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Title: Summary of May 21st and 22nd Shear Campaign

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Summary of May 21st and 22nd Shear Campaign

Goals and Summary

- Principal Campaign Objectives:
  - *Measure mix widths in the counter-propagating shear campaign*
  - *Measure 2D structure evolution of the surface of the tracer layer*

- Secondary Operational Objectives:
  - Improve the long duration BL signal balance and test the 3-slit arrangement with the SMP
  - Platform development of a streaked record of the plan view 2D structure evolution
  - Test the effects of enhanced initial surface roughening on the mix-width evolution

Summary

- We have streaked imaging of both smooth and roughened foils in both Ti and Al at both early and late times. Further work will be needed to check if the signal is strong enough on all shots to extract reliable mix-widths.
- The initial test of the 3 slit streaked imaging setup was unsuccessful. Streaked images of a driven shots using the slit on the target resulted in low signal, while un-driven shots showed much higher signals. The working hypothesis is that the signal dropped due to slit closure on the target; the successful NIF setup used a much wider slit, on the order of 100 um instead of 20 um.
    - We were able to get good streak data by switching back to a 20 um pinhole at the front of the SSCA and removing the slits from the targets.
    - To obtain the best late-time streak data we had to overlap the two TIM4 BL groups (on the BL driver).
- We have sets of plan view radiographs for at least three different times for both smooth and roughened foils in both Ti and Al.
    - There are visually identifiable difference between the plan view radiographs of the smooth and enhanced roughened foils. The enhanced roughening is apparent in the plan view images at early times and seems to persist as the dominant structure scale into late times.
- We have several streaked plan view images. Further analysis will be required to determine if this can be turned into a viable platform for turbulence studies.
    - Signal strength on the Al streaked plan view looks promising.

Overviews

Shot Overview

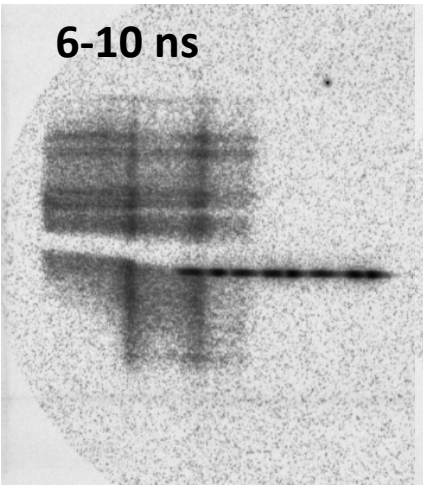
Shot	Time	Date	RID	name	main target i.d.	TIM4 BL i.d.	Streak Timing		Plan View timing
73480	8:49 AM	5/21	48863	zero interstrip	NA	NA	BL characterization/no drive		
73481	9:15 AM	5/21	48819	no drive (leftover)	1Red/1Silver	1White	BL characterization/no drive		
73482	10:20 AM	5/21	47511	fiducial	1Purple	2White	BL characterization/no drive		
73483	11:32 AM	5/21	48870	Al, EH	1Red/1White	3White	BL characterization/no drive		
73484	12:25 PM	5/21	47483	Al, smooth	4Red/2Blue	6White	6-8 ns	12-14 ns	14 ns
73485	1:15 PM	5/21	48833	Al, EH	1Red/4White	7White	6-8 ns	12-14 ns	14 ns
73486	2:05 PM	5/21	47885	Al, EH, rot	1Gold/2White	8White	6-8 ns	12-14 ns	12 ns
73487	3:20 PM	5/21	48834	Ti, smooth	5Red/4Blue	1Pink	6-8 ns	12-14 ns	14 ns
73490	4:23 PM	5/21	48835	Ti, EH	2Red/1Blue	2Pink	6-8 ns	12-14 ns	14 ns
73491	5:19 PM	5/21	48836	Ti, EH, rot	2Gold/2Pink	1Blue	6-8 ns	12-14 ns	12 ns
73493	6:05 PM	5/21	48875	fiducial	2Purple	9White	BL characterization/no drive		
73494	6:49 PM	5/21	48837	Al, smooth	4Red/1Blue	11White	6-8 ns	8-10 ns	12 ns
73496	7:54 PM	5/21	48838	Al, EH	1Red/2White	12White	6-8 ns	8-10 ns	12 ns
73503	9:39 AM	5/22	48839	Ti, smooth	5Red/2Blue	3Pink	6-8 ns	8-10 ns	12 ns
73504	10:29 AM	5/22	48840	Ti, EH	2Red/2Blue	5Pink	6-8 ns	8-10 ns	12 ns
73505	11:16 AM	5/22	48849	Ti, EH	2Red/3Blue	7Pink	6-8 ns	12-14 ns	16 ns
73506	12:14 PM	5/22	48850	Al, smooth	4Red/3Blue	13White	6-8 ns	12-14 ns	16 ns
73508	1:10 PM	5/22	48851	Al, EH	1Red/3White	4White	6-8 ns	12-14 ns	16 ns
73509	2:01 PM	5/22	48852	Ti, smooth	5Red/3Blue	6Pink	6-8 ns	12-14 ns	16 ns
73510	3:04 PM	5/22	48844	Al, smooth	1Red/5White	14White	6-8 ns	10-11 ns	10 ns
73512	3:56 PM	5/22	48845	Al, EH	5Red/1Blue	9Pink	6-8 ns	10-11 ns	10 ns
73513	4:45 PM	5/22	48846	Ti, smooth	2Red/4Blue	8Pink	6-8 ns	10-11 ns	10 ns
73514	5:35 PM	5/22	48847	Ti, EH	1Gold/1White	5White	6-8 ns	10-11ns	10 ns
73515	6:23 PM	5/22	48841	Ti, smooth, rot	3Gold/2Pink	3Blue	6-8 ns	12-13 ns	12 ns
73516	7:10 PM	5/22	48842	Ti, EH, rot	2Gold/1Pink	4Blue	6-8 ns	12-13 ns	12 ns
73518	7:59 PM	5/22	49055	Al, EH, rot	1Gold/1White	5White	6-8 ns	12-13 ns	14 ns

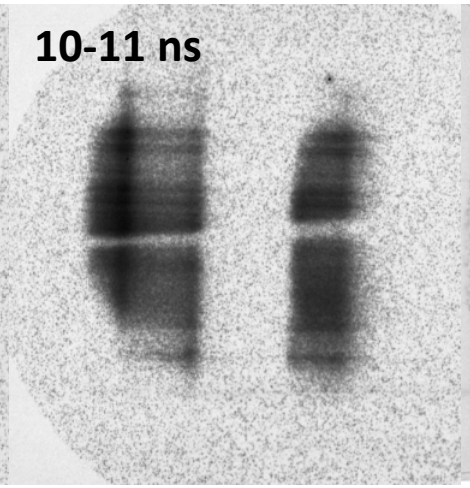
Shot Overview

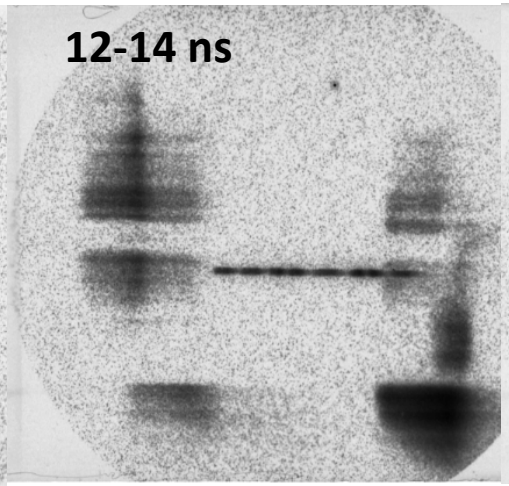
Shot	RID	name	Streak Timing		Data?	Plan View timing	Data?	Notes
73480	48863	zero interstrip	BL characterization/no drive					
73481	48819	no drive (leftover)	BL characterization/no drive					
73482	47511	fiducial	BL characterization/no drive					SSCA repointed 250um up
73483	48870	Al, EH	BL characterization/no drive					
73484	47483	Al, smooth	6-8 ns	12-14 ns	Y	14 ns	Y	T4 BL late and T4 FrL late changed to f = -4 mm
73485	48833	Al, EH	6-8 ns	12-14 ns	Y	14 ns	Y	Moved center of streak sweep +2 ns, No LAPC
73486	47885	Al, EH, rot	6-8 ns	12-14 ns	N	12 ns	Y	No SSCA data, software error
73487	48834	Ti, smooth	6-8 ns	12-14 ns	N	14 ns	Y	No SSCA data, software error; Switched to SFC2/No SFC2 data, wrong filter
73490	48835	Ti, EH	6-8 ns	12-14 ns	Y	14 ns	Y	No fiducial beams 47 and 53 from here on out; +200 ps to XRFC1 timing
73491	48836	Ti, EH, rot	6-8 ns	12-14 ns	Y	12 ns	Y	+100 ps to XRFC1 timing
73493	48875	fiducial	BL characterization/no drive					
73494	48837	Al, smooth	6-8 ns	8-10 ns	Y	12 ns	Y	Removed slit, switched to 20 um pinhole in front in SSCA; SSCA timing - 2ns; SFC2 offset timing = 13 ns, interstrip timings are 0ns, 1ns, 2ns, 3ns, bias = 0 V, 20 um pinholes (previously 8 um)
73496	48838	Al, EH	6-8 ns	8-10 ns	Y	12 ns	Y	SFC2 offset = 9.5 ns; All TIM4 beams to f = -3.5 mm
73503	48839	Ti, smooth	6-8 ns	8-10 ns	Y	12 ns	Y	+0.25 ns to BL driver; -1 ns to SSCA offset; moved SSCA UV fiducials + 2 ns; all TIM4 beams @f = -4mm; 20 um pinhole in SSCA front
73504	48840	Ti, EH	6-8 ns	8-10 ns	Y	12 ns	Y	
73505	48849	Ti, EH	6-8 ns	12-14 ns	Y	16 ns	N	SSCA repointed 100um down, signal low/blast shield needed changing; timing change propagation mistake, no plan view
73506	48850	Al, smooth	6-8 ns	12-14 ns	Y	16 ns	Y	reduced the focus on the TIM4 BL late beams to try to bring up the late-time signal
73508	48851	Al, EH	6-8 ns	12-14 ns	Y	16 ns	Y	
73509	48852	Ti, smooth	6-8 ns	12-14 ns	Y	16 ns	Y	
73510	48844	Al, smooth	6-8 ns	10-11 ns	Y	10 ns	N	moved the two BL driver TIM4 beam groups to the same time; turned off SSCA UV fiducial; XRFC3 triggered early
73512	48845	Al, EH	6-8 ns	10-11 ns	N	10 ns	Y	No SSCA data, film accidently exposed during development
73513	48846	Ti, smooth	6-8 ns	10-11 ns	Y	10 ns	Y	
73514	48847	Ti, EH	6-8 ns	10-11 ns	Y	10 ns	Y	
73515	48841	Ti, smooth, rot	6-8 ns	12-13 ns	Y	12 ns	Y	
73516	48842	Ti, EH, rot	6-8 ns	12-13 ns	N	12 ns	N	No TIM based diagnostics fired
73518	49055	Al, EH, rot	6-8 ns	12-13 ns	Y	14 ns	Y	

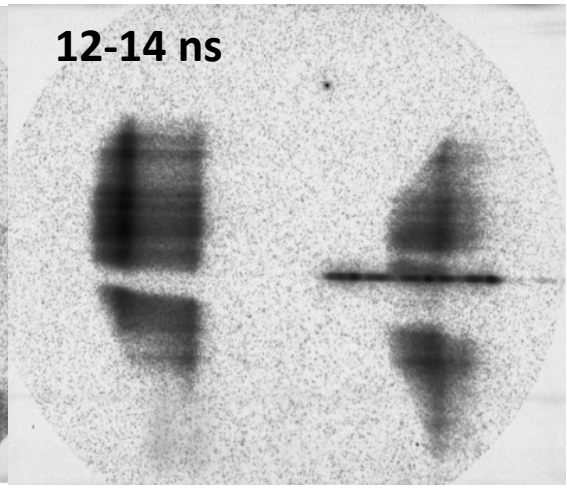
Edge View Streaked images – 20 um Al foils

Smooth Foils

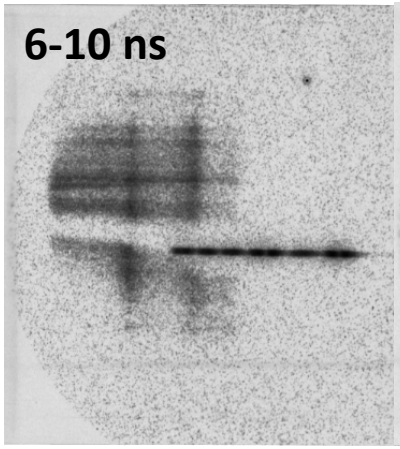


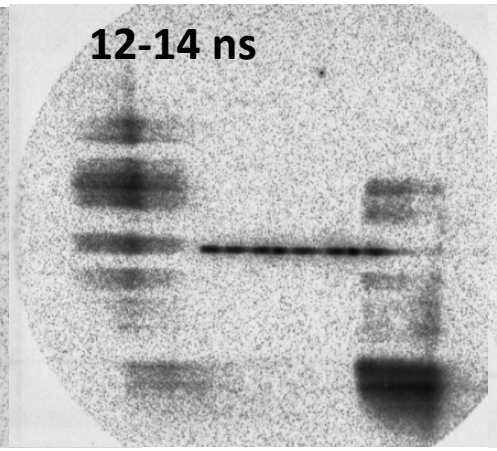


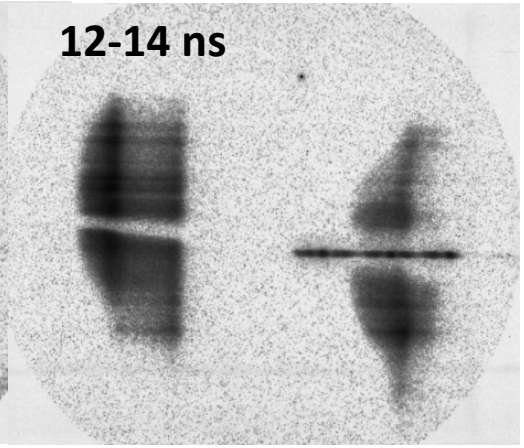




Rough Foils



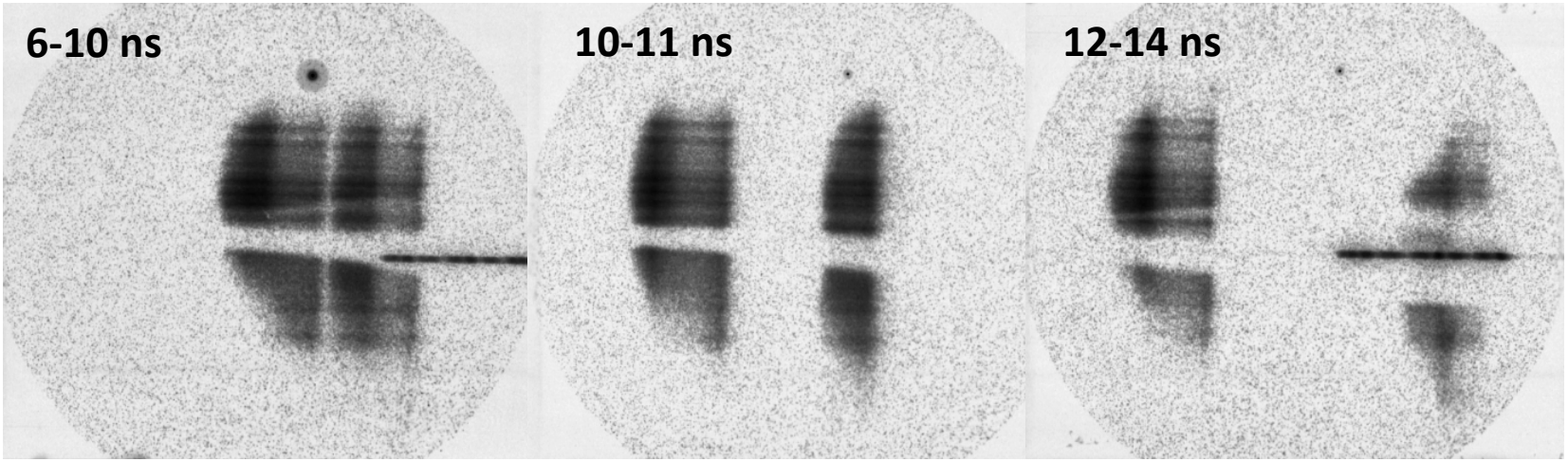




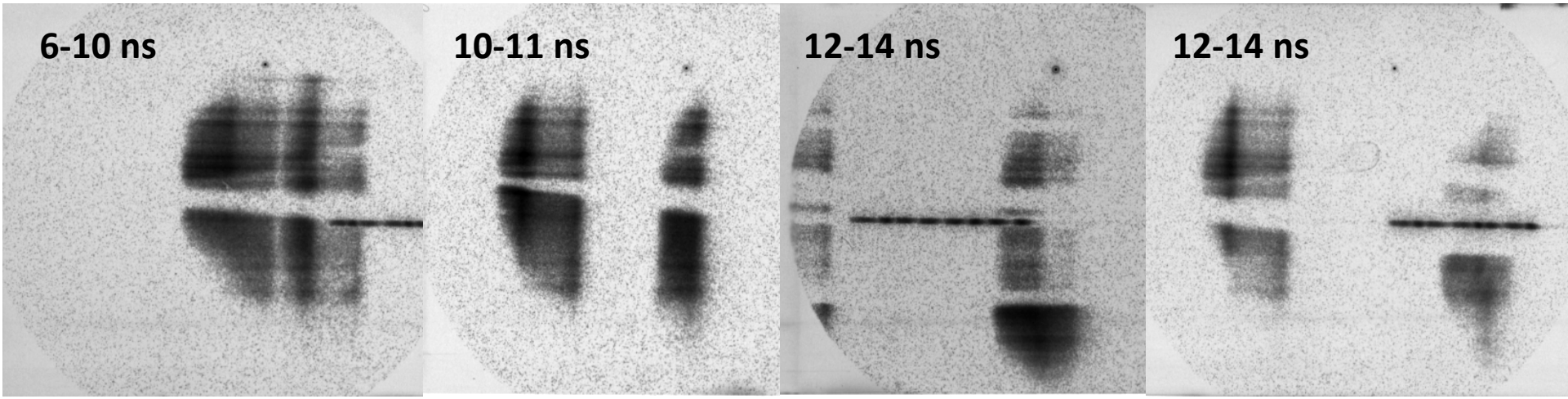
No data for 10-11 ns: accidental film exposure

Edge View Streaked images – 12 um Ti foils

Smooth Foils



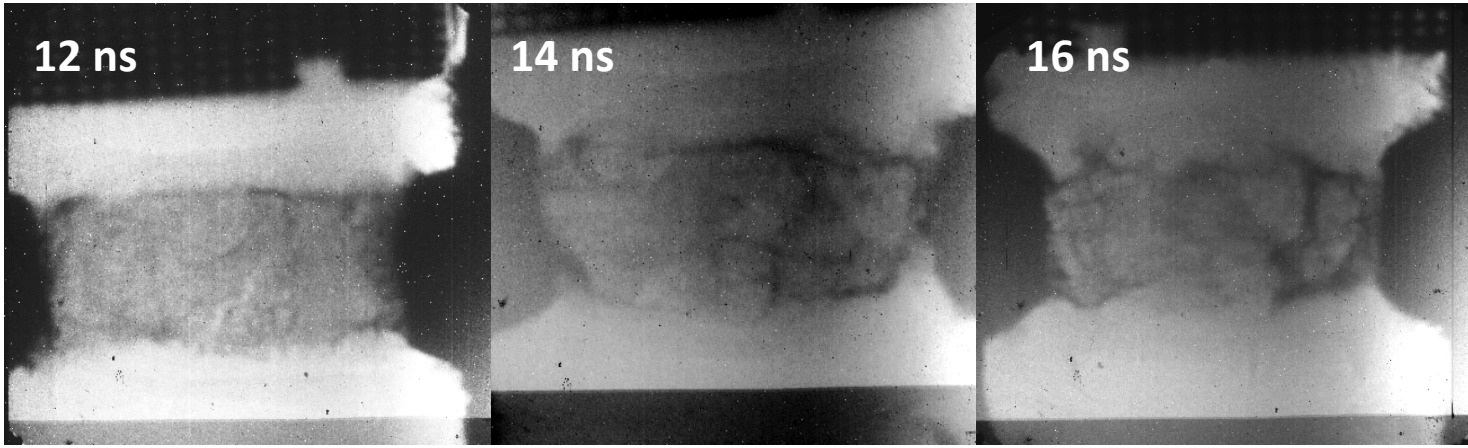
Rough Foils



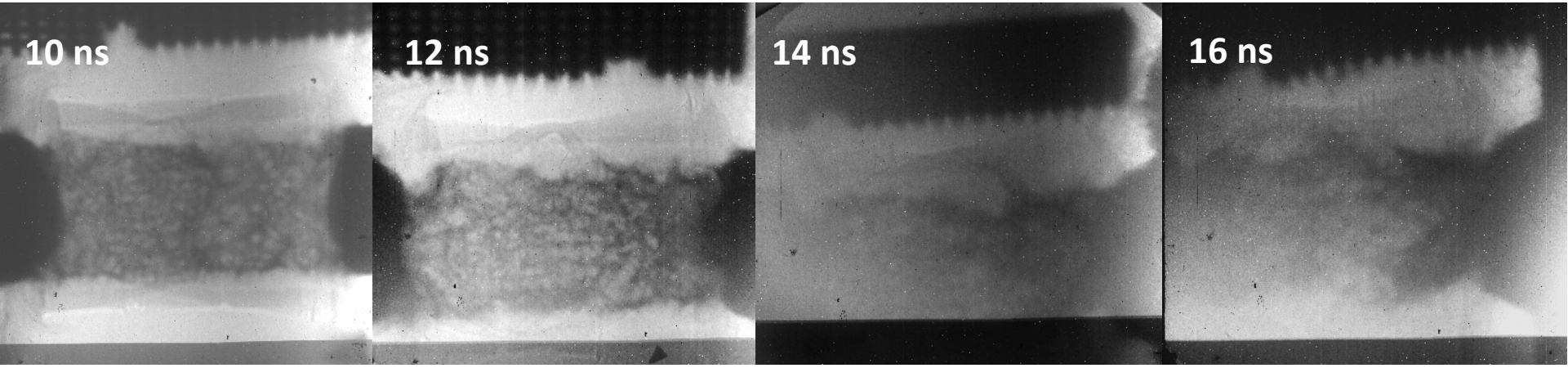
Plan View Radiographs – 20 um Al foils

Smooth Foils

No image that shot

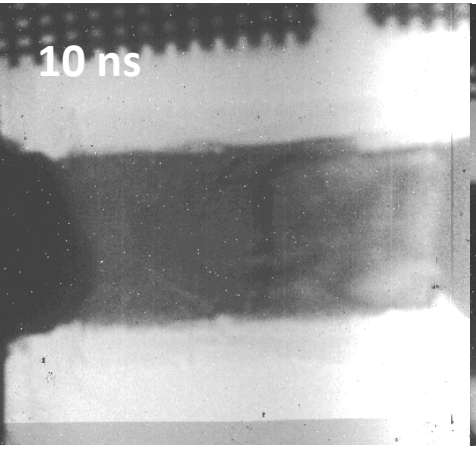


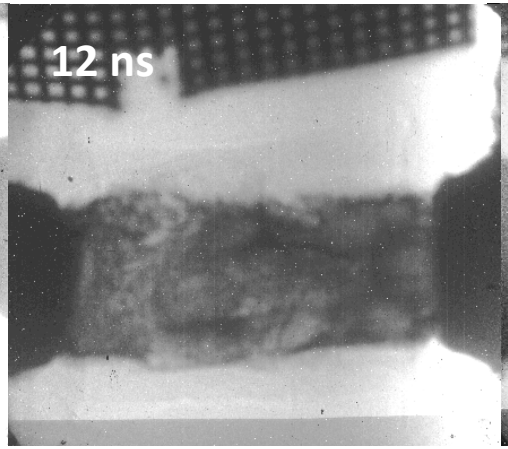
Rough Foils

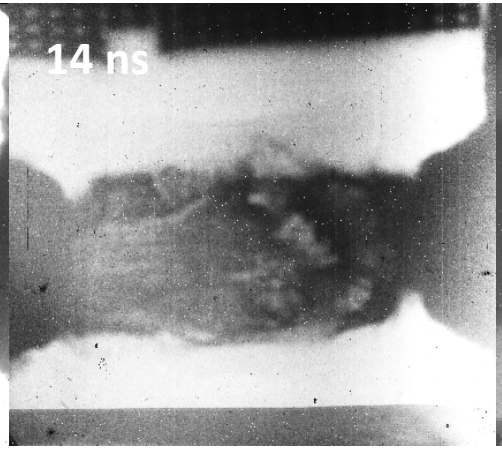


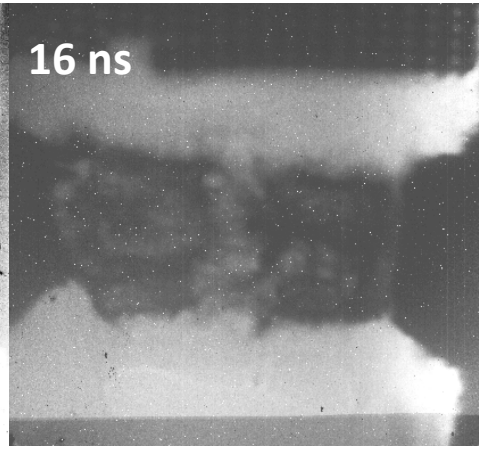
Plan View Radiographs – 12 um Ti foils

Smooth Foils

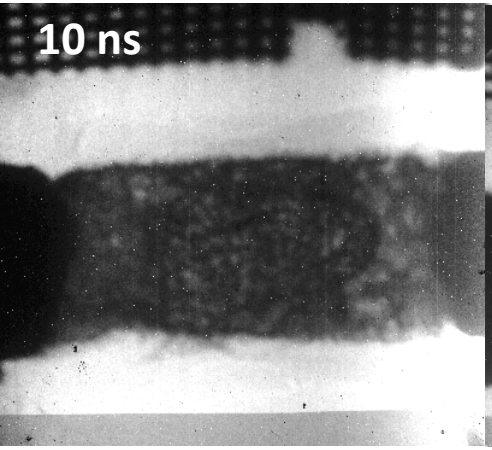


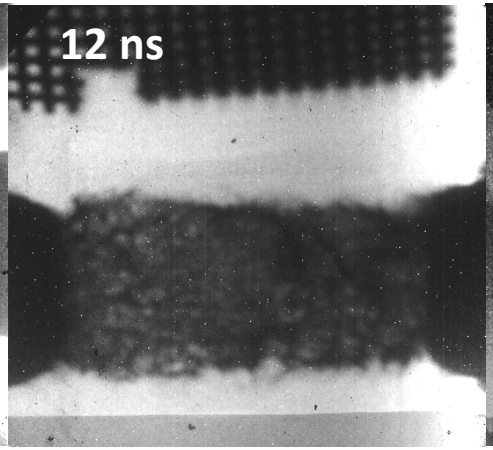


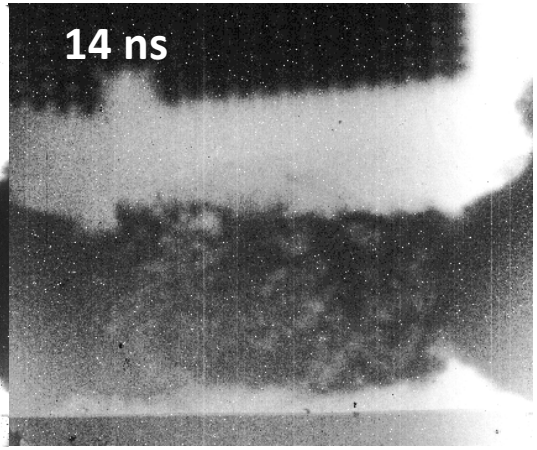




Rough Foils







No image that shot

Shot Information

Shot #73480

- Zero interstrip timing
- RID #48863

Shot #73481

- RID #48819
- Target: 1Red/1Silver, 1White

Target type

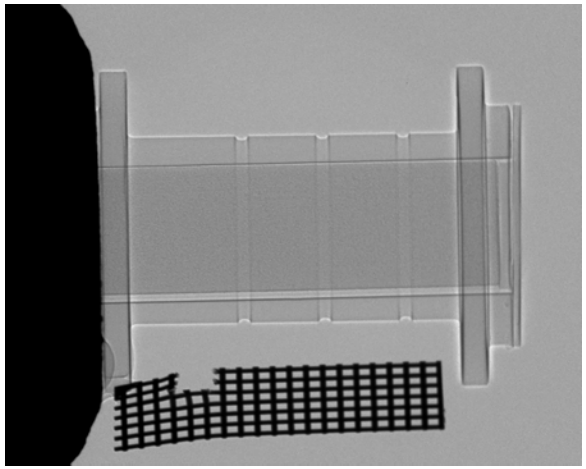
20 um Al	X	Smooth	X	Edge-on	X	Fiducial	
12 um Ti		Rough		Plan View			

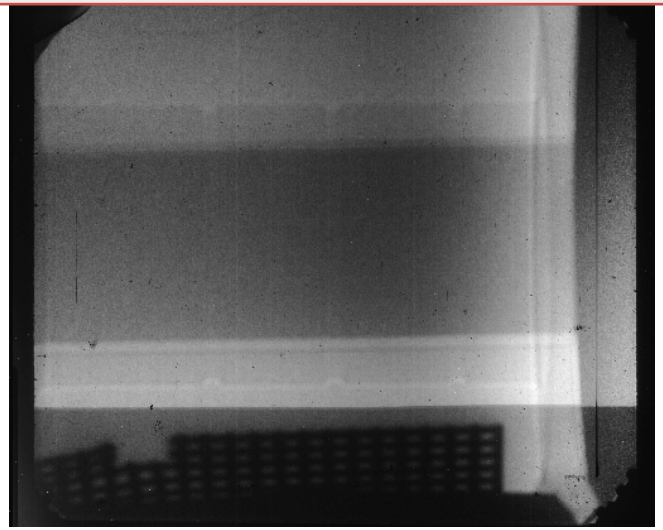
Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to T0 (ns)
SSD	-4	T4 SSD early	-5	500	4	0
		T4 SSD mid	-5	500	5	1
		Fiducial SSD	0	500	4	0
BL	8	T4 FrL late	-5	450	-2	6
		T4 BL late	-5	450	-1	7
		Fiducial late	0	450	-1	7
		6 TIM2	-3	450	0	8

TIM3 XRFC3 (CCD)

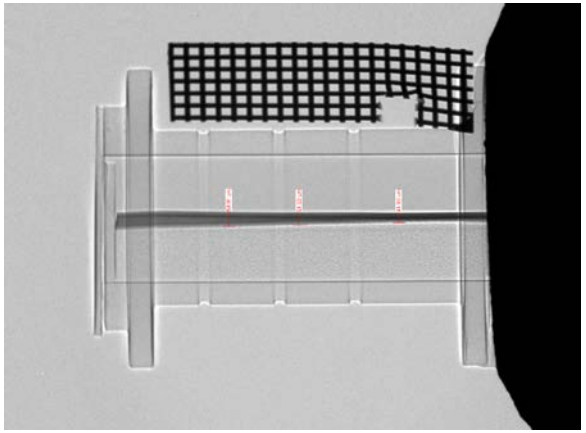
BL	pinhole	filter	bias	start time (t0+)	stand-off
Cr	leftover	Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	8.4 ns	26.4 cm

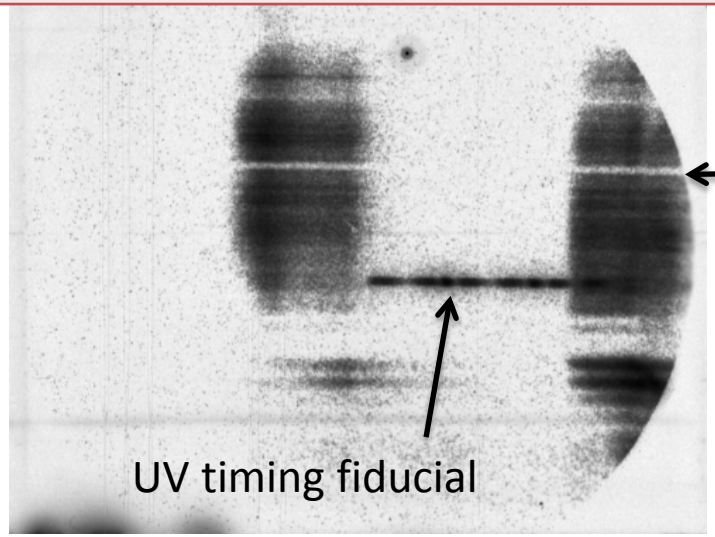




TIM6 SSCA/SMP (film)

BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side Sc	20x	20um/10 um/330 um	8 mil Be/1 mil Be	9 ns	4 ns	1 ns



