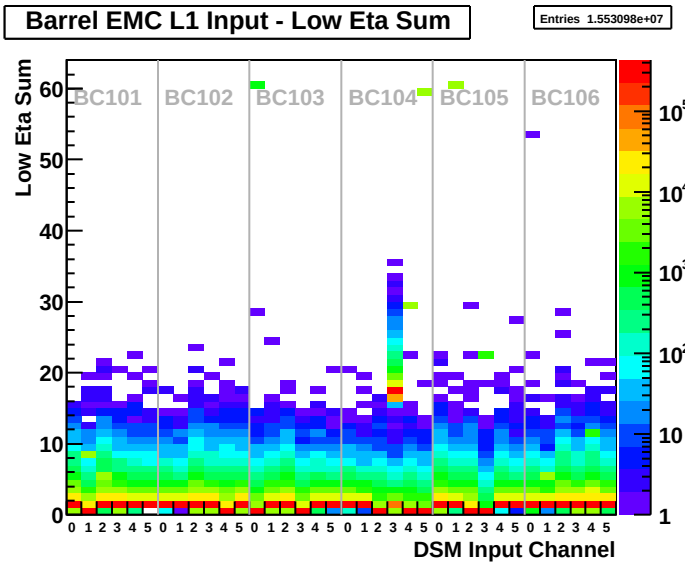
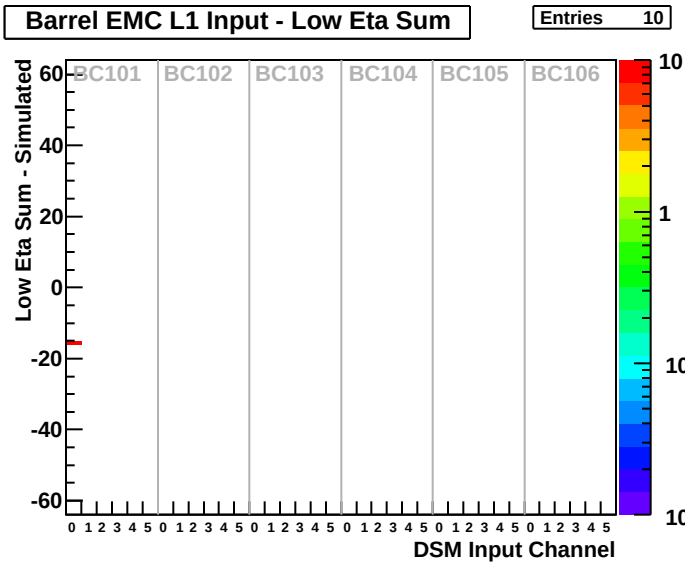
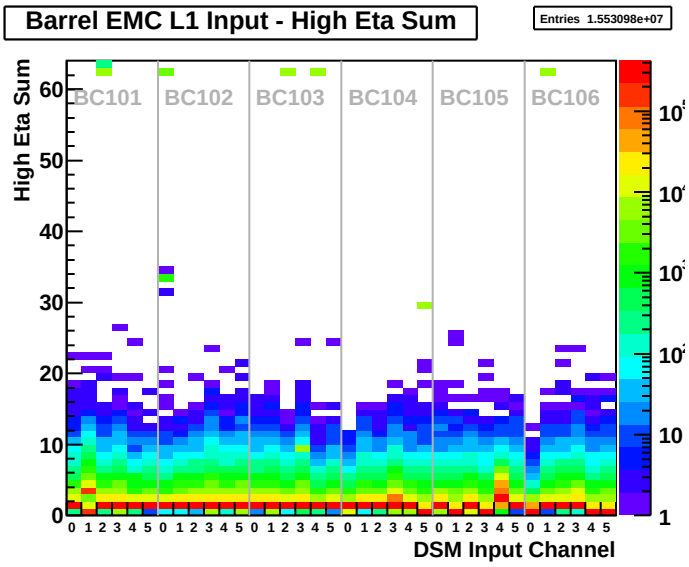
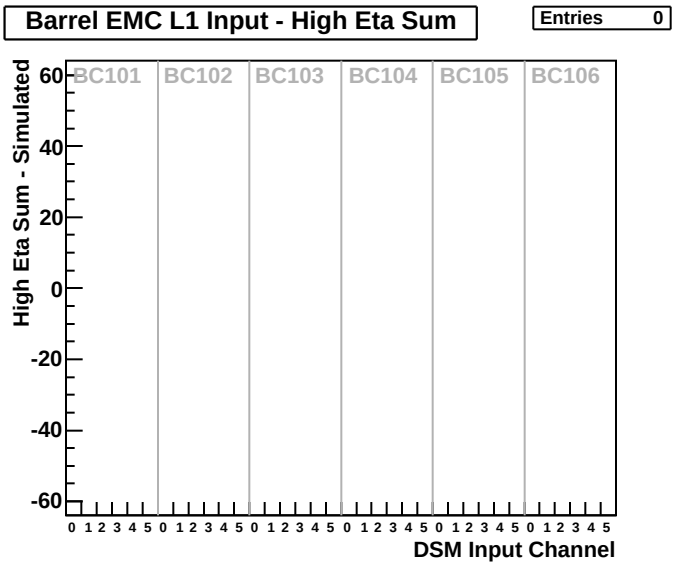
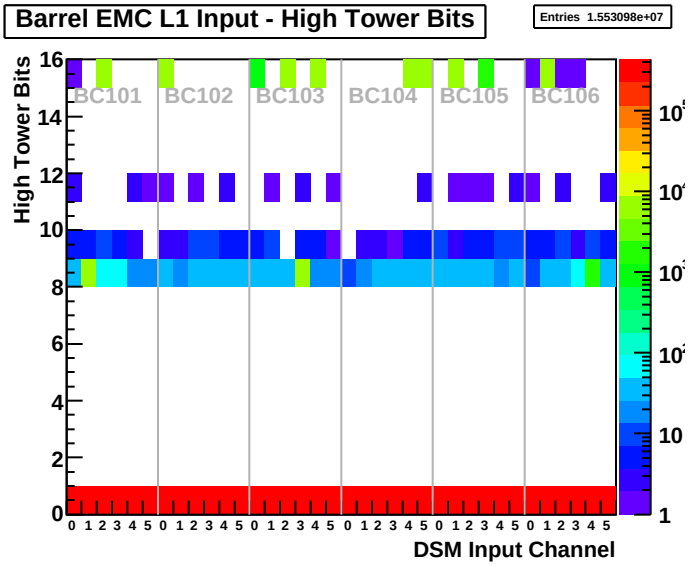
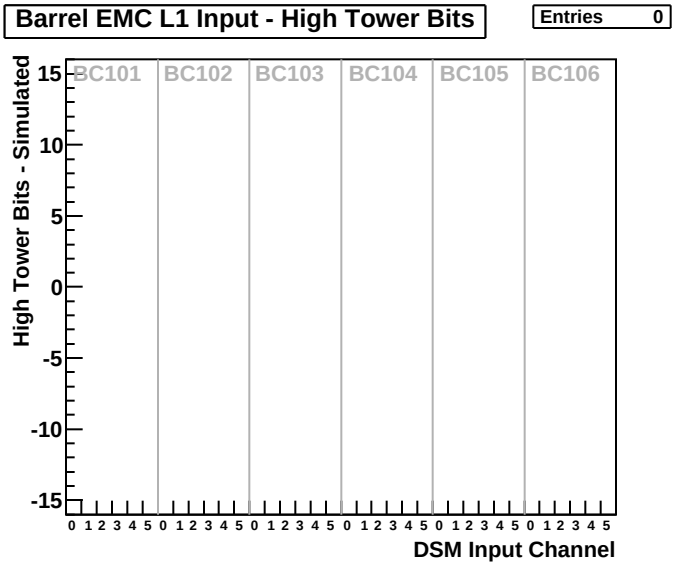

Barrel EMC L1 Input - Low Eta Sum
Entries 1.553098e+07
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

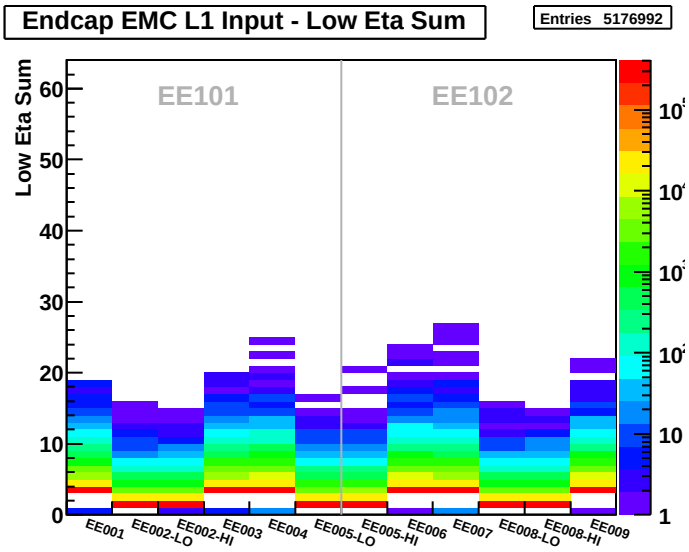

Barrel EMC L1 Input - Low Eta Sum
Entries 10
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

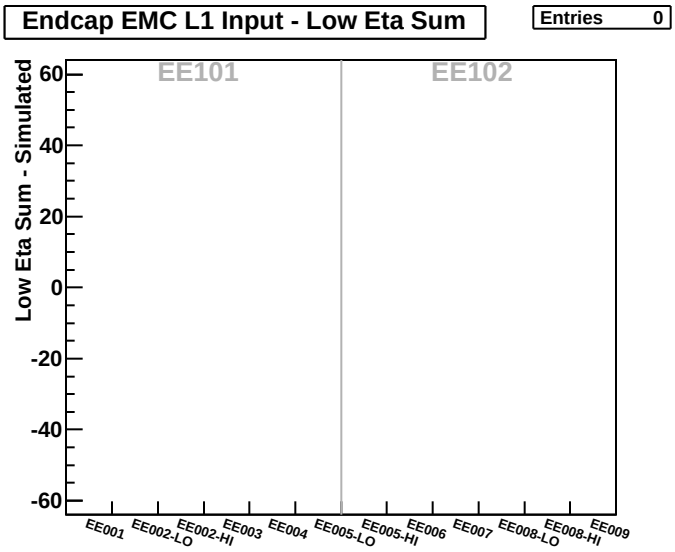

Barrel EMC L1 Input - High Eta Sum
Entries 1.553098e+07
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

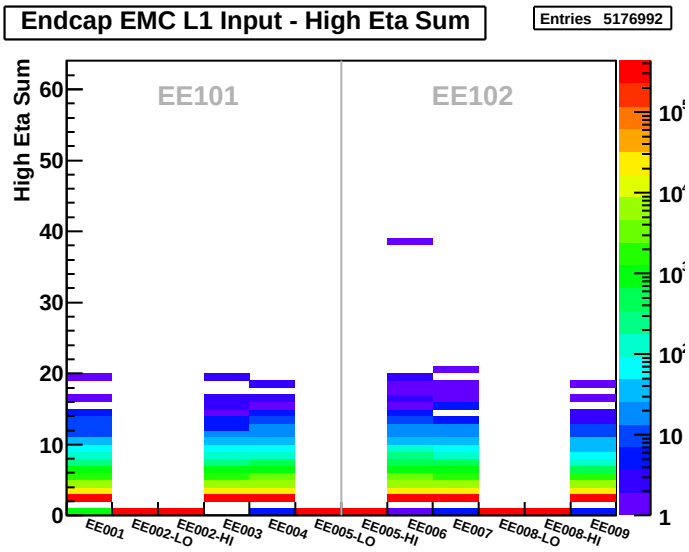

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

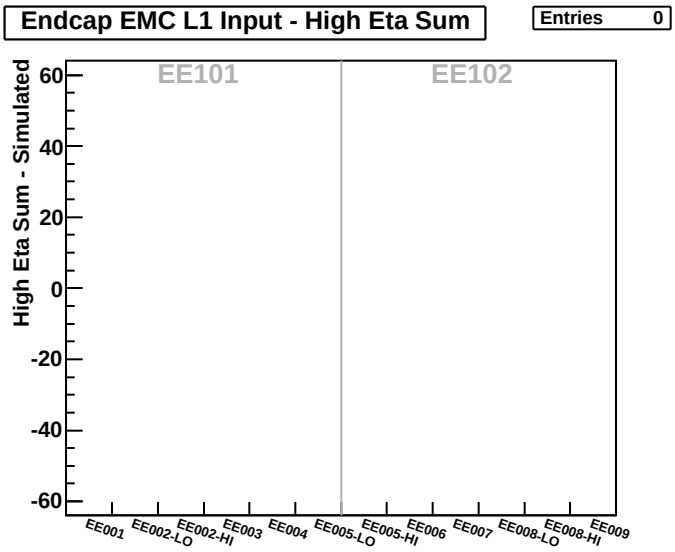

Barrel EMC L1 Input - High Tower Bits
Entries 1.553098e+07
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

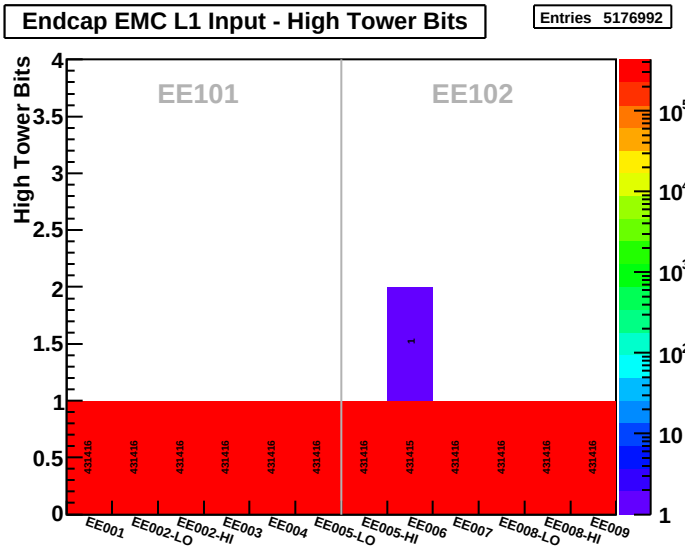

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

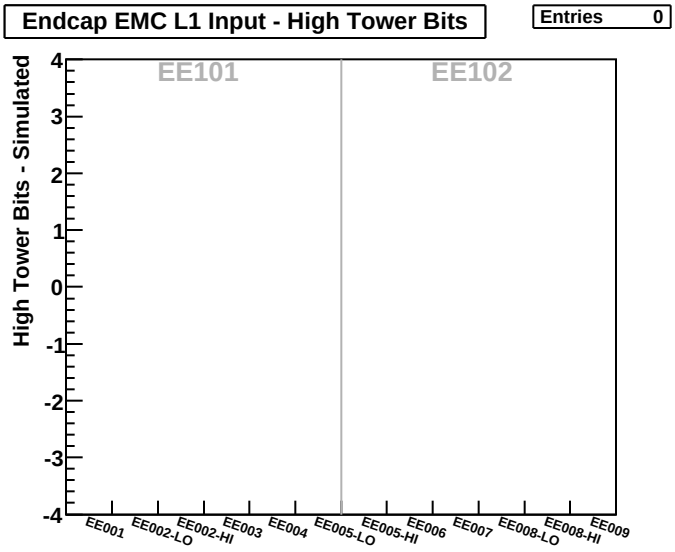

Endcap EMC L1 Input - Low Eta Sum
Entries 5176992
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

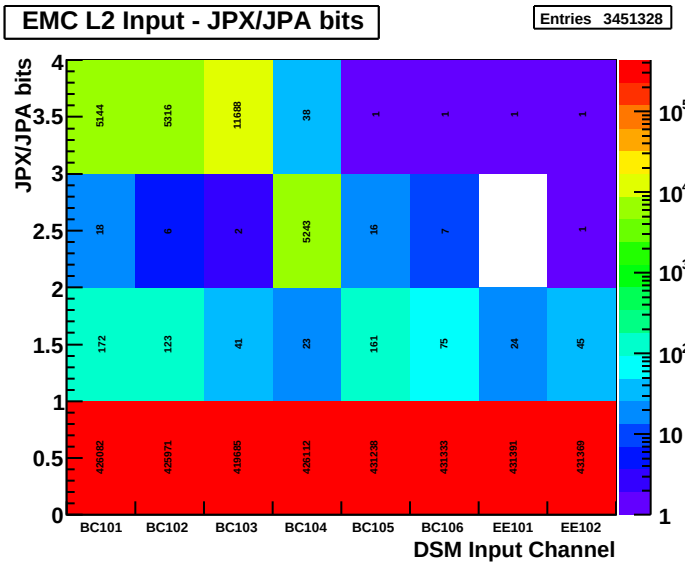

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

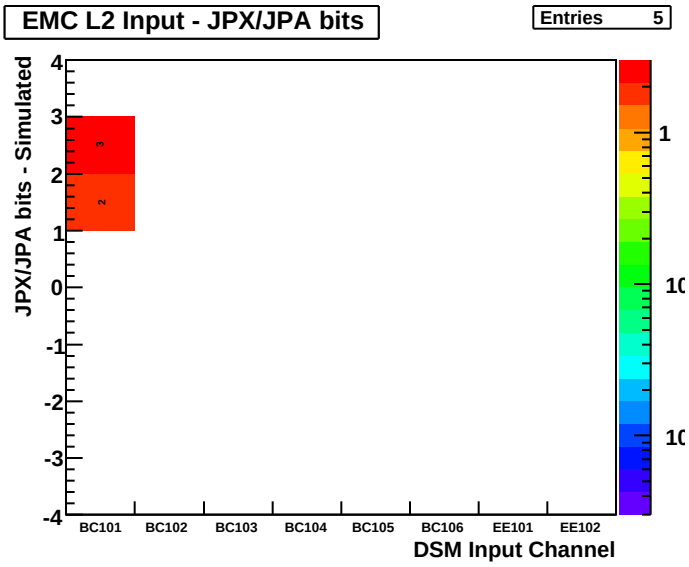

Endcap EMC L1 Input - High Eta Sum
Entries 5176992
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

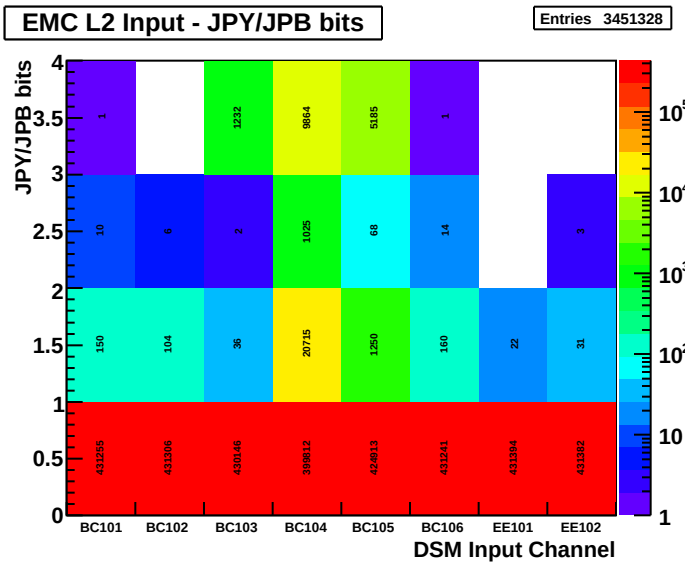

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

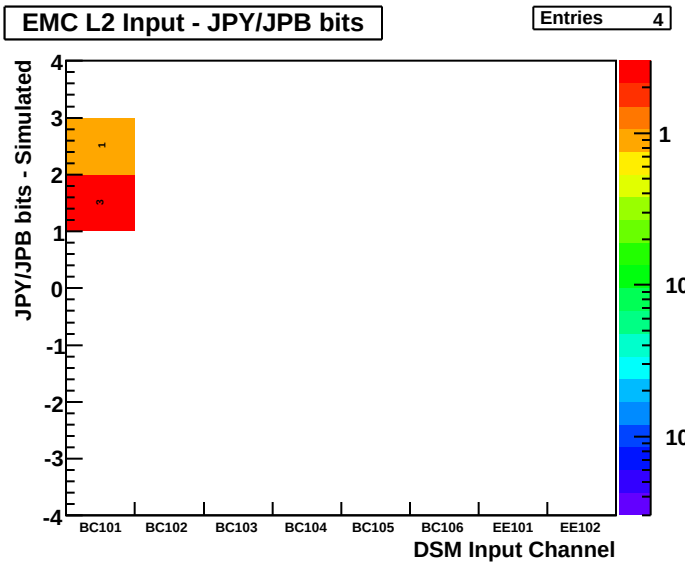

Endcap EMC L1 Input - High Tower Bits
Entries 5176992
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

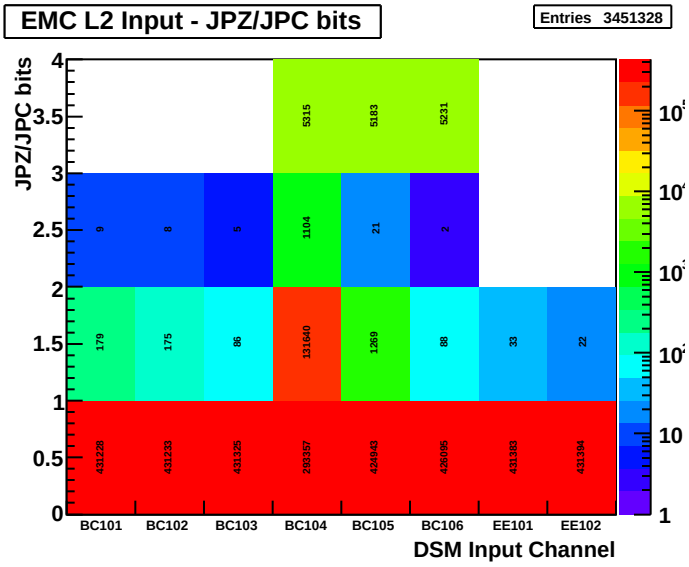

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

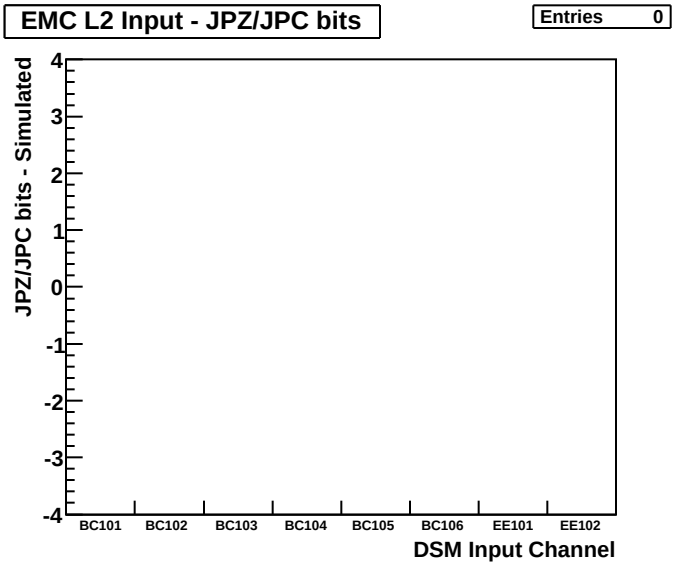

EMC L2 Input - JPX/JPA bits
Entries 3451328
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
5144 5316 11688 38 1 1 1 1
18 6 2 5243 16 7 1
172 123 41 23 161 75 24 45
426082 425971 419685 426112 431238 431333 431391 431369

