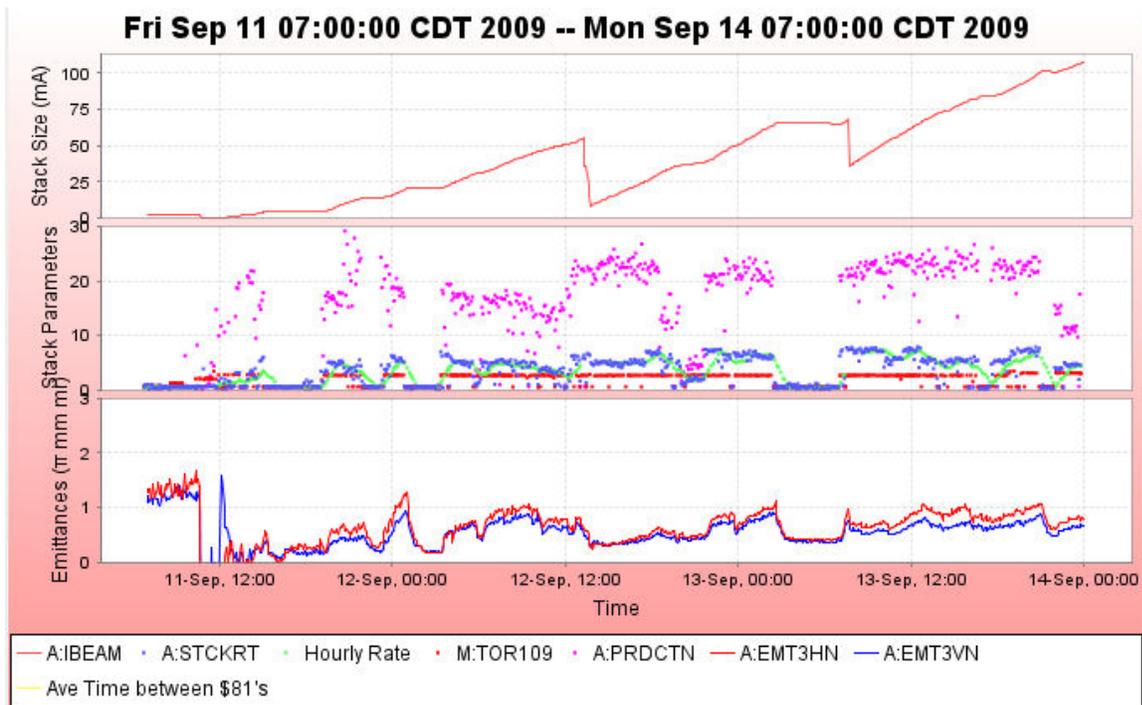


## Stacking

- Friday afternoon established stacking!
- Started exercising all of our diagnostics and tuning tools.
- Stacked
  - Stack rate peaked 7ma/hr, production in the low to mid 20s.
  - When we got above 80mA, we started running the flusher.
  - Stacked to over 135mA.
  - Look forward to transferring more and stacking at smaller stacks.
- Problems
  - Accumulator orbit was fixed.
  - Large changes need to the cryo notch filter trombone to make the system run.
  - Saturday evening, production and stacking took a dip. Experts came in to help. BPM703 was driving the overthruster. A:CH1T1 trombone stuck at 25psec, was 67.78psec
    - Try swapping card upstairs,
    - If no, have to access.
  - Also found low level trombone A:CV1T1 at a wrong value.
    - Experts investigating.
  - Our horizontal and vertical core band 1 systems are broken.
  - Somewhere we having something that turns off the new 4-8 TWTs A:CMTW03 & A:CMTW04. We'll track that down later. Meanwhile, there is a problem with the graphics page - all the hi-level trombones on the page are mapped to A:CMTH02, so all the read backs are the same.
  - DRF2 is sick. Fanback is only 73V compared to the nominal of 233V. Waveform not right on P18
  - Horizontal damper appears to be broken.
  - Lithium lens tripping
    - When I arrived at the target station both the general lens module and the conductivity meter interlocks had dropped. The conductivity LO interlock appears to be the problem. Both flow meter outputs are solid while the lens conductivity LO read back is dropping out periodically. I suggest we continue running overnight and have Bernie bypass the conductivity LO interlock tomorrow when there is a reasonable opportunity. Conductivity meters were replaced during the shutdown. The replacement outputs for both meters have been dropping out. We will be replacing the conductivity meters with new ones as soon as they become available. The HI interlock feature continues to be functional and is the one that we need to shut down the power supply in the event of a collection lens failure.
    - Bernie 5-10 minutes, will trip lens power supply.



