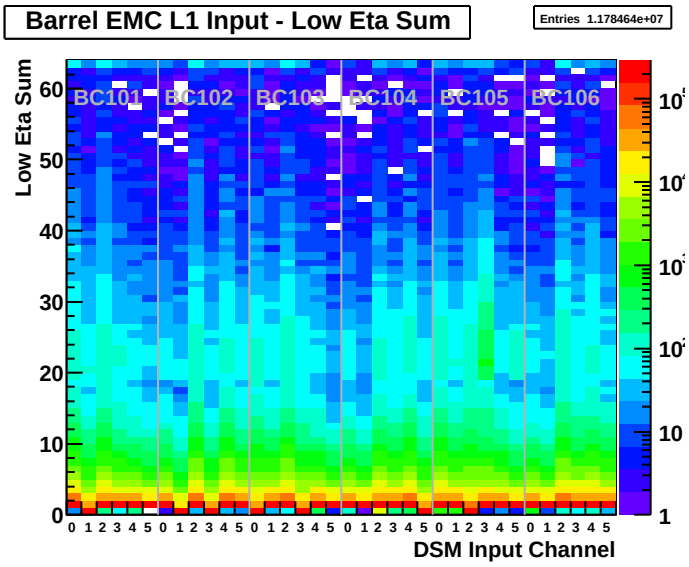
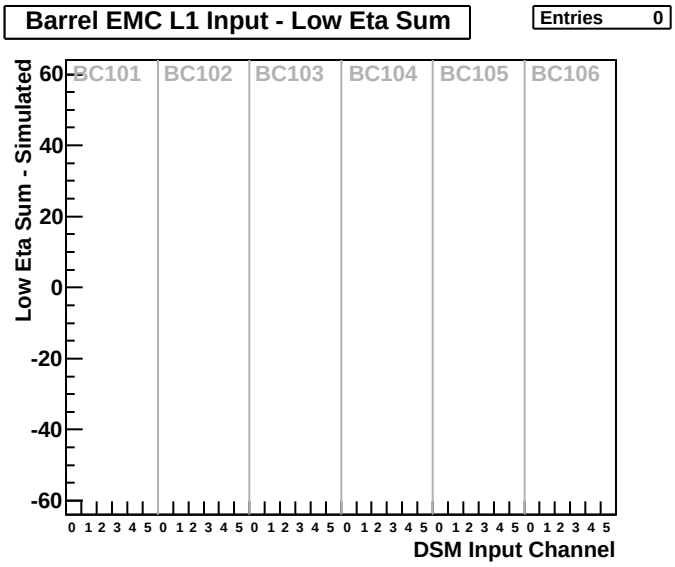
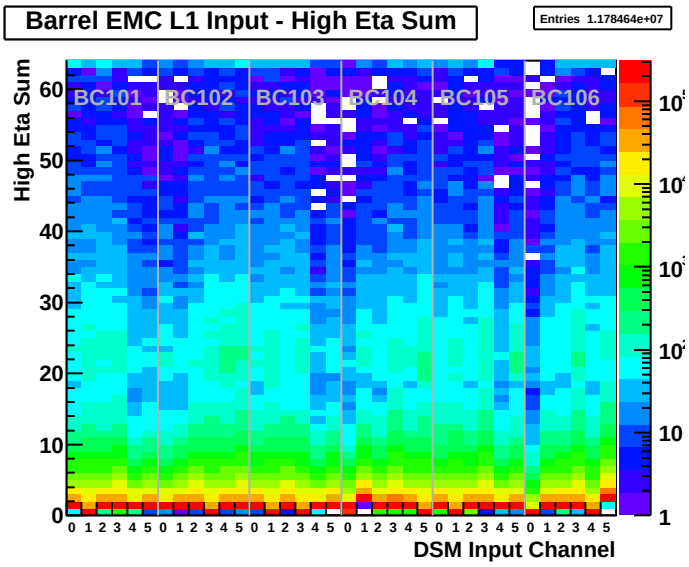
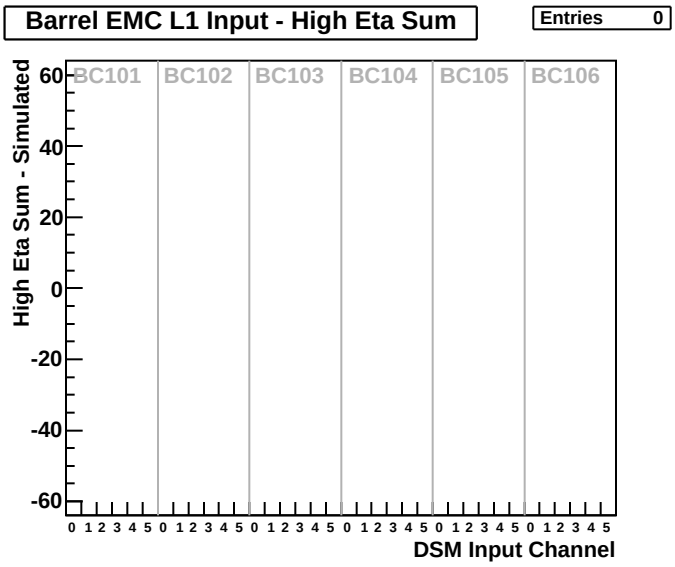
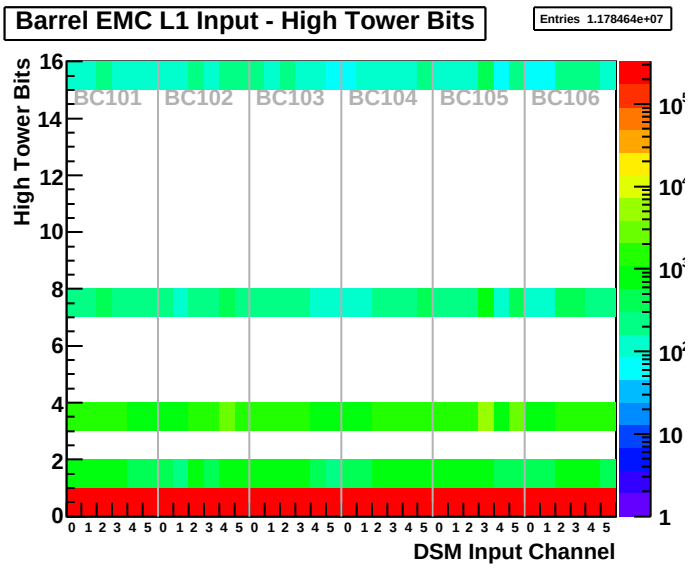
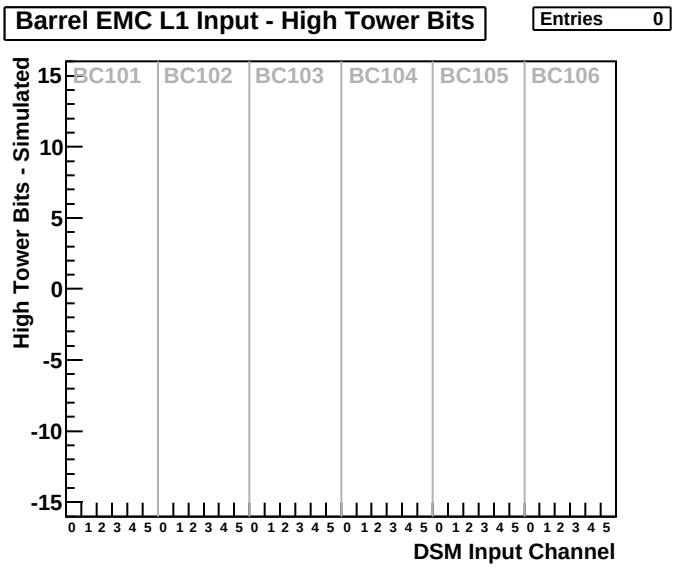

Barrel EMC L1 Input - Low Eta Sum
Entries 1.178464e+07
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

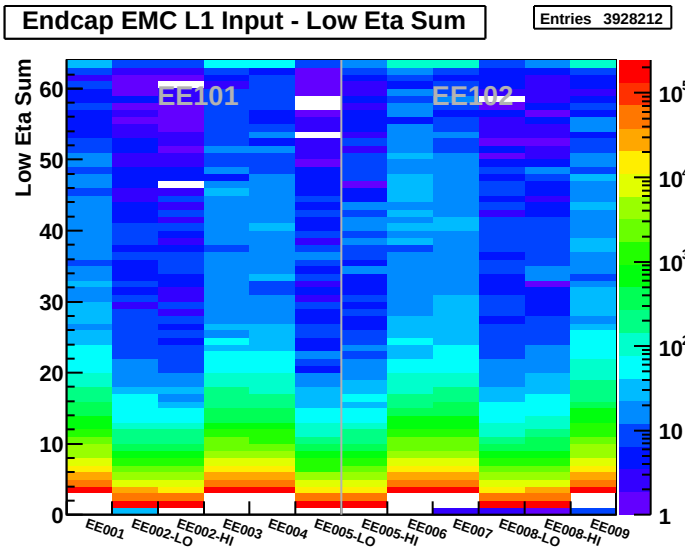

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

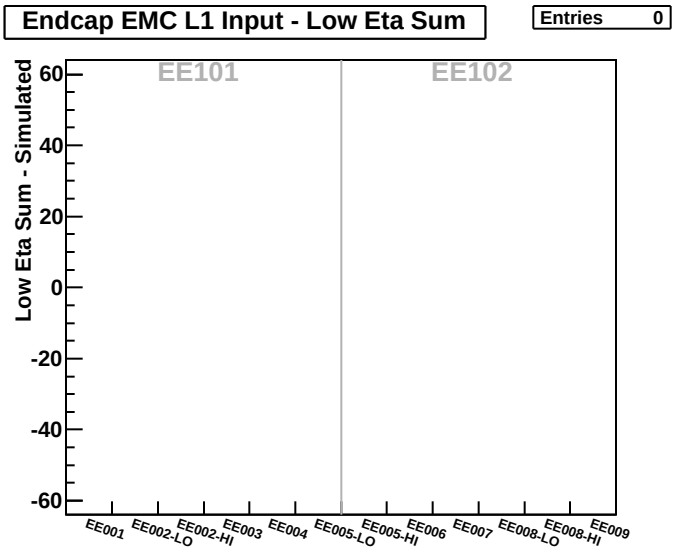

Barrel EMC L1 Input - High Eta Sum
Entries 1.178464e+07
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

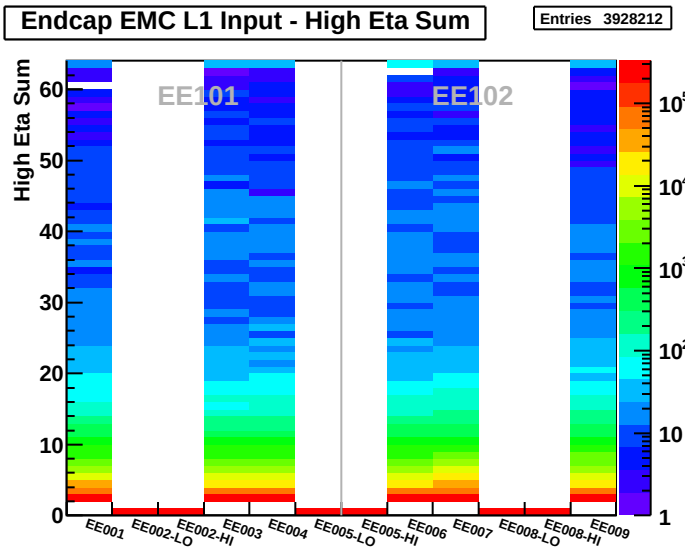

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

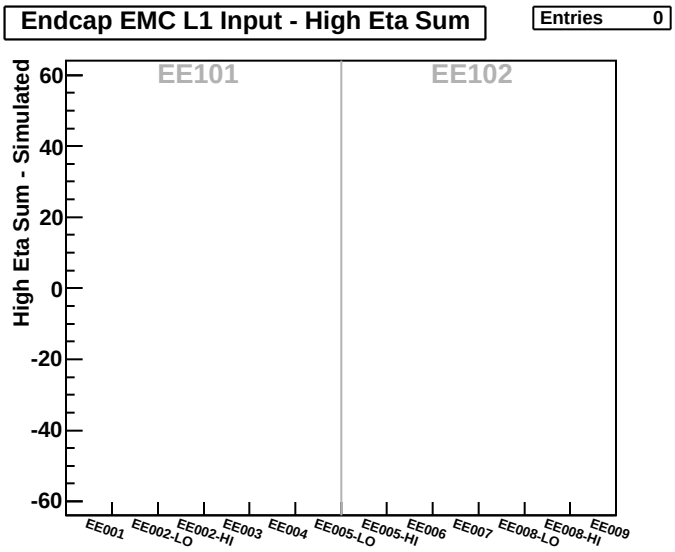

Barrel EMC L1 Input - High Tower Bits
Entries 1.178464e+07
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

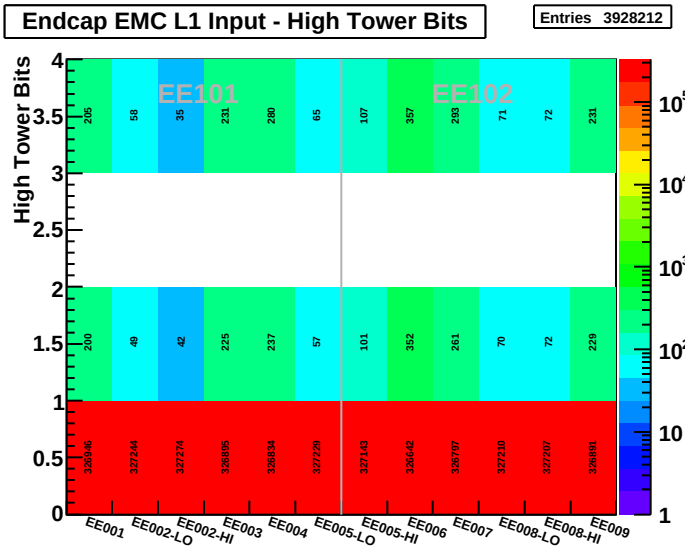

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

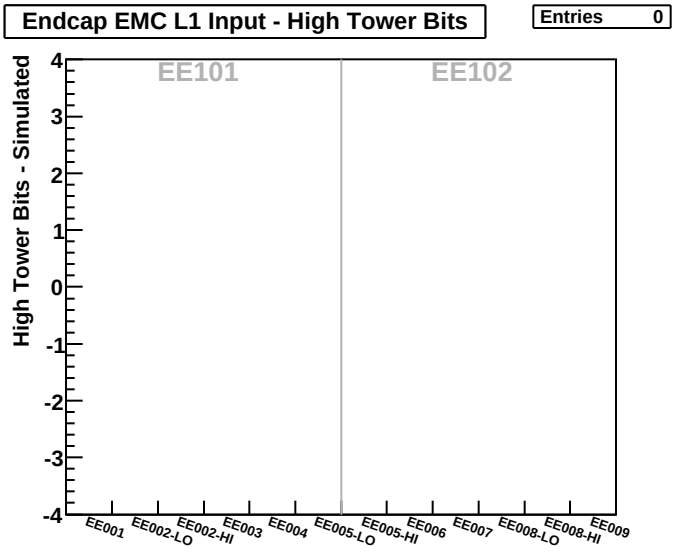

Endcap EMC L1 Input - Low Eta Sum
Entries 3928212
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

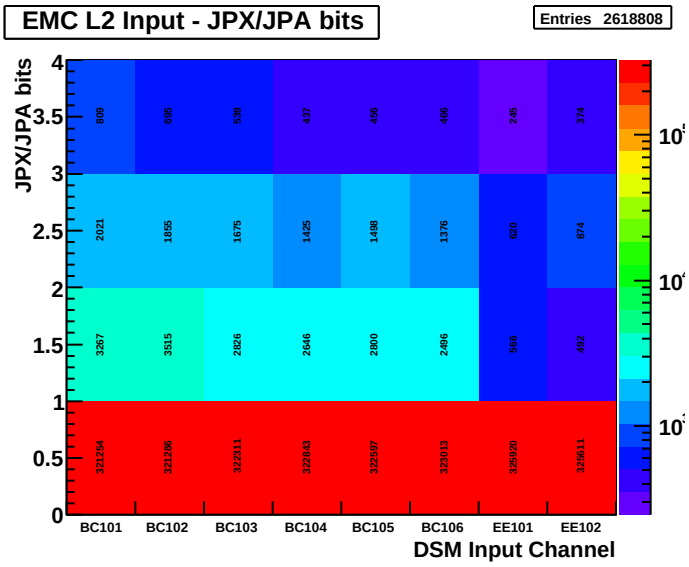

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

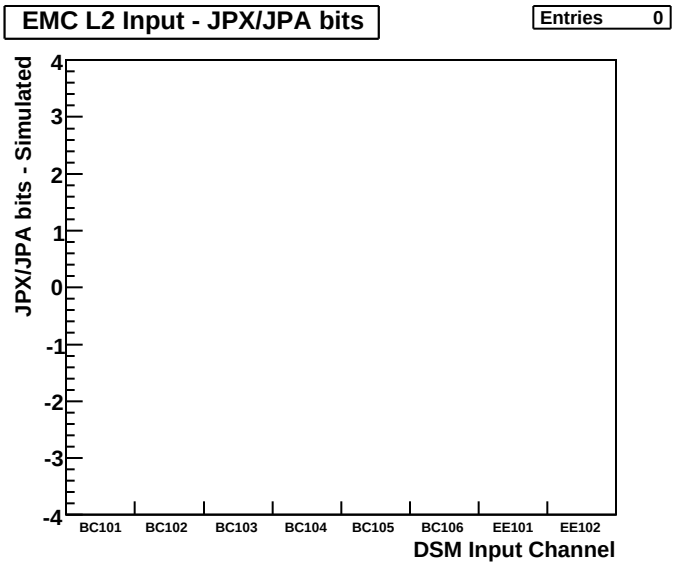

Endcap EMC L1 Input - High Eta Sum
Entries 3928212
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

