

2010-10-15 Friday Morning Notes

Friday, October 15, 2010
5:00 AM

On-Call

- Friday: Stan Johnson
- Saturday: Vladimir Nagaslaev
- Sunday: Keith Gollwitzer

Stacking

- DRF1-5 started tripping yesterday. Had to turn down the PA voltage to get it to run. The DRF1 fanback sum is 4.97 MV.
- Spot size tweaking today.
- Stacking Numbers
 - $\langle \text{stacking rate} \rangle = 26.4 \text{ mA/hr}$
 - $\langle \text{production} \rangle = 24.1 \text{ pbars/MP}$
 - $\langle \text{POT} \rangle = 8.24 \text{ Tp}$
- Evidence of Target Damage
 - 1% dip in AP2 yield at two rotation positions
 - Assumed to be cracked Be jacket
 - Overall yield change is negligible
 - Possible that material is ejected from crack....may sputter on lens

Transfers

- Unstacked 546×10^{10} in 56 transfers over 17 sets.
- $\langle \text{overall efficiency} \rangle = 95.5\%$
- Take out the transfers 21240 (71ma 94%) and 21238 (148mA 90.5%) and we have an overall efficiency of 96.7%

Requests

- 2.6 second cycle time

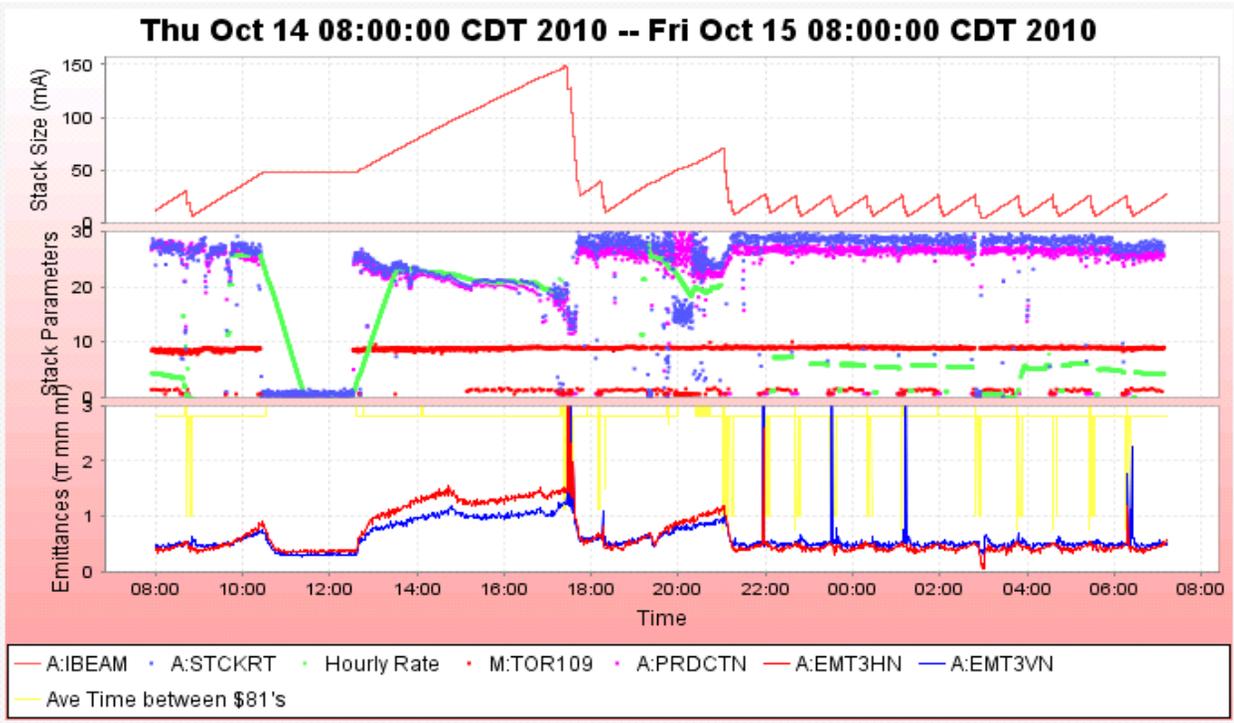
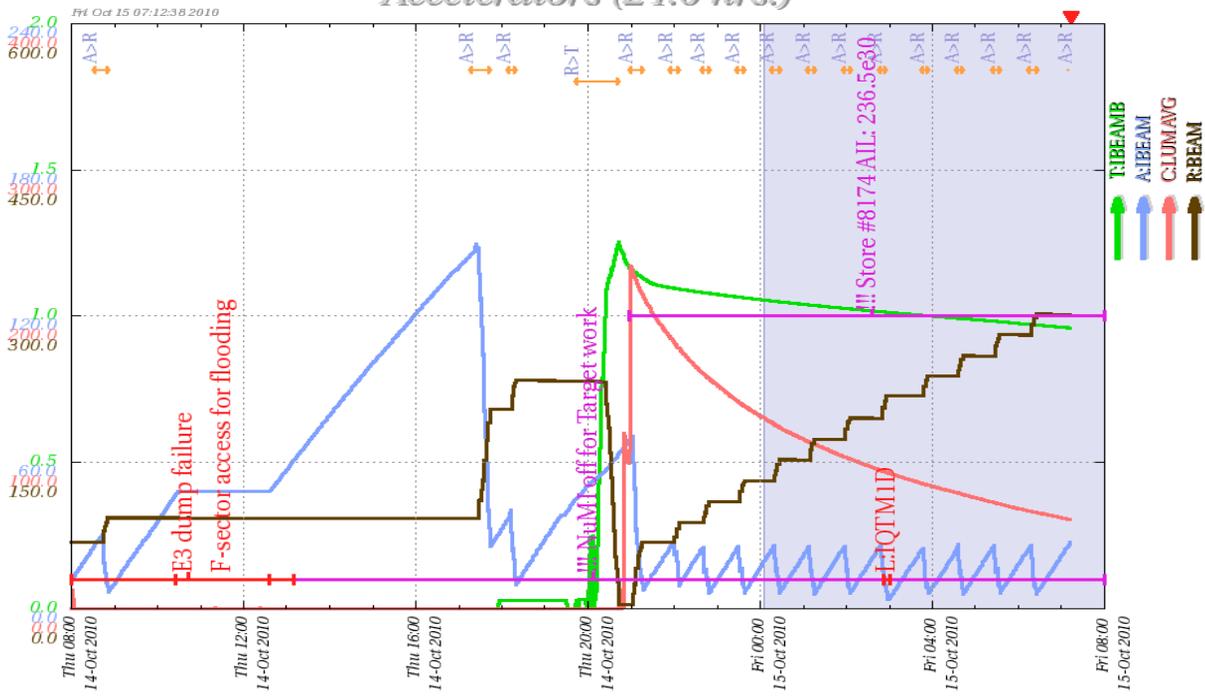
The Numbers

