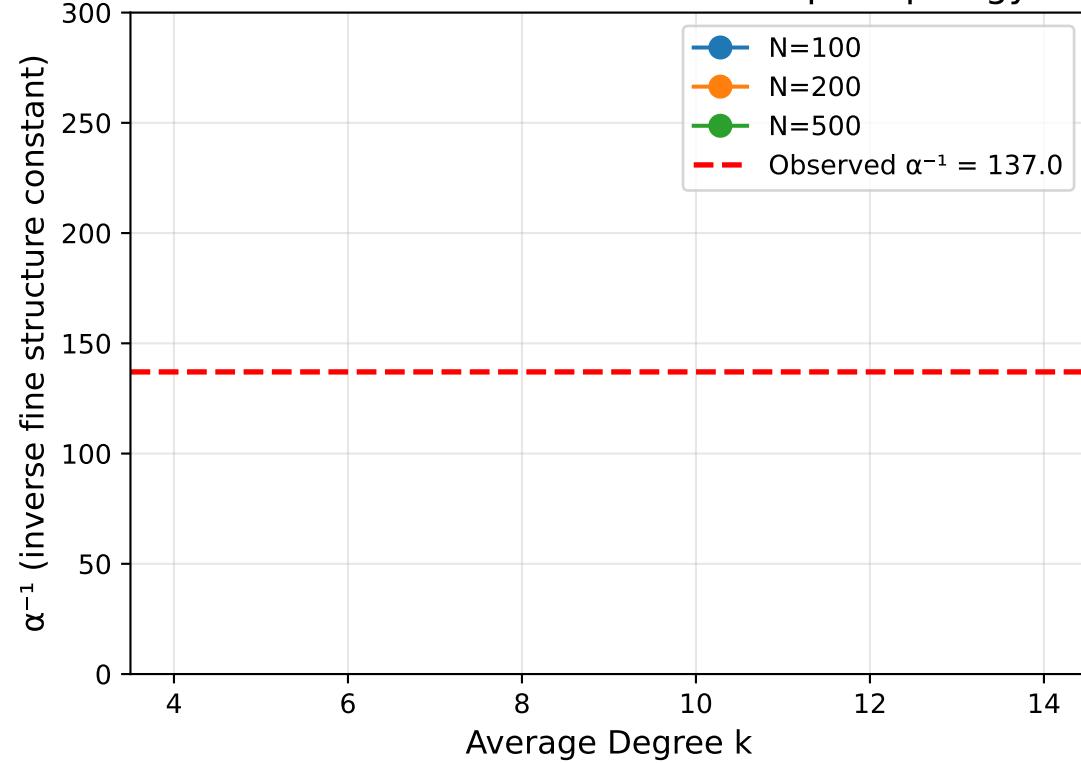
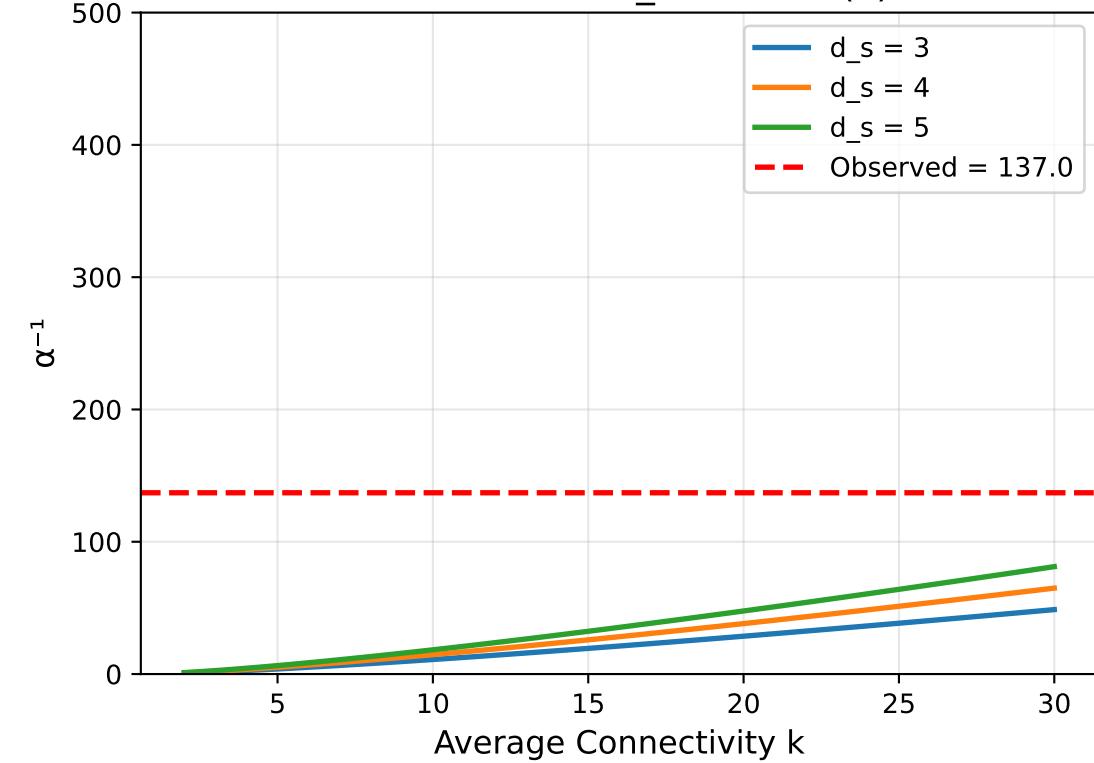


