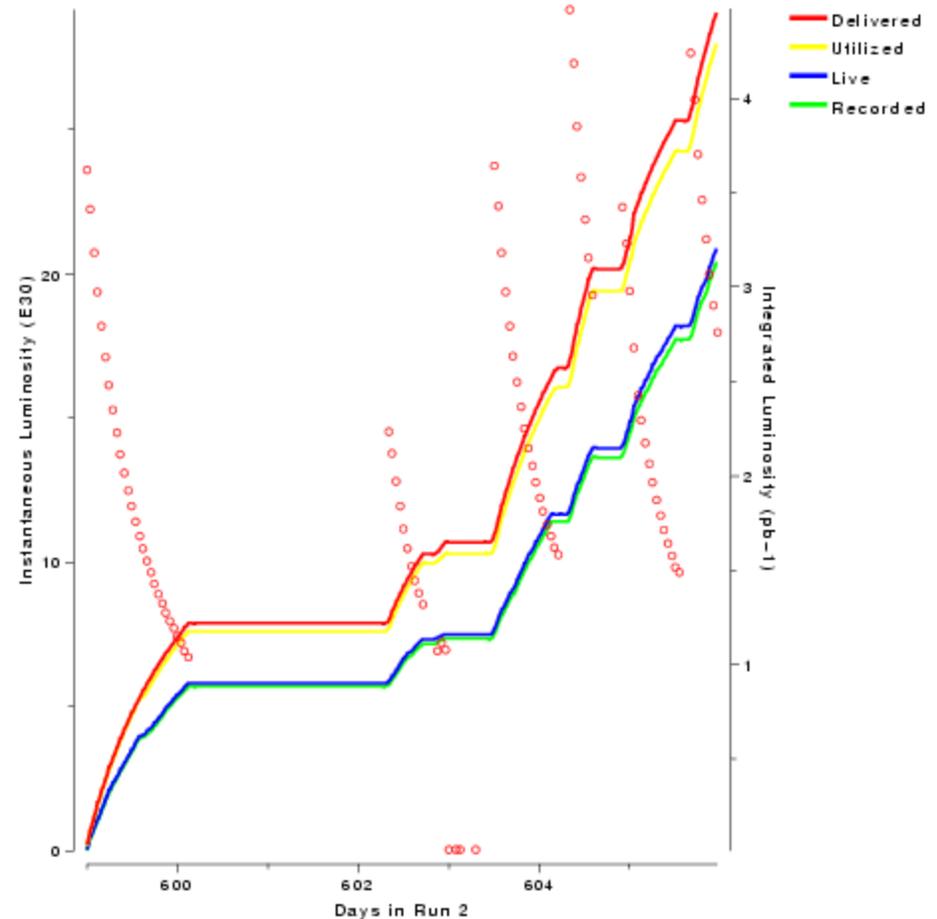
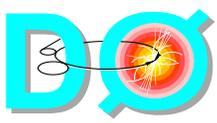


Week of October 21 to October 28 D0 Summary

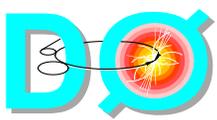
- Delivered luminosity and operating efficiency
 - ◆ Delivered: 4.5pb^{-1}
 - ◆ Recorded: 3.2pb^{-1} (~71%)
- Data taking efficiency
 - ◆ no major hardware/software problems
 - ◆ one of the best weeks on record
- Number of events collected
 - ◆ 8.3mln
- Accelerator halo
 - ◆ reasonable
 - ◆ working on feedback to Tevatron halo task force
- Beam position
 - ◆ stable





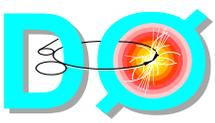
Detectors Operation

- Luminosity
 - ◆ stable
 - ◆ concentrating on finalizing new electronics implementation
- Silicon
 - ◆ running smoothly
- Fiber tracker/preshower
 - ◆ full system in the readout
 - ◆ total number of dead channels is ~0.3%
 - ◆ major issue with fiber tracker electronics was resolved last week
- Calorimeter
 - ◆ running smoothly
- Muon system
 - ◆ running with one mini-drift plane OFF due to HV problems for last ~10 days
 - ▲ efficiency is expected to be basically un-affected
 - ▲ one plane out of ~164 planes
 - ▲ waiting for natural ~24 hours shutdown to repair difficult to access plane
 - ◆ two readout/trigger issues are affecting overall DO efficiency
 - ▲ mini-drift tube readout crates losing sync (limits our trigger rates)
 - ▲ "missing" inputs into muon Level 2 trigger
 - ▲ both of the above problems account for ~12% of efficiency loss
- Forward proton detector
 - ◆ inserting pots during all stores
 - ◆ hope to be able to remove them quickly too
 - ▲ calorimeter shifters training in progress



