MoG model with $d = 100$, $q = 10$, and $n = m = 10^5$						
	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} 0.02814^{+0.0099}_{-0.012} \\ \textbf{0.00222}^{+0.00077}_{-0.00084} \\ 0.02341^{+0.0067}_{-0.0087} \\ 0.03878^{+0.013}_{-0.014} \\ 0.03601^{+0.0081}_{-0.011} \\ 0.075^{+2e-05} \end{array} $	$0.03797^{+0.009}_{-0.01}$	950	$ \begin{array}{c} 0.00918^{+0.0025}_{-0.0035} \\ \textbf{0.00051}^{+0.0002}_{-0.0002} \\ 0.00812^{+0.0016}_{-0.0024} \\ 0.01263^{+0.0031}_{-0.0038} \\ 0.00722^{+0.0022}_{-0.0024} \\ 0.01263^{+0.0031}_{-0.0022} \end{array} $	$0.01247^{+0.0022}_{-0.0026}$	1022
$t_{\overline{ ext{KS}}}$	$0.00222^{+0.00077}_{-0.00084}$	$\begin{array}{c} \textbf{0.00307} & \textbf{0.00073} \\ \textbf{0.00307} & \textbf{-0.00077} \\ \textbf{0.03148} & \textbf{-0.0061} \\ \textbf{0.05066} & \textbf{-0.012} \\ \textbf{0.04577} & \textbf{-0.0076} \\ \textbf{4.075} & \textbf{-0.076} \\ \end{array}$	1541	$0.00051^{+0.0002}_{-0.0002}$	$\begin{array}{c} \textbf{0.00073}^{+0.0026} \\ \textbf{0.00073}^{+0.0002} \\ -0.0002 \\ 0.01068^{+0.0013} \\ -0.0016 \end{array}$	1689
$t_{ m SKS}$	$0.02341^{+0.0067}_{-0.0087}$	$0.03148^{+0.0061}_{-0.0069}$	1475	$0.00812^{+0.0016}_{-0.0024}$	$0.01068^{+0.0013}_{-0.0016}$	1557
$t_{ m FGD}$	$0.03878^{+0.013}_{-0.014}$	$0.05066^{+0.011}_{-0.012}$	20712	$0.01263^{+0.0031}_{-0.0038}$	0.01401 ± 0.0024	18446
$t_{ m MMD}$	$0.03601^{+0.0081}_{-0.01}$	$0.04577^{+0.0065}_{-0.0076}$	10677	$0.00722^{+0.0022}_{-0.0024}$	$0.00915^{+0.0019}_{-0.002}$	11691
$t_{ m LLR}$	$2e - 05^{+2e - 05}_{-1e - 05}$	$4e - 05^{+1}_{-2}e^{-05}_{-05}$	24750	$0.0^{+1}_{-0}e^{-0.0024}$	$0.01631_{-0.0029}^{+0.0029} 0.00915_{-0.002}^{+0.0019} 1e - 05_{-1e-05}^{+0}$	34527
$\Sigma_{i\neq j}$ -deformation			pow_+ -deformation			
Statistic	$\epsilon_{95\%\mathrm{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$\epsilon_{95\%\mathrm{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)
$t_{ m SW}$	$0.00271^{+0.00069}_{-0.00091}$	$0.00361^{+0.0006}_{-0.00061}$	15210	$0.00368^{+0.001}_{-0.0014}$	$0.00498^{+0.00086}_{-0.001}$	1026
$t_{\overline{ ext{KS}}}$	$1.00061^{+0.00012}_{-0.00049}$	$1.00085^{+0.00013}$	20786	$\begin{array}{c} \textbf{0.00018} \\ \textbf{0.00018} \\ \textbf{-7e-05} \\ 0.00331 \\ \textbf{-0.00092} \\ \textbf{-0.00092} \end{array}$	$\begin{array}{c} \textbf{0.00027}^{+7} \textbf{e-05} \\ \textbf{0.00027}^{+7} \textbf{e-05} \\ \textbf{0.0043}^{+0.00047} \\ \textbf{0.00652}^{+0.00058} \\ \textbf{0.00652}^{+0.00098} \\ \textbf{0.0033}^{+0.0007} \\ \textbf{-0.00071} \\ \textbf{0.0037} \end{array}$	1743
$t_{ m SKS}$	$0.0021^{+0.00059}_{-0.0008}$	$0.0028^{+0.00049}_{-0.0006}$	16600	$0.00331^{+0.0006}_{-0.00092}$	$0.0043^{+0.00047}_{-0.00058}$	1594
$t_{ m FGD}$	$0.0021^{+0.00039}_{-0.0008} \\ 0.0016^{+0.00041}_{-0.0004}$	$0.002^{+0.0003}_{-0.0003}$	70077	$0.00505^{+0.0012}_{-0.0016}$	$0.00652^{+0.00098}_{-0.0012}$	19149
