$\begin{tabular}{ll} \hline \hline & MoG model with $d=100$, $q=10$, and $n=m=2\cdot 10^4$ \\ \hline \hline \end{tabular}$						
	$\mu$ -deformation			$\Sigma_{ii}$ -deformation		
Statistic	$\epsilon_{95\%\mathrm{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$\epsilon_{95\%\mathrm{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)
$t_{ m SW}$	$\begin{array}{c} 0.06686^{+0.019}_{-0.023} \\ 0.0052^{+0.0021}_{-0.0021} \end{array}$	$0.08691^{+0.017}_{-0.019}$	698	$0.02176^{+0.0058}_{-0.0075}$	$0.02825^{+0.0052}_{-0.006}$	766
$t_{\overline{ ext{KS}}}$	$0.0052^{+0.0021}_{-0.0021}$	$0.00766^{+0.0022}_{-0.0023}$	1312	$0.00132^{+0.00073}_{-0.00062}$	$0.00216^{+0.00083}_{-0.00078}$	1447
$t_{ m SKS}$	$0.05483^{+0.014}_{-0.017}$	$0.07079^{+0.012}_{-0.014}$	737	$0.01903^{+0.0038}_{-0.0051}$	$0.02404^{+0.0031}_{-0.0037}$	813
$t_{ m FGD}$	$0.0917^{+0.024}_{-0.025}$	$0.11605^{+0.021}_{-0.022}$	5212	$-0.00060\pm0.0002$	$0.03721^{+0.005}_{-0.0056}$	5272
$t_{ m MMD}$	$0.08171^{+0.015}_{-0.019}$	$0.10334_{-0.014}^{-0.022}$	1992	$\begin{array}{c} 0.02902_{-0.0077} \\ 0.01681_{-0.0038}^{+0.0034} \end{array}$	$0.02112^{+0.0029}_{-0.0031}$	2247
$t_{ m LLR}$	$6e - 05^{+4e - 05}_{-4e - 05}$	$9e - 05^{+4}_{-4e-05}^{-0.014}$	5633	$1e - 05^{+1e - 05}_{-1e - 05}$	$2e - 05^{+1e - 05}_{-1e - 05}$	6765
$\Sigma_{i \neq j}$ -deformation			$\mathrm{pow}_+\text{-}\mathrm{deformation}$			
Statistic	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)
$t_{ m SW}$	$0.0063^{+0.0015}_{-0.002}$	$0.00832^{+0.0013}_{-0.0016}$	15486	$0.00863^{+0.0022}_{-0.0029}$	$0.01123^{+0.002}_{-0.0024}$	784
$t_{\overline{ ext{KS}}}$	$1.00219^{+0.00074}$	$1.00219^{+0.00098}_{-0.00042}$	18574	$0.00049^{+0.0003}$	$0.00084^{+0.00031}_{-0.00032}$	1622
$t_{ m SKS}$	$0.00471^{+0.0014}_{-0.0016}$	$0.00618^{+0.0013}_{-0.0015}$	19756	$0.0077^{+0.0013}_{-0.002}$	$0.00961^{+0.0011}_{-0.0013}$	822
$t_{ m FGD}$	$0.00362^{+0.00079}_{-0.00093}$	$0.00461^{+0.00058}_{-0.0007}$	23515	$0.01177^{+0.0023}_{-0.0029}$	$\begin{array}{c} 0.01473^{+0.002}_{-0.0023} \\ 0.00762^{+0.0011}_{-0.0011} \end{array}$	4103
$t_{ m MMD}$	$0.0086^{+0.0024}_{-0.0027}$	$0.01098^{+0.0022}_{-0.0022}$	18798	$0.00608^{+0.0012}_{-0.0014}$	$0.00762^{+0.0011}_{-0.0011}$	2406
$t_{ m LLR}$	$\begin{array}{c} 1.00216 - 0.0017 \\ 0.00471 + 0.0016 \\ 0.00362 + 0.00079 \\ 0.0086 + 0.0027 \\ 0.01886 + 0.0027 \\ 0.01886 + 0.0072 \\ \end{array}$	$\begin{array}{c} -0.0015 \\ 0.00461^{+0.00058}_{-0.0007} \\ 0.01098^{+0.0022}_{-0.0022} \\ 0.0233^{+0.0072}_{-0.0078} \end{array}$	18881	$\begin{array}{c} 0.06377^{+0.00124}_{-0.0024} \\ 0.0077^{+0.0013}_{-0.002} \\ 0.01177^{+0.0029}_{-0.0029} \\ 0.00608^{+0.0012}_{-0.0014} \\ 0.0^{+1}_{-0} \end{array}$	$1e - 05^{-0.0011}_{-1e - 05}$	5652
$pow\deformation$				$\mathcal{N} ext{-deformation}$		
Statistic	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)
$t_{ m SW}$	$0.00879^{+5}_{-0.003}$	$0.01149^{+5}_{-0.0025}$	703	$0.27003^{+0.034}_{-0.053}$	$0.31096^{+0.026}_{-0.036}$	<b>659</b>
$t_{\overline{ ext{KS}}}$	$0.0005^{+0.00031}_{-0.00025}$	$0.00085^{+0.00033}_{-0.00034}$	832	$0.01686^{+0.0067}_{-0.0081}$	$0.02454^{+0.0062}_{-0.0071}$	730
$t_{ m SKS}$	$0.00767^{+0.0014}_{-0.0021}$	$0.00962^{+0.0011}_{-0.0015}$	840	$0.23297^{+0.032}_{-0.049}$	$0.26623^{+0.028}_{-0.034}$	705
$t_{ m FGD}$	$0.0118^{+0.0024}_{-0.003}$	$0.01489^{+0.002}_{-0.0023}$	4175	$0.23954^{+0.023}_{-0.034}$	$0.26901^{+0.019}_{-0.021}$	3372
$t_{ m MMD}$	$\begin{array}{c} -0.00568 \\ 0.00568 \\ -0.0018 \\ 0.0 \\ -0.0018 \end{array}$	$0.00733^{+0.0015}_{-0.0015}$	2584	$1.01706^{+0.091}_{-0.13}$	$1.14737_{-0.077}^{+0.064}$	1740
$t_{ m LLR}$	$0.0^{+1e-05}_{-0}$	$1e - 05^{+0}_{-1e-05}$	7345	-	-	
$\mathcal{U} ext{-} ext{deformation}$			Timing			
Statistic	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$t^{\text{null}}$ (s)		
$t_{ m SW}$	$\begin{array}{c} 0.46758^{+0.057}_{-0.092} \\ \textbf{0.02575}^{+0.01}_{-0.012} \\ 0.40136^{+0.059}_{-0.083} \\ 0.41583^{+0.039}_{-0.059} \\ \end{array}$	$0.53846^{+0.045}_{-0.062}$	626	313		
$t_{\overline{ ext{KS}}}$	$0.02575^{+0.01}_{-0.012}$	$0.03716^{+0.0098}_{-0.01}$	716	545		
$t_{ m SKS}$	$0.40136^{+0.059}_{-0.083}$	$0.46142^{+0.05}_{-0.057}$	687	618		
$t_{ m FGD}$	$0.41583^{+0.039}_{-0.059}$	$0.46699^{+0.033}$	3032	7869		
$t_{ m MMD}$	$1.75184_{-0.22}^{+0.17}$	$1.9784^{+0.13}_{-0.15}$	1931	2411		
$t_{ m LLR}$	-	-	-	_		