

# 3<sup>rd</sup> module of 5<sup>th</sup> layer tripped

ROCcrate2--sbsvme30
Run Control rcGui-58
Fri 15 Jan 2021 05:07:18 PM EST

Output Buffer Status

Slot	nrnds	F E	Full	Flags	Blks	Events	Trigs	Missed
2	0	0	1	0 0 0 0	45	109358	2315866	0
3	0	0	1	1 0 0 0	1	2	2	0
4	0	0	1	1 0 0 0	1	2	2	0
5	0	0	1	1 0 0 0	1	2	2	0
6	0	0	1	0 0 0 0	1	2	2	0
7	0	0	1	0 0 0 0	1	2	2	0
8	0	0	1	0 0 0 0	1	2	2	0

----- SDRAM ----- -- OBUF

Slot	FIFO Addr	WR OK	RD OK	Overrun	Word Count	F E	Wor
2	0x1881b60	1	0x1881b60	1	no 0x	0	0 1
3	0x 22d1	1	0x1c79b04	1	YES 0x1ffffff	1	0
4	0x 41d	1	0x1c7a35c	1	YES 0x1ffffff	1	0
5	0x 22d1	1	0x1c7b716	1	YES 0x1ffffff	1	0
6	0x 5 1 0x	0	1	no 0x	5	0 1	
7	0x 5 1 0x	0	1	no 0x	5	0 1	
8	0x 5 1 0x	0	1	no 0x	5	0 1	

```

** Trying a reset
daLogMsg: INFO: Resetting MPDs with ERRORS
resetMPDs: Number of calls = 0
* Success? Be sure to check the data!
daLogMsg: INFO: MPDs reset. CHECK THE DATA
Slot 3 - OBUF block count: 6

**** OUTPUT BUFFER FIFO is FULL in MPD 3 !!! RESET EVERYTHING !!!
Slot 4 - OBUF block count: 7

**** OUTPUT BUFFER FIFO is FULL in MPD 4 !!! RESET EVERYTHING !!!
Slot 5 - OBUF block count: 6

**** OUTPUT BUFFER FIFO is FULL in MPD 5 !!! RESET EVERYTHING !!!

WARNING: *** Timeout while waiting for data in mpd 6 - check MPD/AF
Slot 6 - OBUF block count: 0
WARNING: *** Timeout while waiting for data in mpd 7 - check MPD/AF
Slot 7 - OBUF block count: 0
WARNING: *** Timeout while waiting for data in mpd 8 - check MPD/AF
Slot 8 - OBUF block count: 0
daLogMsg: WARN: Errors in readout for event 1157934
daLogMsg: WARN:
** ERRORS in Readout. Types:
* Empty
* Full
** MPDs with errors:
  3 4 5 6 7 8
    
```

Status for TI at VME (Local) base address 0x0a80000 (0xa51a0000)

Control Sessions Configurations Options Expert User Help

Start Time: 01/14/21 21:39:33    End Time: 01/15/21 16:58:18

Run Parameters

Expid: SBS    Session: EMCleanroom    Configuration: **layer1\_2\_3\_4\_5**

Run Status

Run Number: 2817    Run State: **ended**    Event Limit: 0

Output File: /home/sbs-onl/raw/gem\_cleanroom\_2817.evio.80

Watch Component: PEBcleanroom    Data Limit: 0

User RTV %(config): unset

User RTV %(dir): unset

Total Events: **1,157,935**    Time Limit (min.): 0

Name	State	EvtRate	DataRate	IntEvtRate	IntDataRate
PEBcleanroom	downloaded	0.0	0.0	16.7	23057.8
ROCcrate2	downloaded	0.0	0.0	16.7	-83.4
ROCcrate1	downloaded	0.0	0.0	16.7	81.2
ROCcrate0	downloaded	0.0	0.0	16.7	81.2

