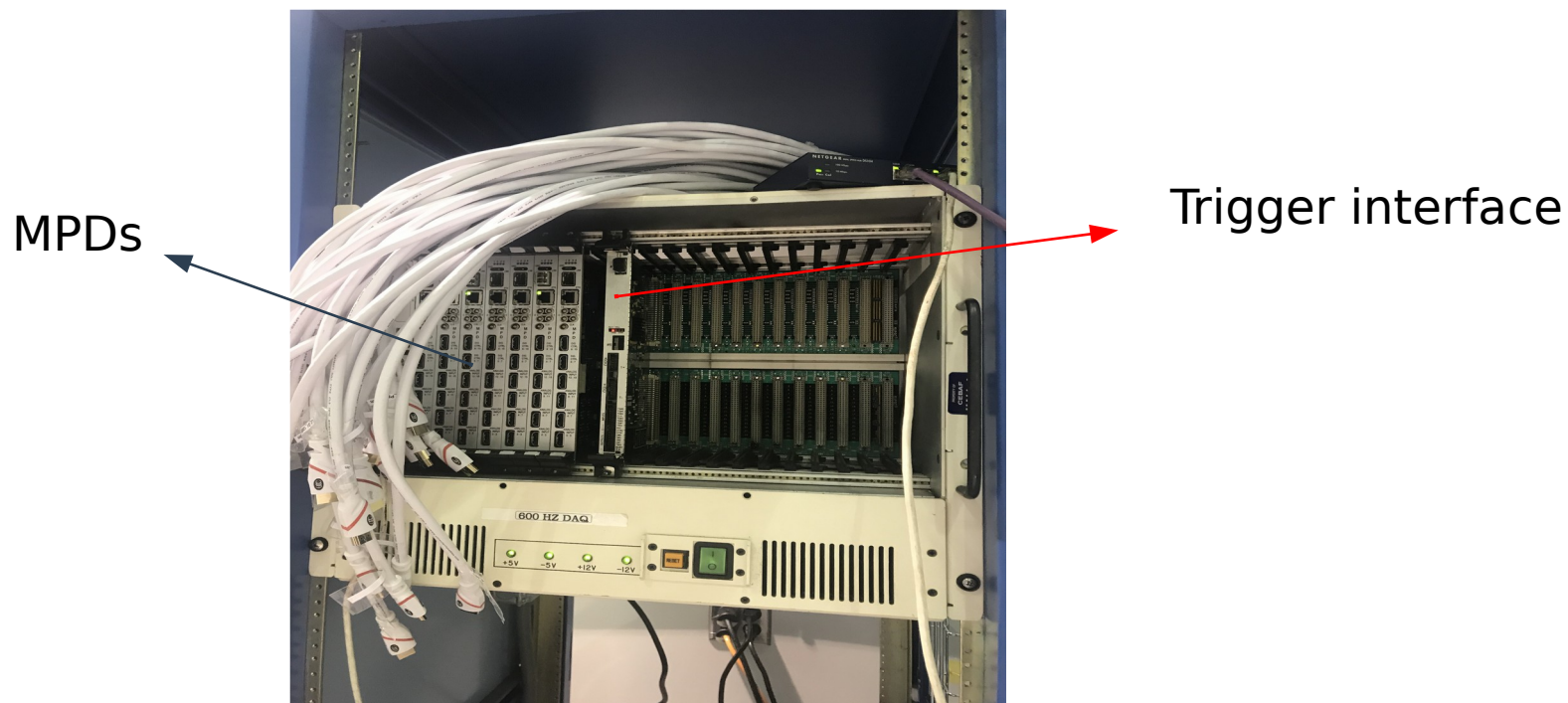


DAQ setup

- Installed VME controller (its hostname is hallavme14pc)
- Installed 7 MPD's and the address switch set to the slot number
- TI address is set for slot 10



VME crate

DAQ setup

→ Programmed firmware of all MPDs before being attached to the crate

→ Copied programs and libraries we need to run CODA 3.10

This is a version of CODA that is in current development as opposed to the older version currently used in Hall A (CODA 2.6.2)

Detail information are posted in wiki:
[SBS GEM EEL Cleanroom setup](#)

→ Checked the communication between APV and MPD

→ Configured CODA to read TI and tested

DAQ setup

New Run Control GUI

The screenshot displays the Run Control rcGui-41 interface. At the top, the system tray shows the date and time as 'Wed Aug 21, 4:22 PM' and the user as 'coda'. The main window title is 'Run Control rcGui-41'. Below the title bar is a menu bar with 'Control', 'Sessions', 'Configurations', 'Options', 'Expert', 'User', and 'Help'. A toolbar contains icons for file operations and run control (play, stop, pause, etc.).

