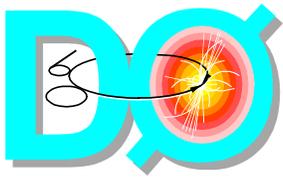


# Fiber Tracker Electronics

- VLPC cryostats have been cold ~ 2 weeks
- Installation and testing of AFE cards in situ progressing: 47 AFE boards installed and working + 8 “marching” boards used for checking slots. Most boards working fine with few exceptions being debugged.
- AFE board production and testing at SiDet and DØ
- Infrastructure: 97/99 AFE slots tested for readout (2 missing a backplane). 2.5 bad slots, rest are good and ready for boards. Prequalified slots work when boards plugged in.
- By end of shutdown expect to fill all the CFT-axial slots, then CPS-axial/CFT-stereo then CFT-stereo only
- L1 Trigger Electronics: Mixer boards are installed and 1/2 DFE boards





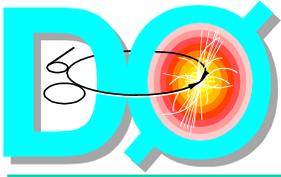
# AFE Production & Testing Status

## November 5, 2001

Lot	Manuf.	Stuffed	SiDet	DAB3	Installed
1	146	146	123+16*	69^	47@
2	54	54#	14+22*	0	0
3	44	18 Bottom LH+	0	0	0

- ◆ \* Many of the failed cards do not return to SiDet
- ◆ ^ Pass SVX, VSVX; 65 also pass LVDS (does not include weekend work)
- ◆ @ 187 of 200 AFE slots commissioned
- ◆ # Handwork underway, primarily at SiDet
- ◆ + First item of loaded left-handed board inspected today, 18 early next week.
- ◆ Tuesday will discuss final shutdown configuration:
  - ▲ Will complete central axial (76) and much of central stereo (60+30)  
Additional ~50 cards expected: Production ~20; operable but failing specs ~20 ; Withheld for testing trigger ~10.

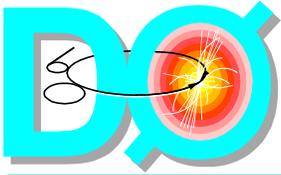




# Mixer/DFE Status

- **Mixer**
  - ◆ 16/20 installed; 4 for testing
  - ◆ Cabling underway
- **Digital Front End & Collectors/Broadcasters**
  - ◆ 20/40 DFEs installed, remainder Tuesday
  - ◆ Majority of Collectors/Broadcasters this week
  - ◆ Cabling underway
- **Integration of vertical slice 8-AFE/4-Mixer/  
8-DFE/2-Collector/1-Broadcaster at DØ this  
week**

