

# 2010-10-13 Wednesday Morning Notes

Tuesday, October 12, 2010

3:11 PM

## On-call:

- Wednesday and Thursday: DVM

## Stacking

- Controls experts changed out the M:IP107 power supply
- Stacking Numbers
  - <stacking rate> = 26.7 mA/hr
  - <production> = 25.0 pbar/Mp
  - <POT> = 8.43 Tp
- Overnight (20:00 to 02:00) not including large stack
  - <stacking rate> = 28.0 mA/hr
  - <production>=25.8 pbar/Mp
  - <POT>=8.44 Tp

## Transfers

- Had a problem with the stacktail not gaiting off for transfers. Settings peeker showed that the commands were going out at the correct time, but both the pin switch and medium level amp stayed on. No errors were reported by the sequencer. Rebooted PBCOOL front end. All seemed better. <http://www-bd.fnal.gov/cgi-mach/machlog.pl?nb=pbar10&action=view&page=268&anchor=093248&hilite=09:32:48->
- This is similar to a problem on the previous day, where the sequencer didn't see the \$94 after a set of transfers and did not turn the stacktail back on.
- Unstacked 446E10 in 57 transfers in 19 sets.
- Stacking efficiency = 96.8%

## PreVault Access

- Check on AP1 vacuum.
- Cooldown 1.25 hours?
- Turbo need an hour
- Leak check 4 hours.

<b>Pbar</b>				
<b>ID</b>	<b>Requestor</b>	<b>Title</b>	<b>Location</b>	<b>Type</b>
<a href="#">12509</a>	Gollwitzer, Keith	Inspection of PreVault Inspection of Pbar tunnel; search for water leaks and ground water etc.	PreVault enclosure	Misc
<a href="#">12500</a>	Gollwitzer, Keith	Inspection of Transport Inspection of Pbar tunnel; search for water leaks and ground water etc.	Transport enclosure	Misc
<a href="#">12499</a>	Gollwitzer, Keith	Inspection of PreVault/Target Inspection of Pbar tunnel; search for water leaks and ground water etc.	PreVault/Target enclosure	Misc

<a href="#">12497</a>	Drendel , Brian	Leak Check M:IP107  M:IP701 is tripping off. It looks like we have a vacuum leak in the vicinity of EB6. It would be helpful to complete a leak check of the area. We would like to line this up with other naturally occurring downtime.	PreVault Enclosure	Vacuum
<a href="#">12491</a>	Sprosty , Susan	ODH EXH FANS  QUARTERLY MAINT.PM.FOR ODH EXH FANS FESS ASSET #AP183,AP184,AP185,AP186,AP187	PBAR TUNNEL	FESS / Utilities
<a href="#">12474</a>	Drendel , Brian	LCW Manifold Leak on A1B3  A1B3 has an LCW leak on the LCW manifold. The leak can be seen if you look at the manifold from the downstream end of the magnet. Under the 3" in the center of the manifold, there is a very slow LCW weeper coming from the threads on that connection. This is just above the small orange hose connector labeled "9."	Pbar Rings	Water
<a href="#">12471</a>	Drendel , Brian	D1Q5 LCW hose replacement  D1Q5 has a slow dripper on the fitting for the orange hose that goes to the LCW return header.	Pbar Rings	Water
<a href="#">12470</a>	Gollwitzer, Keith	Inspection of Pbar Rings  Inspection of Pbar tunnel; search for water leaks and ground water etc.	Rings enclosure	Misc
<a href="#">12469</a>	Drendel , Brian	Rollaround Console Doesnt Work  Stochastic Cooling guys report that the Thinwire Ethernet rollaround cart console was not working when they tried to use it in the tunnel in the A30 region. The Thinnet repeater in the AP30 service building was power cycled, which did not fix the problem. We need the Network Guys to look at the Thinnet to see if it is operational.	Pbar Rings	Controls
<a href="#">12468</a>	Leveling, Anthony	Store 10 mm-7 in coffin  10 mm-7 lens/transformer was removed from service on 8/21 following development of a transformer ground fault. While installing 10mm-1 on lens module #2, discovered that the upstream lens water line needs to be reworked so that the module water line can be connected. Drop 10 mm-1 from module #2, rework upstream water line, and finish installation of 10 mm-1 onto lens module #2.	APO upper vault	Target Station
<a href="#">12450</a>	Leveling, Anthony	November target air blower check  Perform periodic maintenance on target blower in November 2010. Last maintenance was on October 4.	APO Target Hall	Target Station
<a href="#">12406</a>	Drendel , Brian	ARF1 calibration  After changing out the Acopian +5V power supply in the ARF1	AP50	Low Level RF

