

2011-04-04 Monday Morning Notes

Monday, April 04, 2011
7:18 AM

On-call

- Friday: Keith
- Saturday: Steve
- Sunday: Jim
- Monday/Tuesday: Keith
- Wednesday/Thursday: Al
- Friday: JPM

Stacking and Transfers

- We stacked 25.6mA/hr with a production of 22.1 pbars/Mp with 8.02 Tp on target.
 - Went from 11 to 12 turns late Saturday evening
 - With SY120 at 12 turns and normal stack sizes we stacked 25.9mA/hr with a production of 23.1 pbars/Mp with 8.3 Tp on target
 - With \$29s only and normal sized stacks, we only stacked with 11 turns, 27.25 mA/hr with a production of 23.4 pbars/Mp with 7.78 tp on target.
- We unstacked 1284E10 (428/day) in 141 transfers (50/day) over 51 sets (17/day) with an overall efficiency of 94.2%.
 - Transfer 23847 (Friday 21:11) 57% due pre/fire fail to fire on the R:KPS2A kicker
 - Transfer 23879 (Sunday at 6:55) has errors on the SDA data. Inadvertently lost a transfer from Pbar to RR when the sequencer was killed at a most inopportune moment.
 - Remove the bad transfers and the ones from over 35mA and we get 96.3%.

Operational Happenings

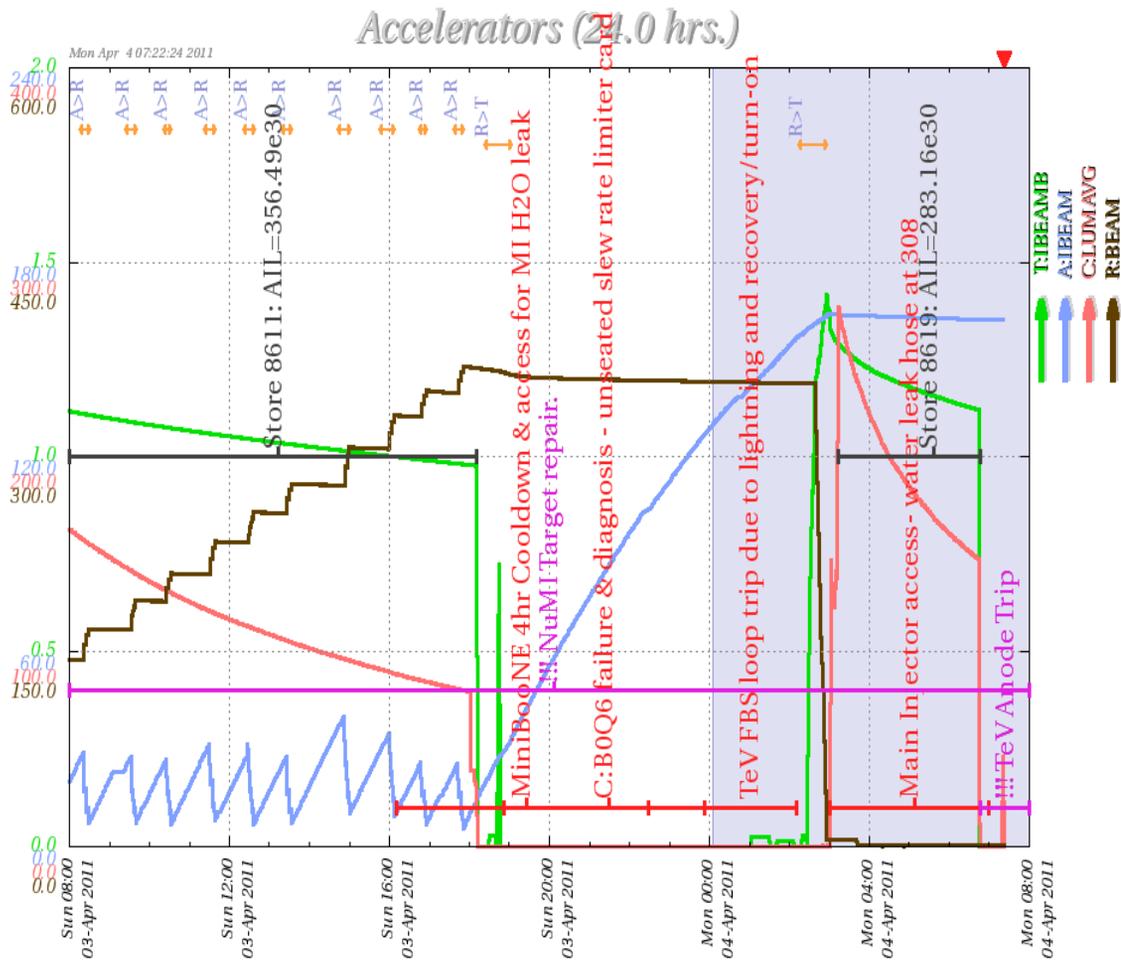
- Sunday 2pm losses on MI tune-up of tunes and chromaticity. Fixed when MI tuning changes were restored.
- Chilled Water Loop
 - Trips on dump water temp too high
 - Some adjustments to the chilled water temperature regulation script.
- **Dump water reservoir tank holding level!**
- ARF1 LCAP changed 03:00 on april 2nd, but not sent out until april 3rd 19:00

