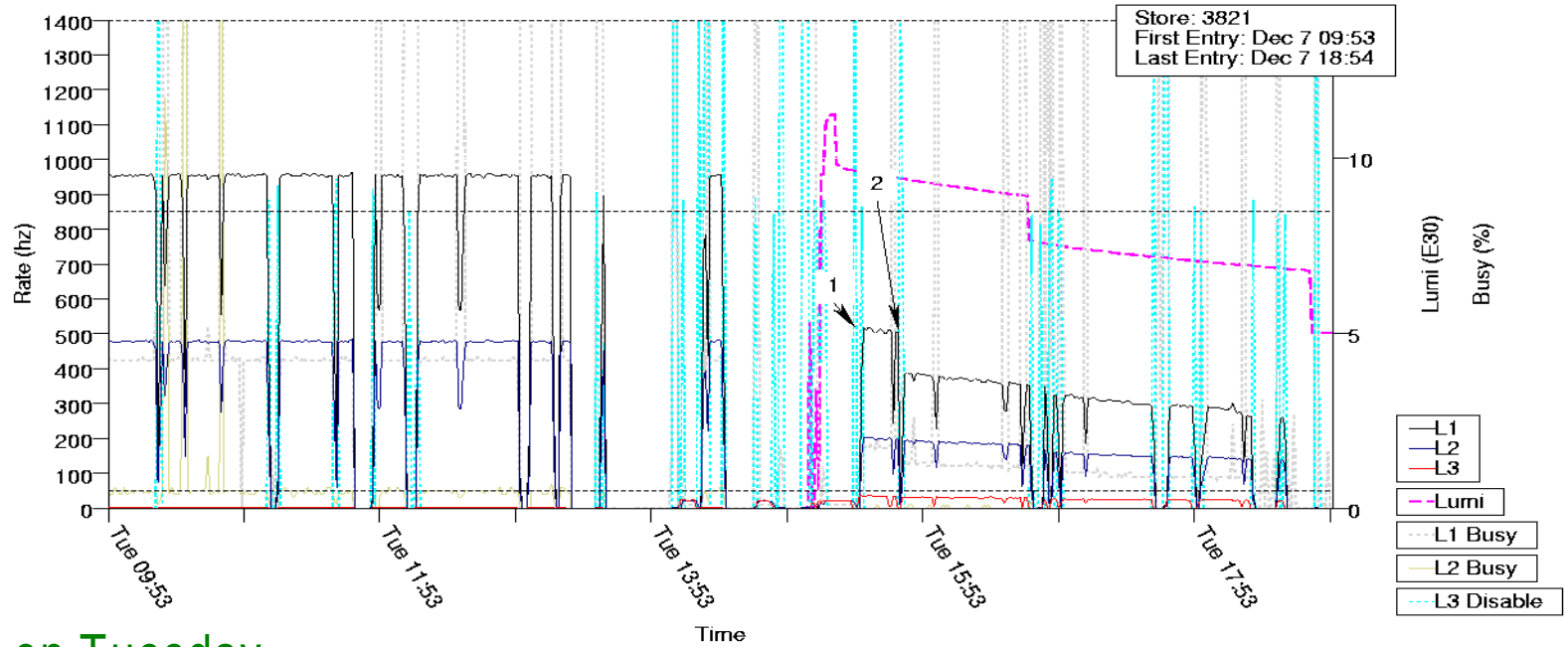
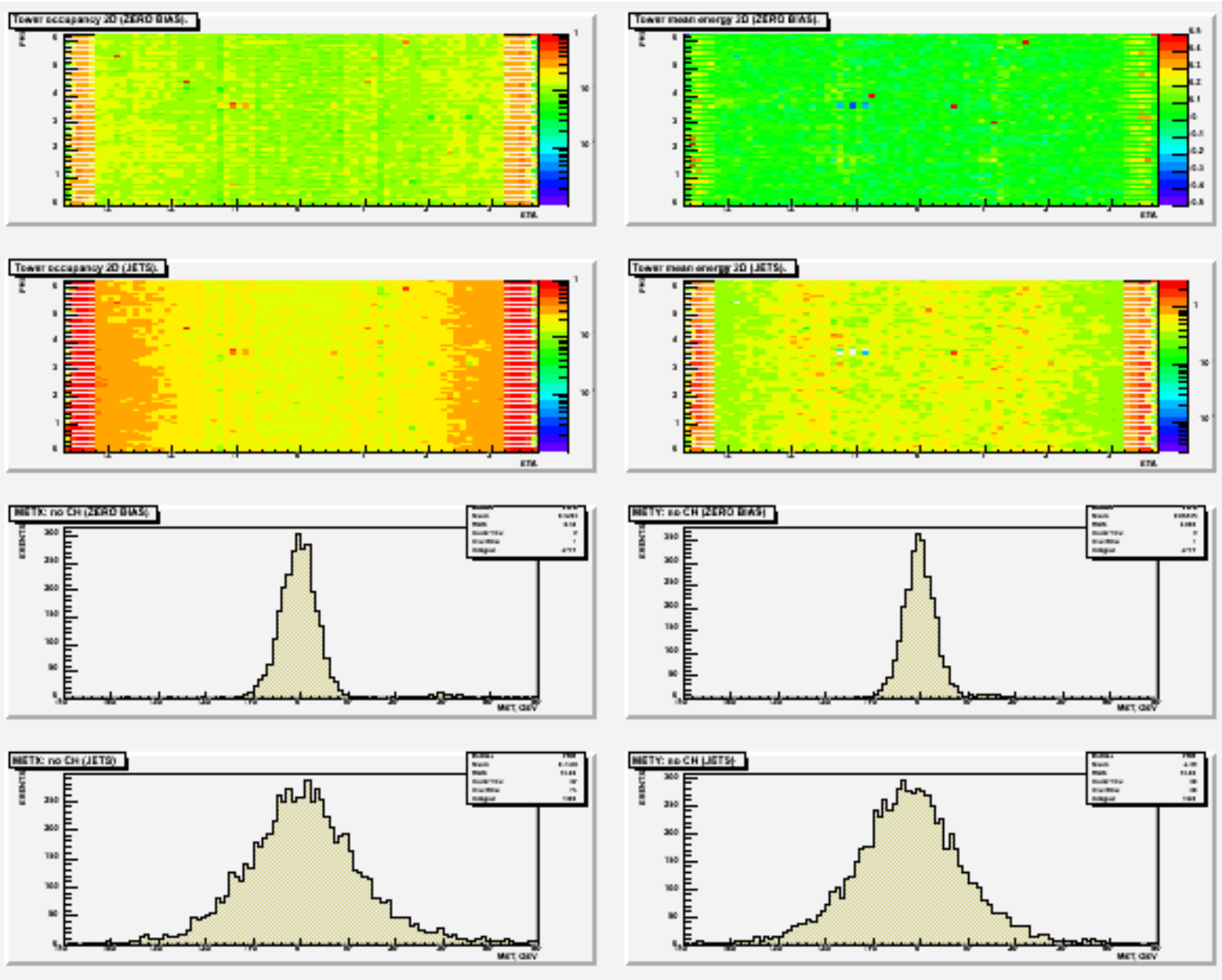
First Store 3821 (Tue)



