

# DAQ memo

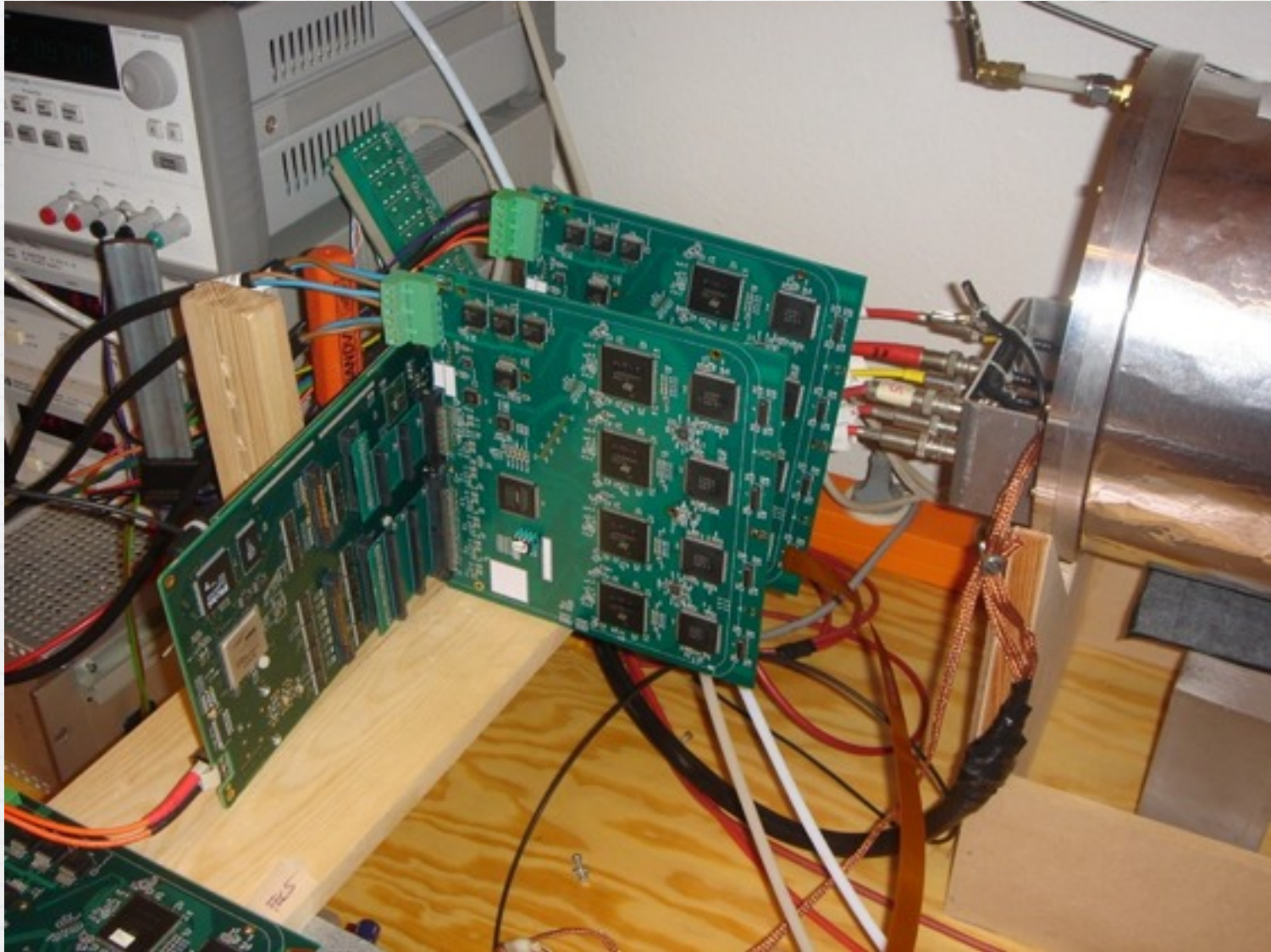
Friday meeting

R. Yonamine

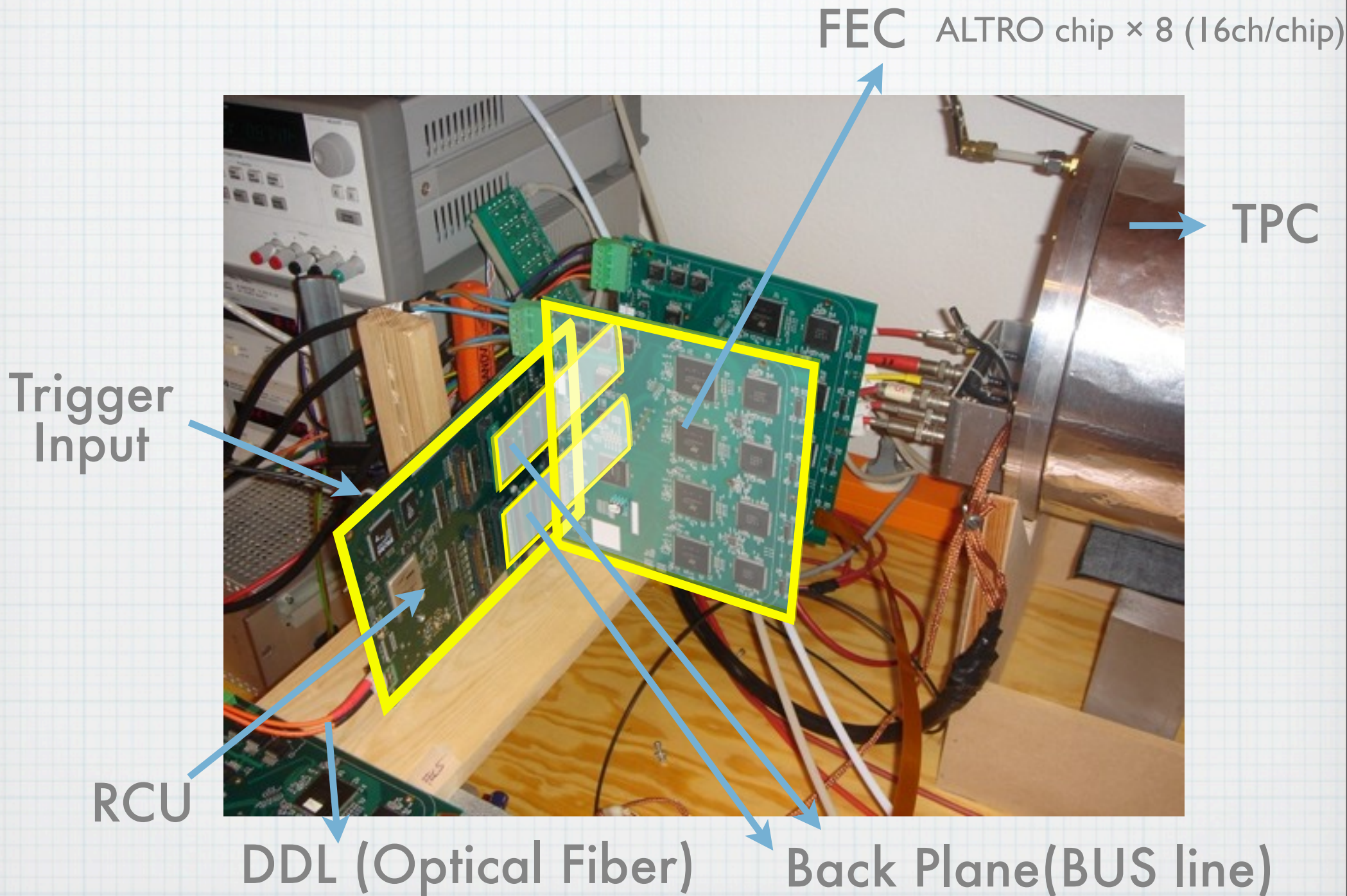
Jul. 17th 2009

# Overview

## Hardware setup



# Overview



FEC ALTRO chip × 8 (16ch/chip)

