|                                  |  | deformation  | $rac{ m and \ n=m=10^5}{\Sigma_{ii}	ext{-deformation}}$ |   |   |       |
|----------------------------------|--|--|--|---|---|-------|
| Statistic                        | $\epsilon_{95\%\mathrm{CL}}$   | $\epsilon_{99\%\mathrm{CL}}$   | t (s)  | $\epsilon_{95\%\mathrm{CL}}$  | $\epsilon_{99\%\mathrm{CL}}$  | t (s) |
| $t_{ m SW}$                      | $0.02998^{+0.014}_{-0.013}$  | $0.0404^{+0.014}_{-0.012}$   | 628  | $0.01242^{+0.004}_{-0.0038}$  | $0.0167^{+0.0039}_{-0.0036}$  | 655   |
| $t_{\overline{	ext{KS}}}$        | $0.02652^{+0.011}_{-0.011}$  | $0.03393^{+0.011}_{-0.011}$  | <b>412</b>   | $0.02063^{+0.0065}_{-0.007}$  | $0.02676_{-0.0065}^{+0.0059}$   | 431   |
| t <sub>SKS</sub>                 | $\begin{array}{c} 0.03198^{+0.014}_{-0.013} \\ 0.02961^{+0.017}_{-0.012} \end{array}$                                | $0.04336^{+0.013}_{-0.013}$  | 762  | $0.01678^{+0.0048}_{-0.005}$  | $0.02286^{+0.0046}_{-0.0048}$   | 792   |
| FGD                              | $0.02961^{+0.017}_{-0.012}$  | $0.03908^{+0.016}_{-0.012}$  | 1484   | $0.01067^{+0.0046}_{-0.0037}$   | $0.01371^{+0.0043}_{-0.0035}$   | 1498  |
| MMD                              | $0.03647^{+0.027}_{-0.018}$  | $0.05258^{+0.026}_{-0.018}$  | 9485   | $0.01056^{+0.0079}_{-0.0051}$   | $0.01523^{+0.0074}_{-0.0052}$   | 10186 |
| LLR                              | $0.00908^{+0.006}_{-0.0061}$   | $0.01277^{+0.006}_{-0.0061}$   | 4974   | $0.00198^{+0.0012}_{-0.0012}$   | $0.00279_{-0.0012}^{+0.0012}$   | 6312  |
| $\Sigma_{i \neq j}$ -deformation |  |  |  | pow <sub>+</sub> -deformation   |   |       |
| Statistic                        | $\epsilon_{95\%\mathrm{CL}}$   | $\epsilon_{99\%\mathrm{CL}}$   | t (s)  | $\epsilon_{95\%\mathrm{CL}}$  | $\epsilon_{99\%\mathrm{CL}}$  | t (s) |
| SW                               | $\begin{array}{ c c c c c c }\hline 0.0268^{+0.0063}_{-0.0071} \\ 1.01714^{+0.0083}_{-0.0035} \\ \hline \end{array}$ | $\begin{array}{c} 0.038^{+0.0053}_{-0.0059} \\ 1.02769^{+0.0015}_{-0.011} \\ 0.05083^{+0.0081}_{-0.0088} \\ \textbf{0.00923^{+0.0015}_{-0.0016}} \\ 0.05706^{+0.023}_{-0.018} \end{array}$ | 737  | $0.00308^{+0.0014}_{-0.0012}$   | $0.00421^{+0.0013}_{-0.0012}$   | 697   |
| $\overline{	ext{KS}}$            | $1.01714^{+0.0083}_{-0.0035}$  | $1.02769^{+0.0039}_{-0.011}$   | $\bf 574$  | $0.00418^{+0.0012}_{-0.0015}$   | $0.00528^{+0.0015}_{-0.0014}$   | 462   |
| SKS                              | $0.03693^{+0.0089}_{-0.01}$  | $0.05083^{+0.0081}_{-0.0088}$  | 869  | $0.00345^{+0.0013}_{-0.0012}$   | $0.00455^{+0.0013}_{-0.0012}$   | 846   |
| FGD                              | $\begin{array}{c} 0.03693^{+0.0089}_{-0.01} \\ 0.00711^{+0.0017}_{-0.002} \end{array}$                               | $0.00923_{-0.0016}^{+0.0015}$  | 2029   | $\begin{array}{c} 0.00345^{+0.0013}_{-0.0012} \\ 0.00278^{+0.0015}_{-0.0011} \end{array}$ | $\begin{array}{c} -0.0014 \\ 0.00455^{+0.0013}_{-0.0012} \\ 0.00363^{+0.0014}_{-0.0011} \\ \end{array}$ | 1539  |
