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Experimental condition

Type of tomography	StandardQst
Nrep	100
N	[100, 1000, 10000]
RNG seed	777

True object

Type	State
Dim	2
Vec	[0.70710678 0. 0. 0.]

Tester objects

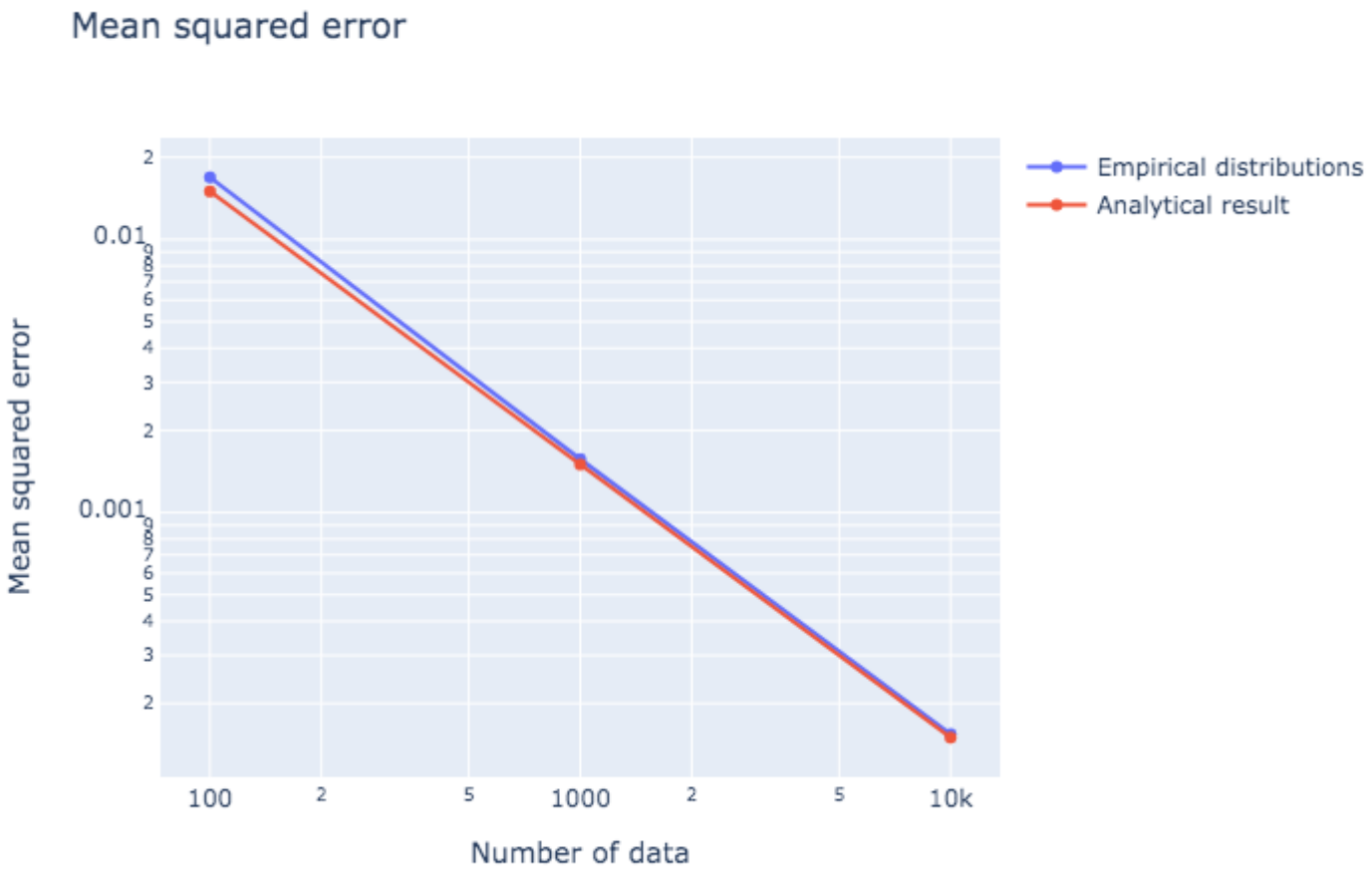
0	**Type**	Povm
	Dim	2
	Number of outcomes	2
	Vecs	[0.70710678 0.70710678 0. 0.] [0.70710678 -0.70710678 0. 0.]
1	**Type**	Povm
	Dim	2
	Number of outcomes	2
	Vecs	[0.70710678 0. 0.70710678 0.] [0.70710678 0. -0.70710678 0.]
2	**Type**	Povm
	Dim	2
	Number of outcomes	2
	Vecs	[0.70710678 0. 0. 0.70710678] [0.70710678 0. 0. -0.70710678]

Cases

	Name	Parameterization	Tomography	Estimator
0	LinearEstimator(True)	True	StandardQst	LinearEstimator

