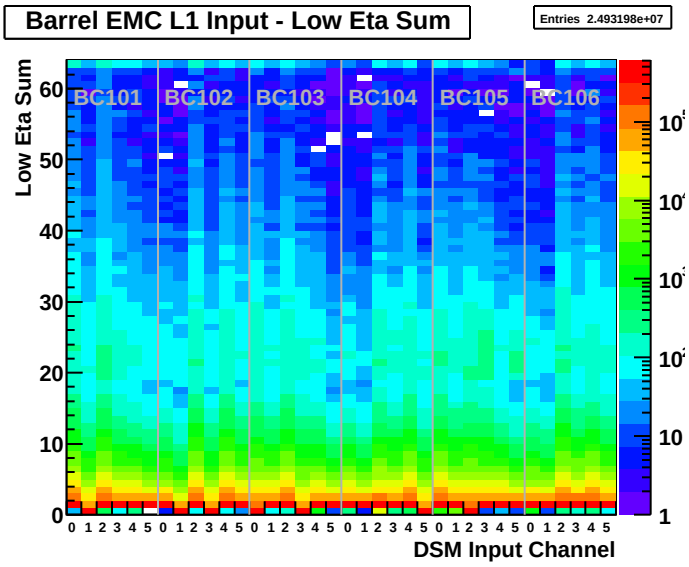
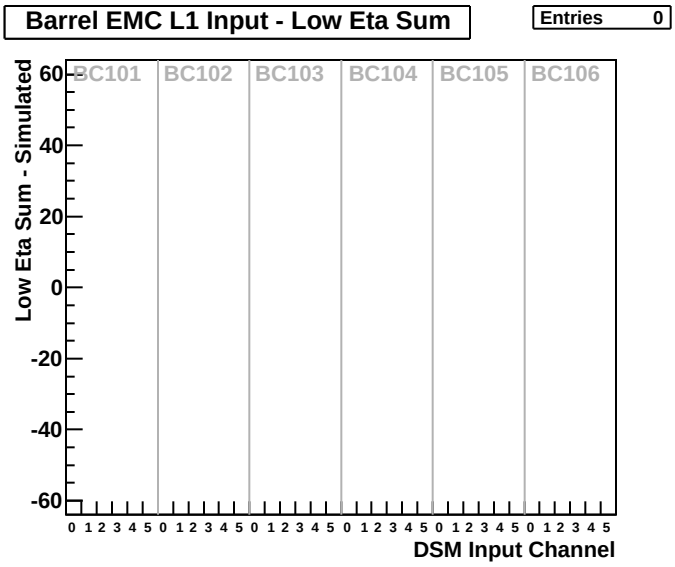
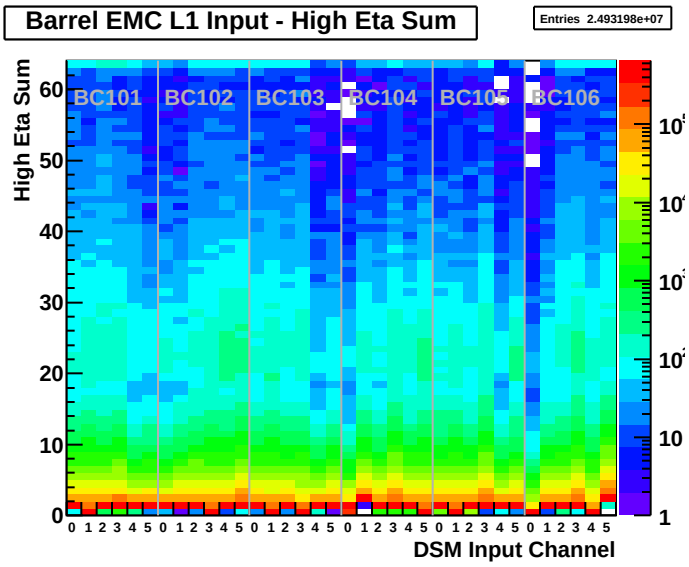
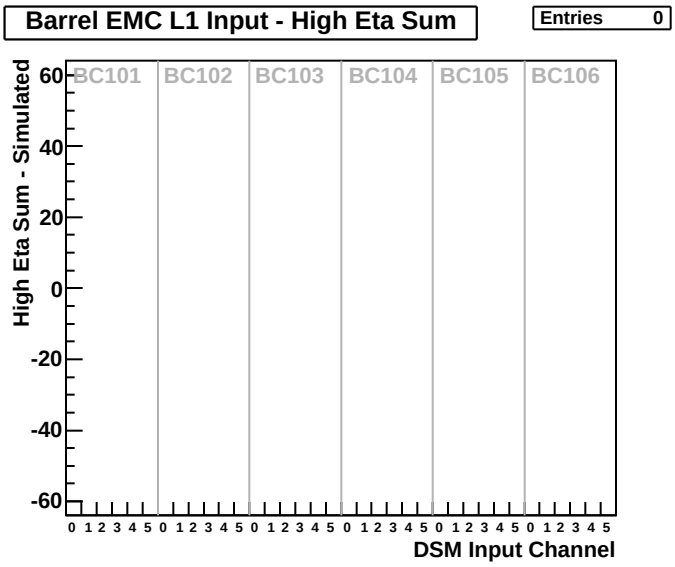
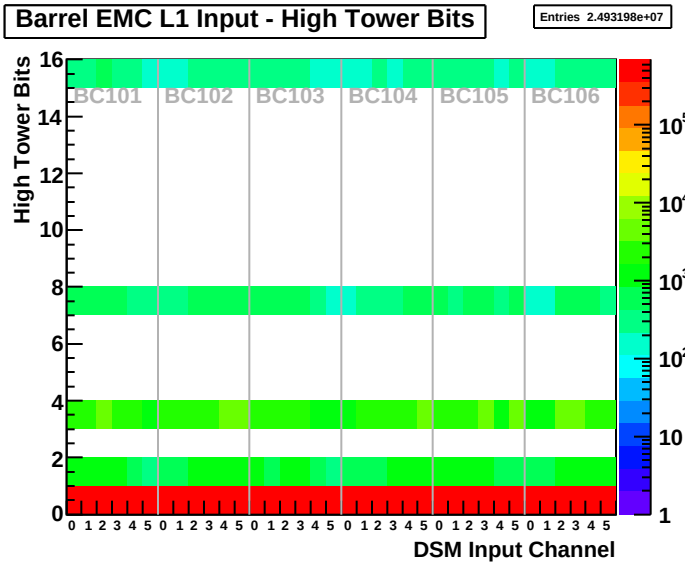
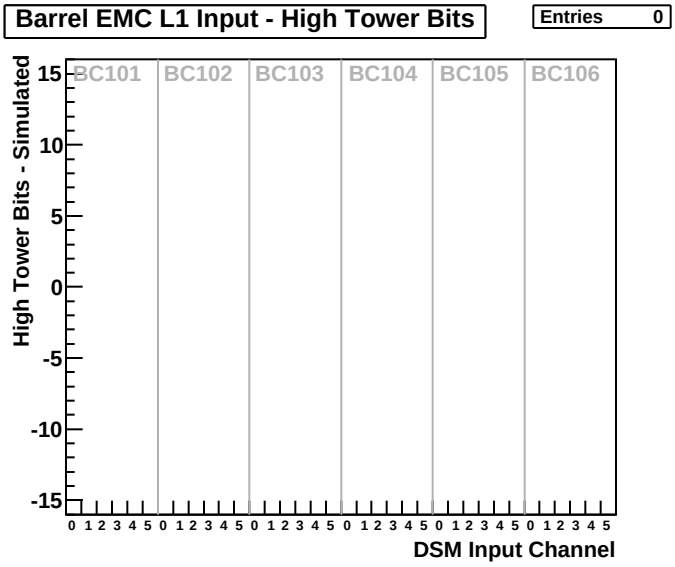

Barrel EMC L1 Input - Low Eta Sum
Entries 2.493198e+07
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

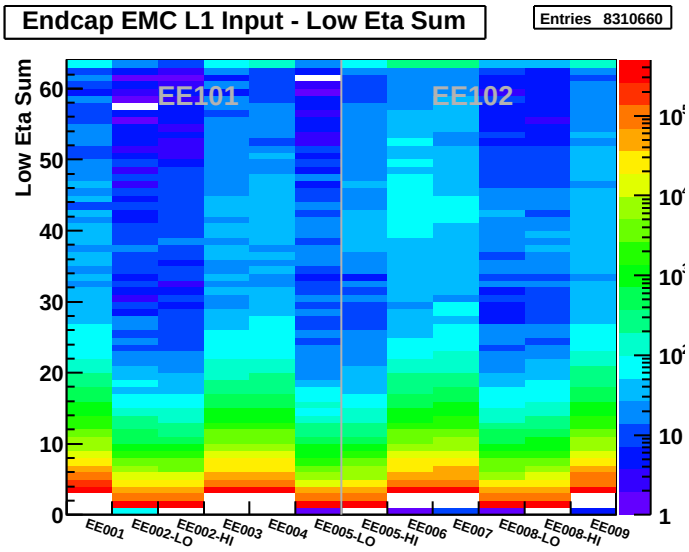

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

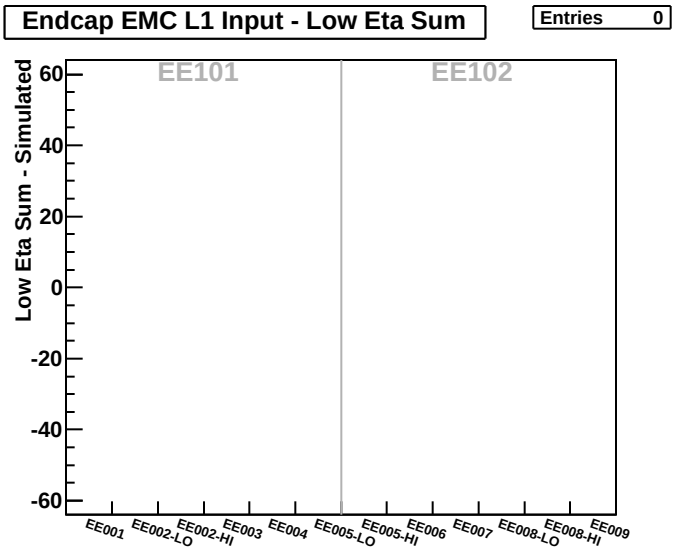

Barrel EMC L1 Input - High Eta Sum
Entries 2.493198e+07
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

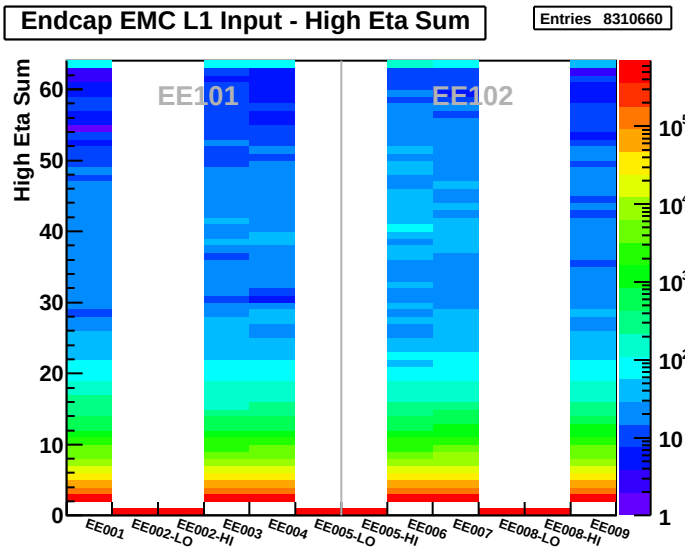

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

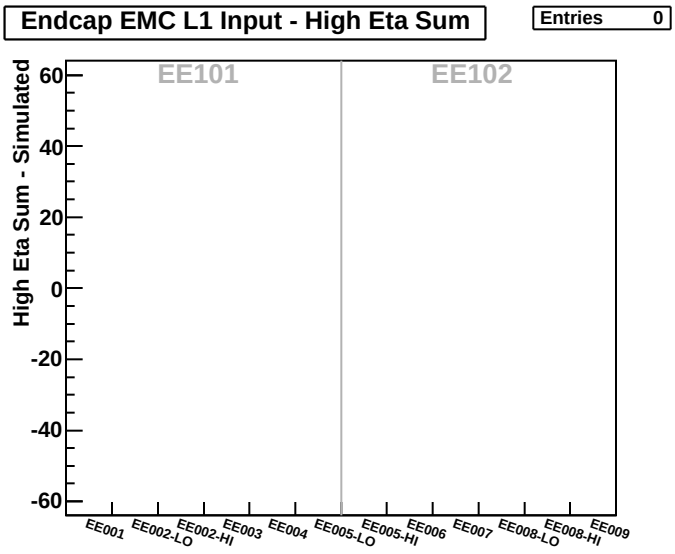

Barrel EMC L1 Input - High Tower Bits
Entries 2.493198e+07
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

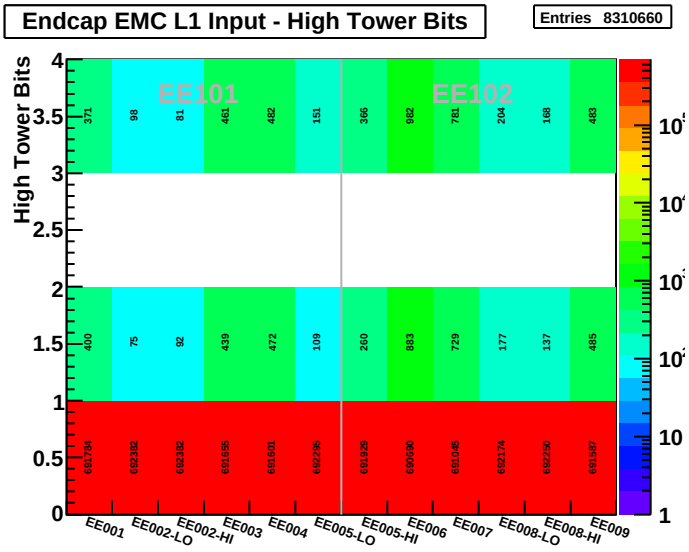

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

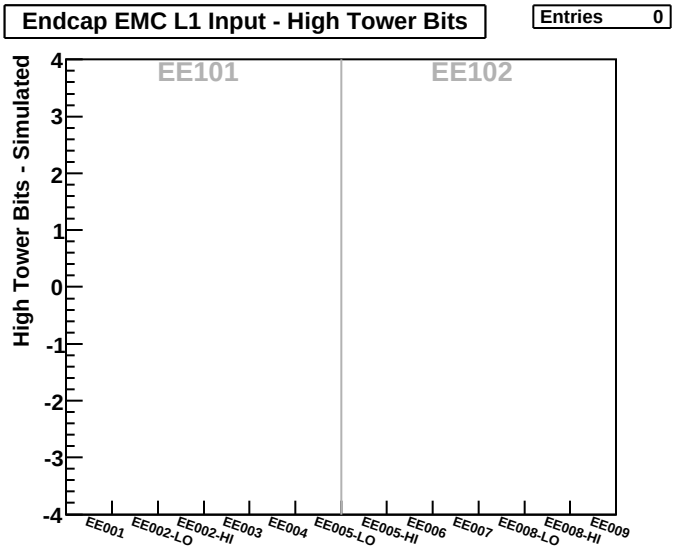

Endcap EMC L1 Input - Low Eta Sum
Entries 8310660
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

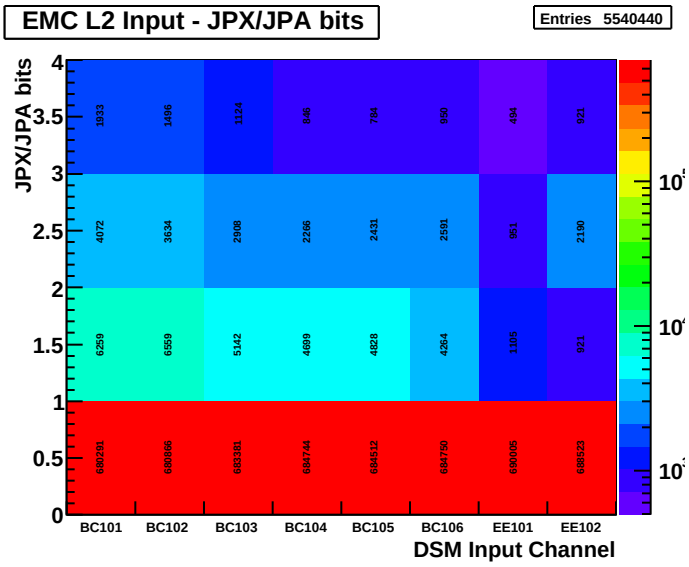

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

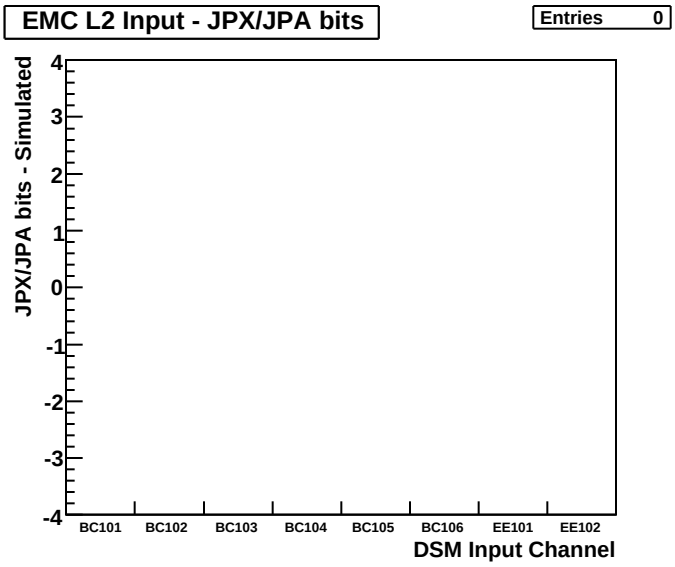

Endcap EMC L1 Input - High Eta Sum
Entries 8310660
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

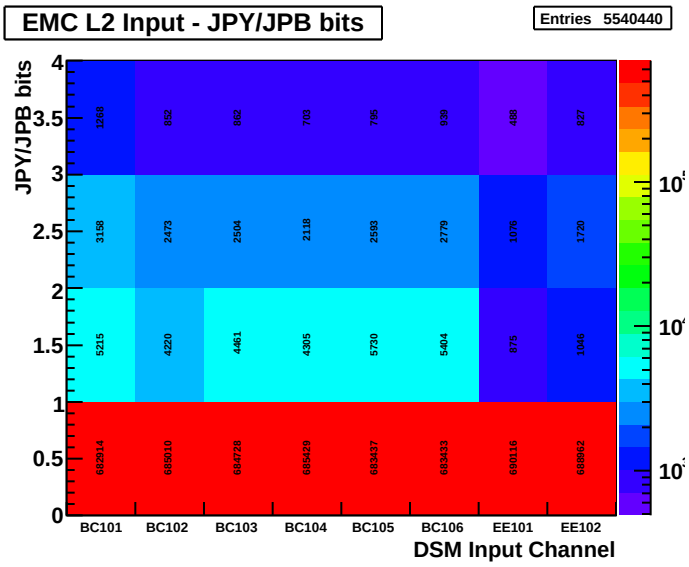

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

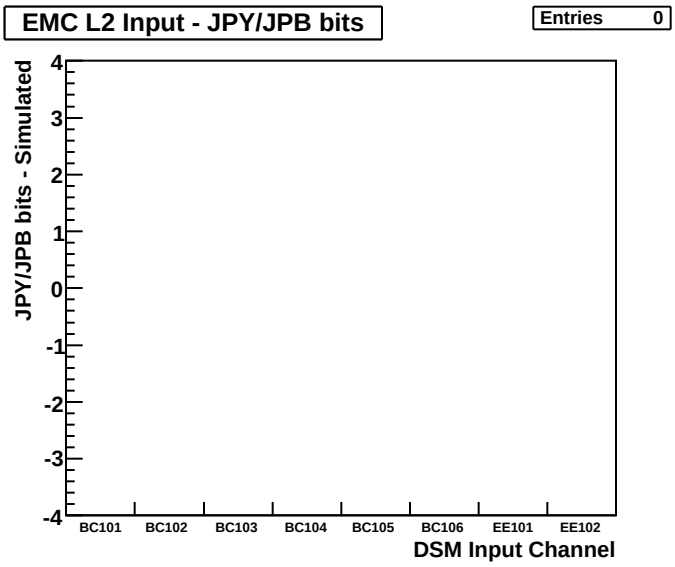

Endcap EMC L1 Input - High Tower Bits
Entries 8310660
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

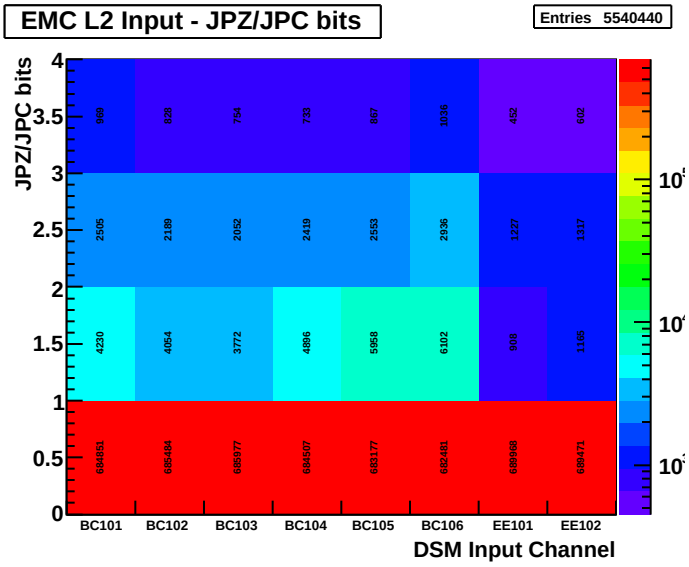

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

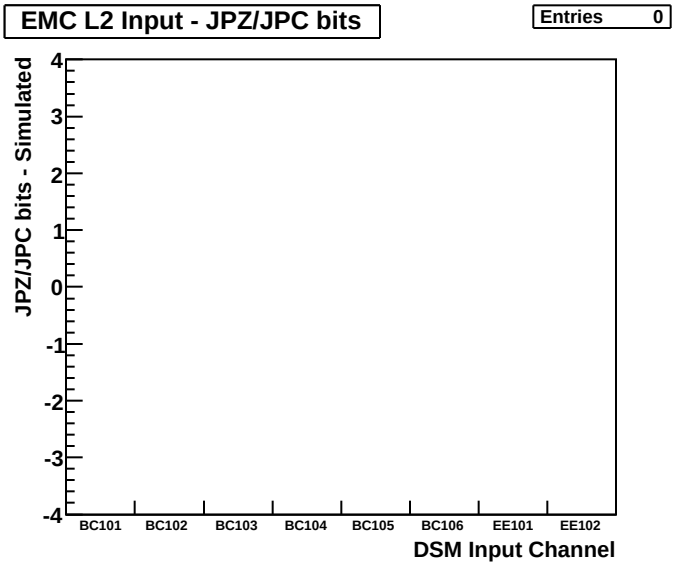

EMC L2 Input - JPX/JPA bits
Entries 5540440
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1933 1496 1124 846 784 950 494 921
4072 3634 2908 2266 2431 2591 951 2190
6259 6559 5142 4699 4828 4264 1105 921
680291 680866 683381 684744 684512 684750 690005 688523

