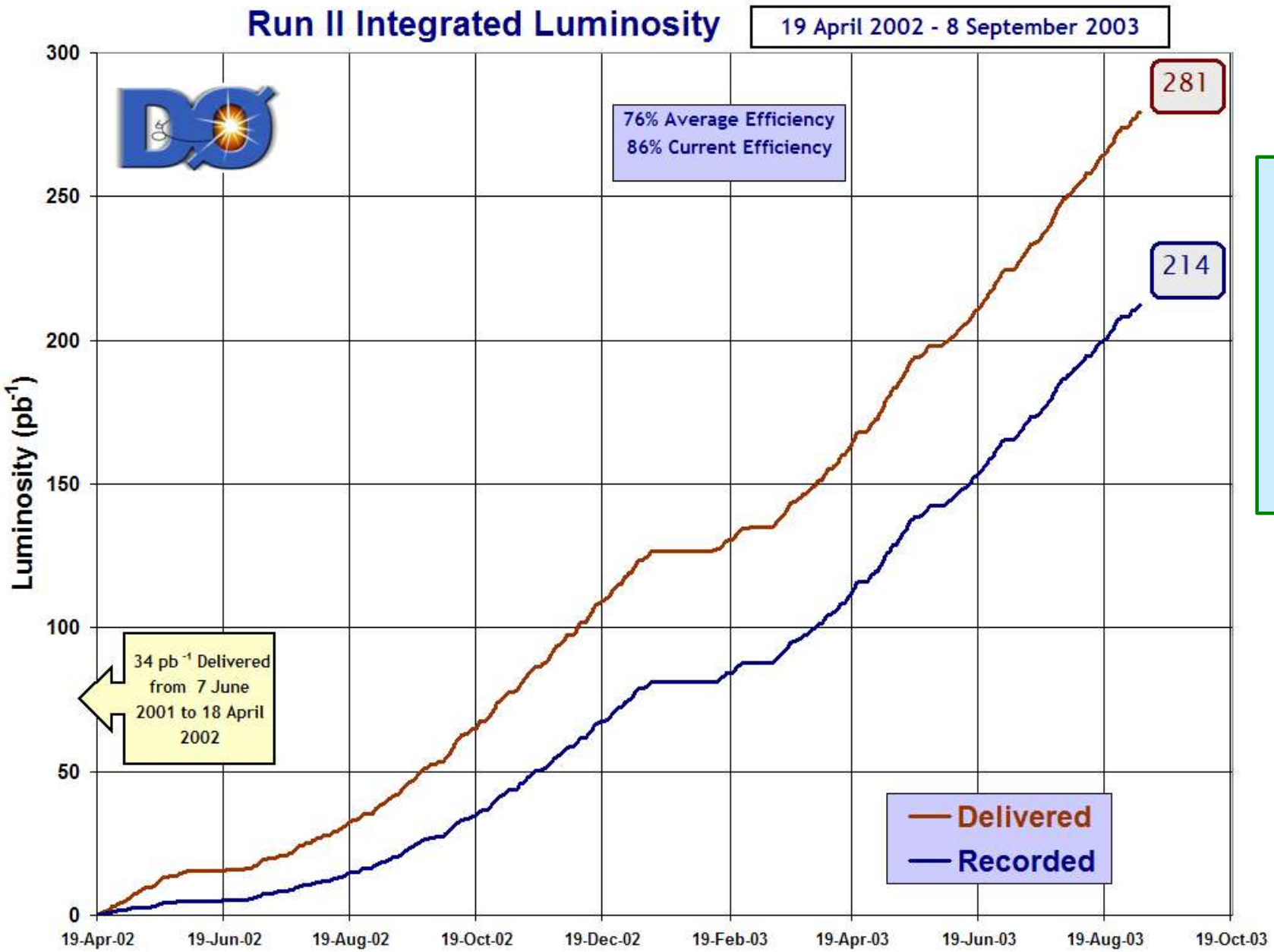
Integrated Luminosity



Total data sample on tape with complete detector > 200pb^{-1}

Weekly Summary

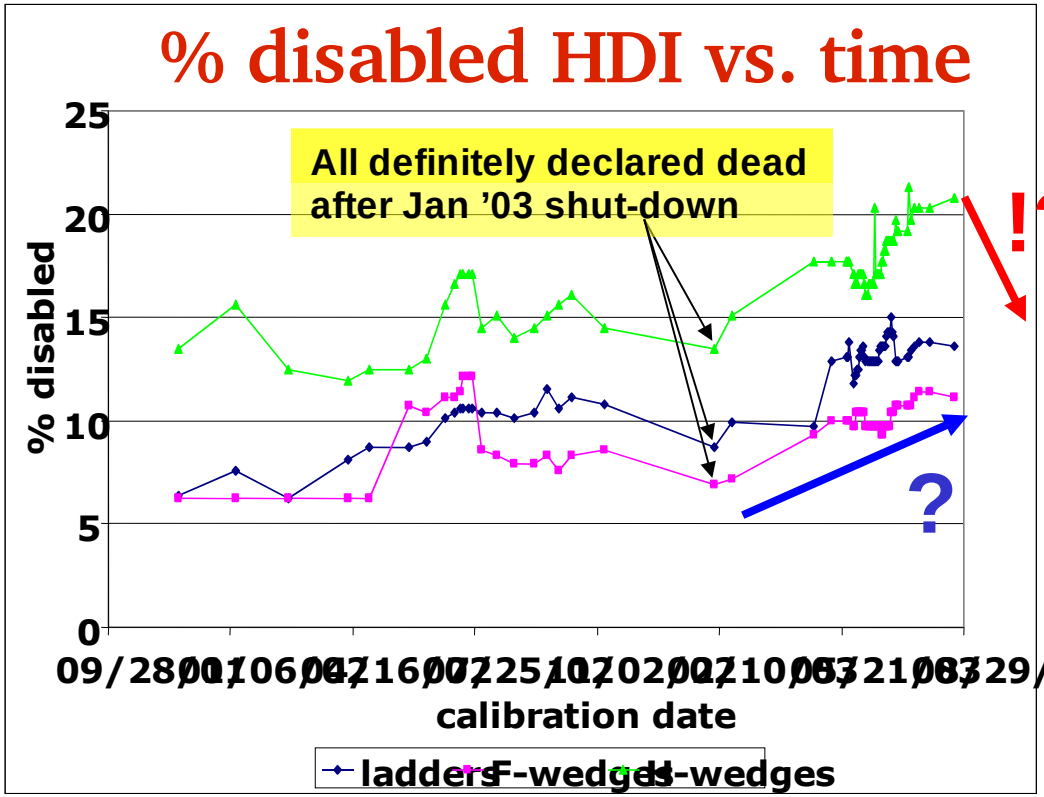
- Stable data taking with >90% efficiency much of the time. Two larger downtimes > 1 hr
  - (False) SMT smoke alarm in the collision hall (Tuesday)
  - (False) drip detector tripping off L1CAL (Friday)
  - Rack monitoring will be inspected during the shutdown
- Plenty of special runs and related activity until the last hours of store
  - Forward Proton Detector commissioning
  - Level 1 Muon trigger efficiency
  - L1 Track trigger firmware debugging
  - L1 Cal trigger missing E_T and calibration studies, L2/L3 calorimeter studies
  - L2 Track and Preshower commissioning
  - First physics runs with Silicon Track Trigger (part of it) in the readout
- Went into supervised access yesterday afternoon

Shutdown Plans

- Major goals for the shutdown
  - Improve **reliability**: reduce access time, periods with incomplete detector etc.
  - Improve **quality** of the data: reduce calorimeter noise, repair Silicon HDI's
- Detector groups together with mechanical and electrical support groups have developed detailed job lists. Day-by-day schedule includes
  - Detector opening and closing
  - Allocation of manpower resources from detector groups and Fermilab's support teams
  - Survey as needed during major moves – asking for help / cooperation from survey group because of ongoing Calorimeter noise study
- Duration of the shutdown is long enough to perform all major planned activities

Shutdown: Major Jobs I

- Luminosity system
  - Spare cables installations
- Silicon
  - Repairs of failed HDIs / electronics
