MoG model with d = 20, q = 5, and n = m = $5 \cdot 10^4$

μ-deformation

Statistic	$\epsilon_{95\%\text{CL}}$	$\epsilon_{99\%\text{CL}}$	t (s)
t_{SW}	$0.04957^{+0.018}_{-0.02}$	$0.06694^{+0.017}_{-0.017}$	3023
$t_{\overline{\text{KS}}}$	$\mathbf{0.00482^{+0.0013}_{-0.0018}}$	$\mathbf{0.00667^{+0.0011}_{-0.0013}}$	2966
t_{SKS}	$0.03647^{+0.011}_{-0.014}$	$0.04821^{+0.011}_{-0.012}$	**2899**
t_{FGD}	$0.05778^{+0.026}_{-0.027}$	$0.0787^{+0.023}_{-0.021}$	4047
t_{MMD}	$0.04425^{+0.019}_{-0.018}$	$0.06215^{+0.017}_{-0.015}$	10204
t_{LLR}	$0.00021^{+0.00013}_{-0.00014}$	$0.0003^{+0.00013}_{-0.00014}$	5911

Σ_{ii}-deformation

Statistic	$\epsilon_{95\%\text{CL}}$	$\epsilon_{99\%\text{CL}}$	t (s)
t_{SW}	$0.01679^{+0.005}_{-0.0063}$	$0.02315^{+0.0045}_{-0.005}$	3197
$t_{\overline{\text{KS}}}$	$\mathbf{0.00175^{+0.00052}_{-0.00068}}$	$\mathbf{0.00248^{+0.00042}_{-0.00052}}$	3185
t_{SKS}	$0.01329^{+0.003}_{-0.0043}$	$0.01759^{+0.0025}_{-0.003}$	**3022**
t_{FGD}	$0.01945^{+0.0063}_{-0.0081}$	$0.02651^{+0.0053}_{-0.0056}$	4507
t_{MMD}	$0.00923^{+0.0058}_{-0.0051}$	$0.01305^{+0.0053}_{-0.0044}$	11217
t_{LLR}	$7e-05^{+5e-05}_{-4e-05}$	0.0001^{+5e-05}_{-4e-05}	6304

$\Sigma_{i \neq j}$-deformation

Statistic	$\epsilon_{95\%\text{CL}}$	$\epsilon_{99\%\text{CL}}$	t (s)
t_{SW}	$0.00377^{+0.00098}_{-0.0013}$	$0.00513^{+0.00085}_{-0.00097}$	2111
$t_{\overline{\text{KS}}}$	$\mathbf{0.00033^{+0.0001}_{-0.00011}}$	$\mathbf{0.00046^{+0.0001}_{-0.0001}}$	**2033**
t_{SKS}	$0.00244^{+0.00075}_{-0.00092}$	$0.00329^{+0.00067}_{-0.00077}$	2098
t_{FGD}	$0.00268^{+0.00075}_{-0.0011}$	$0.0037^{+0.0006}_{-0.00071}$	3753
t_{MMD}	$0.00527^{+0.0019}_{-0.0021}$	$0.00742^{+0.0017}_{-0.0016}$	12555
t_{LLR}	0.0^{+1e-05}_{-0}	$1e-05^{+0}_{-1e-05}$	6656

pow_+-deformation

Statistic	$\epsilon_{95\%\text{CL}}$	$\epsilon^{\text{pow}_+}_{99\%\text{CL}}$	t (s)
t_{SW}	$0.00581^{+0.0017}_{-0.0022}$	$0.00798^{+0.0015}_{-0.0017}$	**3157**
$t_{\overline{\text{KS}}}$	$\mathbf{0.0004^{+0.00015}_{-0.00017}}$	$\mathbf{0.00059^{+0.00013}_{-0.00014}}$	3363
t_{SKS}	$0.0043^{+0.0009}_{-0.0013}$	$0.00565^{+0.00074}_{-0.0009}$	3193
t_{FGD}	$0.00702^{+0.0021}_{-0.0028}$	$0.00965^{+0.0016}_{-0.0019}$	4870
t_{MMD}	$0.00332^{+0.0018}_{-0.0014}$	$0.00467^{+0.0017}_{-0.0014}$	11801
t_{LLR}	$2e-05^{+1e-05}_{-1e-05}$	$2e-05^{+1e-05}_{-1e-05}$	6877

pow_--deformation

Statistic	$\epsilon_{95\%\text{CL}}$	$\epsilon^{\text{pow}_-}_{99\%\text{CL}}$	t (s)
t_{SW}	$0.00604^{+0.0017}_{-0.0023}$	$0.00825^{+0.0016}_{-0.0018}$	**3051**
$t_{\overline{\text{KS}}}$	$\mathbf{0.00042^{+0.00015}_{-0.00018}}$	$\mathbf{0.00061^{+0.00013}_{-0.00015}}$	3372
t_{SKS}	$0.00441^{+0.00092}_{-0.0014}$	$0.00574^{+0.00077}_{-0.00094}$	3324
t_{FGD}	$0.00722^{+0.0021}_{-0.0027}$	$0.00987^{+0.0016}_{-0.0019}$	4892
t_{MMD}	$0.00353^{+0.0016}_{-0.0015}$	$0.00494^{+0.0014}_{-0.0012}$	11418
t_{LLR}	$2e-05^{+1e-05}_{-1e-05}$	$2e-05^{+1e-05}_{-1e-05}$	6991

$\mathcal{N}$-deformation

Statistic	$\epsilon_{95\%\text{CL}}$	$\epsilon^{\mathcal{N}}_{99\%\text{CL}}$	t (s)
t_{SW}	$0.19318^{+0.025}_{-0.039}$	$0.22704^{+0.019}_{-0.026}$	**2403**
$t_{\overline{\text{KS}}}$	$\mathbf{0.00751^{+0.002}_{-0.0024}}$	$\mathbf{0.00993^{+0.0018}_{-0.002}}$	2934
t_{SKS}	$0.15874^{+0.023}_{-0.034}$	$0.18473^{+0.019}_{-0.023}$	2726
t_{FGD}	$0.18095^{+0.023}_{-0.038}$	$0.21269^{+0.016}_{-0.02}$	3756
t_{MMD}	$0.43531^{+0.066}_{-0.11}$	$0.51609^{+0.045}_{-0.054}$	8642
t_{LLR}	-	-	-

$\mathcal{U}$-deformation | Timing

Statistic	$\epsilon_{95\%\text{CL}}$	$\epsilon^{\mathcal{U}}_{99\%\text{CL}}$	t (s)	t^{null} (s)
t_{SW}	$0.33394^{+0.044}_{-0.068}$	$0.39248^{+0.033}_{-0.044}$	**2354**	338
$t_{\overline{\text{KS}}}$	$\mathbf{0.01211^{+0.003}_{-0.0035}}$	$\mathbf{0.01575^{+0.0027}_{-0.003}}$	2835	**155**
t_{SKS}	$0.27395^{+0.041}_{-0.059}$	$0.3188^{+0.033}_{-0.04}$	2601	509
t_{FGD}	$0.31409^{+0.04}_{-0.07}$	$0.36919^{+0.027}_{-0.036}$	3643	2795
t_{MMD}	$0.75353^{+0.12}_{-0.18}$	$0.89336^{+0.078}_{-0.098}$	7700	13860
t_{LLR}	-	-	-	-