Abstract

In this article I show that the existing Photon theory of Einstein on which Quantum Electrodynamics in physics is based , violates the law of dialectical logic (the law of opposites) and the law of formal logic (the law of Identity). Another words, Einstein's theory violates the basic rules of human thinking and for this reason is not scientific theory.

In addition to that, I explain the photoelectric effect without photons theory and without violation of laws of logic and so on. This new theory is based on the fact that electromagnetic waves are the result of the fluctuation of environment in which they spread (electromagnetic field) and that electromagnetic waves are considered as polarized pulses.

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"Who are temporary here ? Get out.

Your time is over"

V.V. Mayakovsky

Theoretical Development of Classical and Quantum Electrodynamics

Introduction

Classical electrodynamics which is based on Maxwell's formulas, successfully explains all the phenomena in electrodynamics to the point where the physics began to accumulate facts, which were in conflict with it. For example, classical electrodynamics are argued that the energy of an electromagnetic wave, regardless of its length, is carried by a continuous wave front, while the experiments showed that the higher the frequency of the electromagnetic wave the more evident is the fact that the energy of such a wave is transferred quantumly. In other words, Classical Electrodynamics takes into account only the properties of the continuous electromagnetic field meanwhile quantum electrodynamics is based on the idea that the electromagnetic field has also discontinuous (discrete) properties, which are created by quanta of the field, photons.
Thus, experiments in physics indicate that there is a boundary in the electrodynamics of Maxwell's theory. But this is not surprising, because any truth, any concept, any theory is always relative, i.e., They have a meaning only within that base, to which they are defined (The Law of Sufficient Ground). And if physicists encounter electrical phenomena that go beyond this sufficient ground, then it is said that the old theory (Maxwell's theory), which is correct for the old foundation, should be replaced by a new theory, built on a new sufficient ground, which should be the opposite the old one. The trouble is that sometimes a new theory comes into existence based on a wrong sufficient ground. Hence, it turns out that the new theory resolves the problem in one or in several places and in others leaves the problem unsolved. In other words, although the theory is the new one but it did not introduce any systematic understanding of all the associated physical phenomena. It happened with quantum electrodynamics. Its existence is scientifically indisputable, but it is based on a false sufficient ground.
The interaction of electromagnetic radiation with charged particles in quantum electrodynamics is considered as the absorption and emission of particles, photons.

The sufficient ground of the theory of Maxwell.

The situation in which Maxwell's theory was in relation to the quantum electrodynamics, is similar to the situation of the Euclidean geometry versus to Lobachevsky geometry. Euclid geometry is based on assumption that through a given point not on a given line exactly one line can be drawn parallel to a given line. This postulate is qualitative ground on which Euclid geometry was built. From this geometry follows the assertion that the sum of the angles of a triangle on the plane is equal to180 degrees. But Lobachevsky came and said that the statement of Euclid about 180

degrees true only for the plane, where can be drawn through a point lying outside a given line only one straight line parallel to this one. Because Lobachevsky geometry is based on assumption that through a given point not on a given line there are more than two lines can be drawn parallel to this line through this point. More than two lines could mean 10,20,100,..N (where N is any number > than 2).
This postulate is the qualitative ground on which Lobachevsky geometry was built. Then it is fair to claim that the sum of the angles of a triangle on the plane will be less than 180 degrees. In both cases both mathematicians built their geometry by using the same formal logic regarding of the fact that logic of Euclid geometry is different from the logic of Lobachevsky geometry.

Thus we see that in spite of the correctness of the two theories in geometry, Euclidean and non-Euclidean, they are relatively controversial. In other words, Euclidean geometry has a meaning only within its qualitative ground, on which it is built, that through a point lying outside the line on the plane, you can spend just one straight line parallel to this one, but outside of that reason, it becomes quite inapplicable, i.e.. unscientific.
The same result holds for hyperbolic geometry, it only makes sense within its own ground on which it is built, that through a given point not on a given line there are more than two lines can be drawn parallel to this line through this point. Beyond this foundation, it becomes quite inapplicable, i.e., unscientific.
Which of these geometries, more realistically reflects the space surrounding us? Of course, hyperbolic geometry is. But since in our practical life, with our low speeds and distances, the curvature of the surface is very, very small, we use the geometry of Euclid.
From the standpoint of dialectical logic, Euclidean and hyperbolic qualitative grounds are opposites, because in Euclidean geometry one can draw one parallel line and in Lobachevsky geometry one can draw infinite number of Parallel lines.

