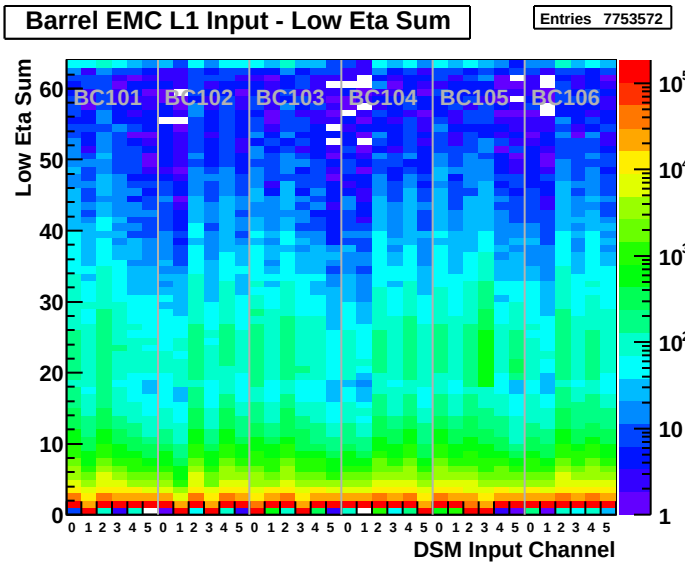
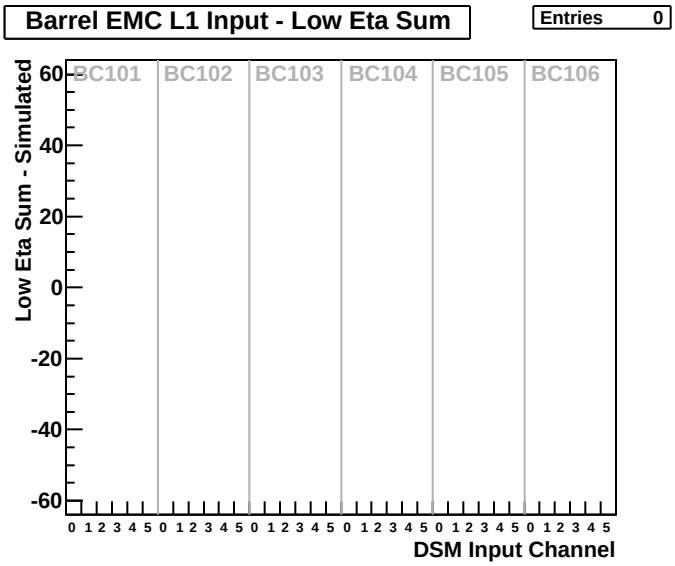
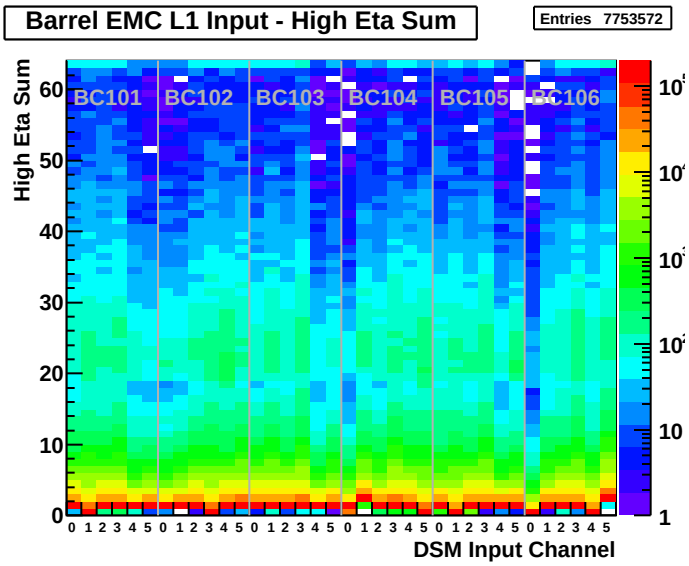
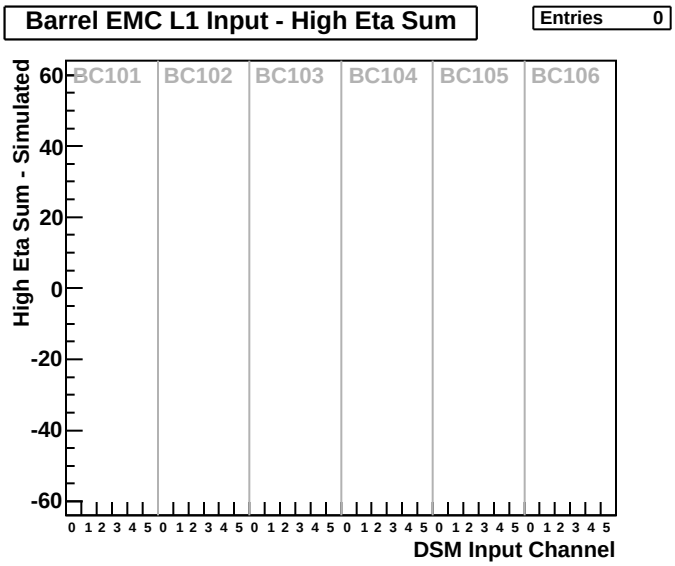
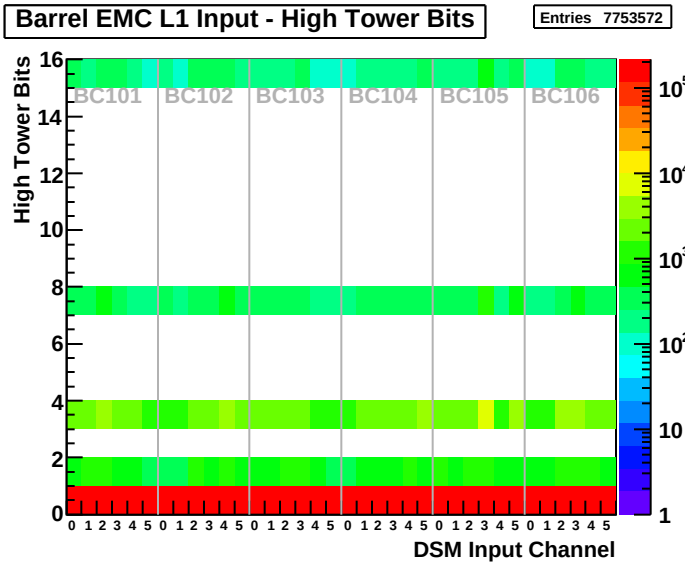
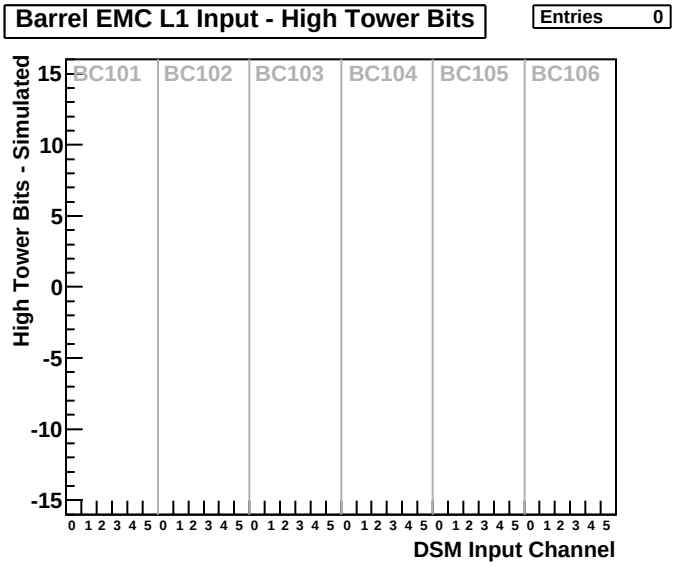

Barrel EMC L1 Input - Low Eta Sum
Entries 7753572
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

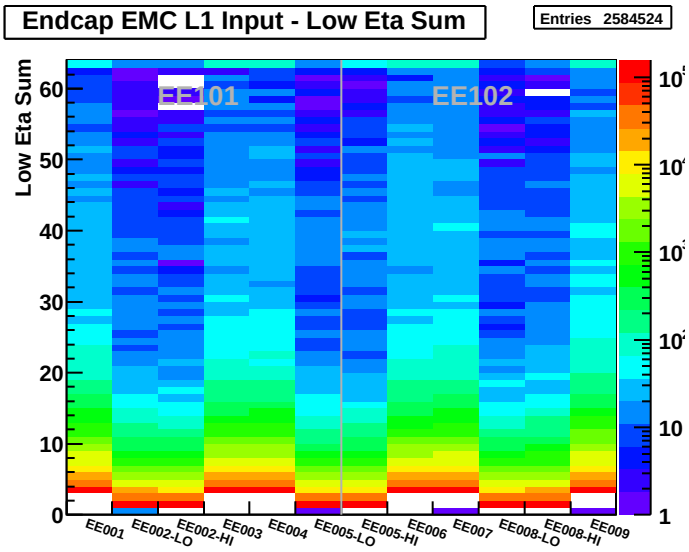

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

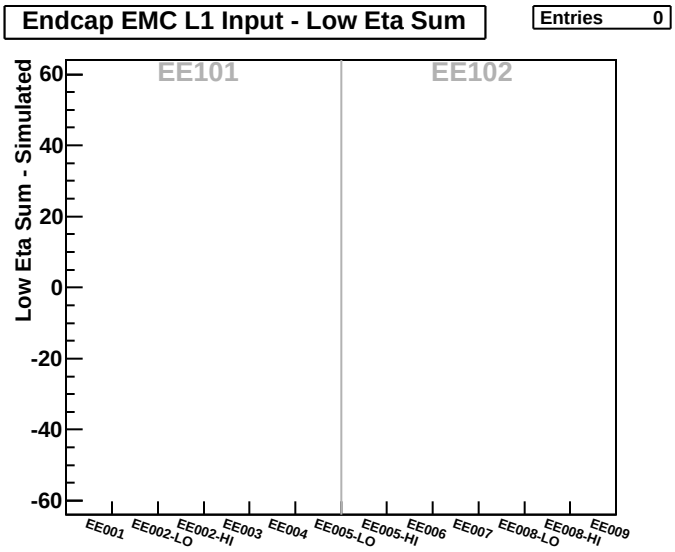

Barrel EMC L1 Input - High Eta Sum
Entries 7753572
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

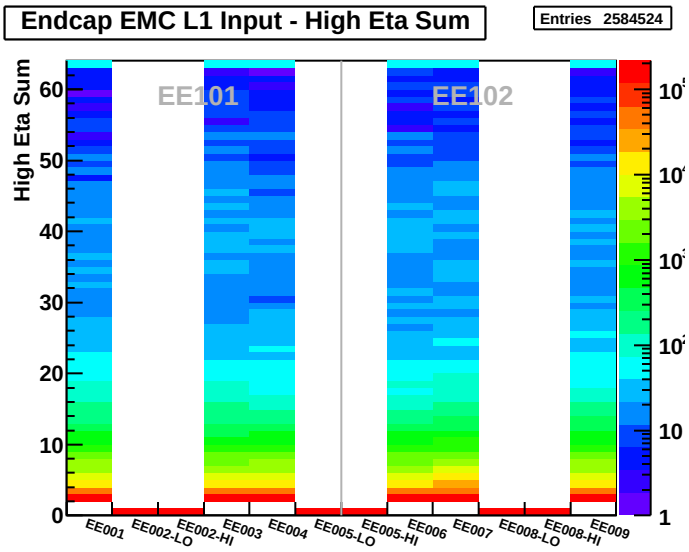

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

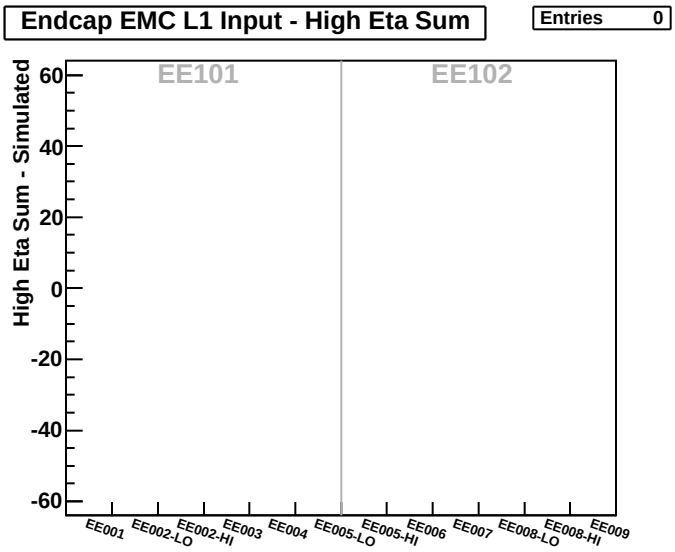

Barrel EMC L1 Input - High Tower Bits
Entries 7753572
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

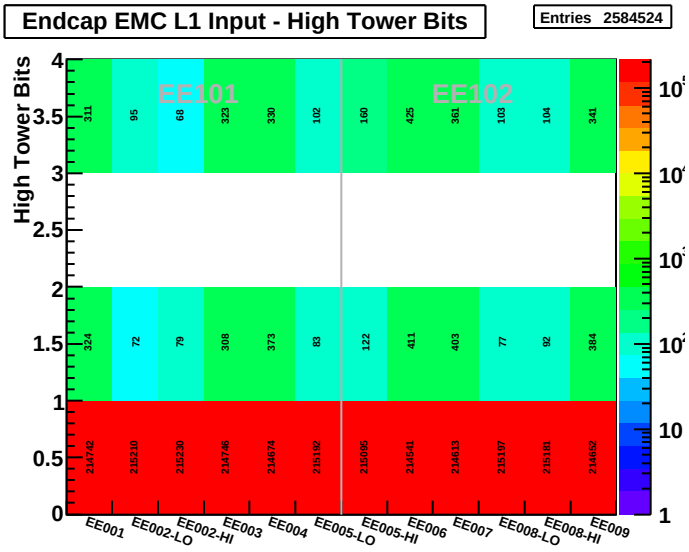

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

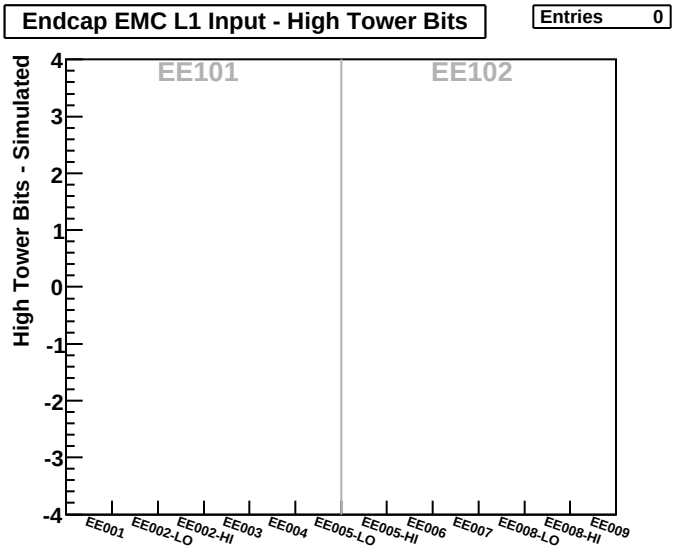

Endcap EMC L1 Input - Low Eta Sum
Entries 2584524
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

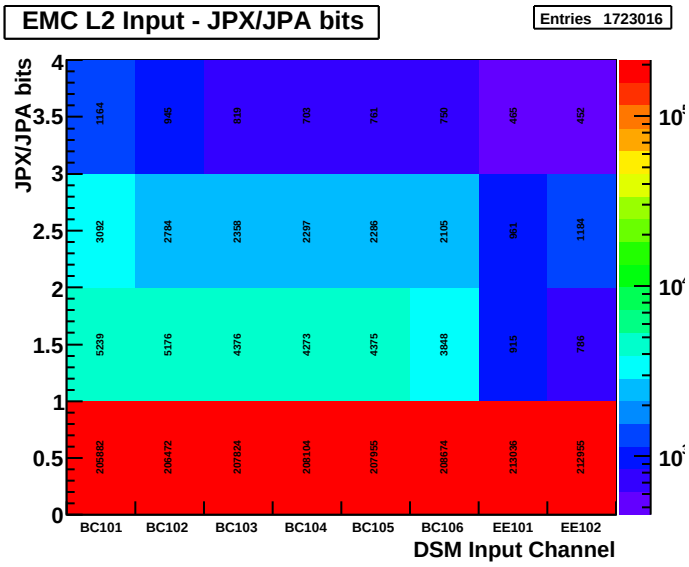

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

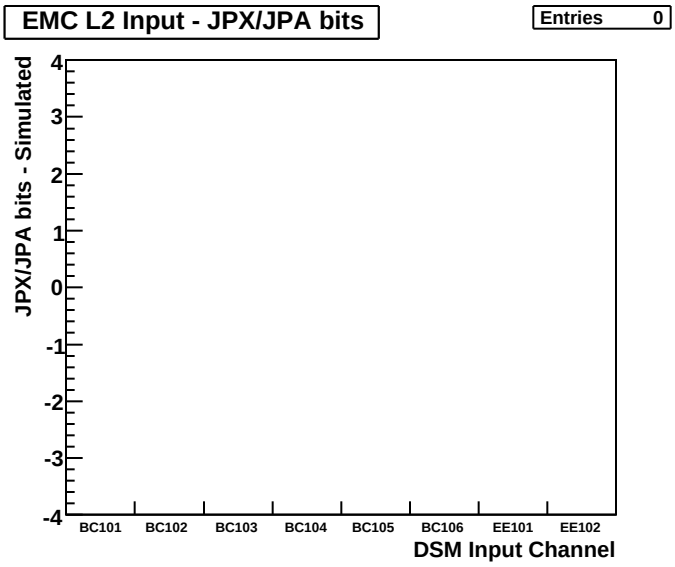

Endcap EMC L1 Input - High Eta Sum
Entries 2584524
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

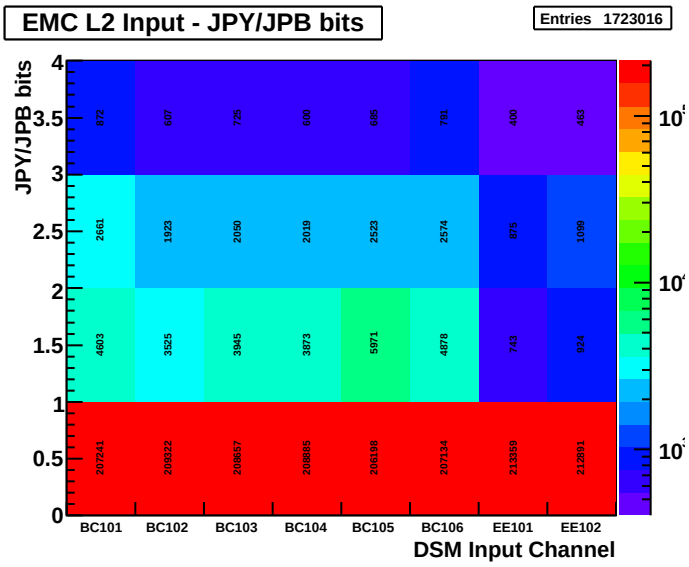

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

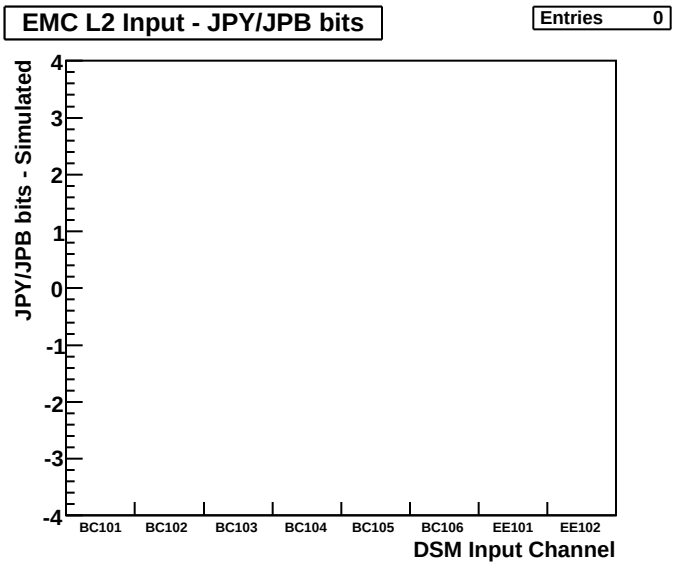

Endcap EMC L1 Input - High Tower Bits
Entries 2584524
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

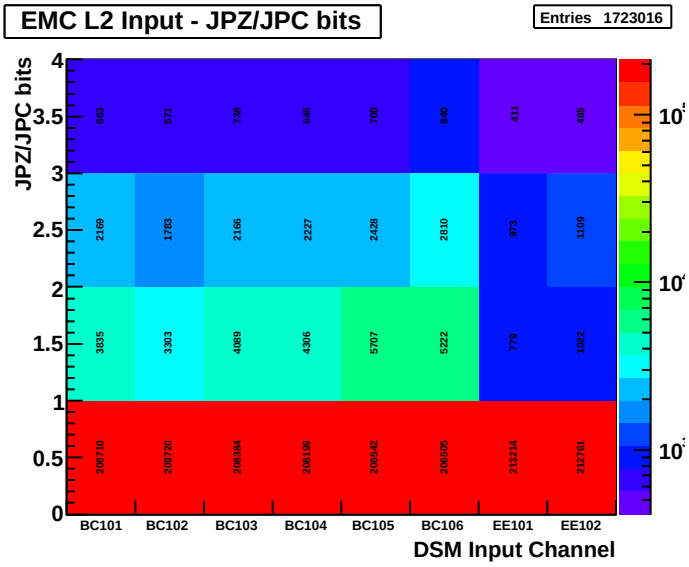

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

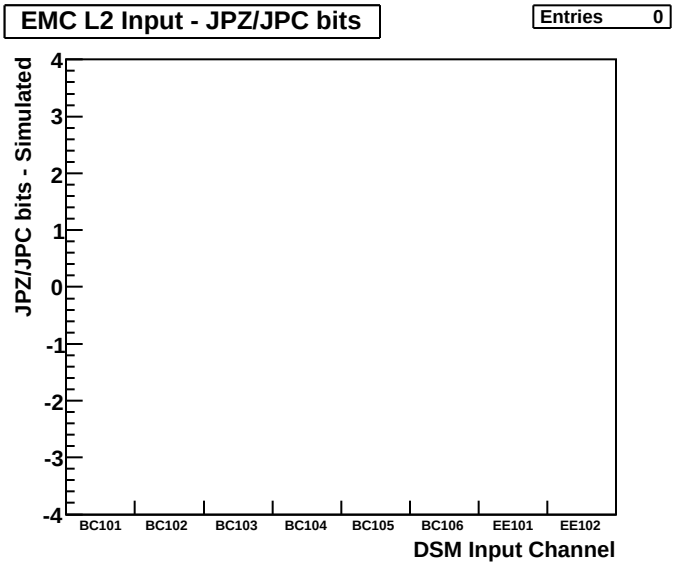

EMC L2 Input - JPX/JPA bits
Entries 1723016
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1164 945 819 703 761 750 465 452
3092 2784 2358 2297 2286 2105 961 1184
5239 5176 4376 4273 4375 3848 915 786
205682 206472 207824 208104 207955 208674 213036 212955

