$n = m = 10^4$

Statistic	μ-deformation $\epsilon_{95\%\text{CL}}$	$\epsilon_{99\%\text{CL}}$	t (s)	Σ_{ii}-deformation $\epsilon_{95\%\text{CL}}$	$\epsilon_{99\%\text{CL}}$	t (s)
t_{LLR}	$0.00036^{+0.00019}_{-0.0002}$	$0.0005^{+0.0002}_{-0.0002}$	2775	$0.00011^{+7e-05}_{-8e-05}$	$0.00016^{+8e-05}_{-8e-05}$	3061
$\overline{D}$	$0.002^{+0.00077}_{-0.00083}$	$0.00277^{+0.00075}_{-0.00076}$	1307	$0.00121^{+0.00032}_{-0.00039}$	$0.00157^{+0.00031}_{-0.00033}$	1314
$\widetilde{D}$	$0.02325^{+0.0079}_{-0.0085}$	$0.03165^{+0.0076}_{-0.0076}$	1438	$0.00731^{+0.0018}_{-0.0022}$	$0.00993^{+0.0015}_{-0.0017}$	1538
$d_{\text{MMD}^2_u}$	$0.02669^{+0.014}_{-0.011}$	$0.03545^{+0.014}_{-0.011}$	8989	$0.00629^{+0.0031}_{-0.0025}$	$0.00833^{+0.0029}_{-0.0023}$	9568
$\widetilde{W}$	$0.03867^{+0.015}_{-0.015}$	$0.05335^{+0.015}_{-0.015}$	1311	$0.01366^{+0.0039}_{-0.0044}$	$0.01898^{+0.0035}_{-0.0039}$	1414
d_{FGD_∞}	$0.04381^{+0.026}_{-0.019}$	$0.06082^{+0.024}_{-0.018}$	1535	$0.0147^{+0.004}_{-0.0043}$	$0.02005^{+0.0035}_{-0.0035}$	1610

Statistic	$\Sigma_{i \neq j}$-deformation $\epsilon_{95\%\text{CL}}$	$\epsilon_{99\%\text{CL}}$	t (s)	pow$_+$-deformation $\epsilon_{95\%\text{CL}}$	$\epsilon_{99\%\text{CL}}$	t (s)
t_{LLR}	$3e-05^{+2e-05}_{-2e-05}$	$4e-05^{+2e-05}_{-2e-05}$	4239	$0.00017^{+0.0001}_{-9e-05}$	$0.00025^{+0.0001}_{-0.0001}$	2853
$\overline{D}$	$0.0004^{+0.00014}_{-0.00014}$	$0.00054^{+0.00014}_{-0.00014}$	1014	$0.00142^{+0.00043}_{-0.00049}$	$0.00189^{+0.00041}_{-0.00043}$	1325
$\widetilde{D}$	$0.00281^{+0.00078}_{-0.00097}$	$0.00385^{+0.00072}_{-0.0008}$	1254	$0.00467^{+0.001}_{-0.0013}$	$0.0063^{+0.00088}_{-0.001}$	1551
$d_{\text{MMD}^2_u}$	$0.00427^{+0.002}_{-0.0018}$	$0.00571^{+0.0019}_{-0.0017}$	9204	$0.00361^{+0.0019}_{-0.0014}$	$0.00478^{+0.0018}_{-0.0014}$	9705
$\widetilde{W}$	$0.0049^{+0.0014}_{-0.0016}$	$0.00695^{+0.0013}_{-0.0013}$	1146	$0.00841^{+0.0024}_{-0.0028}$	$0.01169^{+0.0022}_{-0.0023}$	1461
d_{FGD_∞}	$0.00511^{+0.0011}_{-0.0013}$	$0.0071^{+0.00095}_{-0.00095}$	1390	$0.0089^{+0.0026}_{-0.0027}$	$0.01216^{+0.0023}_{-0.0023}$	1789

Statistic	pow$_-$-deformation $\epsilon_{95\%\text{CL}}$	$\epsilon_{99\%\text{CL}}$	t (s)	$\mathcal{N}$-deformation $\epsilon_{95\%\text{CL}}$	$\epsilon_{99\%\text{CL}}$	t (s)
t_{LLR}	$0.00018^{+0.0001}_{-0.0001}$	$0.00025^{+0.0001}_{-0.0001}$	2849	NaN	NaN	NaN
$\overline{D}$	$0.00142^{+0.00045}_{-0.0005}$	$0.00188^{+0.00042}_{-0.00044}$	1319	$0.00546^{+0.00092}_{-0.0012}$	$0.00651^{+0.00087}_{-0.0009}$	1.2e+03
$d_{\text{MMD}^2_u}$	$0.00374^{+0.0019}_{-0.0016}$	$0.00492^{+0.0019}_{-0.0015}$	9723	$0.25293^{+0.036}_{-0.048}$	$0.28868^{+0.032}_{-0.032}$	8.6e+03
$\widetilde{D}$	$0.0048^{+0.0011}_{-0.0014}$	$0.00642^{+0.001}_{-0.0011}$	1561	$0.11614^{+0.016}_{-0.024}$	$0.1371^{+0.013}_{-0.017}$	1.3e+03
$\widetilde{W}$	$0.00858^{+0.0024}_{-0.0029}$	$0.01188^{+0.0023}_{-0.0024}$	1465	$0.16467^{+0.02}_{-0.029}$	$0.19494^{+0.015}_{-0.019}$	1.2e+03
d_{FGD_∞}	$0.0091^{+0.0025}_{-0.0026}$	$0.01247^{+0.0022}_{-0.0022}$	1788	$0.1925^{+0.019}_{-0.027}$	$0.22617^{+0.014}_{-0.016}$	1.5e+03

Statistic	$\mathcal{U}$-deformation $\epsilon_{95\%\text{CL}}$	$\epsilon_{99\%\text{CL}}$	t (s)	Timing t^{null} (s)
d_{FGD_∞}	$0.33191^{+0.034}_{-0.044}$	$0.39255^{+0.022}_{-0.028}$	1.4e+03	1150
$\overline{D}$	$0.00924^{+0.0015}_{-0.0019}$	$0.01096^{+0.0013}_{-0.0015}$	1.2e+03	49
$d_{\text{MMD}^2_u}$	$0.43535^{+0.067}_{-0.079}$	$0.5005^{+0.054}_{-0.057}$	7e+03	13839
$\widetilde{D}$	$0.19824^{+0.029}_{-0.04}$	$0.23402^{+0.023}_{-0.029}$	1.3e+03	484
$\widetilde{W}$	$0.28418^{+0.035}_{-0.05}$	$0.33591^{+0.027}_{-0.033}$	1.3e+03	319
t_{LLR}	NaN	NaN	NaN	-