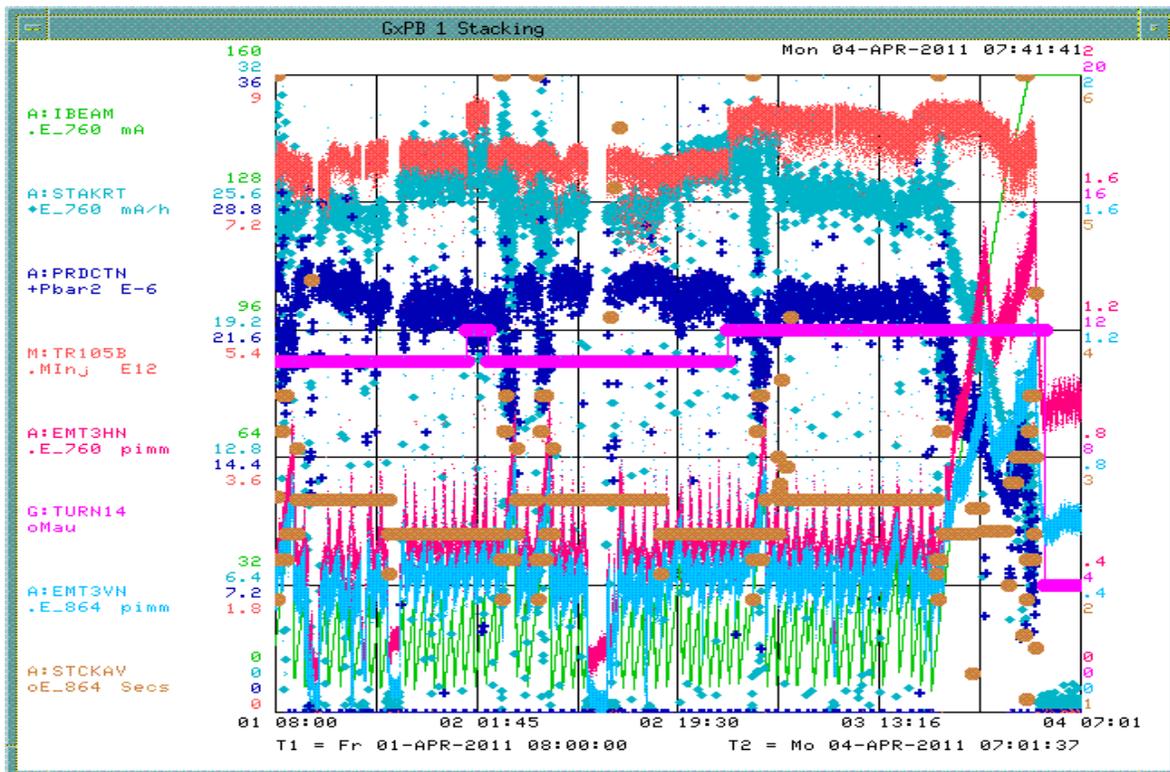
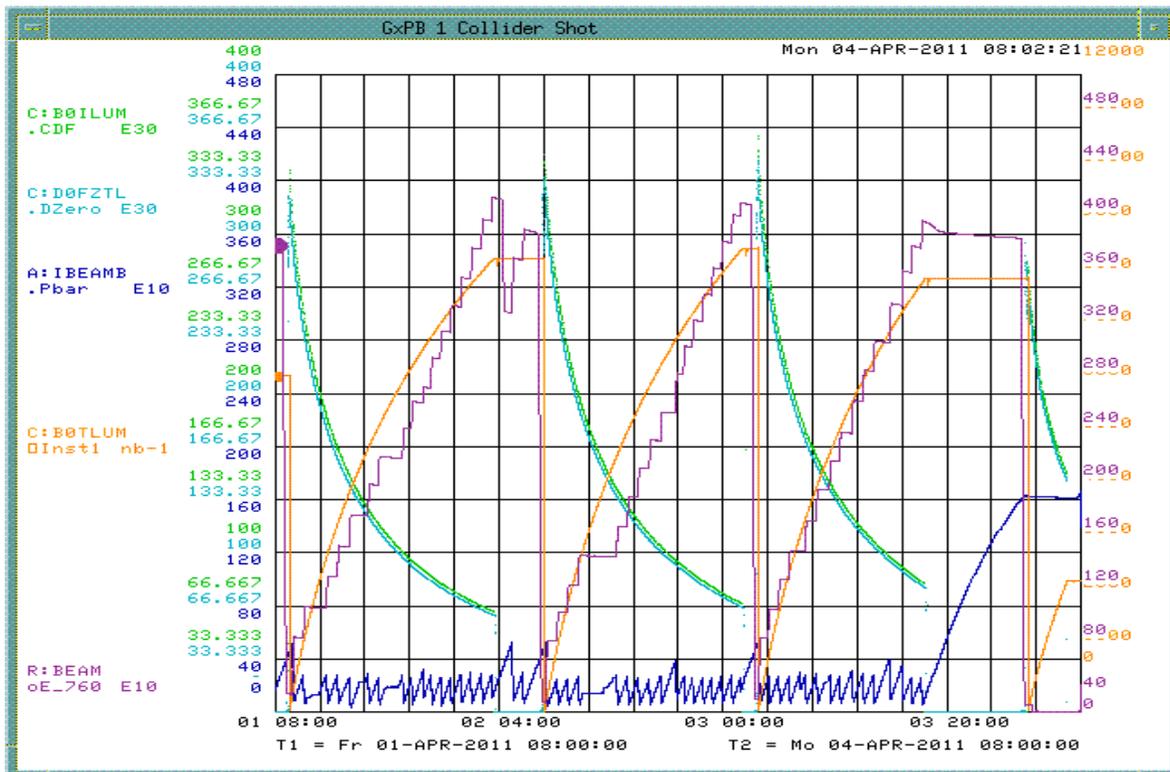
Numbers

