2010-11-16 Tuesday Morning Notes

Tuesday, November 16, 2010
6:36 AM

Stacking and Transfers

- D:Q404 tripped on phase imbalance (http://www-bd.fnal.gov/cgi-mach/machlog.pl?nb=pbar10&action=view&page=298&anchor=024314&hilite=02:43:14).
    - Undercurrent indication
    - Dave Peterson replaced internal power supply.
    - Output now has 38 Hz ripple.
- Leveling: A 200 module tripped on D:TGTFDP input which is the DP cell for the target air blower flow. We went out to AP0 and found that the hardware interlock card had tripped on high DP indication. The 15 sec datalogger caught the event (see following plot). The blower pressure (D:TRMP) is on a 1 min logger list and we did not see an actual pressure excursion. Both devices have now been added to the Pbar4 1 Hz list. We reset the interlock and have resumed stacking. We'll have to keep an eye on the DP cell. To the best of my memory (a leaky thing), I don't remember having such a trip in the past.
  Pasted from <http://www-bd.fnal.gov/cgi-mach/machlog.pl?nb=pbar10&action=view&page=last&frame=2&anchor=&hilite=&load=>
- Morgan: I moved around the stacktail medium level trombones to try to improve stacking. Moving them together up and down didn't seem to help. Lowering A:STPM01 from 319 to 309ps did. I also reverted back to earlier stacktail monitor settings on the leg 1 and leg 2 attenuators, and put back the minimum trunk attenuator setting and multiplier. I'll leave the changes in overnight and see how things work
  Pasted from <http://www-bd.fnal.gov/cgi-mach/machlog.pl?nb=pbar10&action=view&page=last&frame=2&anchor=&hilite=&load=>
- Pellatron down again and in on access. More big stacks!

Numbers

- Stacking
    - Pbars stacked: 374.80 E10
    - Time stacking: 20.02 Hr
    - Average stacking rate: 18.72 E10/Hr

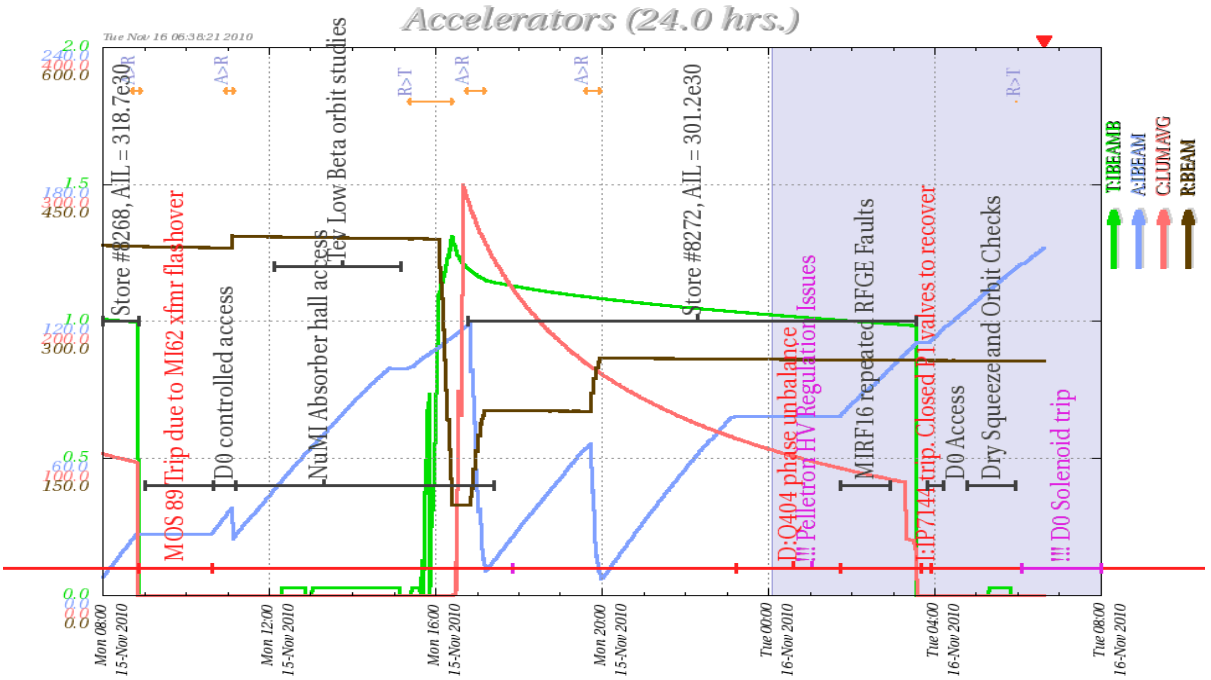
- Uptime
    - Number of pulses while in stacking mode: 29450
    - Number of pulses with beam: 27443
    - Fraction of up pulses was: 93.19%

