

# The MINERvA Operations Report

## All Experimenters Meeting

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# V95 FEB Firmware Upgrade



- We have installed V95 FEB firmware in the detector.
  - Increases the number of hits a TriP chip can store from 8 to 20.
  - V95 was used in test beam and was extensively tested.
- The ADC data is bad some of the times.
  - Since each PMT pixel is readout out by a hi, med, and low channel, we can determine whether the ADC value for a pixel makes sense. Most of the time the ADC values are OK.
  - We call this problem the V95 ADC Problem. This problem was described in the last AEM talk.
  - We are still working on trying to understand and to fix this problem.
- We are planning on staying with v95 for the next 2 weeks.
- We are setting up the test beam DAQ to a 2 crate system to replicate the V95 problem there.



# 2015 Shutdown Tasks



- During our testing of V95 a chain failed, probably from a bad FEB.
  - A chain is a daisy chain of FEBs readout by a CROC-E channel.
  - We removed 2 roof panel & replaced 3 FEBs on this chain. The problem is intermittent, so finding the problem hardware has taken a while.
  - On Oct 2 we replaced an FEB and ran the DAQ with just this FEB on the chain. The DAQ ran without a problem. We will put rest of the 9 FEBs on the chain.
  - If this chain runs without a problem, we will put the roof back on, probably this week.
- The veto HV is working.
  - The HV code was on a computer, mnvonline04, which was removed from the Hall & replaced with the present DAQ computer. mnvonline04 was upgraded brought back into the Hall. mnvonline04 will become a spare DAQ computer.



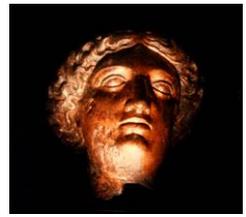
# 2015 Shutdown Tasks



- We replaced 2 PMTs with varying gain.
- We have been cleaning the FESB power supplies. This task should be finished by tomorrow.
  - These power supplies supply power to a fuse box which can be controlled remotely. The fuse box then powers the FESBs. The FESB is a module which drops the 48 volts from the FESB power supply to 5 volts for the FEBs. A FESB supplies low voltage power to the FEBs for an entire chain.
  - Effectively, the FESB power supplies supply low voltage power to all the FEBs .
- The DAQ computer is setting up the 2 light injection (LI) boxes.
  - We were having 2 old DAQ computers setup the LI boxes, but these computers were ~ 6 years old and should be retired.
  - The DAQ computer needs 2 serial ports to setup both LI boxes and the old computers in the Hall only had one.



# 2015 Shutdown Tasks



- We have installed 2 upgraded DAQ computers in the Hall and replaced the old ones.
  - The upgrades include increasing disc size to 15 TB and increasing the number of serial ports as described above.
  - We are running on one and the other needs to be tested.
- Need to replace the network switch for MINERvA, as it is old.
- 2 computer clones of logger, our online monitoring machine, have been brought into the MINOS Hall. They still need to be tested.
  - One of them will become logger and the other will be the spare
- There are a couple of FEBs which may need to be replaced, but these can be reached with the roof on.



# 2015 Shutdown Tasks



- V96 FEB & CROCE firmware, which increases the live time.
  - However, we need to solve the V95 problem before we can go to V96.
  - Getting ready to install v96 will require a lot of testing.
- Thanks
  - Geoff Savage, Donatella Torretta – Neutrino Division.
  - Cristian Gingu , Paul Rubinov, Steve Chappa, Roberto Davila – EED.
  - Experimental Computing Division, SLAM Group.