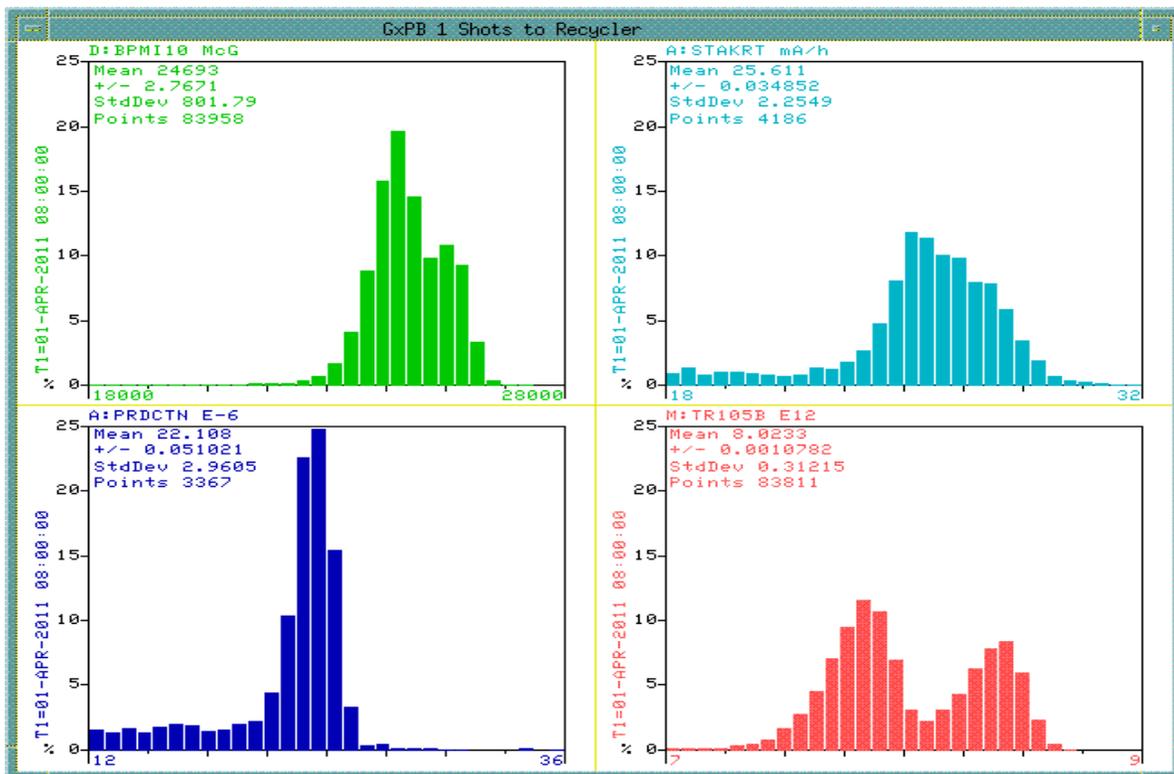
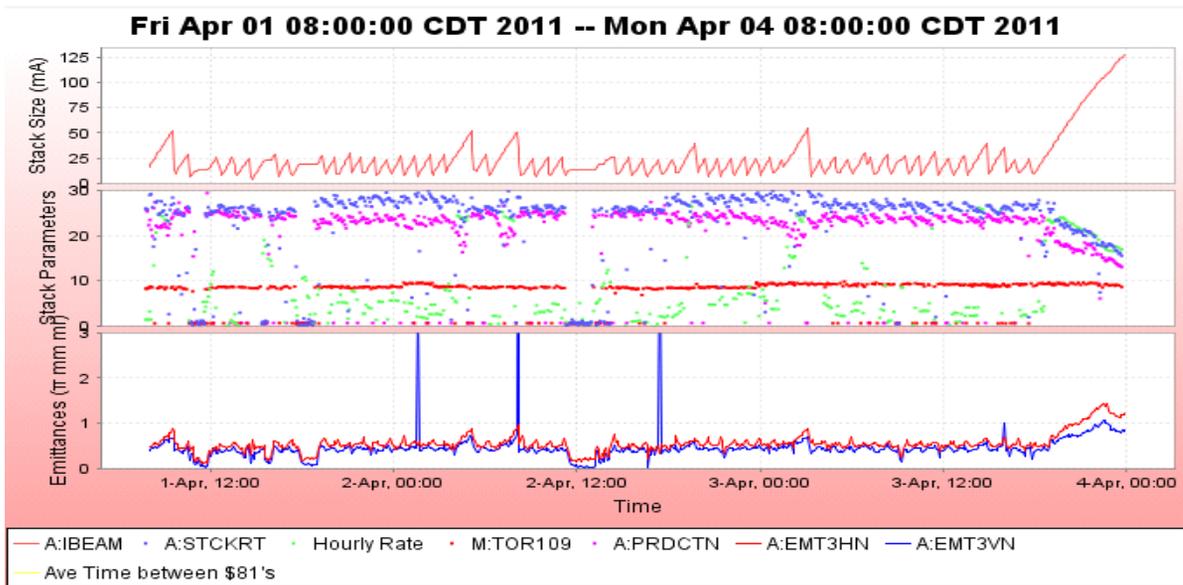
- Stacking
 - Pbars stacked: 1591.50 E10
 - Time stacking: 63.84 Hr
 - Average stacking rate: 24.93 E10/Hr
- Uptime
 - Number of pulses while in stacking mode: 89533
 - Number of pulses with beam: 84518
 - Fraction of up pulses was: 94.40%
- The uptime's effect on the stacking numbers
 - Corrected time stacking: 60.26 Hr
 - Possible average stacking rate: 26.41 E10/Hr
 - Could have stacked: 1685.93 E10/Hr
- Recycler Transfers

- Pbars sent to the Recycler: 1315.69 E10
- Number of transfers : 154
- Number of transfer sets: 53
- Average Number of transfer per set: 2.91
- Time taken to shoot including reverse proton tuneup: 00.54 Hr
- Transfer efficiency: 93.68%
- Other Info
 - Average POT : 8.01 E12
 - Average production: 23.49 pbars/E6 protons

