

**CG model with  $d = 5$  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)
$t_{SW}$	$0.06637^{+0.032}_{-0.029}$	$0.09067^{+0.03}_{-0.029}$	<b>508</b>	$0.02563^{+0.0081}_{-0.0084}$	$0.03543^{+0.0079}_{-0.0076}$	<b>547</b>
$t_{\overline{KS}}$	<b><math>0.0604^{+0.028}_{-0.028}</math></b>	<b><math>0.0788^{+0.026}_{-0.027}</math></b>	536	$0.04739^{+0.014}_{-0.016}$	$0.0626^{+0.013}_{-0.014}$	572
$t_{SKS}$	$0.06935^{+0.033}_{-0.032}$	$0.09308^{+0.032}_{-0.032}$	982	$0.03556^{+0.011}_{-0.012}$	$0.0483^{+0.01}_{-0.01}$	1062
$t_{FGD}$	$0.06444^{+0.04}_{-0.03}$	$0.08946^{+0.036}_{-0.028}$	533	<b><math>0.02066^{+0.0095}_{-0.0076}</math></b>	<b><math>0.02862^{+0.0088}_{-0.0074}</math></b>	565
$t_{MMD}$	$0.08197^{+0.055}_{-0.036}$	$0.11263^{+0.052}_{-0.036}$	1114	$0.02366^{+0.016}_{-0.011}$	$0.03246^{+0.015}_{-0.011}$	1212
$t_{LLR}$	$0.01986^{+0.013}_{-0.013}$	$0.02935^{+0.013}_{-0.013}$	1465	$0.0044^{+0.0026}_{-0.0026}$	$0.00639^{+0.0026}_{-0.0025}$	1357
$\Sigma_{i \neq j}$ -deformation				pow $_{+}$ -deformation		
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}^{pow+}$	$t$ (s)
$t_{SW}$	$0.03062^{+0.0071}_{-0.0085}$	$0.04408^{+0.0063}_{-0.007}$	969	$0.00648^{+0.003}_{-0.0027}$	$0.0091^{+0.0029}_{-0.0028}$	<b>581</b>
$t_{\overline{KS}}$	$1.04761^{+0.013}_{-0.015}$	$1.06418^{+0.013}_{-0.014}$	<b>837</b>	$0.00947^{+0.0033}_{-0.0037}$	$0.01206^{+0.0032}_{-0.0033}$	607
$t_{SKS}$	$0.04058^{+0.01}_{-0.013}$	$0.05559^{+0.01}_{-0.011}$	1124	$0.00731^{+0.003}_{-0.0031}$	$0.00962^{+0.0029}_{-0.0029}$	1091
$t_{FGD}$	<b><math>0.00778^{+0.0023}_{-0.0021}</math></b>	<b><math>0.01094^{+0.0018}_{-0.0017}</math></b>	1324	$0.00554^{+0.0034}_{-0.0025}$	$0.00773^{+0.0031}_{-0.0024}$	614
$t_{MMD}$	$0.04776^{+0.028}_{-0.02}$	$0.06485^{+0.025}_{-0.019}$	1723	<b><math>0.00446^{+0.003}_{-0.002}</math></b>	<b><math>0.00612^{+0.0029}_{-0.002}</math></b>	1308
$t_{LLR}$	$0.0342^{+0.014}_{-0.017}$	$0.04471^{+0.01}_{-0.015}$	2711	$0.00161^{+0.001}_{-0.001}$	$0.00228^{+0.001}_{-0.001}$	1490
pow $_{-}$ -deformation				$\mathcal{N}$ -deformation		
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}^{pow-}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}^{\mathcal{N}}$	$t$ (s)
$t_{SW}$	$0.00714^{+10}_{-0.0025}$	$0.00976^{+10}_{-0.0025}$	<b>526</b>	$0.31414^{+0.046}_{-0.054}$	$0.37729^{+0.04}_{-0.039}$	488
$t_{\overline{KS}}$	$0.00938^{+0.0036}_{-0.0035}$	$0.01208^{+0.0034}_{-0.0033}$	649	$0.2711^{+0.038}_{-0.059}$	$0.31549^{+0.032}_{-0.043}$	577
$t_{SKS}$	$0.00773^{+0.0029}_{-0.0028}$	$0.01011^{+0.0028}_{-0.0027}$	1089	$0.31014^{+0.045}_{-0.057}$	$0.3699^{+0.038}_{-0.047}$	965
$t_{FGD}$	$0.00626^{+0.0033}_{-0.0024}$	$0.00846^{+0.0031}_{-0.0023}$	608	<b><math>0.23539^{+0.025}_{-0.034}</math></b>	<b><math>0.27474^{+0.019}_{-0.02}</math></b>	<b>468</b>
$t_{MMD}$	<b><math>0.00517^{+0.0035}_{-0.0024}</math></b>	<b><math>0.00699^{+0.0033}_{-0.0024}</math></b>	1321	$0.65882^{+0.16}_{-0.15}$	$0.77006^{+0.13}_{-0.11}$	964
$t_{LLR}$	$0.00174^{+0.001}_{-0.001}$	$0.00235^{+0.001}_{-0.001}$	1478	-	-	-
$\mathcal{U}$ -deformation				Timing		
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}^{\mathcal{U}}$	$t$ (s)	$t^{\text{null}}$ (s)		
$t_{FGD}$	<b><math>0.40466^{+0.047}_{-0.058}</math></b>	<b><math>0.47806^{+0.031}_{-0.035}</math></b>	<b>455</b>	465		
$t_{LLR}$	-	-	-	-		
$t_{MMD}$	$1.13409^{+0.27}_{-0.25}$	$1.33277^{+0.23}_{-0.2}$	1057	1267		
$t_{SKS}$	$0.53293^{+0.085}_{-0.096}$	$0.63342^{+0.064}_{-0.075}$	601	375		
$t_{SW}$	$0.54152^{+0.081}_{-0.091}$	$0.65357^{+0.063}_{-0.071}$	470	279		
$t_{\overline{KS}}$	$0.45812^{+0.072}_{-0.096}$	$0.53398^{+0.063}_{-0.071}$	557	<b>32</b>		