

# 2008-02-11 Monday Morning Pbar Notes

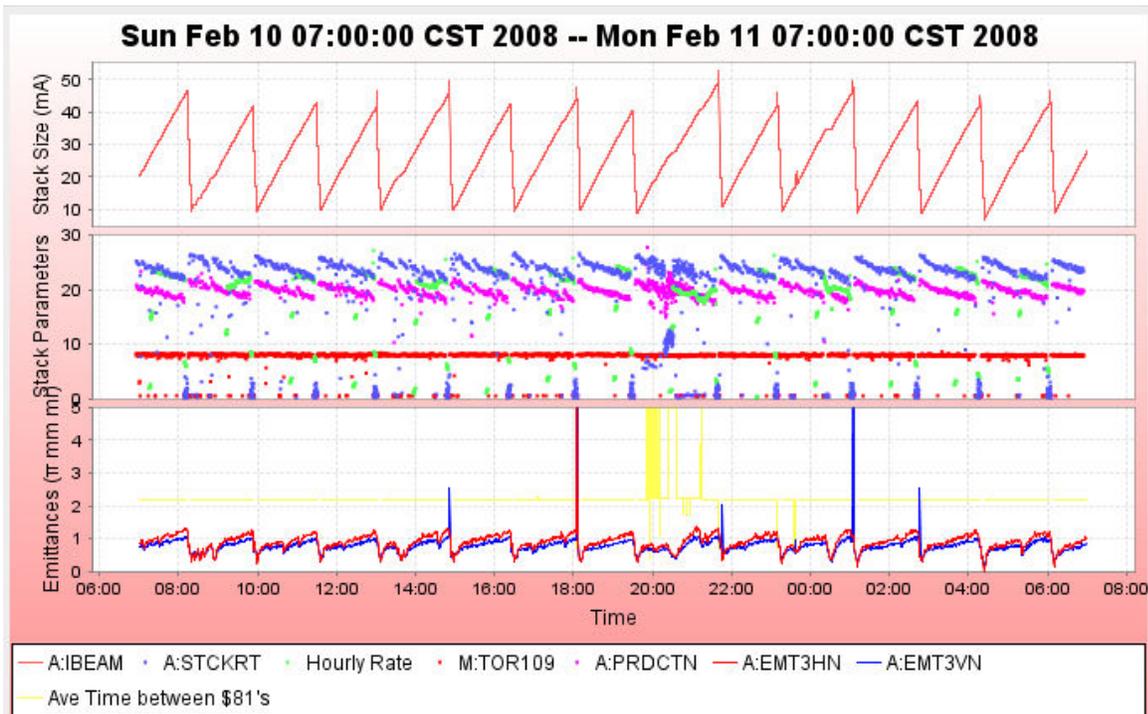
Sunday, February 10, 2008  
6:01 PM

## Access

Pbar Access on 2-8-08				
ID	Requestor	Title	Location	Type
<a href="#">7411</a>	Bair, Chuck	On 1/18/2008, ground water dripping on a porcelain support was found to be shorting the electrical buss for A:IB on the ceiling over A4Q7. That support was removed temporarily to clear the ground fault. During this access, a new unistrut bus support was anchored to the ceiling for the A:IB and A:LQ buses about 1 foot upstream of the original location. This is far enough to get the support out of the way of the ground water leak.	Acc/Deb Rings	Power Supply
<a href="#">7480</a>	Gollwitzer, Keith	Inspection of Pbar Rings revealed no surprises. The small leak on the LCW bleader valve located near the A10-2 stub is no worse.	Rings enclosure	Misc
	Pasquinelli	Debuncher Momentum Band 3 TWT #3 failed. The dual coupler at the output of the TWT was replaced. The TWT is not back in service and the alarms have been enabled.	Pbar Rings	Cooling
<a href="#">7503</a>	Sheahan, Patrick	PA's were replaced on DRF1-3, DRF1-4 and DRF1-7. DRF1-6 had a capacitor in the driver power supply fail on startup. This was repaired. All RF are running and we have a sum fanback voltage of around 5.5MV.	DRF1	High Level RF
<a href="#">7509</a>	Wisner, Bernard	One of two new septum transformers were tested in septum DESEPV. This new transformer was recently built and purchased for the Septum "Pulse Power Supply Power Modules." The new component appeared to function and was left in the supply.	AP10	Kicker Systems

