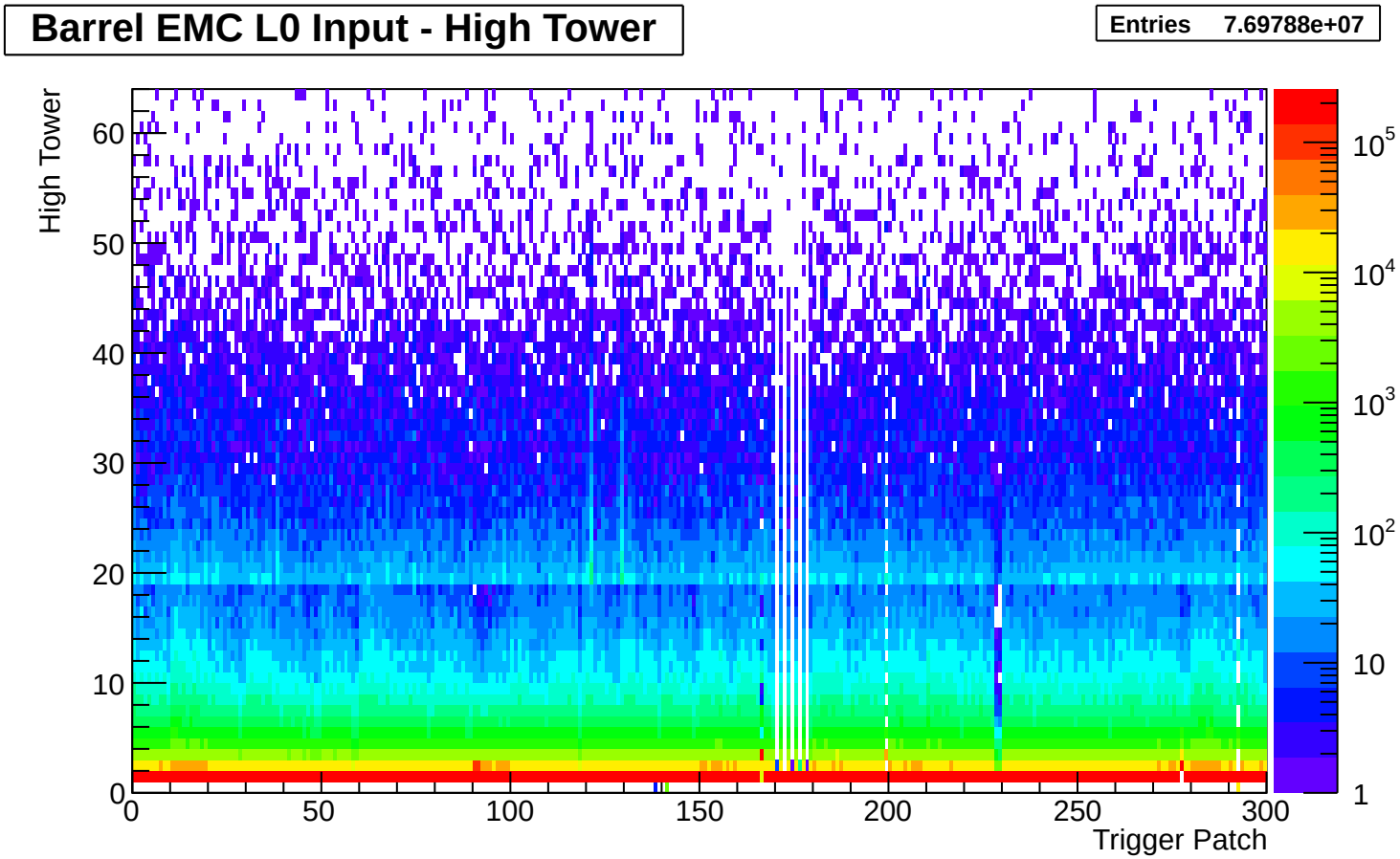
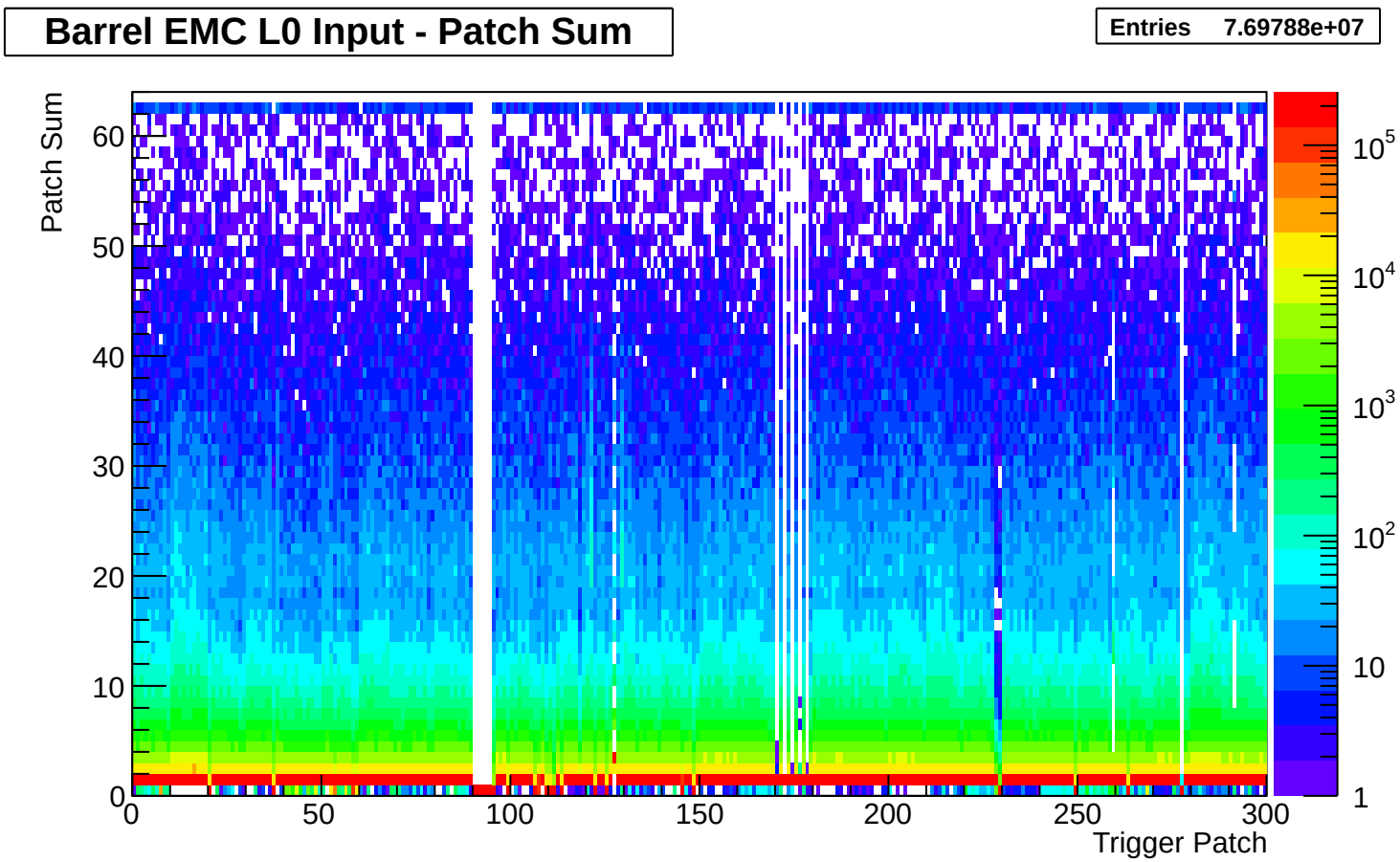
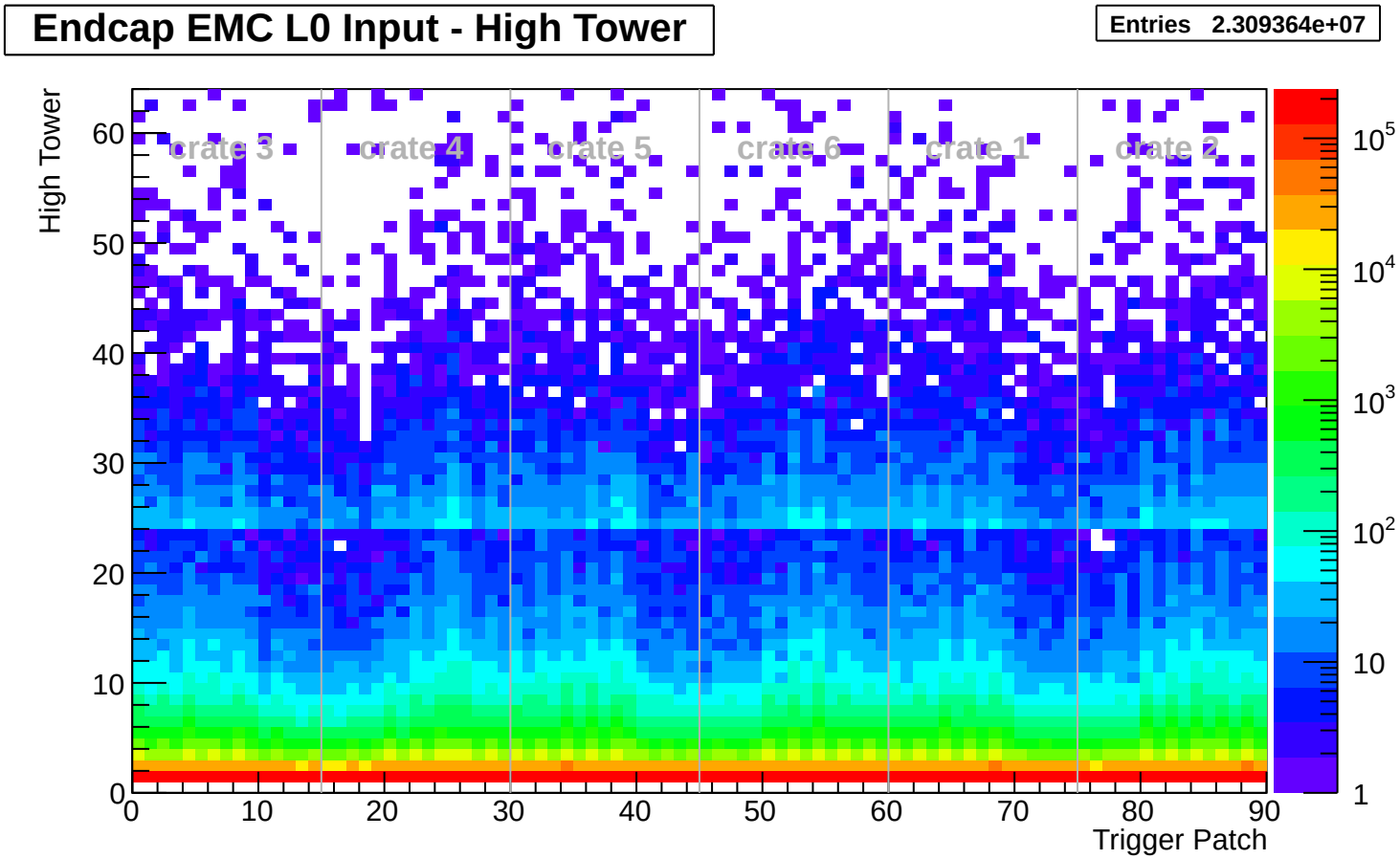
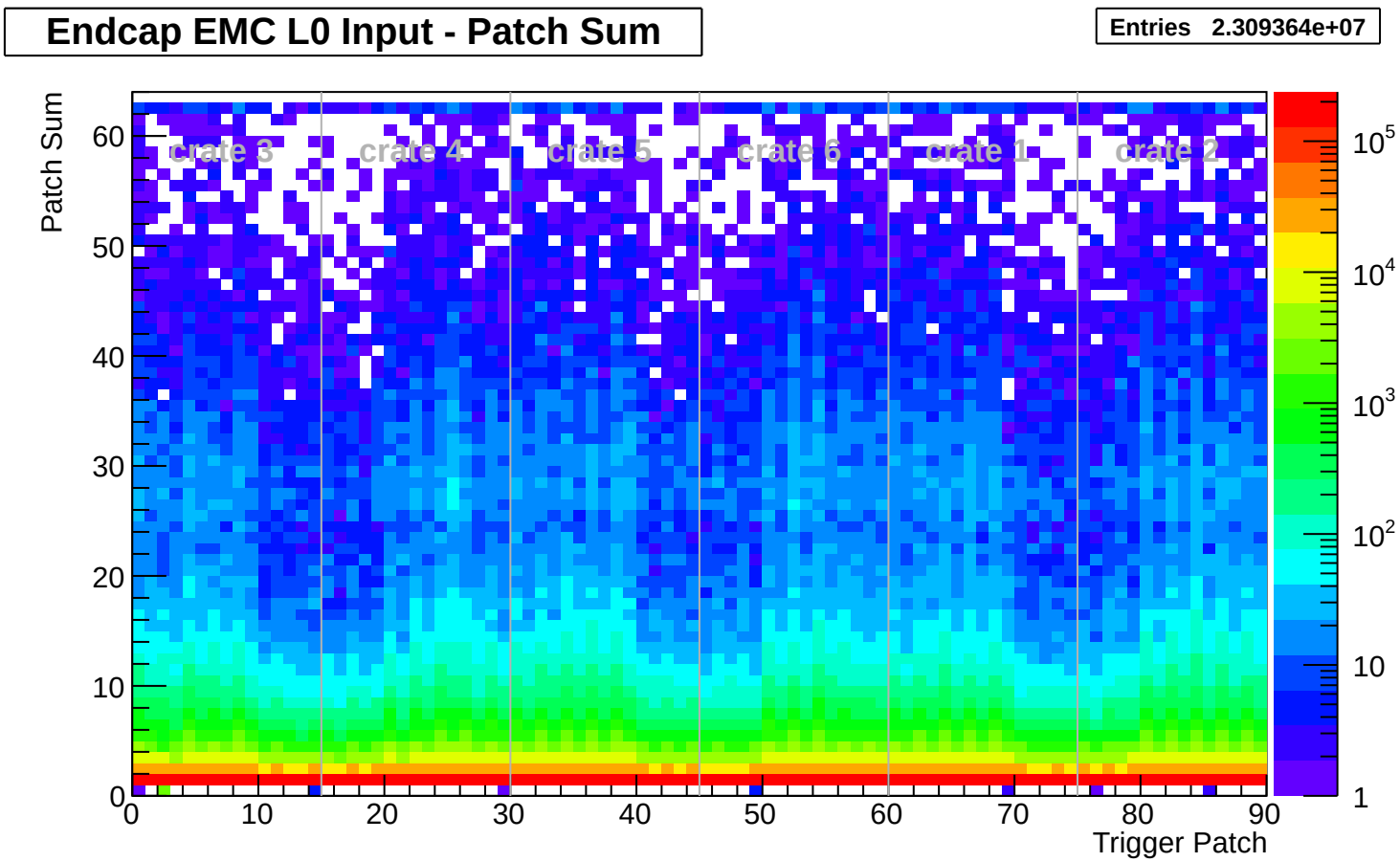
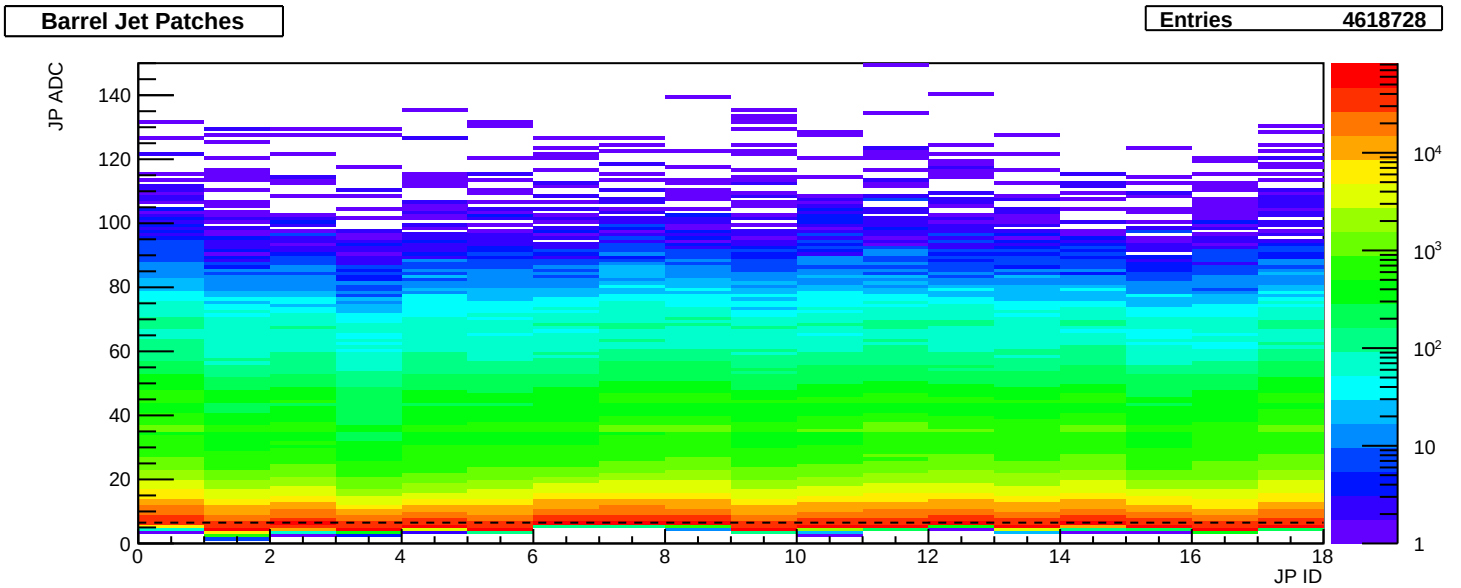
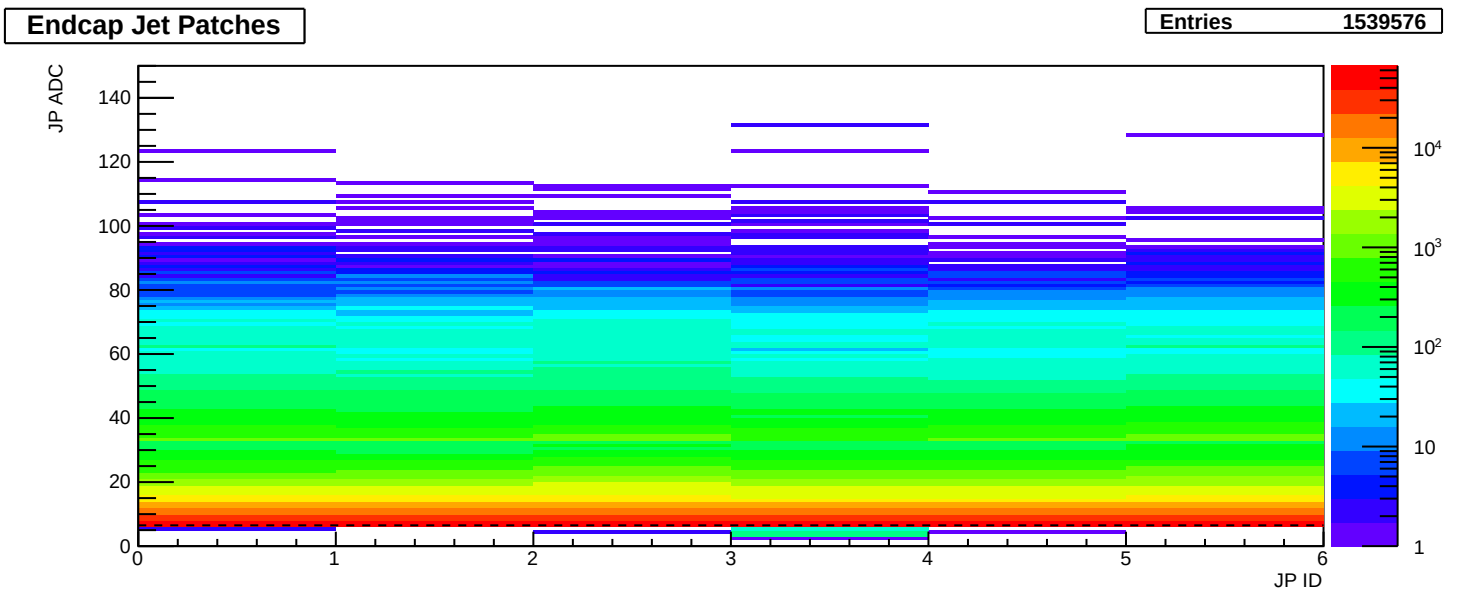

Barrel EMC L0 Input - High Tower
Entries 7.69788e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

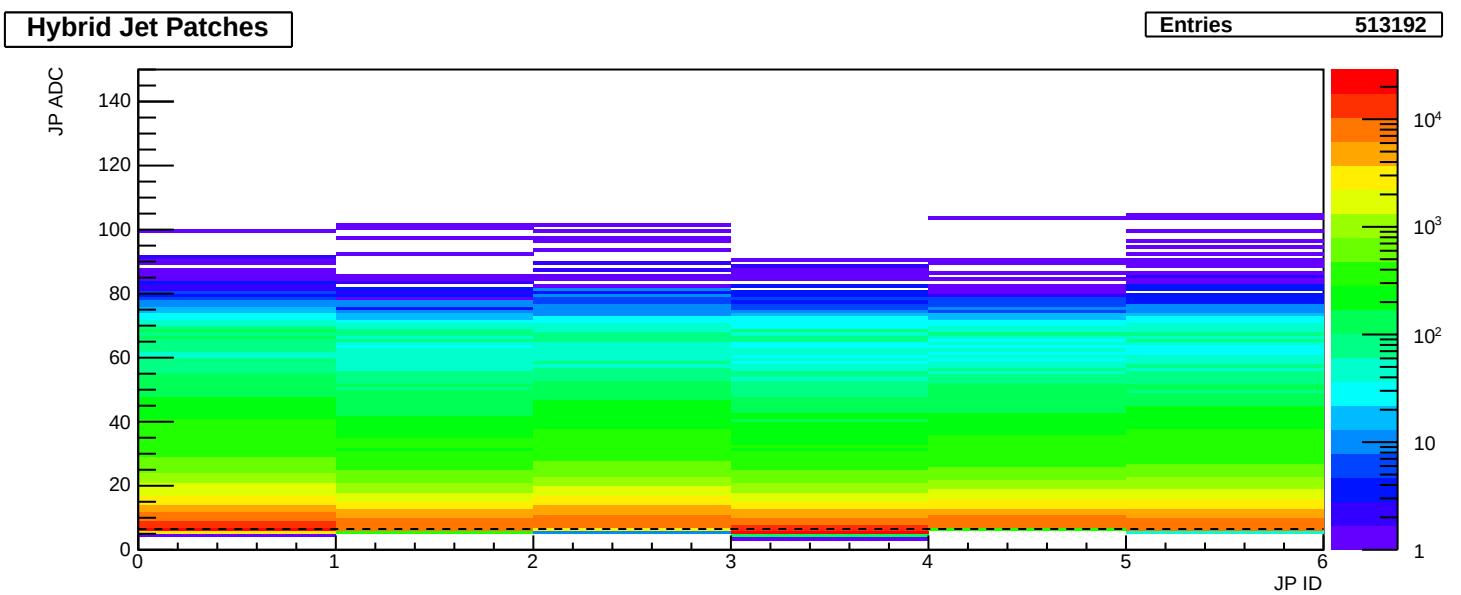

Barrel EMC L0 Input - Patch Sum
Entries 7.69788e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

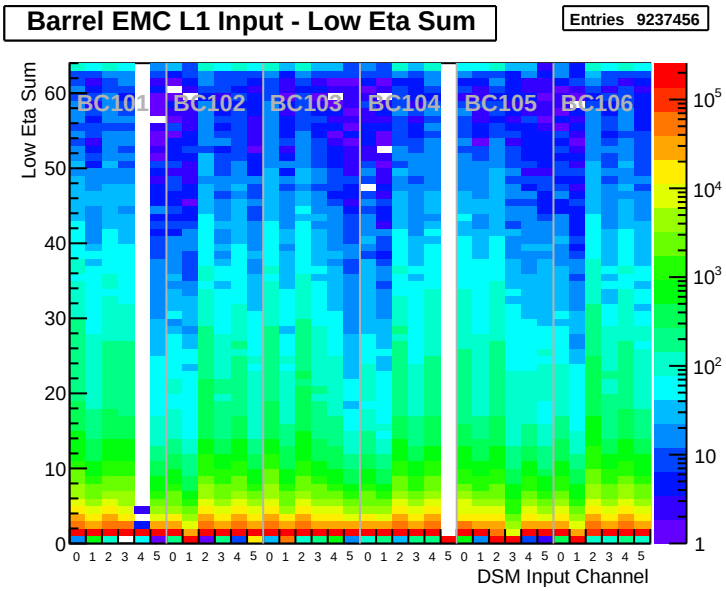

Endcap EMC L0 Input - High Tower
Entries 2.309364e+07
High Tower
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

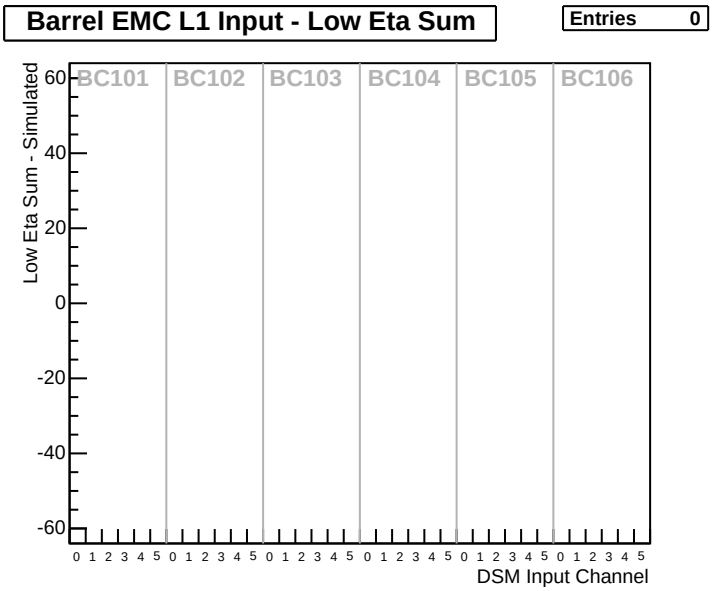

Endcap EMC L0 Input - Patch Sum
Entries 2.309364e+07
Patch Sum
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

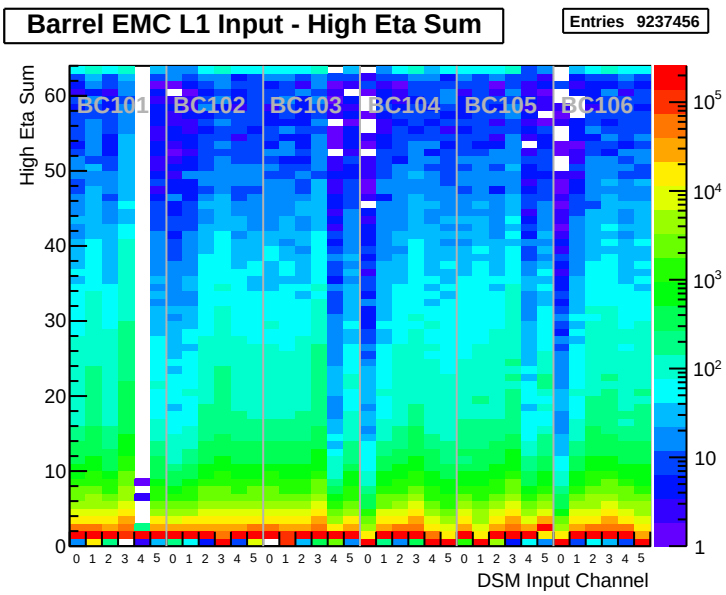

Barrel Jet Patches
Entries 4618728
JP ADC
JP ID

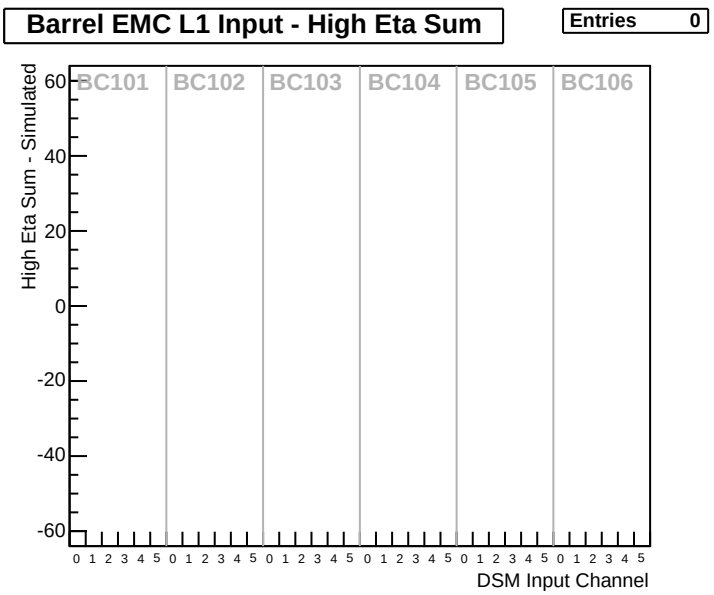

Endcap Jet Patches
Entries 1539576
JP ADC
JP ID

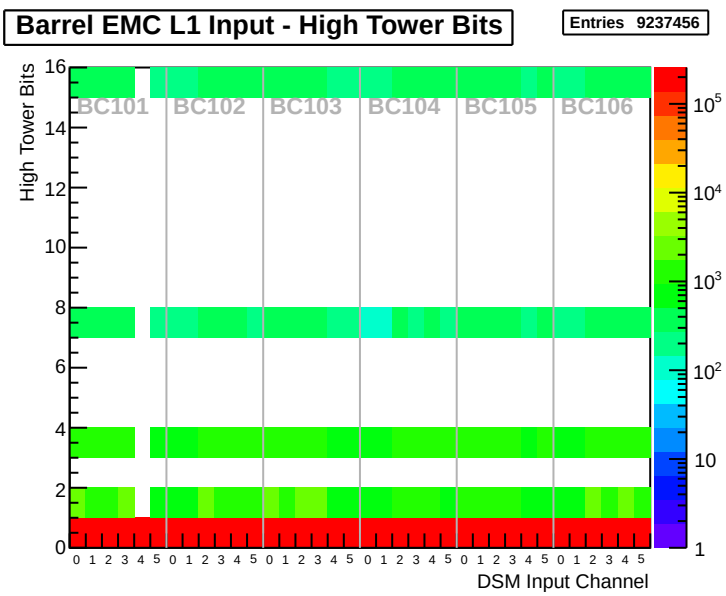

Hybrid Jet Patches
Entries 513192
JP ADC
JP ID

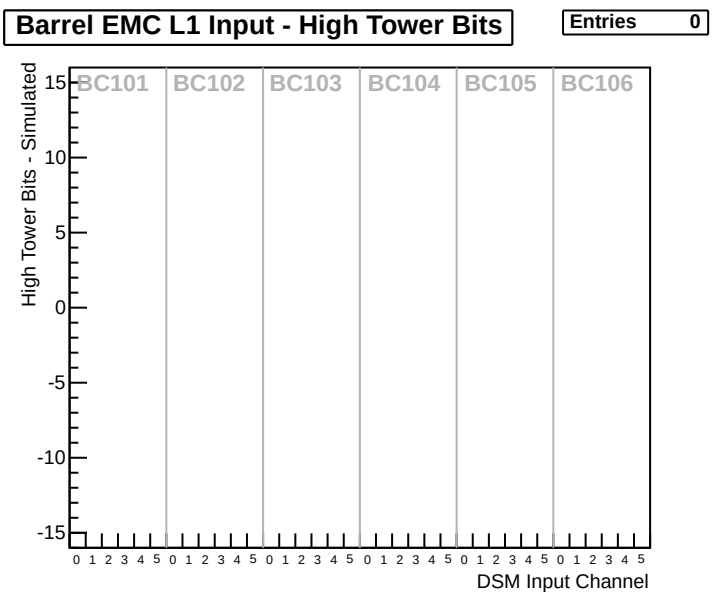

Barrel EMC L1 Input - Low Eta Sum
Entries 9237456
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

