2011-01-31 Monday Morning Notes

Monday, January 31, 2011
7:55 AM

Stacking and Transfers

- Stacked 26.7mA/hr with a production of 21.8 pbars/Mp and 7.96 Tp on target
- Unstacked 1806E10 (601E10/day) in 217 transfers (72/day) over 70 sets (23/day) with an average overall unstacking efficiency of 96.0%.

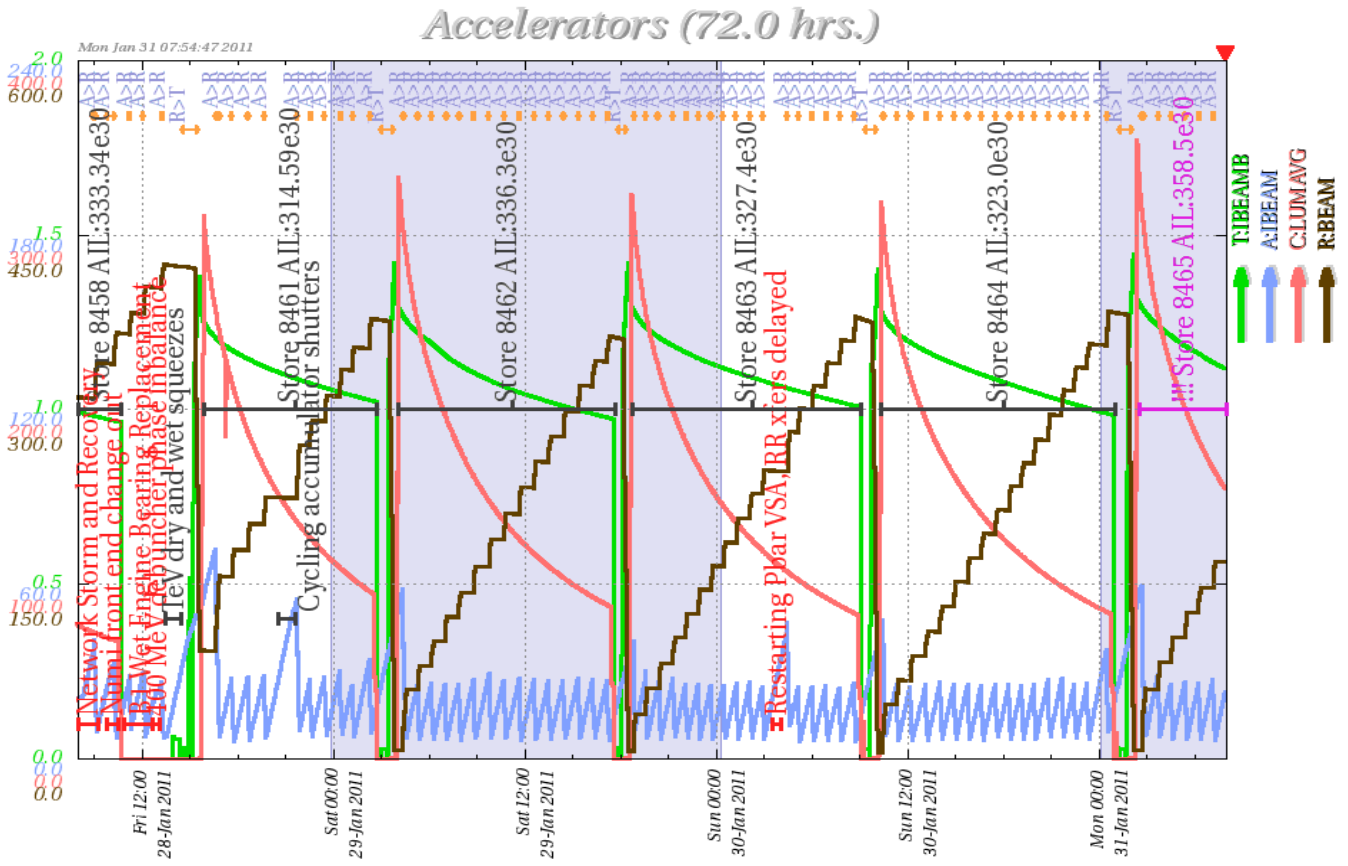
Interesting happenings

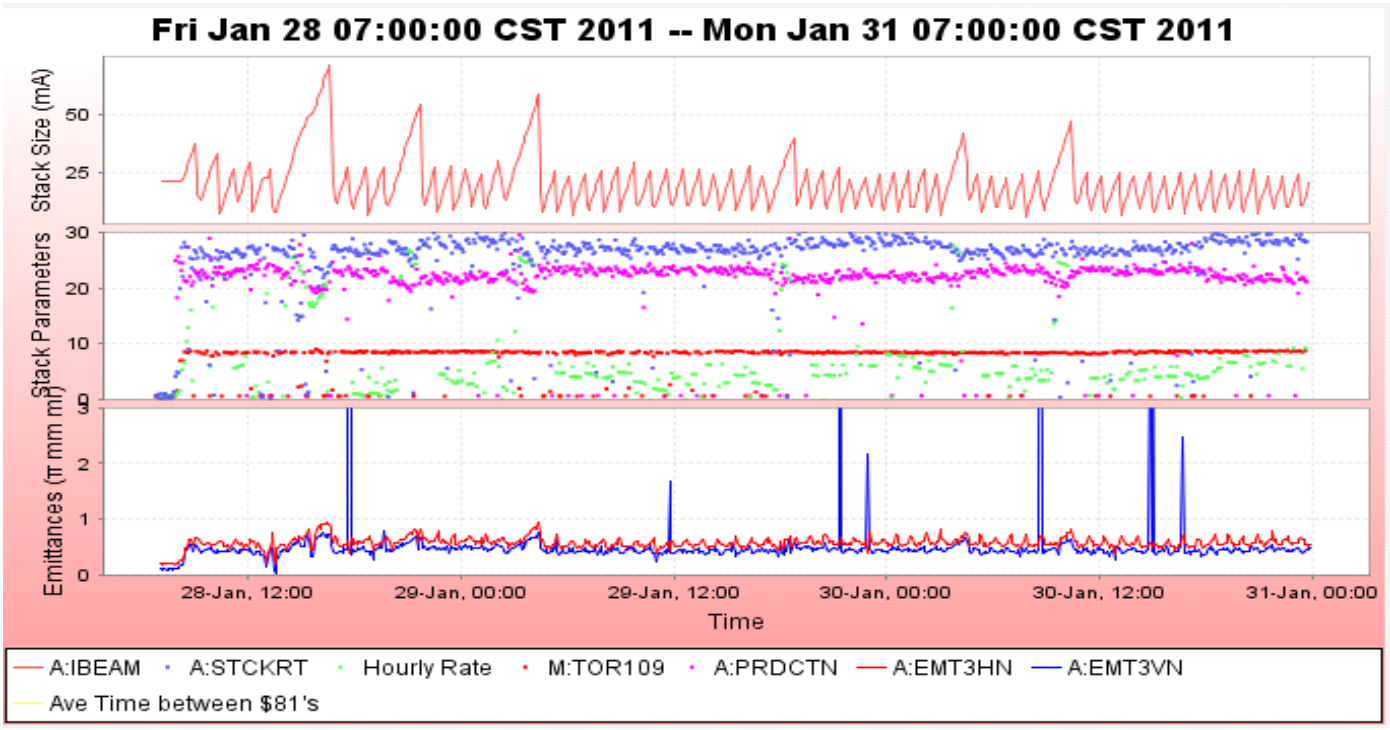
- Lots of GPIB problems.
    - Stacking VSA died, required a power cycle, restart of AP1001 and DCE11
    - Debuncher Injection kicker scope lost communication, required a power cycle.
    - Flux capacitor scope stopped updating. Required a power cycle and restart of DCE11.

