

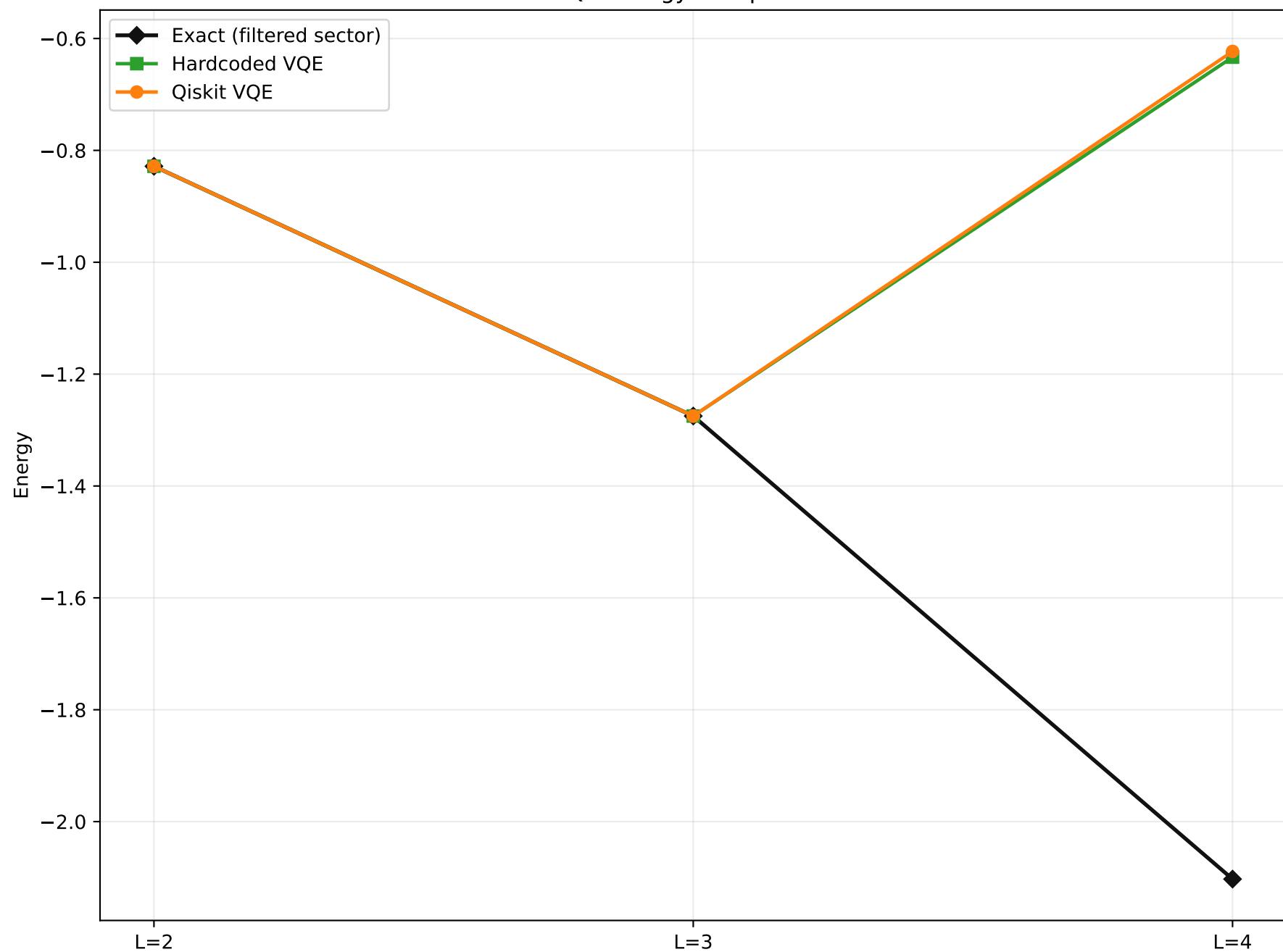
## Hardcoded vs Qiskit Pipeline Comparison Summary

