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von Neumann measurements: $\sum_i P_i = \mathbb{I}$, $P_i P_j = \delta_{ij} P_i$. Then when measuring ρ_A, it collapses to $\frac{1}{\mathrm{tr}(P_i \rho_A)} P_i \rho_A P_i$. If we measure system C on the state $U_{AC}(|0\rangle\langle 0| \otimes \rho_A)U_{AC}^\dagger$ gives $\mathrm{tr}_C\left(\left(P_i^{(C)} \otimes \mathbb{I}\right) U_{AC}(|0\rangle\langle 0| \otimes \rho_A)U_{AC}^\dagger \left(P_i^{(c)} \otimes \mathbb{I}\right)\right)$

Let $A_0 = \sqrt{\mathbb{I} - \mathrm{d}t \sum_i L_i^\dagger L_i}$, $\{L_i\}$ are Limdblod operators, $A_i = \sqrt{\mathrm{d}t} L_i$. This gives

$$\frac{\mathrm{d}\rho}{\mathrm{d}t} = i[H, \rho] + \sum_i L_i \rho L_i^\dagger - \frac{1}{2} \sum_i \left(L_i^\dagger L_i \rho + \rho L_i^\dagger L_i\right).$$

Ky-Fan principle for Hermitian matrices: $\lambda_1 = \max_{P_1} \mathrm{tr}(P_1 \rho) = \max_{|\psi\rangle} \langle \psi | \rho | \psi \rangle$, $\lambda_1 + \lambda_2 = \max_{P_2} \mathrm{tr}(P_2 \rho)$, $\lambda_1 + \lambda_2 + \lambda_3 = \max_{P_3} \mathrm{tr}(P_3 \rho)$. P_i are projectors.