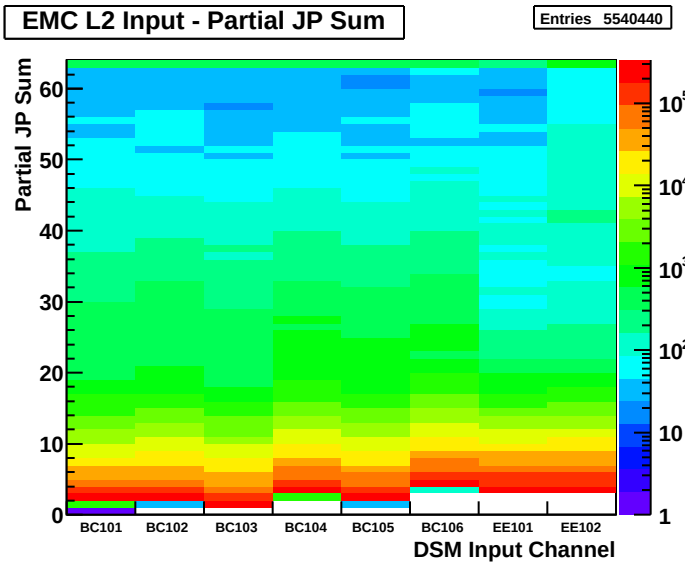

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

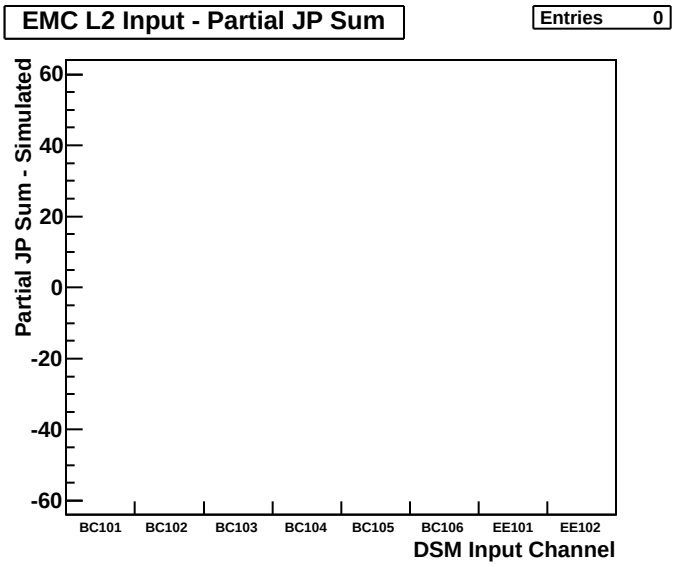

EMC L2 Input - JPY/JPB bits
Entries 5540440
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1266 852 862 703 705 939 488 827
3158 2473 2504 2118 2593 2779 1076 1720
5215 4220 4461 4305 5730 5404 875 1046
682914 683010 684728 685429 683437 683433 690116 688962

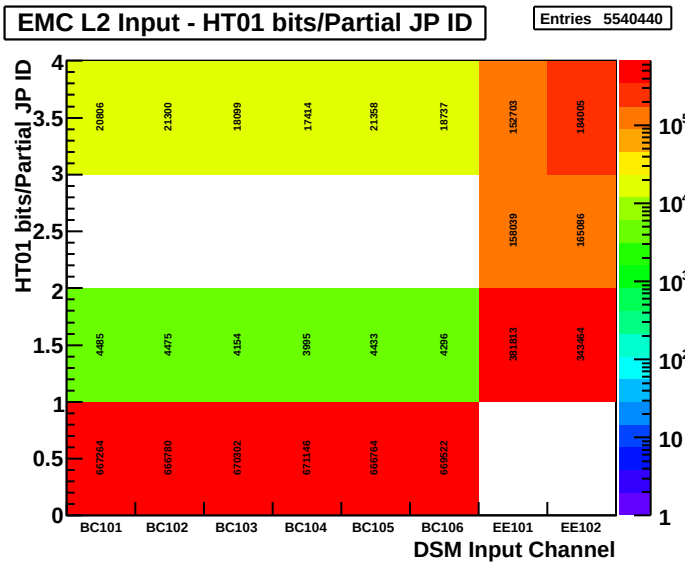

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

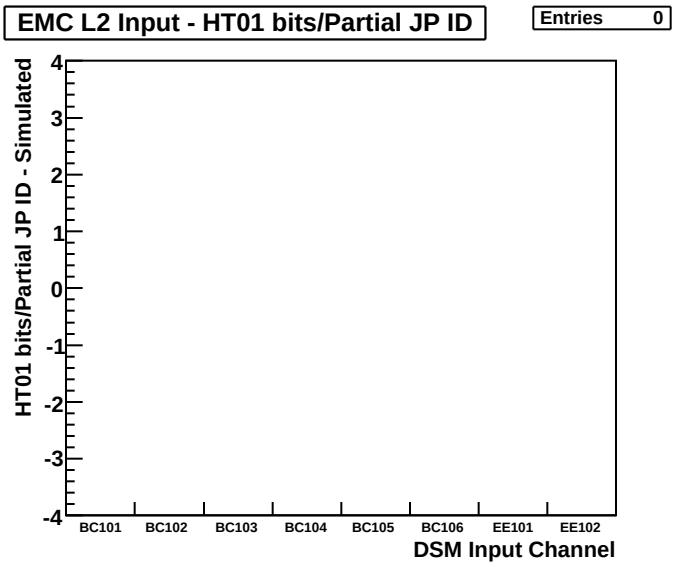

EMC L2 Input - JPZ/JPC bits
Entries 5540440
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
989 828 754 733 867 1036 452 602
2505 2189 2052 2419 2553 2936 1227 1317
4230 4054 3772 4896 5958 6102 903 1165
684651 685494 685977 684507 683177 682481 689968 689471

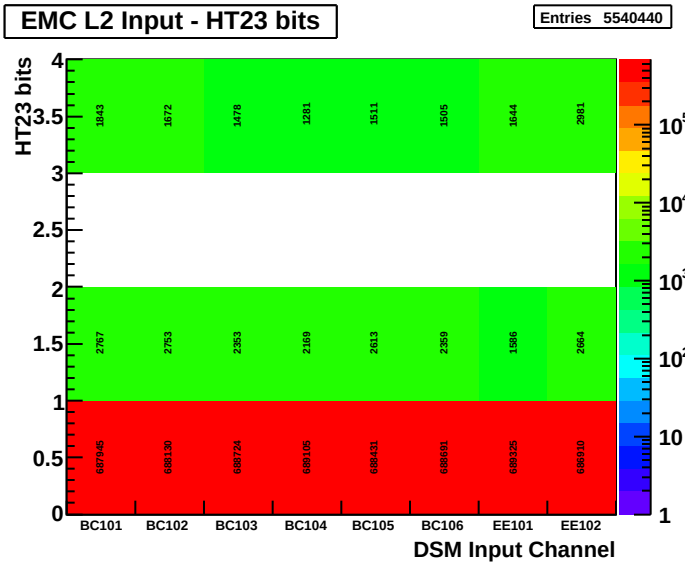

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

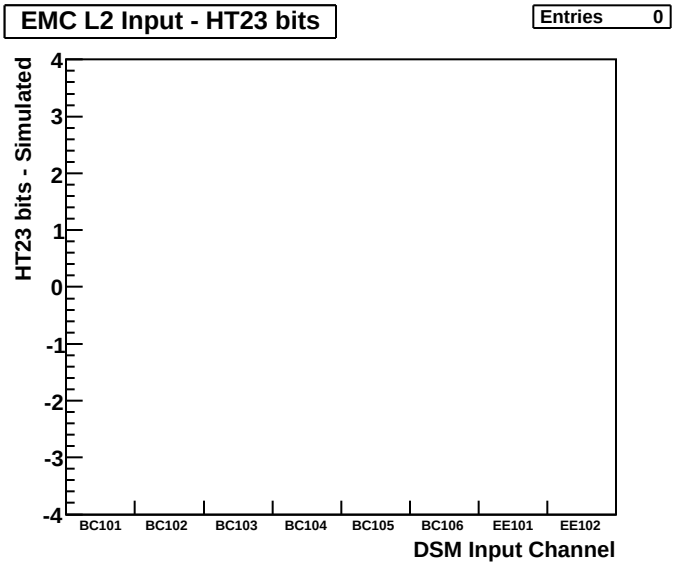

EMC L2 Input - Partial JP Sum
Entries 5540440
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

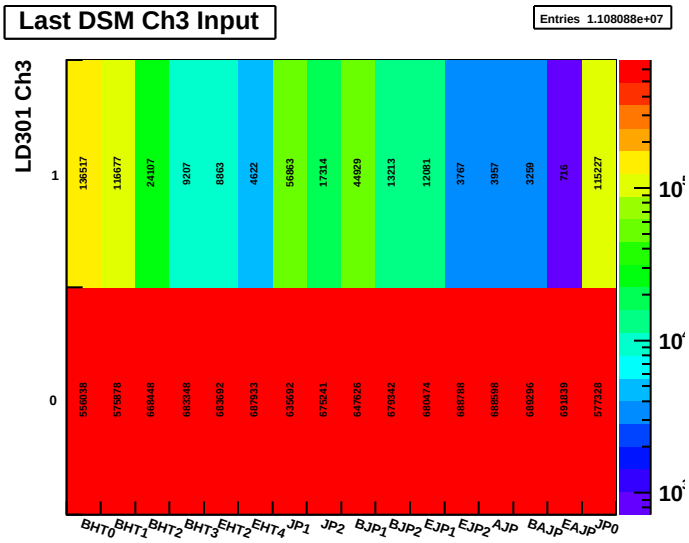

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

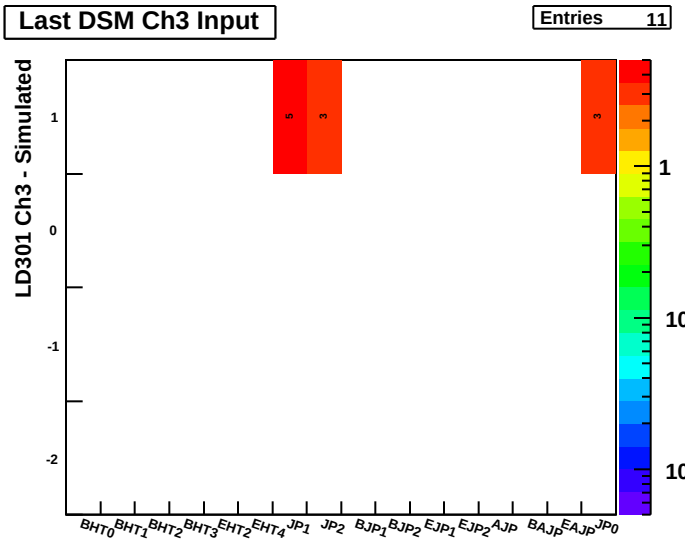

EMC L2 Input - HT01 bits/Partial JP ID
Entries 5540440
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

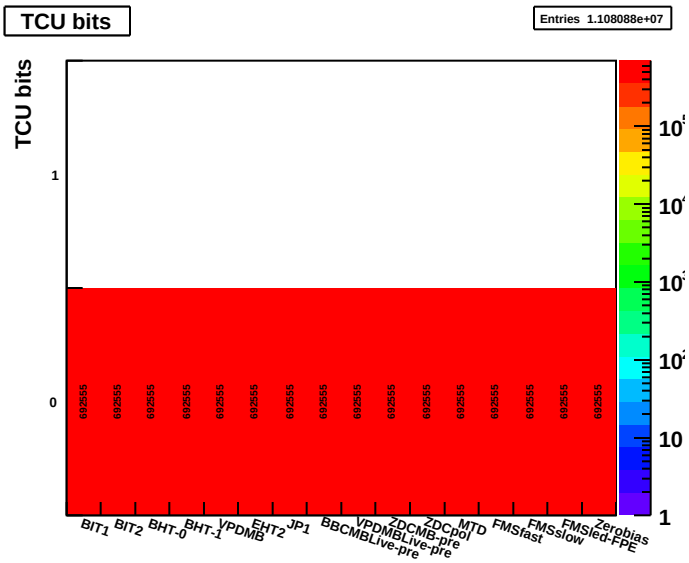

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

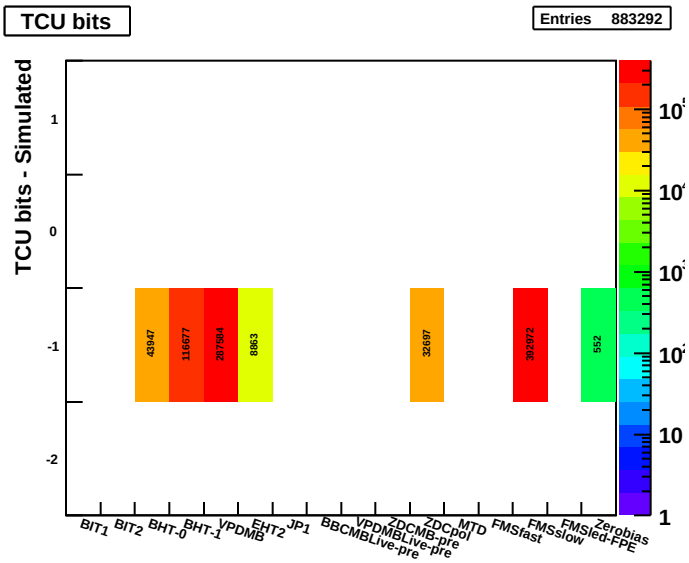

EMC L2 Input - HT23 bits
Entries 5540440
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

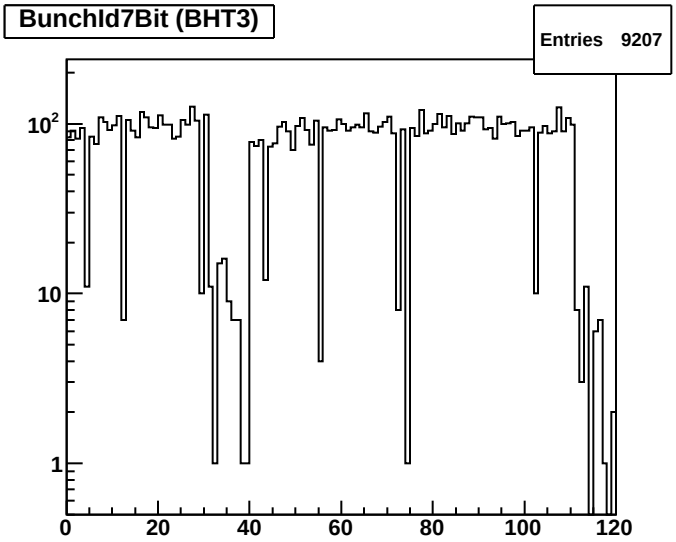

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

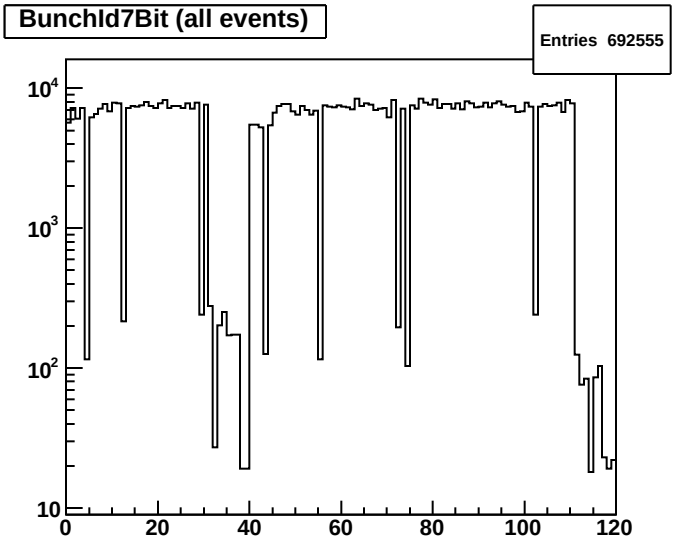

Last DSM Ch3 Input
Entries 1.108088e+07
LD301 Ch3
1
0
136517 116677 24107 9207 8863 4622 56863 17314 44929 13213 12081 3767 3957 3259 716 115227
556038 575878 668448 683348 683692 687933 635692 675241 647626 679342 680474 688788 688598 689296 691839 577328
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

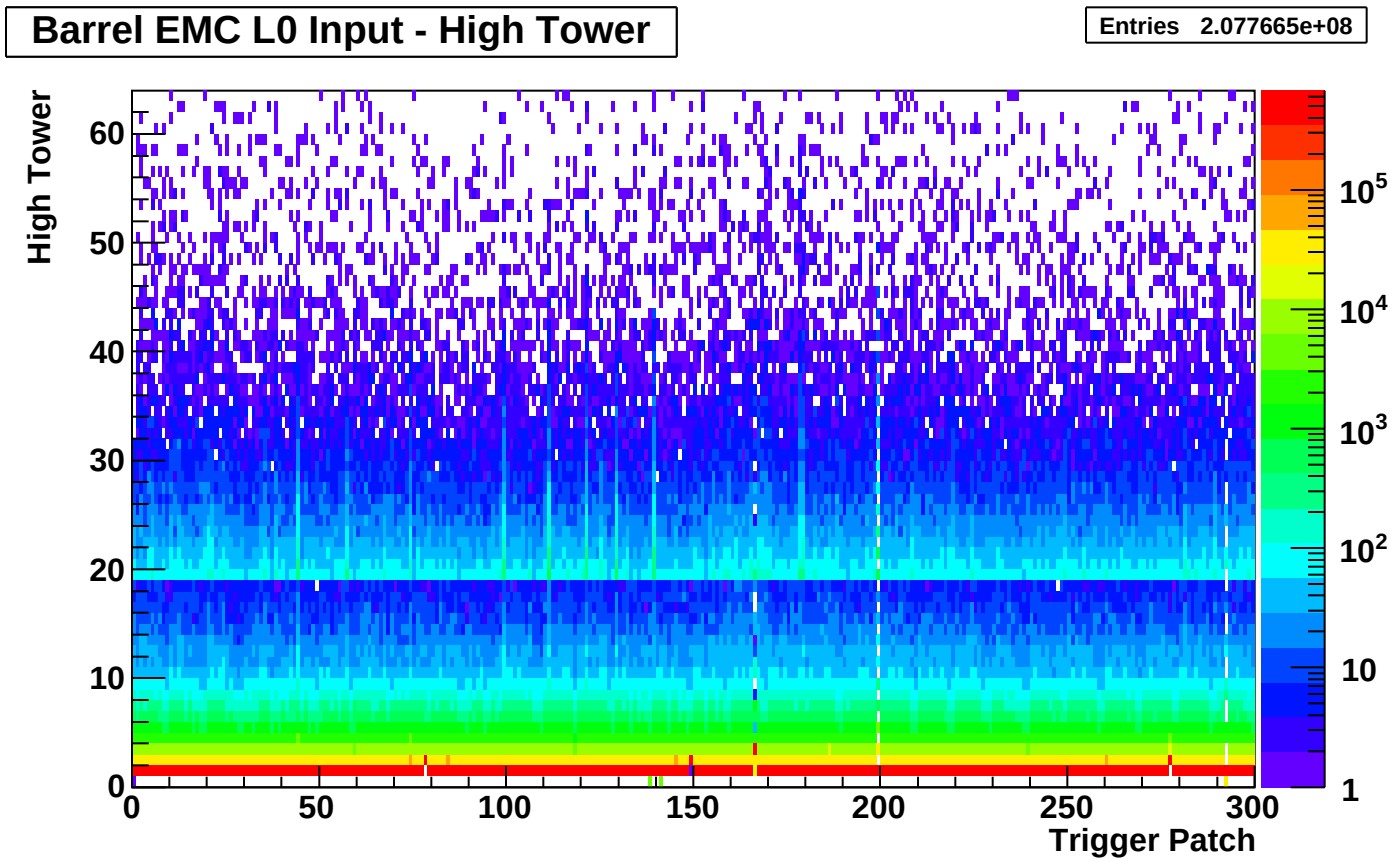

Last DSM Ch3 Input
Entries 11
LD301 Ch3 - Simulated
1
0
-1
-2
5 3 3
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