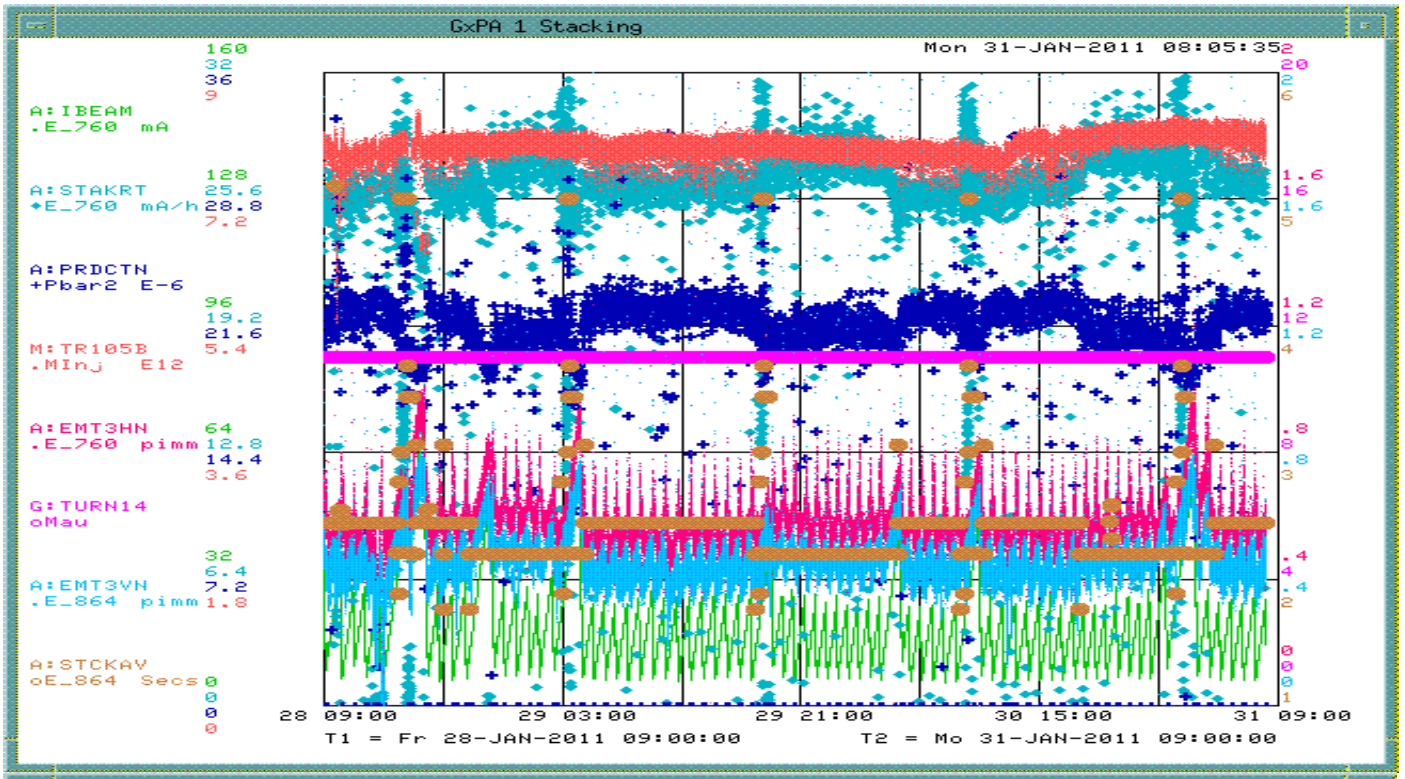
Numbers

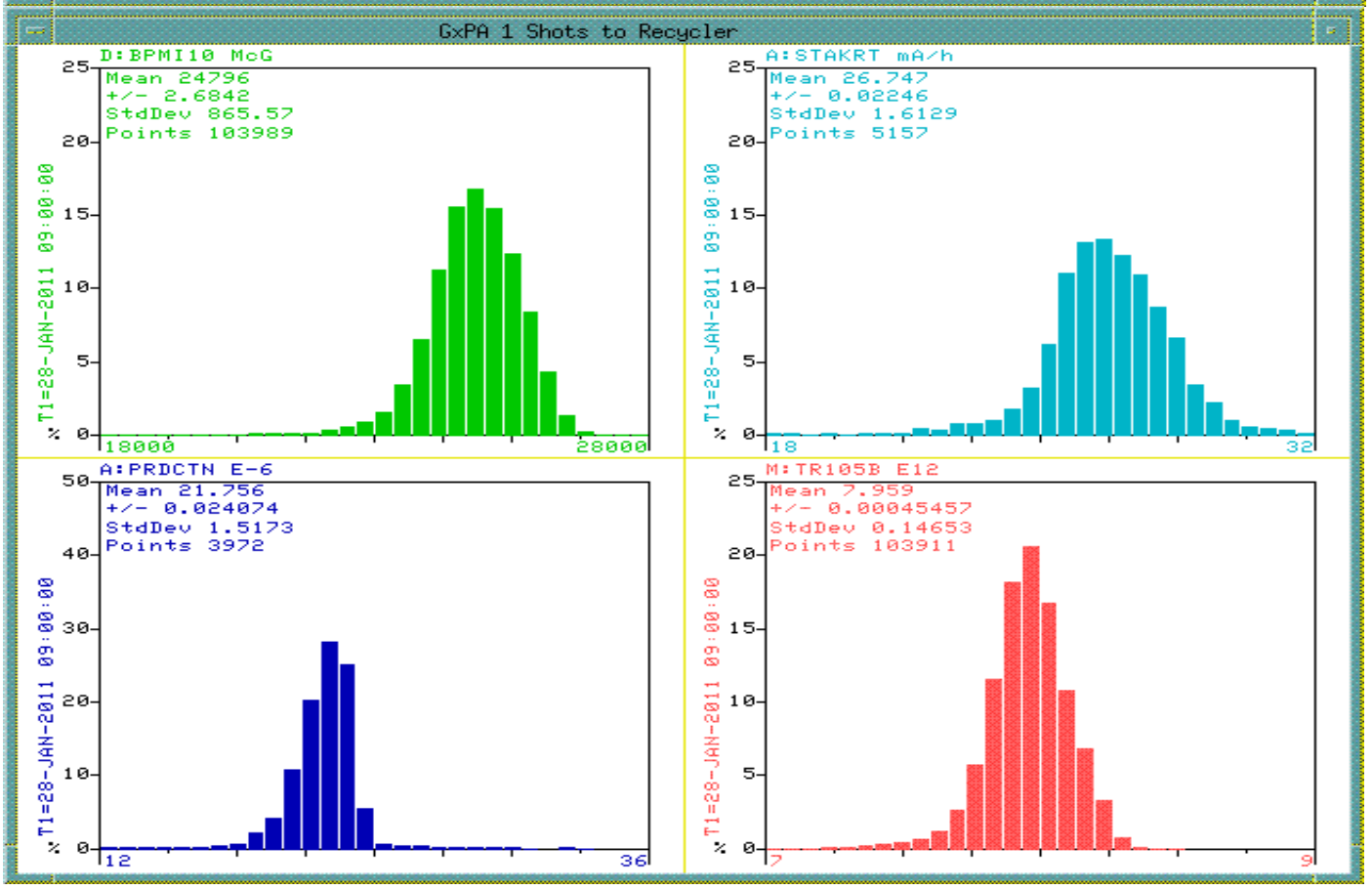
- Stacking
    - Pbars stacked: 1819.75 E10
    - Time stacking: 71.08 Hr
    - Average stacking rate: 25.60 E10/Hr
- Uptime
    - Number of pulses while in stacking mode: 107933
    - Number of pulses with beam: 105130
    - Fraction of up pulses was: 97.40%
- The uptime's effect on the stacking numbers
    - Corrected time stacking: 69.24 Hr
    - Possible average stacking rate: 26.28 E10/Hr
    - Could have stacked: 1868.27 E10/Hr
- Recycler Transfers
    - Pbars sent to the Recycler: 1820.59 E10
    - Number of transfers : 219
    - Number of transfer sets: 71
    - Average Number of transfer per set: 3.08
    - Time taken to shoot including reverse proton tuneup: 00.77 Hr
    - Transfer efficiency: 95.69%
- Other Info
    - Average POT : 7.95 E12
    - Average production: 21.78 pbars/E6 protons