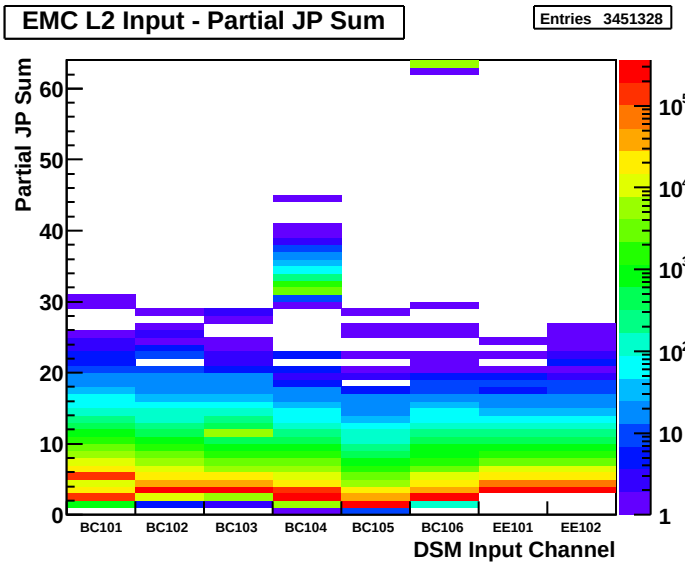

EMC L2 Input - JPX/JPA bits
Entries 5
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
3
2

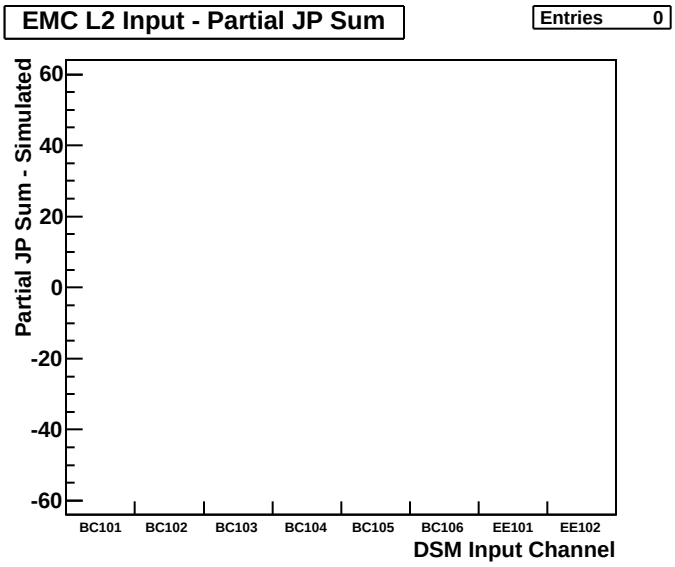

EMC L2 Input - JPY/JPB bits
Entries 3451328
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1 1232 9864 5185 1
10 6 2 1025 68 14 3
150 104 36 20715 1250 160 22 31
431255 431306 430146 399812 424913 431241 431394 431382

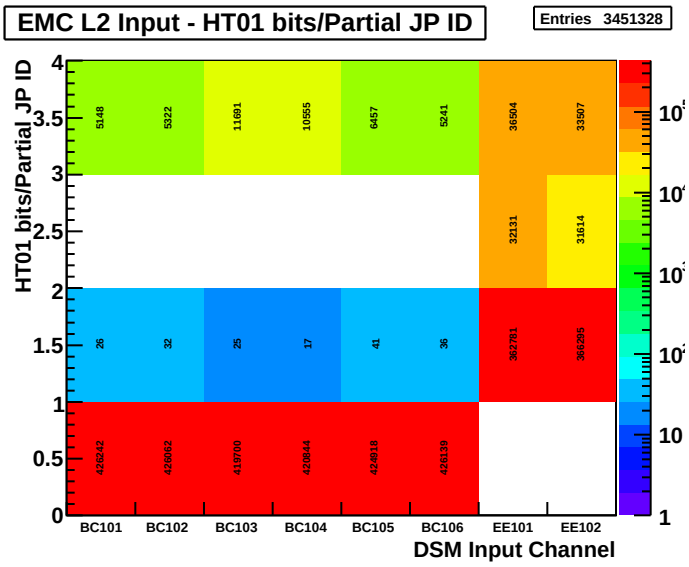

EMC L2 Input - JPY/JPB bits
Entries 4
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1
3

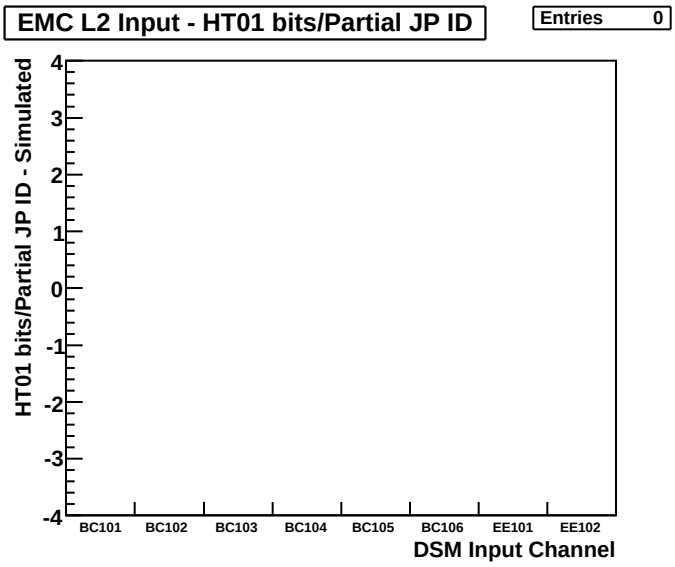

EMC L2 Input - JPZ/JPC bits
Entries 3451328
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
5315 5183 5231
9 8 5 1104 21 2
179 175 86 131640 1269 88 33 22
431228 431233 431325 293357 424943 426095 431383 431394

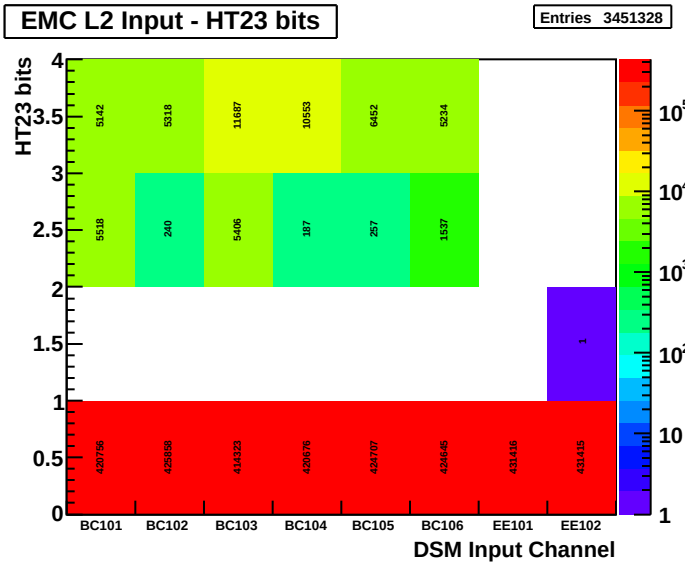

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

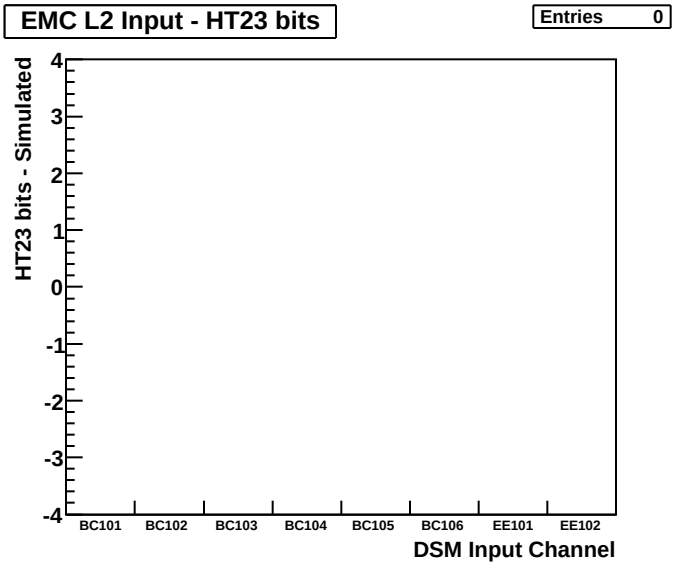

EMC L2 Input - Partial JP Sum
Entries 3451328
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

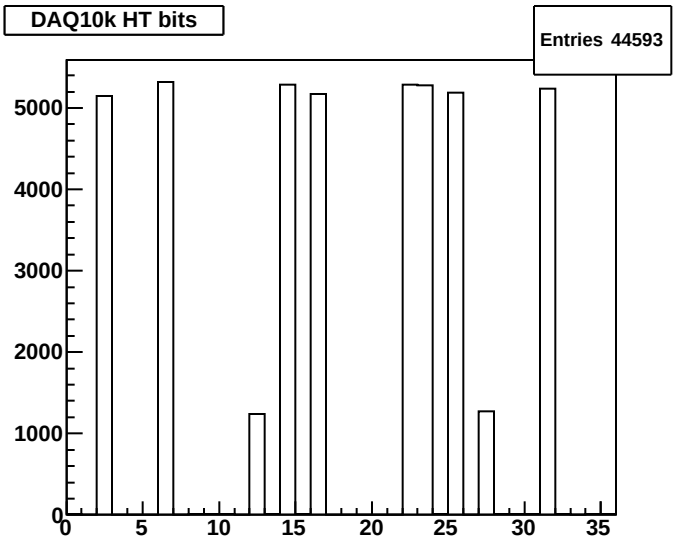

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

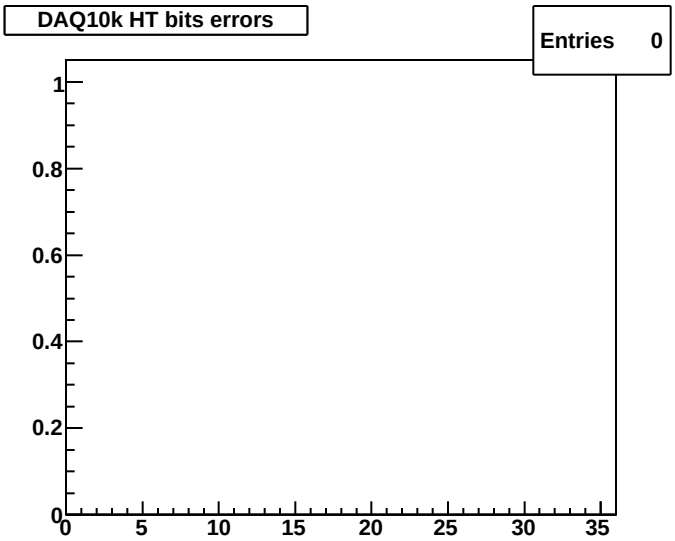

EMC L2 Input - HT01 bits/Partial JP ID
Entries 3451328
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

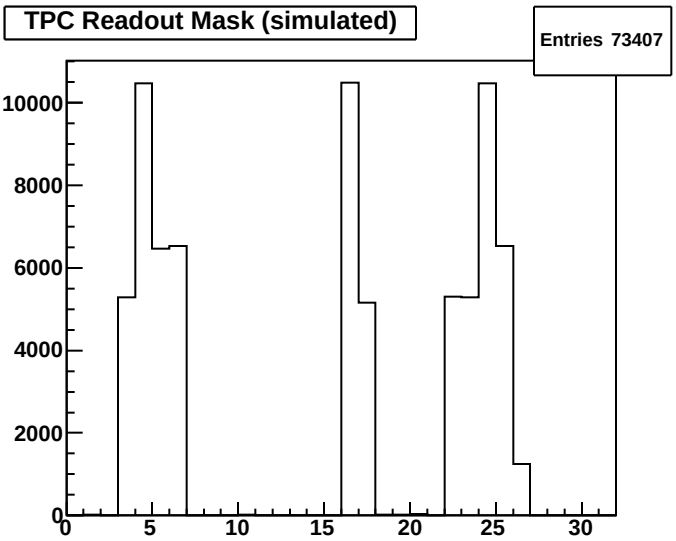

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

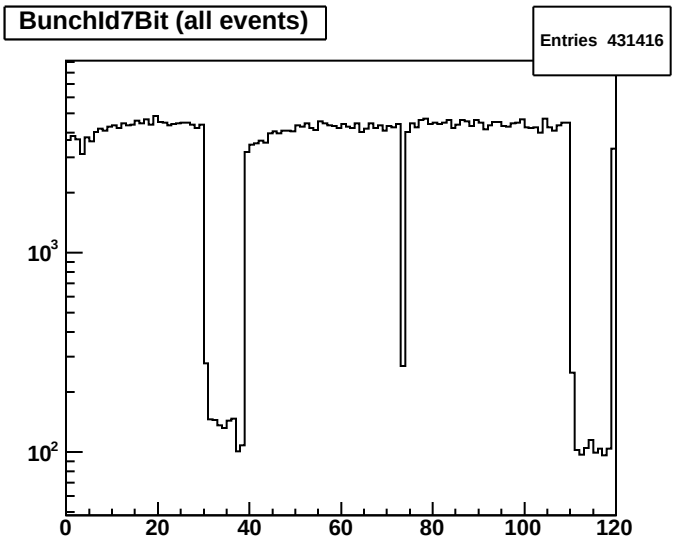

EMC L2 Input - HT23 bits
Entries 3451328
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

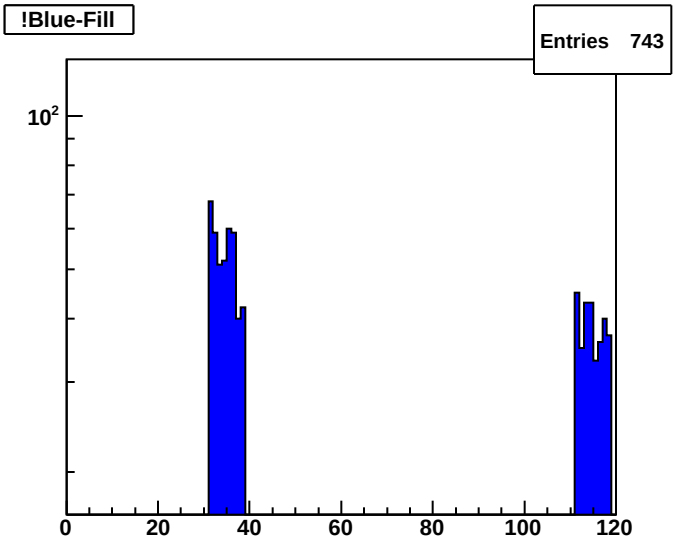

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

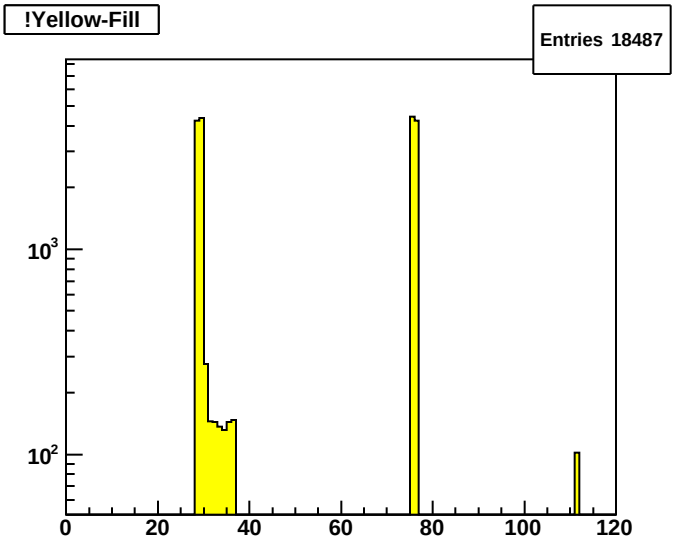

DAQ10k HT bits
Entries 44593
5000
4000
3000
2000
1000
0
0 5 10 15 20 25 30 35

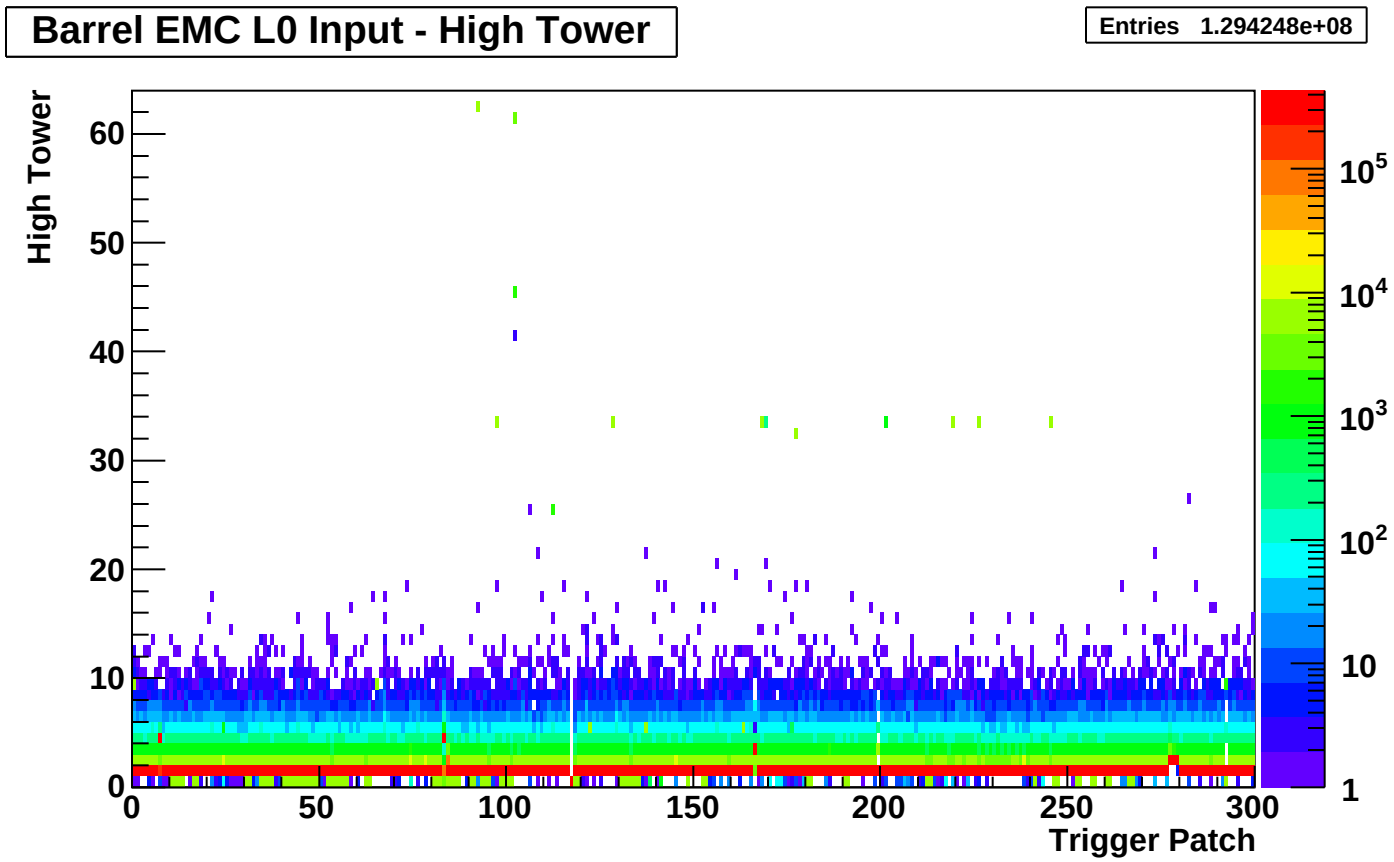

DAQ10k HT bits errors
Entries 0
1
0.8
0.6
0.4
0.2
0
0 5 10 15 20 25 30 35

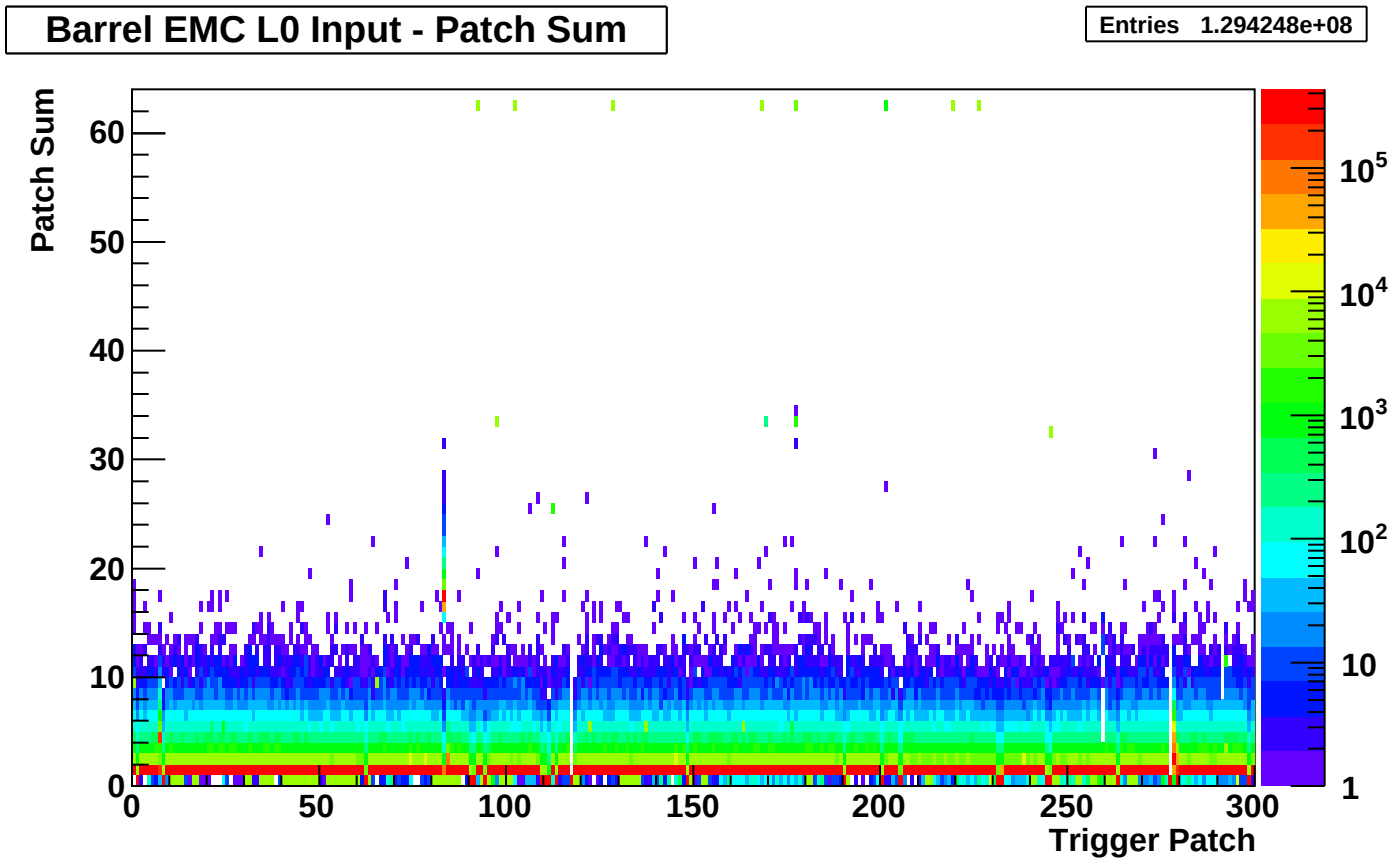

TPC Readout Mask (simulated)
Entries 73407
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30

