

2010-10-20 Wednesday Morning Notes

Wednesday, October 20, 2010
6:00 AM

On-call

- Tuesday: Jim Morgan
- Wednesday: Tony Leveling
- Thursday: Jim Morgan
- Friday: Keith Gollwitzer
- Saturday: Tony Leveling
- Sunday: Dave Vander Muelen

Stacking

- Did a lot of tuning yesterday , including centering Debuncher movable devices (has been going on for a few days).
- There were AP-50 rad trips overnight due to the Overthrunder mis-steering beam at the end of AP-2. The vertical 733 BPM (D:BPM733) appears to have developed a large offset that led to the steering errors. For now I have masked that BPM from the Overthrunder and we have turned it back on.
Pasted from <<http://www-bd.fnal.gov/cgi-mach/machlog.pl?nb=pbar10&action=view&page=last&frame=2&scroll=true&load=>>
- Stacking Numbers
 - <stacking rate>=25.3 mA/hr
 - <production>=22.9 pbar/E6 protons
 - <POT>=8.37e12

Transfers

- Transfer Numbers
 - Unstacked 302e10 in 36 transfers over 12 sets
 - Overall efficiency 93%
 - The third transfer of set #21357 was lost on the owl shift after critical devices tripped off due to a rad trip.
Pasted from <<http://www-bd.fnal.gov/cgi-mach/machlog.pl?nb=pbar10&action=view&page=276&frame=2&anchor=&hilite=&load=>>
 - Take out the bad last three transfers 21357, 21360, 21361 and we have 97.4%

Requests

- Cycle time
 - Make all shot setup timelines 2.6 seconds
 - Tune on cycle-time. Try 2.4 and 2.2 seconds.

The Numbers

- Stacking
 - Pbars stacked: 302.24 E10
 - Time stacking: 16.37 Hr
 - Average stacking rate: 18.46 E10/Hr
- Uptime
 - Number of pulses while in stacking mode: 21090
 - Number of pulses with beam: 15768
 - Fraction of up pulses was: 74.77%

- The uptime's effect on the stacking numbers
 - Corrected time stacking: 12.24 Hr
 - Possible average stacking rate: 24.69 E10/Hr
 - Could have stacked: 404.25 E10/Hr

- Recycler Transfers
 - Pbars sent to the Recycler: 298.49 E10
 - Number of transfers : 35
 - Number of transfer sets: 12
 - Average Number of transfer per set: 2.92
 - Time taken to shoot including reverse proton tuneup: 00.12 Hr
 - Transfer efficiency: 93.13%

- Other Info
 - Average POT : 8.35 E12
 - Average production: 22.96 pbars/E6 protons