1	LinearEstimator(False)	False	StandardQst	LinearEstimator
2	ProjectedLinearEstimator(True)	True	StandardQst	ProjectedLinearEstimator
3	ProjectedLinearEstimator(False)	False	StandardQst	ProjectedLinearEstimator

MSE of Empirical Distributions

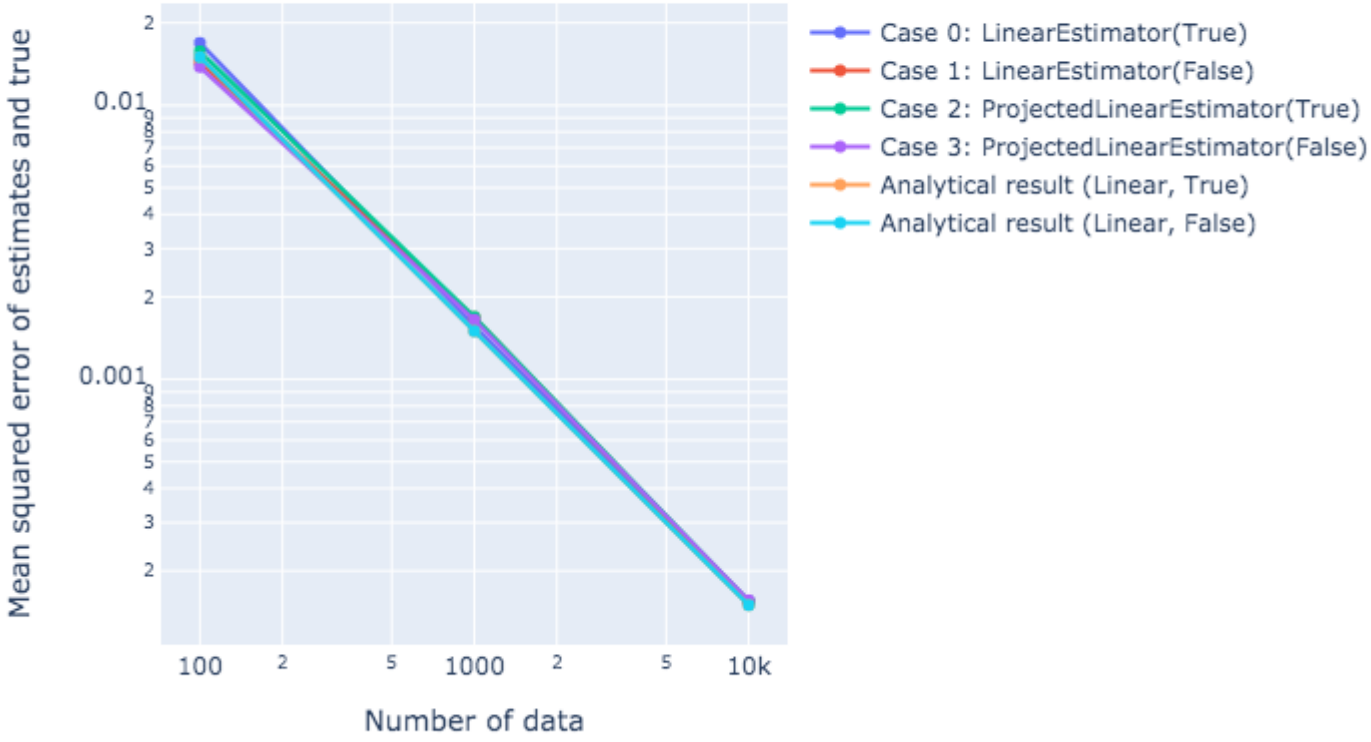


Consistency test

	Type of tomography	Parametorization	Estimator	Result

0	StandardQst	True	LinearEstimator	0.000000e+00
1	StandardQst	False	LinearEstimator	4.930381e-32
2	StandardQst	True	ProjectedLinearEstimator	0.000000e+00
3	StandardQst	False	ProjectedLinearEstimator	0.000000e+00

