



The Week in Review

Arnd Meyer
(Fermilab)
Feb 18, 2002

- **Monday** morning (Feb 11) short access to pull toroids out. Idea was to collect data during one store with this modified "shielding"
- **Tuesday/Wednesday** beam studies
 - Roman pot background and timing studies with pbar and p only stores
 - A lot of work on trigger systems (trigger supervisor firmware upgrade, SVT repair, ShowerMax information for L2, ...)

Store	Initial Lum	Duration	$L_{\text{delivered}}/\text{nb}$	$L_{\text{live}}/\text{nb}$	Eff
990	Thu 2/14	5.9E10	12.8h	185.5	79.1
992	Fri 2/15	6.5E10	13.5h	221.9	42.6%
994	Fri 2/15	12.4E10	13.4h	395.3	76.6%
996	Sat 2/16	10.5E10	13.9h	358.6	45.2%
998	Sun 2/17	8.1E10	12.4h	250.3	78.7%
1000	Sun 2/17	10.8E10	10.7h	287.3	79.1%
				147.7	51.4%
				1698.9	62.2%
					1056.1



The Week in Review

Arnd Meyer
(Fermilab)
Feb 18, 2002

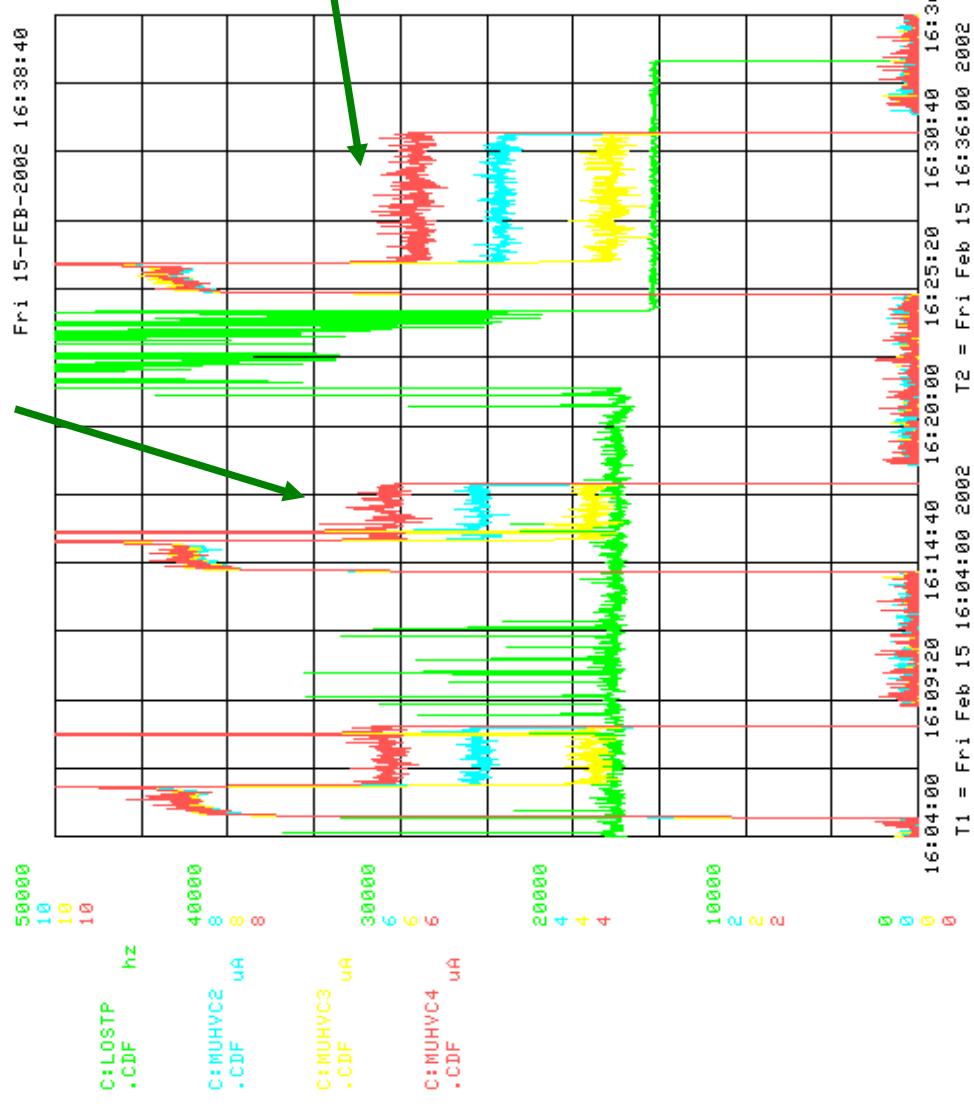
- **Thursday morning Store 990** - data taking in "toroids out" configuration. Also use much of the store for studies (\rightarrow low eff.)
 - Modified L2 clustering
 - Tests to use ShowerMax information at L2
 - Upgraded Silicon FB firmware
 - Upgrade track trigger software and L2 control code
- **Short access Thursday evening** to push toroids back
- **Friday store 992** smooth data taking. End of store rescraping to see effect on our muon currents
- **Friday night store 994**, excellent initial luminosity $1.24 * 10^{31} \text{cm}^{-2} \text{s}^{-1}$
 - Murphy's law: bad disk failure on a DAQ server machine, 4 hours lost
- **Saturday/Sunday** smooth data taking
- Sunday at end of store 998 brief test of diffractive triggers with roman pots in - thanks to MCR for doing this on very short notice
- Sunday late evening store 1000: lost close to 2h due to data corruption problem from forward detector crate (Miniplug + Roman Pot readout)

