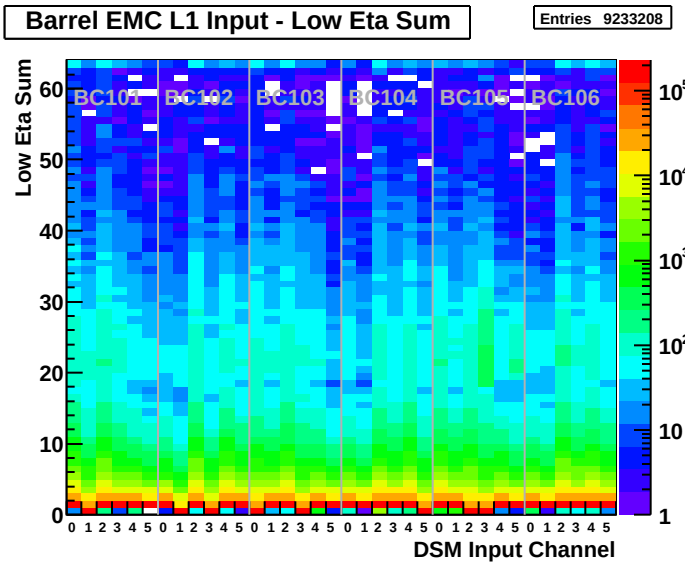
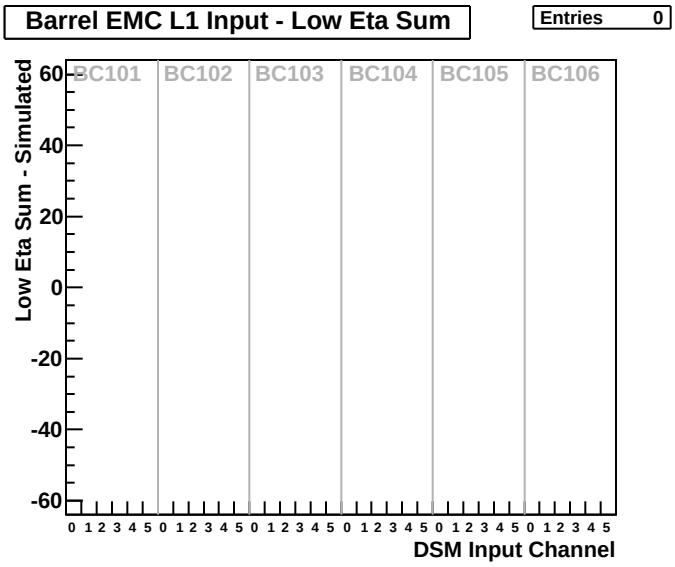
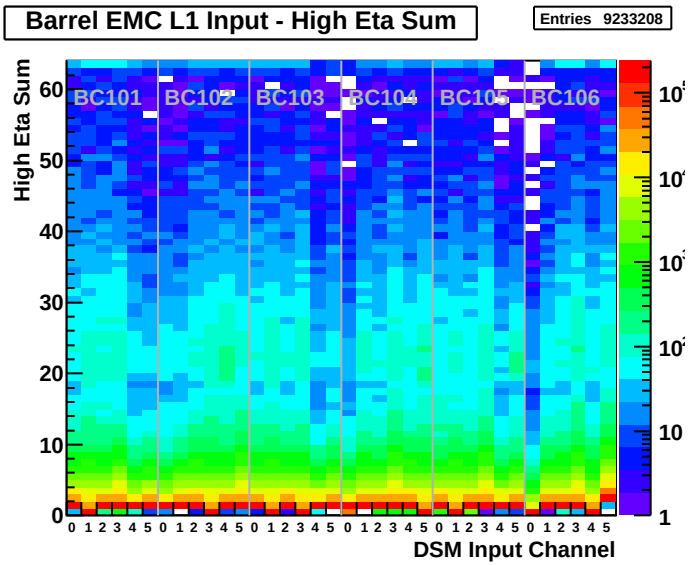
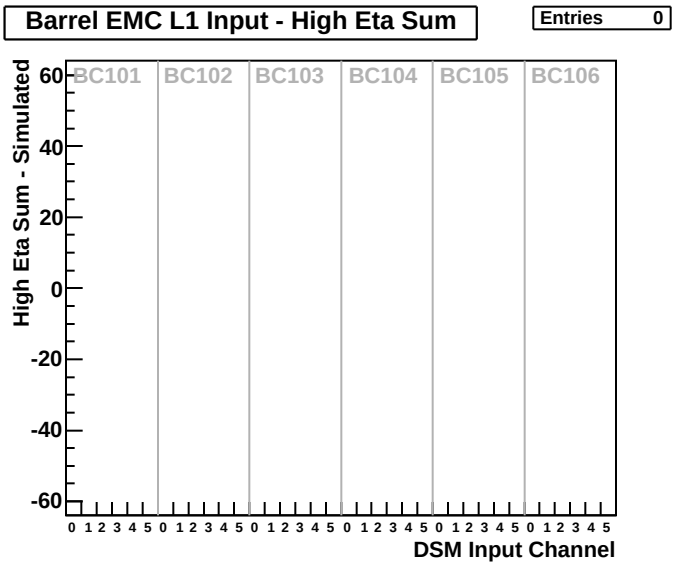
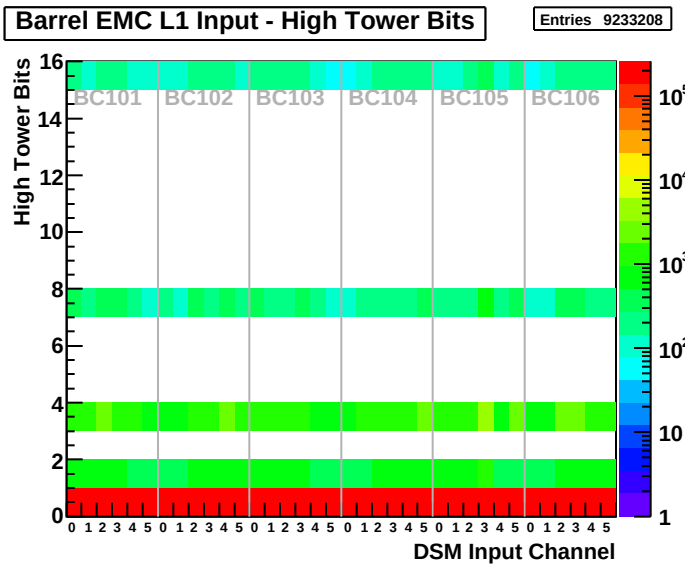
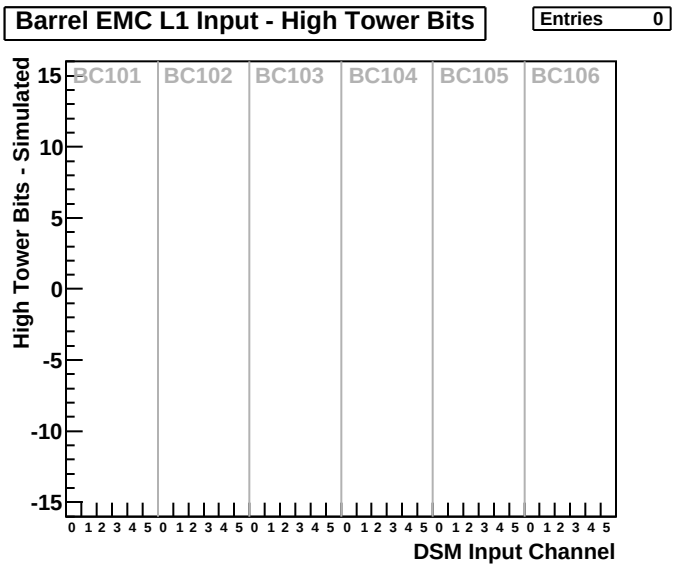

Barrel EMC L1 Input - Low Eta Sum
Entries 9233208
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

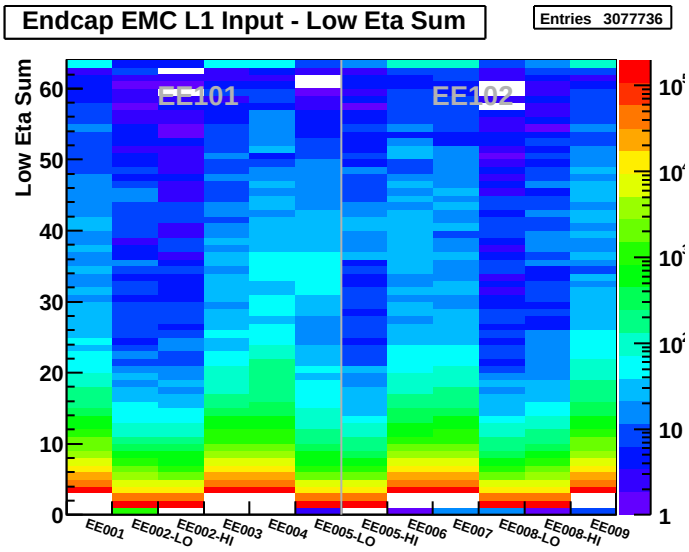

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

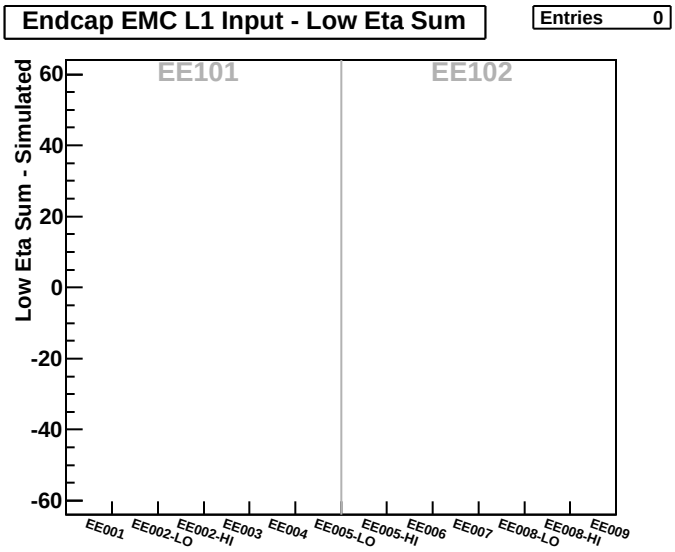

Barrel EMC L1 Input - High Eta Sum
Entries 9233208
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

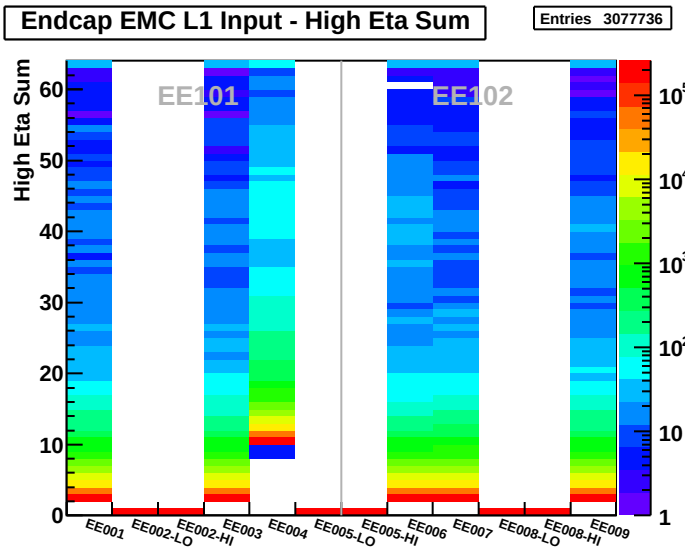

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

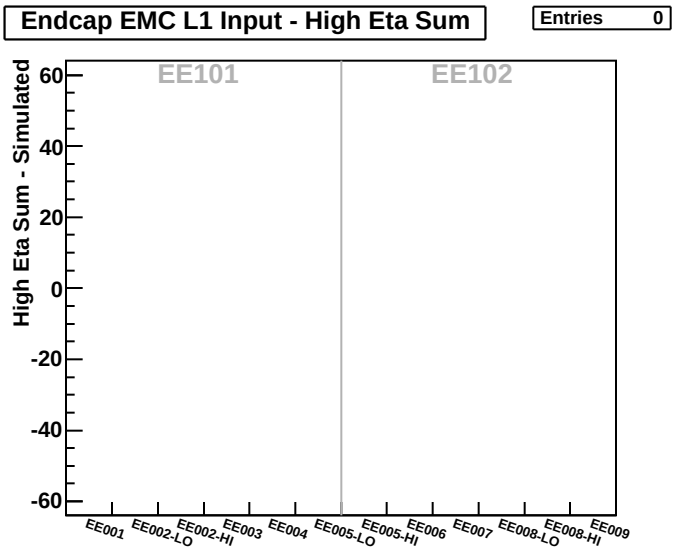

Barrel EMC L1 Input - High Tower Bits
Entries 9233208
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

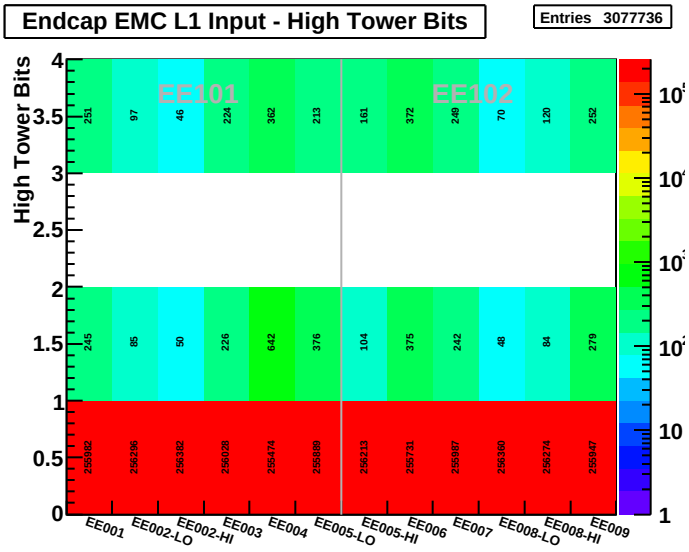

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

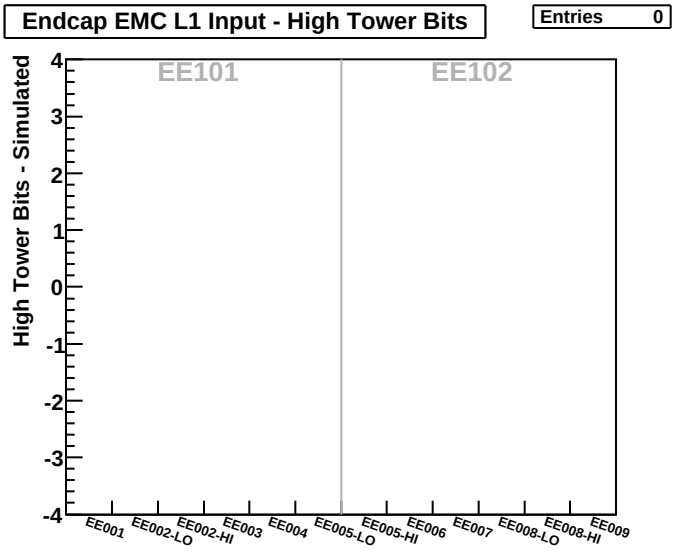

Endcap EMC L1 Input - Low Eta Sum
Entries 3077736
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

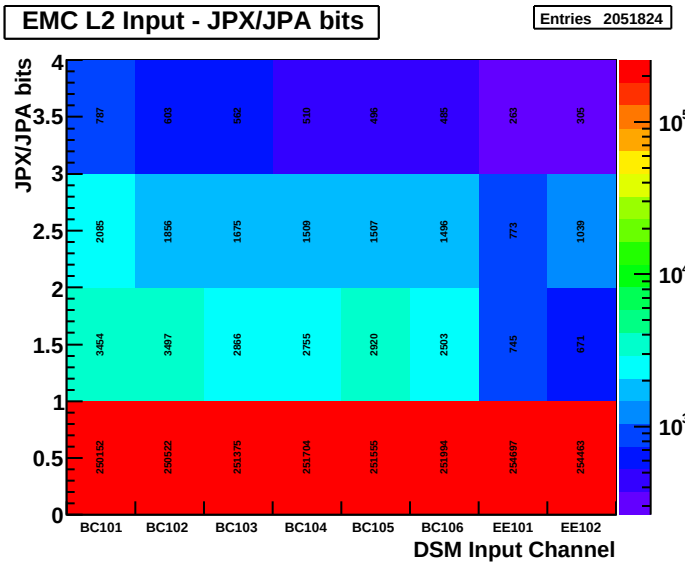

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

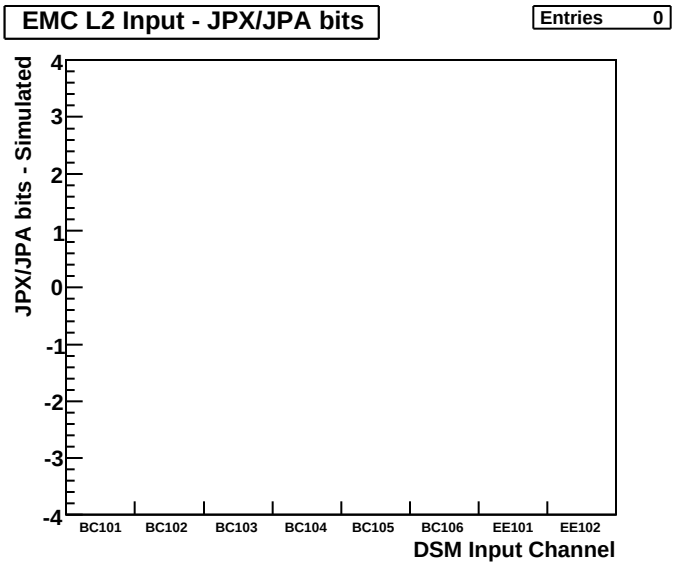

Endcap EMC L1 Input - High Eta Sum
Entries 3077736
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

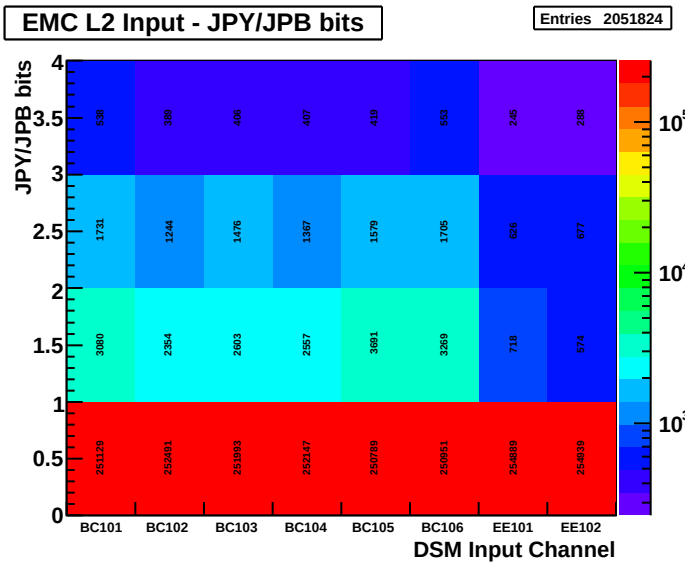

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

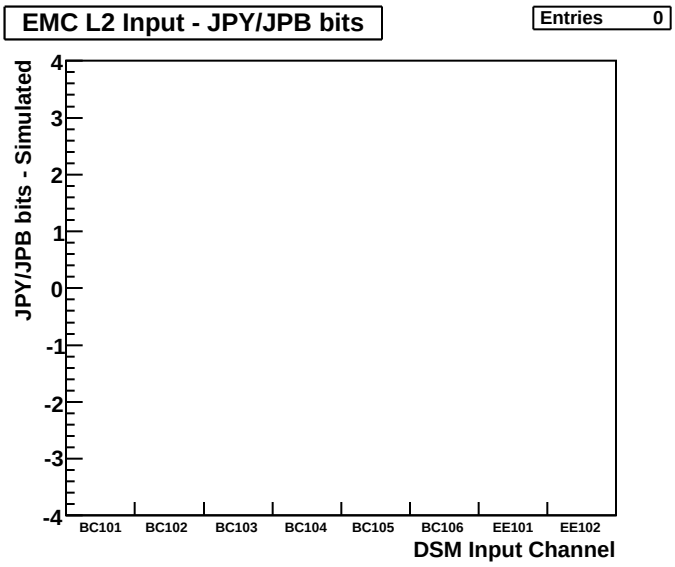

Endcap EMC L1 Input - High Tower Bits
Entries 3077736
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

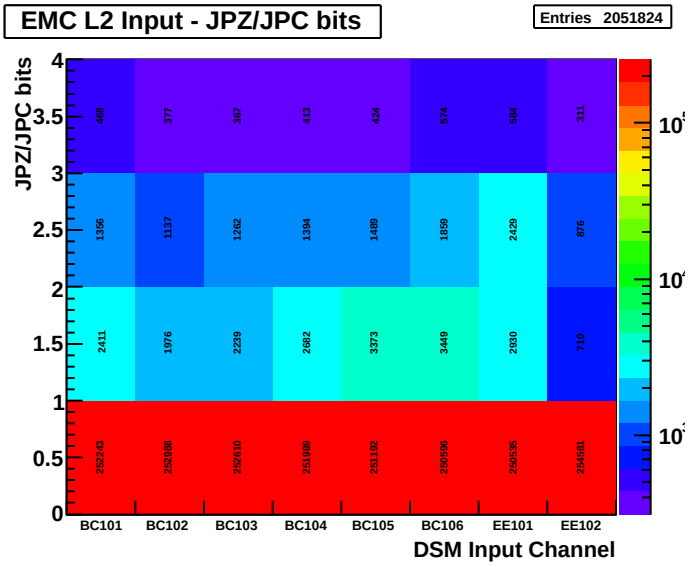

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

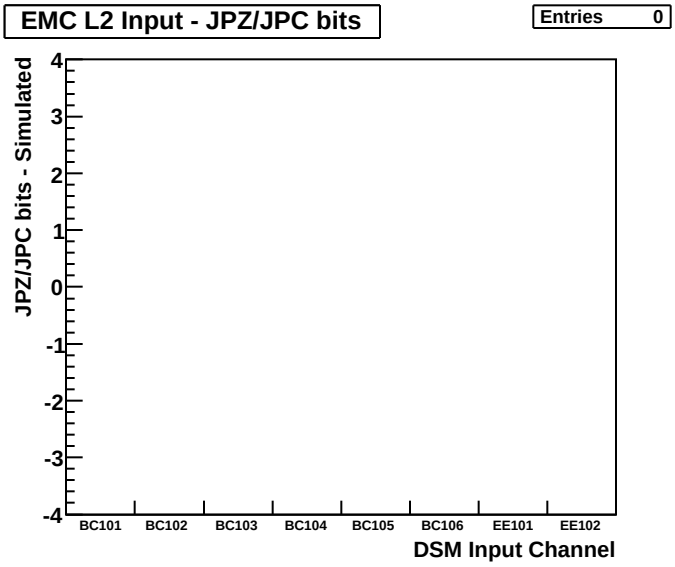

EMC L2 Input - JPX/JPA bits
Entries 2051824
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
787 603 562 510 496 485 263 305
2085 1856 1675 1509 1507 1496 773 1039
3454 3497 2866 2755 2920 2503 745 671
250152 250522 251375 251704 251595 251994 254697 254463

