

**MoG model with  $d = 100$ ,  $q = 10$ , and  $n = m = 10^5$**

$\mu$ -deformation				$\Sigma_{ii}$ -deformation		
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)
$t_{SW}$	$0.02814^{+0.0099}_{-0.012}$	$0.03797^{+0.009}_{-0.01}$	<b>950</b>	$0.00918^{+0.0025}_{-0.0035}$	$0.01247^{+0.0022}_{-0.0026}$	<b>1022</b>
$t_{\overline{KS}}$	<b><math>0.00222^{+0.00077}_{-0.00084}</math></b>	<b><math>0.00307^{+0.00073}_{-0.00077}</math></b>	1541	<b><math>0.00051^{+0.0002}_{-0.0002}</math></b>	<b><math>0.00073^{+0.0002}_{-0.0002}</math></b>	1689
$t_{SKS}$	$0.02341^{+0.0067}_{-0.0087}$	$0.03148^{+0.0061}_{-0.0069}$	1475	$0.00812^{+0.0016}_{-0.0024}$	$0.01068^{+0.0013}_{-0.0016}$	1557
$t_{FGD}$	$0.03878^{+0.013}_{-0.014}$	$0.05066^{+0.011}_{-0.012}$	20712	$0.01263^{+0.0031}_{-0.0038}$	$0.01631^{+0.0024}_{-0.0029}$	18446
$t_{MMD}$	$0.03601^{+0.0081}_{-0.01}$	$0.04577^{+0.0065}_{-0.0076}$	10677	$0.00722^{+0.0022}_{-0.0024}$	$0.00915^{+0.0019}_{-0.002}$	11691
$t_{LLR}$	$2e-05^{+2e-05}_{-1e-05}$	$4e-05^{+1e-05}_{-2e-05}$	24750	$0.0^{+1e-05}_{-0}$	$1e-05^{+0}_{-1e-05}$	34527
$\Sigma_{i \neq j}$ -deformation				pow $_+$ -deformation		
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)
$t_{SW}$	$0.01697^{+0.0046}_{-0.0064}$	$0.02315^{+0.0036}_{-0.0045}$	<b>3531</b>	$0.00368^{+0.001}_{-0.0014}$	$0.00498^{+0.00086}_{-0.001}$	<b>1026</b>
$t_{\overline{KS}}$	$1.00061^{+0.00012}_{-0.00012}$	$1.00073^{+0.00025}_{-0.00012}$	9908	<b><math>0.00018^{+8e-05}_{-7e-05}</math></b>	<b><math>0.00027^{+7e-05}_{-8e-05}</math></b>	1743
$t_{SKS}$	$0.01855^{+0.0049}_{-0.0066}$	$0.02508^{+0.0043}_{-0.0052}$	4171	$0.00331^{+0.0006}_{-0.00092}$	$0.0043^{+0.00047}_{-0.00058}$	1594
$t_{FGD}$	<b><math>0.00299^{+0.00073}_{-0.00088}</math></b>	<b><math>0.00389^{+0.0006}_{-0.00068}</math></b>	25716	$0.00505^{+0.0012}_{-0.0016}$	$0.00652^{+0.00098}_{-0.0012}$	19149
$t_{MMD}$	$0.01259^{+0.0035}_{-0.0039}$	$0.01586^{+0.0032}_{-0.0032}$	14405	$0.00263^{+0.00077}_{-0.00088}$	$0.0033^{+0.0007}_{-0.00071}$	12093
$t_{LLR}$	-	-	-	$0.0^{+0}_{-0}$	$0.0^{+0}_{-0}$	30414
pow $_-$ -deformation				$\mathcal{N}$ -deformation		
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)
$t_{SW}$	$0.00374^{+5}_{-0.0014}$	$0.00505^{+5}_{-0.0011}$	<b>935</b>	$0.17253^{+0.022}_{-0.036}$	$0.20139^{+0.016}_{-0.021}$	<b>838</b>
$t_{\overline{KS}}$	<b><math>0.00018^{+8e-05}_{-7e-05}</math></b>	<b><math>0.00027^{+8e-05}_{-8e-05}</math></b>	1753	<b><math>0.00606^{+0.0029}_{-0.0031}</math></b>	<b><math>0.00921^{+0.0027}_{-0.003}</math></b>	1589
$t_{SKS}$	$0.00331^{+0.00064}_{-0.00098}$	$0.0043^{+0.00051}_{-0.00063}$	1605	$0.14876^{+0.02}_{-0.031}$	$0.17443^{+0.016}_{-0.021}$	1363
$t_{FGD}$	$0.00504^{+0.0012}_{-0.0016}$	$0.00655^{+0.001}_{-0.0012}$	19105	$0.15458^{+0.018}_{-0.027}$	$0.17576^{+0.014}_{-0.016}$	15222
$t_{MMD}$	$0.00257^{+0.00071}_{-0.0008}$	$0.00329^{+0.00064}_{-0.00066}$	12099	$0.67808^{+0.07}_{-0.11}$	$0.7615^{+0.053}_{-0.069}$	8142
$t_{LLR}$	$0.0^{+0}_{-0}$	$0.0^{+0}_{-0}$	39144	-	-	-
$\mathcal{U}$ -deformation				Timing		
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	$t^{\text{null}}$ (s)		
$t_{FGD}$	$0.26668^{+0.031}_{-0.044}$	$0.3051^{+0.022}_{-0.03}$	12103	39629		
$t_{LLR}$	-	-	-	-		
$t_{MMD}$	$1.17598^{+0.12}_{-0.19}$	$1.32064^{+0.093}_{-0.12}$	9105	18930		
$t_{SKS}$	$0.25702^{+0.037}_{-0.054}$	$0.30137^{+0.028}_{-0.036}$	1316	1753		
$t_{SW}$	$0.2996^{+0.036}_{-0.063}$	$0.34972^{+0.028}_{-0.038}$	<b>665</b>	<b>476</b>		
$t_{\overline{KS}}$	<b><math>0.00925^{+0.0047}_{-0.005}</math></b>	<b><math>0.01423^{+0.0043}_{-0.0048}</math></b>	1590	1594		