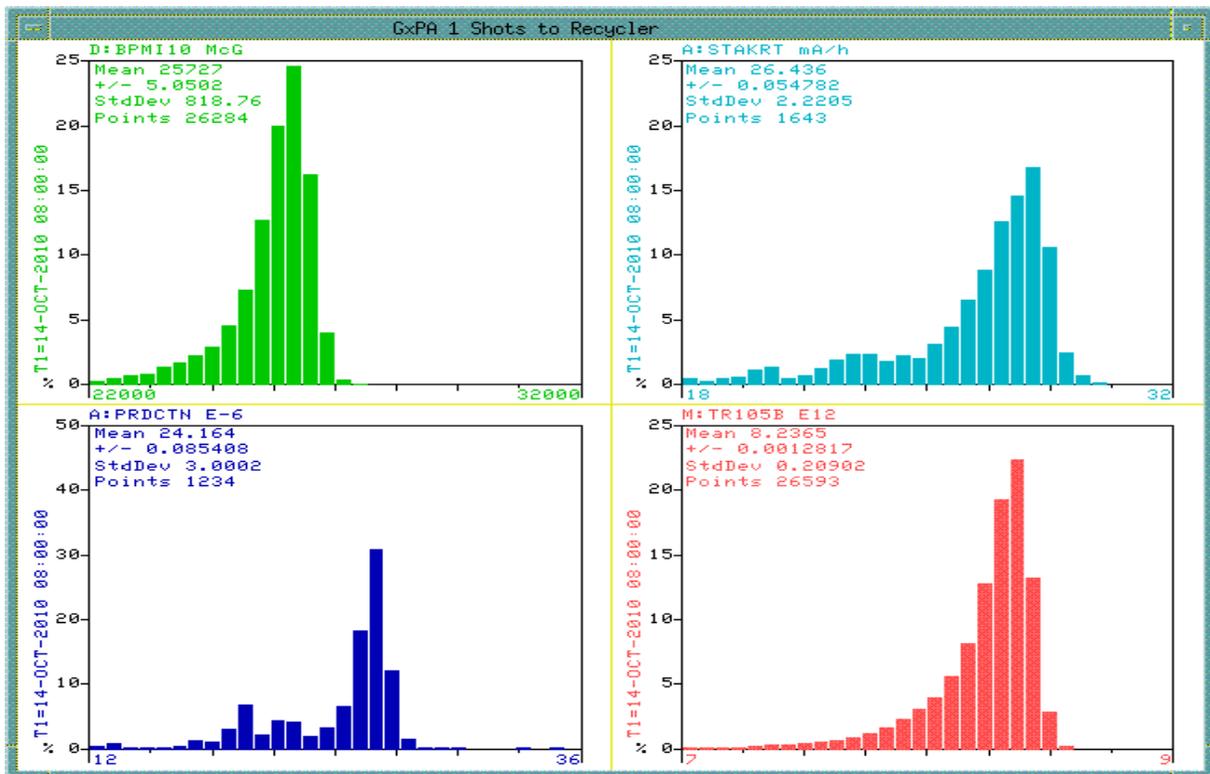
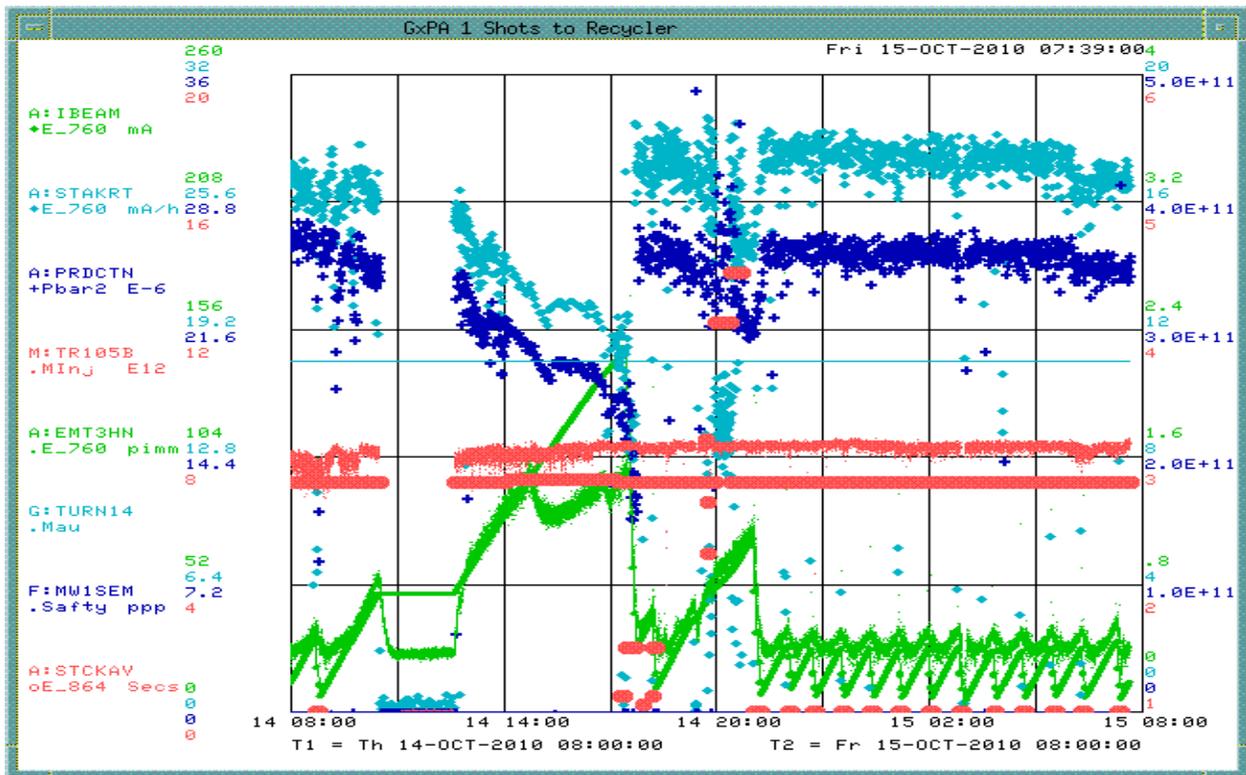
- Week
 - Stacking
 - Pbars stacked: $3470.18 \text{ E}10$
 - Time stacking: 142.15 Hr
 - Average stacking rate: $24.41 \text{ E}10/\text{Hr}$
 - Uptime
 - Number of pulses while in stacking mode: 174713
 - Number of pulses with beam: 167115
 - Fraction of up pulses was: 95.65%
 - The uptime's effect on the stacking numbers
 - Corrected time stacking: 135.97 Hr
 - Possible average stacking rate: $25.52 \text{ E}10/\text{Hr}$
 - Could have stacked: $3627.95 \text{ E}10/\text{Hr}$
 - Recycler Transfers