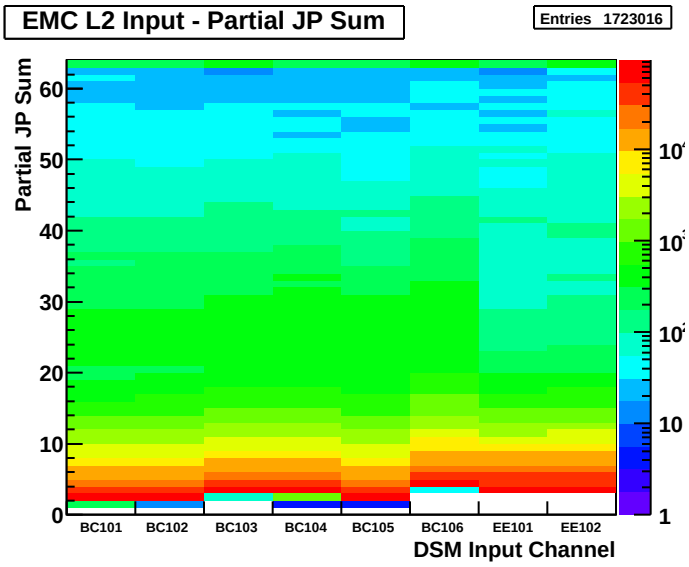

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

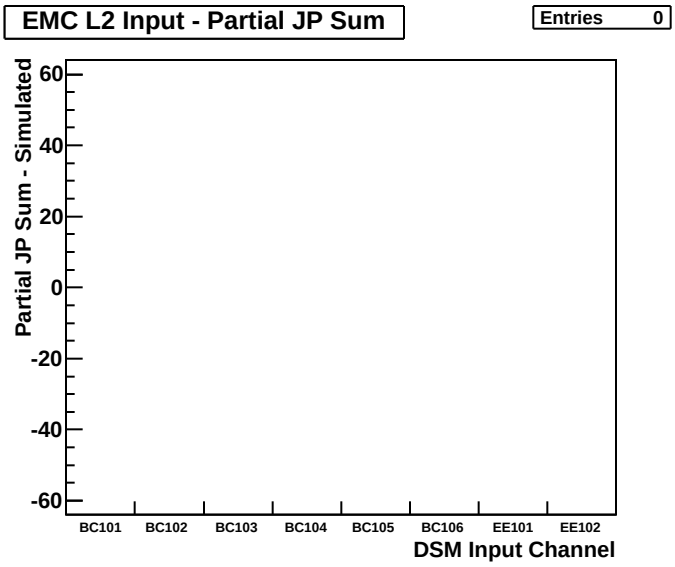

EMC L2 Input - JPY/JPB bits
Entries 1723016
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
672 607 725 600 685 781 400 463
2661 1923 2050 2019 2523 2574 875 1099
4603 3835 3945 3873 5971 4978 743 924
207241 208322 208657 208885 206198 207134 213359 212891

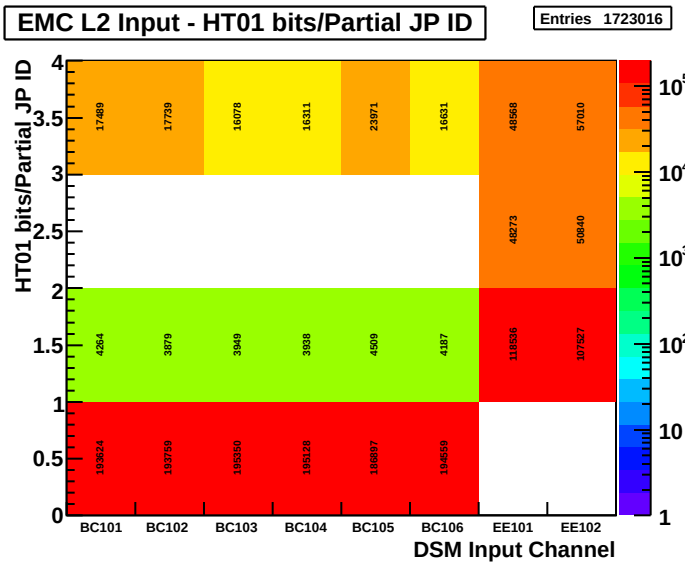

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

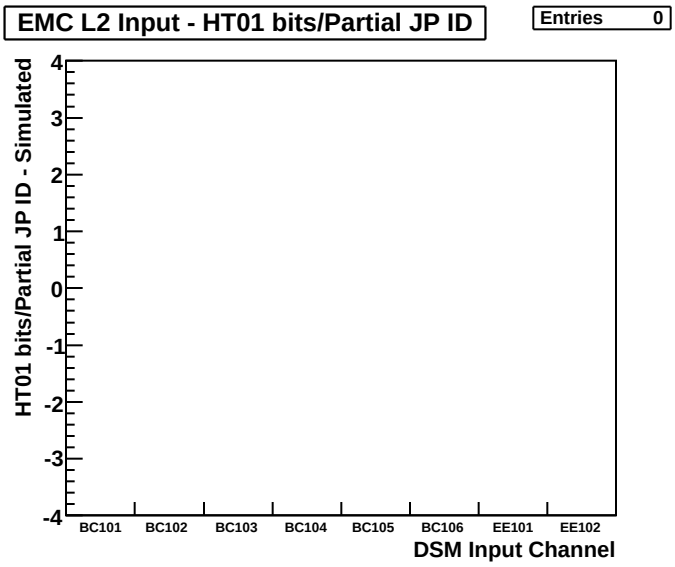

EMC L2 Input - JPZ/JPC bits
Entries 1723016
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
683 571 738 645 700 840 411 485
2169 1783 2166 2227 2428 2810 973 1109
3835 3303 4089 4306 5707 5222 779 1022
208710 209720 208384 208198 206542 206505 213214 212761

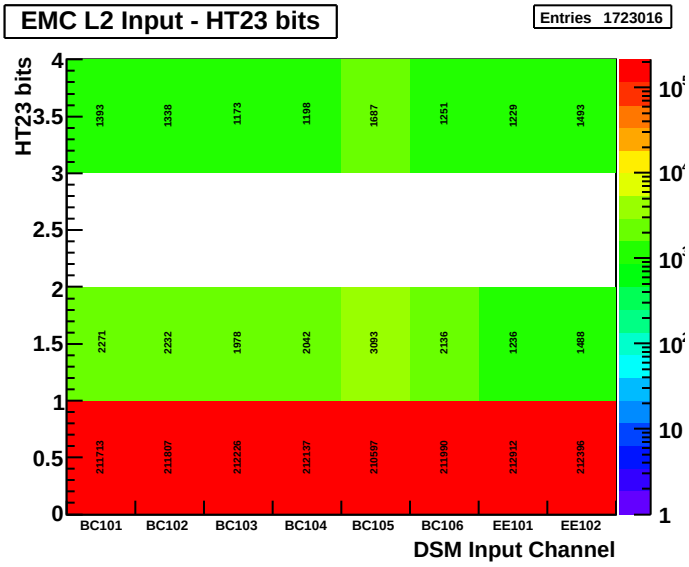

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

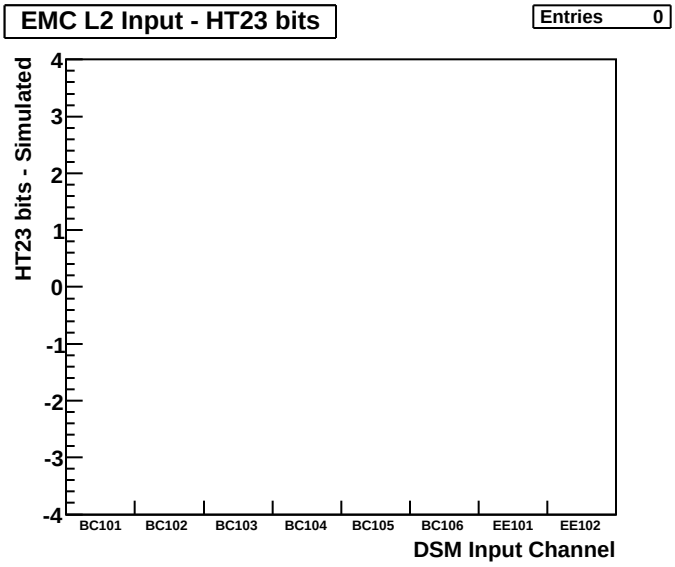

EMC L2 Input - Partial JP Sum
Entries 1723016
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

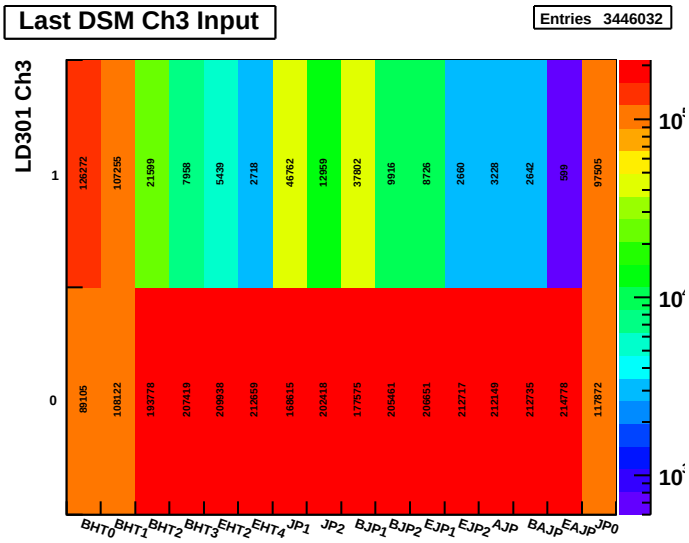

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

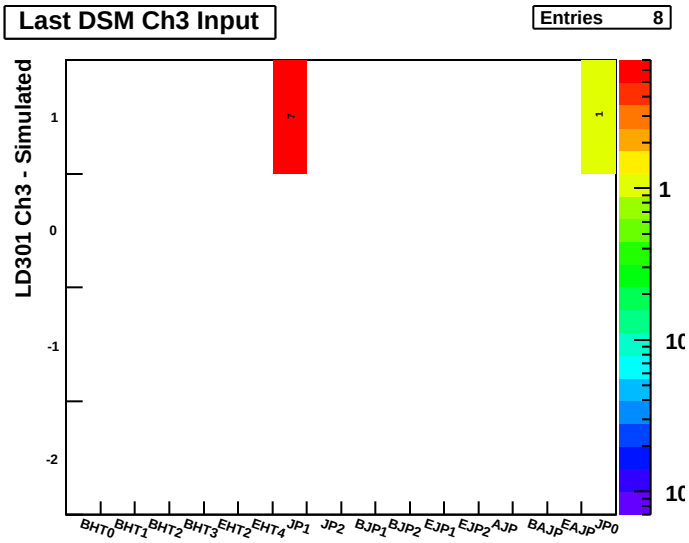

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1723016
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

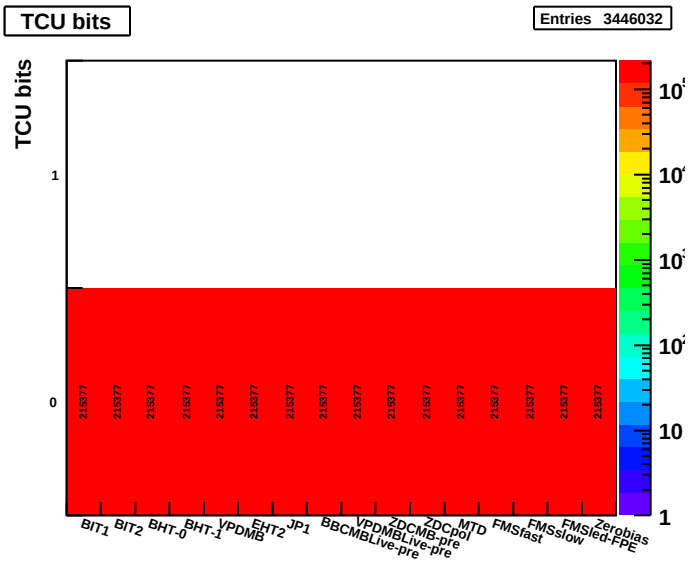

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

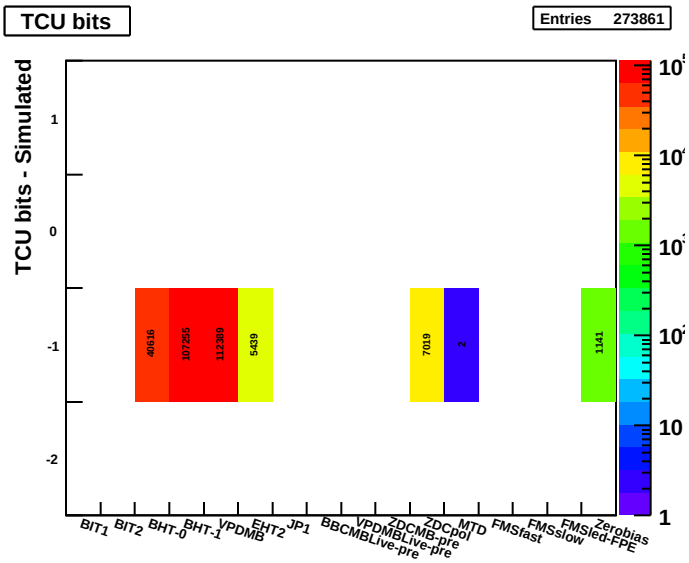

EMC L2 Input - HT23 bits
Entries 1723016
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

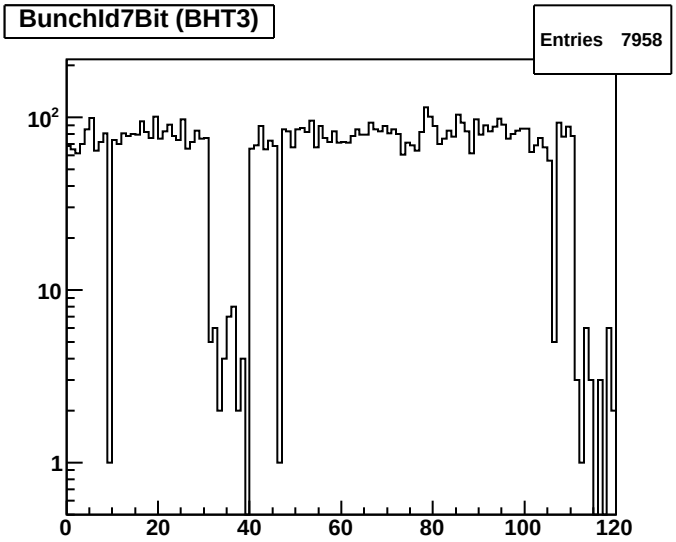

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

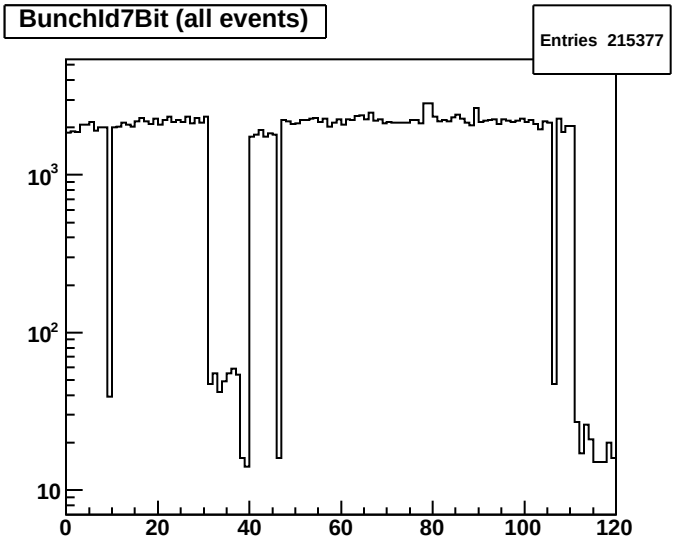

Last DSM Ch3 Input
Entries 3446032
LD301 Ch3
1
0
126272
107255
21599
7958
5439
2718
46762
12959
37802
9916
8726
2660
3228
2642
599
97505
89105
108122
193778
207419
209938
212659
168615
202418
177575
205461
206651
212717
212149
212735
214778
117872
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

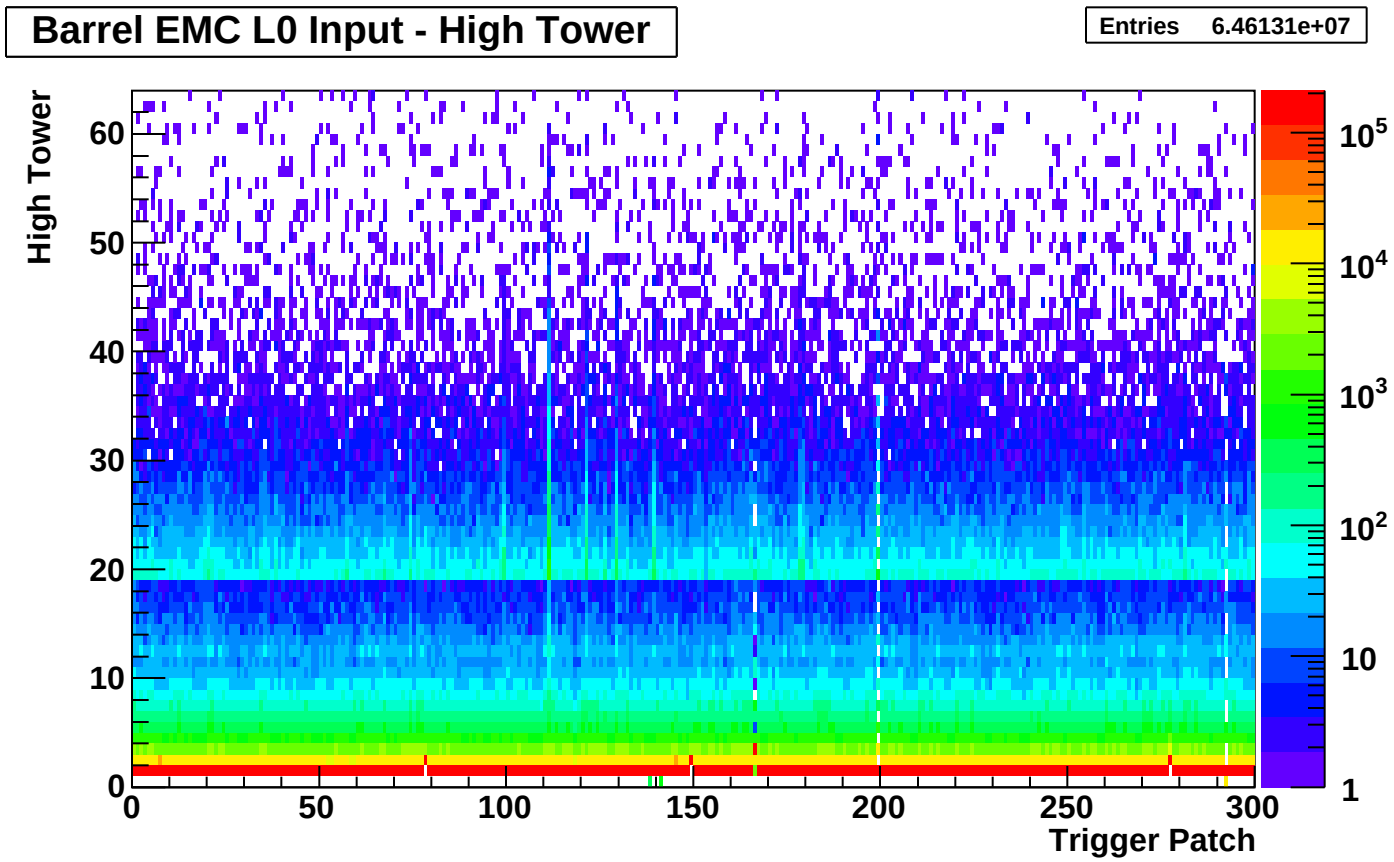

Last DSM Ch3 Input
Entries 8
LD301 Ch3 - Simulated
1
0
-1
-2
7
1
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

