2010-12-06 Monday Morning Notes

Monday, December 06, 2010
7:29 AM

Stacking and Transfers

- Average stacking numbers over the weekend.
  - 24.6mA/hr
  - 19.94 pbars/Mp
  - 7.97 Tp
- Transfers
  - Unstacked 1464E10 in 156 transfers over 48 sets.
  - Average efficiency 94.8%
  - Averaged 488E10 in 52 transfers over 16 sets.

Interesting Stuff

- We are running with the VB1 upper half band off due to a control issue in the tunnel. When the upper half band is on we trip all the TWTs, even when the attenuator is maxed out at 31.75dB. Suspect a bad controller in the A10-1 stub room for D:V1PA1.

Numbers (3 days)

- Stacking
  - Pbars stacked: 1451.56 E10
  - Time stacking: 67.77 Hr
  - Average stacking rate: 21.42 E10/Hr

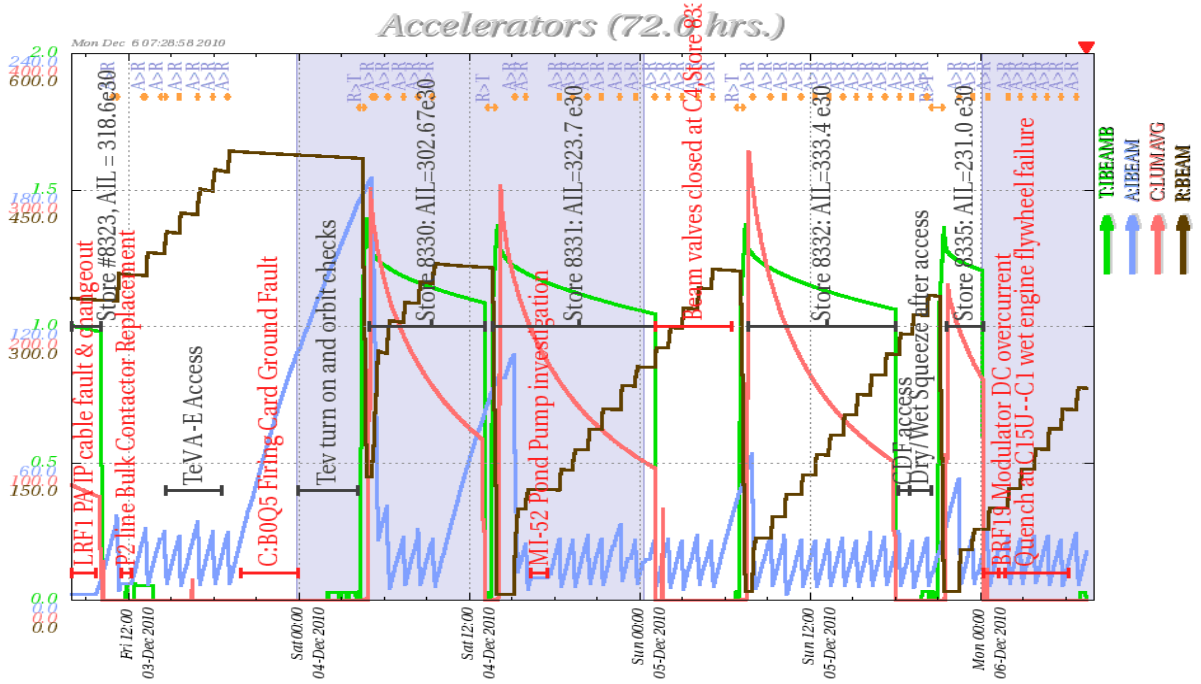
- Uptime
  - Number of pulses while in stacking mode: 100582
  - Number of pulses with beam: 93905
  - Fraction of up pulses was: 93.36%