## Stacking:

- *Don't forget to cut out numbers and details when giving report. Try to talk in generalities and not mention numbers or specific device names unless there is a major problem.*
- Protons on target ran 7.5e12 most of the weekend 11 turns. Dropped to 7.4e12 by the end of the weekend.
- Best stacking hour on Friday was 24.5mA, close to best stacking conditions. Stacking fell off a few percent over the weekend to both upstream performance degradation as well as normal target performance dropping.
- Paul's pbar plots and numbers did not update on Sunday. Paul will re-run these today.
- Cannot connect to Java to run Java performance tools and plot this morning. Get an error connecting to DSE06 - connection refused.
- We set a record one week of stacking with 2,863mA.
- Friday
  - D:Q724 tripped during the evening shift.
- Saturday
  - **15:10:20**- The Pbar overthruster was restarted from the most recent "I Like It" file because I:VT703 was exceeding its maximum limit. Lowered the flattop value for I:LAM52 on the Pbar cycles to bring down the current in I:VT703.
- Sunday
  - **20:53:50**- Rebooted PBCOOL VME at the request of DVM. P34 was getting MOOC\_NO\_SUCH\_OID errors and settings to the core momentum systems were not taking. After the reboot, things worked normally again.
  - After the reboot, D59 still bombs when trying to unbyypass D:PV3AU1.
- Monday
  - Tony made a target move just prior to the 9am meeting.



## Transfers:

- MI collimators were pulled all the way out for this weekend.
- Transfers for the most part good. There was not a noticeable gain by pulling the collimators out.
- Some sub-par transfers on Saturday and Sunday evening.
  - Saturday
    - 7105 - 88.2%, Saturday, 2/9 12:26:16pm
    - 7106 - 87.1%, Saturday, 2/9 1:49:46pm
    - Emittance management.
  - Sunday
    - 7122 - 88.1%, Sunday, 2/10 4:24:51pm
    - 7123 89.7%
    - 7124 - 87.9%
    - 7125 - 86.7%
    - 7136 - 89.2% - Sunday, 2/10 11pm
- Problems
  - 7109 - missing IBEAM2
  - 7098 - I:BEAMS large nubmer