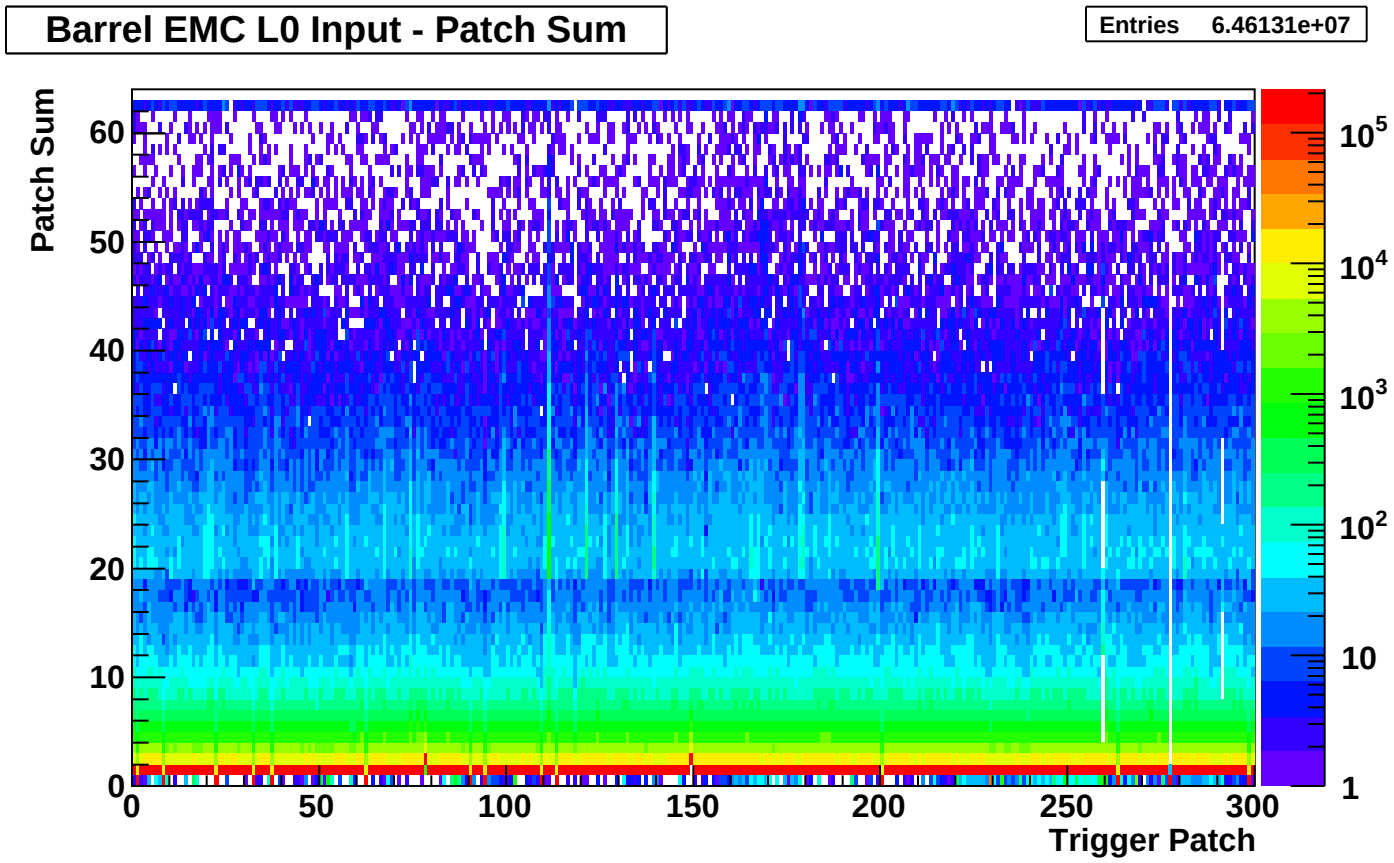

TCU bits
Entries 3446032
TCU bits
1
0
215377
BIT1 BIT2 BHT-0 BHT-1 VPDMB EHT2 JP1 BBCMBLive-pre VPDMBLive-pre ZDCMB-pre ZDCpol MTD FMSfast FMSslow FMSled-FPE Zerobias

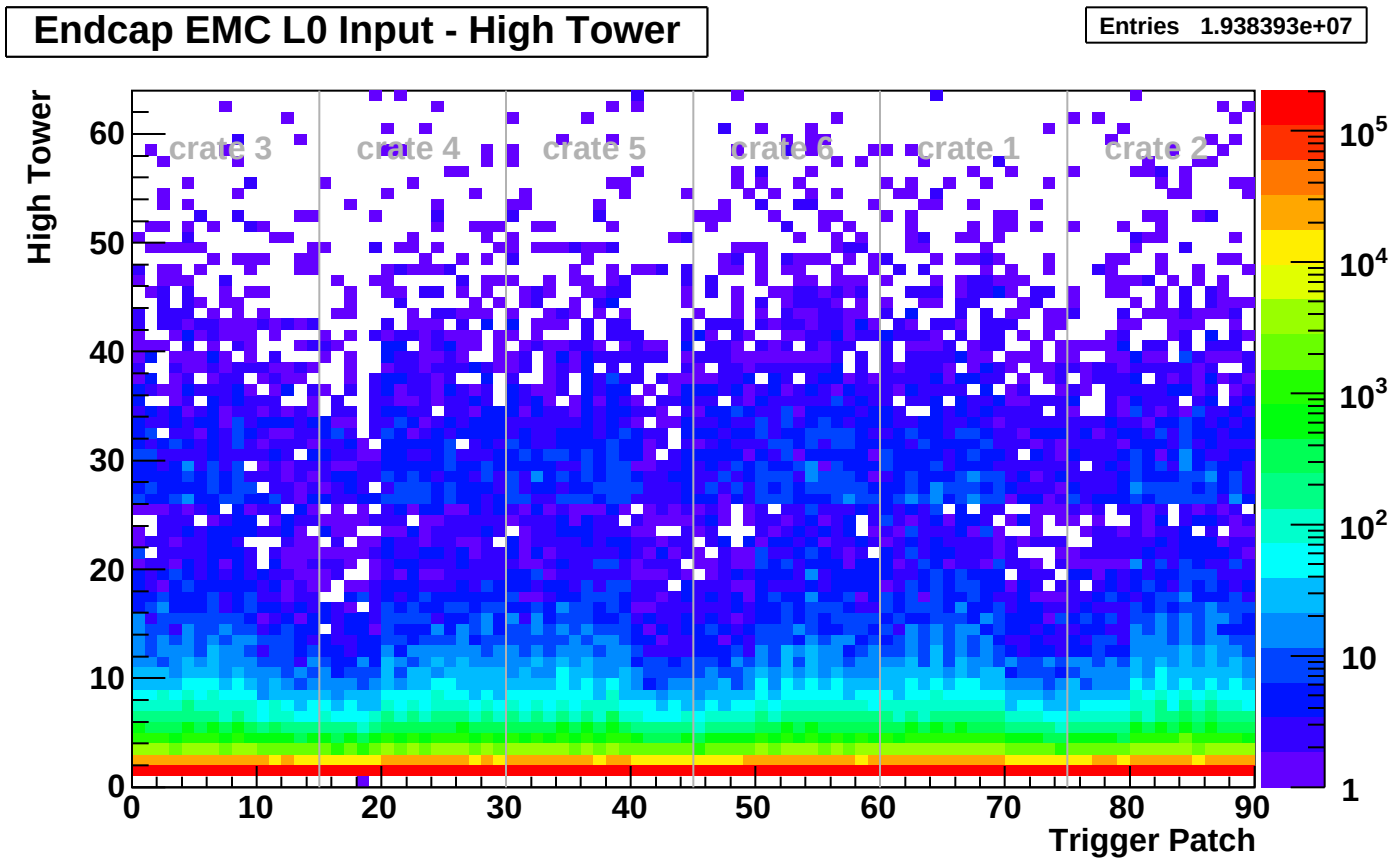

TCU bits
Entries 273861
TCU bits - Simulated
1
0
-1
-2
40616
107255
112389
5439
7019
2
1141
BIT1 BIT2 BHT-0 BHT-1 VPDMB EHT2 JP1 BBCMBLive-pre VPDMBLive-pre ZDCMB-pre ZDCpol MTD FMSfast FMSslow FMSled-FPE Zerobias

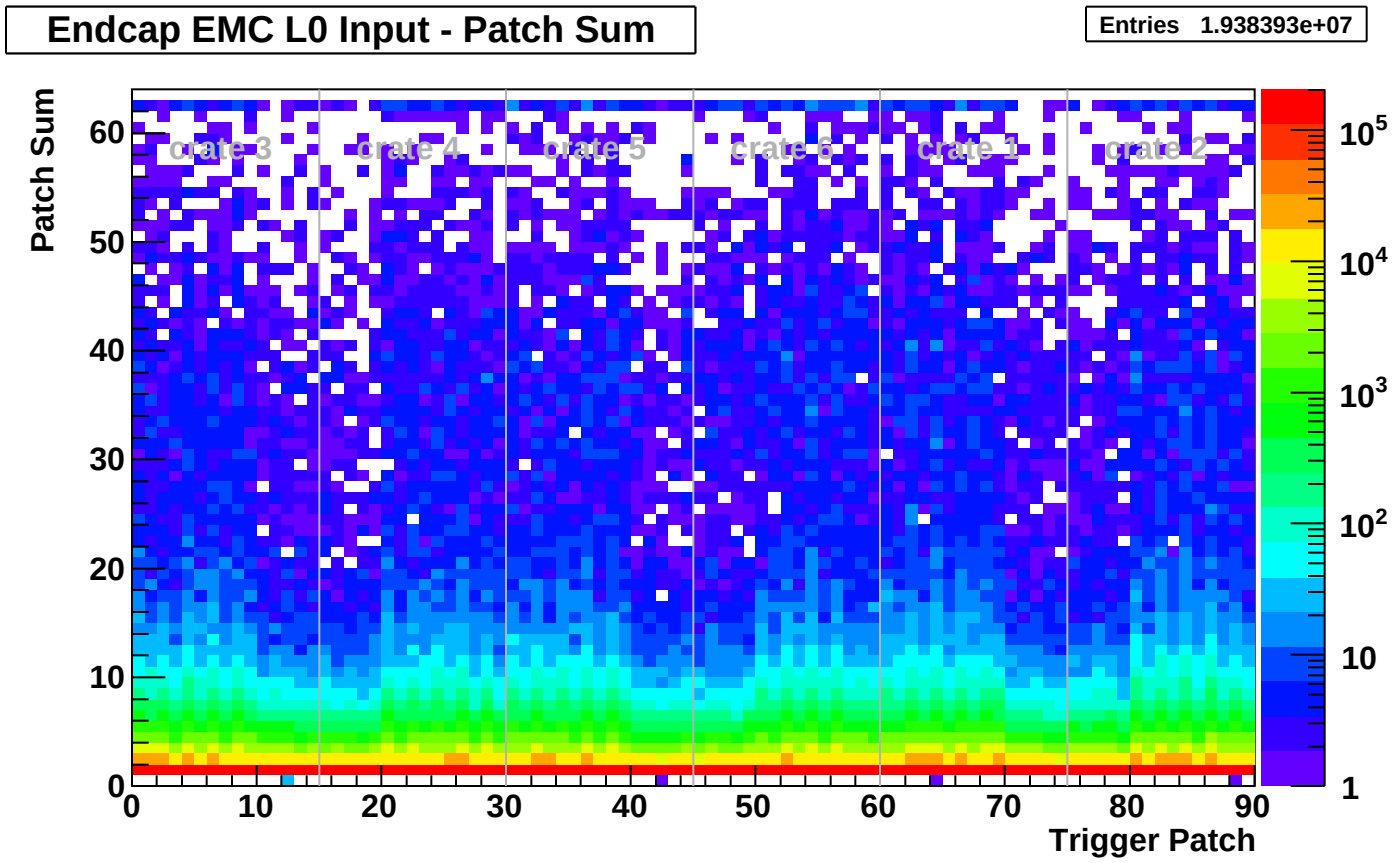

BunchId7Bit (BHT3)
Entries 7958
0 20 40 60 80 100 120

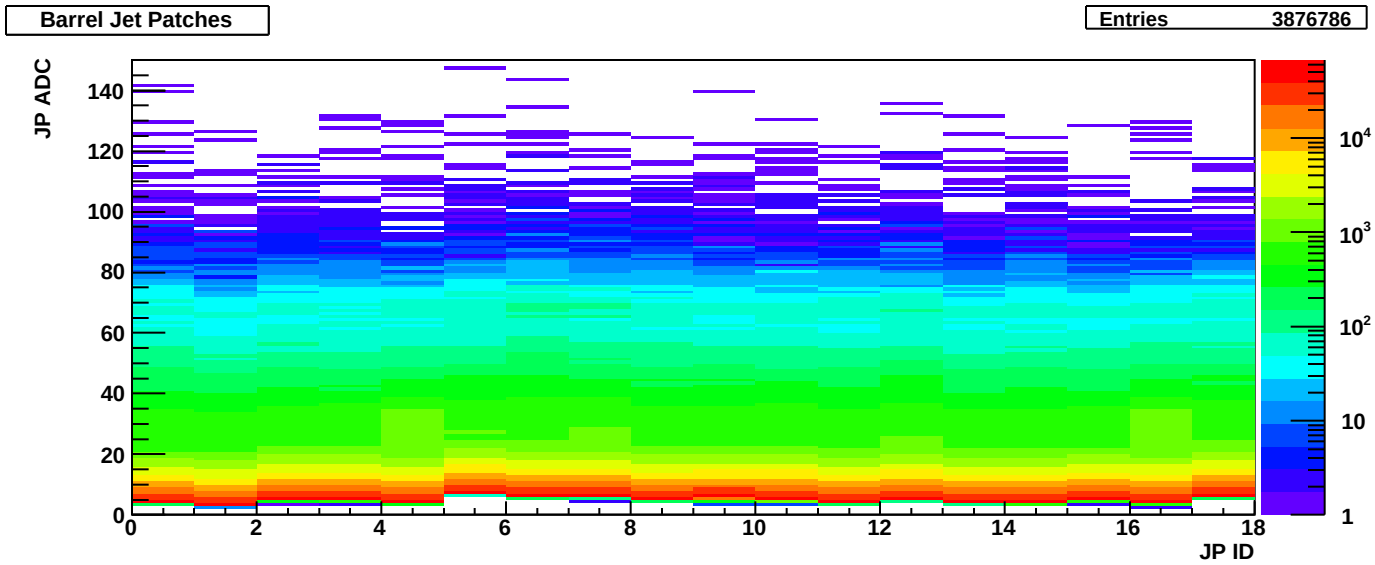

BunchId7Bit (all events)
Entries 215377
0 20 40 60 80 100 120

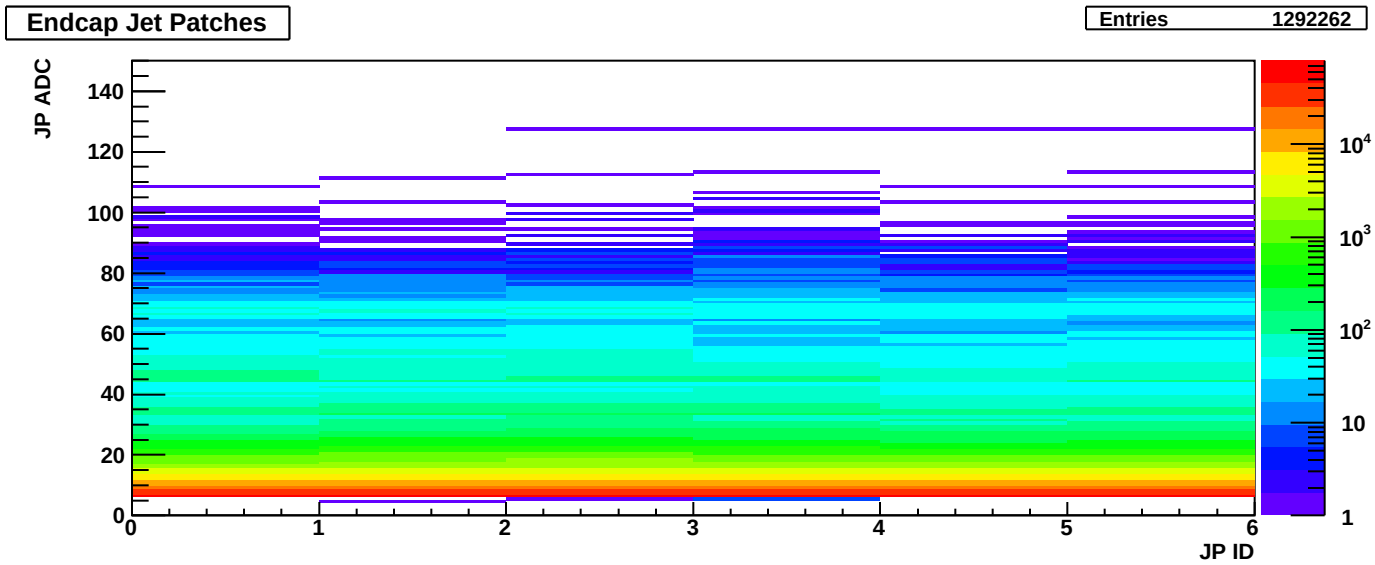

Barrel EMC L0 Input - High Tower
Entries 6.46131e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

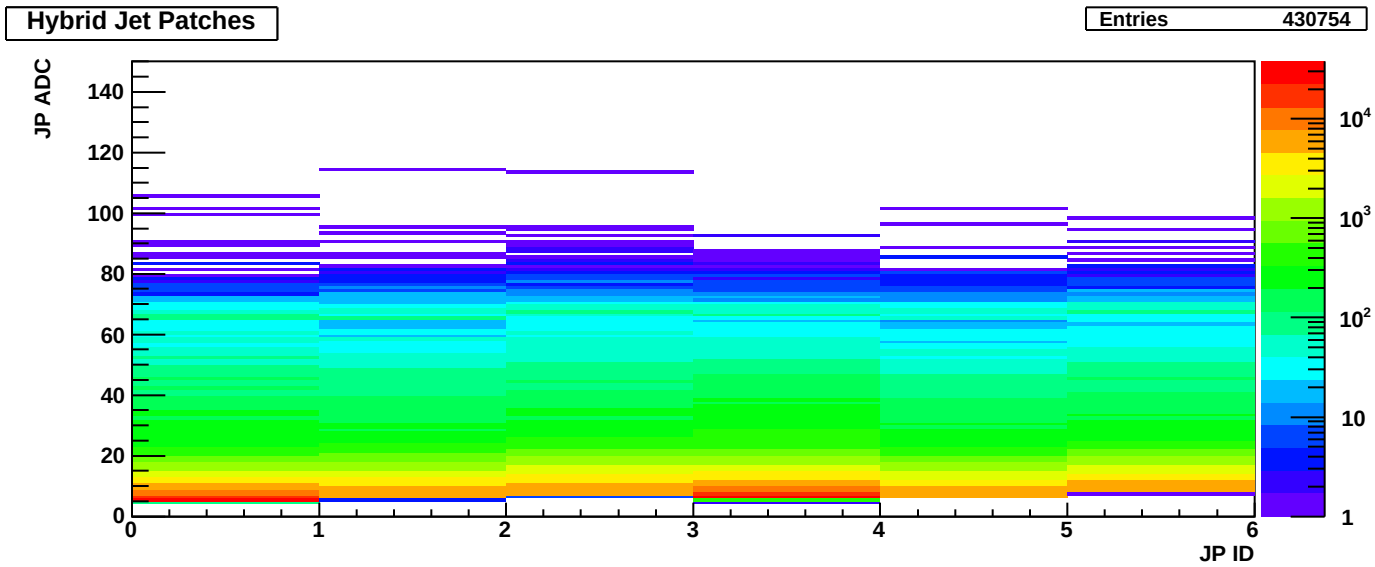

Barrel EMC L0 Input - Patch Sum
Entries 6.46131e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

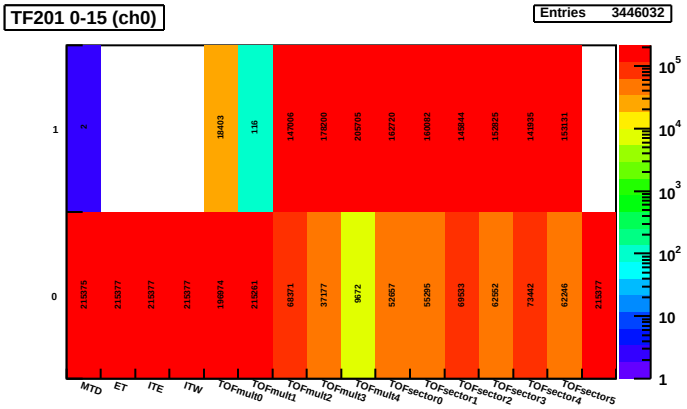

Endcap EMC L0 Input - High Tower
Entries 1.938393e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

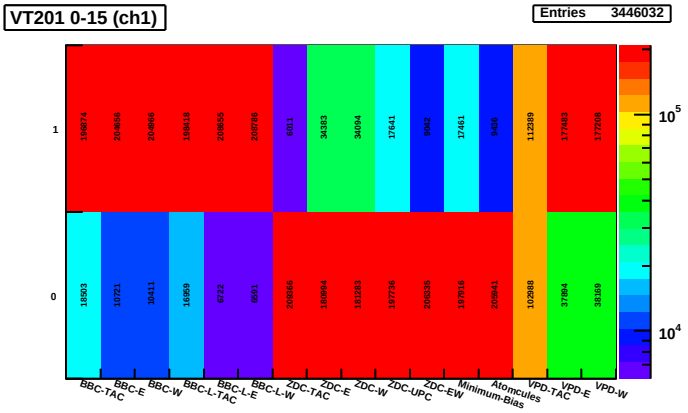

Endcap EMC L0 Input - Patch Sum
Entries 1.938393e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

