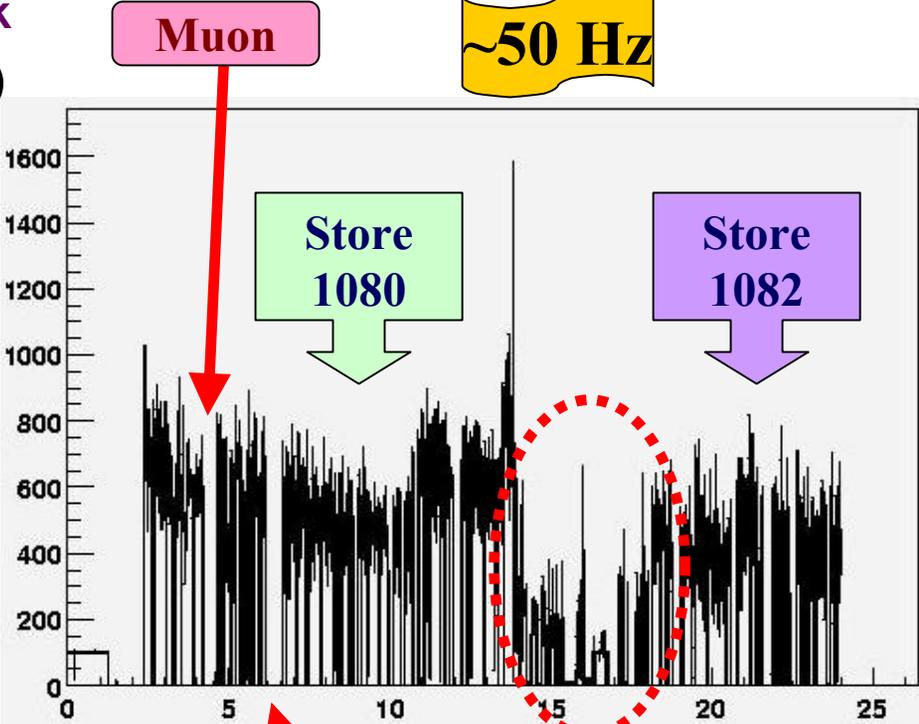


DØ Status: 03/11 - 03/18

L3 Input Rate
15 March 2002

~50 Hz



Muon

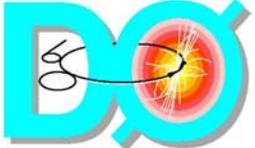
Store
1080

Store
1082

VRC & SMT
Power Cycle

No store

- Week integrated luminosity
 - 1.1 pb⁻¹ delivered (recorded by DØ)
 - 0.7 pb⁻¹ lost due to Master Clock
 - 1.0 pb⁻¹ utilized (recorded runs)
 - 65% Live Fraction...
 - *Excluding Master Clock issues*
 - Affected three stores last week (1068, 1070, 1072)
- Data collection downtime
 - ~15 min lost Begin/ End Store
 - HV ramps, run config, L3/DAQ
 - Muon readout crates
 - ~15% of total downtime
 - Remaining sources
 - L3/DAQ, CAL/CFT/SMT readout crates

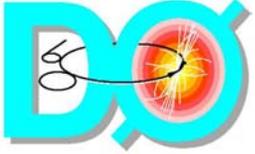


Problems with Master Clock

Phase Coherent Clock

- Trigger framework problems began owl shift 3/12 (Store 1070)
 - Seq halt & clock parity errors
- DØ Experts investigated
 - Potentially bad PCC module but no spare! 3/12 13:00
 - Called MCR for help
- Steve Chappa - found spare PCC module 3/13 10:00
(*but not certified*)
 - Needed extension mods to provide sync for data taking
 - Successful TFW run 3/13 13:30

- Using 2nd PCC module w/kluged phase lock loop circuit board from 1st PCC module
 - MC Timing output signals wrt beam x-ing has moved less than 2 ns compared to recent measurement (23-FEB-02)
- We still don't know why it failed...
- Will have spare working PCC within the week