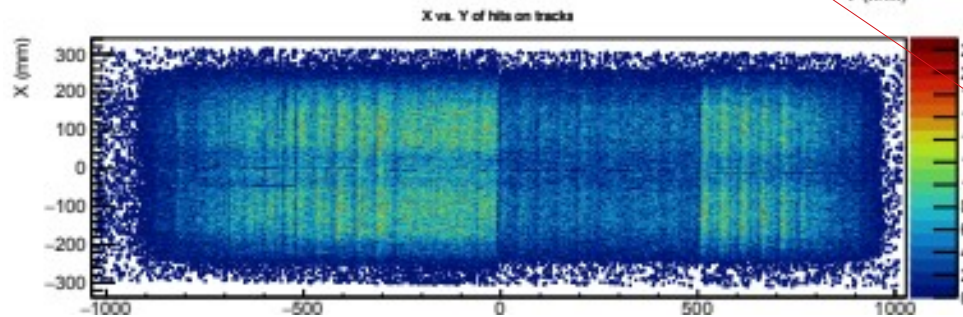
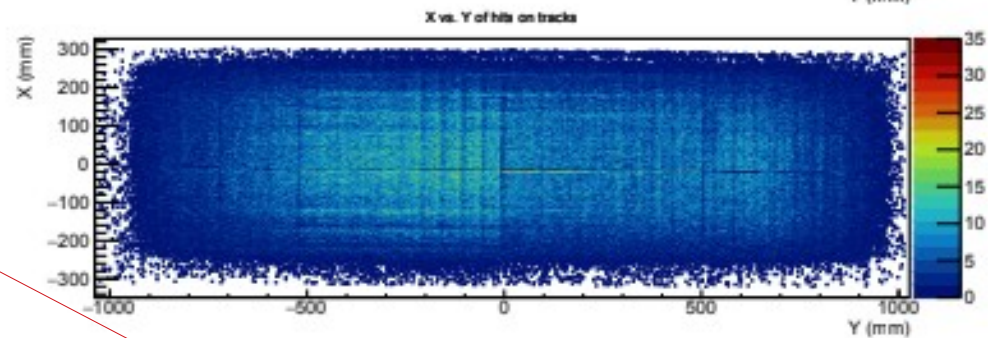
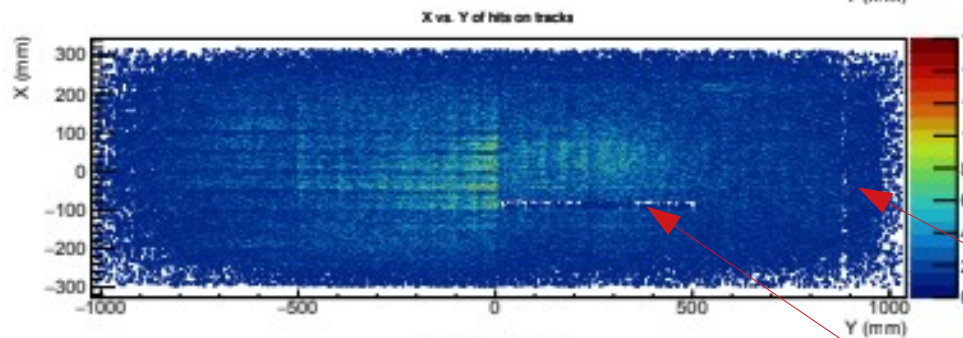
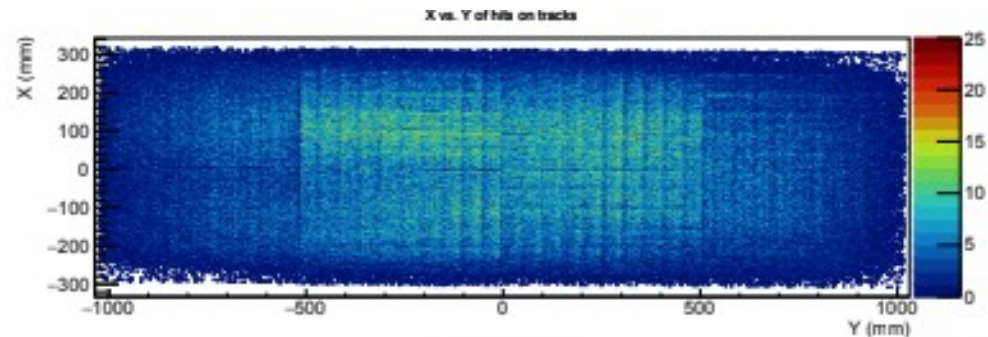
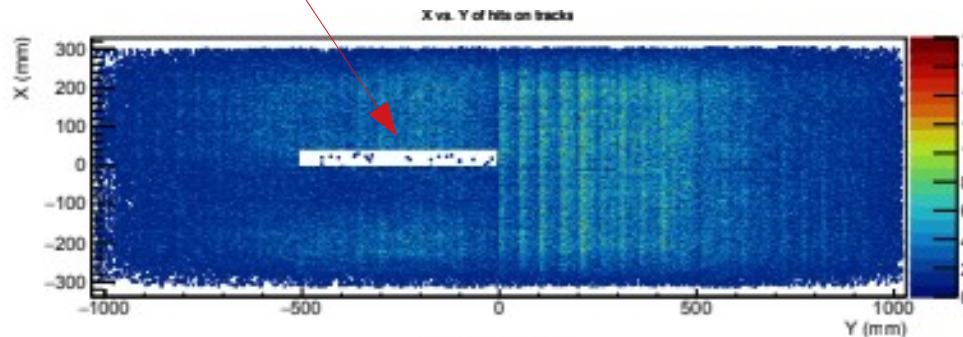
Event Rate

