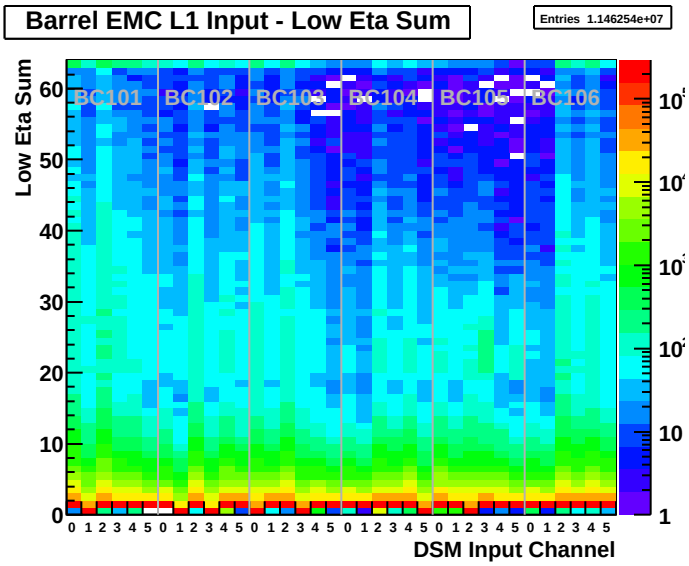
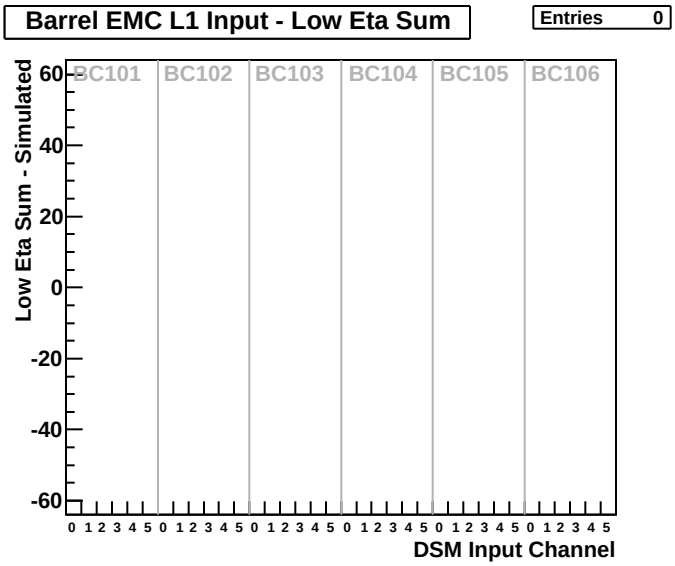
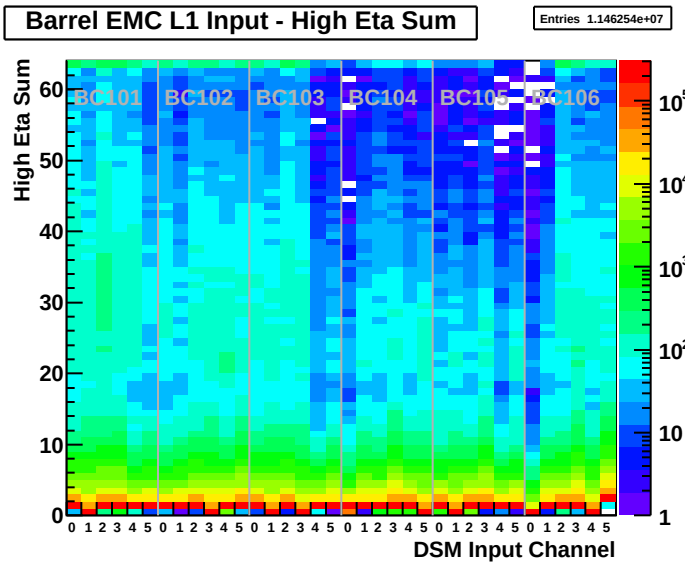
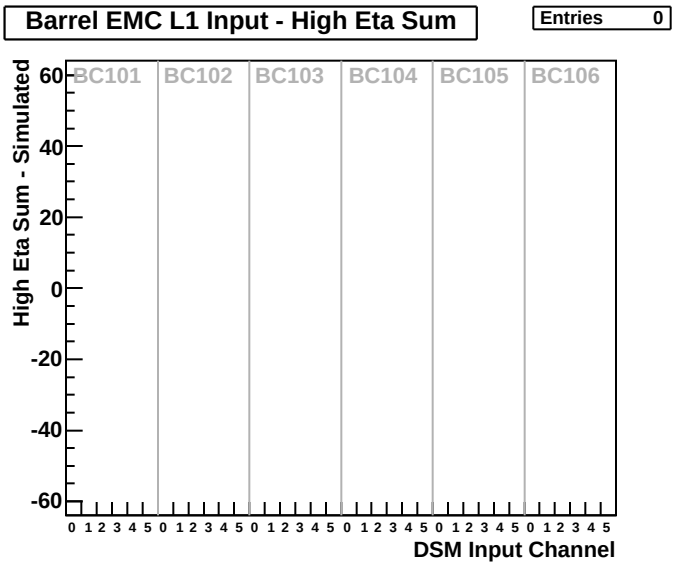
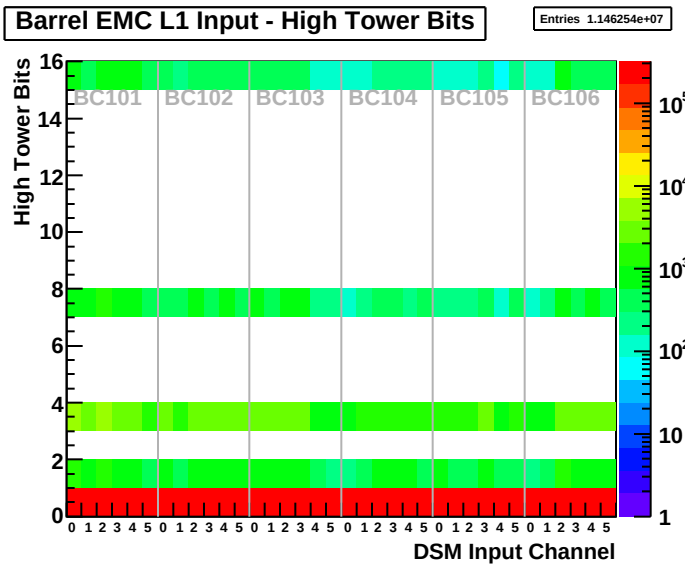
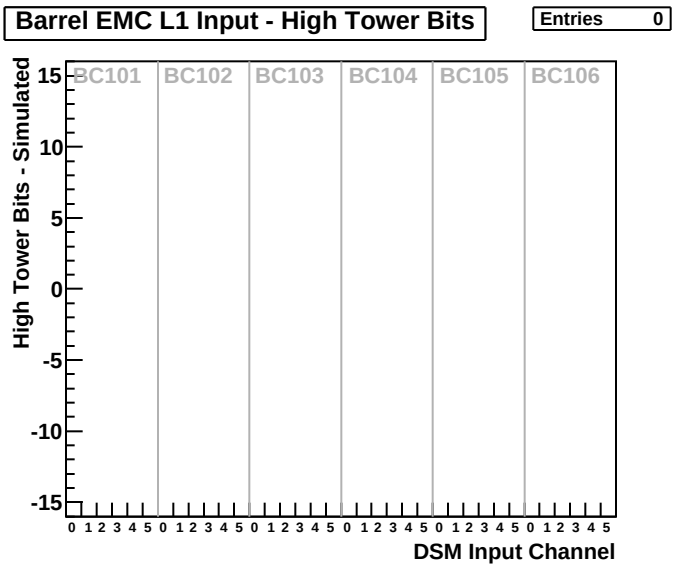

Barrel EMC L1 Input - Low Eta Sum
Entries 1.146254e+07
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

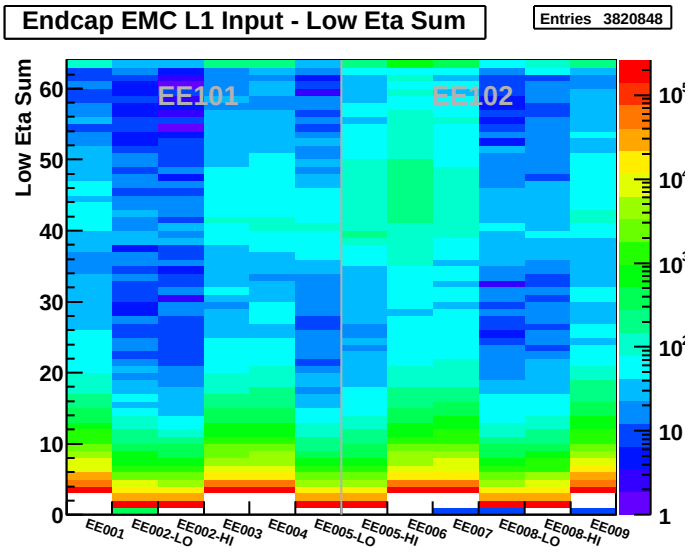

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

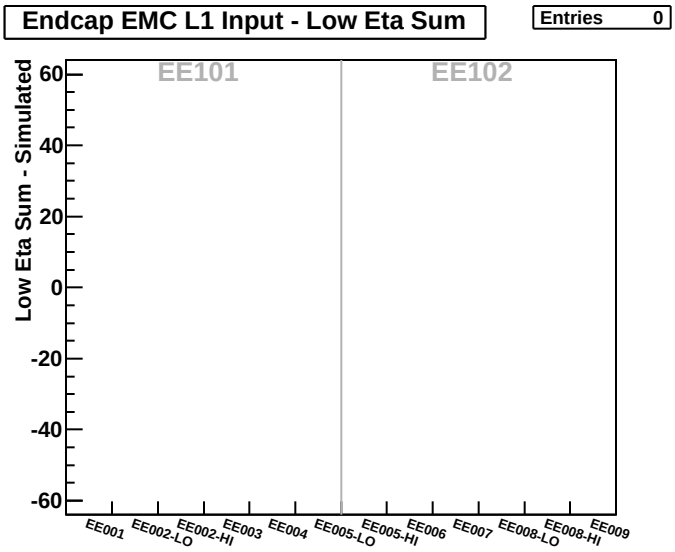

Barrel EMC L1 Input - High Eta Sum
Entries 1.146254e+07
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

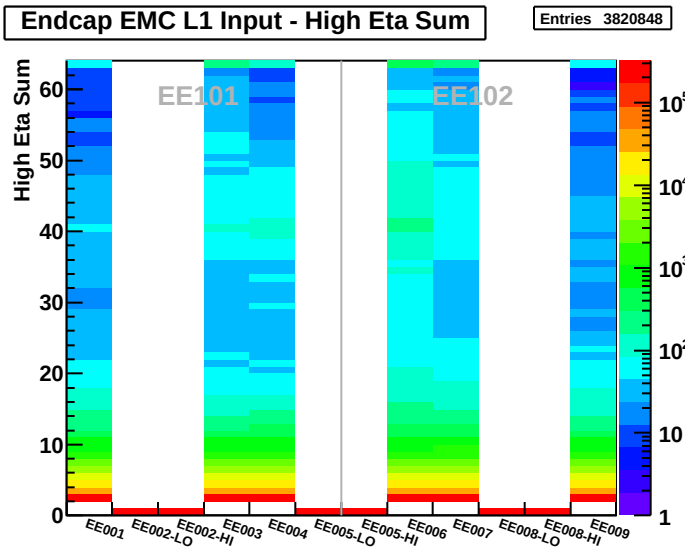

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

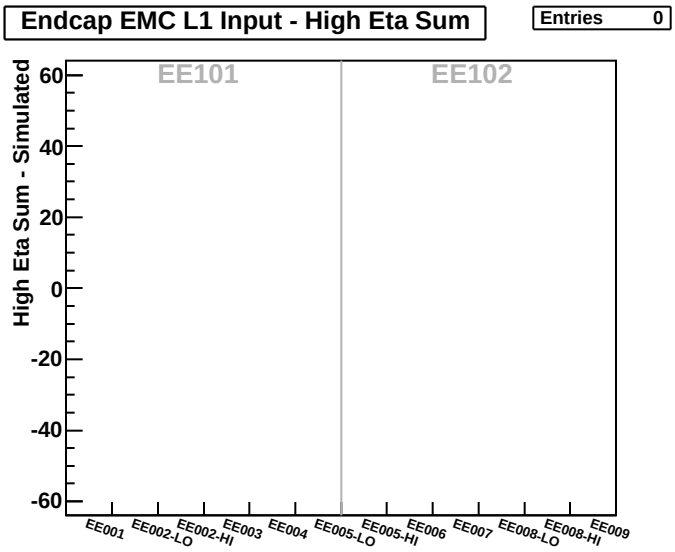

Barrel EMC L1 Input - High Tower Bits
Entries 1.146254e+07
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

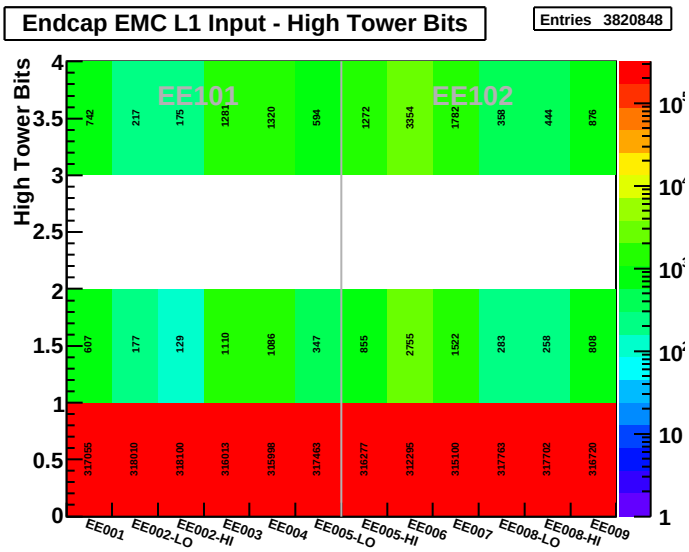

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

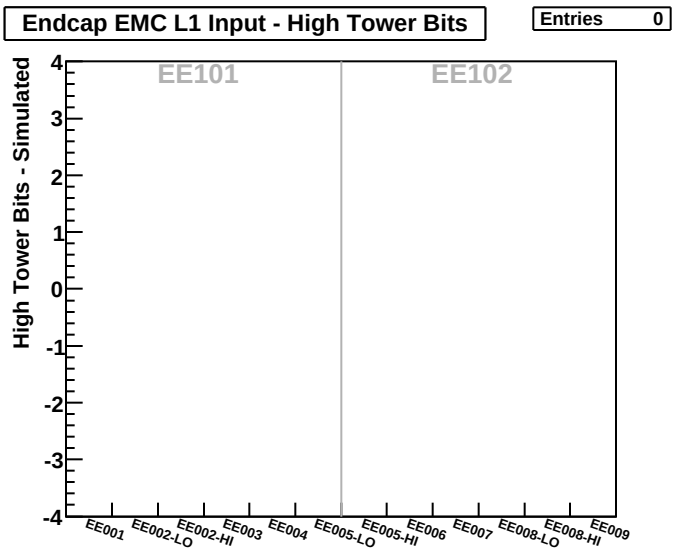

Endcap EMC L1 Input - Low Eta Sum
Entries 3820848
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

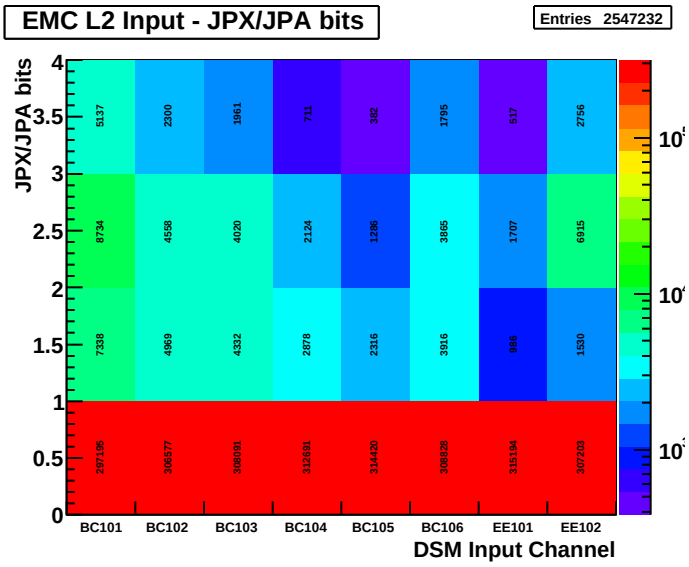

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

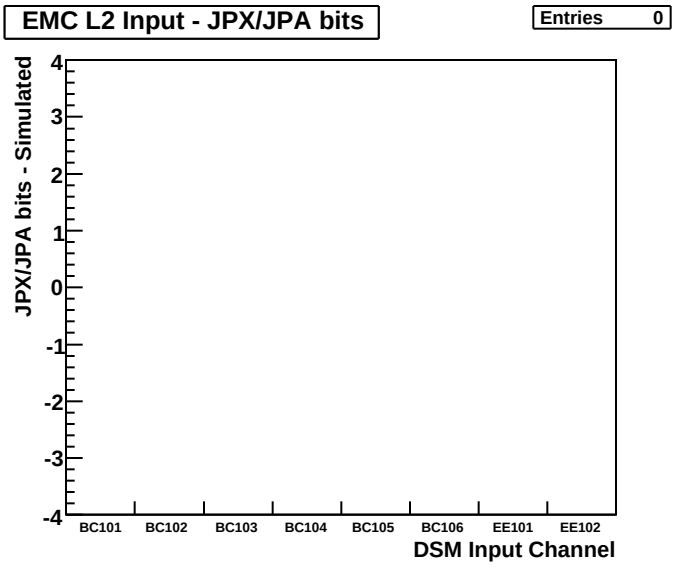

Endcap EMC L1 Input - High Eta Sum
Entries 3820848
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

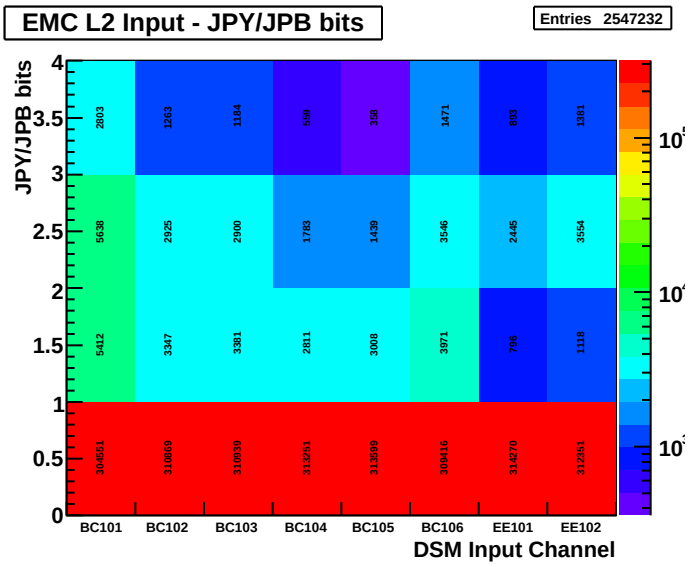

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

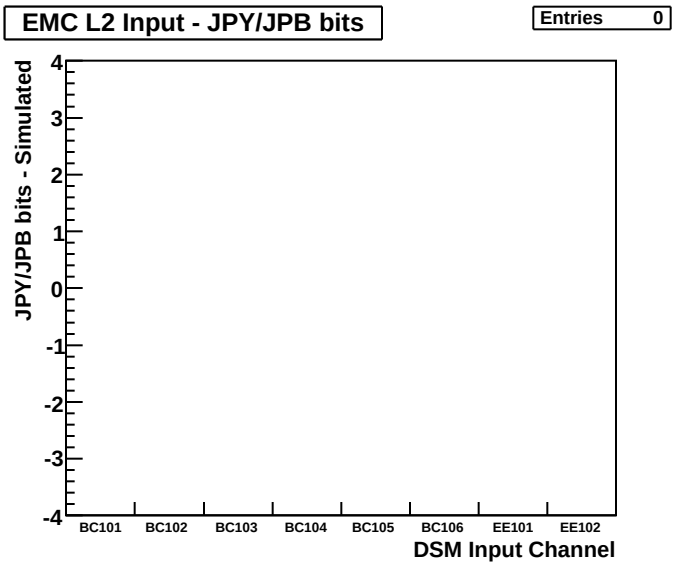

Endcap EMC L1 Input - High Tower Bits
Entries 3820848
High Tower Bits
EE101
EE102
742 217 175 1281 1320 594 1272 3354 1782 358 444 876
607 177 129 1110 1086 347 855 2755 1522 283 258 808
317055 318010 318100 316913 315998 317463 316277 312295 315100 317763 317702 316720
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