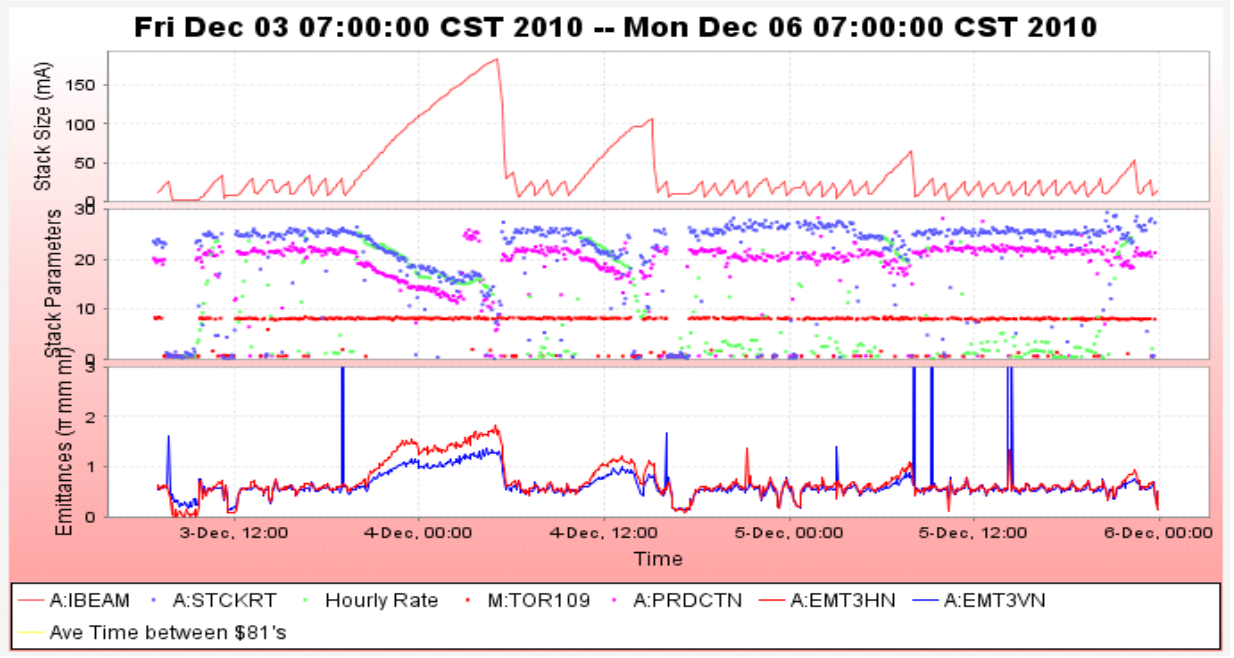
- The uptime's effect on the stacking numbers
  - Corrected time stacking: 63.27 Hr
  - Possible average stacking rate: 22.94 E10/Hr
  - Could have stacked: 1554.77 E10/Hr

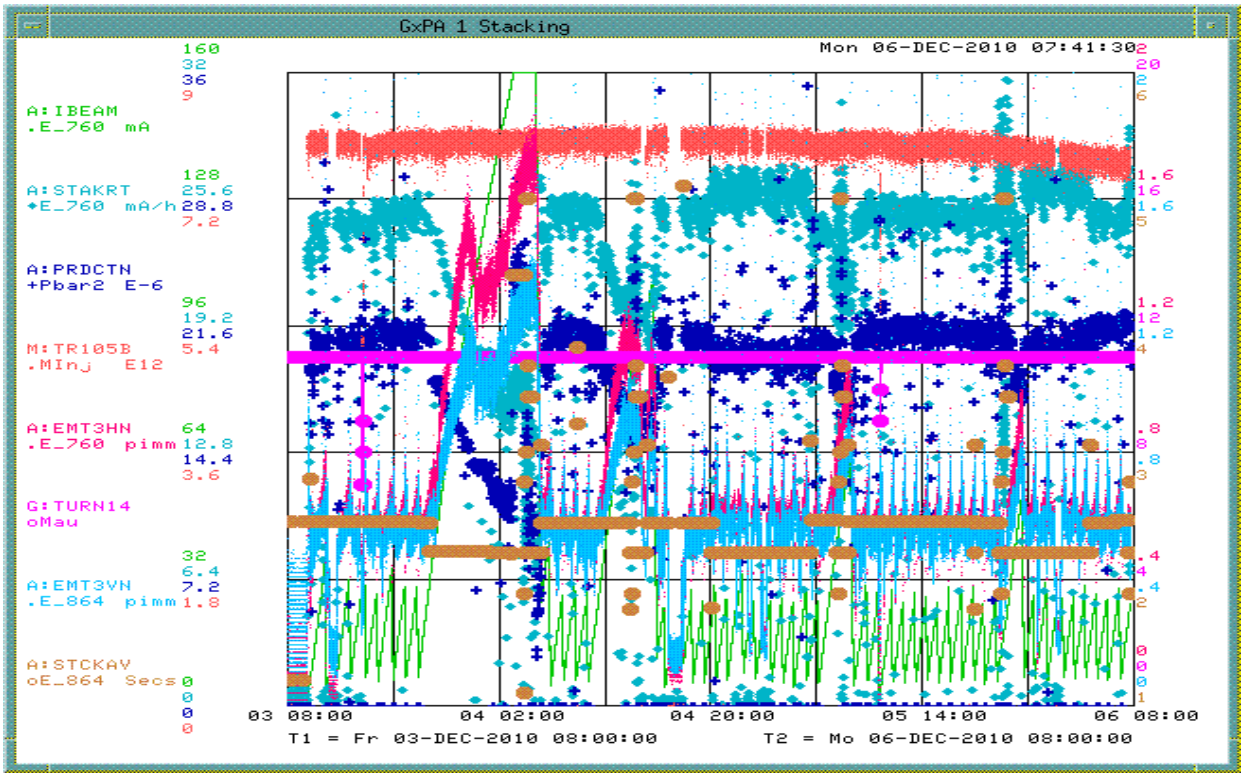
- Recycler Transfers
  - Pbars sent to the Recycler: 1444.90 E10
  - Number of transfers : 154
  - Number of transfer sets: 48
  - Average Number of transfer per set: 3.21
  - Time taken to shoot including reverse proton tuneup: 00.54 Hr
  - Transfer efficiency: 94.40%

