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Research Article

JUPITER'S INNOVATIVE GRAVITATIONAL CONCEPT PROPOSAL

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Abstract

Why Jupiter provides 50% of the gravitational force in the solar system, while the Sun does not contribute 99%, have seem to puzzle many scientists. This seems to defy the gravitational assumptions of Einstein's theory. According to the theory, the Sun's massive weight should contribute significantly to the gravitational force that maintains the orbits of the solar system (particularly the other 8 planets). This mass should cause a curvature in space, creating an invisible path for the planets to follow. Although migration theories suggest that there may be cause for planet migration, as of now, there is no definitive answer.In this research paper, we hope to bridge the gap between Einstein's theory as well as the quantum physic, we will propose a comprehensive explanation for the mechanism of gravitational contribution and its underlying reasons. Our goal is to unveil Einstein's theory and explore Jupiter's gravitational history, shedding light on why Jupiter may exerts50% more gravitational force than the Sun.

Keywords: Gravitational force, Gravitational contribution, Solar system, Einstein's theory.

INTRODUCTION

Gravitational-force among2bodies alters on their masses and the distance between them. Even though the Sun is much more massive than Jupiter, the distance and mass differences mean that Jupiter can contribute more gravitational force than the Sun [1].According to the migration theory, Jupiter may have exerted over 90% of the gravitational force compared to the Sun during a certain period. This could have led to an invisible force that disrupted the orbital range of other planets, potentially affecting their orbital paths. Therefore, it is possible that Jupiter had a greater gravitational impact than the Sun during a particular periodof time.Although the Sun is much bigger than all the other planets, its gravitational force might not be greater than the gravity of other planets owing to their different gaps of dissociation from the Sun. But, Jupiter, for example, has a significant gravitational influence, even though the Sun's gravity always prevails. Considering the gravitational contribution to orbital paths, Jupiter may appear to have more than 50% contribution of the influence on the orbits of other planets, especially those of other planets. In this research paper, it is proposed that antiparticles, when simulated in a time series, may be capable of capturing gravitational waves, thereby generating an additional force that could correct the trajectories of other planets. According to the accumulation gravitational-wave theory developed by Lie, the capture of gravitational waves within a specific time span results in the accumulation of power force. (Lie, 2025) [2]. These particle and antiparticles could potentially create a form of gravitational field barrier, leading to a transformation of the surrounding space and influencing the trajectories of other planets.Actually speaking, in the context of spacetime, if the interval between points is space-like, with a Lorentz transformation, there willbe a needed to interchange points x and y. When the two terms are Lorentz invariant. Sothat, we can only perform a Lorentz transformation in the second term. As a result, the second term becomes exactly the same as the first term, causing the commutator $[Ø(x),Ø(y)]$ to be zero, which satisfies relativistic causality. Conversely, if the interval between two points is time-like, $〖(x-y)〗^2>0$, then no continuous Lorentz transformation will interchange the two points x and y. As a result, in general, the commutator is not equal to zero [3].That mean, when the sun of X and the Jupiter of Y is the two major point. Which is when the interval between points is space-like, a Lorentz transformation is required to interchange points x and y. Since the two terms are Lorentz invariant, only the second term can undergo a Lorentz transformation. This causes the second term may become identical or more than one as to the first term, resulting in the commutator $[Ø(x),Ø(y)]$ being not exactly equal likely, as required by relativistic causality. As a result, the net energy consumption of accumulation by Jupiter is more than 1 in the short run.

Suggestion for the Capture of gravitational wave

In the grand scheme of things, when a planet enters a solar system, the impact creates a large disturbance that generates a force of momentum. Some of this force is transformed into gravitational waves, which are captured by other planets in the solar system. The remaining force is converted into potential gravitational energy, which will be altered over the short term (as over a billion years). If we assume the solar system's spacetime is like a bottle, the wall might move in the opposite direction, capturing the accumulation of all the gravitational waves from the sun and the migration of the planets.

The causality described above occurs not only in the single-component Klein-Gordon field but also in the propagation of the complex Klein-Gordon field. To calculate the commutator $[Ø(x),Ø^{\dagger}(y)]$, two types of generation and extinction operators, a_p, $a_p^{\dagger}$, b^p, and $b_p^{\dagger}$, are involved in the quantization of the complex Klein-Gordon field. These operators produce particles of equal mass but opposite conserved charge, which we'll refer to as electric charge. They act as antiparticles to each other. For instance, $Ø(x)$ produces positively charged particles and annihilates negatively charged particles, while $Ø^{\dagger}(x)$ produces negatively charged particles and annihilates positively charged particles.When considering two space-time points x and y separated by space, the commutator [Ø(x),Ø^† (y)]. This may lead to (indicate) that for the single-component Klein-Gordon field, despite initially appearing to involve only one type of particle, in reality, its antiparticle is itself. So, this research paper predicted that the field may be derived by momentum as well as the anti-particle.

The cancellation of the two terms in the commutator [Ø(x),Ø^† (y)] is achieved through the propagation of positive and negative particles along different time directions, which ultimately maintains causality.If we assume the Klein bottle hypothesis is accurate, this paper's prediction of the short-run and long-run approaches may accurately represent the corresponding conservation flow.

Integration of gravitational wave

This paper suggests that the migration of planets can generate a significant amount of energy force, which in turn can contribute to the correction of a planet's orbit by Jupiter. Therefore, this gravitational assumption, influenced by the interaction of particles and antiparticles in spacetime, will undoubtedly impact the paths of the planets, particularly their directional paths.