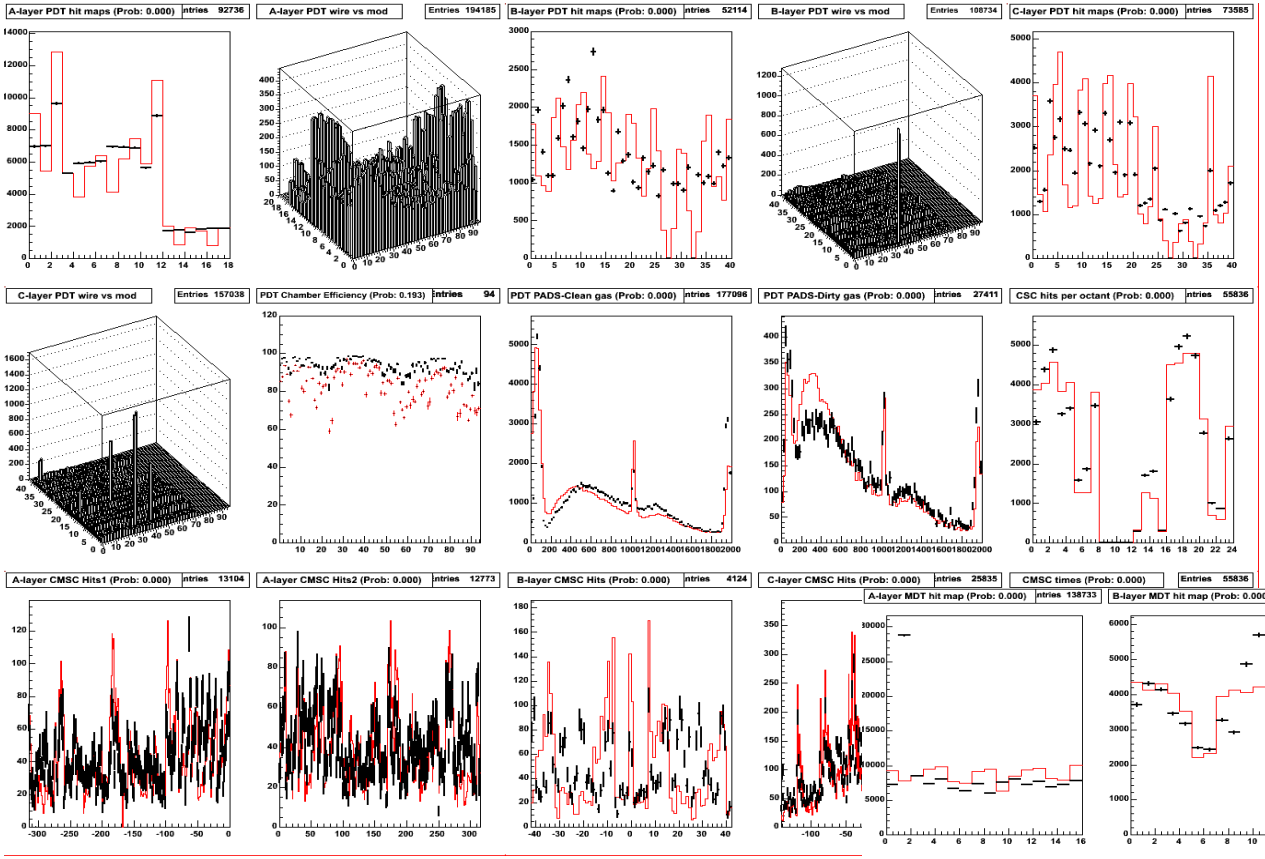
	Run	Duration	inL	Live	scl/hr	pause	<Tape Rate>	Prescale_File
1	201537	0.29 h	9.7	92%	3.4	0.02 h	0.0 hz	00-10E30
2	201538	1.86 h	9.5	94%	8.6	0.13 h	0.0 hz	00-10E30

- First store (3821) on Tuesday
  - Initial luminosity $9.6 \cdot 10^{30} cm^{-2} s^{-1}$ (CDF: 10.2)
  - We started global physics running within 3 minutes
  - First look at online histograms, beam losses, and trigger rates encouraging
  - But: beam spot is displaced in x, y by ~-1mm and ~3mm
- Store lost after about 3 hours. $97 nb^{-1}$ delivered luminosity.
- Collected 3 runs, plenty of problems quickly identified and solved within 1-2 days
  - CFT dead channels at L3, no bias on part of SMT, Forward muon timing, ...
- Solenoid running stably at 4550A, 95.8% of old operating current. Investigations continue.