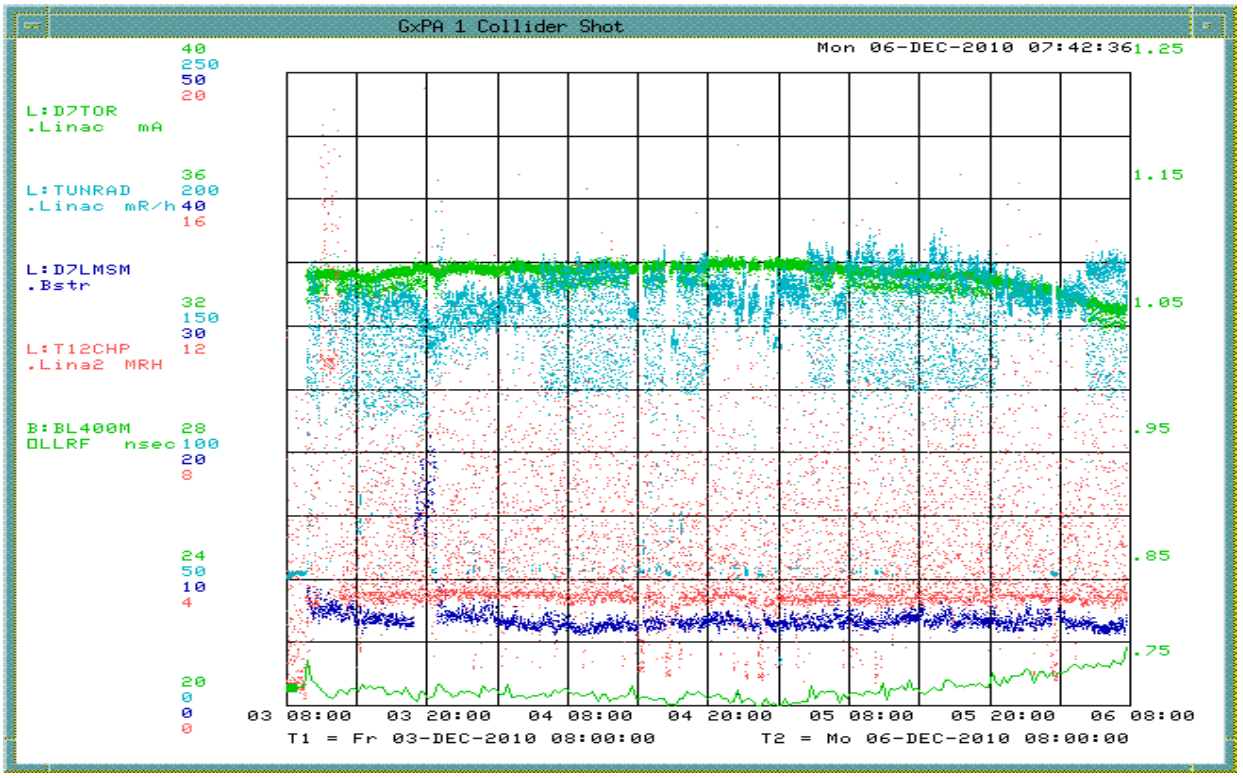
- Other Info
  - Average POT : 7.97 E12
  - Average production: 19.39 pbars/E6 protons