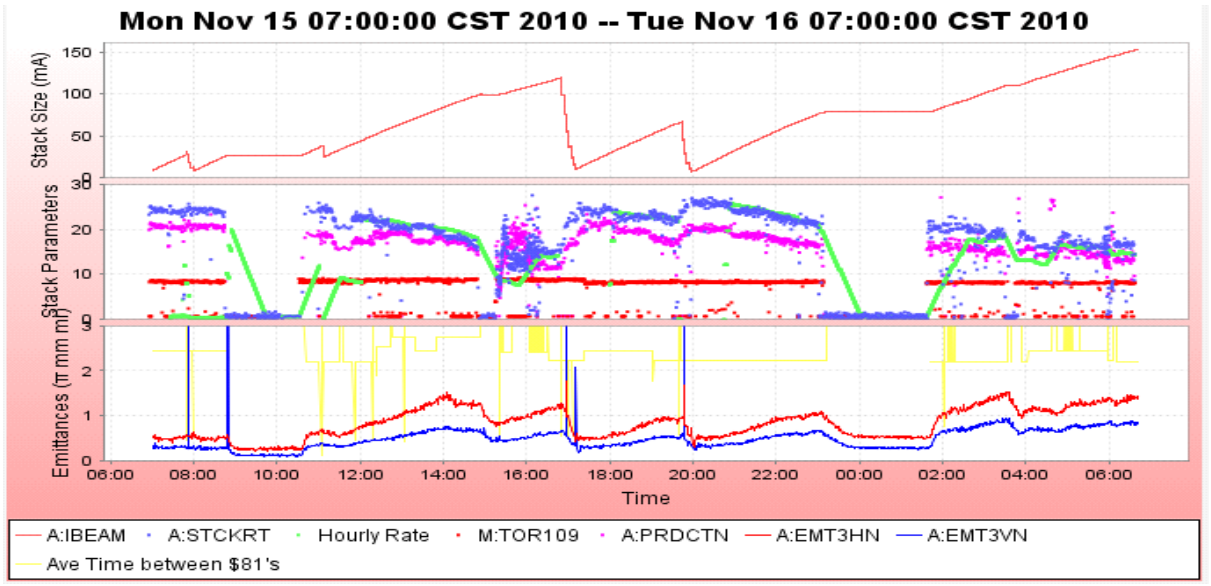
- The uptime's effect on the stacking numbers
    - Corrected time stacking: 18.66 Hr
    - Possible average stacking rate: 20.09 E10/Hr
    - Could have stacked: 402.21 E10/Hr

