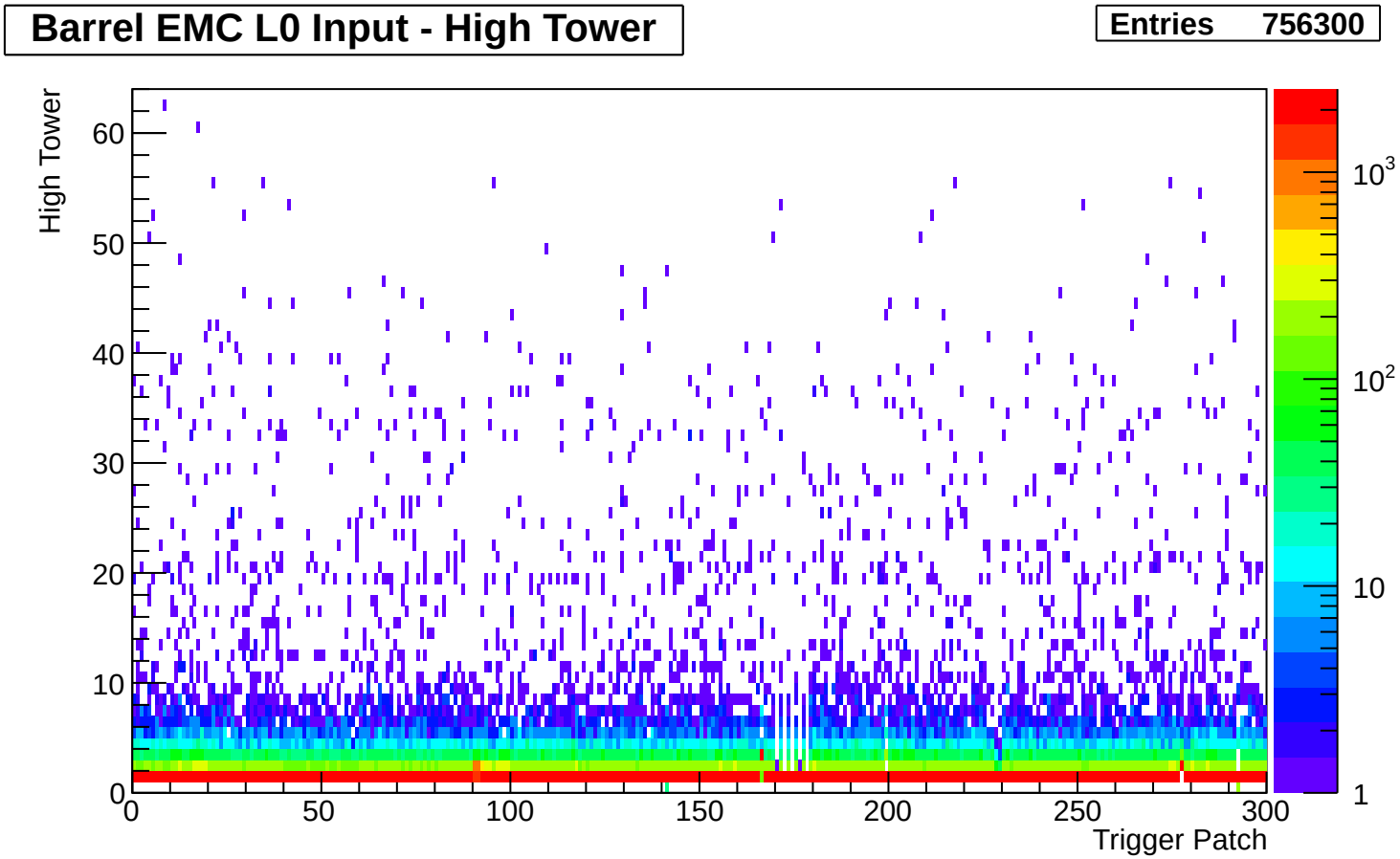
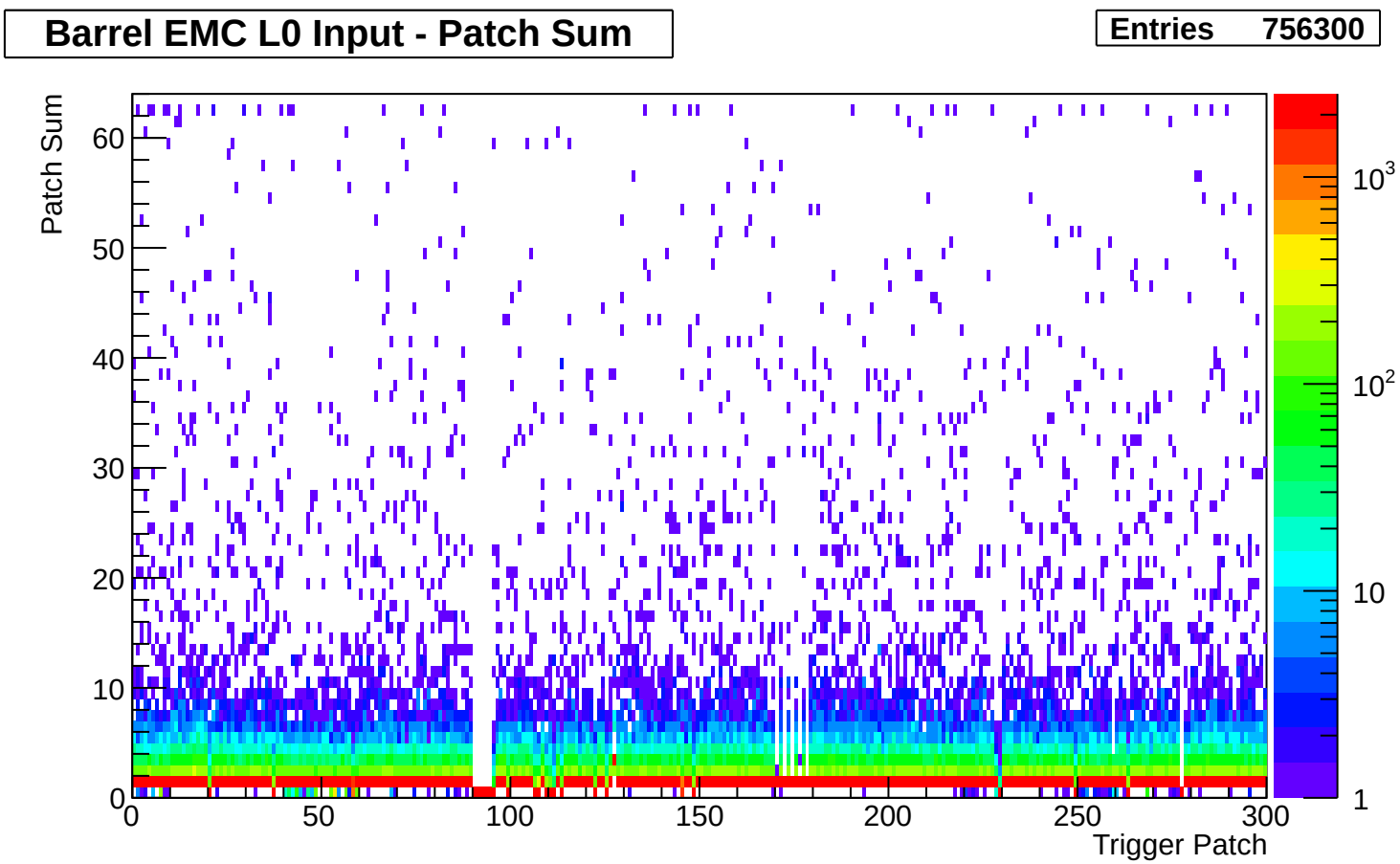
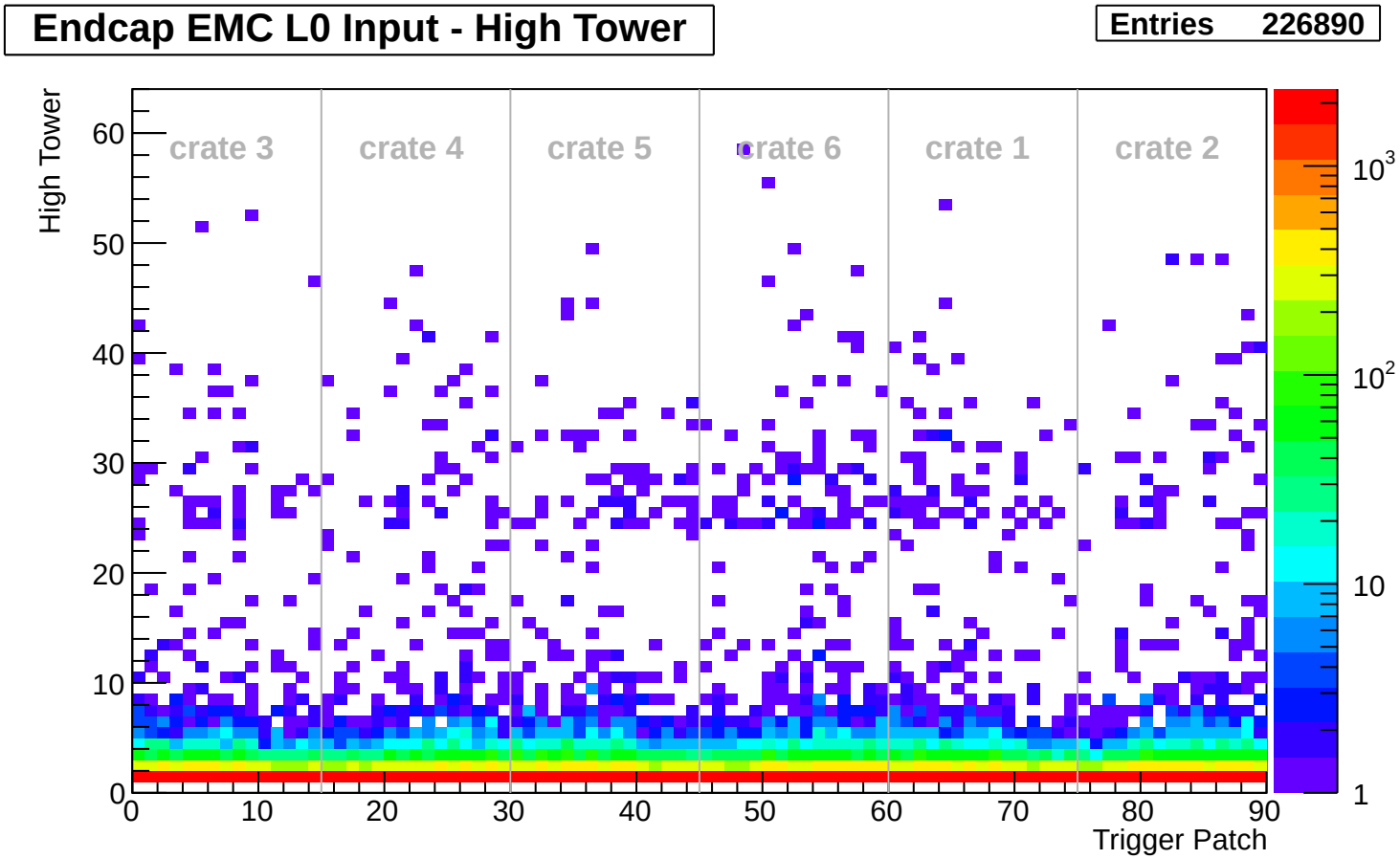
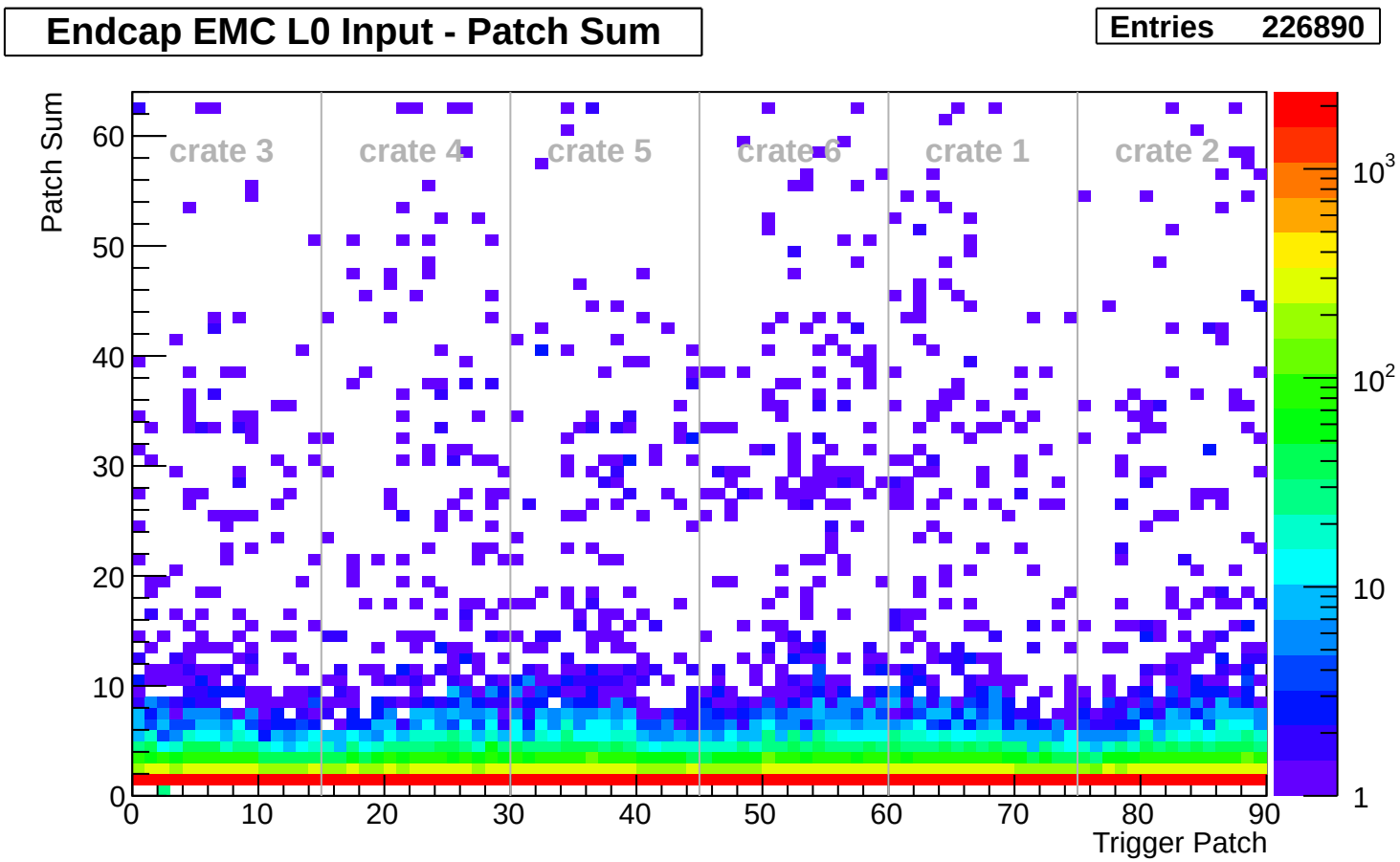
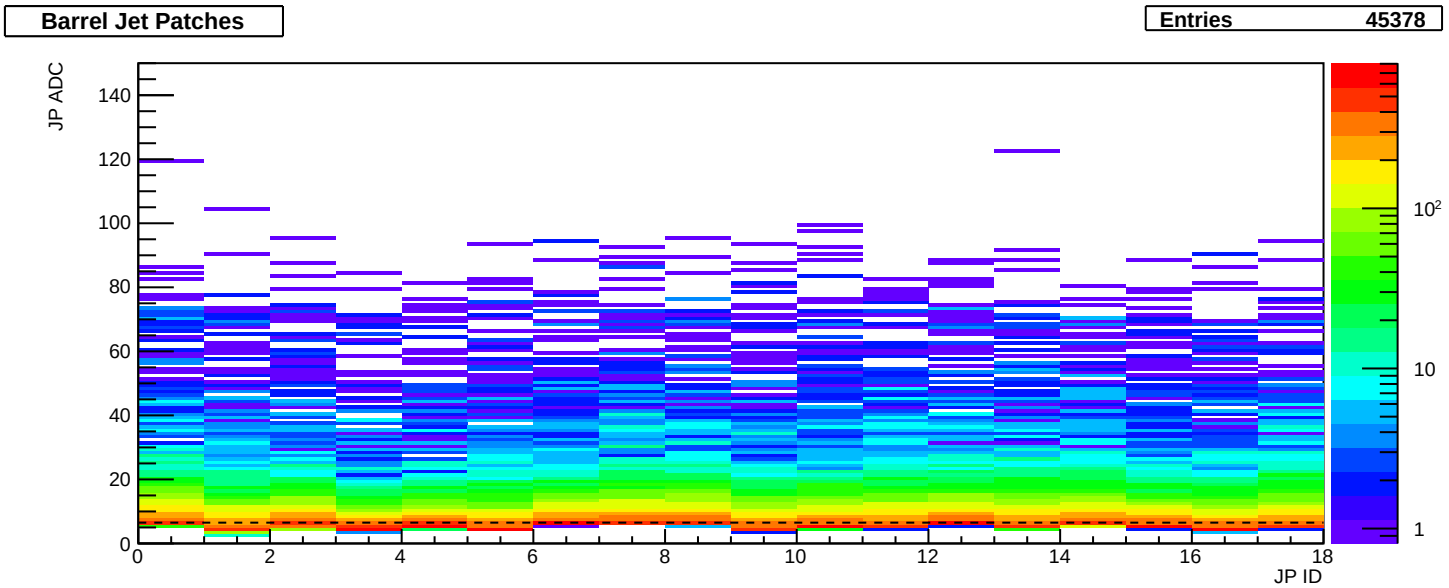
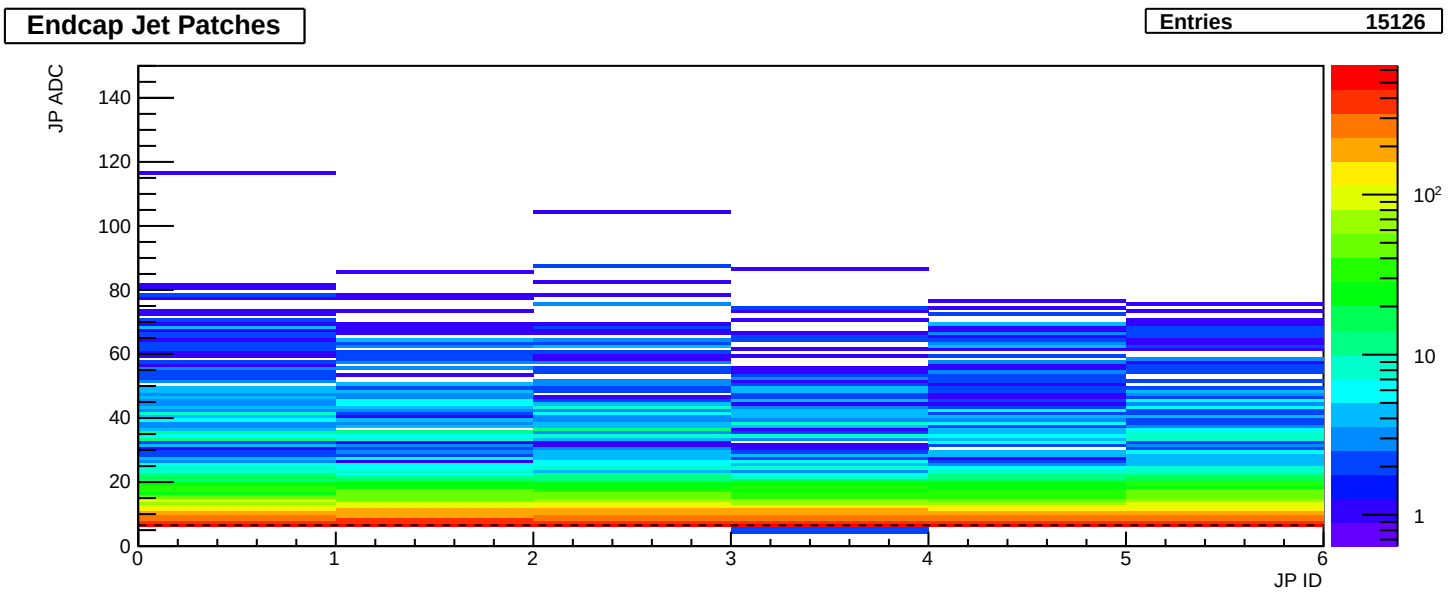

Barrel EMC L0 Input - High Tower
Entries 756300
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

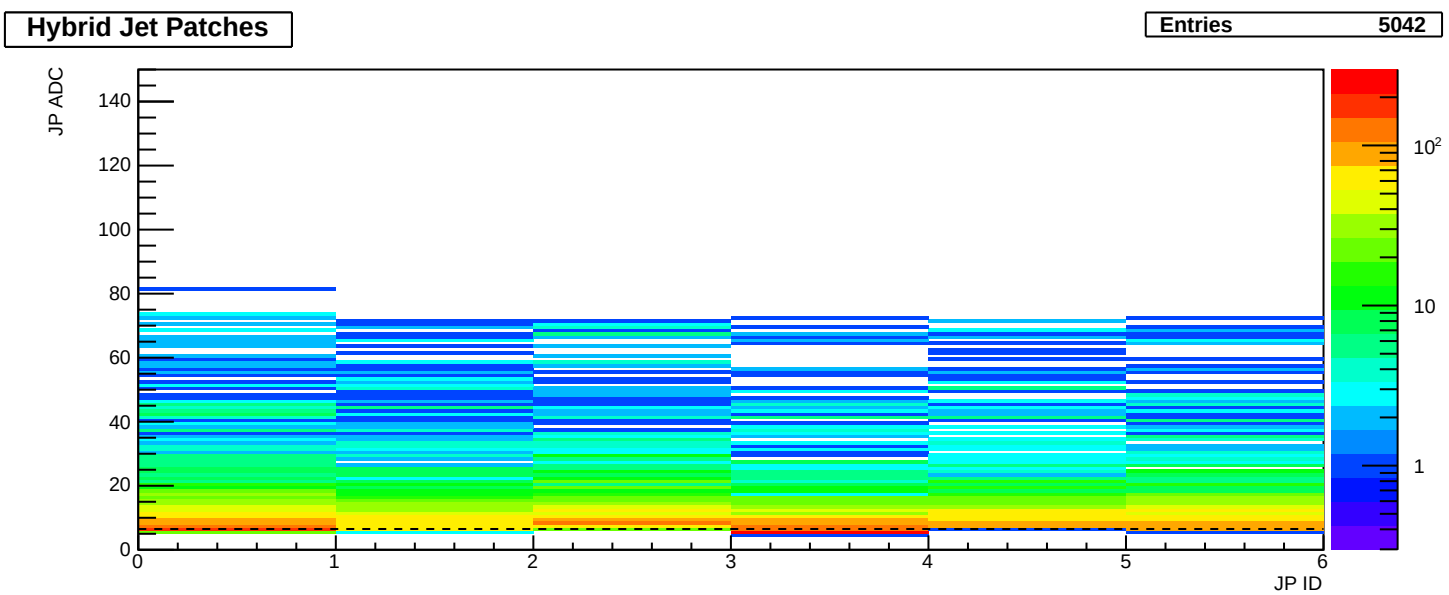

Barrel EMC L0 Input - Patch Sum
Entries 756300
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

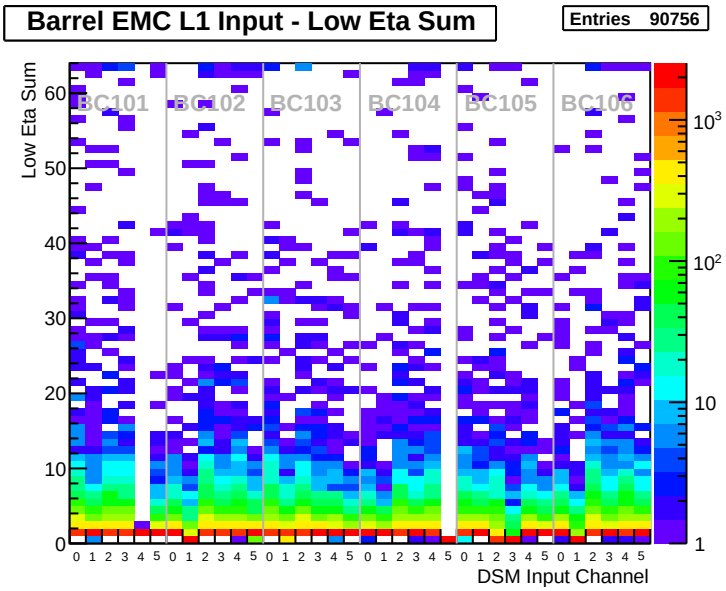

Endcap EMC L0 Input - High Tower
Entries 226890
High Tower
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

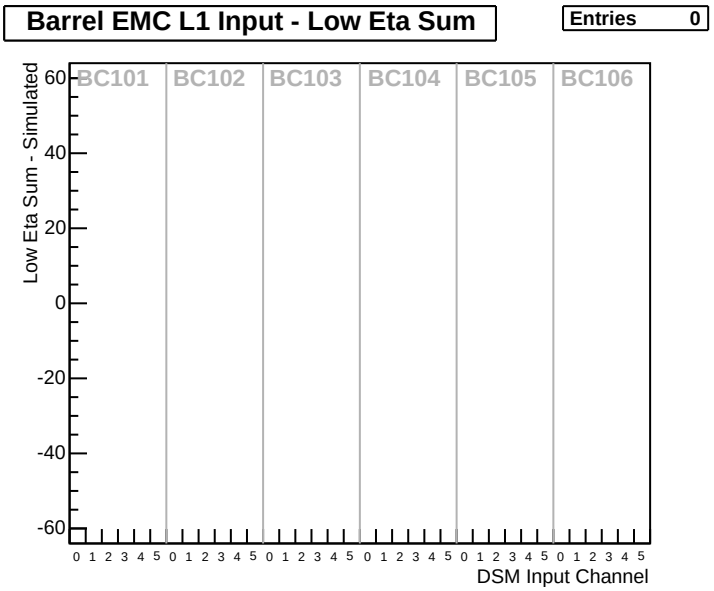

Endcap EMC L0 Input - Patch Sum
Entries 226890
Patch Sum
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

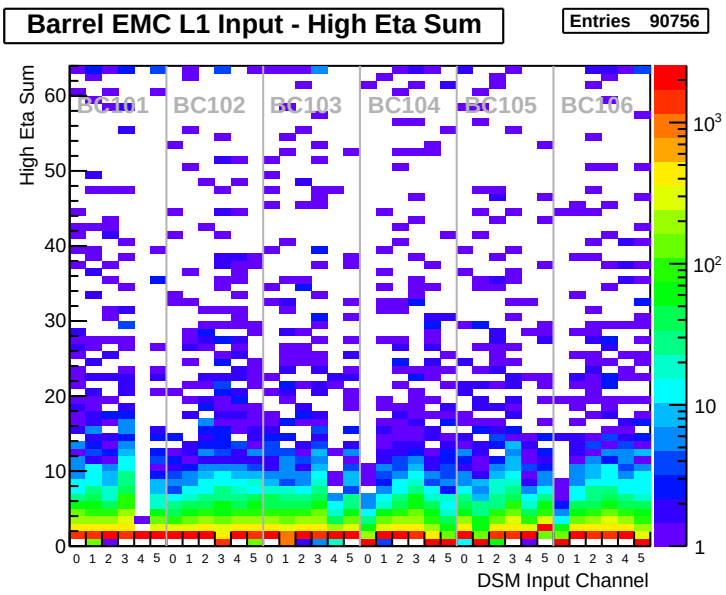

Barrel Jet Patches
Entries 45378
JP ADC
JP ID

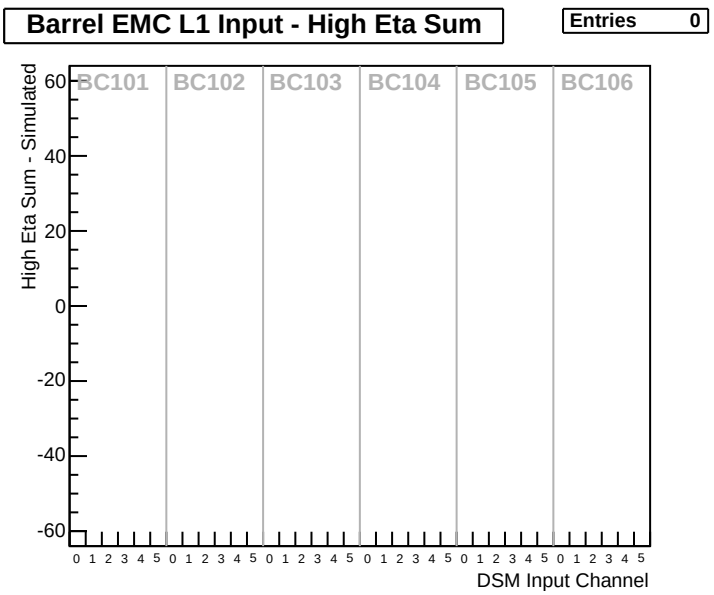

Endcap Jet Patches
Entries 15126
JP ADC
JP ID

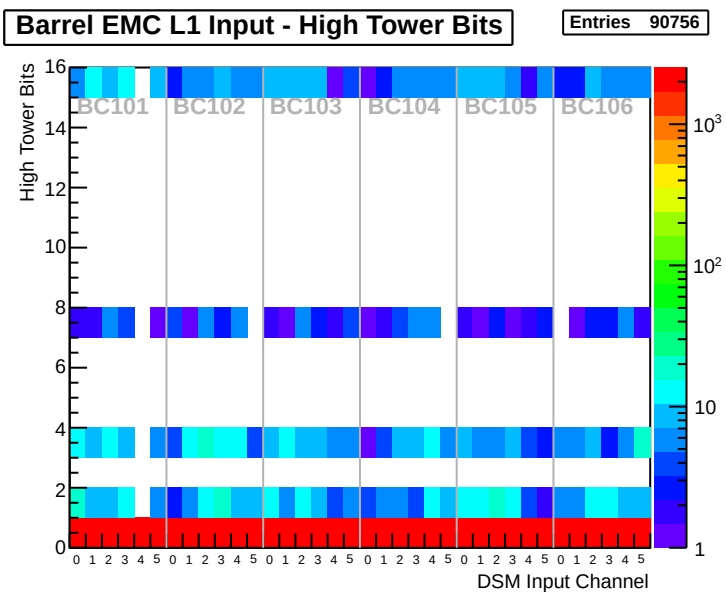

Hybrid Jet Patches
Entries 5042
JP ADC
JP ID

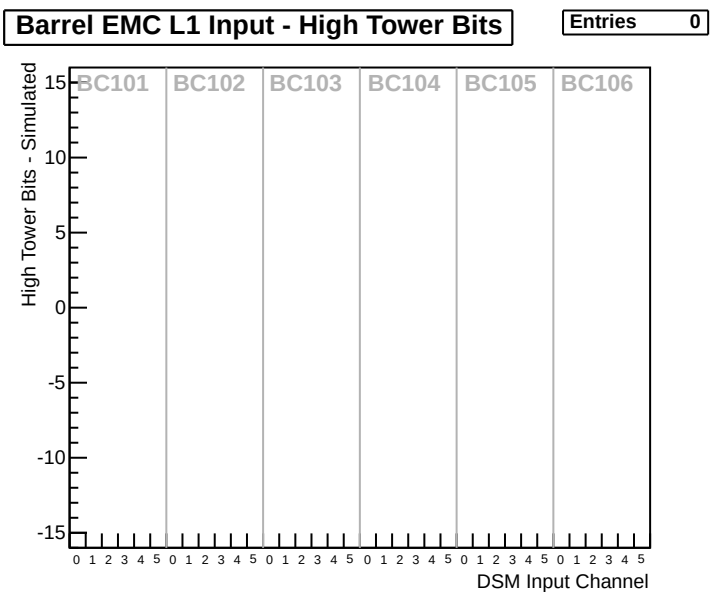

Barrel EMC L1 Input - Low Eta Sum
Entries 90756
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

