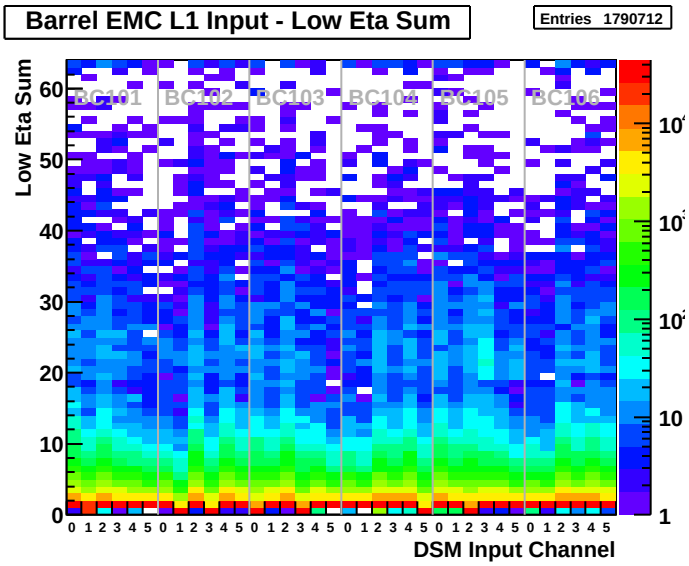
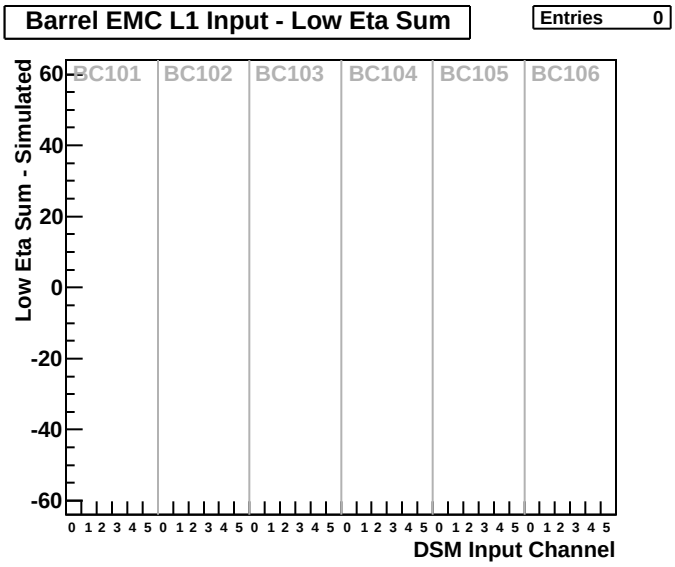
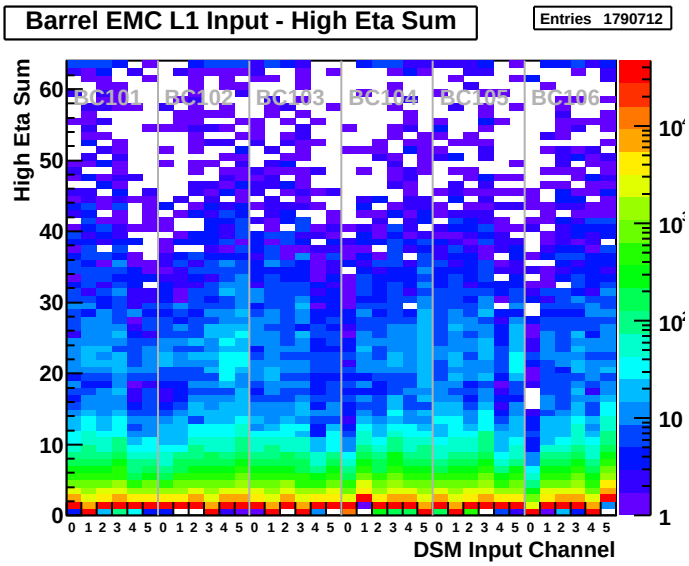
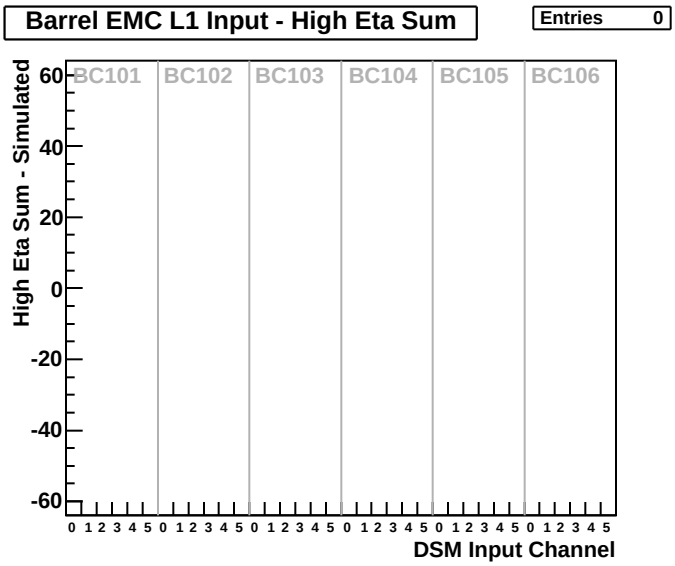
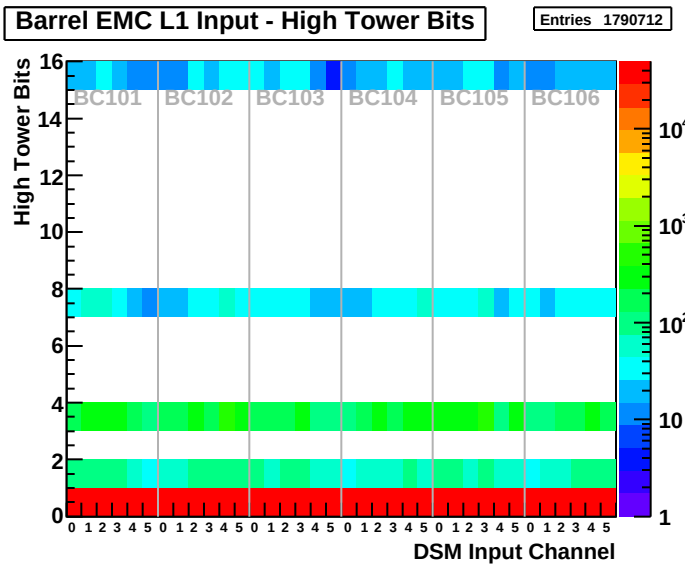
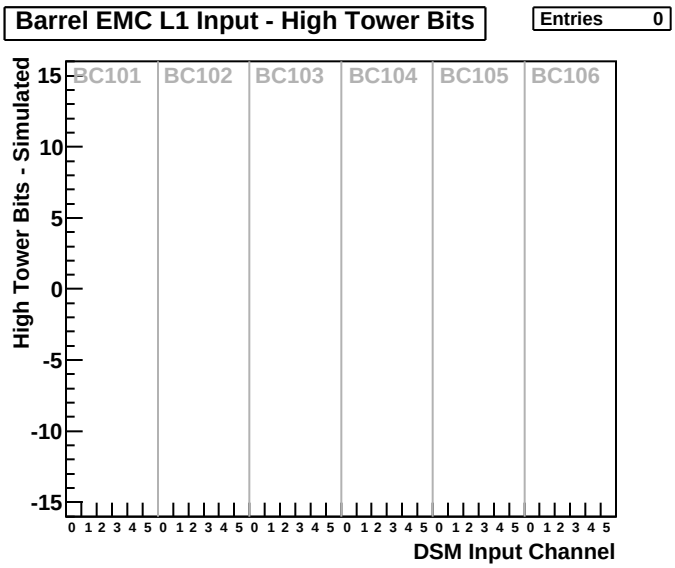

Barrel EMC L1 Input - Low Eta Sum
Entries 1790712
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

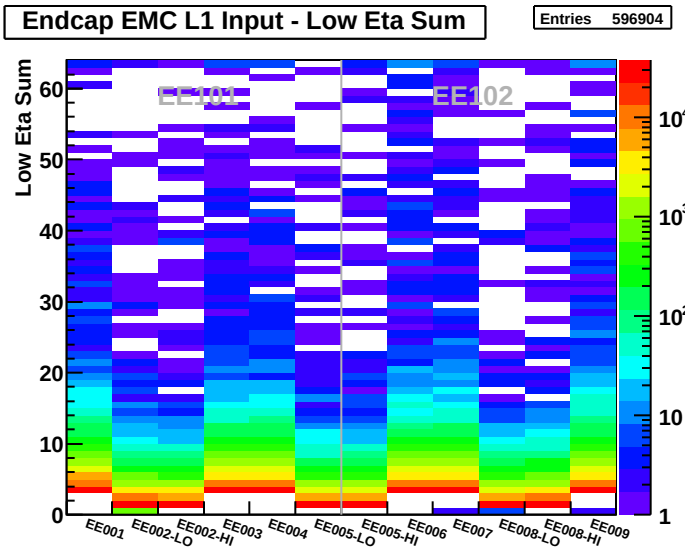

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

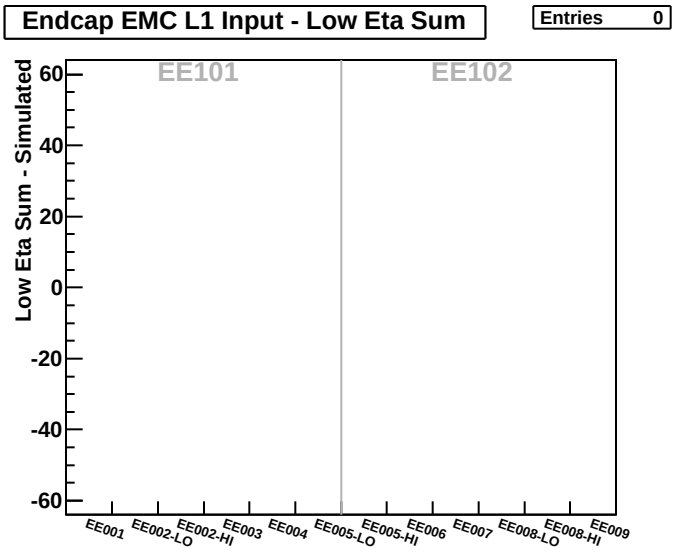

Barrel EMC L1 Input - High Eta Sum
Entries 1790712
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

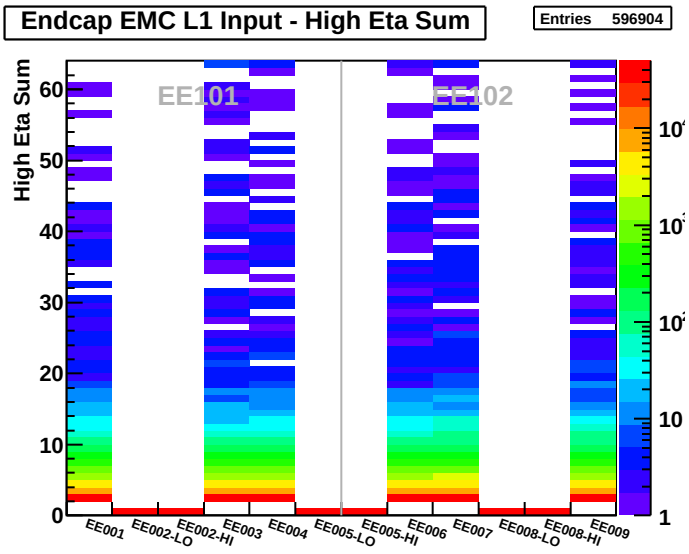

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

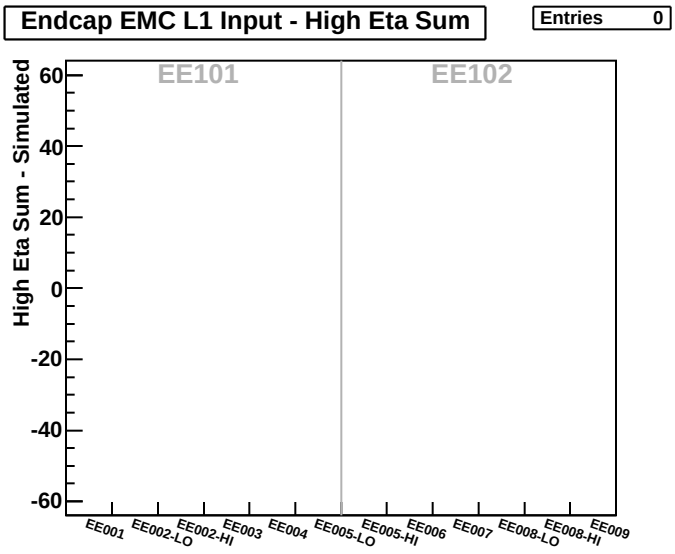

Barrel EMC L1 Input - High Tower Bits
Entries 1790712
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

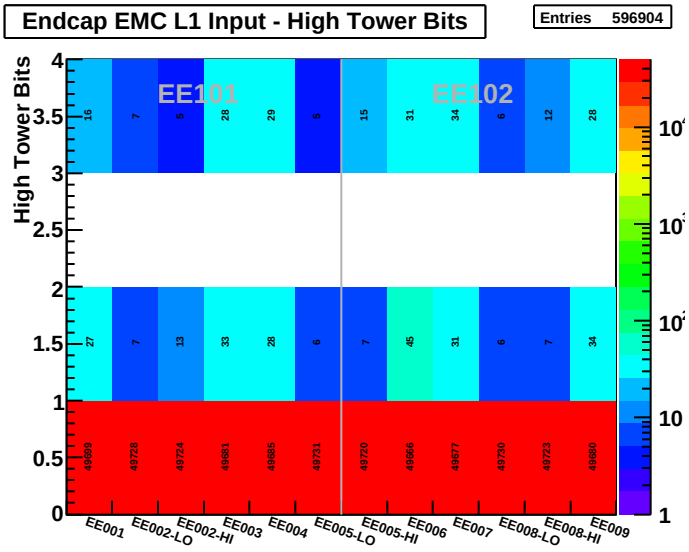

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

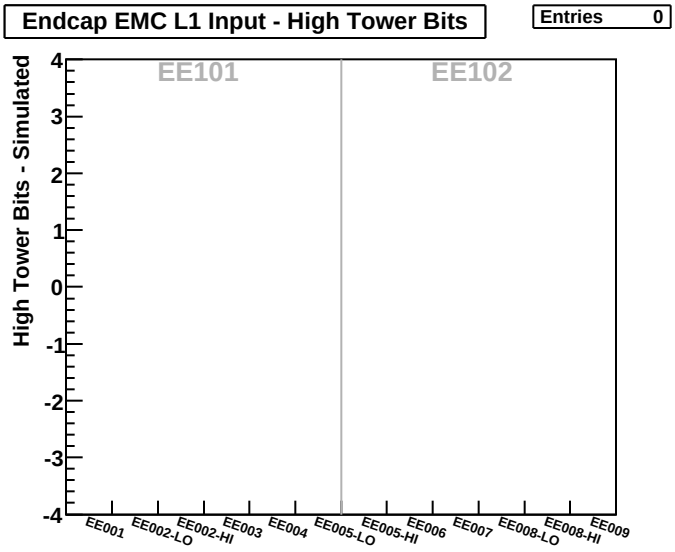

Endcap EMC L1 Input - Low Eta Sum
Entries 596904
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

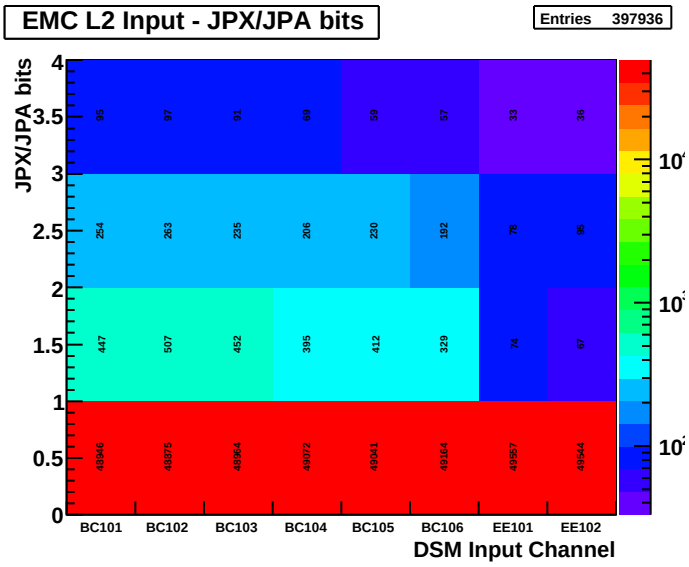

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

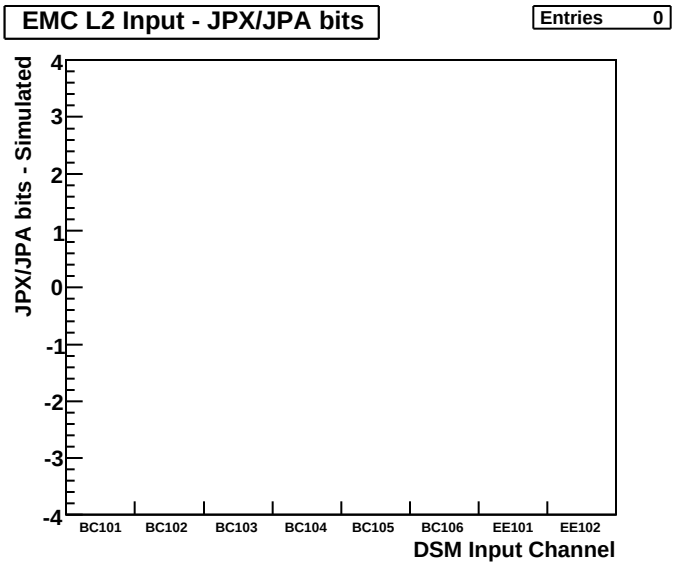

Endcap EMC L1 Input - High Eta Sum
Entries 596904
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

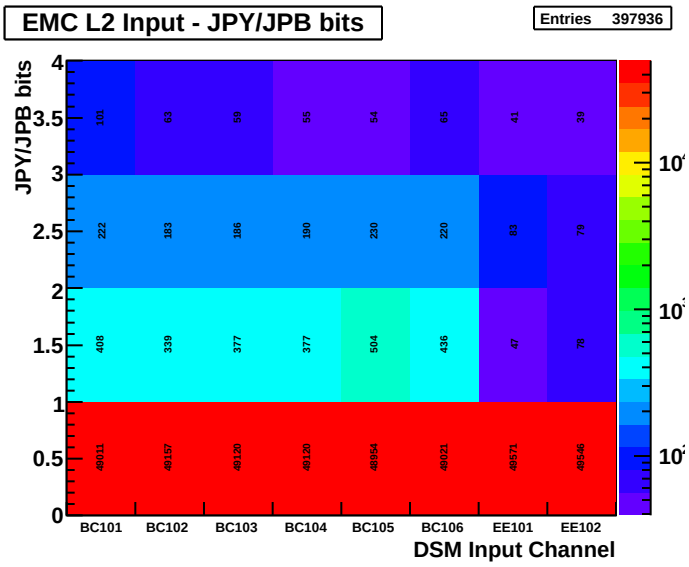

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

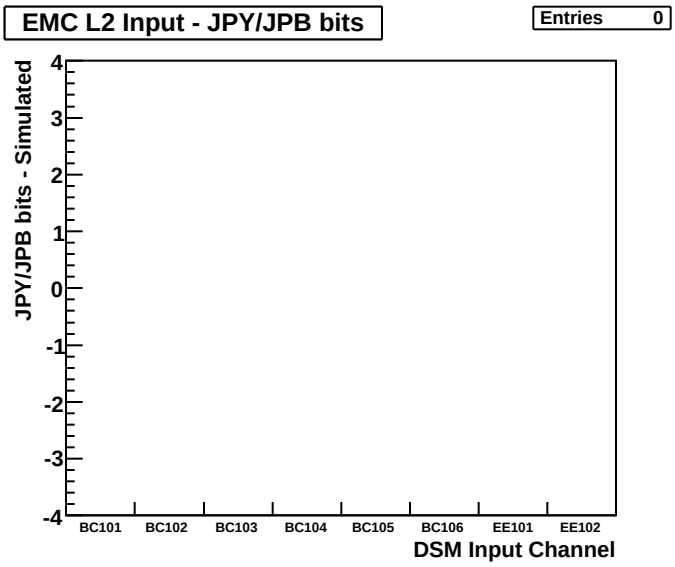

Endcap EMC L1 Input - High Tower Bits
Entries 596904
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

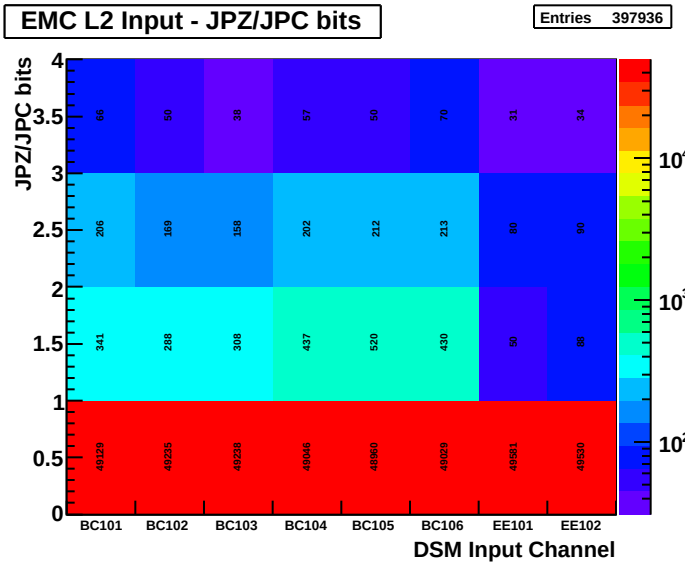

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

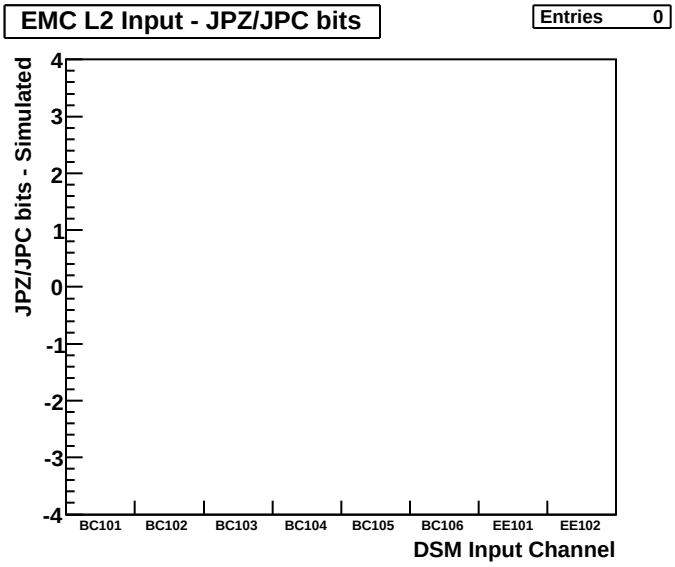

EMC L2 Input - JPX/JPA bits
Entries 397936
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
95 97 91 69 59 57 33 36
254 263 235 206 230 192 78 95
447 507 452 395 412 329 74 67
48946 48875 48864 49072 49041 49164 49557 49544

