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1

1

1

1

2

2

2

3

3

3

3

3

4

## Experimental Condition

John		Doe		
Jane		Doe		
hoge				
		featureA	featureB	featureC
dataA	2016-07-01 00:00:00	1.0	1.0	1.0
	2016-07-01 00:01:00	1.0	1.0	1.0
	2016-07-01 00:02:00	1.0	1.0	1.0
dataB	2016-07-01 00:00:00	2.0	2.0	2.0
	2016-07-01 00:01:00	2.0	2.0	2.0
	2016-07-01 00:02:00	2.0	2.0	2.0
dataC	2016-07-01 00:00:00	3.0	3.0	3.0
	2016-07-01 00:01:00	3.0	3.0	3.0
	2016-07-01 00:02:00	3.0	3.0	3.0
		0		
0		type: Povm dim: 2 number of measurements: 2 vec: [0.70710678 0.70710678 0.0. ] [ 0.70710678 -0.70710678 0.0. ] 		
1		type: Povm dim: 2 number of measurements: 2 vec: [0.70710678 0.70710678 0. ] [ 0.70710678 0. -0.70710678 0. ] 		
2		type: Povm dim: 2 number of measurements: 2 vec: [0.70710678 0.0. 0.70710678] [ 0.70710678 0.0. -0.70710678] 		

## True Object

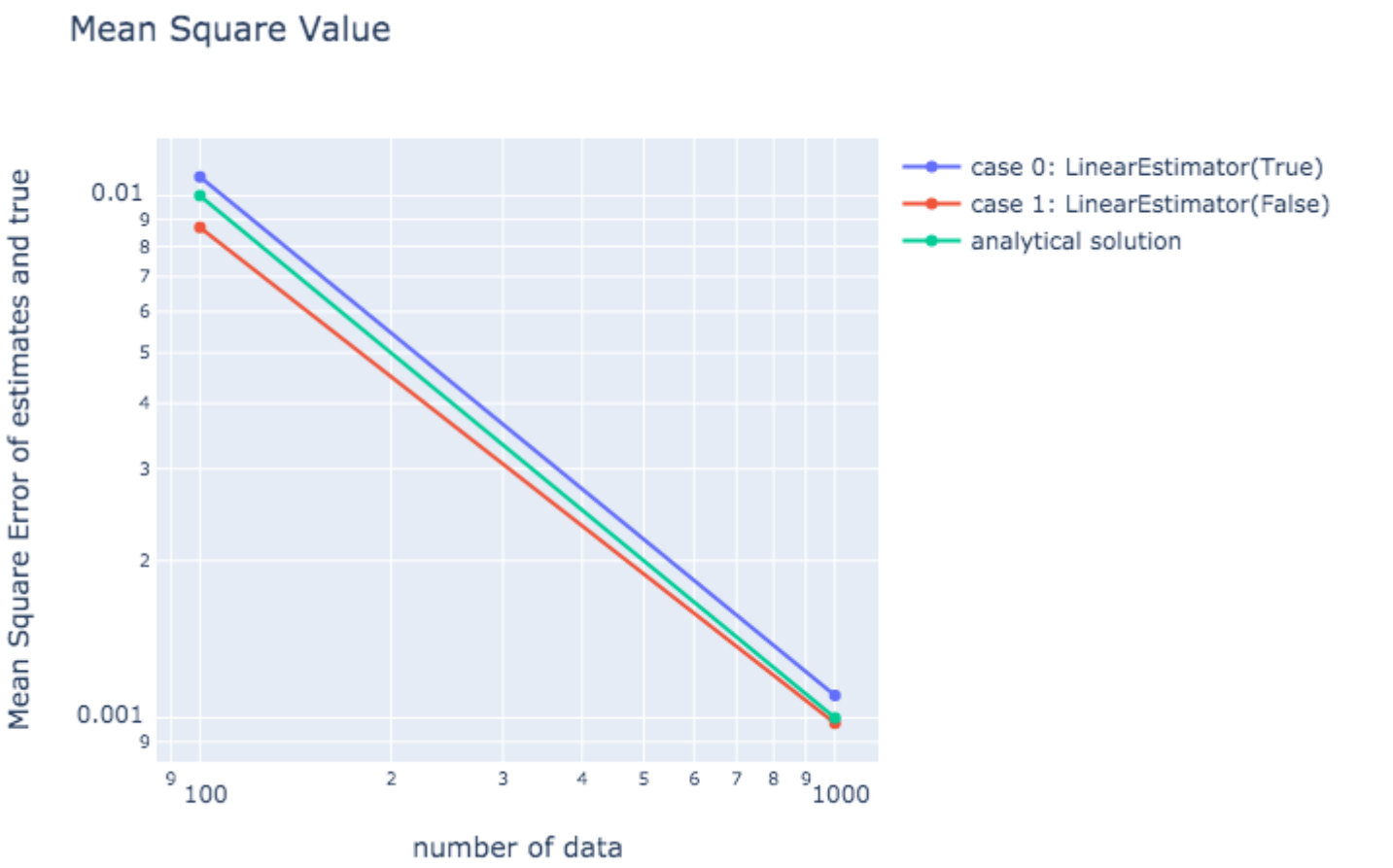
type: State  
dim: 2  
vec: [0.70710678 0.0. 0.70710678]