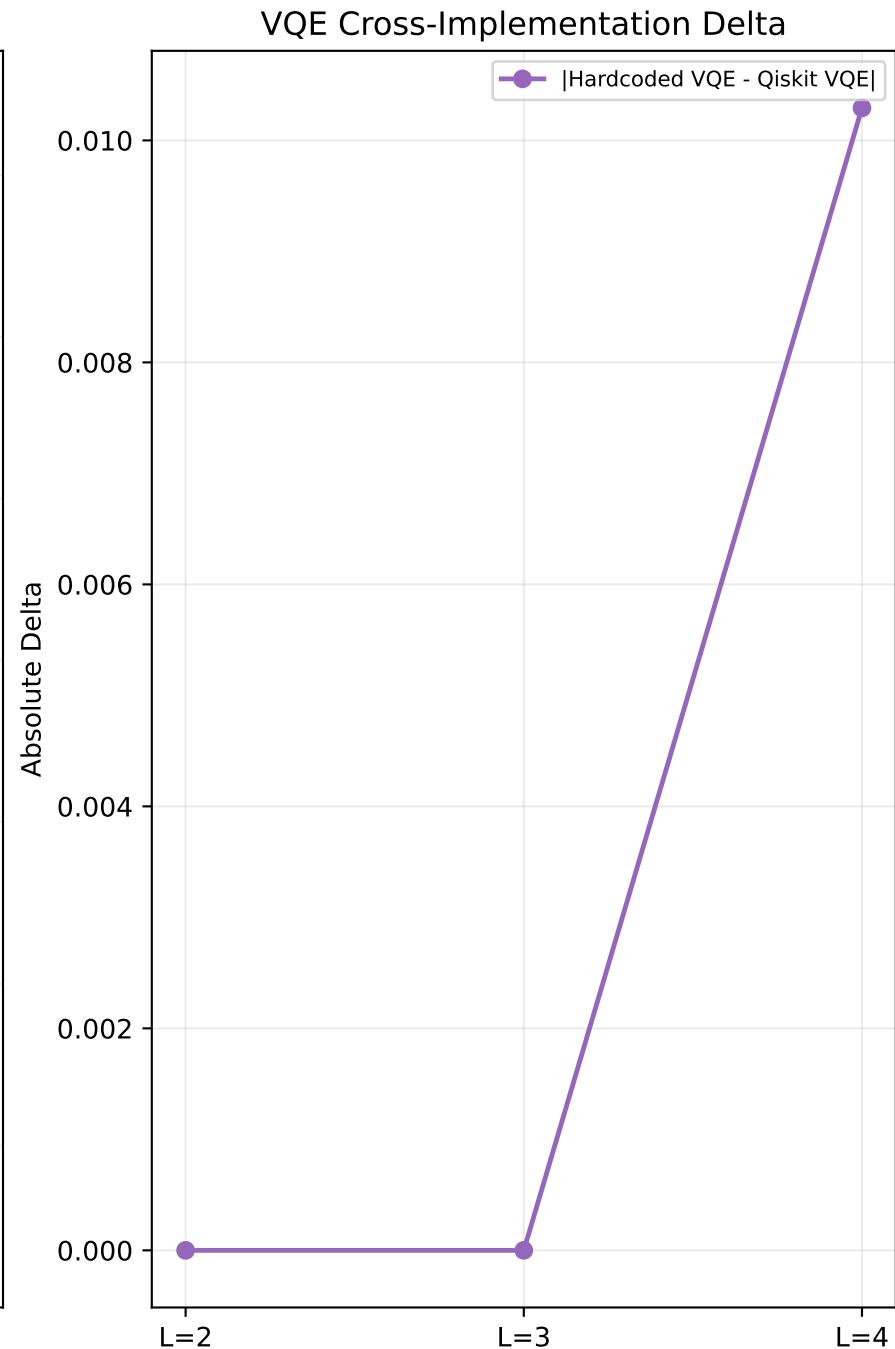
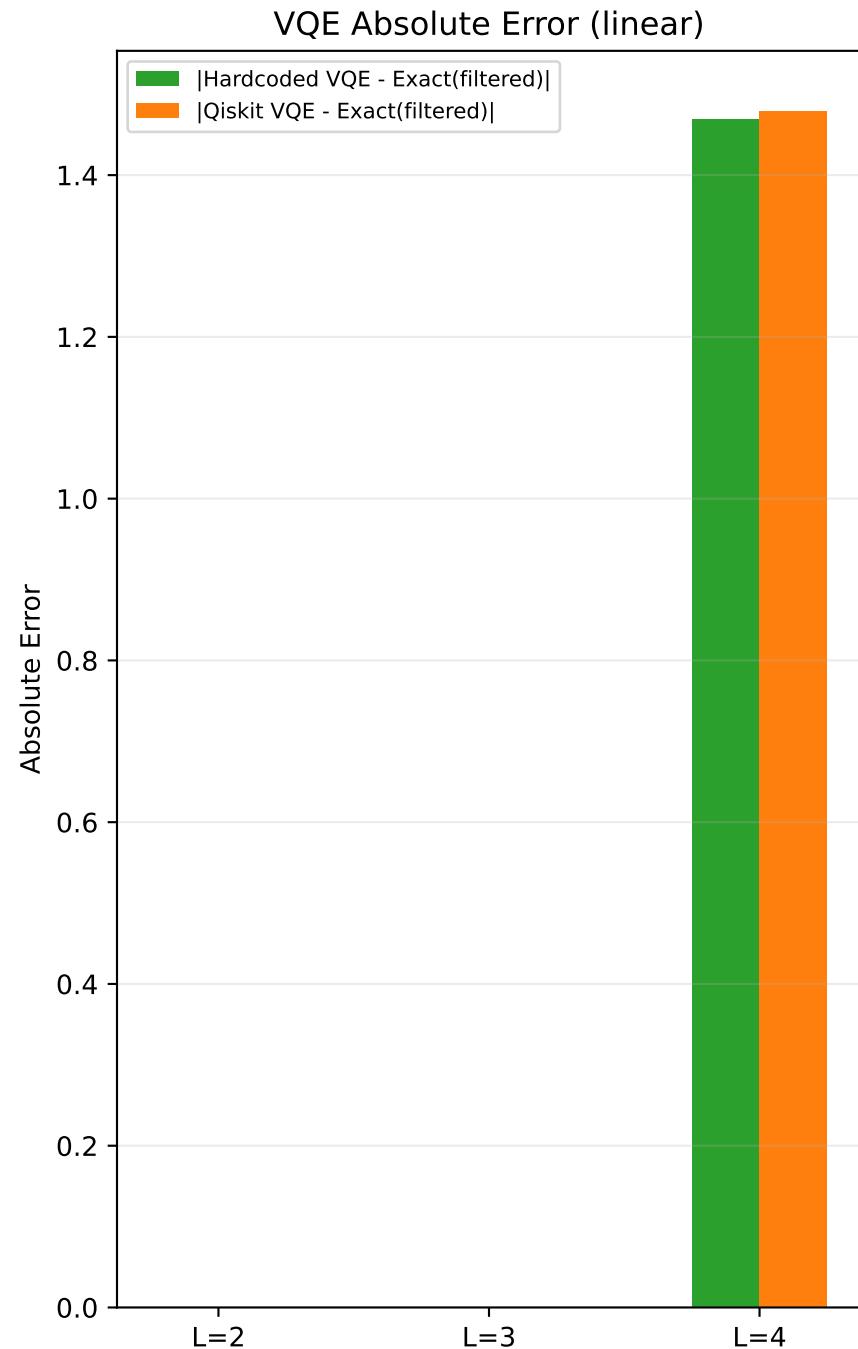
```
generated_utc: 2026-02-13T17:00:09.951132+00:00
all_pass: True
l_values: [2, 3, 4]

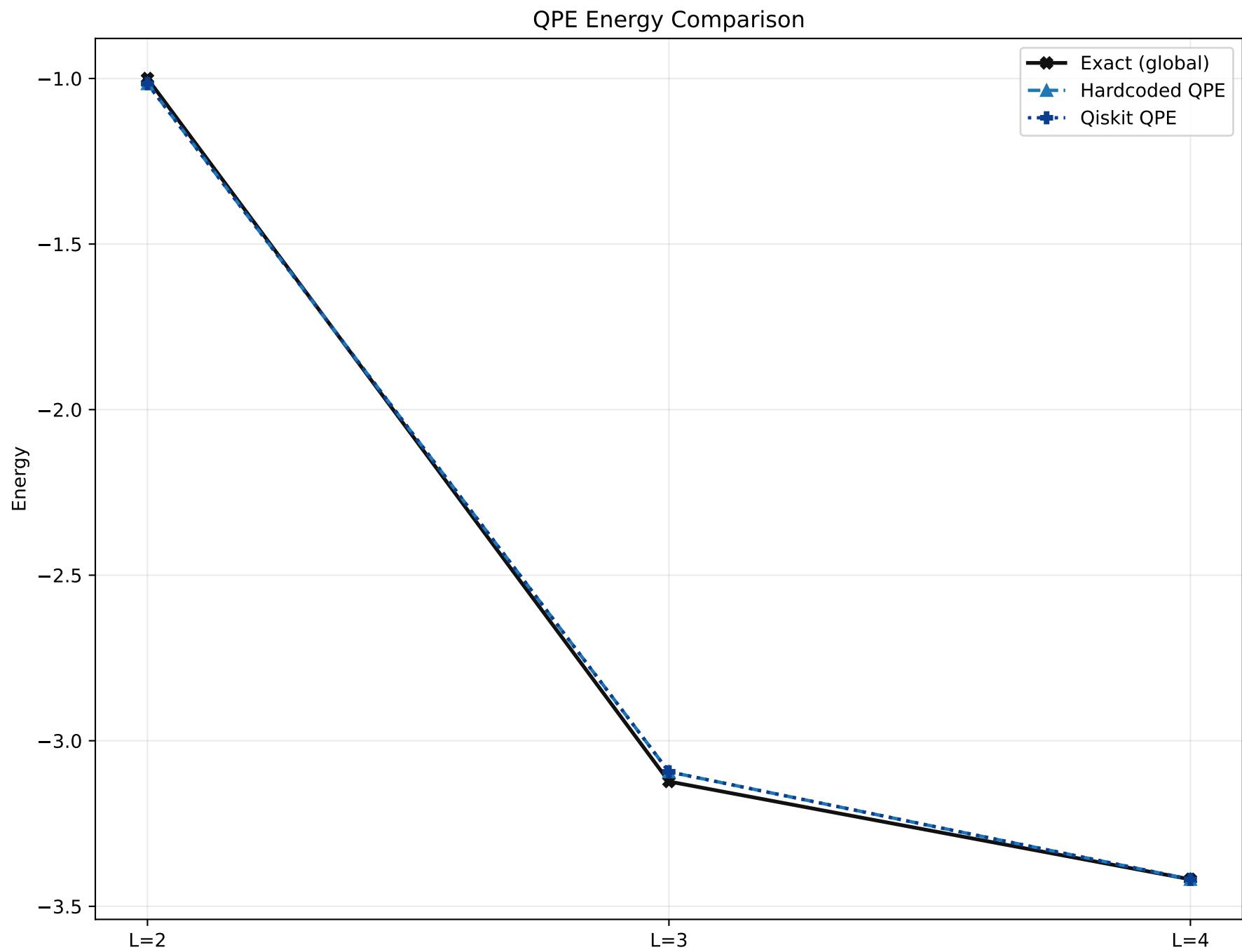
thresholds: {"ground_state_energy_abs_delta": 1e-08, "fidelity_max_abs_delta": 0.0001, "energy_trotter_max_abs_delta": 0.001,
hardcoded_qiskit_import_isolation: {'pass': True, 'qpe_adapter_range': {'start_line': 299, 'end_line': 416}, 'qiskit_imports': []}

