Noise: Dephasing, [0.001, 0.001, 0, 0]Title Simulation Mean -7.588028443549487 vqe xy

redundant (noise=6) -7.5880284435494385 0.10673748123865909ху redundant (noise=18) -6.28454723195193 0.1627423405639358xy0.08912986050559951zne -8.239769049348192 xy

-6.559653522129835

-7.092341686779543

-5.97122563622368

-5.97122563622362

-6.605990911161048

-5.97122563622368

-5.97122563622362

-4.701695086348764

-4.014099834939171

-6.713152863903258

-6.9205461139528435

-5.97122563622368

-5.97122563622362

-4.7016950863487645

-4.01409983493917

-6.605990911161048

-6.9205461139528435

Anstze with noise-free time-evolution.

Std

0.10673748123865216

0.15124979844206457

0.21602941424704925

0.21602941424705321

0.22127314516423383

0.22490941122324423

0.24690963596051196

0.3274932846028536

0.3274932846028536

0.3141739134474781

0.3456748215824703

0.19766791757742266

0.3274932846028536

0.3274932846028537

0.31417391344747814

0.31514195679643936

0.34822114941292537

0.19766791757742266

0.3274932846028536

0.32749328460285343

0.31417391344747825

0.3151419567964393

0.34567482158247037

0.19766791757742266

noiseoff -8.369342611101047 xy-6.55965352212981 ising vqe

ising redundant (noise=6) redundant (noise=18) ising

ising zne ising

heisenberg

heisenberg

heisenberg

heisenberg

heisenberg

heisenberg-ric3

heisenberg-ricmul

heisenberg-ricmul

heisenberg-ricmul

heisenberg-ricmul

heisenberg-ricmul

heisenberg-ricmul

noiseoff

-5.4942771928304195

-7.2800222505553736 vqe redundant (noise=6)

redundant (noise=18) zne

noiseoff

-4.7016950863487645 -6.9205461139528435

vge redundant (noise=6)

redundant (noise=18)

heisenberg-ric3 heisenberg-ric3 heisenberg-ric3 heisenberg-ric3 redundant (noise=26) heisenberg-ric3

zne

noiseoff

vge

redundant (noise=(4, 2))

redundant (noise=(12,6))

redundant (noise=(20, 6))

zne

noiseoff

## XY CONFIGURATION

Parameter	Value
run	vqe
nqubits	7
state	dmatrix
output.file_name_prefix	xy_noisefree_time_evo_dephasing
output.draw.status	True
output.draw.fig_dpi	100
output.draw.type	png
observable.def	ising
observable.coefficients.cn	[0.5,  0.5,  0.5,  0.5,  0.5,  0.5]
observable.coefficients.bn	[1.0, 1.0, 1.0, 1.0, 1.0, 1.0]
observable.coefficients.r	1
ansatz.layer	30
ansatz.gateset	1
ansatz.ugate.type	xy-iss
ansatz.ugate.coefficients.cn	$[0.5,\ 0.5,\ 0.5,\ 0.5,\ 0.5,\ 0.5]$
ansatz.ugate.coefficients.bn	[0,0,0,0,0,0]
ansatz.ugate.coefficients.r	0
ansatz.ugate.time.min	0.0
ansatz.ugate.time.max	10.0
vqe.iteration	10
vqe.optimization.status	True
${\it vqe.optimization.algorithm}$	SLSQP
${\bf vqe. optimization. constraint}$	True
init_param.value	random
noise_profile.status	True
noise_profile.type	dephasing
noise_profile.noise_prob	[0.001,  0.001,  0,  0]
noise_profile.noise_on_init_param.status	False
noise_profile.noise_on_init_param.value	0
redundant.identity_factors	[[0, 0, 0, 0], [1, 1, 0, 0]]
zne.method	richardson
zne.degree	1
zne.sampling	default
zne.data_points	

## ISING CONFIGURATION

Parameter	Value
run	vqe
nqubits	7
state	dmatrix
output.file_name_prefix	ising_noisefree_time_evo_dephasing
output.draw.status	True
output.draw.fig_dpi	100
output.draw.type	png
observable.def	ising
observable.coefficients.cn	[0.5,  0.5,  0.5,  0.5,  0.5,  0.5]
observable.coefficients.bn	[1.0, 1.0, 1.0, 1.0, 1.0, 1.0]
observable.coefficients.r	1
ansatz.layer	30
ansatz.gateset	1
ansatz.ugate.type	ising
ansatz.ugate.coefficients.cn	[0.5,  0.5,  0.5,  0.5,  0.5,  0.5]
ansatz.ugate.coefficients.bn	[0, 0, 0, 0, 0, 0, 0]
ansatz.ugate.coefficients.r	0
ansatz.ugate.time.min	0.0
ansatz.ugate.time.max	10.0
vqe.iteration	10
vqe.optimization.status	True
${\it vqe.optimization.algorithm}$	SLSQP
vqe.optimization.constraint	True
init_param.value	random
noise_profile.status	True
noise_profile.type	dephasing
noise_profile.noise_prob	[0.001,0.001,0,0]
noise_profile.noise_on_init_param.status	False
noise_profile.noise_on_init_param.value	0
redundant.identity_factors	[[0, 0, 0, 0], [1, 1, 0, 0]]
zne.method	richardson
zne.degree	1
zne.sampling	default
zne.data_points	

## HEISENBERG CONFIGURATION

Parameter	Value
run	vqe
nqubits	7
state	dmatrix
output.file_name_prefix	heisenberg_noisefree_time_evo_dephasing
output.draw.status	True
output.draw.fig_dpi	100
output.draw.type	png
observable.def	ising
observable.coefficients.cn	[0.5,  0.5,  0.5,  0.5,  0.5,  0.5]
observable.coefficients.bn	[1.0, 1.0, 1.0, 1.0, 1.0, 1.0]
observable.coefficients.r	1
ansatz.layer	30
ansatz.gateset	1
ansatz.ugate.type	heisenberg
ansatz.ugate.coefficients.cn	[0.5,  0.5,  0.5,  0.5,  0.5,  0.5]
ansatz.ugate.coefficients.bn	[0, 0, 0, 0, 0, 0, 0]
ansatz.ugate.coefficients.r	0
ansatz.ugate.time.min	0.0
ansatz.ugate.time.max	10.0
vqe.iteration	10
vqe.optimization.status	True
vqe.optimization.algorithm	SLSQP
vqe.optimization.constraint	True
init_param.value	random
noise_profile.status	True
noise_profile.type	dephasing
noise_profile.noise_prob	[0.001,0.001,0,0]
noise_profile.noise_on_init_param.status	False
noise_profile.noise_on_init_param.value	0
redundant.identity_factors	[[0, 0, 0, 0], [1, 1, 0, 0]]
zne.method	richardson
zne.degree	1
zne.sampling	default
zne.data_points	