- Pbars sent to the Recycler: 3378.29 E10
 - Number of transfers : 381
 - Number of transfer sets: 123
 - Average Number of transfer per set: 3.10
 - Time taken to shoot including reverse proton tuneup: 01.33 Hr
 - Transfer efficiency: 96.04%
- Other Info
 - Average POT : 8.35 E12
 - Average production: 24.86 pbars/E6 protons
- Day
 - Stacking
 - Pbars stacked: 534.57 E10
 - Time stacking: 21.71 Hr
 - Average stacking rate: 24.62 E10/Hr
 - Uptime
 - Number of pulses while in stacking mode: 27326
 - Number of pulses with beam: 26698
 - Fraction of up pulses was: 97.70%
 - The uptime's effect on the stacking numbers
 - Corrected time stacking: 21.21 Hr
 - Possible average stacking rate: 25.20 E10/Hr
 - Could have stacked: 547.15 E10/Hr
 - Recycler Transfers
 - Pbars sent to the Recycler: 521.06 E10
 - Number of transfers : 53
 - Number of transfer sets: 16
 - Average Number of transfer per set: 3.31
 - Time taken to shoot including reverse proton tuneup: 00.19 Hr
 - Transfer efficiency: 95.08%
 - Other Info
 - Average POT : 8.23 E12
 - Average production: 24.33 pbars/E6 protons

