Data Taking Statistics

Week of 2003 April 28-May 04

			Normalizable Luminosity (nb^{-1})			Hours			Norm. Events (k)		Efficiency	
Day	Date	Del	Util	Rec	Physics	Store	Util	Rec	Rec	Physics	Rec	Phys
Mon	28-Apr-03	1231.74	1200.09	1107.34	1107.34	16.9	16.5	16.0	2165	2165	0.899	0.899
Tue	29-Apr-03	690.23	627.06	581.00	581.00	14.4	12.9	12.6	1751	1699	0.842	0.842
Wed	30-Apr-03	1160.49	1014.72	838.05	825.91	16.1	14.7	14.0	2047	1826	0.722	0.712
Thu	1-May-03	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0	0	0.000	0.000
Fri	2-May-03	1531.70	1502.22	1357.40	1357.40	18.2	17.8	17.1	2227	2227	0.886	0.886
Sat	3-May-03	1379.71	1320.17	1128.59	1128.59	15.0	14.4	13.7	2243	2147	0.818	0.818
Sun	4-May-03	1877.00	1826.75	1684.70	1684.70	20.7	20.2	19.7	3186	3186	0.898	0.898
		7870.9	7491.0	6697.1	6684.9	101.3	96.5	93.1	13619	13250	0.851	0.849

- Corrections to Physics Luminosity & Events to Tape
  - Special Runs: Jet Energy Scale & Test new L2/L3 EM-Track Triggers
    - Recorded 12 nb^{-1} & 370k of non-Physics events

	Recorded Physics Lumi	Efficiency	Physics Events (million)
This Week	6.7 pb^{-1}	85.1%	13.3
Last Week	3.0 pb^{-1}	86.3%	6.6
Prior Best Week (2003 Apr 14-20)	6.0 pb^{-1}	87.0%	13.3

Delivered Luminosity Losses

Date	Time	Downtime (hrs)	Deadtime (hrs)	Reason
28-Apr-03	2:12	0.23	0.25	HDIs in SMT x67
29-Apr-03	6:59	0.50	0.00	EM & Track Trigger Rate Test
29-Apr-03	9:47	0.20	0.00	Jet Energy Scale Special Run
29-Apr-03	10:57	0.75	0.00	CTT Firmware Special Run
30-Apr-03	3:25	1.00	0.00	Begin Store 2495; Bad PDT 144 FE; L2 Disable Input
30-Apr-03	8:23	0.30	0.00	Special Run: New L2/L3 EM Triggers
30-Apr-03	10:34	0.15	0.00	Jet Energy Scale Special Run
2-May-03	10:00	0.05	0.40	MTM Power Supply Trip L1 Crate x14
3-May-03	0:41	0.17	0.18	Begin Store 2503; Pixel Crate x32; L2 Disable Input
3-May-03	13:04	0.27	0.37	MTM Power Supply Trip L1 Crate x14
4-May-03	1:00	0.20	0.05	Operator Error: Download to non-existent FPD AFE
4-May-03	4:57	0.00	0.20	MDT Major Alarms Auto-pausing Run
4-May-03	17:46	0.15	0.00	Begin Store 2507; PDT 244; L2 Disable Input

- ~1.0 hr: 50 Run transitions (~1 minute/per)
- ~0.5 hr: 12 Begin or End Store transitions (~3 min/per)
- ~3 hrs: Average 4-5% FEB during physics data taking

Other D0 News

Three Controlled Accesses

- 16:30-17:30 Tue Apr 29th
  - CTT Commissioning
  - CFT AFE Board Swap
  - Calorimeter BLS PS Swap
- 15:30-17:00 Thu May 1st
  - Replace PDT Electronics
  - CTT/FPD Comissioning
- 14:45-15:30 Sat May 3rd
  - Fix Muon Pixel PS - stuck VME controller
  - L1 Muon/CTT PS checkout