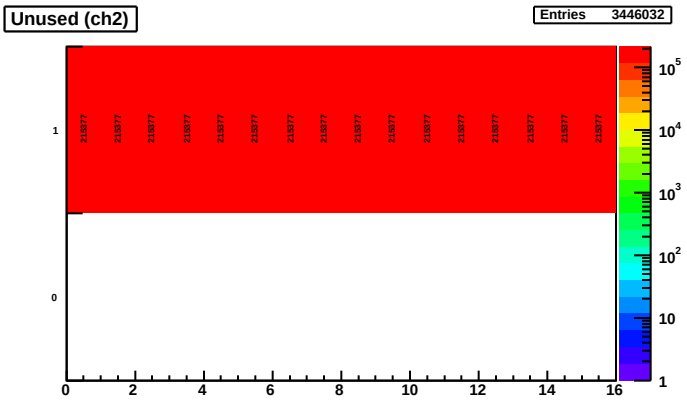

Barrel Jet Patches
Entries 3876786
JP ADC
JP ID

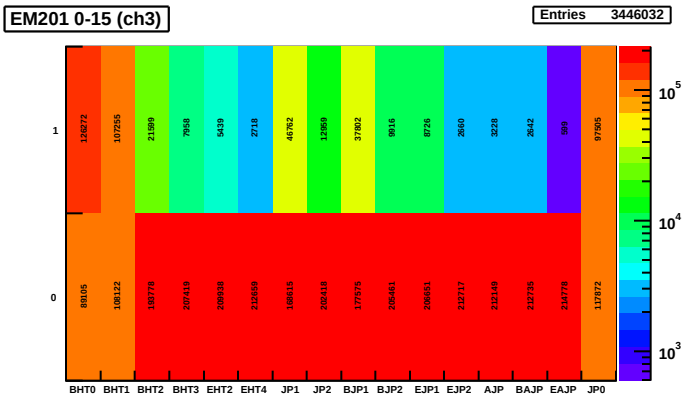

Endcap Jet Patches
Entries 1292262
JP ADC
JP ID

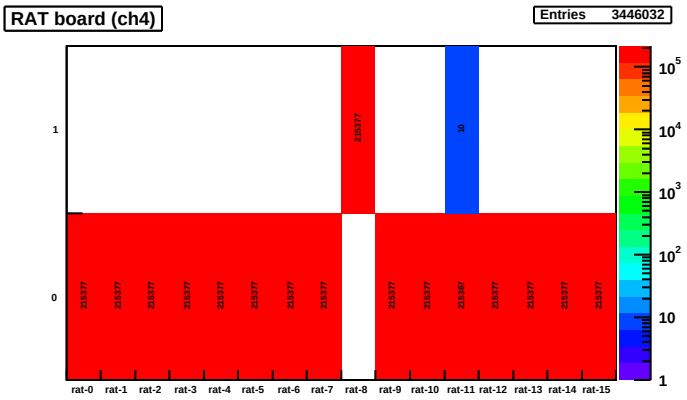

Hybrid Jet Patches
Entries 430754
JP ADC
JP ID

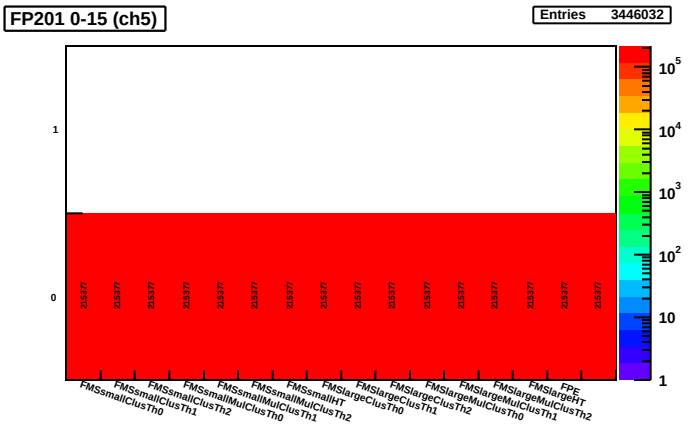

TF201 0-15 (ch0)
Entries 3446032
MTD
ET
ITE
ITW
TOFmult0
TOFmult1
TOFmult2
TOFmult3
TOFmult4
TOFsector0
TOFsector1
TOFsector2
TOFsector3
TOFsector4
TOFsector5

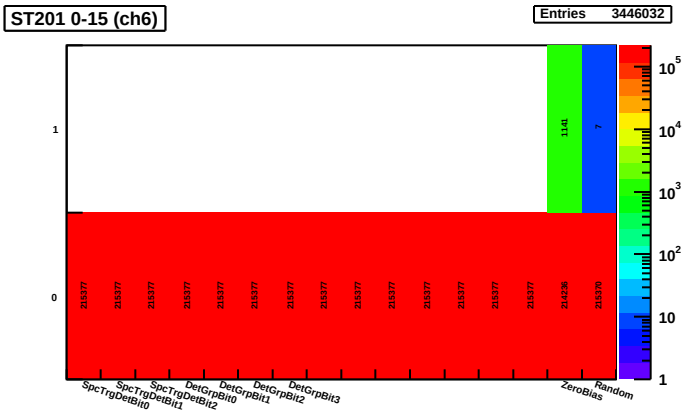

VT201 0-15 (ch1)
Entries 3446032
BBC-TAC
BBC-E
BBC-W
BBC-L-TAC
BBC-L-E
BBC-L-W
ZDC-TAC
ZDC-E
ZDC-W
ZDC-UPC
ZDC-EW
Minimum-Bias
Atomcules
VPD-TAC
VPD-E
VPD-W

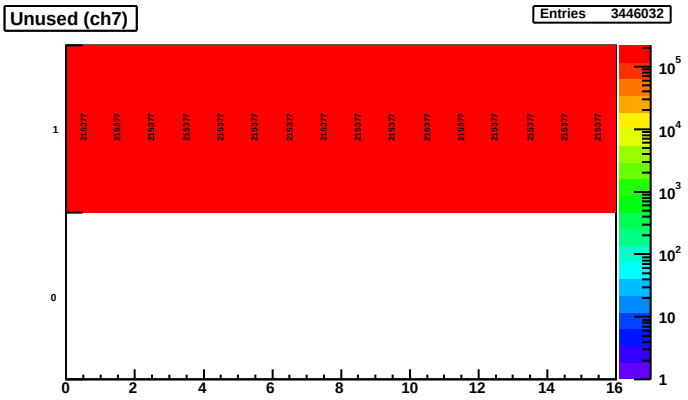

Unused (ch2)
Entries 3446032

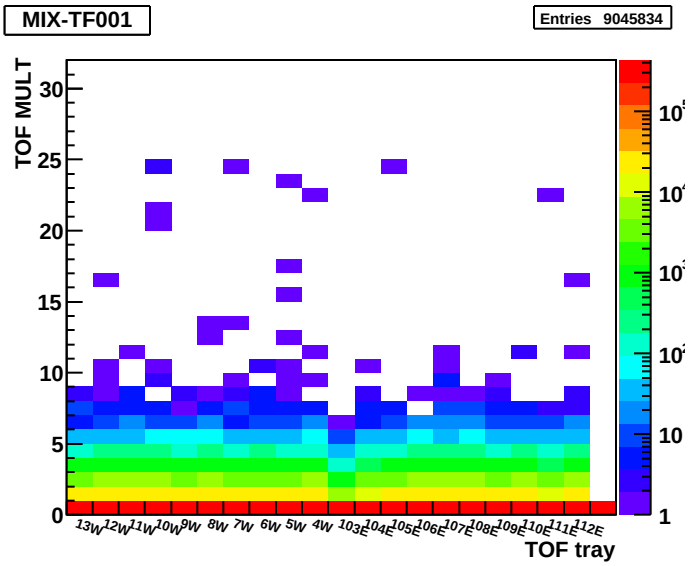

EM201 0-15 (ch3)
Entries 3446032
BHT0
BHT1
BHT2
BHT3
EHT2
EHT4
JP1
JP2
BJP1
BJP2
EJP1
EJP2
AJP
BAJP
EAJP
JP0

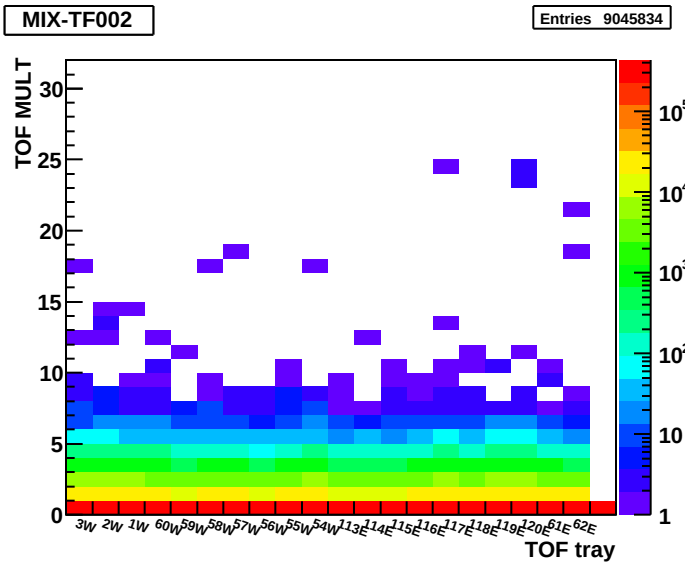

RAT board (ch4)
Entries 3446032
rat-0
rat-1
rat-2
rat-3
rat-4
rat-5
rat-6
rat-7
rat-8
rat-9
rat-10
rat-11
rat-12
rat-13
rat-14
rat-15

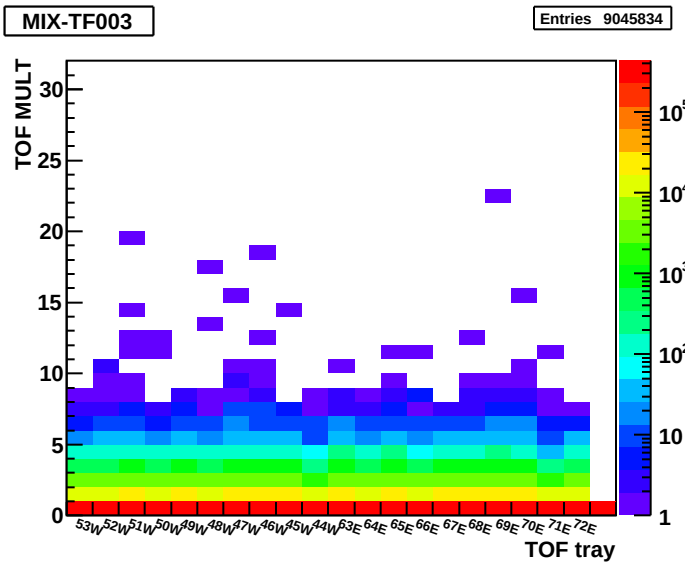

FP201 0-15 (ch5)
Entries 3446032
FMSsmallClusTh0
FMSsmallClusTh1
FMSsmallClusTh2
FMSsmallMulClusTh0
FMSsmallMulClusTh1
FMSsmallMulClusTh2
FMSsmallHT
FMSlargeClusTh0
FMSlargeClusTh1
FMSlargeClusTh2
FMSlargeMulClusTh0
FMSlargeMulClusTh1
FMSlargeMulClusTh2
FMSlargeHT
FPE

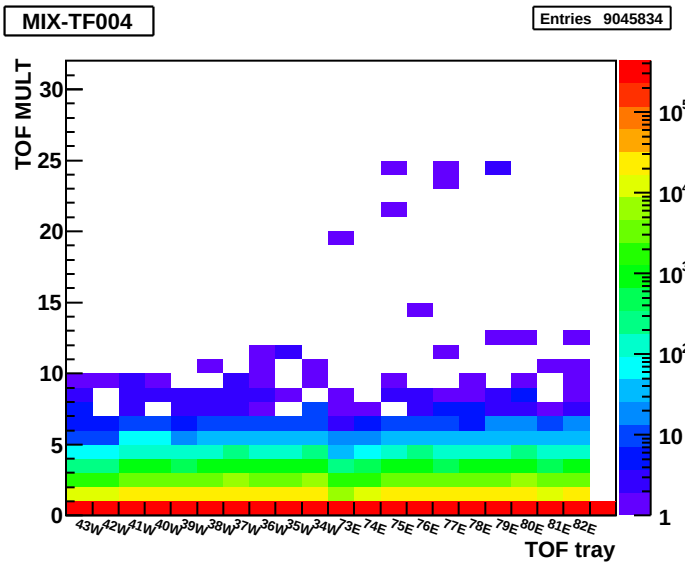

ST201 0-15 (ch6)
Entries 3446032
SpcTrgDetBit0
SpcTrgDetBit1
SpcTrgDetBit2
DetGrpBit0
DetGrpBit1
DetGrpBit2
DetGrpBit3
ZeroBias
Random

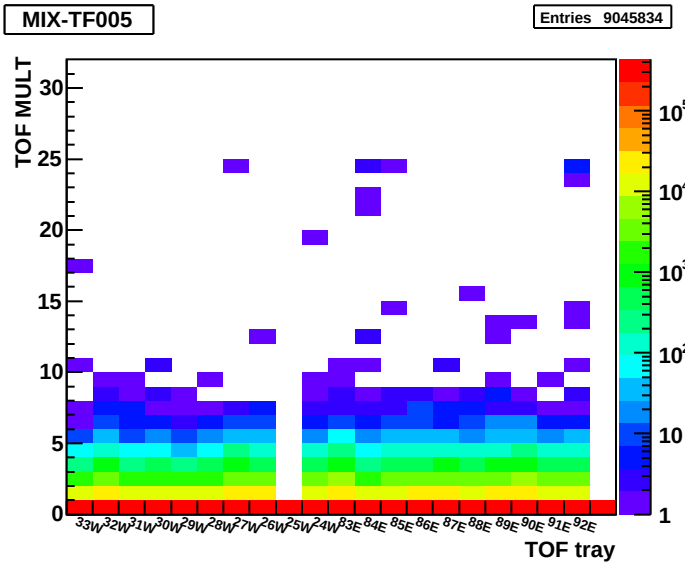

Unused (ch7)
Entries 3446032

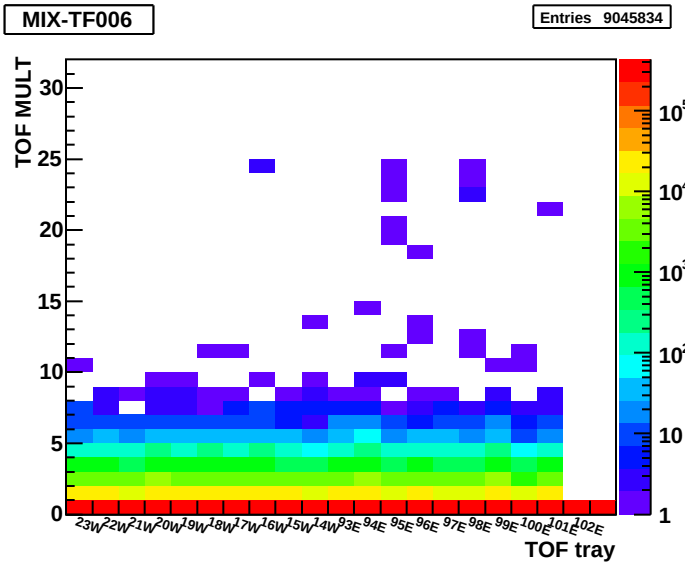

MIX-TF001
Entries 9045834
TOF MULT
TOF tray

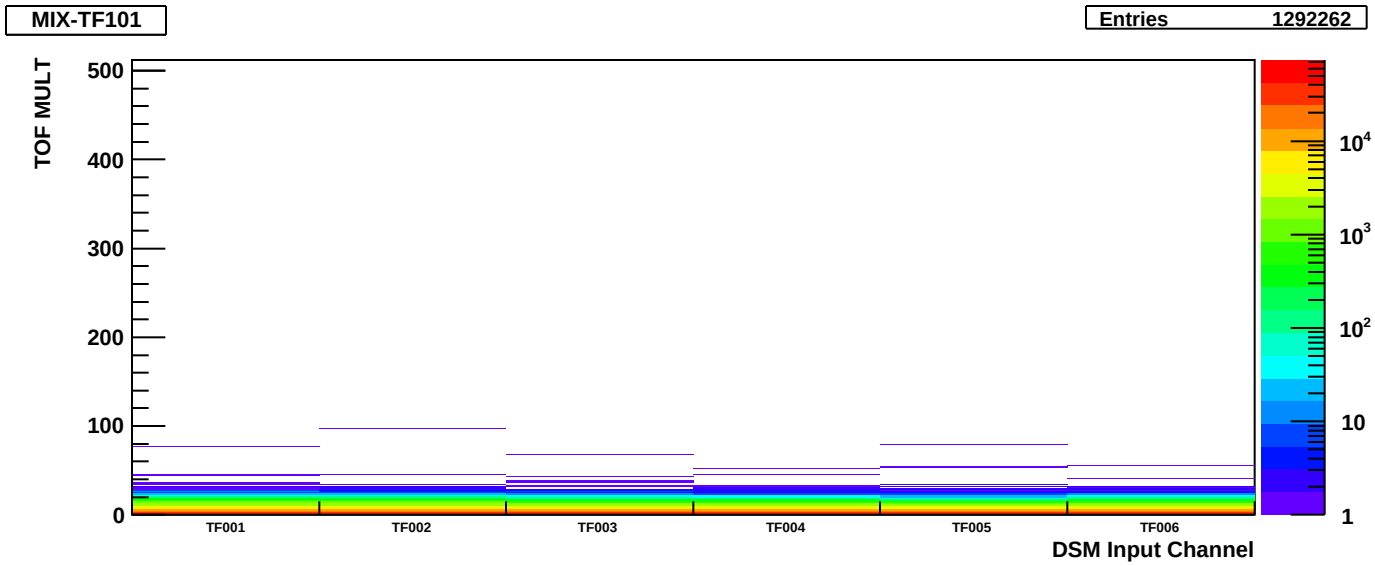

MIX-TF002
Entries 9045834
TOF MULT
TOF tray

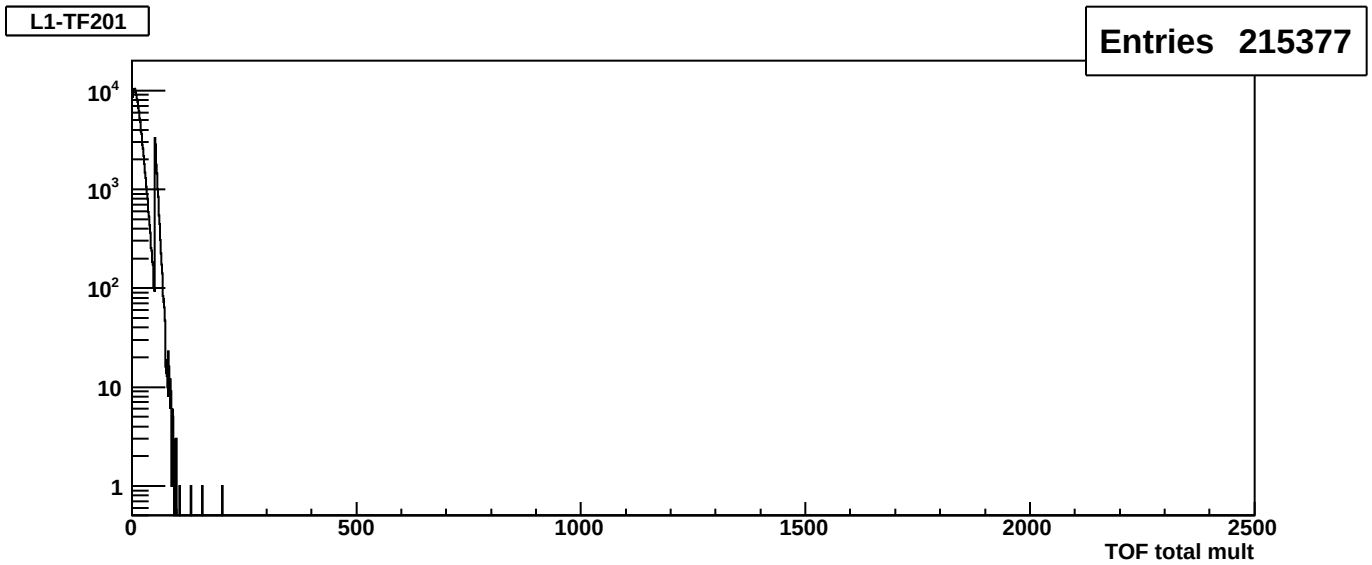

MIX-TF003
Entries 9045834
TOF MULT
TOF tray

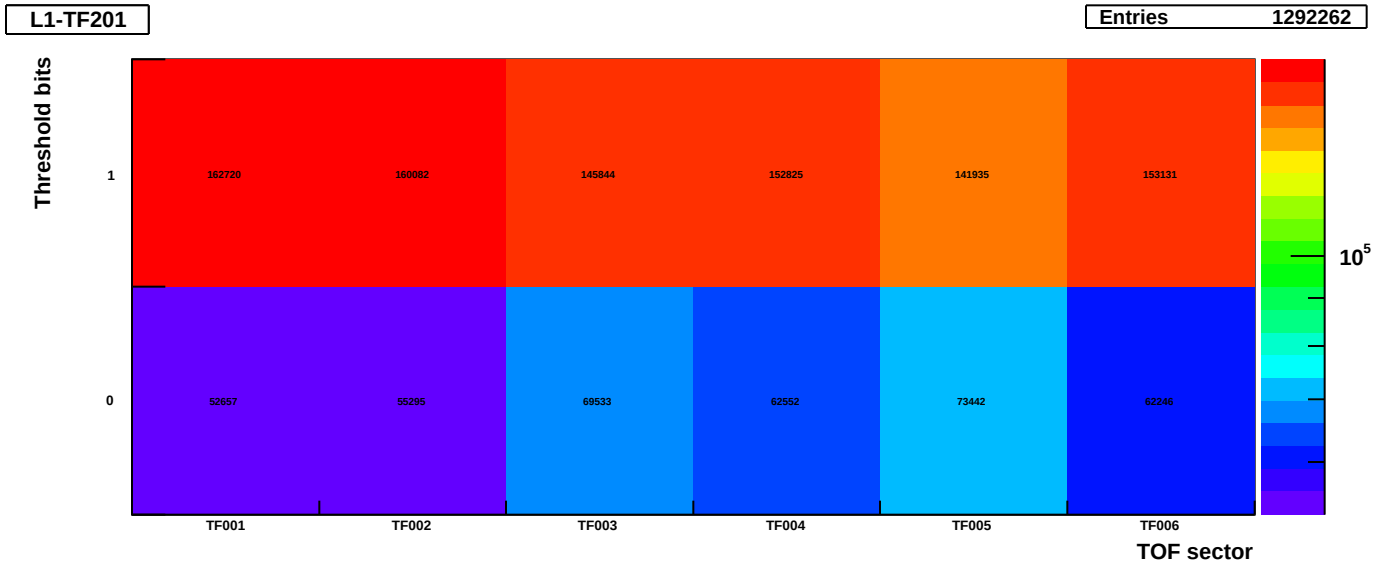

MIX-TF004
Entries 9045834
TOF MULT
TOF tray

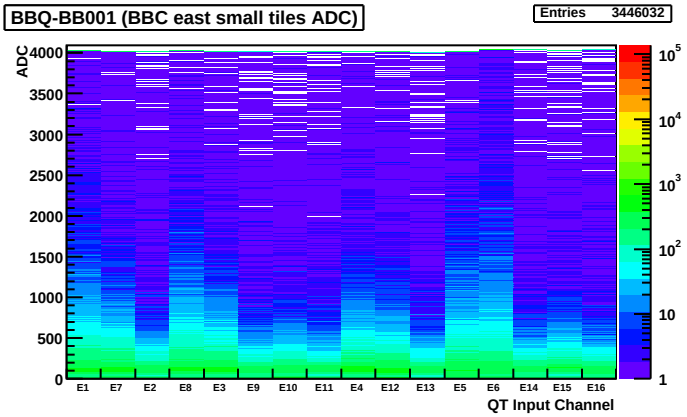

MIX-TF005
Entries 9045834
TOF MULT
TOF tray

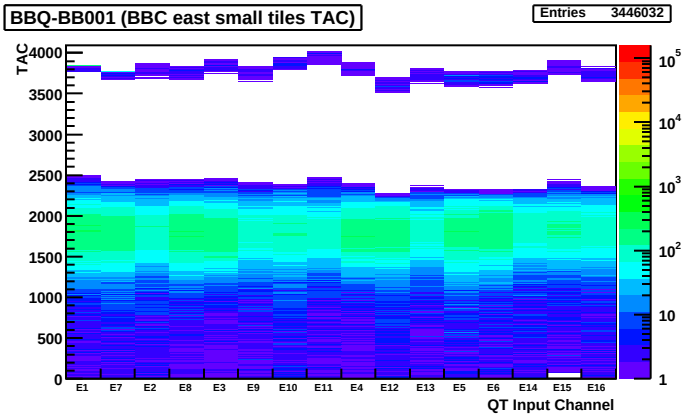

MIX-TF006
Entries 9045834
TOF MULT
TOF tray

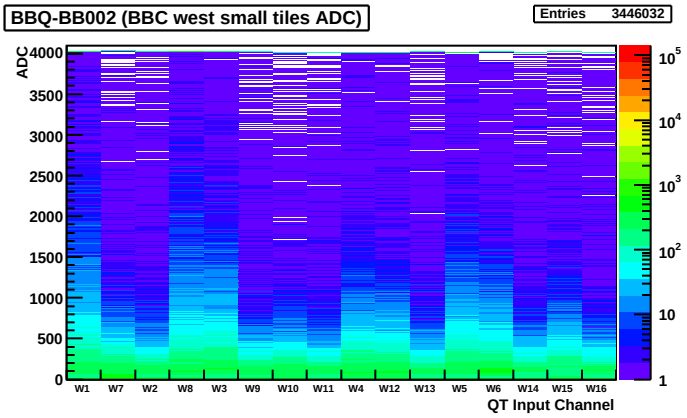

MIX-TF101
Entries 1292262
TOF MULT
500
400
300
200
100
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