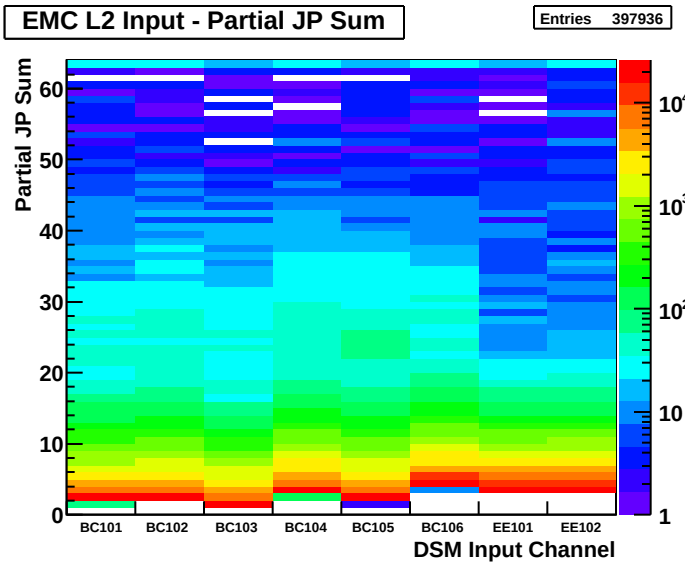

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

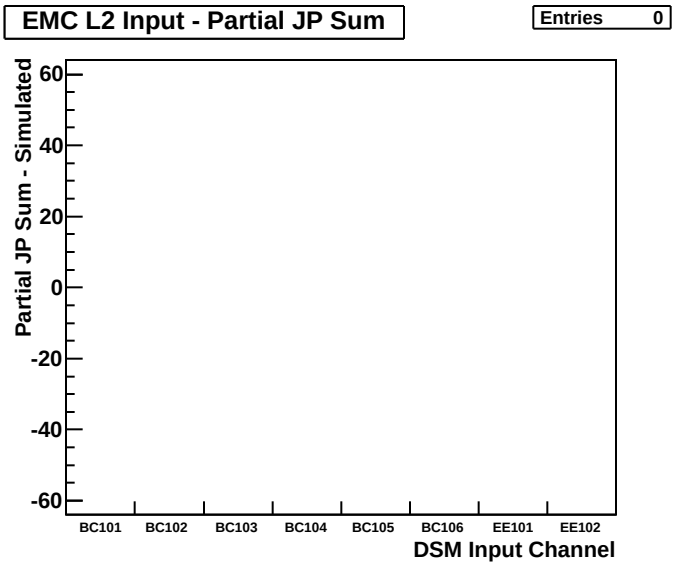

EMC L2 Input - JPY/JPB bits
Entries 397936
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
101 63 59 55 54 65 41 39
222 183 186 190 230 220 83 79
408 339 377 377 504 436 47 78
49011 49157 49120 49120 48954 49021 49571 49546

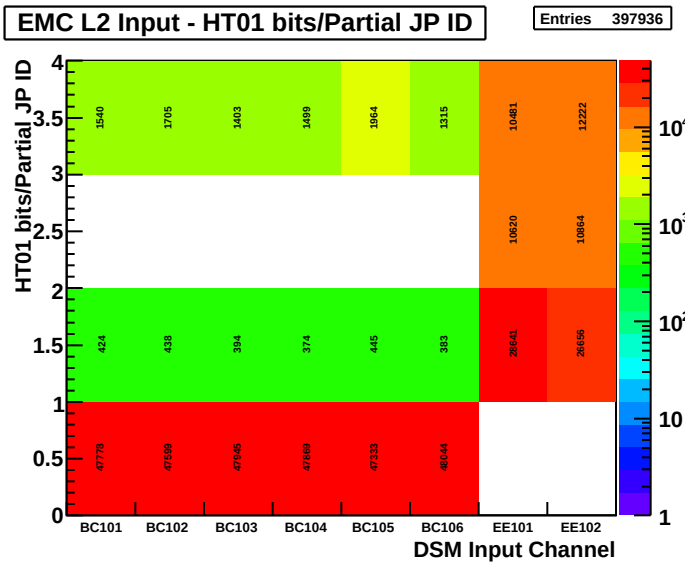

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

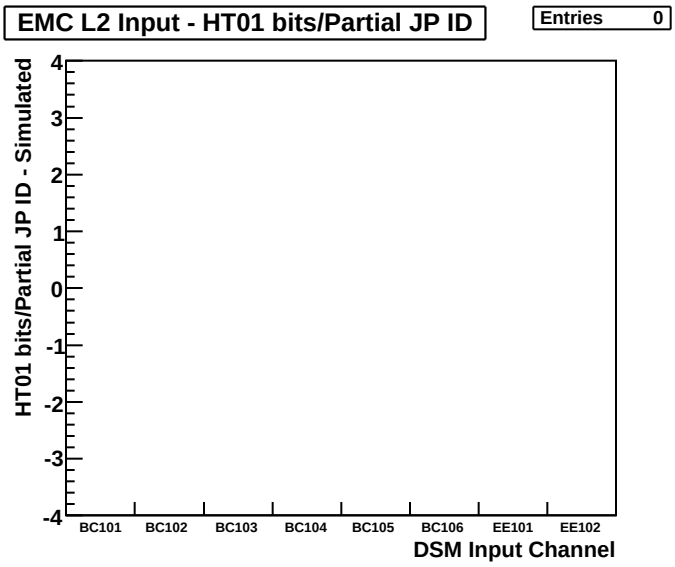

EMC L2 Input - JPZ/JPC bits
Entries 397936
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
66 50 38 57 50 70 31 34
206 169 158 202 212 213 80 90
341 288 308 437 520 430 50 88
49129 49225 49238 49046 48960 49029 49581 49530

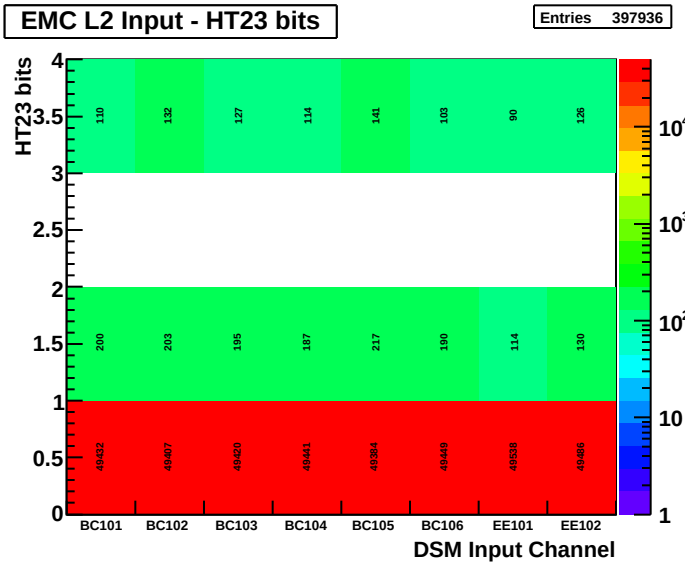

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

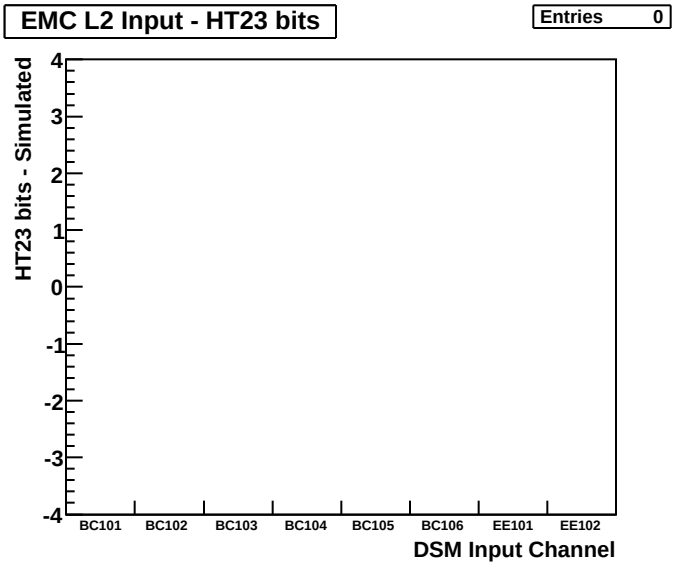

EMC L2 Input - Partial JP Sum
Entries 397936
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

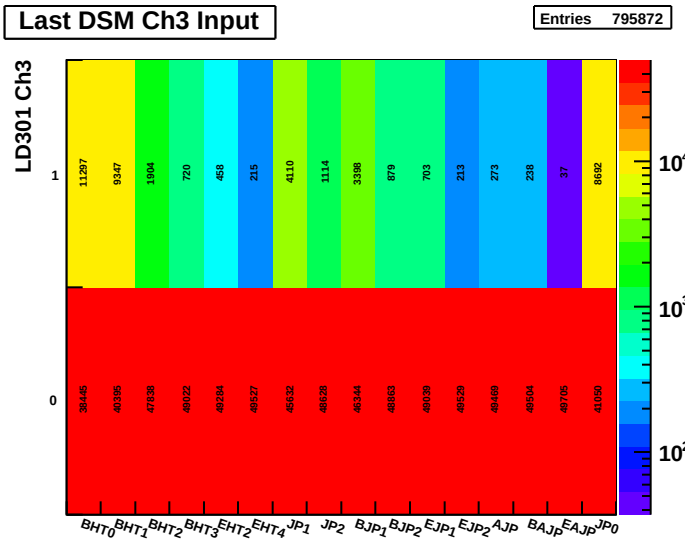

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

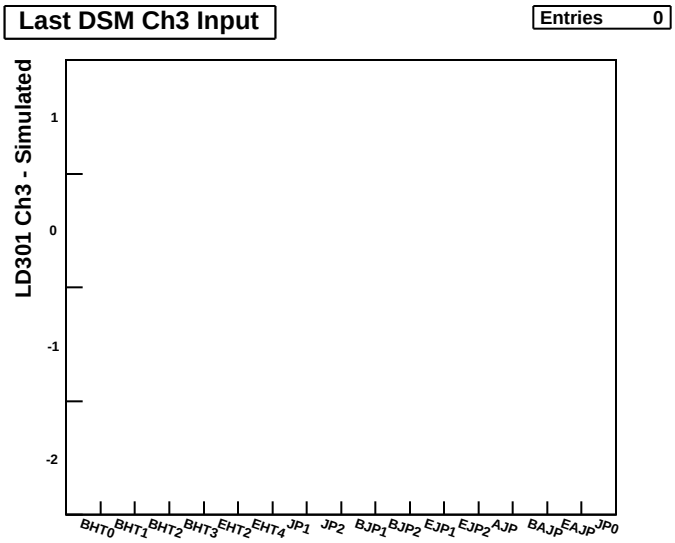

EMC L2 Input - HT01 bits/Partial JP ID
Entries 397936
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

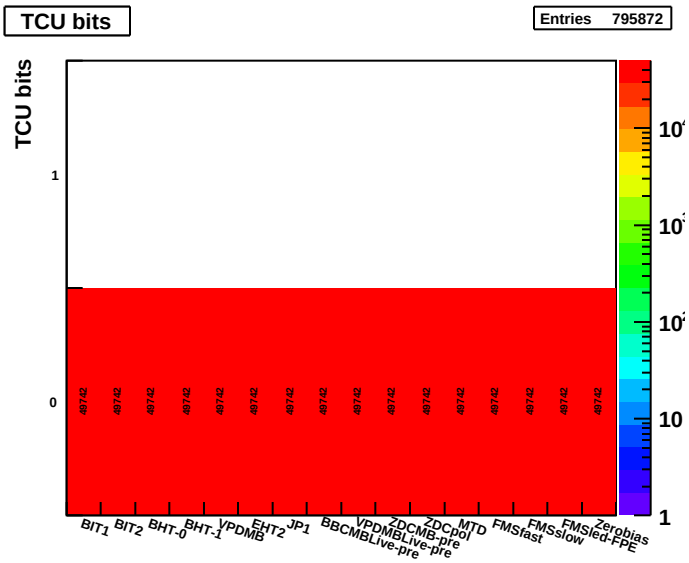

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

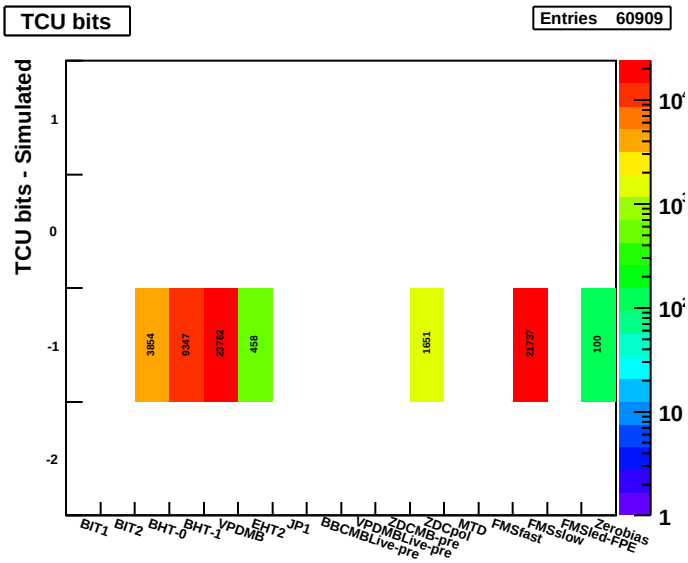

EMC L2 Input - HT23 bits
Entries 397936
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

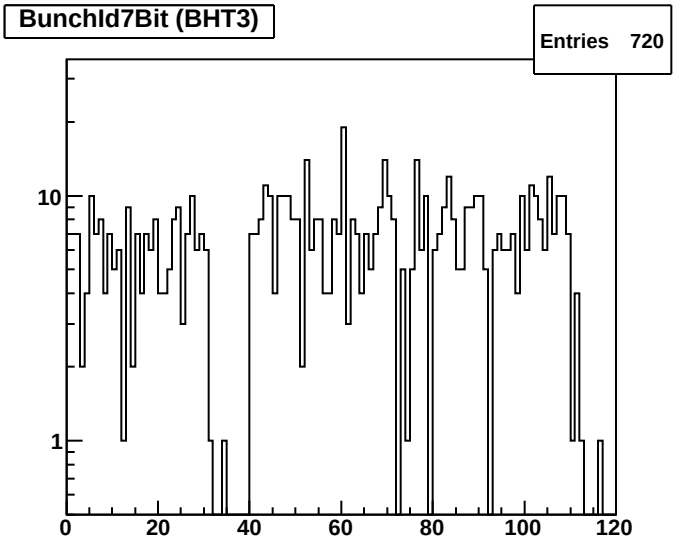

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

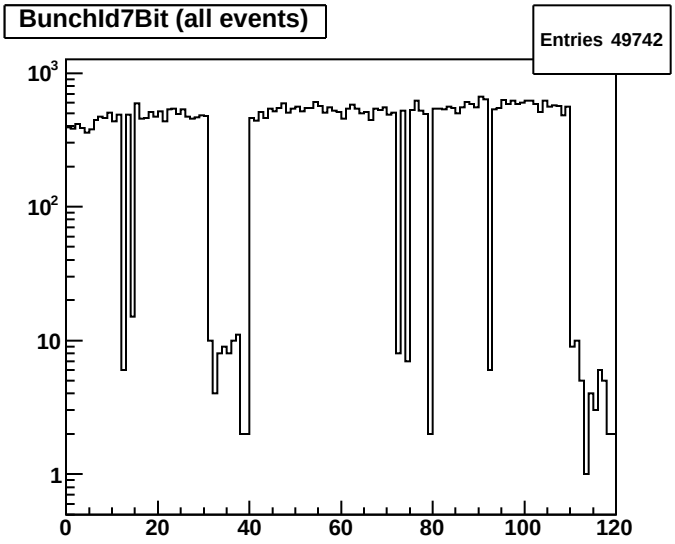

Last DSM Ch3 Input
Entries 795872
LD301 Ch3
11297 9347 1904 720 458 215 4110 1114 3398 879 703 213 273 238 37 8692
38445 40395 47838 49022 49284 49527 45632 48628 46344 48863 49039 49529 49469 49504 49705 41050
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

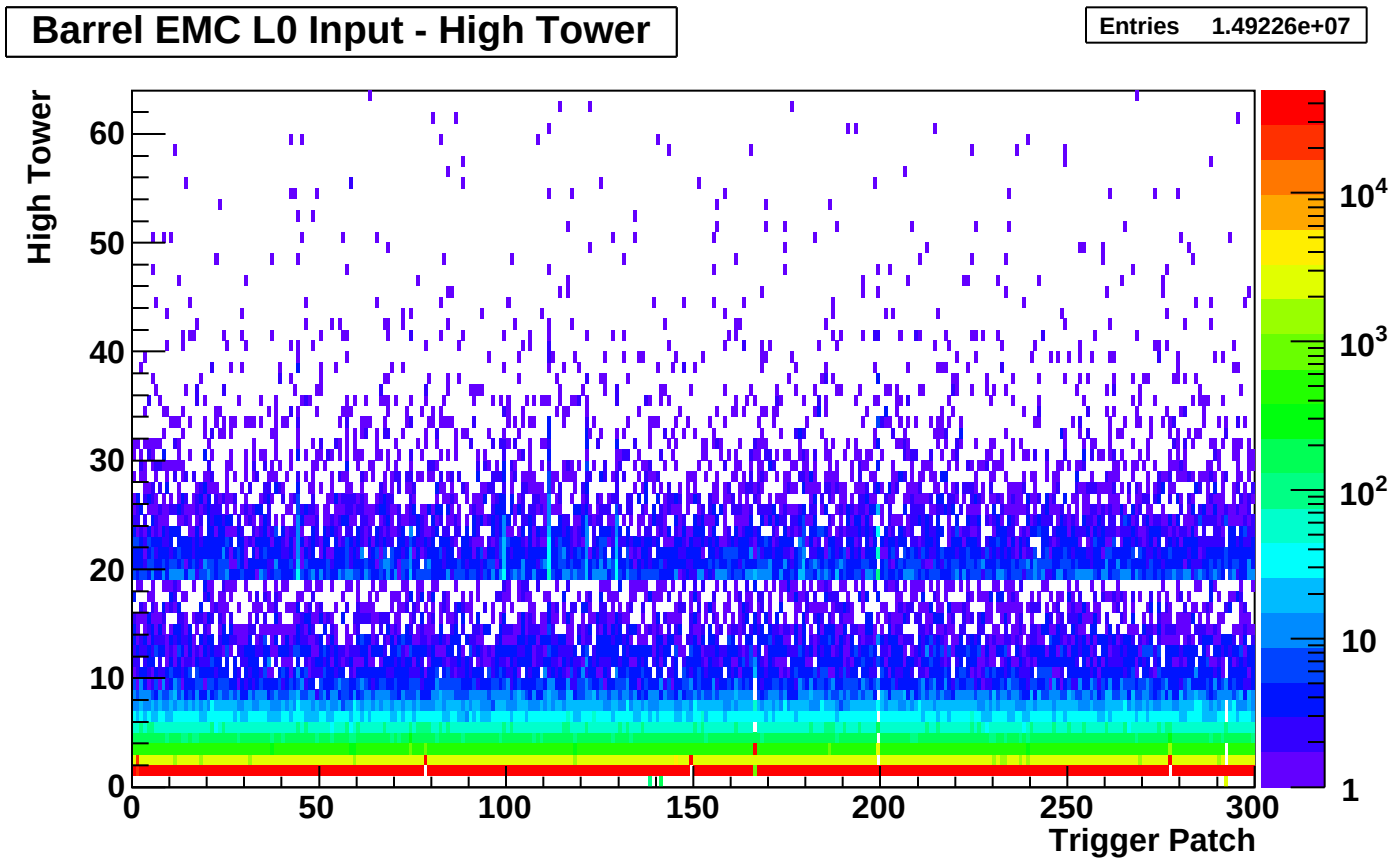

Last DSM Ch3 Input
Entries 0
LD301 Ch3 - Simulated
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