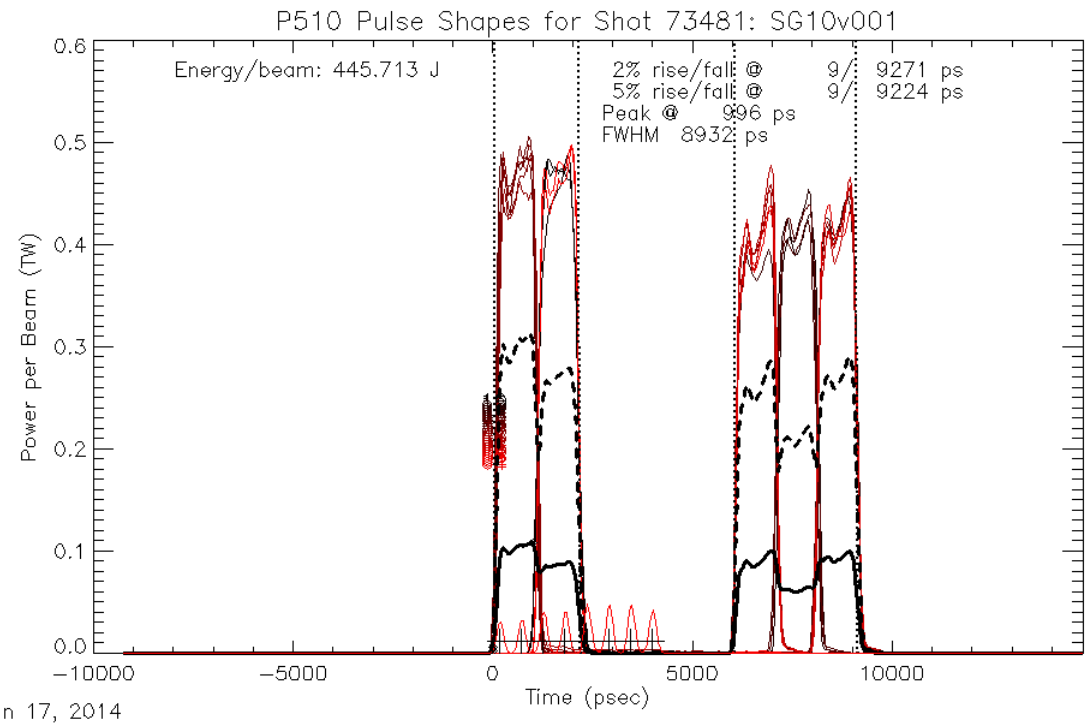


Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive

H12C XRPHC – sees H12 drive

No drive



Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11		34	
13		36	
14		41	
18		43	
32		48	
66		49	
67		60	
69		63	
Total			
		Diff	
		% Diff	

Shot #73482

- RID #47511
- Target: 1Purple,2White

Target type

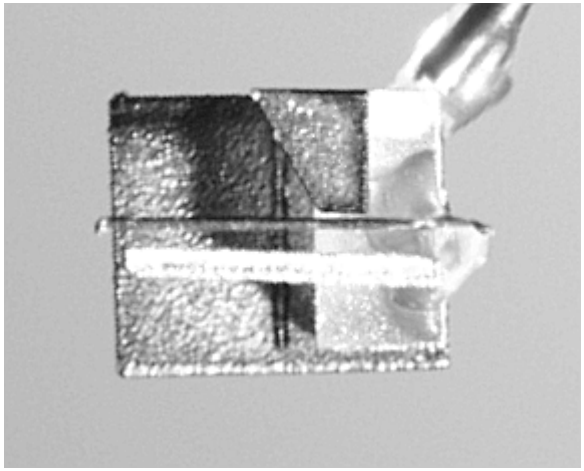
20 um Al		Smooth		Edge-on		Fiducial	X
12 um Ti		Rough		Plan View			

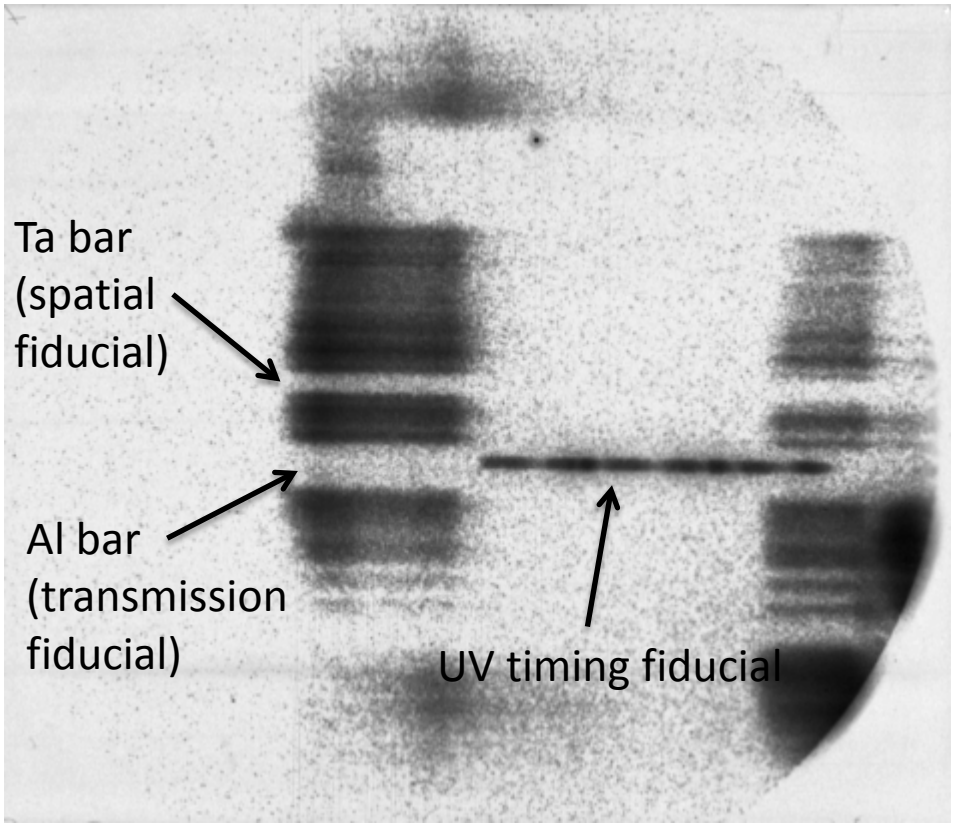
Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to T0 (ns)
SSD	-4	T4 SSD early	-5	500	4	0
		T4 SSD mid	-5	500	5	1
		Fiducial SSD	0	500	4	0
BL	8	T4 FrL late	-5	450	-2	6
		T4 BL late	-5	450	-1	7
		Fiducial late	0	450	-1	7

TIM6 SSCA/SMP (film)

BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side Sc	20x	20um/10 um/330 um	8 mil Be/1 mil Be	9 ns	4 ns	1 ns





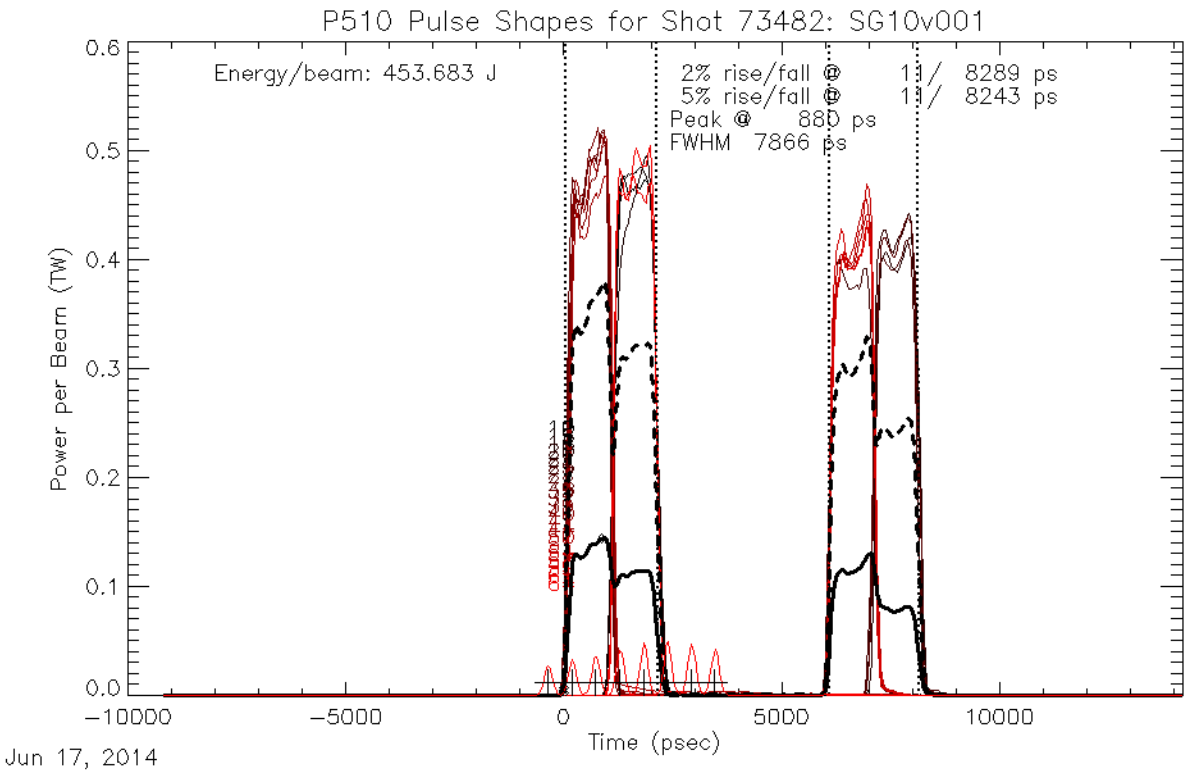
Repointed SSCA 250um up

Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive

H12C XRPHC – sees H12 drive

No drive



Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11		34	
13		36	
14		41	
18		43	
32		48	
66		49	
67		60	
69		63	
Total			
		Diff	
		% Diff	

Shot #73483

- RID #48870
- Target: 1Red/1White, 3White

Target type

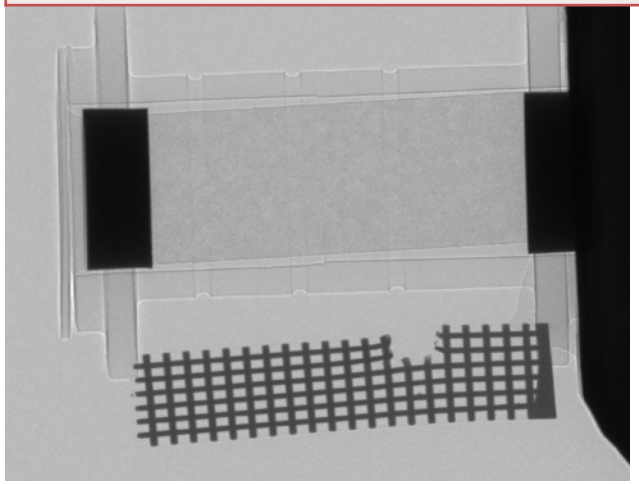
20 um Al	X	Smooth		Edge-on	X	Fiducial	
12 um Ti		Rough	X	Plan View			

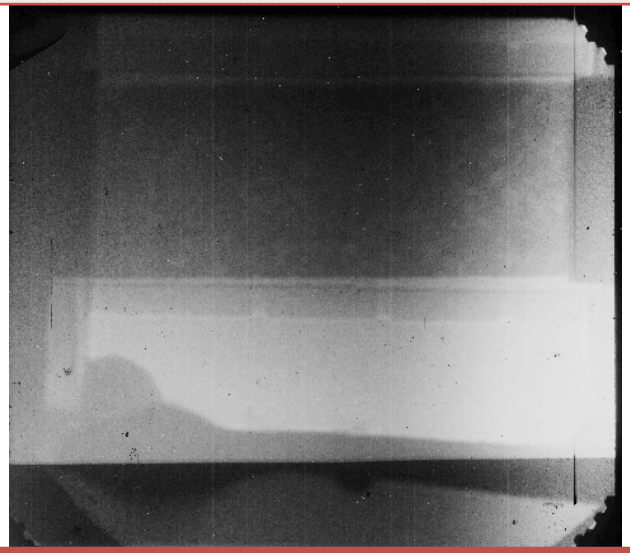
Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to T0 (ns)
SSD	-4	T4 SSD early	-5	500	4	0
		T4 SSD mid	-5	500	5	1
		Fiducial SSD	0	500	4	0
BL	8	T4 FrL late	-5	450	-2	6
		T4 BL late	-5	450	-1	7
		Fiducial late	0	450	-1	7
		6 TIM2	-3	450	0	8

TIM3 XRFC3 (CCD)

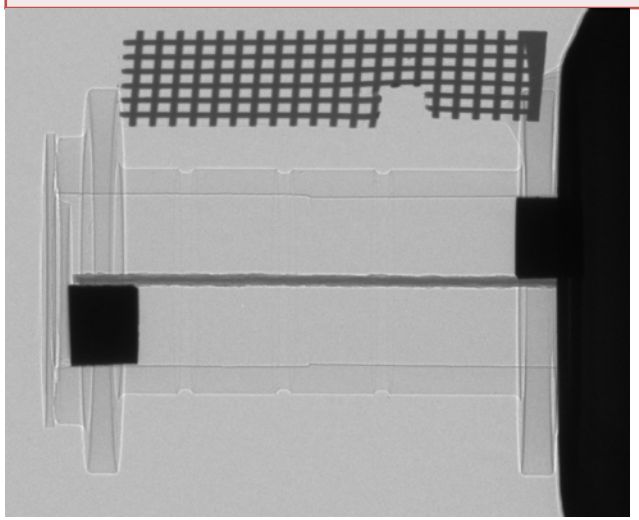
BL	pinhole	filter	bias	start time (t0+)	stand-off
Sc		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	8.4 ns	26.4 cm





TIM6 SSCA/SMP (film)

BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side Sc	20x	20um/10 um/330 um	8 mil Be/1 mil Be	9 ns	4 ns	1 ns

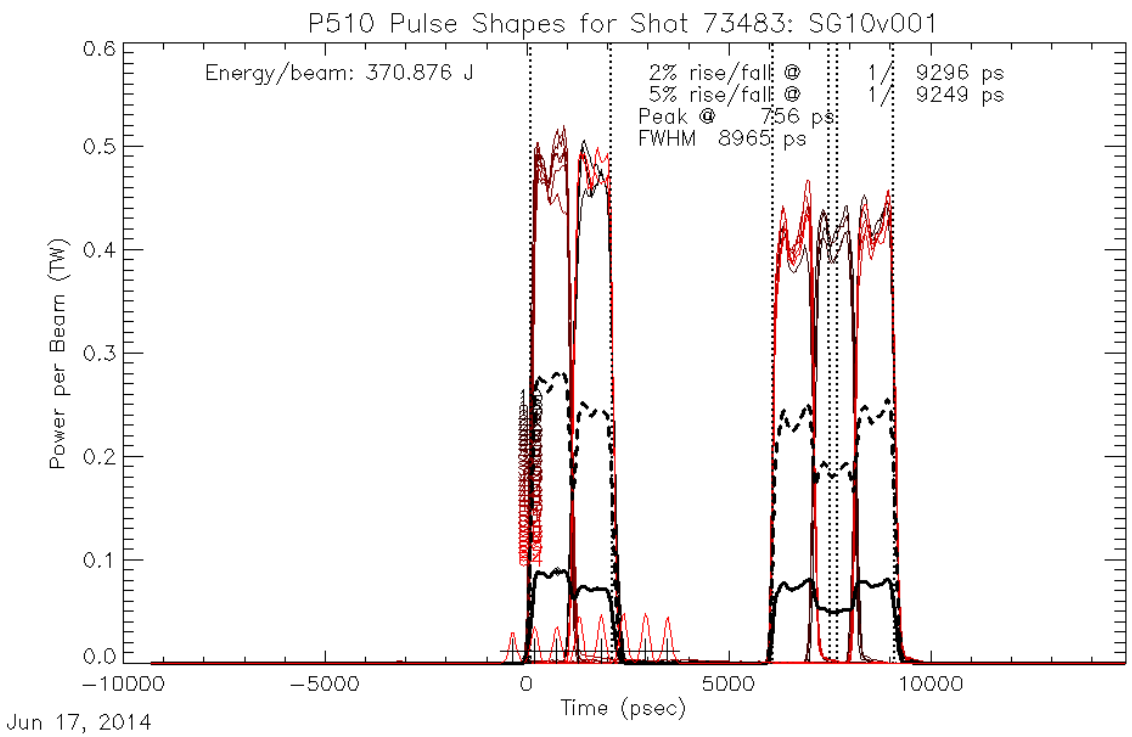


Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive

H12C XRPHC – sees H12 drive

No drive



Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11		34	
13		36	
14		41	
18		43	
32		48	
66		49	
67		60	
69		63	
Total			
		Diff	
		% Diff	

Shot #73484

- RID #44910
- Target: 4Red/2Blue,6White

Target type

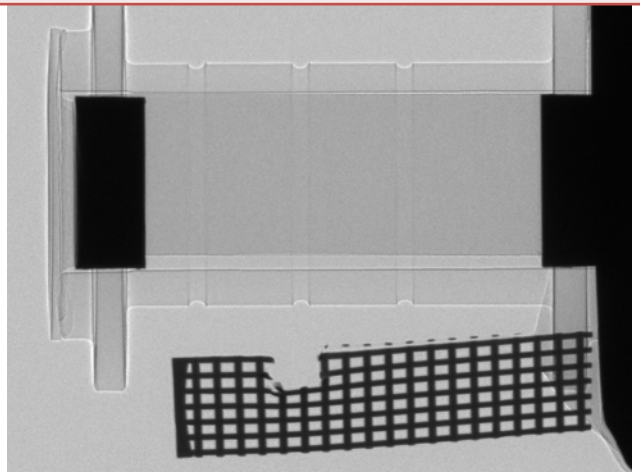
20 um Al	X	Smooth	X	Edge-on	X	Fiducial	
12 um Ti		Rough		Plan View			

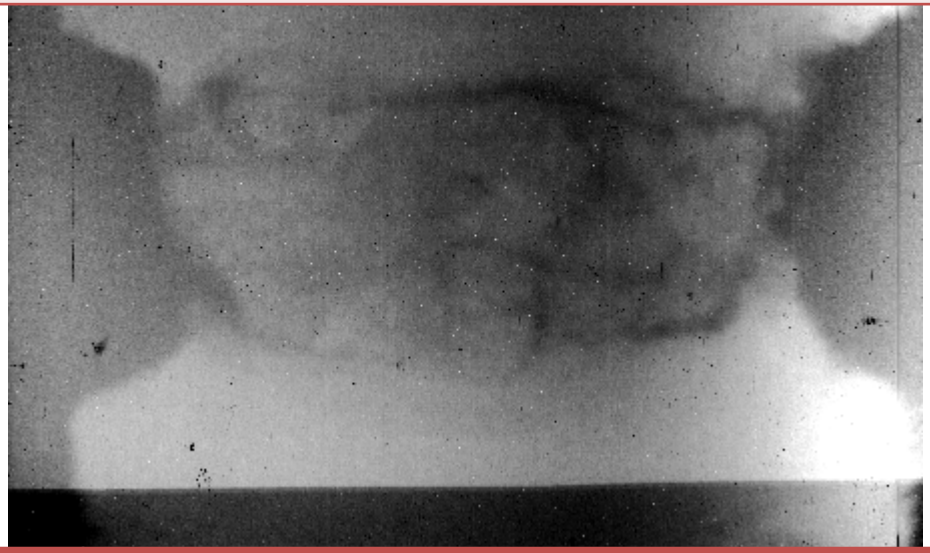
Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-5	500	4	6
		T4 SSD mid	-5	500	5	7
		Fiducial SSD	0	500	4	6
BL	8	T4 FrL late	-4	450	-2	12
		T4 BL late	-4	450	-1	13
		Fiducial late	0	450	-1	13
		6 TIM2	-3	450	0	14

TIM3 XRFC3 (CCD)

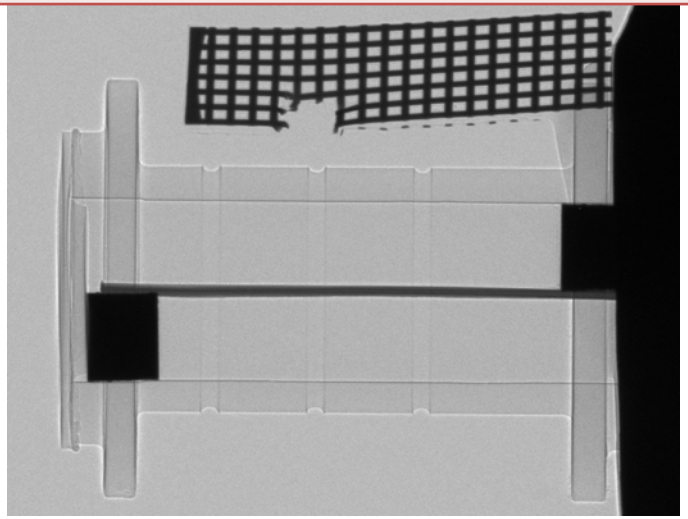
BL	pinhole	filter	bias	start time (t0+)	stand-off
Fe		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	8.4 ns	26.4 cm

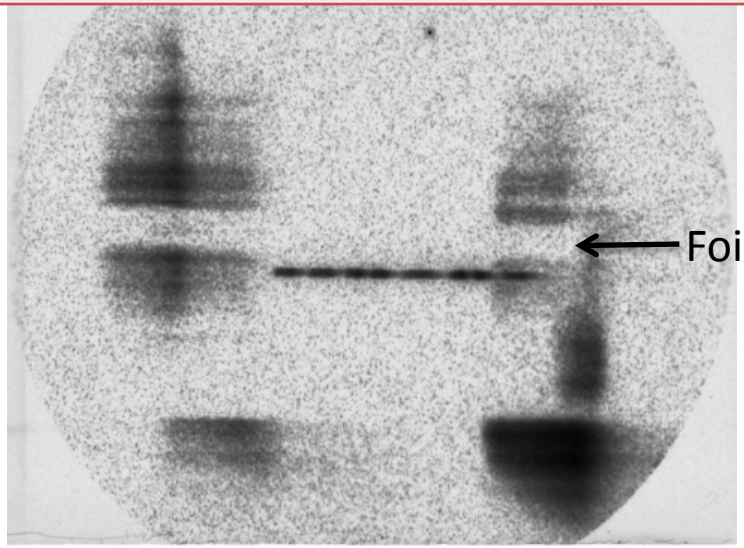




TIM6 SSCA/SMP (film)

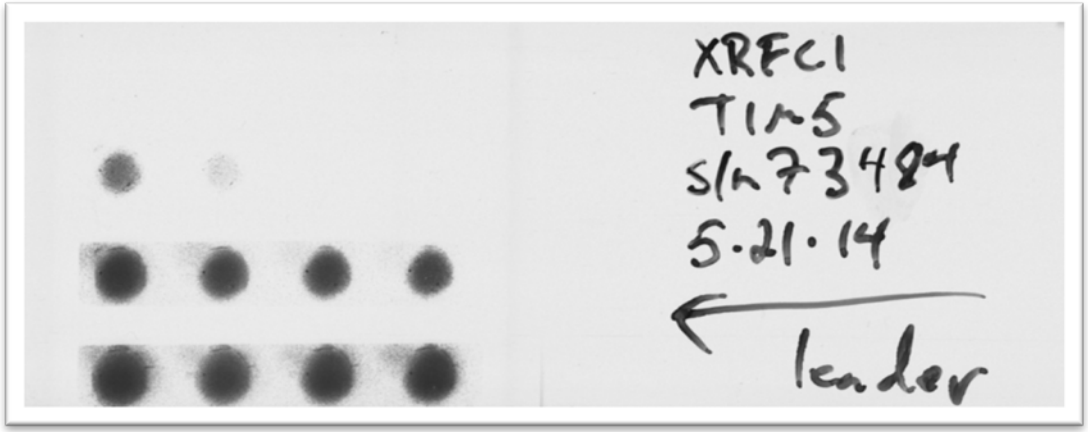
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side Sc	20x	20um/10 um/330 um	8 mil Be/1 mil Be	9 ns	4 ns	1 ns



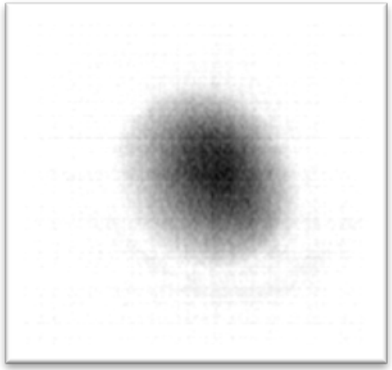


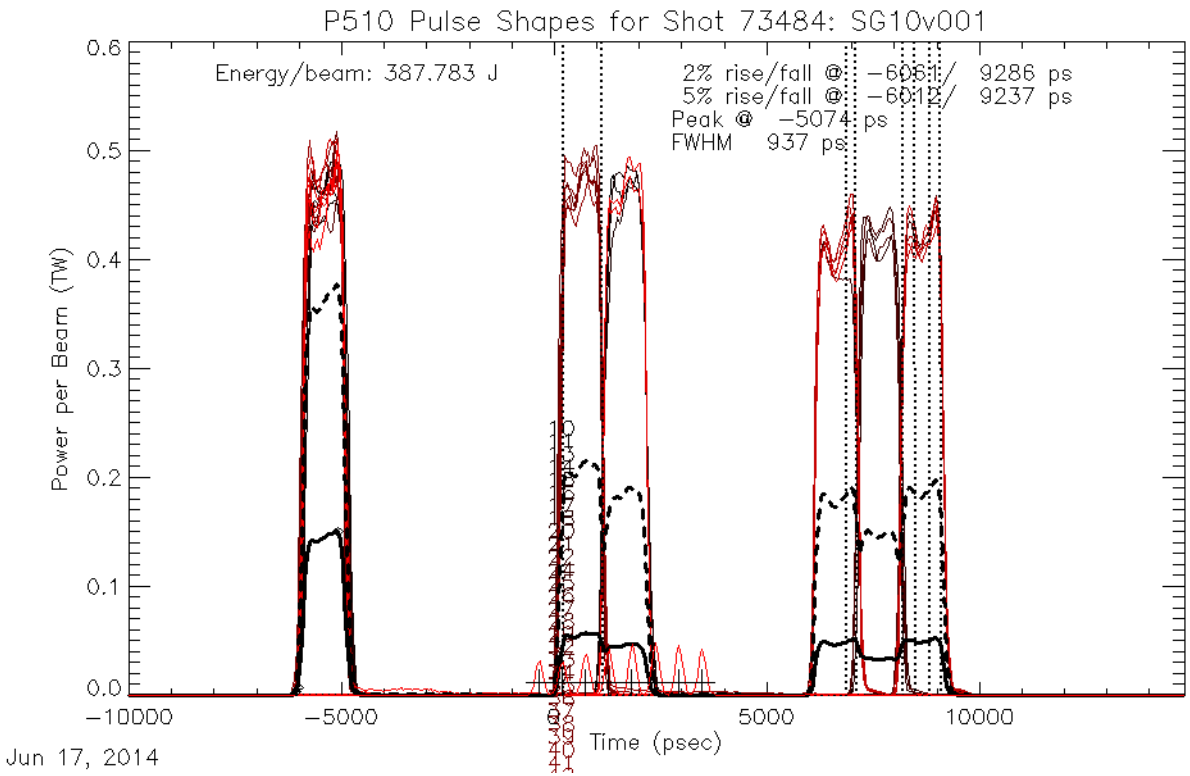
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive





Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11	475.9	34	476.2
13	468.9	36	478.2
14	450.4	41	485.5
18	479.5	43	468.6
32	449.6	48	487
66	465.5	49	483.7
67	464.6	60	497.7
69	470.1	63	472.6
Total	3724.5		3849.5
		Diff	125
		% Diff	3.300766

Shot #73485

- RID #48833
- Target: 1Red/4White,7White

No LAPC or SFC2

Target type

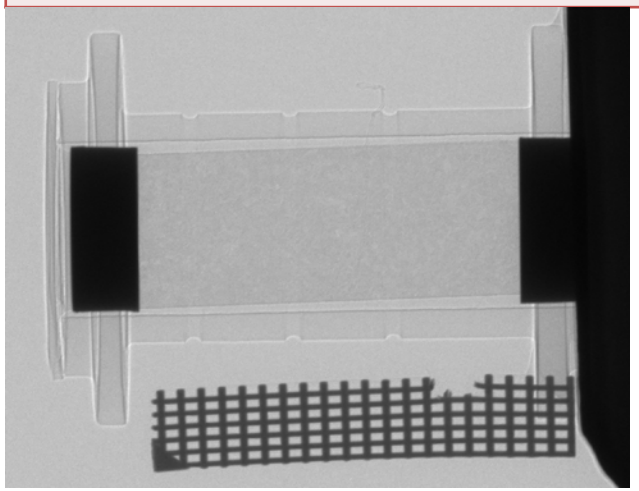
20 um Al	X	Smooth		Edge-on	X	Fiducial	
12 um Ti		Rough	X	Plan View			

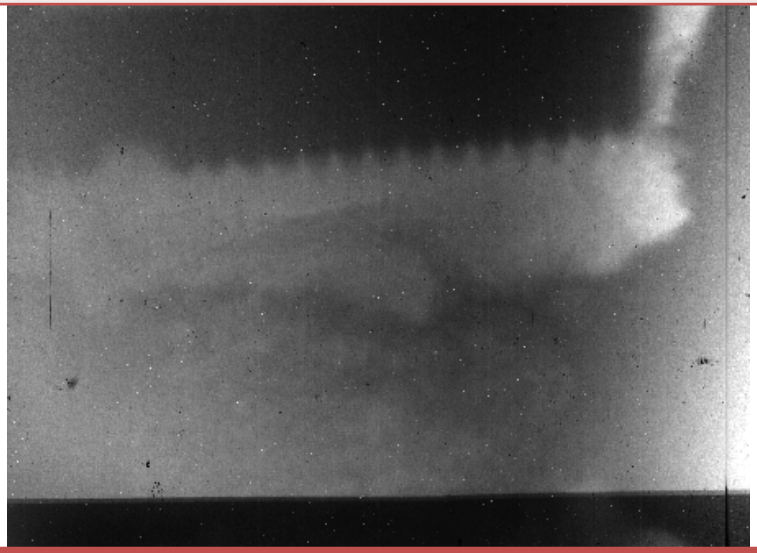
Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-5	500	4	6
		T4 SSD mid	-5	500	5	7
		Fiducial SSD	0	500	4	6
BL	8	T4 FrL late	-4	450	-2	12
		T4 BL late	-4	450	-1	13
		Fiducial late	0	450	-1	13
		6 TIM2	-3	450	0	14

TIM3 XRFC3 (CCD)

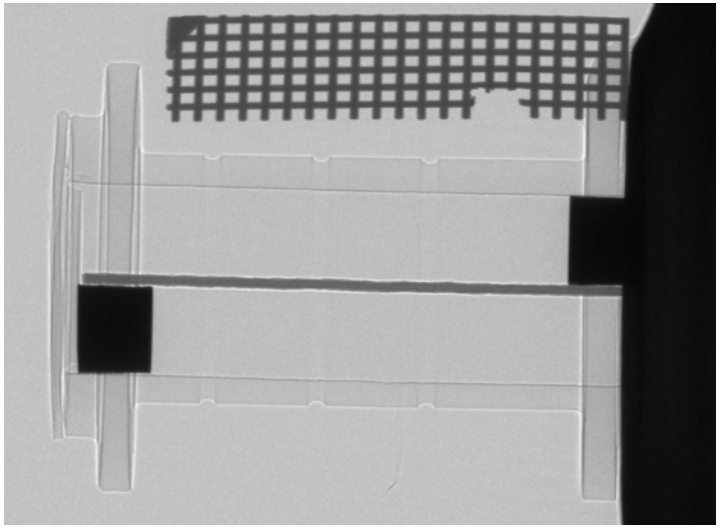
BL	pinhole	filter	bias	start time (t0+)	stand-off
Sc		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	8.4 ns	26.4 cm

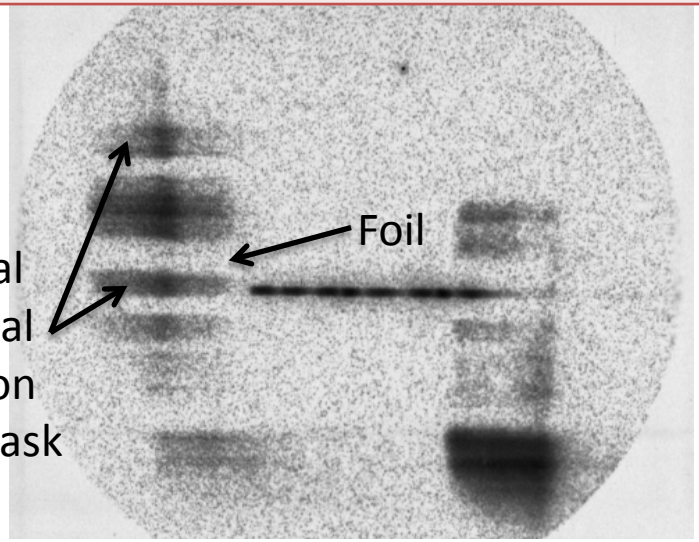




TIM6 SSCA/SMP (film)

