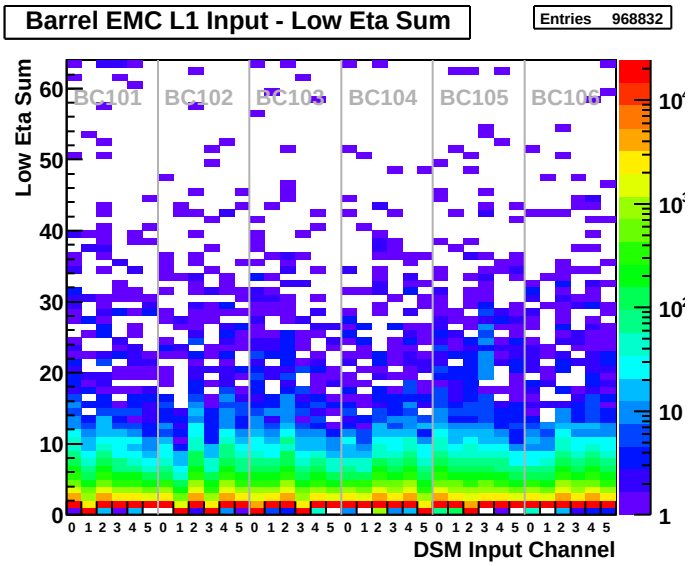
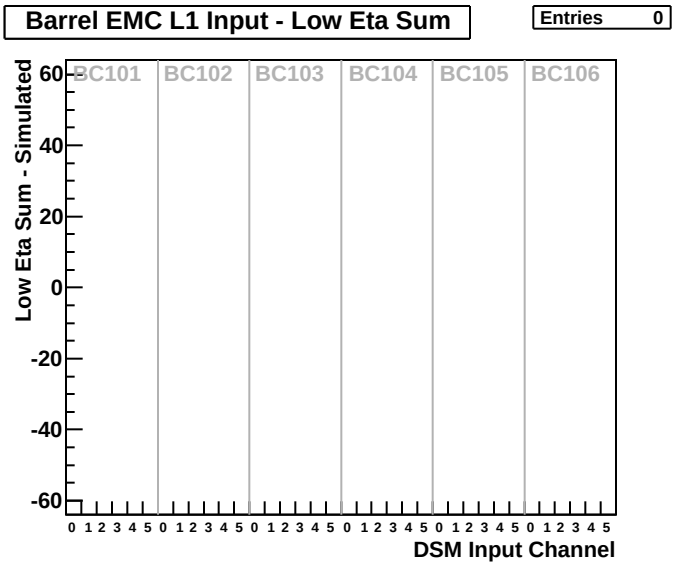
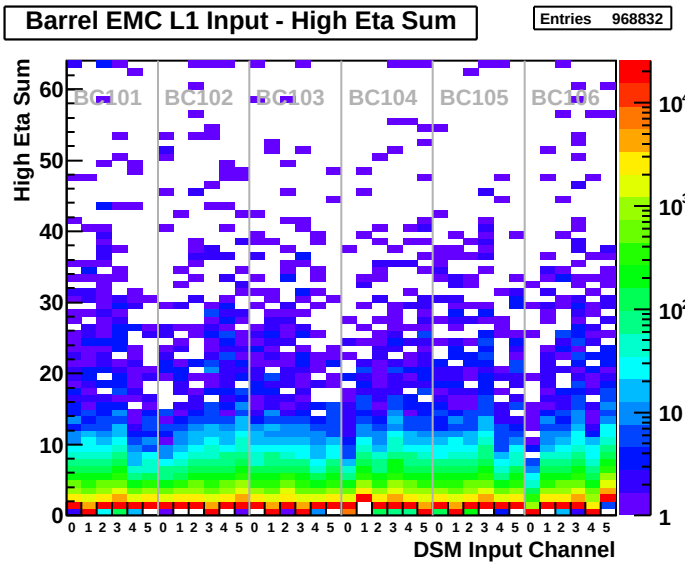
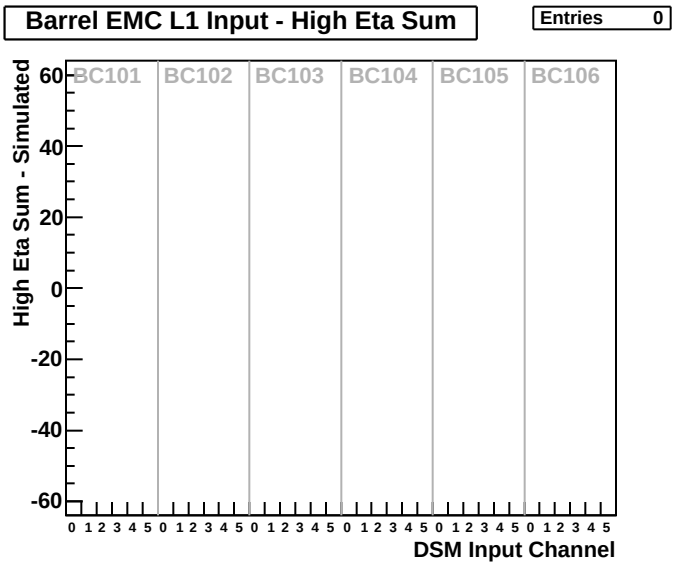
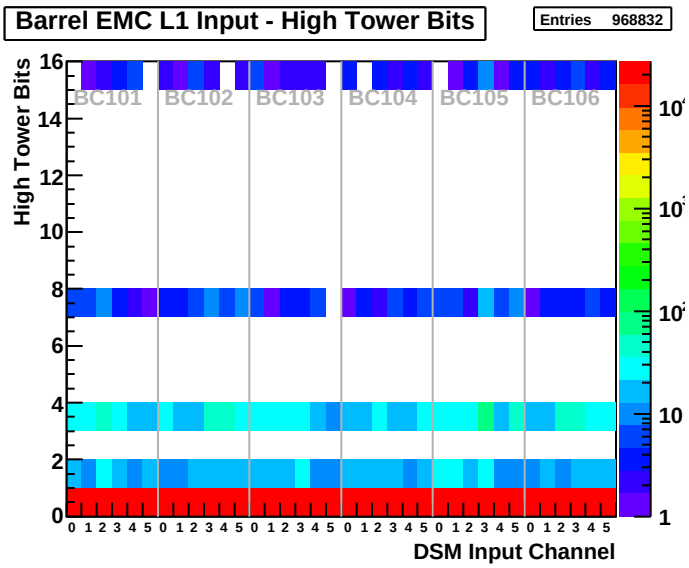
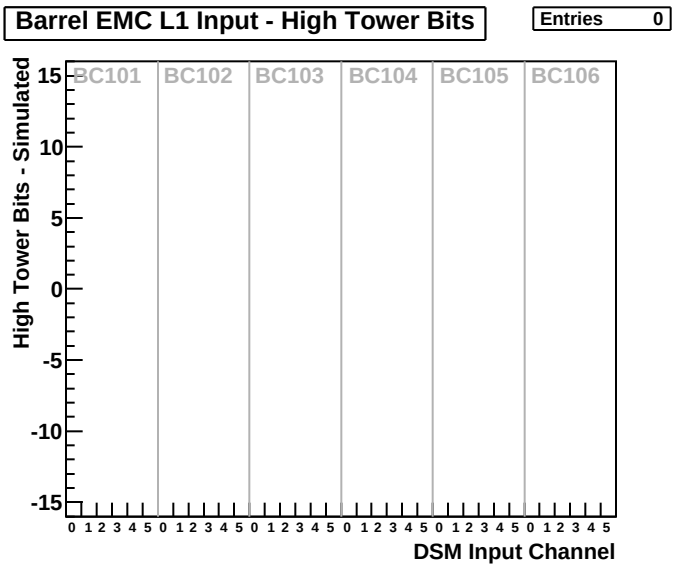

Barrel EMC L1 Input - Low Eta Sum
Entries 968832
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

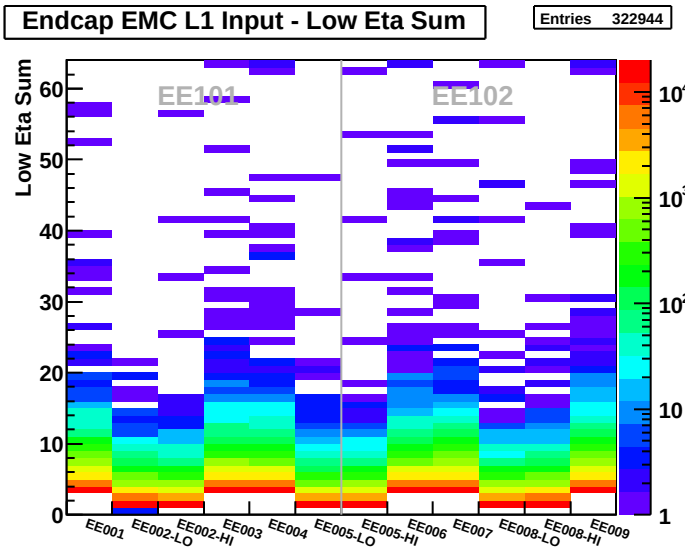

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

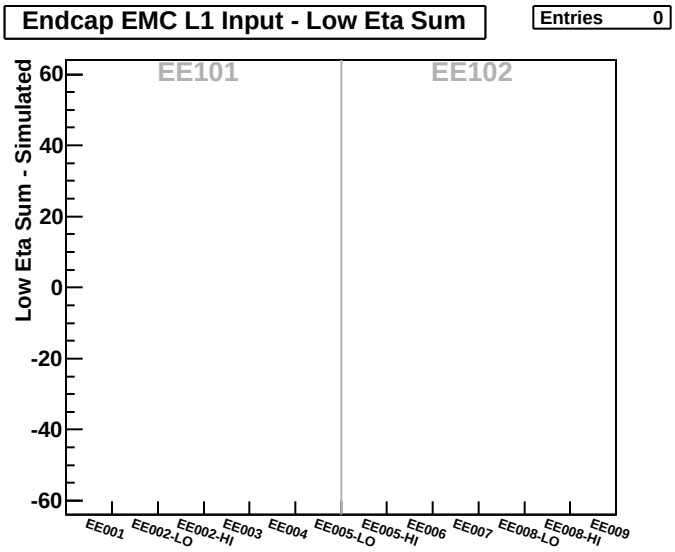

Barrel EMC L1 Input - High Eta Sum
Entries 968832
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

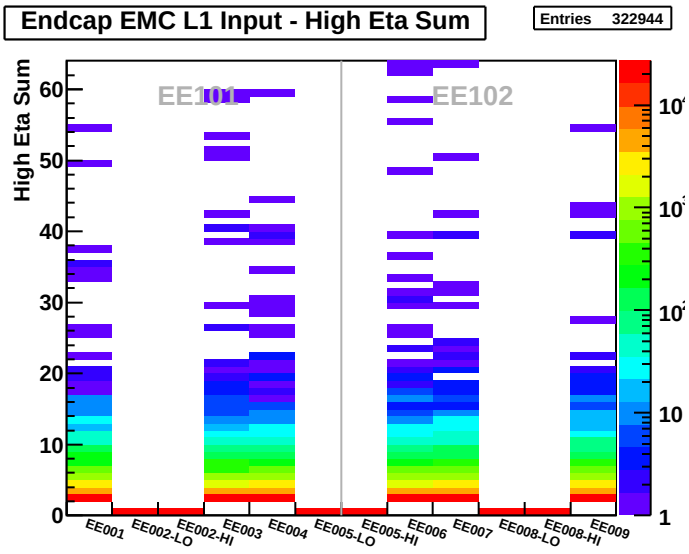

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

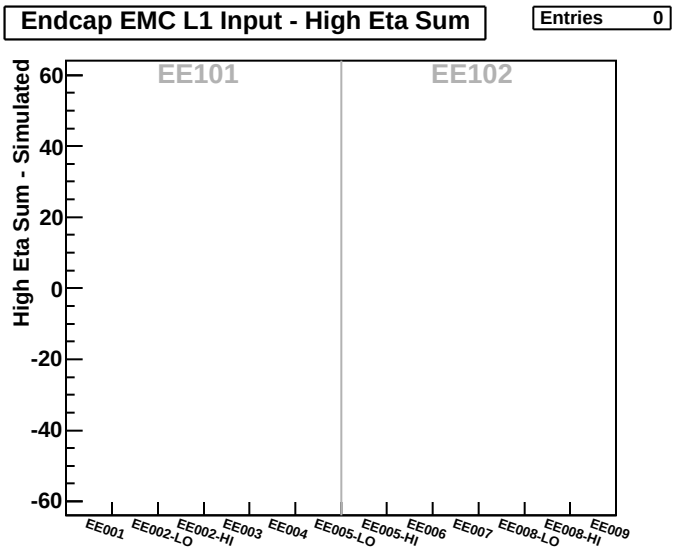

Barrel EMC L1 Input - High Tower Bits
Entries 968832
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

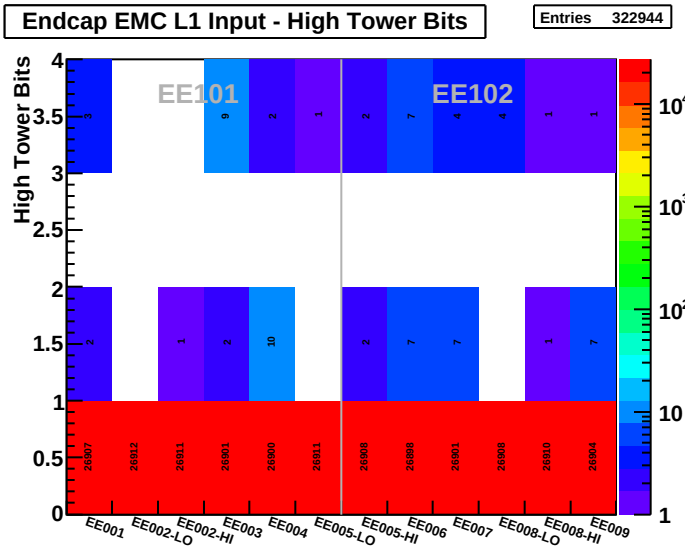

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

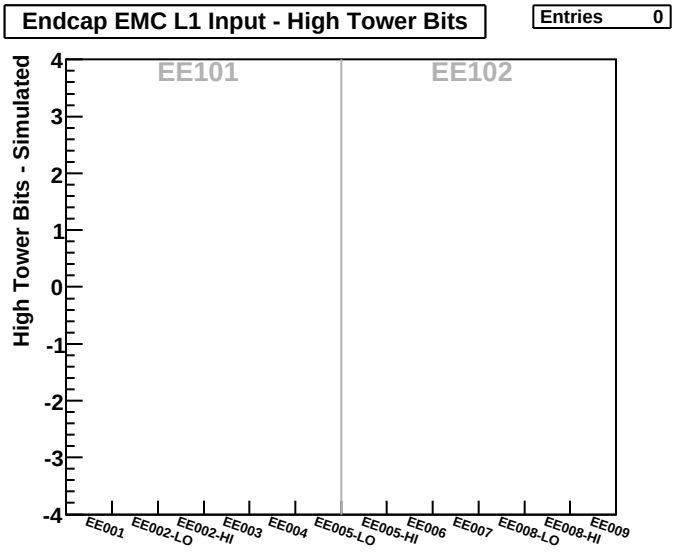

Endcap EMC L1 Input - Low Eta Sum
Entries 322944
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

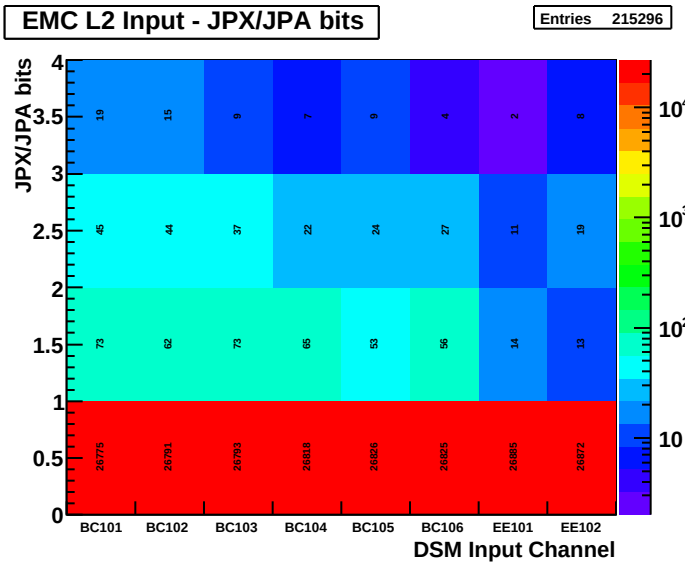

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

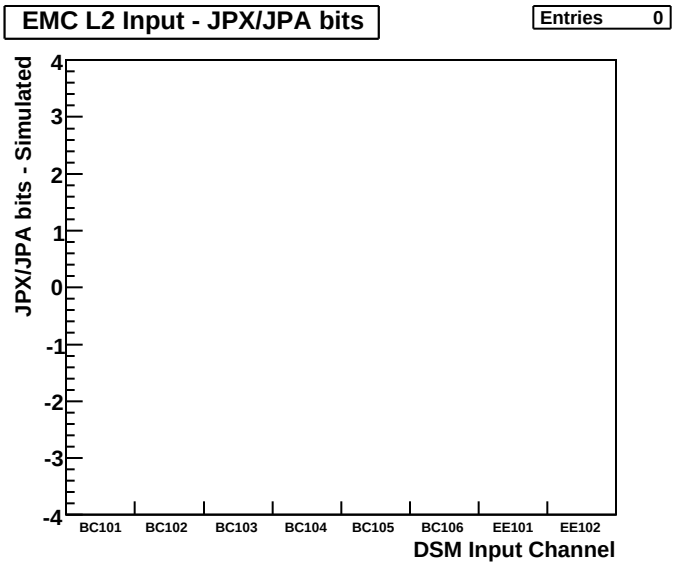

Endcap EMC L1 Input - High Eta Sum
Entries 322944
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

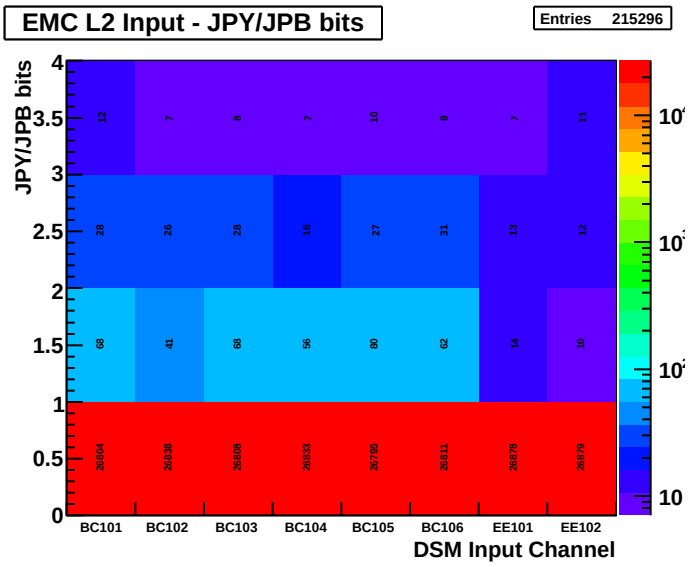

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

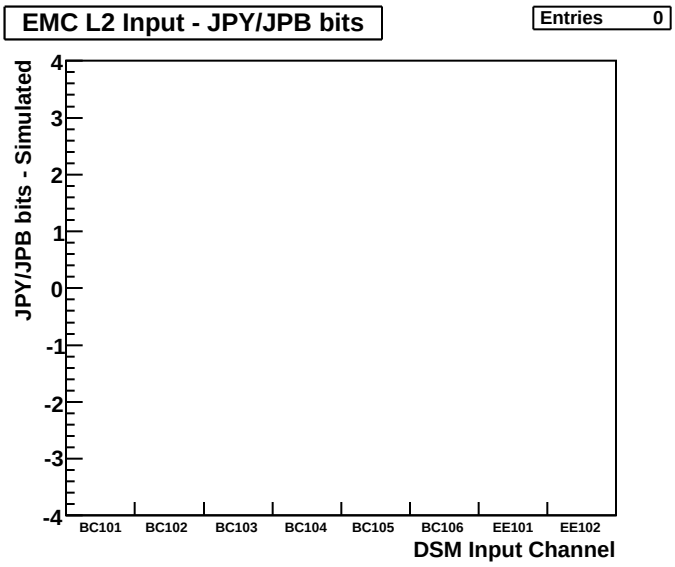

Endcap EMC L1 Input - High Tower Bits
Entries 322944
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

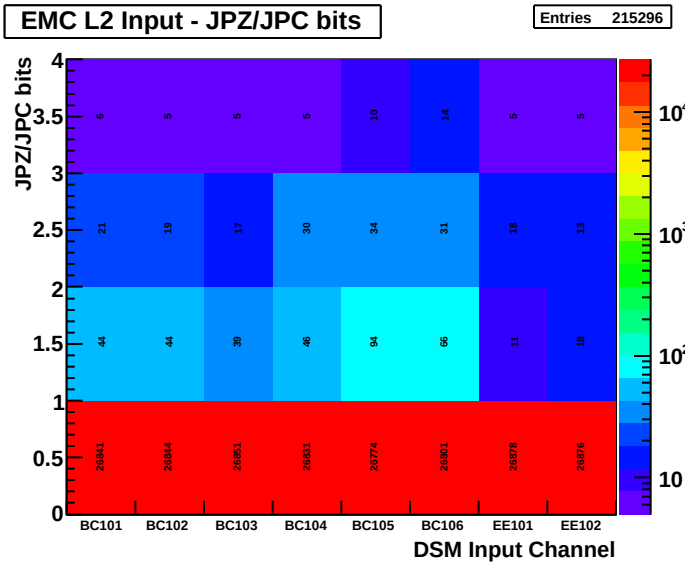

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

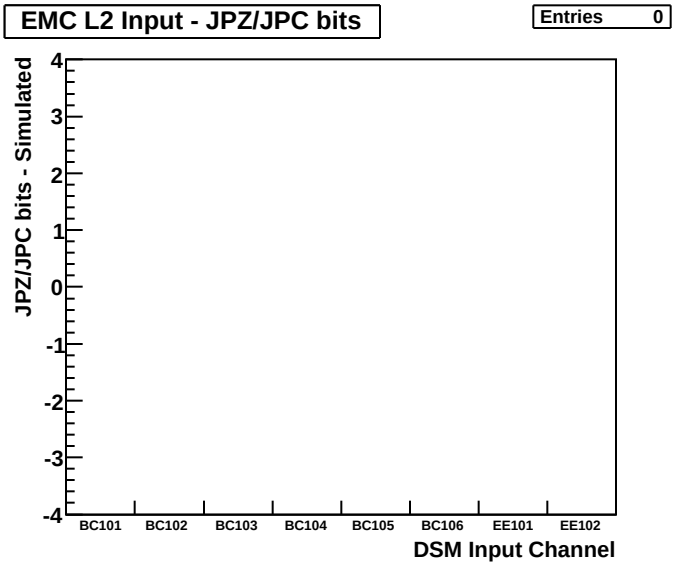

EMC L2 Input - JPX/JPA bits
Entries 215296
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
19 15 9 7 9 4 2 8
45 44 37 22 24 27 11 19
73 62 73 65 53 56 14 13
26775 26791 26793 26818 26826 26825 26885 26872