## Tester Objects

type: Povm  
dim: 2

number of measurements: 2  
vec: [0.70710678 0.70710678 0. 0. ]  
[ 0.70710678 -0.70710678 0. 0. ]  
type: Povm  
dim: 2  
number of measurements: 2  
vec: [0.70710678 0. 0.70710678 0. ]  
[ 0.70710678 0. -0.70710678 0. ]  
type: Povm  
dim: 2  
number of measurements: 2  
vec: [0.70710678 0. 0. 0.70710678]  
[ 0.70710678 0. 0. -0.70710678]

## MSE

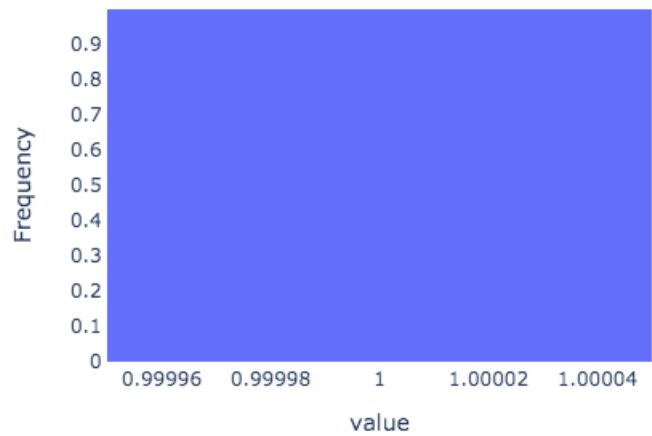


## Physicality Violation Test

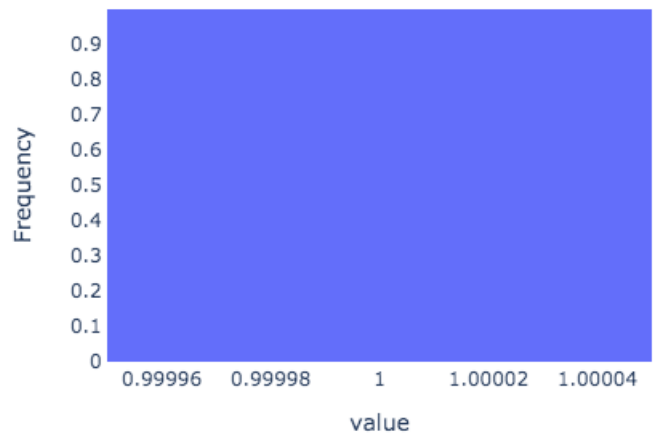
on\_para\_eq\_constraint=True

case 0: LinearEstimator(True)

N=100, Nrep=100



N=1000, Nrep=100

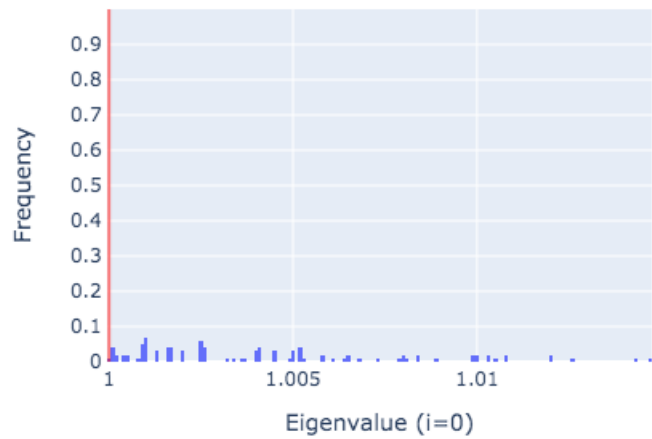


on\_para\_eq\_constraint=False

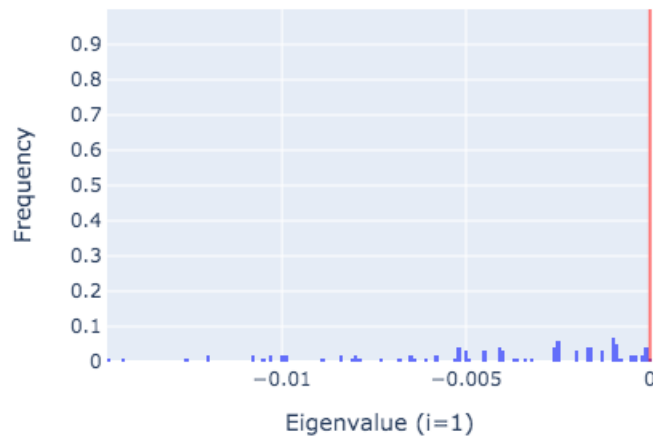
case 1: LinearEstimator(False)

