📓 MU Simulation Log — Test 1 (Parameter Tweaks, No T)

Goal

Test how fragile the baseline classical model is by varying key parameters. This will show you how sensitive the system is to choices before we add $T(r)$. The expectation is that **nothing resolves the fold collapse** — you'll still hit nan or see strong weight divergences — but the *way* it happens will change.

Parameters to Change

1. **Gamma (γ)**
   - Original: `1.0`
   - Test values: `0.5` (smaller), `2.0` (larger).
   - Expectation:
     - Smaller γ → weaker blow-up, nan may appear later, fold looks gentler.
     - Larger γ → stronger blow-up, nan appears earlier, fold sharper.
2. **hbar ($\hbar$)**
   - Original: `0.1`
   - Test values: `0.05` (smaller), `0.5` (larger).
   - Expectation:
     - Smaller $\hbar$ → path weights separate **more dramatically** (like quantum interference amplified).
     - Larger $\hbar$ → weights hug each other, less distinction.

Prediction

- **Nan** will still appear for both parameter changes.
- **Weight log plot** will show more/less divergence depending on $\hbar$.
- **grr plot** should remain identical in shape (since it depends on f′, not γ/$\hbar$).
- This test confirms: tuning parameters alone doesn't fix the fold — we'll need $T(r)$.