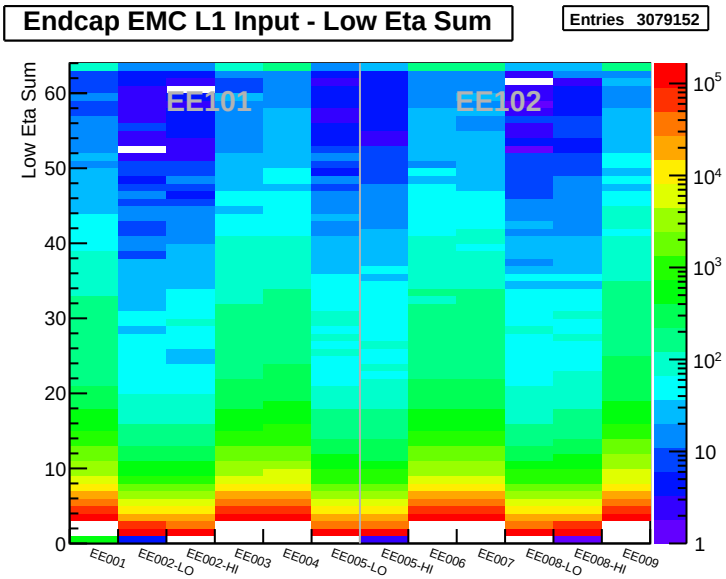

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

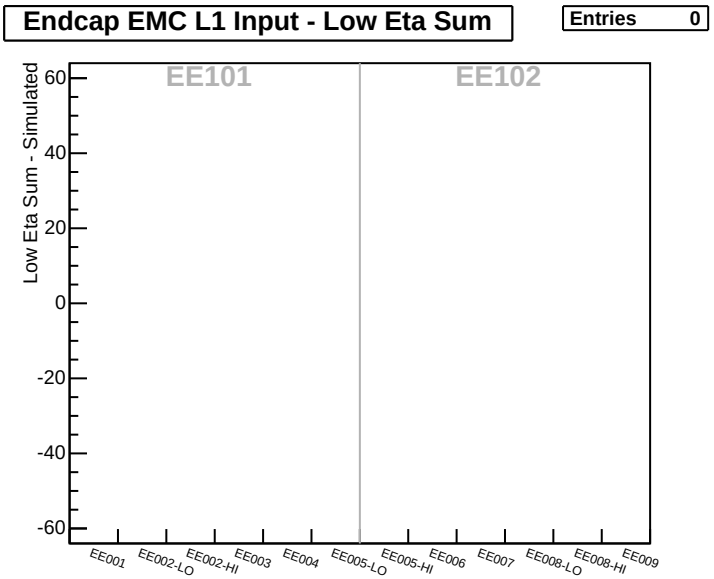

Barrel EMC L1 Input - High Eta Sum
Entries 9237456
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

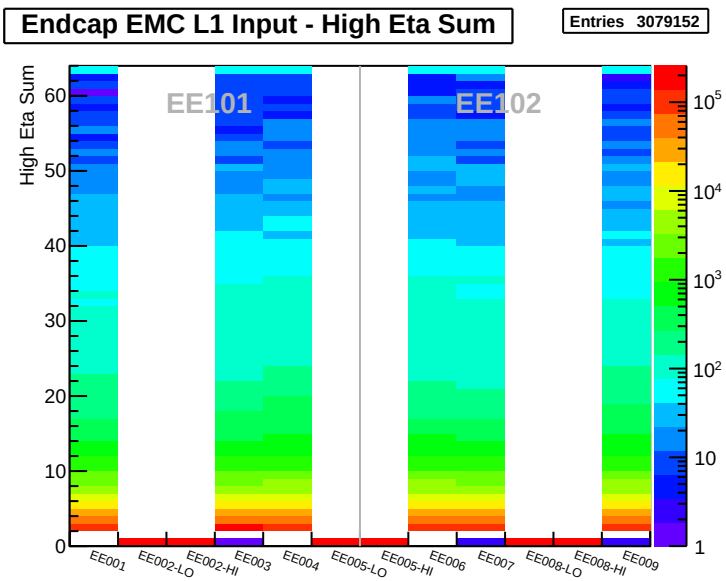

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

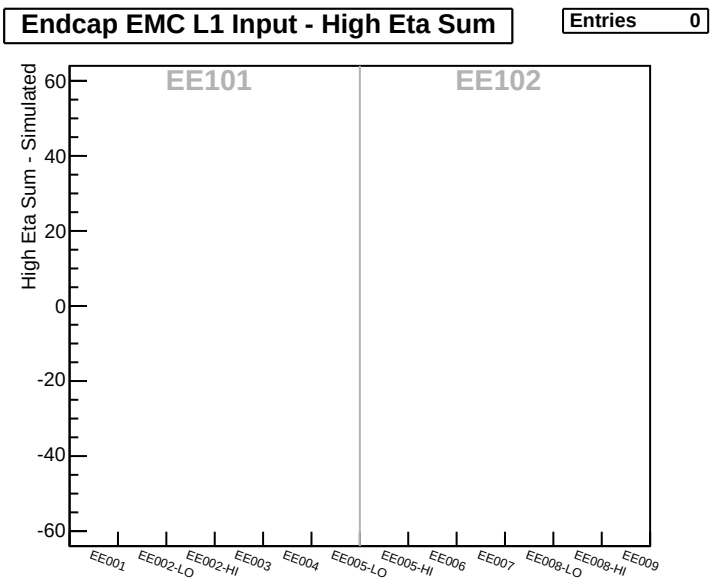

Barrel EMC L1 Input - High Tower Bits
Entries 9237456
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

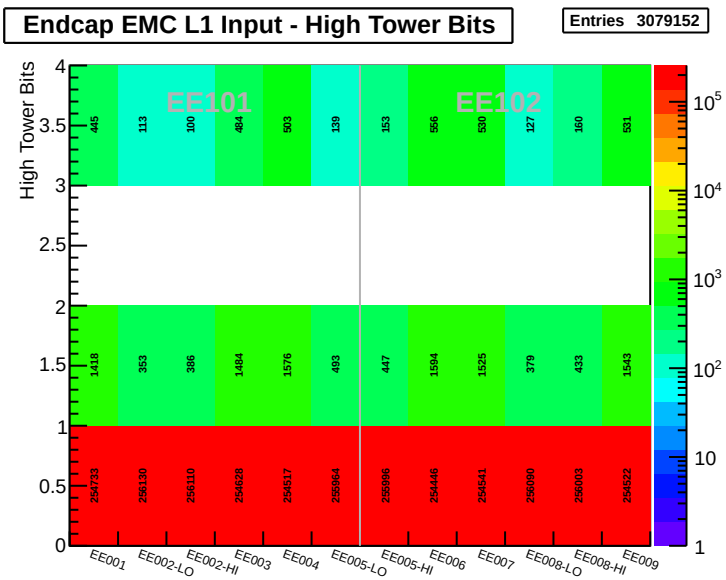

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

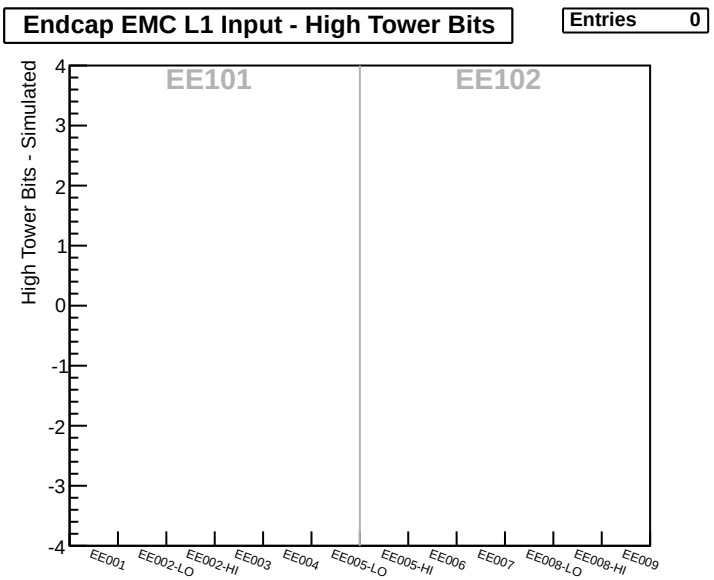

Endcap EMC L1 Input - Low Eta Sum
Entries 3079152
Low Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

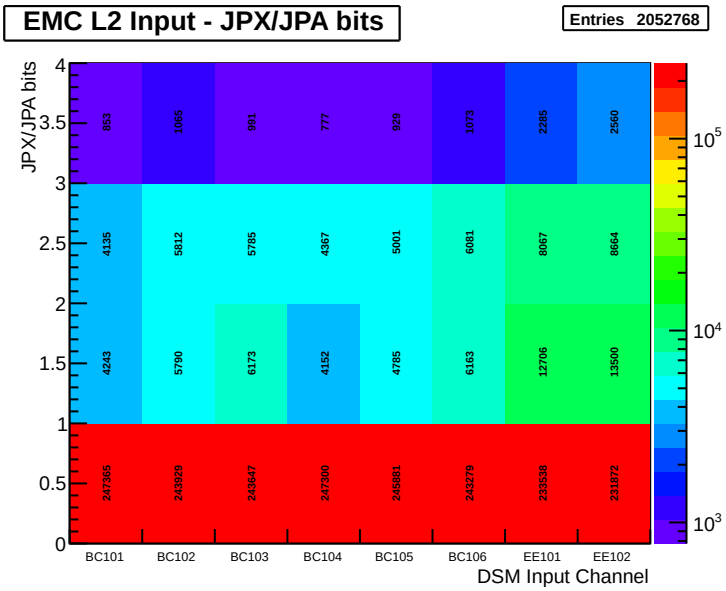

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

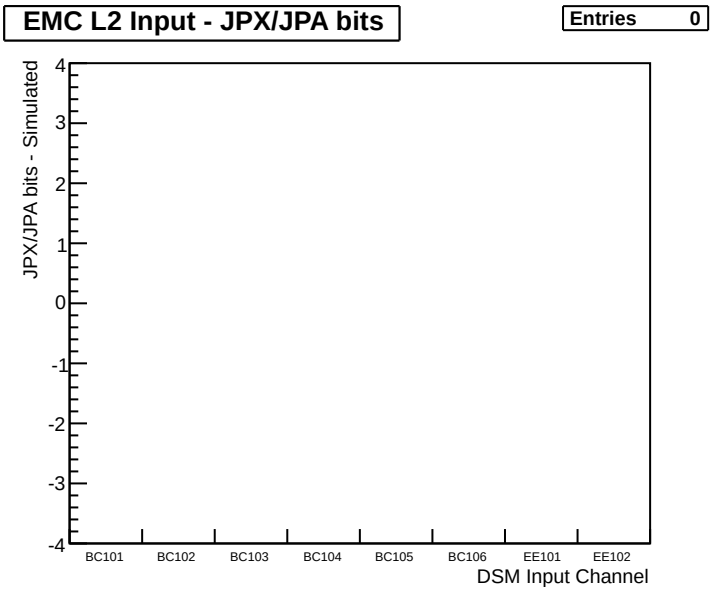

Endcap EMC L1 Input - High Eta Sum
Entries 3079152
High Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

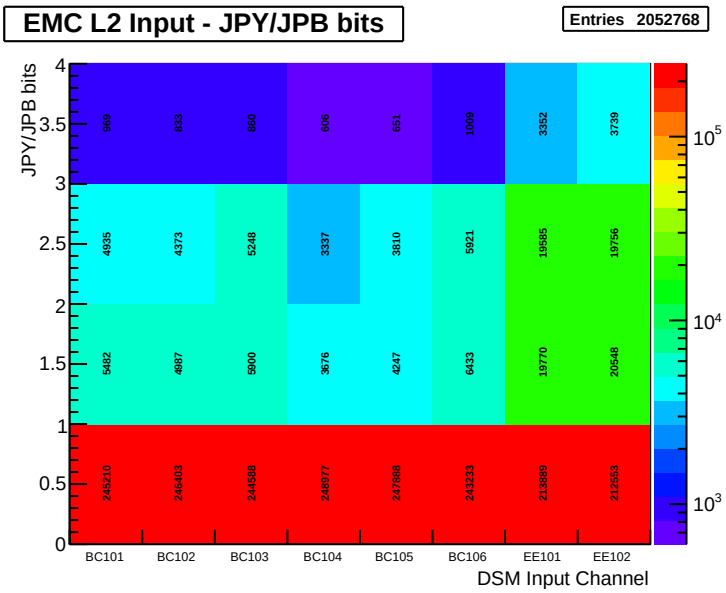

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

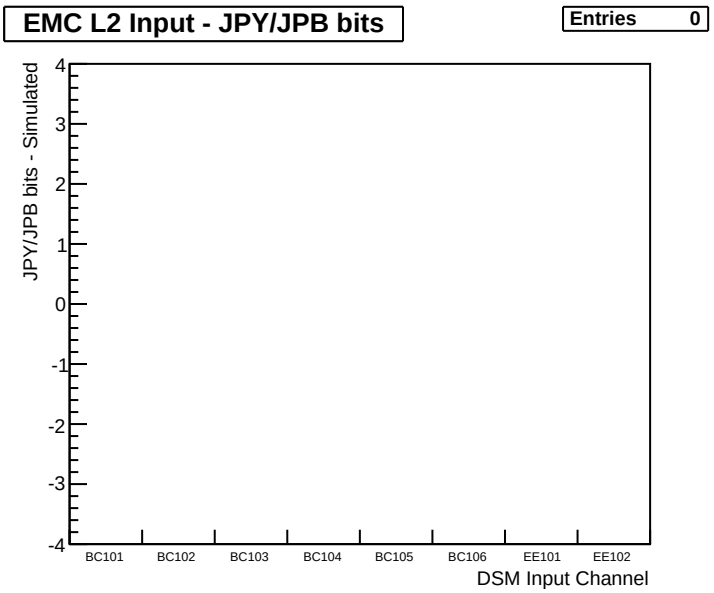

Endcap EMC L1 Input - High Tower Bits
Entries 3079152
High Tower Bits
EE101
EE102
445 113 100 484 503 139 153 556 530 127 160 531
1418 353 386 1484 1576 493 447 1594 1525 379 433 1543
254733 256130 256110 254628 254517 255964 255996 254446 254541 256090 256003 254522
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

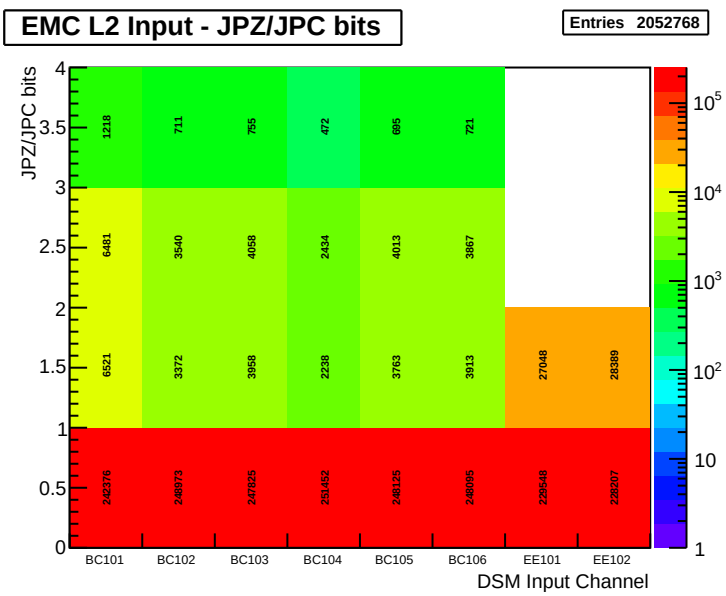

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

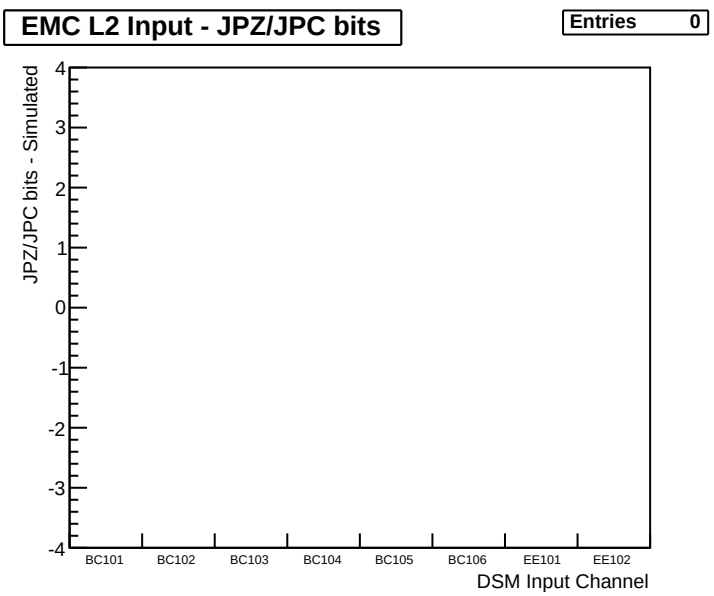

EMC L2 Input - JPX/JPA bits
Entries 2052768
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
853 1065 991 777 929 1073 2285 2560
4135 5812 5785 4367 5001 6081 8067 8664
4243 5790 6173 4152 4785 6163 12706 13500
247365 243929 243647 247300 245881 243279 233538 231872

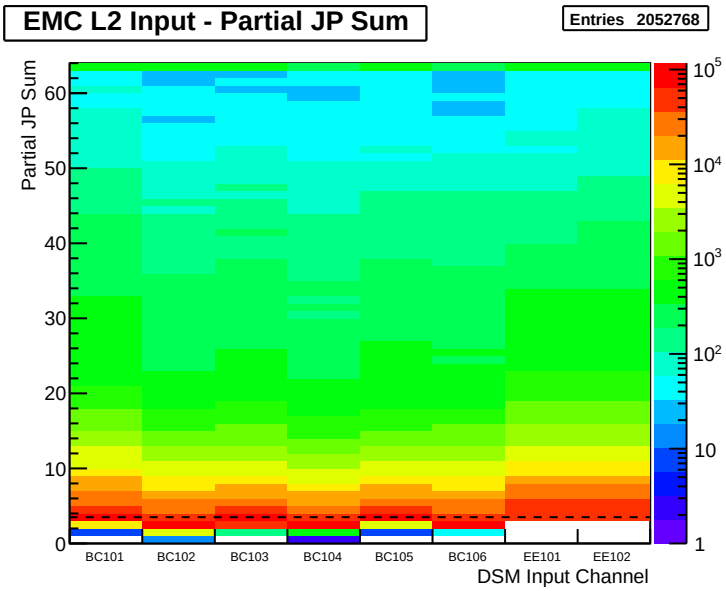

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

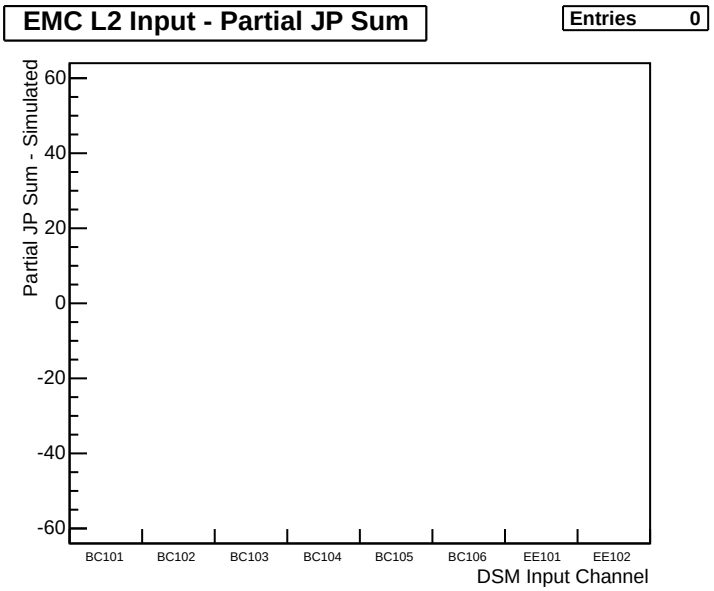

EMC L2 Input - JPY/JPB bits
Entries 2052768
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
569 833 860 606 651 1009 3352 3739
4935 4373 5248 3337 3810 5921 19585 19756
5482 4987 5900 3676 4247 6433 19770 20548
245210 246403 244588 248977 247888 243233 213869 212553

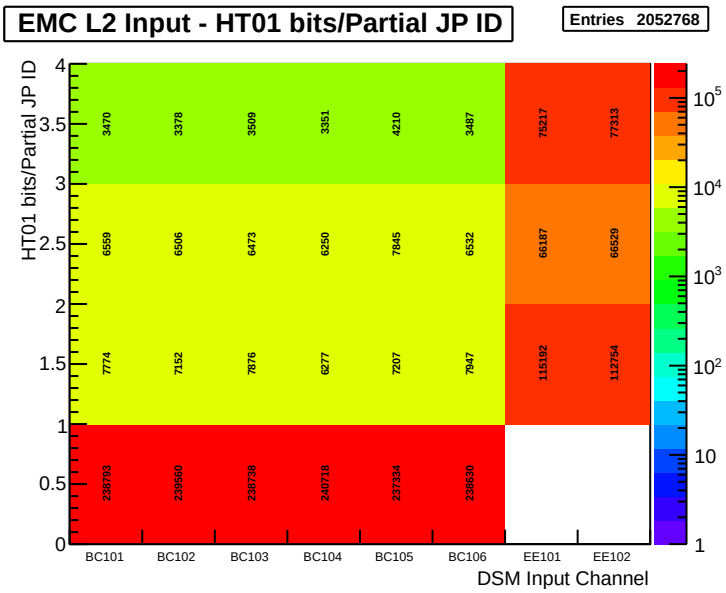

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

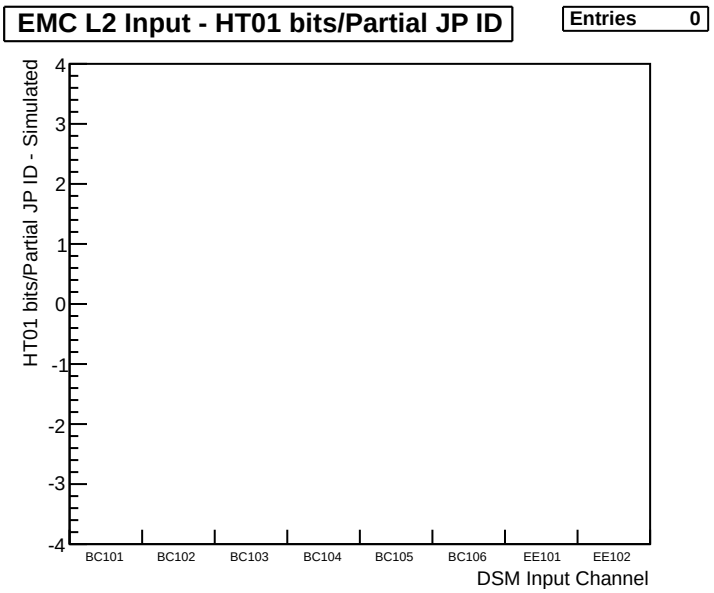

EMC L2 Input - JPZ/JPC bits
Entries 2052768
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1218 711 755 472 695 721
6481 3540 4058 2434 4013 3867
6521 3372 3958 2238 3763 3913 27048 28389
242376 248973 247825 251452 248125 248095 229548 228207

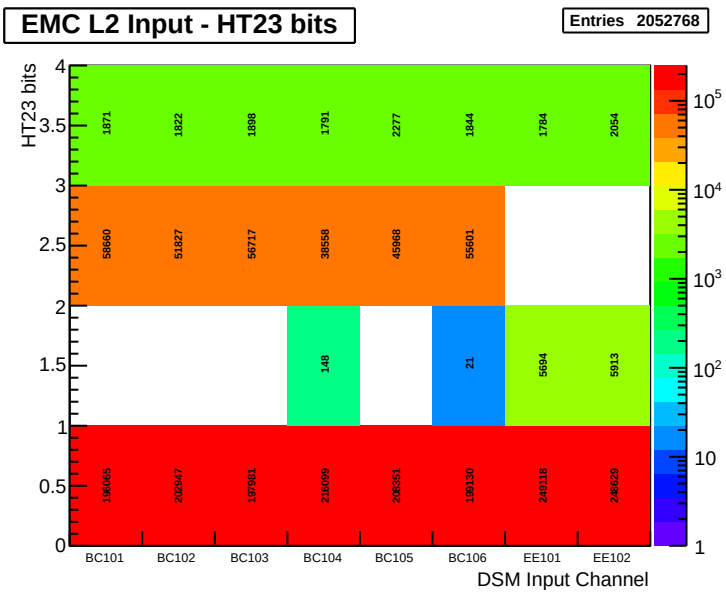

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

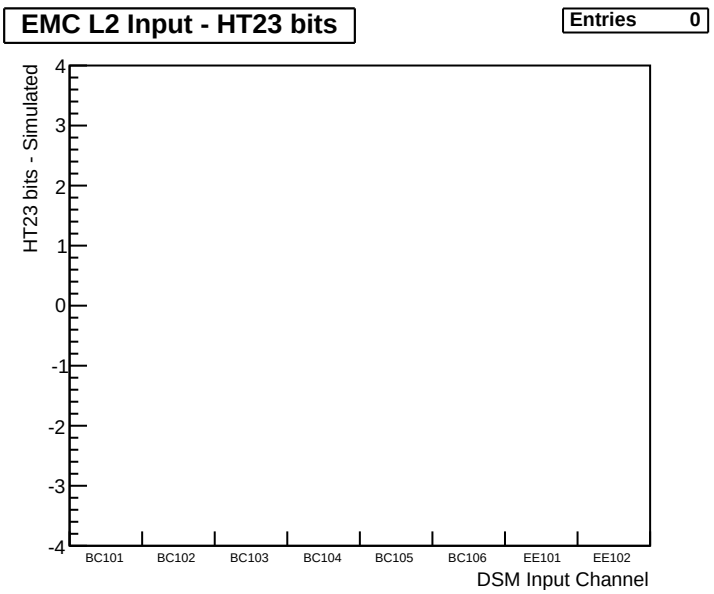

EMC L2 Input - Partial JP Sum
Entries 2052768
Partial JP Sum
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

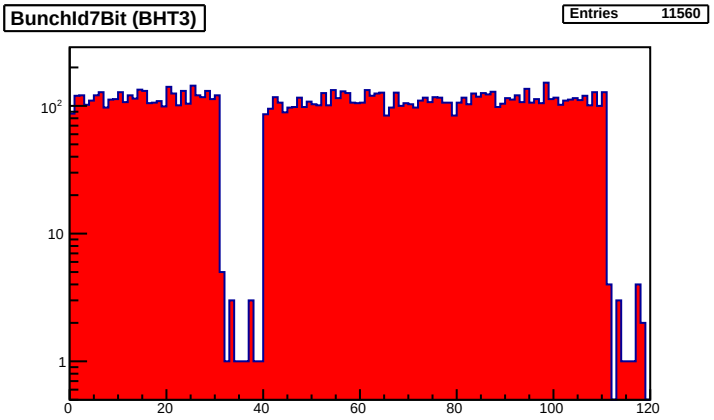

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

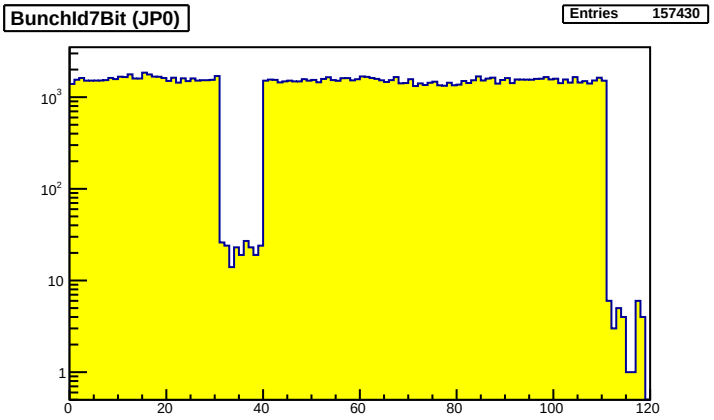

EMC L2 Input - HT01 bits/Partial JP ID
Entries 2052768
HT01 bits/Partial JP ID
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

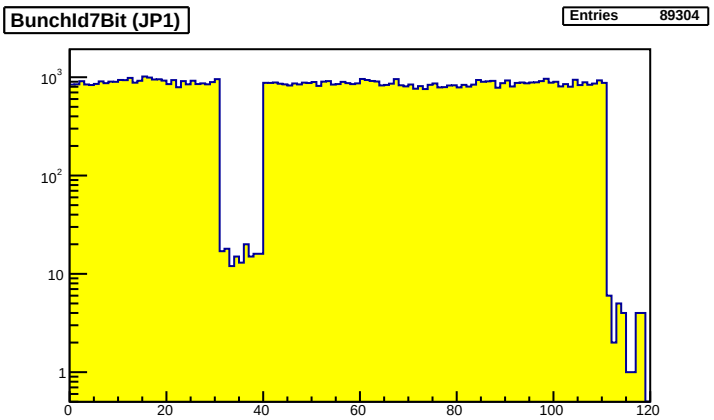

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

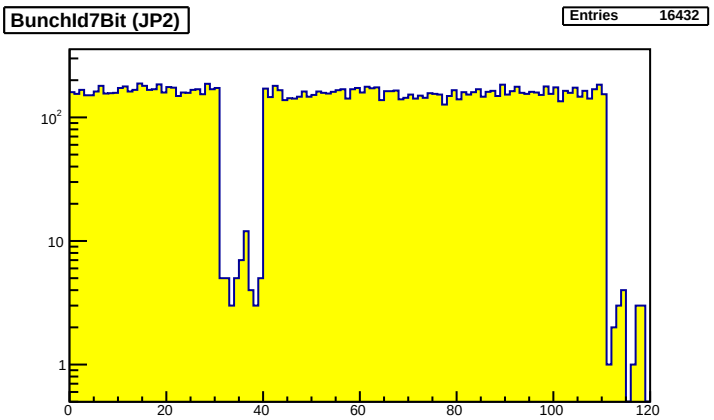

EMC L2 Input - HT23 bits
Entries 2052768
HT23 bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

