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Experimental condition

Type of tomography	StandardQst
Nrep	6400
N	[100, 1000]

True object

Type	State
Dim	2
Vec	[0.70710678 0.40824829 0.40824829 0.40824829]

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]

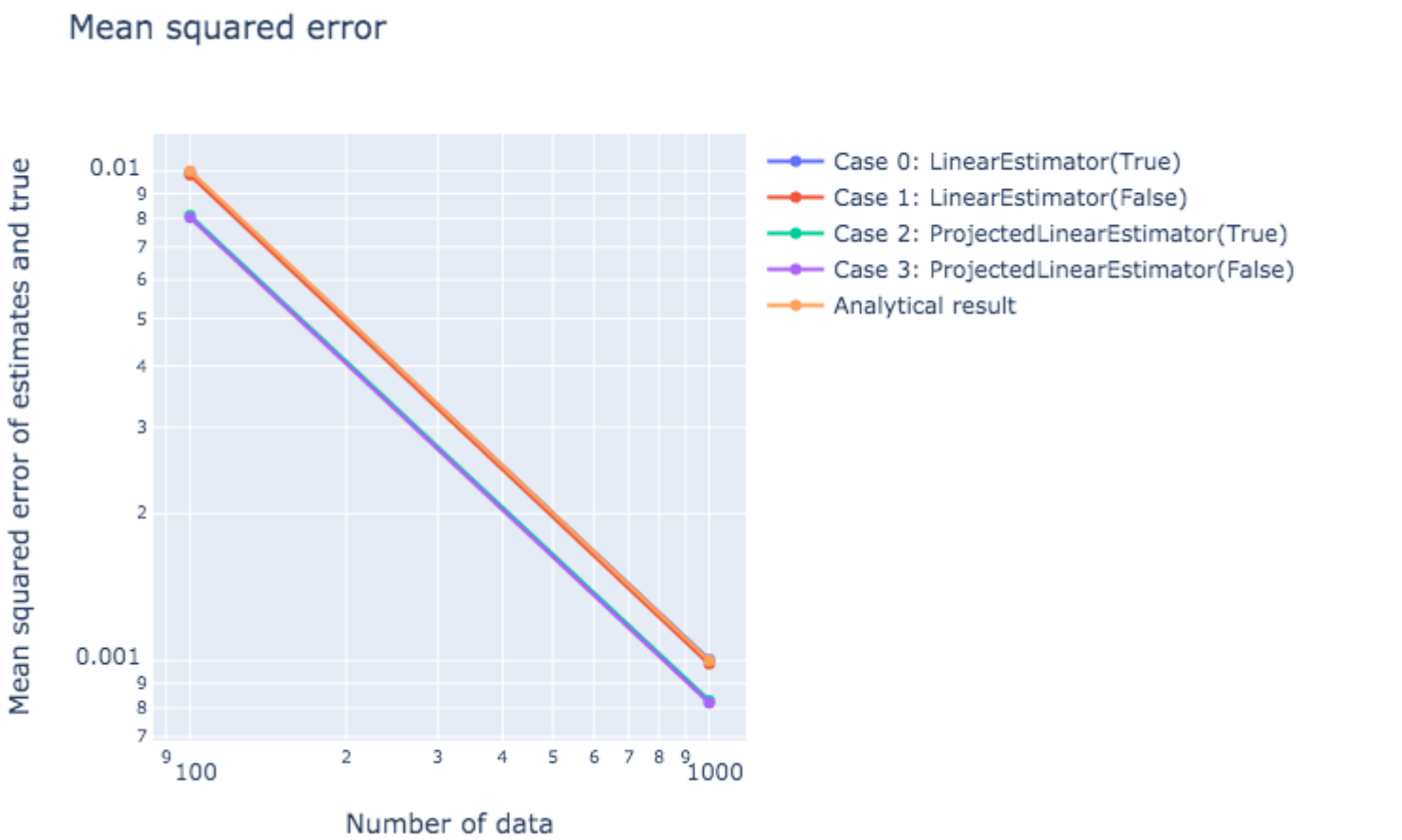
Cases

	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

Consistency test

	Type of tomography	ParametORIZATION	Estimator	Result
0	StandardQst	True	LinearEstimator	9.244464e-33
1	StandardQst	False	LinearEstimator	5.854827e-32
2	StandardQst	True	ProjectedLinearEstimator	2.095412e-31
3	StandardQst	False	ProjectedLinearEstimator	3.050673e-31

