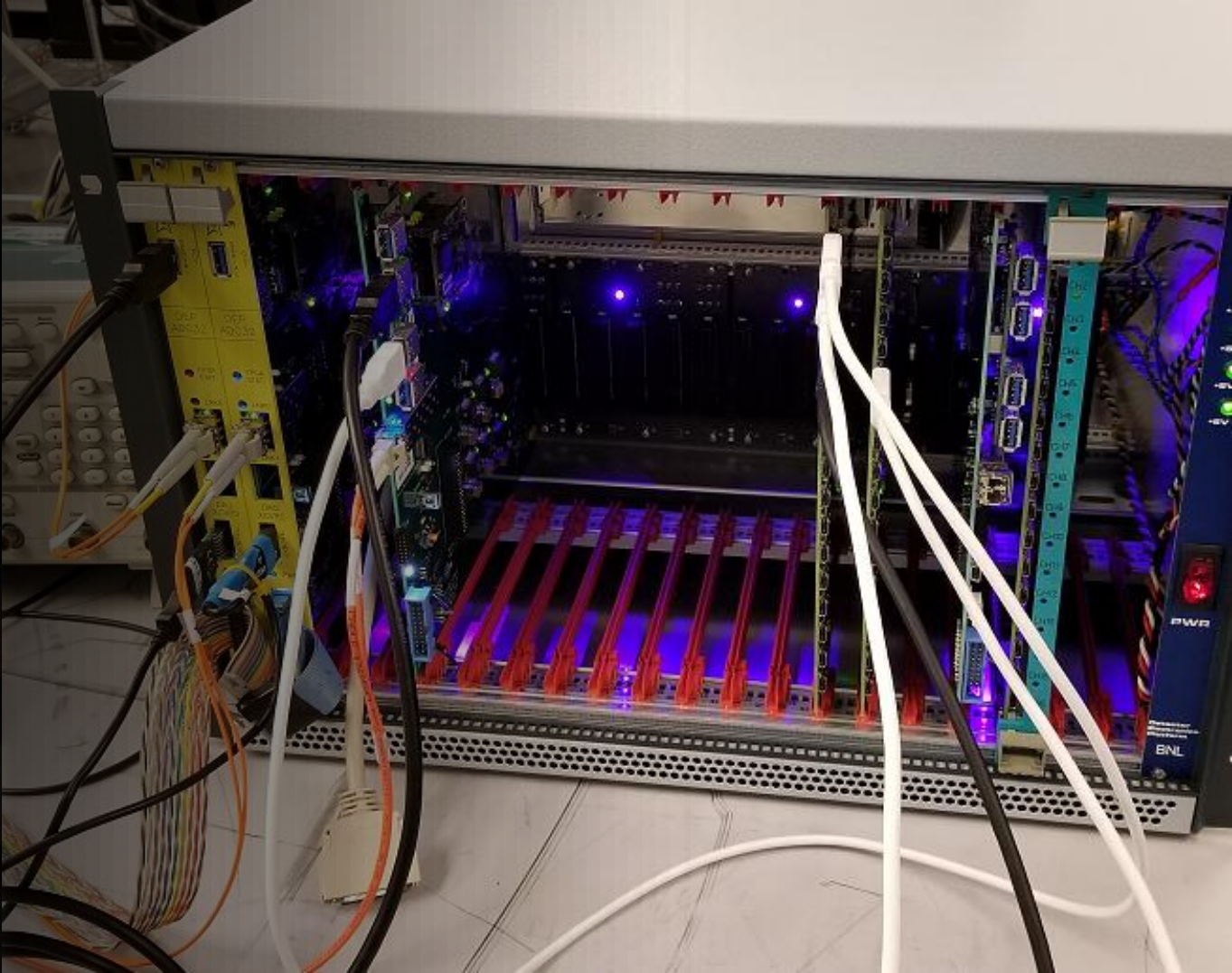