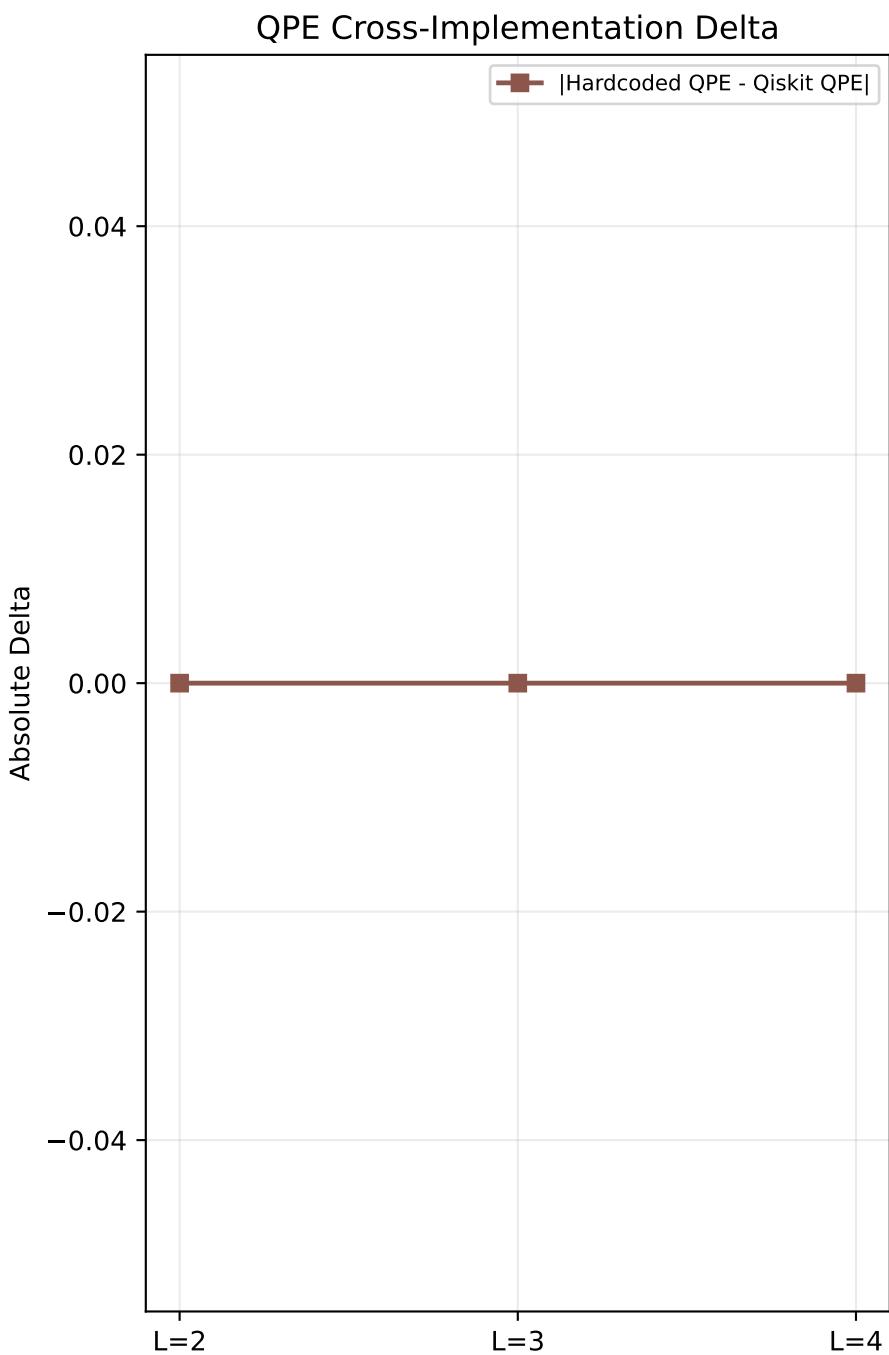
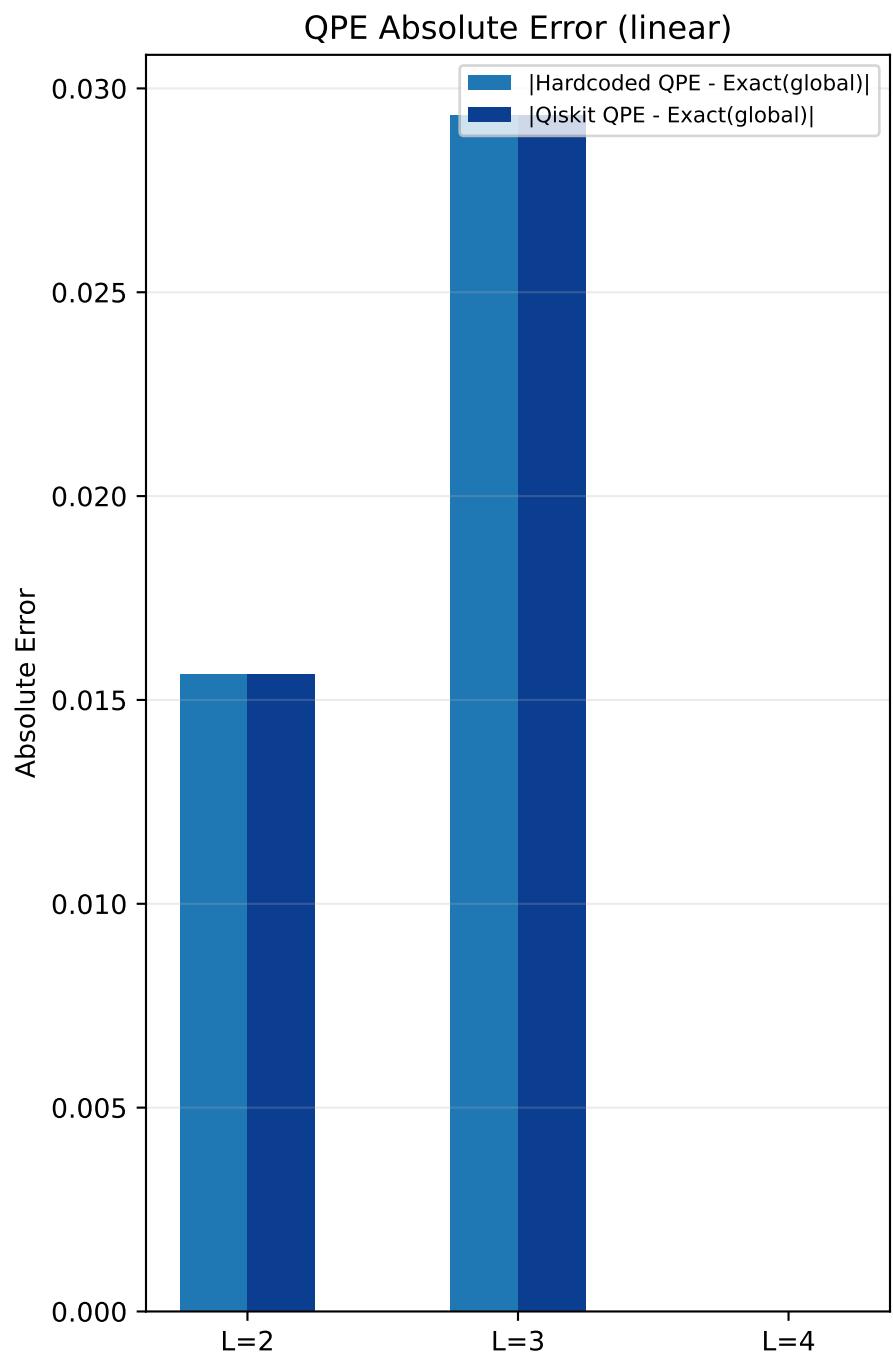
Per-L pass flags:
L=2 pass=True metrics_json=Tests/artifacts/hardcoded_vs_qiskit_pipeline_L2_metrics.json
L=3 pass=True metrics_json=Tests/artifacts/hardcoded_vs_qiskit_pipeline_L3_metrics.json
L=4 pass=True metrics_json=Tests/artifacts/hardcoded_vs_qiskit_pipeline_L4_metrics.json
```