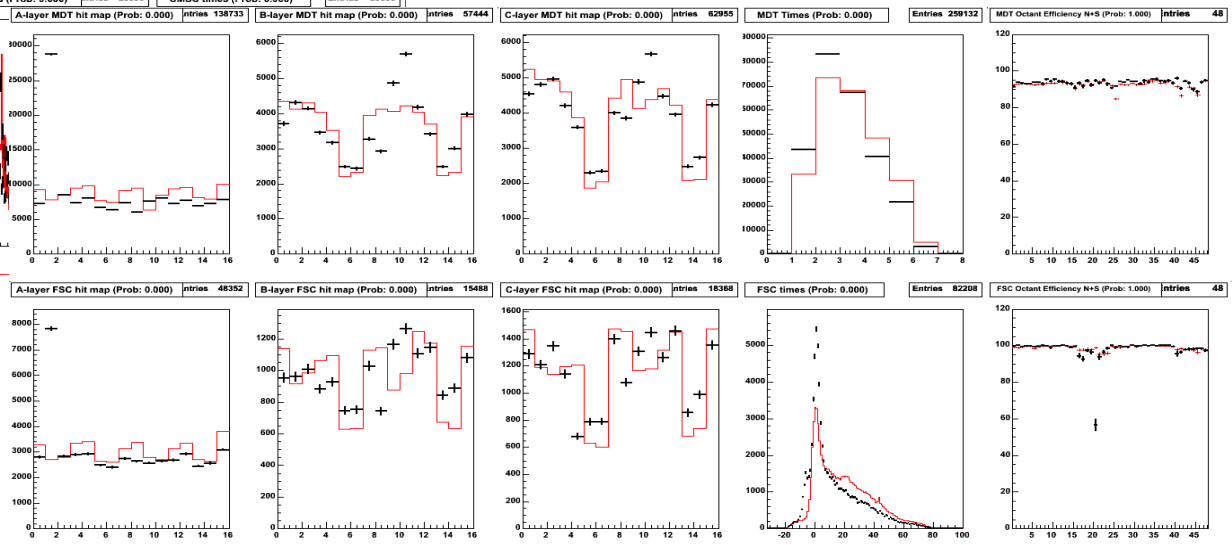
Store 3821 – Calorimeter

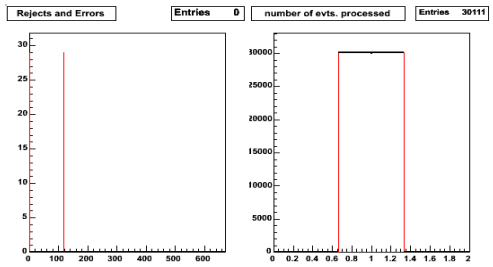


Store 3821 – Muons



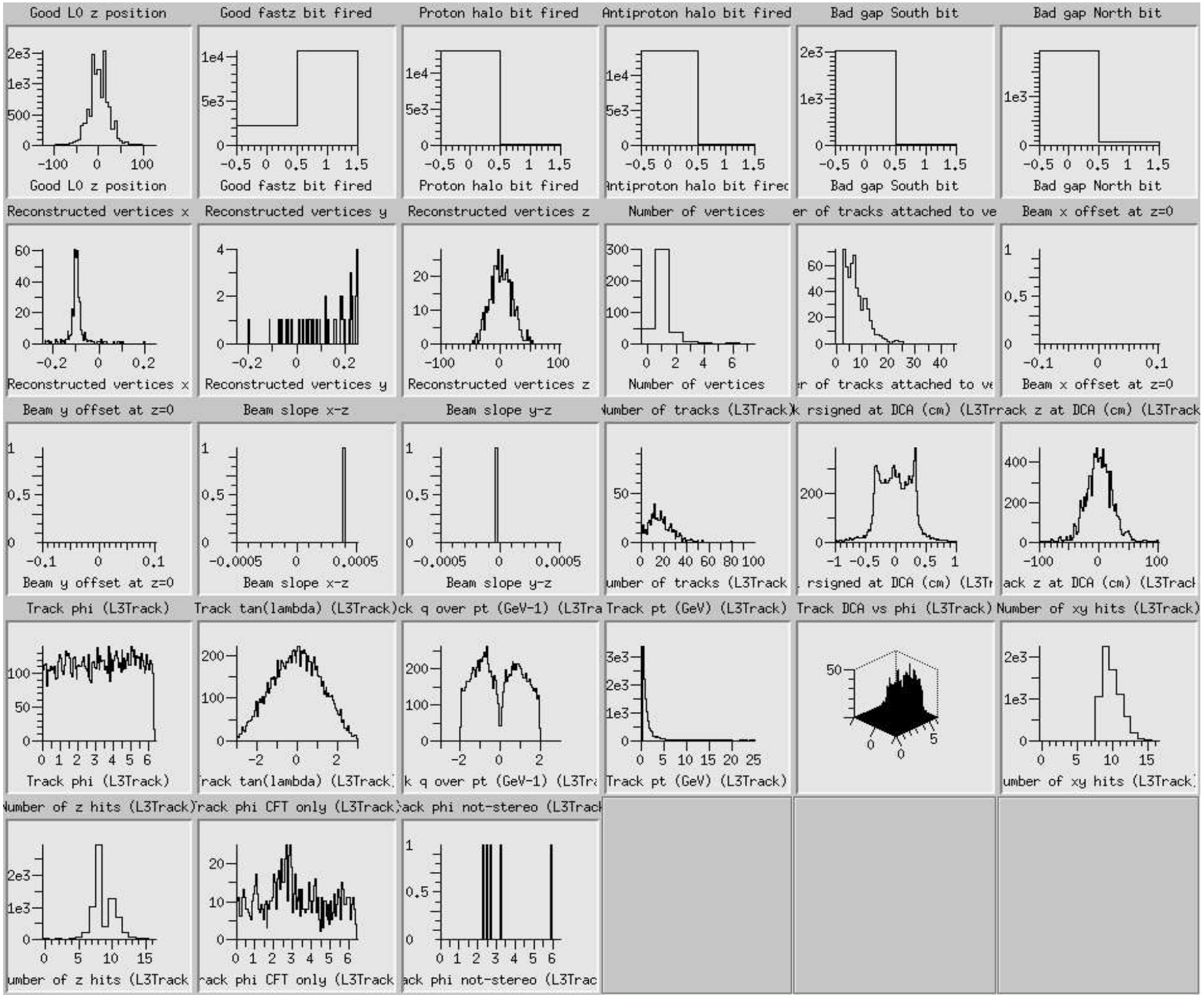
Central



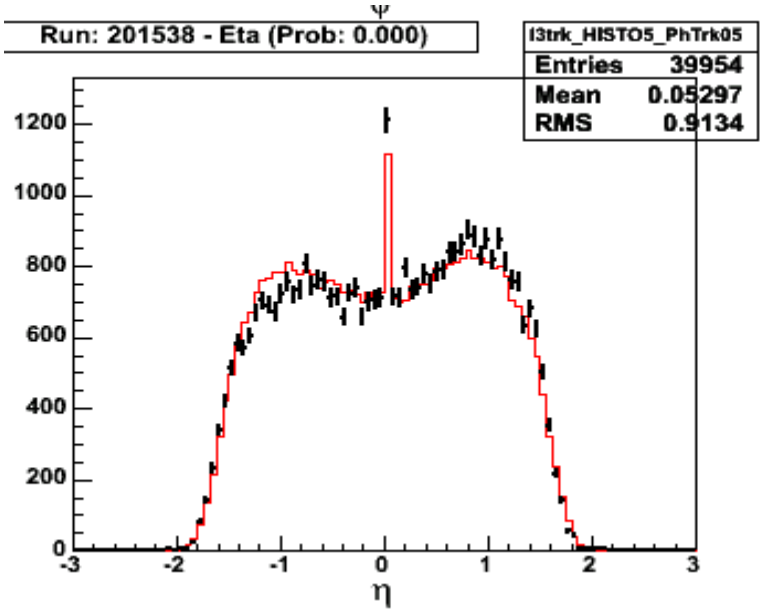


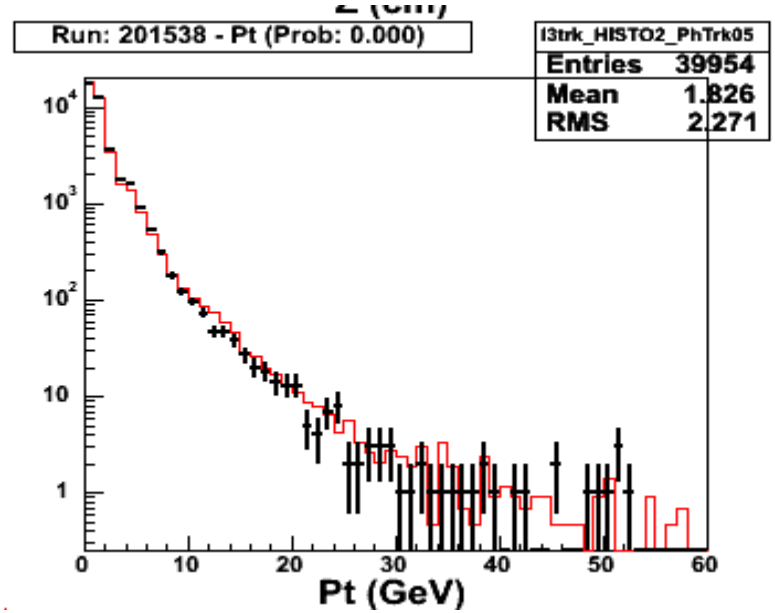
Forward

Arnd Meyer (RWTH Aachen)

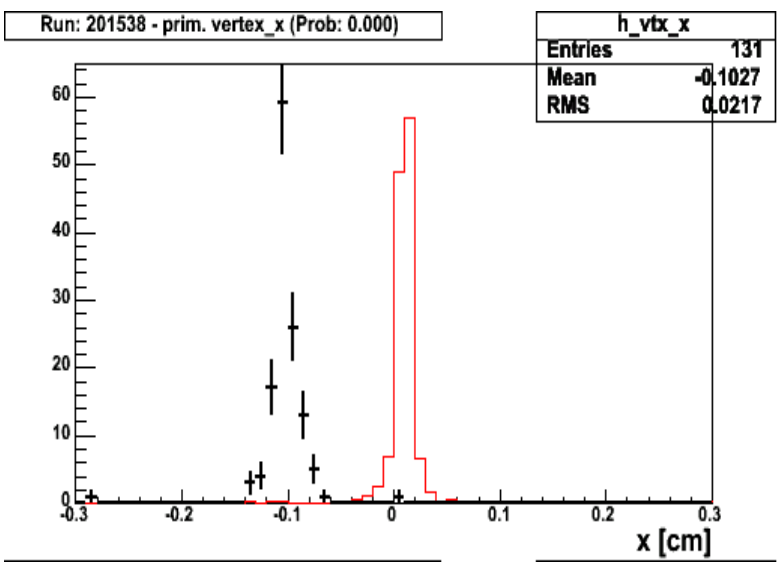

Good L0 z position
Good fastz bit fired
Proton halo bit fired
Antiproton halo bit fired
Bad gap South bit
Bad gap North bit
Reconstructed vertices x
Reconstructed vertices y
Reconstructed vertices z
Number of vertices
er of tracks attached to ve
Beam x offset at z=0
Beam y offset at z=0
Beam slope x-z
Beam slope y-z
Number of tracks (L3Track)
k rsigned at DCA (cm) (L3Tr
rack z at DCA (cm) (L3Track
Track phi (L3Track)
Track tan(lambda) (L3Track)
ck q over pt (GeV-1) (L3Tra
Track pt (GeV) (L3Track)
Track DCA vs phi (L3Track)
Number of xy hits (L3Track)
umber of z hits (L3Track)
rack phi CFT only (L3Track)
ack phi not-stereo (L3Track