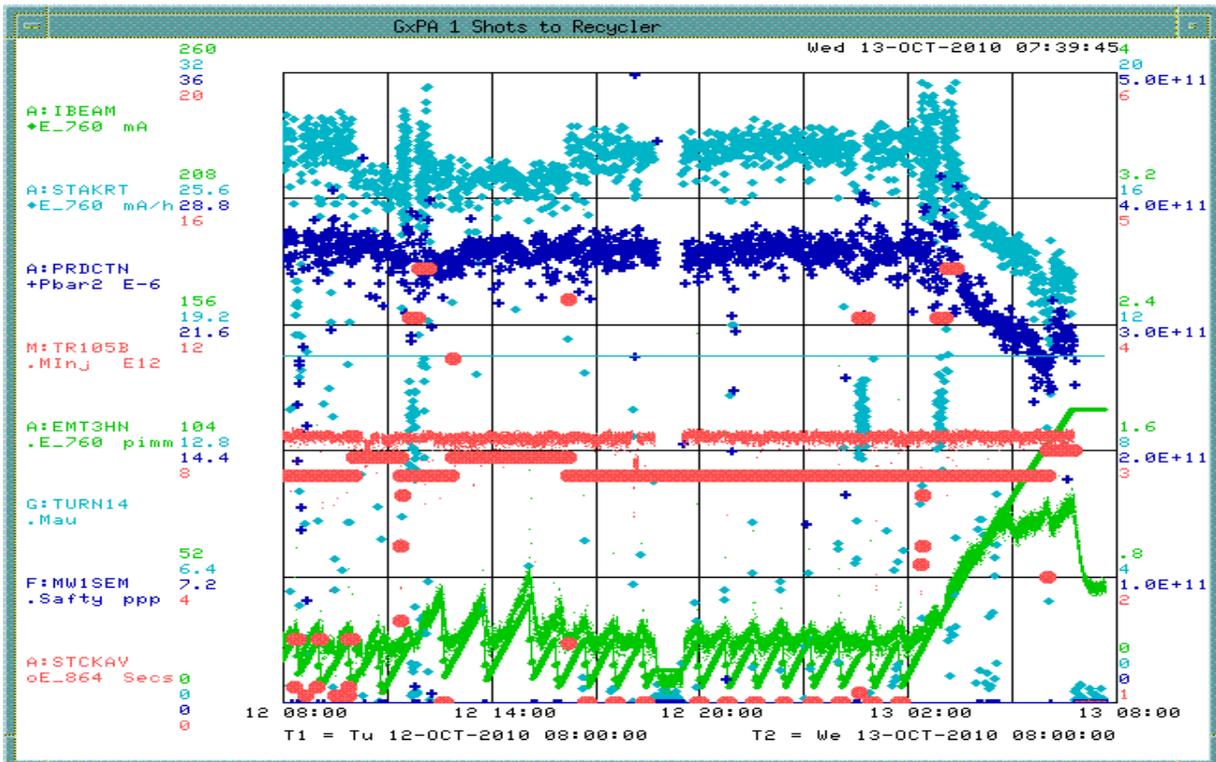
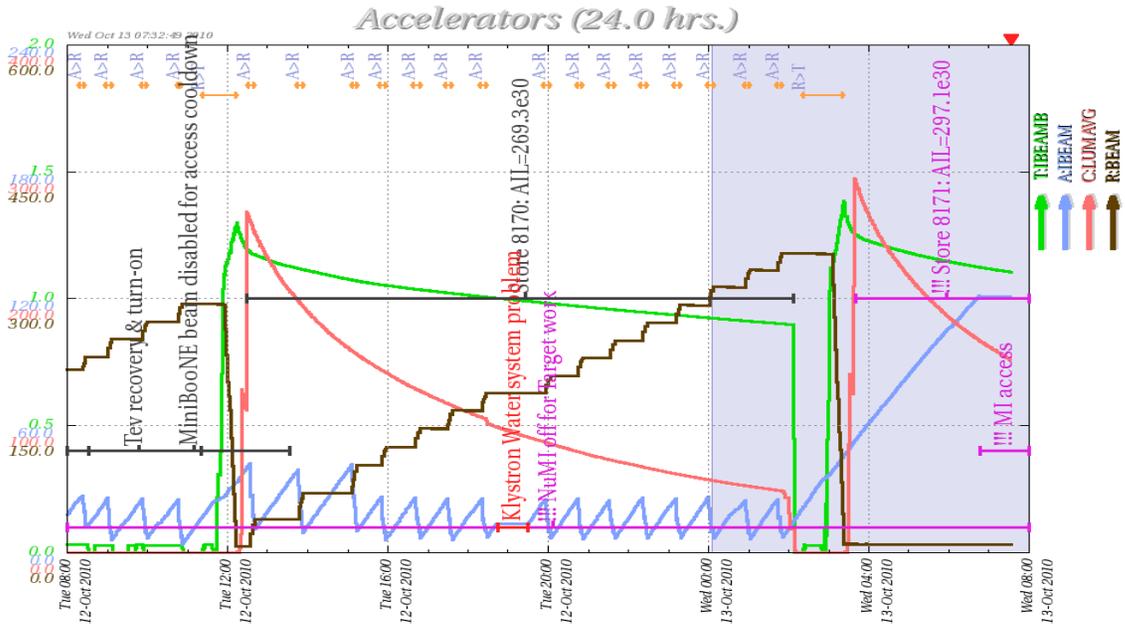
		LLRF, the output of the ARF1 amplitude curve is saturated. One hour of no stacking time is needed to recalibrate the output.		
<a href="#">12378</a>	Drendel, Brian	D:EKIK Module #1 Power Supplies  D:EKIK module #1 is starting to show some timing drift. During a shutdown of a day or longer, it would be nice to open up the oil-filled thyatron tank and check the brick power supplies.	AP10 Service Building	Power Supply
<a href="#">12345</a>	Vander Meulen, David	D:V4TW01 Tripps  D:V4TW01 is tripping on reverse power. A bad cable was replaced in the tunnel, but the problem is in the tank, which means we have to let up vacuum. The job including vacuum pump down is a minimum of 6 hours.	D30 Tunnel	Stochastic Cooling
<a href="#">12253</a>	Leveling, Anthony	Install new shielding blocks  New concrete shielding blocks are to be installed for the JASMIN experiment. Install shield blocks at some opportunistic access when the shield blocks become available. Estimated arrival is now late August/early September.	APO upper vault	Target Station
<a href="#">12240</a>	Sievert, Ken	Connect BV500H to A50 CIA Crate  Terminate cable and connector on valve, modify crate to accept valve status.	A50	Vacuum
<a href="#">9310</a>	Obrycki, Mark	Sled drawings/ panel schedules  Inspect breaker panels in tunnel	AP-10 tunnel	ES&H / Interlocks
Total Requests: 17				

