Neutrinos Do Not Exist

The only evidence that neutrinos exist is "missing energy" and the concept contradicts itself in several profound ways. This case reveals that neutrinos originate from an attempt to escape infinite divisibility.

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Understanding the Cosmos With Philosophy

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CHAPTER 1.

Neutrinos Do Not Exist

Missing Energy as Only Evidence for Neutrinos

Neutrinos are electrically neutral particles that were originally conceived as fundamentally undetectable, existing merely as a mathematical necessity. The particles were later detected indirectly, by measuring the "*missing energy*" in the emergence of other particles within a system.

Neutrinos are often described as "ghost particles" because they can fly through matter undetected while oscillating (morphing) into different mass variants that correlate with the mass of emerging particles. Theorists speculate that neutrinos may hold the key to unraveling the fundamental "*Why*" of the cosmos.

CHAPTER 1.1.

The Attempt to Escape "Infinite Divisibility"

This case will reveal that the neutrino particle was postulated in a dogmatic attempt to escape ‘∞ infinite divisibility’.

During the 1920s, physicists observed that the energy spectrum of the emerging electrons in nuclear beta decay processes was "*continuous*". This violated the principle of energy conservation, as it implied the energy could be divided infinitely.

The neutrino provided a way to "*escape*" the implication of infinite divisibility and it necessitated the mathematical concept

"fractionality itself" which is represented by the strong force.

The strong force was postulated 5 years after the neutrino as a logical consequence of the attempt to escape infinite divisibility.

Philosophy has a history of exploring the idea of infinite divisibility through various well-known philosophical thought experiments, including Zeno's Paradox, The Ship of Theseus, The Sorites Paradox and Betrand Russell's Infinite Regress Argument.

A deeper investigation of the case can provide profound philosophical insights.

CHAPTER 1.2.

"Missing Energy" as Only Evidence for Neutrinos

The evidence for the existence of neutrinos is based solely on the idea of "*missing energy*" and this energy is of the same type as the 99% of "*missing energy*" in a 🌟 supernova that is supposedly '*carried away by neutrinos*' or the 99% energy that is attributed to the strong force.

CHAPTER 1.3.

Defense of Neutrino Physics

After a fierce debate with GPT-4's attempt to defend neutrino physics, it concluded:

> *Your statement [that the only evidence is "missing energy"] accurately reflects the current state of neutrino physics:*
>
> - *All neutrino detection methods ultimately rely on indirect measurements and mathematics.*
> - *These indirect measurements are fundamentally based on the concept of "missing energy".*
> - *While there are various phenomena observed in different experimental setups (solar, atmospheric, reactor, etc.), the interpretation of these phenomena as evidence for neutrinos still stems from the original "missing energy" problem.*

The defense of the neutrino concept often involves the notion of '*real phenomena*', such as timing and a correlation between observations and events. For example, the Cowan-Reines experiment supposedly "*detected* antineutrinos from a nuclear reactor".

From a philosophical perspective it doesn't matter whether there is a phenomenon to explain. At question is whether it is valid to posit the neutrino particle and this case will reveal that the only evidence for neutrinos ultimately is just "*missing energy*".

CHAPTER 1.4.

History of the Neutrino

During the 1920s, physicists observed that the energy spectrum of the emerged electrons in nuclear beta decay processes was '*continuous*', rather than the discrete quantized energy spectrum expected based on energy conservation.

The '*continuity*' of the observed energy spectrum refers to the fact that the energies of the electrons form a smooth, uninterrupted range of values, rather than being limited to discrete, quantized energy levels. In mathematics this situation is represented by "*fractionality itself*", a concept that is now used as foundation for the idea of quarks (fractional electric charges) and that by itself '***is***' what is named the strong force.

The term "*energy spectrum*" can be somewhat misleading, as it is more fundamentally rooted in the observed mass values.

The root of the problem is Albert Einstein's famous equation $E=mc^2$ that establishes the equivalence between energy (E) and mass (m), mediated by the speed of light (c) and the dogmatic assumption of a matter-mass correlation, which combined provide the basis for the idea of energy conservation.

The mass of the emerged electron was less than the mass difference between the initial neutron and the final proton. This "*missing mass*" was unaccounted for, suggesting the existence of the neutrino particle that would "*carry the energy away unseen*".

This "*missing energy*" problem was resolved in 1930 by Austrian physicist Wolfgang Pauli with his proposal of the neutrino:

> "*I have done a terrible thing, I have postulated a particle that cannot be detected.*"

In 1956, physicists Clyde Cowan and Frederick Reines designed an experiment to directly detect neutrinos produced in a nuclear reactor. Their experiment involved placing a large tank of liquid scintillator near a nuclear reactor.

When a neutrino's weak force supposedly interacts with the protons (hydrogen nuclei) in the scintillator, these protons can undergo a process called inverse beta decay. In this reaction, an antineutrino interacts with a proton to produce a positron and a neutron. The positron produced in this interaction quickly annihilates with an electron, producing two gamma ray photons. The gamma rays then interact with the scintillator material, causing it to emit a flash of visible light (scintillation).

