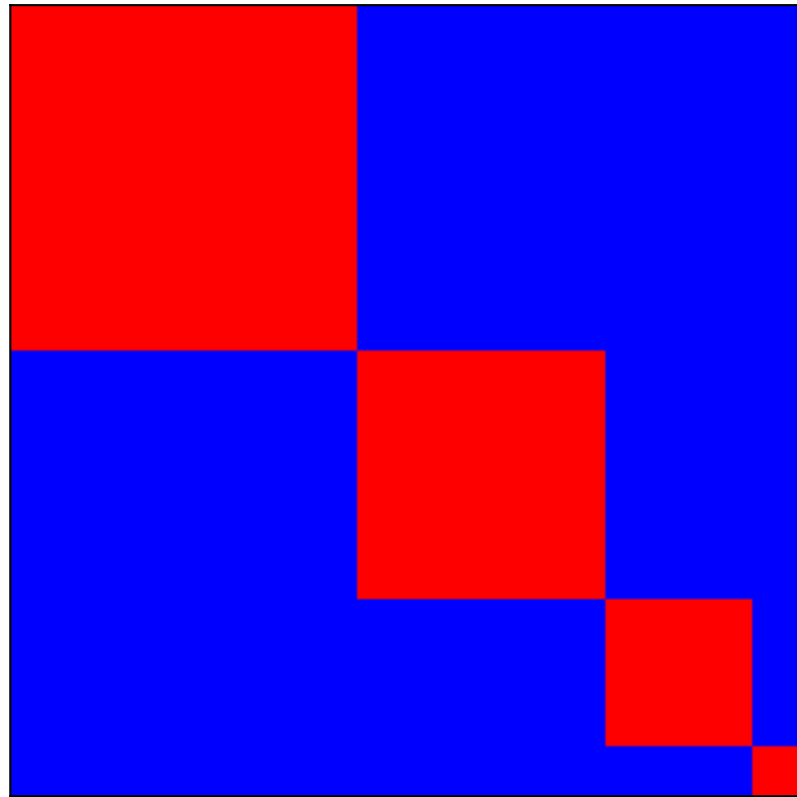
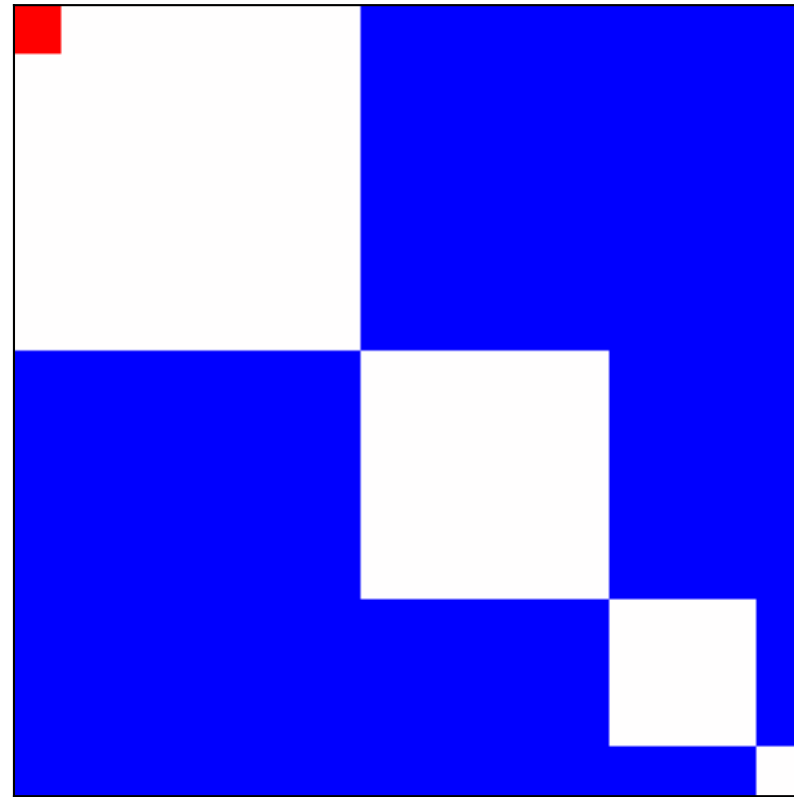


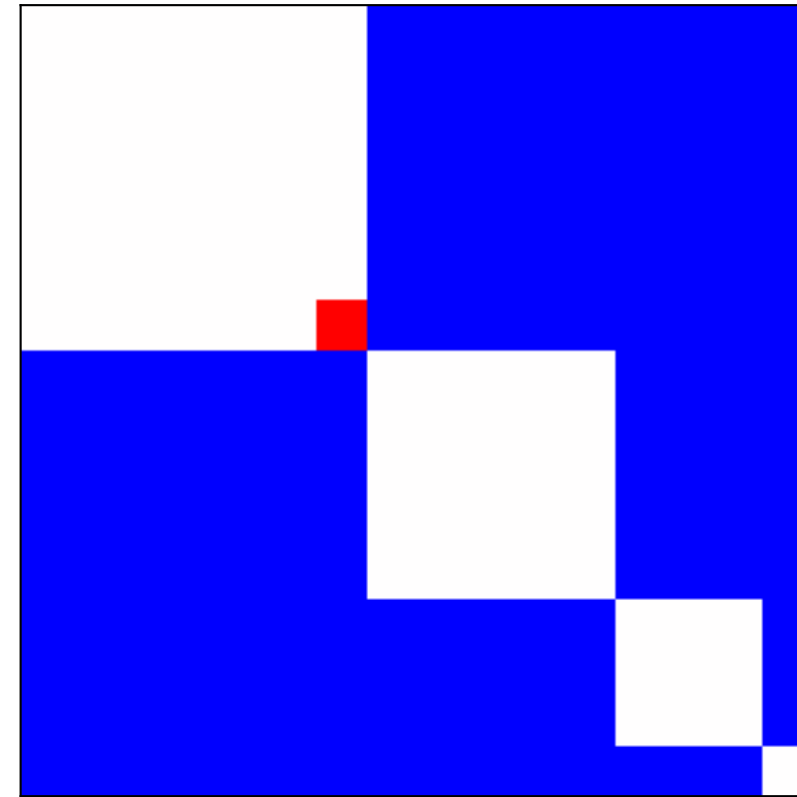
$$\rho = \sum_{j,m,m'} |j, m\rangle \langle j, m'|$$