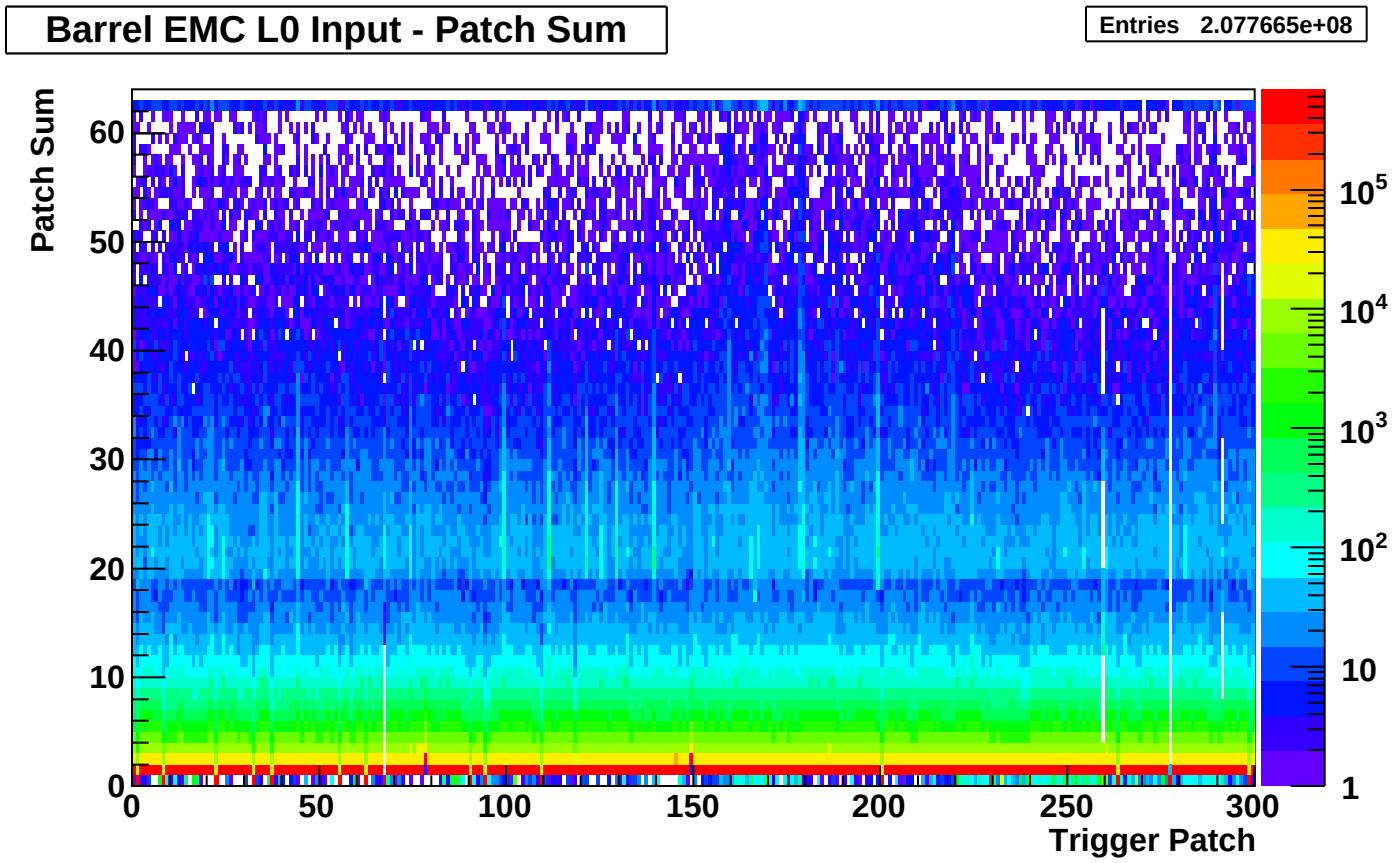

TCU bits
Entries 1.108088e+07
TCU bits
1
0
692555 692555 692555 692555 692555 692555 692555 692555 692555 692555 692555 692555 692555 692555 692555 692555
BIT1 BIT2 BHT-0 BHT-1 VPDMB EHT2 JP1 BBCMBLive-pre VPDMBLive-pre ZDCMB-pre ZDCpol MTD FMSfast FMSslow FMSled-FPE Zerobias

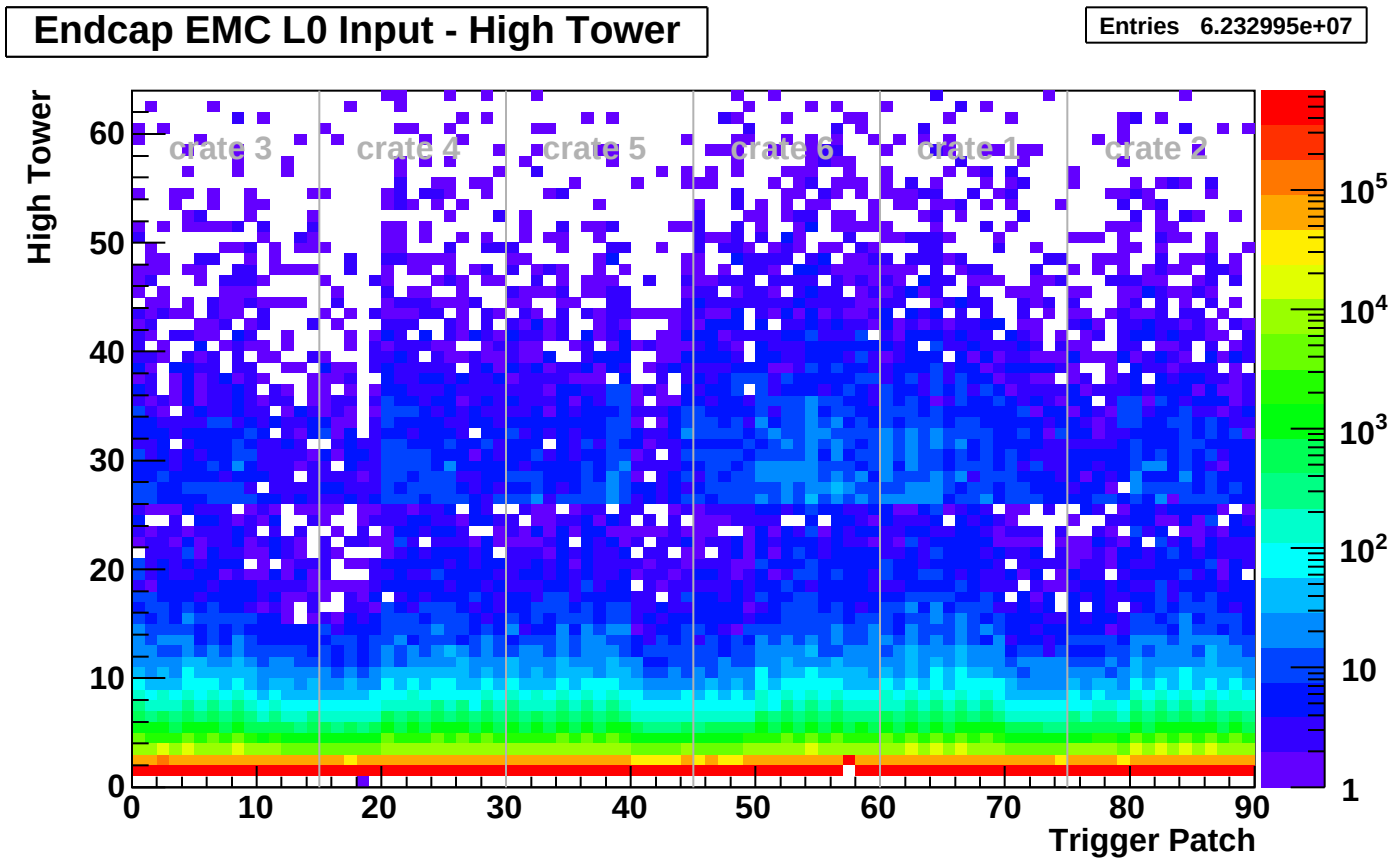

TCU bits
Entries 883292
TCU bits - Simulated
1
0
-1
-2
43947 116677 287584 8863 32697 392972 552
BIT1 BIT2 BHT-0 BHT-1 VPDMB EHT2 JP1 BBCMBLive-pre VPDMBLive-pre ZDCMB-pre ZDCpol MTD FMSfast FMSslow FMSled-FPE Zerobias

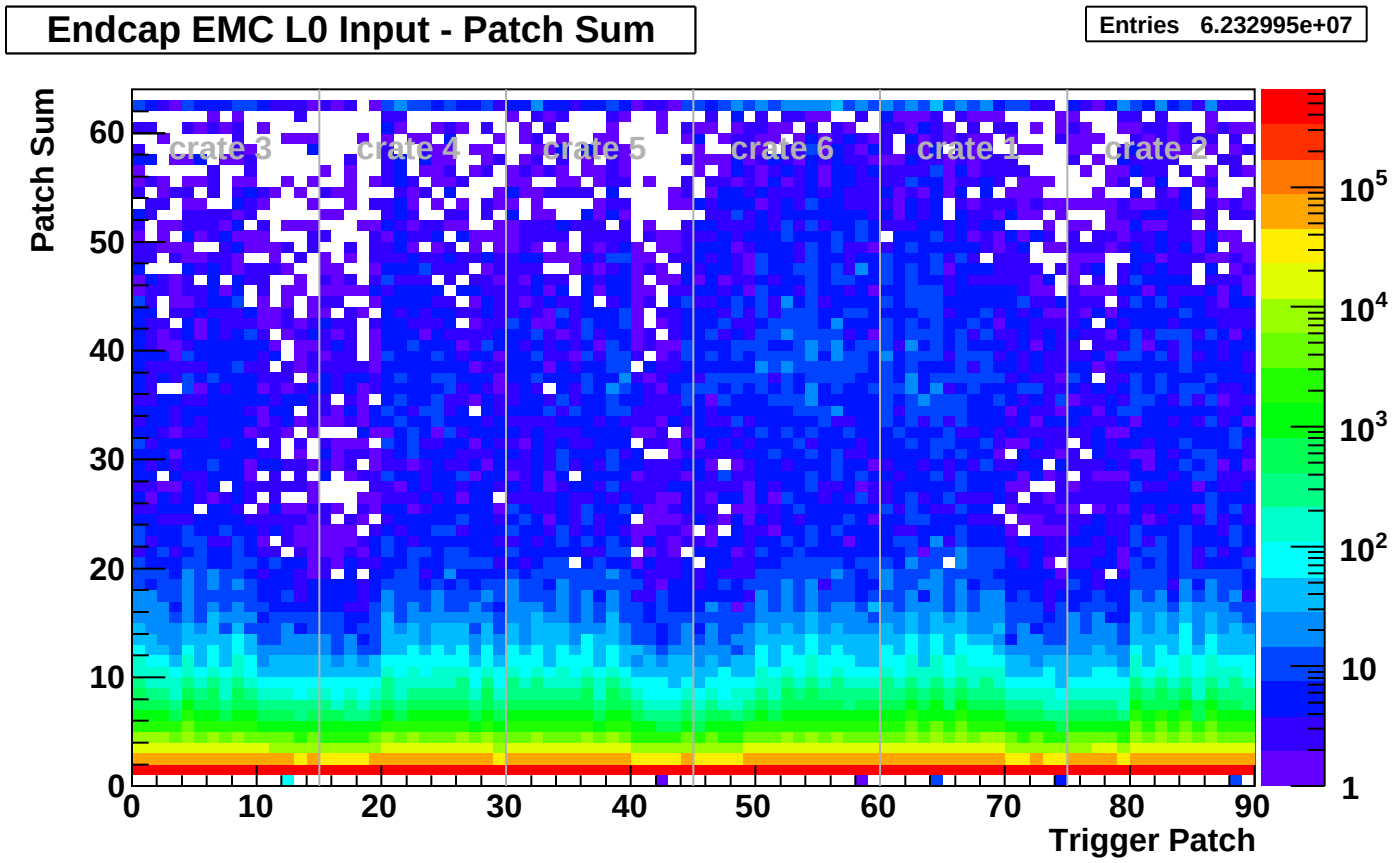

BunchId7Bit (BHT3)
Entries 9207
10²
10
1
0 20 40 60 80 100 120

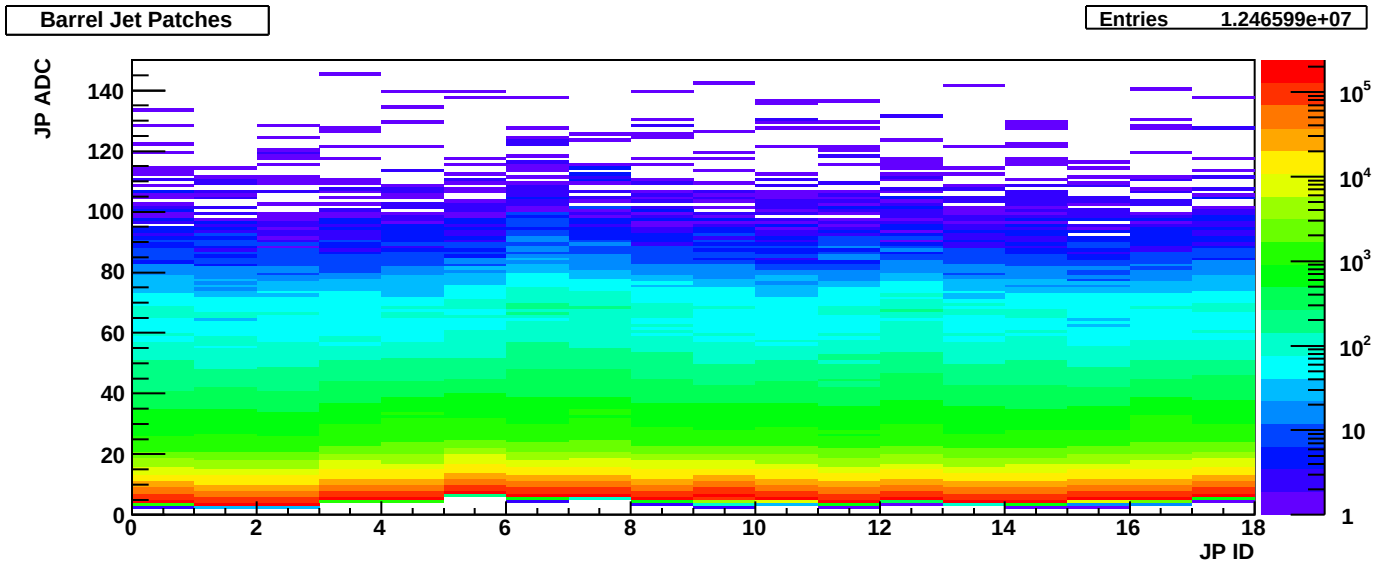

BunchId7Bit (all events)
Entries 692555
10⁴
10³
10²
10
0 20 40 60 80 100 120

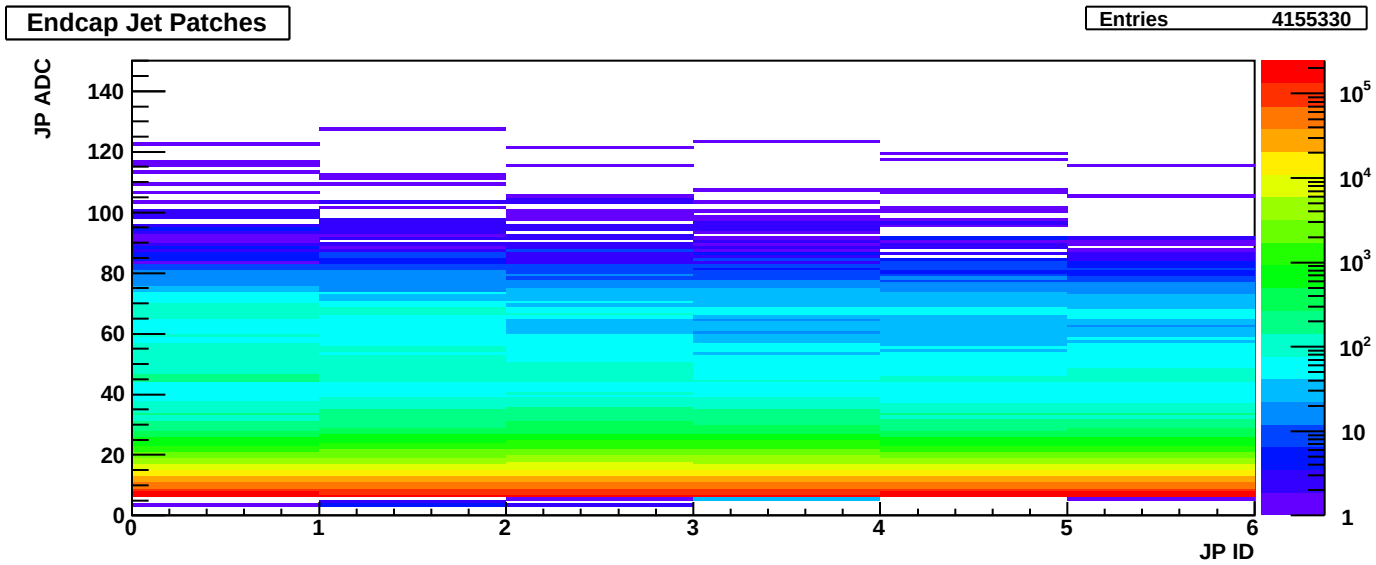

Barrel EMC L0 Input - High Tower
Entries 2.077665e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

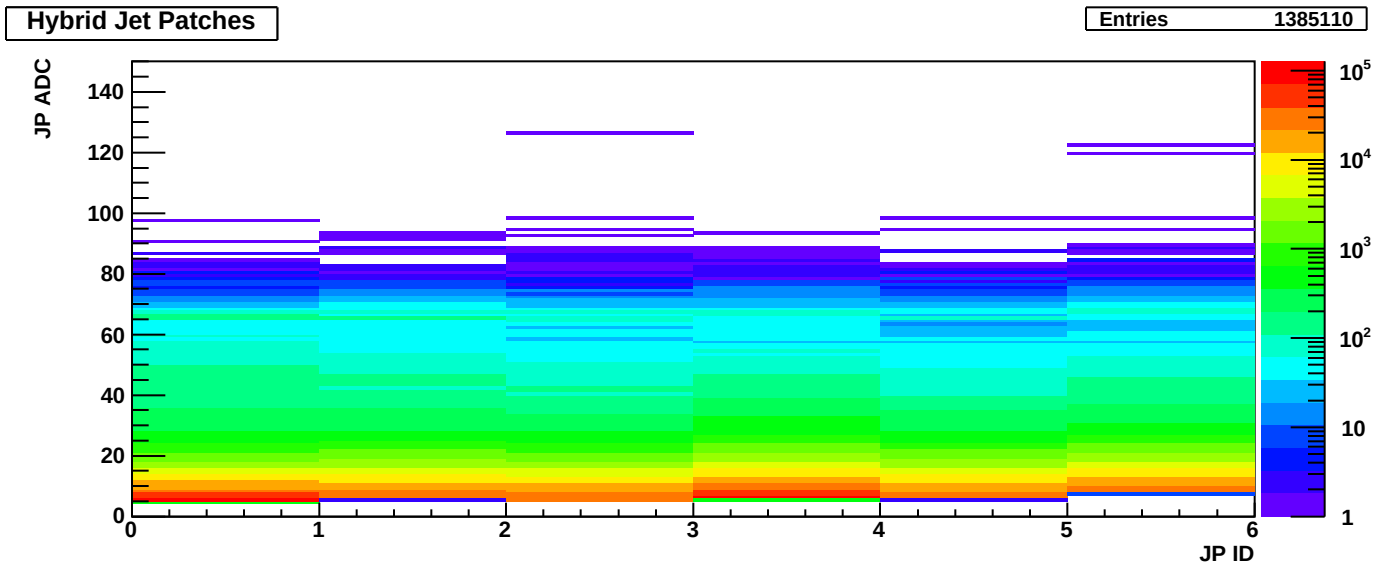

Barrel EMC L0 Input - Patch Sum
Entries 2.077665e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

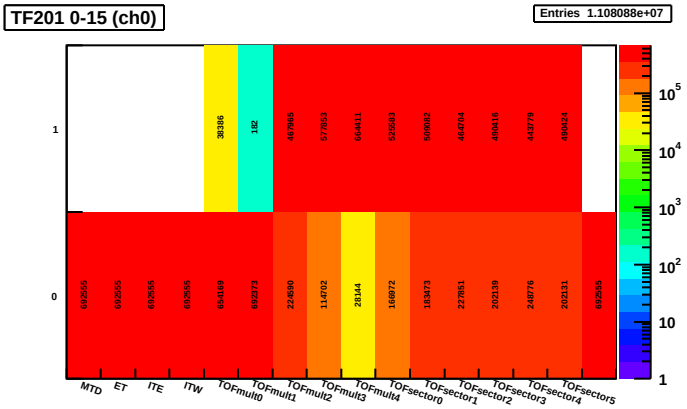

Endcap EMC L0 Input - High Tower
Entries 6.232995e+07
High Tower
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

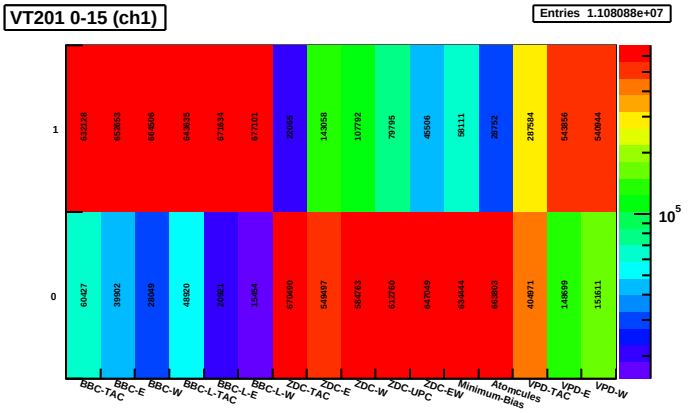

Endcap EMC L0 Input - Patch Sum
Entries 6.232995e+07
Patch Sum
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