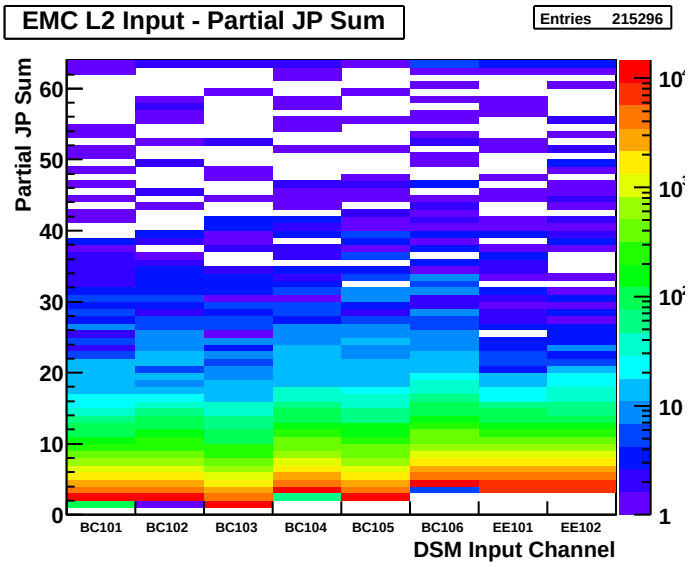

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

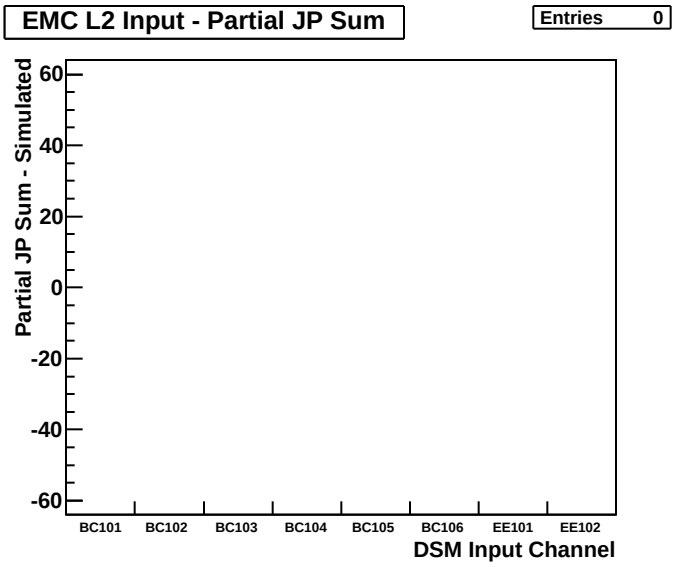

EMC L2 Input - JPY/JPB bits
Entries 215296
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
12 7 8 7 10 8 7 11
28 26 28 16 27 31 13 12
68 41 68 56 80 62 14 10
26804 26838 26808 26833 26795 26811 26878 26879

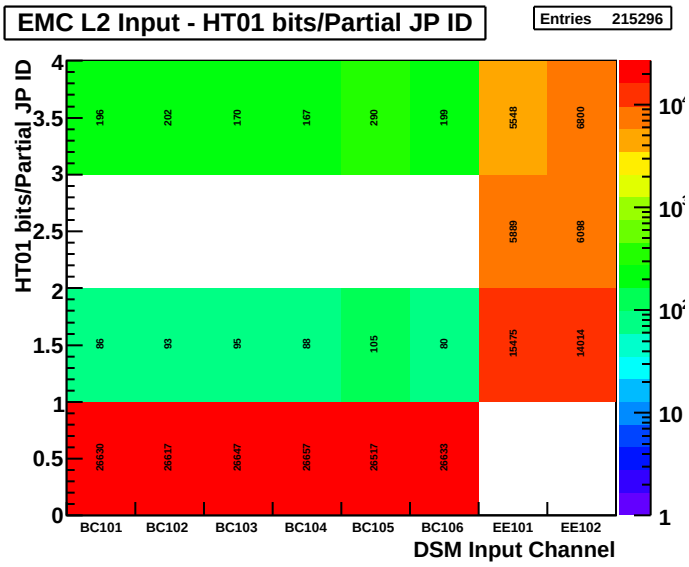

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

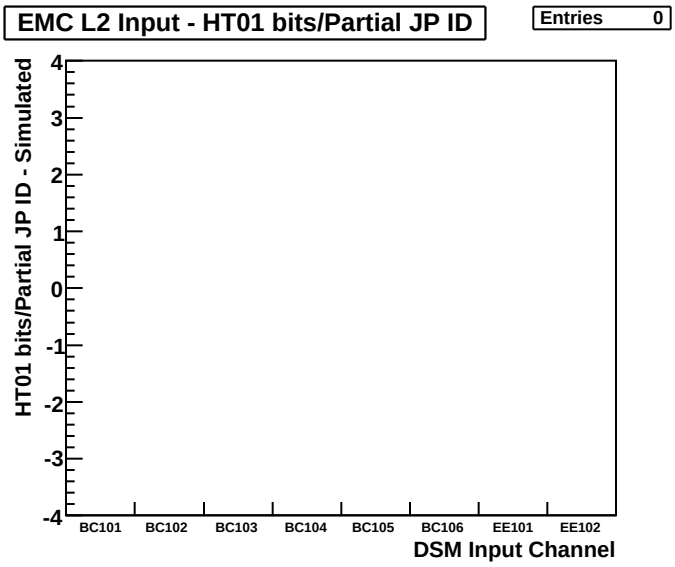

EMC L2 Input - JPZ/JPC bits
Entries 215296
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
6 5 5 5 10 14 5 5
21 19 17 30 34 31 18 13
44 44 39 46 94 66 11 18
26841 26844 26851 26831 26774 26801 26878 26876

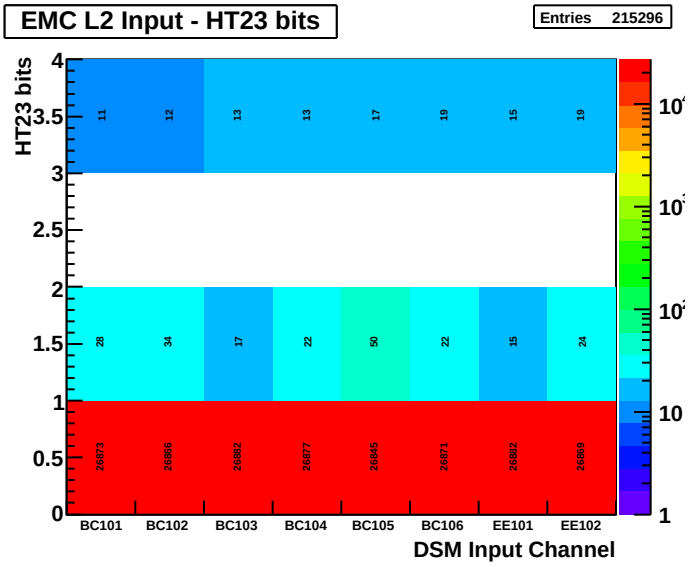

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

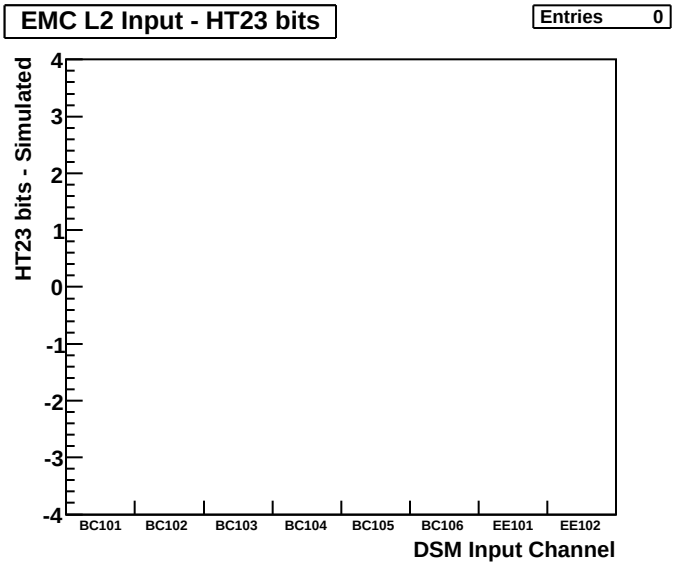

EMC L2 Input - Partial JP Sum
Entries 215296
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

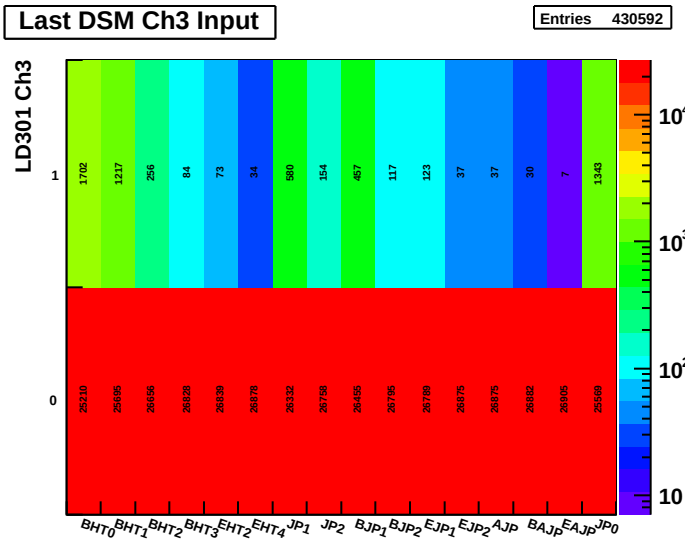

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

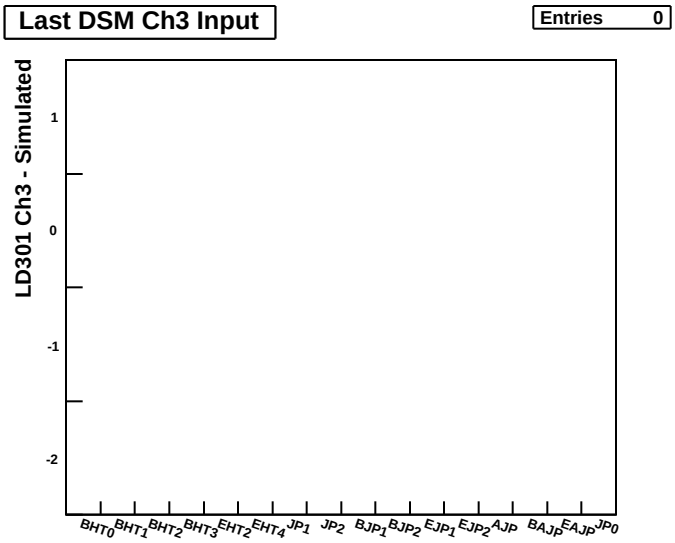

EMC L2 Input - HT01 bits/Partial JP ID
Entries 215296
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

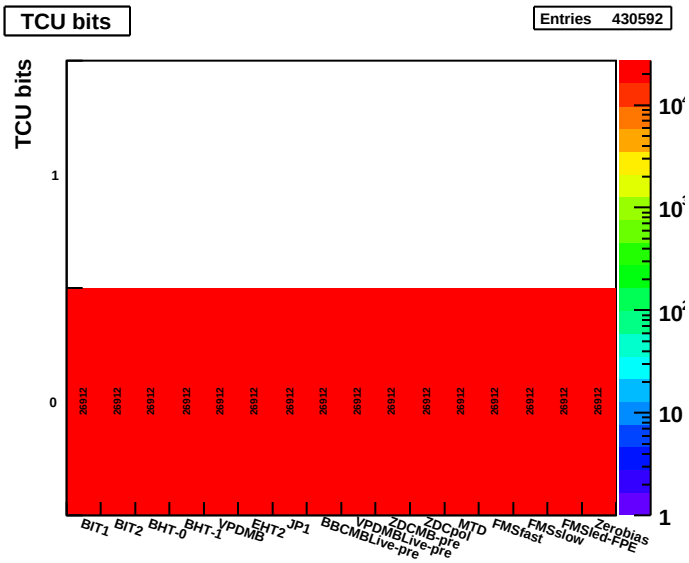

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

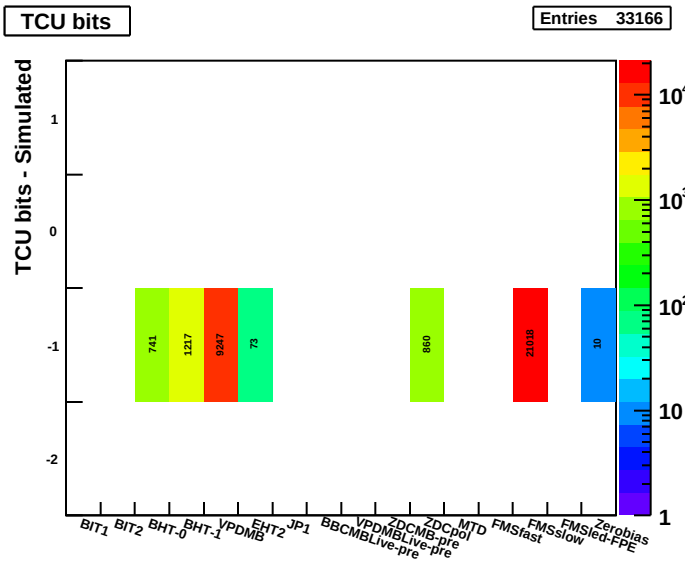

EMC L2 Input - HT23 bits
Entries 215296
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

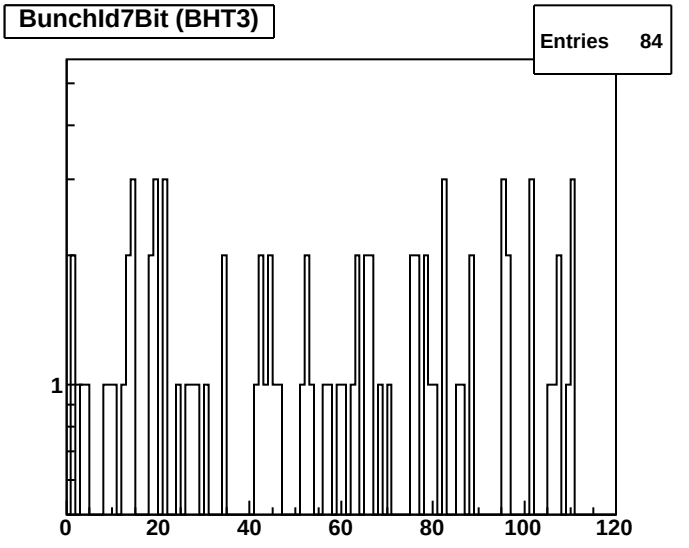

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

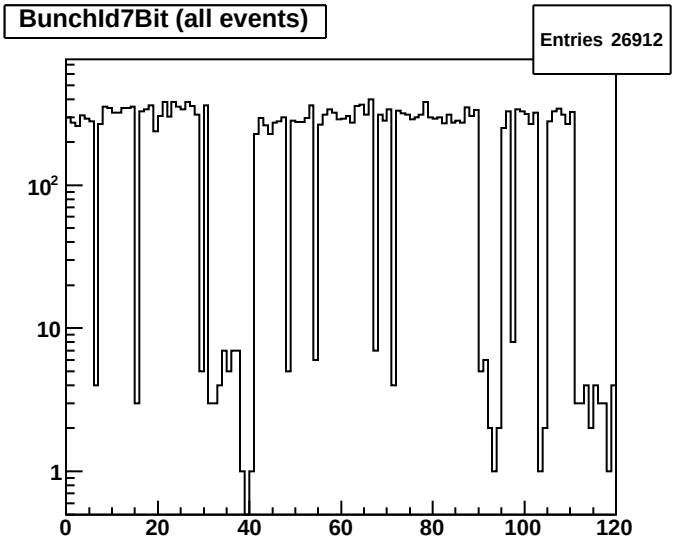

Last DSM Ch3 Input
Entries 430592
LD301 Ch3
1
0
1702 1217 256 84 73 34 580 154 457 117 123 37 37 30 7 1343
25210 25695 26556 26828 26839 26878 26332 26758 26455 26785 26789 26875 26875 26882 25905 25569
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

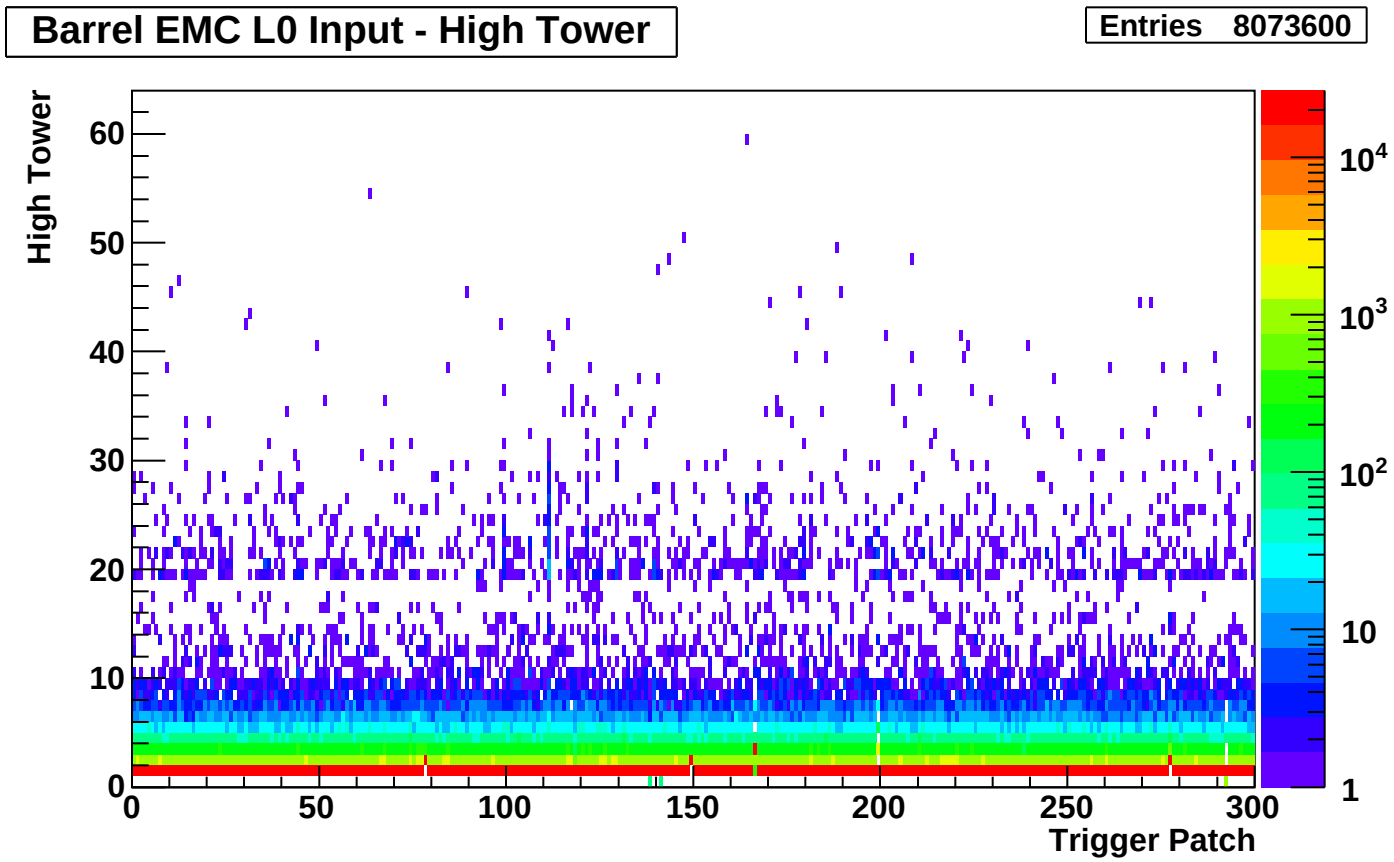

Last DSM Ch3 Input
Entries 0
LD301 Ch3 - Simulated
1
0
-1
-2
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

