${\rm MoG~model~with~d=20,~q=5,~and~n=m=10^5}$						
	$\mu$ -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{vmatrix} 0.03313^{+0.013}_{-0.014} \\ 0.00336^{+0.00093}_{-0.0012} \\ 0.02413^{+0.0082}_{-0.0095} \\ 0.03818^{+0.018}_{-0.016} \\ 0.03221^{+0.012}_{-0.011} \\ 0.0012 \end{vmatrix} $	$0.04474^{+0.012}_{-0.013}$	2949	$0.01198^{+0.0033}_{-0.0043}$	$0.01611^{+0.0031}_{-0.0034}$	3129
$t_{\overline{\mathrm{KS}}}$	$0.00336_{-0.0012}^{+0.00093}$	$0.00457^{+0.0008}_{-0.0002}$	3047	$ \begin{array}{c c} 0.01198^{+0.0033}_{-0.0043} \\ 0.00123^{+0.00035}_{-0.00047} \end{array} $	$0.00169^{+0.00029}$	3163
$t_{ m SKS}$	$0.02413^{+0.0082}_{-0.0095}$	$\begin{array}{c} -0.00092 \\ 0.03295^{+0.0076}_{-0.0081} \\ 0.05241^{+0.017}_{-0.014} \end{array}$	3089	$1.00094^{+0.002}$	$\begin{array}{c} 0.01256^{+0.0017}_{-0.002} \\ 0.01256^{+0.0017}_{-0.002} \\ 0.01827^{+0.0034}_{-0.0035} \\ 0.00928^{+0.0031}_{-0.0025} \\ 0.00125^{+0.00026}_{-0.00027} \end{array}$	3211
$t_{ m FGD}$	$0.03818^{+0.018}_{-0.016}$	$0.05241_{-0.014}^{+0.017}$	5730	$0.01349_{-0.0047}^{+0.004}$	$0.01827^{+0.0034}_{-0.0035}$	5971
$t_{ m MMD}$	$0.03221_{-0.011}^{+0.012}$	$0.04404^{+0.011}_{-0.000}$	11685	$\begin{array}{c} 0.0031_{-0.0029} \\ 0.01349_{-0.0047}^{+0.004} \\ 0.00667_{-0.0027}^{+0.0033} \\ 0.00103_{-0.0023}^{+0.00029} \end{array}$	$0.00928^{+0.0031}_{-0.0025}$	12637
$t_{ m NPLM}$		$0.00004 \pm 0.001$	25454	$0.00103^{+0.00029}_{-0.00033}$	$0.00125^{+0.00026}_{-0.00027}$	42043
$t_{ m LLR}$	$\begin{array}{c c} 0.0043_{-0.0014} \\ 0.00014_{-9e-05}^{+0.0001} \end{array}$	$0.00524_{-0.0012} \\ 0.00021_{-9e-05}^{+0.0001}$	9362	$5e - 05^{+4e - 05}_{-3e - 05}$	$7e - 05^{+4e - 05}_{-3e - 05}$	7986
$\Sigma_{i\neq j}$ -deformation				$pow_+$ -deformation		
Statistic	$ \epsilon_{95\%{ m CL}} $	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$\epsilon_{95\%\mathrm{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)
$t_{ m SW}$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$\begin{array}{c} 0.01998^{+0.0032}_{-0.0039} \\ 1.00183^{+0.00024}_{-0.00055} \\ 0.0135^{+0.0005}_{-0.0048} \end{array}$	3497	$\begin{array}{c} 0.00416^{+0.0012}_{-0.0015} \\ 0.00029^{+9e-05}_{-0.00012} \end{array}$	$0.00561^{+0.001}_{-0.0012}$	3284
$t_{\overline{ ext{KS}}}$	$1.00159_{-0.0012}^{+0.00012}$	$1.00183^{+0.00024}_{-0.00055}$	3998	$0.00029^{+9\mathrm{e}-05}_{-0.00012}$	$0.00041^{+9e-05}_{-0.0001}$	3555
$t_{ m SKS}$	$0.0157^{+0.0051}_{-0.0064}$	0.02125   0.0010	3704	$0.00306^{+0.00062}_{-0.00089}$	$0.00405^{+0.00049}_{-0.0006}$	3412
$t_{ m FGD}$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$0.0051^{+0.00081}_{-0.00081}$	8033	$ \begin{array}{c} 0.00306^{+0.00062}_{-0.00089} \\ 0.00494^{+0.0013}_{-0.0016} \end{array} $	$0.00405^{+0.00049}_{-0.0006} \\ 0.00667^{+0.0011}_{-0.0011}$	5958