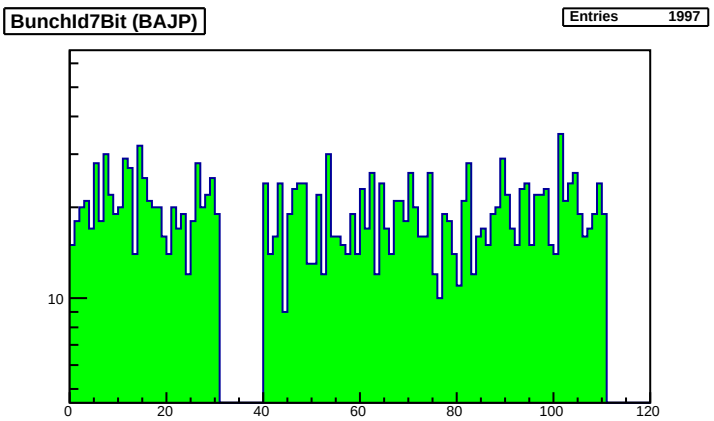

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

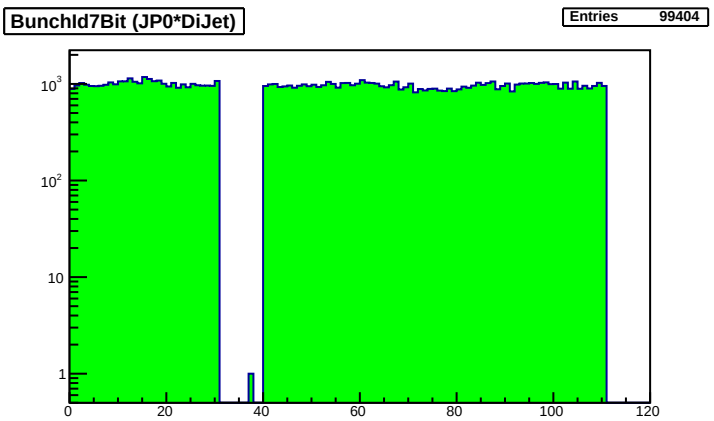

BunchId7Bit (BHT3)
Entries 11560

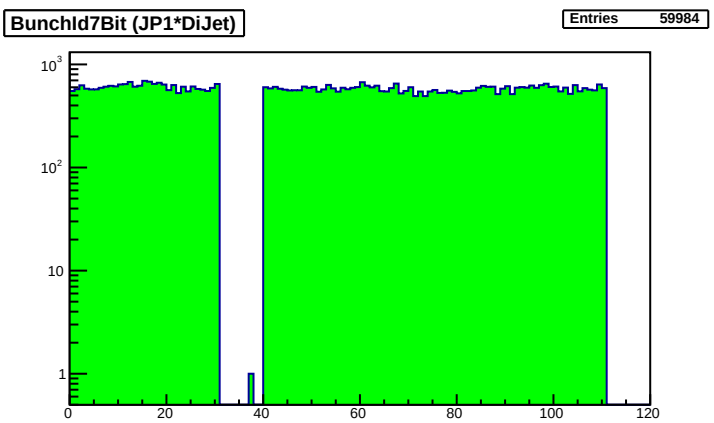

BunchId7Bit (JP0)
Entries 157430

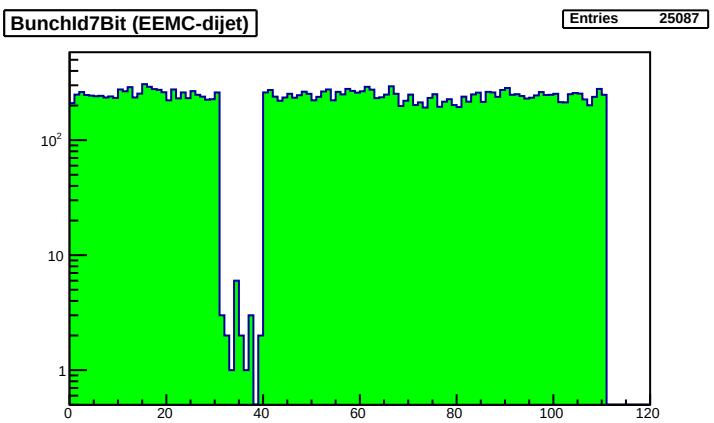

BunchId7Bit (JP1)
Entries 89304

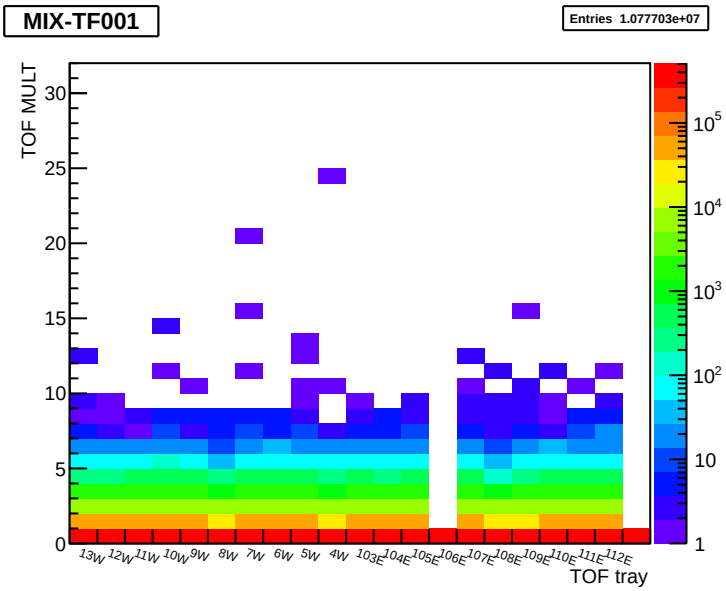

BunchId7Bit (JP2)
Entries 16432

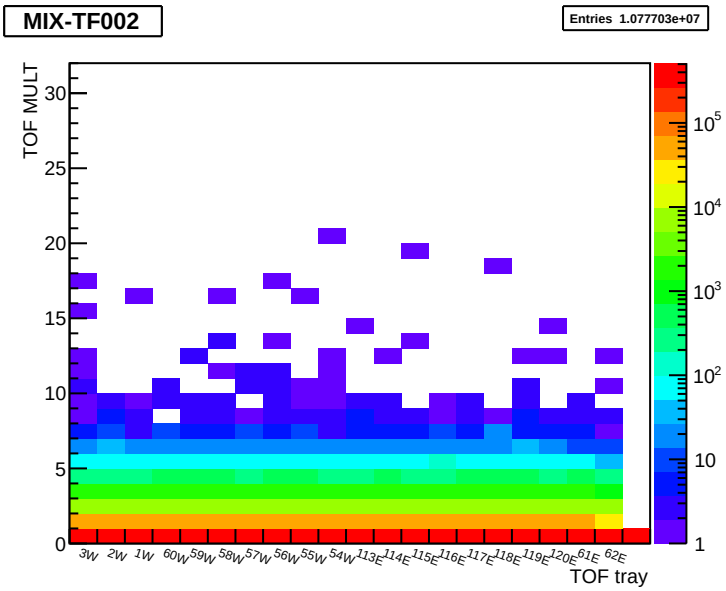

BunchId7Bit (BAJP)
Entries 1997

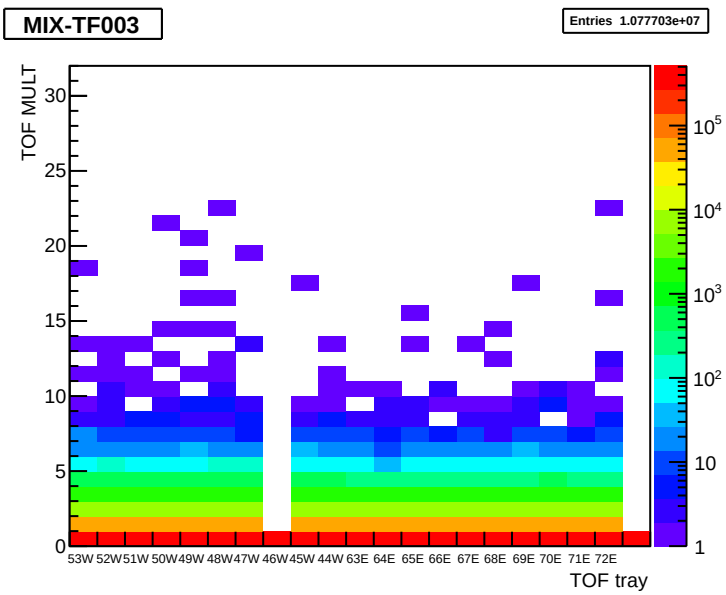

BunchId7Bit (JP0*DiJet)
Entries 99404

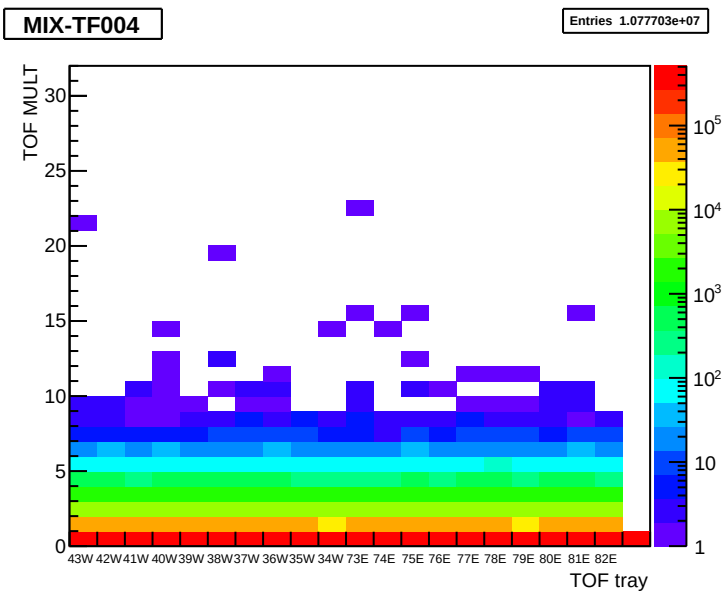

BunchId7Bit (JP1*DiJet)
Entries 59984

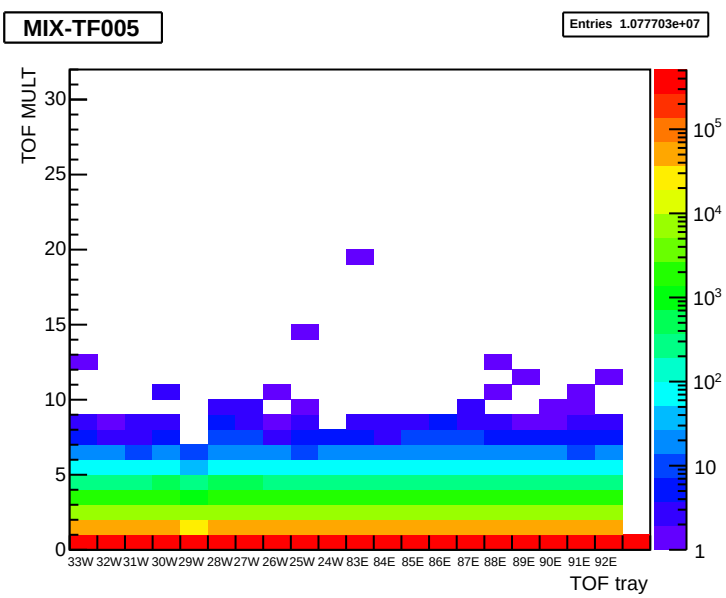

BunchId7Bit (EEMC-dijet)
Entries 25087

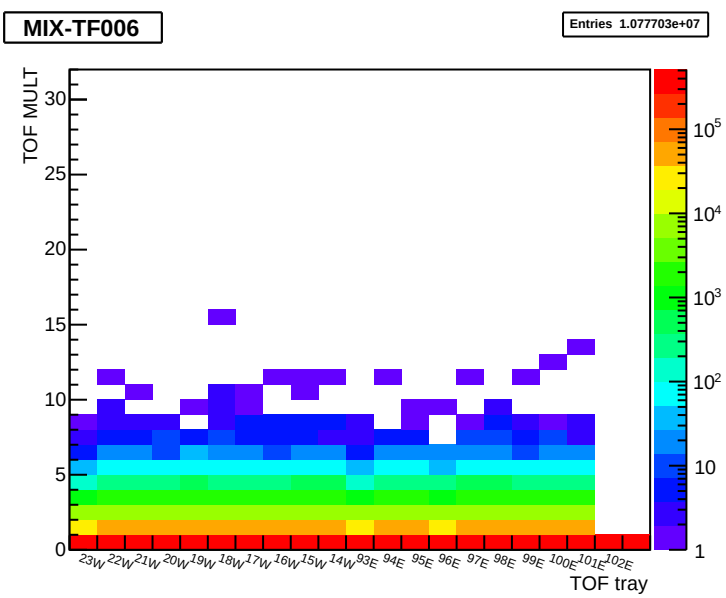

MIX-TF001
Entries 1.077703e+07
TOF MULT
TOF tray

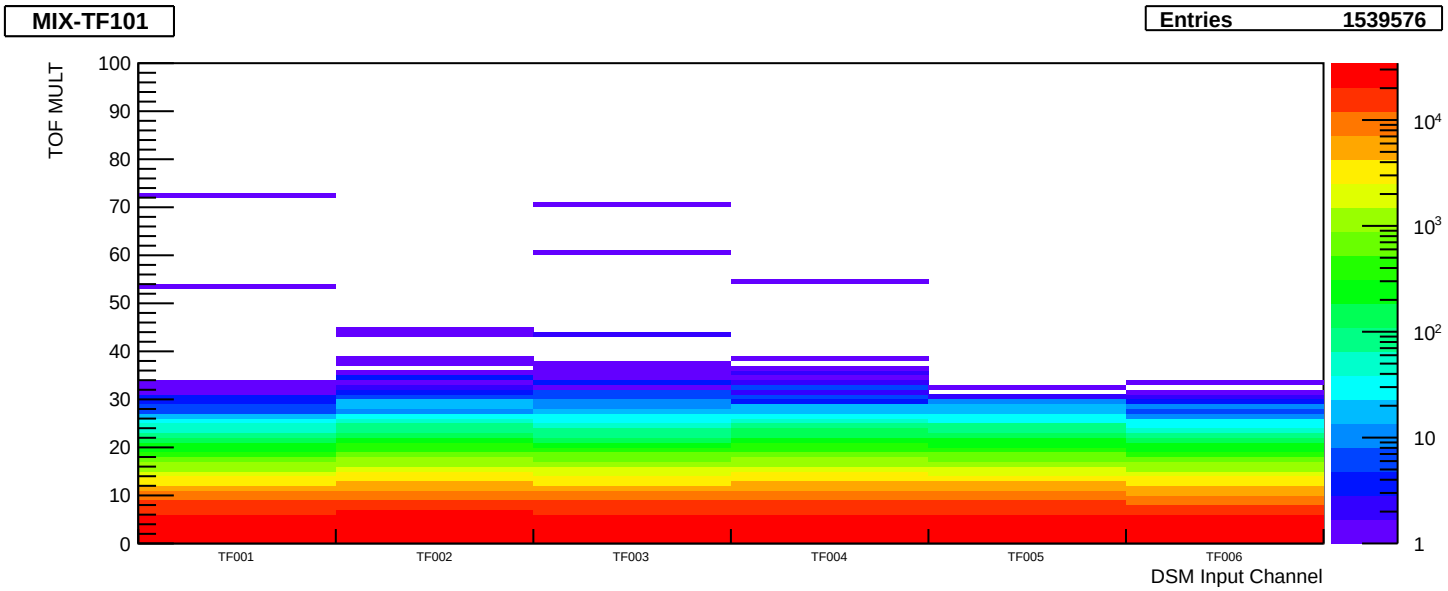

MIX-TF002
Entries 1.077703e+07
TOF MULT
TOF tray

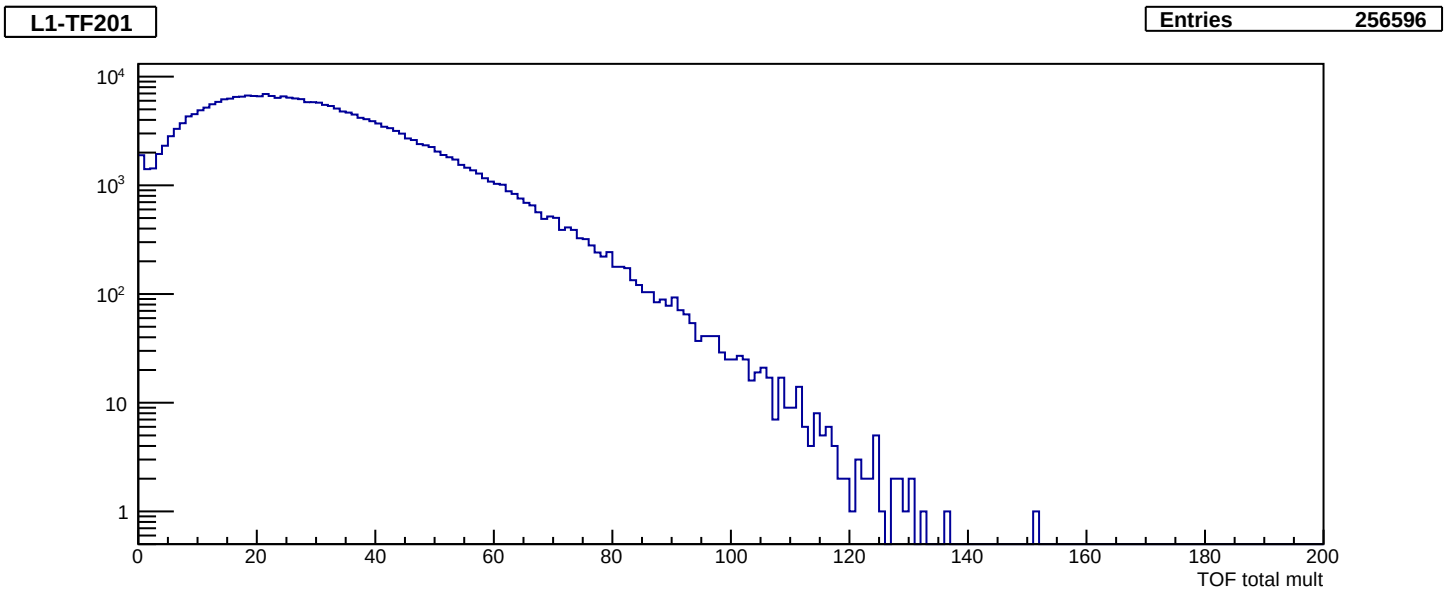

MIX-TF003
Entries 1.077703e+07
TOF MULT
TOF tray

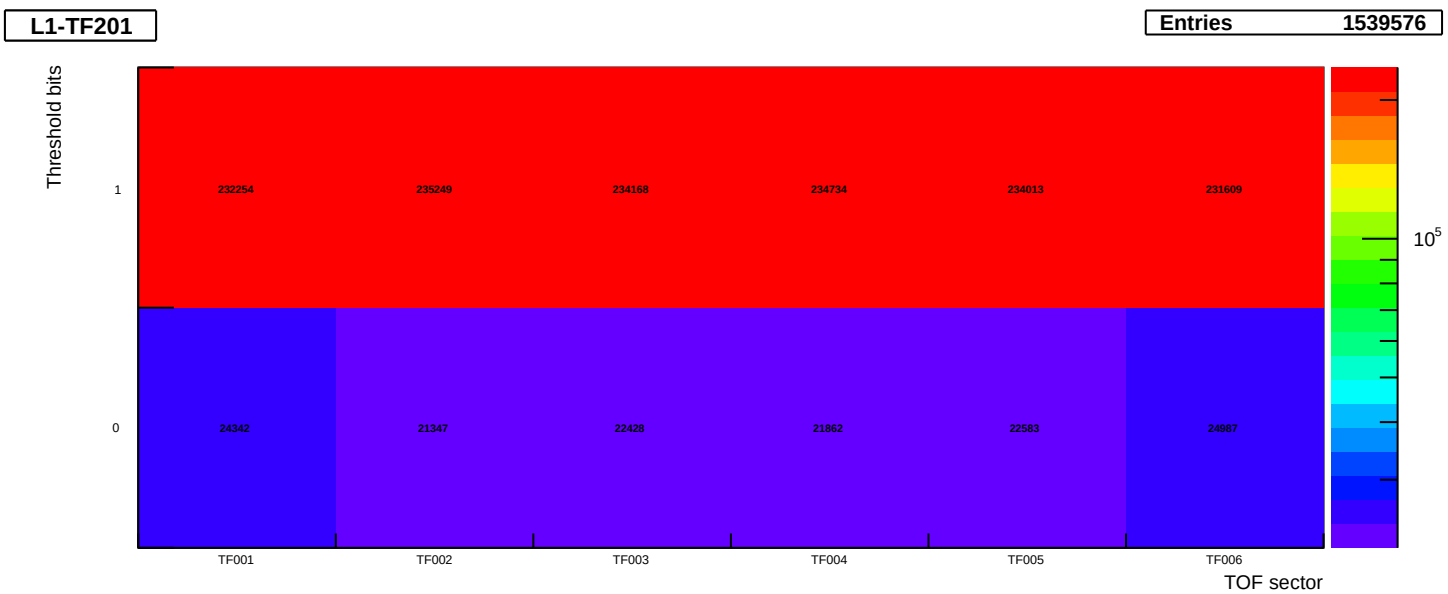

MIX-TF004
Entries 1.077703e+07
TOF MULT
TOF tray

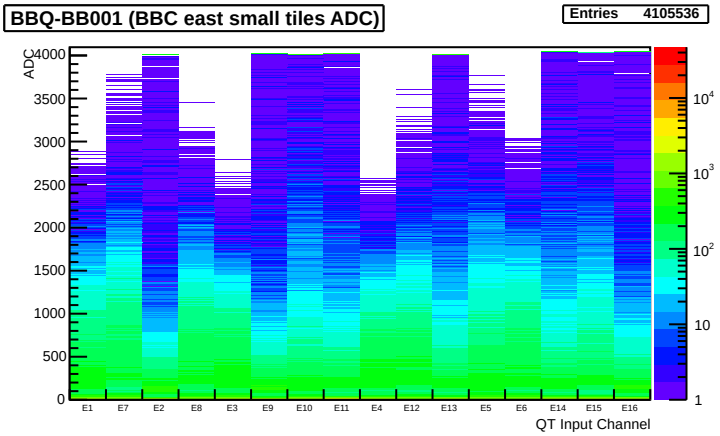

MIX-TF005
Entries 1.077703e+07
TOF MULT
TOF tray

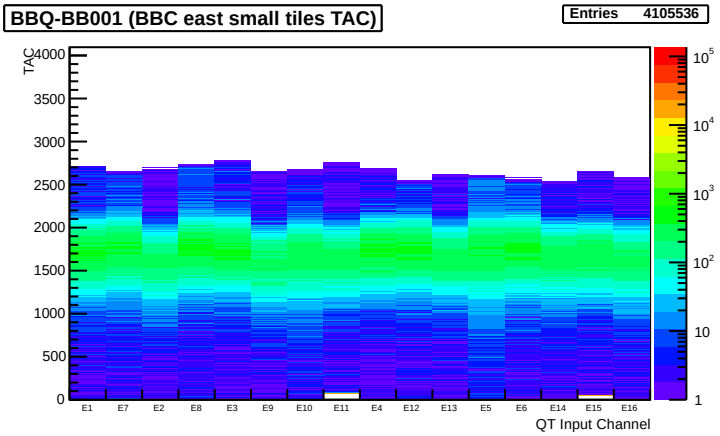

MIX-TF006
Entries 1.077703e+07
TOF MULT
TOF tray

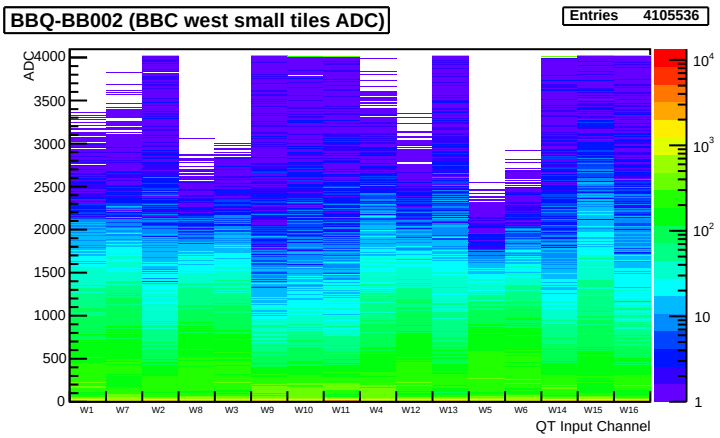

MIX-TF101
Entries 1539576
TOF MULT
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

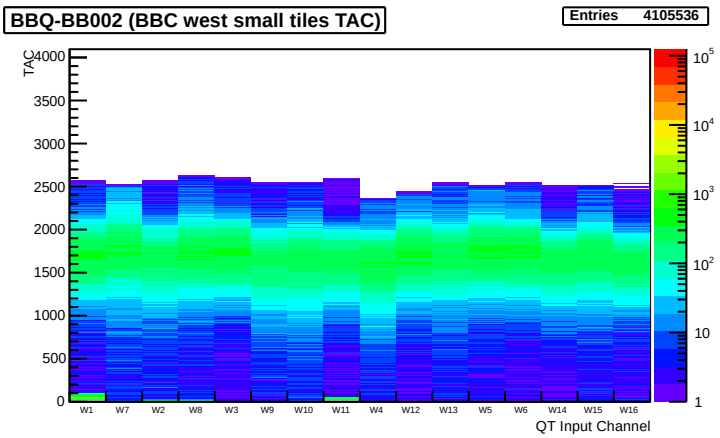

L1-TF201
Entries 256596
TOF total mult

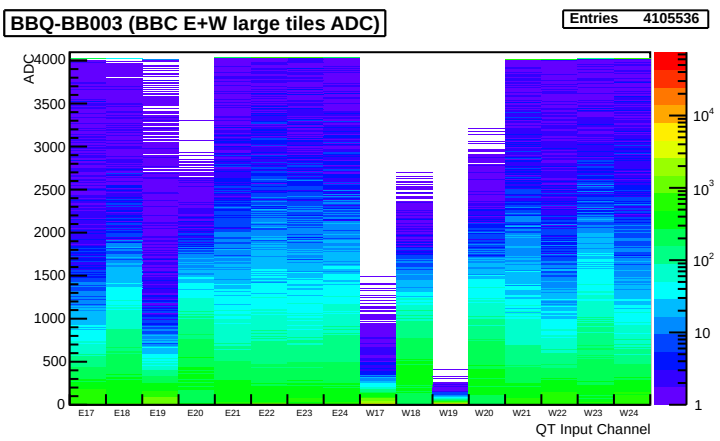

L1-TF201
Entries 1539576
Threshold bits
232254
235249
234168
234734
234013
231609
24342
21347
22428
21862
22583
24987
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

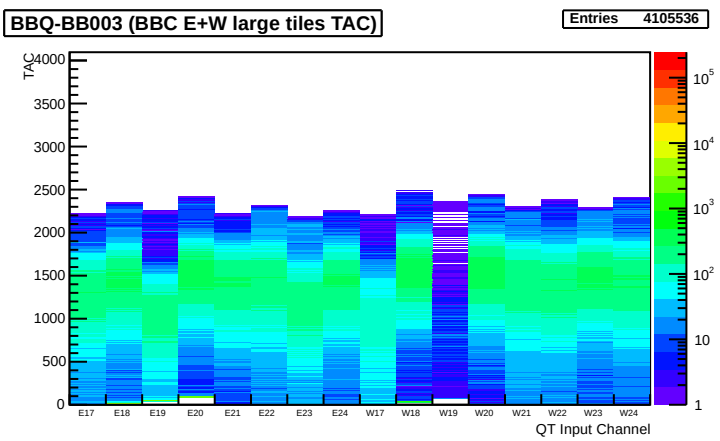

BBQ-BB001 (BBC east small tiles ADC)
Entries 4105536
ADC
QT Input Channel

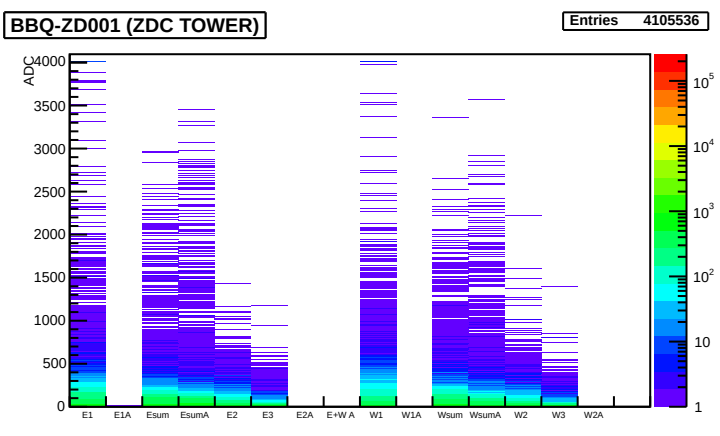

BBQ-BB001 (BBC east small tiles TAC)
Entries 4105536
TAC
QT Input Channel

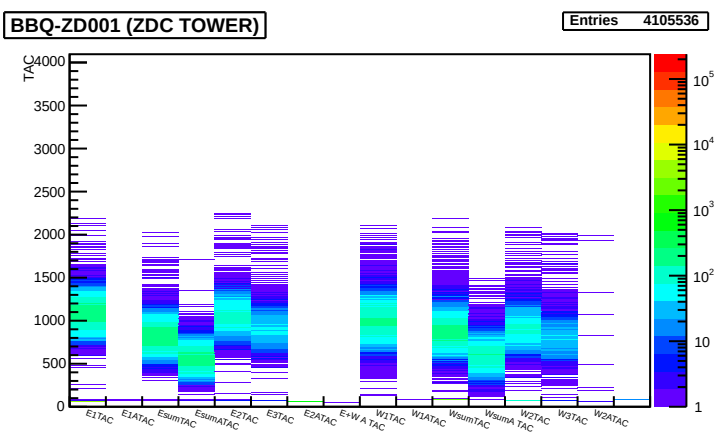

BBQ-BB002 (BBC west small tiles ADC)
Entries 4105536
ADC
QT Input Channel

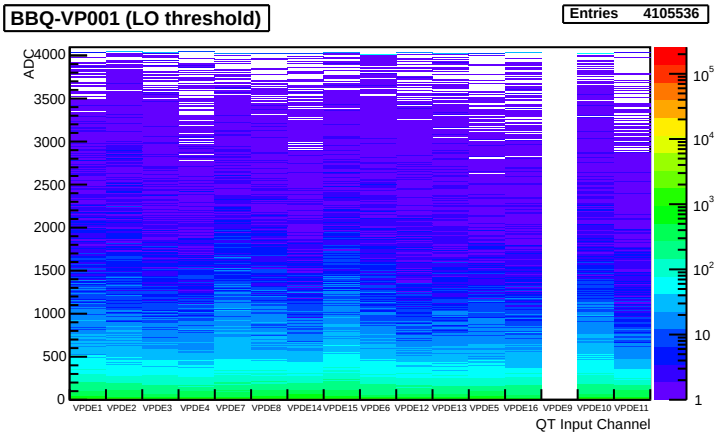

BBQ-BB002 (BBC west small tiles TAC)
Entries 4105536
TAC
QT Input Channel

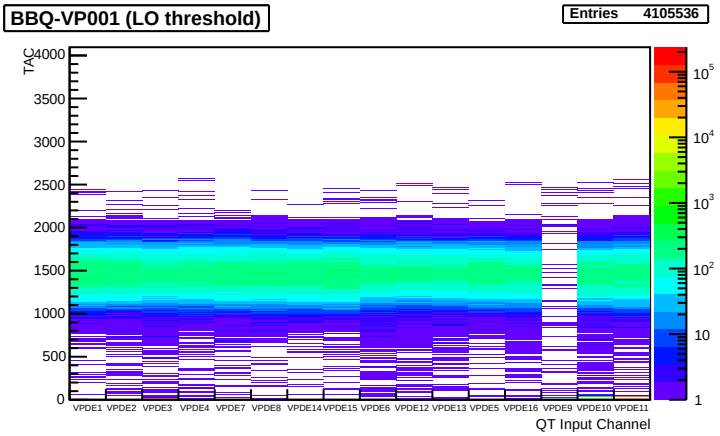

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 4105536
ADC
QT Input Channel

