2010-12-17 Friday Morning Notes

Friday, December 17, 2010
7:48 AM

Stacking and Transfers

- Stacked 26.13mA/hr with a production of 20.87 pbars/Mp with 8.03 Tp on target
- Unstacked 396E10 in 50 transfers over 16 sets with an average efficiency of 96.1%.

Interesting Happenings

- Access started at 9am, and turn-on was done by 11am, but problems with I:V714 (http://www-bd.fnal.gov/cgi-mcr/elog.pl?nb=2010&action=view&page=947&anchor=102205&hilite=10:22:05-) and I:HVF11 (http://www-bd.fnal.gov/cgi-mcr/elog.pl?nb=2010&action=view&page=947&anchor=112958&hilite=11:29:58-) delayed stacking.
- HVF11
  - Following the I:HVF11 work, the supply came back about 4A different. This caused the overthruster to rail the trims.
  - Keith corrected this http://www-bd.fnal.gov/cgi-mach/machlog.pl?nb=pbar10&action=view&page=323&anchor=074856&hilite=07:48:56-
- Milestones
  - Accumulated 2.5ng in calendar year 2010
  - Accumulated 13ng in the history of pbar.

Numbers

- Stacking
  - Pbars stacked: 403.11 E10
  - Time stacking: 18.77 Hr
  - Average stacking rate: 21.48 E10/Hr

- Uptime
  - Number of pulses while in stacking mode: 28675
  - Number of pulses with beam: 23983
  - Fraction of up pulses was: 83.64%

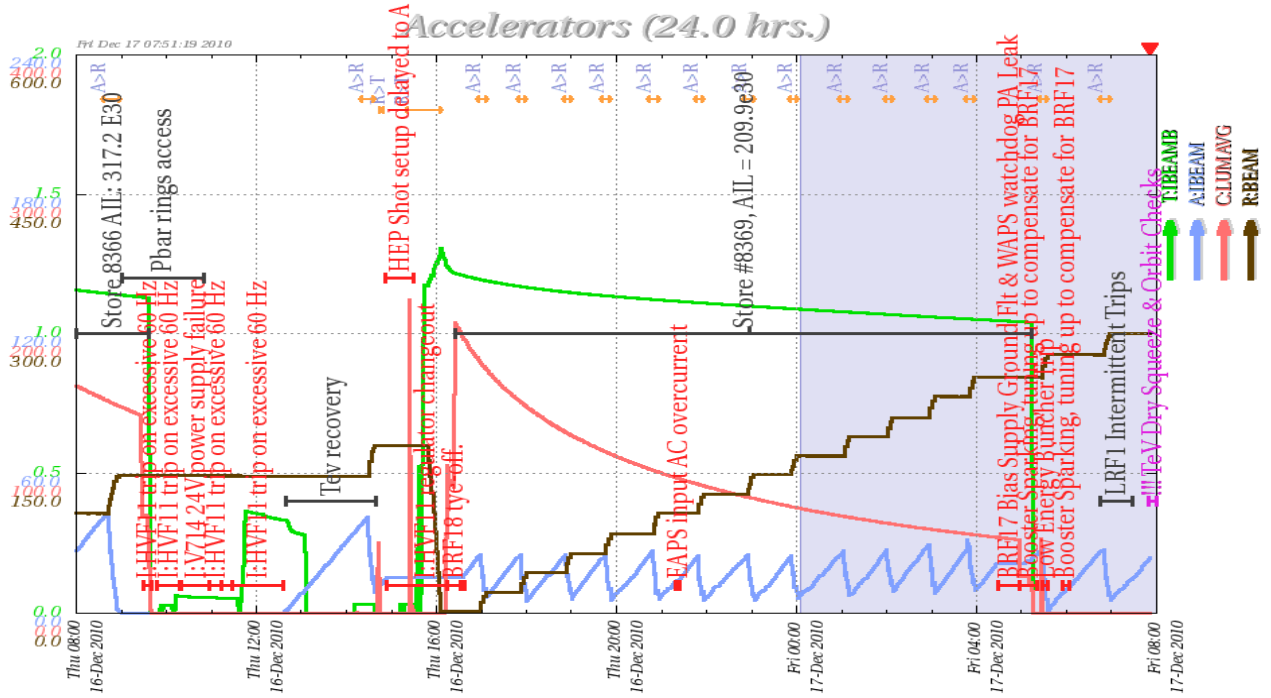
- The uptime's effect on the stacking numbers
  - Corrected time stacking: 15.70 Hr
  - Possible average stacking rate: 25.68 E10/Hr
  - Could have stacked: 481.98 E10/Hr

