

**Scaled Particle features with  $n = m = 10^4$**

$\mu$ -deformation				$\Sigma_{ii}$ -deformation			
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	
$t_{SW}$	$0.03001^{+0.0061}_{-0.012}$	$0.03983^{+0.0059}_{-0.0068}$	<b>636</b>	$0.03556^{+0.013}_{-0.014}$	$0.04838^{+0.01}_{-0.012}$	<b>663</b>	
$t_{\overline{KS}}$	<b><math>0.01913^{+0.0053}_{-0.0097}</math></b>	<b><math>0.02873^{+0.0044}_{-0.0066}</math></b>	772	$0.04819^{+0.016}_{-0.026}$	$0.06797^{+0.015}_{-0.016}$	871	
$t_{SKS}$	$0.02745^{+0.0048}_{-0.011}$	$0.03644^{+0.0054}_{-0.0062}$	1583	$0.04382^{+0.021}_{-0.014}$	$0.0658^{+0.01}_{-0.016}$	1772	
$t_{FGD}$	$0.03709^{+0.0078}_{-0.013}$	$0.04616^{+0.0054}_{-0.0098}$	2093	<b><math>0.03145^{+0.0096}_{-0.013}</math></b>	<b><math>0.0415^{+0.013}_{-0.0099}</math></b>	2163	
$t_{MMD}$	$0.03985^{+0.0061}_{-0.016}$	$0.04959^{+0.0059}_{-0.008}$	1591	$0.03486^{+0.015}_{-0.014}$	$0.04702^{+0.0095}_{-0.011}$	2055	
$\Sigma_{i \neq j}$ -deformation				pow $_+$ -deformation			
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}^{pow+}$	$t$ (s)	
$t_{SW}$	$0.03068^{+0.01}_{-0.012}$	$0.04073^{+0.006}_{-0.007}$	1080	$0.04091^{+0.016}_{-0.016}$	$0.0543^{+0.008}_{-0.013}$	<b>539</b>	
$t_{\overline{KS}}$	$1.03125^{+0.014}_{-0.011}$	$1.05323^{+0.0083}_{-0.016}$	<b>811</b>	<b><math>0.03145^{+0.0096}_{-0.017}</math></b>	$0.04437^{+0.01}_{-0.01}$	1171	
$t_{SKS}$	$0.02805^{+0.013}_{-0.0086}$	$0.04288^{+0.012}_{-0.0073}$	2346	$0.06612^{+0.024}_{-0.023}$	$0.09525^{+0.013}_{-0.016}$	2062	
$t_{FGD}$	<b><math>0.0032^{+0.00083}_{-0.0011}</math></b>	<b><math>0.00399^{+0.00089}_{-0.0006}</math></b>	3890	$0.03323^{+0.015}_{-0.014}$	<b><math>0.04254^{+0.012}_{-0.01}</math></b>	2277	
$t_{MMD}$	$0.02011^{+0.011}_{-0.0077}$	$0.02741^{+0.0094}_{-0.0084}$	2312	$0.04071^{+0.016}_{-0.016}$	$0.0537^{+0.017}_{-0.013}$	2231	
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)	
$t_{SW}$	$0.04382^{+0.021}_{-0.017}$	$0.0618^{+0.014}_{-0.018}$	<b>689</b>	$0.16911^{+0.026}_{-0.035}$	$0.18687^{+0.03}_{-0.02}$	<b>397</b>	
$t_{\overline{KS}}$	<b><math>0.03145^{+0.0096}_{-0.018}</math></b>	<b><math>0.0415^{+0.013}_{-0.0096}</math></b>	1316	$0.11951^{+0.025}_{-0.034}$	$0.14874^{+0.018}_{-0.02}$	1196	
$t_{SKS}$	$0.07149^{+0.026}_{-0.026}$	$0.10084^{+0.023}_{-0.017}$	2143	$0.15558^{+0.04}_{-0.029}$	$0.19363^{+0.023}_{-0.025}$	1868	
$t_{FGD}$	$0.03556^{+0.013}_{-0.012}$	$0.04553^{+0.013}_{-0.013}$	2220	<b><math>0.07893^{+0.011}_{-0.015}</math></b>	<b><math>0.0886^{+0.012}_{-0.0093}</math></b>	1870	
$t_{MMD}$	$0.04497^{+0.023}_{-0.018}$	$0.05933^{+0.018}_{-0.014}$	2247	$0.41065^{+0.042}_{-0.05}$	$0.47533^{+0.05}_{-0.043}$	1844	
$\mathcal{U}$ -deformation				Timing			
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}^{\mathcal{U}}$	$t$ (s)	$t^{\text{null}}$ (s)			
$t_{FGD}$	<b><math>0.13593^{+0.016}_{-0.025}</math></b>	<b><math>0.15378^{+0.02}_{-0.016}</math></b>	1874	651			
$t_{LLR}$	-	-	-	-			
$t_{MMD}$	$0.69962^{+0.082}_{-0.086}$	$0.8098^{+0.086}_{-0.074}$	1768	368			
$t_{SKS}$	$0.28696^{+0.041}_{-0.066}$	$0.33718^{+0.03}_{-0.043}$	1817	402			
$t_{SW}$	$0.28696^{+0.041}_{-0.059}$	$0.31709^{+0.05}_{-0.033}$	<b>373</b>	<b>139</b>			
$t_{\overline{KS}}$	$0.1977^{+0.029}_{-0.055}$	$0.24605^{+0.029}_{-0.032}$	1238	173			