BigBite Working Group Bi-Weekly Meeting Minutes

3.24.2021

Agenda:

- BBCAL cosmic calibrations – status of debugging noisy channels – Provakar/Arun
- Gathering supplies for F1TDC setup and cable preparation – Provakar/Sebastian/Arun
- FADC status, cables and patch panels – Arun
- Status of libraries for remote power supply and coordination with HCAL folks on borrowing module – Juan Carlos
- Cosmic counter preparation – Arun
- Synchronizing software efforts for FADC upgrade – Mark/Juan Carlos/Eric

Attendance:

1. Sebastian Seeds
2. Arun Tadepelli
3. Eric Fuchey
4. Juan Carlos Carnejo
5. Provakar Datta
6. Eric Fuchey
7. Gary Penman
8. Mark Jones
9. Will Tireman
10. Alexander Comsonne
11. Bhesha Raj Devkota
12. Bogdan Wojtsekhowski

Actual:

- Crane
    - Mark Jones: No new updates.
        - 2 scenarios: Weldments can be moved or weldments cannot be moved
            - Decabling impacted (either some disconnecting or all disconnected)
- Cosmic calibrations
    - Provakar: Pedestal double peak problem
        - Before and after changing crate cosmic runs plots
        - Changed event display
        - Shower aligned around 100 after calibration script
            - Diagnostic plots
                - Fits are okay on all channels

- Pedestal plots: Issues still exist
    - Triple and double peaks emerge
        - Must check on the scope!
        - How far separated are the peaks?
            - 20 ADC channels wide
            - Check amp vs event number
            - Summing module might be bad
            - Grounding issue?
        - Shower -> Amp -> Fastbus
- F1TDC Supplies
    - Completed 52 cables (+2 spares)
        - Front end to weldment
    - Will continue work (Arun and Provakar)
    - Alex brought fADCs
        - Brad asking for 4 fADCs. Alex to coordinate with Brad to return them.
        - 16 in BB crate currently
- Remote power supplies
    - Threshold tweaking modules
        - Libraries are complete, need tested
            - On Juan Carlos repository github
                - https://github.com/leadmocha/mpv904Lib
            - Needs GUI
        - HCal will control both HCal and BB discriminators
            - Chris C. given request for patch panel
            - Must give him layout, schematic, type of connectors, etc.
        - Sebastian and Provakar will design voltage filter in NIM module next to discriminator to remove pickup on control cable.
        - No need to change lower threshold. High threshold used to accept or reject electrons, must be remotely adjustable.
- Cosmic hardware preparation
    - Drawing need produced
    - Chuck is aware of project
    - Need to get documentation and literature to corroborate path forward
- Synchronizing software efforts
    - Detect mode fADC is operating in
        - Changes in analyzer may be necessary
        - Mark to take a look
    - Switch to fADCs
        - Should take a week
        - BB Cal VME done.
    - Software
        - Mark Jones to write code to read data from fADC
        - Current code from Juan Carlos
            - https://github.com/JeffersonLab/SBS-Offline/tree/hcal_dev

- Mode difference
    - Need instance of fADC cut
    - Analyzer must be modified to include mode for fADC since TDC data is stored differently now. Mark to take a look. Juan Carlos and Mark to take this offline.