



D0 Status Report

5/2/2005

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Data Taking for 4/25 – 5/1

| Day | Delivered | Recorded | Eff. | Comments |
|------------|-----------------------|-----------------------|--------|--|
| 4/25 (Mon) | 2.14 pb ⁻¹ | 1.99 pb ⁻¹ | 92.9 % | |
| 4/26 (Tue) | 3.13 pb ⁻¹ | 2.90 pb ⁻¹ | 92.6 % | |
| 4/27 (Wed) | 1.85 pb ⁻¹ | 1.67 pb ⁻¹ | 90.3 % | Controlled access |
| 4/28 (Thu) | 3.01 pb ⁻¹ | 2.82 pb ⁻¹ | 93.4 % | |
| 4/29 (Fri) | 3.43 pb ⁻¹ | 2.80 pb ⁻¹ | 81.9 % | STT problem |
| 4/30 (Sat) | 1.52 pb ⁻¹ | 1.18 pb ⁻¹ | 77.3 % | Power outage due to aging UPS and recovery |
| 5/1 (Sun) | 4.00 pb ⁻¹ | 3.70 pb ⁻¹ | 92.6 % | Best recorded lumi for a day Previous record was 3.4 pb ⁻¹ on 3/20/05 |

| | | | | |
|------------|-----------------------|-----------------------|--------|--|
| 4/25 – 5/1 | 19.1 pb ⁻¹ | 17.1 pb ⁻¹ | 89.4 % | Best recorded lumi for a week Previous record was 16.9 pb ⁻¹ during 3/21/05–3/27/05 |
|------------|-----------------------|-----------------------|--------|--|



Store Statistics

| Store | Init Lum | Duration | Delivered | Recorded | Eff. | Comments |
|-------|----------|-----------|-----------------------|-----------------------|------|---------------------------|
| 4111 | 56E30 | 34 hours | 2.35 pb ⁻¹ | 2.08 pb ⁻¹ | 88 % | 36x24 store |
| 4112 | 103E30 | 32 hours | 4.39 pb ⁻¹ | 3.98 pb ⁻¹ | 91 % | |
| 4116 | 111E30 | 32 hours | 4.76 pb ⁻¹ | 4.37 pb ⁻¹ | 92 % | |
| 4118 | 114E30 | 29 hours | 4.62 pb ⁻¹ | 3.54 pb ⁻¹ | 77 % | Power outage and recovery |
| 4121 | 113E30 | 30 hours | 4.73 pb ⁻¹ | 4.32 pb ⁻¹ | 91 % | |
| 4122 | 113E30 | 6.5 hours | | | | Lost store due to quench |



Notable events of the week

- Controlled access during Separator conditioning on 4/27
 - Surveyed the muon truss
 - Worked on the CTT missing sector problem
 - Worked on the CFT AFE temperature control problem
 - Replaced a muon PDT front-end board
 - Replaced a few CAL daughter cards
- Power outage on 4/30
 - The breakers for the collision hall and MCH tripped, probably due to an aging UPS in the safety system.
 - Lost power to the entire detector and MCH.
 - Magnets also went down due to the power loss to the interlock system.
 - Recovered with few problems
 - Lost one DFE crate controller

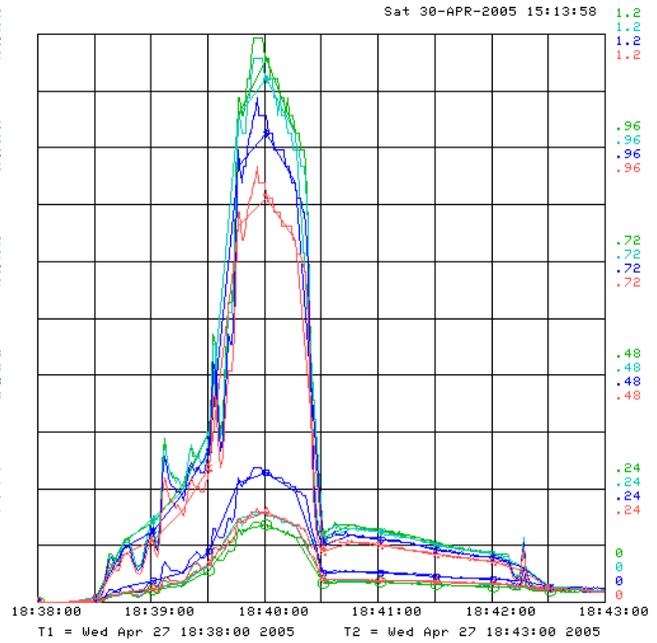
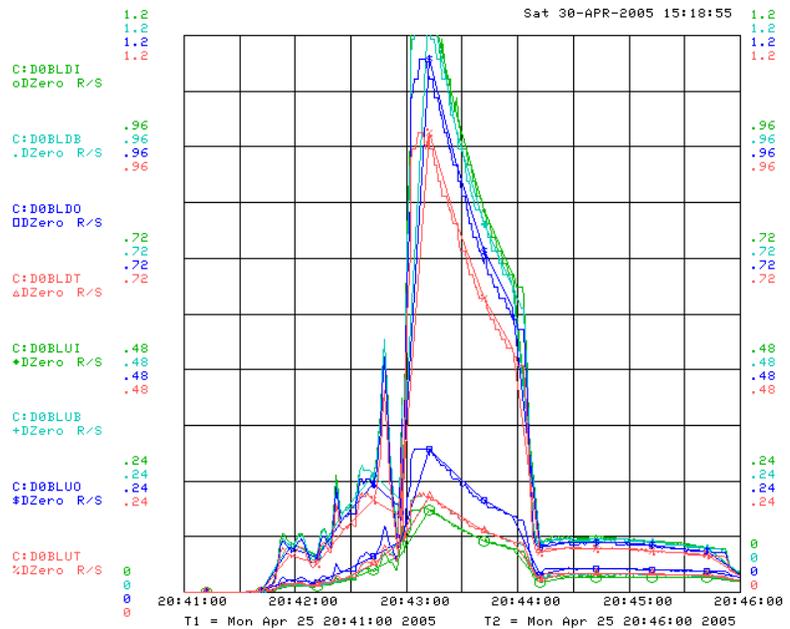