		2/11/2008	7:00:00 AM			1312.601			1197.83	91.26%	2723.549	1268.429	207.49%	96.63%	113	38
7130	4605	Monday, February 11, 2008	6:04:36 AM	43.188	8.988	34.200	170.766	201.776	31.01	90.67%	32.457	33.125	94.90%	96.86%	3	1
7129	4604	Monday, February 11, 2008	4:18:43 AM	41.388	7.388	34.000	139.783	171.435	31.65	93.09%	32.813	31.796	96.51%	93.52%	3	1
7128	4603	Monday, February 11, 2008	2:43:16 AM	43.388	8.988	34.400	109.445	140.415	30.97	90.03%	32.778	33.760	95.28%	98.14%	3	1
7127	4602	Monday, February 11, 2008	1:05:25 AM	45.988	9.188	36.800	76.284	109.805	33.52	91.09%	34.799	36.203	94.56%	98.38%	3	1
7126	4601	Sunday, February 10, 2008	11:10:34 PM	42.188	9.388	32.800	47.523	76.765	29.24	89.15%	30.893	31.560	94.19%	96.22%	3	1
7125	4600	Sunday, February 10, 2008	9:40:50 PM	49.387	10.987	38.400	14.814	48.129	33.32	86.76%	36.174	36.572	94.20%	95.24%	3	1
7124	4598	Sunday, February 10, 2008	7:30:53 PM	40.588	8.988	31.600	404.095	431.891	27.80	87.96%	29.843	30.375	94.44%	96.12%	3	1
7123	4597	Sunday, February 10, 2008	6:05:23 PM	43.788	10.188	33.600	376.525	406.673	30.15	89.73%	32.469	33.734	96.63%	100.40%	3	1
7122	4596	Sunday, February 10, 2008	4:24:51 PM	42.588	9.788	32.800	350.254	379.169	28.92	88.16%	31.396	31.341	95.72%	95.55%	3	1
7121	4595	Sunday, February 10, 2008	2:51:32 PM	45.788	10.188	35.600	320.100	352.200	32.10	90.17%	34.433	34.751	96.72%	97.62%	3	1
7120	4594	Sunday, February 10, 2008	1:01:28 PM	41.788	10.188	31.600	293.468	322.231	28.76	91.02%	29.889	30.795	94.59%	97.45%	3	1
7119	4593	Sunday, February 10, 2008	11:30:21 AM	42.988	10.188	32.800	264.704	294.793	30.09	91.73%	31.461	32.964	95.92%	100.50%	3	1
7118	4592	Sunday, February 10, 2008	9:53:43 AM	41.788	9.588	32.200	235.969	265.351	29.38	91.25%	30.615	31.571	95.08%	98.05%	3	1
7117	4591	Sunday, February 10, 2008	8:13:41 AM	46.588	9.988	36.600	203.724	236.796	33.07	90.36%	35.672	34.159	97.46%	93.33%	3	1
7116	4590	Sunday, February 10, 2008	6:19:50 AM	42.787	7.388	35.399	171.152	204.339	33.19	93.75%	34.277	33.281	96.83%	94.02%	3	1
7115	4589	Sunday, February 10, 2008	4:42:40 AM	42.988	9.388	33.600	140.964	171.527	30.56	90.96%	32.092	31.694	95.51%	94.33%	3	1
7114	4588	Sunday, February 10, 2008	3:07:25 AM	42.588	8.988	33.600	110.417	141.433	31.02	92.31%	32.633	31.745	97.12%	94.48%	3	1
7113	4587	Sunday, February 10, 2008	1:31:10 AM	41.788	8.588	33.200	80.077	110.886	30.81	92.80%	32.182	32.257	96.93%	97.16%	3	1
7112	4586	Saturday, February 09, 2008	11:57:13 PM	42.188	9.388	32.800	50.158	80.378	30.22	92.13%	31.741	32.651	96.77%	99.55%	3	1
7111	4585	Saturday, February 09, 2008	10:24:48 PM	57.588	11.587	46.001	9.472	51.065	41.59	90.42%	44.523	45.700	96.79%	99.35%	3	1
7110	4583	Saturday, February 09, 2008	7:57:36 PM	40.988	9.588	31.400	312.492	341.116	28.62	91.16%	29.946	29.862	95.37%	95.10%	3	1
7109	4582	Saturday, February 09, 2008	6:31:38 PM	41.388	9.988	31.400	284.684	313.523	28.84	91.84%	30.596	29.510	97.44%	93.98%	3	1
7108	4581	Saturday, February 09, 2008	4:57:06 PM	41.188	7.388	33.800	253.908	285.568	31.66	93.67%	32.735	32.918	96.85%	97.39%	3	1
7107	4580	Saturday, February 09, 2008	3:18:54 PM	42.588	9.388	33.200	224.207	254.635	30.43	91.65%	32.535	32.190	98.00%	96.96%	3	1
7106	4579	Saturday, February 09, 2008	1:49:46 PM	42.188	11.587	30.601	198.379	225.041	26.66	87.13%	29.524	29.761	96.48%	97.25%	3	1
7105	4578	Saturday, February 09, 2008	12:22:16 PM	42.988	13.388	29.600	173.063	198.966	25.90	87.51%	28.391	28.345	95.92%	95.76%	3	1
7104	4577	Saturday, February 09, 2008	10:52:47 AM	47.588	11.388	36.200	140.133	173.639	33.51	92.56%	34.939	35.230	96.52%	97.32%	3	1
7103	4576	Saturday, February 09, 2008	9:11:32 AM	43.788	10.588	33.200	109.495	140.558	31.06	93.56%	32.323	32.870	97.36%	99.01%	3	1
7102	4575	Saturday, February 09, 2008	7:32:35 AM	46.988	9.988	37.000	75.402	109.920	34.52	93.29%	36.008	36.040	97.32%	97.41%	3	1
7101	4574	Saturday, February 09, 2008	5:53:12 AM	40.788	11.988	28.800	48.053	75.666	27.61	95.88%	28.620	27.497	99.38%	95.48%	2	1
7100	4573	Saturday, February 09, 2008	4:19:50 AM	59.588	12.988	46.600	5.930	48.493	42.56	91.34%	44.433	44.640	95.35%	95.79%	3	1
7099	4571	Saturday, February 09, 2008	1:29:36 AM	43.788	9.588	34.200	167.843	199.167	31.32	91.59%	33.402	33.331	97.67%	97.46%	3	1
7098	4570	Friday, February 08, 2008	11:55:29 PM	43.188	9.388	33.800	137.133	168.413	31.28	92.54%	1492.243	31.744	4414.92%	93.92%	3	1
7097	4569	Friday, February 08, 2008	10:23:40 PM	42.588	9.788	32.800	107.127	137.452	30.33	92.45%	31.856	30.864	97.12%	94.10%	3	1
7096	4568	Friday, February 08, 2008	8:50:41 PM	40.988	8.388	32.600	76.726	107.419	30.69	94.15%	31.620	31.549	96.99%	96.78%	3	1
7095	4567	Friday, February 08, 2008	7:21:19 PM	41.988	9.388	32.600	46.796	76.847	30.05	92.18%	31.353	31.196	96.17%	95.69%	3	1
7094	4566	Friday, February 08, 2008	5:49:29 PM	50.588	10.588	40.000	11.399	47.044	35.65	89.11%	38.175	38.886	95.44%	97.22%	3	1
7093	4564	Friday, February 08, 2008	9:02:07 AM	46.988	4.188	42.800	311.893	351.665	39.77	92.93%	41.710	41.962	97.45%	98.04%	3	1

Studies:

## Requests:

- Gain Ramping Studies
  - "Completely parasitic"
  - Take over SA#1 (bunch rotation), SA#2 (Accumulator Longitudinal profile), and the D/A VSA (Accumulator to Debuncher alignment).
  - D/A VSA also takes away the Stacktail Monitor VSA during stacking. Unstacking mode in the Accumulator VSA should be ok.

