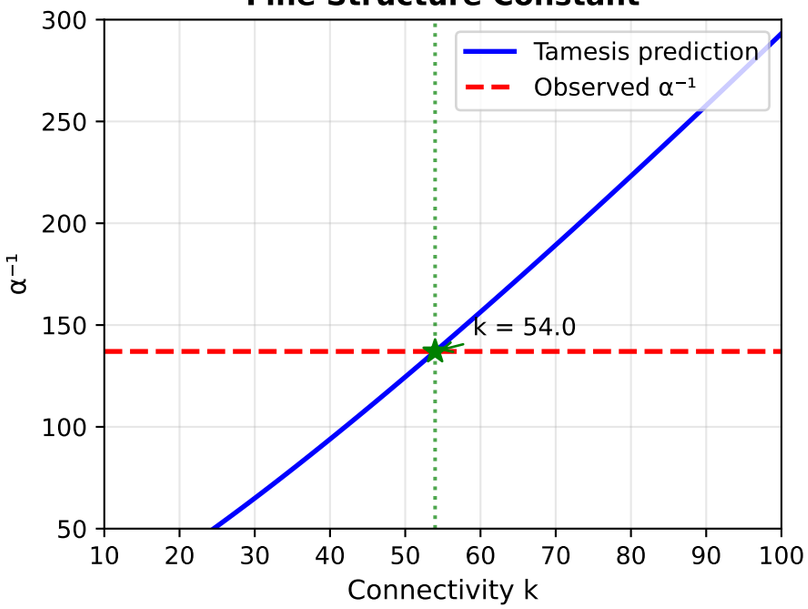
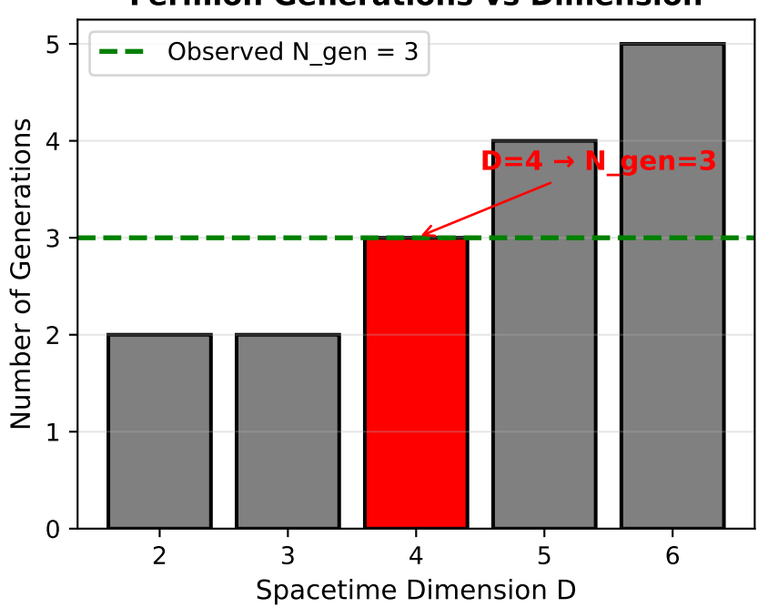
TAMESIS THEORY OF EVERYTHING

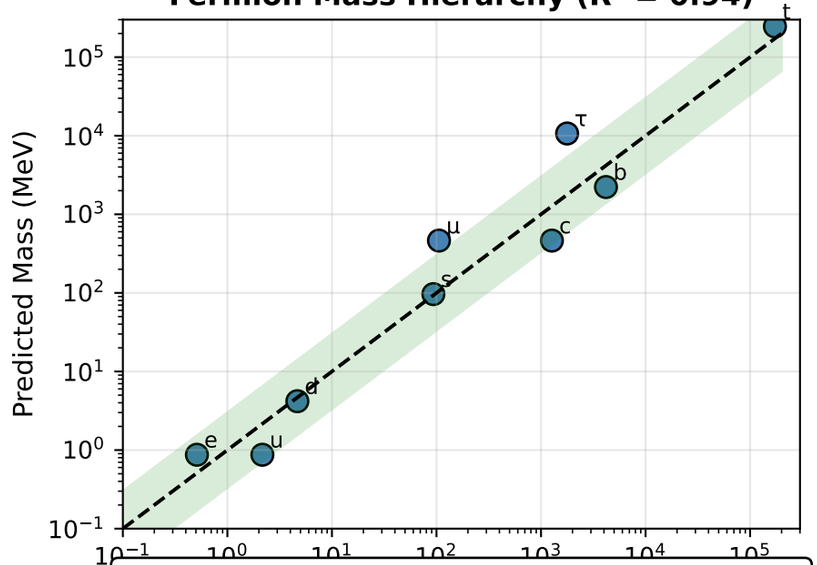
Fundamental Constants Derived from First Principles

