

$\mathbf{n} = \mathbf{m} = 10^4$						
Statistic	$\mu$ -deformation			$\Sigma_{ii}$ -deformation		
	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)
$t_{LLR}$	$0.00541^{+0.0033}_{-0.0032}$	$0.00768^{+0.0033}_{-0.0032}$	2276	$0.00101^{+0.00073}_{-0.00071}$	$0.0015^{+0.00073}_{-0.00071}$	2564
$d_{MMD_u^2}$	$0.05661^{+0.03}_{-0.026}$	$0.07172^{+0.028}_{-0.024}$	1162	$0.0369^{+0.016}_{-0.016}$	$0.04633^{+0.015}_{-0.014}$	1256
$\overline{D}$	$0.08229^{+0.027}_{-0.033}$	$0.10339^{+0.025}_{-0.028}$	651	$0.03958^{+0.015}_{-0.018}$	$0.05039^{+0.014}_{-0.016}$	688
$\widetilde{W}$	$0.08359^{+0.028}_{-0.034}$	$0.10651^{+0.025}_{-0.028}$	844	$0.03133^{+0.012}_{-0.014}$	$0.03977^{+0.011}_{-0.012}$	888
$\widetilde{D}$	$0.08589^{+0.029}_{-0.037}$	$0.10945^{+0.026}_{-0.03}$	941	$0.04009^{+0.015}_{-0.019}$	$0.05107^{+0.014}_{-0.016}$	1026
$d_{FGD_\infty}$	$0.09233^{+0.032}_{-0.033}$	$0.11682^{+0.029}_{-0.027}$	3408	$0.02875^{+0.01}_{-0.011}$	$0.03664^{+0.0092}_{-0.0087}$	3738
Statistic	$\Sigma_{i \neq j}$ -deformation			pow <sub>+</sub> -deformation		
	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)
$t_{LLR}$	$4e-05^{+3e-05}_{-2e-05}$	$6e-05^{+3e-05}_{-3e-05}$	3372	$0.00038^{+0.00019}_{-0.0002}$	$0.00052^{+0.00019}_{-0.00019}$	2639
$d_{FGD_\infty}$	$0.00341^{+0.00091}_{-0.0011}$	$0.00438^{+0.00077}_{-0.00088}$	4052	$0.00707^{+0.0025}_{-0.0025}$	$0.00898^{+0.0022}_{-0.0021}$	4281
$d_{MMD_u^2}$	$0.02391^{+0.0084}_{-0.0083}$	$0.02992^{+0.008}_{-0.0075}$	1139	$0.00447^{+0.0024}_{-0.0021}$	$0.00569^{+0.0022}_{-0.0019}$	1027
$\widetilde{W}$	$0.03515^{+0.011}_{-0.015}$	$0.0461^{+0.01}_{-0.012}$	885	$0.00693^{+0.0024}_{-0.003}$	$0.0088^{+0.0022}_{-0.0024}$	944
$\widetilde{D}$	$0.0402^{+0.016}_{-0.019}$	$0.05406^{+0.014}_{-0.017}$	1009	$0.00784^{+0.0026}_{-0.0034}$	$0.00985^{+0.0024}_{-0.0026}$	1108
$\overline{D}$	$1.02012^{+0.01}_{-0.003}$	$1.02919^{+0.003}_{-0.003}$	509	$0.00853^{+0.0028}_{-0.0035}$	$0.01068^{+0.0025}_{-0.0029}$	877
Statistic	pow <sub>-</sub> -deformation			$\mathcal{N}$ -deformation		
	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)
$t_{LLR}$	$0.00033^{+0.00019}_{-0.0002}$	$0.00047^{+0.00019}_{-0.0002}$	2710	NaN	NaN	NaN
$d_{MMD_u^2}$	$0.00537^{+0.0023}_{-0.002}$	$0.00664^{+0.0022}_{-0.0018}$	1038	$1.21562^{+0.16}_{-0.25}$	$1.35657^{+0.13}_{-0.16}$	8e+02
$d_{FGD_\infty}$	$0.00686^{+0.0026}_{-0.0026}$	$0.00886^{+0.0023}_{-0.0023}$	4378	$0.23754^{+0.029}_{-0.045}$	$0.26842^{+0.023}_{-0.03}$	3.3e+03
$\widetilde{W}$	$0.00702^{+5}_{-0.0032}$	$0.00889^{+5}_{-0.0026}$	862	$0.4895^{+0.084}_{-0.13}$	$0.55438^{+0.069}_{-0.087}$	7.6e+02
$\widetilde{D}$	$0.00765^{+0.0027}_{-0.0036}$	$0.00961^{+0.0024}_{-0.0028}$	1119	$0.53076^{+0.092}_{-0.16}$	$0.60111^{+0.075}_{-0.1}$	9e+02
$\overline{D}$	$0.00823^{+0.0028}_{-0.0035}$	$0.01034^{+0.0025}_{-0.0029}$	878	$0.55303^{+0.094}_{-0.14}$	$0.6216^{+0.083}_{-0.098}$	7e+02
Statistic	$\mathcal{U}$ -deformation			Timing		
	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	$t^{\text{null}}$ (s)		
$d_{FGD_\infty}$	$0.41168^{+0.048}_{-0.076}$	$0.4652^{+0.039}_{-0.051}$	3.2e+03	5381		
$\overline{D}$	$0.95234^{+0.17}_{-0.24}$	$1.07042^{+0.14}_{-0.17}$	6.8e+02	491		
$d_{MMD_u^2}$	$2.08745^{+0.3}_{-0.41}$	$2.34223^{+0.24}_{-0.27}$	7.5e+02	633		
$\widetilde{D}$	$0.91554^{+0.16}_{-0.25}$	$1.04113^{+0.13}_{-0.19}$	8.8e+02	468		
$\widetilde{W}$	$0.84895^{+0.14}_{-0.22}$	$0.96147^{+0.12}_{-0.15}$	7.1e+02	275		
$t_{LLR}$	NaN	NaN	NaN	-		