Review of: "Does energy always have mass?"

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Potential competing interests: No potential competing interests to declare.

This manuscript introduces a fresh perspective on mass-energy equivalence, positing that not only can mass be converted into energy, but every form of energy inherently possesses mass. The study yields compelling findings and insightful perspectives, contributing to the advancement of this foundational concept in physics. The figures are presented aptly, and the paper demonstrates a meticulous approach to the study.

However, several revisions are essential for its acceptance in the Journal. To this end, I propose the following recommendations:

Clarity and Coherence: The authors should precisely articulate the novelty and objective of their work in the introduction. Clarity and conciseness should be prioritized in their language, supported by well-evidenced arguments. Consider engaging a native English speaker or professional language editing service for further refinement.

References: Strengthen the manuscript by incorporating additional references related to their work, showcasing a thorough understanding of the broader literature on this subject.

Equation (1): Refine Equation (1) for conciseness by eliminating the space before and after the + sign.

Thought Experiments: While the use of thought experiments is intriguing, they alone cannot substantiate or refute a scientific theory. The authors should supplement their claims with more empirical evidence.

Gravitational Frequency Shift: Provide additional evidence supporting the claim that the gravitational frequency shift's existence contradicts energy conservation.

Misner, Thorne, and Wheeler's Argument: Support the critique of Misner, Thorne, and Wheeler's argument with objective evidence.

Mass-Energy Equivalence vs. Mass-Energy Conversion: Clarify the distinction between mass-energy equivalence and mass-energy conversion, emphasizing their unique characteristics.

Double-Counting of Energy: Explain why the argument that energy is created when a body absorbs heat differs from established scientific consensus on this matter.

Radioactive Decay: Offer a more accurate explanation of radioactive decay, avoiding oversimplification.

Gravitational Potential Energy: Correct the assertion that prior works neglect gravitational potential energy by providing

accurate references.

General Relativity: Provide a more comprehensive explanation of general relativity and its implications for energy and gravity.

Capacitor: Elaborate on why a capacitor's increase in mass when storing electrical energy is considered insignificant.

In conclusion, while the paper presents intriguing ideas, substantial revisions are necessary for publication. Addressing the outlined concerns and bolstering the manuscript's structure and clarity could elevate its potential contribution to our understanding of mass-energy equivalence.