End of Store 992



Arnd Meyer
(Fermilab)
Feb 18, 2002

before

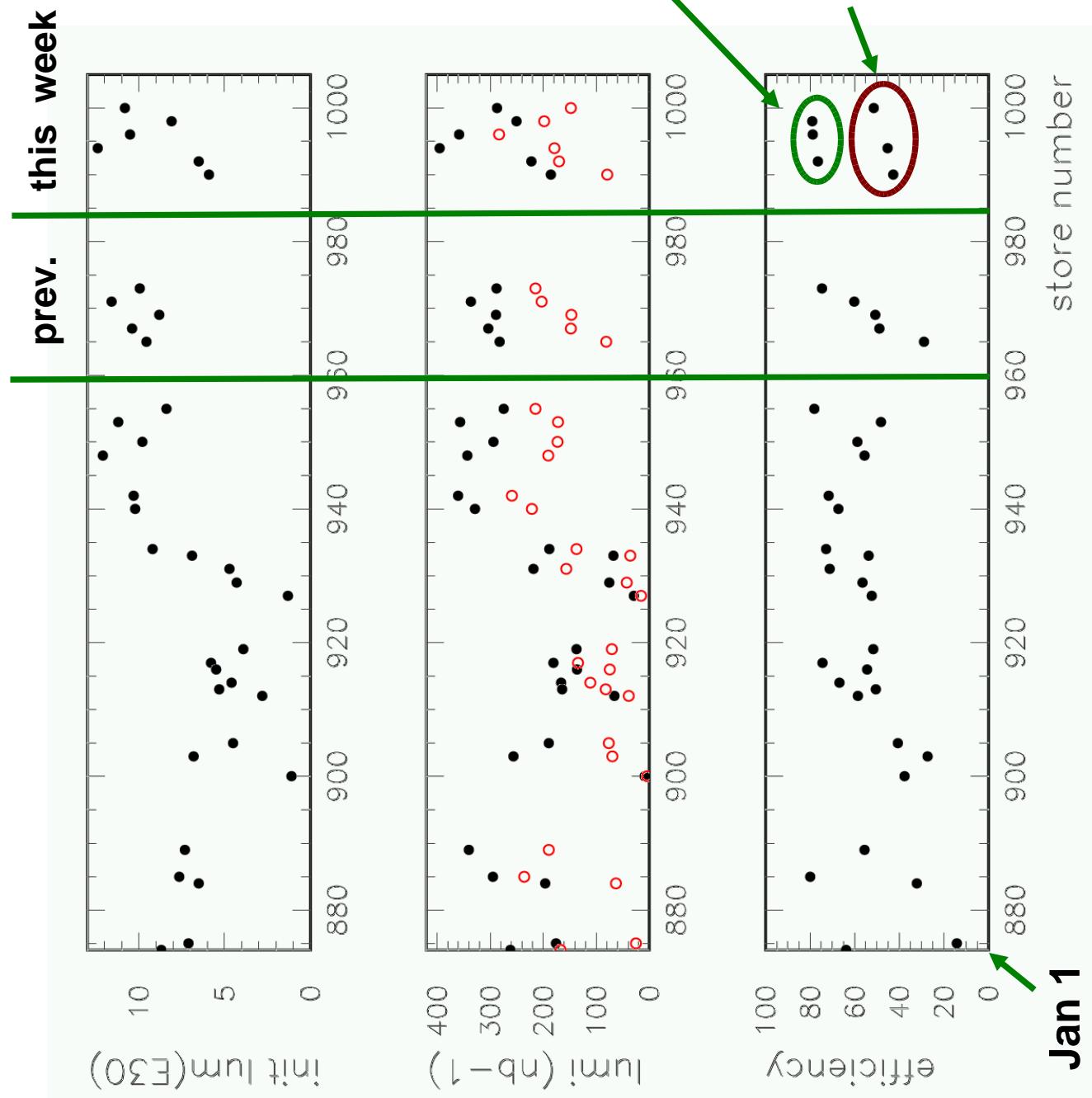


after scraping



Operational Efficiency

Arnd Meyer
(Fermilab)
Feb 18, 2002

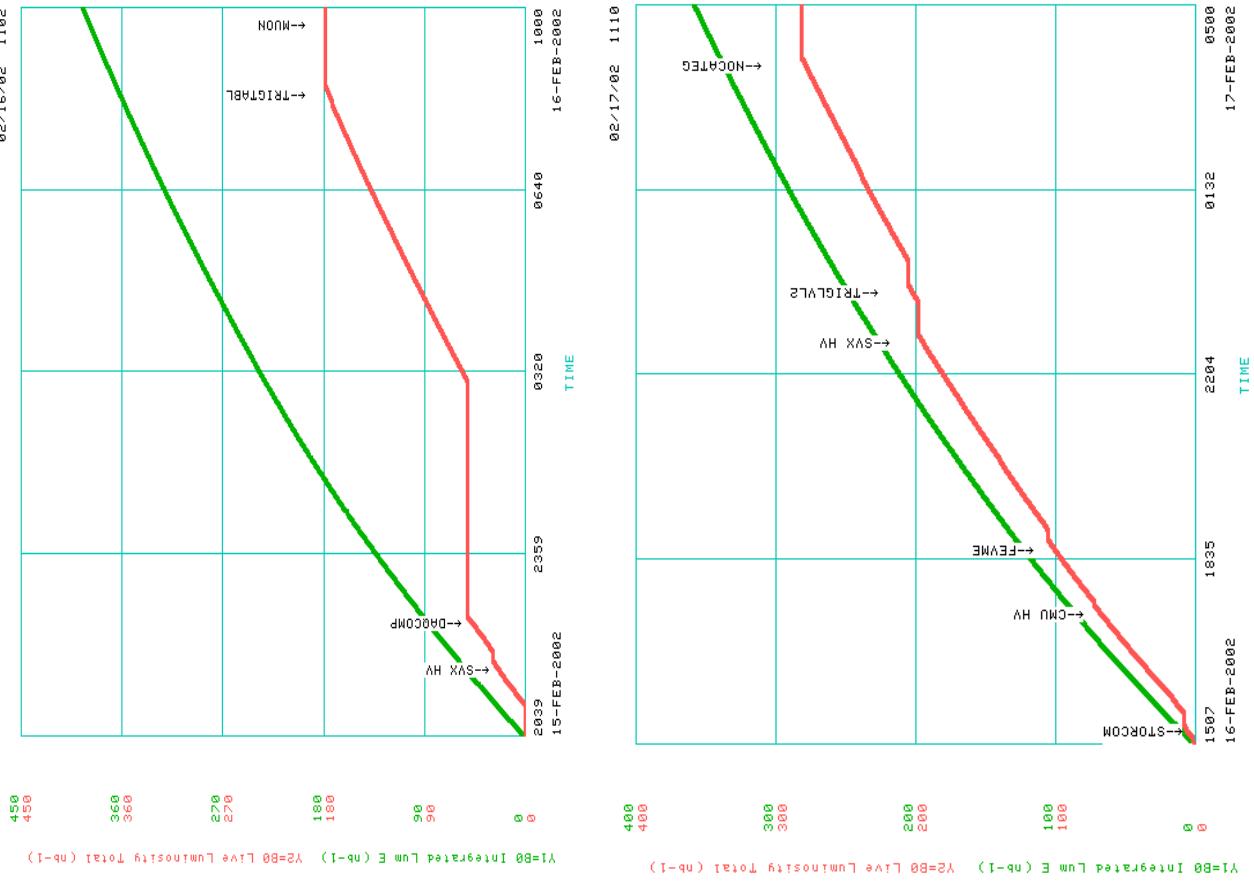




Stores 994 / 996

Arnd Meyer
(Fermilab)
Feb 18, 2002

- Except catastrophic events, major sources of downtime are
 - studies, tests (e.g. trigger tables)
 - Event builder ("cannot reset VRB" - have to powercycle crate and clean-up EVB)
 - Ramping up HV, HV trips, Silicon calibration
 - Inhibit system
 - VME crate controller hangs (SVT) and minor FE electronics glitches
 - DAQ deadtime: at high luminosity, and due to occasional long tails in SVX \rightarrow SVT readout time
- Our largest DAQ run ever (in terms of lumi) on Saturday
 - 190nb $^{-1}$ to tape
 - 65Mio. L1 triggers
 - 4.4Mio. L2 triggers
 - 780k L3 \rightarrow tape