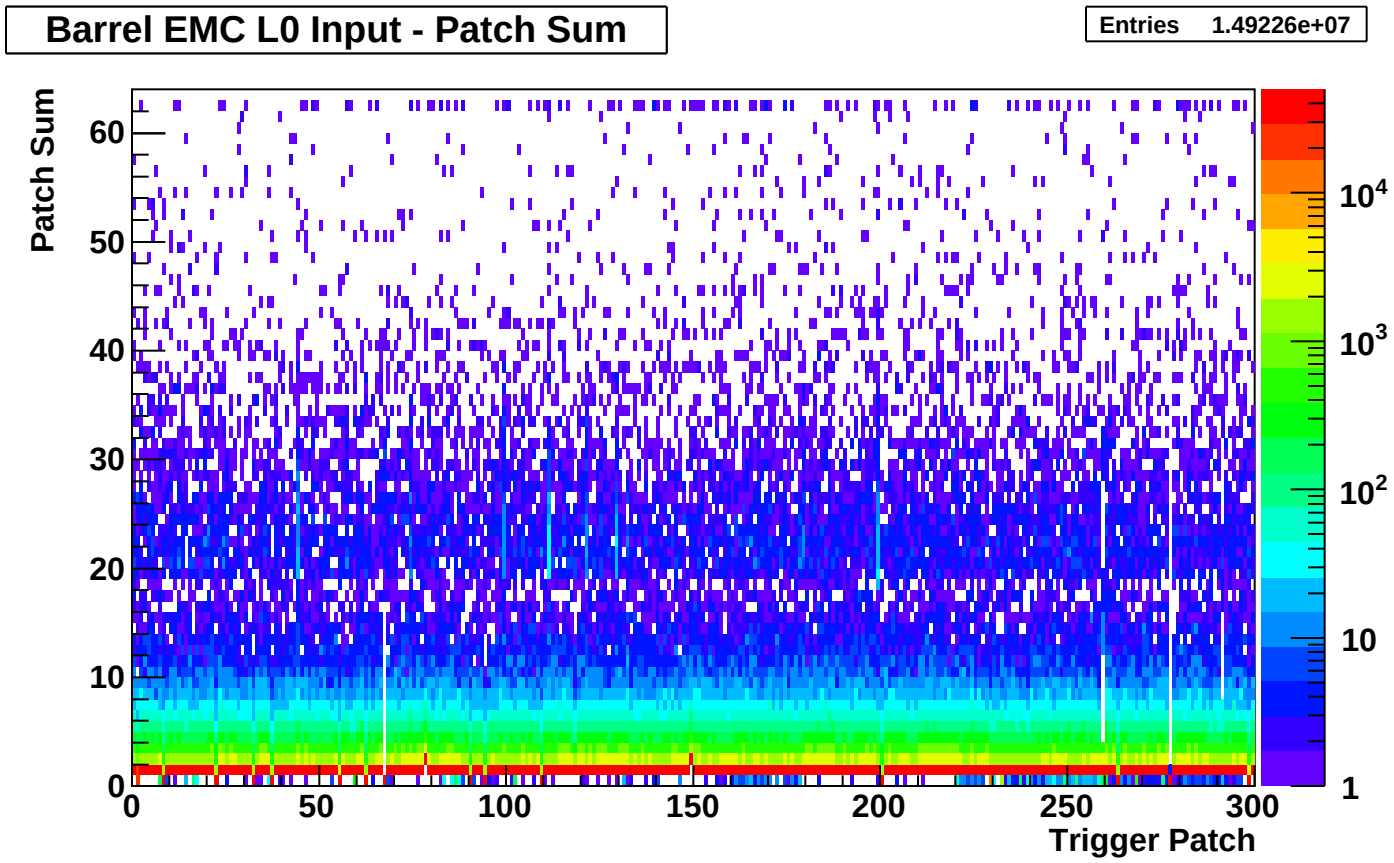

TCU bits
Entries 795872
TCU bits
49742 49742 49742 49742 49742 49742 49742 49742 49742 49742 49742 49742 49742 49742 49742 49742
BIT1 BIT2 BHT-0 BHT-1 VPDMB EHT2 JP1 BBCMBLive-pre VPDMBLive-pre ZDCMB-pre ZDCpol MTD FMSfast FMSslow FMSled-FPE Zerobias

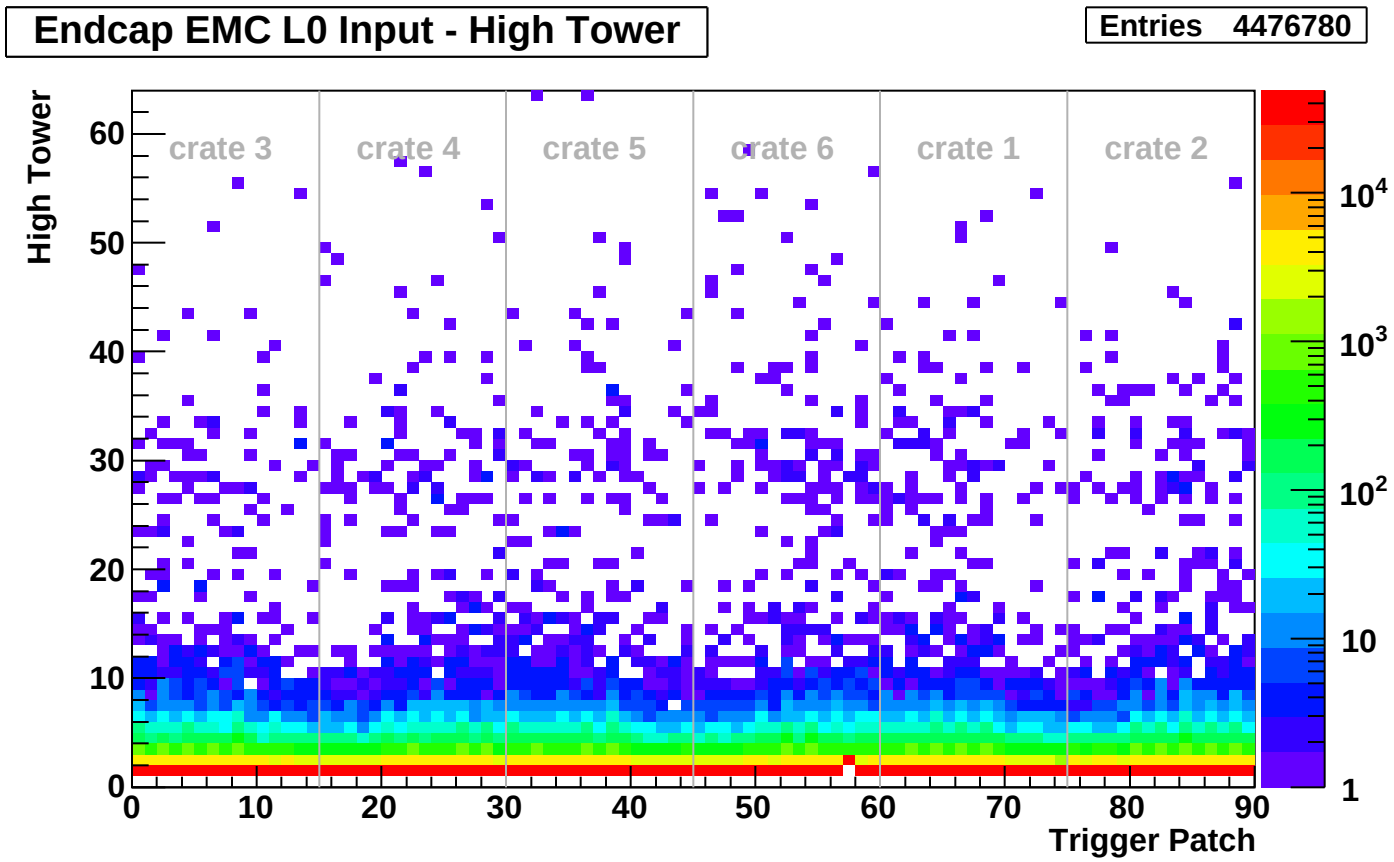

TCU bits
Entries 60909
TCU bits - Simulated
3854 9347 23762 458 1651 21737 100
BIT1 BIT2 BHT-0 BHT-1 VPDMB EHT2 JP1 BBCMBLive-pre VPDMBLive-pre ZDCMB-pre ZDCpol MTD FMSfast FMSslow FMSled-FPE Zerobias

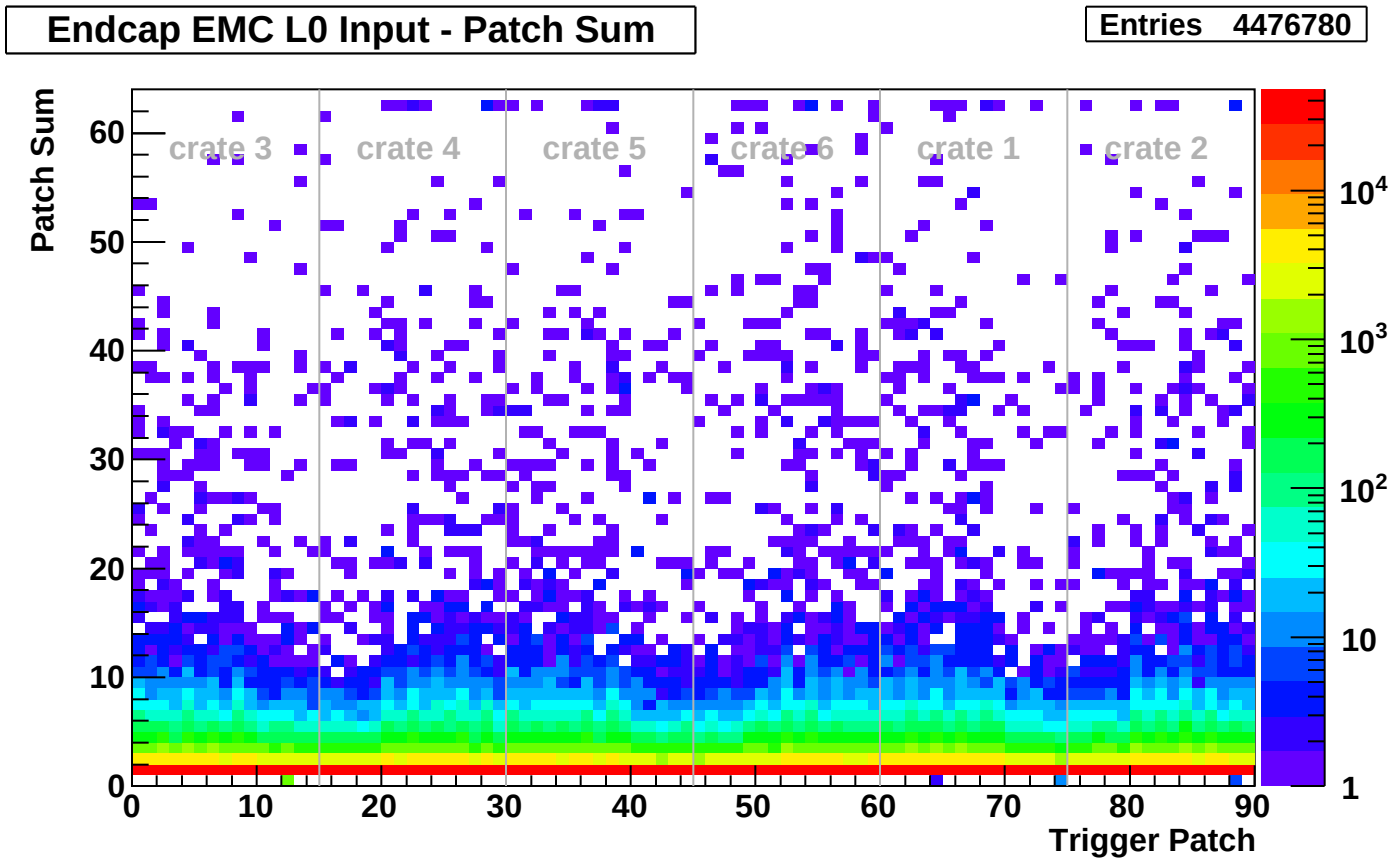

BunchId7Bit (BHT3)
Entries 720

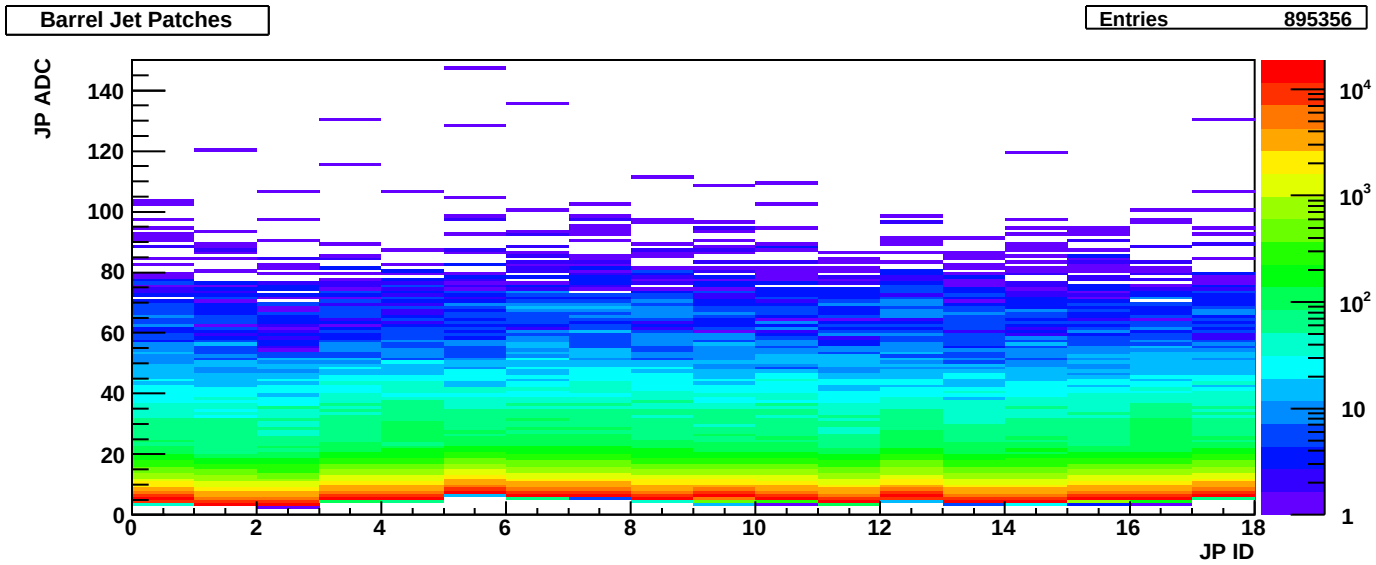

BunchId7Bit (all events)
Entries 49742

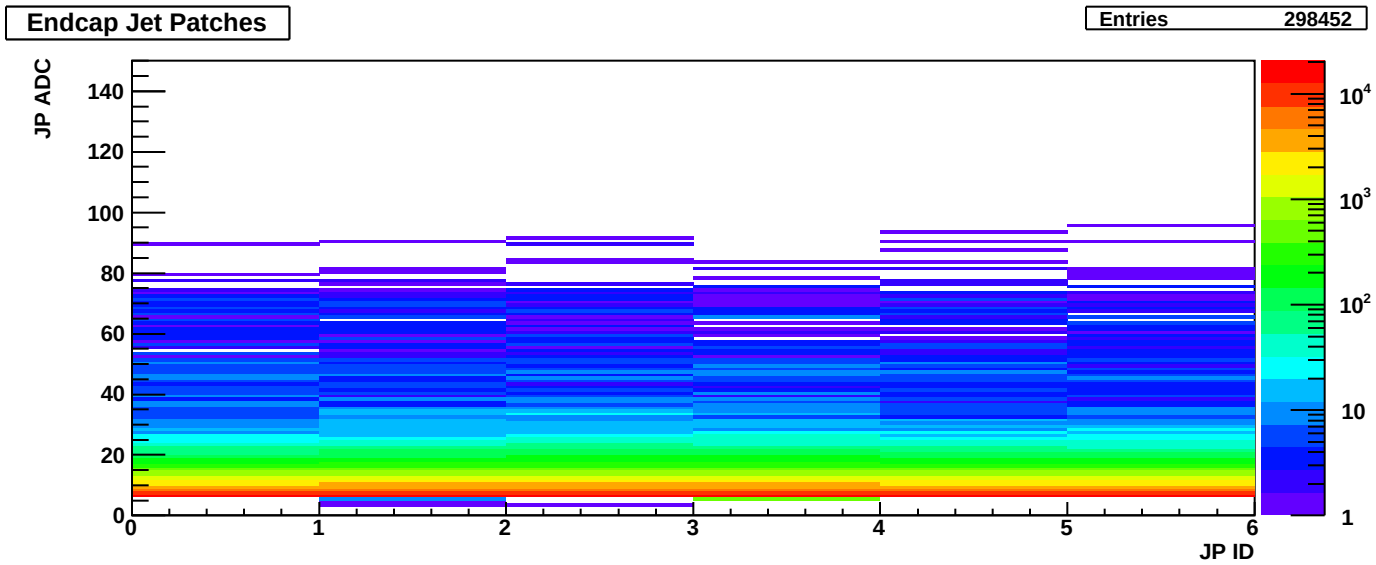

Barrel EMC L0 Input - High Tower
Entries 1.49226e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$

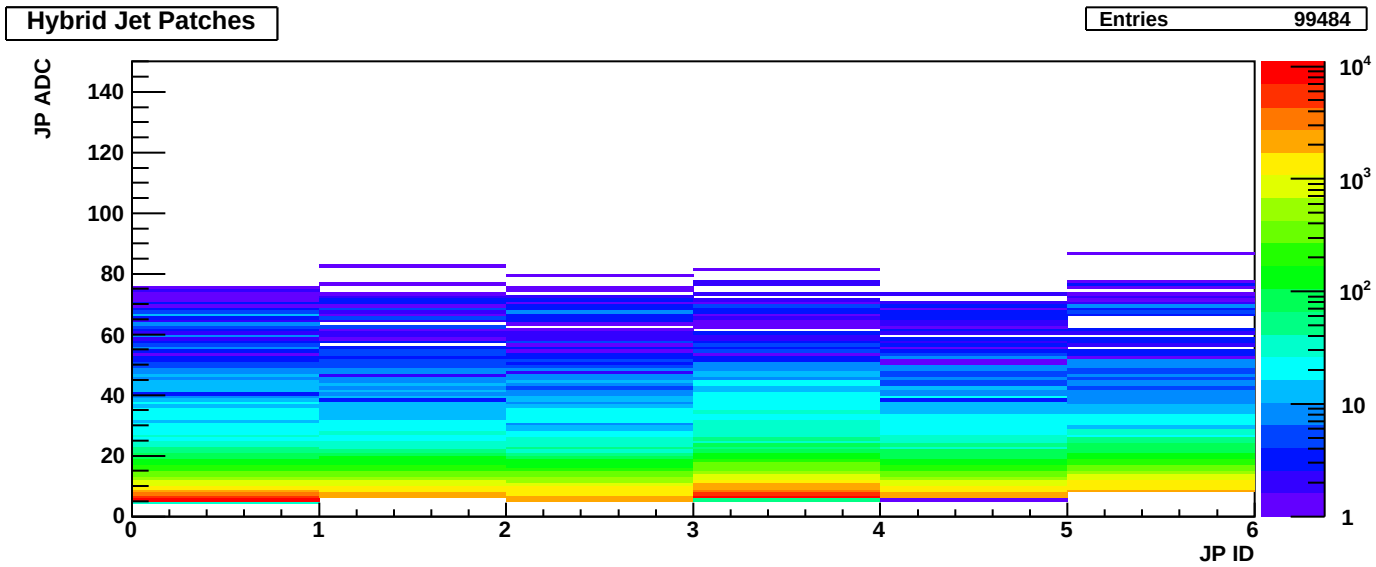

Barrel EMC L0 Input - Patch Sum
Entries 1.49226e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$

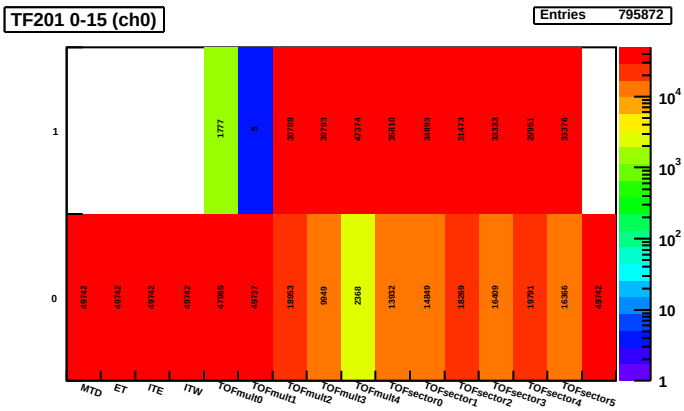

Endcap EMC L0 Input - High Tower
Entries 4476780
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

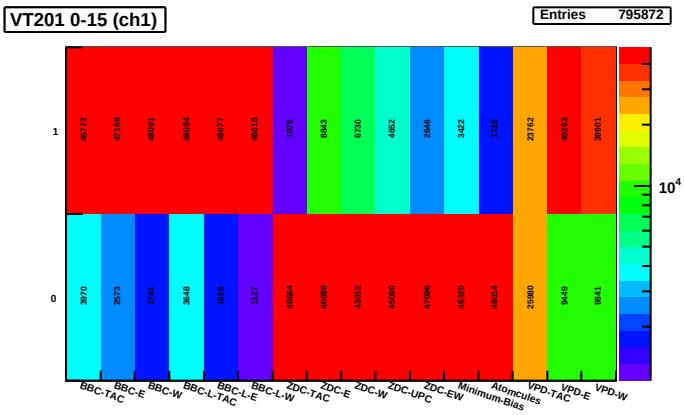

Endcap EMC L0 Input - Patch Sum
Entries 4476780
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

