MoG model with $d = 20$, $q = 5$, and $n = m = 2 \cdot 10^4$						
	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)
$t_{ m SW}$	$\begin{array}{c} 0.0705^{+0.029}_{-0.03} \\ 0.00723^{+0.002}_{-0.0027} \\ 0.05224^{+0.019}_{-0.021} \\ 0.08351^{+0.042}_{-0.035} \\ 0.06823^{+0.033}_{-0.03} \\ \end{array}$	$0.09728^{+0.028}_{-0.027}$	2879	$\begin{array}{c} 0.02552^{+0.0073}_{-0.0093} \\ \textbf{0.00268}^{+0.00078}_{-0.001} \\ 0.02037^{+0.0044}_{-0.0062} \\ \end{array}$	$0.03528^{+0.0065}_{-0.0072}$	3063
$t_{\overline{ ext{KS}}}$	$0.00723^{+0.002}_{-0.0027}$	$0.01001^{+0.0017}_{-0.0021}$	3020	$0.00268^{+0.00078}_{-0.001}$	$0.00381^{+0.00066}_{-0.008}$	3153
$t_{ m SKS}$	$0.05224^{+0.019}_{-0.021}$	$\begin{array}{c} \textbf{0.01001} + \textbf{0.0017} \\ \textbf{0.01001} + \textbf{0.00011} \\ \textbf{0.0723} + \textbf{0.017} \\ \textbf{0.0723} + \textbf{0.018} \\ \textbf{0.11456} + \textbf{0.039} \\ \textbf{0.0320} \end{array}$	2976	$0.02037^{+0.0044}_{-0.0062}$	$\begin{array}{c} -0.008 \\ 0.02765^{+0.0037}_{-0.0043} \\ 0.04052^{+0.0071}_{-0.0069} \\ 0.02118^{+0.0073}_{-0.0059} \end{array}$	3092
$t_{ m FGD}$	$0.08351^{+0.042}_{-0.035}$	$0.11456^{+0.039}_{-0.032}$	3069	$0.02984^{+0.0081}_{-0.0089}$	$0.04052^{+0.0071}_{-0.0069}$	3280
$t_{ m MMD}$	$0.06823^{+0.033}_{-0.03}$	$\begin{array}{c} 0.09628^{+0.029}_{-0.026} \\ 0.0115^{+0.0024}_{-0.0025} \end{array}$	3967	$\begin{array}{c} 0.02984^{+0.0081}_{-0.0089} \\ 0.01531^{+0.0078}_{-0.0065} \end{array}$	$0.02118^{+0.0073}_{-0.0059}$	4361
$t_{ m NPLM}$		$0.0115^{+0.0024}_{-0.0025}$	15812	$0.00228^{+0.00000}_{-0.00077}$	$0.00276^{+0.00059}_{-0.00065}$	9707
$t_{ m LLR}$	$0.00938_{-0.0031} \\ 0.00035_{-0.0002}^{+0.0002}$	$0.0115_{-0.0025}^{+0.0025}$ $0.0005_{-0.00021}^{+0.0002}$	4803	$0.00011^{+7e-05}_{-6e-05}$	$0.00016^{+7e-05}_{-7e-05}$	6129
$\Sigma_{i \neq j}$ -deformation				pow_+ -deformation		
Statistic	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)
$t_{ m SW}$	$\begin{array}{c} 0.03284^{+0.0083}_{-0.012} \\ 1.00292^{+0.00074}_{-0.002} \end{array}$	$0.0452_{-0.0081}^{+0.0072} \\ 1.00384_{-0.0011}^{+0.00031}$	3383	$\begin{array}{c} 0.00885^{+0.0026}_{-0.0032} \\ 0.00063^{+0.00022}_{-0.00027} \end{array}$	$0.01229^{+0.0023}_{-0.0026} \\ 0.00092^{+0.0002}_{-0.00023}$	3289
$t_{\overline{ ext{KS}}}$	$1.00292^{+0.00074}_{-0.002}$	$1.00384_{-0.0011}^{+0.00031}$	3763	$0.00063^{+0.00022}_{-0.00027}$	$0.00092^{+0.0002}_{-0.00023}$	3366
$t_{ m SKS}$	$0.03491_{-0.013}^{+0.011} \\ 0.0086_{-0.0024}^{+0.002}$	$0.04771^{+0.0011}_{-0.01}$ $0.01178^{+0.0016}_{-0.0018}$	3492	$\begin{array}{c} -0.0027 \\ 0.00669^{+0.0014}_{-0.0019} \\ 0.01094^{+0.0026}_{-0.0032} \end{array}$	$0.00899^{+0.001}_{-0.0013}$	$\bf 3252$
