MoG model with $d = 5$, $q = 3$, and $n = m = 5 \cdot 10^4$							
	μ -deformation			Σ_{ii} -deformation			
Statistic	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$\epsilon_{95\%\mathrm{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	
$t_{ m SW}$	$\begin{array}{c} 0.03867^{+0.015}_{-0.015} \\ \textbf{0.002}^{+0.00077}_{-0.00083} \\ 0.02325^{+0.0079}_{-0.0085} \end{array}$	$0.05335^{+0.015}_{-0.015}$	1312	$\begin{array}{c} 0.01366^{+0.0039}_{-0.0044} \\ \textbf{0.00121}^{+0.00032}_{-0.00039} \end{array}$	$0.01898^{+0.0035}_{-0.0039}$	1415	
$t_{\overline{ ext{KS}}}$	$0.002^{+0.00077}_{-0.00083}$	$0.00277^{+0.00075}_{-0.00076}$	1308	$0.00121_{-0.00039}^{+0.00032}$	$0.00157^{+0.00031}_{-0.00033}$	1315	
$t_{ m SKS}$	$0.02325^{+0.0079}_{-0.0085}$	$0.03165^{+0.0076}_{-0.0076}$	1439	$1.000731^{+0.0018}$	$0.00993^{+0.0015}_{-0.0017}$	1539	
$t_{ m FGD}$	$0.04381^{+0.026}_{-0.019}$	$0.06082^{+0.024}_{-0.018}$	1536	$0.0147^{+0.004}_{-0.0043}$	$0.02005^{+0.0035}_{-0.0035}$	1610	
$t_{ m MMD}$	$\begin{array}{c} 0.04381^{+0.026}_{-0.019} \\ 0.02669^{+0.014}_{-0.011} \end{array}$	$0.03545^{+0.014}_{-0.011}$	8990	$0.00629_{-0.0025}^{+0.0031}$	$0.00833^{+0.0029}_{-0.0023}$	9570	
$t_{ m NPLM}$	$0.00423^{+0.0013}_{-0.0014}$	$0.00515^{+0.0011}_{-0.0012}$	18283	$0.00092^{+0.00031}_{-0.00032}$	$0.00112^{+0.0003}_{-0.00027}$	12719	
$t_{ m NPLM}$	$\begin{array}{c} 0.02669^{+0.014}_{-0.011} \\ 0.00423^{+0.0013}_{-0.0014} \\ 0.00159^{+0.00052}_{-0.00063} \end{array}$	$\begin{array}{c} \textbf{0.09393} - 0.015 \\ \textbf{0.00277} - \textbf{0.00075} \\ \textbf{0.003165} - 0.0076 \\ \textbf{0.03165} - 0.0076 \\ \textbf{0.06082} + 0.024 \\ \textbf{0.018} \\ \textbf{0.03545} + 0.014 \\ \textbf{0.00515} - 0.0011 \\ \textbf{0.00192} + 0.0012 \\ \textbf{0.00192} - 0.00033 \\ \textbf{0.00093} \end{array}$	26347	$\begin{array}{c} 0.0147 + 0.004 \\ 0.0147 + 0.004 \\ -0.0043 \\ 0.00629 + 0.0025 \\ 0.00092 + 0.00031 \\ 0.0006 + 0.00031 \\ 0.0006 + 0.00021 \\ 0.00021 \\ 0.0014 + 7e - 05 \\ \end{array}$	$\begin{array}{c} 0.0133 - 0.0039 \\ 0.00157 + 0.00031 \\ 0.00993 + 0.0017 \\ 0.02005 + 0.0035 \\ 0.0035 + 0.0023 \\ 0.00833 + 0.0023 \\ 0.00112 + 0.00037 \\ 0.00072 + 0.00017 \\ 0.00072 + 0.00017 \\ 0.00079 + 0.00018 \\ 0.00018 + 0.00018 \\ 0.0001$	27774	
$t_{ m LLR}$	$0.00159_{-0.00063} \\ 0.00036_{-0.0002}^{+0.00019}$	$0.00192_{-0.00053}^{+0.00053}$ $0.0005_{-0.0002}^{+0.0002}$	2776	$0.00011_{-8e-05}^{+7e-05}$	$0.00072_{-0.00018} \\ 0.00016_{-8e-05}^{+8e-05}$	3063	