MSE

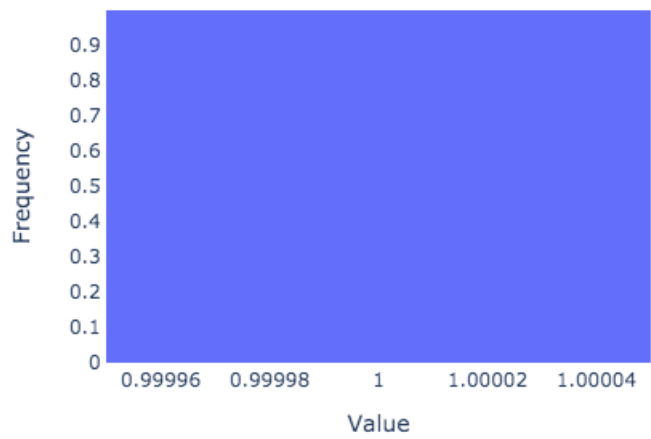


Physicality violation test

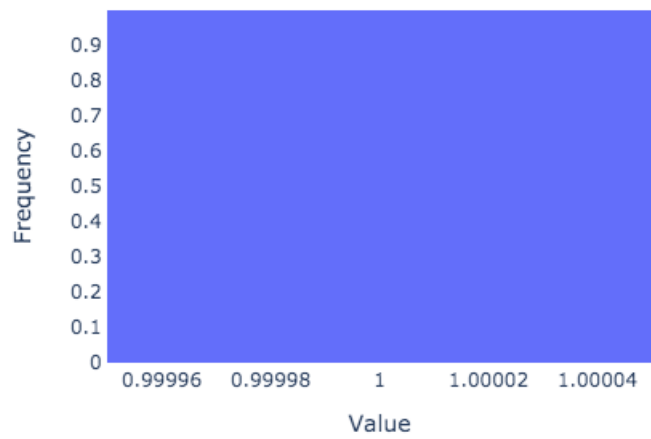
on_para_eq_constraint=True

Case 0: LinearEstimator(True)

N=100, Nrep=6400

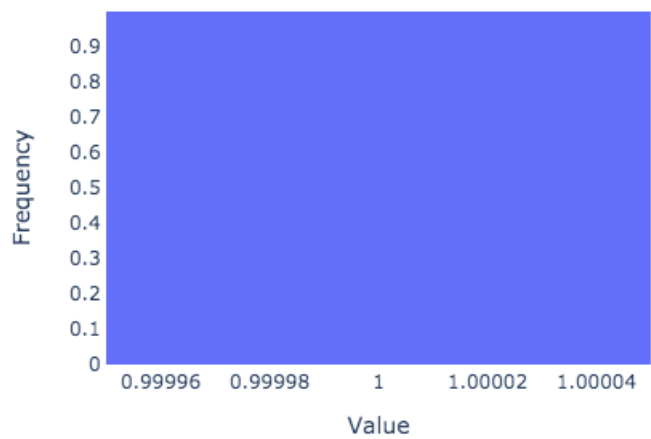


N=1000, Nrep=6400

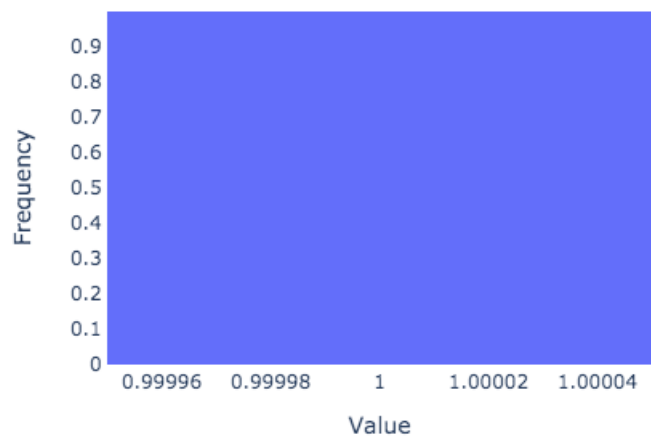


Case 2: ProjectedLinearEstimator(True)

