CDF Operations Summary

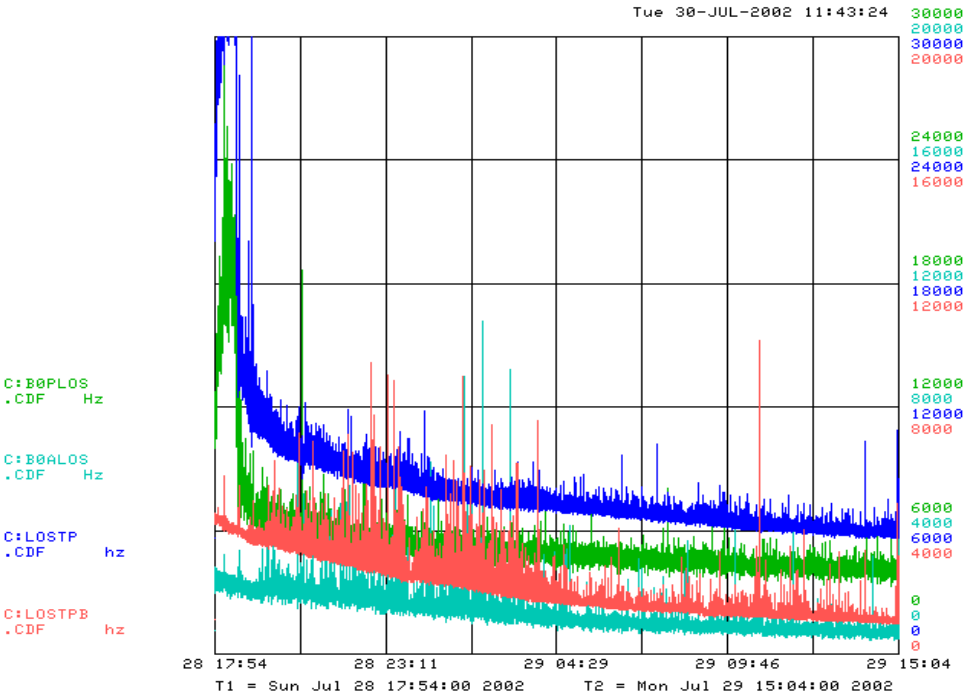
Arnd Meyer
Fermilab
August 5, 2002

- Few stores
- Running efficiently as long as losses are low

Store		Initial Lum	Duration	$L_{delivered}$/nb	L_{live}/nb	Eff
(1594	Sun 7/28	2.6E31	21.1h	887.2	659.5	74.3%)
1613	Wed 7/31	1.4E31	21.9h	426.7	295.7	69.3%
1616	Fri 8/2	2.0E31	8.7h	411.3	289.8	70.5%
1622	Sat 8/3	1.9E31	23.2h	821.5	766.6	93.3%
			53.8h	1659.5	1352.1	81.5%