Generally speaking, any science is being built on the grounds of the opposite. Within each qualitative ground any scientific theory, which is limited to those grounds, is a coherent formal logic system. But as time goes by, science begins to accumulate facts that are unexplained in terms of existing scientific theories, there is a need for birth of a new scientific theory, which will be built on the qualitative ground which is opposite to the base on which is built the old one. It is this commonality in the development of science and philosophy grasps, the science about formal and dialectical logic, and their ratio. (See my philosophical articles on this topic: "Formal and Dialectical Logic as Unity of Opposites or Development of Classical Philosophy," "The development of laws of formal logic of Aristotle," etc.

Let's consider the grounds on which the classical and quantum electrodynamics are built. Classical electrodynamics is based on the following basis: there are positive and negative charge, which forms a constant electrostatic field. And on this simple basis, the entire universe of classical electrodynamics is built. It is interesting to note that already in classical electrodynamics the question of the environment in which electromagnetic waves propagate is raised. This approach was quite logical, because any waves, which were familiar to physicists of the time, were distributed in a particular environment. For example, a medium for the propagation of sound waves was the air, and ground for the spread of water waves is water in the lake, rivers, seas, etc. . But the physics of that time could not find a medium for electromagnetic waves, even though there have been attempts in this direction: they assumed the existence of the ether.

Research in this direction was quite deserted with the advent of relativity theory Einstein. "Theory of Relativity is often used for distinguishing the views of Einstein, Minkowski, and their followers, completely eliminating from consideration the concept of the electromagnetic ether from the looks and the results of their predecessors, like Lorentz and Poincare (not to mention the delimitation of the work of other physicists, entirely inconsistent with her). " (Internet, Vikipideya). And despite the various reasons for termination of the search by physicists for the medium in which electromagnetic waves propagate, this environment - is not recognized by any of the physicists - all the time, was quietly present throughout the development of classical electrodynamics. It was a constant electrostatic field, because the later is qualitative ground on which the classical electrodynamics is built. As a result of the system logic Classical Electrodynamics considers only the continuous properties of the electromagnetic field.

False Qualitative ground on which Quantum Electrodynamics is built.

In contrast to classical electrodynamics, quantum electrodynamics are concerned with discontinuous properties of the electromagnetic field. And for this reason it has to be constructed on the basis that the opposite of the base upon which the classical electrodynamics are built.

Physicists unknowingly violated the above law of thought, the relationship between formal and dialectical logic and took for the foundations of quantum electrodynamics their invented particle photon. These photons localize the energy of a light wave in such quanta particles that move independently of each other, even if the wave is continuously distributed in space.
Thus Einstein, who introduced this concept of the photon, thought he explained the photoelectric effect, which was impossible to explain from the standpoint of classical electrodynamics. Indeed, "in the violet light with a wavelength of 4000 A, the photoelectric effect is easily observed with density u = 1/1000000 erg / sec x smsm ...." In this case, the time to accumulate the necessary energy in the atom to eject a photoelectron is 50 minutes, although in reality the photoelectron emitted instantaneously. (Course of General Physics, Volume 3, Physics, 1962, page 392) "Next S. Frisch in his physics textbook says: "To save the idea of the transfer of light energy with continuous wave front would have to take an artificial hypothesis that either there is a mechanism of energy transfer of electrons from one to another, or that the photoelectron energy is obtained not by light energy but by any other sources of atoms . . . Summarizing, we can say: the photoelectric process looks as if the light energy is transferred by individual particles. If the particle enters the atom, it passes its energy completely. This is the hypothesis of the corpuscular nature of light was made by Einstein. He admitted that light represents a stream of individual particles. These light particles were originally called light quanta, which is currently established for them the name of the photons. The photon energy is equal to Planck's constant times the frequency. Thus, photons, depending on the frequency of the light, have different energy. " (P. 393, ibid.) In other words, " In 1905, Einstein showed that all of the basic laws of photoelectric phenomena directly are explained, if we assume that the light is absorbed with the same portions which the light is emitted according to Planck proposal."(p. 389, ibid.)

