

2010-12-16 Thursday Tuning and Operations

Thursday, December 16, 2010

7:22 AM

Stacking and Transfers

- Stacked 25mA/hr with a production of 20.41 pbars/Mp with 8.09 Tp on target
- Unstacked 490E10 in 59 transfers over 19 sets with an average efficiency of 93.2%
 - Lost first transfer of set 22366 due to I:HVF11 tripping off.
 - Removing the lost transfer we are at 95.4%

Interesting Happenings

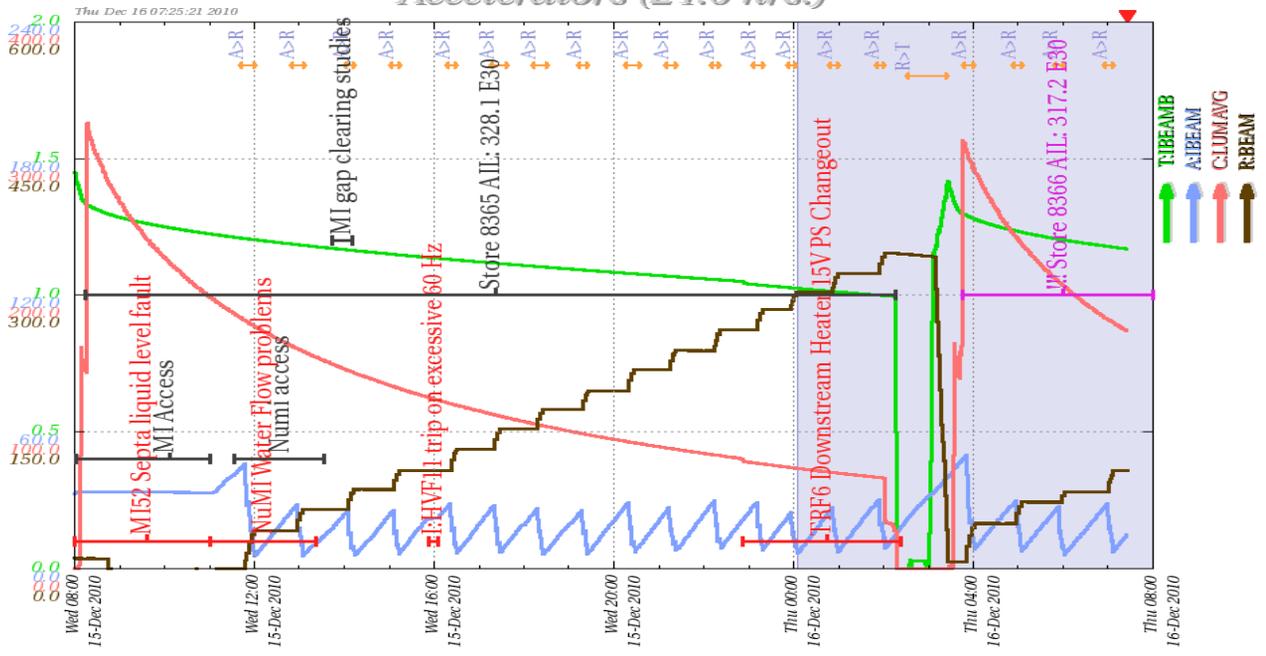
- I:HVF11
 - Occasionally doesn't follow its reference and trips on excessive 60Hz.

Numbers

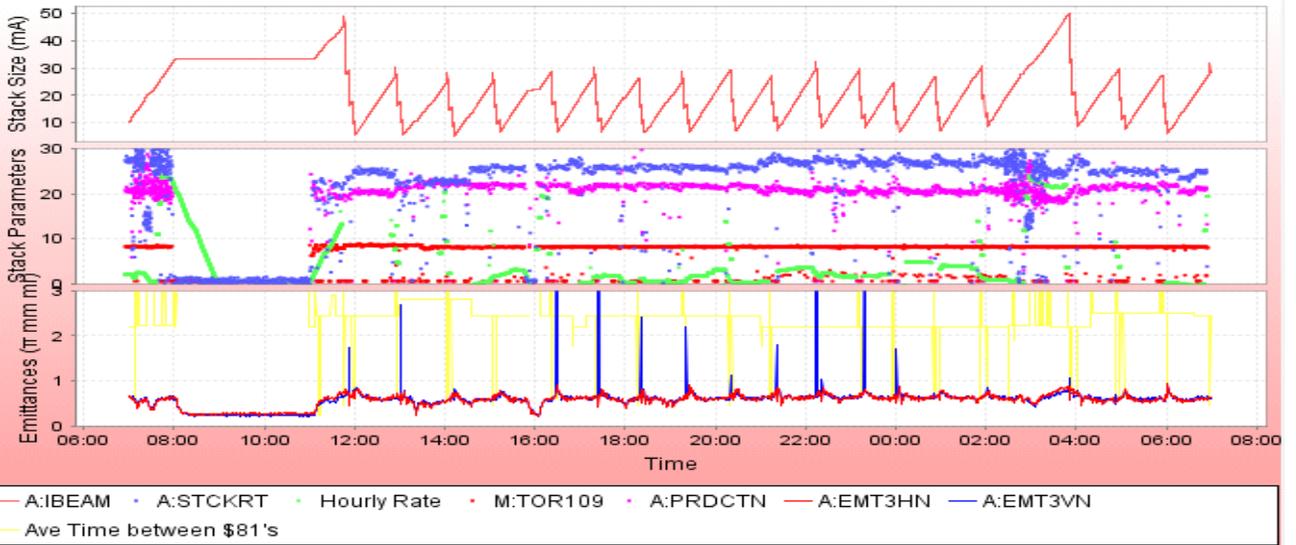
- Stacking
 - Pbars stacked: 490.83 E10
 - Time stacking: 20.92 Hr
 - Average stacking rate: 23.46 E10/Hr
- Uptime
 - Number of pulses while in stacking mode: 30898
 - Number of pulses with beam: 29395
 - Fraction of up pulses was: 95.14%
- The uptime's effect on the stacking numbers
 - Corrected time stacking: 19.90 Hr
 - Possible average stacking rate: 24.66 E10/Hr
 - Could have stacked: 515.93 E10/Hr
- Recycler Transfers
 - Pbars sent to the Recycler: 489.05 E10
 - Number of transfers : 59
 - Number of transfer sets: 19
 - Average Number of transfer per set: 3.11
 - Time taken to shoot including reverse proton tuneup: 00.21 Hr
 - Transfer efficiency: 92.76%
- Other Info
 - Average POT : 8.08 E12
 - Average production: 20.66 pbars/E6 protons