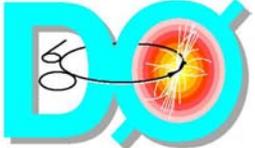
DØ Detector Status

- We made no Controlled Access requests
 - Took advantage to make minor repairs & to do small detector maintenance jobs

Sub-detector Report

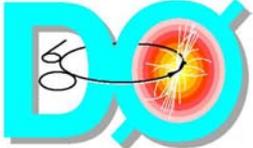
- Calorimeter: Full readout
 - T&C FPGA change moved timing by max 30 ns each readout crate
 - BLS power supplies stable
- SMT: Full readout
 - No LV supply trips in past three weeks!

- CFT: Steady improvement
 - All axials & ~50% stereo boards
 - Total channel readout increases with each access & board swaps
- Muon: Steady running
 - Readout crate errors are major issue → under study
 - 29/500k events source of errors

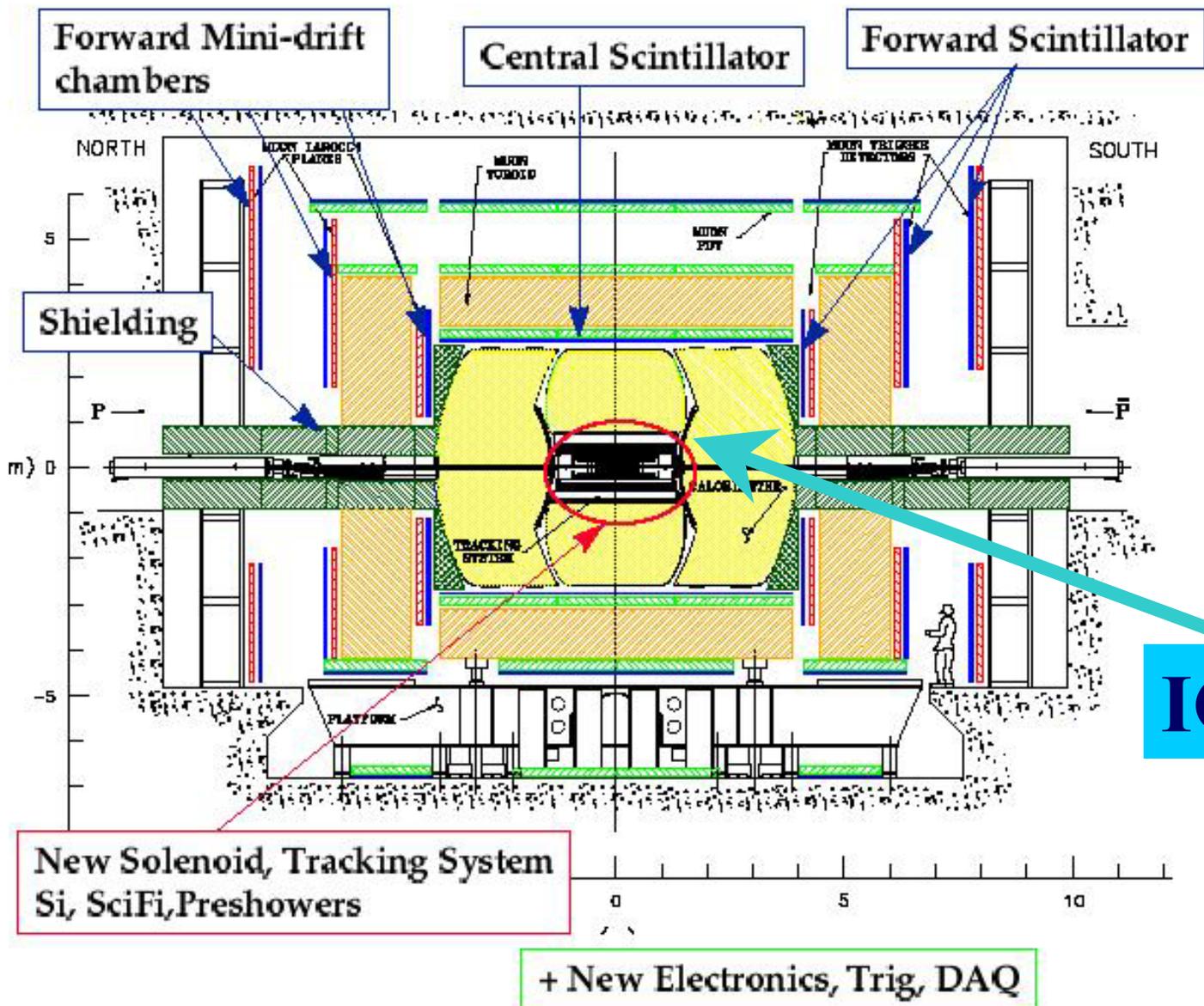


Inter-Cryostat Detector

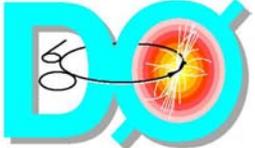
- Joint effort: Univ. Texas-Arlington & Louisiana Tech Univ.
- Enhances the hermeticity and uniformity of the Calorimeter System
 - Rapidly changing material profile & extra “dead” material between the Central & Endcap Calorimeters
 - ICD provides additional sampling in the ICR
- Improves E_T calculation & Jet Energy Resolution
 - Crucial role in coverage of $1.1 < |\eta| < 1.4$
 - Reduce rate of fake E_T
- Commissioning of Calorimeter Readout
 - ICD channels “sprinkled” throughout most of the calorimeter readout system