The Daily Plots

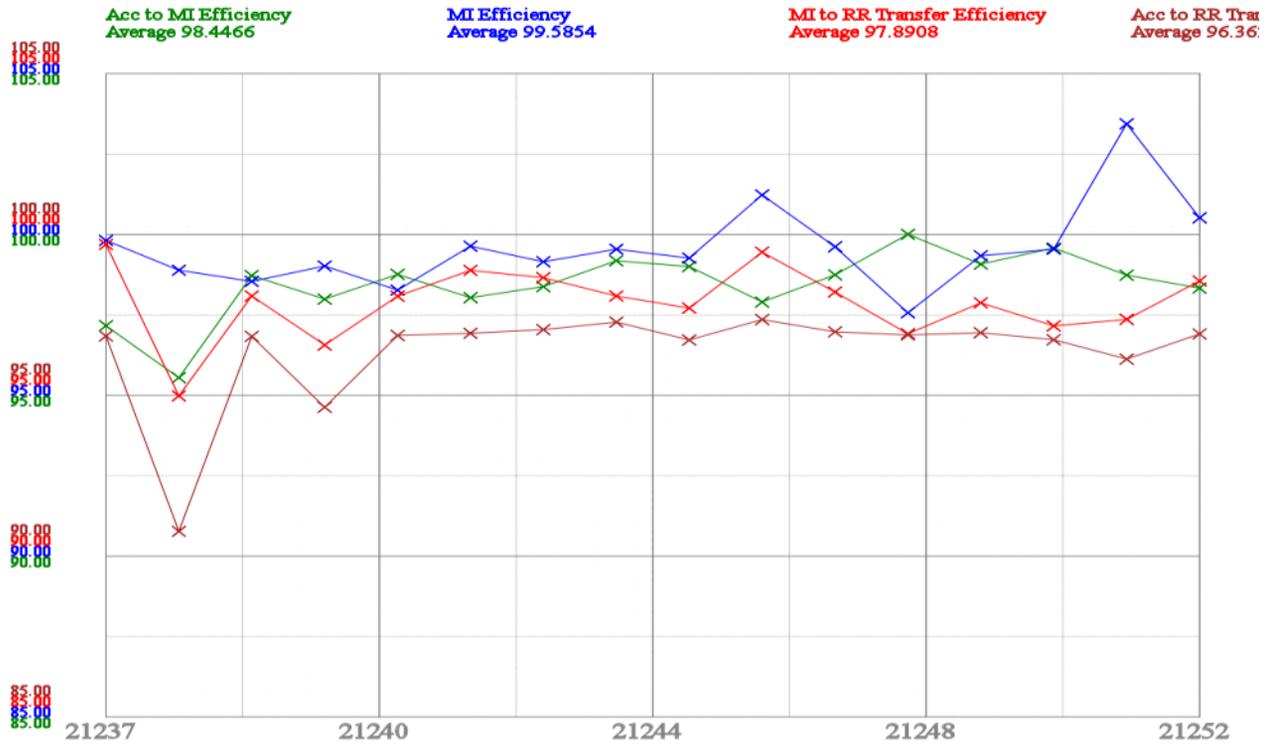
Accelerators (24.0 hrs.)