What is illogical with Photon theory?

Let's start with the most important that the photon theory contradicts the laws of logic thinking.

1. Every leap in the qualitative development means transformation of the qualitative basis in its opposite. Photons are not the opposites of the charge and its constant electrostatic field.
2. Inventing the photon for the explanation of photoelectric effect creates a dual nature of light relative to the same base, which is a violation of the fundamental law of thought of formal logic: the law of identity. Let's take, for example, a charge. It also defined as the opposite properties of + and -, but in the relation of each charge, the later is uniquely identified as + or as a minus. Dual definition of light as an electromagnetic wave and the corpuscular on one and the same qualitative ground violates the logic law. How do you perceive my statement when I say that you are at the same time a man and a woman? The absurdity of this logic is evident in everyday life, but when such a statement carried on the theoretical level of physics it makes this illogical statement admissible. The same story is with light: any color light consists of electromagnetic waves and its opposite particle photon.
3. The trick with the photon does not stop there, because it must be reconciled with the theory of relativity. According to the latest the energy of the particle with zero rest mass, with approach of the particle velocity to the speed of light has to grow indefinitely. But as the photon energy is finite, then it means that the photon does not have zero mass, but it does have inertial mass. But Einstein needs the particle to explain transmitting of energy instantly from the electromagnetic wave to photo electrons, which in his view is possible only when particles collide. So, we are talking about the old way of mechanical power transmission at a qualitatively new level, where the energy transfer is quite different.
Rather than to investigate the new method of instant transmission of energy under the interaction of an atomic particles and electromagnetic wave, Einstein went on the famous old way, the collision of particles, and thus made a scientific theoretical mistake by assuming the existence of a particle photon.
But enough talk about a photon as a false basis, let's talk about the real qualitative ground and how within it the photoelectric effect and other such things are explained.

Quantum Electrodynamics

So, we have to create a theory for the explanation of the photoelectric effect in such a way, that in contrast to the existing photon theory, our theory would comply with the dialectical and formal laws of our thinking, which I mentioned above. In that case, we could create a theory that would have been logical for all occasions within quantum electrodynamics.
1. We must admit that the new qualitative basis for the study of quantum electrodynamics is a moving charge and variable electrostatic field that the charge creates in a space during its motion. This ground is the opposite of the base upon which the classical electrodynamics are built. In other words such ground should be the variable electrostatic field created by a moving charge in a circle, for example, the motion of electrons in the atom. This argument is based on the laws of our thinking, i.e. on the laws of formal and dialectical logic, which is a reflection of reality in terms. And the reality is that the negatively charged electrons always revolve around the nucleus of an atom.
2. For this reason, we must reject completely the existing duality of light and come out only from its electromagnetic nature.
3. We must recognize the fact that the EMW (Electromagnetic wave) is spread in a certain environment, the idea of which we change as we enter into its (environment) content. And such an environment is a constant and a variable electric field. Why the issue of the environment in which

the electromagnetic wave spreads, is very important for physics? Because this environment influences the form of electromagnetic waves. Without an understanding of this relationship pseudoscientific theories come into existence. They manipulate the logic to the correct result of experience. In classical electrodynamics - which is based on Maxwell's equations, that mathematically unified existing laws of Gauss, Faraday and Ampere, the discoveries of which were based on the study of electrostatic charge and its electrostatic field - the constant electrostatic field had no effect on the form of electromagnetic waves, which were described by Maxwell, because that field was not changing. But from the moment when physics has penetrated into the content of the atom, it was found that all the charged particles exist only in the motion, never staying in an atom at rest. For example, the rotation of the electron around the nucleus of an atom. Such rotation of the charge in a circle and creates the variable electrostatic field. The later begins to appear only when the frequency of the electromagnetic wave is comparable with the frequency of the alternating electric field, or what is the same thing - with the frequency of oscillation of the electron around the nucleus of an atom. EMW with relatively low frequencies does not interact with this field, and so in the classical electrodynamics such field is unconsciously perceived as a constant electrostatic field. The subsequent presentation of the article reveals the content of each of these provisions

