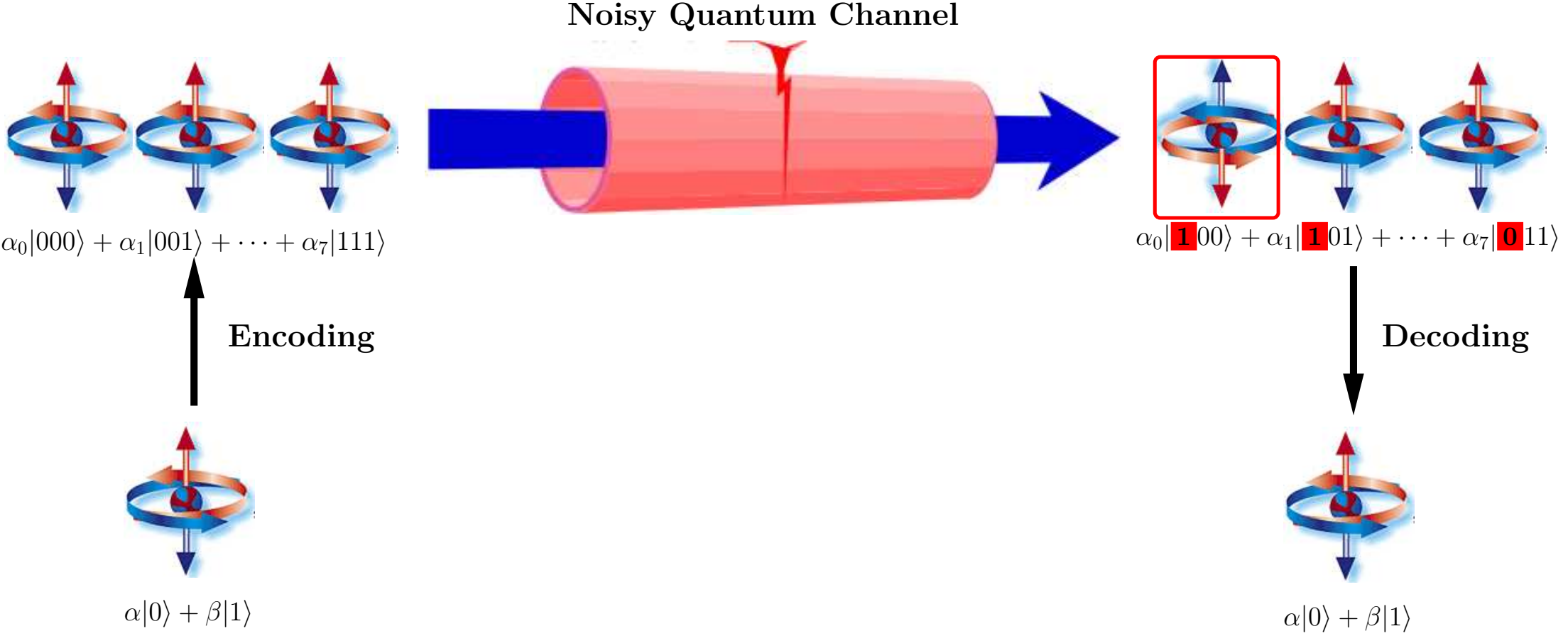
Noisy Quantum Channel
$\alpha_0|000\rangle + \alpha_1|001\rangle + \cdots + \alpha_7|111\rangle$
Encoding
$\alpha|0\rangle + \beta|1\rangle$
$\alpha_0|100\rangle + \alpha_1|101\rangle + \cdots + \alpha_7|011\rangle$
Decoding
$\alpha|0\rangle + \beta|1\rangle$