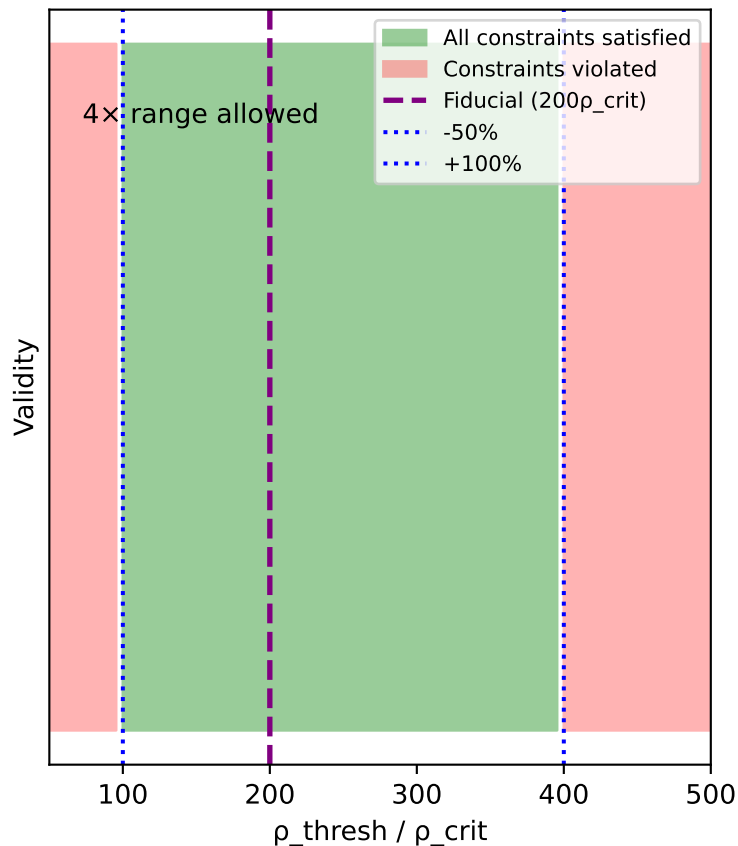
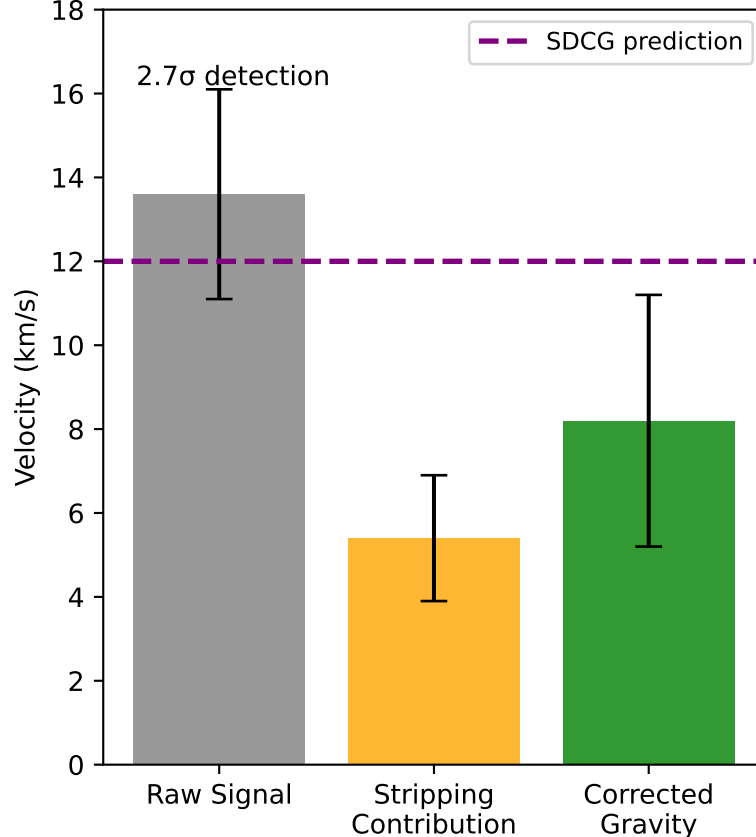


