Wednesday, June 15, 2016 10:38 PM

$\chi(t)$ : plug $\theta = \pi$ into Equation (3)

$$|\chi(t)\rangle = \begin{bmatrix} \chi_+(t) \\ \chi_-(t) \end{bmatrix} \quad ; |\chi(0)\rangle = \begin{bmatrix} \chi_+(0) \\ \chi_-(0) \end{bmatrix} = \begin{bmatrix} 1 \\ 0 \\ 0 \\ 1 \end{bmatrix} ?$$

$$F = |\langle \chi(t) | \chi_+(0) \rangle|$$

$$\stackrel{?}{=} \left| \begin{bmatrix} \chi_+^*(t) & \chi_-^*(t) \end{bmatrix} \begin{bmatrix} 1 \\ 0 \end{bmatrix} \right| \quad \text{is this true?}$$

$$\stackrel{?}{=} |\chi_+^*(t)|$$

$$\stackrel{?}{=} ||\chi_+(t)|| \quad \text{is this true?}$$