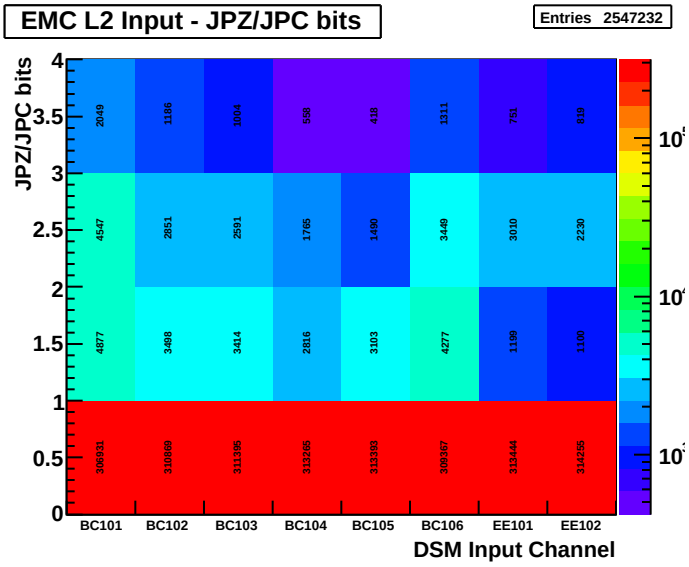

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

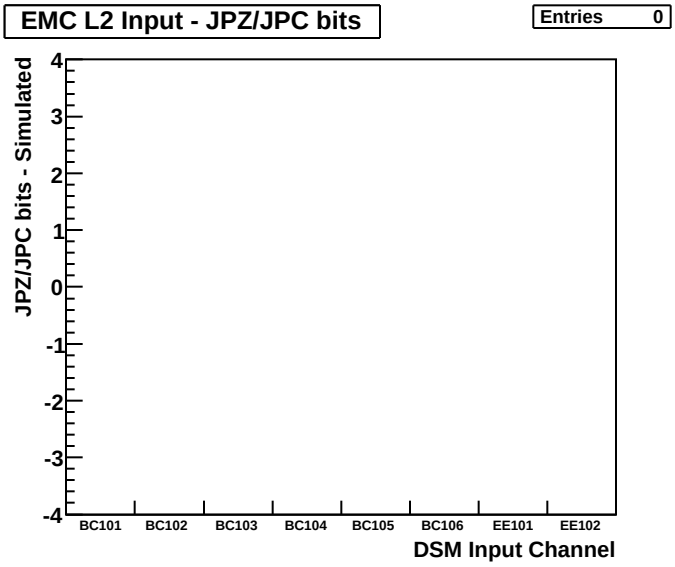

EMC L2 Input - JPX/JPA bits
Entries 2547232
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
5137 2300 1961 711 382 1795 517 2756
8734 4558 4020 2124 1286 3865 1707 6915
7338 4969 4332 2878 2316 3916 986 1530
297105 306577 308091 312691 314420 308828 315194 307203

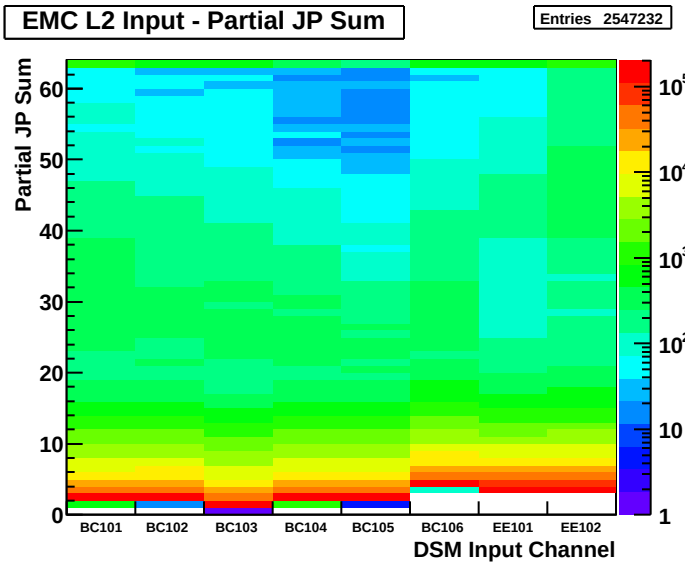

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

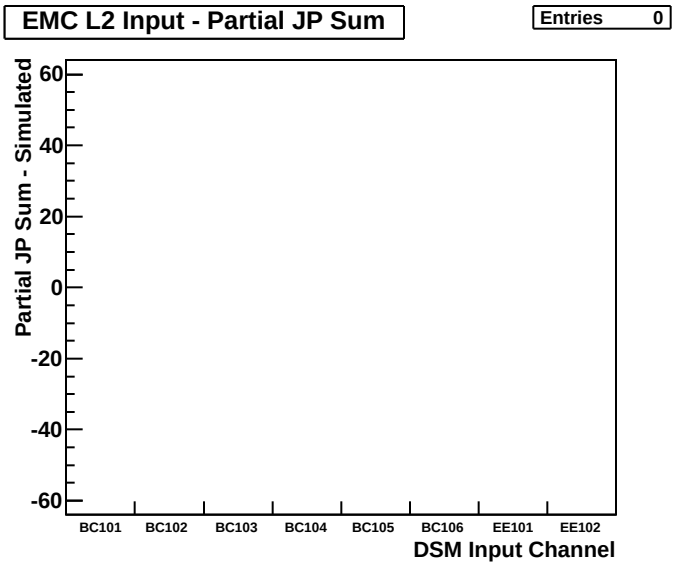

EMC L2 Input - JPY/JPB bits
Entries 2547232
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
2803 1263 1184 559 358 1471 883 1381
5638 2925 2900 1783 1439 3546 2445 3554
5412 3347 3381 2811 3008 3971 796 1118
304551 310869 310939 312251 313599 309416 314270 312251

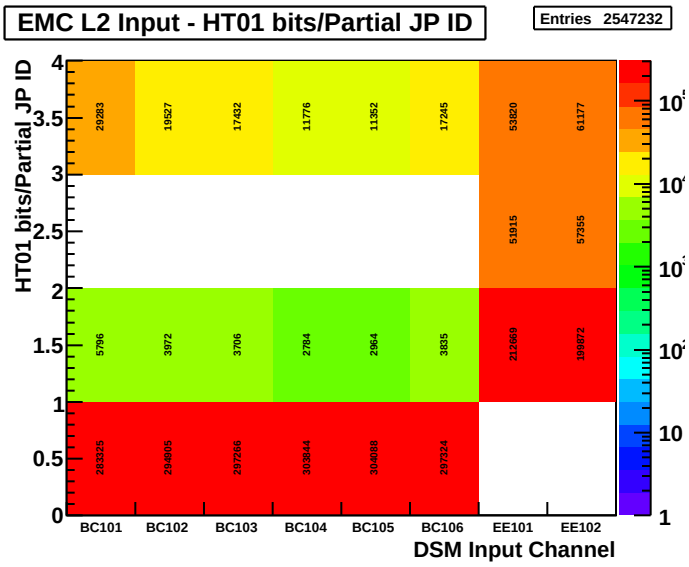

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

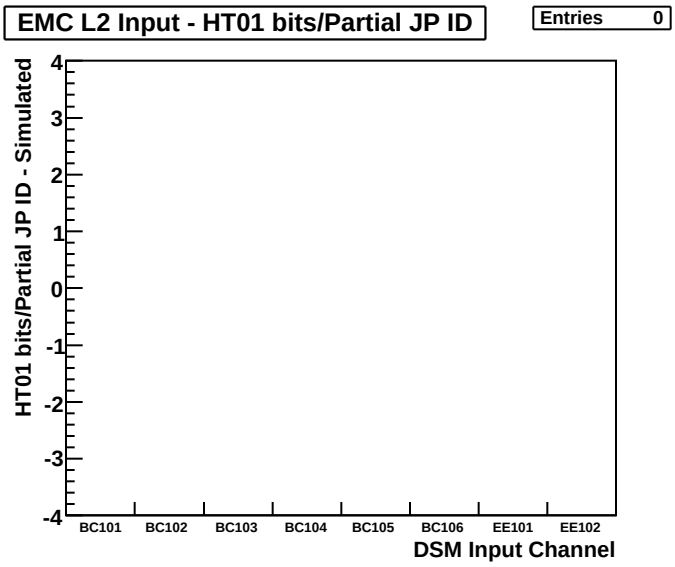

EMC L2 Input - JPZ/JPC bits
Entries 2547232
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
2049 1186 1004 558 418 1311 751 819
4547 2851 2591 1765 1490 3449 3010 2230
4877 3498 3414 2816 3103 4277 1199 1100
306931 310869 311395 313265 313393 309367 313444 314255

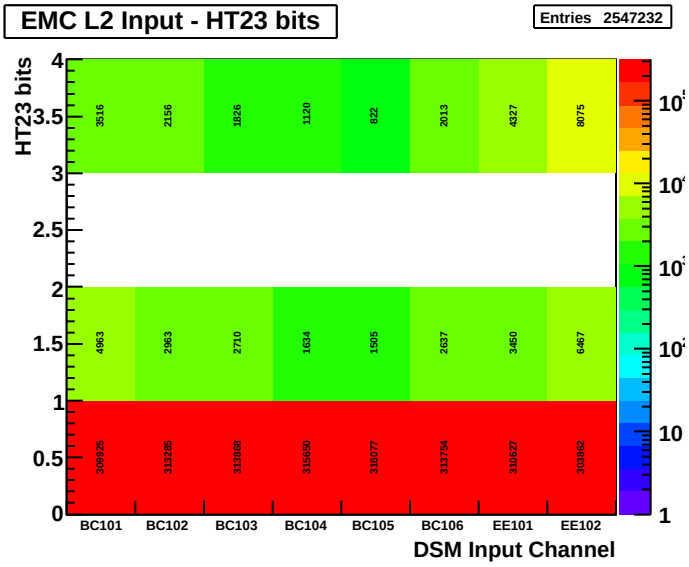

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

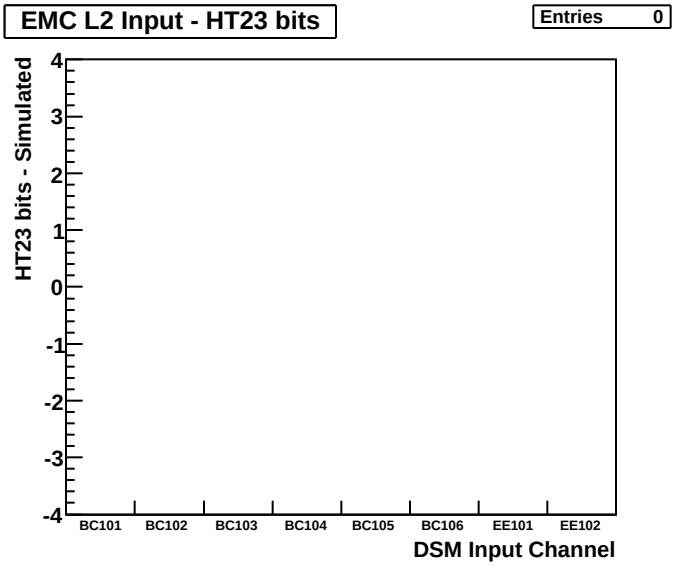

EMC L2 Input - Partial JP Sum
Entries 2547232
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

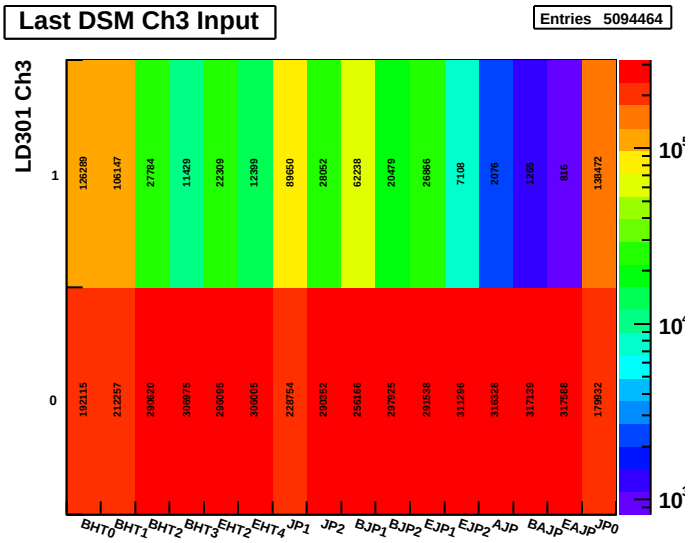

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

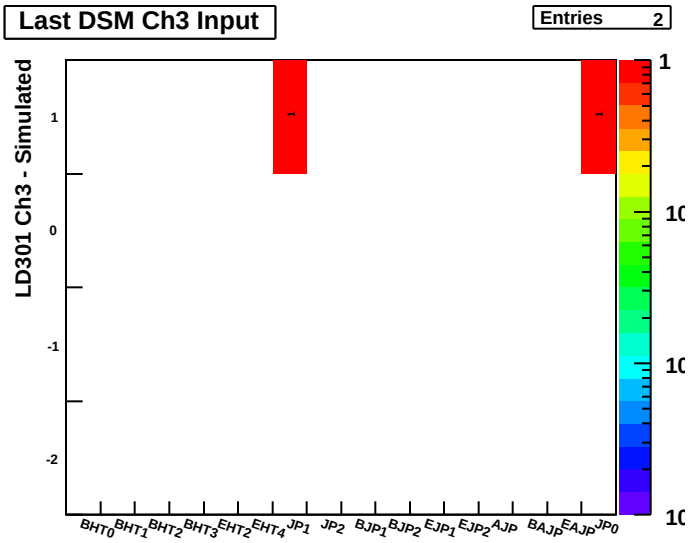

EMC L2 Input - HT01 bits/Partial JP ID
Entries 2547232
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

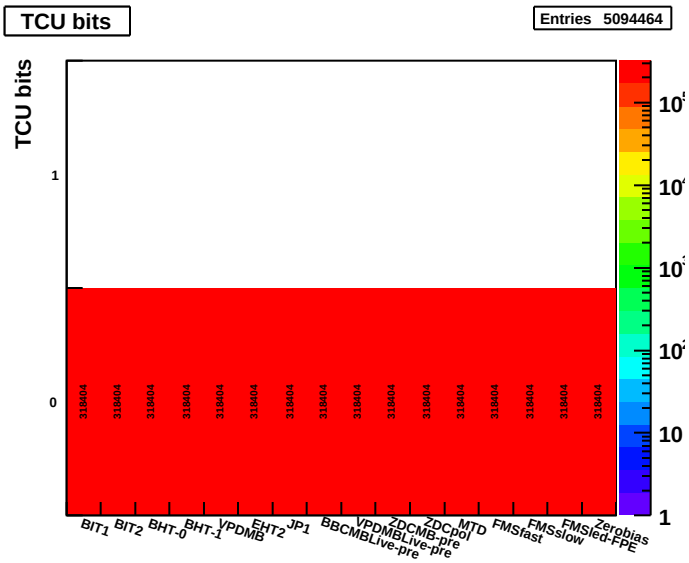

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

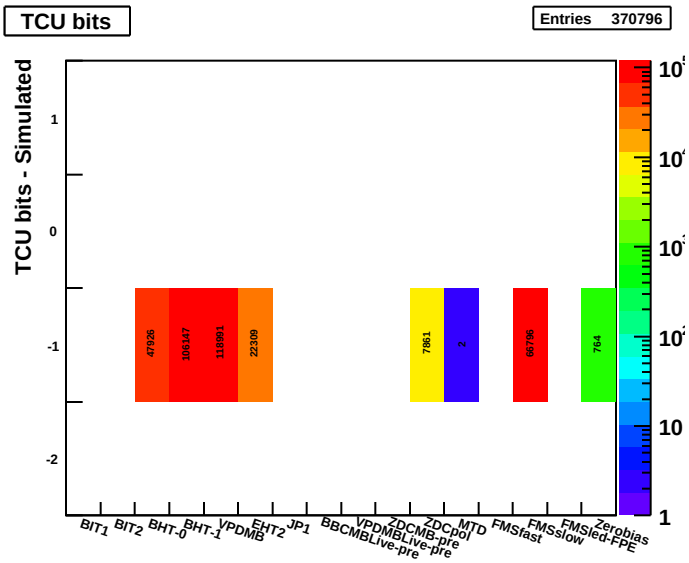

EMC L2 Input - HT23 bits
Entries 2547232
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

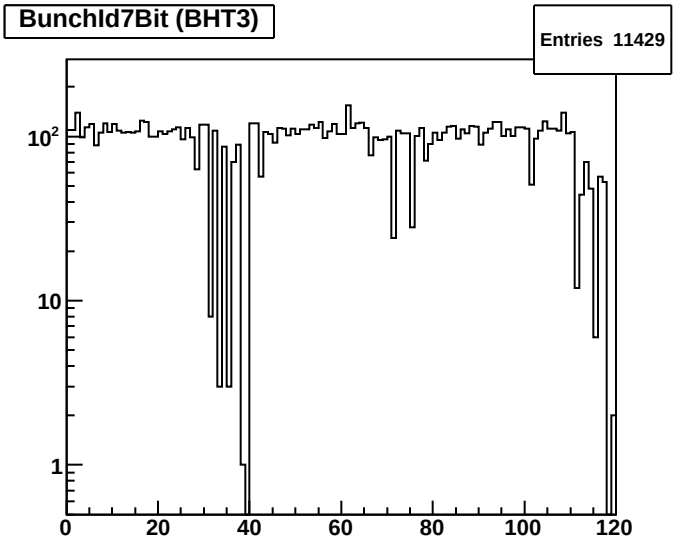

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

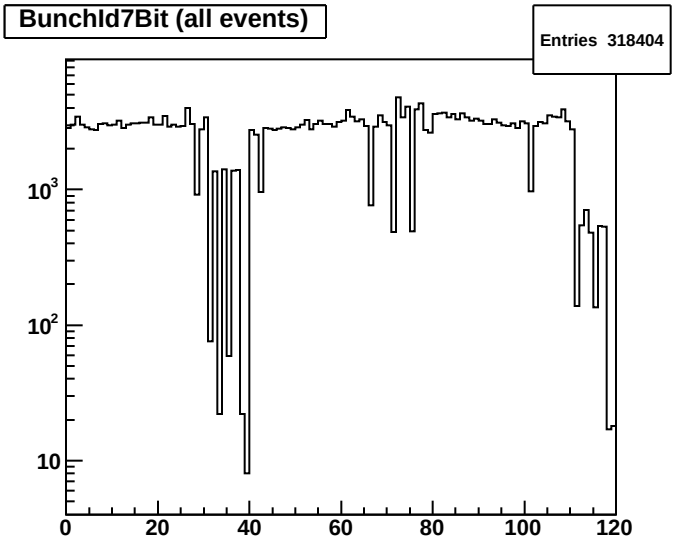

Last DSM Ch3 Input
Entries 5094464
LD301 Ch3
1
0
126289 106147 27784 11429 22309 12399 89650 28052 62238 20479 26866 7108 2076 1265 616 138472
192115 212257 290620 306975 296095 306005 228754 290352 256166 297925 291538 311296 316328 317139 317588 179932
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

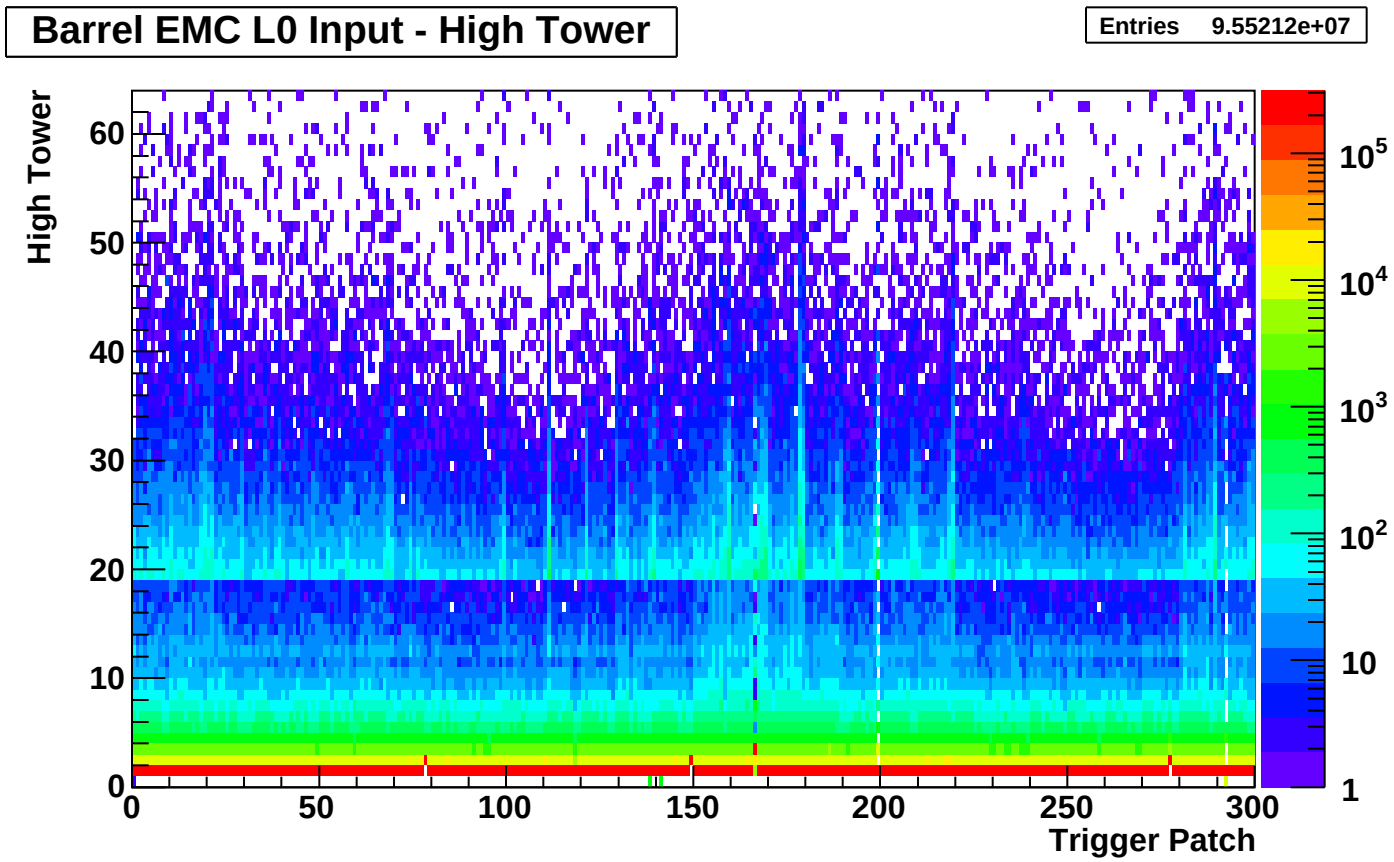

Last DSM Ch3 Input
Entries 2
LD301 Ch3 - Simulated
1
0
-1
-2
1 1
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