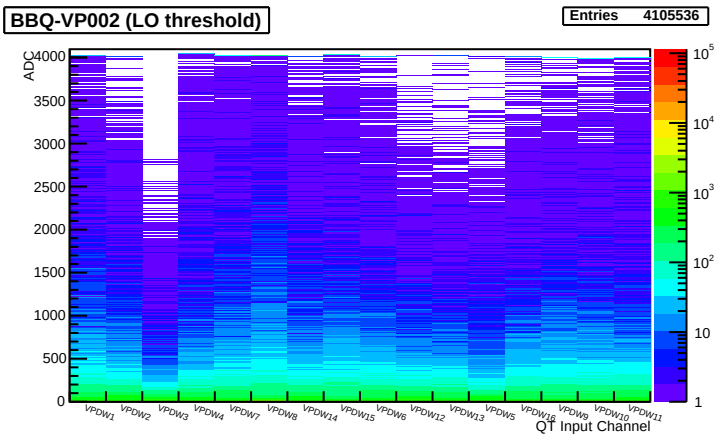

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 4105536
TAC
QT Input Channel

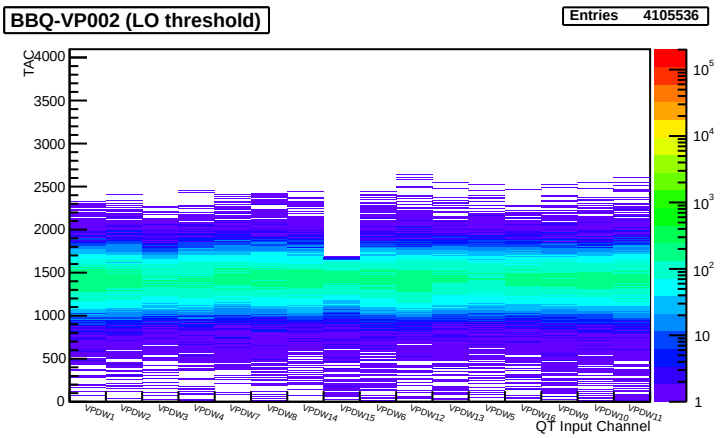

BBQ-ZD001 (ZDC TOWER)
Entries 4105536
ADC

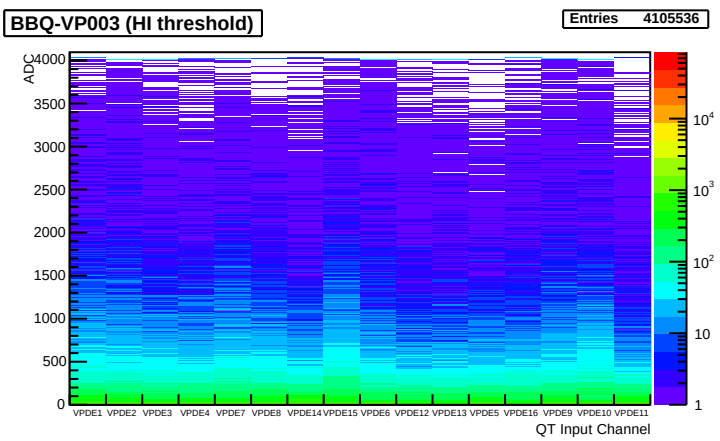

BBQ-ZD001 (ZDC TOWER)
Entries 4105536
TAC

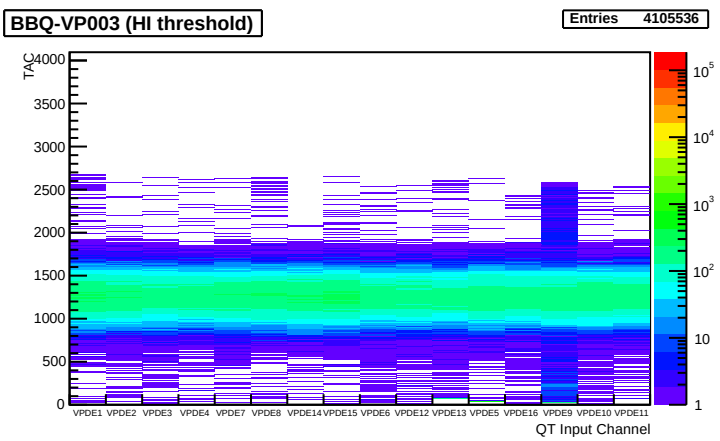

BBQ-VP001 (LO threshold)
Entries 4105536
ADC
QT Input Channel

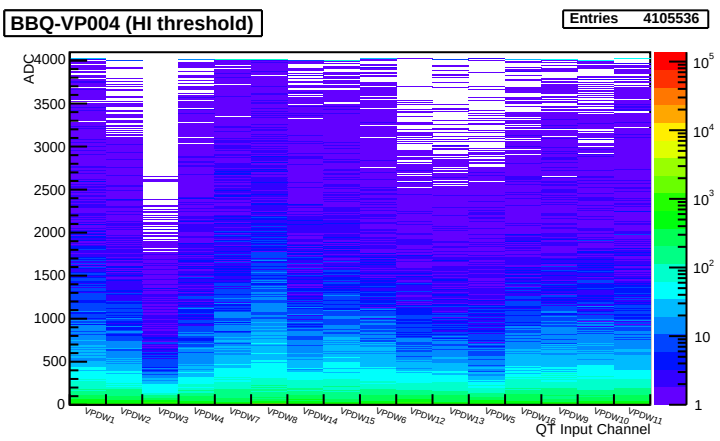

BBQ-VP001 (LO threshold)
Entries 4105536
TAC
QT Input Channel

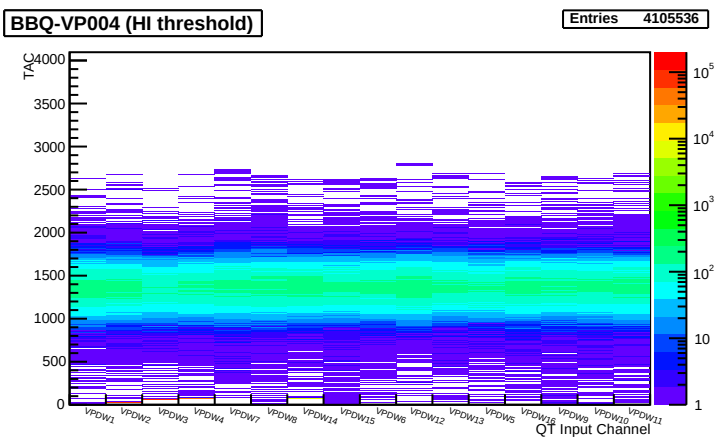

BBQ-VP002 (LO threshold)
Entries 4105536
ADC
QT Input Channel

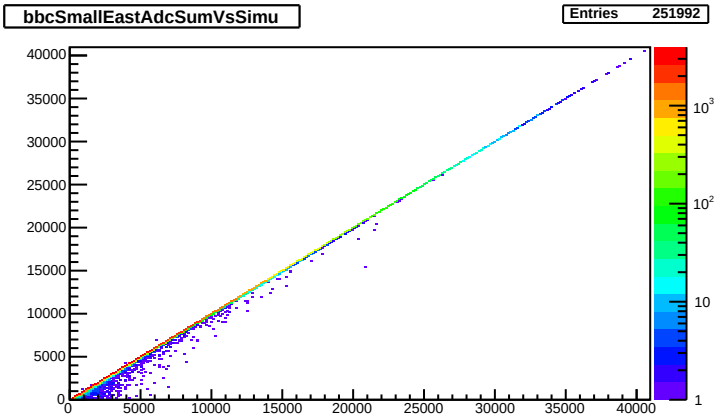

BBQ-VP002 (LO threshold)
Entries 4105536
TAC
QT Input Channel

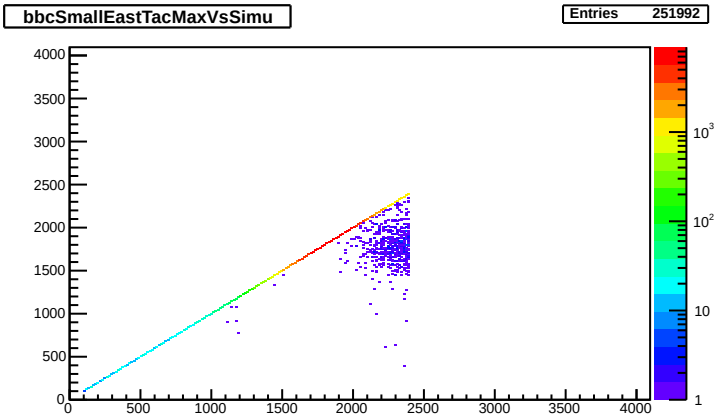

BBQ-VP003 (HI threshold)
Entries 4105536
ADC
QT Input Channel

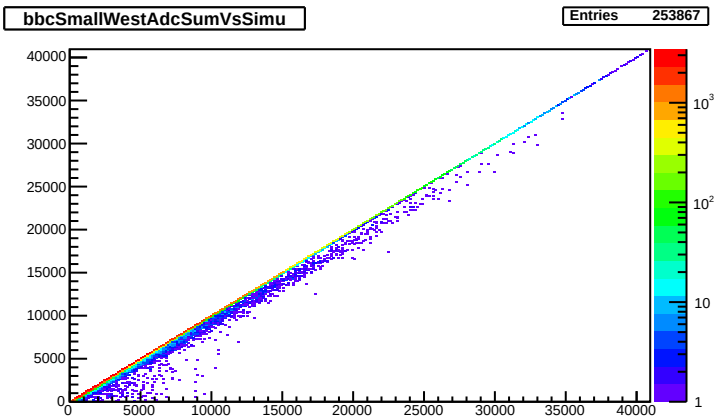

BBQ-VP003 (HI threshold)
Entries 4105536
TAC
QT Input Channel

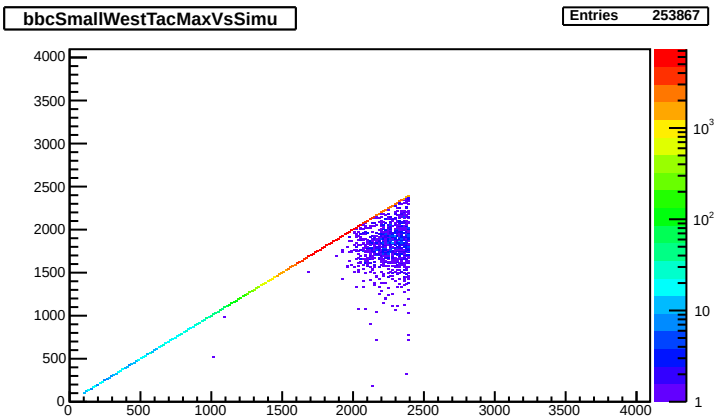

BBQ-VP004 (HI threshold)
Entries 4105536
ADC
QT Input Channel

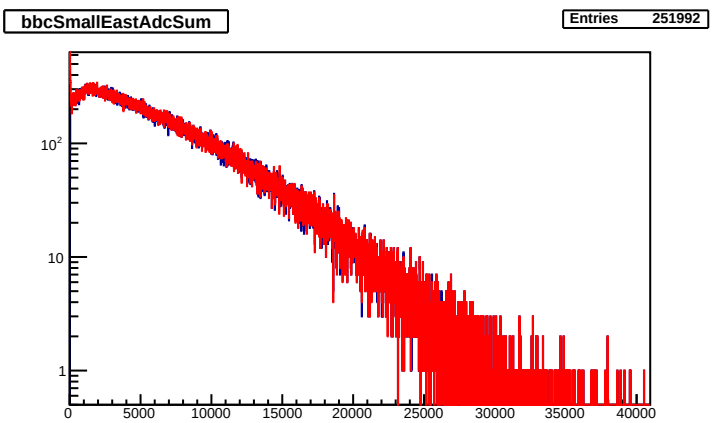

BBQ-VP004 (HI threshold)
Entries 4105536
TAC
QT Input Channel

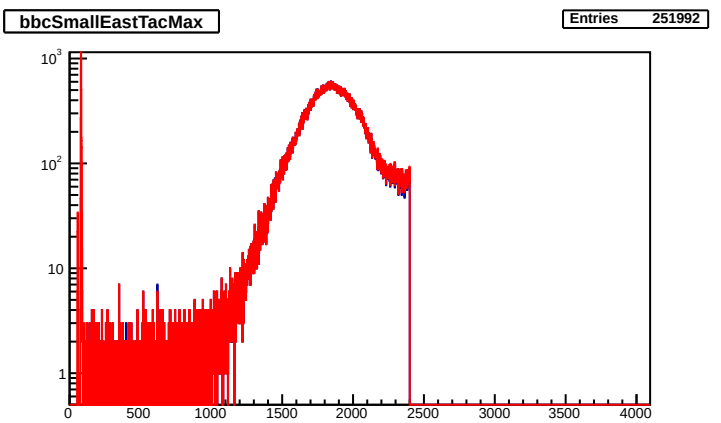

bbcSmallEastAdcSumVsSimu
Entries 251992

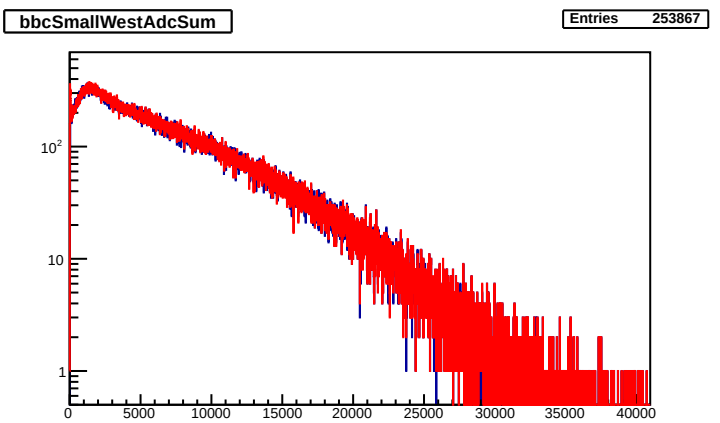

bbcSmallEastTacMaxVsSimu
Entries 251992

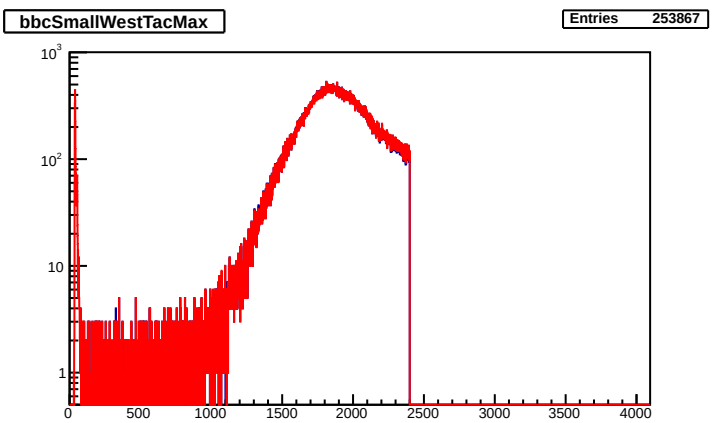

bbcSmallWestAdcSumVsSimu
Entries 253867

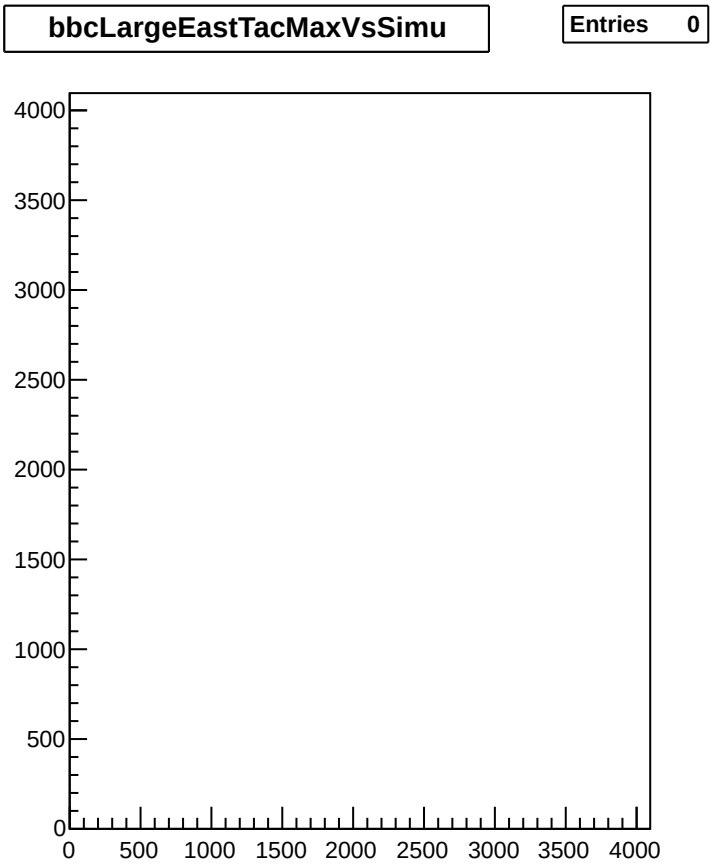

bbcSmallWestTacMaxVsSimu
Entries 253867

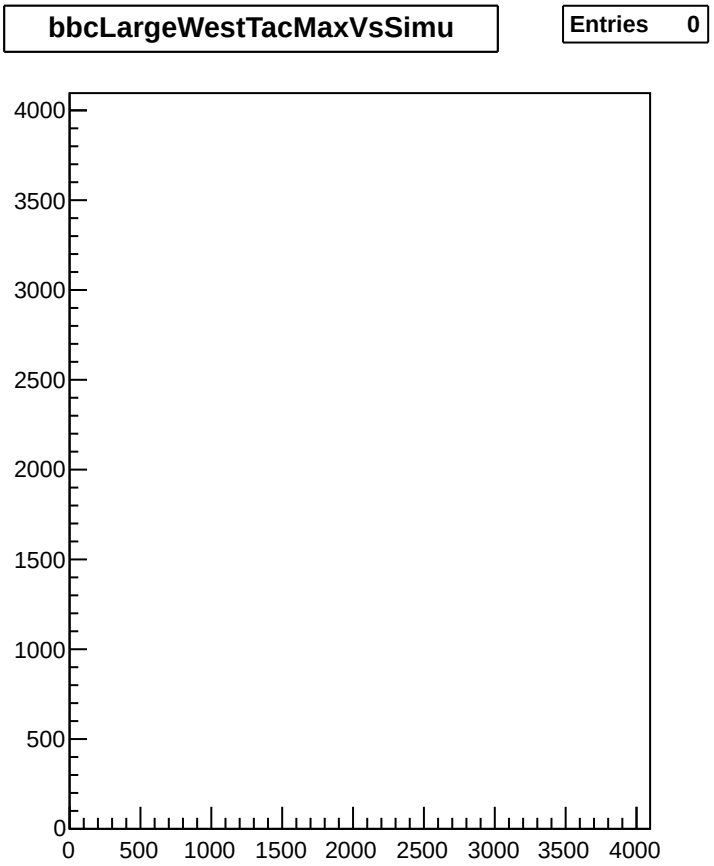

bbcSmallEastAdcSum
Entries 251992

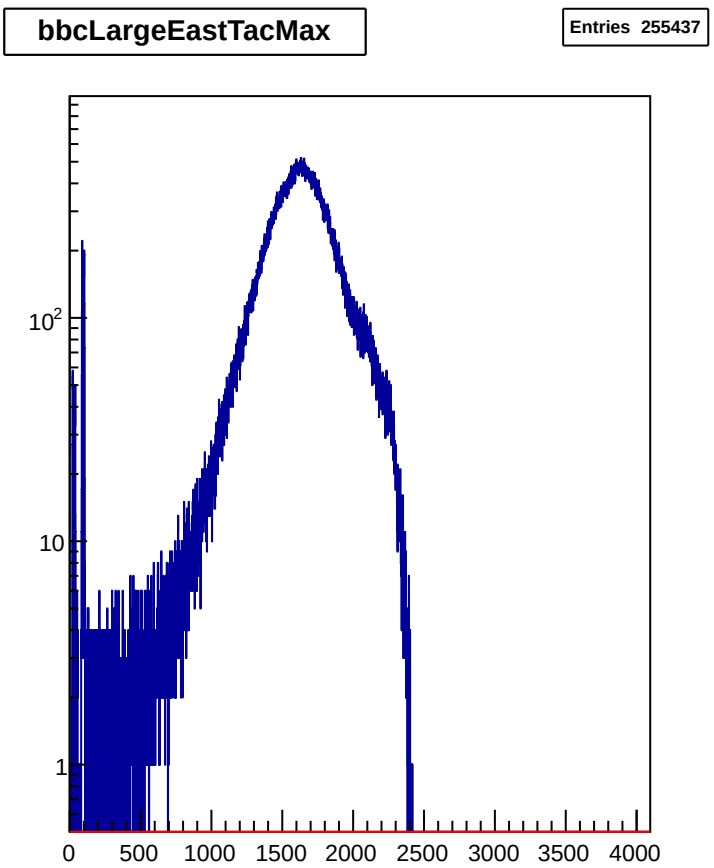

bbcSmallEastTacMax
Entries 251992

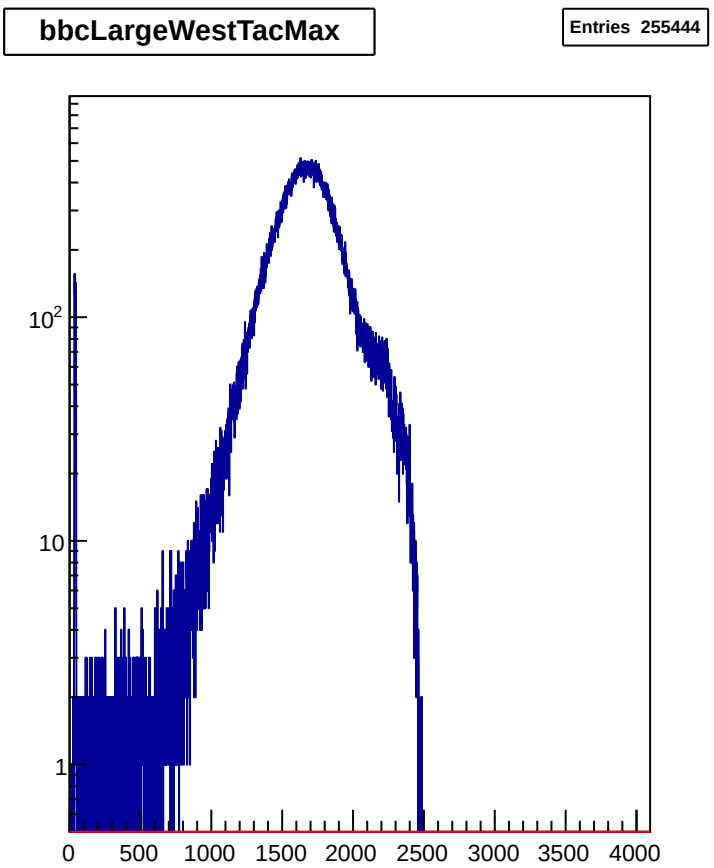

bbcSmallWestAdcSum
Entries 253867

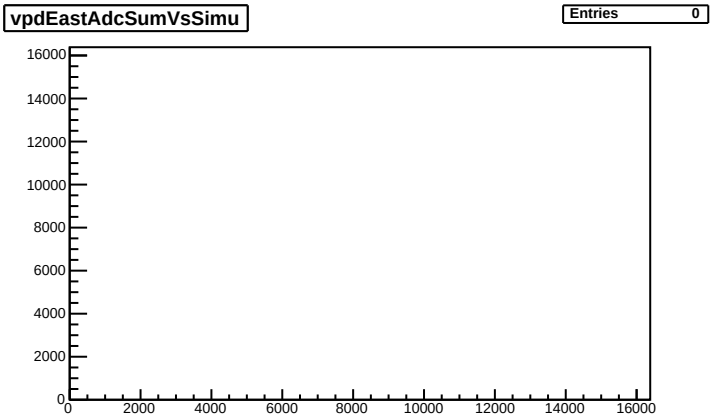

bbcSmallWestTacMax
Entries 253867

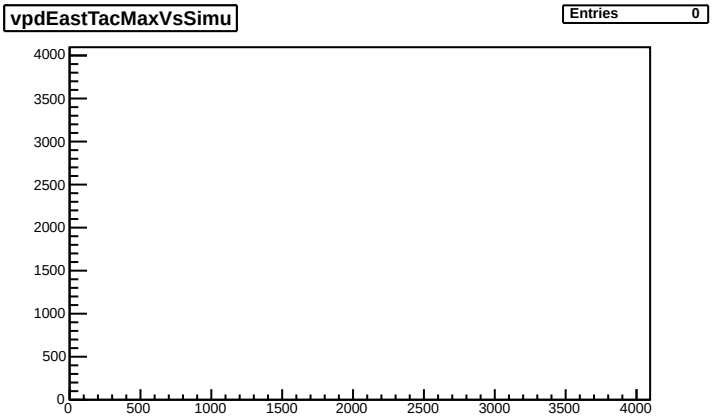

bbcLargeEastTacMaxVsSimu
Entries 0
4000
3500
3000
2500
2000
1500
1000
500
0
0 500 1000 1500 2000 2500 3000 3500 4000

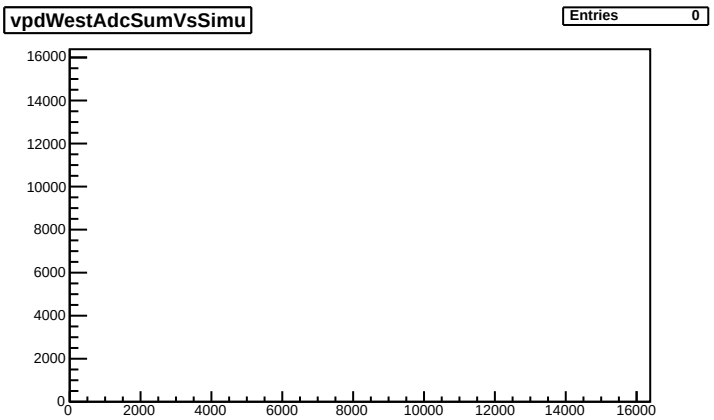

bbcLargeWestTacMaxVsSimu
Entries 0
4000
3500
3000
2500
2000
1500
1000
500
0
0 500 1000 1500 2000 2500 3000 3500 4000

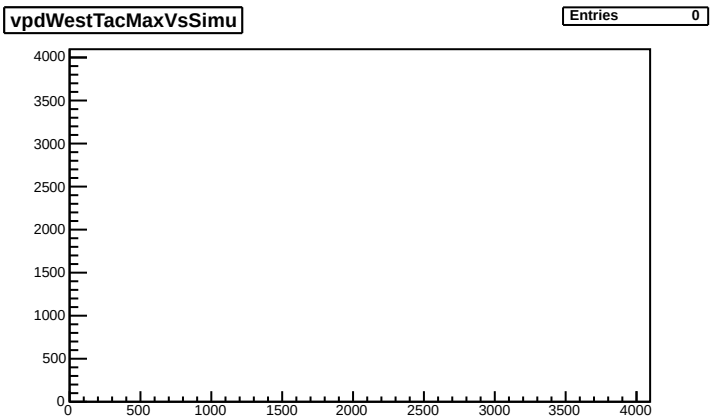

bbcLargeEastTacMax
Entries 255437
10^2
10
1
0 500 1000 1500 2000 2500 3000 3500 4000

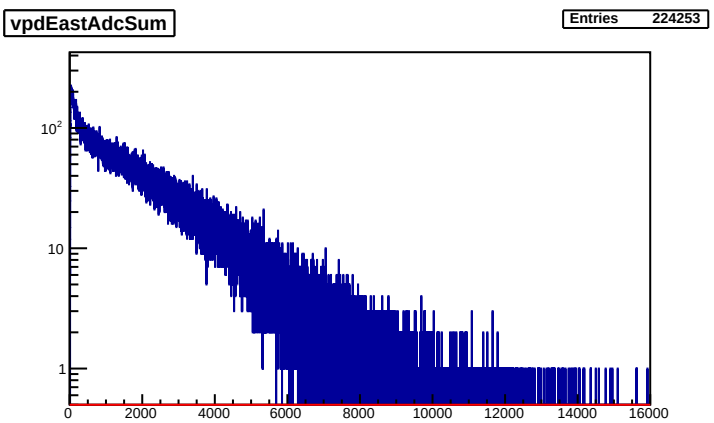

bbcLargeWestTacMax
Entries 255444
10^2
10
1
0 500 1000 1500 2000 2500 3000 3500 4000