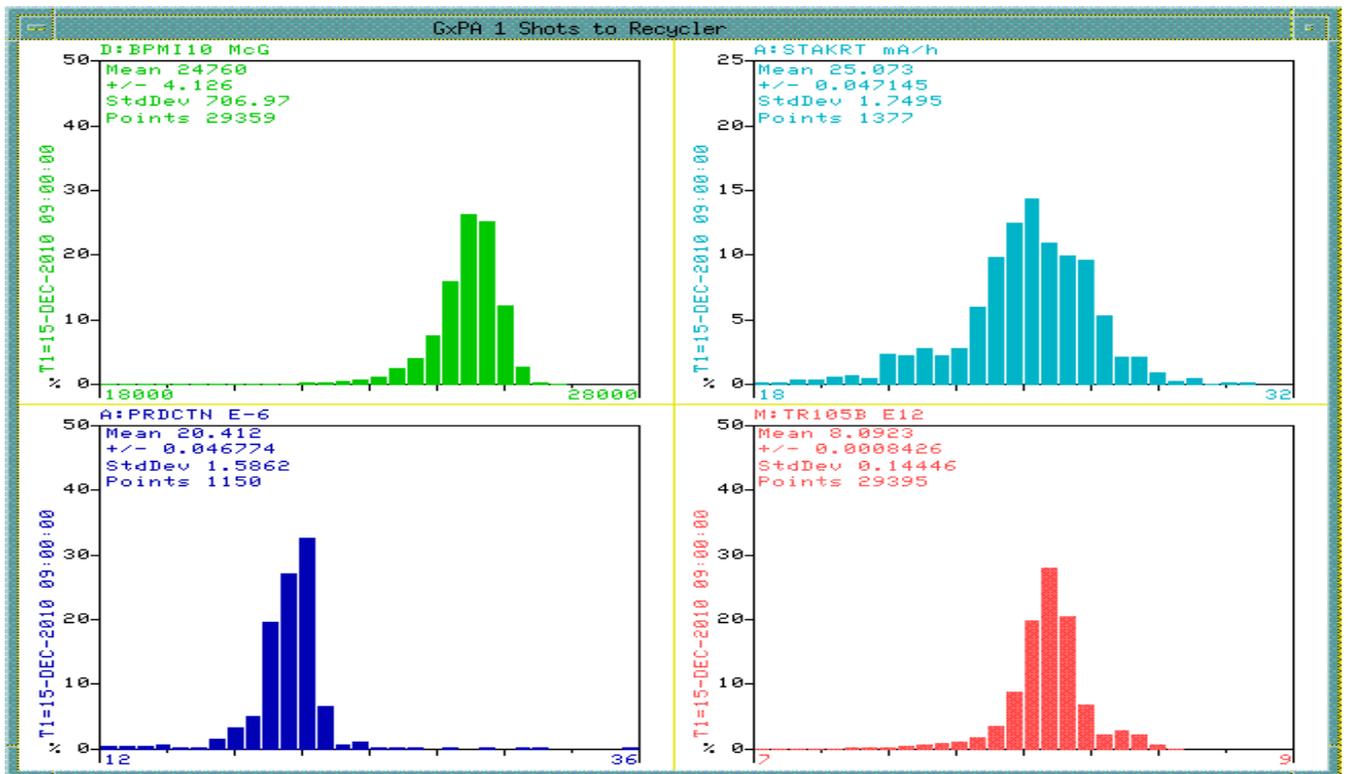
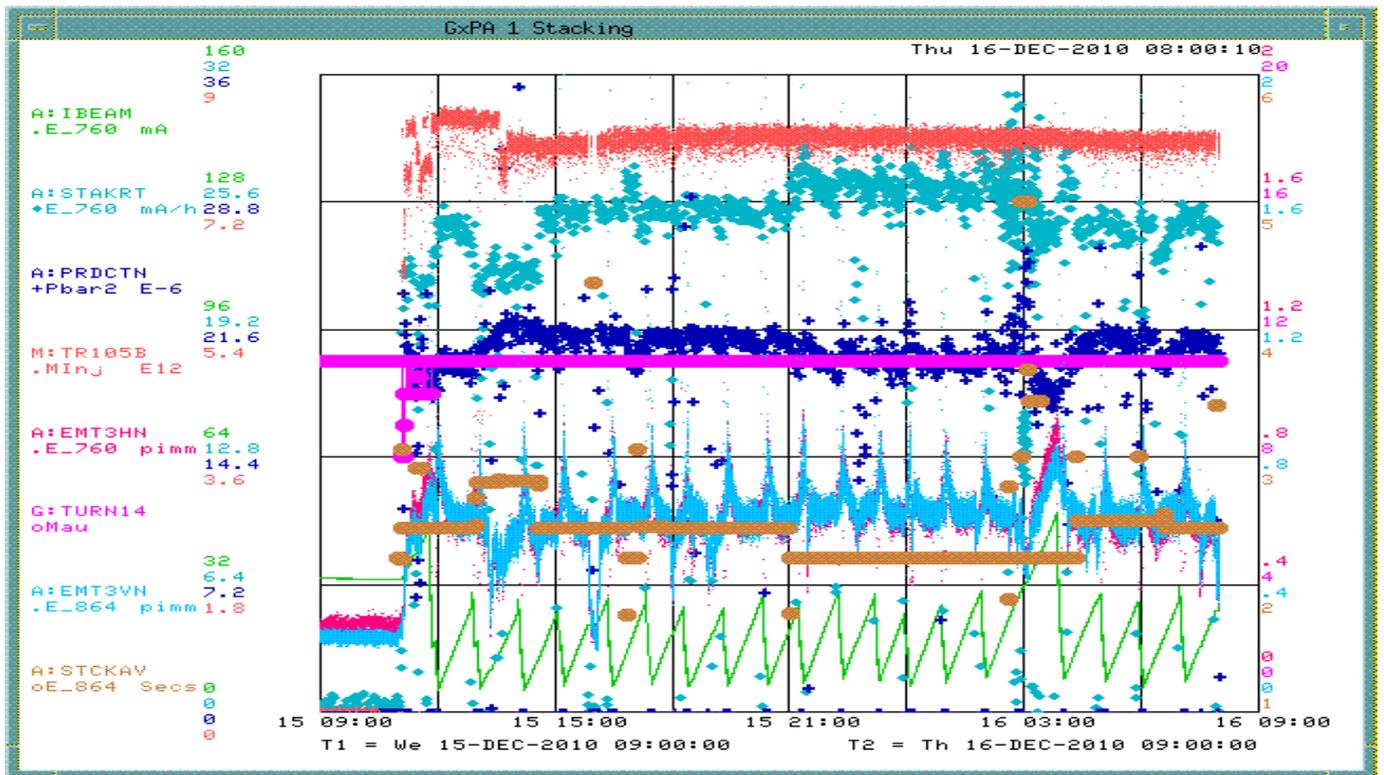
Plots

