

EEL clean room Daq and read out update

Last week:

- Fixed few APV connection issues we have seen in the recent cosmic tests
- Tested Daq for the backplanes for the assembly layer before and after replacement
- Prepared back planes for the second assembly layer which is under preparation

This week:

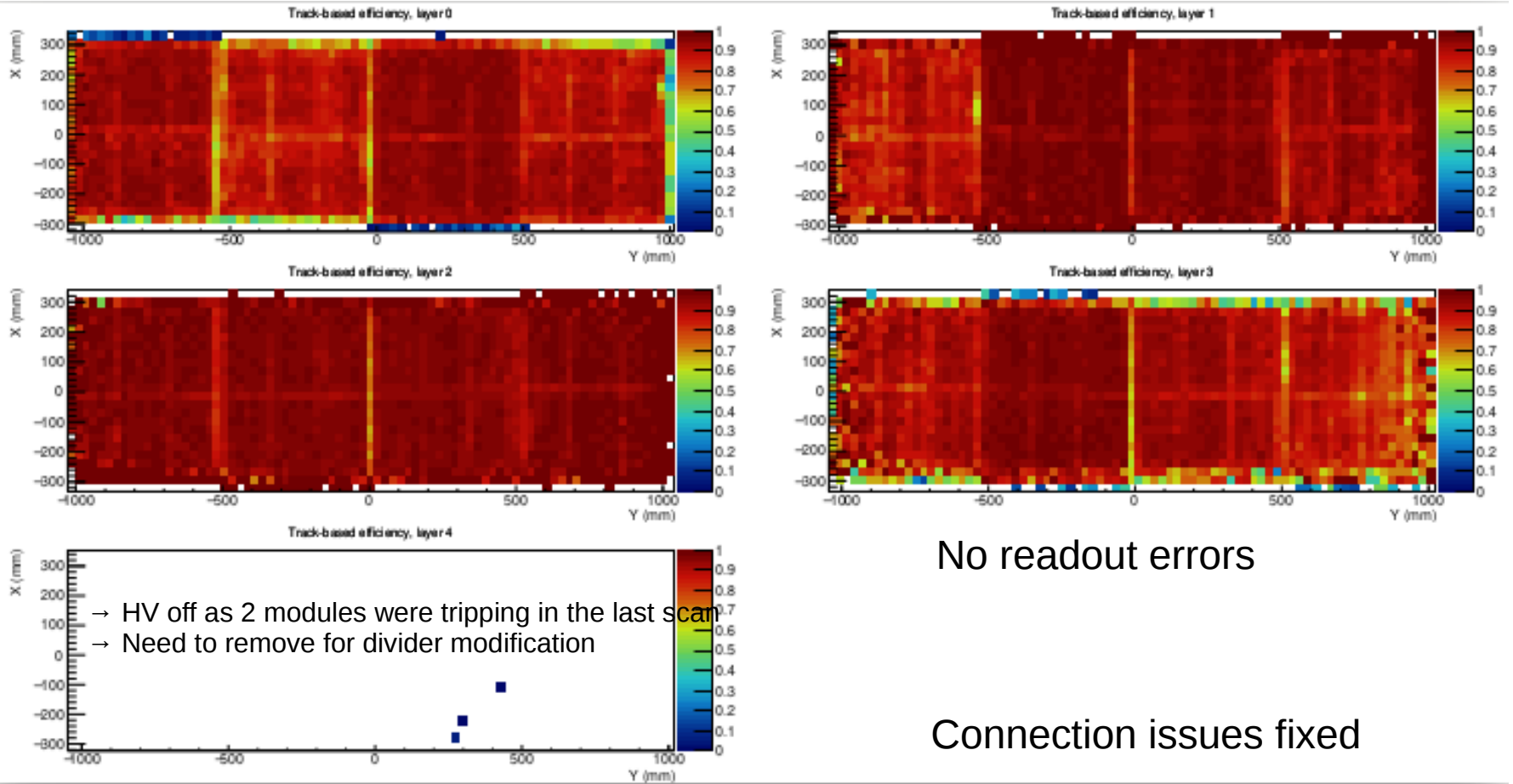
- Network issues => Alex replaced router => seems fixed
- Coda had been running stably until yesterday morning since router replacement nearly 90 hours (~6M events) for the first time
- Running hv scan since Monday afternoon.
- Except a few crashes (trigger going down to zero) coda is running fine without any readout errors