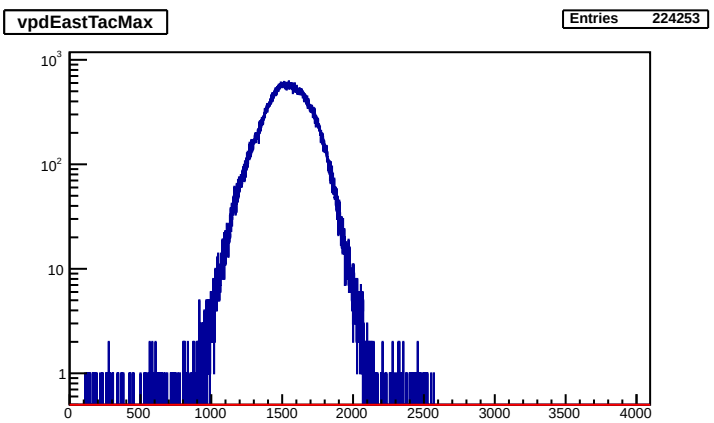

vpdEastAdcSumVsSimu
Entries 0

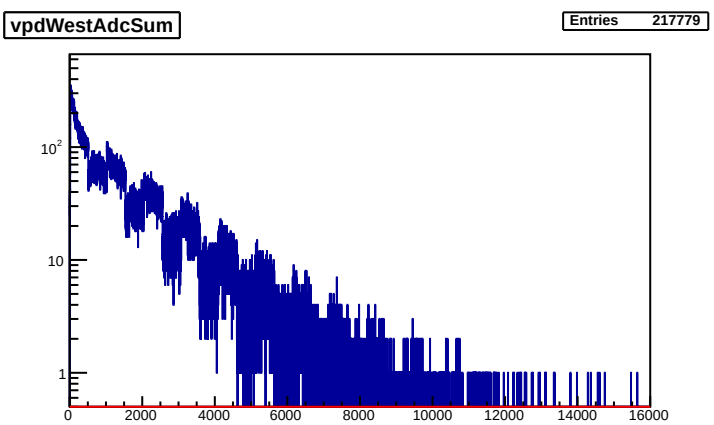

vpdEastTacMaxVsSimu
Entries 0

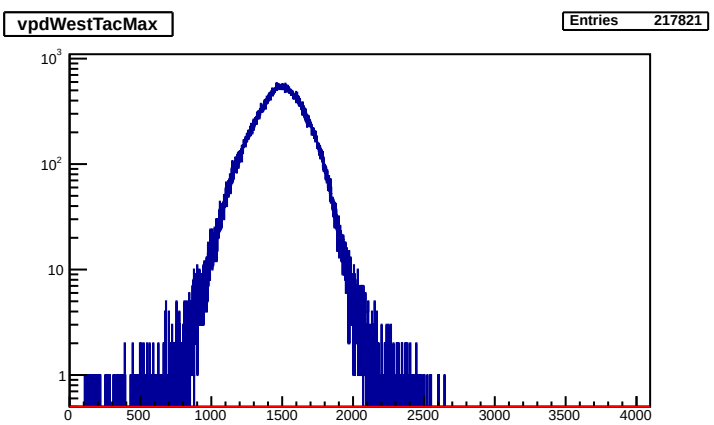

vpdWestAdcSumVsSimu
Entries 0

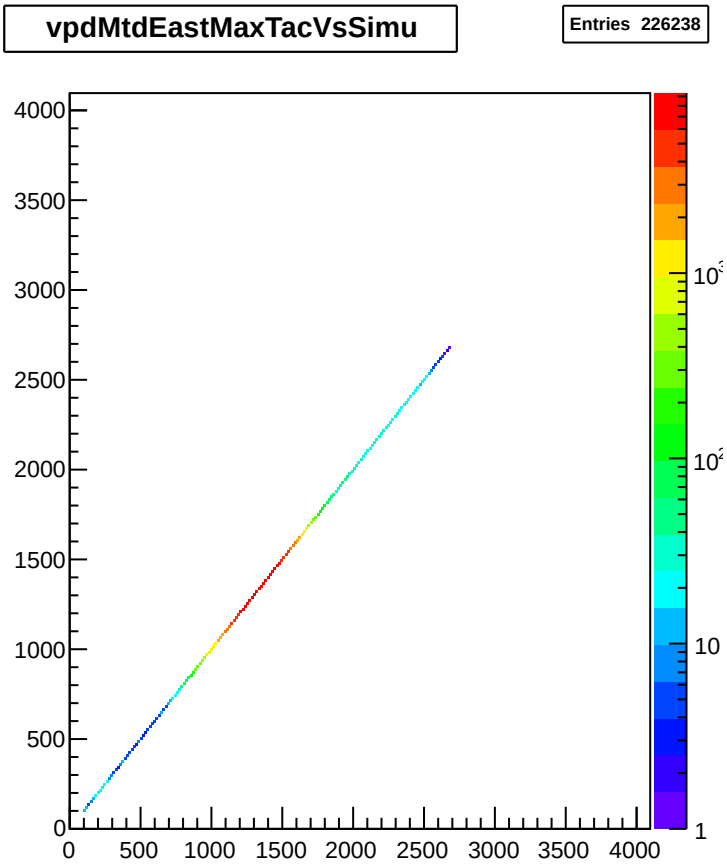

vpdWestTacMaxVsSimu
Entries 0

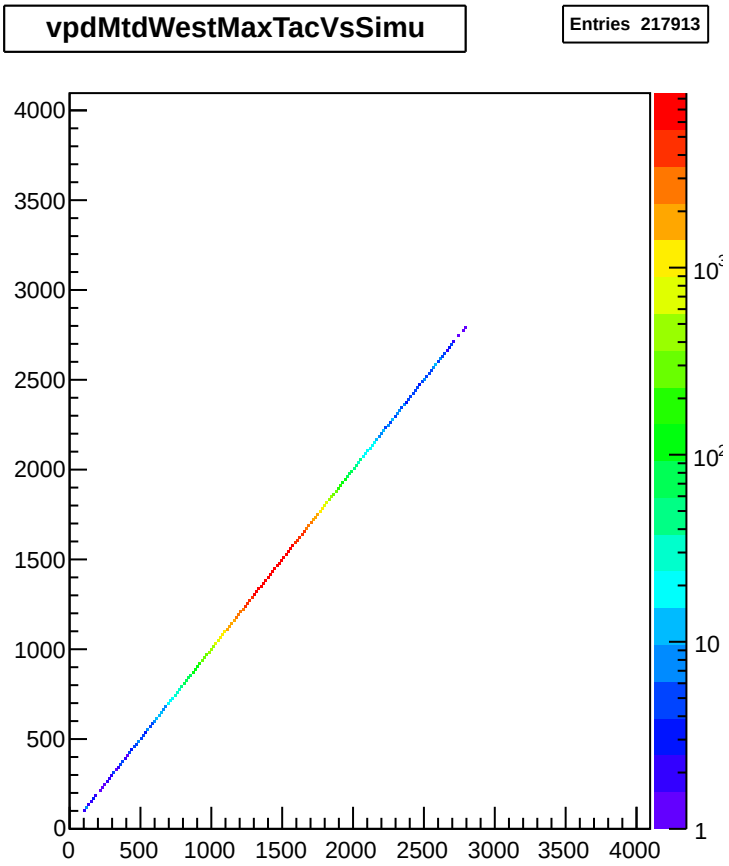

vpdEastAdcSum
Entries 224253

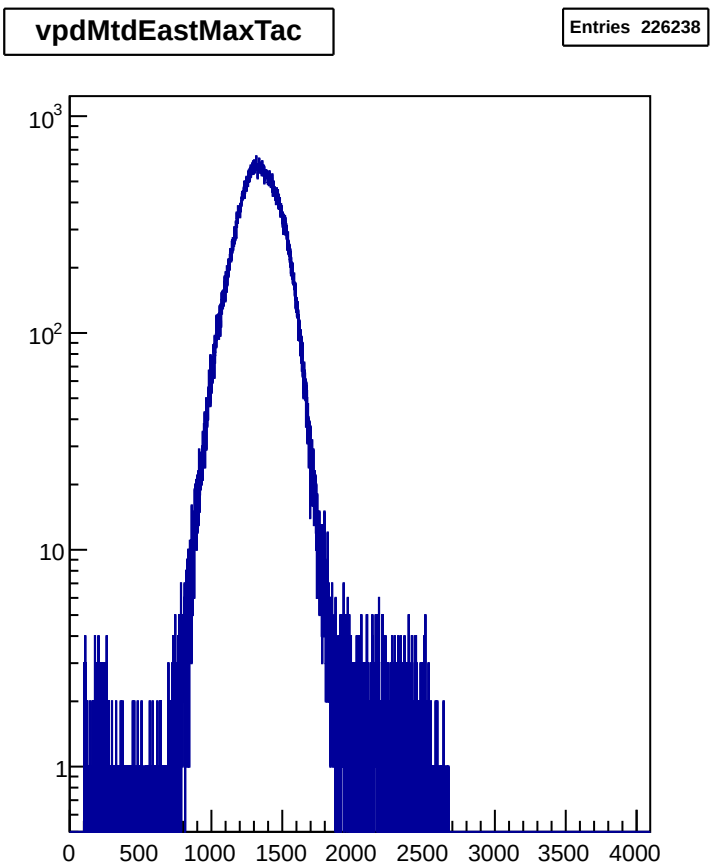

vpdEastTacMax
Entries 224253

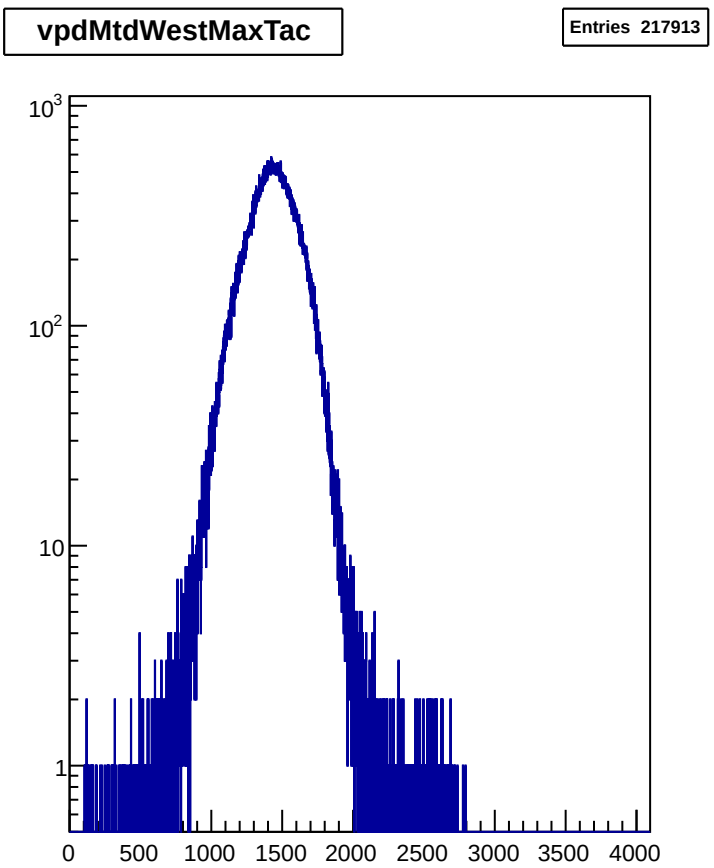

vpdWestAdcSum
Entries 217779

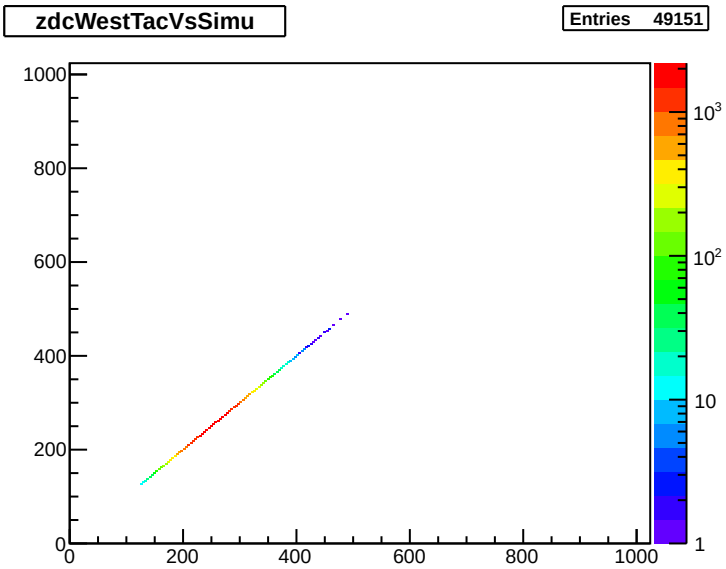

vpdWestTacMax
Entries 217821

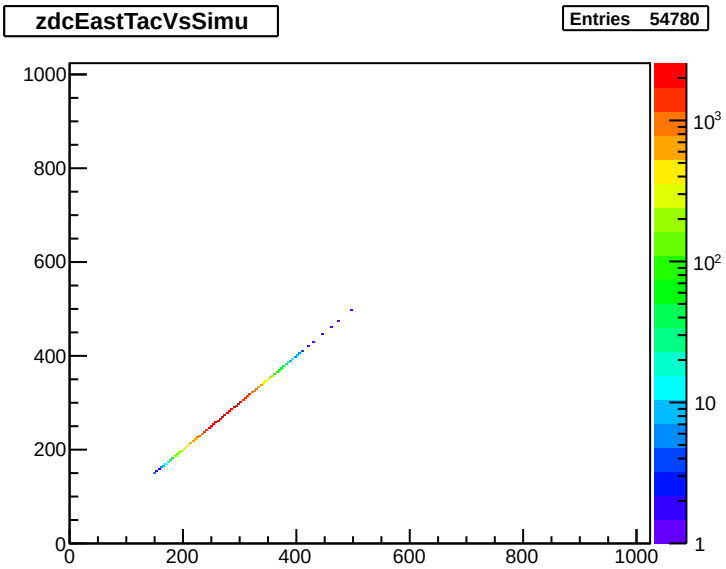

vpdMtdEastMaxTacVsSimu
Entries 226238
0
500
1000
1500
2000
2500
3000
3500
4000
1
10
10²
10³

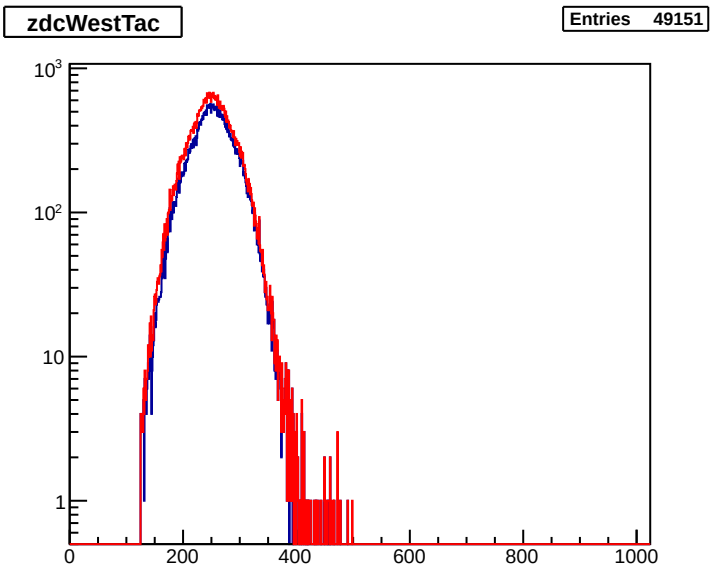

vpdMtdWestMaxTacVsSimu
Entries 217913
0
500
1000
1500
2000
2500
3000
3500
4000
1
10
10²
10³

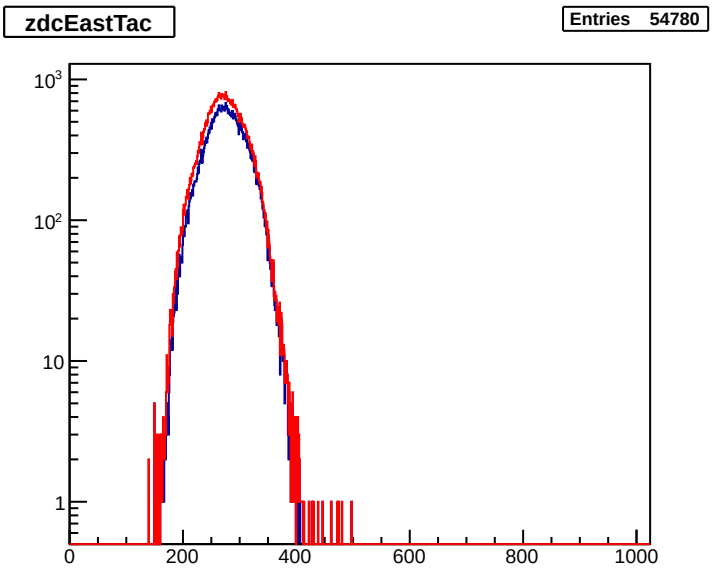

vpdMtdEastMaxTac
Entries 226238
1
10
10²
10³
0
500
1000
1500
2000
2500
3000
3500
4000

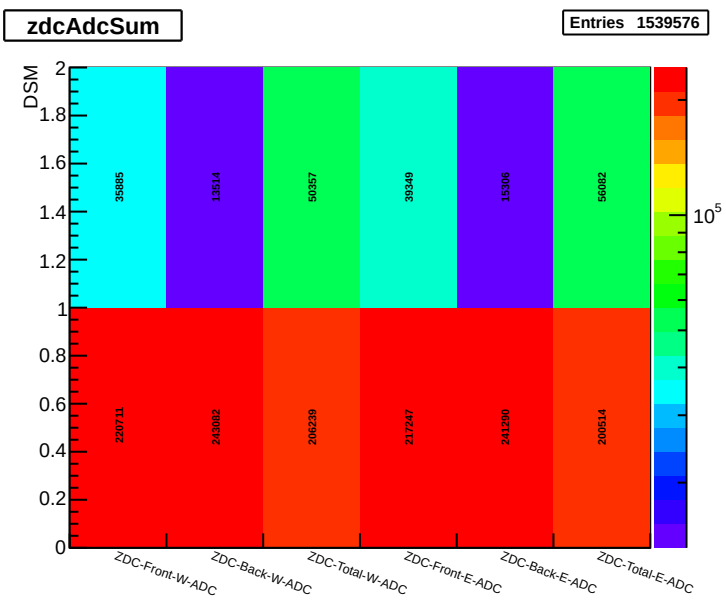

vpdMtdWestMaxTac
Entries 217913
1
10
10²
10³
0
500
1000
1500
2000
2500
3000
3500
4000

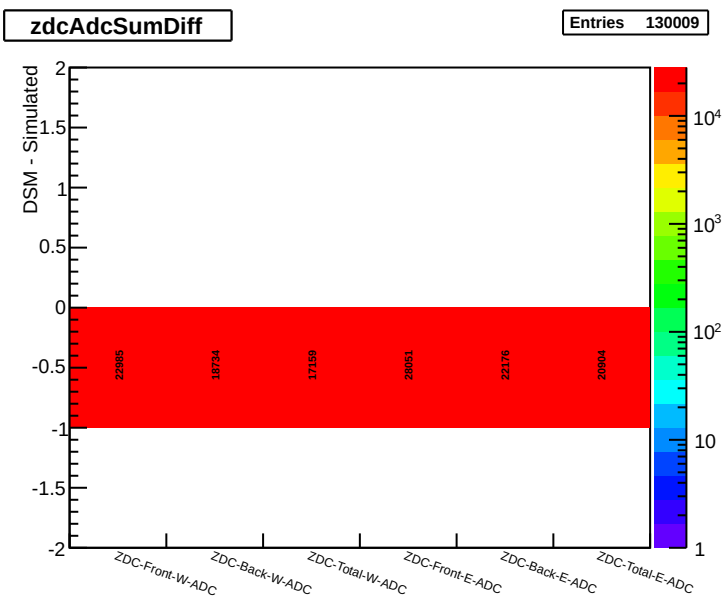

zdcWestTacVsSimu
Entries 49151

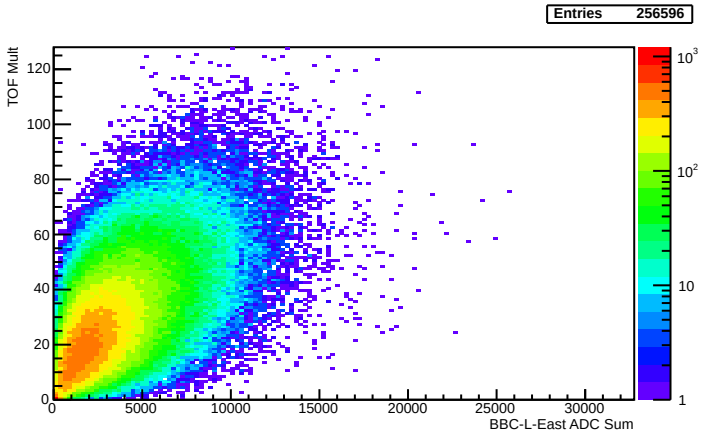

zdcEastTacVsSimu
Entries 54780

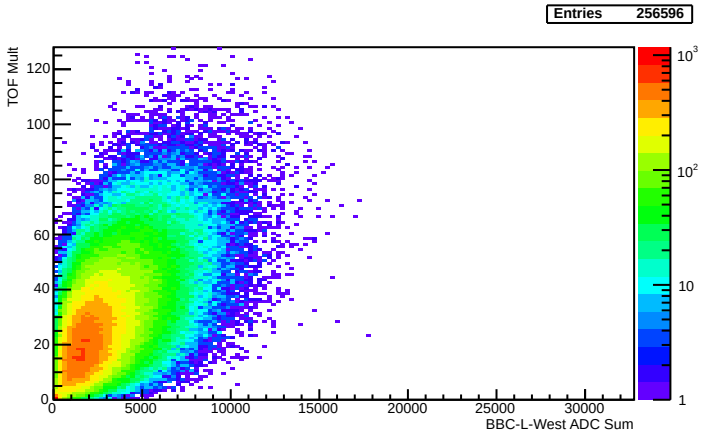

zdcWestTac
Entries 49151

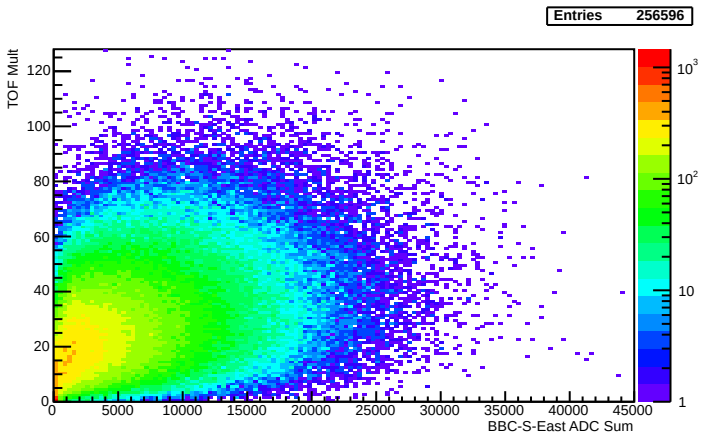

zdcEastTac
Entries 54780

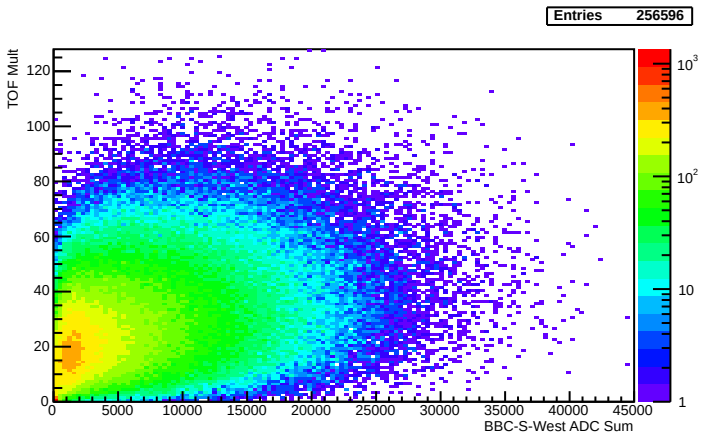

zdcAdcSum
Entries 1539576
DSM
35885
13514
50357
39349
15306
56082
220711
243082
206239
217247
241290
200514
ZDC-Front-W-ADC
ZDC-Back-W-ADC
ZDC-Total-W-ADC
ZDC-Front-E-ADC
ZDC-Back-E-ADC
ZDC-Total-E-ADC

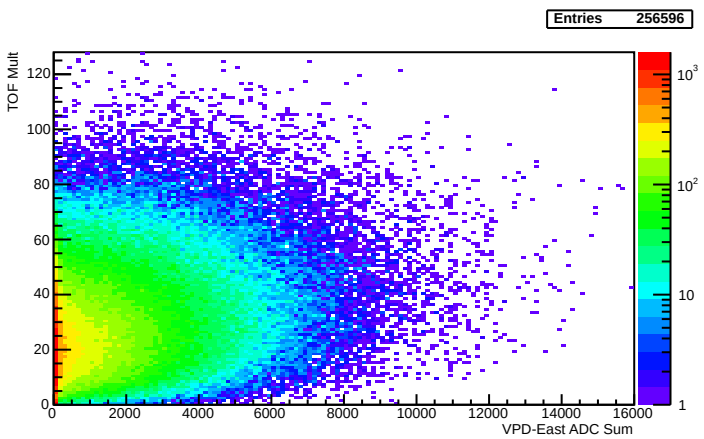

zdcAdcSumDiff
Entries 130009
DSM - Simulated
22985
18734
17159
28051
22176
20904
ZDC-Front-W-ADC
ZDC-Back-W-ADC
ZDC-Total-W-ADC
ZDC-Front-E-ADC
ZDC-Back-E-ADC
ZDC-Total-E-ADC