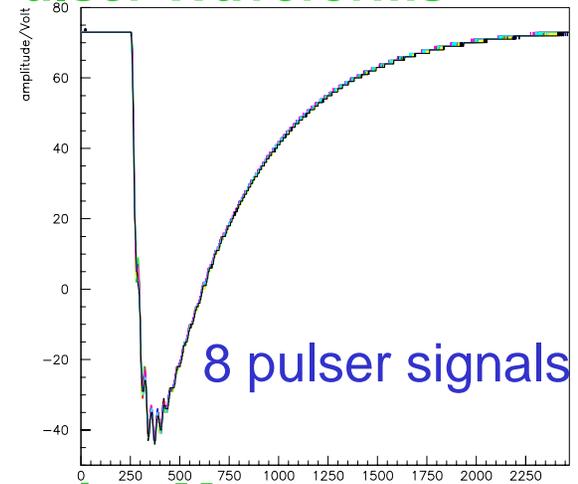




# Calorimeter

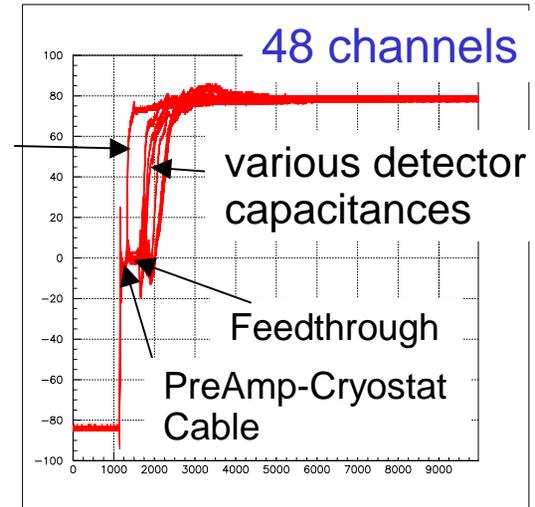
- Replacing fuses on Calorimeter analog front-end electronics power supplies with circuit breakers > 2/3 done
- Some repairs to preamplifier power supplies and cooling systems
- Extra cableway shielding being added in central region
- During the shutdown have identified and repaired about 150 bad channels and 41 noisy channels. < 40 bad channels due to damaged cables and bad/disconnected cells in cryostats (<0.1%).
- Waveform measurements: check uniformity of the calibration signal and determine correction factors if necessary
- Reflection measurements: resistance, capacitance and inductance measurement of signal from preamplifier to signal pads in cryostats. Allows refinement of the Spice models and determination of correction factors between physical and calibration signals.

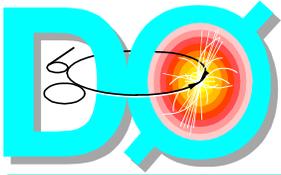
## Pulsar Waveforms



## Reflection Measurements

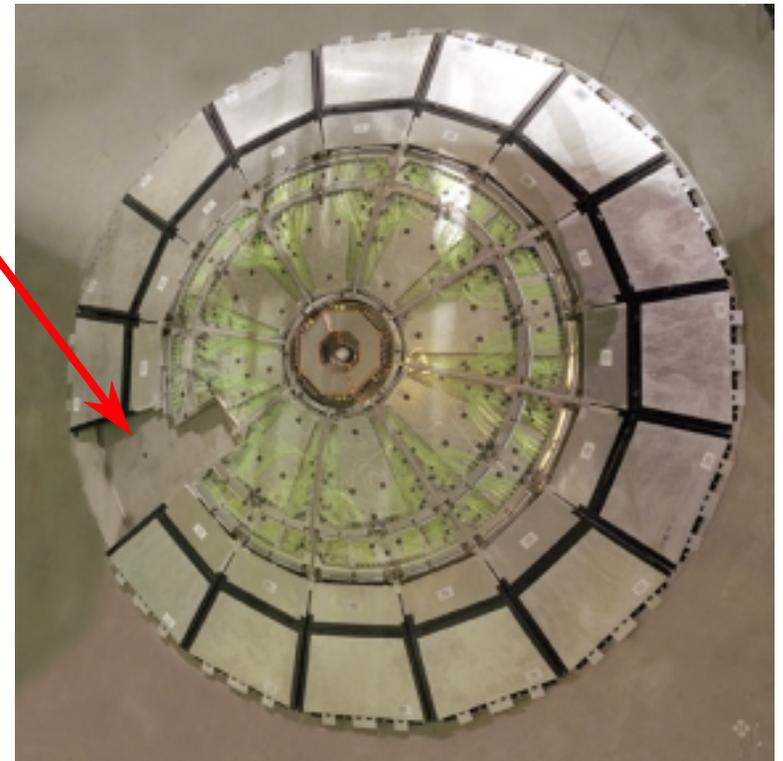
non connected cable

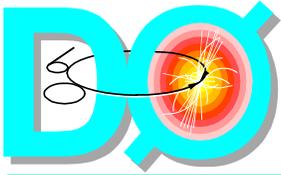




# Intercryostat Detector (ICD)

- Only South had readout electronics drawers installed prior to shutdown (34/64)
- Repairs to PMT HV bases and signal preamplifier boards almost complete (few %)
- All tiles installed including  $\frac{1}{2}$  tile by cryoservices pipe
- Checked signal seen from scintillator using radioactive source
- Total number of channels = 376
- ICD South – 1 dead, 2 low response  
3 being checked
- ICD North –  $\frac{1}{2}$  NW checked so far  
4 to check on NE