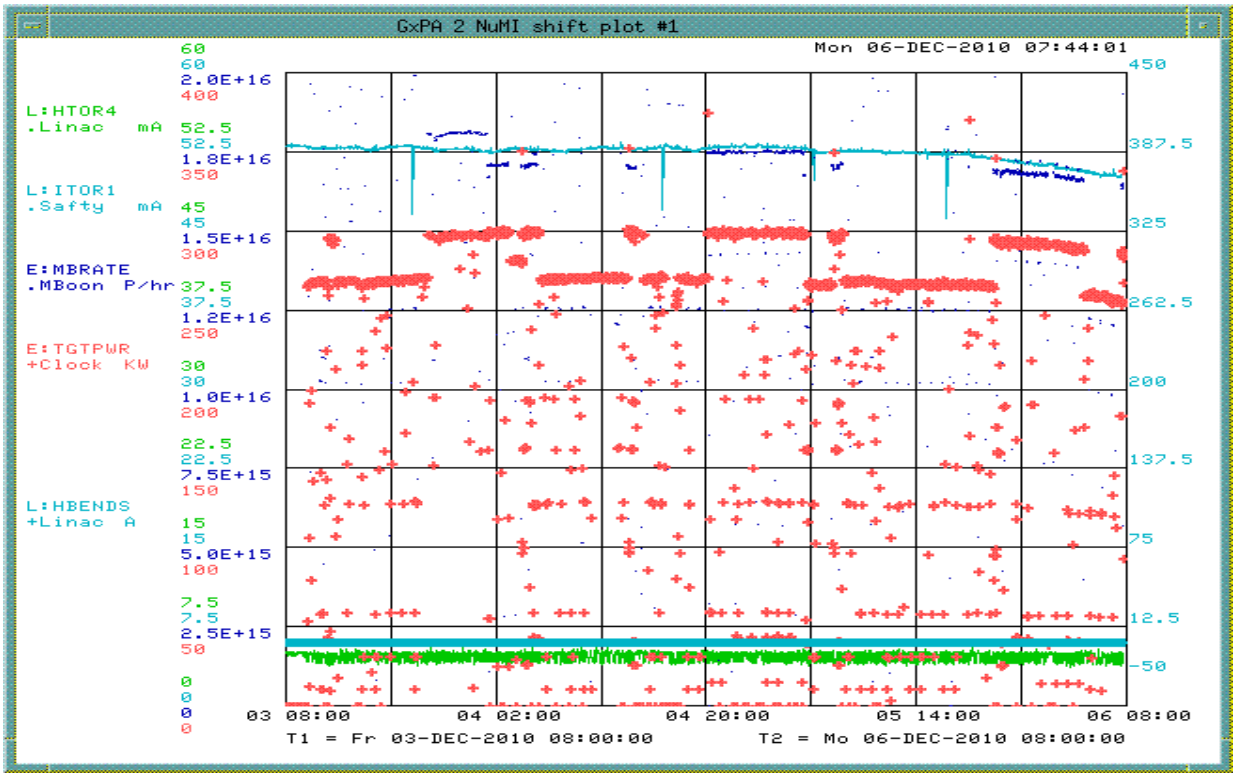
Plots


Accelerators (72.0 hrs.)
Mon Dec 6 07:28:58 2010
LRF1 PA/IP cable fault & changeout
Store #8323, AIL = 318.6e30
P2 line Bulk Contactor Replacement
TeV A-E Access
C:B0Q5 Firing Card Ground Fault
Tev turn on and orbit checks
Store 8330: AIL=302.67e30
Store 8331: AIL=323.7 e30
TM1-52 Pond Pump investigation
Beam valves closed at C4 Store 83
Store 8332: AIL=333.4 e30
CDF access
Dry/Wet Squeeze after access
Store 8335: AIL=231.0 e30
BRF13 Modulator DC overcurrent
Quench at C15U--C1 wet engine flywheel failure
T:IBEAMB
A:IBEAM
C:LUMAVG
R:BEAM
Fri 12:00 03-Dec 2010
Sat 00:00 04-Dec 2010
Sat 12:00 04-Dec 2010
Sun 00:00 05-Dec 2010
Sun 12:00 05-Dec 2010
Mon 00:00 06-Dec 2010