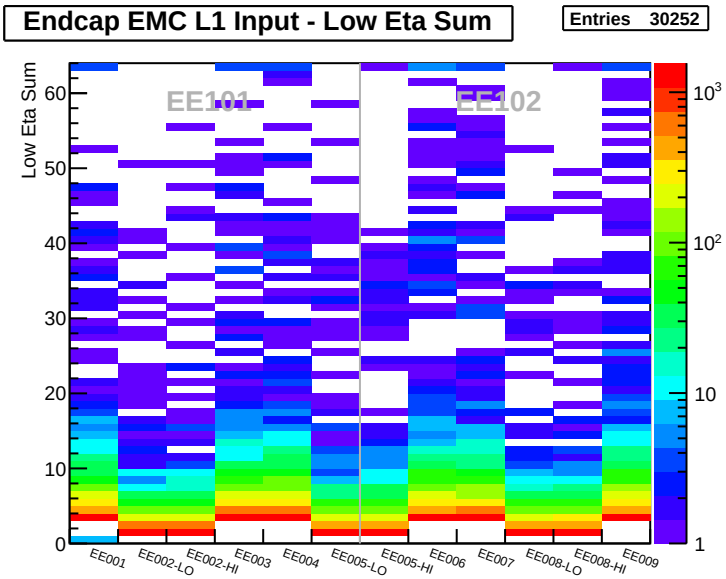

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

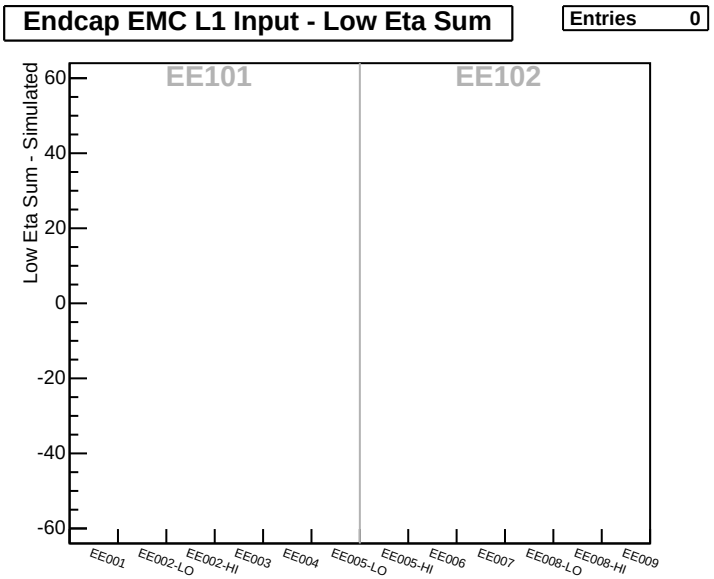

Barrel EMC L1 Input - High Eta Sum
Entries 90756
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

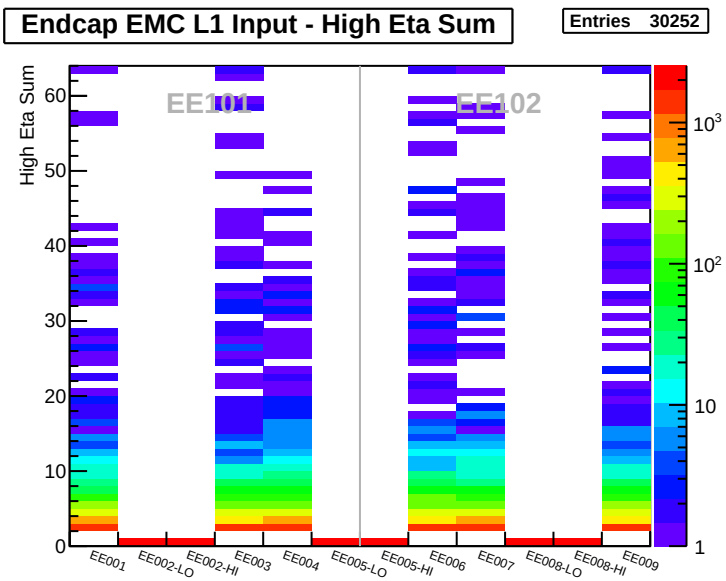

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

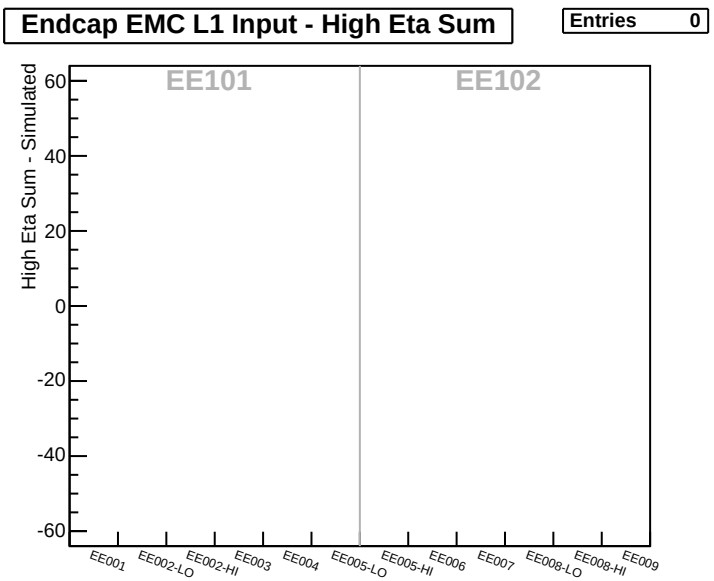

Barrel EMC L1 Input - High Tower Bits
Entries 90756
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

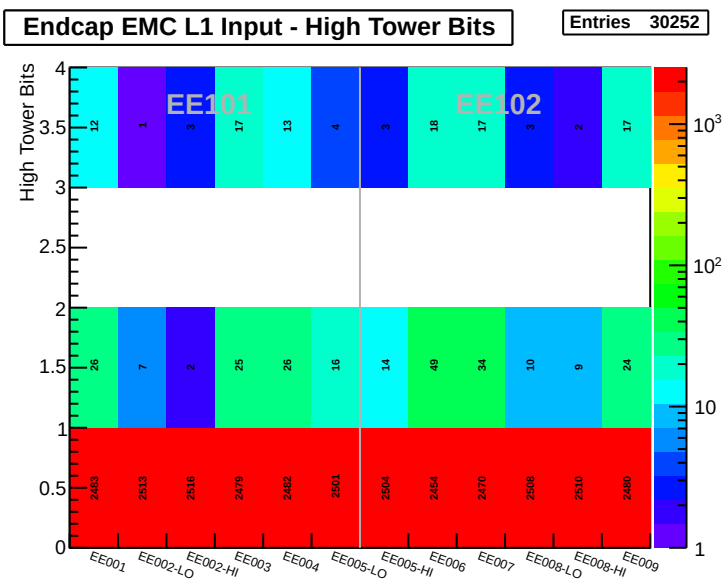

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

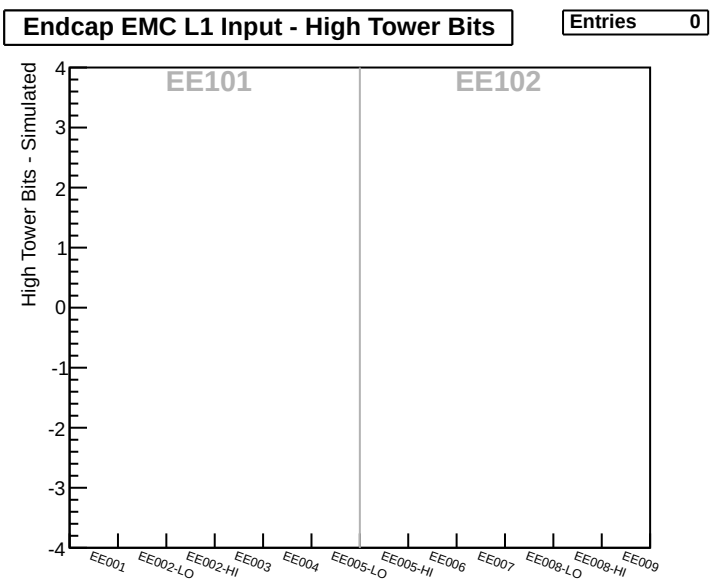

Endcap EMC L1 Input - Low Eta Sum
Entries 30252
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

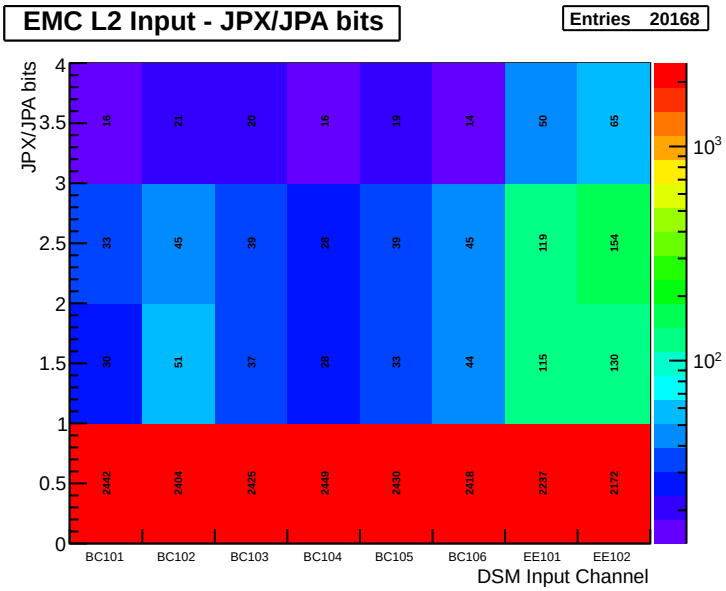

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

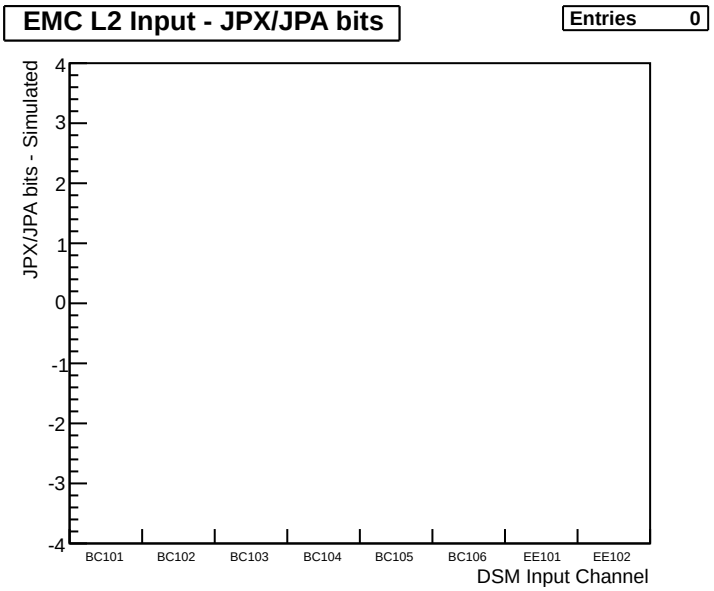

Endcap EMC L1 Input - High Eta Sum
Entries 30252
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

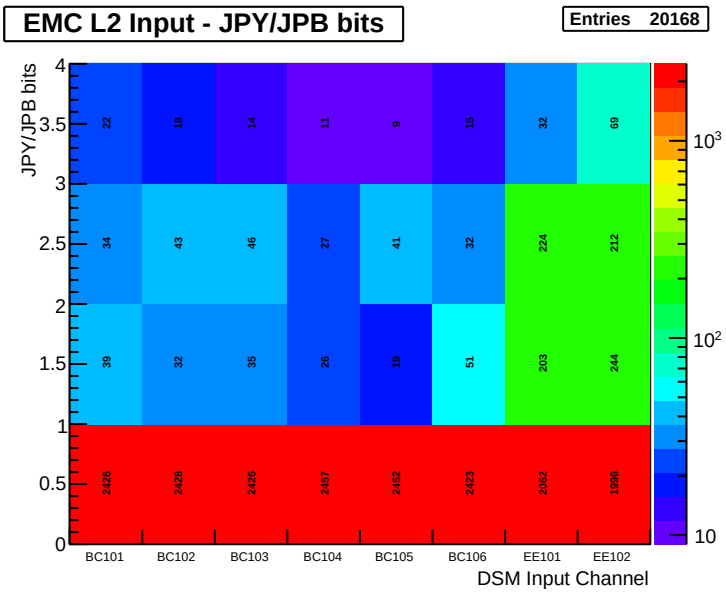

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

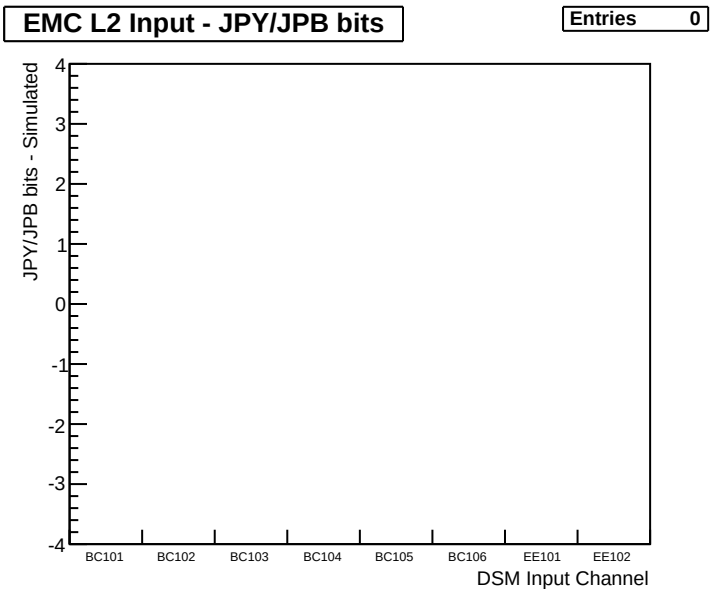

Endcap EMC L1 Input - High Tower Bits
Entries 30252
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

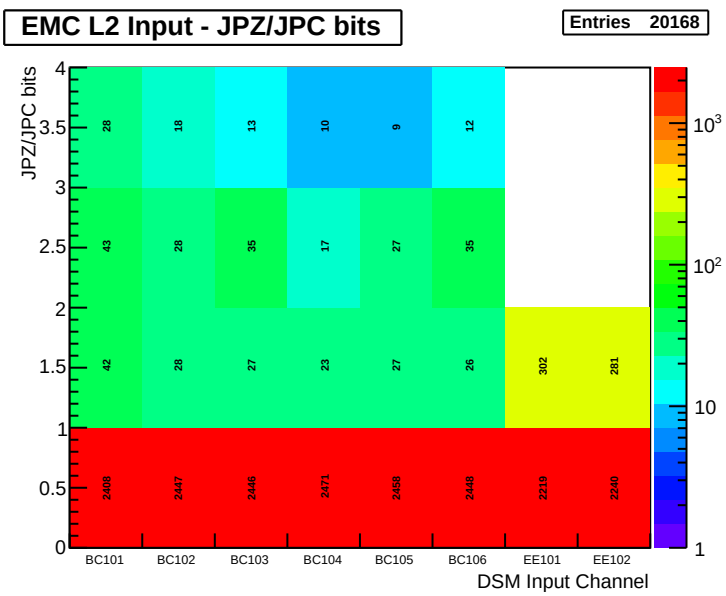

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

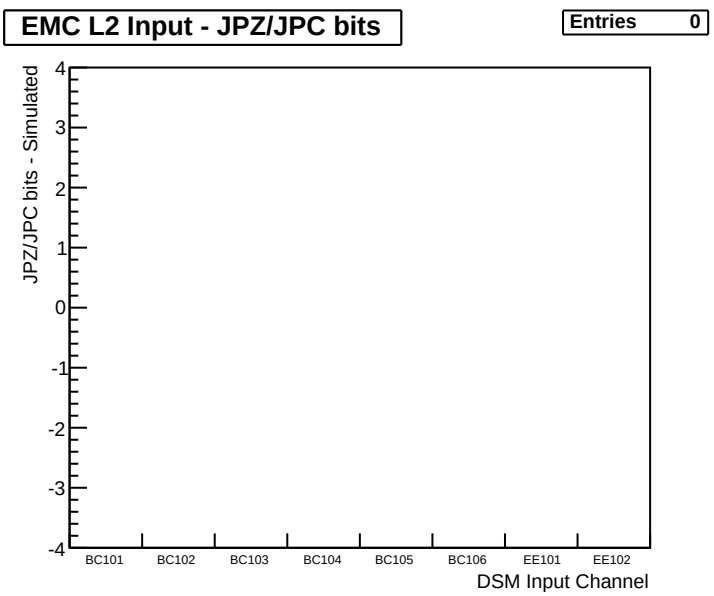

EMC L2 Input - JPX/JPA bits
Entries 20168
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
16 21 20 16 19 14 50 65
33 45 39 28 39 45 119 154
30 51 37 28 33 44 115 130
2442 2404 2425 2449 2430 2418 2237 2172

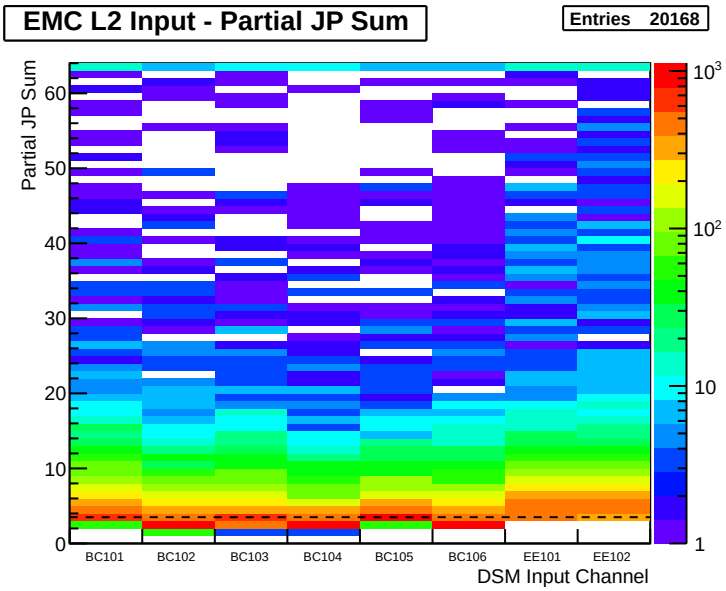

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

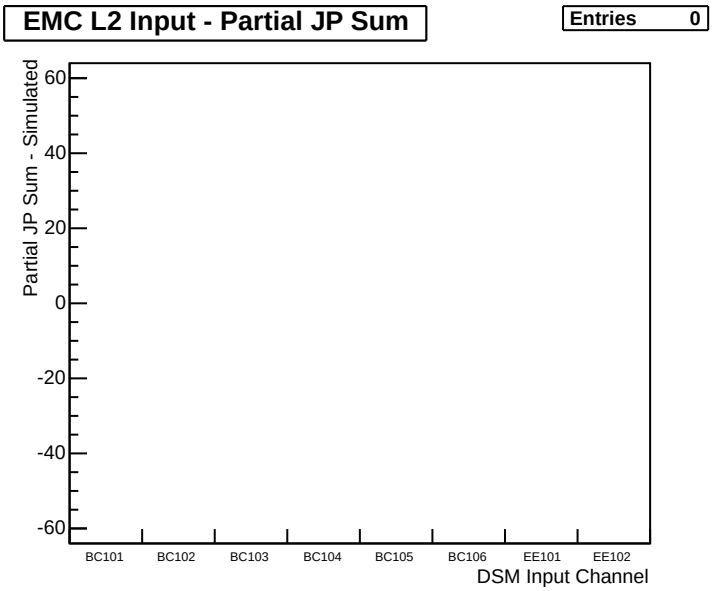

EMC L2 Input - JPY/JPB bits
Entries 20168
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
22 18 14 11 9 15 32 69
34 43 46 27 41 32 224 212
39 32 35 26 19 51 203 244
2426 2428 2426 2457 2452 2423 2062 1996

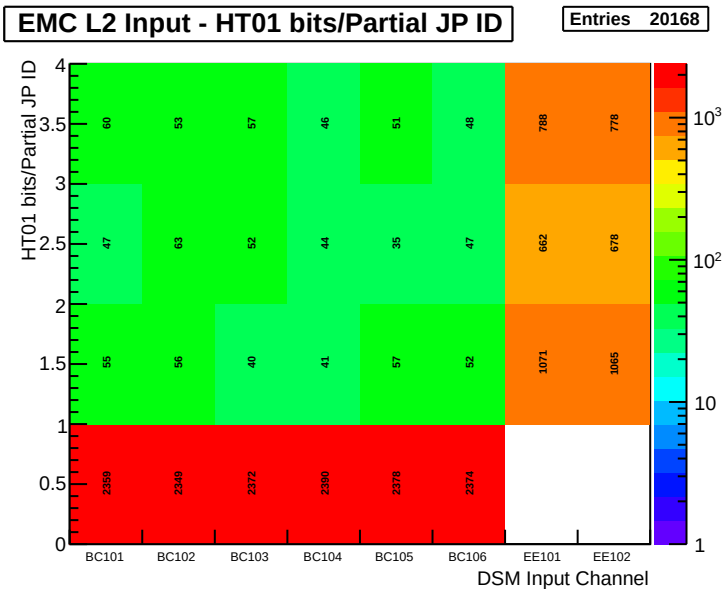

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

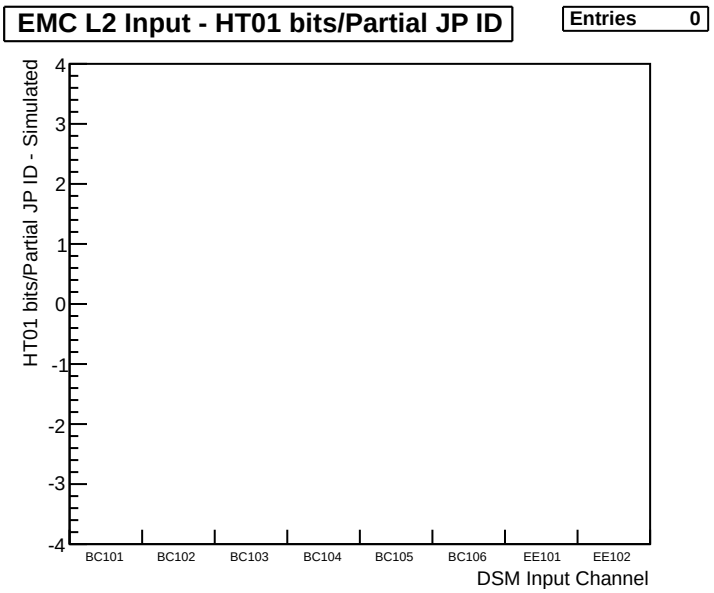

EMC L2 Input - JPZ/JPC bits
Entries 20168
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
28 18 13 10 9 12
43 28 35 17 27 35
42 28 27 23 27 26 302 281
2408 2447 2446 2471 2458 2448 2219 2240

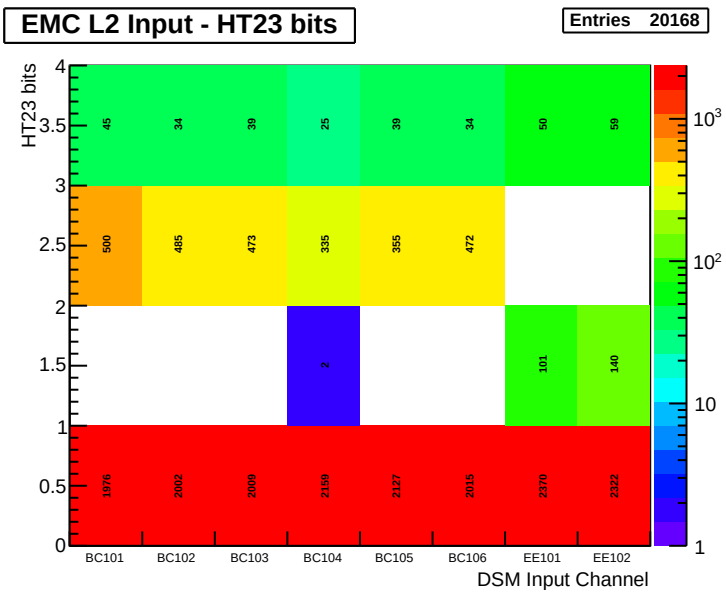

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

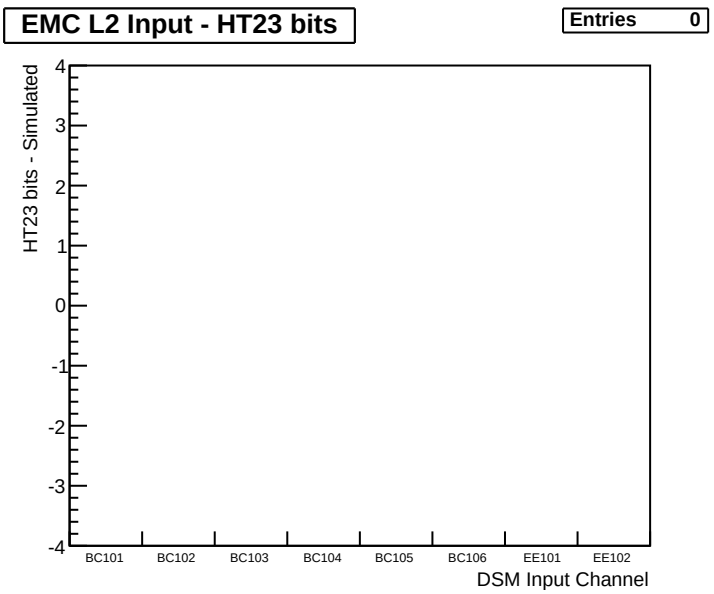

EMC L2 Input - Partial JP Sum
Entries 20168
Partial JP Sum
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

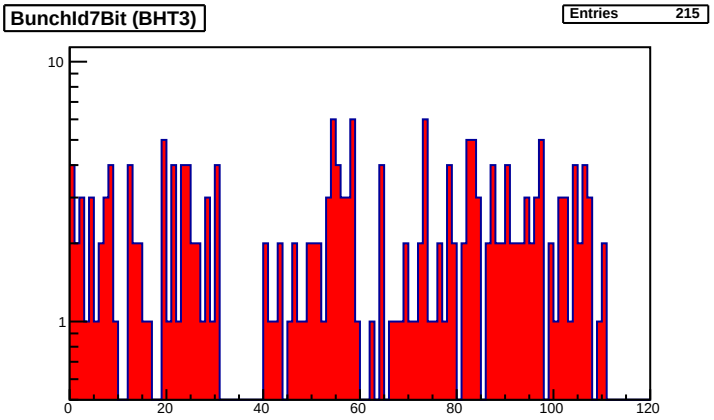

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

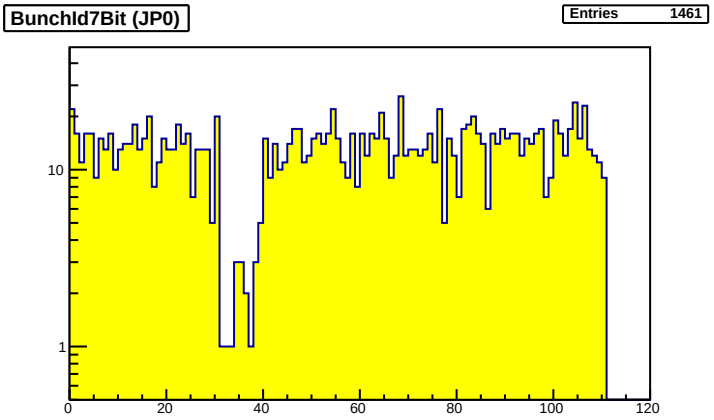

EMC L2 Input - HT01 bits/Partial JP ID
Entries 20168
HT01 bits/Partial JP ID
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

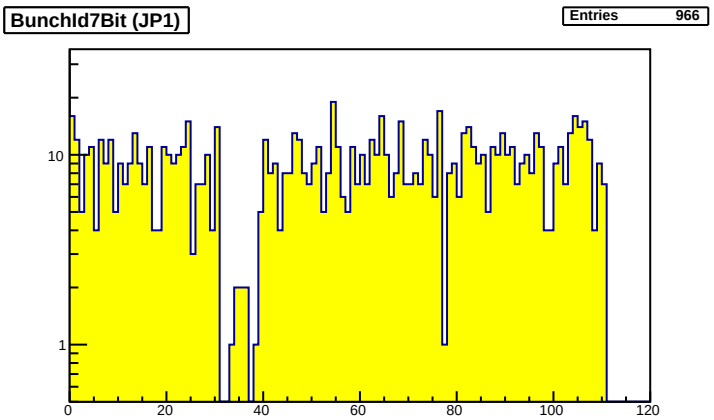

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

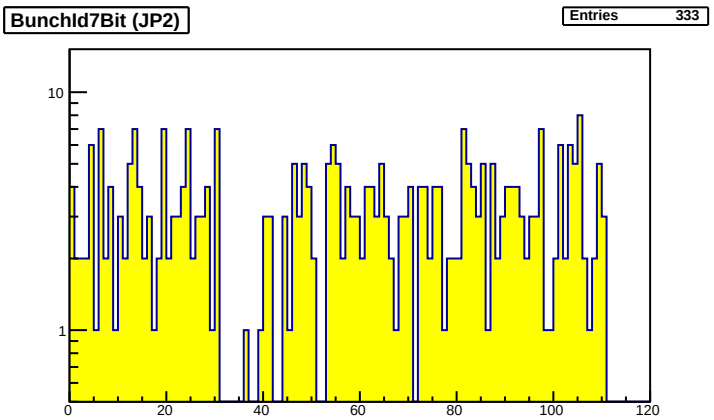

EMC L2 Input - HT23 bits
Entries 20168
HT23 bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