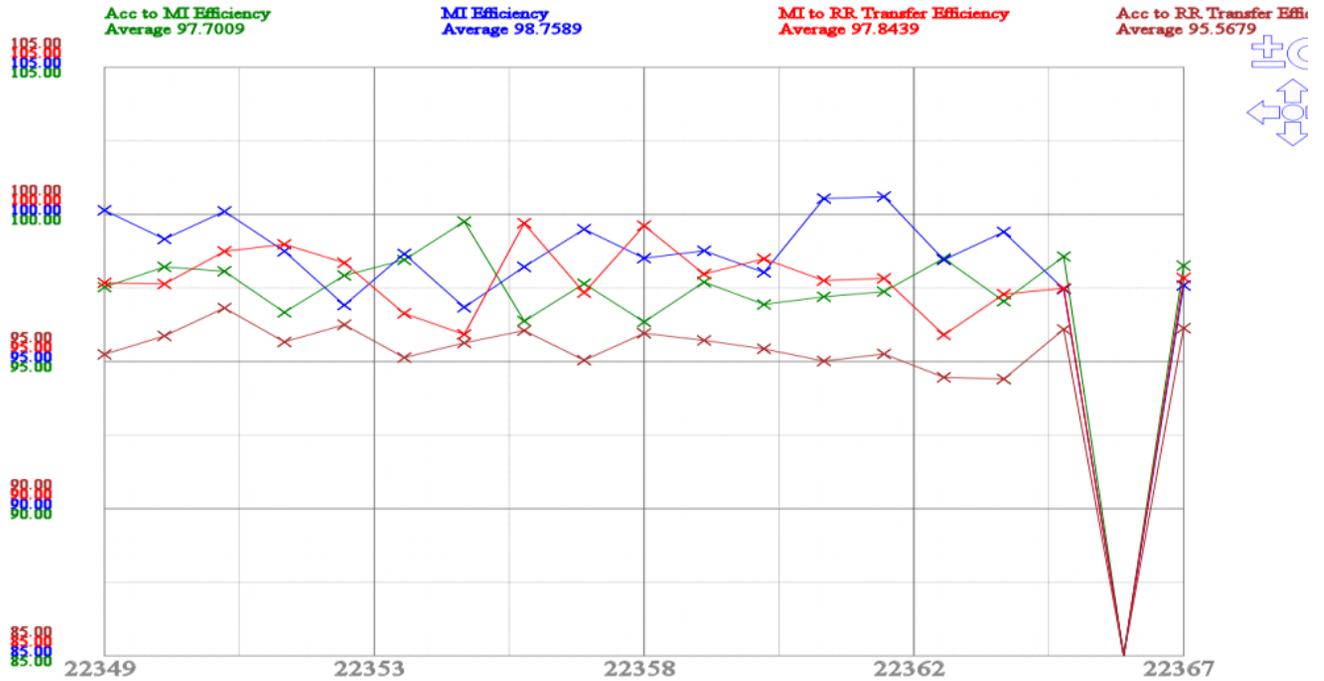
Accelerators (24.0 hrs.)