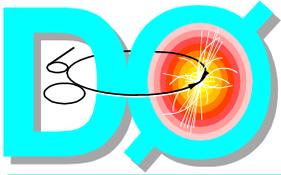




# Muon Systems

- New stops made for correcting positions of muon planes when detector closed based on survey results
- Prototype polyshield being installed downstream of calorimeter endcap cryostat to reduce backgrounds in muon trigger.
- Central (PDT and Scintillator)
  - ◆ Beam delays adjusted and trigger gates reduced factor ~2-2.5 before shutdown - will be tweaked some more with beam
  - ◆ Gain calibration for individual PMT thresholds
  - ◆ Worked on front-end electronics to reduce noise; fixing TOF gates for out-of-time particles
  - ◆ Completing commissioning of A-layer PDTs
  - ◆ Working on cleaning up noisy channels

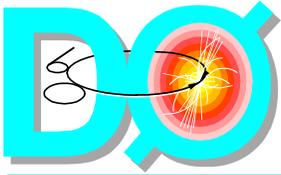




# Muon Systems (2)

- **Forward (MDT and Pixels)**
  - ◆ HV channels all working and calibrated to  $< 0.3\%$
  - ◆ Gas purged and in recirculating
  - ◆  $\sim 0.4\%$  disabled wires
- **L1 Trigger**
  - ◆ Completing installation of cables for CFT-muon match
  - ◆ FPGA fixes for readout
  - ◆ Commissioning PDT trigger
  - ◆ New scintillator algorithms being worked on





# DAQ, Trigger and Data Processing

- **DAQ**

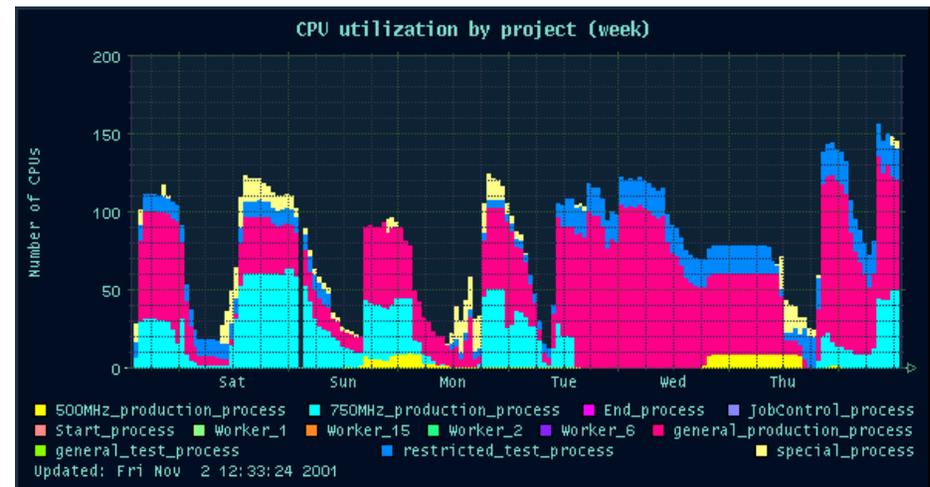
- ◆ DAQ operational 24/7 for detector and sub-system commissioning
- ◆ Online cluster fully kerberized
- ◆ Isolation tests performed successfully

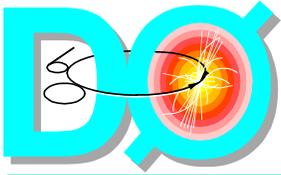
- **Trigger**

- ◆ Linux cluster (48 dual nodes 1GHz) for L3 filtering installed, commissioned → default today
- ◆ L2 have 13 working alpha boards, 2 more coming
- ◆ Expect to have L2 calorimeter, muon and global trigger after shutdown

- **Data Processing**

- ◆ Reprocessed about 4.9 million events with latest version of RECO (10.07)





# Forward Proton Detector

- Installing and testing 8 new detectors
- Resolving some LV PS issues
- Multiplexor and software upgrades for pot motion control
- Install new scintillator veto counters around beam pipe