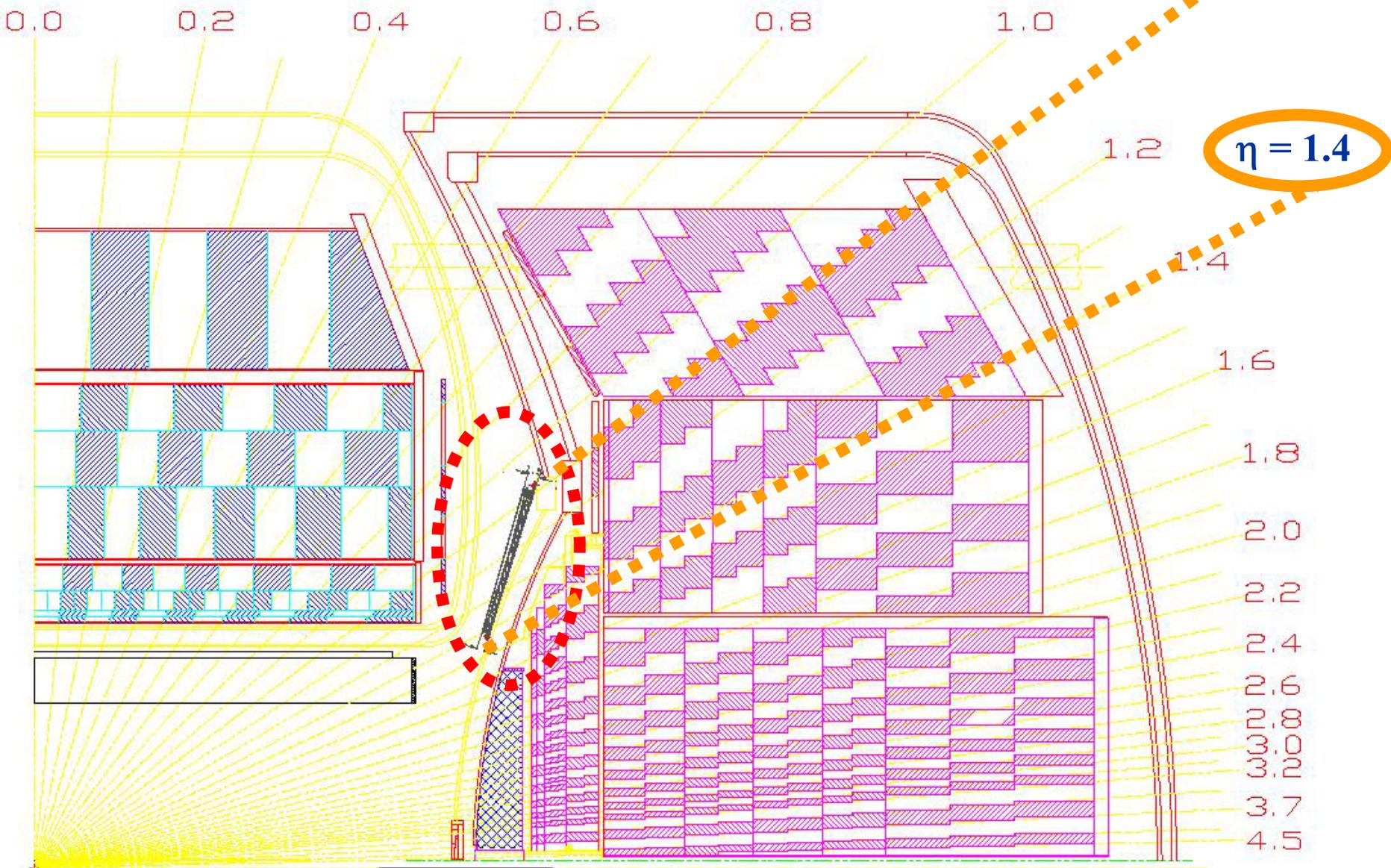
DØ Detector

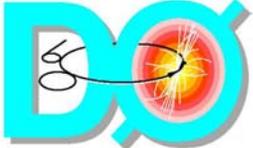