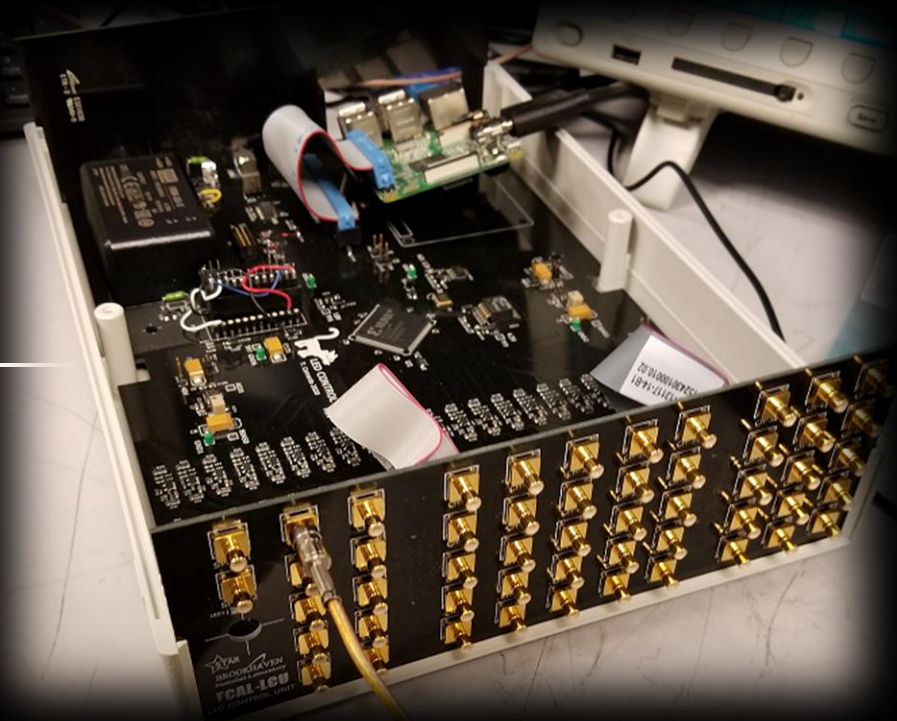