02/10/2021

Anu, Malinga and Thir

Tracking results of most recent cosmic test

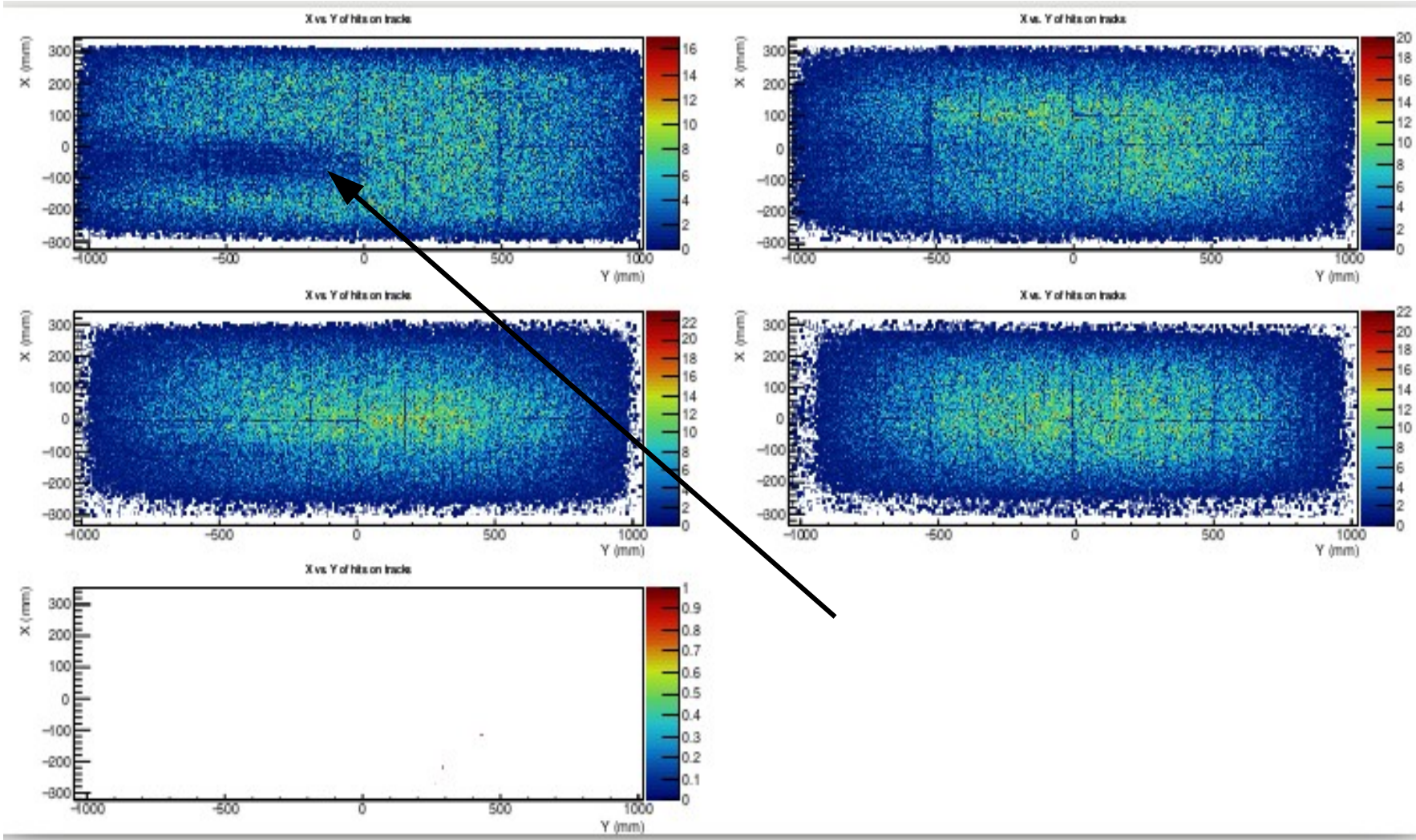
Run 3031 & 3034 combined



No readout errors

Connection issues fixed

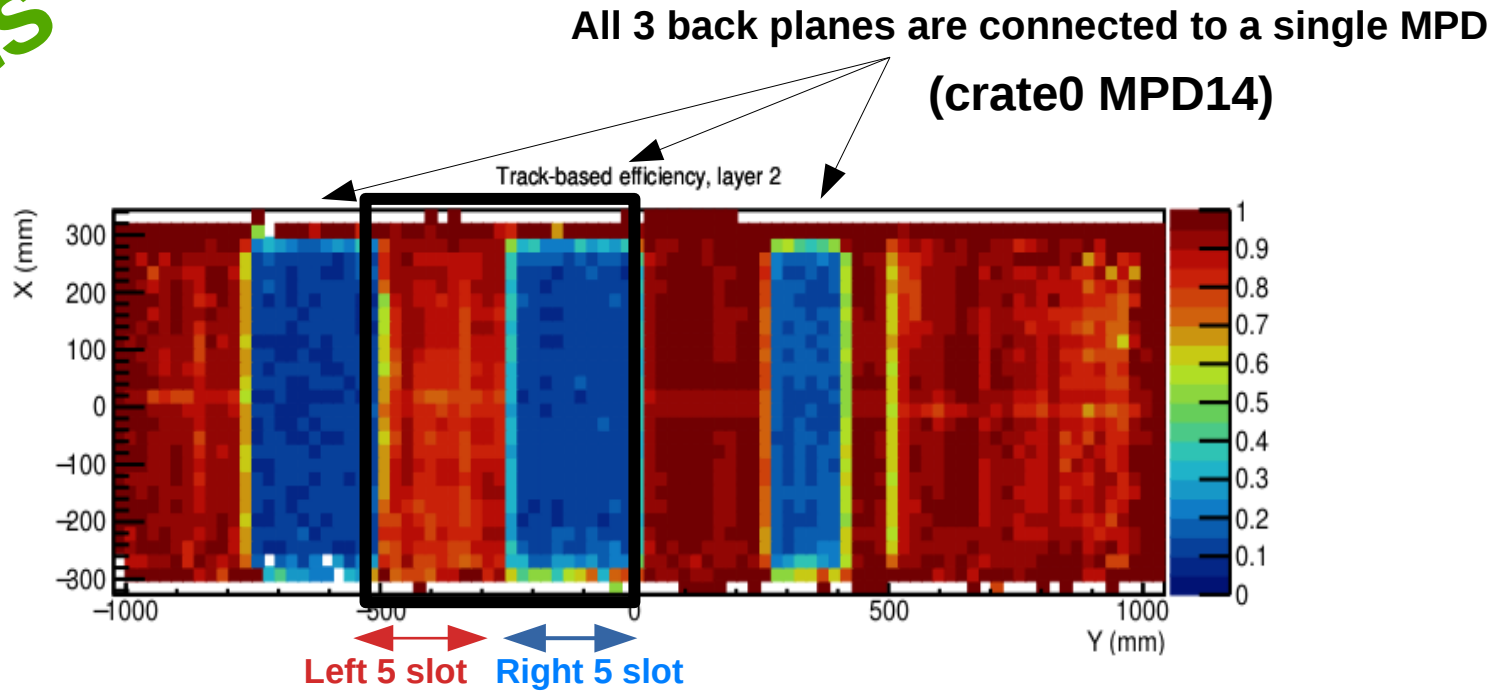
Tracking results of most recent cosmic test



