

# On the new Representations of Physical Essence of the Quantum Planck Constant, Light, Radiation, and the Structure of Elementary Particles

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*Abstract:*<sup>1</sup> Modern physics, and especially quantum and particle physics, is full of contradictions and uncertainties. Many of the most important concepts are blurred or not defined at all. This is the concept of "mass", "back", "photon" and others. Huge amounts of money are spent on accelerators, to experiment, and the structure of elementary particles, and especially the electron still has not been determined. The article shows that the reason for this lies in the fact that initially was not understood the true, deeper meaning of the greatest discoveries of the XX century - the opening of Max Planck in 1900, photon energy and action. It is shown that the lowest possible energy quantum Planck ( $h$ ), in essence, there is a new elementary particle of the universe with a mass of  $7.36 \cdot 10^{-51}$  kg, which has its own structure and characteristics. And precisely because it comprised all of the radiation, in Vol. H. And the light, and all the elementary particles. Recognition of quantum  $h$  Planck particle can not only correctly understand the structure and essence of light, radiation and particles, but it helps to reveal the essence of all natural forces - electromagnetic, magnetic, and even gravity, the essence of the changes the electron (nucleon) of the mass and energy in the accelerator. Lets show the real essence of the physical mass and spin of the particles, to determine the nature and parameters of the velocity of light, and even gravity. It allows you to reveal the physical essence of the formula  $E = mc^2$  i.e. the device to show the essence of all the particles of matter how difficult the rotating masses, having twice the kinetic energy.

*Key words:* elementary particles, photons, quantum gravity

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