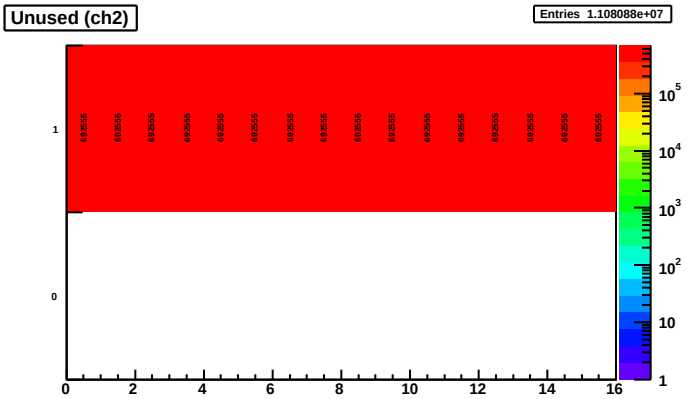

Barrel Jet Patches
Entries 1.246599e+07
JP ADC
JP ID

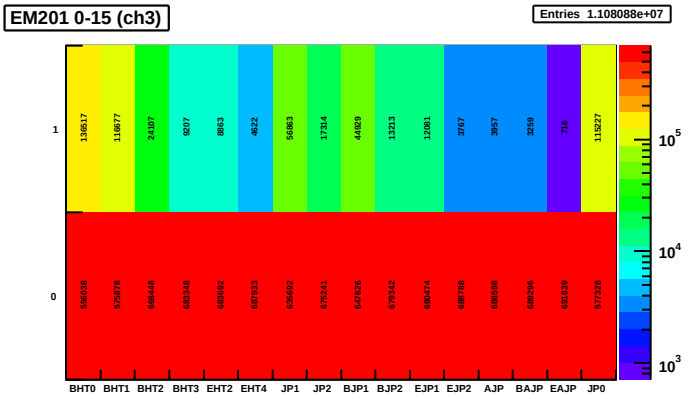

Endcap Jet Patches
Entries 4155330
JP ADC
JP ID

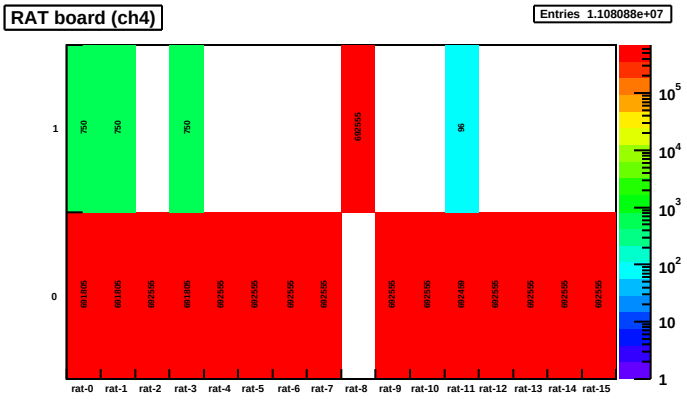

Hybrid Jet Patches
Entries 1385110
JP ADC
JP ID

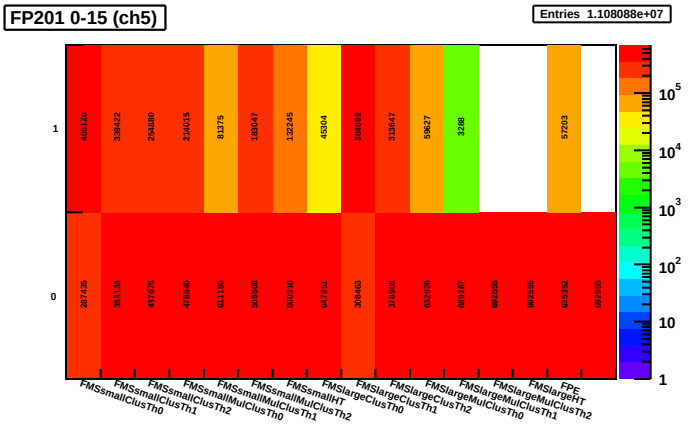

TF201 0-15 (ch0)
Entries 1.108088e+07
MTD
ET
ITE
ITW
TOFmult0
TOFmult1
TOFmult2
TOFmult3
TOFmult4
TOFsector0
TOFsector1
TOFsector2
TOFsector3
TOFsector4
TOFsector5

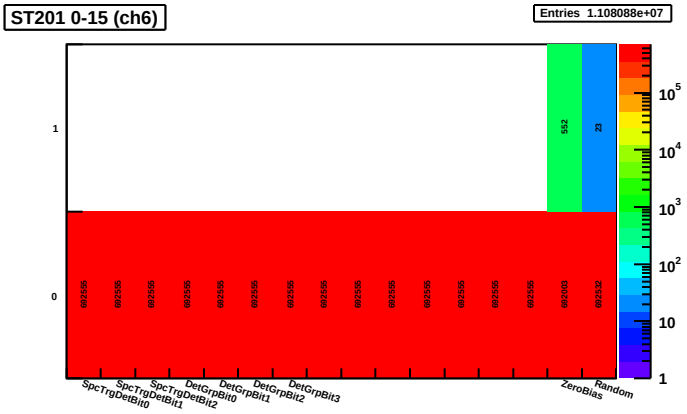

VT201 0-15 (ch1)
Entries 1.108088e+07
BBC-TAC
BBC-E
BBC-W
BBC-L-TAC
BBC-L-E
BBC-L-W
ZDC-TAC
ZDC-E
ZDC-W
ZDC-UPC
ZDC-EW
Minimum-Bias
Atomcules
VPD-TAC
VPD-E
VPD-W

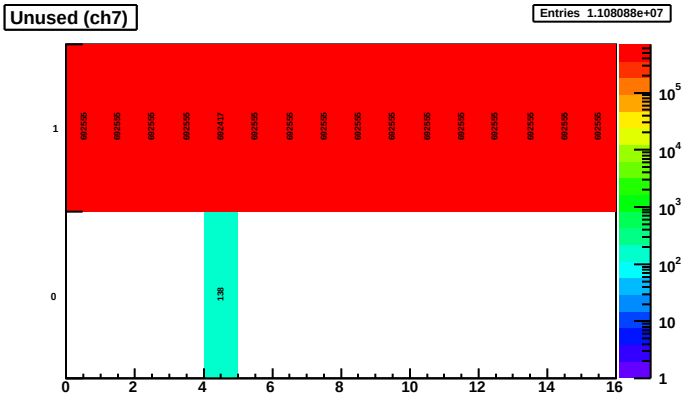

Unused (ch2)
Entries 1.108088e+07

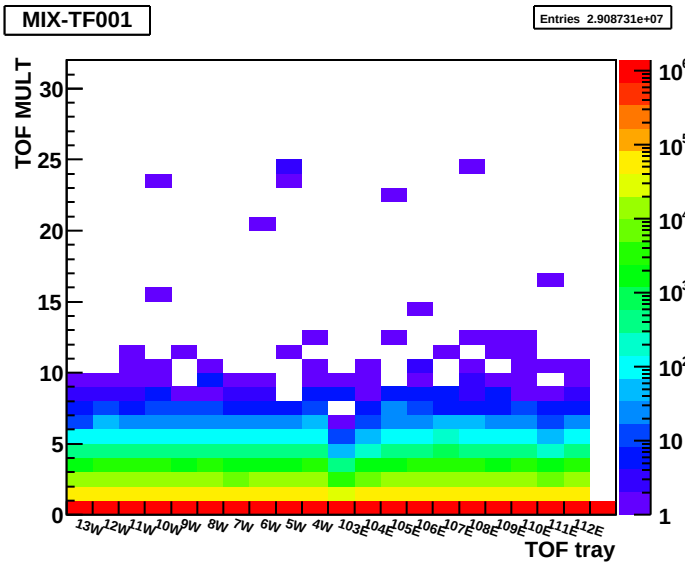

EM201 0-15 (ch3)
Entries 1.108088e+07
BHT0
BHT1
BHT2
BHT3
EHT2
EHT4
JP1
JP2
BJP1
BJP2
EJP1
EJP2
AJP
BAJP
EAJP
JP0

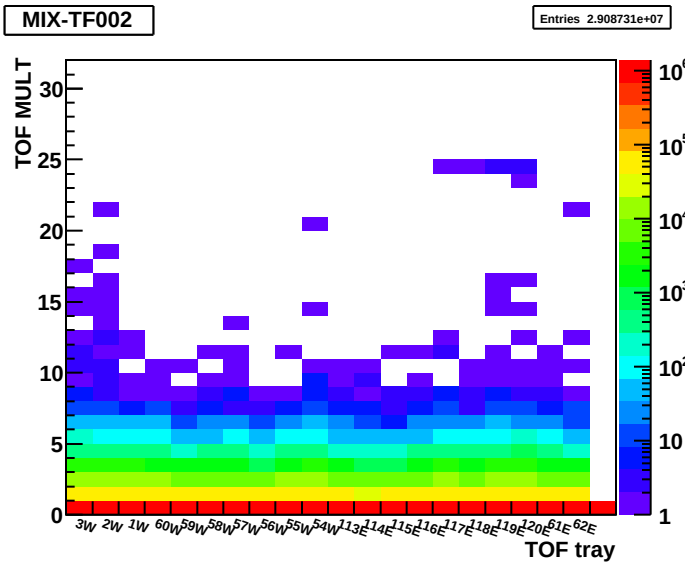

RAT board (ch4)
Entries 1.108088e+07
rat-0
rat-1
rat-2
rat-3
rat-4
rat-5
rat-6
rat-7
rat-8
rat-9
rat-10
rat-11
rat-12
rat-13
rat-14
rat-15

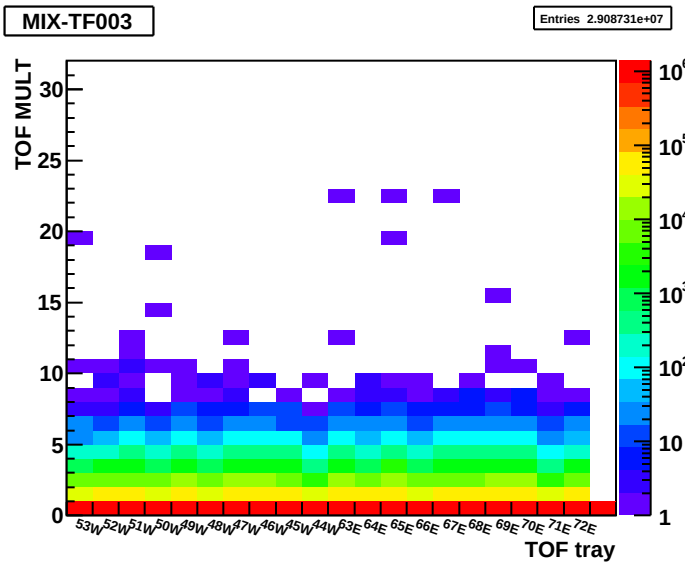

FP201 0-15 (ch5)
Entries 1.108088e+07
FMSsmallClusTh0
FMSsmallClusTh1
FMSsmallClusTh2
FMSsmallMulClusTh0
FMSsmallMulClusTh1
FMSsmallMulClusTh2
FMSsmallHT
FMSlargeClusTh0
FMSlargeClusTh1
FMSlargeClusTh2
FMSlargeMulClusTh0
FMSlargeMulClusTh1
FMSlargeMulClusTh2
FMSlargeHT
FPE

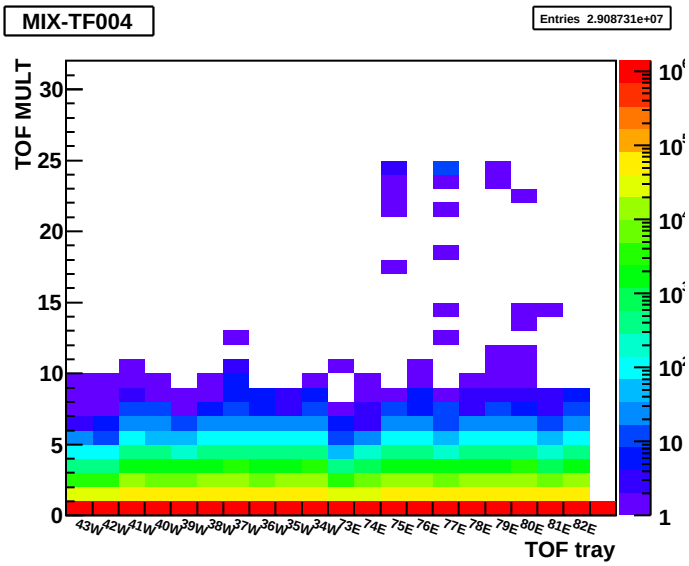

ST201 0-15 (ch6)
Entries 1.108088e+07
SpcTrgDetBit0
SpcTrgDetBit1
SpcTrgDetBit2
DetGrpBit0
DetGrpBit1
DetGrpBit2
DetGrpBit3
ZeroBias
Random

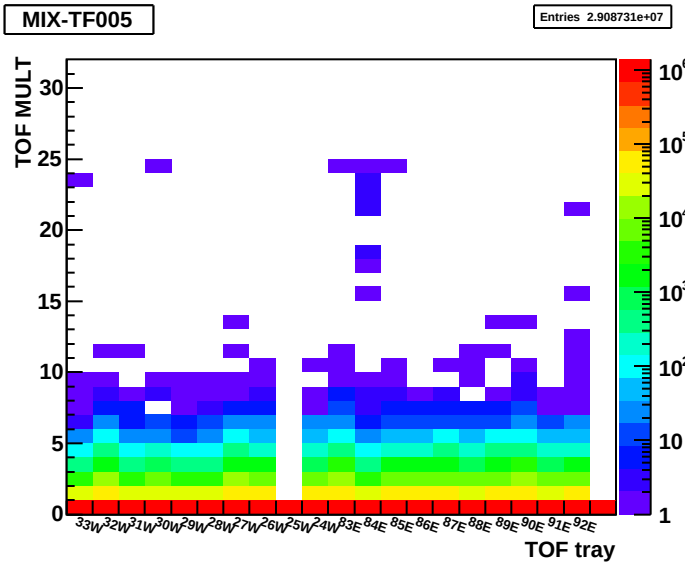

Unused (ch7)
Entries 1.108088e+07

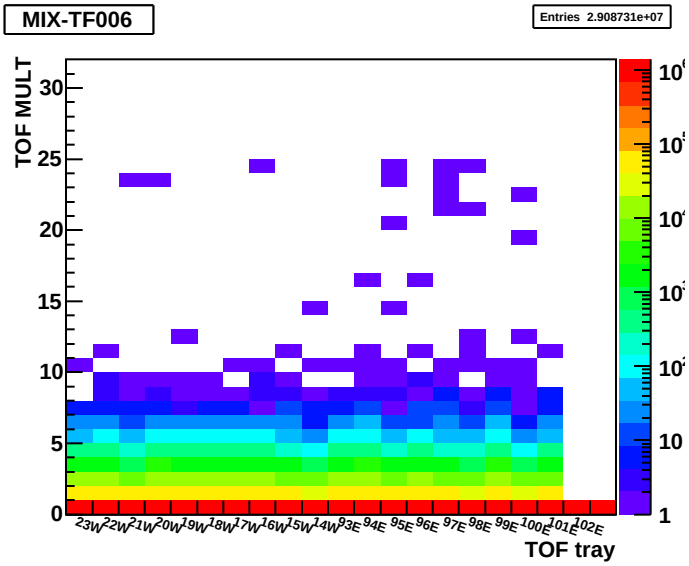

MIX-TF001
Entries 2.908731e+07
TOF MULT
TOF tray

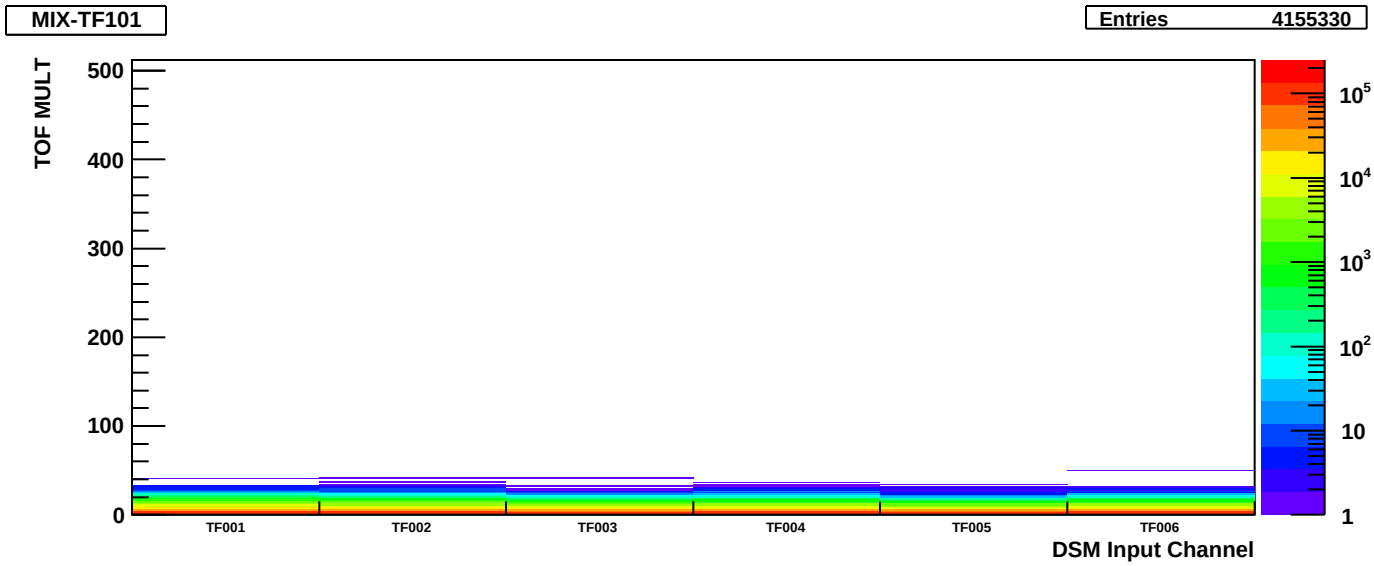

MIX-TF002
Entries 2.908731e+07
TOF MULT
TOF tray

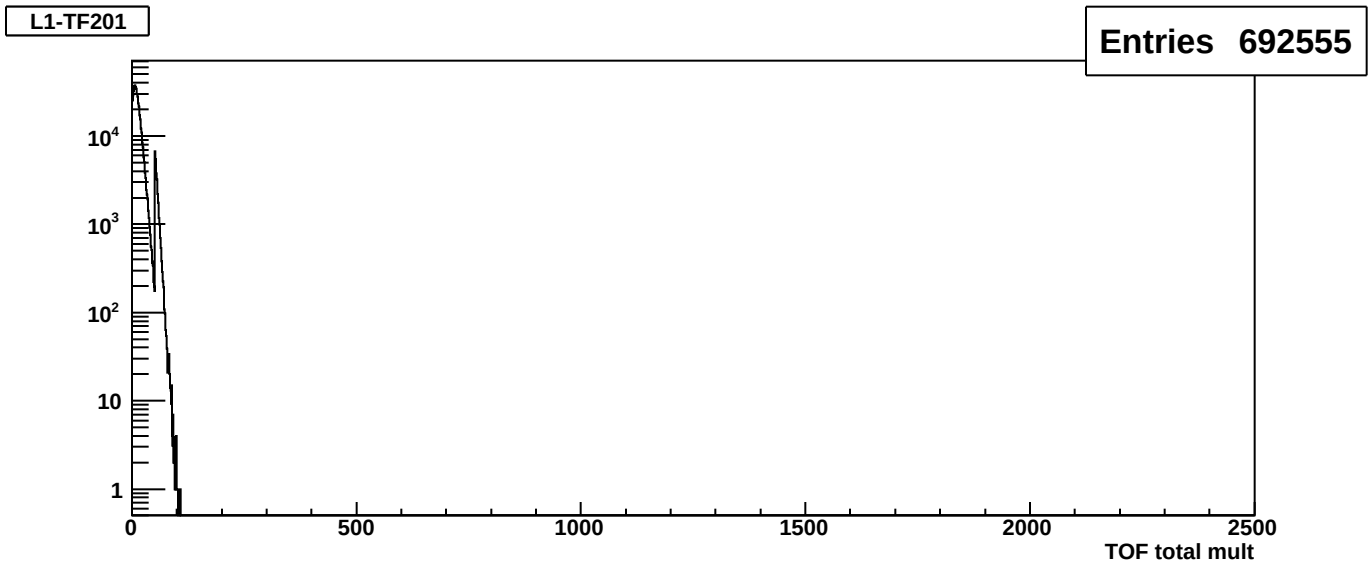

MIX-TF003
Entries 2.908731e+07
TOF MULT
TOF tray

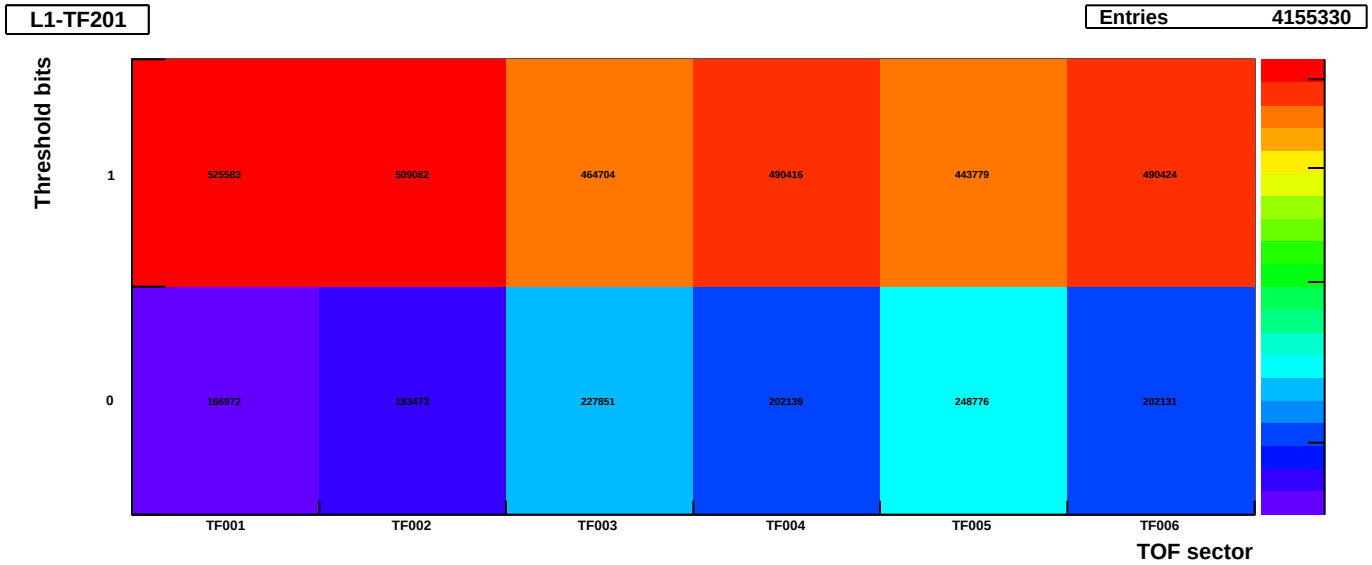

MIX-TF004
Entries 2.908731e+07
TOF MULT
TOF tray

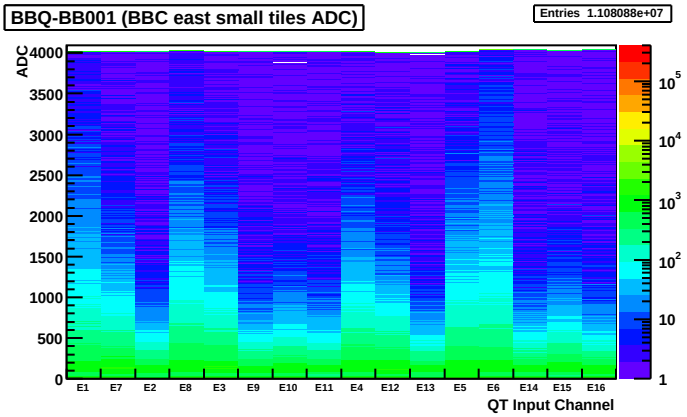

MIX-TF005
Entries 2.908731e+07
TOF MULT
TOF tray

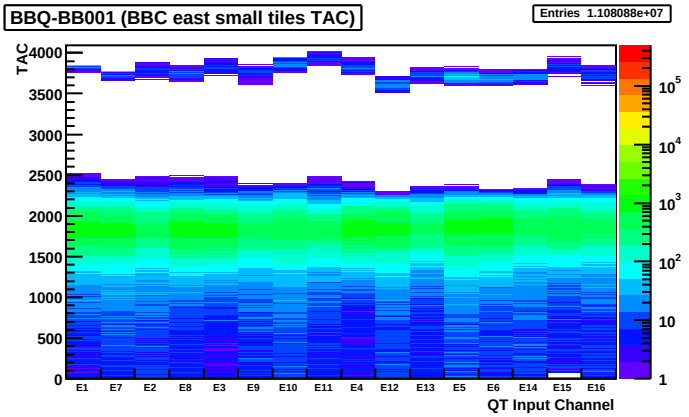

MIX-TF006
Entries 2.908731e+07
TOF MULT
TOF tray

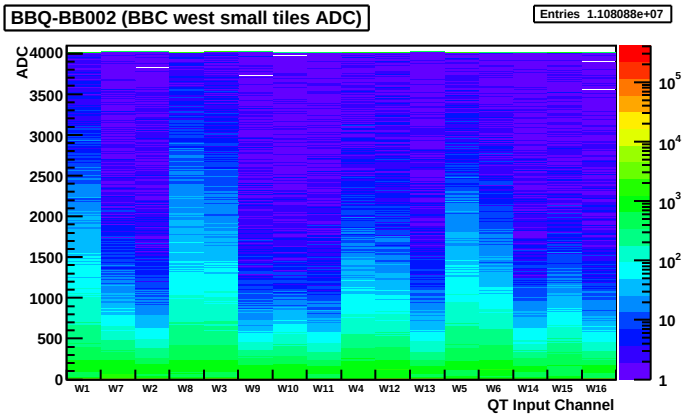

MIX-TF101
Entries 4155330
TOF MULT
500
400
300
200
100
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

