Title: **Gravity as Space Tension: A New Cosmological Model**

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Abstract

This theory presents gravity as a phenomenon resulting from tension in space trapped within atoms formed in the early universe. As cosmic inflation occurred, the spatial volume encapsulated within the electromagnetic shells of newly formed atoms became compressed. Over time, as the universe continued to expand, the disparity between the original compressed spatial tension and the current state of cosmic expansion manifests as gravitational attraction. This interpretation provides a fundamental explanation for gravitational strength based on atomic formation and universal spatial expansion dynamics.

Introduction

Traditional explanations of gravity have focused on describing gravitational effects—such as Newton's law of universal gravitation and Einstein's general relativity—without addressing the intrinsic cause of why matter is attracted at a distance. This paper introduces a novel theoretical framework that identifies the root cause of gravity as originating from the difference in spatial tension between the compressed space trapped within atoms during their formation and the continually expanding space of the modern universe.

Formation of Atoms and Space Compression

During the early universe, approximately 50,000–60,000 years post-Big Bang, primordial atomic lightning (PAL) energy existed as concentrated electromagnetic (EM) radiation. As the universe cooled, PAL energy became trapped within EM shells, forming the first hydrogen atoms. At this stage, space itself was drastically smaller and denser compared to its current expanded state. The internal space encapsulated within atomic shells thus remained at this highly compressed, early universal density.

Gravitational Mechanism Explained

The spatial volume trapped within atomic shells retains its original tension state, corresponding to the dense, compressed conditions at the time of atom formation. As the universe expands, the surrounding spatial volume becomes progressively less dense, creating a differential tension gradient. This gradient induces gravitational attraction, pulling matter toward areas of greater spatial tension—specifically, toward mass-rich regions containing many atoms. Hence, gravity is the measurable outcome of this tension gradient in space.

Implications and Predictions

This theory provides clear predictions for the evolving strength and localization of gravity:

- **Localized Gravitational Concentration:** Dense celestial bodies, such as neutron stars and black holes, exhibit extreme gravitational attraction due to highly concentrated atomic spatial tension.
- **Galactic Structure Formation:** The observed filamentary, web-like large-scale structure of galaxy superclusters can be directly attributed to collective atomic spatial tension throughout cosmic evolution.
- **Fusion and Elemental Stability:** Elements lighter than iron fuse and release trapped PAL energy, reducing tension. Conversely, heavier elements beyond iron require energy input to form, resulting in higher tension states and gravitational attraction.

Experimental and Observational Validation

This model can be tested and validated by:

- Observational studies of gravitational distribution in galaxy clusters and large-scale cosmic structures.
- Laboratory experiments measuring atomic and nuclear mass variations linked to spatial tension differentials.
- Simulations of early universe atomic formation conditions compared to modern gravitational data.

Conclusion

The concept of gravity as spatial tension trapped within atomic structures, originating from conditions in the early universe, provides a comprehensive and causative explanation of gravitational phenomena. This theory aligns with observed cosmic structures and elemental stability patterns, offering predictive power that could advance gravitational physics and cosmological understanding significantly.

Author's Statement

I, Paul Emmett Zaffuto, confirm this document presents my original scientific idea, timestamped and recorded within my documented interactions. All concepts described herein originate from my theoretical investigations and experimental considerations.