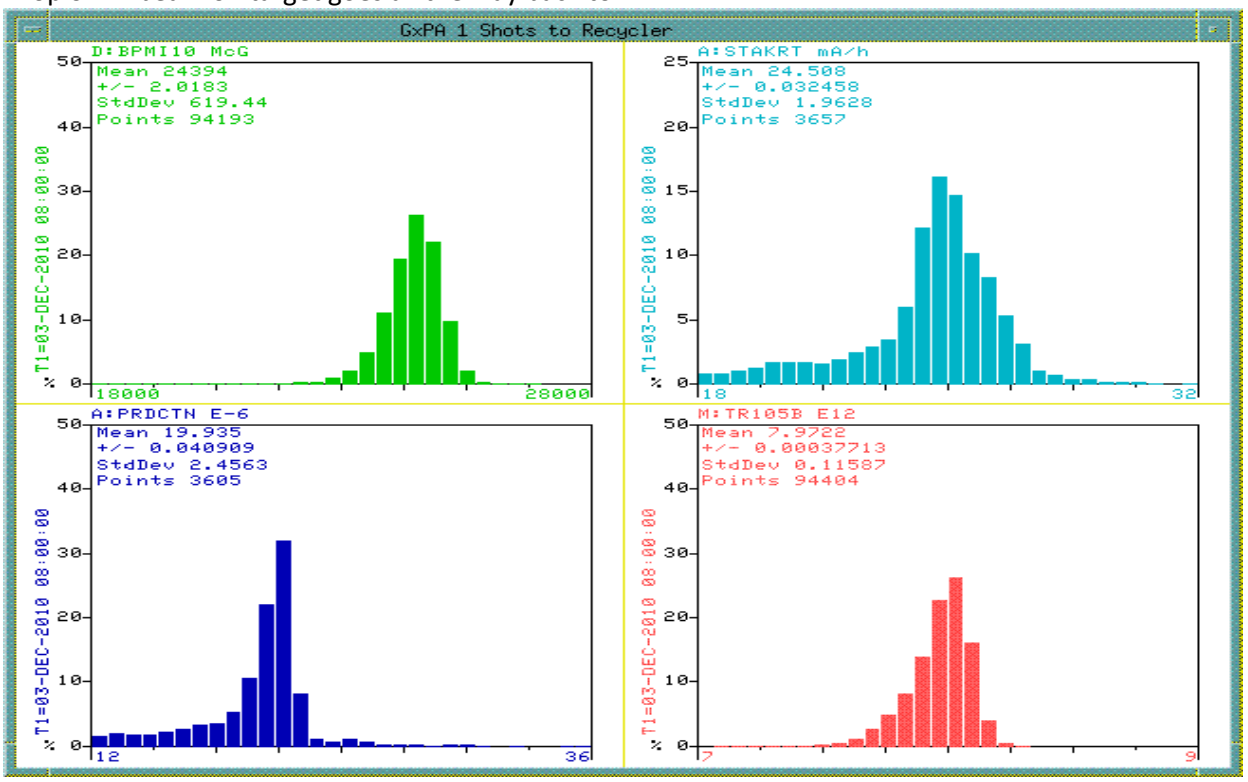

Fri Dec 03 07:00:00 CST 2010 -- Mon Dec 06 07:00:00 CST 2010
Stack Size (mA)
Stack Parameters
Emittances (π mm mr)
3-Dec, 12:00
4-Dec, 00:00
4-Dec, 12:00
5-Dec, 00:00
5-Dec, 12:00
6-Dec, 00:00
Time
A:IBEAM
A:STCKRT
Hourly Rate
M:TOR109
A:PRDCTN
A:EMT3HN
A:EMT3VN
Ave Time between $81's


GxPA 1 Stacking
Mon 06-DEC-2010 07:41:30
A:IBEAM
.E_760 mA
A:STAKRT
+E_760 mA/h
A:PRDCTN
+Pbar2 E-6
M:TR105B
.MInj E12
A:EMT3HN
.E_760 pimm
G:TURN14
oMau
A:EMT3VN
.E_864 pimm
A:STCKAV
oE_864 Secs
03 08:00
04 02:00
04 20:00
05 14:00
06 08:00
T1 = Fr 03-DEC-2010 08:00:00
T2 = Mo 06-DEC-2010 08:00:00

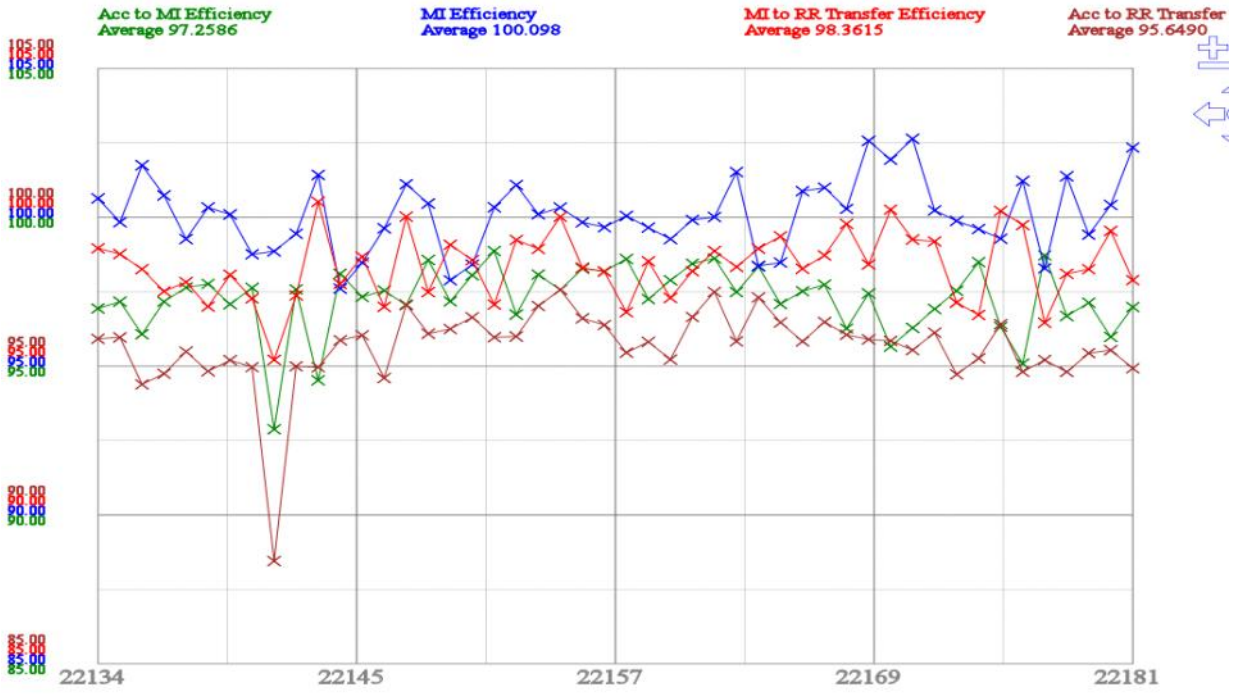

GxPA 1 Collider Shot
Mon 06-DEC-2010 07:42:36
L:D7TOR
.Linac mA
L:TUNRAD
.Linac mR/h
L:D7LMSM
.Bstr
L:T12CHP
.Lina2 MRH
B:BL400M
OLLRF nsec
03 08:00
03 20:00
04 08:00
04 20:00
05 08:00
05 20:00
06 08:00
T1 = Fr 03-DEC-2010 08:00:00
T2 = Mo 06-DEC-2010 08:00:00