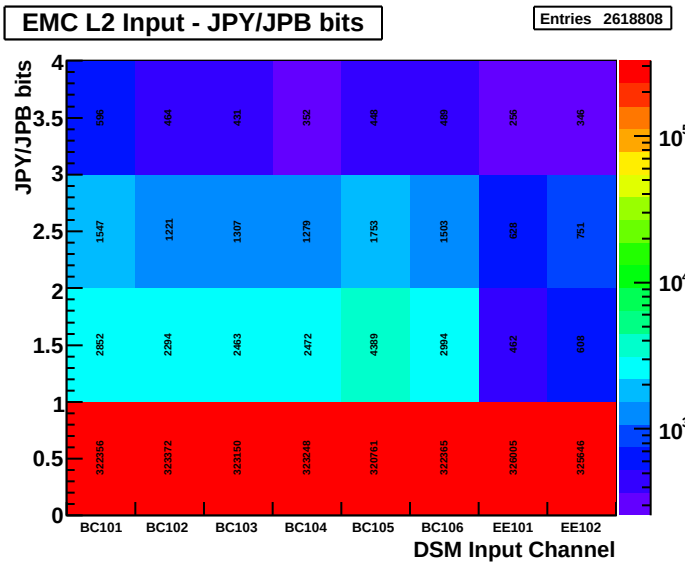

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

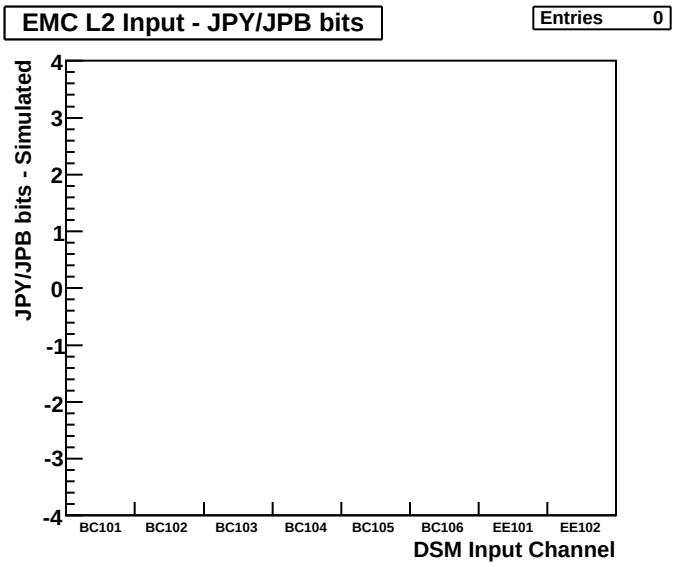

Endcap EMC L1 Input - High Tower Bits
Entries 3928212
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

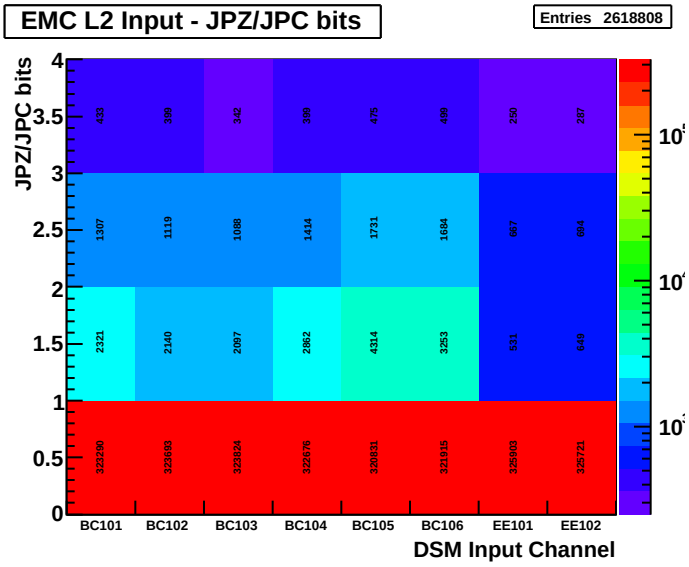

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

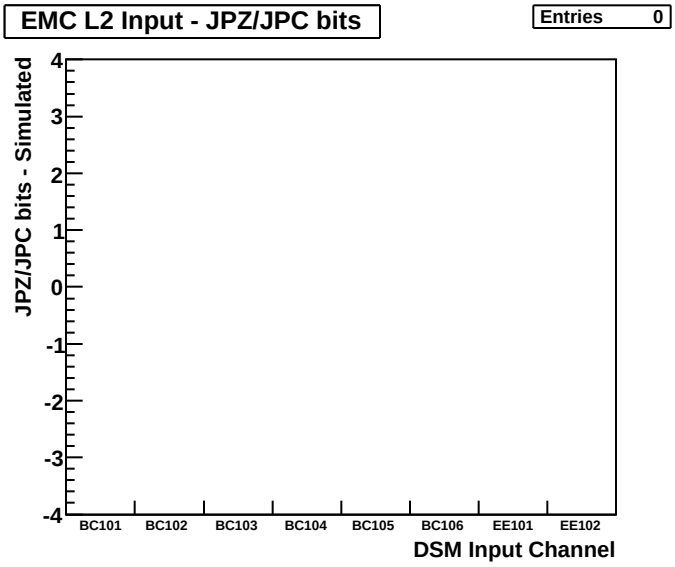

EMC L2 Input - JPX/JPA bits
Entries 2618808
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
809 695 539 437 456 466 245 374
2021 1855 1675 1425 1498 1376 620 874
3267 3515 2826 2646 2800 2496 566 492
321254 321286 322311 322843 322597 323013 325920 325611

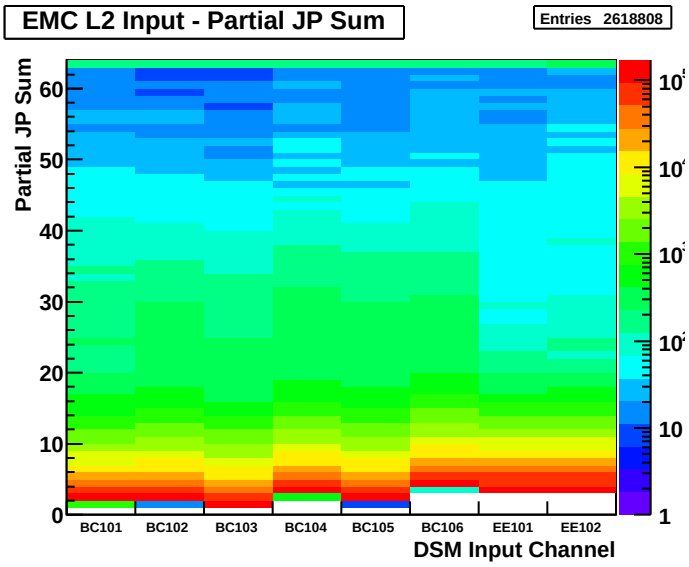

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

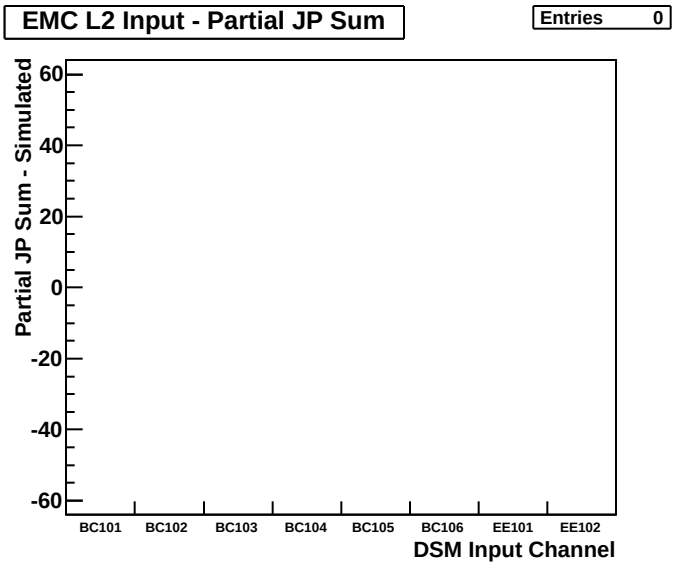

EMC L2 Input - JPY/JPB bits
Entries 2618808
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
596 464 431 352 448 489 256 346
1547 1221 1307 1279 1753 1503 628 751
2852 2294 2463 2472 4389 2994 462 608
322356 322372 322150 322248 320761 322365 326005 325646

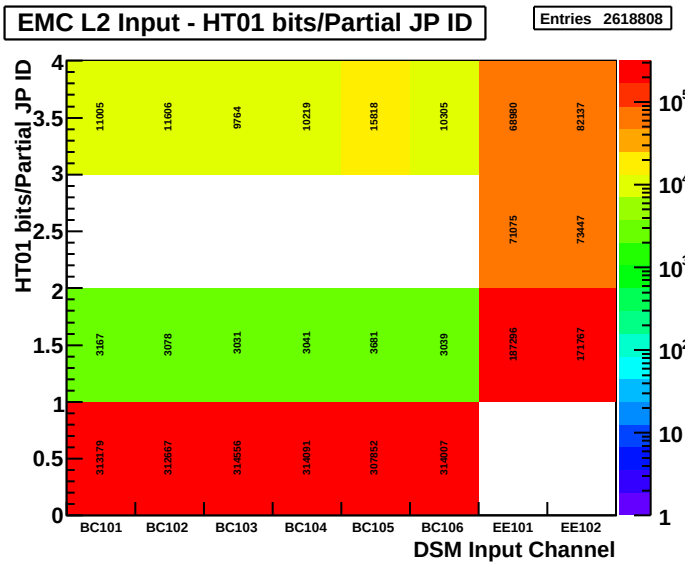

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

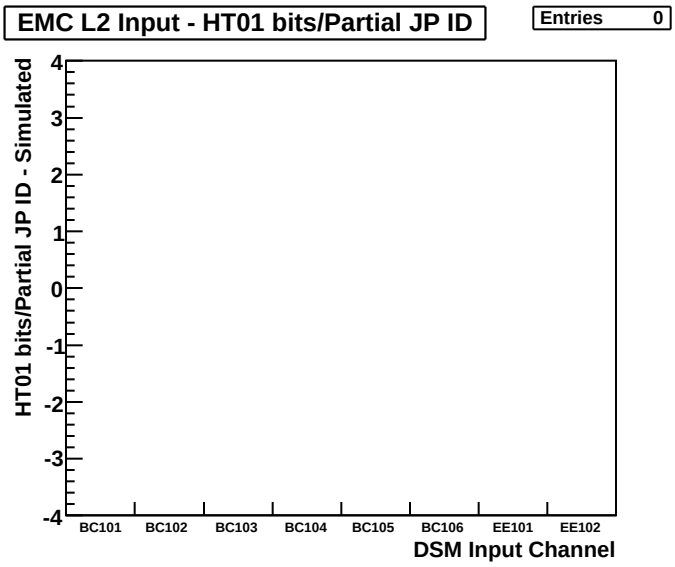

EMC L2 Input - JPZ/JPC bits
Entries 2618808
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
433 399 342 399 475 499 250 287
1307 1119 1088 1414 1731 1684 667 684
2321 2140 2097 2862 4314 3253 531 649
323390 323693 323824 322876 320831 321915 325903 325721

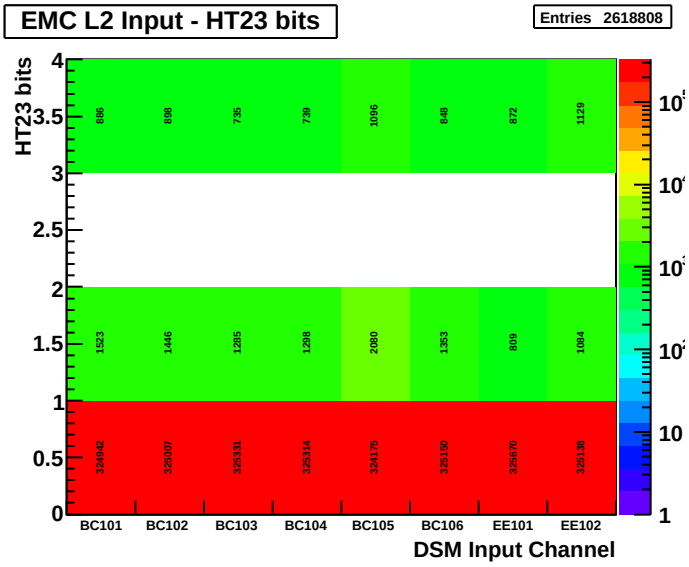

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

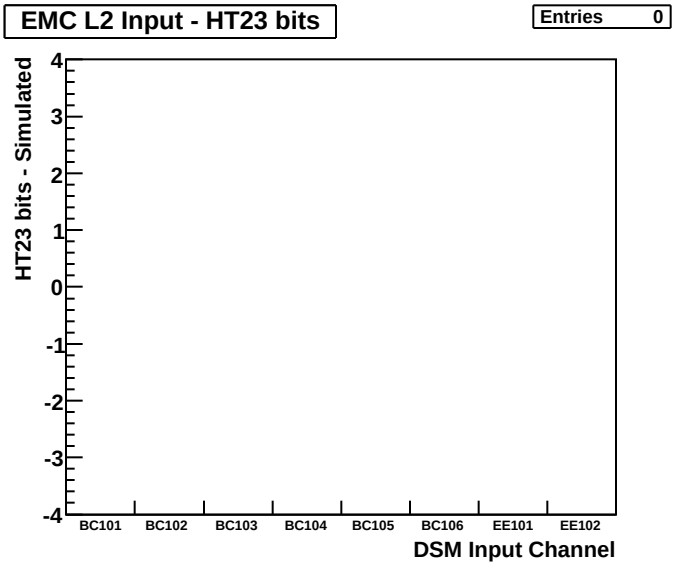

EMC L2 Input - Partial JP Sum
Entries 2618808
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

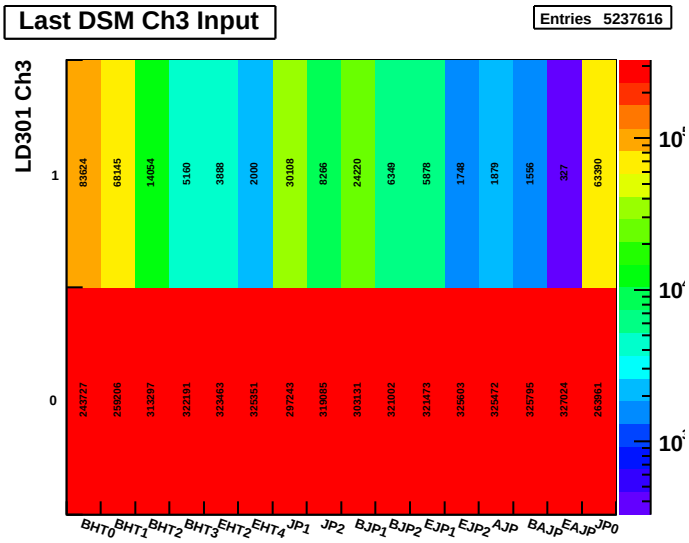

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

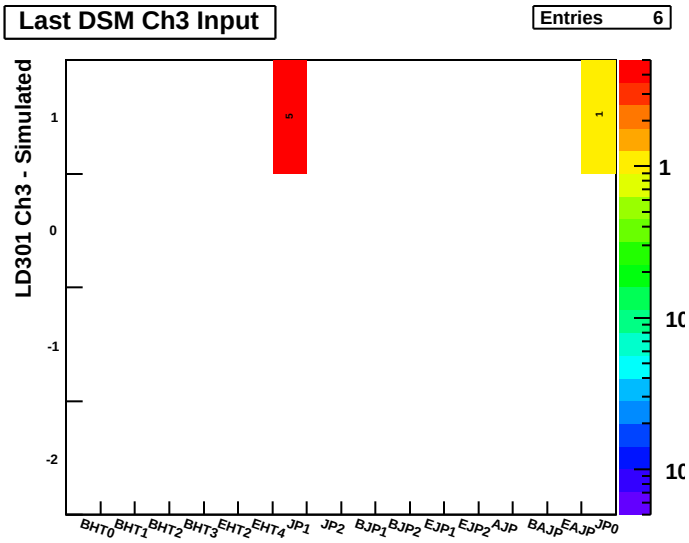

EMC L2 Input - HT01 bits/Partial JP ID
Entries 2618808
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