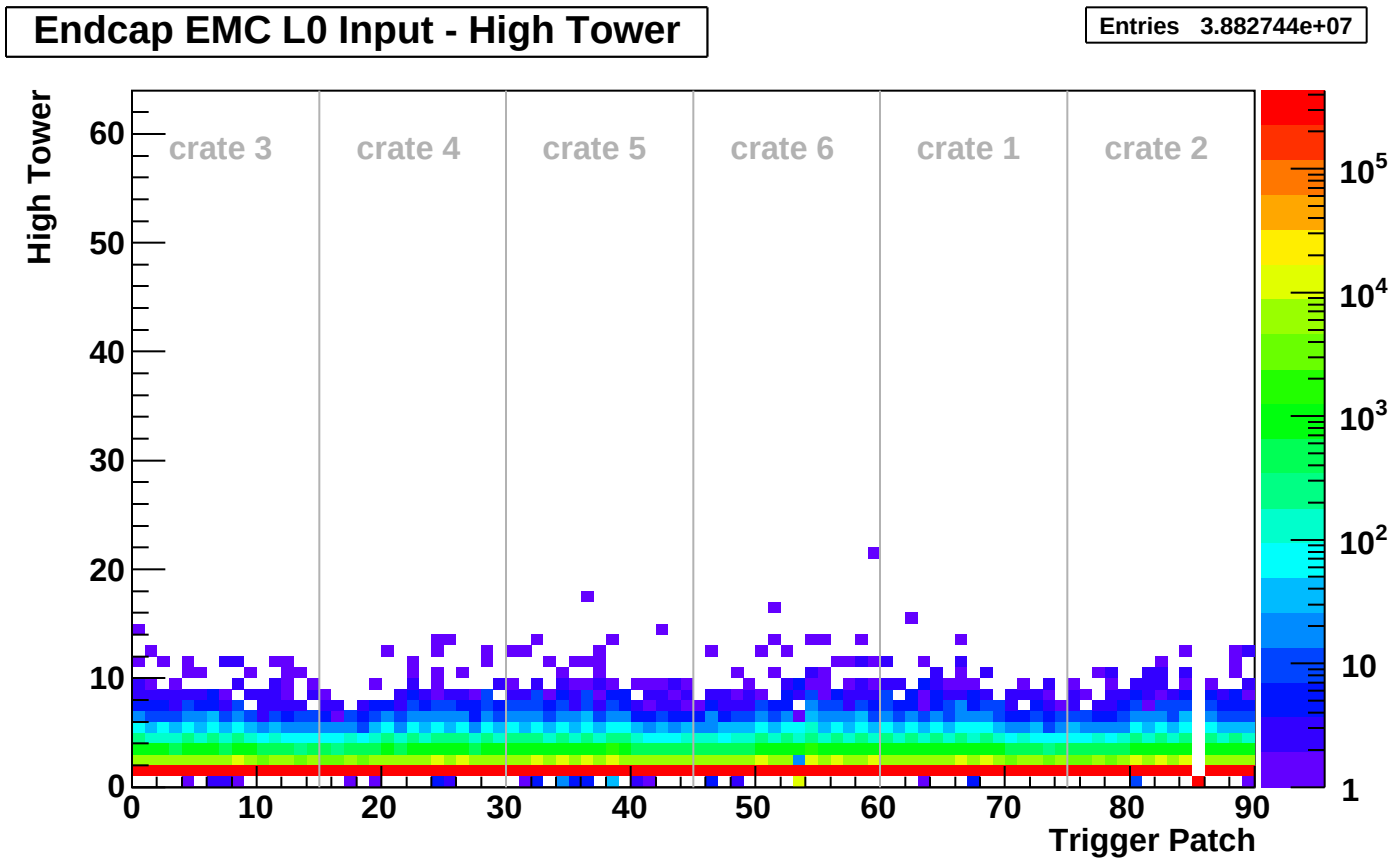

BunchId7Bit (all events)
Entries 431416
$10^3$
$10^2$
0 20 40 60 80 100 120

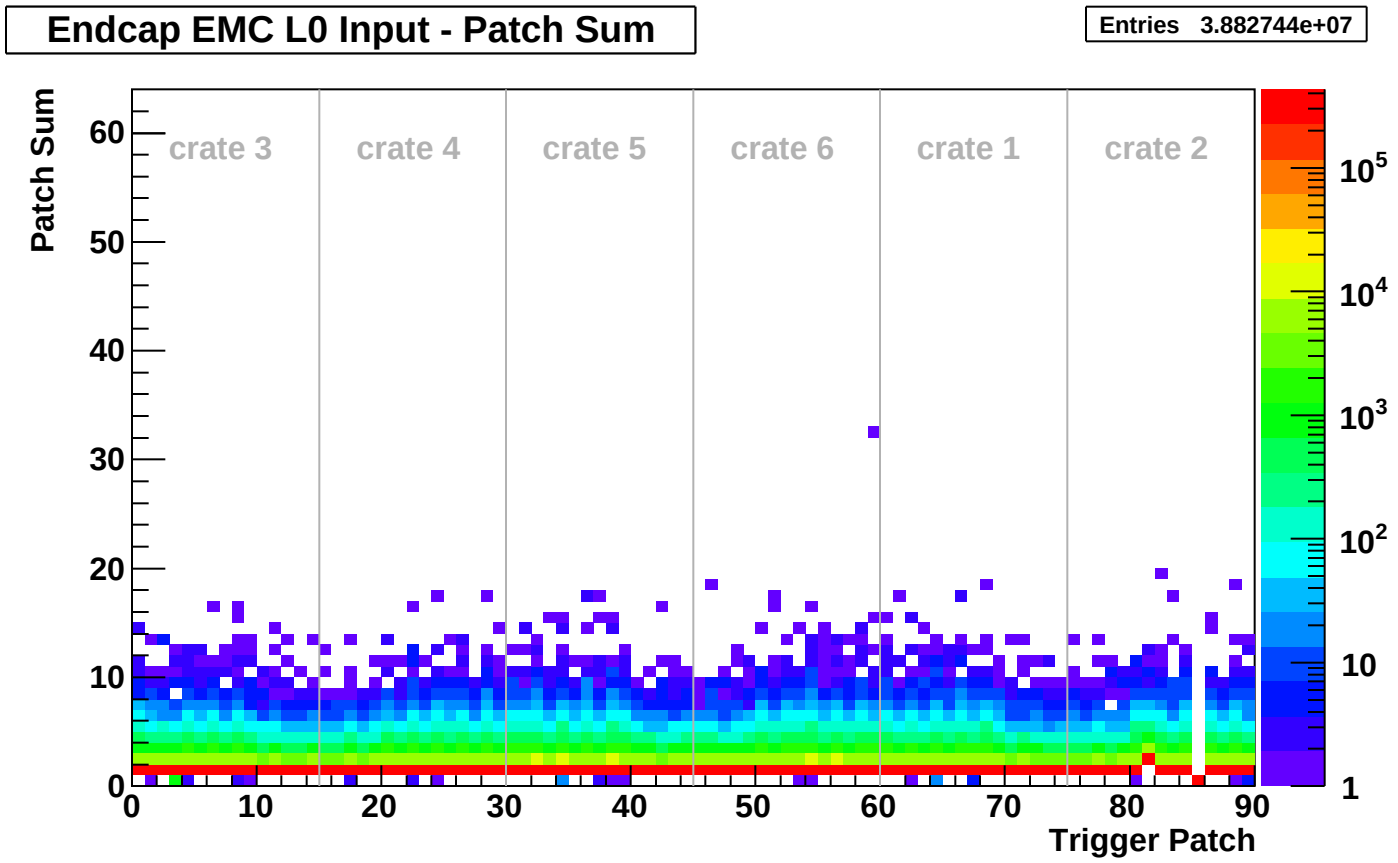

!Blue-Fill
Entries 743
$10^2$
0 20 40 60 80 100 120

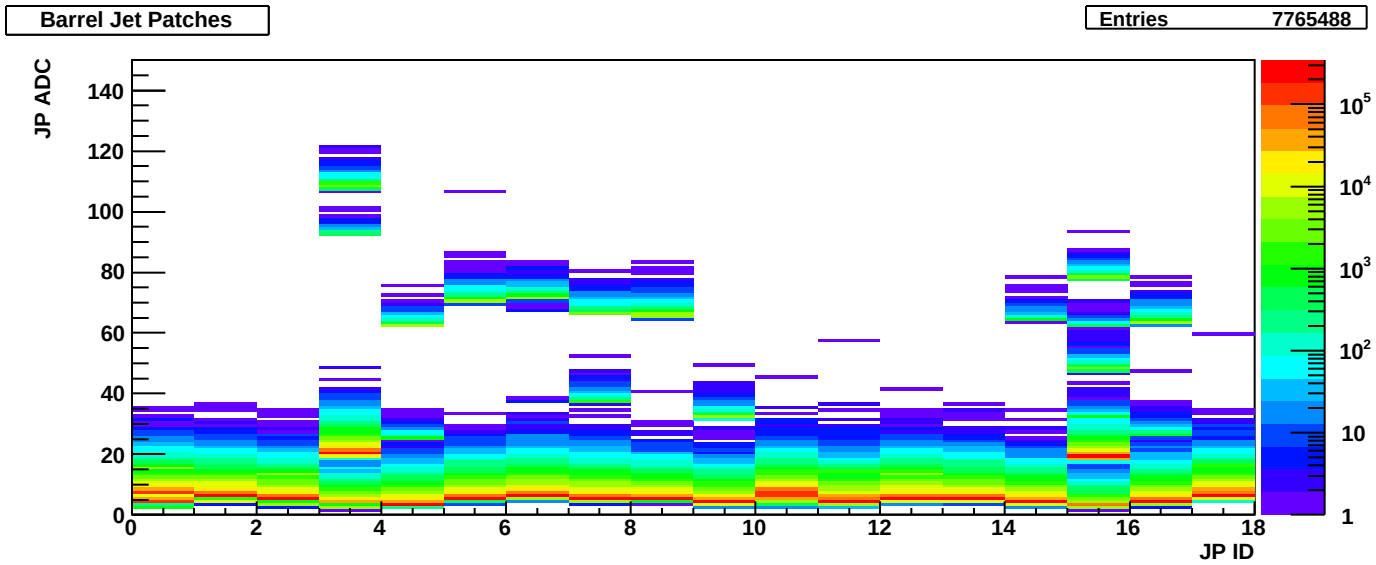

!Yellow-Fill
Entries 18487
$10^3$
$10^2$
0 20 40 60 80 100 120

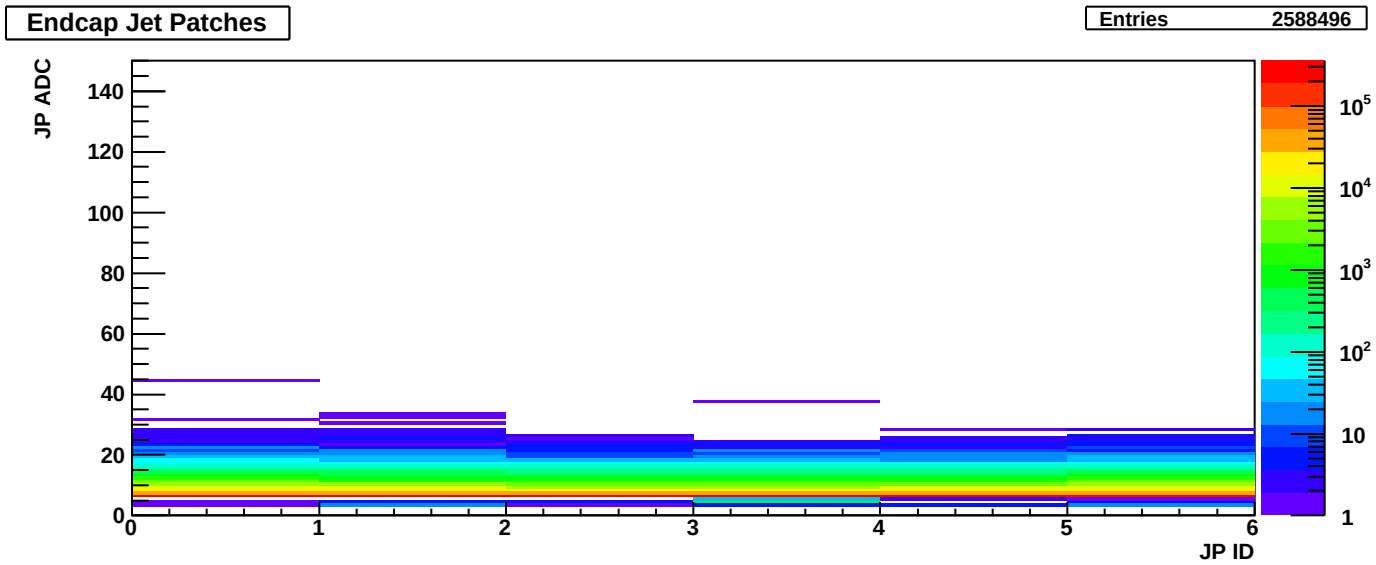

Barrel EMC L0 Input - High Tower
Entries 1.294248e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$
$10^5$

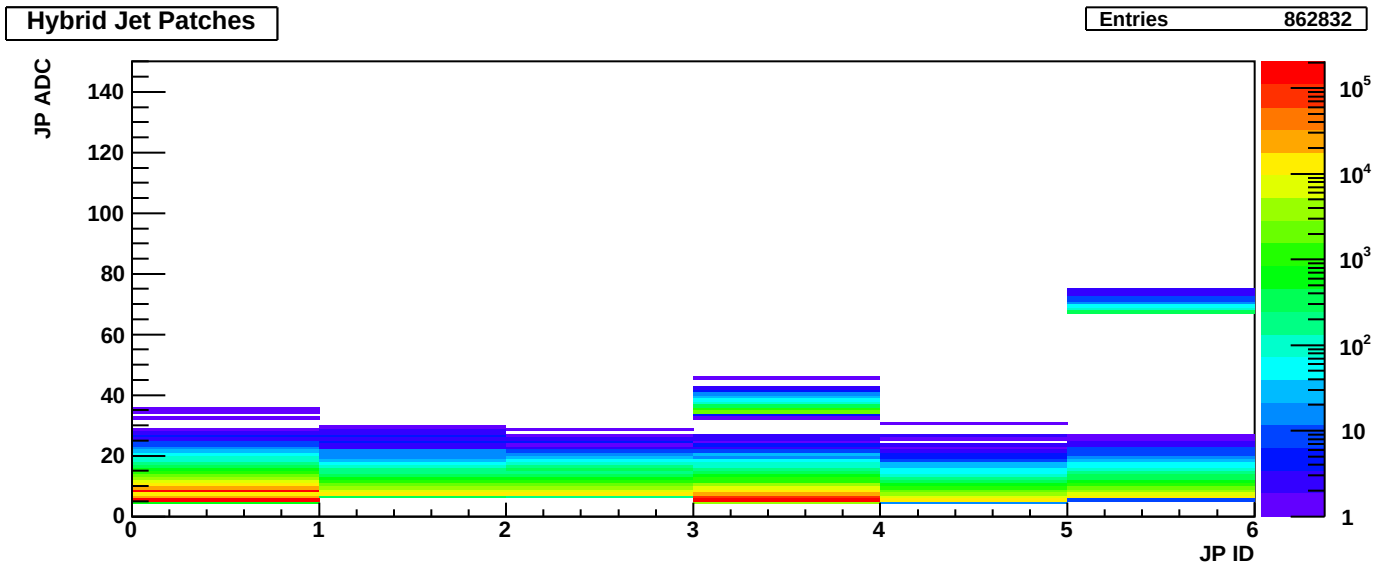

Barrel EMC L0 Input - Patch Sum
Entries 1.294248e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$
$10^5$

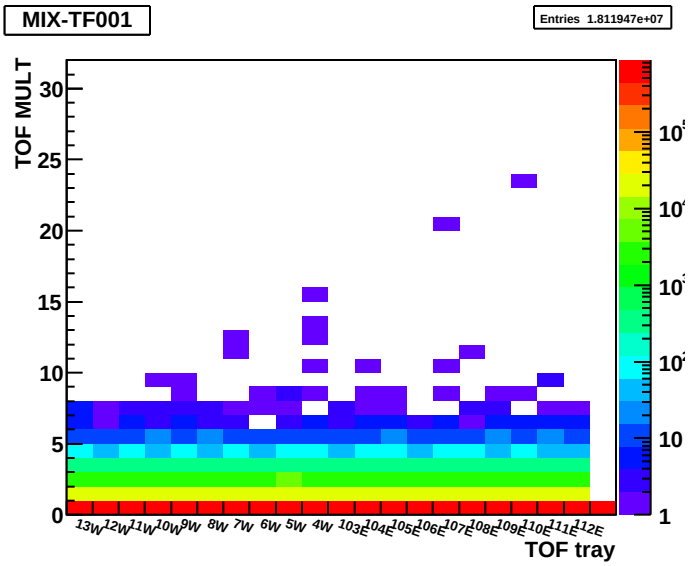

Endcap EMC L0 Input - High Tower
Entries 3.882744e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

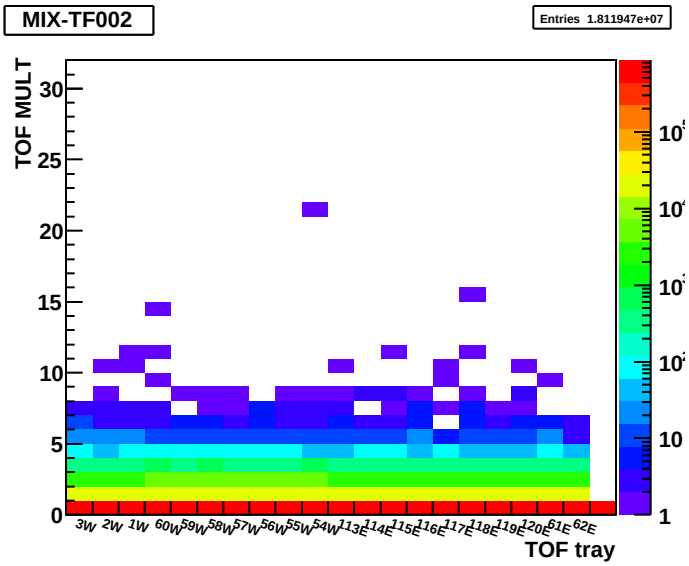

Endcap EMC L0 Input - Patch Sum
Entries 3.882744e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