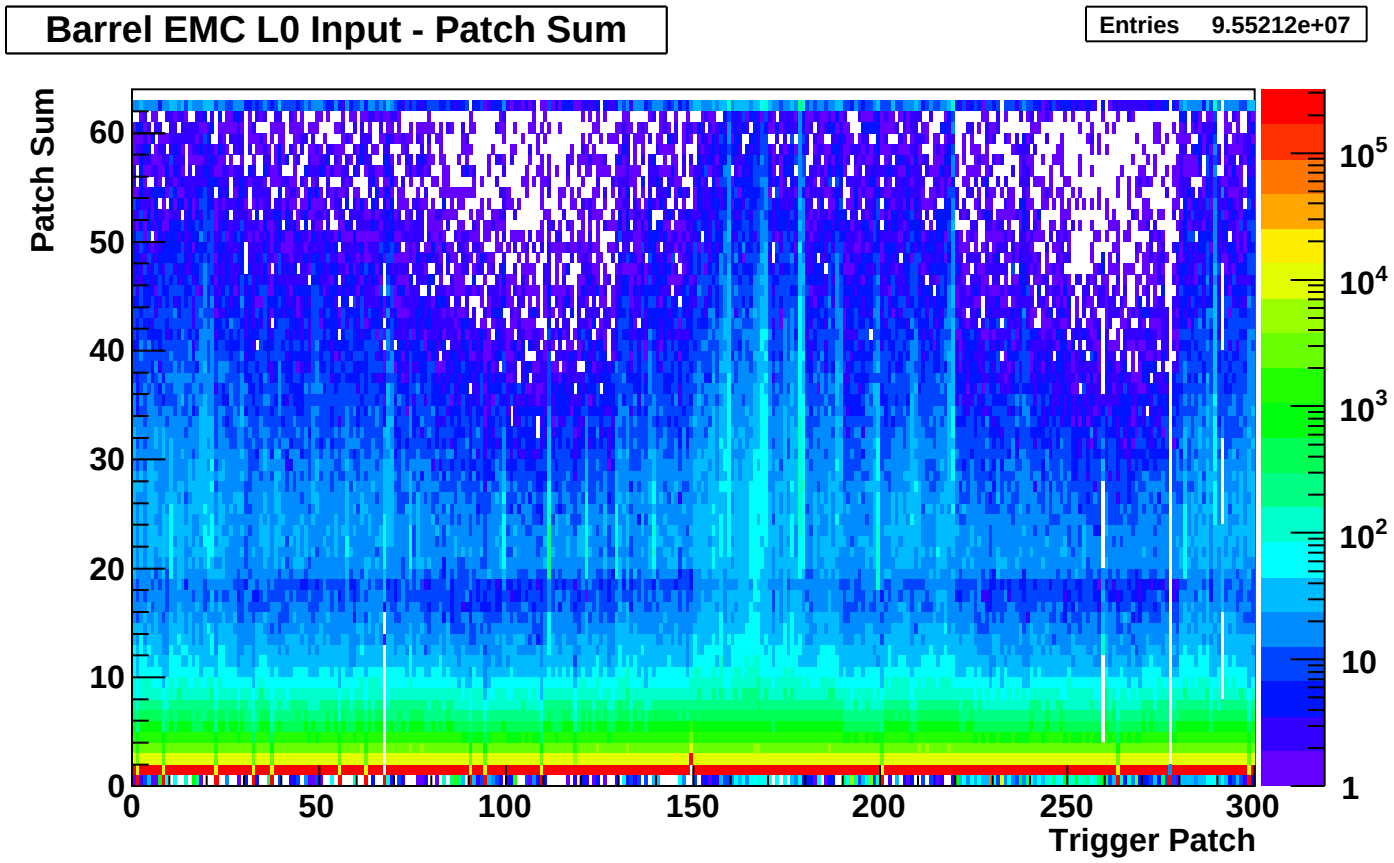

TCU bits
Entries 5094464
TCU bits
1
0
318404 318404 318404 318404 318404 318404 318404 318404 318404 318404 318404 318404 318404 318404 318404 318404
BIT1 BIT2 BHT-0 BHT-1 VPDMB EHT2 JP1 BBCMBLive-pre VPDMBLive-pre ZDCMB-pre ZDCpol MTD FMSfast FMSslow FMSled-FPE Zerobias

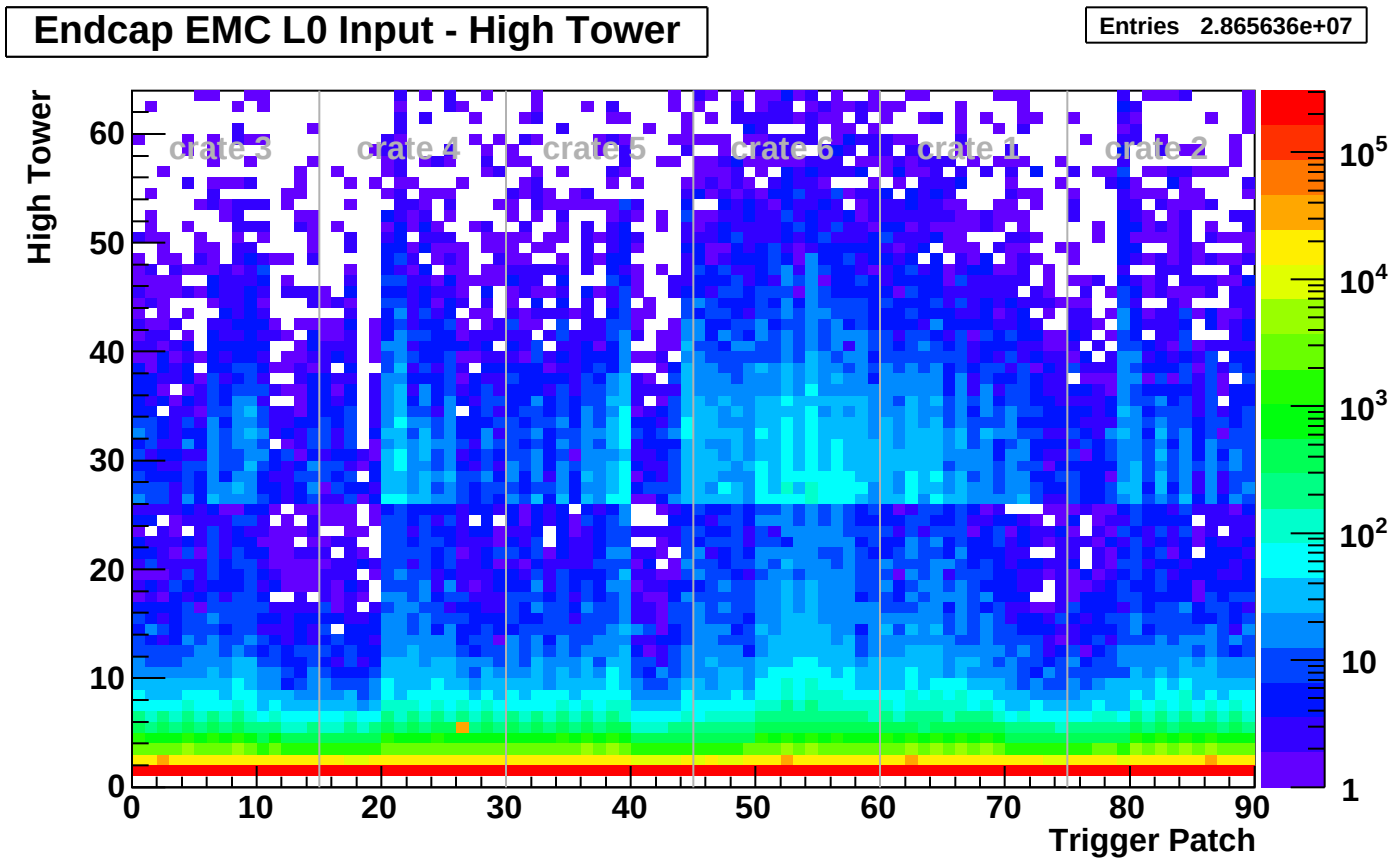

TCU bits
Entries 370796
TCU bits - Simulated
1
0
-1
-2
47926 106147 118991 22309 7861 2 66796 764
BIT1 BIT2 BHT-0 BHT-1 VPDMB EHT2 JP1 BBCMBLive-pre VPDMBLive-pre ZDCMB-pre ZDCpol MTD FMSfast FMSslow FMSled-FPE Zerobias

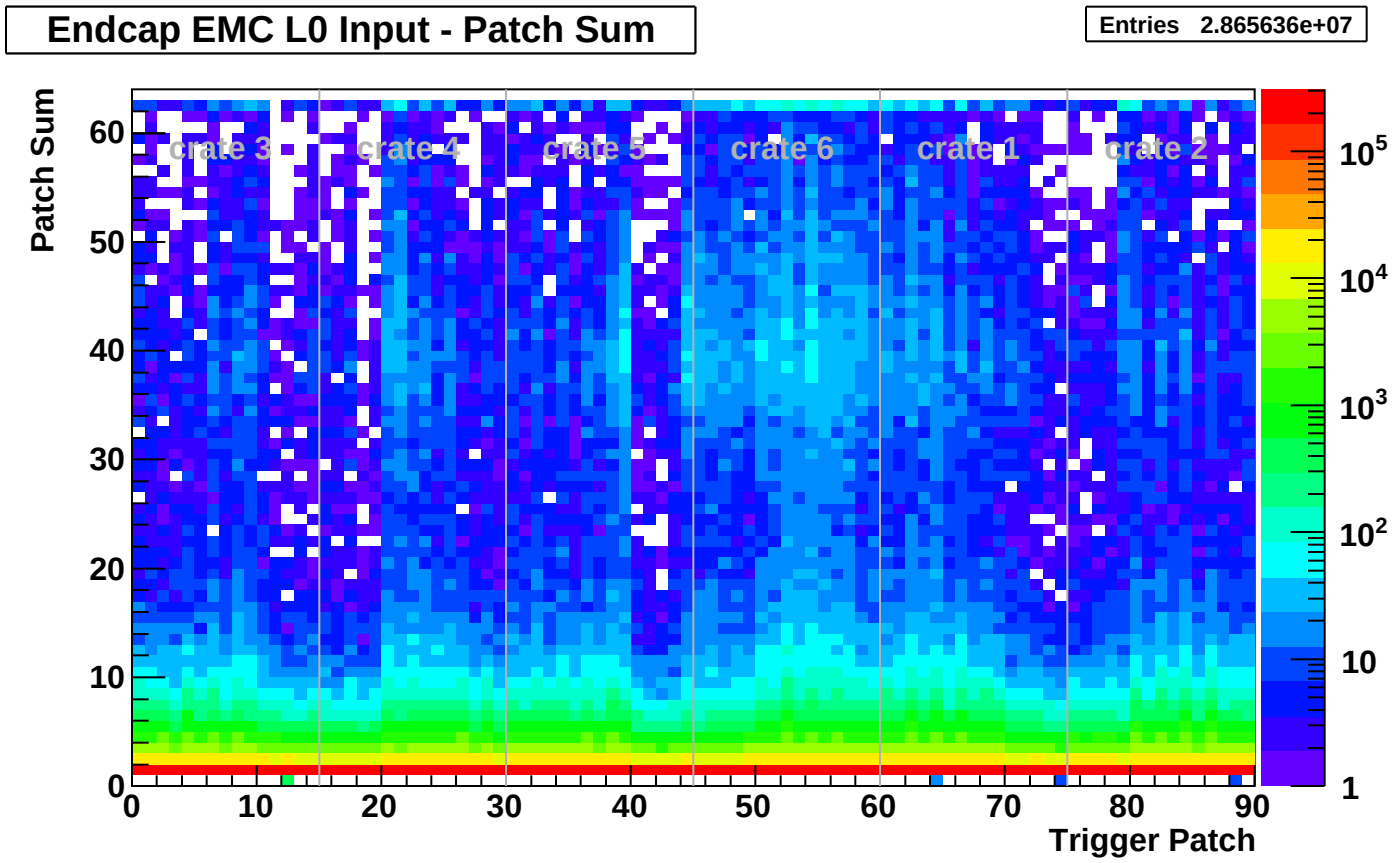

BunchId7Bit (BHT3)
Entries 11429
10²
10
1
0 20 40 60 80 100 120

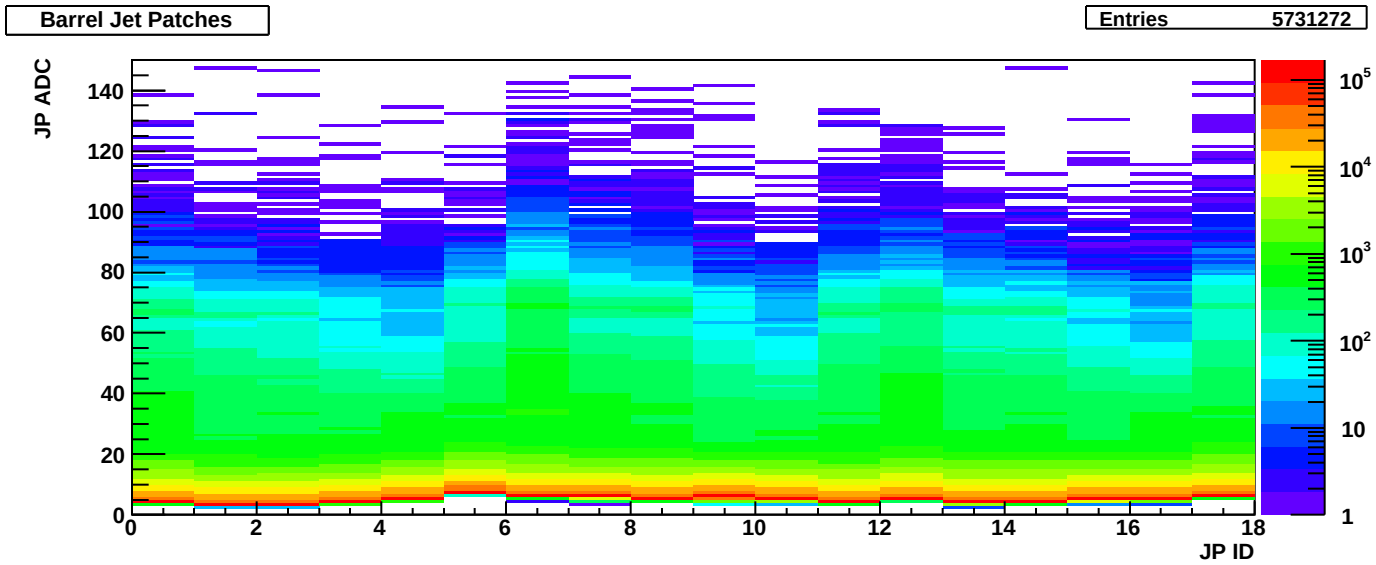

BunchId7Bit (all events)
Entries 318404
10³
10²
10
0 20 40 60 80 100 120

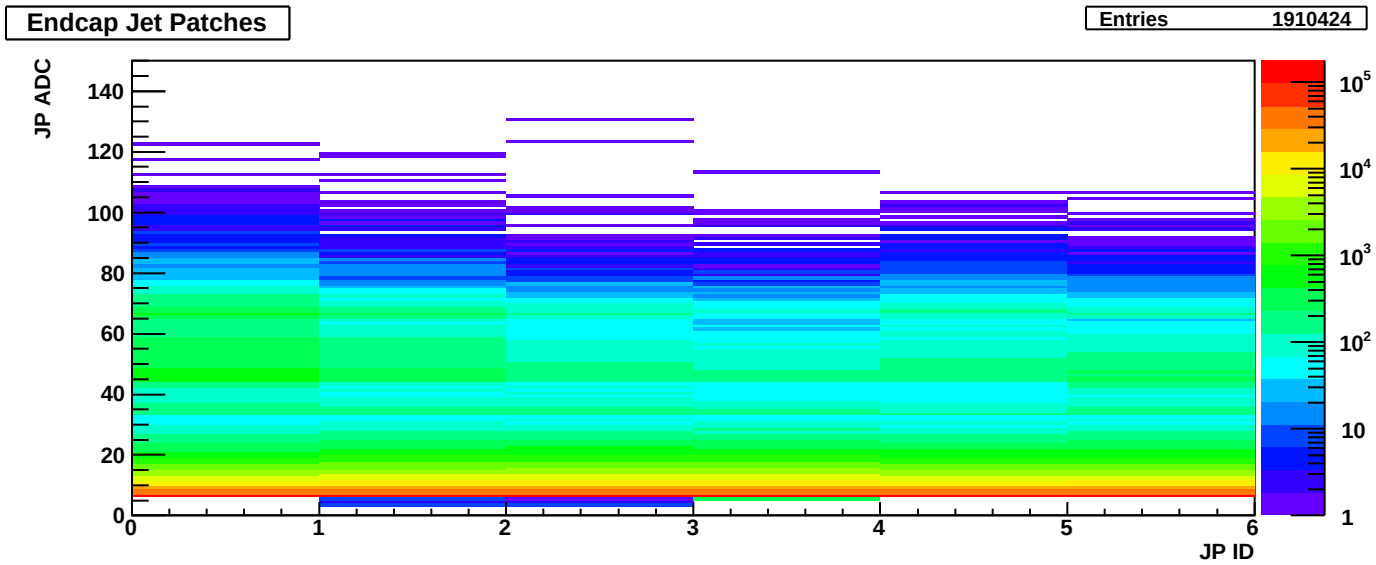

Barrel EMC L0 Input - High Tower
Entries 9.55212e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

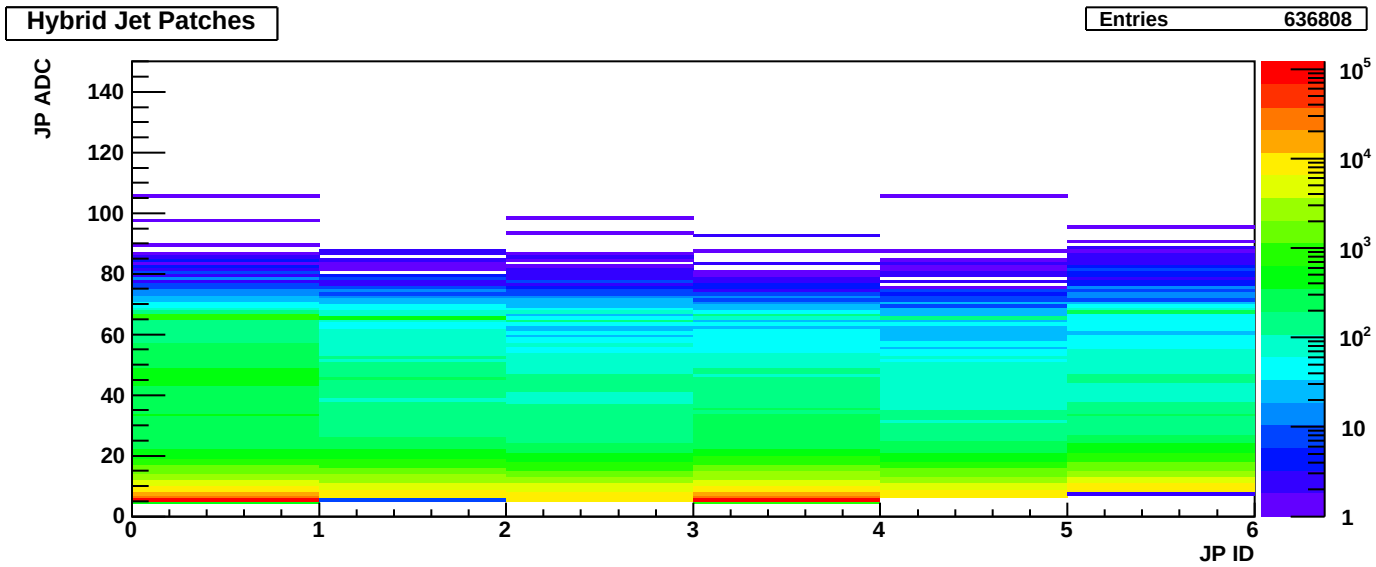

Barrel EMC L0 Input - Patch Sum
Entries 9.55212e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

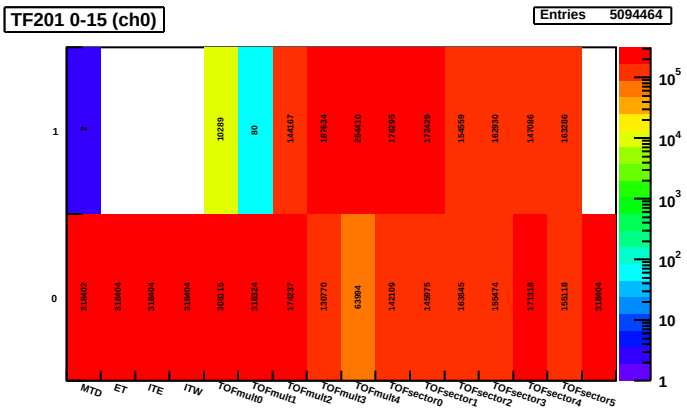

Endcap EMC L0 Input - High Tower
Entries 2.865636e+07
High Tower
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

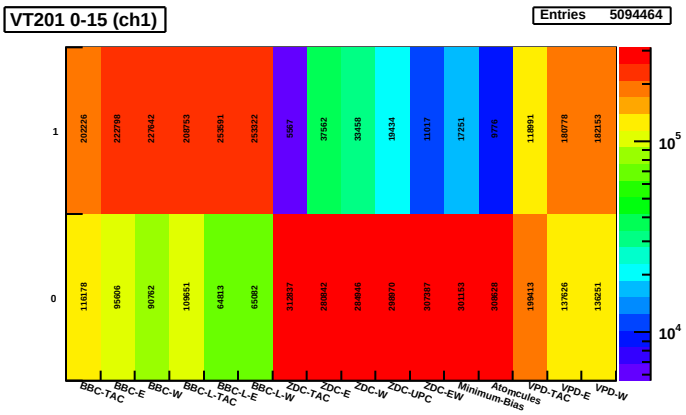

Endcap EMC L0 Input - Patch Sum
Entries 2.865636e+07
Patch Sum
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

