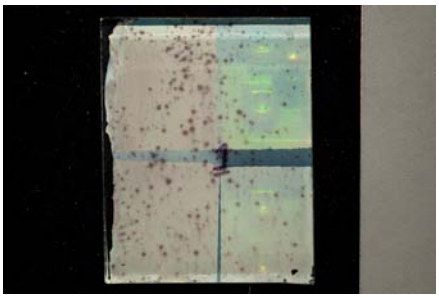
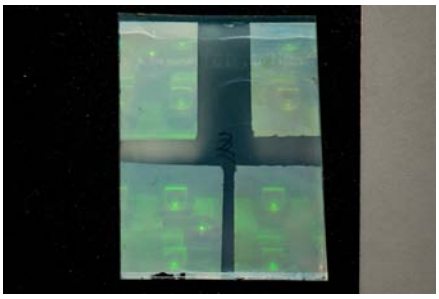
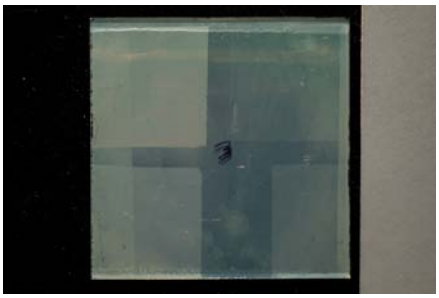


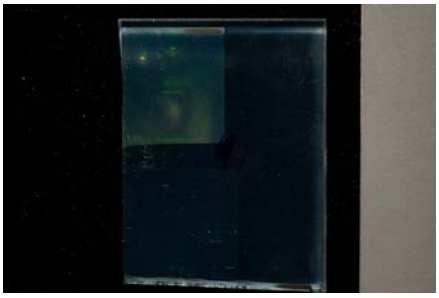
#1: Harman Red, 5, 10, 20, 40 second exposures, for 200, 400, 800, 1600 μJ/cm^2. 2' Kodak D-8 at 72F, PBQ-2 bleach. Green shifted replay, 200 looked best as higher expos were very noisy, plus undissolved chunks of PBQ left spots all over. Mixed classic Fe EDTA bleach for all the rest of the tests.



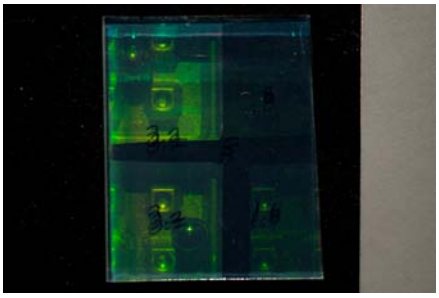
#2: Harman Red, 50, 100, 200, 400, 5' D-8, green replay, very milky.



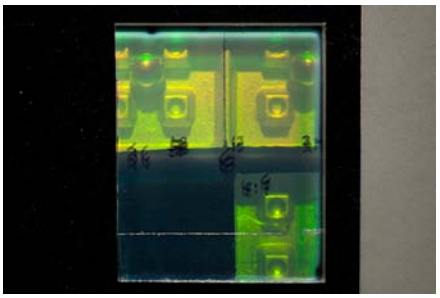
#3: BB640, 50, 100, 200, 400, 5' D-8, no image at all except for highlight on ball bearing in 400. I thought that this was the way I had been doing things previously.



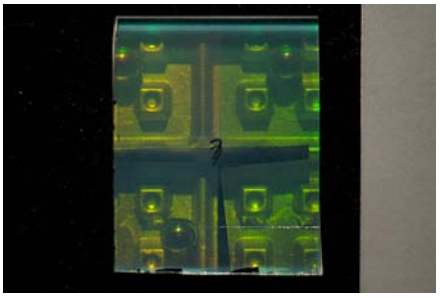
#4: Harman Red, dropped expos down to 4, 8, 16 and 32 μJ/cm^2, 5' D-8, only the 32 had an image, so we found the threshold, however this was green shifted.



