

# Review of: "Quaternion Quantum Mechanics: Unraveling the Mysteries of Gravity and Quantum Mechanics within the Planck-Kleinert Crystal"

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Potential competing interests: No potential competing interests to declare.

The idea that “the universe is an ideal elastic solid where the elementary particles are soliton-like waves” deserves high praise, however, there are some questions that I haven't found the answer to:

1. Michelson–Morley experiment, if we are talking about æther.
2. The Poisson's ratio of the universe crystal given in Table 1 corresponds to alloy steel. What is the reason for this choice?
3. With the universe crystal density of the order of  $10^7 \text{ kg/m}^3$  and the proton density conditionally  $10^{27} \text{ kg}/(1 \text{ Fm})^3 = 10^{18} \text{ kg/m}^3$ , the proton represents a relative fluctuation of the vacuum of the order of  $10^{18}/10^{97}$ . How to explain the stability of such a small density fluctuation and why the rest masses of all protons are the same?