Other Notes:

- Paul's Numbers
  - Saturday
    - Most in an hour: 24.64 mA at Fri Feb 08 21:56:00 CST 2008
    - Best: 25.19 mA on 30-Jan-08
    - Average Production 17.16 e-6/proton Best: 25.41 e-6/proton on

- 01/30/2008
    - Average Protons on Target 6.70 e12 Best: 8.77 e12 on 07/24/2007
    - Largest Stack 59.59 mA Best: 271.01 mA on 11/14/2007
  - Sunday
    - Didn't update
  - Monday
    - Most in an hour: 23.68 mA at Sun Feb 10 19:10:31 CST 2008
    - Best: 25.19 mA on 30-Jan-08
    - Average Production 17.90 e-6/proton Best: 25.41 e-6/proton on 01/30/2008
    - Average Protons on Target 6.39 e12 Best: 8.77 e12 on 07/24/2007
    - Largest Stack 49.12 mA Best: 271.01 mA on 11/14/2007
- AI's Numbers
  - Cannot connect to DSE06 - was able to update later

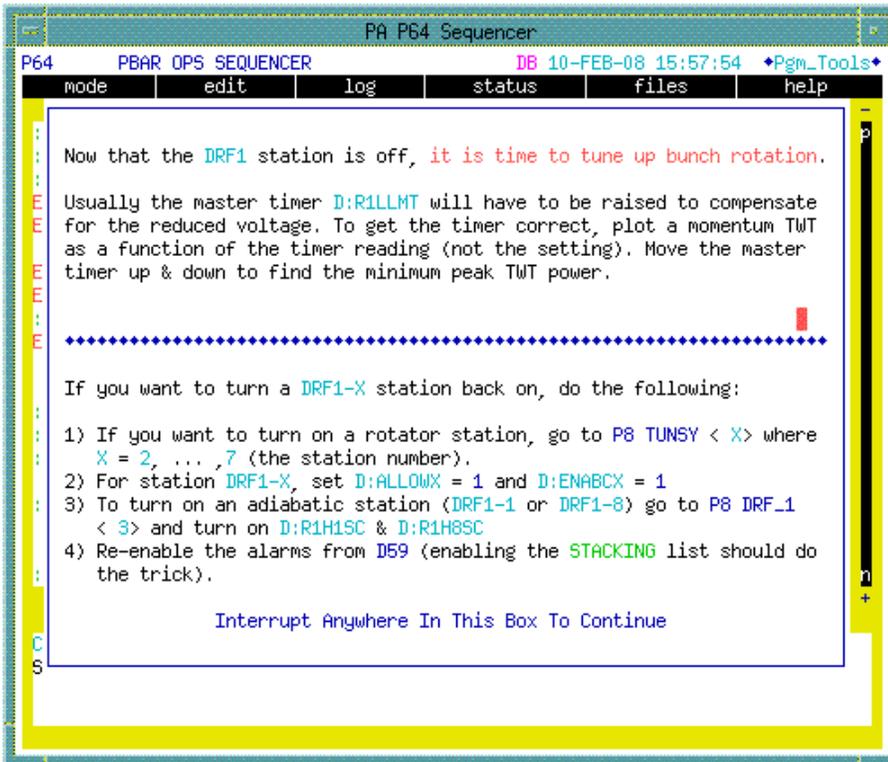
Stacking  
 Pbars stacked: 482.14 E10  
 Time stacking: 22.46 Hr  
 Average stacking rate: 21.46 E10/Hr

Uptime  
 Number of pulses while in stacking mode: 36255  
 Number of pulses with beam: 34255  
 Fraction of up pulses was: 94.48%

The uptime's effect on the stacking numbers  
 Corrected time stacking: 21.22 Hr  
 Possible average stacking rate: 22.72 E10/Hr  
 Could have stacked: 510.29 E10/Hr

Recycler Transfers  
 Pbars sent to the Recycler: 474.53 E10  
 Number of transfers : 42  
 Number of transfer sets: 14  
 Average Number of transfer per set: 3.00  
 Time taken to shoot: 01.54 Hr  
 Time per set of transfers: 06.58 min  
 Transfer efficiency: 90.68%

Other Info  
 Average POT : 7.42 E12  
 Average production: 18.96 pbars/E6 protons
- Runing without a DRF cavity. Return instructions.



Pasted from <<http://www-bd.fnal.gov/cgi-mach/machlog.pl?nb=pbar08&action=view&page=-800&button=yes&invert=yes>>

- Poor transfers on Saturday evening due to emittance management issues