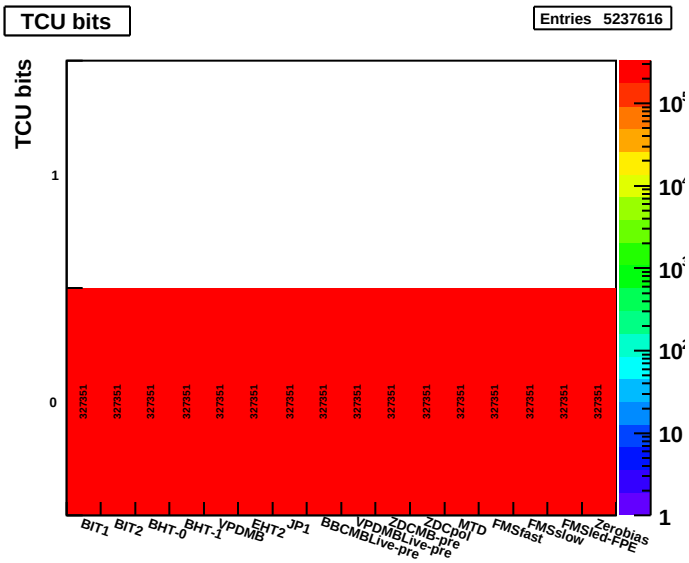

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

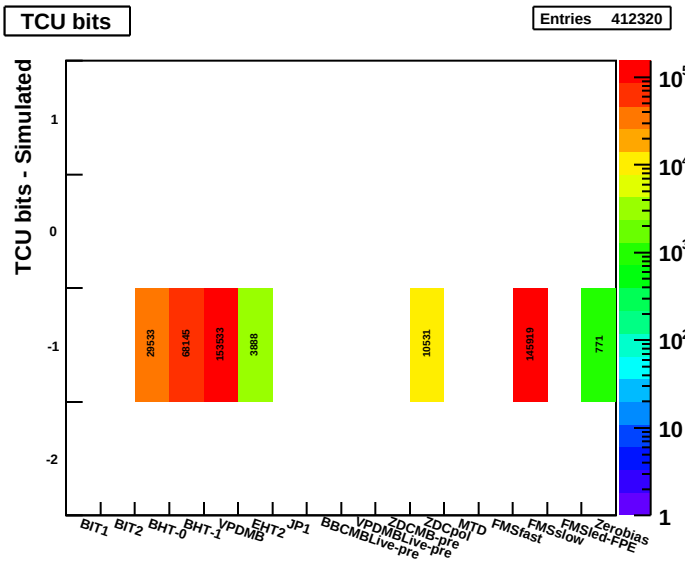

EMC L2 Input - HT23 bits
Entries 2618808
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

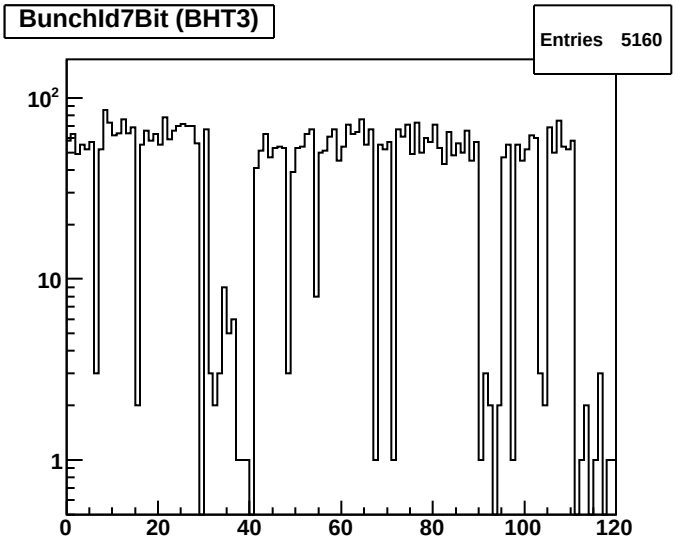

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

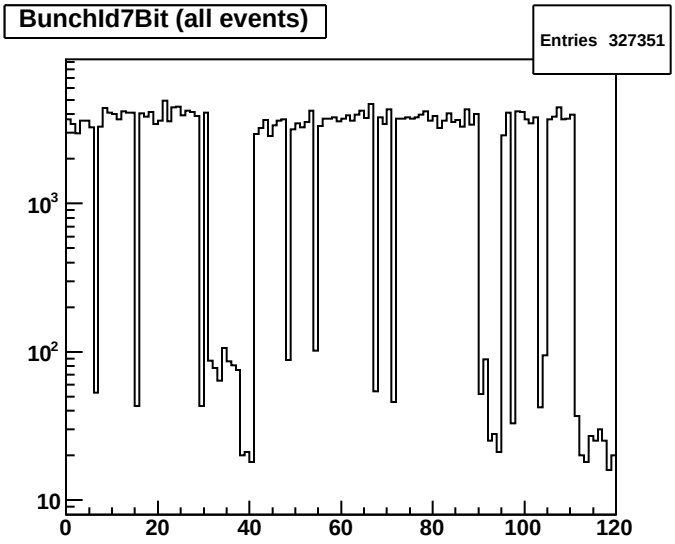

Last DSM Ch3 Input
Entries 5237616
LD301 Ch3
1
0
83624 68145 14054 5160 3888 2000 30108 8266 24220 6349 5878 1748 1879 1556 327 63390
243727 259206 313297 322191 323463 325351 297243 319085 303131 321002 321473 325603 325472 325795 327024 263961
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

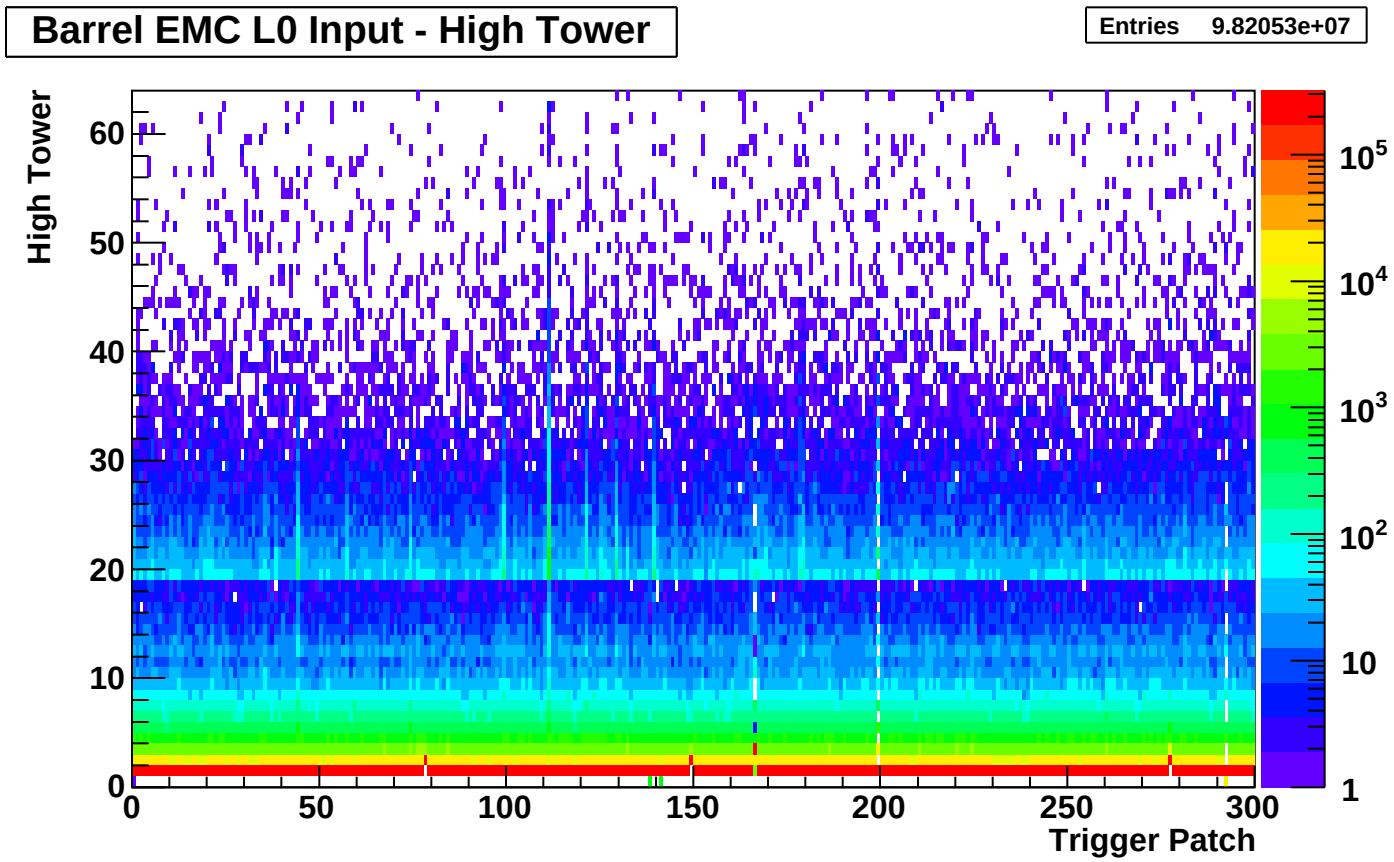

Last DSM Ch3 Input
Entries 6
LD301 Ch3 - Simulated
1
0
-1
-2
5
1
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

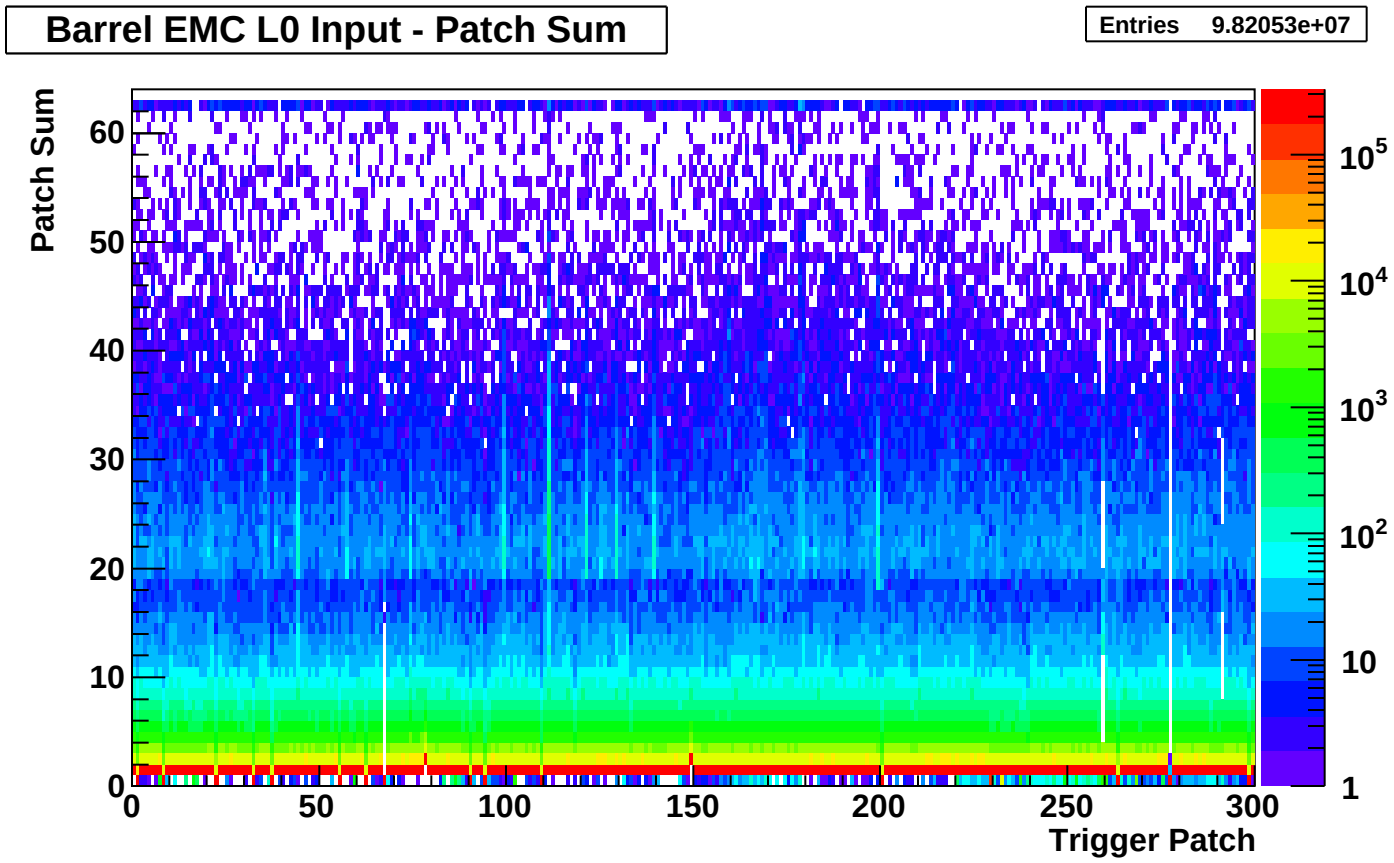

TCU bits
Entries 5237616
TCU bits
1
0
327351 327351 327351 327351 327351 327351 327351 327351 327351 327351 327351 327351 327351 327351 327351 327351
BIT1 BIT2 BHT-0 BHT-1 VPDMB EHT2 JP1 BBCMBLive-pre VPDMBLive-pre ZDCMB-pre ZDCpol MTD FMSfast FMSslow FMSled-FPE Zerobias

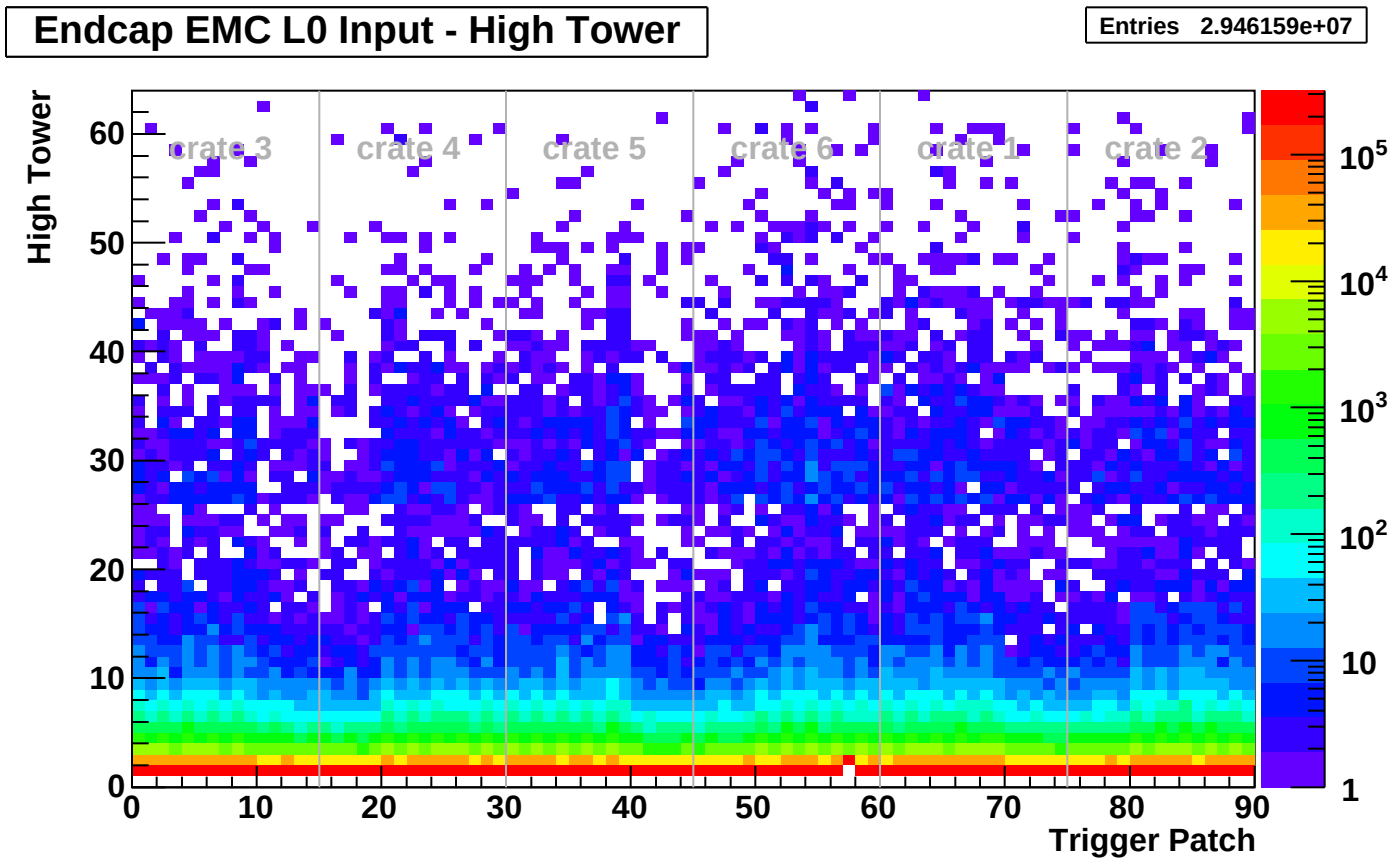

TCU bits
Entries 412320
TCU bits - Simulated
1
0
-1
-2
29533 68145 153533 3888 10531 145919 771
BIT1 BIT2 BHT-0 BHT-1 VPDMB EHT2 JP1 BBCMBLive-pre VPDMBLive-pre ZDCMB-pre ZDCpol MTD FMSfast FMSslow FMSled-FPE Zerobias