Quantum Variable electrostatic field

This field is formed by a dipole charge as it rotates. Dipole at rest forms a constant electrostatic field. If a test charge is placed in this field at a great distance from the dipole, then the dipole charges will act on the probe charge with very little force. For example, the field strength at a distance R from the dipole, i.e., at a point A will always be proportional to the dipole moment **p** and inversely proportional to the cube of the distance R from the dipole. (Fig. 1)

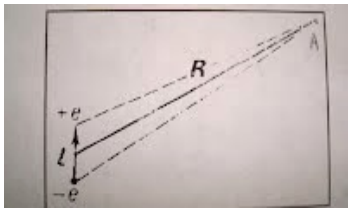


Fig. 1

Since the basis for quantum electrodynamics, according to dialectical logic, should be quantitative ground, which is opposite the base of classical electrodynamics, then we should not have to deal with the charges at rest but with charges in motion. Therefore, let's consider the dipole charge as it rotates.

To simplify the explanation let's put the end of the line R to the point of the dipole, where the charge + e is, and the dipole itself let's put on the extension of the line R to the left, as shown in Figure 2.

L R E

-e _____+e_____A

Fig. 2

In Figure 2, L - length of the dipole, R - the distance from A to the charge + e. Now we'll turn the dipole in the horizontal plane in a circle with a center at e +. In this case, our charge-e will make a circular motion around the charge + e. In relation to point A the charge, as it moves around all the time, would then approach the point A and then would move away from it. Consequently, the field strength at a point A will oscillate from a maximum to its minimum. The value of E will be minimal when the charge -e will be the furthest away from the point A, as shown in Figure 2, and the absolute value of E is maximum when the charge -e will take at its rotation the closest location to the point A.

In this case, we are not interested in the direction of the vector of the electric force of the dipole, but we are interested in the fact that the constant tension **E** of the point A under the dipole in rest, becomes a variable one under the rotating dipole, i.e. voltage at a point A starts to oscillate at a certain frequency, which is determined by the speed of rotation of the charge-e. It is easy to see that in terms of the dipole moment the variable intensity E of the field at the point A is very small, because it is inversely proportional to the cube of the distance from the center of the dipole to the point A and therefore physicists think that the energy at this point is very, very small. But in fact, at very high frequency oscillations of the absolute value of the **E** at the point A the energy field at this point may be very, very large, because the energy at the point A will be determined not by the dipole moment and the distance of the point A, but the frequency of oscillation of the intensity E . This energy is equal to Planck's constant times the frequency of the electric field. In this formula, the value of intensity E is completely absent, because the energy depends only on the frequency of oscillation.

If in classical electrodynamics (CED), the energy of constant electric field is mainly determined by the magnitude of the charge, in quantum electrodynamics an energy of the variable electrostatic field is determined by frequency of oscillation of the charge creating the electric field. Thus, we can create a lot of energy in the variable electrostatic field not by increasing the electrical charge but by increasing the frequency of it oscillation. Graphically, the electrical oscillations in our point A are depicted in Figure 3. In this figure, we can see that they are the pulse oscillation of one polarity, negative. In our illustration we see six pulses, which are numbered. In other words, the energy of variable electrostatic field is a quantum energy contained in each pulse, which is determined by the frequency of the pulse.

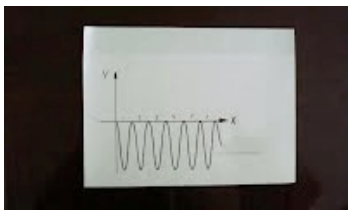


Fig. 3

Why do I say that we are dealing in this case with a pulse of one polarity, namely the negative? Because these variations are caused by the circular motion of the negative charge of the dipole, -e. The positive charge of our dipole + e revolves only around its axis, so its distance from point A is always the same at any time. Therefore, at point A positive field intensity remains constant. If we deploy our dipole at 180 degrees, that is, swap our charges (See Figure 4.), Then the positive charge + e will turn around the negative charge, and voltage fluctuations at the point A will be positive. But in this case, the field strength of the negative charge-e is a constant and will not undergo oscillations.

