



Data Taking July 14 – 20

<i>Day</i>	<i>$\int L dt (del)$</i>	<i>$\int L dt (rec)$</i>	<i>Efficiency</i>
Mon	956nb ⁻¹	840nb ⁻¹	87.8%
Wed	111nb ⁻¹	100nb ⁻¹	90.3%
Thu	481nb ⁻¹	422nb ⁻¹	87.6%
Fri	633nb ⁻¹	581nb ⁻¹	91.8%
Sat	1014nb ⁻¹	865nb ⁻¹	85.3%
Sun	1250nb ⁻¹	1030nb ⁻¹	82.4%
This week	4445nb⁻¹	3838nb⁻¹	86.3%
Last week	7807nb⁻¹	6721nb⁻¹	86.1%
Best week	9786 nb⁻¹	8604nb⁻¹	87.9%

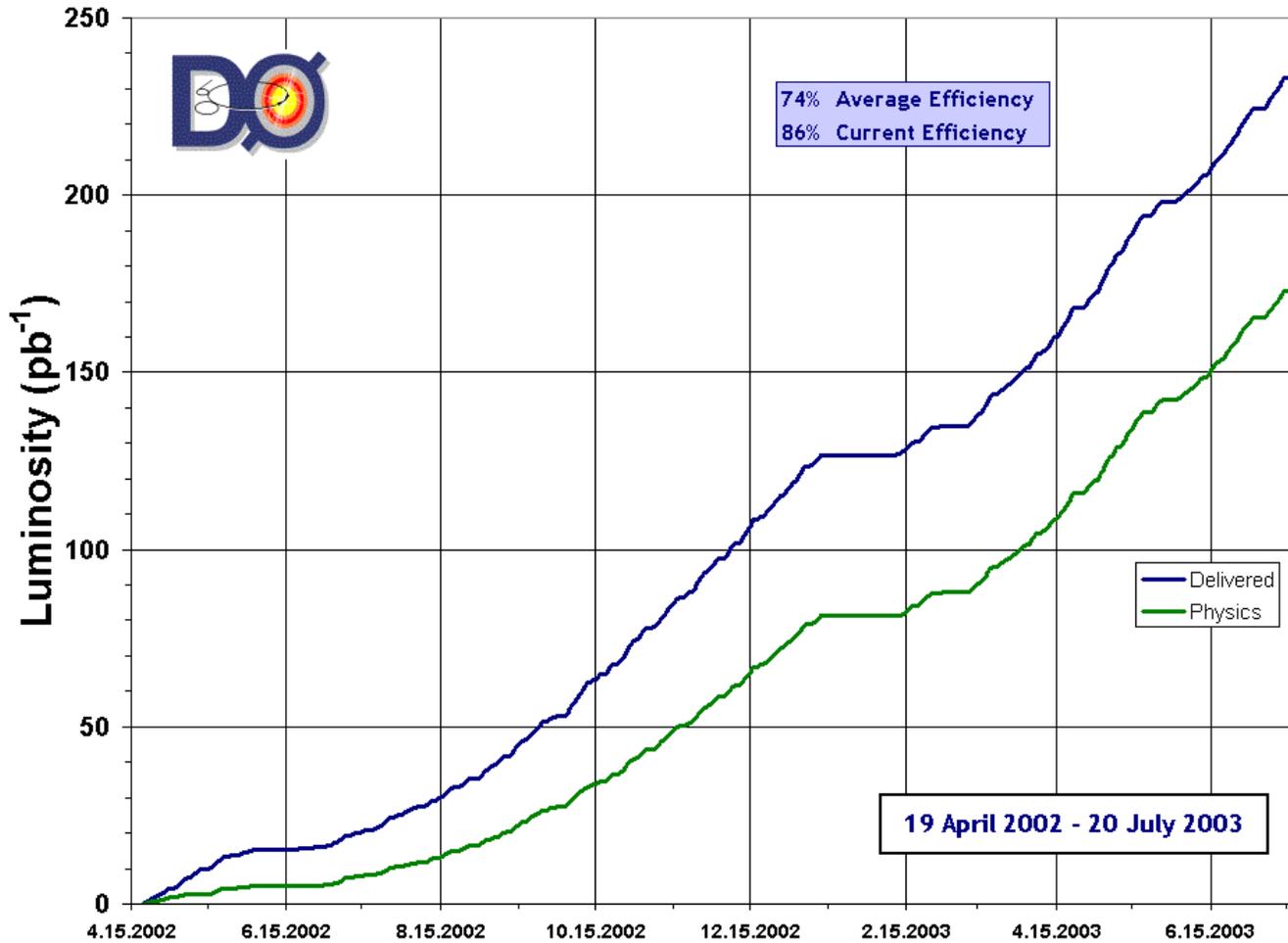
Fairly consistent data taking efficiency

