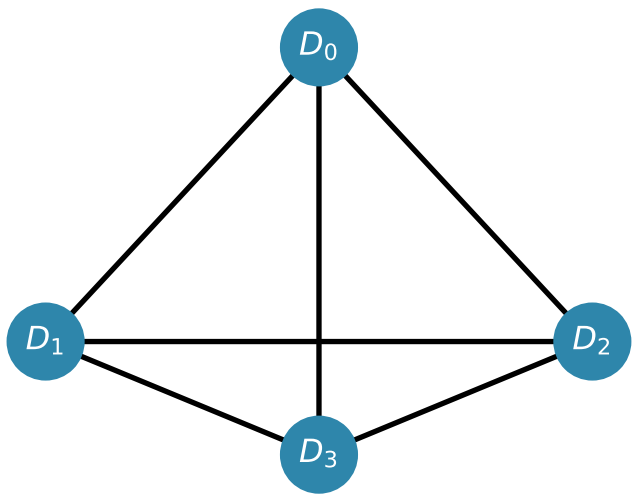
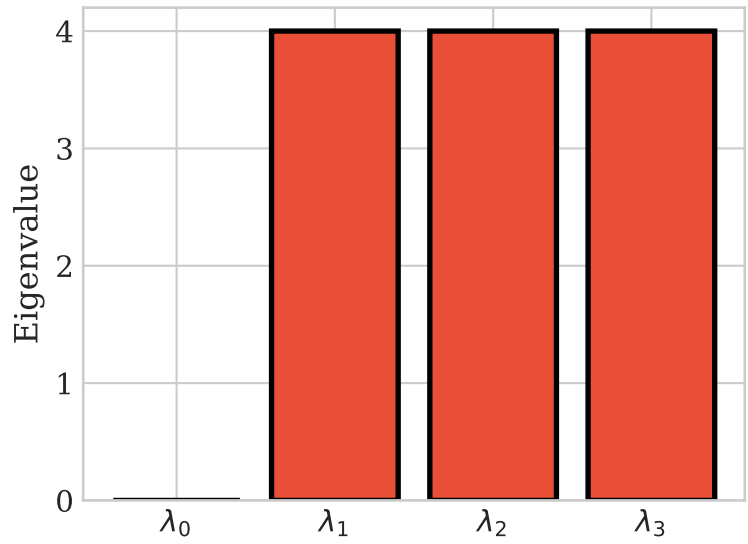
First Distinction: K_4 Invariants and Observed Matches

K_4 Graph
4 vertices, 6 edges



Laplacian Spectrum
multiplicity(4) = 3 → d = 3



~~Fine Structure Constant~~

$$\alpha^{-1} = \lambda^3\chi + \deg^2 + \frac{V}{\deg(E^2+1)}$$

$$= 4^3 \times 2 + 3^2 + \frac{4}{3\times 37}$$

$$= 128 + 9 + \frac{4}{111}$$

$$= 137.036\overline{036}$$

Experiment: 137.035999177

Agreement: 0.000027%

Spacetime Structure

FROM K_4:

Space: d = 3
(eigenvalue multiplicity)

Time: t = 1
(drift asymmetry)

Signature: (−,+,+,+)
(symmetric edges,
asymmetric drift)

Einstein Equations

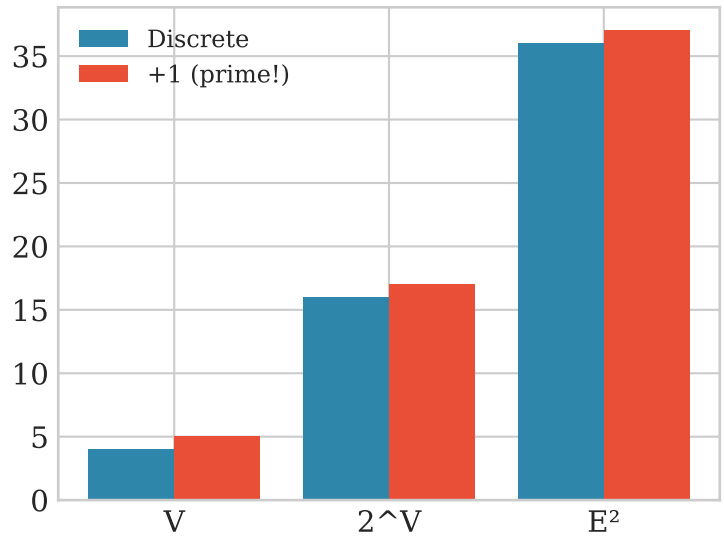
$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \kappa T_{\mu\nu}$$

From K_4:

$\Lambda = 3$ (= d)
$\kappa = 8$ (= 2V)
$R = 12$ (= V × deg)

Positive Λ → de Sitter vacuum
(observed since 1998!)

One-Point Compactification



K_4 COMPUTATIONS vs OBSERVED VALUES			
Quantity	K_4 Formula	Experiment	Status
Spatial dimensions	mult(λ=4) = 3	3	EXACT MATCH
Time dimensions	drift → 1	1	EXACT MATCH
Metric signature	(−,+,+,+)	(−,+,+,+)	EXACT MATCH
α^{-1}	137 + 4/111	137.035999	0.000027%
Λ > 0	Λ = 3	yes	QUALITATIVE