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Research Article

Keywords: graviton, photon, magnetic sea, quantum gravity

Posted Date: January 7th, 2022

DOI: <https://doi.org/10.21203/rs.3.rs-1238693/v1>

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Abstract

The ground-based device simulates the graviton explosion between gravity and magnetic seas. Trapped graviton was set to behave as free relativistic quantum particles, making it possible to induce magnetic fields as a function of time in the space Hieut (H). Our result is grounded on rigorous proof based on the photon sea for different initial superpositions of positive- negative-graviton spinor states. This explains that the interactive inducing protocol can be used to test the ability of the magnetic field not to communicate but to explode with relativistic quantum gravity.

I. Introduction

Recent advances in cooling, control, and measurement of mechanical systems have allowed various models of low-energy quantum gravity (1). However, we made graviton a considerable force using Earth's gravity for experiments. In addition, our quantum regime has allowed direct observations of quantum gravity at nano-scale experiments achievable (2).

(Fig.1)

Figure 1. A schematic diagram of graviton that navigates in condensed photon sea.

Space-G has graviton force (mg), and space-P has photon force ($\epsilon = -N \frac{d\Phi}{dt}$)

If the graviton's interactive sensing protocol has the gravitational field's ability to communicate quantum information.(3) (4) (5), we could present a model for graviton to interact, collide, and explode with photon seas. As a result, it induces changes in the fields. Michael Faraday wrote a paper in 1851 titled "On the possible relation of gravity to electricity" (6). However, Faraday's experiments could not prove the relationship between gravity and electromagnetic fields. Gravitation is still regarded as a weaker interaction than electromagnetism or nuclear forces. This paper gives a broad overview of this idea, using photon-graviton matters and their operating mechanical systems to illustrate the predictions of diverse gravitational phenomena.

II. Captured graviton explode in the condensed photon sea.

In the sixth measurement, the random patterns at points 3502, 3503, 3504, and 3505 show a typical pattern when graviton is trapped in photon sea—the potential increases as graviton overlaps in units of 0.001 seconds (2). Gravitational-wave (GW)20200618 might be measured because it is more significant than Earth's gravity. The voltage increased rapidly by 0.0352 millivolts, 0.0356 millivolts, 0.129 millivolts, 3.54 millivolts, and 0.0408 millivolts at 3502, 3503, 3504, 3505 3506 points. (Fig. 2)

Figure 2. GW20200618^{informality}

It was not caused by a pressure change in the vacuum tube because 0.001-second units measured it, and only five points change occurred in succession. The voltage increased 0.0352 milivolt, 0.0356 milivolt, 0.129 milivolt, 3.54 milivolt, 0.0408 milivolt at 3502, 3503, 3504, 3505 and 3506 points in the vacuum on June 18, 2020. According to Newton's third law, the other points also shows a rebound phenomenon ($R^2=0.323$).

It was a phenomenon caused by the sudden gravitational fluids in the vacuum, but LIGO and Virgo suspended the third observing run on March 27 2020, at 17:00 UTC, as the current worldwide COVID-19 pandemic demands(7). J. K. of LIGO confirmed that LIGO was not operating on June 18, 2020. So we assign these measurements as GW20200618^{informality} as a phenomenon in which the magnetic fields trap gravitational waves. The theory of quantum mechanics can be merged with general relativity or gravitational force at microscopic length scales. Now, we can convert the study of light trapped in a black hole into a study of gravity trapped in space H.

$$\frac{\partial B_x}{\partial x} + \frac{\partial B_y}{\partial y} + \frac{\partial B_z}{\partial z} = 0$$

$$\varepsilon^{\mu\nu\kappa\lambda}\partial_\nu F_{\kappa\lambda} = 0$$

$$\varepsilon = -N \frac{d\Phi}{dt} \text{ in space H}$$

are balanced, the mass-energy equivalence principle of General Relativity holds in space H.

That is, approximately $E_1 = m_1 c^2$ (by graviton) and $E_2 = m_2 c^2$ (by photon) hold. In space H,

there are $E_1 = \frac{l^3}{\mu_1} c^2$ and $E_2 = \frac{l^3}{\mu_2} c^2$. If space H is identified as l^3 , l^3 is consisted of time,

density (μ) and mass of string (m) where they can exchange energy. (l is the length of the

hidden space.) Space H exclude time on Earth because time is a four-dimensional constant,

$l^3 = \mu \cdot m$ and $m = \frac{l^3}{\mu}$. $\frac{l^3}{\mu}$ is filled with graviton and photon.