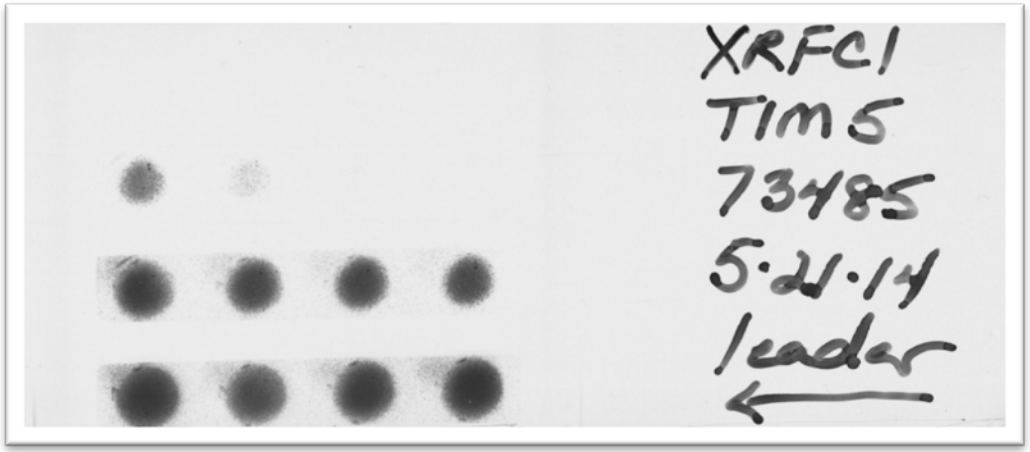
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side Sc	20x	20um/10 um/330 um	8 mil Be/1 mil Be	9 ns	6 ns	1 ns



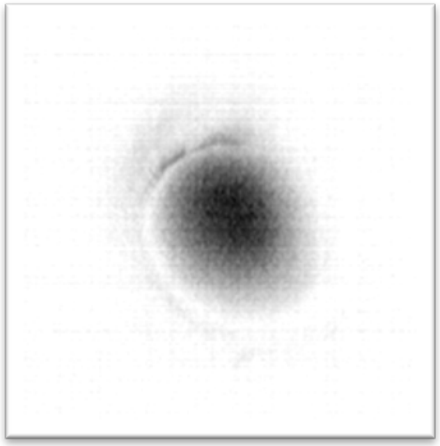


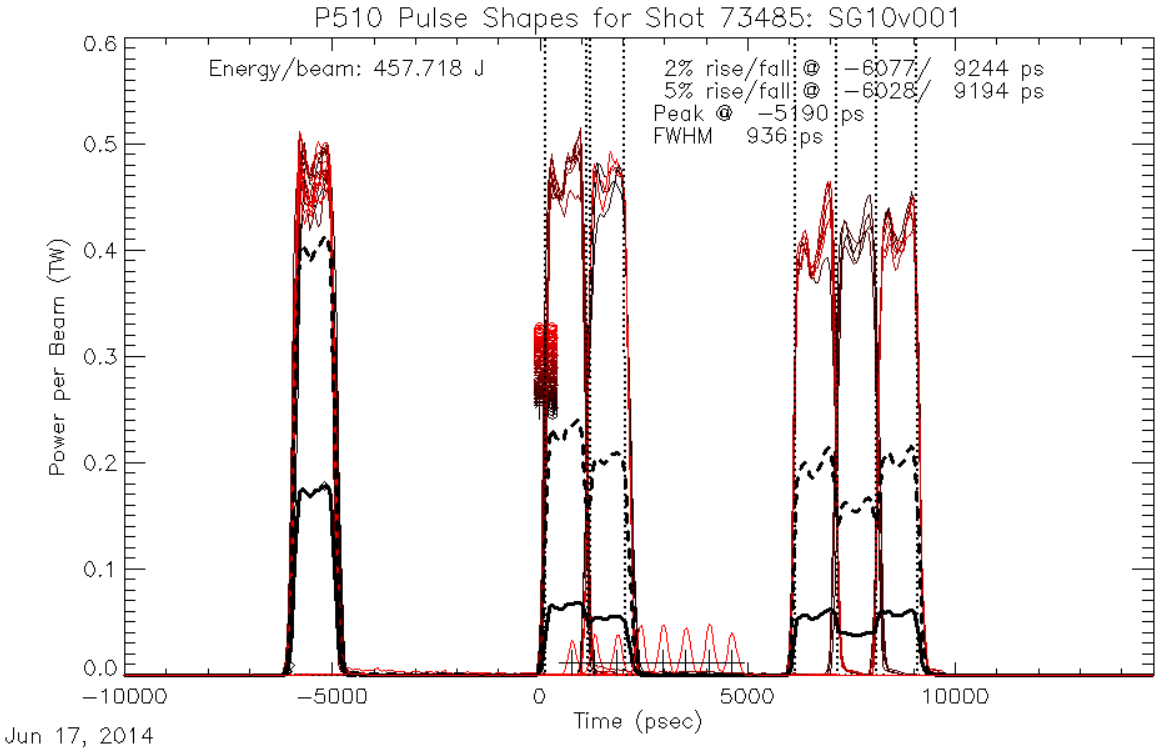
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive





Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11	474.9	34	475.5
13	476.7	36	480.5
14	453.8	41	483.3
18	483.9	43	471.4
32	454.4	48	492.5
66	466	49	482
67	463.7	60	495.5
69	467.5	63	474.1
Total	3740.9		3854.8
		Diff	113.9
		% Diff	2.999065

Shot #73486

- RID #47885
- Target: 1Gold/2White, 8White

No LAPC or SFC2

Target type

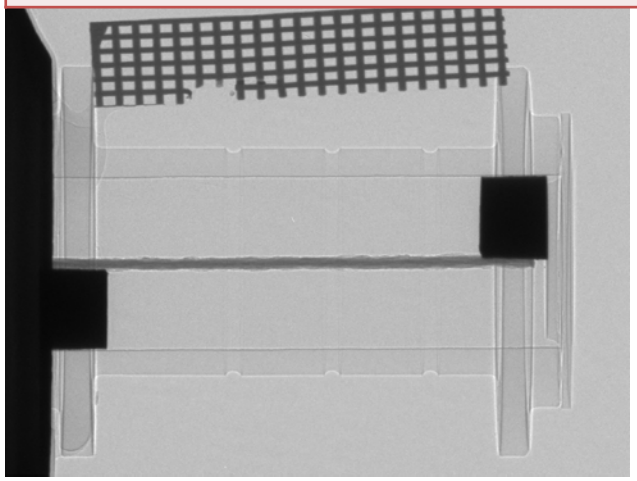
20 um Al	X	Smooth		Edge-on		Fiducial	
12 um Ti		Rough	X	Plan View	X		

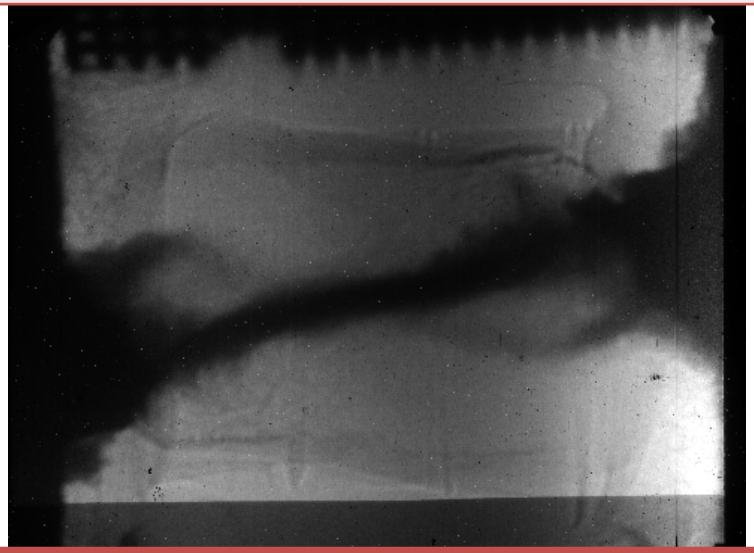
Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-5	500	4	6
		T4 SSD mid	-5	500	5	7
		Fiducial SSD	0	500	4	6
BL	8	T4 FrL late	-5	450	-2	12
		T4 BL late	-5	450	-1	13
		Fiducial late	0	450	-1	13
		6 TIM2	-3	450	-2	12

TIM3 XRFC3 (CCD)

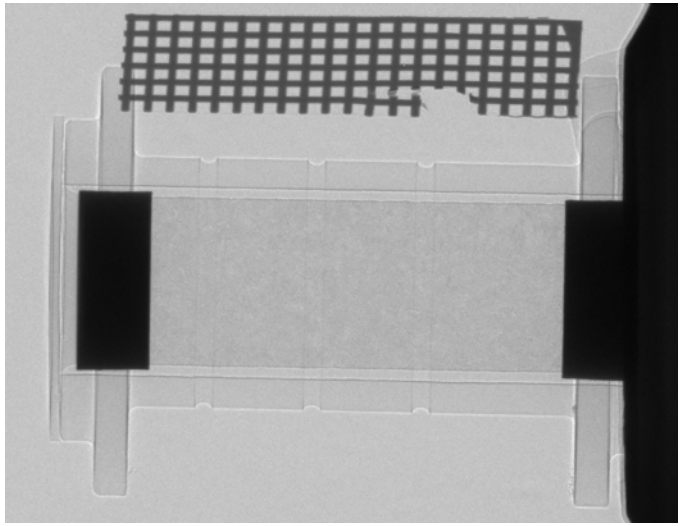
BL	pinhole	filter	bias	start time (t0+)	stand-off
Sc		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	8.4 ns	26.4 cm





TIM6 SSCA/SMP (film)

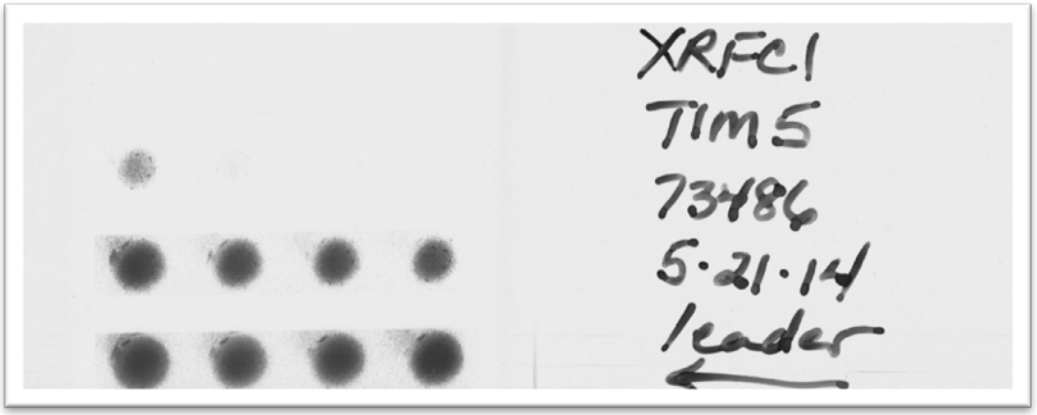
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side Sc	20x	20um/10 um/330 um	8 mil Be/1 mil Be	9 ns	6 ns	1 ns



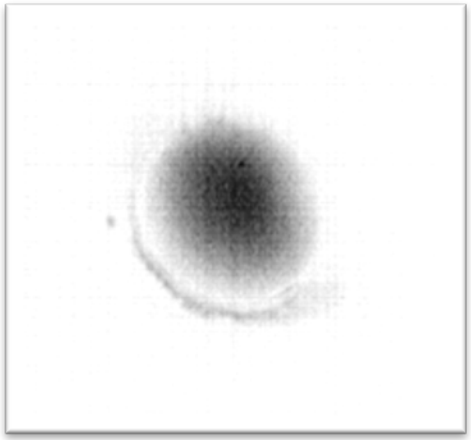
No streak camera, software error

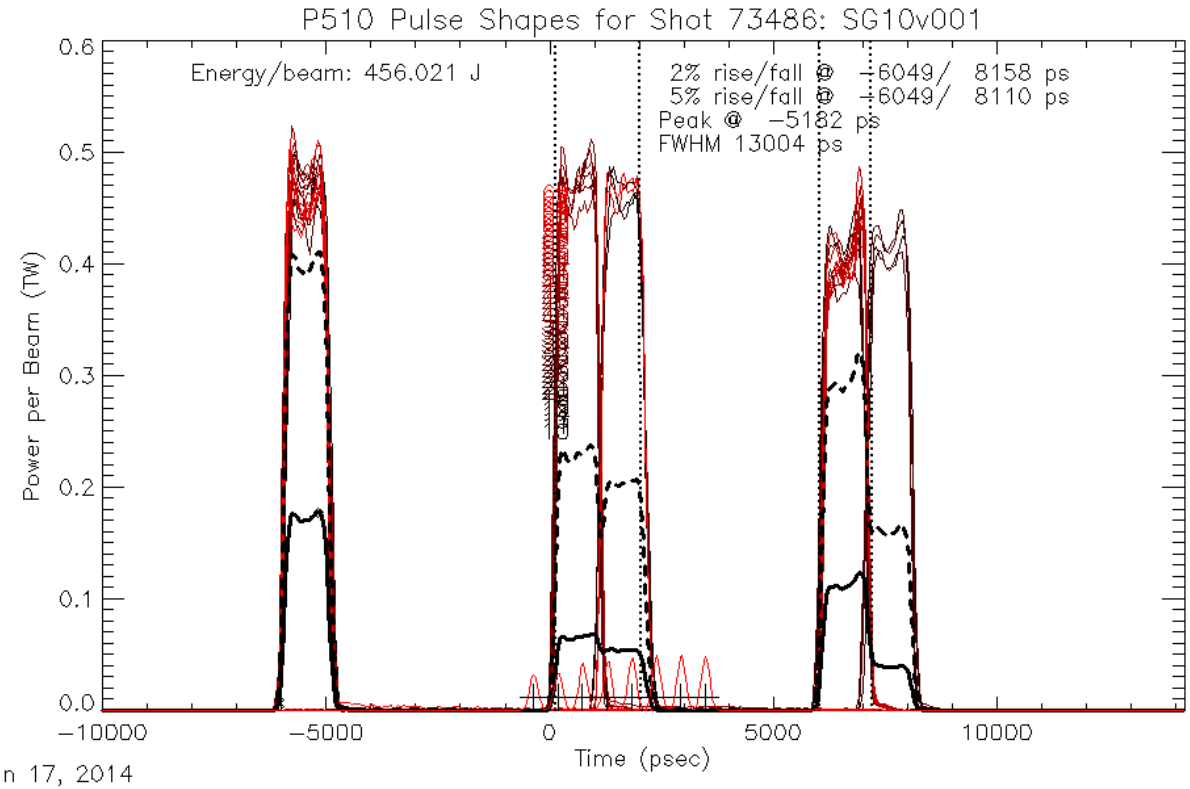
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive





Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11	474.2	34	475.5
13	478.1	36	478.9
14	453	41	482
18	483.8	43	471.2
32	453.9	48	492.3
66	465.1	49	481.2
67	458.6	60	492.4
69	466.4	63	472.6
Total	3733.1		3846.1
		Diff	113
		% Diff	2.981845

Shot #73487

- RID #48834
- Target: 5Red/4Blue, 1Pink

SFC2 added

Target type

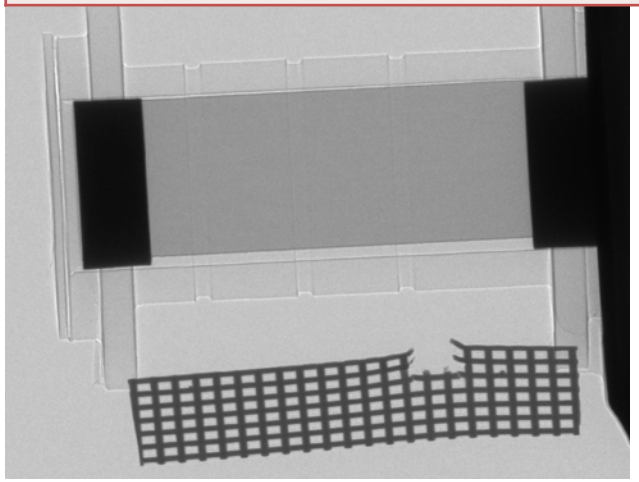
20 um Al		Smooth	X	Edge-on	X	Fiducial	
12 um Ti	X	Rough		Plan View			

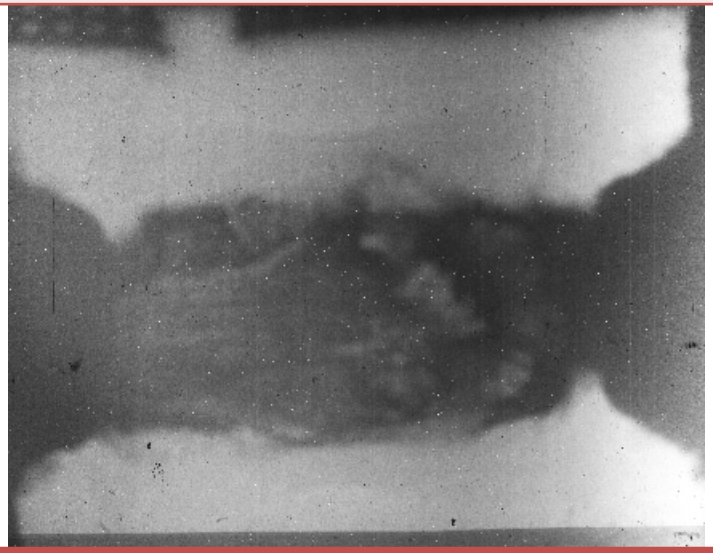
Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-5	500	4	6
		T4 SSD mid	-5	500	5	7
		Fiducial SSD	0	500	4	6
BL	8	T4 FrL late	-5	450	-2	12
		T4 BL late	-5	450	-1	13
		Fiducial late	0	450	-1	13
		6 TIM2	-3	450	0	14

TIM3 XRFC3 (CCD)

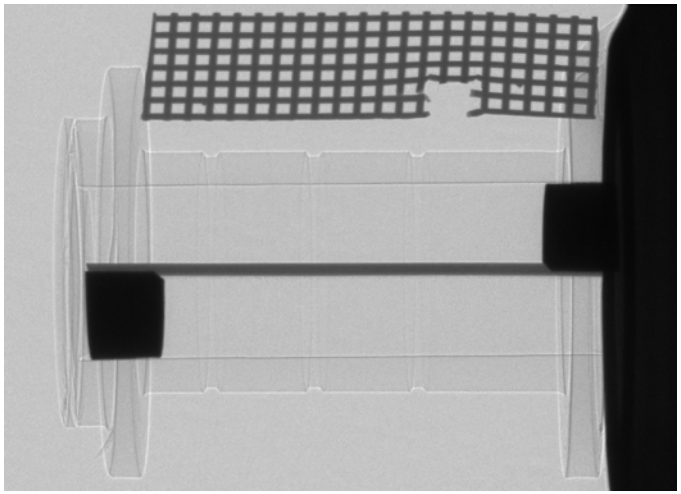
BL	pinhole	filter	bias	start time (t0+)	stand-off
Fe		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	8.4 ns	26.4 cm





TIM6 SSCA/SMP (film)

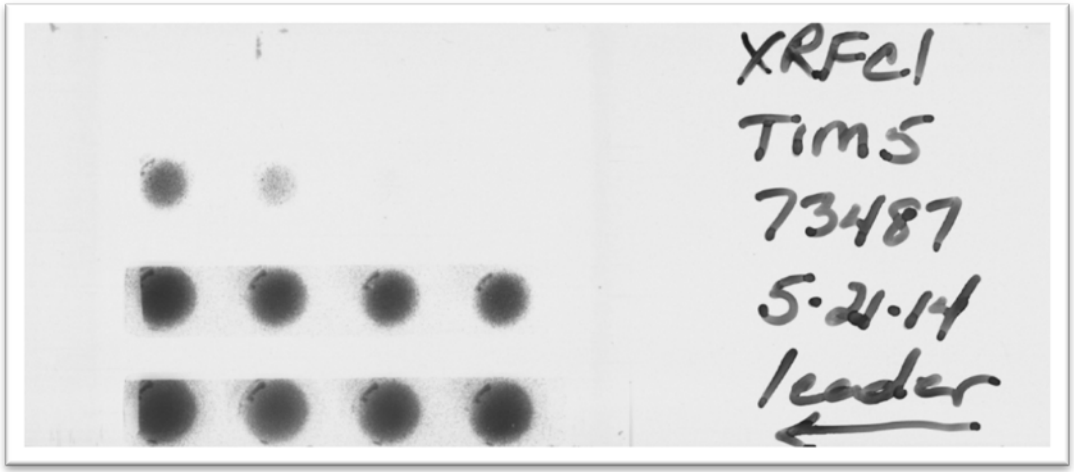
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side V	20x	20um/10 um/330 um	8 mil Be/1 mil Be	9 ns	6 ns	1 ns



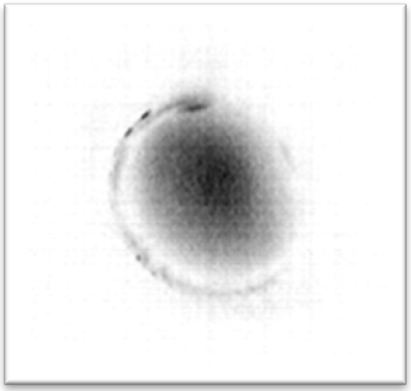
No streak camera, software error

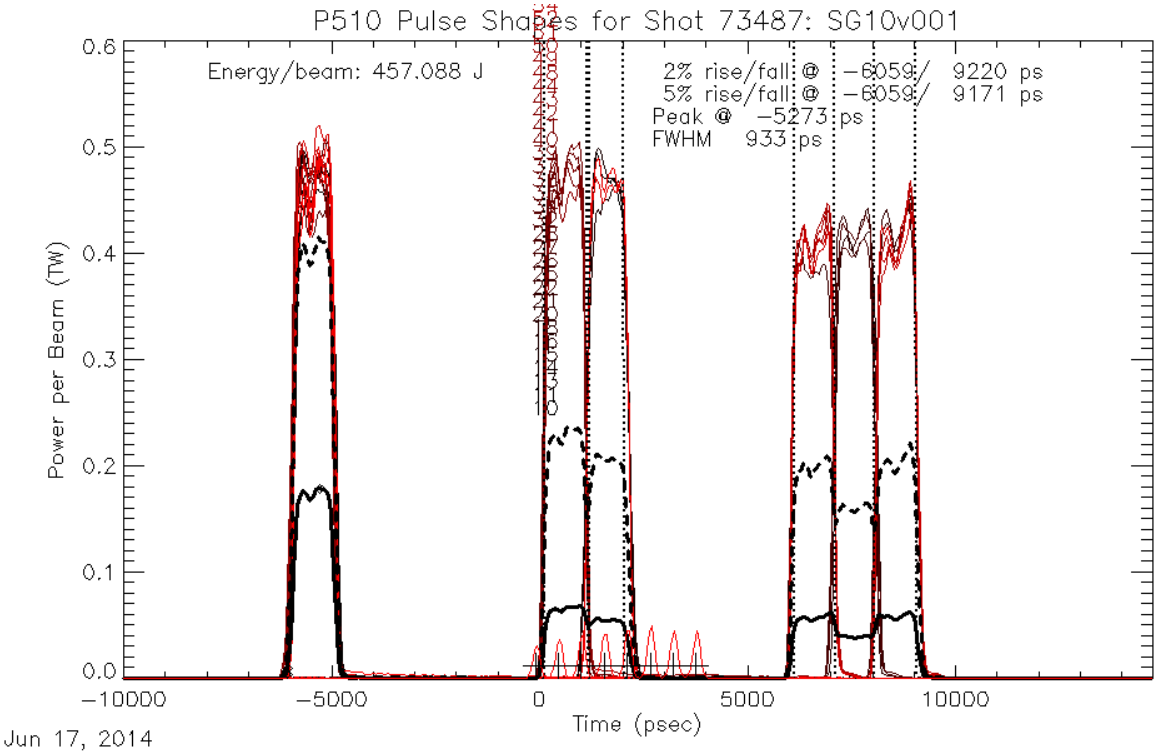
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive





Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11	471.5	34	474.4
13	475.7	36	478.9
14	452.8	41	479.6
18	481	43	468.8
32	452.9	48	489.5
66	465.7	49	482.5
67	460.9	60	494
69	466	63	471.2
Total	3726.5		3838.9
		Diff	112.4
		% Diff	2.971423

Shot #73490

- RID #48835
- Target: 2Red/1Blue, 2Pink

Target type

Dropped timing fiducial beam 47 and 53

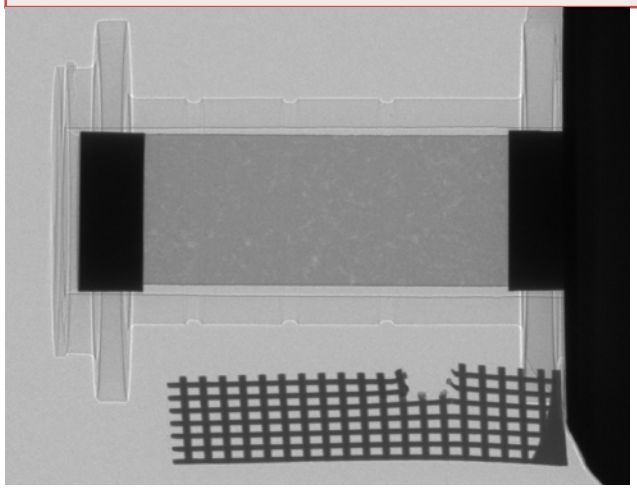
20 um Al		Smooth		Edge-on	X	Fiducial	
12 um Ti	X	Rough	X	Plan View			

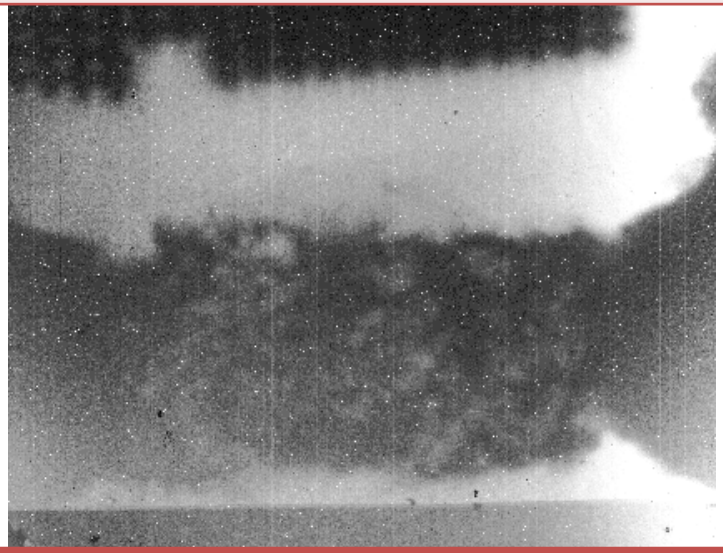
Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-5	500	4	6
		T4 SSD mid	-5	500	5	7
BL	8	T4 FrL late	-5	450	-2	12
		T4 BL late	-5	450	-1	13
		6 TIM2	-3	450	0	14

TIM3 XRFC3 (CCD)

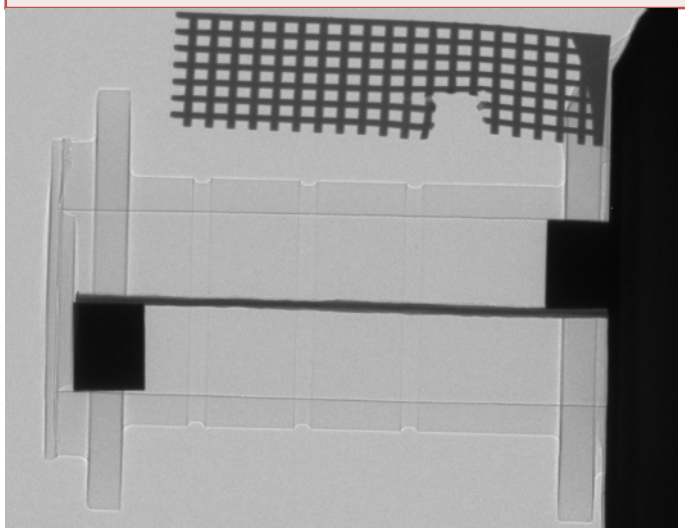
BL	pinhole	filter	bias	start time (t0+)	stand-off
Fe		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	8.4 ns	26.4 cm

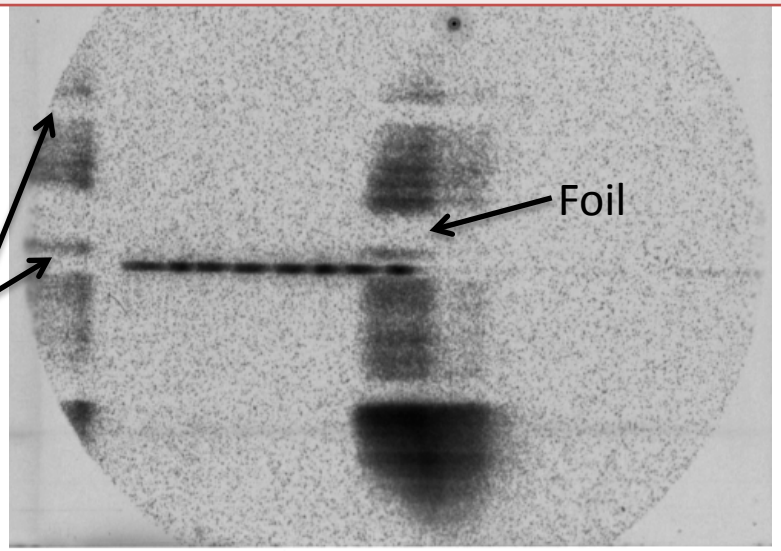




TIM6 SSCA/SMP (film)

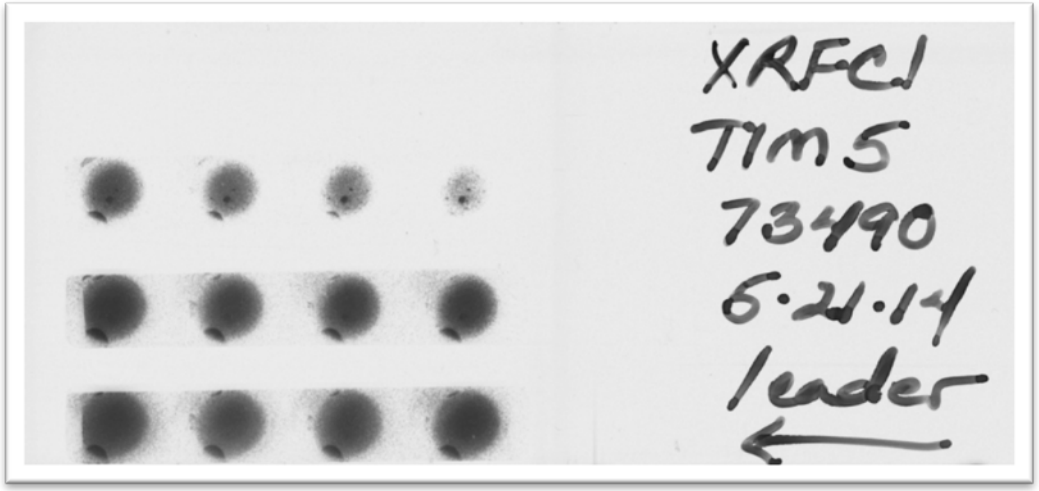
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side V	20x	20um/10 um/330 um	8 mil Be/1 mil Be	9 ns	6 ns	1 ns