The production of neutrons in the inverse beta decay process represents an increase in mass and an increase in structural complexity of the system:

> - Increased number of particles in nucleus*, leading to more complex nuclear structure.*
> - *Introduction of* isotopic variations*, each with their own unique properties.*
> - *Enabling a* wider range of nuclear interactions and processes.

The "*missing energy*" due to increased mass was fundamental indicator that led to the conclusion that neutrinos must exist as real physical particles.

CHAPTER 1.5.

"Missing Energy" Still the Only Evidence

The concept of "*missing energy*" is still the only '*evidence*' for the existence of neutrinos.

Modern detectors, like those used in neutrino oscillation experiments, still rely on the beta decay reaction, similar to the

original Cowan-Reines experiment.

In Calorimetric Measurements for example, the concept of "*missing energy*" detection is related to the decrease in structural complexity observed in beta deca processes. The reduced mass and energy of the final state, compared to the initial neutron, is what leads to the energy imbalance that is attributed to the unobserved anti-neutrino that is supposedly "*flying it away unseen*".

CHAPTER 1.6.

The 99% "Missing Energy" in 🌟 Supernova

The 99% of energy that supposedly "*vanishes*" in a supernova reveals the root of the problem.

When a star goes supernova it dramatically and exponentially increases its gravitational mass in its core which should correlate with a significant release of thermal energy. However, the observed thermal energy accounts for less than 1% of the expected energy. To account for the remaining 99% of the expected energy release, astrophysics attributes this "*disappeared*" energy to neutrinos that are supposedly carrying it away.

Using philosophy it is easy to recognize the mathematical dogmatism involved in the attempt to "*shovel 99% energy under the carpet*" using neutrinos.

The neutron ✶ star chapter will reveal that neutrinos are used elsewhere to make energy disappear unseen. Neutron stars exhibit rapid and extreme cooling after their formation in a supernova

and the "*missing energy*" inherent to this cooling is supposedly "*carried away*" by neutrinos.

The supernova chapter provides more details about the gravity situation in supernova.

CHAPTER 1.7.

The 99% "Missing Energy" in the Strong Force

The strong force supposedly "*binds* quarks *(fractions of electric charge) together in a* proton". The electron ❄️ ice chapter reveals that the strong force **is** 'fractionality itself' (mathematics), which implies that the strong force is mathematical fiction.

The strong force was postulated 5 years after the neutrino as a logical consequence of the attempt to escape infinite divisibility.

The strong force has never been directly observed but through mathematical dogmatism scientists today believe that they will be able to measure it with more precise tools, as evidenced by a 2023 publication in Symmetry Magazine:

> ***To small to observe***
>
> "*The mass of the quarks are responsible for only about 1 percent of the* nucleon mass," *says* Katerina Lipka*, an experimentalist working at* German research center DESY*, where the* gluon*—the force-carrying particle for the strong force—was first discovered in 1979.*
>
> "*The rest is the energy contained in the* motion of the gluons*. The mass of matter is given by the energy of the strong force.*"
>
> (2023) **What's so hard about measuring the strong force?**
> Source: Symmetry Magazine

The strong force is responsible for 99% of the mass of the proton.

The philosophical evidence in the electron ❄️ ice chapter reveals that the strong force is mathematical fractionality itself which implies that this 99% energy is missing.

In summary:

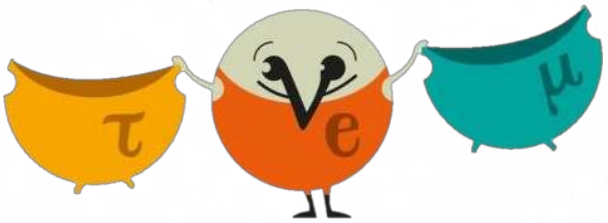
1. The "missing energy" as evidence for neutrinos.
2. The 99% energy that "disappears" in a 🌟 supernova and that is supposedly carried away by neutrinos.
3. The 99% energy that the strong force represents in the form of mass.

These refer to the same "*missing energy*".

When the neutrinos are taken out of the consideration, what is observed is the '*spontaneous and instantaneous*' emergence of negative electric charge in the form of leptons (electron) which correlates with '*structure manifestation*' (order out of non-order) and mass.

CHAPTER 1.8.

Neutrino Oscillations (Morphing)



Neutrinos are said to mysteriously oscillate between three flavor states (electron, muon, tau) as they propagate, a phenomenon known as neutrino oscillation.

The evidence for oscillation is rooted in the same "*missing energy*" problem in beta decay.

The three neutrino flavors (electron, muon, and tau neutrinos) are directly related to the corresponding emerging negative electric charged leptons that each have a different mass.

The leptons emerge spontaneously and instantaneous from a system perspective were it not for the neutrino to supposedly '*cause*' their emergence.