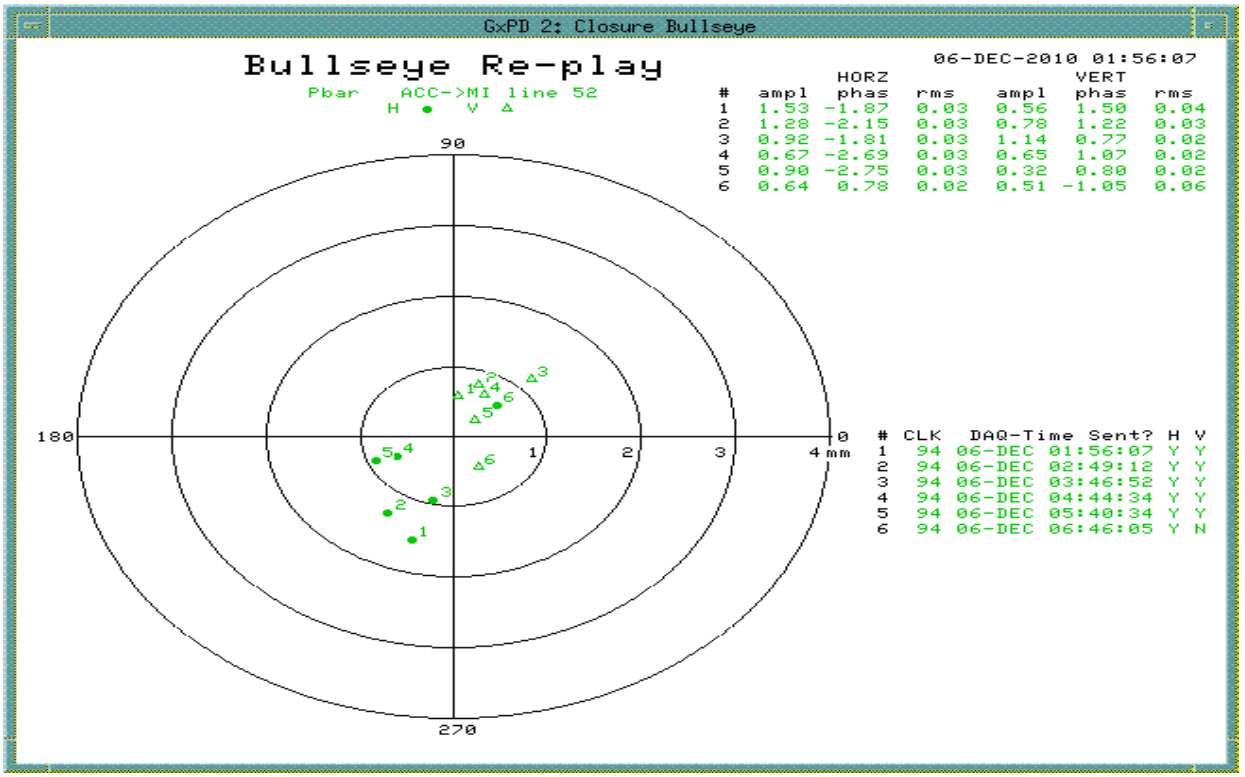
Drop off in beam on target goes all the way back to I-



Histogram


Acc to MI Efficiency
Average 97.2586
MI Efficiency
Average 100.098
MI to RR Transfer Efficiency
Average 98.3615
Acc to RR Transfer
Average 95.6490
105.00
100.00
95.00
90.00
85.00
22134
22145
22157
22169
22181

