Correlation Functions

Quantum:

$$C_{AB}(t) = \operatorname{tr}\left(\hat{A}\,e^{i\hat{H}t}\,\hat{B}\,e^{-i\hat{H}t}\right)$$

Double Herman-Kluk:

$$C_{AB}^{\mathrm{DHK}}(t) = \int \mathrm{d}\Omega_0 \int \mathrm{d}\Omega_0' \left\langle \Omega_0 \left| \hat{A} \right| \Omega_0' \right\rangle \left\langle \Omega_t' \left| \hat{B} \right| \Omega_t \right\rangle \mathcal{C}_t^{\mathrm{HK}} \mathcal{C}_{t'}^{\mathrm{HK}\,*} e^{i\Delta S}$$

Linearized SC-IVR (Classical Wigner):

$$C_{AB}^{\mathrm{LSC}}(t) = \int \mathrm{d}\Omega_0\, A_{\mathrm{W}}(\Omega_0) B_{\mathrm{W}}(\Omega_t)$$

Important Initial Phase Space Distribution