Chayut Universe Wave Function

Paper C: From Abstract Imagination to Mathematical Equation & Experimental Realization

Title: Chayut Universe Wave Function (CUWF) Paper C: From Abstract Imagination to Mathematical Equation & Experimental Realization

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Abstract

This paper develops the mathematical and methodological foundation of the Chayut Universe Wave Function (CUWF), establishing how a physical universe can emerge from the structural primitives of stillness, disturbance, collapse, entropic curvature, and relational deformation. Unlike traditional physics, which usually begins with geometry, fields, Hilbert spaces, or variational principles, CUWF begins from pre-mathematical relational constraints. From these constraints, mathematical operators such as the entropic Laplacian Δ^{E}, the collapse potential gradient $\nabla\Phi$, the stability operator L^{E}, the entanglement deformation field Ξ, and the effective degree-of-freedom derivative $\partial/\partial N_{eff}$ arise as logical necessities rather than assumptions.

Paper C demonstrates that geometry is not fundamental but emergent from collapse dynamics; entanglement is a geometric deformation rather than an algebraic construction; time is an entropic ordering rather than a primitive dimension; particles are stable resonant modes of disturbance; and force-like behavior emerges from gradients of collapse potential and relational deformation.

By establishing a unified path from concept ⟶ logic ⟶ symbolic mapping ⟶ equation ⟶ experiment, Paper C elevates CUWF from conceptual insight into a rigorous first-principles research framework. It serves as the mathematical and methodological spine connecting Papers A and B with the later experimental and application-oriented CUWF series.

Paper C demonstrates:

geometry is not fundamental but emergent from collapse dynamics;

entanglement is a geometric deformation, not an algebraic construction;

time is an entropic ordering, not a dimension;

particles are resonance modes of disturbance;

force-like behavior emerges from gradients of collapse potential;

known physics appears as projection limits of deeper collapse-relational dynamics.

Keywords

Collapse Dynamics; Entropic Geometry; Emergent Spacetime; CUWF; Nonlinear Wave Evolution; Geometric Entanglement; Relational Physics; Δ^{E} Operator; Ξ-Field; Collapse Potential Gradient; Effective Degrees of Freedom; First-Principles Theory; Quantum Foundations; Mathematical Ontology; Emergent Time; Direct-Origin Theory.

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