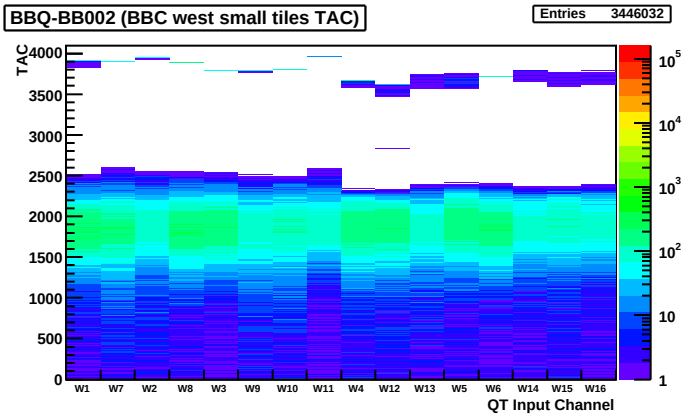

L1-TF201
Entries 215377
10^4
10^3
10^2
10
1
0
500
1000
1500
2000
2500
TOF total mult

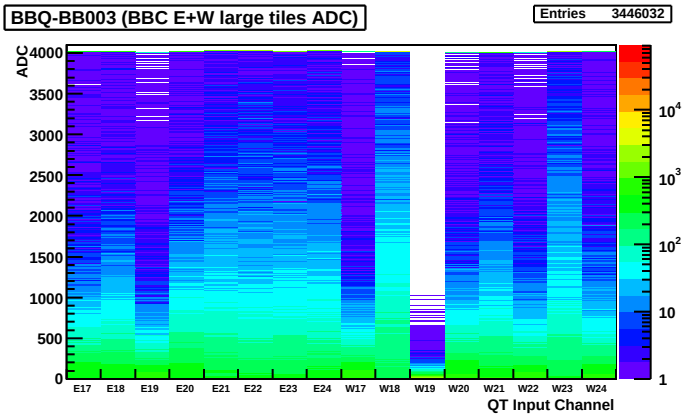

L1-TF201
Entries 1292262
Threshold bits
1
0
162720
160082
145844
152825
141935
153131
52657
55295
69533
62552
73442
62246
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^5

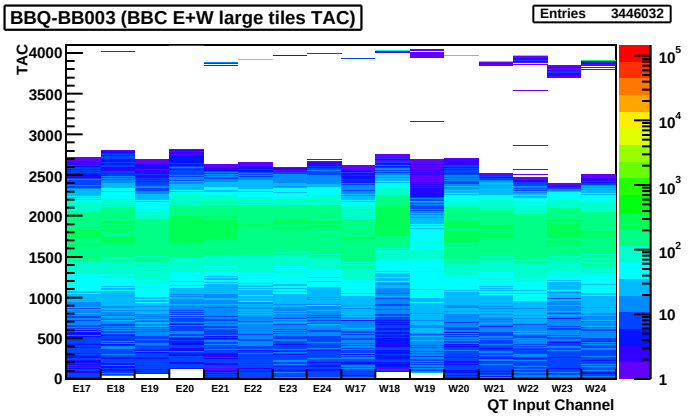

BBQ-BB001 (BBC east small tiles ADC)
Entries 3446032
ADC
QT Input Channel

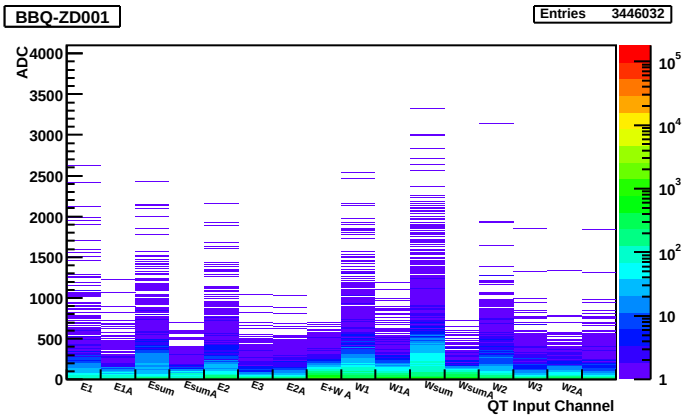

BBQ-BB001 (BBC east small tiles TAC)
Entries 3446032
TAC
QT Input Channel

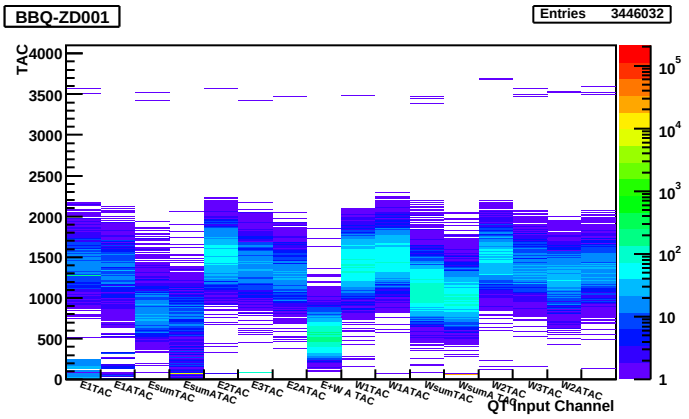

BBQ-BB002 (BBC west small tiles ADC)
Entries 3446032
ADC
QT Input Channel

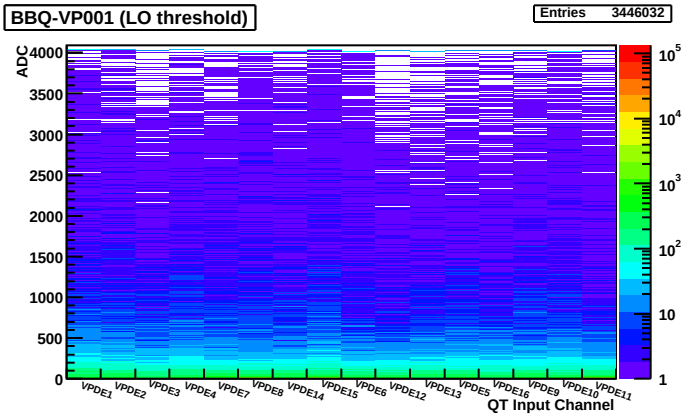

BBQ-BB002 (BBC west small tiles TAC)
Entries 3446032
TAC
QT Input Channel

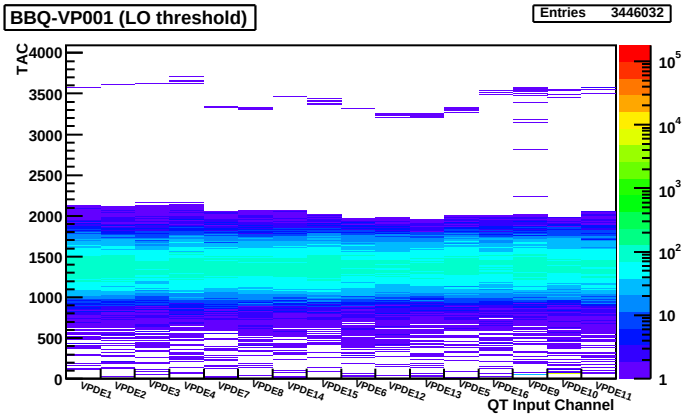

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 3446032
ADC
QT Input Channel

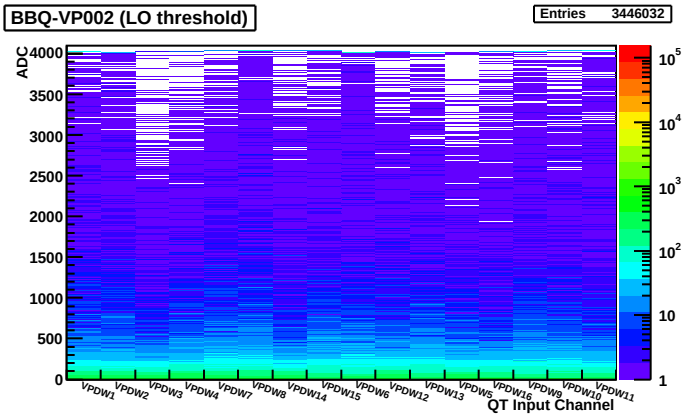

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 3446032
TAC
QT Input Channel