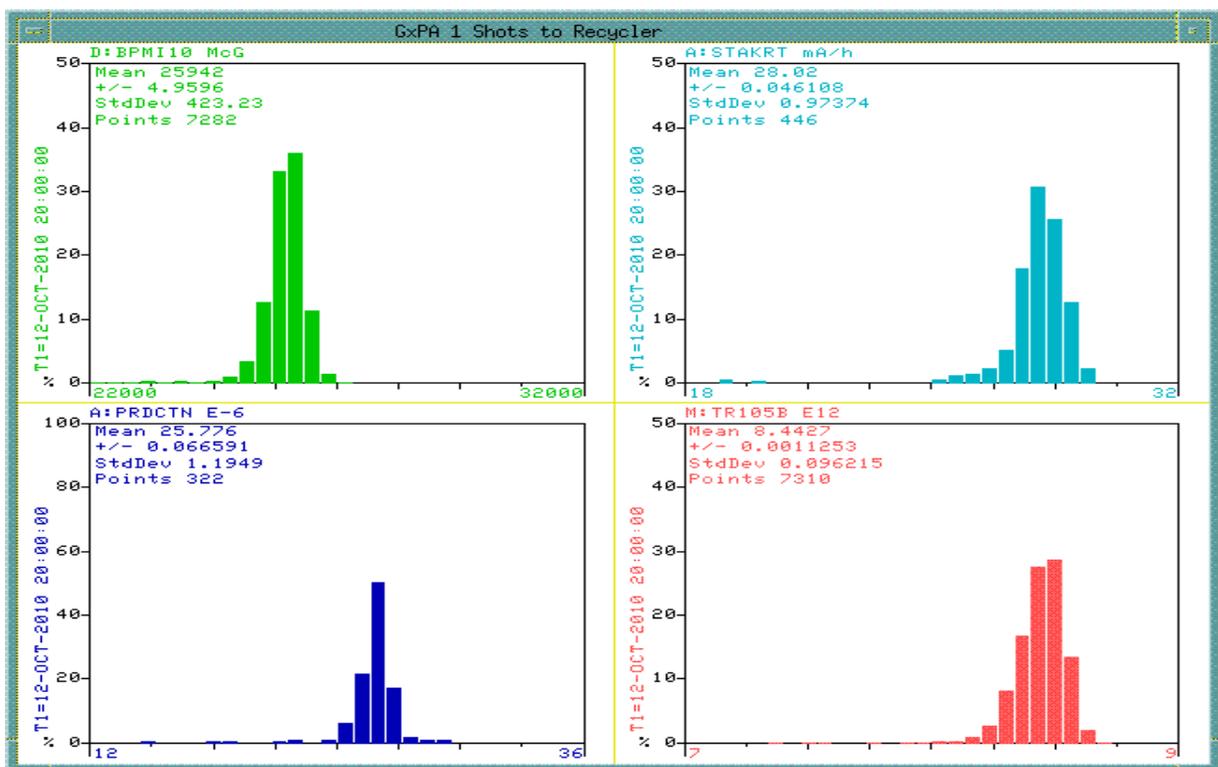