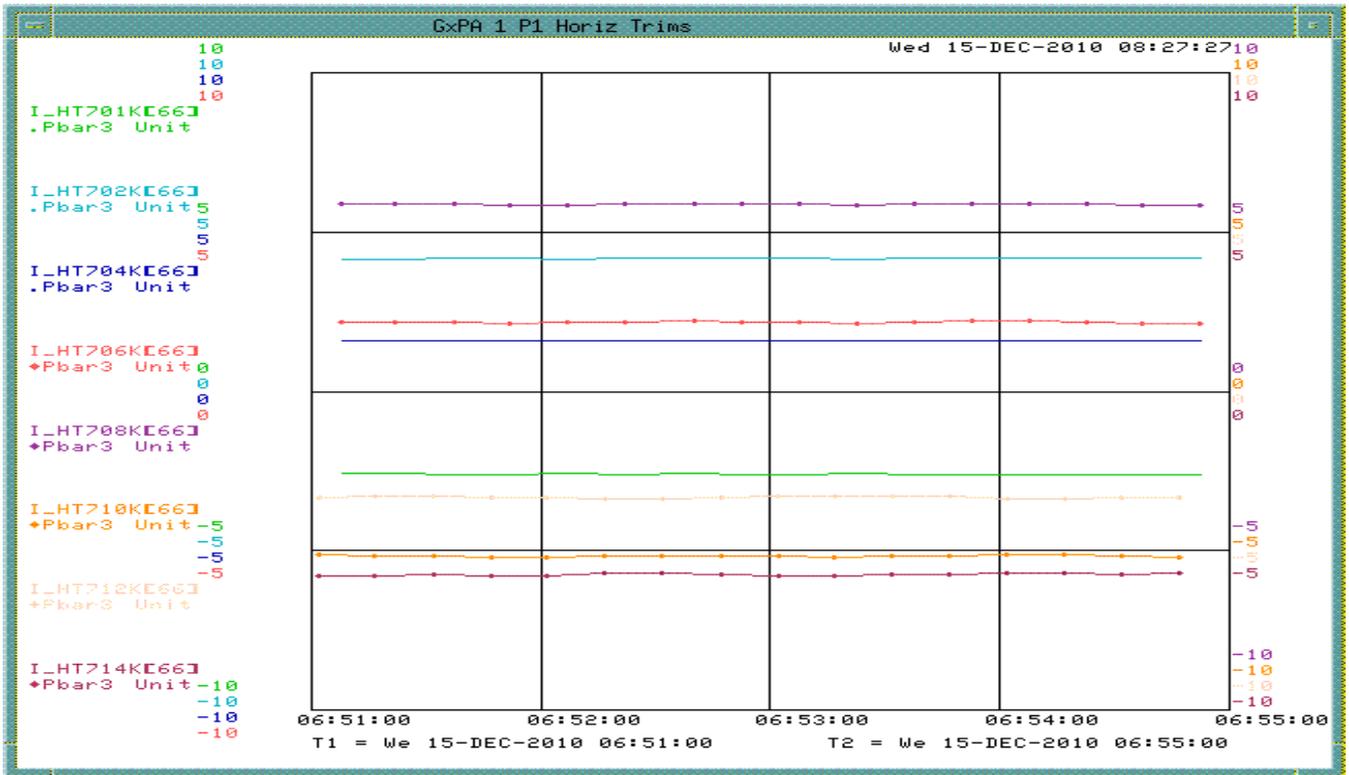
Wed Dec 15 07:00:00 CST 2010 -- Thu Dec 16 07:00:00 CST 2010