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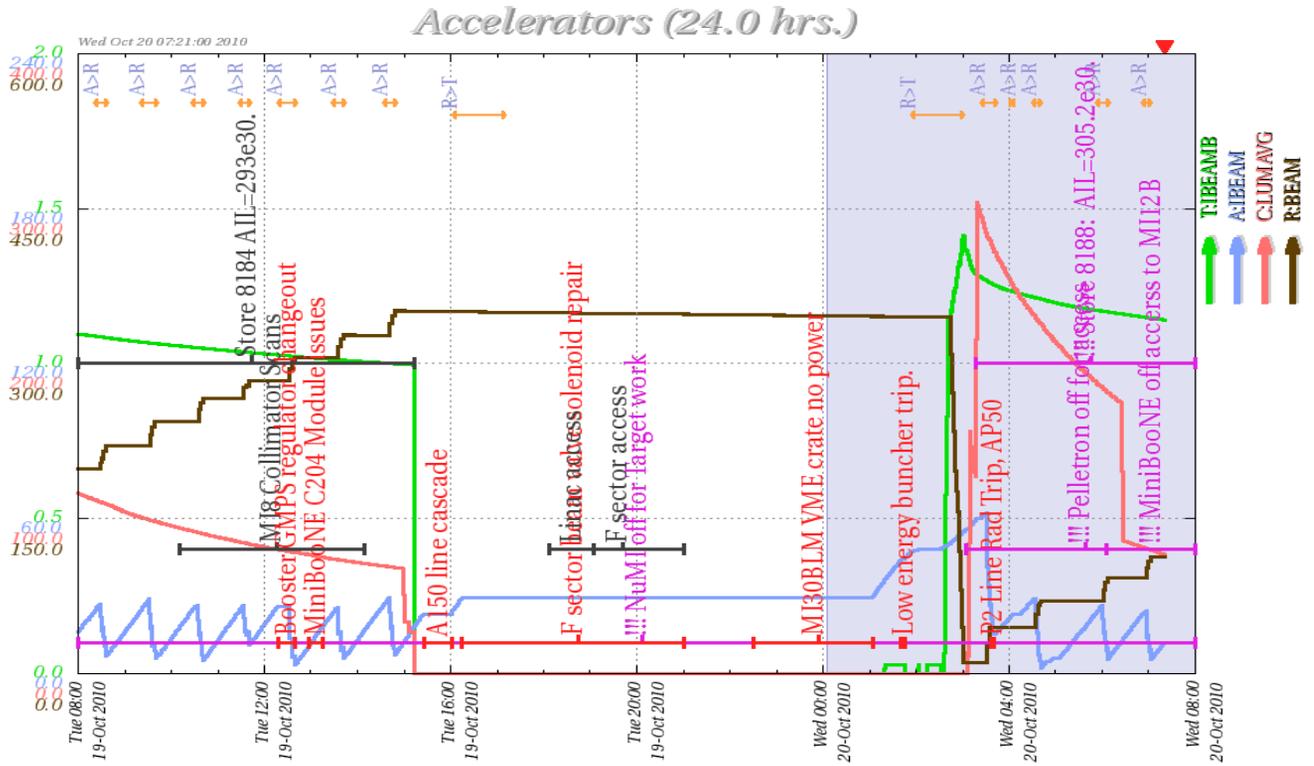
Worklist

ID	Requestor	Title	Location
12539	Drendel, Brian	Repair AP1 line vacuum leak: Leak check and perform permanent repair of the vacuum leak on the downstream AP1 line. The leak is believed to be inside of the shielding wall past the sweeping magnet and Tor109. The vacuum pipe goes into the shielding wall by about 2' and is difficult to get to. This job requires taking out Tor109, the sweeping magnet and equipment.	PreVault Enclosure Vacuum
12538	Drendel, Brian	Insert vacuum window US of PV8T: This is a temporary fix to the downstream AP1 line vacuum leak until we can arrange enough no-stacking time to complete the permanent repairs. We would take the spool piece out between PV8T and PQ9A and insert a vacuum window assembly with a pump out port. The hardware for this still has to be built. Upstream of the vacuum window could then be pumped down to normal vacuum, while downstream would be roughed.	PreVault Enclosure Vacuum
12536	Peterson, David	A40 Fan Status Check: The A40 Circulating Fan status is bad. Check to see if it is a sensor problem or fan problem.	A40 Circulating Fan ES&H / Interlocks
12535	Gollwitzer, Keith	Inspection of PreVault: Inspection of Pbar tunnel; search for water leaks and ground water etc.	PreVault
12520	Wisner, Bernard	Repair shunt D:QS706: The shunt has an offset current of 0.5A. This shunt normally runs at 0A. Refer to Pbar Elog at http://www-bd.fnal.gov/cgi-mach/machlog.pl?nb=pbar10&action=view&page=269&anchor=143636&hilite=14:36:36 for details.	Transport Power Supply
12500	Gollwitzer	Inspection of Transport: Inspection of Pbar tunnel; search for water leaks	Transport