  - Coherent noise and “grass” noise studies
  - Installation of coolant lines resistivity monitors
  - Replacement of TLDs
- Fiber tracker and preshowers
  - Maintenance of LVPSs and installing upgraded LVPS (better connectors)
  - Modifications of AFE boards to remove un-used SVX inputs from the readout
    - Reduce data size and front-end busy for the D0 detector
  - Maintenance of the VLPC He cooling system



Two projects: !? and ?

Shutdown: Major Jobs II

- Calorimeter
  - Replacement of all large cooling fans for preamplifiers cooling
  - Modifications and tests of all Rack Monitor Interfaces
  - Study and hopefully fix noises (currently performing step by step power up of experiment)
- Muon
  - Access to A layer forward muon tracker: replacement of preamplifiers, gas leaks, gas monitors
  - Installation of extra trigger counters
  - Installation of ~200 remote power cycle relays for front-end electronics and all relevant cabling
- Forward proton detector
  - Maintenance and installation of electronics for full system operation
- General detector maintenance
  - Air handlers, hydraulic systems, vacuum jackets, cooling water systems, ODH heads, etc.

Summary

- D0 was in good shape for physics data taking until the last store
- Besides physics, collected plenty of special runs for future improvements
- Collected 214pb^{-1} with complete detector
- Detailed plan for the shutdown is in place
  - Assume access ends on November 17th
  - Plan to finish all major jobs in 7 weeks with only limited access needed during the last 3 weeks
  - Close detector during week 10
- Commission detector for beam during the last week of the shutdown in order to be ready for physics as quickly as possible