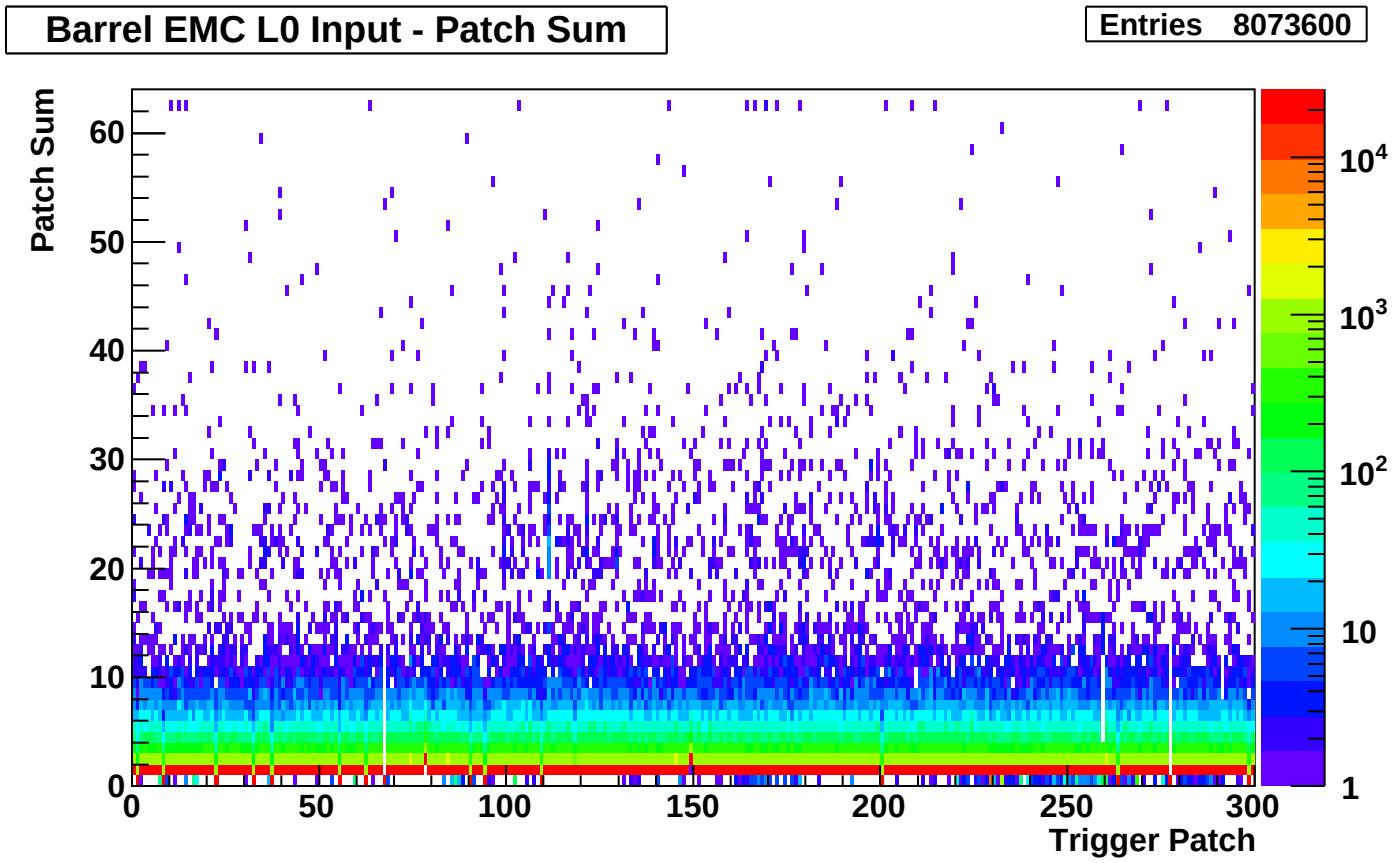

TCU bits
Entries 430592
TCU bits
1
0
26912 26912 26912 26912 26912 26912 26912 26912 26912 26912 26912 26912 26912 26912 26912 26912
BIT1 BIT2 BHT-0 BHT-1 VPDMB EHT2 JP1 BBCMBLive-pre VPDMBLive-pre ZDCMB-pre ZDCpol MTD FMSfast FMSslow FMSled-FPE Zerobias

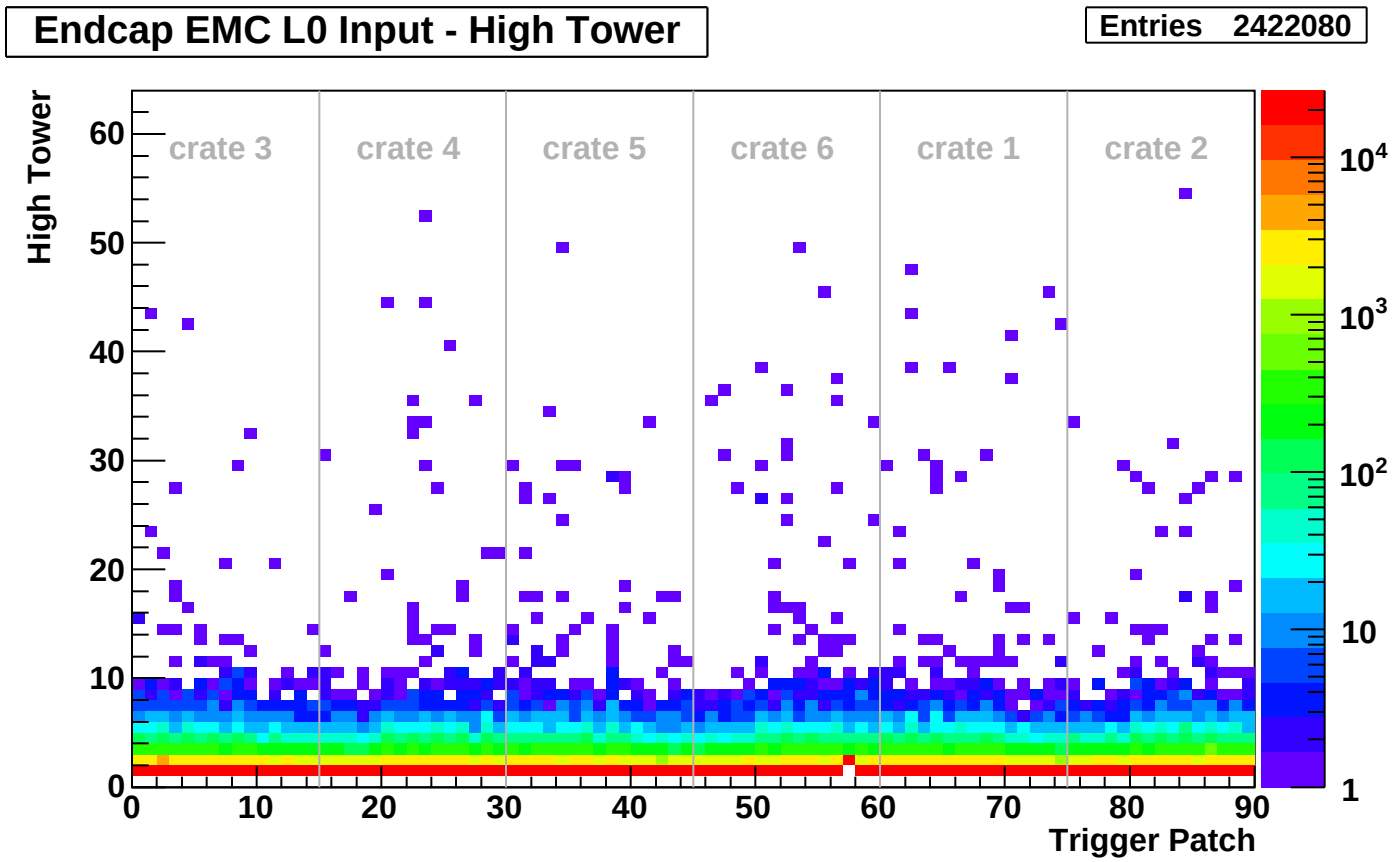

TCU bits
Entries 33166
TCU bits - Simulated
1
0
-1
-2
741 1217 9247 73 860 21018 10
BIT1 BIT2 BHT-0 BHT-1 VPDMB EHT2 JP1 BBCMBLive-pre VPDMBLive-pre ZDCMB-pre ZDCpol MTD FMSfast FMSslow FMSled-FPE Zerobias

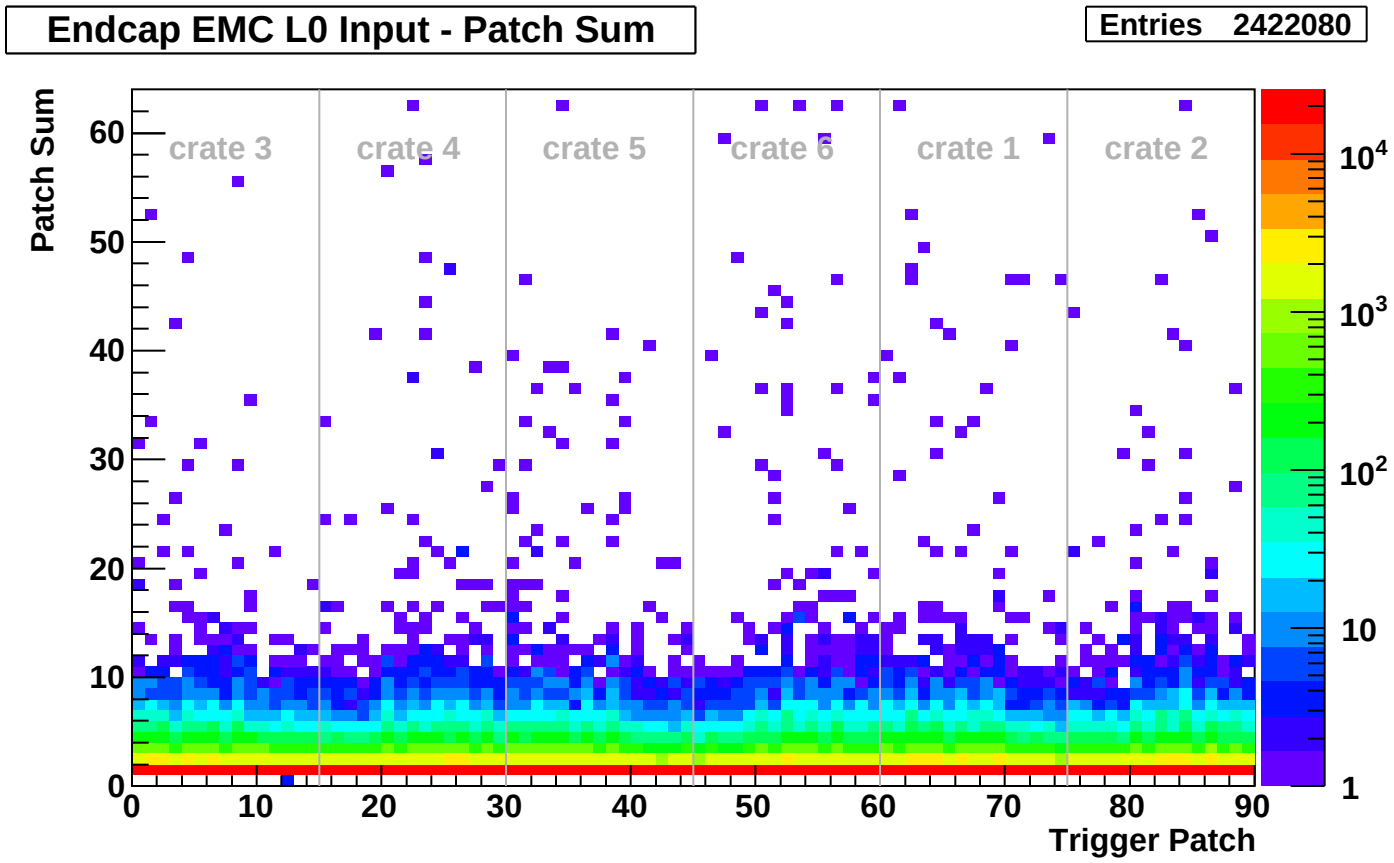

BunchId7Bit (BHT3)
Entries 84
1
0 20 40 60 80 100 120

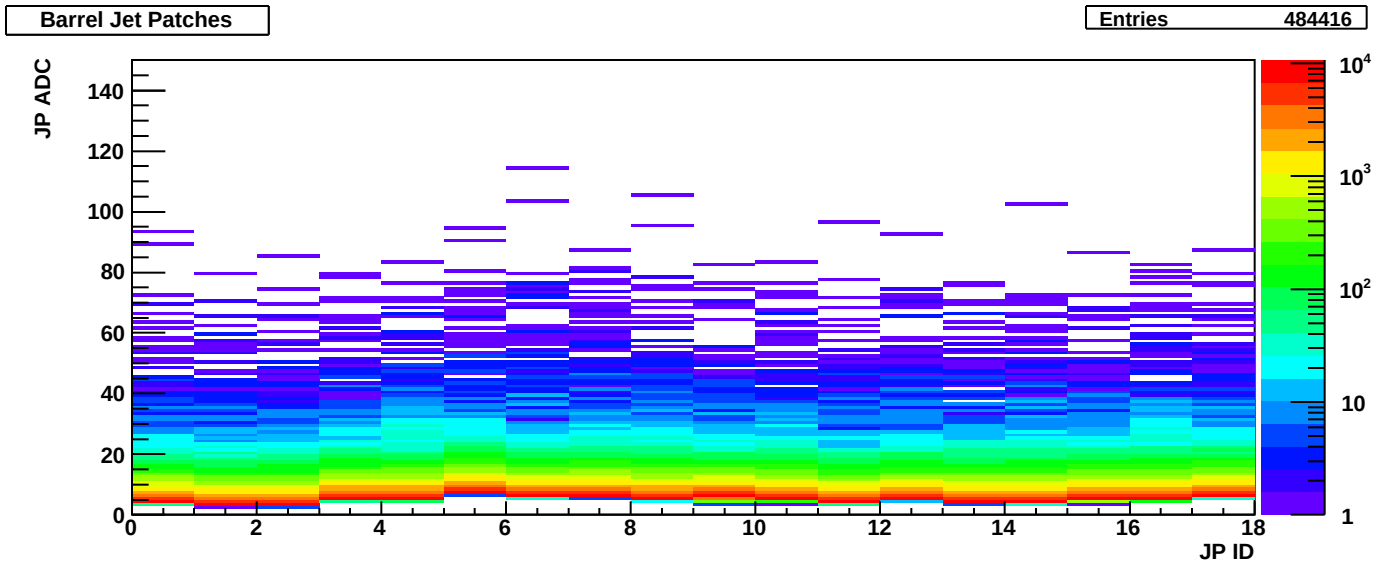

BunchId7Bit (all events)
Entries 26912
10²
10
1
0 20 40 60 80 100 120

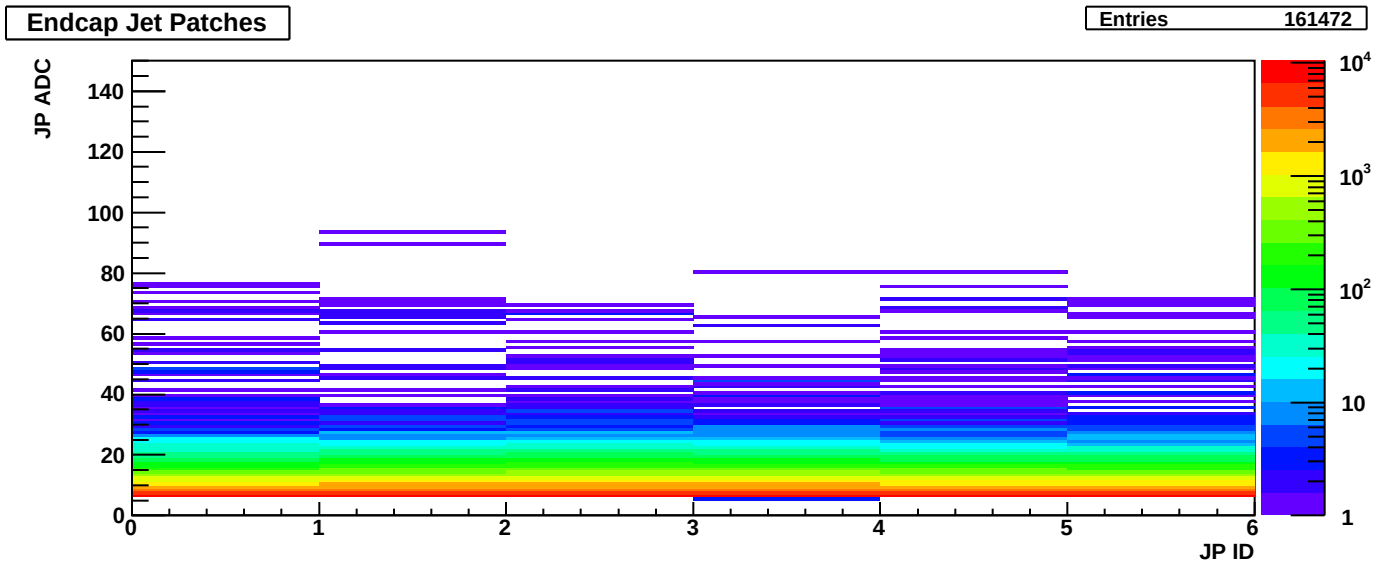

Barrel EMC L0 Input - High Tower
Entries 8073600
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

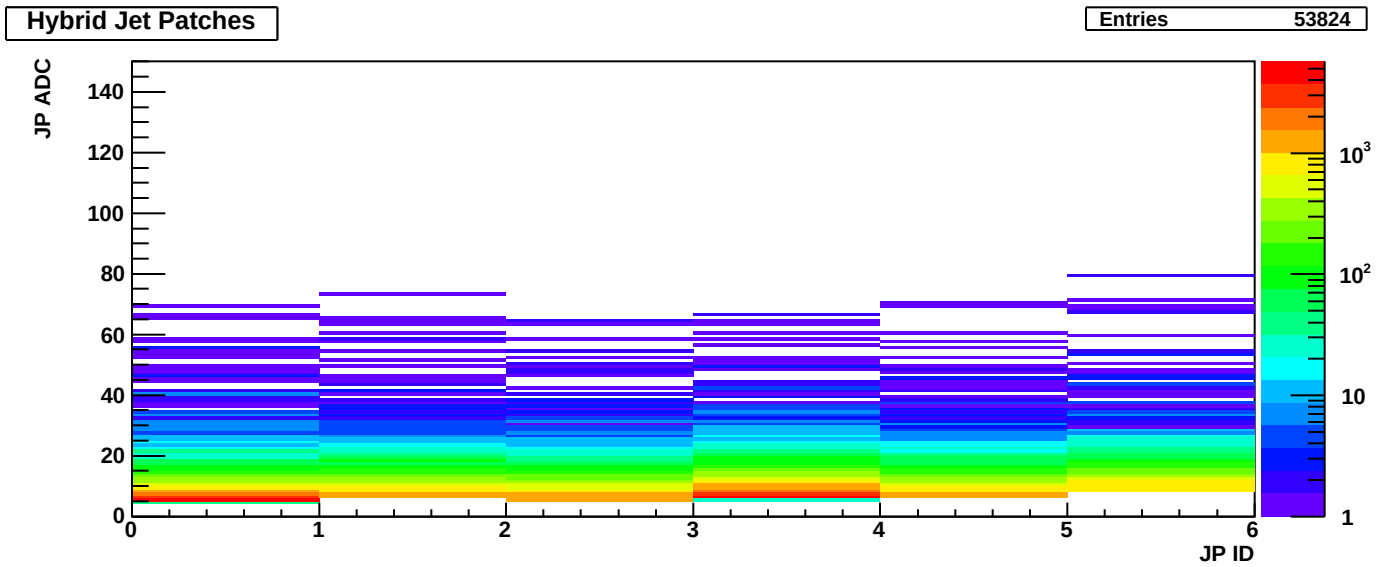

Barrel EMC L0 Input - Patch Sum
Entries 8073600
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

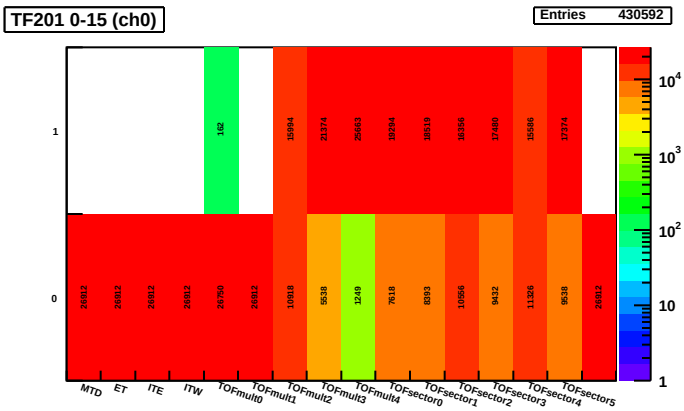

Endcap EMC L0 Input - High Tower
Entries 2422080
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

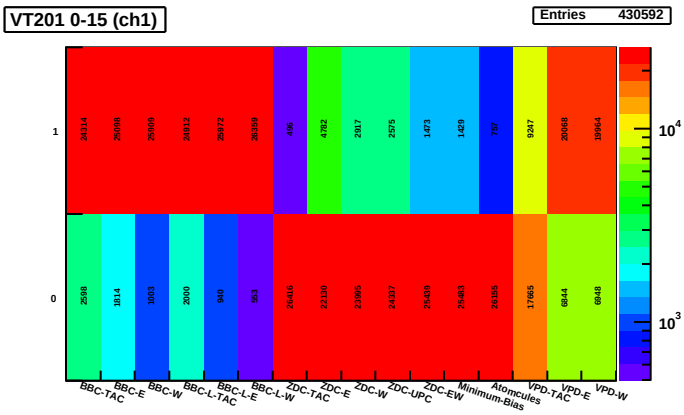

Endcap EMC L0 Input - Patch Sum
Entries 2422080
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

