📓 MU Simulation Log — Test 3 (Path-Integrated Selector $T(r)$ T(r))

Goal

Upgrade the selector so it accumulates influence **along the path**, not just at a single point. This matches your intuition: *"lingering near the fold builds up T influence."*

We define:

$$Q_T(v) = \int T(r(t))\, dt$$

and modify weights:

$$w(v) = \exp\left(-\frac{1}{\hbar}[Q(v) - \beta Q_T(v)]\right)$$

where β is a scaling knob (we'll set $\beta = 1.0$ for now).

Parameters

Keep same as Test-2:

```
gamma  = 1.0
eps    = 1e-6
hbar   = 0.1
Twindow = 1.0
beta = 1.0
```

Predictions

- **Slow path**: survives strongly, boosted by cumulative T influence (consistent with MU principle).

- **Fast path**: suppressed more cleanly (huge Q but little T exposure).

- **Weights**: slow ≫ fast, ratio finite and very large.

- **Plots**:

  - Log-weights should show sharp separation (big vertical gap).

  - g_rr still flips (geometry unchanged).

  - q paths plot legends will now show a dramatic difference in weights.