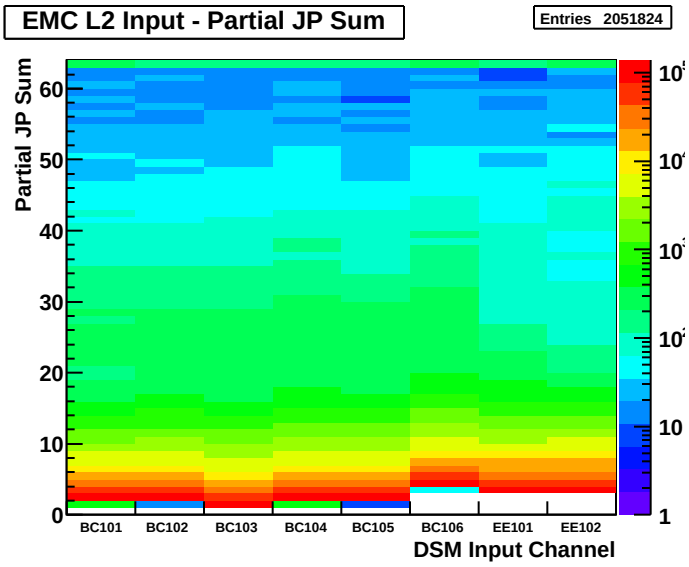

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

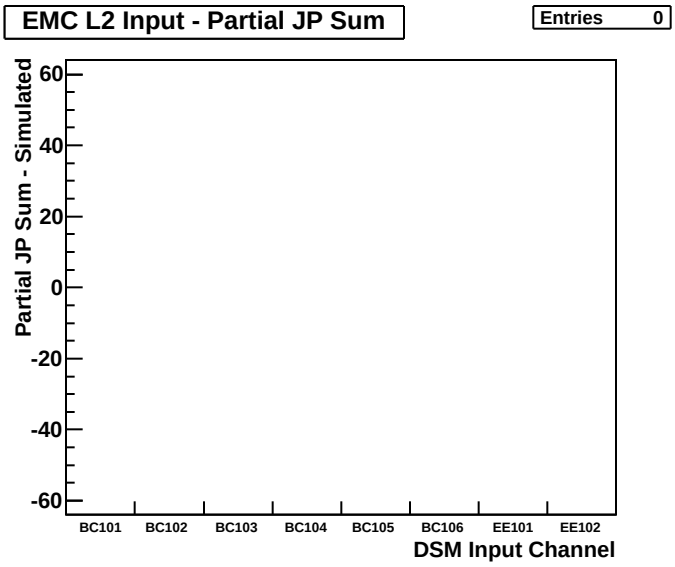

EMC L2 Input - JPY/JPB bits
Entries 2051824
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
538 389 406 407 419 553 245 288
1731 1244 1476 1367 1579 1705 626 677
3080 2354 2603 2557 3691 3269 718 574
251129 253491 253993 253147 250789 250951 254889 254939

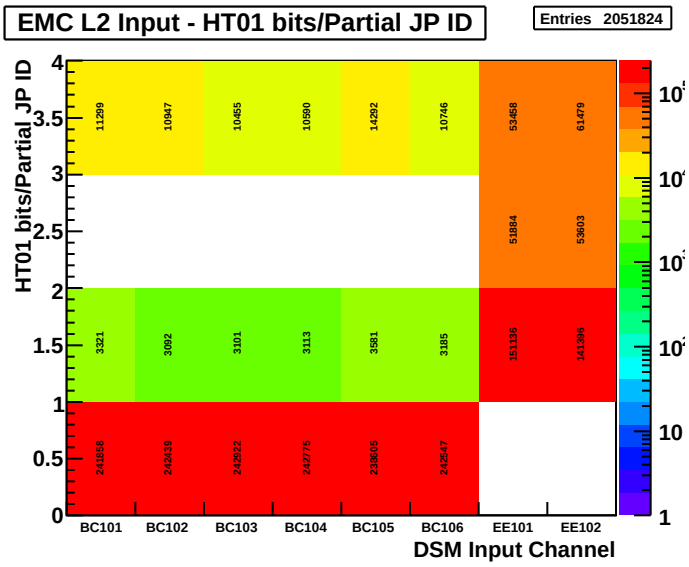

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

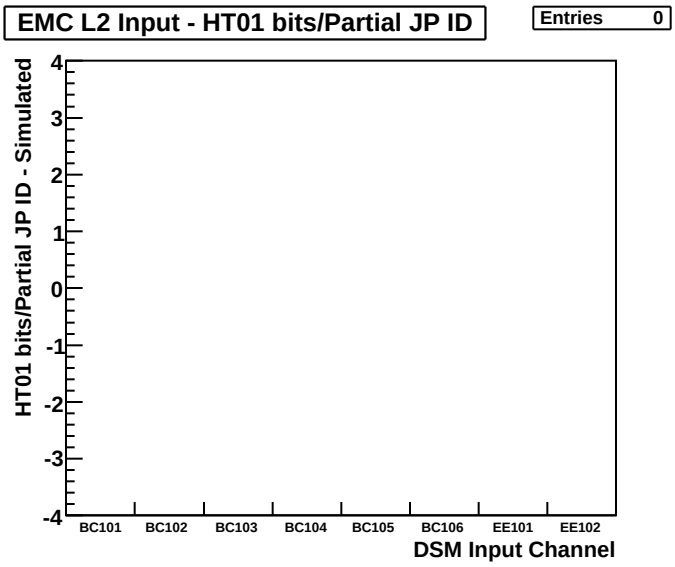

EMC L2 Input - JPZ/JPC bits
Entries 2051824
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
488 377 367 413 424 574 584 311
1356 1137 1262 1394 1489 1859 2429 876
2411 1976 2239 2682 3373 3449 2930 710
252243 252388 252610 251888 251192 250596 250535 254581

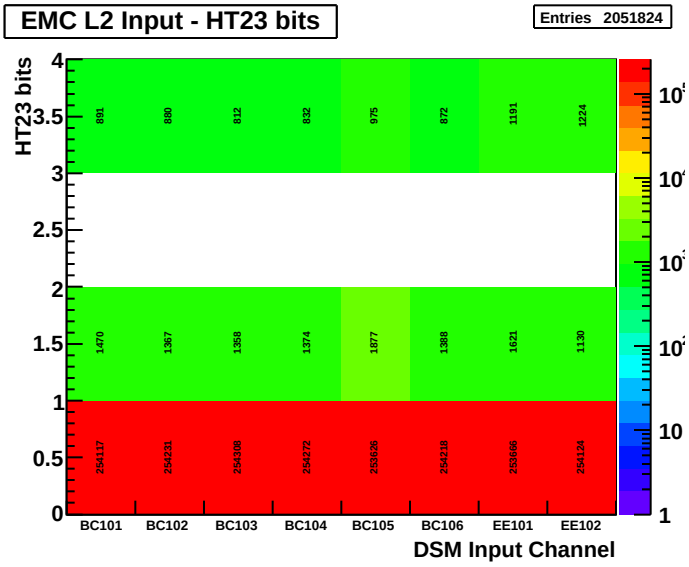

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

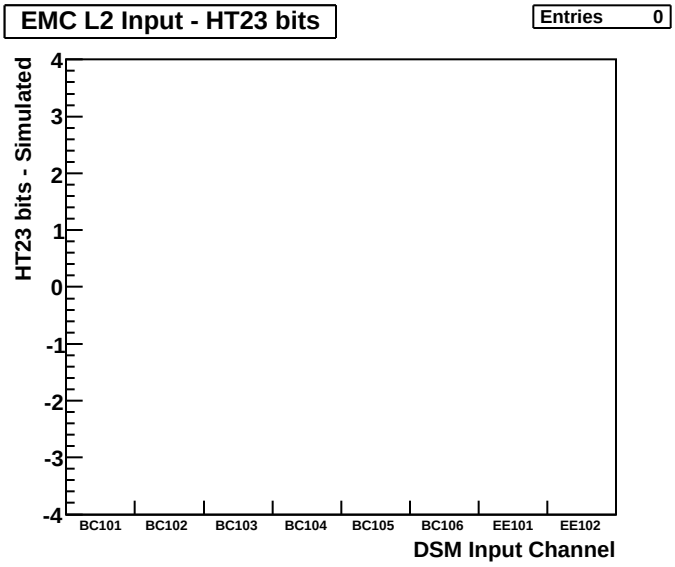

EMC L2 Input - Partial JP Sum
Entries 2051824
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

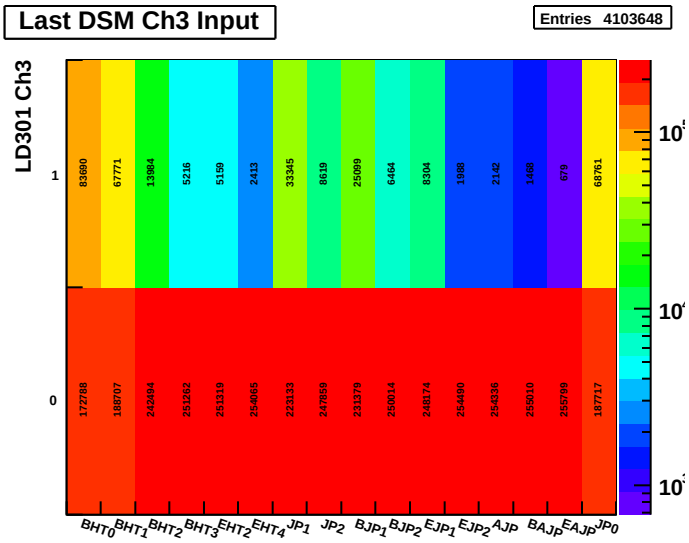

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

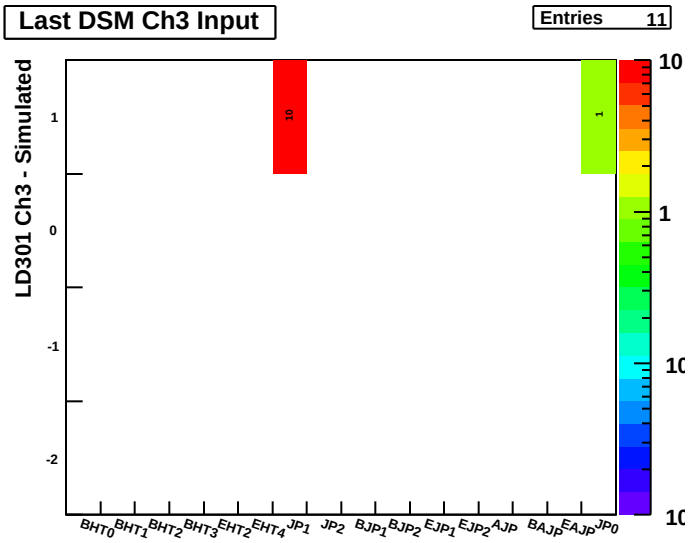

EMC L2 Input - HT01 bits/Partial JP ID
Entries 2051824
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

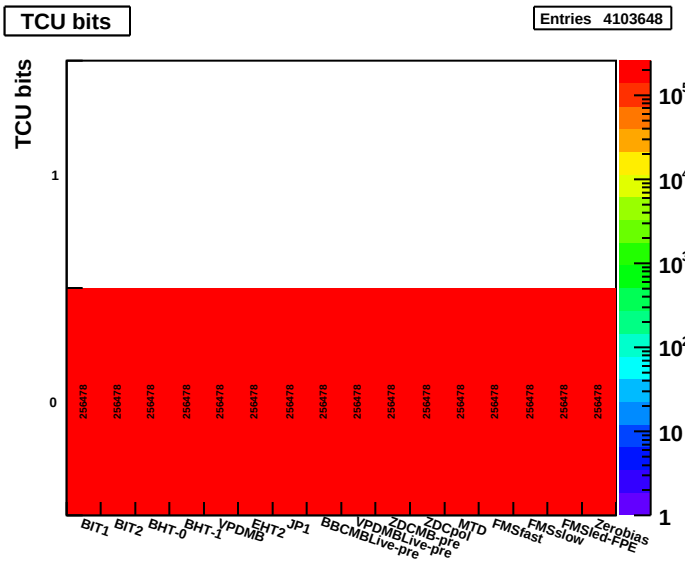

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

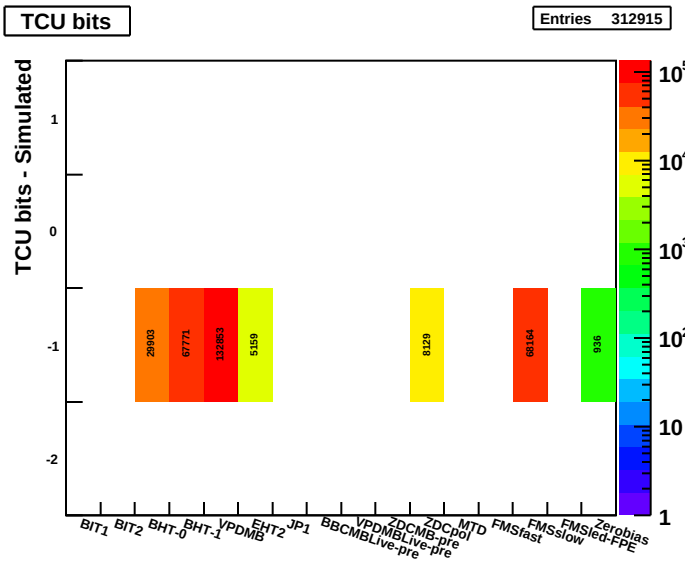

EMC L2 Input - HT23 bits
Entries 2051824
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

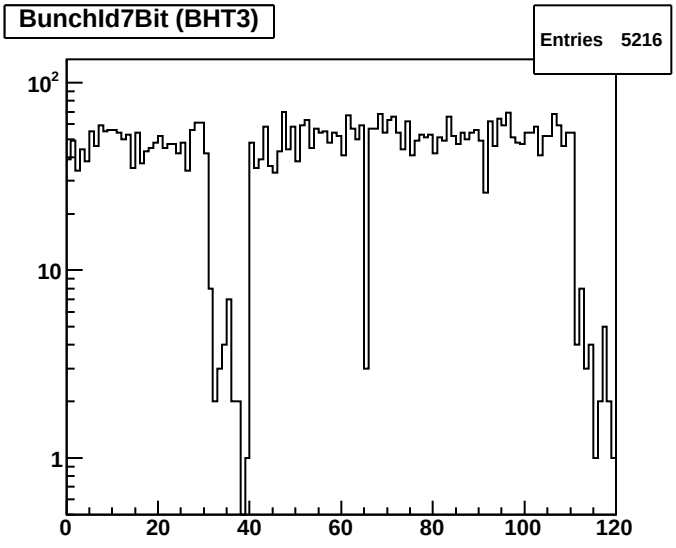

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

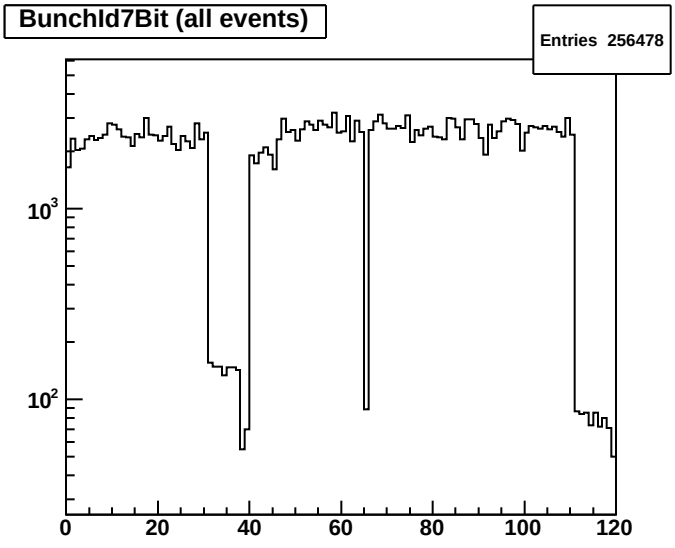

Last DSM Ch3 Input
Entries 4103648
LD301 Ch3
1
0
83680 67771 13984 5216 5159 2413 33345 8619 25099 6464 8304 1988 2142 1468 679 68761
172788 188707 242494 251262 251319 254065 223133 247659 231379 250014 248174 254490 254436 255010 255799 187717
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

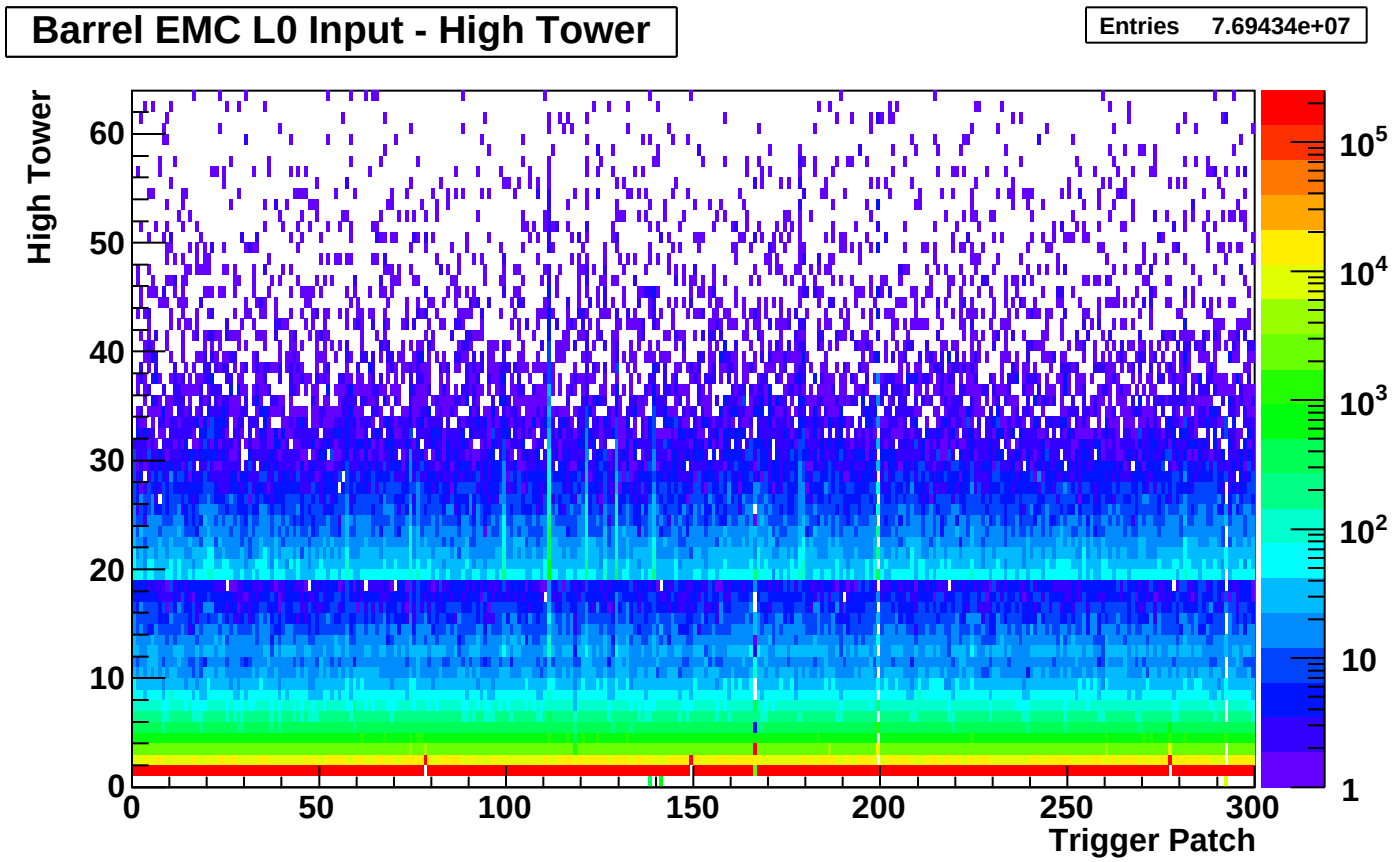

Last DSM Ch3 Input
Entries 11
LD301 Ch3 - Simulated
1
0
-1
-2
10
1
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