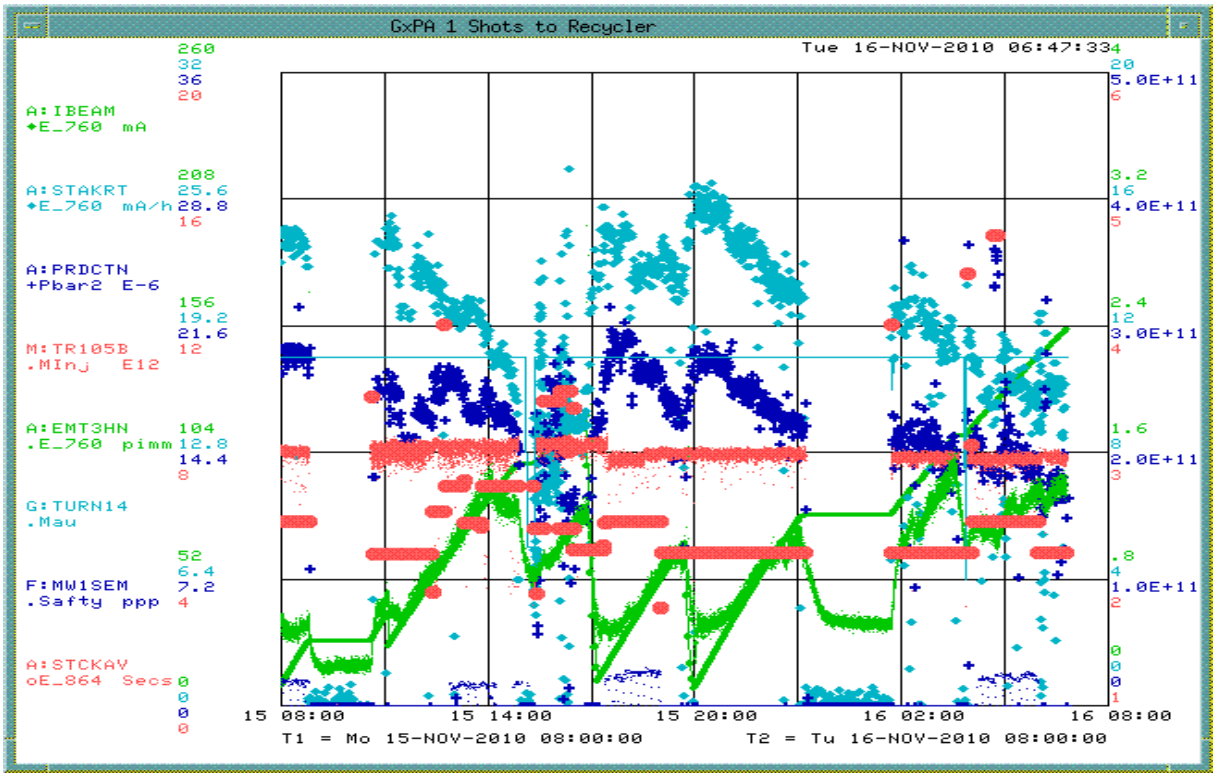
- Recycler Transfers
    - Pbars sent to the Recycler: 238.94 E10
    - Number of transfers : 19
    - Number of transfer sets: 6
    - Average Number of transfer per set: 3.17