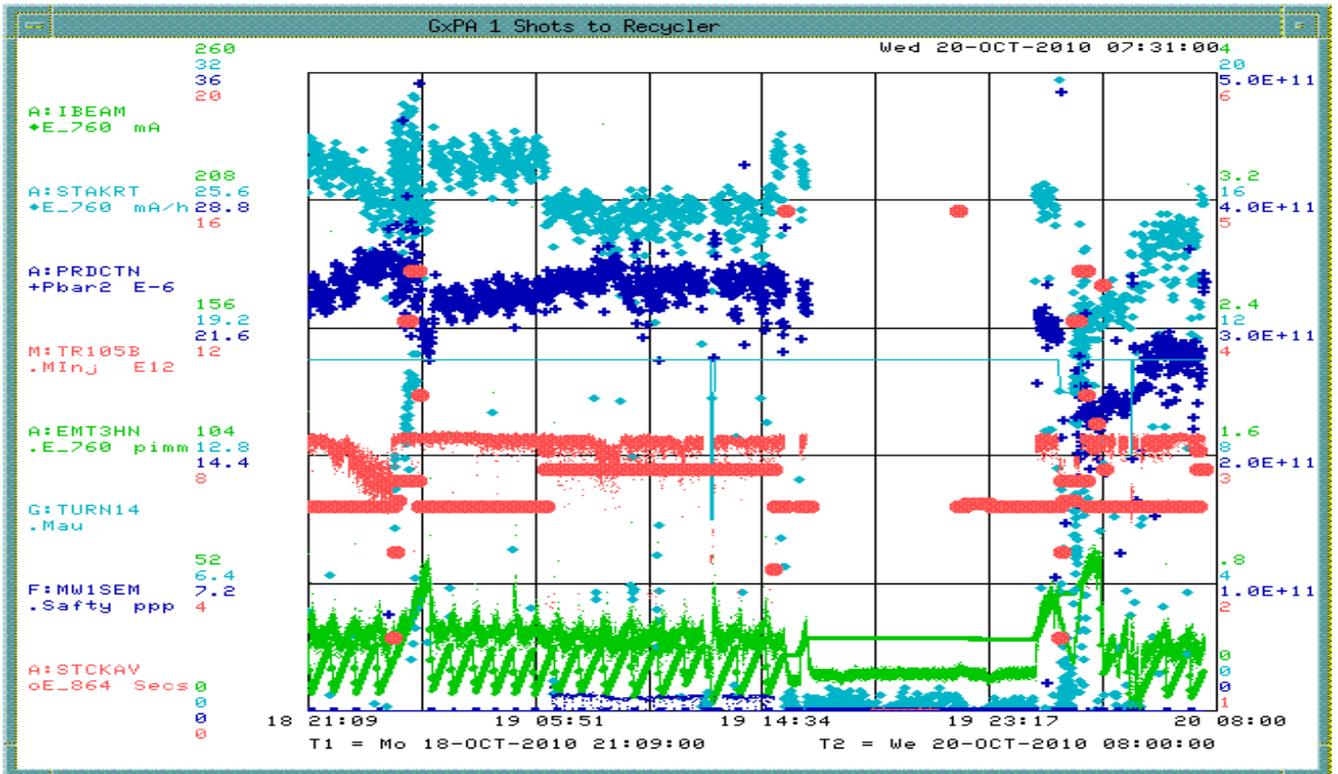
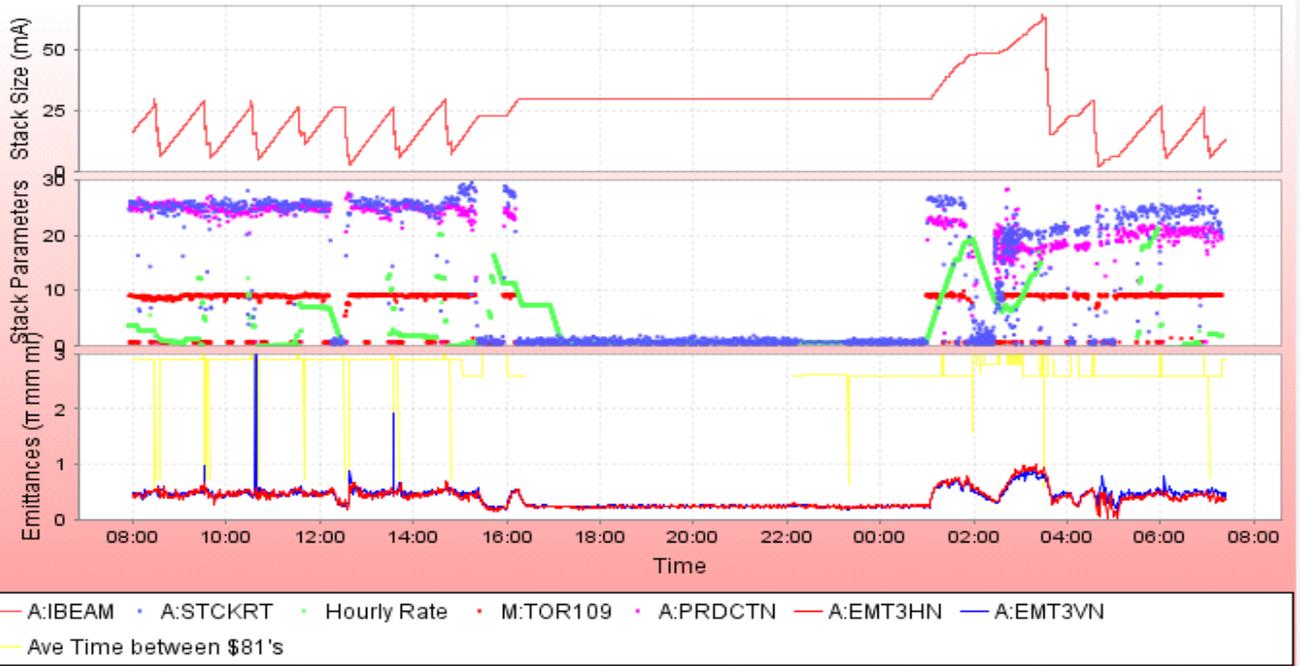
	, Keith	and ground water etc.	
12499	Gollwitzer , Keith	Inspection of PreVault/Target: Inspection of Pbar tunnel; search for water leaks and ground water etc.	PreVault/ Target
12491	Sprosty, Susan	ODH EXH FANS: QUARTERLY MAINT.PM.FOR ODH EXH FANS FESS ASSET #AP183,AP184,AP185,AP186,AP187	PBAR TUNNEL: FESS / Utilities
12474	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
12471	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
12470	Gollwitzer , Keith	Inspection of Pbar Rings: Inspection of Pbar tunnel; search for water leaks and ground water etc.	Rings enclosure
12469	Drendel, Brian	Rollaround Console Doesn't 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
12468	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.	AP0 upper vault Target Station
12450	Leveling, Anthony	November target air blower check: Perform periodic maintenance on target blower in November 2010. Last maintenance was on October 4.	AP0 Target Hall: Target Station
12406	Drendel, Brian	ARF1 calibration: After changing out the Acopian +5V power supply in the ARF1 LLRF, the output of the ARF1 amplitude curve is saturated. One hour of no stacking time is needed to recalibrate the output.	AP50 Low Level RF
12378	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 thyratron tank and check the brick power supplies.	AP10 Service Building Power Supply
12345	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
12253	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.	AP0 upper vault

