n = m = 10^4

Statistic	μ-deformation			Σ_{ii}-deformation		
	$\epsilon_{95\%\text{CL}}$	$\epsilon_{99\%\text{CL}}$	t (s)	$\epsilon_{95\%\text{CL}}$	$\epsilon_{99\%\text{CL}}$	t (s)
t_{LLR}	$0.00908^{+0.006}_{-0.0061}$	$0.01277^{+0.006}_{-0.0061}$	4974	$0.00198^{+0.0012}_{-0.0012}$	$0.00279^{+0.0012}_{-0.0012}$	6311
$\overline{D}$	$0.02652^{+0.011}_{-0.011}$	$0.03393^{+0.011}_{-0.011}$	411	$0.02063^{+0.0065}_{-0.007}$	$0.02676^{+0.0059}_{-0.0065}$	431
d_{FGD_∞}	$0.02961^{+0.017}_{-0.012}$	$0.03908^{+0.016}_{-0.012}$	1482	$0.01067^{+0.0046}_{-0.0037}$	$0.01371^{+0.0043}_{-0.0035}$	1497
$\widetilde{W}$	$0.02998^{+0.014}_{-0.013}$	$0.0404^{+0.014}_{-0.012}$	626	$0.01242^{+0.004}_{-0.0038}$	$0.0167^{+0.0039}_{-0.0036}$	654
$\widetilde{D}$	$0.03198^{+0.014}_{-0.013}$	$0.04336^{+0.013}_{-0.013}$	761	$0.01678^{+0.0048}_{-0.005}$	$0.02286^{+0.0046}_{-0.0048}$	790
$d_{\text{MMD}^2_u}$	$0.03647^{+0.027}_{-0.018}$	$0.05258^{+0.026}_{-0.018}$	9484	$0.01056^{+0.0079}_{-0.0051}$	$0.01523^{+0.0074}_{-0.0052}$	10186

Statistic	$\Sigma_{i\neq j}$-deformation			pow_+-deformation		
	$\epsilon_{95\%\text{CL}}$	$\epsilon_{99\%\text{CL}}$	t (s)	$\epsilon_{95\%\text{CL}}$	$\epsilon_{99\%\text{CL}}$	t (s)
t_{LLR}	$0.00021^{+0.00013}_{-0.00013}$	$0.00028^{+0.00013}_{-0.00012}$	6377	$0.00074^{+0.00046}_{-0.00046}$	$0.00103^{+0.00046}_{-0.00046}$	4937
d_{FGD_∞}	$0.00345^{+0.00084}_{-0.001}$	$0.00453^{+0.00071}_{-0.00077}$	1510	$0.00278^{+0.0015}_{-0.0011}$	$0.00363^{+0.0014}_{-0.0011}$	1539
$\widetilde{D}$	$0.00971^{+0.0029}_{-0.0031}$	$0.01419^{+0.0028}_{-0.0029}$	816	$0.00345^{+0.0013}_{-0.0012}$	$0.00455^{+0.0013}_{-0.0012}$	846
$\widetilde{W}$	$0.01056^{+0.0027}_{-0.003}$	$0.01543^{+0.0023}_{-0.0026}$	659	$0.00308^{+0.0014}_{-0.0012}$	$0.00421^{+0.0013}_{-0.0012}$	696
$d_{\text{MMD}^2_u}$	$0.01898^{+0.012}_{-0.0091}$	$0.02712^{+0.011}_{-0.0087}$	9839	$0.00199^{+0.0015}_{-0.00098}$	$0.00286^{+0.0014}_{-0.00098}$	10854
$\overline{D}$	$1.00993^{+0.0045}_{-0.0005}$	$1.01389^{+0.0015}_{-0.002}$	287	$0.00418^{+0.0016}_{-0.0015}$	$0.00528^{+0.0015}_{-0.0014}$	461

Statistic	pow_--deformation			$\mathcal{N}$-deformation		
	$\epsilon_{95\%\text{CL}}$	$\epsilon_{99\%\text{CL}}$	t (s)	$\epsilon_{95\%\text{CL}}$	$\epsilon_{99\%\text{CL}}$	t (s)
t_{LLR}	$0.00074^{+0.00046}_{-0.00046}$	$0.00104^{+0.00045}_{-0.00046}$	4853	NaN	NaN	NaN
$d_{\text{MMD}^2_u}$	$0.00216^{+0.0017}_{-0.0011}$	$0.00308^{+0.0016}_{-0.0011}$	13727	$0.43774^{+0.11}_{-0.11}$	$0.52451^{+0.09}_{-0.078}$	7.8e+03
d_{FGD_∞}	$0.00265^{+0.0015}_{-0.0013}$	$0.0035^{+0.0014}_{-0.0012}$	1567	$0.15901^{+0.017}_{-0.022}$	$0.18192^{+0.013}_{-0.015}$	1.2e+03
$\widetilde{W}$	$0.00299^{+5}_{-0.0011}$	$0.00411^{+5}_{-0.0011}$	680	$0.21417^{+0.031}_{-0.035}$	$0.25369^{+0.025}_{-0.026}$	6.4e+02
$\widetilde{D}$	$0.00339^{+0.0013}_{-0.0012}$	$0.00452^{+0.0012}_{-0.0012}$	854	$0.20906^{+0.03}_{-0.034}$	$0.24763^{+0.025}_{-0.026}$	6.9e+02
$\overline{D}$	$0.00408^{+0.0015}_{-0.0016}$	$0.00518^{+0.0015}_{-0.0015}$	463	$0.17628^{+0.029}_{-0.036}$	$0.20261^{+0.025}_{-0.027}$	4e+02

Statistic	$\mathcal{U}$-deformation			Timing
	$\epsilon_{95\%\text{CL}}$	$\epsilon_{99\%\text{CL}}$	t (s)	t^{null} (s)
d_{FGD_∞}	$0.27764^{+0.028}_{-0.04}$	$0.31558^{+0.021}_{-0.026}$	1.1e+03	1864
$\overline{D}$	$0.30398^{+0.046}_{-0.065}$	$0.35106^{+0.039}_{-0.05}$	3.8e+02	68
$d_{\text{MMD}^2_u}$	$0.75881^{+0.19}_{-0.19}$	$0.90445^{+0.16}_{-0.14}$	9.5e+03	16275
$\widetilde{D}$	$0.3622^{+0.049}_{-0.063}$	$0.42903^{+0.043}_{-0.048}$	6.6e+02	662
$\widetilde{W}$	$0.37144^{+0.052}_{-0.061}$	$0.43998^{+0.044}_{-0.048}$	6.2e+02	350
t_{LLR}	NaN	NaN	NaN	-