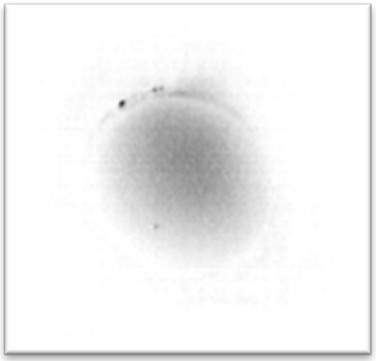


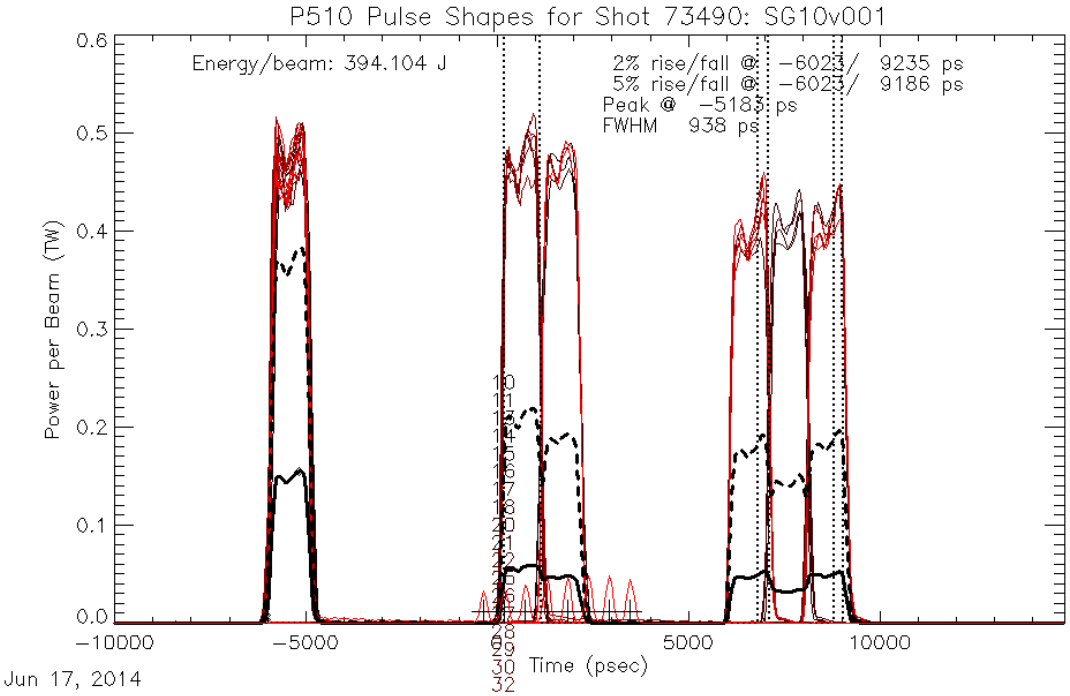
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive





Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11	478.8	34	480.4
13	482.3	36	483.5
14	458.2	41	487.5
18	486.4	43	472.7
32	458.3	48	495.5
66	469.9	49	488
67	465.8	60	498.4
69	472.2	63	478.9
Total	3771.9		3884.9
		Diff	113
		% Diff	2.951625

Shot #73491

- RID #48835
- Target: 2Gold/2Pink, 1Blue

Target type

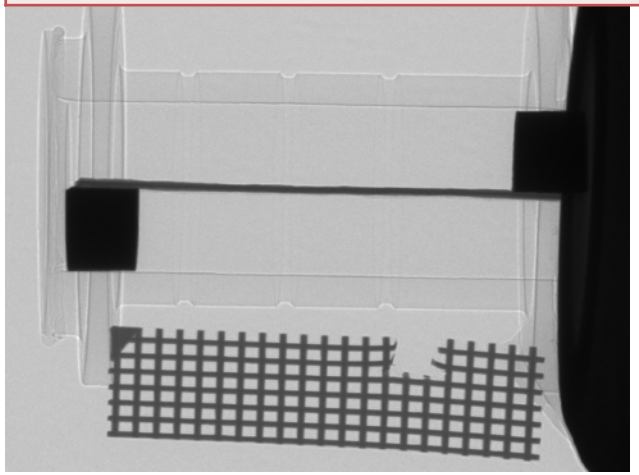
20 um Al		Smooth		Edge-on		Fiducial	
12 um Ti	X	Rough	X	Plan View	X		

Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-5	500	4	6
		T4 SSD mid	-5	500	5	7
BL	8	T4 FrL late	-5	450	-2	12
		T4 BL late	-5	450	-1	13
		6 TIM2	-3	450	-2	12

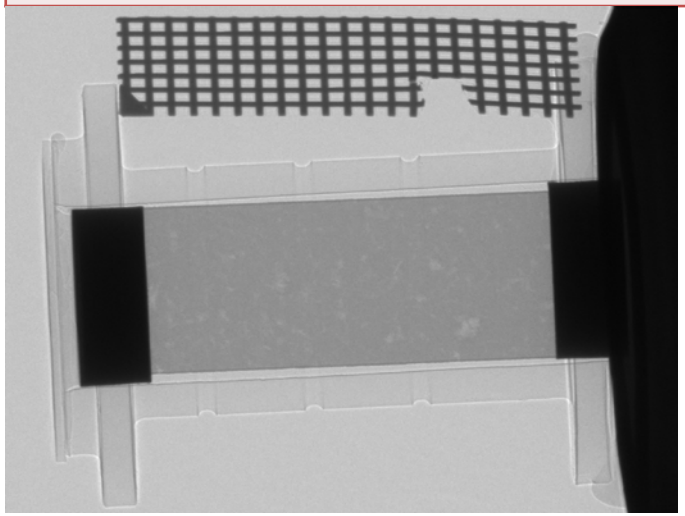
TIM3 XRFC3 (CCD)

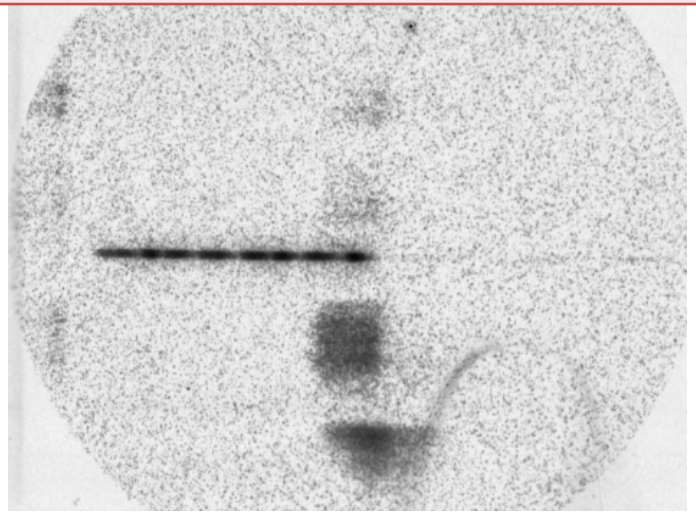
BL	pinhole	filter	bias	start time (t0+)	stand-off
V		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	8.4 ns	26.4 cm



TIM6 SSCA/SMP (film)

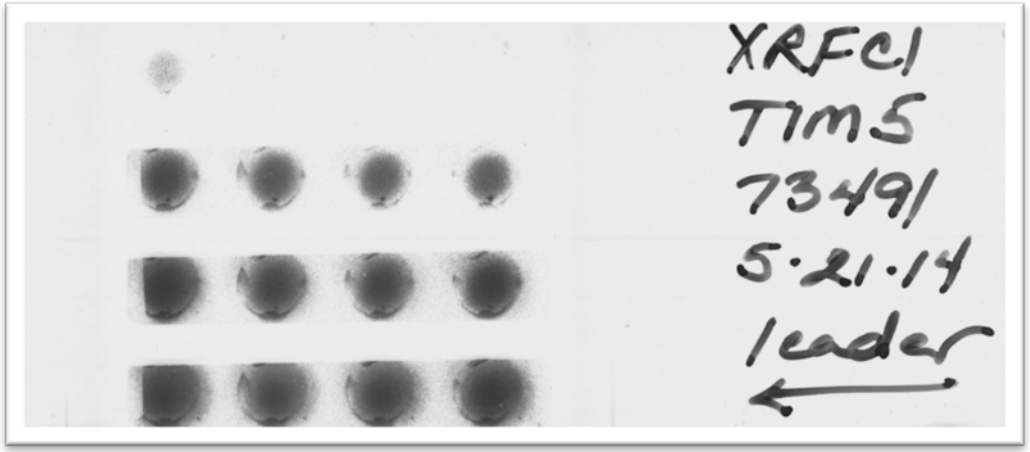
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side Fe	20x	20um/10 um/330 um	8 mil Be/1 mil Be	9 ns	6 ns	1 ns



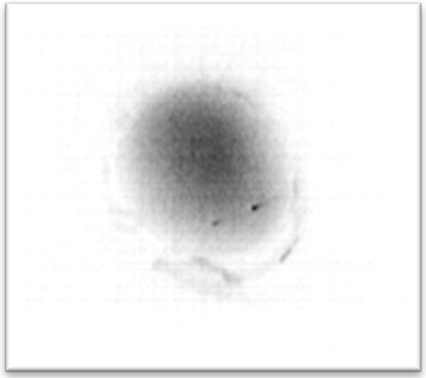


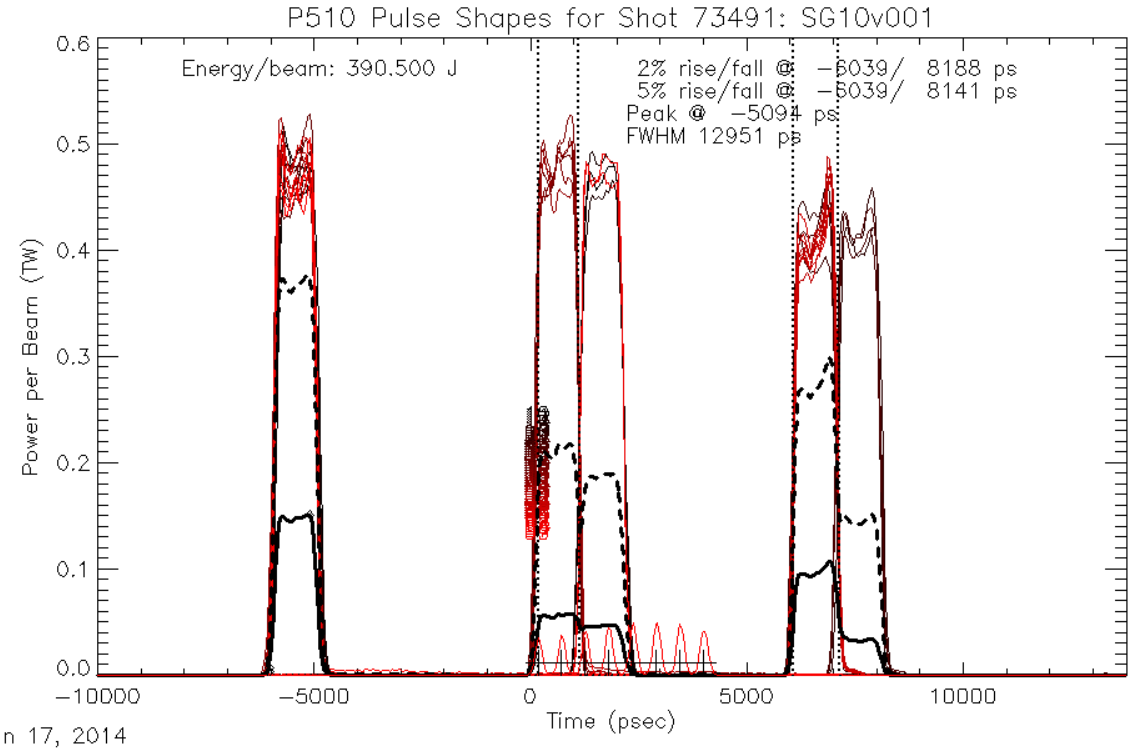
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive





Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11	478.4	34	481
13	484.1	36	484.1
14	459.3	41	484.3
18	487.4	43	476.7
32	459.4	48	497.8
66	471.9	49	488.7
67	466.4	60	498.9
69	473.1	63	478.4
Total	3780		3889.9
		Diff	109.9
		% Diff	2.865748

Shot #73493

- RID #48875
- Target: 2Purple,9White

Target type

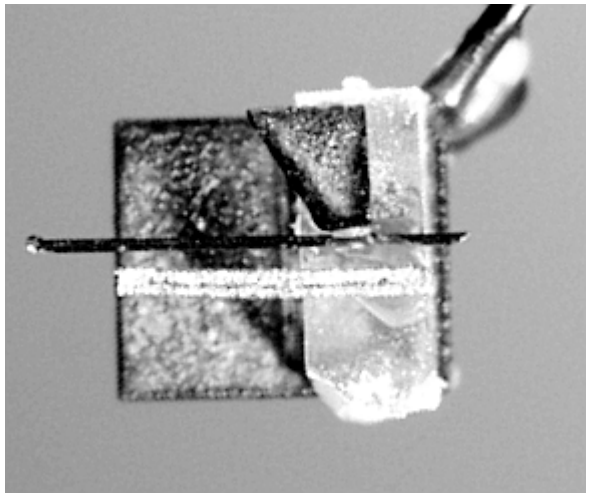
20 um Al		Smooth		Edge-on		Fiducial	X
12 um Ti		Rough		Plan View			

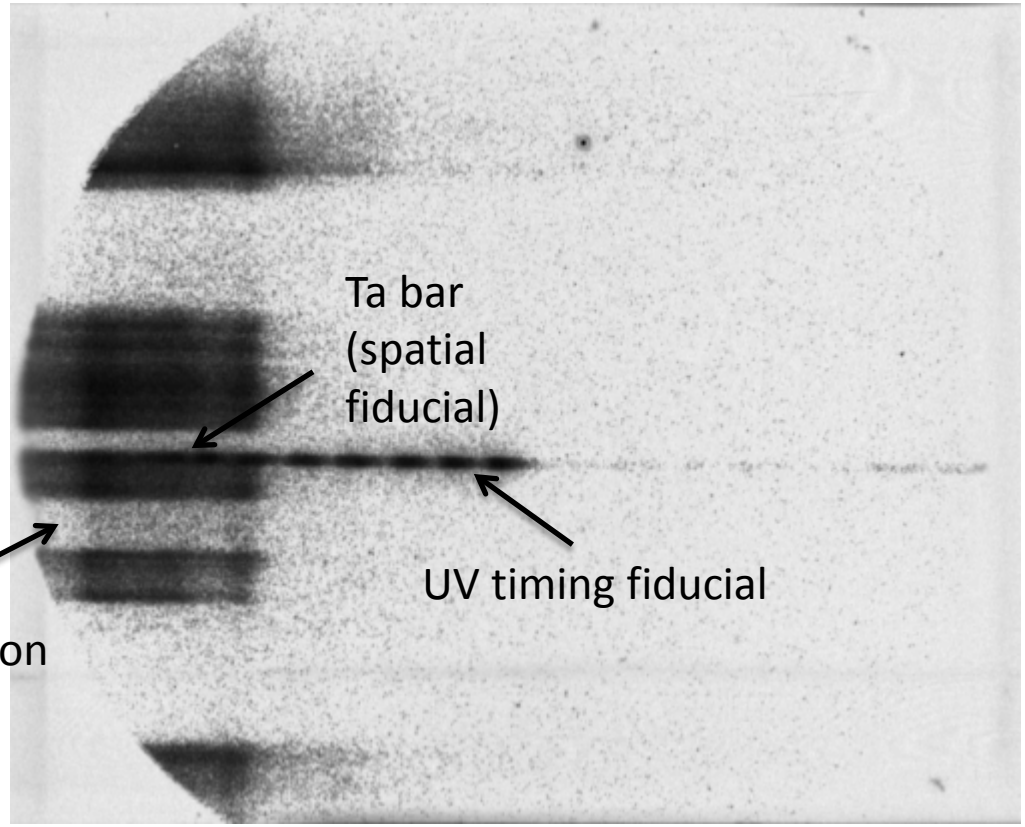
Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to T0 (ns)
SSD	-4	T4 SSD early	-5	500	4	0
		T4 SSD mid	-5	500	5	1
		Fiducial SSD	0	500	4	0
BL	4	T4 FrL late	-5	450	-2	2
		T4 BL late	-5	450	-1	3
		Fiducial late	0	450	-1	3

TIM6 SSCA/SMP (film)

BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side Sc	20x	20um/10 um/330 um	8 mil Be/1 mil Be	9 ns	6 ns	1 ns



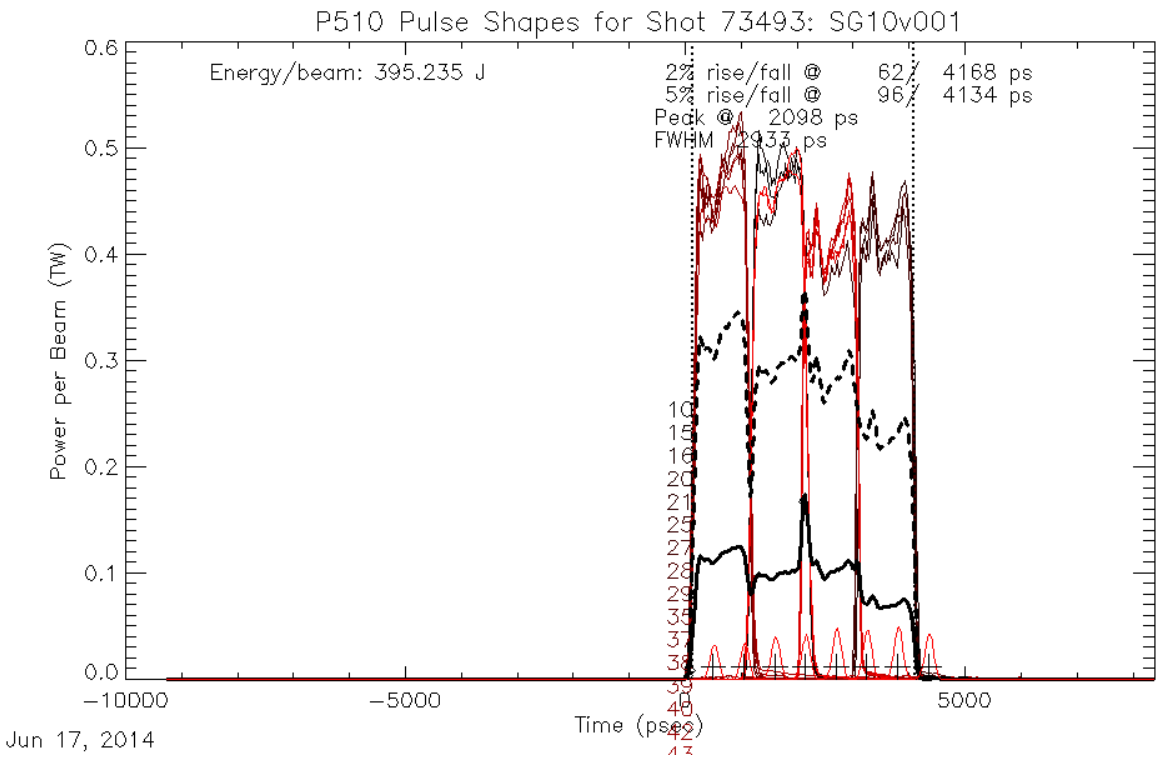


Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive

H12C XRPHC – sees H12 drive

No drive



Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11		34	
13		36	
14		41	
18		43	
32		48	
66		49	
67		60	
69		63	
Total			
		Diff	
		% Diff	

Shot #73494

- RID #48837
- Target: 4Red/1Blue, 11White

Target type

Slit removed from target, switched to 10 um pinhole in SSCA

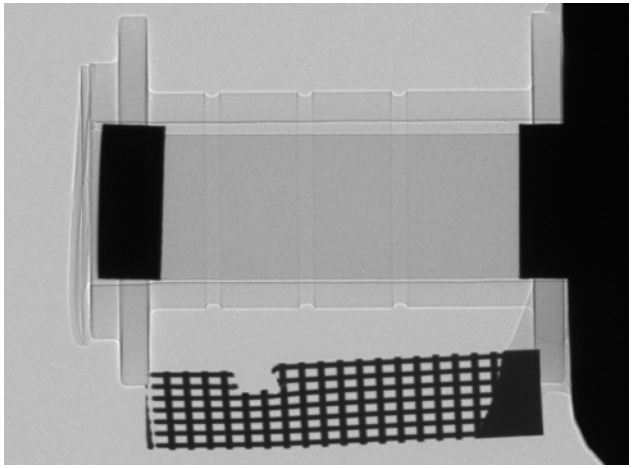
20 um Al	X	Smooth	X	Edge-on	X	Fiducial	
12 um Ti		Rough		Plan View			

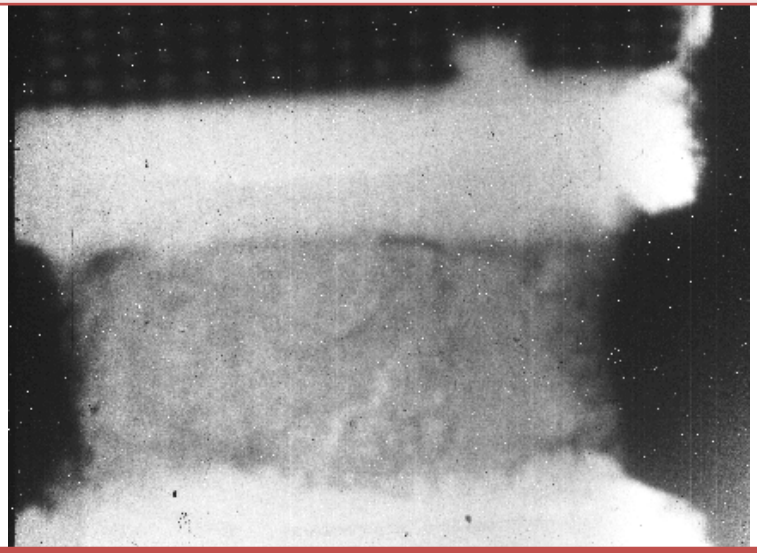
Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-5	500	4	6
		T4 SSD mid	-5	500	5	7
BL	4	T4 FrL late	-5	450	-2	8
		T4 BL late	-5	450	-1	9
		6 TIM2	-3	450	2	12

TIM3 XRFC3 (CCD)

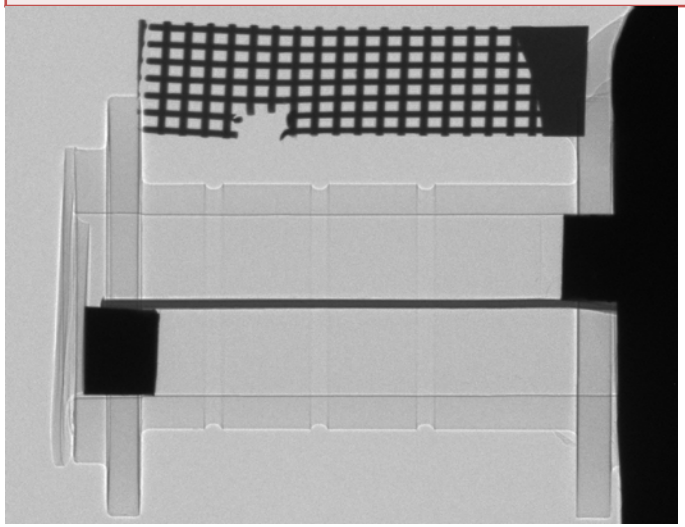
BL	pinhole	filter	bias	start time (t0+)	stand-off
Fe		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	8.4 ns	26.4 cm

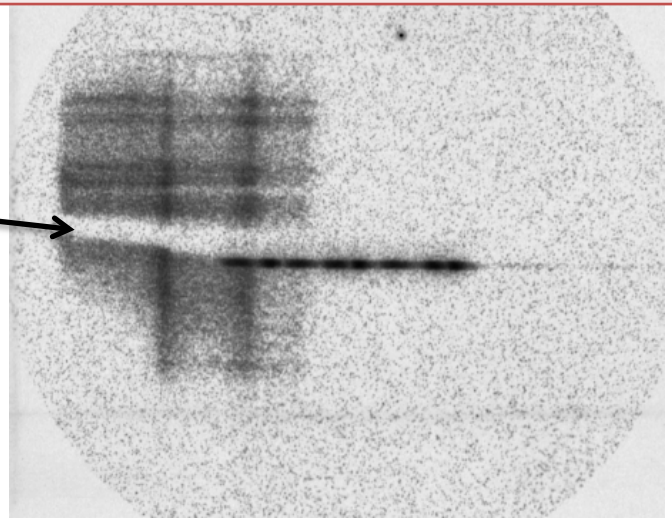




TIM6 SSCA/SMP (film)

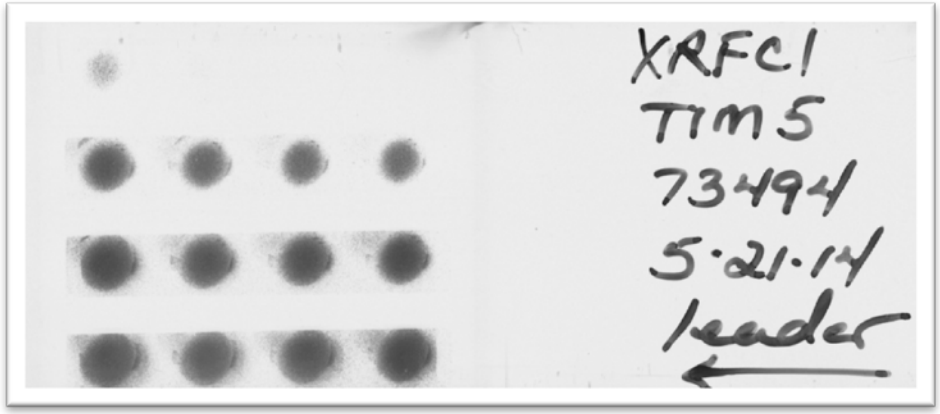
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side Sc	20x	10 um pinhole/330 um	8 mil Be/1 mil Be	9 ns	4 ns	1 ns



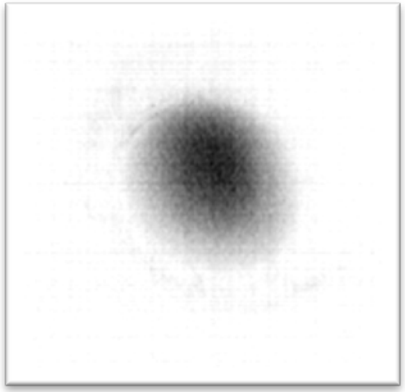


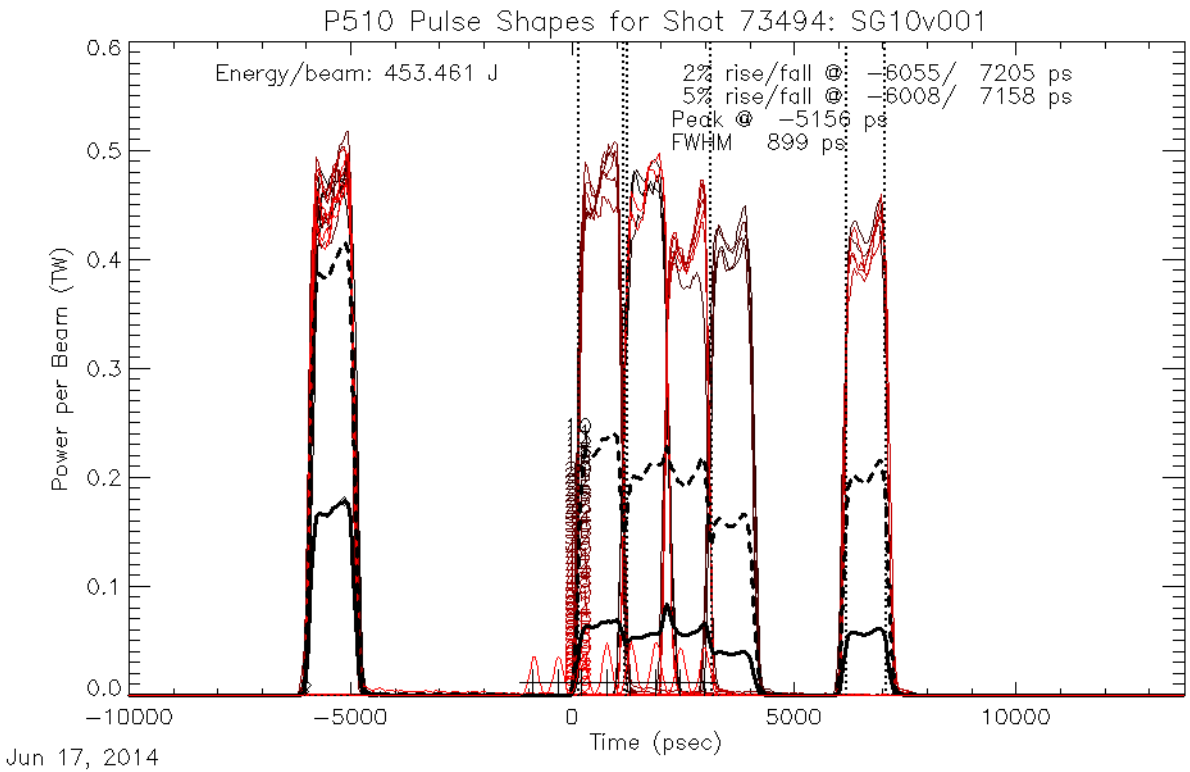
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive





Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11	468.6	34	469.2
13	467.2	36	467.3
14	450.1	41	478.1
18	469.9	43	458.8
32	447.2	48	480.5
66	456.3	49	478.7
67	455	60	487.7
69	461.4	63	468
Total	3675.7		3788.3
		Diff	112.6
		% Diff	3.017149

Shot #73496

- RID #48838
- Target: 1Red/2White, 12White

Target type

Slit removed from target, switched to 10 um pinhole in SSCA

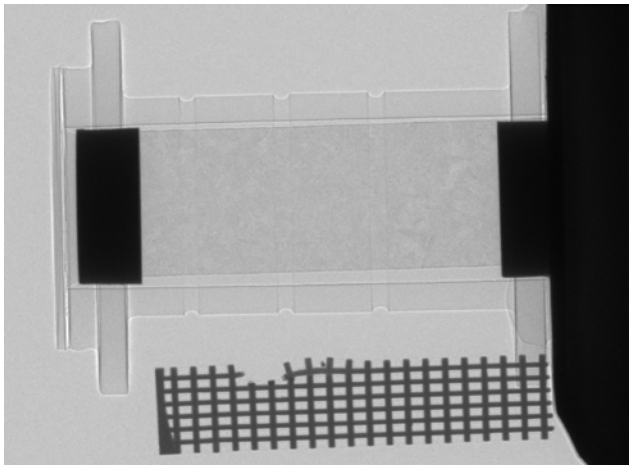
20 um Al	X	Smooth		Edge-on	X	Fiducial	
12 um Ti		Rough	X	Plan View			

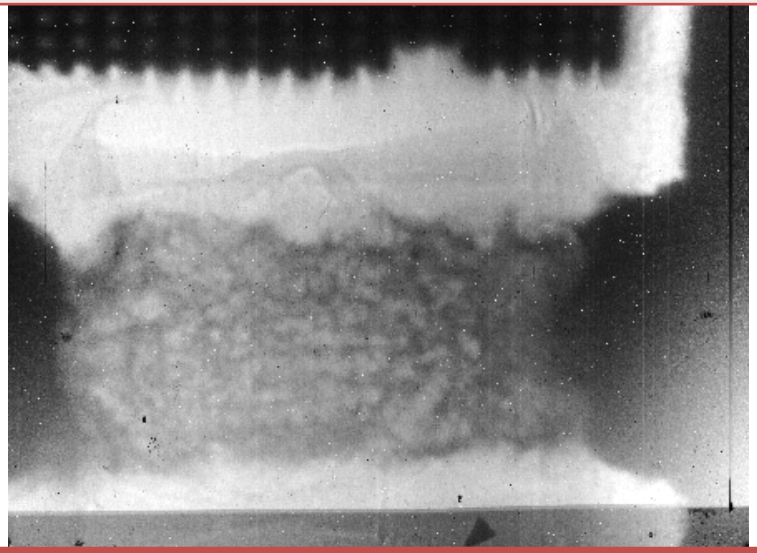
Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-3.5	500	4	6
		T4 SSD mid	-3.5	500	5	7
BL	4	T4 FrL late	-3.5	450	-2	8
		T4 BL late	-3.5	450	-1	9
		6 TIM2	-3	450	2	12

TIM3 XRFC3 (CCD)

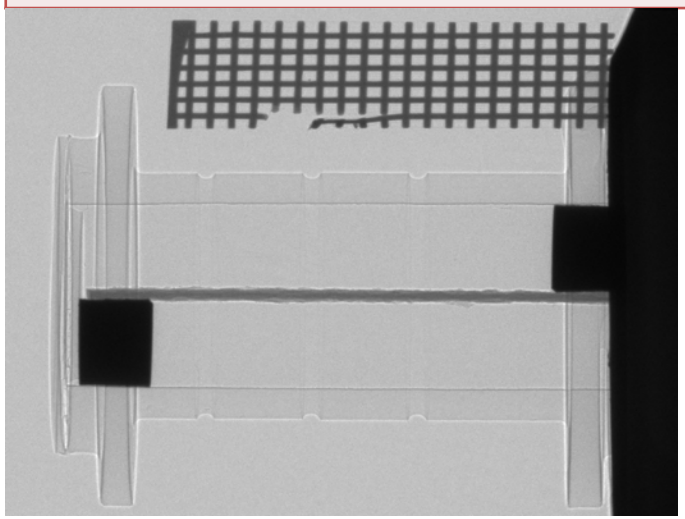
BL	pinhole	filter	bias	start time (t0+)	stand-off
Sc		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	8.4 ns	26.4 cm

