2011-01-26 Wednesday Morning Notes

Wednesday, January 26, 2011
7:19 AM

Stacking and Transfers

- Stacked 26.8mA/hr with a production of 21.2 pbar/Mp with 7.80 Tp on target
- Unstacked 562E10 in 71 transfers over 23 sets with an average overall efficiency of 96.2%

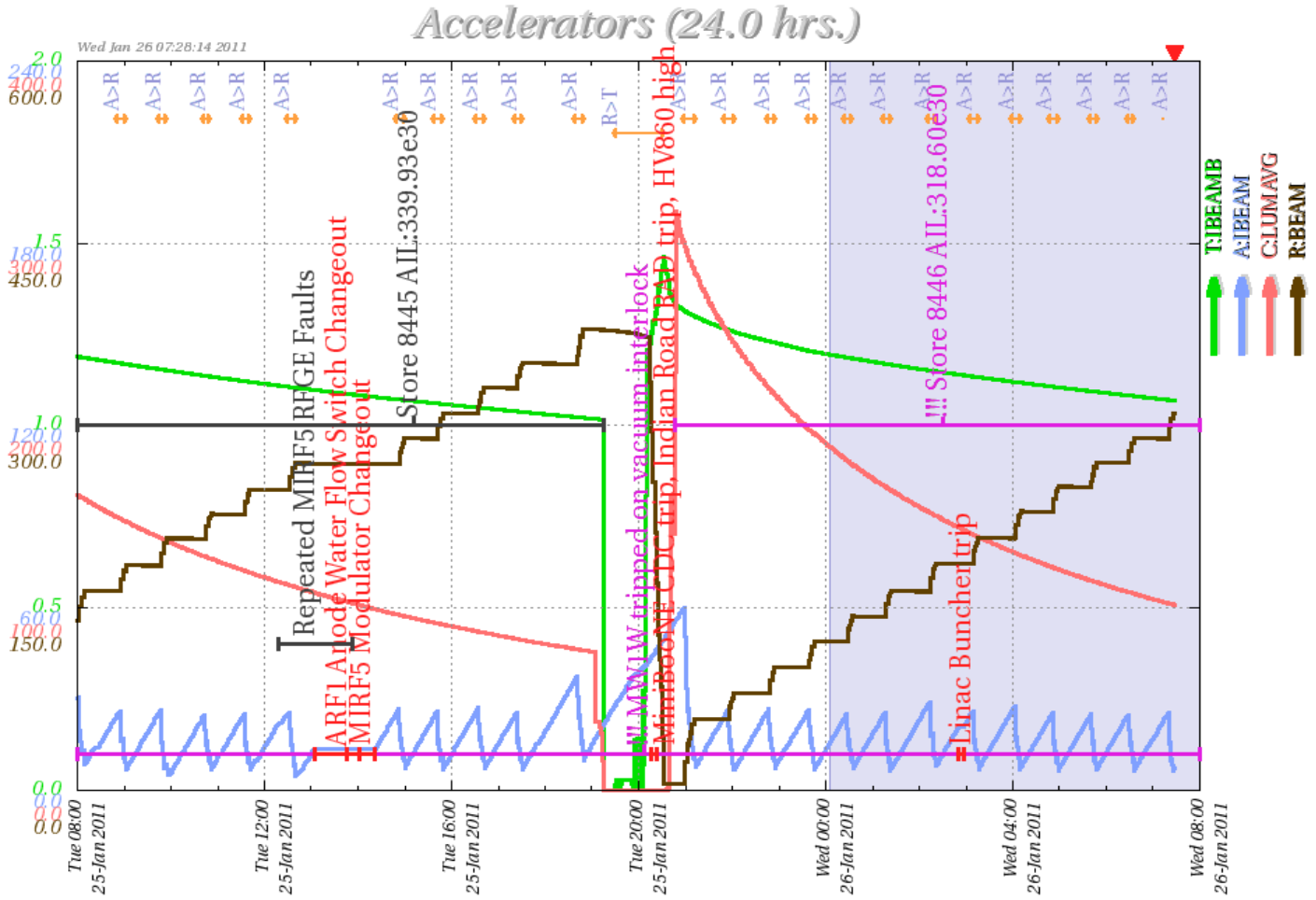
Interesting Happenings

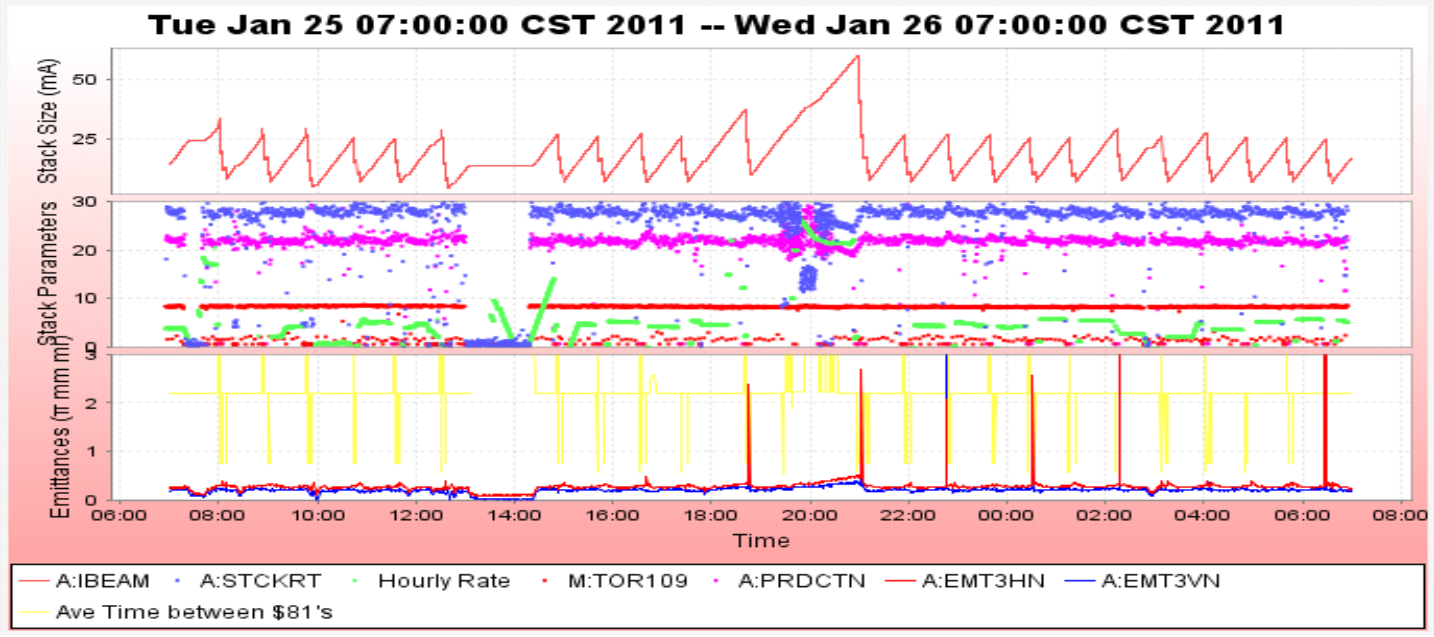
- ARF1: Tripped a few times with an anode water flow indication. Bernie, Pat and Dave looked at the supply and found the internal water flow switch was corroded, dripping and not working correctly. It actually was stuck in the "Good Flow" position but the microswitch contacts seemed corroded enough that it might have been intermittent electrically. Bernie replaced the switch. The new one has a very slow leak at the actuator arm gasket but valving the supply water down a bit seems to help. Bernie will look into getting another spare.
- Cryo performance continues to degrade. Cryo increased the maximum position on the dry engine.