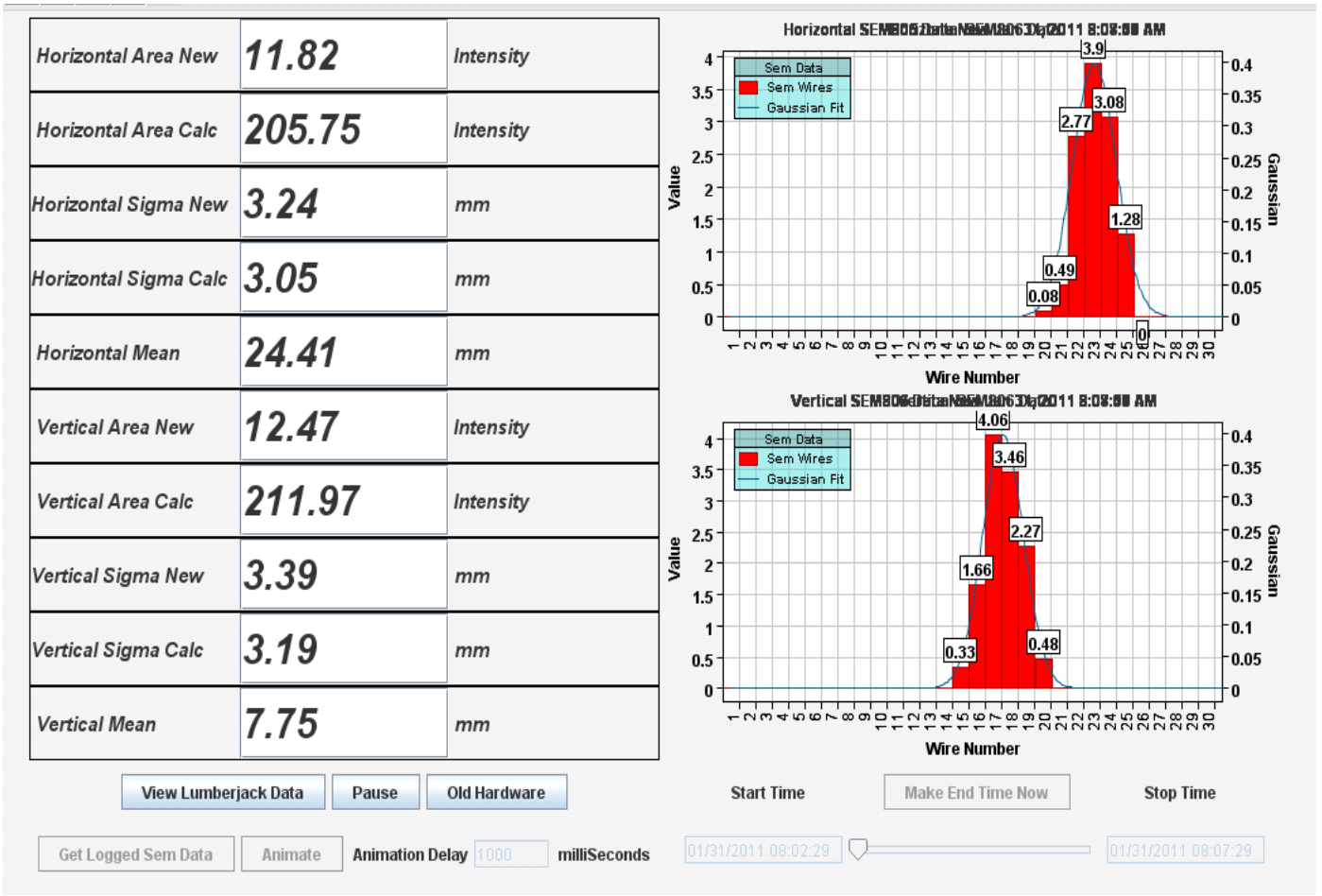
Plots

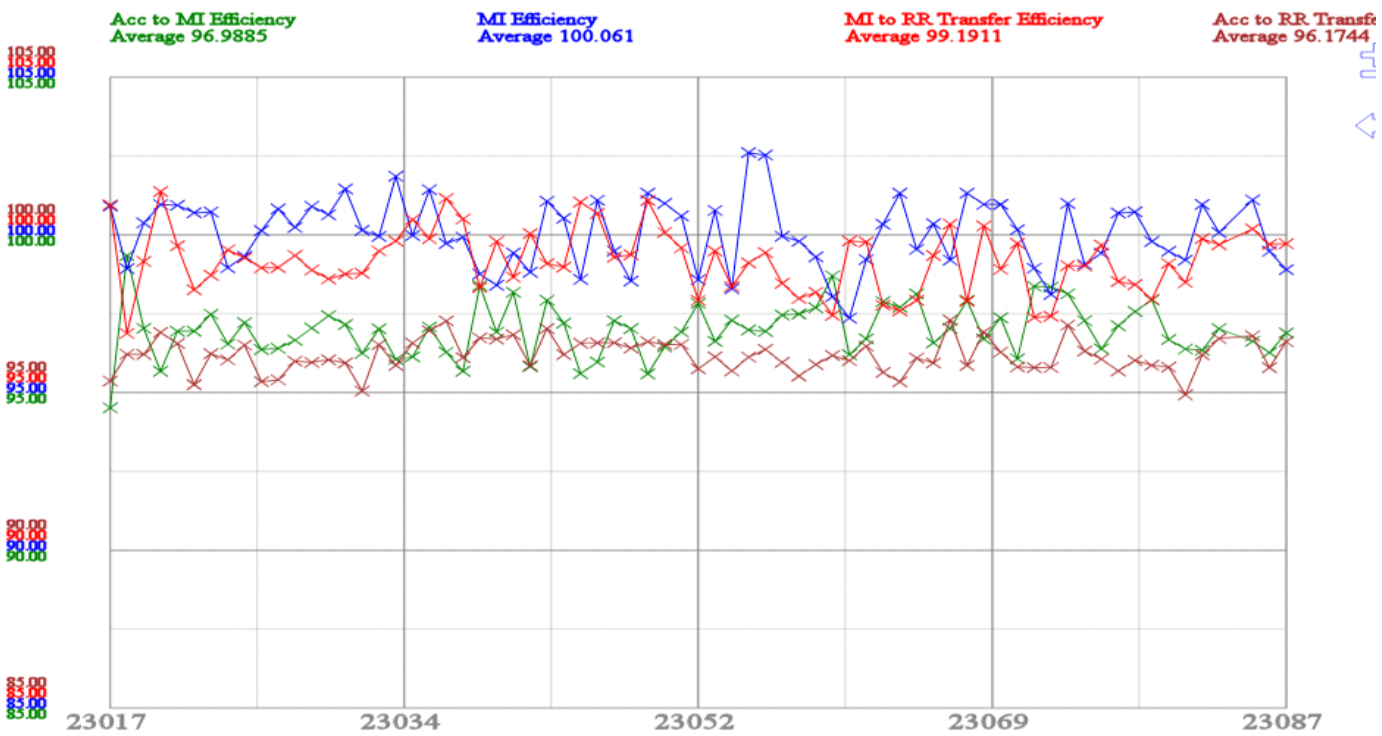

Accelerators (72.0 hrs.)
Mon Jan 31 07:54:47 2011
Store 8458 AIL:333.34e30
Store 8461 AIL:314.59e30
Store 8462 AIL:336.3e30
Store 8463 AIL:327.4e30
Store 8464 AIL:323.0e30
!!! Store 8465 AIL:358.5e30
Network Storm and Recovery
Nimi front end change out
B1 Wet Engine Bearing Replacement
400 MeV debuncher phase imbalance
TeV dry and wet squeezes
Cycling accumulator shutters
Restarting Pbar VSA, RR xfers delayed
T:IBEAMB
A:IBEAM
C:LUMAVG
R:BEAM
Fri 12:00 28-Jan 2011
Sat 00:00 29-Jan 2011
Sat 12:00 29-Jan 2011
Sun 00:00 30-Jan 2011
Sun 12:00 30-Jan 2011
Mon 00:00 31-Jan 2011


Fri Jan 28 07:00:00 CST 2011 -- Mon Jan 31 07:00:00 CST 2011
Stack Size (mA)
Stack Parameters
Emittances (π mm mr)
28-Jan, 12:00
29-Jan, 00:00
29-Jan, 12:00
30-Jan, 00:00
30-Jan, 12:00
31-Jan, 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 31-JAN-2011 08:05:35
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
28 09:00
29 03:00
29 21:00
30 15:00
31 09:00
T1 = Fr 28-JAN-2011 09:00:00
T2 = Mo 31-JAN-2011 09:00:00


GxPA 1 Shots to Recycler
D:BPMI10 McG
Mean 24796
+/- 2.6842
StdDev 865.57
Points 103989
A:STAKRT mA/h
Mean 26.747
+/- 0.02246
StdDev 1.6129
Points 5157
A:PRDCTN E-6
Mean 21.756
+/- 0.024074
StdDev 1.5173
Points 3972
M:TR105B E12
Mean 7.959
+/- 0.00045457
StdDev 0.14653
Points 103911
T1=28-JAN-2011 09:00:00


