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Literature Reviews

A Short Communication: 'Hasret's Theory'; Quantum Observation Caused by the Filling of a Helium-3 Electron Hole in an INVIZICLOUD© via a 'Celalettin-Field Quantum Observation Tunnel'

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Abstract: In anti-ferromagnetism, the magnetic moments of particles related to electron spin; a regular pattern, the remaining particles in the ensemble are like ferromagnetism; a manifestation of ordered magnetism. The attraction between a magnet and a ferromagnetic the quality of magnetism first apparent to the formation of the Earth 4 Billion years ago until today. Generally, antiferromagnetic order is directly proportional to temperature. Above the Néel temperature, the material is typically paramagnetic. When investigating 'quantum observation' and hypothesizing a reason for quantum decoherence 'because' of quantum observation the 'Celalettin-Field Quantum Observation Tunnel' is a mathematically sound explanation.

Keywords: Celalettin-Field Quantum Observation Tunnel, Quantum Entanglement, Quantum Observation

Introduction

A photon in a superposition or one that is quantum entangled is in a phase, where that phase can change into quantum decoherence. 'Quantum Observation' is a very poorly defined; in Quantum Theory where we are still at the point where we are to "just accept" that quantum observation causes quantum decoherence. However what we do know about quantum observation is that it is achieved where 'information is acquired from the particle behaving quantum mechanically'. The study proposes 'Hasret's Theory', which is a mathematically sound theory explaining a tangible reason why 'observing' a quantum entangled system, causes wavefunction collapse.

This study exploits anti-ferromagnetism, the magnetic moments of particles related to electron spin within the CFQOT's electron holes and hypothesizes that the filling those holes is the granular level mechanics going during the quantum observation; acquisition of information phase, which may be the acquisition of an electron (Kane, 1998; Celalettin and King, 2018).

The 'Celalettin-Field Quantum Observation Tunnel' (CFQOT) is a speculative structure produced in an ensemble of Orbital Angular Momentum (OAM) polarized atomic Helium-3. One of a pair of quantum entangled photons with enough energy, bores through the medium, depolarizes the electrons and/or ionizes them as the photon bores through the ensemble, creating a tunnel (Celalettin and King, 2018). The photon leaves a carnage of depolarized and ionized atoms, which when said atoms are viewed and considered as a single quantum system, it can theoretically be used to acquire information on tunneling photon (Gisin and Thew, 2010; Celalettin and King, 2018).

Discussion

The acquisition of information on the entangled photon is can be through either imaging techniques, or monitoring the density of the medium or the like which in effect, measures it, meeting Heisenberg's Uncertainty principle's violation (Kane, 1998; Gachet *et al*., 2010).

Figure 1, we see anti-ferromagnetic elements (Bozorth, 1951; Celalettin and King, 2018; Gachet *et al*., 2010). As the entangled photon collides with INVIZICLOUD©, it burrows through the cloud leaving a wake of Helium-3 isotopes with no longer anti-ferromagnetized electron spins until either it rebounds its way out of the gas ensemble, is absorbed by one of the free electrons, or is re-aligned via spin exchange optical pumping, leaving an electron hole. It is the filling of these holes that is proposed to be the reason that 'quantum observation' causes 'quantum decoherence'.

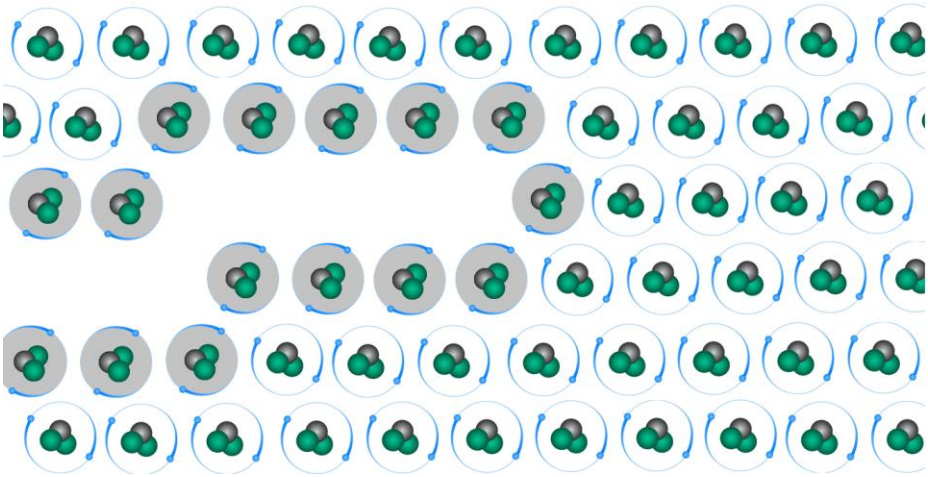

Fig. 1: 'Celalettin-field quantum observation tunnel' (Helium-3 atoms in grey have are no longer anti-ferromagnetized)