    - Time taken to shoot including reverse proton tuneup: 00.07 Hr
    - Transfer efficiency: 93.12%

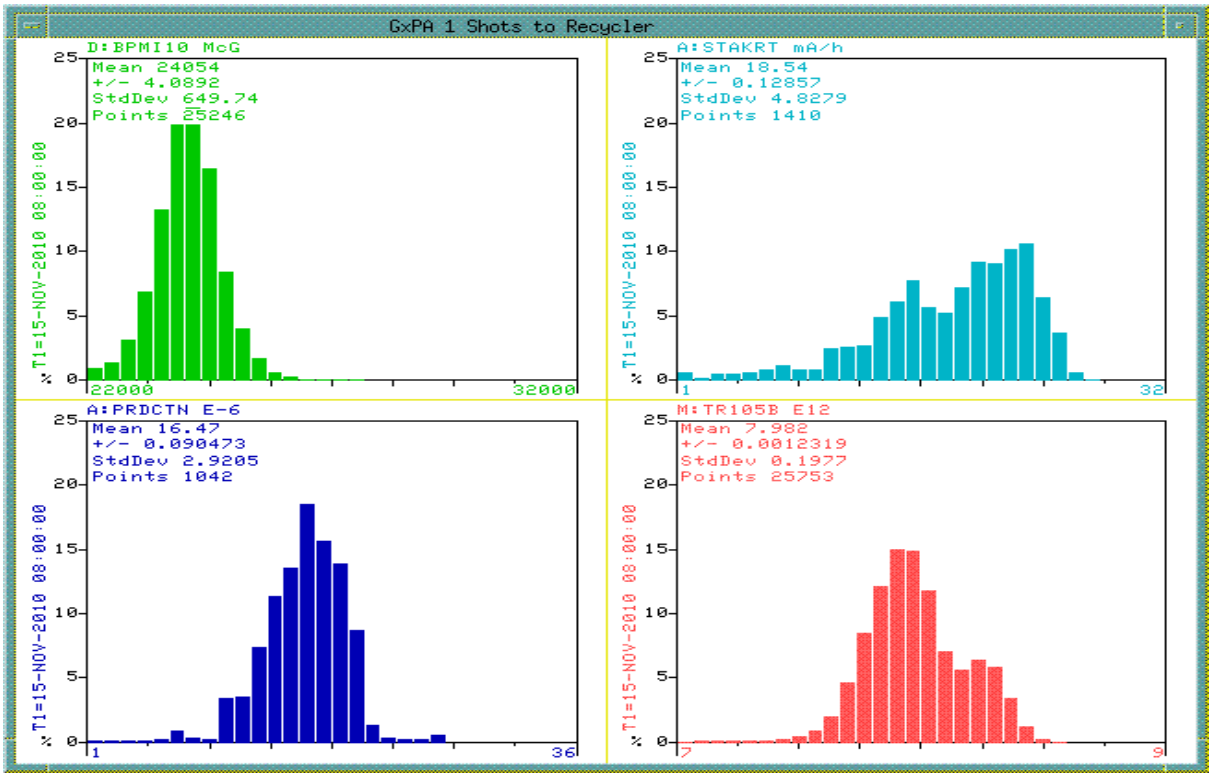
- Other Info
  - Average POT : 7.97 E12
  - Average production: 17.14 pbars/E6 protons

