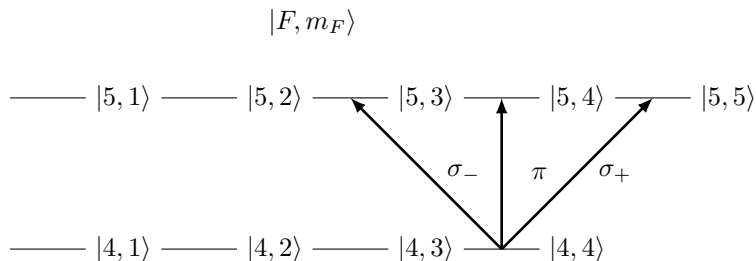
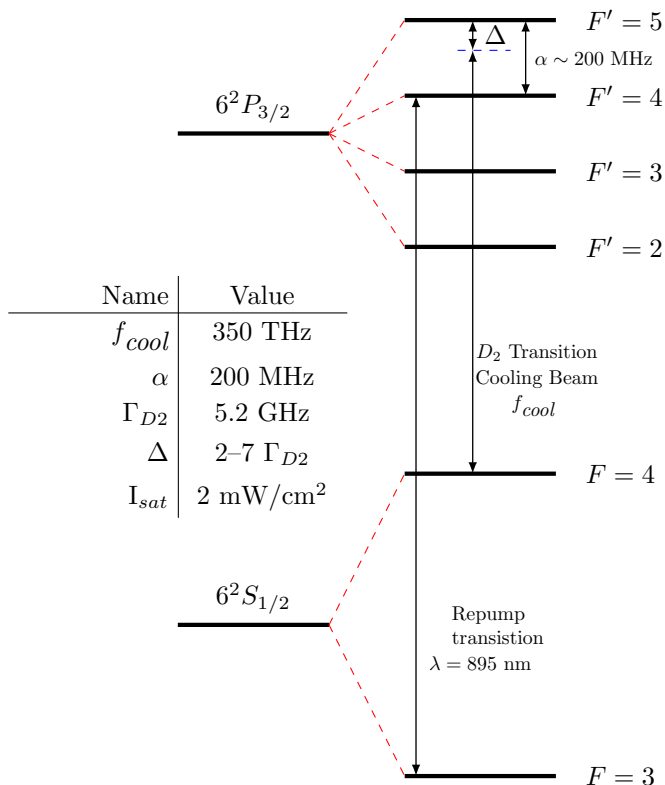


Level diagram layout for repump laser for Cs Cooling



σ_+ from $|4, 4\rangle$ to $|5, 5\rangle$ is cyclic due to selection rules

π Transition rate from $F=4$ to $F'=4$ not completely zero.

Now $F' = 4$ can decay into $F = 3$

Repumper puts $F = 3$ back in $F' = 4$ so that cooling can continue