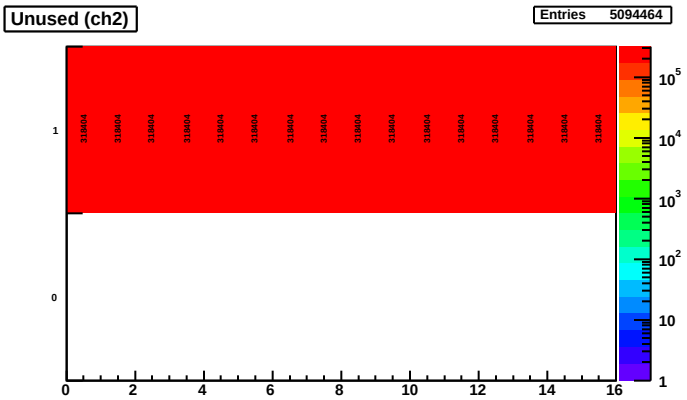

Barrel Jet Patches
Entries 5731272
JP ADC
JP ID

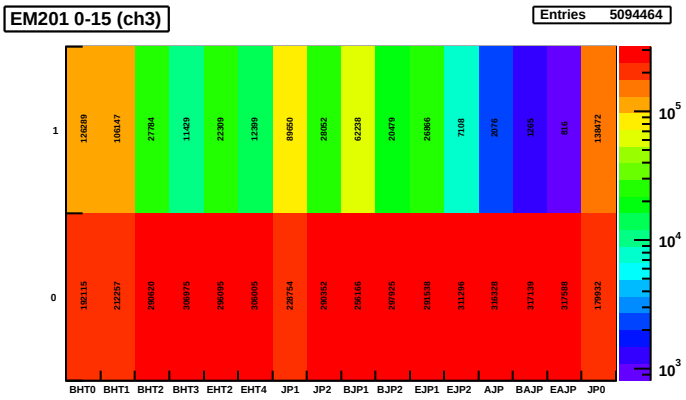

Endcap Jet Patches
Entries 1910424
JP ADC
JP ID

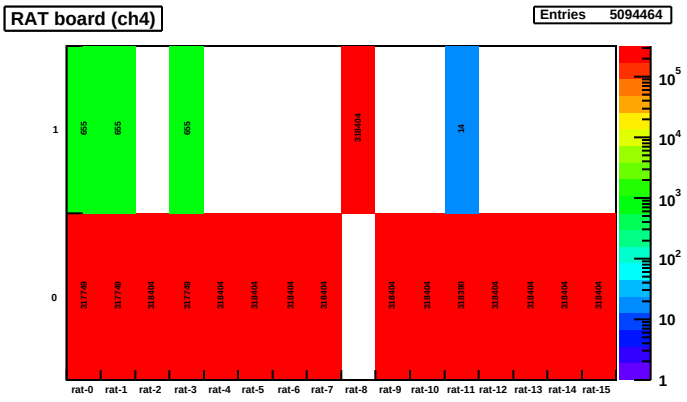

Hybrid Jet Patches
Entries 636808
JP ADC
JP ID

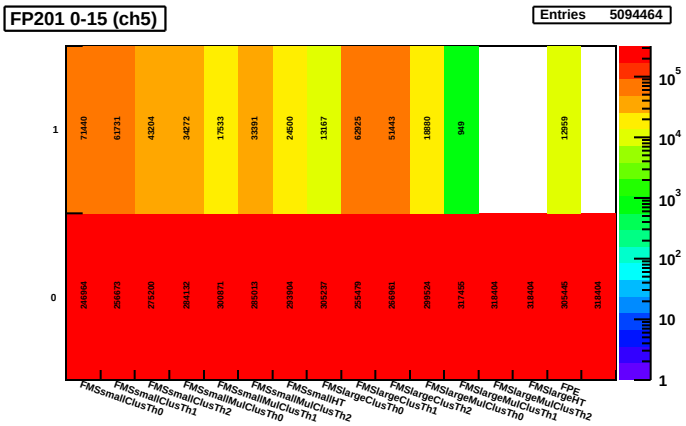

TF201 0-15 (ch0)
Entries 5094464
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5

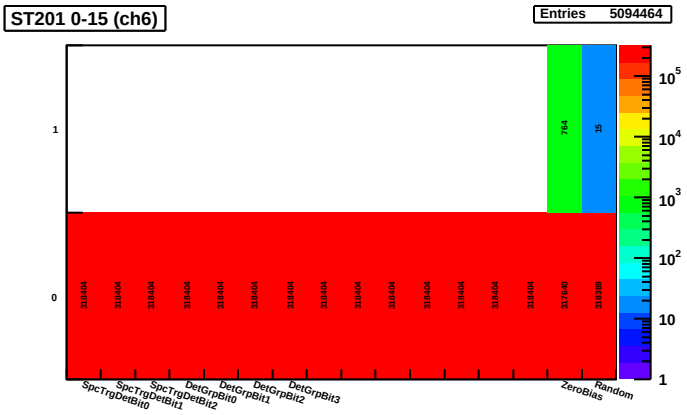

VT201 0-15 (ch1)
Entries 5094464
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-UPC ZDC-EW Minimum-Bias Atomcules VPD-TAC VPD-E VPD-W

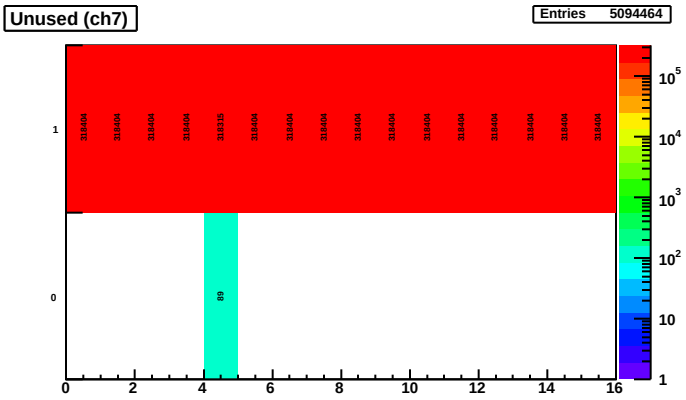

Unused (ch2)
Entries 5094464

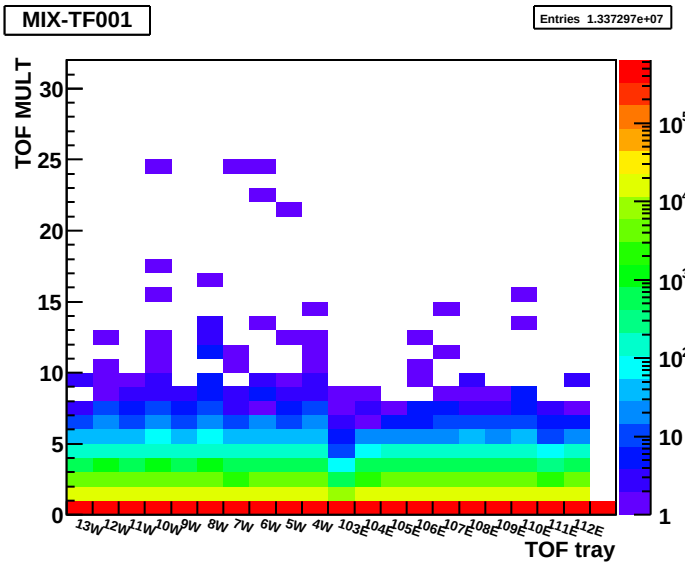

EM201 0-15 (ch3)
Entries 5094464
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

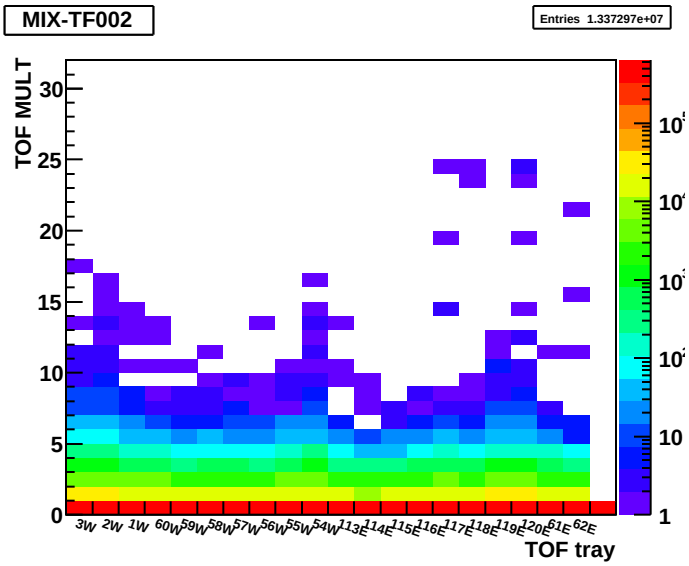

RAT board (ch4)
Entries 5094464
rat-0 rat-1 rat-2 rat-3 rat-4 rat-5 rat-6 rat-7 rat-8 rat-9 rat-10 rat-11 rat-12 rat-13 rat-14 rat-15

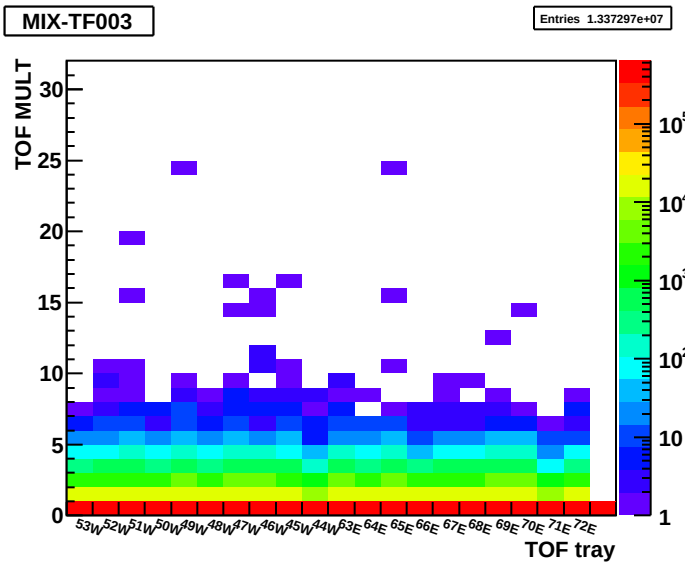

FP201 0-15 (ch5)
Entries 5094464
FMSsmallClusTh0 FMSsmallClusTh1 FMSsmallClusTh2 FMSsmallMulClusTh0 FMSsmallMulClusTh1 FMSsmallMulClusTh2 FMSsmallHT FMSlargeClusTh0 FMSlargeClusTh1 FMSlargeClusTh2 FMSlargeMulClusTh0 FMSlargeMulClusTh1 FMSlargeMulClusTh2 FMSlargeHT FPE

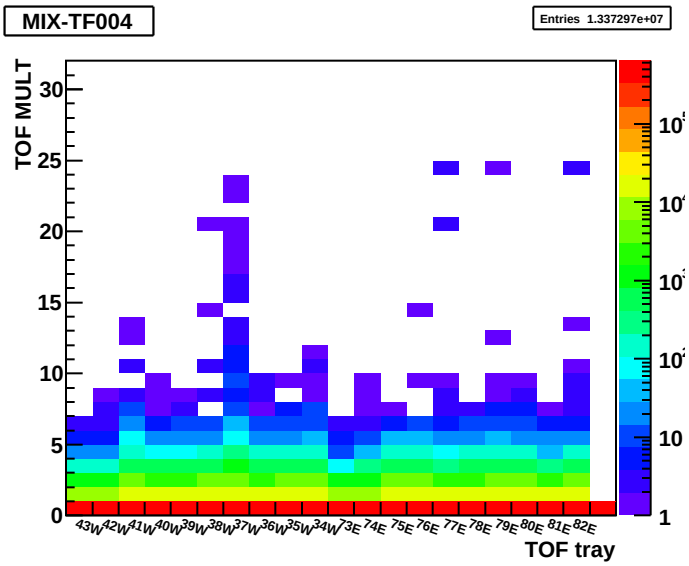

ST201 0-15 (ch6)
Entries 5094464
SpcTrgDetBit0 SpcTrgDetBit1 SpcTrgDetBit2 DetCrpBit0 DetCrpBit1 DetCrpBit2 DetCrpBit3 ZeroBias Random

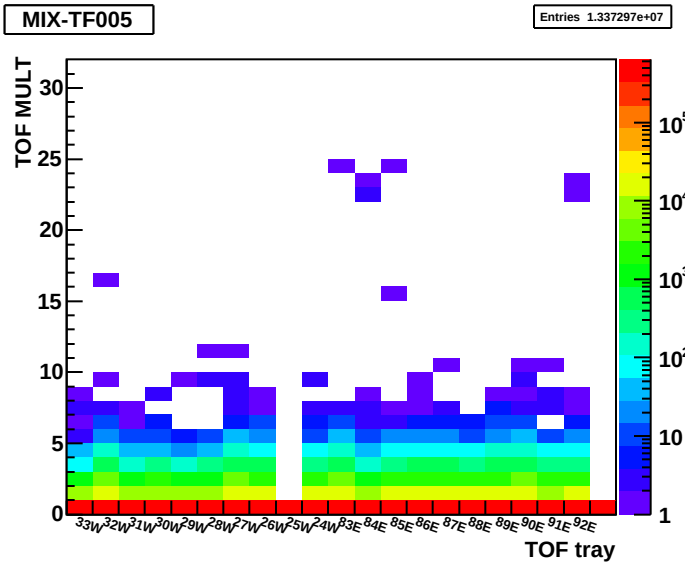

Unused (ch7)
Entries 5094464

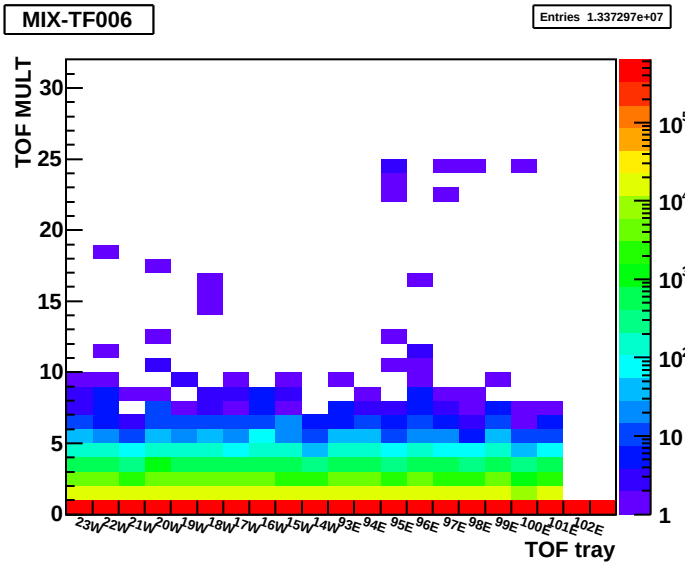

MIX-TF001
Entries 1.337297e+07
TOF MULT
TOF tray

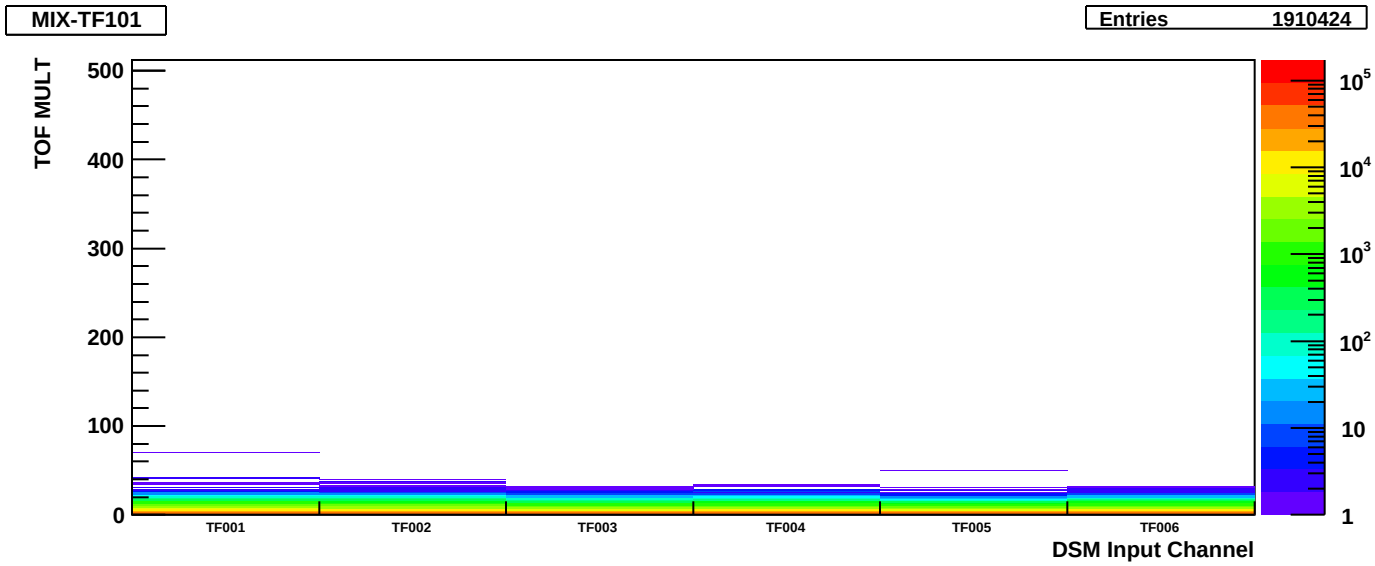

MIX-TF002
Entries 1.337297e+07
TOF MULT
TOF tray

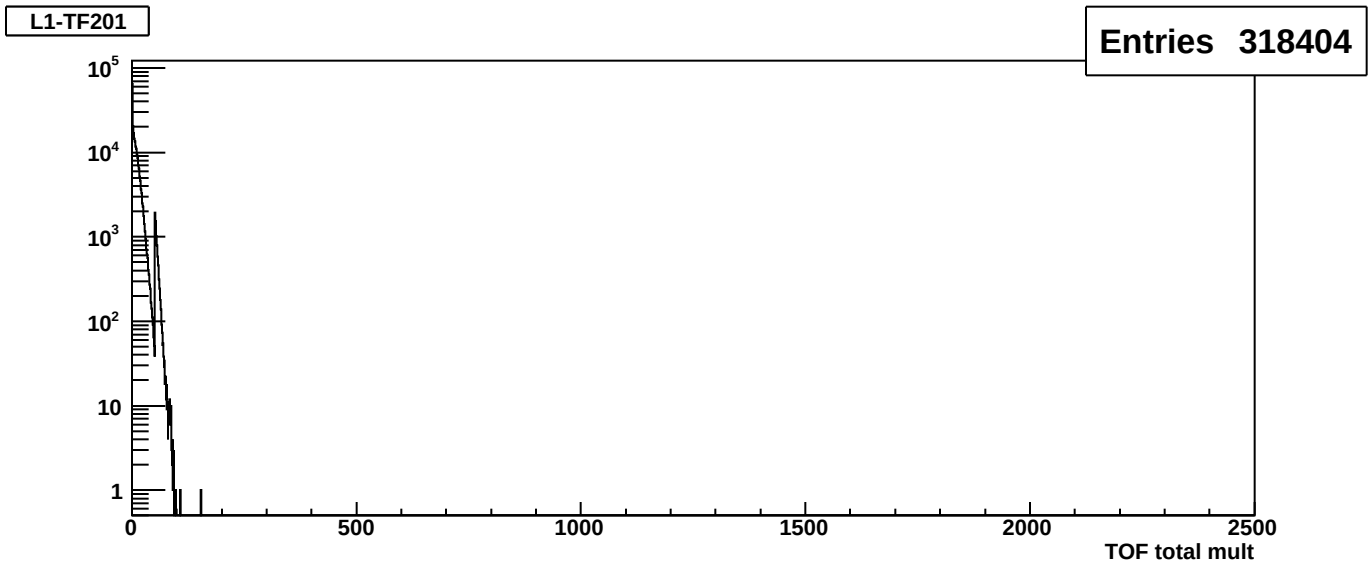

MIX-TF003
Entries 1.337297e+07
TOF MULT
TOF tray

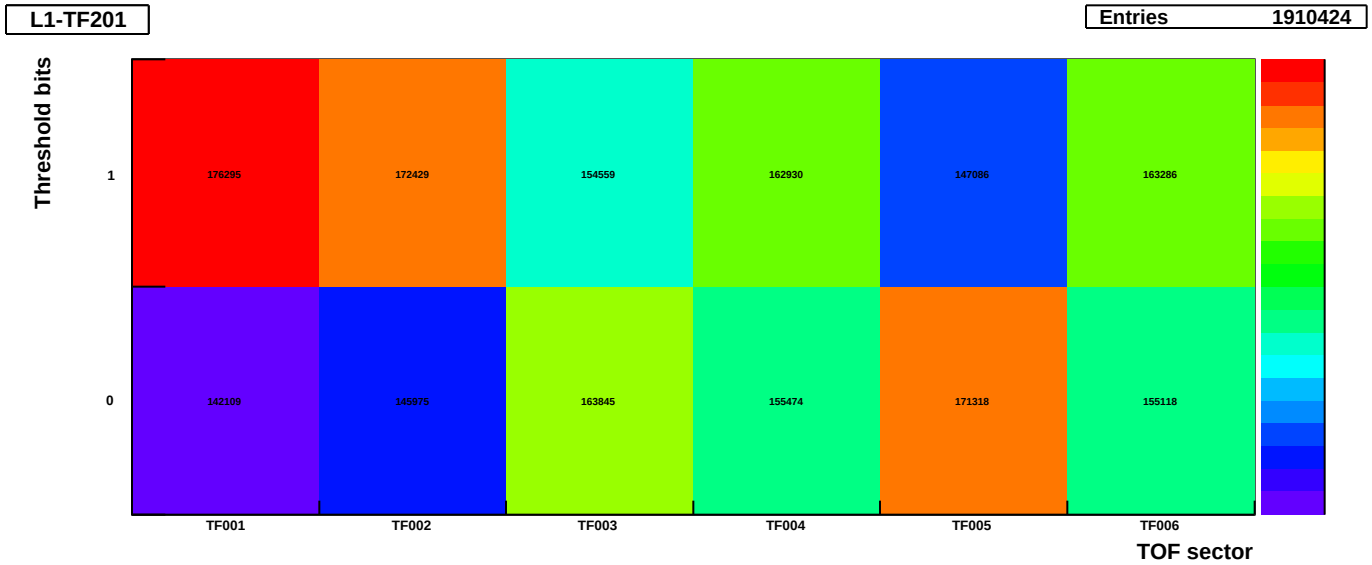

MIX-TF004
Entries 1.337297e+07
TOF MULT
TOF tray

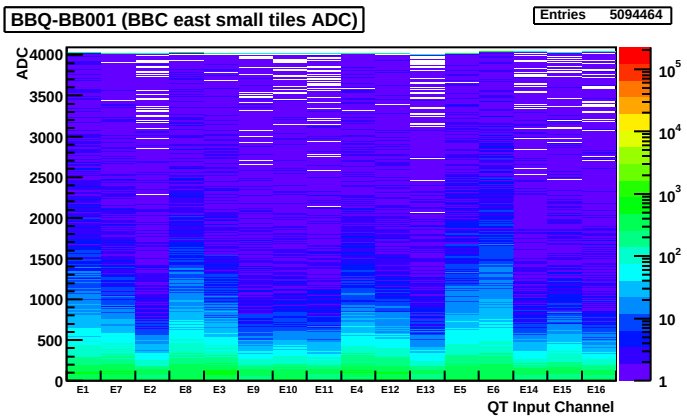

MIX-TF005
Entries 1.337297e+07
TOF MULT
TOF tray

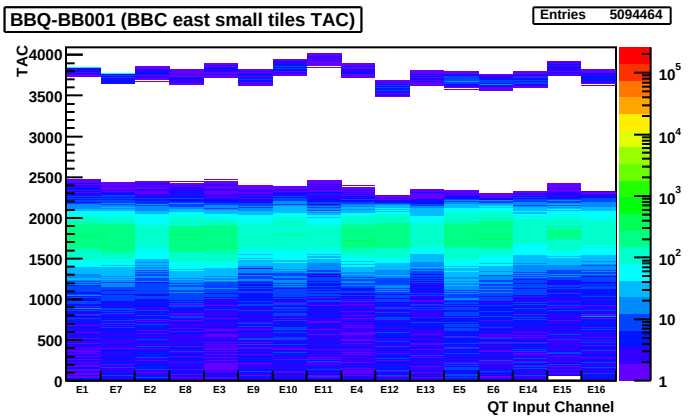

MIX-TF006
Entries 1.337297e+07
TOF MULT
TOF tray

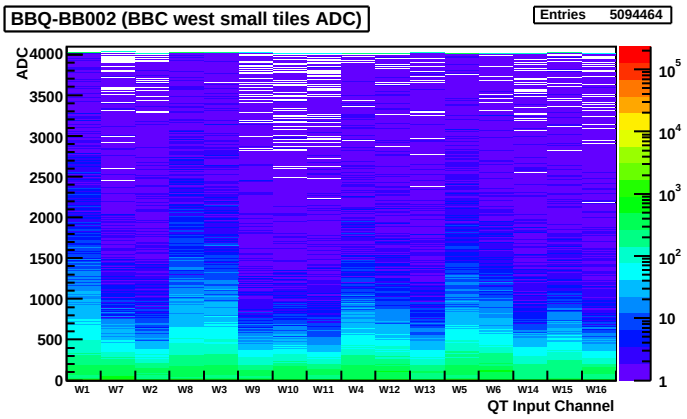

MIX-TF101
Entries 1910424
TOF MULT
500
400
300
200
100
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