ICD

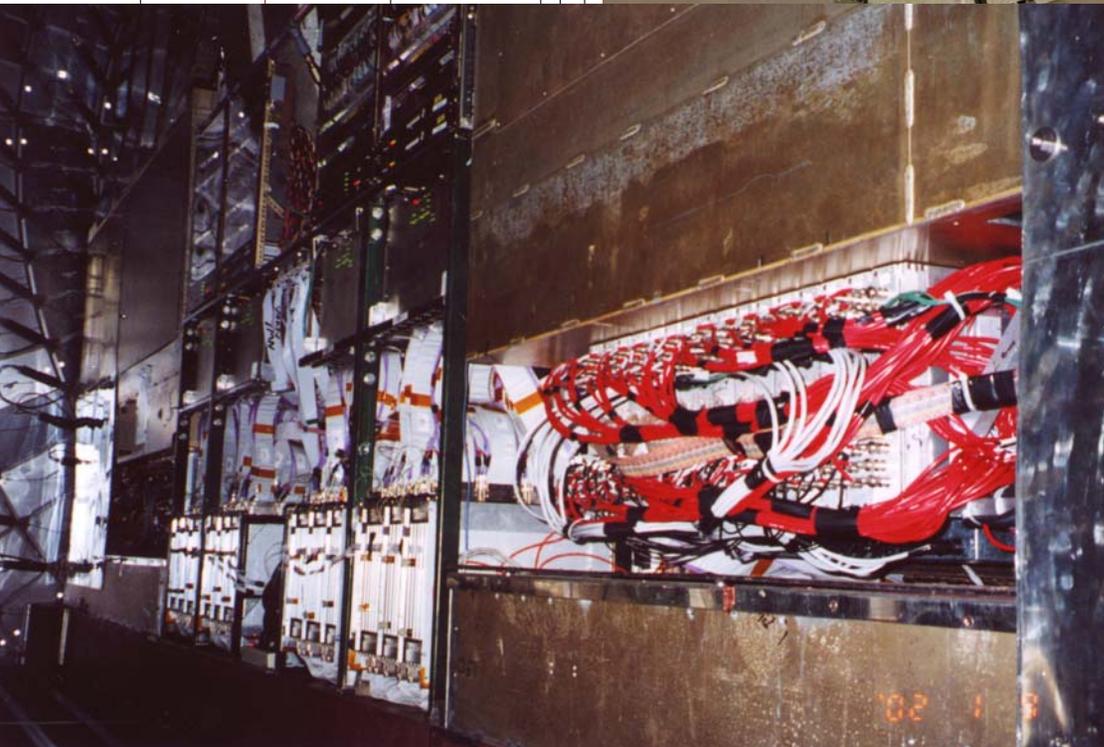
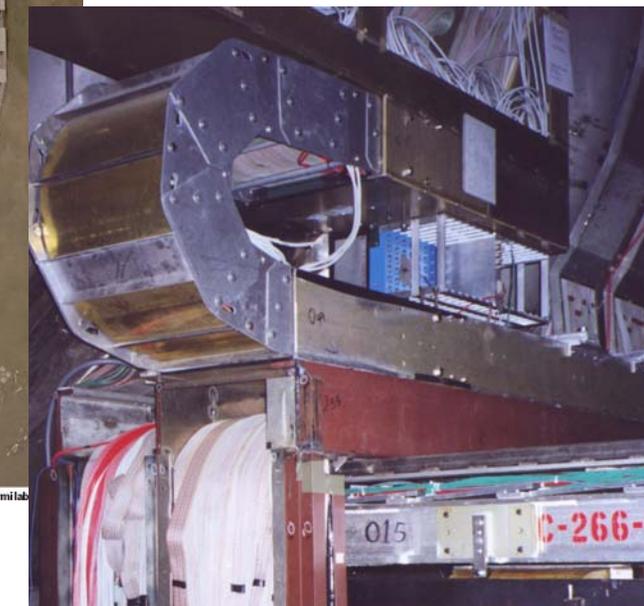