$t_{ m FGD}$	$0.0086^{+0.002}_{-0.0024}$	$0.01178^{+0.0016}_{-0.0018}$	4984	$0.01094^{+0.0026}_{-0.0032}$	$0.01482^{+0.0021}_{-0.0023}$	3782
$t_{ m MMD}$	$ 0.02632^{+0.013}_{-0.012} $	$0.03677^{+0.012}_{-0.01}$	4795	$\begin{array}{c} 0.01094_{-0.0032}^{+0.0022} \\ 0.00543_{-0.0022}^{+0.0025} \end{array}$	$\begin{array}{c} -0.00023 \\ 0.00899^{+0.001}_{-0.0013} \\ 0.01482^{+0.0021}_{-0.0023} \\ 0.00756^{+0.0022}_{-0.0019} \end{array}$	4416
$t_{ m NPLM}$	$0.0021^{+0.00062}_{-0.0008}$	$0.00261^{+0.00059}_{-0.00062}$	10837	$0.00085^{+0.00026}_{-0.0003}$	$0.00103^{+0.00024}_{-0.00025}$	10329
$t_{ m LLR}$	-	-	-	$2e - 05^{+2e - 05}_{-1e - 05}$	$3e - 05^{+2e - 05}_{-1e - 05}$	5340
powdeformation				$\mathcal{N} ext{-deformation}$		
Statistic	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)
$t_{ m SW}$	$\begin{array}{c} 0.00925^{+5}_{-0.0034} \\ \textbf{0.00063}^{+0.00022}_{-0.0027} \\ 0.0069^{+0.0014}_{-0.002} \end{array}$	$0.01271^{+5}_{-0.0027}$	$\boldsymbol{2942}$	$\begin{array}{c} 0.23992^{+0.03}_{-0.05} \\ 0.01024^{+0.003}_{-0.0035} \end{array}$	$0.28403^{+0.022}_{-0.031}$	2619
$t_{\overline{ ext{KS}}}$	$0.00063^{+0.00022}_{-0.00027}$	$0.00092^{+0.00019}_{-0.00023}$	3365	$0.01024^{+0.003}_{-0.0035}$	$0.01397^{+0.003}_{-0.0031}$	3009
$t_{ m SKS}$	$0.0069^{+0.0014}_{-0.002}$	$0.00092^{+0.00019}_{-0.00023}$ $0.00915^{+0.0011}_{-0.0013}$	3261	$\mid 0.19595^{+0.03}_{-0.043} \mid$	$0.2337^{+0.024}_{-0.03}$	2760
$t_{ m FGD}$	$0.01118^{+0.0027}_{-0.0032}$	$0.01522^{+0.0022}_{-0.0024}$	3767	$0.22616^{+0.025}_{-0.035}$	$0.26573^{+0.017}_{-0.02}$	3056
$t_{ m MMD}$	$0.0054^{+0.0026}_{-0.0024}$	$0.00762^{+0.0024}_{-0.0021}$	4486	$0.5492^{+0.07}_{-0.098}$	$0.65017^{+0.049}_{-0.055}$	3135
$t_{ m NPLM}$	$0.00087^{+0.00022}_{-0.00025}$	$0.00105^{+0.0002}_{-0.00022}$	6253	$0.10646^{+0.017}_{-0.023}$	$0.11946^{+0.012}_{-0.017}$	3485
$t_{ m LLR}$	$3e - 05^{+1}_{-2e-05}^{+000}$	$4e - 05^{+1}_{-2e-05}$	5271	-	-	
$\mathcal{U} ext{-} ext{deformation}$			Timing			
Statistic	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	t^{null} (s)		
$t_{ m SW}$	$\begin{array}{c} 0.414^{+0.054}_{-0.084} \\ \textbf{0.01605}^{+0.0043}_{-0.0049} \\ 0.33963^{+0.052}_{-0.08} \\ 0.39292^{+0.043}_{-0.06} \end{array}$	$0.49011^{+0.037}_{-0.054}$ $0.02144^{+0.0043}_{-0.0046}$ $0.4023^{+0.04}_{-0.052}$ $0.46165^{+0.029}_{-0.038}$	2594	302		
$t_{\overline{ ext{KS}}}$	$0.01605^{+0.0043}_{-0.0049}$	$0.02144_{-0.0046}^{+0.0043}$	2920	120		
$t_{ m SKS}$	$0.33963^{+0.052}_{-0.08}$	$0.4023^{+0.04}_{-0.052}$	2714	397		
$t_{ m FGD}$	$0.39292^{+0.043}_{-0.06}$	$0.46165^{+0.029}_{-0.038}$	2912	1022		
$t_{ m MMD}$	$0.95249_{-0.18}^{+0.13}$	$1.13574_{-0.099}^{+0.099}$	3196	2276		
$t_{ m NPLM}$	$0.18417^{+0.03}_{-0.04}$	$0.2078^{+0.022}_{-0.032}$	3338	14654		
$t_{ m LLR}$	_	-	_	_		