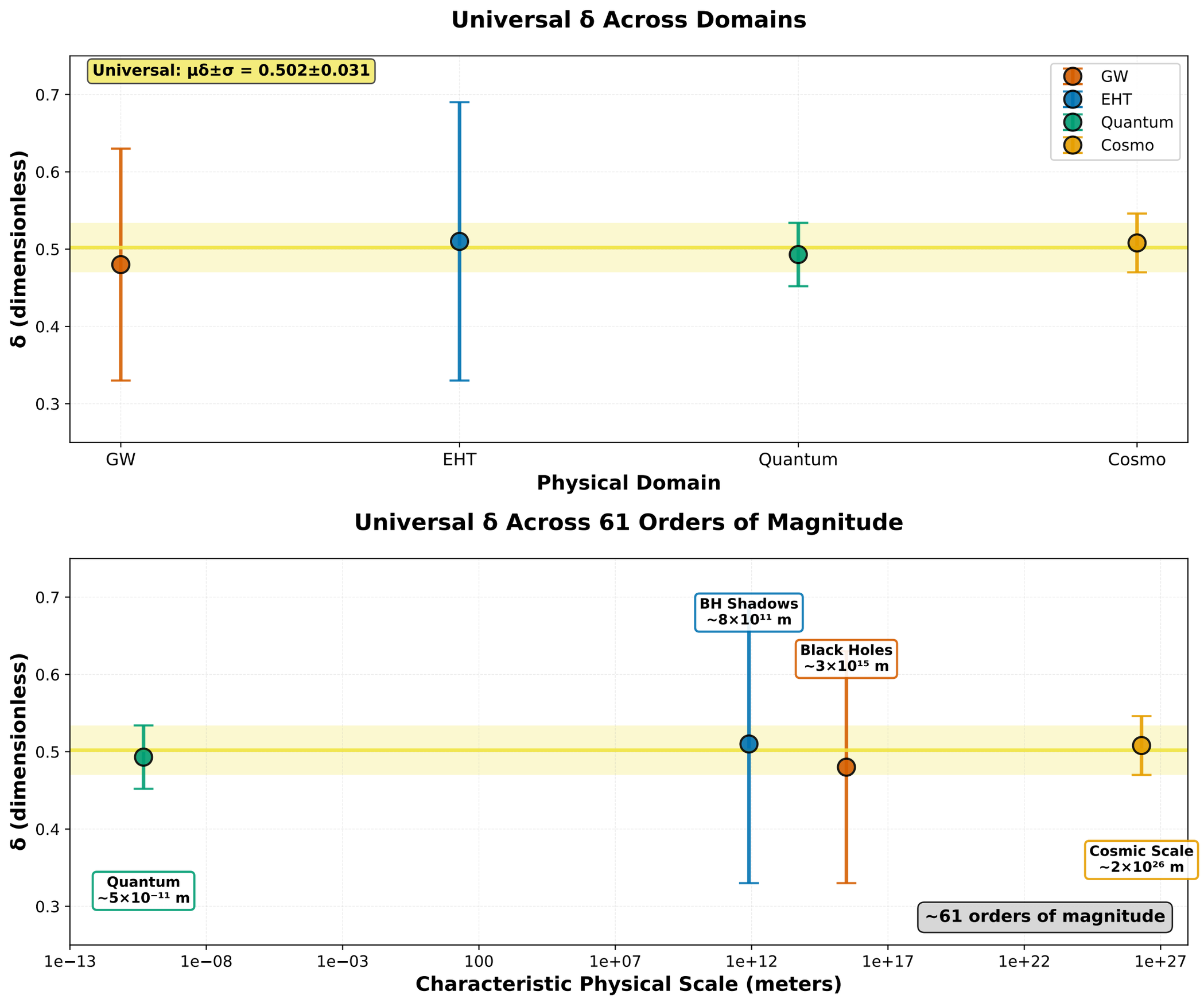
Universal δ Across Domains
Universal: μδ±σ = 0.502±0.031
GW
EHT
Quantum
Cosmo
δ (dimensionless)
0.7
0.6
0.5
0.4
0.3
GW
EHT
Quantum
Cosmo
Physical Domain
Universal δ Across 61 Orders of Magnitude
BH Shadows
~8×10¹¹ m
Black Holes
~3×10¹⁵ m
Quantum
~5×10⁻¹¹ m
Cosmic Scale
~2×10²⁶ m
~61 orders of magnitude
δ (dimensionless)
1e−13
1e−08
1e−03
100
1e+07
1e+12
1e+17
1e+22
1e+27
Characteristic Physical Scale (meters)