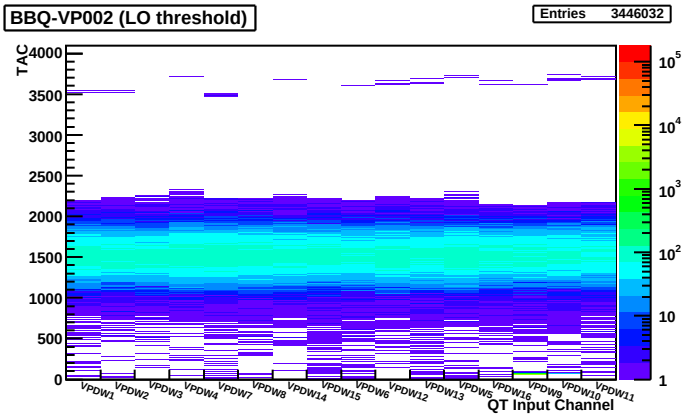

BBQ-ZD001
Entries 3446032
ADC
QT Input Channel

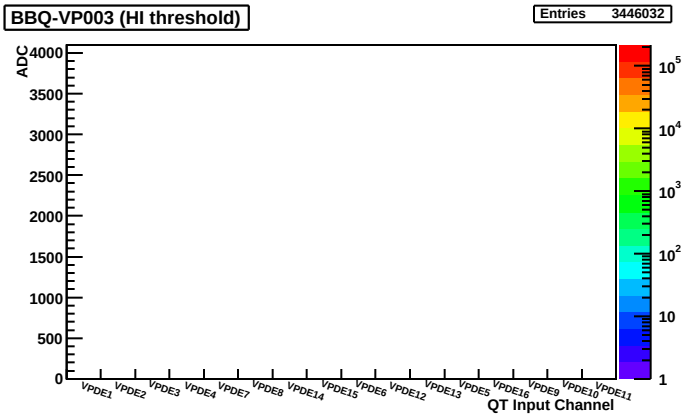

BBQ-ZD001
Entries 3446032
TAC
QT Input Channel

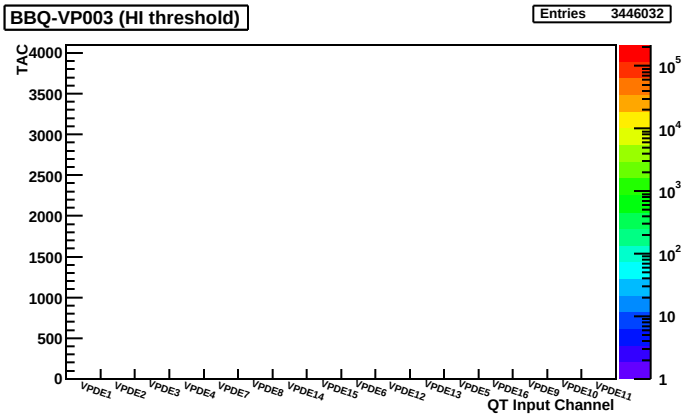

BBQ-VP001 (LO threshold)
Entries 3446032
ADC
QT Input Channel

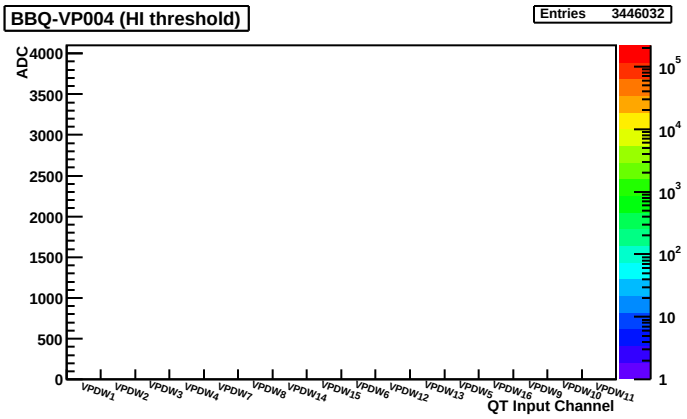

BBQ-VP001 (LO threshold)
Entries 3446032
TAC
QT Input Channel

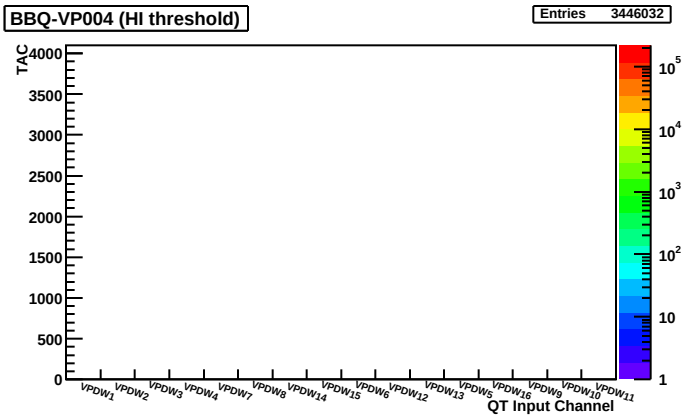

BBQ-VP002 (LO threshold)
Entries 3446032
ADC
QT Input Channel

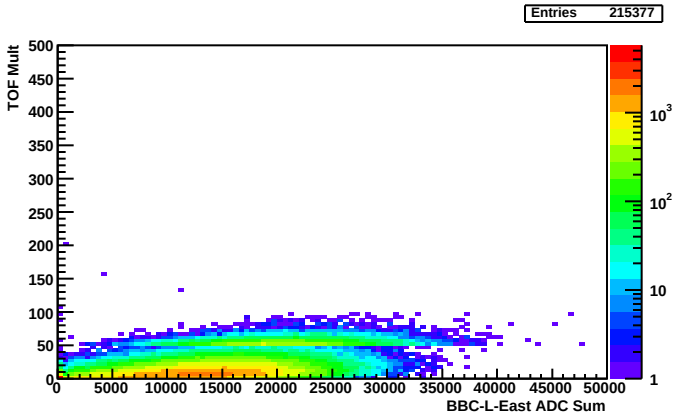

BBQ-VP002 (LO threshold)
Entries 3446032
TAC
QT Input Channel

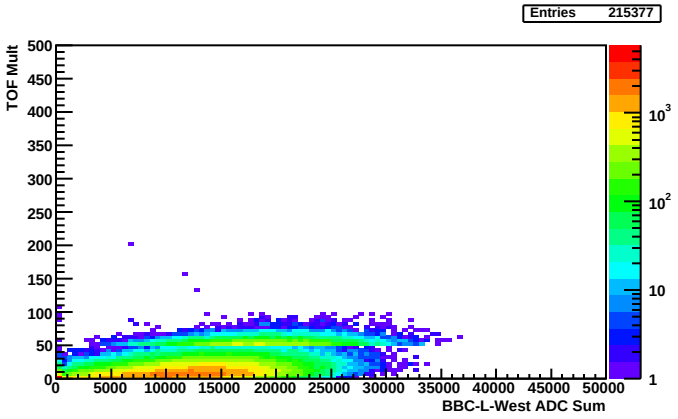

BBQ-VP003 (HI threshold)
Entries 3446032
ADC
QT Input Channel

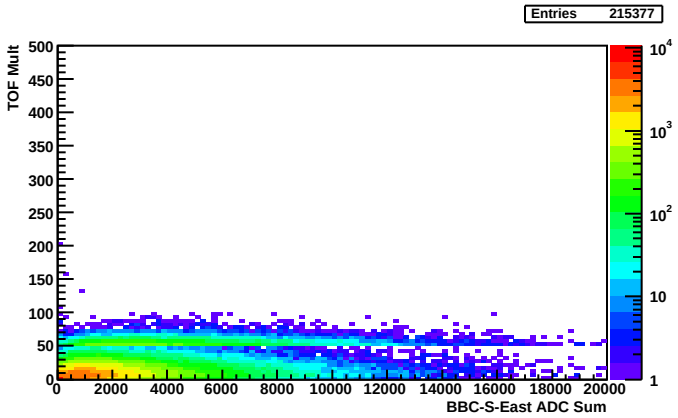

BBQ-VP003 (HI threshold)
Entries 3446032
TAC
QT Input Channel

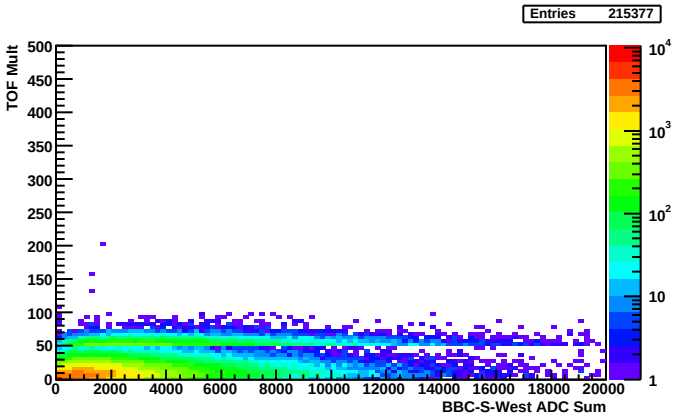

BBQ-VP004 (HI threshold)
Entries 3446032
ADC
QT Input Channel

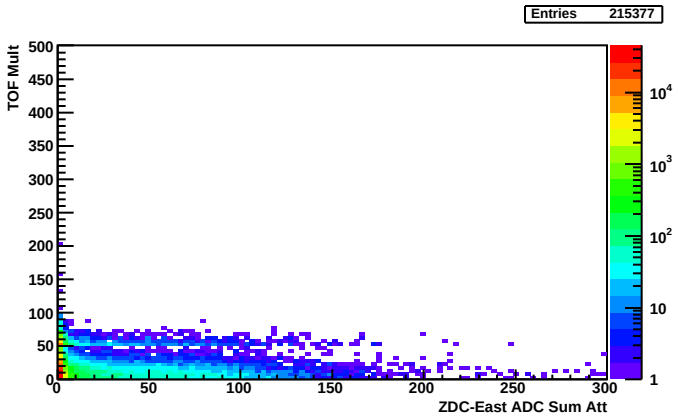

BBQ-VP004 (HI threshold)
Entries 3446032
TAC
QT Input Channel

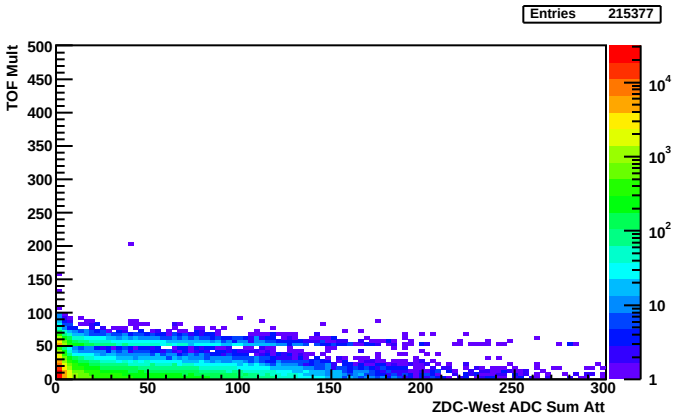

Entries 215377
TOF Mult
BBC-L-East ADC Sum

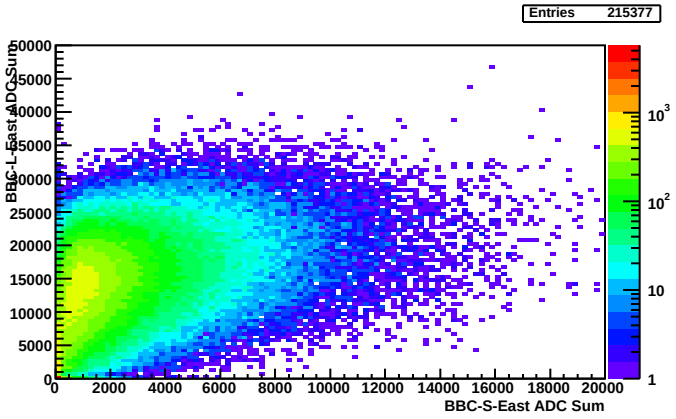

Entries 215377
TOF Mult
BBC-L-West ADC Sum

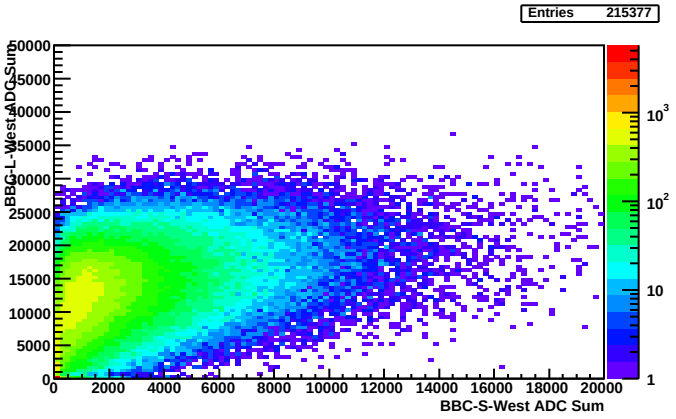

Entries 215377
TOF Mult
BBC-S-East ADC Sum

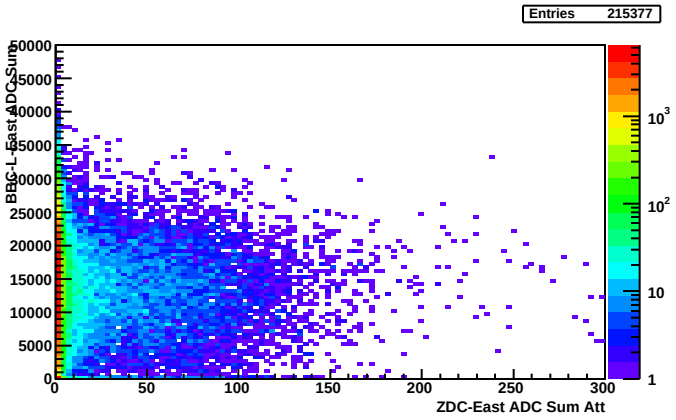

Entries 215377
TOF Mult
BBC-S-West ADC Sum

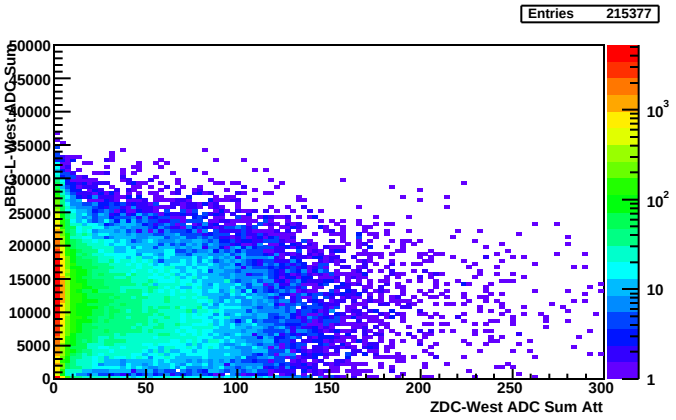

Entries 215377
TOF Mult
ZDC-East ADC Sum Att

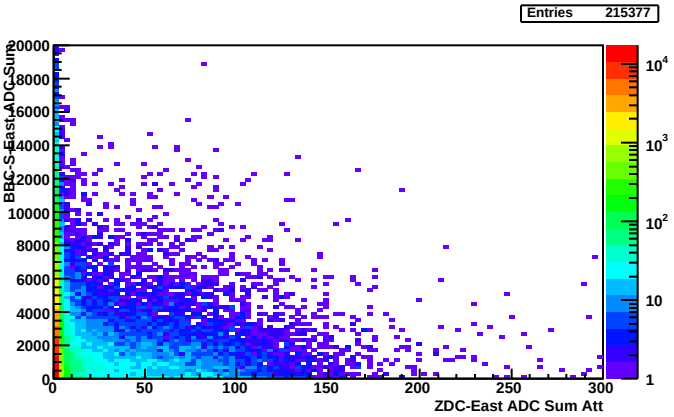

Entries 215377
TOF Mult
ZDC-West ADC Sum Att

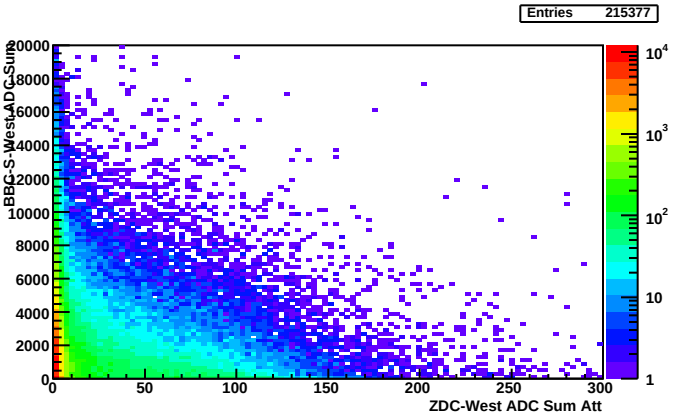

Entries 215377
BBC-L-East ADC Sum
BBC-S-East ADC Sum

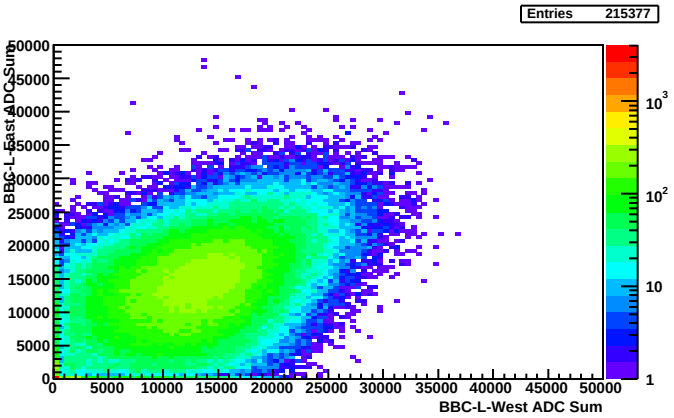

Entries 215377
BBC-L-West ADC Sum
BBC-S-West ADC Sum

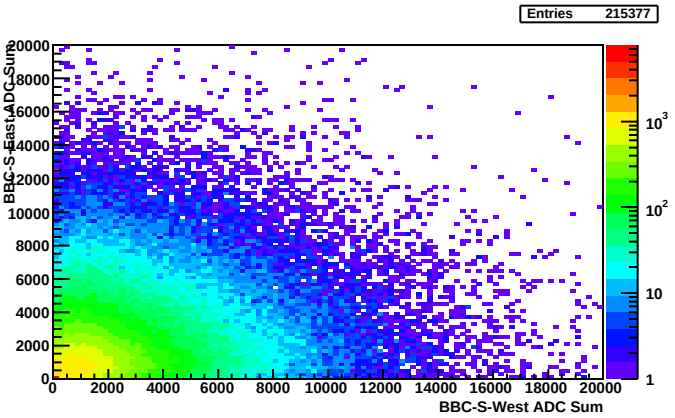

Entries 215377
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

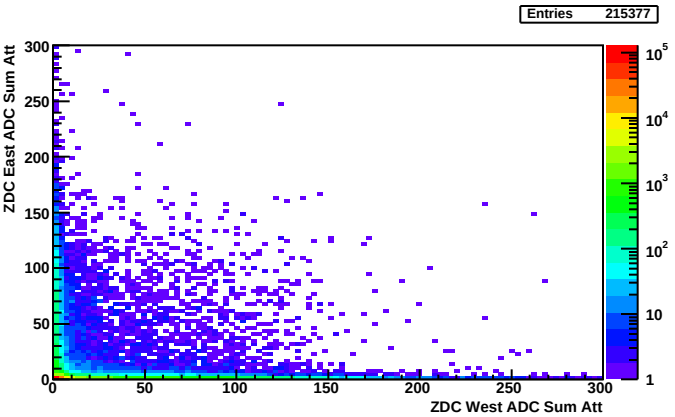

Entries 215377
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

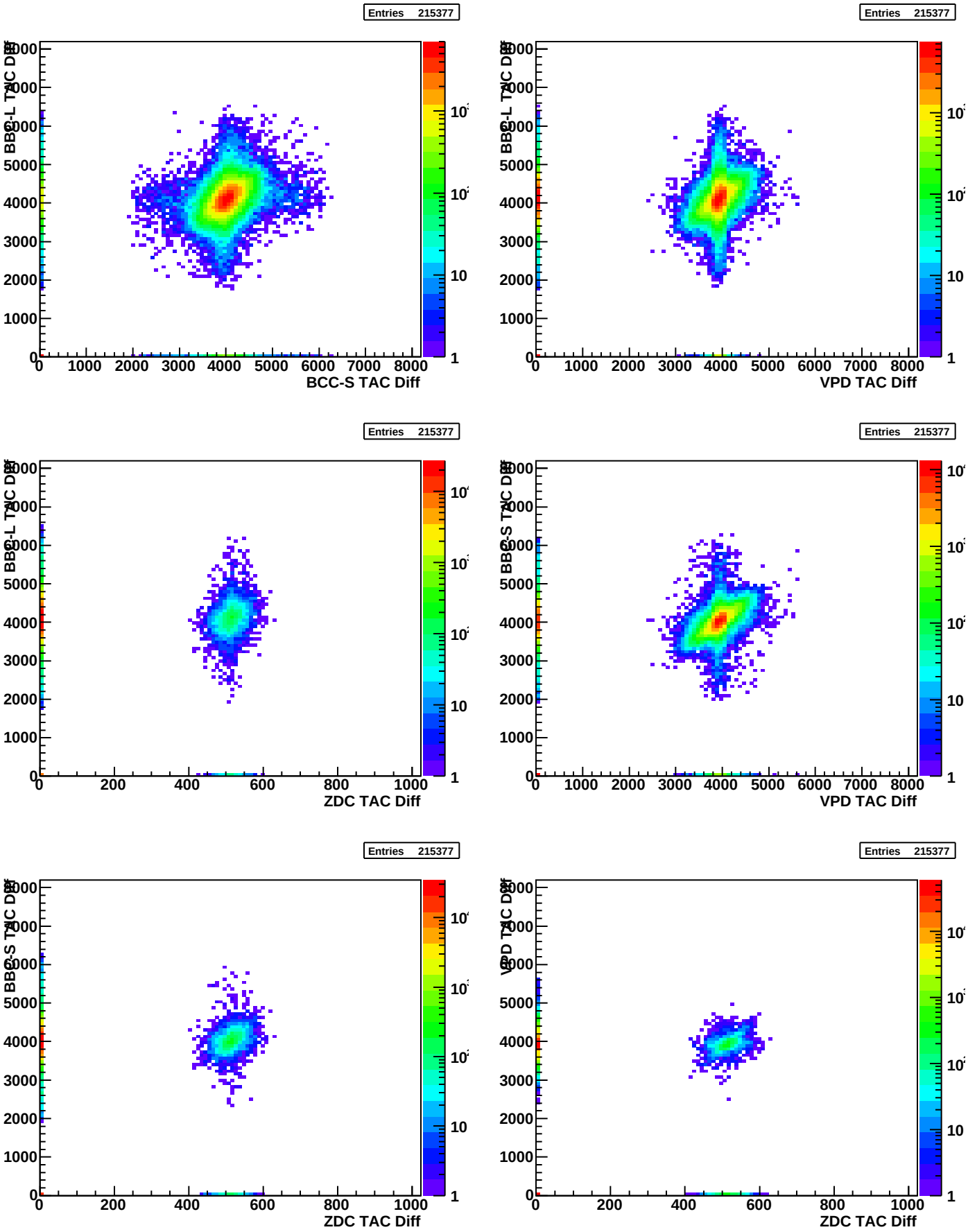

Entries 215377
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

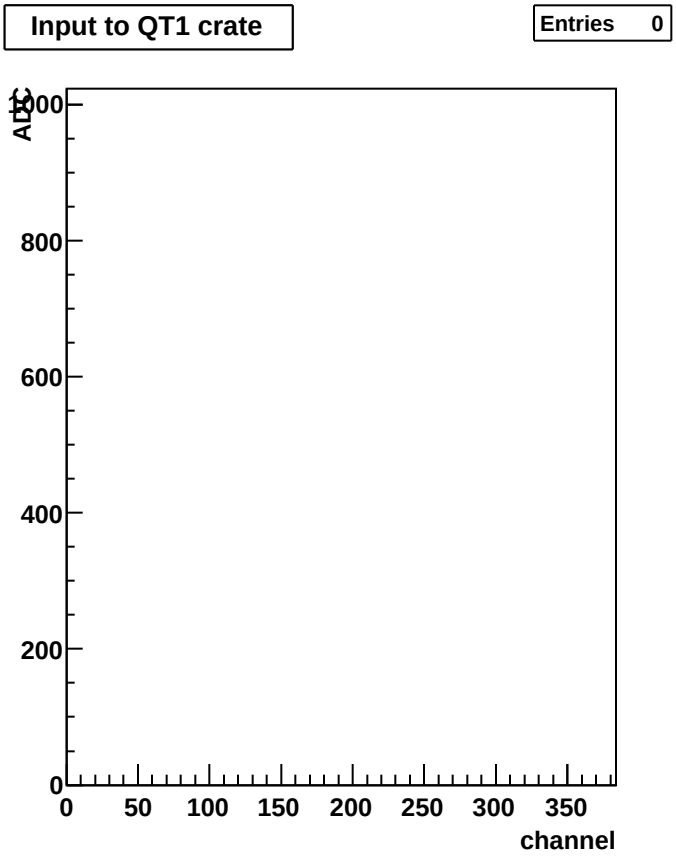

Entries 215377
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

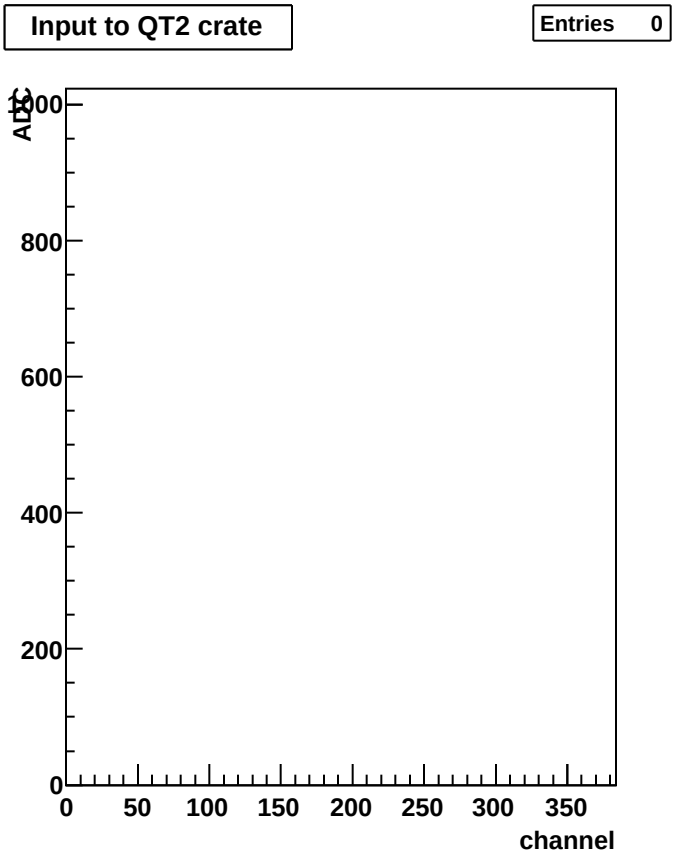

Entries 215377
BBC-L-East ADC Sum
BBC-L-West ADC Sum

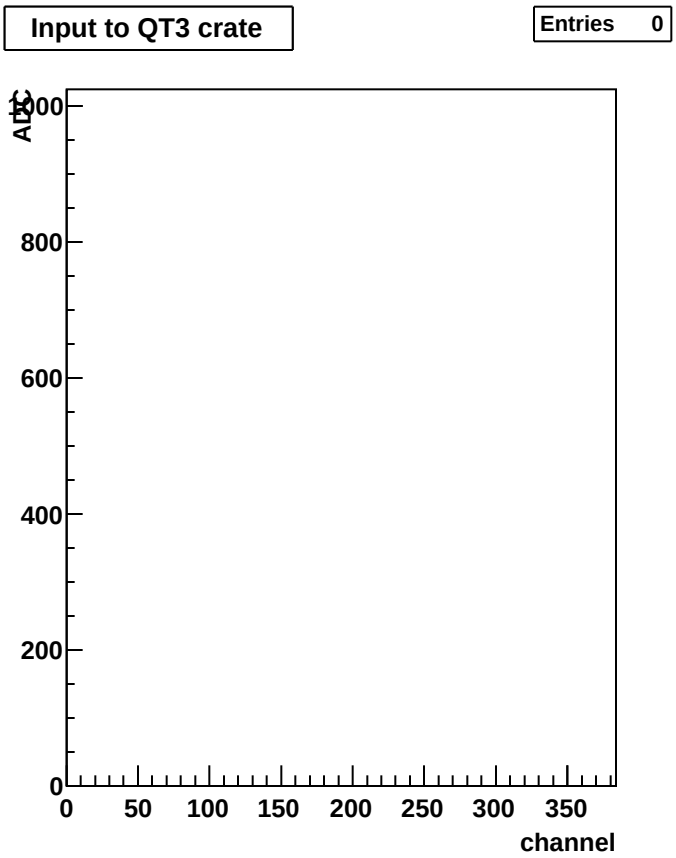

Entries 215377
BBC-S-East ADC Sum
BBC-S-West ADC Sum

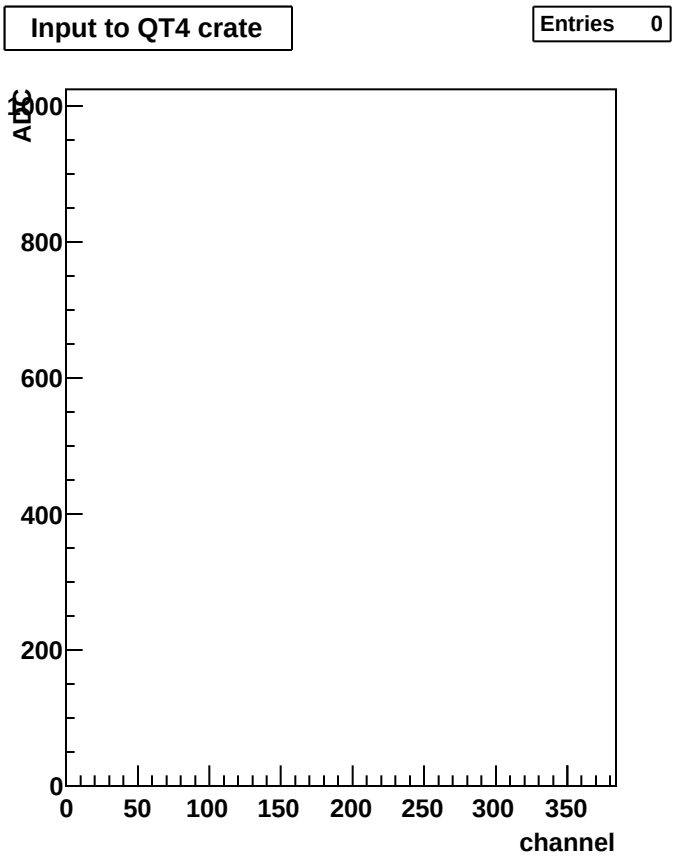

Entries 215377
ZDC East ADC Sum Att
ZDC West ADC Sum Att

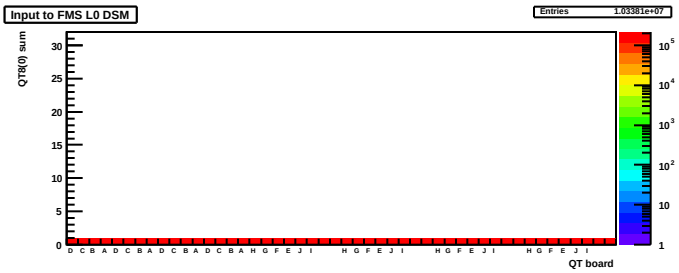

Entries 215377
BBC-L TAC Diff
BCC-S TAC Diff
Entries 215377
BBC-L TAC Diff
VPD TAC Diff
Entries 215377
BBC-L TAC Diff
ZDC TAC Diff
Entries 215377
BBC-S TAC Diff
VPD TAC Diff
Entries 215377
BBC-S TAC Diff
ZDC TAC Diff
Entries 215377
VPD TAC Diff
ZDC TAC Diff

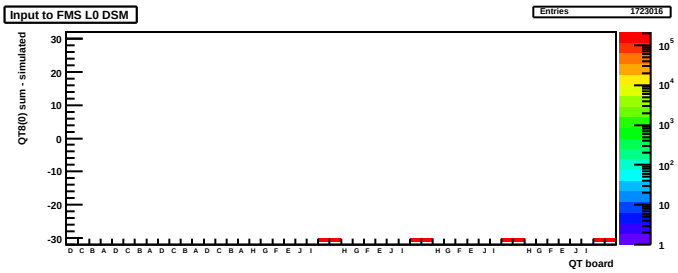

Input to QT1 crate
Entries 0
ADC
1000
800
600
400
200
0
0 50 100 150 200 250 300 350
channel