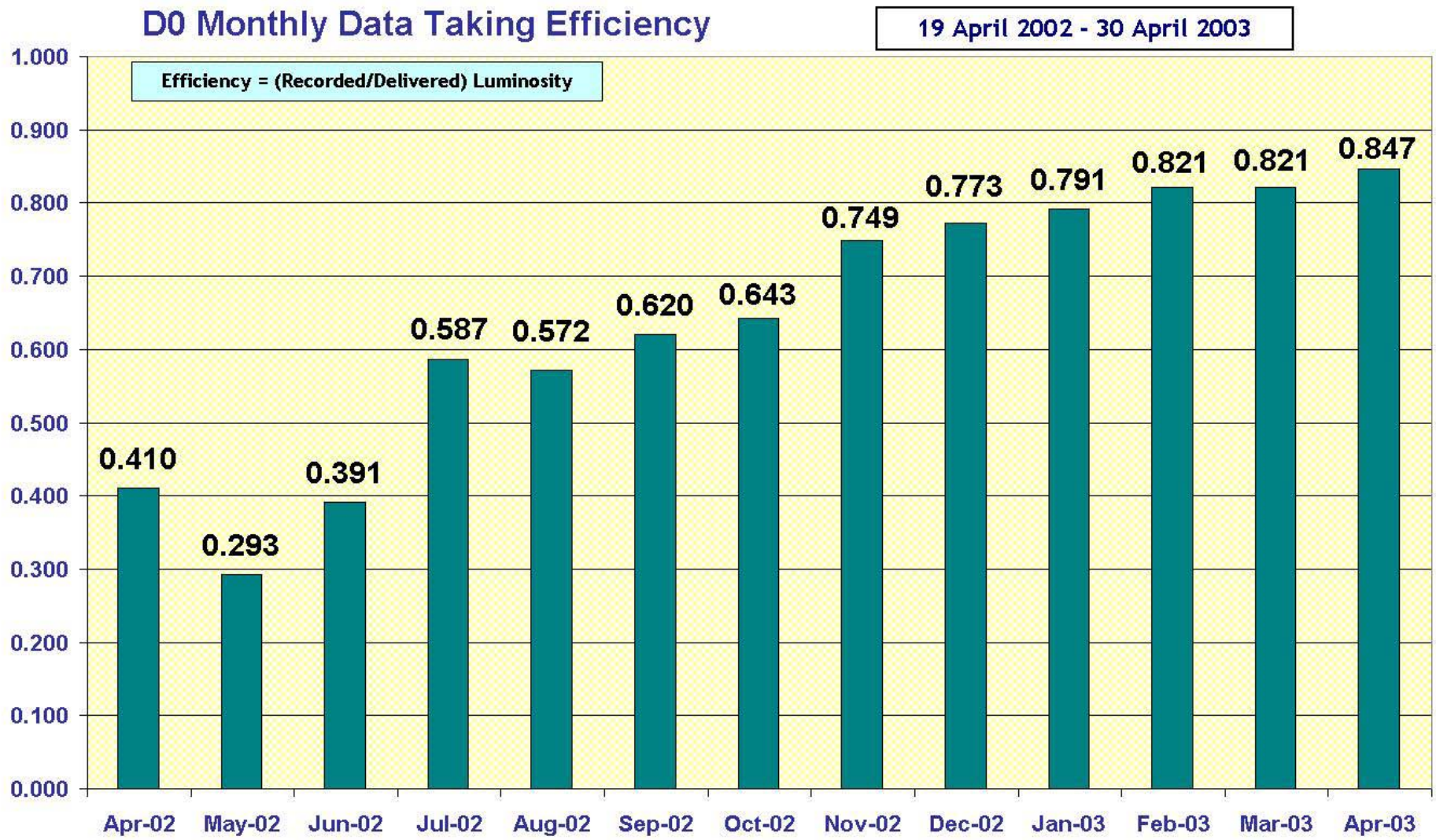
Store 2496 (~04:00 Thu May 1st)

- Pbar losses ~300x typical values
- D0 did not take any physics runs
- Store 2496 has been excluded from our weekly accounting