Just as it could be the physical evidence there was an interaction between the CFQOT and the photon (Celalettin and King, 2018; Gachet *et al*., 2010; Salerno *et al*., 2002; Walker and Happer, 1997; Dehlinger and Mitchell, 2002).

Albert Einstein described the photoelectric effect using a formula that relates the maximum kinetic energy of the photoelectrons to the frequency of the absorbed photons and the threshold frequency of the photo emissive surface, which is described by Equation 1 (Adler, 2003; Heisenberg and Bond, 1959):

$$K_{\max} = h\left(f - f_0 \right) \quad (1)$$

Where:

K = Kinetic energy of the signaler entangled photon
h = Planck constant
f = Frequency of the incident photon

After reverse engineering the photodiode detector and analyzing Einstein's description of the photoelectric effect using a formula that relates the maximum kinetic energy of the photoelectrons to the frequency of the absorbed photons and the threshold frequency of the photo emissive surface, engineering the CFQOT such that its photo emissive surface is its polarization and the threshold frequency of depolarizing one of the atoms is represented by the same equation (Celalettin and King, 2018; Adler, 2003; Heisenberg and Bond, 1959).

Comparing this simple but fundamental equation to both the photoelectric effect and INVIZICLOUD© and a more advanced equation later on in this paper, a pattern starts to emerge. As we already know, in the photodiode, electron-holes are created in the diode. Concurrently, when the electron-holes are created in the CFQOT by photons energetic enough described by Equation 1, electron-holes are creates in INVIZICLOUD©; A comparison unable to be performed prior to the creation of the CFQOT.

This would be easy to test if an atom of Helium-3 were prepared with one electron removed, put in a superposition in a vacuum and observed. If there were no free electrons available then it would remain in a superposition. The CFQOT is described using this formula that relates the maximum kinetic energy of photoelectrons produced when a high energy photon dislodges an electron from the Helium-3 atom, to the frequency of the CFQOT tunneling photon, which is described by Equation 1 (Celalettin and King, 2018; Salerno *et al*., 2002; Raison *et al*., 1971; Adler, 2003). Which as previously analyzed describes the exact maximum kinetic energy for the entangled photon to penetrate INVIZICLOUD© and create a CFQOC.

Kinetic Energy of the Entangled Photon in the Photoelectric Effect and INVIZICLOUD©

It is still not conclusive what causes 'quantum observation' and subsequently 'quantum decoherence' after the particle in a superposition is sampled through the filling of an electron hole. However the filling of an electron hole is a form of interaction so therefore an electron hole produced via a photon/Helium-3 collision causing a hole results is quantum decoherence due to the fact is a form of interaction (Forrester and Kusmartsev, 2014; Fukushima, 2015).

At this stage, all that can be confirmed is that:

1. The photoelectric effect and the CFQOT produces electron holes via a very similar process
2. 'Quantum Observation', a poorly defined phenomena occurs eventually
3. Decoherence occurs under both the photoelectric effect and CFQOT

The Role of the Proton in when a γsig Dislodges an Electron

The momentum of each photon in the photo electric effect and the CFQOT is given by:

$$p = \frac{E}{c} = \frac{h\upsilon}{c} = \frac{h\upsilon}{v\lambda} = \frac{h}{\lambda} \tag{2}$$

Where:
p = Photon's momentum
E = Energy
v = Velocity
λ = Wavelength
h = Planck's Constant

However let the mass of the electron to be ejected and maximum velocity of the photon:

$$\therefore \frac{1}{2}mv_{\max}^2 = h\nu - \phi_0$$
$$\therefore h\nu = \phi_0 + \frac{1}{2}mv_{\max}^2$$
$$But \phi_0 = h\nu_0$$

where, v_0 = Threshold frequency

$$\therefore \frac{1}{2}mv_{\max}^2 = h\nu - \phi_0$$
$$\therefore h\nu = \phi_0 + \frac{1}{2}mv_{\max}^2 \tag{3}$$
$$But\ \phi_0 = h\nu_0$$

Which is the photoelectric equation derived, to which the CFQOT behaves according to the same equation. However as the photoelectric effect is the act of emitting an outer electron, a proton could not be ejected as it is bound to the nucleus via the Strong force. However the effect it has on the remaining atom is interesting (Hertz, 1887).