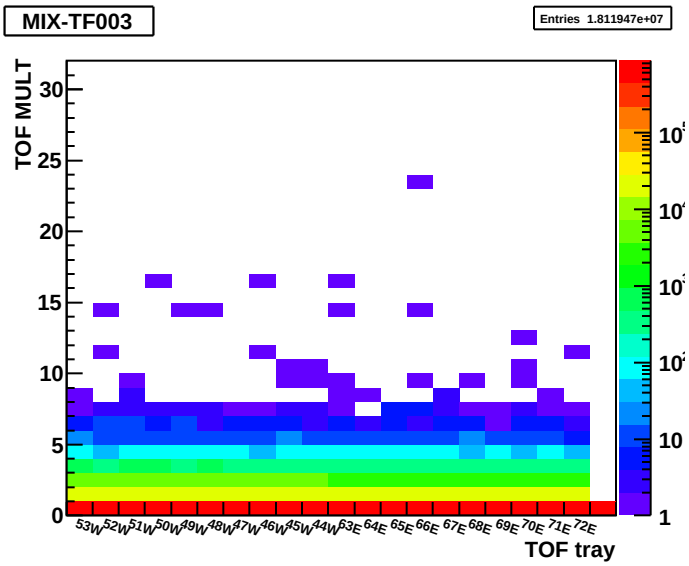

Barrel Jet Patches
Entries 7765488
JP ADC
JP ID

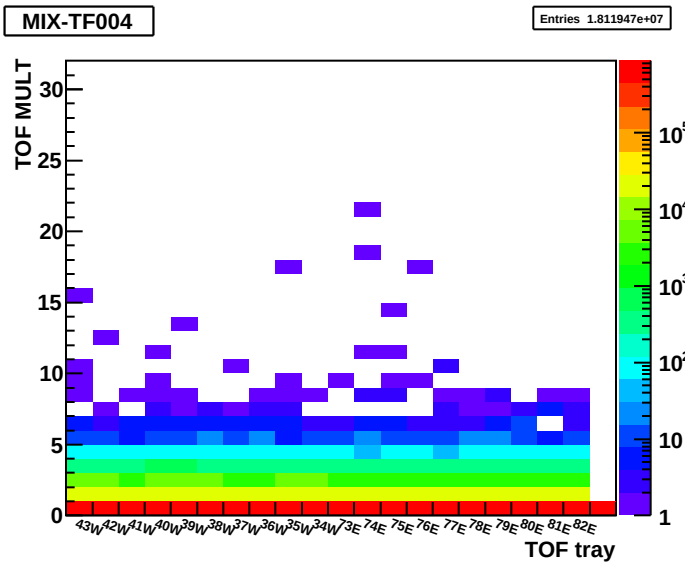

Endcap Jet Patches
Entries 2588496
JP ADC
JP ID

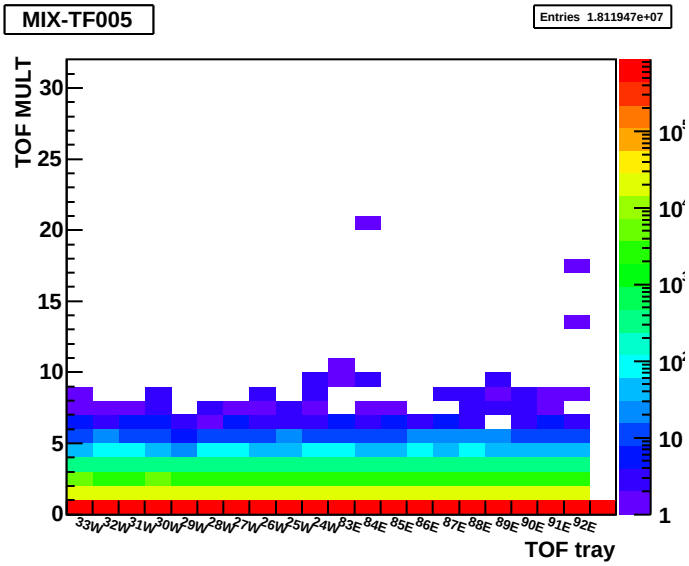

Hybrid Jet Patches
Entries 862832
JP ADC
JP ID

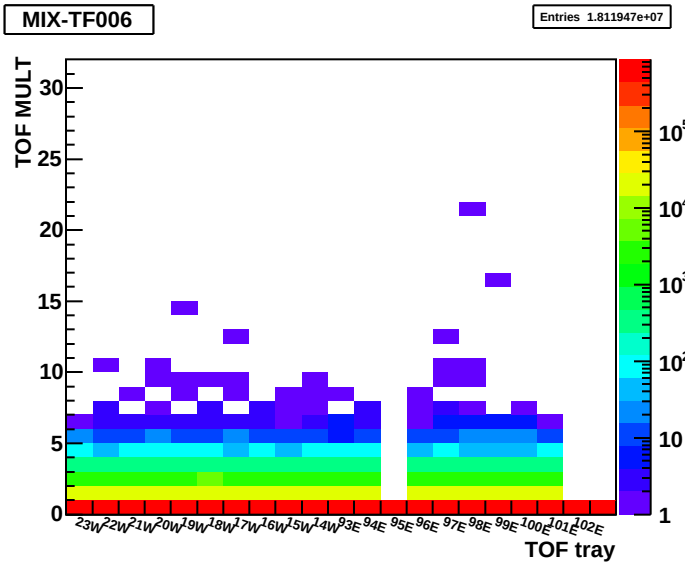

MIX-TF001
Entries 1.811947e+07
TOF MULT
TOF tray

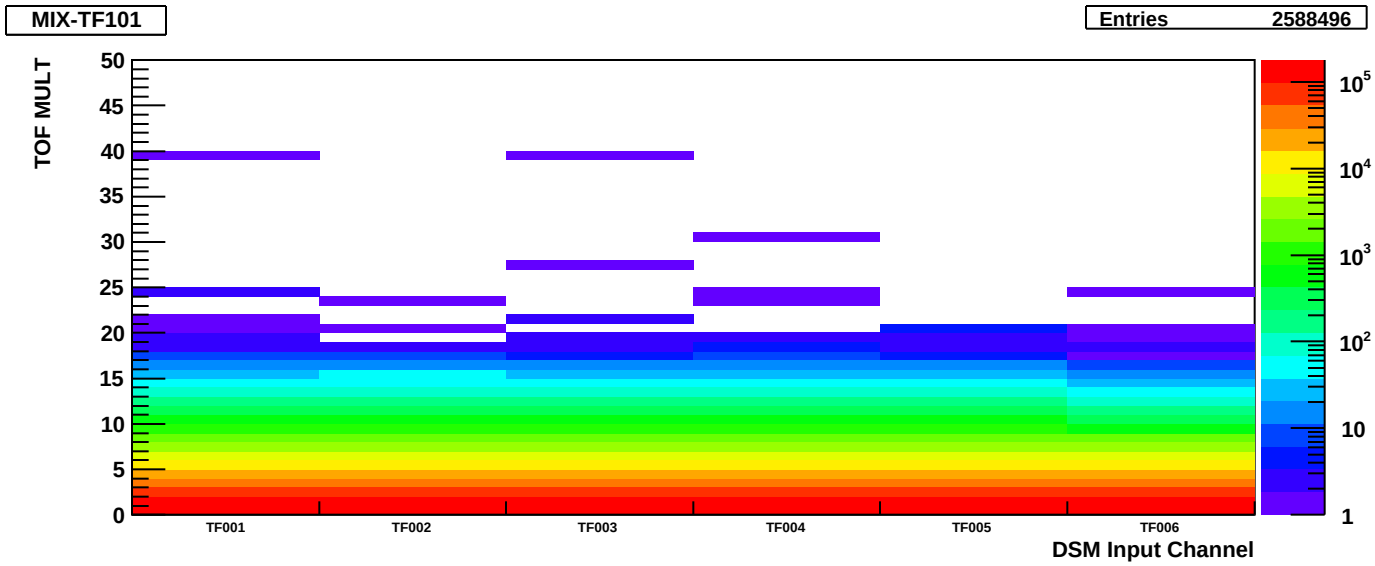

MIX-TF002
Entries 1.811947e+07
TOF MULT
TOF tray

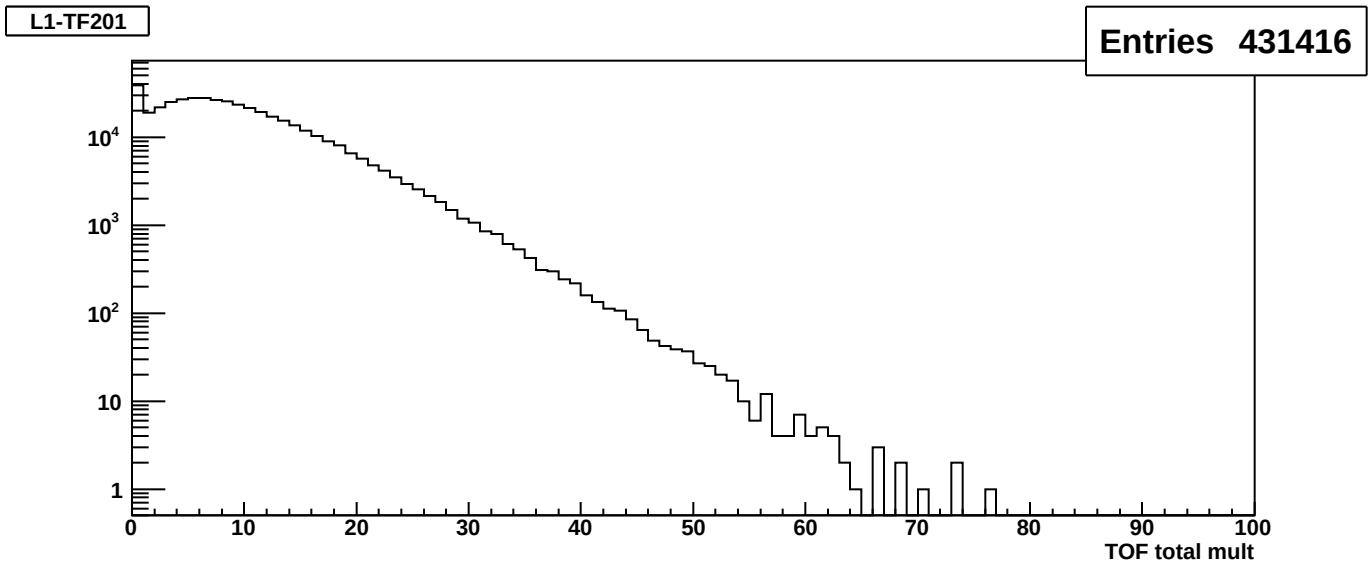

MIX-TF003
Entries 1.811947e+07
TOF MULT
TOF tray

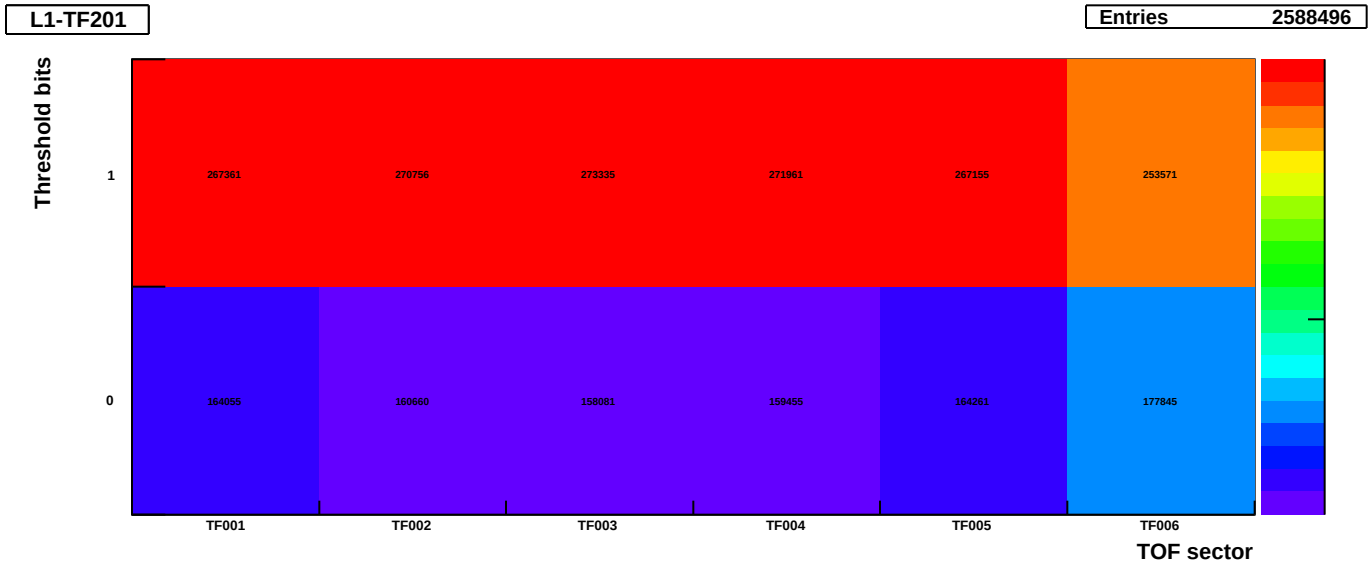

MIX-TF004
Entries 1.811947e+07
TOF MULT
TOF tray

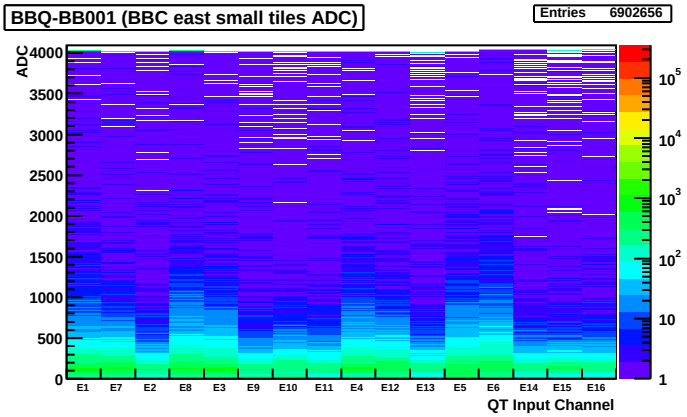

MIX-TF005
Entries 1.811947e+07
TOF MULT
TOF tray

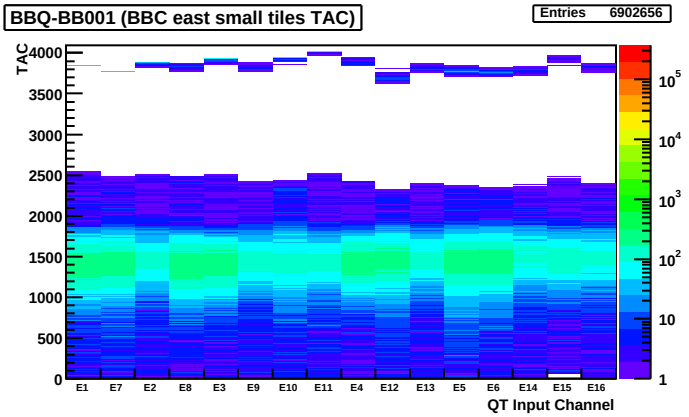

MIX-TF006
Entries 1.811947e+07
TOF MULT
TOF tray

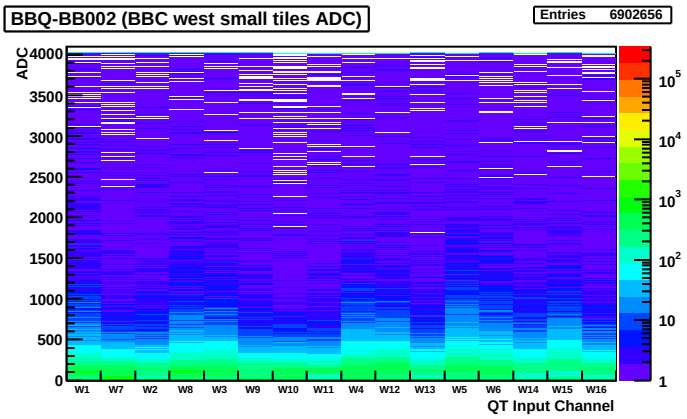

MIX-TF101
Entries 2588496
TOF MULT
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

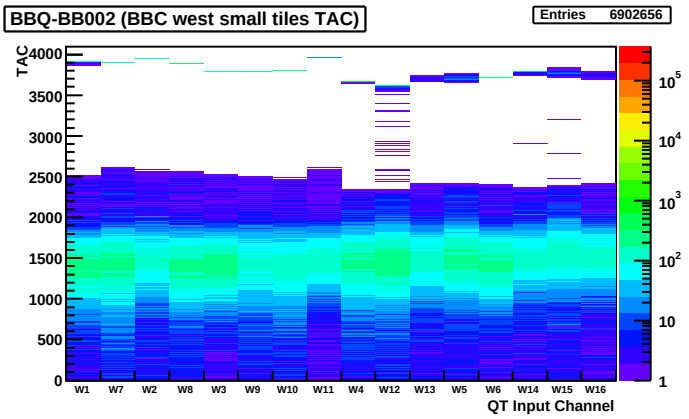

L1-TF201
Entries 431416
TOF total mult

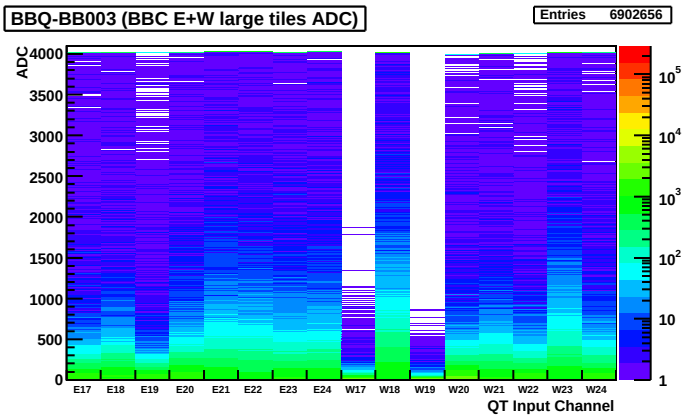

L1-TF201
Entries 2588496
Threshold bits
267361
270756
273335
271961
267155
253571
164055
160660
158081
159455
164261
177845
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

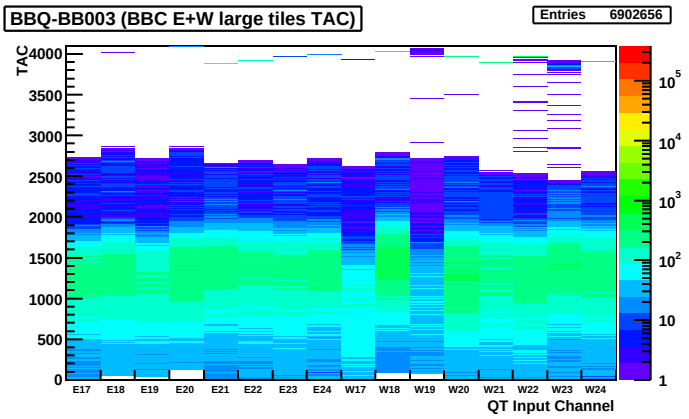

BBQ-BB001 (BBC east small tiles ADC)
Entries 6902656
ADC
QT Input Channel

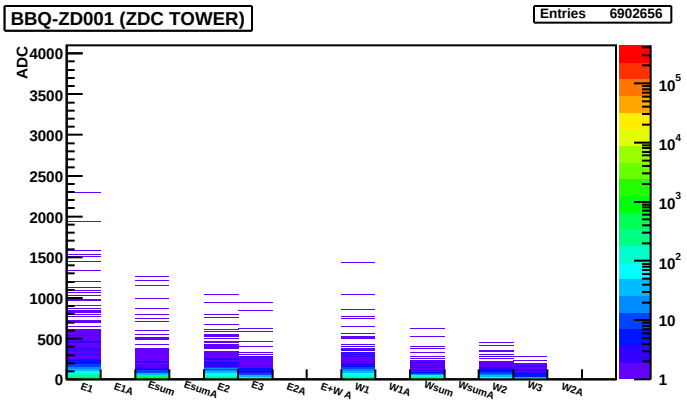

BBQ-BB001 (BBC east small tiles TAC)
Entries 6902656
TAC
QT Input Channel

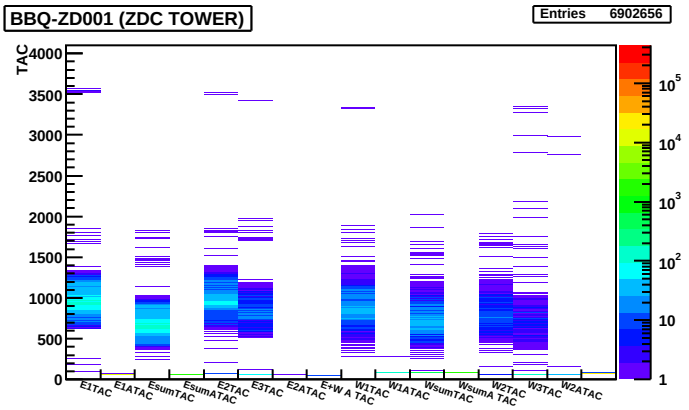

BBQ-BB002 (BBC west small tiles ADC)
Entries 6902656
ADC
QT Input Channel

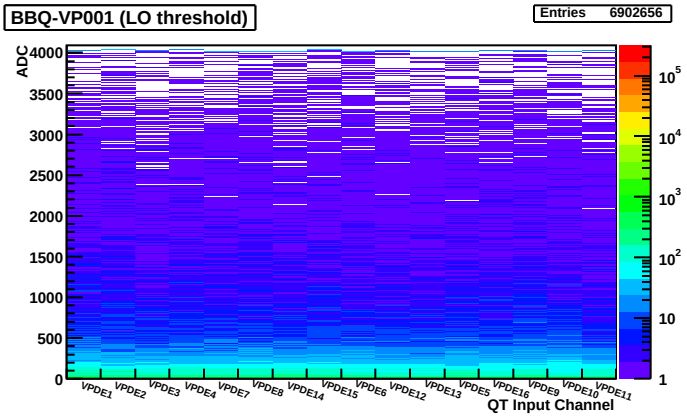

BBQ-BB002 (BBC west small tiles TAC)
Entries 6902656
TAC
QT Input Channel

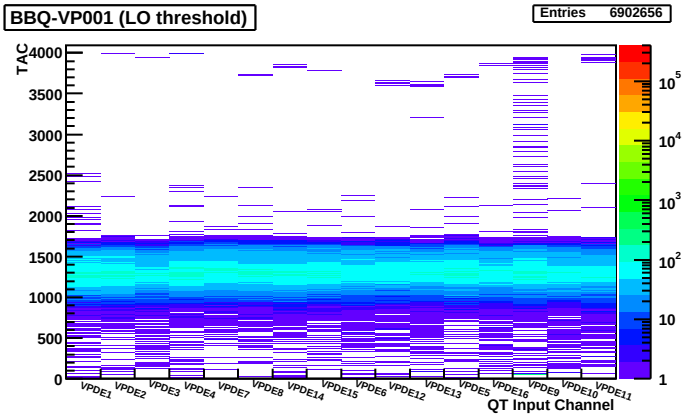

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 6902656
ADC
QT Input Channel

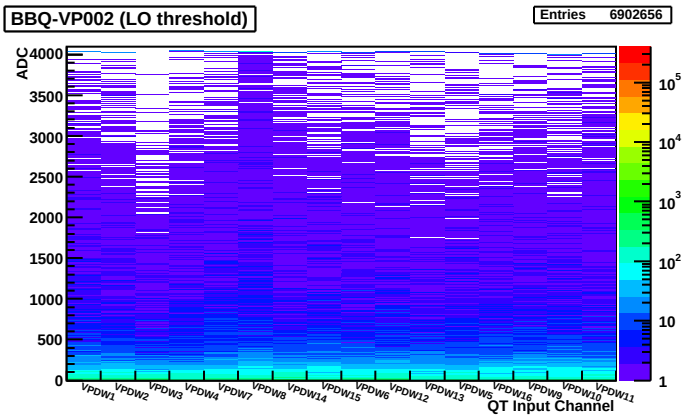

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 6902656
TAC
QT Input Channel