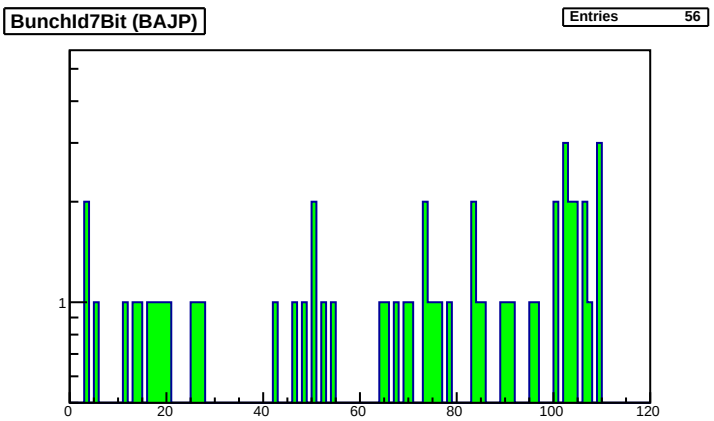

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

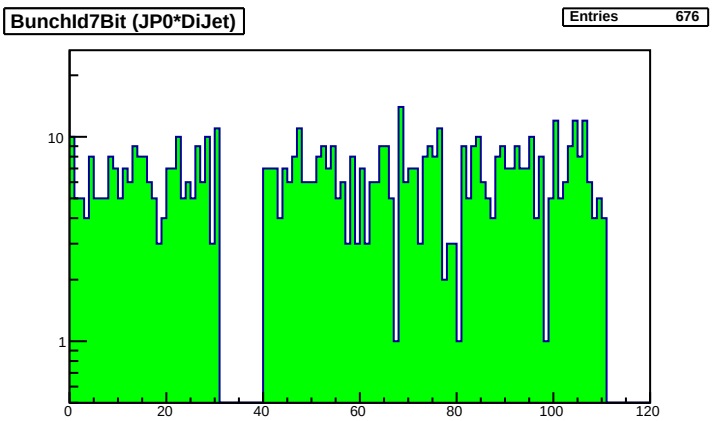

BunchId7Bit (BHT3)
Entries 215

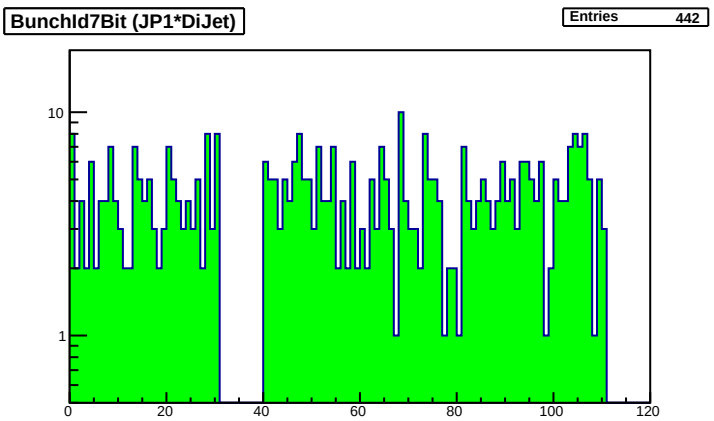

BunchId7Bit (JP0)
Entries 1461

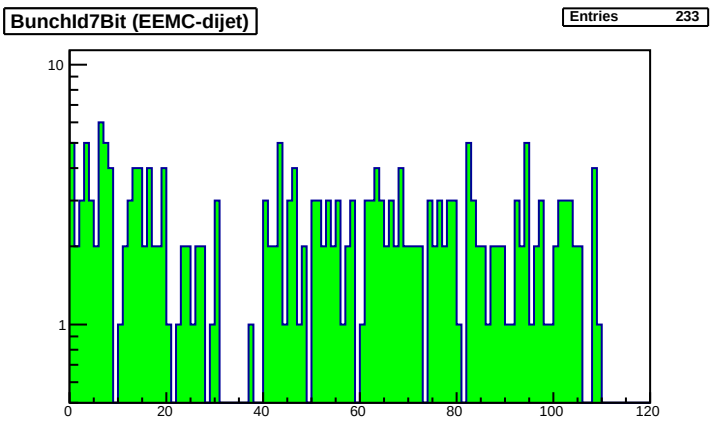

BunchId7Bit (JP1)
Entries 966

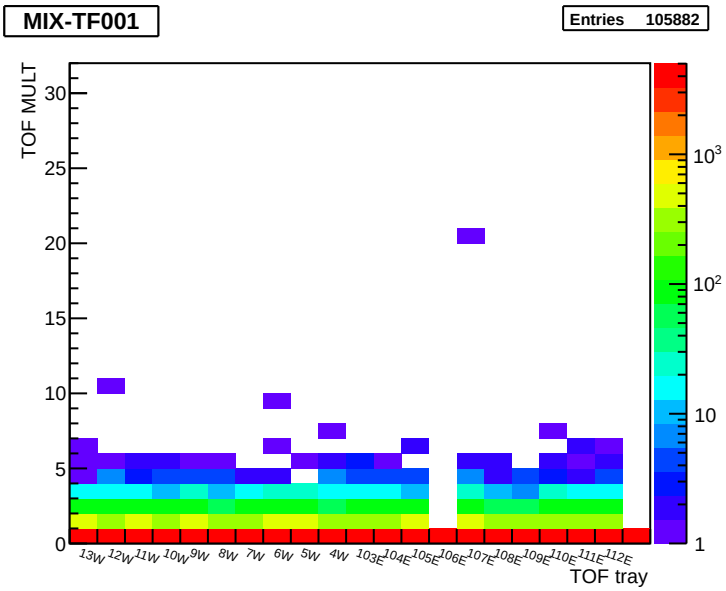

BunchId7Bit (JP2)
Entries 333

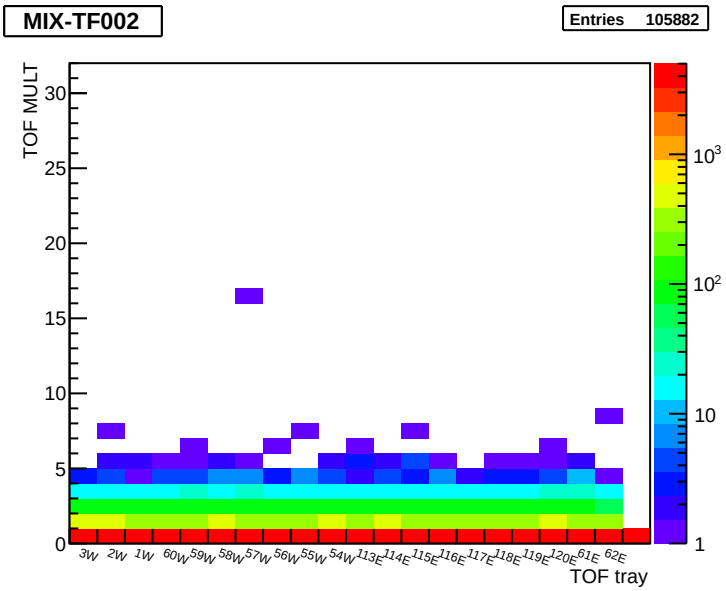

BunchId7Bit (BAJP)
Entries 56

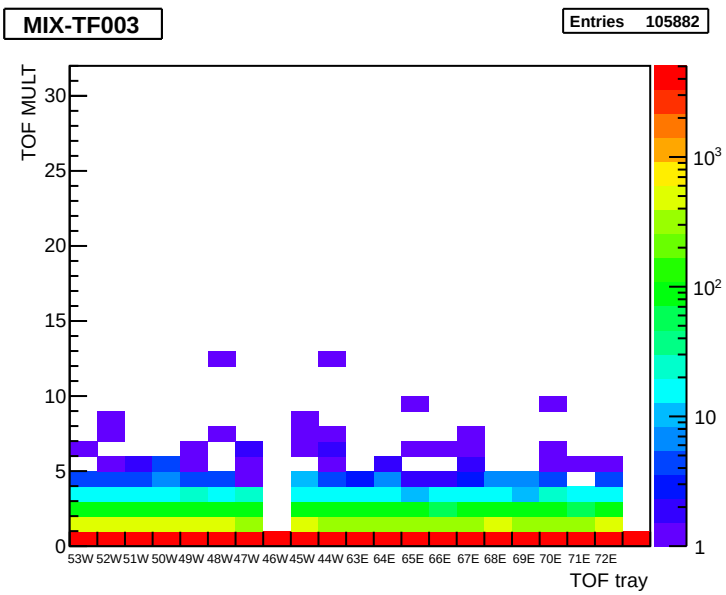

BunchId7Bit (JP0*DiJet)
Entries 676

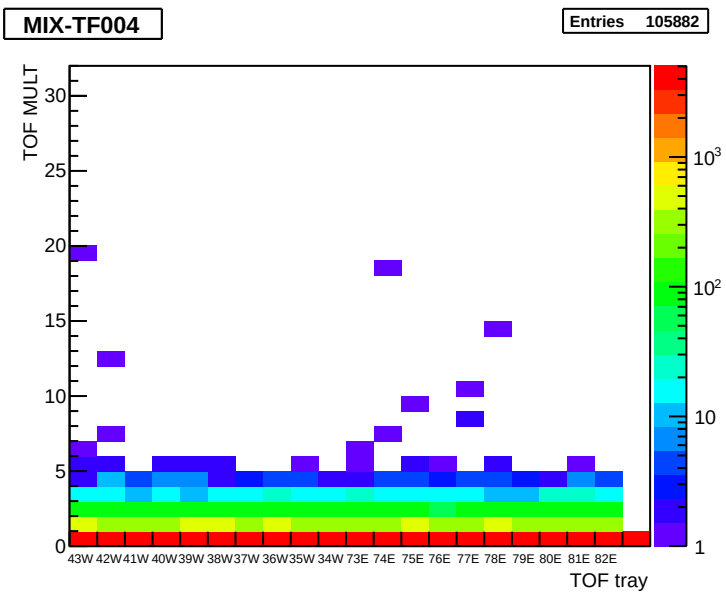

BunchId7Bit (JP1*DiJet)
Entries 442

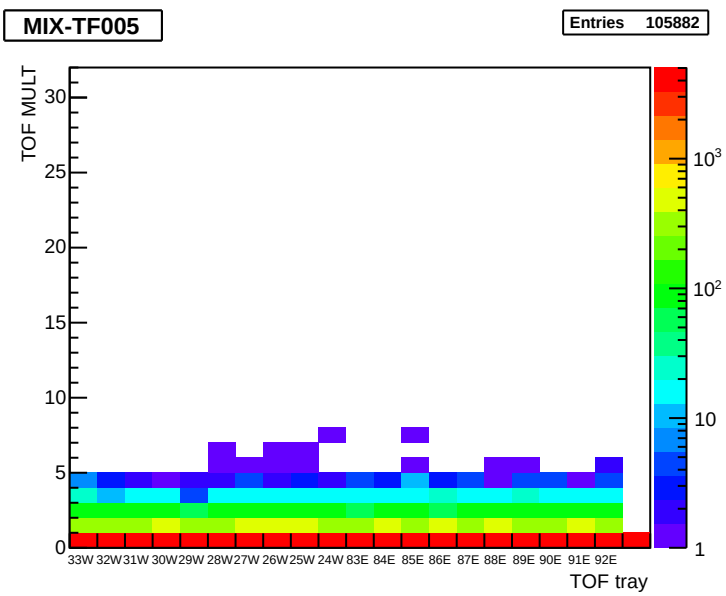

BunchId7Bit (EEMC-dijet)
Entries 233

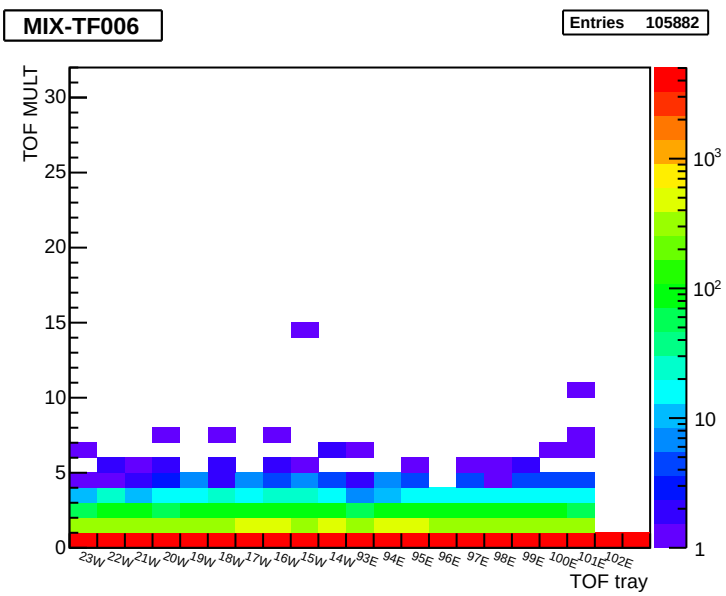

MIX-TF001
Entries 105882
TOF MULT
TOF tray

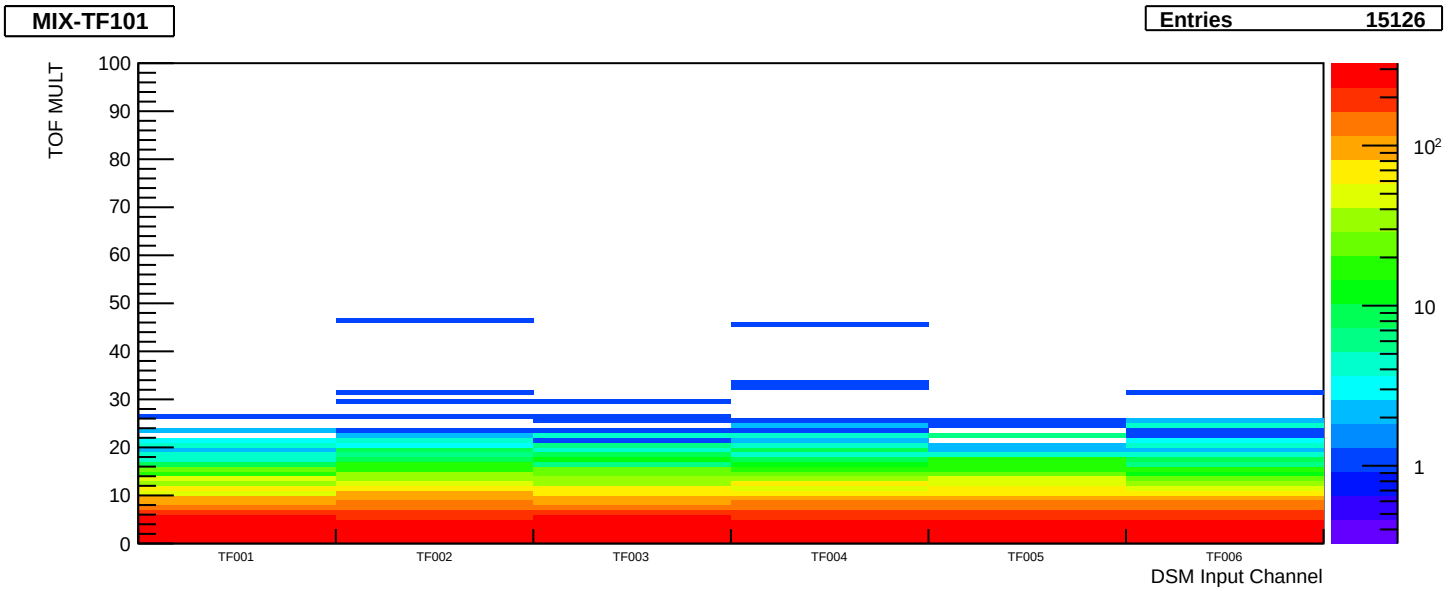

MIX-TF002
Entries 105882
TOF MULT
TOF tray

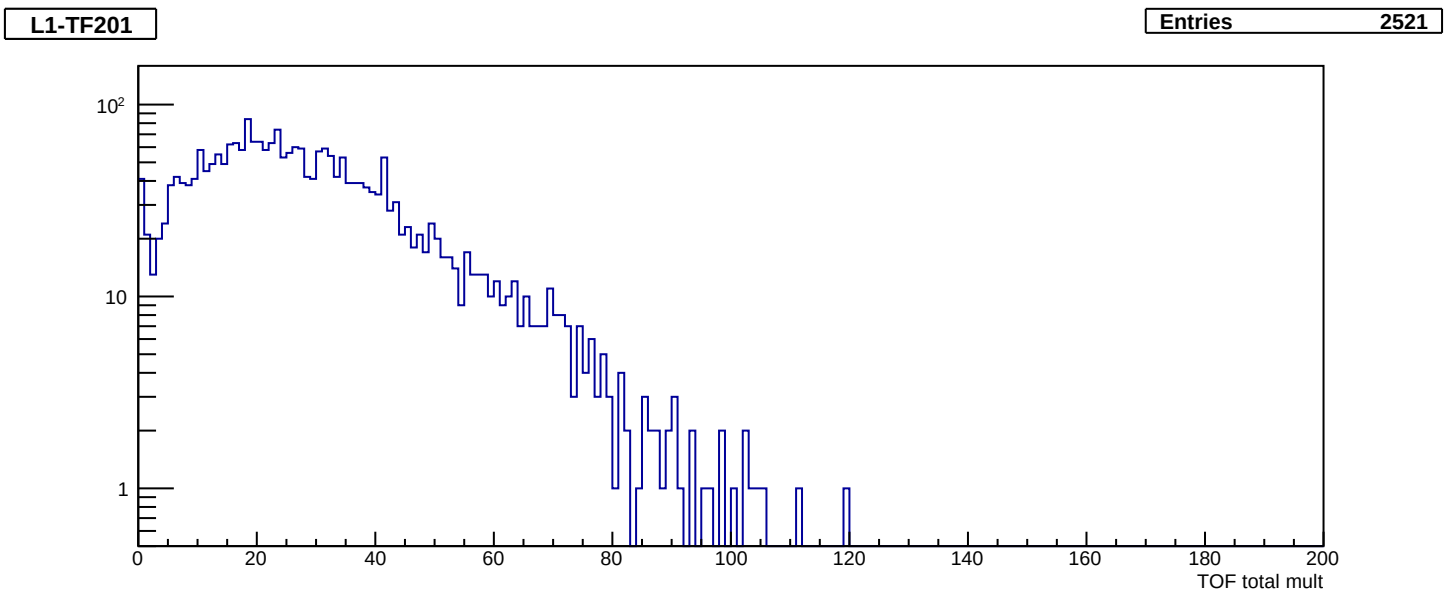

MIX-TF003
Entries 105882
TOF MULT
TOF tray

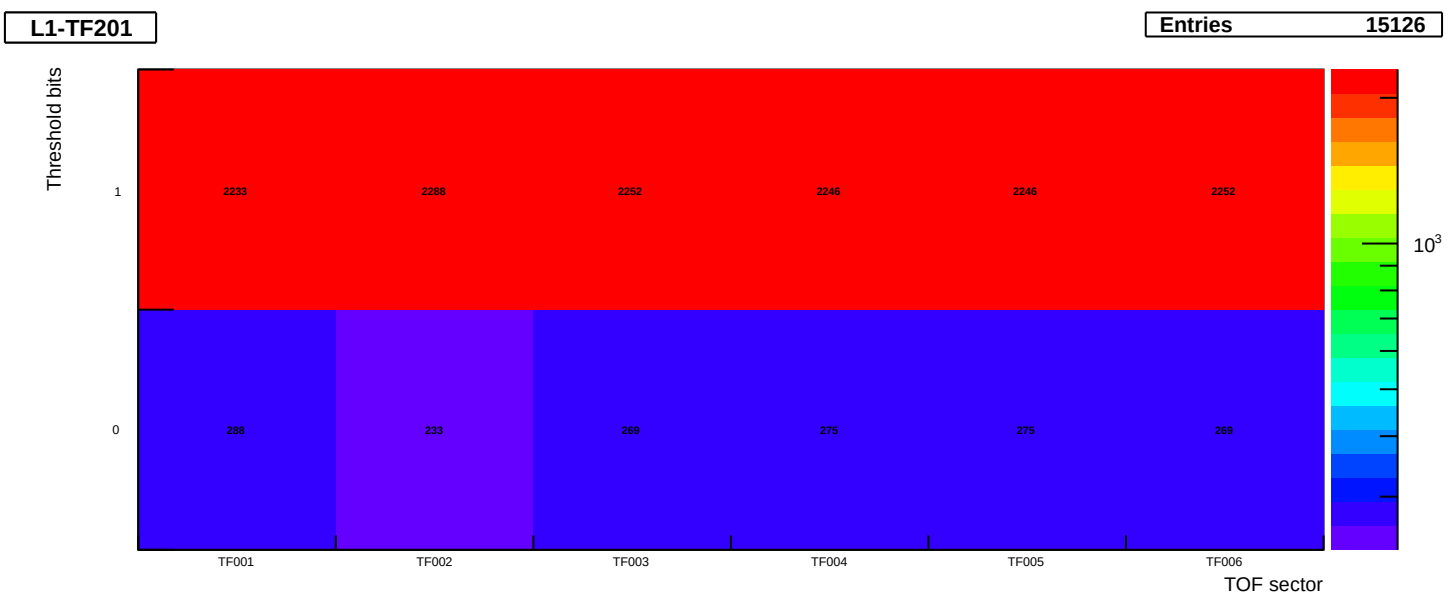

MIX-TF004
Entries 105882
TOF MULT
TOF tray

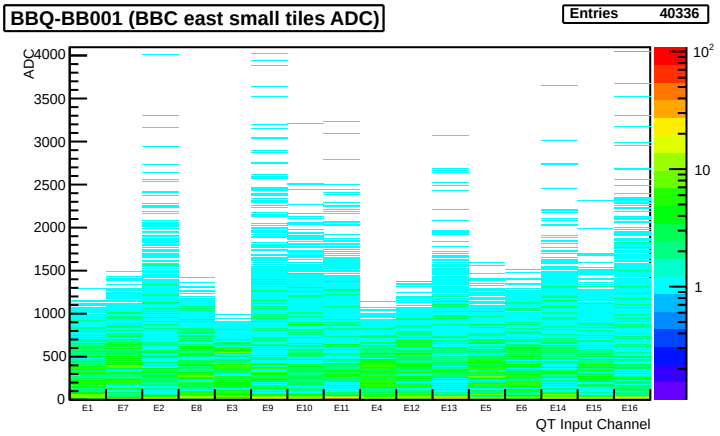

MIX-TF005
Entries 105882
TOF MULT
TOF tray

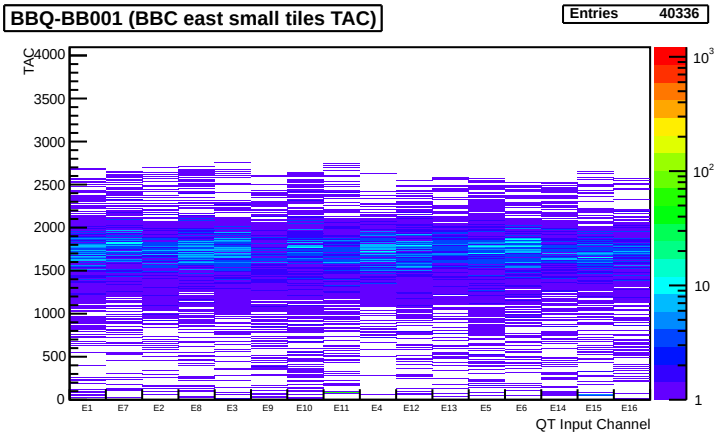

MIX-TF006
Entries 105882
TOF MULT
TOF tray

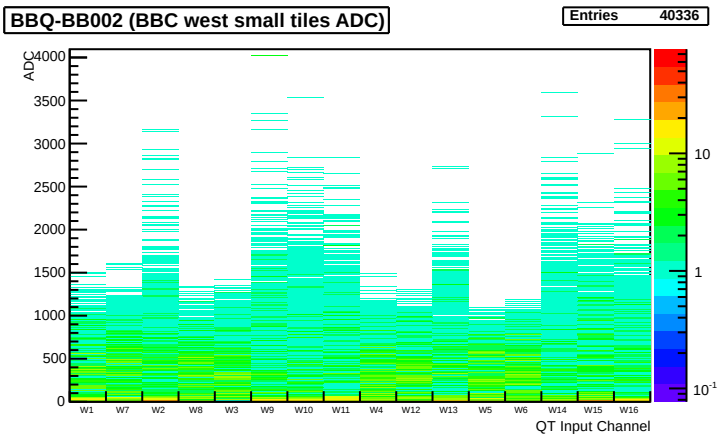

MIX-TF101
Entries 15126
TOF MULT
100
90
80
70
60
50
40
30
20
10
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^2
10
1

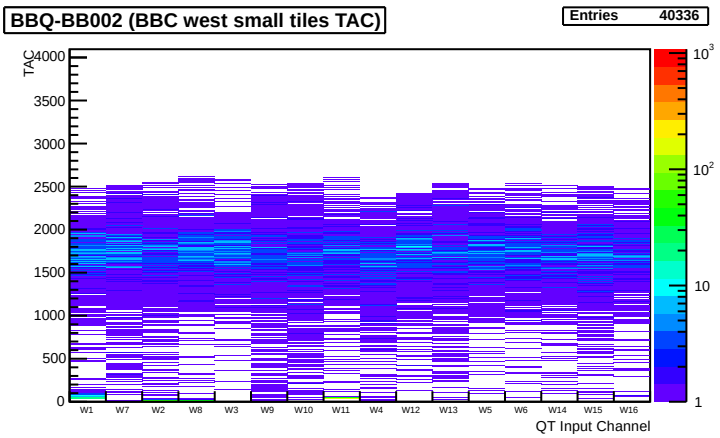

L1-TF201
Entries 2521
10^2
10
1
0
20
40
60
80
100
120
140
160
180
200
TOF total mult

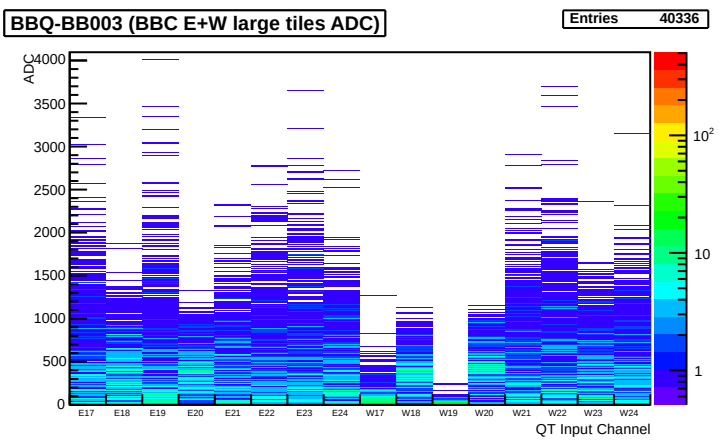

L1-TF201
Entries 15126
Threshold bits
1
0
2233
2288
2252
2246
2246
2252
288
233
269
275
275
269
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^3