→ Trigger went down to zero  
→ Readout error with multiple MPDs on the 3<sup>rd</sup> crate

Name	Message	Time	Severity
sms_layer1_2_3_4_5	waiting for... ROCcrate0,	21:36:00 01/14	WARN
sms_layer1_2_3_4_5	waiting for... ROCcrate0,	21:36:05 01/14	WARN
sms_layer1_2_3_4_5	waiting for... ROCcrate0,	21:36:10 01/14	WARN
sms_layer1_2_3_4_5	waiting for... ROCcrate0,	21:36:15 01/14	WARN
sms_layer1_2_3_4_5	waiting for... ROCcrate0,	21:36:20 01/14	WARN
sms_layer1_2_3_4_5	waiting for... ROCcrate0,	21:36:25 01/14	WARN
sms_layer1_2_3_4_5	waiting for... ROCcrate0,	21:36:30 01/14	WARN
sms_layer1_2_3_4_5	Download succeeded.	21:36:33 01/14	INFO
sms_layer1_2_3_4_5	Download is started.	21:38:06 01/14	INFO
sms_layer1_2_3_4_5	Download succeeded.	21:38:09 01/14	INFO
sms_layer1_2_3_4_5	StartRun is started.	21:39:20 01/14	INFO
PEBcleanroom	Script (/home/sbs-onl/SBS-GEM-Cleanroom/scripts/MakeEntry.sh Layer1_2_3_4_5 START 2817)	21:39:20 01/14	INFO
PEBcleanroom	Emu PEBcleanroom go: waiting for PRESTART event in module EbModule (client msg)	21:39:27 01/14	INFO

Single APV card detached to the readout board (fixed physically)

## Tracking results (recent cosmic test)



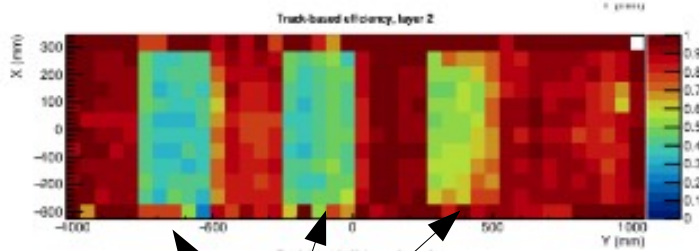
Did not see any connection issue (could have some noisy channels)

Nearly one 3<sup>rd</sup> channel are not connected

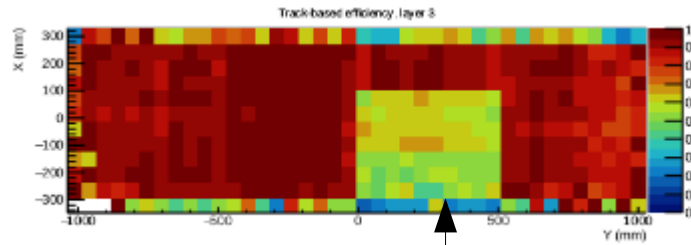
# MPD readout errors

Old plots

3<sup>rd</sup> Layer



4<sup>th</sup> Layer



Crate0 MPD14 (3\*5 slot)

(replaced about 2 month ago)

Collected nearly **8M cosmic events** since then



No readout errors

Crate1 MPD12 (12 slot)

(replaced yesterday)