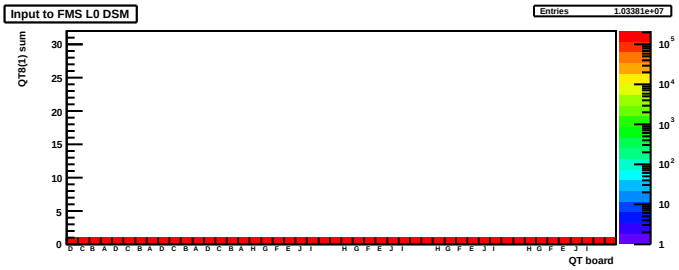

Input to QT2 crate
Entries 0
ADC
1000
800
600
400
200
0
0 50 100 150 200 250 300 350
channel

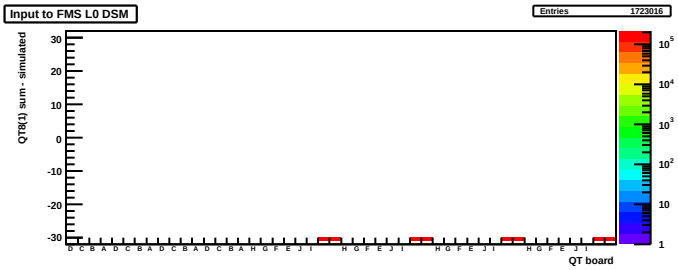

Input to QT3 crate
Entries 0
ADC
1000
800
600
400
200
0
0 50 100 150 200 250 300 350
channel

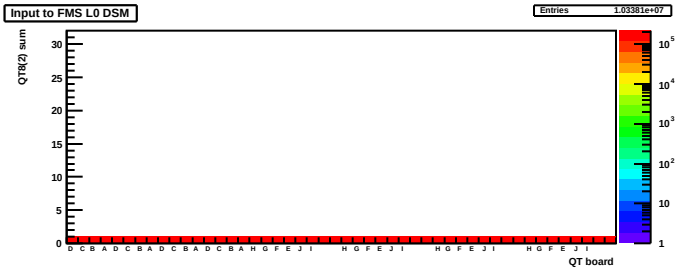

Input to QT4 crate
Entries 0
ADC
1000
800
600
400
200
0
0 50 100 150 200 250 300 350
channel

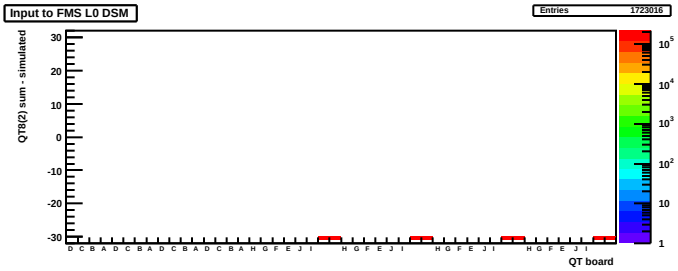

Input to FMS L0 DSM
Entries 1.03381e+07
QT8(0) sum
QT board

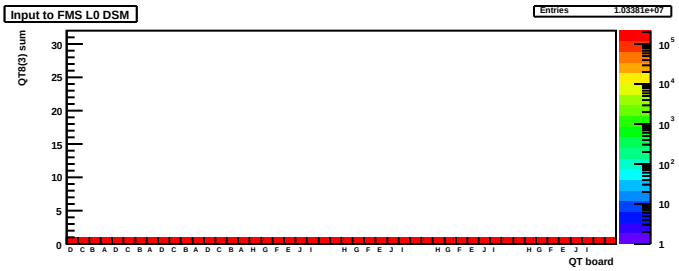

Input to FMS L0 DSM
Entries 1723016
QT8(0) sum - simulated
QT board

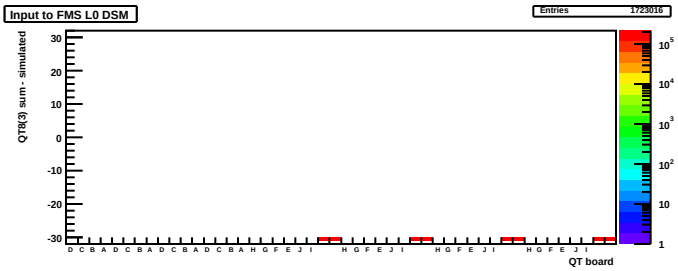

Input to FMS L0 DSM
Entries 1.03381e+07
QT8(1) sum
QT board

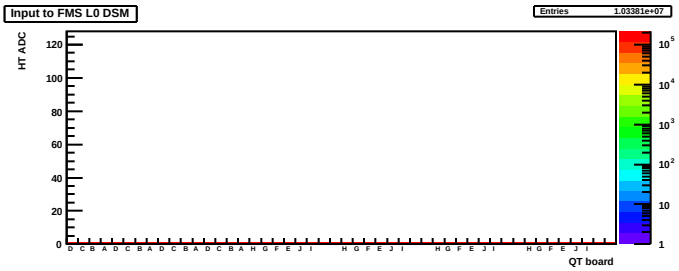

Input to FMS L0 DSM
Entries 1723016
QT8(1) sum - simulated
QT board

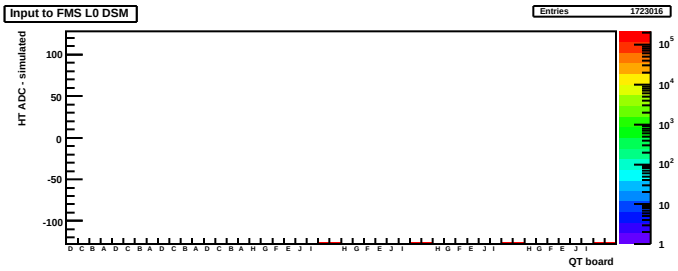

Input to FMS L0 DSM
Entries 1.03381e+07
QT8(2) sum
QT board

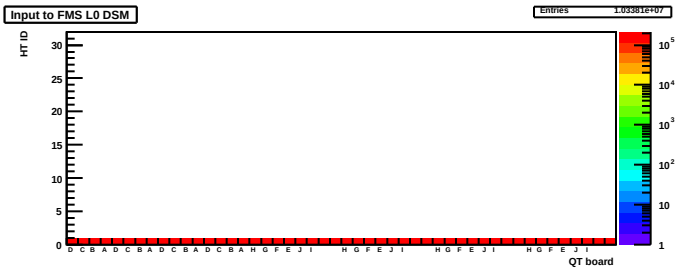

Input to FMS L0 DSM
Entries 1723016
QT8(2) sum - simulated
QT board

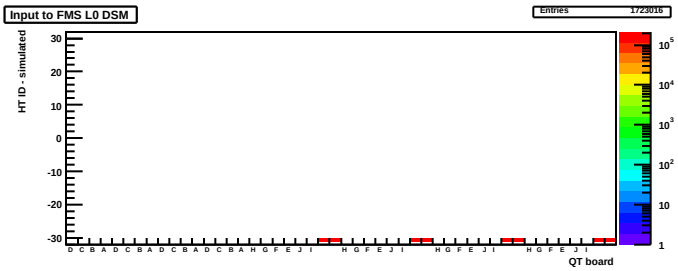

Input to FMS L0 DSM
Entries 1.03381e+07
QT8(3) sum
QT board

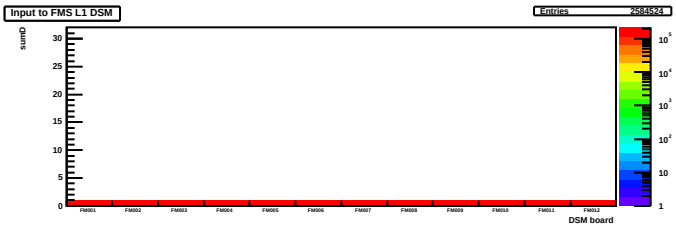

Input to FMS L0 DSM
Entries 1723016
QT8(3) sum - simulated
QT board

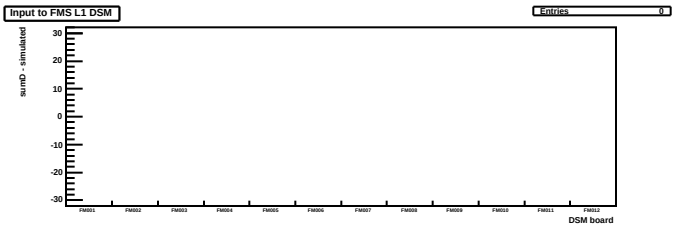

Input to FMS L0 DSM
Entries 1.03381e+07
HT ADC
QT board

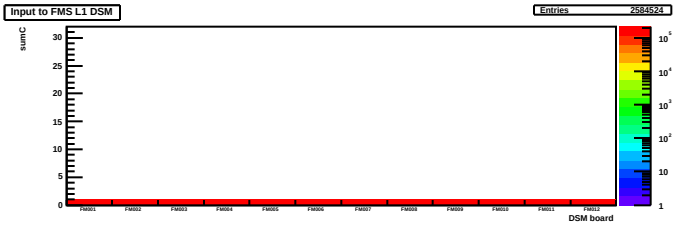

Input to FMS L0 DSM
Entries 1723016
HT ADC - simulated
QT board

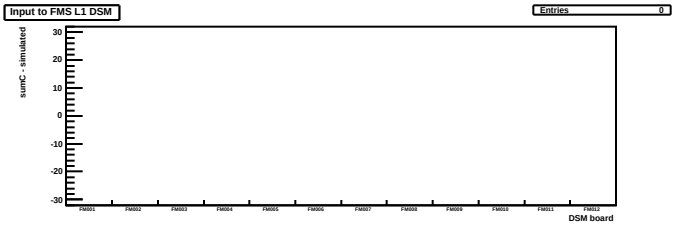

Input to FMS L0 DSM
Entries 1.03381e+07
HT ID
QT board

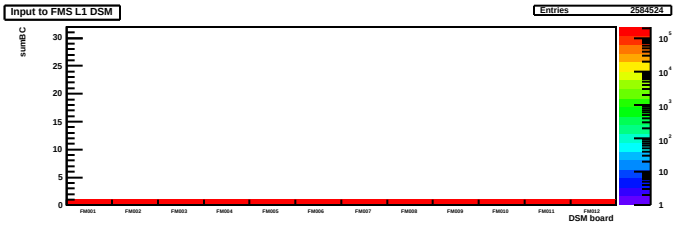

Input to FMS L0 DSM
Entries 1723016
HT ID - simulated
QT board

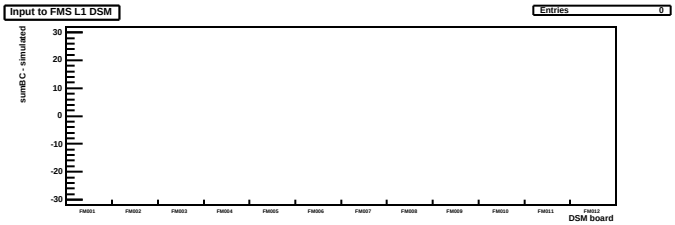

Input to FMS L1 DSM
Entries 2584524
sumD
DSM board

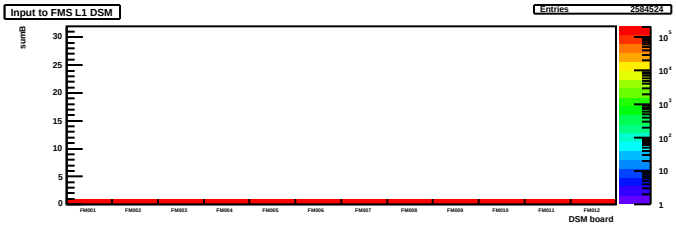

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

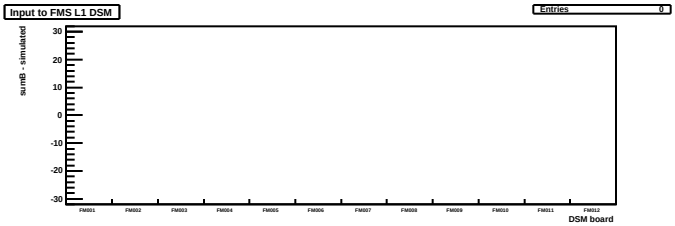

Input to FMS L1 DSM
Entries 2584524
sumC
DSM board

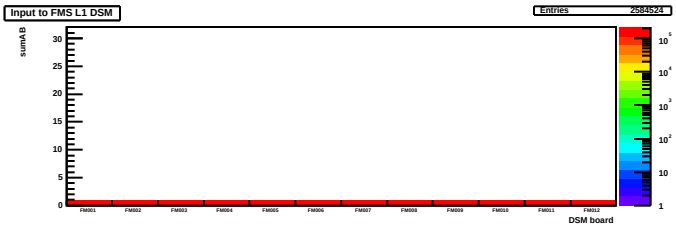

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

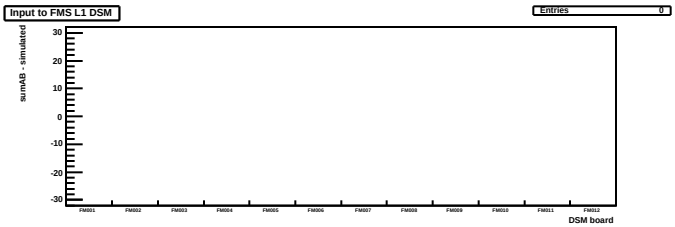

Input to FMS L1 DSM
Entries 2584524
sumBC
DSM board

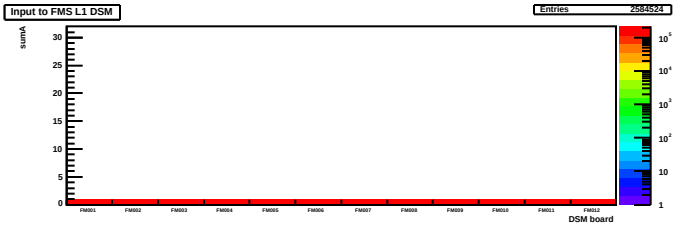

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

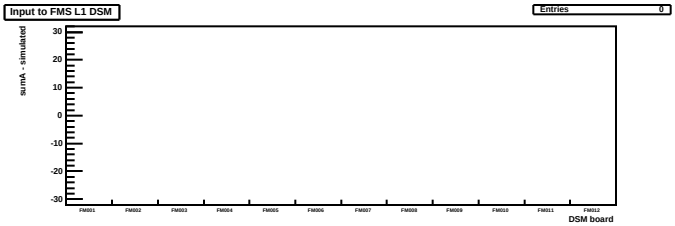

Input to FMS L1 DSM
Entries 2584524
sumB
DSM board

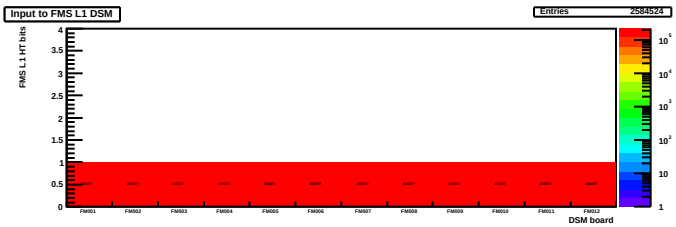

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

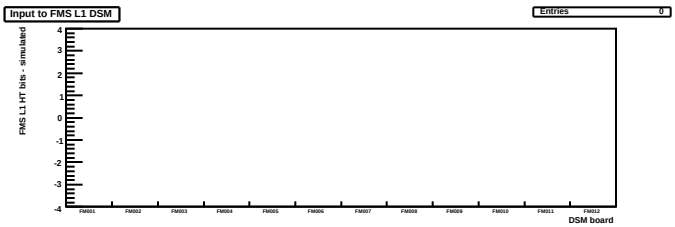

Input to FMS L1 DSM
Entries 2584524
sumAB
DSM board

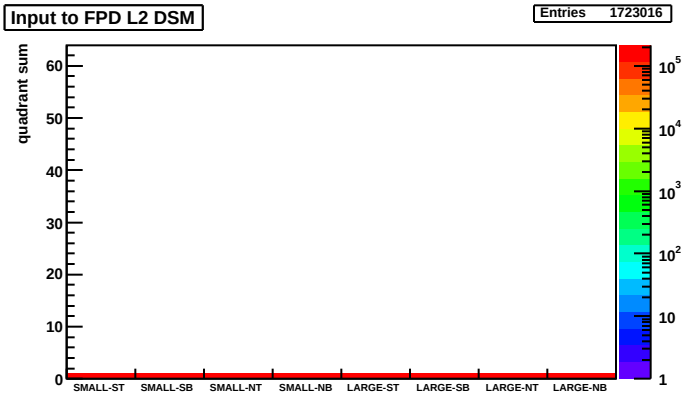

Input to FMS L1 DSM
Entries 0
sumAB - simulated
DSM board

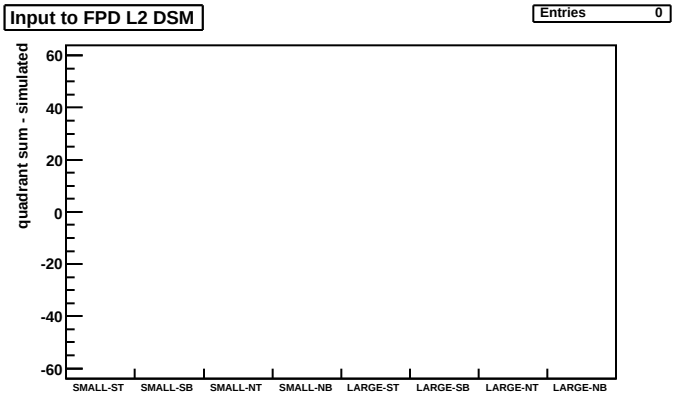

Input to FMS L1 DSM
Entries 2584524
sumA
DSM board

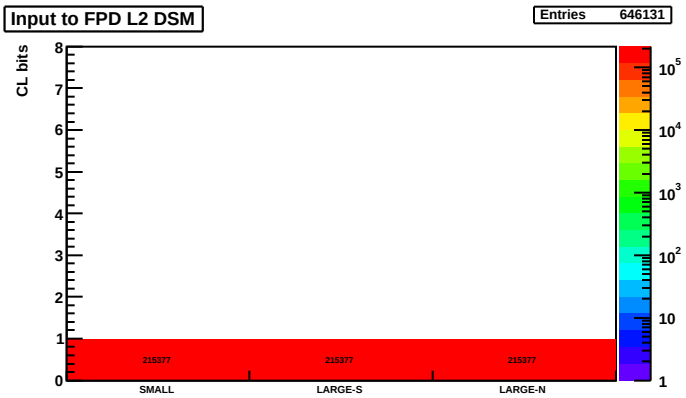

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

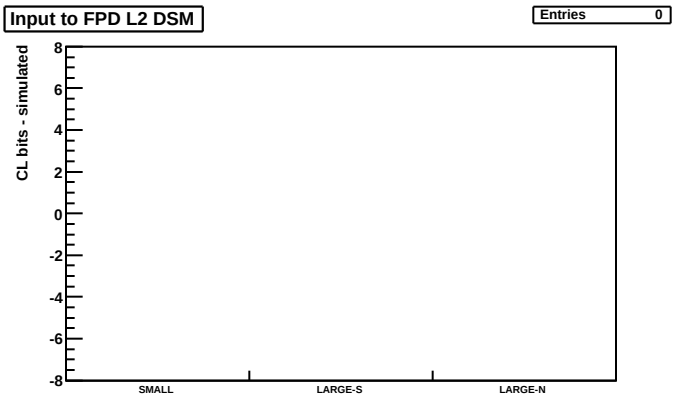

Input to FMS L1 DSM
Entries 2584524
FMS L1 HT bits
DSM board

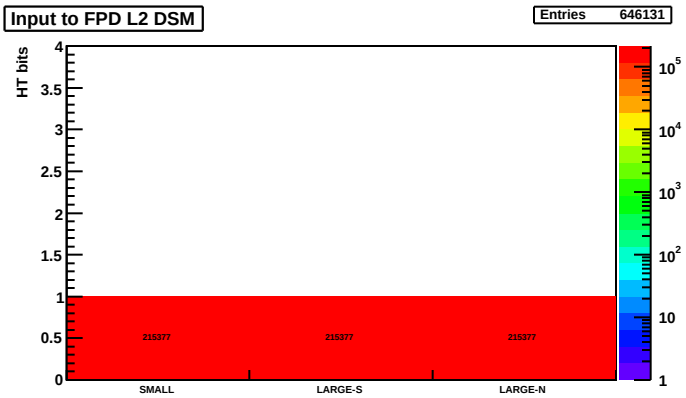

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

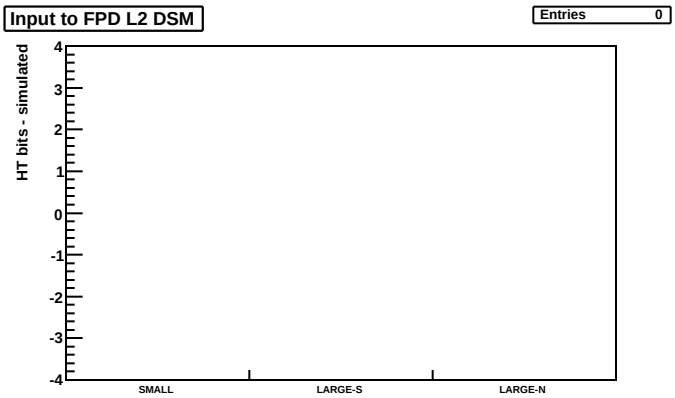

Input to FPD L2 DSM
Entries 1723016
quadrant sum
SMALL-ST SMALL-SB SMALL-NT SMALL-NB LARGE-ST LARGE-SB LARGE-NT LARGE-NB