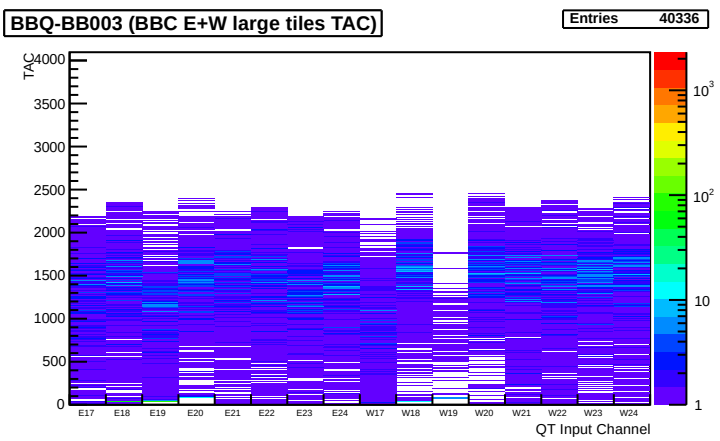

BBQ-BB001 (BBC east small tiles ADC)
Entries 40336
ADC
QT Input Channel

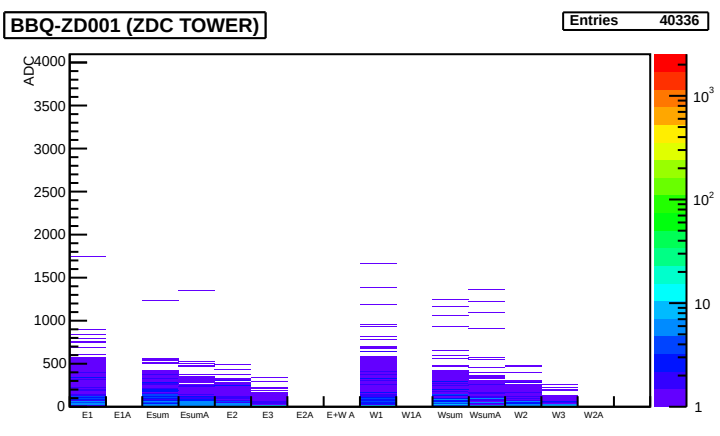

BBQ-BB001 (BBC east small tiles TAC)
Entries 40336
TAC
QT Input Channel

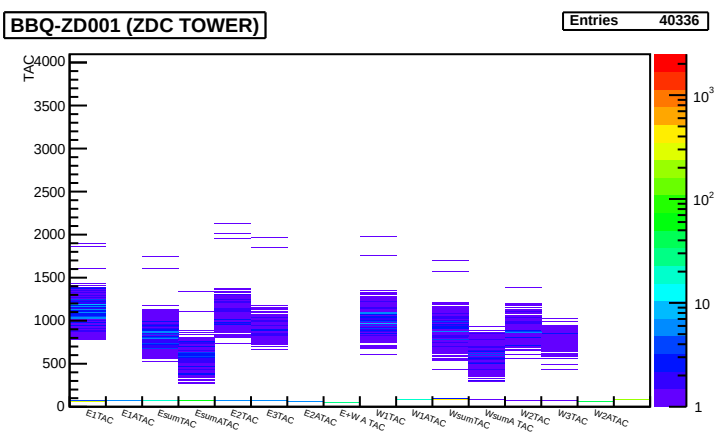

BBQ-BB002 (BBC west small tiles ADC)
Entries 40336
ADC
QT Input Channel

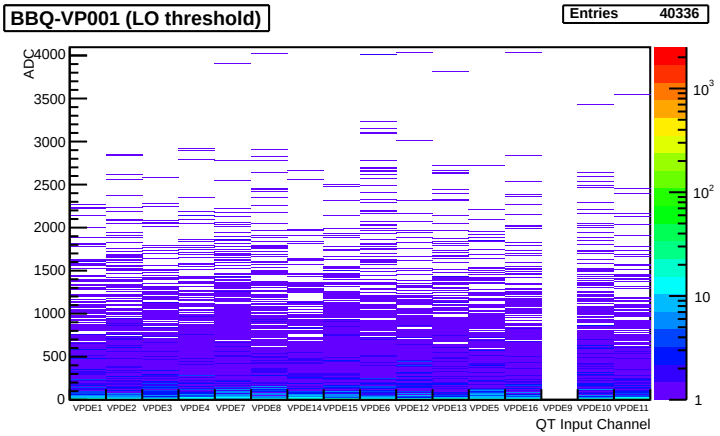

BBQ-BB002 (BBC west small tiles TAC)
Entries 40336
TAC
QT Input Channel

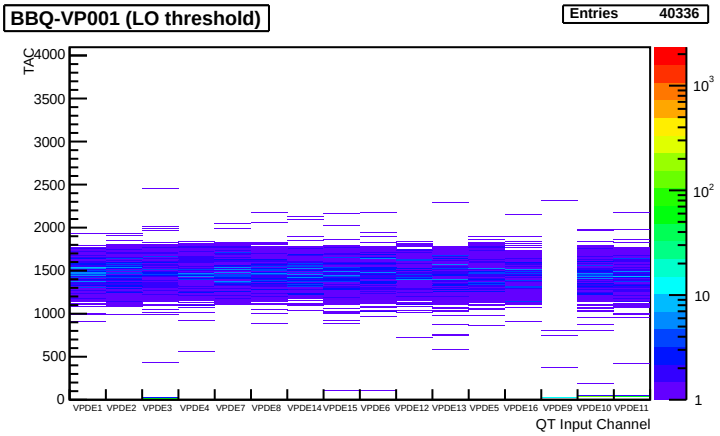

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 40336
ADC
QT Input Channel

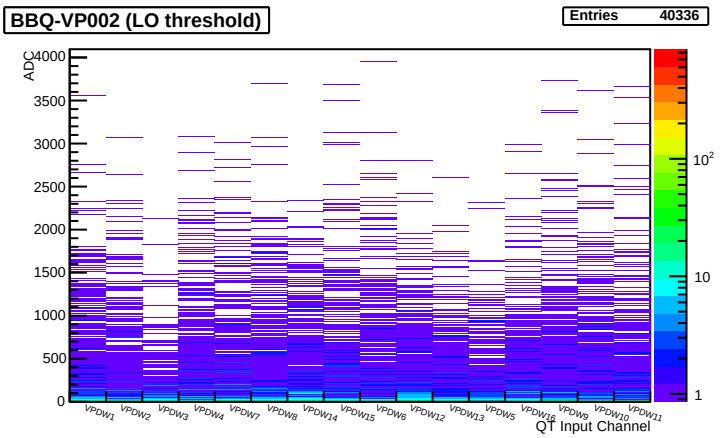

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 40336
TAC
QT Input Channel

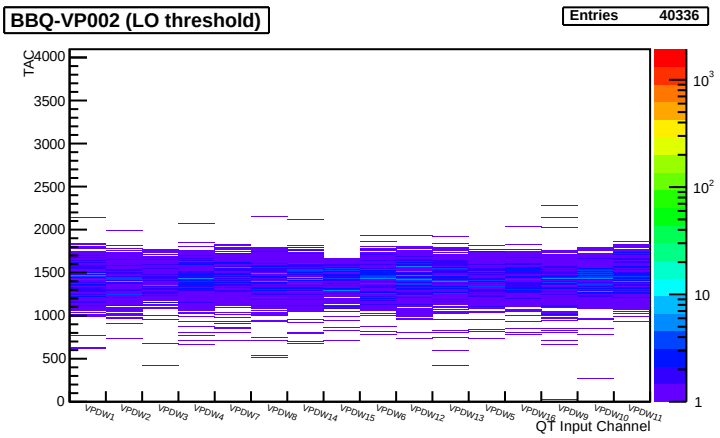

BBQ-ZD001 (ZDC TOWER)
Entries 40336
ADC

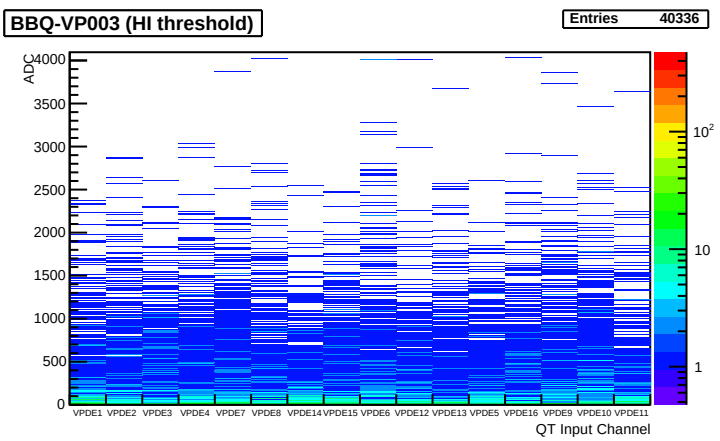

BBQ-ZD001 (ZDC TOWER)
Entries 40336
TAC

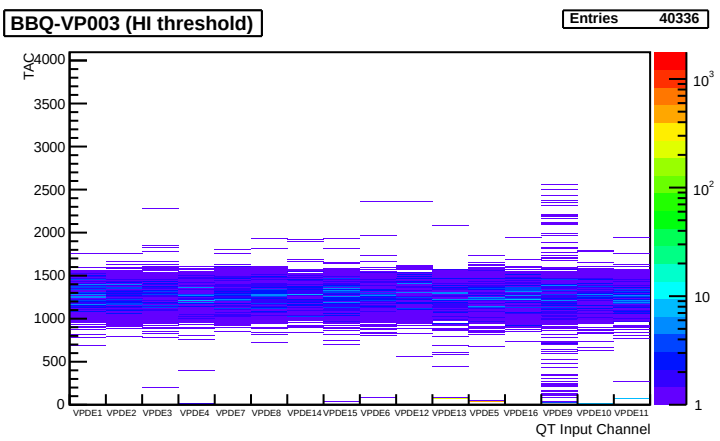

BBQ-VP001 (LO threshold)
Entries 40336
ADC
QT Input Channel

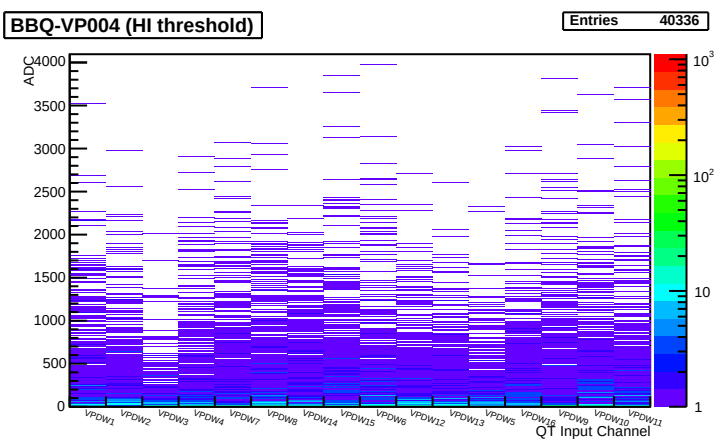

BBQ-VP001 (LO threshold)
Entries 40336
TAC
QT Input Channel

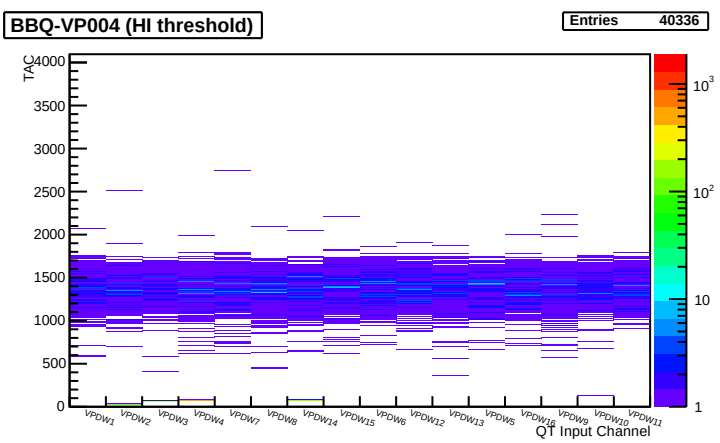

BBQ-VP002 (LO threshold)
Entries 40336
ADC
QT Input Channel

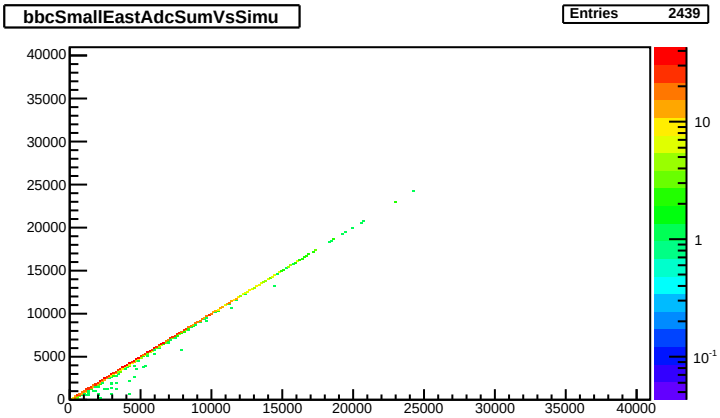

BBQ-VP002 (LO threshold)
Entries 40336
TAC
QT Input Channel

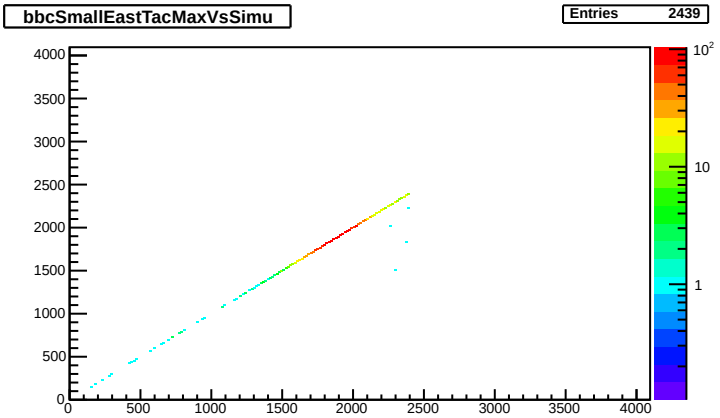

BBQ-VP003 (HI threshold)
Entries 40336
ADC
QT Input Channel

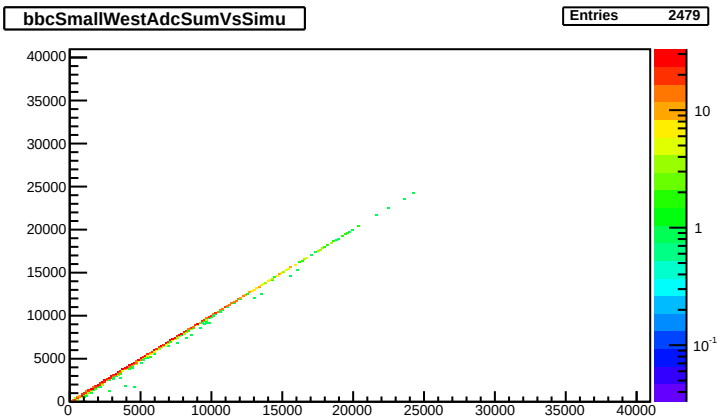

BBQ-VP003 (HI threshold)
Entries 40336
TAC
QT Input Channel

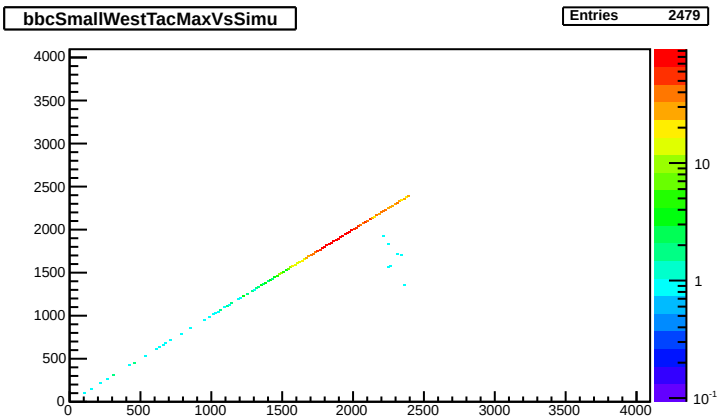

BBQ-VP004 (HI threshold)
Entries 40336
ADC
QT Input Channel

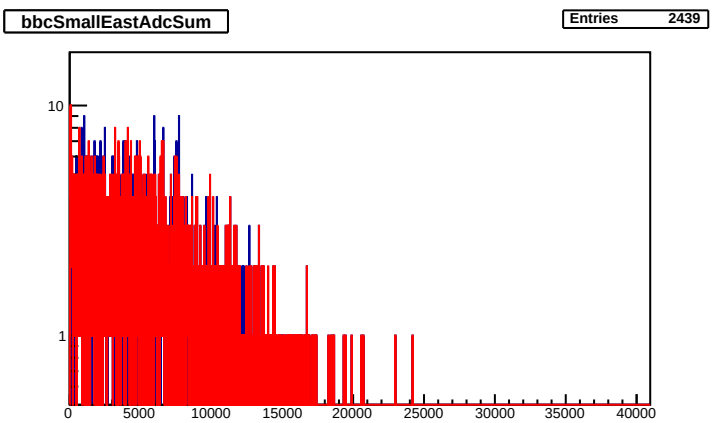

BBQ-VP004 (HI threshold)
Entries 40336
TAC
QT Input Channel

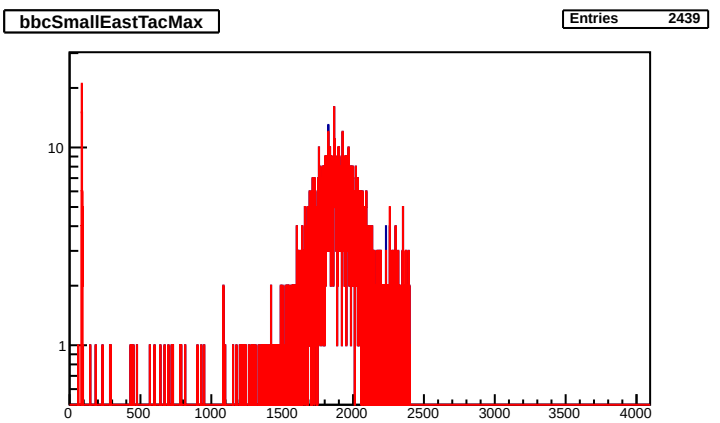

bbcSmallEastAdcSumVsSimu
Entries 2439

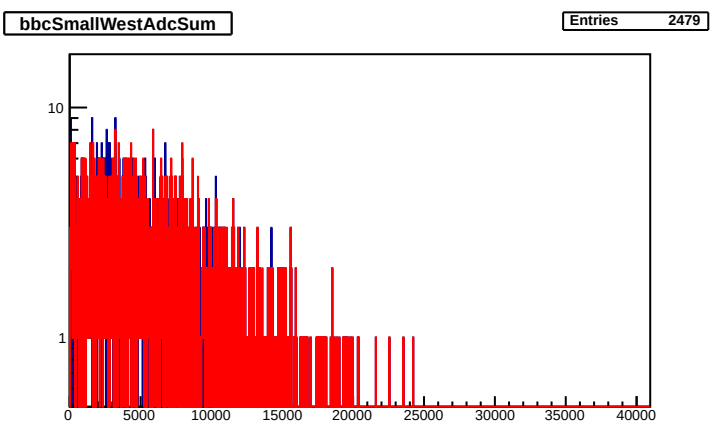

bbcSmallEastTacMaxVsSimu
Entries 2439

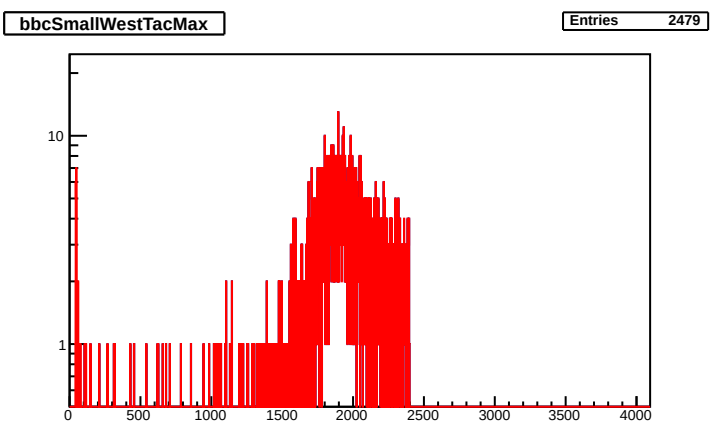

bbcSmallWestAdcSumVsSimu
Entries 2479

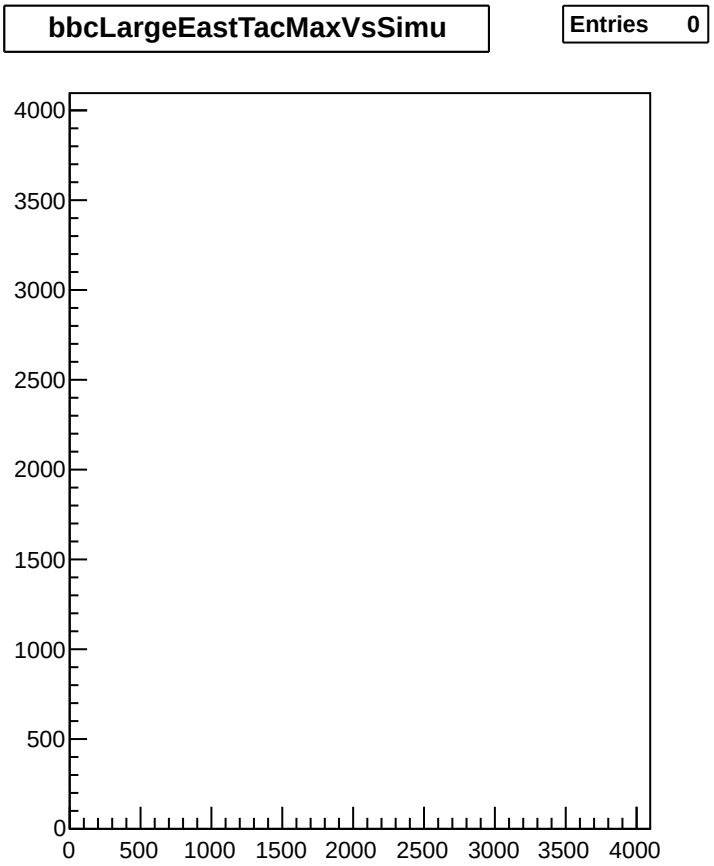

bbcSmallWestTacMaxVsSimu
Entries 2479

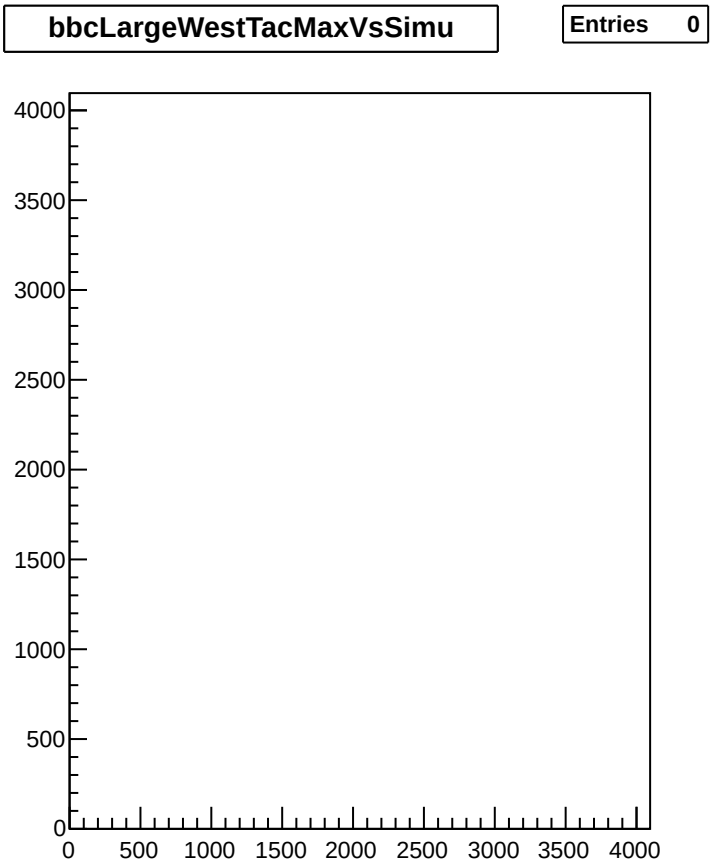

bbcSmallEastAdcSum
Entries 2439

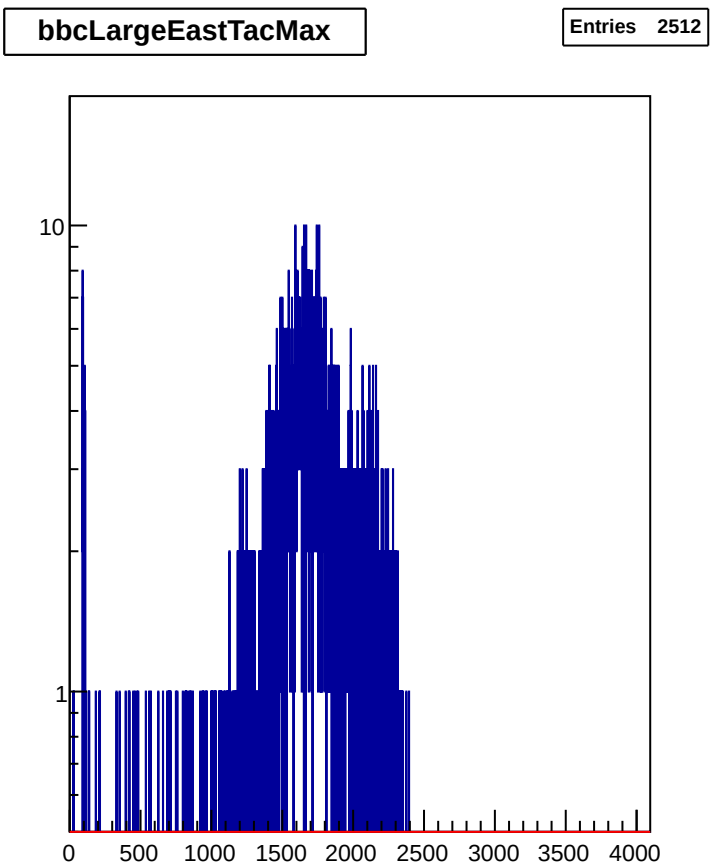

bbcSmallEastTacMax
Entries 2439

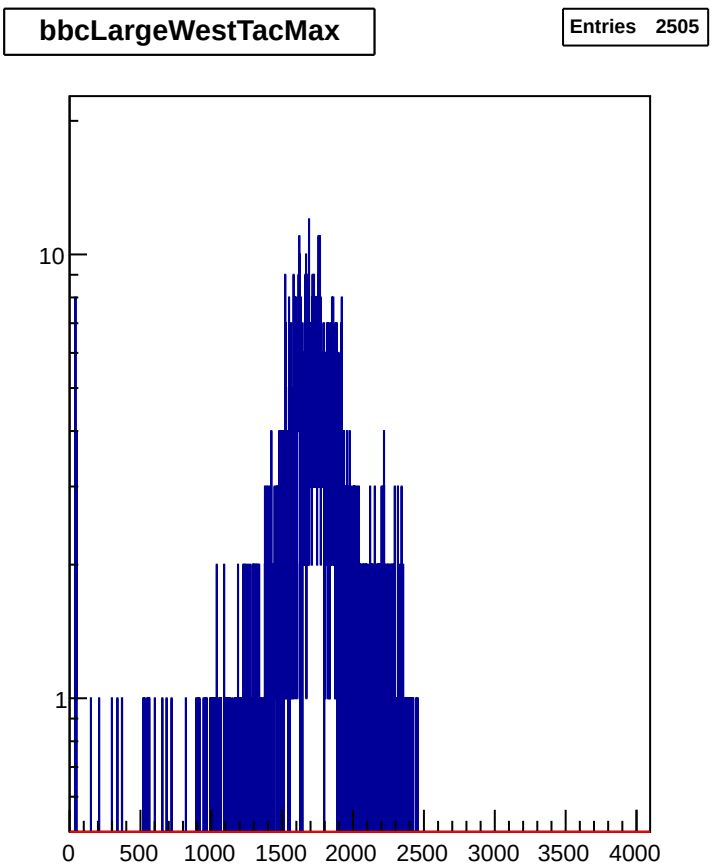

bbcSmallWestAdcSum
Entries 2479

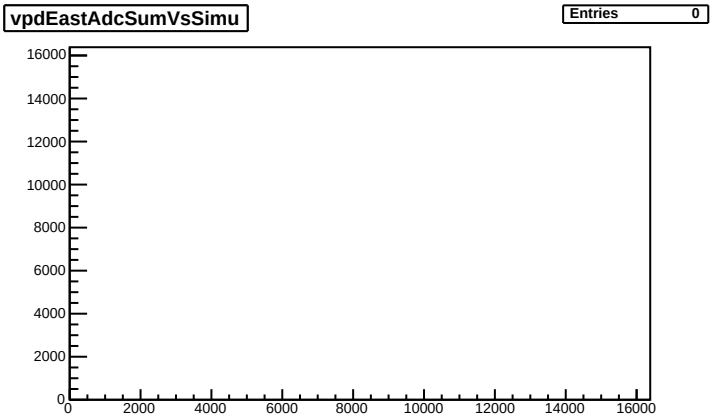

bbcSmallWestTacMax
Entries 2479

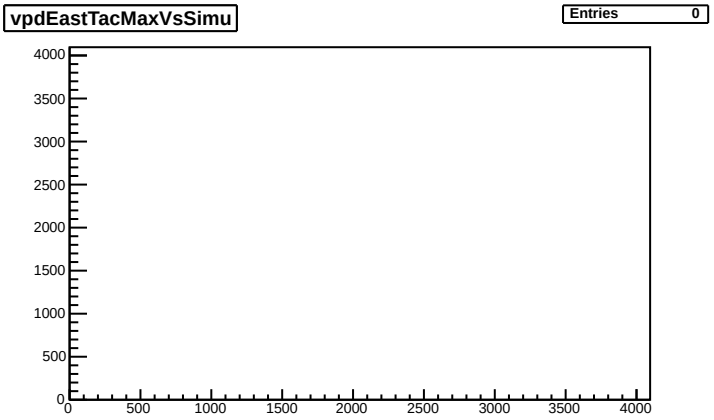

bbcLargeEastTacMaxVsSimu
Entries 0
4000
3500
3000
2500
2000
1500
1000
500
0
0 500 1000 1500 2000 2500 3000 3500 4000

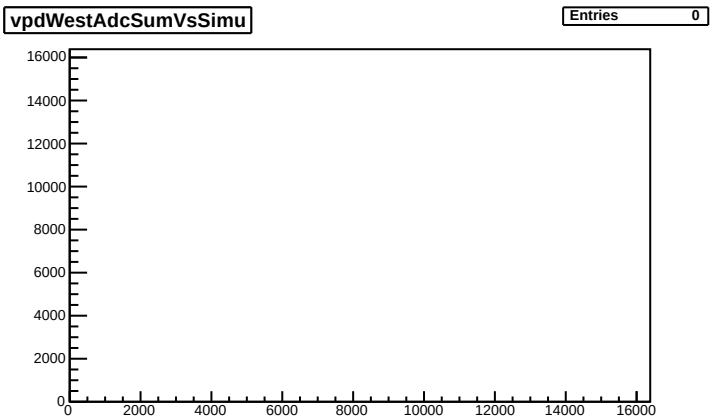

bbcLargeWestTacMaxVsSimu
Entries 0
4000
3500
3000
2500
2000
1500
1000
500
0
0 500 1000 1500 2000 2500 3000 3500 4000

