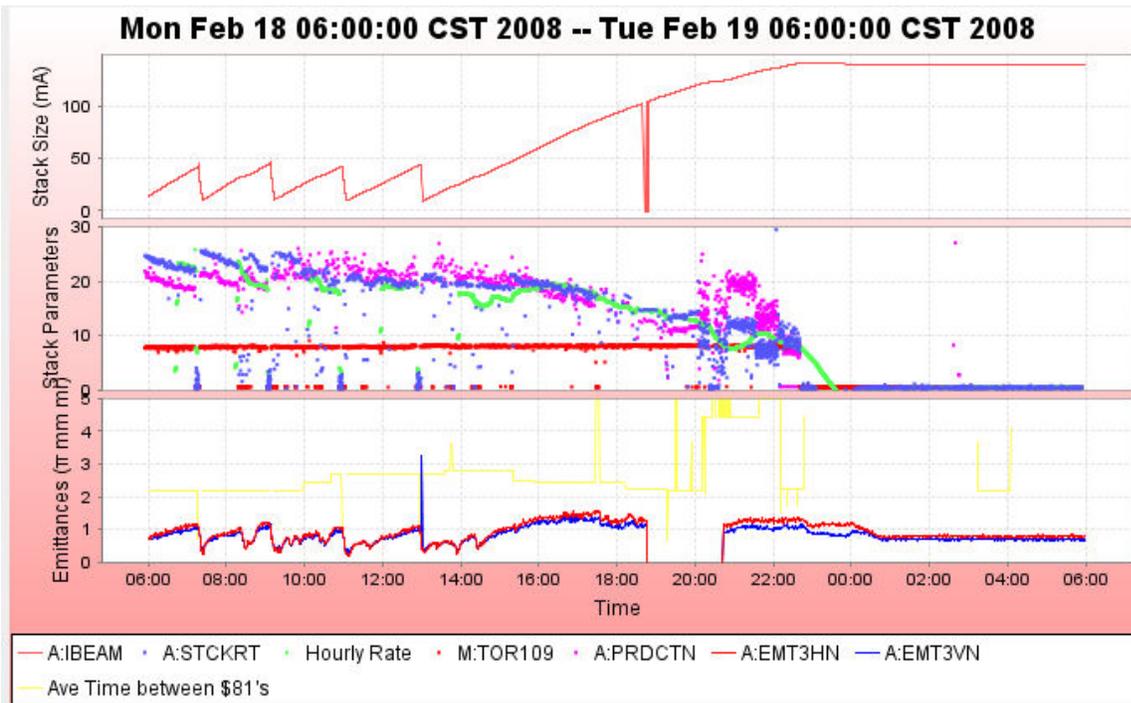


## Stacking

- Best stacking hour 23.12mA and average production was 15.83 e-6/proton
  - Both numbers are down.
  - The stacking number is down since we did not stack with small stack sizes on our optimal stacking shifts (eve and owl).
  - The production number is down largely due to stacking to the large 140mA stack.
- Serious Alarms issues:
  - We have serious controls alarm issues. It appears that anytime a Pbar front end (Pbar CAMAC front end, TWTDEB front end, AP1001 front end, etc...), that parameters get corrupted. We see this the most with the alarms properties of these parameters. The parameters spit back "no such property for device" MOOC errors when trying to access the alarms data for that device. D59 shows that all fields for a parameter are blank. A forced restore of alarms properties to each individual crate appears to restore the alarm functionality. In one case, we had parameters get wrong setting downloaded when the AP1001 front end was rebooted. This is a severe controls problem for us, and we need the help of Controls today to help resolve this.
- The P1 line permit is dropping repeatedly with I:VT701 high. Ops turned off the Oscillation Overthruster since it was pushing I:VT701 too high. This was not a problem with the overthruster. The positions coming out of the MI shifted, as could be seen on the upstream P1 BPMs. We were able to restore the P1 BPM positions with a LAM52 change. That fixed the problem and the Oscillation Overthruster was turned back on.
- At 6am, with 140mA in the stack, the Accumulator DCCT started reporting back -500mA. Each of the independent readbacks from the Accumulator DCCT were reading large negative numbers. A:IBEAM comes back through the AP1001 FE through a Keithly DVM, A:IBEAMB & V come through the Pbar CAMAC front end through MADCs, and A:BEAM comes back through the new PBeam front end at AP10. This appeared to be a DCCT problem, so we contacted Dallas, who found a hardware problem in the upstairs DCCT rack that will take a couple hours to fix.
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- L



## Transfers

- We unstacked only 134mA in 12 transfers over 4 sets.
  - Average ACC to MI efficiency was 96%
  - Average ACC to RR efficiency was 90%
  - The numbers were fairly average.

Column 1 Number_0_Pbar	Column 4 Number_3_Transfer Time	Column 21 Number_2 O_A:IBEAM B sampled	Column 22 Number_21_A:IB	Unstacked (mA)	Column 23 Number_22_R:BE	Column 24 Number_23_R:BE	Stashed	Acc to RR Eff	Column 27 Number_26_MI	Column 28 Number_27_MI Before	Acc to MI Eff	Acc to MI2 Eff	Transfer	Sets
	2/19/2008 7:00:00 AM			133.399			120.30	90.18%	128.483	127.064	96.31%	95.25%	12	4
7217	Monday, February 18, 2008 12:58:01 PM	44.188	9.788	34.400	324.789	355.898	31.11	90.43%	33.458	32.544	97.26%	94.60%	3	1
7216	Monday, February 18, 2008 10:58:31 AM	42.787	9.988	32.799	297.590	326.843	29.25	89.19%	31.465	30.300	95.93%	92.38%	3	1
7215	Monday, February 18, 2008 9:08:15 AM	45.388	11.188	34.200	267.767	298.646	30.88	90.29%	32.869	33.813	96.11%	98.87%	3	1
7214	Monday, February 18, 2008 7:17:54 AM	42.188	10.188	32.000	239.502	268.561	29.06	90.81%	30.691	30.407	95.91%	95.02%	3	1