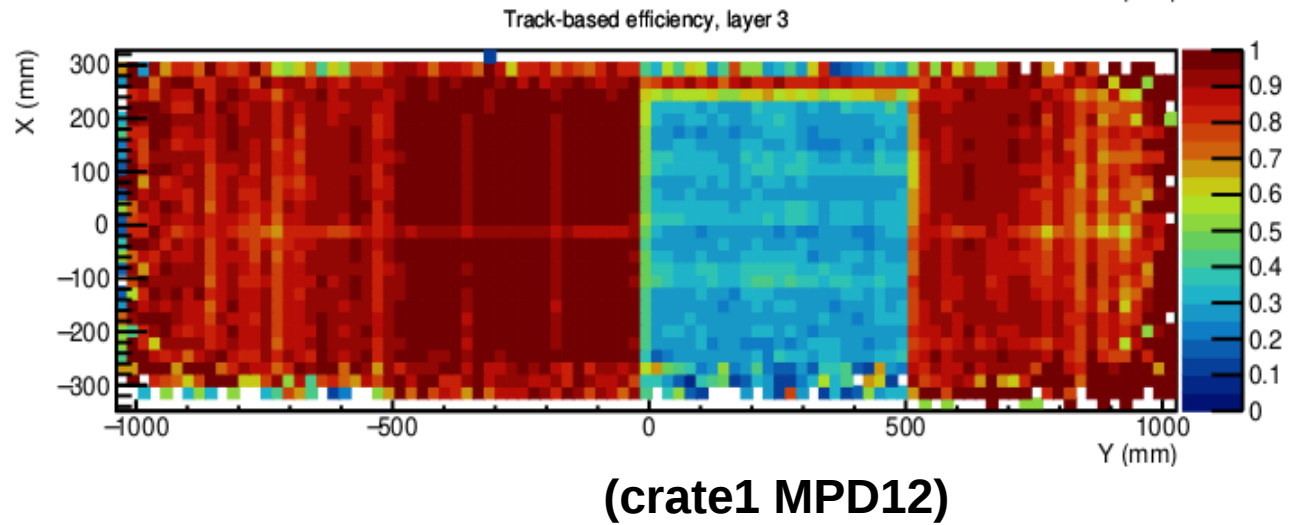
Low efficiency issues

Old plots

3rd Layer

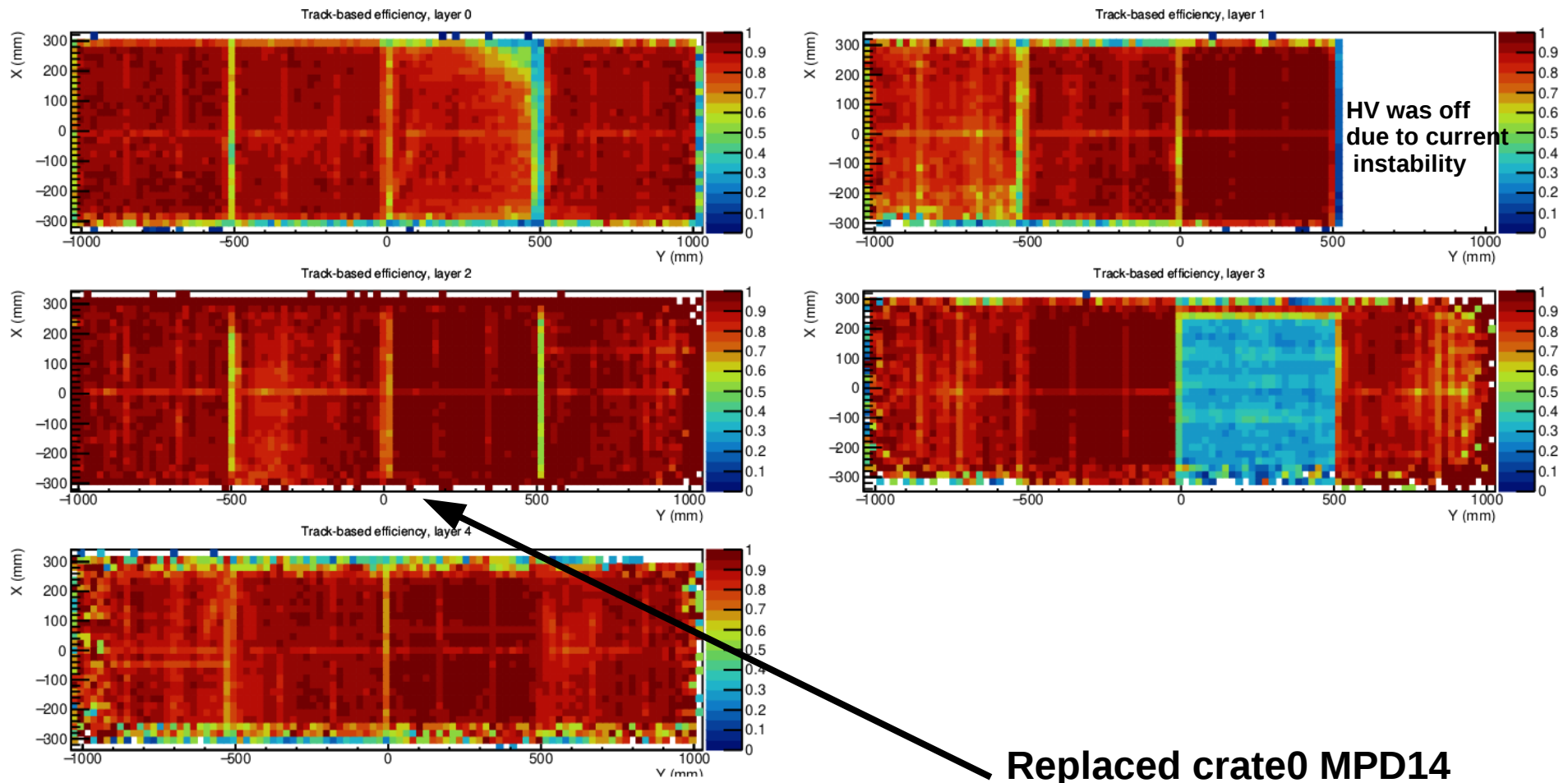


4th Layer 3rd module