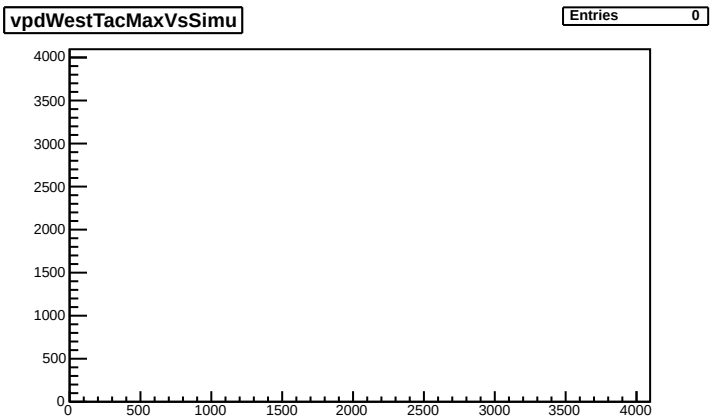

bbcLargeEastTacMax
Entries 2512
10
1
0 500 1000 1500 2000 2500 3000 3500 4000

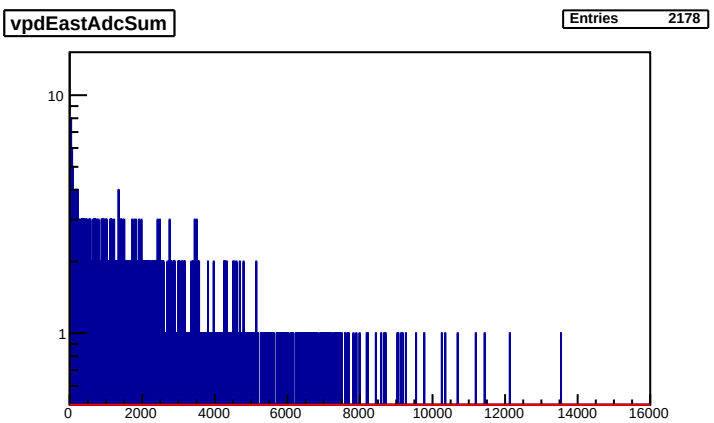

bbcLargeWestTacMax
Entries 2505
10
1
0 500 1000 1500 2000 2500 3000 3500 4000

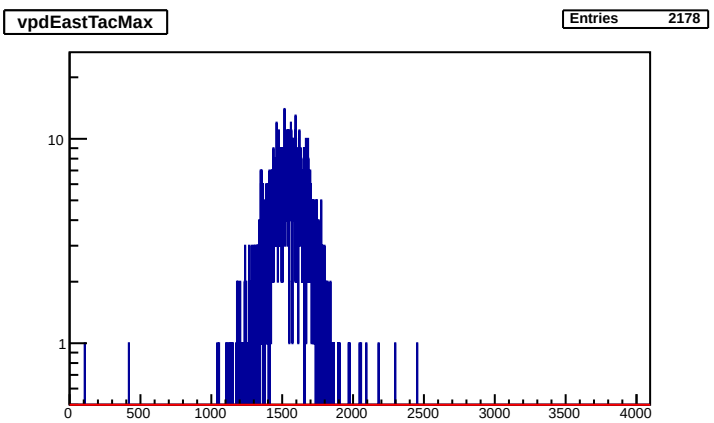

vpdEastAdcSumVsSimu
Entries 0

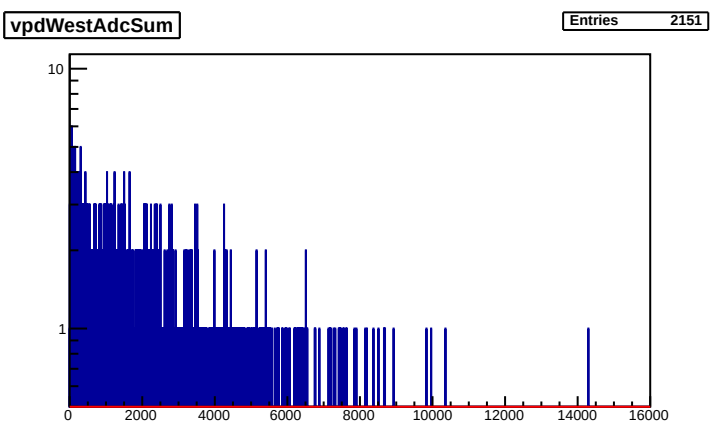

vpdEastTacMaxVsSimu
Entries 0

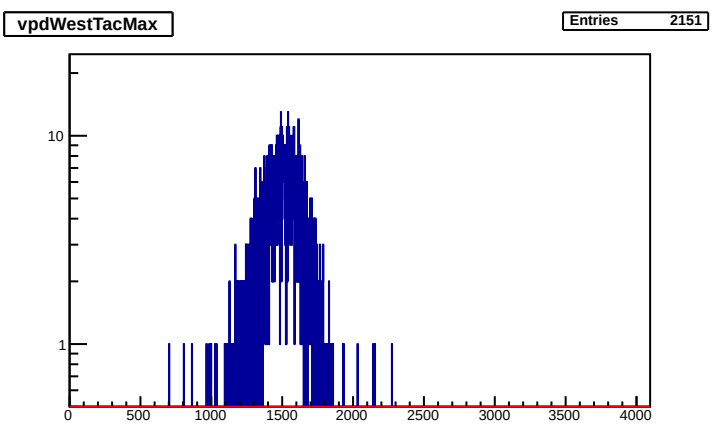

vpdWestAdcSumVsSimu
Entries 0

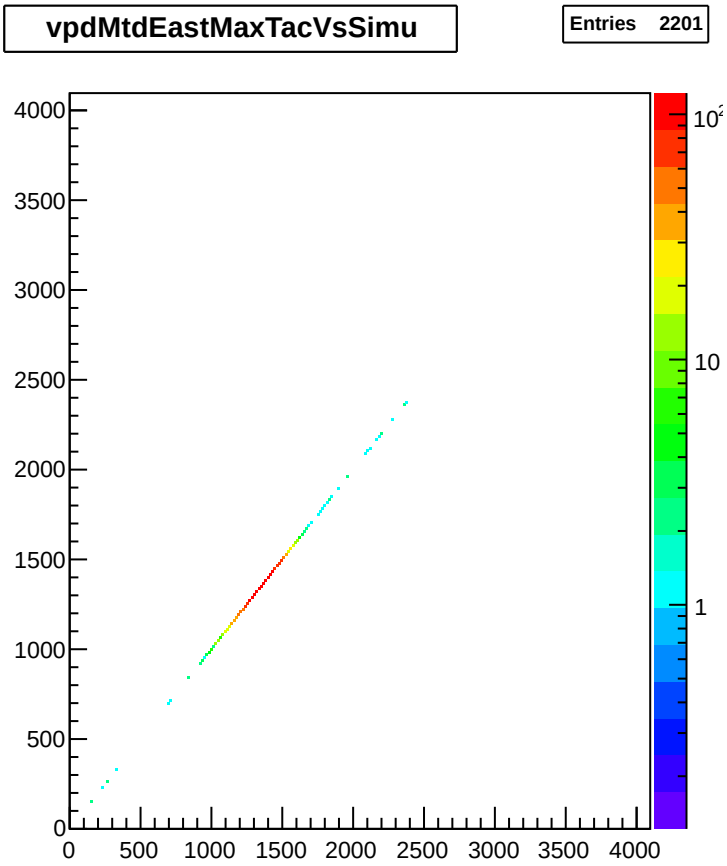

vpdWestTacMaxVsSimu
Entries 0

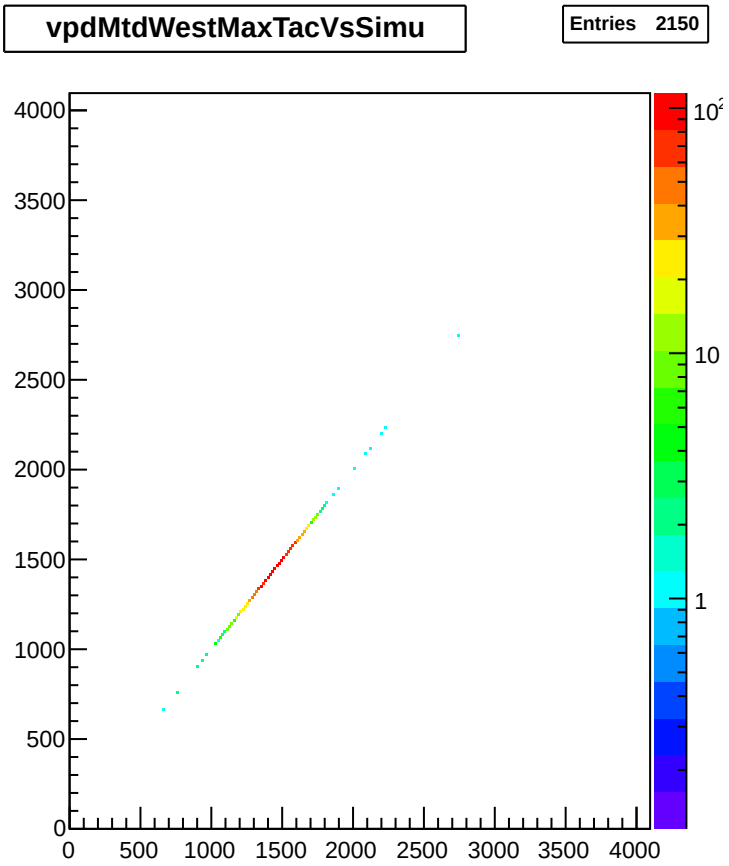

vpdEastAdcSum
Entries 2178

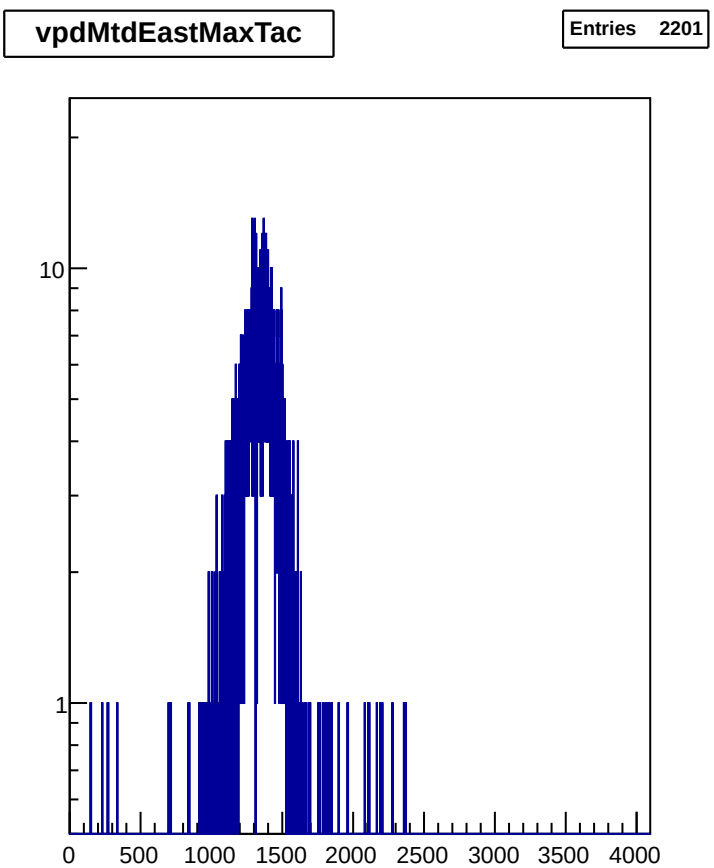

vpdEastTacMax
Entries 2178

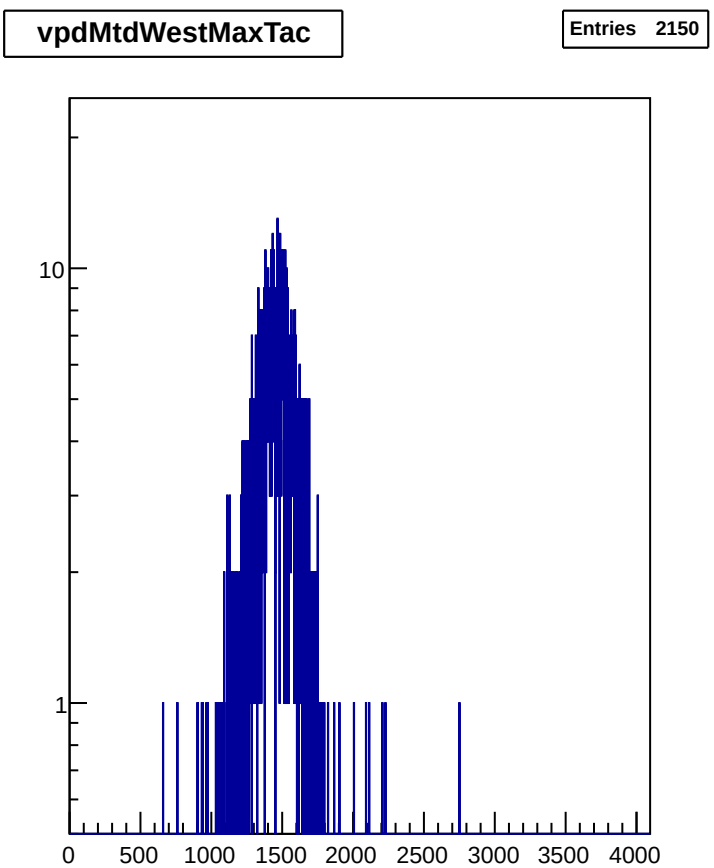

vpdWestAdcSum
Entries 2151

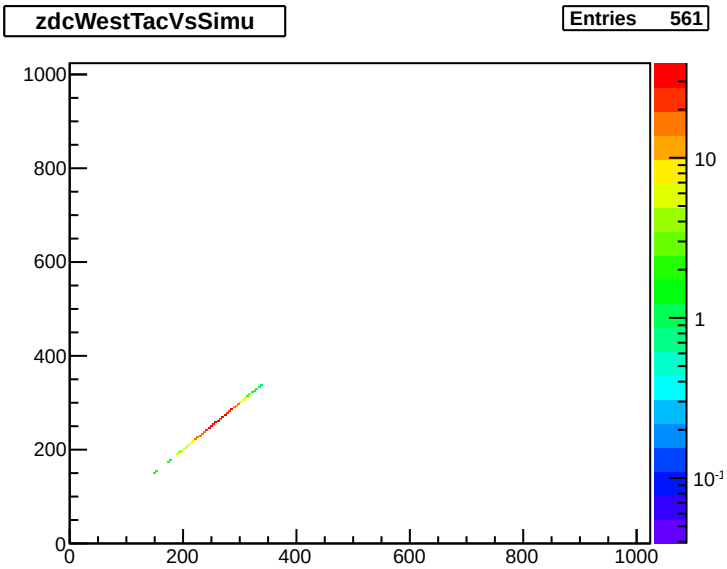

vpdWestTacMax
Entries 2151

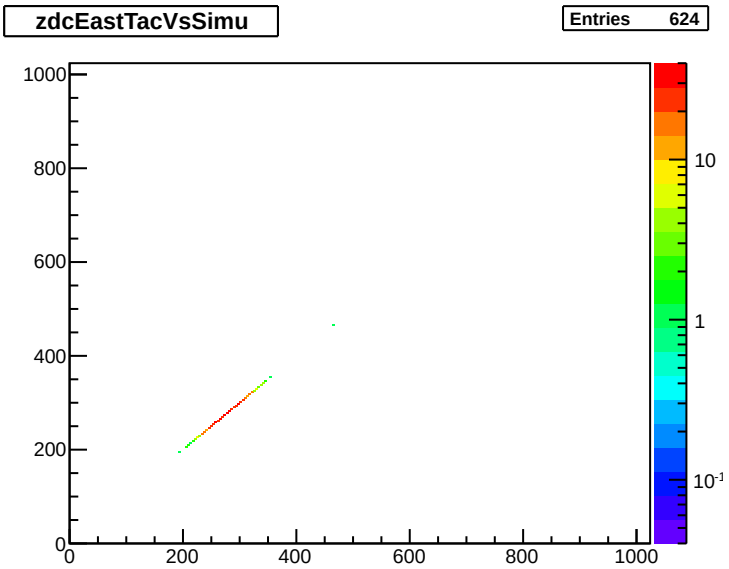

vpdMtdEastMaxTacVsSimu
Entries 2201
4000
3500
3000
2500
2000
1500
1000
500
0
0 500 1000 1500 2000 2500 3000 3500 4000
10
1

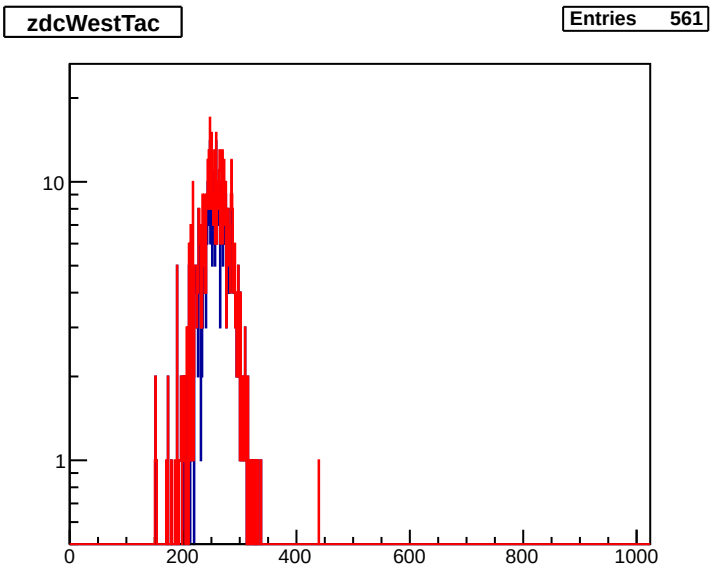

vpdMtdWestMaxTacVsSimu
Entries 2150
4000
3500
3000
2500
2000
1500
1000
500
0
0 500 1000 1500 2000 2500 3000 3500 4000
10
1

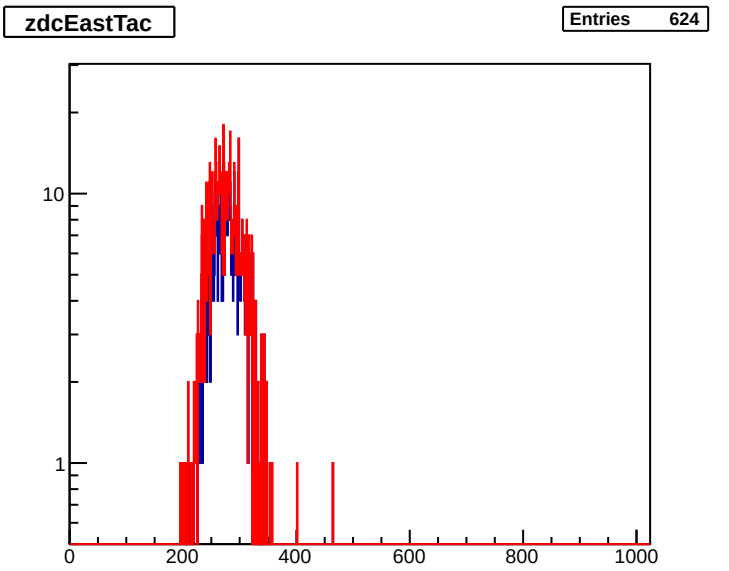

vpdMtdEastMaxTac
Entries 2201
10
1
0 500 1000 1500 2000 2500 3000 3500 4000

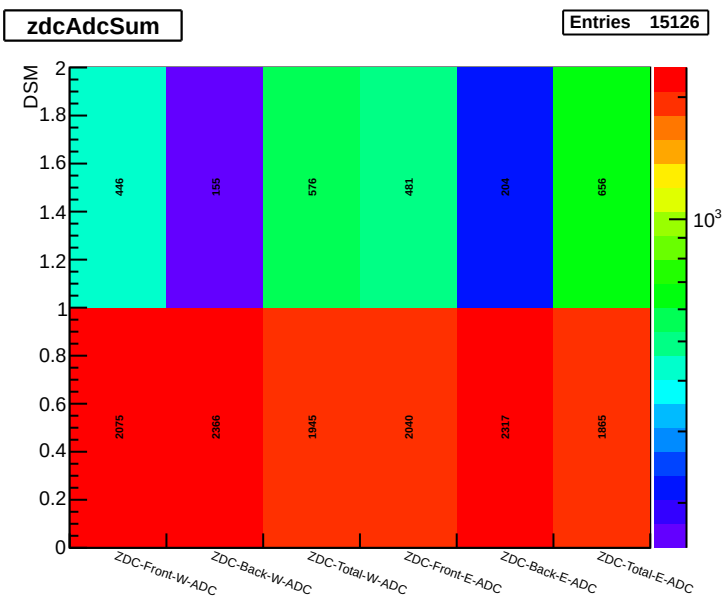

vpdMtdWestMaxTac
Entries 2150
10
1
0 500 1000 1500 2000 2500 3000 3500 4000

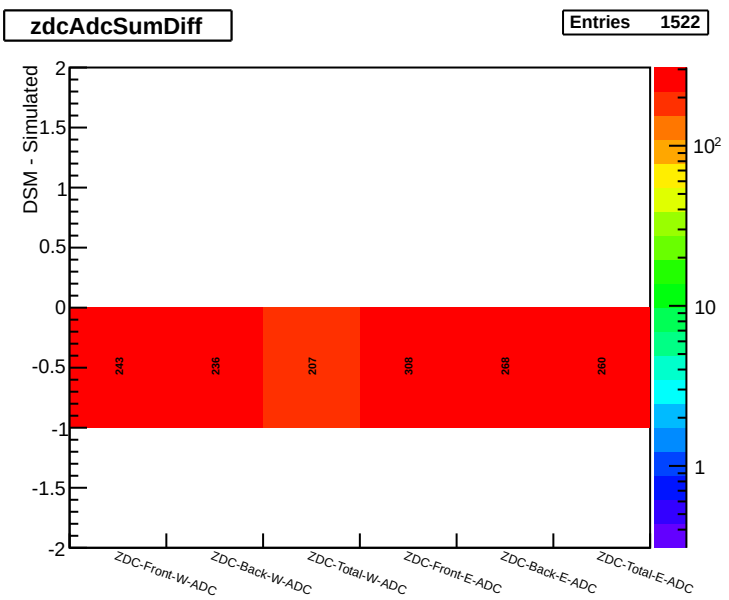

zdcWestTacVsSimu
Entries 561
1000
800
600
400
200
0
0
200
400
600
800
1000
10
1
10^{-1}

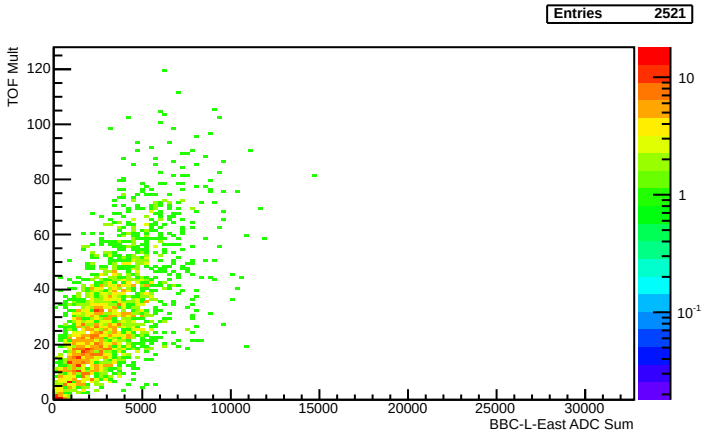

zdcEastTacVsSimu
Entries 624
1000
800
600
400
200
0
0
200
400
600
800
1000
10
1
10^{-1}

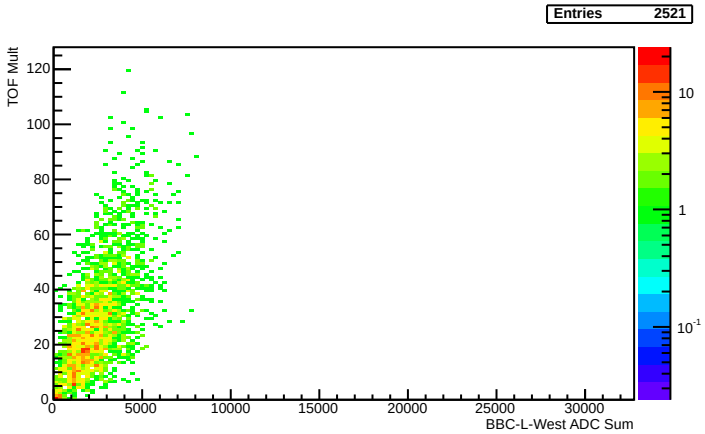

zdcWestTac
Entries 561
10
1
0
200
400
600
800
1000

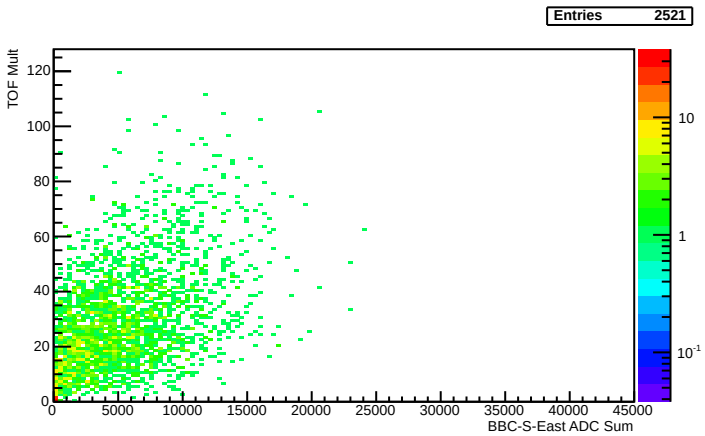

zdcEastTac
Entries 624
10
1
0
200
400
600
800
1000

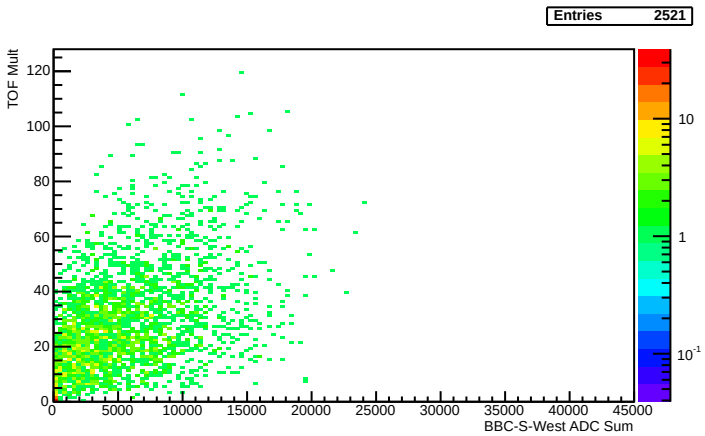

zdcAdcSum
Entries 15126
DSM
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
446
155
576
481
204
656
2075
2366
1945
2040
2317
1865
10^3
ZDC-Front-W-ADC
ZDC-Back-W-ADC
ZDC-Total-W-ADC
ZDC-Front-E-ADC
ZDC-Back-E-ADC
ZDC-Total-E-ADC

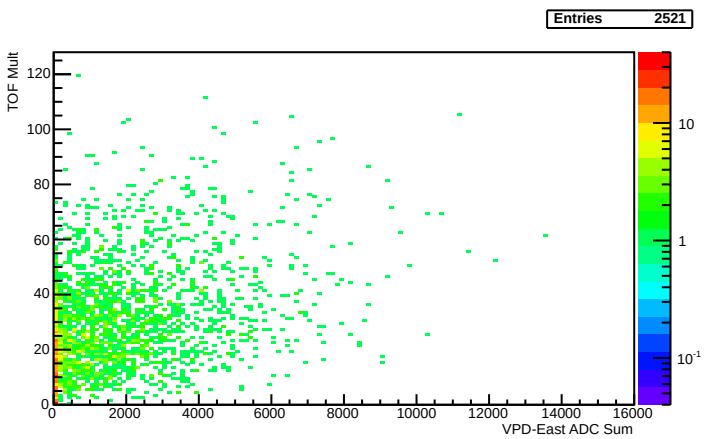

zdcAdcSumDiff
Entries 1522
DSM - Simulated
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
243
236
207
308
268
260
10^2
10
1
ZDC-Front-W-ADC
ZDC-Back-W-ADC
ZDC-Total-W-ADC
ZDC-Front-E-ADC
ZDC-Back-E-ADC
ZDC-Total-E-ADC