## Studies

## Requests

- Access items (See electronic worklist)
  - Target vault
  - Replace lens system DI cartridge.
  - Inspect modules in storage rack
  - Target blower oil and air filter change
  - Target SEM calbe checkout.
  - Accumulator DCCT repairs
  - Checkout D:Q724 power supply
  - ARF1

## Other Notes

- Paul's Numbers
  - Most in an hour: 23.12 mA at Mon Feb 18 08:23:09 CST 2008
  - Best: 25.19 mA on 30-Jan-08
  - Average Production 15.83 e-6/proton Best: 25.41 e-6/proton on 01/30/2008
  - Average Protons on Target 7.27 e12 Best: 8.77 e12 on 07/24/2007
  - Largest Stack 141.91 mA Best: 271.01 mA on 11/14/2007
  
- Al's Numbers
  - Stacking
    - Pbars stacked: 238.81 E10
    - Time stacking: 15.36 Hr
    - Average stacking rate: 15.55 E10/Hr
  
  - Uptime
    - Number of pulses while in stacking mode: 23718
    - Number of pulses with beam: 19570
    - Fraction of up pulses was: 82.51%
  
  - The uptime's effect on the stacking numbers
    - Corrected time stacking: 12.67 Hr
    - Possible average stacking rate: 18.84 E10/Hr
    - Could have stacked: 289.42 E10/Hr
  
  - Recycler Transfers
    - Pbars sent to the Recycler: 133.09 E10
    - Number of transfers : 12
    - Number of transfer sets: 4
    - Average Number of transfer per set: 3.00
    - Time taken to shoot: 00.44 Hr
    - Time per set of transfers: 06.57 min
    - Transfer efficiency: 90.72%
  
  - Other Info
    - Average POT : 7.43 E12
    - Average production: 16.42 pbars/E6 protons

- Pbar HE

**Just wanted to fill everyone in on the PBar heat exchanger status. We are currently operating off the Plate and Frame Heat Exchanger (HE9). The pressure drop across the heat exchanger is about 12 psi and rising. This indicates that there is some blockage and we would like to clean it. In order to clean it, we would need to switch to the Shell and Tube Heat Exchanger (HX8). Recent events have shown us that the Shell and Tube Heat Exchanger has a significant leak and cannot be used as a backup until we fix it. We are vulnerable while we continue to run on the Plate and Frame Heat Exchanger, but we don't have an option at this time. Time is ticking but FESS has a plan.....**

**Monday, Feb. 18th**

**FESS will try to contact a contractor to work on repair of the Shell and Tube Heat Exchanger. It is a holiday for some so this may not happen until Tuesday.**

**Tuesday - Thursday**

**The contractor will work on and repair the Shell and Tube Heat**

**Exchanger.**

**Friday, Feb. 22nd**

**The Shell and Tube will be ready, but needs to have LCW run through it and polished. (overnight)**

**Monday, Feb. 25th**

**The Shell and Tube will be a viable backup and we can look at taking the Plate and Frame off line for cleaning. It**

**will take 2-3 days to clean the heat exchanger.**

**Good Luck, Dan**

○ Pbar HE Update

This schedule looks good depending upon the back-up status of HE8. Some history & possible outcomes:

HE8 had both a mechanical & chemical cleaning during the 2007 shutdown period at a cost of over \$10k.

20 tubes were plugged based on leakage & condition for a total of 22 tubes plugged[see past report on condition]. It was re-checked for leaks & was found to be ok in Oct 2007. Last week after we attempted to put back HE8 on line we found that there was LCW leakage of ~ 0.5gpm or at least 700gpd. This leakage rate would correspond to 4000 – 5000gpd of LCW if put on line in full operation which would be difficult to sustain over at least a 2 day period. There fore we need to open it back up & determine/plug any other leaking tubes.

If/when we cannot use HE8 then we would require a minimum of 2 days shutdown[plus contractor notification time] on the PBar LCW system to chemically clean the plates in place. This needs to be done about every 3 to 4 months based on our past history.

If we wait to long & the residue on the plates cannot be properly chemically cleaned off we then need to open up the plate pack which means a 1 to 2 week shutdown. This has happened on the Booster plate pack when we exceeded a dP of 15 psi. If this becomes the mode of operation we would take advantage of planned shutdowns to clean the plate pack every 2 to 4 months. The addition of the proposed 70 plates would extend this opportunity & give more flexibility in the cleaning schedule. We can also discuss other options.

Tony

○ Alarms

- Mon Feb 18 20:04:43 Lots of trouble with Debuncher TWT alarms tonight. After rebooting TWTDEB & TWTDB2 front ends, there were no alarm blocks (analog or digital) downloaded so the P34 babysitter didn't work and we could not tell when TWTs were tripping off. We ended up downloading every digital and analog alarm block manually from D59. For now the alarms work, but the Debuncher TWT front end reboots seemed to have started all the trouble. We finally go a hold of the alarm front end guy and he talked with Kevin about the download lists. More on that later.
- See MOOC alarms that say "no such property for device" Were restoring crate by crate.
- After our many reboots of various things (AP1001 in this case) old default values for our emittance monitor synthesizers were restored - the old 79 MHz values. I called Dave Peterson and he confirmed my suspicions. He told me where the parameters were and after a redirect, they are now correct.