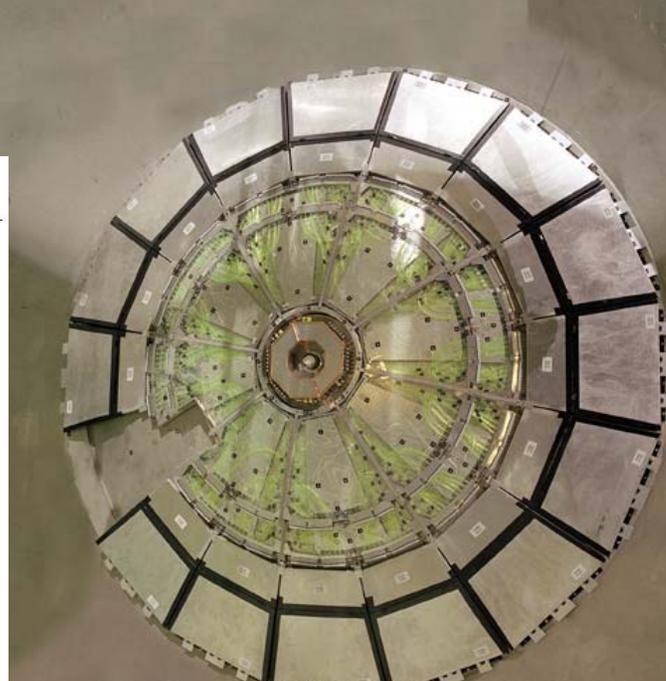
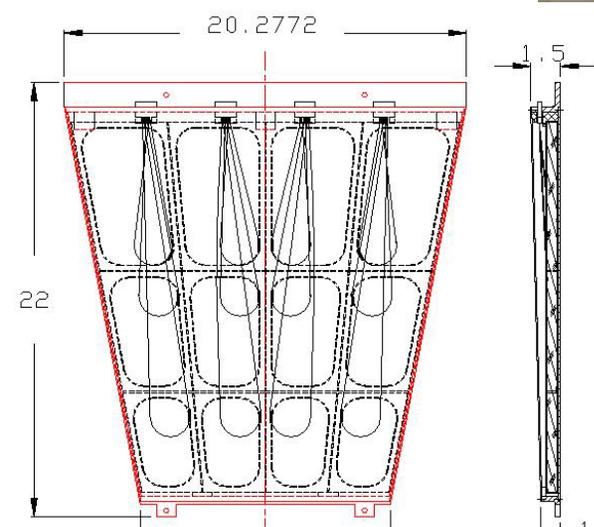


