

$\mathbf{n} = \mathbf{m} = 10^4$						
Statistic	μ -deformation			Σ_{ii} -deformation		
	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)
t_{LLR}	$0.00359^{+0.0024}_{-0.0024}$	$0.00499^{+0.0024}_{-0.0024}$	4609	$0.00121^{+0.0007}_{-0.00069}$	$0.00169^{+0.00069}_{-0.0007}$	5013
$d_{FGD\infty}$	$0.03111^{+0.021}_{-0.017}$	$0.04221^{+0.019}_{-0.016}$	4254	$0.01186^{+0.0054}_{-0.005}$	$0.01569^{+0.0048}_{-0.0044}$	4334
\widetilde{W}	$0.03129^{+0.017}_{-0.017}$	$0.04371^{+0.017}_{-0.016}$	639	$0.01426^{+0.005}_{-0.0059}$	$0.01917^{+0.0048}_{-0.0048}$	664
\widetilde{D}	$0.03135^{+0.016}_{-0.016}$	$0.04314^{+0.016}_{-0.015}$	768	$0.018^{+0.0065}_{-0.0075}$	$0.02411^{+0.0063}_{-0.0064}$	781
\overline{D}	$0.03141^{+0.016}_{-0.015}$	$0.04347^{+0.015}_{-0.015}$	459	$0.01967^{+0.0071}_{-0.0077}$	$0.02735^{+0.0066}_{-0.007}$	471
$d_{MMD^2_u}$	$0.04025^{+0.025}_{-0.019}$	$0.05607^{+0.023}_{-0.018}$	9662	$0.01562^{+0.01}_{-0.0074}$	$0.02173^{+0.0094}_{-0.0071}$	10028
Statistic	$\Sigma_{i \neq j}$ -deformation			pow ₊ -deformation		
	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)
t_{LLR}	$5e-05^{+3e-05}_{-3e-05}$	$7e-05^{+3e-05}_{-3e-05}$	6856	$0.00029^{+0.00017}_{-0.00017}$	$0.00041^{+0.00017}_{-0.00016}$	5377
$d_{FGD\infty}$	$0.00162^{+0.00043}_{-0.00056}$	$0.00213^{+0.00036}_{-0.00041}$	3859	$0.00271^{+0.0015}_{-0.0014}$	$0.00361^{+0.0014}_{-0.0011}$	3414
\widetilde{D}	$0.00699^{+0.0027}_{-0.0031}$	$0.01009^{+0.0026}_{-0.0028}$	833	$0.00327^{+0.0013}_{-0.0015}$	$0.00437^{+0.0013}_{-0.0013}$	836
\widetilde{W}	$0.008^{+0.0026}_{-0.0033}$	$0.01172^{+0.0022}_{-0.0026}$	681	$0.00297^{+0.0014}_{-0.0015}$	$0.00412^{+0.0013}_{-0.0013}$	702
$d_{MMD^2_u}$	$0.0089^{+0.0058}_{-0.0041}$	$0.01257^{+0.0055}_{-0.004}$	12613	$0.00241^{+0.0016}_{-0.0012}$	$0.00337^{+0.0015}_{-0.0011}$	11028
\overline{D}	$1.00821^{+0.005}_{-0.0022}$	$1.01193^{+0.0022}_{-0.0015}$	329	$0.00399^{+0.0016}_{-0.0017}$	$0.00538^{+0.0014}_{-0.0015}$	507
Statistic	pow ₋ -deformation			\mathcal{N} -deformation		
	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)
t_{LLR}	$0.00031^{+0.00016}_{-0.00017}$	$0.00043^{+0.00016}_{-0.00017}$	5380	NaN	NaN	NaN
$d_{MMD^2_u}$	$0.00241^{+0.0016}_{-0.0011}$	$0.0034^{+0.0015}_{-0.0011}$	11030	$0.60915^{+0.1}_{-0.12}$	$0.71813^{+0.08}_{-0.08}$	$7.6e+03$
$d_{FGD\infty}$	$0.00296^{+0.0012}_{-0.001}$	$0.0039^{+0.0011}_{-0.00093}$	3369	$0.14094^{+0.018}_{-0.027}$	$0.16127^{+0.013}_{-0.016}$	$2.6e+03$
\widetilde{W}	$0.00332^{+5}_{-0.0012}$	$0.00448^{+5}_{-0.00099}$	634	$0.2383^{+0.041}_{-0.058}$	$0.2828^{+0.032}_{-0.039}$	$5.3e+02$
\widetilde{D}	$0.00361^{+0.0011}_{-0.0012}$	$0.0047^{+0.0011}_{-0.001}$	826	$0.23289^{+0.042}_{-0.057}$	$0.27403^{+0.034}_{-0.041}$	$6.7e+02$
\overline{D}	$0.00427^{+0.0013}_{-0.0014}$	$0.00565^{+0.0013}_{-0.0012}$	501	$0.26557^{+0.046}_{-0.062}$	$0.31516^{+0.036}_{-0.044}$	$4.2e+02$
Statistic	\mathcal{U} -deformation			Timing		
	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)	t^{null} (s)		
$d_{FGD\infty}$	$0.24366^{+0.031}_{-0.046}$	$0.27881^{+0.023}_{-0.027}$	$2.5e+03$	6325		
\overline{D}	$0.45649^{+0.083}_{-0.1}$	$0.54354^{+0.064}_{-0.073}$	$4e+02$	224		
$d_{MMD^2_u}$	$1.06239^{+0.16}_{-0.22}$	$1.24837^{+0.14}_{-0.14}$	$8.3e+03$	16601		
\widetilde{D}	$0.40164^{+0.076}_{-0.096}$	$0.47562^{+0.061}_{-0.07}$	$6.6e+02$	702		
\widetilde{W}	$0.41249^{+0.072}_{-0.1}$	$0.49115^{+0.057}_{-0.069}$	$5.2e+02$	358		
t_{LLR}	NaN	NaN	NaN	-		