

## HCAL Biweekly Meeting Minutes 4.28.21

### Nominal Agenda:

1. Update on HCal move.
  - a. Now targeting approximately May 17th.
2. LED voltage scans taken for right half of HCal.
  - a. Analysis underway.
3. Progress on implementing the HCal overlapping regions trigger.
  - a. Debugged some HCal channels.
  - b. Disparities between HCal halves has been resolved.
  - c. Running cosmics.
4. Progress on testing the VME DAC.
  - a. Adapter patch panel delivered.
  - b. Testing VME DAC library.
  - c. Building control GUI.
5. Other discussion topics.

### Attendance:

1. Sebastian Seeds
2. Juan Carlos Cornejo
3. Scott Barcus
4. Vanessa Brio
5. Jim Napolitano
6. Brian Q
7. Arun

### Actual:

*Scott*

- HCal move is moved back one week.
  - GEMs requested more time for the move
    - Will move BB and HCal at same time
  - Gives time to work out VME DAQ issue
  - Not sure where it is going to go first in Hall A
    - We will not have access to take data for one month
      - No power in bunker
      - This is from Jessie
    - Portable crane coming back on 17<sup>th</sup>
    - Recabling that must wait until HCal is in position
      - DAQ bunker
    - Can take data again mid-late June, might be able to cable up earlier than that
  - During downtime
    - Analyze LED and cosmic data
    - Work on SBS offline

- Right half voltage scans for LEDs
  - Sebastian to follow up with Chuck to have channel 69 fixed
- Implemented overlapping region trigger
  - 4x4 groups clusters – 4 clusters are superclusters
    - Superclusters overlap
    - Triggering on clusters
    - Sebastian to put new cosmic runs on wiki
    - Threshold tests in progress
  - Right half and left half trigger disparity explained
    - Linear fan-in fan-out
  - **Supercluster map and logic discussed**
    - Analog sum
    - Might be double counting on superclusters
    - Channel 69 and 78 discrepancies
      - 69, bad lemo, replacement cable in place
      - 78, low HV has been corrected
- Monte carlo number of events plot discussed
  - Matches measured values
- VME DAC
  - Currently testing adapter patch panel
  - Patch panel works
  - Library still not working
    - Waiting to hear back from Bryan Moffet
    - Cannot write to addresses
      - Very old board
      - Only has 16 registers
        - When you read to the register, it resets it
        - Can only verify communication to register via analog output
      - Resets to lowest value
        - Measured to be +/- 1V (not +/- 10 V as expected)
        - Okay for HCal: 1 discriminator
        - BB: 4 discriminators, 2 low, 2 high
  - Scott working on GUI to control discriminator thresholds
    - Design discussed – development pending implementation of remex libraries
- Still need to get DVCS pulser working