L **R** **E**

+e _____-e_____A

Fig 4

See Figure 5. In this figure, there are six positive pulses and negative pulses are absent.

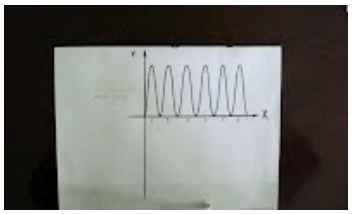
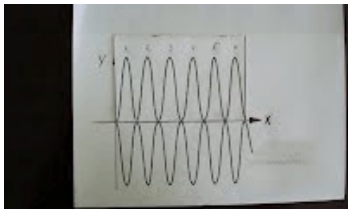


Fig. 5

In the last example we will rotate around the center of the dipole, in this case, the positive and negative charges of the dipole at the same time will make a circular motion around the center of the dipole. Then the field strength, positive and negative, at the point A will experience a simultaneous fluctuation in value. In this case, we will have both the positive and negative vibrations of the variable field, which will be synchronized. Graphically, this is shown in Figure 6, where we have six positive and six negative pulses.

Fig 6



At any point in space, in relation to which the charges of the dipole are approaching and passing away, there are oscillations of the electric field, which are created by positive and negative charge of our dipole.
In nature, these variables' electrostatic fields are created on the macro and micro level, because orbiting charges are always part of the dipole. For example, any atom, including hydrogen in the sun, is a dipole, because the electrons in it revolve around the positive nucleus. This shows that the natural oscillating electrostatic field can have different frequencies, all of which exist simultaneously.

Summing up about variable electrostatic field.

1. In contrast to the constant electrostatic field, variable electrostatic field has a high frequency (kinetic) energy, because it has pulse oscillations.
2. There are positive and negative variable electrostatic field that can exist alone or simultaneously.
3. The variable electrostatic field in the Quantum electrodynamics exists in the form of polarized pulses.
4. The energy of these fields is contained in each of its pulses, which can be considered as a quantum of energy, and therefore, such a field is discrete.
5. The source of this quantum of energy is the rotation of the dipole charges.

Electromagnetic wave in a quantum variable electrostatic field.

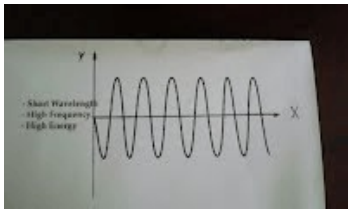


Fig. 7

In classical electrodynamics, the electromagnetic wave is considered in the form of sinusoidal waves in various forms, for example, as shown in Figure 7, where we have represented only the electrical part of the wave.

But this view is correct only for classical electrodynamics. In the later the energy of the electromagnetic wave is composed of electric field energy and the energy of the magnetic field, which are determined by the magnitude of intensity E and H. But along with this energy a source, generating electromagnetic waves, expends its energy to form the frequency of the electromagnetic wave. At low frequencies, this energy is very small compared with the energy of the waves, concluded in its electric and magnetic fields, so the physicists of classical electrodynamics did not take into account and did not pay attention to her. However, with high-frequency of electromagnetic waves the frequency energy becomes the dominant factor over the energy of the electric and magnetic field of the wave. Figuratively speaking frequency energy becomes Queen of energies.
For example, high-energy infrared light with a wavelength of 5000 A corresponds to the energy of

$4 \cdot ?10^{-1}2$ erg, while its electric power and energy of a magnetic wave 3,000 times smaller. But X-

rays with a wavelength of 0.1A corresponds to the energy in 2·?10-7 erg.
Consequently, our understanding of the electromagnetic wave in the form sinusoidal oscillations, as we know it in classical electrodynamics, has to change, when its frequency is comparable to the oscillation frequency of the variable electrostatic field, i.e. with the frequency of oscillation of the electrons in the atom. The same electromagnetic wave we have to represent in the form of the polarized pulses, which are depicted in Figure 4. In other words EMW takes shape corresponding to the environment in which it is distributed, i.e., form of the polarized pulses of the variable electrostatic field. Therefore, the environment in which EMW is distributed, defines it as a form of a sine wave if the wave propagates in a constant electrostatic field, or as the polarized pulses if the wave propagates in a variable electrostatic field.

