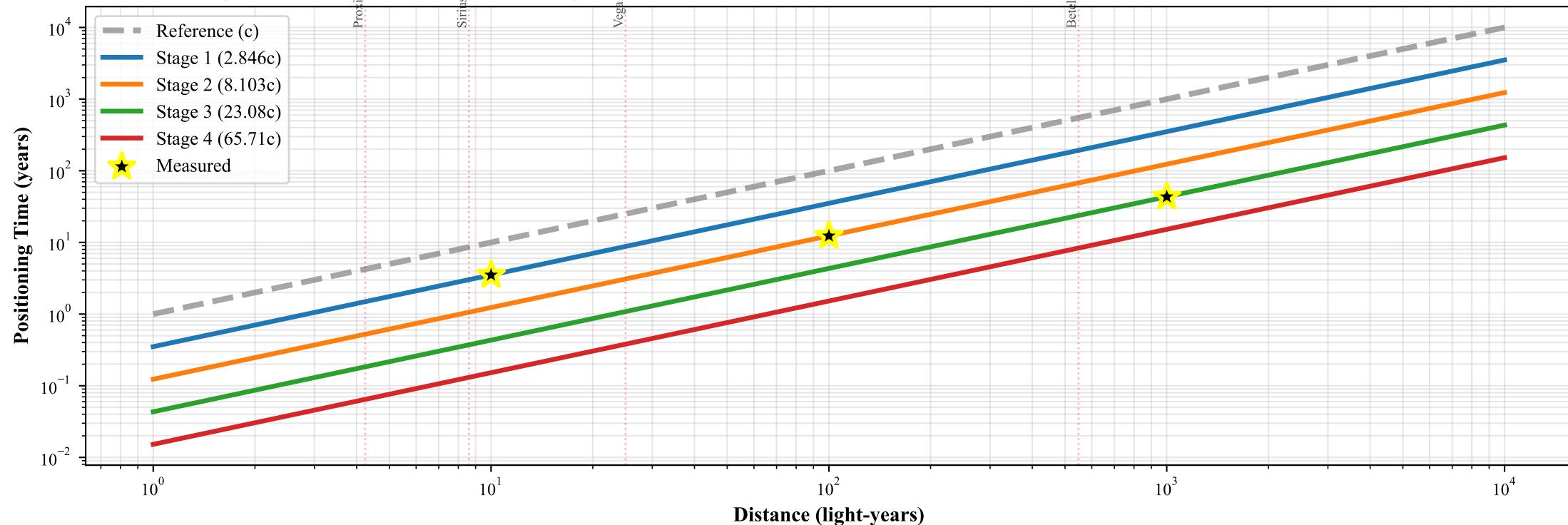
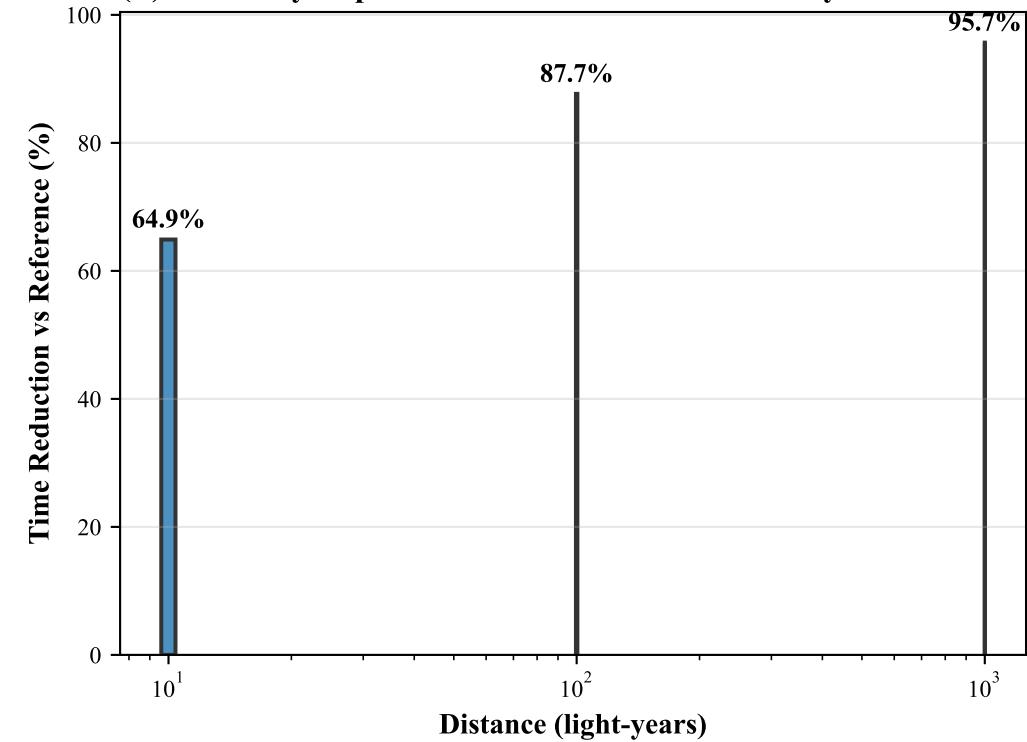


Figure 4: Extended Distance Positioning Capabilities

(A) Positioning Time vs Distance (All Cascade Stages)



(B) Efficiency Improvement Over Reference Velocity



EXTENDED DISTANCE POSITIONING

Destination	Distance	Time	Stage
Mars	2.40×10^{-5} ly	0.1 hours	Stage 1
Proxima Centauri	4.24×10^0 ly	1.5 years	Stage 1
Sirius	8.60×10^0 ly	3.0 years	Stage 1
Vega	2.50×10^1 ly	3.1 years	Stage 2
Betelgeuse	5.48×10^2 ly	23.7 years	Stage 3
Galactic Center	2.67×10^4 ly	406.3 years	Stage 4
Andromeda Galaxy	2.54×10^6 ly	38.6 kyr	Stage 4