$$\underbrace{\begin{array}{|c|c|} \hline e^{-j\omega\Delta t_i} & 0 \\ \hline 0 & e^{-j\omega\Delta t_k} \\ \hline e^{-j\omega\Delta t_j} & 0 \\ \hline 0 & e^{-j\omega\Delta t_l} \\ \hline \end{array}}_{\boldsymbol{\Gamma}} \cdot \underbrace{\begin{array}{|c|c|c|c|} \hline e^{+j\omega\Delta t_i} & 0 & e^{+j\omega\Delta t_j} & 0 \\ \hline 0 & e^{+j\omega\Delta t_k} & 0 & e^{+j\omega\Delta t_l} \\ \hline \end{array}}_{\boldsymbol{\Gamma}^H} = \underbrace{\begin{array}{|c|c|c|c|} \hline 1 & 0 & e^{-j\omega\Delta t_{ij}} & 0 \\ \hline 0 & 1 & 0 & e^{-j\omega\Delta t_{kl}} \\ \hline e^{-j\omega\Delta t_{ji}} & 0 & 1 & 0 \\ \hline 0 & e^{-j\omega\Delta t_{lk}} & 0 & 1 \\ \hline \end{array}}_{\boldsymbol{\Gamma}\boldsymbol{\Gamma}^H}$$

shot k

(shot l)*