More than usual interruptions keep average still below 90%



Integrated Luminosity

Run II Integrated Luminosity



237

176

Could/should surpass 200pb⁻¹ by shutdown

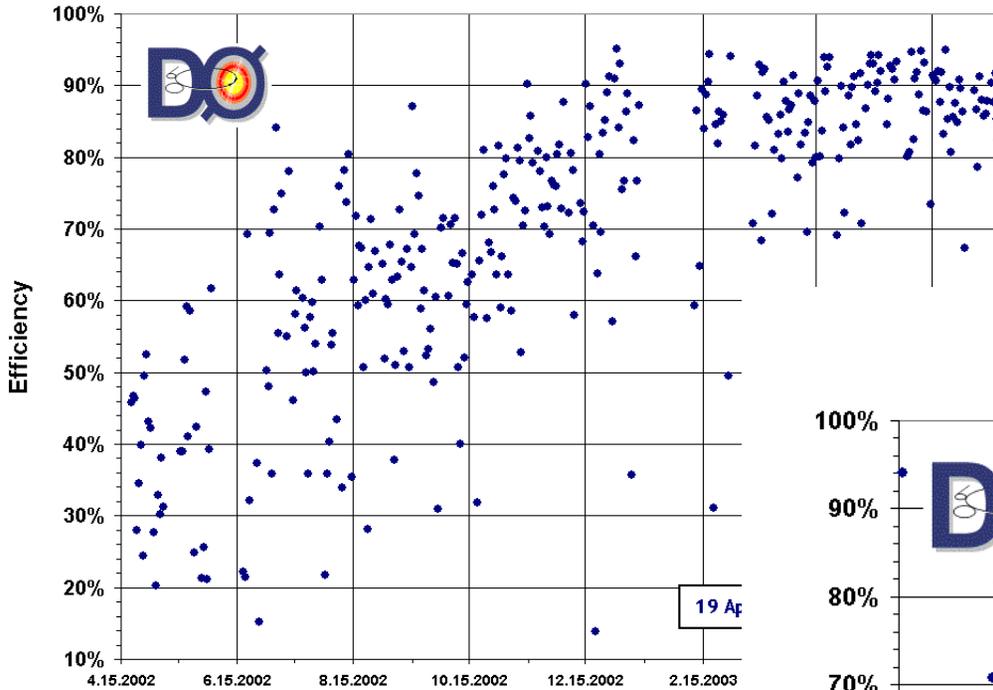
(need ~5pb⁻¹/week)