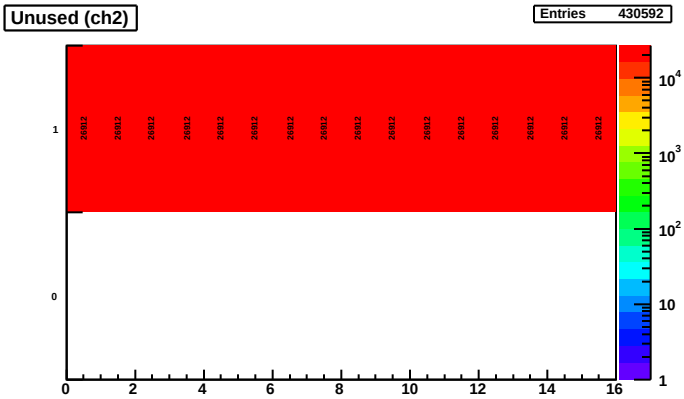

Barrel Jet Patches
Entries 484416
JP ADC
JP ID

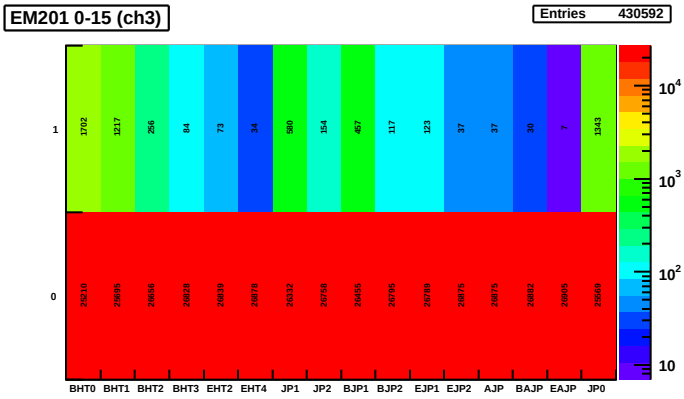

Endcap Jet Patches
Entries 161472
JP ADC
JP ID

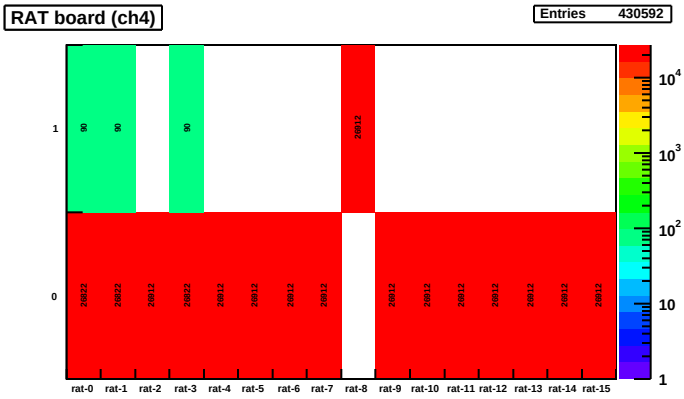

Hybrid Jet Patches
Entries 53824
JP ADC
JP ID

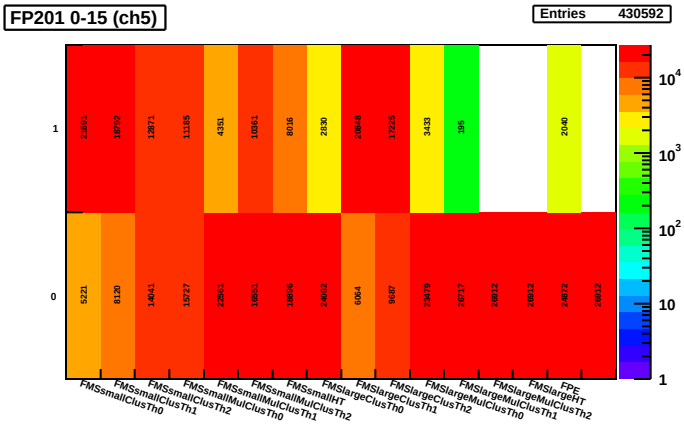

TF201 0-15 (ch0)
Entries 430592
MTD
ET
ITE
ITW
TOFmult0
TOFmult1
TOFmult2
TOFmult3
TOFmult4
TOFsector0
TOFsector1
TOFsector2
TOFsector3
TOFsector4
TOFsector5

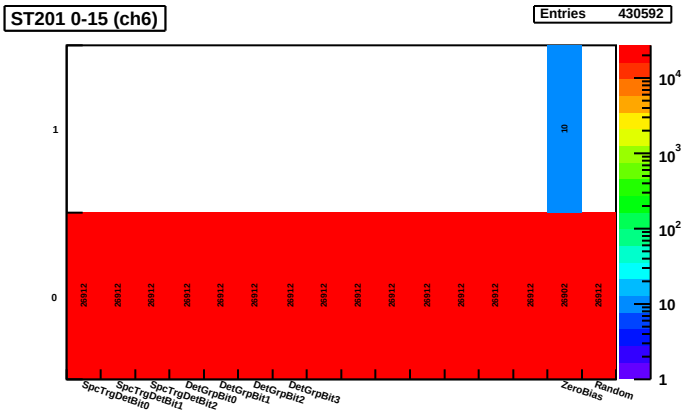

VT201 0-15 (ch1)
Entries 430592
BBC-TAC
BBC-E
BBC-W
BBC-L-TAC
BBC-L-E
BBC-L-W
ZDC-TAC
ZDC-E
ZDC-W
ZDC-UPC
ZDC-EW
Minimum-Bias
Atomcules
VPD-TAC
VPD-E
VPD-W

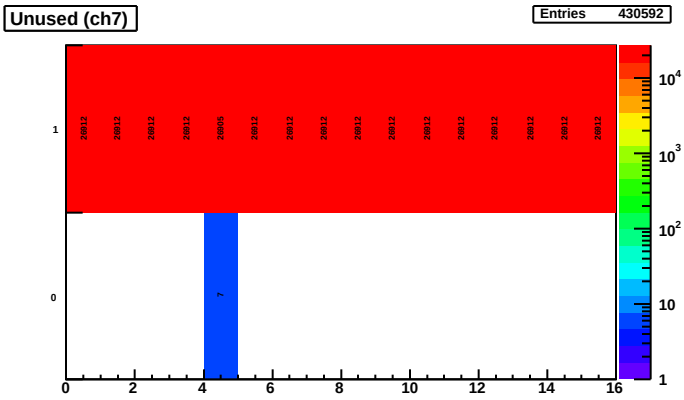

Unused (ch2)
Entries 430592

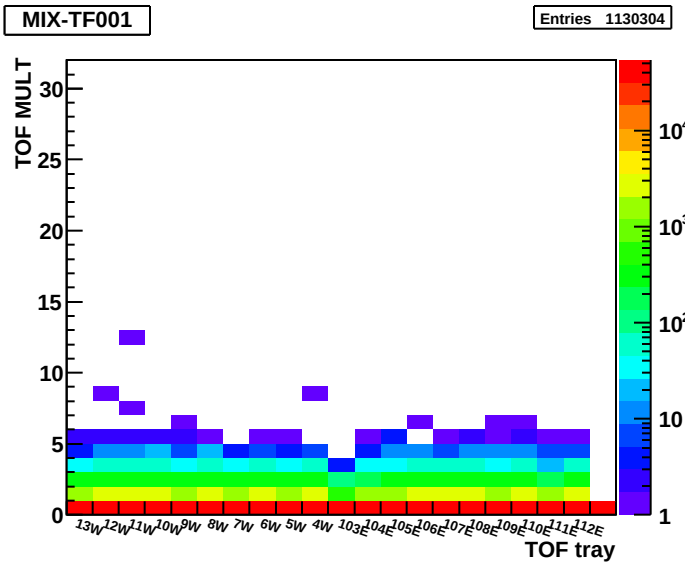

EM201 0-15 (ch3)
Entries 430592
BHT0
BHT1
BHT2
BHT3
EHT2
EHT4
JP1
JP2
BJP1
BJP2
EJP1
EJP2
AJP
BAJP
EAJP
JP0

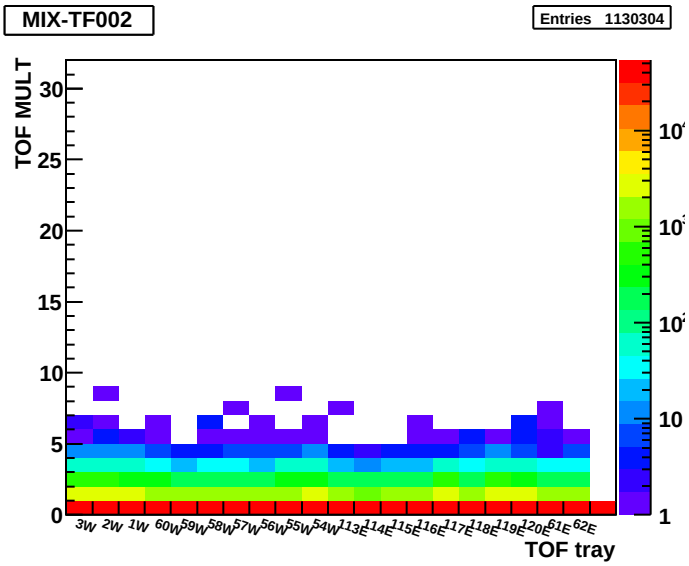

RAT board (ch4)
Entries 430592
rat-0
rat-1
rat-2
rat-3
rat-4
rat-5
rat-6
rat-7
rat-8
rat-9
rat-10
rat-11
rat-12
rat-13
rat-14
rat-15

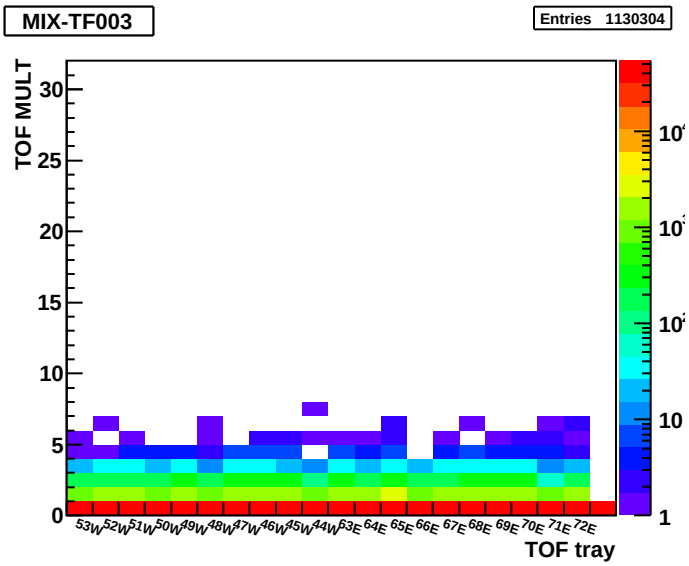

FP201 0-15 (ch5)
Entries 430592
FMSsmallClusTh0
FMSsmallClusTh1
FMSsmallClusTh2
FMSsmallMulClusTh0
FMSsmallMulClusTh1
FMSsmallMulClusTh2
FMSsmallHT
FMSlargeClusTh0
FMSlargeClusTh1
FMSlargeClusTh2
FMSlargeMulClusTh0
FMSlargeMulClusTh1
FMSlargeMulClusTh2
FMSlargeHT
FPE

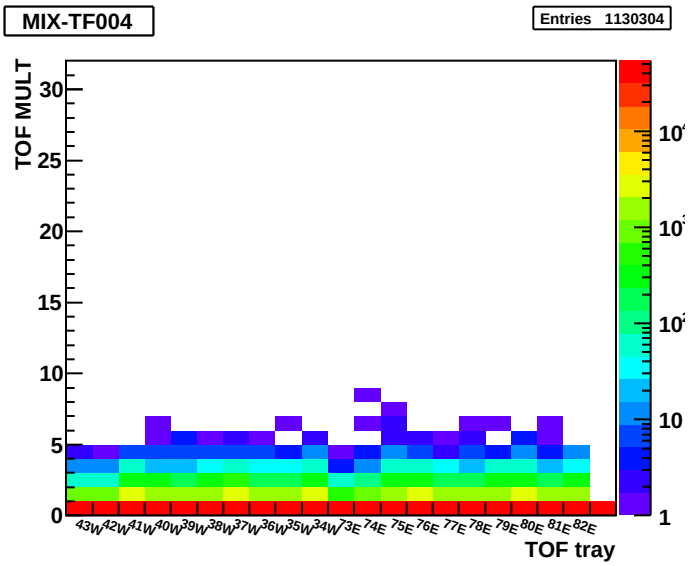

ST201 0-15 (ch6)
Entries 430592
SpcTrgDetBit0
SpcTrgDetBit1
SpcTrgDetBit2
DetGrpBit0
DetGrpBit1
DetGrpBit2
DetGrpBit3
ZeroBias
Random

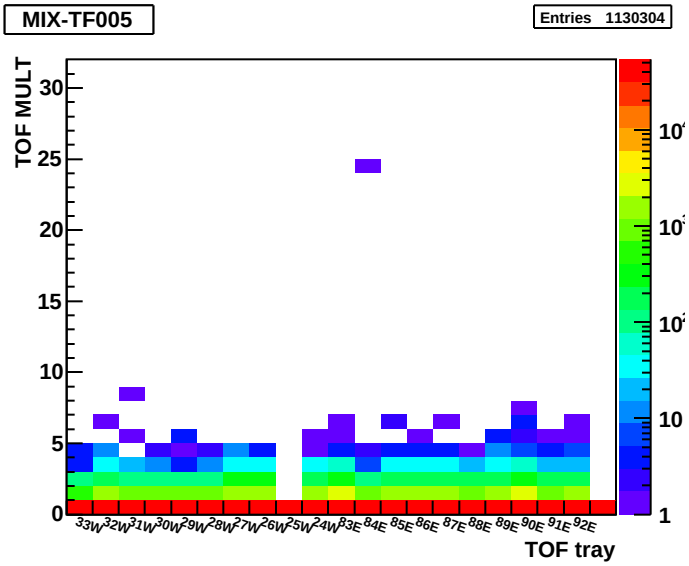

Unused (ch7)
Entries 430592

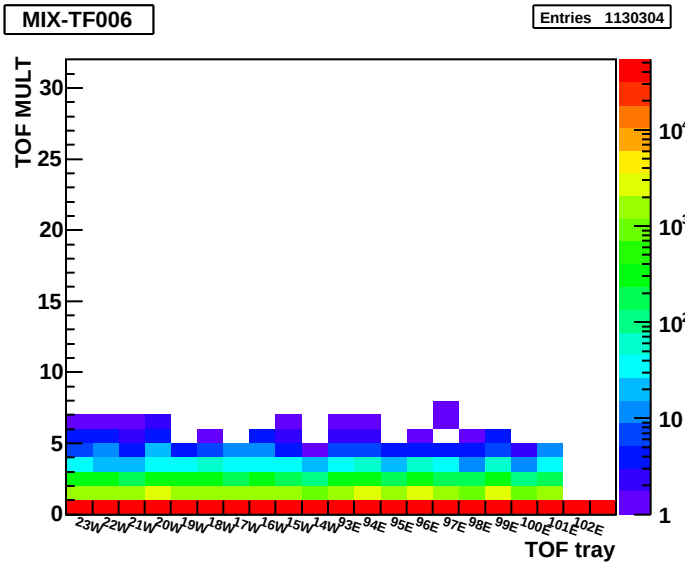

MIX-TF001
Entries 1130304
TOF MULT
TOF tray

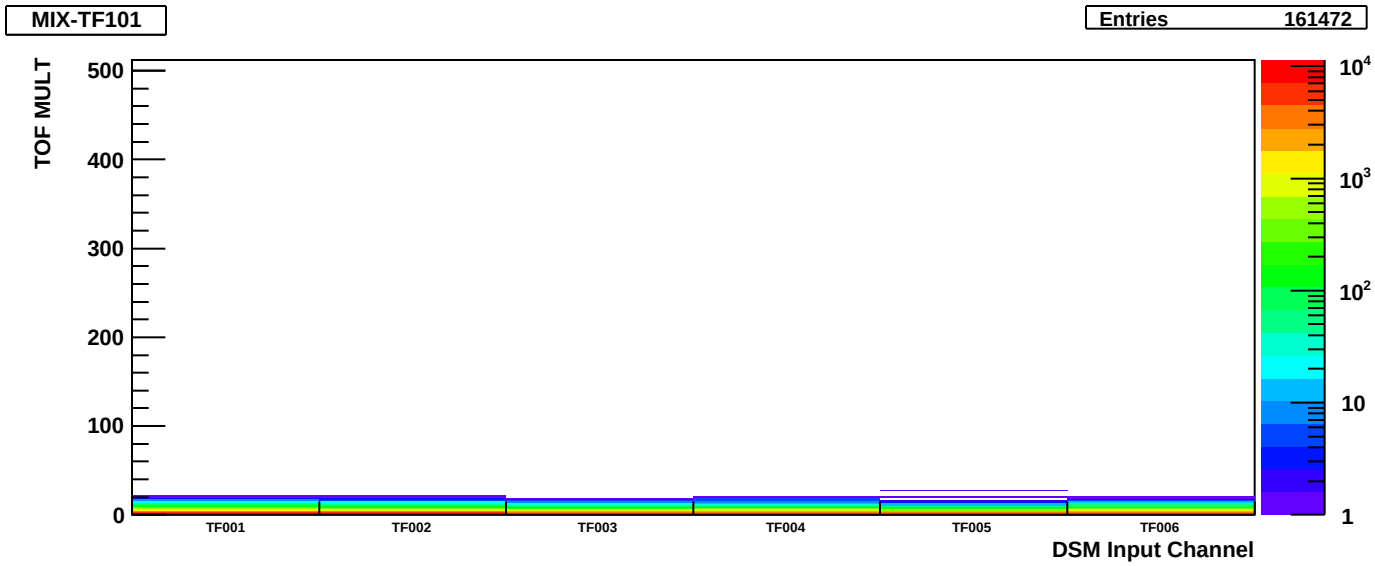

MIX-TF002
Entries 1130304
TOF MULT
TOF tray

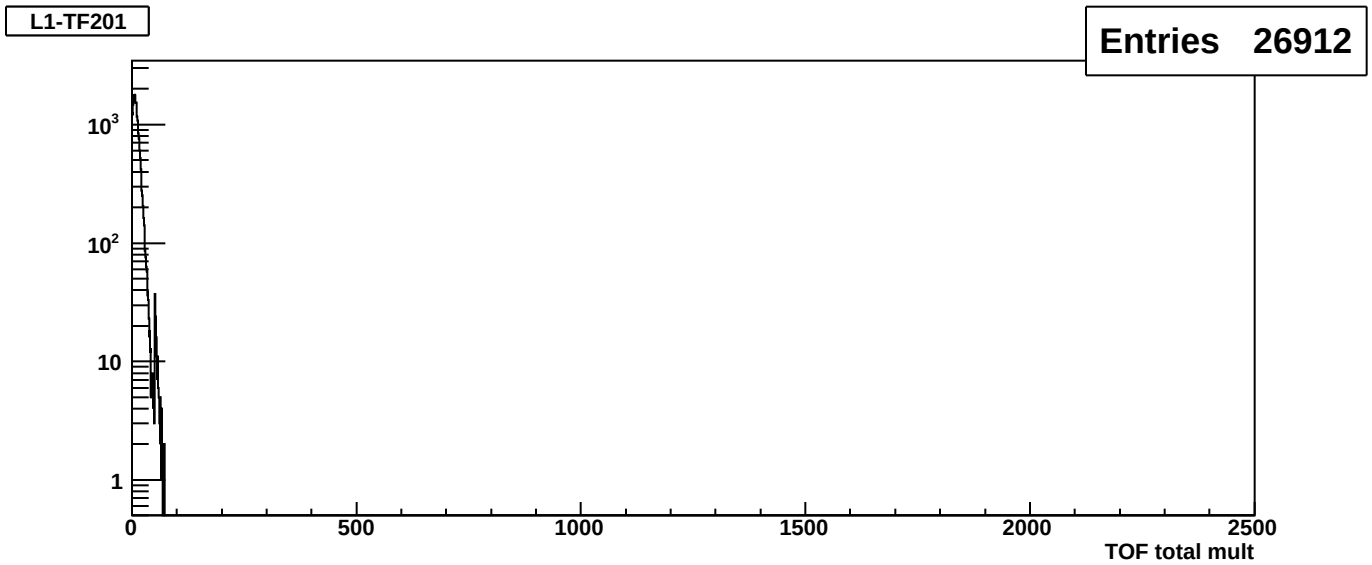

MIX-TF003
Entries 1130304
TOF MULT
TOF tray

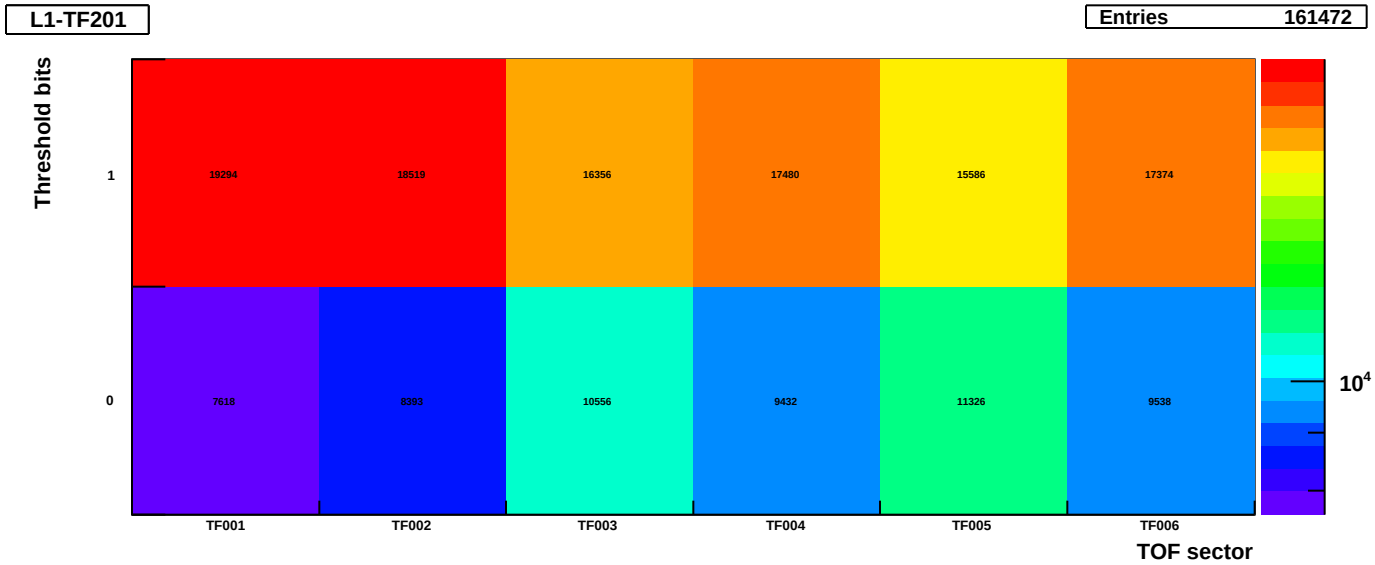

MIX-TF004
Entries 1130304
TOF MULT
TOF tray

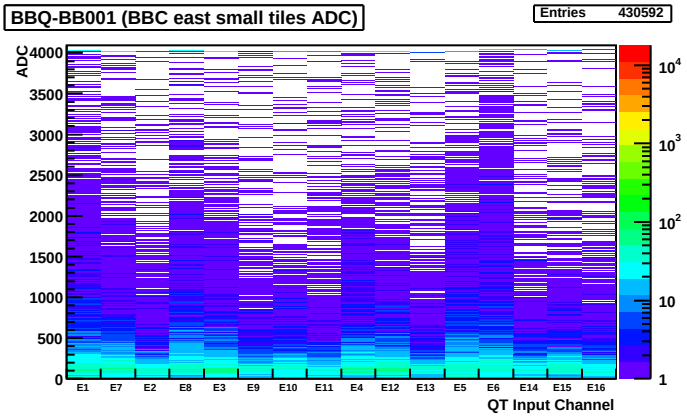

MIX-TF005
Entries 1130304
TOF MULT
TOF tray

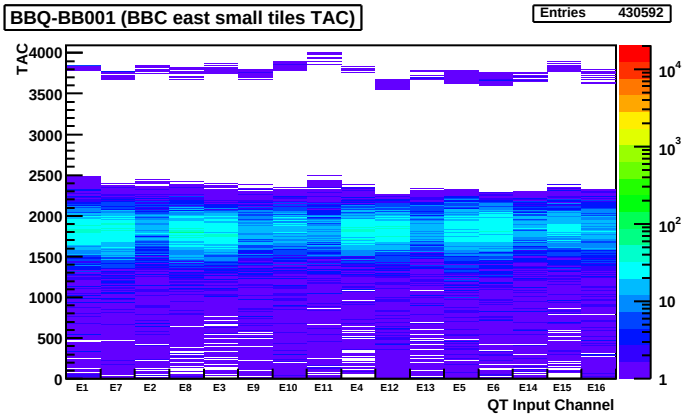

MIX-TF006
Entries 1130304
TOF MULT
TOF tray

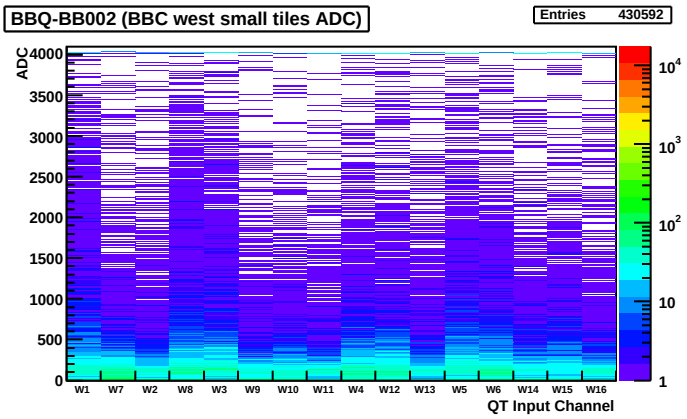

MIX-TF101
Entries 161472
TOF MULT
500
400
300
200
100
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