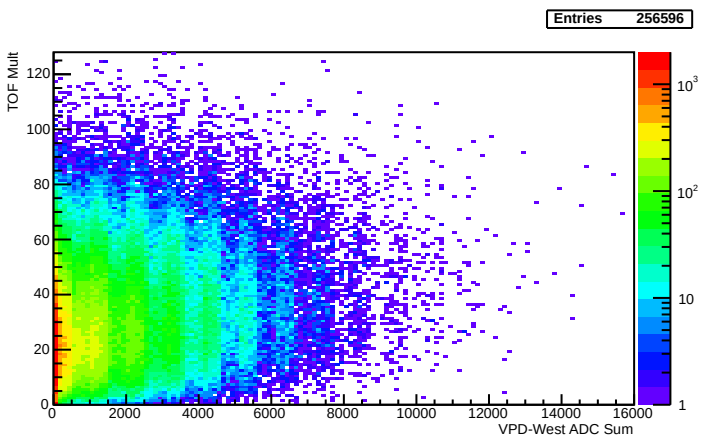

Entries 256596
TOF Mult
BBC-L-East ADC Sum

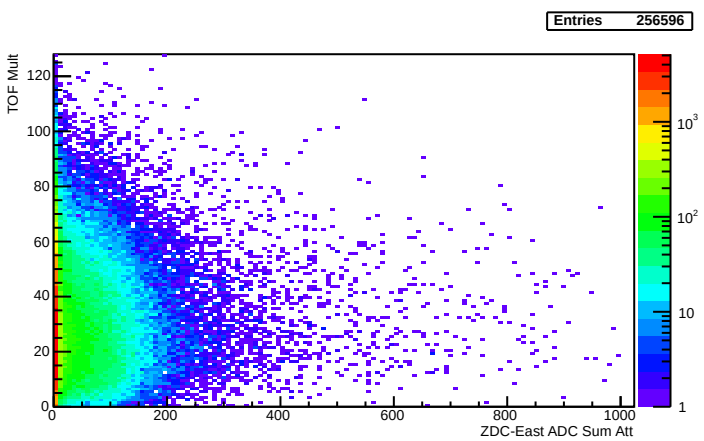

Entries 256596
TOF Mult
BBC-L-West ADC Sum

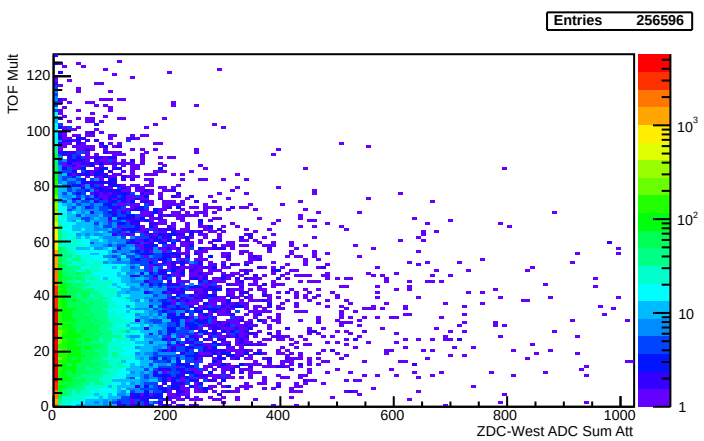

Entries 256596
TOF Mult
BBC-S-East ADC Sum

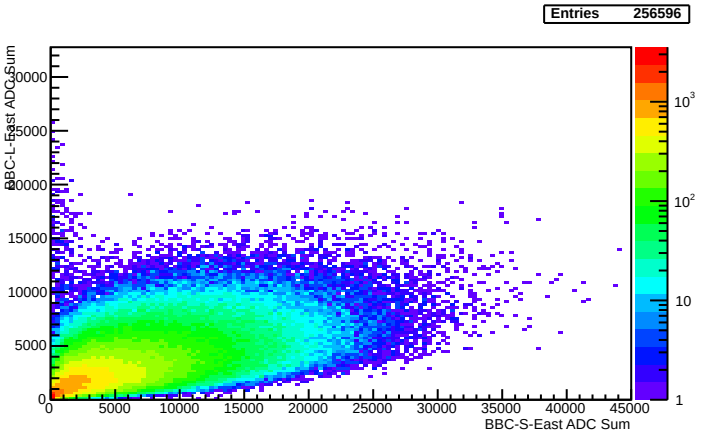

Entries 256596
TOF Mult
BBC-S-West ADC Sum

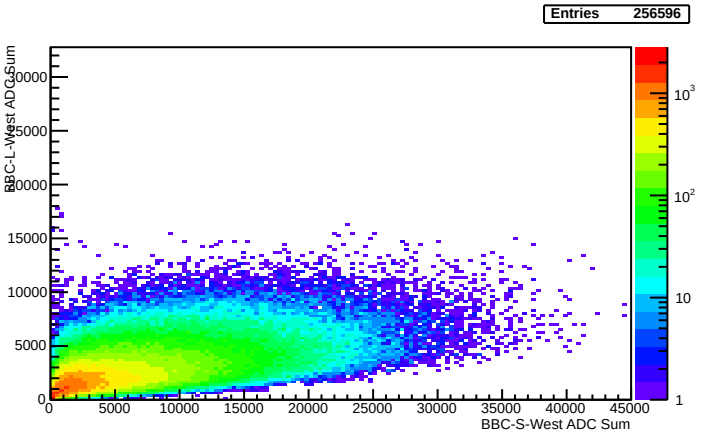

Entries 256596
TOF Mult
VPD-East ADC Sum

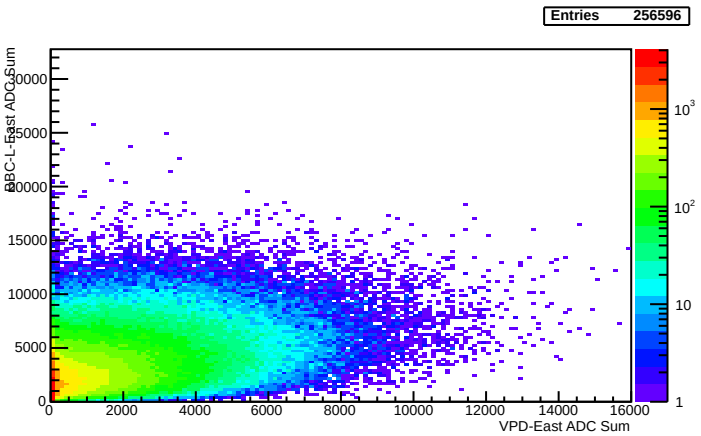

Entries 256596
TOF Mult
VPD-West ADC Sum

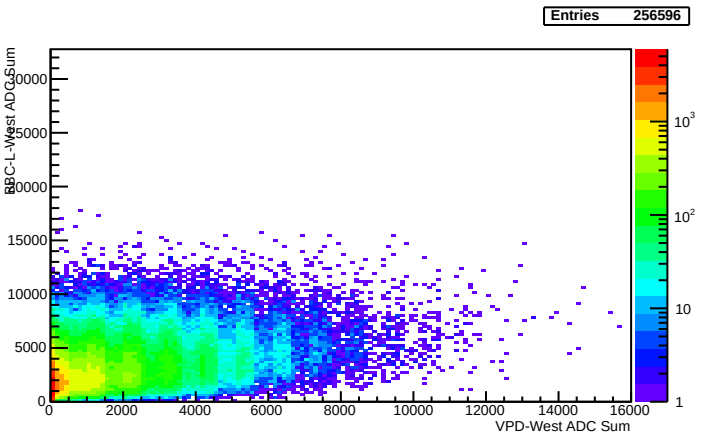

Entries 256596
TOF Mult
ZDC-East ADC Sum Att

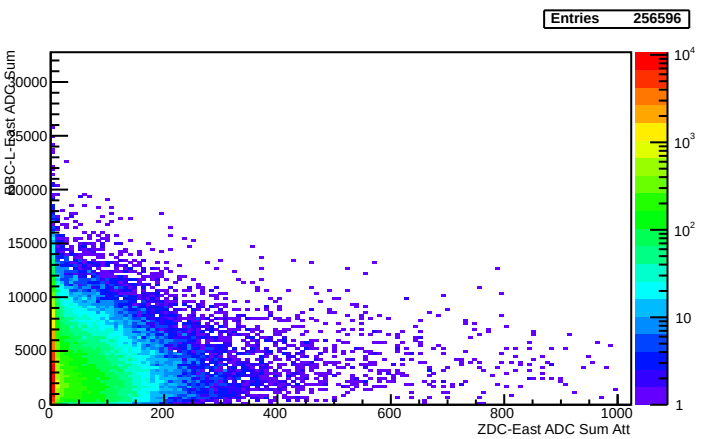

Entries 256596
TOF Mult
ZDC-West ADC Sum Att

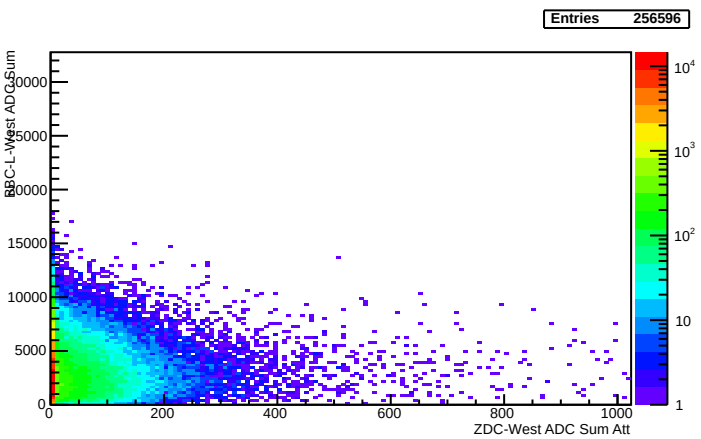

Entries 256596
BBC-L-East ADC Sum
BBC-S-East ADC Sum

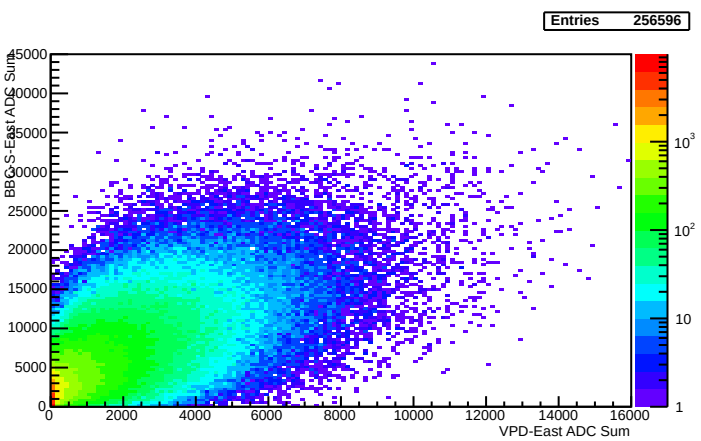

Entries 256596
BBC-L-West ADC Sum
BBC-S-West ADC Sum

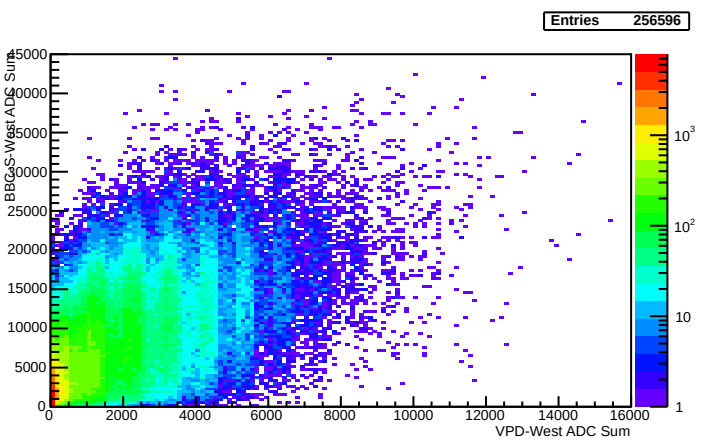

Entries 256596
BBC-L-East ADC Sum
VPD-East ADC Sum

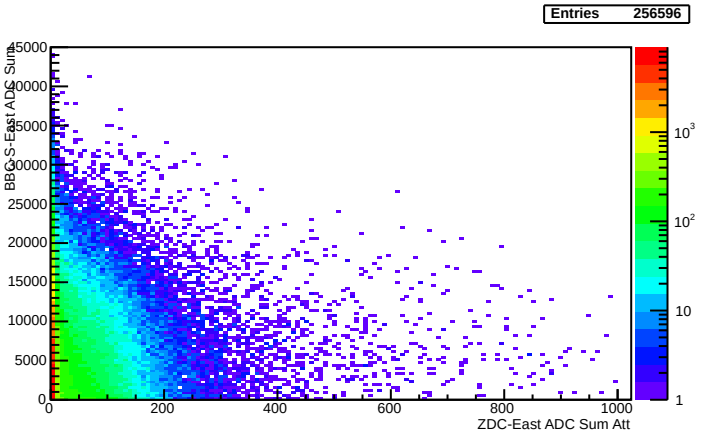

Entries 256596
BBC-L-West ADC Sum
VPD-West ADC Sum

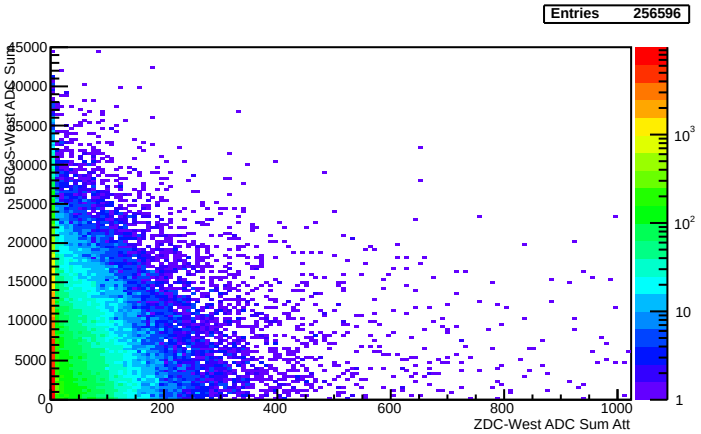

Entries 256596
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

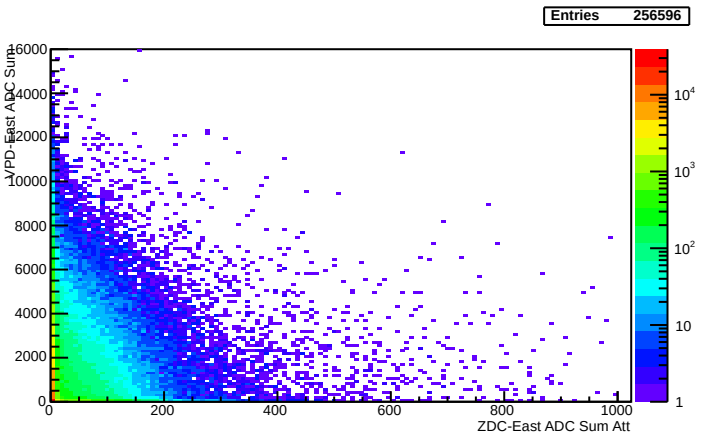

Entries 256596
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

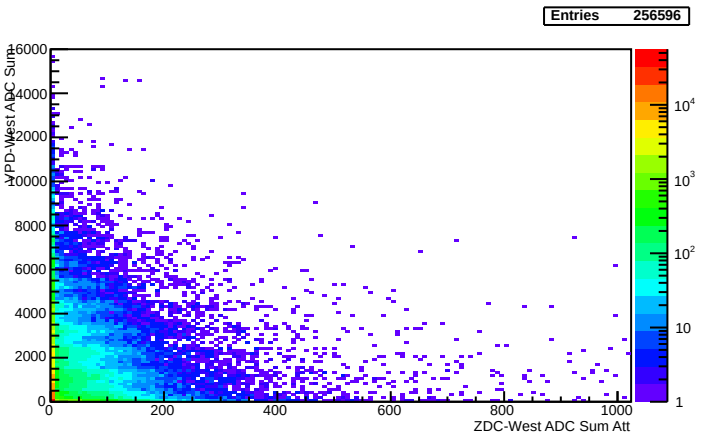

Entries 256596
BBC-S-East ADC Sum
VPD-East ADC Sum

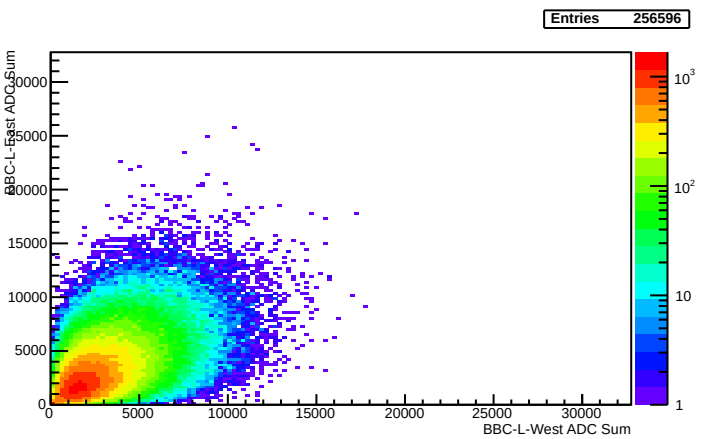

Entries 256596
BBC-S-West ADC Sum
VPD-West ADC Sum

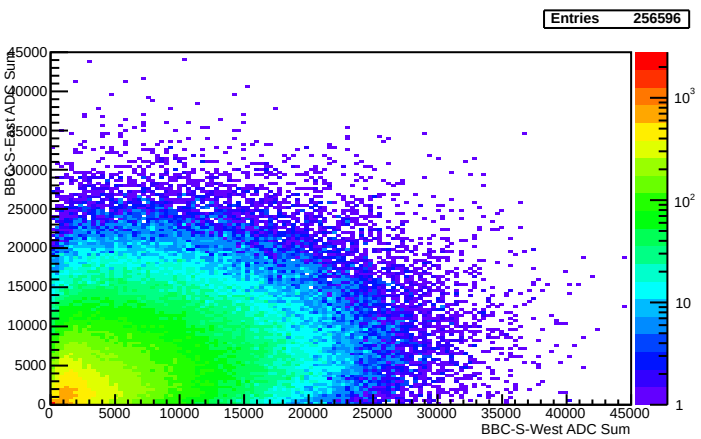

Entries 256596
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

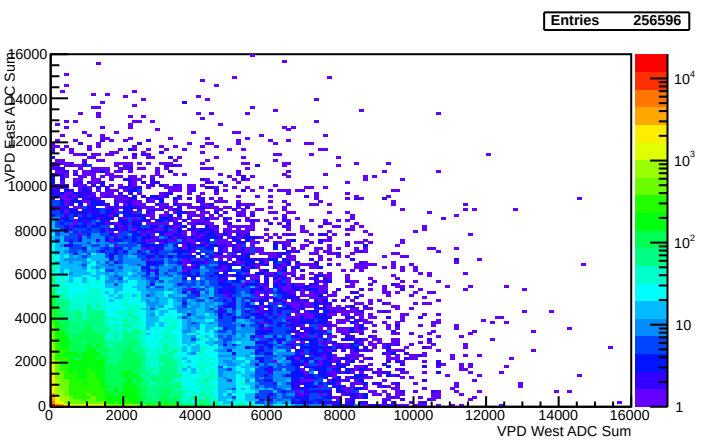

Entries 256596
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

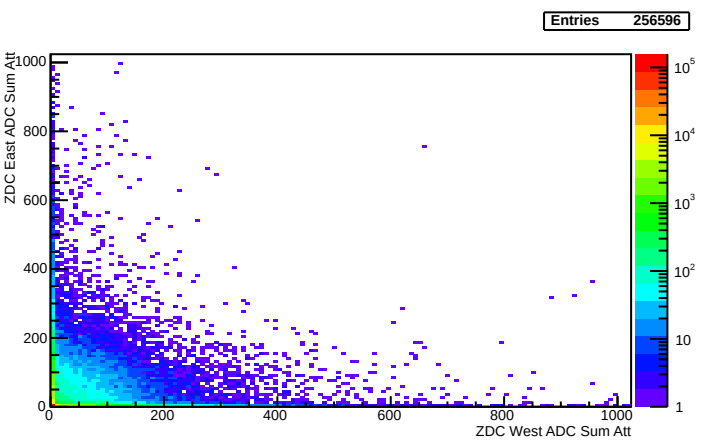

Entries 256596
VPD-East ADC Sum
ZDC-East ADC Sum Att

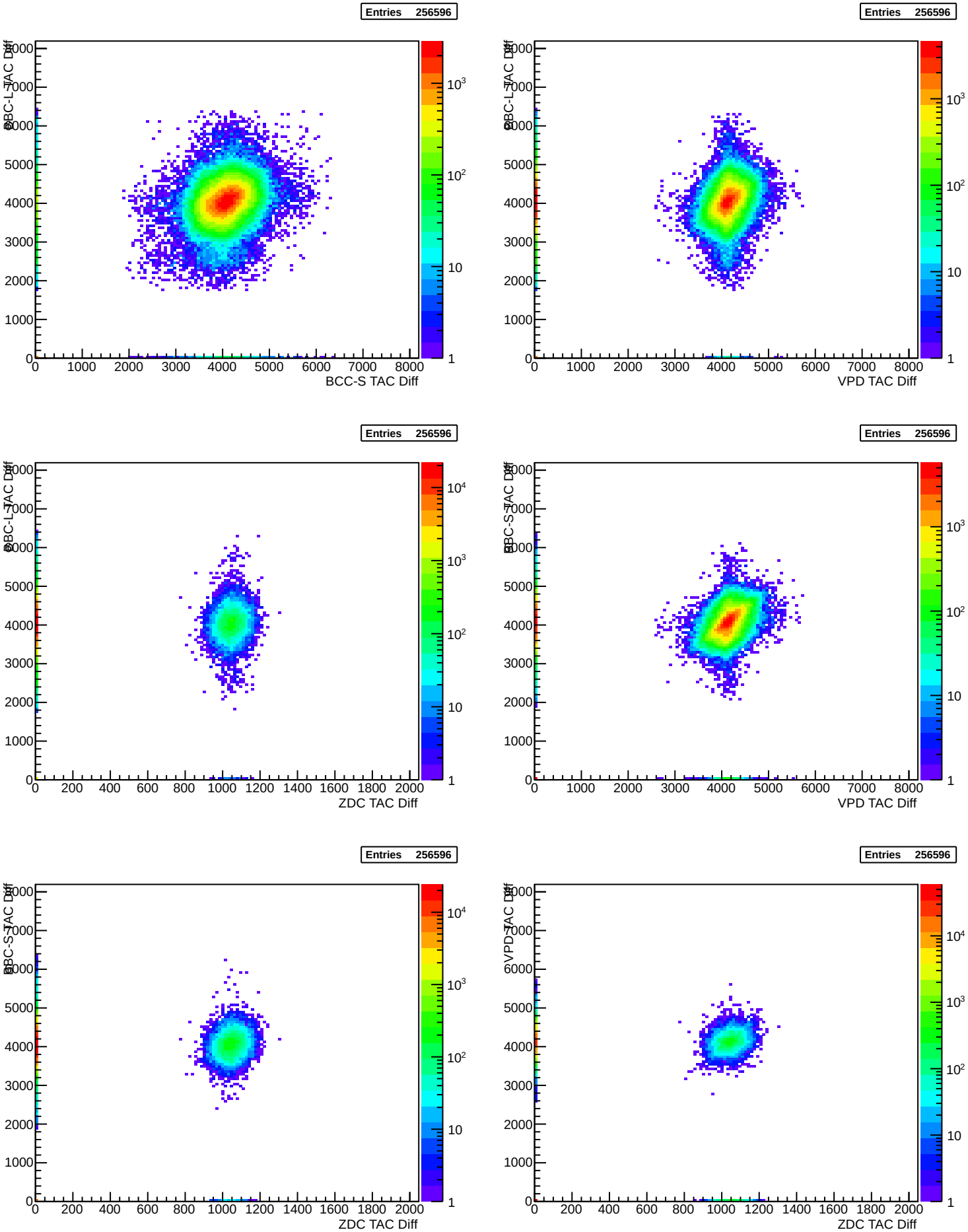

Entries 256596
VPD-West ADC Sum
ZDC-West ADC Sum Att

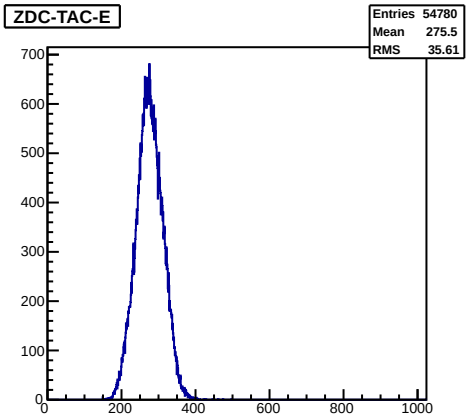

Entries 256596
BBC-L-East ADC Sum
BBC-L-West ADC Sum

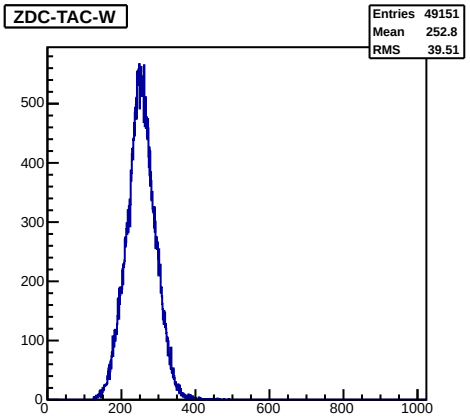

Entries 256596
BBC-S-East ADC Sum
BBC-S-West ADC Sum

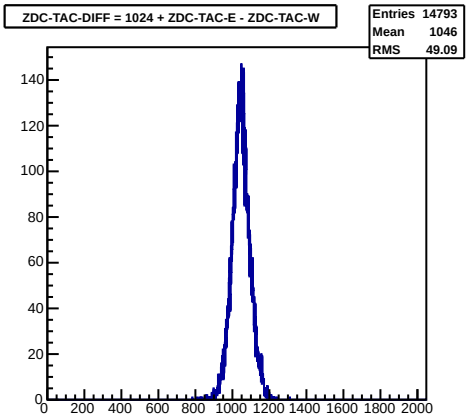

Entries 256596
VPD East ADC Sum
VPD West ADC Sum

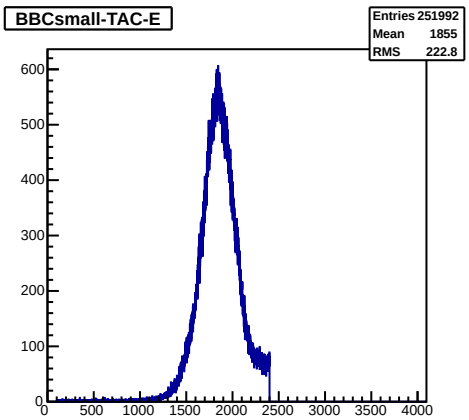

Entries 256596
ZDC East ADC Sum Att
ZDC West ADC Sum Att

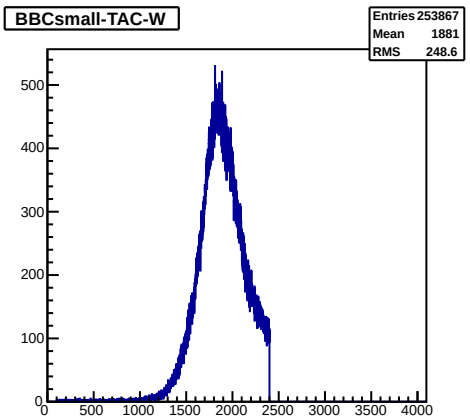

Entries 256596
BBC-L TAC Diff
BCC-S TAC Diff
Entries 256596
BBC-L TAC Diff
VPD TAC Diff
Entries 256596
BBC-L TAC Diff
ZDC TAC Diff
Entries 256596
BBC-S TAC Diff
VPD TAC Diff
Entries 256596
BBC-S TAC Diff
ZDC TAC Diff
Entries 256596
VPD TAC Diff
ZDC TAC Diff