In reality, the EMWs all the time are being distributed in a variable electrostatic field (VEF). But since the low-frequency waves are indifferent to the high-frequency oscillations of VEF, so far we alternating electrostatic field consider as a constant electrostatic field (CEF). For example, a big ship did not feel small waves in the sea. For it, this sea is calm and the ship sails in a straight line. Meanwhile, the same waves will swing the small boat like a chip. Its straight course will be made in the form of sinusoidal fluctuations.
Since the potential energy of a permanent electrostatic field continuously distributed over its entire volume, then the same principle of uninterrupted energy is reflected in the EMW's which CEF has to do with. On the other hand, as we can see, the energy of variable electrostatic field is distributed in a space in the form of polarized pulses, quanta, i.e. discretely. Therefore, such distribution of energy is inherented by EMW in this field. Just as water takes the shape of the vessel in which it is located, the wave energy is distributed according to the field in which it is.

Resume

1. EMW in quantum electrodynamics changes its form: from sinusoidal wave to the wave in the form of polarized pulses.
2. Front energy of EMW is decreased significantly compare with the increased high-frequency energy, which is determined by the formula: This energy is equal to Planck's constant times the frequency of the electric field.3. High-frequency energy of an electromagnetic wave is concentrated in each its pulse.
4. Electric field, in which the wave propagates, determines its shape and the distribution of its energy, continuous or discontinuous (discrete, quantum).
4. As physicists see, I explained the presence of high-frequency energy in the electromagnetic wave, while maintaining its unique definition as the electromagnetic. And so I have not broken the law of formal logic, the law of identity.

Explanation of the photoelectric effect without photon theory

From the position of the variable electrostatic field a photoelectric effect is explained by the following way. Light wave, as I have shown above, is composed of polarized pulses. Each pulse wave contains high-frequency energy, which is equal to Planck's constant times the frequency of the electric field. Getting in the electron, the polarized pulse completely gives up its energy to the electron. The higher the frequency of the pulse, the greater speed the photoelectron gets to escape from the atom. But in order for the light wave to convey fully its energy to the electron, it is necessary that a phase of the frequency of oscillations of the electron coincides with the phase of the light pulse.

If the power of the light flow increases, it increases the number of light pulses, which simultaneously reach the body, giving the photoelectric effect. As a result, the number of emitted photo electrons increases.

Generally speaking, if in a photon theory of Einstein, we replace EMW in the form of a sinusoidal wave by our new representation of the electromagnetic wave as the electromagnetic oscillation in the pulse shape, and replace the photon, which has concentrated all frequency energy, by our polarized pulse containing this energy, then all results of experimentation, which were explained by using the photon theory, now as much can be explained by using our theory about EMW in the form of polarized pulses. And again, all of the experiments that confirmed the existence of photon-particles equally will confirm the existence of our polarized pulses.

Compton effect without photons

Until now, the Compton effect is explained as follows: "Under the collision of particles-photons with free electrons they are elastically repelled from electrons, This leads to the appearance of the scattered rays. Under the collision of a photon with an electron part of the energy transferred to the electron, the energy of the scattered photon E'p becomes less than the initial energy: E'p <Ep. Frequency y' of the scattered photon is related to its energy by ratio hy' = E'p where from inequality E'p < Ep follows that frequency y' < y. Thus, we immediately obtain that the wavelength of ray scattered in the Compton experiment, must be greater than the wavelength of the primary rays ... "(general physics course, T 3, pp. 404, SE Frisch and A, B, Timoreva, Fizmatgiz 1962)

"The assumption that the Compton effect due to elastic collision of a photon with a free electron, leads not only to the fact that there must be a photon scattering with decreasing frequency. Under the collision part of the photon energy transferred to the electron, and hence the electron gets some momentum. Thus, in addition with scattered rays with different wavelength there are accelerated electrons - the so-called electron impact. " (Ibid.) (See Fig 8).