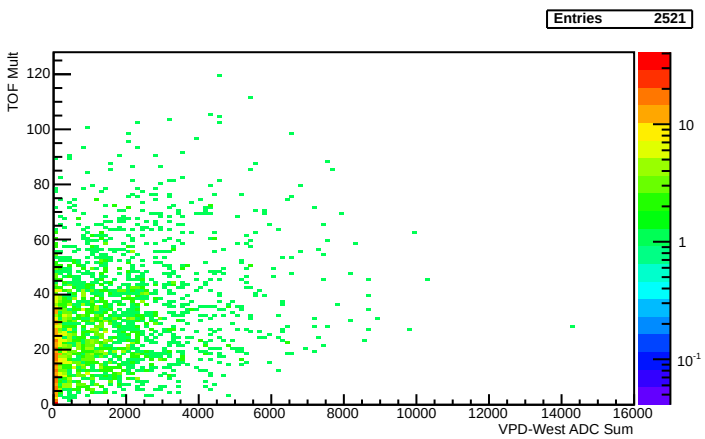

Entries 2521
TOF Mult
BBC-L-East ADC Sum

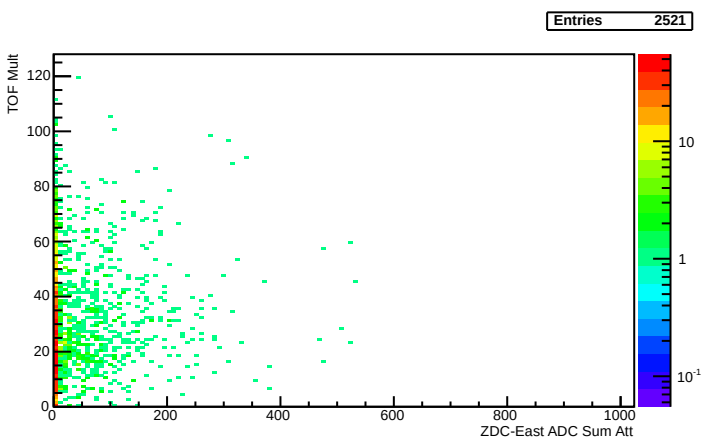

Entries 2521
TOF Mult
BBC-L-West ADC Sum

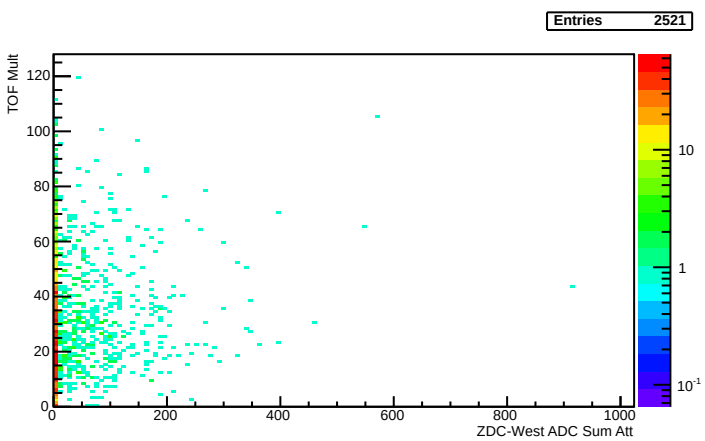

Entries 2521
TOF Mult
BBC-S-East ADC Sum

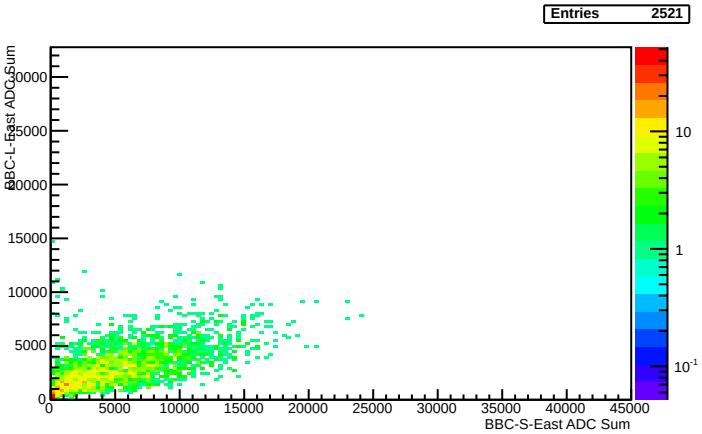

Entries 2521
TOF Mult
BBC-S-West ADC Sum

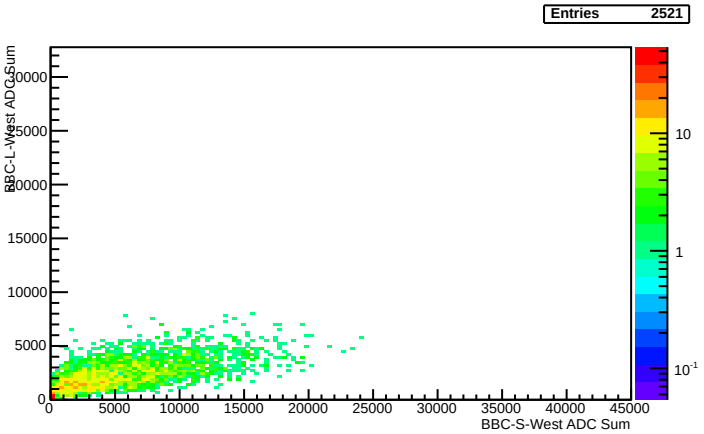

Entries 2521
TOF Mult
VPD-East ADC Sum

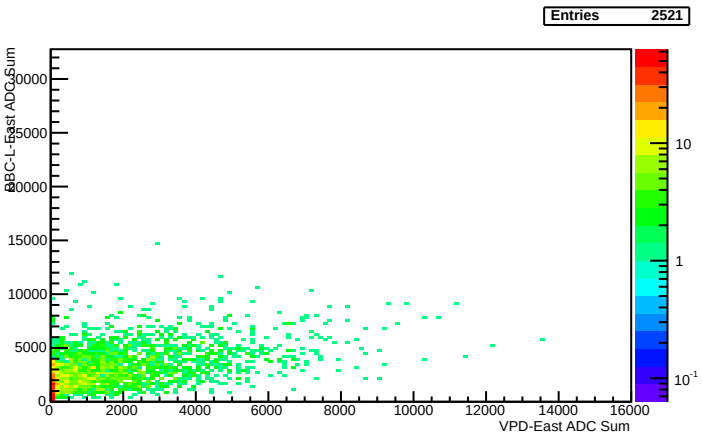

Entries 2521
TOF Mult
VPD-West ADC Sum

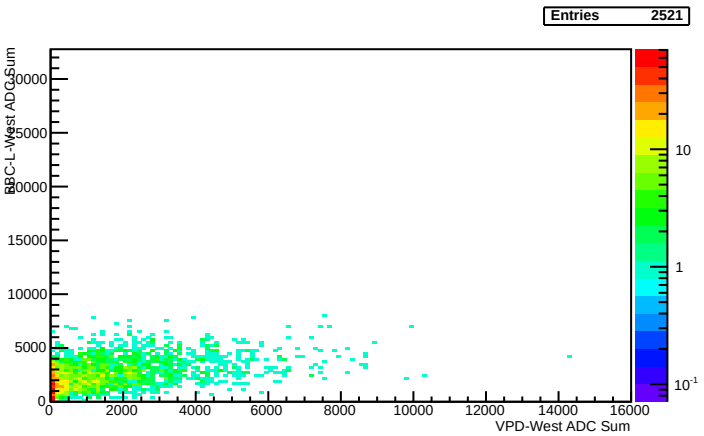

Entries 2521
TOF Mult
ZDC-East ADC Sum Att

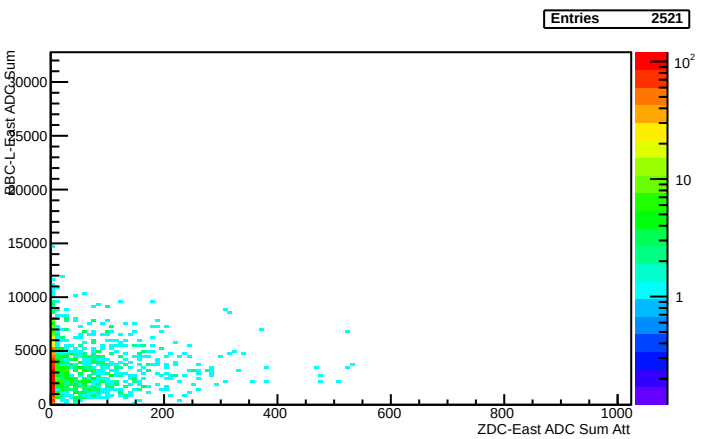

Entries 2521
TOF Mult
ZDC-West ADC Sum Att

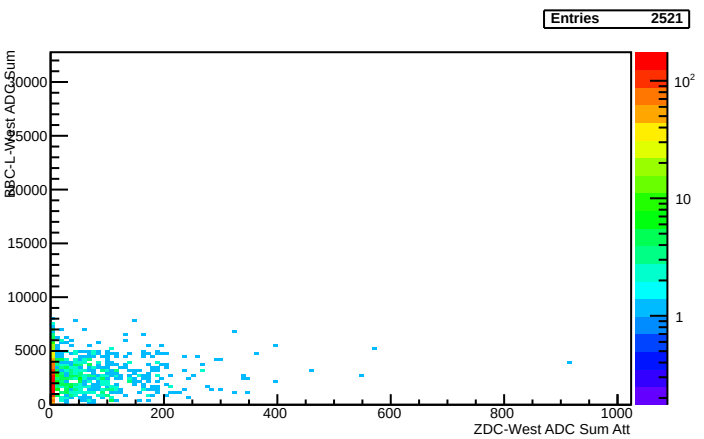

Entries 2521
BBC-L-East ADC Sum
BBC-S-East ADC Sum

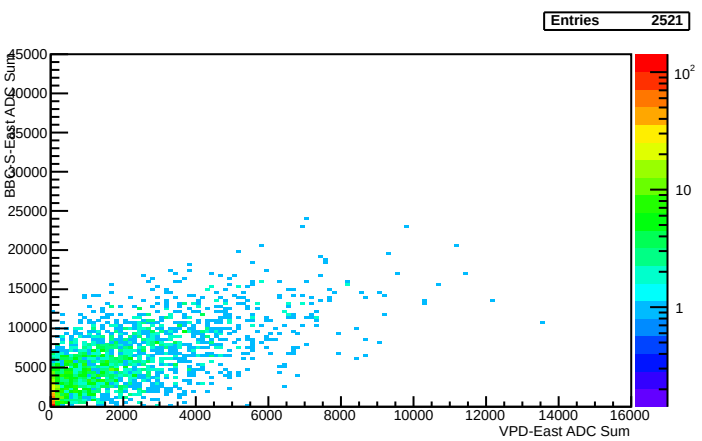

Entries 2521
BBC-L-West ADC Sum
BBC-S-West ADC Sum

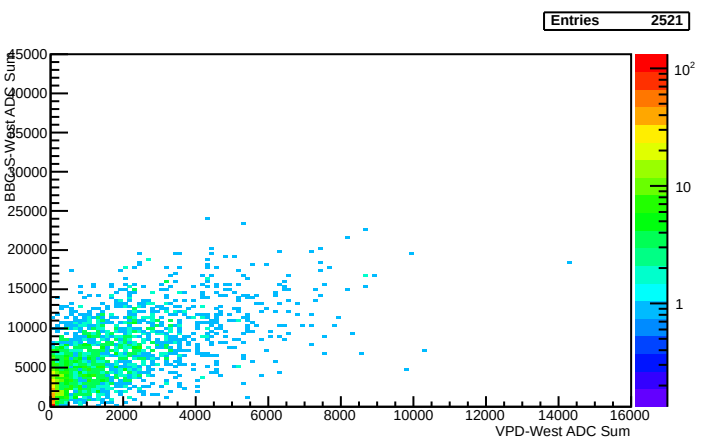

Entries 2521
BBC-L-East ADC Sum
VPD-East ADC Sum

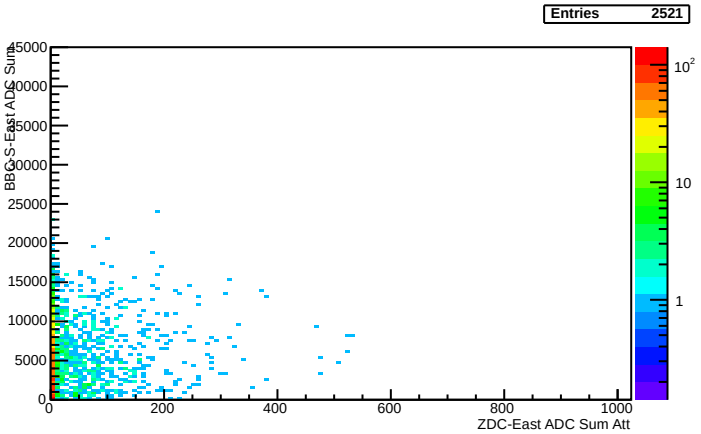

Entries 2521
BBC-L-West ADC Sum
VPD-West ADC Sum

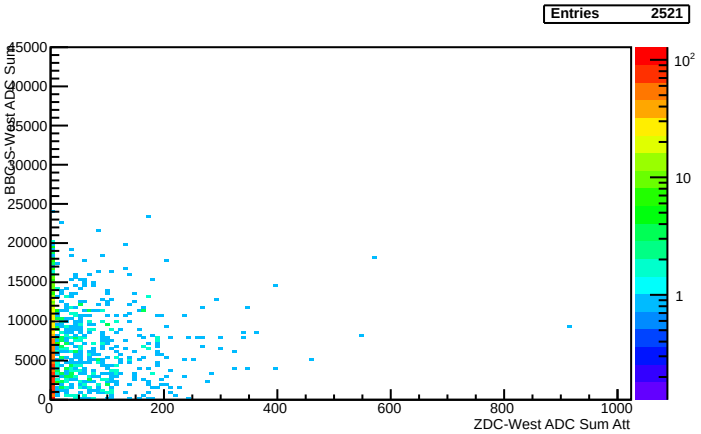

Entries 2521
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

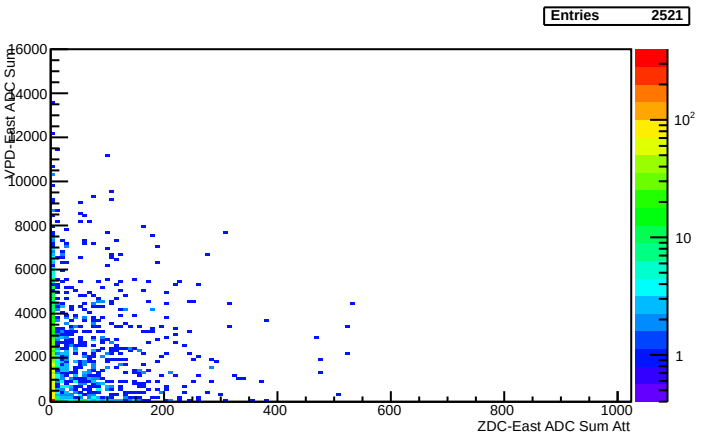

Entries 2521
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

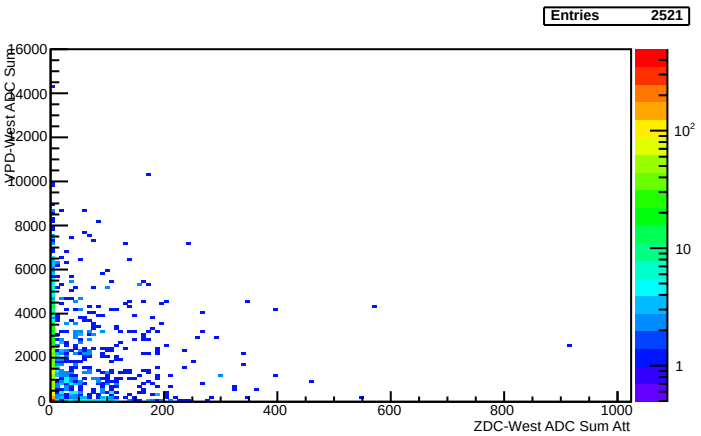

Entries 2521
BBC-S-East ADC Sum
VPD-East ADC Sum

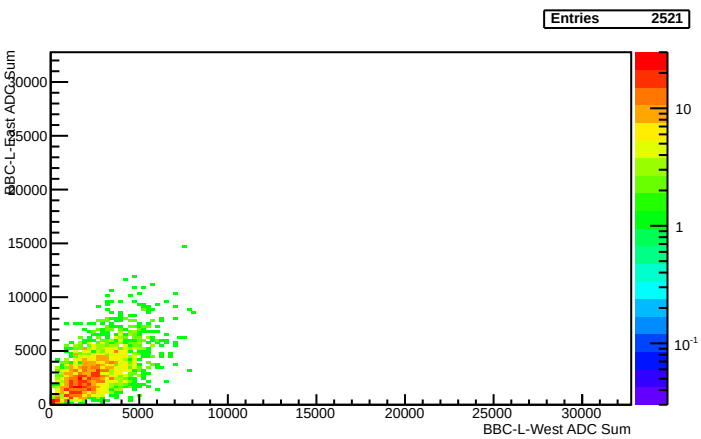

Entries 2521
BBC-S-West ADC Sum
VPD-West ADC Sum

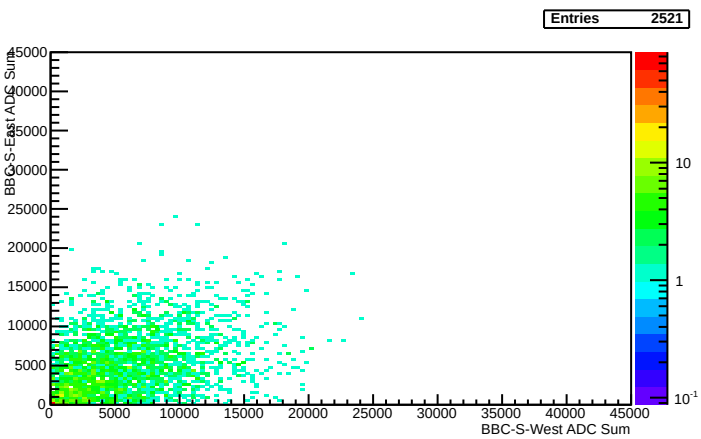

Entries 2521
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

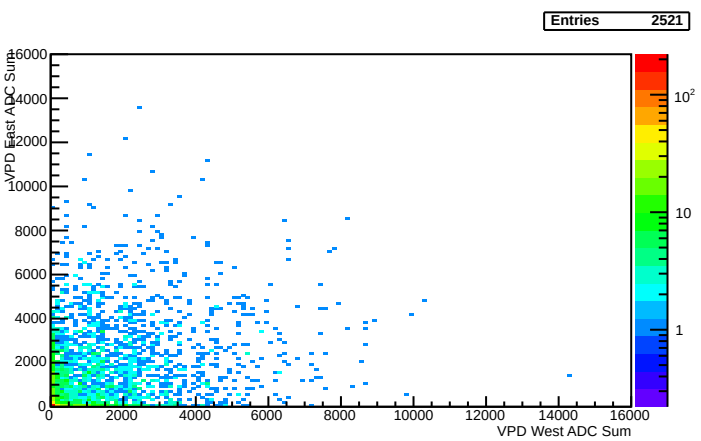

Entries 2521
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

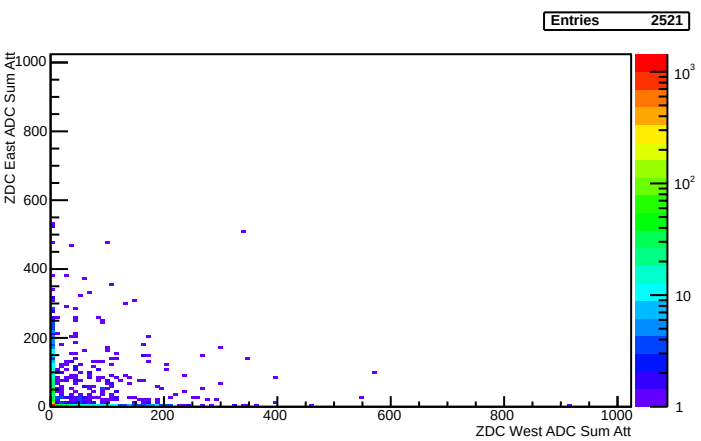

Entries 2521
VPD-East ADC Sum
ZDC-East ADC Sum Att

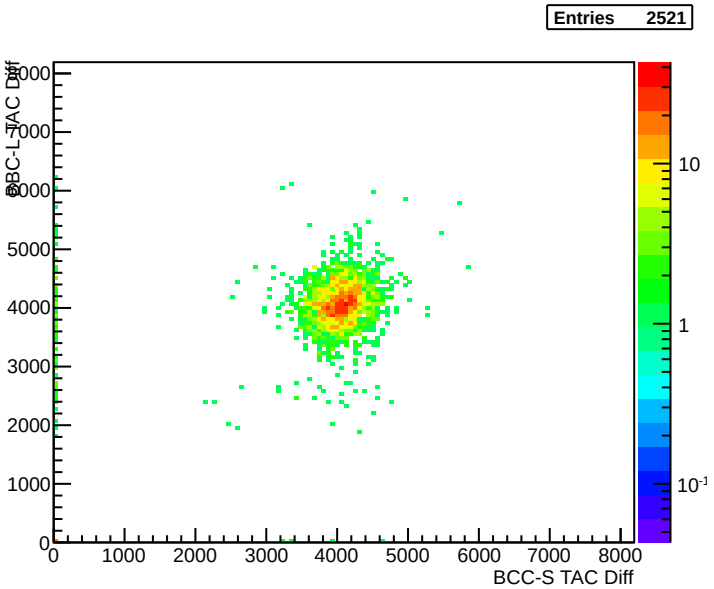

Entries 2521
VPD-West ADC Sum
ZDC-West ADC Sum Att

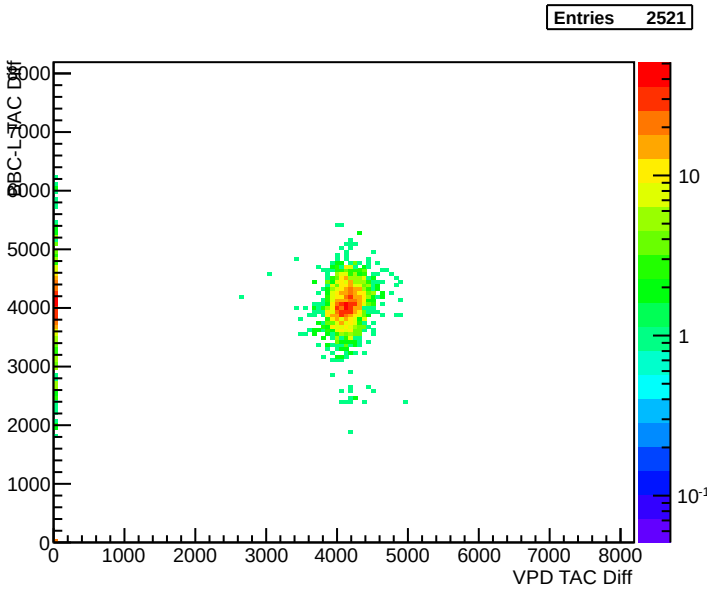

Entries 2521
BBC-L-East ADC Sum
BBC-L-West ADC Sum

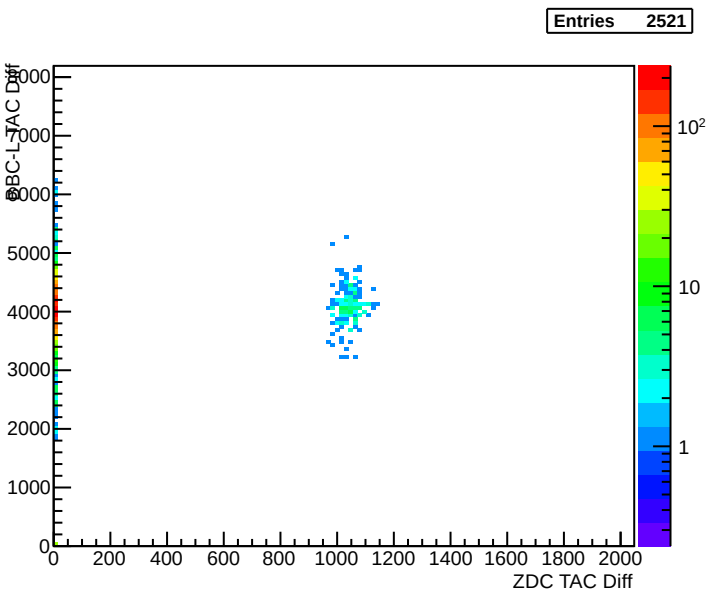

Entries 2521
BBC-S-East ADC Sum
BBC-S-West ADC Sum

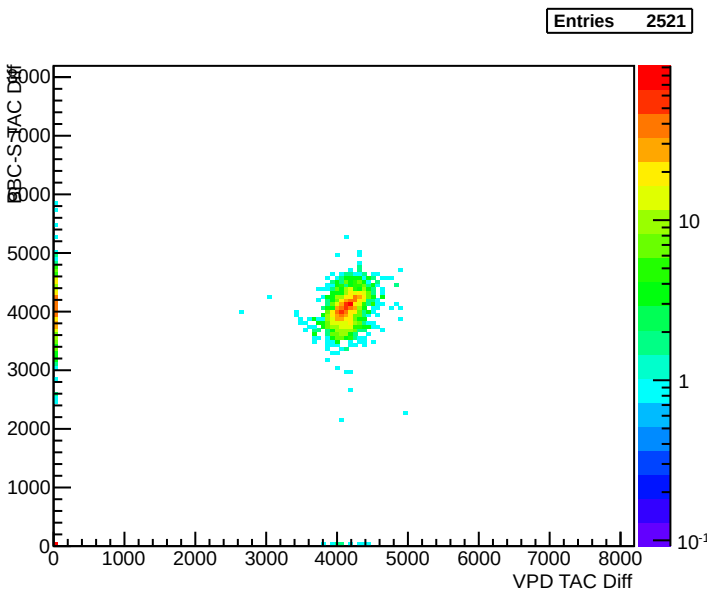

Entries 2521
VPD East ADC Sum
VPD West ADC Sum

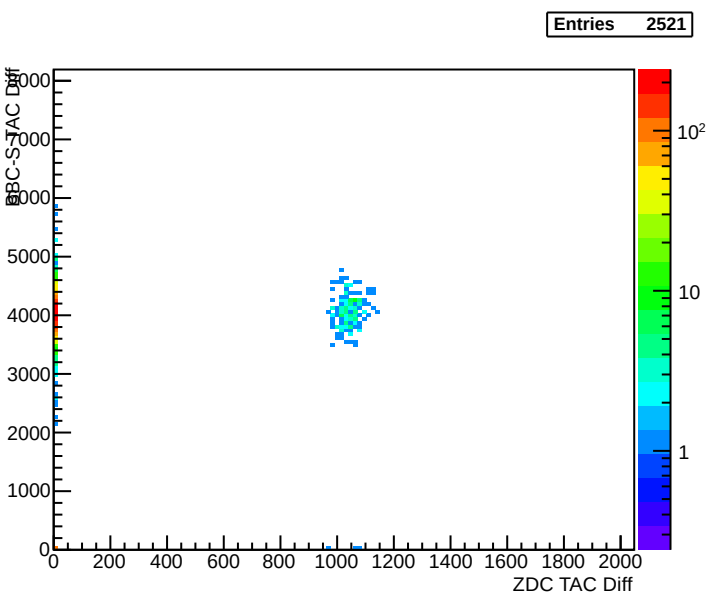

Entries 2521
ZDC East ADC Sum Att
ZDC West ADC Sum Att

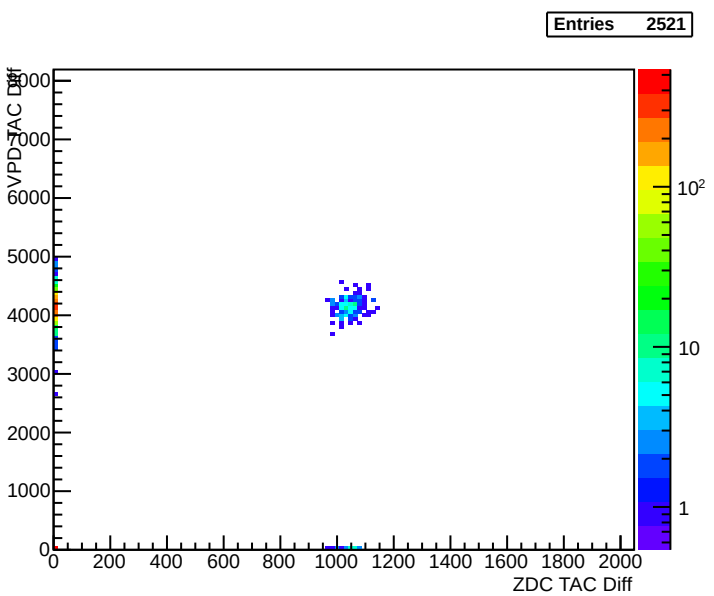

Entries 2521
BBC-L TAC Diff
BCC-S TAC Diff

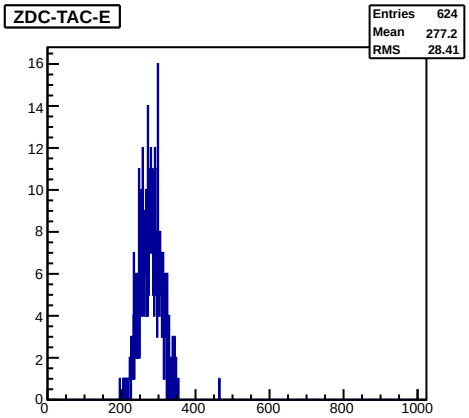

Entries 2521
BBC-L TAC Diff
VPD TAC Diff

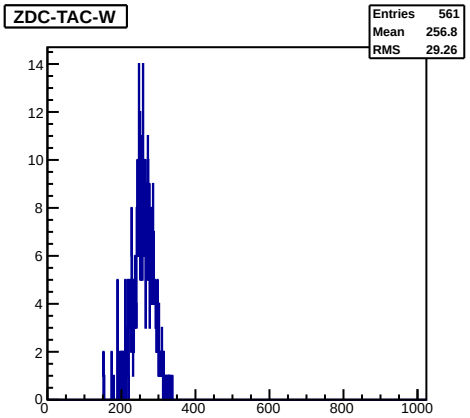

Entries 2521
BBC-L TAC Diff
ZDC TAC Diff

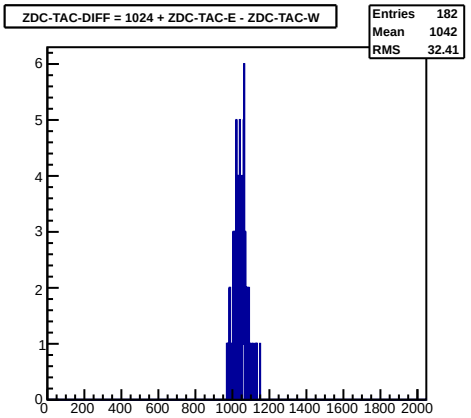

Entries 2521
BBC-S TAC Diff
VPD TAC Diff

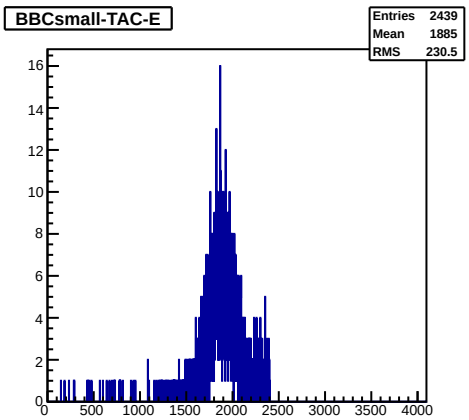

Entries 2521
BBC-S TAC Diff
ZDC TAC Diff

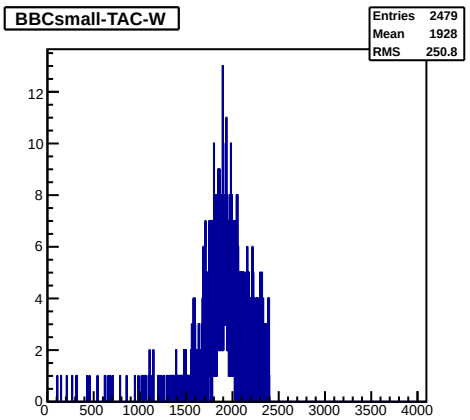

Entries 2521
VPD TAC Diff
ZDC TAC Diff

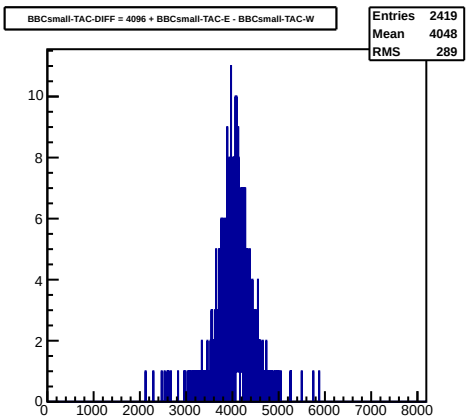

ZDC-TAC-E
Entries 624
Mean 277.2
RMS 28.41

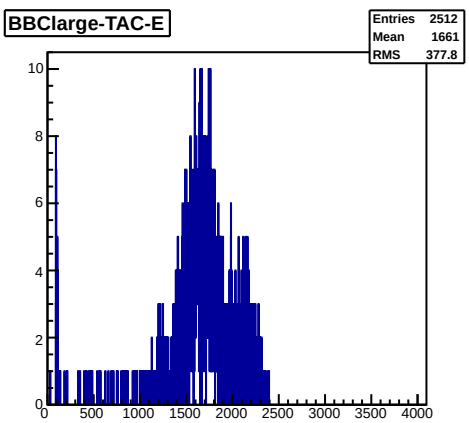

ZDC-TAC-W
Entries 561
Mean 256.8
RMS 29.26

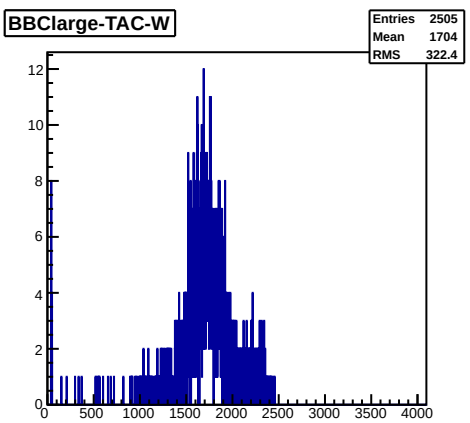

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 182
Mean 1042
RMS 32.41

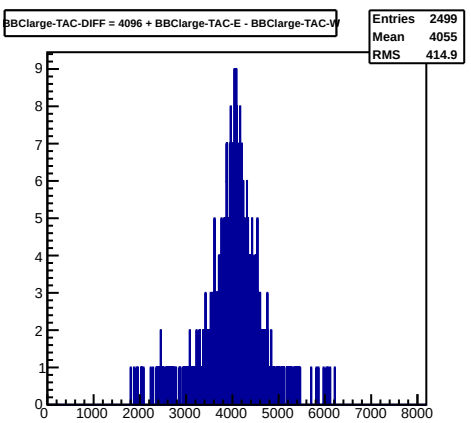

BBCsmall-TAC-E
Entries 2439
Mean 1885
RMS 230.5

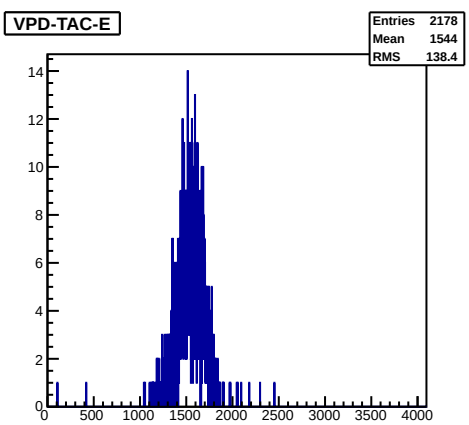

BBCsmall-TAC-W
Entries 2479
Mean 1928
RMS 250.8

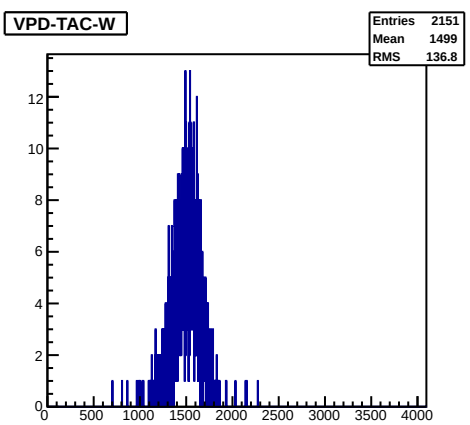

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 2419
Mean 4048
RMS 289

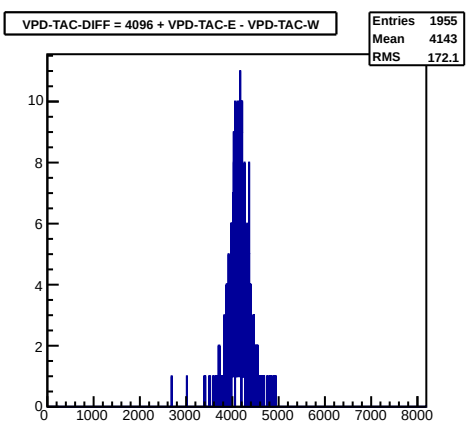

BBClarge-TAC-E
Entries 2512
Mean 1661
RMS 377.8

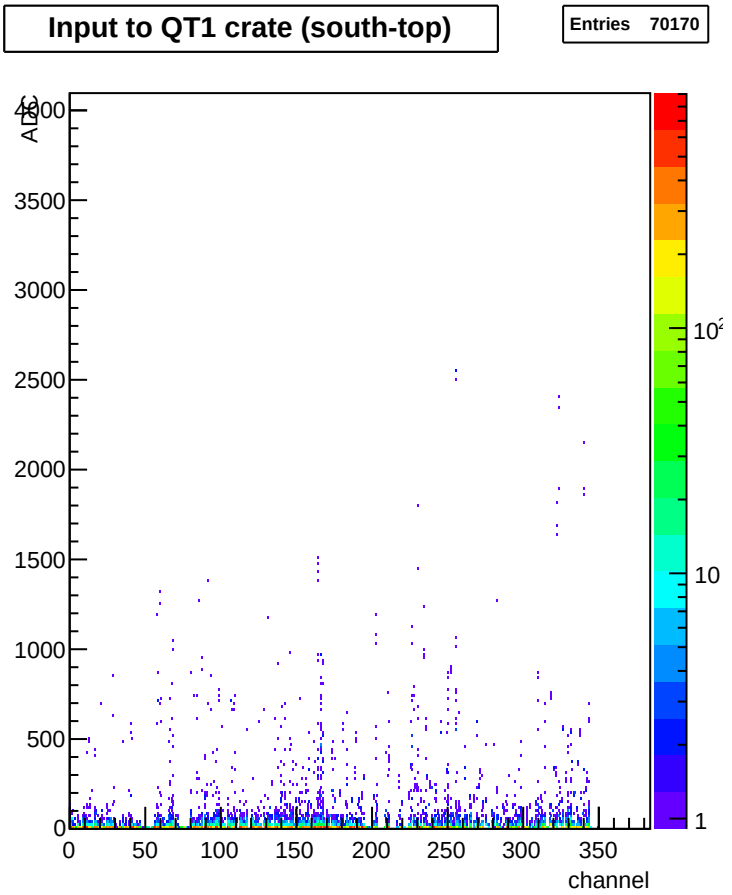

BBClarge-TAC-W
Entries 2505
Mean 1704
RMS 322.4

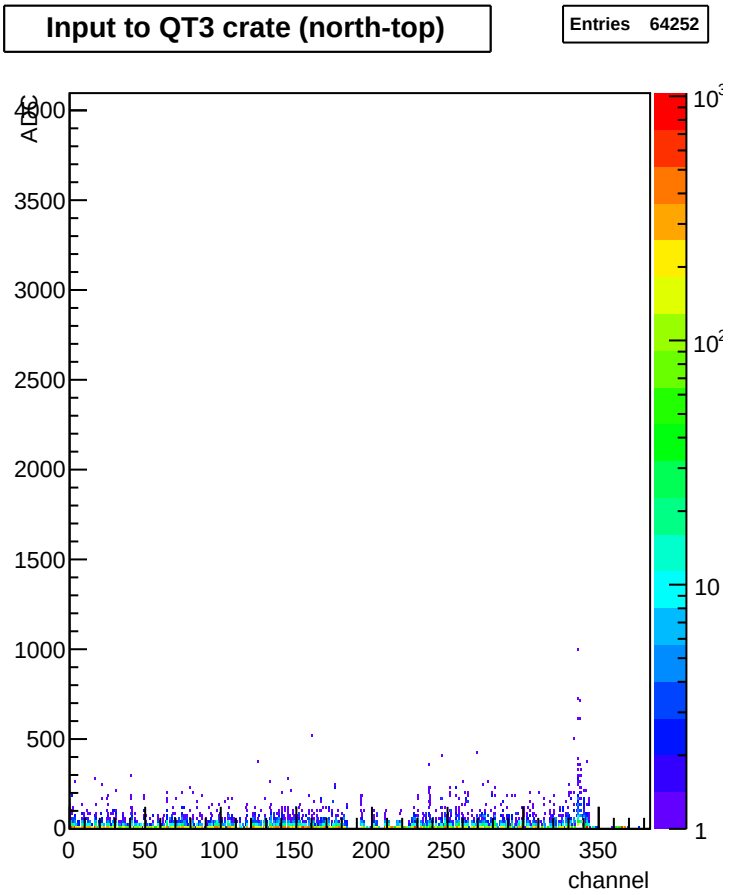