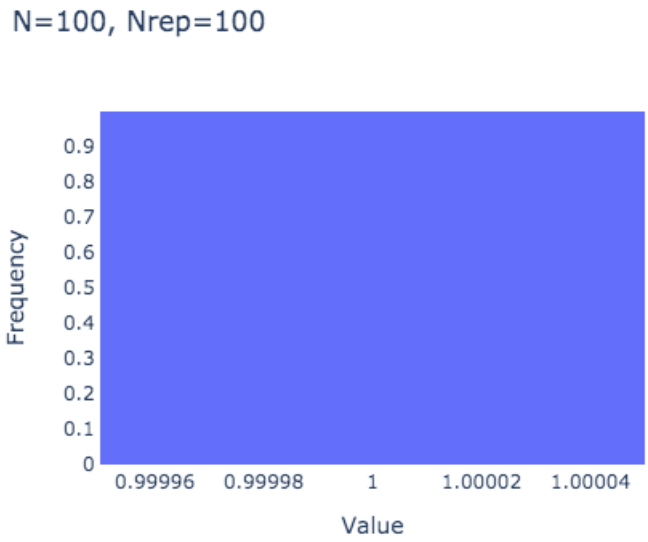
MSE

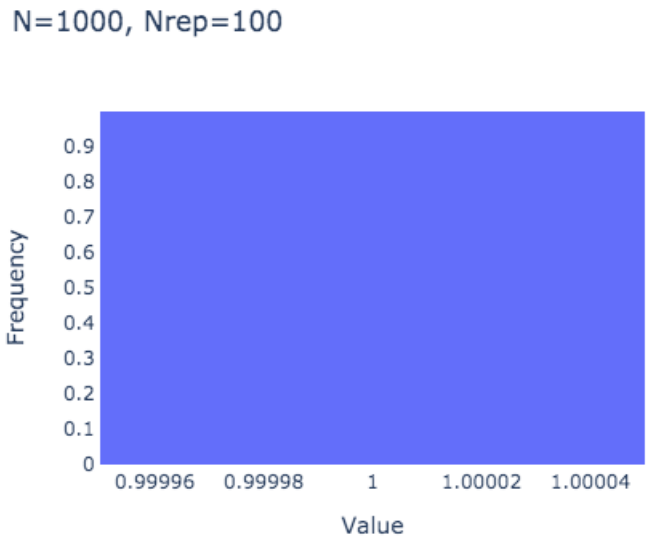


Physicality violation test

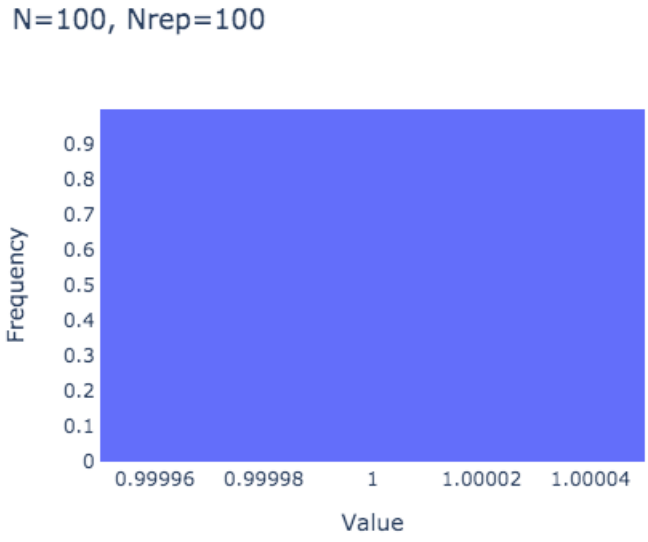
on_para_eq_constraint=True

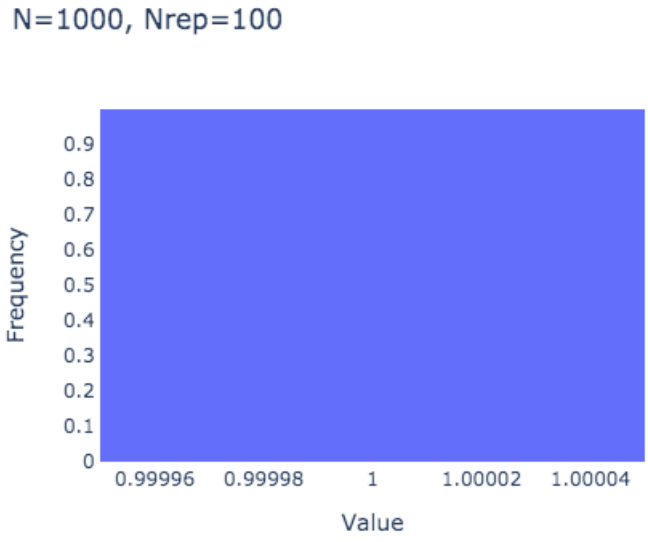
Case 0: LinearEstimator(True)





Case 2: ProjectedLinearEstimator(True)