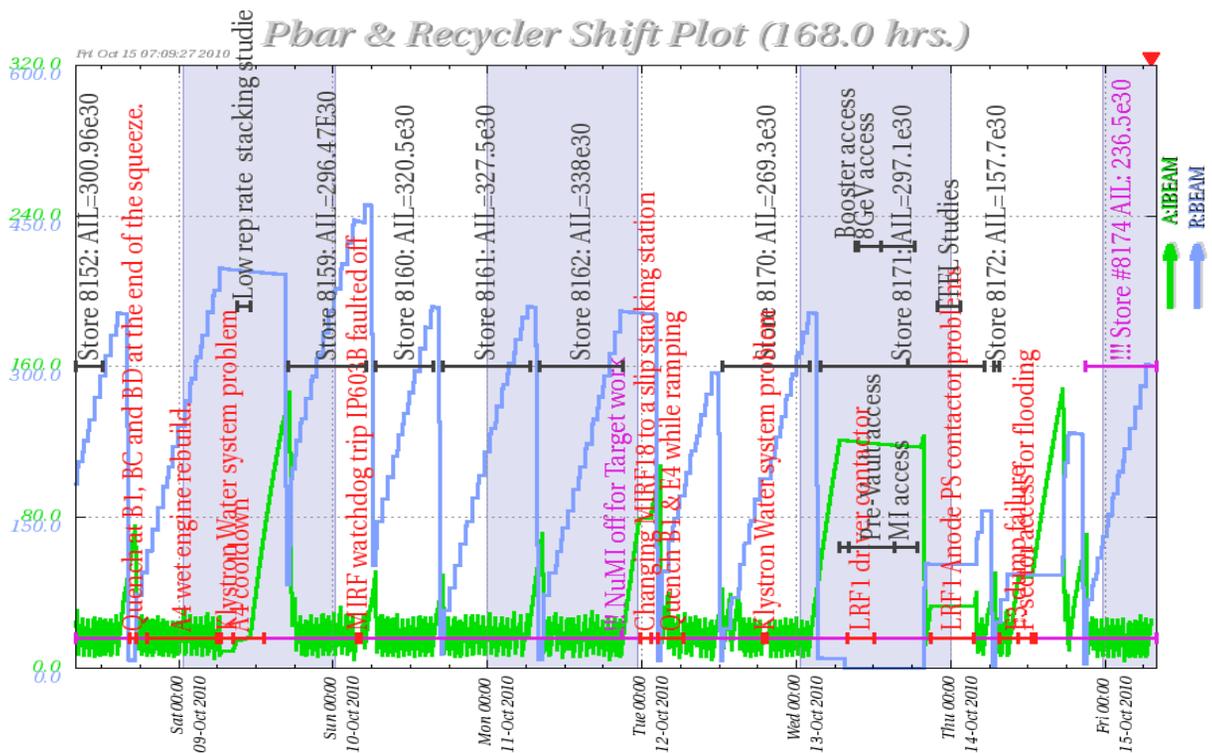


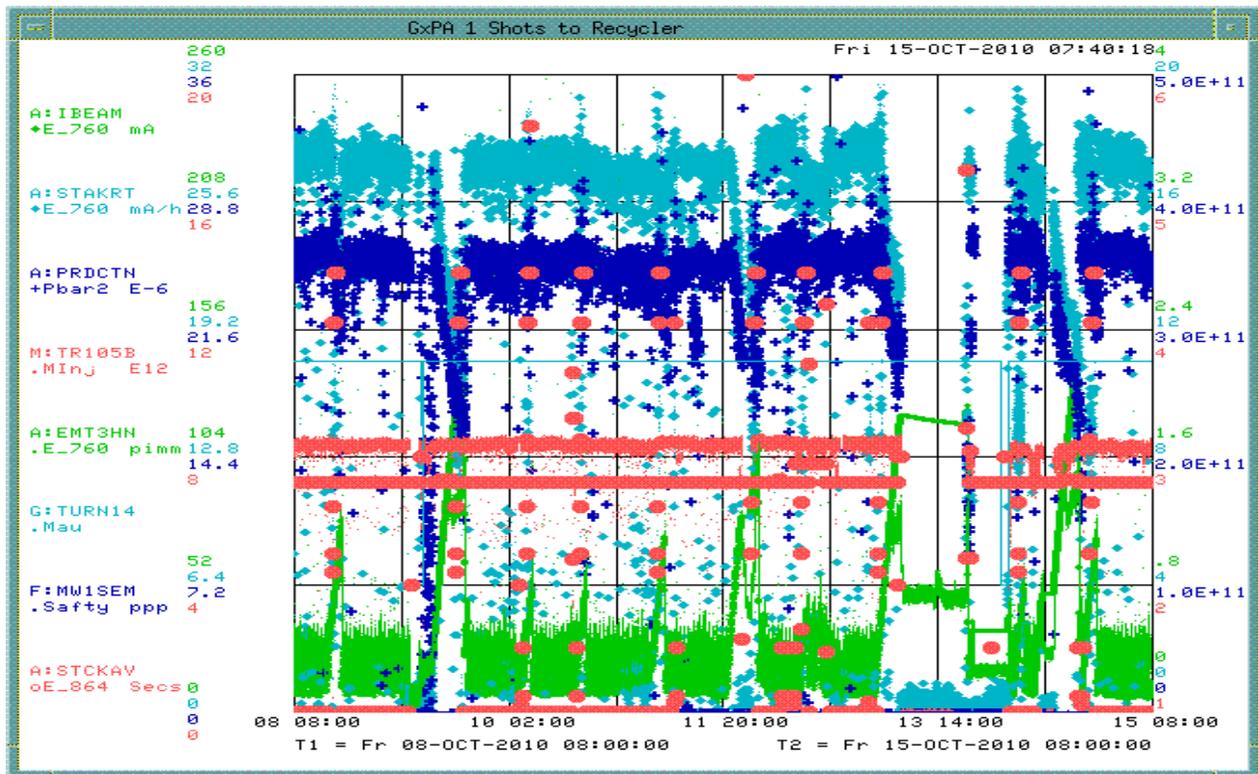
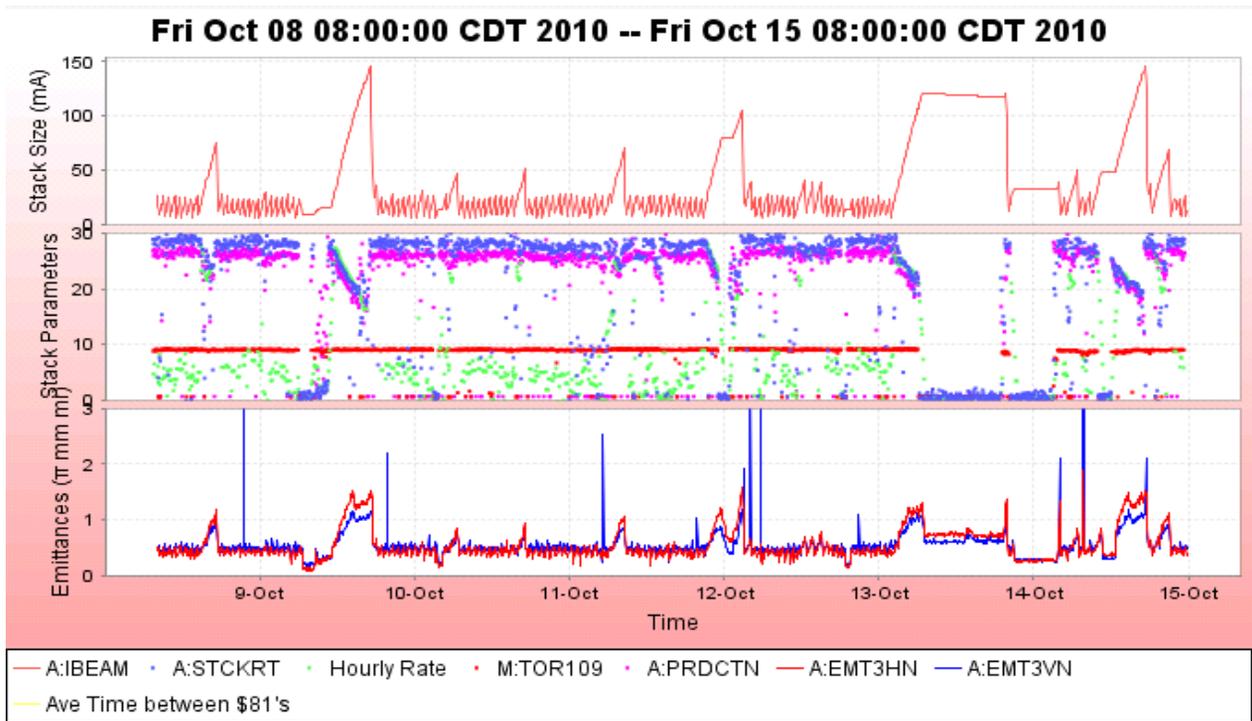
Column 1 Number_0_Pbar Transfer Shot #	Column 4 Number_3 Transfer Time	Column 21 Number_20_A-I BEAMB sampled on \$91 (A-BEA M7), E10	Column 22 Number_21_A-I BEAMB sampled on \$94 (A-BEA M9), E10	Unstacked (mA)	Column 23 Number_22_R: BEAMS (R:BEA ME0[0]) pre zfer E10	Column 24 Number_23_R: BEAM (R:BEA ME0[1]) post zfer, E10	Stashed	Acc to RR Eff	Acc to MI Eff	Acc to MI2 Eff	Acc to MI * Acc to MI2 Efficiency	Trans fers	Sets	Column 5 Number_4_Acc Horizontal Emittance	Column 6 Number_5_Acc Vertical Emittance	Column 8 Number_7_Acc Longitudinal Emittance	
Totals =>				546.30			518.82	94.97%	97.68%	97.08%	94.82%	56	17	4.8972	5.0682	1.8888	
Daily Average =>				546.30			518.82					56	17				
21252	Friday, October 15, 2010	7:17	29.28	5.29	25.63	301.77	326.37	24.81	96.80%	98.29%	98.60%	96.91%	3	1	4.324	4.784	1.869