Horizontal Area New 11.82 Intensity
Horizontal Area Calc 205.75 Intensity
Horizontal Sigma New 3.24 mm
Horizontal Sigma Calc 3.05 mm
Horizontal Mean 24.41 mm
Vertical Area New 12.47 Intensity
Vertical Area Calc 211.97 Intensity
Vertical Sigma New 3.39 mm
Vertical Sigma Calc 3.19 mm
Vertical Mean 7.75 mm
Sem Data
Sem Wires
Gaussian Fit
Value
Gaussian
Wire Number
View Lumberjack Data
Pause
Old Hardware
Start Time
Make End Time Now
Stop Time
Get Logged Sem Data
Animate
Animation Delay
milliSeconds
01/31/2011 08:02:29
01/31/2011 08:07:29


Acc to MI Efficiency
Average 96.9885
MI Efficiency
Average 100.061
MI to RR Transfer Efficiency
Average 99.1911
Acc to RR Transfe
Average 96.1744
23017
23034
23052
23069
23087

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 =>				1805.51			1733.42	96.01%	97.10%	97.15%	94.33%	217	70	5.7252	4.3325	1.9552
	Daily Average =>				601.84			577.81					72	23			
23087	Monday, January 31, 2011	7:09	27.65	6.38	23.91	146.83	169.59	23.07	96.50%	97.10%	96.00%	93.22%	3	1	5.288	4.158	1.962
23086	Monday, January 31, 2011	6:14	25.87	6.46	22.18	125.99	147.01	21.24	95.78%	97.35%	96.31%	93.76%	3	1	5.473	4.253	2.002
23085	Monday, January 31, 2011	5:23	26.91	6.55	23.11	104.06	126.19	22.37	96.81%	96.52%	97.77%	94.37%	3	1	5.598	4.418	1.949
23083	Monday, January 31, 2011	4:30	25.93	6.59	22.08	83.21	104.32	21.30	96.49%	97.33%	96.88%	94.29%	3	1	5.577	4.22	1.973
23082	Monday, January 31, 2011	3:42	29.22	7.06	24.86	59.93	83.43	23.80	95.75%	96.67%	97.13%	93.90%	3	1	6.584	4.738	1.952
23081	Monday, January 31, 2011	2:42	59.99	7.46	57.89	7.16	60.30	54.42	94.01%	96.22%	95.71%	92.09%	5	1	7.516	5.302	1.914
23080	Monday, January 31, 2011	0:28	37.51	9.10	30.95	355.42	384.56	29.64	95.76%	96.66%	96.54%	93.31%	3	1	5.815	4.508	1.904
23079	Sunday, January 30, 2011	23:15	26.20	6.81	22.17	336.00	356.92	21.32	96.13%	97.35%	97.23%	94.65%	3	1	5.737	4.305	1.944
23078	Sunday, January 30, 2011	22:26	25.77	6.77	21.79	316.36	336.97	20.93	96.06%	97.26%	98.08%	95.39%	3	1	5.736	4.333	1.956
23077	Sunday, January 30, 2011	21:39	27.55	7.26	23.11	295.20	317.02	22.15	95.85%	97.20%	98.10%	95.35%	3	1	5.706	4.403	1.98
23076	Sunday, January 30, 2011	20:48	27.39	7.10	23.10	274.04	295.95	22.24	96.27%	96.57%	96.10%	92.80%	3	1	5.832	4.443	1.958
23075	Sunday, January 30, 2011	19:55	25.47	6.49	21.75	254.02	274.72	20.95	96.33%	97.19%	96.23%	93.52%	3	1	5.485	4.265	1.943
23074	Sunday, January 30, 2011	19:08	25.22	6.67	21.39	234.10	254.51	20.77	97.10%	98.47%	99.50%	97.97%	3	1	5.739	4.278	1.966
23073	Sunday, January 30, 2011	18:21	25.87	6.63	22.04	213.66	234.55	21.08	95.62%	98.56%	96.92%	95.52%	3	1	5.595	4.133	1.938
23072	Sunday, January 30, 2011	17:30	25.77	6.95	21.63	193.42	214.01	20.75	95.96%	98.48%	97.37%	95.89%	3	1	5.462	4.46	2.022
23071	Sunday, January 30, 2011	16:37	25.50	6.25	22.03	172.76	193.74	21.16	96.05%	96.11%	96.44%	92.69%	3	1	5.276	4.118	1.949
23070	Sunday, January 30, 2011	15:46	25.67	6.29	22.13	151.90	173.06	21.30	96.24%	97.48%	98.26%	95.78%	3	1	5.538	4.082	1.972
23069	Sunday, January 30, 2011	14:54	25.91	6.20	22.37	130.79	152.22	21.68	96.92%	97.32%	98.07%	95.44%	3	1	5.385	4.122	1.977
23068	Sunday, January 30, 2011	14:02	26.30	6.24	22.82	109.30	131.02	21.91	96.00%	97.88%	98.29%	96.21%	3	1	5.229	3.885	1.96