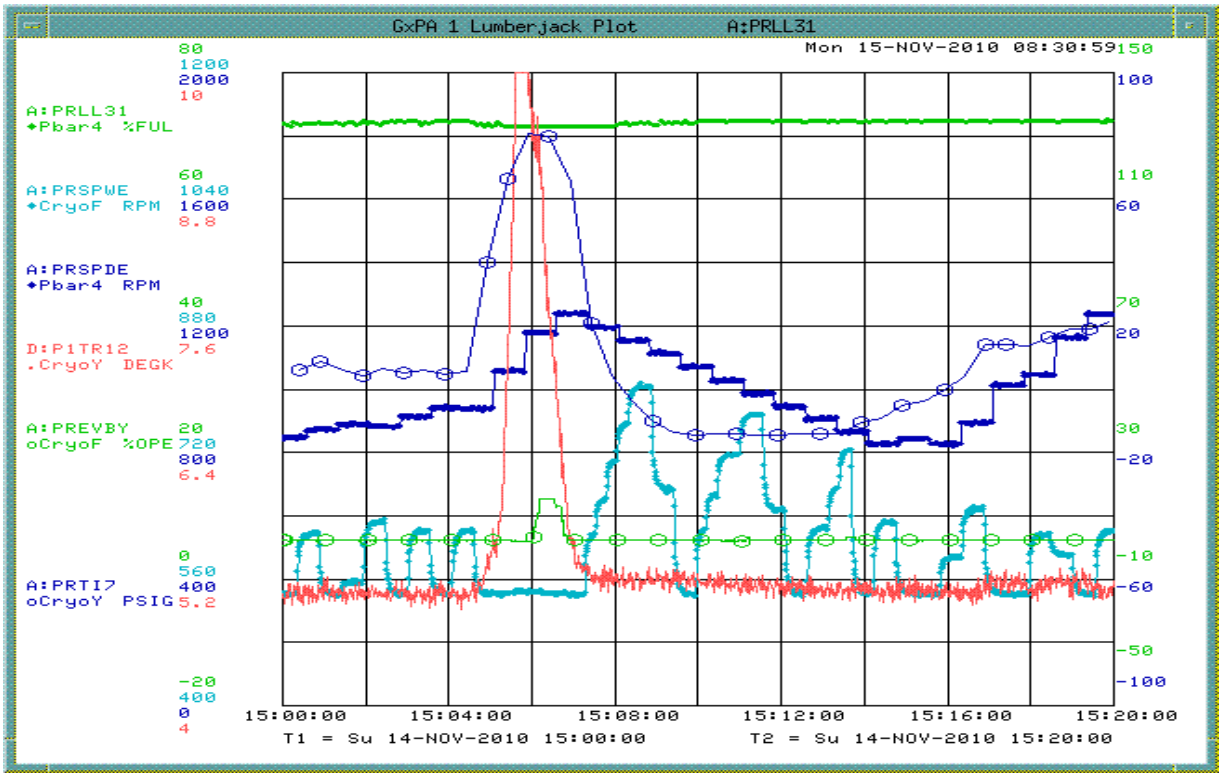
Plots



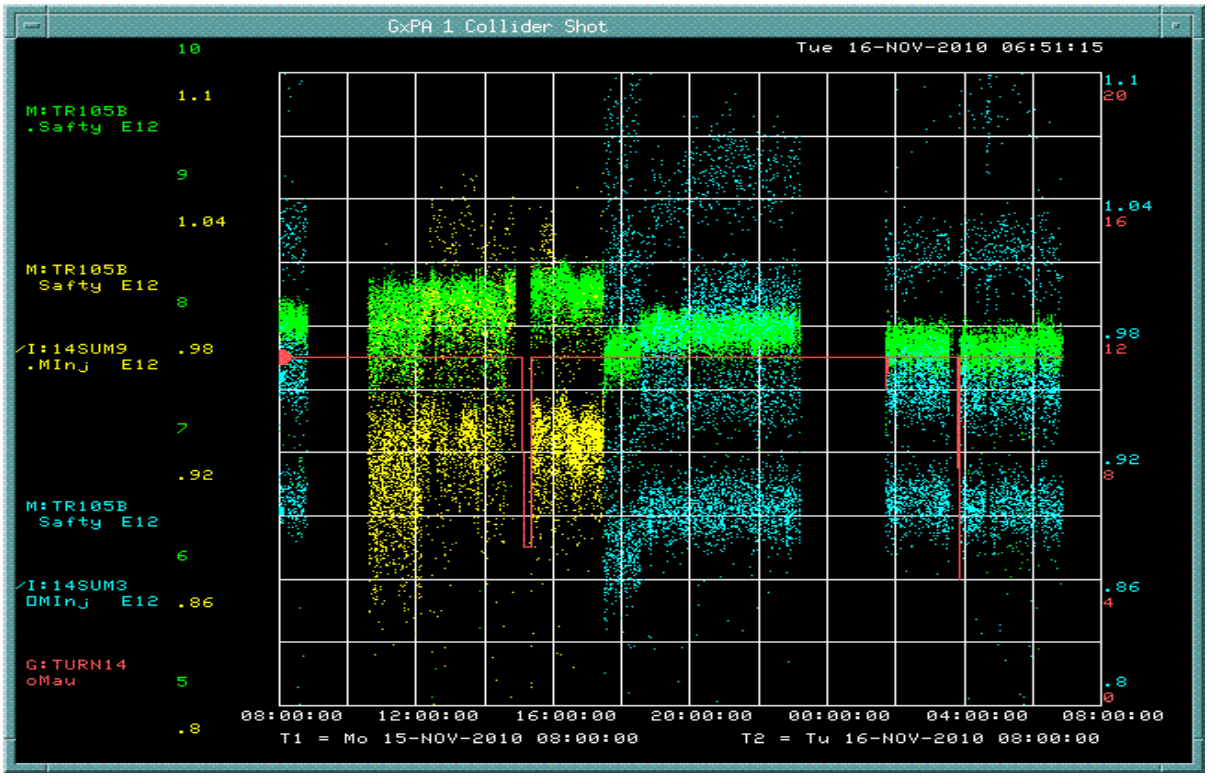


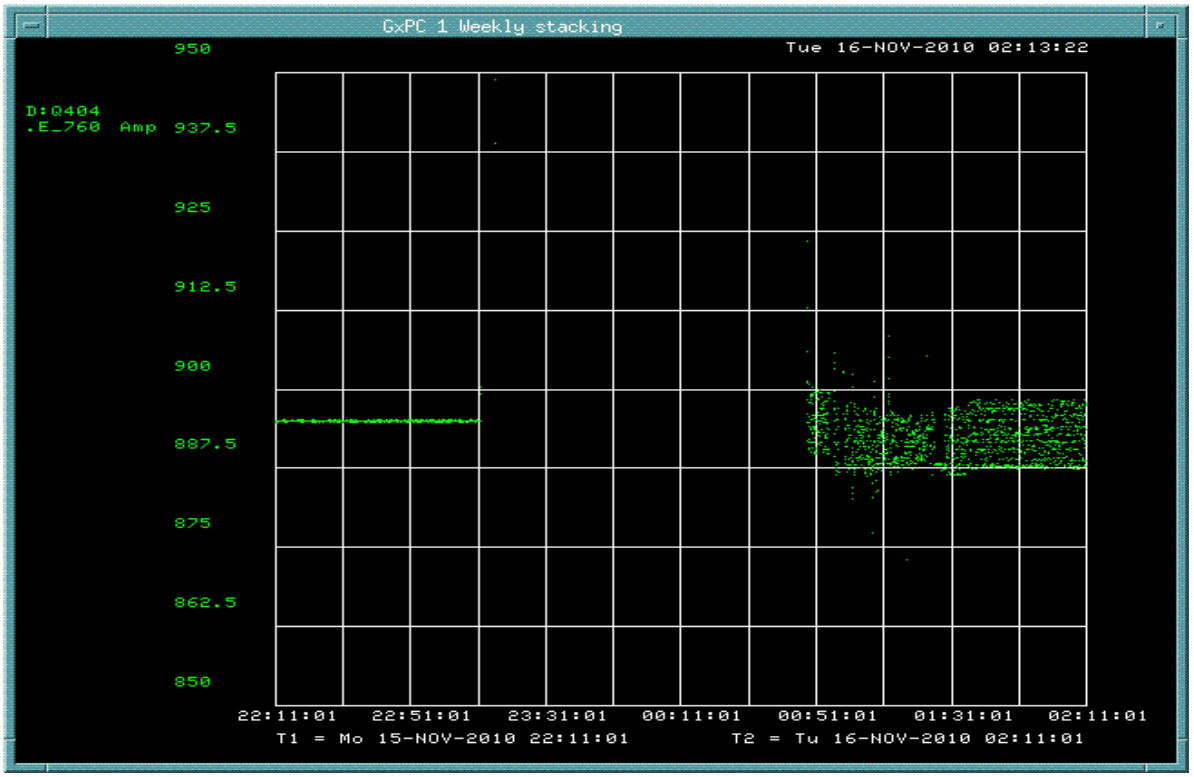

GxPA 1 Shots to Recycler
Tue 16-NOV-2010 06:47:33
A:IBEAM
+E_760 mA
A:STAKRT
+E_760 mA/h
A:PRDCTN
+Pbar2 E-6
M:TR105B
.MInj E12
A:EMT3HN
.E_760 pimm
G:TURN14
.Mau
F:MW1SEM
.Safty ppp
A:STCKAV
oE_864 Secs
15 08:00
15 14:00
15 20:00
16 02:00
16 08:00
T1 = Mo 15-NOV-2010 08:00:00
T2 = Tu 16-NOV-2010 08:00:00