The gravitational force gives the exercise of the action of the complex Klein-Gaul entry, and the corresponding conservation flow accumulates and is captured by some other means. This Quantifies theory and verifies the causal conclusions mentioned above.

Modify Suggestion:

Starting from the commutator of the gravitational wave field, we can define different propagators of the field. For example, we can define a delayed propagator (Short Run Approach):

$D_r(x-y) \equiv \theta(x^0-y^0)\langle 0|[\emptyset(x),\emptyset(y)]|0\rangle * p*$ SumGravitational wave (1.1)

As $\theta(x^0-y^0)$*P* Gravitational wave express, in the Lorenz transformation of constant bases

$D_R(x-y) = \int \frac{d^4p}{(2\pi)^4}\left(\frac{i}{p^2-m_0^2}\right)e^{-ip.(x-y)}$p*SumGravitational-wave(1.2)

The integral for p^0 must encircle the two singular points of the integrand,but it is not as likely that in the short run approach; in the short run, it may cause an imbalance situation, but in the long run, it will still come to zero equal approaches. ±E_p. This integral path ensures the propagation characteristics of the propagator. Specifically, if x^0 < y^0, the propagator D_R (x-y) will always be as likely in the long run, but in the short run, due to the gravitational assumption. Simply put, it corresponds to a wave in which both the positive and negative energy components of the plane wave factor propagate in the positive time direction. It may have a shift effect when the nominator magnet wave and denominator magnet wave shift. Due to the negative sign of correctness. This cross-examination of the exchange of nominator and denominator effect, which was developed and proposed by this research article, may provide a new kind of insight concept, which may brighten the way for a full new understanding of the universe.

It is reasonable to show that if our integral paths encircle the two singular points of the integrand, we will obtain the so-called advanced propagator. This corresponds to both positive and negative energy components propagating in the negative time direction. The most common in quantum field theory are the so-called Feynman propagators. It is equivalent to bypassing the marvel from below the negative energy marvel and above the positive energy singularity. We can express the selection of this path clearly as the transformance.

In our earlier discussion of the Lorentz group, we talked about the distinction between space-like and time-like intervals. The key difference lies in the connectivity of these intervals. Time-like surfaces, both above and below, are separated by light cones, while space-like intervals are connected. If the commutator were always equal to zero, we wouldn't have a quantum theory. So, it must have happened in the short-run imbalance position.

If applying the Feynman propagator, these kinds of anti-particle and particle movements, will be consumed as the final end of zero, but in accordance of the time series, this paper believed that this spacetime transformation of gravativity activities may still be working on, that means in the short run (10000 years of time), In these time series it will still be affected, but in the long run approach (2 billion years), the spacelike will become normal. Which will not affect the conservation Law of physics.

Where ϵ is an infinitesimally positive number that ensures the selection of the integration path described above. Feynman propagators represent waves in which the positive energy portion propagates in the positive time direction, and the negative energy portion propagates in the negative time direction. As the expression is in a four-dimensional Fourier transform, the Feynman propagator in momentum space will make it easier to prove our paper's assumption, as mentioned above.

Among them, we define the so-called timing operator, whose function is to always place the field operator whose time is later on the left side of the product, that is, therefore, Feynman propagators are also called timing propagators. In the following, we will often use this type of timing propagator.

The connection between quantum fields, waves, and particles is a fundamental concept in physics. In relativistic quantum field theory, the field itself is a central component. The ground state of the quantized field, is defined as the vacuum in quantum field theory, signifying the system's lowest energy level. Excitations above the vacuum state are associated with particles. This connection is particularly apparent in the behavior of free fields, where the eigenvalues of its Hamiltonian are evenly spaced for a given wave vector, and each component's energy can be interpreted as the energy of a single particle. Furthermore, the energy and momentum of this single particle adhere to the energy-momentum relationship in the special theory of relativity. So, this research paper proposesand tries to utilize the relativity theory as well as the energy-momentum, transforming to the energy of the gravitational wave of accumulation, which will become a new gravitational field of force that corrections the solar system's path.

The eigenvalues of the operator (non-negative integers) represent the number of particles with momentum. In addition, the quantum field in the Heisenberg representation satisfies a wave equation. For the free Klein-Gordon field, this wave equation is known as the Klein-Gordon equation, with its solutions corresponding to waves in space-time. This illustrates that while non-relativistic quantum mechanics is rooted in de Broglie's wave-particle duality, our understanding is further refined in relativistic quantum field theory. The relativistic quantum field serves as the connection between waves and particles, acting as a wave (as a solution to the wave equation), and as coefficients for the generation and destruction of corresponding particles based on the eigenfunction (Fourier) of the wave.

In summary, this research paper aims to explore the concept of explaining the phenomenon of Jupiter's additional contribution to gravitational forces. The study focuses on the interplay of short-term and long-term processes in antiparticle dual processing, resulting in an additional gravitational effect in the time series. This may account for why Jupiter exerts more gravitational force than the Sun. The simultaneous occurrence of multiple events leads to the processing of certain elements, which may be linked to the divided particle theory, causing a gravitational distortion attributed to a specific objects. These factors contribute to the capture process, potentially leading to the return of antiparticles to the vicinity of solar planets. Hope this research paper can contribute to the world and humanilty.

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