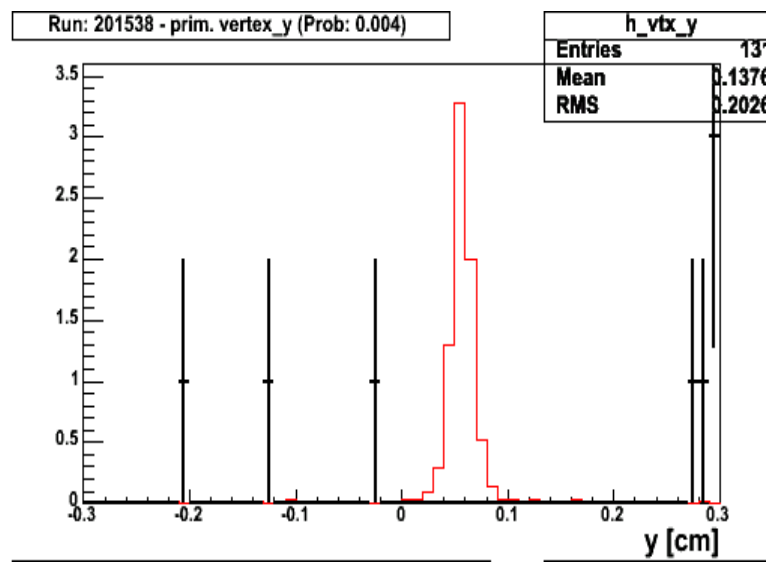
Store 3821





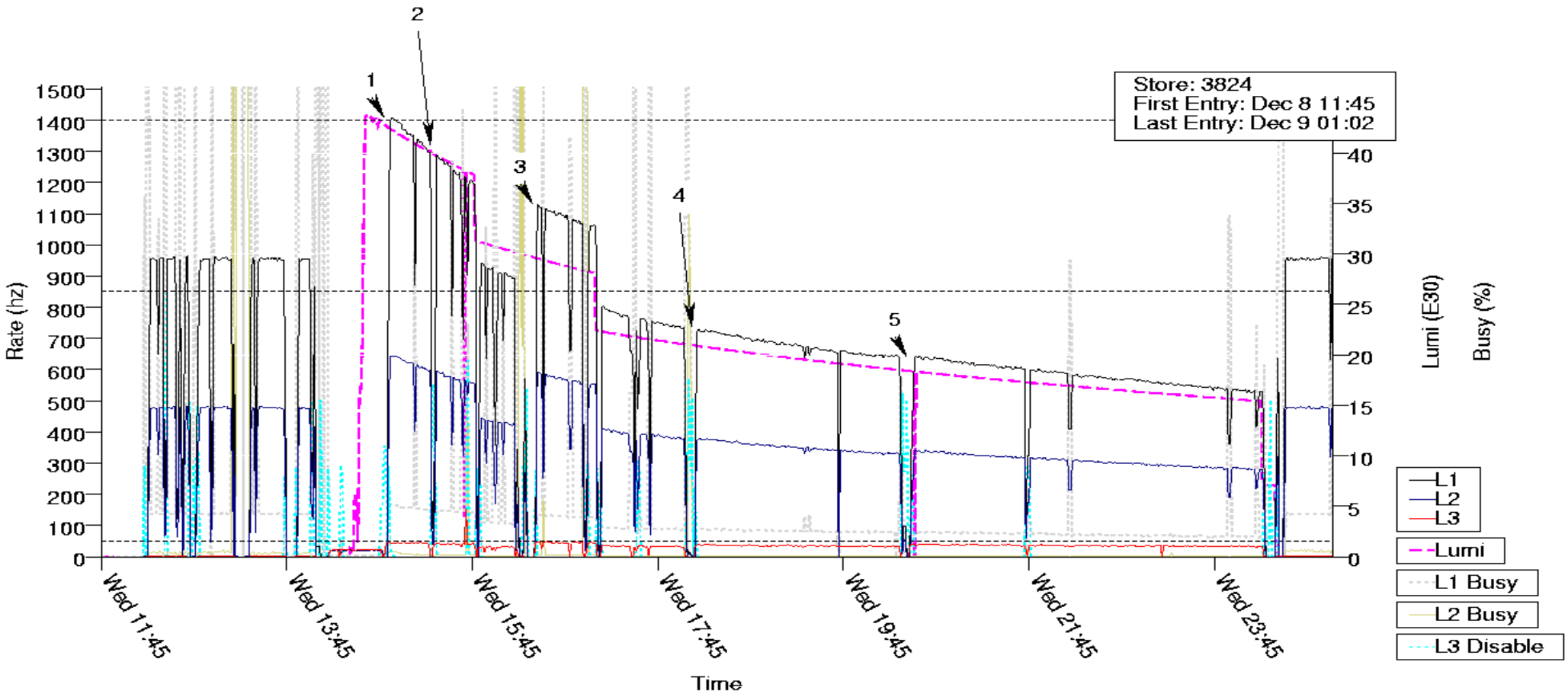
Level 3





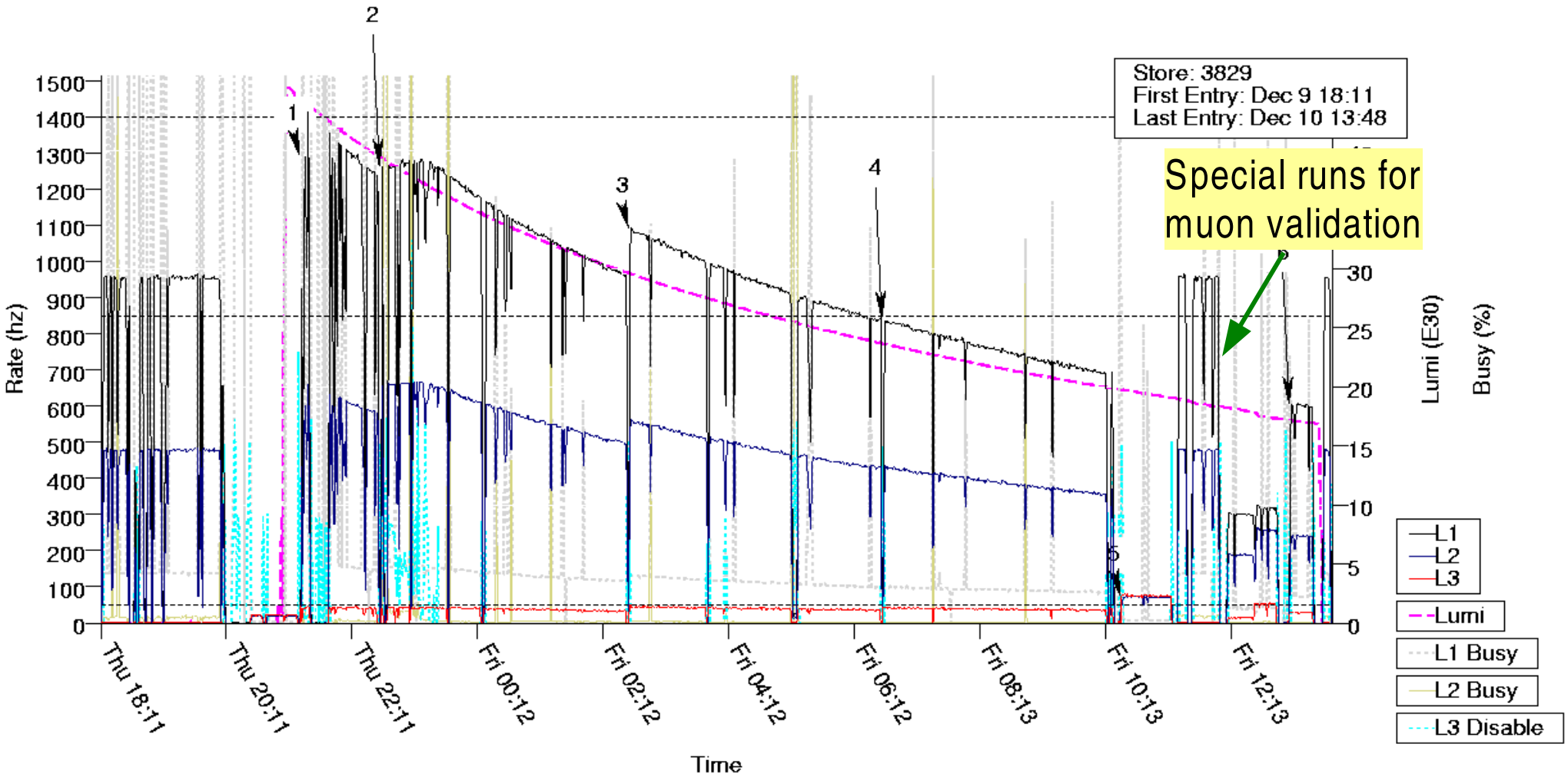
recocert

Store 3824 (Wed)



