Photon Mass

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Abstract

The atomic structure is presented on the basis of the theory of vortex gravitation. The feasibility and calculation of the values of the density and mass of electromagnetic particles are proposed. A calculation is made, which proves that the photon must have mass. In the calculations, some physical characteristics of electromagnetic particles that are accepted by modern physics are refuted.

Keywords: Theory of vortex gravity • Cosmology and cosmogony • Celestial mechanics

Introduction theory of light

The nature of light has been studied by scientists since the Renaissance. According to some scientists, light had a wave nature. Others defended the corpuscular theory of the origin of light. To the founders of the wave theory, in the first place, should be attributed Rene Descartes. He represented light as a disturbance in the world substance [1]. The founder of the corpuscular theory was Pierre Gassendi [2]. The same point of view was followed by Isaac Newton [3]. Later, the wave theory of light was investigated by Robert Hooke [4] and Christian Huygens [5]. Thomas Jung [6] in the early 19th century, his experiments with diffraction received evidence for the recognition of the wave theory. In his opinion, different colors correspond to different wavelengths. In 1817 the wave theory of light was followed by Augustin Fresnel in 1817 [7]. When considering the problem of thermal equilibrium of an absolutely black body, Max Planck [8] formulated his idea of the emission of light by portions - light quanta, which were called photons. Experiments of Malus and Bio [9] with polarization provided, as it seemed then, convincing evidence in favor of corpuscular theory and against the wave theory. In quantum mechanics, the idea of Dui de Broglie [10] about corpuscular-wave dualism was confirmed.

The Theory of Vortex Gravitation

The theory of vortex gravity, cosmology and cosmogony is based on the assumption that gravity, all celestial bodies and elementary particles are created by etheric vortices (torsions). The values of the bodies (the system of bodies) and the corresponding vortices can vary by an infinite amount. The largest etheric vortex that a person can observe is the universal whirlwind, the smallest - the atomic whirlwind.

The orbital velocities of the ether in each vortex decrease in the direction from the center to the periphery, according to the inverse square law [11]. The change in orbital velocities, in accordance with the Bernoulli principle, causes an inversely proportional change (increase) in the pressure in the ether [12]. The pressure gradient creates the forces of vortex gravity and pushes the substance (body) into the zones with the least pressure, that is, in the center of the torsion bar. This pattern operates in the same way in ethereal vortices of any size [13].

Vortex atomic structure

In the central part of any celestial, ethereal torsion, the centripetal acceleration of the ether reaches enormous values. Directly proportional to this acceleration corresponds to the pressure gradient in the ether or vortex gravity. Under the influence of a huge force of gravitation, the ether thickens and forms in the center of the torsion the super dense core of the celestial body. The density of the nucleus is so great that it cannot be pierced by ether. Ether, with its rotation near the nucleus, touches its fixed surface. In these zones there is turbulence of the ether, the formation of vortices and atomic micro- torsions. These torsions create atoms, as well as the forces of atomic gravity. In the central part of the atomic torsion, according to the same scheme, the ether is condensed into a superdense state and a fixed nucleus of the atom is formed. In the zone of contact of the ether with the core, the same turbulence of the ether and the appearance of torsion corpuscles occur. The size of these torsions is many orders of magnitude smaller than the atomic torsion. In the torsion corpuscule, also, the ether is consolidated and the formation of particles. In these particles, the density of the substance also reaches a value that the ether cannot permeate. Consequently, torsion corpuscles are transformed into material bodies that have masses. These bodies are various electromagnetic particles (electrons, photons or quarks, etc.).

Conclusion

In this paper, all calculations are made from the assumption that electromagnetic particles arise at the lowest orbit of the atomic torsion. It is possible that torsion corpuscles can appear on other orbits, or in atomic torsion, having other dynamic characteristics. In this case, the results presented can be subject to adjustment, but the physico-mathematical principle of calculations will correspond to this article.

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