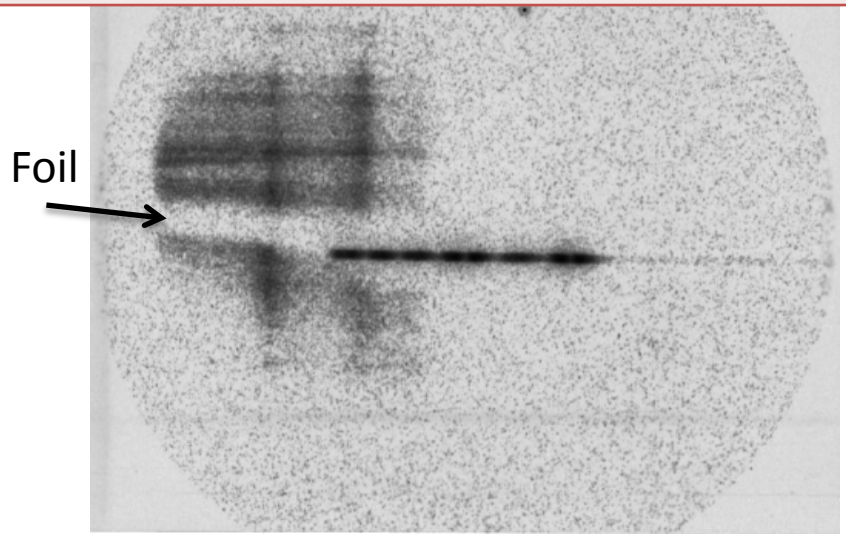




TIM6 SSCA/SMP (film)

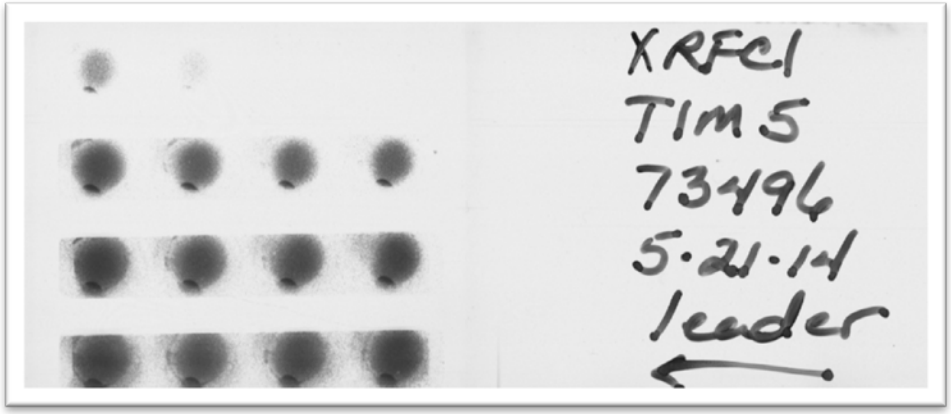
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side Sc	20x	10 um pinhole/330 um	8 mil Be/1 mil Be	9 ns	4 ns	1 ns



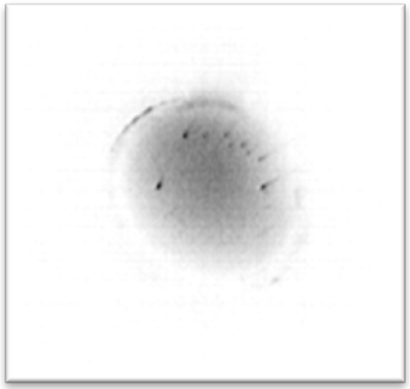


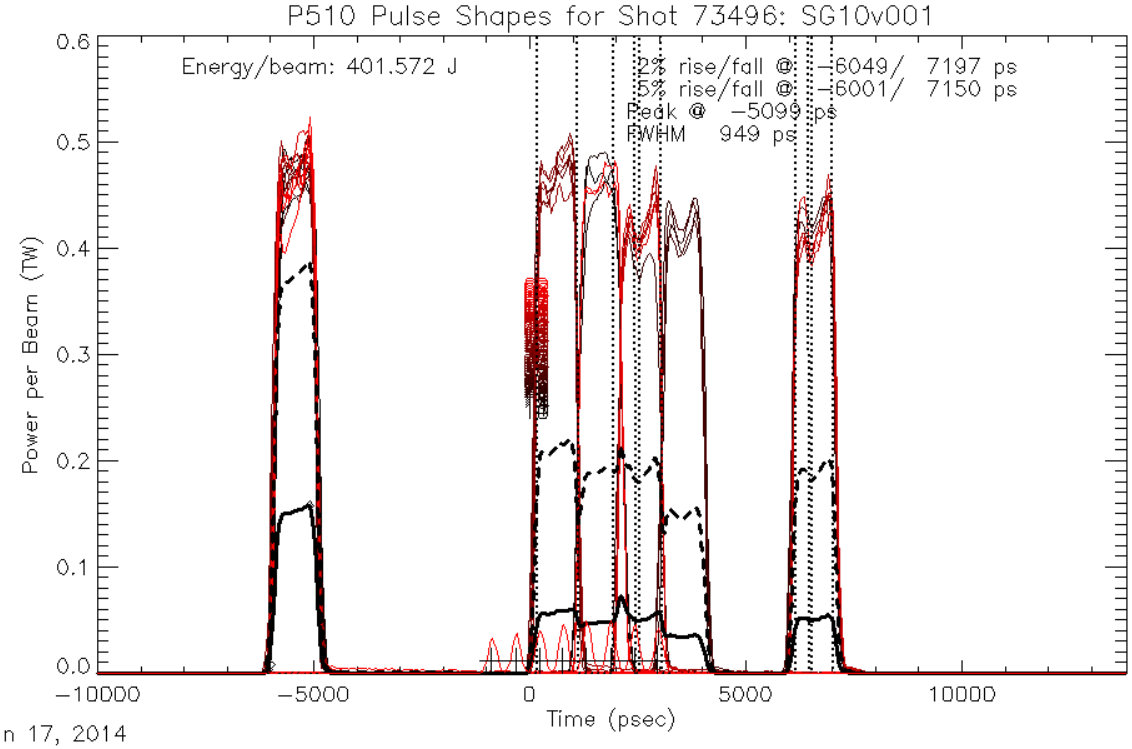
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive





Jun 17, 2014

Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11	472.2	34	474.9
13	475.6	36	476.2
14	450.8	41	478.2
18	476.8	43	469.7
32	452	48	490.4
66	466.1	49	482.8
67	461.9	60	491.4
69	465.6	63	469.6
Total	3721		3833.2
		Diff	112.2
		% Diff	2.970533

Shot #73503

- RID #48839
- Target: 5Red/2Blue, 3Pink

Target type

Slit removed from target; 20 um pinhole in SSCA

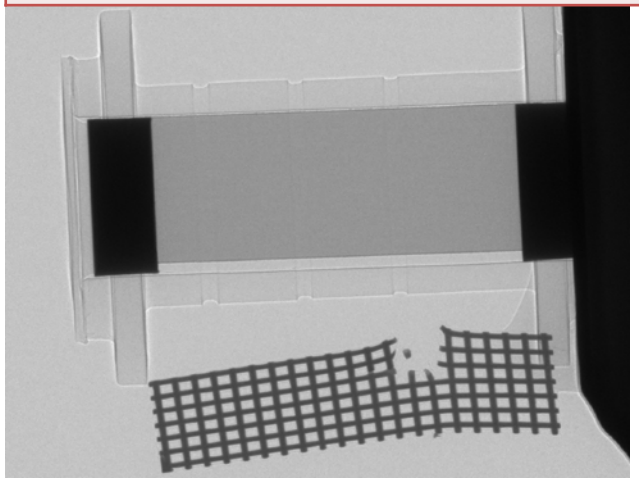
20 um Al		Smooth	X	Edge-on	X	Fiducial	
12 um Ti	X	Rough		Plan View			

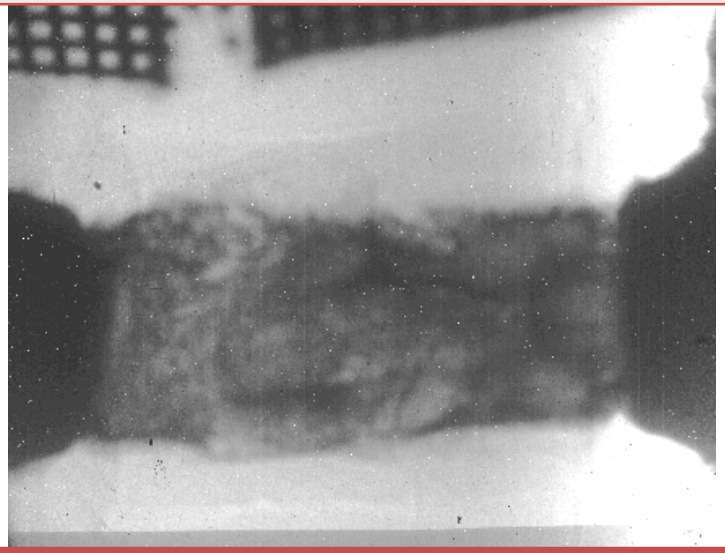
Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-4	500	4	6
		T4 SSD mid	-4	500	5	7
BL	4.25	T4 FrL late	-4	450	-2	8.25
		T4 BL late	-4	450	-1	9.25
		6 TIM2	-3	450	2	12.25

TIM3 XRFC3 (CCD)

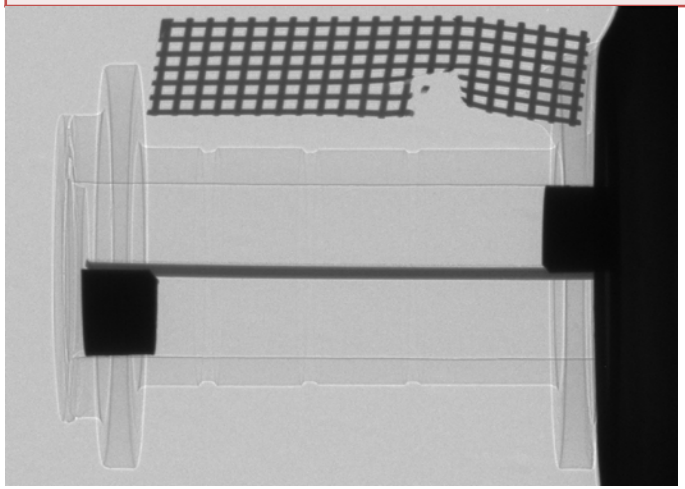
BL	pinhole	filter	bias	start time (t0+)	stand-off
Fe		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	8.4 ns	26.4 cm

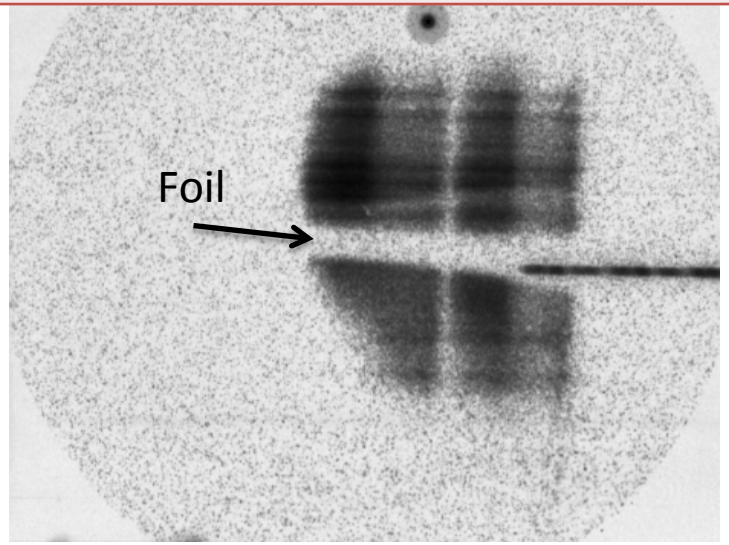




TIM6 SSCA/SMP (film)

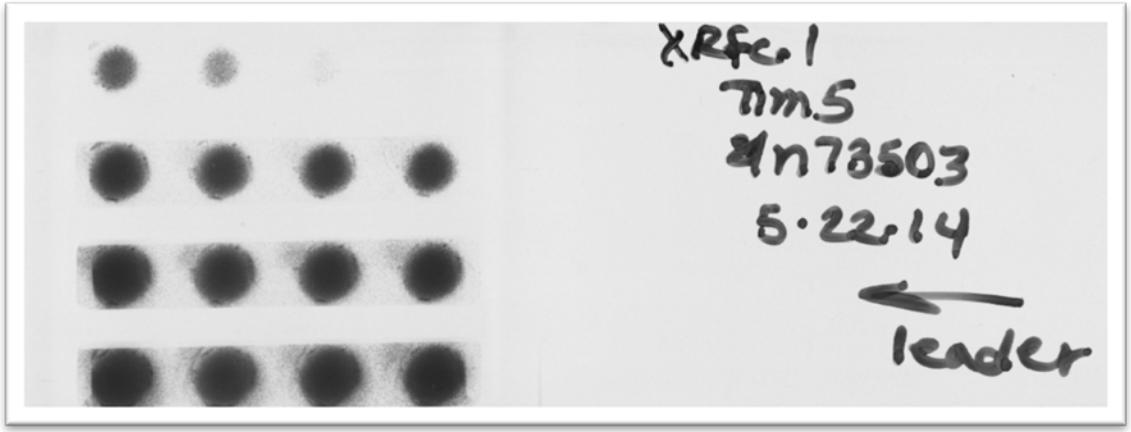
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side V	20x	20 um pinhole/330 um	8 mil Be/1 mil Be	9 ns	3 ns	1 ns



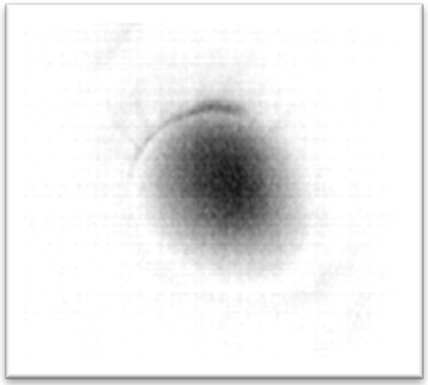


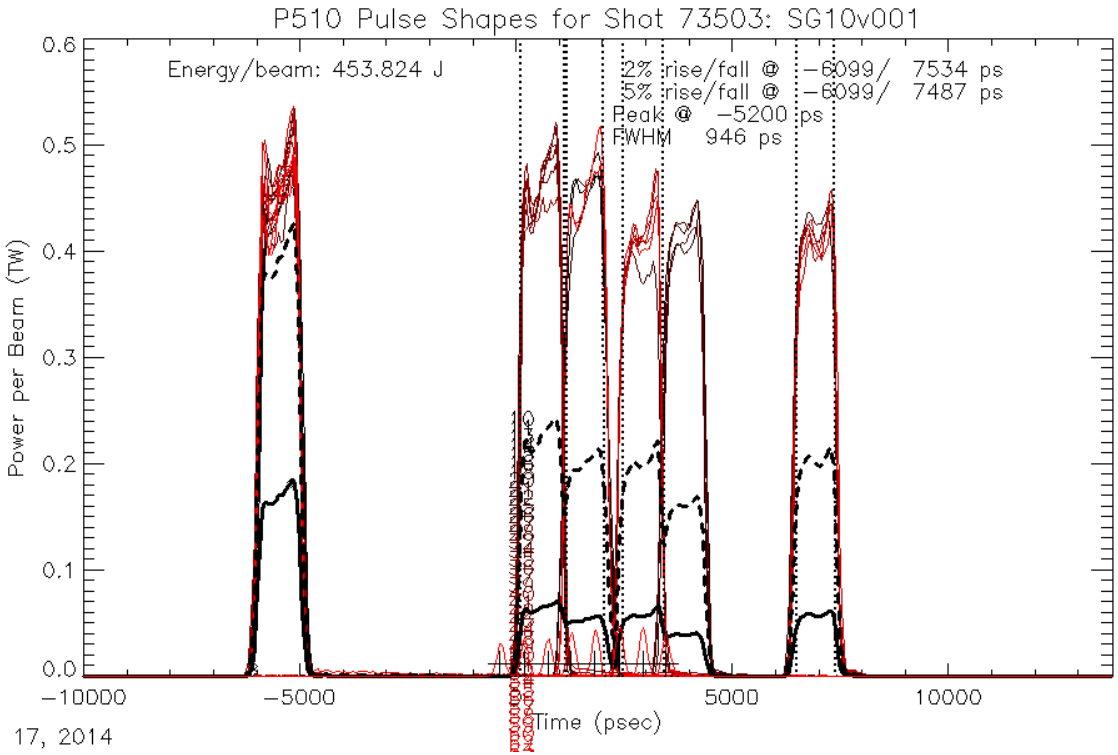
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive





Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11	469.9	34	472.5
13	474.1	36	477.2
14	448.5	41	478.6
18	480.5	43	467.2
32	448.6	48	487.5
66	466.3	49	479.9
67	460.9	60	491.7
69	469	63	469.1
Total	3717.8		3823.7
		Diff	105.9
		% Diff	2.80846

Shot #73504

- RID #48840
- Target: 2Red/2Blue, 5 Pink

Target type

Slit removed from target; 20 um pinhole in SSCA

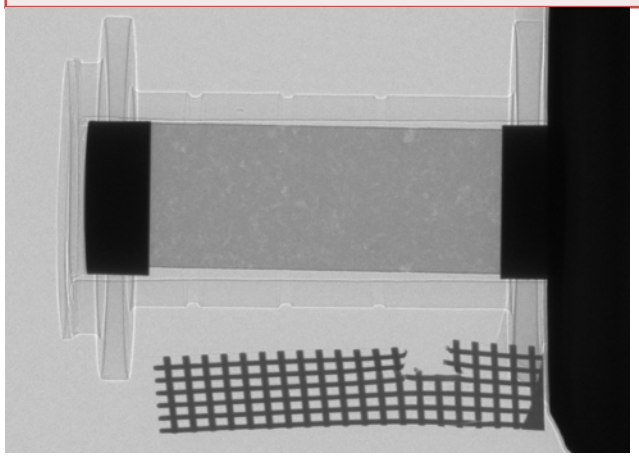
20 um Al		Smooth		Edge-on	X	Fiducial	
12 um Ti	X	Rough	X	Plan View			

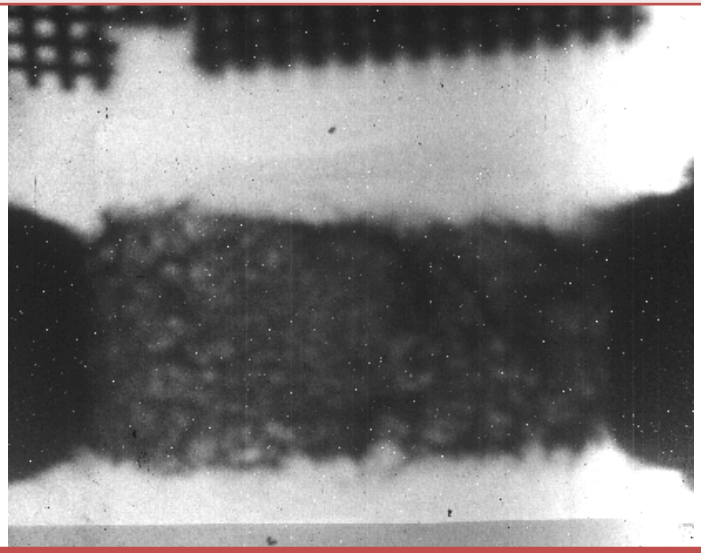
Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-4	500	4	6
		T4 SSD mid	-4	500	5	7
BL	4.25	T4 FrL late	-4	450	-2	8.25
		T4 BL late	-4	450	-1	9.25
		6 TIM2	-3	450	2	12.25

TIM3 XRFC3 (CCD)

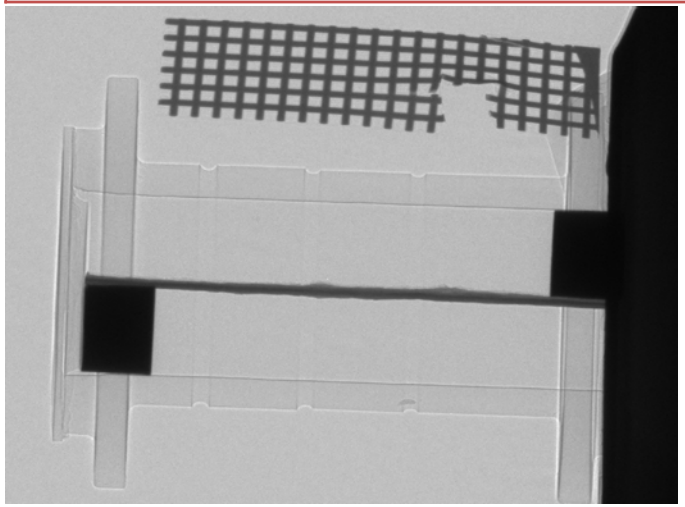
BL	pinhole	filter	bias	start time (t0+)	stand-off
Fe		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	8.4 ns	26.4 cm

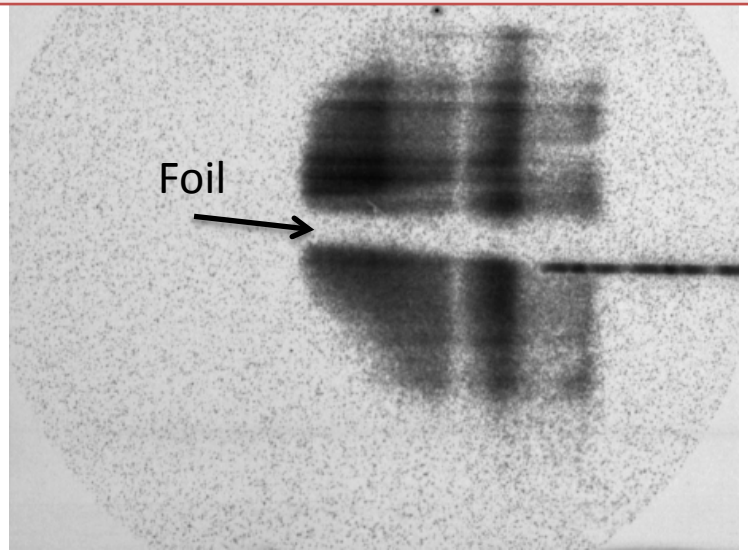




TIM6 SSCA/SMP (film)

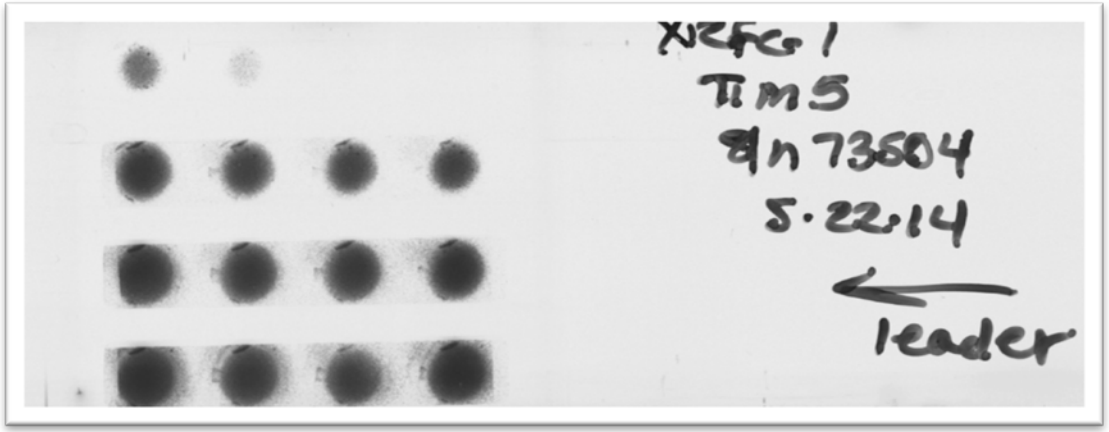
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side V	20x	20 um pinhole/330 um	8 mil Be/1 mil Be	9 ns	3 ns	1 ns



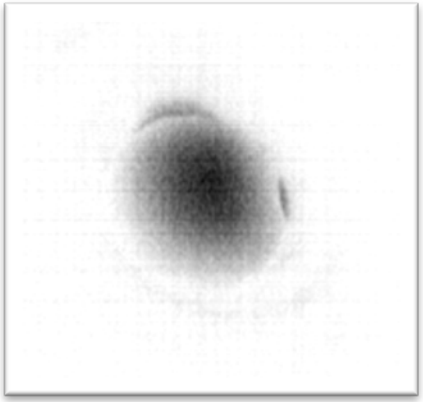


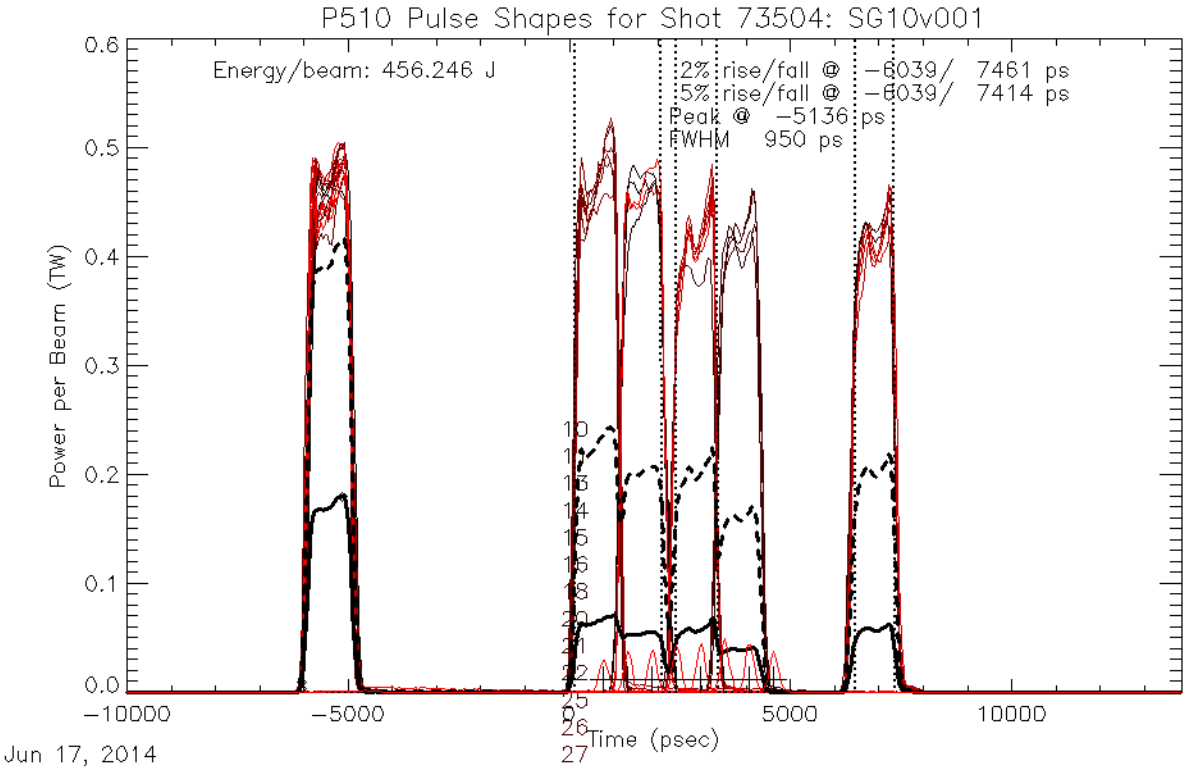
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive





Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11	472.7	34	474.8
13	478.9	36	478.7
14	452.9	41	480.3
18	483	43	472.4
32	452.1	48	489.4
66	468.6	49	481.4
67	463.3	60	496.1
69	470.6	63	474.2
Total	3742.1		3847.3
		Diff	105.2
		% Diff	2.772288

Shot #73505

- RID #48849
- Target: 2Red/3Blue, 7Pink

Target type

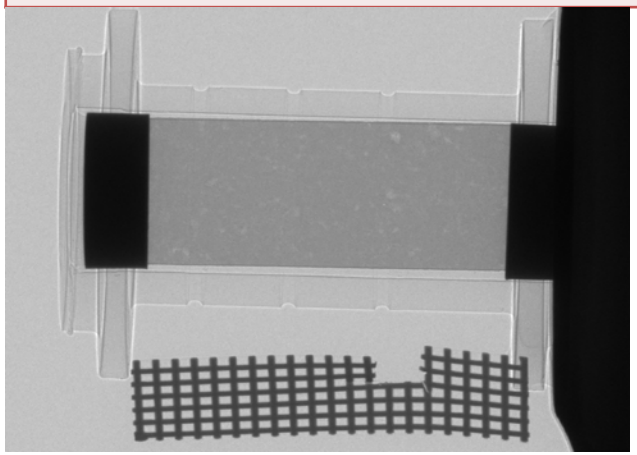
20 um Al		Smooth		Edge-on	X	Fiducial	
12 um Ti	X	Rough	X	Plan View			

Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-4	500	4	6
		T4 SSD mid	-4	500	5	7
BL	8	T4 FrL late	-4	450	-2	12
		T4 BL late	-4	450	-1	13
		6 TIM2	-3	450	2	16

TIM3 XRFC3 (CCD)

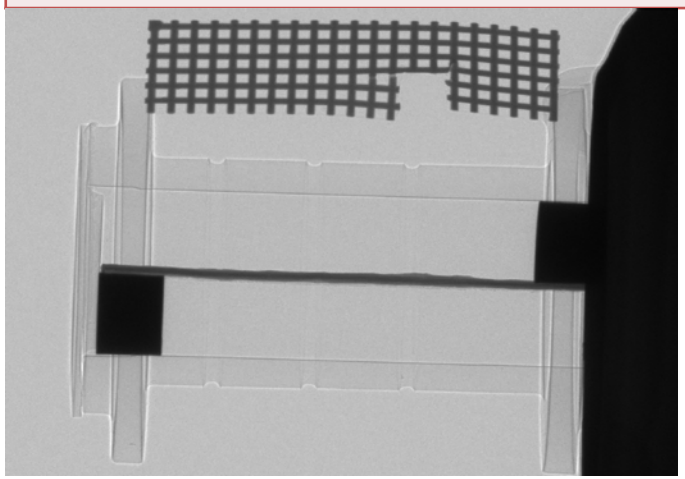
BL	pinhole	filter	bias	start time (t0+)	stand-off
Fe		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	**6.65 ns (error)**	26.4 cm

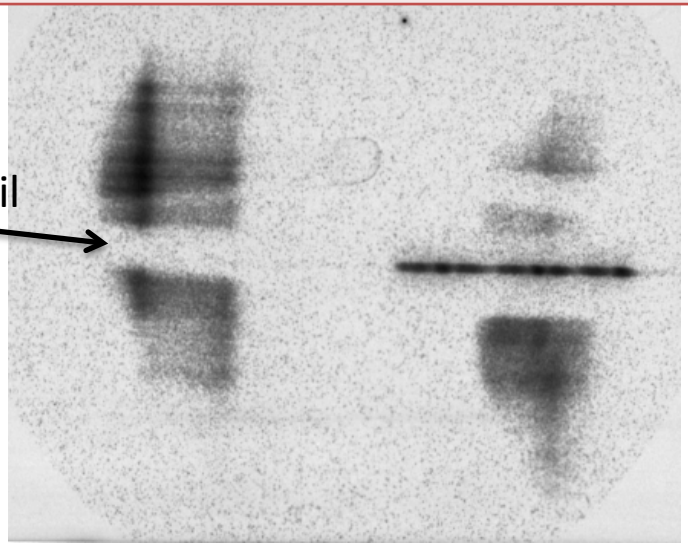


Timing change propagation error; missed the BL

TIM6 SSCA/SMP (film)

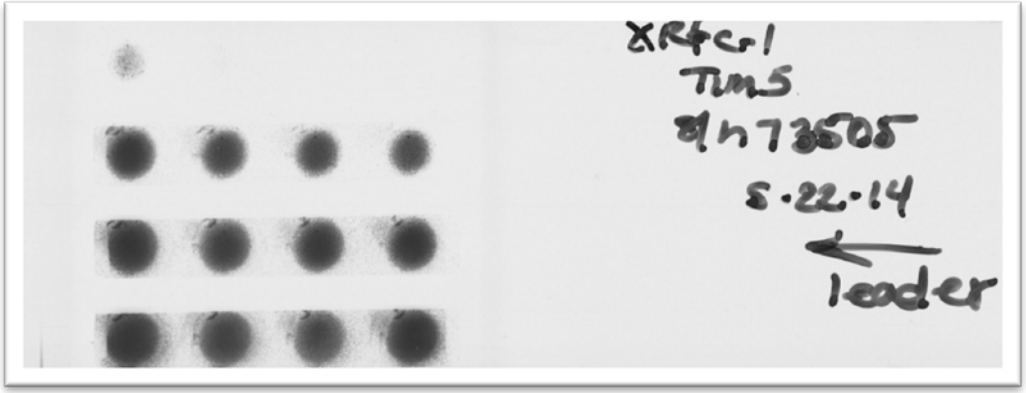
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side V	20x	20 um pinhole/330 um	8 mil Be/1 mil Be	9 ns	6 ns	1 ns