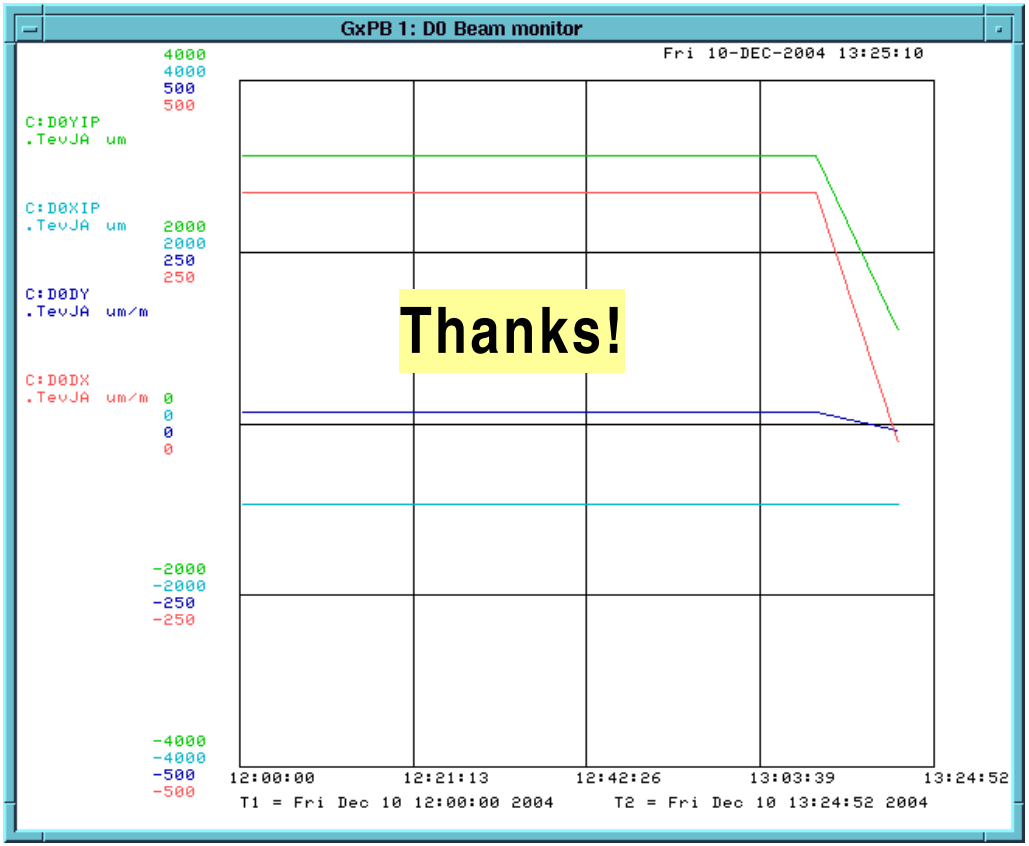
- Controlled access Thursday morning to fix outstanding problems
  - Forward muon timing
  - Some electronics + cable swaps + firmware work (L1 muon, CTT, SMT)