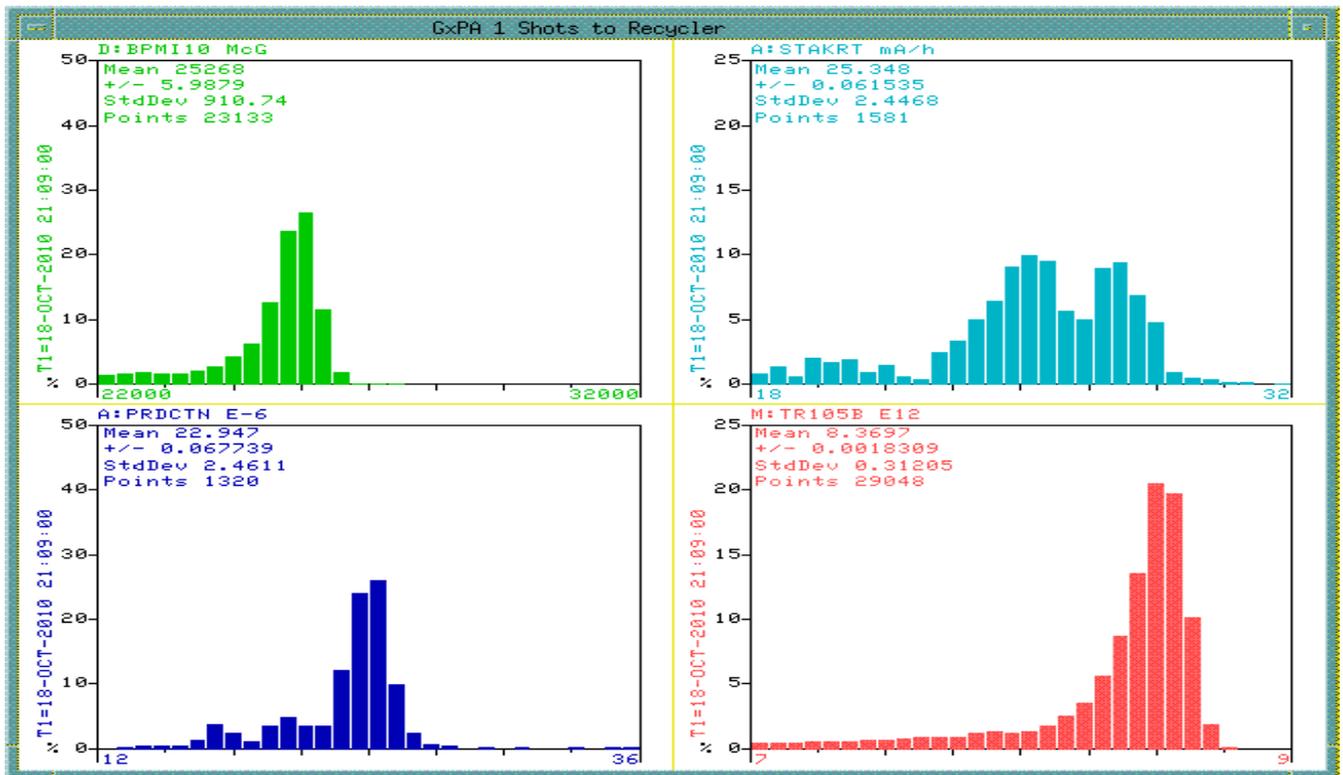
			Target Station
12240	Sievert, Ken	Connect BV500H to A50 CIA Crate: Terminate cable and connector on valve, modify crate to accept valve status.	A50 Vacuum
9310	Obrycki, Mark	Sled drawings/ panel schedules: Inspect breaker panels in tunnel	AP-10 tunnel ES&H / Interlocks