Higher than usual Pbar Halo

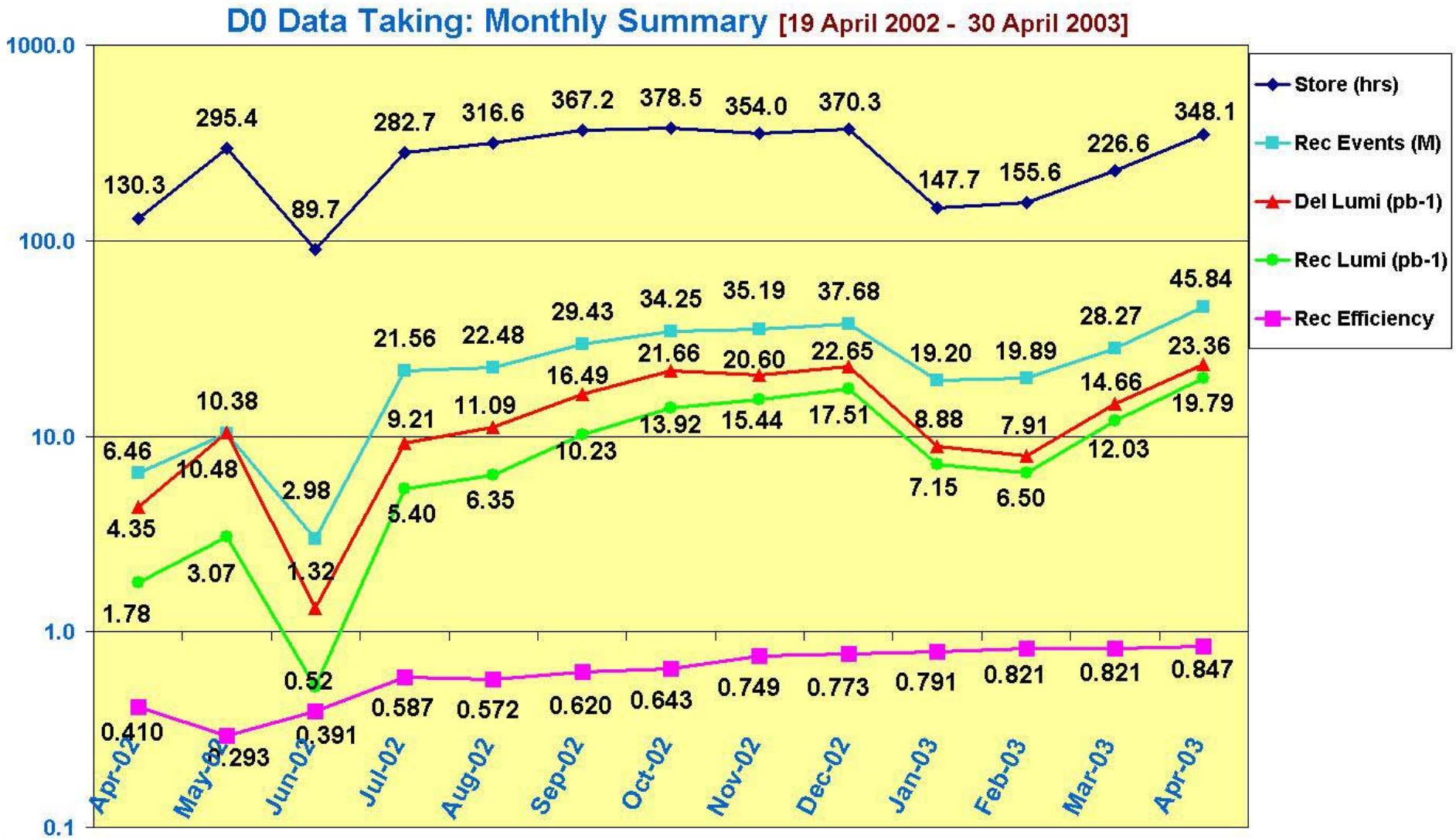
- D0 guidelines are <4 kHz
  - Higher losses affect our L1 trigger rates = more deadtime
  - Also, increases the irradiation of our Silicon & Muon detectors
  - Typical values have been 3.5-4.0 over the past couple of months
  - Last week BoS values (D0AHTL)
    - 2491: 5.0 kHz
    - 2495: 4.4 kHz
    - 2502: 4.5 kHz
    - 2503: 5.5 kHz
    - 2505: 4.9 kHz
    - 2507: 4.2 kHz
    - 2509: 4.1 kHz
  - Trending down…

