

# Wigner-Weisskopf for to atomer og fri vakuum

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Følger Deutsch' udledning.<sup>1</sup>

$$\hat{H} = 2\pi\gamma_{NV}S_zB_z = \pi\hbar\gamma_{NV}B_z \begin{pmatrix} 1 & 0 \\ 0 & -1 \end{pmatrix} \quad (1)$$

Eigenstates:  $|0\rangle, |1\rangle$

$$\hat{H} = 2\pi\gamma_{NV}(S_zB_z + S_xB_x) = \pi\hbar\gamma_{NV} \left[ B_z \begin{pmatrix} 1 & 0 \\ 0 & -1 \end{pmatrix} + B_x \begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix} \right] \quad (2)$$

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<sup>1</sup>Deutsch - Spontaneous Emission: Wigner-Weisskopf Theory