VQE Energy Comparison

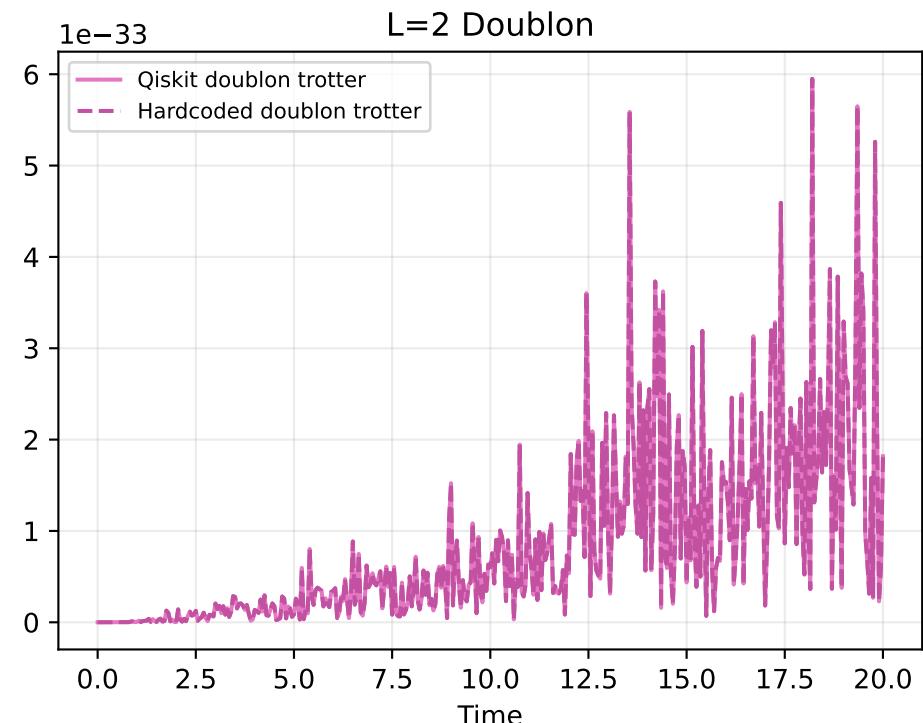
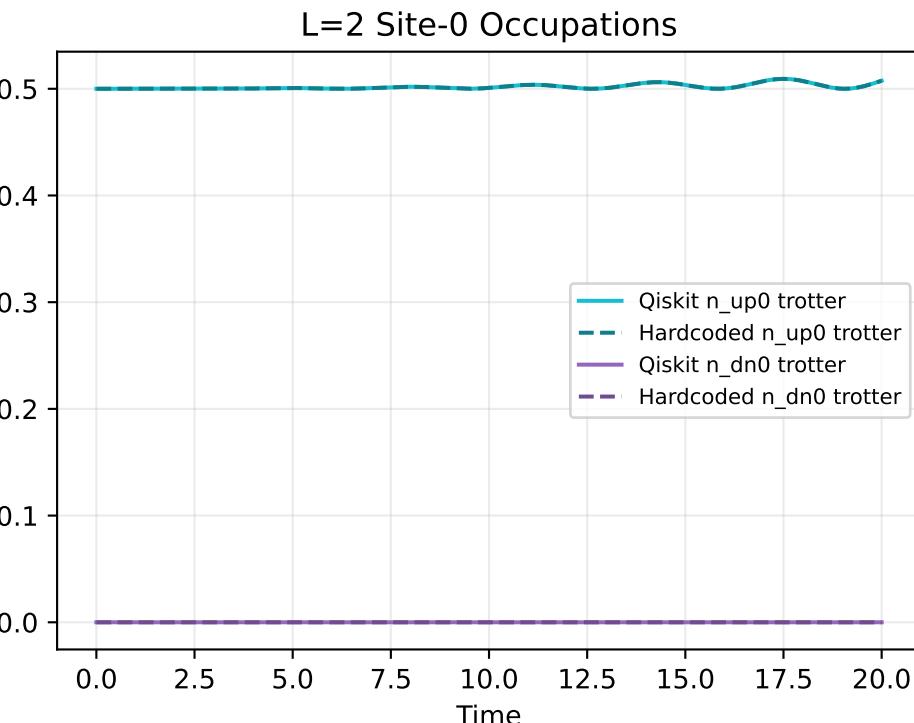
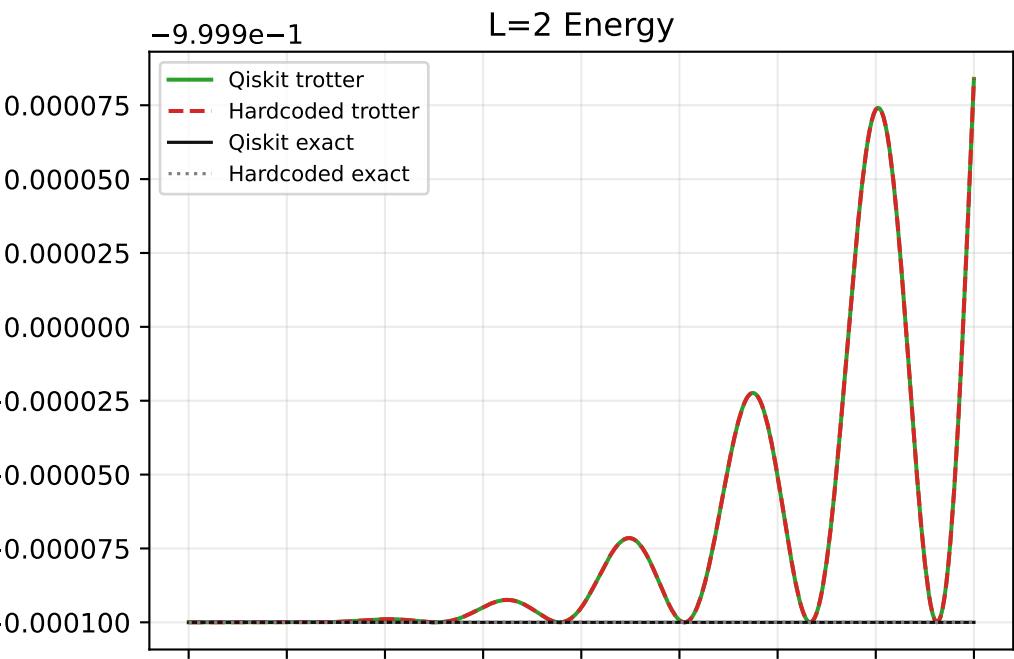
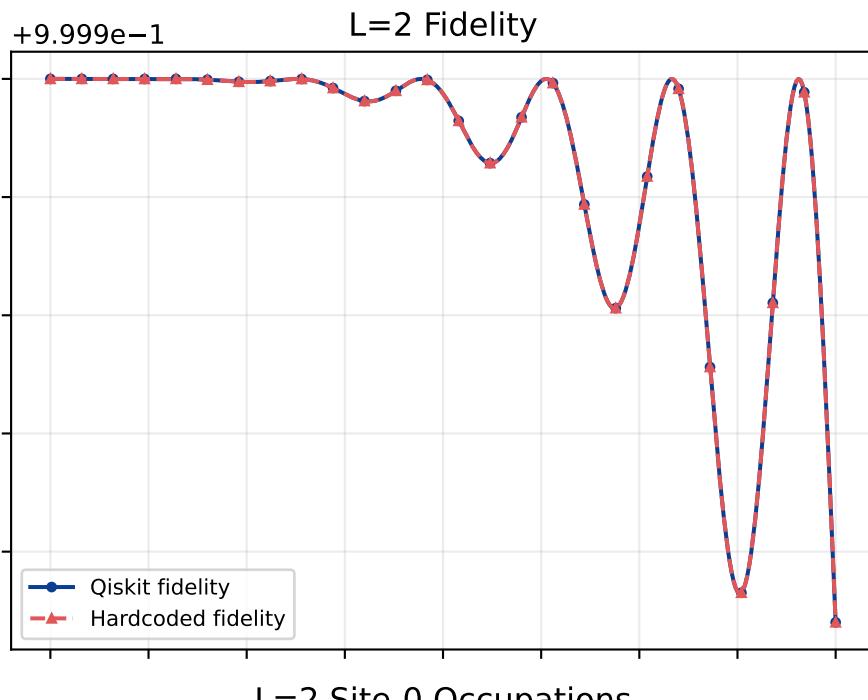