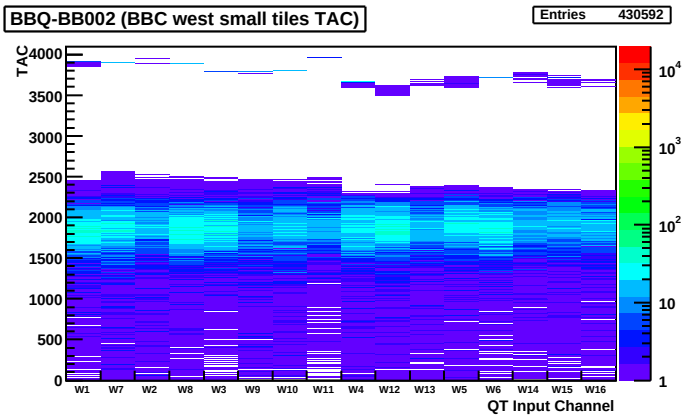

L1-TF201
Entries 26912
10^3
10^2
10
1
0
500
1000
1500
2000
2500
TOF total mult

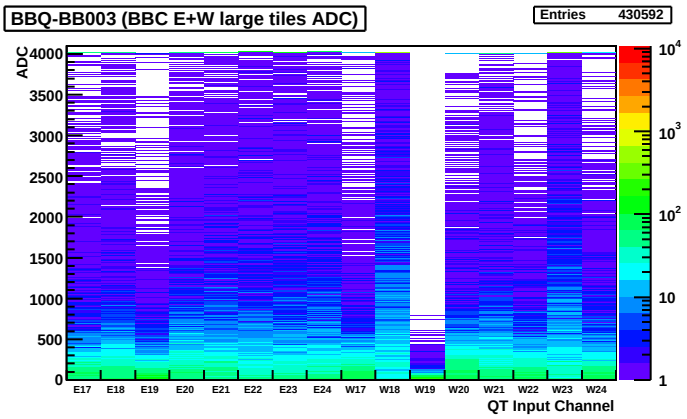

L1-TF201
Entries 161472
Threshold bits
1
0
19294
18519
16356
17480
15586
17374
7618
8393
10556
9432
11326
9538
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4

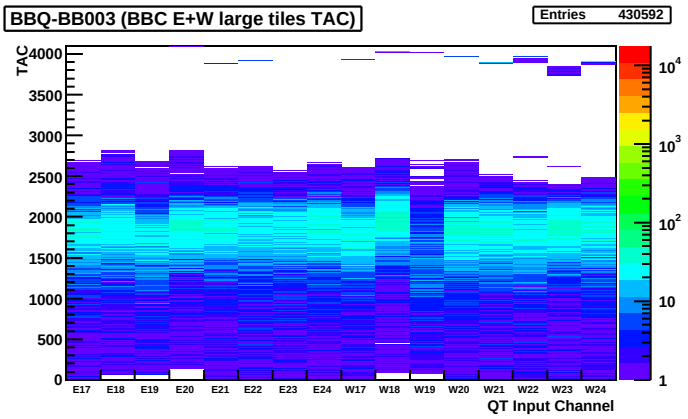

BBQ-BB001 (BBC east small tiles ADC)
Entries 430592
ADC
QT Input Channel

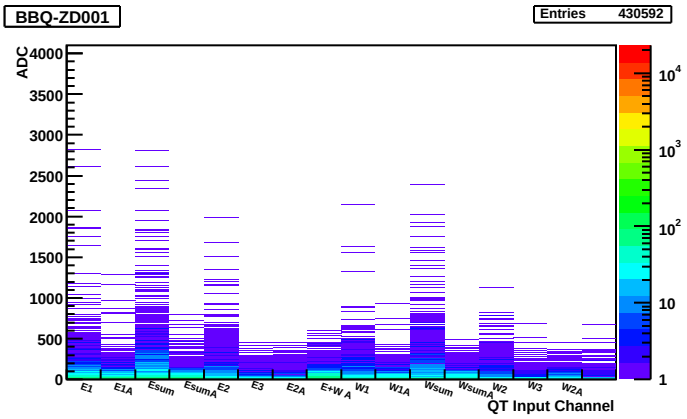

BBQ-BB001 (BBC east small tiles TAC)
Entries 430592
TAC
QT Input Channel

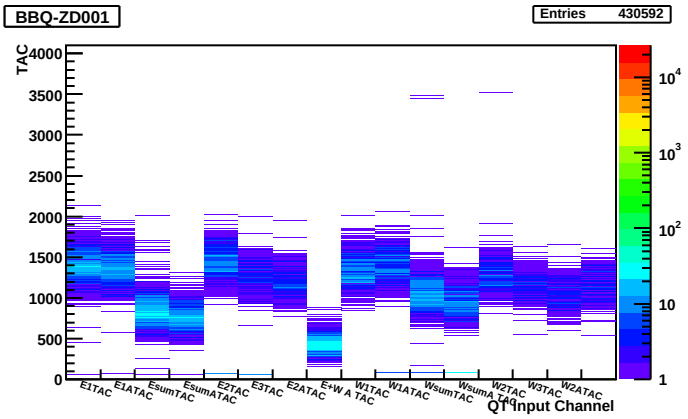

BBQ-BB002 (BBC west small tiles ADC)
Entries 430592
ADC
QT Input Channel

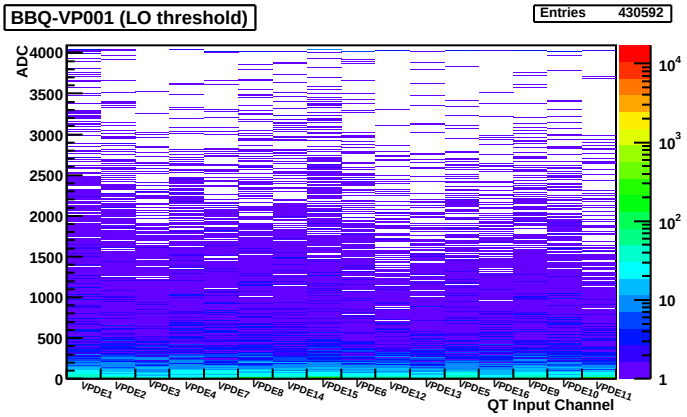

BBQ-BB002 (BBC west small tiles TAC)
Entries 430592
TAC
QT Input Channel

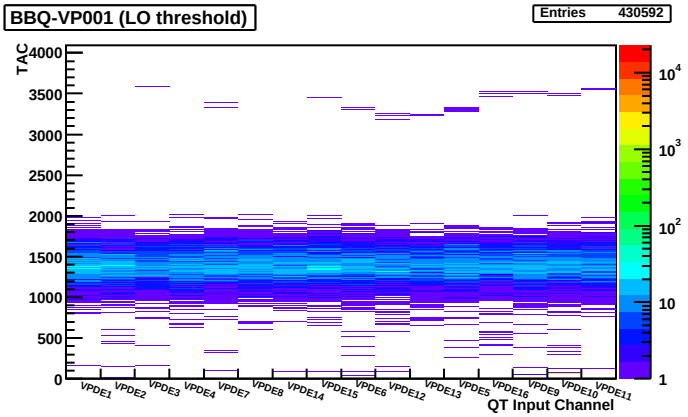

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 430592
ADC
QT Input Channel

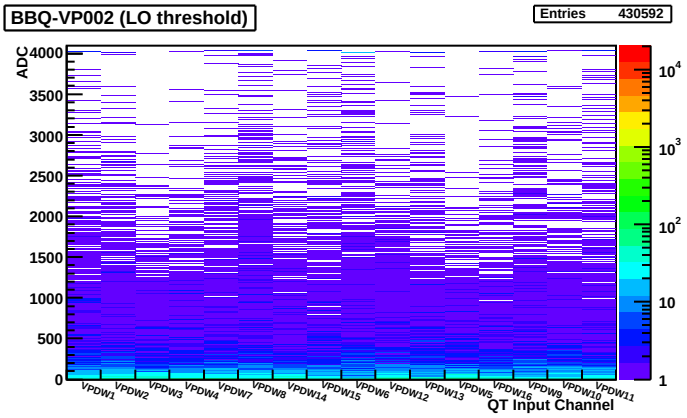

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 430592
TAC
QT Input Channel

