



Update on GEM - Panjab

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(On behalf of PU-GEM Group)

CMS GEM Workshop

01 Oct. 2019

CERN

Manpower

Faculty:

- Vipin Bhatnagar, Jasbir Singh, Sushil S Chauhan and Sunil Bansal

Graduate Students:

- Currently 3-4 Graduate student (mostly entering into their 3rd year)
- 1-2 other senior students who will graduate soon but helping when needed.
- All of them have experience in assembly of GE1/1 chambers at PU

Technician:

- Shiv, **Amarjeet***, Navjot, and Subhash
*: In CERN for 2 Months
- They have experience in assembly and QC testing as well as preparing/providing of mechanical/electrical support for GE1/1

Quality Control (QC)

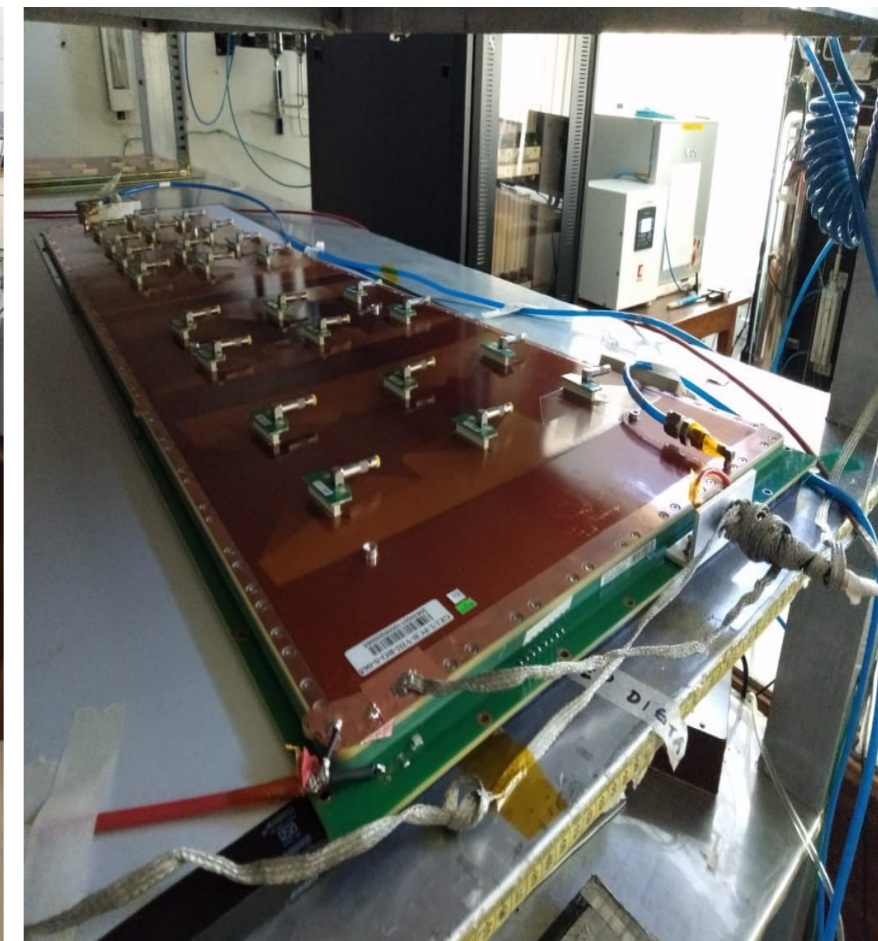
- All the QCs (2,3,4) are in working condition
 - Recently tested with one spare v5 generation GE1/1 chamber available at PU site



Clean Room Facility



Gas Leak Station



QC3/4 Test Setup

QC-5 Setup (1)

- For GE1/1 the QC5 was done at DU site for all assembled chambers but PU group already working to setup it at PU site
- Copper box of similar size as at DU site is already available few weeks ago