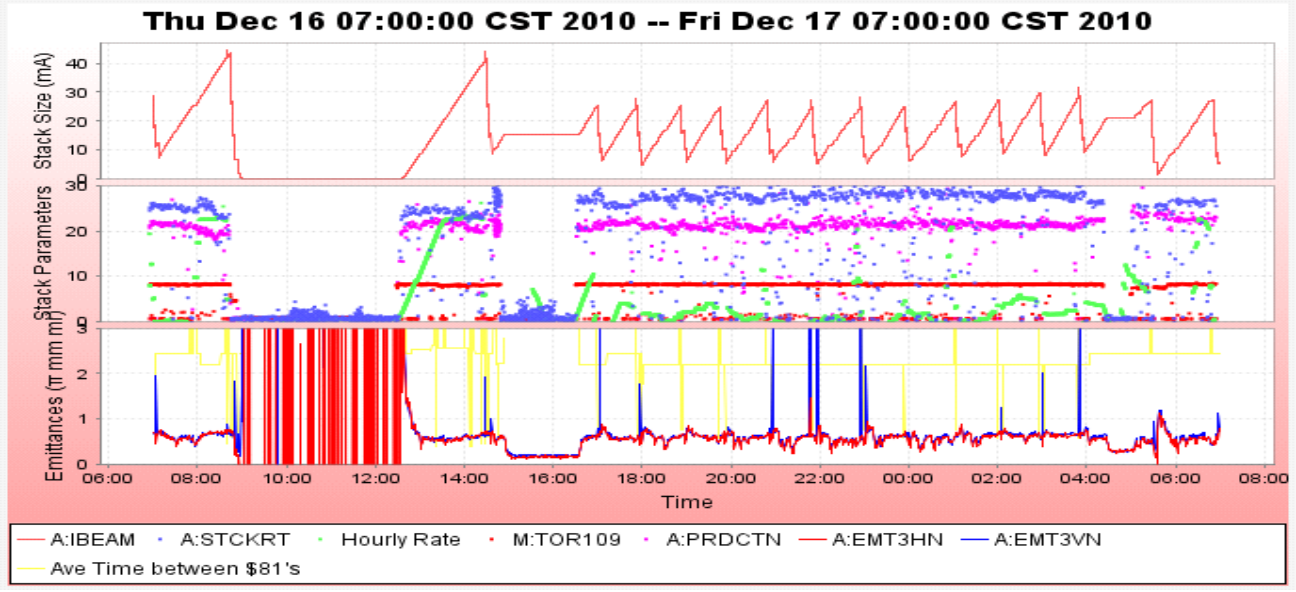
- Recycler Transfers
  - Pbars sent to the Recycler: 387.26 E10
  - Number of transfers : 49
  - Number of transfer sets: 16
  - Average Number of transfer per set: 3.06
  - Time taken to shoot including reverse proton tuneup: 00.17 Hr
  - Transfer efficiency: 95.83%