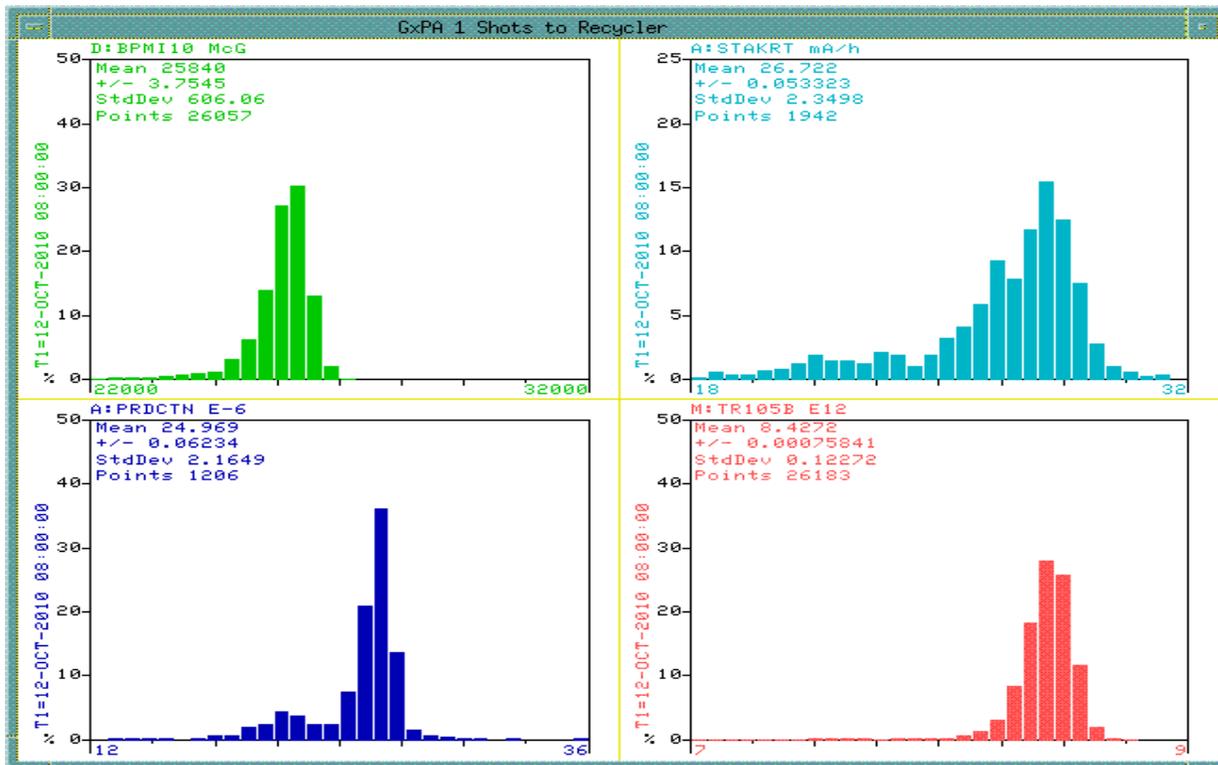
## The Numbers

