Research Article

SCALAR SYSTEM IN THE PHOTON (PHO-LIGHT) REACTION IN THE SUPERPOSITION CUBIC (NEW GENERATION QUANTUM CHIP CONCEPT)

*Lie Chun Pong

HKUST

Abstract

Light can be described as.......
Einsteinseems not to like the word "light" because he thinks it is a particle rather than a wave, so he calls it a "photon". The quantum mechanics postulates that light exhibits both wave and particle behaviors, using duality and probability to describe these dual-happening events with a probabilistic description [1][2][3][4].

Keywords: Scalar System, Superposition Cubic, Field, Quantum Chip.

INTRODUCTION

In wave theory, waves are described as changes in a parameter over space and time, such as water wave height, sound wave pressure, or light wave electromagnetic fields. The amplitude of the wave is the value of this parameter, and the wave is a function that specifies the amplitude at each point. The waveform at a specific time is influenced by external sources and initial conditions. In many cases, the equations describing the wave are linear, allowing the superposition principle to be applied. This principle states that the resulting amplitude of two or more waves traveling in the same space is the sum of the amplitudes produced by each wave individually. For example, two waves traveling in opposite directions will pass straight through each other without any distortion on the other side. Interference between waves occurs when two or more waves travel through the same space, resulting in a combined amplitude. This can lead to destructive interference, producing a lower overall amplitude, or constructive interference, resulting in a greater overall amplitude, especially with a line array. In quantum mechanics, the behavior of a wave function is described using the Schrödinger wave equation. By expressing the wave function as a superposition of stationary-state wave functions, we can analyze its behavior. The linear nature of the Schrödinger wave equation allows us to calculate the original wave function's behavior through this superposition, known as a quantum superposition.

Pho-light Cubic positioning

This research paper suggests that a wave can transform into a wave-like particle and then into a field. In such a case, it would simulate the wave light particle into a pho-light scalar, which can shed light on the cubic in the scalar moment. This scalar moment can directly induce the system to transform into the information energy form, where more energy refers to 1 and less energy refers to 0. Therefore, 1 and 0 both exist in the cubic form of a superposition state.

This cubic superposition state, with the pho-light scalar, can appear throughout the cube, acting as a probability cloud. These probability clouds of the scalar can be influenced by the moment that simulates the change in position between 1 and 0.

Scalar wave of Superposition (0,1)

Additionally, energy can transform into different types of fields, compressing and emitting energy when it accelerates. This research paper proposed an emission that might create a disturbance in momentum, triggered by a cubic photon-light collision (at the scalar level) through the summation of micro-scale collisions. This tremor was an anomaly in electric flow currents, causing a change in swing. The wave of the energy field, which connects all chains as a unified field, can shape the potential of a multi-field that forms a cubic-hub dimension. The momentum disturbance caused in a wave generates a field because a form of momentum energy temporarily becomes a pho-light. Consider electromagnetic waves as an example, where the disturbance is caused by accelerated charged particles. Besides the energy shift, there may be a moment derived from it. We suggest this process can be derived from the interaction, which transforms into a type of superposition.

Our paper proposes that the energy can simultaneouslyexist in another position due to superposition in a hub dimension, possibly created during the collision experiment. This cubic dimension can be observable. According to atomic collision theory, when one atom collapses, another may form. This could explain why energy can be detected after the collision. The superposition principle in physics and systems theory states that for any linear system, the combined response to multiple stimuli is the sum of individual responses. For example, if input A produces response X and input B produces response Y, then the response to A*B equals the response to B*A, which is (X*Y) = (Y*X) which (1,0) and (0,1) can be imply.

