

We're planning to add red opsins to our 2p rig, we'd like to image gcamp, plus a red indicator while illuminating red opsins

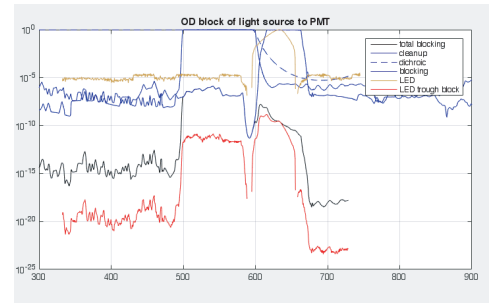
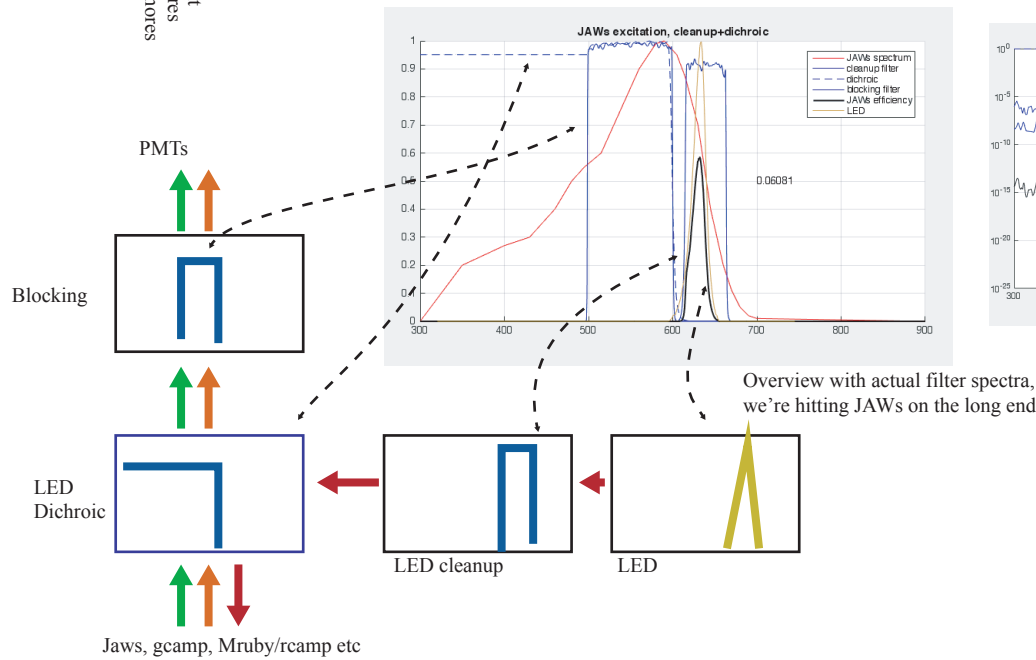
The scheme we came up with is to separate the red illumination into the far red, and image near red.

The main issues i'm seeing with this are

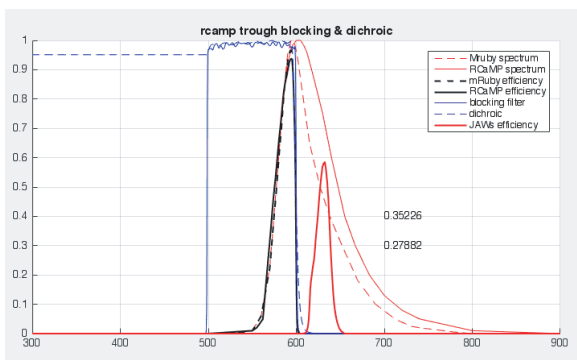
1- we're losing a bunch of red imaging power through the filter

2- we're going to have to crank up the led power a bit to get effects, so the filtering from led to the red pmt needs to be good - i'm getting good numbers on paper, but the led is gonna give a bunch of non collimated light, so maybe enough will sneak through to cause issues?

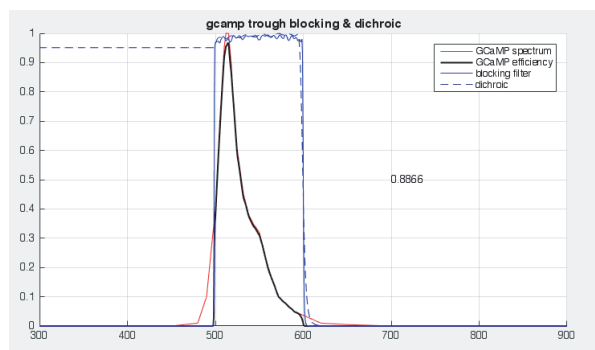
as plan b we're also gonna get gated pmts, but it might be nice to be able to do this with filters



log plot of attenuation, multiplied together the filters(black) and then the led spectrum(red). looks like we're getting OD6ish blocking from the LED



We're hitting jaws on the long end, but we're still seeing red mruby or rcamp etc on the short side, with about 30% of light making it up - maybe that's too little?



~90% of green light makes it to pmt in this scheme