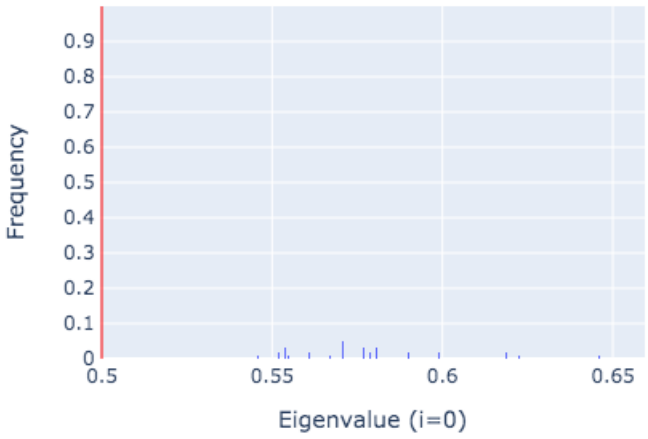


on_para_eq_constraint=False

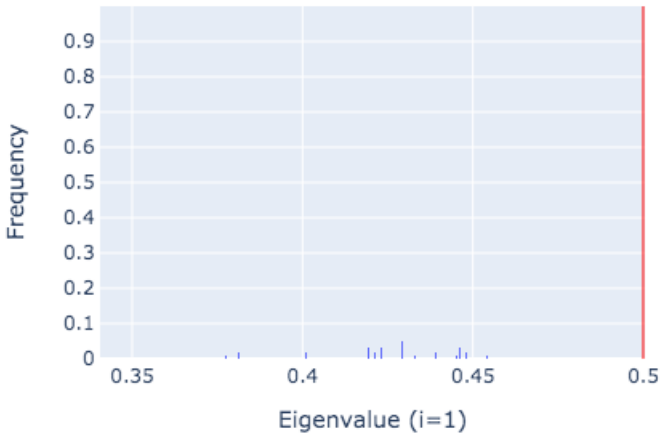
Eigenvalue

Case 1: LinearEstimator(False)