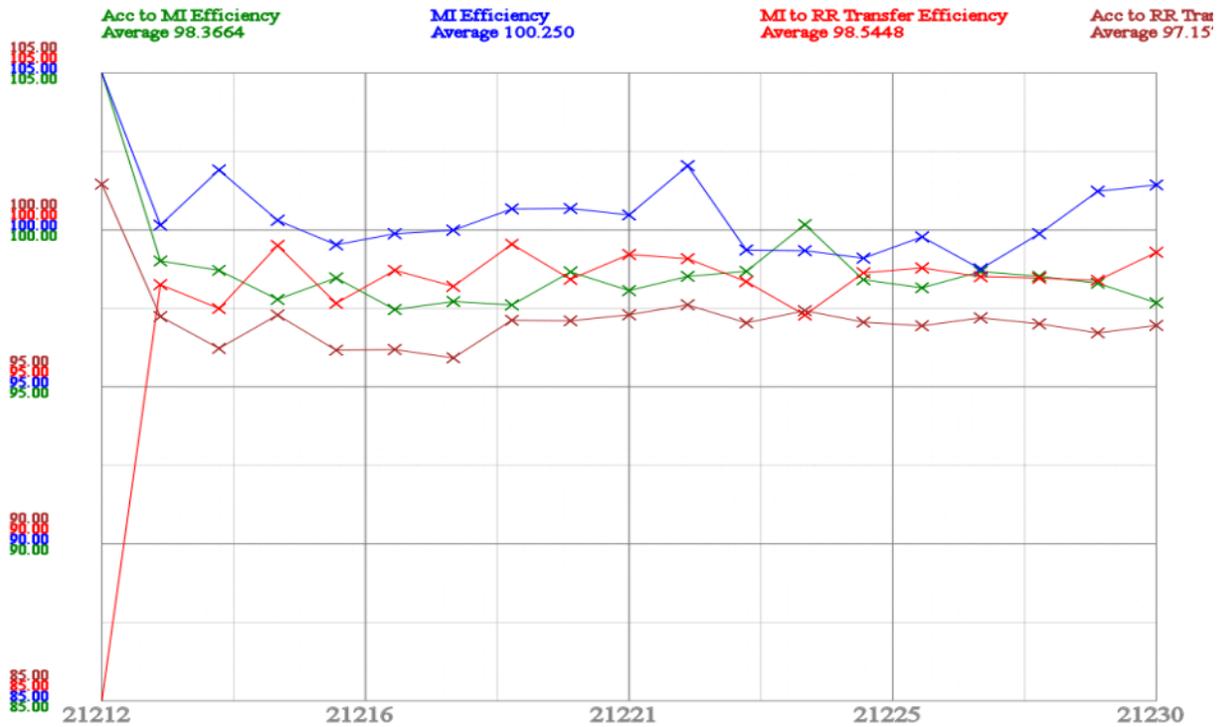
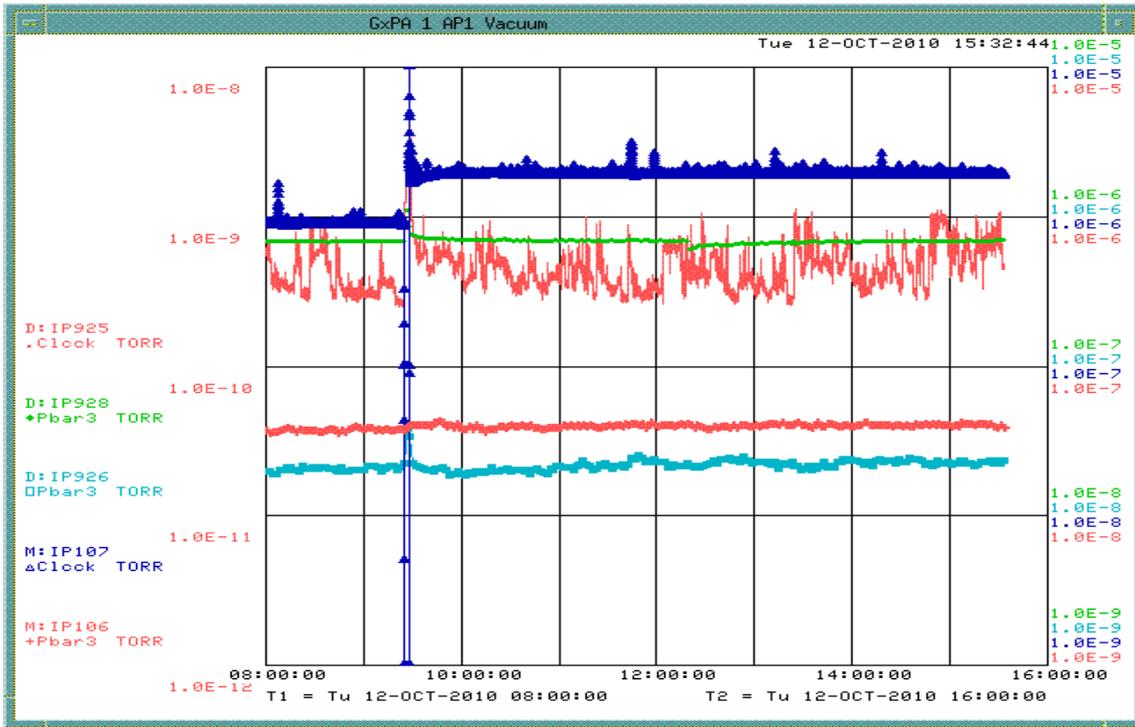
- Stacking
  - Pbars stacked: 582.62 E10
  - Time stacking: 22.82 Hr
  - Average stacking rate: 25.53 E10/Hr
- Uptime
  - Number of pulses while in stacking mode: 28177
  - Number of pulses with beam: 27303
  - Fraction of up pulses was: 96.90%
- The uptime's effect on the stacking numbers
  - Corrected time stacking: 22.11 Hr
  - Possible average stacking rate: 26.35 E10/Hr
  - Could have stacked: 601.27 E10/Hr
- Recycler Transfers
  - Pbars sent to the Recycler: 467.54 E10
  - Number of transfers : 60