23067	Sunday, January 30, 2011	13:07	25.55	6.15	22.10	88.30	109.49	21.48	97.23%	97.88%	97.44%	95.37%	3	1	5.495	4.105	1.963
23066	Sunday, January 30, 2011	12:09	25.10	5.87	21.93	67.49	88.48	21.08	96.13%	96.94%	97.20%	94.23%	3	1	5.576	4.228	1.955
23065	Sunday, January 30, 2011	11:18	25.71	6.33	22.09	46.46	67.61	21.28	96.32%	98.32%	97.59%	95.95%	3	1	5.534	4.287	1.991
23064	Sunday, January 30, 2011	10:26	47.47	7.61	43.71	5.69	46.73	41.54	95.02%	97.60%	98.57%	96.20%	4	1	6.497	4.986	1.905
23063	Sunday, January 30, 2011	8:37	25.99	5.98	22.64	358.81	379.96	21.67	95.72%	97.50%	97.70%	95.26%	3	1	5.521	4.158	1.982
23062	Sunday, January 30, 2011	7:43	24.76	5.82	21.55	339.63	360.14	20.82	96.60%	97.17%	96.30%	93.58%	3	1	5.516	4.021	1.975
23061	Sunday, January 30, 2011	6:51	25.25	6.25	21.71	320.06	340.66	20.88	96.17%	96.24%	94.25%	90.71%	3	1	5.462	4.183	1.969
23060	Sunday, January 30, 2011	6:00	25.07	6.36	21.41	300.64	320.95	20.59	96.20%	98.89%	97.44%	96.36%	3	1	5.678	4.374	1.998
23059	Sunday, January 30, 2011	5:08	24.88	5.85	21.70	280.80	301.34	20.85	96.08%	97.84%	97.17%	95.08%	3	1	5.578	3.947	1.967
23058	Sunday, January 30, 2011	4:28	44.78	10.92	36.45	247.34	281.51	34.78	95.43%	97.53%	97.31%	94.90%	3	1	6.507	5.043	1.912
23057	Sunday, January 30, 2011	2:53	25.08	6.48	21.35	227.88	248.13	20.52	96.12%	97.41%	97.67%	95.14%	3	1	6.03	4.443	1.961
23056	Sunday, January 30, 2011	2:06	26.92	7.01	22.69	206.62	228.20	21.85	96.31%	97.43%	98.64%	96.11%	3	1	5.83	4.332	1.972
23055	Sunday, January 30, 2011	1:15	25.83	6.59	22.07	185.89	206.97	21.22	96.14%	97.08%	99.53%	96.63%	3	1	5.427	4.289	1.958
23054	Sunday, January 30, 2011	0:27	25.46	6.63	21.63	165.60	186.15	20.76	95.96%	97.23%	96.00%	93.34%	3	1	5.549	4.161	1.987
23053	Saturday, January 29, 2011	23:39	25.43	6.73	21.55	145.38	165.88	20.75	96.29%	96.78%	97.32%	94.19%	3	1	5.579	4.261	1.969
23052	Saturday, January 29, 2011	22:52	25.91	6.73	21.95	124.62	145.60	21.07	95.99%	98.43%	97.39%	95.86%	3	1	5.754	4.236	1.947
23051	Saturday, January 29, 2011	22:04	25.90	6.95	21.76	104.05	124.86	21.04	96.67%	96.90%	97.60%	94.57%	3	1	5.623	4.297	1.997
23050	Saturday, January 29, 2011	21:17	27.73	7.20	23.28	81.93	104.25	22.50	96.64%	96.60%	97.50%	94.19%	3	1	5.661	4.253	1.975
23049	Saturday, January 29, 2011	20:24	26.88	6.78	22.81	60.28	82.07	22.06	96.73%	96.08%	97.65%	93.82%	3	1	6.09	4.471	1.96
23048	Saturday, January 29, 2011	19:33	27.61	7.17	23.18	38.26	60.43	22.38	96.56%	96.96%	95.69%	92.78%	3	1	5.791	4.458	2
23047	Saturday, January 29, 2011	18:48	40.58	10.03	33.21	6.81	38.48	32.00	96.36%	97.43%	97.02%	94.53%	3	1	6.148	4.691	1.915
23046	Saturday, January 29, 2011	17:09	27.32	6.39	23.52	341.29	363.43	22.73	96.61%	96.64%	97.37%	94.10%	3	1	5.468	4.157	1.936
23045	Saturday, January 29, 2011	16:15	27.84	7.06	23.54	320.27	342.49	22.73	96.56%	96.20%	95.25%	91.63%	3	1	5.615	4.326	1.959
23044	Saturday, January 29, 2011	15:20	28.16	6.98	23.99	298.50	321.19	23.09	96.22%	97.50%	97.60%	95.16%	3	1	5.442	4.349	1.969
23043	Saturday, January 29, 2011	14:24	27.44	6.67	23.49	276.86	299.29	22.77	96.94%	97.78%	98.28%	96.10%	3	1	5.439	4.089	1.971