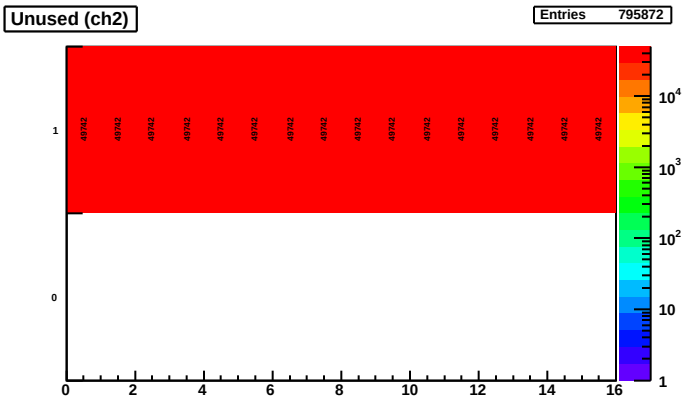

Barrel Jet Patches
Entries 895356
JP ADC
JP ID

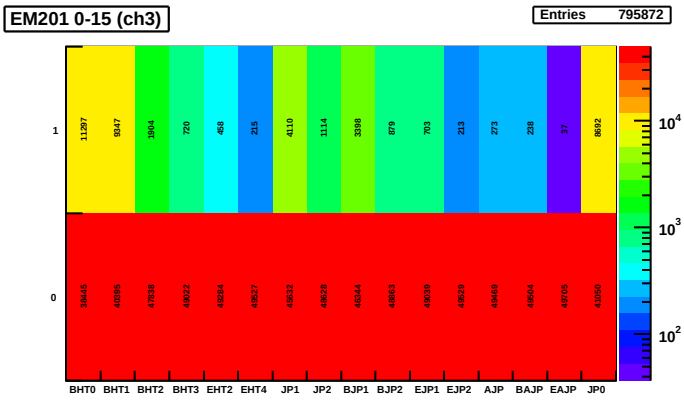

Endcap Jet Patches
Entries 298452
JP ADC
JP ID

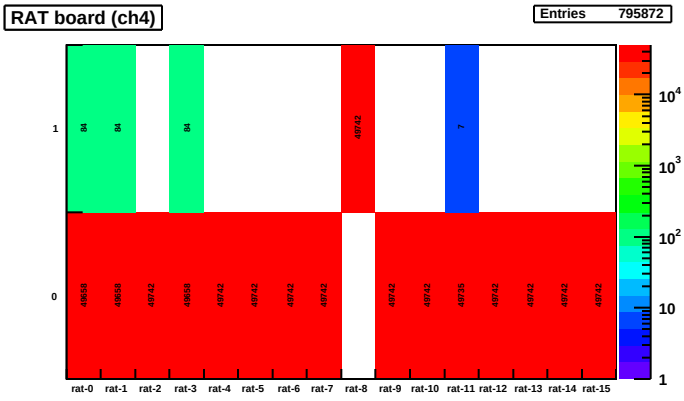

Hybrid Jet Patches
Entries 99484
JP ADC
JP ID

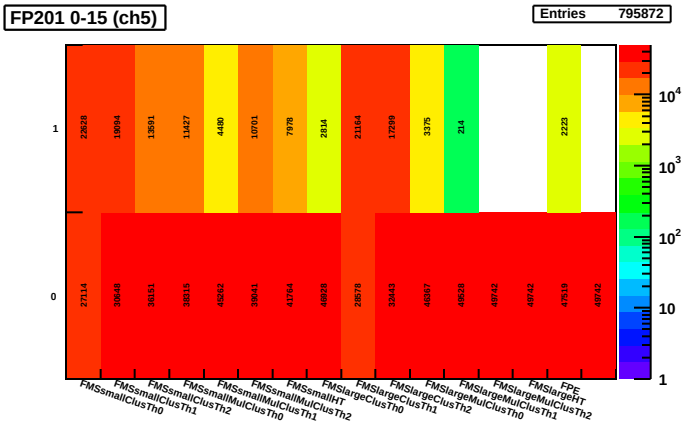

TF201 0-15 (ch0)
Entries 795872
MTD
ET
ITE
ITW
TOFmult0
TOFmult1
TOFmult2
TOFmult3
TOFmult4
TOFsector0
TOFsector1
TOFsector2
TOFsector3
TOFsector4
TOFsector5

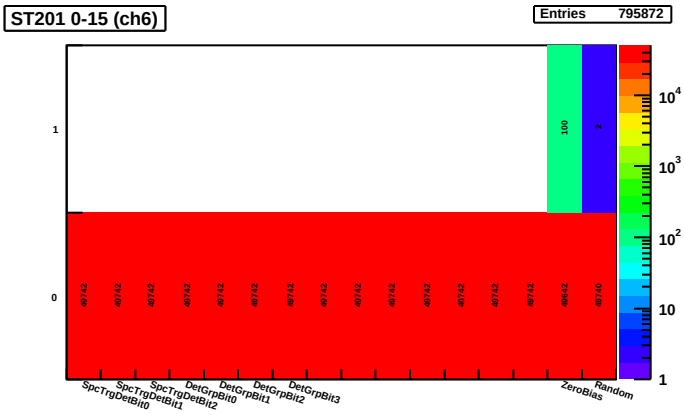

VT201 0-15 (ch1)
Entries 795872
BBC-TAC
BBC-E
BBC-W
BBC-L-TAC
BBC-L-E
BBC-L-W
ZDC-TAC
ZDC-E
ZDC-W
ZDC-UPC
ZDC-EW
Minimum-Bias
Atomcules
VPD-TAC
VPD-E
VPD-W

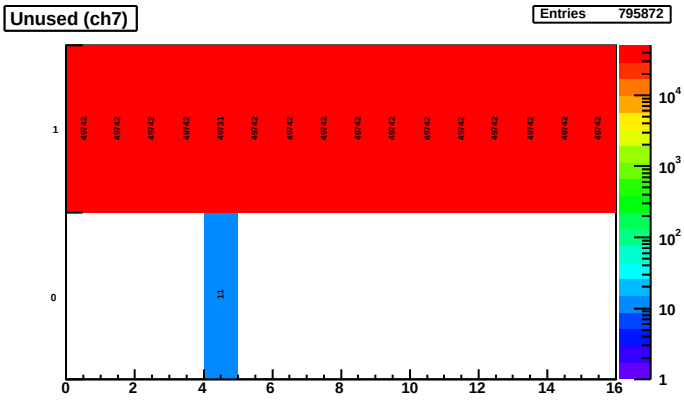

Unused (ch2)
Entries 795872

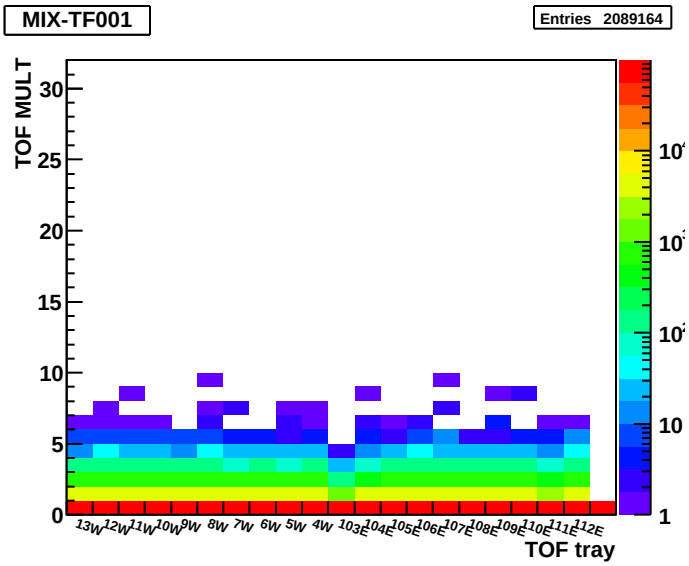

EM201 0-15 (ch3)
Entries 795872
BHT0
BHT1
BHT2
BHT3
EHT2
EHT4
JP1
JP2
BJP1
BJP2
EJP1
EJP2
AJP
BAJP
EAJP
JP0

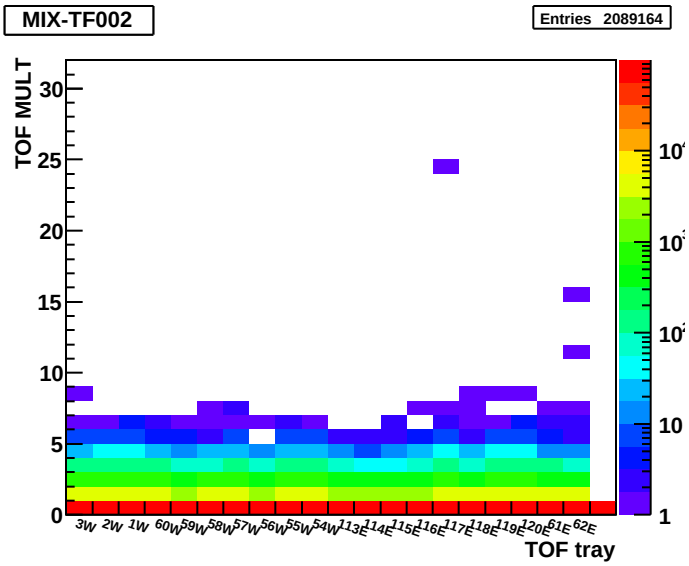

RAT board (ch4)
Entries 795872
rat-0
rat-1
rat-2
rat-3
rat-4
rat-5
rat-6
rat-7
rat-8
rat-9
rat-10
rat-11
rat-12
rat-13
rat-14
rat-15

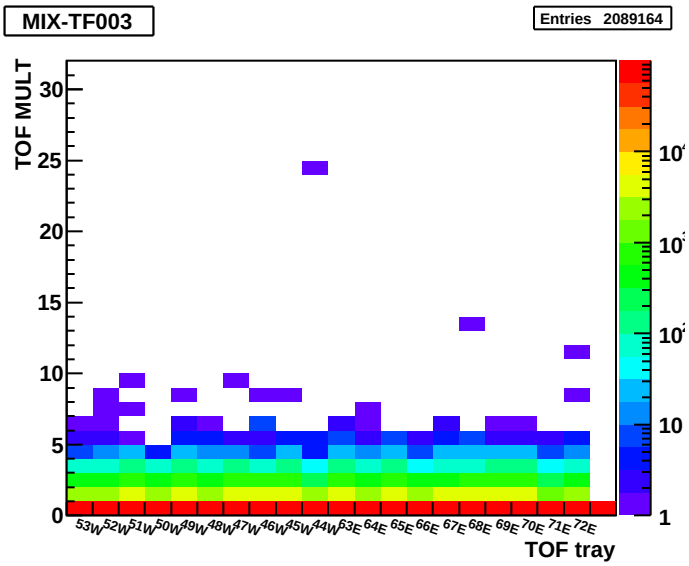

FP201 0-15 (ch5)
Entries 795872
FMSsmallClusTh0
FMSsmallClusTh1
FMSsmallClusTh2
FMSsmallMulClusTh0
FMSsmallMulClusTh1
FMSsmallMulClusTh2
FMSsmallHT
FMSlargeClusTh0
FMSlargeClusTh1
FMSlargeClusTh2
FMSlargeMulClusTh0
FMSlargeMulClusTh1
FMSlargeMulClusTh2
FMSlargeHT
FPE

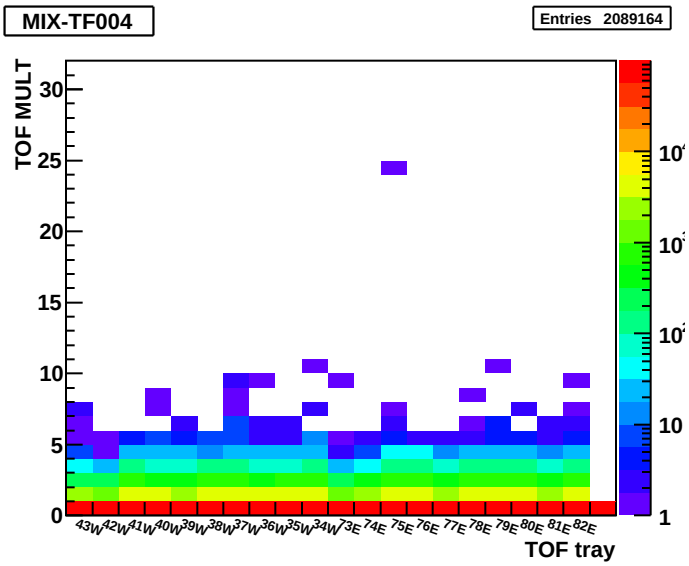

ST201 0-15 (ch6)
Entries 795872
SpcTrgDetBit0
SpcTrgDetBit1
SpcTrgDetBit2
DetCrpBit0
DetCrpBit1
DetCrpBit2
DetCrpBit3
ZeroBias
Random

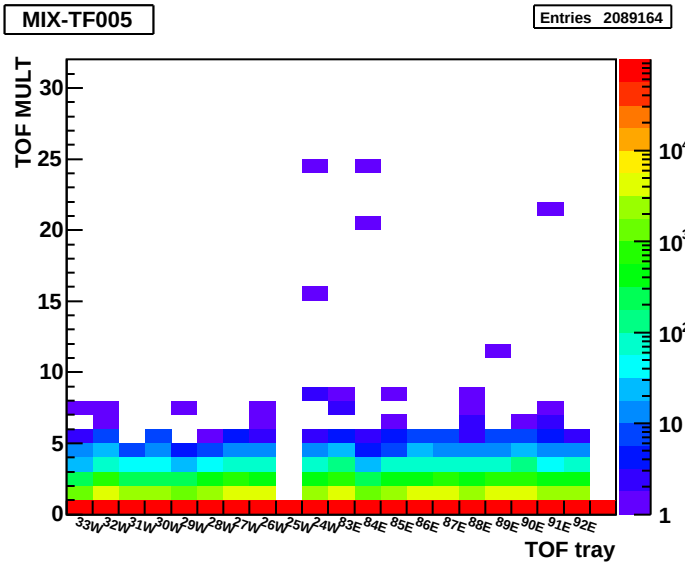

Unused (ch7)
Entries 795872

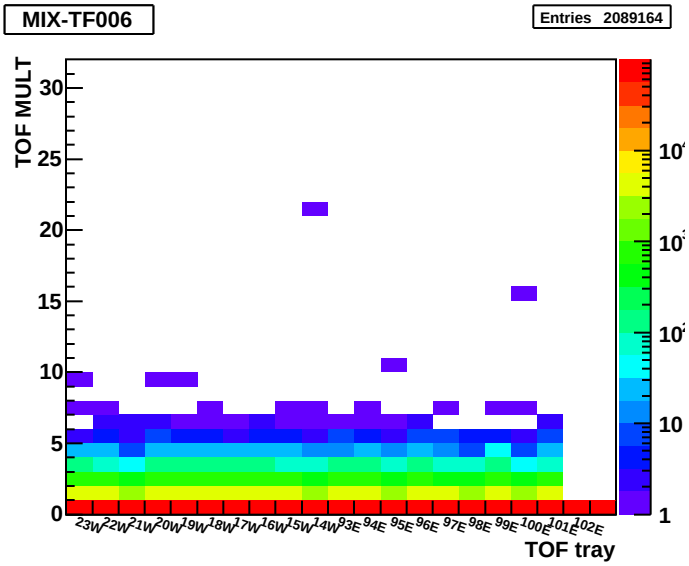

MIX-TF001
Entries 2089164
TOF MULT
TOF tray

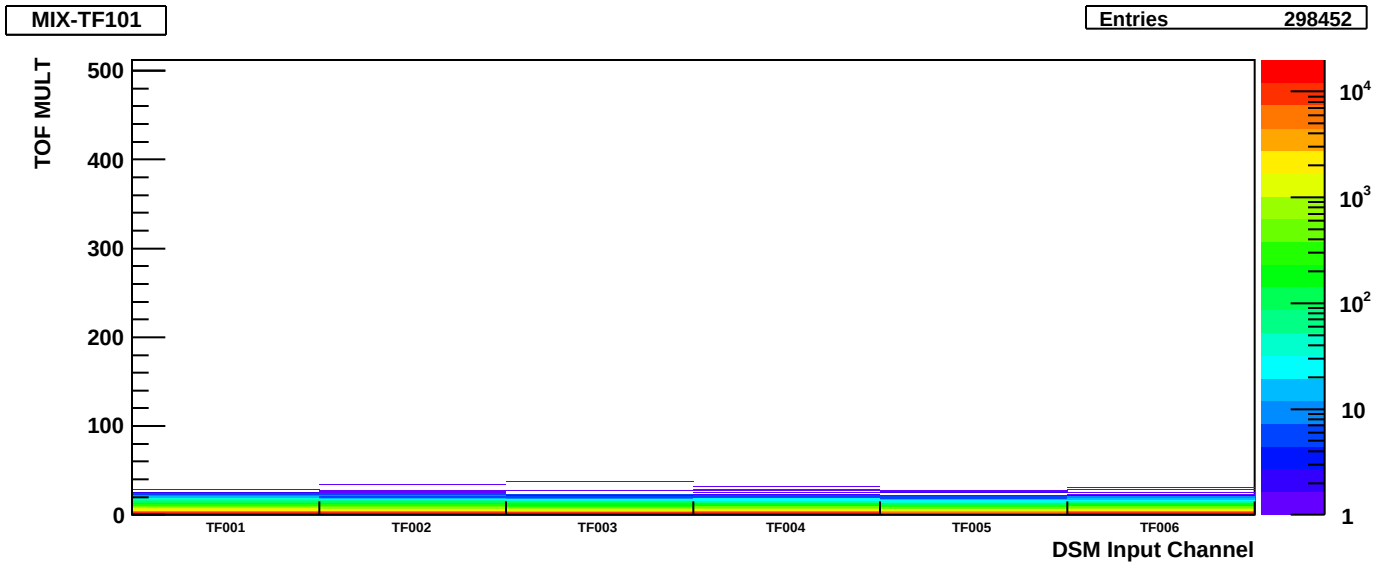

MIX-TF002
Entries 2089164
TOF MULT
TOF tray

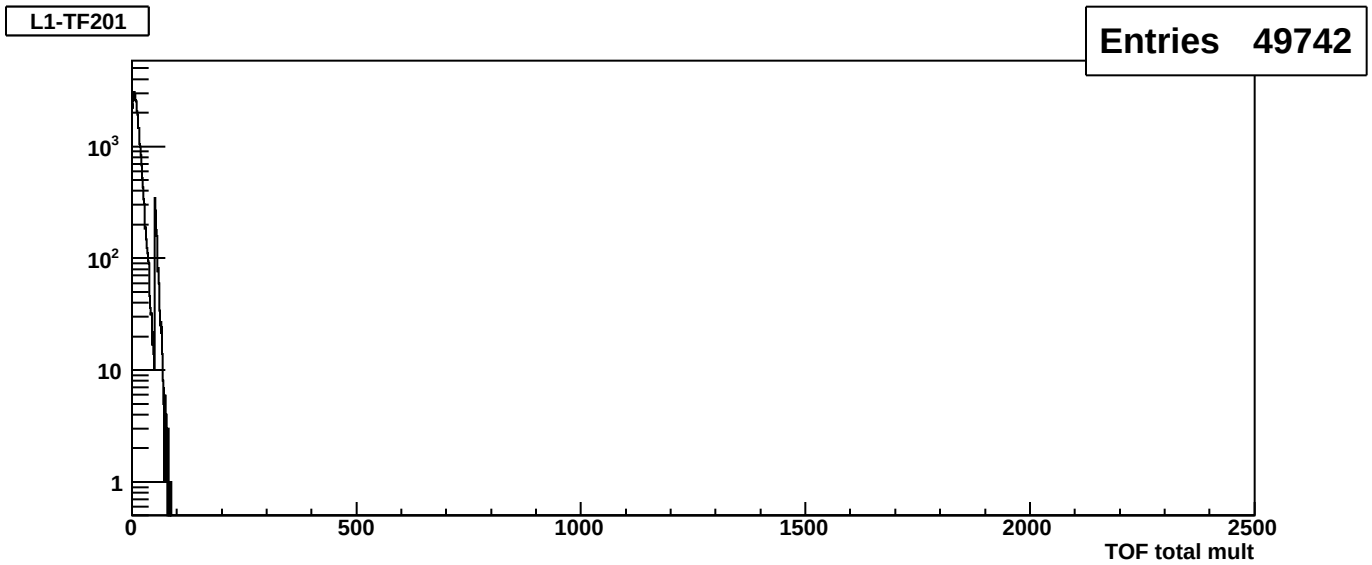

MIX-TF003
Entries 2089164
TOF MULT
TOF tray

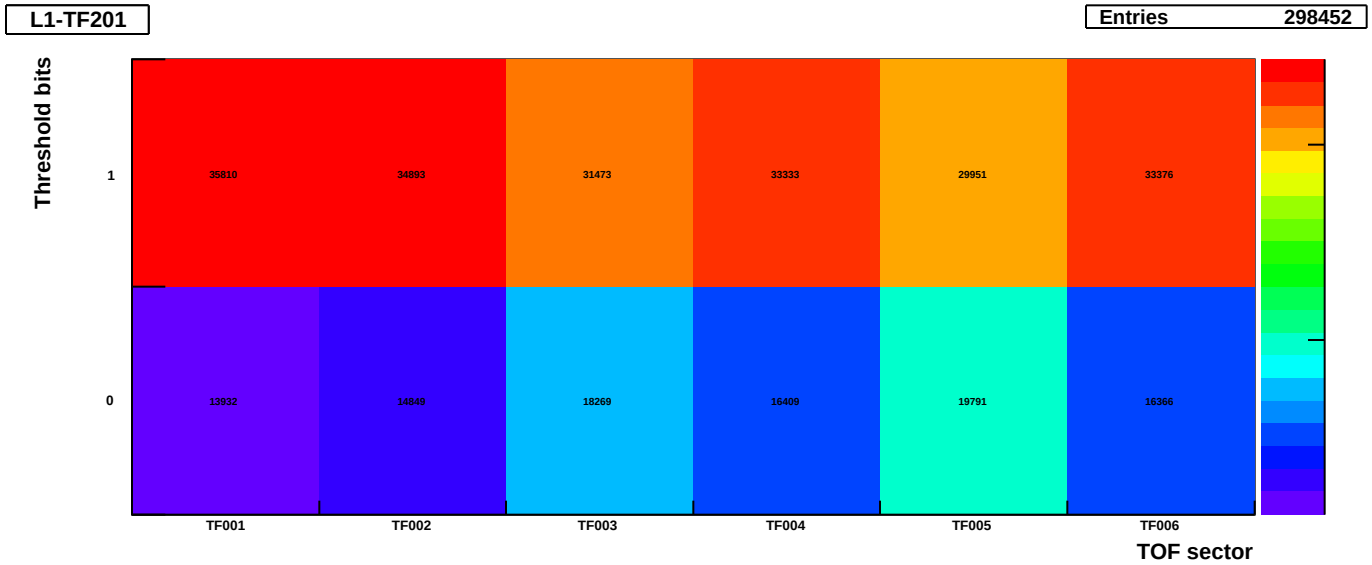

MIX-TF004
Entries 2089164
TOF MULT
TOF tray

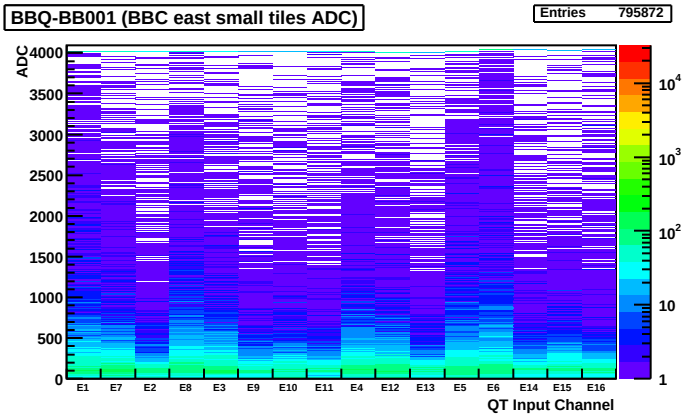

MIX-TF005
Entries 2089164
TOF MULT
TOF tray

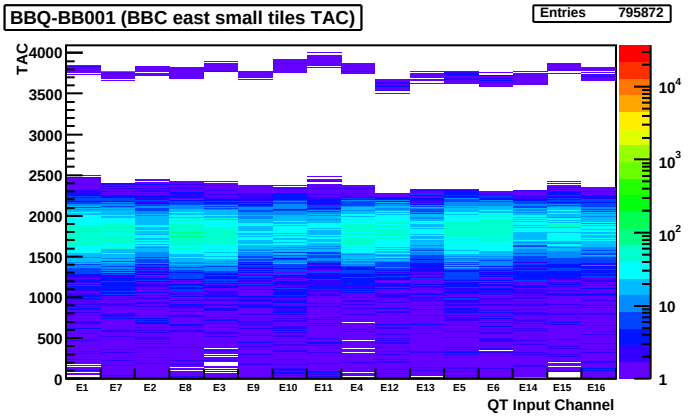

MIX-TF006
Entries 2089164
TOF MULT
TOF tray

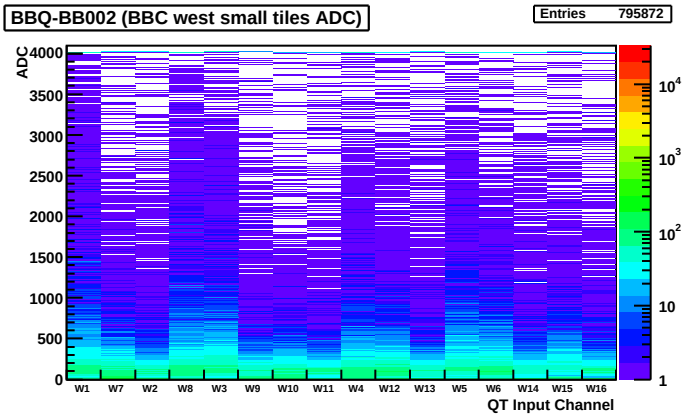

MIX-TF101
Entries 298452
TOF MULT
500
400
300
200
100
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
$10^4$
$10^3$
$10^2$
10
1

