$H = \chi a^\dagger a \sigma_z$.

$U(t) = e^{-iHt} = \begin{cases} e^{-i\chi a^\dagger a t} & \sigma_z = +1 \\ e^{+i\chi a^\dagger a t} & \sigma_z = -1 \end{cases}$

SNR은 time이 커질 수록.

SNR = measurement rate × time,

$\overline{n}_{meas}$: QND measurement 한 coh, order of unity

QND fidelity : 1st measurement 와 2nd measurement 사이 fidelity 측정.

bifurcation readout 등과 비교해 readout 개념!