

$$\begin{aligned} \operatorname{Re}[U^{\mu\nu}(\mathbf{p}, q)] &= \operatorname{Re} \left[\int_{-\infty}^{\infty} d\tau R^{\mu\nu}(\tau; \mathbf{p}, \mathbf{q}) e^{-iq_4\tau} \right] \\ &\propto \int_0^{\infty} d\tau [R^{\mu\nu}(\tau; \mathbf{p}, \mathbf{q}) - R^{\mu\nu}(-\tau; \mathbf{p}, \mathbf{q})] \sin(q_4\tau) \end{aligned}$$