Corresponding Author: Lie Chun Pong, HKUST

Pho-light output stimuli yield hub (field)

The sum of stimuli results in the sum of reactions. This property in mathematics is known as additivity and indicates a linear map, function, or operator. It has applications in physics and engineering since many physical systems can be modeled as sum of linear systems. For example, a beam can behave as a linear and scalar system where the input stimulus is the structural load and the output response is the deflection. Although the superposition principle is an approximation of real physical phenomena, it helps identify the operating regions of these systems. The principle of superposition applies to any sum of linear equations in ascalar system, including algebraic equations, linear differential equations, and systems of these equations. Inputs and responses can be numbers, functions, vectors, vector fields, time-varying signals, or other objects that meet certain axioms. When referring to vectors and vector fields, superposition generally means adding vectors. This principle simplifies calculations in linear systems by expressing a general stimulus as a combination of simpler stimuli. In Fourier transformation analysis, a stimulus is represented as a combination of infinitely many sinusoids, allowing individual analysis and response calculation. Similarly, in Green's function analysis, the stimulus is represented as a combination of infinitely many impulse functions. This approach is commonly used in electromagnetic theory to describe light as a combination of plane waves.

Mechanism in the Cubic Pole Chip

The mechanism involves the electron interaction of the photon, wave, and scalar fields

The described mechanism involves the core interaction between the photon, the wave function, and scalar fields, involving complex quantum electrodynamical processes. Specifically, it includes the coupling mediated by the electromagnetic vector potential, the propagation behavior of wave functions within quantum field theory, and the role of scalar fields in mediating interactions or symmetry-breaking phenomena. This interaction can be described by the exchange of virtual particles, and gauge invariance principles, helping to deepen the understanding of particle interactions at the quantum level.

The principle resembles using a heating pipe to activate the oven's heat. This oven's box is analogous to our description of the cubic pho-light, which is scalar within the cubic volume. The pho-light then functions as a scalar within this space, surrounded by a wave of particles. These wave-like particles scatter around the cube. Consequently, an electron can interact with the photon when the photon scales; in this simulation, it can initiate the interaction between the photon and the electron inside the cubic. These matches might suggest a super positional state that occurs.

These can be likened to a process, where a heat source analogous to a red flowis used to activate an oven. In this analogy, the oven's enclosure represents a three-dimensional cubic region described by quantum field theory, specifically pertaining to scalar fields such as the Higgs field within the cube. This scalar field within the cubic volume interacts with particles, which can be conceptualized as quantum excitations or 'particles of light'bosons similar to photons propagating as

wave-like phenomena within this confined space. These wave functions exhibit interference and scattering as they interact with the boundaries and surrounding medium. So, we suggested that, consequently, electrons within this cubic region can interact with these photon-like excitations; when the photon field undergoes a scalar fluctuation representing a quantum excitationit can induce an interaction between the photon and the electron via quantum electrodynamics (QED) processes. This interaction within the cubic volume may give rise to quantum superposition states, where the electron and photon exist simultaneously in multiple states until measurement. This model exemplifies the quantum field interactions and particle correlations fundamental to quantum mechanics and particle physics.

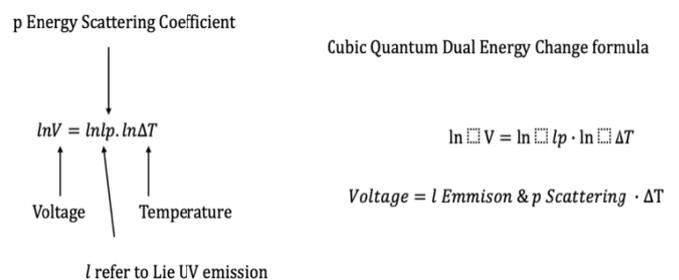**Cubic Square quantum (0,1) device in superposition**

