

MoG model with $d = 100$, $q = 10$, and $n = m = 5 \cdot 10^4$						
Statistic	μ -deformation			Σ_{ii} -deformation		
	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)
t_{SW}	$0.03998^{+0.011}_{-0.013}$	$0.05217^{+0.01}_{-0.012}$	836	$0.01323^{+0.0032}_{-0.0041}$	$0.01718^{+0.0028}_{-0.0032}$	907
$t_{\overline{KS}}$	$0.00299^{+0.001}_{-0.0011}$	$0.00425^{+0.001}_{-0.001}$	915	$0.00071^{+0.00029}_{-0.00028}$	$0.00105^{+0.00031}_{-0.00029}$	1002
t_{SKS}	$0.0331^{+0.0083}_{-0.0097}$	$0.04324^{+0.0076}_{-0.0082}$	1012	$0.01187^{+0.002}_{-0.0028}$	$0.0151^{+0.0016}_{-0.002}$	1099
t_{FGD}	$0.05672^{+0.017}_{-0.018}$	$0.07296^{+0.015}_{-0.015}$	10126	$0.01849^{+0.0042}_{-0.0051}$	$0.0235^{+0.0033}_{-0.0039}$	8804
t_{MMD}	$0.05034^{+0.011}_{-0.013}$	$0.06423^{+0.0092}_{-0.01}$	9640	$0.0101^{+0.0028}_{-0.003}$	$0.01277^{+0.0026}_{-0.0026}$	9030
t_{NPLM}	$0.00416^{+0.0013}_{-0.0017}$	$0.00505^{+0.0011}_{-0.0014}$	17371	$0.0013^{+0.0004}_{-0.00053}$	$0.00158^{+0.00034}_{-0.00041}$	15496
t_{NPLM}	$0.00329^{+0.001}_{-0.0014}$	$0.00402^{+0.00086}_{-0.001}$	48147	$0.00107^{+0.00032}_{-0.00045}$	$0.00131^{+0.00029}_{-0.00034}$	51892
t_{LLR}	$4e-05^{+2e-05}_{-3e-05}$	$5e-05^{+3e-05}_{-2e-05}$	12683	$1e-05^{+0}_{-1e-05}$	$1e-05^{+1e-05}_{-0}$	13707
Statistic	$\Sigma_{i \neq j}$ -deformation			pow ₊ -deformation		
	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)
t_{SW}	$0.0243^{+0.0056}_{-0.0075}$	$0.0317^{+0.0046}_{-0.0055}$	3349	$0.00526^{+0.0013}_{-0.0016}$	$0.00684^{+0.0011}_{-0.0013}$	921
$t_{\overline{KS}}$	$1.00061^{+0.00085}_{-0.00037}$	$1.00125^{+0.00021}_{-0.00027}$	9029	$0.00026^{+0.00011}_{-0.00011}$	$0.00039^{+0.00013}_{-0.00012}$	1081
t_{SKS}	$0.02643^{+0.0064}_{-0.0078}$	$0.03469^{+0.0055}_{-0.0064}$	3678	$0.00478^{+0.00081}_{-0.0011}$	$0.00605^{+0.00062}_{-0.00075}$	1123
t_{FGD}	$0.00431^{+0.00099}_{-0.0011}$	$0.00562^{+0.00081}_{-0.0009}$	14614	$0.00731^{+0.0016}_{-0.0019}$	$0.00933^{+0.0013}_{-0.0015}$	9507
t_{MMD}	$0.01779^{+0.0044}_{-0.0048}$	$0.02268^{+0.0042}_{-0.004}$	12678	$0.00365^{+0.001}_{-0.0011}$	$0.00462^{+0.00093}_{-0.00092}$	9688
t_{NPLM}	$0.0019^{+0.0007}_{-0.0008}$	$0.00241^{+0.00059}_{-0.0007}$	25479	$0.0005^{+0.00015}_{-0.0002}$	$0.00061^{+0.00013}_{-0.00016}$	21877
t_{NPLM}	$0.01267^{+0.0041}_{-0.006}$	$0.0159^{+0.0033}_{-0.0045}$	48716	$0.00041^{+0.00012}_{-0.00017}$	$0.00051^{+0.0001}_{-0.00013}$	55028
t_{LLR}	-	-	-	0.0^{+0}_{-0}	0.0^{+1e-05}_{-0}	16259
Statistic	pow ₋ -deformation			\mathcal{N} -deformation		
	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)
t_{SW}	$0.00536^{+5}_{-0.0016}$	$0.00698^{+5}_{-0.0013}$	717	$0.20881^{+0.023}_{-0.035}$	$0.2389^{+0.017}_{-0.023}$	634
$t_{\overline{KS}}$	$0.00026^{+0.00011}_{-0.00011}$	$0.00039^{+0.00013}_{-0.00011}$	1096	$0.0089^{+0.0037}_{-0.0043}$	$0.01341^{+0.0034}_{-0.0038}$	969
t_{SKS}	$0.0047^{+0.00077}_{-0.0011}$	$0.00595^{+0.00061}_{-0.0007}$	1128	$0.18004^{+0.021}_{-0.031}$	$0.20733^{+0.018}_{-0.023}$	942
t_{FGD}	$0.00731^{+0.0016}_{-0.002}$	$0.00937^{+0.0014}_{-0.0015}$	9183	$0.18738^{+0.021}_{-0.029}$	$0.21173^{+0.016}_{-0.017}$	7138
t_{MMD}	$0.00367^{+0.00095}_{-0.001}$	$0.00469^{+0.00086}_{-0.00084}$	9701	$0.80488^{+0.074}_{-0.11}$	$0.90321^{+0.055}_{-0.068}$	6223
t_{NPLM}	$0.00053^{+0.00017}_{-0.00021}$	$0.00064^{+0.00014}_{-0.00017}$	33036	$0.14778^{+0.028}_{-0.048}$	$0.16898^{+0.023}_{-0.033}$	12094
t_{NPLM}	$0.00044^{+0.00014}_{-0.00018}$	$0.00054^{+0.00011}_{-0.00014}$	51633	$0.10096^{+0.02}_{-0.034}$	$0.11511^{+0.017}_{-0.023}$	33640
t_{LLR}	0.0^{+0}_{-0}	0.0^{+1e-05}_{-0}	15658	-	-	-
Statistic	\mathcal{U} -deformation			Timing		
	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	t (s)	t_{null} (s)		
t_{SW}	$0.36179^{+0.04}_{-0.06}$	$0.41391^{+0.029}_{-0.04}$	622	381		
$t_{\overline{KS}}$	$0.01367^{+0.0059}_{-0.0069}$	$0.02063^{+0.0056}_{-0.0059}$	953	731		
t_{SKS}	$0.31042^{+0.037}_{-0.056}$	$0.35749^{+0.03}_{-0.038}$	929	903		
t_{FGD}	$0.32329^{+0.035}_{-0.048}$	$0.36745^{+0.025}_{-0.033}$	6909	13787		
t_{MMD}	$1.39527^{+0.12}_{-0.19}$	$1.56573^{+0.096}_{-0.12}$	6920	14553		
t_{NPLM}	$0.25424^{+0.049}_{-0.083}$	$0.29307^{+0.036}_{-0.058}$	11622	9585		
t_{NPLM}	$0.17448^{+0.035}_{-0.058}$	$0.20113^{+0.025}_{-0.036}$	32256	72958		
t_{LLR}	-	-	-	-		