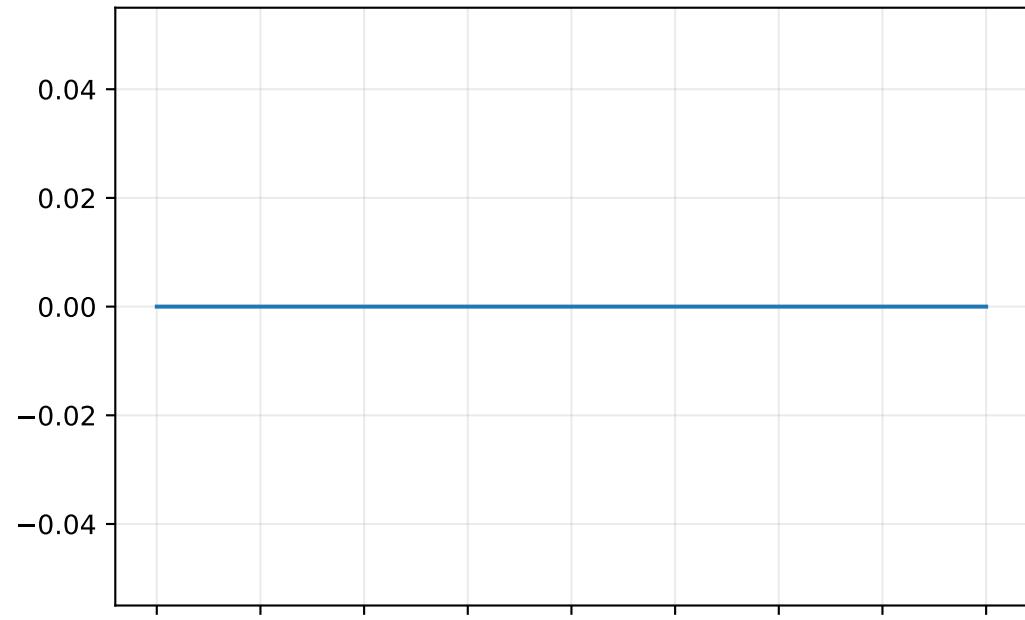


# Bundle Page: L=2 Trajectory Comparison

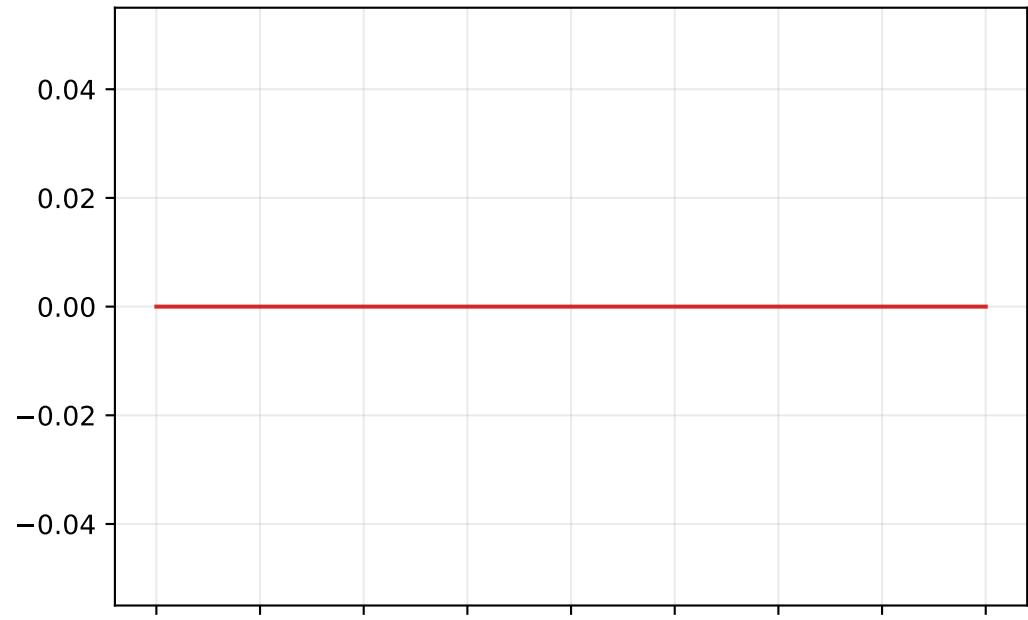


## Bundle Delta Diagnostics L=2

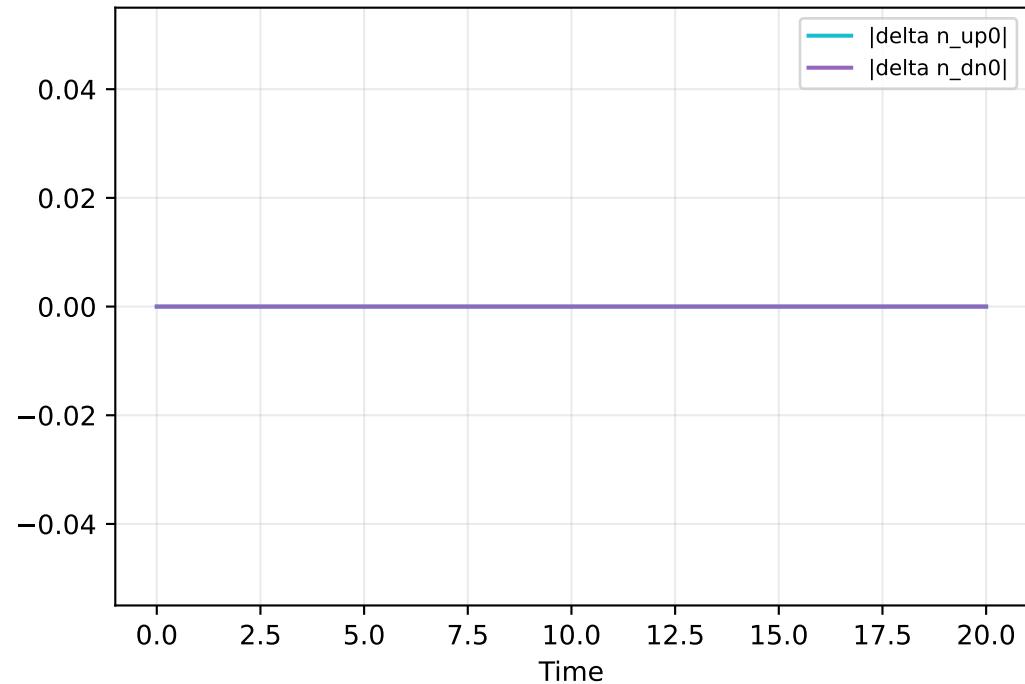
|delta fidelity|



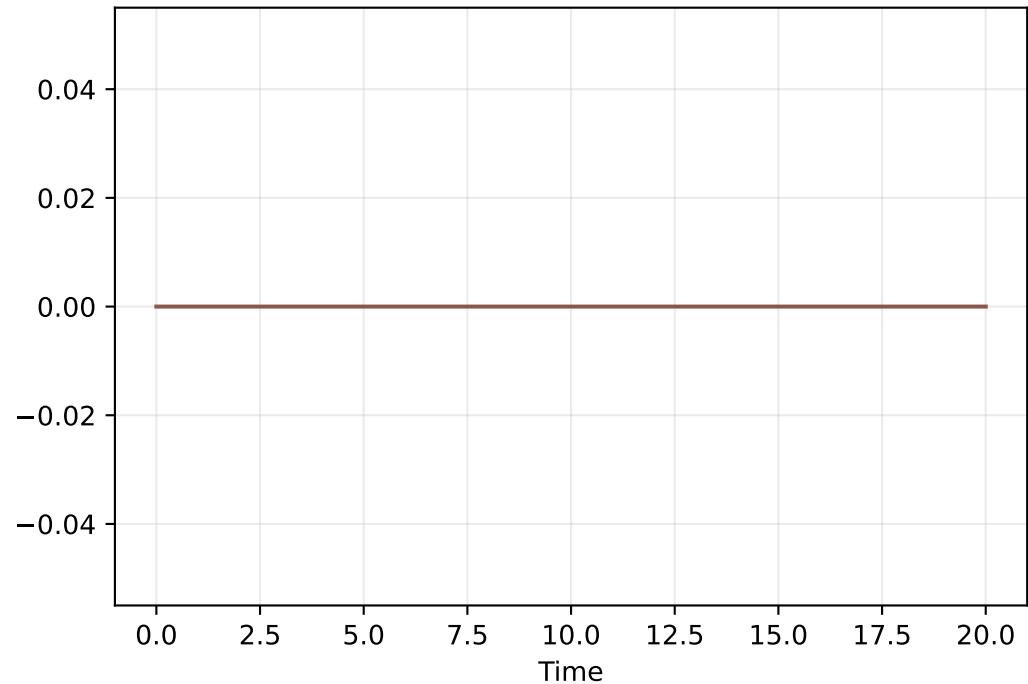
|delta energy\_trotter|



|delta occupations|



|delta doublon\_trotter|



Bundle metrics page L=2

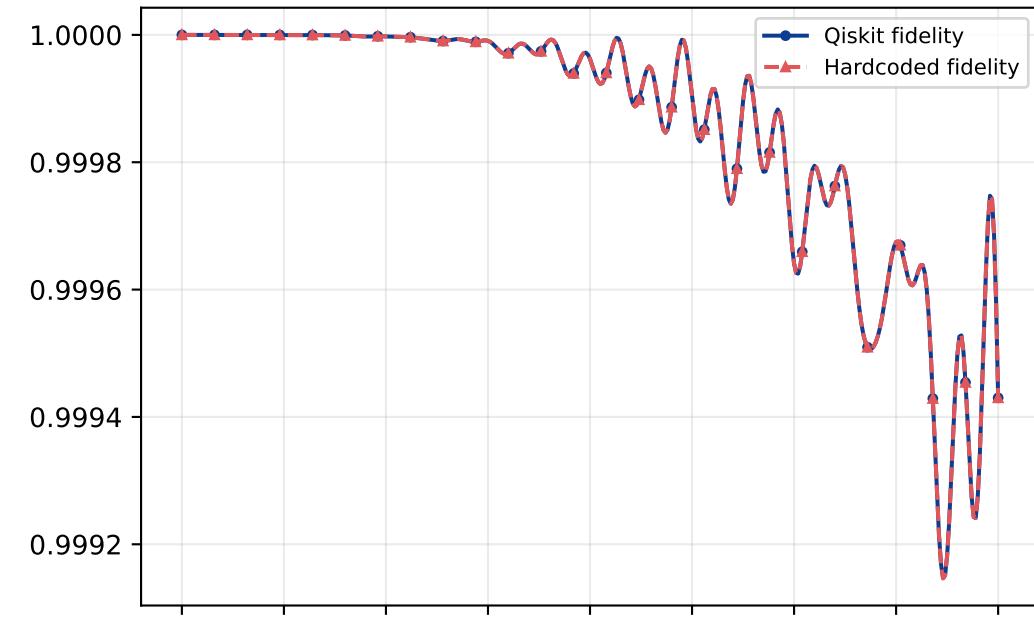
Trotterization comparison uses each path's configured initial state.  
For VQE-init runs, both exact(t) and trotter(t) start from the VQE ansatz state.

```
ground_state_energy_abs_delta = 0.0
fidelity max/mean/final = 0.0 / 0.0 / 0.0
energy_trotter max/mean/final = 0.0 / 0.0 / 0.0
n_up_site0_trotter max/mean/final = 0.0 / 0.0 / 0.0
n_dn_site0_trotter max/mean/final = 0.0 / 0.0 / 0.0
doublon_trotter max/mean/final = 0.0 / 0.0 / 0.0

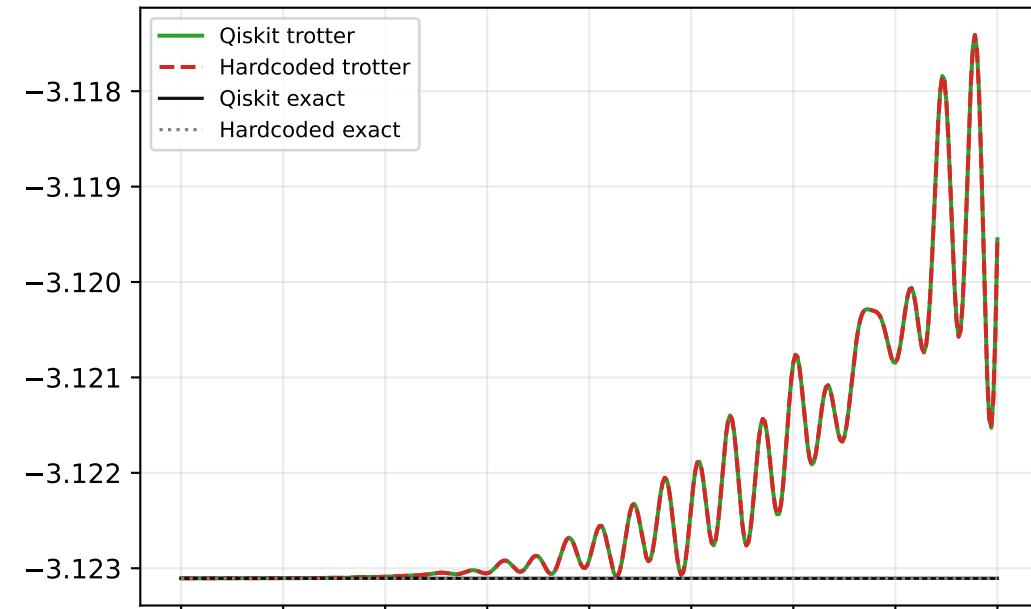
checks = {'ground_state_energy_abs_delta': True, 'fidelity_max_abs_delta': True, 'energy_trotter_max_abs_delta': True, 'n_up_s
PASS = True
```