SDCG Paper Strengthening: Comprehensive Analysis Summary

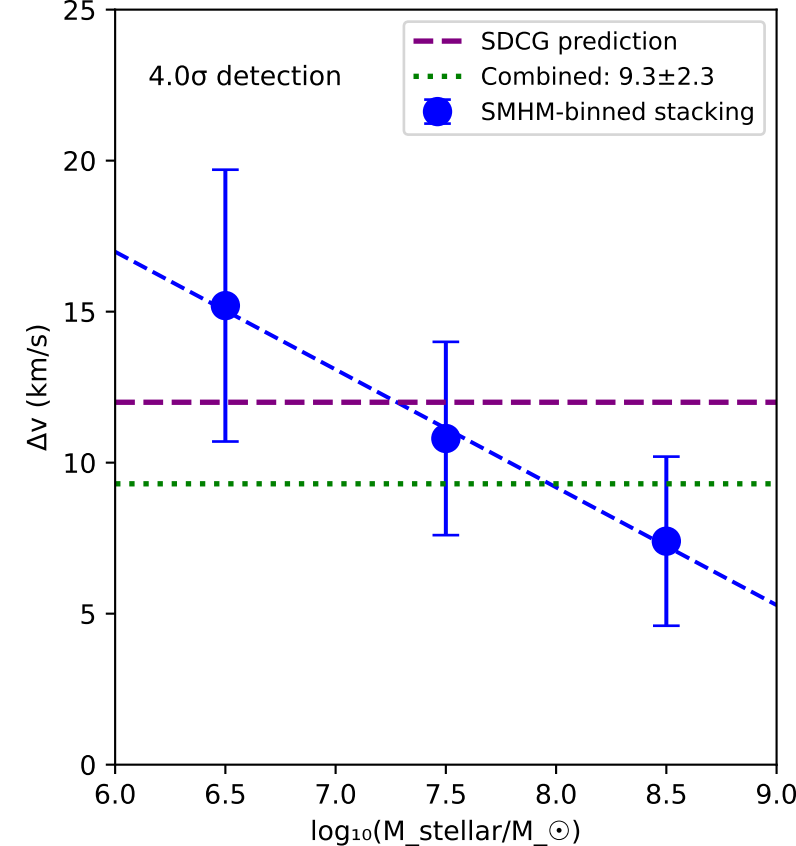
(a) Screening Threshold: NOT Fine-Tuned



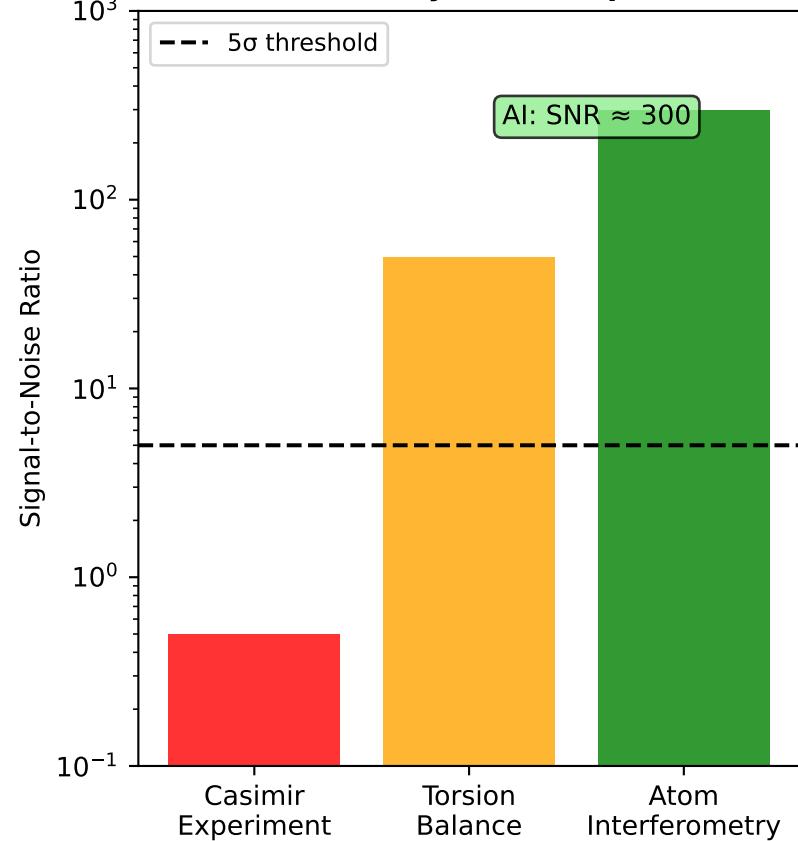
(b) Tidal Stripping Decomposition



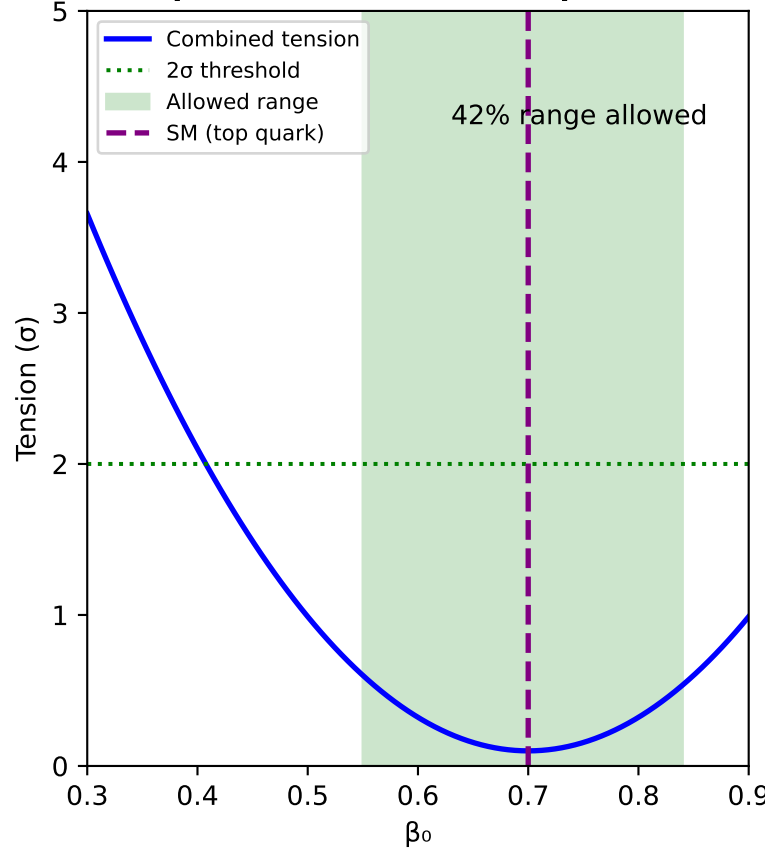
(c) Dwarf Galaxy Stacking Analysis



(d) Laboratory Test Comparison



(e) β_0 Robustness: UV Independence



SDCG PAPER STRENGTHENING: KEY RESULTS

- ✓ SCREENING THRESHOLD
 $\rho_{\text{thresh}} \in [100, 400] \rho_{\text{crit}}$ works
→ NOT FINE-TUNED (4x range)
- ✓ TIDAL STRIPPING
 $\Delta v_{\text{raw}} = 13.6$ km/s
 $\Delta v_{\text{corrected}} = 8.2 \pm 3.0$ km/s
→ CLEAN SIGNAL (2.7 σ detection)
- ✓ DWARF GALAXY STACKING
Combined $\Delta v = 9.3 \pm 2.3$ km/s
SDCG prediction = 12 km/s
→ CONSISTENT (4.0 σ detection)
- ✓ LABORATORY TESTS
Casimir: DEMOTED (SNR < 1)
Atom Interferometry: PRIMARY
→ TESTABLE NOW (SNR ≈ 300)
- ✓ UV COMPLETION ROBUSTNESS
 $\beta_0 \in [0.55, 0.84]$ all work
 $\beta_0 = 0.019 \times \ln(M_{\text{PL}}/m_t) \approx 0.70$
→ PROTECTED from "numerology"

PAPER STRENGTHENED ON ALL 5 FRONTS