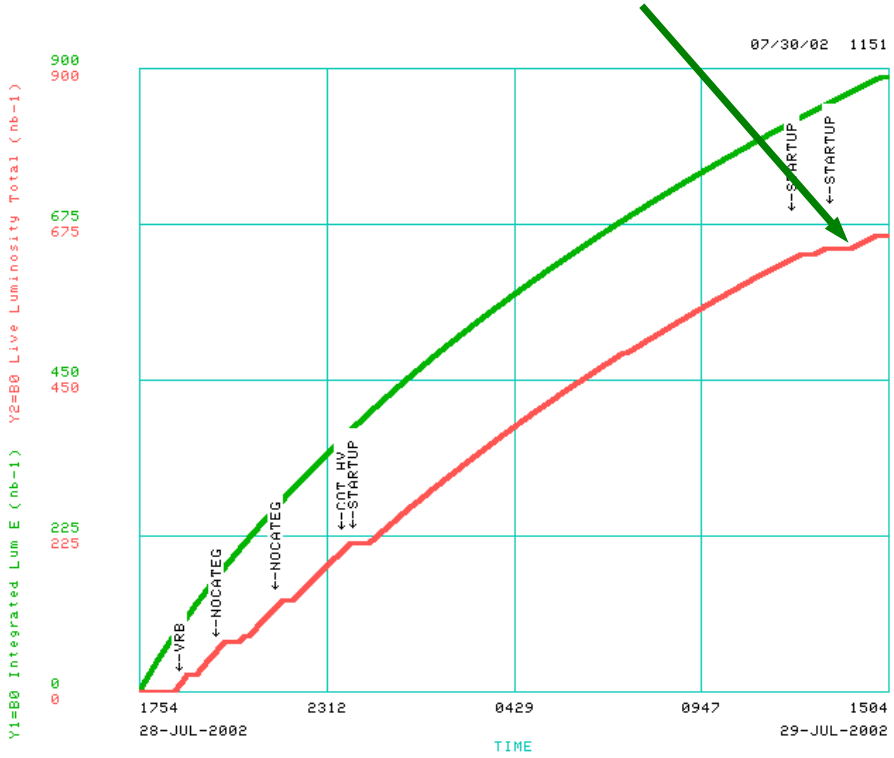
Sunday, Store 1594

Arnd Meyer
Fermilab
August 5, 2002



Initial luminosity $2.1 \cdot 10^{31} cm^{-2} s^{-1}$

Special runs (MinBias, trigger table test, XTRP firmware test)

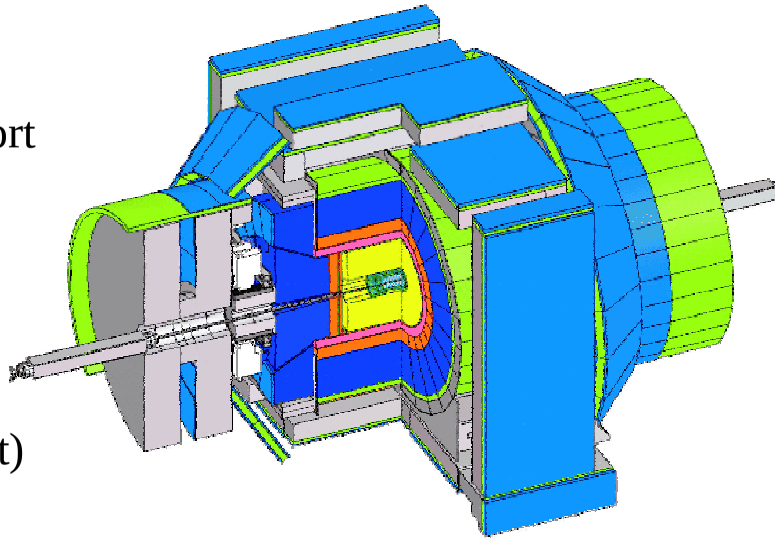


Terminated as planned Monday afternoon

Access Tuesday

Arnd Meyer
Fermilab
August 5, 2002

- 5 hours controlled access
- Silicon
  - Swapped two power supplies to work around a LV short
  - Swapped two FIB's
  - Gained 6 ladders
- Central Muon eXtension
  - Work on HV problems in wedges 21,22,23 (north west)



- Miniplugs
  - Will be able to read out all 84+84 tower channels of the Miniplugs now
  - Replaced transition boards
  - Installed roman pot cable extensions with correct cable wiring
- Rest of the day spent with experts working on a variety of systems
  - E.g. commissioning of dynamic prescales and Time-of-Flight trigger

