CMoG model with $d = 5$ , $q = 3$ , and $n = m = 10^5$						
	$\mu$ -deformation			$\Sigma_{ii}$ -deformation		
Statistic	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$\epsilon_{95\%\mathrm{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)
$t_{ m SW}$	$\begin{array}{c} 0.02927^{+0.01}_{-0.0098} \\ \textbf{0.00146}^{+0.00055}_{-0.00057} \\ 0.01762^{+0.0061}_{-0.0062} \\ 0.03532^{+0.019}_{-0.014} \\ 0.01904^{+0.011}_{-0.0077} \\ 0.00024^{+0.00014}_{-0.00013} \end{array}$	$0.04035^{+0.01}_{-0.0095}$	1681	$0.00935^{+0.0028}_{-0.0032}$	$0.01322^{+0.0026}_{-0.0027}$	1787
$t_{\overline{ ext{KS}}}$	$0.00146^{+0.00055}_{-0.00057}$	$0.00202^{+0.00054}_{-0.00055}$	1351	$\begin{array}{c} \textbf{0.00084} \begin{array}{c} -0.0032\\ \textbf{0.00084} \begin{array}{c} +0.00023\\ -0.00026\\ \hline 0.00504 \begin{array}{c} +0.0012\\ -0.0016\\ \hline 0.01036 \begin{array}{c} +0.0034\\ -0.0037\\ \hline 0.00456 \begin{array}{c} +0.0019\\ -0.0015\\ \hline \end{array} \\ \end{array}$	$\begin{array}{c} -0.0023 \\ 0.0011^{+0.00023}_{-0.00023} \\ 0.00694^{+0.0011}_{-0.0012} \\ 0.01442^{+0.0029}_{-0.003} \end{array}$	<b>1394</b>
$t_{ m SKS}$	$0.01762^{+0.0061}_{-0.0062}$	$0.0237^{+0.0059}_{-0.0059}$	1523	$0.00504^{+0.0012}_{-0.0016}$	$0.00694^{+0.0011}_{-0.0012}$	1591
$t_{ m FGD}$	$0.03532^{+0.019}_{-0.014}$	$0.04753^{+0.017}_{-0.013}$	2364	$0.01036^{+0.0034}_{-0.0037}$	$0.01442^{+0.0029}_{-0.003}$	2518
$t_{ m MMD}$	$0.01904^{+0.011}_{-0.0077}$	$0.02548^{+0.01}_{-0.0076}$	10489	$0.00456^{+0.0019}_{-0.0015}$	$\begin{array}{c} 0.01442_{-0.003}^{+0.003} \\ 0.00605_{-0.0014}^{+0.0017} \end{array}$	11046
$t_{ m LLR}$	$0.00024^{+0.00014}_{-0.00013}$	$\begin{array}{c} \textbf{0.04039} {=} 0.0095 \\ \textbf{0.00202} {=} 0.00054 \\ \textbf{0.00205} \\ \textbf{0.0237} {=} 0.0059 \\ \textbf{0.04753} {=} 0.013 \\ \textbf{0.02548} {=} 0.0076 \\ \textbf{0.00033} {=} 0.00014 \\ \textbf{0.00033} {=} 0.00013 \\ \end{array}$	3539	$8e - 05^{+6e - 05}_{-5e - 05}$	$0.00011^{+6e-05}_{-5e-05}$	3795
$\Sigma_{i \neq j}$ -deformation			$pow_+$ -deformation			
Statistic	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}^{\mathrm{pow}_{+}}$	t (s)
$t_{ m SW}$	$0.0034^{+0.00092}_{-0.0011}$	$\begin{array}{c} 0.00489^{+0.00081}_{-0.00093} \\ 0.00039^{+9e-05}_{-9e-05} \\ 0.00269^{+0.00049}_{-0.00055} \\ 0.00507^{+0.00078}_{-0.00085} \\ \end{array}$	1758	$0.00584^{+0.0017}_{-0.002}$	$0.00823^{+0.0016}_{-0.0016}$	1647
$t_{\overline{ ext{KS}}}$	$\begin{array}{c} -0.0011 \\ \textbf{0.00029} \\ -9e \\ -0.05 \\ 0.00196 \\ -0.00066 \\ 0.00362 \\ -0.0012 \\ -0.0012 \\ \end{array}$	$0.00039^{+9e-05}_{-9e-05}$	1060	$0.00103^{+0.00032}_{-0.00034}$	$0.00138^{+0.00031}_{-0.00031}$	1377