Beam Loss at End of Squeeze

Studies were done to reduce this loss on 4/27

Store 4112

Store 4116



D0 initial lumi 103E30
BLM: 58 rad/min

D0 initial lumi 111E30
BLM: 52 rad/min

Spikes are gone and less dose on the p bar side MDTs.
But further improvements are needed.

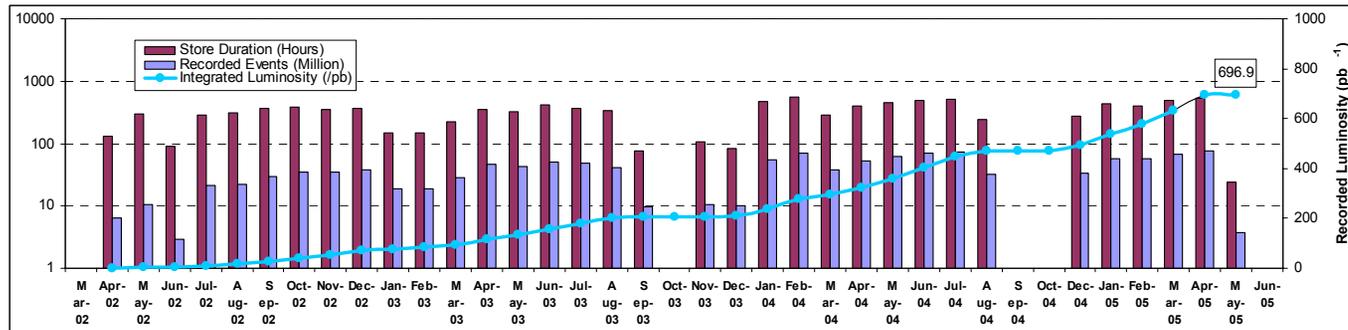
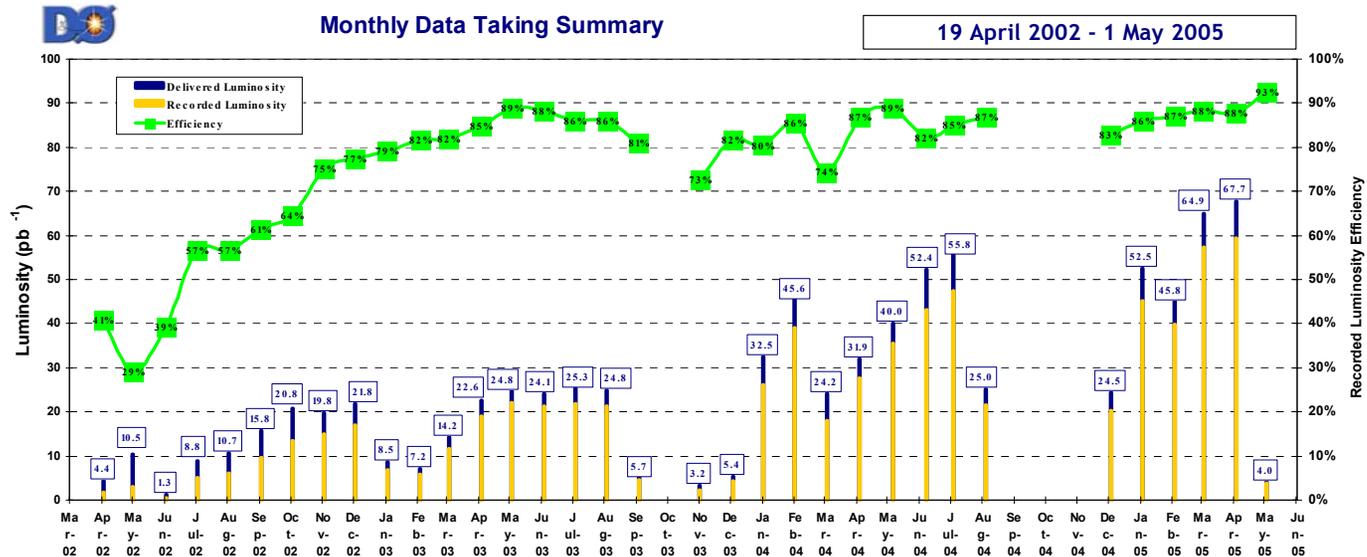