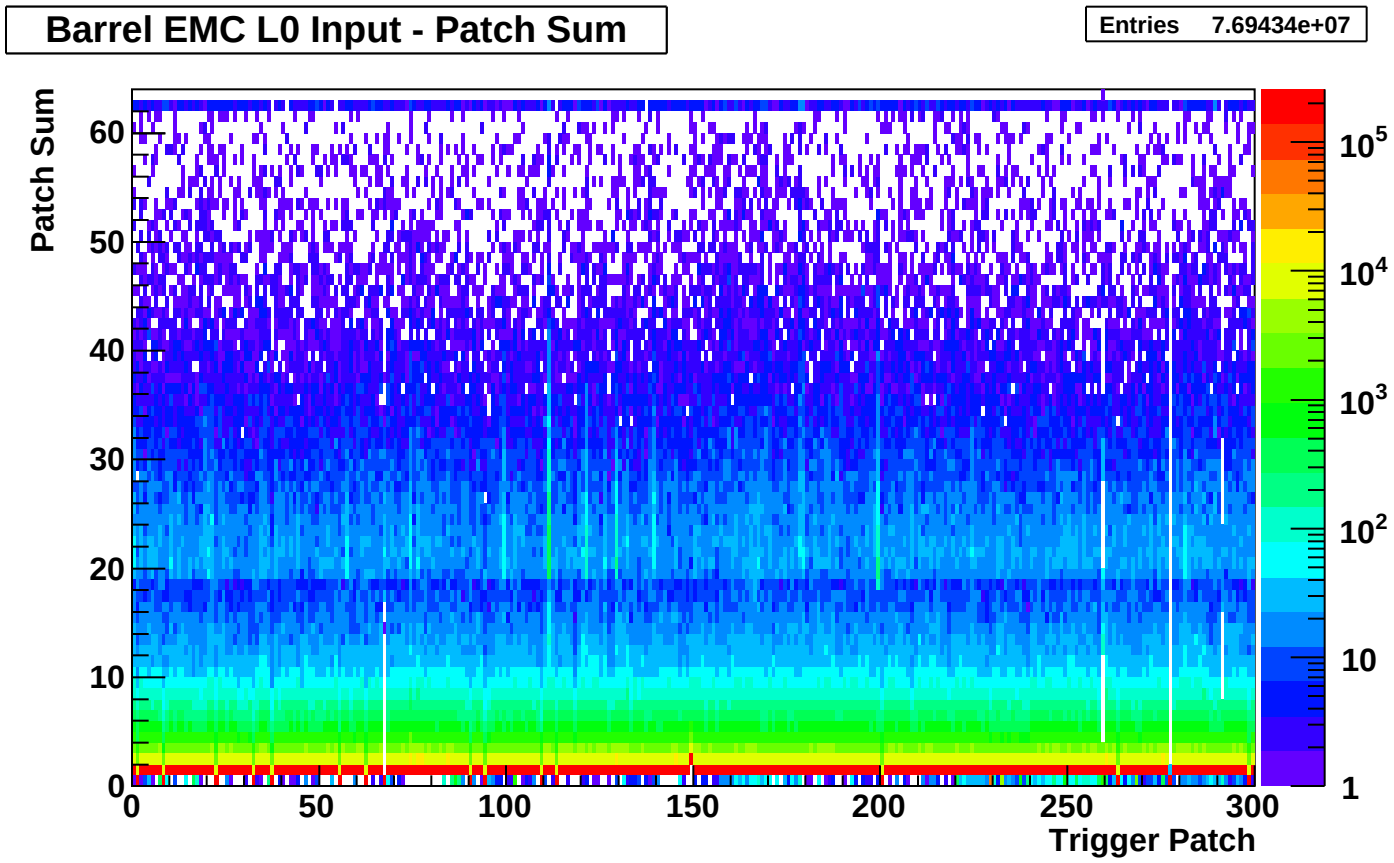

TCU bits
Entries 4103648
TCU bits
1
0
256478
BIT1 BIT2 BHT-0 BHT-1 VPDMB EHT2 JP1 BBCMBLive-pre VPDMBLive-pre ZDCMB-pre ZDCpol MTD FMSfast FMSslow FMSled-FPE Zerobias
1

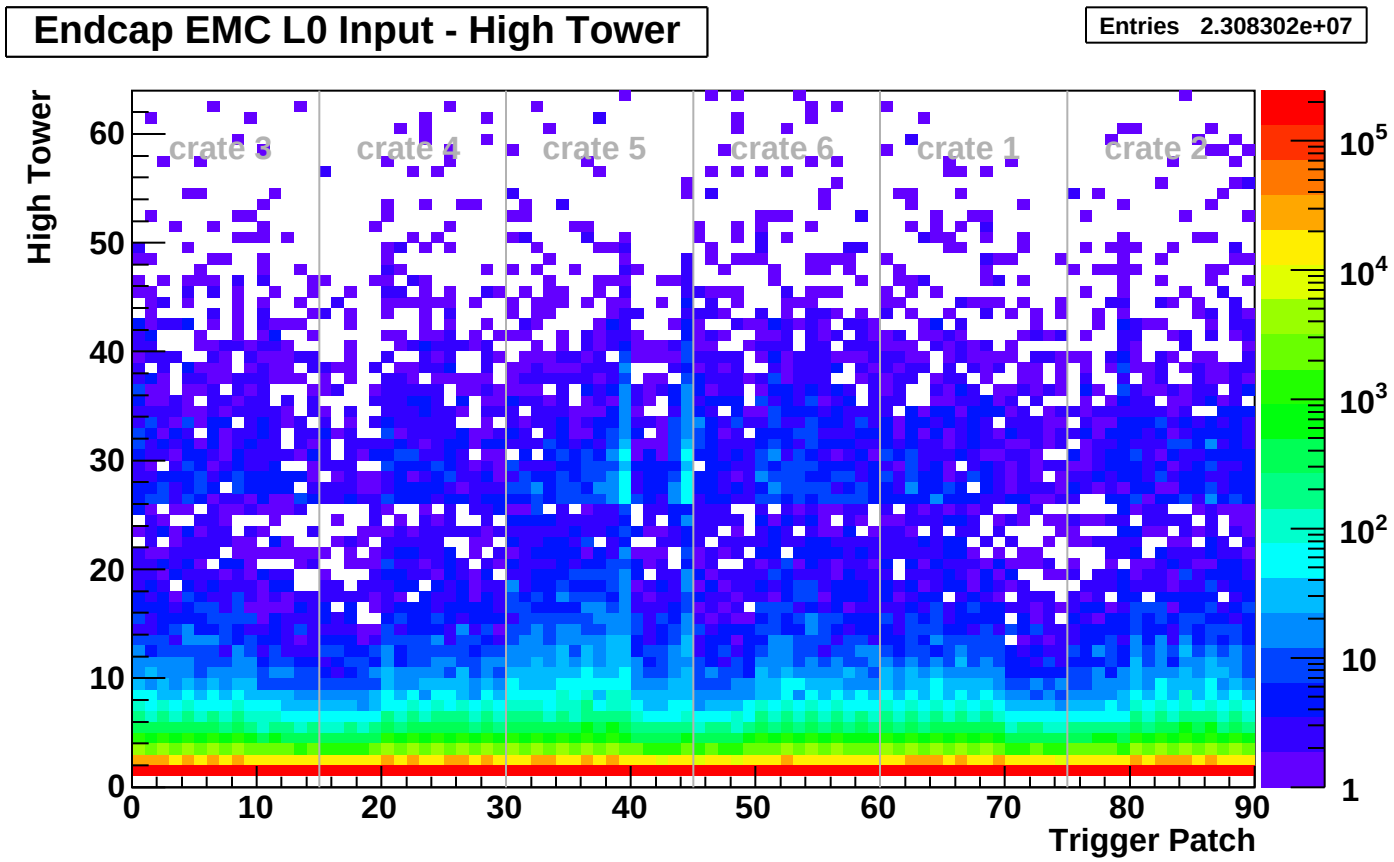

TCU bits
Entries 312915
TCU bits - Simulated
1
0
-1
-2
29903 67771 132853 5159 8129 68164 936
BIT1 BIT2 BHT-0 BHT-1 VPDMB EHT2 JP1 BBCMBLive-pre VPDMBLive-pre ZDCMB-pre ZDCpol MTD FMSfast FMSslow FMSled-FPE Zerobias
1

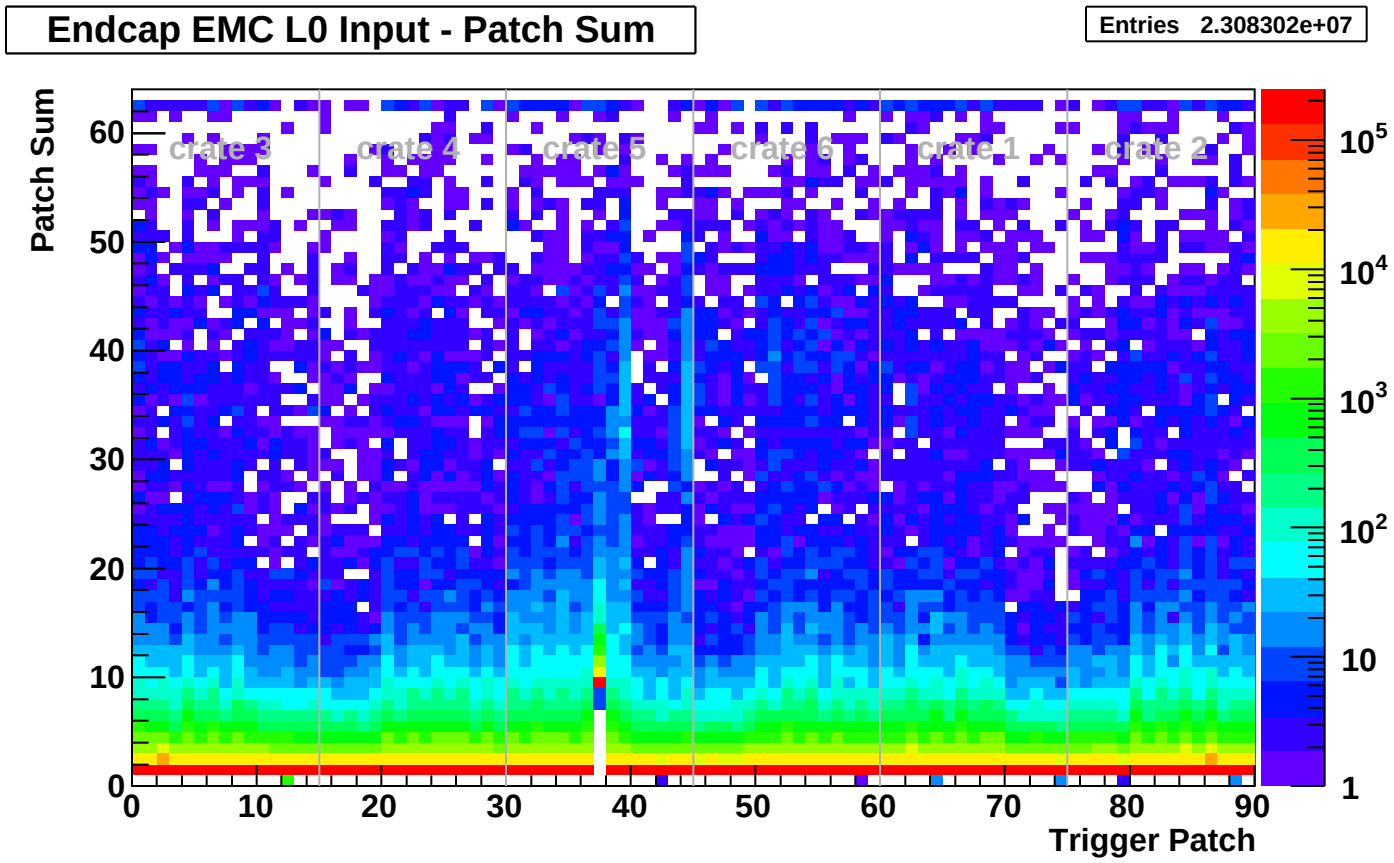

BunchId7Bit (BHT3)
Entries 5216
10^2
10
1
0 20 40 60 80 100 120

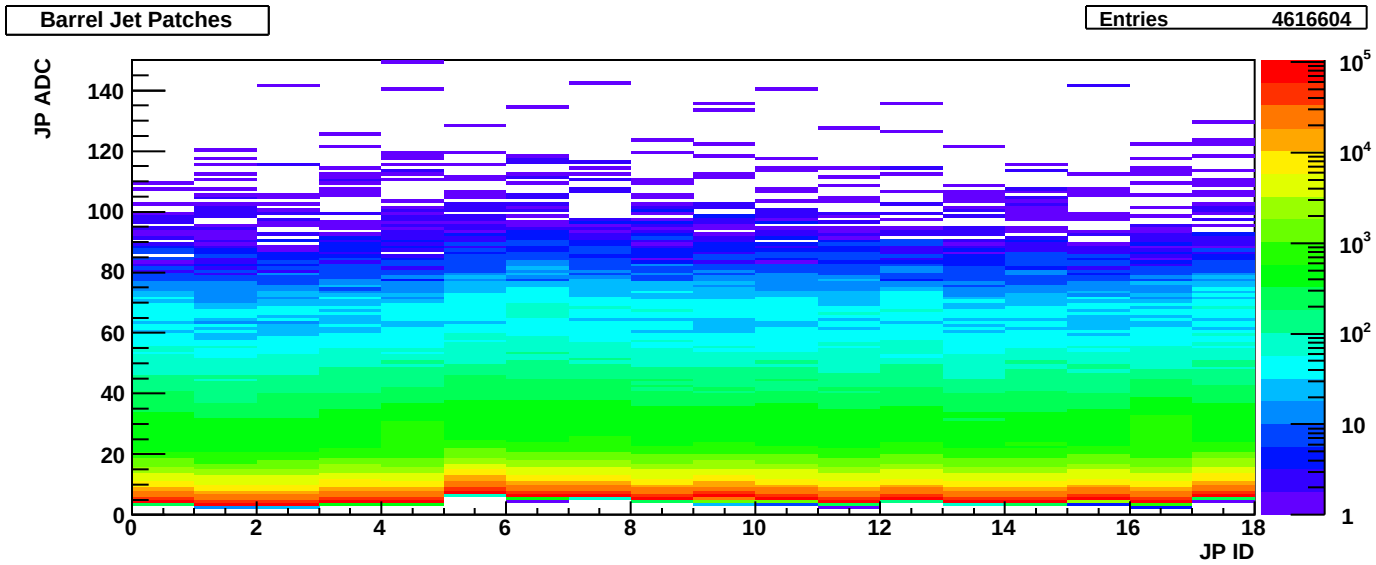

BunchId7Bit (all events)
Entries 256478
10^3
10^2
0 20 40 60 80 100 120

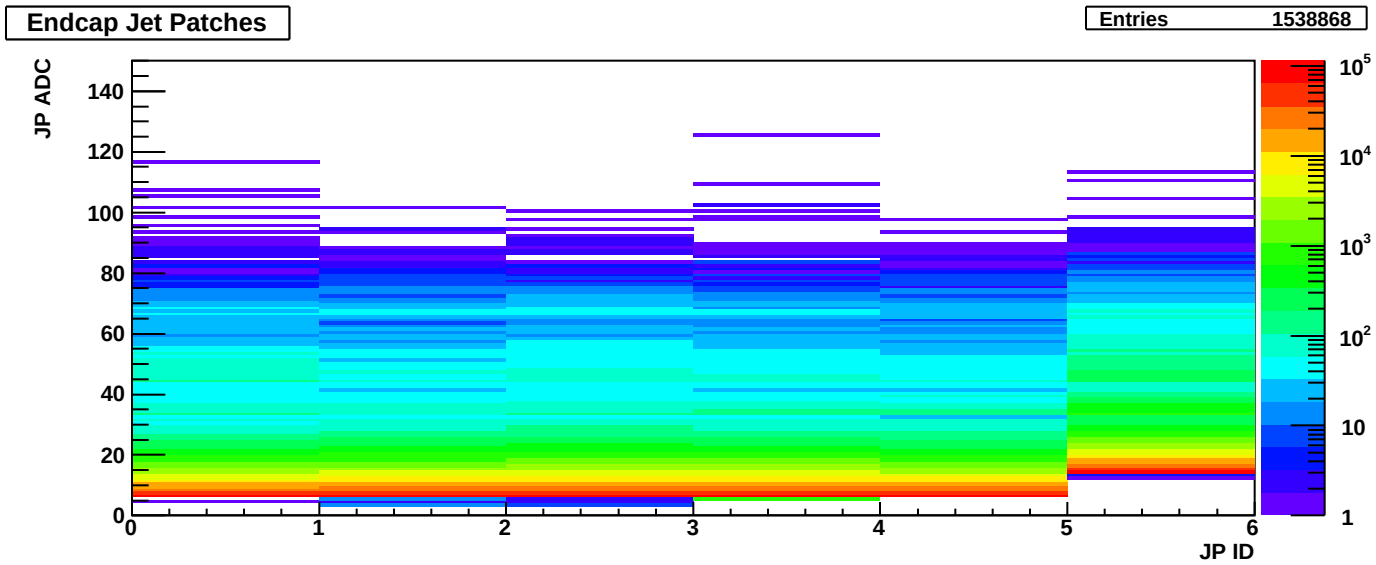

Barrel EMC L0 Input - High Tower
Entries 7.69434e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

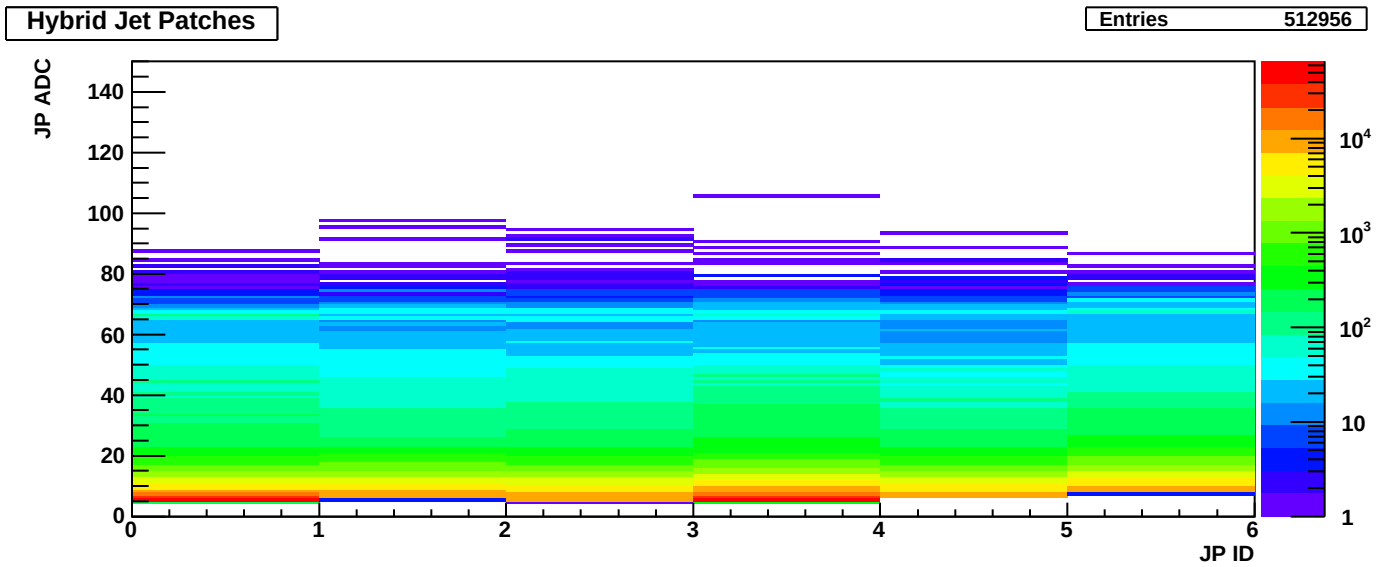

Barrel EMC L0 Input - Patch Sum
Entries 7.69434e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

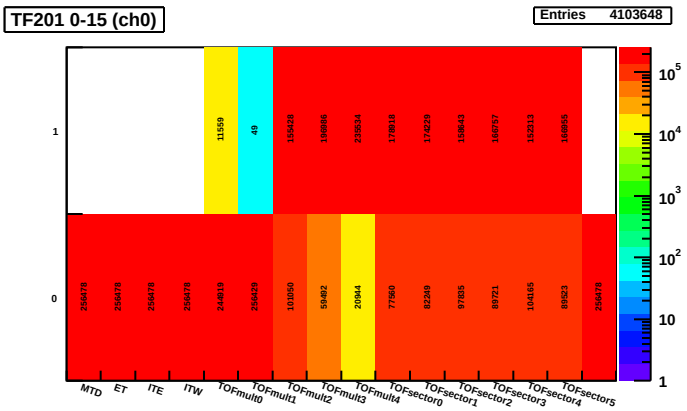

Endcap EMC L0 Input - High Tower
Entries 2.308302e+07
High Tower
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

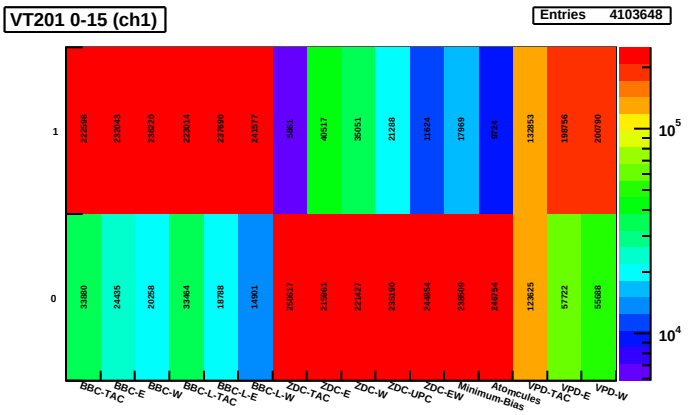

Endcap EMC L0 Input - Patch Sum
Entries 2.308302e+07
Patch Sum
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