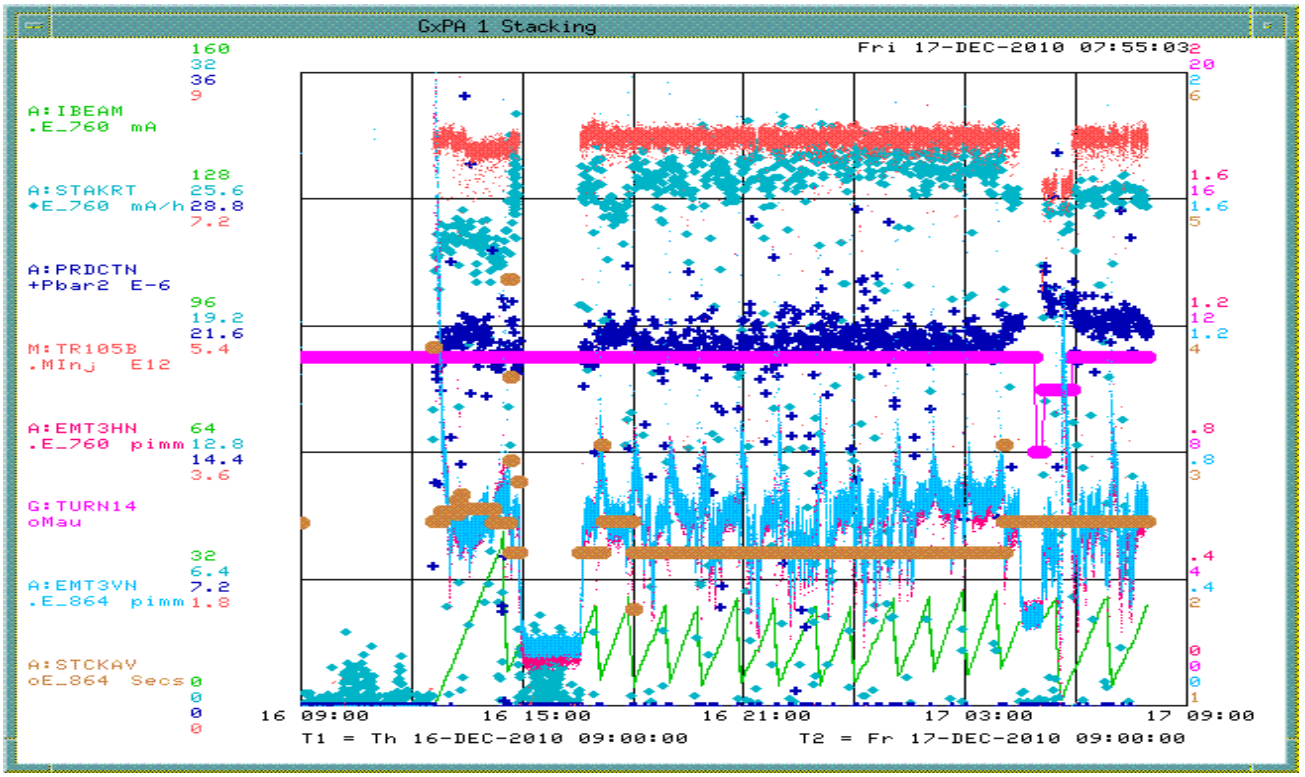
- Other Info
  - Average POT : 7.99 E12
  - Average production: 21.03 pbars/E6 protons