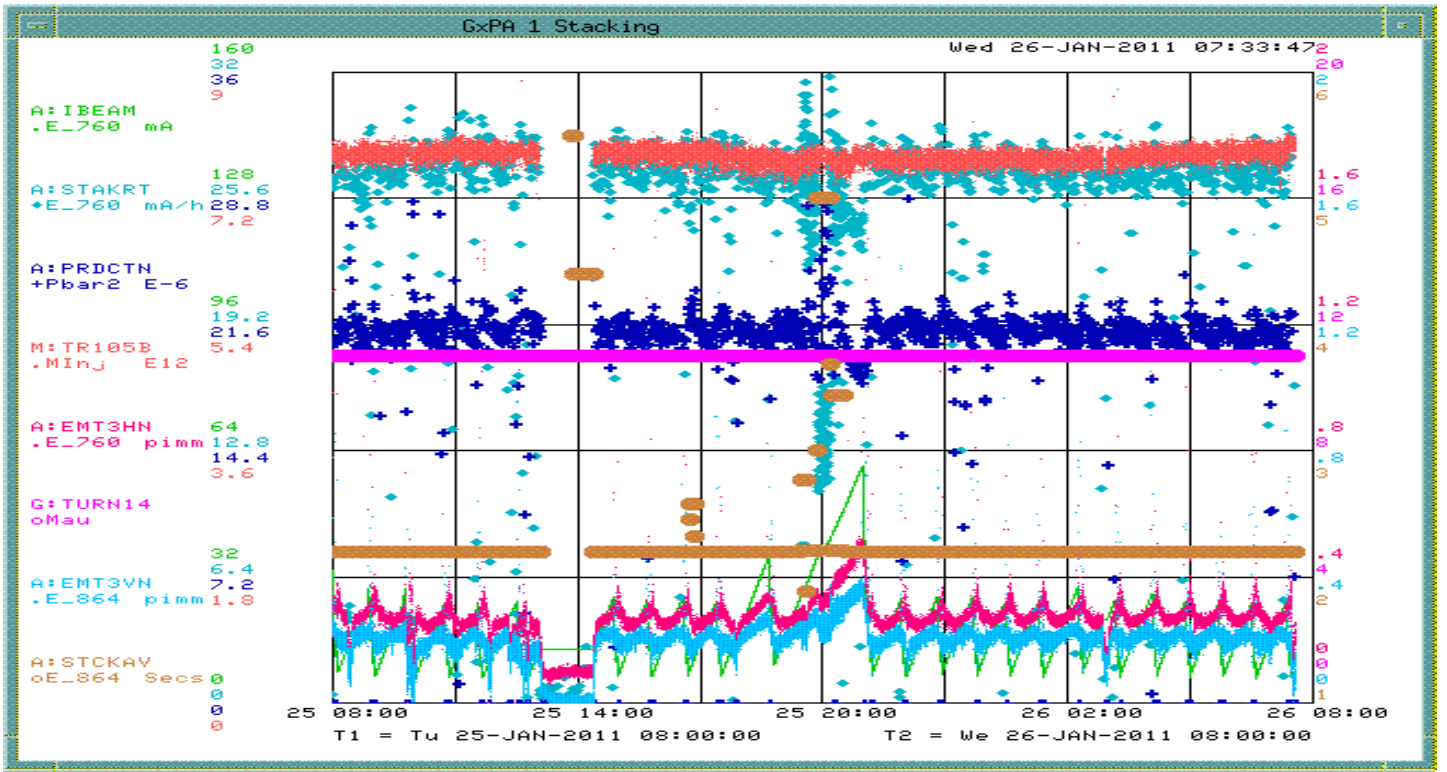
Numbers

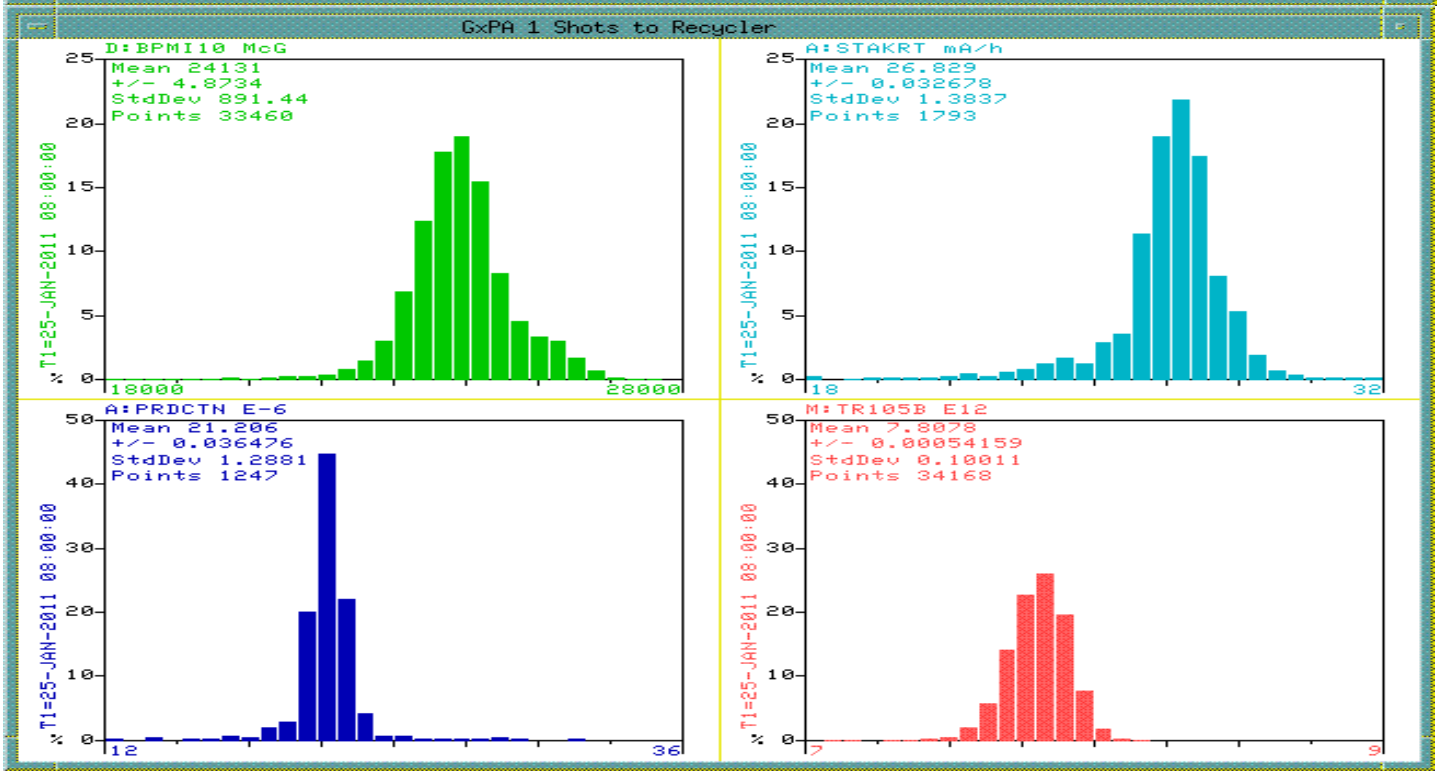
- Stacking
  - Pbars stacked: 572.38 E10
  - Time stacking: 22.36 Hr
  - Average stacking rate: 25.59 E10/Hr
- Uptime
  - Number of pulses while in stacking mode: 35964
  - Number of pulses with beam: 34461
  - Fraction of up pulses was: 95.82%
- The uptime's effect on the stacking numbers
  - Corrected time stacking: 21.43 Hr
  - Possible average stacking rate: 26.71 E10/Hr
  - Could have stacked: 597.34 E10/Hr
- Recycler Transfers
  - Pbars sent to the Recycler: 582.32 E10
  - Number of transfers : 74
  - Number of transfer sets: 24
  - Average Number of transfer per set: 3.08
  - Time taken to shoot including reverse proton tuneup: 00.26 Hr
  - Transfer efficiency: 95.90%
- Other Info
  - Average POT : 7.81 E12
  - Average production: 21.28 pbars/E6 protons