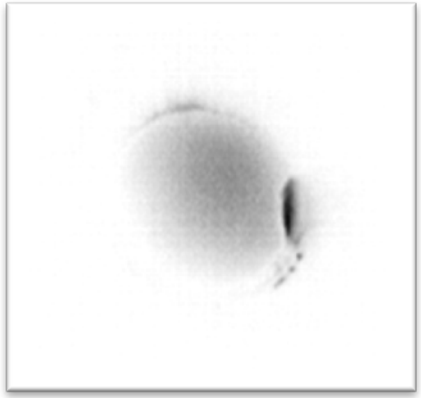


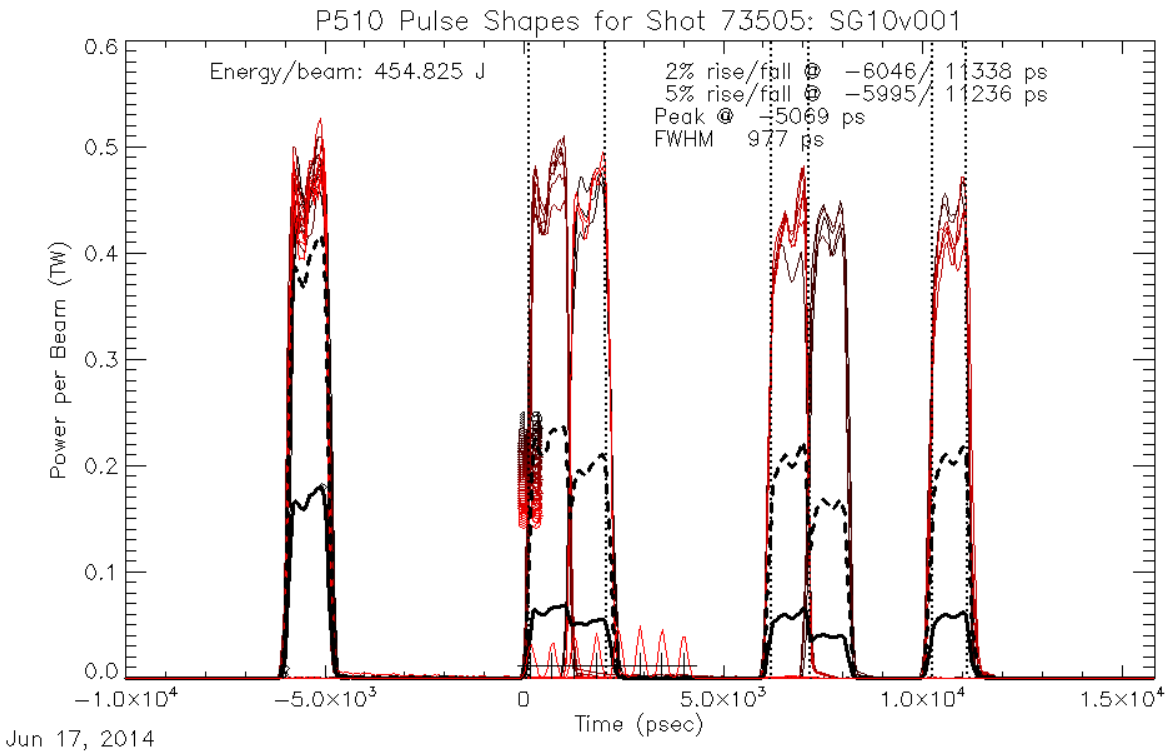
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive





Drive Power Balance

H12 Drive		H19 Drive	
Beam	**Power(J)**	**Beam**	**Power(J)**
11	466.5	34	469.5
13	471.4	36	469.5
14	446.8	41	475.7
18	477.7	43	467.8
32	448.6	48	483.1
66	464.1	49	478.9
67	462.3	60	492.1
69	465.8	63	467.9
Total	**3703.2**		**3804.5**
		Diff	**101.3**
		% Diff	**2.698563**

Shot #73506

- RID #48850
- Target: 4Red/3Blue, 13White

Target type

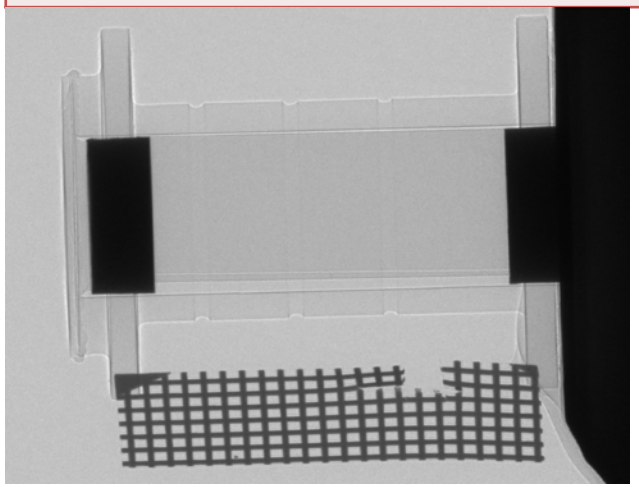
20 um Al	X	Smooth	X	Edge-on	X	Fiducial	
12 um Ti		Rough		Plan View			

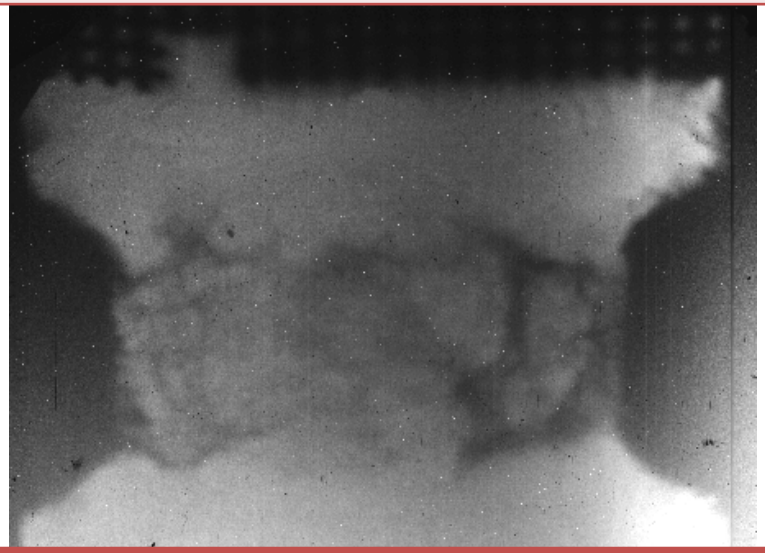
Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-4	500	4	6
		T4 SSD mid	-4	500	5	7
BL	8	T4 FrL late	-4	450	-2	12
		T4 BL late	-3.5	450	-1	13
		6 TIM2	-3	450	2	16

TIM3 XRFC3 (CCD)

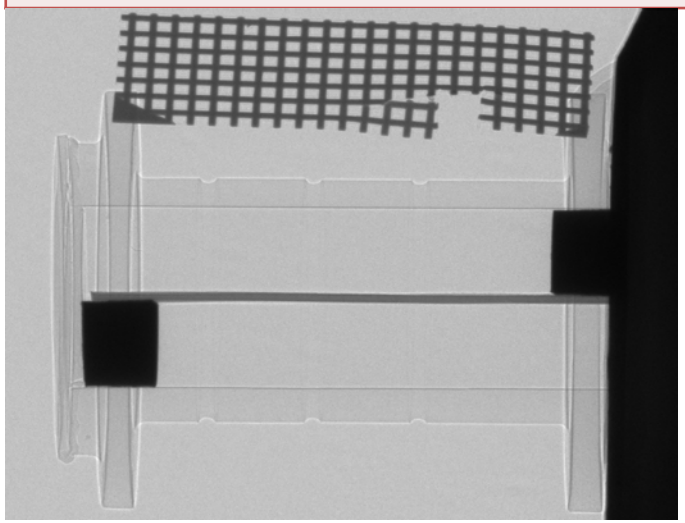
BL	pinhole	filter	bias	start time (t0+)	stand-off
Fe		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	10.4 ns	26.4 cm

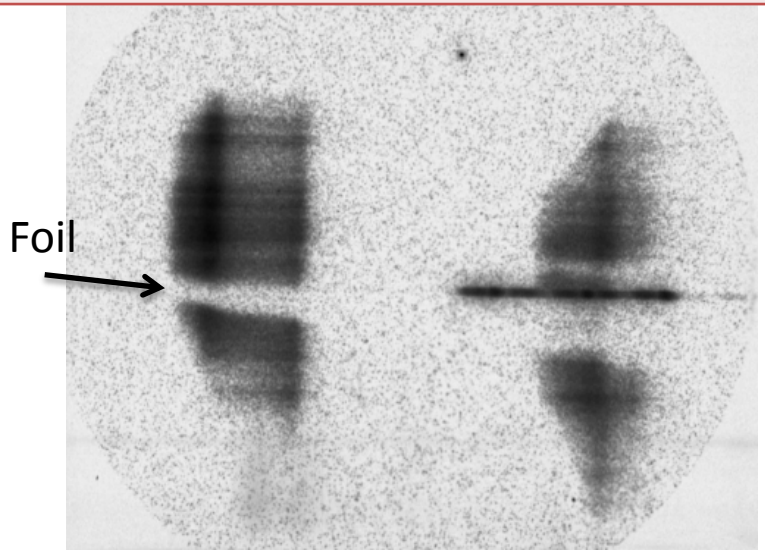




TIM6 SSCA/SMP (film)

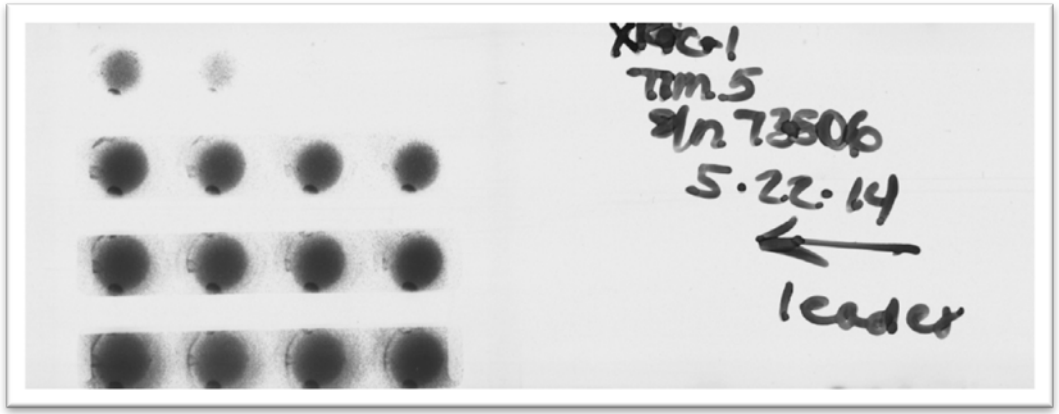
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side Sc	20x	20 um pinhole/330 um	8 mil Be/1 mil Be	9 ns	6 ns	1 ns



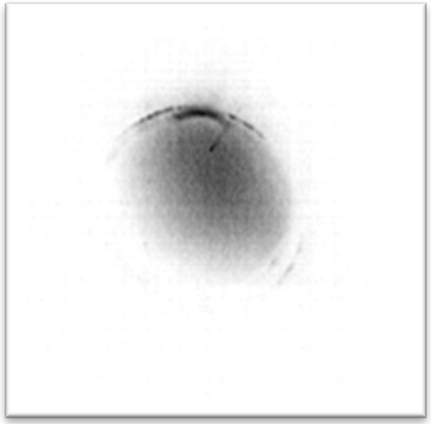


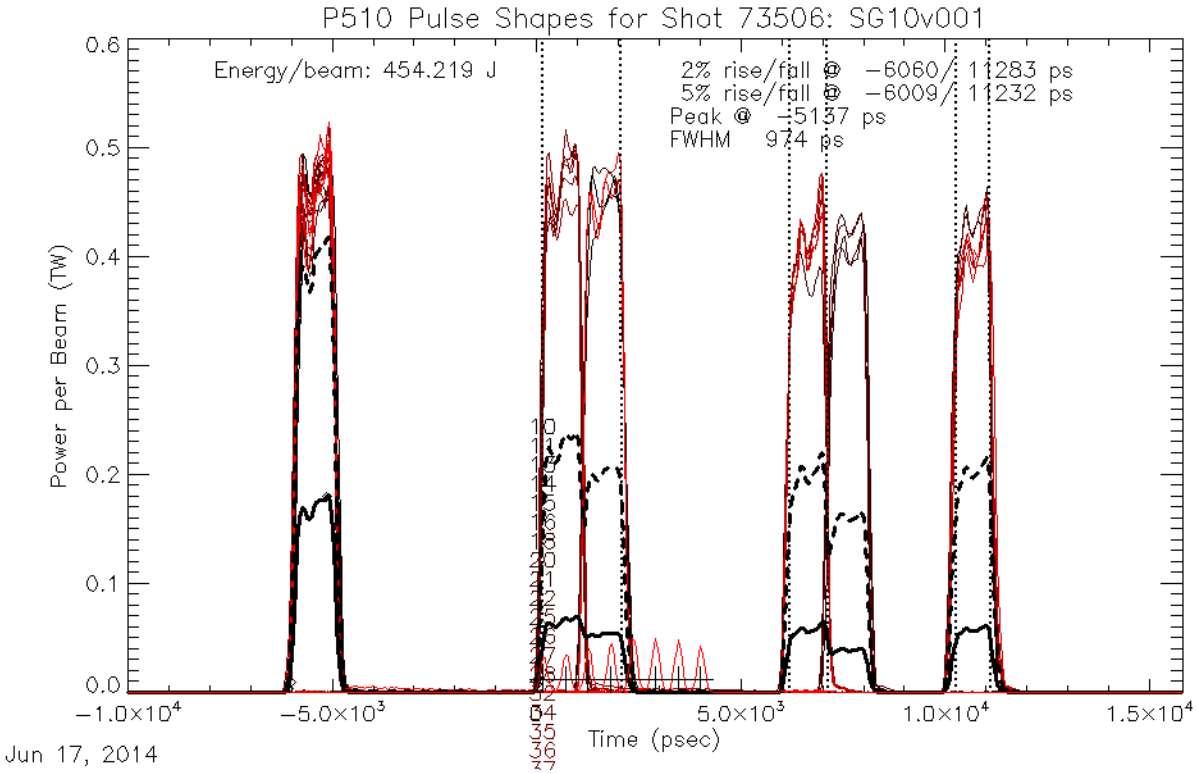
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive





Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11	471.5	34	472.4
13	476.3	36	474.8
14	450.5	41	479.1
18	480.6	43	470.6
32	450.8	48	488.3
66	465	49	479.6
67	463.3	60	490.9
69	468.5	63	472
Total	3726.5		3827.7
		Diff	101.2
		% Diff	2.679304

Shot #73508

- RID #48851
- Target: 1Red/3White, 4White

Target type

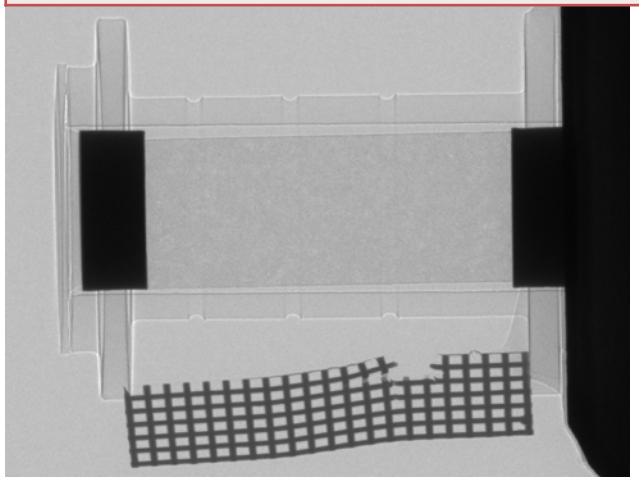
20 um Al	X	Smooth		Edge-on	X	Fiducial	
12 um Ti		Rough	X	Plan View			

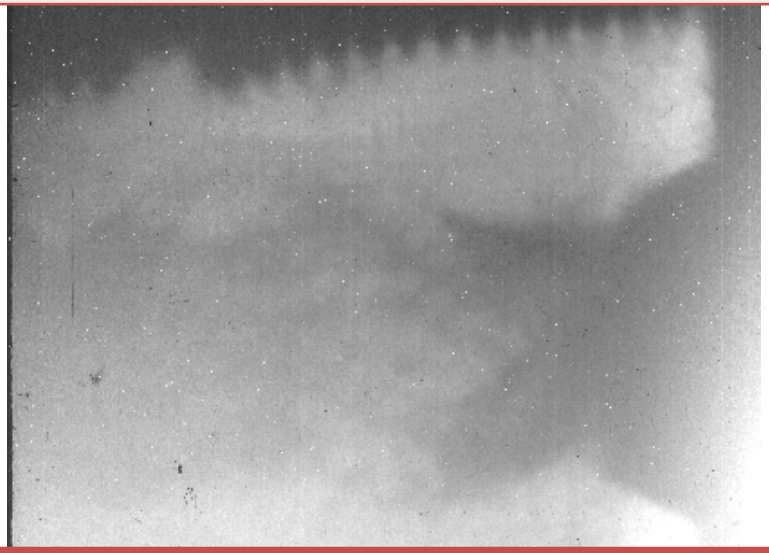
Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-4	500	4	6
		T4 SSD mid	-4	500	5	7
BL	8	T4 FrL late	-4	450	-2	12
		T4 BL late	-3.5	450	-1	13
		6 TIM2	-3	450	2	16

TIM3 XRFC3 (CCD)

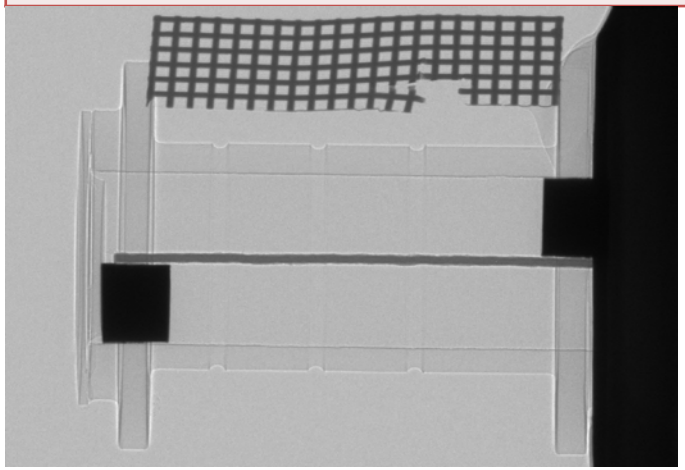
BL	pinhole	filter	bias	start time (t0+)	stand-off
Sc		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	10.4 ns	26.4 cm

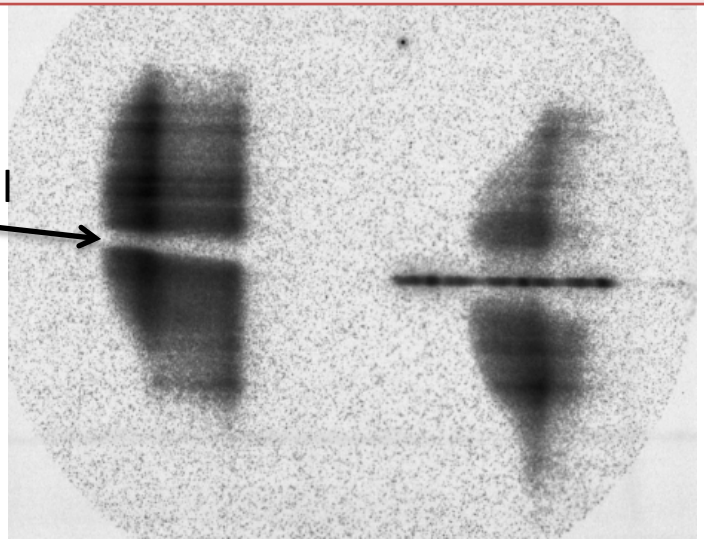




TIM6 SSCA/SMP (film)

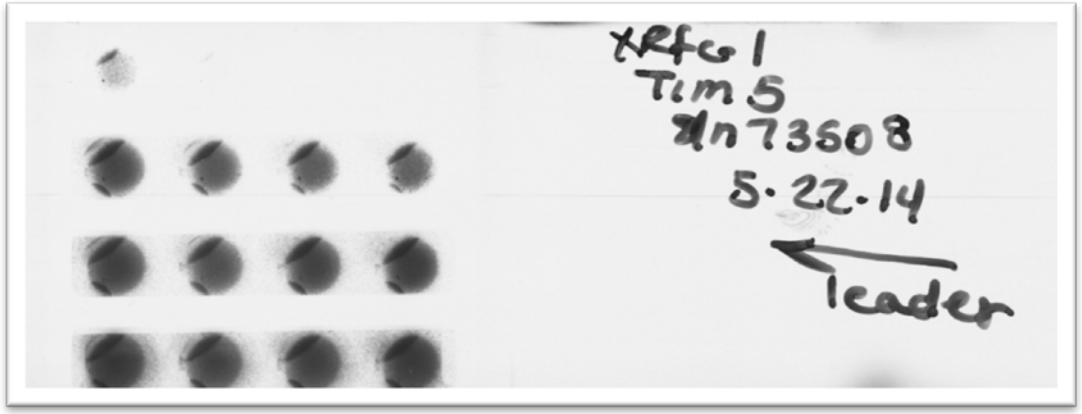
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side Sc	20x	20 um pinhole/330 um	8 mil Be/1 mil Be	9 ns	3 ns	1 ns



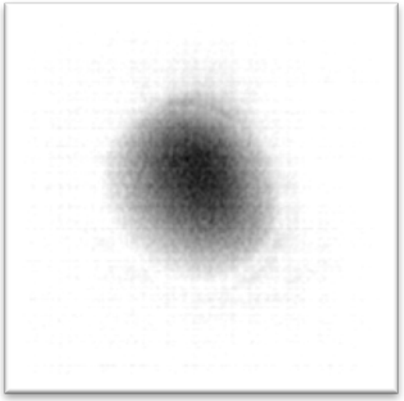


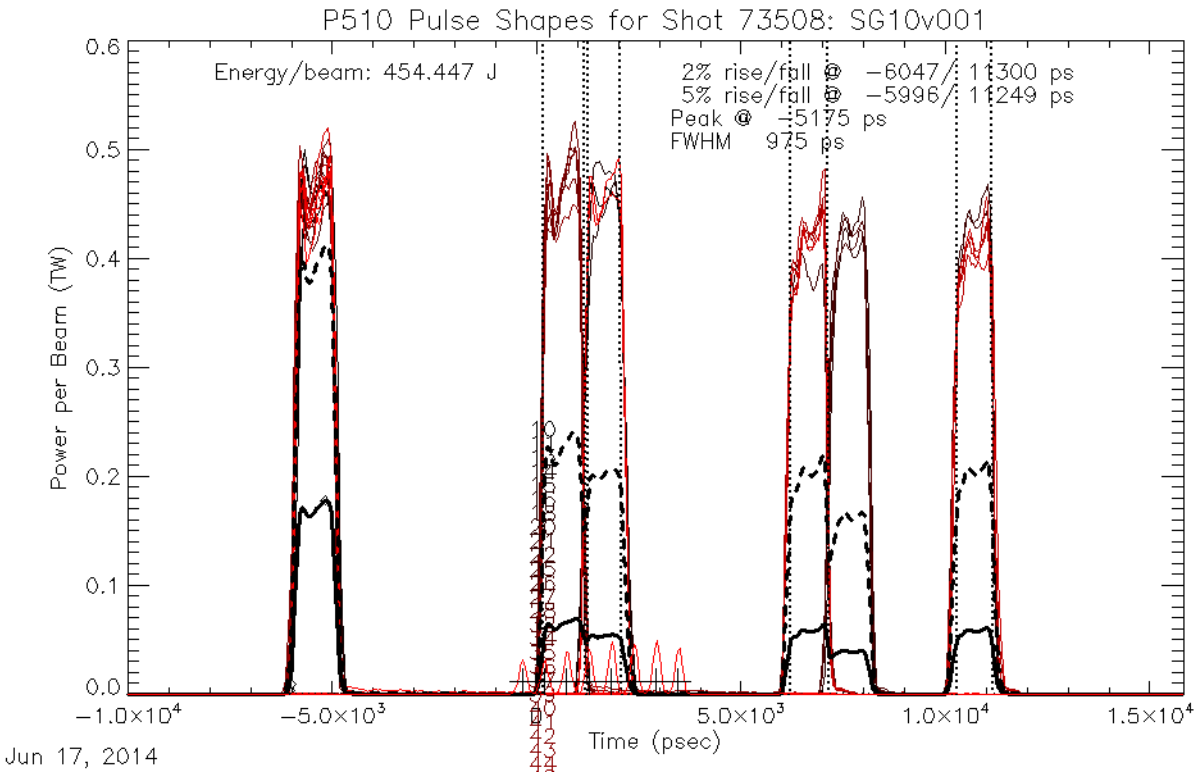
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive





Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11	469.6	34	471.5
13	476.8	36	475.2
14	449	41	476.8
18	481.1	43	469.2
32	449.7	48	490.4
66	465.2	49	478.2
67	461.2	60	491.2
69	466	63	470.8
Total	3718.6		3823.3
		Diff	104.7
		% Diff	2.776489

Shot #73509

- RID #48852
- Target: 5Red/3Blue, 6Pink

Target type

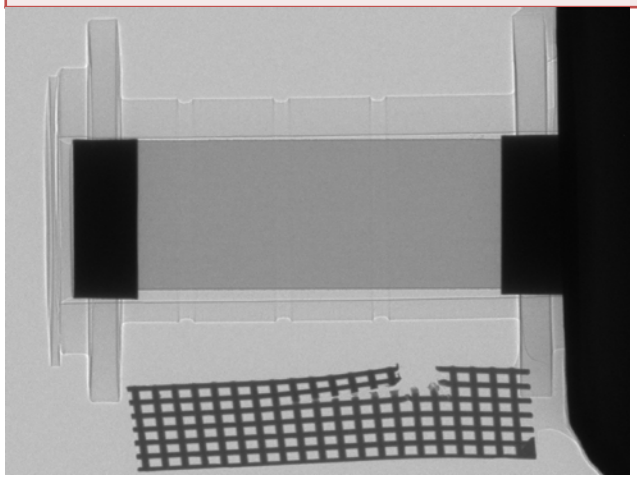
20 um Al		Smooth	X	Edge-on	X	Fiducial	
12 um Ti	X	Rough		Plan View			

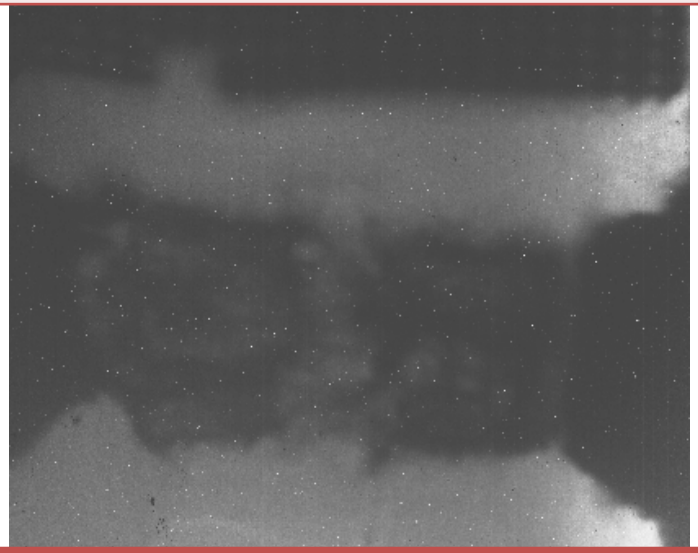
Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-4	500	4	6
		T4 SSD mid	-4	500	5	7
BL	8	T4 FrL late	-4	450	-2	12
		T4 BL late	-3.5	450	-1	13
		6 TIM2	-3	450	2	16

TIM3 XRFC3 (CCD)

BL	pinhole	filter	bias	start time (t0+)	stand-off
		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	10.4 ns	26.4 cm

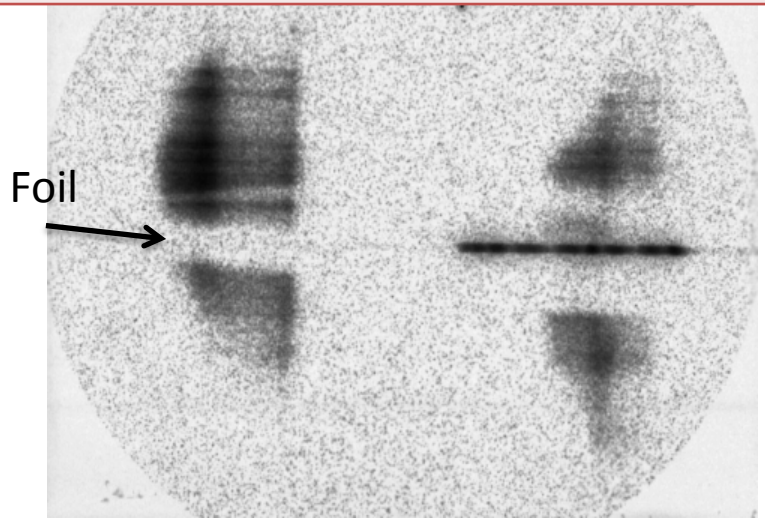




TIM6 SSCA/SMP (film)

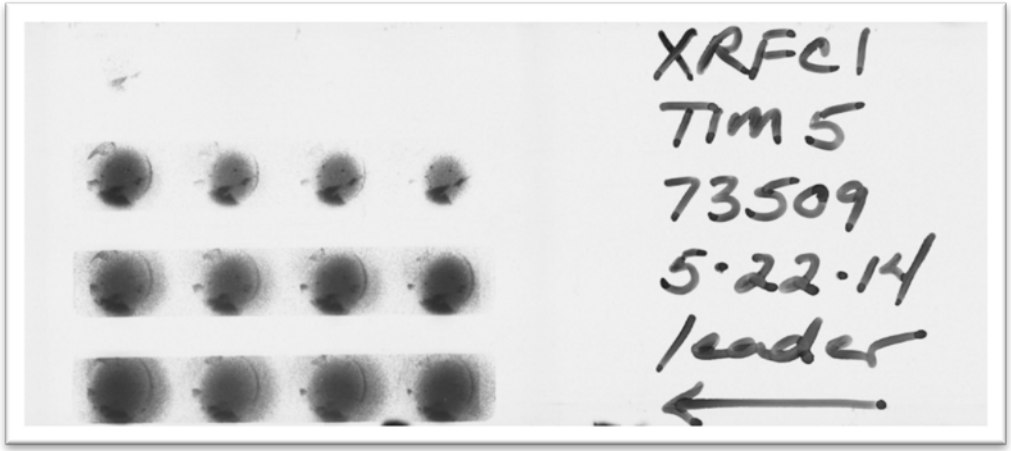
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side	20x	20 um pinhole/330 um	8 mil Be/1 mil Be	9 ns	6 ns	1 ns

No tiff from Xradia

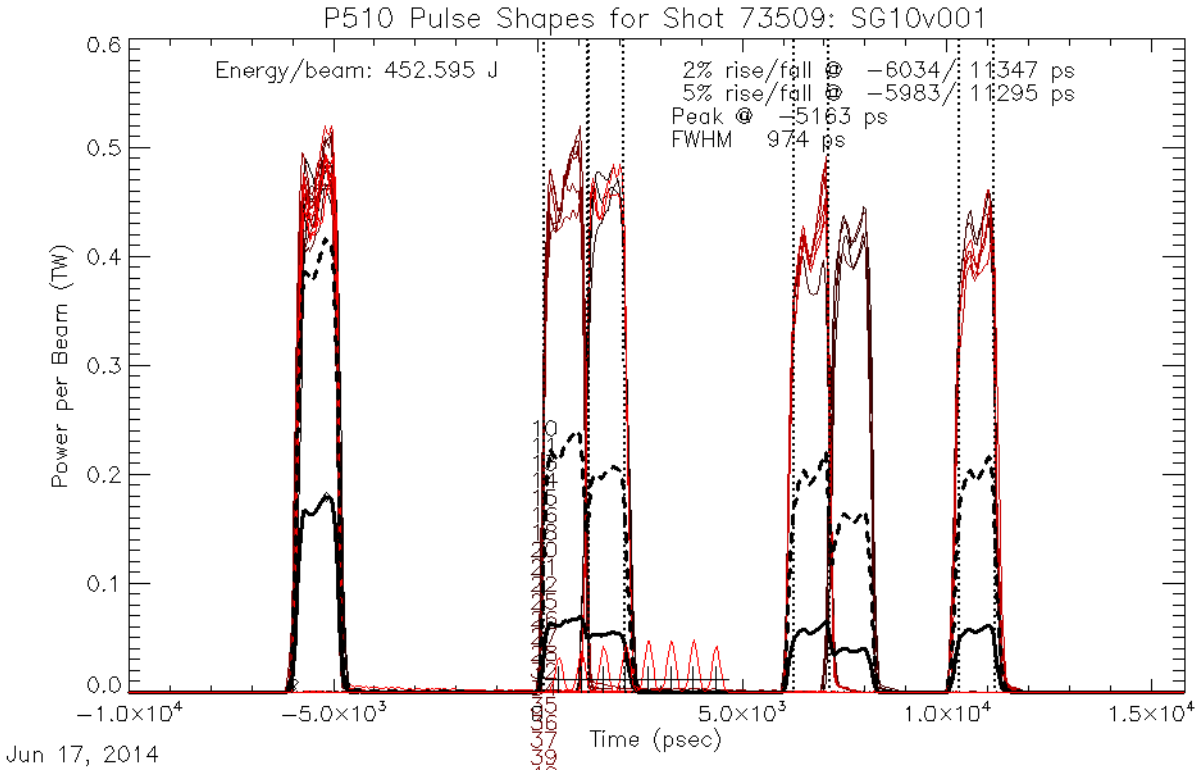


Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive



Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11	469.1	34	472.4
13	476.7	36	472.1
14	451.3	41	477.2
18	478.1	43	468.9
32	449.4	48	490
66	464.3	49	478.2
67	458.9	60	489.4
69	467.7	63	471
Total	3715.5		3819.2
		Diff	103.7
		% Diff	2.752598

Shot #73510

- RID #48844
- Target: 2White/3Red, 10White

Target type

20 um Al	X	Smooth	X	Edge-on	X	Fiducial	
12 um Ti		Rough		Plan View			

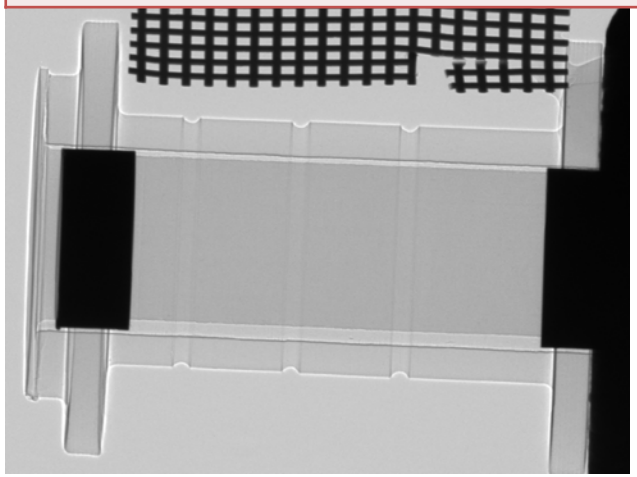
Overlapped T4 FrL late and T4 BL late beam groups to improve signal power.

Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-4	500	4	6
		T4 SSD mid	-4	500	5	7
BL	6	T4 FrL late	-4	450	-2	10
		T4 BL late	-4	450	-2	10
		6 TIM2	-3	450	-2	10

TIM3 XRFC3 (CCD)

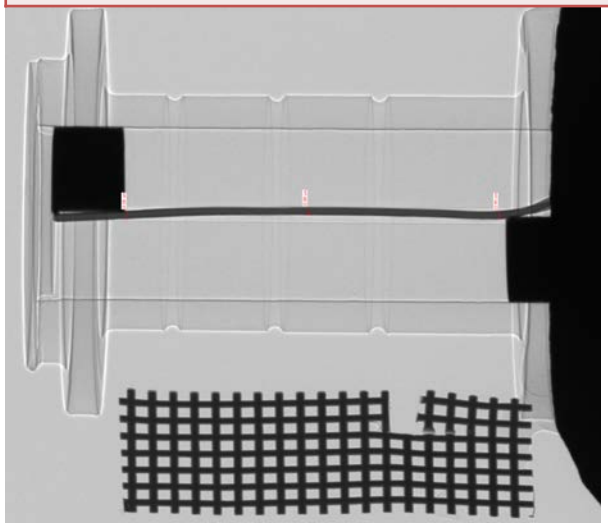
BL	pinhole	filter	bias	start time (t0+)	stand-off
Cr		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	4.4 ns	26.4 cm

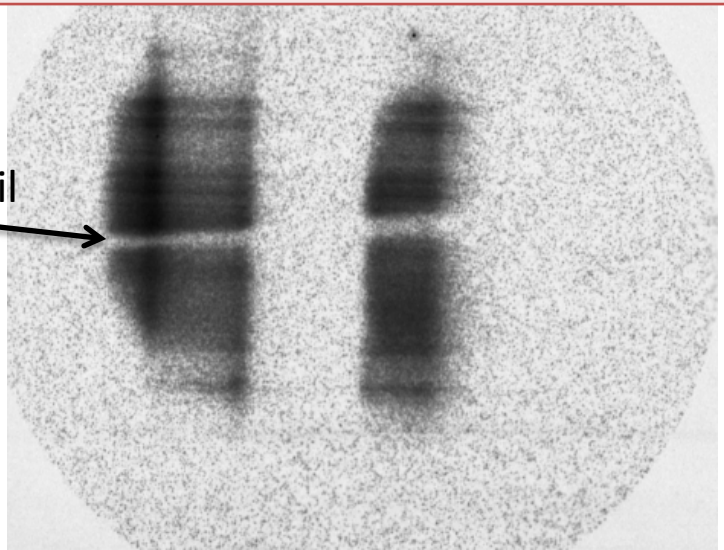


XRFC3 trigger timing problem; may have shot early

TIM6 SSCA/SMP (film)

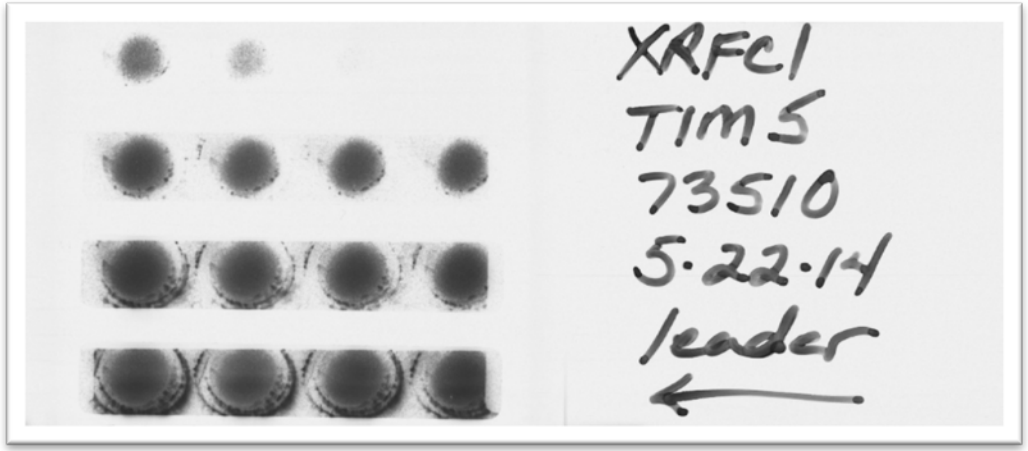
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side Sc	20x	20 um pinhole/330 um	8 mil Be/1 mil Be	9 ns	6 ns	1 ns



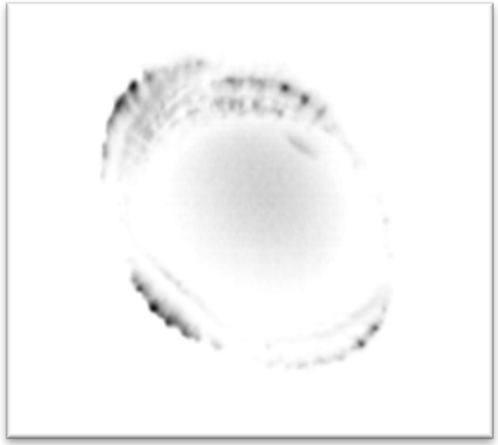


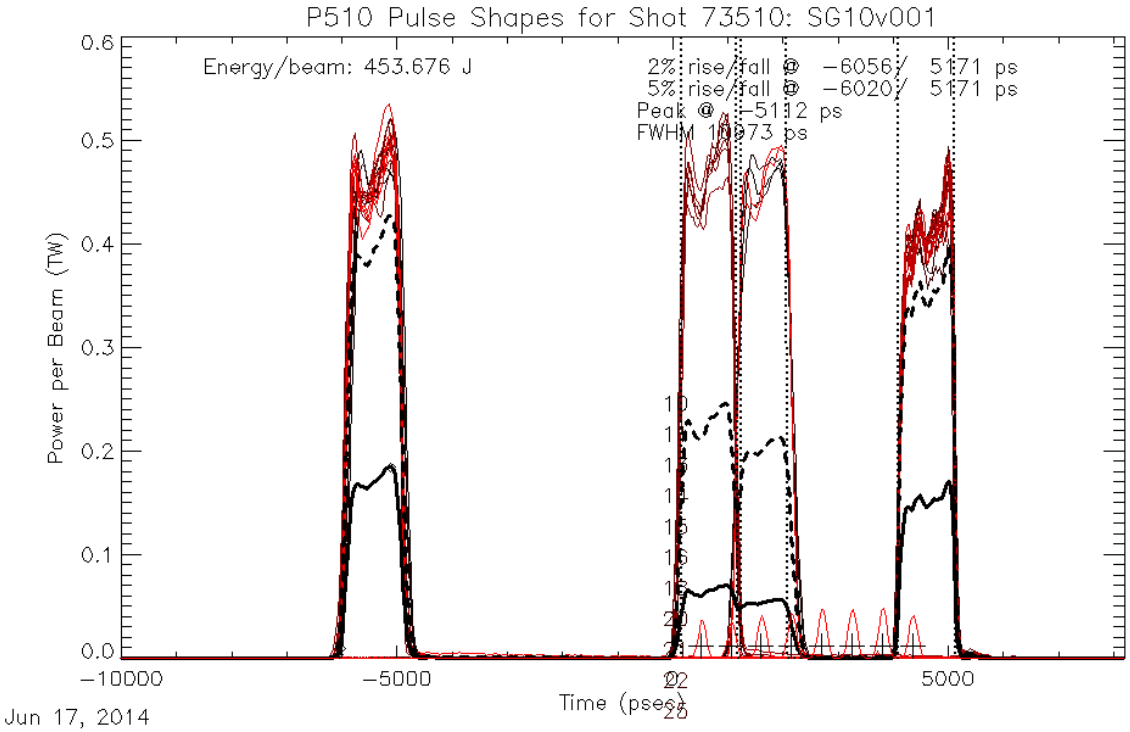
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive





Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11	471.8	34	475.2
13	476.3	36	478
14	451.5	41	479.7
18	479.2	43	473.6
32	452.6	48	489.9
66	469.8	49	483.6
67	465.5	60	494.5
69	470.6	63	474.8
Total	3737.3		3849.3
		Diff	112
		% Diff	2.952574

Shot #73512

- RID #48845
- Target: 1Red/5White, 14White

Target type

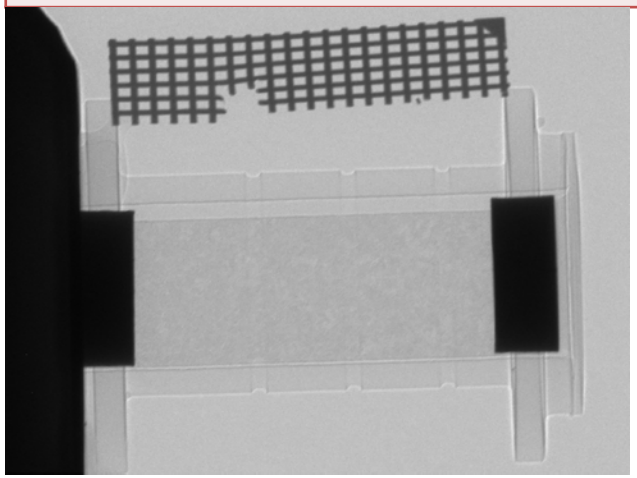
20 um Al	X	Smooth		Edge-on	X	Fiducial	
12 um Ti		Rough	X	Plan View			

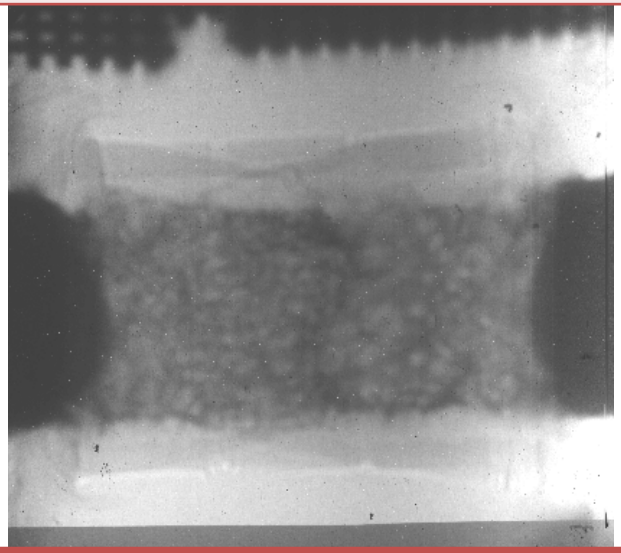
Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-4	500	4	6
		T4 SSD mid	-4	500	5	7
BL	6	T4 FrL late	-4	450	-2	10
		T4 BL late	-4	450	-2	10
		6 TIM2	-3	450	-2	10

TIM3 XRFC3 (CCD)

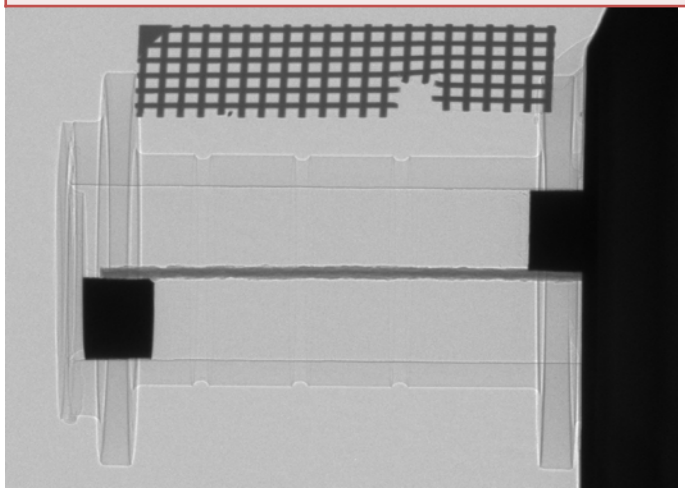
BL	pinhole	filter	bias	start time (t0+)	stand-off
Sc		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	4.4 ns	26.4 cm





TIM6 SSCA/SMP (film)

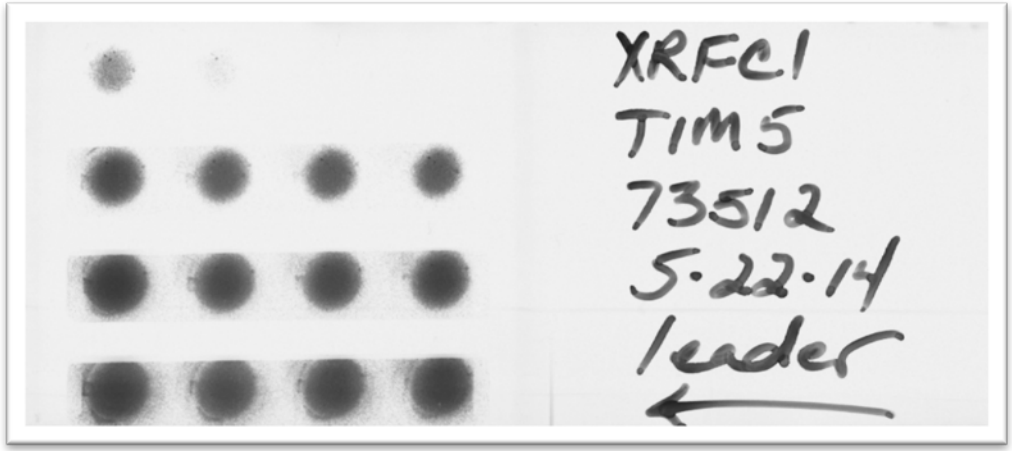
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side Sc	20x	20 um pinhole/330 um	8 mil Be/1 mil Be	9 ns	6 ns	1 ns



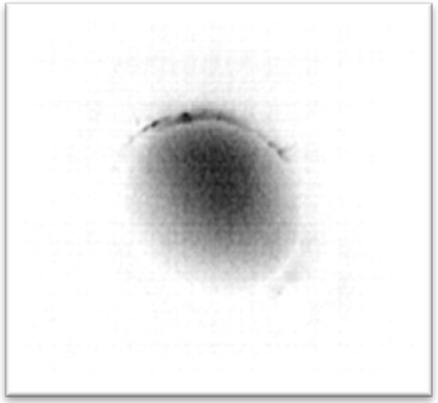
Film accidentally exposed during development. Film may have been cut too long for diagnostic.

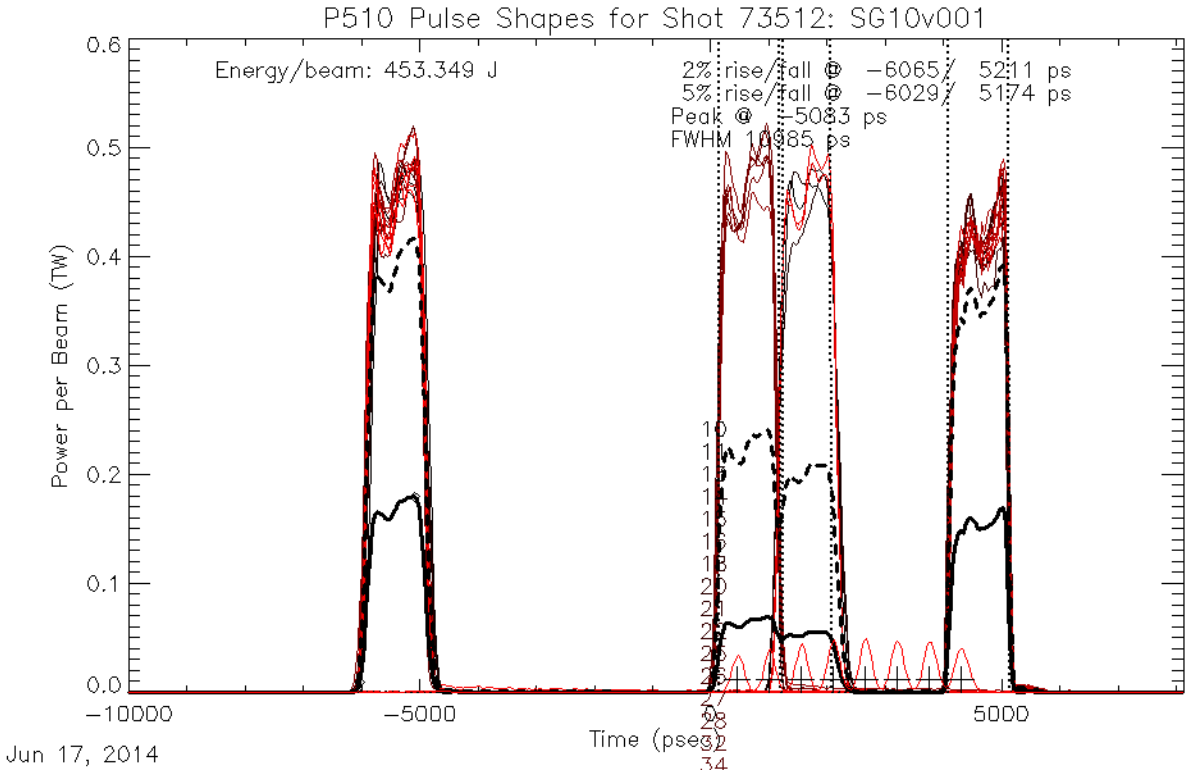
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive





Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11	467.3	34	471
13	475.8	36	473.7
14	448.9	41	474.3
18	475.7	43	468.7
32	447.7	48	486.5
66	464.2	49	479.2
67	460.7	60	491.2
69	465.9	63	470.3
Total	3706.2		3814.9
		Diff	108.7
		% Diff	2.890535

Shot #73513

- RID #48846
- Target: 5Red/1Blue, 9Pink

Target type

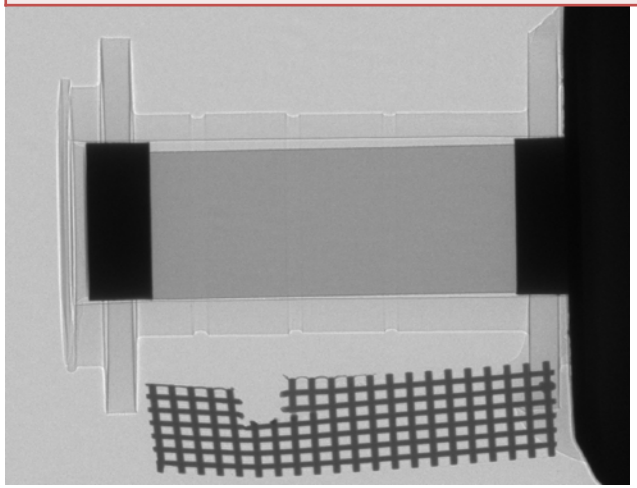
20 um Al		Smooth	X	Edge-on	X	Fiducial	
12 um Ti	X	Rough		Plan View			

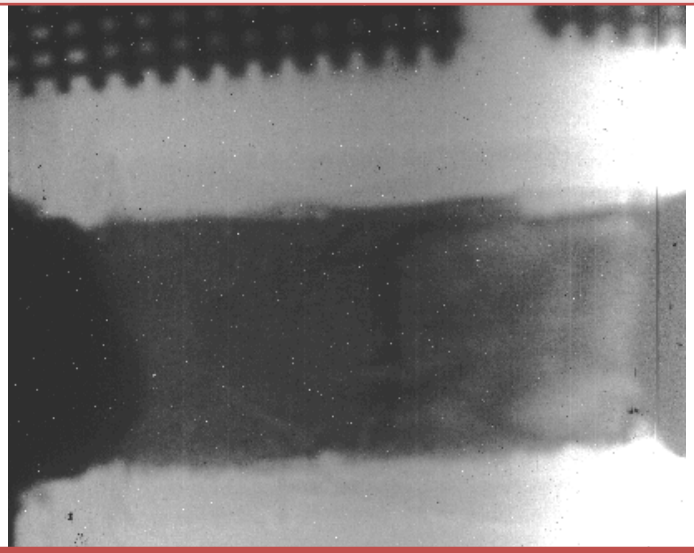
Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-4	500	4	6
		T4 SSD mid	-4	500	5	7
BL	6	T4 FrL late	-4	450	-2	10
		T4 BL late	-4	450	-2	10
		6 TIM2	-3	450	-2	10

TIM3 XRFC3 (CCD)

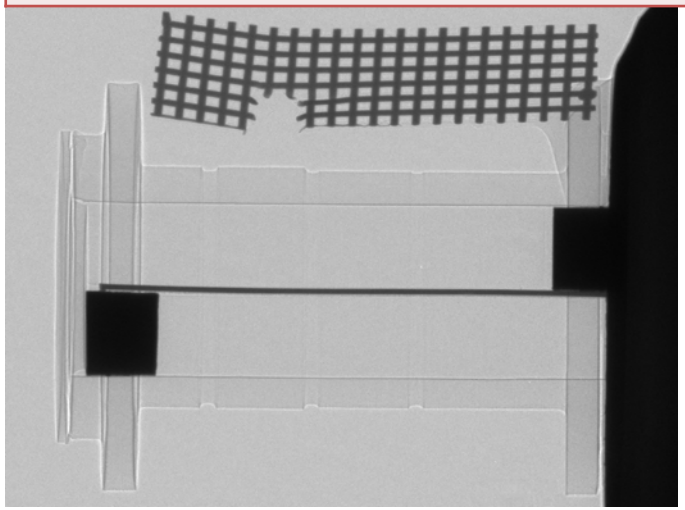
BL	pinhole	filter	bias	start time (t0+)	stand-off
Fe		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	4.4 ns	26.4 cm

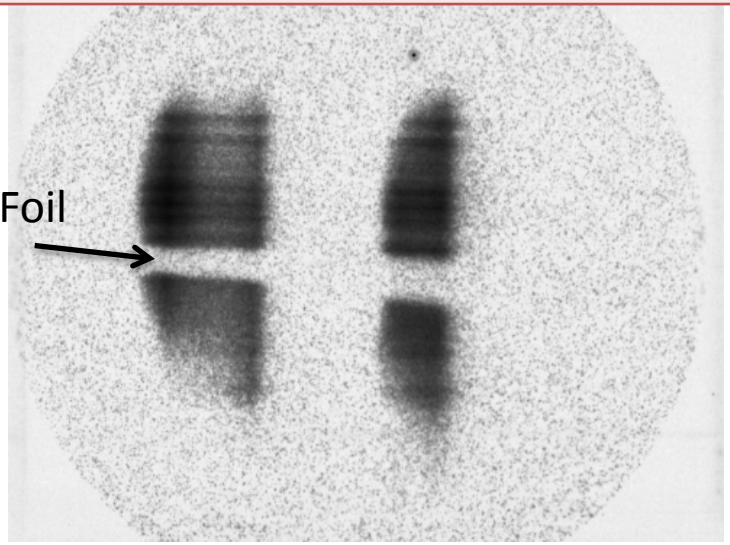




TIM6 SSCA/SMP (film)

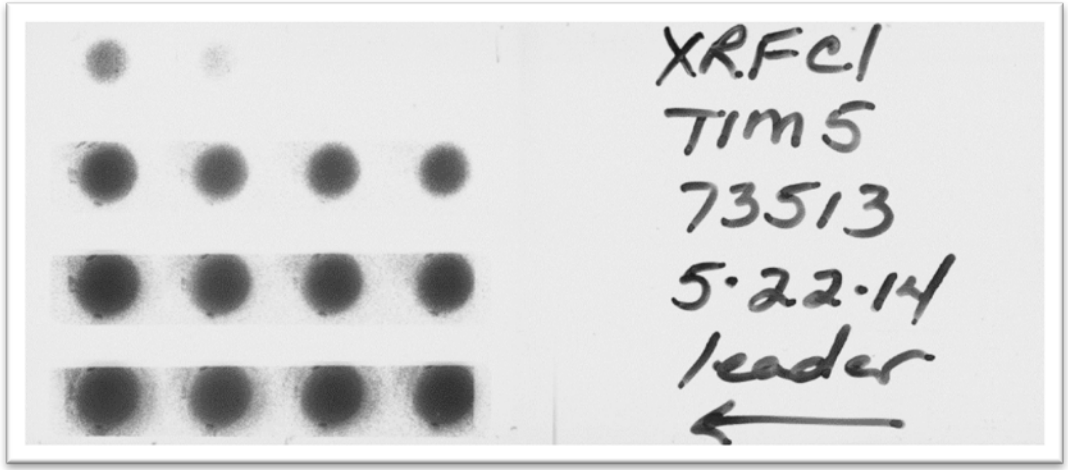
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side V	20x	20 um pinhole/330 um	8 mil Be/1 mil Be	9 ns	6 ns	1 ns



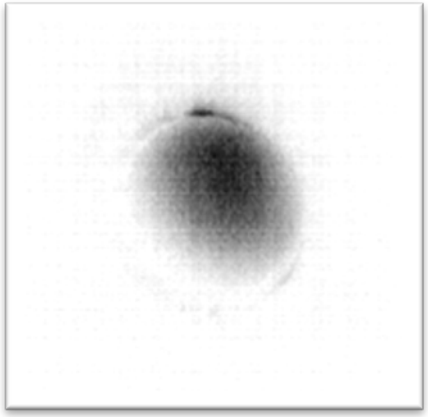


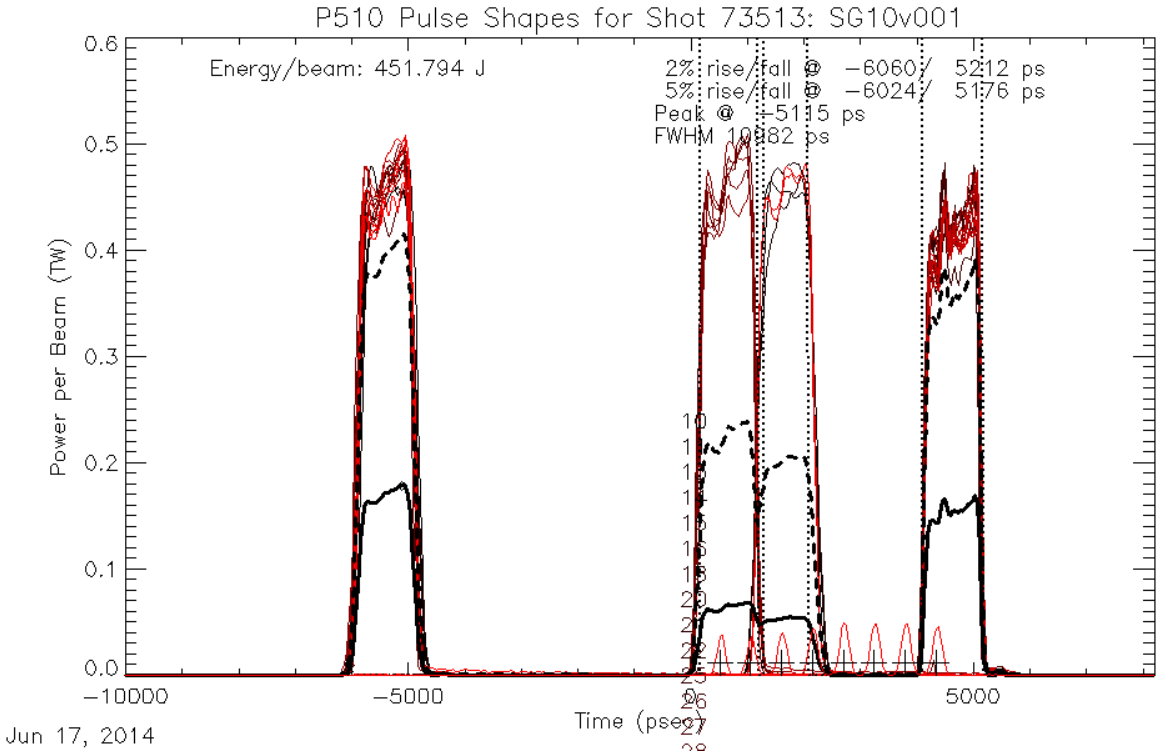
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive





Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11	466.6	34	470
13	472	36	471.3
14	447.1	41	473.1
18	472.9	43	467.2
32	446.5	48	485.8
66	463.2	49	475.8
67	459.1	60	488.3
69	464.9	63	469.9
Total	3692.3		3801.4
		Diff	109.1
		% Diff	2.911779

Shot #73514

- RID #48847
- Target: 2Red/4Blue, 8Pink

Target type

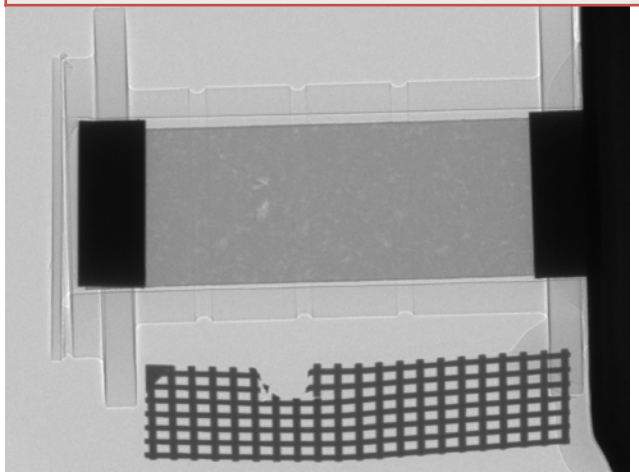
20 um Al		Smooth		Edge-on	X	Fiducial	
12 um Ti	X	Rough	X	Plan View			

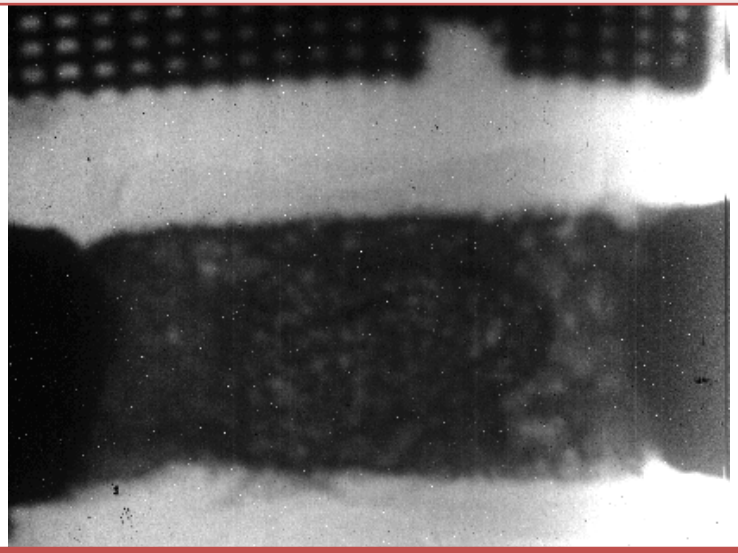
Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-4	500	4	6
		T4 SSD mid	-4	500	5	7
BL	6	T4 FrL late	-4	450	-2	10
		T4 BL late	-4	450	-2	10
		6 TIM2	-3	450	-2	10

TIM3 XRFC3 (CCD)