$t_{ m MMD}$	$0.01272^{+0.005}_{-0.0044}$	$0.01711^{+0.0048}_{-0.004}$	13426	$0.00241^{+0.001}_{-0.00091}$	$0.00333^{+0.00094}_{-0.00082}$	13310
$t_{ m NPLM}$	$0.001^{+0.0002}_{-0.00037}$	$0.0012^{+0.0002}_{-0.0003}$	32501	$0.00039^{+0.0001}_{-0.00013}$	$0.00047^{+9e-05}$	40489
$t_{ m LLR}$	-	-		$1e - 05^{+1}_{-1}e^{-05}$	$2e - 05^{+0}_{-1e-05}$	8742
powdeformation				$\mathcal{N} ext{-deformation}$		
Statistic	$\epsilon_{95\%{ m CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$\epsilon_{95\%\mathrm{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)
$t_{ m SW}$	$ \begin{array}{c} 0.00419^{+0.0012}_{-0.0015} \\ 0.00029^{+0.0001}_{-0.00012} \\ 0.00301^{+0.00067}_{-0.00097} \end{array} $	$0.00567^{+0.0011}_{-0.0012}$	3291	$\begin{array}{c c} 0.16001^{+0.02}_{-0.031} \\ 0.00593^{+0.0015}_{-0.0018} \end{array}$	$0.18547^{+0.016}_{-0.019}$	2607
$t_{\overline{ ext{KS}}}$	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	$0.00041^{+0.0001}_{-0.0001}$	3549	$0.00593^{+0.0015}_{-0.0018}$	$0.00757^{+0.0014}_{-0.0015}$	3131
$t_{ m SKS}$	$0.00301^{+0.00067}_{-0.00097}$	$\begin{array}{c} \textbf{0.00301}_{-0.0012} \\ \textbf{0.00041}_{-0.0001}^{+0.0001} \\ 0.00398_{-0.00065}^{+0.00056} \end{array}$	3447	L 0 1010 (±0.019	$0.15417^{+0.015}_{-0.02}$	2786
$t_{ m FGD}$	$0.00488^{+0.0013}_{-0.0016}$	$0.00669^{+0.0011}_{-0.0011}$	5693	$0.15039_{-0.027}^{+0.017}$	$0.17553^{+0.012}_{-0.015}$	4625
$t_{ m MMD}$	$0.00257^{+0.001}_{-0.00001}$	$0.00349^{+0.00096}_{-0.00081}$	13333	$0.37231^{+0.04}_{-0.061}$	$0.43454^{+0.03}_{-0.033}$	9278
$t_{ m NPLM}$	$\pm 0.00000\pm 0.00011$	$0.00047^{+0.0001}_{-0.0001}$	26892	$0.07464^{+0.01}_{-0.014}$	$0.08382^{+0.0076}_{-0.011}$	23292
$t_{ m LLR}$	$1e - 05^{+1e - 05}_{-1e - 05}$	$2e - 05^{+0.0001}_{-1e-05}$	8857	-	-	_
$\mathcal{U} ext{-deformation}$			Timing			
Statistic	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$t^{\text{null}}$ (s)		
$t_{ m SW}$	$\begin{array}{c} 0.27854^{+0.033}_{-0.055} \\ 0.00979^{+0.0023}_{-0.0028} \\ 0.22648^{+0.032}_{-0.049} \\ \end{array}$	$\begin{array}{c} 0.32293^{+0.025}_{-0.035} \\ 0.01236^{+0.0019}_{-0.0023} \\ 0.26646^{+0.026}_{-0.034} \end{array}$	2497	384		
$t_{\overline{ ext{KS}}}$	$0.00979_{-0.0028}^{+0.0023}$	$0.01236_{-0.0023}^{+0.0019}$	2980	321		
$t_{ m SKS}$	$0.22648^{+0.032}_{-0.049}$	$0.26646^{+0.026}_{-0.034}$	2674	721		
$t_{ m FGD}$	$  0.26002^{+0.00}_{-0.046}$	$0.30348^{+0.021}_{-0.026}$	4428	5139		
$t_{ m MMD}$	$0.64451^{+0.068}_{-0.094}$	$0.75224^{+0.053}_{-0.053}$	9043	16625		
$t_{ m NPLM}$	$0.1286^{+0.019}_{-0.025}$	$0.14441^{+0.013}_{-0.018}$	22599	35063		
$t_{ m LLR}$	-	-	-	-		