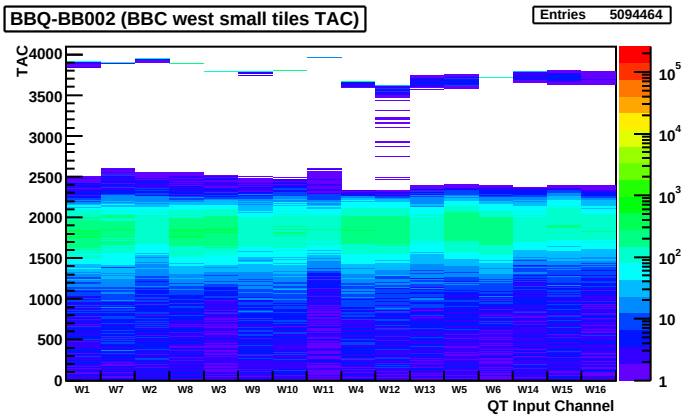

L1-TF201
Entries 318404
10^5
10^4
10^3
10^2
10
1
0
500
1000
1500
2000
2500
TOF total mult

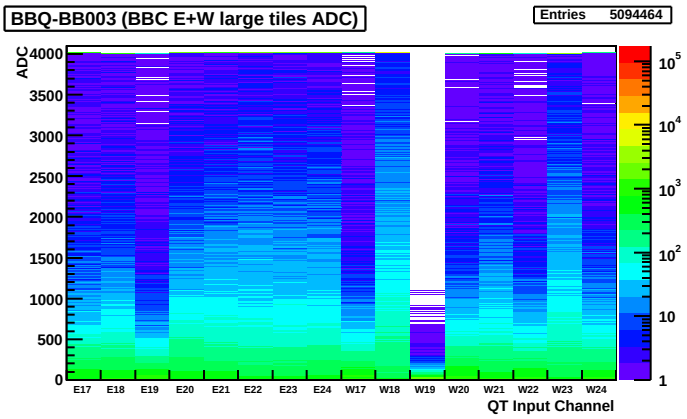

L1-TF201
Entries 1910424
Threshold bits
1
0
176295
172429
154559
162930
147086
163286
142109
145975
163845
155474
171318
155118
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

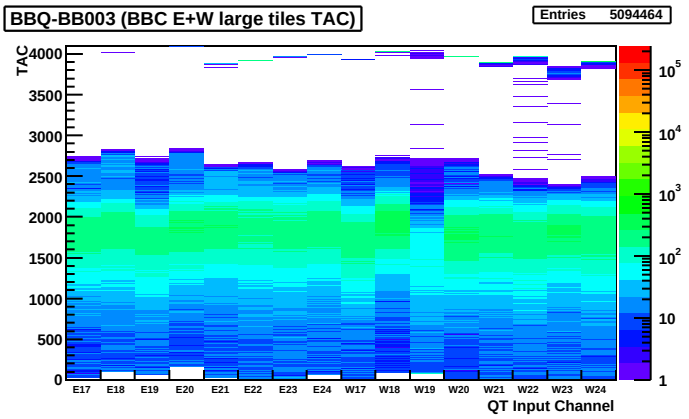

BBQ-BB001 (BBC east small tiles ADC)
Entries 5094464
ADC
QT Input Channel

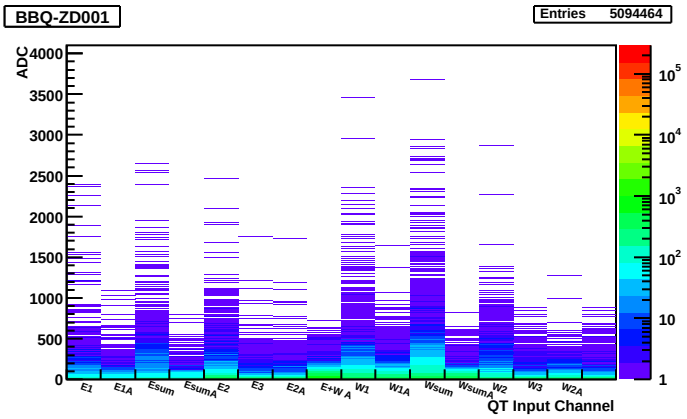

BBQ-BB001 (BBC east small tiles TAC)
Entries 5094464
TAC
QT Input Channel

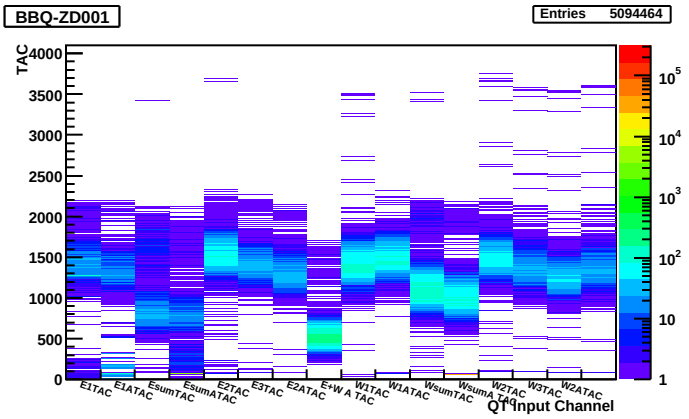

BBQ-BB002 (BBC west small tiles ADC)
Entries 5094464
ADC
QT Input Channel

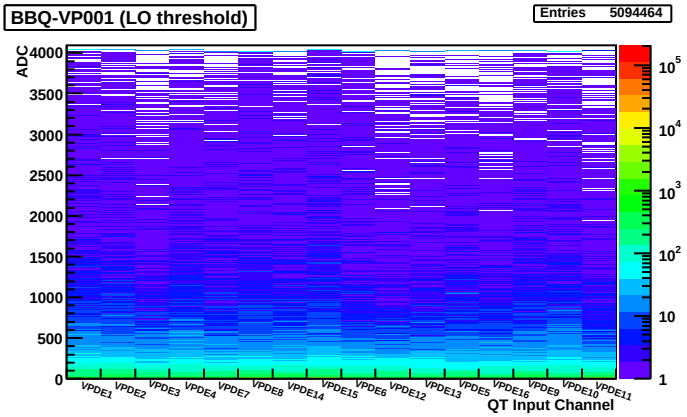

BBQ-BB002 (BBC west small tiles TAC)
Entries 5094464
TAC
QT Input Channel

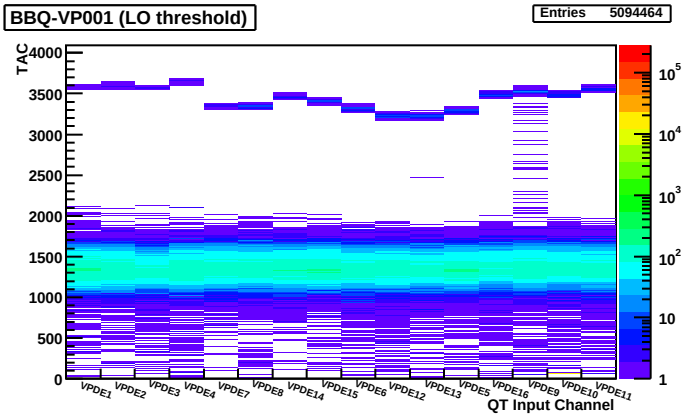

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 5094464
ADC
QT Input Channel

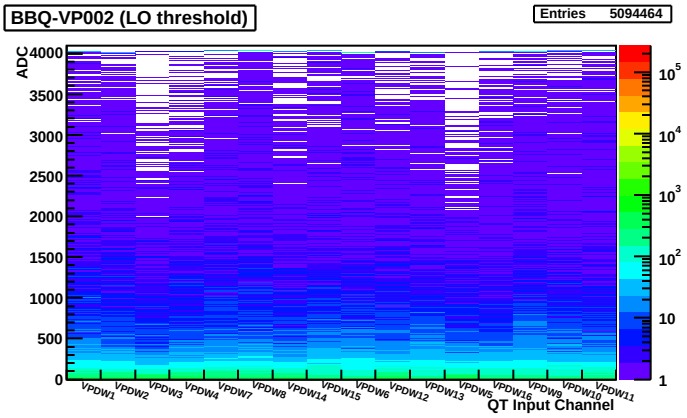

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 5094464
TAC
QT Input Channel