23042	Saturday, January 29, 2011	13:29	27.47	6.56	23.64	255.06	277.51	22.69	95.96%	96.30%	95.46%	91.93%	3	1	5.514	4.154	1.945
23041	Saturday, January 29, 2011	12:34	27.59	6.44	23.88	232.95	255.69	23.10	96.75%	98.13%	97.56%	95.74%	3	1	5.362	4.105	1.957
23040	Saturday, January 29, 2011	11:38	27.62	6.13	24.04	210.46	233.47	23.24	96.65%	97.36%	95.64%	93.12%	3	1	5.355	3.788	1.946
23039	Saturday, January 29, 2011	10:40	27.25	6.64	23.38	188.57	210.84	22.63	96.79%	98.08%	97.10%	95.23%	3	1	5.589	4.286	1.996
23038	Saturday, January 29, 2011	9:45	29.23	6.76	25.12	165.00	188.94	24.17	96.19%	96.47%	96.55%	93.14%	3	1	5.444	4.213	1.939
23037	Saturday, January 29, 2011	8:46	27.24	6.53	23.42	143.06	165.43	22.72	97.04%	96.95%	96.46%	93.52%	3	1	5.459	4.106	1.967
23036	Saturday, January 29, 2011	7:51	25.81	6.39	22.13	122.00	143.28	21.47	96.99%	97.14%	97.77%	94.97%	3	1	5.468	4.146	1.973
23035	Saturday, January 29, 2011	6:59	25.74	6.63	21.87	101.33	122.25	21.11	96.52%	96.75%	97.54%	94.37%	3	1	5.667	3.976	1.979
23034	Saturday, January 29, 2011	6:08	26.31	6.56	22.46	80.09	101.48	21.54	95.92%	96.38%	97.67%	94.13%	3	1	5.411	4.034	1.943
23033	Saturday, January 29, 2011	5:16	25.65	6.68	21.74	59.52	80.27	20.98	96.49%	97.30%	97.37%	94.74%	3	1	5.196	4.159	1.994
23032	Saturday, January 29, 2011	4:21	58.44	7.17	56.48	7.51	59.79	53.35	94.46%	96.75%	96.71%	93.57%	5	1	6.897	5.143	1.928
23031	Saturday, January 29, 2011	2:15	34.08	8.99	27.84	352.72	378.84	26.68	95.85%	97.34%	98.20%	95.58%	3	1	5.619	4.552	1.946
23030	Saturday, January 29, 2011	1:09	25.44	7.03	21.26	334.05	354.13	20.45	96.19%	97.04%	97.93%	95.03%	3	1	5.995	4.288	1.965
23029	Saturday, January 29, 2011	0:24	30.13	7.95	24.89	311.44	334.95	23.91	96.09%	97.07%	97.47%	94.61%	3	1	6.056	4.618	1.978
23028	Friday, January 28, 2011	23:26	28.33	7.52	23.57	290.15	312.42	22.66	96.11%	96.96%	96.97%	94.02%	3	1	6.13	4.467	1.961
23027	Friday, January 28, 2011	22:32	27.56	7.27	23.01	269.26	290.98	22.02	95.70%	96.44%	97.28%	93.82%	3	1	6.249	4.471	1.926
23026	Friday, January 28, 2011	21:42	55.00	9.55	49.37	224.13	270.08	46.97	95.13%	96.55%	96.78%	93.44%	4	1	6.817	5.27	1.898
23025	Friday, January 28, 2011	19:38	28.74	6.90	24.52	201.80	225.10	23.62	96.34%	97.25%	96.75%	94.09%	3	1	5.733	4.391	1.949
23024	Friday, January 28, 2011	18:37	27.86	6.42	24.02	179.43	202.24	23.06	95.99%	97.16%	96.29%	93.55%	3	1	5.768	4.285	1.935
23023	Friday, January 28, 2011	17:38	28.00	5.88	24.39	156.67	179.84	23.44	96.09%	97.61%	98.00%	95.65%	3	1	5.408	4.115	1.923
23022	Friday, January 28, 2011	16:37	72.23	7.52	69.39	92.99	157.20	65.66	94.64%	96.54%	97.20%	93.83%	5	1	6.503	4.94	1.825
23021	Friday, January 28, 2011	13:13	26.22	6.83	22.15	404.48	425.30	21.40	96.65%	97.78%	98.32%	96.14%	3	1	5.578	4.053	2.001
23020	Friday, January 28, 2011	12:05	30.01	7.26	25.41	382.49	406.42	24.54	96.61%	94.83%	96.24%	91.27%	3	1	5.528	4.074	1.956
23019	Friday, January 28, 2011	11:14	28.33	9.90	19.76	365.00	383.77	19.02	96.25%	97.23%	97.15%	94.46%	2	1	5.366	4.306	1.916
23018	Friday, January 28, 2011	10:15	32.81	6.70	28.60	339.28	366.35	27.51	96.18%	99.07%	98.43%	97.52%	3	1	5.132	3.931	1.902
23017	Friday, January 28, 2011	9:02	39.07	9.00	32.58	310.11	340.51	30.98	95.09%	94.86%	95.69%	90.77%	3	1	6.142	4.833	1.904