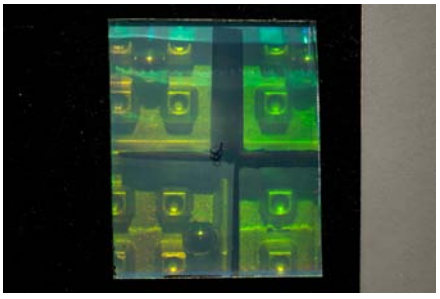
#5: Harman Red, 32, 64, hiccupped and did 128 μJ/cm^2 twice, screwed up with the blocker card, 1' D-8. The latter seemed to be going in the right direction, although still green.



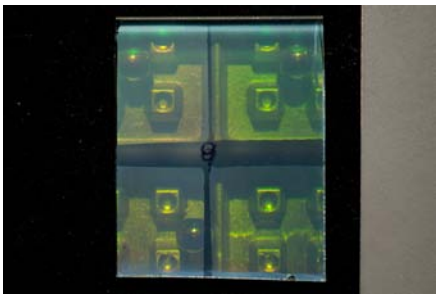
#6: Harman Red, 125, 250, 500, 1000 μJ/cm^2. The 125 is hidden under a misplaced 500, but the 250, 500 and 1000 are decently bright but noisy and yellowy green.



#7: Harman Red, 500, 1000, 2000 and 4000 μJ/cm^2, 30” D-8

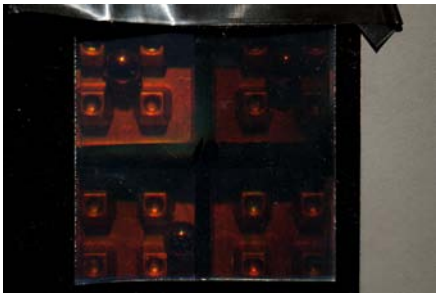


#8: Harman Red, 500, 1000, 2000 and 4000 μJ/cm^2, 1’ D-8

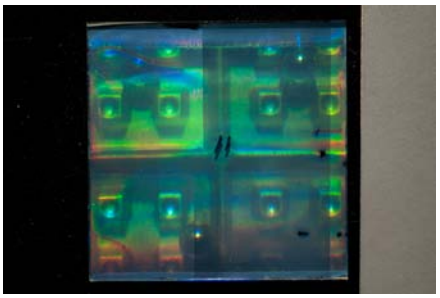


#9: Harman Red, 500, 1000, 2000 and 4000 μJ/cm^2, 2’ D-8

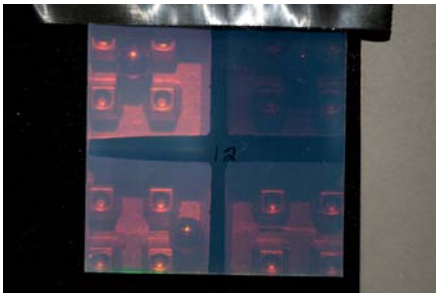
#7 has some images, but none are exceptionally bright. The best one on #8 is the shortest one, 500 μJ/cm^2, which is better than anything on the 2’ developed on, #9, again its best is the shortest. If I were to pick the best expo it would be the 500 on the 1’ development. Or maybe all are over-exposed and over-developed? Might be an avenue to retry.



#10 BB-640, 500, 1000, 2000 and 4000 μJ/cm^2, is same expo series, no activation or whatever you want to call it, 1’ D-8. The longest expo is the best, not much color shift if at all since I can get real time fringes, decent S/N, but doesn’t pop like it should.

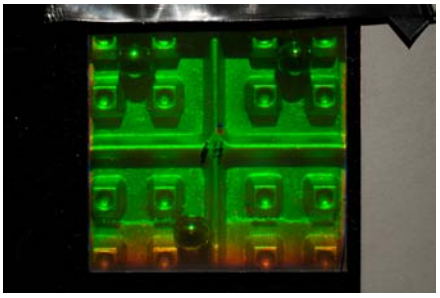


#11: Sphere-S, 500, 1000, 2000 and 4000 μJ/cm^2, 1' D-8. Bright, but not very, color is randomly shifted all over the place, maybe because of handling during a long time drying (like hours).