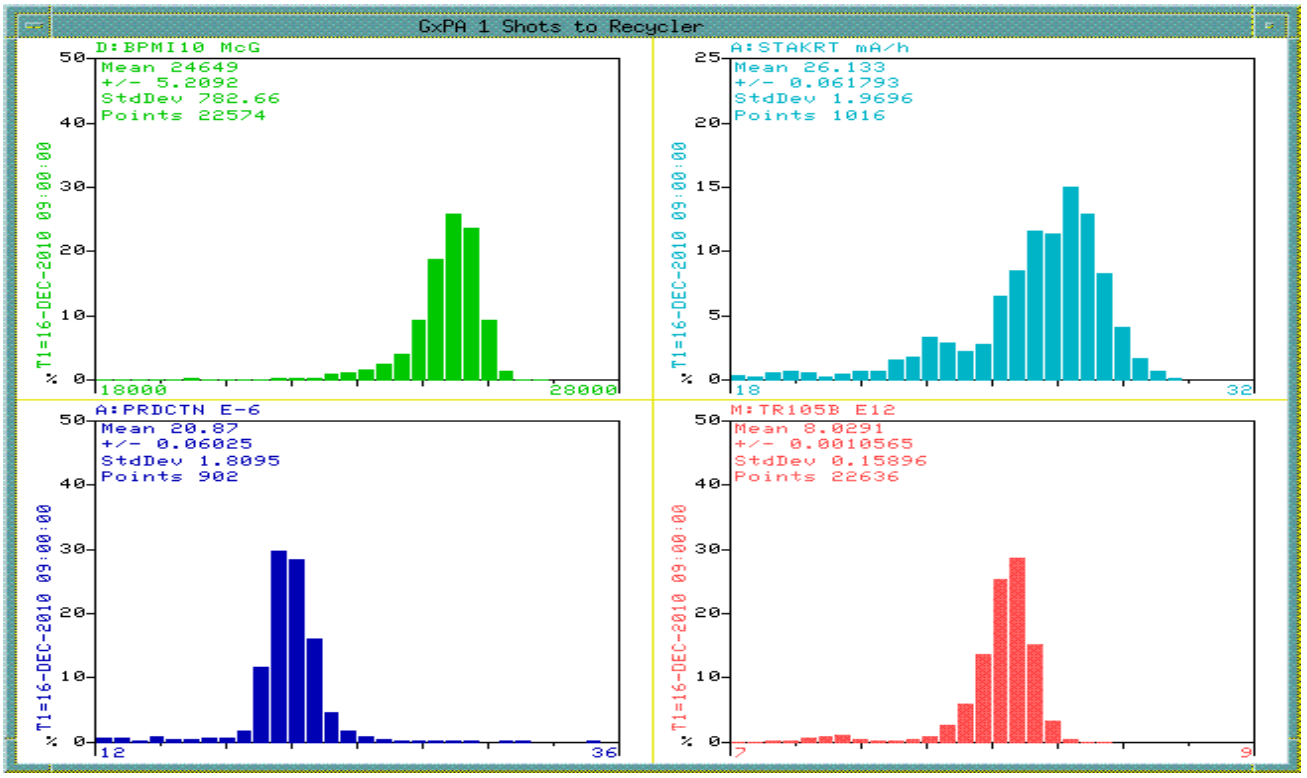
- * Red indicates a problem during data retrieval. See the message window for details.