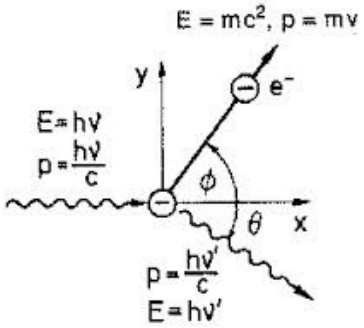


Fig 8

Thus the Compton effect is explained by mechanical collision of photons with free electrons. But as I have shown in this article, the "discovery" of a photon or duality of electromagnetic waves violates the law of Identity of formal logic and therefore it is not a scientific discovery.

This effect is explained , if in quantum electrodynamics, electromagnetic wave regarded as

electromagnetic waves in the form of polarized pulses with a negative or positive electric field strength E. (Fig 9).

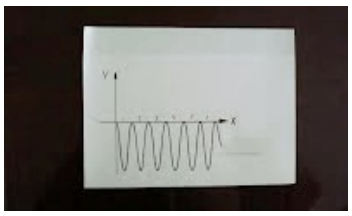


Fig 9

In other words, under the radiation of X-rays of short wavelength, in the scattering material it is not a mechanical collision of photons with free electrons takes place but the electric interaction of polarized pulse with a free electron. In this interaction, the polarized pulse repels from a negatively charged electron, but this can only happen when our pulse has a negative polarity. In such a situation polarized pulse gives part of their energy to negative electrons (through negative electric field of electron), so the scattered polarized impulse has a lower energy than the initial one E'ph <Eph. Frequency **y,** scattered polarized impulse, is related to its energy by ratio hy'= E'ph where from inequality E'ph < Eph follows that the frequency of **y' < y**. Thus, we immediately obtain that the wavelength of scattered rays, must be greater than the wavelength of the primary radiation. On the other hand, the energy that a free electron gets in the form of momentum from polarized impulse causes it to accelerate. This gives rise to the recoil electrons.
From these considerations it is clear that the electrical interaction of polarized pulse with a free electron in a scattering material does not affect the calculations and the results of the experiment that are made by Compton. But they make a correct representation of reality.
Moreover representation of electromagnetic wave (EMW) in the form of polarized pulse very logically consistent with the formula of quantum Planck energy E = hy, because in that pulse energy is distributed over its entire length and is not concentrated in a single point of EMW as a photon.

Until 1925 Bohr was not a supporter of the photon. He was very prone to the idea that the interaction of X-ray waves and the body takes place not due to the mechanical interaction of photons and electrons but due to the electric interaction of electromagnetic waves and electrons (negative charge). But he could not create a theory that would be in harmony with the Compton effect. And so he, in the end, joined the camp of supporters of photon theory. (If you can't beat the enemy, join them.)

If Bohr realized to present an electromagnetic wave in quantum electrodynamics as polarized pulse, which in reality has the same function as the imaginary photon, then he would easily proved the correctness of his thinking about the electrical interaction of the high frequency electromagnetic wave with electron of the body. But such a discovery could be made only by a scholar who understands how the laws of formal and dialectic logic work in science.

Unfortunately physicists put themselves above the laws of thought, and hence the fictitious particles, photons and other hypothetical particles, came into existence. Moreover their number is

doubled, because they are subject to the law of symmetry (one of the laws of dialectical logic: the law of opposites). But more about that in another article.

CONCLUSION: Classical philosophy is Queen of The Sciences

From the above it is clear that the same result from the physical experiment can be explained correctly or wrongly. In the first case, you get a scientific representation of the real world, in the second case - the false notion, because it violates the laws of logic of our thinking. The development of scientific understanding of the real world maintains the system formal logic. False representation leads to a violation of the system logic within the qualitative ground and much artificially complicates the real world, which is already complicated. It depends up to you, Theoretical physicists, what theory you take as a qualitative ground: a theory that violates the laws of logic or theory that hold them. The choice is yours.

Ilya Stavinsky

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