The transition we’re driving is 4s\_{1/2}, F=1 to 5p\_{3/2}, F = {0,1,2} (3 not allowed, of course)

We’re looking for evidence of quantum beats (be it from the superposition of the 5p |F> states or from Zeeman hyperfine).

To find evidence of quantum beats due to the superposition of the |F> states, we shorten the 405 nm pulse from 1 microsec to 0.5 microsec. By doing this, we increase the spectrum of the driving field (c.f. Uncertainty principle), and hopefully be able to excite a range of |F> states where F = {0,1,2}.

To look for Zeeman beating, we can change the MOT current. We’ll do this later.