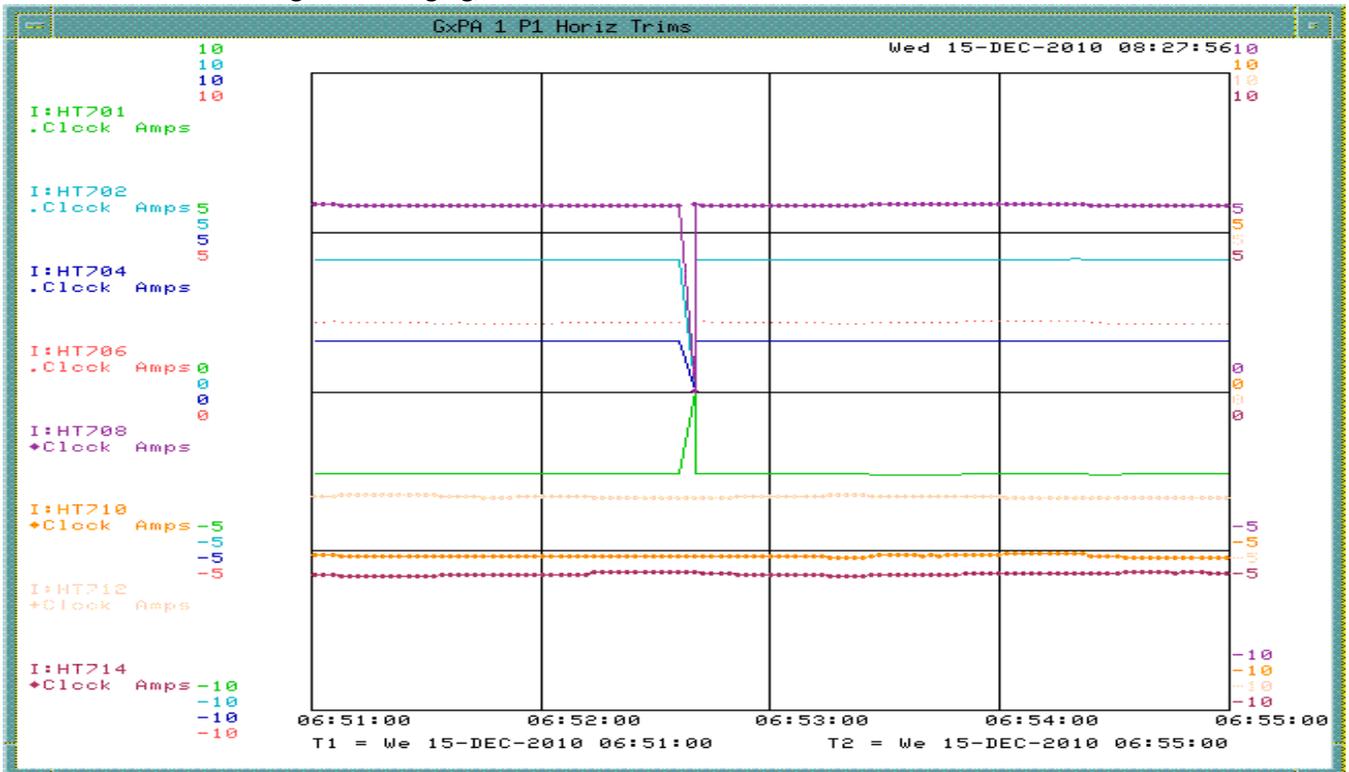




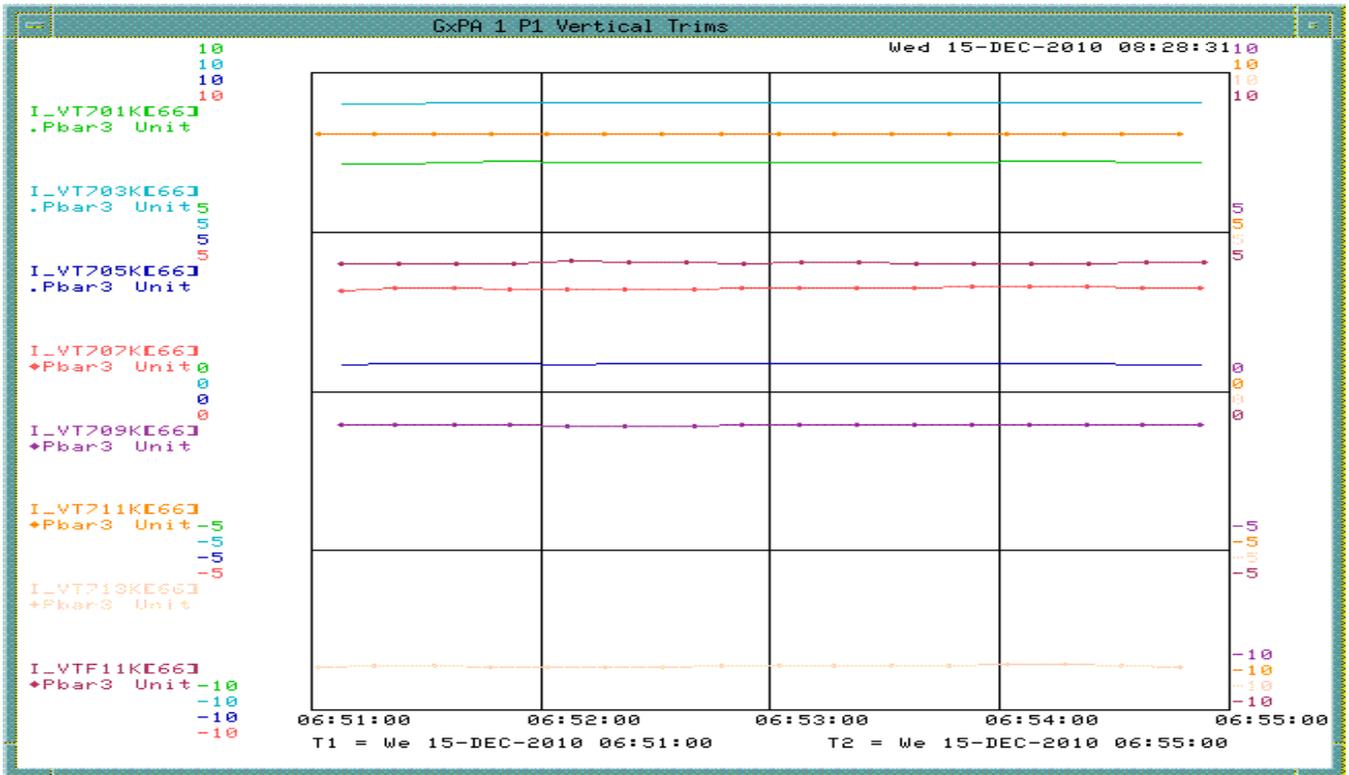
Column 1 Number_0_Pbar Transfer Shot #	Column 4 Number_3_Transfer Time	Column 21 Number_20_A-I BEAMB sampled on \$91 (A:BEAM7), E10	Column 22 Number_21_A-I BEAMB sampled on \$94 (A:BEAM9), E10	Unstacked (mA)	Column 23 Number_22_R: BEAMS (R:BEAME[0]), E10	Column 24 Number_23_R: BEAM (R:BEAME[1]), post 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 =>				489.71			456.25	93.17%	95.52%	94.47%	90.23%	59	19	6.0733	5.9222	1.9373	
Daily Average =>				489.71			456.25					59	19				
22367	Thursday, December 16, 2010	7:00	28.97	7.38	24.13	84.49	107.44	23.14	95.91%	98.08%	96.51%	94.65%	3	1	5.881	5.887	1.959
22366	Thursday, December 16, 2010	5:54	27.43	5.97	23.72	72.99	84.59	11.57	48.78%	50.17%	49.53%	24.85%	3	1	5.929	5.763	1.92
22365	Thursday, December 16, 2010	4:57	29.75	7.42	24.84	49.47	73.12	23.86	96.06%	98.50%	96.90%	95.45%	3	1	5.932	6.048	1.968
22364	Thursday, December 16, 2010	3:51	50.13	8.31	45.57	7.36	49.73	42.89	94.11%	97.21%	96.18%	93.50%	4	1	7.206	6.652	1.88
22363	Thursday, December 16, 2010	1:54	30.50	8.46	24.68	323.51	346.69	23.38	94.73%	98.28%	97.15%	95.48%	3	1	6.103	5.905	1.966
22362	Thursday, December 16, 2010	0:52	26.88	7.05	22.18	303.30	324.24	21.16	95.42%	97.52%	98.41%	95.97%	3	1	5.937	5.929	1.966
22361	Wednesday, December 15, 2010	23:57	24.67	6.41	20.85	284.30	303.89	19.83	95.12%	97.32%	97.65%	95.04%	3	1	6.275	6.004	1.968