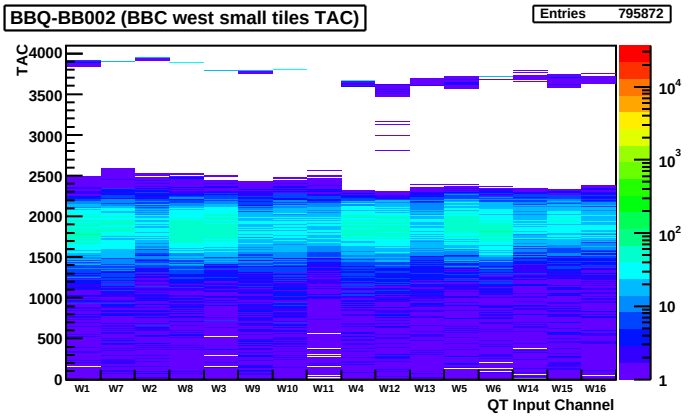

L1-TF201
Entries 49742
$10^3$
$10^2$
10
1
0
500
1000
1500
2000
2500
TOF total mult

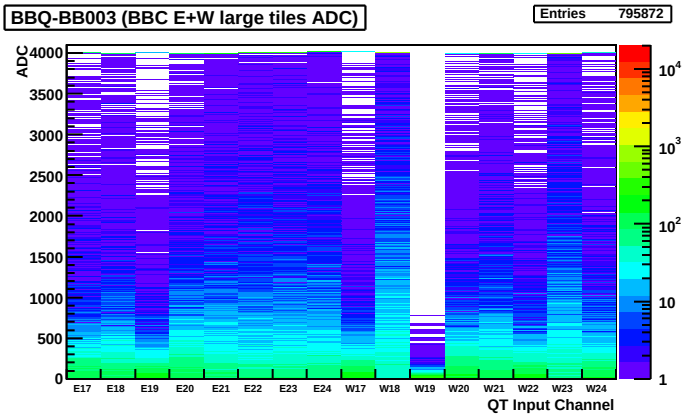

L1-TF201
Entries 298452
Threshold bits
1
0
35810
34893
31473
33333
29951
33376
13932
14849
18269
16409
19791
16366
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

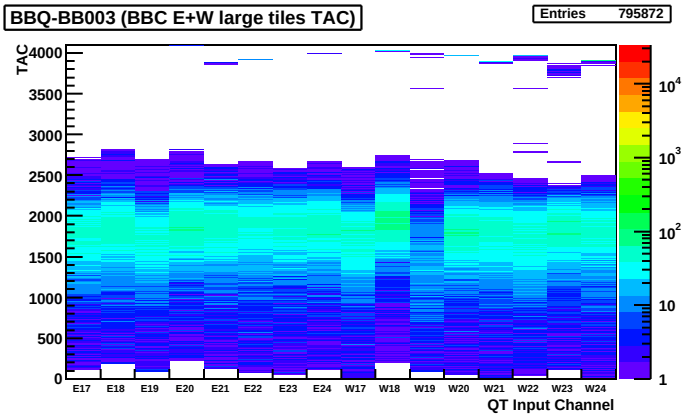

BBQ-BB001 (BBC east small tiles ADC)
Entries 795872
ADC
QT Input Channel

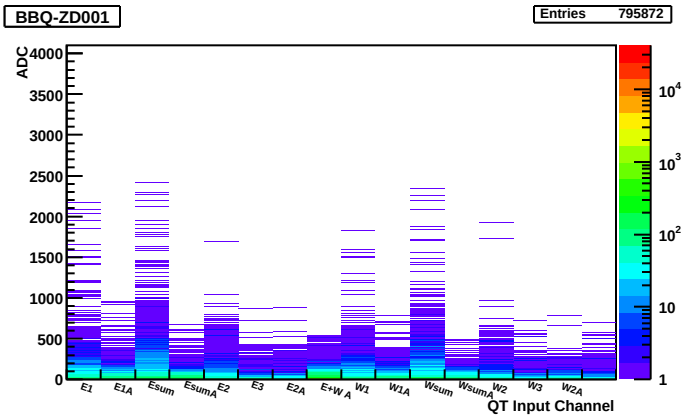

BBQ-BB001 (BBC east small tiles TAC)
Entries 795872
TAC
QT Input Channel

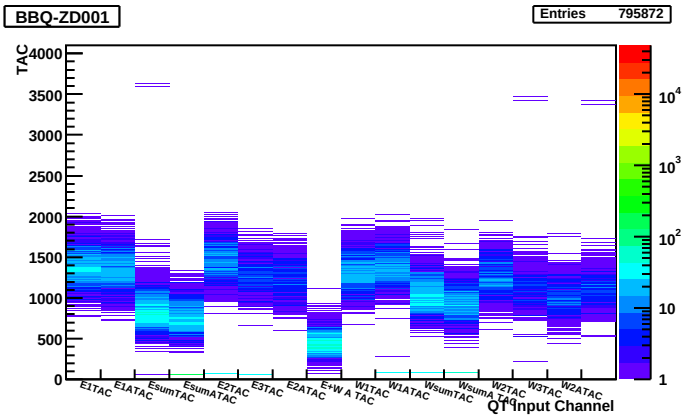

BBQ-BB002 (BBC west small tiles ADC)
Entries 795872
ADC
QT Input Channel

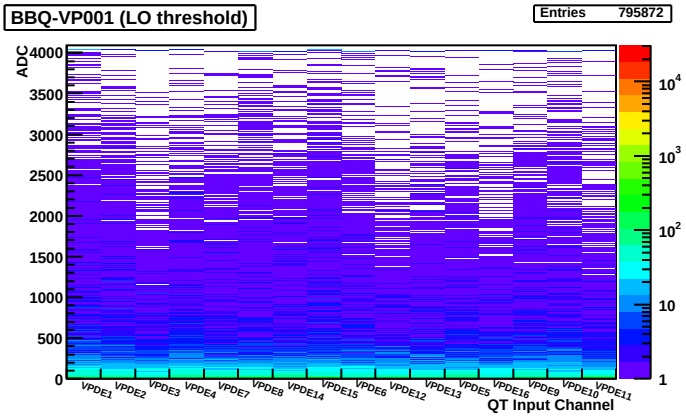

BBQ-BB002 (BBC west small tiles TAC)
Entries 795872
TAC
QT Input Channel

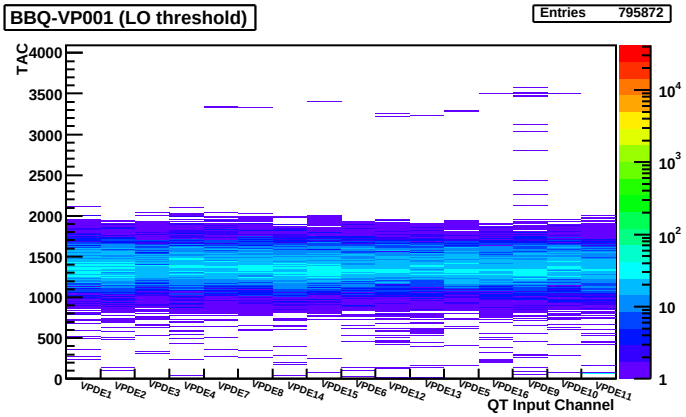

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 795872
ADC
QT Input Channel

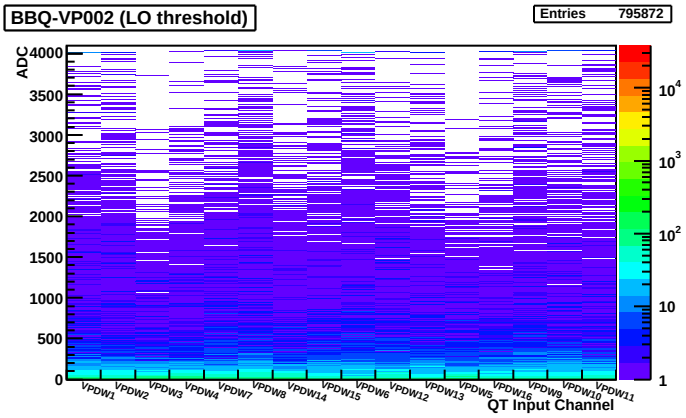

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 795872
TAC
QT Input Channel