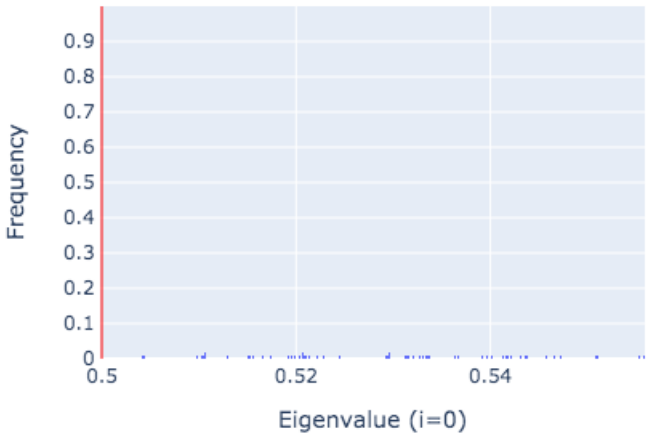
N=100, Nrep=100



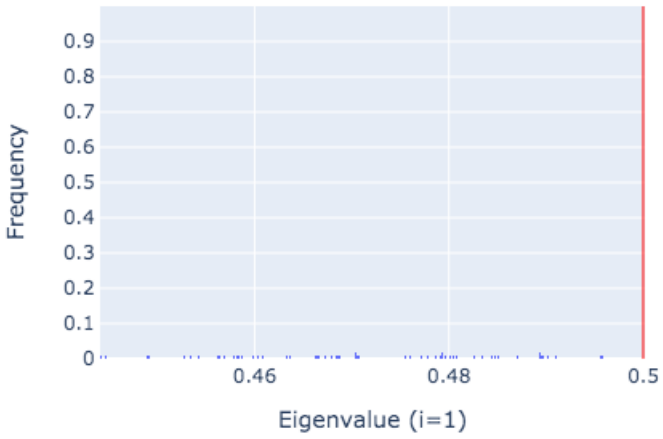
N=100, Nrep=100

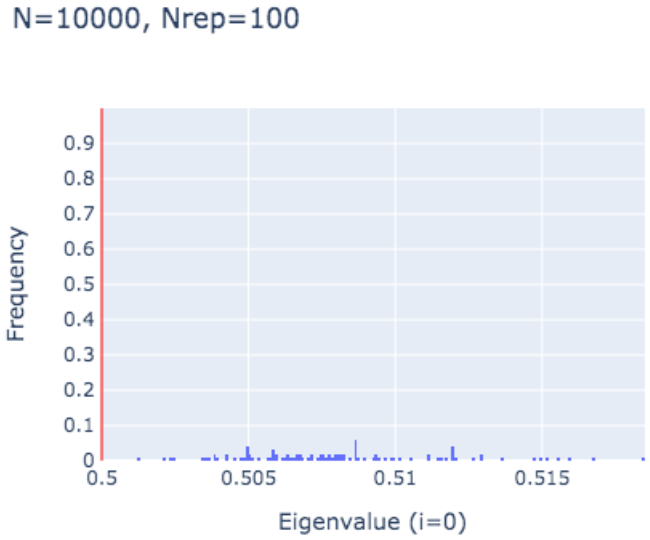


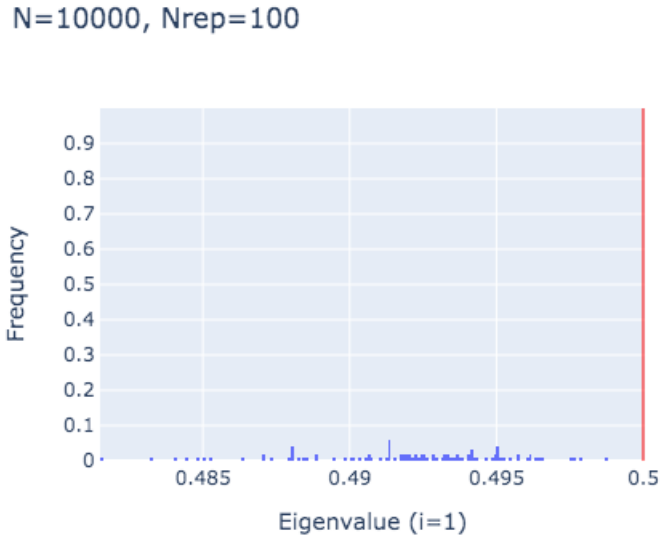
N=1000, Nrep=100



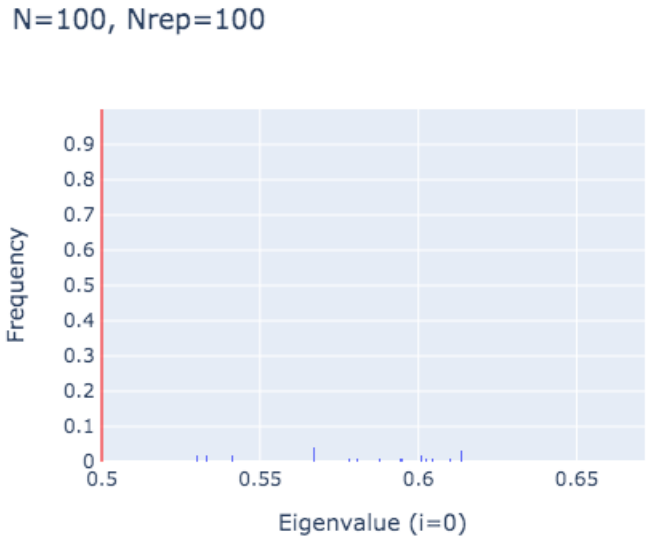
N=1000, Nrep=100

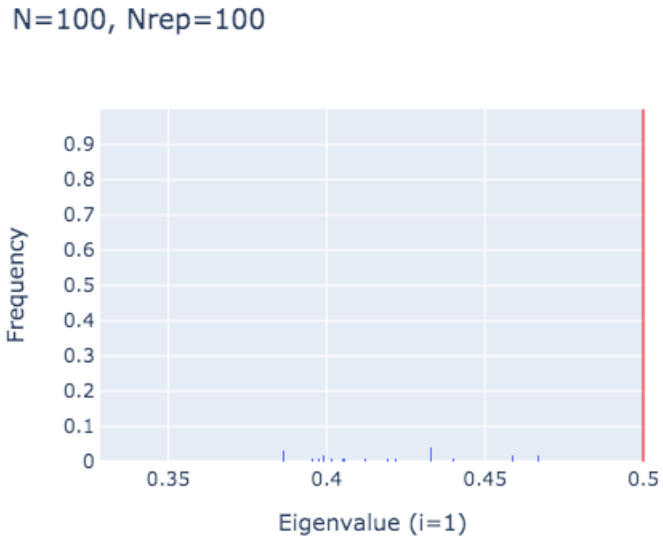


