## DØ Calorimeter Status at Begin of Run II

### Calorimeter Electronics Status

- **BLS**
  - PS Boards: 0
  - Preamp: 1

- **Preamp**
  - PS Boards: 1
  - BLS: 0

- **ENDCAP NORTH**
  - PS Boards: 1
  - Preamp: 1

- **CENTRAL CALORIMETER**
  - PS Boards: 2
  - Preamp: 2

- **ENDCAP SOUTH**
  - PS Boards: 3
  - Preamp: 3

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DØ Calorimeter Status at Begin of Run II

All DØ Meeting
March 9, 2001
Calorimeter Commissioning Shifts

- Shifts ongoing 2-3/day
  - U. Bassler,
  - M. Bhattacharjee,
  - V. Bhatnagar, L. Duflot,
  - T. Eitzroth, S. Fu, M. Gao,
  - R. Hauser, M. Hohlfeld,
  - B. Kehoe, N. Parua,
  - M. Ridel, D. Schamberger,
  - M. Tuts, V. Zutshi

- Concentrated on CC
- Working on software (examines, GUIs etc.) for online debugging and commissioning
Calorimeter Preamps and BLS

- **Preamp**
  - All 1152 m/boards with 48 preamps per board tested and installed (55k)
  - 3 secondary PS to install (21/24 + 1 ICD installed)
  - Cooling fan needs rework in one box (~4-8 hr)
  - All calibration pulsers installed, cabled, tested and commissioned
  - Commission preamps and readout chain
  - Fix known broken cables

- **BaseLine Subtractor (BLS)**
  - 29/36 PS installed (1 to repair), 6 ready to be installed, (need ~8 hr to install + test)
  - 9/12 quadrants populated (864/1152). Need ~300 more
  - Final board assembly and testing at SUNY-SB (about 50/week). Awaiting about 150 boards from manufacturer.
  - Commission
Calorimeter ADC, T&C + Trigger

• **ADC & T+C**
  - Run I ADC’s working fine
  - ADC controllers modified and being tested
  - 3 prototype Timing and Control cards being used
  - 10 more being stuffed at SUNY-SB (~1-2 next week)
  - Still need T+C Crate controller (1-2 week layout, 2 week production)
  - More than 3 (8) crate readout into L3 a concern due to lack of VRC slots
  - PIB control prototype working. Final board production soon and communication with T&C controller needs to be tested

• **L1/L2 Trigger**
  - Trigger drivers (2 EM + 2 HAD per board) – have all CC (1.5k). EC in 2 weeks.
  - Trigger summers (4 EM + 4 HAD per board) – only assembling CC at moment (3k). Few boards worth next week, final delivery in ~2 weeks. Need testing at FNAL, installation.
  - Can test and time in L1 trigger with a few towers
  - Noise issues on readout are a concern
  - Simulations ongoing for layer-weights to get final EC trigger resistor values (incl. MG + ICD regions)
  - Commission
Calorimeter LAr, HV and ICD

• LAr and HV
  ◆ All cryostats filled with LAr – no leaks!!!
  ◆ All HV has been turned on to 2kV on all channels
  ◆ LAr purity tested (< 0.4 ppm O₂ equiv.)
  ◆ HV cables reinstalled and tested
  ◆ LAr temp. and purity being monitored

• ICD
  ◆ 5 tiles installed on ECS-SW
  ◆ PMT box, HV + LV power, electronics pulser installed
  ◆ Cables run through the winders
  ◆ pORC in the works – need this before can turn on power
  ◆ Calibration and characterization ongoing in cosmic ray test-stand
  ◆ Final install in April – will move PMT box few inches to avoid Silicon cables
Calorimeter
Calibration, Downloads + Controls

- Calibration
  - Pedestal calibration data sent to and processed in L3 scriptrunner node
  - Data sent to CalibManager and then to Oracle dB
  - Python tools extract data to pickle files
  - Working on handling gain runs with pulser
  - Automatic validation and extraction tools needed

- Downloads/controls
  - Final download system (COMICS) not in place yet but tested with prototype
  - Pedestal and limits files read from pickle file in Comics and downloaded to ADC
  - Working on pulser and T&C communication
  - Control GUIs (via EPICS) for LV and HV work
  - General alarm monitoring of all systems and control GUIs need to be implemented and made more robust
Summary

- Start with ~4 crate readout (CC) + T&C crate
- Debugging + commissioning (CC then EC’s)
- Almost all infrastructure in place
- 9/12 quad’s instrumented
- 5/16 ICD tiles on ECS
- 12/12 quad’s by end of 6 weeks assuming some access
- Some trigger summers/drivers installed by end of 6 weeks (all of CC?)
- Timed in to L1 trigger