	${f MoG}$	$\mathbf{model} \ \mathbf{with} \ \mathbf{d} = 5$	$5,\ \mathbf{q}=3$, and $n = m = 5$.	10^4	
	μ -deformation			Σ_{ii} -deformation		
Statistic	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)
$t_{ m SW}$	$0.03867^{+0.015}_{-0.015}$	$0.05335^{+0.015}_{-0.015}$	1312	$0.01366^{+0.0039}_{-0.0044}$	$0.01898^{+0.0035}_{-0.0039}$	1415
$t_{\overline{ ext{KS}}}$	$0.002^{+0.00077}_{-0.00083}$	$0.00277^{+0.00075}_{-0.00076}$	1308	$0.00121^{+0.00032}_{-0.00039}$	$0.00157^{+0.00031}_{-0.00033}$	1315
$t_{ m SKS}$	$0.02325^{+0.0079}_{-0.0085}$	$0.03165^{+0.0076}_{-0.0076}$	1439	$0.00731^{+0.0018}_{-0.0022}$	$0.00993^{+0.0015}_{-0.0017}$	1539
$t_{ m FGD}$	$0.04381^{+0.026}_{-0.019}$	$0.06082^{+0.024}_{-0.018}$	1536	$0.0147^{+0.004}_{-0.0043}$	$0.02005^{+0.0035}_{-0.0035}$	1610
$t_{ m MMD}$	$0.02669^{+0.014}_{-0.011}$	$0.03545^{+0.014}_{-0.011}$	8990	$0.00629^{+0.0031}_{-0.0025}$	$0.00833^{+0.0029}_{-0.0023}$	9570
$t_{ m LLR}$	$0.00036^{+0.00019}_{-0.0002}$	$0.0005^{+0.0002}_{-0.0002}$	2776	$0.00011^{+7e-05}_{-8e-05}$	$0.00016^{+8e-05}_{-8e-05}$	3063
$\Sigma_{i \neq j}$ -deformation				pow_+ -deformation		
Statistic	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)
$t_{ m SW}$	$\begin{array}{c} 0.01245^{+0.0028}_{-0.0036} \\ 1.00116^{+0.00055}_{-6e-05} \end{array}$	$\begin{array}{c} 0.01724^{+0.0023}_{-0.0027} \\ 1.00165^{+0.00018}_{-0.00025} \end{array}$	1868	$0.00841^{+0.0024}_{-0.0028}$	$0.01169^{+0.0022}_{-0.0023}$	1462
$t_{\overline{ ext{KS}}}$	$1.00116^{+0.00055}_{-6e-05}$	$1.00165^{+0.00018}_{-0.00025}$	$\boldsymbol{1731}$	$0.00142^{+0.00043}_{-0.00049}$	$0.00189^{+0.00041}_{-0.00043}$	1326
$t_{ m SKS}$		$0.01545^{+0.0031}_{-0.0021}$	1987	$0.00467^{+0.001}_{-0.0012}$	$0.0063^{+0.00088}_{-0.001}$	1552
$t_{ m FGD}$	$0.0053^{+0.0011}_{-0.0013}$	$0.00729^{+0.001}_{-0.0011}$	2470	$0.0089^{+0.0026}_{-0.0027}$	$0.01216^{+0.0023}_{-0.0023}$	1790
$t_{ m MMD}$	$0.01025^{+0.0045}_{-0.004}$	$0.01344^{+0.0042}_{-0.0035}$	10015	$0.00361_{-0.0014}^{+0.0019}$	$0.00478^{+0.0018}_{-0.0014}$	9705
$t_{ m LLR}$	$\begin{array}{c} 0.01162^{+0.0032}_{-0.004} \\ \textbf{0.0053}^{+0.0011}_{-0.0013} \\ 0.01025^{+0.0045}_{-0.004} \\ 0.02474^{+0.0098}_{-0.013} \end{array}$	$0.01344_{-0.0035}^{+0.0041} \\ 0.0313_{-0.0093}^{+0.0082}$	3914	$\begin{array}{c} -0.00361^{+0.0019}_{-0.0014} \\ 0.00017^{+0.0001}_{-9e-05} \end{array}$	$0.00025^{+0.0001}_{-0.0001}$	2854
$pow\deformation$				$\mathcal{N} ext{-deformation}$		
Statistic	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)
$t_{ m SW}$	$0.00858^{+0.0024}_{-0.0029}$	$0.01188^{+0.0023}_{-0.0024}$	1466	$0.16467^{+0.02}_{-0.029}$	$0.19494^{+0.015}_{-0.019}$	1187
$t_{\overline{ ext{KS}}}$	$0.00142^{+0.00045}_{-0.0005}$	$0.00188^{+0.00042}_{-0.00044}$	1320	$0.00546^{+0.00092}_{-0.0012}$	$0.00651^{+0.00087}_{-0.0009}$	1226
$t_{ m SKS}$	$0.0048^{+0.0011}_{-0.0014}$	$0.00642^{+0.001}_{-0.0011}$	1562	$0.11614^{+0.016}_{-0.024}$	$0.1371^{+0.013}_{-0.017}$	1321
$t_{ m FGD}$	$0.0091^{+0.0025}_{-0.0026}$	$0.01247^{+0.0022}_{-0.0022}$	1789	$0.1925^{+0.019}_{-0.027}$	$0.22617^{+0.014}_{-0.016}$	1452
$t_{ m MMD}$	$0.00374_{-0.0016}^{+0.0019}$	$0.00492^{+0.0019}_{-0.0015}$	9724	$0.25293^{+0.036}_{-0.048}$	$0.28868^{+0.032}_{-0.032}$	8612
$t_{ m LLR}$	$\begin{array}{c} -0.00374^{+0.0019}_{-0.0016} \\ 0.00018^{+0.0001}_{-0.0001} \end{array}$	$0.00025^{+0.0001}_{-0.0001}$	2850	-	-	-
$\mathcal{U} ext{-} ext{deformation}$				Timing		
Statistic	$\epsilon_{95\% ext{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	t^{null} (s)		
$t_{ m SW}$	$0.28418^{+0.035}_{-0.05}$	$0.33591^{+0.027}_{-0.033}$	1344	319		
$t_{\overline{ ext{KS}}}$	$0.00924_{-0.0019}^{+0.0015}$	$0.01096^{+0.0013}_{-0.0015}$	1208	49		
$t_{ m SKS}$	$0.19824^{+0.029}_{-0.04}$	A AAA+U.U23	1271	484		
$t_{ m FGD}$	$\begin{array}{c} \textbf{0.00924} \begin{array}{c} \textbf{-0.05} \\ \textbf{0.00924} \begin{array}{c} \textbf{-0.0015} \\ \textbf{-0.0019} \\ \textbf{0.19824} \begin{array}{c} \textbf{-0.029} \\ \textbf{-0.04} \\ \textbf{0.33191} \begin{array}{c} \textbf{-0.034} \\ \textbf{-0.044} \\ \textbf{0.0652} \end{array} \end{array}$	$0.23402_{-0.029} \ 0.39255_{-0.028}^{+0.022}$	1433	1150		
$t_{ m MMD}$	$0.43535^{+0.067}_{-0.079}$	$0.5005^{+0.054}_{-0.057}$	7010	13839		
$t_{ m LLR}$	-	-	-	-		