

Pascos

Abstract:

Big bang cosmology, reliant on an infinitely hot singularity, struggles to reconcile Planck-scale dynamics with observable cosmic structures. We propose a hyper-rational model that redefines the universe as a geometric, cold-start expansion from the Planck scale (10^{-35} m, 10^{-44} s) to the observable cosmos (10^{26} m, 13.8 billion years) across 202 base-2 notations, all simultaneously active. Initiated by infinitesimal spheres at one per Planck Time ($\sim 10^{43}$ spheres/second by Notation 143), this lattice evolves through sphere stacking into tetrahedrons and octahedrons, anchored by four irrational numbers (π , e , $\sqrt{2}$, ϕ) within the octahedron's four hexagonal plates. These plates encode continuity-symmetry-harmony, replacing particle-centric models with a qualitative scaffold of dimensionless constants. Geometric gaps of 7.356° , arising from five tetrahedron or octahedron configurations above Notation 60, seed quantum fluctuations, potentially manifesting as dark matter halos, CMBR power spectra, and quantum gravity's spacetime foam. Testable predictions include gap-induced density variations aligning with N-body simulations for dark matter and Planck satellite data for CMBR, achievable through AI-driven computational geometry (e.g., topological deep learning). Unlike big bang frameworks, this model posits time as a dynamic agent, driving continuous emergence from Planck spheres to galaxies, implicating humans as participatory co-creators. We invite PASCOS 2025 attendees to collaborate on simulating these geometric structures, exploring their implications for cosmology and particle physics, and advancing a unified, mathematically coherent view of the universe.