| MMD                              | $0.04051^{+0.026}_{-0.02}$   | $0.05706^{+0.023}_{-0.018}$  | 10010  | $0.00199_{-0.00098}^{+0.0015}$  | $0.00286^{+0.0014}_{-0.00098}$  | 10854 |
| LLR                              | -  | -  | -  | $0.00074^{+0.00046}_{-0.00046}$   | $0.00103^{+0.00046}_{-0.00046}$   | 4937  |
| powdeformation                   |  |  | $\mathcal{N}	ext{-}	ext{deformation}$                    |   |   |       |
| Statistic                        | $\epsilon_{95\%	ext{CL}}$  | $\epsilon_{99\%\mathrm{CL}}$   | t (s)  | $\epsilon_{95\%\mathrm{CL}}$  | $\epsilon_{99\%\mathrm{CL}}$  | t (s) |
| SW                               | $0.00299^{+5}_{-0.0011}$   | $0.00411^{+5}_{-0.0011}$   | 681  | $0.21417^{+0.031}_{-0.035}$   | $0.25369^{+0.025}_{-0.026}$   | 639   |
| $\overline{	ext{KS}}$            | $0.00408^{+0.0011}_{-0.0016}$  | $0.00518_{-0.0015}^{+0.0015} \\ 0.00452_{-0.0012}^{+0.0012}$   | 464  | $0.17628^{+0.029}_{-0.036}$   | $0.20261_{-0.027}^{+0.025}$   | 400   |
| SKS                              | $0.00339^{+0.0013}_{-0.0012}$  | $0.00452^{+0.0012}_{-0.0012}$  | 855  | $0.20906^{+0.03}_{-0.034}$  | $0.24763^{+0.025}_{-0.026}$   | 695   |
| FGD                              | $0.00265^{+0.0015}_{-0.0013}$  | $0.0035^{+0.0014}_{-0.0012}$   | 1568   | $0.15901^{+0.017}_{-0.022}$   | $0.18192^{+0.013}_{-0.015}$   | 1177  |
| MMD                              | $0.00216^{+0.0017}_{-0.0011}$  | $0.00308^{+0.0016}_{-0.0011}$  | 13727  | $0.43774_{-0.11}^{+0.11}$   | $0.52451^{+0.09}_{-0.078}$  | 7791  |
| LLR                              | $0.00074^{+0.00046}_{-0.00046}$  | $0.00104^{+0.00045}_{-0.00046}$  | 4854   | -   | -   | -     |
| $\mathcal{U}	ext{-deformation}$  |  |  |  | Timing  |   |       |
| Statistic                        | $\epsilon_{95\%\mathrm{CL}}$   | $\epsilon_{99\%\mathrm{CL}}$   | t (s)  | $t^{\text{null}}$ (s)   |   |       |
| FGD                              | $\begin{array}{ c c c c c c c c c c c c c c c c c c c$   | $0.31558^{+0.021}_{-0.026}$  | 1125   | 1864  |   |       |
| LLR                              | -  | -  | -  | -   |   |       |
| MMD                              | $0.75881^{+0.19}_{-0.19}$  | $\begin{array}{c} 0.90445^{+0.16}_{-0.14} \\ 0.42903^{+0.043}_{-0.048} \\ 0.43998^{+0.044}_{-0.048} \end{array}$   | 9541   | 16275   |   |       |
| SKS                              | $ \begin{array}{c} 0.3622^{+0.049}_{-0.063} \\ 0.37144^{+0.052}_{-0.061} \end{array} $                               | $0.42903^{+0.043}_{-0.048}$  | 663  | 662   |   |       |
| t <sub>SW</sub>                  | $ \begin{array}{c c} 0.37144^{+0.052}_{-0.061} \\ 0.30398^{+0.046}_{-0.065} \end{array} $                            | $0.43998^{+0.044}_{-0.048} \\ 0.35106^{+0.039}_{-0.05}$  | 621  | 350   |   |       |
| KS                               | $\pm 0.30398^{+0.046}$   | $0.35106^{+0.039}$   | 380  | 68  |   |       |