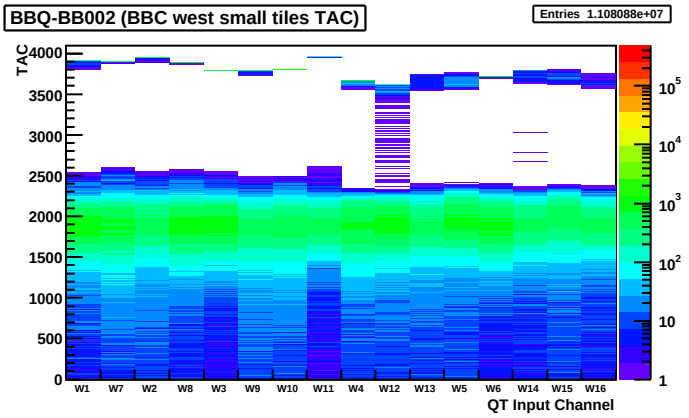

L1-TF201
Entries 692555
10^4
10^3
10^2
10
1
0
500
1000
1500
2000
2500
TOF total mult

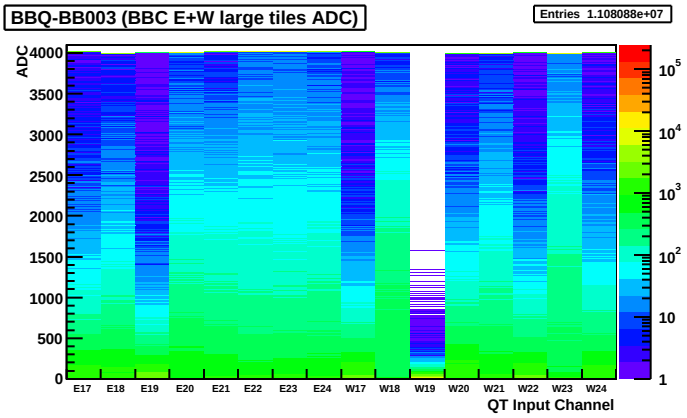

L1-TF201
Entries 4155330
Threshold bits
1
0
525583
509082
464704
490416
443779
490424
166972
183473
227851
202139
248776
202131
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

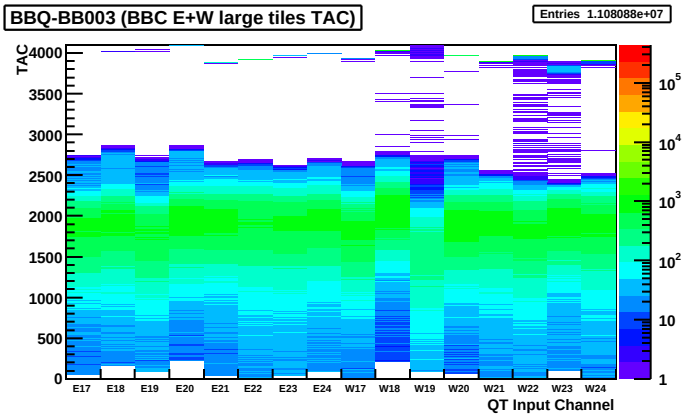

BBQ-BB001 (BBC east small tiles ADC)
Entries 1.108088e+07
ADC
QT Input Channel

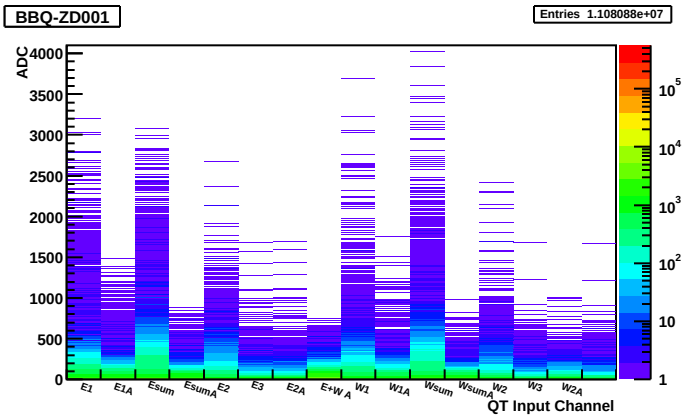

BBQ-BB001 (BBC east small tiles TAC)
Entries 1.108088e+07
TAC
QT Input Channel

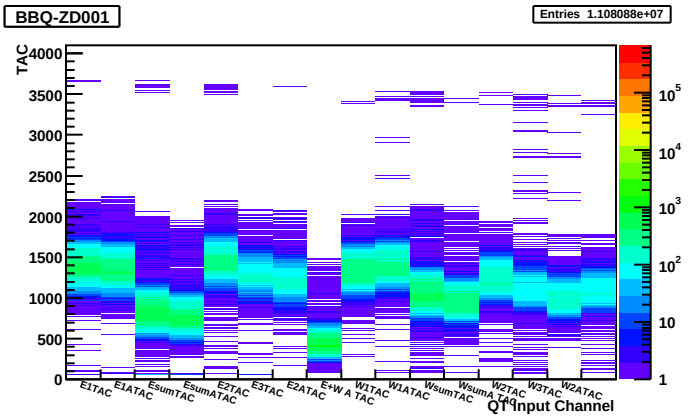

BBQ-BB002 (BBC west small tiles ADC)
Entries 1.108088e+07
ADC
QT Input Channel

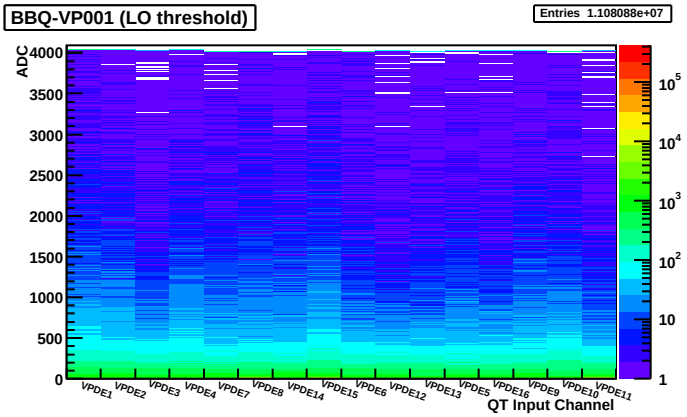

BBQ-BB002 (BBC west small tiles TAC)
Entries 1.108088e+07
TAC
QT Input Channel

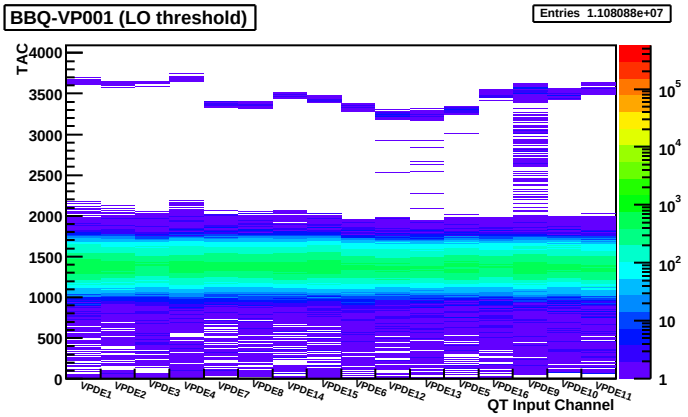

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 1.108088e+07
ADC
QT Input Channel

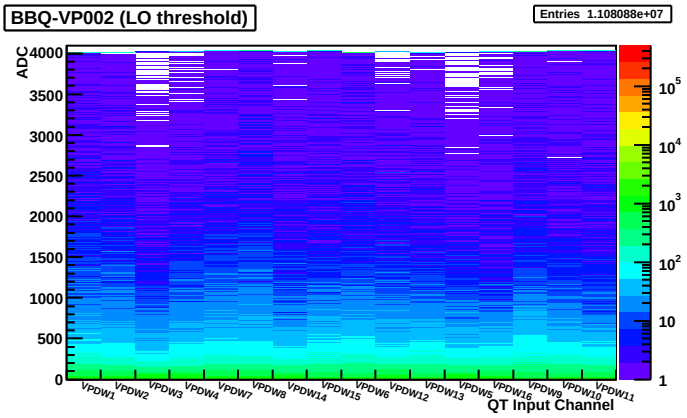

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 1.108088e+07
TAC
QT Input Channel