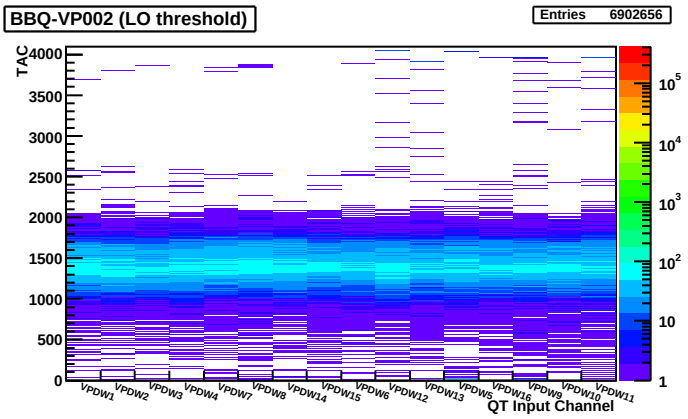

BBQ-ZD001 (ZDC TOWER)
Entries 6902656
ADC

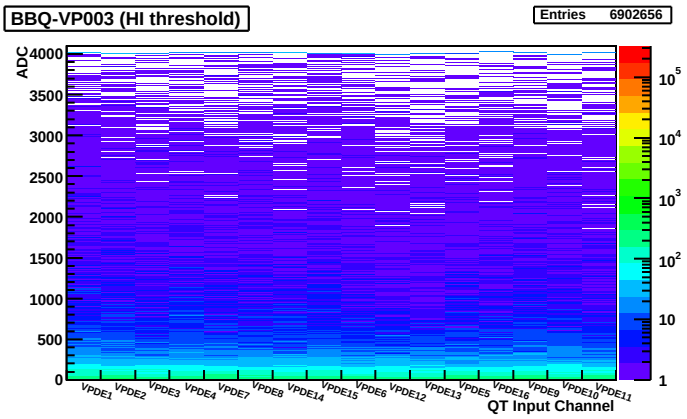

BBQ-ZD001 (ZDC TOWER)
Entries 6902656
TAC

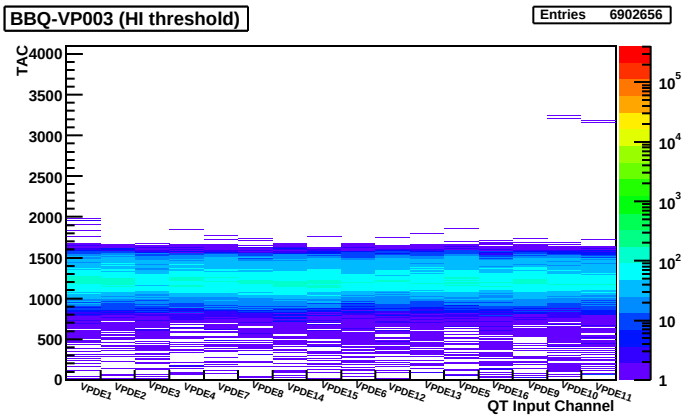

BBQ-VP001 (LO threshold)
Entries 6902656
ADC
QT Input Channel

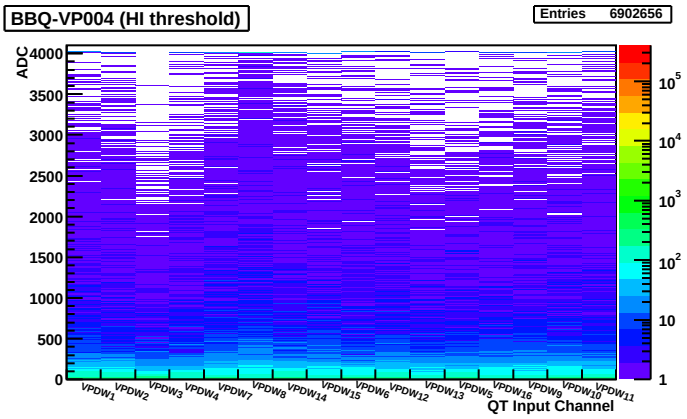

BBQ-VP001 (LO threshold)
Entries 6902656
TAC
QT Input Channel

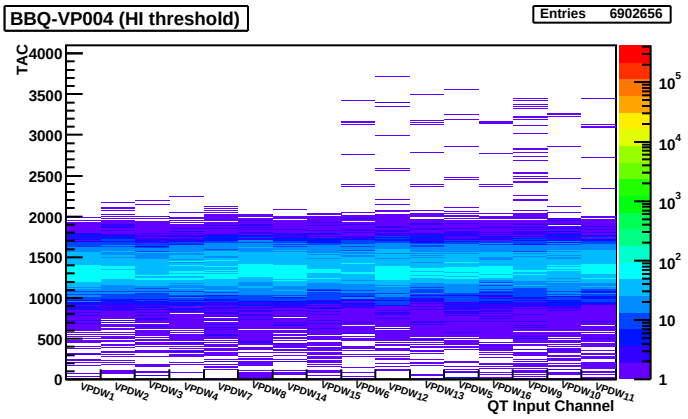

BBQ-VP002 (LO threshold)
Entries 6902656
ADC
QT Input Channel

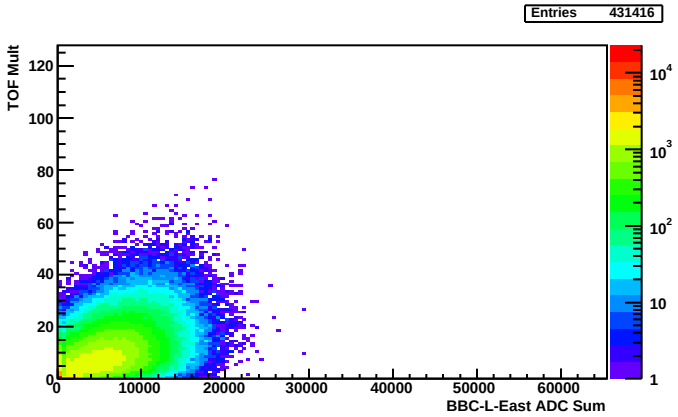

BBQ-VP002 (LO threshold)
Entries 6902656
TAC
QT Input Channel

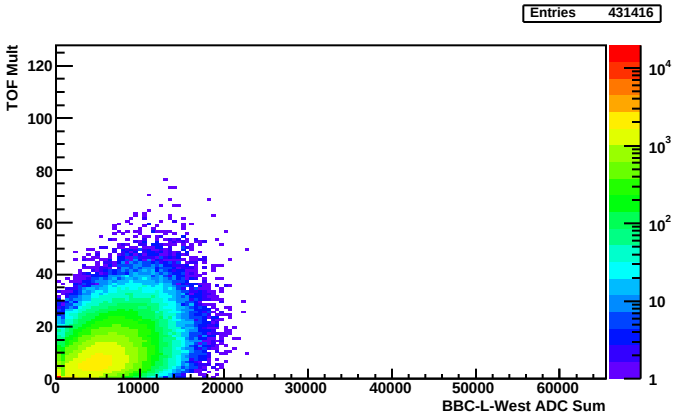

BBQ-VP003 (HI threshold)
Entries 6902656
ADC
QT Input Channel

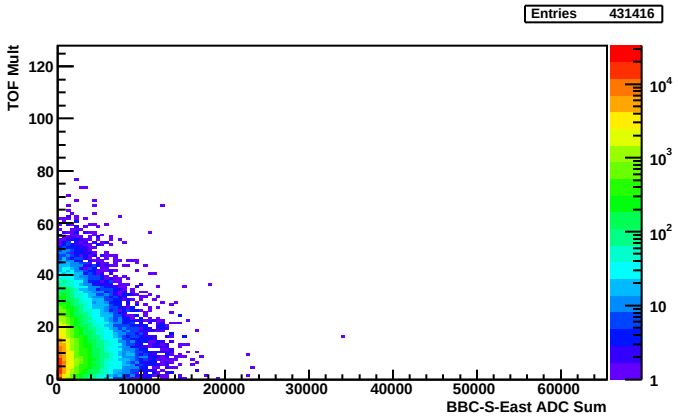

BBQ-VP003 (HI threshold)
Entries 6902656
TAC
QT Input Channel

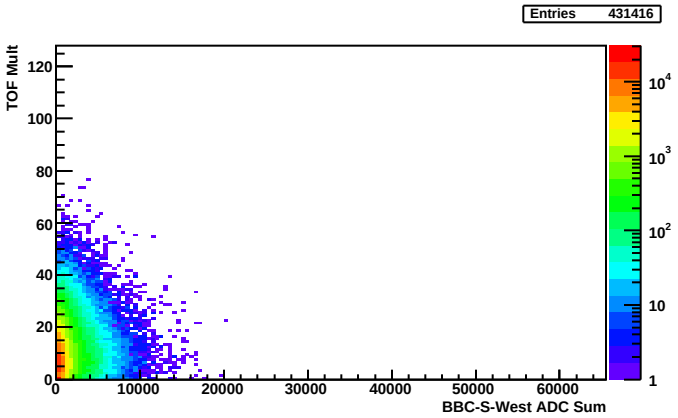

BBQ-VP004 (HI threshold)
Entries 6902656
ADC
QT Input Channel

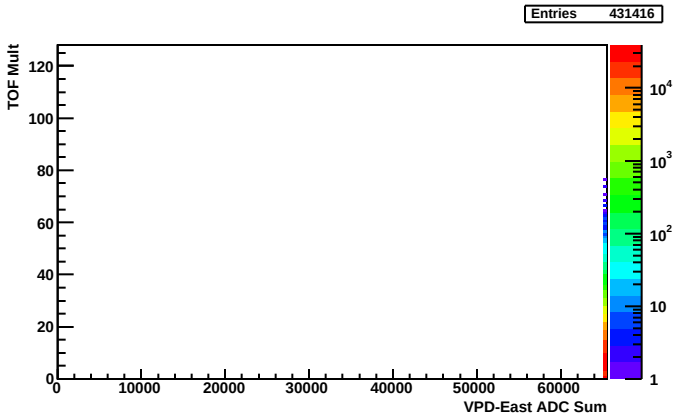

BBQ-VP004 (HI threshold)
Entries 6902656
TAC
QT Input Channel

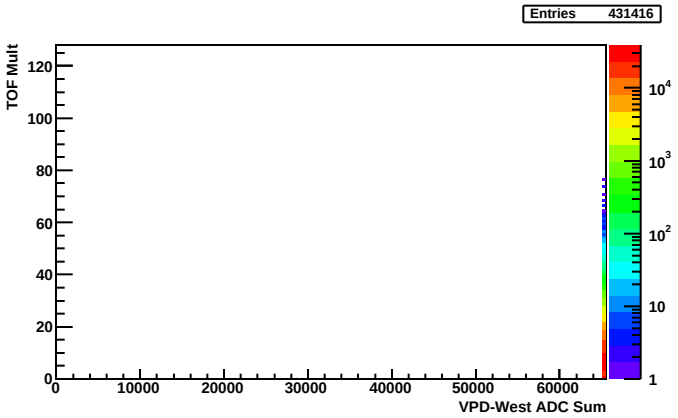

Entries 431416
TOF Mult
BBC-L-East ADC Sum

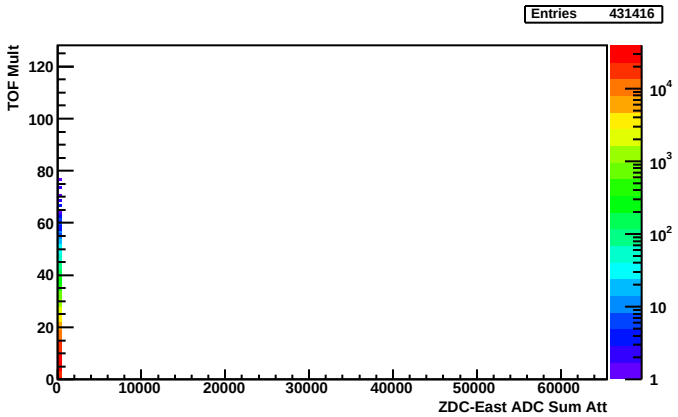

Entries 431416
TOF Mult
BBC-L-West ADC Sum

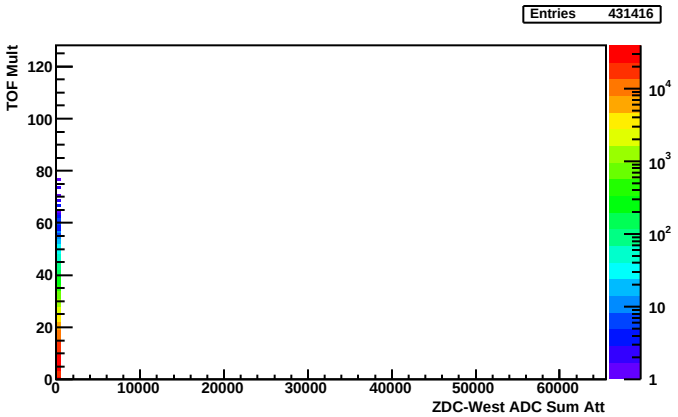

Entries 431416
TOF Mult
BBC-S-East ADC Sum

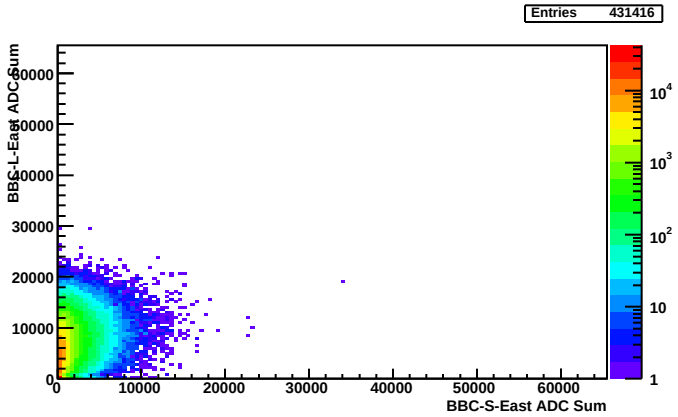

Entries 431416
TOF Mult
BBC-S-West ADC Sum

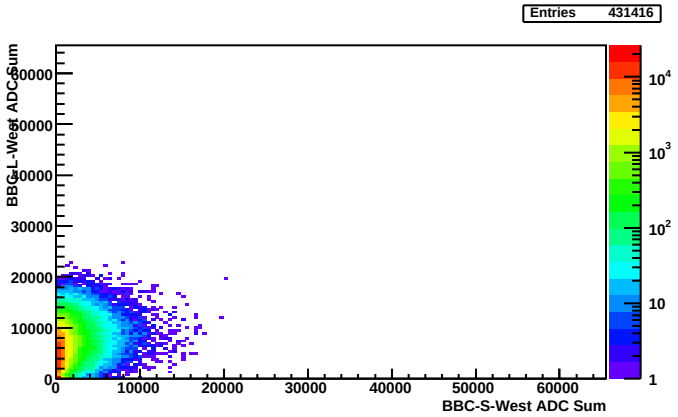

Entries 431416
TOF Mult
VPD-East ADC Sum

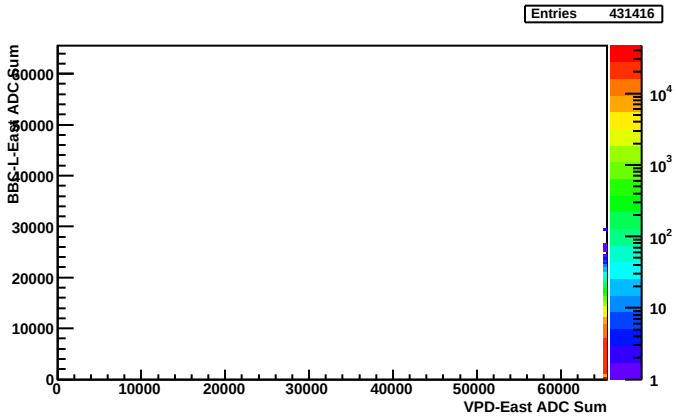

Entries 431416
TOF Mult
VPD-West ADC Sum

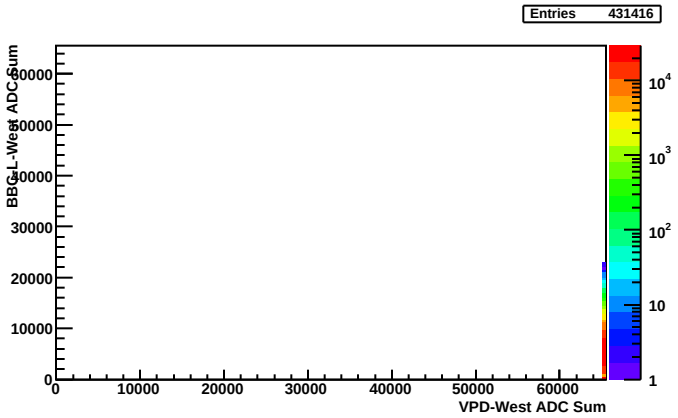

Entries 431416
TOF Mult
ZDC-East ADC Sum Att

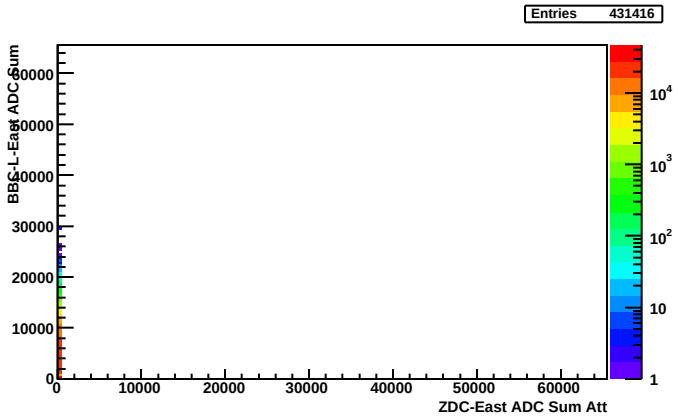

Entries 431416
TOF Mult
ZDC-West ADC Sum Att

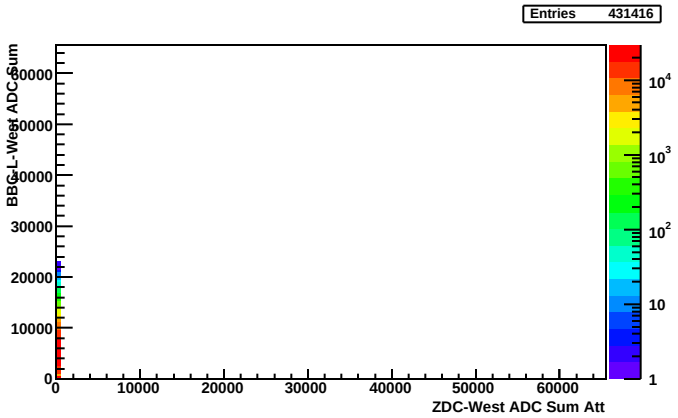

Entries 431416
BBC-L-East ADC Sum
BBC-S-East ADC Sum

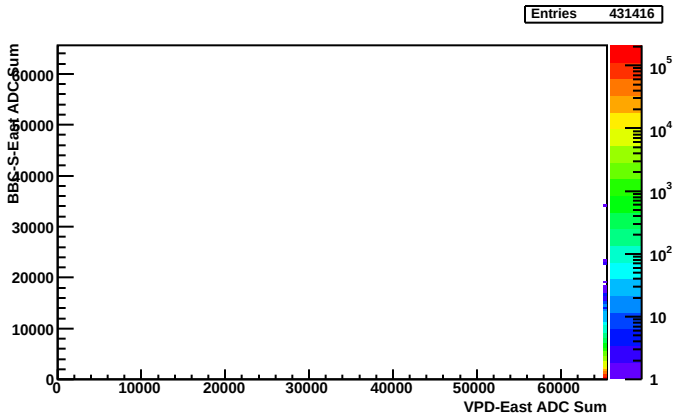

Entries 431416
BBC-L-West ADC Sum
BBC-S-West ADC Sum

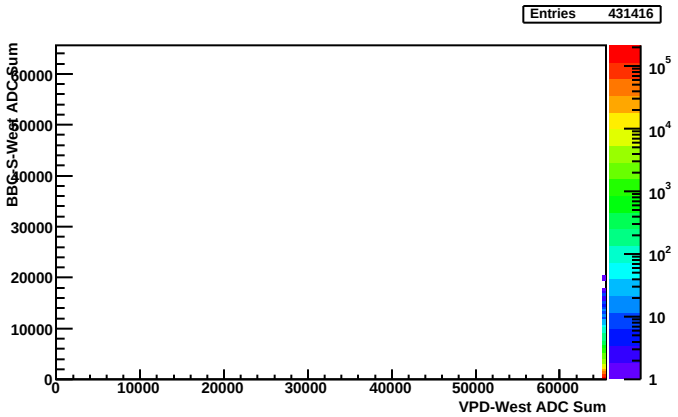

Entries 431416
BBC-L-East ADC Sum
VPD-East ADC Sum

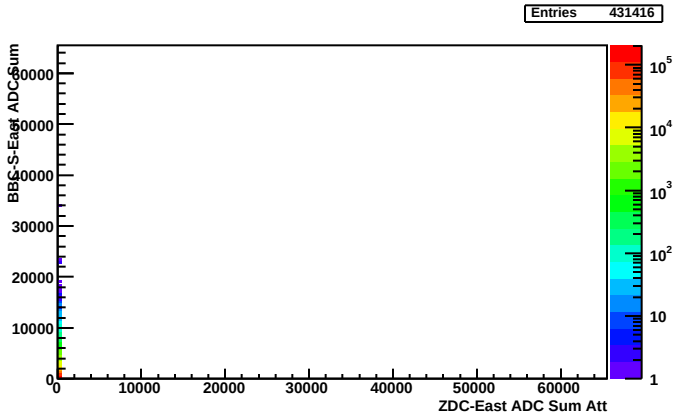

Entries 431416
BBC-L-West ADC Sum
VPD-West ADC Sum

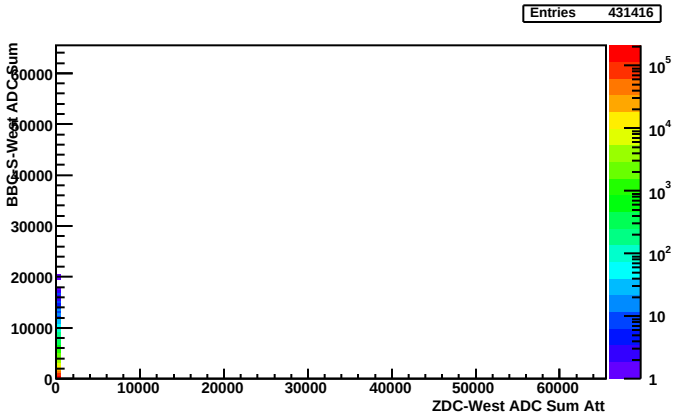

Entries 431416
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

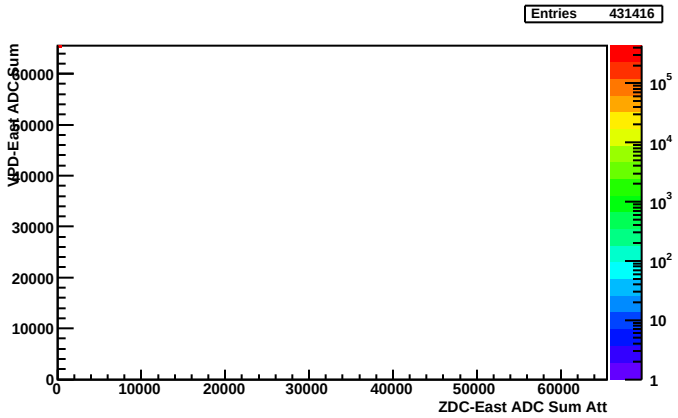

Entries 431416
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

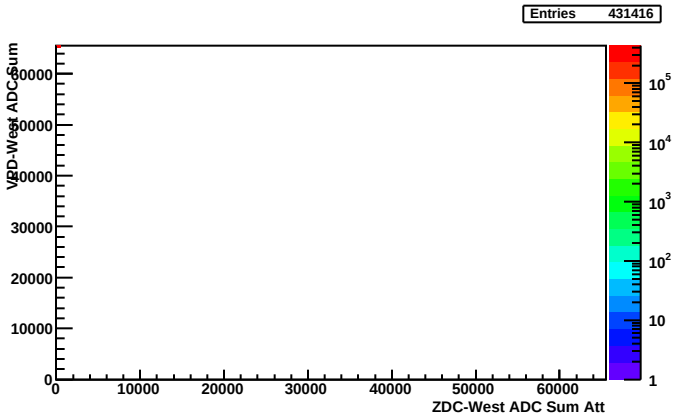

Entries 431416
BBC-S-East ADC Sum
VPD-East ADC Sum

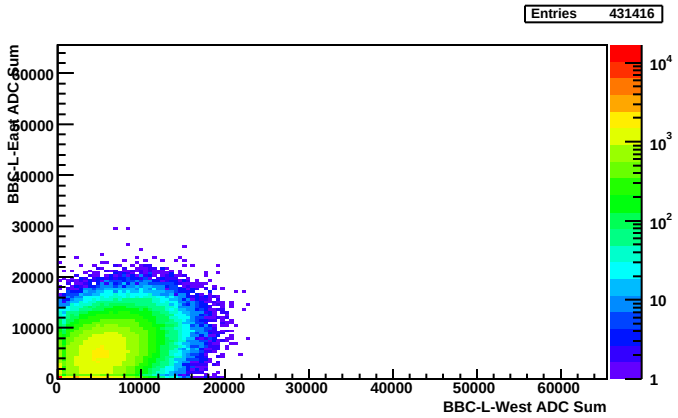

Entries 431416
BBC-S-West ADC Sum
VPD-West ADC Sum

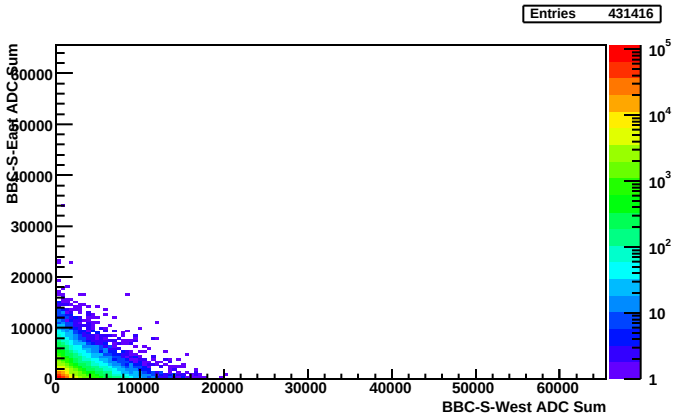

Entries 431416
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

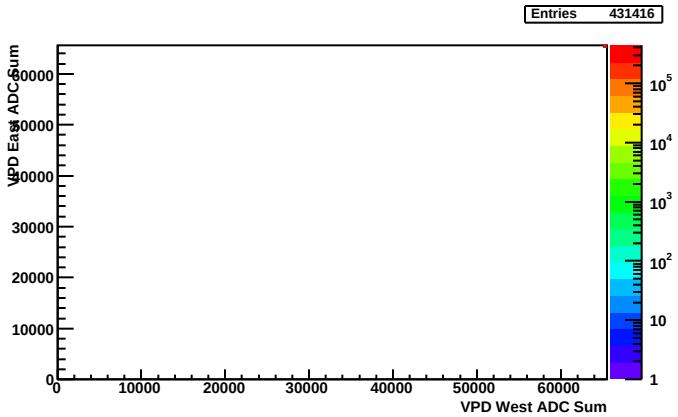

Entries 431416
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

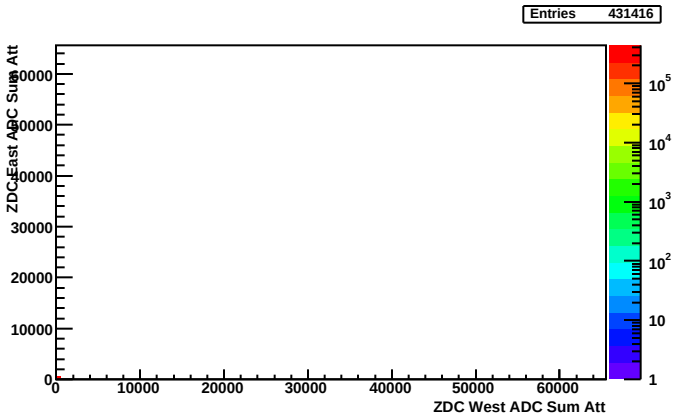

Entries 431416
VPD-East ADC Sum
ZDC-East ADC Sum Att

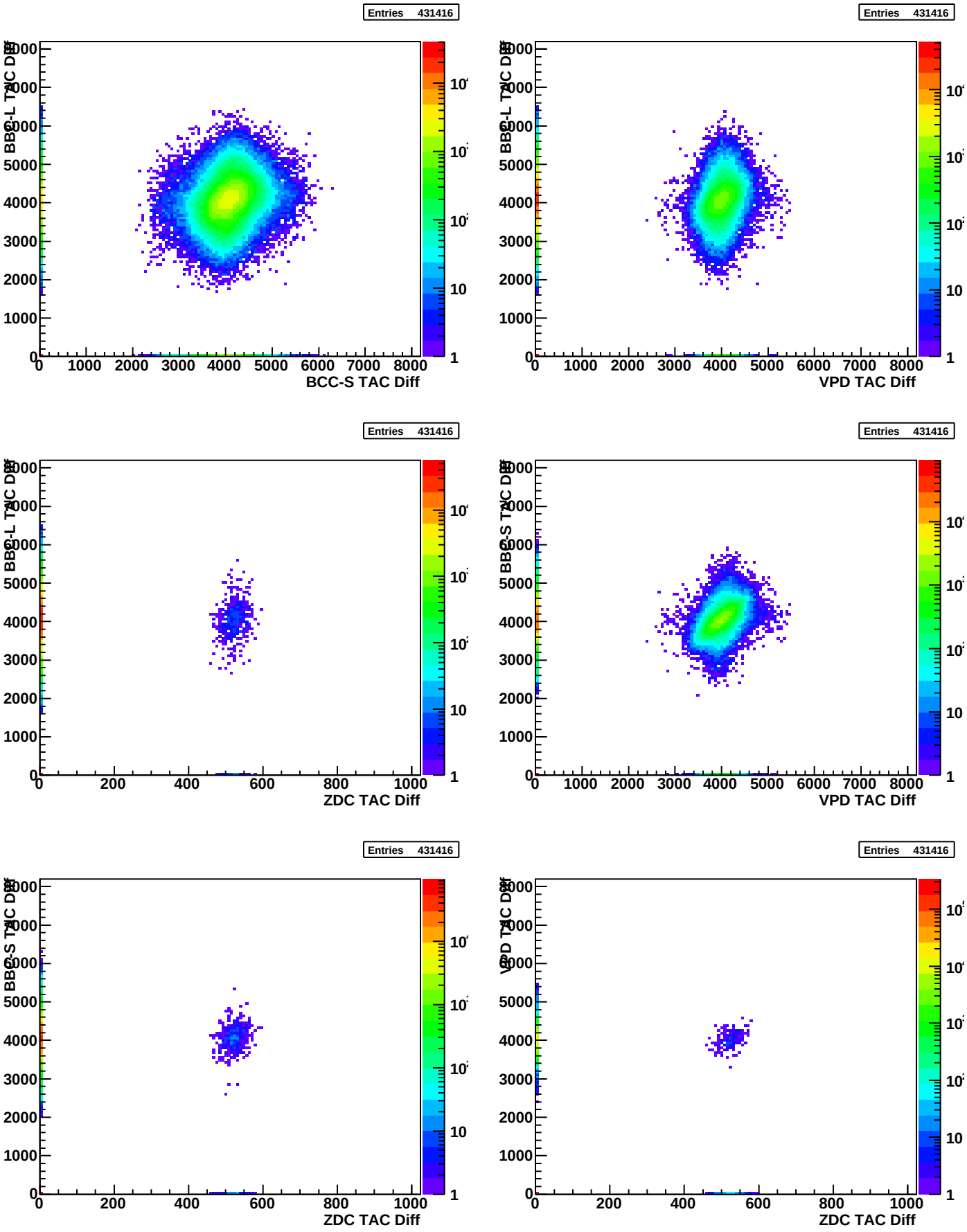

Entries 431416
VPD-West ADC Sum
ZDC-West ADC Sum Att

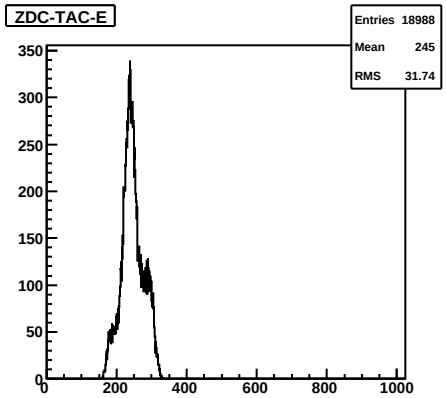

Entries 431416
BBC-L-East ADC Sum
BBC-L-West ADC Sum

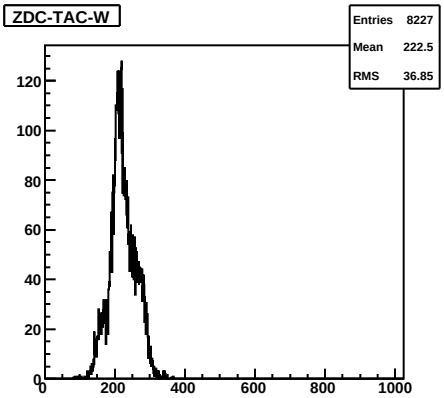

Entries 431416
BBC-S-East ADC Sum
BBC-S-West ADC Sum

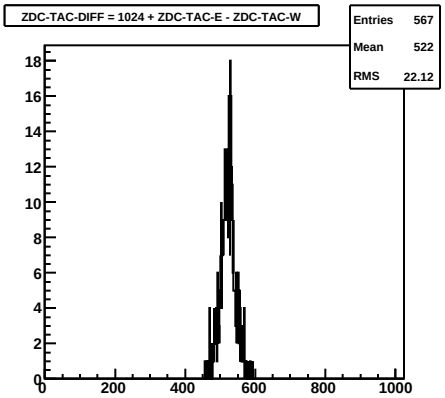

Entries 431416
VPD East ADC Sum
VPD West ADC Sum

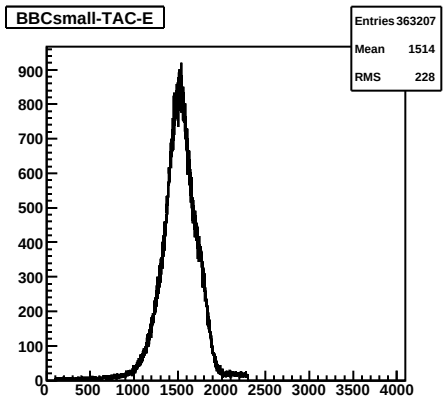

Entries 431416
ZDC East ADC Sum Att
ZDC West ADC Sum Att

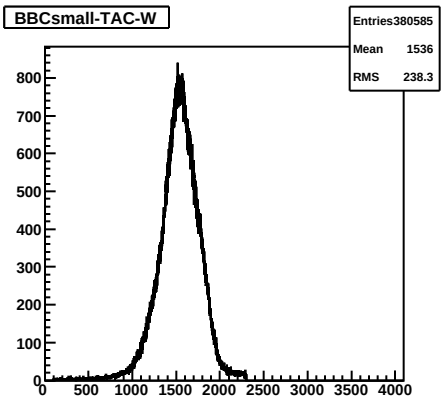

Entries 431416
BBC-L TAC Diff
BCC-S TAC Diff
Entries 431416
BBC-L TAC Diff
VPD TAC Diff
Entries 431416
BBC-L TAC Diff
ZDC TAC Diff
Entries 431416
BBC-S TAC Diff
VPD TAC Diff
Entries 431416
BBC-S TAC Diff
ZDC TAC Diff
Entries 431416
VPD TAC Diff
ZDC TAC Diff