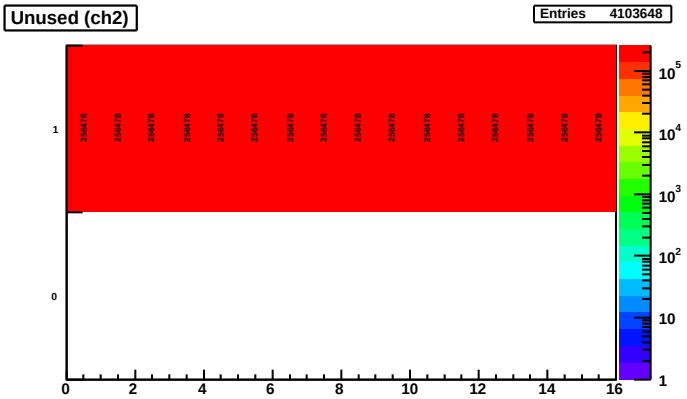

Barrel Jet Patches
Entries 4616604
JP ADC
JP ID

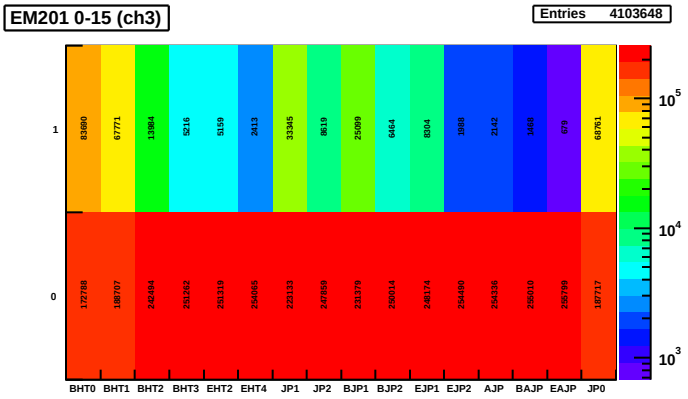

Endcap Jet Patches
Entries 1538868
JP ADC
JP ID

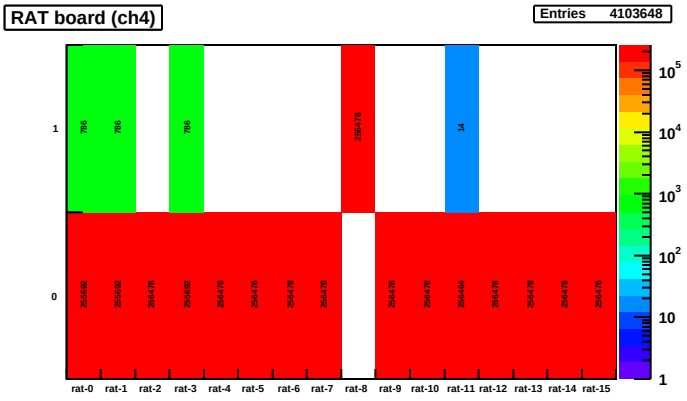

Hybrid Jet Patches
Entries 512956
JP ADC
JP ID

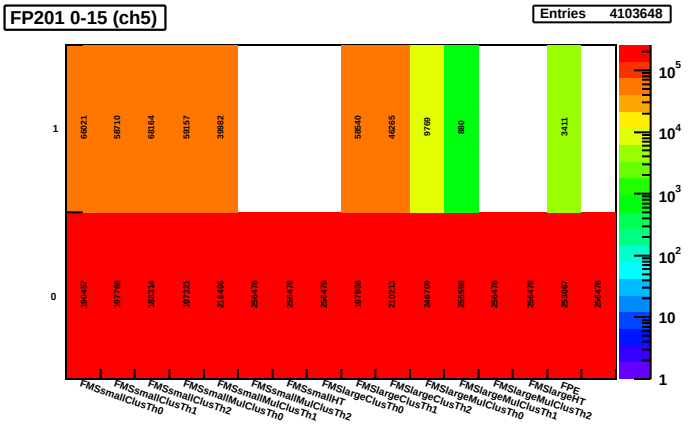

TF201 0-15 (ch0)
Entries 4103648
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5

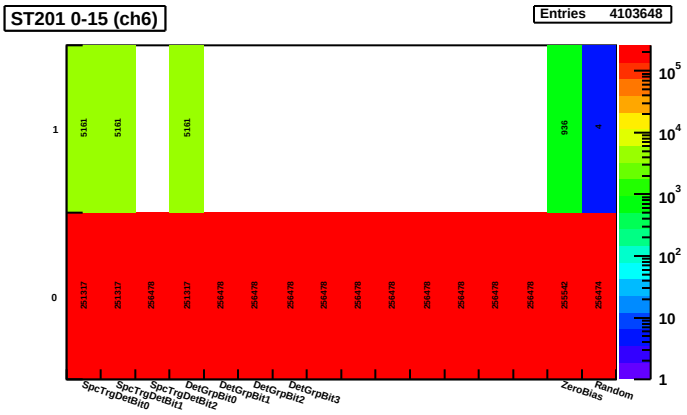

VT201 0-15 (ch1)
Entries 4103648
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-UPC ZDC-EW Minimum-Bias Atomcules VPD-TAC VPD-E VPD-W

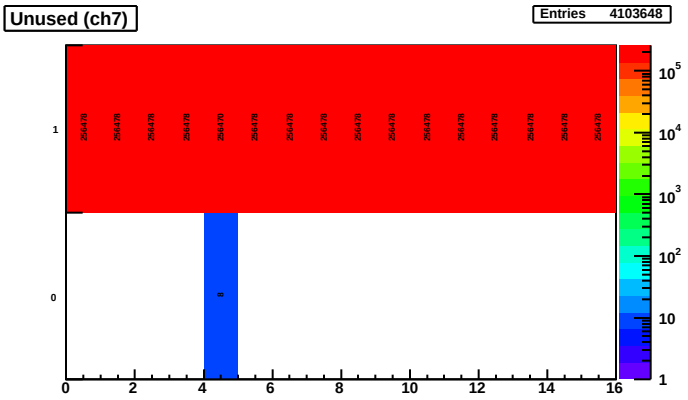

Unused (ch2)
Entries 4103648

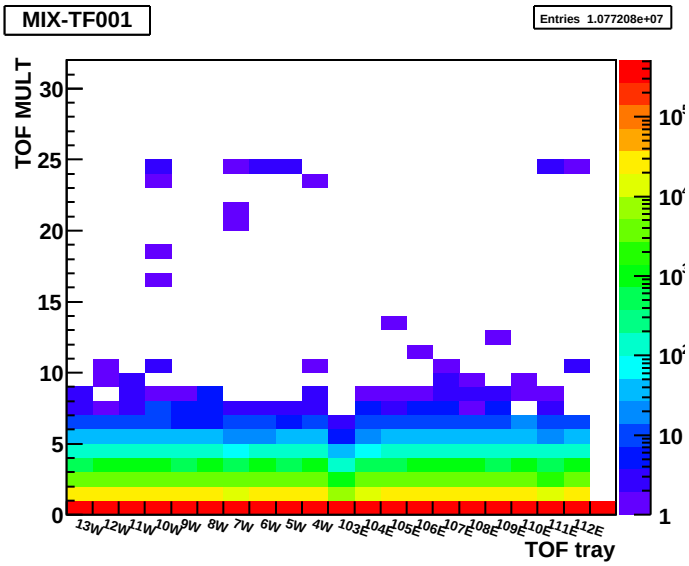

EM201 0-15 (ch3)
Entries 4103648
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

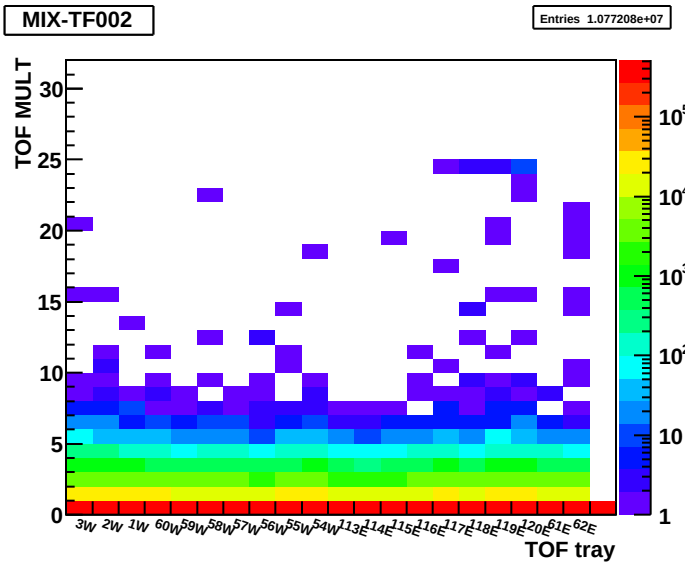

RAT board (ch4)
Entries 4103648
rat-0 rat-1 rat-2 rat-3 rat-4 rat-5 rat-6 rat-7 rat-8 rat-9 rat-10 rat-11 rat-12 rat-13 rat-14 rat-15

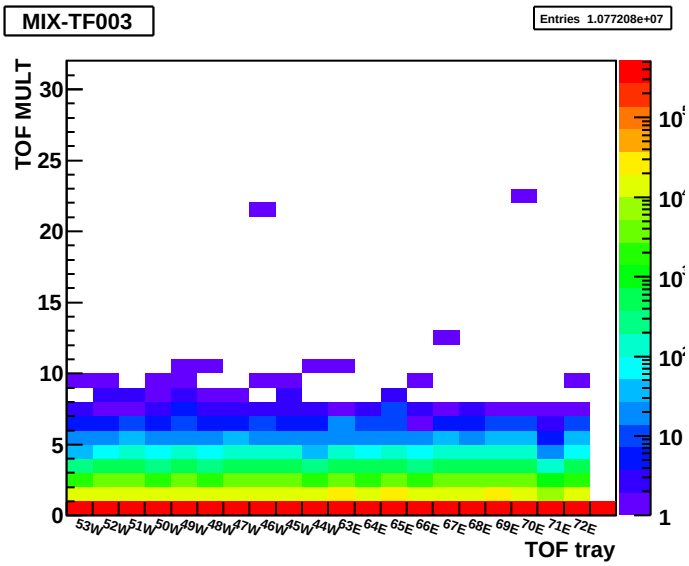

FP201 0-15 (ch5)
Entries 4103648
FMSsmallClusTh0 FMSsmallClusTh1 FMSsmallClusTh2 FMSsmallMulClusTh0 FMSsmallMulClusTh1 FMSsmallMulClusTh2 FMSsmallHT FMSlargeClusTh0 FMSlargeClusTh1 FMSlargeClusTh2 FMSlargeMulClusTh0 FMSlargeMulClusTh1 FMSlargeMulClusTh2 FMSlargeHT FPE

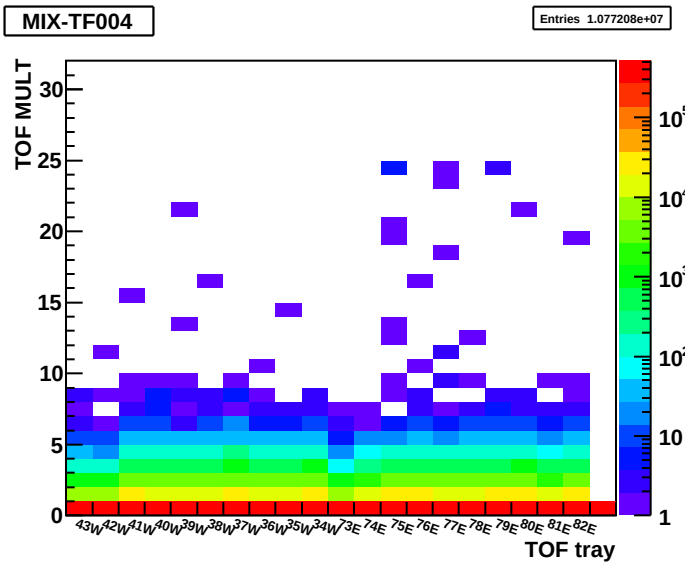

ST201 0-15 (ch6)
Entries 4103648
SpcTrgDetBit0 SpcTrgDetBit1 SpcTrgDetBit2 DetCrpBit0 DetCrpBit1 DetCrpBit2 DetCrpBit3 ZeroBias Random

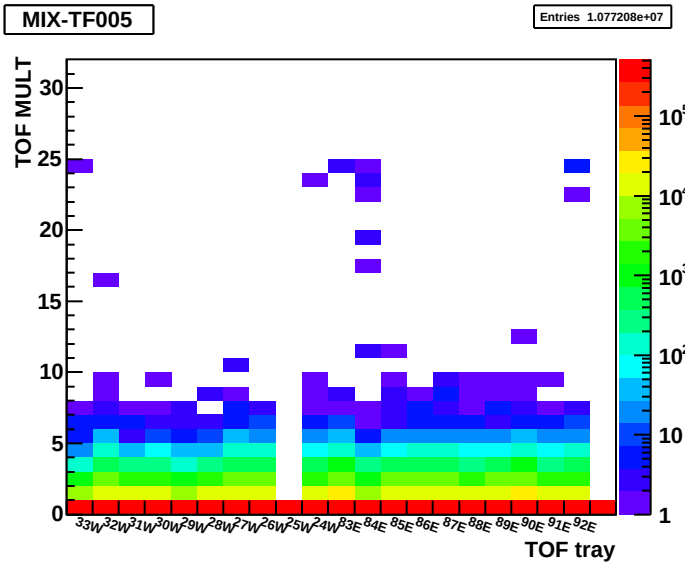

Unused (ch7)
Entries 4103648

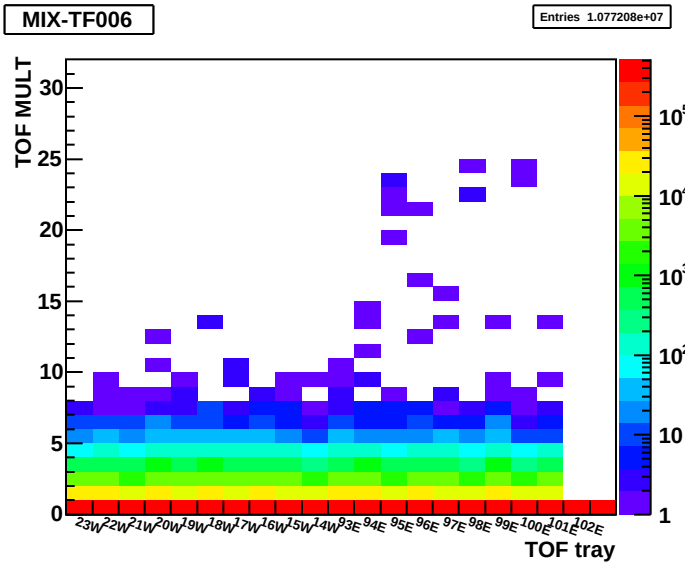

MIX-TF001
Entries 1.077208e+07
TOF MULT
TOF tray

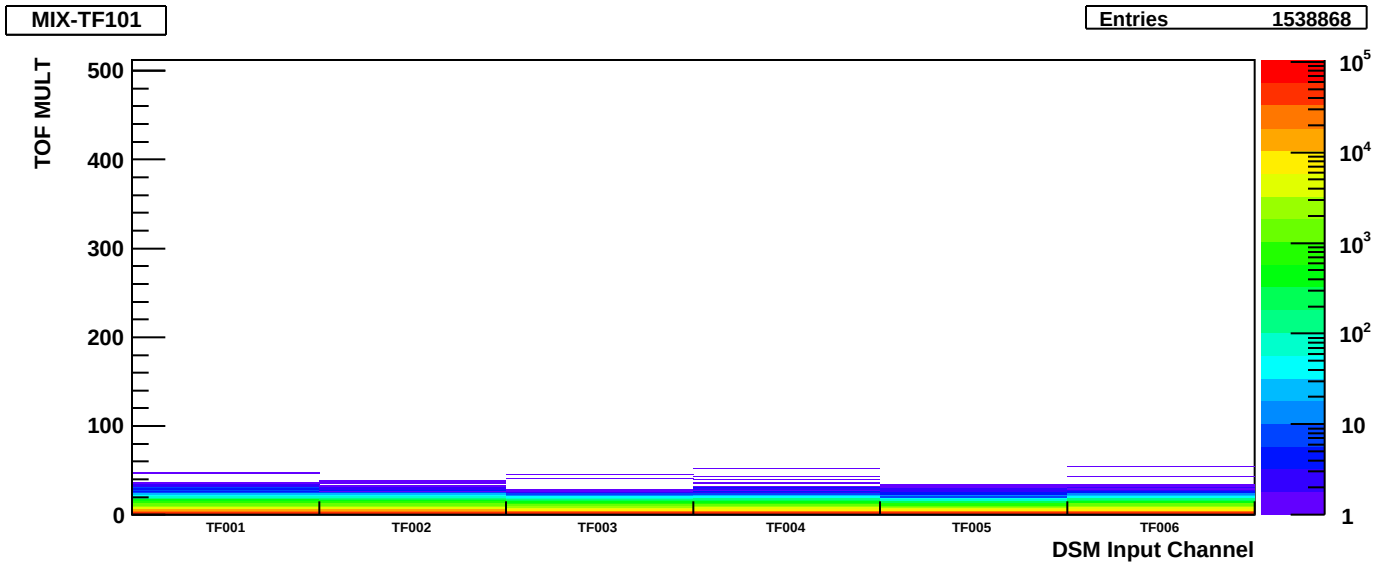

MIX-TF002
Entries 1.077208e+07
TOF MULT
TOF tray

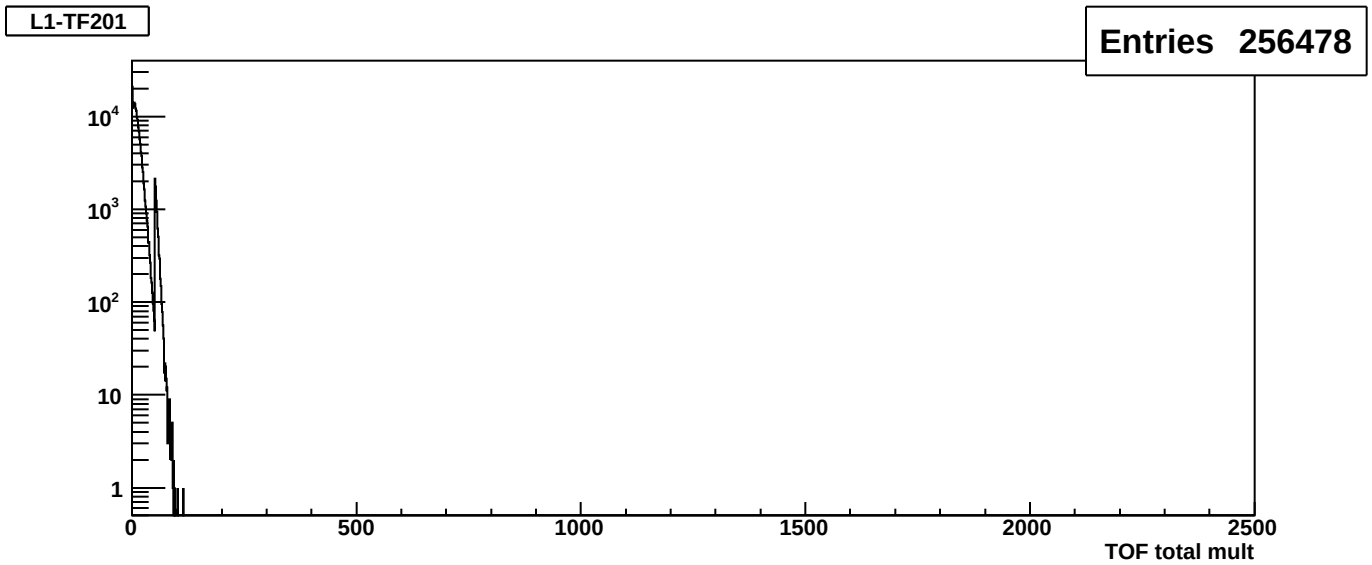

MIX-TF003
Entries 1.077208e+07
TOF MULT
TOF tray

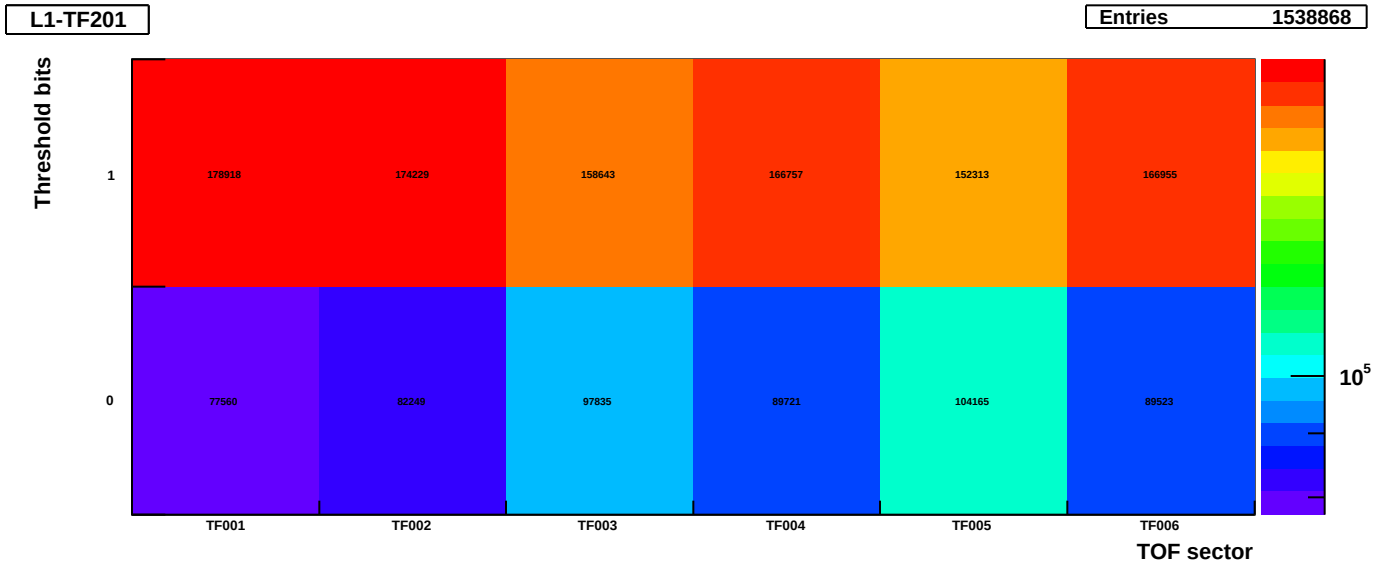

MIX-TF004
Entries 1.077208e+07
TOF MULT
TOF tray

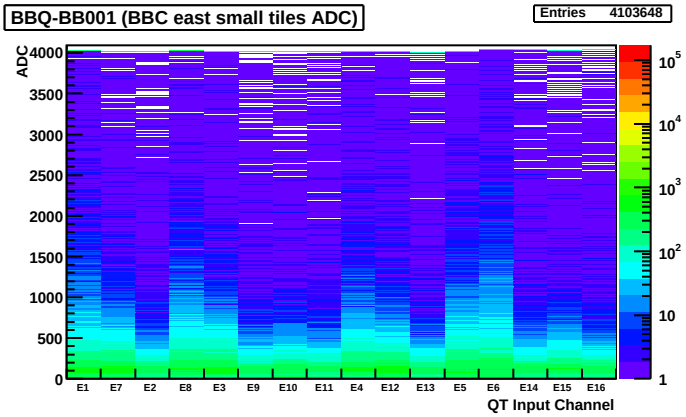

MIX-TF005
Entries 1.077208e+07
TOF MULT
TOF tray

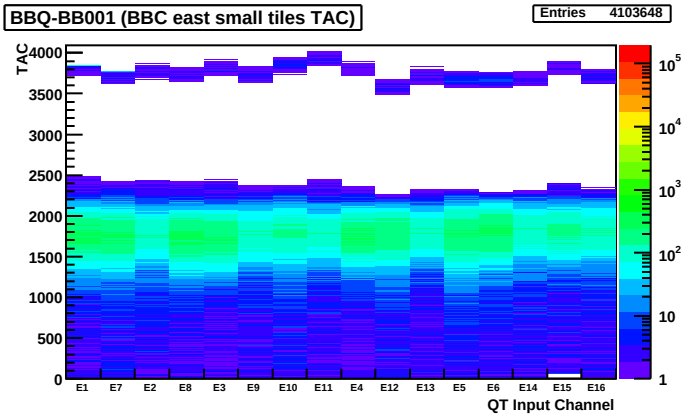

MIX-TF006
Entries 1.077208e+07
TOF MULT
TOF tray

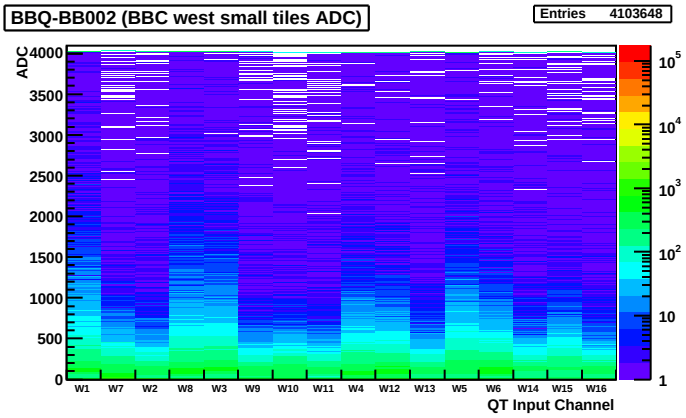

MIX-TF101
Entries 1538868
TOF MULT
500
400
300
200
100
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