Monthly Data Taking Efficiency

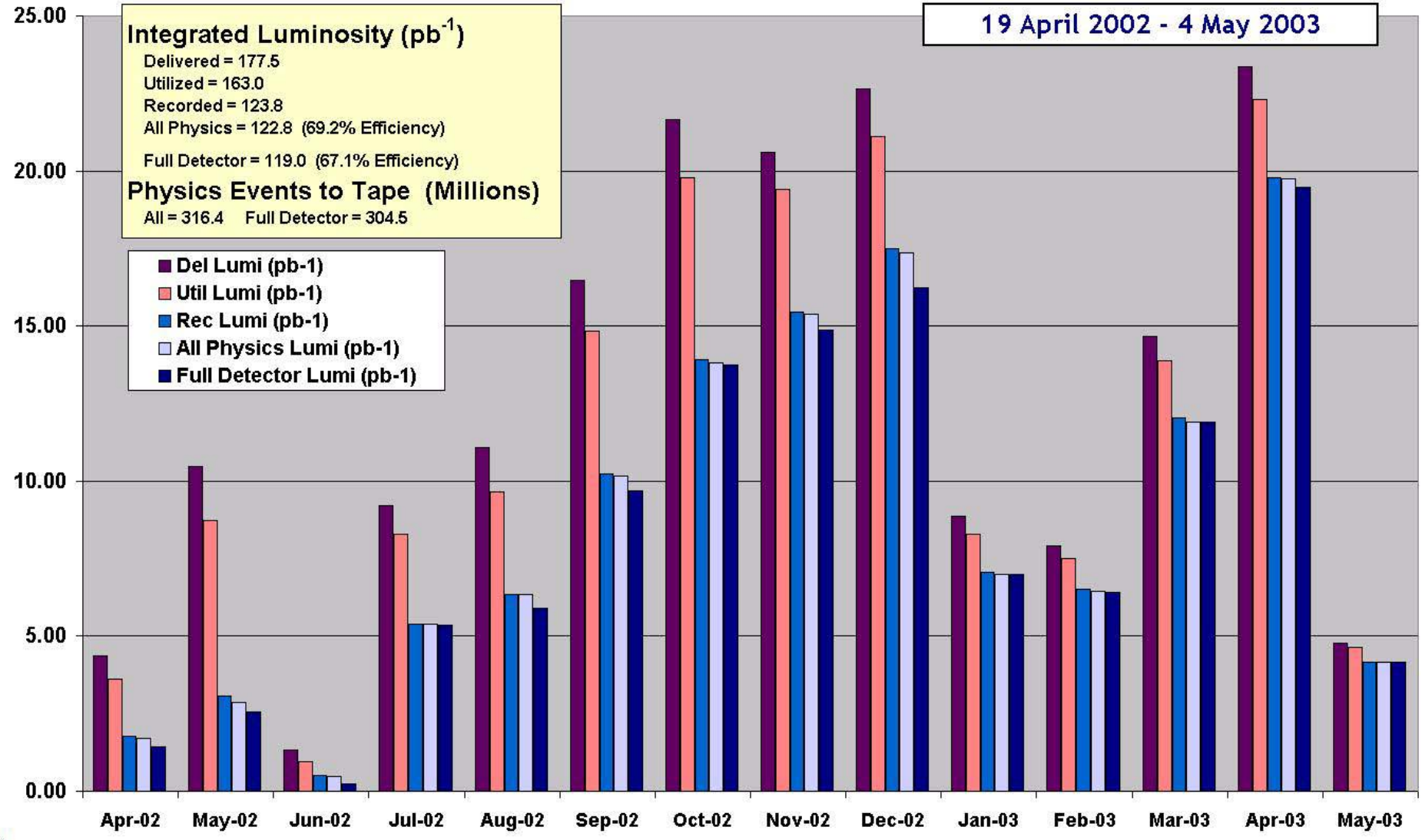


D0 Efficiency Goal by the end of June 2003 is >90%.