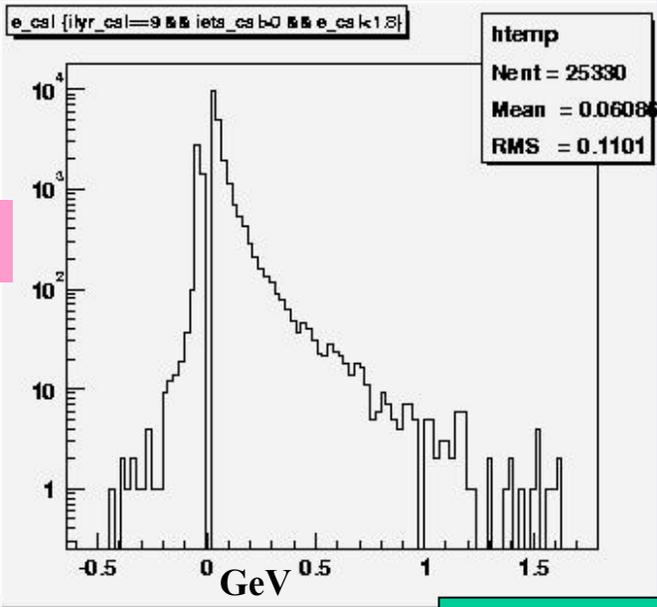
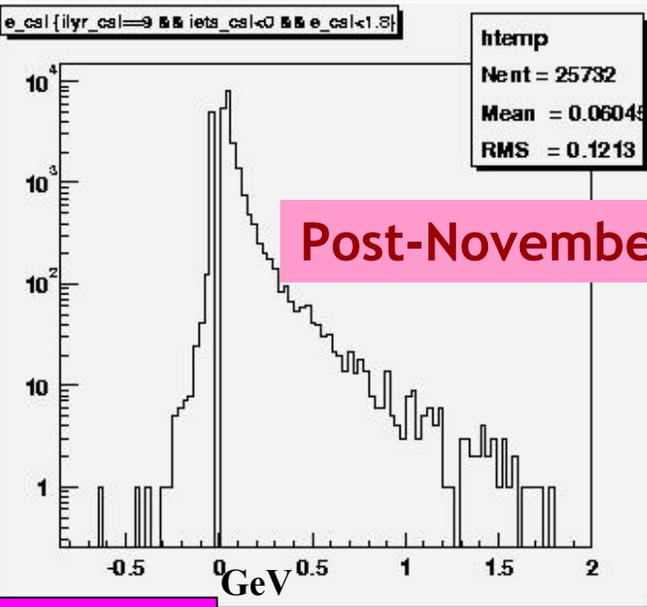
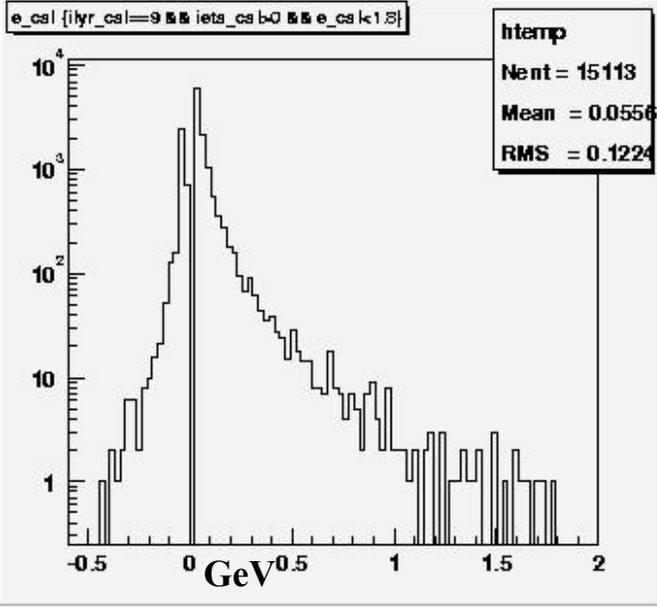
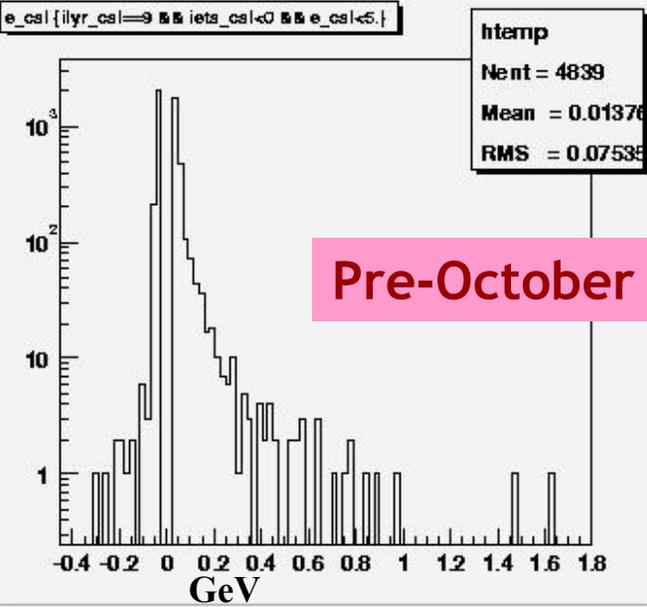
Inter-Cryostat Region