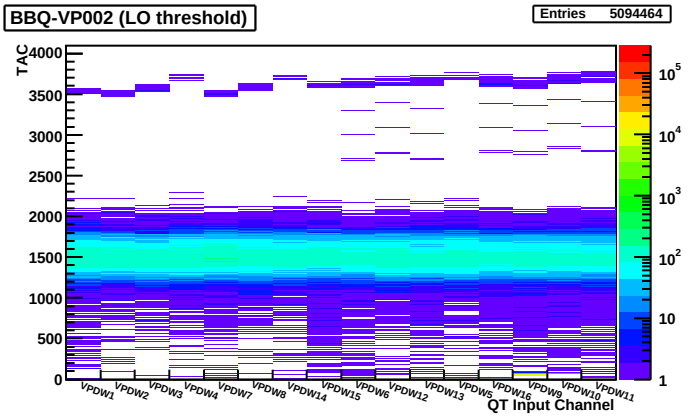

BBQ-ZD001
Entries 5094464
ADC
QT Input Channel

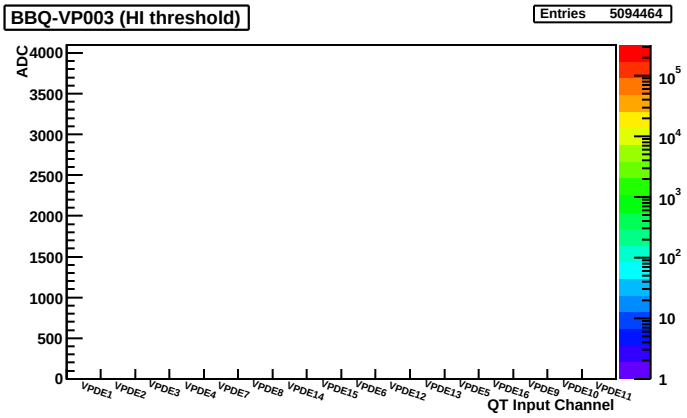

BBQ-ZD001
Entries 5094464
TAC
QT Input Channel

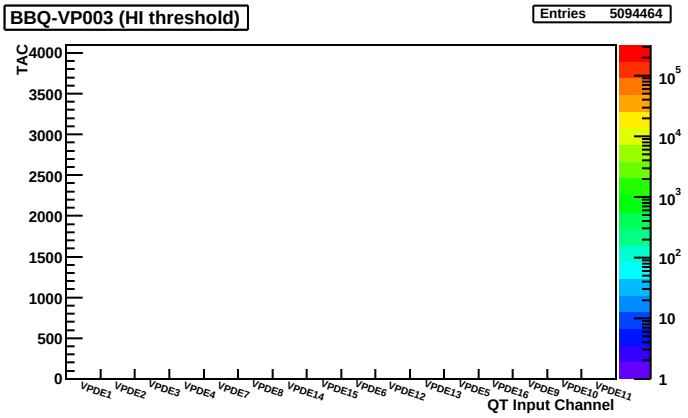

BBQ-VP001 (LO threshold)
Entries 5094464
ADC
QT Input Channel

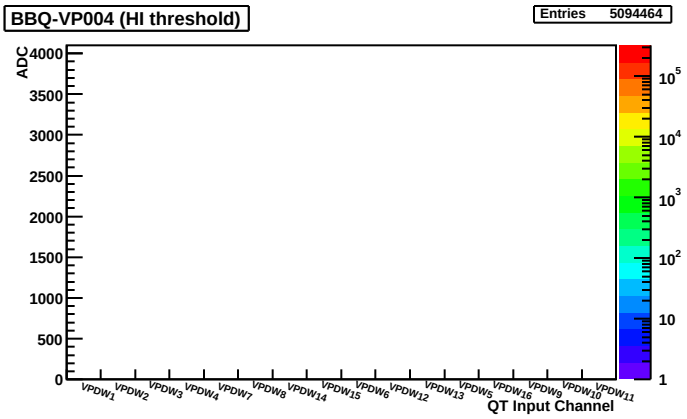

BBQ-VP001 (LO threshold)
Entries 5094464
TAC
QT Input Channel

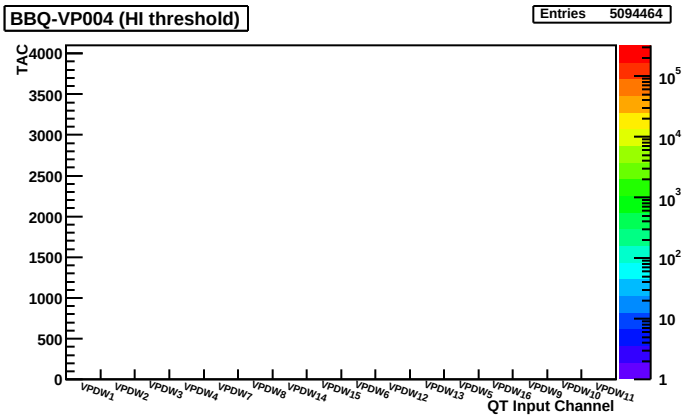

BBQ-VP002 (LO threshold)
Entries 5094464
ADC
QT Input Channel

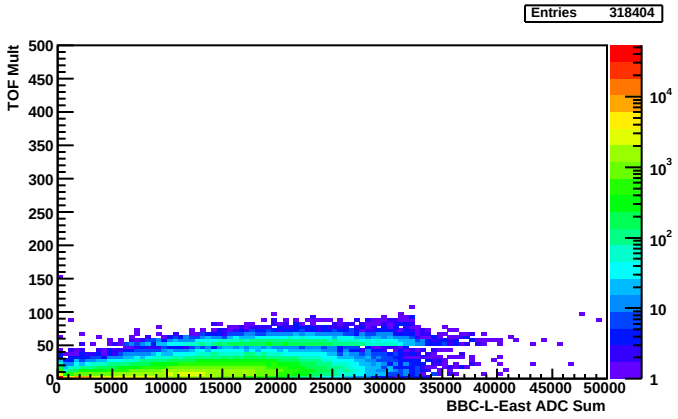

BBQ-VP002 (LO threshold)
Entries 5094464
TAC
QT Input Channel

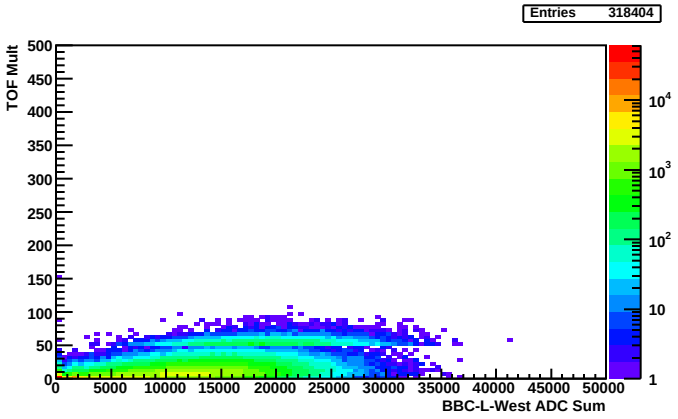

BBQ-VP003 (HI threshold)
Entries 5094464
ADC
QT Input Channel

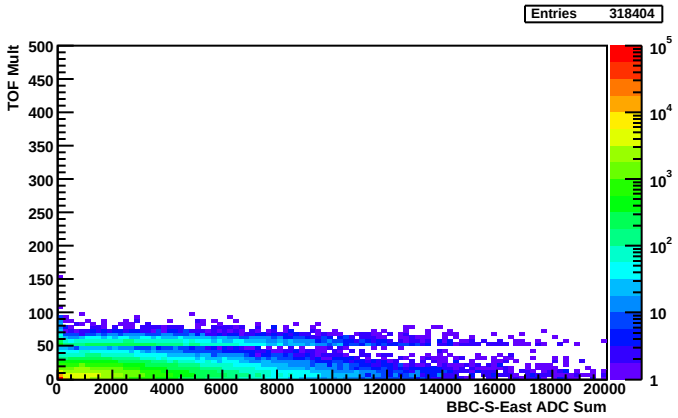

BBQ-VP003 (HI threshold)
Entries 5094464
TAC
QT Input Channel

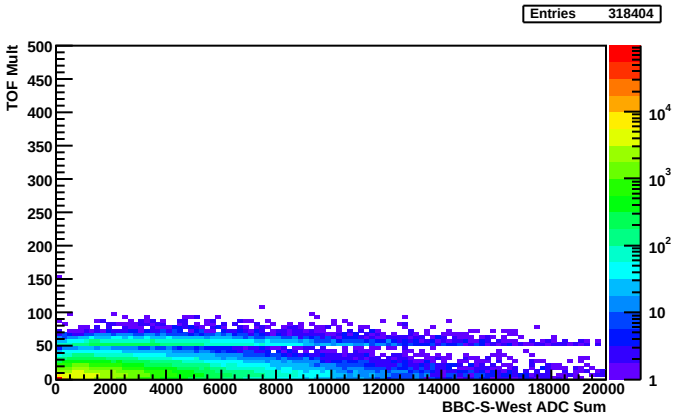

BBQ-VP004 (HI threshold)
Entries 5094464
ADC
QT Input Channel

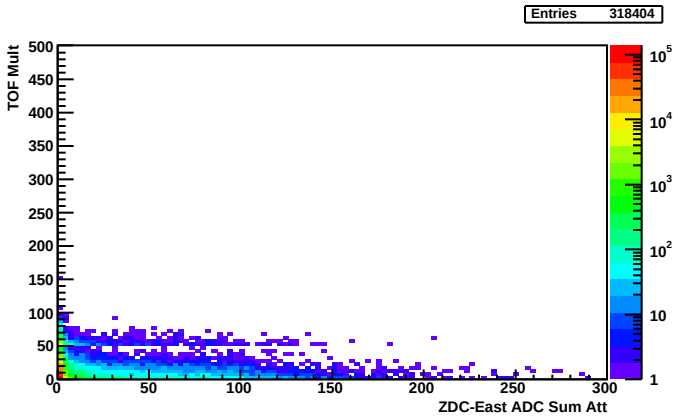

BBQ-VP004 (HI threshold)
Entries 5094464
TAC
QT Input Channel

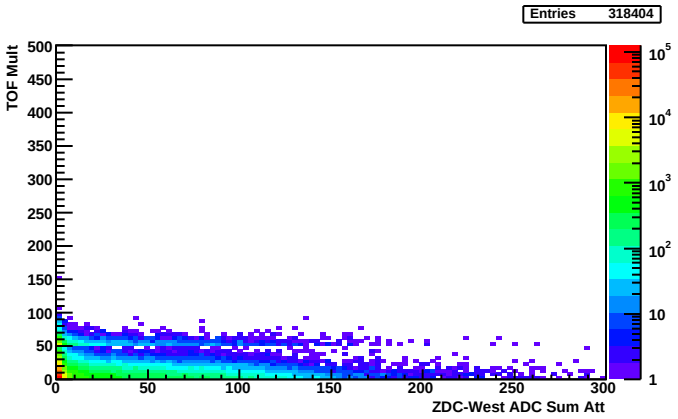

Entries 318404
TOF Mult
BBC-L-East ADC Sum

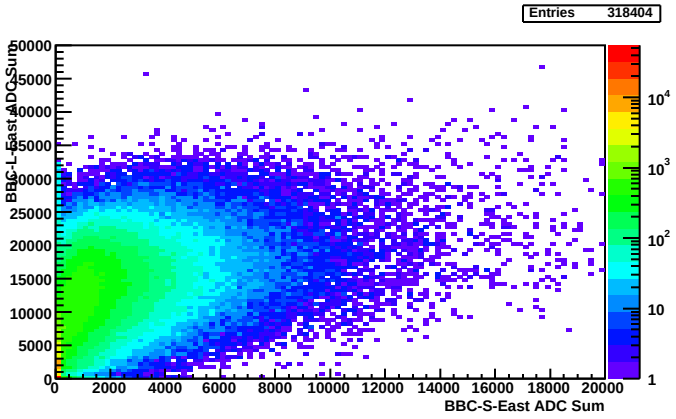

Entries 318404
TOF Mult
BBC-L-West ADC Sum

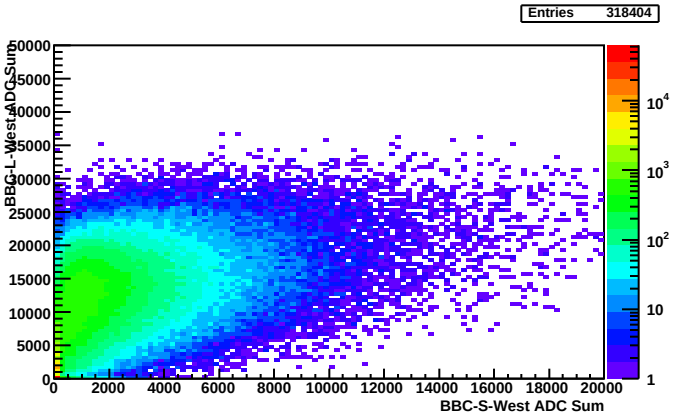

Entries 318404
TOF Mult
BBC-S-East ADC Sum

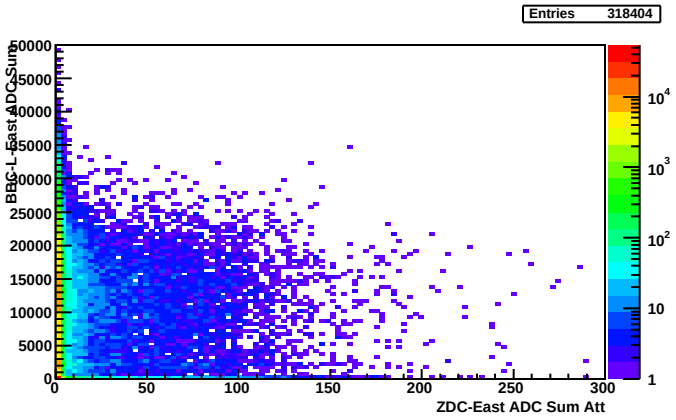

Entries 318404
TOF Mult
BBC-S-West ADC Sum

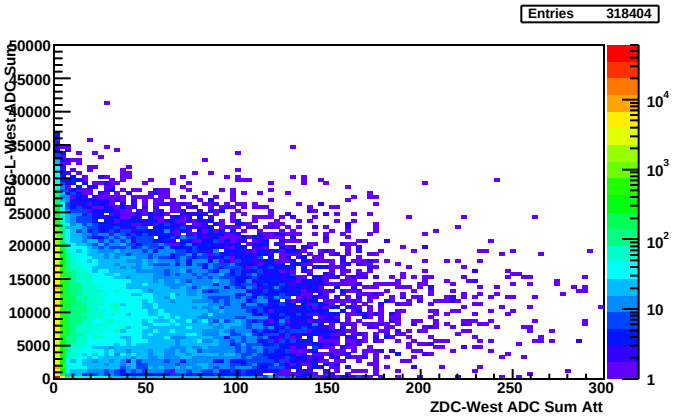

Entries 318404
TOF Mult
ZDC-East ADC Sum Att

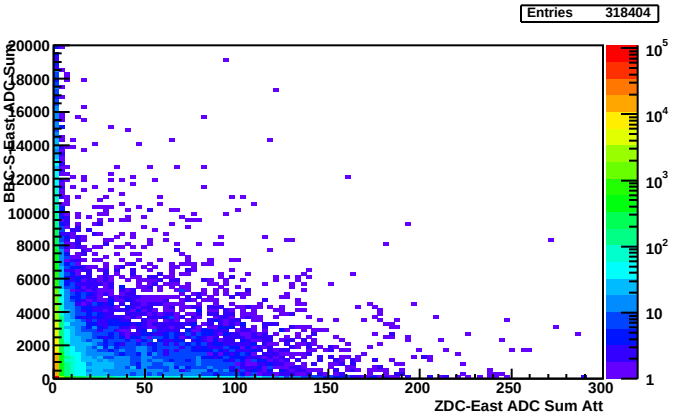

Entries 318404
TOF Mult
ZDC-West ADC Sum Att

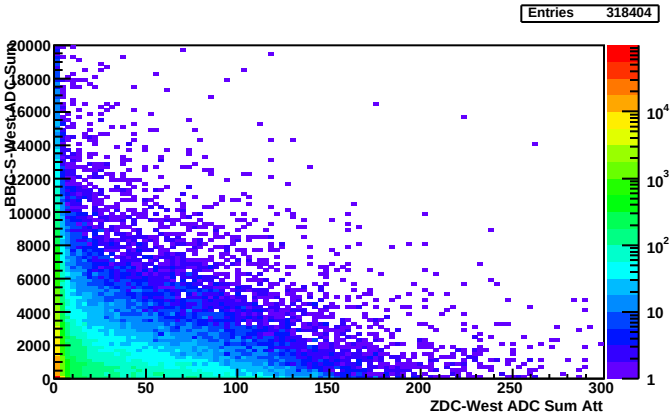

Entries 318404
BBC-L-East ADC Sum
BBC-S-East ADC Sum

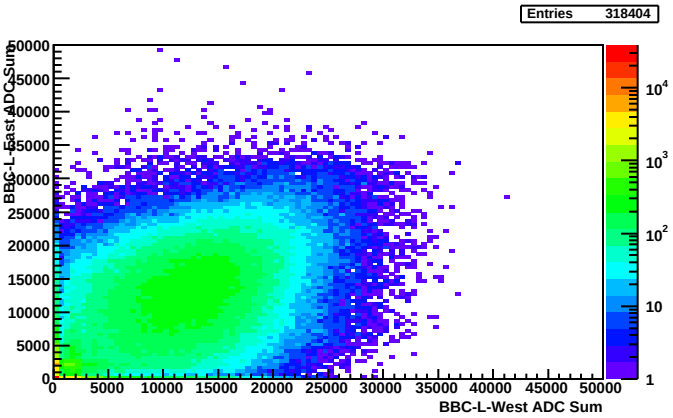

Entries 318404
BBC-L-West ADC Sum
BBC-S-West ADC Sum

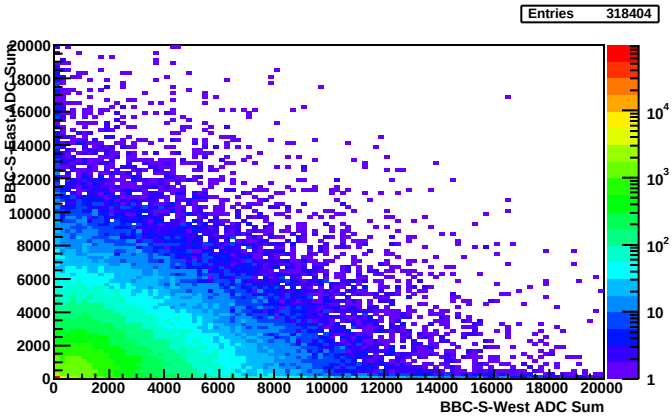

Entries 318404
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

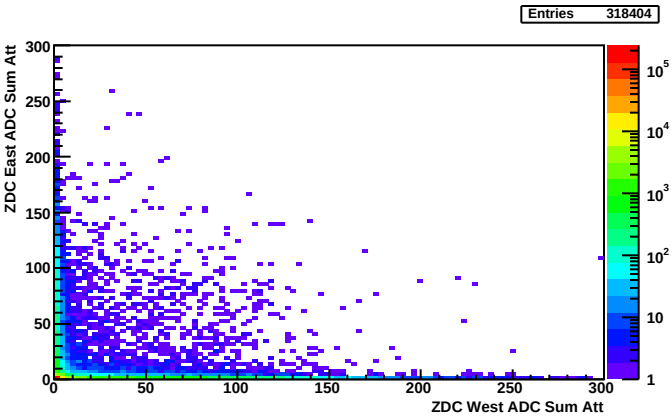

Entries 318404
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

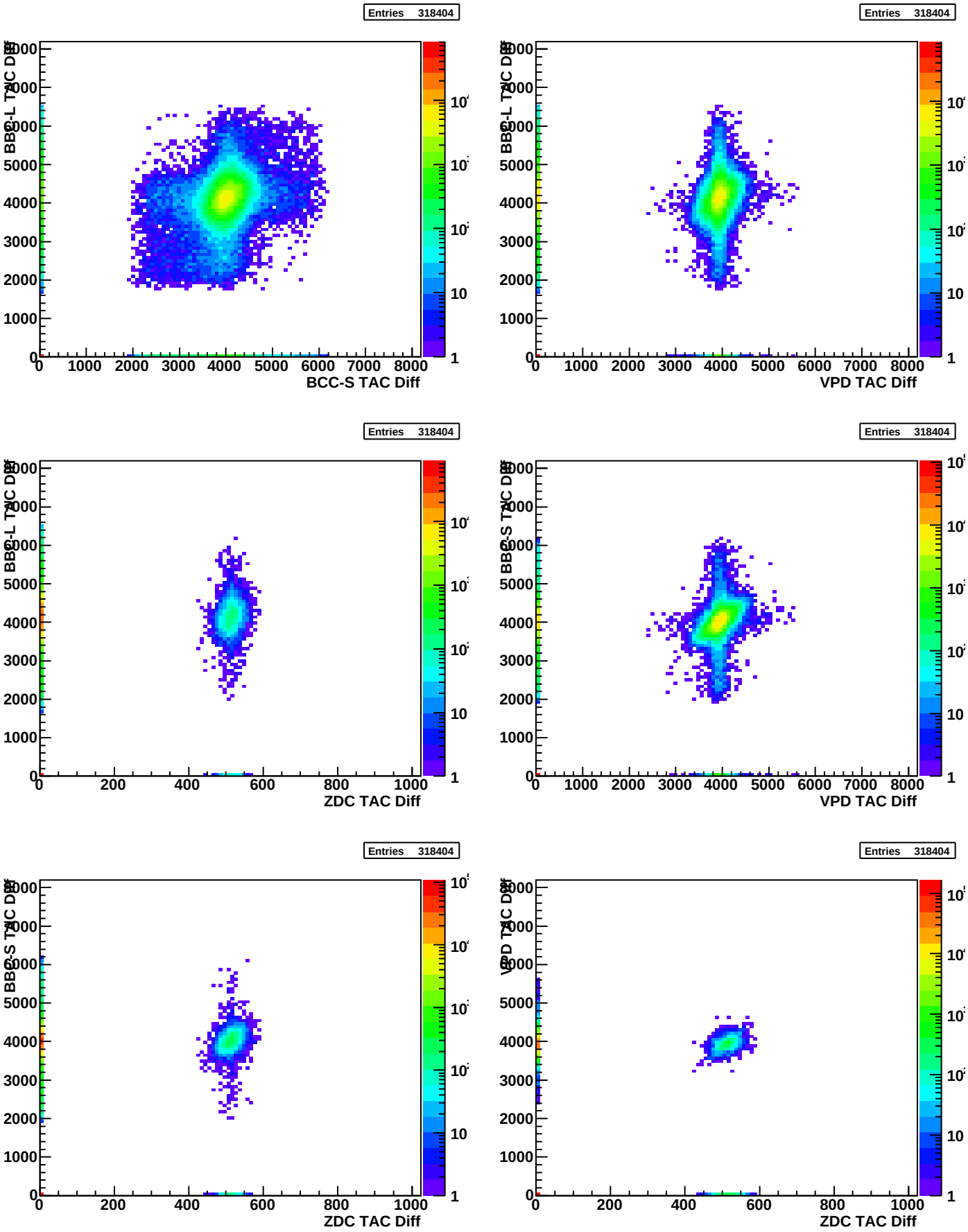

Entries 318404
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

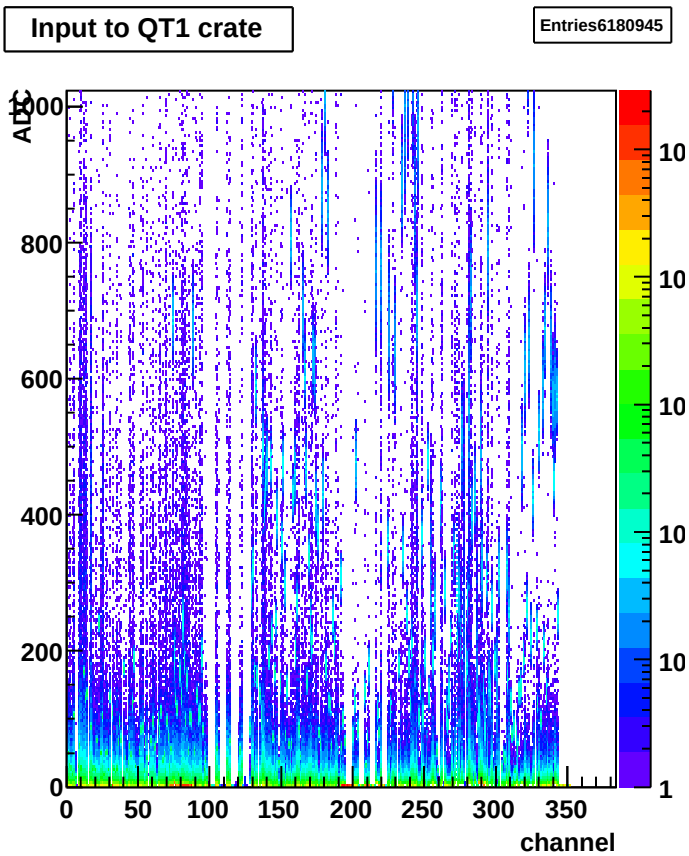

Entries 318404
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

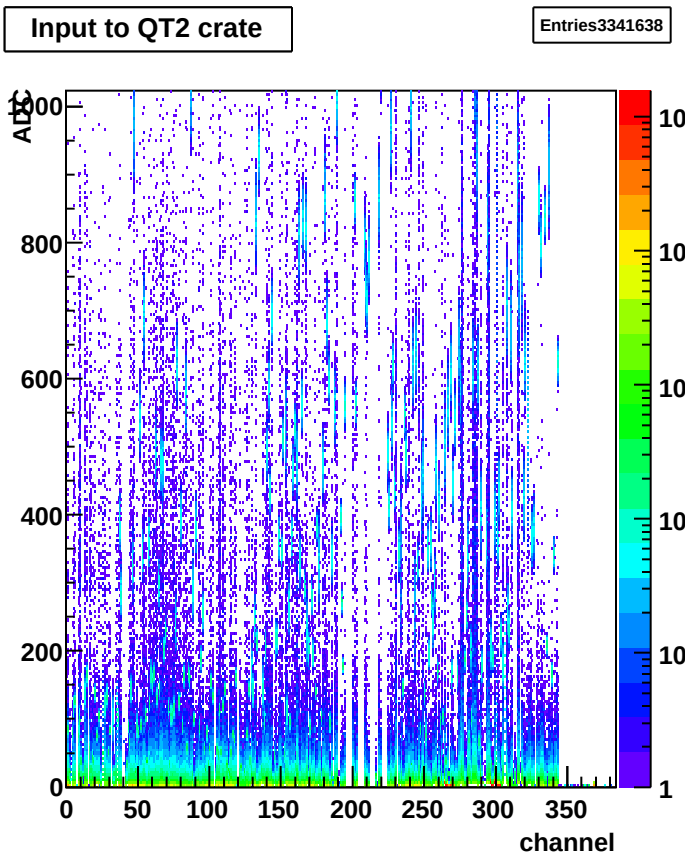

Entries 318404
BBC-L-East ADC Sum
BBC-L-West ADC Sum

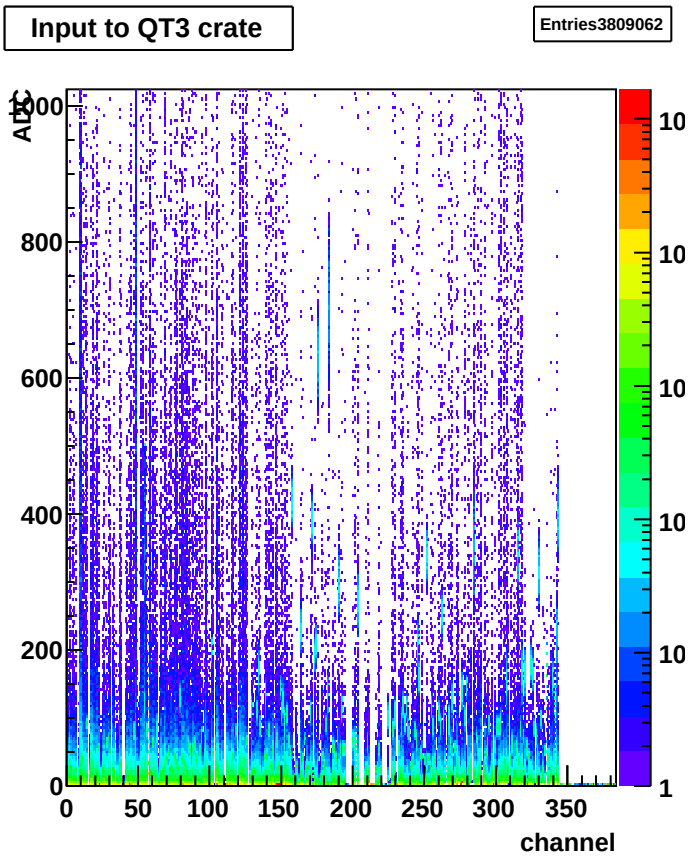

Entries 318404
BBC-S-East ADC Sum
BBC-S-West ADC Sum

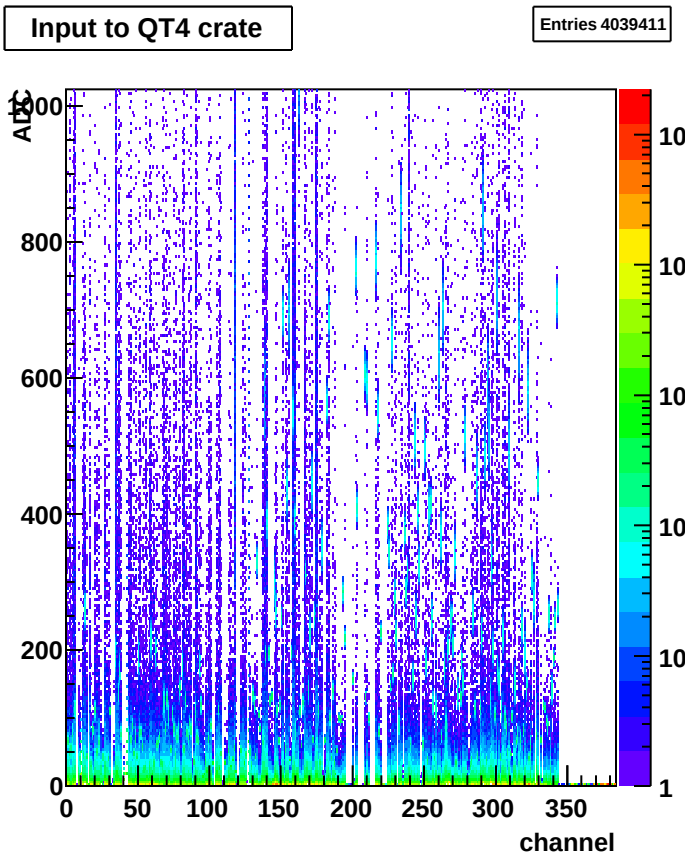

Entries 318404
ZDC East ADC Sum Att
ZDC West ADC Sum Att

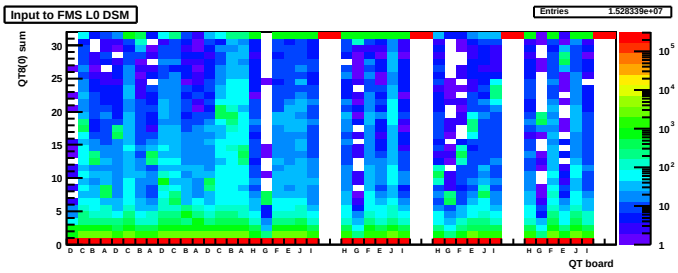

Entries 318404
BBC-L TAC Diff
BCC-S TAC Diff
Entries 318404
BBC-L TAC Diff
VPD TAC Diff
Entries 318404
BBC-L TAC Diff
ZDC TAC Diff
Entries 318404
BBC-S TAC Diff
VPD TAC Diff
Entries 318404
BBC-S TAC Diff
ZDC TAC Diff
Entries 318404
VPD TAC Diff
ZDC TAC Diff