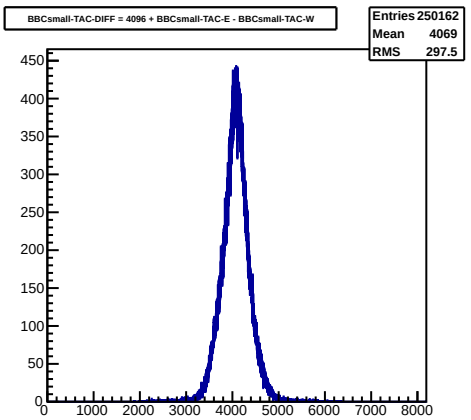

ZDC-TAC-E
Entries 54780
Mean 275.5
RMS 35.61

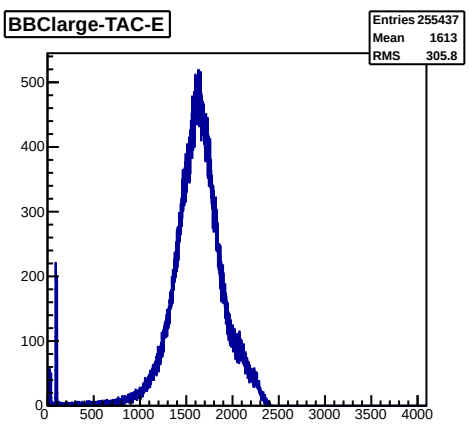

ZDC-TAC-W
Entries 49151
Mean 252.8
RMS 39.51

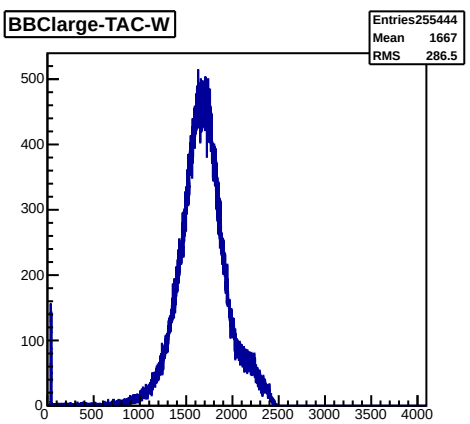

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 14793
Mean 1046
RMS 49.09

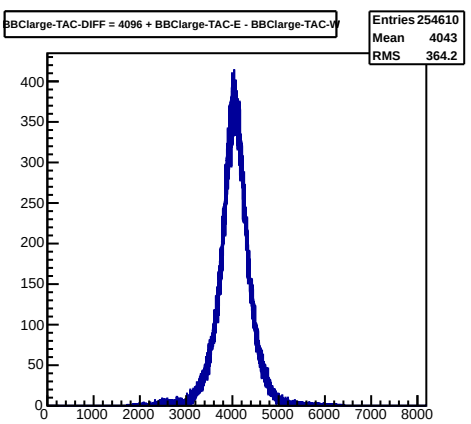

BBCsmall-TAC-E
Entries 251992
Mean 1855
RMS 222.8

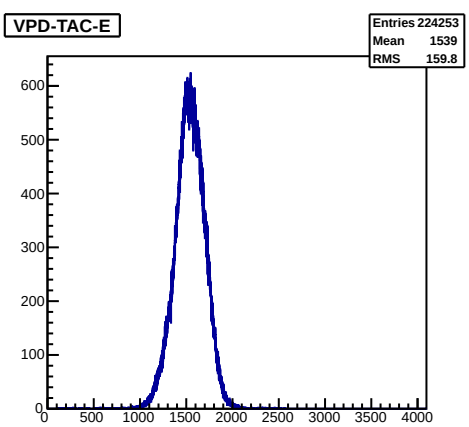

BBCsmall-TAC-W
Entries 253867
Mean 1881
RMS 248.6

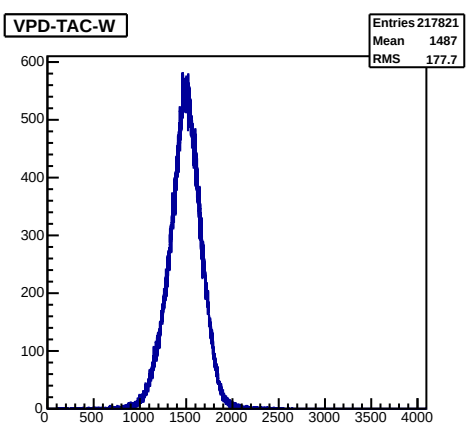

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 250162
Mean 4069
RMS 297.5

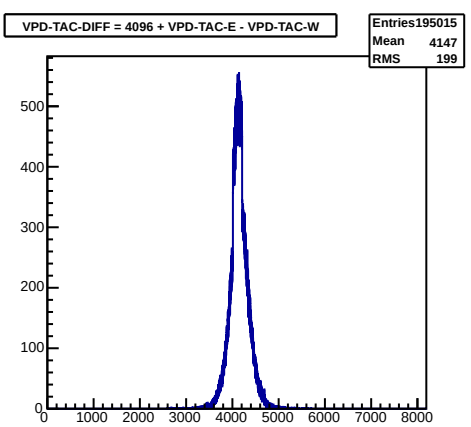

BBClarge-TAC-E
Entries 255437
Mean 1613
RMS 305.8

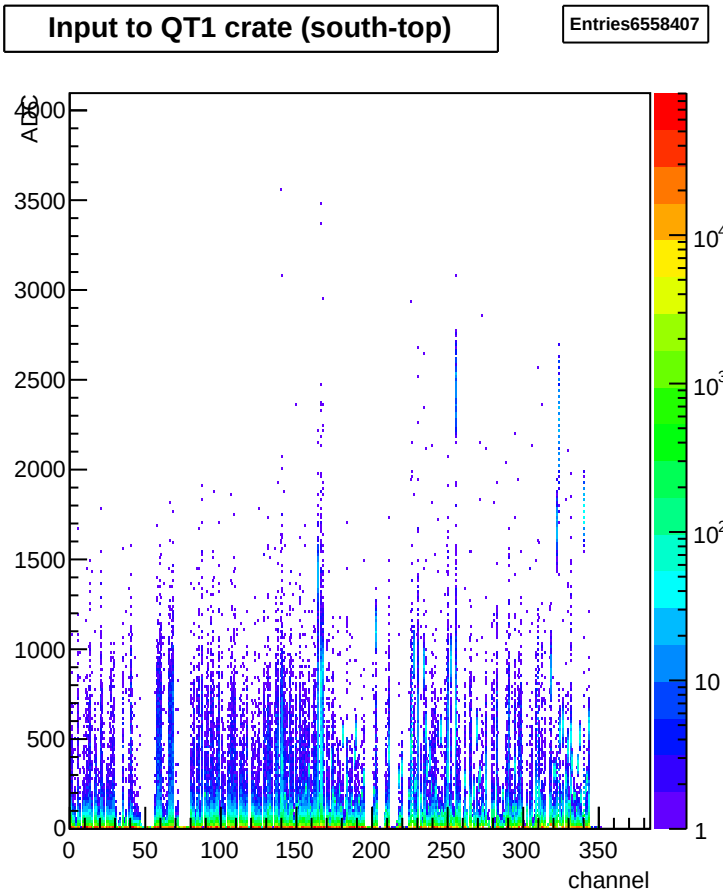

BBClarge-TAC-W
Entries 255444
Mean 1667
RMS 286.5

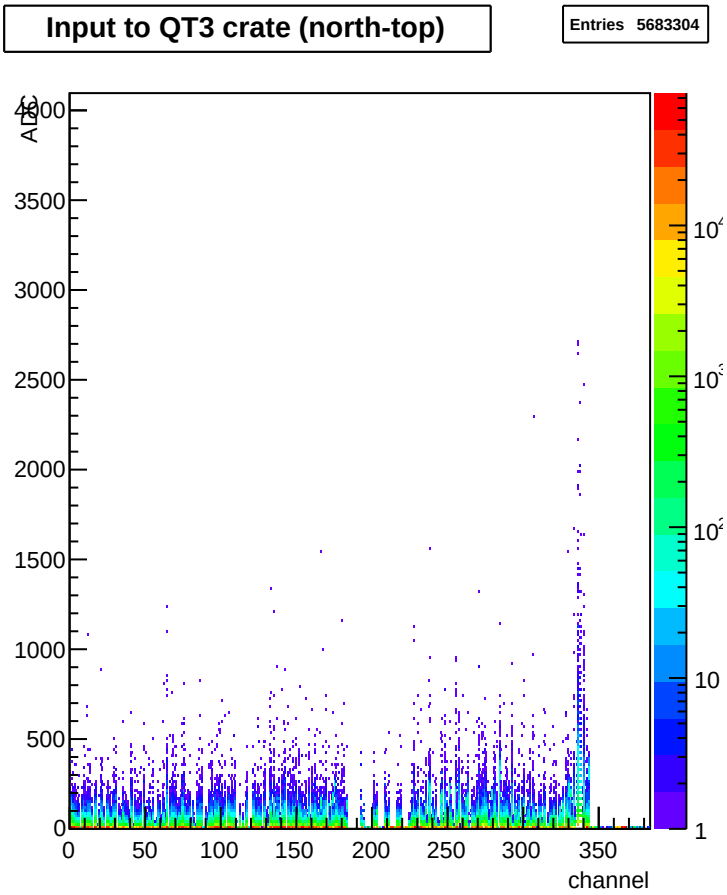

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 254610
Mean 4043
RMS 364.2

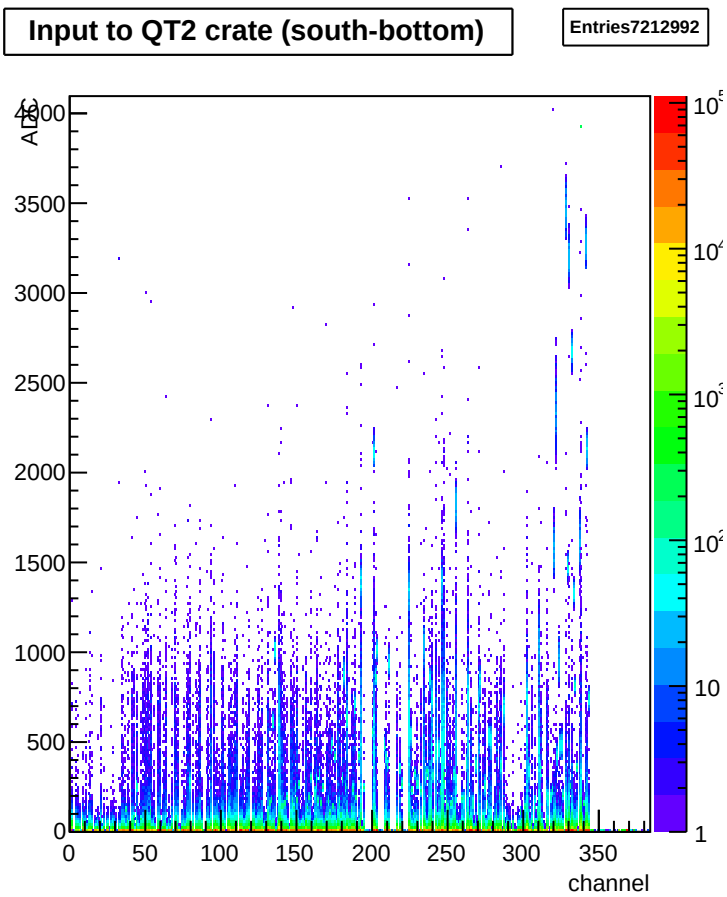

VPD-TAC-E
Entries 224253
Mean 1539
RMS 159.8

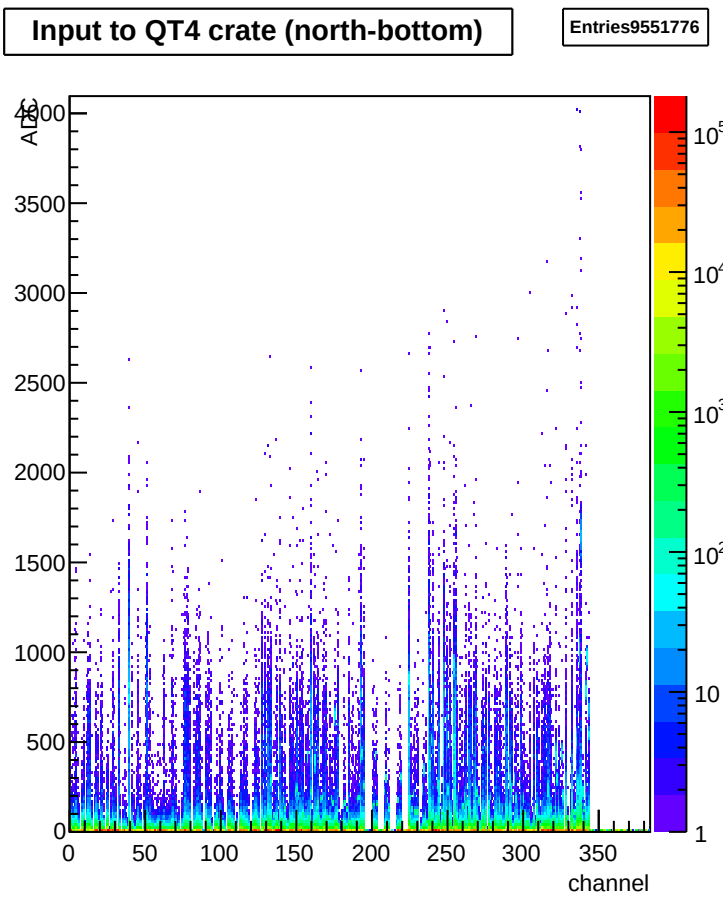

VPD-TAC-W
Entries 217821
Mean 1487
RMS 177.7

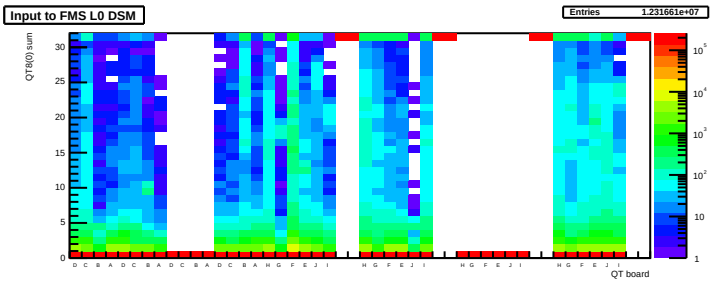

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 195015
Mean 4147
RMS 199

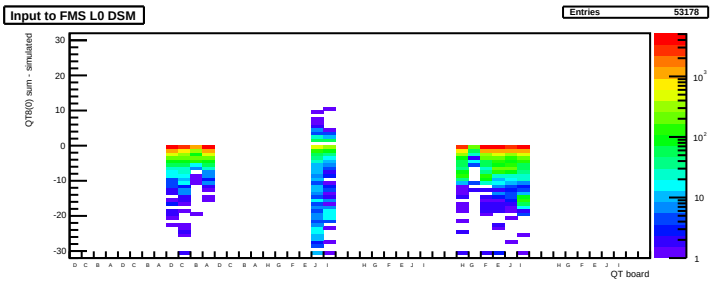

Input to QT1 crate (south-top)
Entries6558407
ADC
channel

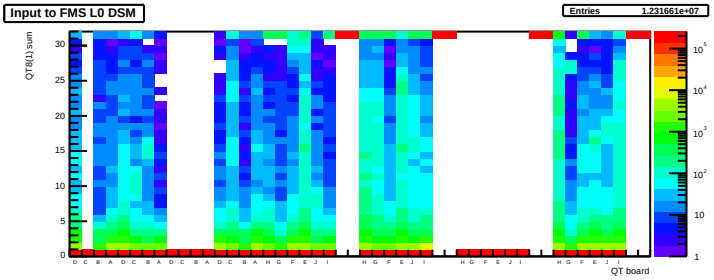

Input to QT3 crate (north-top)
Entries 5683304
ADC
channel

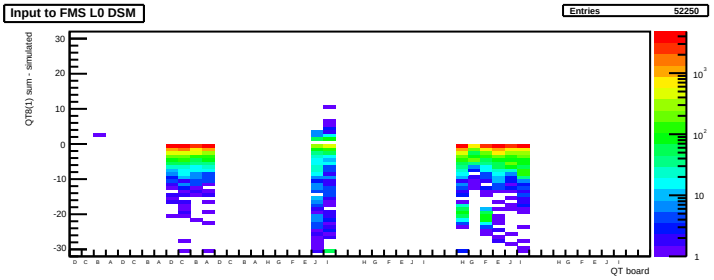

Input to QT2 crate (south-bottom)
Entries7212992
ADC
channel

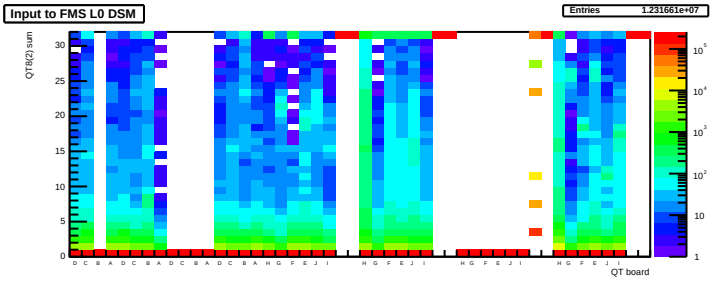

Input to QT4 crate (north-bottom)
Entries9551776
ADC
channel

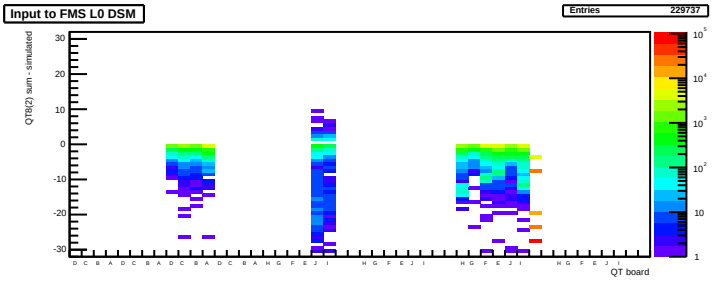

Input to FMS L0 DSM
Entries 1.231661e+07
QT8(0) sum
QT board

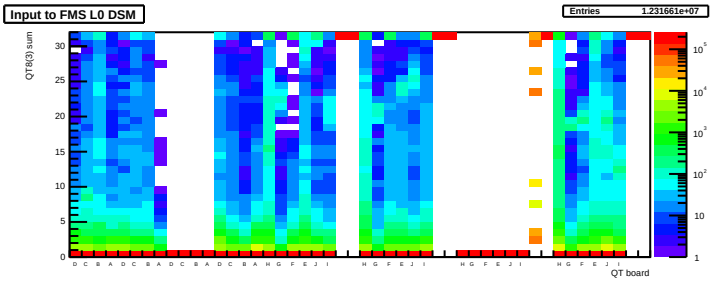

Input to FMS L0 DSM
Entries 53178
QT8(0) sum - simulated
QT board

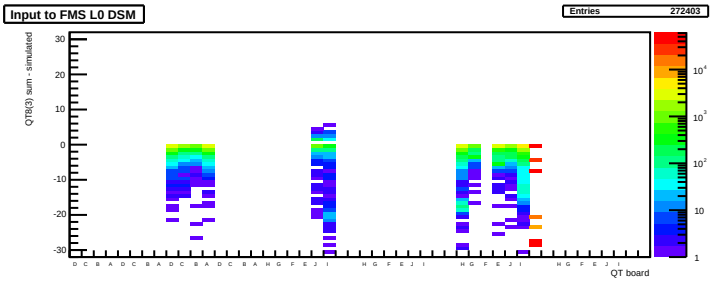

Input to FMS L0 DSM
Entries 1.231661e+07
QT8(1) sum
QT board

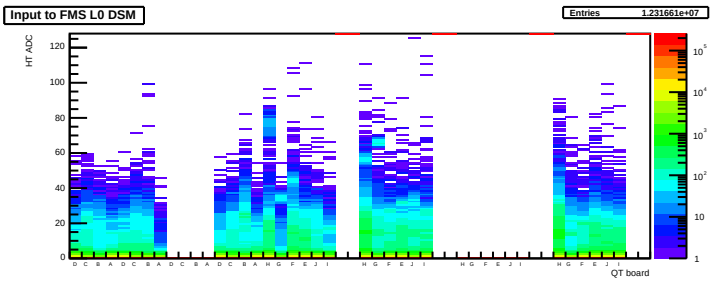

Input to FMS L0 DSM
Entries 52250
QT8(1) sum - simulated
QT board

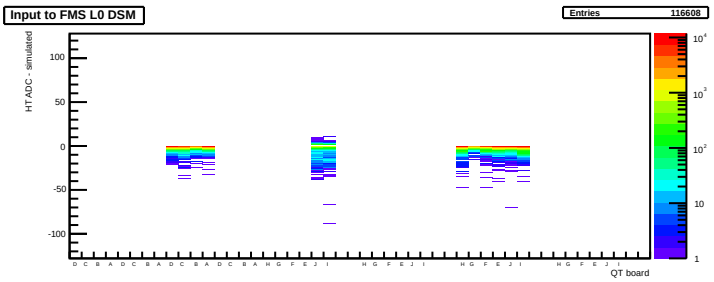

Input to FMS L0 DSM
Entries 1.231661e+07
QT8(2) sum
QT board

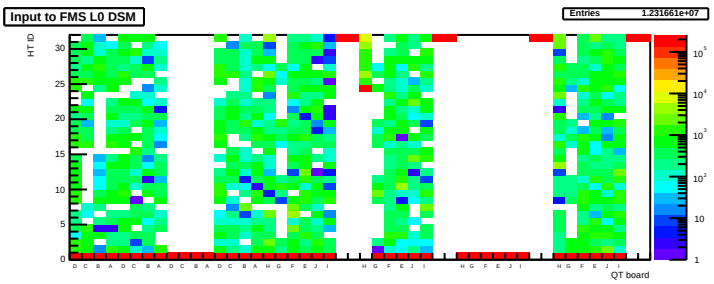

Input to FMS L0 DSM
Entries 229737
QT8(2) sum - simulated
QT board

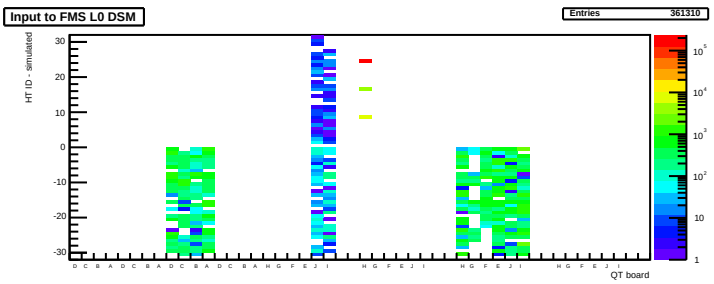

Input to FMS L0 DSM
Entries 1.231661e+07
QT8(3) sum
QT board

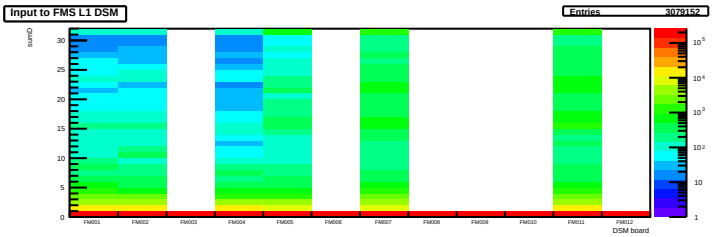

Input to FMS L0 DSM
Entries 272403
QT8(3) sum - simulated
QT board

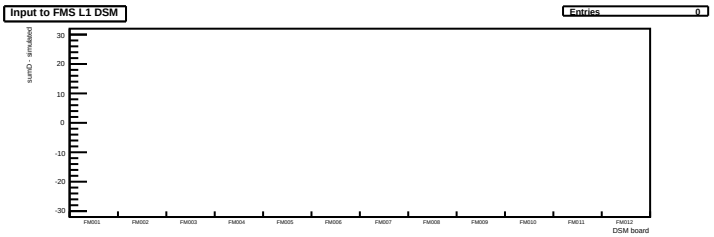

Input to FMS L0 DSM
Entries 1.231661e+07
HT ADC
QT board

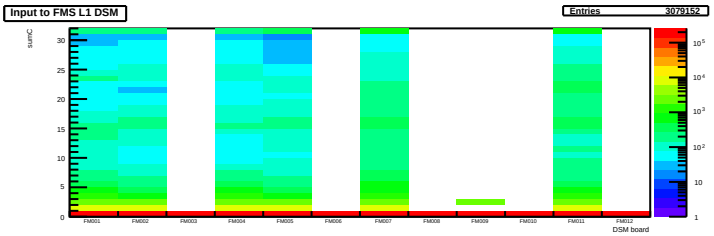

Input to FMS L0 DSM
Entries 116608
HT ADC - simulated
QT board

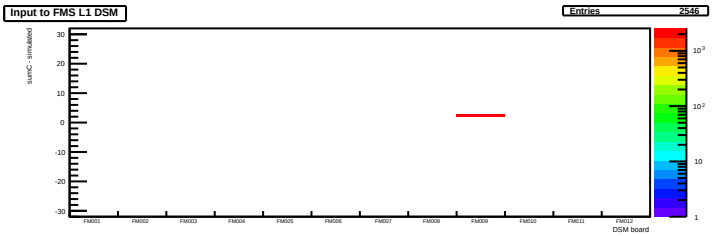

Input to FMS L0 DSM
Entries 1.231661e+07
HT ID
QT board

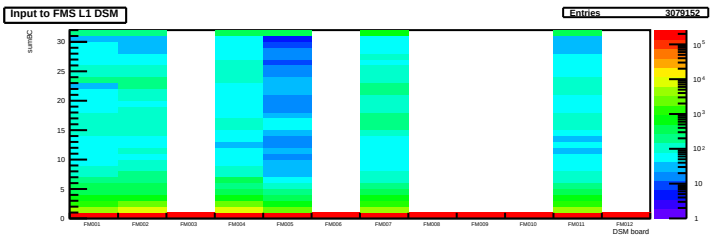

Input to FMS L0 DSM
Entries 361310
HT ID - simulated
QT board

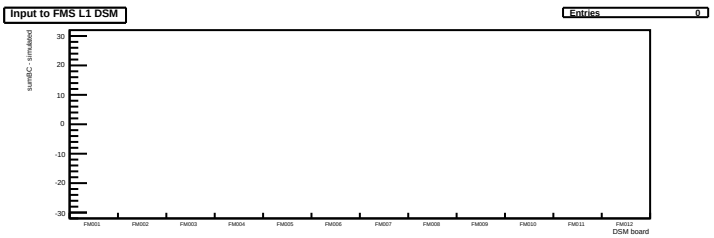

Input to FMS L1 DSM
Entries 3079152
sumD
DSM board

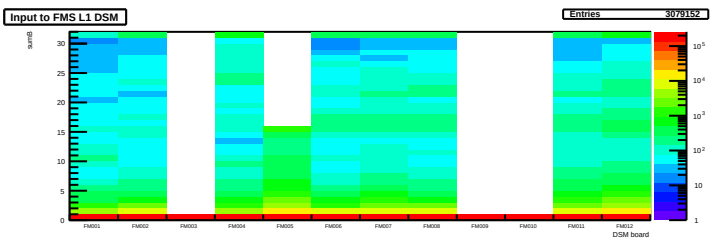

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

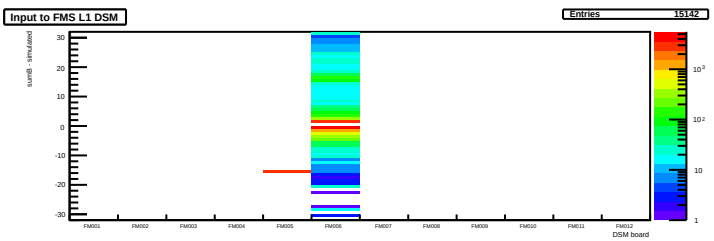

Input to FMS L1 DSM
Entries 3079152
sumC
DSM board

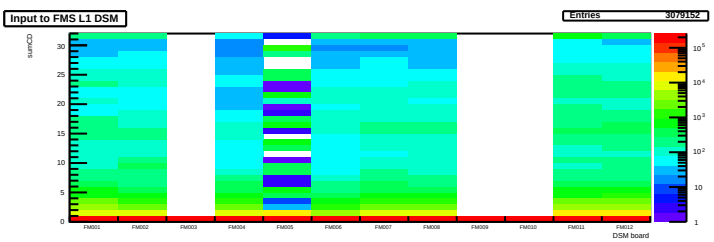

Input to FMS L1 DSM
Entries 2546
sumC - simulated
DSM board

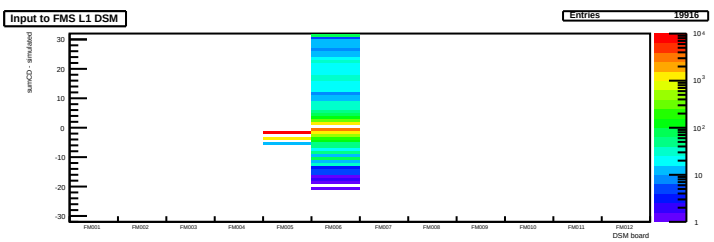

Input to FMS L1 DSM
Entries 3079152
sumBC
DSM board

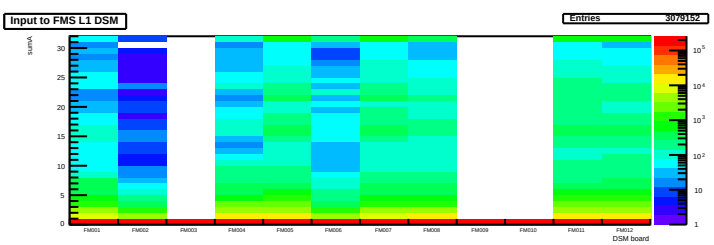

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

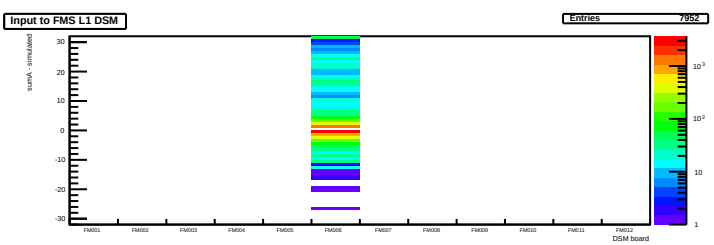

Input to FMS L1 DSM
Entries 3079152
sumB
DSM board

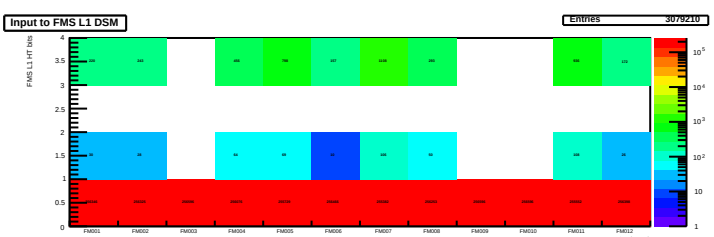

Input to FMS L1 DSM
Entries 15142
sumB - simulated
DSM board

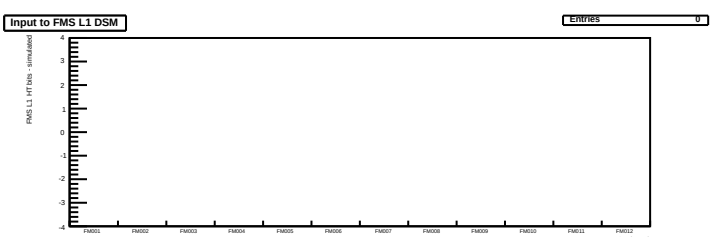

Input to FMS L1 DSM
Entries 3079152
sumCD
DSM board

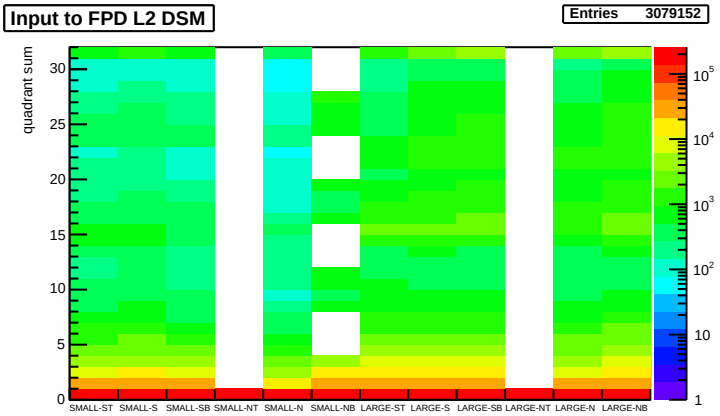

Input to FMS L1 DSM
Entries 19916
sumCD - simulated
DSM board

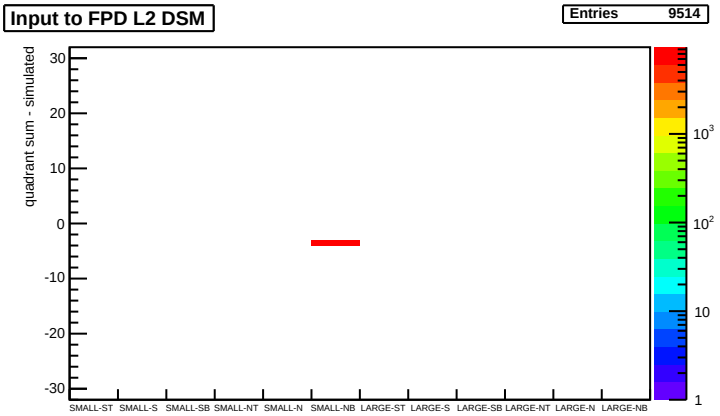

Input to FMS L1 DSM
Entries 3079152
sumA
DSM board

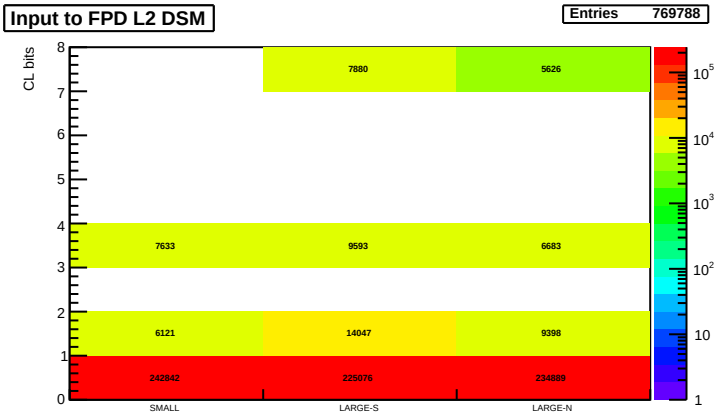

Input to FMS L1 DSM
Entries 7952
sumA - simulated
DSM board

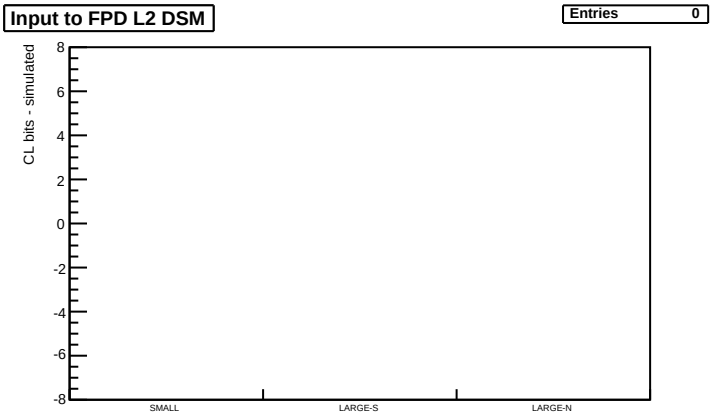

Input to FMS L1 DSM
Entries 3079210
FMS L1 HT bits
DSM board

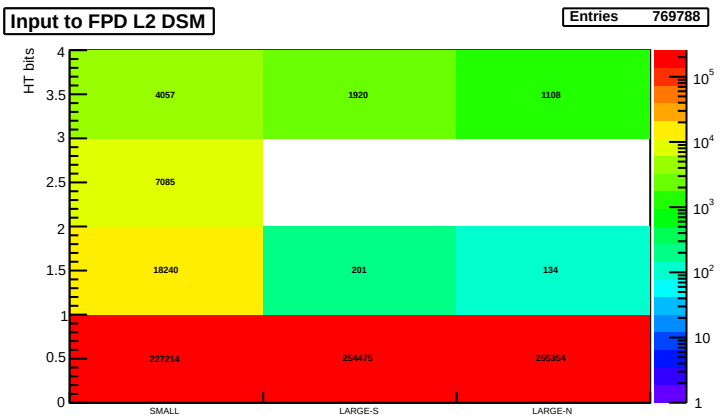

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

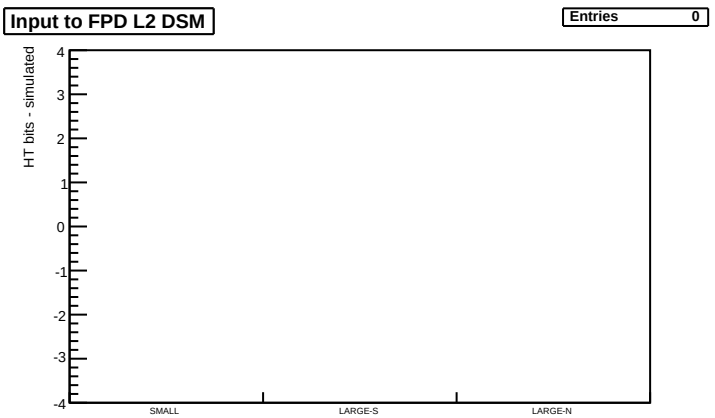

Input to FPD L2 DSM
Entries 3079152
quadrant sum
SMALL-ST SMALL-S SMALL-SB SMALL-NT SMALL-N SMALL-NB LARGE-ST LARGE-S LARGE-SB LARGE-NT LARGE-N LARGE-NB

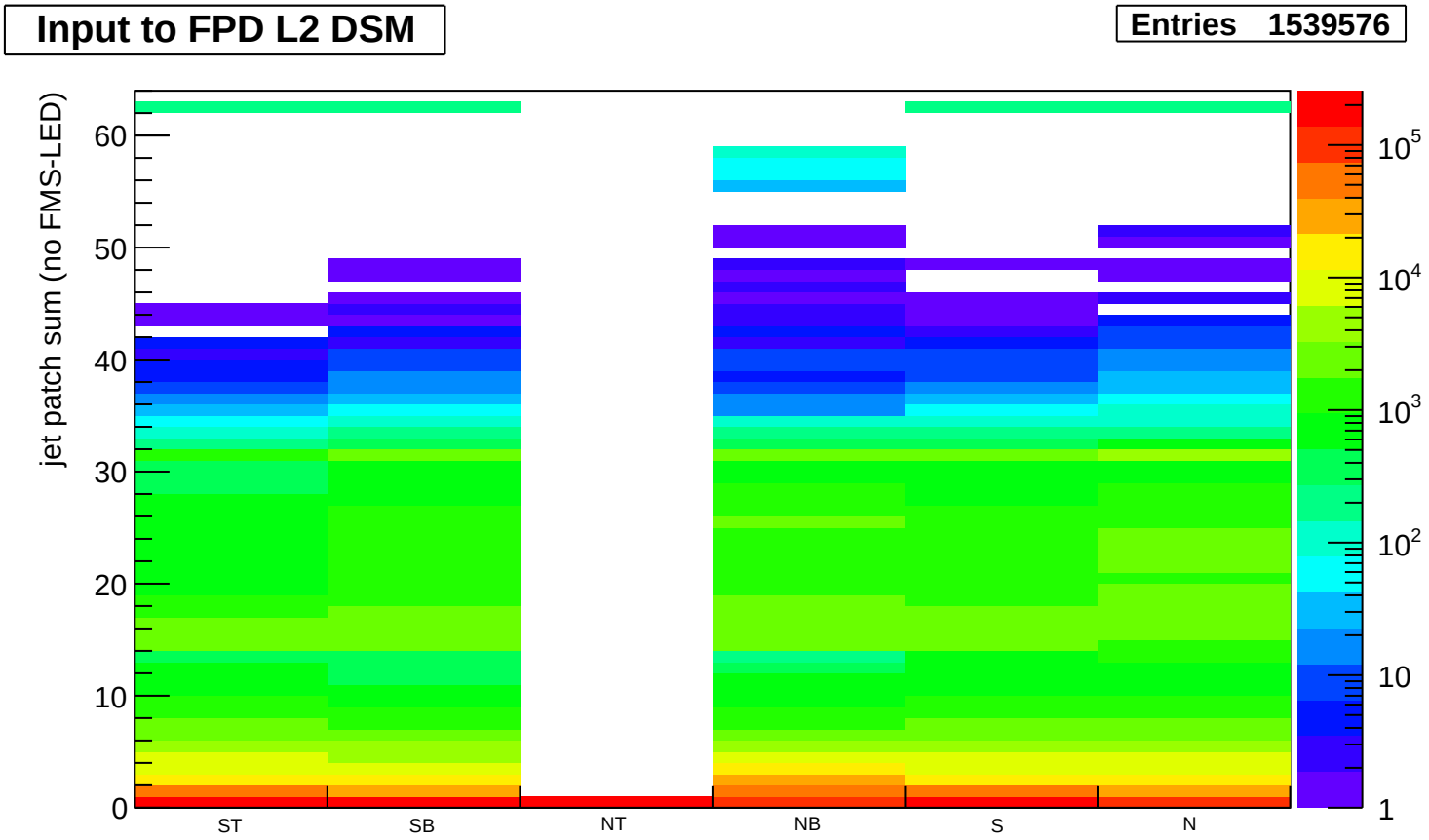

Input to FPD L2 DSM
Entries 9514
quadrant sum - simulated
SMALL-ST SMALL-S SMALL-SB SMALL-NT SMALL-N SMALL-NB LARGE-ST LARGE-S LARGE-SB LARGE-NT LARGE-N LARGE-NB