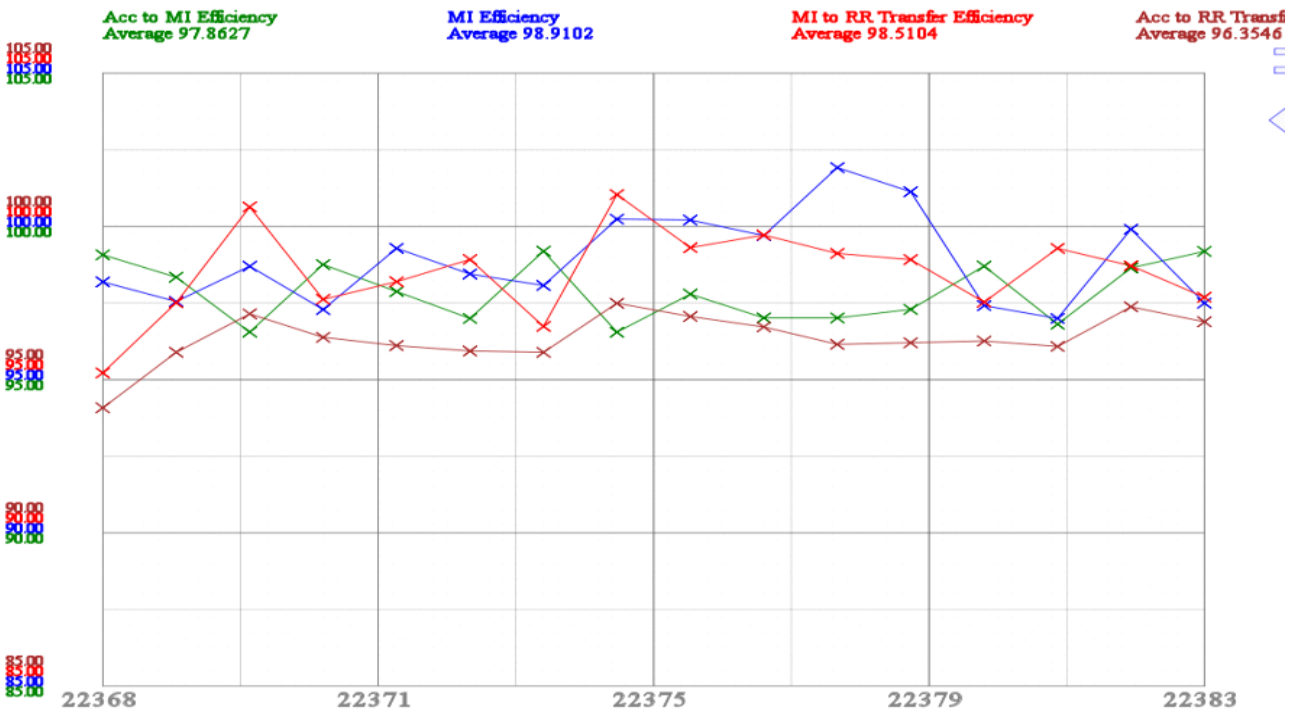
Plots



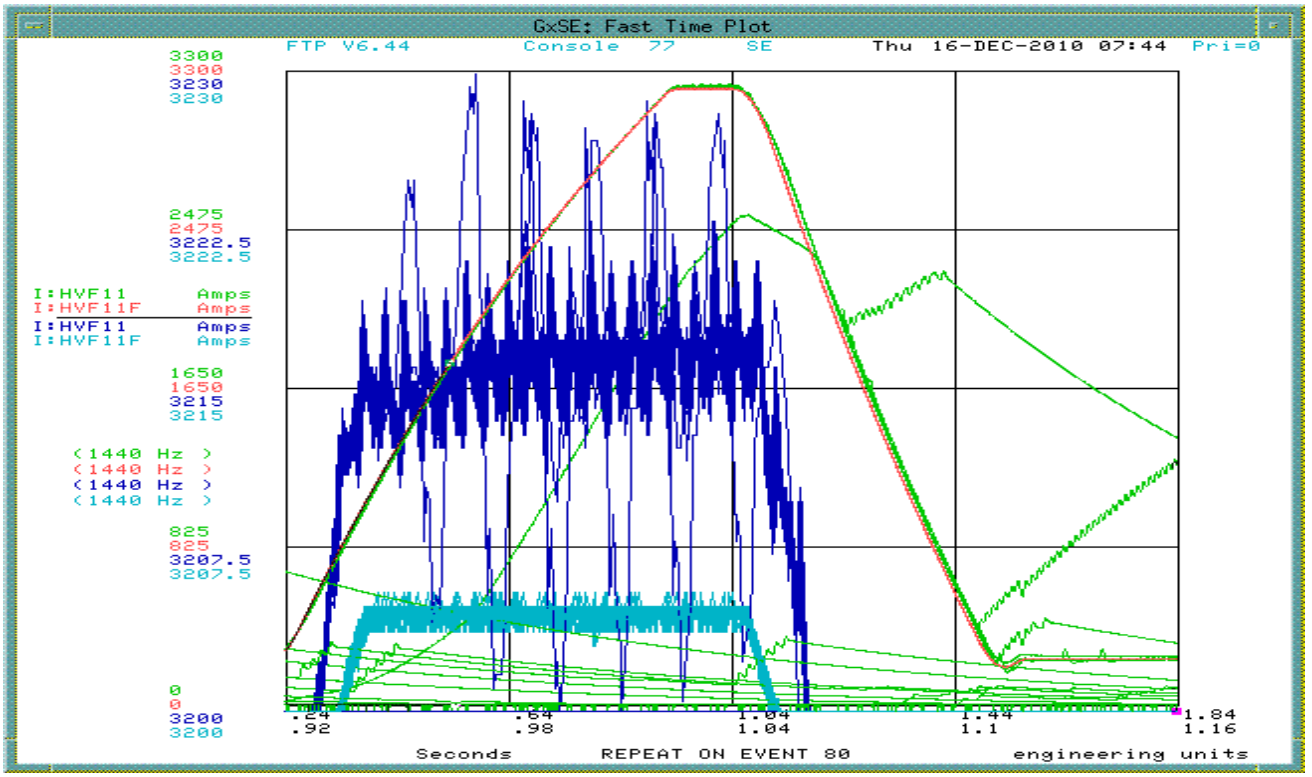



GxPA 1 Stacking
Fri 17-DEC-2010 07:55:03
A:IBEAM
.E_760 mA
A:STAKRT
+E_760 mA/h
A:PRDCTN
+Pbar2 E-6
M:TR105B
.MInj E12
A:EMT3HN
.E_760 pimm
G:TURN14
oMau
A:EMT3VN
.E_864 pimm
A:STCKAV
oE_864 Secs
16 09:00
16 15:00
16 21:00
17 03:00
17 09:00
T1 = Th 16-DEC-2010 09:00:00
T2 = Fr 17-DEC-2010 09:00:00