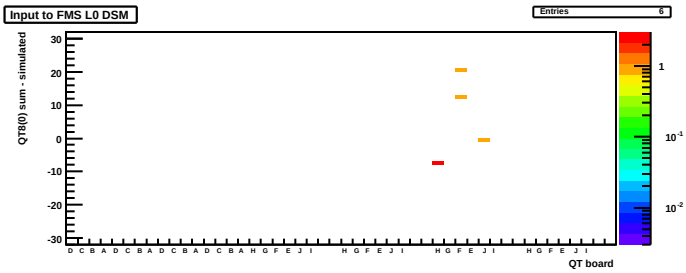

Input to QT1 crate
Entries6180945
ADC
channel

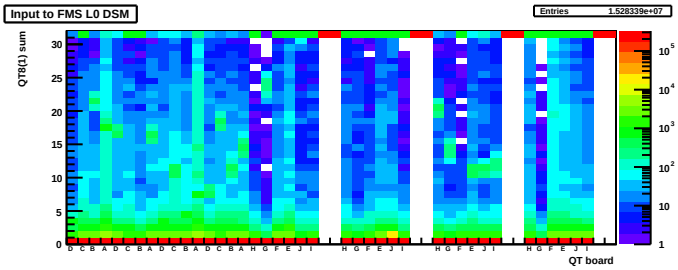

Input to QT2 crate
Entries3341638
ADC
channel

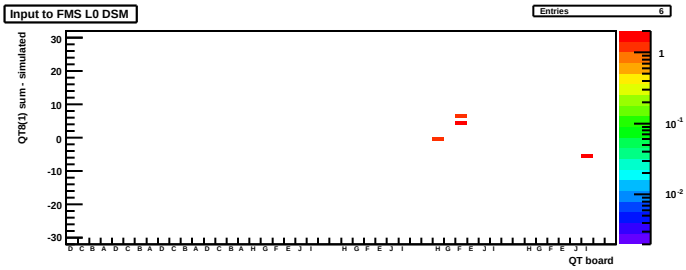

Input to QT3 crate
Entries3809062
ADC
channel

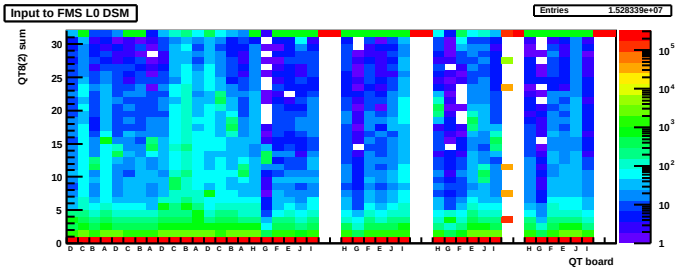

Input to QT4 crate
Entries 4039411
ADC
channel

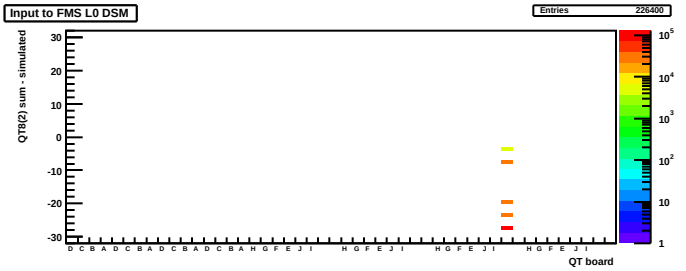

Input to FMS L0 DSM
Entries 1.528339e+07
QT8(0) sum
QT board

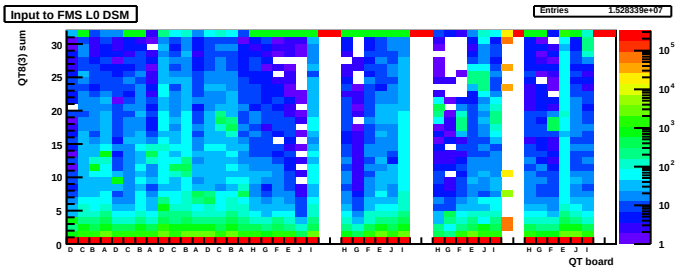

Input to FMS L0 DSM
Entries 6
QT8(0) sum - simulated
QT board

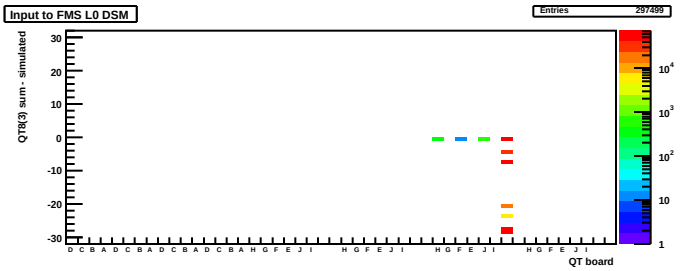

Input to FMS L0 DSM
Entries 1.528339e+07
QT8(1) sum
QT board

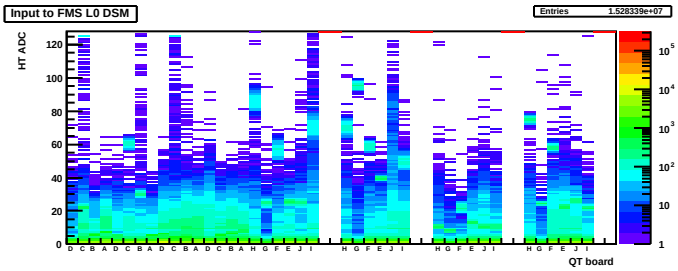

Input to FMS L0 DSM
Entries 6
QT8(1) sum - simulated
QT board

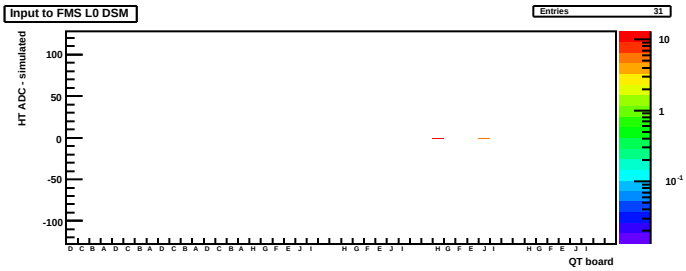

Input to FMS L0 DSM
Entries 1.528339e+07
QT8(2) sum
QT board

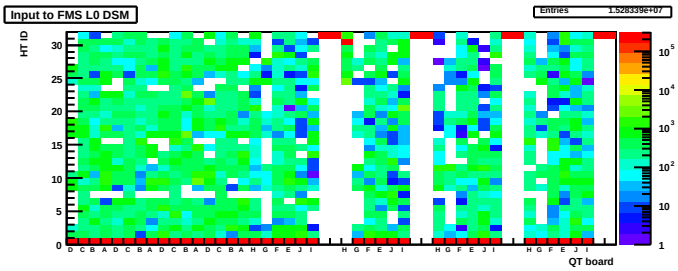

Input to FMS L0 DSM
Entries 226400
QT8(2) sum - simulated
QT board

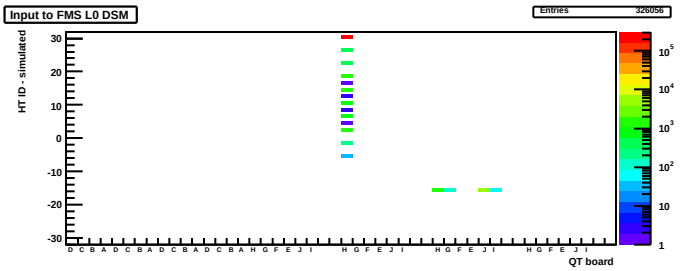

Input to FMS L0 DSM
Entries 1.528339e+07
QT8(3) sum
QT board

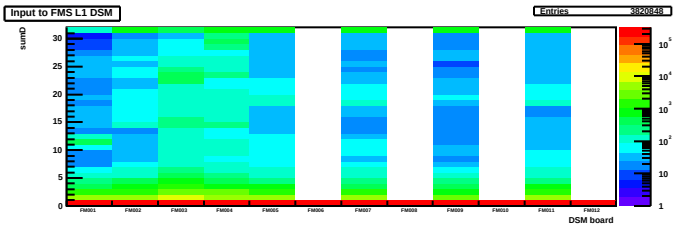

Input to FMS L0 DSM
Entries 297499
QT8(3) sum - simulated
QT board

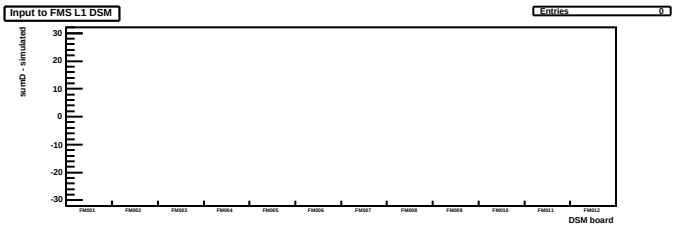

Input to FMS L0 DSM
Entries 1.528339e+07
HT ADC
QT board

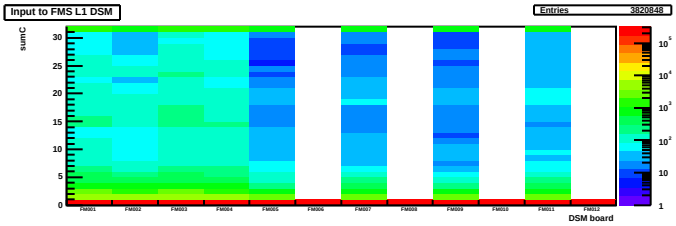

Input to FMS L0 DSM
Entries 31
HT ADC - simulated
QT board

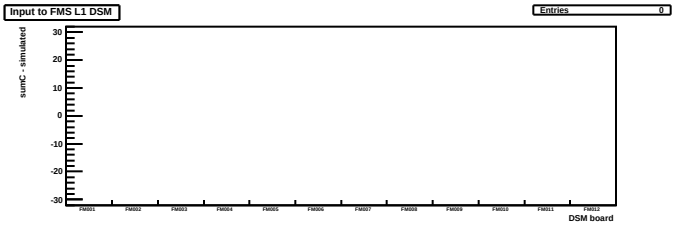

Input to FMS L0 DSM
Entries 1.528339e+07
HT ID
QT board

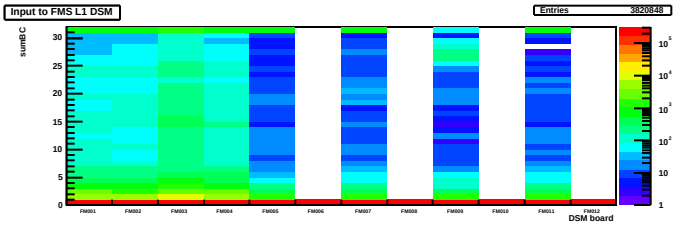

Input to FMS L0 DSM
Entries 326056
HT ID - simulated
QT board

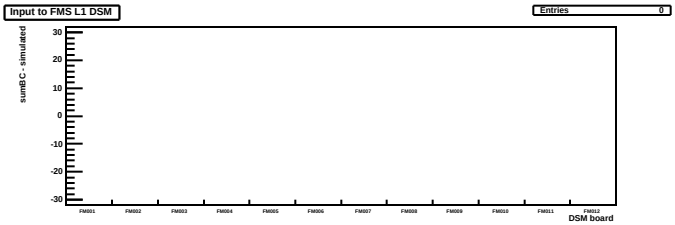

Input to FMS L1 DSM
Entries 3820848
sumD
DSM board

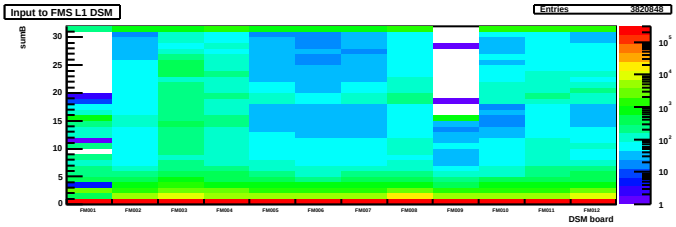

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

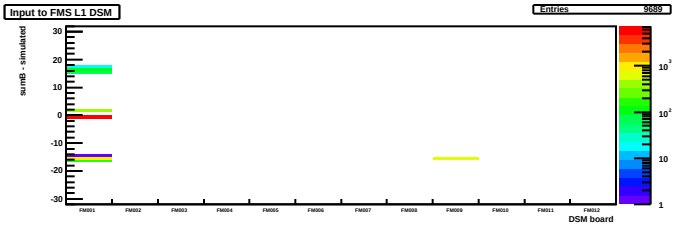

Input to FMS L1 DSM
Entries 3820848
sumC
DSM board

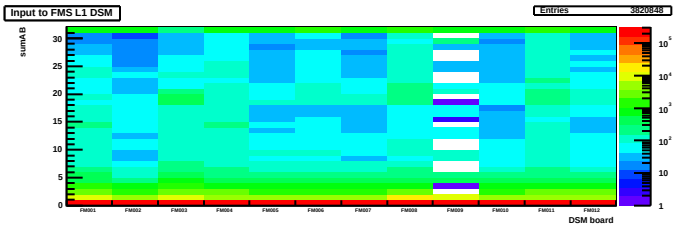

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

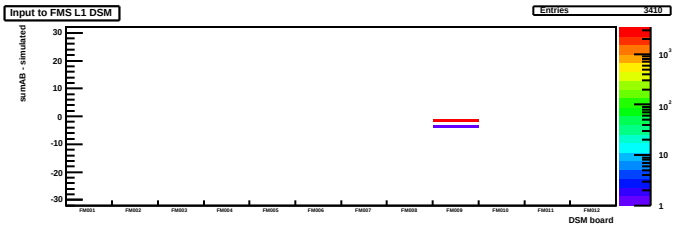

Input to FMS L1 DSM
Entries 3820848
sumBC
DSM board

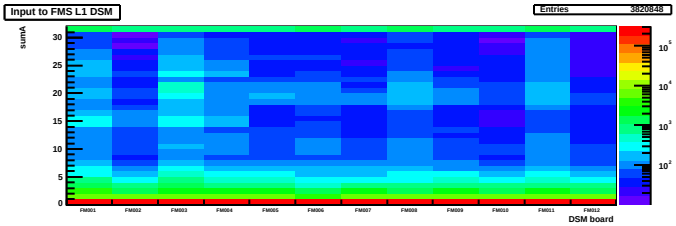

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

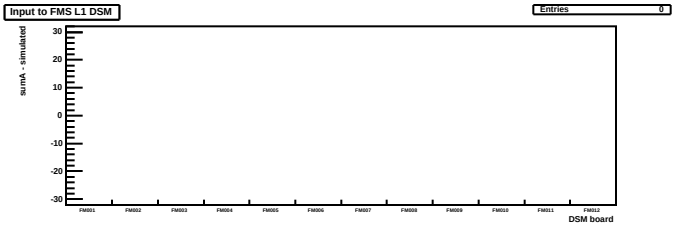

Input to FMS L1 DSM
Entries 3820848
sumB
DSM board

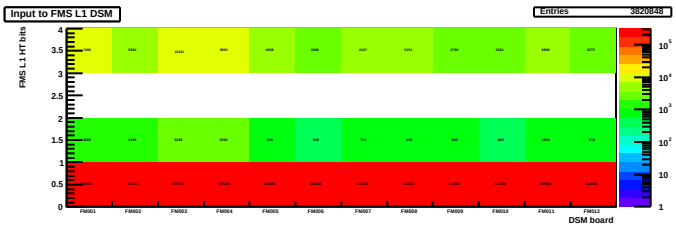

Input to FMS L1 DSM
Entries 9689
sumB - simulated
DSM board

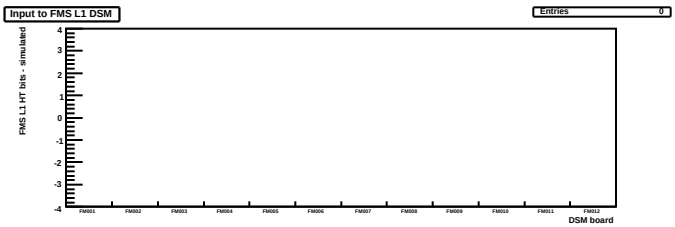

Input to FMS L1 DSM
Entries 3820848
sumAB
DSM board

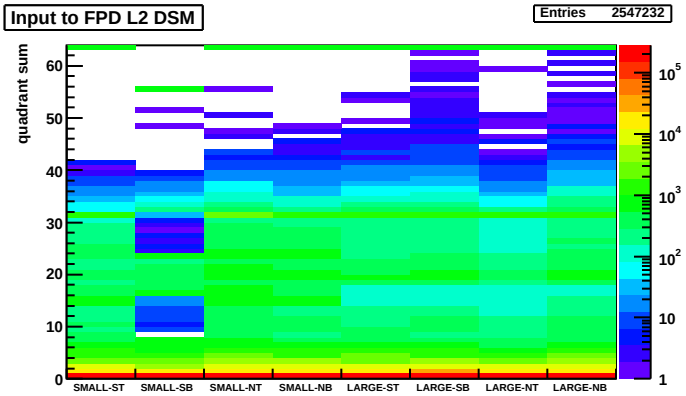

Input to FMS L1 DSM
Entries 3410
sumAB - simulated
DSM board

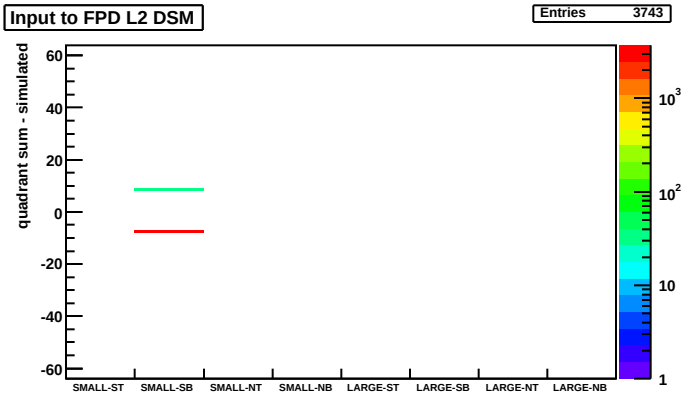

Input to FMS L1 DSM
Entries 3820848
sumA
DSM board

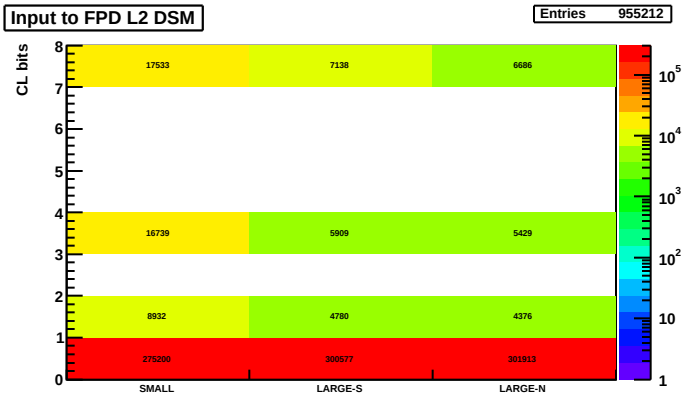

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

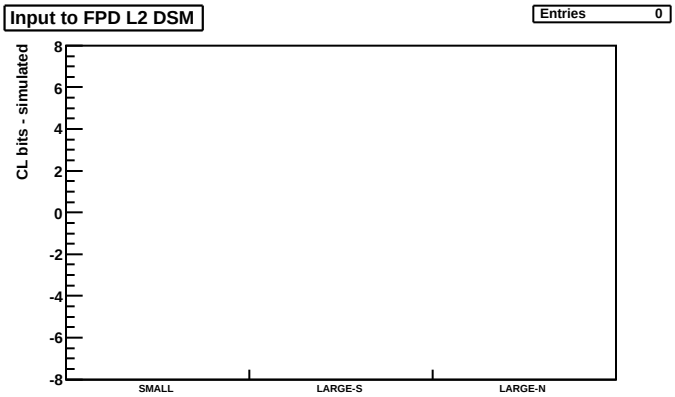

Input to FMS L1 DSM
Entries 3820848
FMS L1 HT bits
DSM board

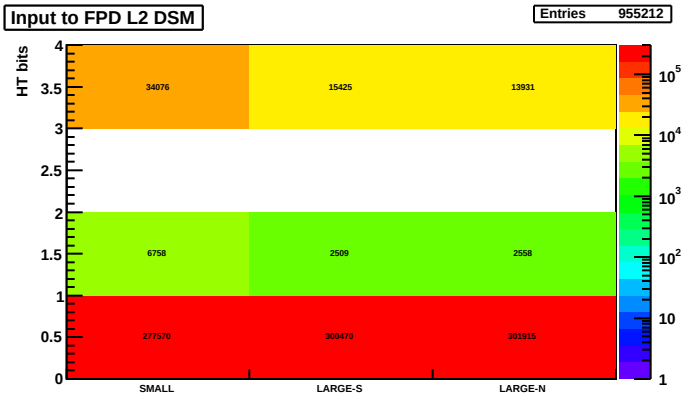

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

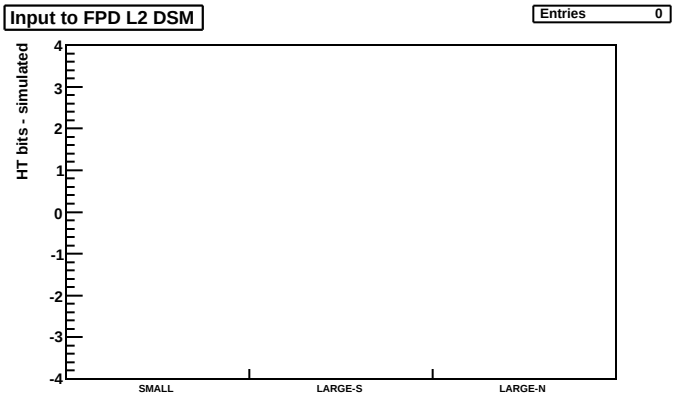

Input to FPD L2 DSM
Entries 2547232
quadrant sum
SMALL-ST
SMALL-SB
SMALL-NT
SMALL-NB
LARGE-ST
LARGE-SB
LARGE-NT
LARGE-NB

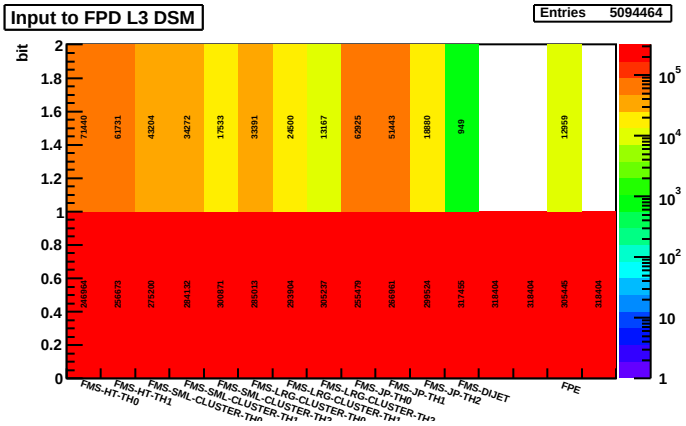

Input to FPD L2 DSM
Entries 3743
quadrant sum - simulated
SMALL-ST
SMALL-SB
SMALL-NT
SMALL-NB
LARGE-ST
LARGE-SB
LARGE-NT
LARGE-NB