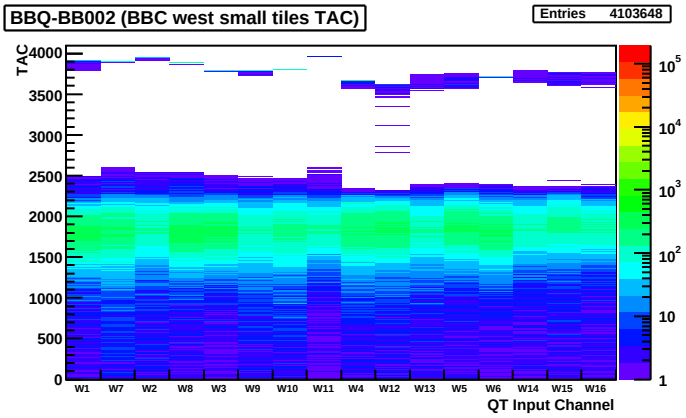

L1-TF201
Entries 256478
10^4
10^3
10^2
10
1
0
500
1000
1500
2000
2500
TOF total mult

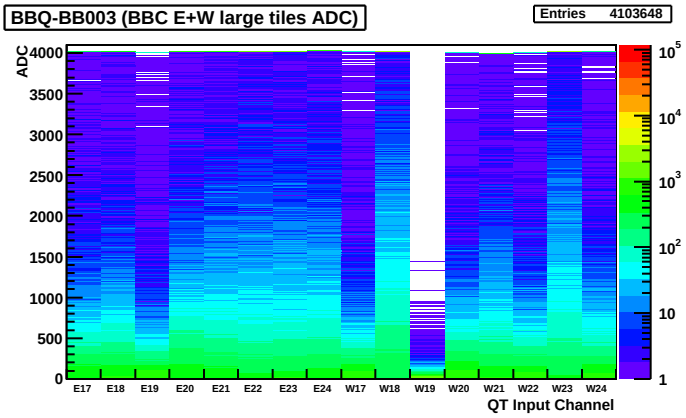

L1-TF201
Entries 1538868
Threshold bits
1
0
178918
174229
158643
166757
152313
166955
77560
82249
97835
89721
104165
89523
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^5

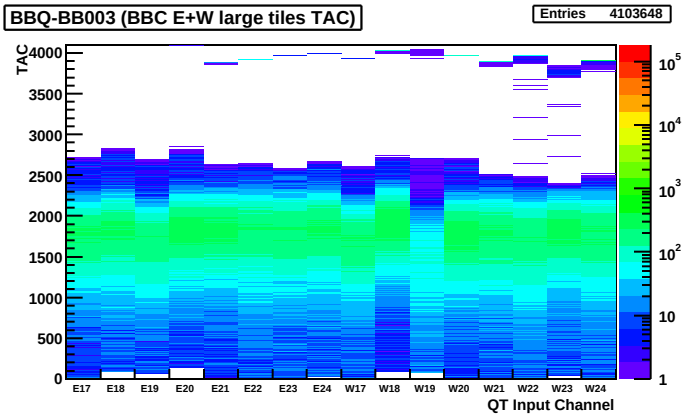

BBQ-BB001 (BBC east small tiles ADC)
Entries 4103648
ADC
QT Input Channel

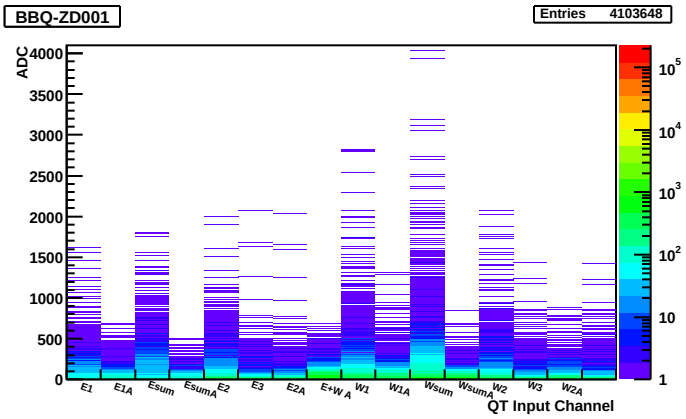

BBQ-BB001 (BBC east small tiles TAC)
Entries 4103648
TAC
QT Input Channel

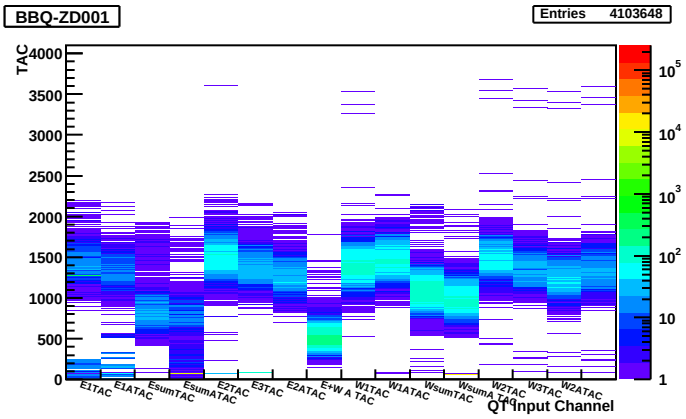

BBQ-BB002 (BBC west small tiles ADC)
Entries 4103648
ADC
QT Input Channel

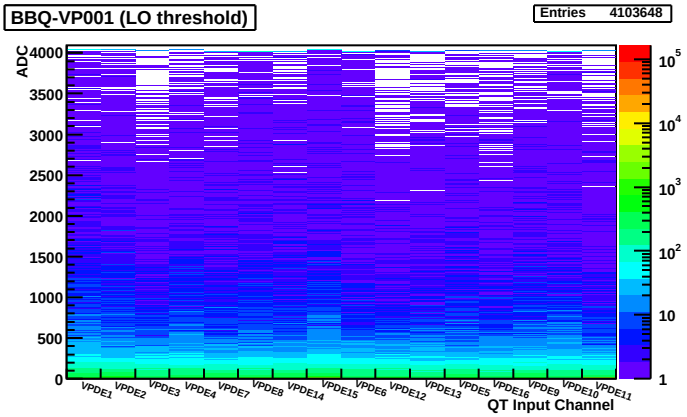

BBQ-BB002 (BBC west small tiles TAC)
Entries 4103648
TAC
QT Input Channel

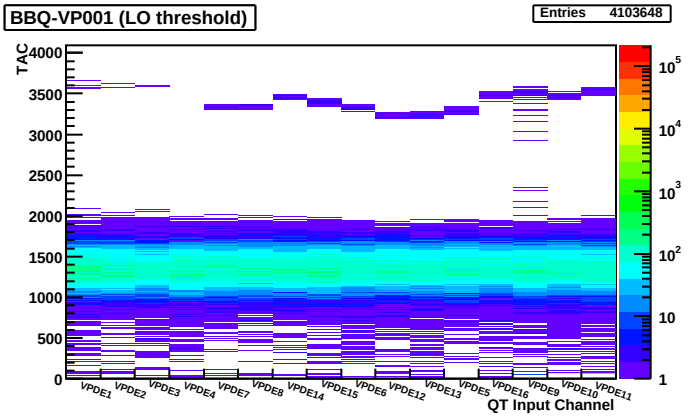

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 4103648
ADC
QT Input Channel

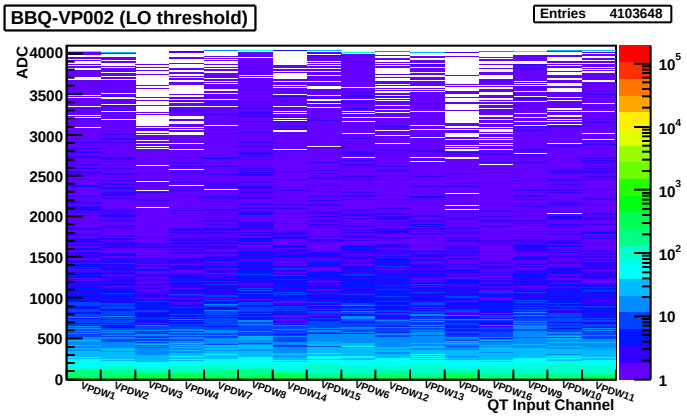

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 4103648
TAC
QT Input Channel