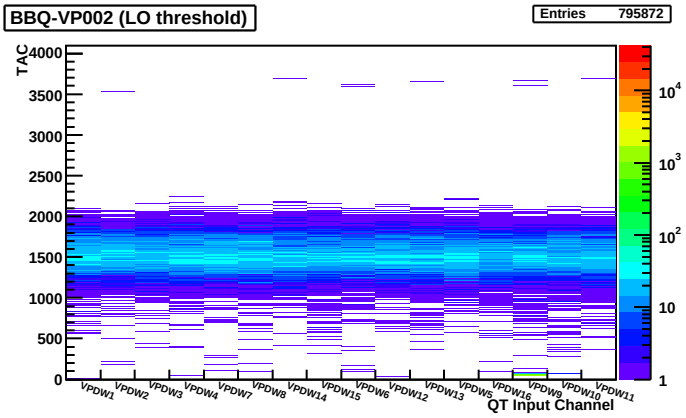

BBQ-ZD001
Entries 795872
ADC
QT Input Channel

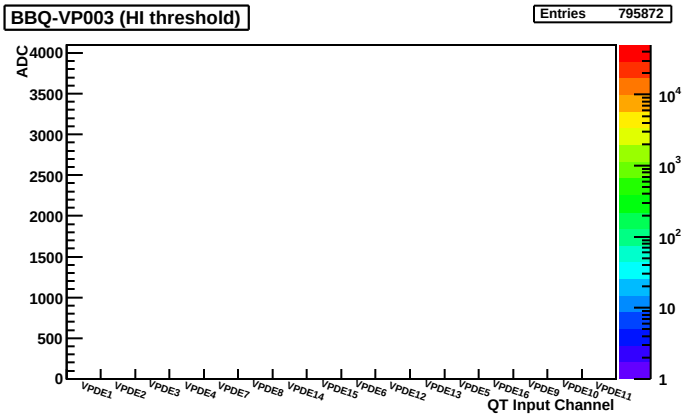

BBQ-ZD001
Entries 795872
TAC
QT Input Channel

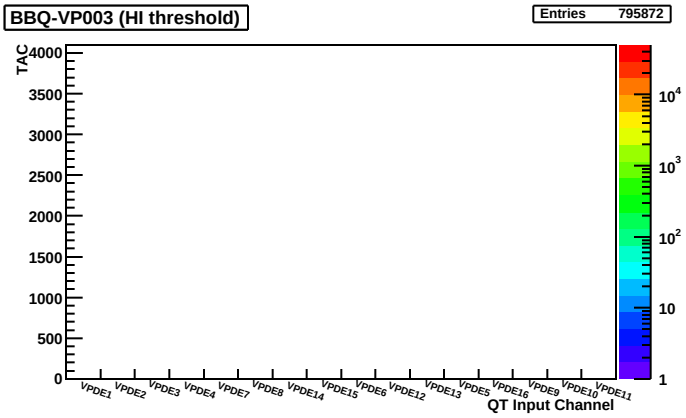

BBQ-VP001 (LO threshold)
Entries 795872
ADC
QT Input Channel

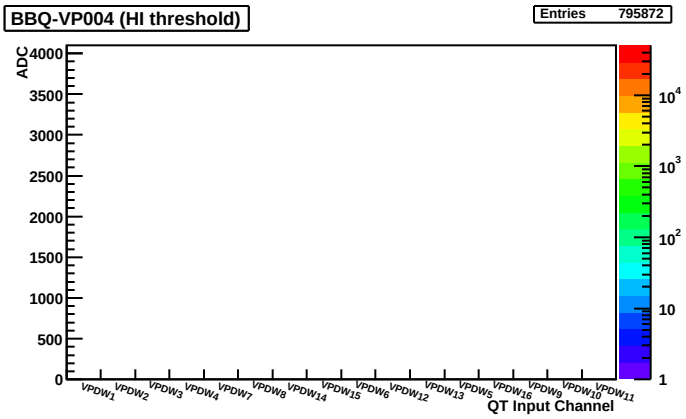

BBQ-VP001 (LO threshold)
Entries 795872
TAC
QT Input Channel

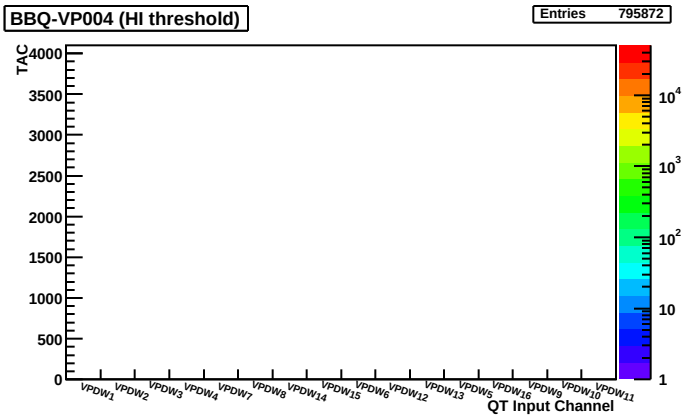

BBQ-VP002 (LO threshold)
Entries 795872
ADC
QT Input Channel

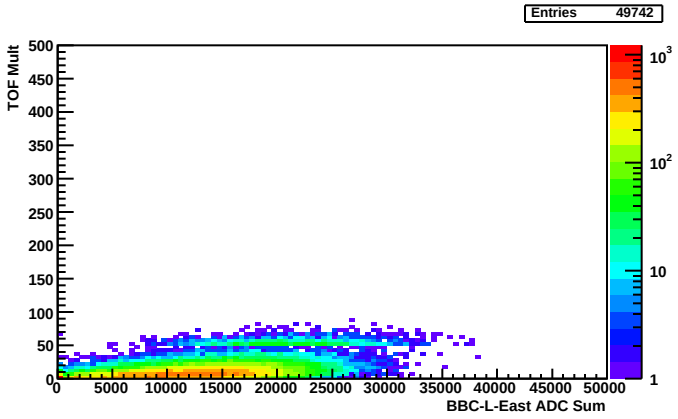

BBQ-VP002 (LO threshold)
Entries 795872
TAC
QT Input Channel

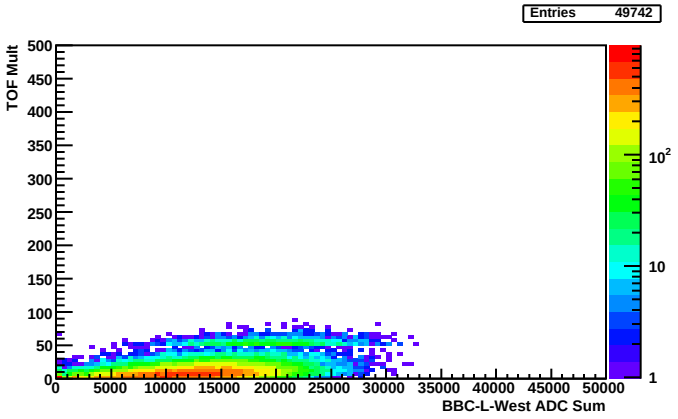

BBQ-VP003 (HI threshold)
Entries 795872
ADC
QT Input Channel

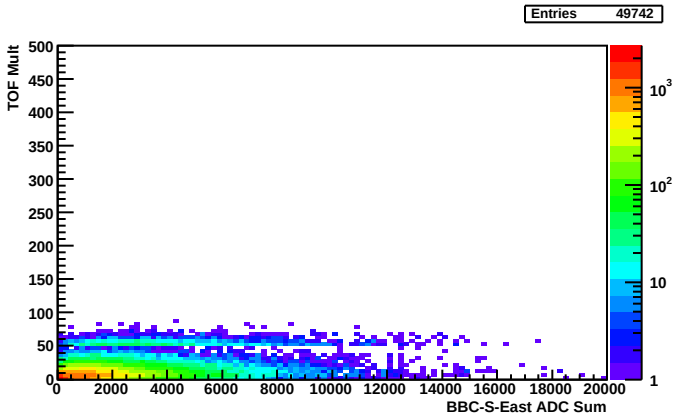

BBQ-VP003 (HI threshold)
Entries 795872
TAC
QT Input Channel

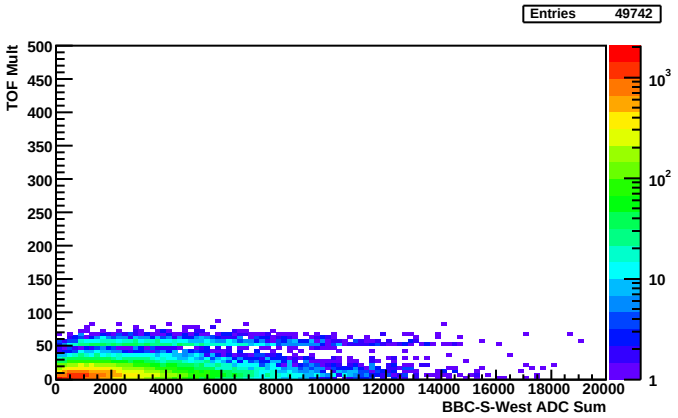

BBQ-VP004 (HI threshold)
Entries 795872
ADC
QT Input Channel

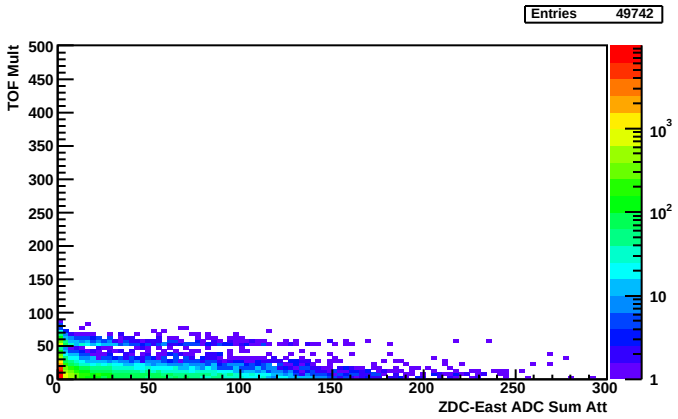

BBQ-VP004 (HI threshold)
Entries 795872
TAC
QT Input Channel

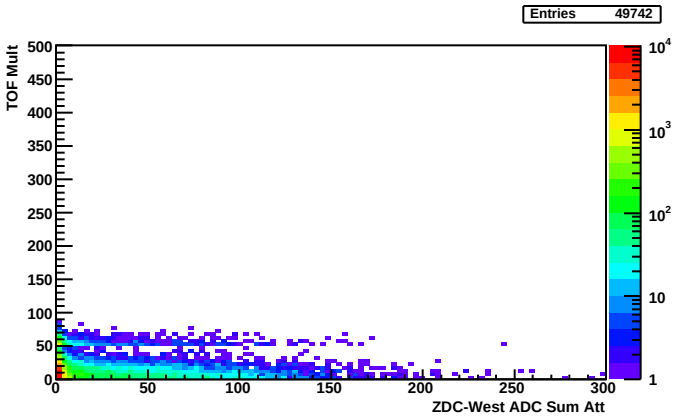

Entries 49742
TOF Mult
BBC-L-East ADC Sum

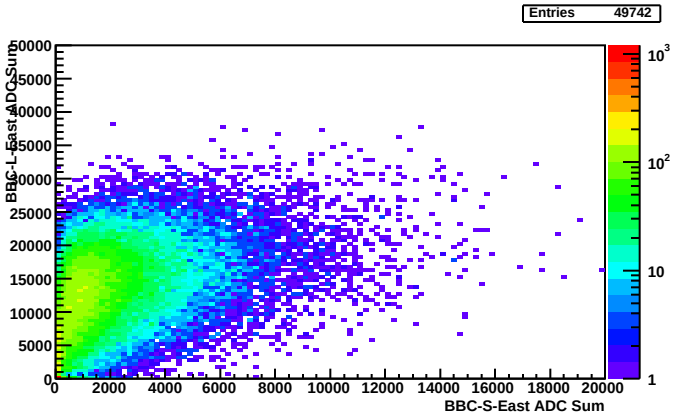

Entries 49742
TOF Mult
BBC-L-West ADC Sum

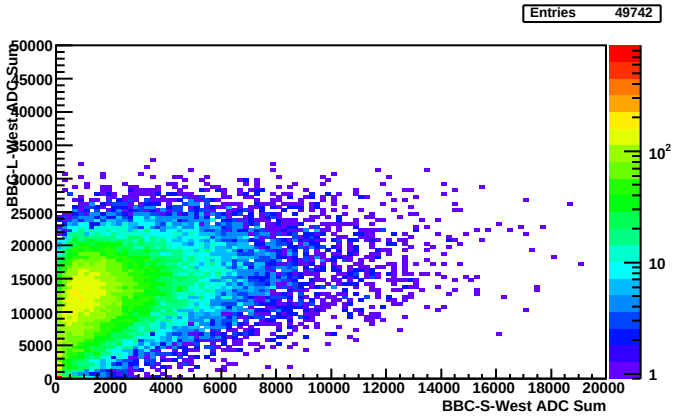

Entries 49742
TOF Mult
BBC-S-East ADC Sum

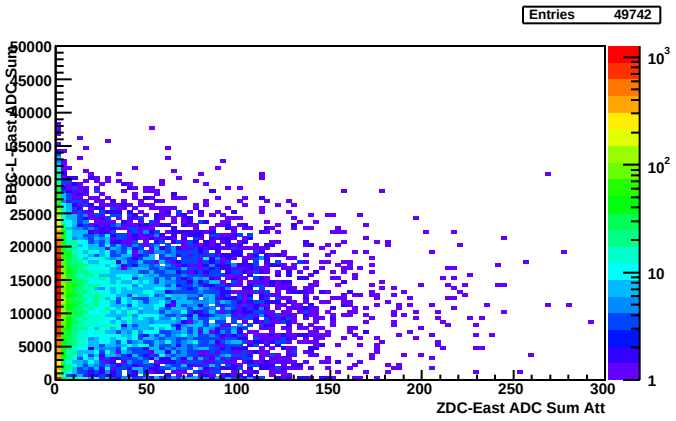

Entries 49742
TOF Mult
BBC-S-West ADC Sum

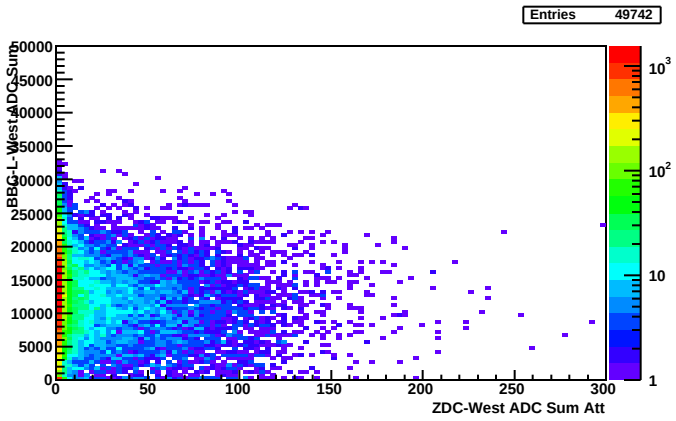

Entries 49742
TOF Mult
ZDC-East ADC Sum Att

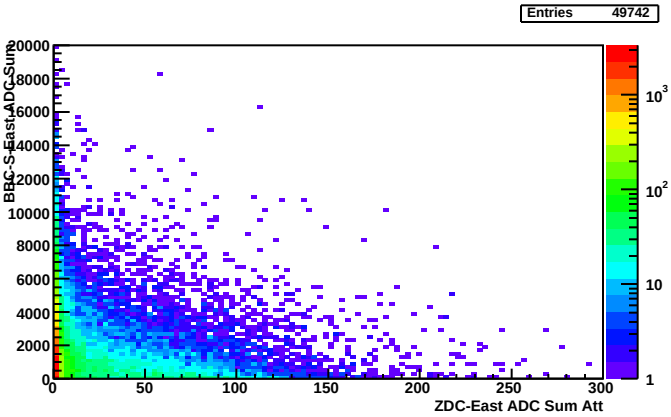

Entries 49742
TOF Mult
ZDC-West ADC Sum Att

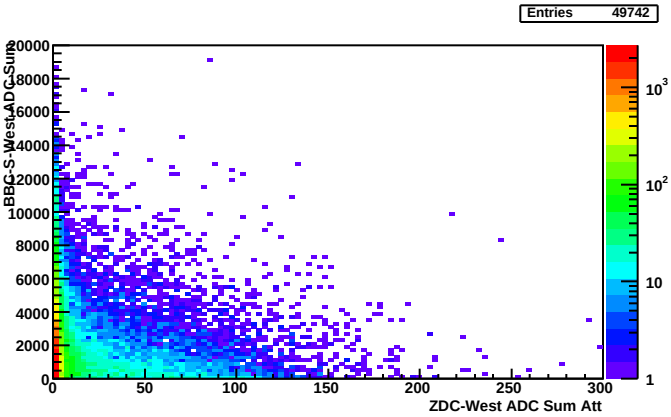

Entries 49742
BBC-L-East ADC Sum
BBC-S-East ADC Sum

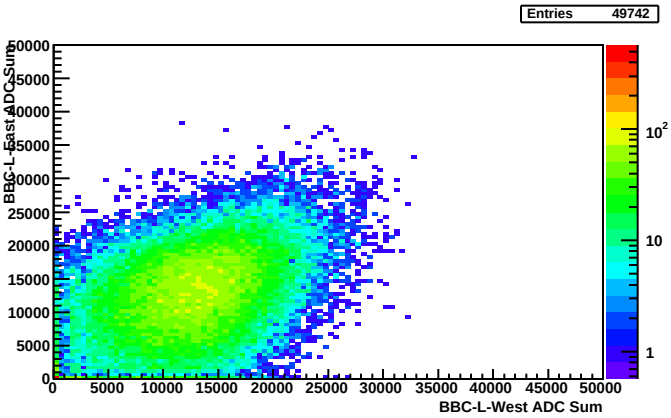

Entries 49742
BBC-L-West ADC Sum
BBC-S-West ADC Sum

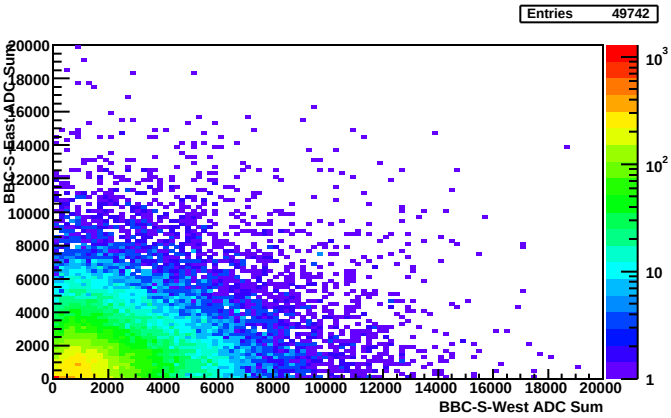

Entries 49742
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

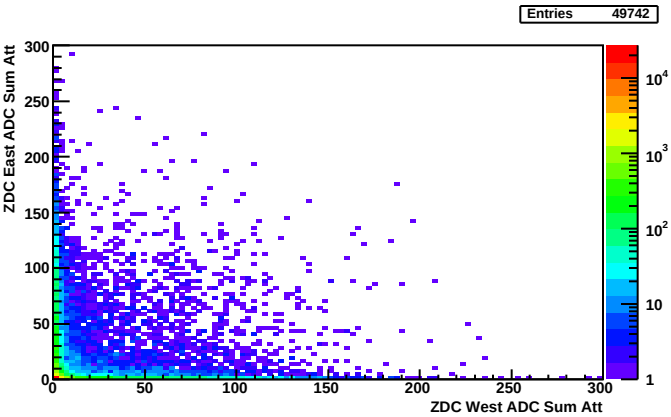

Entries 49742
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

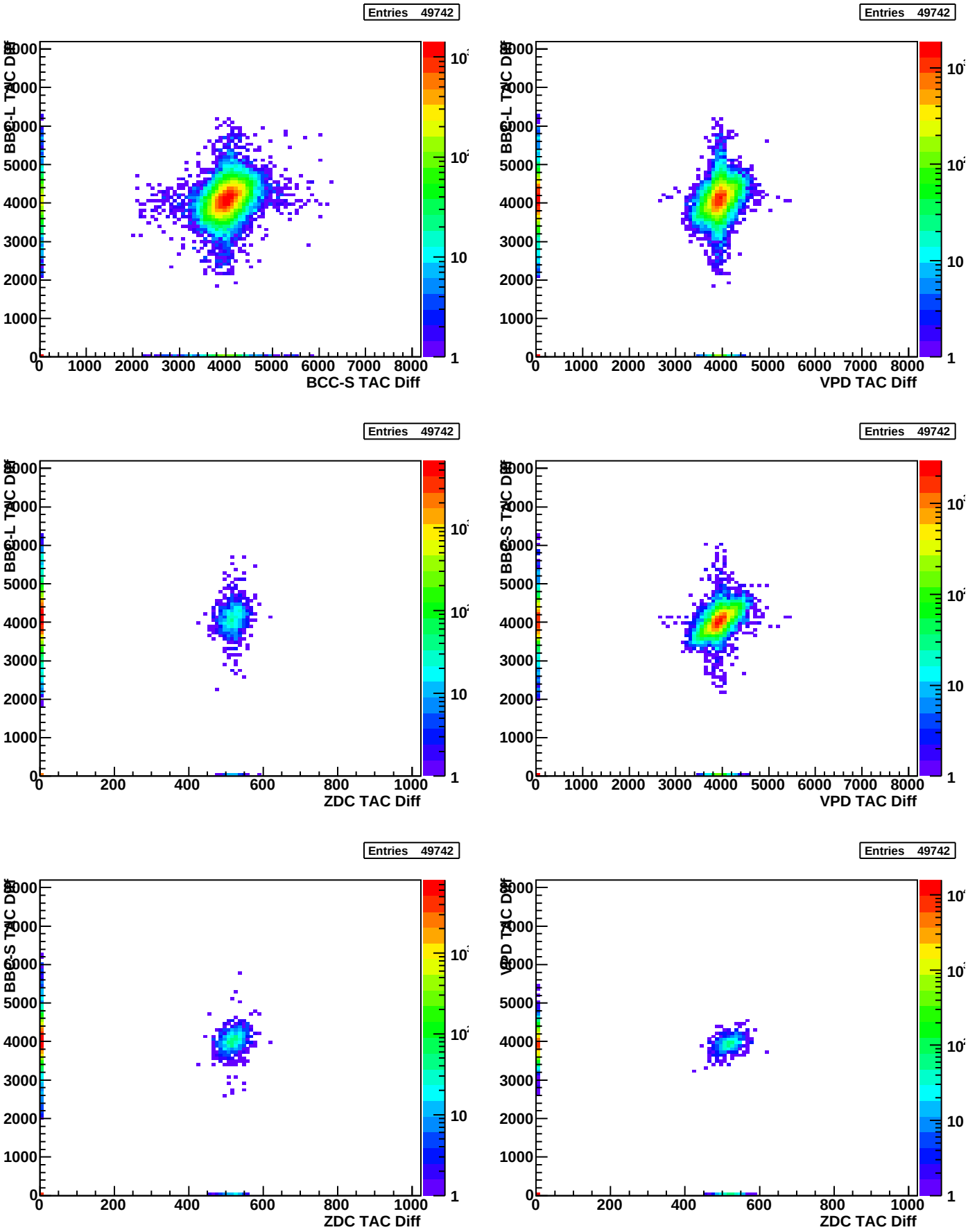

Entries 49742
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

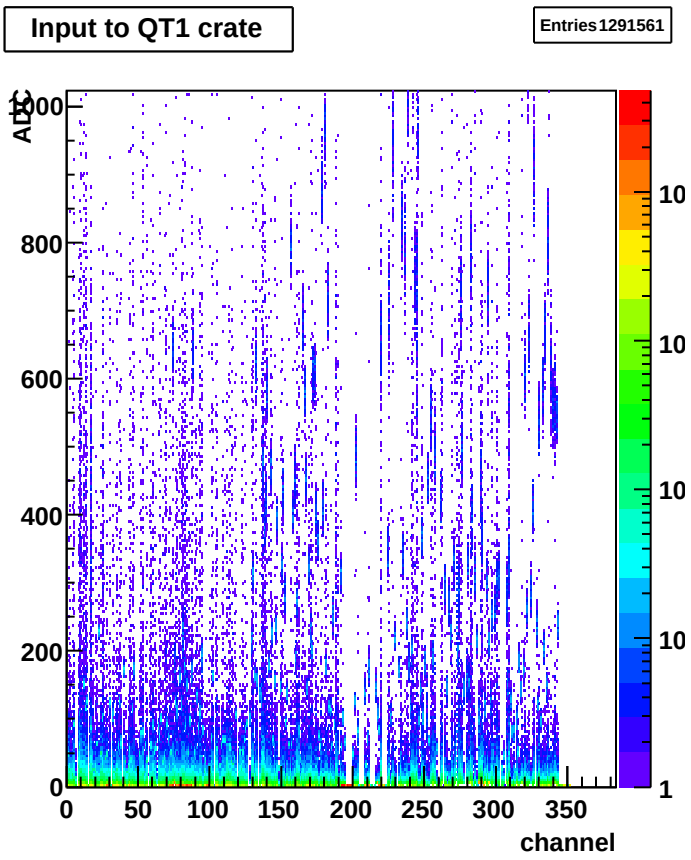

Entries 49742
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

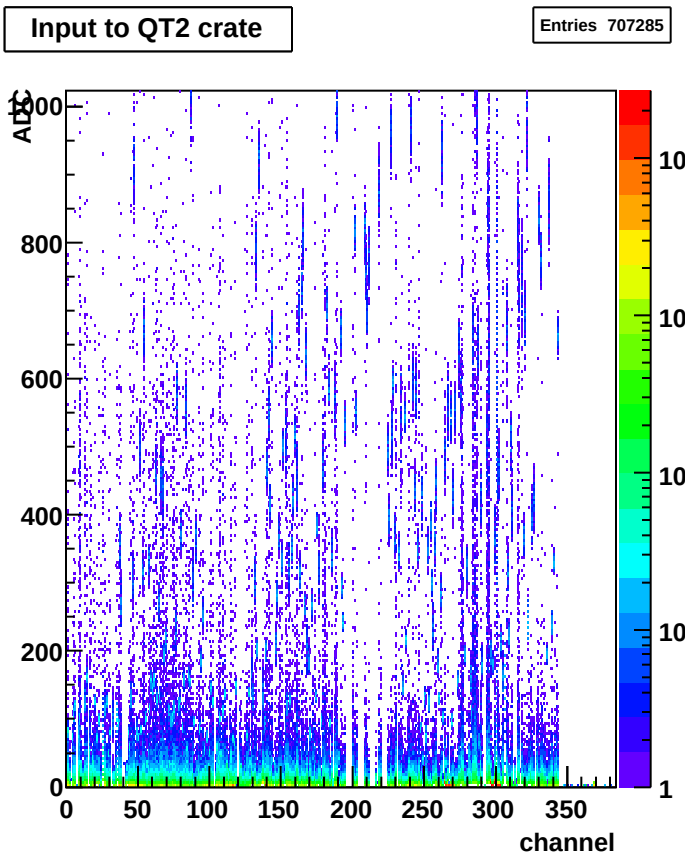

Entries 49742
BBC-L-East ADC Sum
BBC-L-West ADC Sum

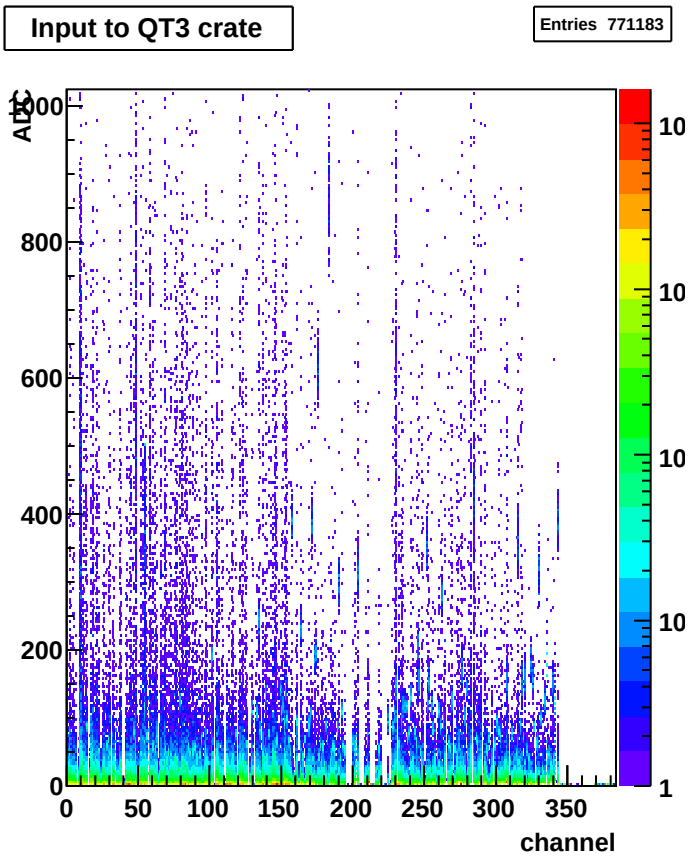

Entries 49742
BBC-S-East ADC Sum
BBC-S-West ADC Sum

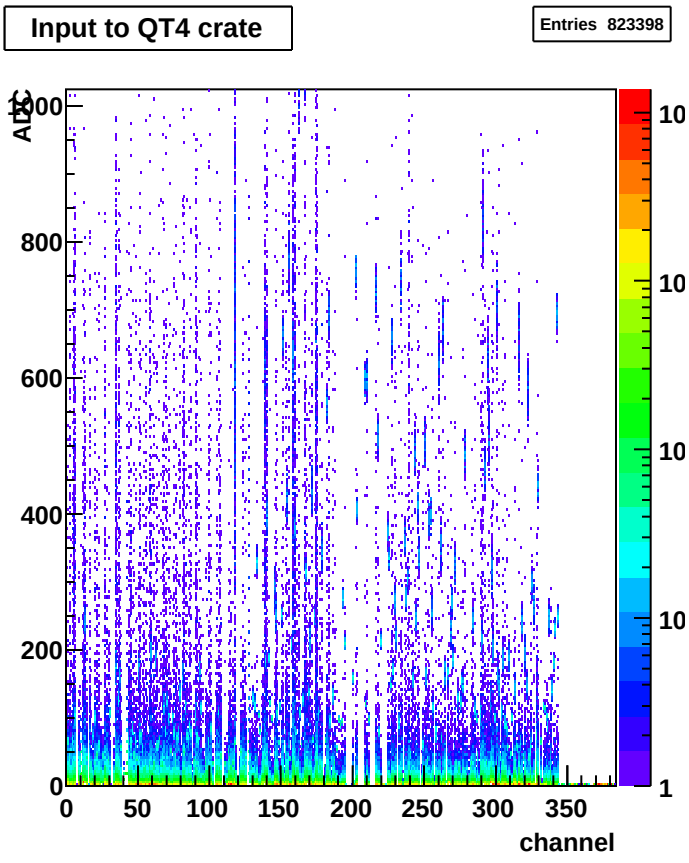

Entries 49742
ZDC East ADC Sum Att
ZDC West ADC Sum Att

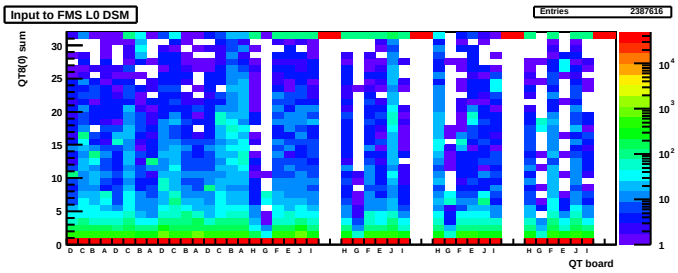

Entries 49742
BBC-L TAC Diff
BCC-S TAC Diff
Entries 49742
BBC-L TAC Diff
VPD TAC Diff
Entries 49742
BBC-L TAC Diff
ZDC TAC Diff
Entries 49742
BBC-S TAC Diff
VPD TAC Diff
Entries 49742
BBC-S TAC Diff
ZDC TAC Diff
Entries 49742
VPD TAC Diff
ZDC TAC Diff

