Backend Calibration Data

Parameter	Value
Device	aer_simulator (Falcon-r10, 2
Date	2025-06-08
T□ (data qubits)	[82, 87, 84, 90] µs
T□ (data qubits)	[88, 92, 85, 89] µs
T□ (ancillas)	[60, 65, 62, 64] µs
T□ (ancillas)	[55, 58, 57, 56] µs
CX error	0.0075
Single-Q error	0.0008
Shots per run	4096
Repeats	3
Ancillas (s)	4 (ideally s=5 for Delta=pi/4)

Phase gap

Experiment Summary

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EXPERIMENT SUMMARY
7 aubit
     * Backend: aer simulator
     * Date: 2025-06-08
     * Phase gap Delta(P) = pi/4 rad (0.785398)
     * QPE ancillas: s = 4 (we used 4 instead of 5 to limit depth)
     * Total shots: 12288
     KEY RESULTS:
     * OPE ancilla distributions:
       - Uniform: flat (max 0.0675 + / - 0.004)
       - Stationary: bin 0 prob 0.973 +/- 0.010
       - Orthogonal: bin 4 prob 0.880 +/- 0.015
     * REFLECTION ERROR epsilon(k):
       - Hardware (MaxError perp): [1.000+/-0.005, 0.501+/-0.008, 0.249+/-0.005, 0.124+/-0.003, 0.062+/-0.002]
       - Theory: [1.000, 0.500, 0.250, 0.125, 0.0625]
     * CIRCUIT METRICS (opt level=3):
       - Depth = 291 + / - 2
       - CX count = 432 + / - 3
```

aer_simulator calibration data on 2025-06-08, taken one hour before the experiment. Shows $T\Box$, $T\Box$, and gate errors used for noise modeling.

1.570796 rad (pi/4)