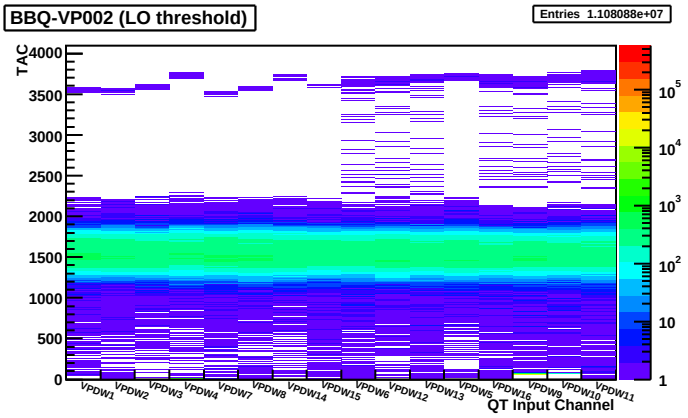

BBQ-ZD001
Entries 1.108088e+07
ADC
QT Input Channel

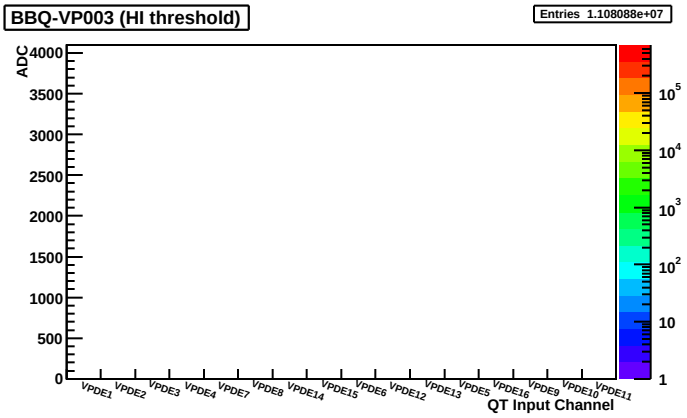

BBQ-ZD001
Entries 1.108088e+07
TAC
QT Input Channel

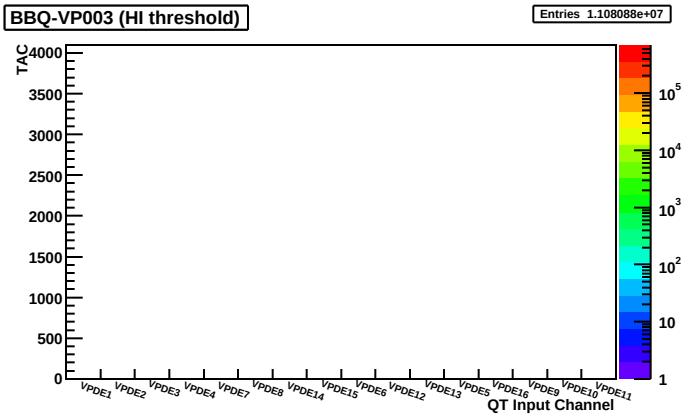

BBQ-VP001 (LO threshold)
Entries 1.108088e+07
ADC
QT Input Channel

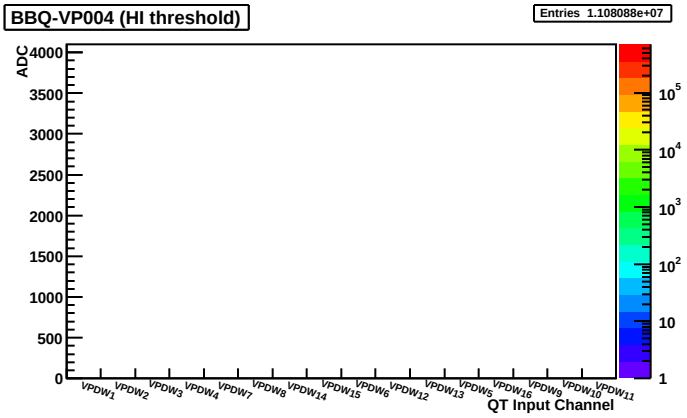

BBQ-VP001 (LO threshold)
Entries 1.108088e+07
TAC
QT Input Channel

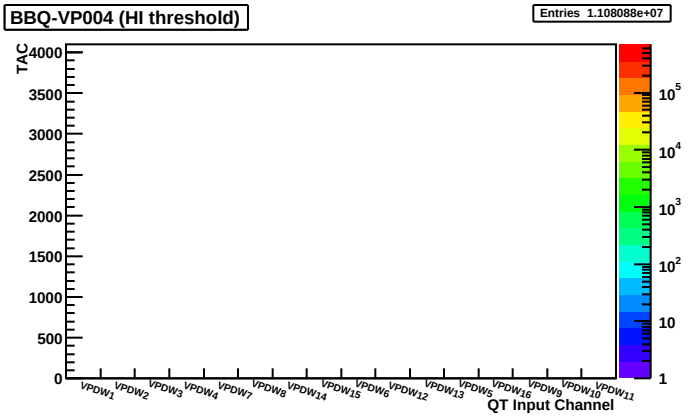

BBQ-VP002 (LO threshold)
Entries 1.108088e+07
ADC
QT Input Channel

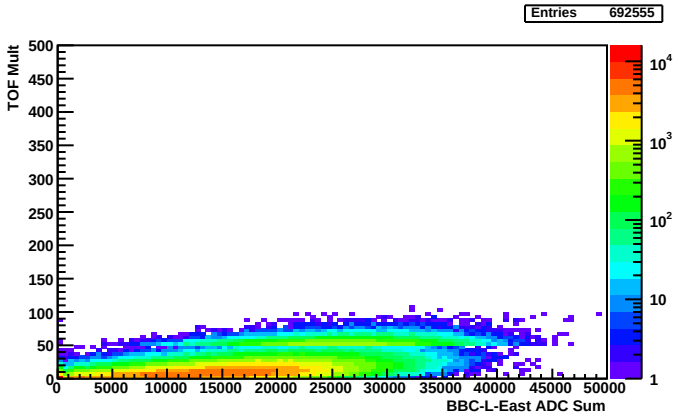

BBQ-VP002 (LO threshold)
Entries 1.108088e+07
TAC
QT Input Channel

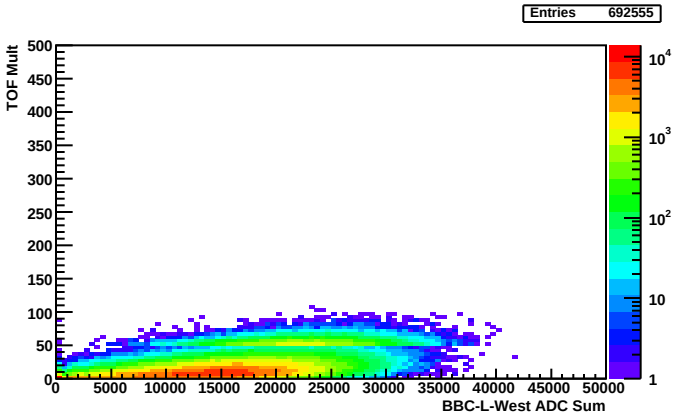

BBQ-VP003 (HI threshold)
Entries 1.108088e+07
ADC
QT Input Channel

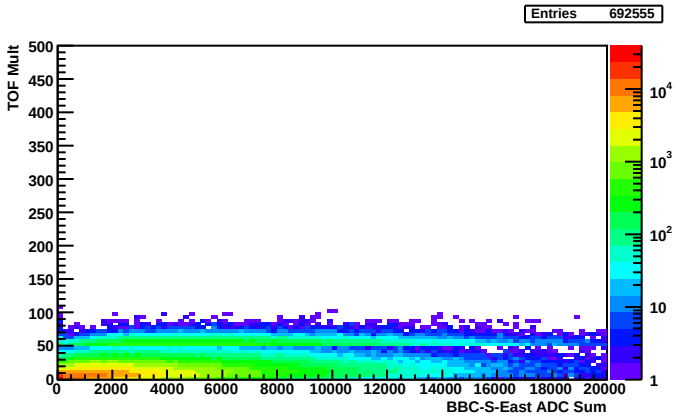

BBQ-VP003 (HI threshold)
Entries 1.108088e+07
TAC
QT Input Channel

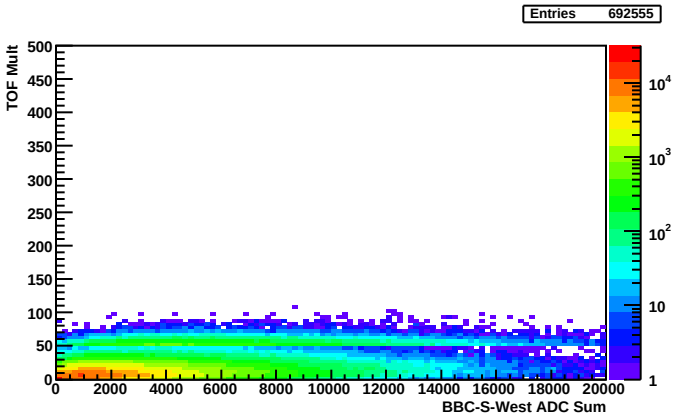

BBQ-VP004 (HI threshold)
Entries 1.108088e+07
ADC
QT Input Channel

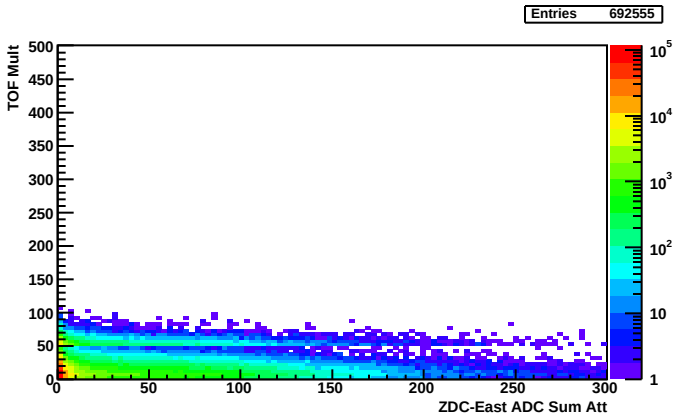

BBQ-VP004 (HI threshold)
Entries 1.108088e+07
TAC
QT Input Channel

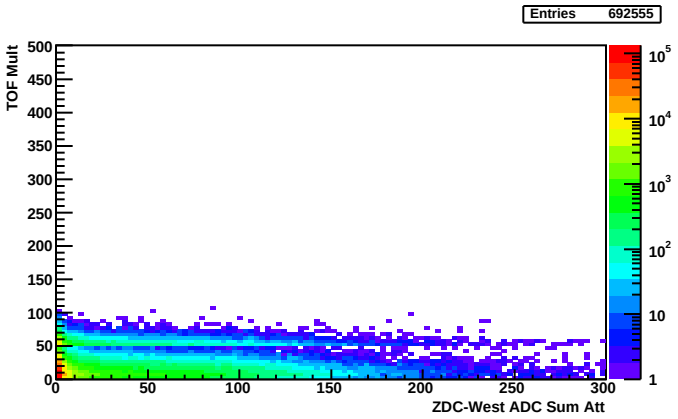

Entries 692555
TOF Mult
BBC-L-East ADC Sum

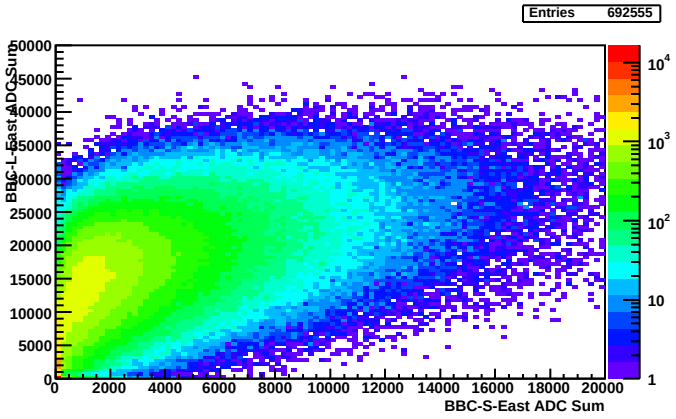

Entries 692555
TOF Mult
BBC-L-West ADC Sum

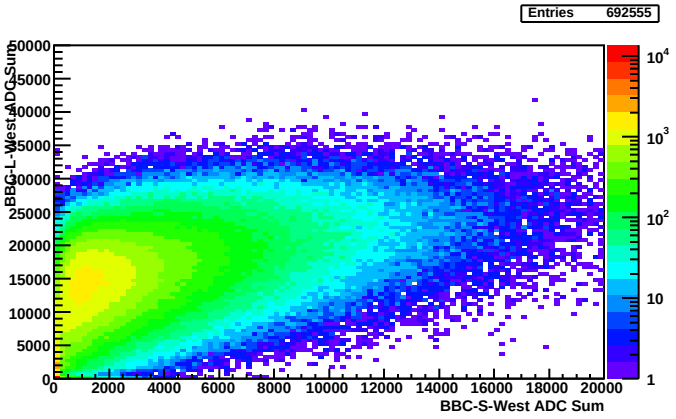

Entries 692555
TOF Mult
BBC-S-East ADC Sum

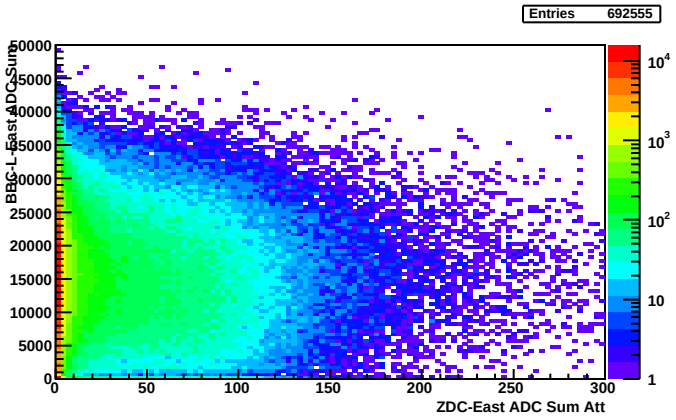

Entries 692555
TOF Mult
BBC-S-West ADC Sum

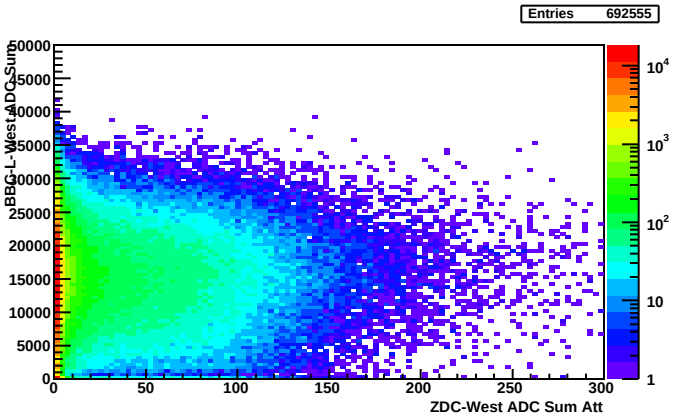

Entries 692555
TOF Mult
ZDC-East ADC Sum Att

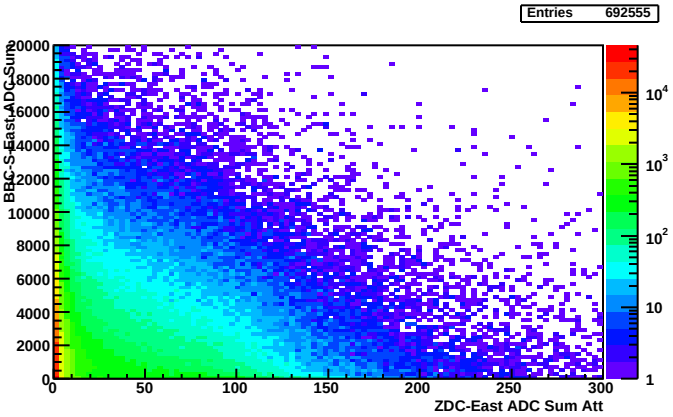

Entries 692555
TOF Mult
ZDC-West ADC Sum Att

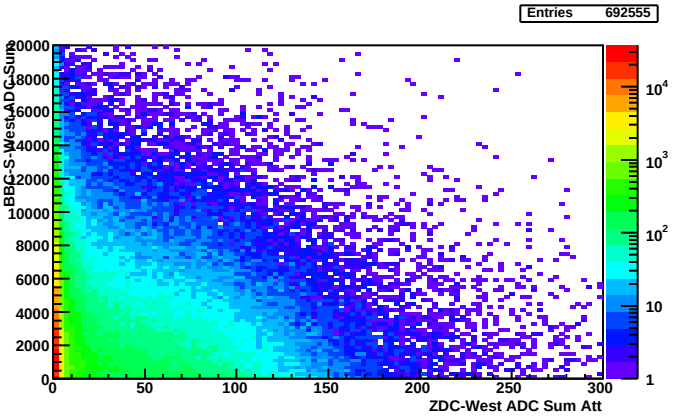

Entries 692555
BBC-L-East ADC Sum
BBC-S-East ADC Sum

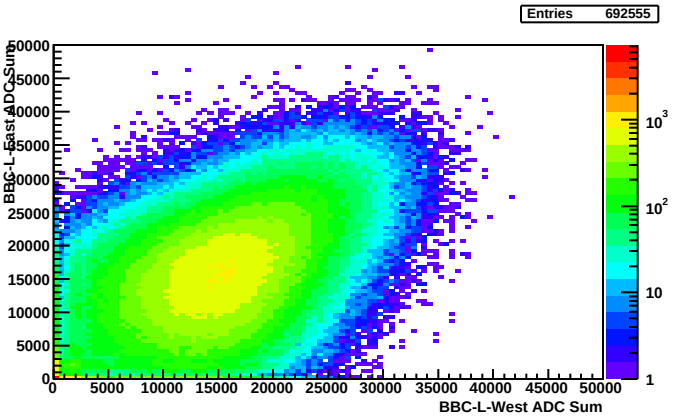

Entries 692555
BBC-L-West ADC Sum
BBC-S-West ADC Sum

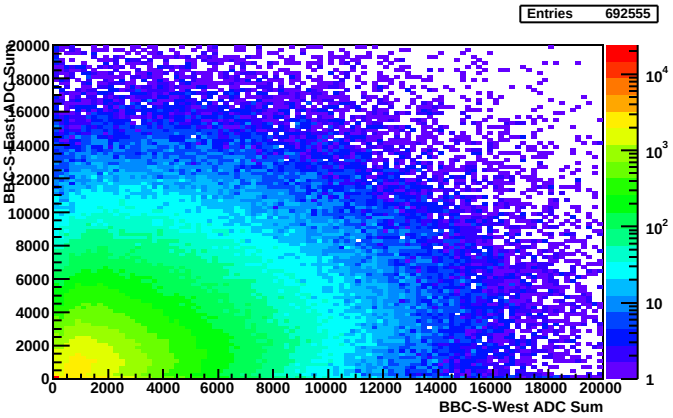

Entries 692555
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

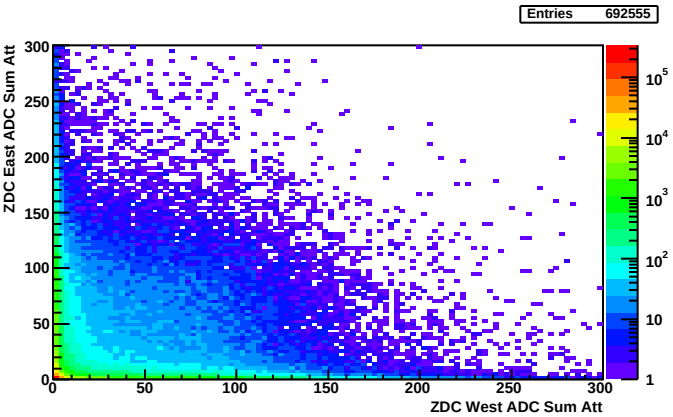

Entries 692555
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

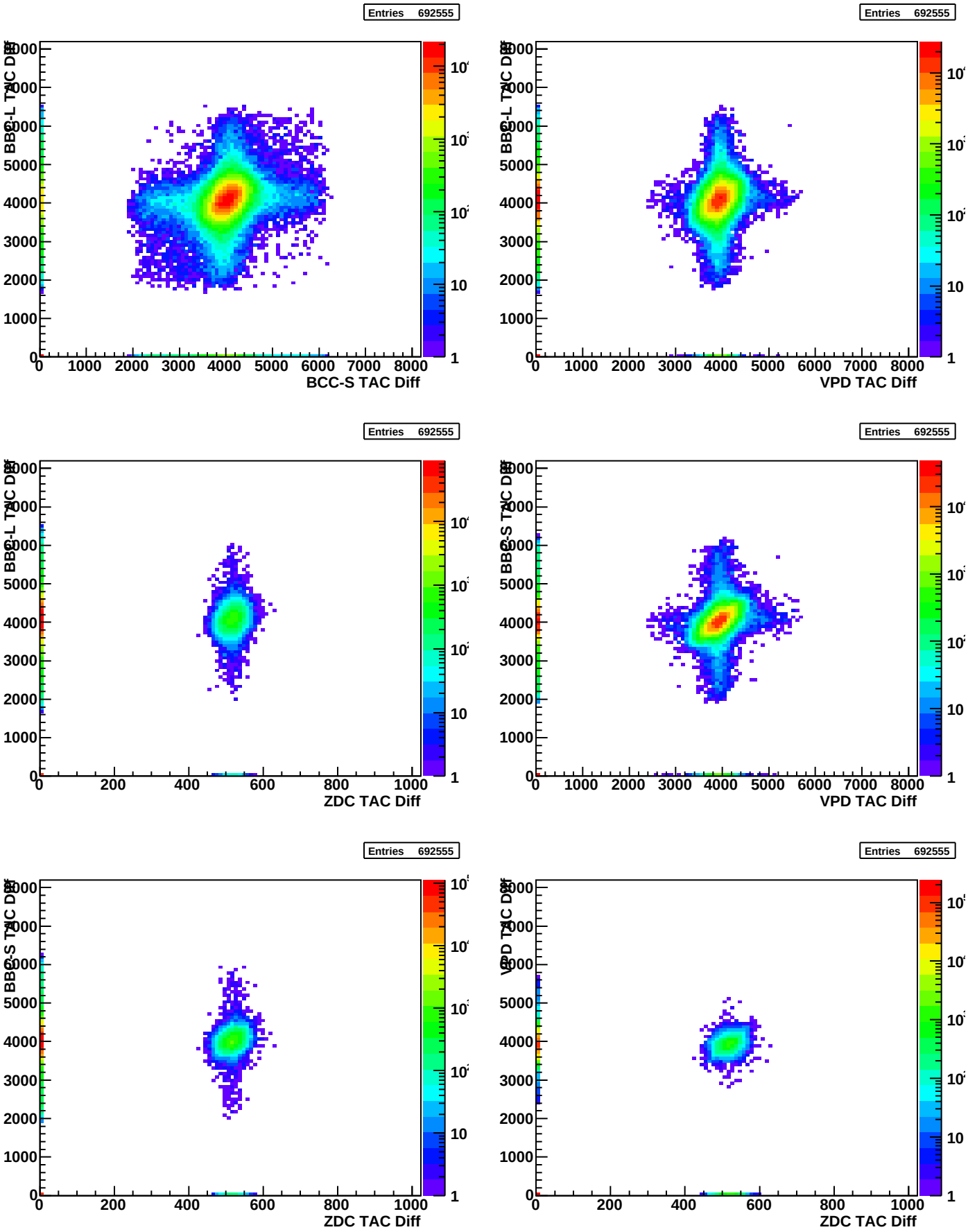

Entries 692555
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

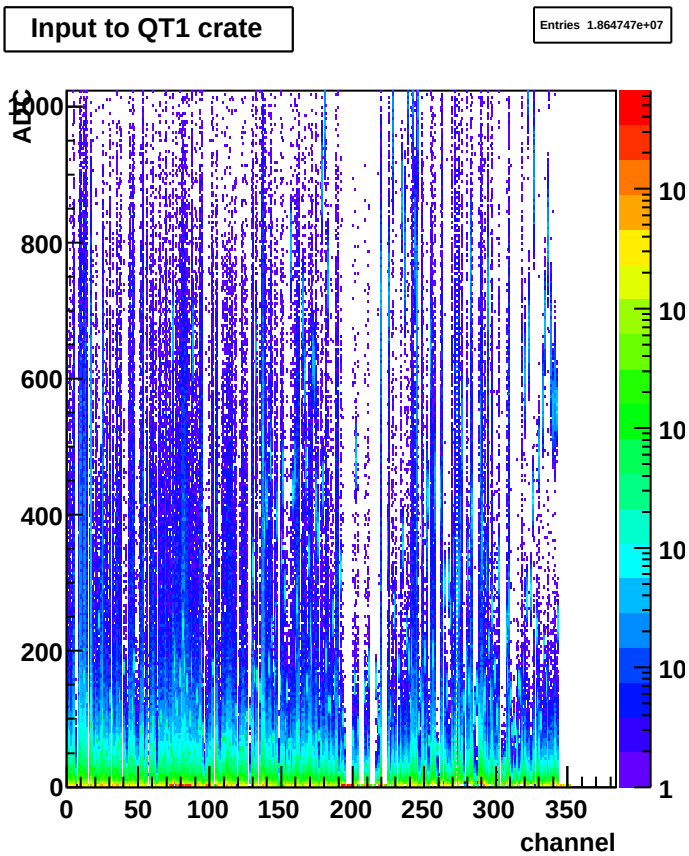

Entries 692555
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

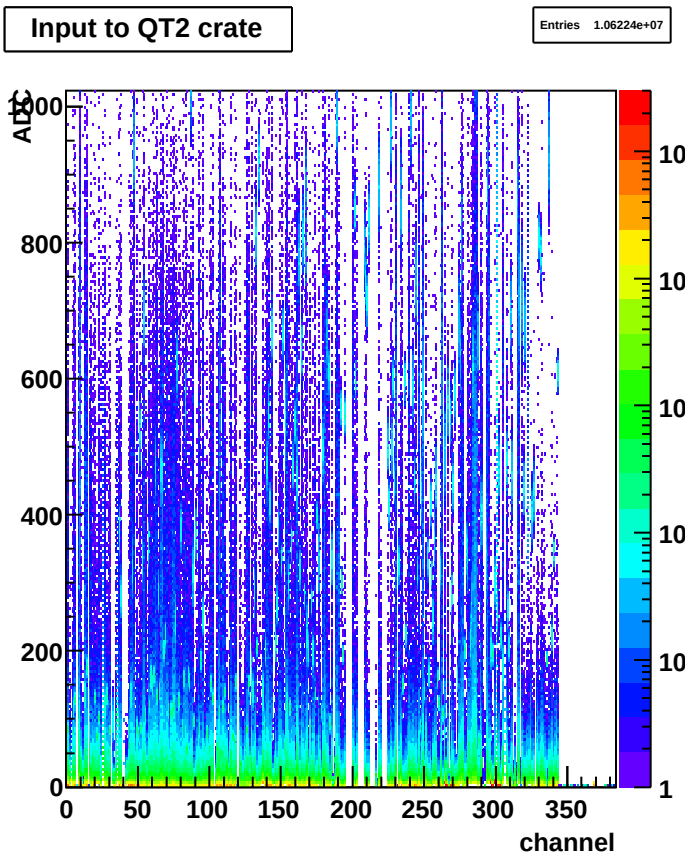

Entries 692555
BBC-L-East ADC Sum
BBC-L-West ADC Sum

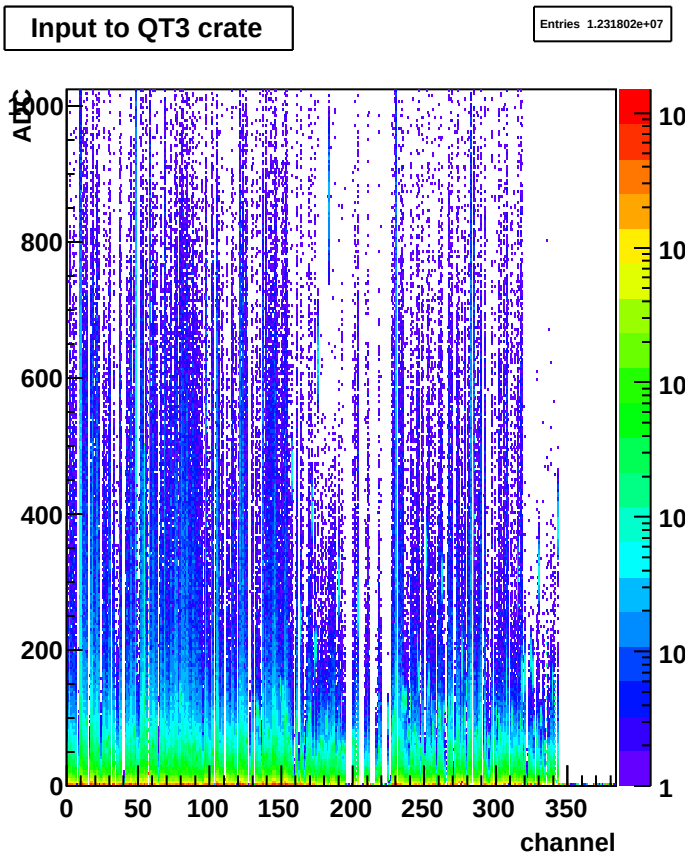

Entries 692555
BBC-S-East ADC Sum
BBC-S-West ADC Sum

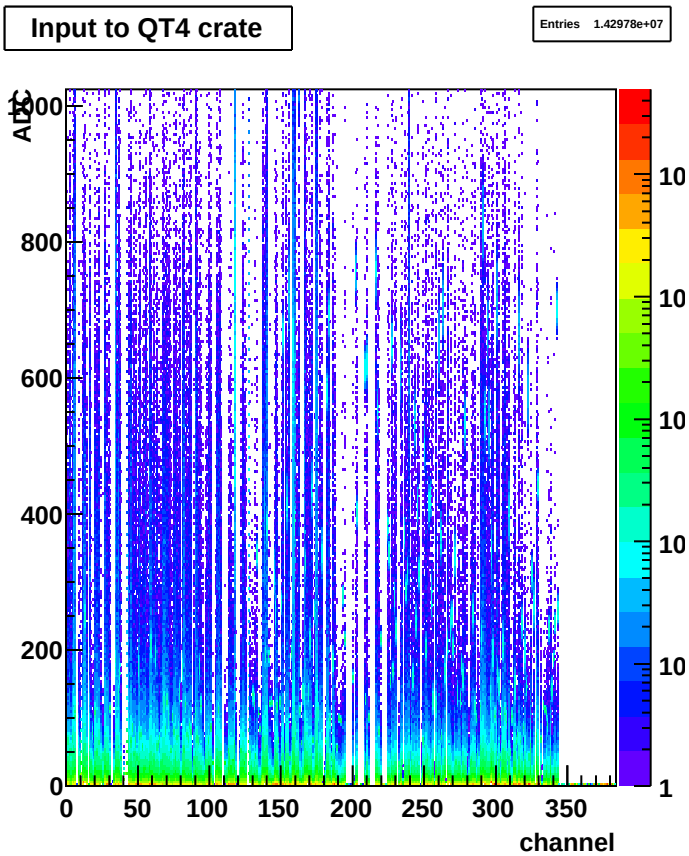

Entries 692555
ZDC East ADC Sum Att
ZDC West ADC Sum Att

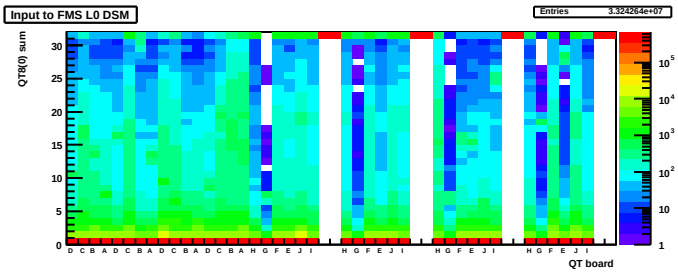

Entries 692555
BBC-L TAC Diff
BCC-S TAC Diff
Entries 692555
BBC-L TAC Diff
VPD TAC Diff
Entries 692555
BBC-L TAC Diff
ZDC TAC Diff
Entries 692555
BBC-S TAC Diff
VPD TAC Diff
Entries 692555
BBC-S TAC Diff
ZDC TAC Diff
Entries 692555
VPD TAC Diff
ZDC TAC Diff

