

MoG model with $d = 100$, $q = 10$, and $n = m = 10^5$						
Statistic	μ -deformation			Σ_{ii} -deformation		
	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)
t_{SW}	$0.02814^{+0.0099}_{-0.012}$	$0.03797^{+0.009}_{-0.01}$	950	$0.00918^{+0.0025}_{-0.0035}$	$0.01247^{+0.0022}_{-0.0026}$	1022
$t_{\overline{KS}}$	$0.00222^{+0.00077}_{-0.00084}$	$0.00307^{+0.00073}_{-0.00077}$	1541	$0.00051^{+0.0002}_{-0.0002}$	$0.00073^{+0.0002}_{-0.0002}$	1689
t_{SKS}	$0.02341^{+0.0067}_{-0.0087}$	$0.03148^{+0.0061}_{-0.0069}$	1475	$0.00812^{+0.0016}_{-0.0024}$	$0.01068^{+0.0013}_{-0.0016}$	1557
t_{FGD}	$0.03878^{+0.013}_{-0.014}$	$0.05066^{+0.011}_{-0.012}$	20712	$0.01263^{+0.0031}_{-0.0038}$	$0.01631^{+0.0024}_{-0.0029}$	18446
t_{MMD}	$0.03601^{+0.0081}_{-0.01}$	$0.04577^{+0.0065}_{-0.0076}$	10677	$0.00722^{+0.0022}_{-0.0024}$	$0.00915^{+0.0019}_{-0.002}$	11691
t_{NPLM}	$0.0029^{+0.00093}_{-0.0012}$	$0.00354^{+0.00079}_{-0.00096}$	44613	$0.00094^{+0.00029}_{-0.0004}$	$0.00114^{+0.00026}_{-0.00031}$	39241
t_{NPLM}	$0.00244^{+0.00075}_{-0.001}$	$0.00294^{+0.00066}_{-0.00082}$	49058	$0.00083^{+0.00024}_{-0.00035}$	$0.00099^{+0.00022}_{-0.00026}$	50580
t_{LLR}	$2e-05^{+2e-05}_{-1e-05}$	$4e-05^{+1e-05}_{-2e-05}$	24750	0.0^{+1e-05}_{-0}	$1e-05^{+0}_{-1e-05}$	34527
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_{SW}	$0.01697^{+0.0046}_{-0.0064}$	$0.02315^{+0.0036}_{-0.0045}$	3531	$0.00368^{+0.001}_{-0.0014}$	$0.00498^{+0.00086}_{-0.001}$	1026
$t_{\overline{KS}}$	$1.00061^{+0.00012}_{-0.00012}$	$1.00073^{+0.00025}_{-0.00012}$	9908	$0.00018^{+8e-05}_{-7e-05}$	$0.00027^{+7e-05}_{-8e-05}$	1743
t_{SKS}	$0.01855^{+0.0049}_{-0.0066}$	$0.02508^{+0.0043}_{-0.0052}$	4171	$0.00331^{+0.0006}_{-0.00092}$	$0.0043^{+0.0006}_{-0.00058}$	1594
t_{FGD}	$0.00299^{+0.00073}_{-0.00088}$	$0.00389^{+0.0006}_{-0.00068}$	25716	$0.00505^{+0.0012}_{-0.0016}$	$0.00652^{+0.00098}_{-0.0012}$	19149
t_{MMD}	$0.01259^{+0.0035}_{-0.0039}$	$0.01586^{+0.0032}_{-0.0032}$	14405	$0.00263^{+0.00077}_{-0.00088}$	$0.0033^{+0.0007}_{-0.00071}$	12093
t_{NPLM}	$0.0012^{+0.0005}_{-0.0005}$	$0.0015^{+0.00041}_{-0.0004}$	47259	$0.00036^{+0.00011}_{-0.00015}$	$0.00044^{+0.0001}_{-0.00012}$	53210
t_{NPLM}	$0.01406^{+0.0036}_{-0.0055}$	$0.01671^{+0.0029}_{-0.0043}$	40761	$0.00032^{+9e-05}_{-0.00013}$	$0.00038^{+9e-05}_{-0.0001}$	47529
t_{LLR}	-	-	-	0.0^{+0}_{-0}	0.0^{+0}_{-0}	30414
Statistic	pow ₋ -deformation			\mathcal{N} -deformation		
	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)
t_{SW}	$0.00374^{+5}_{-0.0014}$	$0.00505^{+5}_{-0.0011}$	935	$0.17253^{+0.022}_{-0.036}$	$0.20139^{+0.016}_{-0.021}$	838
$t_{\overline{KS}}$	$0.00018^{+8e-05}_{-7e-05}$	$0.00027^{+8e-05}_{-8e-05}$	1753	$0.00606^{+0.0029}_{-0.0031}$	$0.00921^{+0.0027}_{-0.003}$	1589
t_{SKS}	$0.00331^{+0.00064}_{-0.00098}$	$0.0043^{+0.00051}_{-0.00063}$	1605	$0.14876^{+0.02}_{-0.031}$	$0.17443^{+0.016}_{-0.021}$	1363
t_{FGD}	$0.00504^{+0.0012}_{-0.0016}$	$0.00655^{+0.001}_{-0.0012}$	19105	$0.15458^{+0.018}_{-0.027}$	$0.17576^{+0.014}_{-0.016}$	15222
t_{MMD}	$0.00257^{+0.00071}_{-0.0008}$	$0.00329^{+0.00064}_{-0.00066}$	12099	$0.67808^{+0.07}_{-0.11}$	$0.7615^{+0.053}_{-0.069}$	8142
t_{NPLM}	$0.00035^{+0.00011}_{-0.00015}$	$0.00043^{+0.0001}_{-0.00012}$	44155	$0.12423^{+0.023}_{-0.041}$	$0.14175^{+0.016}_{-0.028}$	31727
t_{NPLM}	$0.00032^{+9e-05}_{-0.00014}$	$0.00038^{+9e-05}_{-0.00011}$	46986	$0.10102^{+0.019}_{-0.03}$	$0.11354^{+0.015}_{-0.021}$	32670
t_{LLR}	0.0^{+0}_{-0}	0.0^{+0}_{-0}	39144	-	-	-
Statistic	\mathcal{U} -deformation			Timing		
	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)	t_{null} (s)		
t_{SW}	$0.2996^{+0.036}_{-0.063}$	$0.34972^{+0.028}_{-0.038}$	665	476		
$t_{\overline{KS}}$	$0.00925^{+0.0047}_{-0.005}$	$0.01423^{+0.0043}_{-0.0048}$	1590	1594		
t_{SKS}	$0.25702^{+0.037}_{-0.054}$	$0.30137^{+0.028}_{-0.036}$	1316	1753		
t_{FGD}	$0.26668^{+0.031}_{-0.044}$	$0.3051^{+0.022}_{-0.03}$	12103	39629		
t_{MMD}	$1.17598^{+0.12}_{-0.19}$	$1.32064^{+0.093}_{-0.12}$	9105	18930		
t_{NPLM}	$0.21387^{+0.039}_{-0.066}$	$0.24534^{+0.029}_{-0.043}$	29733	50710		
t_{NPLM}	$0.17631^{+0.03}_{-0.052}$	$0.1986^{+0.024}_{-0.038}$	31273	76407		
t_{LLR}	-	-	-	-		