TPC

Trigger Input

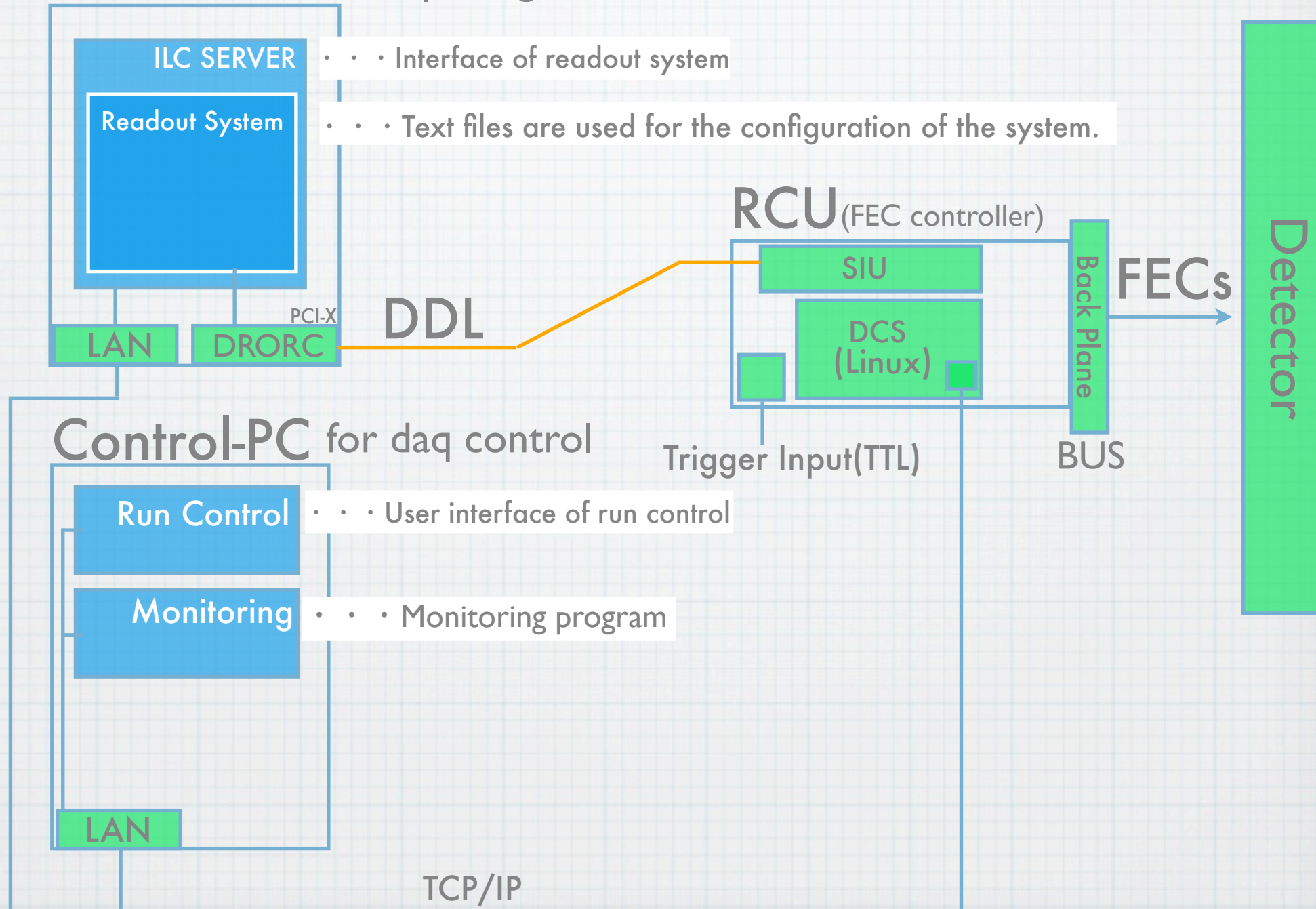
RCU

DDL (Optical Fiber)