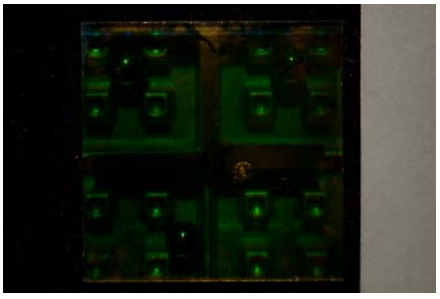


#12: PFG-01, 50, 100, 200, 400 μJ/cm^2. 1' D-8. Looks like you would expect it to, 200 the brightest, 400 about the same brightness but noisier. Also got real time fringes.

#13: Harman Red, 500, 1000, 2000, 4000 μJ/cm^2, GP-2 15', dim blue reconstruction.

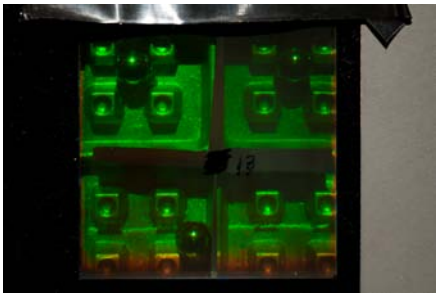


#14: Sphere-S, 500, 1000, quadrant card fell during the 2000 μJ/cm^2 exposure, so this plate in GP-2 15', got an overall exposure of that dosage, and it came out with a very nice and clean image, green however, except at the edges, which may have been caused by leaving it in the rack during drying. Could fixing cause the shrinking?

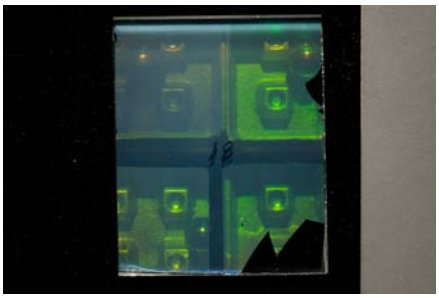


#15: 500, 1000, 2000, 4000 μJ/cm^2, BB-640 activated, GP-2 15', dim green image.

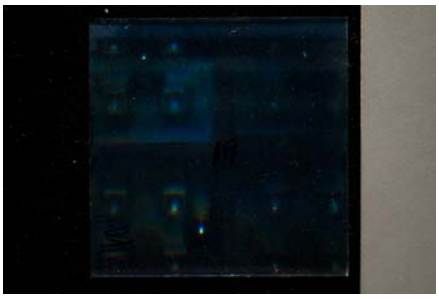
#16: 500, 1000, 2000, 4000 μJ/cm^2, erased PFG-03M, GP-2 15', the longest expo was the only one with a decent image, but it was dim. There was an overall haze, maybe these plates are too old and/or the erasing bath is causing the problem. Also when looking at the emulsion side there is that chirped effect where the replay color is sort of silvery purple for lack of a better word. (Should have photographed this.)



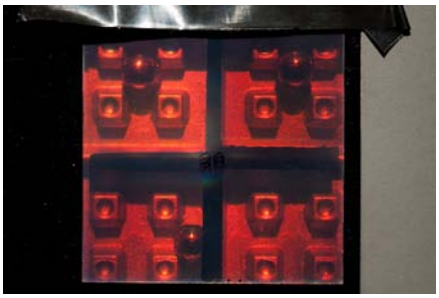
#17: 500, 1000, 2000, 4000 μJ/cm^2, Sphere-S, GP-2 15', expo series properly done this time, nice and bright and low noise, however it was green! Do we need a different fixer that doesn't harden and shrink things? This one also had a different color on the emulsion side.



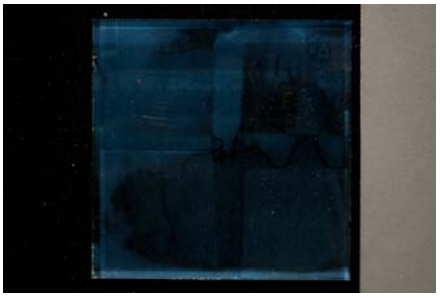
#18: Harman Red, 500, 1000, 2000, 4000 μJ/cm^2, 1' D-8, 500 was brightest, but a bit noisy, but worst of all, it was green! Coating a little raggedy at edges.