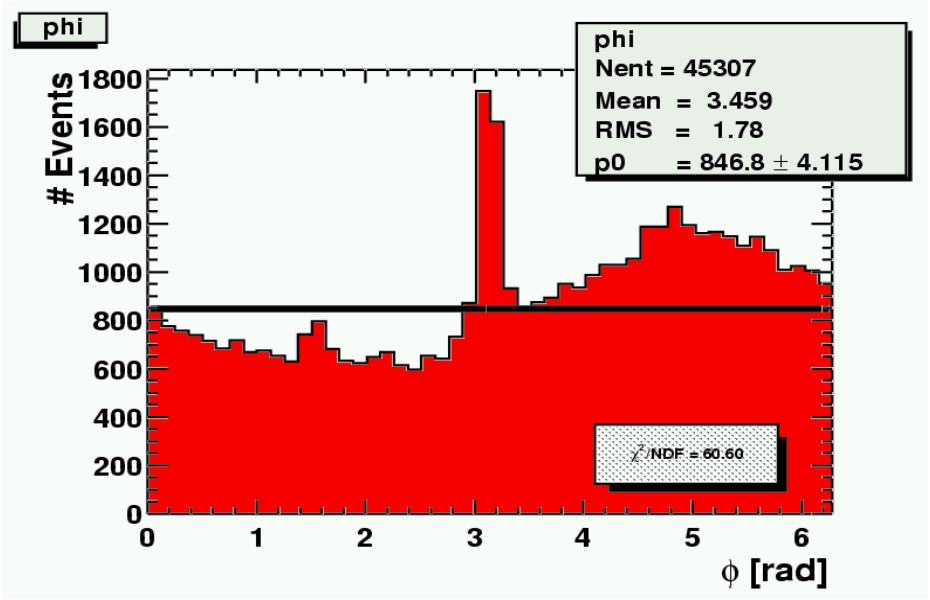
Wednesday, Store 1613

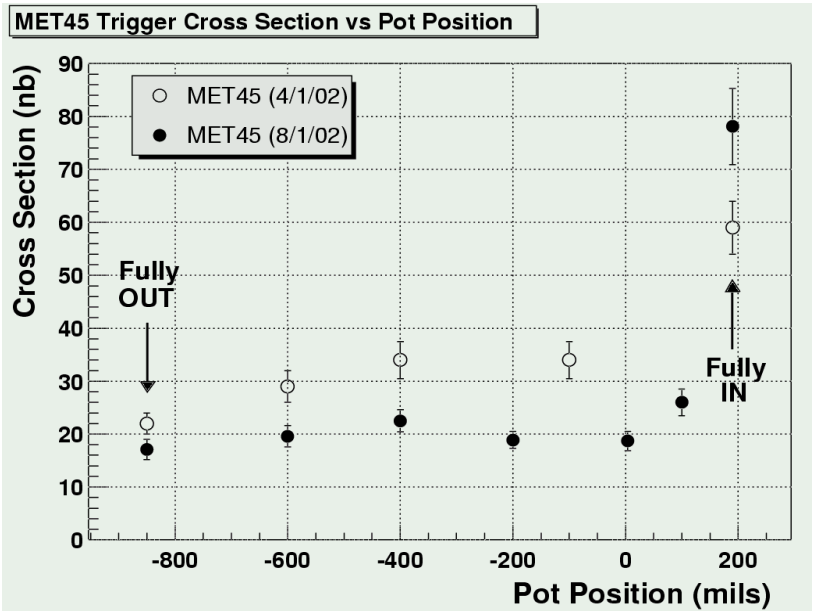
Arnd Meyer
Fermilab
August 5, 2002

- After continued studies on Wednesday, shot setup started late afternoon
- Store 1613 in before midnight, with somewhat low initial luminosity $1.4 \cdot 10^{31} cm^{-2} s^{-1}$
- Again high losses in the beginning, improved after rescraping this time
  - Three stores in a row with high initial losses
- Lost one RF station around 5:30
  - Take out Silicon
  - Use opportunity for roman pot / beam halo study
  - Sit, wait, and ask MCR to shorten our suffering