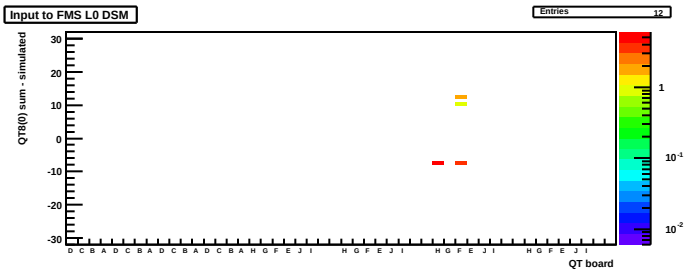

Input to QT1 crate
Entries 1291561
ADC
channel

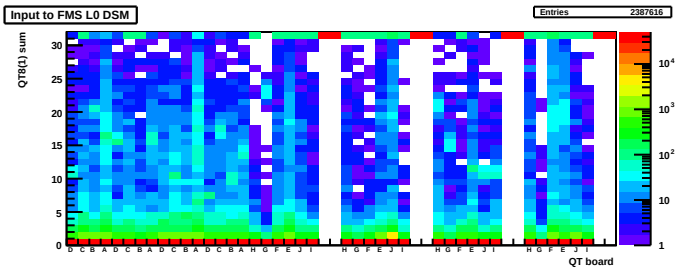

Input to QT2 crate
Entries 707285
ADC
channel

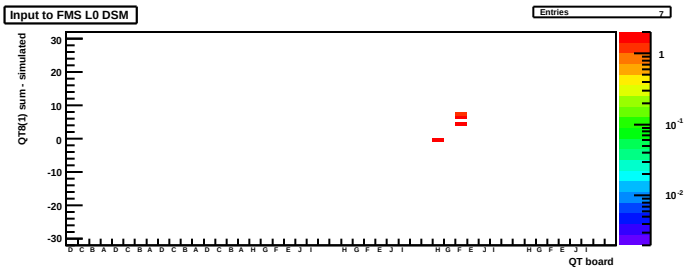

Input to QT3 crate
Entries 771183
ADC
channel

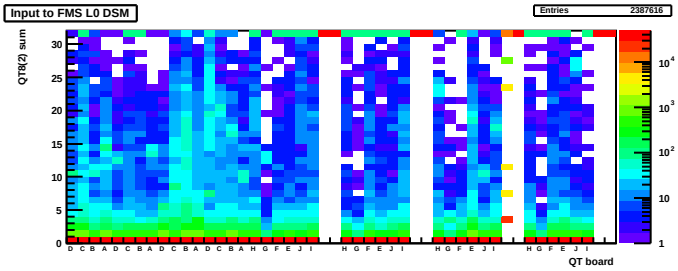

Input to QT4 crate
Entries 823398
ADC
channel

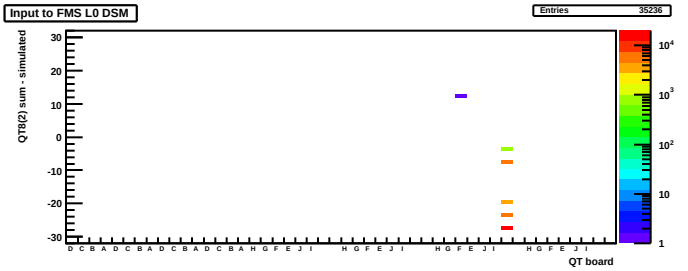

Input to FMS L0 DSM
Entries 2387616
QT8(0) sum
QT board

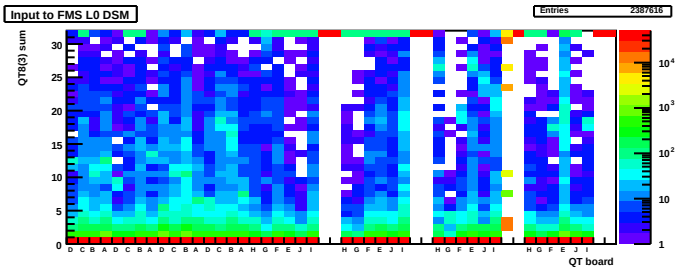

Input to FMS L0 DSM
Entries 12
QT8(0) sum - simulated
QT board

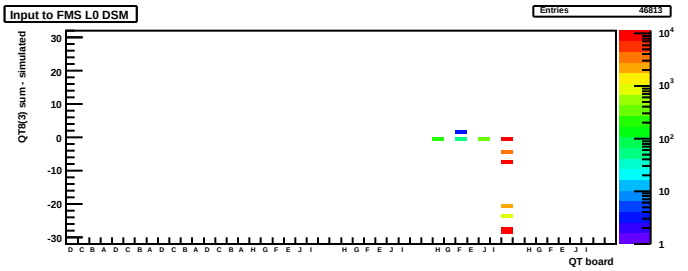

Input to FMS L0 DSM
Entries 2387616
QT8(1) sum
QT board

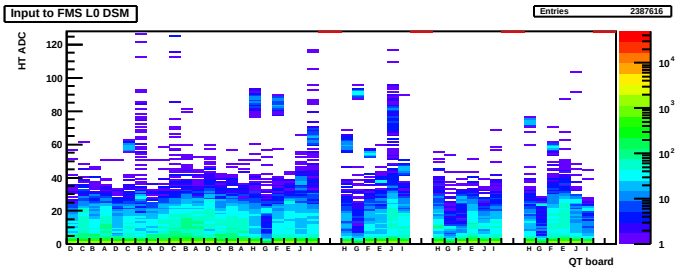

Input to FMS L0 DSM
Entries 7
QT8(1) sum - simulated
QT board

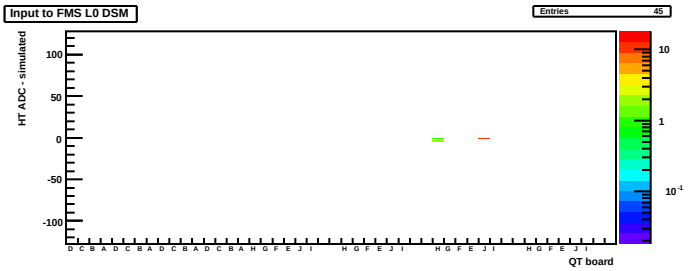

Input to FMS L0 DSM
Entries 2387616
QT8(2) sum
QT board

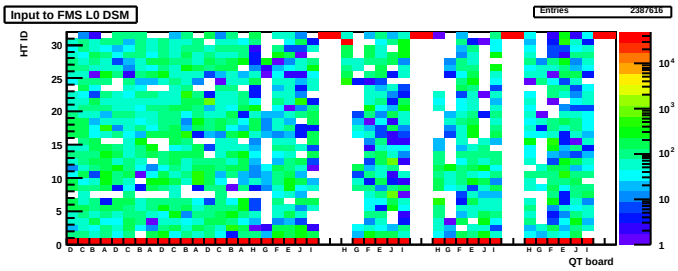

Input to FMS L0 DSM
Entries 35236
QT8(2) sum - simulated
QT board

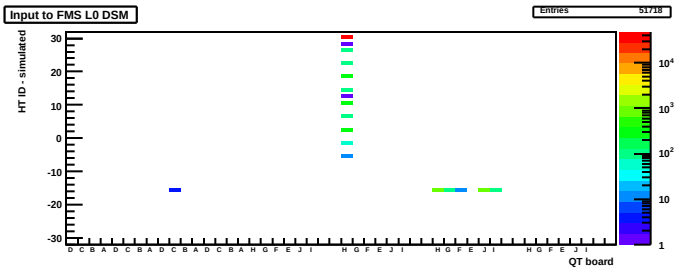

Input to FMS L0 DSM
Entries 2387616
QT8(3) sum
QT board

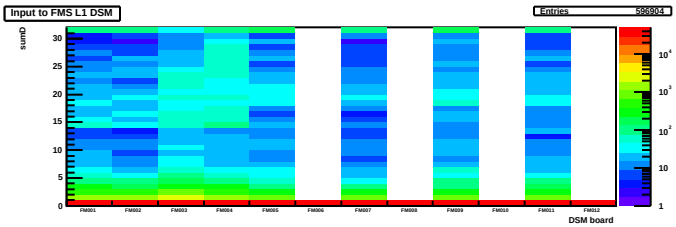

Input to FMS L0 DSM
Entries 46813
QT8(3) sum - simulated
QT board

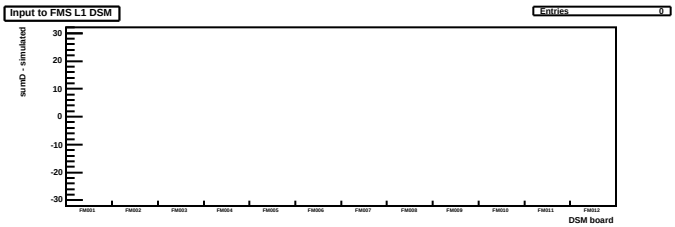

Input to FMS L0 DSM
Entries 2387616
HT ADC
QT board

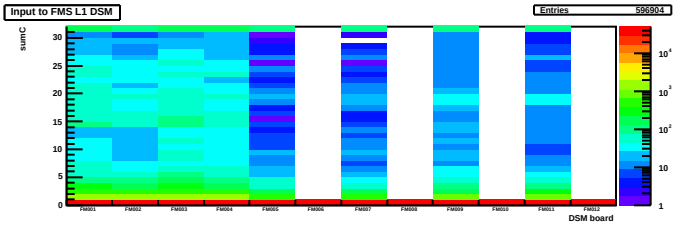

Input to FMS L0 DSM
Entries 45
HT ADC - simulated
QT board

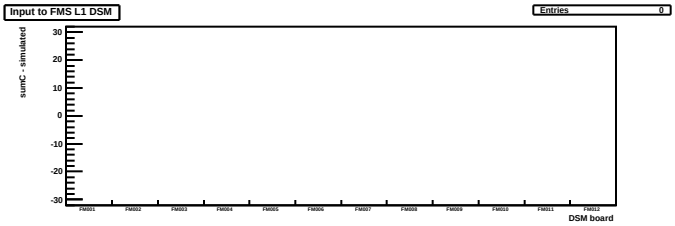

Input to FMS L0 DSM
Entries 2387616
HT ID
QT board

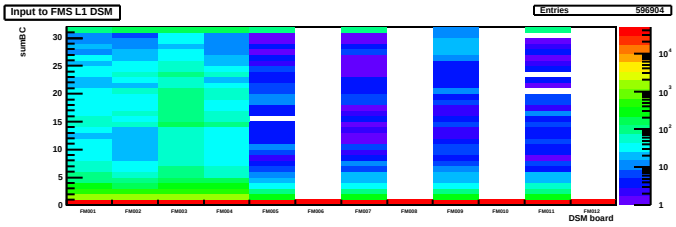

Input to FMS L0 DSM
Entries 51718
HT ID - simulated
QT board

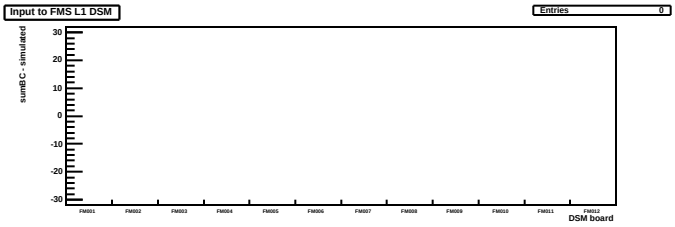

Input to FMS L1 DSM
Entries 596904
sumD
DSM board

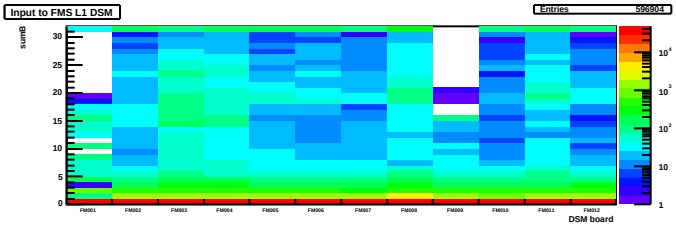

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

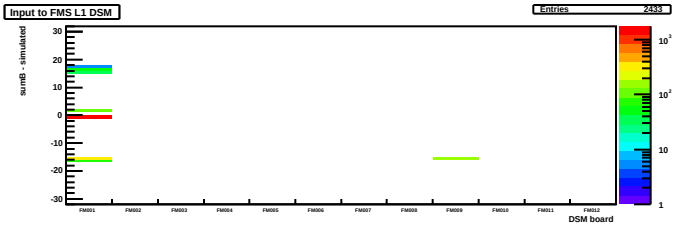

Input to FMS L1 DSM
Entries 596904
sumC
DSM board

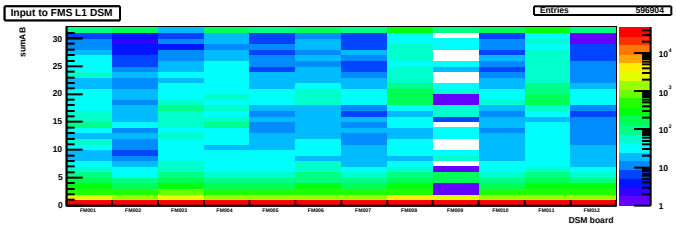

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

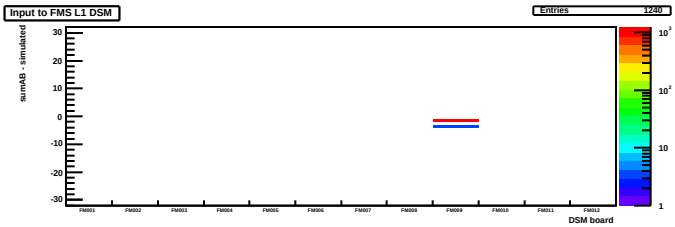

Input to FMS L1 DSM
Entries 596904
sumBC
DSM board

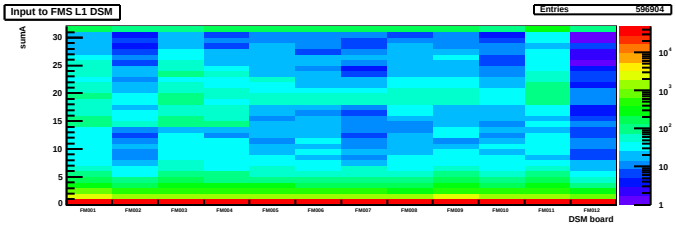

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

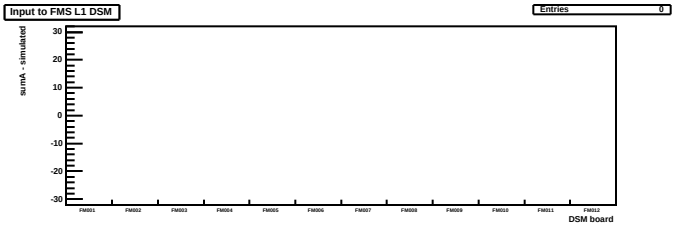

Input to FMS L1 DSM
Entries 596904
sumB
DSM board

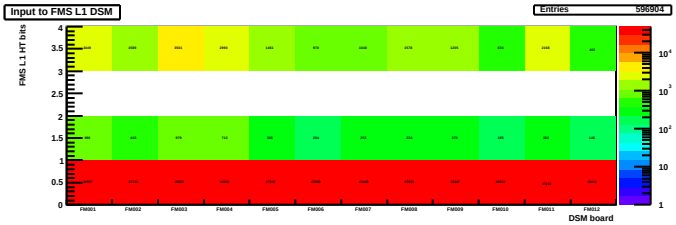

Input to FMS L1 DSM
Entries 2433
sumB - simulated
DSM board

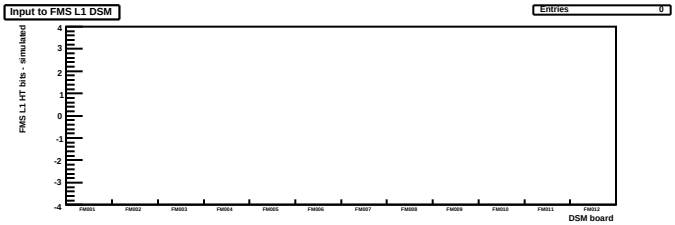

Input to FMS L1 DSM
Entries 596904
sumAB
DSM board

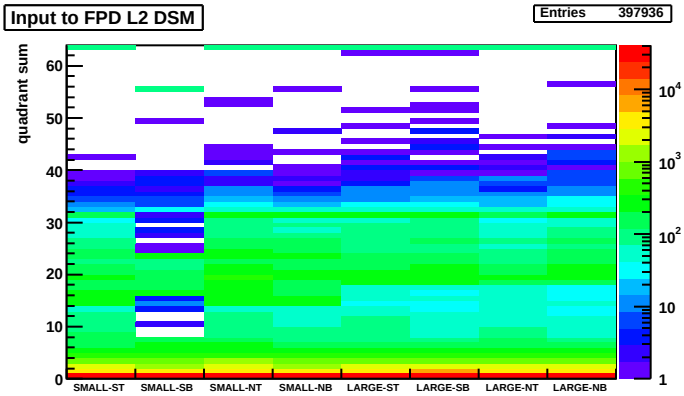

Input to FMS L1 DSM
Entries 1240
sumAB - simulated
DSM board

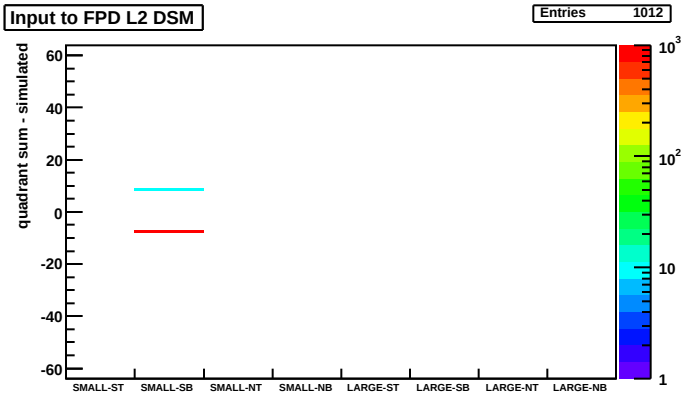

Input to FMS L1 DSM
Entries 596904
sumA
DSM board

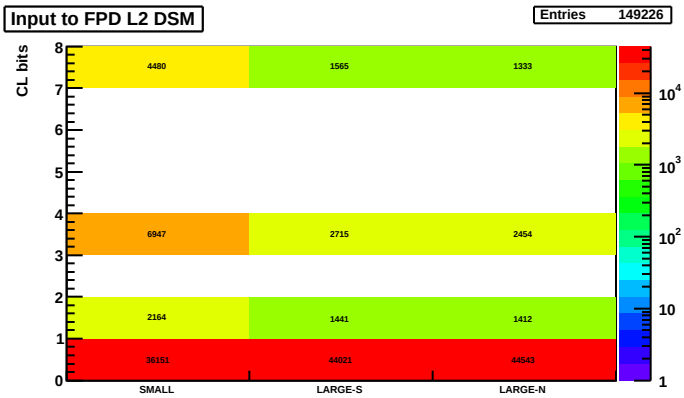

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

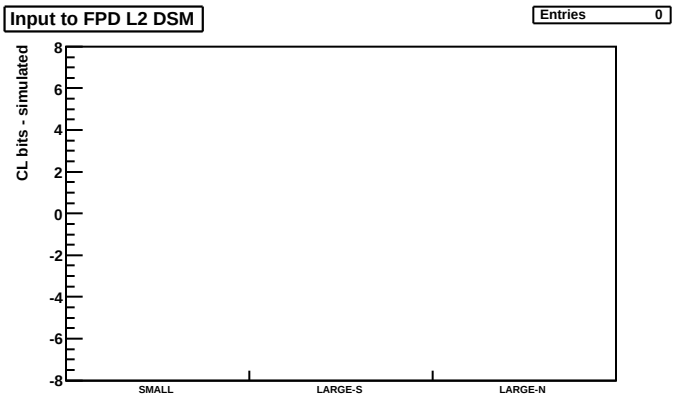

Input to FMS L1 DSM
Entries 596904
FMS L1 HT bits
DSM board

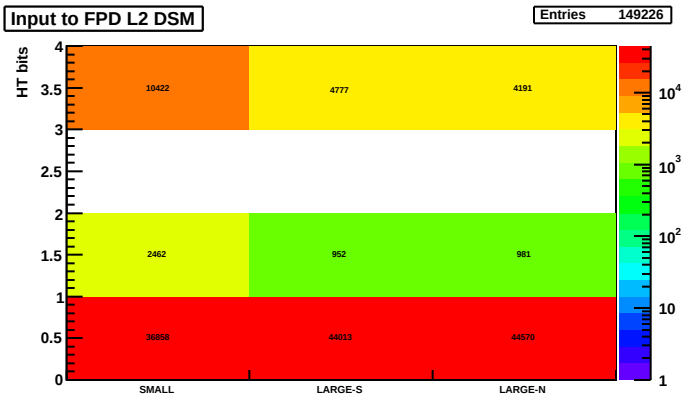

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

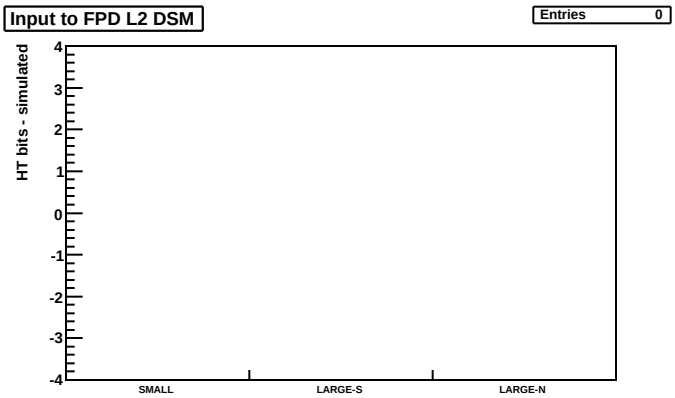

Input to FPD L2 DSM
Entries 397936
quadrant sum
SMALL-ST SMALL-SB SMALL-NT SMALL-NB LARGE-ST LARGE-SB LARGE-NT LARGE-NB

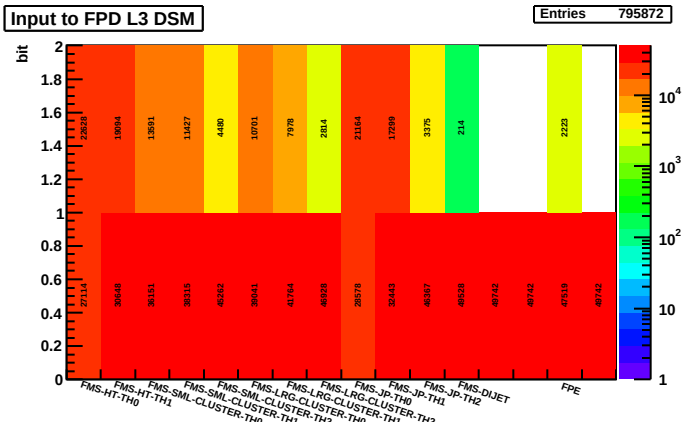

Input to FPD L2 DSM
Entries 1012
quadrant sum - simulated
SMALL-ST SMALL-SB SMALL-NT SMALL-NB LARGE-ST LARGE-SB LARGE-NT LARGE-NB