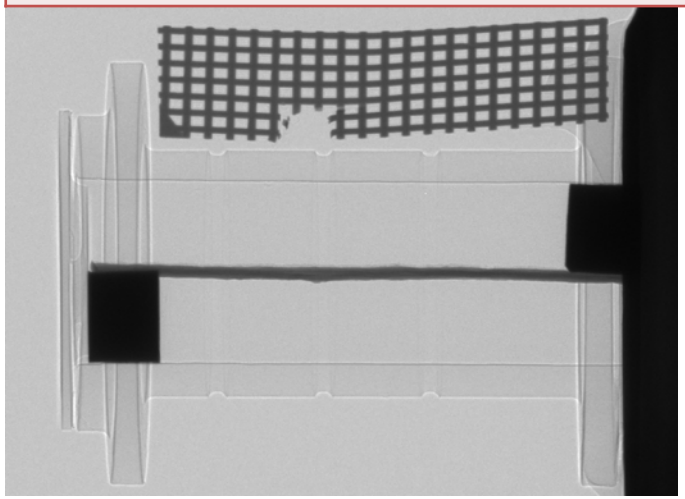
BL	pinhole	filter	bias	start time (t0+)	stand-off
Fe		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	4.4 ns	26.4 cm

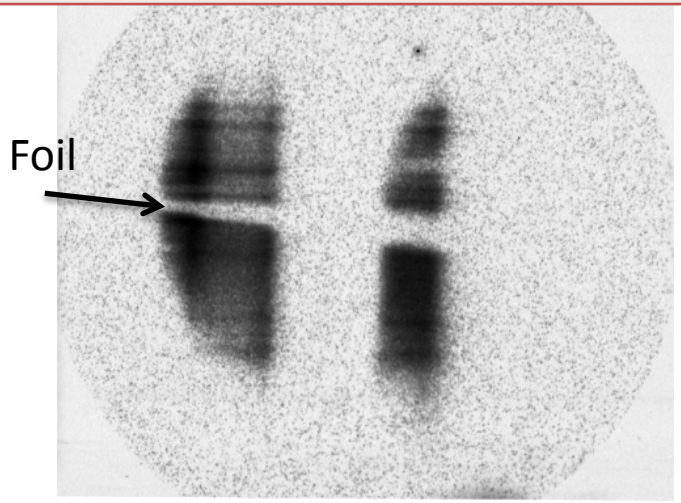




TIM6 SSCA/SMP (film)

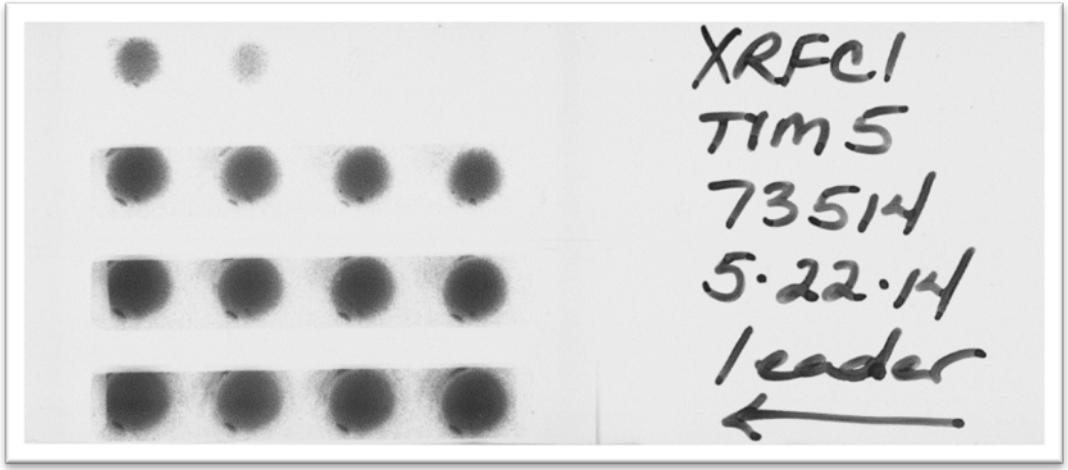
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side V	20x	20 um pinhole/330 um	8 mil Be/1 mil Be	9 ns	6 ns	1 ns



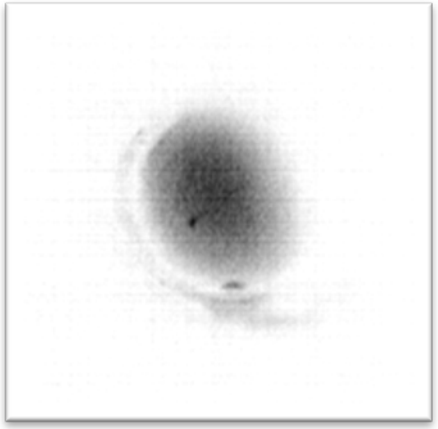


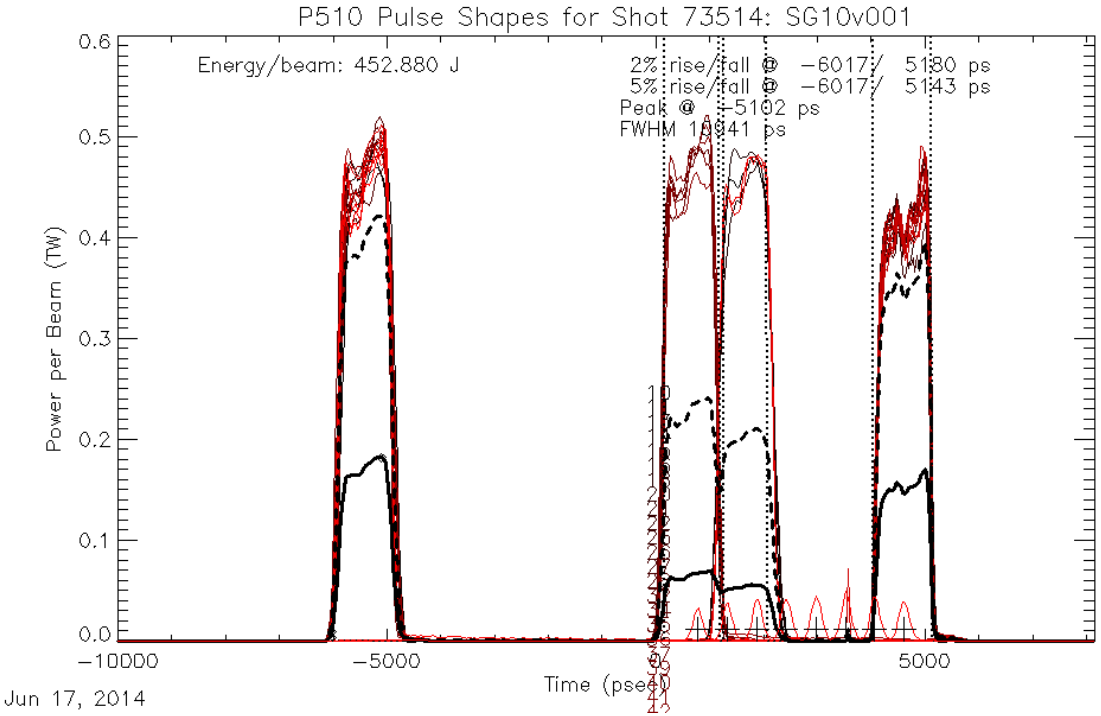
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive





Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11	470.6	34	473.7
13	476.7	36	476
14	451	41	476.4
18	477.7	43	468.9
32	447.9	48	489.3
66	468.4	49	479.7
67	460.3	60	491.1
69	467.7	63	471.6
Total	3720.3		3826.7
		Diff	106.4
		% Diff	2.819663

Shot #73515

- RID #48841
- Target: 3Gold/2Pink, 3Blue

Target type

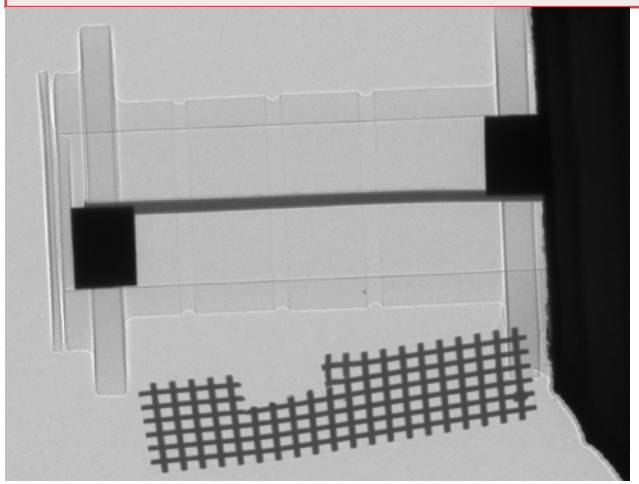
20 um Al		Smooth	X	Edge-on	X	Fiducial	
12 um Ti	X	Rough		Plan View			

Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-4	500	4	6
		T4 SSD mid	-4	500	5	7
BL	8	T4 FrL late	-4	450	-2	12
		T4 BL late	-4	450	-2	12
		6 TIM2	-3	450	-2	12

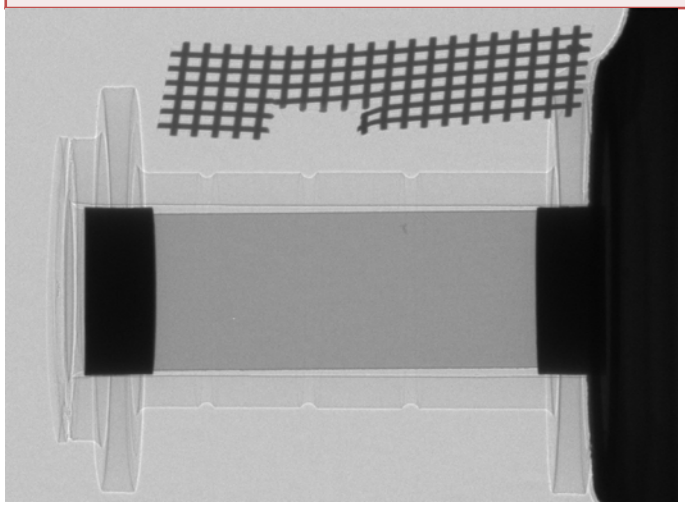
TIM3 XRFC3 (CCD)

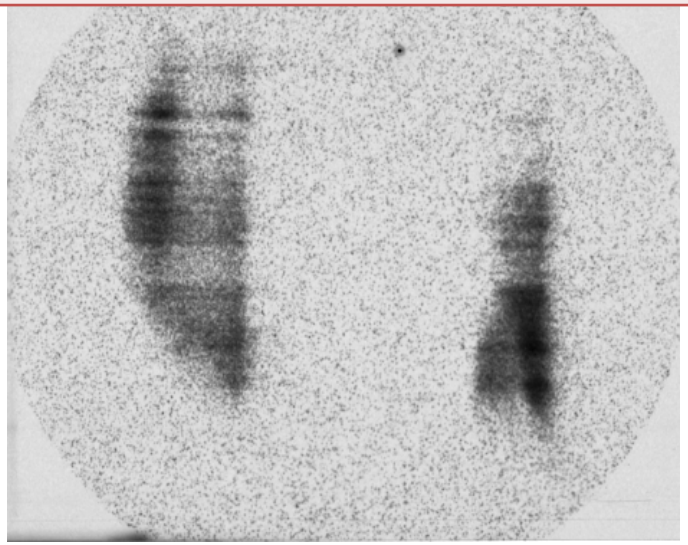
BL	pinhole	filter	bias	start time (t0+)	stand-off
V		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	6.4 ns	26.4 cm



TIM6 SSCA/SMP (film)

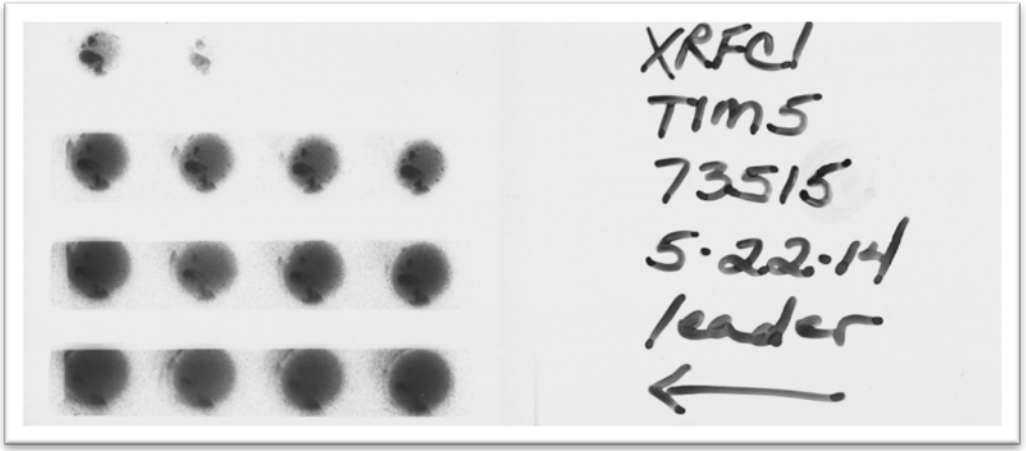
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side Fe	20x	20 um pinhole/330 um	8 mil Be/1 mil Be	9 ns	6 ns	1 ns



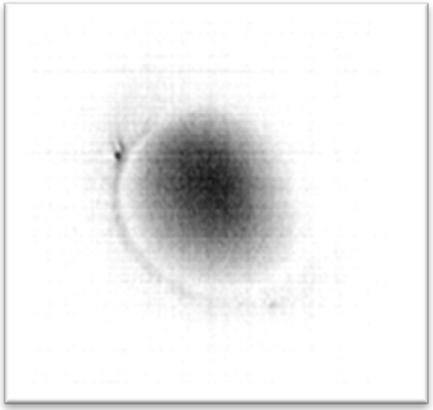


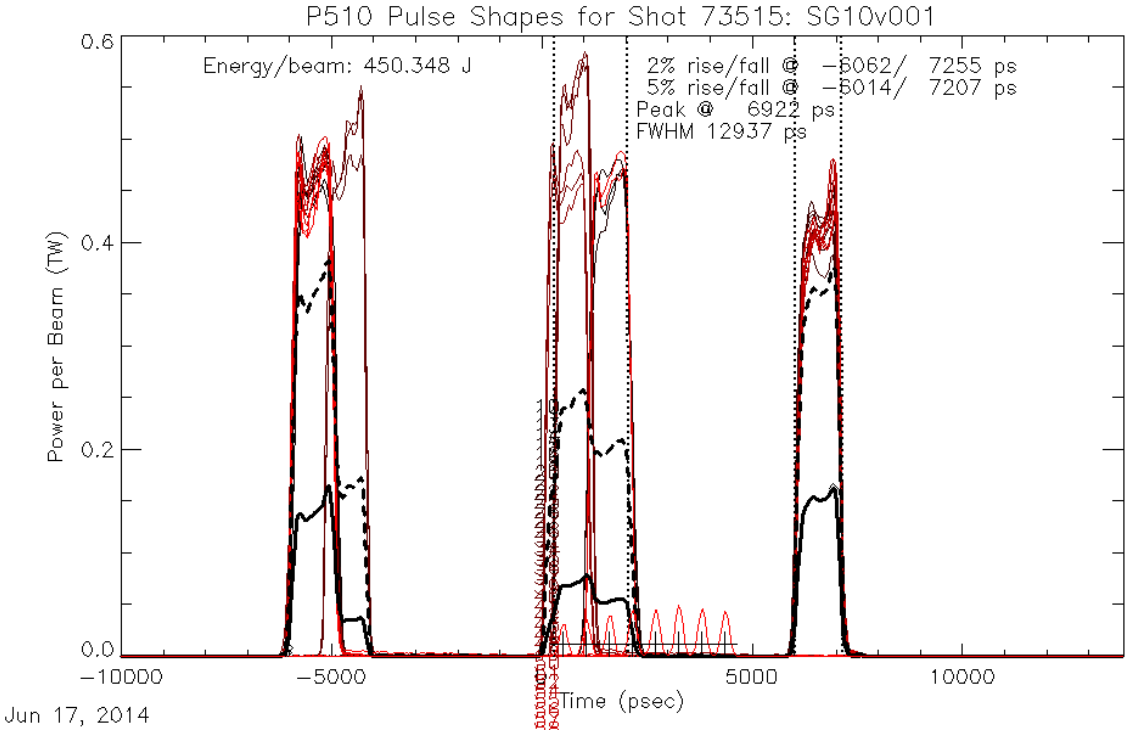
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive





Drive Power Balance

Beams 32 (H12 drive), and 36 and 34 (H9 drive) fired over 0.5 ns late. Drive is not symmetric.

Shot #73516

- RID #48842
- Target: 2Gold/2Pink, 4Blue

Target type

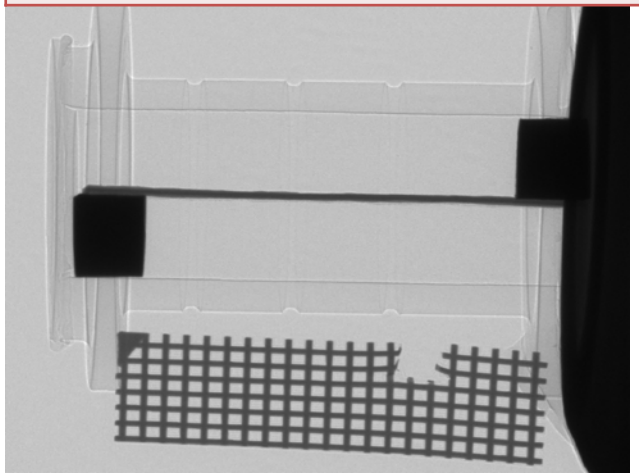
20 um Al		Smooth		Edge-on	X	Fiducial	
12 um Ti	X	Rough	X	Plan View			

Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-4	500	4	6
		T4 SSD mid	-4	500	5	7
BL	8	T4 FrL late	-4	450	-2	12
		T4 BL late	-4	450	-2	12
		6 TIM2	-3	450	-2	12

TIM3 XRFC3 (CCD)

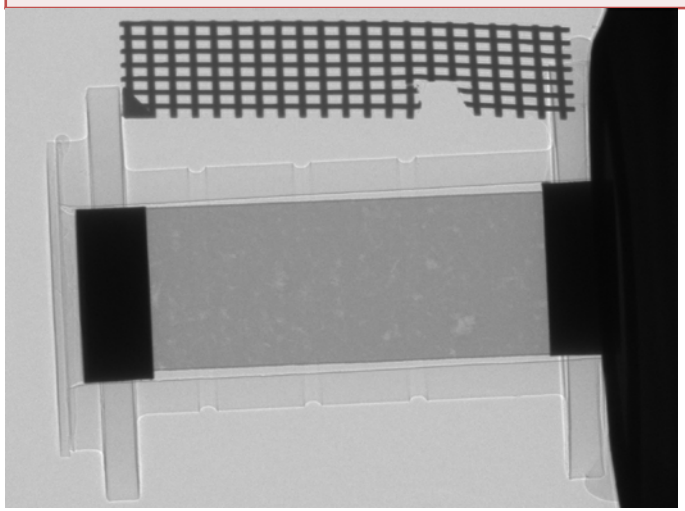
BL	pinhole	filter	bias	start time (t0+)	stand-off
V		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	6.4 ns	26.4 cm



No TIM diagnostics fired on this shot

TIM6 SSCA/SMP (film)

BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side Fe	20x	20 um pinhole/330 um	8 mil Be/1 mil Be	9 ns	6 ns	1 ns



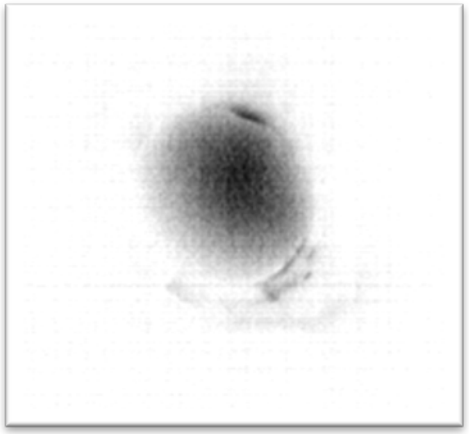
No TIM diagnostics fired on this shot

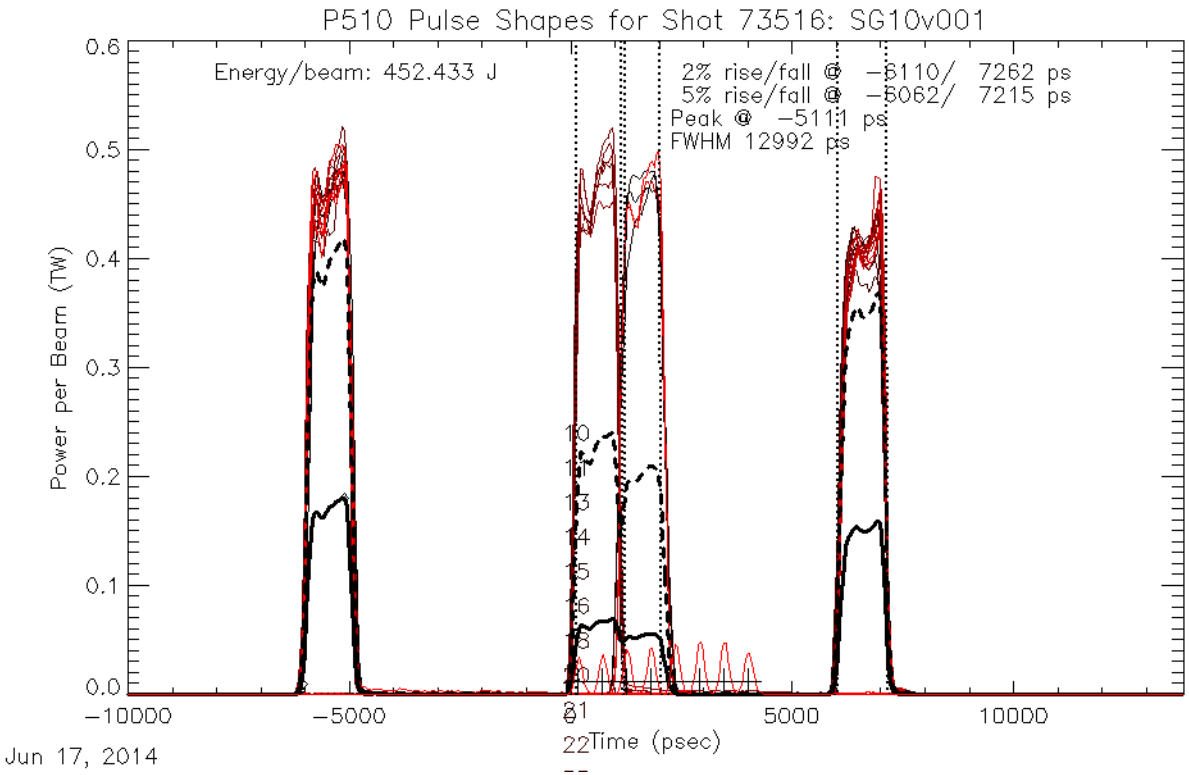
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive

No TIM diagnostics fired on this shot

H12C XRPHC – sees H12 drive





Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11	467.2	34	472.3
13	475.5	36	474.2
14	450.2	41	475.7
18	475.7	43	468.4
32	446.6	48	490.2
66	466.1	49	479.3
67	458.9	60	490
69	468.6	63	471.5
Total	3708.8		3821.6
		Diff	112.8
		% Diff	2.995857

Shot #73518

- RID #49055
- Target: 1Gold/1White, 5White

Target type

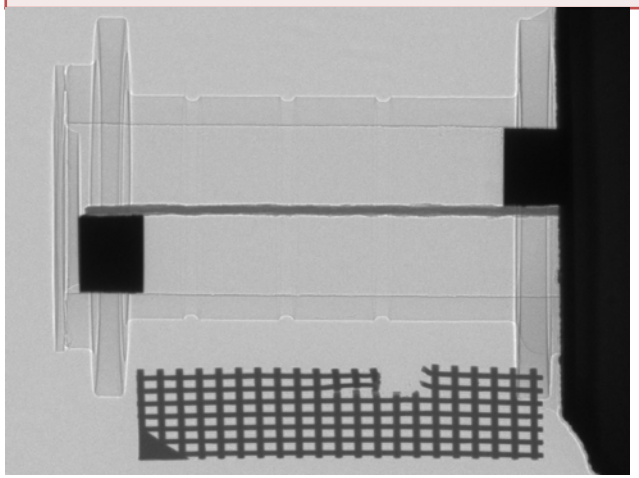
20 um Al	X	Smooth		Edge-on		Fiducial	
12 um Ti		Rough	X	Plan View	X		

Laser Conditions

Driver/Delay		Beams	Focusing (mm)	Energy (J/beam)	Beam Delay (ns)	rel. to H9 (ns)
SSD	-4	H9 Shock	-3.75	500	-2	0
		H12 Shock	-3.75	500	-2	0
		T4 SSD early	-4	500	4	6
		T4 SSD mid	-4	500	5	7
BL	8	T4 FrL late	-4	450	-2	12
		T4 BL late	-4	450	-2	12
		6 TIM2	-3	450	0	14

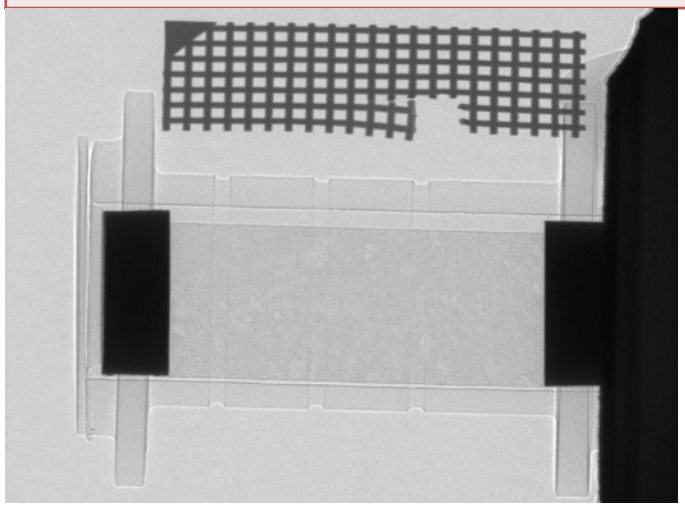
TIM3 XRFC3 (CCD)

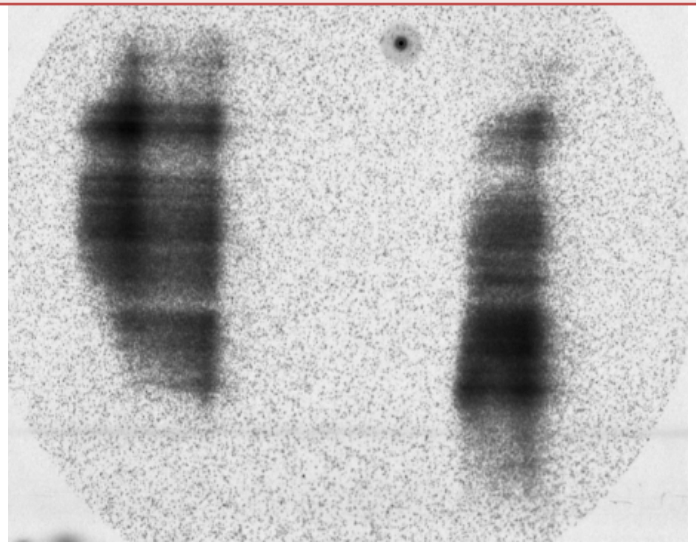
BL	pinhole	filter	bias	start time (t0+)	stand-off
Sc		Front: 10 mils Be + 3 mils poly; Rear: 10 mils Be	150 V	8.4 ns	26.4 cm



TIM6 SSCA/SMP (film)

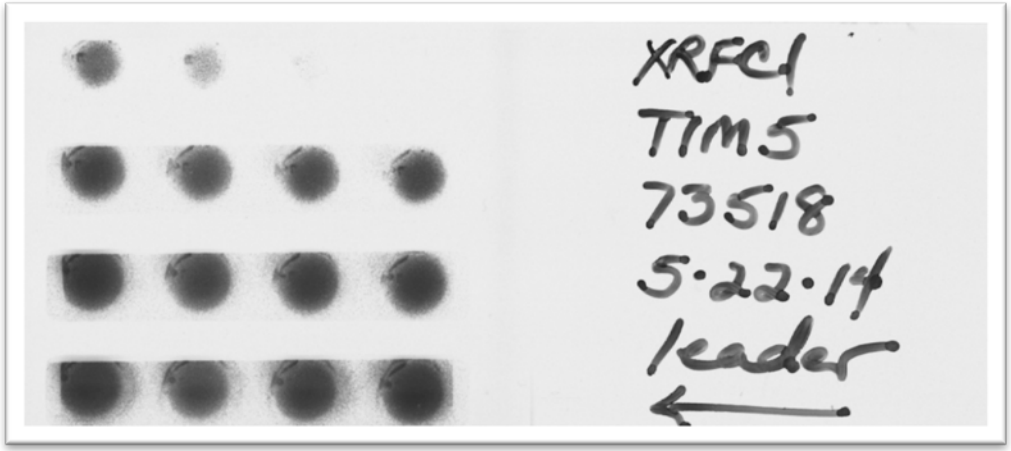
BL	M	aperture	filter	sweep	sw. center (t0+)	fidu start (t0+)
2-side Sc	20x	20 um pinhole/330 um	8 mil Be/1 mil Be	9 ns	6 ns	1 ns



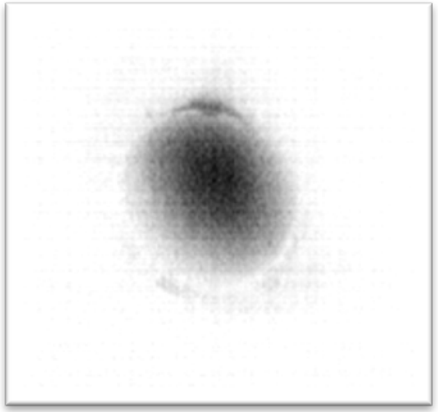


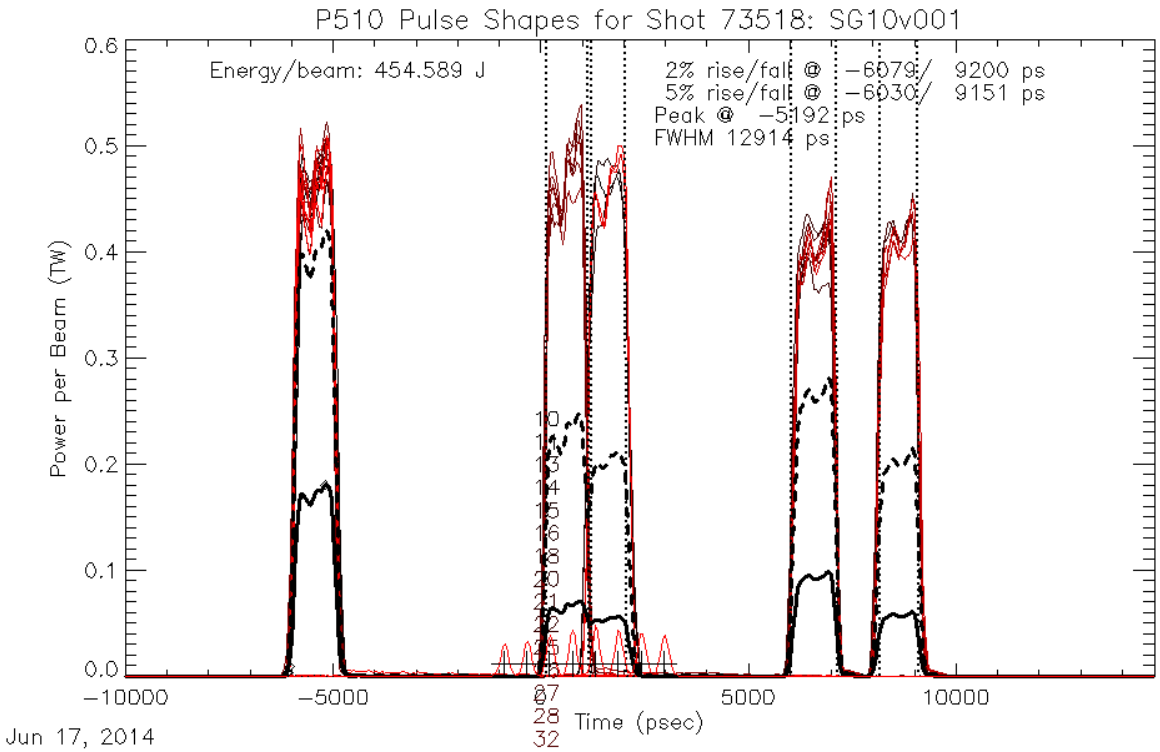
Drive Balance Summary

TIM5 XRFC1/6x (film) – sees H9 drive



H12C XRPHC – sees H12 drive





Drive Power Balance

H12 Drive		H19 Drive	
Beam	Power(J)	Beam	Power(J)
11	472.7	34	475.7
13	478.4	36	478.1
14	453.1	41	480
18	479.9	43	472.2
32	448.1	48	494.3
66	470.7	49	481
67	463.2	60	493.1
69	471.6	63	473.8
Total	3737.7		3848.2
		Diff	110.5
		% Diff	2.9133