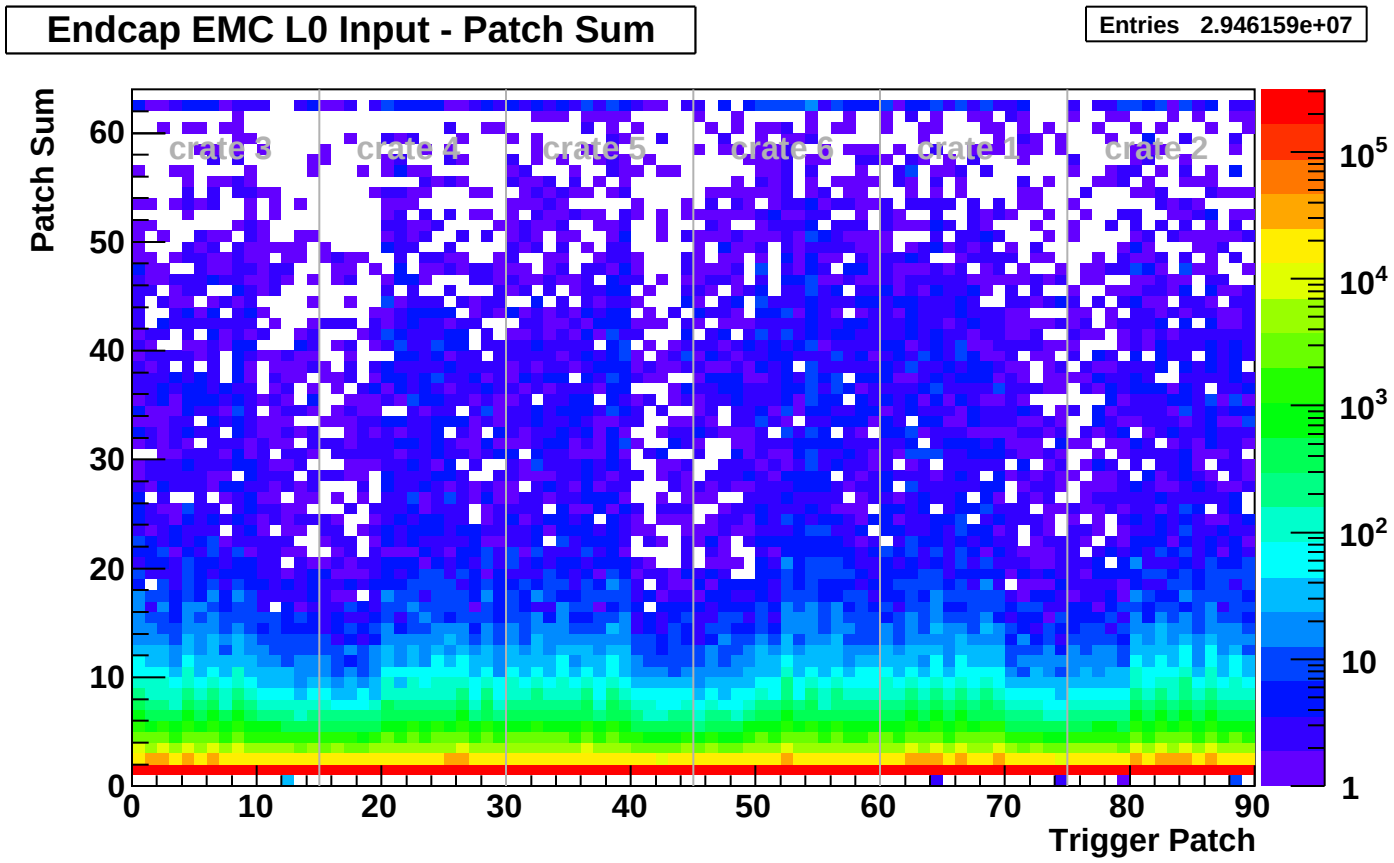

BunchId7Bit (BHT3)
Entries 5160
10²
10
1
0 20 40 60 80 100 120

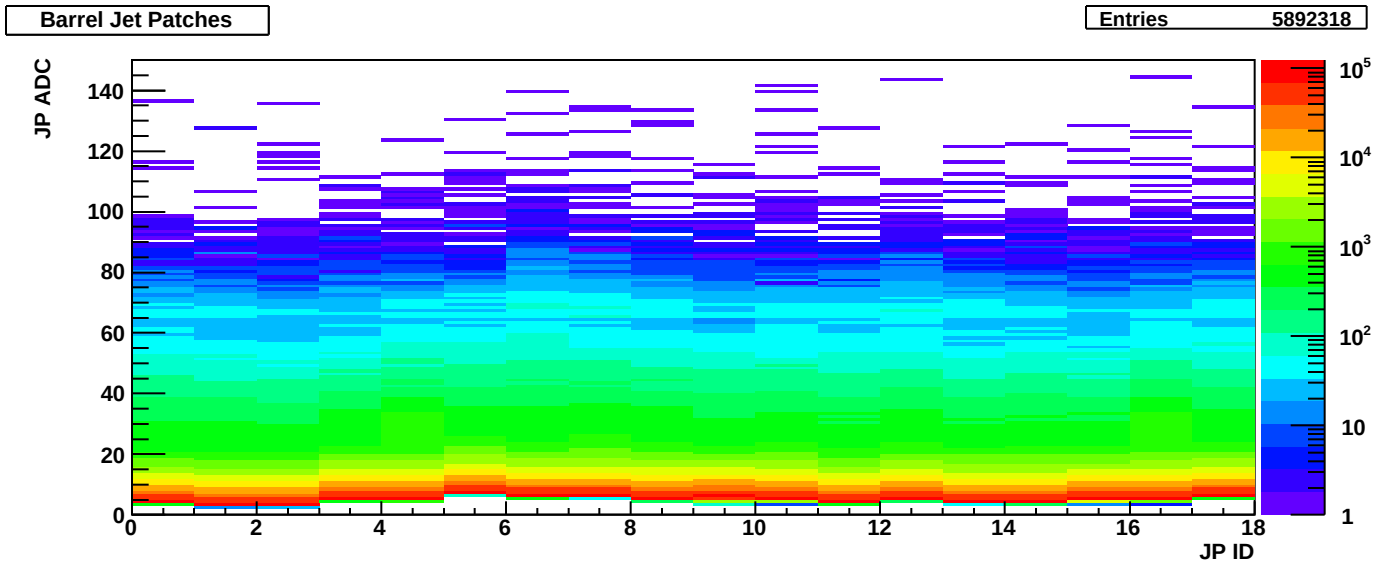

BunchId7Bit (all events)
Entries 327351
10³
10²
10
0 20 40 60 80 100 120

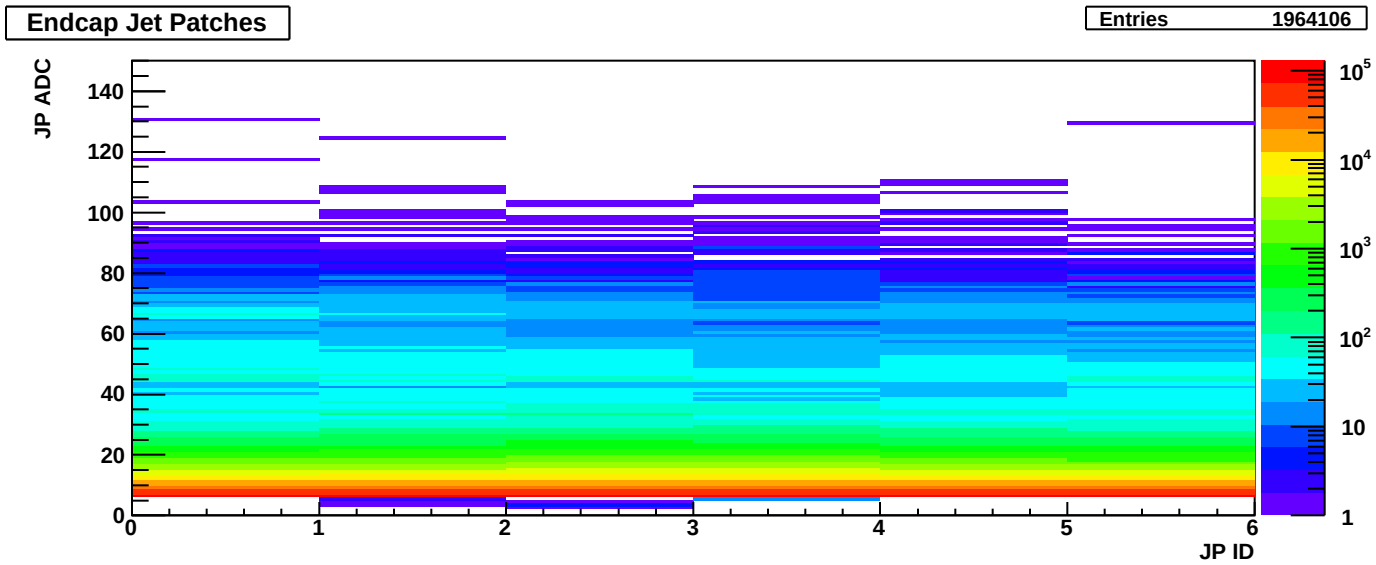

Barrel EMC L0 Input - High Tower
Entries 9.82053e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

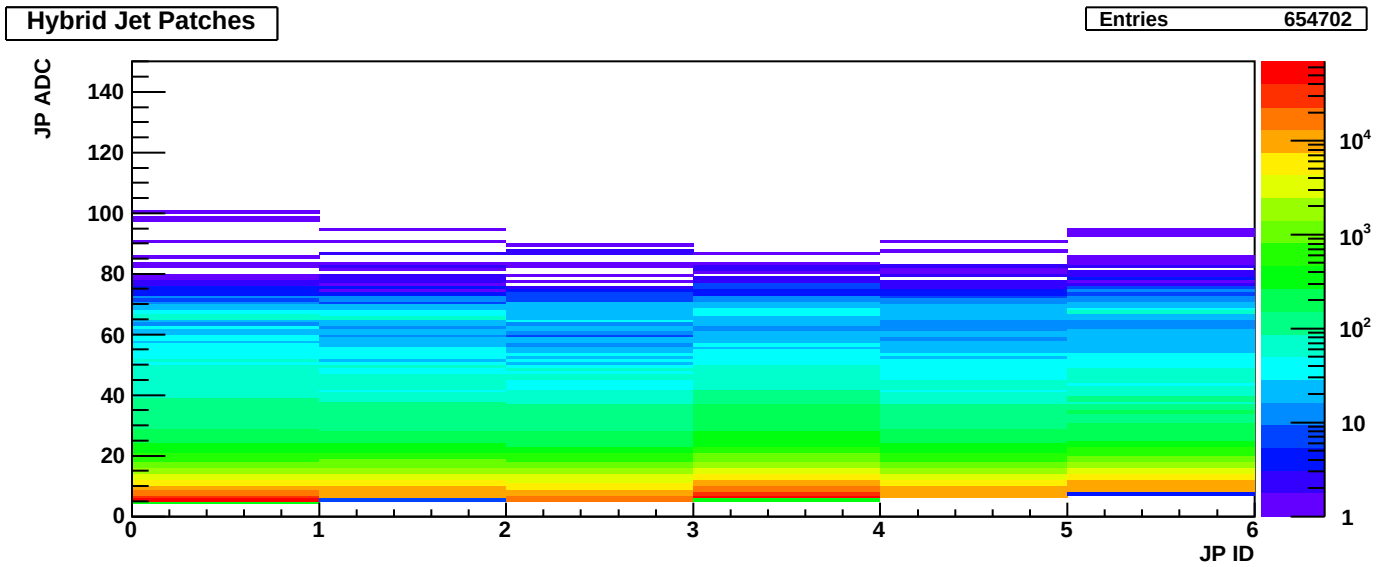

Barrel EMC L0 Input - Patch Sum
Entries 9.82053e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

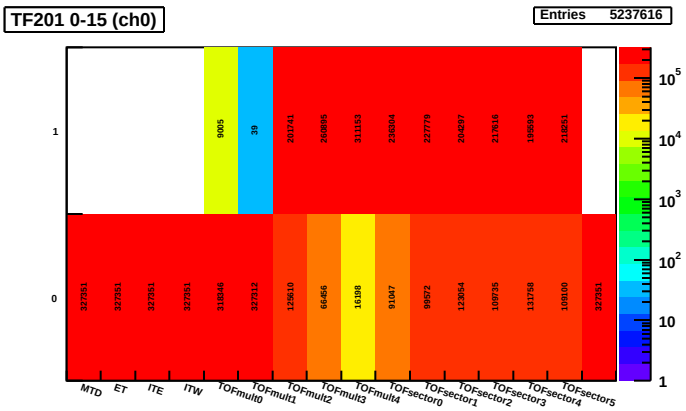

Endcap EMC L0 Input - High Tower
Entries 2.946159e+07
High Tower
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

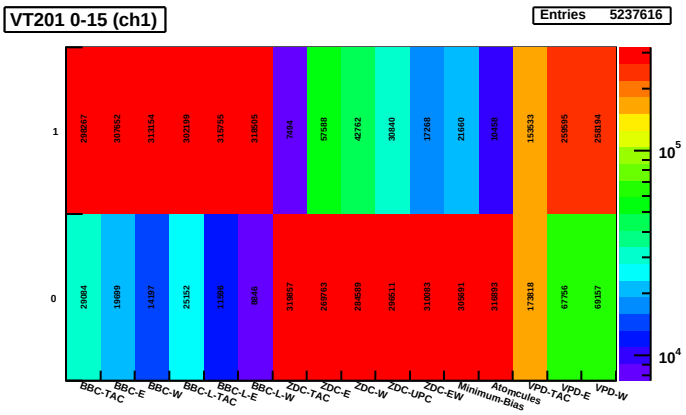

Endcap EMC L0 Input - Patch Sum
Entries 2.946159e+07
Patch Sum
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

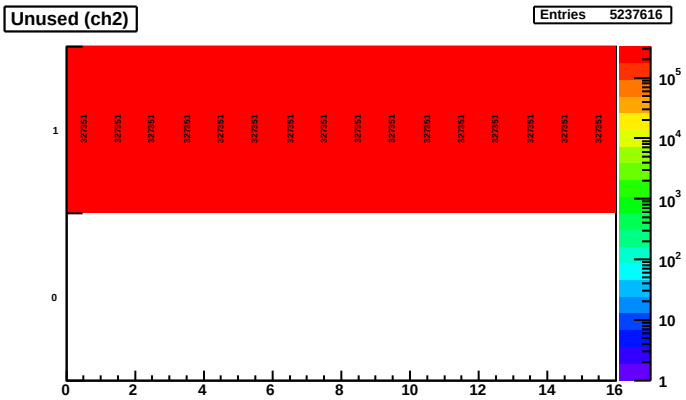

Barrel Jet Patches
Entries 5892318
JP ADC
JP ID

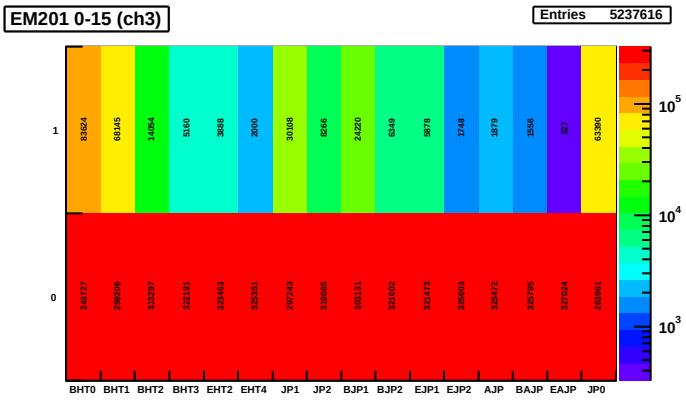

Endcap Jet Patches
Entries 1964106
JP ADC
JP ID

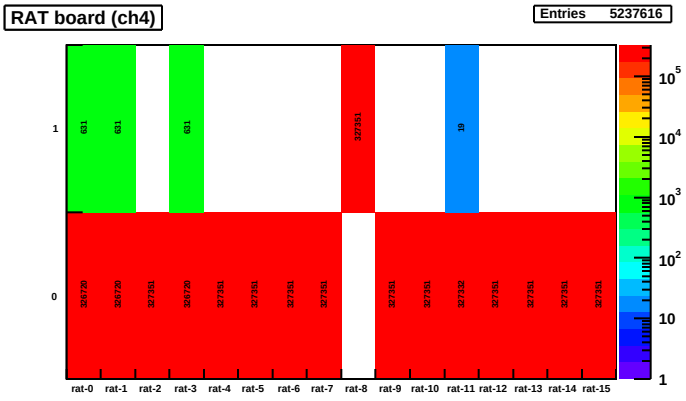

Hybrid Jet Patches
Entries 654702
JP ADC
JP ID

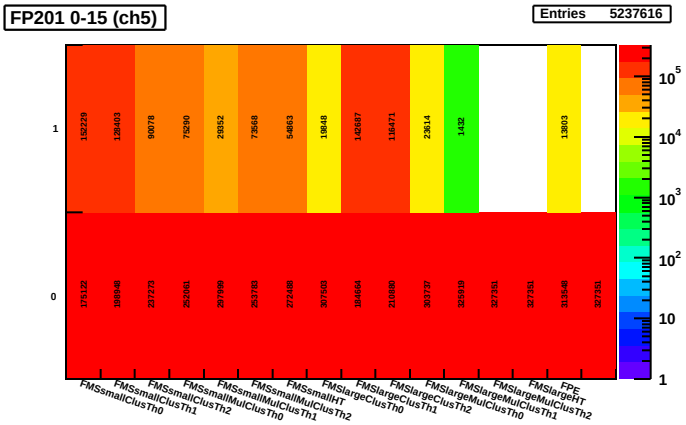

TF201 0-15 (ch0)
Entries 5237616
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5

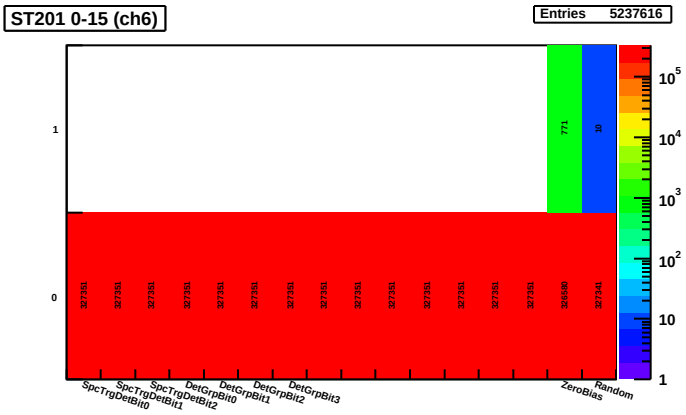

VT201 0-15 (ch1)
Entries 5237616
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-UPC ZDC-EW Minimum-Bias Atomcules VPD-TAC VPD-E VPD-W