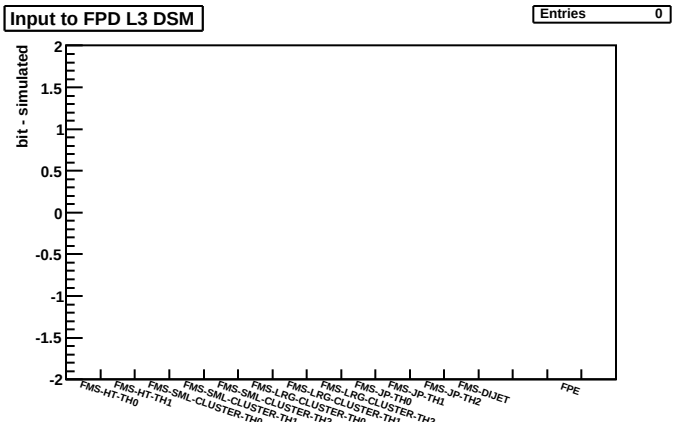

Input to FPD L2 DSM
Entries 149226
CL bits
4480 1565 1333
6947 2715 2454
2164 1441 1412
36151 44021 44543
SMALL LARGE-S LARGE-N

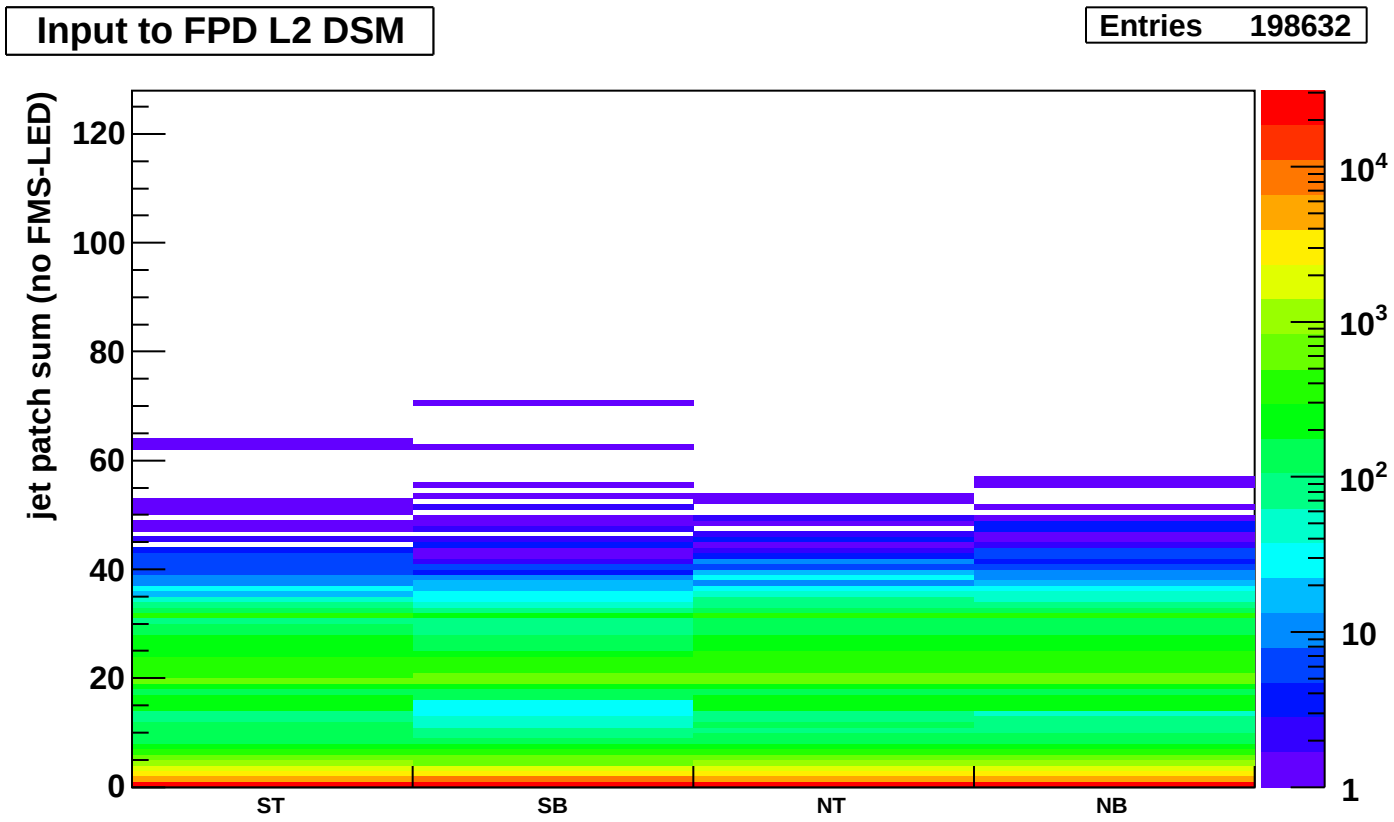

Input to FPD L2 DSM
Entries 0
CL bits - simulated
SMALL LARGE-S LARGE-N

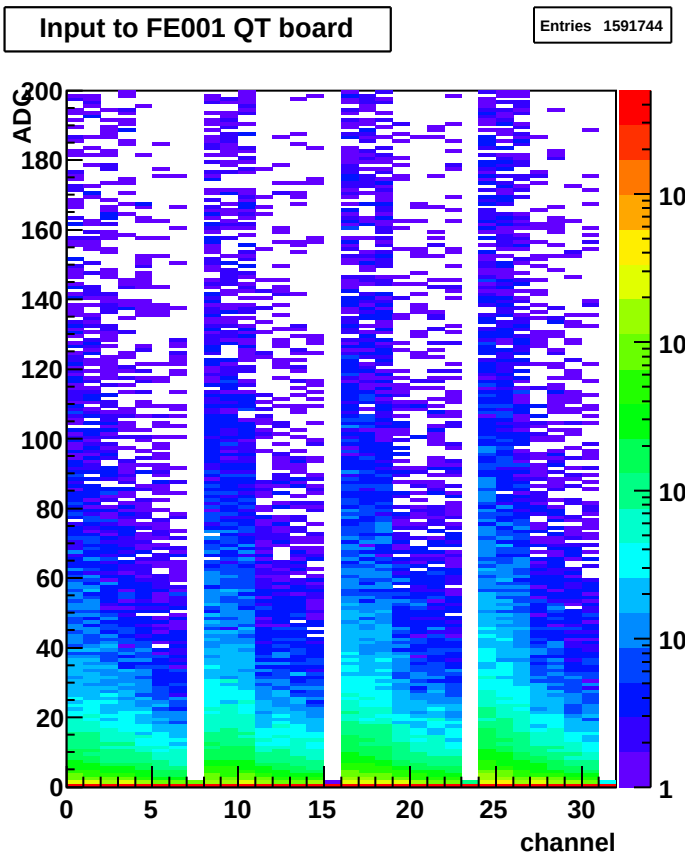

Input to FPD L2 DSM
Entries 149226
HT bits
10422 4777 4191
2462 952 981
36858 44013 44570
SMALL LARGE-S LARGE-N

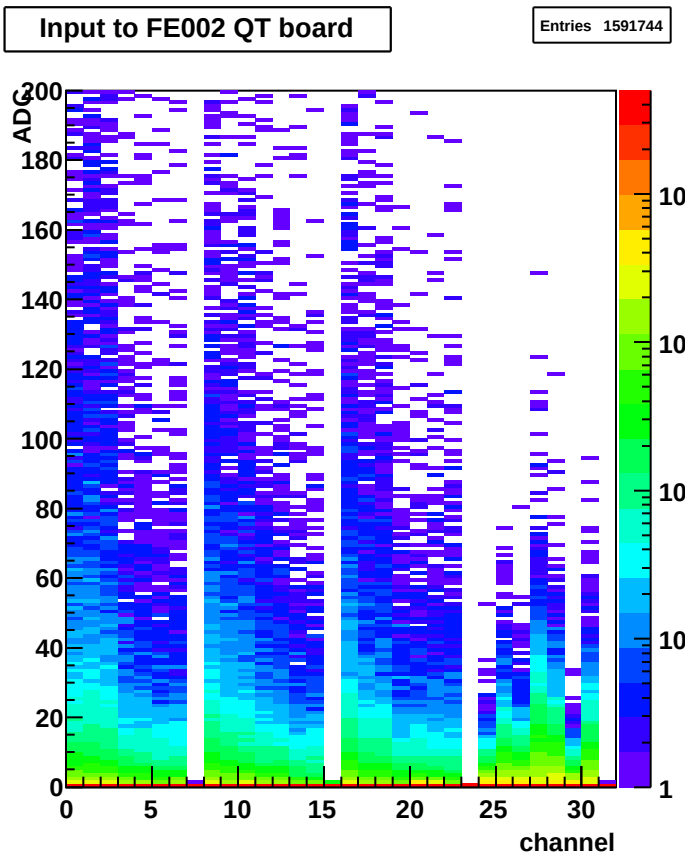

Input to FPD L2 DSM
Entries 0
HT bits - simulated
SMALL LARGE-S LARGE-N

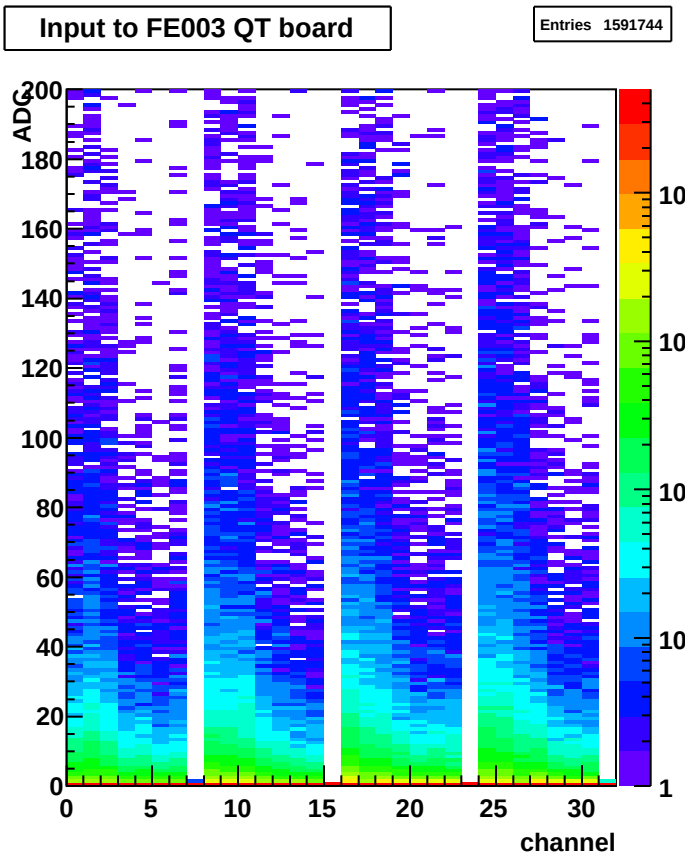

Input to FPD L3 DSM
Entries 795872
bit
FMS-HT-TH0 FMS-HT-TH1 FMS-SML-CLUSTER-TH0 FMS-SML-CLUSTER-TH1 FMS-SML-CLUSTER-TH2 FMS-LRG-CLUSTER-TH0 FMS-LRG-CLUSTER-TH1 FMS-LRG-CLUSTER-TH2 FMS-JP-TH0 FMS-JP-TH1 FMS-JP-TH2 FMS-DIJET FPE

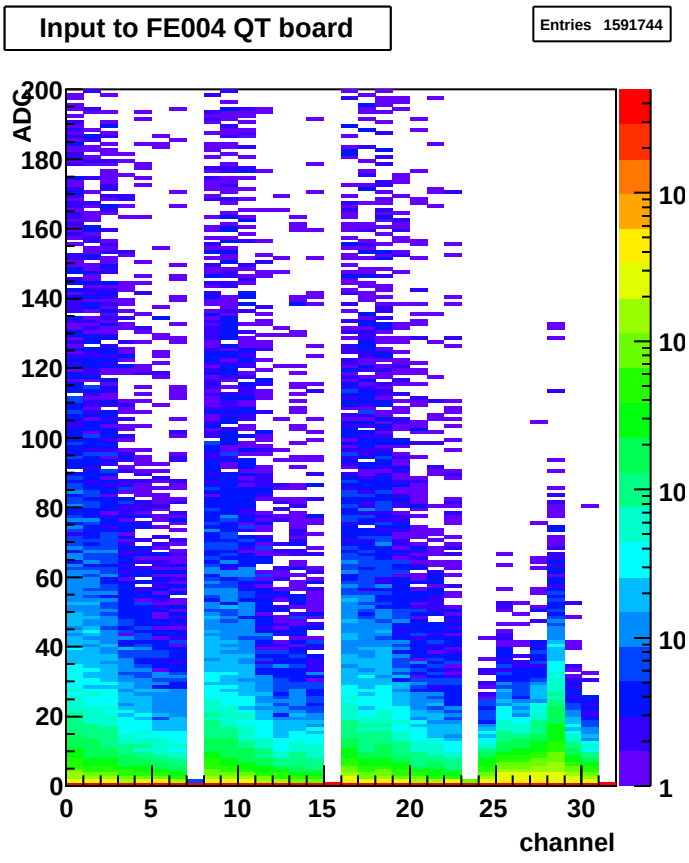

Input to FPD L3 DSM
Entries 0
bit - simulated
FMS-HT-TH0 FMS-HT-TH1 FMS-SML-CLUSTER-TH0 FMS-SML-CLUSTER-TH1 FMS-SML-CLUSTER-TH2 FMS-LRG-CLUSTER-TH0 FMS-LRG-CLUSTER-TH1 FMS-LRG-CLUSTER-TH2 FMS-JP-TH0 FMS-JP-TH1 FMS-JP-TH2 FMS-DIJET FPE

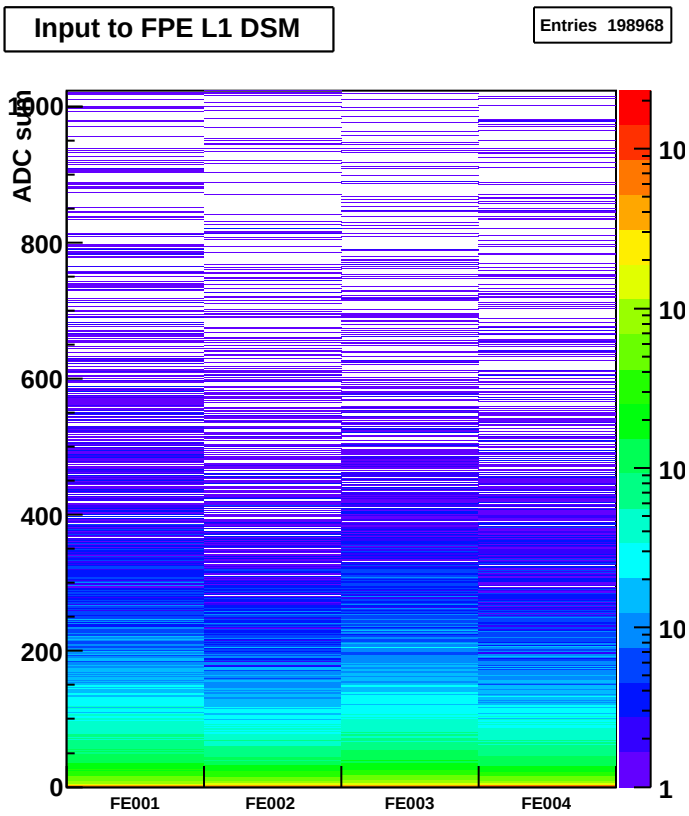

Input to FPD L2 DSM
Entries 198632
jet patch sum (no FMS-LED)
0
20
40
60
80
100
120
ST
SB
NT
NB
1
10
$10^2$
$10^3$
$10^4$

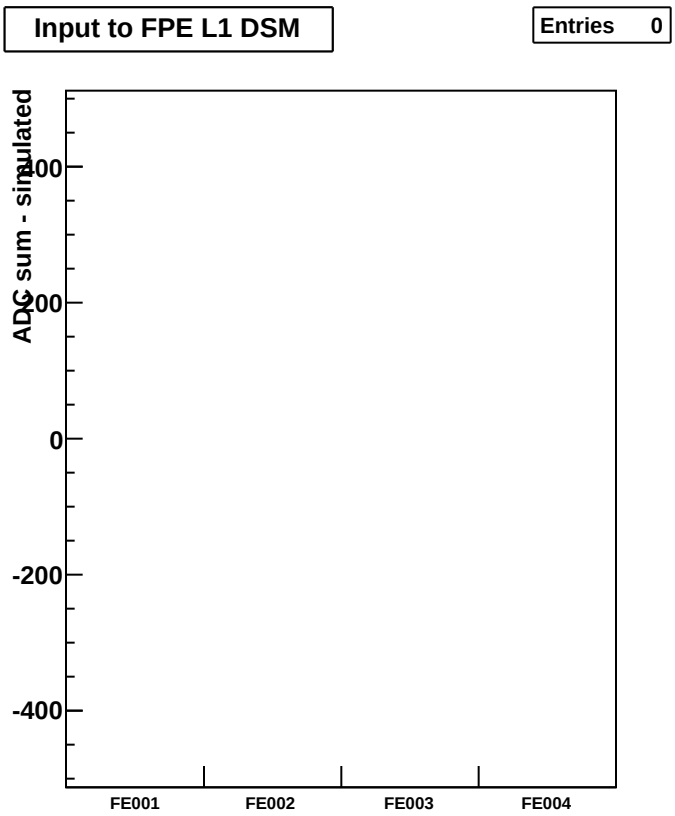

Input to FE001 QT board
Entries 1591744
ADC
channel

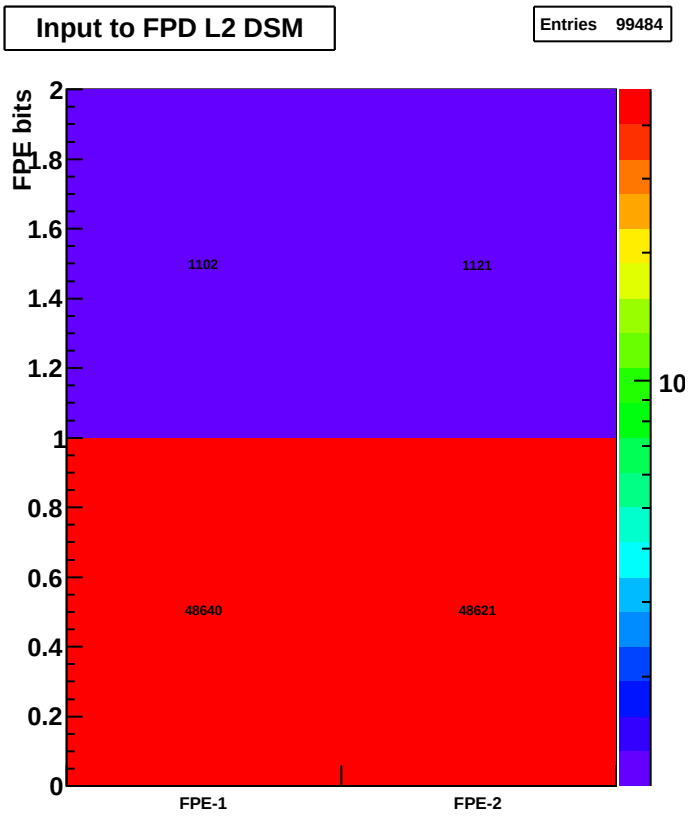

Input to FE002 QT board
Entries 1591744
ADC
channel

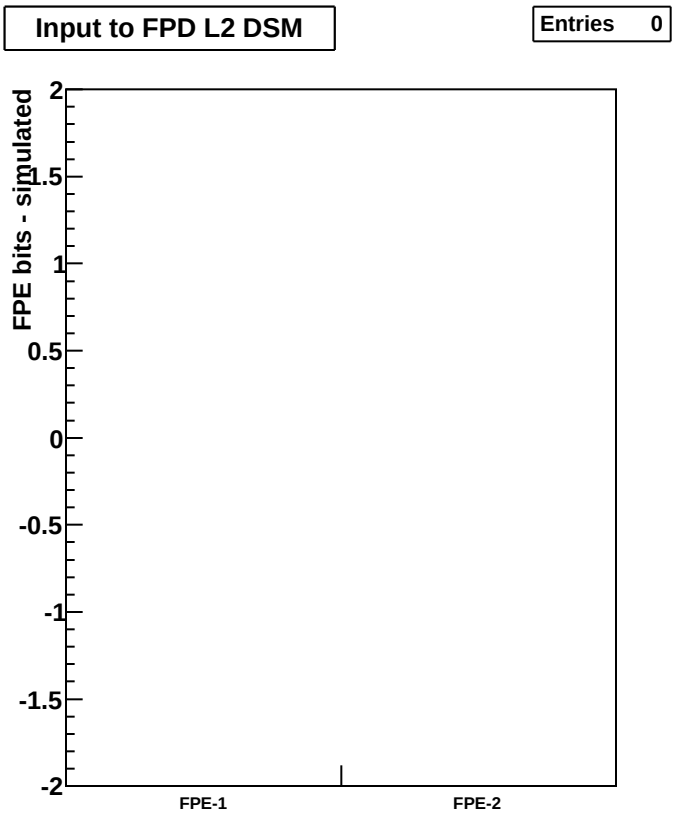

Input to FE003 QT board
Entries 1591744
ADC
channel


Input to FE004 QT board
Entries 1591744
ADC
channel


Input to FPE L1 DSM
Entries 198968
ADC sum
1000
800
600
400
200
0
FE001
FE002
FE003
FE004
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 99484
FPE bits
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
1102
1121
48640
48621
FPE-1
FPE-2
10


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