

$$|S_0\rangle \rightarrow \begin{pmatrix} 0 \\ 1 \\ 0 \end{pmatrix}, E=0 \quad (1)$$

$$|S\rangle \rightarrow \frac{1}{\sqrt{2}} \begin{pmatrix} 1 \\ 0 \\ 1 \end{pmatrix}, E=1 \quad |A\rangle \rightarrow \frac{1}{\sqrt{2}} \begin{pmatrix} 1 \\ 0 \\ -1 \end{pmatrix}, E=-1$$

$$H = \begin{pmatrix} u & \sqrt{2}c & 0 \\ \sqrt{2}c & 1 & 0 \\ 0 & 0 & -1 \end{pmatrix} \quad (2)$$

$$E_0 = -1 \quad |E_0\rangle = |A\rangle \rightarrow \frac{1}{\sqrt{2}} \begin{pmatrix} 1 \\ 0 \\ -1 \end{pmatrix} \quad (3) + (d)$$

$$E_1 = 1 + \sqrt{2}c \quad |E_1\rangle = \frac{1}{\sqrt{2}} (|S_0\rangle + |S\rangle) \rightarrow \begin{pmatrix} 1/2 \\ 1/\sqrt{2} \\ 1/2 \end{pmatrix}$$

$$E_2 = 1 - \sqrt{2}c \quad |E_2\rangle = \frac{1}{\sqrt{2}} (|S_0\rangle - |S\rangle) \rightarrow \begin{pmatrix} 1/2 \\ -1/\sqrt{2} \\ 1/2 \end{pmatrix}$$

$$|-1\rangle = \frac{1}{\sqrt{2}} |E_0\rangle + \frac{1}{2} |E_1\rangle + \frac{1}{2} |E_2\rangle \quad (7)$$

$$|\psi(t)\rangle = \frac{1}{\sqrt{2}} e^{-iE_0 t} |E_0\rangle + \frac{1}{2} e^{-iE_1 t} |E_1\rangle + \frac{1}{2} e^{-iE_2 t} |E_2\rangle$$

$$\langle 0 | \psi(t) \rangle = \frac{1}{2\sqrt{2}} (e^{-iE_1 t} - e^{-iE_2 t})$$

$$p(t) = \frac{1}{2} \sin^2(\sqrt{2} c t)$$

• σ_0/c לה ההתנהגות (1)