

Dualism of Light Quanta : Reality or Abstraction?

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A quantum of light is a privileged particle. No other particle can travel with the speed ($c = 1$). There are two kinds of spins, as a result of which the particle attains motion.

- 1) Under the action of Planck's spin, which is equal to the unit ($\hbar = 1$) a quantum of light flies rectilinearly with speed ($c = 1$). The geometrical form of a circle: ($C/D = 3,14$). A quantum of light behaves as a particle.
- 2) Under the action of Goudsmit-Uhlenbeck's spin, ($\hbar = h / 2p$) a quantum of light rotates around of the diameter and is known as electron.

The geometrical form of a circle is transformed into a sphere. This kind of movement is described by Lorentz's transformations. The wave properties of light quantum are shown. The dualism of a particle becomes clear and the paradox disappears completely.

When the form of a circle is change into the form of a sphere, the transcendental magnitude ($p = 3,14$) is changed to another transcendental magnitude ($e = 2,71$).

The transformation of a circle to a sphere (spin) is described by the geometry of N. Lobachevsky, F. Klein, A. Poincare. The transformation of sphere into circle is algebraically described by a formula, which was discovered by L. Euler in 1748.

$$\cos j + i \sin j = e^{ij}$$

Chronology of physics.

- XVII c- the thermodynamics was created.
- XVIII c - the mechanics dominated.
- XIX c - electrodynamics developed.
- XX c - the power of atom have opened
- XXI c - the importance of Vacuum is clear.
- Science has found consciousness.
- Mankind has found consciousness.

Pythagoras, Theory, Electrodynamics and SRT.

Pythagoras' theory applies equally to the largest and smallest triangle. So mathematicians had decided, that this applies also to the electromagnetic phenomena; that the laws of a nature in the macrocosm and in a microcosm are identical. It appears that this is not so.

In the macrocosm, Maxwell's laws apply and in the microcosm, other laws, the laws of SRT operate. These laws are interconnected. SRT is a continuation of the development of electrodynamics.

- 1) What is the makeup of the electron in Maxwell's theory? Maxwell's equations have no relation to the movement of the electron. They describe the distribution of electromagnetic waves but not the movement of a particle such as an electron. In Maxwell's theory, the charge - electron is considered local, as though the particle is "at rest". This means that it particle does not move rectilinearly, but rotates around the diameter (has the form of a sphere). The rotation of the electron creates electrical waves.
- 2) What is the makeup of the electron in SRT? At the beginning of the last century many scientists (Einstein, Lorents, Fitzgerald, Poincare, Abraham) were interested in the question:

What will take place, if the electron, creating an electrical field, begins to move - rectilinearly?

All of them came to the conclusion that there would be radical changes with the electron. These changes are described by the Lorentz transformations. That is, when the originally rotating electron (sphere) begins to move rectilinearly, during movement it gradually will change its geometrical form. Having reached constant speed of ($v=c$), its form will become a circle. In such condition it is called a "quantum of light ". And when a quantum of light rotates around its diameter its name is "electron " An "electron" is an actively working "quantum of light".

With such an interpretation, electrodynamics and SRT becomes one general theory.

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