	I	Particle features	with n	$= m = 5 \cdot 10^4$		
	μ -c	Σ_{ii} -deformation				
Statistic	$\epsilon_{95\%\mathrm{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$\epsilon_{95\%\mathrm{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)
$t_{ m SW}$	$0.02633^{+0.0098}_{-0.013}$	$0.03714^{+0.0084}_{-0.0097}$	849	$0.02913^{+0.012}_{-0.0079}$	$0.04108^{+0.0093}_{-0.011}$	824
$t_{\overline{ ext{KS}}}$	$0.0^{+0.0045}_{-0}$	$0.00771^{+0.0022}_{-0.0002}$	49525	$0.0^{+0.013}_{-0}$	$0.01904^{+0.0086}_{-0.011}$	55017
$t_{ m SKS}$	$0.01592^{+0.0046}_{-0.0061}$	$\begin{array}{c} -0.0068 \\ 0.02334^{+0.0058}_{-0.0059} \\ 0.06462^{+0.013}_{-0.013} \end{array}$	17572	$0.02735^{+0.0049}_{-0.017}$	$0.03362^{+0.0081}_{-0.0071}$	24987
$t_{ m FGD}$	$0.04749^{+0.012}_{-0.024}$	$0.06462^{+0.013}_{-0.013}$	30820	$0.04004^{+0.017}_{-0.012}$	$0.0556^{+0.018}_{-0.016}$	25551
$t_{ m MMD}$	$0.1396^{+0.1}_{-0.065}$	$0.21274_{-0.065}^{+0.071}$	18527	$0.06988^{+0.048}_{-0.031}$	$0.0556_{-0.016}^{+0.018} \\ 0.0986_{-0.036}^{+0.037}$	33217
$\Sigma_{i \neq j}$ -deformation				pow_+ -deformation		
Statistic	$\epsilon_{95\%\mathrm{CL}}$	$\epsilon_{99\%\mathrm{CL}}$	t (s)	$\epsilon_{95\%\mathrm{CL}}$	$\epsilon_{99\%\mathrm{CL}}^{\mathrm{pow}_{+}}$	t (s)
tsw	$0.02306^{+0.0072}_{-0.0085}$	$0.03463^{+0.0053}_{-0.0063}$	6060	$0.02745^{+0.011}_{-0.0075}$	$0.03872^{+0.0088}_{-0.011}$	806
$t_{\overline{ ext{KS}}}$	$1.00781^{+0}_{-0.024}$	$1.01556^{+0.0078}_{-0.004}$	13217	$0.0^{+0.0066}_{-0}$	$0.01141^{+0.0073}_{-0.011}$	46010
SKS	$0.01802^{+0.0064}_{-0.0040}$	$0.02541^{+0.0058}_{-0.0054}$	27170	$0.03594^{+0.021}_{-0.016}$	$0.05069^{+0.011}_{-0.014}$	24821
FGD	$0.01324^{+0.0029}_{-0.0050}$	$0.01988^{+0.003}_{-0.003}$	36323	$ \begin{array}{c} -0.016 \\ 0.02459^{+0.013}_{-0.012} \\ 0.02054^{+0.014}_{-0.0071} \end{array} $	0.02501 ± 0.013	25798
$t_{ m MMD}$	$0.13691^{+0.047}_{-0.043}$	$0.1931_{-0.031}^{+0.044}$	20564	$0.02054_{-0.0071}^{+0.014}$	$0.03501_{\substack{-0.012\\-0.0091}}$ $0.02657_{\substack{-0.0091}}^{+0.013}$	26195
$pow\deformation$				$\mathcal{N} ext{-deformation}$		
Statistic	$\epsilon_{95\%\mathrm{CL}}$	$\epsilon_{99\%\mathrm{CL}}^{\mathrm{pow}_{-}}$	t (s)	$\epsilon_{95\%\mathrm{CL}}$	$\epsilon_{99\%\mathrm{CL}}^{\mathcal{N}}$	t (s)
$t_{ m SW}$	$0.02745^{+0.011}_{-0.014}$	$0.03872^{+0.0088}_{-0.01}$	809	$0.10733^{+0.022}_{-0.026}$	$0.13357^{+0.016}_{-0.016}$	691
$t_{\overline{\mathrm{KS}}}$	$0.0^{+0.0095}_{-0}$	$0.01323^{+0.0069}$	45685	$0.0656^{+0.016}_{-0.053}$	$0.08707^{+0.013}_{-0.016}$	7484
SKS	$0.03777^{+0.015}_{-0.017}$	$0.04837^{+0.014}_{-0.015}$	15966	$0.08456^{+0.013}_{-0.013}$	$0.09935^{+0.0089}_{-0.01}$	18276
$t_{ m FGD}$	$0.02241^{+0.019}_{-0.01}$	$0.0353^{+0.019}_{-0.011}$	26549	1.014600 ± 0.034	$0.1758^{+0.023}_{-0.021}$	23330
$t_{ m MMD}$	$0.02077^{+0.017}_{-0.01}$	$0.02939_{-0.0089}^{+0.016}$	20263	$\begin{array}{c} 0.14008_{-0.038} \\ 0.33827_{-0.089}^{+0.088} \end{array}$	$\begin{array}{c} 0.1758^{+0.023}_{-0.021} \\ 0.37964^{+0.091}_{-0.073} \end{array}$	19908
$\mathcal{U} ext{-} ext{deformation}$					Timing	
Statistic	$\epsilon_{95\%\mathrm{CL}}$	$\epsilon_{99\%\mathrm{CL}}^{\mathcal{U}}$	t (s)	t^{null} (s)		
$t_{ m FGD}$	$0.25168^{+0.053}_{-0.065}$	$0.30289^{+0.04}_{-0.036}$	23243	7351		
$t_{ m LLR}$	_	-	-	-		
$t_{ m MMD}$	$0.58039^{+0.17}_{-0.15}$	$0.6876^{+0.14}_{-0.14}$	25557	3880		
$t_{ m SKS}$	$0.14453^{+0.02}_{-0.02}$	$0.17795^{+0.0057}_{-0.023}$	17723	4818		
+~~~	$0.1889^{+0.038}_{-0.046}$	$0.2351^{+0.028}_{-0.04}$	625	150		
$t_{ m SW}$	$0.10693^{+0.022}_{-0.086}$	$0.14193^{+0.021}_{-0.019}$				