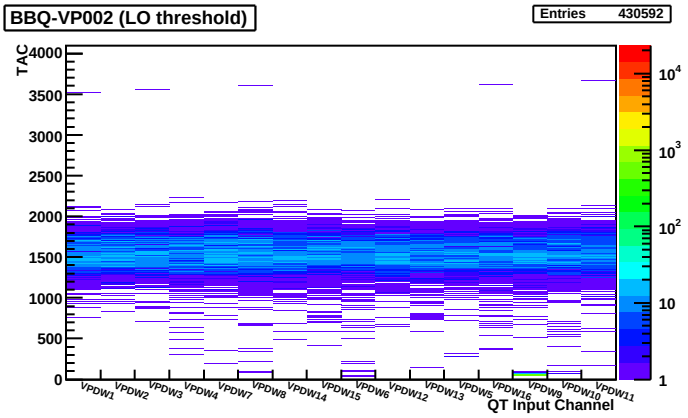

BBQ-ZD001
Entries 430592
ADC
QT Input Channel

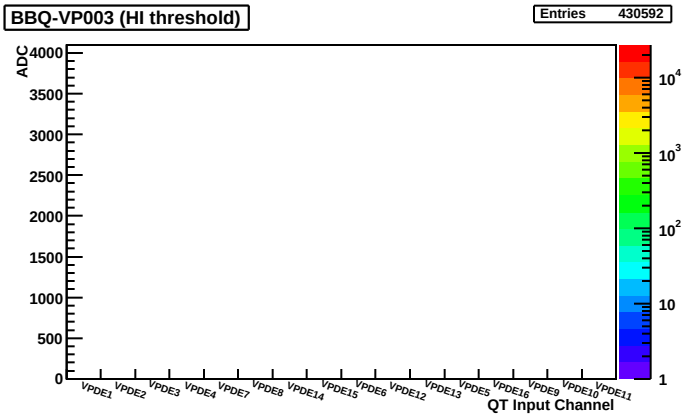

BBQ-ZD001
Entries 430592
TAC
QT Input Channel

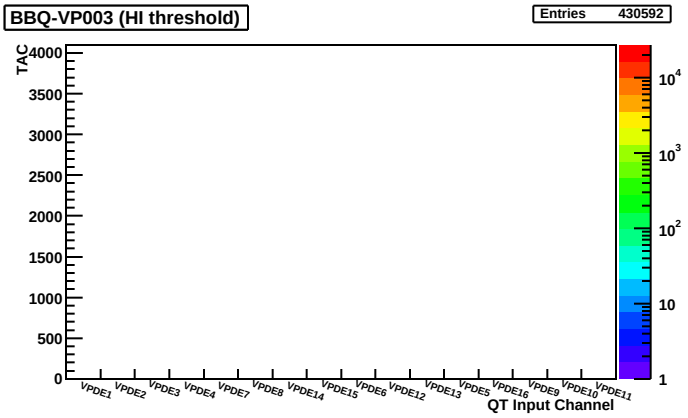

BBQ-VP001 (LO threshold)
Entries 430592
ADC
QT Input Channel

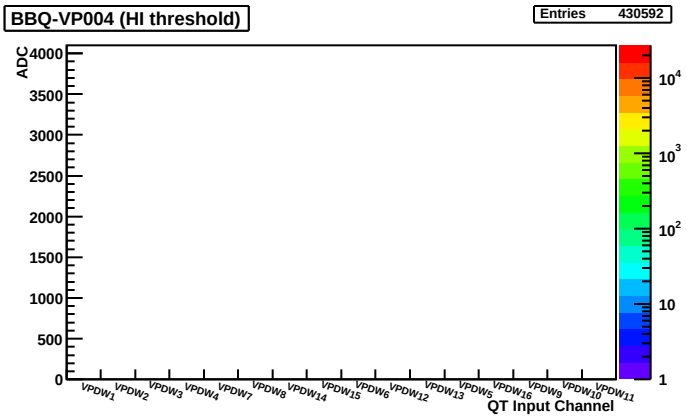

BBQ-VP001 (LO threshold)
Entries 430592
TAC
QT Input Channel

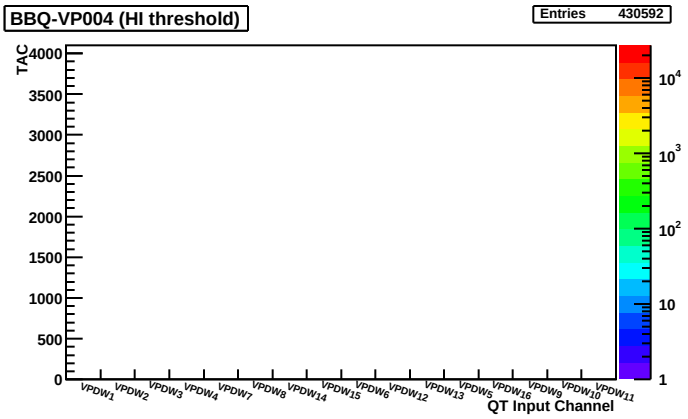

BBQ-VP002 (LO threshold)
Entries 430592
ADC
QT Input Channel

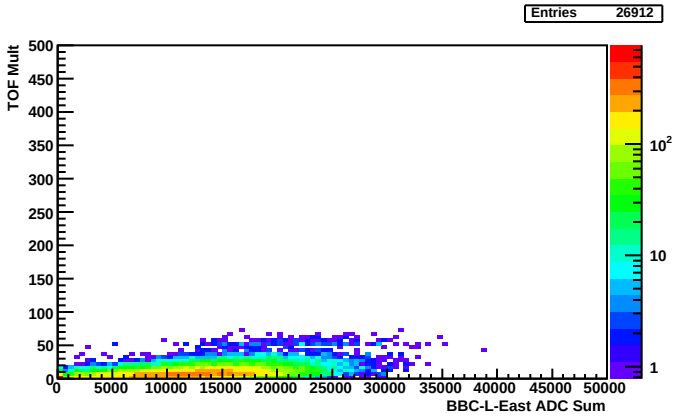

BBQ-VP002 (LO threshold)
Entries 430592
TAC
QT Input Channel

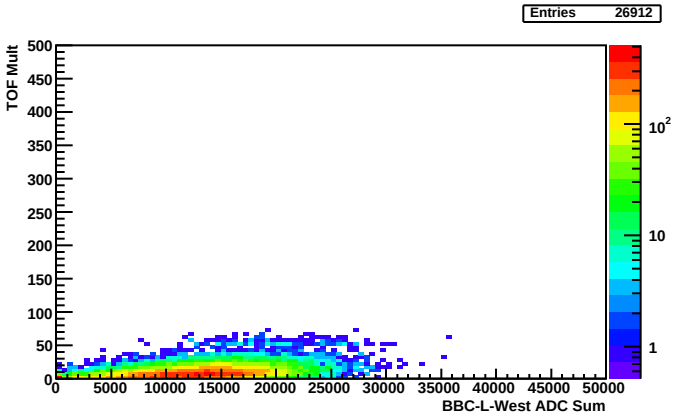

BBQ-VP003 (HI threshold)
Entries 430592
ADC
QT Input Channel

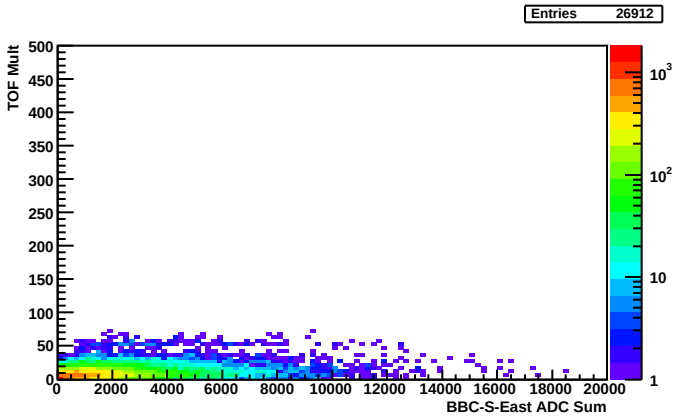

BBQ-VP003 (HI threshold)
Entries 430592
TAC
QT Input Channel

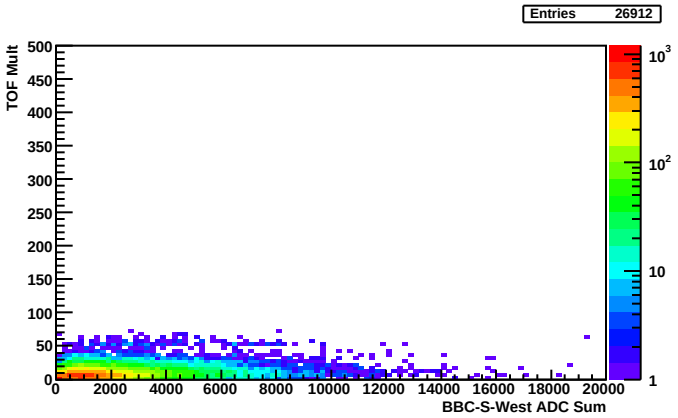

BBQ-VP004 (HI threshold)
Entries 430592
ADC
QT Input Channel

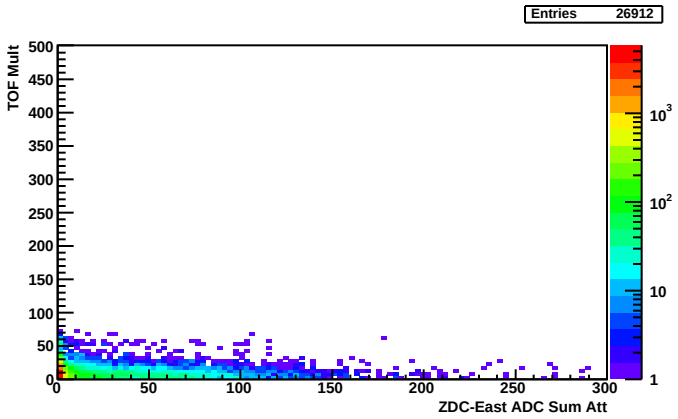

BBQ-VP004 (HI threshold)
Entries 430592
TAC
QT Input Channel

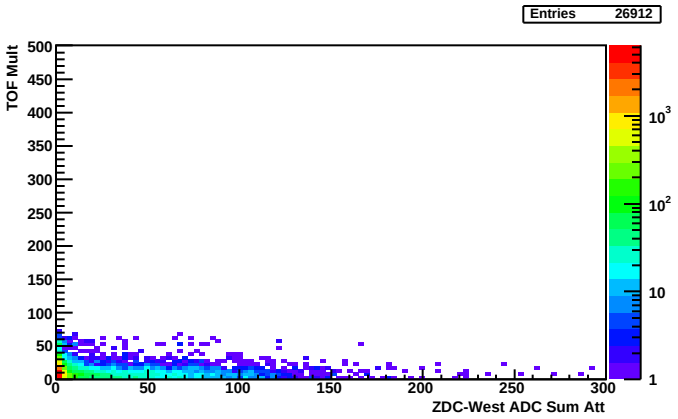

Entries 26912
TOF Mult
BBC-L-East ADC Sum

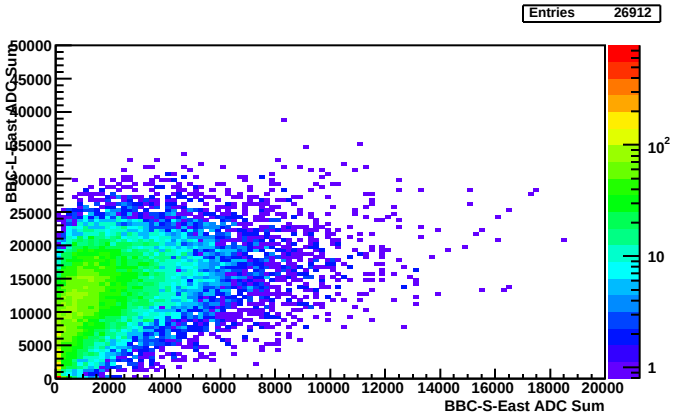

Entries 26912
TOF Mult
BBC-L-West ADC Sum

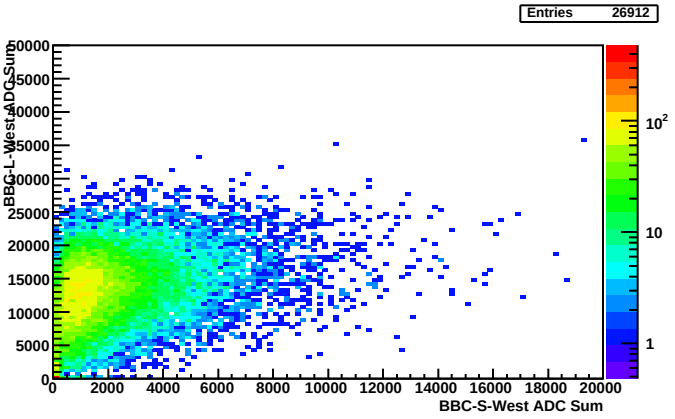

Entries 26912
TOF Mult
BBC-S-East ADC Sum

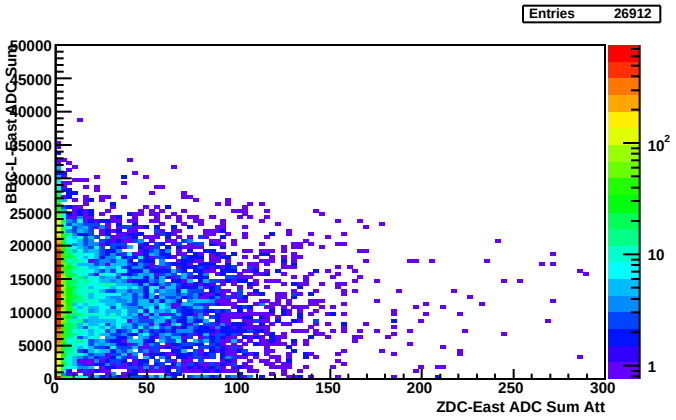

Entries 26912
TOF Mult
BBC-S-West ADC Sum

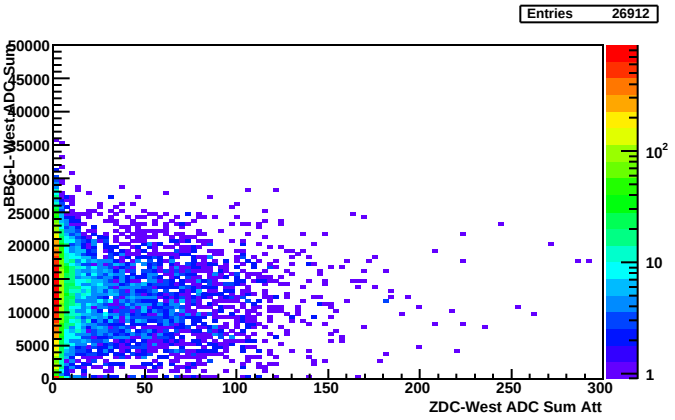

Entries 26912
TOF Mult
ZDC-East ADC Sum Att

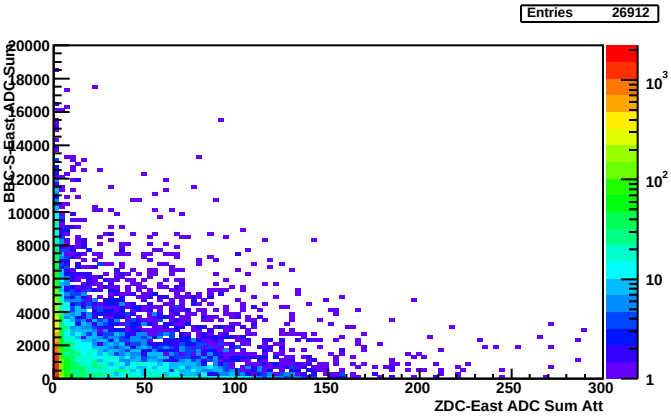

Entries 26912
TOF Mult
ZDC-West ADC Sum Att

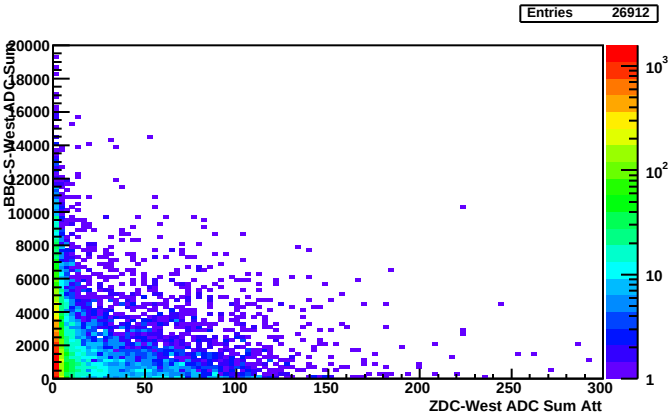

Entries 26912
BBC-L-East ADC Sum
BBC-S-East ADC Sum

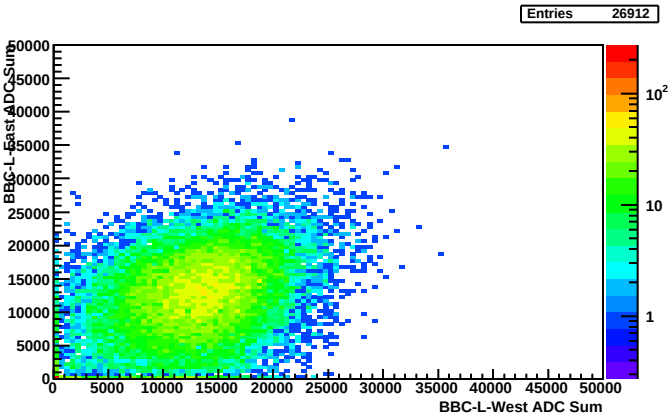

Entries 26912
BBC-L-West ADC Sum
BBC-S-West ADC Sum

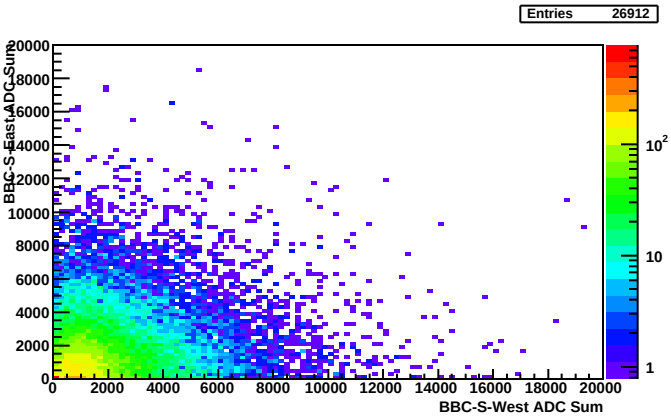

Entries 26912
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

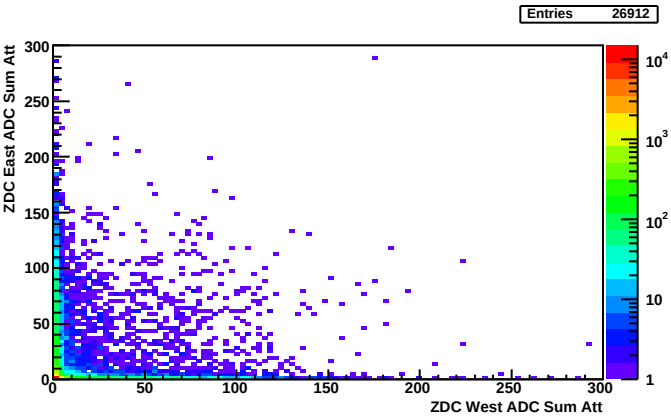

Entries 26912
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

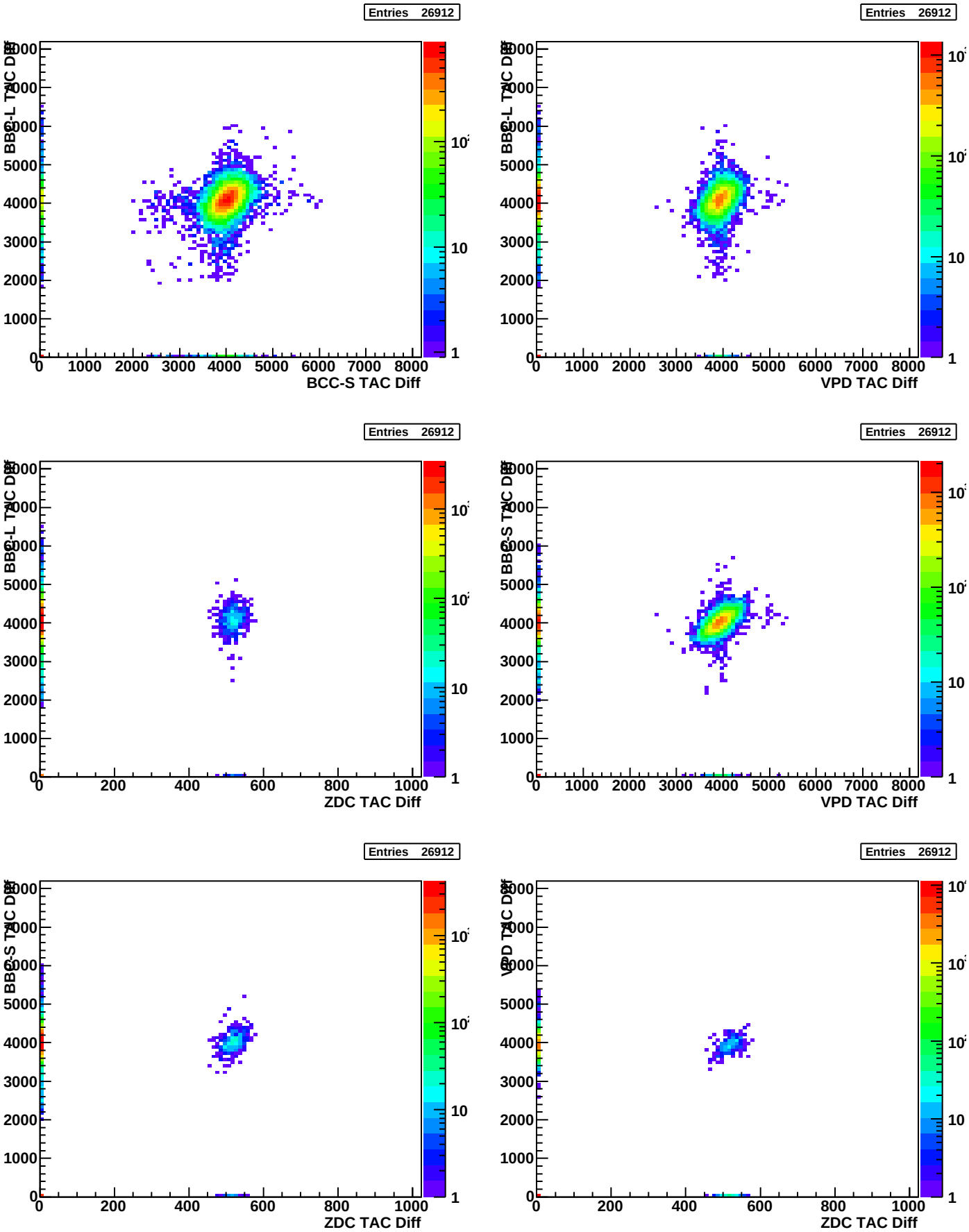

Entries 26912
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

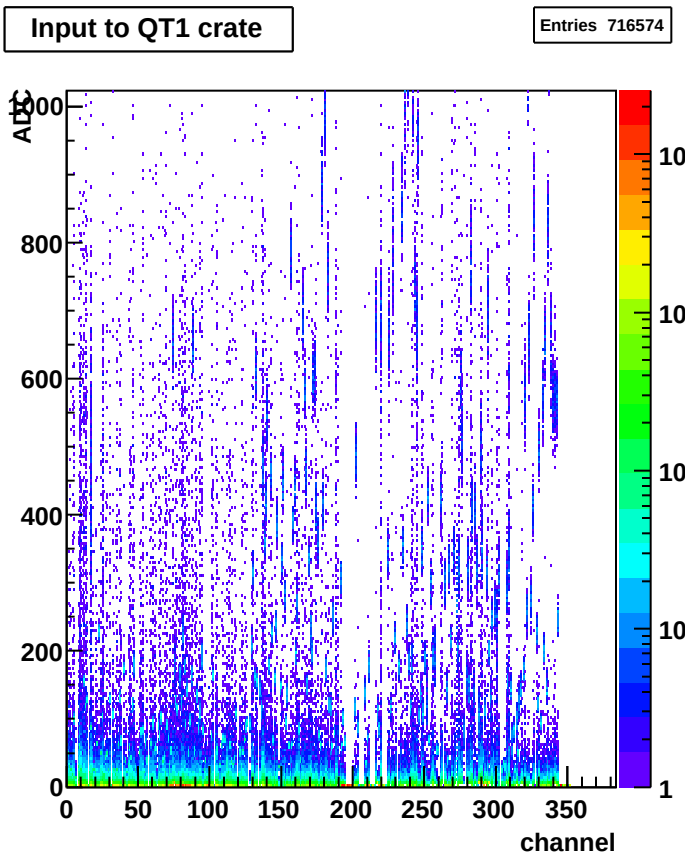

Entries 26912
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

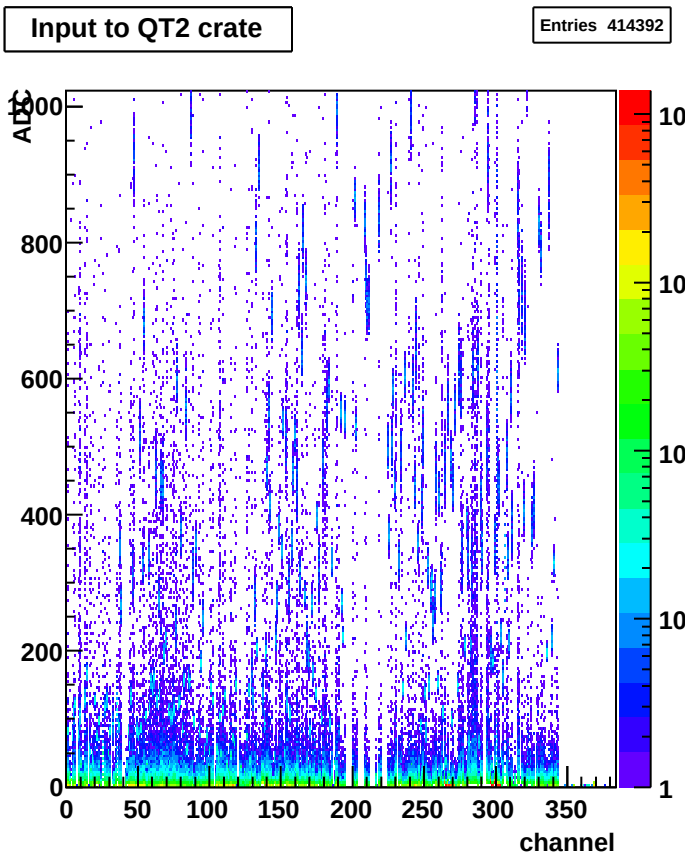

Entries 26912
BBC-L-East ADC Sum
BBC-L-West ADC Sum

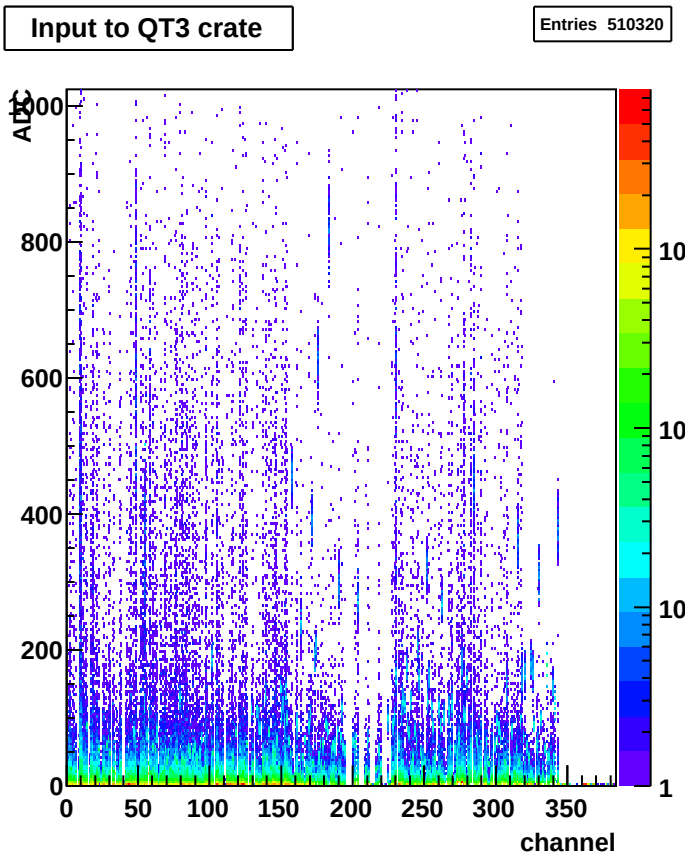

Entries 26912
BBC-S-East ADC Sum
BBC-S-West ADC Sum

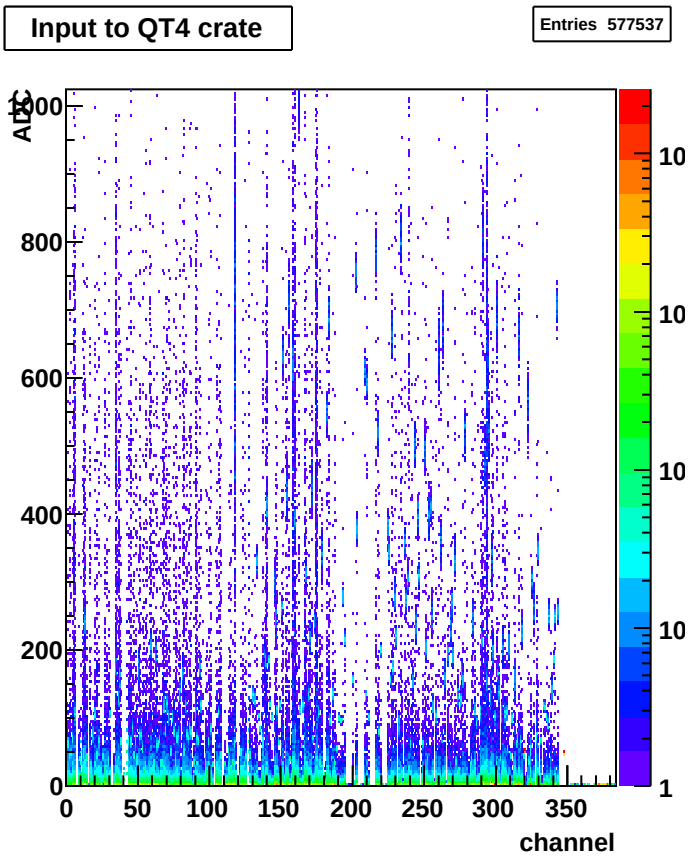

Entries 26912
ZDC East ADC Sum Att
ZDC West ADC Sum Att

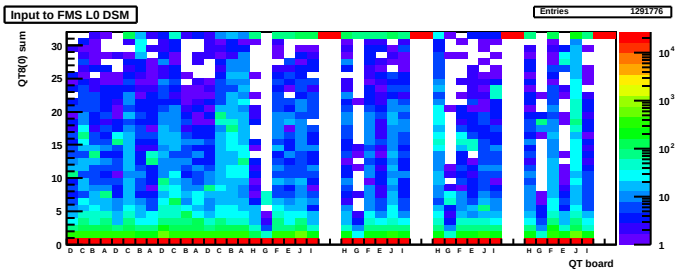

Entries 26912
BBC-L TAC Diff
BCC-S TAC Diff
Entries 26912
BBC-L TAC Diff
VPD TAC Diff
Entries 26912
BBC-L TAC Diff
ZDC TAC Diff
Entries 26912
BBC-S TAC Diff
VPD TAC Diff
Entries 26912
BBC-S TAC Diff
ZDC TAC Diff
Entries 26912
VPD TAC Diff
ZDC TAC Diff