Replaced Crate0 MPD14 (Nov 3 2020)

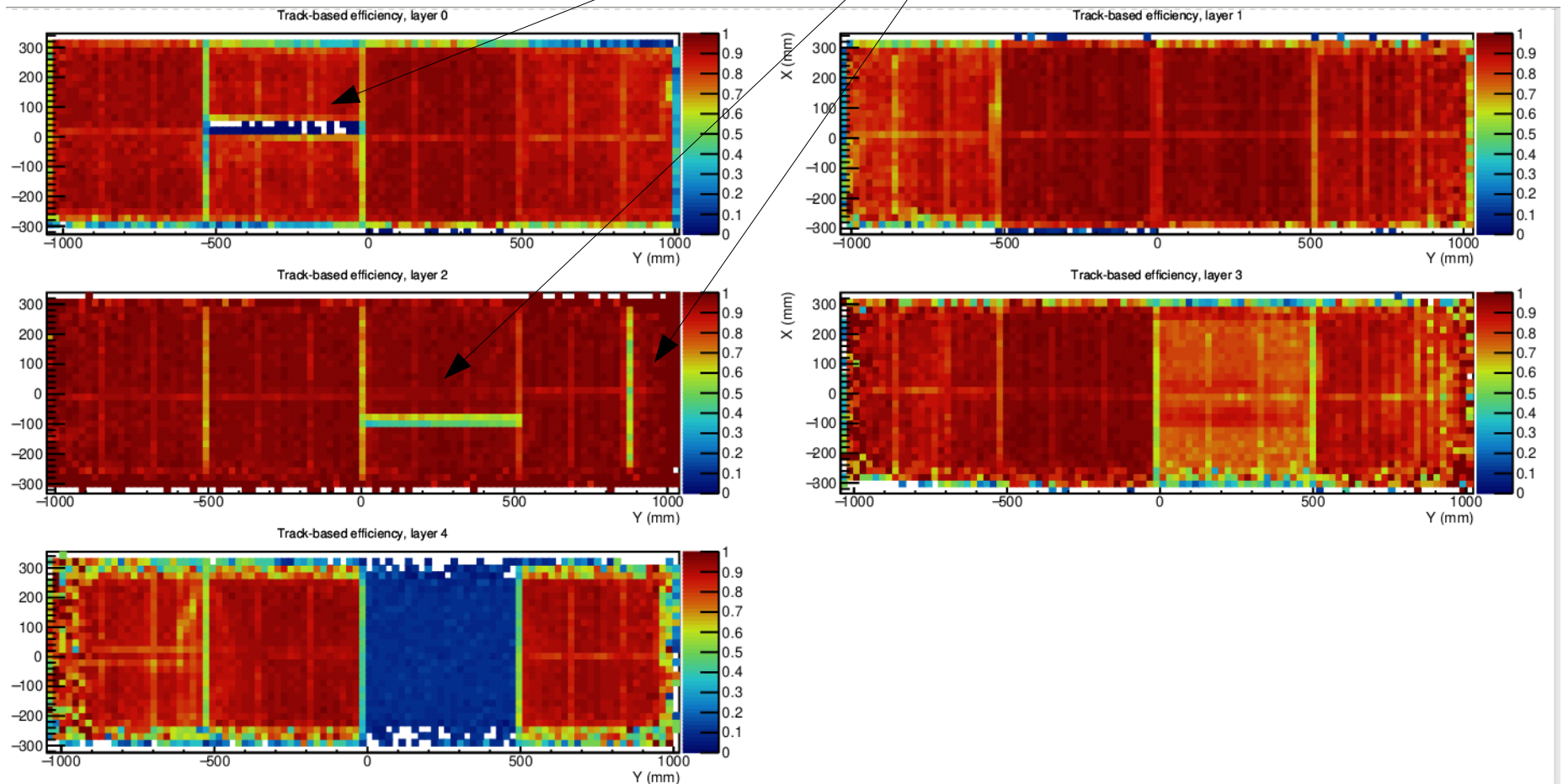
- Readout errors for crate1 MPD12
- No readout error seen for replaced MPD