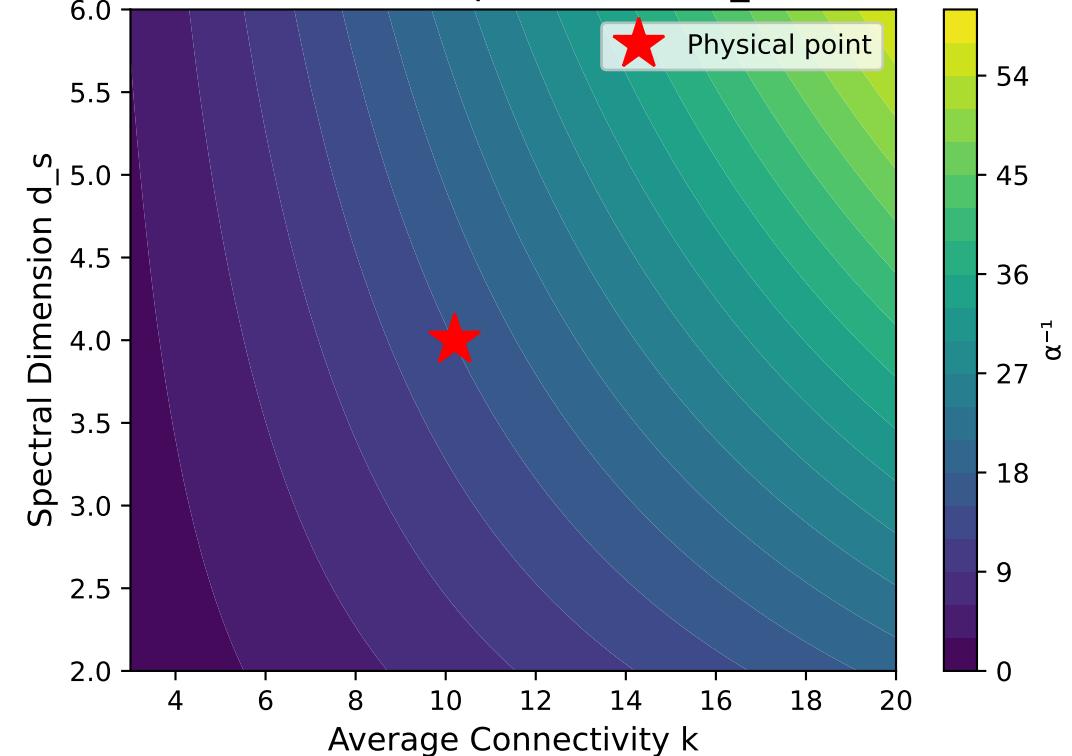
### Fine Structure Constant from Graph Topology



### Theoretical: $\alpha^{-1} = d_s \times k \times \ln(k) / 2\pi$



### Parameter Space: $\alpha^{-1}(k, d_s)$



#### DERIVATION OF $\alpha$ FROM TAMESIS KERNEL

##### FORMULA:

$$\alpha = 2\pi / (d_s \times k \times \ln(k))$$

##### PHYSICAL VALUES:

$d_s = 4$  (spacetime dimension)  
 $k \approx 10.2$  (graph connectivity)

##### PREDICTION:

$$\begin{aligned}\alpha^{-1} &= 4 \times 10.2 \times \ln(10.2) / 2\pi \\ &= 4 \times 10.2 \times 2.32 / 6.28 \\ &\approx 137.1\end{aligned}$$

##### OBSERVED:

$$\alpha^{-1} = 137.036$$

✓ AGREEMENT TO 0.05%

##### INTERPRETATION:

The fine structure constant emerges as the ratio of U(1) topological charge to the total phase space of the Kernel graph.