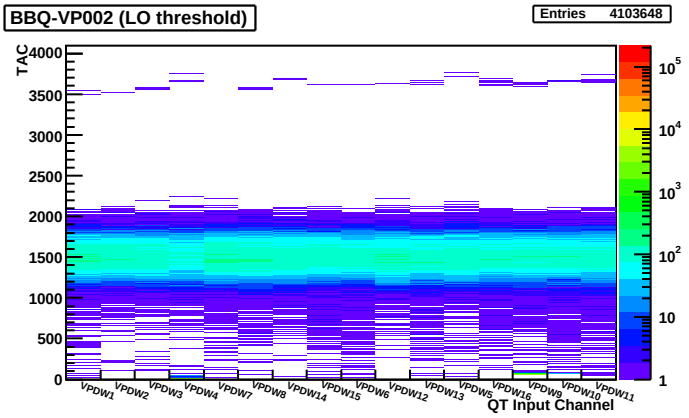

BBQ-ZD001
Entries 4103648
ADC
QT Input Channel

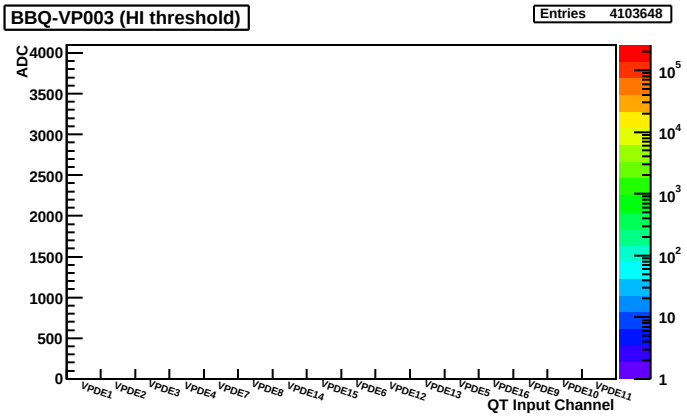

BBQ-ZD001
Entries 4103648
TAC
QT Input Channel

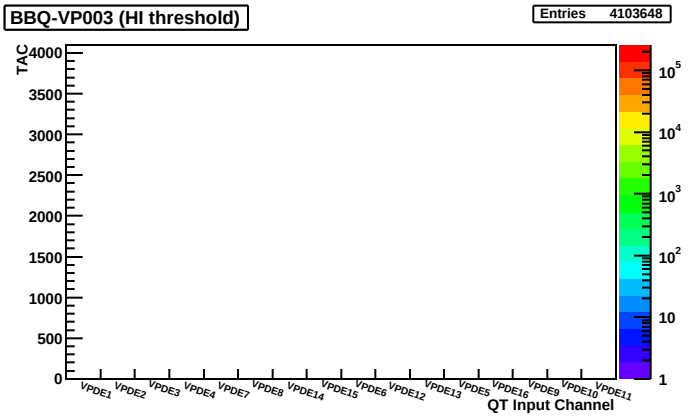

BBQ-VP001 (LO threshold)
Entries 4103648
ADC
QT Input Channel

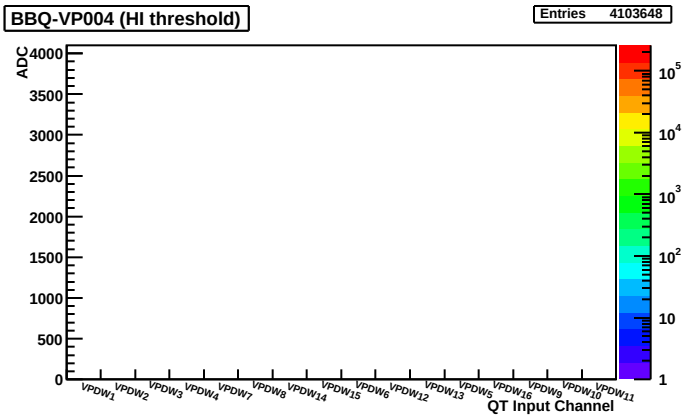

BBQ-VP001 (LO threshold)
Entries 4103648
TAC
QT Input Channel

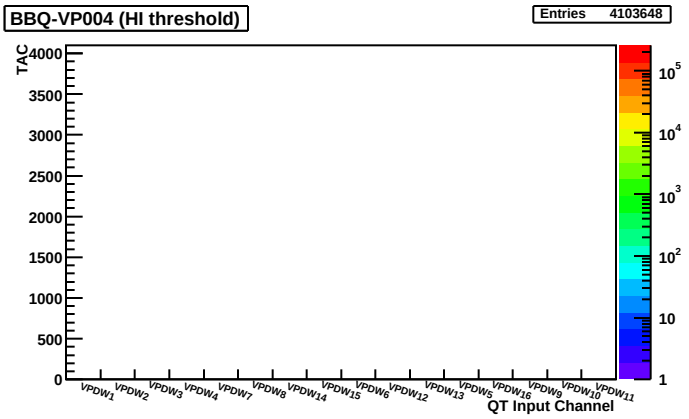

BBQ-VP002 (LO threshold)
Entries 4103648
ADC
QT Input Channel

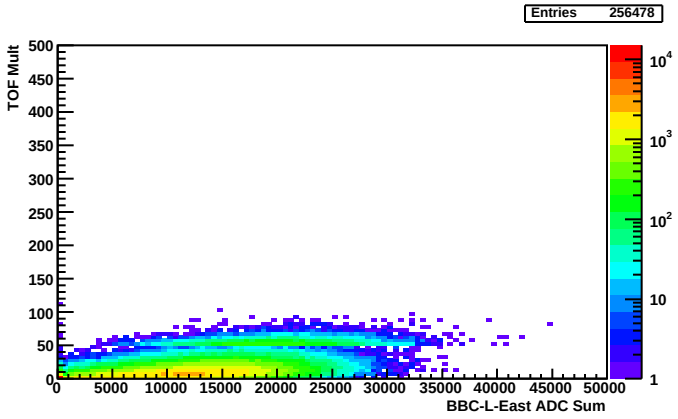

BBQ-VP002 (LO threshold)
Entries 4103648
TAC
QT Input Channel

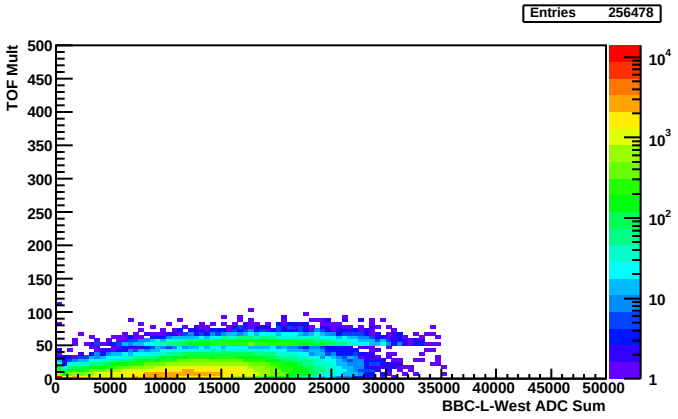

BBQ-VP003 (HI threshold)
Entries 4103648
ADC
QT Input Channel

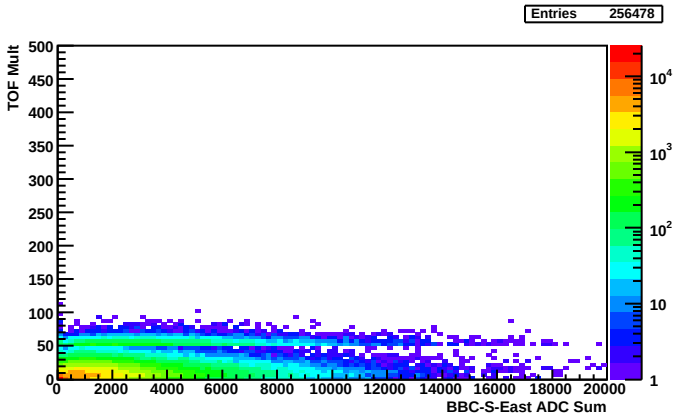

BBQ-VP003 (HI threshold)
Entries 4103648
TAC
QT Input Channel

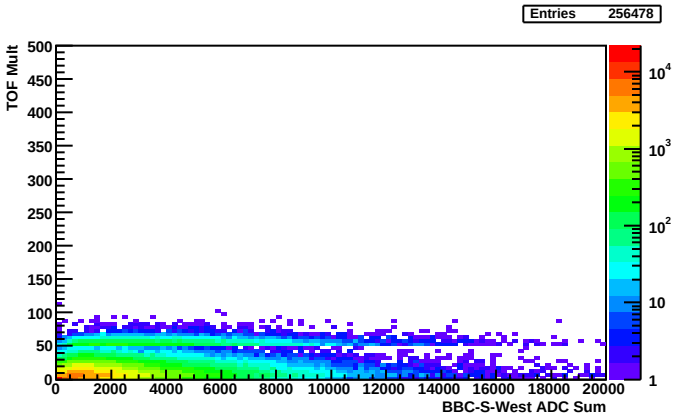

BBQ-VP004 (HI threshold)
Entries 4103648
ADC
QT Input Channel

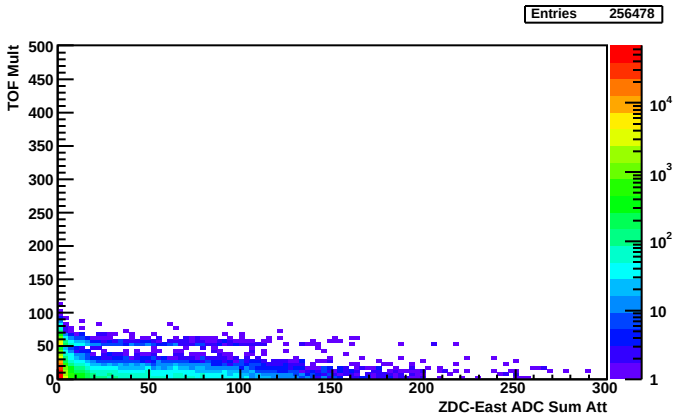

BBQ-VP004 (HI threshold)
Entries 4103648
TAC
QT Input Channel

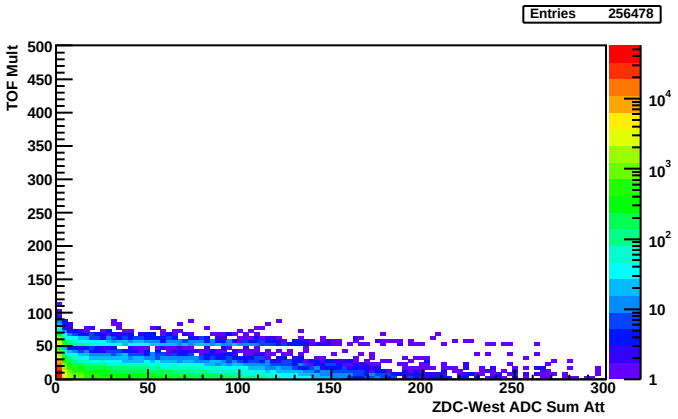

Entries 256478
TOF Mult
BBC-L-East ADC Sum

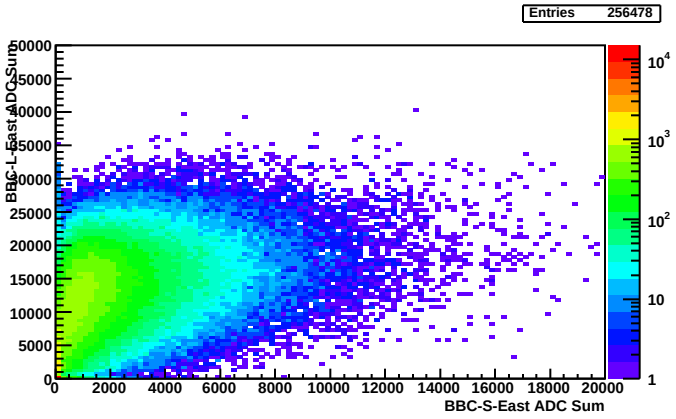

Entries 256478
TOF Mult
BBC-L-West ADC Sum

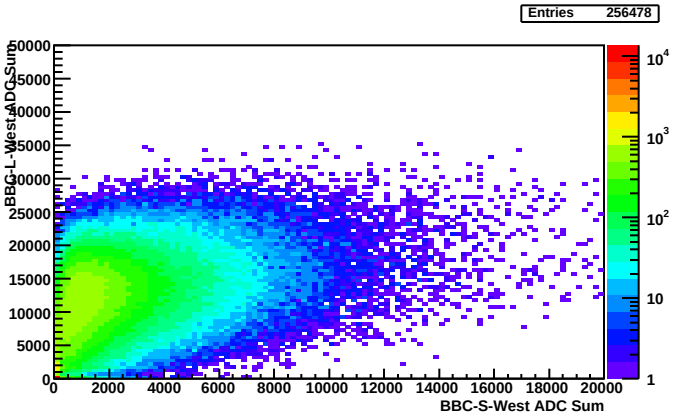

Entries 256478
TOF Mult
BBC-S-East ADC Sum

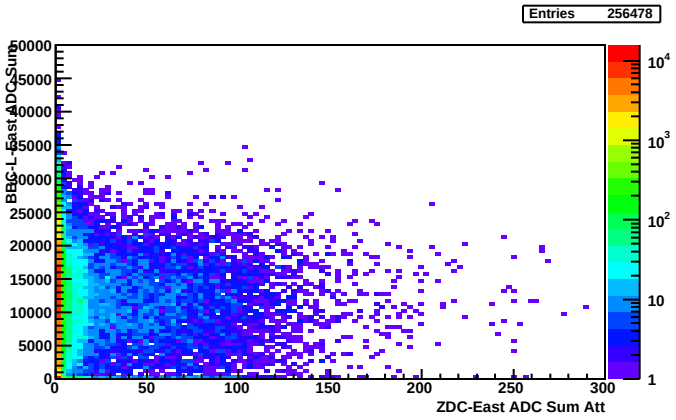

Entries 256478
TOF Mult
BBC-S-West ADC Sum

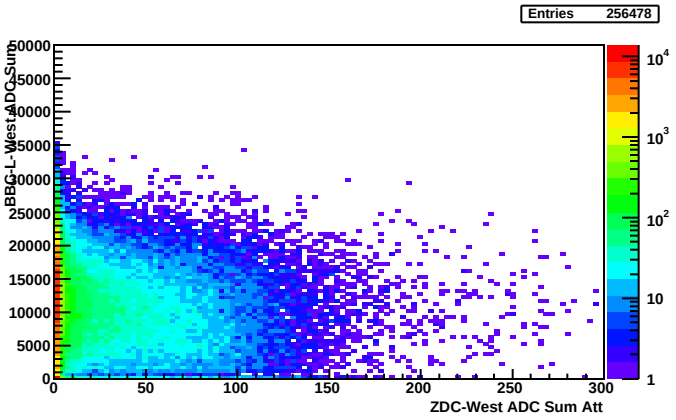

Entries 256478
TOF Mult
ZDC-East ADC Sum Att

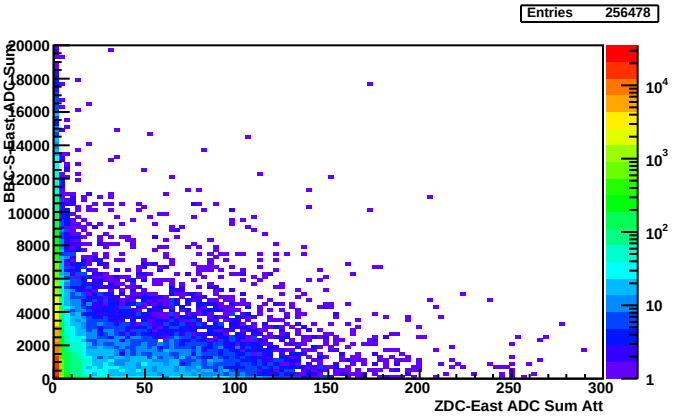

Entries 256478
TOF Mult
ZDC-West ADC Sum Att

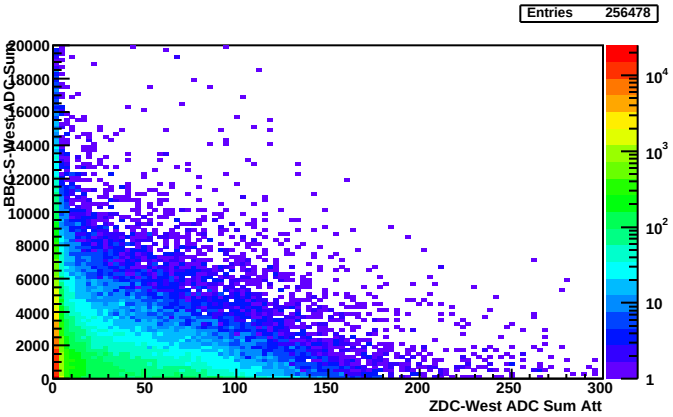

Entries 256478
BBC-L-East ADC Sum
BBC-S-East ADC Sum

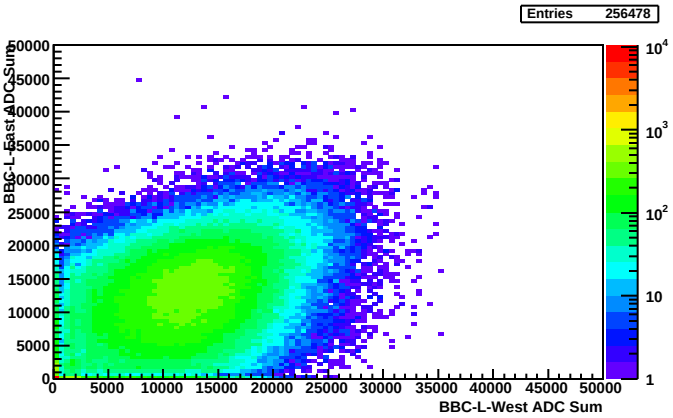

Entries 256478
BBC-L-West ADC Sum
BBC-S-West ADC Sum

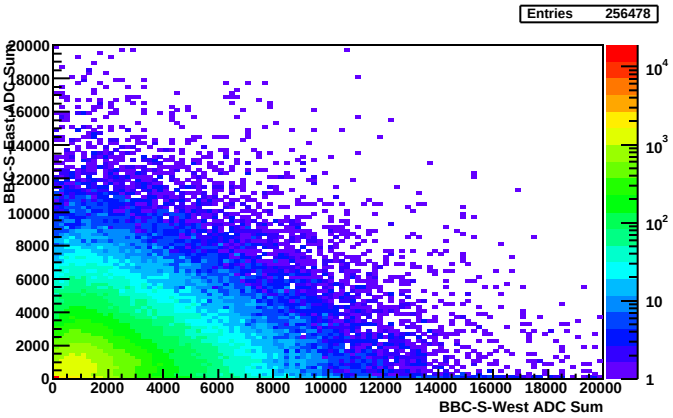

Entries 256478
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

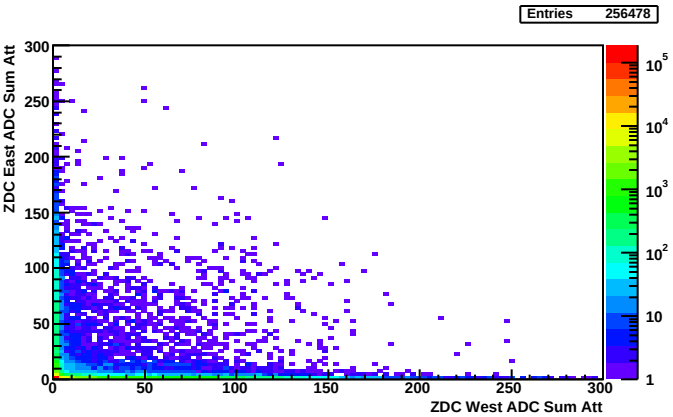

Entries 256478
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

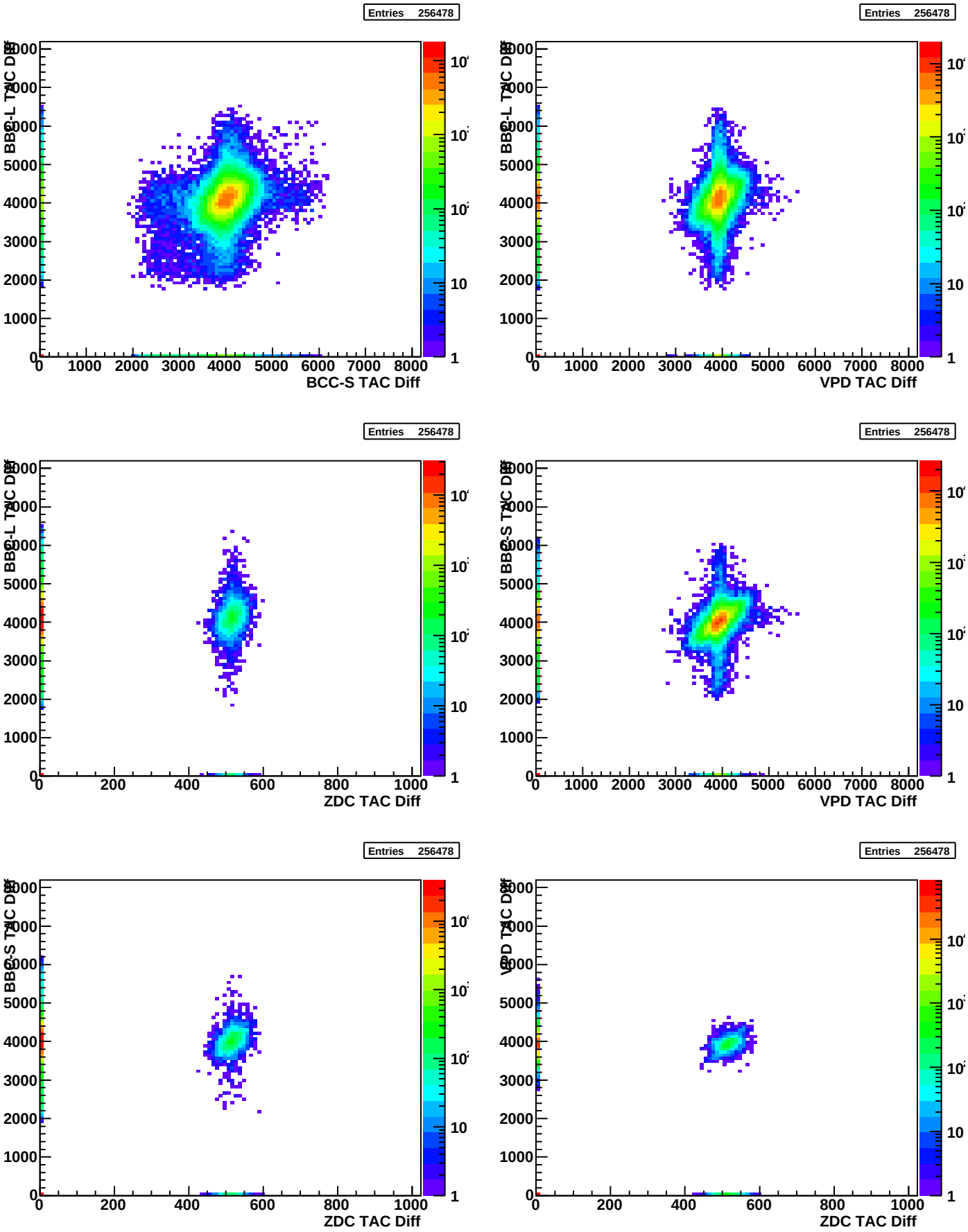

Entries 256478
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

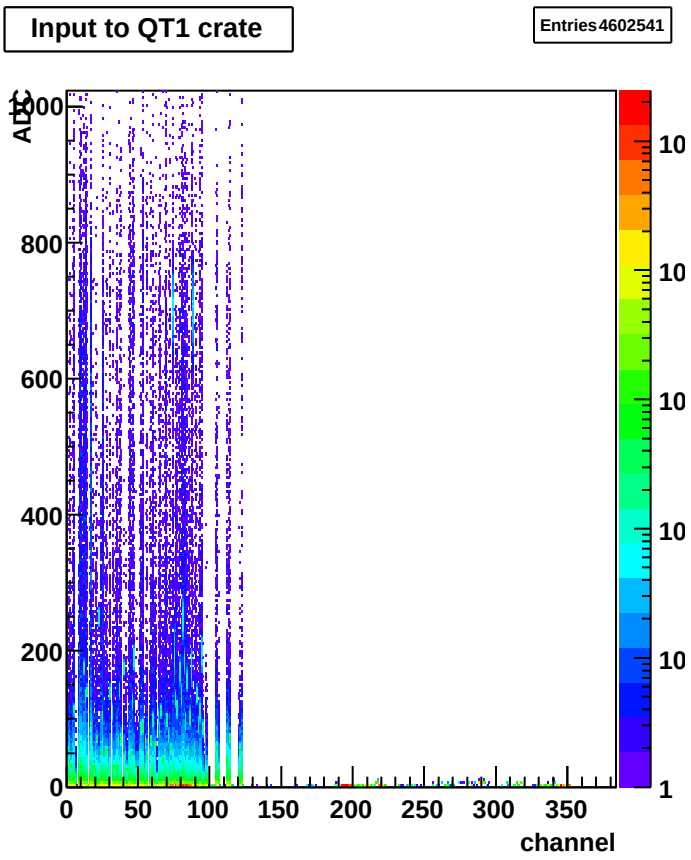

Entries 256478
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

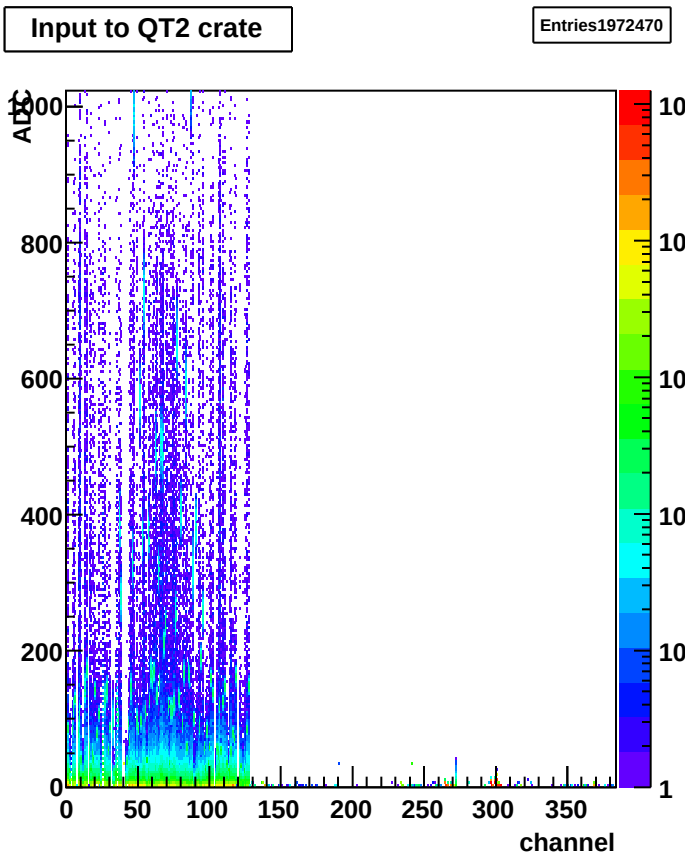

Entries 256478
BBC-L-East ADC Sum
BBC-L-West ADC Sum

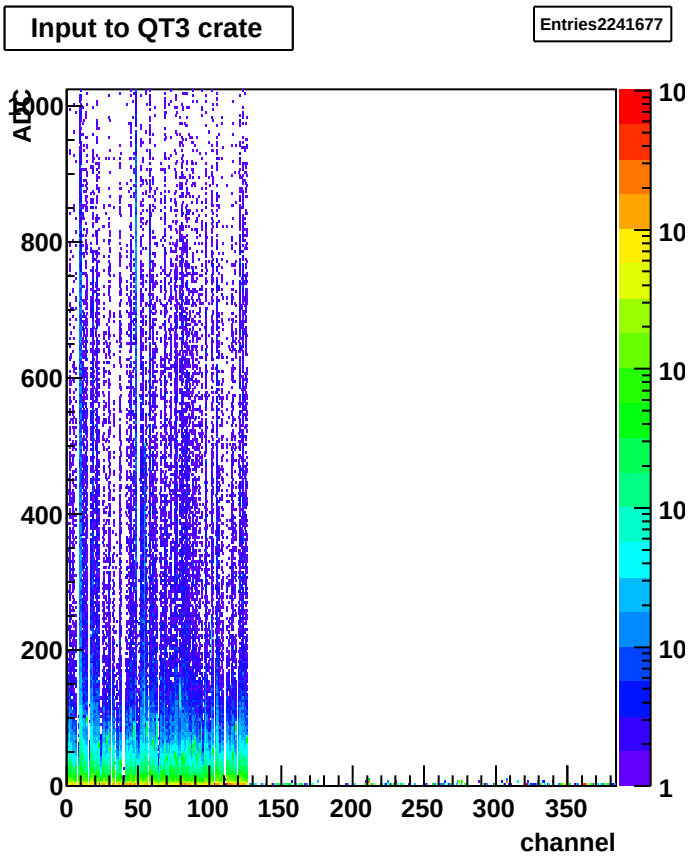

Entries 256478
BBC-S-East ADC Sum
BBC-S-West ADC Sum

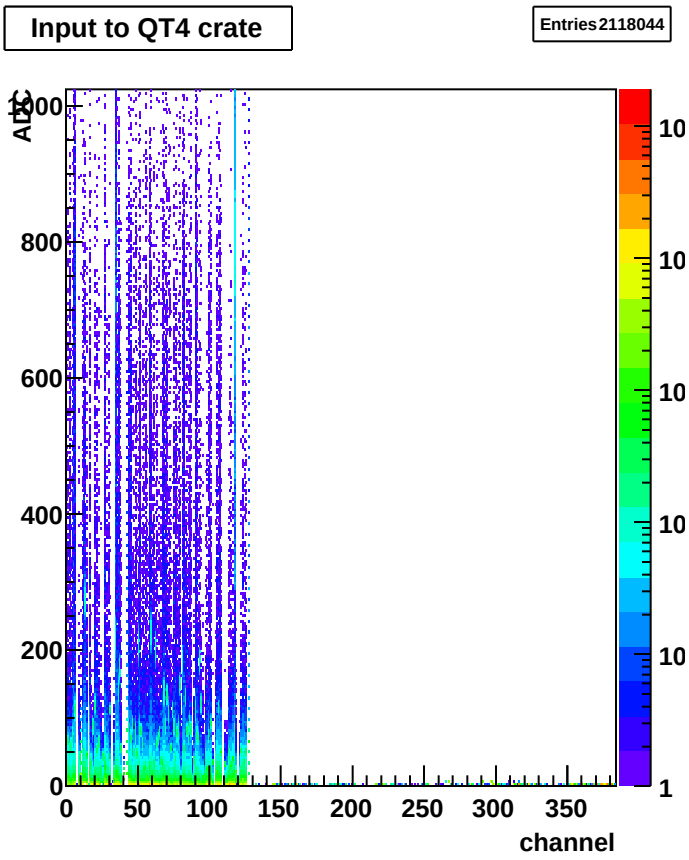

Entries 256478
ZDC East ADC Sum Att
ZDC West ADC Sum Att

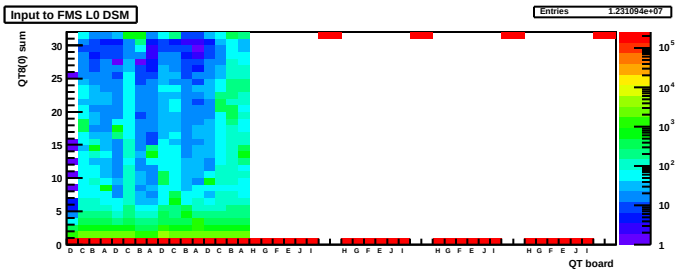

Entries 256478
BBC-L TAC Diff
BCC-S TAC Diff
Entries 256478
BBC-L TAC Diff
VPD TAC Diff
Entries 256478
BBC-L TAC Diff
ZDC TAC Diff
Entries 256478
BBC-S TAC Diff
VPD TAC Diff
Entries 256478
BBC-S TAC Diff
ZDC TAC Diff
Entries 256478
VPD TAC Diff
ZDC TAC Diff