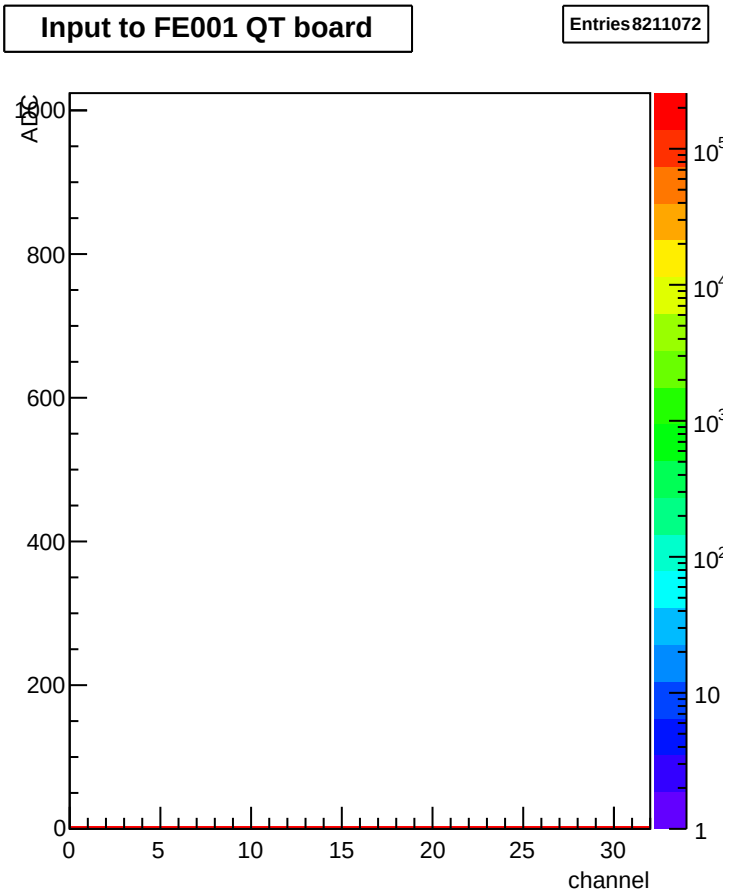

Input to FPD L2 DSM
Entries 769788
CL bits
7880
5626
7633
9593
6683
6121
14047
9398
242842
225076
234889
SMALL
LARGE-S
LARGE-N

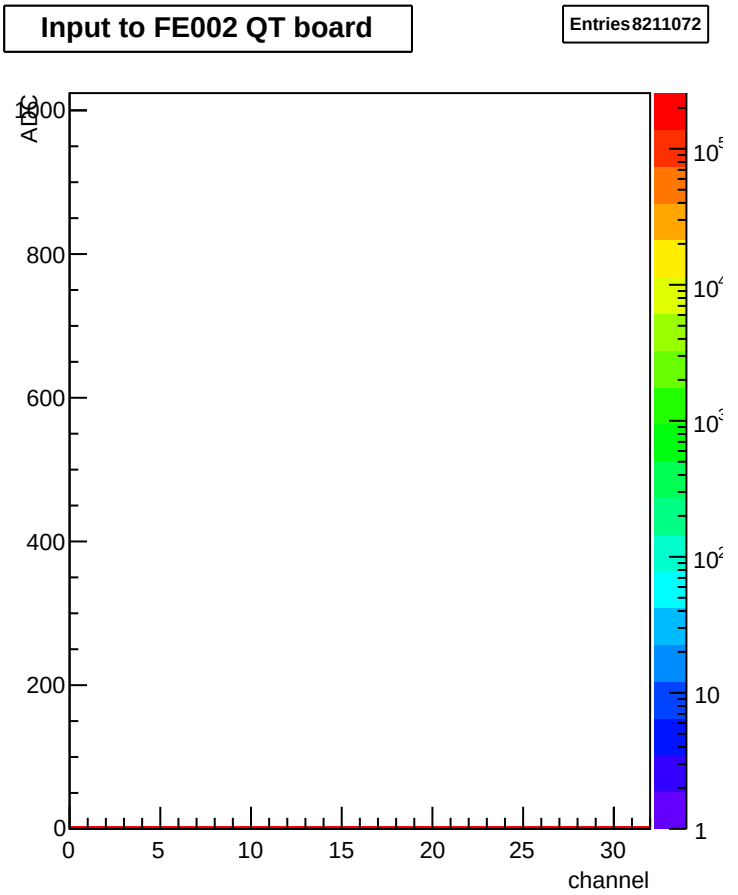

Input to FPD L2 DSM
Entries 0
CL bits - simulated
SMALL
LARGE-S
LARGE-N

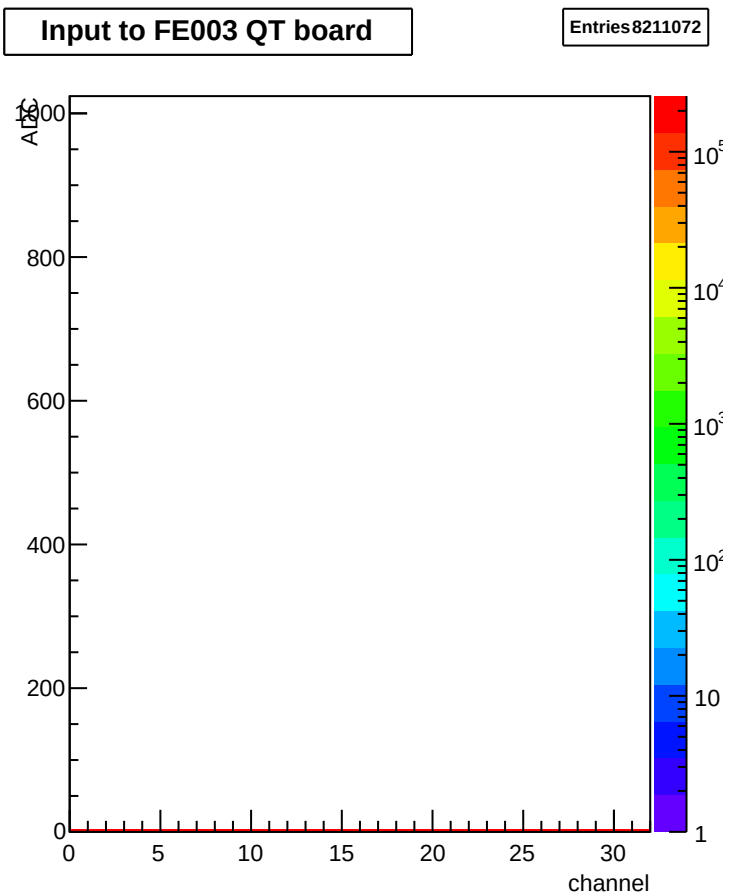

Input to FPD L2 DSM
Entries 769788
HT bits
4057
1920
1108
7085
18240
201
134
227214
254475
255354
SMALL
LARGE-S
LARGE-N

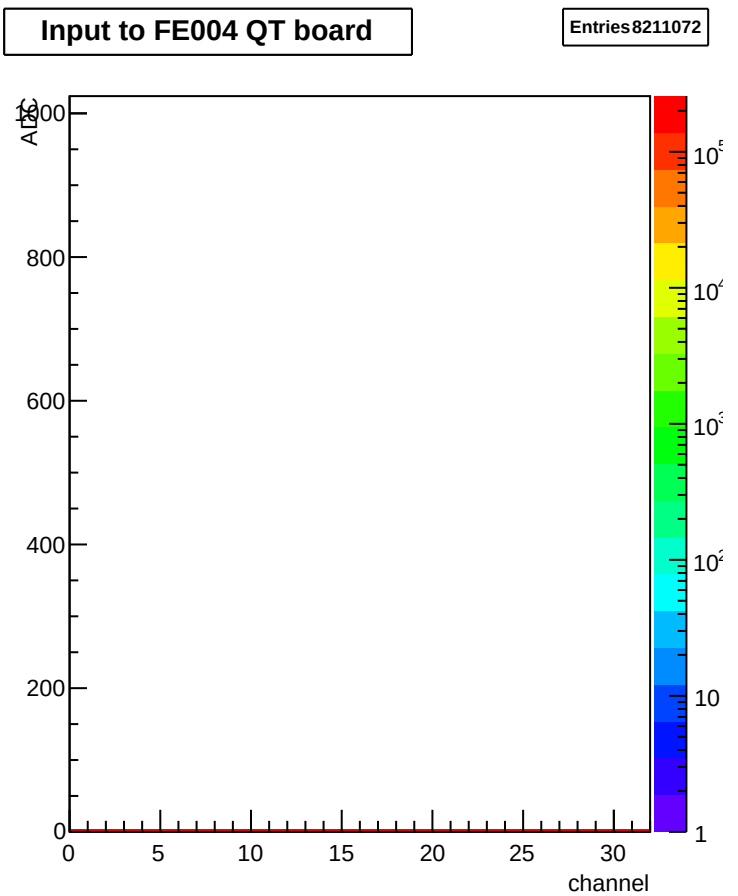

Input to FPD L2 DSM
Entries 0
HT bits - simulated
SMALL
LARGE-S
LARGE-N

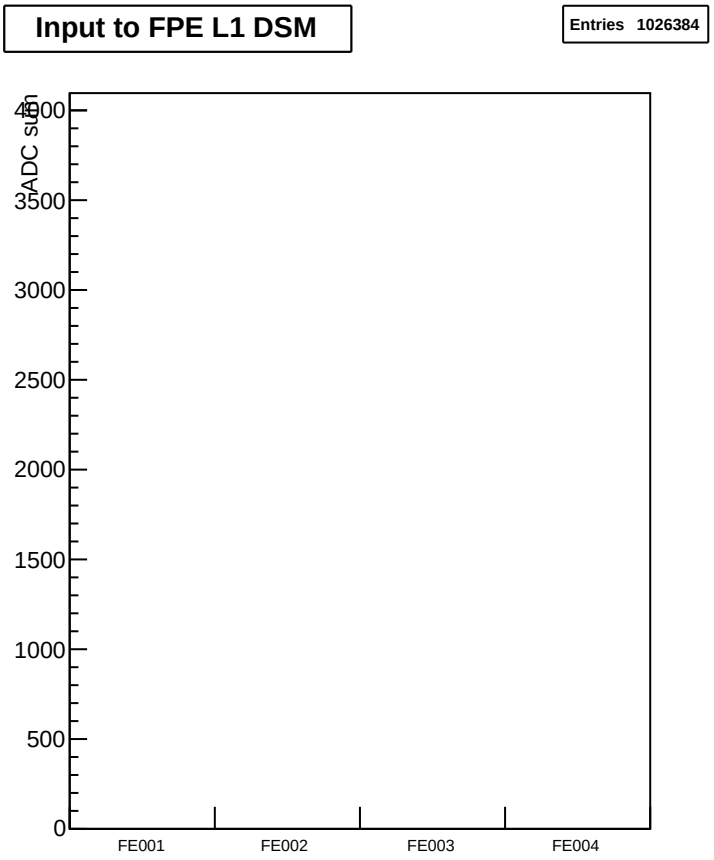

Input to FPD L2 DSM
Entries 1539576
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

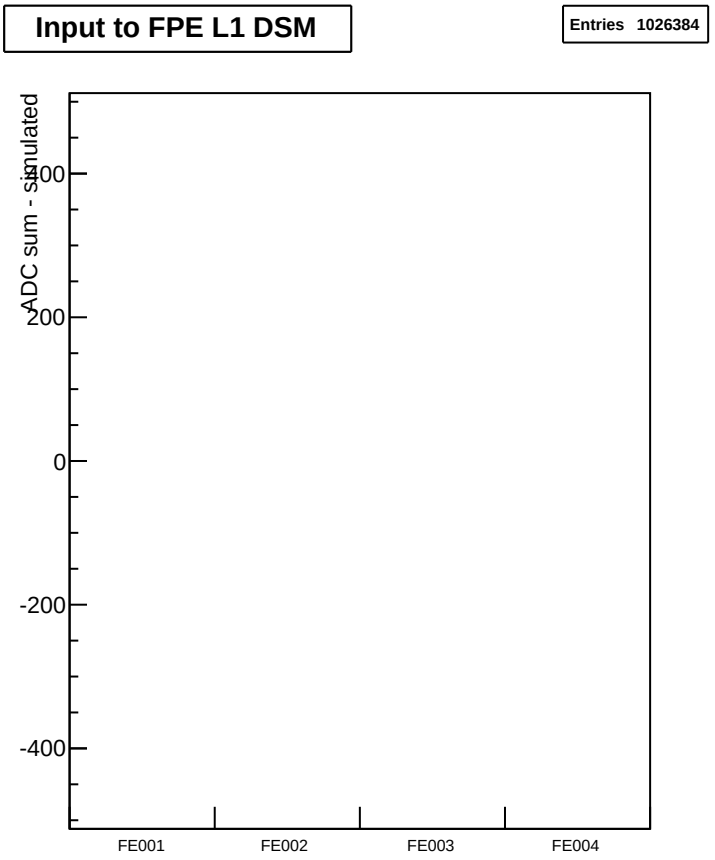

Input to FE001 QT board
Entries 8211072
ADC
channel

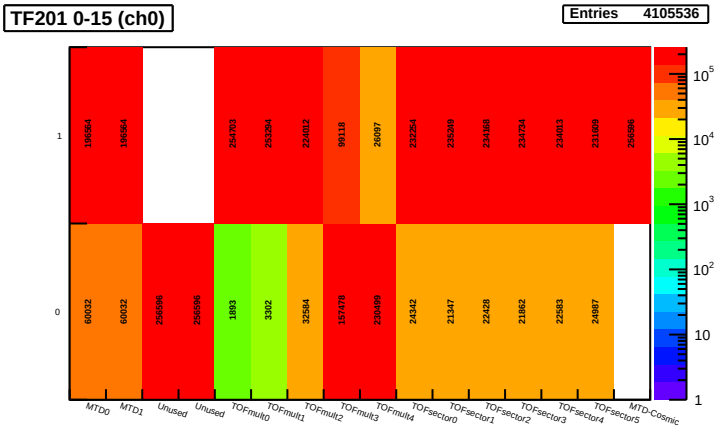

Input to FE002 QT board
Entries 8211072
ADC
channel

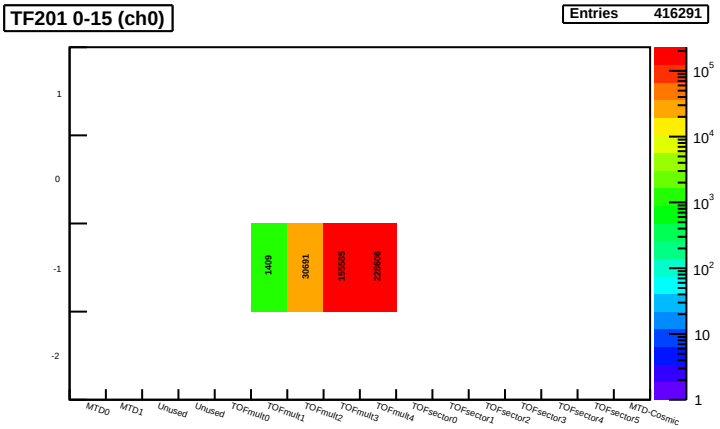

Input to FE003 QT board
Entries 8211072
ADC
channel

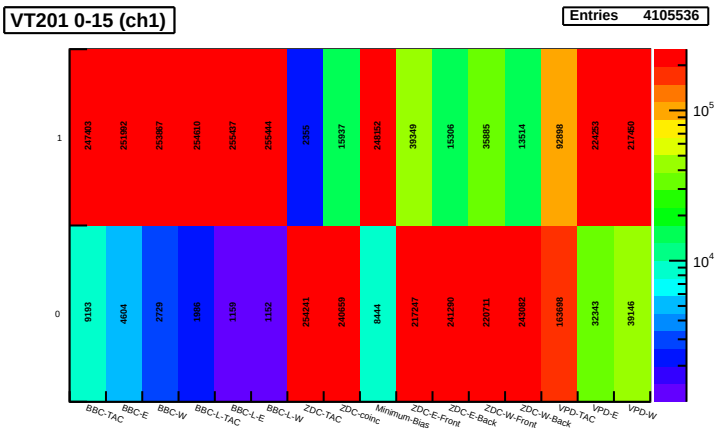

Input to FE004 QT board
Entries 8211072
ADC
channel

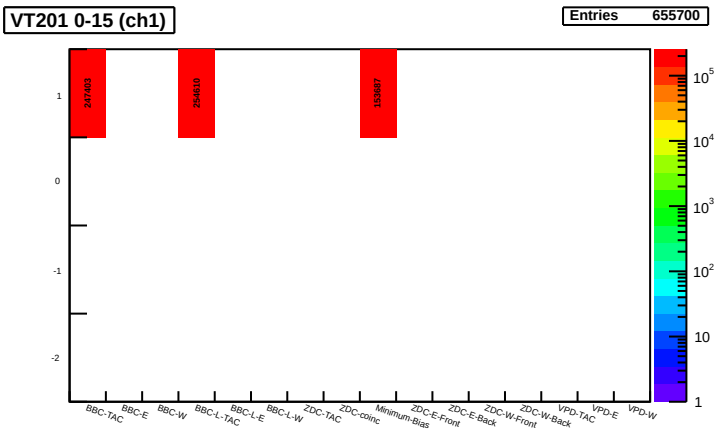

Input to FPE L1 DSM
Entries 1026384
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004

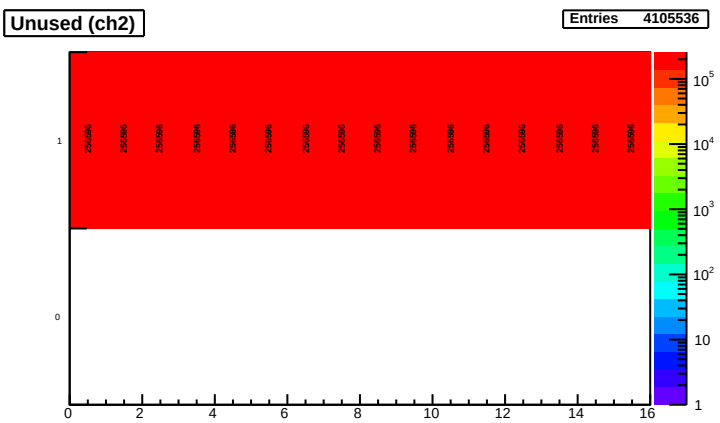

Input to FPE L1 DSM
Entries 1026384
ADC sum - simulated
400
200
0
-200
-400
FE001
FE002
FE003
FE004

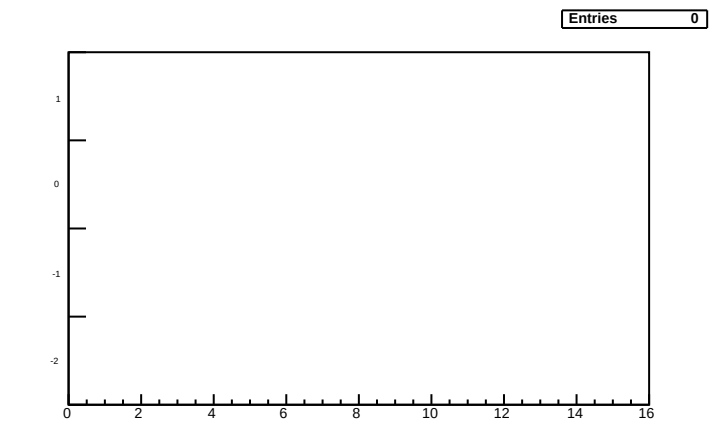

TF201 0-15 (ch0)
Entries 4105536
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

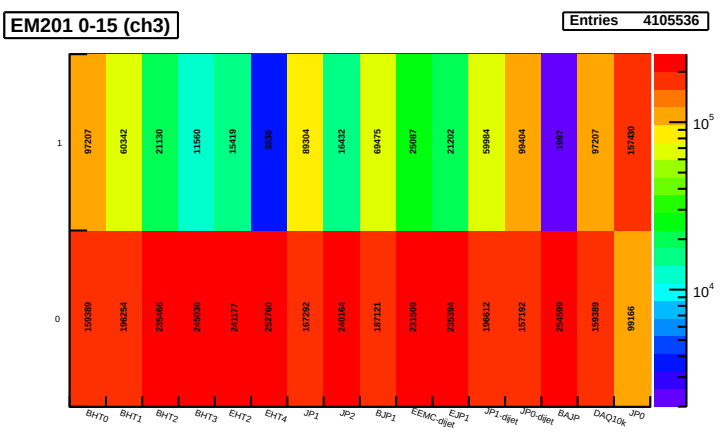

TF201 0-15 (ch0)
Entries 416291
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

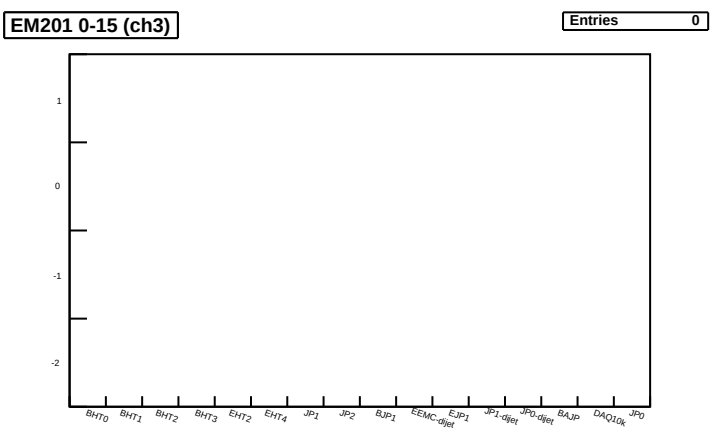

VT201 0-15 (ch1)
Entries 4105536
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-coinc Minimum-Bias ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 655700
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

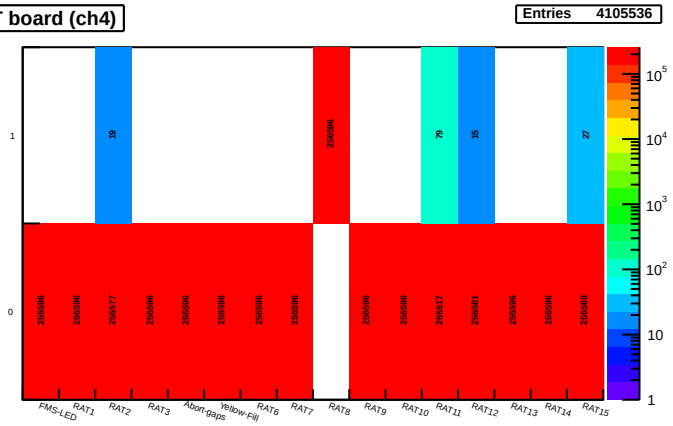

Unused (ch2)
Entries 4105536

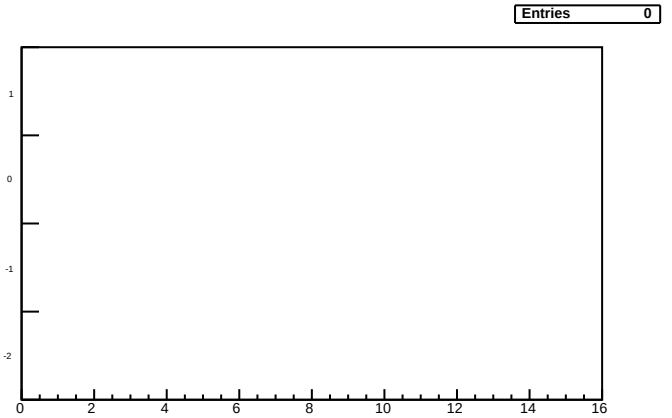

Entries 0


EM201 0-15 (ch3)
Entries 4105536
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 EEMC-dijet EJP-1 JP1-dijet JP0-dijet BAJP DAQ10k JP0

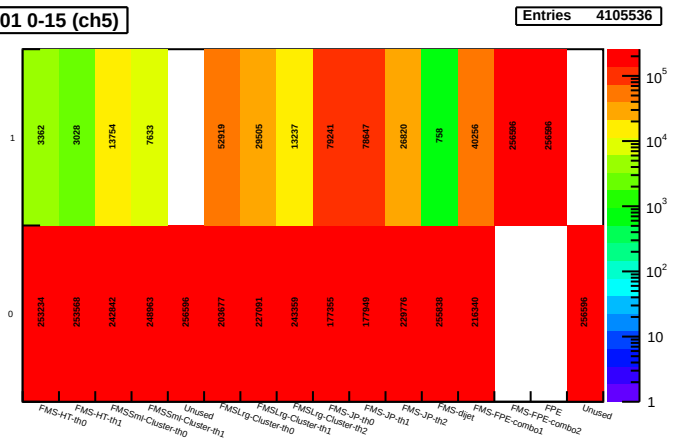

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 EEMC-dijet EJP-1 JP1-dijet JP0-dijet BAJP DAQ10k JP0

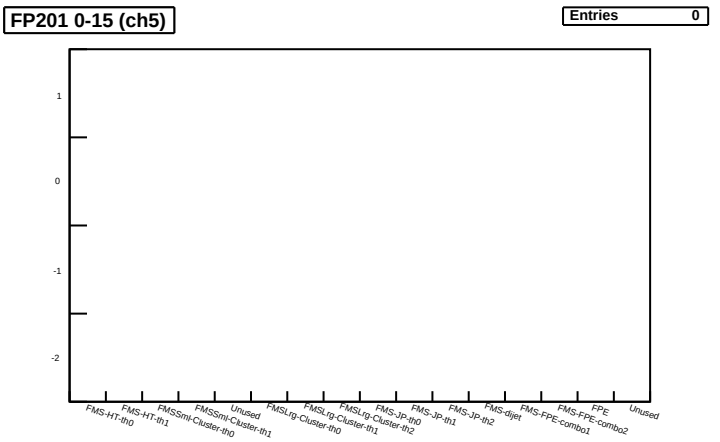
RAT board (ch4)



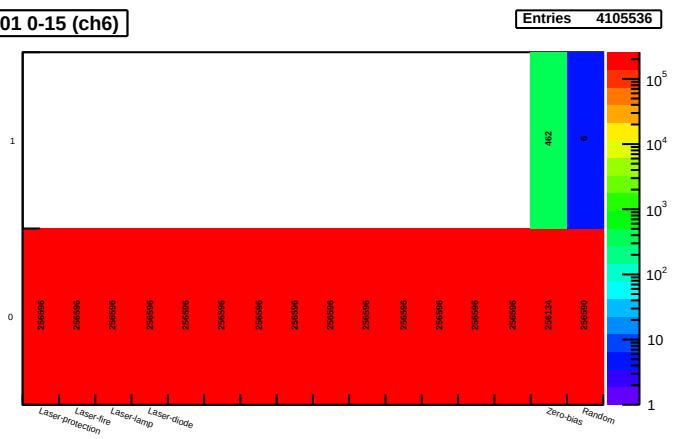


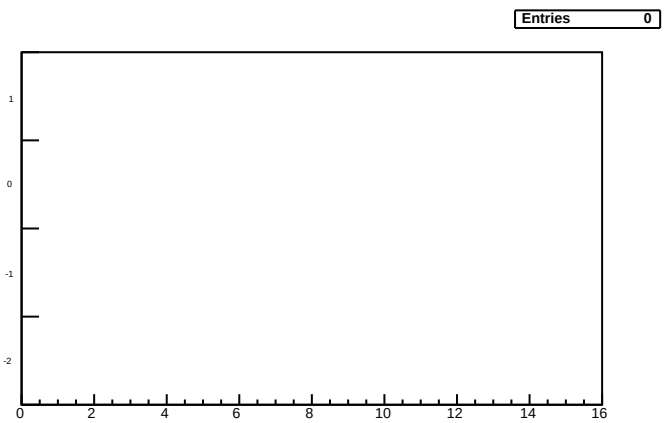
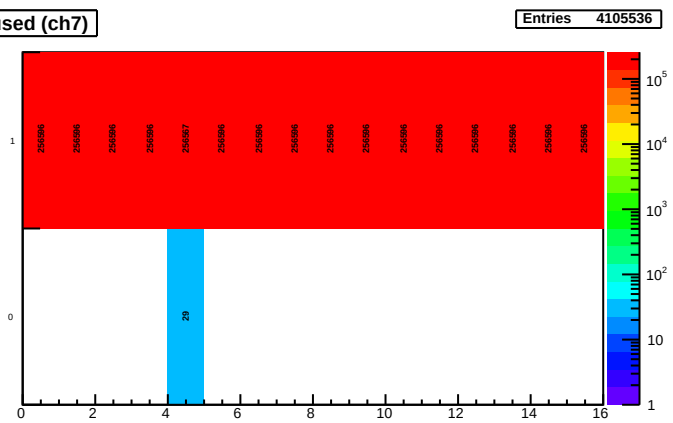
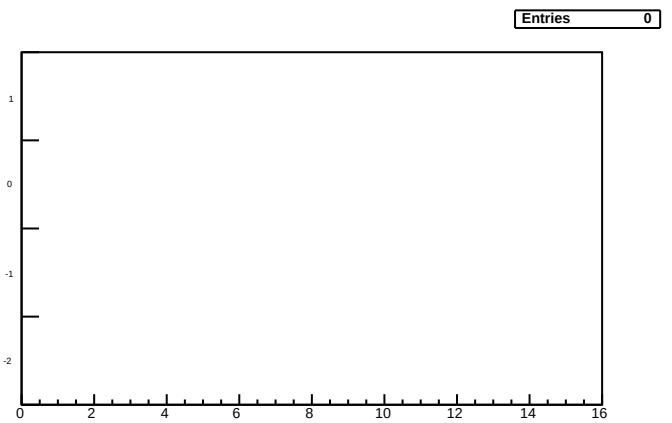
FP201 0-15 (ch5)





ST201 0-15 (ch6)





Unused (ch7)