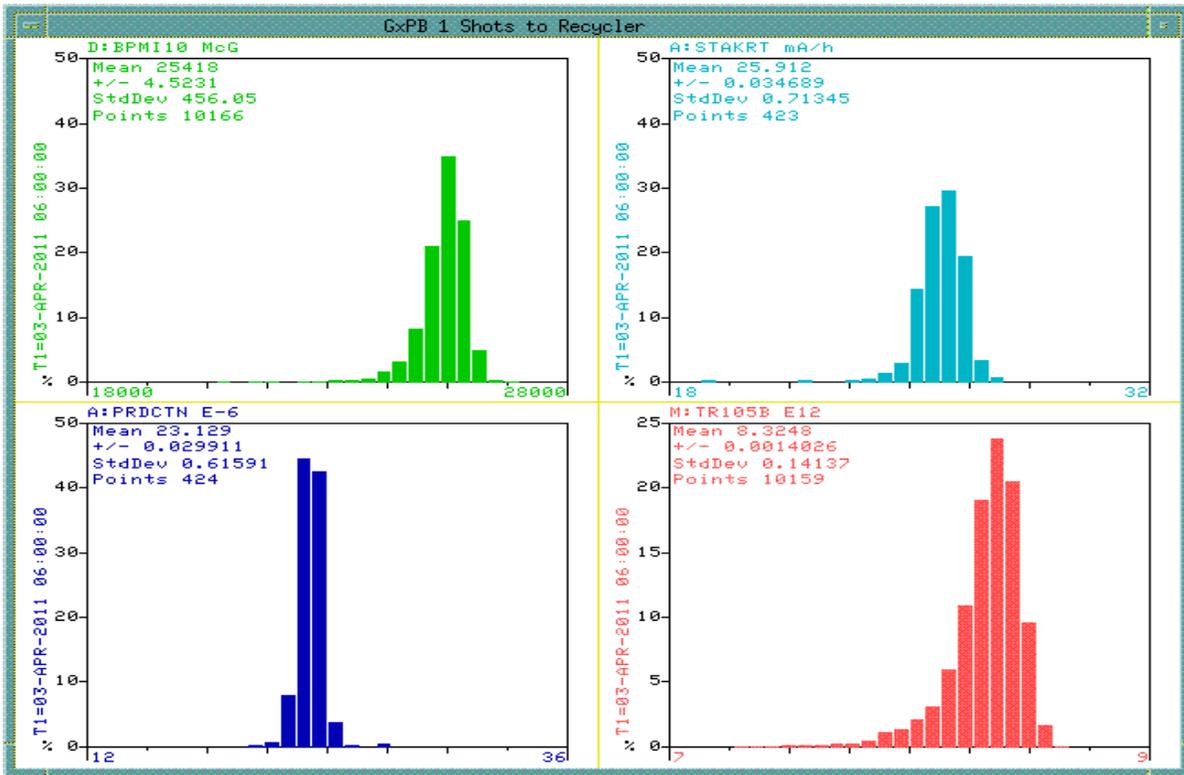
Plots



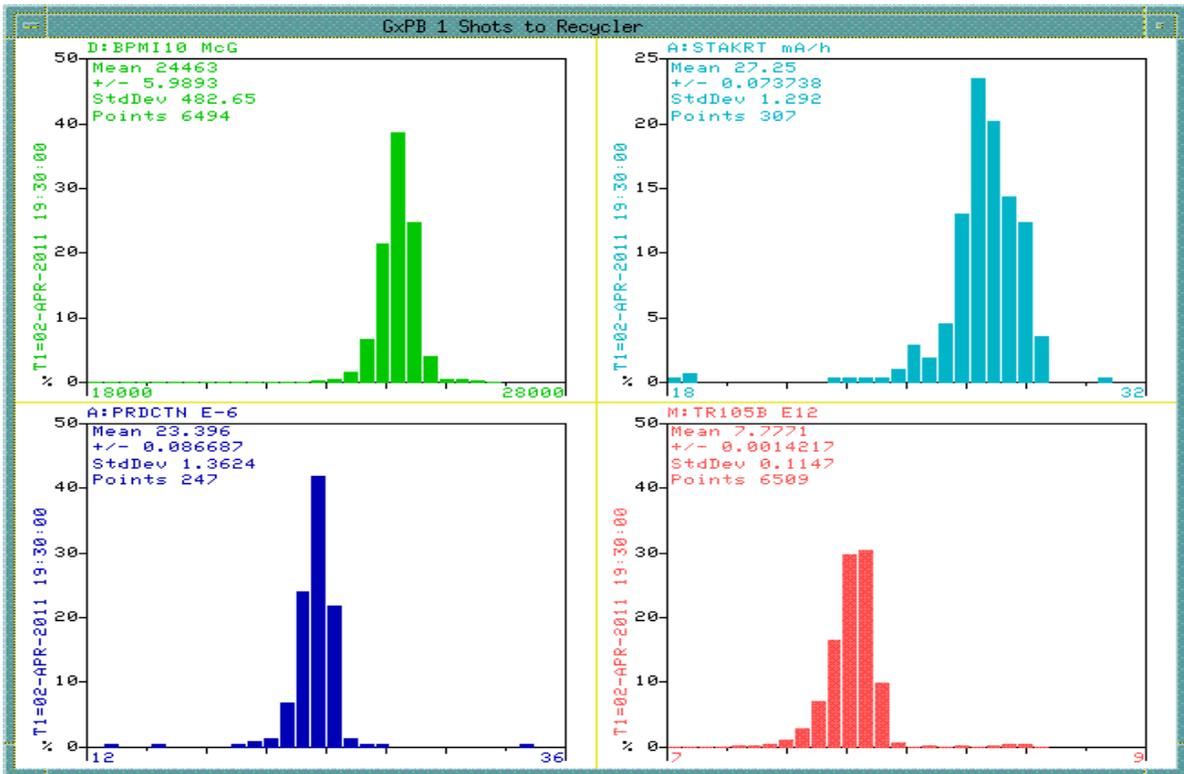




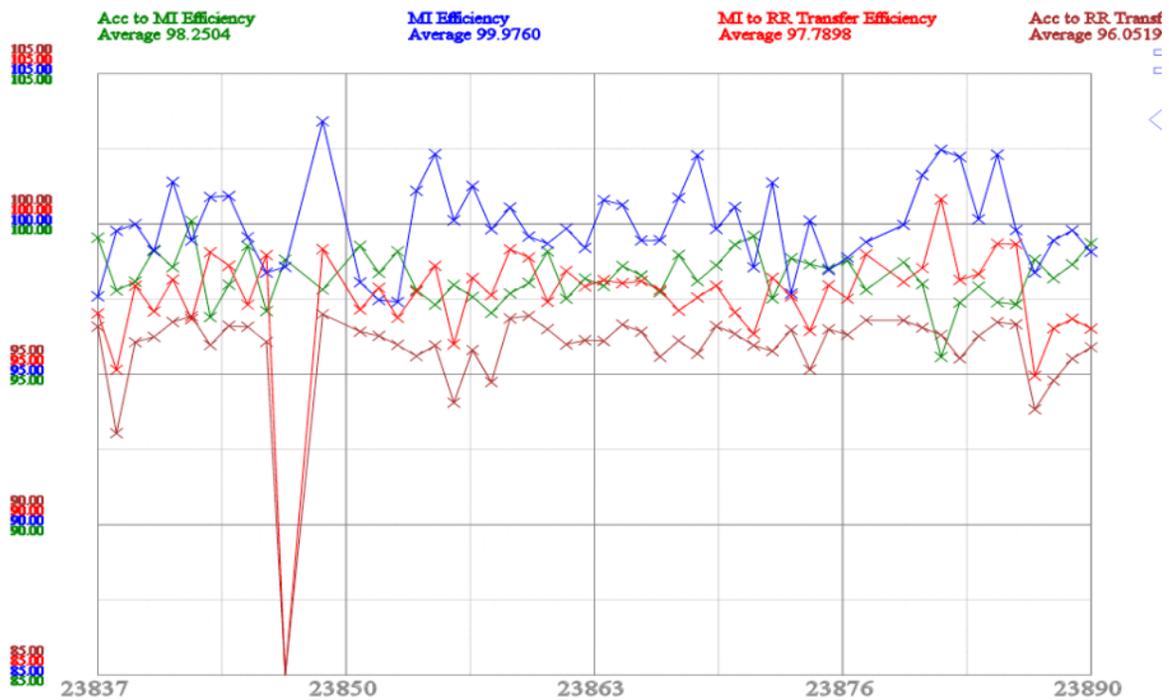
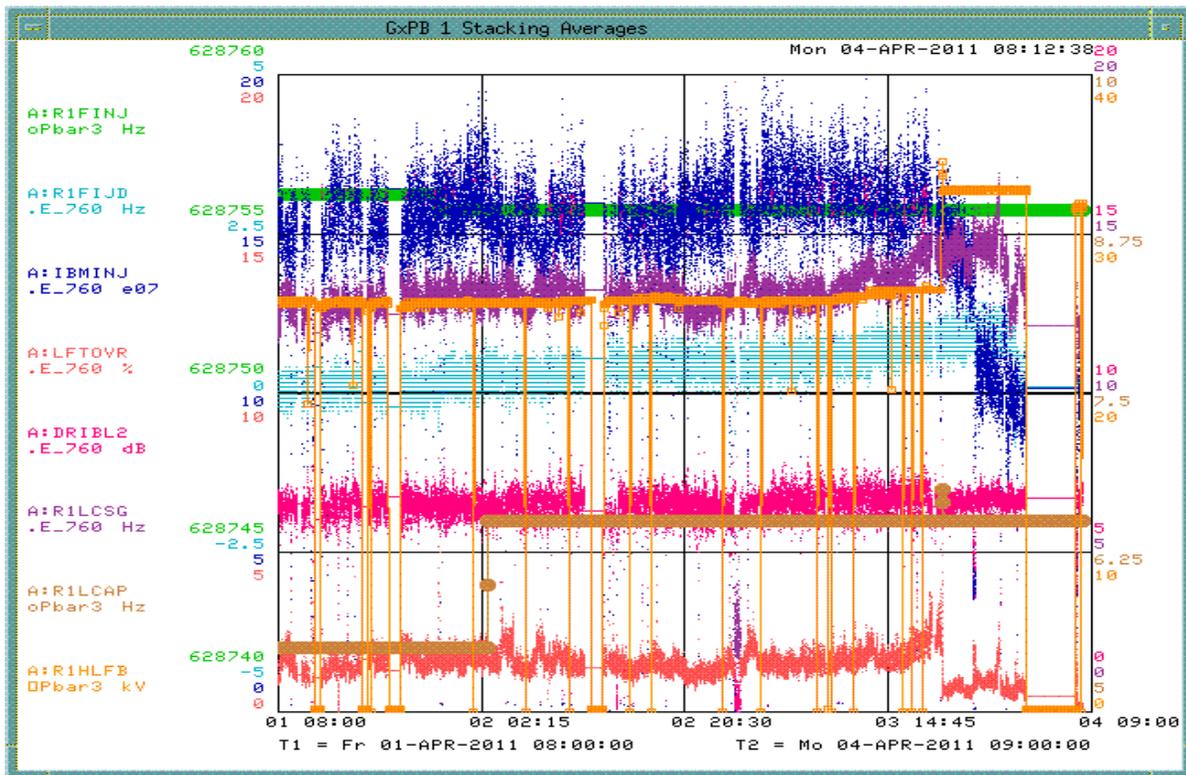