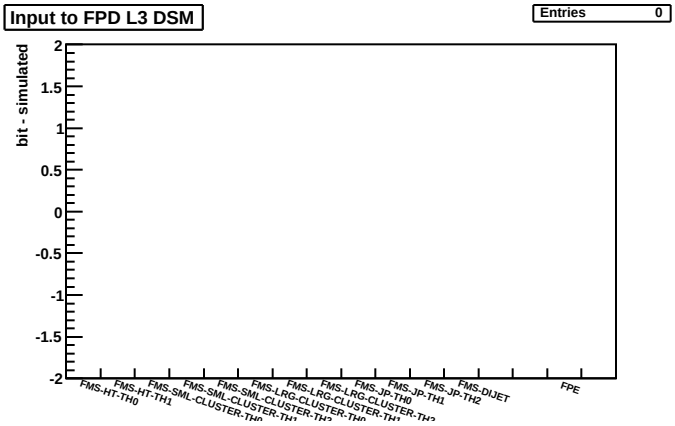

Input to FPD L2 DSM
Entries 955212
CL bits
17533
7138
6686
16739
5909
5429
8932
4780
4376
275200
300577
301913
SMALL
LARGE-S
LARGE-N

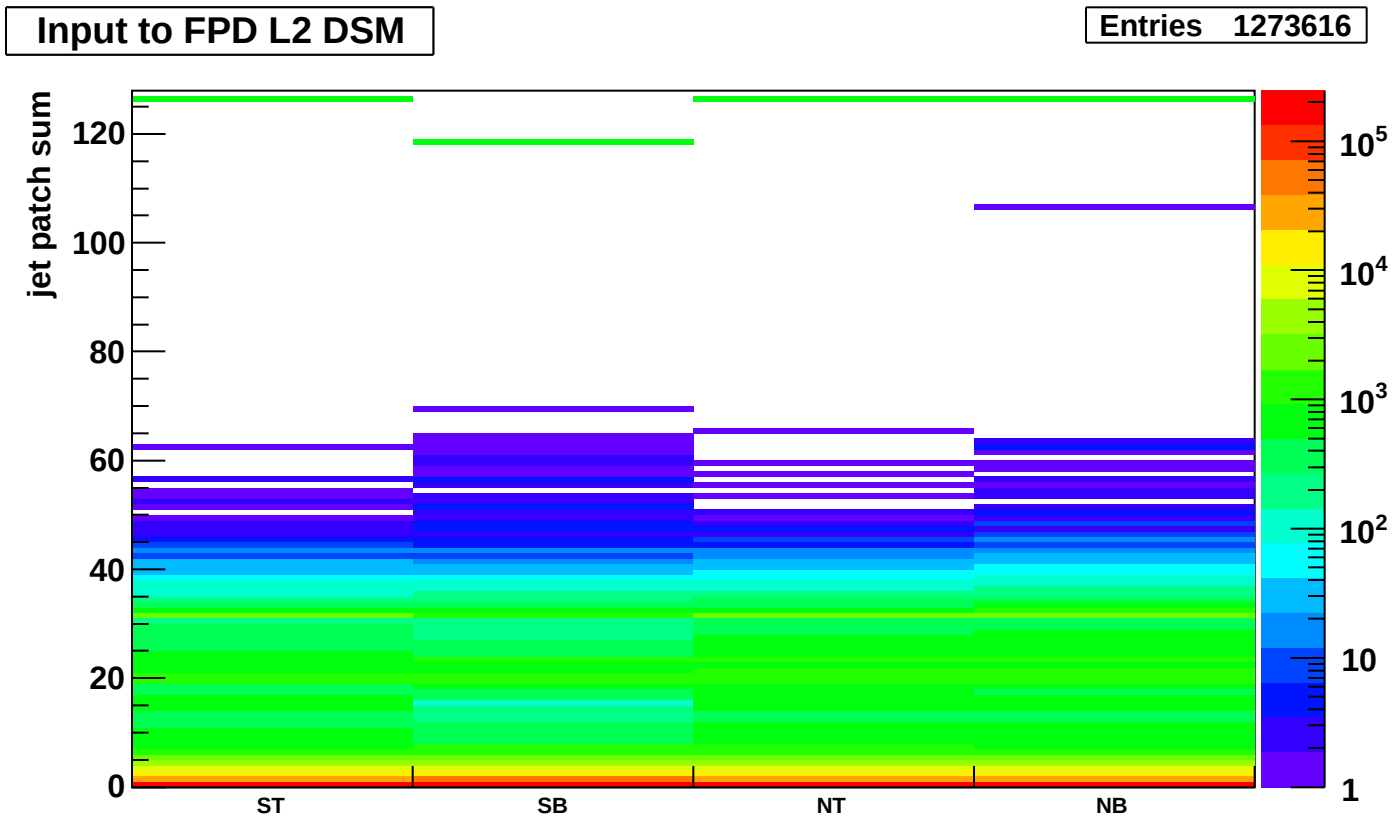

Input to FPD L2 DSM
Entries 0
CL bits - simulated
SMALL
LARGE-S
LARGE-N

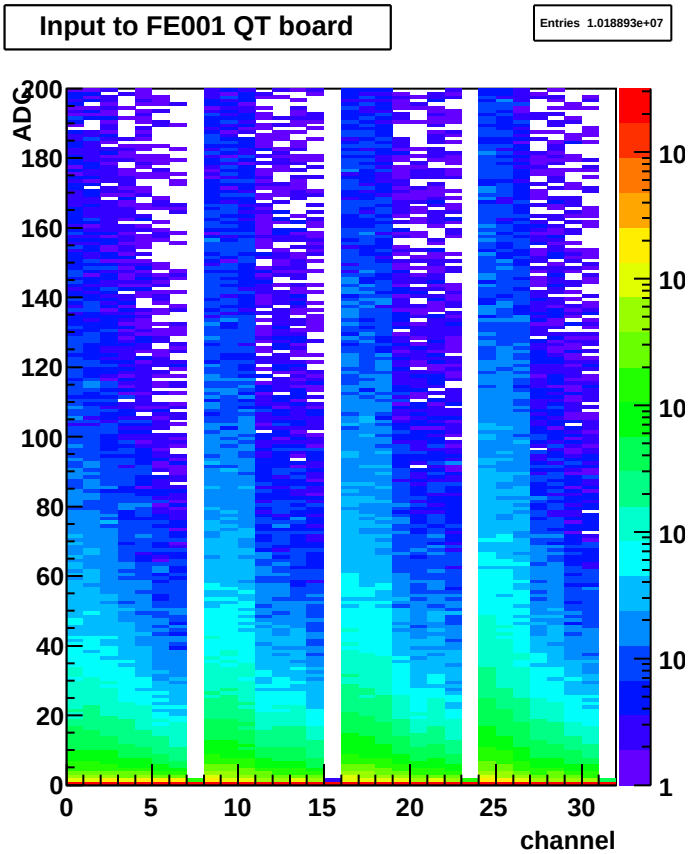

Input to FPD L2 DSM
Entries 955212
HT bits
34076
15425
13931
6758
2509
2558
277570
300470
301915
SMALL
LARGE-S
LARGE-N

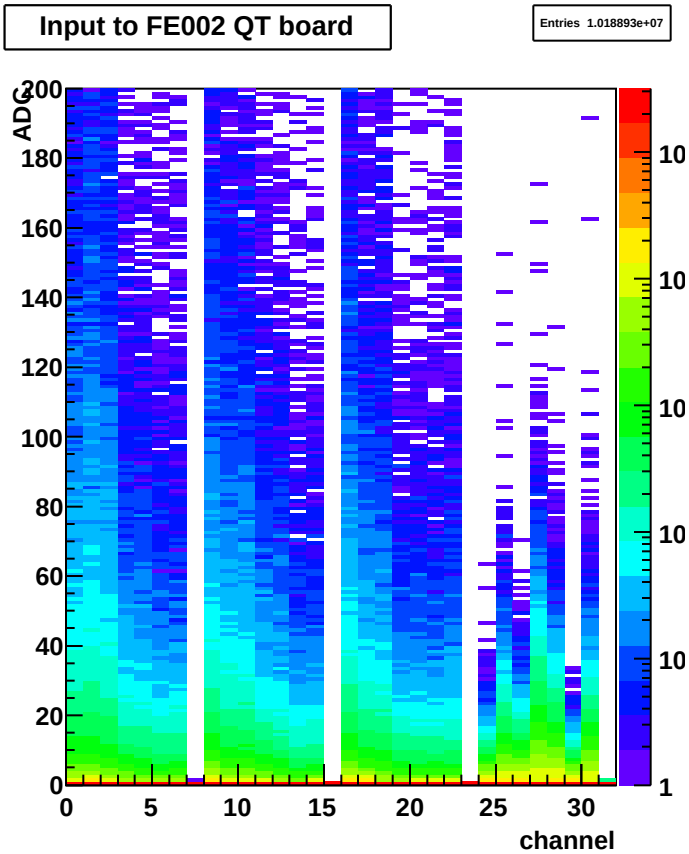

Input to FPD L2 DSM
Entries 0
HT bits - simulated
SMALL
LARGE-S
LARGE-N

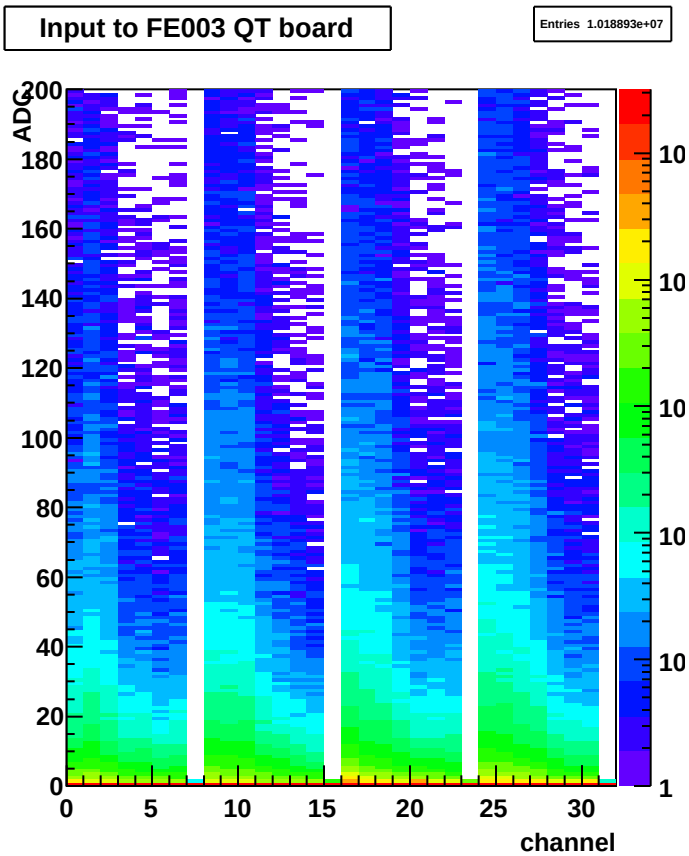

Input to FPD L3 DSM
Entries 5094464
bit
71407
61731
43204
34272
17533
33391
24600
13167
62925
51443
18880
949
12959
FMS-HT-TH0
FMS-HT-TH1
FMS-SML-CLUSTER-TH0
FMS-SML-CLUSTER-TH1
FMS-SML-CLUSTER-TH2
FMS-LRG-CLUSTER-TH0
FMS-LRG-CLUSTER-TH1
FMS-LRG-CLUSTER-TH2
FMS-JP-TH0
FMS-JP-TH1
FMS-JP-TH2
FMS-DIJET
FPE

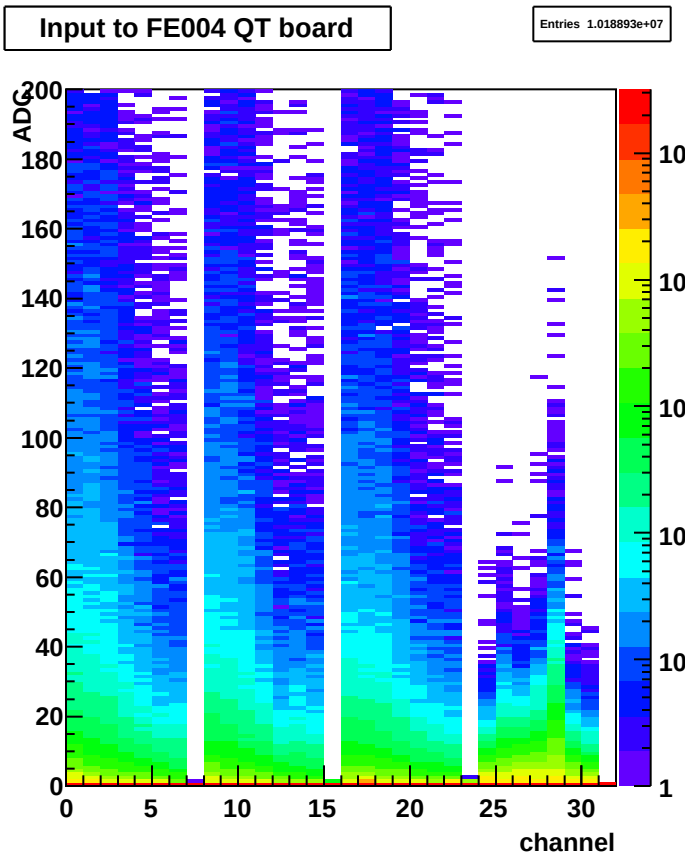

Input to FPD L3 DSM
Entries 0
bit - simulated
FMS-HT-TH0
FMS-HT-TH1
FMS-SML-CLUSTER-TH0
FMS-SML-CLUSTER-TH1
FMS-SML-CLUSTER-TH2
FMS-LRG-CLUSTER-TH0
FMS-LRG-CLUSTER-TH1
FMS-LRG-CLUSTER-TH2
FMS-JP-TH0
FMS-JP-TH1
FMS-JP-TH2
FMS-DIJET
FPE

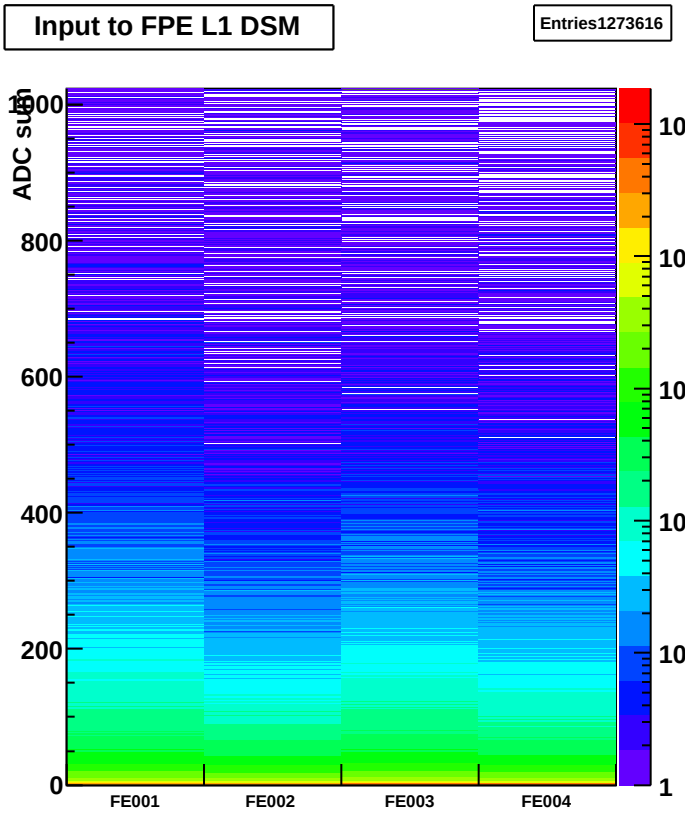

Input to FPD L2 DSM
Entries 1273616
jet patch sum
0
20
40
60
80
100
120
ST
SB
NT
NB
1
10
10^2
10^3
10^4
10^5

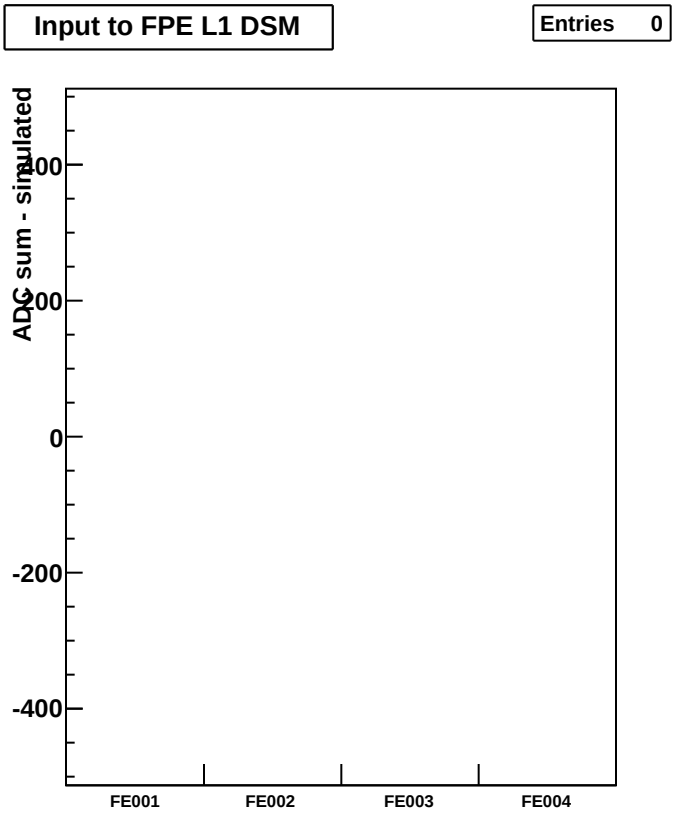

Input to FE001 QT board
Entries 1.018893e+07
ADC
channel

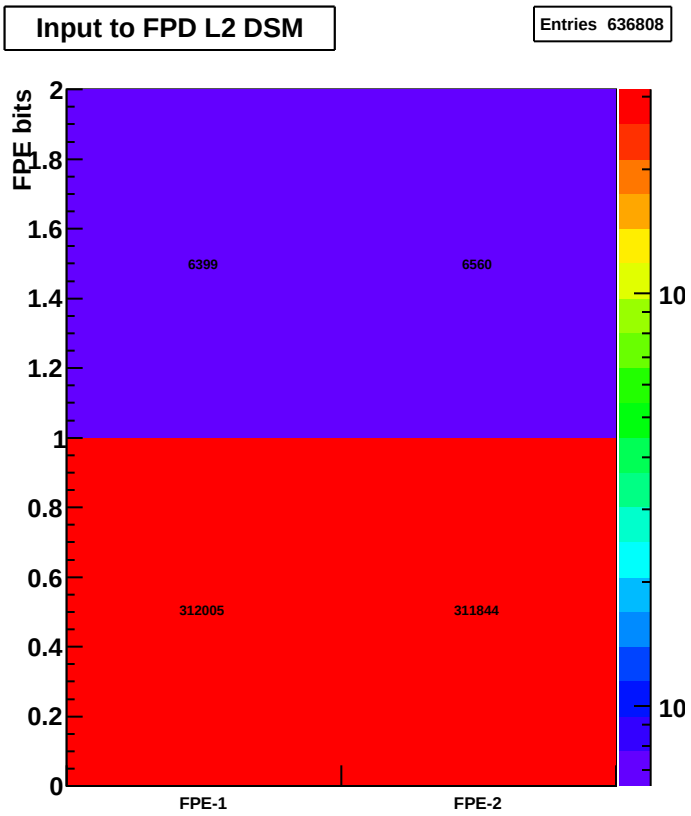

Input to FE002 QT board
Entries 1.018893e+07
ADC
channel

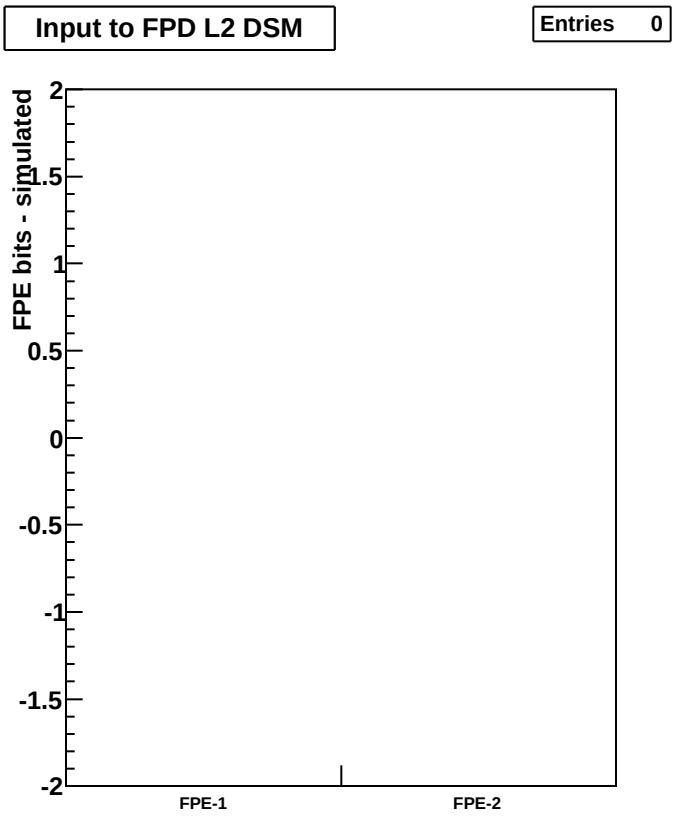

Input to FE003 QT board
Entries 1.018893e+07
ADC
channel


Input to FE004 QT board
Entries 1.018893e+07
ADC
channel


Input to FPE L1 DSM
Entries1273616
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 636808
FPE bits
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
6399
6560
312005
311844
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