Cosmic test (Jan 15 2021)

- Readout error for crate1 MPD12
- No readout error for crate0 MPD14
(replaced in Nov 2020)

Connection issues

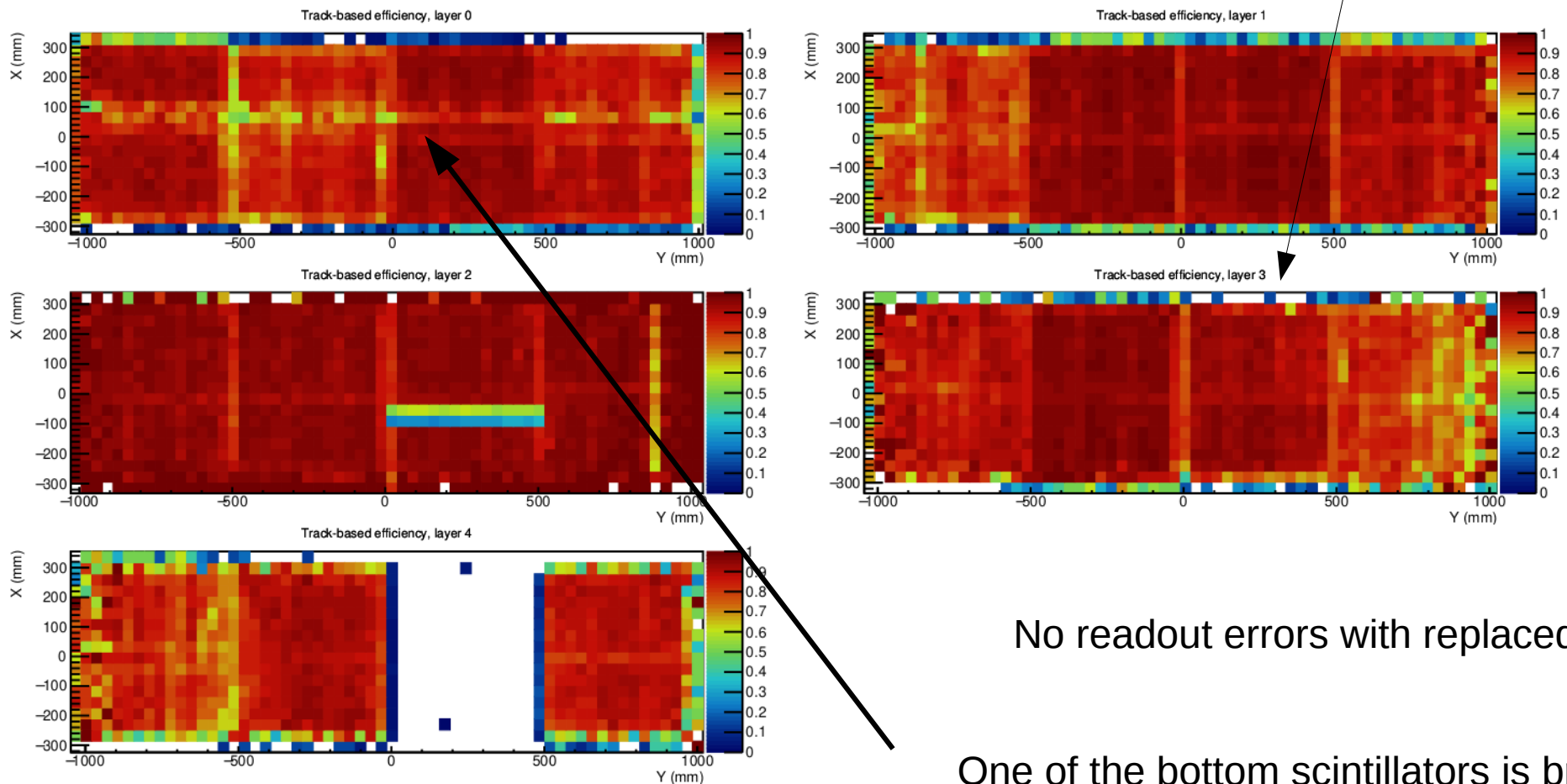


Run: 2817

Cosmic test (Jan 28 2021)