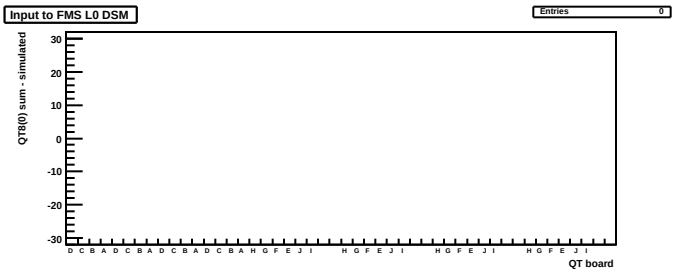

Input to QT1 crate
Entries 4602541
ADC
channel

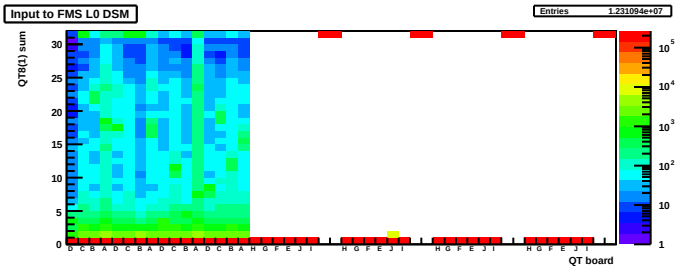

Input to QT2 crate
Entries 1972470
ADC
channel

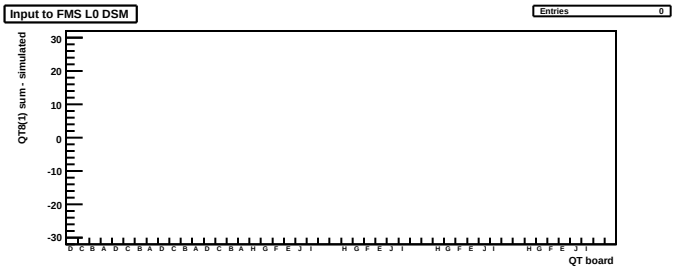

Input to QT3 crate
Entries 2241677
ADC
channel

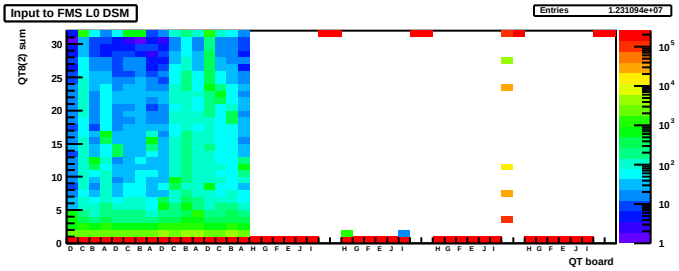

Input to QT4 crate
Entries 2118044
ADC
channel

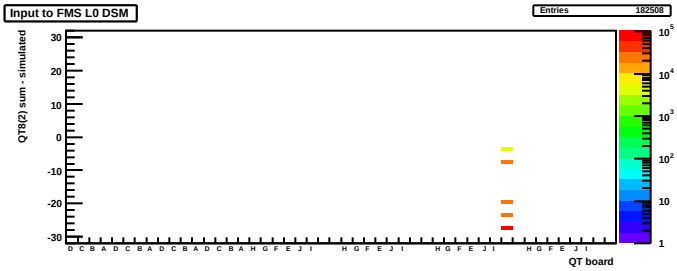

Input to FMS L0 DSM
Entries 1.231094e+07
QT8(0) sum
QT board

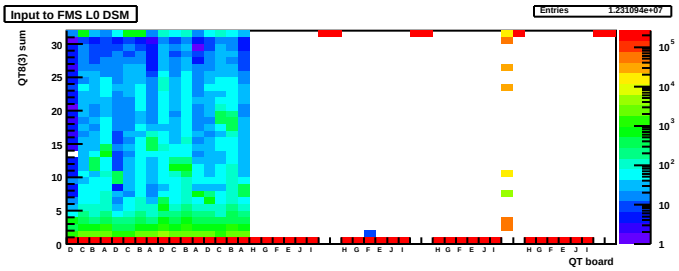

Input to FMS L0 DSM
Entries 0
QT8(0) sum - simulated
QT board

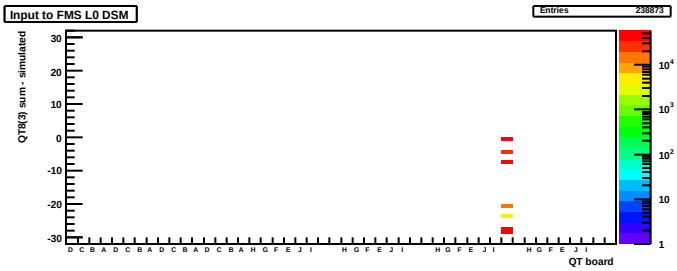

Input to FMS L0 DSM
Entries 1.231094e+07
QT8(1) sum
QT board

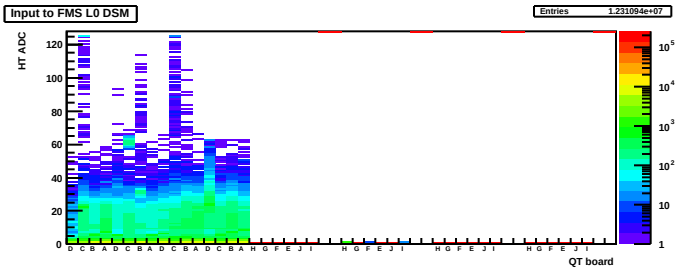

Input to FMS L0 DSM
Entries 0
QT8(1) sum - simulated
QT board

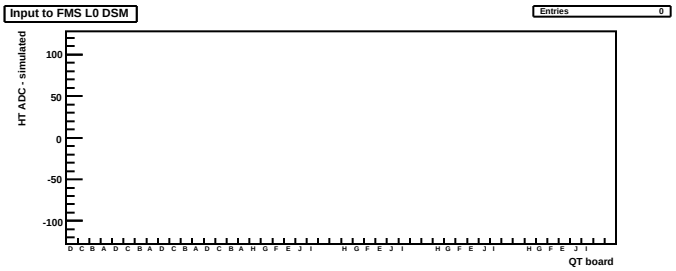

Input to FMS L0 DSM
Entries 1.231094e+07
QT8(2) sum
QT board

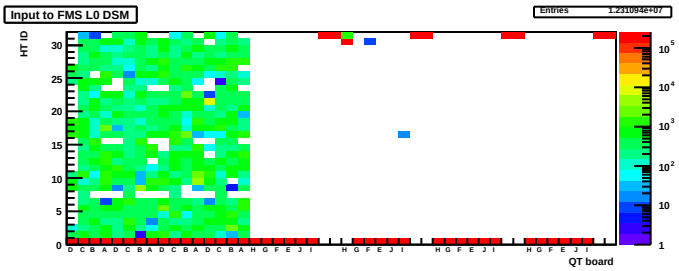

Input to FMS L0 DSM
Entries 182508
QT8(2) sum - simulated
QT board

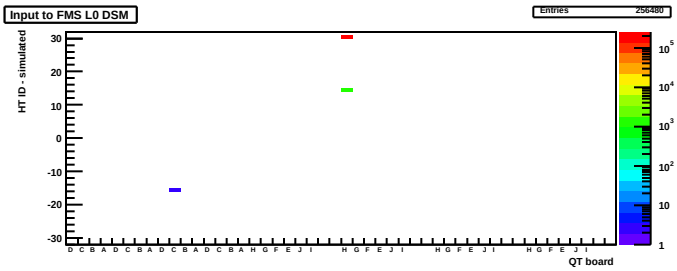

Input to FMS L0 DSM
Entries 1.231094e+07
QT8(3) sum
QT board

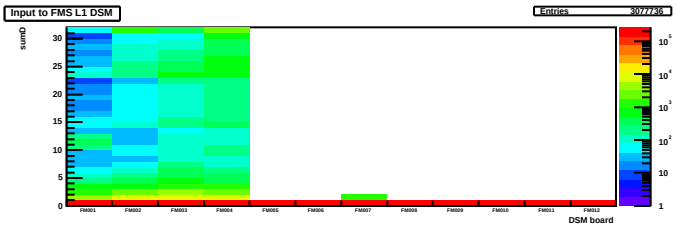

Input to FMS L0 DSM
Entries 238873
QT8(3) sum - simulated
QT board

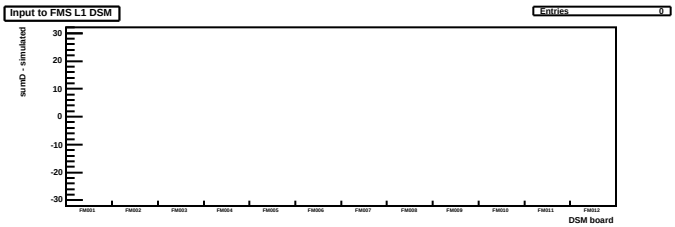

Input to FMS L0 DSM
Entries 1.231094e+07
HT ADC
QT board

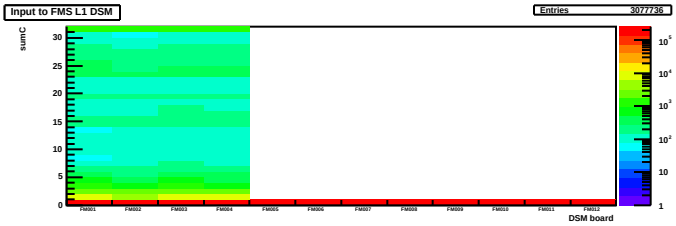

Input to FMS L0 DSM
Entries 0
HT ADC - simulated
QT board

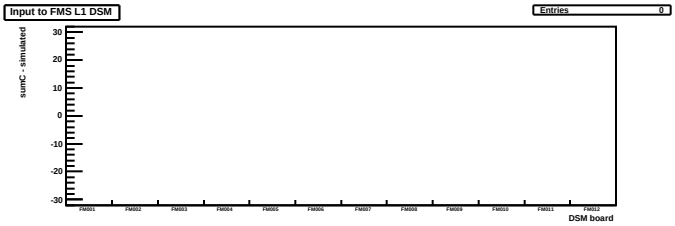

Input to FMS L0 DSM
Entries 1.231094e+07
HT ID
QT board

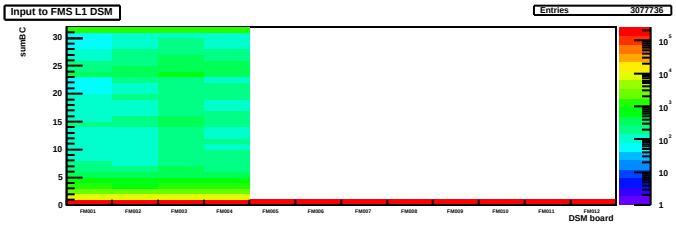

Input to FMS L0 DSM
Entries 256480
HT ID - simulated
QT board

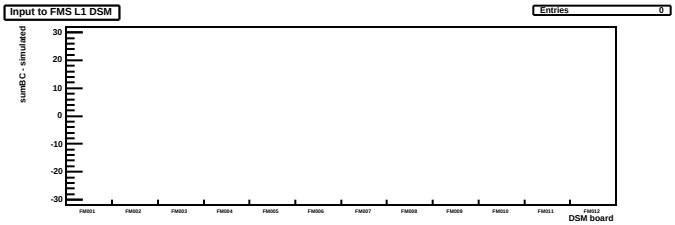

Input to FMS L1 DSM
Entries 3077736
sumD
DSM board

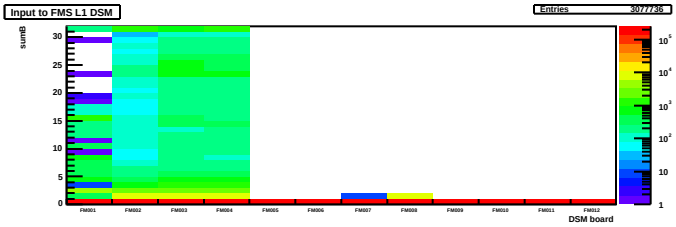

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

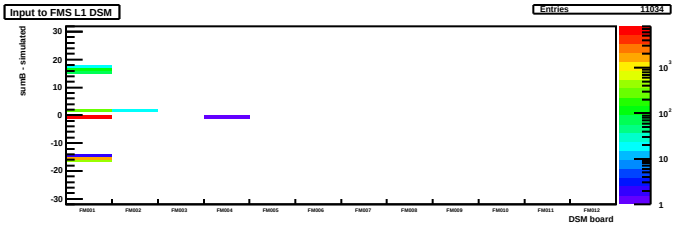

Input to FMS L1 DSM
Entries 3077736
sumC
DSM board

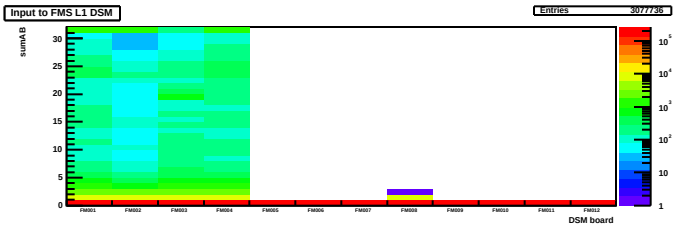

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

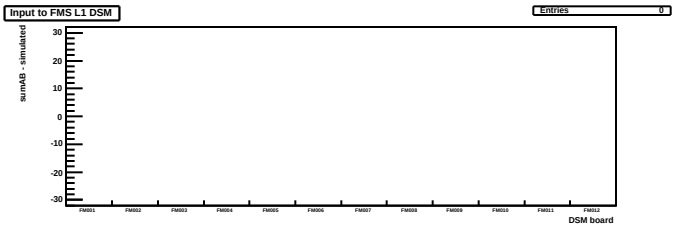

Input to FMS L1 DSM
Entries 3077736
sumBC
DSM board

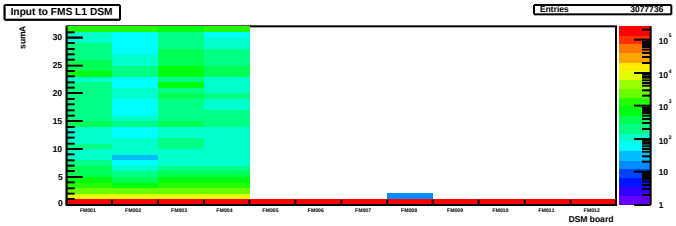

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

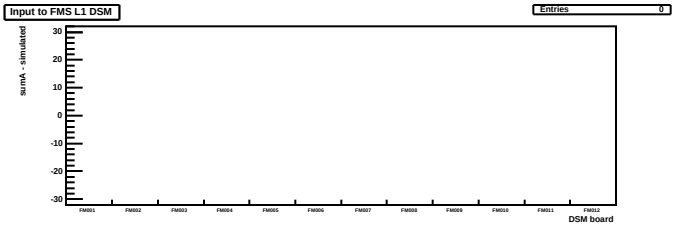

Input to FMS L1 DSM
Entries 3077736
sumB
DSM board

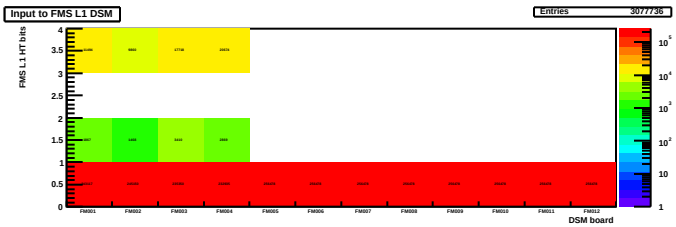

Input to FMS L1 DSM
Entries 11034
sumB - simulated
DSM board

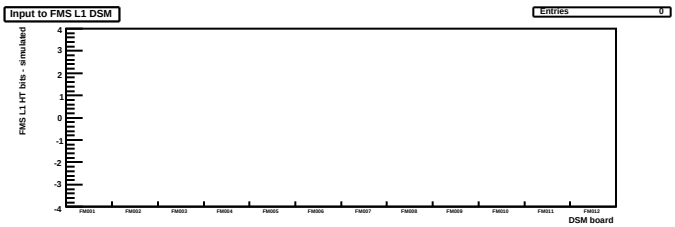

Input to FMS L1 DSM
Entries 3077736
sumAB
DSM board

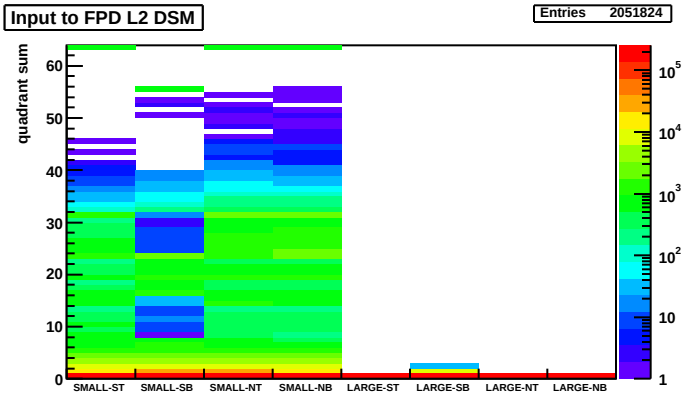

Input to FMS L1 DSM
Entries 0
sumAB - simulated
DSM board

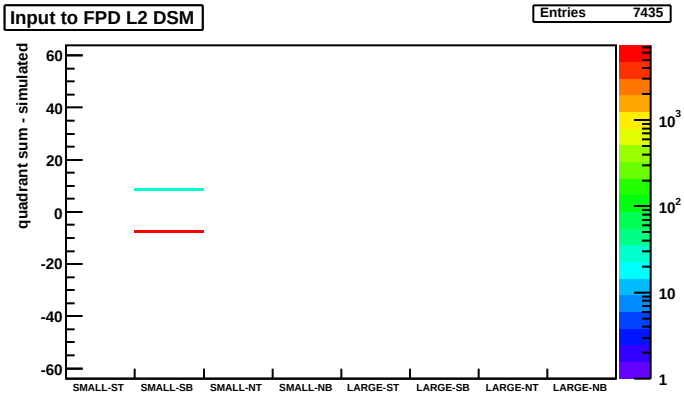

Input to FMS L1 DSM
Entries 3077736
sumA
DSM board

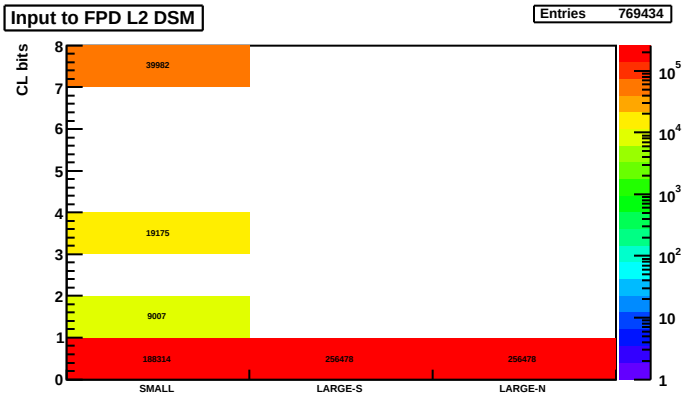

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

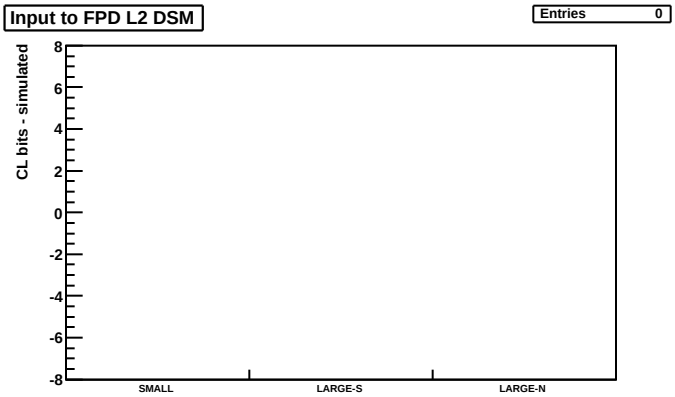

Input to FMS L1 DSM
Entries 3077736
FMS L1 HT bits
DSM board

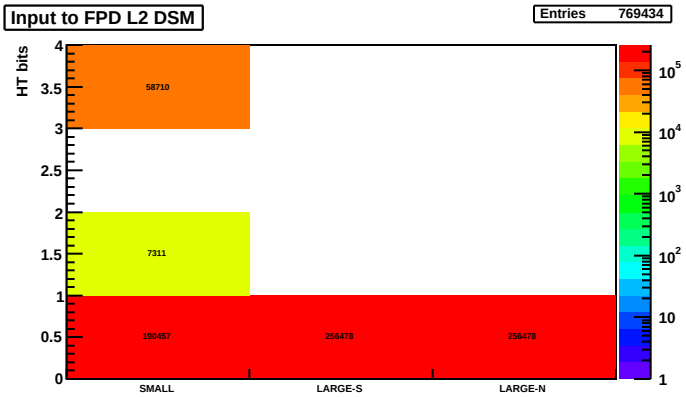

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

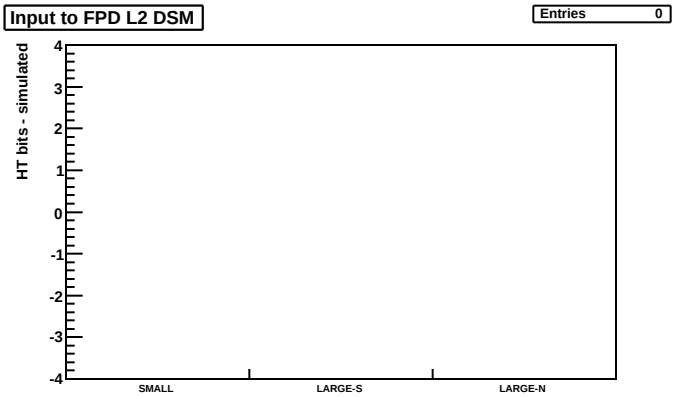

Input to FPD L2 DSM
Entries 2051824
quadrant sum
SMALL-ST
SMALL-SB
SMALL-NT
SMALL-NB
LARGE-ST
LARGE-SB
LARGE-NT
LARGE-NB

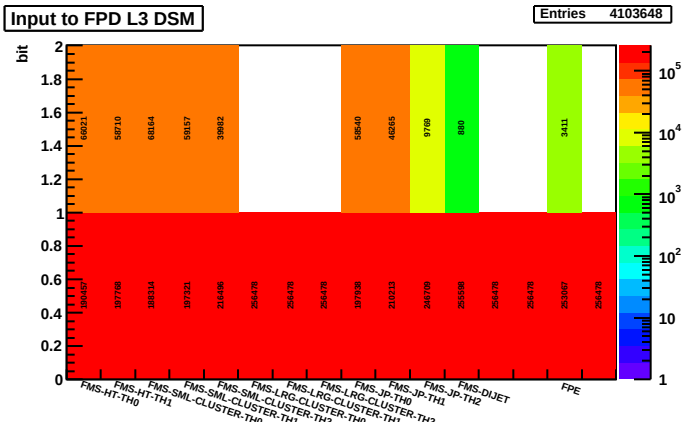

Input to FPD L2 DSM
Entries 7435
quadrant sum - simulated
SMALL-ST
SMALL-SB
SMALL-NT
SMALL-NB
LARGE-ST
LARGE-SB
LARGE-NT
LARGE-NB