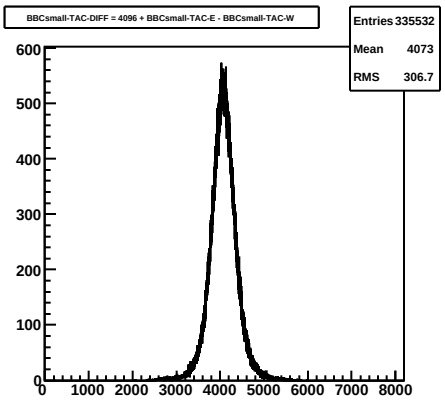

ZDC-TAC-E
Entries 18988
Mean 245
RMS 31.74

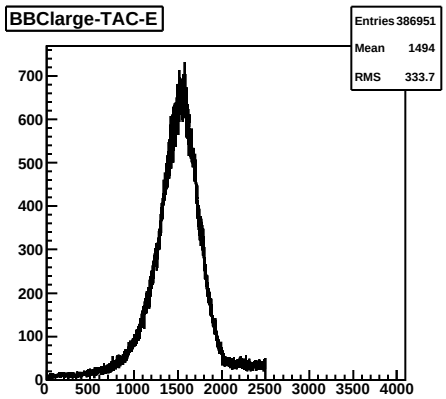

ZDC-TAC-W
Entries 8227
Mean 222.5
RMS 36.85

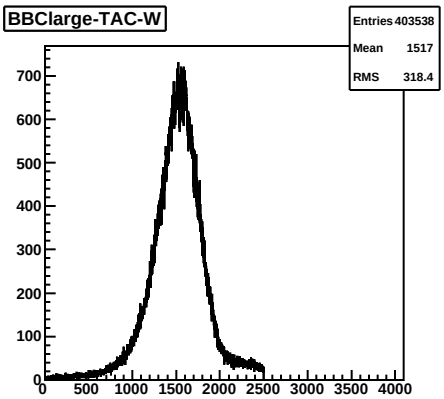

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 567
Mean 522
RMS 22.12

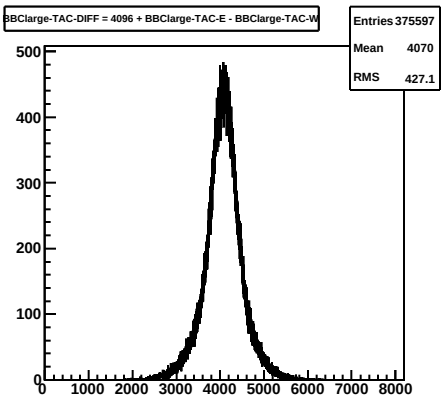

BBCsmall-TAC-E
Entries 363207
Mean 1514
RMS 228

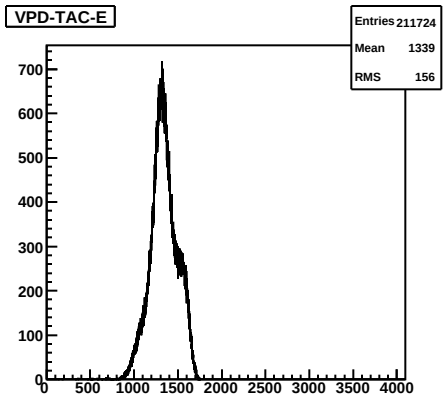

BBCsmall-TAC-W
Entries 380585
Mean 1536
RMS 238.3

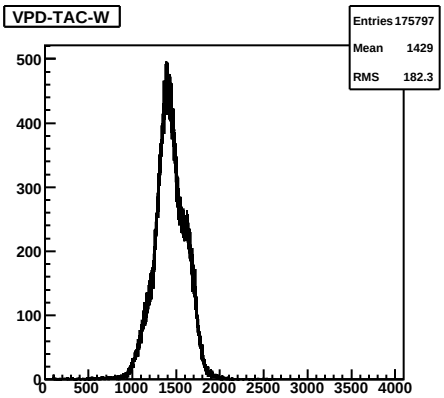

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 335532
Mean 4073
RMS 306.7

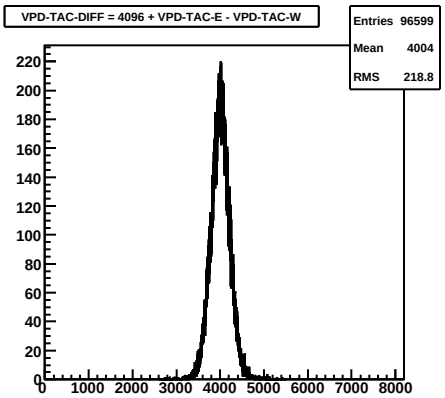

BBClarge-TAC-E
Entries 386951
Mean 1494
RMS 333.7

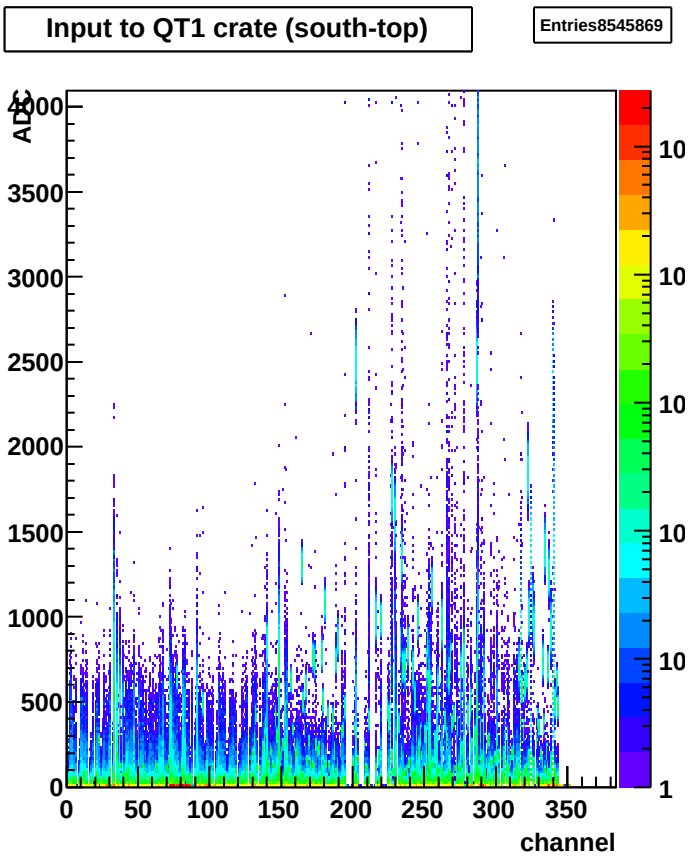

BBClarge-TAC-W
Entries 403538
Mean 1517
RMS 318.4

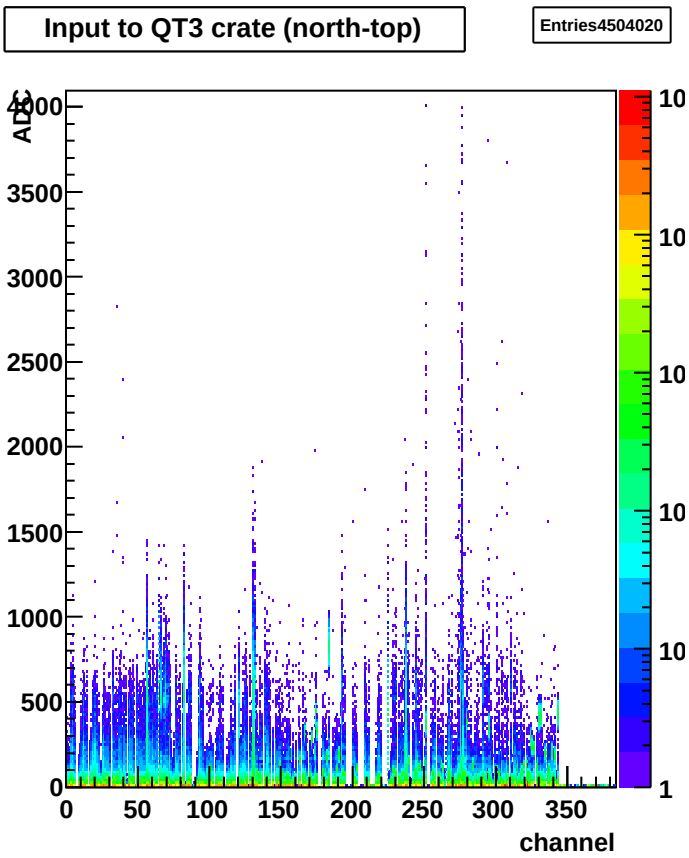

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 375597
Mean 4070
RMS 427.1

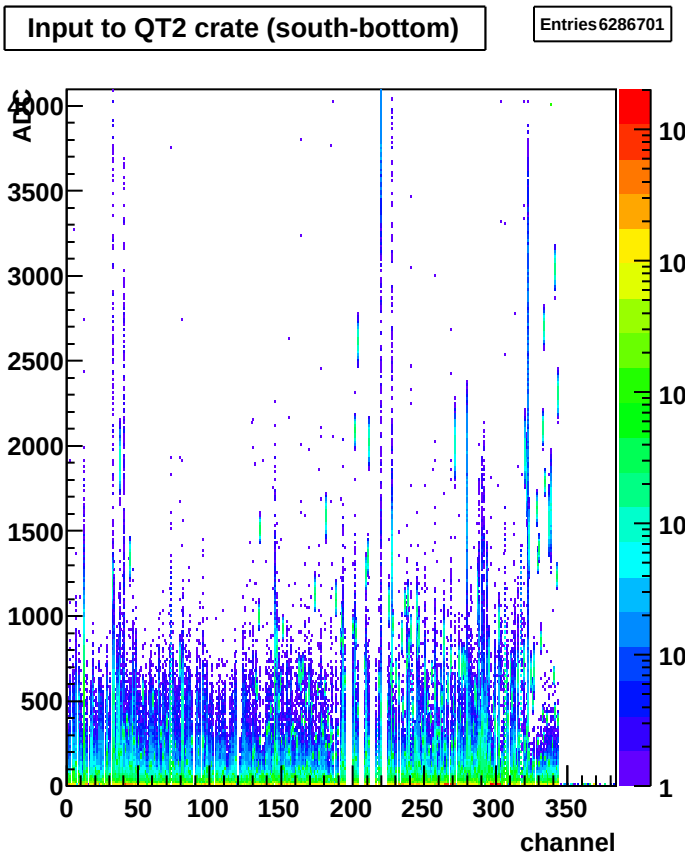

VPD-TAC-E
Entries 211724
Mean 1339
RMS 156

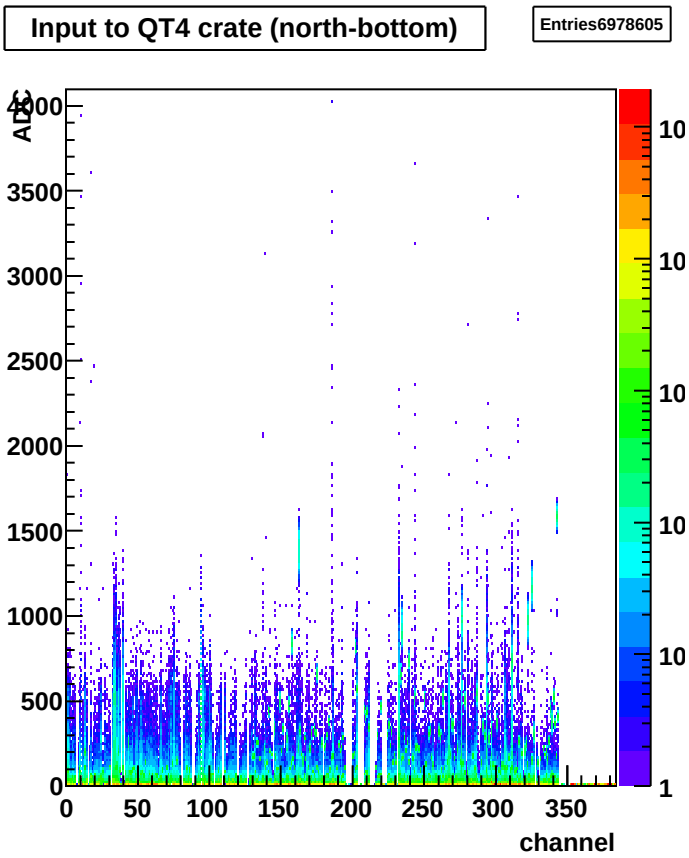

VPD-TAC-W
Entries 175797
Mean 1429
RMS 182.3

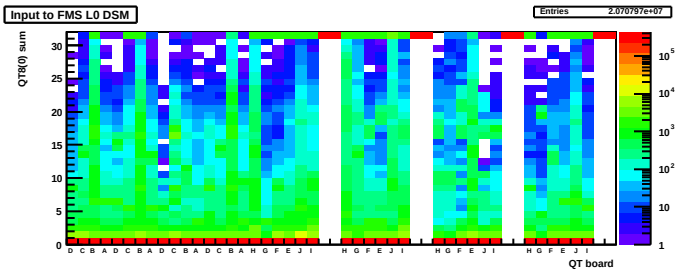

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 96599
Mean 4004
RMS 218.8

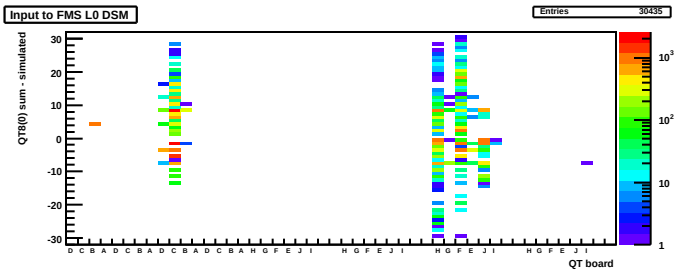

Input to QT1 crate (south-top)
Entries8545869
ADC
channel

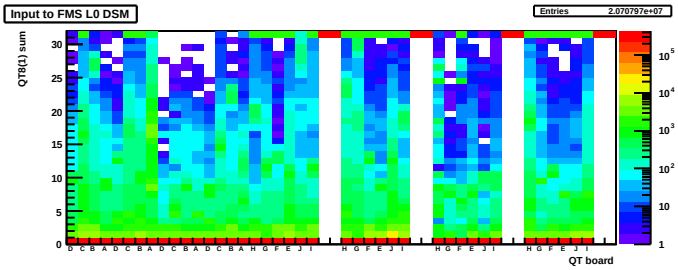

Input to QT3 crate (north-top)
Entries4504020
ADC
channel

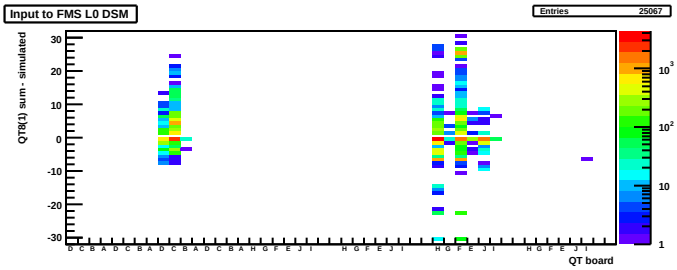

Input to QT2 crate (south-bottom)
Entries6286701
ADC
channel

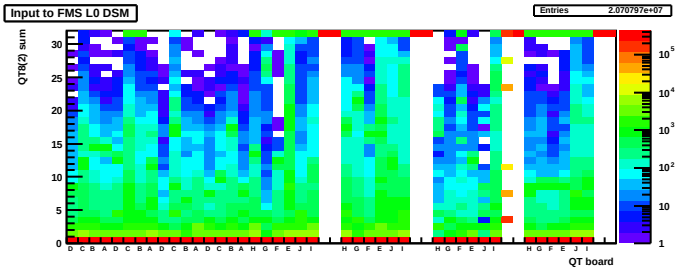

Input to QT4 crate (north-bottom)
Entries6978605
ADC
channel

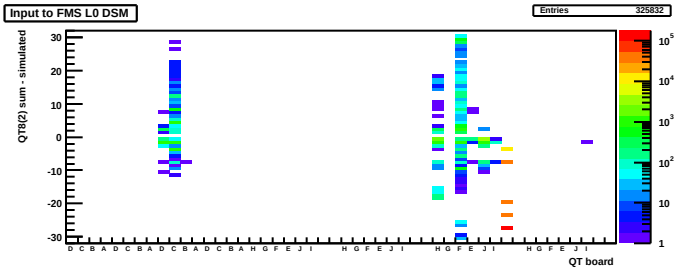

Input to FMS L0 DSM
Entries 2.070797e+07
QT8(0) sum
QT board

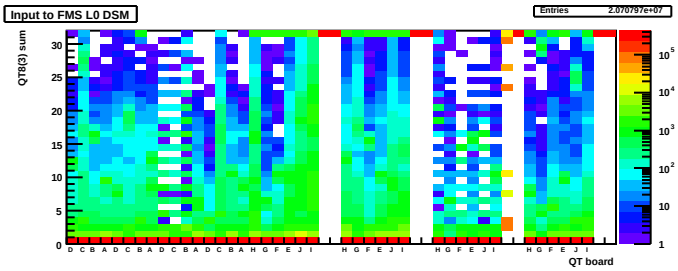

Input to FMS L0 DSM
Entries 30435
QT8(0) sum - simulated
QT board

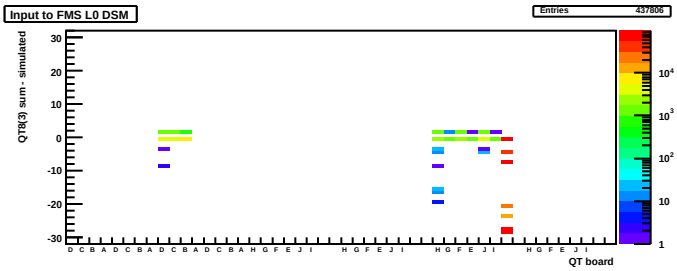

Input to FMS L0 DSM
Entries 2.070797e+07
QT8(1) sum
QT board

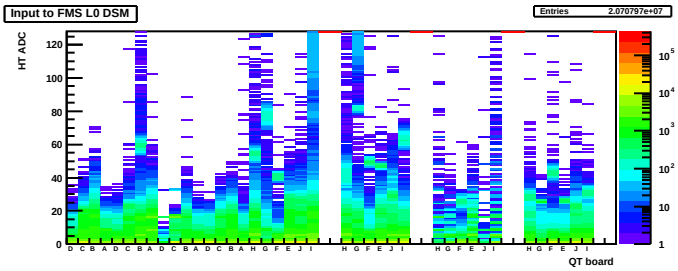

Input to FMS L0 DSM
Entries 25067
QT8(1) sum - simulated
QT board

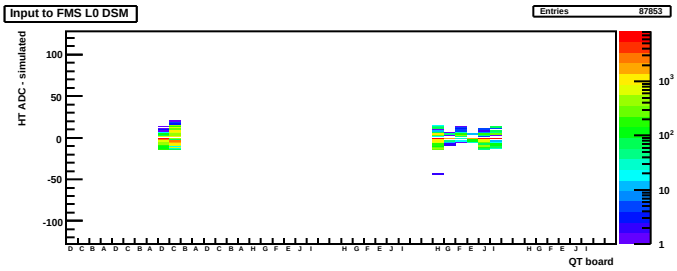

Input to FMS L0 DSM
Entries 2.070797e+07
QT8(2) sum
QT board

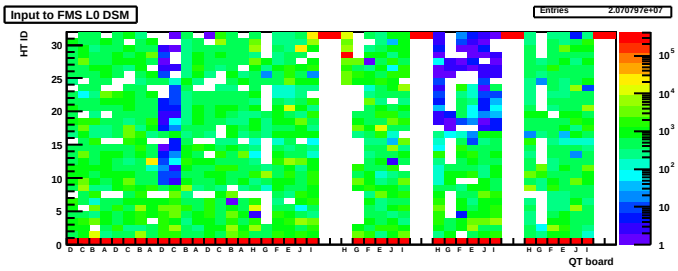

Input to FMS L0 DSM
Entries 325832
QT8(2) sum - simulated
QT board

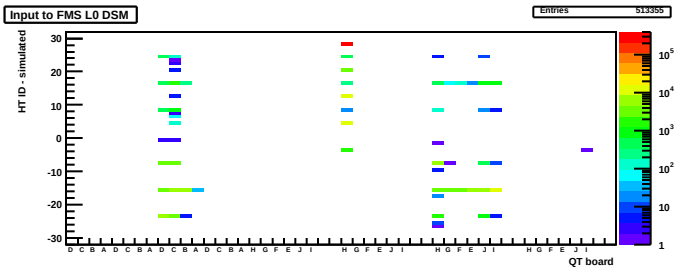

Input to FMS L0 DSM
Entries 2.070797e+07