N=100, Nrep=6400



N=1000, Nrep=6400

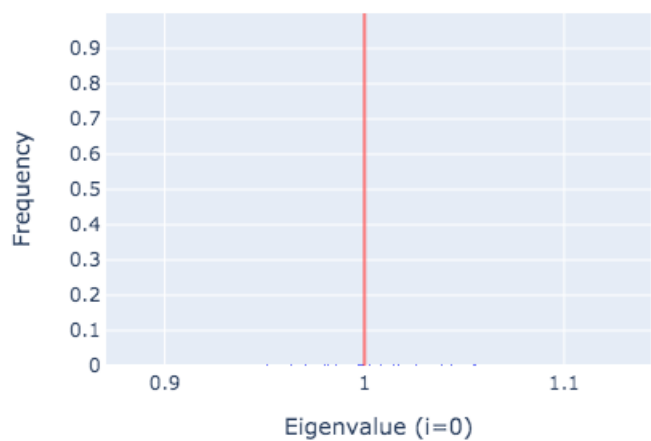


on_para_eq_constraint=False

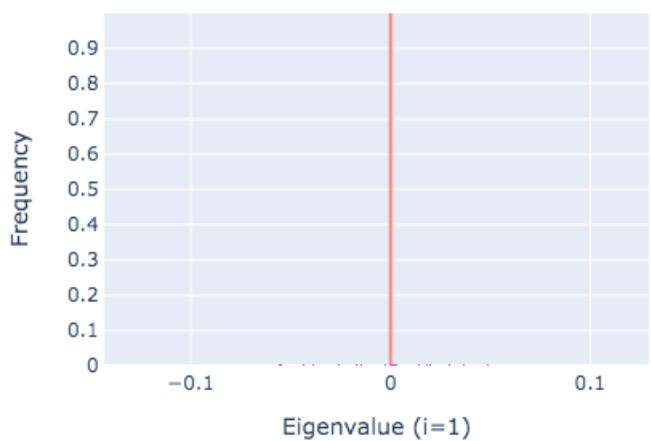
Eigenvalue

Case 1: LinearEstimator(False)