$t_{ m SKS}$	$0.00196^{+0.00053}_{-0.00066}$	$0.00269^{+0.00049}_{-0.00055}$	1592	$0.00329^{+0.00072}_{-0.00091}$	$0.00446^{+0.00063}_{-0.0007}$ $0.00883^{+0.0018}_{-0.0019}$	1992
$t_{ m FGD}$	$0.00362^{+0.00097}_{-0.0012}$	$0.00507^{+0.00078}_{-0.00085}$	2279	$0.00639^{+0.0021}_{-0.0024}$	$0.00883^{+0.0018}_{-0.0019}$	2503
$t_{ m MMD}$	$\begin{array}{c} 0.00303^{+0.0014}_{-0.0011} \\ 2e - 05^{+1e - 05}_{-1e - 05} \end{array}$	$0.00406^{+0.0013}_{-0.0011}$	11061	$0.00264_{-0.00089}^{+0.0011} \\ 0.00012_{-9e-05}^{+8e-05}$	$0.00349_{-0.00085}^{+0.001} \\ 0.00017_{-9e-05}^{+8e-05}$	14540
$t_{ m LLR}$	$2e - 05^{+1e-05}_{-1e-05}$	$0.00406_{-0.0011}^{+0.0013}$ $3e - 05_{-1e-05}^{+1e-05}$	4966	$0.00012^{+8e-05}_{-9e-05}$	$0.00017^{+8e-05}_{-9e-05}$	4452
$pow\deformation$				$\mathcal{N} ext{-} ext{deformation}$		
Statistic	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}^{\mathrm{pow}_{-}}$	t (s)	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}^{\mathcal{N}}$	t (s)
$t_{ m SW}$	$0.00606^{+0.0017}_{-0.0021}$	$0.00856^{+0.0015}_{-0.0017}$	1649	$0.13773^{+0.017}_{-0.026}$	$0.16305^{+0.012}_{-0.016}$	1344
$t_{\overline{ ext{KS}}}$	$0.00098^{+0.00037}_{-0.00037}$	$0.00133^{+0.00035}_{-0.00036}$	1366	$0.00454^{+0.00072}_{-0.00082}$	$0.00539_{-0.00069}^{+0.00062}$	$\boldsymbol{1281}$
$t_{ m SKS}$	$0.00333^{+0.00084}_{-0.001}$	$0.00446^{+0.00075}_{-0.00082}$	2034	$0.09534^{+0.015}_{-0.02}$	$0.11293^{+0.011}_{-0.014}$	1707
$t_{ m FGD}$	$0.00659_{-0.0024}^{+0.002}$	$0.00905^{+0.0017}_{-0.0017}$	2508	$0.16354^{+0.02}_{-0.031}$	$0.19223^{+0.014}_{-0.018}$	2022
$t_{ m MMD}$	$0.00267^{+0.0013}_{-0.0011}$	$0.00357^{+0.0012}_{-0.001}$	11378	$0.21459_{-0.032}^{+0.027}$	$0.24752_{-0.025}^{+0.021}$	8643
$t_{ m LLR}$	$\begin{array}{c} 0.00659_{-0.001}^{+0.002} \\ 0.00659_{-0.0024}^{+0.0013} \\ 0.00267_{-0.0011}^{+0.0013} \\ 0.00013_{-9e-05}^{+9e-05} \end{array}$	$\begin{array}{c} 0.00357^{+0.0012}_{-0.001} \\ 0.00018^{+9e-05}_{-8e-05} \end{array}$	4419	-	-	
$\mathcal{U} ext{-} ext{deformation}$			Timing			
Statistic	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}^{\mathcal{U}}$	t (s)	$t^{\text{null}}$ (s)		
$t_{ m SW}$	$0.23671^{+0.03}_{-0.043}$	$\begin{array}{c} 0.28278^{+0.023}_{-0.028} \\ \textbf{0.00915}^{+0.001}_{-0.0012} \\ 0.19413^{+0.019}_{-0.025} \\ 0.33186^{+0.024}_{-0.03} \\ 0.42782^{+0.036}_{-0.043} \end{array}$	1318	363		
$t_{\overline{ ext{KS}}}$	$0.00774^{+0.0011}$	$0.00915^{+0.001}_{-0.0012}$	1236	77		
$t_{ m SKS}$	$0.16389^{+0.025}_{-0.034}$	$0.19413^{+0.019}_{-0.025}$	1681	672		
$t_{ m FGD}$	$\begin{array}{c} -0.014 \\ 0.16389^{+0.025}_{-0.034} \\ 0.28233^{+0.035}_{-0.054} \end{array}$	$0.33186^{+0.024}_{-0.03}$	1941	2259		
$t_{ m MMD}$	$0.3715^{+0.045}_{-0.055}$	$0.42782^{+0.036}_{-0.043}$	7912	16290		
$t_{ m LLR}$	-	-	-	-		