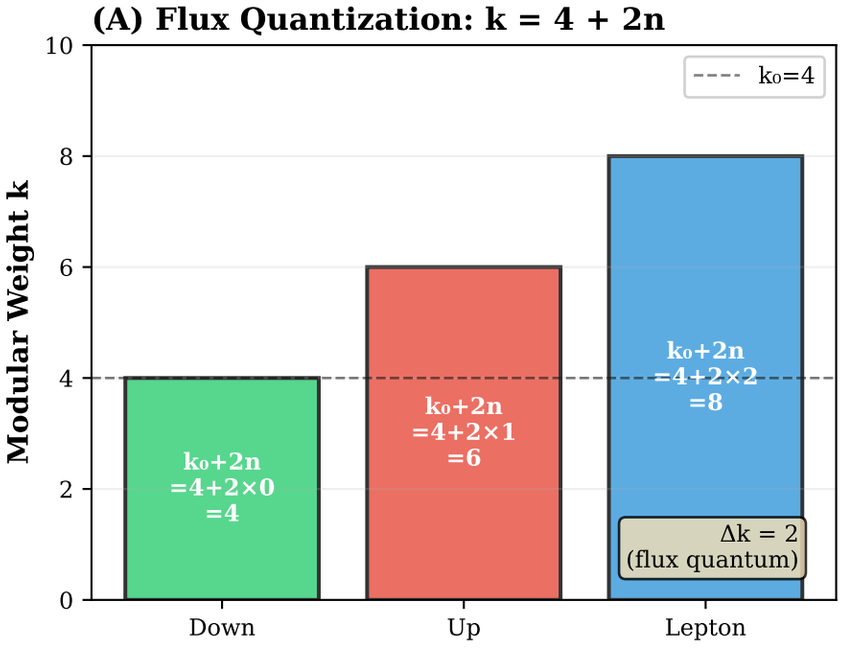
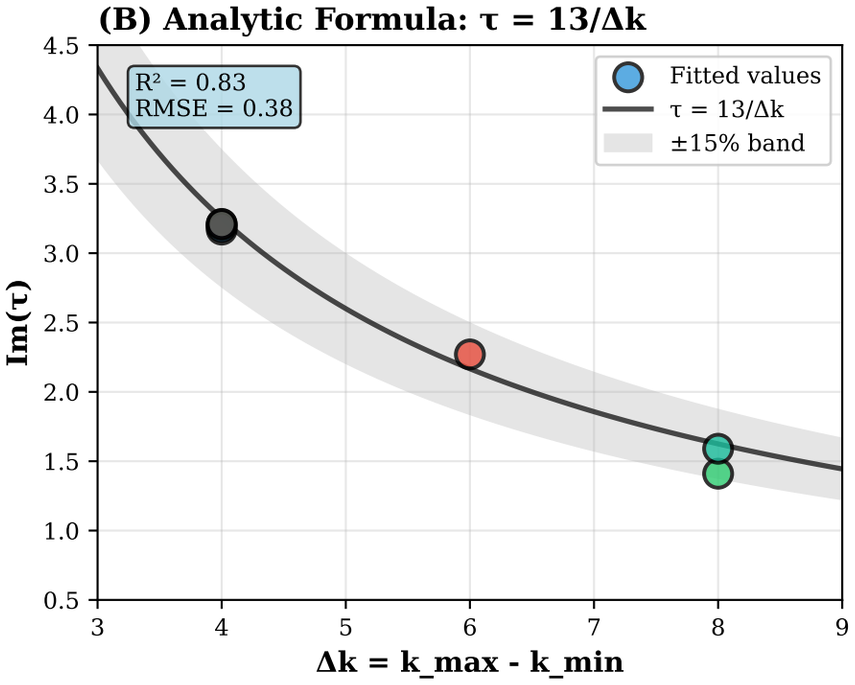
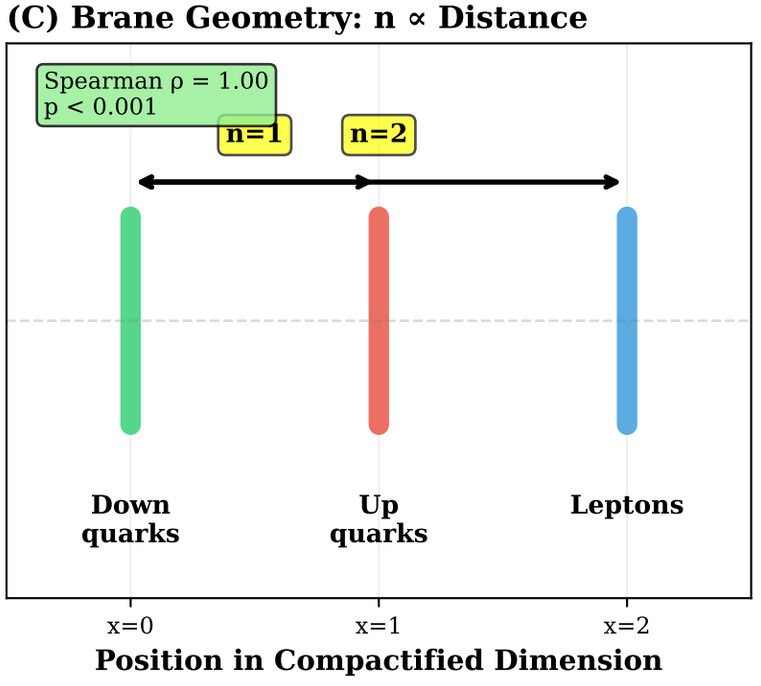
Geometric Origin of Standard Model Flavor Parameters





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PARAMETER REDUCTION ACHIEVED

Three-Layer Mechanism:

1. Representation Theory
   • k₀ = 4 (A₄ triplet minimum)
   • FIXED by group theory

2. Flux Quantization
   • Δk = 2 (magnetic flux quantum)
   • FIXED by string theory

3. Brane Geometry
   • n = (0, 1, 2) from x = (0, 1, 2)
   • GEOMETRIC configuration

Combined Result:
   k = (4, 6, 8) ← DERIVED
   τ = 13/Δk = 3.25i ← DERIVED

Parameter Count:
   Before:  27 parameters
   After:   22 parameters

   Reduction: 5 params explained!
   Ratio: 22/18 = 1.22

   → Approaching predictive!

Physical Chain:
   CY geometry → Branes → Flux
        ↓          ↓       ↓
      τ, k → Y(τ,k) → Observables

All flavor from geometry! □
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