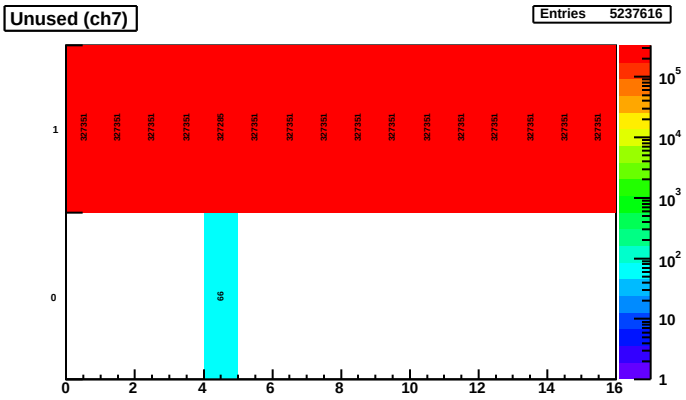

Unused (ch2)
Entries 5237616

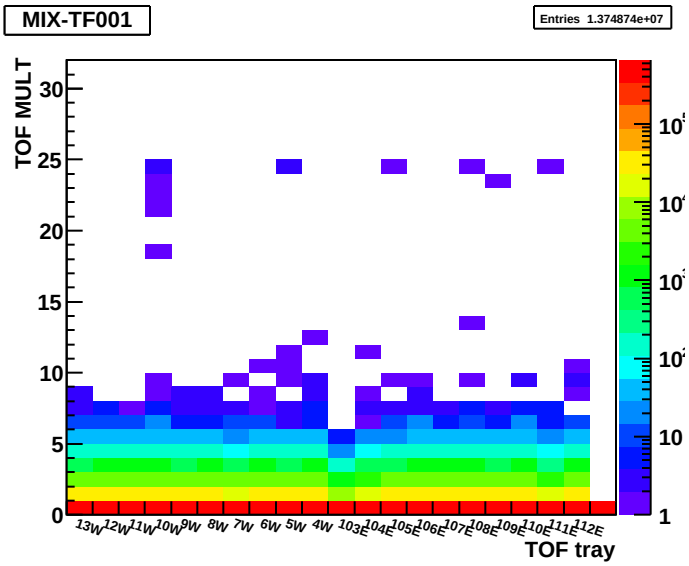

EM201 0-15 (ch3)
Entries 5237616
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

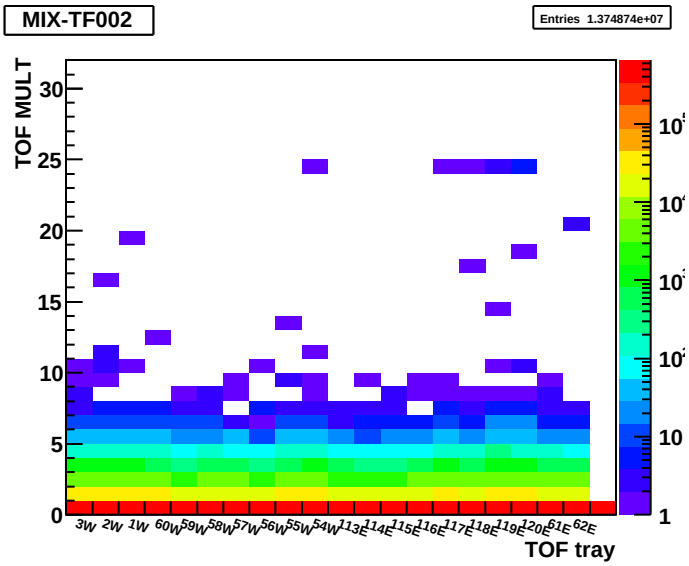

RAT board (ch4)
Entries 5237616
rat-0 rat-1 rat-2 rat-3 rat-4 rat-5 rat-6 rat-7 rat-8 rat-9 rat-10 rat-11 rat-12 rat-13 rat-14 rat-15

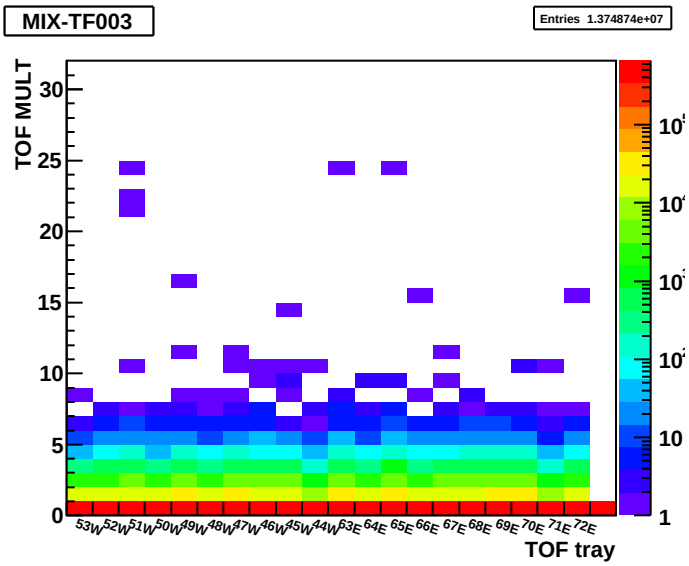

FP201 0-15 (ch5)
Entries 5237616
FMSsmallClusTh0 FMSsmallClusTh1 FMSsmallClusTh2 FMSsmallMulClusTh0 FMSsmallMulClusTh1 FMSsmallMulClusTh2 FMSsmallHT FMSlargeClusTh0 FMSlargeClusTh1 FMSlargeClusTh2 FMSlargeMulClusTh0 FMSlargeMulClusTh1 FMSlargeMulClusTh2 FMSlargeHT FPE

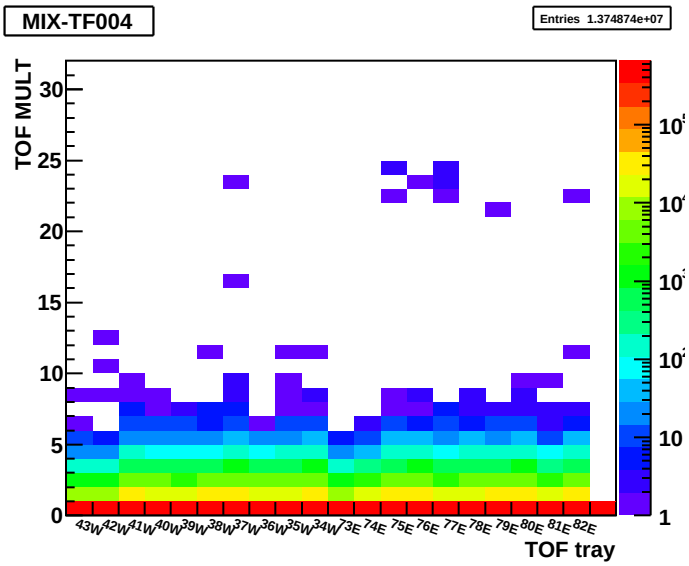

ST201 0-15 (ch6)
Entries 5237616
SpcTrgDetBit0 SpcTrgDetBit1 SpcTrgDetBit2 DetCrpBit0 DetCrpBit1 DetCrpBit2 DetCrpBit3 ZeroBias Random