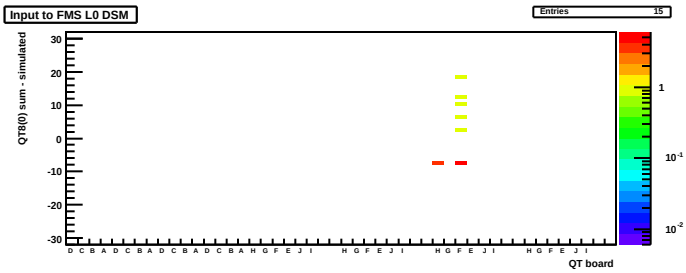

Input to QT1 crate
Entries 716574
ADC
channel

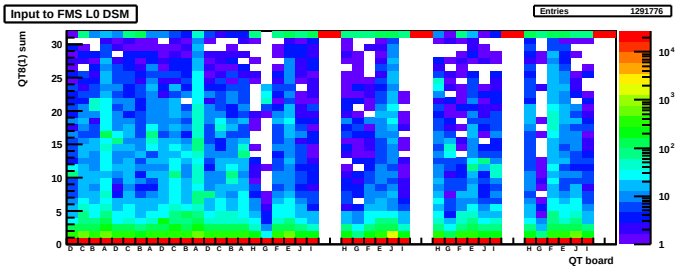

Input to QT2 crate
Entries 414392
ADC
channel

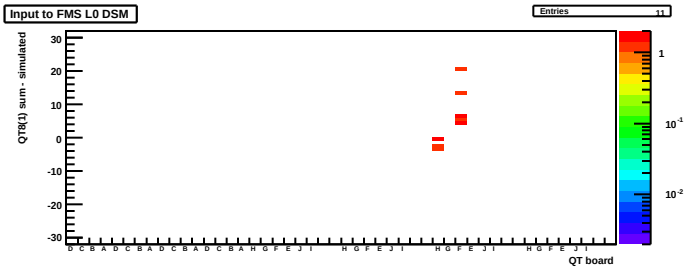

Input to QT3 crate
Entries 510320
ADC
channel

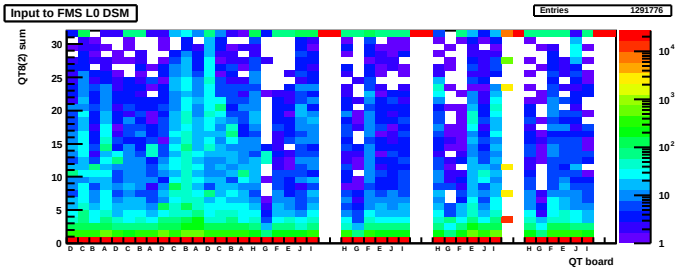

Input to QT4 crate
Entries 577537
ADC
channel

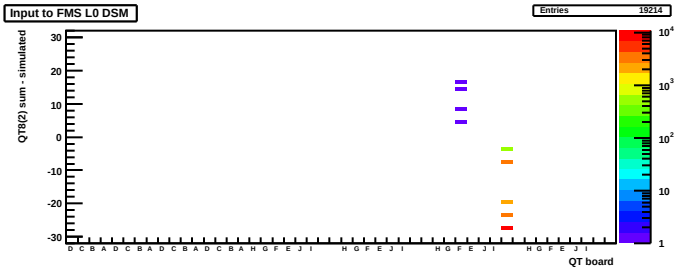

Input to FMS L0 DSM
Entries 1291776
QT8(0) sum
QT board

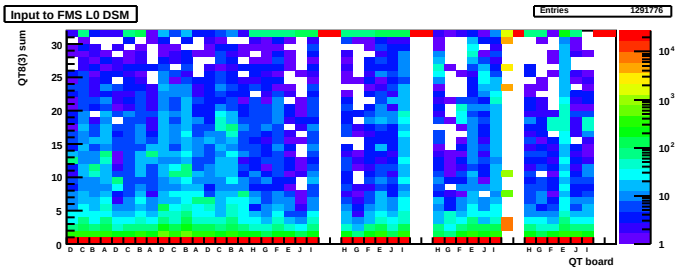

Input to FMS L0 DSM
Entries 15
QT8(0) sum - simulated
QT board

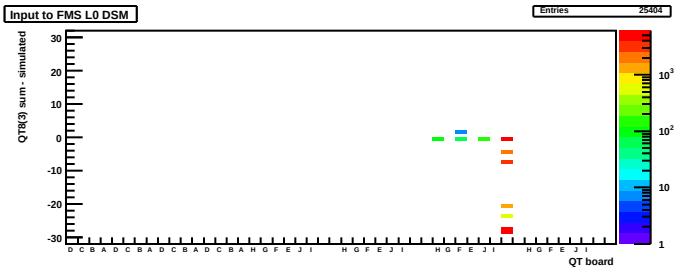

Input to FMS L0 DSM
Entries 1291776
QT8(1) sum
QT board

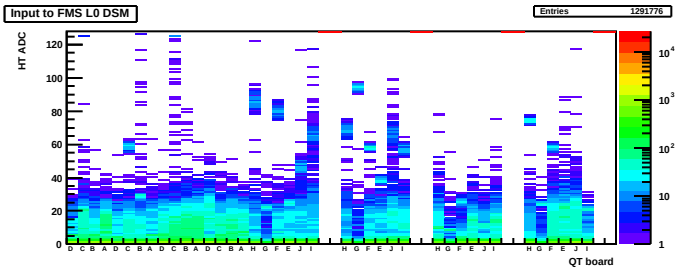

Input to FMS L0 DSM
Entries 11
QT8(1) sum - simulated
QT board

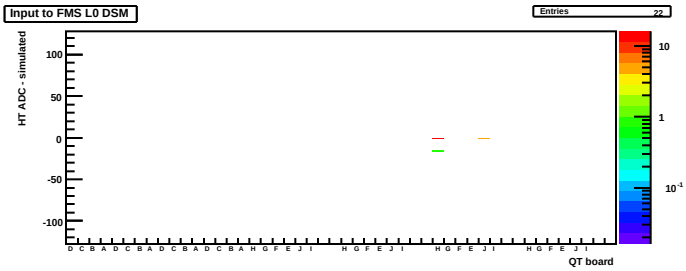

Input to FMS L0 DSM
Entries 1291776
QT8(2) sum
QT board

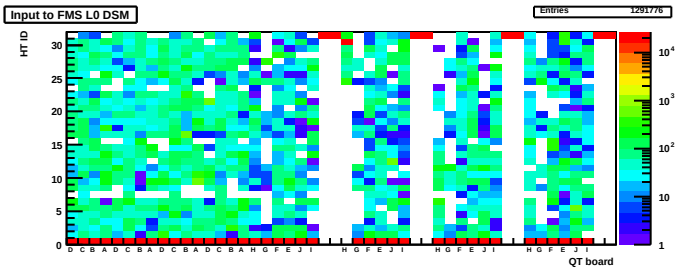

Input to FMS L0 DSM
Entries 19214
QT8(2) sum - simulated
QT board

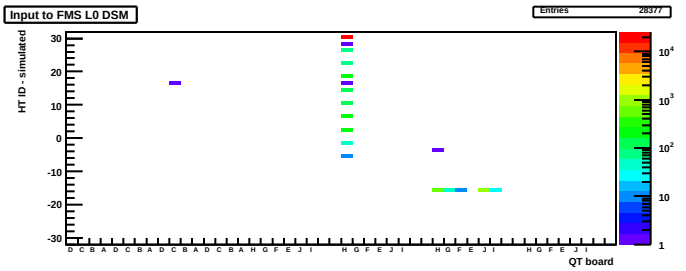

Input to FMS L0 DSM
Entries 1291776
QT8(3) sum
QT board

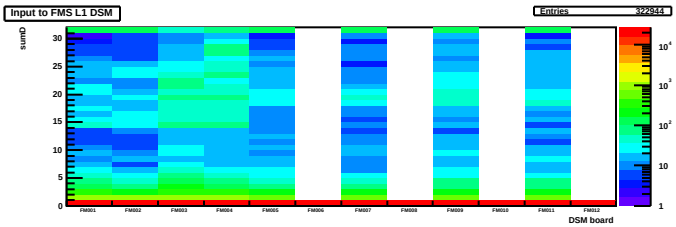

Input to FMS L0 DSM
Entries 25404
QT8(3) sum - simulated
QT board

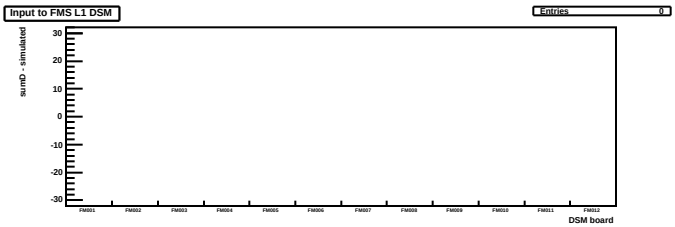

Input to FMS L0 DSM
Entries 1291776
HT ADC
QT board

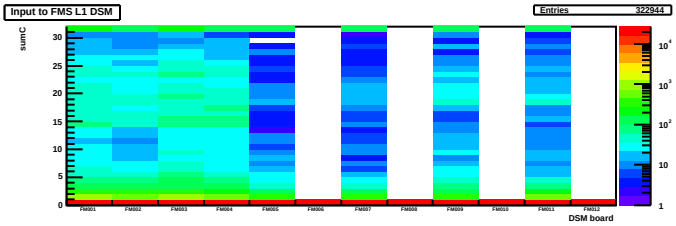

Input to FMS L0 DSM
Entries 22
HT ADC - simulated
QT board

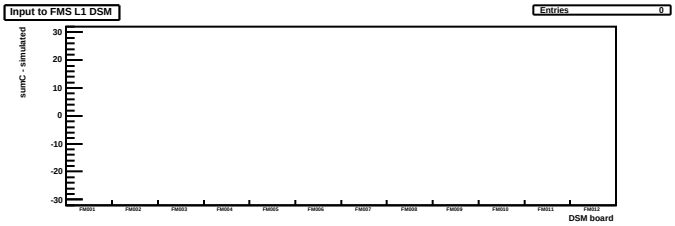

Input to FMS L0 DSM
Entries 1291776
HT ID
QT board

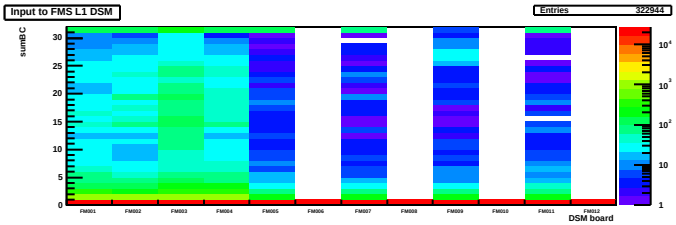

Input to FMS L0 DSM
Entries 28377
HT ID - simulated
QT board

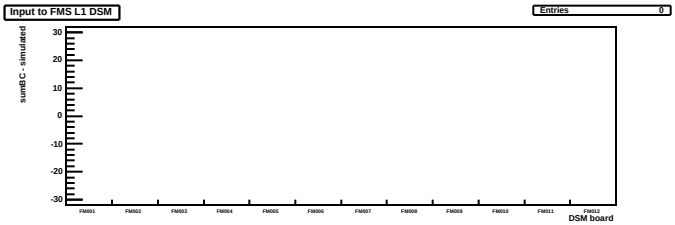

Input to FMS L1 DSM
Entries 322944
sumD
DSM board

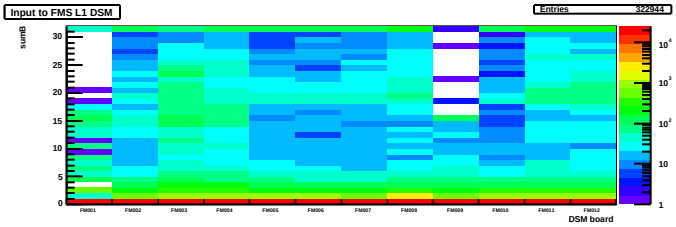

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

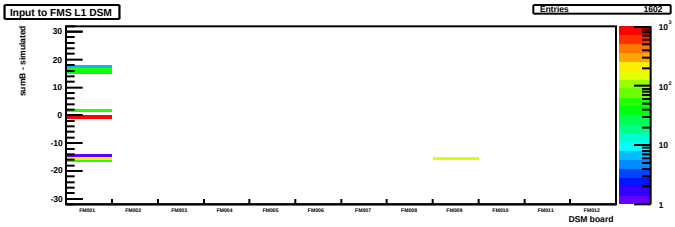

Input to FMS L1 DSM
Entries 322944
sumC
DSM board

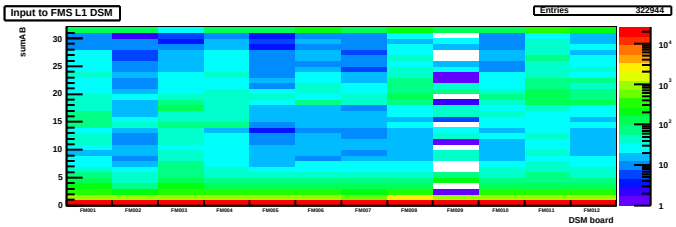

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

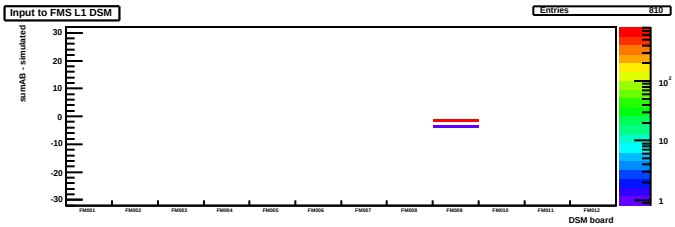

Input to FMS L1 DSM
Entries 322944
sumBC
DSM board

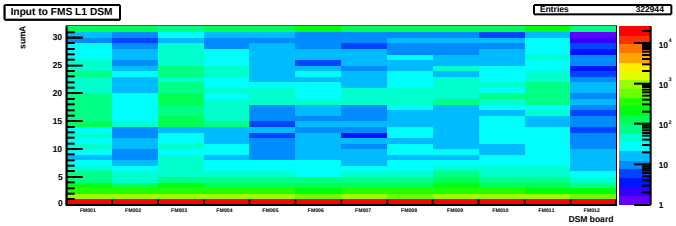

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

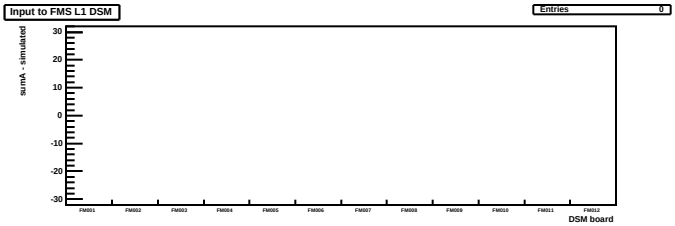

Input to FMS L1 DSM
Entries 322944
sumB
DSM board

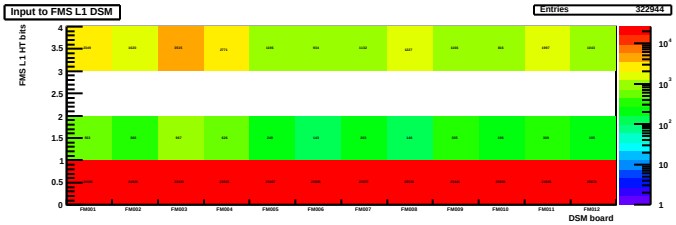

Input to FMS L1 DSM
Entries 1602
sumB - simulated
DSM board

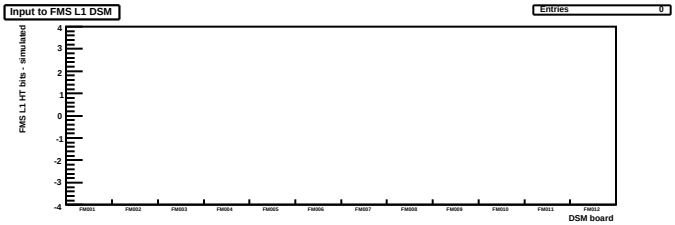

Input to FMS L1 DSM
Entries 322944
sumAB
DSM board

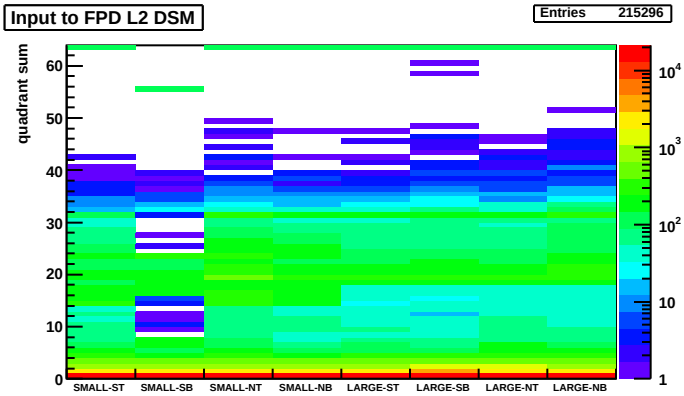

Input to FMS L1 DSM
Entries 810
sumAB - simulated
DSM board

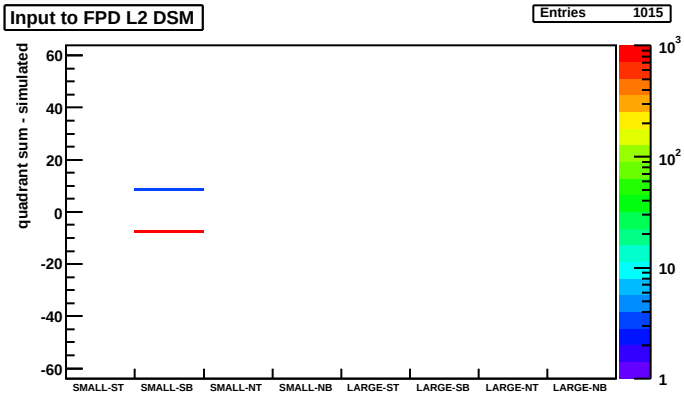

Input to FMS L1 DSM
Entries 322944
sumA
DSM board

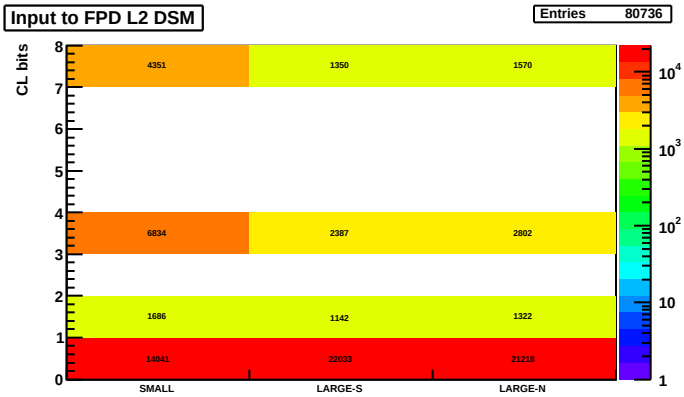

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

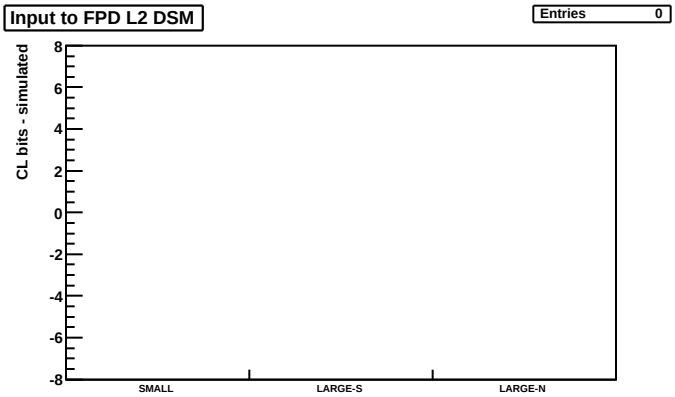

Input to FMS L1 DSM
Entries 322944
FMS L1 HT bits
DSM board

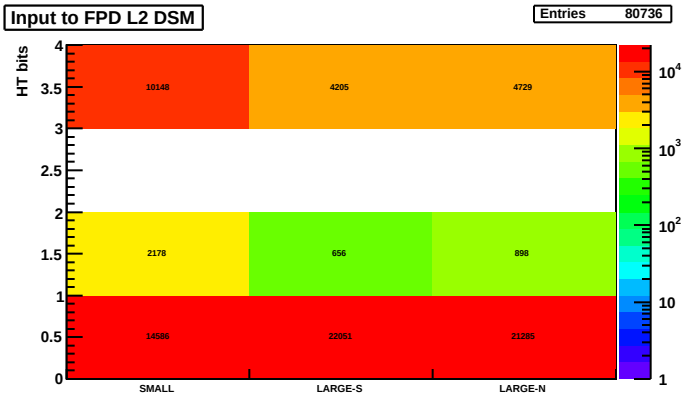

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

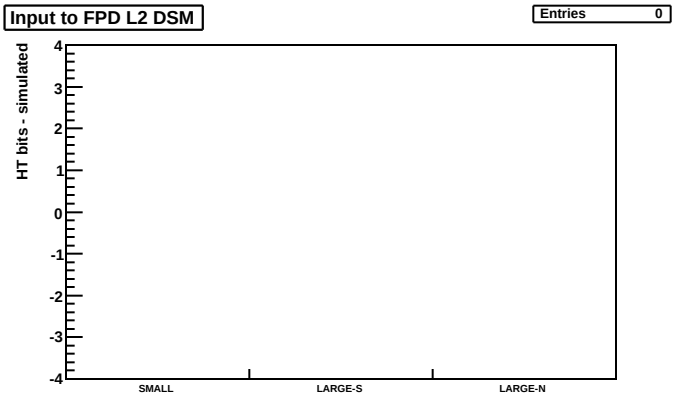

Input to FPD L2 DSM
Entries 215296
quadrant sum
SMALL-ST
SMALL-SB
SMALL-NT
SMALL-NB
LARGE-ST
LARGE-SB
LARGE-NT
LARGE-NB

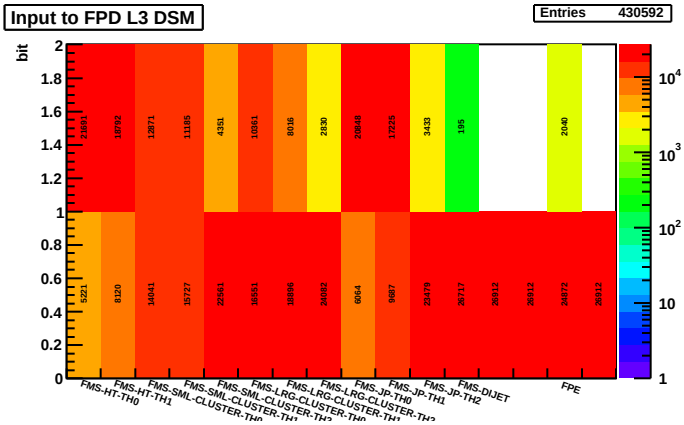

Input to FPD L2 DSM
Entries 1015
quadrant sum - simulated
SMALL-ST
SMALL-SB
SMALL-NT
SMALL-NB
LARGE-ST
LARGE-SB
LARGE-NT
LARGE-NB

