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# **Computation time**

Total	1.6268102765083312min.

# **Experimental condition**

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

## True object

Туре	Gate
Dim	2
нѕ	[[ 1.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00]

1

### **Tester objects**

0	Туре	State
	Dim	2
	Vec	[0.70710678 0.70710678 0. 0. ] State
1	1 Type Dim	
	Vec	[0.70710678 0. 0.70710678 0. ]
2	Туре	State
	Dim	2
	Vec	[0.70710678 0. 0. 0.70710678]
3	Туре	State
	Dim	2
	Vec	[ 0.70710678 0. 00.70710678]
4	Туре	Povm
Dir		2
	Number of	2
	outcomes	_
	Vecs	[0.70710678 0.70710678 0. 0. ]
		[ 0.70710678 -0.70710678 0. 0. ]
5	Туре	Povm
	Dim	2
	Number of	2
	outcomes	_
	Vecs	[0.70710678 0. 0.70710678 0. ]
		[ 0.70710678 00.70710678 0. ]
6	Туре	Povm
	Dim	2
	Number of	2
	outcomes	_
	Vecs	[0.70710678 0. 0. 0.70710678]
		[ 0.70710678 0. 00.70710678]

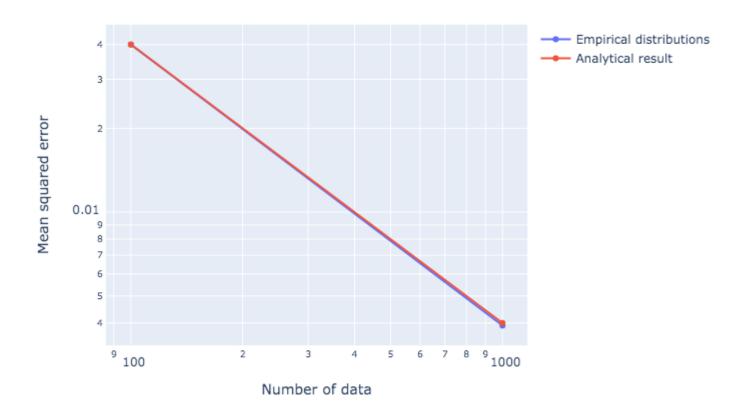
#### Cases

	Name	Parameterization	Tomography	Estimator
0	LinearEstimator(True)	True	StandardQpt	LinearEstimator
1	LinearEstimator(False)	False	StandardQpt	LinearEstimator

2	ProjectedLinearEstimator(True)	True	StandardQpt	ProjectedLinearEstimator
3	ProjectedLinearEstimator(False)	False	StandardQpt	ProjectedLinearEstimator

# **MSE** of empirical distributions

#### Mean squared error



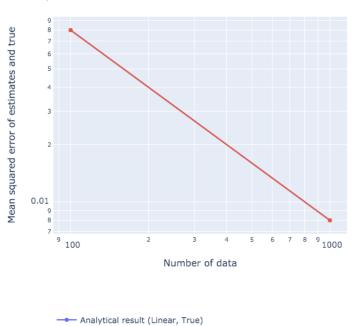
# **Consistency test**

	Type of tomography	Parametorization	Estimator	Result
0	StandardQpt	True	LinearEstimator	9.123974e-32
1	StandardQpt	False	LinearEstimator	2.549862e-30
2	StandardQpt	True	ProjectedLinearEstimator	2.890327e-30

### **MSE** of estimators

#### Comparison of analytical results

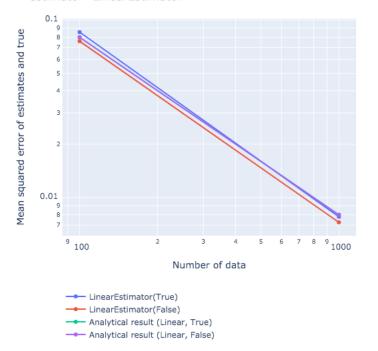




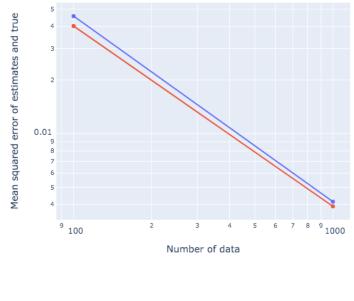
Analytical result (Linear, False)

### Comparison of parametrization

## Mean squared error estimator=LinearEstimator



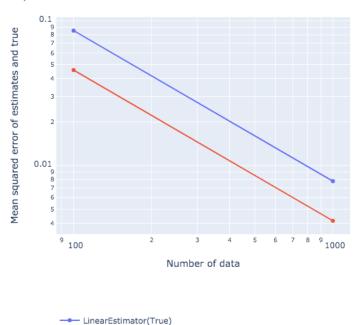
## Mean squared error estimator=ProjectedLinearEstimator



### ProjectedLinearEstimator(True)ProjectedLinearEstimator(False)

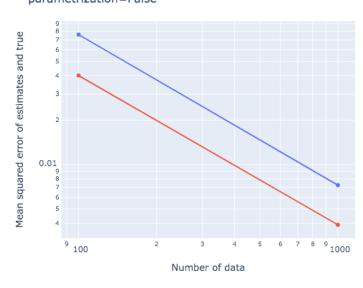
#### **Comparison of estimators**





ProjectedLinearEstimator(True)

# Mean squared error parametrization=False



LinearEstimator(False)ProjectedLinearEstimator(False)