Record Month for Recorded Luminosity

Delivered: 67.7 pb⁻¹

Recorded: 59.4 pb⁻¹

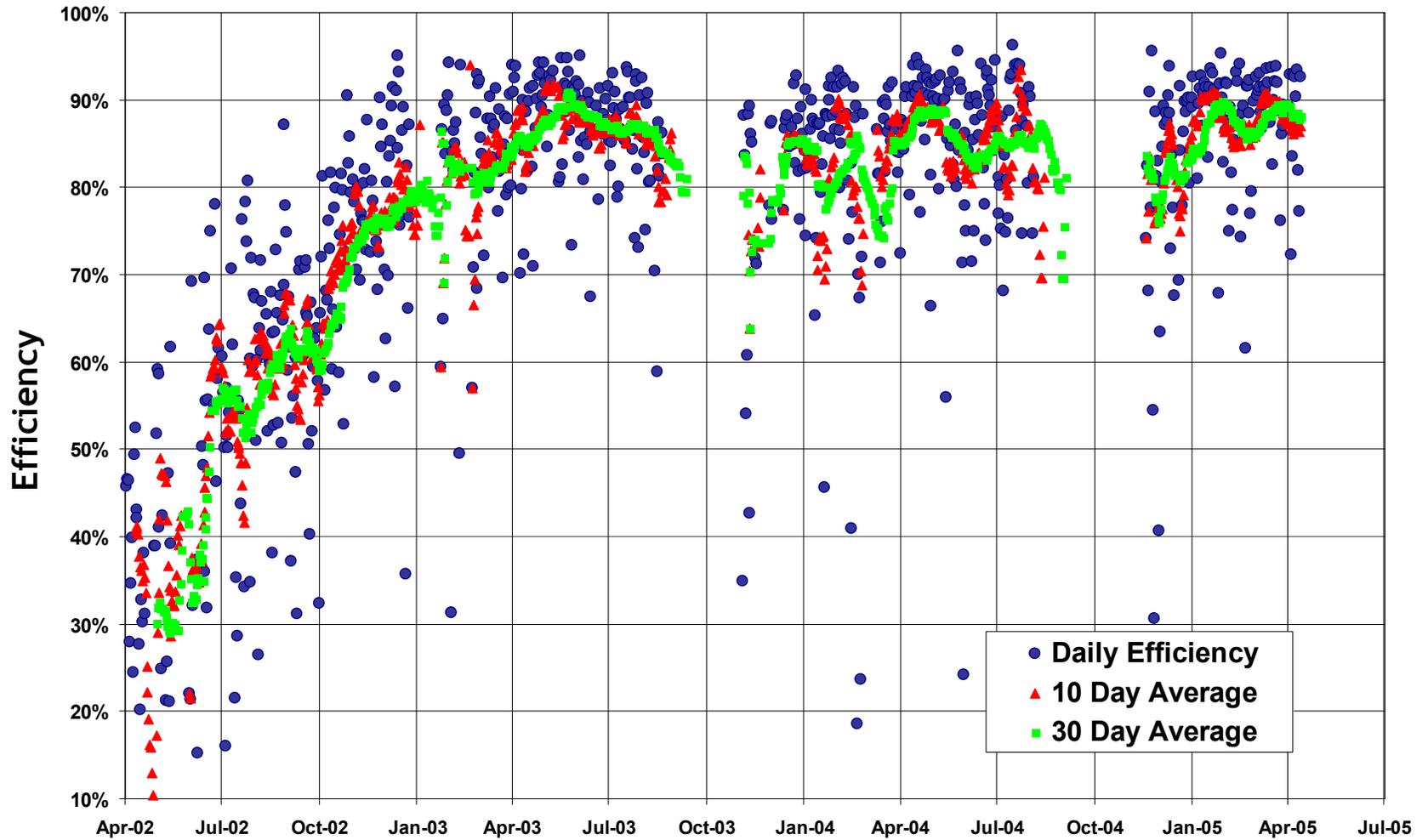
Previous record was 57.4 pb⁻¹ (Mar 05)





Daily Data Taking Efficiency

19 April 2002 - 1 May 2005



2 May 2005

T. Yasuda, Fermilab



Summary

- Had a record breaking week
 - Best recorded luminosity for a day on 5/1: 3.70 pb^{-1}
 - Best recorded luminosity for a week: 17.1 pb^{-1}
 - Best recorded luminosity for a month: 59.4 pb^{-1}
- Lost power to the collision Hall on 4/30
 - Probably due to an aging UPS.
 - Fully recovered.
 - Will have a hot-swappable UPS by Wednesday ready to be installed.
- Spikey losses at the end of squeeze are gone.
 - But further improvements are needed.