QT8(3) sum
QT board

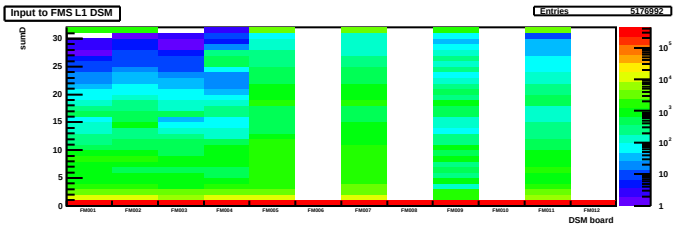

Input to FMS L0 DSM
Entries 437806
QT8(3) sum - simulated
QT board

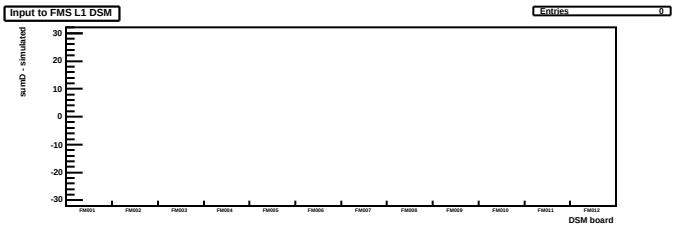

Input to FMS L0 DSM
Entries 2.070797e+07
HT ADC
QT board

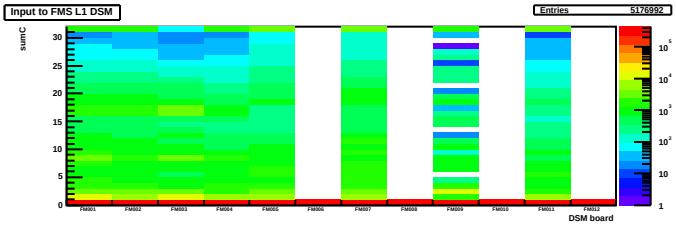

Input to FMS L0 DSM
Entries 87853
HT ADC - simulated
QT board

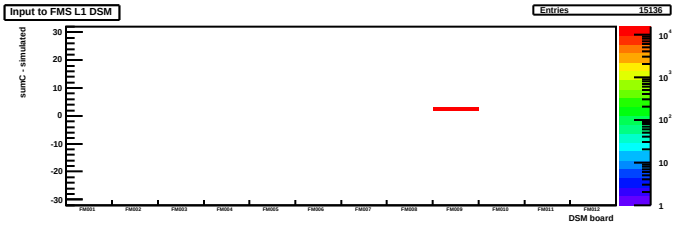

Input to FMS L0 DSM
Entries 2.070797e+07
HT ID
QT board

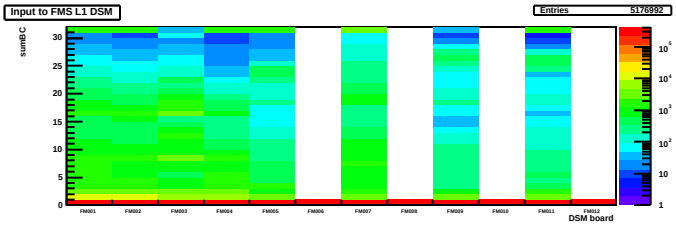

Input to FMS L0 DSM
Entries 513355
HT ID - simulated
QT board

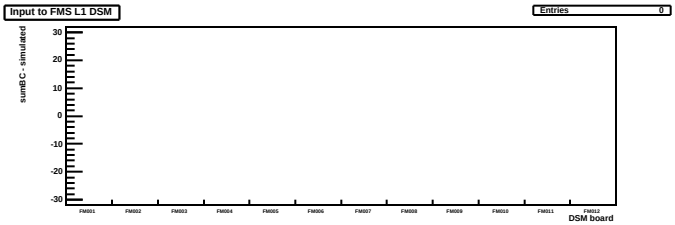

Input to FMS L1 DSM
Entries 5176992
sumD
DSM board

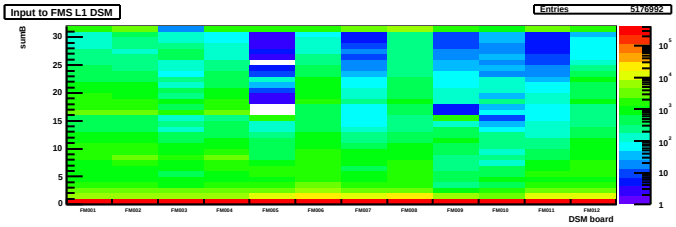

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

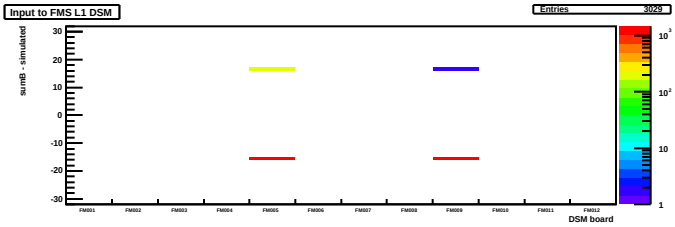

Input to FMS L1 DSM
Entries 5176992
sumC
DSM board

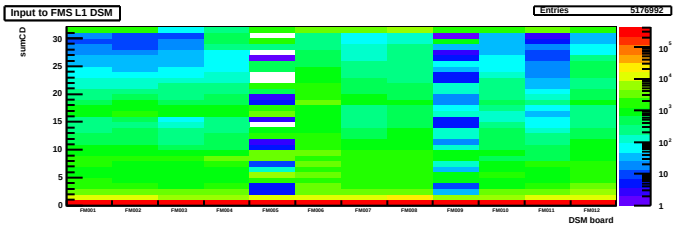

Input to FMS L1 DSM
Entries 15136
sumC - simulated
DSM board

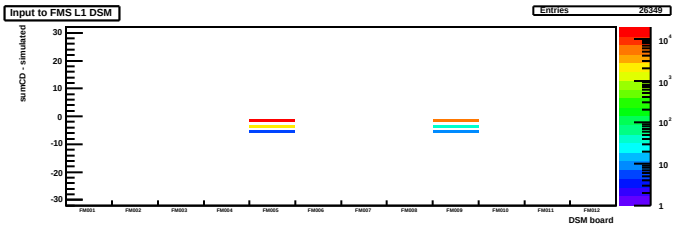

Input to FMS L1 DSM
Entries 5176992
sumBC
DSM board

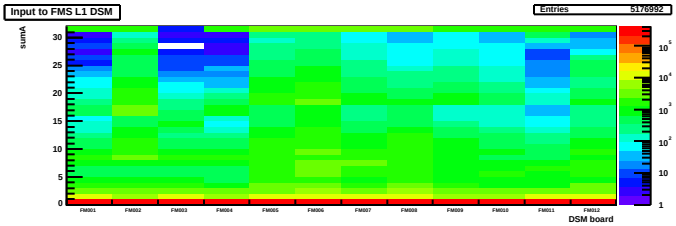

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

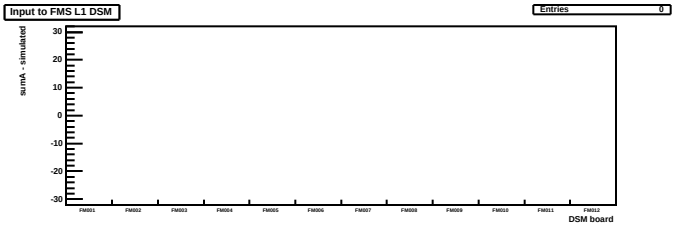

Input to FMS L1 DSM
Entries 5176992
sumB
DSM board

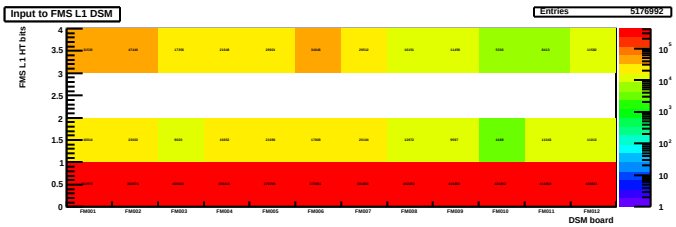

Input to FMS L1 DSM
Entries 3029
sumB - simulated
DSM board

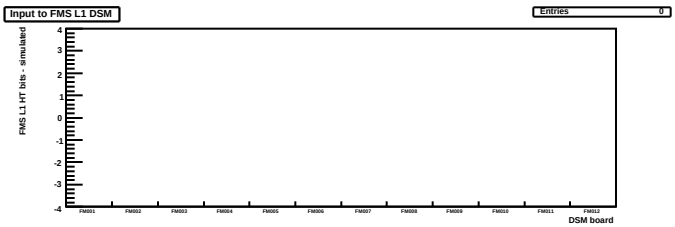

Input to FMS L1 DSM
Entries 5176992
sumCD
DSM board

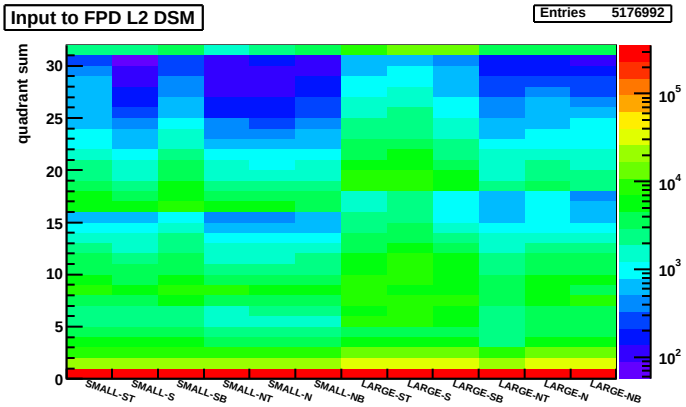

Input to FMS L1 DSM
Entries 26349
sumCD - simulated
DSM board

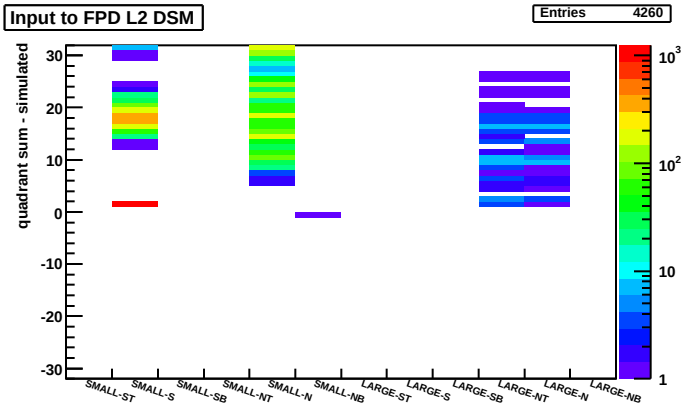

Input to FMS L1 DSM
Entries 5176992
sumA
DSM board

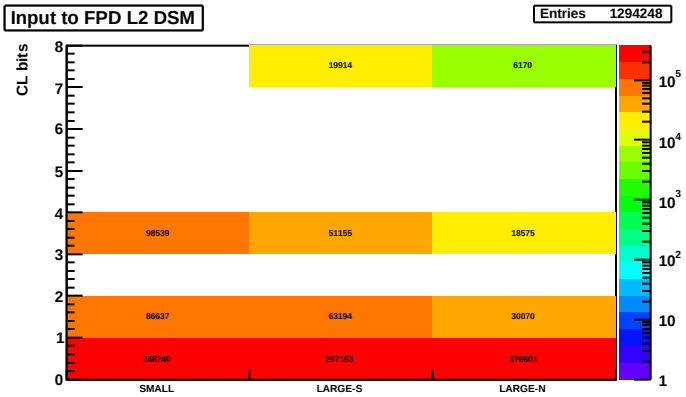

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

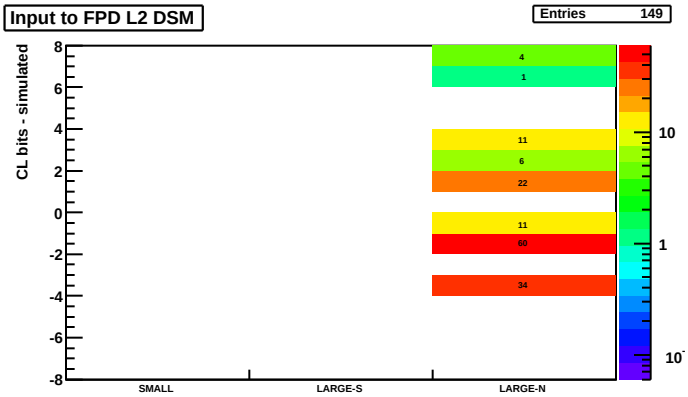

Input to FMS L1 DSM
Entries 5176992
FMS L1 HT bits
DSM board

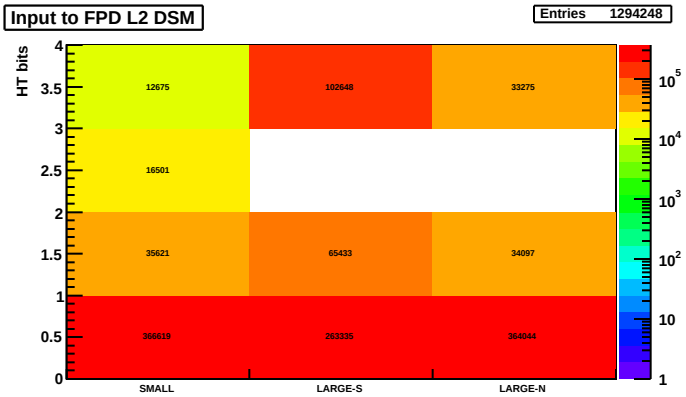

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

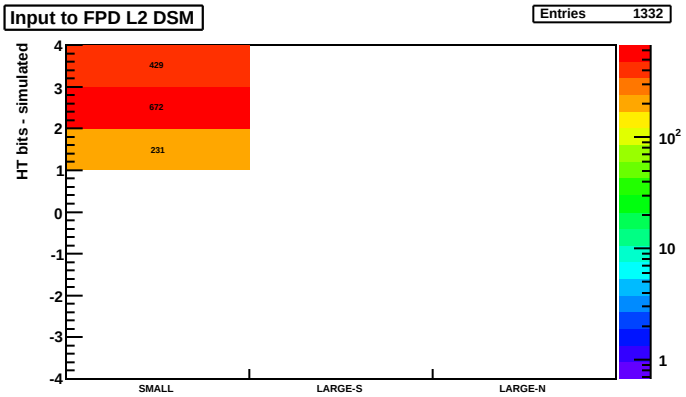

Input to FPD L2 DSM
Entries 5176992
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

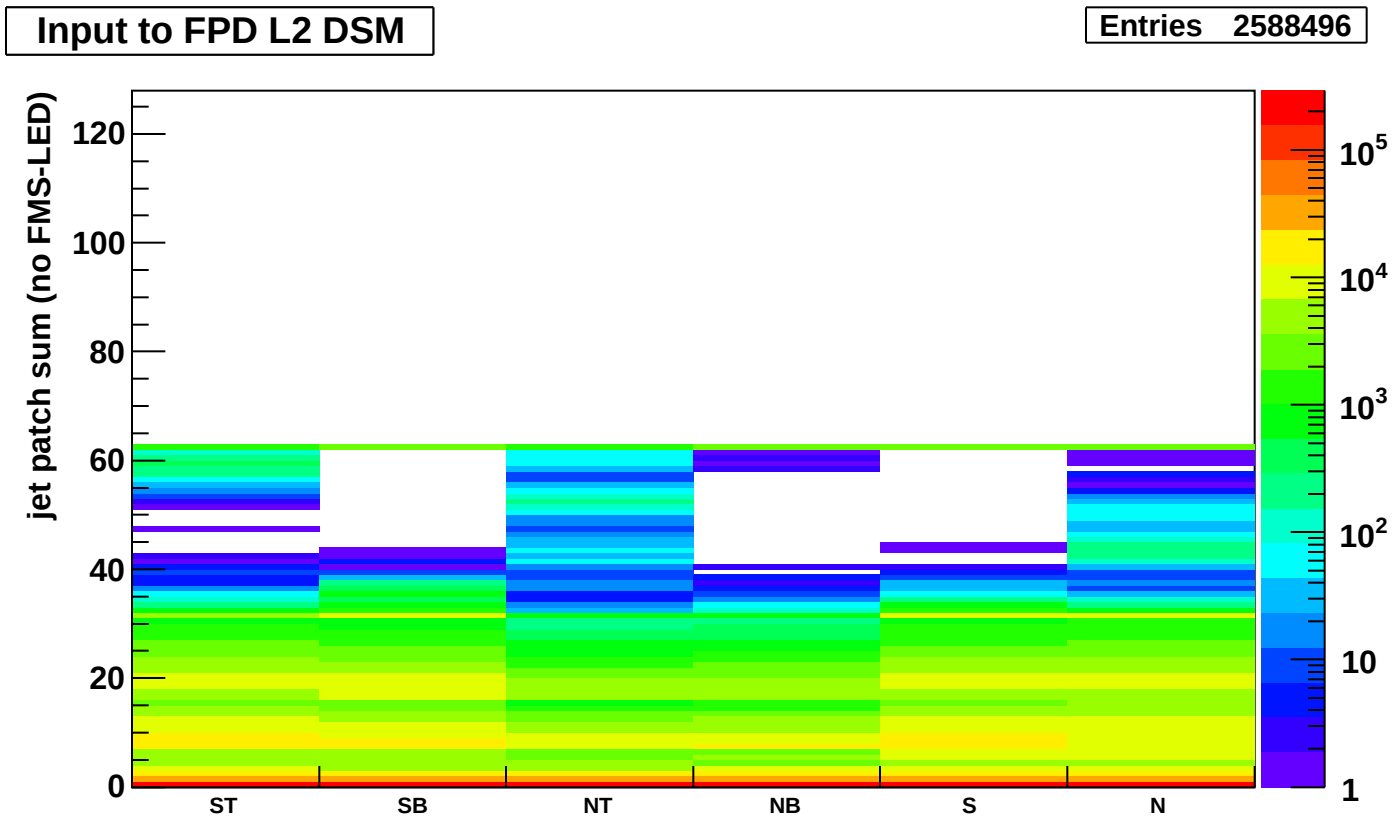

Input to FPD L2 DSM
Entries 4260
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

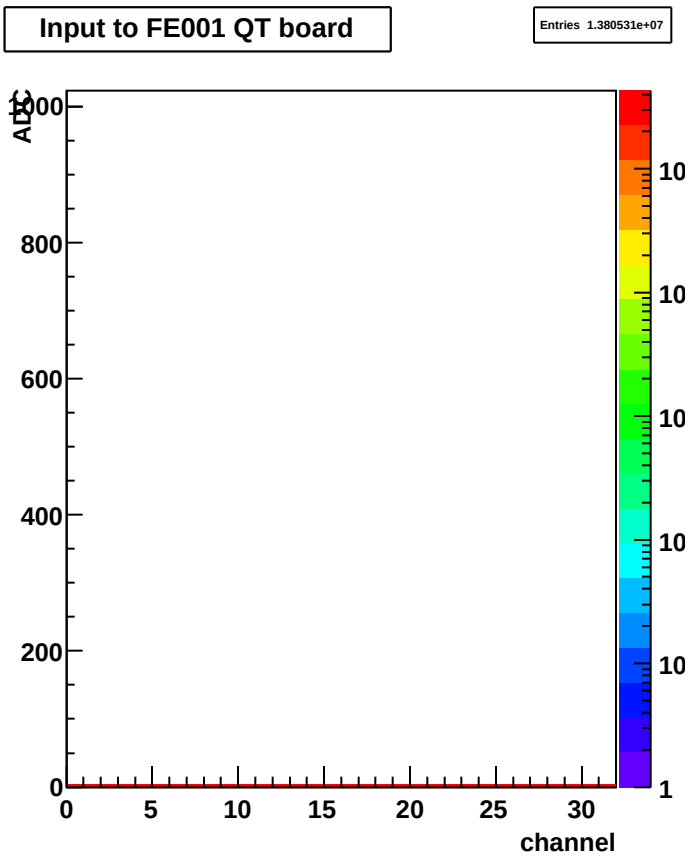

Input to FPD L2 DSM
Entries 1294248
CL bits
19914
6170
98539
51155
18575
86637
63194
30070
246240
297153
376601
SMALL
LARGE-S
LARGE-N