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 2499
Mean 4055
RMS 414.9

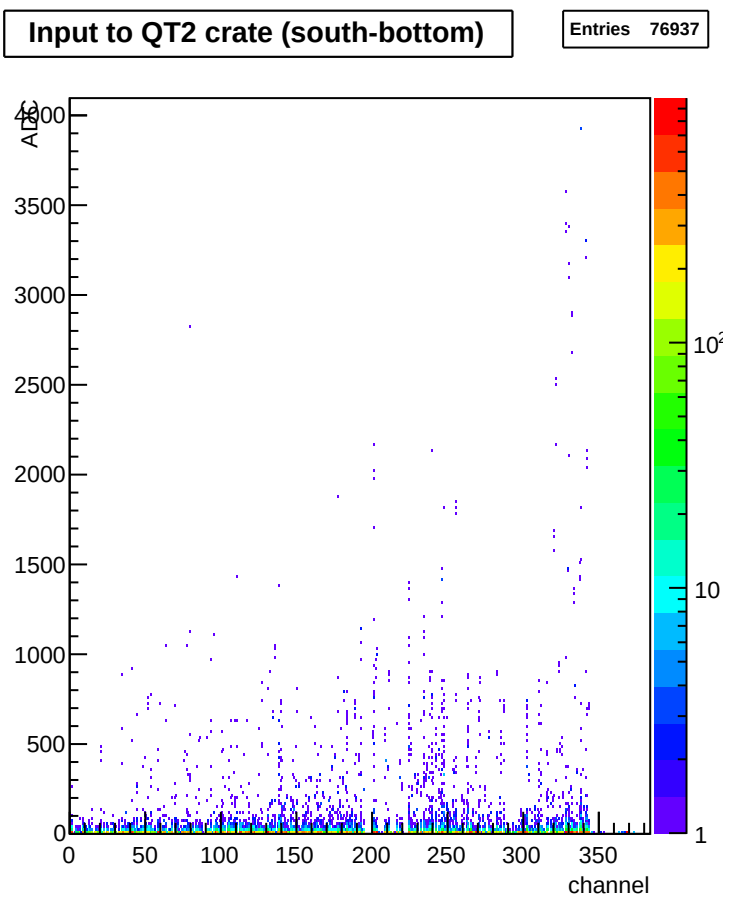

VPD-TAC-E
Entries 2178
Mean 1544
RMS 138.4

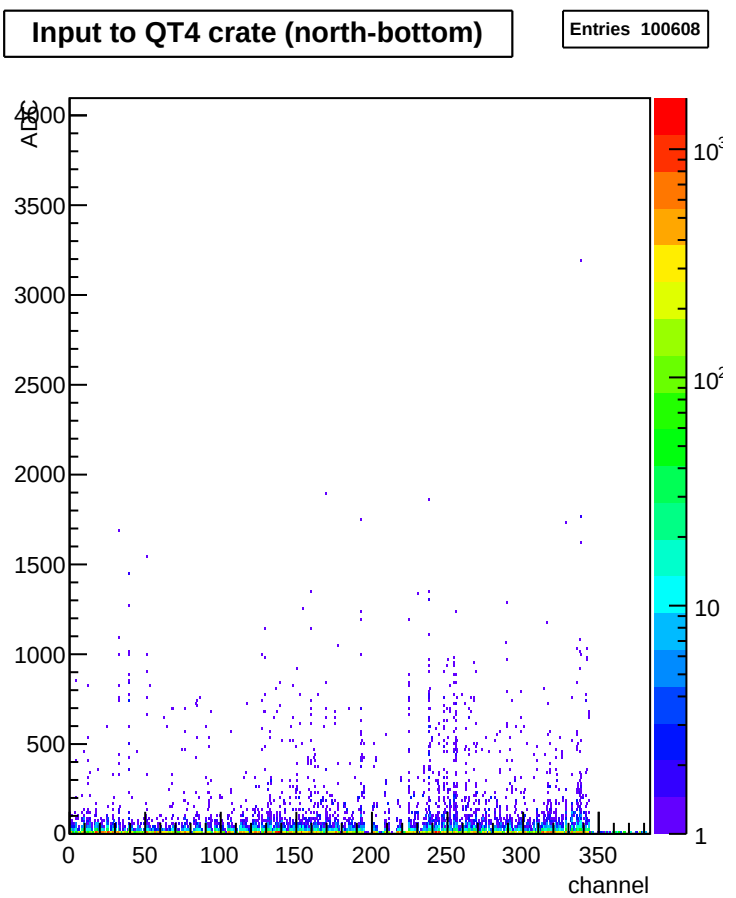

VPD-TAC-W
Entries 2151
Mean 1499
RMS 136.8

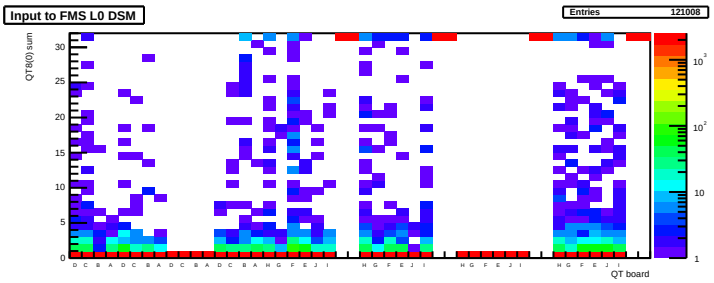

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 1955
Mean 4143
RMS 172.1

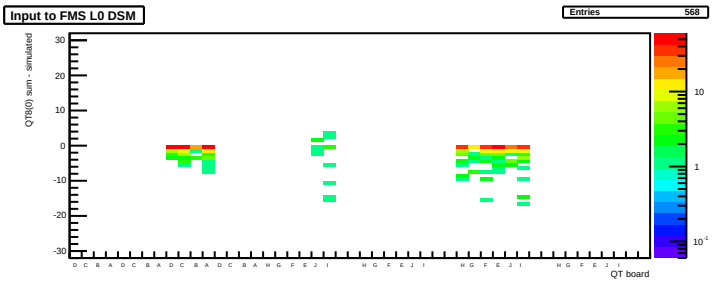

Input to QT1 crate (south-top)
Entries 70170
ADC
channel

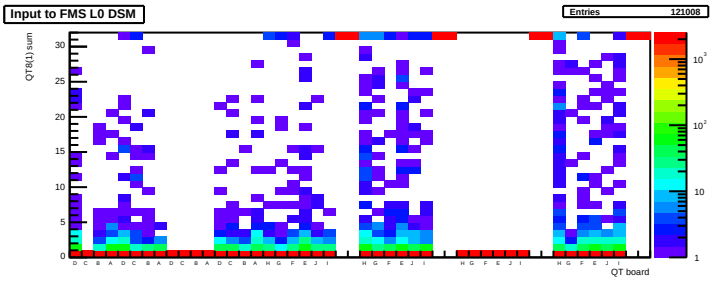

Input to QT3 crate (north-top)
Entries 64252
ADC
channel

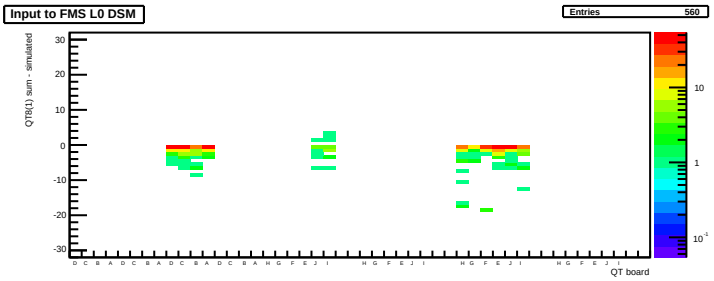

Input to QT2 crate (south-bottom)
Entries 76937
ADC
channel

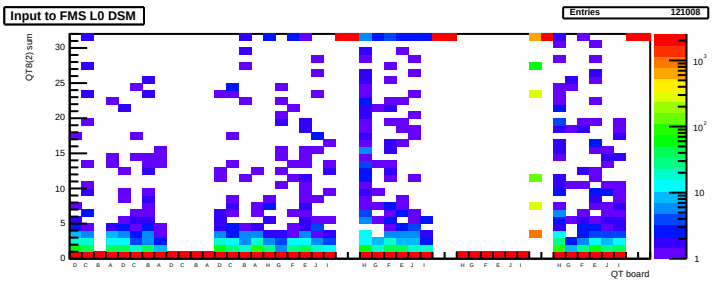

Input to QT4 crate (north-bottom)
Entries 100608
ADC
channel

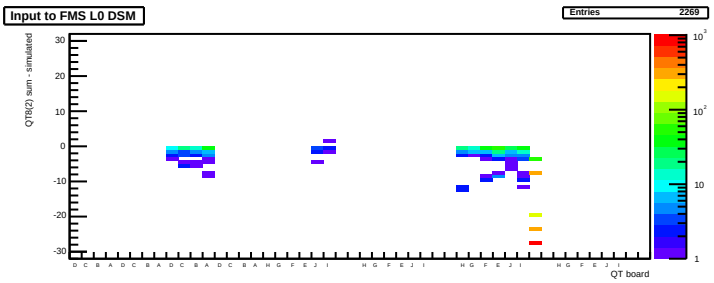

Input to FMS L0 DSM
Entries 121008
QT8(0) sum
QT board

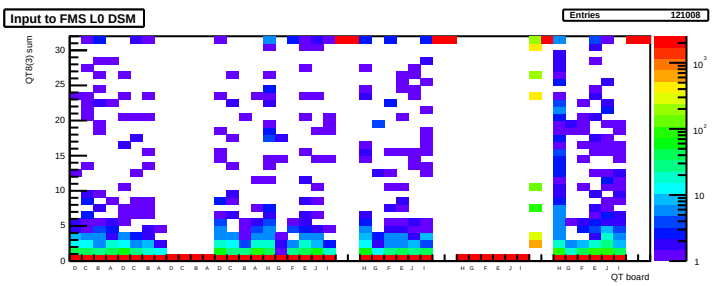

Input to FMS L0 DSM
Entries 568
QT8(0) sum - simulated
QT board

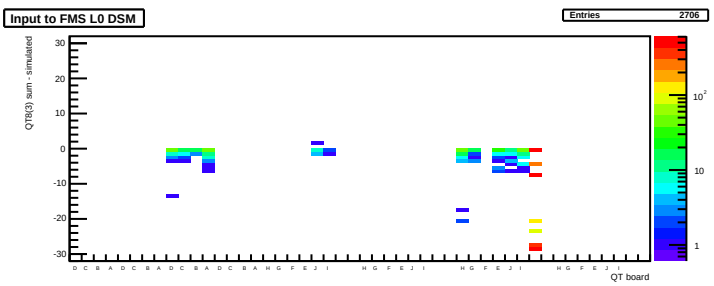

Input to FMS L0 DSM
Entries 121008
QT8(1) sum
QT board

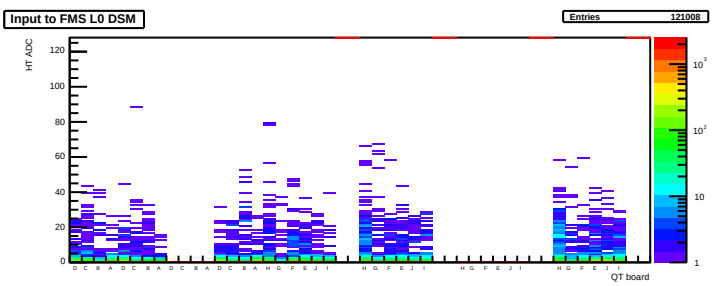

Input to FMS L0 DSM
Entries 560
QT8(1) sum - simulated
QT board

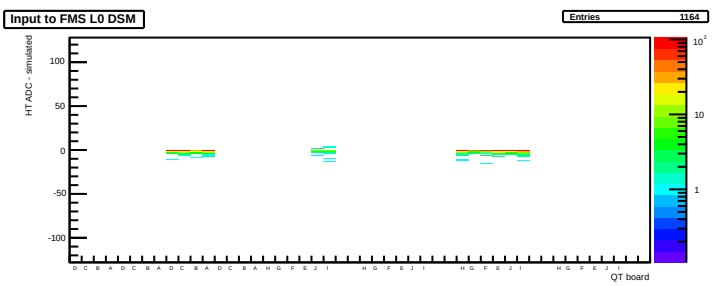

Input to FMS L0 DSM
Entries 121008
QT8(2) sum
QT board

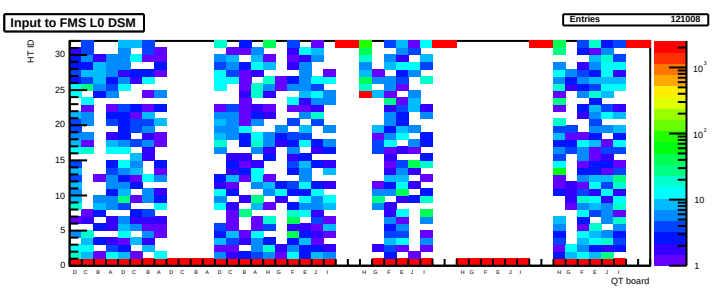

Input to FMS L0 DSM
Entries 2269
QT8(2) sum - simulated
QT board

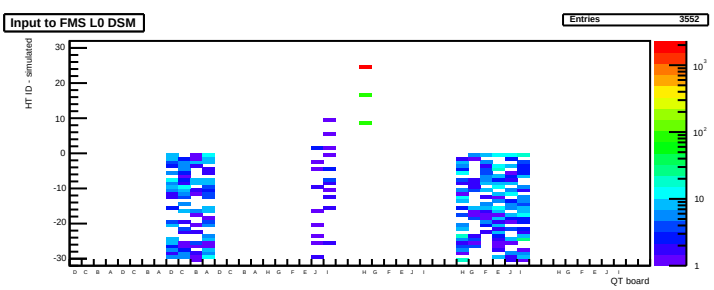

Input to FMS L0 DSM
Entries 121008
QT8(3) sum
QT board

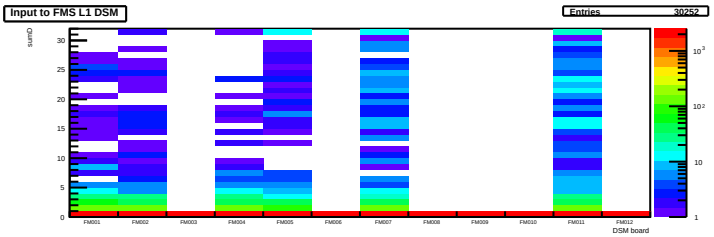

Input to FMS L0 DSM
Entries 2706
QT8(3) sum - simulated
QT board

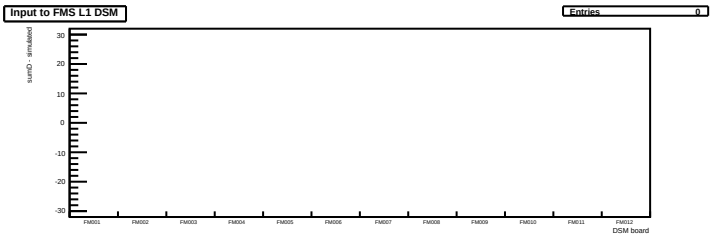

Input to FMS L0 DSM
Entries 121008
HT ADC
QT board

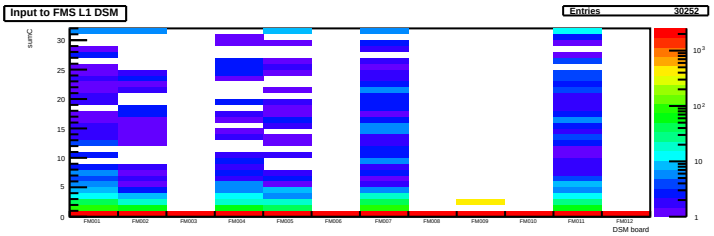

Input to FMS L0 DSM
Entries 1164
HT ADC - simulated
QT board

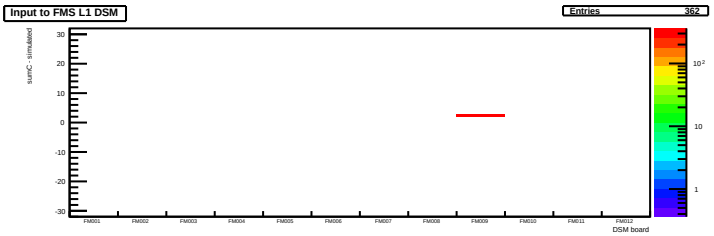

Input to FMS L0 DSM
Entries 121008
HT ID
QT board

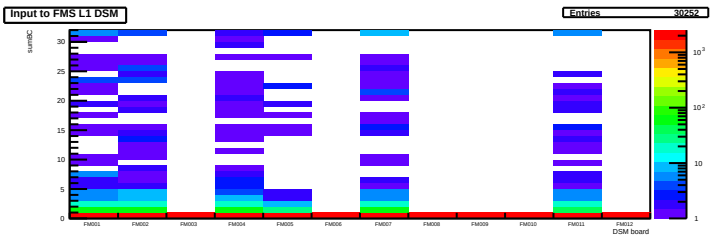

Input to FMS L0 DSM
Entries 3552
HT ID - simulated
QT board

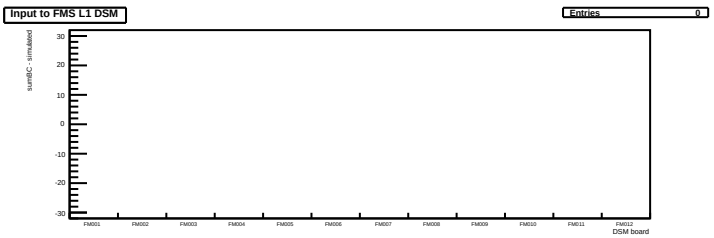

Input to FMS L1 DSM
Entries 30252
sumD
DSM board

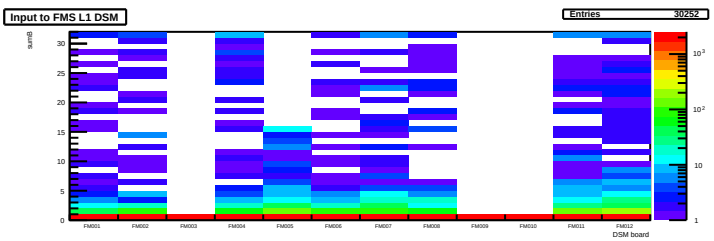

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

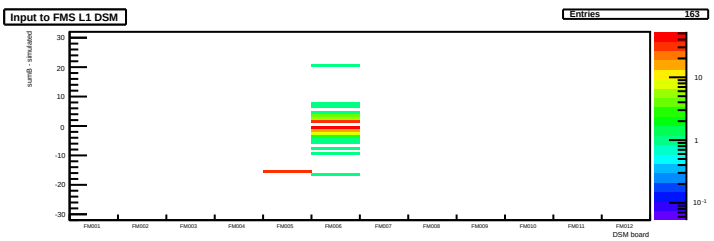

Input to FMS L1 DSM
Entries 30252
sumC
DSM board

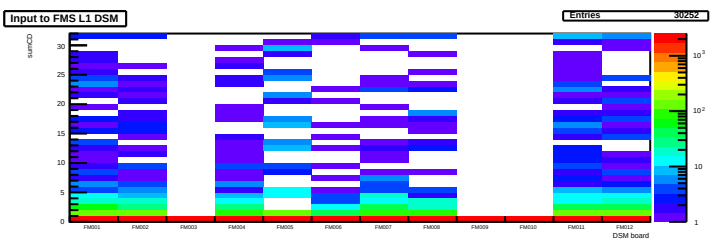

Input to FMS L1 DSM
Entries 362
sumC - simulated
DSM board

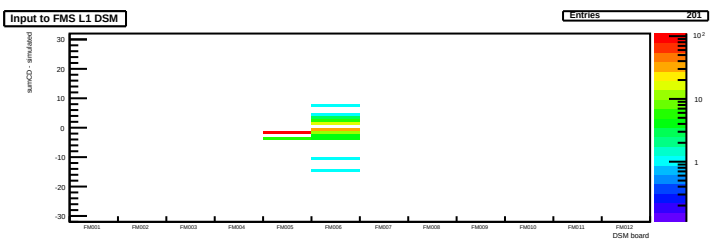

Input to FMS L1 DSM
Entries 30252
sumBC
DSM board

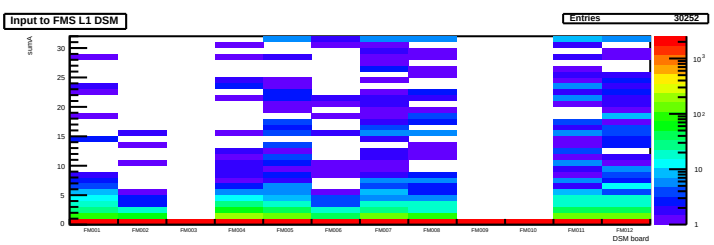

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

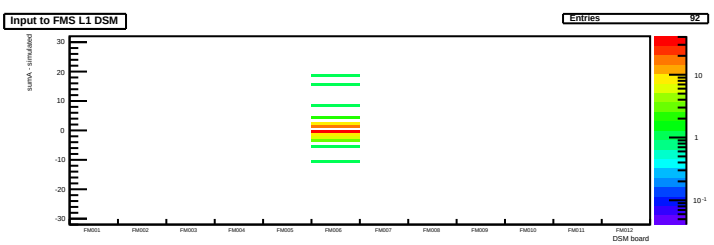

Input to FMS L1 DSM
Entries 30252
sumB
DSM board

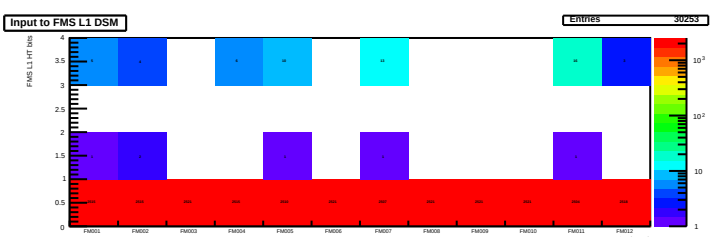

Input to FMS L1 DSM
Entries 163
sumB - simulated
DSM board

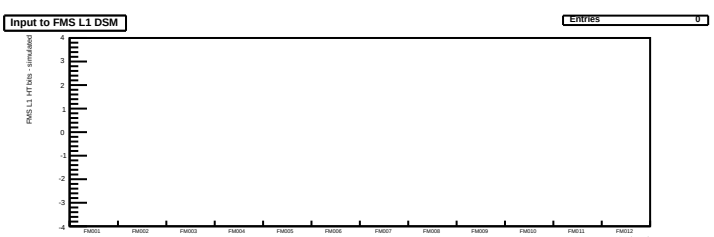

Input to FMS L1 DSM
Entries 30252
sumCD
DSM board

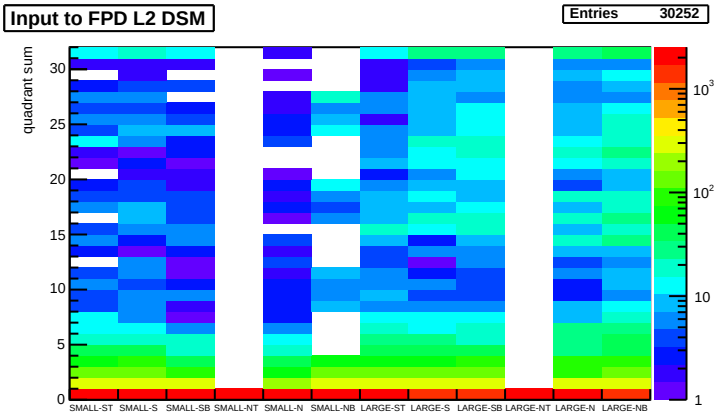

Input to FMS L1 DSM
Entries 201
sumCD - simulated
DSM board

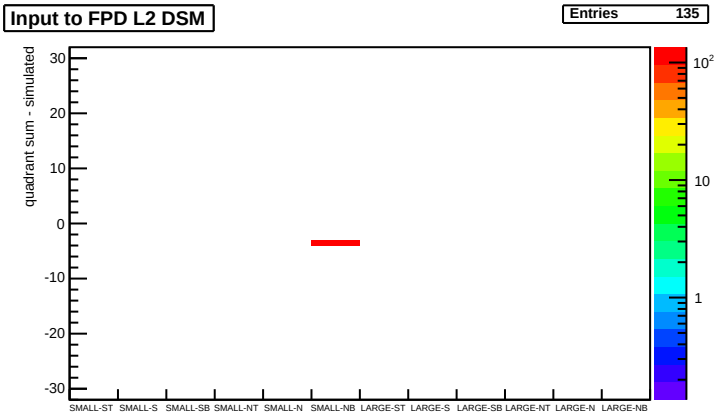

Input to FMS L1 DSM
Entries 30252
sumA
DSM board

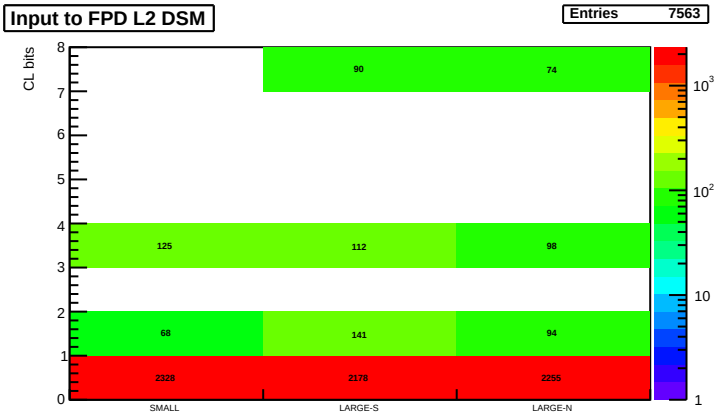

Input to FMS L1 DSM
Entries 92
sumA - simulated
DSM board

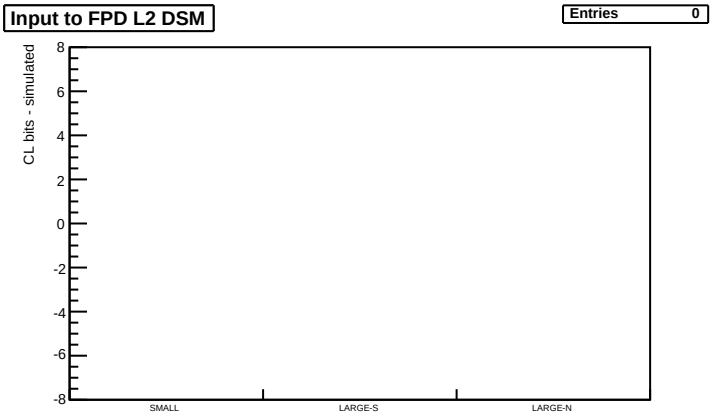

Input to FMS L1 DSM
Entries 30253
FMS L1 HT bits
DSM board

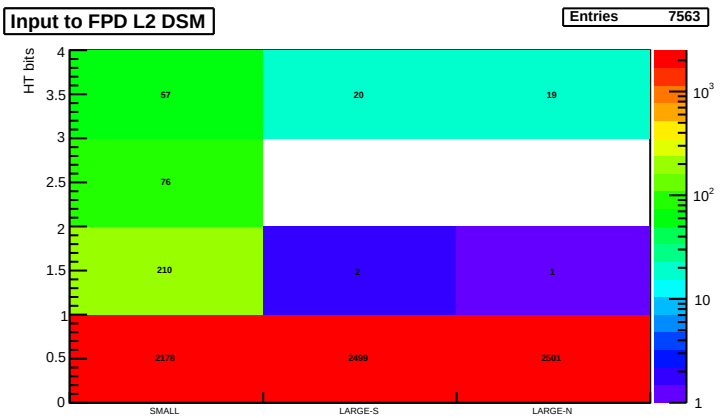

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

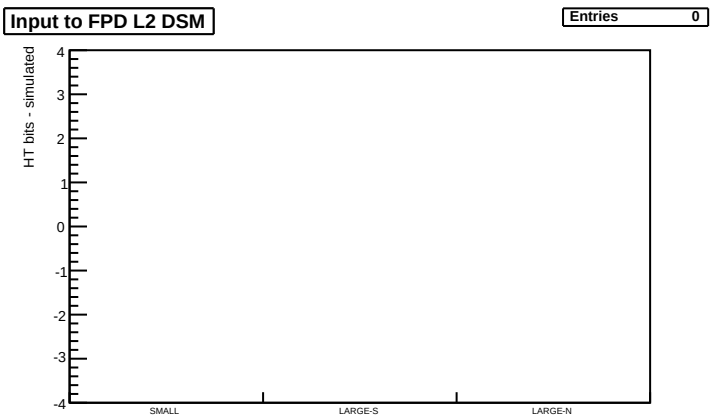

Input to FPD L2 DSM
Entries 30252
quadrant sum
SMALL-ST SMALL-S SMALL-SB SMALL-NT SMALL-N SMALL-NB LARGE-ST LARGE-S LARGE-SB LARGE-NT LARGE-N LARGE-NB