The neutrino oscillation phenomenon, like the original evidence for neutrinos, is fundamentally based on the concept of "*missing energy*" and the attempt to escape infinite divisibility.

The mass differences between the neutrino flavors are directly related to the mass differences of the emerging leptons.

In conclusion: the only evidence that neutrinos exist is the idea of "*missing energy*" despite the observed real phenomenon from various perspectives that requires an explanation.

CHAPTER 1.9.

Neutrino Fog

Evidence That Neutrinos Cannot Exist

A recent news article about neutrinos, when critically examined using philosophy, reveals that science neglects to recognize what is to be considered **plainly obvious**: neutrinos cannot exist.

> ### (2024) Dark matter experiments get a first peek at the ‘neutrino fog’
> *The neutrino fog marks a new way to observe neutrinos, but points to the beginning of the end of dark matter detection.*
> Source: Science News

Dark matter detection experiments are increasingly being hindered by what is now called "neutrino fog", which implies that with increasing sensitivity of the measurement detectors, neutrino’s are supposed to increasingly ‘*fog*’ the results.

What is interesting in these experiments is that the neutrino is seen to interact with the entire nucleus as a whole, rather than just individual nucleons such as protons or neutrons, which implies that the philosophical concept of strong emergence or ("more than the sum of its parts") is applicable.

This "*coherent*" interaction requires the neutrino to interact with multiple nucleons (nucleus parts) simultaneously and most importantly **instantaneously**.

The identity of the whole nucleus (all parts combined) is fundamentally recognized by the neutrino in its ‘*coherent interaction*’.

The instantaneous, collective nature of the coherent neutrino-nucleus interaction fundamentally contradicts both the particle-like and wave-like descriptions of the neutrino and therefore **renders the neutrino concept invalid.**

CHAPTER 2.

Neutrino Experiment Overview:

Neutrino physics is big business. There are billions of USD invested in neutrino detection experiments all over the world.

The Deep Underground Neutrino Experiment (DUNE) for example costed $3.3 billion USD and there are many being built.

- Jiangmen Underground Neutrino Observatory (JUNO) - Location: China
- NEXT (Neutrino Experiment with Xenon TPC) - Location: Spain
- 🧊 IceCube Neutrino Observatory - *Location: South Pole*
- KM3NeT (Cubic Kilometer Neutrino Telescope) - *Location: Mediterranean Sea*
- ANTARES (Astronomy with a Neutrino Telescope and Abyss environmental RESearch) - *Location: Mediterranean Sea*
- Daya Bay Reactor Neutrino Experiment - *Location: China*
- Tokai to Kamioka (T2K) Experiment - *Location: Japan*
- Super-Kamiokande - *Location: Japan*
- Hyper-Kamiokande - *Location: Japan*
- JPARC (Japan Proton Accelerator Research Complex) - *Location: Japan*
- Short-Baseline Neutrino Program (SBN) *at Fermilab*
- India-based Neutrino Observatory (INO) - *Location: India*
- Sudbury Neutrino Observatory (SNO) - *Location: Canada*
- SNO+ (Sudbury Neutrino Observatory Plus) - *Location: Canada*
- Double Chooz - *Location: France*
- KATRIN (Karlsruhe Tritium Neutrino Experiment) - *Location: Germany*
- OPERA (Oscillation Project with Emulsion-tRacking Apparatus) - *Location: Italy/Gran Sasso*
- COHERENT (Coherent Elastic Neutrino-Nucleus Scattering) - *Location: United States*
- Baksan Neutrino Observatory - *Location: Russia*
- Borexino - *Location: Italy*

> - CUORE (Cryogenic Underground Observatory for Rare Events - *Location: Italy*
> - DEAP-3600 - *Location: Canada*
> - GERDA (Germanium Detector Array) - *Location: Italy*
> - HALO (Helium and Lead Observatory - *Location: Canada*
> - LEGEND (Large Enriched Germanium Experiment for Neutrinoless Double-Beta Decay - *Locations: United States, Germany and Russia*
> - MINOS (Main Injector Neutrino Oscillation Search) - *Location: United States*
> - NOvA (NuMI Off-Axis νe Appearance) - *Location: United States*
> - XENON (Dark Matter Experiment) - *Locations: Italy, United States*

Meanwhile, philosophy can do a whole lot better than this:

> (2024) **A neutrino mass mismatch could shake cosmology's foundations**
> *Cosmological data suggest unexpected masses for neutrinos, including the possibility of zero or negative mass.*
> Source: Science News

This study suggests that the neutrino mass changes in time and can be negative.

> "*If you take everything at face value, which is a huge caveat..., then clearly we need new physics,*" *says cosmologist* Sunny Vagnozzi of the University of Trento *in Italy, an author of the paper.*

Philosophy can recognize that these "*absurd*" results originate from a dogmatic attempt to escape ∞ infinite divisibility.

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Share your insights and comments with us at info@cosphi.org.

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