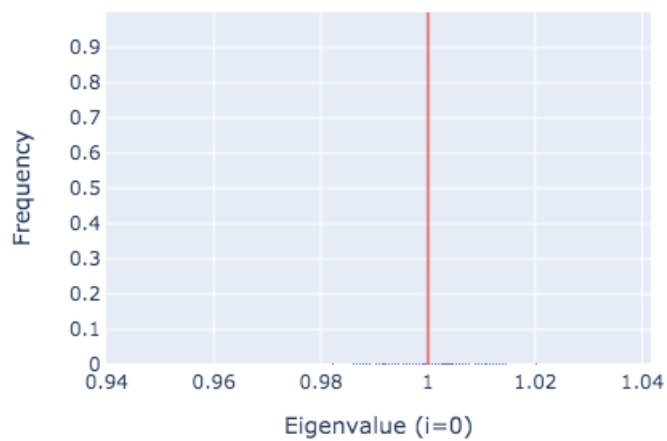
N=100, Nrep=6400



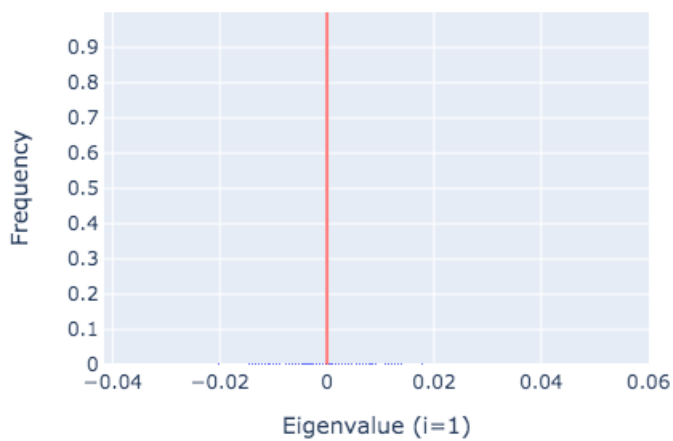
N=100, Nrep=6400



N=1000, Nrep=6400

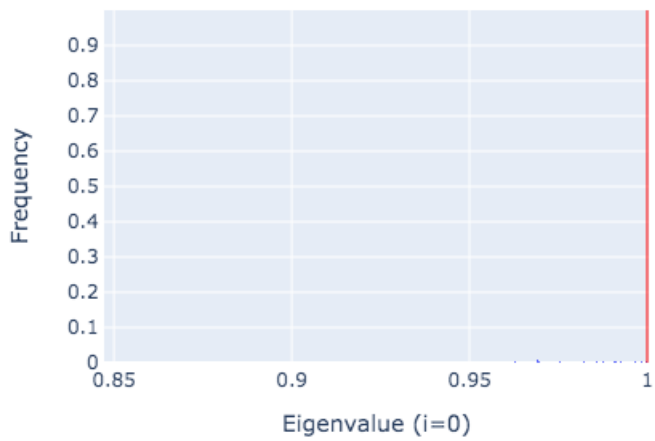


N=1000, Nrep=6400

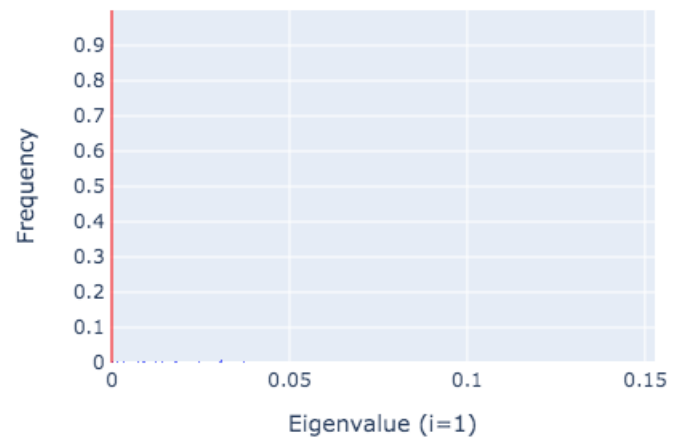


Case 3: ProjectedLinearEstimator(False)

