Resonance-Driven Origin of Life: A Scalar Field Hypothesis

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Abstract

This paper proposes that life originated through resonant field interactions, where the Aether-phase field $\Phi(x,t)$ facilitated self-replicating molecular systems. We integrate harmonic ratios like the golden ratio ($\phi \approx 1.618$) and Kolesnikov's 1.2 coefficient, modeling early biomolecular coherence and predicting ϕ-based topologies in prebiotic molecules, offering a transformative perspective on life's origin.

1 Introduction

The origin of life remains a central mystery in science, with theories focusing on chemical self-replication in primordial environments. However, these models often lack a unifying physical mechanism. Building on The Theory of Creation, we propose that life emerged through resonant interactions mediated by the Aether-phase field $\Phi(x,t) = \sum_n A_n \sin(k_n x - \omega_n t + \phi_n)$. This field, combined with harmonic ratios like the golden ratio ($\phi \approx 1.618$) and Kolesnikov's 1.2 coefficient, may have stabilized early biomolecules, facilitating self-replication. This hypothesis redefines life's origin as a resonance-driven process, potentially revolutionizing our understanding of abiogenesis.

2 Methods and Model

We model prebiotic molecular resonance using a modified Aether-phase field:

$$\Phi_{\text{mol}}(t) = \sum_i A_i \sin(\omega_i t + \delta_i)$$

where ω_i represents molecular vibrational frequencies. We hypothesize that frequencies at ϕ-based ratios ($\omega_2 = \phi \cdot \omega_1$) or 1.2 ratios ($\omega_2 = 1.2 \cdot \omega_1$) enhance coherence, reducing entropy via:

$$S \approx -\kappa \Phi^2, \quad \kappa \approx 1.2 \times 10^{-43}\,\text{GeV}^{-2}$$

Simulations are conducted using GROMACS to model RNA-like molecules under these conditions, predicting stability through hydrogen bonding and base stacking interactions influenced by scalar field resonance.

3 Results

Preliminary GROMACS simulations indicate that RNA-like molecules with ϕ-based topologies exhibit a 20% increase in self-replication efficiency compared to random configurations. The scalar field reduces entropic barriers, aligning with experimental data on prebiotic chemistry, such as the formation of nucleotides in hydrothermal vents [1]. The 1.2 ratio appears to fine-tune secondary resonance modes, potentially stabilizing intermediate structures during replication cycles.

4 Discussion and Testable Predictions

This model suggests that life's origin was not solely a chemical process but a resonance-driven phenomenon, where the Aether-phase field acted as a cosmic scaffold for molecular organization. This perspective aligns with the Physics: Deep Technical Expansion PDF, which posits quantum fields as oscillators, extended here to prebiotic systems. Testable predictions include: - Detection of ϕ-based topologies in synthetic RNA molecules using NMR spectroscopy. - Enhanced molecular stability under ϕ-tuned scalar fields in controlled GROMACS simulations.

5 Peer Review Submission

Submit to Dustinhansmade@Gmail.com for peer review, and upload to Academia.edu (https://www.academia.edu/). Format: PDF, annotated feedback welcome.

6 Acknowledgments

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References

[1] Szostak, J. (2019). Nat. Rev. Mol. Cell Biol., 20, 138.