↑
Detector complete



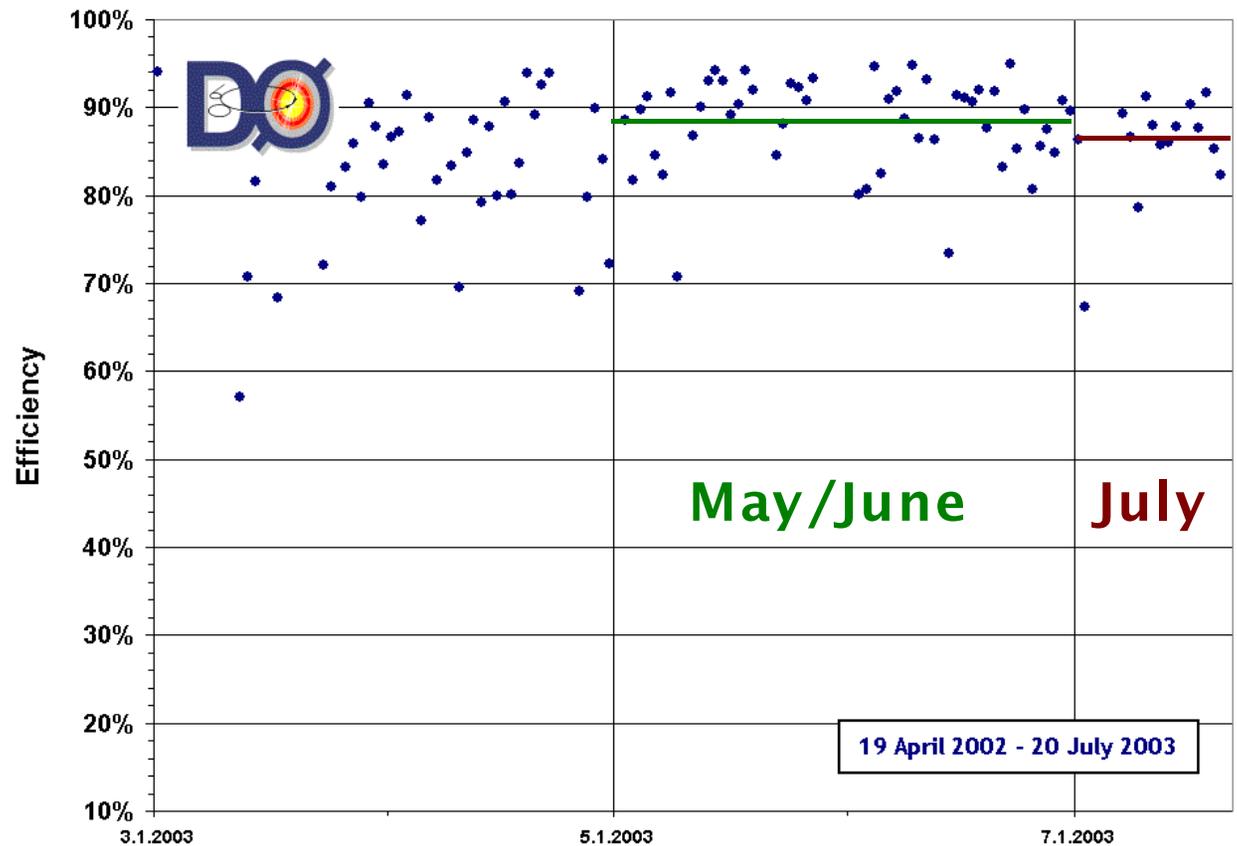
Data Taking Efficiency

Data Taking Efficiency



Detector complete

Data Taking Efficiency





- **Calorimeter low voltage power supply trips**
 - ◆ Around 140 (!) trips between Wed Jul 9 and Tue Jul 15
 - ◆ Two problems, one with power supply, one with rack monitoring
 - ◆ Ultimately solved during access on Tuesday Jul 15
 - ◆ Need to study impact of trips on data quality (at 50Hz to tape there may be strange events while voltages are coming down)
- **Different low voltage power supply trip on Saturday**
 - ◆ Investigated today, will require longer access to repair (OK for now)
- **A couple of cases where Level 3 nodes or single board computers in readout crates would fail**
 - ◆ Improved monitoring, software, instructions
- **Muon front-end and HV problems over the weekend**
 - ◆ Central: PDT HV trip, affecting 4 chambers. Identified and disabled during access today
 - ◆ Forward: MDT front-end board causing frequent readout and trigger errors, ~once/hour. Replaced during access today



Highlights cont.

- Other minor access work on Muon electronics, L1 Muon, L1 Track Trigger, Forward Proton Detector, during 3 controlled accesses
- New trigger list 12.20 online since Thursday morning
 - ◆ Reduced some monitor trigger rates, decoupled some L1/L2 triggers, L3 changes for B triggers
- Fairly large number of (mostly minor) issues, aggravated by new shifters, operator errors, vacation time, ...
- Continue to work hard on getting back to 90%+ efficiency