

The MINERvA Operations Report

All Experimenters Meeting

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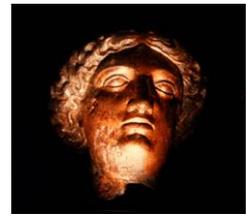
MINERvA



- Running weekday day shifts for about 5 – 8 hours
 - All FEB boards (front end boards) operating
 - Run PEDs and light Injection to determine if there has been any change in the detector.
 - The FEBs & PMTs appear fine.
 - We are using the shifts to investigate a problem we are having with what appears to be one of the VME modules.
 - Described on the next page
 - We are also using these shifts and the above problem to train 2 new experts to address DAQ problems should they arise.
 - They are not DAQ experts (don't write code) but will be able to get the DAQ running should the shifter have a problem.₂



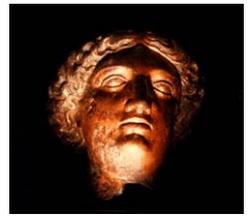
Intermittent DAQ problems



- The DAQ stops running PEDs after ~ 4 hour
 - Software reset fixes the problem
- We can still run shifts with this problem
- The error comes from reading out a CROC module (Chain ReadOut Controller),
- We have narrowed the problem down to CRIM 1 of the 2 CRIM modules in 2d crate.
 - The CRIMs send the timing signals to the CROCs
 - The output of the CRIM 1 seems to cause the problem.
 - Replacing the CRIM or changing the inputs to the CRIM does not seem to help.



Intermittent DAQ Problems



- The problem does not seem to occur with light injection runs
 - This has given us a clue as to the origin of the problem and a possible fix.



CROC-E Upgrade DAQ Test Stand



- DAQ upgrade needed for us to take data with MI Cycle Rate of 0.75 Hz, The CROC-E upgrade.
- New CROC-E boards have been assembled and tested by the 14th floor, ready to be installed.
 - Thanks to Boris Baldin & Cristian Gingu
- New DAQ program has been tested with help from the Fermilab online group.



DAQ Test Stand



- New MINERvA test stand is being assembled at D0 by Geoff Savage. This stand will have a large number of FEBs, ~ 60 , to test the CROC-Es.
 - The MINERvA hardware is assembled
 - Setting up the DAQ computers is next
 - SLF6 will run with the MINERvA DAQ



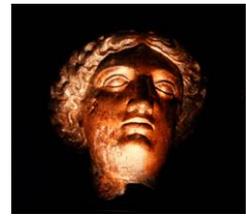
New DAQ Computer



- We will be replacing the 3 DAQ computers with 4 DAQ computers.
 - Of the 3 existing DAQ computer, 2 readout the data and 1 is an event builder.
- The plan - 1 new computer can take over the task of the 3 existing computers
 - One new computer reads out both VME crates and is also the event builder.
 - Gives the DAQ online system redundancy
- The MINERvA test stand will also verify the software of the computers and ensure they can readout the hardware.
- The DAQ computer change over will take about 3-4 days.



Muon Monitor 4 (MM 4)



- We are working on installation of the new Muon Monitor (MM) in the 4th alcove
- MM 4 will look at the high energy tail of the ME beam
- The chamber was built at Univ of Texas, Austin
- The chamber was installed in May.



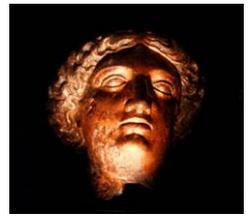
MM4



- We are working on finishing the installation including installing the gas system and the electronics.
 - Linda Bagby (PPD EE) is in charge of the installation.
 - Mike Andrews and AD are helping.
 - Rochester Tech Dan Ruggiero is working on the installation
 - We have a MINERvA student working on the installation



MM 4



- We are waiting on the gas monitor hardware
 - Gas monitor hardware exists outside the alcove.
 - The gas lines to the MM 4 have been run
- MM 1,2,3 had some electronics noise & in the installation of MM 4 we are addressing issues that we think caused noise with MM 1,2,3.
 - These are mostly issues associated with ground loops.



MM 4



- The electronics rack is assembled and is ready to be brought into the tunnel
 - Read out with new SWIC scanner electronics, which has the same front end as the old scanner.
 - The readout cables that run from MM 4 to the electronics should be ready soon.
 - AC power has been run
- We think we can get all work that is needed to be done in the alcove before the beam starts.
 - Running and cabling the readout and HV cables.
- The alcove gets interlocked
- We will finish the work outside the alcove after beam starts.