21251	Friday, October 15, 2010	6:18	26.05	6.02	22.56	280.69	302.27	21.74	96.38%	98.89%	100.96%	99.84%	3	1	4.402	4.844	1.93
21250	Friday, October 15, 2010	5:27	26.28	6.14	22.74	259.24	281.09	22.02	96.84%	99.38%	99.31%	98.69%	3	1	4.422	4.936	1.976
21249	Friday, October 15, 2010	4:36	25.12	5.97	21.72	238.70	259.60	21.04	96.86%	98.74%	98.18%	96.94%	3	1	4.281	4.61	1.944
21248	Friday, October 15, 2010	3:47	25.00	5.87	21.64	218.15	238.97	20.92	96.64%	99.29%	97.83%	97.14%	3	1	4.307	4.767	1.958
21247	Friday, October 15, 2010	2:49	26.71	4.04	23.92	195.39	218.44	23.18	96.89%	98.60%	98.13%	96.75%	3	1	3.82	4.025	1.867
21246	Friday, October 15, 2010	1:58	25.86	6.01	22.44	173.95	195.66	21.84	97.34%	98.09%	98.91%	97.02%	3	1	4.361	4.56	1.957
21245	Friday, October 15, 2010	1:09	25.63	6.06	22.19	152.79	174.16	21.47	96.75%	99.34%	98.20%	97.56%	3	1	4.266	4.545	1.974
21244	Friday, October 15, 2010	0:20	26.13	6.13	22.54	131.12	152.97	21.92	97.25%	99.11%	98.72%	97.85%	3	1	4.267	4.737	1.955