- Number of transfer sets: 20
  - Average Number of transfer per set: 3.00
  - Time taken to shoot including reverse proton tuneup: 00.21 Hr
  - Transfer efficiency: 97.26%
- Other Info
- Average POT : 8.43 E12
  - Average production: 25.32 pbars/E6 protons

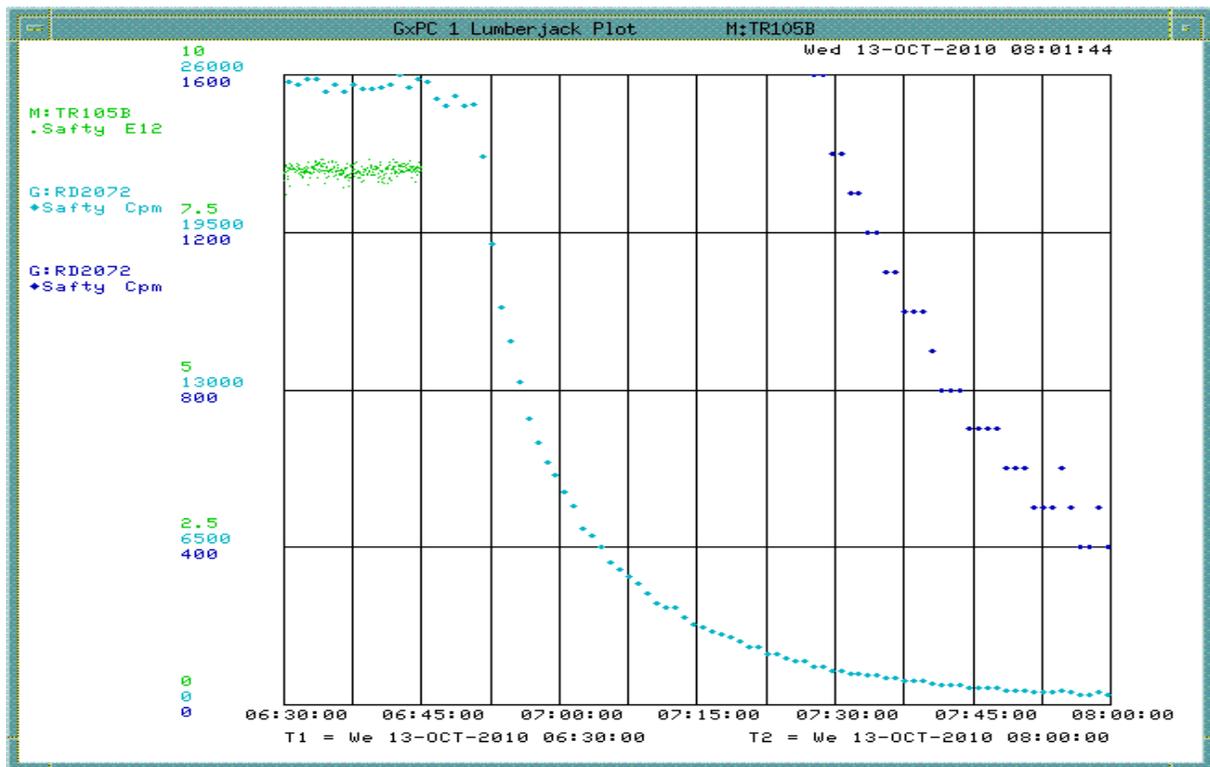
The Plots







Column 1 Number _0_Pbar Transfer Shot #	Column 4 Number_3 Transfer Time	Column 21 Number _20_A:1 BEAMB sampled on \$91 (A:BEA M7), E10	Column 22 Number _21_A:1 BEAMB sampled on \$94 (A:BEA M9), E10	Unstacked (mA)	Column 23 Number _22_R: BEAMS (R:BEA ME0[0]) pre E10	Column 24 Number _23_R: BEAM (R:BEA ME0[1]) post E10	Stashed	Acc to RR Eff	Acc to MI Eff	Acc to MI2 Eff	Acc to MI * Acc to MI2 Efficiency	Tran sfers	Sets	Column 5 Number _4_Acc Horizontal Emittanc e	Column 6 Number _5_Acc Vertical Emittanc e	Column 8 Number _7_Acc Longitu dinal Emittanc e	
<b>Totals =&gt;</b>				<b>446.47</b>			<b>432.33</b>	<b>96.83%</b>	<b>98.21%</b>	<b>98.43%</b>	<b>96.67%</b>	<b>57</b>	<b>19</b>	<b>4.4108</b>	<b>4.6366</b>	<b>1.8993</b>	
<b>Daily Average =&gt;</b>				<b>446.47</b>			<b>432.33</b>					<b>57</b>	<b>19</b>				
21230	Wednesday, October 13, 2010	1:43	25.23	6.49	21.35	333.73	354.22	20.72	97.06%	98.03%	99.04%	97.09%	3	1	3.882	4.834	1.883
21229	Wednesday, October 13, 2010	0:55	25.00	6.15	21.46	313.67	334.28	20.76	96.76%	98.32%	99.53%	97.86%	3	1	4.22	4.737	1.95
21228	Wednesday, October 13, 2010	0:00	26.56	6.54	22.62	292.33	314.16	21.97	97.12%	98.62%	98.79%	97.43%	3	1	4.447	4.427	1.944
21227	Tuesday, October 12, 2010	23:11	25.84	6.52	21.88	271.56	292.71	21.28	97.29%	98.70%	97.72%	96.45%	3	1	4.201	4.654	1.917
21226	Tuesday, October 12, 2010	22:22	26.18	6.54	22.32	250.37	271.89	21.65	96.96%	97.87%	97.87%	95.79%	3	1	4.303	4.455	1.977
21225	Tuesday, October 12, 2010	21:33	25.44	6.39	21.63	229.80	250.67	21.01	97.15%	98.29%	96.92%	95.27%	3	1	4.209	4.517	1.946
21224	Tuesday, October 12, 2010	20:44	25.49	6.26	21.78	208.97	230.08	21.22	97.41%	99.61%	98.91%	98.53%	3	1	4.022	4.438	1.938
21223	Tuesday, October 12, 2010	19:56	25.26	6.25	21.59	188.30	209.16	20.97	97.13%	98.56%	98.20%	96.78%	3	1	4.249	4.841	1.977
21222	Tuesday, October 12, 2010	18:20	25.55	6.58	21.52	167.83	188.69	20.99	97.53%	98.28%	100.35%	98.63%	3	1	4.318	4.686	1.921