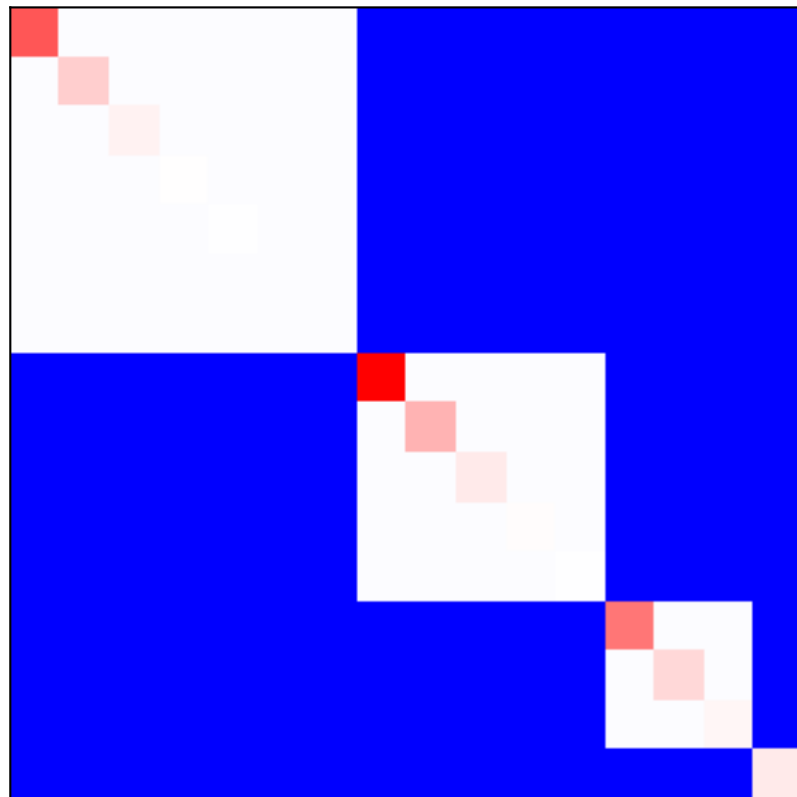
$$\text{Fully excited state, } |\frac{N}{2}, \frac{N}{2}\rangle \langle \frac{N}{2}, \frac{N}{2}|$$



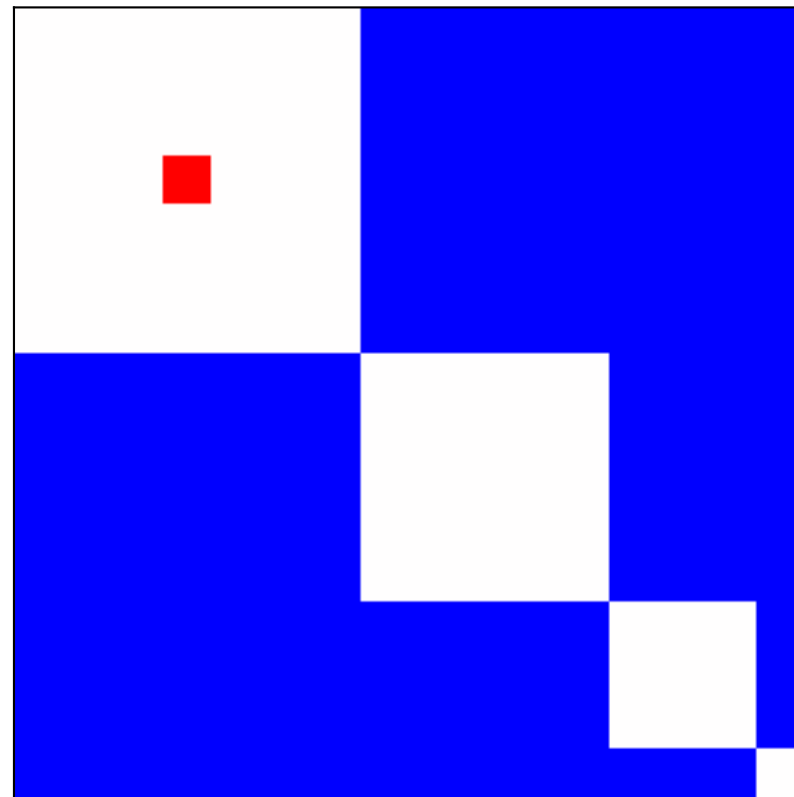
$$\text{Ground state, } |\frac{N}{2}, -\frac{N}{2}\rangle \langle \frac{N}{2}, -\frac{N}{2}|$$



$$\text{Steady state, } H = J_z, \gamma_{\downarrow} = 0.3\gamma_{\uparrow}$$



$$\text{Superradiant state, } |\frac{N}{2}, 0\rangle \langle \frac{N}{2}, 0|$$



$$\text{Subradiant state, } |0, 0\rangle \langle 0, 0|$$