21243	Thursday, October 14, 2010	23:31	26.06	6.27	22.38	109.60	131.27	21.72	97.04%	98.36%	97.60%	96.00%	3	1	4.235	4.895	1.939
21242	Thursday, October 14, 2010	22:41	25.77	6.06	22.32	88.13	109.72	21.64	96.97%	98.41%	98.18%	96.62%	3	1	4.064	4.872	1.933
21241	Thursday, October 14, 2010	22:00	27.47	9.40	20.69	68.27	88.26	20.04	96.87%	98.81%	96.87%	95.71%	3	1	4.513	4.698	1.716
21240	Thursday, October 14, 2010	21:03	71.15	7.17	68.55	4.47	68.42	64.47	94.05%	97.63%	96.59%	94.30%	5	1	7.187	6.405	1.775
21239	Thursday, October 14, 2010	18:13	38.80	9.59	31.30	204.30	234.37	30.25	96.64%	98.53%	97.23%	95.80%	3	1	5.448	5.366	1.918
21238	Thursday, October 14, 2010	17:28	148.09	25.41	126.06	92.51	205.08	114.02	90.45%	95.34%	94.35%	89.95%	6	1	10.718	9.037	1.536
21237	Thursday, October 14, 2010	8:43	30.64	6.27	26.12	68.14	93.34	25.27	96.75%	97.43%	97.08%	94.58%	3	1	4.405	4.497	1.913
21236	Thursday, October 14, 2010	7:43	27.65	6.72	23.50	45.85	68.25	22.48	95.67%	96.97%	96.80%	93.86%	3	1	4.232	4.582	1.95