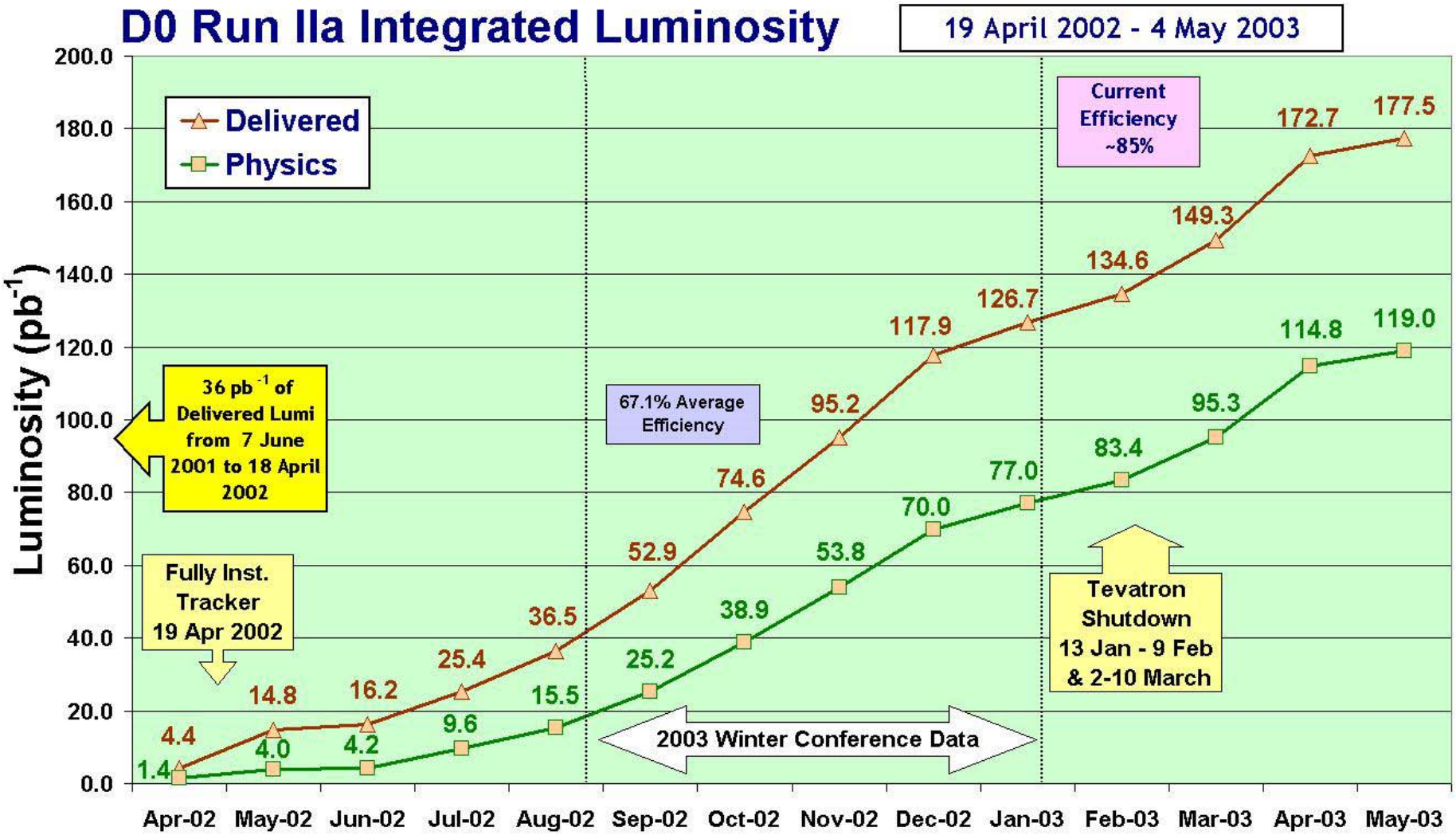
Monthly Data Taking Summary



Full Detector Luminosity



D0 Integrated Luminosity



Plans for Upcoming Week

- No major problems affecting physics data taking
  - Continue to utilize short controlled access opportunities
    - Tracking Trigger & FPD Commissioning
    - Infrequent minor Muon, SMT & Calorimeter electronic or hardware issues as well as second order improvements
- No change to our trigger list or trigger rates
  - Current limits for L1/L2/L3 rates = 1100/500/50 Hz
    - We can run stably at L1/L2 rates at least 50% higher but incur a greater overall deadtime
    - Expect a report from SMT Front-End Busy Task Force later this month for recommendations
- Integrate luminosity…