# Bundle Page: L=3 Trajectory Comparison

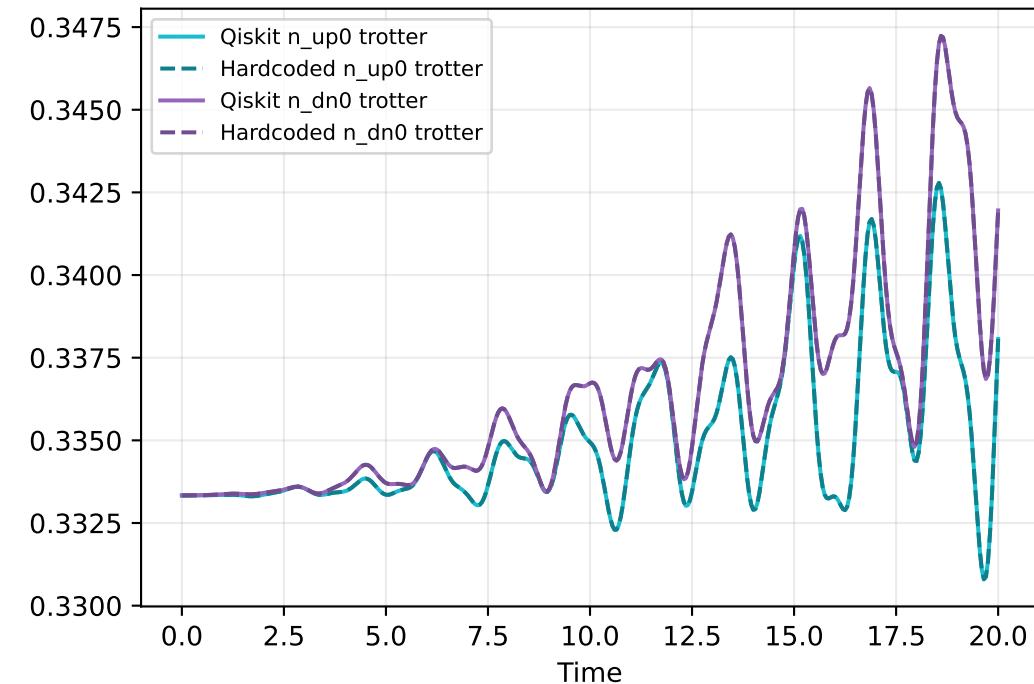
L=3 Fidelity



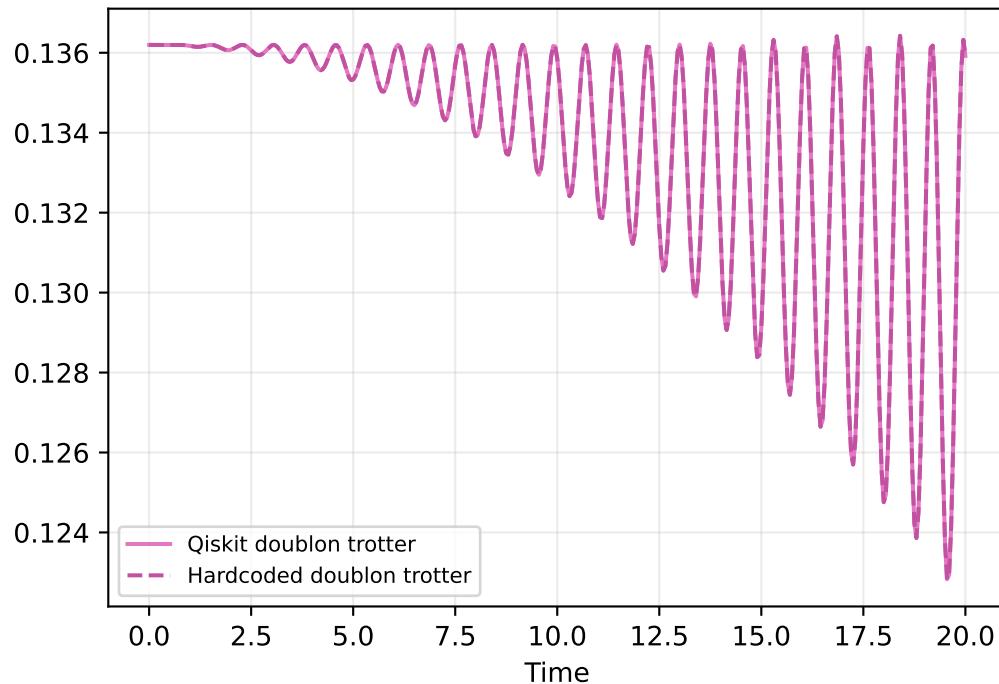
L=3 Energy



L=3 Site-0 Occupations

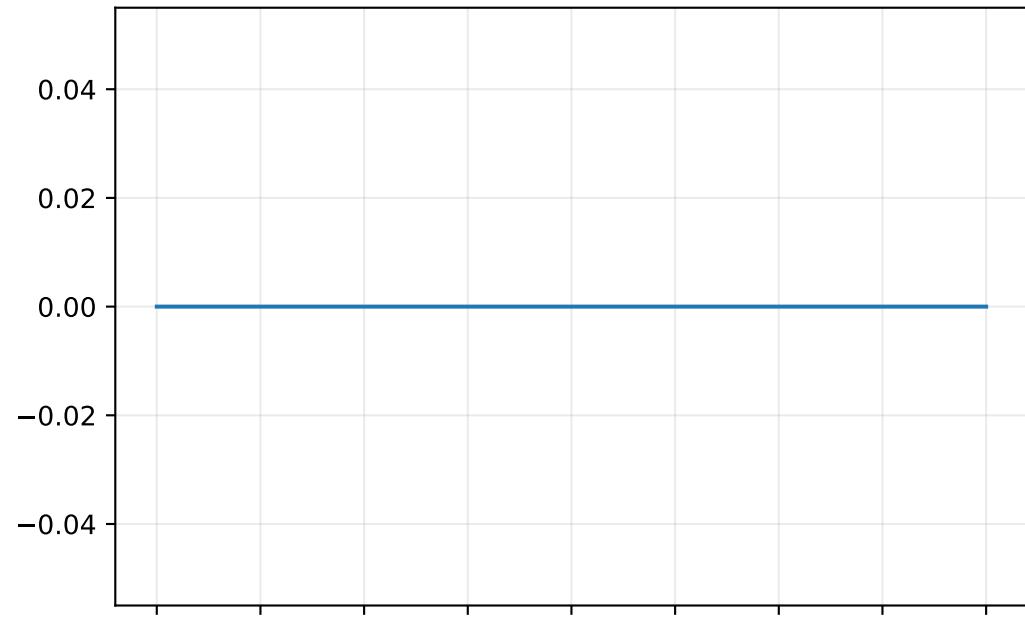


L=3 Doublon

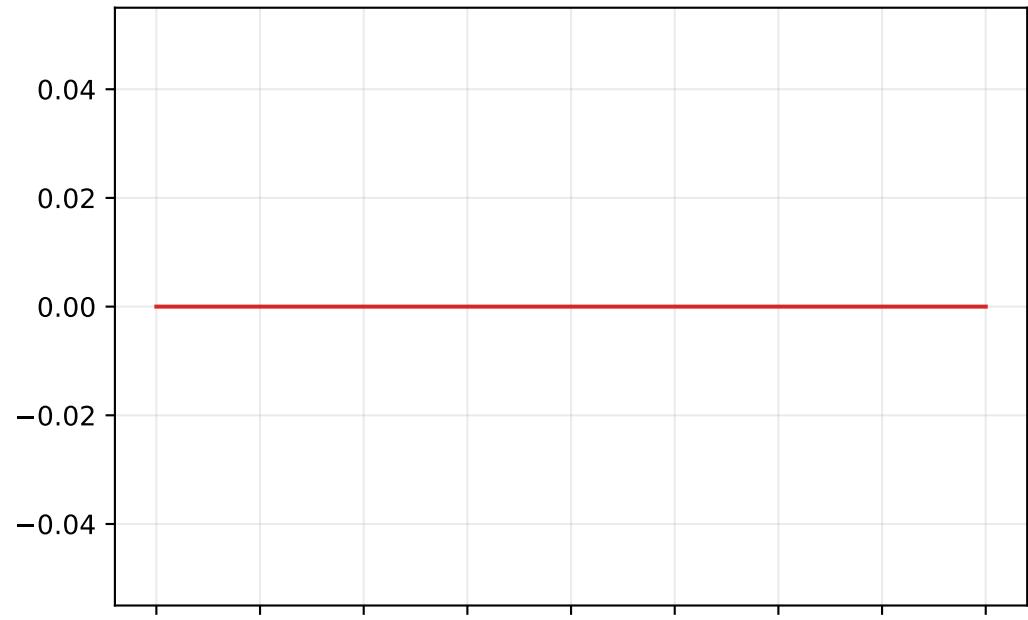


# Bundle Delta Diagnostics L=3

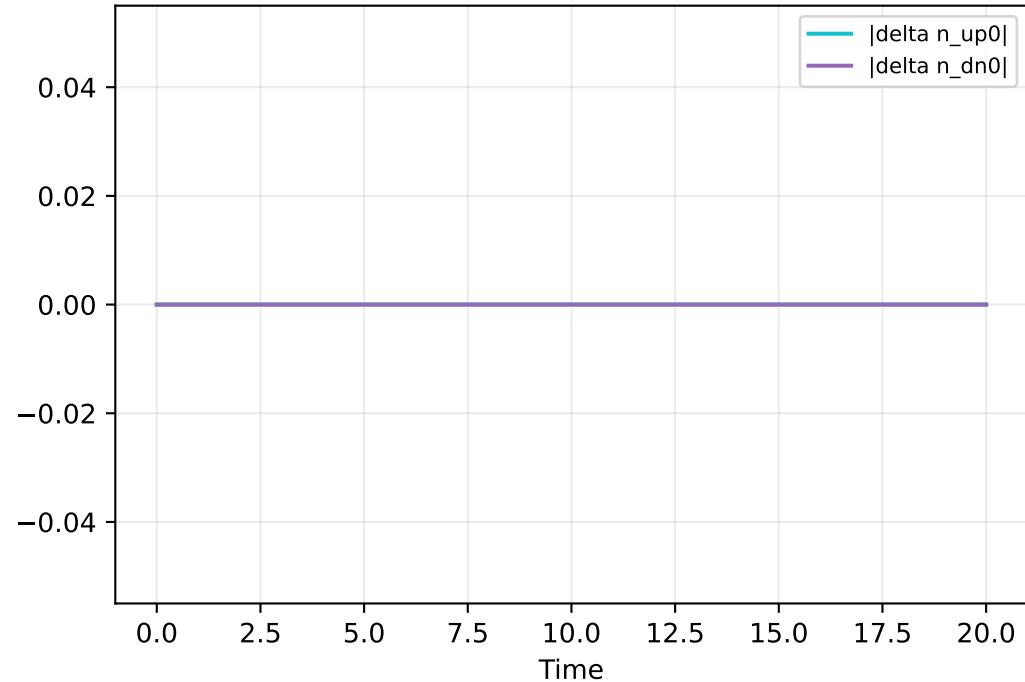
|delta fidelity|



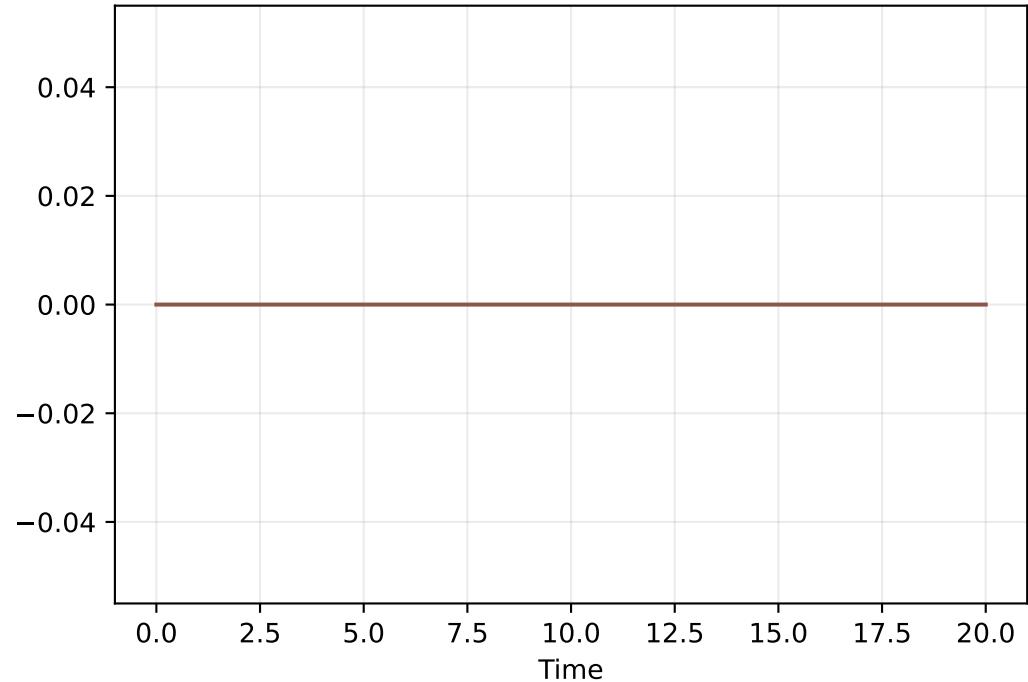
|delta energy\_trotter|



|delta occupations|



|delta doublon\_trotter|



Bundle metrics page L=3

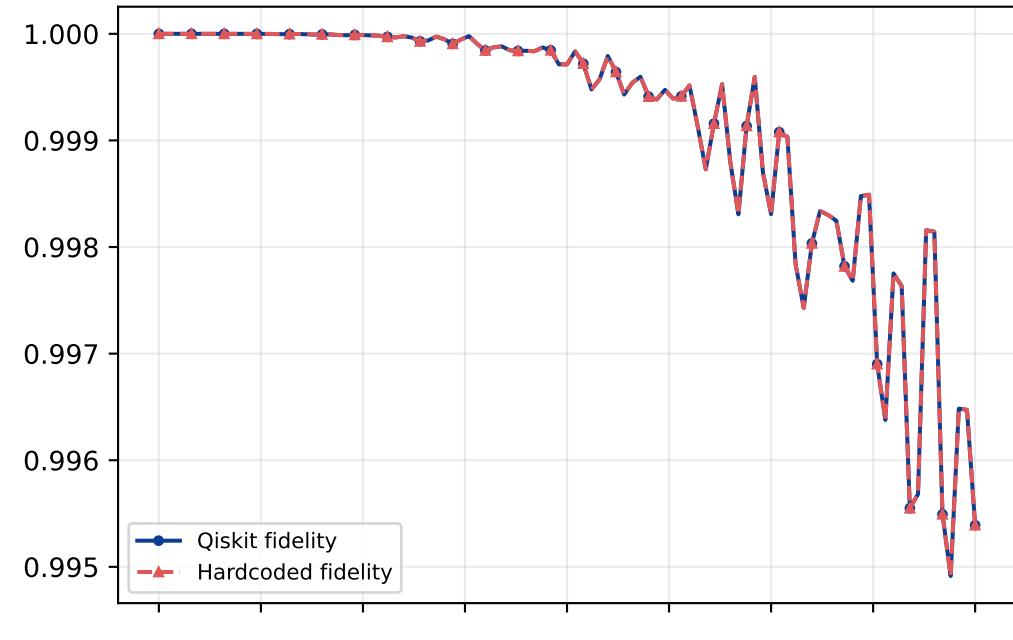