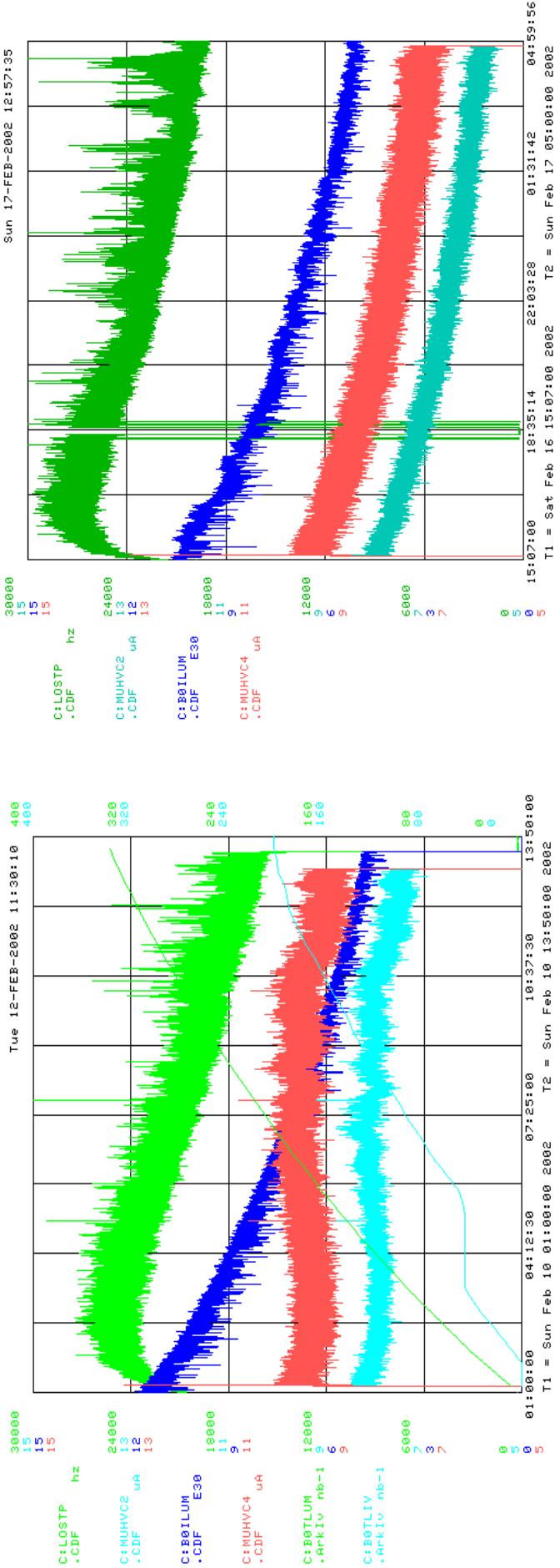
CDF Status

- **No power supplies lost this week**
 - In test box in the collision hall, 60 Alacrity MOSFETs failed compared to 5 of those used in CMS power supplies (Rick Tesarek)
- **Since 10 days, have been taking data with**
 - the (almost) complete detector (including CMP), thanks to new operating limits for CMP
 - a trigger table corresponding to Run 2 physics goals, including hadronic B trigger
- **This is enough reason to switch the major version of trigger table from "0" to "1"**
 - In the process of removing commissioning triggers, and adjusting trigger cross sections for monitoring triggers
 - Should give us some headroom for higher luminosity (had up to 10% DAQ deadtime @ $1.2 \times 10^{31} \text{cm}^{-2}\text{s}^{-1}$, should be close to 0)
 - Dataset definitions frozen



Backgrounds and Muon Currents

Arnd Meyer
(Fermilab)
Feb 18, 2002



- Appears as if one (?) component to high currents is removed
- Still very high currents in the CMP. Will study possible aging
- Beams will perform F17 collimator study Thursday

Coincidence with 50ns beam crossing pulse
Ungated
[BC+50ns, BC+340ns]
Coincidence with abort gap

B0RAT1:
B0RAT2:
B0RAT3:
B0RAT4:



Summary

Arnd Meyer
(Fermilab)
Feb 18, 2002

- Improved background situation allowed us to take most of the data with the complete detector
- Continue to take quality data
- High currents in the muon chambers are (still) a major concern
- Lost some data due to equipment failures
- Currently developing a plan for Thursday/Friday access