The Plots



Tue Oct 19 08:00:00 CDT 2010 -- Wed Oct 20 08:00:00 CDT 2010





PB S53 DIGITAL STATUS

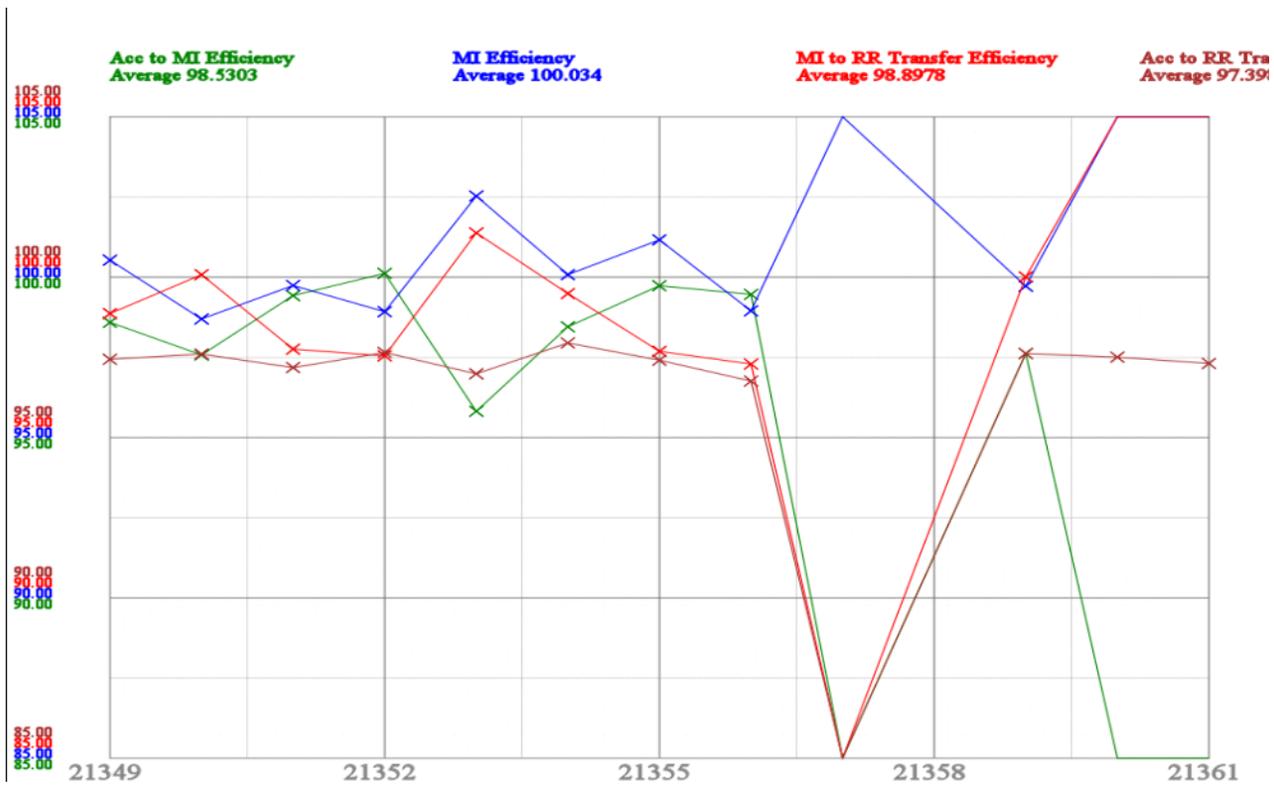
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S53    DIGITAL STATUS                               Pgm_Tools AGG CONTRL
PARAM* *SA X-A/D X=TIME Y=M:HV100 ,B CIG ,I IP9102,I IP9103 *RESET
*save  --- Eng-U I= 0 I= 0 , 2.5 , 2.5 *ON
        s_MI AUTO F= 6 F= 8000 , 10 , 4 , 4 *OFF
.global .linac. .booster .mi. .tev. .sy. .p-bar. .misc. .collider

