

From [https://en.wikipedia.org/wiki/Interaction\\_picture](https://en.wikipedia.org/wiki/Interaction_picture):

Evolution of:	Picture		
	Heisenberg	Schrödinger	Interaction (Dirac)
Ket state	constant	$ \psi_S(t)\rangle = e^{-iH_S t/\hbar}  \psi_S(0)\rangle$	$ \psi_I(t)\rangle = e^{iH_0, st/\hbar}  \psi_S(t)\rangle$
Observable	$A_H(t) = e^{iH_S t/\hbar} A_S e^{-iH_S t/\hbar}$	constant	$A_I(t) = e^{iH_0, st/\hbar} A_S e^{-iH_0, st/\hbar}$
Density matrix	constant	$\rho_S(t) = e^{-iH_S t/\hbar} \rho_S(0) e^{iH_S t/\hbar}$	$\rho_I(t) = e^{iH_0, st/\hbar} \rho_S(t) e^{-iH_0, st/\hbar}$