All 3 days



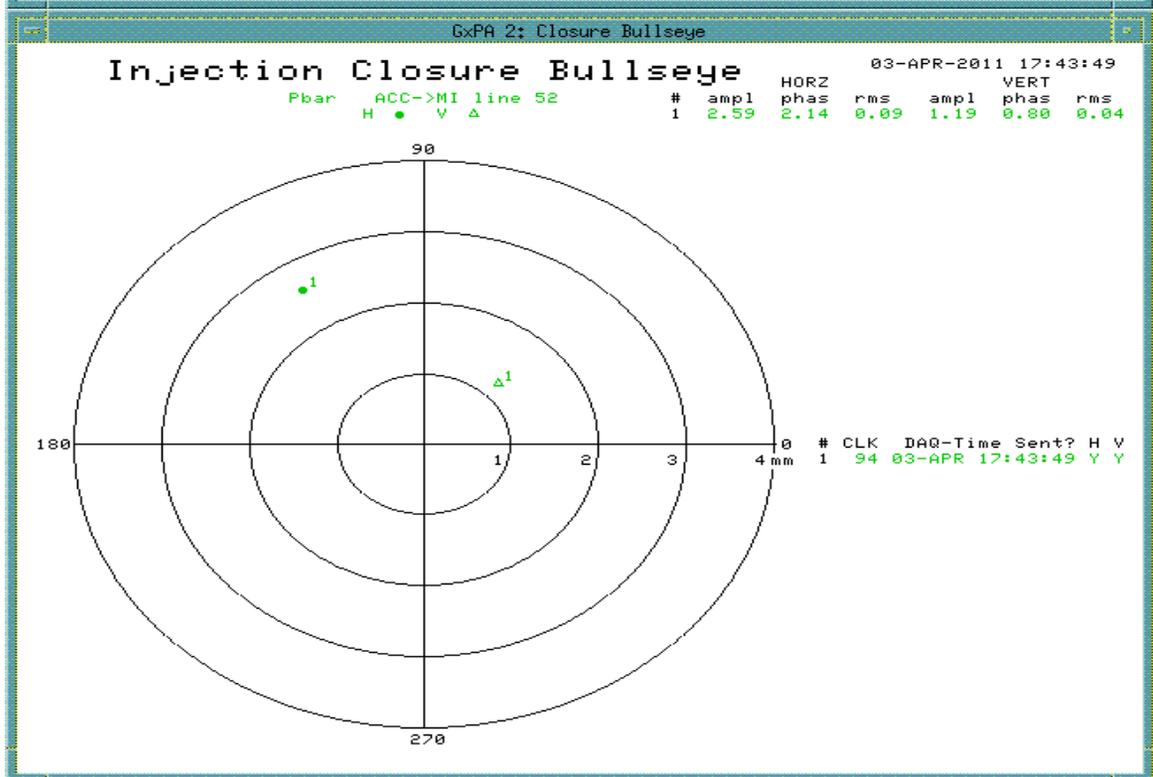
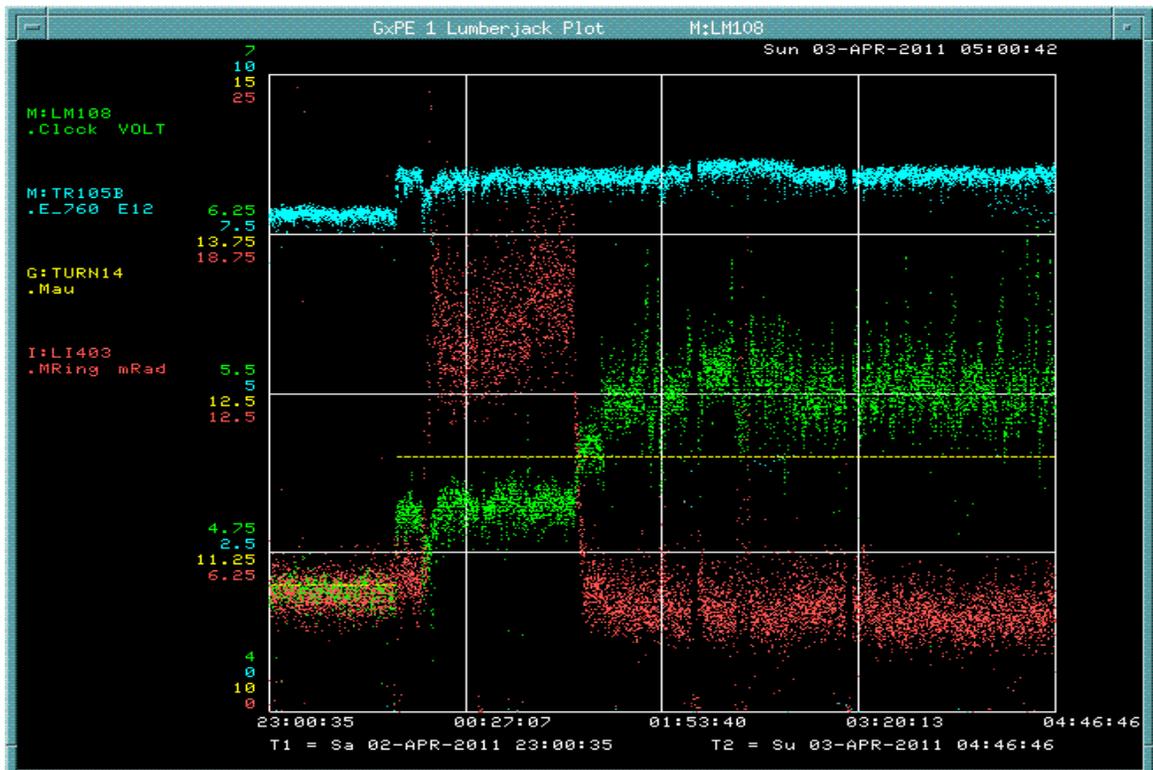
12 turns with SY120 and normal stack sizes