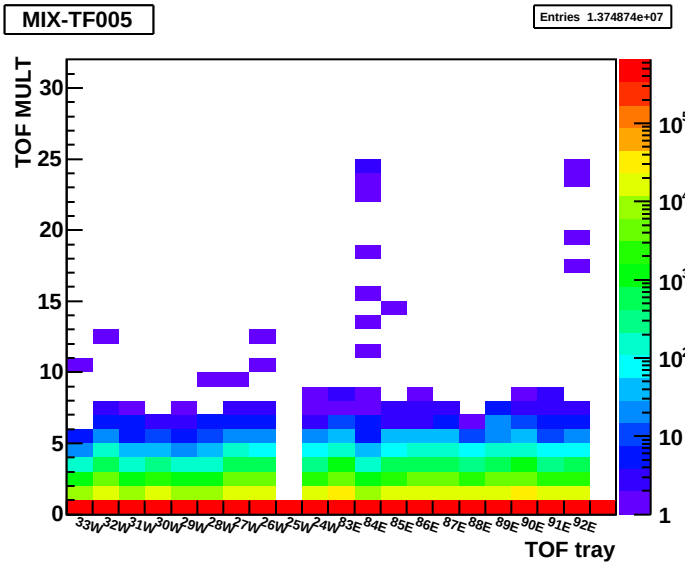

Unused (ch7)
Entries 5237616

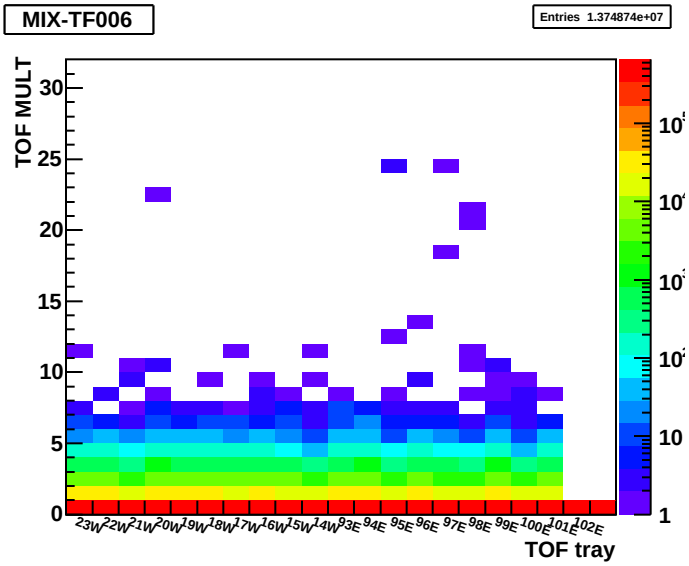

MIX-TF001
Entries 1.374874e+07
TOF MULT
TOF tray

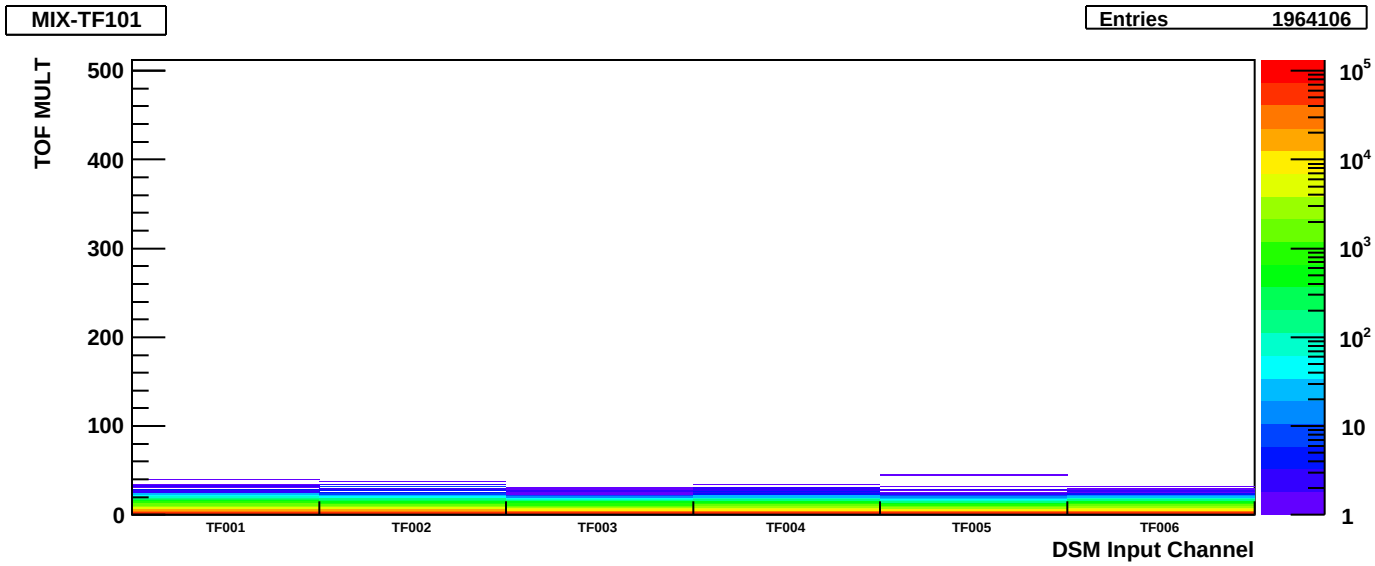

MIX-TF002
Entries 1.374874e+07
TOF MULT
TOF tray

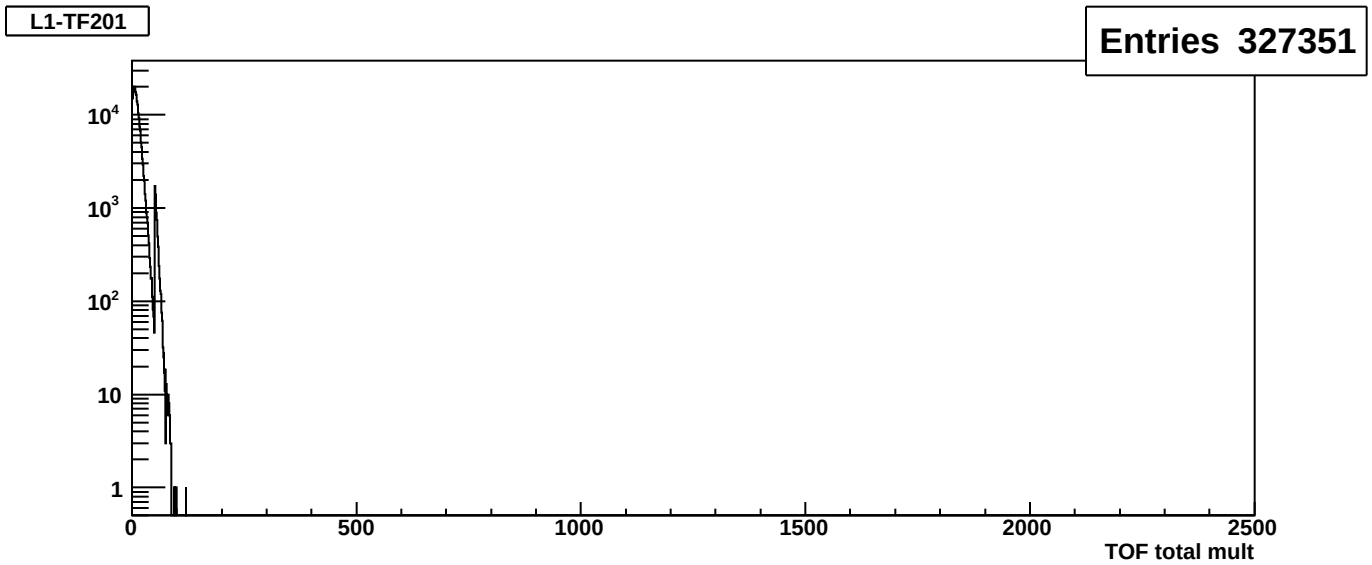

MIX-TF003
Entries 1.374874e+07
TOF MULT
TOF tray

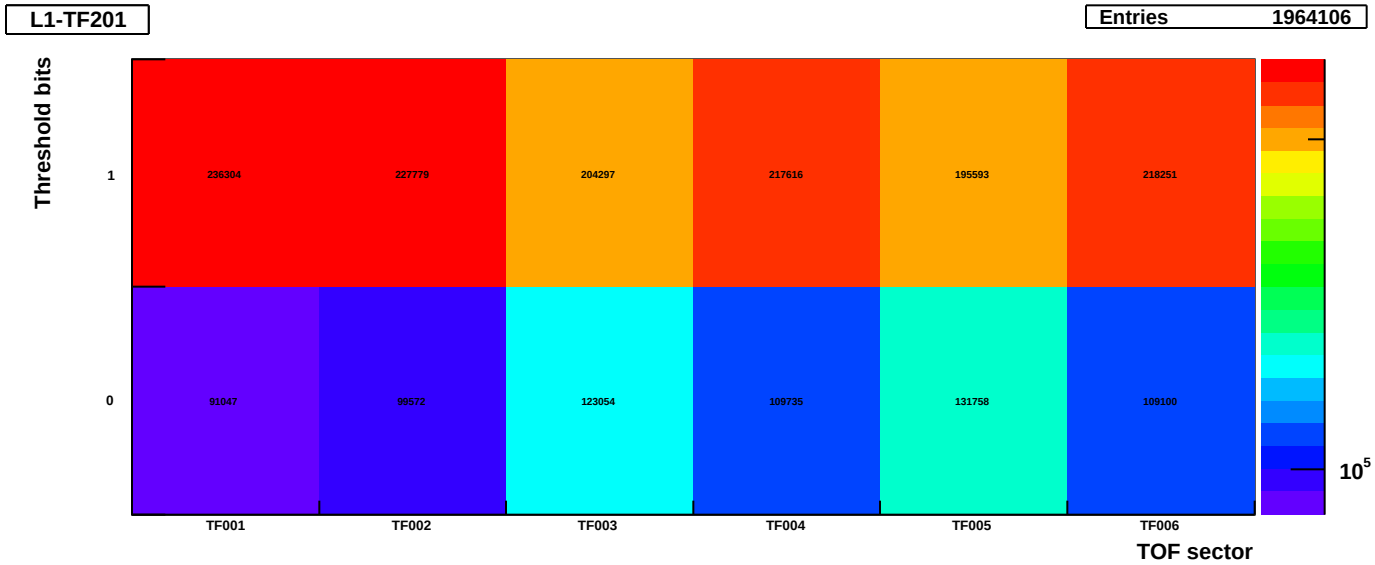

MIX-TF004
Entries 1.374874e+07
TOF MULT
TOF tray

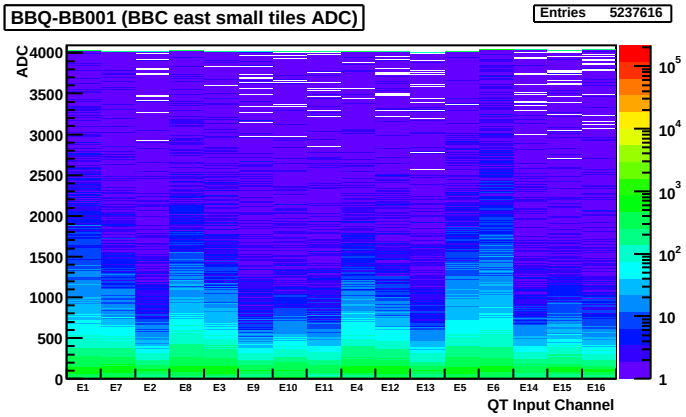

MIX-TF005
Entries 1.374874e+07
TOF MULT
TOF tray

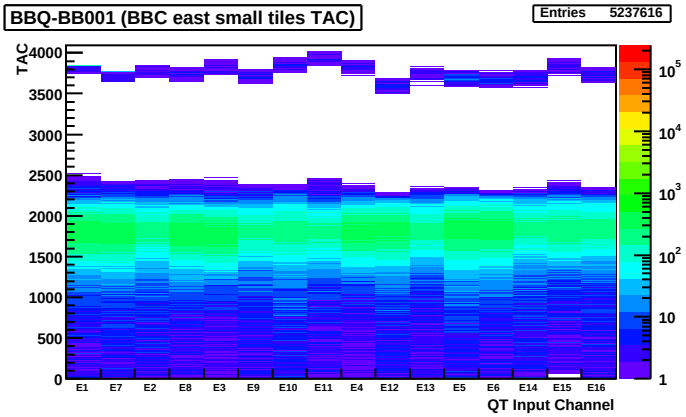

MIX-TF006
Entries 1.374874e+07
TOF MULT
TOF tray

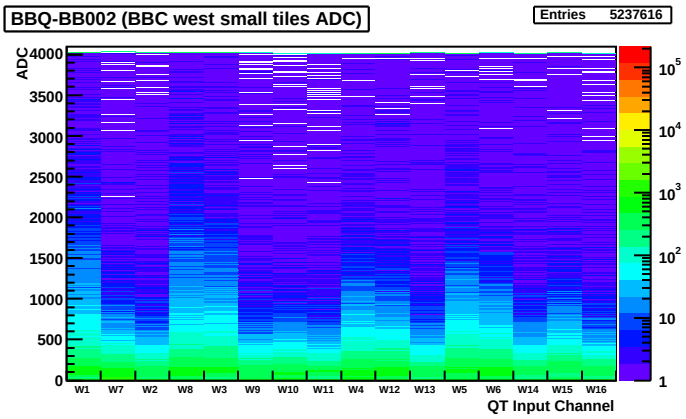

MIX-TF101
Entries 1964106
TOF MULT
500
400
300
200
100
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

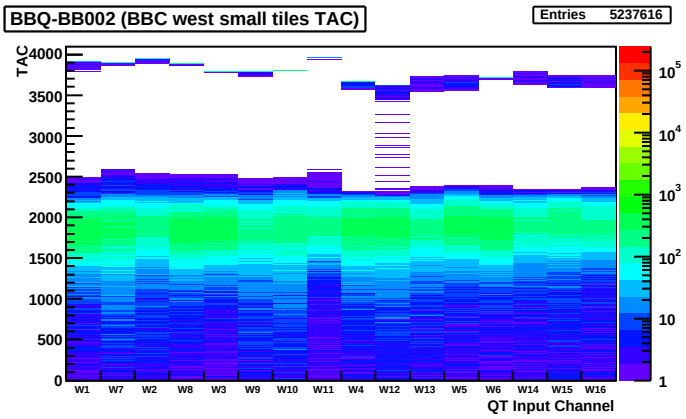

L1-TF201
Entries 327351
10^4
10^3
10^2
10
1
0
500
1000
1500
2000
2500
TOF total mult

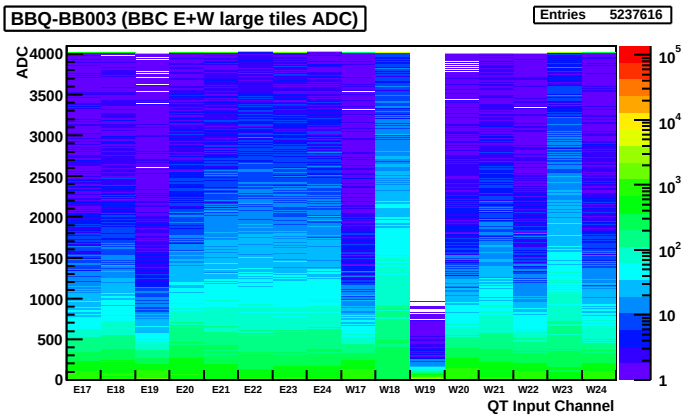

L1-TF201
Entries 1964106
Threshold bits
1
0
236304
227779
204297
217616
195593
218251
91047
99572
123054
109735
131758
109100
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^5

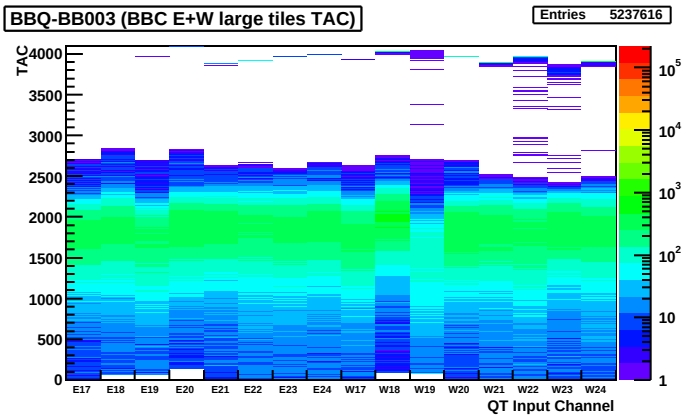

BBQ-BB001 (BBC east small tiles ADC)
Entries 5237616
ADC
QT Input Channel

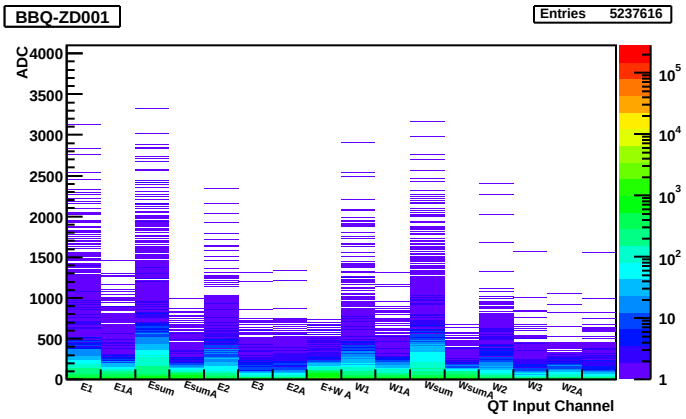

BBQ-BB001 (BBC east small tiles TAC)
Entries 5237616
TAC
QT Input Channel

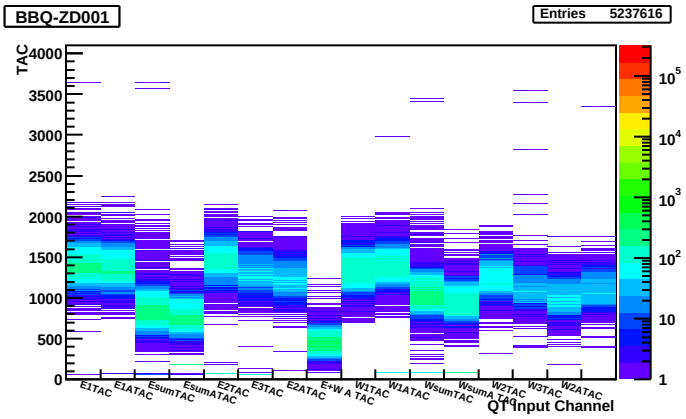

BBQ-BB002 (BBC west small tiles ADC)
Entries 5237616
ADC
QT Input Channel

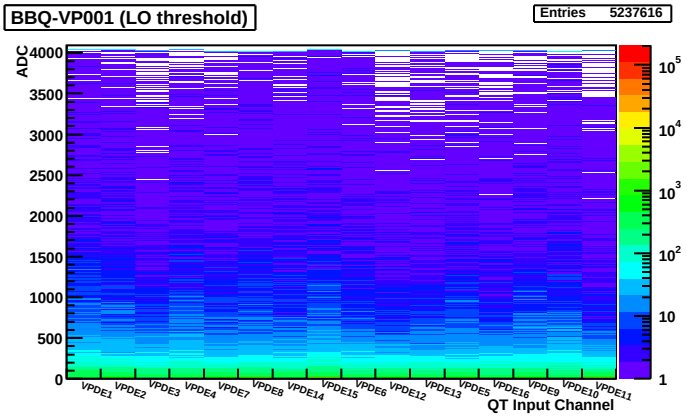

BBQ-BB002 (BBC west small tiles TAC)
Entries 5237616
TAC
QT Input Channel

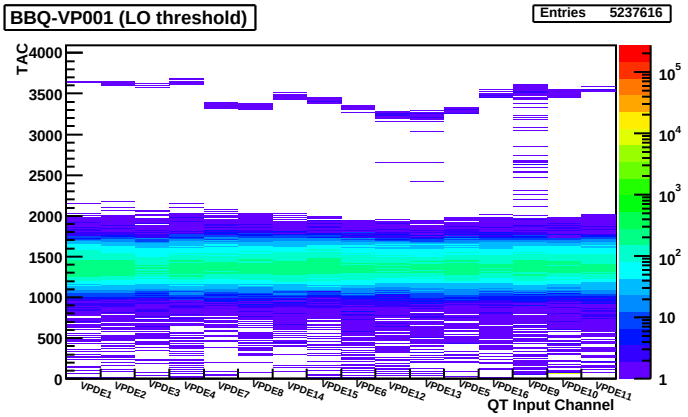

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 5237616
ADC
QT Input Channel

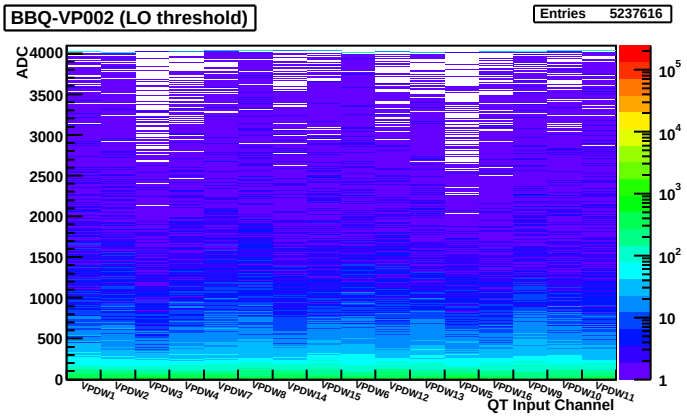

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 5237616
TAC
QT Input Channel

