

The MINERvA Operations Report

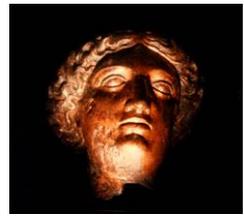
All Experimenters Meeting

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Sep 23, 2013





Taking Data



- We are taking data with very small downtimes
- All parts of the detector seem to be operating fine
 - No problems with the DAQ or hardware seen.
- We still have problems with the Runcontrol (RC) GUI will sometimes go away
 - Data taking continues, checking the online monitoring program will determine if data taking is continuing
 - RC GUI can be easily brought back
 - We are trying to understand why the RC GUI goes away



Online Monitoring



- Online monitoring information is giving us the information we need to monitor the detector
- We are improving the way we monitor the data since we now have automated calibration procedures, which we did not have at the end of the LE Run.
 - This includes using tracking information to look track rates, occupancy, channel gains, and our energy scale.
 - Shift people would check the plots. The plots would come from data from previous shifts. These will include MINOS plots to insure MINOS ND is operating properly.



MINOS Near Detector Monitoring



- MINOS is doing only the day shift
- However, since we need the MINOS detector to analyze muons, we are monitoring the Near Detector 24/7.
 - We monitor MINOS Runcontrol (RC), slow controls (DCS), & online monitoring (OM) histograms.
- Previously, we had trouble accessing OM. After scripts were fixed, we were able to access OM.
- Since Thurs Sep 19. MINOS has been operating their old DAQ. For us the switch was fairly transparent.
 - For remote shifters OM is slow
 - MINOS will switch back to the new DAQ tomorrow, Sep 24.



CROC-E Firmware To Check CRC word



- We are working on the firmware upgrade for the CROC-Es which checks the CRC word
 - Goal: The CRC word (cyclic redundancy check) for all the frames will be passed to the offline to check that there is no problem with the data.
- We did not work on it last week so we are at the same place.



MINERvA Keepup Processing



- MINERvA is currently developing a system to process our data more regularly
- Our new plan is:
 - Creating root files with raw digits within 3-4 days
 - Calculate PEDs and Gains ~ 2 weeks
 - Do strip and timing calibrations for all strips in another 2 weeks → full calibration in ~1/month
- This allows for more frequent monitoring.
- Allows full data processing on the order of couple of months
- Also updating monitoring will include POT from the new IF beam database
 - We are waiting on the final version of the IF beam database



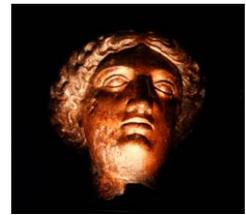
MINOS Keepup & ROOT



- MINOS is updating to a newer version of ROOT to make their Keepup data (daily processing) faster.
- MINERvA is not ready to update ROOT in our software
- Last time we updated ROOT, we experienced problems. Most important was memory leaks, which required ~8 months to solve
- We need MINOS to continue the older version of Keepup until we determine whether their updated Keepup works for us. We are investigating our ability to use the new MINOS version of Keepup



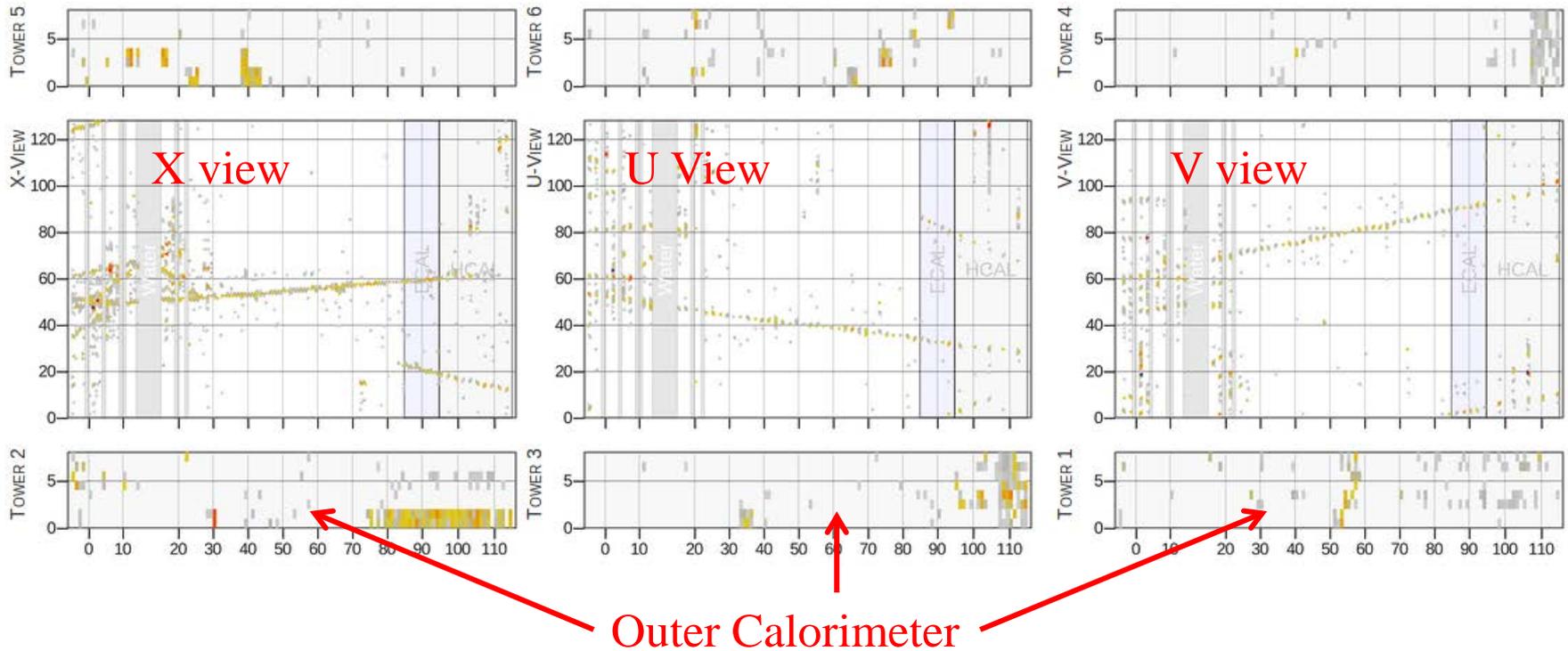
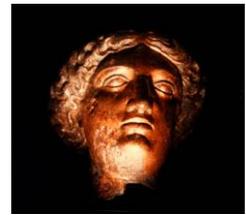
MINOS & MINERvA Keepup



- But 1st, we want to verify our Keepup works with their old Keepup as it did during the LE run.
- We are doing an initial check with runs in which we know MINOS created Keepup files
 - For roughly 2/3 of the runs, we were not able to match MINERvA tracks to MINOS tracks. For the other ~1/3 of the runs, we could match MINERvA tracks to MINOS track.
 - Understanding this problem is a high priority item.
 - We want to be sure its not a DAQ problem between the 2 detectors.



Event Display



- Events over a $10 \mu\text{s}$ gate