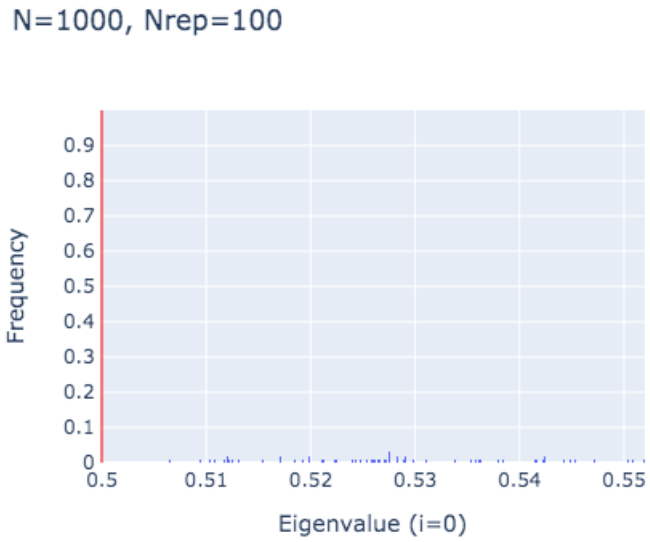


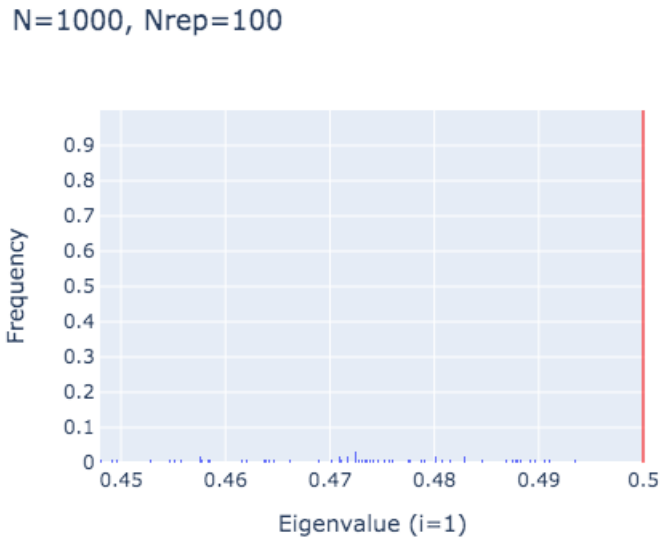


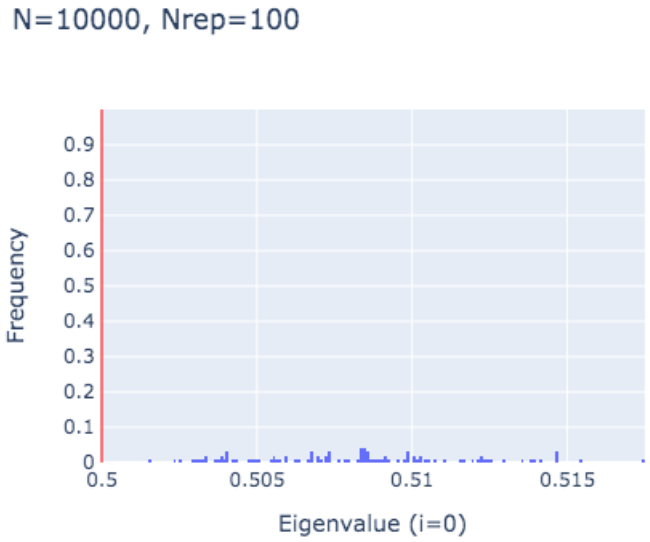
Case 3: ProjectedLinearEstimator(False)

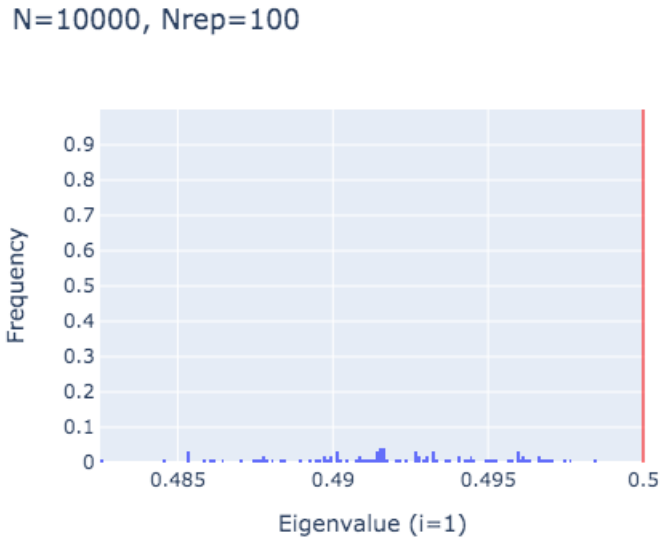








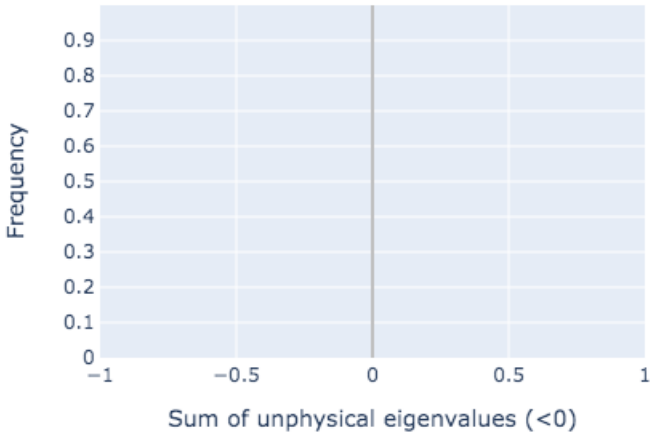




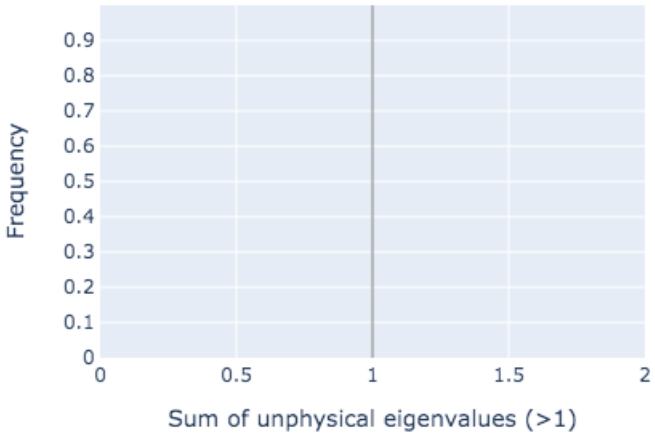
Sum of unphysical eigenvalues

Case 1: LinearEstimator(False)

