

BigBite Working Group Bi-Weekly Meeting Minutes

5.5.2021

Agenda:

1. Moving to the Hall - decabling the detectors starting May 10th - Arun
2. Status of 25 ns sampling to address the 60 Hz noise - Mark/Bogdan/Eric
3. Status of SBS-Offline/Calorimeter classes and ROOT trees to look at FADC data - Juan Carlos/Mark/Eric
4. Status of EPICS readout for BBCAL HV control - Steve Wood
5. Status of controlling the DAC - Scott Barcus
6. Installation of a cosmic counter - Bogdan/Arun
7. Any other topics?

Attendance:

1. Sebastian Seeds
2. Arun Tadepelli
3. Alexander Camsonne
4. Eric Fuchey
5. Scott Barcus
6. Stephen Wood
7. Gary Penman
8. Mark Jones

Actual:

- Move to hall and decabeling starting May 10th
 - Not sure if BB can be taken inside bunker. Options:
 - Get weldment close to bunker – disconnect each rack and put each inside and install (about 1 mo)
 - Or place weldment inside bunker (about 1 day)
- Noise
 - Decided to use mode 1 (sample mode) – read out all samples.
 - Data acquisition is ready to go
 - Data analysis is similar to HCal – but don't want to reinvent the wheel. Need to get a feel for HCal analysis.
 - Pulse integration put into SBS-offline options
 - Find peak, integrate peak
 - Pedestal from first bins?
 - Mark Jones to come up with a 1-page proposal for how this should be done.
- SBS-offline

- Offline analysis of all samples – Provakar to meet with Seb and Scott to mirror root-analysis scripts from HCal
- In parallel, have SBS-offline data work done
 - HCal to work on software after move
 - Provakar to work on event display for BB (from HCal)
 - Check with Seb or Scott to help
- Should cross train between all BBCal and HCal personnel
- Issues exist with reading f1TDC data BBCal
 - Mark Jones working on it
 - Scott Barcus verified that the module is working as expected
 - As of today – TDC data not in root tree
 - Could read in TDC data in incompatible format and modify to correct format. Create a patch script.
- Ideally – move much of the baseline analysis currently in HCal analysis scripts into SBS-offline.
- EPICS readout for HV controls (work by Steve Wood)
 - Installed EPICS server on rpi17,18,20,21
 - Runs in parallel to existing gui
 - Let Steve Wood know if old ones aren't working
 - All HV (except maybe GEMs) will be under EPICS
 - Will give better controls and readouts from HV
 - Rpi17, slots 2-3 aren't showing up (GRINCH)
 - A restart has been observed to fix the issue
 - Replacement of channel card can fix – Chuck Long knows where replacements can be found.
- DAC
 - Voltage GUI is largely complete
 - Calculation of discriminator thresholds will be added to gui
 - Could be added to EPICS
 - All settings should be logged to every run – possibly in CODA
- Installation of the cosmic counter
 - Trigger is in coincidence with scintillator paddles for cosmics
 - Rate is 5-10 kHz
 - Currently, if any block is hit it triggers – lots of bad events
 - Benefit to adding new counter – will cover all of the calorimeter
 - Put on top and bottom and trigger on coincidence for best events
 - Arun wants to install in the hall and do cosmics there.
- CDet HV?
 - Not installed for GMn – not concerned about that yet.