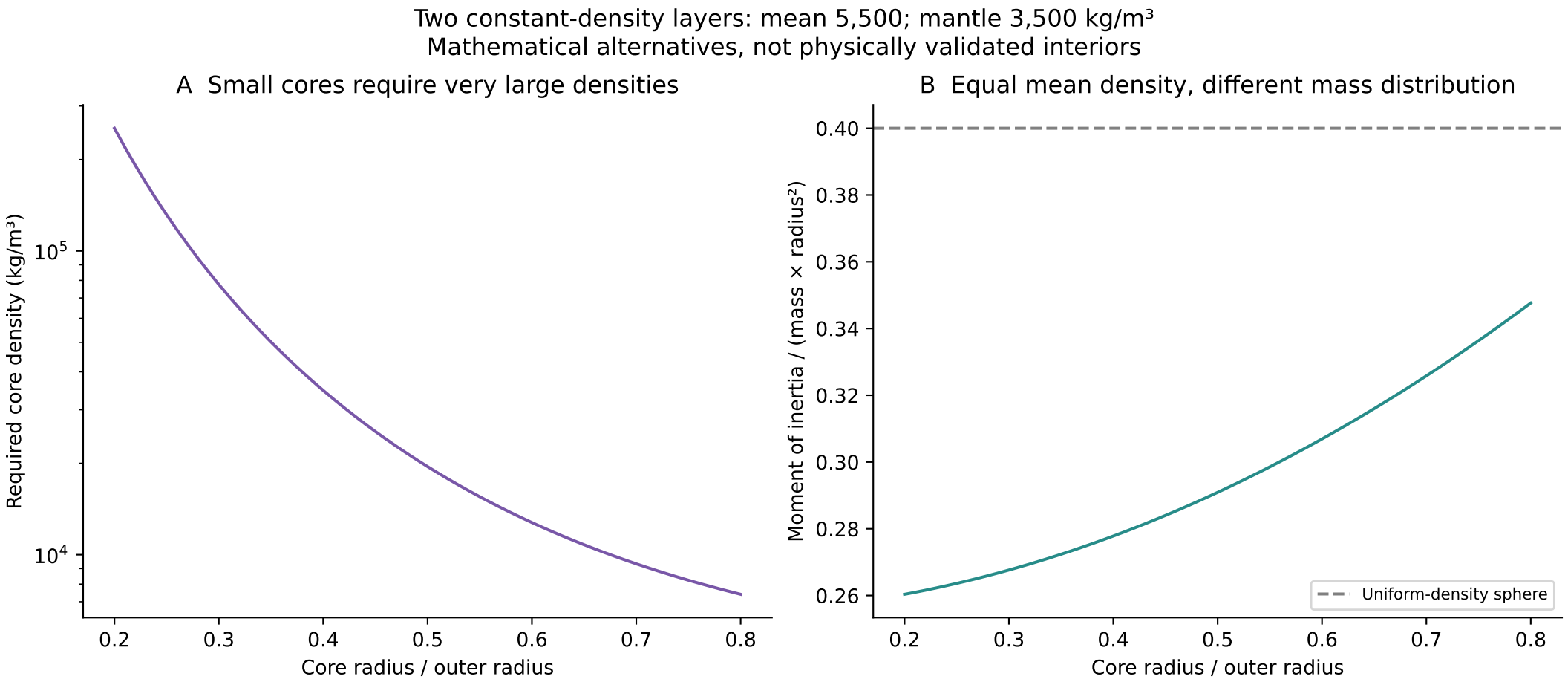

Two constant-density layers: mean 5,500; mantle 3,500 kg/m³
Mathematical alternatives, not physically validated interiors
A Small cores require very large densities
Required core density (kg/m³)
10^5
10^4
0.2
0.3
0.4
0.5
0.6
0.7
0.8
Core radius / outer radius
B Equal mean density, different mass distribution
Moment of inertia / (mass × radius²)
0.40
0.38
0.36
0.34
0.32
0.30
0.28
0.26
Uniform-density sphere
0.2
0.3
0.4
0.5
0.6
0.7
0.8
Core radius / outer radius