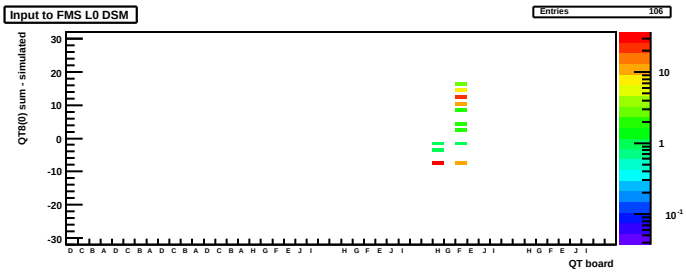

Input to QT1 crate
Entries 1.864747e+07
ADC
channel

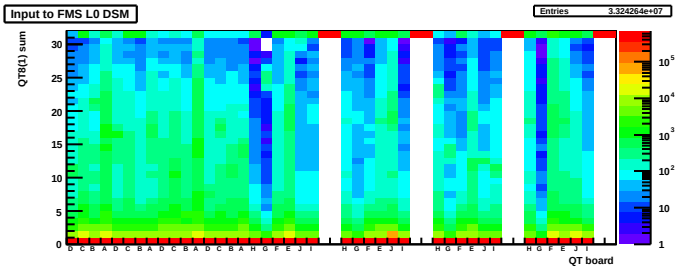

Input to QT2 crate
Entries 1.06224e+07
ADC
channel

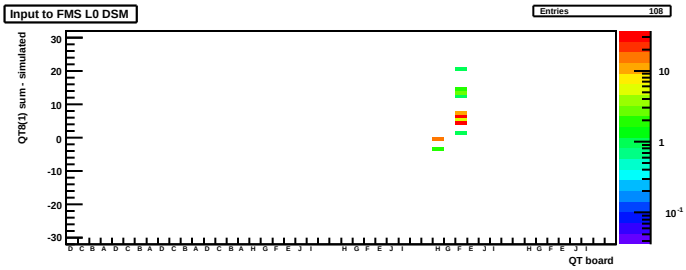

Input to QT3 crate
Entries 1.231802e+07
ADC
channel

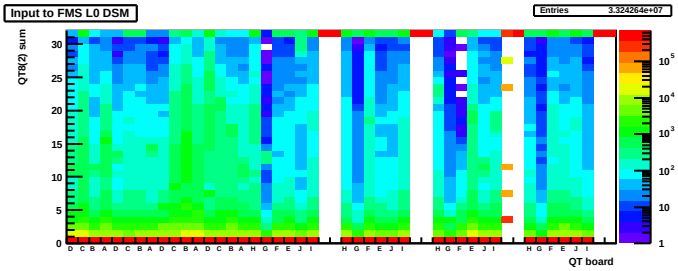

Input to QT4 crate
Entries 1.42978e+07
ADC
channel

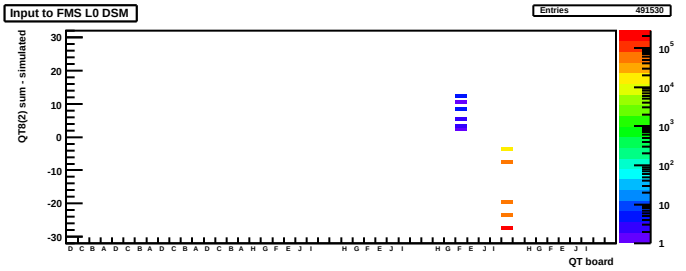

Input to FMS L0 DSM
Entries 3.324264e+07
QT8(0) sum
QT board

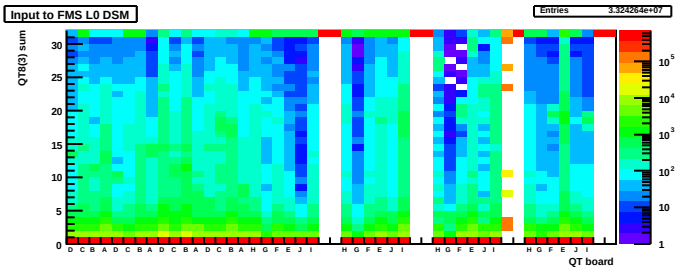

Input to FMS L0 DSM
Entries 106
QT8(0) sum - simulated
QT board

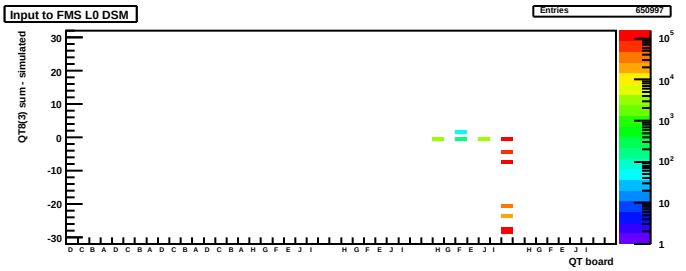

Input to FMS L0 DSM
Entries 3.324264e+07
QT8(1) sum
QT board

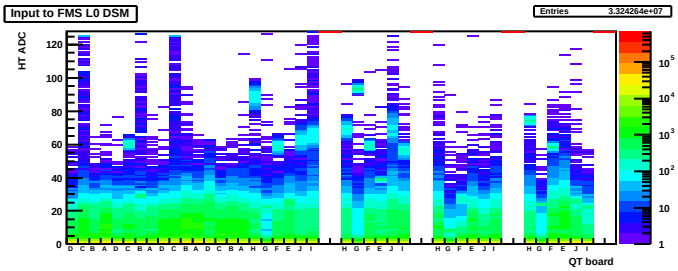

Input to FMS L0 DSM
Entries 108
QT8(1) sum - simulated
QT board

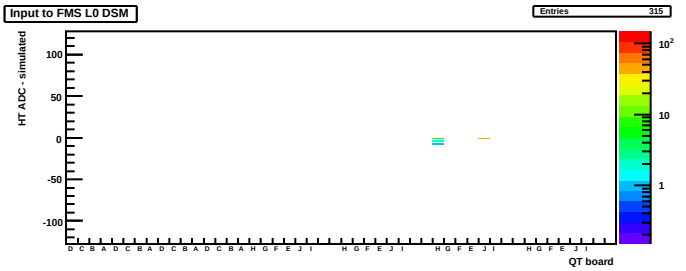

Input to FMS L0 DSM
Entries 3.324264e+07
QT8(2) sum
QT board

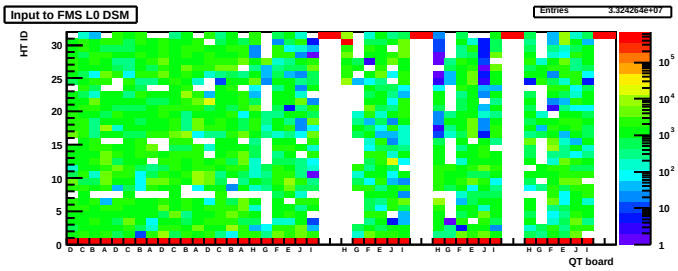

Input to FMS L0 DSM
Entries 491530
QT8(2) sum - simulated
QT board

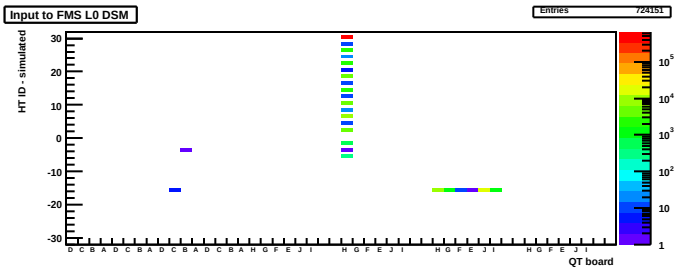

Input to FMS L0 DSM
Entries 3.324264e+07
QT8(3) sum
QT board

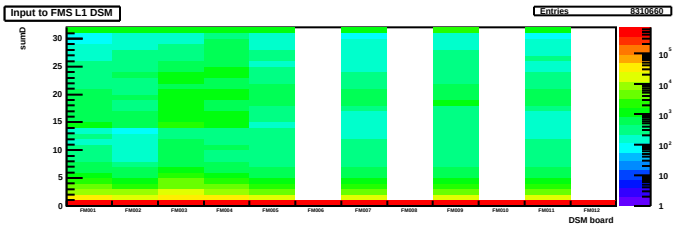

Input to FMS L0 DSM
Entries 650997
QT8(3) sum - simulated
QT board

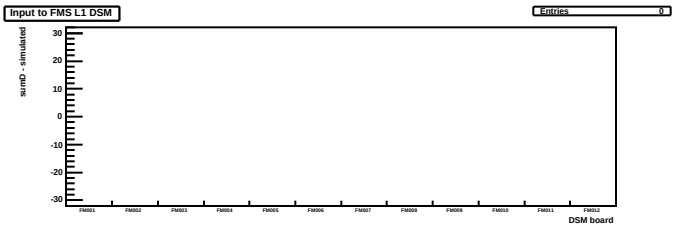

Input to FMS L0 DSM
Entries 3.324264e+07
HT ADC
QT board

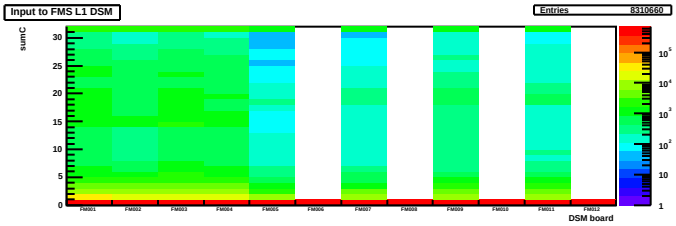

Input to FMS L0 DSM
Entries 315
HT ADC - simulated
QT board

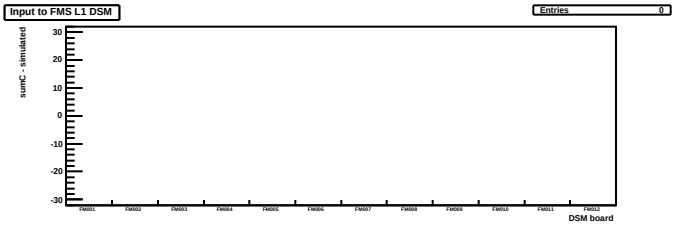

Input to FMS L0 DSM
Entries 3.324264e+07
HT ID
QT board

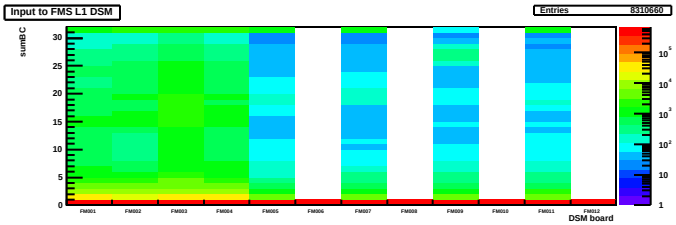

Input to FMS L0 DSM
Entries 724151
HT ID - simulated
QT board

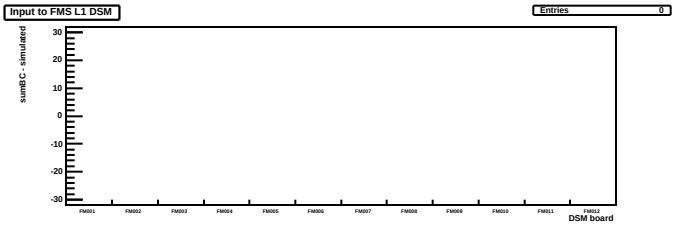

Input to FMS L1 DSM
Entries 8310660
sumD
DSM board

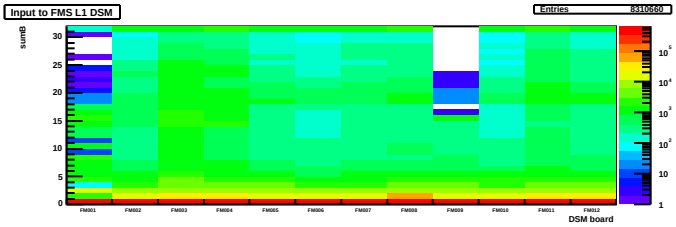

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

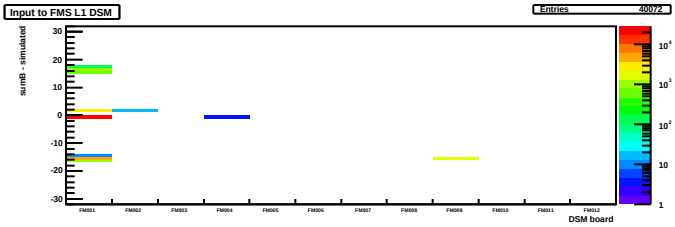

Input to FMS L1 DSM
Entries 8310660
sumC
DSM board

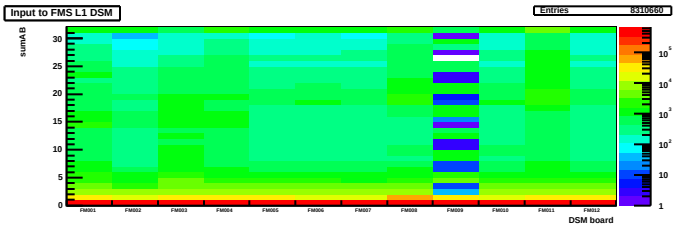

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

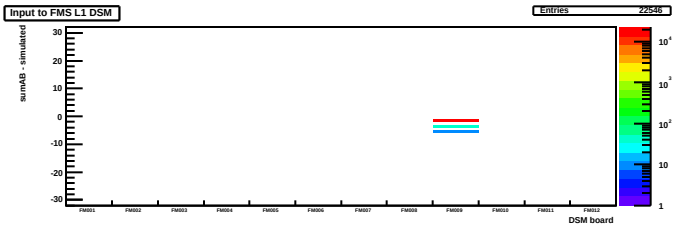

Input to FMS L1 DSM
Entries 8310660
sumBC
DSM board

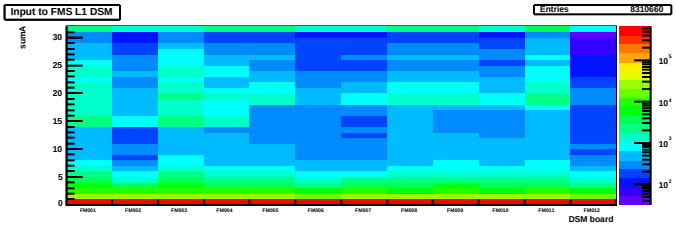

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

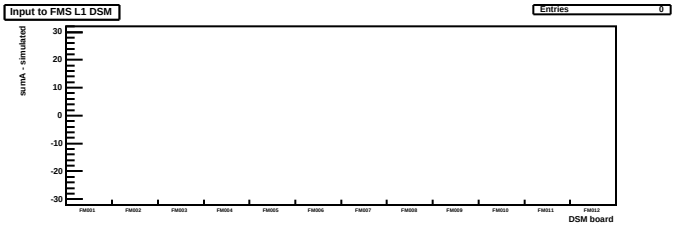

Input to FMS L1 DSM
Entries 8310660
sumB
DSM board

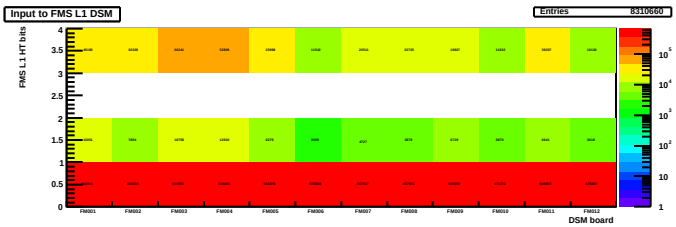

Input to FMS L1 DSM
Entries 40072
sumB - simulated
DSM board

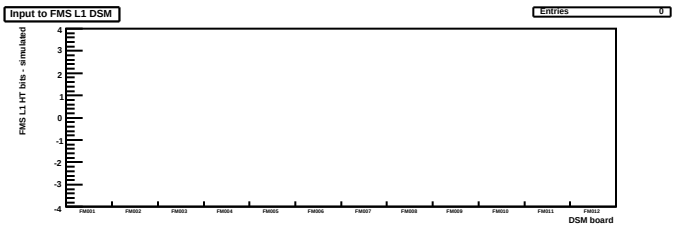

Input to FMS L1 DSM
Entries 8310660
sumAB
DSM board

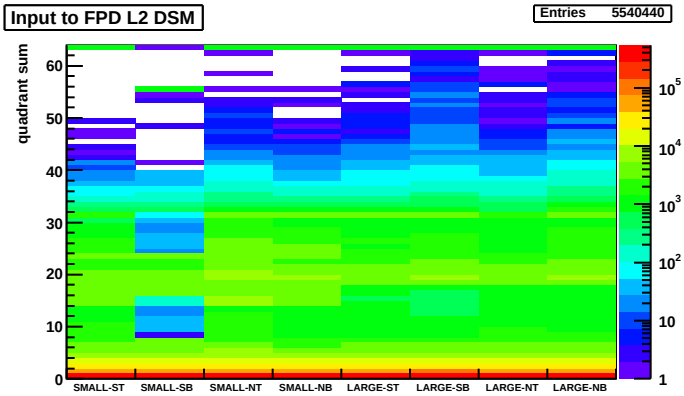

Input to FMS L1 DSM
Entries 22546
sumAB - simulated
DSM board

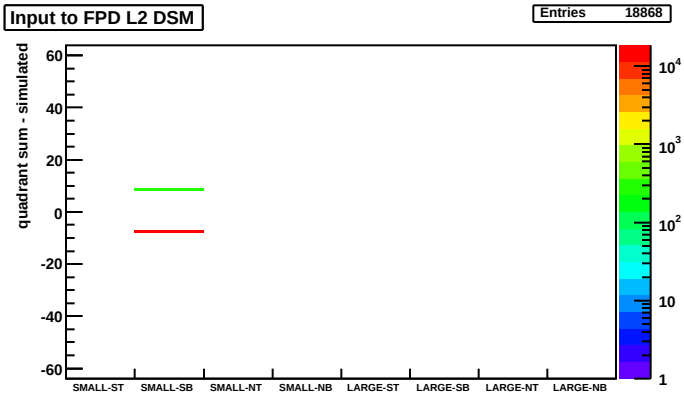

Input to FMS L1 DSM
Entries 8310660
sumA
DSM board

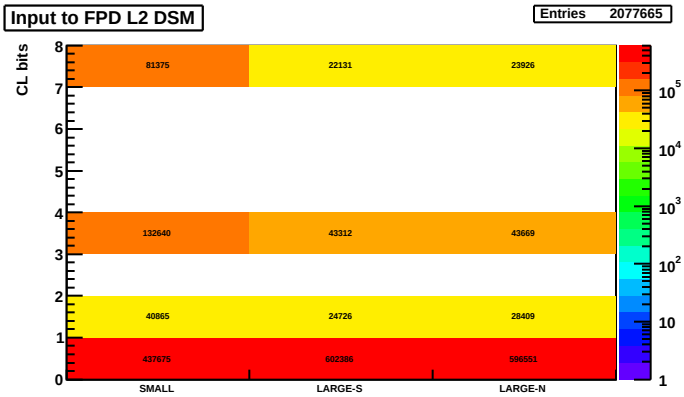

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

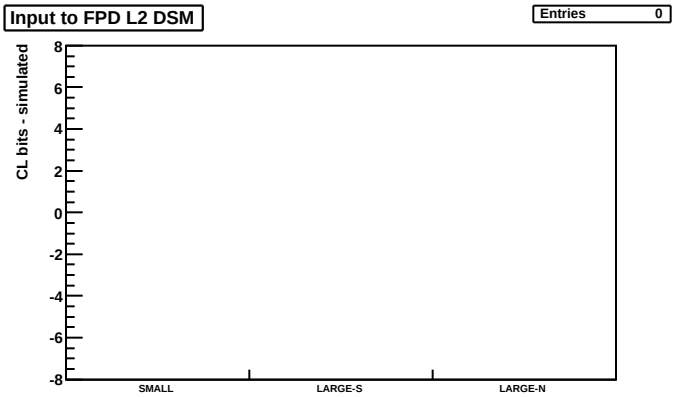

Input to FMS L1 DSM
Entries 8310660
FMS L1 HT bits
DSM board

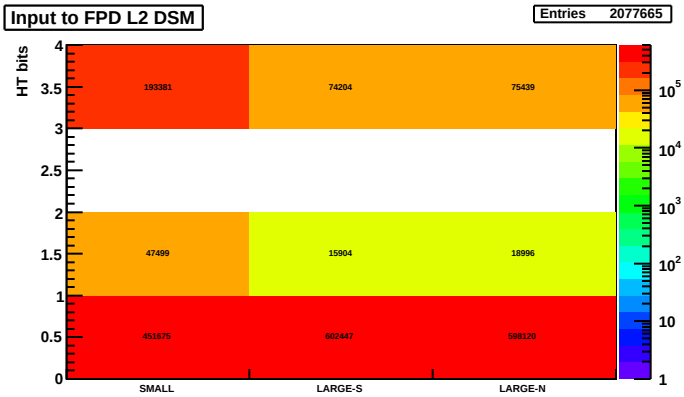

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

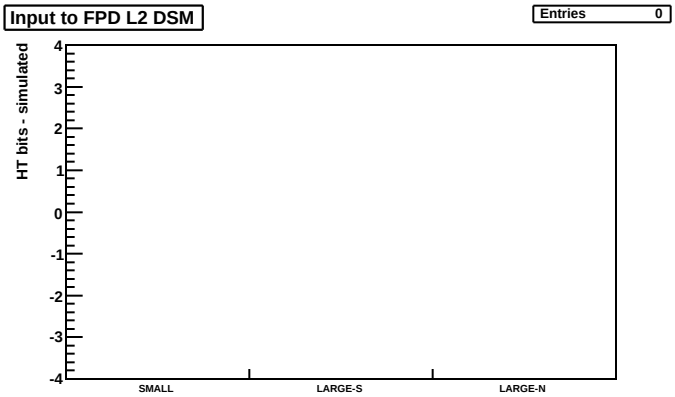

Input to FPD L2 DSM
Entries 5540440
quadrant sum
SMALL-ST
SMALL-SB
SMALL-NT
SMALL-NB
LARGE-ST
LARGE-SB
LARGE-NT
LARGE-NB

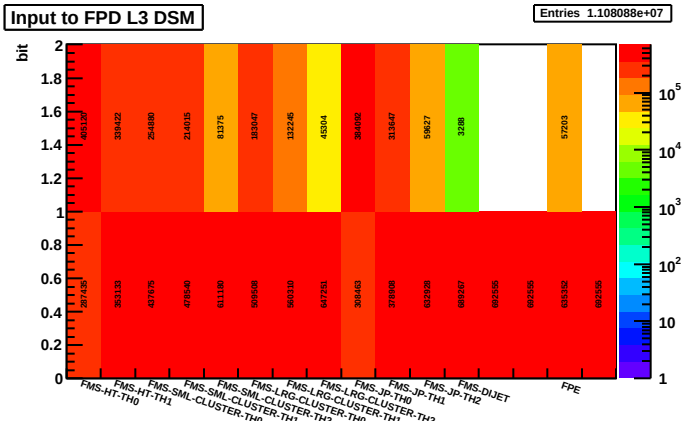

Input to FPD L2 DSM
Entries 18868
quadrant sum - simulated
SMALL-ST
SMALL-SB
SMALL-NT
SMALL-NB
LARGE-ST
LARGE-SB
LARGE-NT
LARGE-NB