Stages of ICD installation from TDR to physics data taking

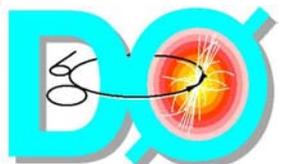


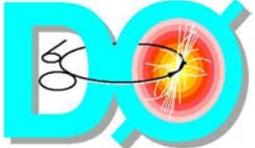


North

South

Comparison of pre-Oct 2001 data and post-Nov 2001 data. The north part of the ICD ($\eta < 0$) was <5% instrumented prior to Oct 2001. The left plots (top & bottom) show the change in the average event energy in the north ICD channels pre/post shutdown. The right plots are of the south ICD, which has been fully instrumented since May 2001.





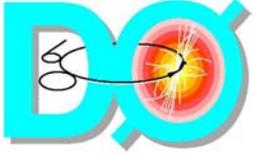
Done

ICD Status

To Do

- 50% in readout by end-May 2001
- Fully instrumented & part of global data taking since Nov 2001
- Integrated into CAL Readout & Shift Guide
- Stable HV system
- Spare electronics & cables in stock
- Working LED calibration system

- Repair & maintenance during detector accesses
 - e.g. Replace Run 1 PMTs with new ones
- Fine-tune energy scale & weights
- Improve MC geometry & material representation



Plans For This Week

- **Need 2 hr access** (*day & time TBD*)
 - Muon VME crate (1 of 12) needs human intervention
- **Steady supply of small jobs ... if offered additional access time**
- **During studies Tuesday & Wednesday**
 - Significant Event Server tests
 - Spare PCC tests
 - Muon readout
 - Test new code & new hardware
 - Test of multibuffering VRBCs
- **Global data taking during stores**
 - Working on increasing data collection efficiency