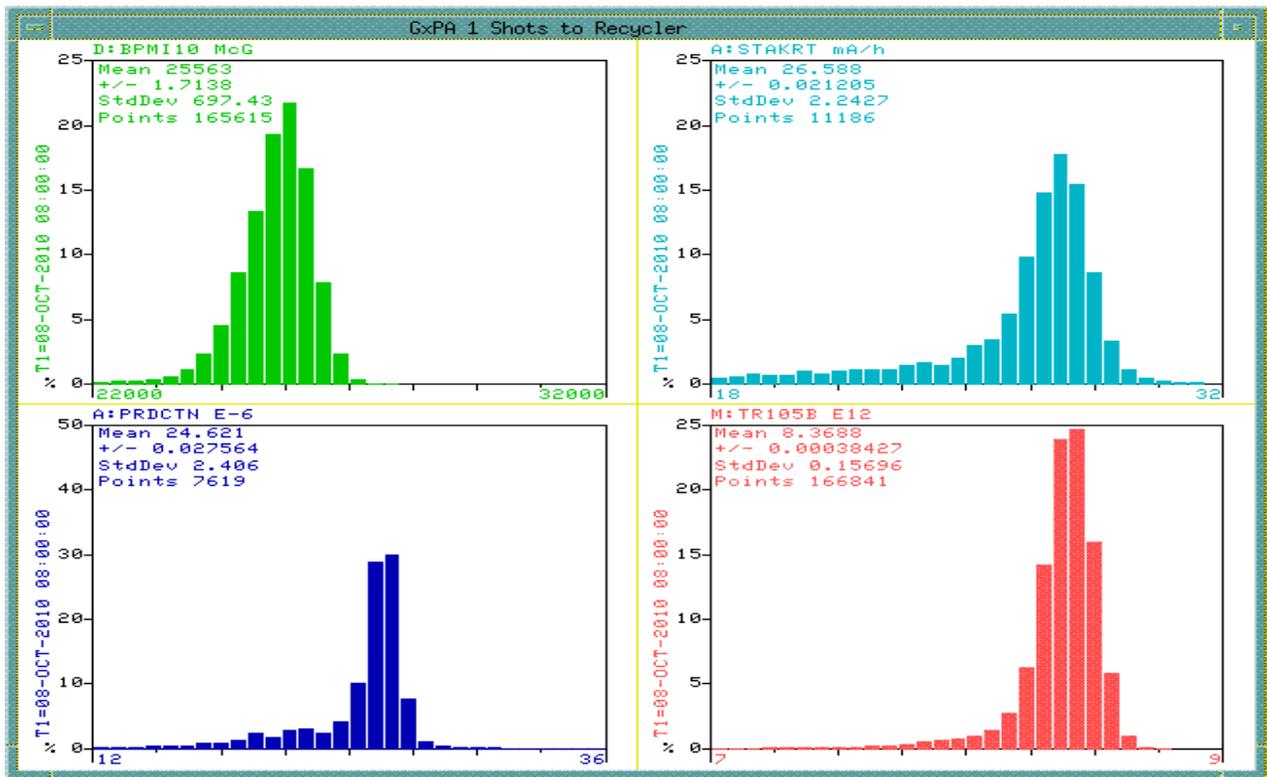
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Totals =>				351.69			340.34	96.77%	98.53%	98.15%	96.70%	56	15	4.3565	4.7145	1.9199	
Daily Average =>				351.69			340.34					56	15				
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The Weekly Plots







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Totals =>				3432.51			3286.53	95.75%	97.52%	97.46%	95.04%	385	122	4.6691	4.8042	1.9136
Daily Average =>				490.36			469.50					55	17			