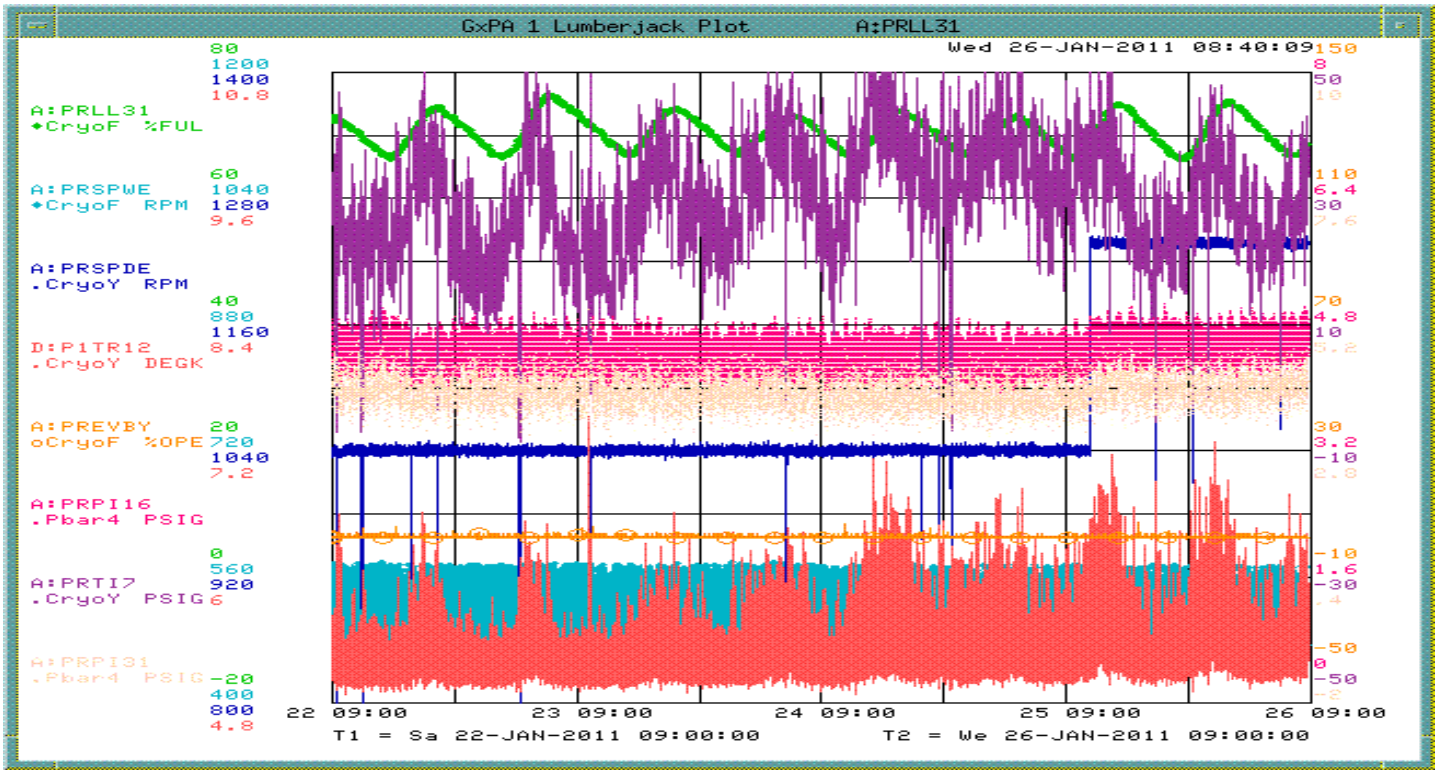
Plots

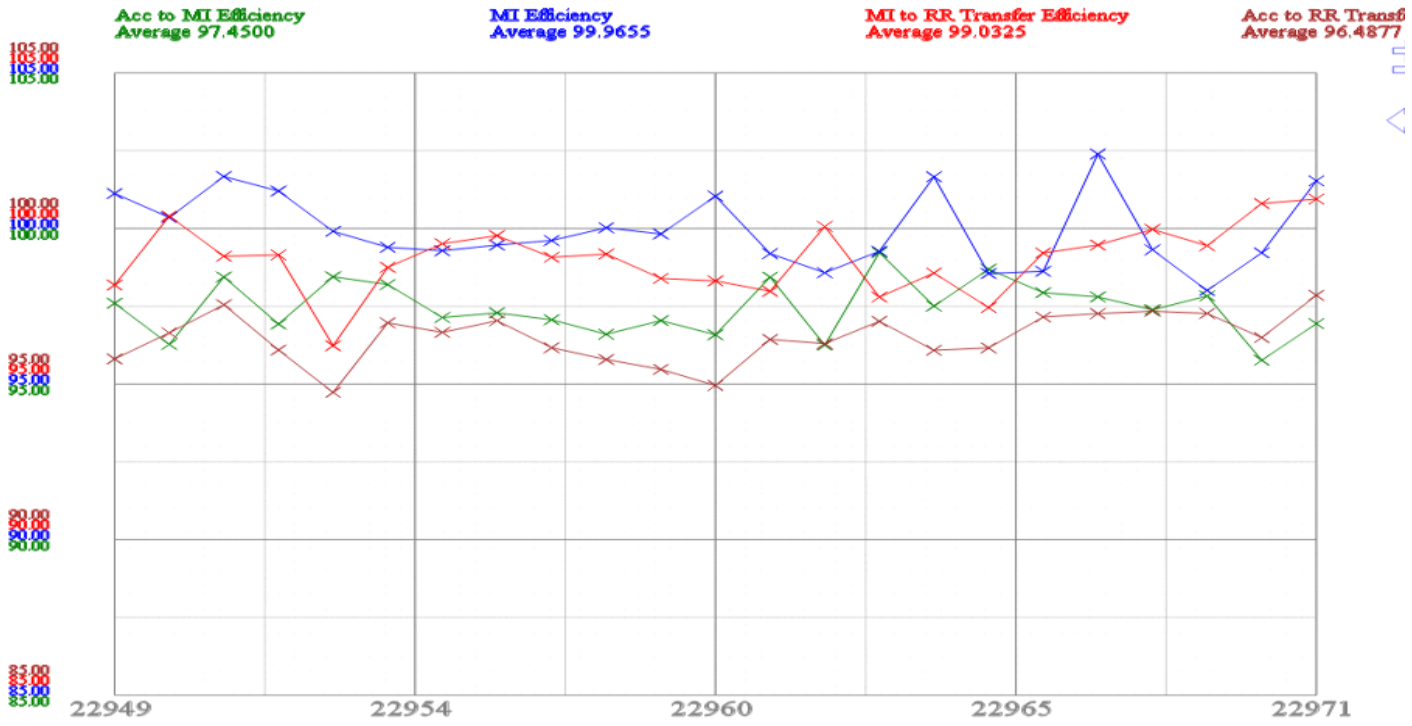

Accelerators (24.0 hrs.)
Wed Jan 26 07:28:14 2011
Repeated MIRF5 RFGE Faults
ARF1 Anode Water Flow Switch Changeout
MIRF5 Modulator Changeout
Store 8445 AIL:339.93e30
!!! MINIW tripped on vacuum interlock
MiniBooNE CDC trip, Indian Road BAD trip, HV860 high
!!! Store 8446 AIL:318.60e30
Linac Buncher trip
T:IBEAMB
A:IBEAM
C:LUMAVG
R:BEAM
Tue 08:00 25-Jan 2011
Tue 12:00 25-Jan 2011
Tue 16:00 25-Jan 2011
Tue 20:00 25-Jan 2011
Wed 00:00 26-Jan 2011
Wed 04:00 26-Jan 2011
Wed 08:00 26-Jan 2011