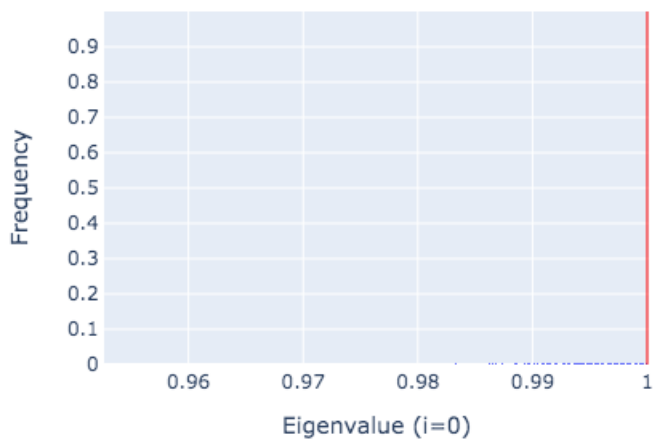
N=100, Nrep=6400



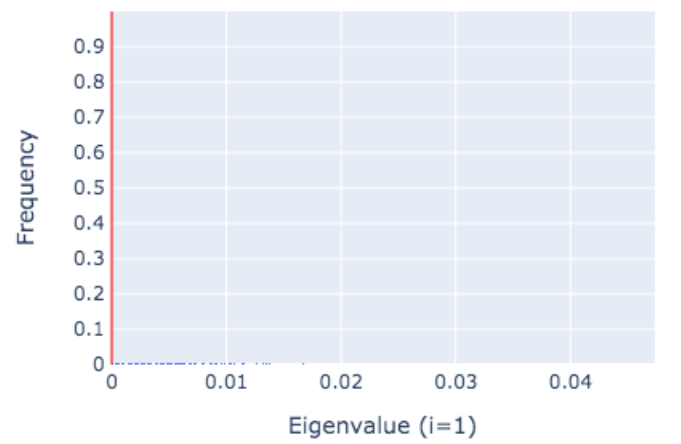
N=100, Nrep=6400



N=1000, Nrep=6400



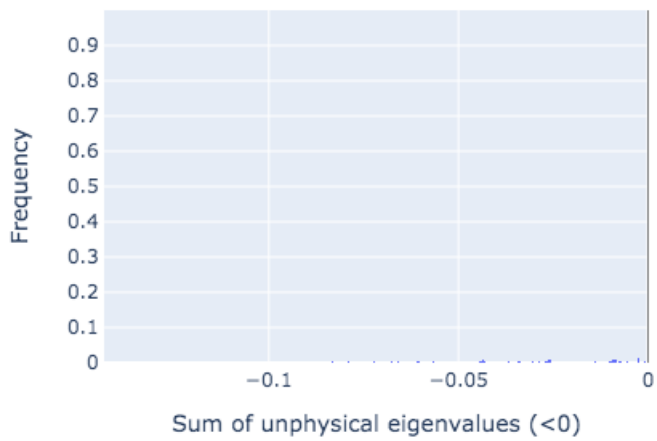
N=1000, Nrep=6400



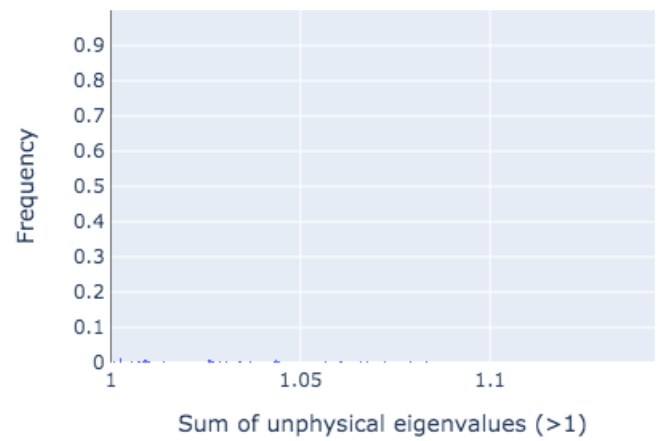
Sum of unphysical eigenvalues

Case 1: LinearEstimator(False)

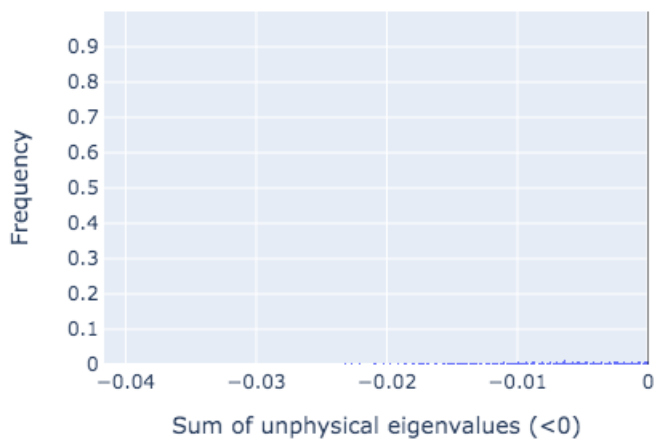
N=100, Nrep=6400
Number of unphysical estimates=3423