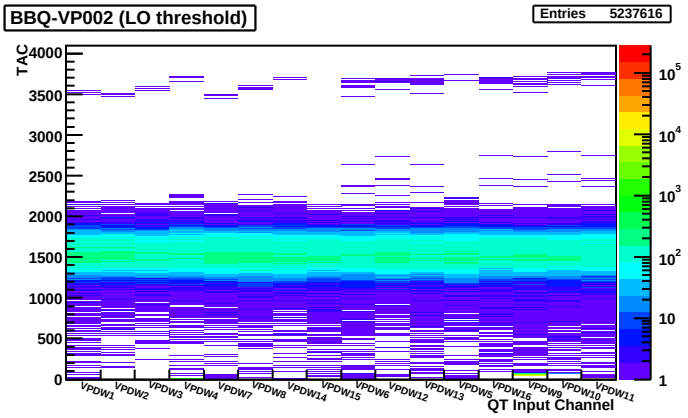

BBQ-ZD001
Entries 5237616
ADC
QT Input Channel

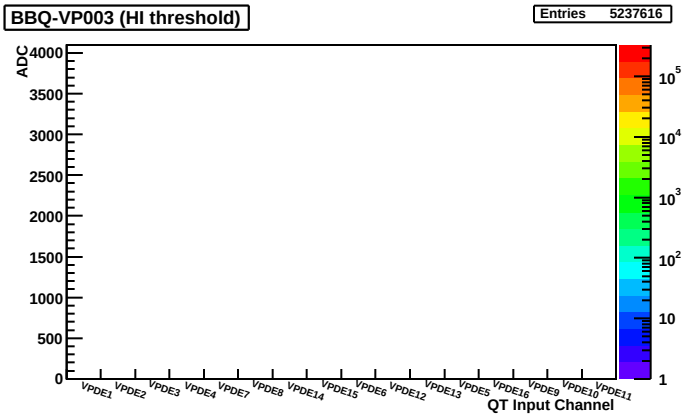

BBQ-ZD001
Entries 5237616
TAC
QT Input Channel

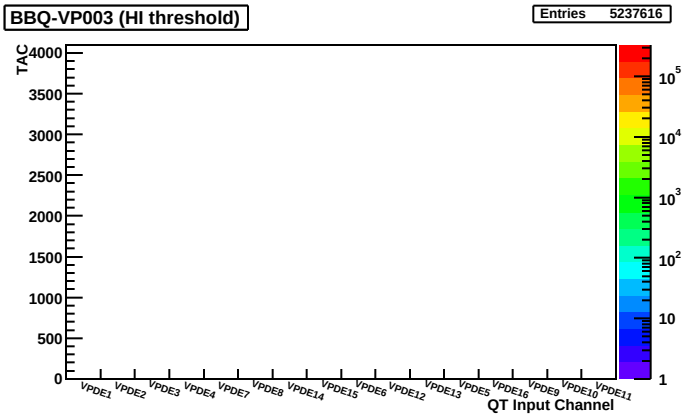

BBQ-VP001 (LO threshold)
Entries 5237616
ADC
QT Input Channel

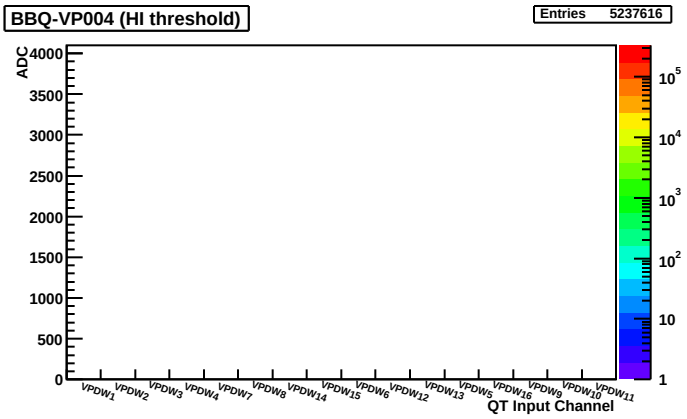

BBQ-VP001 (LO threshold)
Entries 5237616
TAC
QT Input Channel

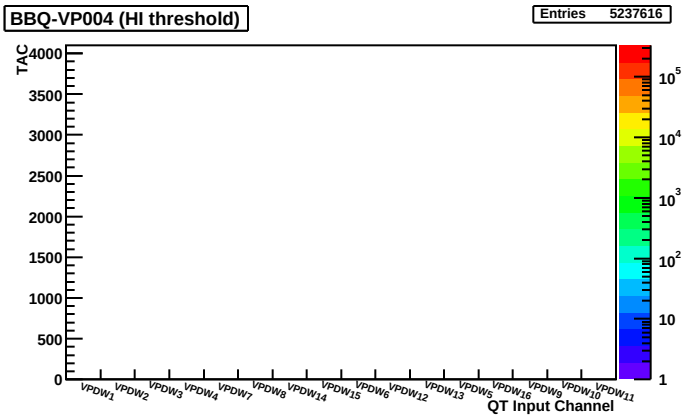

BBQ-VP002 (LO threshold)
Entries 5237616
ADC
QT Input Channel

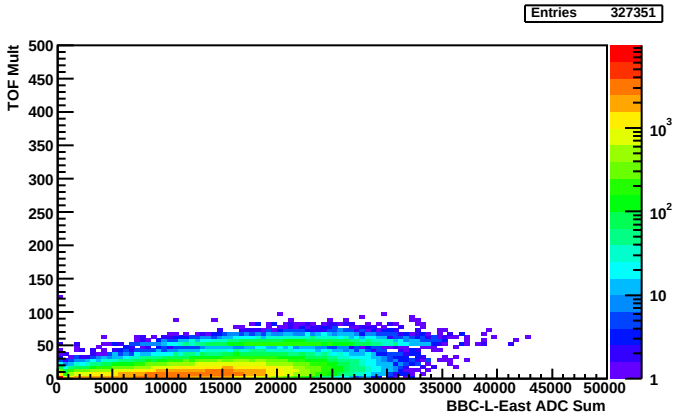

BBQ-VP002 (LO threshold)
Entries 5237616
TAC
QT Input Channel

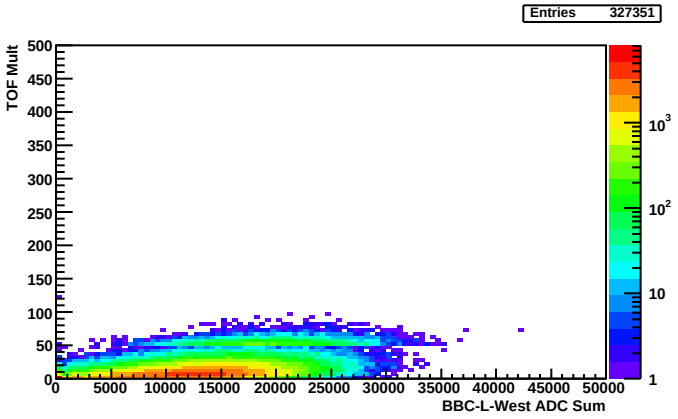

BBQ-VP003 (HI threshold)
Entries 5237616
ADC
QT Input Channel

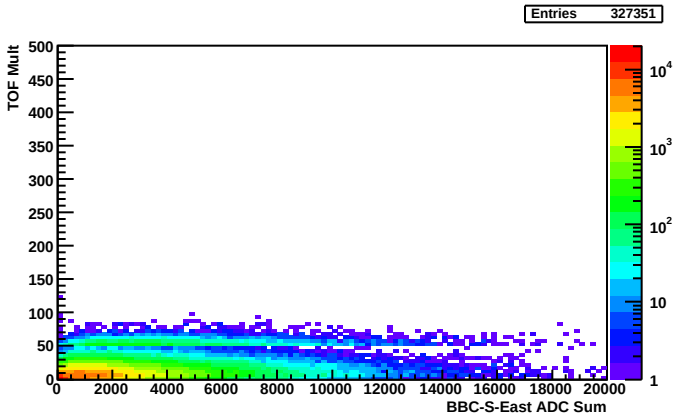

BBQ-VP003 (HI threshold)
Entries 5237616
TAC
QT Input Channel

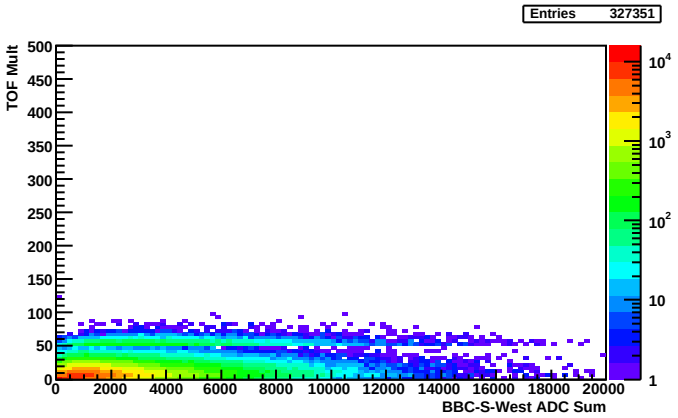

BBQ-VP004 (HI threshold)
Entries 5237616
ADC
QT Input Channel

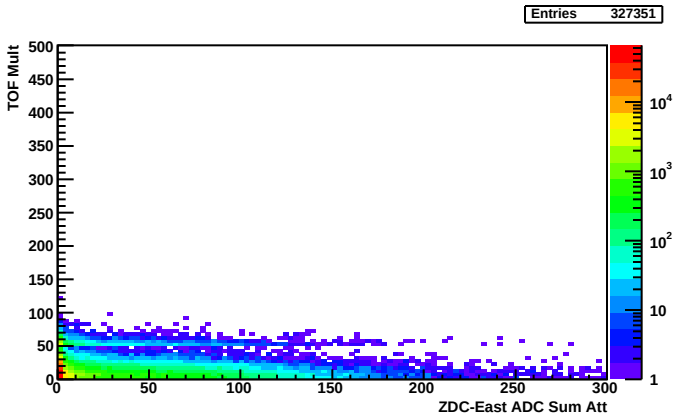

BBQ-VP004 (HI threshold)
Entries 5237616
TAC
QT Input Channel

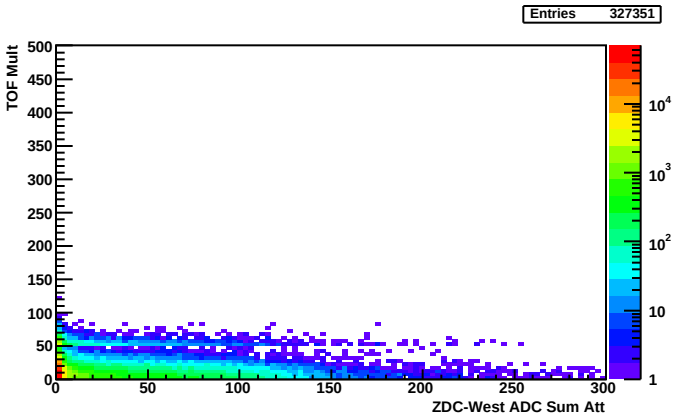

Entries 327351
TOF Mult
BBC-L-East ADC Sum

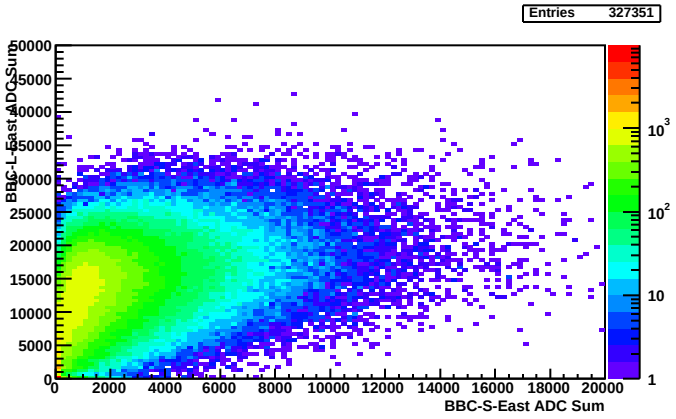

Entries 327351
TOF Mult
BBC-L-West ADC Sum

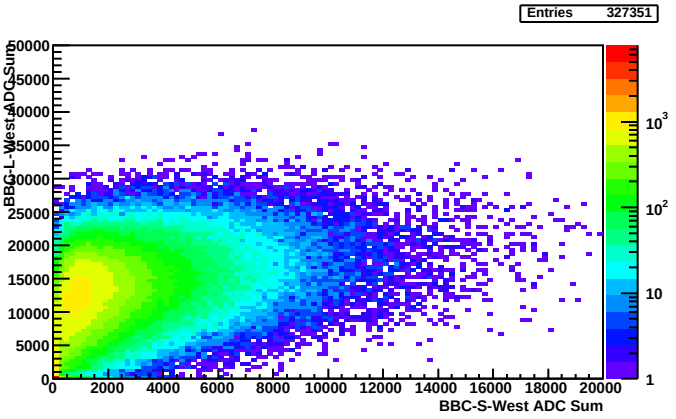

Entries 327351
TOF Mult
BBC-S-East ADC Sum

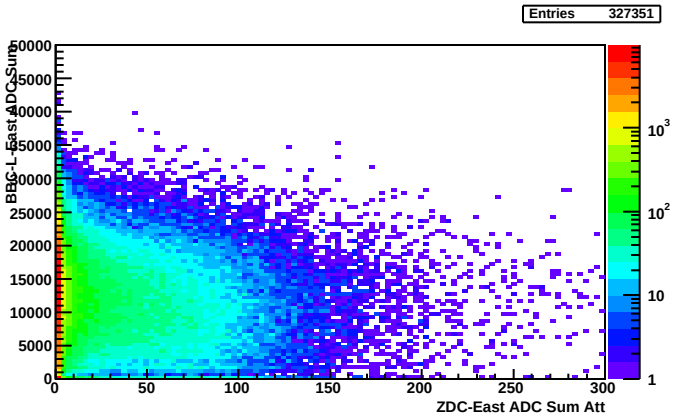

Entries 327351
TOF Mult
BBC-S-West ADC Sum

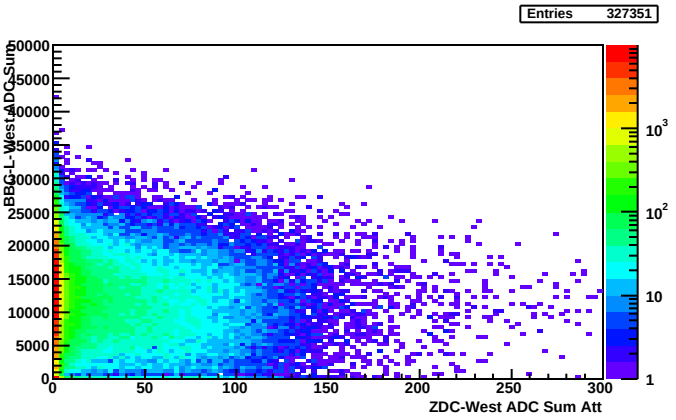

Entries 327351
TOF Mult
ZDC-East ADC Sum Att

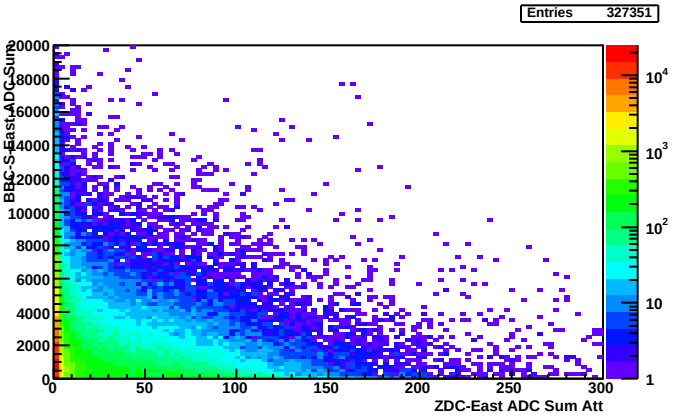

Entries 327351
TOF Mult
ZDC-West ADC Sum Att

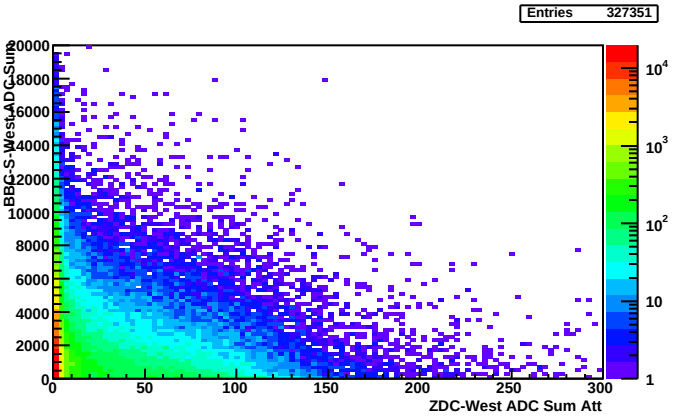

Entries 327351
BBC-L-East ADC Sum
BBC-S-East ADC Sum

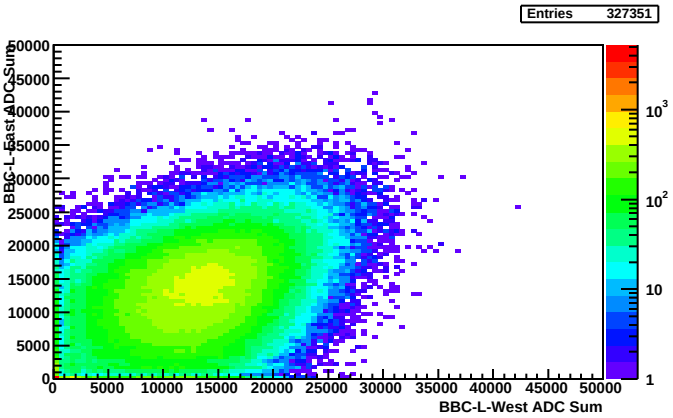

Entries 327351
BBC-L-West ADC Sum
BBC-S-West ADC Sum

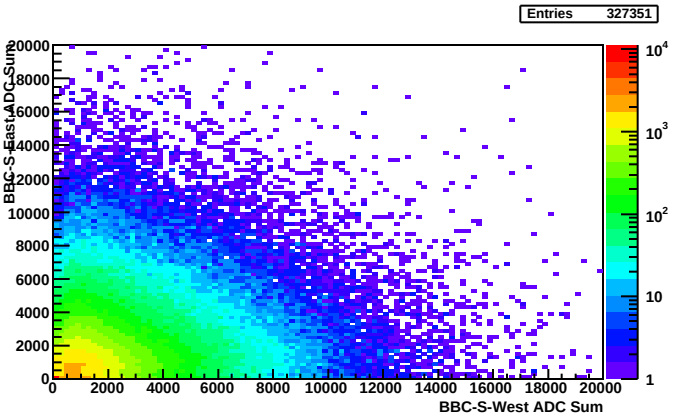

Entries 327351
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

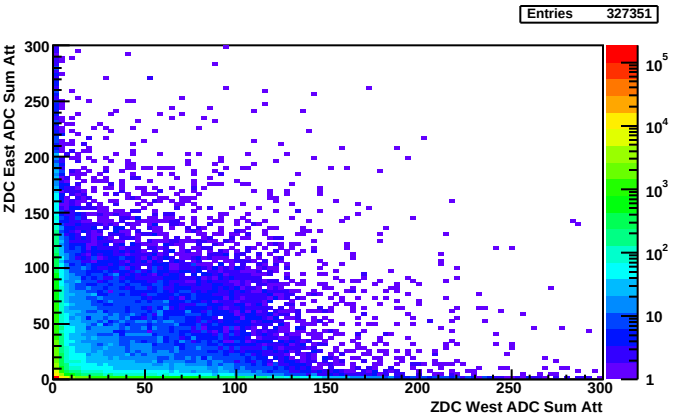

Entries 327351
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

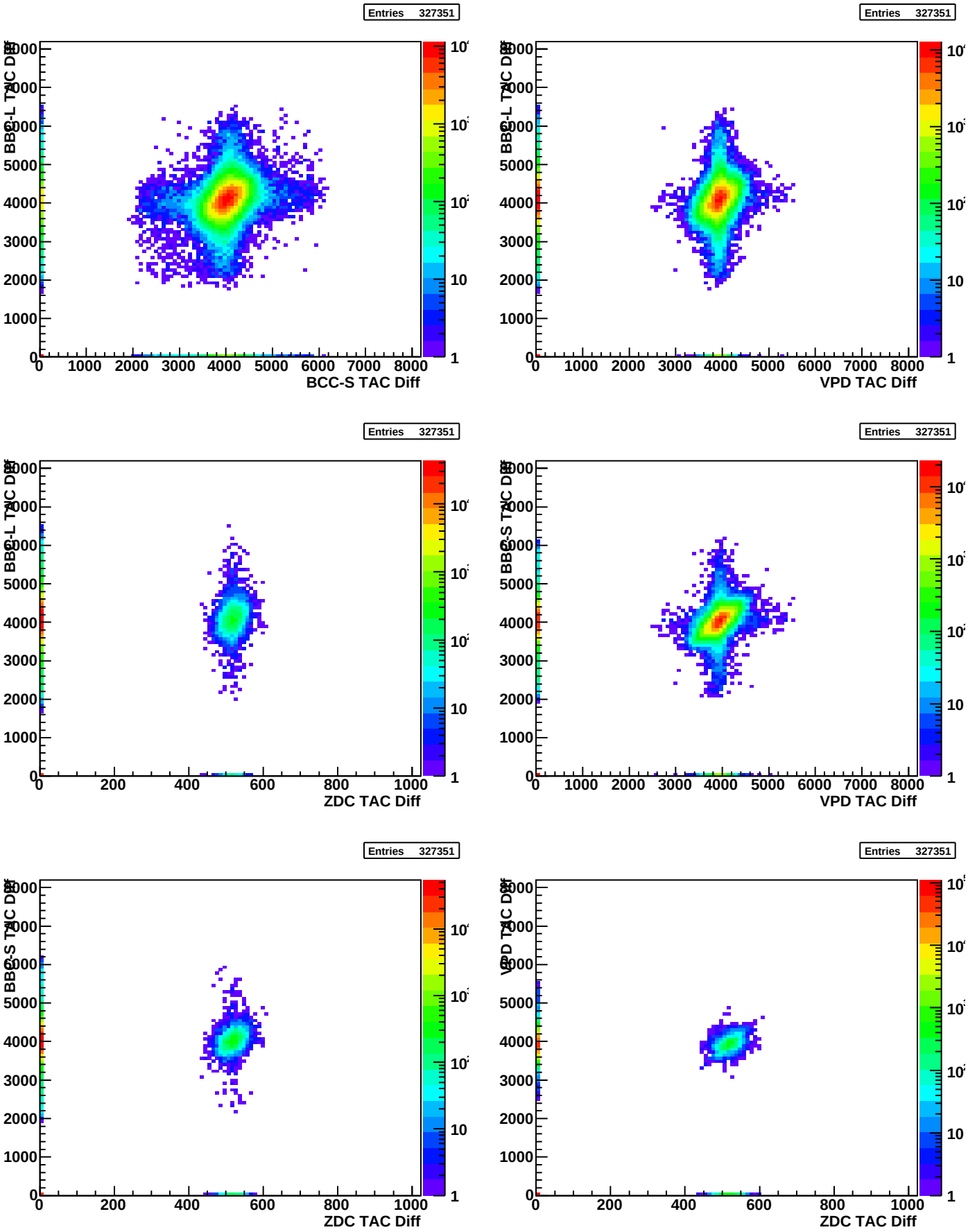

Entries 327351
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