- No read out errors for **crate1 MPD12** (replaced in Jan 22 2021)
- No readout errors for **crate0 MPD14** (replaced in Nov 03 2020)
- **Crate1 MPD7** has started giving readout errors

Need more data



No readout errors with replaced MPDs

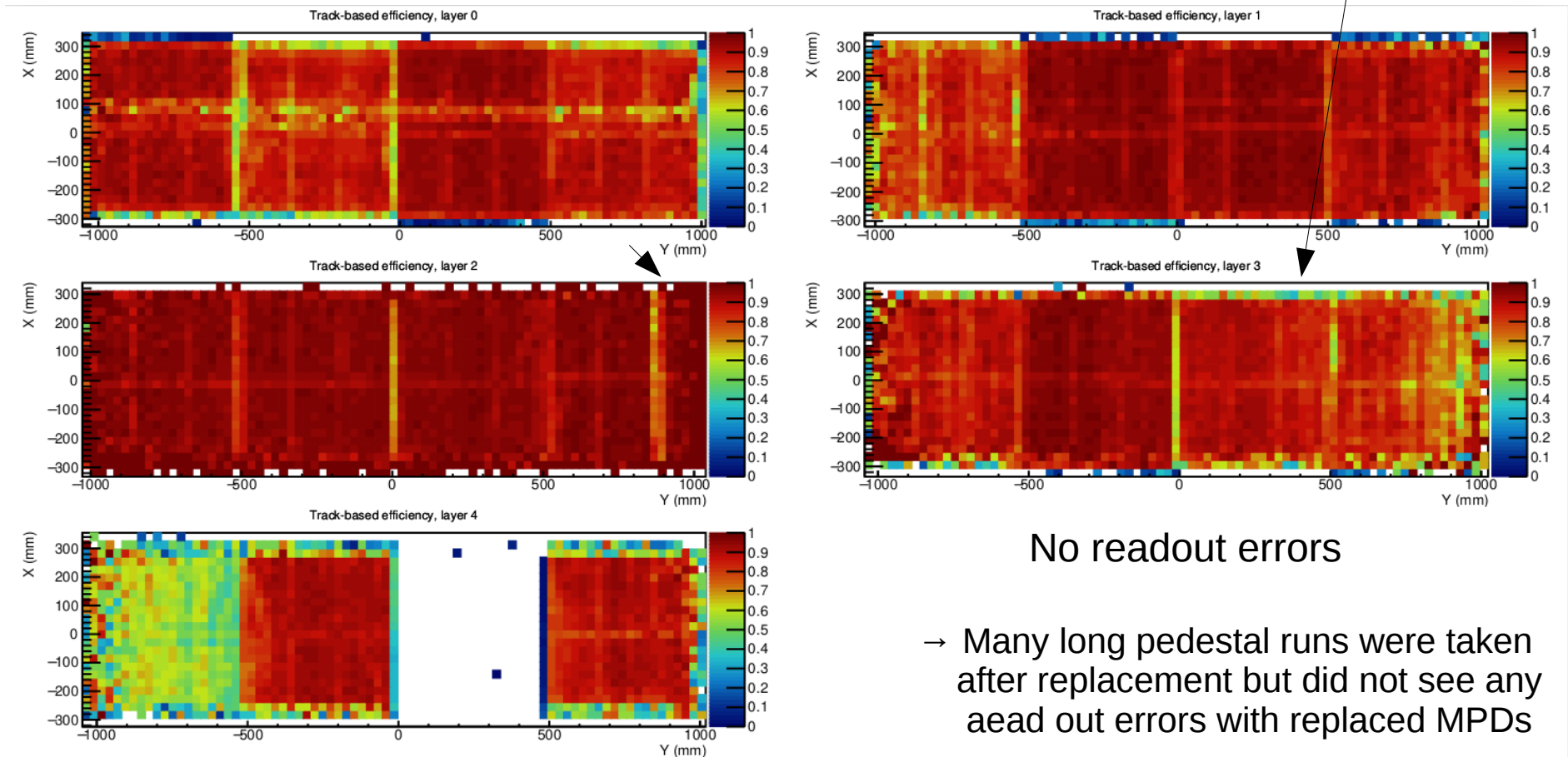
One of the bottom scintillators is broken;
Now fixed

Run: 2911

Cosmic test (Jan 29 2021)