21221	Tuesday, October 12, 2010	17:30	25.73	6.10	22.17	146.50	168.01	21.58	97.34%	98.01%	98.55%	96.58%	3	1	4.159	4.581	1.947
21220	Tuesday, October 12, 2010	16:41	26.25	6.32	22.51	124.92	146.66	21.85	97.06%	98.82%	99.14%	97.97%	3	1	4.372	4.547	1.946
21219	Tuesday, October 12, 2010	15:50	26.41	6.15	22.74	103.12	125.07	22.07	97.06%	97.37%	97.51%	94.95%	3	1	4.351	4.687	1.951
21218	Tuesday, October 12, 2010	15:06	41.80	10.06	34.23	70.65	103.28	32.74	95.66%	97.53%	97.54%	95.13%	3	1	6.293	5.629	1.882
21217	Tuesday, October 12, 2010	13:46	39.41	9.42	32.49	39.69	70.79	31.19	95.98%	97.37%	97.03%	94.48%	3	1	5.691	5.182	1.914
21216	Tuesday, October 12, 2010	12:34	42.21	10.70	34.04	7.21	39.81	32.69	96.04%	98.40%	98.14%	96.57%	3	1	5.747	5.228	1.905
21215	Tuesday, October 12, 2010	10:45	25.08	3.90	22.35	272.55	294.15	21.74	97.29%	97.98%	98.23%	96.25%	3	1	3.203	3.893	1.904
21214	Tuesday, October 12, 2010	9:53	26.03	6.40	21.86	252.01	272.97	21.04	96.25%	98.92%	100.73%	99.64%	3	1	4.156	4.582	1.945
21213	Tuesday, October 12, 2010	9:01	25.87	5.91	22.03	231.10	252.36	21.42	97.20%	98.58%	98.65%	97.25%	3	1	3.969	4.128	1.935
21212	Tuesday, October 12, 2010	8:21	26.65	11.90	15.91	215.94	231.33	15.45	97.10%	97.07%	98.91%	96.00%	3	1	4.013	4.049	1.304



PC D44 Lumberjack Plotter<NoSets>

D44 Lumberjack Datalogger

Plot Title =

X=TIME

Y=M TR105B ,G:RD2072 ,G:RD2072 ,A PRDCTN

I= 0 , 0 , 0

Hours Fit equations Exp Inverse

G:RD2072  $y = \exp(-4.918117\text{hrs}^5 + 17.19812\text{hrs}^4 - 22.85058\text{hrs}^3 + 15.25659\text{hrs}^2 - .117592\text{hrs} + 10.2077)$

76 76 Read  
76 76 Plotted

Y=A: , , , IBEAM  
I= 0 , 0 , 0  
F= 10 , 10 , 10 , 250  
RunCo RunCo RunCo Pbar  
No Fit No Fit No Fit No Fit  
Params Params Params Params

Read  
Plotted

T1=We 13-OCT-2010 06:50:00 T2=We 13-OCT-2010 08:10:00 Dec T2 Now Interval  
Skip X Divs 12 Resize Interpolation Integrate Editor  
Trace Y Divs 4 Average Fold  
Symbol Overwrite Previous Next StdDev LJScanJob  
Dot Group SDA FTP User Recall Save Fit Equations  
Data Source CryoN (DCE42) List Data Copy Min/Max  
All Device Plot List = 1 Export Data Enable Calc Points

Messages

CNS 215, Reading economy is done for G:RD2072  
CNS 215, Reading economy is done for G:RD2072  
CNS 215, user=Pbar-BD-BLM, record # 34 - saved  
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