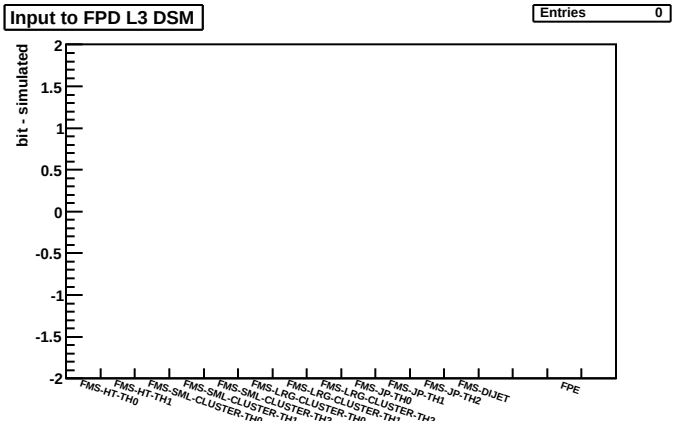

Input to FPD L2 DSM
Entries 80736
CL bits
4351
1350
1570
6834
2387
2802
1686
1142
1322
14041
22033
21218
SMALL
LARGE-S
LARGE-N

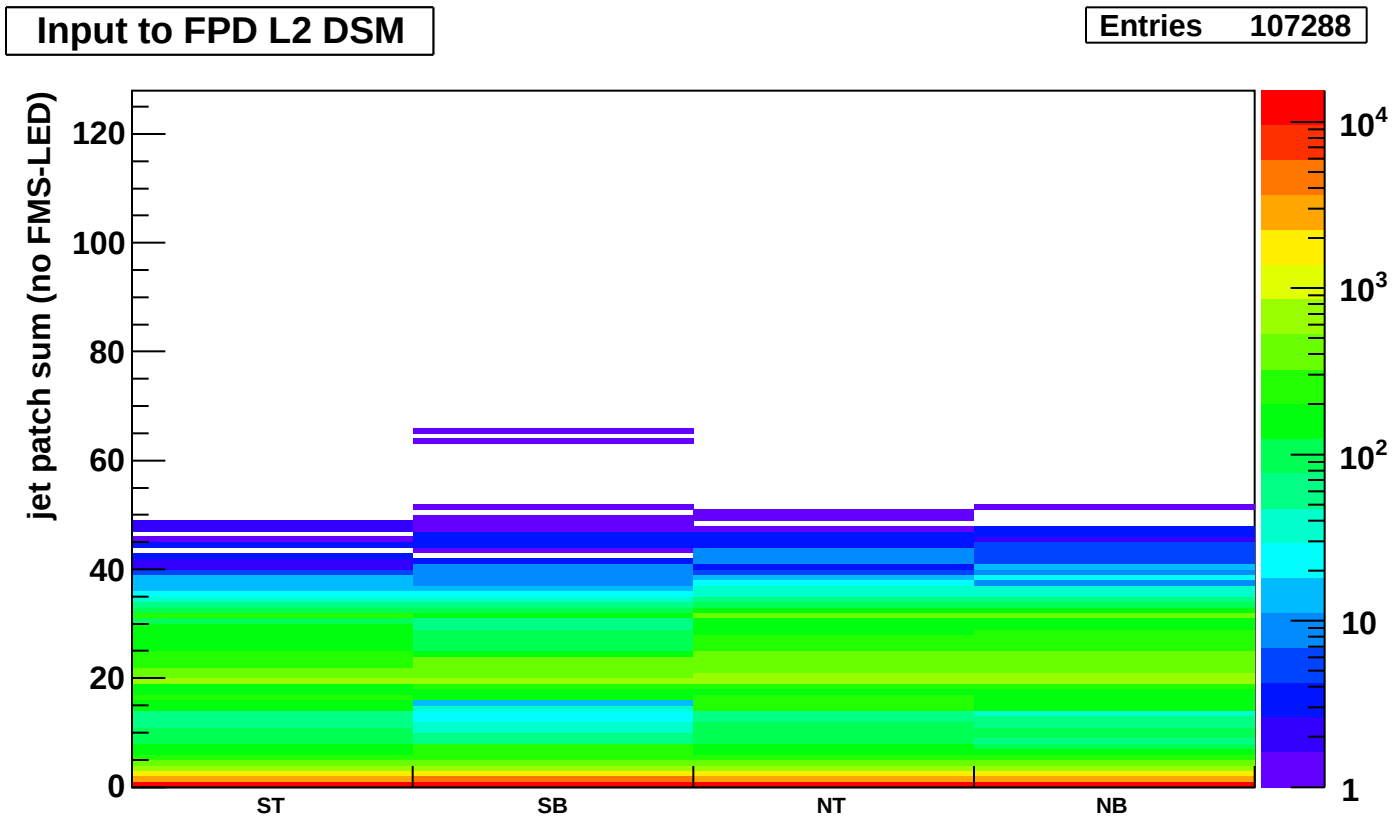

Input to FPD L2 DSM
Entries 0
CL bits - simulated
SMALL
LARGE-S
LARGE-N

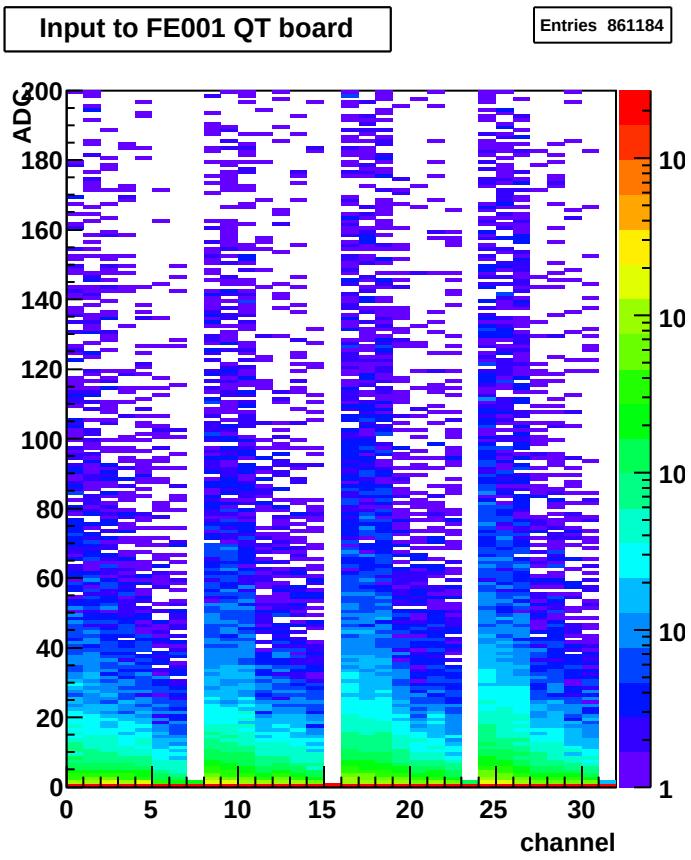

Input to FPD L2 DSM
Entries 80736
HT bits
10148
4205
4729
2178
656
898
14586
22051
21285
SMALL
LARGE-S
LARGE-N

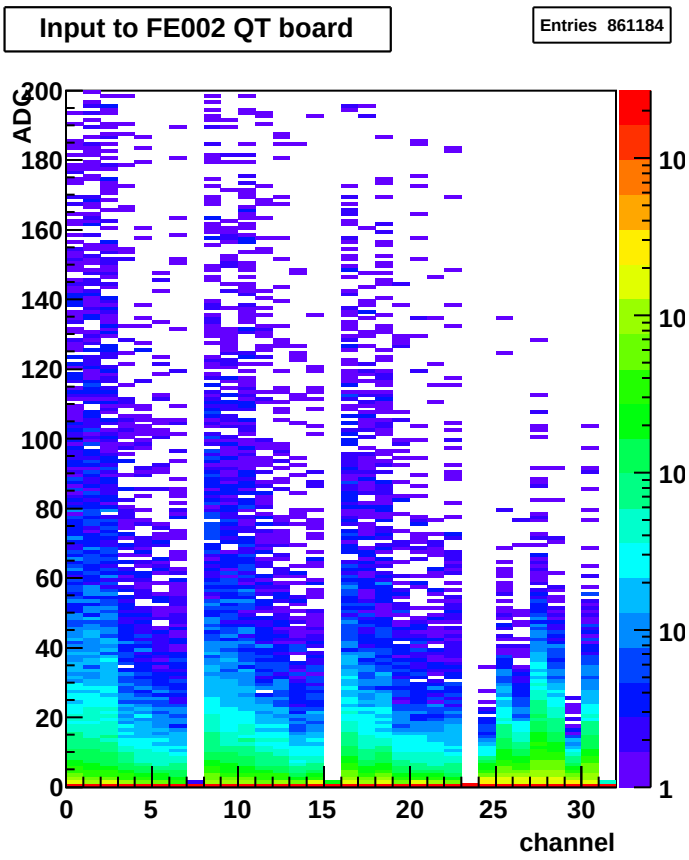

Input to FPD L2 DSM
Entries 0
HT bits - simulated
SMALL
LARGE-S
LARGE-N

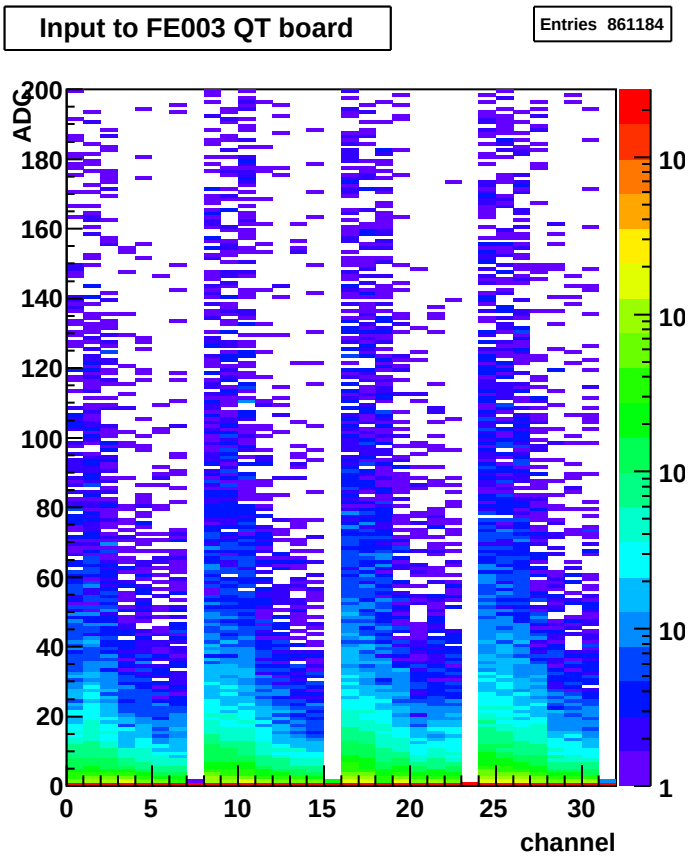

Input to FPD L3 DSM
Entries 430592
bit
FMS-HT-TH0
FMS-HT-TH1
FMS-SML-CLUSTER-TH0
FMS-SML-CLUSTER-TH1
FMS-SML-CLUSTER-TH2
FMS-LRG-CLUSTER-TH0
FMS-LRG-CLUSTER-TH1
FMS-LRG-CLUSTER-TH2
FMS-JP-TH0
FMS-JP-TH1
FMS-JP-TH2
FMS-DIJET
FPE

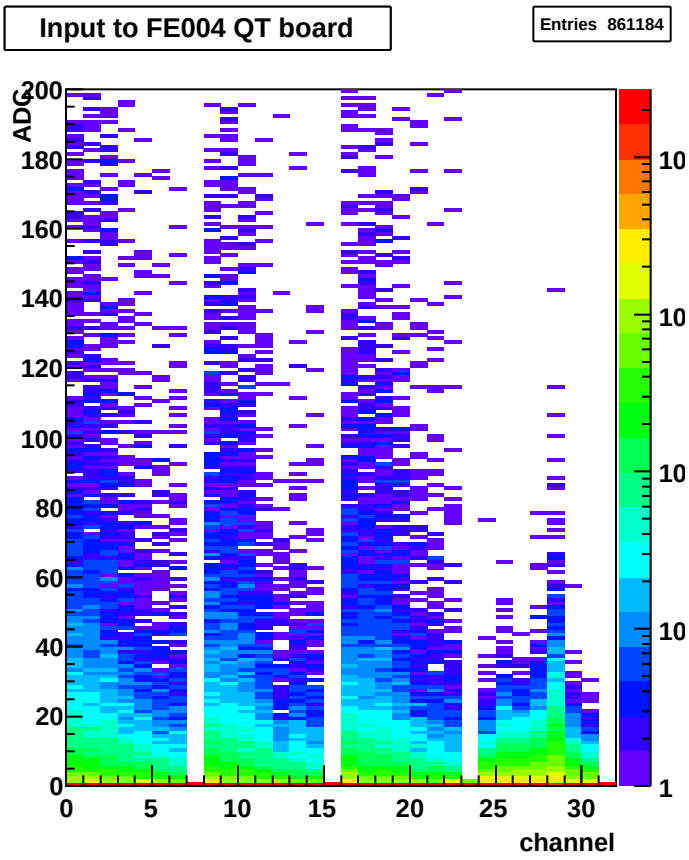

Input to FPD L3 DSM
Entries 0
bit - simulated
FMS-HT-TH0
FMS-HT-TH1
FMS-SML-CLUSTER-TH0
FMS-SML-CLUSTER-TH1
FMS-SML-CLUSTER-TH2
FMS-LRG-CLUSTER-TH0
FMS-LRG-CLUSTER-TH1
FMS-LRG-CLUSTER-TH2
FMS-JP-TH0
FMS-JP-TH1
FMS-JP-TH2
FMS-DIJET
FPE

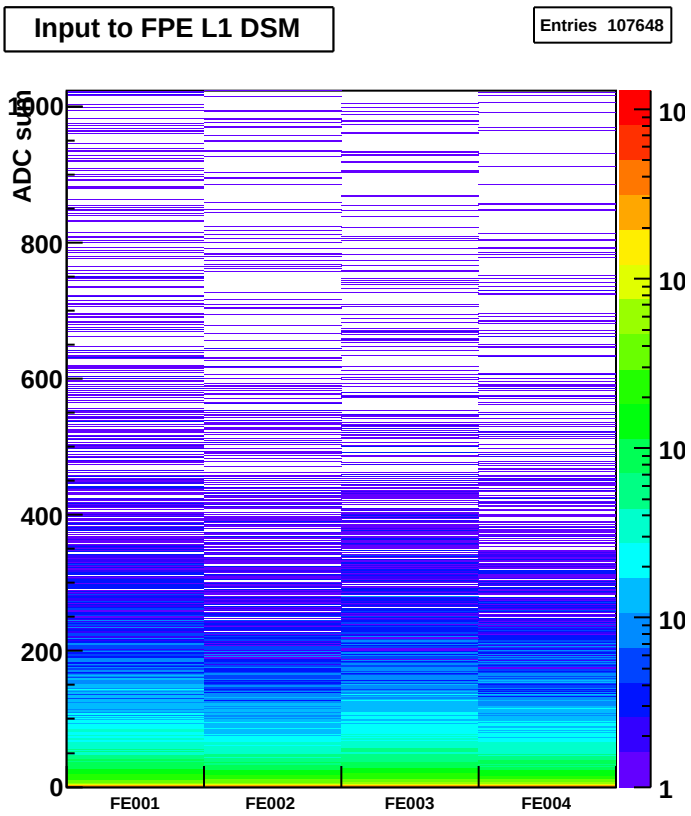

Input to FPD L2 DSM
Entries 107288
jet patch sum (no FMS-LED)
0
20
40
60
80
100
120
ST
SB
NT
NB
1
10
10^2
10^3
10^4

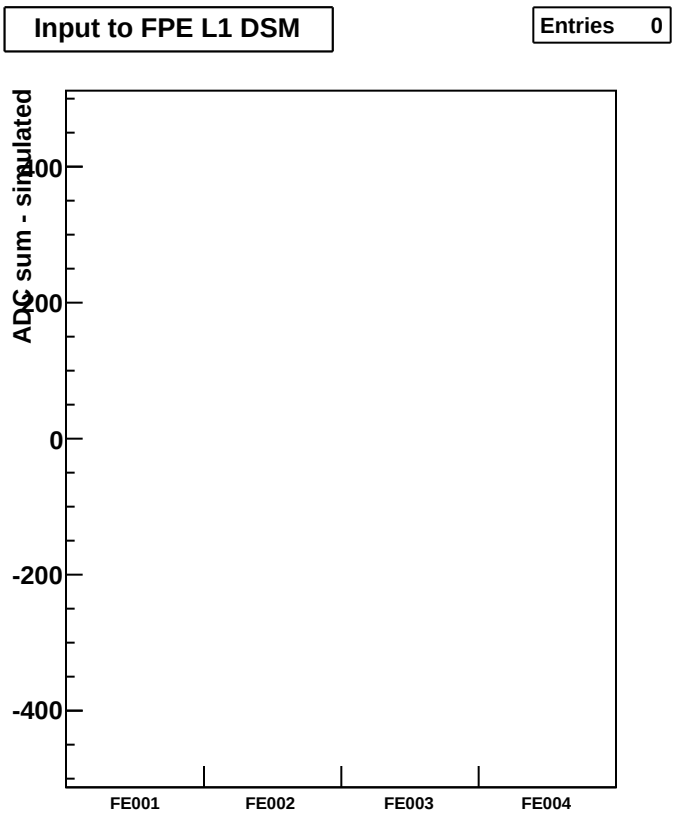

Input to FE001 QT board
Entries 861184
ADC
channel

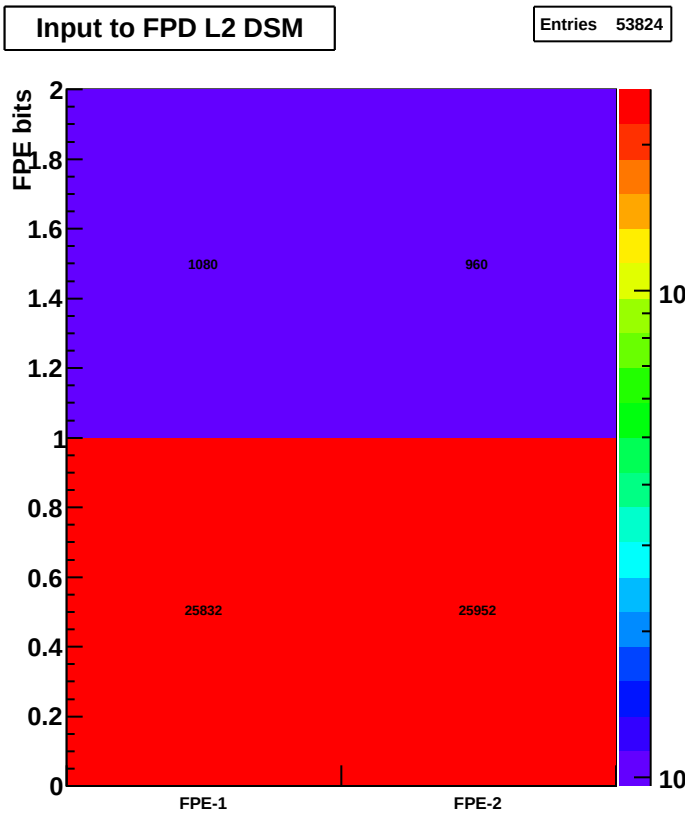

Input to FE002 QT board
Entries 861184
ADC
channel

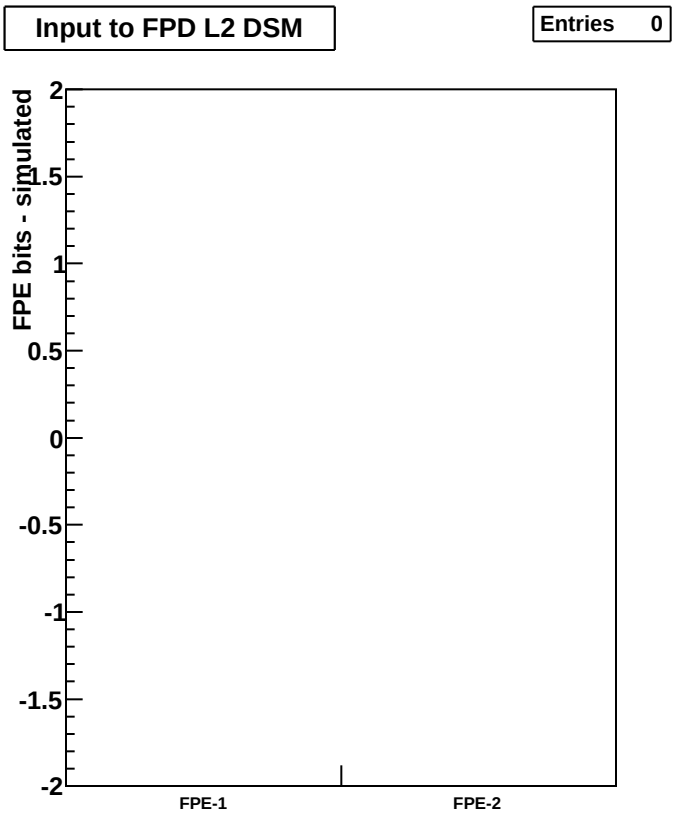

Input to FE003 QT board
Entries 861184
ADC
channel


Input to FE004 QT board
Entries 861184
ADC
channel


Input to FPE L1 DSM
Entries 107648
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 53824
FPE bits
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
1080
960
25832
25952
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