

**Scaled Particle features with  $n = m = 5 \cdot 10^4$**

$\mu$ -deformation							$\Sigma_{ii}$ -deformation			
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	
$t_{SW}$	$0.01334^{+0.0038}_{-0.0046}$	$0.01815^{+0.0037}_{-0.0029}$	<b>1116</b>	$0.0166^{+0.0059}_{-0.0063}$	$0.02125^{+0.006}_{-0.0034}$	<b>1079</b>				
$t_{\overline{KS}}$	<b><math>0.0^{+0.0045}_{-0}</math></b>	<b><math>0.00771^{+0.0022}_{-0.0049}</math></b>	58835	<b><math>0.0^{+0.013}_{-0}</math></b>	$0.01904^{+0.0086}_{-0.011}$	62555				
$t_{SKS}$	$0.01275^{+0.0034}_{-0.0043}$	$0.01734^{+0.0036}_{-0.0028}$	18356	$0.02131^{+0.007}_{-0.0073}$	$0.02899^{+0.006}_{-0.0047}$	26542				
$t_{FGD}$	$0.01627^{+0.003}_{-0.006}$	$0.02025^{+0.0024}_{-0.0047}$	39057	$0.01469^{+0.0034}_{-0.0057}$	<b><math>0.01805^{+0.0043}_{-0.0051}</math></b>	27175				
$t_{MMD}$	$0.01613^{+0.0049}_{-0.0058}$	$0.02141^{+0.0032}_{-0.0035}$	22841	$0.01606^{+0.0074}_{-0.0066}$	$0.02089^{+0.0055}_{-0.0061}$	33730				
$\Sigma_{i \neq j}$ -deformation							pow <sub>+</sub> -deformation			
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}^{pow+}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}^{pow+}$	$t$ (s)	
$t_{SW}$	$0.03128^{+0.0068}_{-0.011}$	$0.04152^{+0.0061}_{-0.0067}$	<b>1424</b>	$0.01894^{+0.0055}_{-0.0072}$	$0.02425^{+0.0068}_{-0.0039}$	<b>1006</b>				
$t_{\overline{KS}}$	$0.99134^{+0.016}_{-0.0078}$	$1.01532^{+0.008}_{-0.004}$	11987	<b><math>0.0^{+0.0066}_{-0}</math></b>	<b><math>0.01141^{+0.0073}_{-0.011}</math></b>	49091				
$t_{SKS}$	$0.03809^{+0.011}_{-0.013}$	$0.0515^{+0.011}_{-0.0083}$	27313	$0.03552^{+0.0055}_{-0.013}$	$0.04366^{+0.01}_{-0.0066}$	15487				
$t_{FGD}$	<b><math>0.0026^{+0.00076}_{-0.00089}</math></b>	<b><math>0.00345^{+0.00052}_{-0.00076}</math></b>	33338	$0.01534^{+0.0052}_{-0.0062}$	$0.01886^{+0.0045}_{-0.0055}$	24241				
$t_{MMD}$	$0.01919^{+0.011}_{-0.0079}$	$0.02614^{+0.0089}_{-0.0065}$	20604	$0.01896^{+0.0074}_{-0.008}$	$0.02428^{+0.0068}_{-0.0071}$	27198				
pow <sub>-</sub> -deformation							$\mathcal{N}$ -deformation			
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}^{pow-}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}^{\mathcal{N}}$	$t$ (s)	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}^{\mathcal{N}}$	$t$ (s)	
$t_{SW}$	$0.01909^{+0.0073}_{-0.0077}$	$0.02693^{+0.0061}_{-0.0068}$	<b>1006</b>	$0.10868^{+0.02}_{-0.017}$	$0.1277^{+0.011}_{-0.022}$	<b>886</b>				
$t_{\overline{KS}}$	<b><math>0.0^{+0.0095}_{-0}</math></b>	<b><math>0.01323^{+0.0069}_{-0.0085}</math></b>	45323	$0.0656^{+0.016}_{-0.049}$	$0.08707^{+0.013}_{-0.019}$	22186				
$t_{SKS}$	$0.0356^{+0.0093}_{-0.013}$	$0.04726^{+0.007}_{-0.011}$	22261	$0.10733^{+0.022}_{-0.017}$	$0.13357^{+0.016}_{-0.026}$	24344				
$t_{FGD}$	$0.01543^{+0.007}_{-0.0065}$	$0.01852^{+0.0068}_{-0.0042}$	24968	<b><math>0.04853^{+0.0071}_{-0.0075}</math></b>	<b><math>0.05702^{+0.0051}_{-0.006}</math></b>	24273				
$t_{MMD}$	$0.01859^{+0.0085}_{-0.0081}$	$0.02501^{+0.0083}_{-0.0064}$	27960	$0.26953^{+0.035}_{-0.052}$	$0.30333^{+0.029}_{-0.011}$	19782				
$\mathcal{U}$ -deformation							Timing			
Statistic	$\epsilon_{95\%CL}$	$\epsilon_{99\%CL}^{\mathcal{U}}$	$t$ (s)	$t^{\text{null}}$ (s)						
$t_{FGD}$	<b><math>0.08969^{+0.006}_{-0.016}</math></b>	<b><math>0.10215^{+0.0042}_{-0.016}</math></b>	21825	6689						
$t_{LLR}$	-	-	-	-						
$t_{MMD}$	$0.48398^{+0.032}_{-0.088}$	$0.5512^{+0.022}_{-0.058}$	14676	3605						
$t_{SKS}$	$0.19116^{+0.035}_{-0.03}$	$0.22462^{+0.02}_{-0.039}$	16154	4379						
$t_{SW}$	$0.19116^{+0.035}_{-0.03}$	$0.22462^{+0.02}_{-0.039}$	<b>774</b>	<b>133</b>						
$t_{\overline{KS}}$	$0.10693^{+0.022}_{-0.086}$	$0.14193^{+0.021}_{-0.019}$	10646	1972						