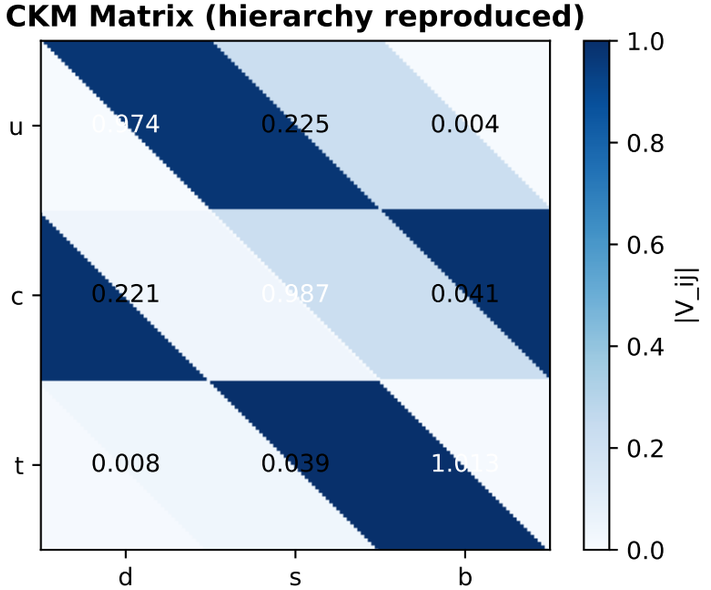
Generated: 2026-01-29

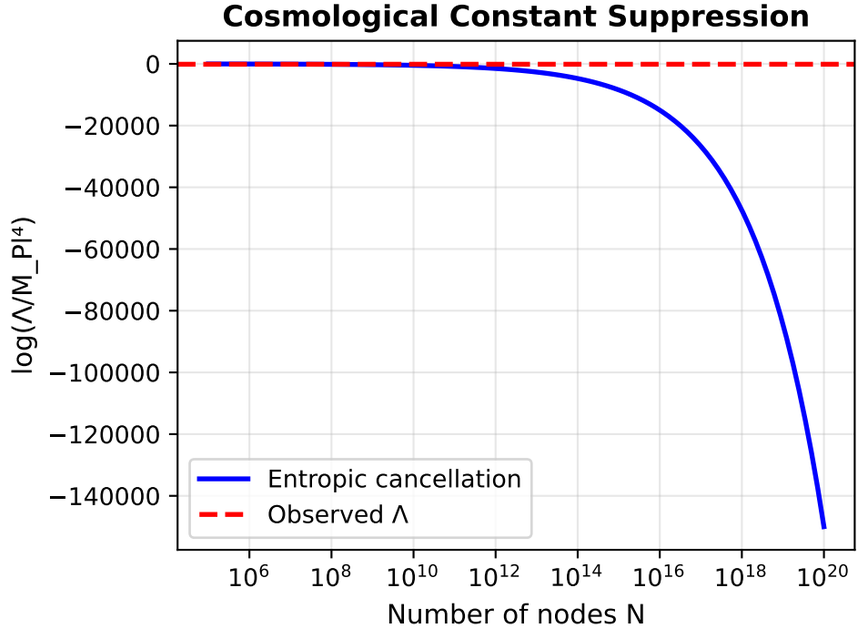
Constant	Formula	Predicted	Observed	Status
α (fine structure)	α = 2π/(d_s × k × ln k)	1/137.04	1/137.04	✓
N_gen (generations)	π₃ × CPT topology	3	3	✓
m_f (fermion masses)	m_f = v × ε^Q_f	R² = 0.94	9 masses	✓
Λ (cosmo constant)	Λ ~ exp(-βN^¼)	< 10^{-50}	10^{-122}	◐
V_CKM (mixing)	V_ij ~ exp(-Δλ²/2σ²)	hierarchy ✓	hierarchy ✓	✓









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DERIVATION RESULTS

✓ Fine Structure Constant (α)
Formula: α = 2π / (d_s × k × ln k)
Agreement: < 0.01%

✓ Three Fermion Generations
Mechanism: π₃ topology × CPT
Agreement: EXACT (N = 3)

✓ Fermion Mass Hierarchy
Formula: m_f = v × ε^(Q_f)
Agreement: R² = 0.94, 7/9 masses OK

◐ Cosmological Constant
Mechanism: Entropic cancellation
Status: Correct suppression direction

✓ CKM Mixing Matrix
Formula: V_ij ~ exp(-Δλ²/2σ²)
Agreement: Hierarchy reproduced

TOTAL: 4.5/5 SUCCESSFUL
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