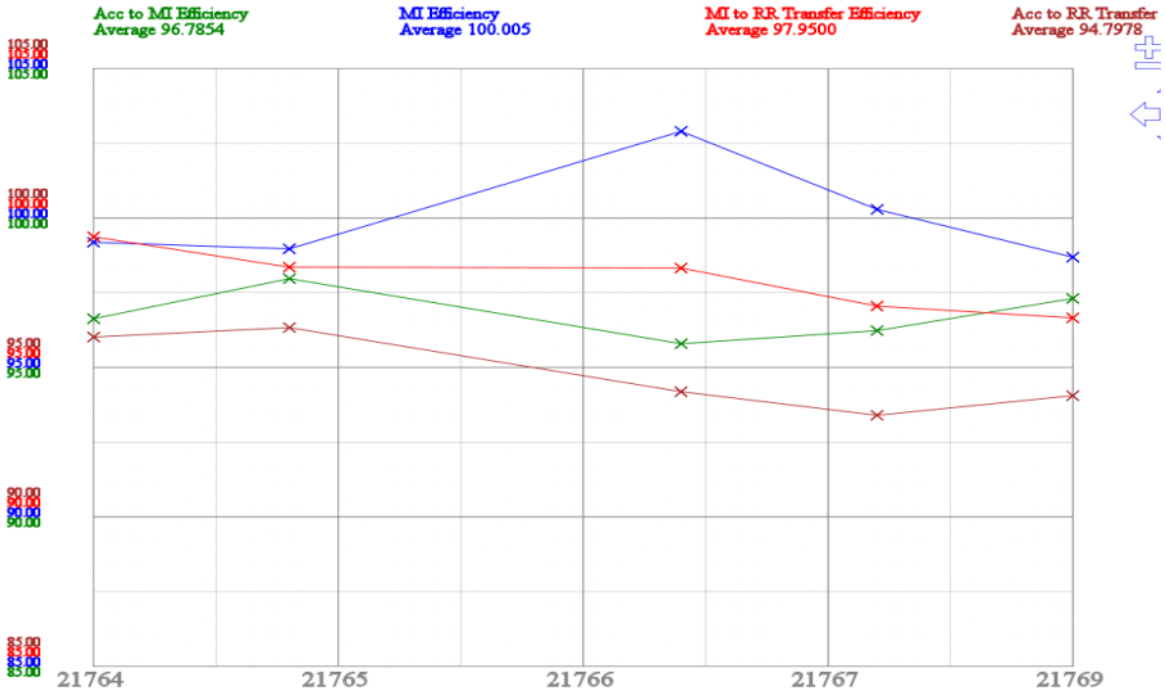

GxPA 1 Shots to Recycler
D:BPMI10 McG
Mean 24054
+/- 4.0892
StdDev 649.74
Points 25246
A:STAKRT mA/h
Mean 18.54
+/- 0.12857
StdDev 4.8279
Points 1410
A:PRDCTN E-6
Mean 16.47
+/- 0.090473
StdDev 2.9205
Points 1042
M:TR105B E12
Mean 7.982
+/- 0.0012319
StdDev 0.1977
Points 25753
T1=15-NOV-2010 08:00:00



Pbar frig response to Tev quench




GxPC 1 Weekly stacking
Tue 16-NOV-2010 02:13:22
D:Q404
.E_760 Amp
950
937.5
925
912.5
900
887.5
875
862.5
850
22:11:01
22:51:01
23:31:01
00:11:01
00:51:01
01:31:01
02:11:01
T1 = Mo 15-NOV-2010 22:11:01
T2 = Tu 16-NOV-2010 02:11:01


Acc to MI Efficiency
Average 96.7854
MI Efficiency
Average 100.005
MI to RR Transfer Efficiency
Average 97.9500
Acc to RR Transfer
Average 94.7978
105.00
100.00
95.00
90.00
85.00
21764
21765
21766
21767
21769

Column 1 Number_0_Pbar Transfer Shot #	Column 4 Number_3_Transfer Time		Column 21 Number_20_A:I BEAMB sampled on $91 (A:BEAM7), E10	Column 22 Number_21_A:I BEAMB 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 =>				239.23			223.95	93.61%	96.21%	96.15%	92.50%	19	5	6.4322	3.6566	1.918
	Daily Average =>				239.23			223.95					19	5			
21769	Monday, November 15, 2010	19:44	66.75	7.21	64.10	201.76	260.51	59.88	93.41%	96.90%	96.02%	93.04%	5	1	7.201	4.424	1.892
21768	Monday, November 15, 2010	16:50	119.44	10.14	114.92	98.74	203.03	106.43	92.61%	95.54%	95.94%	91.66%	7	1	8.747	4.604	1.738
21767	Monday, November 15, 2010	11:05	38.25	24.19	14.06	380.60	393.84	13.24	94.19%	95.80%	98.57%	94.43%	1	1	6.388	3.642	1.923
21765	Monday, November 15, 2010	7:51	28.40	7.61	23.22	361.38	383.45	22.39	96.44%	97.53%	96.06%	93.68%	3	1	4.956	2.716	2.029
21764	Monday, November 15, 2010	6:50	27.90	7.40	22.94	340.73	362.47	22.02	95.98%	96.59%	96.16%	92.88%	3	1	4.869	2.897	2.008