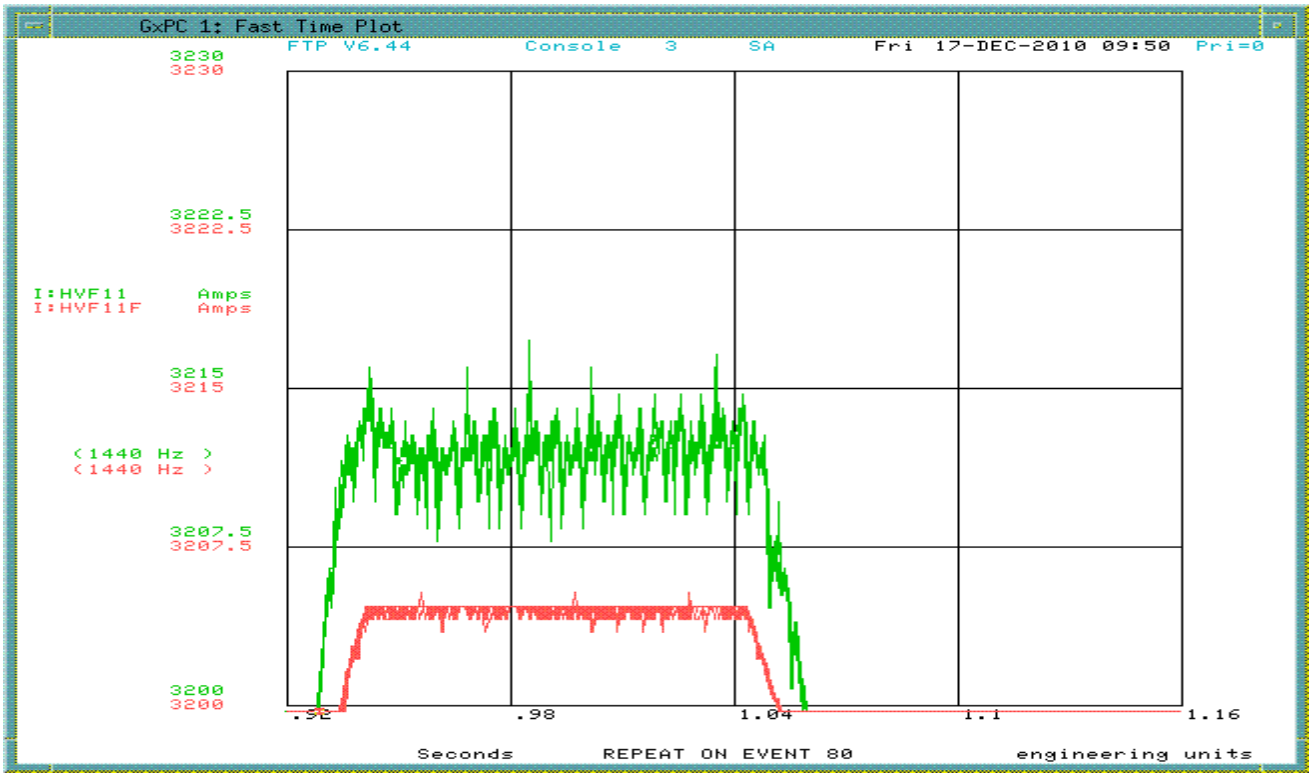

GxPA 1 Shots to Recycler
D:BPMI10 McG
Mean 24649
+/- 5.2092
StdDev 782.66
Points 22574
A:STAKRT mA/h
Mean 26.133
+/- 0.061793
StdDev 1.9696
Points 1016
A:PRDCTN E-6
Mean 20.87
+/- 0.06025
StdDev 1.8095
Points 902
M:TR105B E12
Mean 8.0291
+/- 0.0010565
StdDev 0.15896
Points 22636
T1=16-DEC-2010 09:00:00