Trotterization comparison uses each path's configured initial state.  
For VQE-init runs, both exact(t) and trotter(t) start from the VQE ansatz state.

```
ground_state_energy_abs_delta = 0.0
fidelity max/mean/final = 0.0 / 0.0 / 0.0
energy_trotter max/mean/final = 0.0 / 0.0 / 0.0
n_up_site0_trotter max/mean/final = 0.0 / 0.0 / 0.0
n_dn_site0_trotter max/mean/final = 0.0 / 0.0 / 0.0
doublon_trotter max/mean/final = 0.0 / 0.0 / 0.0

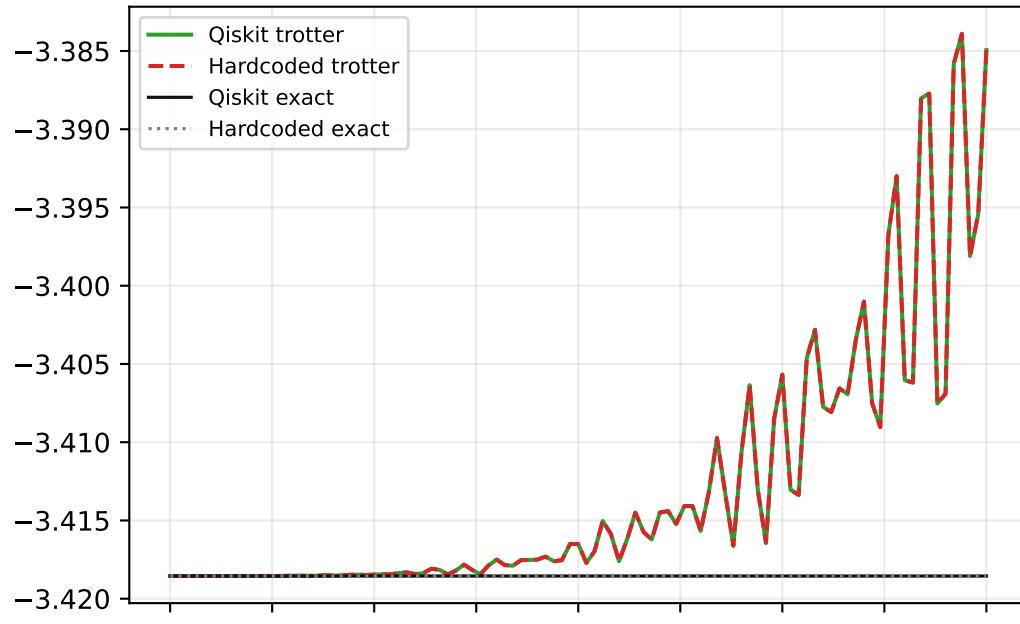
checks = {'ground_state_energy_abs_delta': True, 'fidelity_max_abs_delta': True, 'energy_trotter_max_abs_delta': True, 'n_up_s
PASS = True
```

