

**CG model with  $d = 100$  and  $n = m = 2 \cdot 10^4$**

$\mu$ -deformation				$\Sigma_{ii}$ -deformation		
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)
$t_{SW}$	$0.05955^{+0.021}_{-0.023}$	$0.07615^{+0.019}_{-0.02}$	890	$0.0225^{+0.0073}_{-0.0082}$	$0.02867^{+0.0068}_{-0.0069}$	954
$t_{\overline{KS}}$	$0.05834^{+0.019}_{-0.022}$	$0.07252^{+0.019}_{-0.019}$	<b>802</b>	$0.02825^{+0.0094}_{-0.01}$	$0.03574^{+0.0088}_{-0.0095}$	<b>861</b>
$t_{SKS}$	$0.06195^{+0.021}_{-0.023}$	$0.07913^{+0.019}_{-0.021}$	1200	$0.02901^{+0.0093}_{-0.011}$	$0.03683^{+0.0086}_{-0.0092}$	1080
$t_{FGD}$	$0.06396^{+0.025}_{-0.024}$	$0.07971^{+0.022}_{-0.021}$	5360	<b><math>0.02023^{+0.0075}_{-0.0082}</math></b>	<b><math>0.02523^{+0.0066}_{-0.0069}</math></b>	5467
$t_{MMD}$	<b><math>0.04176^{+0.022}_{-0.018}</math></b>	<b><math>0.05326^{+0.021}_{-0.017}</math></b>	1934	$0.02689^{+0.012}_{-0.01}$	$0.03445^{+0.011}_{-0.0094}$	1959
$t_{LLR}$	$0.00379^{+0.0026}_{-0.0026}$	$0.0055^{+0.0026}_{-0.0026}$	3816	$0.00074^{+0.00053}_{-0.00053}$	$0.00108^{+0.00052}_{-0.00053}$	4378
$\Sigma_{i \neq j}$ -deformation				pow <sub>+</sub> -deformation		
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}^{pow+}$	$t$ (s)
$t_{SW}$	$0.02522^{+0.0067}_{-0.0084}$	$0.03331^{+0.0057}_{-0.0068}$	911	$0.00495^{+0.0017}_{-0.0019}$	$0.00629^{+0.0017}_{-0.0016}$	978
$t_{\overline{KS}}$	$1.0119^{+0.0062}_{-0.003}$	$1.0209^{+0.003}_{-0.003}$	<b>552</b>	$0.00613^{+0.0019}_{-0.0022}$	$0.00754^{+0.0018}_{-0.0019}$	<b>896</b>
$t_{SKS}$	$0.02906^{+0.0095}_{-0.011}$	$0.03857^{+0.0087}_{-0.0096}$	1090	$0.00572^{+0.0019}_{-0.0021}$	$0.00714^{+0.0018}_{-0.0018}$	1180
$t_{FGD}$	<b><math>0.00239^{+0.00064}_{-0.00081}</math></b>	<b><math>0.00299^{+0.00054}_{-0.00063}</math></b>	6363	$0.00494^{+0.0019}_{-0.002}$	$0.00613^{+0.0018}_{-0.0017}$	6351
$t_{MMD}$	$0.01597^{+0.0065}_{-0.0061}$	$0.02031^{+0.0061}_{-0.0054}$	1993	<b><math>0.00332^{+0.0018}_{-0.0014}</math></b>	<b><math>0.00423^{+0.0017}_{-0.0013}</math></b>	2150
$t_{LLR}$	$3e-05^{+2e-05}_{-2e-05}$	$4e-05^{+2e-05}_{-2e-05}$	5629	$0.00021^{+0.00015}_{-0.00015}$	$0.00032^{+0.00015}_{-0.00015}$	4341
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)
$t_{SW}$	$0.00508^{+5}_{-0.0017}$	$0.00647^{+5}_{-0.0015}$	915	$0.41334^{+0.062}_{-0.084}$	$0.46898^{+0.052}_{-0.058}$	805
$t_{\overline{KS}}$	$0.00597^{+0.0019}_{-0.0021}$	$0.0074^{+0.0017}_{-0.0018}$	<b>900</b>	$0.46482^{+0.07}_{-0.097}$	$0.52444^{+0.056}_{-0.075}$	<b>731</b>
$t_{SKS}$	$0.00563^{+0.0017}_{-0.002}$	$0.00704^{+0.0016}_{-0.0017}$	1185	$0.44843^{+0.067}_{-0.096}$	$0.50879^{+0.057}_{-0.069}$	928
$t_{FGD}$	$0.00508^{+0.0017}_{-0.0018}$	$0.00625^{+0.0016}_{-0.0015}$	6610	<b><math>0.1987^{+0.025}_{-0.037}</math></b>	<b><math>0.22055^{+0.021}_{-0.025}</math></b>	5119
$t_{MMD}$	<b><math>0.00353^{+0.0019}_{-0.0016}</math></b>	<b><math>0.0045^{+0.0018}_{-0.0014}</math></b>	2116	$1.01973^{+0.13}_{-0.17}$	$1.1523^{+0.097}_{-0.11}$	1563
$t_{LLR}$	$0.00028^{+0.00015}_{-0.00015}$	$0.00039^{+0.00015}_{-0.00015}$	4141	-	-	-
$\mathcal{U}$ -deformation				Timing		
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}^{\mathcal{U}}$	$t$ (s)	$t^{\text{null}}$ (s)		
$t_{SW}$	$0.71388^{+0.11}_{-0.14}$	$0.81581^{+0.084}_{-0.1}$	775	<b>294</b>		
$t_{\overline{KS}}$	$0.80534^{+0.12}_{-0.17}$	$0.90238^{+0.1}_{-0.13}$	<b>710</b>	527		
$t_{SKS}$	$0.77724^{+0.12}_{-0.16}$	$0.88187^{+0.098}_{-0.13}$	913	592		
$t_{FGD}$	<b><math>0.34266^{+0.043}_{-0.065}</math></b>	<b><math>0.38262^{+0.033}_{-0.044}</math></b>	4326	7457		
$t_{MMD}$	$1.76762^{+0.21}_{-0.3}$	$1.99743^{+0.17}_{-0.19}$	1492	2390		
$t_{LLR}$	-	-	-	-		