22360	Wednesday, December 15, 2010	23:11	29.55	7.90	24.27	261.72	284.77	23.21	95.62%	97.65%	96.29%	94.02%	3	1	6.35	6.238	1.945
22359	Wednesday, December 15, 2010	22:14	29.90	8.20	24.39	239.15	262.22	23.35	95.70%	97.68%	97.25%	94.99%	3	1	6.296	6.143	1.955
22358	Wednesday, December 15, 2010	21:14	27.11	7.31	22.46	218.30	239.55	21.53	95.82%	96.61%	95.75%	92.51%	3	1	6.325	6.126	1.978
22357	Wednesday, December 15, 2010	20:20	29.30	6.87	24.84	195.20	218.67	23.60	94.99%	97.91%	96.91%	94.89%	3	1	6.112	5.905	1.932
22356	Wednesday, December 15, 2010	19:18	25.97	6.31	22.24	174.46	195.47	21.33	95.90%	96.92%	95.20%	92.27%	3	1	6.051	5.875	1.932
22355	Wednesday, December 15, 2010	18:17	26.33	6.42	22.54	153.31	174.64	21.56	95.65%	99.12%	96.06%	95.22%	3	1	5.945	5.895	1.936
22354	Wednesday, December 15, 2010	17:20	27.95	6.71	23.79	131.07	153.59	22.61	95.04%	98.31%	97.34%	95.70%	3	1	6.055	5.927	1.938
22353	Wednesday, December 15, 2010	16:22	28.72	6.52	24.72	107.63	131.22	23.80	96.27%	98.70%	95.20%	93.96%	3	1	5.844	5.624	1.914
22352	Wednesday, December 15, 2010	15:06	25.86	6.35	22.06	86.82	107.81	21.12	95.75%	97.03%	95.49%	92.65%	3	1	5.843	5.675	1.941
22351	Wednesday, December 15, 2010	14:05	25.63	5.27	22.67	65.34	87.04	21.88	96.51%	98.33%	97.72%	96.09%	3	1	5.425	5.374	1.929
22350	Wednesday, December 15, 2010	12:56	27.90	5.69	24.82	41.85	65.48	23.77	95.75%	98.54%	97.63%	96.21%	3	1	5.567	5.629	1.923
22349	Wednesday, December 15, 2010	11:48	46.22	5.28	44.94	-0.04	42.01	42.69	95.01%	97.62%	97.64%	95.32%	4	1	6.316	5.923	1.858