$t_{ m MMD}$	$0.004^{+0.00099}_{-0.0012}$	$0.00499^{+0.001}_{-0.00089}$	36138	$0.00263^{+0.00077}_{-0.00088}$	$0.0033^{+0.0007}_{-0.00071}$	12093
$t_{ m LLR}$	$\begin{array}{c} -0.004 \\ 0.004^{+0.00099} \\ 0.01134^{+0.0043} \\ 0.01134^{+0.0043} \end{array}$	$0.01444^{+0.003}_{-0.0046}$	54581	0.0^{+0}_{-0}	0.0_{-0}^{+0}	30414
$pow\deformation$				$\mathcal{N} ext{-deformation}$		
Statistic	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$\epsilon_{95\%\mathrm{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)
$t_{ m SW}$	$\begin{array}{c} 0.00374^{+5}_{-0.0014} \\ \textbf{0.00018}^{+8e-05}_{-7e-05} \\ 0.00331^{+0.00064}_{-0.00098} \end{array}$	$\begin{array}{c} 0.00505^{+5}_{-0.0011} \\ 0.00027^{+8e-05}_{-8e-05} \\ 0.0043^{+0.00051}_{-0.00063} \end{array}$	935	$ \begin{array}{c} 0.17253^{+0.022}_{-0.036} \\ \textbf{0.00606}^{+0.0029}_{-0.0031} \\ 0.14876^{+0.02}_{-0.031} \\ 0.15458^{+0.018}_{-0.027} \\ 0.67808^{+0.07}_{-0.11} \end{array} $	$0.20139_{-0.021}^{+0.016} \\ 0.00921_{-0.003}^{+0.0027}$	838
$t_{\overline{ ext{KS}}}$	$0.00018^{+8e-05}_{-7e-05}$	$0.00027^{+8\mathrm{e}-05}_{-8\mathrm{e}-05}$	1753	$0.00606^{+0.0029}_{-0.0031}$	$0.00921_{-0.003}^{+0.0027}$	1589
$t_{ m SKS}$	$0.00331^{+0.00064}_{-0.00098}$	$0.0043^{+0.00051}_{-0.00063}$	1605	$0.14876^{+0.02}_{-0.031}$	$0.17443^{+0.016}_{-0.021}$	1363
$t_{ m FGD}$	$0.00504^{+0.0012}_{-0.0016}$	$0.00655^{+0.001}_{-0.0012}$	19105	$0.15458^{+0.018}_{-0.027}$	$0.17576_{-0.016}^{+0.014}$	15222
$t_{ m MMD}$	$ \begin{array}{c} 0.00331_{-0.00098}^{+0.00098} \\ 0.00504_{-0.0016}^{+0.0012} \\ 0.00257_{-0.0008}^{+0.00071} \end{array} $	$\begin{array}{c} 0.00655^{+0.001}_{-0.0012} \\ 0.00329^{+0.00064}_{-0.00066} \end{array}$	12099	$0.67808^{+0.07}_{-0.11}$	$\begin{array}{c} \textbf{0.00921} \begin{array}{c} \textbf{1.0027} \\ \textbf{0.0037} \\ 0.17443 \begin{array}{c} \textbf{-0.016} \\ \textbf{0.17576} \begin{array}{c} \textbf{-0.016} \\ \textbf{0.016} \\ \textbf{0.7615} \begin{array}{c} \textbf{-0.016} \\ \textbf{0.016} \end{array} \\ \textbf{0.7615} \begin{array}{c} \textbf{-0.069} \end{array}$	8142
$t_{ m LLR}$	0.0^{+0}_{-0}	0.0_{-0}^{+0}	39144	-	-	-
$\mathcal{U} ext{-} ext{deformation}$				Timing		
Statistic	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	t^{null} (s)		
$t_{ m SW}$	$0.2996^{+0.036}_{-0.063}$	$0.34972^{+0.028}_{-0.038}$	665	476		
$t_{\overline{ ext{KS}}}$	$0.00925^{+0.0047}_{-0.005}$	$0.01423^{+0.0043}_{-0.0048}$	1590	1594		
$t_{ m SKS}$	$0.25702^{+0.037}_{-0.054}$	$0.30137^{+0.028}_{-0.026}$	1316	1753		
$t_{ m FGD}$	$0.26668^{+0.031}_{-0.044}$	$0.3051^{+0.022}_{-0.03}$	12103	39629		
$t_{ m MMD}$	$1.17598_{-0.19}^{+0.12}$	$1.32064_{-0.12}^{+0.093}$	9105	18930		
$t_{ m LLR}$	-	-	-	-		