These particle-wave light behaviors describe the scalar-like event, and at the moment when the photon and electron particles align at the scalar moment, superposition occurs. During this specific period, which we call "the moment," the "match-up" becomes the interaction moment where both 0 and 1 interact at the same time, causing superposition. These similar situations, which occur in the cloud of probability, then give rise to a superposition interaction, in which 0 and 1 coexist at the same position within the device's cubic square.
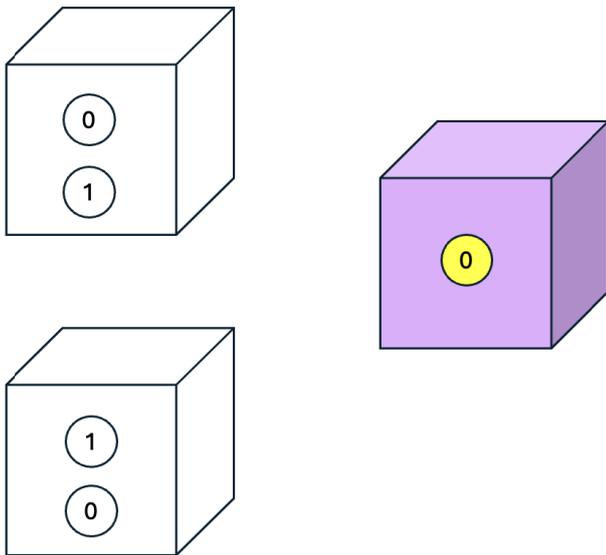
(0,1) in Superposition

Cubic Square quantum (0,1) device in superposition

A Cubic Square Quantum Device operating in a superposition state within the Hilbert space framework, characterized by its (0,1) boundary conditions, representing a quantum system with discrete energy levels and spatial confinement. This device exploits superposition principles to facilitate quantum information processing, leveraging the superposition of its quantum states to enable complex quantum algorithms and entanglement phenomena in condensed matter or quantum computing applications.

Cubic Hub quantum (0,1) device Mechanism &Formulate:

p Energy Scattering Coefficient

$$lnV = lnlp.ln\Delta T$$

Voltage   Temperature

l refer to Lie UV emission

Cubic Quantum Dual Energy Change formula

$$\ln \square V = \ln \square lp \cdot \ln \square \Delta T$$

$$Voltage = l\ Emmison\ \&\ p\ Scattering \cdot \Delta T$$

By emission throughout the cubic hub, this emission can match with the electron, which can correspond to a position in (0, & 1), causing superposition to occur. This mechanism is like a lightning emission event. In a cubic hub, this device could be one of the future quantum devices that could enable quantum chip manufacturing. In the context of a cubic quantum hub, the emission process involves the release of a quantum particle, such as a photon, that can be coherently correlated with an electron, effectively establishing a quantum superposition.

Figure 1. Superposition cubic device (quantum chip)

This emission event can occur at a precise spatial coordinate within the interval (0, 1), corresponding to a super-positional state where the particle exists simultaneously in multiple position eigenstates. Such phenomena resemble the emission events observed in lightning charges, where rapid electromagnetic energy is released. Within this framework, a cubic quantum hub functions as a potential platform for advanced quantum devices, potentially serving as foundational components in next-generation quantum chip fabrication. These devices could leverage quantum superposition and entanglement to enhance computational capabilities and information processing, representing a significant step forward in quantum nanotechnology and integrated quantum circuits.

In conclusion:

This research introduces the new generation quantum chip concept, utilizing the scalar system in the photon (Pho-light) reaction within the superposition cube. Wepresents a novel approach to developing the next-generation quantum chip.

The dual properties enable wave-particle behavior, attracting photons and electrons to interact within the superposition hub. These particles can exist in quantum superposition, and their interactions can be matched and represented using scalar form. This energy transfer can be calculated and accurately described as a behavior that allows superposition to coexist within the hub.

Our new device suggestion will enable the production of next-generation quantum chips become possible. Hope this research paper benefits the world and humanity.

REFERENCES

1. Zur Elektrodynamikbewegter Körper" ("On the Electrodynamics of Moving Bodies") — Introduces special relativity (1905).
2. Can Quantum-Mechanical Description of Physical Reality Be Considered Complete?" (Einstein-Podolsky-Rosen paradox), 1935, Physical Review.
3. Ist die Trägheiteines Körpers von seinem Energieinhaltabhängig?" (E=mc² paper), 1905, Annalen der Physic.
4. ÜberGravitationswellen" ("On Gravitational Waves"), 1918, Sitzungsberichte der KöniglichPreußischen Akademie der Wissenschaften.

****