Roman Pots / Beam Halo

Arnd Meyer
Fermilab
August 5, 2002



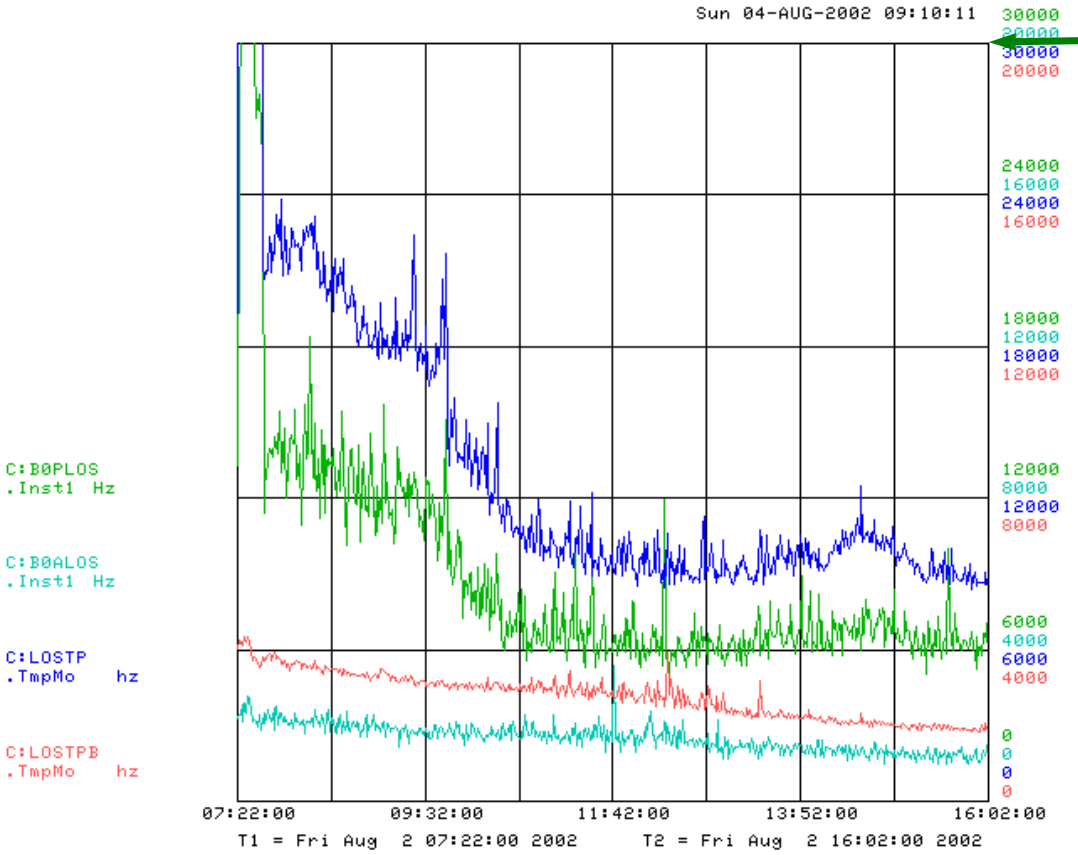


Study effects of roman pot positions on beam-(halo)-induced backgrounds

Friday, Store 1616

Arnd Meyer
Fermilab
August 5, 2002

- Fourth store in a row with intolerable losses; starting to get worried



30kHz

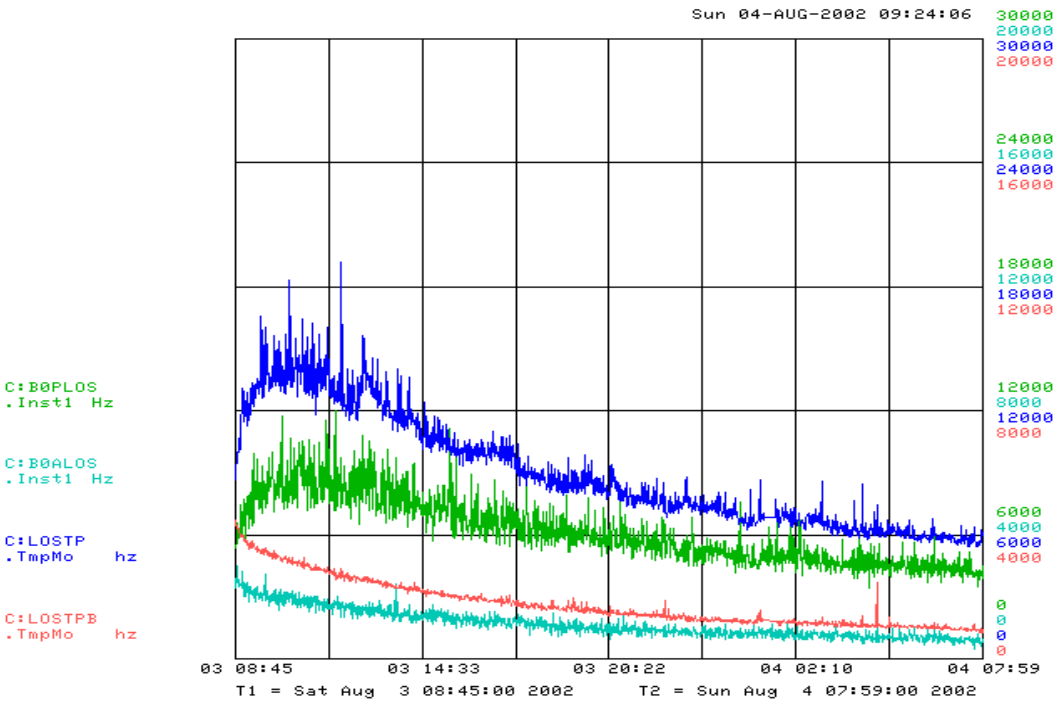
Initial luminosity $2.0 \cdot 10^{31} cm^{-2} s^{-1}$