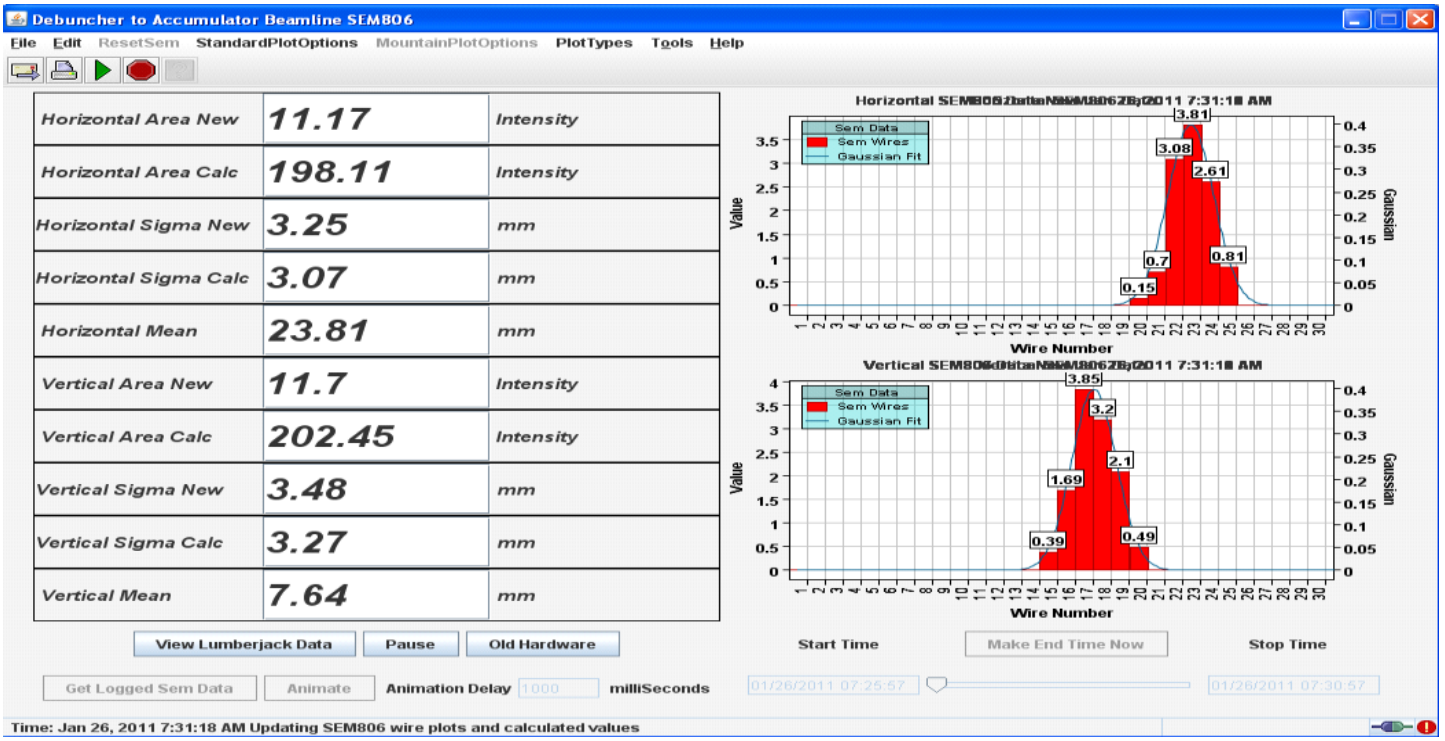

Tue Jan 25 07:00:00 CST 2011 -- Wed Jan 26 07:00:00 CST 2011
Stack Size (mA)
Stack Parameters
Emittances (π mm mr)
Time
A:IBEAM
A:STCKRT
Hourly Rate
M:TOR109
A:PRDCTN
A:EMT3HN
A:EMT3VN
Ave Time between $81's


GxPA 1 Stacking
Wed 26-JAN-2011 07:33:47
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
25 08:00
25 14:00
25 20:00
26 02:00
26 08:00
T1 = Tu 25-JAN-2011 08:00:00
T2 = We 26-JAN-2011 08:00:00


GxPA 1 Shots to Recycler
D:BPMI10 McG
Mean 24131
+/- 4.8734
StdDev 891.44
Points 33460
18000
28000
A:STAKRT mA/h
Mean 26.829
+/- 0.032678
StdDev 1.3837
Points 1793
18
32
A:PRDCTN E-6
Mean 21.206
+/- 0.036476
StdDev 1.2881
Points 1247
12
36
M:TR105B E12
Mean 7.8078
+/- 0.00054159
StdDev 0.10011
Points 34168
7
9
T1=25-JAN-2011 08:00:00
% 0


GxPA 1 Lumberjack Plot
A:PRLL31
Wed 26-JAN-2011 08:40:09
A:PRLL31
CryoF %FUL
A:PRSPWE
CryoF RPM
A:PRSPDE
CryoY RPM
D:P1TR12
CryoY DEGK
A:PREVBY
CryoF %OPE
A:PRPI16
Pbar4 PSIG
A:PRTI7
CryoY PSIG
A:PRPI31
Pbar4 PSIG
22 09:00
23 09:00
24 09:00
25 09:00
26 09:00
T1 = Sa 22-JAN-2011 09:00:00
T2 = We 26-JAN-2011 09:00:00


Acc to MI Efficiency
Average 97.4500
MI Efficiency
Average 99.9655
MI to RR Transfer Efficiency
Average 99.0325
Acc to RR Transf
Average 96.4877
22949
22954
22960
22965
22971