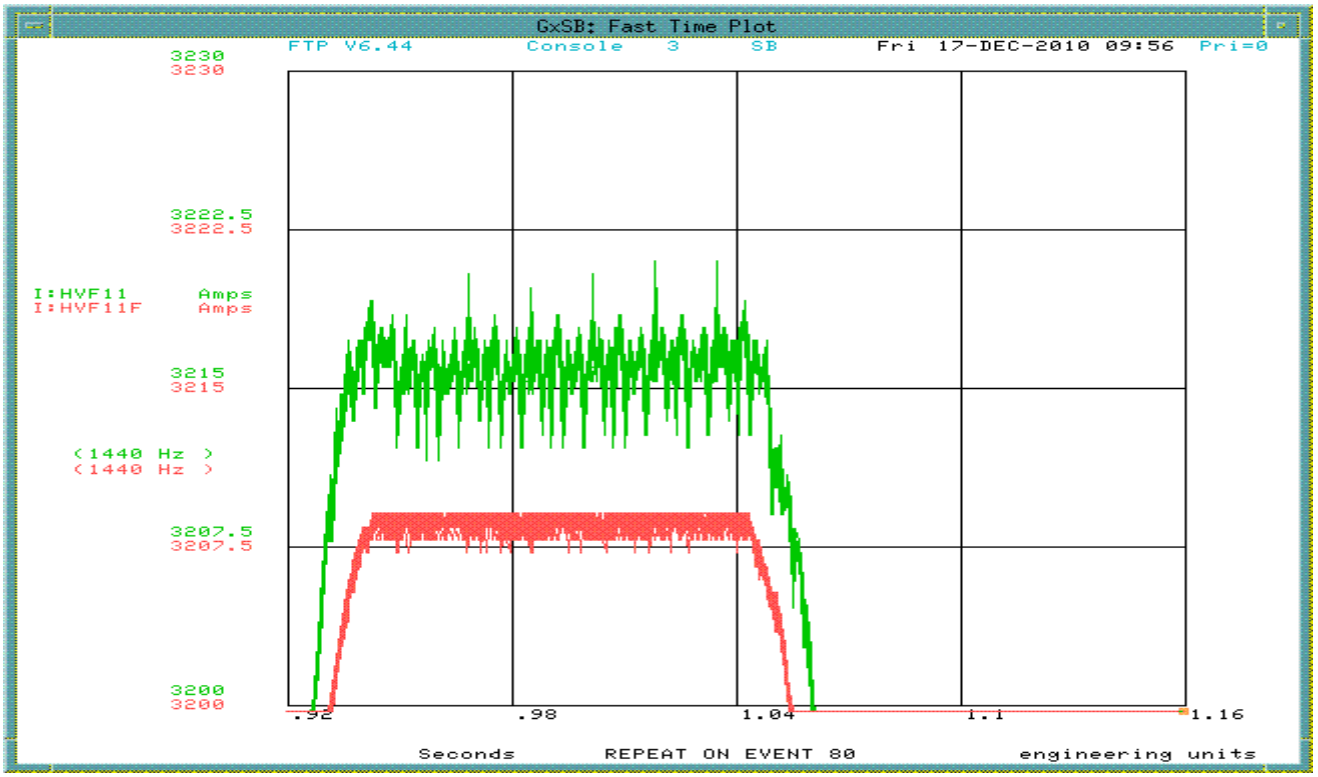
Column 1 Number_0_Pbar Transfer Shot #	Column 4 Number_3_Transfer Time		Column 21 Number_20_A:IBEAMB sampled on $91 (A:BEAM7), E10	Column 22 Number_21_A:IBEAMB sampled on $94 (A:BEAM9), E10	Unstacked (mA)	Column 23 Number_22_R:BEAMS (R:BEAME0[0]) pre xfer E10	Column 24 Number_23_R:BEAM (R:BEAME0[1]) 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 =>				395.51			380.06	96.09%	97.78%	96.84%	94.70%	50	16	5.3676	5.3869	1.9205
	Daily Average =>				395.51			380.06					50	16			
22383	Friday, December 17, 2010	6:50	27.47	5.05	24.49	277.58	300.98	23.68	96.68%	99.42%	96.75%	96.19%	3	1	4.902	5.205	1.927
22382	Friday, December 17, 2010	5:28	27.22	1.29	25.90	253.23	278.12	25.16	97.12%	98.25%	98.42%	96.70%	3	1	3.306	3.283	1.748
22381	Friday, December 17, 2010	3:50	28.81	9.24	22.23	232.70	253.83	21.37	96.14%	96.83%	94.39%	91.40%	3	1	6.113	6.134	1.999
22380	Friday, December 17, 2010	2:57	29.48	8.03	24.11	209.99	233.09	23.21	96.25%	98.57%	96.93%	95.54%	3	1	5.547	5.491	1.967
22379	Friday, December 17, 2010	2:01	27.52	8.71	21.52	189.89	210.36	20.68	96.08%	97.58%	98.81%	96.41%	3	1	6.145	6.158	2.01
22378	Friday, December 17, 2010	1:03	27.04	7.41	22.28	168.86	190.19	21.40	96.02%	97.23%	98.91%	96.17%	3	1	6.177	6.09	1.985