# Bundle Page: L=4 Trajectory Comparison

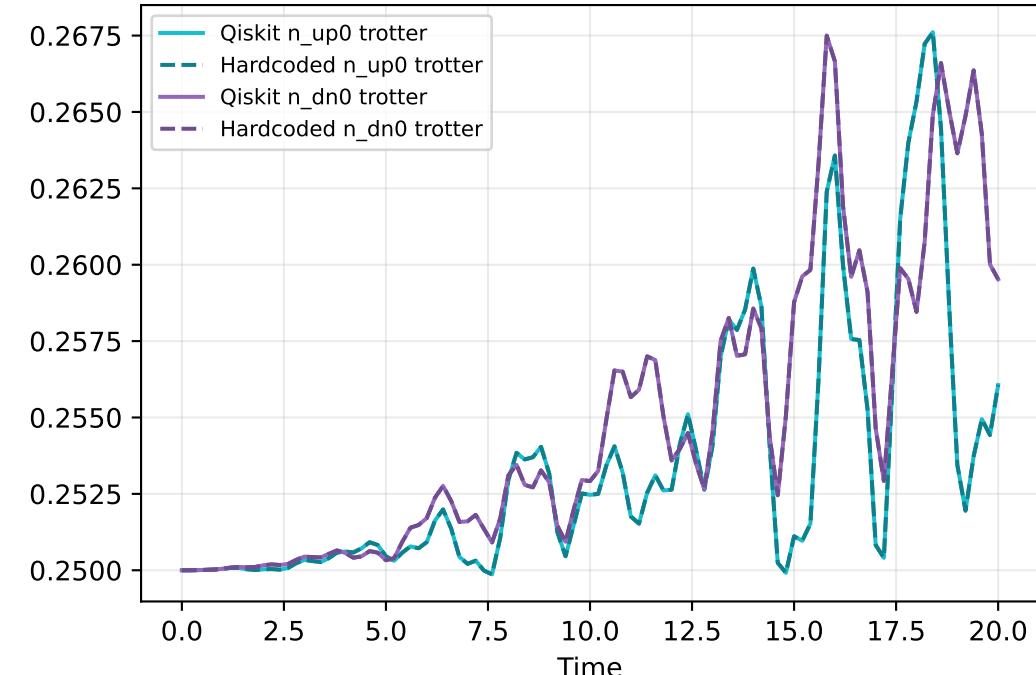
**L=4 Fidelity**



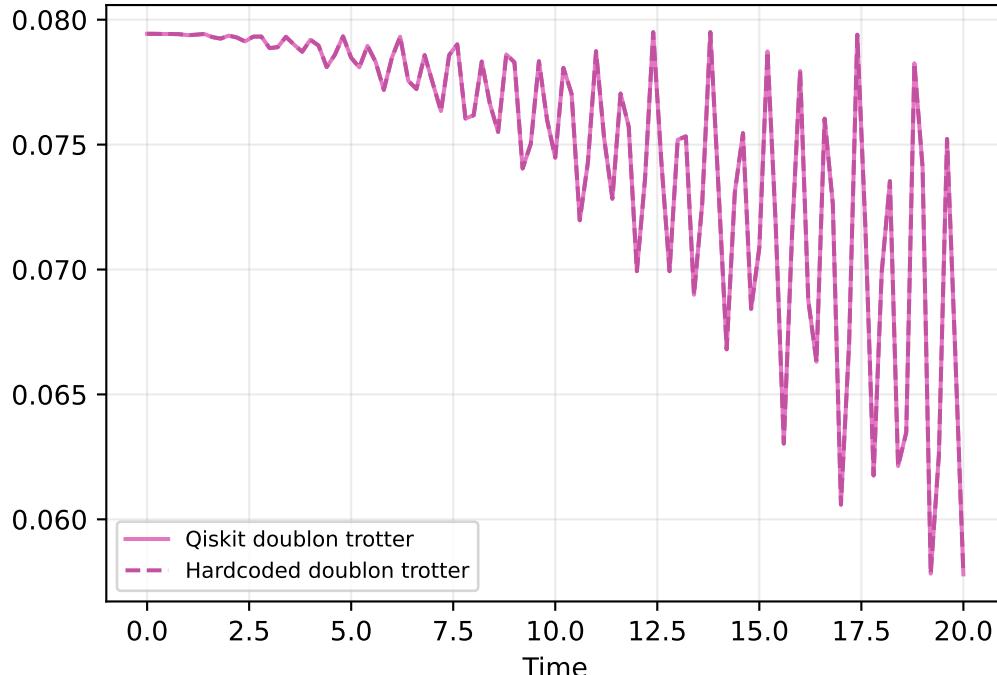
**L=4 Energy**



**L=4 Site-0 Occupations**

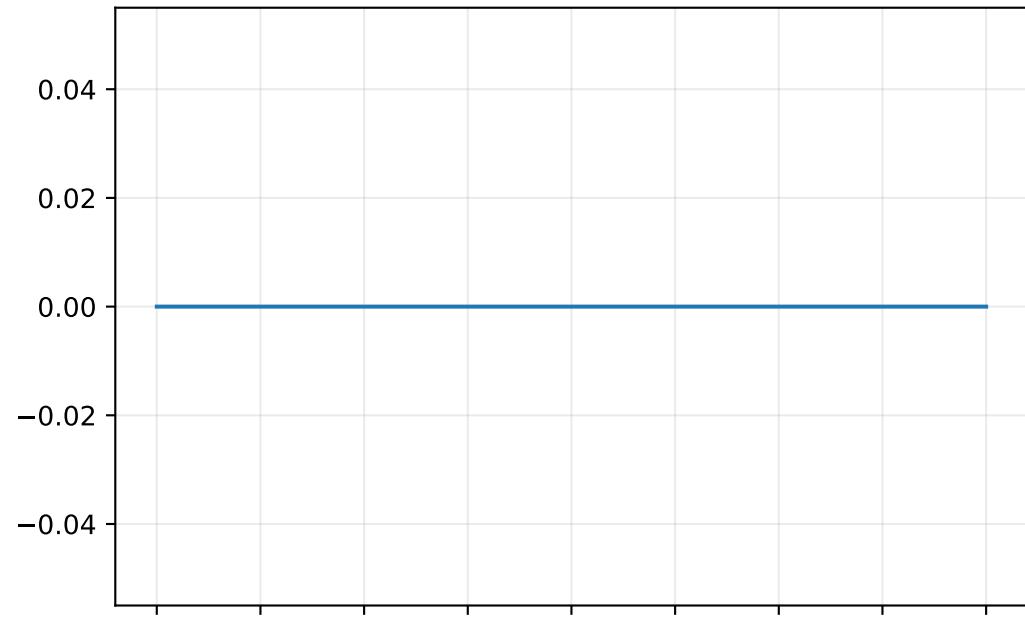


**L=4 Doublon**

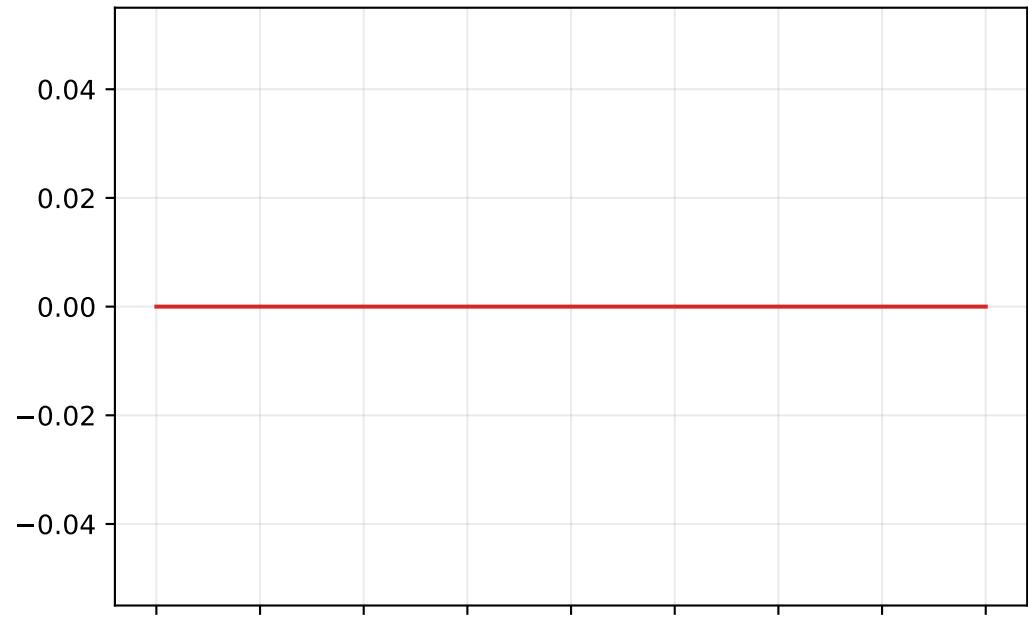


# Bundle Delta Diagnostics L=4

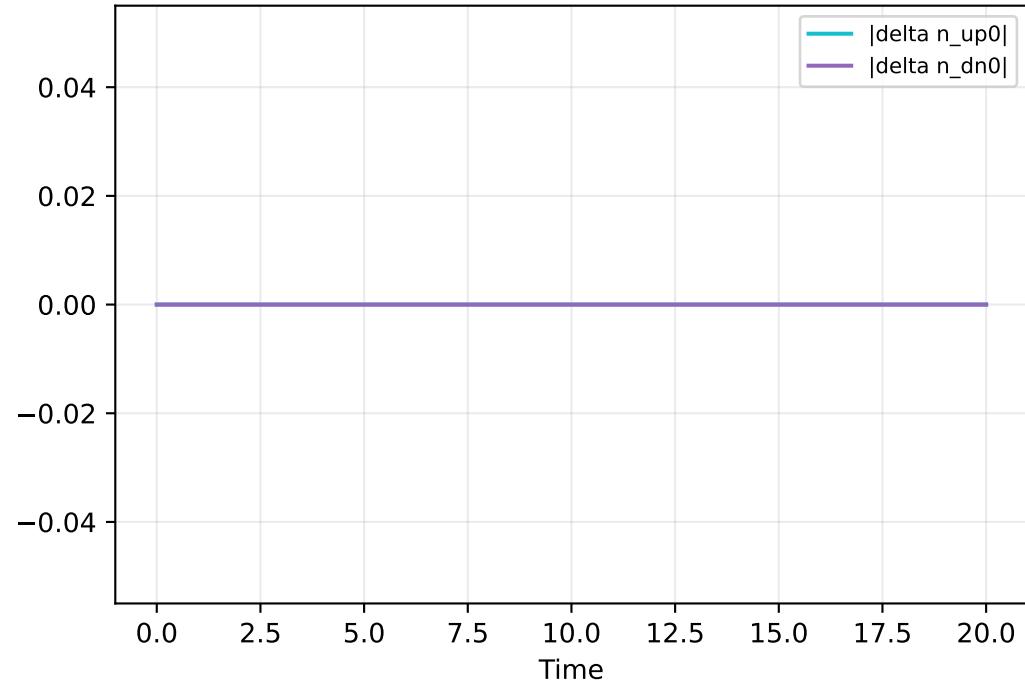
|delta fidelity|



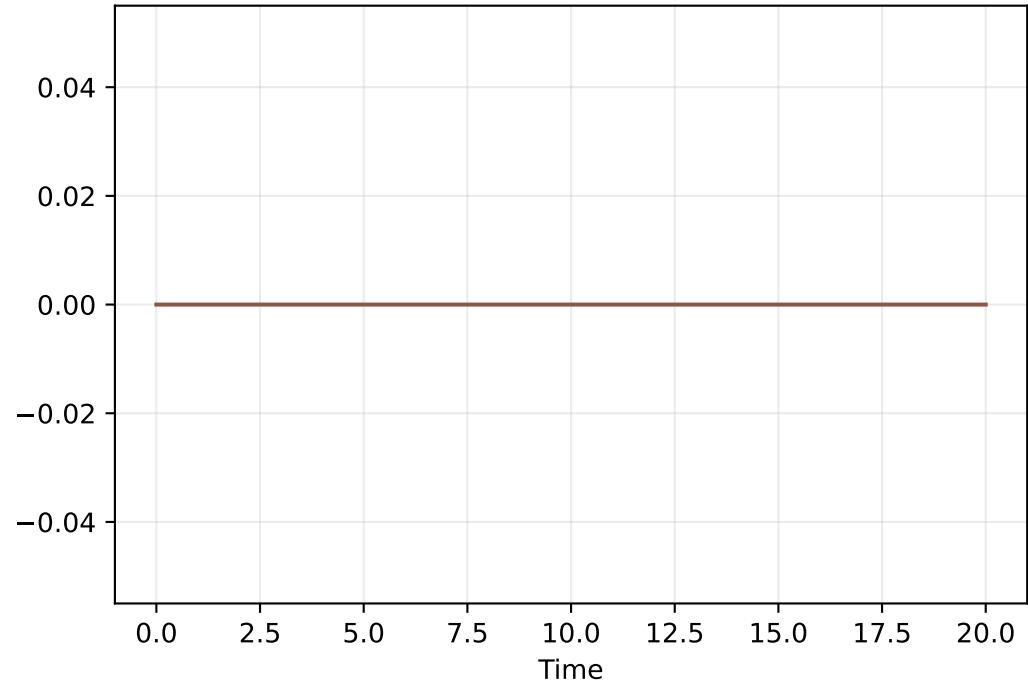
|delta energy\_trotter|



|delta occupations|



|delta doublon\_trotter|



Bundle metrics page L=4

Trotterization comparison uses each path's configured initial state.  
For VQE-init runs, both exact(t) and trotter(t) start from the VQE ansatz state.

```
ground_state_energy_abs_delta = 0.0
fidelity max/mean/final = 0.0 / 0.0 / 0.0
energy_trotter max/mean/final = 0.0 / 0.0 / 0.0
n_up_site0_trotter max/mean/final = 0.0 / 0.0 / 0.0
n_dn_site0_trotter max/mean/final = 0.0 / 0.0 / 0.0
doublon_trotter max/mean/final = 0.0 / 0.0 / 0.0

checks = {'ground_state_energy_abs_delta': True, 'fidelity_max_abs_delta': True, 'energy_trotter_max_abs_delta': True, 'n_up_s
PASS = True
```