Eigenvalue

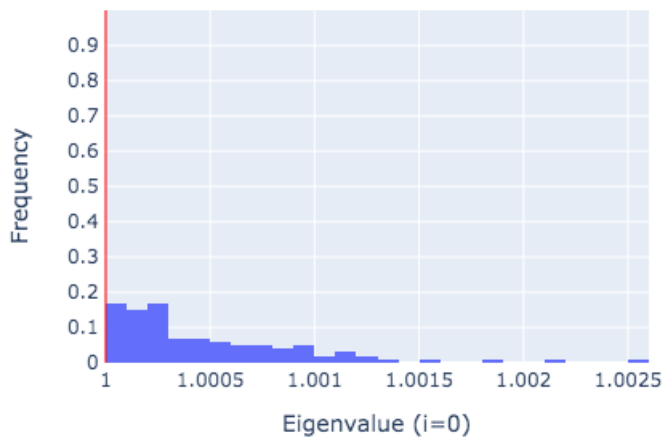
N=100, Nrep=100



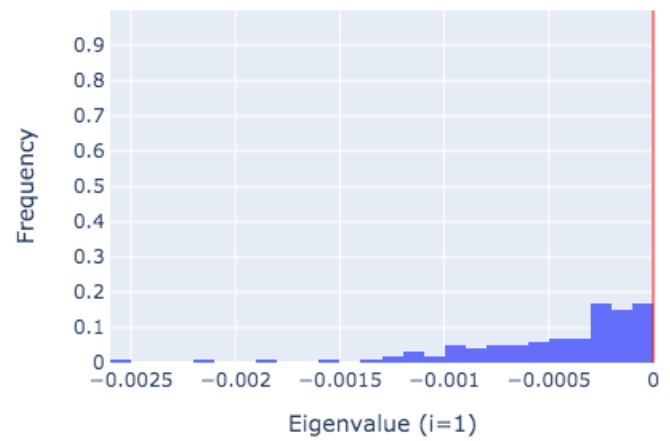
N=100, Nrep=100



N=1000, Nrep=100



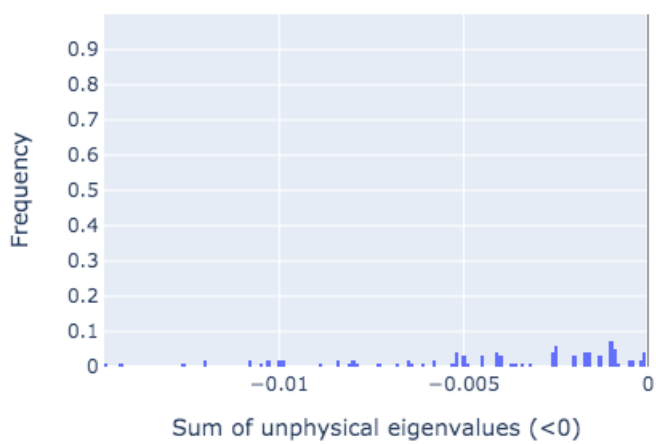
N=1000, Nrep=100



### Sum of unphysical eigenvalues

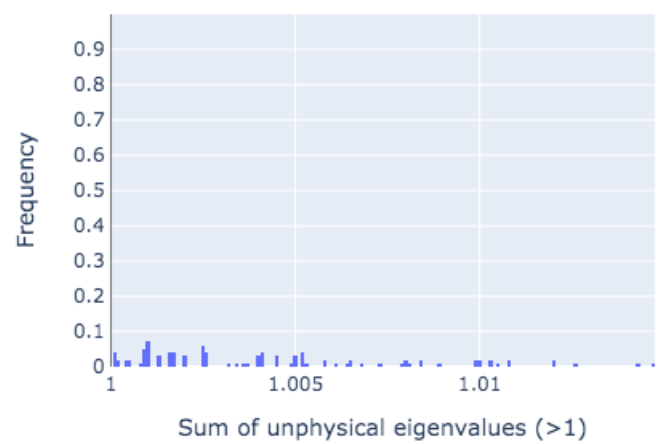
N=100, Nrep=100

Number of Unphysical estimates=99



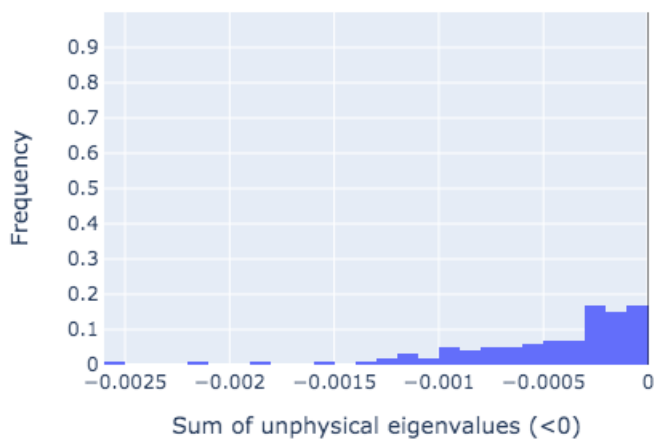
N=100, Nrep=100

Number of Unphysical estimates=99



N=1000, Nrep=100

Number of Unphysical estimates=100



N=1000, Nrep=100

Number of Unphysical estimates=100