Run Parameters:

- Expid: SBS
- Session: GEM Cleanroom
- Configuration: Layer2_Tlonly
- Output File: /home/coda/SBS-GEM-Cleanroom/data/gem_cleanroom_2.evio.0
- User RTV %(config): unset
- User RTV %(dir): unset

Run Status:

- Run Number: 2
- Run State: ended
- Event Limit: 0
- Watch Component: PEBcleanroom
- Data Limit: 0
- Total Events: 90,399
- Time Limit (min): 0

Client Data Table:

Name	State	EvtRate	DataRate	IntEvtRate	IntDataRa...
PEBcleanroom	downloaded	0.0	0.0	3013.2	265.2
ROCLayer2	downloaded	0.0	0.0	3539.5	199.2

Event Rate Graph:

The graph shows the Event Rate in Hz over time. The y-axis ranges from 0 to 5,000 Hz. The rate starts at 0, rises to approximately 3,500 Hz, and remains stable until the end of the run.

Message Log:

Name	Message	Time	Severity
sms_Layer2_Tlonly	Download is started.	15:00:37 08/21	INFO
sms_Layer2_Tlonly	Download succeeded.	15:00:38 08/21	INFO
sms_Layer2_Tlonly	Prestart is started.	15:02:13 08/21	INFO
sms_Layer2_Tlonly	Prestart succeeded.	15:02:18 08/21	INFO
sms_Layer2_Tlonly	Go is started.	15:02:20 08/21	INFO
PEBcleanroom	Emu PEBcleanroom go: waiting for PRESTART event in module EbModule (client msg)	15:02:20 08/21	WARNING
sms_Layer2_Tlonly	Go succeeded.	15:02:22 08/21	INFO
sms_Layer2_Tlonly	End is started.	15:02:47 08/21	INFO
sms_Layer2_Tlonly	End succeeded.	15:02:53 08/21	INFO

DAQ setup

→ Added two configuration

Layer2_Tionly → Configure TI

Layer2 → Configure MPDs

The screenshot shows the Run Control rcGui-71 interface. The top menu bar includes Applications, Places, System, CODA, HV, ROC, Replay, Log, and Monitor. The window title is "Run Control rcGui-71" and the date/time is "Wed Aug 28, 10:26 AM".

The interface is divided into several sections:

- Control:** Contains icons for various control actions like stop, play, and refresh.
- Run Parameters:** Includes fields for Expid (SBS), Session (GEMCleanroom), and Configuration (Layer2).
- Run Status:** Shows Run Number (11), Run State (booted), Event Limit (0), Watch Component, Data Limit (0), and Time Limit (min.) (0).
- Output File:** Shows the path: /home/coda/SBS-GEM-Cleanroom/data/gem-...-11-...-...
- User RTV:** Fields for % (config) and % (dir) are both set to "unset".
- Configuration:** A central area with a text box containing "Layer2_Tionly" and "Layer2".
- Event Rate:** A graph showing event rate over time, with a red shaded area indicating a period of activity.
- Log:** A table at the bottom showing system messages.

Name	State	EvtRat
PEBcleanroom	configured	0.0
ROCLayer2	booted	0.0

Name	Message
PEBcleanroom	Emu PEBcleanroom: state set to ERROR (client msg)
sms_Layer2	End is started.
sms_Layer2	CodaRcEnd service failed.
sms_Layer2	End is started.
sms_Layer2	CodaRcEnd service failed.
rcGui-71	Reset issued.
sms_Layer2	reseted is started.
rcGui-71	Reset issued.
sms_Layer2	reseted is started.

DAQ setup

- Found bug in TI firmware 3v9.2 (relates to using the front panel inputs for triggers). Downgraded both TI firmware and library to 3v8.1.
- Using gate generator as a slow pulser trigger (~few Hz) for debugging.
- I2C (MPD -> APVs config)
 - Debugging I2C. Will need to be less strict with i2c to get other MPDs to work.
 - Library development ongoing.
 - Splitting of configuration files from a couple files: config_apv.txt and config_apv_default.txt
 - config_apv.txt now reads multiple textiles prepared for the individual MPD slots

DAQ setup

Next steps:

- Full Readout of layer2 without SSP
- Debug decoding of CODA 3.10 data with Analyzer.
- Add more layers to readout (more crates, more ROCs, use SSP).
- Consider using VME Controller in MPD crates to configure the MPDs and then use SSP to read them out.