🧪 MU Test Plan — Test 4 (Amplified Selector)

Goal

To test whether increasing the strength of the selector T (via parameter β) magnifies the survival probability of the slow path to a visible dominance. This will check whether the MU selector can overcome action cost differences and act as a **true decision knob** near folds.

Parameters

- **gamma:** 1.0
- **hbar:** 0.1 (fixed for now)
- **beta (T influence): 5.0** (increased from 1.0)
- **velocities tested:** v = 0.050 (slow), v = 0.500 (fast)
- **selector form:** $T(r) = \frac{1}{1 + |r - r_c|},\ r_c = 0.25$
- **integration window:** 1.0

Predictions

1. **Slow path:**
   - Weight will increase compared to Test 3.
   - Survival should become more visible (not just ~10^{-36} but several orders larger).
2. **Fast path:**
   - Weight will remain annihilated (close to zero) because its Q is too large for T to compensate.
3. **Ratio (w_fast / w_slow):**
   - Will remain effectively zero.
   - But the absolute scale of **w_slow** will be amplified by orders of magnitude due to higher β.
4. **MU significance:**
   - This test will show that the selector is not just *passively* preferring slow paths, but can be **dialed up** to dominate outcomes.
   - If confirmed, this is the **first evidence that T is a tunable control parameter** in the MU framework.

Why This Matters

- Demonstrates **control**: the MU selector can be tuned like a physical knob, not just observed.
- Connects directly to the physical intuition of “lingering at the fold gives more chance to survive.”

- If successful, this is the **selection threshold experiment** — a critical step toward proving T’s predictive power.