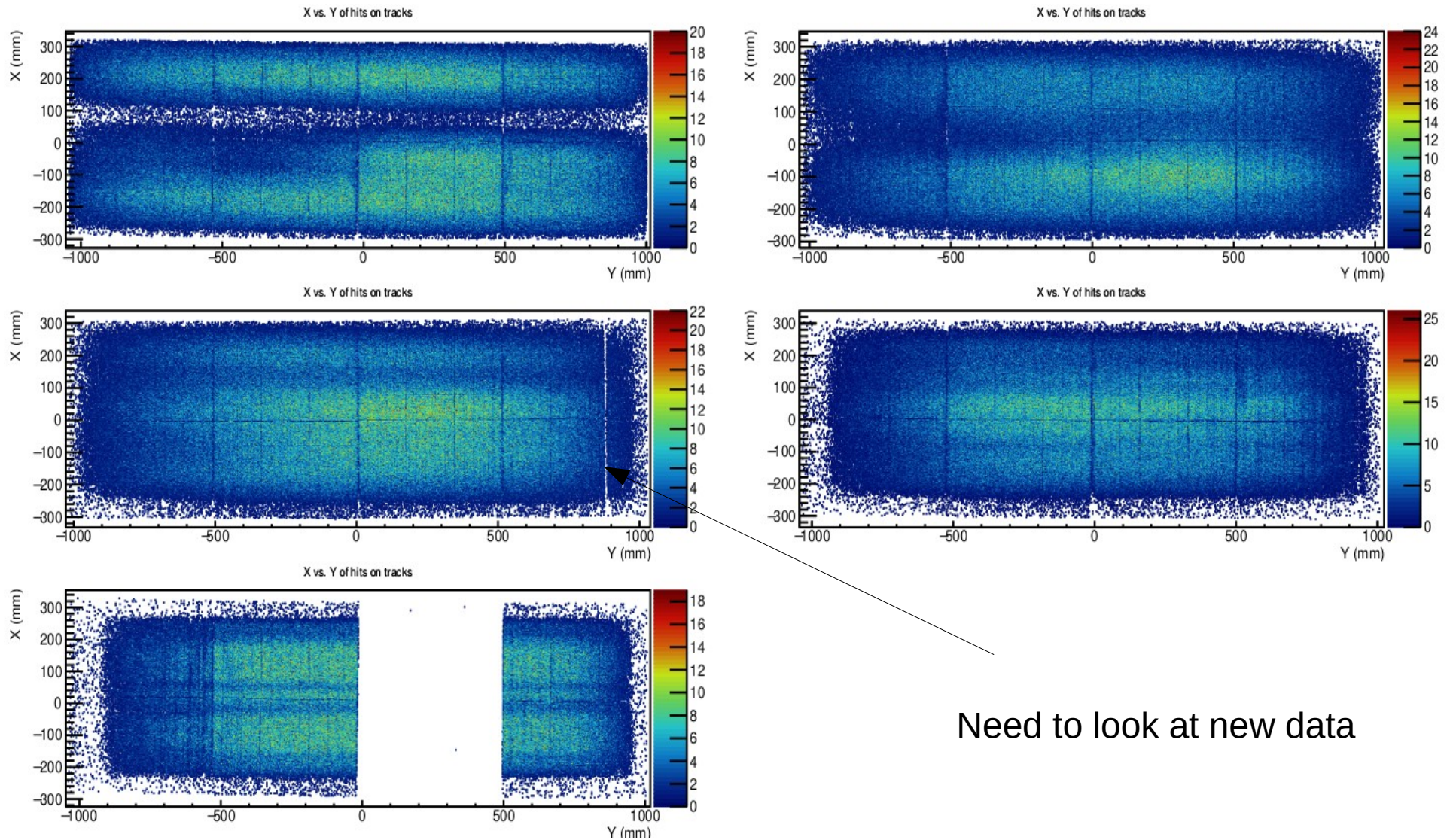
- No read out errors **crate1 MPD12** (replaced in Jan 22 2021)
- No readout error seen **crate0 MPD14** (replaced in Nov 2020)

Fixed??



MPD instability => Low efficiency (need more data)

Cosmic test (Jan 29 2021)



Coda after router replacement

Applications Places TigerVNC Viewer eel124gemdaq.jlab.org:1 (sbs-onl) - TigerVNC Mon 12:06