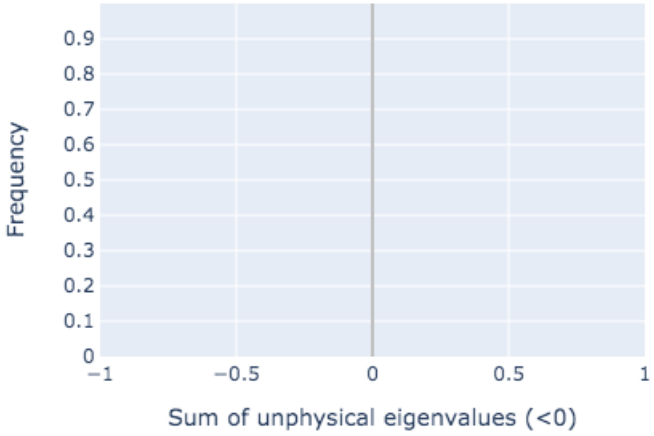
N=100, Nrep=100
Number of unphysical estimates=0



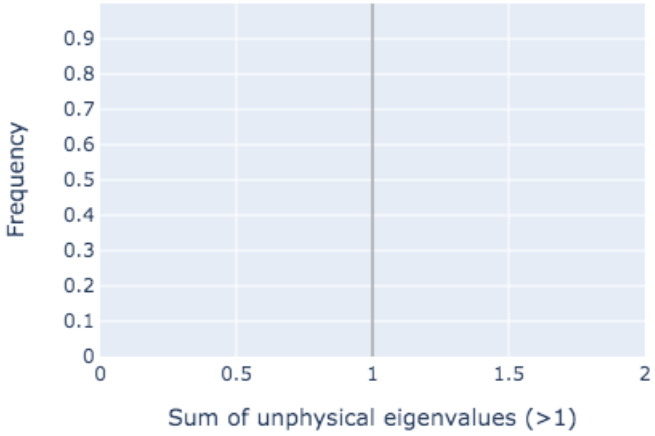
N=100, Nrep=100
Number of unphysical estimates=0

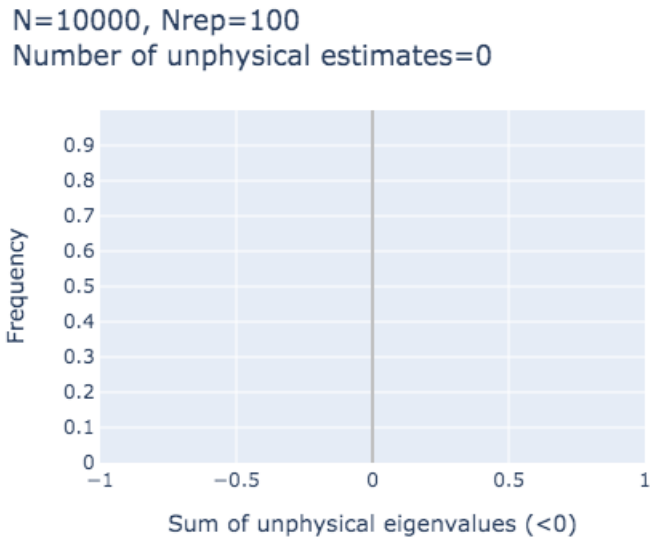


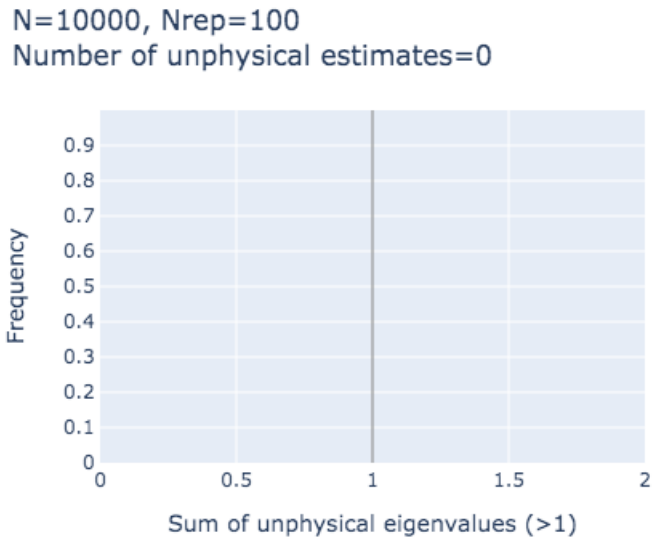
N=1000, Nrep=100
Number of unphysical estimates=0



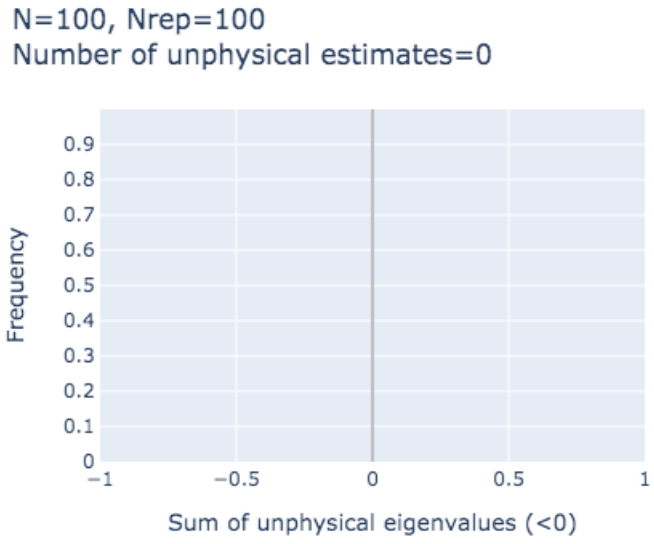
N=1000, Nrep=100
Number of unphysical estimates=0