#19: PFG-03M, 500, 1000, 2000, 4000 μJ/cm^2, 1' D-8, dim blue reconstruction, evidently not the way to go with this material, but had to try it!

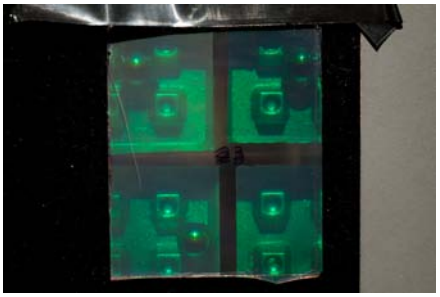


#20: BB-640 activated, 500, 1000, 2000, 4000 μJ/cm^2, 1' D-8, if they all could be like this! Bright, low noise red reconstruction that could yield real-time fringes when replaced onto object holder! Which is a surprise, since I always thought that there was a bit of shrinkage with D-8 and like using the BB pyro developer for perfect wavelength match. But I'm not going to complain much!

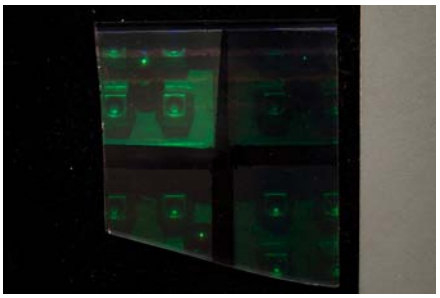


#21: Sphere-S, 500, 1000, 2000, 4000 μJ/cm^2, 1' D-8, took the emulsion clean off!

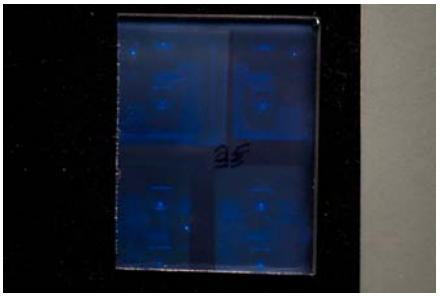
#22: Sphere-S wants 3000 μJ/cm^2 at 515 nm, close enough to what I am shooting at, 532 nm. But forgot to change polarization for the green, so gave two 1500 expos, one right one wrong polarization vector alignment, plus a 3000 and 6000 dose, but it was all moot, since the 1' in D-8 cleaned the emulsion off just like #21! (No picture.)



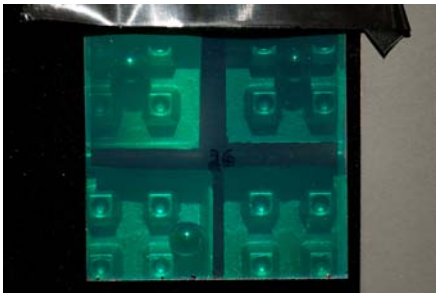
#23: Activated BB-520, 500, 1000, 2000, 4000 μJ/cm^2 at 532 nm, 1' D-8, 500 or 1000 looks great, 500 a little less noisy, laser green replay, only problem is that the sensitizing dye stays behind.



#24: Non-activated BB-520, 500, 1000, 2000, 4000 μJ/cm^2 at 532 nm, 1' D-8, the 4000 is the best, but still not as good as any of the above. Evidently the activator is extremely important.

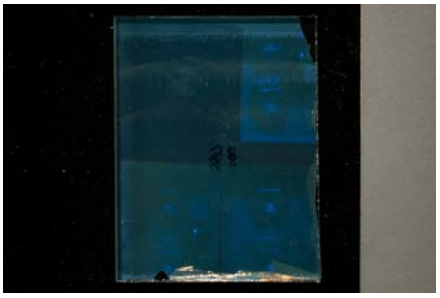


#25: Harman Green, 500, 1000, 2000, 4000 μJ/cm^2 at 532 nm, 1' D-8, dim blue reconstruction, it too has sensitizing dye residue.