	$\Sigma_{i\neq j}$ -deformation				$\mathrm{pow}_+\text{-}\mathrm{deformation}$		
Statistic	$\epsilon_{95\%\mathrm{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	
$t_{ m SW}$	$\begin{array}{c} 0.02657^{+0.0058}_{-0.0077} \\ 1.00116^{+0.00055}_{-6e-05} \\ 0.02533^{+0.0073}_{-0.0088} \\ \end{array}$	$0.03639^{+0.005}_{-0.0059}$	1508	$0.00841^{+0.0024}_{-0.0028}$	$0.01169^{+0.0022}_{-0.0023}$	1462	
$t_{\overline{ ext{KS}}}$	$1.00116^{+0.00055}_{-6e-05}$	$\begin{array}{c} 0.03033_{-0.0059} \\ 1.00165_{-0.00025}^{+0.00018} \\ 0.03416_{-0.0074}^{+0.0062} \\ 0.01443_{-0.0022}^{+0.0017} \\ 0.02908_{-0.0079}^{+0.0094} \\ 0.0018_{-0.0004}^{+0.0094} \\ \end{array}$	1404	$0.00142^{+0.00043}$	$\begin{array}{c} 0.01109_{-0.0023} \\ 0.00189_{-0.00041}^{+0.00041} \\ 0.0063_{-0.001}^{+0.00088} \\ 0.01216_{-0.0023}^{+0.0023} \\ 0.00478_{-0.0014}^{+0.0023} \\ 0.00073_{-0.00017}^{+0.00019} \\ 0.00103_{-0.00025}^{+0.00017} \\ 0.00025_{-0.0001}^{+0.0001} \end{array}$	1326	
$t_{ m SKS}$	$0.02533^{+0.0073}_{-0.0088}$	$0.03416^{+0.0062}_{-0.0074}$	1630	$0.00467^{+0.001}_{-0.0013}$	$0.0063^{+0.00088}_{-0.001}$	1552	
$t_{ m FGD}$	$0.01034^{+0.0023}_{-0.0025}$	$0.01443^{+0.0017}_{-0.0022}$	2060	$0.0089^{+0.0026}_{-0.0027}$	$0.01216^{+0.0023}_{-0.0023}$	1790	
$t_{ m MMD}$	$\begin{array}{c} -0.0083 \\ \textbf{0.01034} \\ -0.0023 \\ 0.02201 \\ -0.0084 \\ 0.00142 \\ -0.00052 \\ \end{array}$	$0.02908^{+0.0094}_{-0.0079}$	9396	$\begin{array}{c} 0.00467^{+0.001}_{-0.0013} \\ 0.00467^{+0.001}_{-0.0013} \\ 0.0089^{+0.0026}_{-0.0027} \\ 0.00361^{+0.0019}_{-0.0014} \\ \end{array}$	$0.00478^{+0.0018}_{-0.0014}$	9705	
$t_{ m NPLM}$	$0.00142^{+0.00051}_{-0.00052}$	$0.0018^{+0.0004}_{-0.00045}$	10207	$\begin{array}{c} 0.00085 \pm 0.0014 \\ 0.0006 + 0.0002 \\ -0.0002 \\ 0.00085 + 0.00024 \\ -0.0003 \end{array}$	$0.00073^{+0.00019}_{-0.00017}$	10610	
$t_{ m NPLM}$	$\begin{array}{c} 0.00142_{-0.00052} \\ 0.0007_{-0.0003}^{+0.0004} \end{array}$	$0.0018_{-0.00045}^{+0.00045}$ $0.00099_{-0.0003}^{+0.00031}$	85671	$0.00085^{+0.00024}_{-0.0003}$	$0.00103^{+0.00021}_{-0.00025}$	31811	
$t_{ m LLR}$	-	-	-	$0.00085_{-0.0003}^{+0.0003} \\ 0.00017_{-9e-05}^{+0.0001}$	$0.00025^{+0.0001}_{-0.0001}$	2854	
	$pow\deformation$			$\mathcal{N} ext{-deformation}$			
Statistic	$\epsilon_{95\%{ m CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	
$t_{ m SW}$	$0.00858^{+0.0024}_{-0.0029}$	$0.01188^{+0.0023}_{-0.0024}$	1466	$0.16467^{+0.02}_{-0.029}$	$0.19494^{+0.015}_{-0.019}$	1187	
