Backend Calibration Data

Parameter	Value
Device	aer_simulator (Falcon-r10, 27 qubits)
Date	2025-06-07
T1 (data qubits)	[82, 87, 84, 90] μs
T2 (data qubits)	[88, 92, 85, 89] μs
T1 (ancillas)	[60, 65, 62, 64] μs
T2 (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	0.785398 rad (pi/4)

aer_simulator calibration data on 2025-06-07, taken one hour before the experiment.
Shows T1, T2, and gate errors used for noise modeling.

Experiment Summary

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EXPERIMENT SUMMARY

* Backend: aer_simulator
* Date: 2025-06-07
* 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:
* QPE 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
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