22377	Thursday, December 16, 2010	23:53	25.01	6.09	20.76	149.25	169.12	20.06	96.63%	97.25%	96.90%	94.24%	3	1	5.667	5.472	1.972
22376	Thursday, December 16, 2010	22:56	25.10	4.95	22.06	128.17	149.43	21.43	97.13%	98.50%	97.62%	96.16%	3	1	5.232	5.211	1.905
22375	Thursday, December 16, 2010	21:49	24.76	5.04	21.70	107.46	128.38	21.10	97.24%	97.08%	97.72%	94.87%	3	1	5.724	5.175	1.909
22374	Thursday, December 16, 2010	20:49	27.24	5.55	23.64	84.95	107.58	22.73	96.15%	98.52%	97.64%	96.20%	3	1	5.594	5.483	1.916
22373	Thursday, December 16, 2010	19:45	25.01	5.14	21.77	64.21	84.99	20.87	95.88%	97.19%	95.35%	92.67%	3	1	4.926	5.016	1.886
22372	Thursday, December 16, 2010	18:52	25.52	5.80	21.70	43.61	64.30	20.86	96.14%	97.95%	97.39%	95.39%	3	1	5.594	5.588	1.938
22371	Thursday, December 16, 2010	17:53	25.45	4.77	22.55	22.09	43.67	21.72	96.34%	98.44%	96.11%	94.61%	3	1	5.298	5.319	1.916
22370	Thursday, December 16, 2010	16:59	25.22	6.41	21.49	1.62	22.21	20.85	96.99%	96.99%	95.56%	92.68%	3	1	6.091	5.883	1.975
22369	Thursday, December 16, 2010	14:29	41.45	8.69	35.16	147.21	180.50	33.70	95.85%	98.41%	96.31%	94.78%	3	1	6.137	6.009	1.864
22368	Thursday, December 16, 2010	8:43	43.42	0.37	44.15	107.15	147.93	41.25	93.44%	96.62%	95.79%	92.55%	5	1	3.428	4.673	1.811



Before I:HVF11 work



After HVF11 work



I:HVF11 adjusted so that flattop current is the same as before the work.