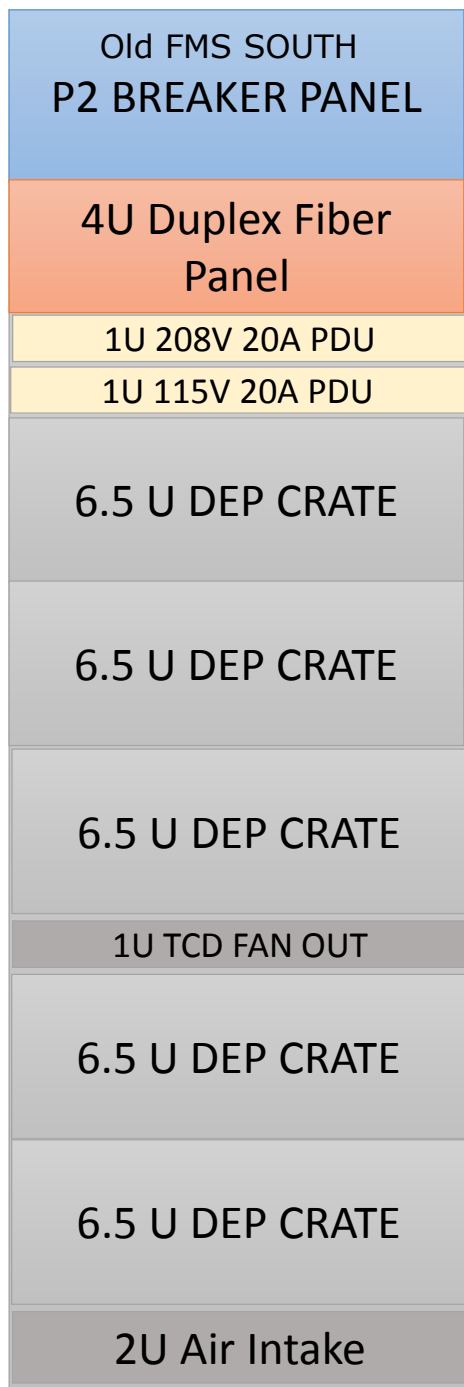
Electronics Installation

ECAL & HCAL Forward Calorimeters
sTGC



Tim Camarda for the
STAR Electronics Group

FALL 2020



Rackmount Electronics Equipment

FMS South

- FMS North has adequate power feed and rack configuration for 120/ 208V 20A

FMS North

- Same config as FMS N. But will need to be relocated on the south side next to FMS S.
- The power feed cable will need to be disconnected from the knife-switch box mounted on the cabinet and re-routed to the South.

FMS North need to remove:

- 2x 9U empty VME crates
- NIM power bin
- Schedule: Can start once shutdown begins in September

Rack Components Install

- **DEP Crates**
 - 2 Complete crates
 - 3 Crates in progress
 - 1 Spare crate
- **Network PDU's**
 - 120V 20A -> 2 in house
 - 208V 20A -> 2 in house
- **Duplex Fiber Panel** -> in house
- **1u TCD FAN OUT** -> 2 in stock
- **LED Control Unit**
 - 2 boxes built & Tested SAT
- **3u Blowers for rack cooling** -> Need to order
- **sTGC DEP Power Crate**
 - LV Power Module -> Prototype Tested SAT
 - Backplane design complete -> need to order boards
 - Control Board for crate -> in development
 - Crates need to be ordered from vendor

Support Components & Cables

1. Patch panels (Power & Signal Boards):

Board Fabrication and assembly is out for quote for turnkey assembly
3 - 4 week turn-time (27 cards)

2. Color Coded Signal cables from FEE to patch panel

- 7 of the 8 colors are in house for ECAL (350 cables)
- White cable will be available in August (50 cables)
- HCAL signal cables: Submitted PO (160 cables)

3. Power/control ribbon cables from FEE to patch panel (LV, HV & I2C Comm.)

- Drawing complete, need to re-check cable length going into the detector enclosure.

4. Power cables from MPD rack power to patch panels

- Cable drawing complete
- Waiting for quote from vendor
- 5-6 week turn-time (12 cables, 10 for system plus 2 spares)

6. LED on detector boards

- ECAL LED board assemblies are completed (55 cards)
- HCAL LED boards: Submitted PO for turnkey assembly (35 cards) 15 day

7. LED SMB driver cables (HCAL & ECAL)

- Still needs to be ordered. (need 80 cables plus spares)

8. 'plugin converter board' to check signals with a scope on the platform

- Need to design board

9. Patch panel mounting plate

Mounting plate drawing complete, need to submit for fabrication

Electronics Install Summary

Most of the Rackmount Equipment is available in house

- Need to order 3u Fans/ Blowers for Cabinet Cooling
- FMS North Rack: Needs to be relocated to South side of beam pipe
- LED Control Box: 2 units assembled & tested
- Ready to start installing equipment in *September 2020*

LV Module for sTGC

Prototype in development

Crates & Backplanes: Need to be ordered

Schedule: Need to test in lab with FEE & RBO

Production boards targeted for November 2020

Support Components & Cables

- Patch Panel (signal & Power Board): Waiting on quote from vendor: 3-4 week turn-time for 27 cards
Mounting plate: Drawing complete, need to submit for fabrication
- Color coded signal cables: 350 of 400 ECAL in house, HCAL PO submitted for 160 cables
Schedule: Should have all cables in by September 7, 2020
- Power/ control ribbon cables: Drawing complete, need to get quote from vendor
- LV Power Cables: Still waiting on quote from vendor (5 – 6 week turn)
- LED Detector Boards: ECAL 55 boards ready to install: HCAL PO for 35 boards submitted
- LED SMB driver cables: Drawing Complete: Need to get quoted from vendor
- Differential to Single-ended test board: Needs to be designed and built.