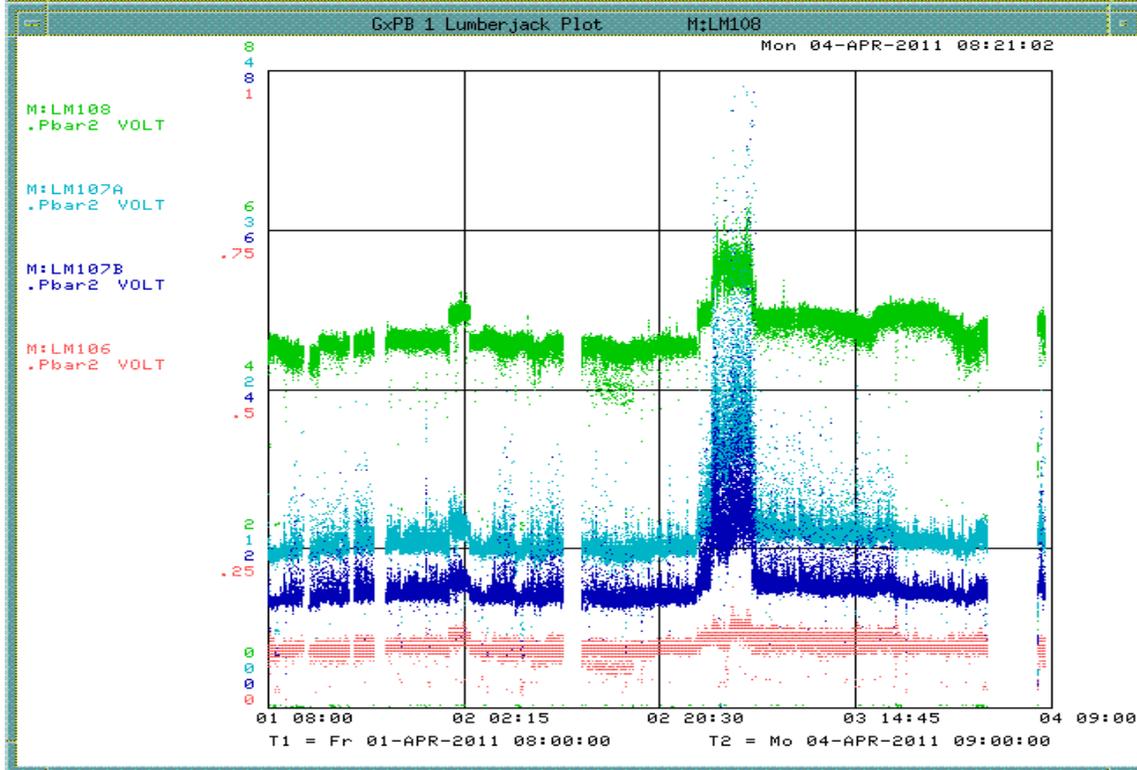
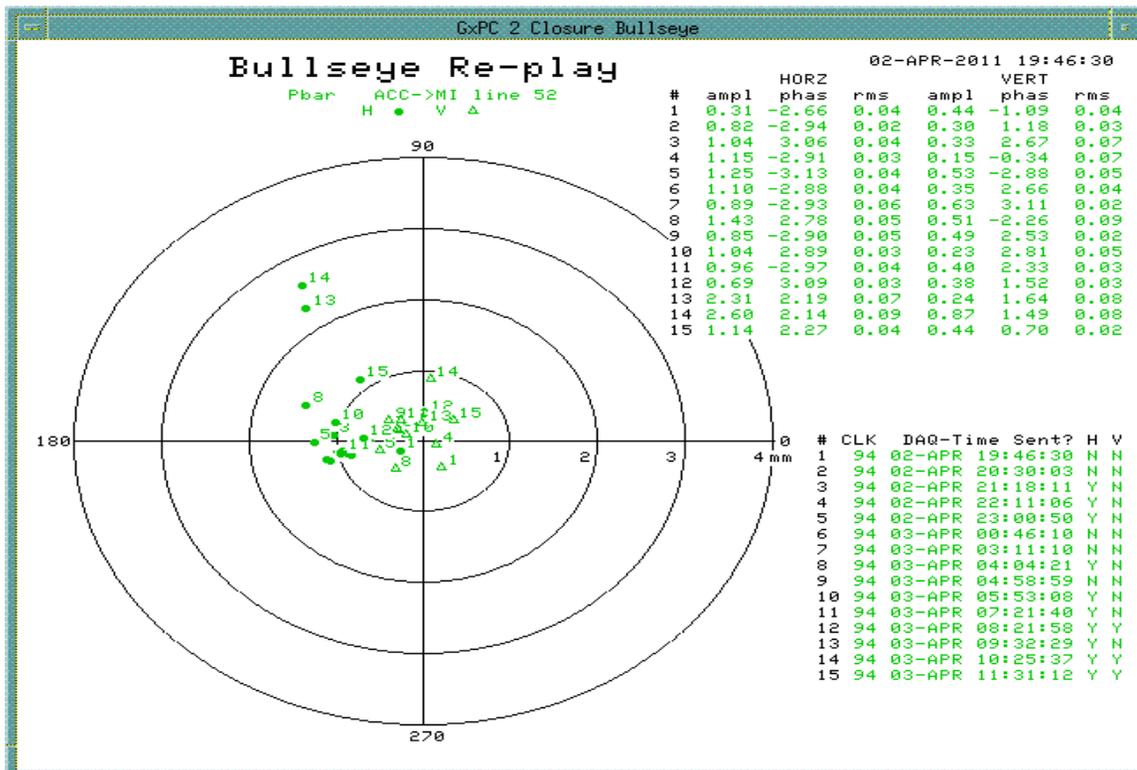