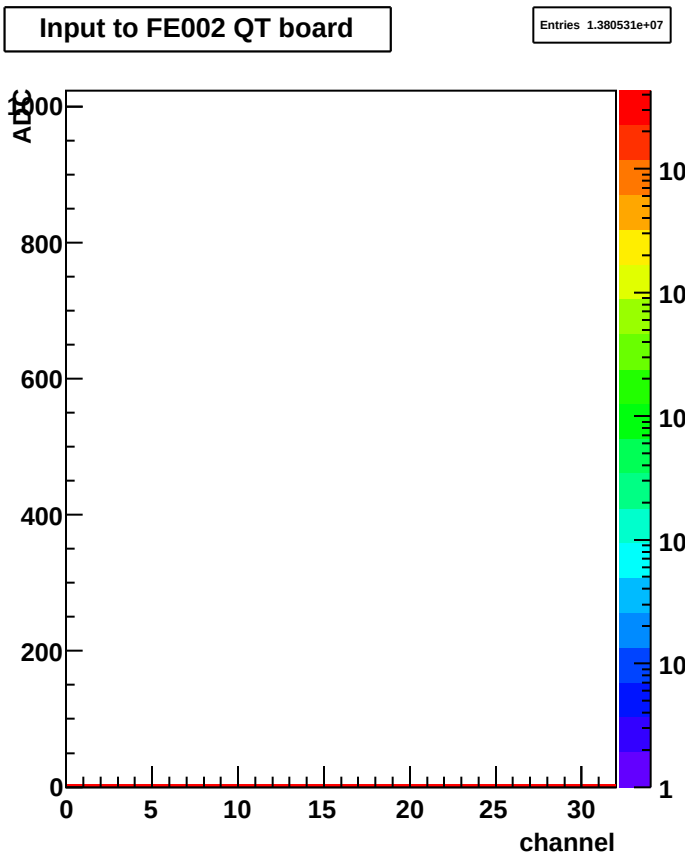

Input to FPD L2 DSM
Entries 149
CL bits - simulated
4
1
11
6
22
11
60
34
SMALL
LARGE-S
LARGE-N

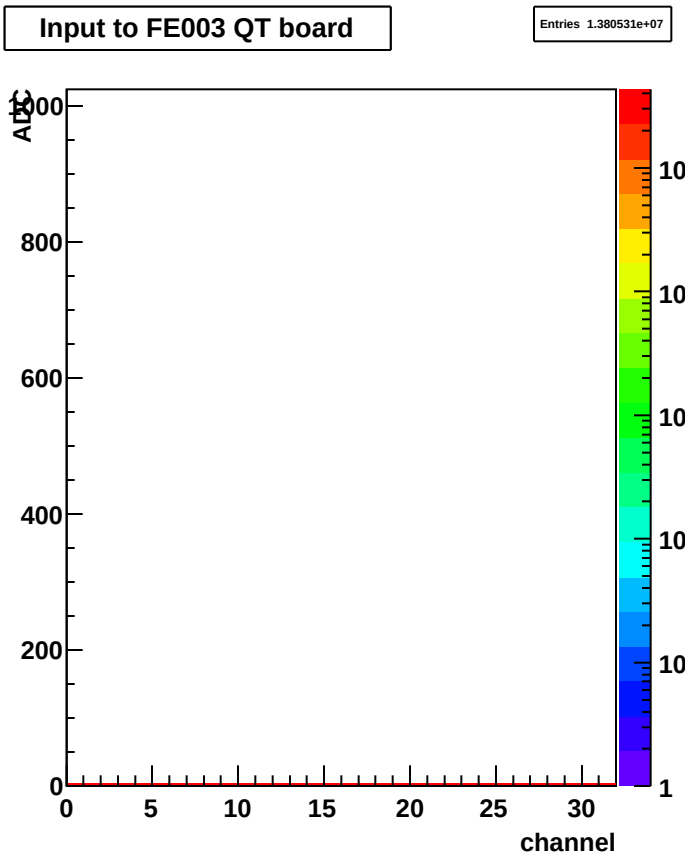

Input to FPD L2 DSM
Entries 1294248
HT bits
12675
102648
33275
16501
35621
65433
34097
366619
263335
364044
SMALL
LARGE-S
LARGE-N

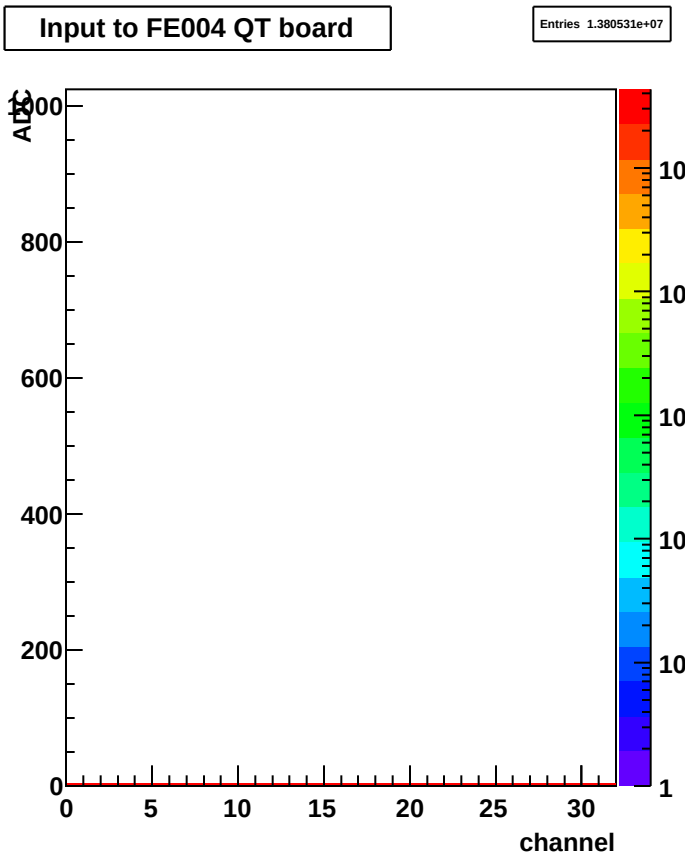

Input to FPD L2 DSM
Entries 1332
HT bits - simulated
429
672
231
SMALL
LARGE-S
LARGE-N

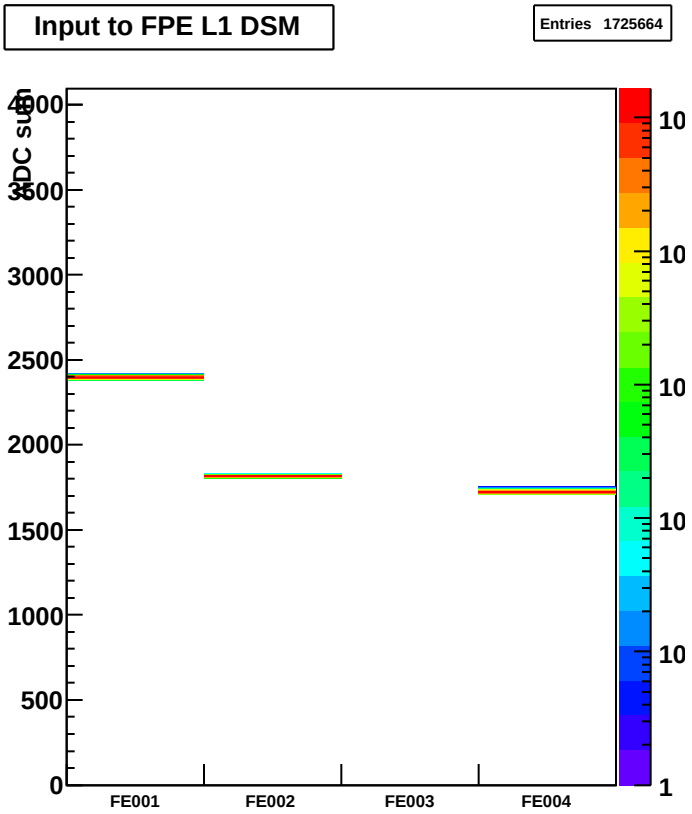

Input to FPD L2 DSM
Entries 2588496
jet patch sum (no FMS-LED)
0
20
40
60
80
100
120
ST
SB
NT
NB
S
N
1
10
$10^2$
$10^3$
$10^4$
$10^5$

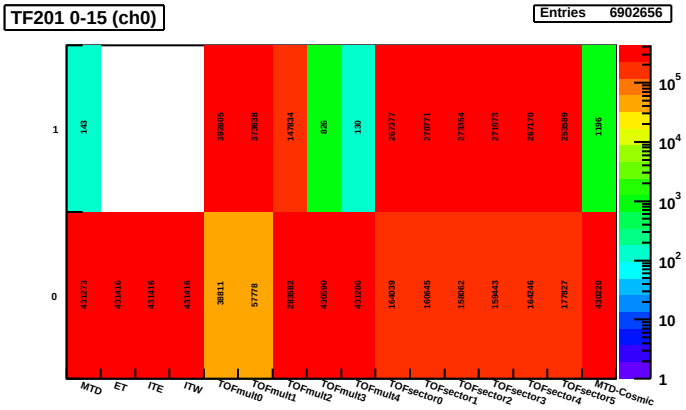

Input to FE001 QT board
Entries 1.380531e+07
ADC
channel

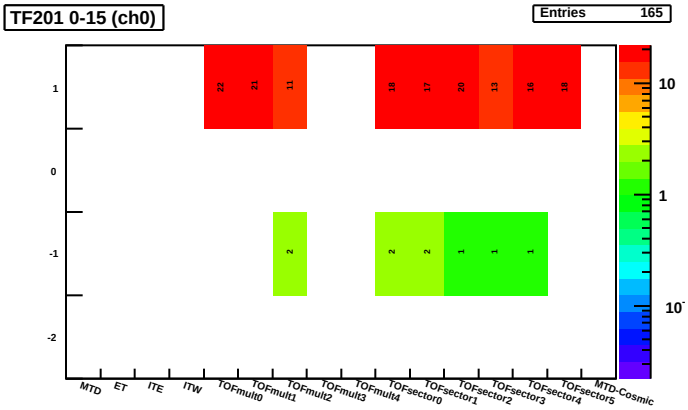

Input to FE002 QT board
Entries 1.380531e+07
ADC
channel

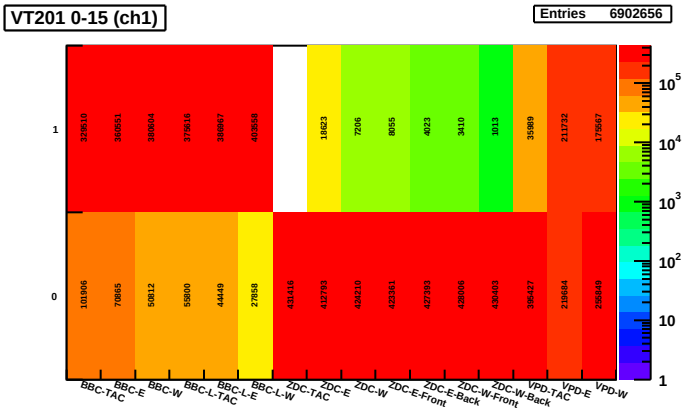

Input to FE003 QT board
Entries 1.380531e+07
ADC
channel

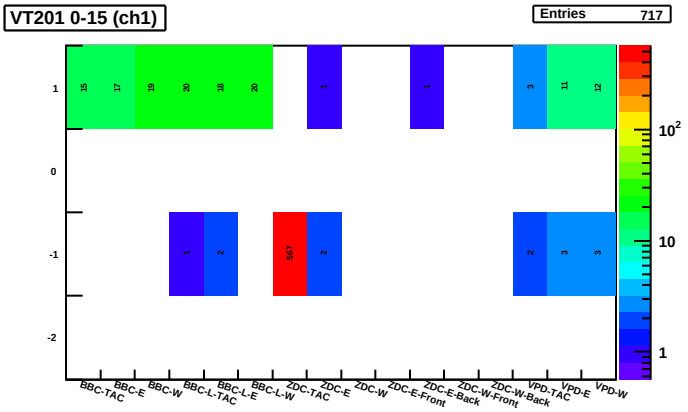

Input to FE004 QT board
Entries 1.380531e+07
ADC
channel

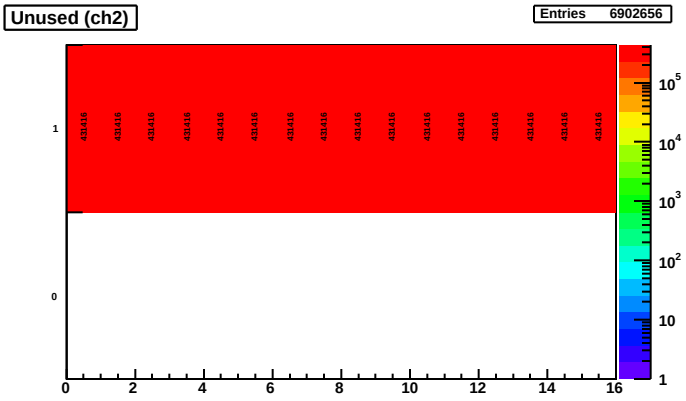

Input to FPE L1 DSM
Entries 1725664
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1

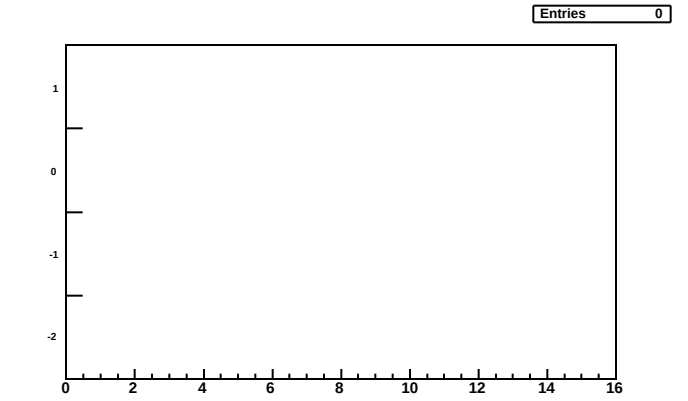

TF201 0-15 (ch0)
Entries 6902656
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

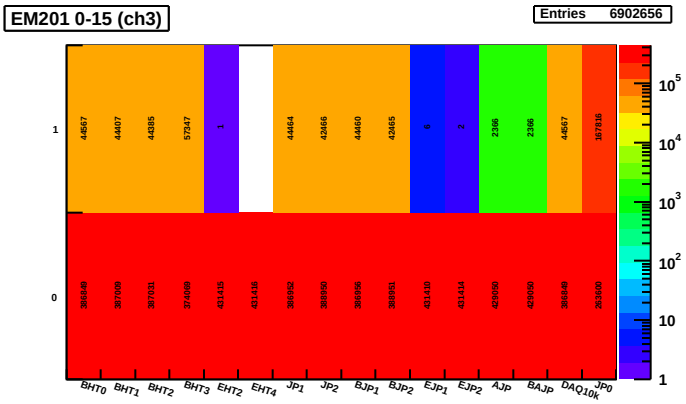

TF201 0-15 (ch0)
Entries 165
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 6902656
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 717
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


Unused (ch2)
Entries 6902656


Entries 0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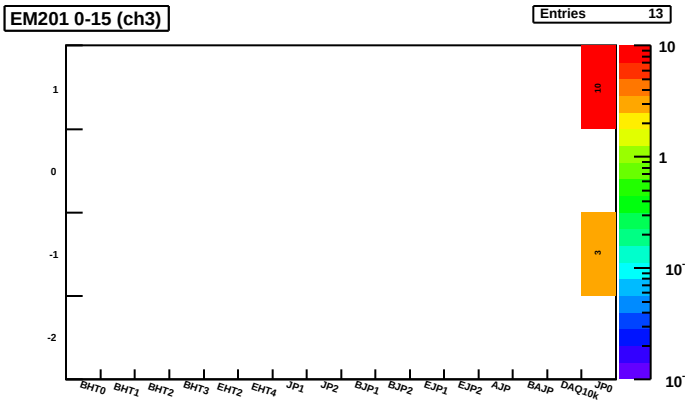
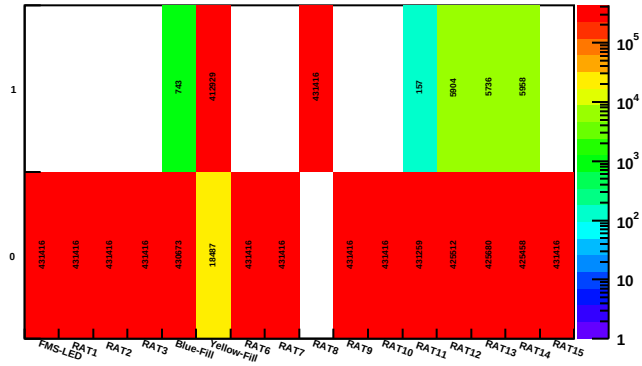
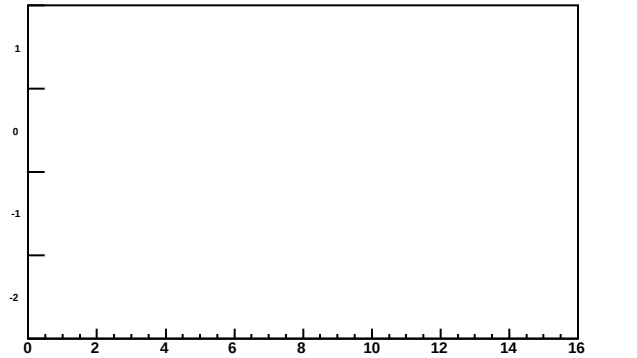
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

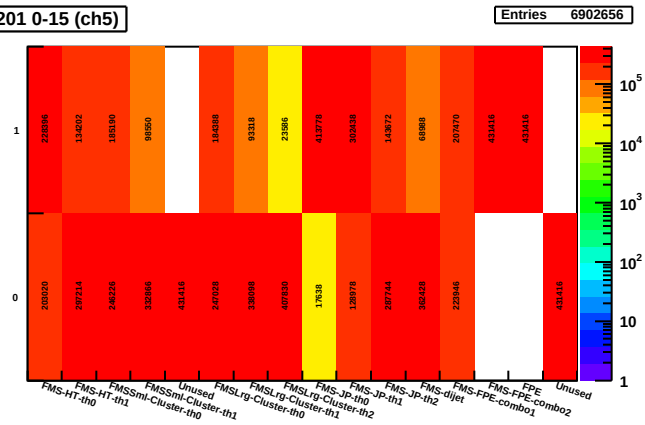

EM201 0-15 (ch3)
Entries 13
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

**RAT board (ch4)**

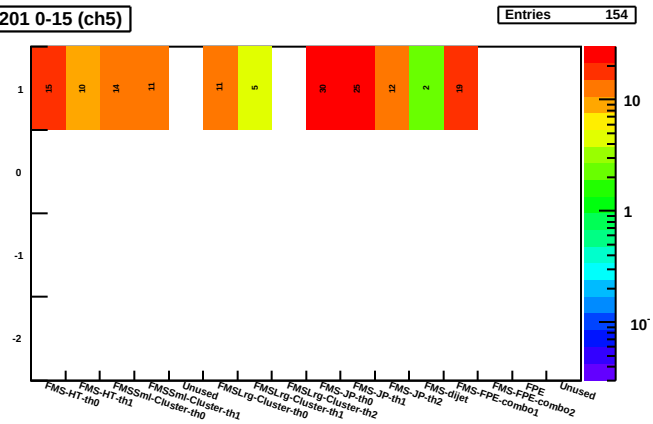


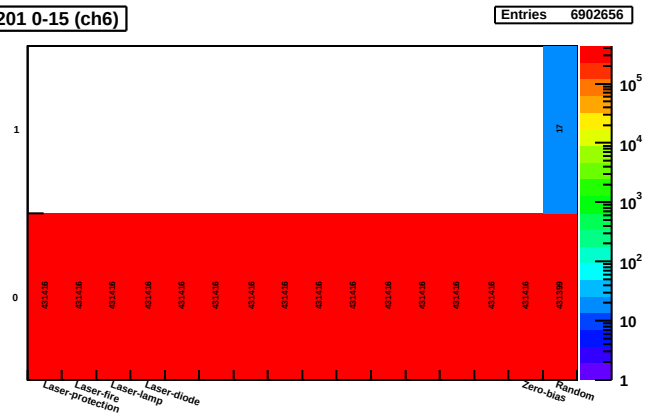

**FP201 0-15 (ch5)**

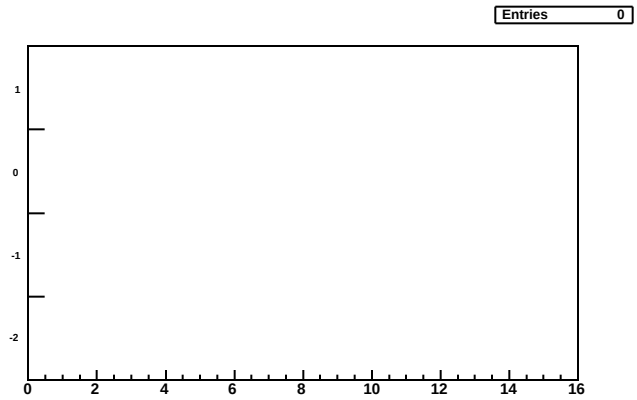


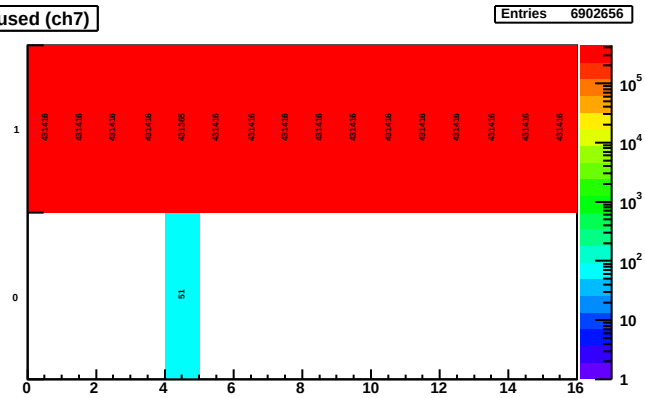
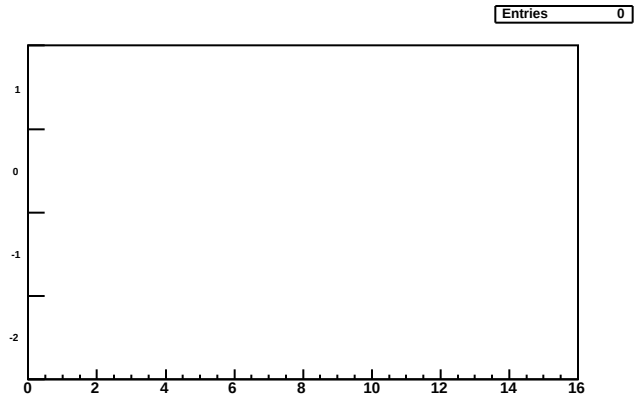

**FP201 0-15 (ch5)**




**ST201 0-15 (ch6)**




**Unused (ch7)**