Store 3829 (Thu/Fri)



- All known major issues resolved, with the exception of the beam spot

Beam Spot

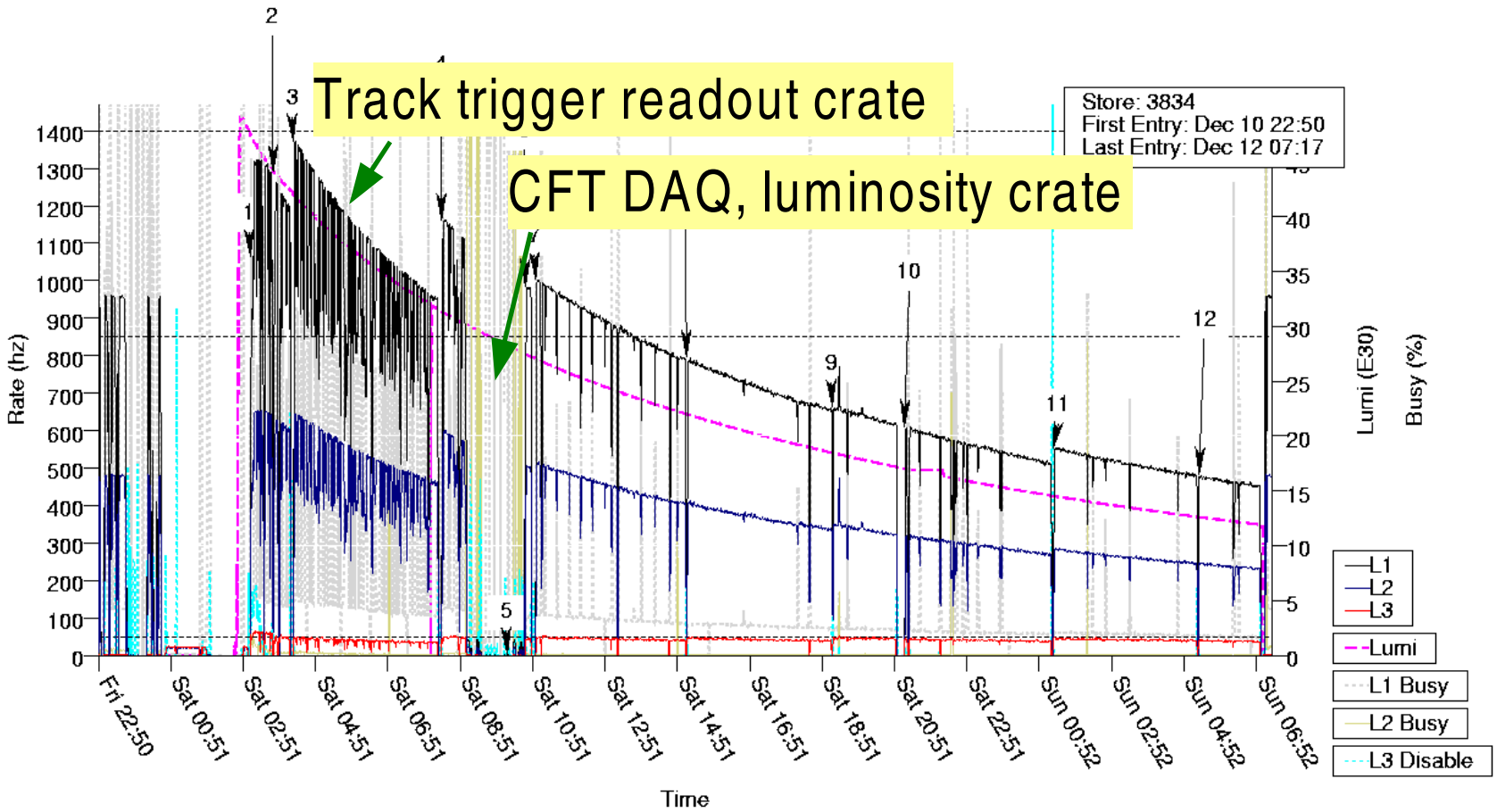


- After changes at the end of the store:
  x: – 0.9 mm y: 1.1 mm
  dx: – 40 μrad dy: – 10 μrad
- Store 3834 (Sat/Sun), changes implemented from the start:
  x: – 0.7 mm y: 1.1 mm
  dx: 200 μrad dy: – 60 μrad
- Typical pre-shutdown:
  x: 0.2 mm y: 0.6 mm
  dx: – 20 μrad dy: – 270 μrad
- Can accommodate up to ~2 mm *radial* offset, and 200 μrad tilt
- Within specs, prefer stability
- Generation of new trigger firmware (track triggers) underway, takes several days

```
C:D0XIP  position x (at z=0)
C:D0YIP  position y (at z=0)
C:D0ZIP  position z (average z of primary vertices)
C:D0DX   tilt xz
C:D0DY   tilt yz
C:D0IPTM time of the last measurement
C:D0IPN  number of measurements during ongoing run
C:D0NINT number of primary vertices per event
```