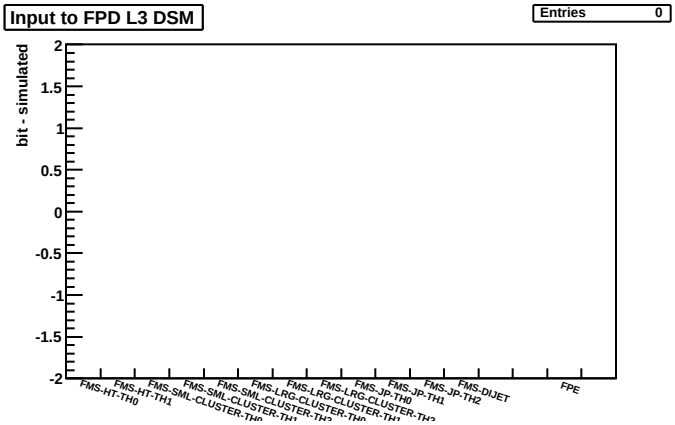

Input to FPD L2 DSM
Entries 2077665
CL bits
81375
22131
23926
132640
43312
43669
40865
24726
28409
437675
602386
596551
SMALL
LARGE-S
LARGE-N

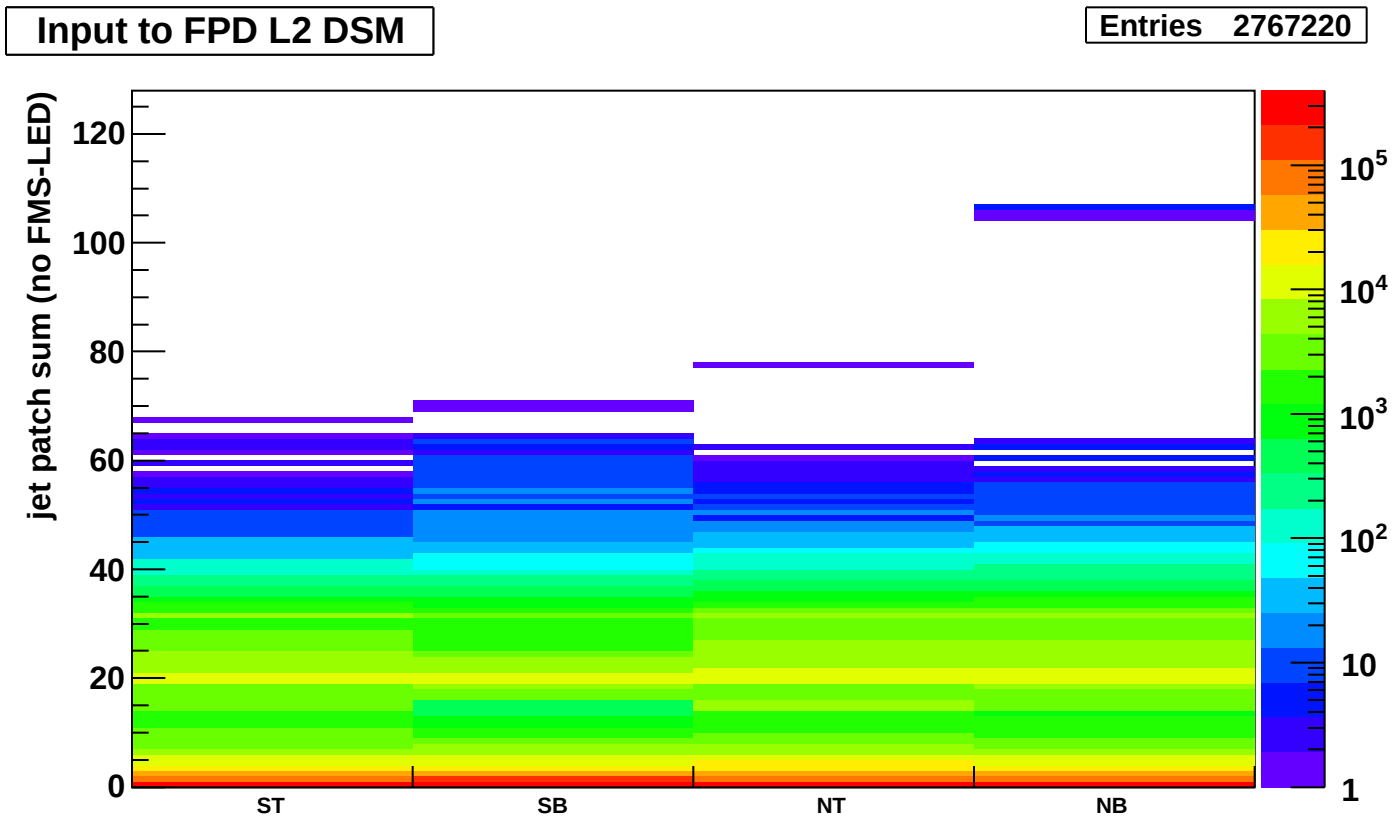

Input to FPD L2 DSM
Entries 0
CL bits - simulated
SMALL
LARGE-S
LARGE-N

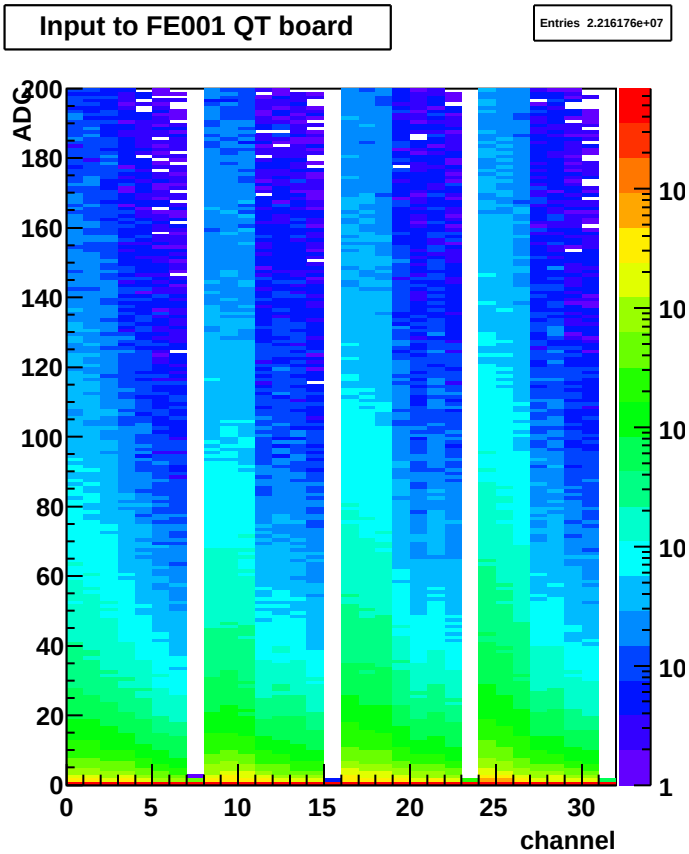

Input to FPD L2 DSM
Entries 2077665
HT bits
193381
74204
75439
47499
15904
18996
451675
602447
598120
SMALL
LARGE-S
LARGE-N

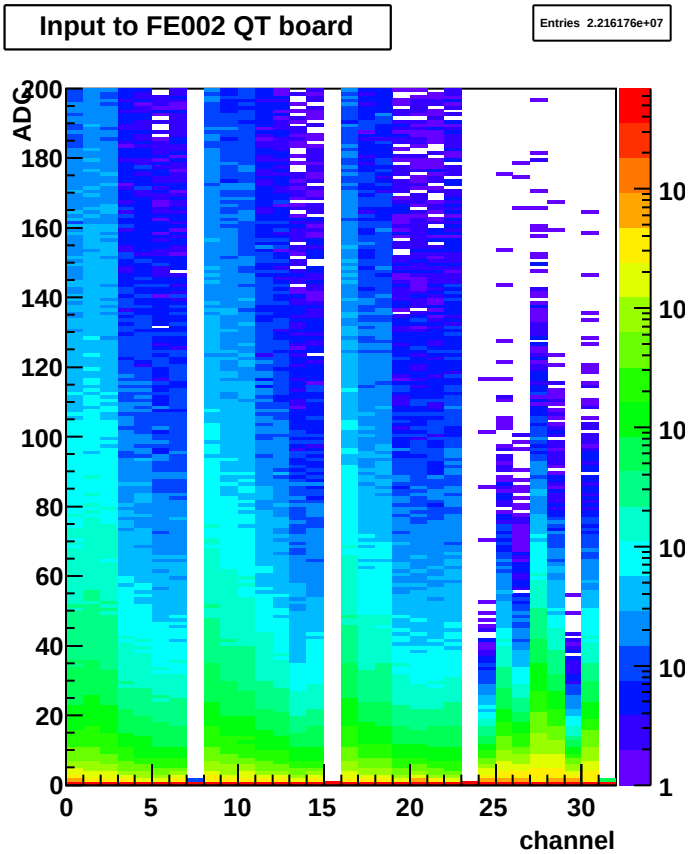

Input to FPD L2 DSM
Entries 0
HT bits - simulated
SMALL
LARGE-S
LARGE-N

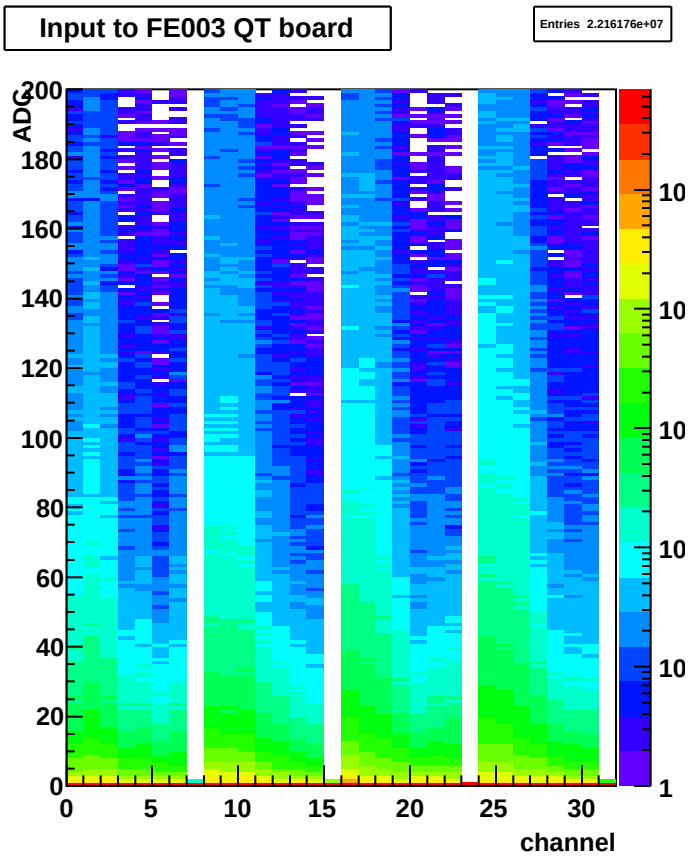

Input to FPD L3 DSM
Entries 1.108088e+07
bit
FMS-HT-TH0
FMS-HT-TH1
FMS-SML-CLUSTER-TH0
FMS-SML-CLUSTER-TH1
FMS-SML-CLUSTER-TH2
FMS-LRG-CLUSTER-TH0
FMS-LRG-CLUSTER-TH1
FMS-LRG-CLUSTER-TH2
FMS-JP-TH0
FMS-JP-TH1
FMS-JP-TH2
FMS-DIJET
FPE

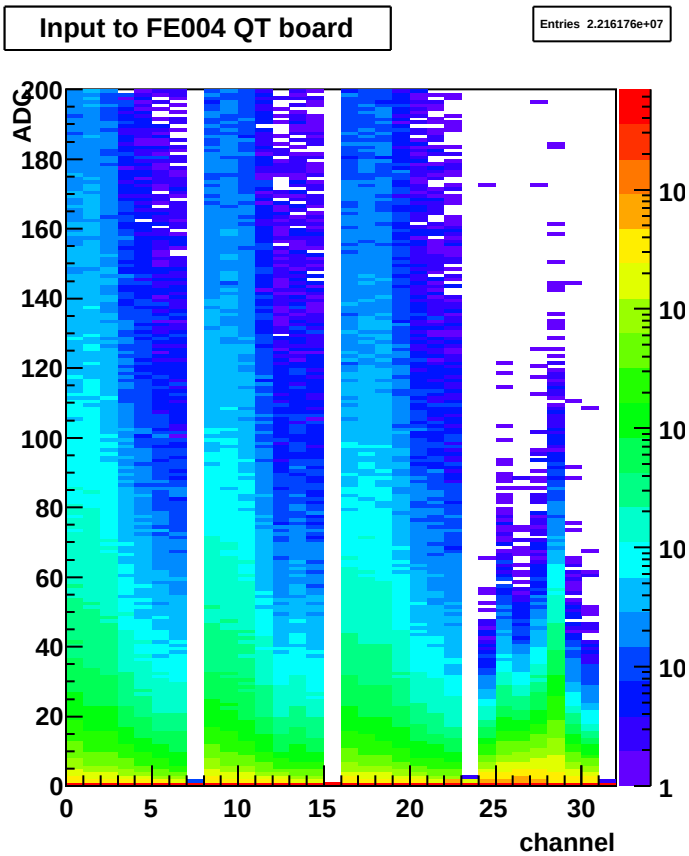

Input to FPD L3 DSM
Entries 0
bit - simulated
FMS-HT-TH0
FMS-HT-TH1
FMS-SML-CLUSTER-TH0
FMS-SML-CLUSTER-TH1
FMS-SML-CLUSTER-TH2
FMS-LRG-CLUSTER-TH0
FMS-LRG-CLUSTER-TH1
FMS-LRG-CLUSTER-TH2
FMS-JP-TH0
FMS-JP-TH1
FMS-JP-TH2
FMS-DIJET
FPE

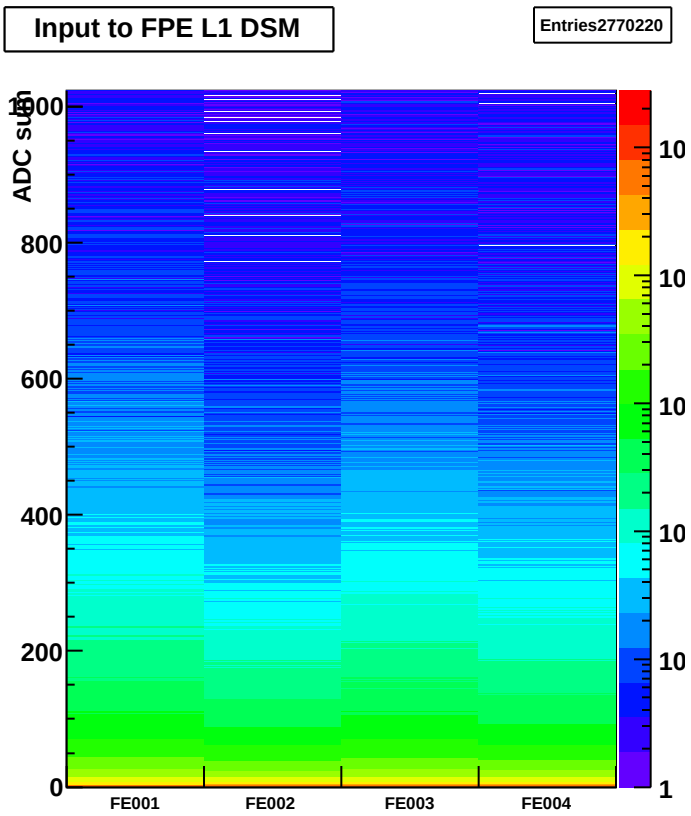

Input to FPD L2 DSM
Entries 2767220
jet patch sum (no FMS-LED)
0
20
40
60
80
100
120
ST
SB
NT
NB
1
10
10^2
10^3
10^4
10^5

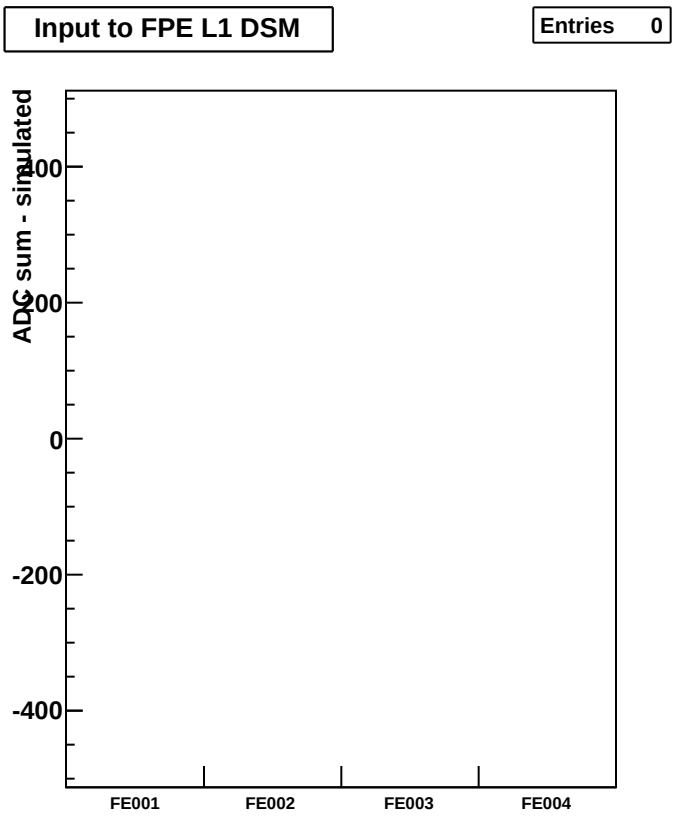

Input to FE001 QT board
Entries 2.216176e+07
ADC
channel

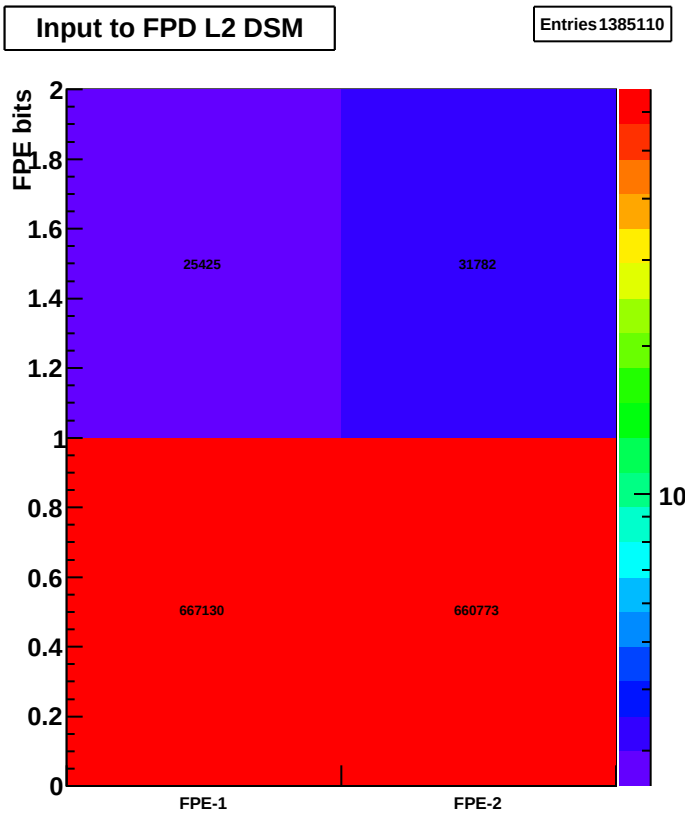

Input to FE002 QT board
Entries 2.216176e+07
ADC
channel

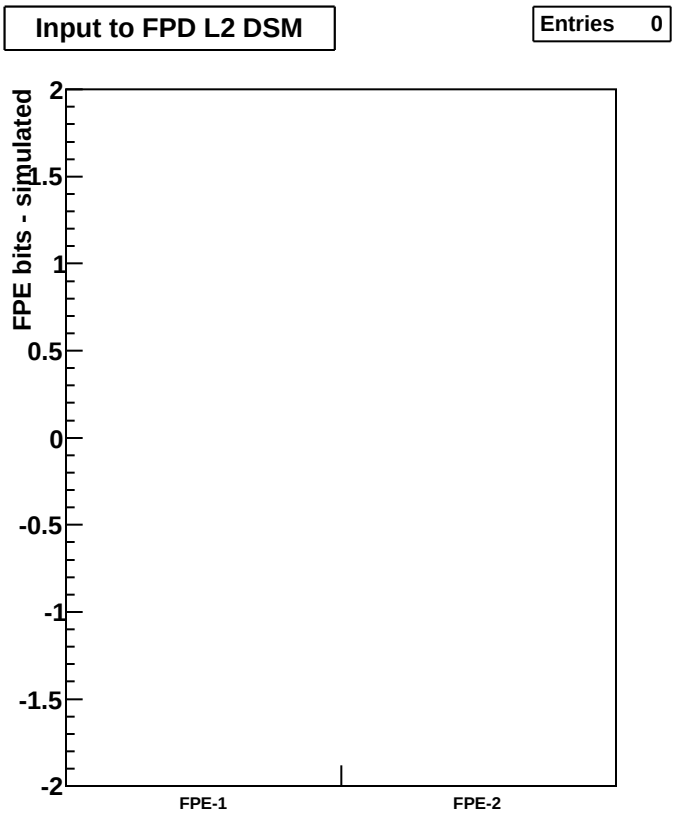

Input to FE003 QT board
Entries 2.216176e+07
ADC
channel


Input to FE004 QT board
Entries 2.216176e+07
ADC
channel


Input to FPE L1 DSM
Entries2770220
ADC sum
1000
800
600
400
200
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1


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


Input to FPD L2 DSM
Entries1385110
FPE bits
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
25425
31782
667130
660773
FPE-1
FPE-2
10


Input to FPD L2 DSM
Entries 0
FPE bits - simulated
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
FPE-1
FPE-2