Here, when space H has graviton and photon on Earth, E_1 and E_2 are in the equilibrium

state. Graviton collides with photon in relatively electromagnetic solid fields that are more

than 10^{39} . The gravitational force of E_1 is converted to the electromagnetic force of E_2 .

Graviton energy in space H is converted into electromagnetic energy, reaching equilibrium.

Graviton-photon equation is taken in space H (Hieut), as follows.

$$\frac{l^3}{\mu_1} c^2 = - \int N \frac{d\Phi}{dt}$$

Three measurements were made first in air and ten times at 0.0001 mbar. We compared from

point 2897 to 2997 of 100,000 points for 10 seconds. There are much large (+) voltages and

currents generated in vacuum states.

Fig. 3. In the vacuum experiments – Currents and Voltages.

This is the first measurement data of the magnetic sea generator with/without air. We compared from point 2897 to 2997 of 100,000 points for 10 seconds. First, when the magnetic sea generator was in the air, the currents from 2897 to 2997 points (Raw data from Data S2 2020.06.18. Vacuum chamber & magnetic sea generator in the air.- gravity1.csv) are displayed, and the trend line is displayed. Next, the currents from 2897 to 2997 points were displayed in the data measured when the magnetic sea generator was in the vacuum (Data S3 2020.06.18.Experiments with the magnetic sea generator in the vacuum chamber.-

vacuum_0.0001mbar1.csv). The voltages from 2897 to 2997 points in the air are also displayed, displaying the trend line. Next, the voltages from 2897 to 2997 points were displayed in the data measured when the magnetic sea generator was in a vacuum (Data S3 2020.06.18.Experiments with the magnetic sea generator in the vacuum chamber.- vacuum_0.0001mbar1.csv).

Earth's gravity and gravitational waves were passed through high magnetic fields. As a result, they produced a certain amount of electricity in the stationary state. Therefore, gravity and gravitational wave can induce the magnetic seas if graviton is present in the magnetic seas.

III. Singularity in space H.

The currents and voltages were generated at the equilibrium state in the vacuum. There is no other way to explain this phenomenon other than describing it as the generation of electricity by dividing particles according to the Weinberg-Witten theorem (8). It is like spherically symmetrical collapse (one space dimension suppressed) within Schwarzschild radius, accompanied by a violent release of energy, possibly gravitational radiation (9). Ohm's law means that the current flowing by the potential difference (voltage) appears between two conductor points. It obeys a specific law. Ohm's law is microscopically the same as if an object moves at a speed of v for the magnetic field B . This equation has a relationship with Lorentz force. There is a drag proportional to the speed of the charge carrier (10).

[Microscopical Ohm's law]

$$\mathbf{J} = \sigma \mathbf{E}. \quad \mathbf{J} = \sigma \cdot (\mathbf{E} + \mathbf{v} \times \mathbf{B})$$

(J is the current density, σ is the electrical conductivity (perhaps a tensor in anisotropic materials), and E is the electric field)

Ohm's law is shown to be nonlocal and cannot be used to evaluate plasma volume resistivity (11). If there is no singularity in the space-time of the sea of magnetic fields, gravity cannot generate electricity. This experiment proves that singularities are inevitably present in the magnetic sea. Space H creates a temporarily closed surface in space-time singularities. The speed of gravity at space H can be the light speed (12) (13), and the magnetic field force is much stronger than gravity, so it is within the Newtonian limit (14).

Space-time singularities generate gravitational waves emission during the black hole ringdown phase. A simple coupling between gravitational perturbations and this scalar hair caused the quasinormal ringing of the Schwarzschild–de Sitter black hole. It produces echoes in the emitted gravitational waves (15).

Suppose, according to reduction to absurdity, deviations from spherical symmetry cannot prevent gravitational collapse and space-time singularities from arising (9). Now, we can convert the study of light trapped in a black hole into a study of gravity trapped in space H. Those in space H can induce the quasinormal ringing of the magnetic sea to generate electricity. A boundary point can detect gravitational waves in the cosmos with an electromagnetic device (16-19). It explains that Cassiopeia A, one of the remnants left after the supernova explosion, has an unusually irregular structure, and the magnetic field amplification occurred in the wreckage, where the magnetic field is 100 times higher than that of its surroundings (20).

IV. Conclusion

The theory of quantum mechanics can be merged with general relativity or gravitational force at nano length scales through space H experiments.

Data Availability

All data are published by OSF: Gravity to Electricity as Quantum (<https://osf.io/ntuda/>).

Supplement

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