M:HV100 PB&PBR1-2 / SF2 Level See Alarm Log
More Info
Local/Remote Control... Remote 1 Invalid Command... OK
Int/Ext Reference... Present 1 bit-30 .....
V/I Regulation... Current 1 MDAT Missing... OK
Ground Fault... No 1 TCLK Missing... OK
Magnet Over Temp... High 0 bit-27 .....
DC Over Current... OK 1 bit-26 .....
Interlocks Complete... Open 0 bit-25 .....
is a sum of:
SCR Failure 0 bit-24 .....
Magnet Overtemp #2 0 bit-23 .....
AC Imbalabnce 0 bit-22 .....
SCR/Water Overtemp 0 bit-21 .....
Door Interlock 0 bit-20 .....
bit- 1 ..... 0 Energy Scaling... Off
DC On/Off... Off 0 Ramped Output... On
Messages
  
```

Ctrl-Menu
 *On
 *Off < *
 *Reset < T

 Local
 Alarm is
 ALARMING
 Speech is
 BYPASSED
 Edit



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 sfer E10	Column 24 Number_23_R: BEAM (R-BEA ME0[1]) post sfer, 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 =>				302.54			281.67	93.10%	90.50%	94.39%	85.42%	36	12	4.5108	4.4383	1.8959	
Daily Average =>				302.54			281.67					36	12				
21361	Wednesday, October 20, 2010	6:56	24:33	5.40	20.94	92.56	112.80	20.34	97.14%	51.30%	97.75%	50.15%	3	1	4.015	4.623	1.963
21360	Wednesday, October 20, 2010	6:01	26:82	5.59	22.96	70.34	92.67	22.36	97.37%	88.97%	98.18%	87.36%	3	1	4.155	4.676	1.951
21359	Wednesday, October 20, 2010	4:34	29:11	2.31	26.80	44.46	70.48	26.10	97.40%	97.49%	97.13%	94.69%	3	1	3.223	3.517	1.828
21357	Wednesday, October 20, 2010	3:31	62.56	15.18	48.70	10.23	44.57	34.51	70.86%	72.84%	72.53%	52.83%	3	1	6.915	6.047	1.774
21356	Tuesday, October 19, 2010	14:41	29:55	7.11	25.02	327.23	351.29	24.22	96.81%	99.19%	98.58%	97.78%	3	1	4.911	4.824	1.953
21355	Tuesday, October 19, 2010	13:34	26:07	5.60	22.83	305.80	327.87	22.24	97.45%	99.54%	100.63%	100.17%	3	1	4.454	4.5	1.913
21354	Tuesday, October 19, 2010	12:32	26:20	3.06	23.59	283.34	306.29	23.10	97.94%	98.54%	98.87%	97.43%	3	1	3.36	2.903	1.77
21353	Tuesday, October 19, 2010	11:33	26:46	10.74	18.21	266.24	283.79	17.69	97.17%	97.80%	99.48%	97.29%	3	1	4.712	4.422	1.969
21352	Tuesday, October 19, 2010	10:34	26:60	5.03	23.16	244.16	266.64	22.64	97.72%	99.99%	98.97%	98.96%	3	1	4.787	4.194	1.848
21351	Tuesday, October 19, 2010	9:32	29:02	5.63	25.24	220.15	244.55	24.50	97.10%	99.02%	99.17%	98.20%	3	1	4.444	4.482	1.907
21350	Tuesday, October 19, 2010	8:29	27:35	6.49	23.33	197.89	220.49	22.75	97.53%	98.04%	96.91%	95.01%	3	1	4.767	4.497	1.889
21349	Tuesday, October 19, 2010	7:31	26:33	7.03	21.78	177.06	198.16	21.21	97.39%	98.32%	99.14%	97.48%	3	1	4.387	4.574	1.986

Column 1 Number _0_Pbar Transfer Shot #	Column 4 Number_3 Transfer Time	Column 21 Number _20_A-I BEAMB sampled on \$91 (A:BEA M7), E10	Column 22 Number _21_A-I BEAMB sampled on \$94 (A:BEA M9), E10	Unstacked (mA)	Column 23 Number _22_R: BEAMS (R:BEA ME0[0]) pre fer E10	Column 24 Number _23_R: BEAM (R:BEA ME0[1]) post fer, E10	Stashed	Acc to RR Eff	Acc to MI Eff	Acc to MI2 Eff	Acc to MI * Acc to MI2 Efficiency	Trans fers	Sets	Column 5 Number _4_Acc Horizont al Emittanc e	Column 6 Number _5_Acc Vertical Emittanc e	Column 8 Number _7_Acc Longitu dinal Emittanc e	
Totals =>				209.95			204.46	97.39%	98.67%	98.71%	97.40%	36	9	4.3383	4.2126	1.8959	
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												3					
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												3					
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21350	Tuesday, October 19, 2010	8:29	27.35	6.49	23.33	197.89	220.49	22.75	97.53%	98.04%	96.91%	95.01%	3	1	4.767	4.497	1.889
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