

**CMoG model with  $d = 100$ ,  $q = 10$ , and  $n = m = 10^4$**

$\mu$ -deformation				$\Sigma_{ii}$ -deformation		
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)
$t_{SW}$	$0.09504^{+0.024}_{-0.028}$	$0.12338^{+0.023}_{-0.024}$	<b>648</b>	$0.03044^{+0.0066}_{-0.0084}$	$0.03963^{+0.0061}_{-0.0067}$	<b>711</b>
$t_{KS}$	<b><math>0.00787^{+0.0031}_{-0.0029}</math></b>	<b><math>0.01207^{+0.0034}_{-0.0032}</math></b>	1244	<b><math>0.00217^{+0.0011}_{-0.00099}</math></b>	<b><math>0.00375^{+0.0011}_{-0.0012}</math></b>	1389
$t_{SKS}$	$0.07672^{+0.018}_{-0.021}$	$0.10153^{+0.016}_{-0.018}$	688	$0.02687^{+0.0041}_{-0.0056}$	$0.0345^{+0.0036}_{-0.004}$	736
$t_{FGD}$	$0.13134^{+0.032}_{-0.034}$	$0.16599^{+0.028}_{-0.028}$	2715	$0.04142^{+0.0081}_{-0.01}$	$0.05232^{+0.0067}_{-0.0074}$	2955
$t_{MMD}$	$0.10962^{+0.028}_{-0.035}$	$0.14183^{+0.023}_{-0.026}$	1350	$0.02117^{+0.007}_{-0.0078}$	$0.02757^{+0.0062}_{-0.0064}$	1536
$t_{LLR}$	$9e - 05^{+6e-05}_{-6e-05}$	$0.00012^{+6e-05}_{-6e-05}$	3225	$2e - 05^{+1e-05}_{-1e-05}$	$2e - 05^{+2e-05}_{-1e-05}$	3499
$\Sigma_{i \neq j}$ -deformation				pow <sub>+</sub> -deformation		
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}^{pow+}$	$t$ (s)
$t_{SW}$	$0.00635^{+0.0011}_{-0.0015}$	$0.00825^{+0.00096}_{-0.0011}$	<b>771</b>	$0.01206^{+0.0028}_{-0.0033}$	$0.01579^{+0.0023}_{-0.0028}$	<b>730</b>
$t_{KS}$	<b><math>0.00078^{+0.00027}_{-0.00031}</math></b>	<b><math>0.00117^{+0.00028}_{-0.00029}</math></b>	1428	<b><math>0.00084^{+0.00043}_{-0.00041}</math></b>	<b><math>0.00144^{+0.00041}_{-0.00045}</math></b>	1467
$t_{SKS}$	$0.00444^{+0.0011}_{-0.0013}$	$0.00592^{+0.00098}_{-0.001}$	821	$0.01088^{+0.0016}_{-0.0021}$	$0.0139^{+0.0013}_{-0.0015}$	773
$t_{FGD}$	$0.00505^{+0.00098}_{-0.0012}$	$0.00646^{+0.00087}_{-0.00098}$	3326	$0.01638^{+0.0032}_{-0.0039}$	$0.02069^{+0.0027}_{-0.003}$	2488
$t_{MMD}$	$0.00903^{+0.0022}_{-0.0026}$	$0.01168^{+0.0019}_{-0.002}$	1525	$0.00761^{+0.0026}_{-0.0028}$	$0.00988^{+0.0023}_{-0.0023}$	1238
$t_{LLR}$	$0.0^{+0}_{-0}$	$0.0^{+0}_{-0}$	4354	$1e - 05^{+0}_{-1e-05}$	$1e - 05^{+0}_{-1e-05}$	3842
pow <sub>-</sub> -deformation				$\mathcal{N}$ -deformation		
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}^{pow-}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}^{\mathcal{N}}$	$t$ (s)
$t_{SW}$	$0.01253^{+5}_{-0.0032}$	$0.0164^{+5}_{-0.0026}$	<b>653</b>	$0.32495^{+0.033}_{-0.046}$	$0.37663^{+0.025}_{-0.032}$	<b>617</b>
$t_{KS}$	<b><math>0.00086^{+0.00044}_{-0.00043}</math></b>	<b><math>0.00147^{+0.00042}_{-0.00047}</math></b>	1542	<b><math>0.02563^{+0.0081}_{-0.0097}</math></b>	<b><math>0.03668^{+0.0078}_{-0.008}</math></b>	652
$t_{SKS}$	$0.01077^{+0.0016}_{-0.0021}$	$0.01376^{+0.0013}_{-0.0015}$	786	$0.27956^{+0.034}_{-0.043}$	$0.32856^{+0.027}_{-0.033}$	657
$t_{FGD}$	$0.01685^{+0.0032}_{-0.0038}$	$0.02139^{+0.0026}_{-0.0032}$	3221	$0.28803^{+0.027}_{-0.038}$	$0.32529^{+0.021}_{-0.025}$	2636
$t_{MMD}$	$0.00834^{+0.0023}_{-0.0025}$	$0.01083^{+0.002}_{-0.0021}$	1257	$1.17867^{+0.13}_{-0.19}$	$1.33971^{+0.09}_{-0.12}$	731
$t_{LLR}$	$1e - 05^{+0}_{-1e-05}$	$1e - 05^{+0}_{-1e-05}$	4903	-	-	-
$\mathcal{U}$ -deformation				Timing		
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}^{\mathcal{U}}$	$t$ (s)	$t^{\text{null}}$ (s)		
$t_{SW}$	$0.56347^{+0.054}_{-0.083}$	$0.65308^{+0.044}_{-0.056}$	<b>588</b>	<b>285</b>		
$t_{KS}$	<b><math>0.03885^{+0.012}_{-0.015}</math></b>	<b><math>0.0555^{+0.011}_{-0.012}</math></b>	644	511		
$t_{SKS}$	$0.48383^{+0.061}_{-0.074}$	$0.56865^{+0.048}_{-0.057}$	631	456		
$t_{FGD}$	$0.49924^{+0.046}_{-0.066}$	$0.56381^{+0.036}_{-0.047}$	2515	3225		
$t_{MMD}$	$2.02548^{+0.23}_{-0.32}$	$2.31727^{+0.16}_{-0.2}$	1113	665		
$t_{LLR}$	-	-	-	-		