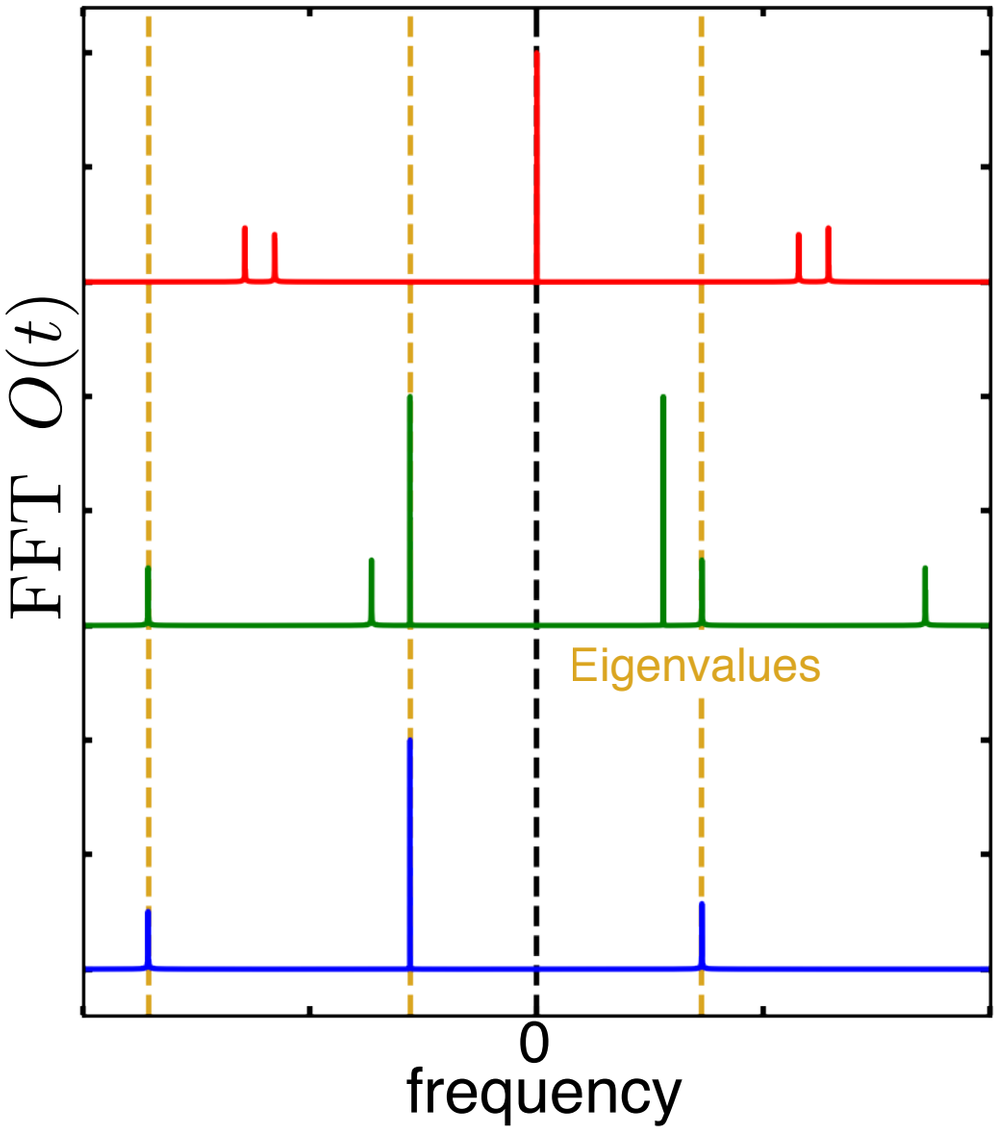

$\lvert\psi_0\rangle$	$\hat{O}$
$\lvert 001\rangle$	$\hat{\sigma^z} = \begin{bmatrix} 1 & 0 \\ 0 & -1 \end{bmatrix}$
$\frac{\lvert 000\rangle + \lvert 001\rangle}{\sqrt{2}}$	$\hat{\sigma}_1^x = \begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$
$\frac{\lvert 000\rangle + \lvert 001\rangle}{\sqrt{2}}$	$\frac{\hat{\sigma}^x + i\hat{\sigma}^y}{2} = \begin{bmatrix} 0 & 1 \\ 0 & 0 \end{bmatrix}$