

Logical Subspace

$$\hat{b}_1 = \sum_{n=1}^{\infty} \sqrt{n} |n-1\rangle \langle n|$$

$|0\rangle, |1\rangle$ — logical subspace

embedded in larger Hilbert space,

$|0\rangle, |1\rangle, |2\rangle, |3\rangle, \dots$ (truncate)