$t_{\overline{ ext{KS}}}$	$0.00142^{+0.00045}_{-0.0005}$	$0.00188^{+0.00042}_{-0.00044}$	1320	$0.00546^{+0.00092}_{-0.0012}$	$0.00651^{+0.00087}_{-0.0009}$	1226	
$t_{ m SKS}$	$\begin{array}{c} \textbf{0.00142} \\ \textbf{0.00142} \\ -0.0005 \\ 0.0048 \\ -0.0014 \\ -0.0014 \\ \end{array}$	$0.00642^{+0.001}$	1562	$0.11614^{+0.016}$	$0.1371^{+0.013}_{-0.013}$	1321	
$t_{ m FGD}$	$0.0091^{+0.0025}_{-0.0026}$	$0.01247^{+0.0022}_{-0.0022}$	1789	$0.1925^{+0.019}_{-0.027}$	$0.22617^{+0.014}_{-0.016}$	1452	
$t_{ m MMD}$	$\begin{array}{c} 0.0091^{+0.0025}_{-0.0026} \\ 0.00374^{+0.0019}_{-0.0016} \\ \end{array}$	$0.00492^{+0.0019}_{-0.0015}$	9724	$0.25293^{+0.036}_{-0.048}$	$\begin{array}{c} 0.1611_{-0.017}^{+0.017} \\ 0.22617_{-0.016}^{+0.014} \\ 0.28868_{-0.032}^{+0.032} \\ 0.07922_{-0.0096}^{+0.0091} \end{array}$	8612	
$t_{ m NPLM}$	$\begin{array}{c} 0.00374^{+0.0019}_{-0.0016} \\ 0.00064^{+0.00024}_{-0.00024} \\ 0.00092^{+0.00029}_{-0.00036} \end{array}$	$\begin{array}{c} 0.00012_{-0.0011} \\ 0.01247_{-0.0022}^{+0.0022} \\ 0.00492_{-0.0015}^{+0.0019} \\ 0.00078_{-0.00022}^{+0.00022} \\ 0.00109_{-0.00023}^{+0.00026} \end{array}$	10749	$0.0707^{+0.011}_{-0.013}$	$0.07922^{+0.0091}_{-0.0096}$	7824	
$t_{ m NPLM}$	$0.00092^{+0.00029}_{-0.00036}$	$0.00109^{+0.00026}_{-0.0003}$	27203	$\begin{array}{c} 0.11014_{0.024} \\ 0.1925^{+0.019}_{-0.027} \\ 0.25293^{+0.036}_{-0.048} \\ 0.0707^{+0.011}_{-0.013} \\ 0.01561^{+0.0023}_{-0.0035} \end{array}$	$0.07922_{-0.0096}^{+0.092}$ $0.0172_{-0.0026}^{+0.091}$	23114	
$t_{ m LLR}$	$0.00092_{-0.00036} \\ 0.00018_{-0.0001}^{+0.0001}$	$0.00109_{-0.0003}^{+0.0003} \\ 0.00025_{-0.0001}^{+0.0001}$	2850	-	-	-	
$\mathcal{U} ext{-deformation}$				Timing			
Statistic	$\epsilon_{95\%{ m CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	t^{null} (s)			
$t_{ m SW}$	$0.28418^{+0.035}_{-0.05}$	$0.33591^{+0.027}_{-0.033}$	1344	319			
$t_{\overline{ ext{KS}}}$	$0.00924^{+0.0015}_{-0.0019}$	$0.01096^{+0.0013}_{-0.0015}$	1208	49			
$t_{ m SKS}$	$0.19824^{+0.029}_{-0.04}$	$0.23402^{+0.023}_{-0.029}$	1271	484			
$t_{ m FGD}$	$0.33191^{+0.034}_{-0.044}$	$0.39255^{+0.022}_{-0.028}$	1433	1150			
$t_{ m MMD}$	$0.43535^{+0.067}_{-0.079}$	$0.5005^{+0.054}_{-0.057}$	7010	13839			
$t_{ m NPLM}$	$\begin{array}{c} 0.12346^{+0.025}_{-0.023} \\ 0.2532^{+0.036}_{-0.23} \end{array}$	$0.13671^{+0.016}_{-0.017}$	7412	23042			
$t_{ m NPLM}$	$0.2532^{+0.036}_{-0.23}$	$0.2533^{+0.036}_{-0.23}$	27781	35675			
$t_{ m LLR}$	-	-	-	-			