\$29s-only with normal stack sizes....only 11 turns



Column 1 Number_0_P Bar Transfer Shot #	Column 4 Number_3_Transfer Time	Column 21 Number_20_A:IBEA MB sampled on #31 (A:BE AMB)	Column 22 Number_21_A:IBEA MB sampled on #34 (A:BE AMB)	Unstacked (mA)	Column 23 Number_23_R:BEA MS (R:BE AME0) preffered	Column 24 Number_23_R:BEA M (R:BE AME0) post	Stacked	Acc to RR Eff	Acc to MI Eff	Acc to MI2 Eff	Acc to MI * Acc to MI2 Efficiency	Transfers	Sets	Column 5 Number_4_Acc Horizontal Emitance	Column 6 Number_5_Acc Vertical Emitance	Column 8 Number_7_Acc Longitudinal Emitance	
Totals =>				1284.23			1209.13	94.15%	97.17%	97.15%	94.40%	151	51	5.3363	4.091	1.945	
Daily Average =>				428.08			403.04					50	17				
23890	Sunday, April 03, 2011	17:43	26.04	5.29	22.73	349.31	370.22	21.75	95.63%	99.32%	98.26%	97.60%	3	1	4.571	3.549	1.957
23889	Sunday, April 03, 2011	16:48	26.29	6.80	22.16	331.07	351.49	21.15	95.43%	98.89%	98.62%	97.52%	3	1	5.138	4.071	1.993
23888	Sunday, April 03, 2011	16:00	35.20	9.08	28.68	306.45	332.59	27.08	94.40%	98.18%	97.43%	96.65%	3	1	5.517	4.456	1.974
23887	Sunday, April 03, 2011	14:52	40.42	9.89	33.05	278.40	308.00	30.85	93.34%	98.54%	97.41%	95.99%	3	1	5.904	4.6	1.925
23886	Sunday, April 03, 2011	13:25	27.78	6.77	23.71	257.04	279.57	22.93	96.72%	97.41%	97.55%	95.03%	3	1	5.329	4.029	1.988
23885	Sunday, April 03, 2011	12:29	28.96	6.78	24.82	234.30	257.86	24.00	96.63%	97.86%	99.41%	97.29%	3	1	5.341	4.102	1.961
23884	Sunday, April 03, 2011	11:30	31.81	7.83	26.66	209.90	235.12	25.69	96.37%	98.00%	98.38%	96.42%	3	1	5.473	4.463	1.961
23883	Sunday, April 03, 2011	10:25	26.92	6.70	22.90	189.07	210.55	21.86	95.43%	97.98%	99.13%	97.13%	3	1	5.319	4.18	1.953
23882	Sunday, April 03, 2011	9:32	27.78	7.12	23.39	167.32	189.52	22.50	96.22%	96.27%	97.74%	94.09%	3	1	5.102	4.055	1.97
23881	Sunday, April 03, 2011	8:21	29.22	6.88	25.06	143.86	167.75	24.19	96.53%	98.23%	99.22%	97.46%	3	1	5.341	4.122	1.951
23880	Sunday, April 03, 2011	7:21	28.06	6.57	24.12	121.15	144.22	23.38	96.92%	98.36%	98.35%	96.74%	3	1	5.196	3.903	1.965
23879	Sunday, April 03, 2011	6:55	30.03	17.08	12.95	Error -58	No data ?						1	1	5.164	4.303	1.88
23878	Sunday, April 03, 2011	5:52	26.83	6.63	22.86	99.60	121.49	22.14	96.85%	98.18%	97.74%	95.96%	3	1	5.321	4.156	1.99
23877	Sunday, April 03, 2011	4:58	27.76	6.76	23.67	77.27	99.81	22.79	96.28%	98.47%	98.00%	96.51%	3	1	5.218	4.191	1.964
23876	Sunday, April 03, 2011	4:04	26.86	6.78	22.75	55.82	77.52	21.96	96.54%	98.26%	97.61%	95.91%	3	1	5.327	4.116	1.977
23875	Sunday, April 03, 2011	3:10	54.51	6.46	50.26	9.50	56.22	47.53	94.57%	98.56%	98.26%	96.84%	4	1	5.944	4.398	1.865
23874	Sunday, April 03, 2011	1:33	26.23	15.60	10.63	373.56	383.82	10.26	96.48%	98.86%	96.58%	95.48%	1	1	5.298	4.377	1.921
23873	Sunday, April 03, 2011	0:45	27.99	7.17	23.39	353.37	375.18	22.42	95.86%	97.48%	98.65%	96.16%	3	1	5.327	4.185	1.942
23872	Saturday, April 02, 2011	23:52	27.41	7.04	22.93	333.55	355.03	22.03	96.11%	99.54%	98.57%	98.12%	3	1	5.406	4.19	1.962
23871	Saturday, April 02, 2011	23:00	26.51	6.59	22.12	314.01	334.91	21.33	96.40%	99.12%	99.44%	98.57%	3	1	5.328	3.993	1.96
23870	Saturday, April 02, 2011	22:10	26.43	6.38	22.14	294.34	315.19	21.34	96.36%	98.60%	98.94%	97.55%	3	1	5.14	4.062	1.92
23869	Saturday, April 02, 2011	21:17	25.63	6.53	21.71	274.92	295.27	20.78	95.73%	97.85%	99.98%	97.84%	3	1	5.305	3.931	1.957
23868	Saturday, April 02, 2011	20:29	26.70	6.54	22.36	254.58	275.78	21.49	96.09%	99.04%	98.83%	97.88%	3	1	5.302	4.21	1.964
