



# New Discovery for the Nature of Neutrinos and a Description of Their Structure



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## Abstract

Neutrinos have long been known as mysterious and elusive particles in modern physics. Despite decades of study, their true nature remains unclear. Based on the recent theoretical developments proposed in Saleh Theory, it is suggested that neutrinos and gravitational fluxes are fundamentally identical manifestations of the same phenomenon. Both share similar characteristics: extremely small rest mass, lack of electric charge, near-light velocity, and high penetrating power through matter. In this paper, we provide a detailed comparison between the physical properties of neutrinos and those of gravitational fluxes as described in Saleh Theory. The results show that gravitational fluxes are composed of intertwined photons forming continuous chains that can penetrate all materials with minimal interaction. These findings lead to a unified interpretation: neutrinos are the quantum carriers of gravitational interaction, and gravity itself is the manifestation of the collective behavior of intertwined photons forming these fluxes.

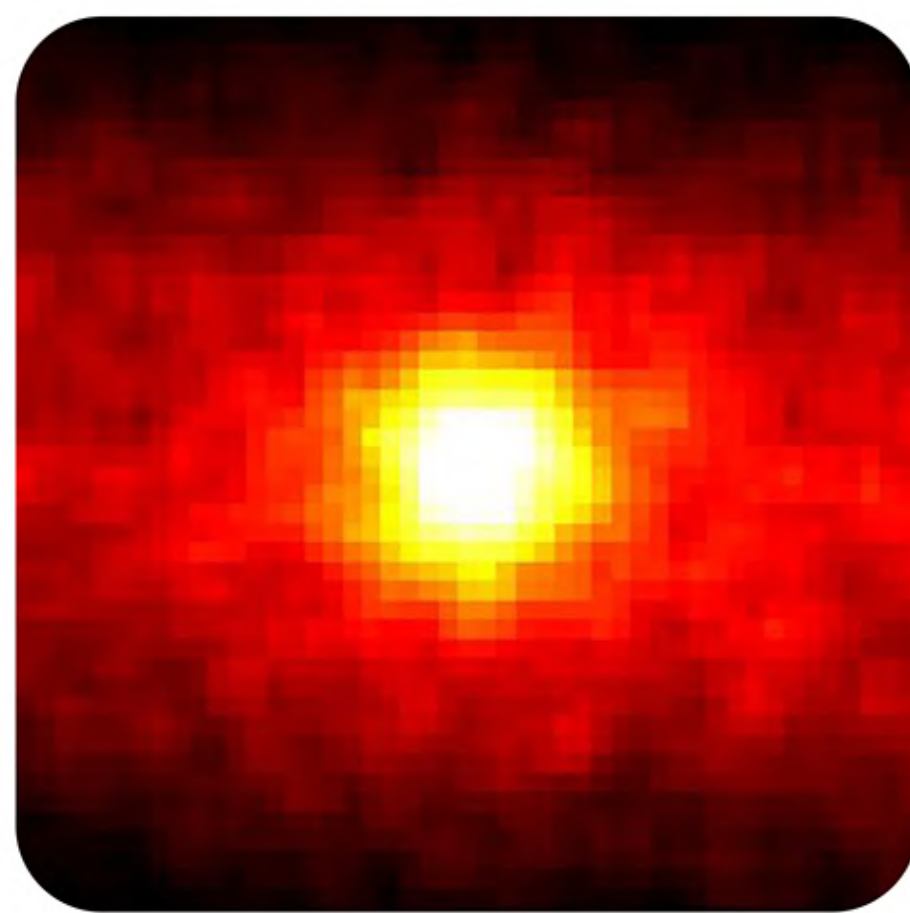
## 1. Introduction

Since the discovery of neutrinos in the early 20th century, their properties have intrigued physicists worldwide. Initially introduced by Wolfgang Pauli to explain missing energy in beta decay, neutrinos were later confirmed experimentally and found to be neutral, nearly massless, and extremely weakly interacting particles. Despite the advances in neutrino physics, many questions remain unanswered: What is their internal structure? Why do they penetrate matter so easily? And is there any deeper connection between neutrinos and the fundamental forces of nature, especially gravity? Saleh Theory introduces a new physical perspective suggesting that all forces and particles originate from the dynamics of photons. In this context, gravity is not a mysterious curvature of spacetime, but rather a continuous flux of intertwined photons emitted by stars, known as gravitational fluxes. These fluxes create equilibrium among celestial bodies and govern orbital motion through energy balance. The present work aims to demonstrate that the physical characteristics of these gravitational fluxes are identical to those of neutrinos.

## 2. Known Physical Properties of Neutrinos

Experimental research has established the following fundamental properties of neutrinos:

1. Neutrinos are produced by stars and emitted isotropically in all directions.
2. They possess a very small but non-zero rest mass.
3. They carry no electric charge.
4. They travel at speeds very close to the speed of light.
5. Their reactivity with matter is extremely low, allowing them to pass through vast amounts of material almost without interaction.
6. They are not directly affected by magnetic fields and can traverse strong fields unhindered.
7. They can pass through the Earth, entering from one side and exiting the opposite side without noticeable resistance.
8. Approximately  $10^{10}$  neutrinos pass through each square centimeter of the Earth per second.
9. They can be detected only by very large detectors placed deep underground.
10. Neutrinos remain the most elusive fundamental particles in the universe.