## Transfers

- D:Q719 tripped with phase imbalance indication. Bad SCR firing card.
- Things went smoothly with the transfers. The beamline tune-up was routine. There was an error on a command to set P1 line BPM timing, but the timers appear to be OK. We took out more than we intended on the first transfer, but it worked fine. The MI BLT isn't working. **Can't close!**
- Saturday we did our first transfers

Totals =>			81.55			73.01	89.53%	95.47%	94.69%	5	2	6.7245	5.5675	1.883	
Sunday, September 13, 2009	7:37	67.98	35.37	32.62	0.03	29.01	28.98	88.84%	92.41%	92.40%	1	1	9.001	7.37	1.883
Saturday, September 12, 2009	13:19	55.43	8.29	48.93	0.03	42.22	44.03	89.98%	97.51%	96.21%	4	1	4.448	3.765	1.883

## Requests

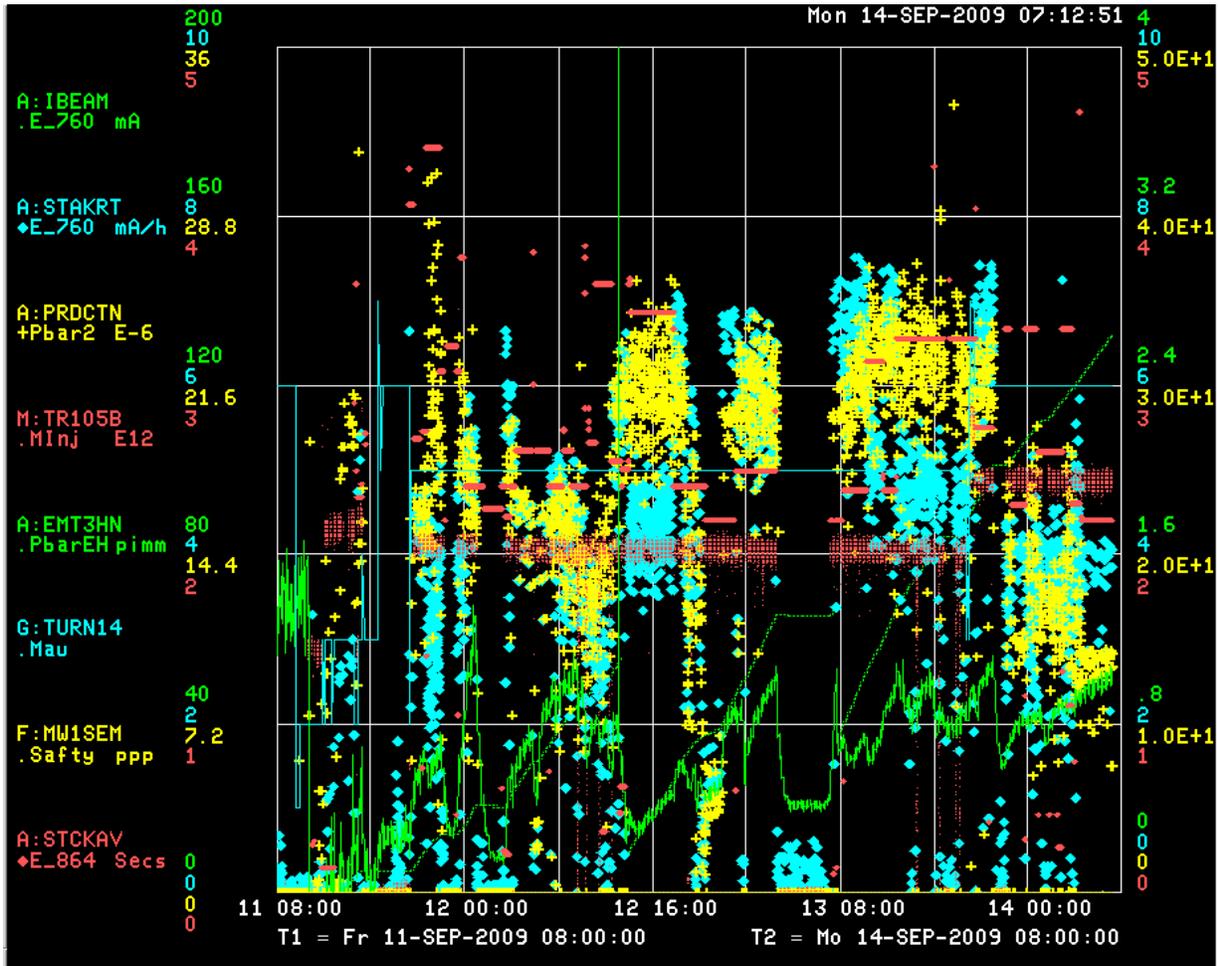
- After transfers, fix motion control or access
- 10-15 minutes - lens power supply work

