

MoG model with $d = 5$, $q = 3$, and $n = m = 10^4$						
Statistic	μ -deformation			Σ_{ii} -deformation		
	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)
t_{SW}	$0.09192^{+0.035}_{-0.035}$	$0.12363^{+0.035}_{-0.032}$	1353	$0.03015^{+0.0085}_{-0.0099}$	$0.04164^{+0.0081}_{-0.0086}$	1531
$t_{\overline{KS}}$	$0.00496^{+0.0017}_{-0.0017}$	$0.00664^{+0.0015}_{-0.0017}$	1539	$0.00274^{+0.00063}_{-0.00069}$	$0.00353^{+0.00059}_{-0.00064}$	1626
t_{SKS}	$0.05494^{+0.019}_{-0.019}$	$0.07242^{+0.018}_{-0.018}$	1748	$0.01644^{+0.0038}_{-0.0045}$	$0.02223^{+0.0033}_{-0.0038}$	1888
t_{FGD}	$0.10354^{+0.06}_{-0.044}$	$0.14117^{+0.056}_{-0.042}$	1278	$0.0327^{+0.0089}_{-0.01}$	$0.0444^{+0.0077}_{-0.0077}$	1270
t_{MMD}	$0.06434^{+0.035}_{-0.025}$	$0.08544^{+0.033}_{-0.025}$	1344	$0.01392^{+0.0054}_{-0.0046}$	$0.0188^{+0.005}_{-0.0044}$	1497
t_{NPLM}	$0.00958^{+0.0027}_{-0.0029}$	$0.01168^{+0.0025}_{-0.0026}$	4593	$0.00221^{+0.00079}_{-0.00074}$	$0.0027^{+0.00074}_{-0.00068}$	5043
t_{LLR}	$0.00078^{+0.00047}_{-0.00047}$	$0.0011^{+0.00047}_{-0.00047}$	2810	$0.00027^{+0.00016}_{-0.00016}$	$0.00037^{+0.00017}_{-0.00016}$	3000
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}	$0.05949^{+0.013}_{-0.018}$	$0.08161^{+0.01}_{-0.014}$	1421	$0.01845^{+0.0052}_{-0.0061}$	$0.0255^{+0.0047}_{-0.0053}$	1259
$t_{\overline{KS}}$	$1.00317^{+0}_{-0.0013}$	$1.00354^{+0.00012}_{-0.00043}$	1384	$0.00345^{+0.00099}_{-0.0011}$	$0.00444^{+0.00096}_{-0.00097}$	1612
t_{SKS}	$0.05701^{+0.015}_{-0.018}$	$0.0746^{+0.014}_{-0.014}$	1593	$0.0106^{+0.0024}_{-0.0027}$	$0.01405^{+0.0021}_{-0.0023}$	1807
t_{FGD}	$0.02441^{+0.006}_{-0.0062}$	$0.03421^{+0.005}_{-0.0056}$	1648	$0.01964^{+0.0054}_{-0.006}$	$0.02668^{+0.0046}_{-0.0048}$	1294
t_{MMD}	$0.04929^{+0.019}_{-0.017}$	$0.06712^{+0.017}_{-0.015}$	1607	$0.00788^{+0.0032}_{-0.0027}$	$0.01064^{+0.003}_{-0.0024}$	1518
t_{NPLM}	$0.00354^{+0.0013}_{-0.0014}$	$0.00451^{+0.0013}_{-0.0012}$	5257	$0.00143^{+0.00053}_{-0.00049}$	$0.00174^{+0.0005}_{-0.00044}$	5082
t_{LLR}	-	-	-	$0.00041^{+0.00025}_{-0.00025}$	$0.00057^{+0.00025}_{-0.00025}$	3017
Statistic	pow $_-$ -deformation			\mathcal{N} -deformation		
	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)
t_{SW}	$0.01989^{+0.0056}_{-0.0064}$	$0.0273^{+0.0052}_{-0.0055}$	1221	$0.25306^{+0.031}_{-0.043}$	$0.29897^{+0.026}_{-0.029}$	1050
$t_{\overline{KS}}$	$0.00317^{+0.0009}_{-0.00089}$	$0.00416^{+0.0009}_{-0.00083}$	1634	$0.00921^{+0.0016}_{-0.0017}$	$0.01112^{+0.0016}_{-0.0016}$	1496
t_{SKS}	$0.01066^{+0.0023}_{-0.0027}$	$0.01407^{+0.0021}_{-0.0022}$	1804	$0.18137^{+0.025}_{-0.036}$	$0.21312^{+0.023}_{-0.025}$	1551
t_{FGD}	$0.02088^{+0.0059}_{-0.0061}$	$0.02847^{+0.005}_{-0.005}$	1300	$0.29378^{+0.029}_{-0.045}$	$0.34516^{+0.022}_{-0.026}$	1080
t_{MMD}	$0.00858^{+0.0037}_{-0.0032}$	$0.01169^{+0.0034}_{-0.003}$	1550	$0.37502^{+0.046}_{-0.064}$	$0.43162^{+0.041}_{-0.039}$	1240
t_{NPLM}	$0.00141^{+0.00055}_{-0.00052}$	$0.00173^{+0.00051}_{-0.00048}$	5153	$0.10681^{+0.017}_{-0.025}$	$0.11719^{+0.016}_{-0.018}$	3939
t_{LLR}	$0.00036^{+0.00025}_{-0.00025}$	$0.00053^{+0.00025}_{-0.00025}$	3139	-	-	-
Statistic	\mathcal{U} -deformation			Timing		
	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)	t^{null} (s)		
t_{SW}	$0.4365^{+0.054}_{-0.078}$	$0.51675^{+0.039}_{-0.053}$	988	261		
$t_{\overline{KS}}$	$0.01504^{+0.0026}_{-0.0027}$	$0.01804^{+0.0022}_{-0.0026}$	1510	37		
t_{SKS}	$0.30846^{+0.044}_{-0.057}$	$0.36537^{+0.036}_{-0.045}$	1513	352		
t_{FGD}	$0.50798^{+0.053}_{-0.076}$	$0.59684^{+0.038}_{-0.049}$	1030	368		
t_{MMD}	$0.64544^{+0.087}_{-0.099}$	$0.7501^{+0.064}_{-0.067}$	1231	215		
t_{NPLM}	$0.1857^{+0.03}_{-0.043}$	$0.20519^{+0.027}_{-0.029}$	3775	3656		
t_{LLR}	-	-	-	-		