Credit: R. Svoboda and K. Gordan (LSU)

## 3. Concept of Gravitational Fluxes in Saleh Theory

According to Saleh Theory, gravitational attraction arises not from spacetime curvature but from continuous flows of intertwined photons that form gravitational fluxes.

These fluxes connect stars and planets through ring-shaped, superstring-like structures that transfer energy and stabilize orbital motion.

The characteristics of gravitational fluxes are summarized as follows:

1. Gravitational fluxes are composed of intertwined photons produced in stellar cores under extreme temperature and pressure.
2. Each component of the flux has an extremely small rest mass due to its photon-based nature.
3. They possess no electric charge.
4. They propagate at the speed of light.
5. They interact only with special alloys and otherwise pass through matter without reaction.
6. They are not influenced by magnetic fields.
7. They behave like a continuous belt that enters a planet on one side and exits the other, maintaining its orbital stability.
8. Approximately  $10^{14}$  gravitational fluxes pass through each square centimeter of the Earth per second.
9. They can be detected only deep underground using materials sensitive to photon interlinking.
10. Their detection is extremely difficult due to their penetrating power.

## 4. Comparison Between Neutrinos and Gravitational Fluxes

Property	Neutrinos	Gravitational Fluxes (Saleh Theory)
Source	Produced in stars	Produced in stellar cores
Composition	Unknown (assumed elementary)	Intertwined photons
Rest mass	Very small, non-zero	Very small (photon-based)
Electric charge	Zero	Zero
Speed	Close to C	Exactly C
Magnetic interaction	None	None
Penetration through matter	Extremely high	Extremely high
Directionality	Isotropic	Radially emitted from stars
Detectability	Only deep underground	Only deep underground
Flux through 1 cm <sup>2</sup> per second	$10^{10}$	$10^{14}$

This comparison clearly demonstrates that the properties of neutrinos and gravitational fluxes are remarkably similar, suggesting a potential equivalence between them.

## 5. Theoretical Interpretation: Neutrino–Gravity Equivalence

Considering these correspondences, Saleh Theory proposes a unified view:

Neutrino is the same as gravity, and gravity is the same as neutrino.

In this interpretation, the high penetrating power of neutrinos (or gravitational fluxes) arises from their intertwined, continuous photon structure. Their high frequency and extremely short wavelength result in strong coherence and stability, allowing them to traverse any form of matter.

In contrast, visible photons, which are not intertwined, exist as independent particles with weaker effects. Thus, gravitational fluxes represent a collective photon state—a coherent network that amplifies the energy density and interaction range of light, giving rise to the gravitational force.

## 6. Implications and Predictions

If neutrinos and gravitational fluxes are indeed identical, several profound implications arise:

1. Unified Field Insight: Gravity and electromagnetism may share a common photon-based origin.
  2. Stellar Physics: Stars emit not only radiant photons but also gravitational fluxes (neutrinos) that maintain planetary stability.
  3. Detection Methods: Specialized alloys or super-coherent photon-sensitive materials could enable the detection of gravitational fluxes.
  4. Energy Transfer Mechanism: Gravitational energy could be quantized as neutrino-photon chains, linking the micro (quantum) and macro (cosmic) scales.
- These predictions open new avenues for both theoretical research and experimental exploration in particle physics and cosmology.

## 7. Conclusion

By comparing the established physical properties of neutrinos with the predicted characteristics of gravitational fluxes in Saleh Theory, this study presents a unified interpretation of these two seemingly different phenomena. Both neutrinos and gravitational fluxes are composed of intertwined photons, lack electric charge, move at or near the speed of light, and possess immense penetrating power.

Therefore, neutrinos can be understood as the quantum essence of gravity—continuous chains of photons that connect celestial bodies through invisible yet powerful fluxes. This insight bridges the gap between quantum theory and gravitational phenomena and provides a new foundation for understanding the universe's underlying structure.

## References

1. Svoboda, R., and K. Gordan. "Neutrinos in the Sun." Astronomy Picture of the Day, NASA, 05 Jun 1998, <https://apod.nasa.gov/apod/ap980605.html>
2. Cowan Jr, Clyde L., et al. "Detection of the free neutrino: a confirmation." Science 124.3212 (1956): 103-104.
3. Einstein, Albert. "The foundation of the general theory of relativity." Annalen Phys 49.7 (1916): 769-822.
4. Saleh, Gh. "New description for the nature of neutrinos." The 84th Japan Society of Applied Physics (JSAP) Autumn Meeting 2023. 2023.
5. Saleh, Gh. "A new explanation for the nature and other properties of neutrinos." International Annual Meeting of the German Astronomical Society (AG meeting 2023. 2023).
6. Saleh, Gh. "Discovering the True Nature of neutrinos." APS New England Section Fall Meeting Abstracts. 2022.
7. Saleh, Gh. "New discovery about the nature of neutrinos and their structure." APS Northwest Section Meeting Abstracts. Vol. 22. 2022.
8. Saleh, Gh. "The neutrinos or gravitational fluxes." 2022 JINA-CEE Frontiers in Nuclear Astrophysics (2022): 29.