Column 1 Number_0_Pbar Transfer Shot #	Column 4 Number_3_Transfer Time		Column 21 Number_20_A:IBEAMB sampled on $91 (A:BEAM7), E10	Column 22 Number_21_A:IBEAMB sampled on $94 (A:BEAM9), E10	Unstacked (mA)	Column 23 Number_22_R:BEAMS (R:BEAME0[0]) pre xfer E10	Column 24 Number_23_R:BEAM (R:BEAME0[1]) post xfer, E10	Stashed	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 Emittance	Column 6 Number_5_Acc Vertical Emittance	Column 8 Number_7_Acc Longitudinal Emittance
	Totals =>				1464.26			1387.74	94.77%	96.86%	96.82%	93.78%	156	48	6.012	5.4546	1.9144
	Daily Average =>				488.09			462.58					52	16			
22181	Monday, December 06, 2010	6:45	29.83	6.70	25.65	209.21	233.31	24.38	95.06%	96.74%	98.70%	95.48%	3	1	5.781	5.364	1.925
22180	Monday, December 06, 2010	5:40	26.88	6.34	23.10	187.91	209.74	22.09	95.66%	96.16%	97.22%	93.48%	3	1	5.969	5.595	1.948
22179	Monday, December 06, 2010	4:44	28.28	6.80	24.02	165.66	188.41	22.94	95.48%	97.21%	96.69%	93.99%	3	1	5.813	5.337	1.933
22178	Monday, December 06, 2010	3:46	28.22	7.04	23.79	143.64	166.07	22.62	95.09%	97.40%	98.64%	96.08%	3	1	6.175	5.616	1.945
22177	Monday, December 06, 2010	2:48	27.10	6.83	22.85	122.34	143.94	21.73	95.08%	98.40%	96.80%	95.26%	3	1	6.031	5.714	1.973
22176	Monday, December 06, 2010	1:55	27.23	7.10	22.78	101.02	122.52	21.65	95.05%	95.77%	96.23%	92.16%	3	1	6.098	5.582	1.963
22175	Monday, December 06, 2010	0:31	28.10	5.73	24.91	77.48	101.27	24.04	96.51%	97.53%	97.04%	94.64%	3	1	5.219	4.942	1.908
22174	Sunday, December 05, 2010	23:26	27.85	6.98	23.51	55.44	77.68	22.40	95.30%	98.23%	97.78%	96.06%	3	1	5.901	5.511	1.965
22173	Sunday, December 05, 2010	22:28	53.25	7.11	49.57	9.43	55.72	46.81	94.44%	97.16%	97.07%	94.31%	4	1	7.242	6.176	1.842
22172	Sunday, December 05, 2010	20:13	27.47	6.31	23.71	312.62	335.00	22.78	96.04%	97.09%	96.99%	94.17%	3	1	5.85	5.26	1.969
22171	Sunday, December 05, 2010	19:11	25.90	5.36	22.87	291.95	313.52	21.81	95.39%	96.44%	99.04%	95.51%	3	1	5.404	4.877	1.899
22170	Sunday, December 05, 2010	18:16	28.15	6.44	24.17	269.84	292.62	23.12	95.68%	96.14%	97.82%	94.04%	3	1	6.023	5.389	1.959
22169	Sunday, December 05, 2010	17:16	28.47	6.52	24.48	247.15	270.41	23.49	95.94%	97.51%	99.49%	97.01%	3	1	5.95	5.417	1.956
22168	Sunday, December 05, 2010	16:15	27.20	6.32	23.48	225.31	247.66	22.55	96.08%	96.25%	97.44%	93.78%	3	1	5.879	5.296	1.935
22167	Sunday, December 05, 2010	15:16	26.38	5.66	23.22	203.50	225.72	22.43	96.60%	97.99%	98.20%	96.23%	3	1	5.677	5.404	1.94
22166	Sunday, December 05, 2010	14:18	27.60	6.38	23.76	181.19	203.88	22.81	96.00%	97.56%	98.05%	95.66%	3	1	5.686	5.201	1.969
22165	Sunday, December 05, 2010	13:19	26.70	6.10	23.11	159.38	181.47	22.34	96.68%	97.35%	96.01%	93.47%	3	1	5.482	5.335	1.959
22164	Sunday, December 05, 2010	12:21	26.39	5.97	22.93	137.66	159.68	22.24	96.97%	98.06%	97.18%	95.30%	3	1	5.65	5.342	1.953
22163	Sunday, December 05, 2010	11:23	26.54	5.97	23.12	115.74	137.86	22.20	96.03%	97.17%	99.05%	96.24%	3	1	5.631	5.284	1.962
22162	Sunday, December 05, 2010	10:11	26.65	2.57	24.85	91.95	115.97	24.18	97.29%	98.71%	98.85%	97.57%	3	1	4.322	4.157	1.861
22161	Sunday, December 05, 2010	9:15	28.68	6.49	24.76	68.36	92.08	23.95	96.70%	98.43%	98.10%	96.56%	3	1	5.864	5.323	1.961
22160	Sunday, December 05, 2010	7:55	64.39	5.17	63.50	9.30	68.62	60.23	94.85%	97.53%	96.93%	94.54%	5	1	7.137	6.297	1.846
22159	Sunday, December 05, 2010	5:03	26.45	5.73	23.23	341.82	363.75	22.29	95.93%	97.25%	97.10%	94.43%	3	1	5.779	5.399	1.941
22158	Sunday, December 05, 2010	4:04	28.64	6.46	24.45	319.82	342.89	23.37	95.59%	98.38%	98.43%	96.84%	3	1	6.059	5.501	1.923