## The Numbers

- Paul's Numbers
- Al's Numbers (6:50am Friday to 6:50am Monday)
  - Stacking
    - Pbars stacked: 160.77 E10
    - Time stacking: 59.13 Hr
    - Average stacking rate: 02.72 E10/Hr
  - Uptime
    - Number of pulses while in stacking mode: 71506
    - Number of pulses with beam: 58677
    - Fraction of up pulses was: 82.06%
  - The uptime's effect on the stacking numbers
    - Corrected time stacking: 48.52 Hr

- Possible average stacking rate: 03.31 E10/Hr
  - Could have stacked: 195.93 E10/Hr
- Recycler Transfers
  - Pbars sent to the Recycler: 84.30 E10
  - Number of transfers : 5
  - Number of transfer sets: 2
  - Average Number of transfer per set: 2.50
  - Time taken to shoot including reverse proton tuneup: 00.02 Hr
  - Transfer efficiency: 88.90%
- Other Info
  - Average POT : 2.14 E12
  - Average production: 12.80 pbars/E6 protons
- \* Red indicates a problem during data retrieval. See the message window for details.
- \* Missed one or more A:IBEAM7 events somewhere in the middle of the user selected time span. Calculated time shot using 13 secs per transfer.
- 

Plots



```

PB S53 DIGITAL STATUS
S53 DIGITAL STATUS                               ♦Pgm_Tools♦ AGG CONTRL
parm *SA♦ X-A/D X=TIME Y=D:P2TW01,D:P2TW02,D:P2TW03,D:P2TW04 *RESET
*save BL-- Eng-U I= 0 I= 0 , 0 , 0 , 0 *ON
      r_80 15_Hz F= 2.4 F= 200 , 200 , 200 , 200 *OFF
.global .linac.. .booster ..mi... .tev... .sy... .p-bar... .misc... collider

D:LNV Collection Lens PS Volts -See Alarm Log-

Interlocks Complete Open 0 *****CAUTION***** READ 1 *On
Safety System On 1 In case of ground fault, THIS 1 *Off < *
P.S. Over Current OK 1 P.S Over Current or Load MESSAGE 1 *Reset< T
Ground Fault No 1 Over Current 1 .....
Load Over Current OK 1 do not turn on power sup 1 .....
Capacitor Over Voltage OK 1 ply. Put image of lens READ 1 Local .
Bias Current OK 1 and pulsed magnet scope THIS 1 Alarm is
-40 Volt P.S. OK 1 trace in MCR elog and MESSAGE 0 ALARMING
-15 Volt P.S. OK 1 contact TARGET STATION 1 Speech is
+15 Volt P.S. OK 1 PERSONNEL (T. Leveling 1 BYPASSED
+75 Volt P.S. OK 1 Obie, or J. Morgan. READ 1 Edit
P.S. Temperature Normal 1 THIS 0
Ext Interlock D:LNST1 Trouble 0 OK to reset and turn on MESSAGE 1
Door Interlocks OK 1 in the event of cap over 1
Local/Remote Control Remote 1 voltage. 1
On/Off Off 0 1

Messages
No control PDB DBM_NOPROP

```