The MINERνA Operations Report
All Experimenters Meeting

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MINERvA Shifts

- Running weekday day shifts for about 5 – 8 hours
  - All FEBs (front end boards) operating
  - Run PEDs and Light Injection (LI) to determine if there has been any change in the detector.
    - The FEBs & PMTs appear fine.
  - We used the shifts to help solve a problem we had with what appeared to be one of the VME modules.
  - This problem was presented at the last AEM meeting
- Will run 24 hour shifts when start we get NuMI beam
  - However, we cancel non day shift if there is no NuMI beam.

Intermittent DAQ problem

- The DAQ stopped running PEDs after ~ 4 hours from reading out a CROC, CROC reads out FEBs.
- Problem seemed to be CRIM 1 of the 2 CRIMs in 2d crate.
  - The CRIMs send the timing & trigger signals to the CROCs
- The problem did not to occur with LI runs
  - The clue to solve the problem
  - LI runs the DAQ triggers CRIM 1 in Crate 0 and it sends triggers (beam gate) to the other 3 CRIMs
  - For PED runs DAQ triggers all the CRIMs.
    - But CRIM 1 Crate 0 sends its trigger to the other 3 CRIMS
  - Multiple triggers in Crate 1 and this caused the errors.
- Modified the DAQ so that PED runs looks like LI runs. This fixed the problem.

CROC-E Upgrade

- DAQ upgrade needed for us to take data with MI Cycle Rate of 0.75 Hz, The CROC-E upgrade.
  - New CROC-Es handle many of the tasks automatically which were handled by the DAQ computer
- Last week the old CROCs were replaced by the CROC-E boards.
  - All 15 CROC-Es seem to work, but more tests needed
    - The CROC-Es can be addressed
    - Information can be passed back and forth between the FEBs and the computers
  - Still need to check the data
  - Run Control will need to be modified to enable the non-experts to run the DAQ.

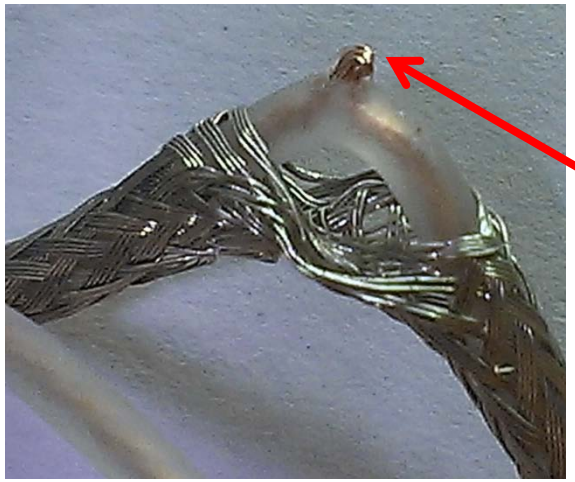
New DAQ Computers

- Will be replacing 3 DAQ computers with 4 DAQ computers.
  - Right now, we are reading out the CROC-E with the old DAQ computers
    - We can take data with the old DAQ computers
  - The plan: need to check that 1 new computer can take over the task of the 3 existing computers
  - 1st install 2 computers in DAQ rack, later 2 in VETO rack
  - DAQ rack installation should happen this week.
- The MINERvA test stand at D0 will verify the software of the computers and ensure they can read out the VME crates.
- We have prepared the DAQ rack to accept 2 computers quickly
  - Done during the CROC-E replacement

Muon Monitor 4, MM 4

- The on-off valve for the gas line to MM 4 will be installed tomorrow morning.
  - It will be Installed on input line just upstream of the DAQ-gas racks
  - Then He flow can be started to hadron monitor, MM 1,2,&3.
  - When gas system comes for MM 4, gas to MM 4 can be turned on without affecting MM 1, 2, & 3.
    - This work can be done in access tunnel.
- DAQ rack and Gas Rack will be installed in place tomorrow

MM 4



- Signal cables, MM 4 to SWIC scanner in DAQ rack.
  - In an attempt to save money a old RG174 cable bundle was to be used
  - 3 bundles needed, 81 cells
  - Connectors were installed on both ends
  - Shorts were found randomly throughout the cable bundles
  - Center conductor punches through center insulator and touches the ground braid at random places.
  - Hence, this cable bundle will not be used
- Now, bundles being made from stock room RG174 spools.
- 1 of the 3 need bundles finished by tomorrow
- The other 2 bundles by early next week.
- Beam must be off to install the signal cables.