22157	Sunday, December 05, 2010	2:58	26.30	4.82	23.22	298.73	320.81	22.35	96.26%	98.06%	97.80%	95.90%	3	1	5.425	5.129	1.935
22156	Sunday, December 05, 2010	2:02	27.25	5.68	23.60	276.93	299.47	22.81	96.66%	98.18%	98.43%	96.64%	3	1	5.659	5.307	1.925
22155	Sunday, December 05, 2010	1:04	26.73	6.16	23.13	255.52	277.71	22.45	97.04%	97.03%	96.97%	94.09%	3	1	5.942	5.309	1.916
22154	Saturday, December 04, 2010	23:42	26.45	6.72	22.31	234.94	256.31	21.67	97.14%	97.81%	98.58%	96.42%	3	1	6.124	5.54	1.956
22153	Saturday, December 04, 2010	22:38	33.47	8.33	27.71	209.28	235.65	26.56	95.85%	96.50%	97.00%	93.61%	3	1	6.248	5.506	1.941
22152	Saturday, December 04, 2010	21:18	27.03	6.38	23.16	187.70	209.75	22.30	96.29%	99.06%	98.64%	97.72%	3	1	6.06	5.521	1.975
22151	Saturday, December 04, 2010	20:22	28.61	6.89	24.31	164.85	188.01	23.45	96.46%	98.02%	97.17%	95.25%	3	1	5.976	5.691	1.974
22150	Saturday, December 04, 2010	19:19	26.56	5.89	23.16	143.06	165.20	22.33	96.41%	97.79%	96.08%	93.96%	3	1	5.678	5.064	1.931
22149	Saturday, December 04, 2010	18:21	26.89	5.99	23.42	120.99	143.37	22.51	96.15%	98.45%	98.65%	97.11%	3	1	5.722	5.102	1.965
22148	Saturday, December 04, 2010	16:00	24.86	4.85	22.50	99.79	121.39	21.81	96.96%	97.23%	97.96%	95.24%	3	1	5.133	5.06	1.911
22147	Saturday, December 04, 2010	15:07	107.86	12.36	100.82	6.73	100.19	95.06	94.29%	97.36%	97.13%	94.56%	6	1	8.445	6.457	1.732
22146	Saturday, December 04, 2010	9:27	27.03	6.16	23.43	347.71	369.75	22.53	96.15%	97.21%	96.38%	93.69%	3	1	5.365	5.093	1.942
22145	Saturday, December 04, 2010	8:26	29.03	6.61	24.95	325.79	349.18	23.90	95.78%	97.53%	96.04%	93.66%	3	1	5.73	5.302	1.953
22144	Saturday, December 04, 2010	7:22	27.87	6.54	23.92	305.03	327.19	22.67	94.78%	95.16%	95.99%	91.35%	3	1	5.931	5.574	1.927
22143	Saturday, December 04, 2010	6:13	41.42	5.17	39.91	270.88	307.35	37.74	94.56%	96.92%	96.81%	93.83%	4	1	6.259	5.441	1.86
22142	Saturday, December 04, 2010	5:07	185.62	26.12	162.66	135.14	273.69	143.41	88.17%	92.75%	91.66%	85.02%	8	1	11.937	9.018	1.424
22141	Friday, December 03, 2010	19:00	30.08	7.22	25.42	470.20	493.70	24.15	95.00%	97.46%	96.76%	94.30%	3	1	6.18	5.269	1.937
22140	Friday, December 03, 2010	17:57	30.16	7.12	25.64	449.11	472.92	24.41	95.21%	97.23%	97.31%	94.61%	3	1	5.877	5.512	1.941
22139	Friday, December 03, 2010	16:53	34.65	6.55	30.50	423.11	451.49	28.92	94.79%	97.82%	98.38%	96.24%	3	1	5.862	5.287	1.861
22138	Friday, December 03, 2010	15:34	28.31	6.36	24.39	402.74	425.60	23.29	95.48%	98.13%	97.47%	95.65%	3	1	5.821	5.284	1.919
22137	Friday, December 03, 2010	14:33	30.61	7.08	26.02	380.13	404.48	24.69	94.87%	97.50%	97.84%	95.39%	3	1	5.888	5.531	1.915
22136	Friday, December 03, 2010	13:14	32.03	6.99	27.53	356.34	381.99	26.00	94.46%	96.06%	97.08%	93.26%	3	1	6.228	5.66	1.925
22135	Friday, December 03, 2010	11:12	35.35	4.24	31.86	328.57	358.58	30.49	95.70%	97.17%	96.89%	94.14%	3	1	5.29	4.827	1.853
22134	Friday, December 03, 2010	7:45	26.60	2.47	24.92	308.10	331.66	23.83	95.61%	96.91%	97.73%	94.71%	3	1	5.168	5.02	1.84


GxPD 2: Closure Bullseye
Bullseye Re-play
Pbar ACC->MI line 52
H ● V △
06-DEC-2010 01:56:07
HORZ VERT
ampl phas rms ampl phas rms
1 1.53 -1.87 0.03 0.56 1.50 0.04
2 1.28 -2.15 0.03 0.78 1.22 0.03
3 0.92 -1.81 0.03 1.14 0.77 0.02
4 0.67 -2.69 0.03 0.65 1.07 0.02
5 0.90 -2.75 0.03 0.32 0.80 0.02
6 0.64 0.78 0.02 0.51 -1.05 0.06
90
180
0
270
1
2
3
4 mm
CLK DAQ-Time Sent? H V
1 94 06-DEC 01:56:07 Y Y
2 94 06-DEC 02:49:12 Y Y
3 94 06-DEC 03:46:52 Y Y
4 94 06-DEC 04:44:34 Y Y
5 94 06-DEC 05:40:34 Y Y
6 94 06-DEC 06:46:05 Y N