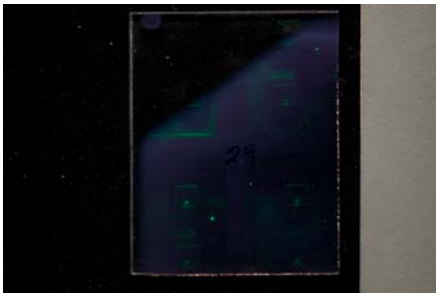
#26: Activated BB-640, 500, 1000, 2000, 4000 μJ/cm^2 at 532 nm, 1' D-8, a twin to #23 except that its brightness peaks at 2000! One or two stops difference, and when you look at their spectral sensitivity/absorption curve it bears that out! This means 5 color holography is possible in my lab! (R, O, Y, G, and K)

#27: Sphere-S, 2000, 4000, 8000 μJ/cm^2, 1' D-8, another D-8 disaster. Oh well! (No picture)

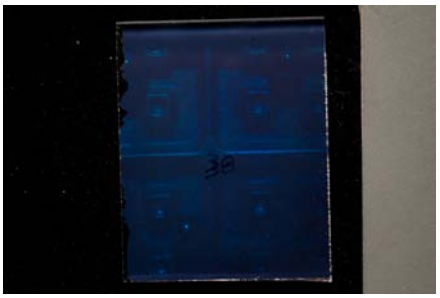


#28: Harman Red, 3000, 6000, 12000, μJ/cm^2 1' D-8, like #25, a dim blue reconstruction.

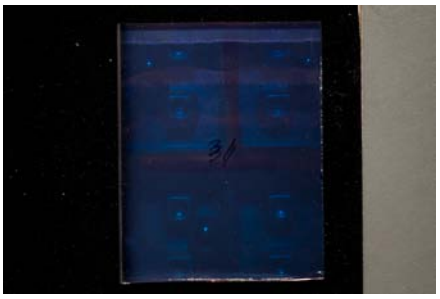
Received word that the LaserSmith was using what he called TJ-1, a metol/ascorbine brew, actually an old BB or Jeff Blyth formulation. I didn't want to mix that up right away, since I had some SM-6 mixed up which had been recommended to me by Stas at Geola for the Sphere-S plates, so I tried that on the following.



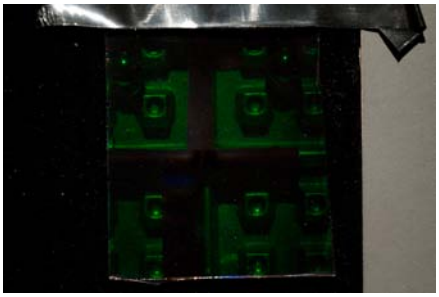
#29: If there was a big improvement for BB plates by activating them in Photo-Flo, why wouldn't the Harman products benefit? 500, 1000, 2000, 4000 μJ/cm^2 at 532 nm, 1' in SM-6. Dim green reconstruction, plus coating edge.



#30: Harman Green, non-activated, 500, 1000, but quadrant blocker fell off during 2000 μJ/cm^2 at 532 nm so there is an overall expo, 1' in SM-6. Dim blue reconstruction.



#31: Harman Green, non-activated, 500, 1000, 2000, 4000 μJ/cm^2 @ 532 nm, 1' in SM-6, dim blue reconstruction.



#32: Activated BB-520, 500, 1000, 2000, 4000 μJ/cm^2 at 532 nm, 1' in SM-6, not as bright as #24, with a different green color, but it is less noisy. I was always convinced (since I am the discoverer of SM-6) that it is not suitable for CW holography, only pulsed.

#33: Sphere-S, 500, 1000, 2000, 4000 μJ/cm^2 at 532 nm, 1' in SM-6. Stas recommended this developer for this material, however the plate was totally blank. The emulsion didn't come off this time, it was just blank. Maybe it was totally over-developed?