However once the electron is emitted, the atom's charge changes:

$$FC = GN - UE - 1/2\ BE \tag{4}$$

Where:
FC = Formal charge
GN = Number of valence electrons in free, non-bonded atom
UE = Number of unshared electrons
BE = Number of electrons shared in covalent bonds

This would be significant, for Helium 3 because of the 2 protons, so those Helium atoms that loose electrons could bond with shared electrons on the covalent bonds. How that would affect the CFQOT is insignificant due to the sheer number of Helium-3 atoms per CFQOT cannister. So therefore it's safe to conclude that the photoelectric effect and INVIZICLOUD© both can be described by Equation 1 (Celalettin and King, 2018; Gachet *et al*., 2010; Salerno *et al*., 2002; Walker and Happer, 1997; Dehlinger and Mitchell, 2002; Raison *et al*., 1971).

Anti-Ferromagnetism

Anti-ferromagnetism is the phenomena that polarizes the electron spin which enables INVIZICLOUD© to exist and subsequently provides an Orbital Angular Momentum (OAM) ensemble to the entangled photon to burrow through, leaving information on its size and nuclear spin, which will be passed throughout the ensemble via spine exchange optical pumping (Bozorth, 1951; Gisin and Thew, 2010; Celalettin and King, 2018; Gachet *et al*., 2010; Walker and Happer, 1997), whereby the magnetic moments of atoms or molecules, usually related to the spins of electrons, align in to the neighboring spins.

We use the classical models by considering the classical spins with magnetic moments μA 6 = μB. To simplify we assume that nuclear spin interaction is disordered of the Heisenberg form. So, the ferrimagnet model described by the classical Hamiltonian of the type:

$$\mathcal{H} = -\sum_{i}^{N} \mu_i H \cdot s_i - \sum_{i}^{N} D_i \left(s_i^z\right)^2 - \sum_{\langle ij \rangle} J_{ij} s_i \cdot s_j \tag{5}$$

$$\dot{s}_i = \gamma_i \left[s_i \times H_{i,tot} + \zeta_i \right] - \gamma_i \lambda_i \left[s_i \times \left[s_i \times H_{i,tot} \right] \right] \tag{6}$$

$$\left\langle \zeta_{i,\alpha}(t) \zeta_{j,\beta}(t') \right\rangle = \frac{2\lambda_i k_B T}{\mu_i \gamma_i} \delta_{ij} \delta_{\alpha\beta} \delta(t - t') \tag{7}$$

$$H_{i,tot} \equiv -\frac{1}{\mu_i} \frac{\partial \mathcal{H}}{\partial s_i} = H + \frac{2D_i}{\mu_i} s_i^z e_z + \frac{1}{\mu_i} \sum_{j \in neig(i)} J_{ij} s_{ij} \tag{8}$$

Where:
H = Hamiltonian
N = Total number of Spins
I and J = Lattice sites
D_i = The anisotropy constant of site I
$|S_i| = 1$ = The third sum is over neighbor pairs
$J_{ij} = J_{AA(BB)} > 0$ = Heisenberg exchange interaction parameter
λ_i = Is the coupling to the heat bath parameter
a,B = Cartesian Z components Heat Bath and T is the temperature

Conclusion

The values for the parameters can be chosen a spontaneous electric polarization. At Equations 2 to 5, the Anti-ferromagnetism is based on the spins of the electrons in the ensemble. It is safe to say the equation cannot be reconciled unless there is an electron in the hole and the spin is either aligned, or there to be aligned.

As the CFQOT relies entirely on an anti-ferromagnetism based system which will in all likelihood be provided by an electromagnet, with spin-exchange optical pumping potentially working against the capability, the electromagnet with counteract that risk. Considering the Kinetic Energy of the photoelectric effect and INVIZICLOUD© both are described by Equation 1 and Equations 2,3,4 & 5 described the nuclear spins of the ferrimagnet model.

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Author's Contributions

As the author, I came up with Hasret's Theory as a theoretical explanation of quantum observation, whilst my supervisor ensured I used an appropriate mathematical approach.

Ethics

This article is original and contains unpublished material. The corresponding author confirms that all of the other authors have read and approved the manuscript and no ethical issues involved.

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