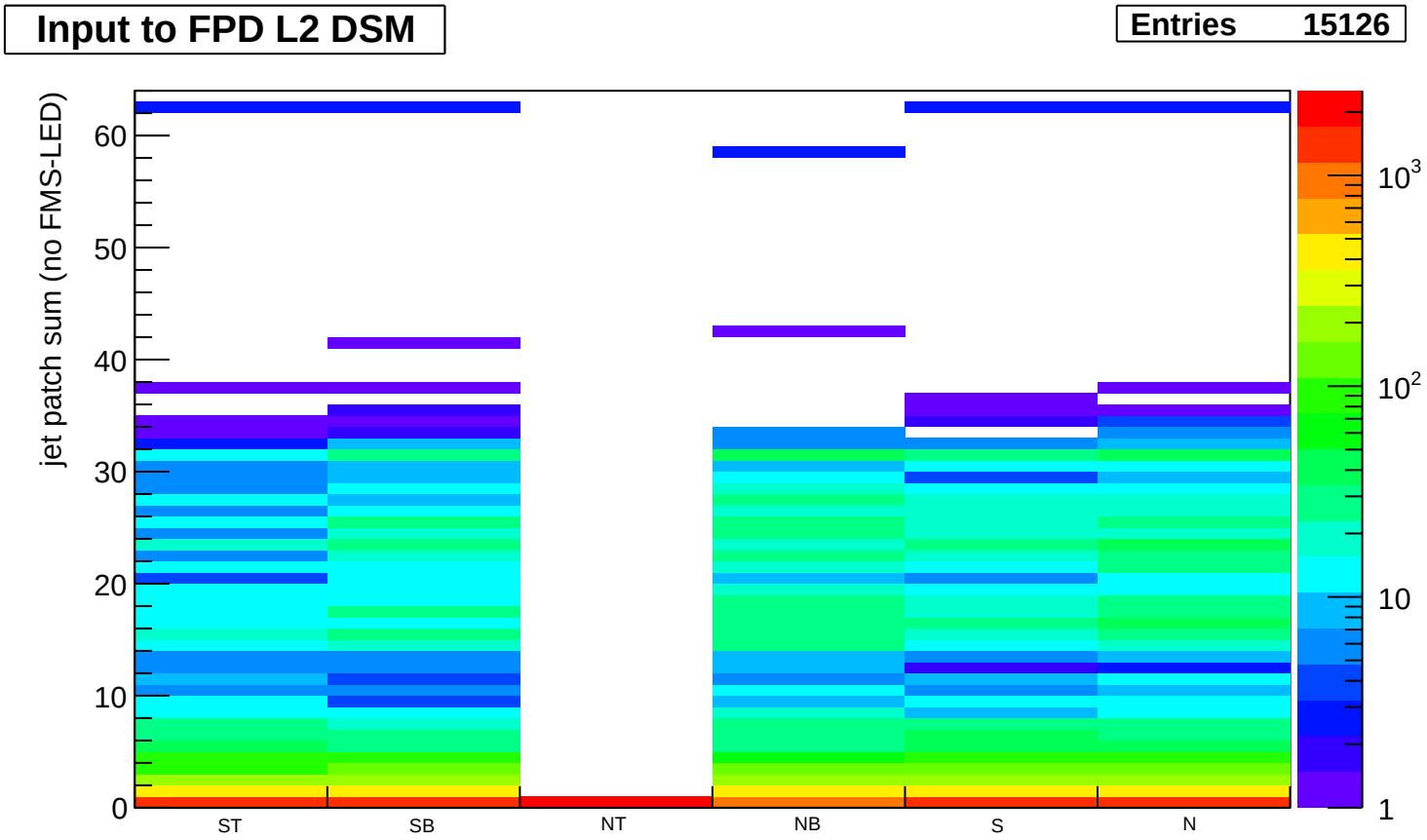

Input to FPD L2 DSM
Entries 135
quadrant sum - simulated
SMALL-ST SMALL-S SMALL-SB SMALL-NT SMALL-N SMALL-NB LARGE-ST LARGE-S LARGE-SB LARGE-NT LARGE-N LARGE-NB

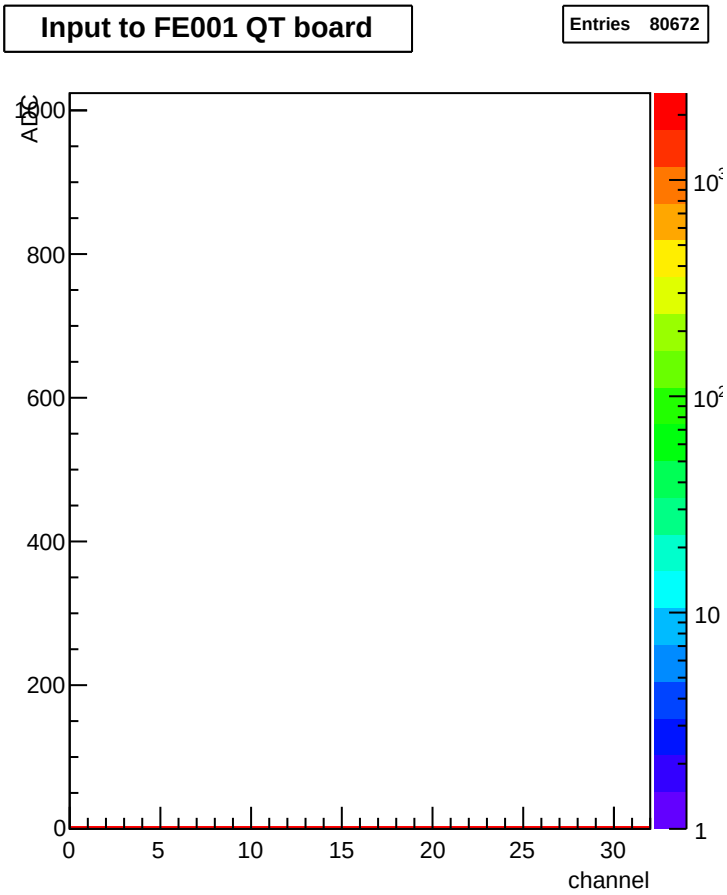

Input to FPD L2 DSM
Entries 7563
CL bits
90 74
125 112 98
68 141 94
2328 2178 2255
SMALL LARGE-S LARGE-N

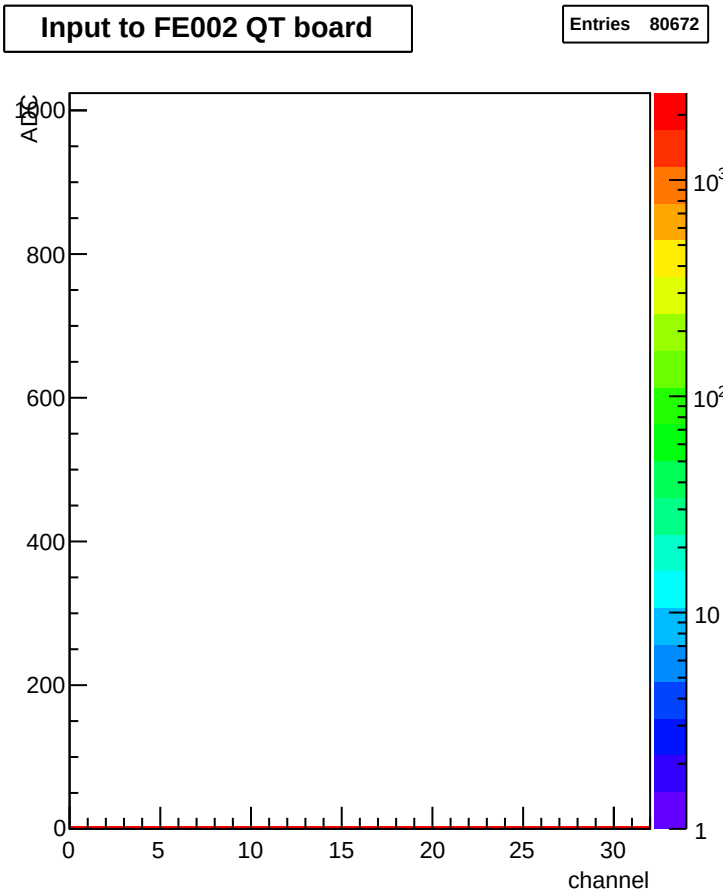

Input to FPD L2 DSM
Entries 0
CL bits - simulated
SMALL LARGE-S LARGE-N

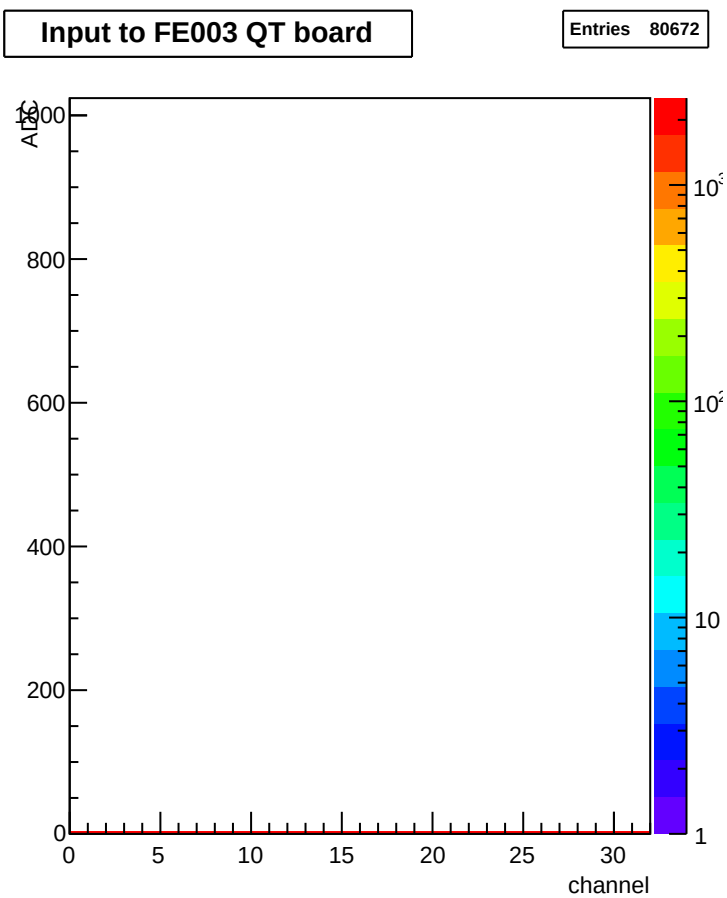

Input to FPD L2 DSM
Entries 7563
HT bits
57 20 19
76
210 2 1
2178 2499 2501
SMALL LARGE-S LARGE-N

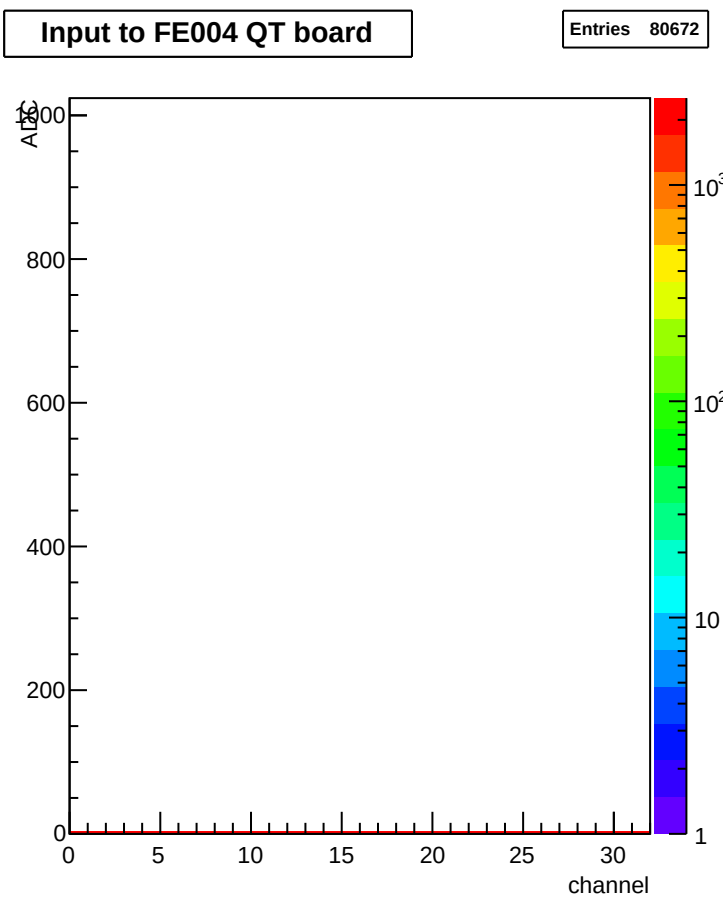

Input to FPD L2 DSM
Entries 0
HT bits - simulated
SMALL LARGE-S LARGE-N

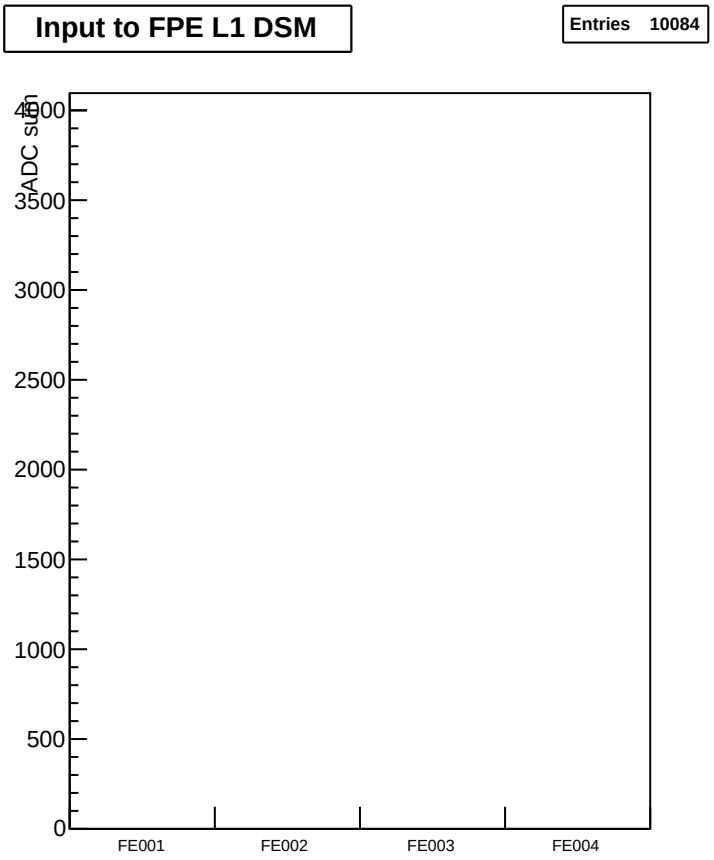

Input to FPD L2 DSM
Entries 15126
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3

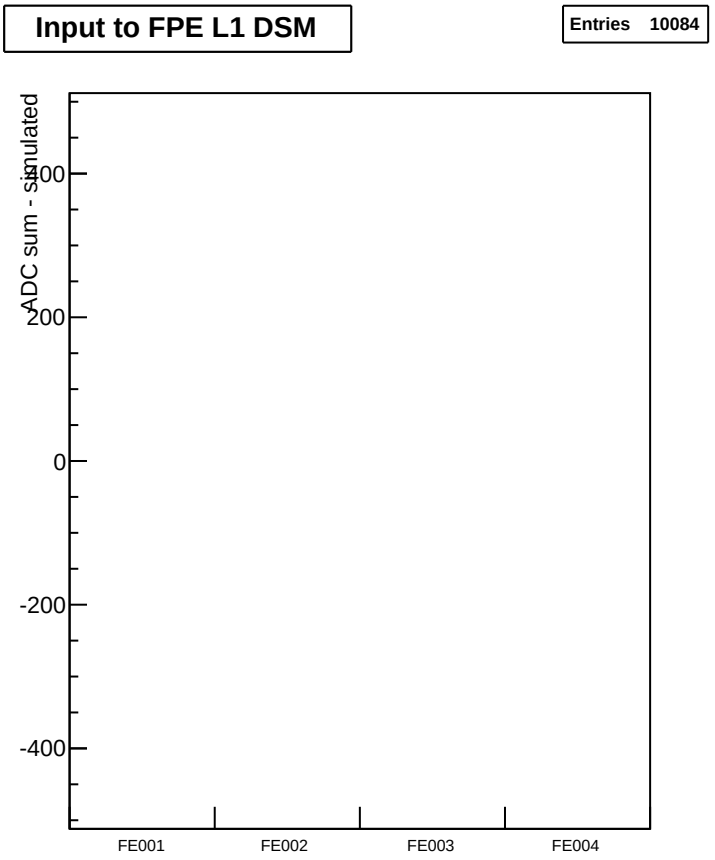

Input to FE001 QT board
Entries 80672
ADC
channel

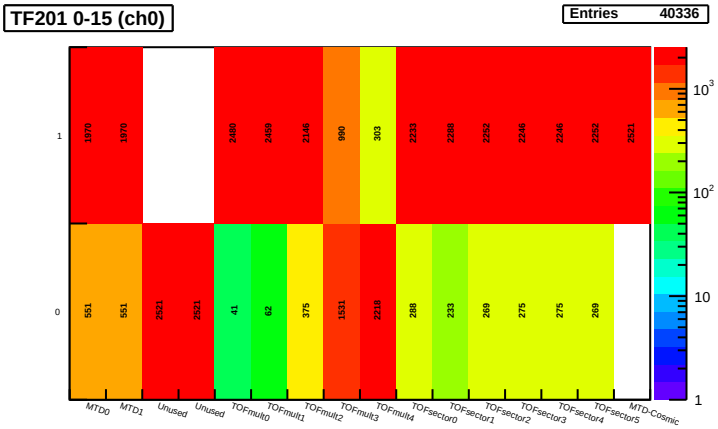

Input to FE002 QT board
Entries 80672
ADC
channel

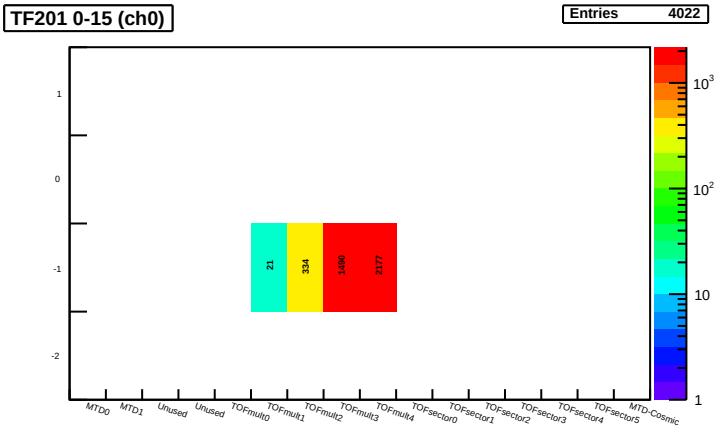

Input to FE003 QT board
Entries 80672
ADC
channel

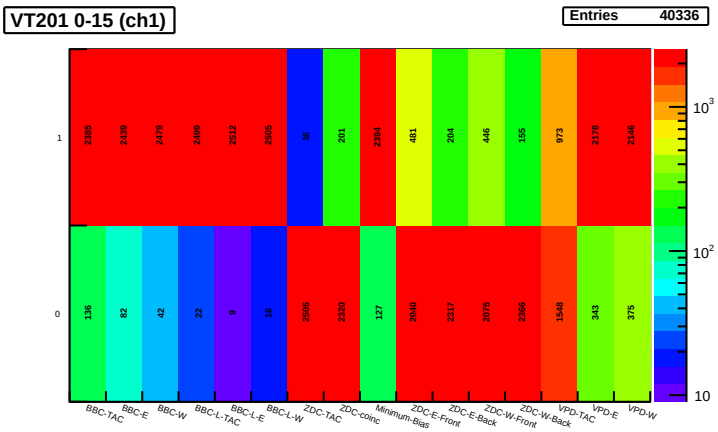

Input to FE004 QT board
Entries 80672
ADC
channel

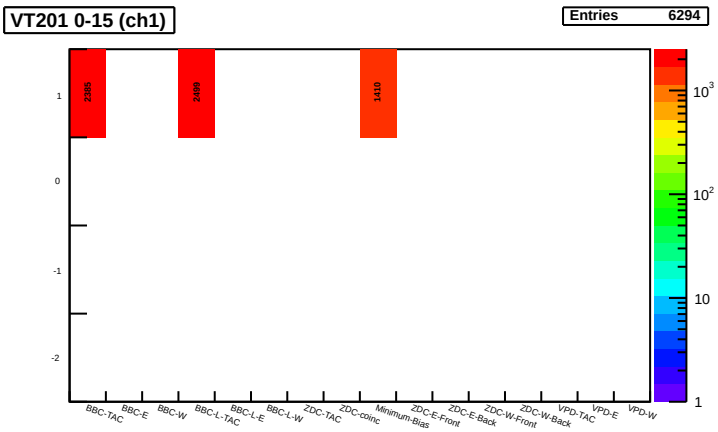

Input to FPE L1 DSM
Entries 10084
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004

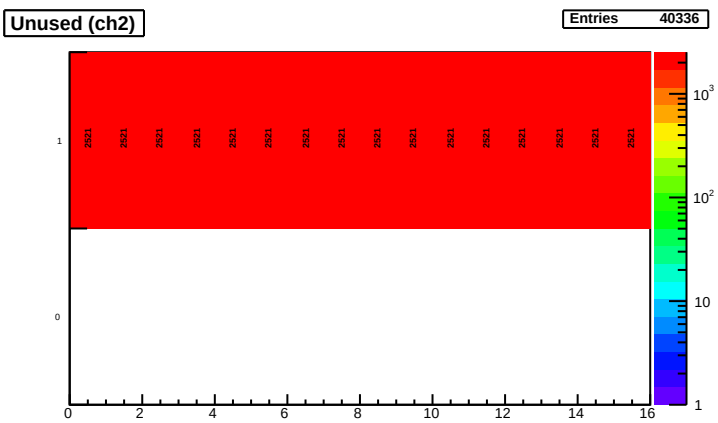

Input to FPE L1 DSM
Entries 10084
ADC sum - simulated
400
200
0
-200
-400
FE001
FE002
FE003
FE004

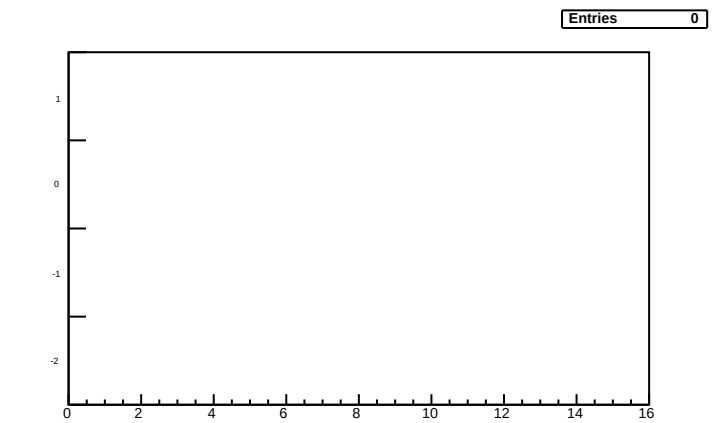

TF201 0-15 (ch0)
Entries 40336
1970 1970 2480 2459 2146 990 303 2233 2288 2252 2246 2246 2252 2521
551 551 2521 2521 41 62 375 1531 2218 288 233 269 275 275 269
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

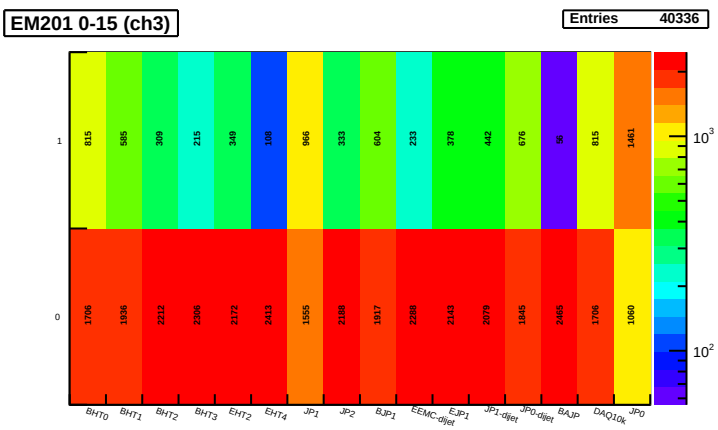

TF201 0-15 (ch0)
Entries 4022
21 334 1490 2177
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

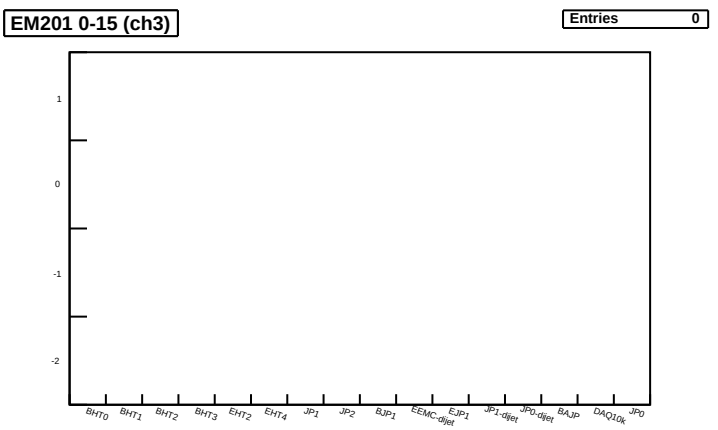

VT201 0-15 (ch1)
Entries 40336
2385 2439 2479 2499 2512 2505 16 201 2394 481 204 446 155 973 2178 2146
136 82 42 22 9 16 2505 2320 127 2040 2317 2075 2366 1548 343 375
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-coinc Minimum-Bias ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 6294
2385 2499 1410
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-coinc Minimum-Bias ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W

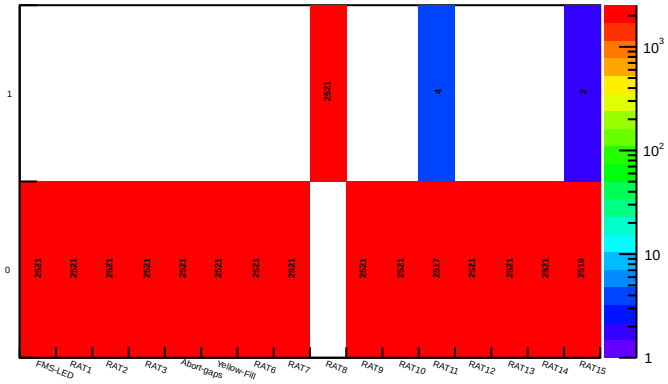

Unused (ch2)
Entries 40336
2521 2521 2521 2521 2521 2521 2521 2521 2521 2521 2521 2521 2521 2521 2521 2521

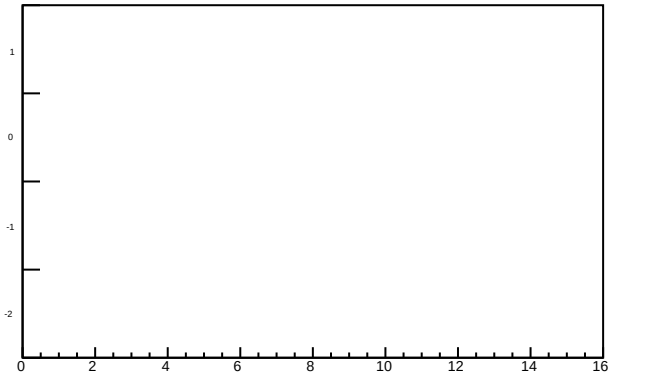

Entries 0


EM201 0-15 (ch3)
Entries 40336
815 585 309 215 349 108 966 333 604 233 378 442 676 56 815 1461
1706 1536 2212 2306 2172 2413 1555 2188 1917 2288 2143 2079 1845 2465 1706 1060
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 EEMC-dijet EJP1 JP1-dijet JP0-dijet BAJP DAQ10k JP0

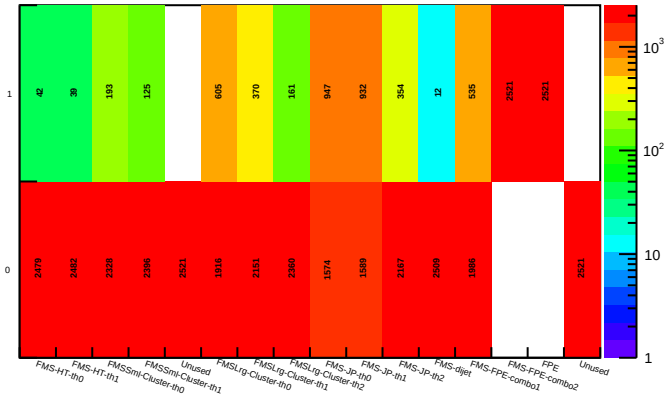

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 EEMC-dijet EJP1 JP1-dijet JP0-dijet BAJP DAQ10k JP0

RAT board (ch4)

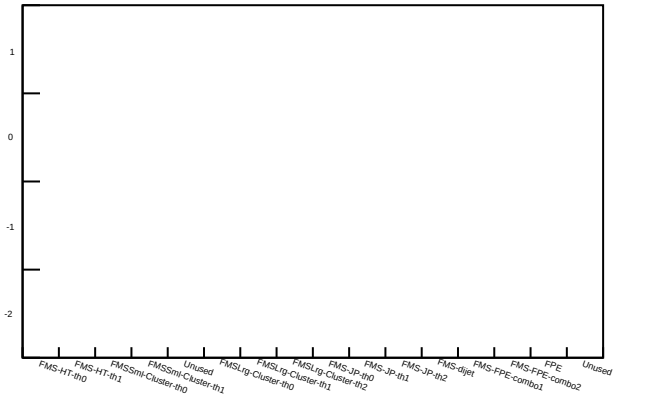




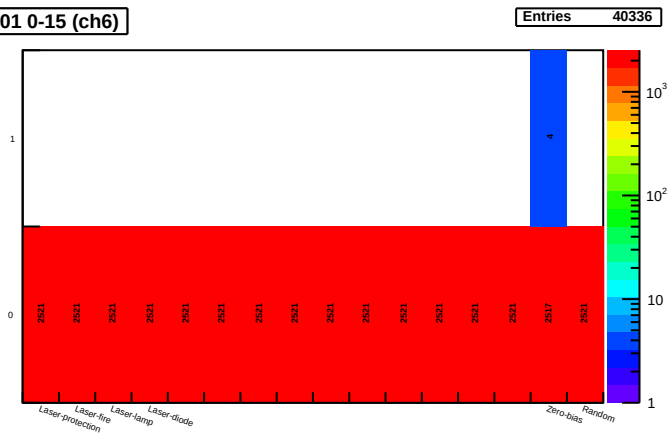
FP201 0-15 (ch5)

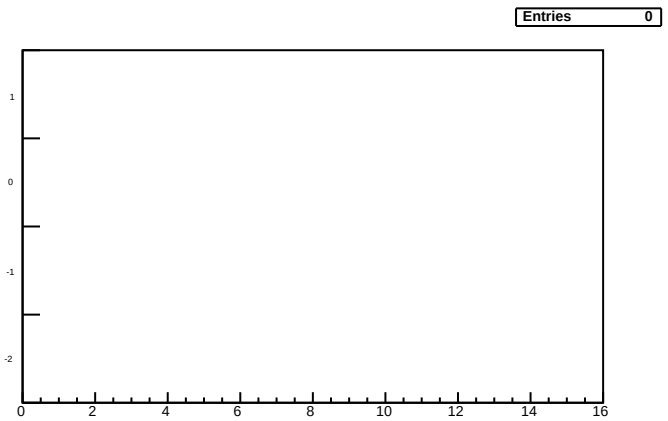
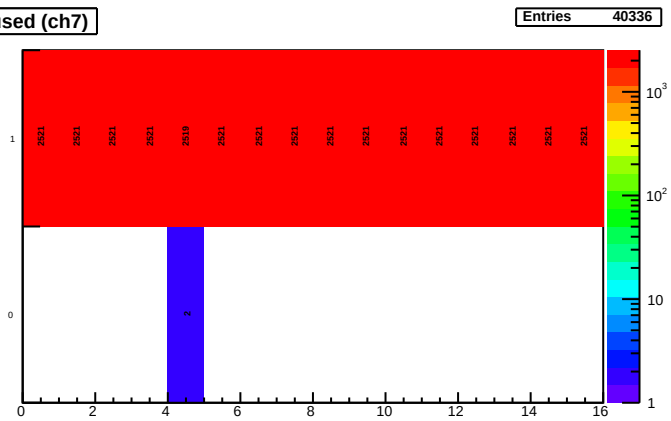
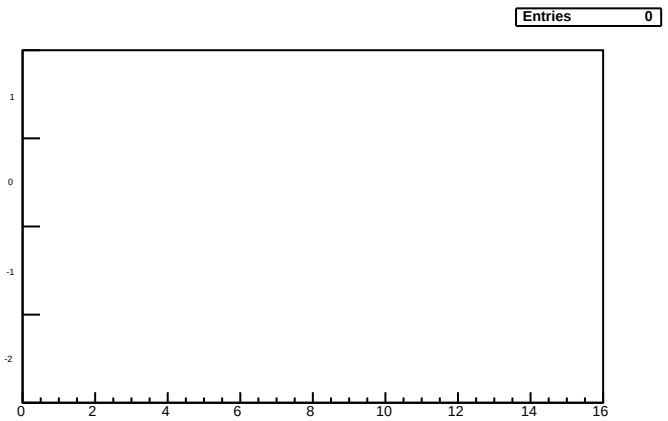


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)