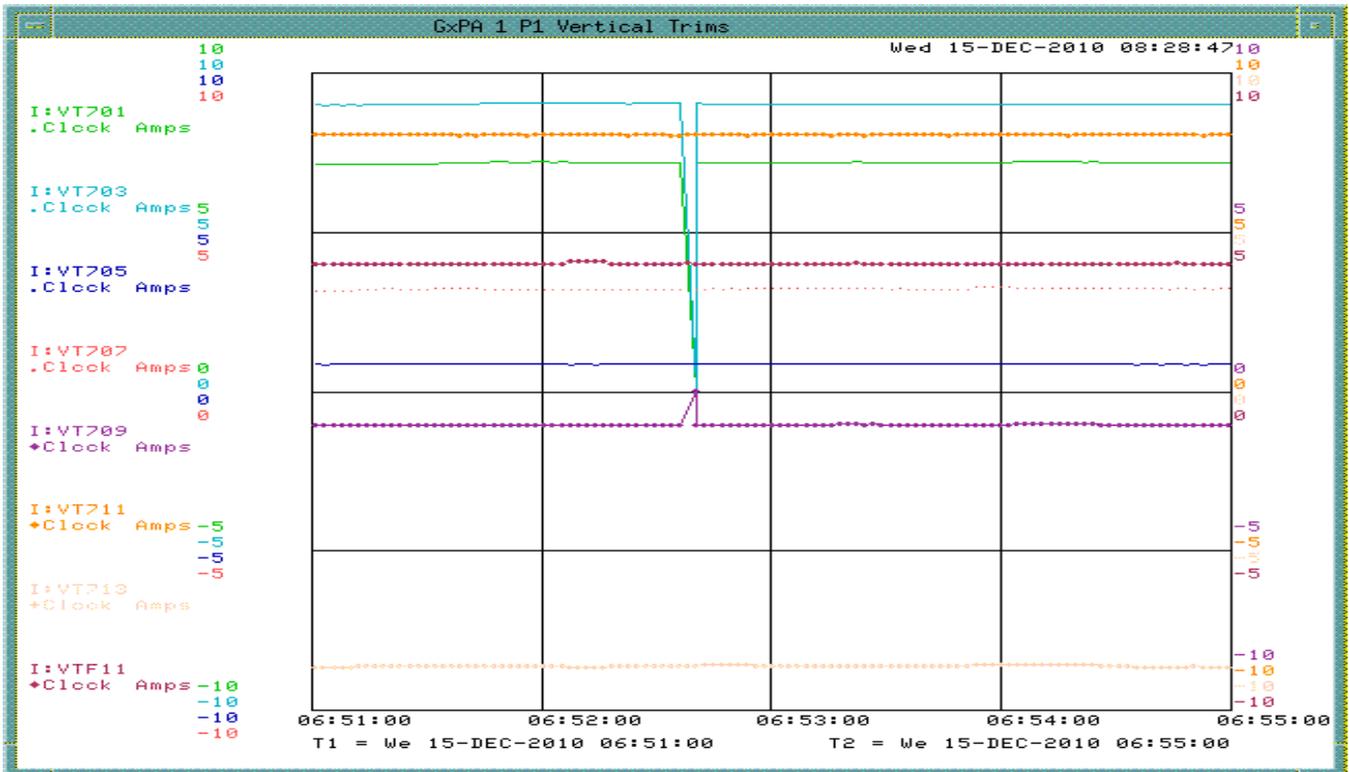
P1 horizontal trim settings not changing, but...