23867	Saturday, April 02, 2011	19:46	39.36	9.71	31.80	225.51	255.38	30.38	95.53%	97.93%	97.55%	95.54%	3	1	5.936	4.728	1.924
23866	Saturday, April 02, 2011	18:25	27.42	6.66	22.87	204.38	226.15	22.08	96.55%	98.21%	98.23%	96.53%	3	1	5.173	3.911	1.976
23865	Saturday, April 02, 2011	17:25	25.60	5.96	22.19	183.68	204.87	21.46	96.73%	98.77%	98.85%	97.63%	3	1	4.947	3.895	1.966
23864	Saturday, April 02, 2011	16:25	26.36	5.93	23.03	162.26	184.11	22.12	96.04%	98.01%	98.21%	96.26%	3	1	5.049	3.937	1.935
23863	Saturday, April 02, 2011	15:29	27.36	5.74	23.88	139.96	162.59	22.91	95.94%	97.85%	96.88%	94.80%	3	1	4.851	3.749	1.921
23862	Saturday, April 02, 2011	14:30	27.80	6.07	24.30	117.29	140.22	23.26	95.71%	97.49%	97.56%	95.11%	3	1	5.442	4.313	1.923
23861	Saturday, April 02, 2011	11:02	26.87	6.17	23.27	95.73	117.93	22.46	96.52%	98.68%	98.19%	96.89%	3	1	5.024	3.802	1.944
23860	Saturday, April 02, 2011	10:05	25.66	6.21	22.06	74.83	95.95	21.39	96.94%	98.23%	98.77%	97.02%	3	1	5.118	3.944	1.991
23859	Saturday, April 02, 2011	9:11	25.59	5.91	22.22	53.68	74.98	21.53	96.90%	97.98%	98.73%	96.73%	3	1	5.202	3.813	1.954
23858	Saturday, April 02, 2011	8:10	52.90	4.50	51.52	7.06	54.11	48.35	93.84%	96.75%	96.80%	93.65%	5	1	6.398	4.578	1.915
23857	Saturday, April 02, 2011	6:06	28.98	6.68	24.91	340.31	363.57	23.86	95.76%	97.96%	98.48%	96.47%	3	1	5.281	3.98	1.948
23856	Saturday, April 02, 2011	5:09	52.83	8.98	46.96	300.42	342.48	43.80	93.27%	97.76%	97.55%	95.37%	4	1	6.801	5.288	1.898
23855	Saturday, April 02, 2011	3:20	28.81	10.61	19.28	369.85	388.07	18.50	95.97%	97.26%	99.23%	96.50%	2	1	5.518	4.332	1.959
23854	Saturday, April 02, 2011	2:26	29.37	7.03	24.59	348.45	371.38	23.46	95.40%	97.57%	98.27%	95.88%	3	1	5.468	4.155	1.946
23853	Saturday, April 02, 2011	1:29	29.37	6.51	25.03	326.25	349.78	24.01	95.92%	98.72%	96.67%	95.44%	3	1	5.271	3.879	1.945
23852	Saturday, April 02, 2011	0:33	28.69	7.17	24.12	305.11	327.70	23.19	96.14%	98.08%	96.15%	94.30%	3	1	5.458	4.124	1.957
23851	Friday, April 01, 2011	23:37	25.88	6.36	21.73	286.12	306.61	20.96	96.46%	99.53%	97.97%	97.51%	3	1	5.346	3.83	1.957
23849	Friday, April 01, 2011	21:55	28.27	6.22	24.12	243.98	266.99	23.43	97.13%	97.68%	100.63%	98.30%	3	1	5.137	3.561	1.926
23847	Friday, April 01, 2011	21:11	30.34	10.54	20.69	233.14	244.81	11.93	97.66%	98.66%	97.59%	96.28%	2	1	5.206	4.114	1.889
23846	Friday, April 01, 2011	20:10	25.84	5.95	21.92	213.28	233.99	21.08	96.16%	97.60%	96.35%	94.03%	3	1	5.168	3.857	1.944
23845	Friday, April 01, 2011	19:22	28.28	6.86	23.53	191.36	213.79	22.72	96.58%	98.84%	98.75%	97.60%	3	1	5.395	4.268	1.969
23844	Friday, April 01, 2011	17:11	25.84	6.01	22.36	171.12	192.39	21.58	96.51%	97.95%	98.37%	96.35%	3	1	5.217	3.825	1.954
23843	Friday, April 01, 2011	16:17	29.64	6.79	25.36	147.71	171.62	24.30	95.82%	97.29%	98.02%	95.37%	3	1	5.581	4.182	1.933
23842	Friday, April 01, 2011	14:36	26.58	3.29	24.09	124.93	148.10	23.37	97.00%	100.08%	99.53%	99.61%	3	1	4.111	2.674	1.919
23841	Friday, April 01, 2011	13:33	28.78	6.62	24.72	101.61	125.18	23.89	96.66%	98.52%	99.38%	97.92%	3	1	5.149	3.79	1.957
23840	Friday, April 01, 2011	12:34	28.24	6.71	24.11	78.77	101.78	23.25	96.42%	98.86%	98.49%	97.36%	3	1	4.953	3.767	1.947
23839	Friday, April 01, 2011	10:30	28.30	6.34	16.87	56.18	79.29	16.20	96.06%	97.98%	96.89%	94.93%	2	1	4.864	3.876	1.913
23838	Friday, April 01, 2011	9:32	52.79	8.41	47.65	13.49	56.73	44.23	92.82%	97.66%	97.22%	94.94%	4	1	6.778	5.028	1.89





MI Losses up after MI tune and chromaticity changes. Losses back down.