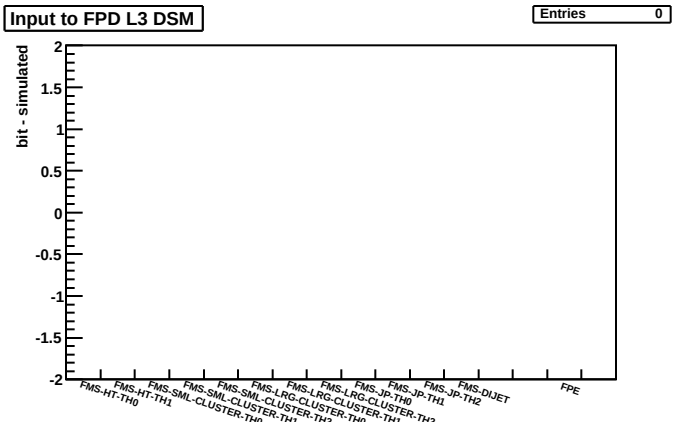

Input to FPD L2 DSM
Entries 769434
CL bits
39982
19175
9007
188314
256478
256478
SMALL
LARGE-S
LARGE-N

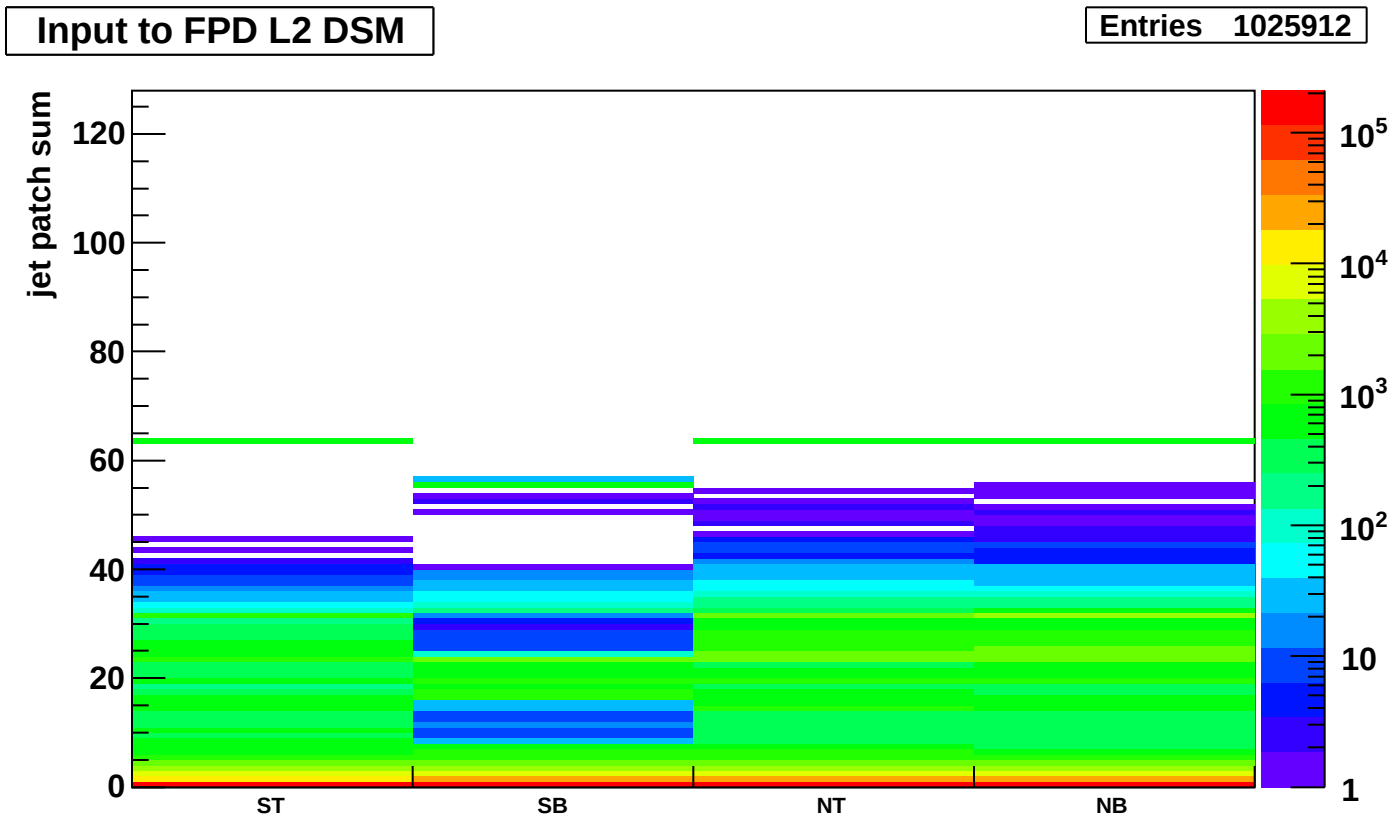

Input to FPD L2 DSM
Entries 0
CL bits - simulated
SMALL
LARGE-S
LARGE-N

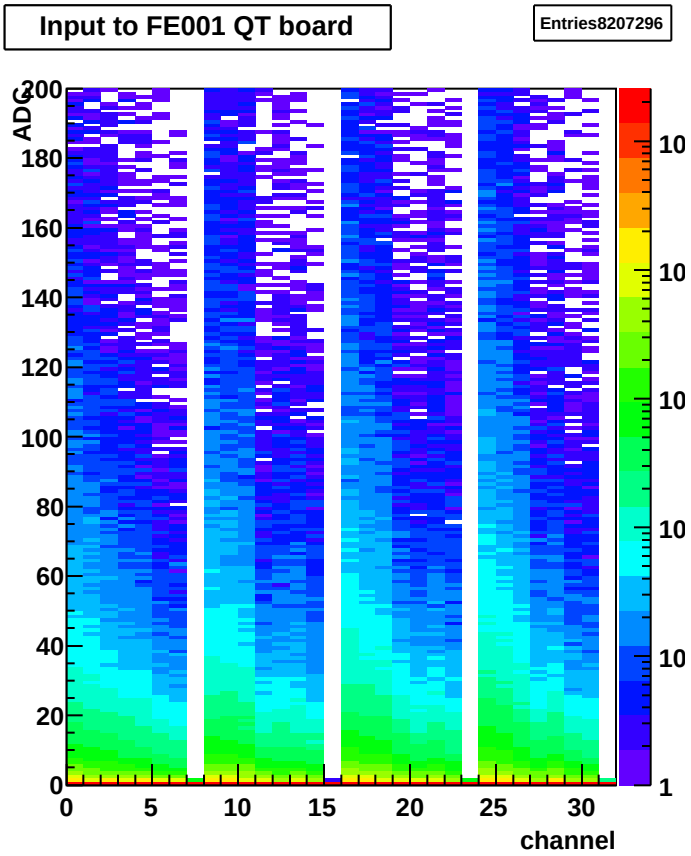

Input to FPD L2 DSM
Entries 769434
HT bits
58710
7311
190457
256478
256478
SMALL
LARGE-S
LARGE-N

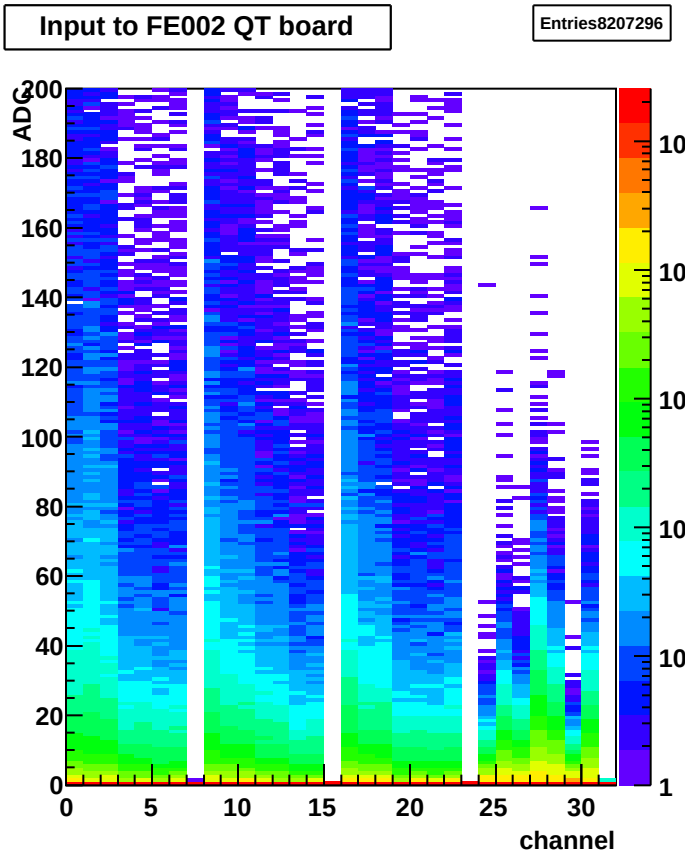

Input to FPD L2 DSM
Entries 0
HT bits - simulated
SMALL
LARGE-S
LARGE-N

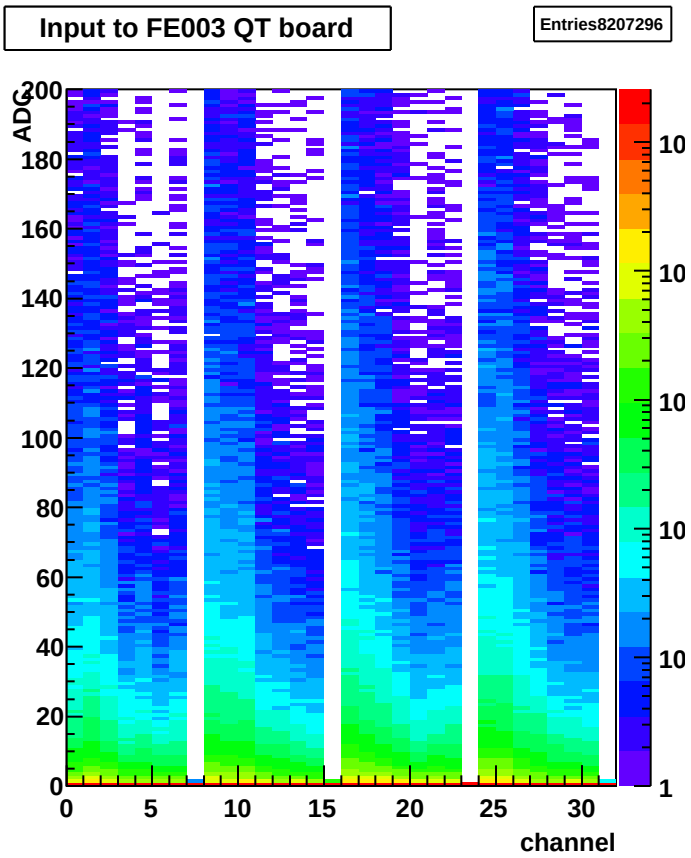

Input to FPD L3 DSM
Entries 4103648
bit
FMS-HT-TH0
FMS-HT-TH1
FMS-SML-CLUSTER-TH0
FMS-SML-CLUSTER-TH1
FMS-SML-CLUSTER-TH2
FMS-LRG-CLUSTER-TH0
FMS-LRG-CLUSTER-TH1
FMS-LRG-CLUSTER-TH2
FMS-JP-TH0
FMS-JP-TH1
FMS-JP-TH2
FMS-DIJET
FPE

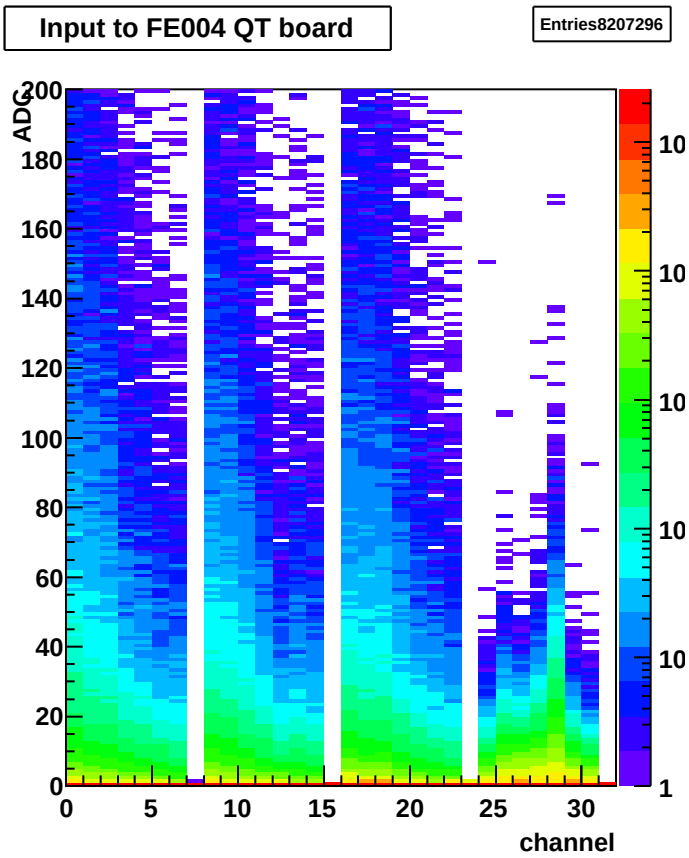

Input to FPD L3 DSM
Entries 0
bit - simulated
FMS-HT-TH0
FMS-HT-TH1
FMS-SML-CLUSTER-TH0
FMS-SML-CLUSTER-TH1
FMS-SML-CLUSTER-TH2
FMS-LRG-CLUSTER-TH0
FMS-LRG-CLUSTER-TH1
FMS-LRG-CLUSTER-TH2
FMS-JP-TH0
FMS-JP-TH1
FMS-JP-TH2
FMS-DIJET
FPE

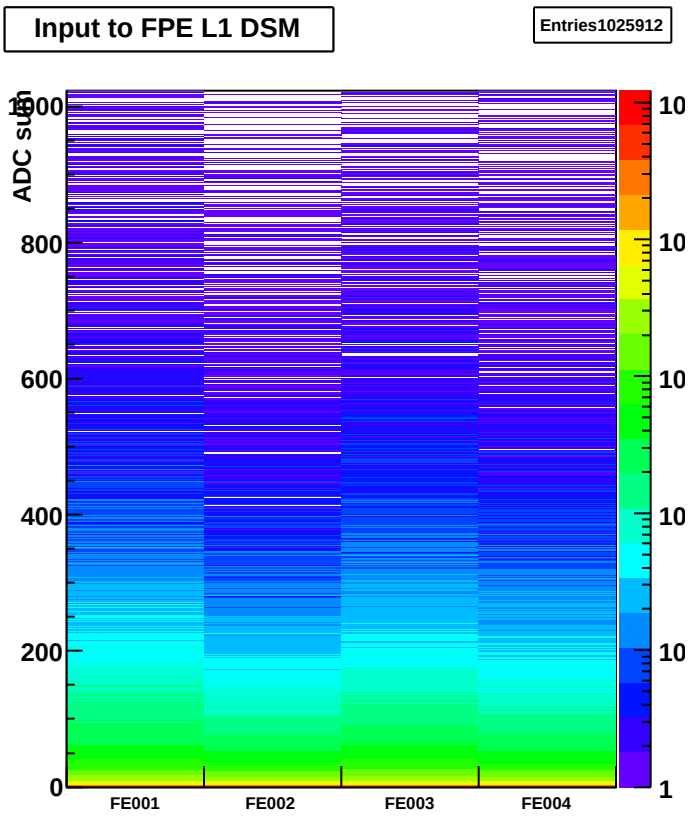

Input to FPD L2 DSM
Entries 1025912
jet patch sum
0
20
40
60
80
100
120
ST
SB
NT
NB
1
10
10^2
10^3
10^4
10^5

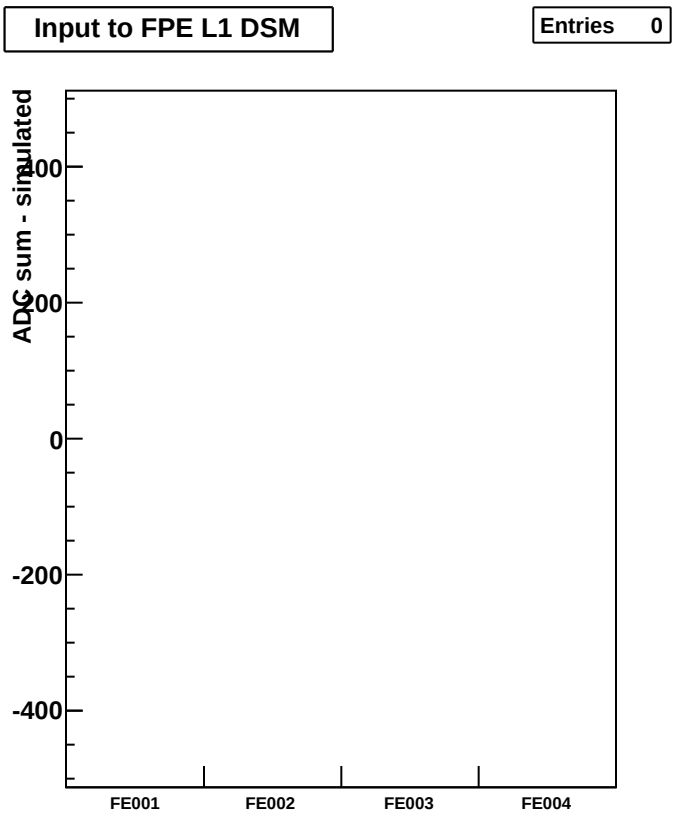

Input to FE001 QT board
Entries8207296
ADC
channel

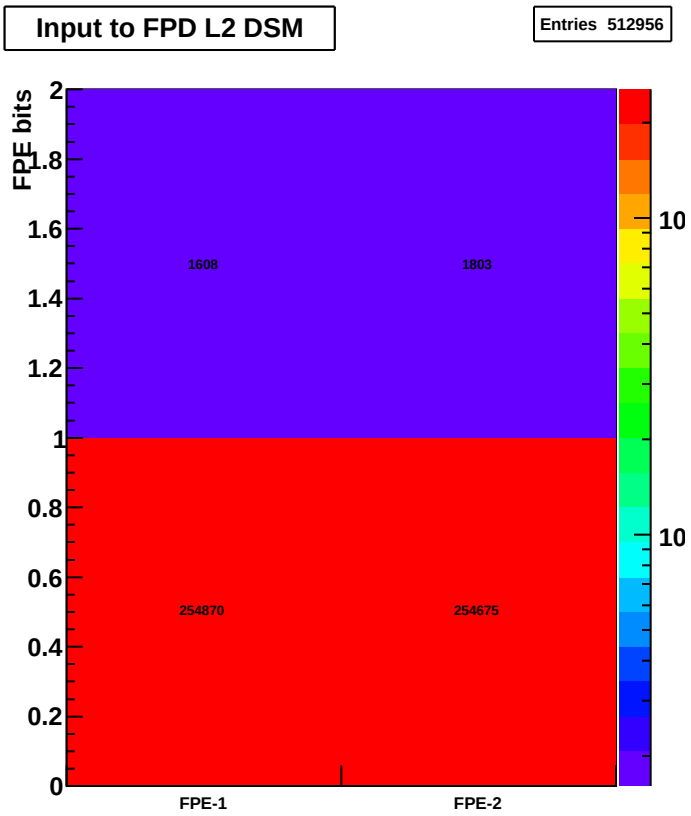

Input to FE002 QT board
Entries8207296
ADC
channel

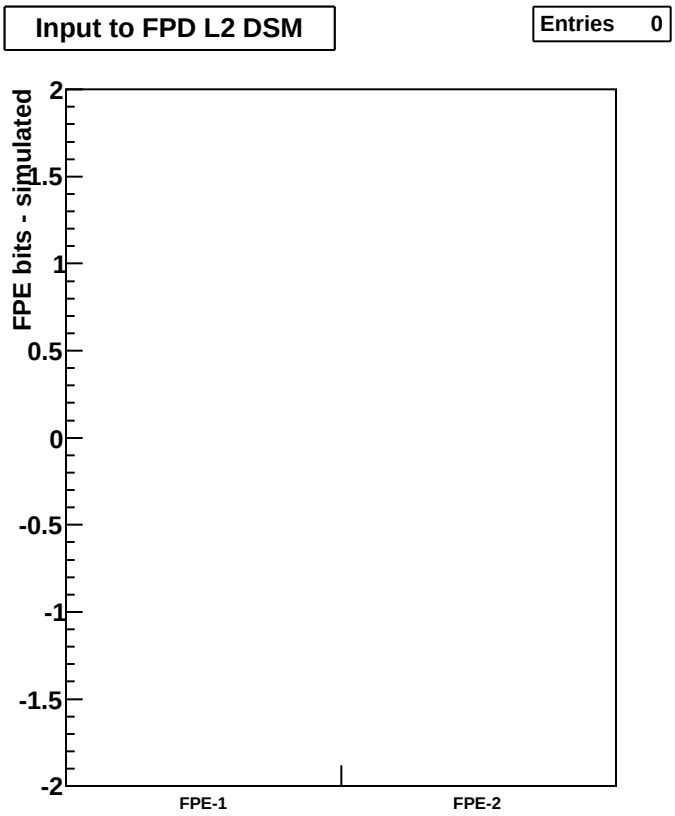

Input to FE003 QT board
Entries8207296
ADC
channel


Input to FE004 QT board
Entries8207296
ADC
channel


Input to FPE L1 DSM
Entries1025912
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
Entries 512956
FPE bits
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
1608
1803
254870
254675
FPE-1
FPE-2
10
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