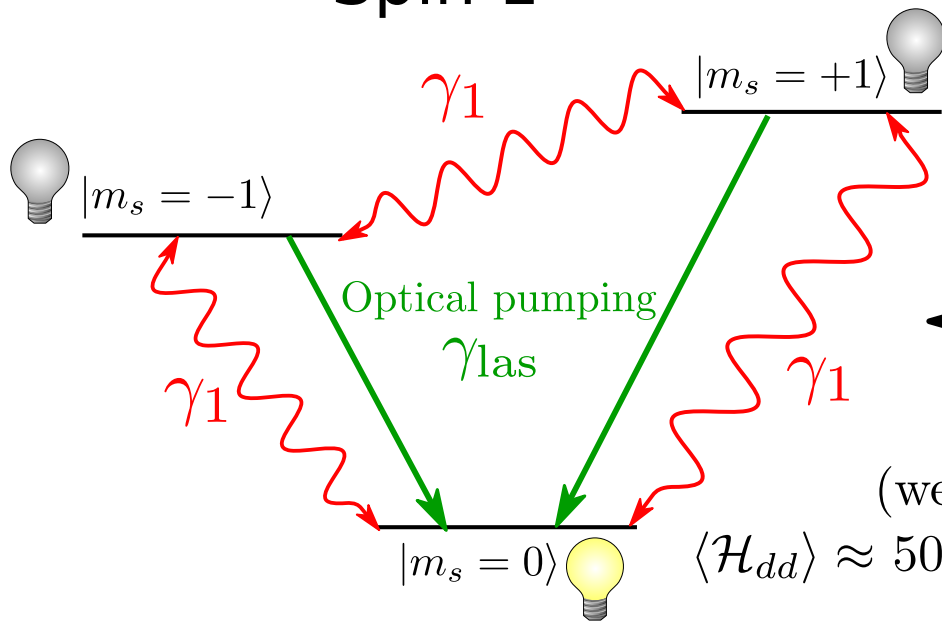
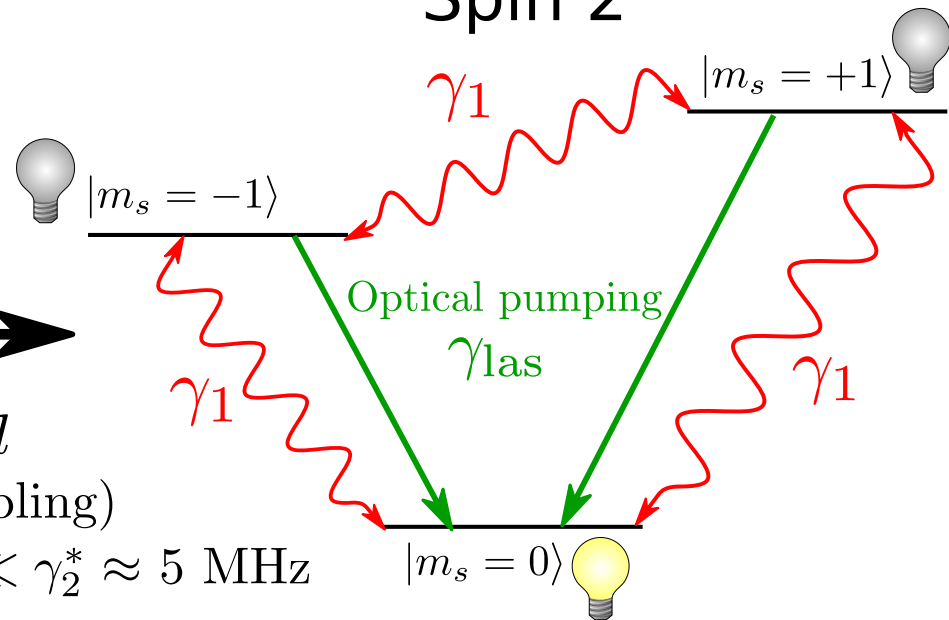


# Homogeneous case

Spin 1



Spin 2



$\mathcal{H}_{dd}$

(weak coupling)

$$\langle \mathcal{H}_{dd} \rangle \approx 50 \text{ KHz} \ll \gamma_2^* \approx 5 \text{ MHz}$$

Flip-flop processes ( $|-1; 0\rangle \rightarrow |0; -1\rangle$ ) preserve the spin population in  $|0\rangle$

→ Dipolar coupling does not modify the ensemble spin lifetime