

Title: A New Proof of Wave-Particle Duality of Light

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I. Abstract Body

Einstein defined a pocket of energy with zero rest mass (photon) and explained the both double-slit experiment and the photoelectric effect. On the other hand it seems, Einstein himself did not accept wave-particle duality and knew that as only a temporary way out. But because of the prestige of Einstein, only a few scientists have investigated the possibility of a non-zero rest mass of the photon with few results.

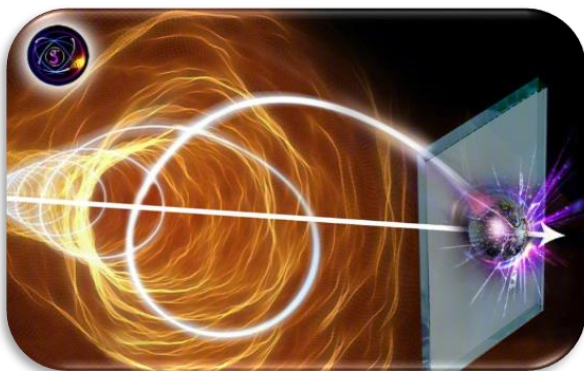
In this article, we present a new proof of wave-particle duality of the light. Consider a particle that is separated from a moving source. The motion of the particle is always affected by the movement of its source. Now notice how the electrons move in an atom. In this situation, the electron has two kinds of motion, moving around itself and around the nucleus of the atom. Like the Earth that rotates around itself and simultaneously orbits around the sun.

When the electron is excited, it emits a Photon the motion of the photon is affected by the motion of its source, Electron, and must include both types of motion of its source. So, the photon is a particle that always traverses on helical direction and has a three-dimensional motion.

In Saleh Theory, since the photon has a projectile and impulsive motion, it is a particle. On the other hand, as it has a rotational motion, it behaves wavelike. In other words, on the true nature of the photon, we can say:

“The photon is a particle that traverses like a wave.”

II. Image:



III. Reference:

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IV. Biography:

Prof. Gh. Saleh is an independent researcher and main theoretician of Saleh Research Group. He was educated at the Sharif University of Technology. He has more than 17 articles such as:

- New structure for Electron, Proton & Neutron
 - 3D motion of Photon and new energy equation for Photon
 - Describe the nature of superstring
 - New describe for dark matter and dark energy
 - New provement for speed faster than light speed
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