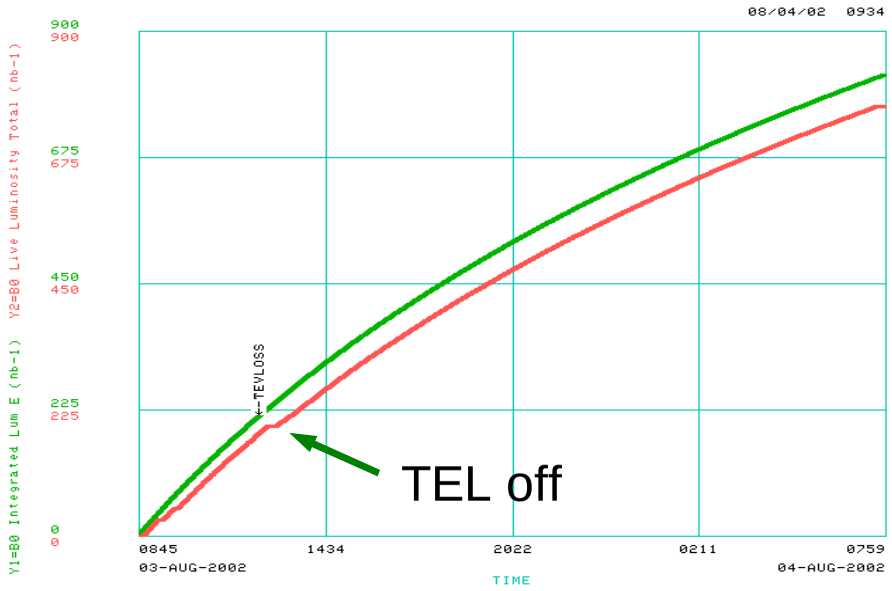
Lost after ~9hrs

Saturday, Store 1622

Arnd Meyer
Fermilab
August 5, 2002

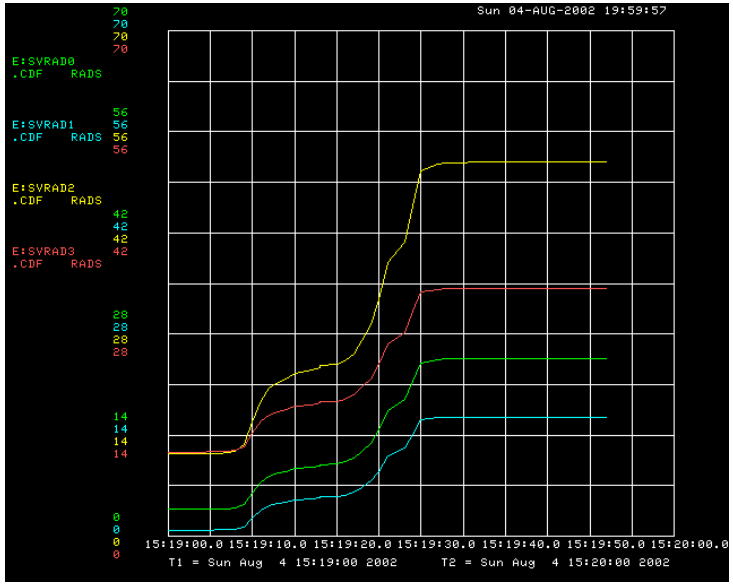
- Initial luminosity $1.8 \cdot 10^{31} cm^{-2} s^{-1}$
- Good losses from the beginning
- Set new records
  - Data taking efficiency: 93.3% to tape
  - Accumulated luminosity for store: $766.6 nb^{-1}$
  - Saturday evening shift: 99.1% efficient
- Intentionally ended Sunday morning

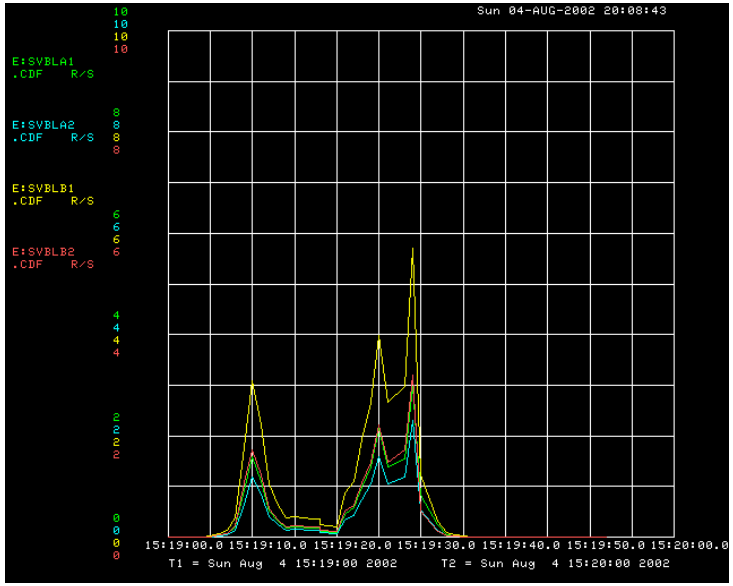




Beam Loss 36x0 Store Sunday 15:19

Arnd Meyer
Fermilab
August 5, 2002





Integrated 40-50 rads at a rate of up to 6 rads/sec

No safety threshold was crossed so we did not pull the abort

Trips only on the BIAS lines at STDBY (2V)

- 15/48 L00
- 17/72 L0
- 25/72 L1
- 1/72 L2
- 45/72 L3
- 15/48 L4
-

Requested quiet time and cross-checked everything

No damage was introduced

Summary

Arnd Meyer
Fermilab
August 5, 2002

- CDF continues to be in good shape
- Initial losses have been bad for four stores in a row
  - but good for the last one
- Areas of concern
  - CMX high voltage problems
  - Potential Silicon damage
- Plan for the week includes, besides taking good data, improvements to the SVT trigger efficiency, and attempt to recover two bad Silicon wedges if a natural access opportunity arises
- Finally... good luck to Matthew Jones, Phillip Koehn, and Eric James