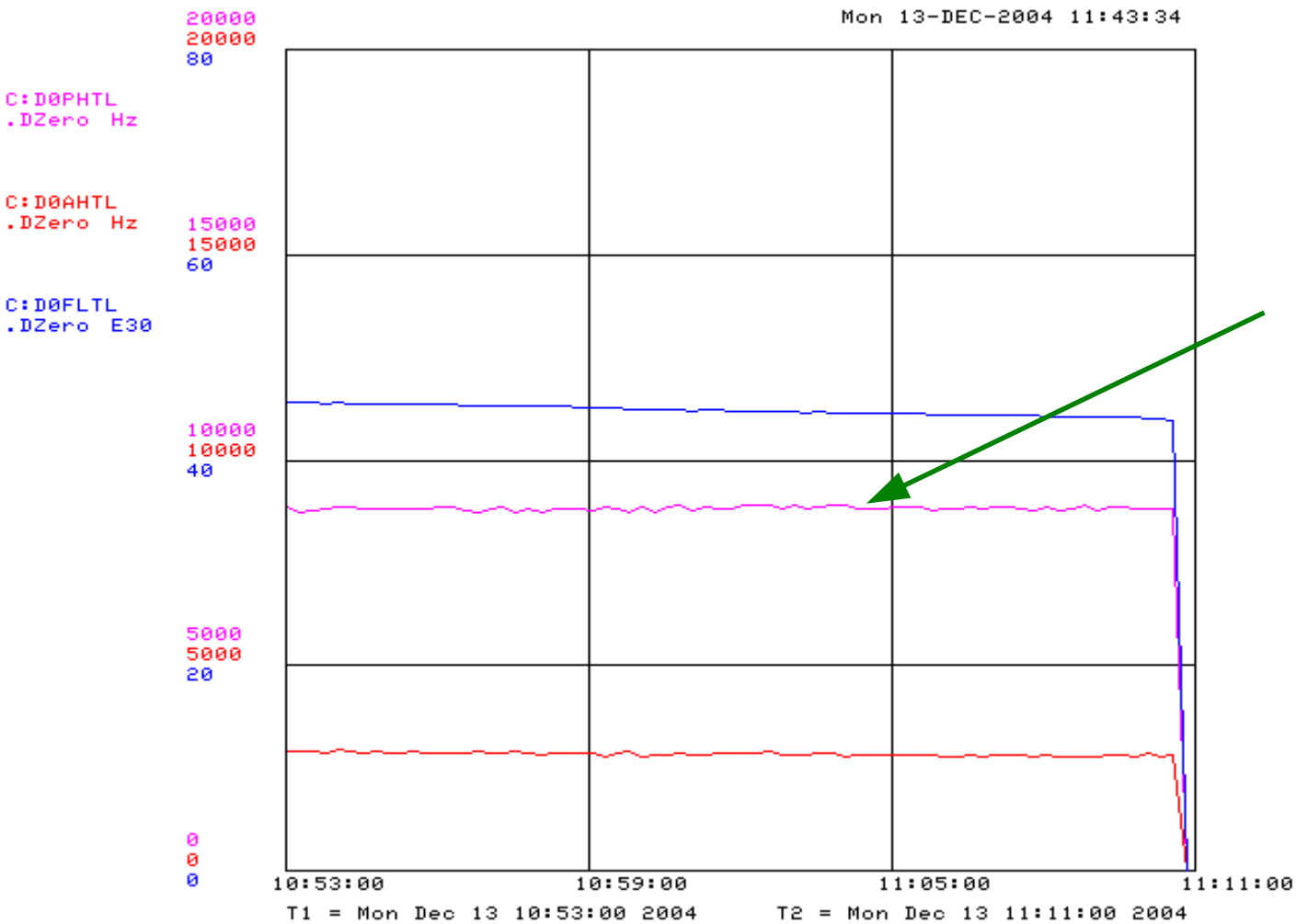
New ACNET devices

Store 3834 (Sat/Sun)



- Orbit changes implemented from the beginning
- Silicon firmware problem solved during Sunday access
- Not fully understood: high load on L3 farm limits L3 input rate to about 650Hz
- Occasional DAQ problems related to online server replacement – almost no lost data

Beam Halo



Proton halo rate is about a factor five lower than before the shutdown, at comparable intensities (44-48kHz p, 2.5-3kHz pbar)

Overall, beam halo is good for running

Data Taking Summary

- This week: Monday Dec 6th – Sunday Dec 12th:
  - **Delivered 4594nb^{-1} Recorded 3762nb^{-1} Efficiency 81.9%**

Day		$\int L\,dt$ (del)	$\int L\,dt$ (rec)	Efficiency	
Tue	Dec 7	97nb^{-1}	72nb^{-1}	74.1%	
Wed	Dec 8	746nb^{-1}	615nb^{-1}	82.4%	
Thu	Dec 9	399nb^{-1}	272nb^{-1}	68.1%	
Fri	Dec 10	1074nb^{-1}	976nb^{-1}	90.9%	beam spot moved at end
Sat	Dec 11	1939nb^{-1}	1503nb^{-1}	77.5%	} physics quality data?
Sun	Dec 12	339nb^{-1}	324nb^{-1}	95.6%	