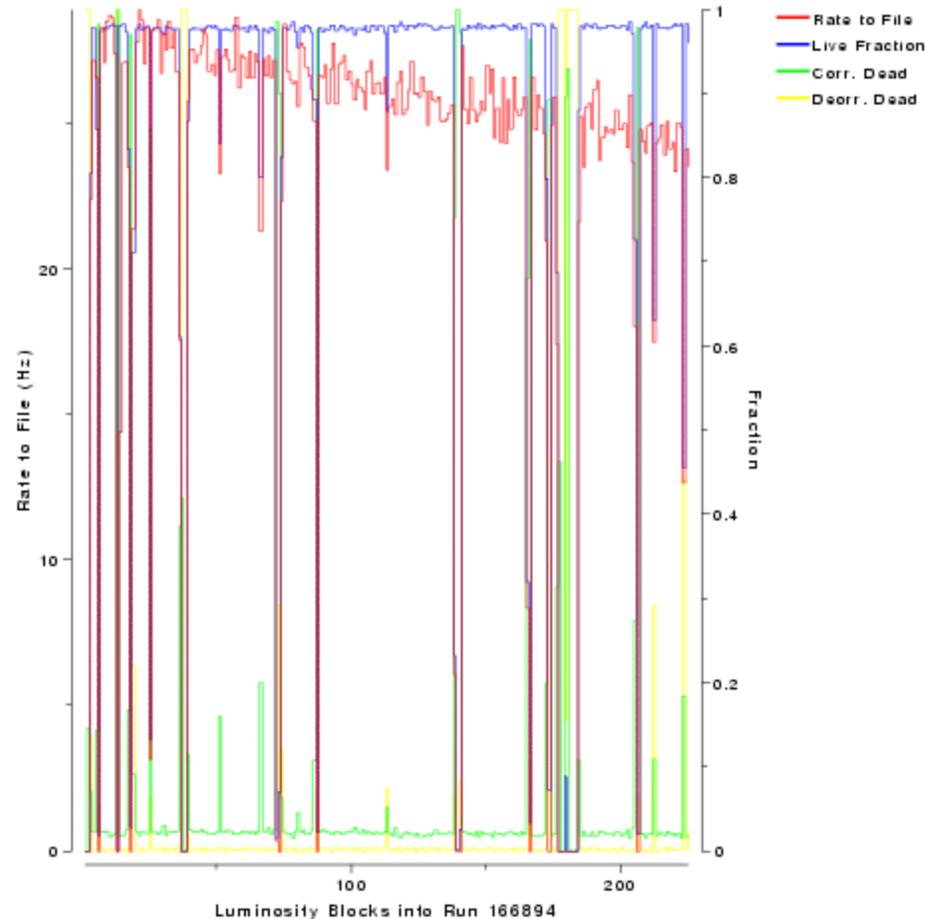
Data Taking and Triggering

- Running physics trigger list 8.41
 - ◆ designed for luminosity in the range $(5-50)10^{30}$
 - ◆ keeping high p_T triggers un-prescaled at any luminosity
- After improving stability in trigger/DAQ over month we are able to set new trigger rates guidelines which are limited by trigger/DAQ systems stability
 - ◆ L1 trigger $\sim 0.5\text{kHz}$
 - ◆ L2 trigger $0.2-0.3\text{kHz}$
 - ◆ L3 trigger (to tape) $\sim 50\text{ Hz}$
- Total number of events collected over last week
 - ◆ 8.3mln
 - ◆ total number of events reconstructed on the farms is 7.6mln
 - ◆ farms reconstruction is basically up to speed with data taking, further improvements are expected soon

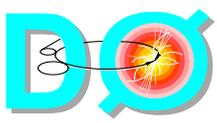


Operating Efficiency

- There were three major issues affecting our (record) efficiency last week
 - ◆ fiber tracker electronics "loosing" memory
 - ▲ traced to monitoring software affecting data taking (changing operating parameters)
 - resolved!
 - ◆ Muon mini-drift tubes and Level 2 trigger issues
- If above mentioned muon problems are resolved we could
 - ◆ increase efficiency by another ~12%
 - ◆ increase Level 1 and Level 2 trigger rates by another factor of 2
- The rest of inefficiency is spread over multiple "once type" issues
 - ◆ working on improving experts response



~90% Efficiency 4 hours Run collected
this weekend with Spokeperson
as shift Captain



Summary

- D0 experiment is progressing well with physics data taking
 - ◆ trigger list 8.41 is running on-line
 - ◆ planning for 9.0 to be on-line within a week
 - ◆ 8.3 mln events collected last week - one of the best weeks on record
- After about 4 weeks of struggle our weekly data taking efficiency is up by ~10%
 - ◆ problems with fiber tracker monitoring resolved
 - ◆ trigger rates are a little more conservative (by ~30%)
 - ▲ some of the problems are rate dependent (non-linearly)
 - ◆ have well defined plan of attacking next largest issues
 - ▲ muon loss of sync and Level 2 losing inputs
- Further increase in off-line data processing power as well as Level 1 and Level 2 trigger bandwidth is expected soon
- Could use "natural" opportunity for an access
 - ◆ ~2 hours for minor tests/repairs
 - ◆ ~24 hours for mini-drift tubes plane HV fix