Back Plane (BUS line)

# Overview Software side

## DAQ-PC for data polling

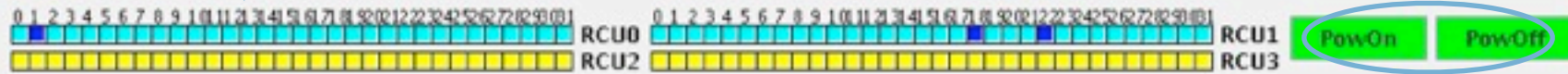


# DAQ interface

showing connection status of FECs

Need to configure with /misc/ilcdaq/config-v4.0/rcu-<#>.cfg  
(RCU.POWER and RCU.READOUT)

## Power settings



Power switch of FEC

## PCA settings

Polarity  Shutdown  Preamp enable  Gain  Shaper  Decay time

Load PCA setting

Control Button

start DAQ  
DAQ stopped  
Start run  
Pause  
Run stopped  
Status  
SCRIPT

```
[2008-12-01 09:52:08] SRV:*UPD EVT 4712
[2008-12-01 09:53:08] SRV:*UPD EVT 5648
[2008-12-01 09:54:08] SRV:*UPD EVT 6584
[2008-12-01 09:55:08] SRV:*UPD EVT 7520
[2008-12-01 09:56:08] SRV:*UPD EVT 8455
[2008-12-01 09:57:08] SRV:*UPD EVT 9391
[2008-12-01 09:58:08] SRV:*UPD EVT 10327
[2008-12-01 09:59:08] SRV:*UPD EVT 11262
[2008-12-01 10:00:08] SRV:*UPD EVT 12198
[2008-12-01 10:01:08] SRV:*UPD EVT 13133
[2008-12-01 10:01:13] Stopping run
[2008-12-01 10:01:13] SRV:*STATUS DAQ 1 RUN 0 LOG 0 MON 1 EVT 13213 TYPE 0 MODE 1 RUNNB 3382
[2008-12-01 10:03:14] Stopping DAQ
[2008-12-01 10:03:14] SRV:*STATUS DAQ 0 RUN 0 LOG 0 MON 1 EVT 13213 TYPE 0 MODE 1 RUNNB 3382
[2008-12-01 10:03:40] Powering off...
[2008-12-01 10:03:42] SRV:*POW S0 1 RCU0 2 P0 0 S1 1 RCU1 4400
```

Processing status

Run comment (max 240 characters):

---

--- Write run comment ---

Run type:

Physics  Pedestals  Test

Run mode:

Pedestal subtraction  Zero suppression  Logging

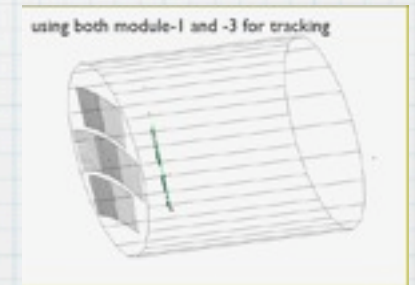
Monitor  Read events

# Data Analysis

We used temporary analysis program(non Marlin-TPC).

This is composed of ...

- **unpacker** ----- To make ROOT files from raw data
- **hitmaker** ----- To reconstruct hit clusters for each rows
- **trackmaker** ----- To reconstruct tracks from hit clusters  
(including Kalman Filter which is based on ROOT)
- **gui** ----- Event display



We can easily get measurement information from unpacked data.

e.g. RCU ID, Channel ID, rise time, ...