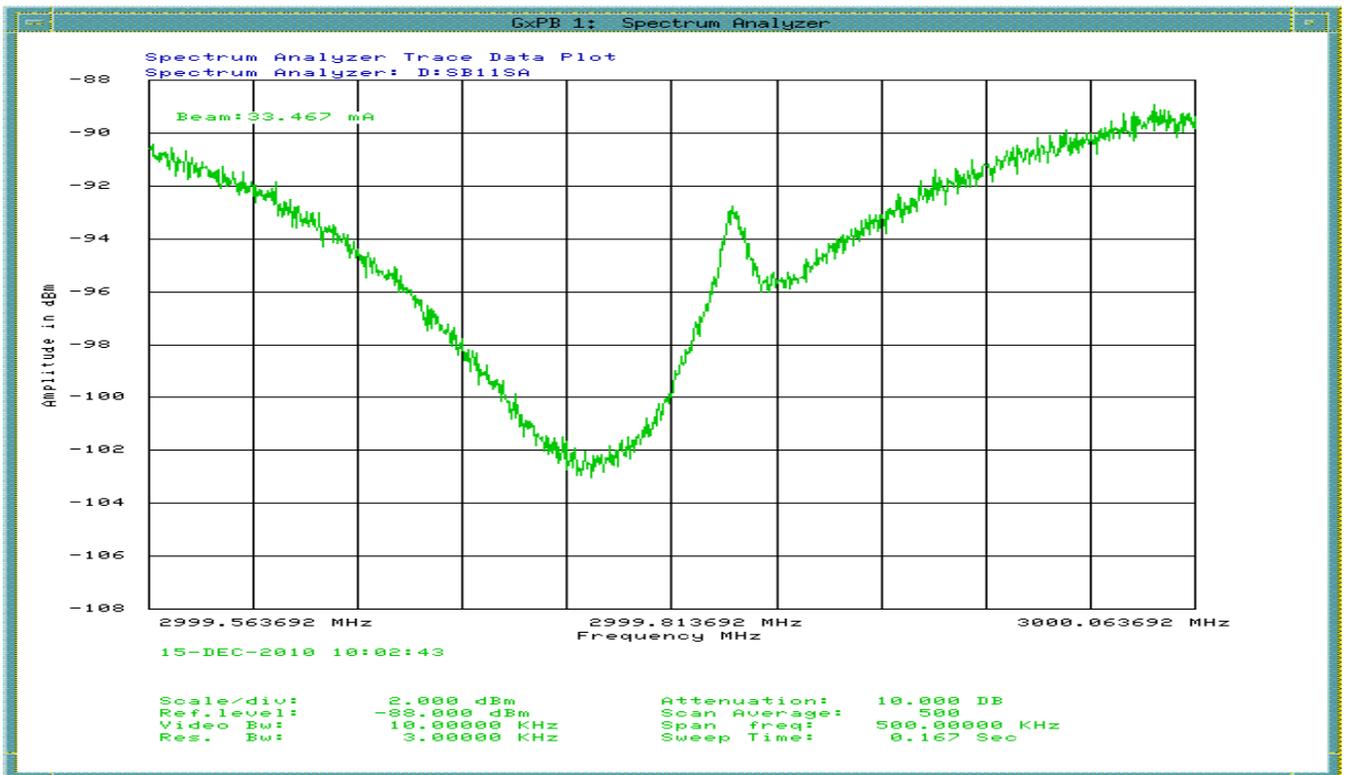
P1 trim readbacks show one missed pulse



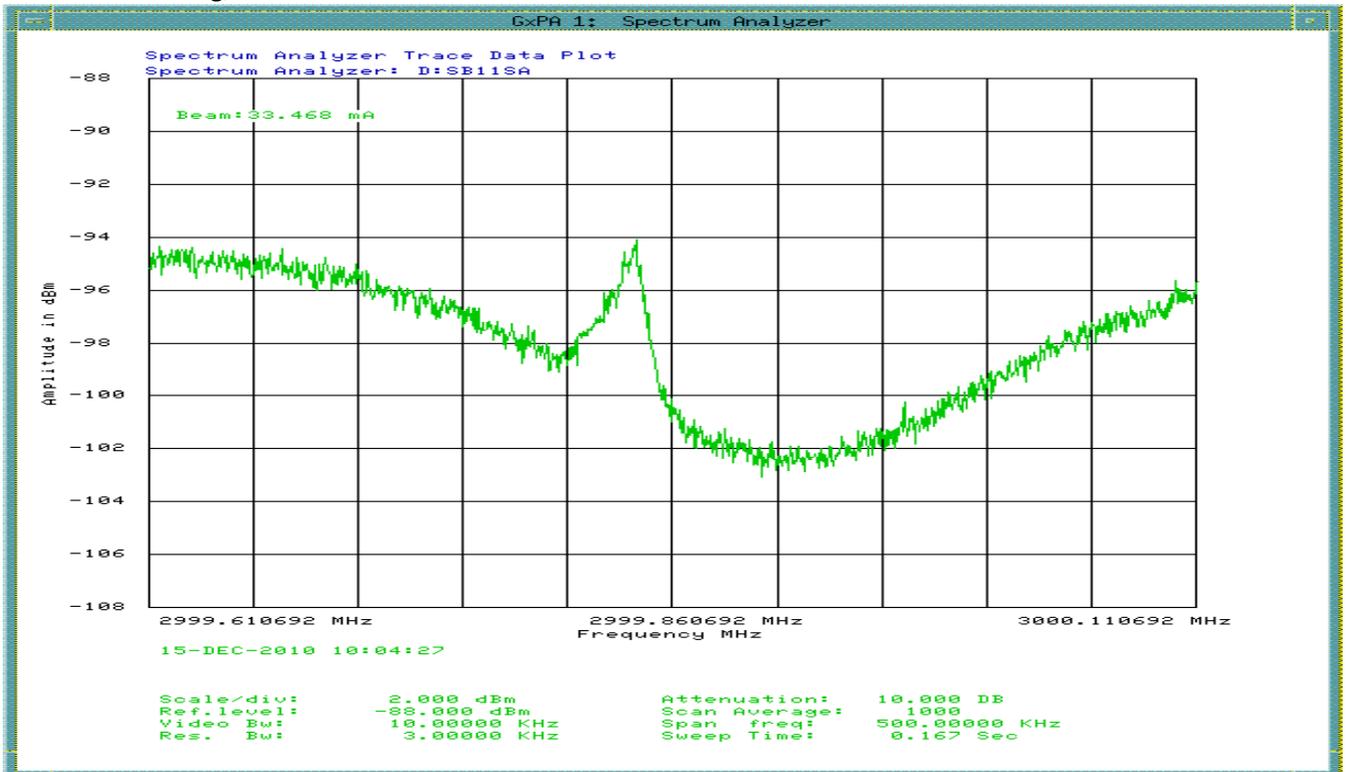
Same with vertical



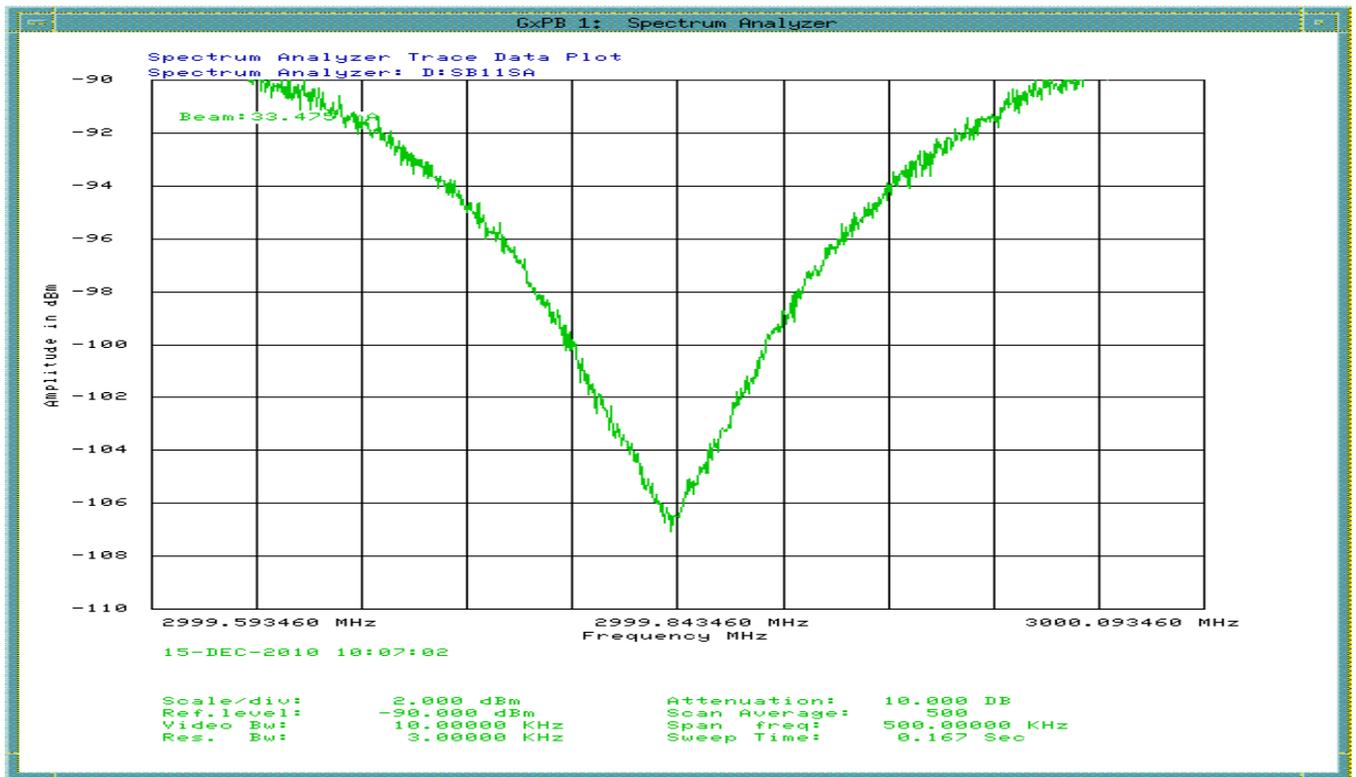
Same with vertical



When not stacking, filter #1



When not stacking, stacktail filter #2



When not stacking, stacktail filter #3