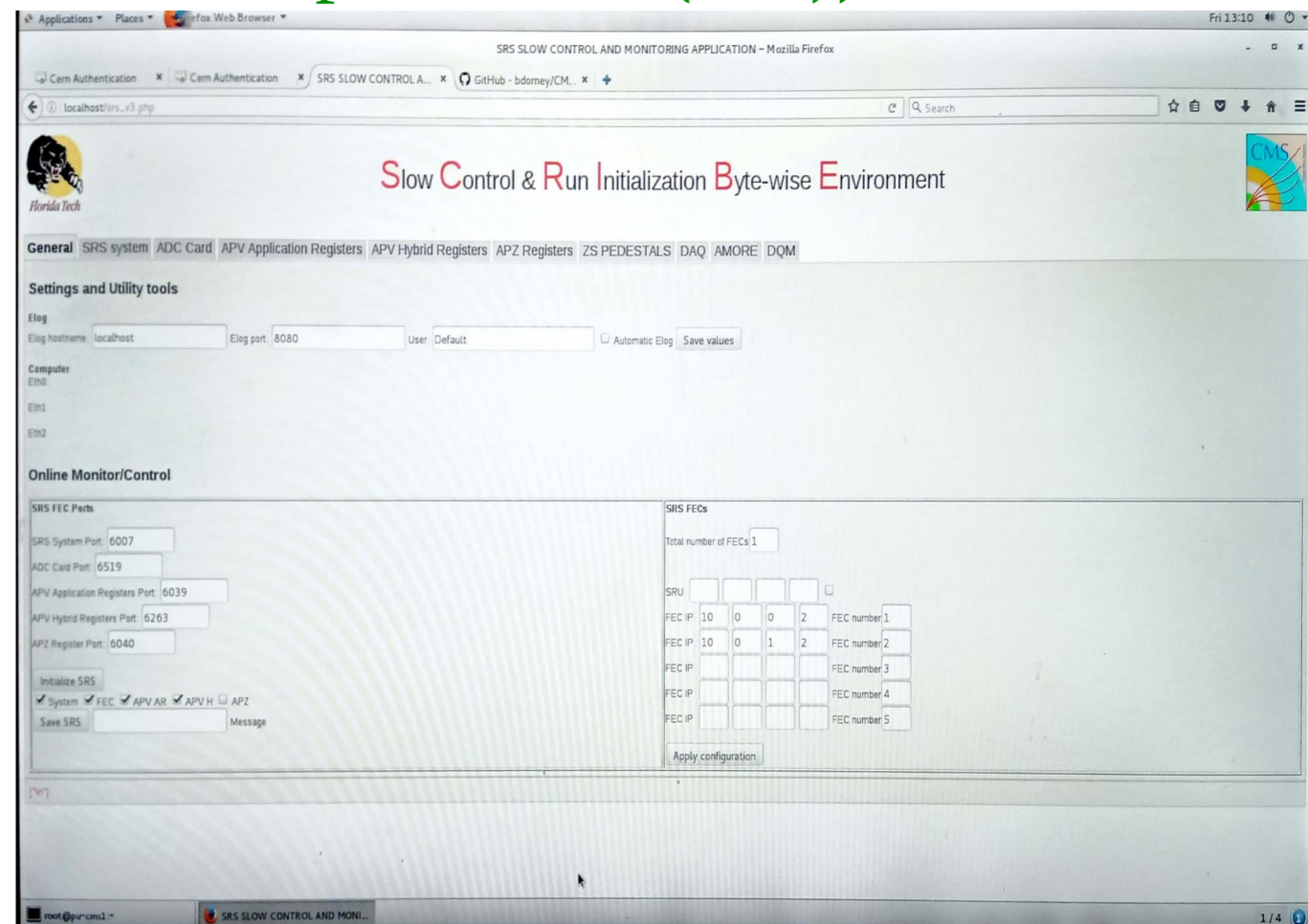
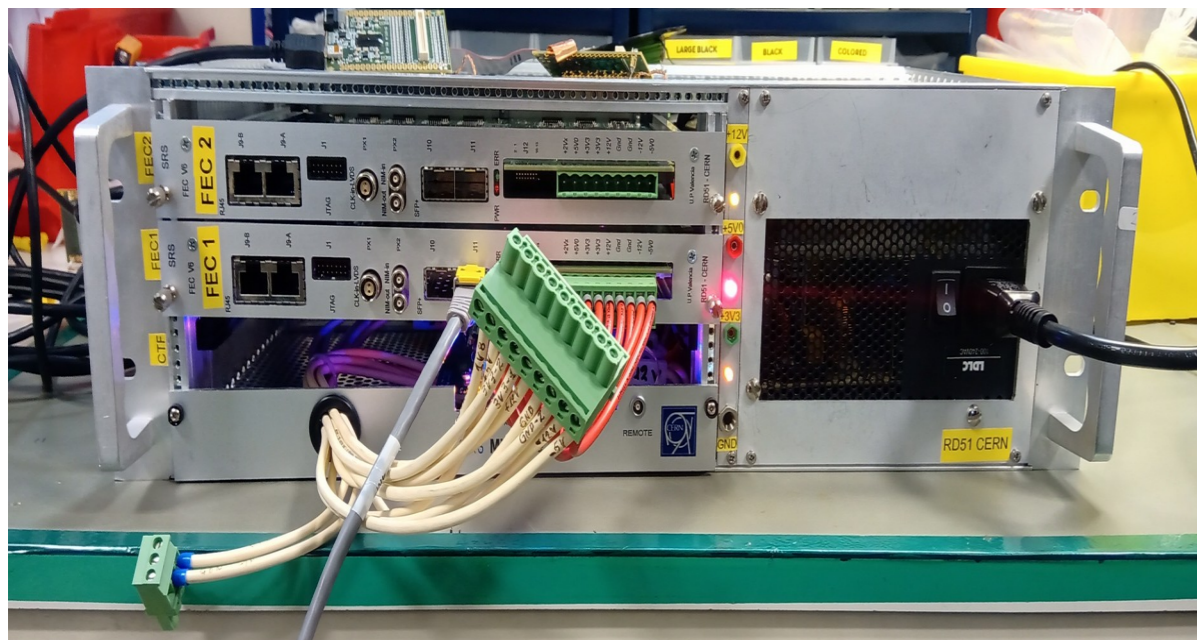
L x W x H :

