BigBite Working Group Bi-Weekly Meeting Minutes

4.21.2021

Agenda:

- Plans for moving BBCAL to the hall - Arun
- Status of readout of FADC - Mark
- Status of readout of trigger monitor - Mark
- Familiarization with FADC/trigger monitor/scalers - Mark/Steve Wood
- Tests we need to conduct before moving to the Hall - Mark
- Cosmic counter preparation - Bogdan
- Debugging noisy pedestals on individual channels - Provakar/Arun
- Synchronizing software efforts with HCAL - Mark/Juan Carlos
- Testing of different libraries for DAC - Sebastian/Juan
- Status of control module patch panel cable - Scott/Juan Carlos

Attendance:

1. Sebastian Seeds
2. Provakar Datta
3. Arun Tadepelli
4. Gary Penman
5. Mark Jones
6. Bryan Moffet
7. Alex Camsonne
8. Eric Fuchey
9. Juan Carlos Carnejo
10. Scott Barcus
11. Will Tireman
12. Stephen Wood

Actual:

- Plans for moving to the hall
    - Update: Jessie and Jack
        - Weldment can be taken as close as possible, 25% chance that weldment can be put inside the bunker without removal of everything first.
    - Timeline in flux. May 10^{th} is the deadline.
- Necessary actions before move
    - F1TDC not working, tried widening the trigger window to no avail
    - fADC readout is working
        - Map complete, data is okay, pending software via Juan Carlos
            - SBS offline for BB skeleton working pushed to github

                - Not tested with BB data yet
                - Mode hardcoded in, mode-7 to read pedestal
                - Clustering is preserved from Eric's code
                    - Eric will verify after meeting
            - SBS offline tutorial given by Juan Carlos tomorrow at 2:30pm
        - Trigger monitor spare pending
        - Mark Jones to do a trigger monitor tutorial
            - Possibly on-site
        - Software is ready to test, higher level debugging needed
            - Should be done by students
        - Next steps
            - Check with Eric to do gain matching with monte carlo simulations (with fADC)
            - Eric will update simulations with fADC response
- Cosmic counter
    - Wrapped scintillator with aluminized mylar with Chuck
- Debugging noisy pedestals
    - Ongoing
    - Provakar
        - Plots as f'n of event number
        - Quick pedestal changes over bands
            - Look at fADC GUI: Looking for band switching over longer time scales (~60 Hz?) not ~GHz (sampling rate)
        - Signal comes right out of amplifier
- Synchronizing software efforts
    - Juan Carlos tutorial on SBS-offline
        - 4/22/21 2:30pm
        - Should be general with subsystem addressed individually
- Testing of libraries for DAQ
    - Exist, not tested
        - Control module patch panel cable
            - Last week: Electronics group: nearly done. Needs mounts (on order)
                - This week or next week – not arrived yet
            - Not vital to test before move
            - June or July before power to hall
    - No GUI exists yet – libraries written not tested
        - Might be able to test 37-pin connector with DMM to cross check software
        - Should NOT check with simple wires in ports – PS up to 5mV
- Scalers test
    - Stephen Wood – no work on scalers (work for fADCs currently)
        - Several channels not working, need to check thresholds
        - Can make GUI modeled after BB Hodoscope
        - Might be possible to put all HV under EPICS GUIs (not Java)
            - Working with Brad for this
            - Needs IP addresses for HV crates (written on RP)

        - Scott for HCal
        - Eric for BB
    - Needs spreadsheet (or file equivalent) with each HV channel and what it's connected to
        - Scott has for HCal, will send (needs slot numbers)
        - Eric for BB
    - Needs someone who knows where all the crates are and admin for crates for testing
        - Scott for HCal
  - Spare f1TDC coming from HCal
- Will Tireman looking for interesting QM questions for exam! Contact him with information if you have ideas.