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 =>				562.19			541.08	96.24%	97.40%	97.48%	94.95%	71	23	2.7095	1.968	1.9593
	Daily Average =>				562.19			541.08					71	23			
22971	Wednesday, January 26, 2011	6:28	24.98	6.18	21.52	269.55	290.00	20.91	97.16%	97.00%	98.42%	95.47%	3	1	2.627	1.784	1.963
22970	Wednesday, January 26, 2011	5:41	25.37	6.68	21.44	249.48	269.96	20.76	96.81%	95.64%	95.58%	91.42%	3	1	2.758	2.021	1.99
22969	Wednesday, January 26, 2011	4:51	25.58	6.50	21.79	229.29	250.10	21.14	97.05%	98.03%	96.41%	94.51%	3	1	2.714	2.023	1.976
22968	Wednesday, January 26, 2011	4:03	27.58	6.93	23.38	207.37	229.68	22.75	97.31%	97.40%	97.09%	94.56%	3	1	2.726	1.976	1.962
22967	Wednesday, January 26, 2011	3:09	26.11	6.62	22.17	186.53	207.79	21.55	97.18%	98.10%	100.15%	98.25%	3	1	2.682	1.983	1.979
22966	Wednesday, January 26, 2011	2:13	29.06	7.41	24.38	163.50	186.91	23.62	96.91%	98.07%	97.33%	95.45%	3	1	2.762	2.069	1.972
22965	Wednesday, January 26, 2011	1:16	25.49	6.34	21.81	142.97	163.95	21.03	96.44%	98.34%	97.42%	95.81%	3	1	2.743	2.084	1.955
22964	Wednesday, January 26, 2011	0:27	25.44	6.68	21.49	122.68	143.34	20.69	96.26%	97.53%	98.84%	96.40%	3	1	2.81	2	1.975
22963	Tuesday, January 25, 2011	23:39	26.71	6.82	22.59	101.23	122.94	21.89	96.90%	98.81%	98.29%	97.12%	3	1	2.725	1.996	1.978
22962	Tuesday, January 25, 2011	22:47	26.91	7.07	22.62	79.80	101.43	21.82	96.46%	96.52%	95.52%	92.20%	3	1	2.627	1.919	1.949
22961	Tuesday, January 25, 2011	21:55	26.62	6.66	22.71	58.29	79.97	21.91	96.48%	98.59%	97.66%	96.28%	3	1	2.641	2.011	1.965
22960	Tuesday, January 25, 2011	20:58	60.20	7.04	58.17	5.17	58.53	54.66	93.97%	96.45%	97.14%	93.69%	5	1	3.475	2.461	1.923
22959	Tuesday, January 25, 2011	18:41	37.48	9.53	30.55	350.80	379.55	29.18	95.49%	97.22%	97.23%	94.53%	3	1	3.08	2.145	1.925
22958	Tuesday, January 25, 2011	17:23	25.81	6.53	22.03	330.97	351.75	21.09	95.72%	96.97%	97.23%	94.28%	3	1	2.691	1.918	1.951
22957	Tuesday, January 25, 2011	16:34	27.08	6.78	22.98	309.80	331.49	22.10	96.19%	97.25%	96.70%	94.04%	3	1	2.674	1.931	1.952
22956	Tuesday, January 25, 2011	15:42	26.08	6.62	22.18	289.23	310.46	21.58	97.31%	97.37%	96.74%	94.19%	3	1	2.607	1.989	1.963
22955	Tuesday, January 25, 2011	14:53	26.97	6.89	22.79	268.11	289.81	22.00	96.53%	97.02%	96.32%	93.46%	3	1	2.664	2.008	1.959
22954	Tuesday, January 25, 2011	12:32	25.67	4.45	23.17	247.13	269.35	22.34	96.45%	97.53%	97.20%	94.79%	3	1	2.249	1.514	1.912
22953	Tuesday, January 25, 2011	11:34	25.03	6.50	21.29	227.19	247.42	20.21	94.93%	98.45%	98.16%	96.64%	3	1	2.595	1.966	1.99
22952	Tuesday, January 25, 2011	10:44	25.23	6.51	21.47	207.09	227.51	20.64	96.17%	97.19%	98.52%	95.75%	3	1	2.68	1.894	1.974
22951	Tuesday, January 25, 2011	9:47	26.57	4.49	23.54	184.89	207.48	22.91	97.32%	98.16%	99.52%	97.69%	3	1	2.252	1.457	1.906
22950	Tuesday, January 25, 2011	8:55	26.43	6.60	22.40	163.88	185.25	21.65	96.65%	96.49%	97.05%	93.64%	3	1	2.68	2.05	1.971
22949	Tuesday, January 25, 2011	8:01	30.92	7.84	25.73	139.75	164.15	24.64	95.76%	97.54%	98.23%	95.82%	3	1	2.857	2.064	1.975