1.57 m x 0.57 m x 1.15 m

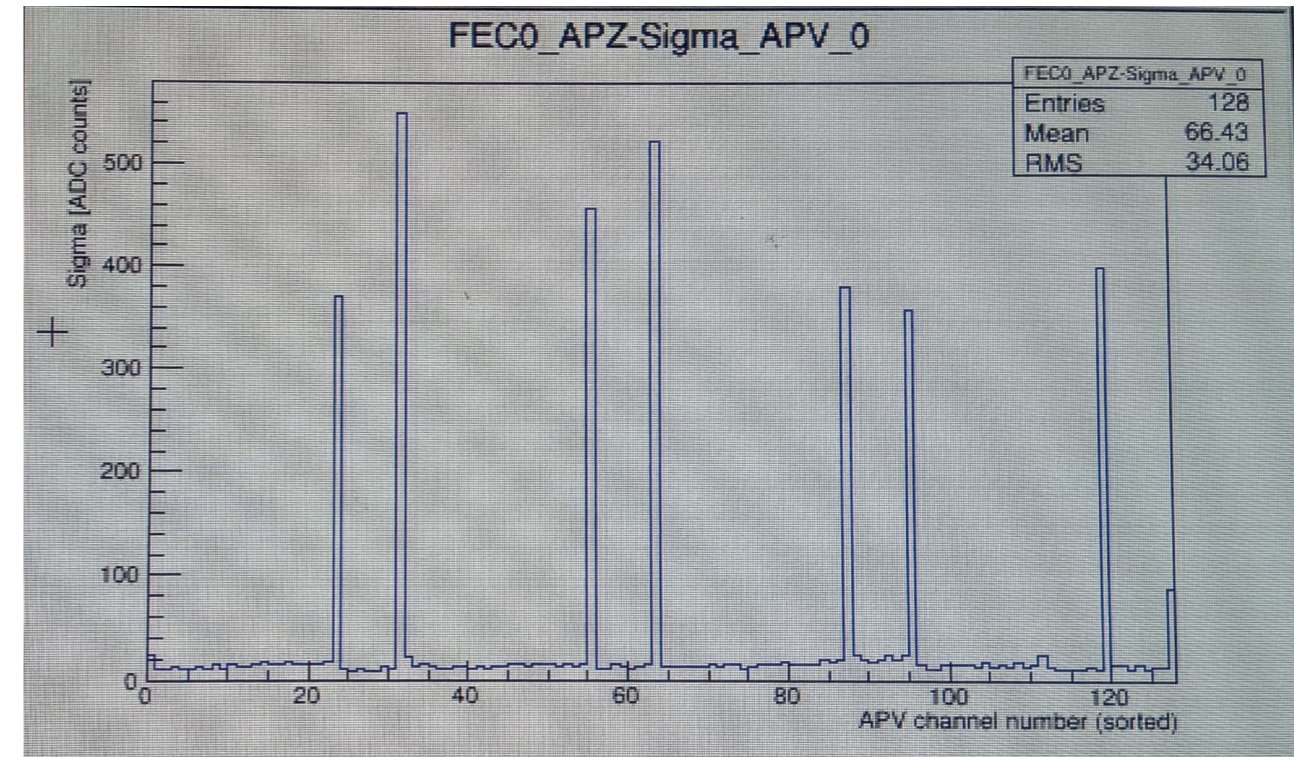
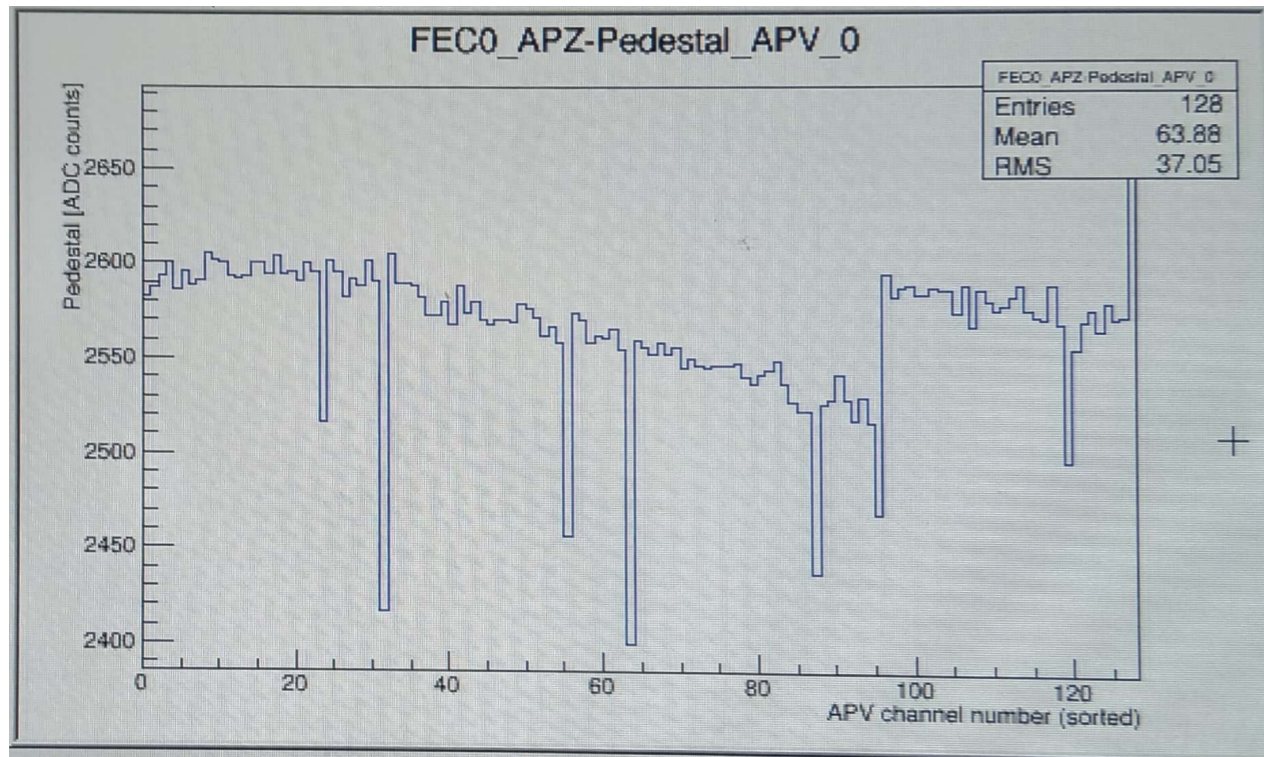


QC-5 Status (2)

- SRS ordered in October 2018 after several delays it finally arrived at CERN in August
- SRS software is already installed on a system
 - FEC Firmware was loaded by RD51 expert Enraldo
 - Tested the setup last week (with the help of Mohit(DU))



- Result for one of the channel



- Noise is due to grounding problem

- APV25 request process started

- Dr Supratik(SINP) will provide more input for PU to follow

- Super Chamber assembly

- Two student and 1 technical staff from PU are at CERN for Super Chamber assembly

- All the QCs upto QC5 could be done at PU site. All components (upto QC4) are working fine
 - For GE2/1 the QCs setup will be same
 - QC5 Stage needs to be ratified/approved (in due course of time)
- At present focus is to complete the QC5 setup asap:
 - Some preparation already done at PU and in September setup was tested here at CERN

Thanks!