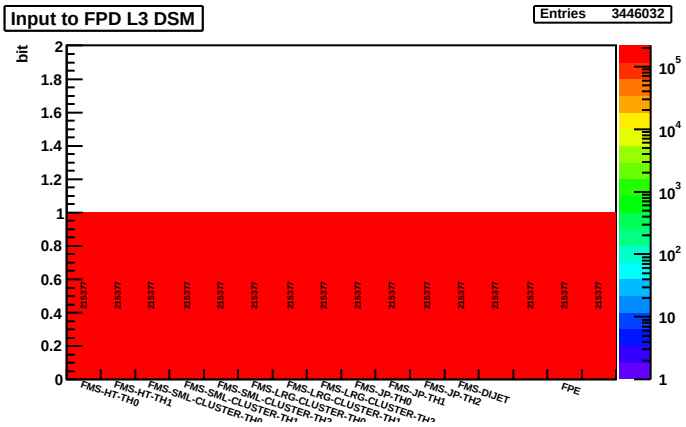

Input to FPD L2 DSM
Entries 0
quadrant sum - simulated
SMALL-ST SMALL-SB SMALL-NT SMALL-NB LARGE-ST LARGE-SB LARGE-NT LARGE-NB

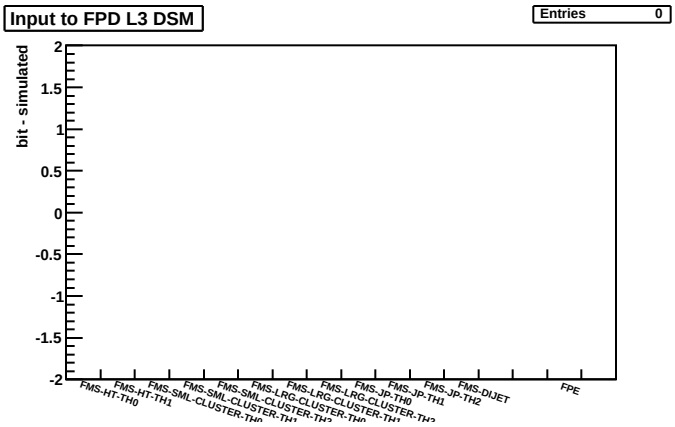

Input to FPD L2 DSM
Entries 646131
CL bits
215377
215377
215377
SMALL LARGE-S LARGE-N

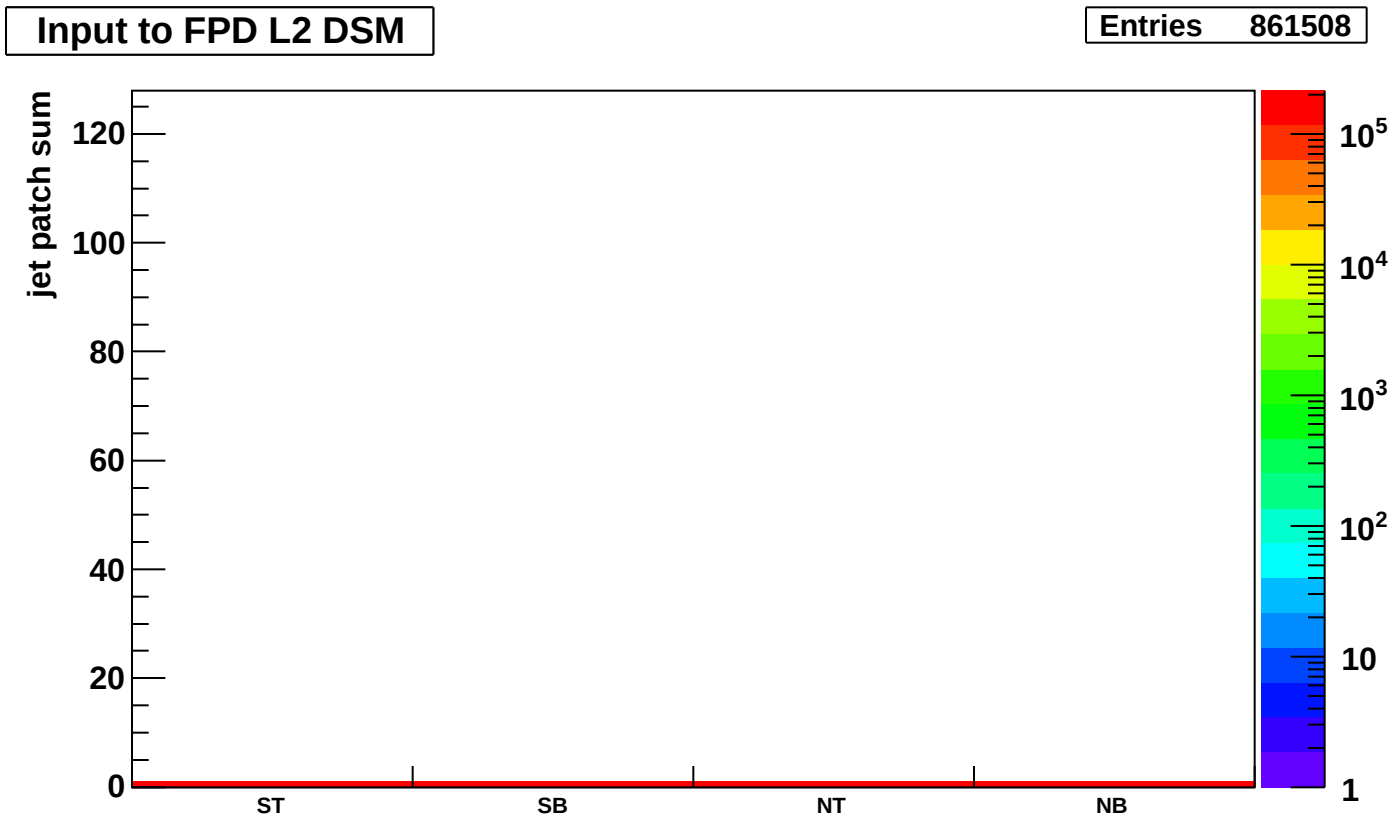

Input to FPD L2 DSM
Entries 0
CL bits - simulated
SMALL LARGE-S LARGE-N

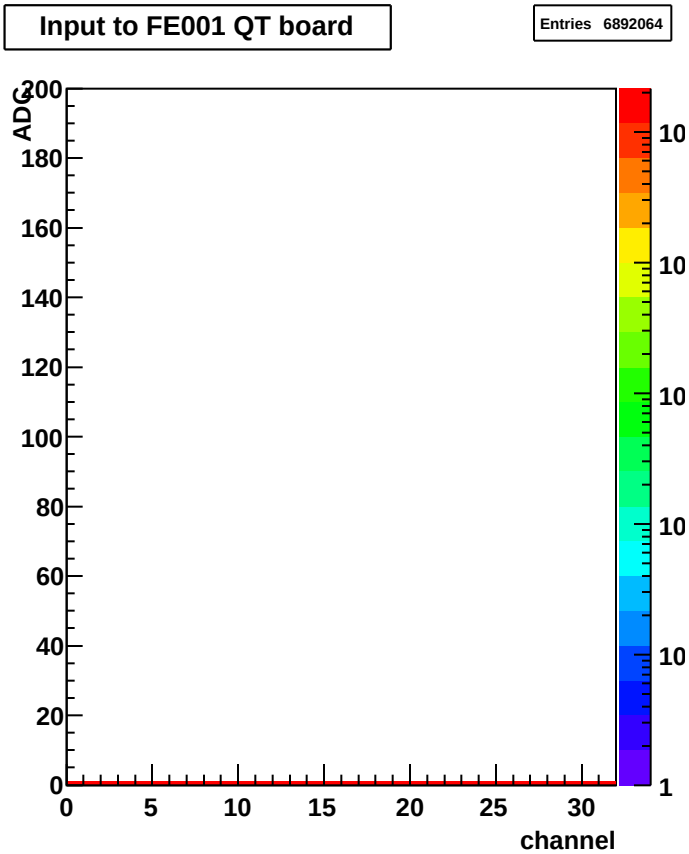

Input to FPD L2 DSM
Entries 646131
HT bits
215377
215377
215377
SMALL LARGE-S LARGE-N

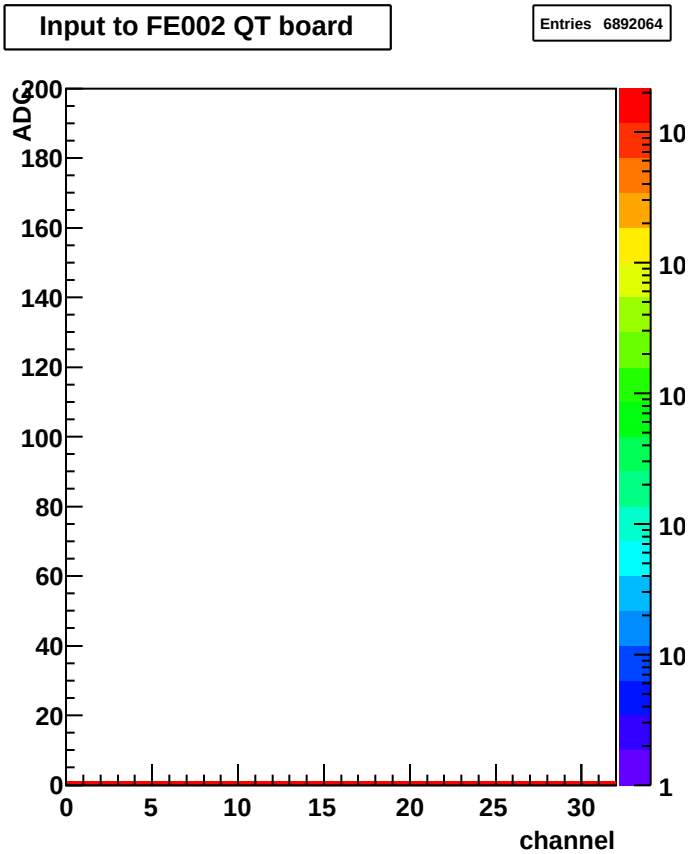

Input to FPD L2 DSM
Entries 0
HT bits - simulated
SMALL LARGE-S LARGE-N

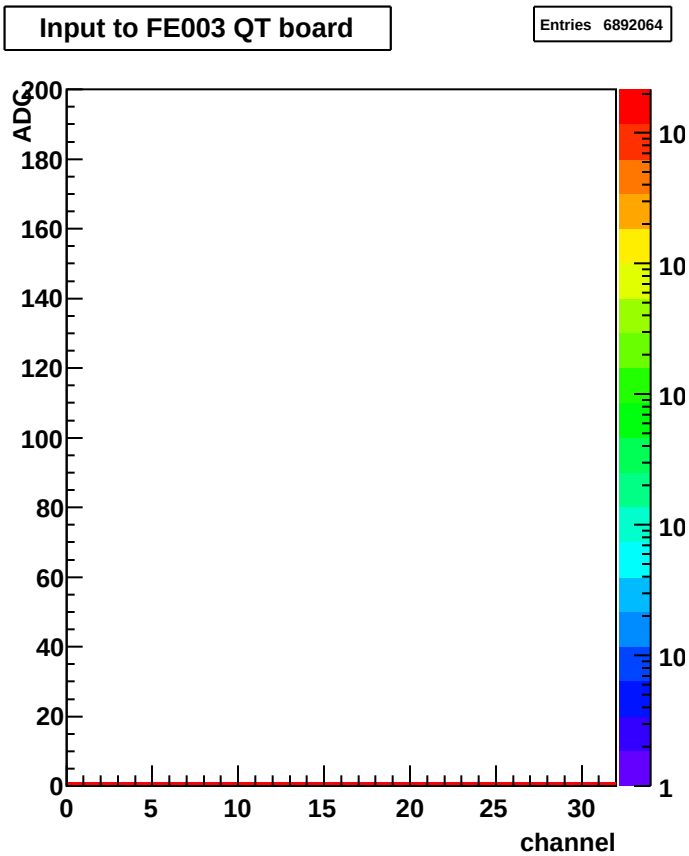

Input to FPD L3 DSM
Entries 3446032
bit
215377
FMS-HT-TH0 FMS-HT-TH1 FMS-SML-CLUSTER-TH0 FMS-SML-CLUSTER-TH1 FMS-SML-CLUSTER-TH2 FMS-LRG-CLUSTER-TH0 FMS-LRG-CLUSTER-TH1 FMS-LRG-CLUSTER-TH2 FMS-JP-TH0 FMS-JP-TH1 FMS-JP-TH2 FMS-DIJET FPE

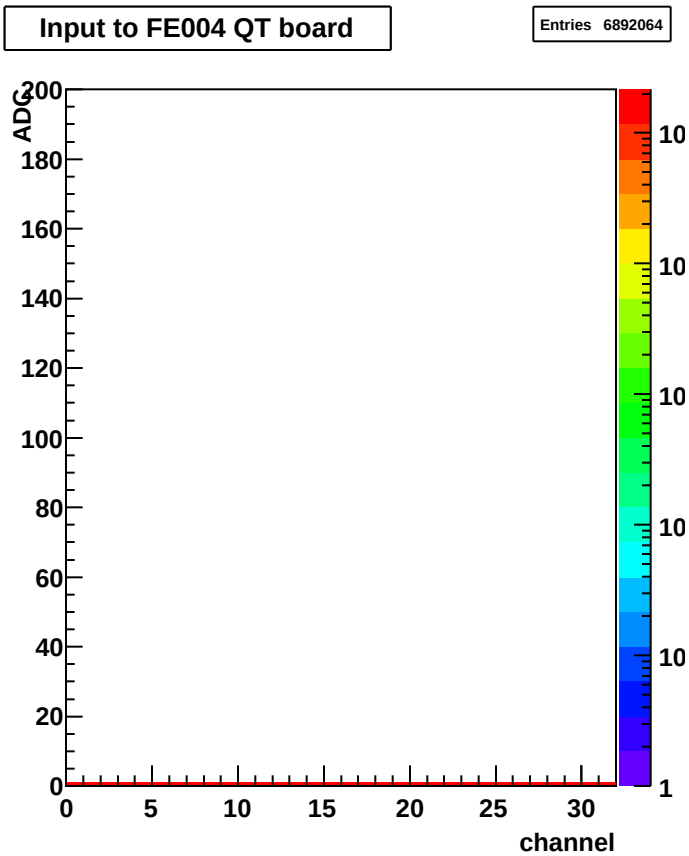

Input to FPD L3 DSM
Entries 0
bit - simulated
FMS-HT-TH0 FMS-HT-TH1 FMS-SML-CLUSTER-TH0 FMS-SML-CLUSTER-TH1 FMS-SML-CLUSTER-TH2 FMS-LRG-CLUSTER-TH0 FMS-LRG-CLUSTER-TH1 FMS-LRG-CLUSTER-TH2 FMS-JP-TH0 FMS-JP-TH1 FMS-JP-TH2 FMS-DIJET FPE

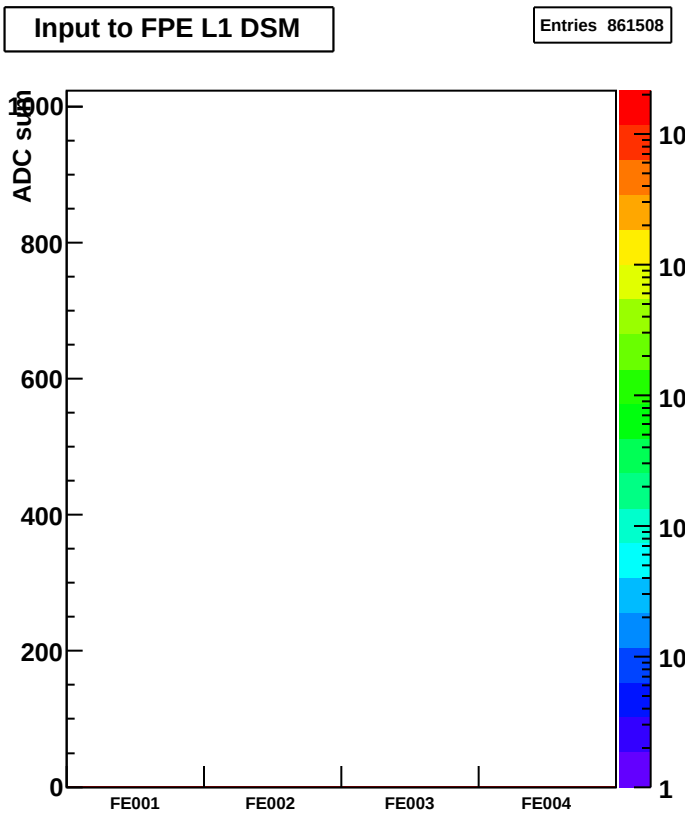

Input to FPD L2 DSM
Entries 861508
jet patch sum
120
100
80
60
40
20
0
ST
SB
NT
NB
10^5
10^4
10^3
10^2
10
1

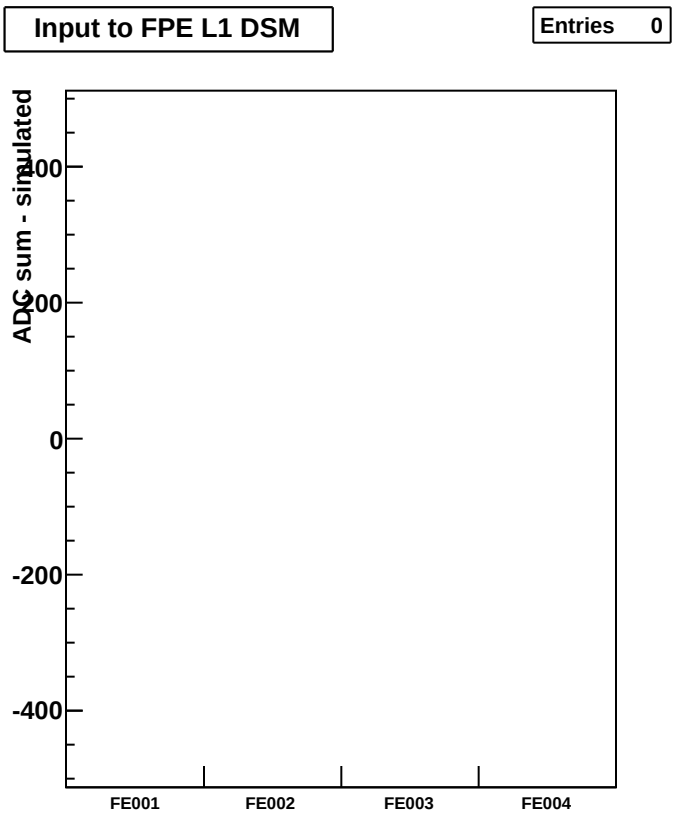

Input to FE001 QT board
Entries 6892064
ADC
channel

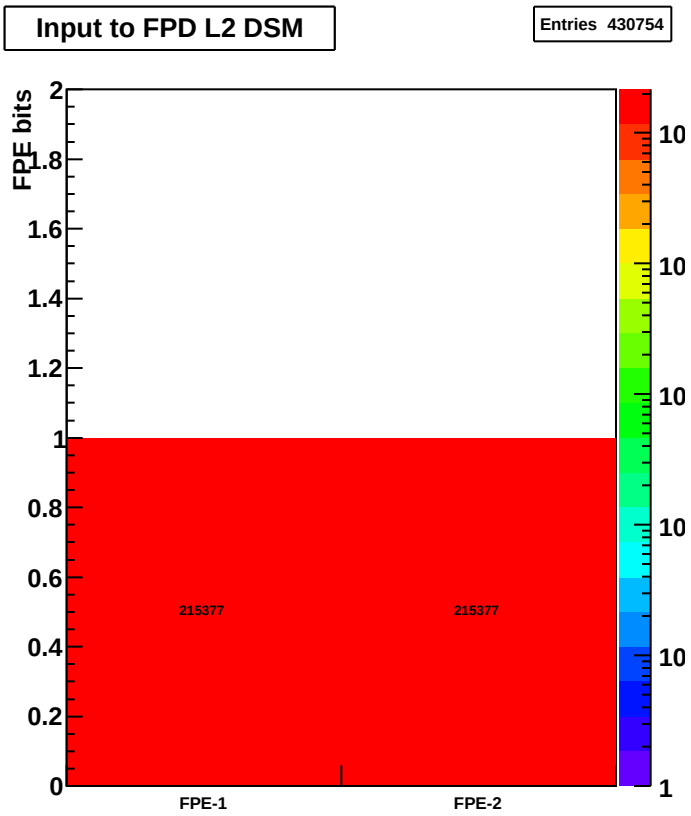

Input to FE002 QT board
Entries 6892064
ADC
channel

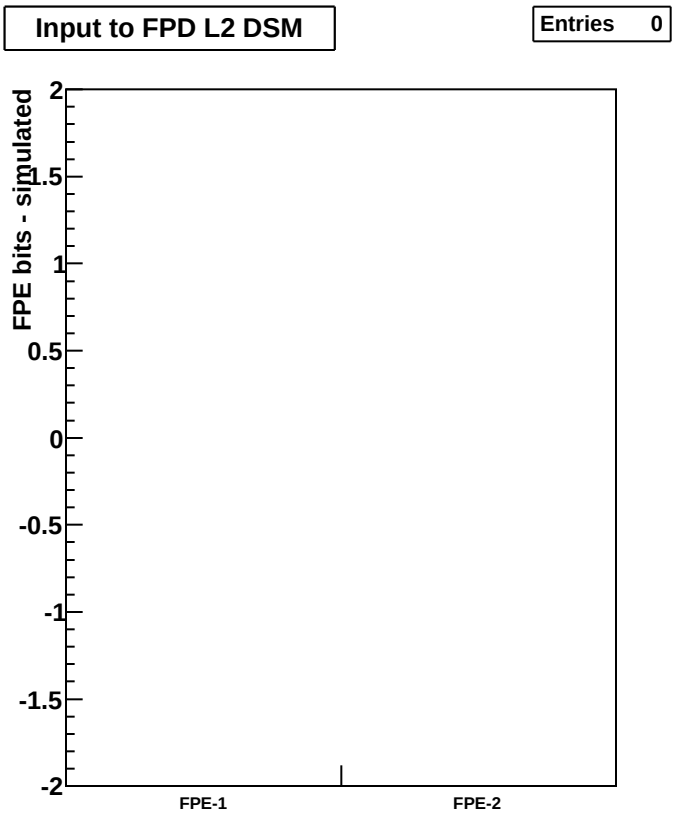

Input to FE003 QT board
Entries 6892064
ADC
channel


Input to FE004 QT board
Entries 6892064
ADC
channel


Input to FPE L1 DSM
Entries 861508
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 430754
FPE bits
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
215377
215377
FPE-1
FPE-2
10
10
10
10
10
1


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