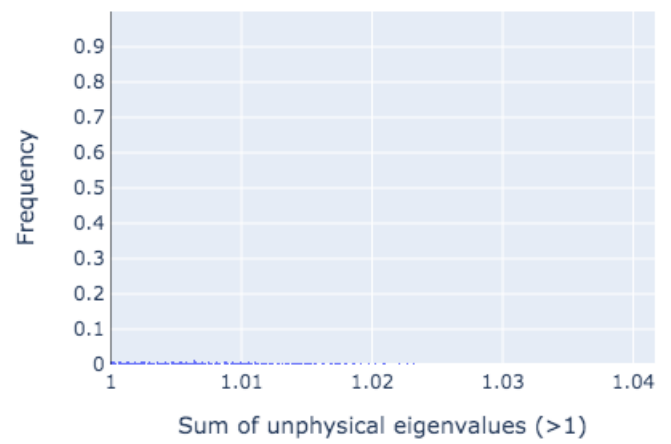
N=100, Nrep=6400
Number of unphysical estimates=3423



N=1000, Nrep=6400
Number of unphysical estimates=3291

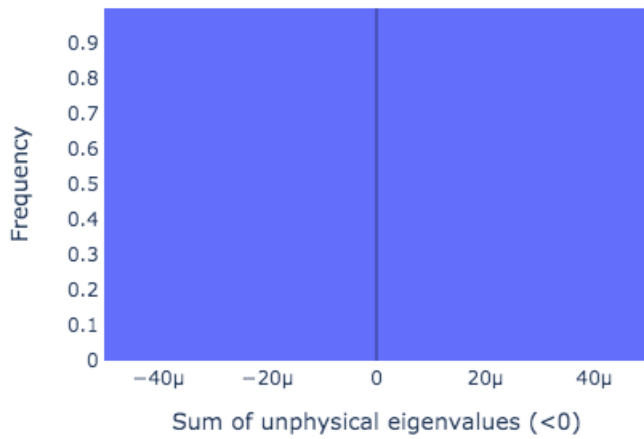


N=1000, Nrep=6400
Number of unphysical estimates=3291

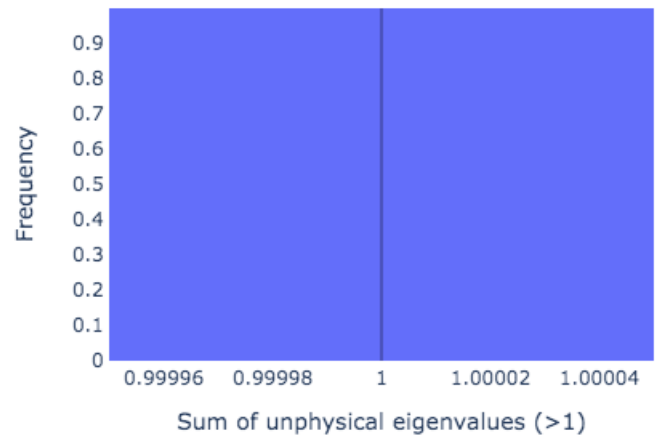


Case 3: ProjectedLinearEstimator(False)

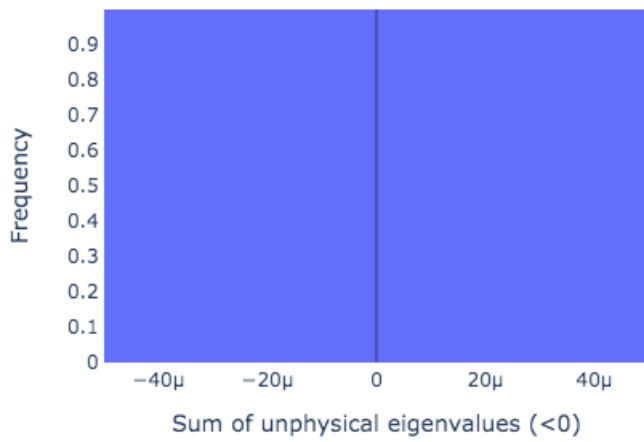
N=100, Nrep=6400
Number of unphysical estimates=791



N=100, Nrep=6400
Number of unphysical estimates=791



N=1000, Nrep=6400
Number of unphysical estimates=2097



N=1000, Nrep=6400
Number of unphysical estimates=2097