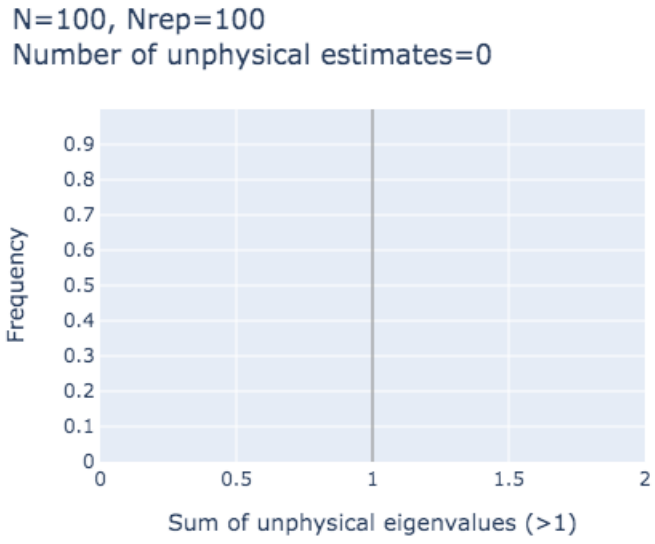




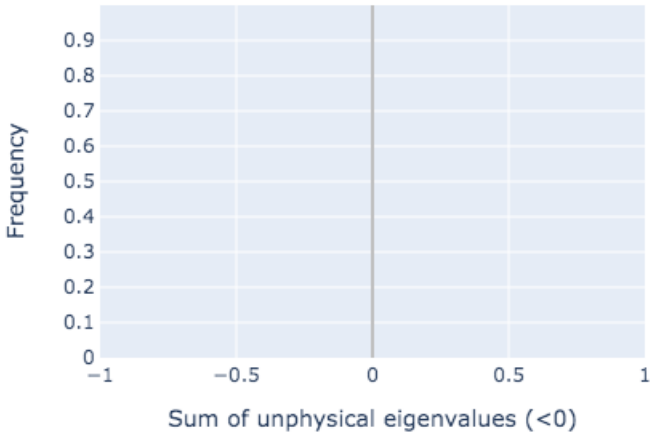


Case 3: ProjectedLinearEstimator(False)

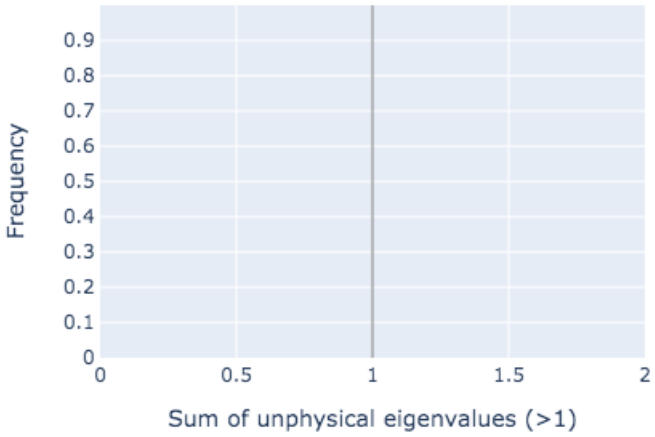




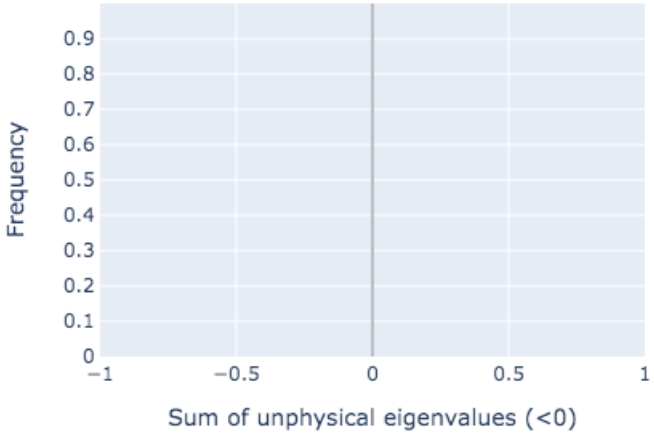
N=1000, Nrep=100
Number of unphysical estimates=0



N=1000, Nrep=100
Number of unphysical estimates=0



N=10000, Nrep=100
Number of unphysical estimates=0



N=10000, Nrep=100
Number of unphysical estimates=0