Mon 08 Feb 2021 12:06:07 PM EST

```

ROCcrate0--hallavme14pc
Configured APVs (ADC 15 ... 0)
MPD 2 : .... 1111 1111 1111 (#APV 12)
MPD 3 : .... 1111 1111 1111 (#APV 12)
MPD 4 : .... 1111 1111 1111 (#APV 12)
MPD 5 : .... 1111 1111 1111 (#APV 12)
MPD 6 : .111 1111 1111 1111 (#APV 15)
MPD 7 : .111 1111 1111 1111 (#APV 15)
MPD 8 : ...1 1111 ...1 1111 (#APV 10)
MPD 10 : .... 1111 1111 1111 (#APV 12)
MPD 11 : .... 1111 1111 1111 (#APV 12)
MPD 12 : .... 1111 1111 1111 (#APV 12)
MPD 13 : .... 1111 1111 1111 (#APV 12)
MPD 14 : .111 1111 1111 1111 (#APV 15)
MPD 15 : .111 1111 1111 1111 (#APV 15)
MPD 16 : ...1 1111 ...1 1111 (#APV 10)

tiPoll: Entering polling loop...
tiPoll: INFO: Running at FIFO/40
ROL: Exiting (5)
daLogHsg: INFO: active, events taken so far 0

ROCcrate1--sbsvme25
Configured APVs (ADC 15 ... 0)
MPD 2 : .... 1111 1111 1111 (#APV 12)
MPD 3 : .... 1111 1111 1111 (#APV 12)
MPD 4 : .... 1111 1111 1111 (#APV 12)
MPD 5 : .... 1111 1111 1111 (#APV 12)
MPD 6 : .111 1111 1111 1111 (#APV 15)
MPD 7 : .111 1111 1111 1111 (#APV 15)
MPD 8 : ...1 1111 ...1 1111 (#APV 10)
MPD 10 : .... 1111 1111 1111 (#APV 12)
MPD 11 : .... 1111 1111 1111 (#APV 12)
MPD 12 : .... 1111 1111 1111 (#APV 12)
MPD 13 : .... 1111 1111 1111 (#APV 12)
MPD 14 : .111 1111 1111 1111 (#APV 15)
MPD 15 : .111 1111 1111 1111 (#APV 15)
MPD 16 : ...1 1111 ...1 1111 (#APV 10)

tiPoll: Entering polling loop...
tiPoll: INFO: Running at OTHER/0
ROL: Exiting (5)
daLogHsg: INFO: active, events taken so far 0

ROCcrate2--sbsvme30
daLogHsg: INFO:
Configured APVs (ADC 15 ... 0)
MPD 2 : .... 1111 1111 1111 (#APV 12)
MPD 3 : .... 1111 1111 1111 (#APV 12)
MPD 4 : .... 1111 1111 1111 (#APV 12)
MPD 5 : .... 1111 1111 1111 (#APV 12)
MPD 6 : .111 1111 1111 1111 (#APV 15)
MPD 7 : .111 1111 1111 1111 (#APV 15)
MPD 8 : ...1 1111 ...1 1111 (#APV 10)

tiPoll: Entering polling loop...
tiPoll: INFO: Running at OTHER/0
ROL: Exiting (5)
daLogHsg: INFO: active, events taken so far 0

```

Run Control rcGui-17

Control Sessions Configurations Options Expert User Help

Start Time: 02/05/21 16:00:52 End Time: 0

Run Parameters: Expid: SBS Session: EMCleanroom Configuration: Layer1_2_3_4_5

Run Status: Run Number: 3028 Run State: active Event Limit: 0

Output File: /home/sbs-onl/raw/gem_cleanroom_3028.evio.283

Watch Component: PEBcleanroom Data Limit: 0

Total Events: 4,089,410 Time Limit (min.): 0

Name	State	EvtRate	DataRate	IntEvtRate	IntDataR...
PEBcleanroom	active	18.5	25613.8	16.7	23098.7
ROCcrate2	active	13.0	3600.4	16.7	-5.3
ROCcrate1	active	12.0	6646.0	16.7	-11.8
ROCcrate0	active	12.5	6922.9	16.7	-11.8

Event Rate

Name	Message	Time	Severity
sms_layer1_2_3_4_5	waiting for... ROCcrate2,	15:59:02 02/05	WARN
sms_layer1_2_3_4_5	waiting for... ROCcrate0,	15:59:10 02/05	WARN
sms_layer1_2_3_4_5	waiting for... ROCcrate0,	15:59:15 02/05	WARN
sms_layer1_2_3_4_5	waiting for... ROCcrate0,	15:59:20 02/05	WARN
sms_layer1_2_3_4_5	waiting for... ROCcrate0,	15:59:25 02/05	WARN
sms_layer1_2_3_4_5	waiting for... ROCcrate0,	15:59:31 02/05	WARN
sms_layer1_2_3_4_5	waiting for... ROCcrate0,	15:59:36 02/05	WARN
sms_layer1_2_3_4_5	waiting for... ROCcrate0,	15:59:41 02/05	WARN
sms_layer1_2_3_4_5	waiting for... ROCcrate0,	15:59:46 02/05	WARN
sms_layer1_2_3_4_5	waiting for... ROCcrate0,	15:59:51 02/05	WARN
sms_layer1_2_3_4_5	waiting for... ROCcrate0,	15:59:56 02/05	WARN
sms_layer1_2_3_4_5	waiting for... ROCcrate0,	16:00:01 02/05	WARN
sms_layer1_2_3_4_5	Download succeeded.	16:00:06 02/05	INFO

Applications Run Control rcGui-17 sbs-onl@eel124gemdaq... platform rcgui ROCcrate1--sbsvme25 ROCcrate2--sbsvme30 Event Builder ROCcrate0--hallavme1...

sbs-onl@eel124gemdaq~ sbs-onl@eel124gemdaq~ eel124gemdaq.jlab.org:1 (sbs... [eel124gemdaq.jlab.org:2 (sbs... [eel124gemdaq.jlab.org:3 (sbs... [eel124gemdaq.jlab.org:4 (sbs... eel124gemdaq.jlab.org:5 (sbs...