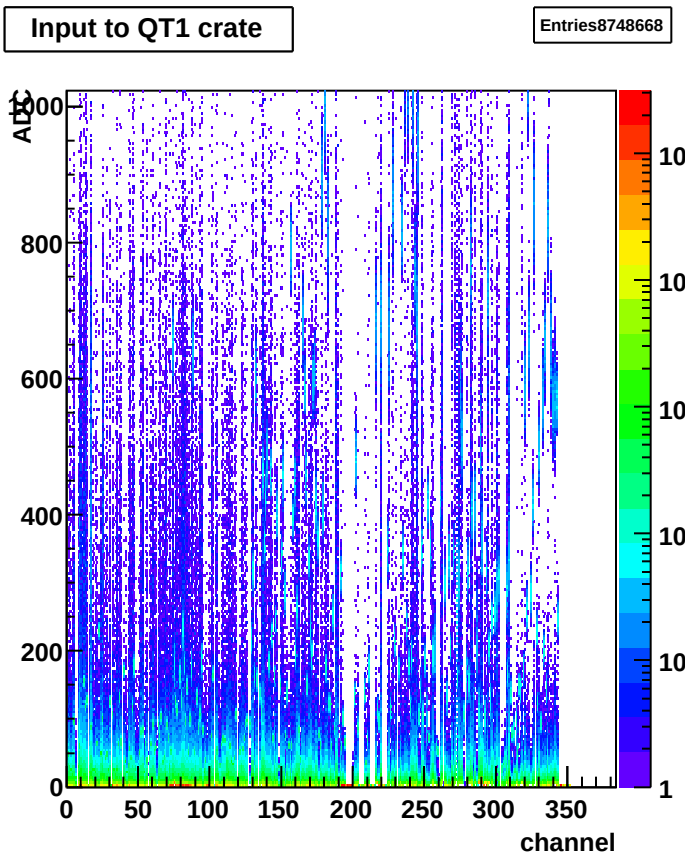

Entries 327351
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

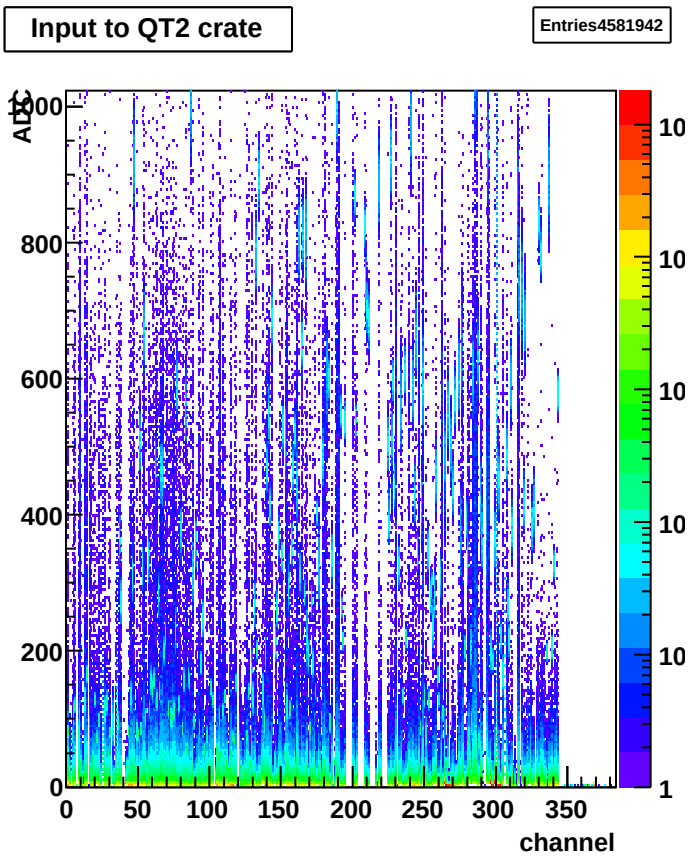

Entries 327351
BBC-L-East ADC Sum
BBC-L-West ADC Sum

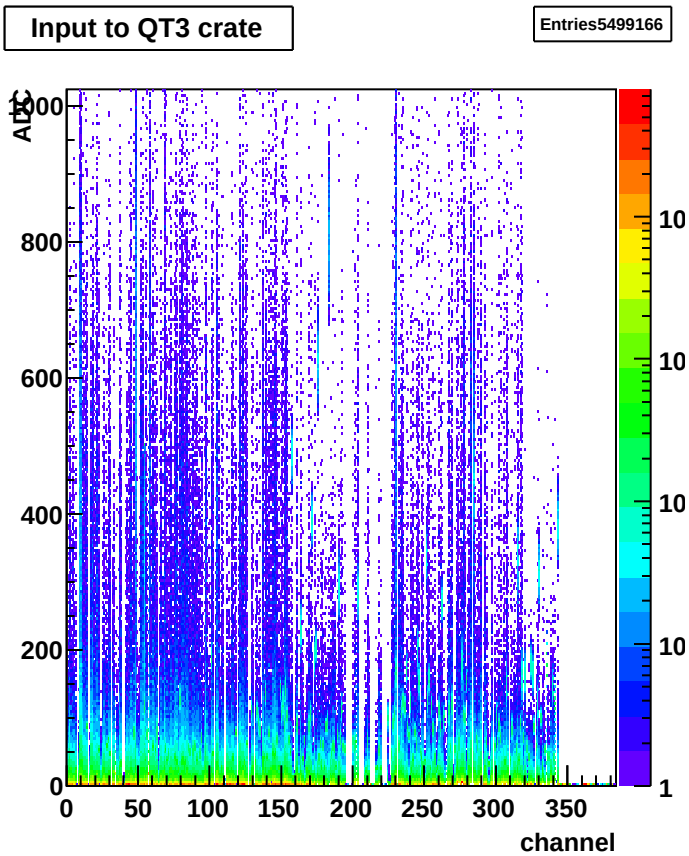

Entries 327351
BBC-S-East ADC Sum
BBC-S-West ADC Sum

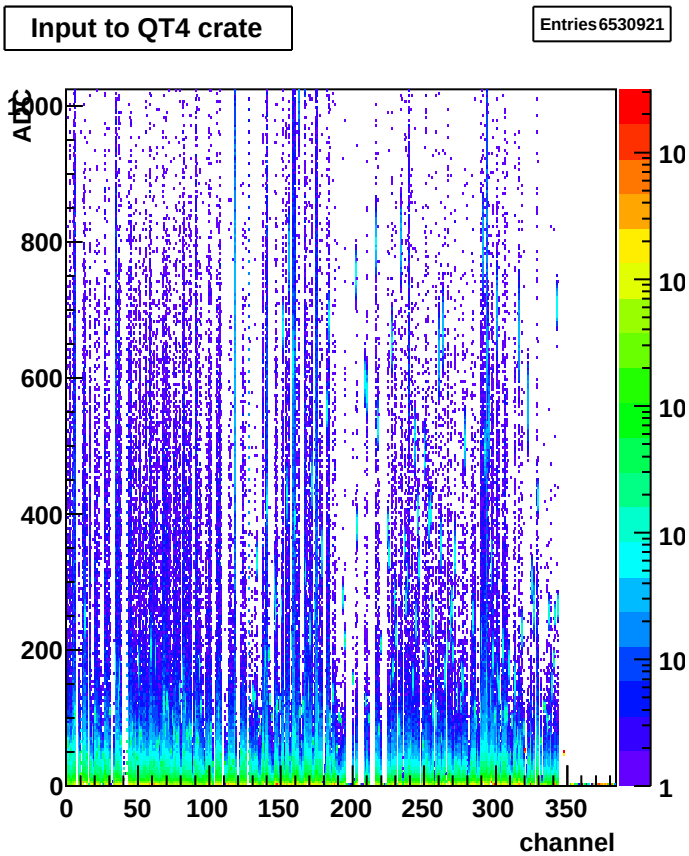

Entries 327351
ZDC East ADC Sum Att
ZDC West ADC Sum Att

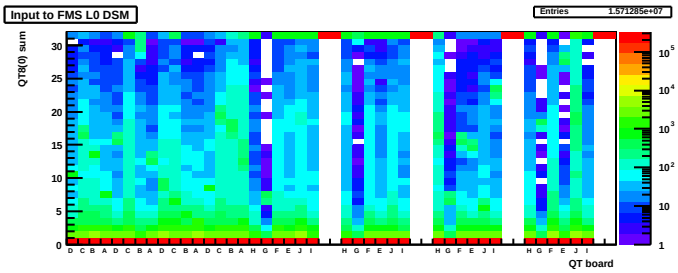

Entries 327351
BBC-L TAC Diff
BCC-S TAC Diff
Entries 327351
BBC-L TAC Diff
VPD TAC Diff
Entries 327351
BBC-L TAC Diff
ZDC TAC Diff
Entries 327351
BBC-S TAC Diff
VPD TAC Diff
Entries 327351
BBC-S TAC Diff
ZDC TAC Diff
Entries 327351
VPD TAC Diff
ZDC TAC Diff

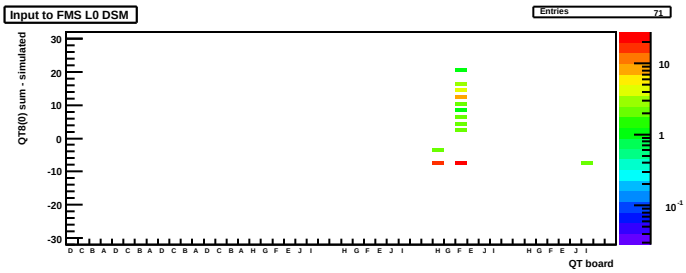

Input to QT1 crate
Entries8748668
ADC
channel

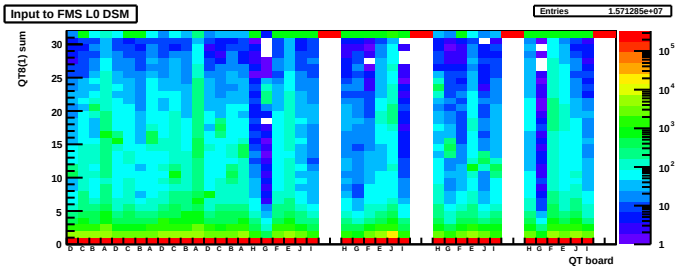

Input to QT2 crate
Entries4581942
ADC
channel

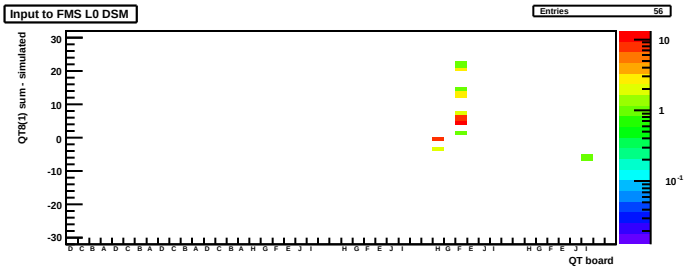

Input to QT3 crate
Entries5499166
ADC
channel

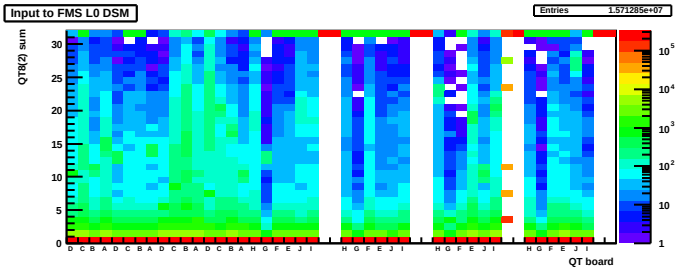

Input to QT4 crate
Entries6530921
ADC
channel

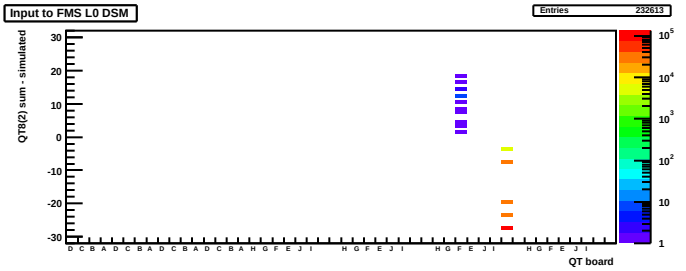

Input to FMS L0 DSM
Entries 1.571285e+07
QT8(0) sum
QT board

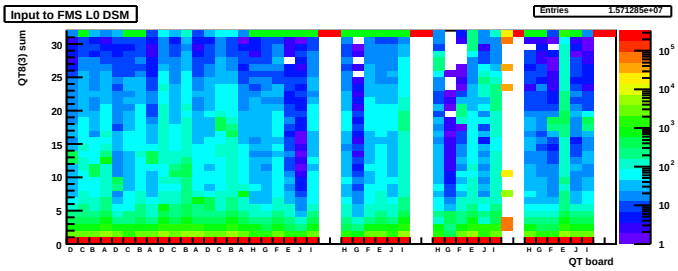

Input to FMS L0 DSM
Entries 71
QT8(0) sum - simulated
QT board

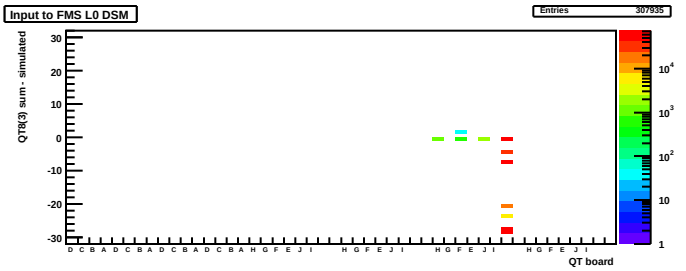

Input to FMS L0 DSM
Entries 1.571285e+07
QT8(1) sum
QT board

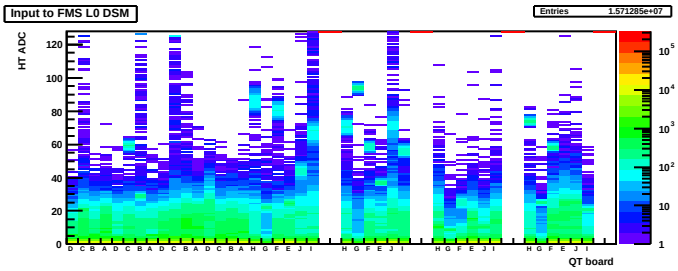

Input to FMS L0 DSM
Entries 56
QT8(1) sum - simulated
QT board

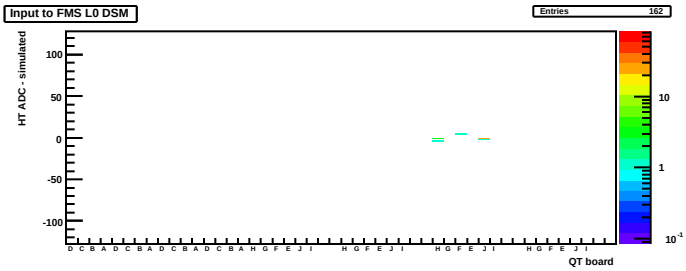

Input to FMS L0 DSM
Entries 1.571285e+07
QT8(2) sum
QT board

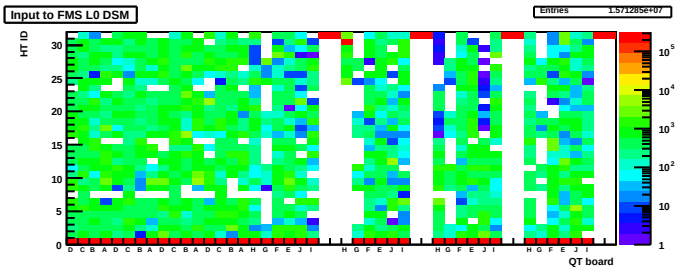

Input to FMS L0 DSM
Entries 232613
QT8(2) sum - simulated
QT board

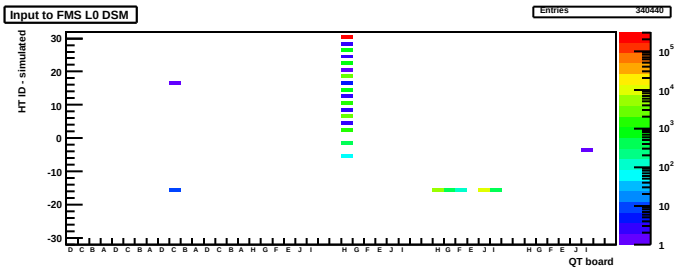

Input to FMS L0 DSM
Entries 1.571285e+07
QT8(3) sum
QT board

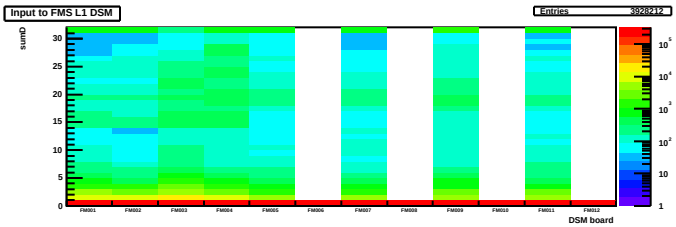

Input to FMS L0 DSM
Entries 307935
QT8(3) sum - simulated
QT board

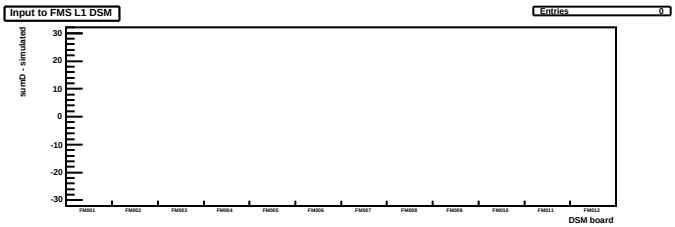

Input to FMS L0 DSM
Entries 1.571285e+07
HT ADC
QT board

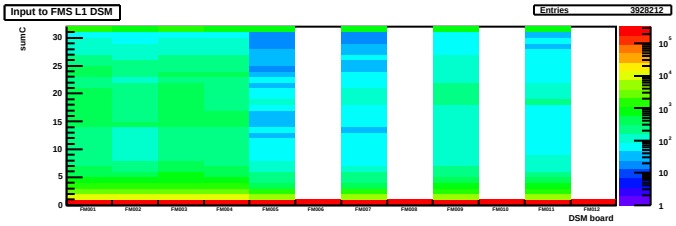

Input to FMS L0 DSM
Entries 162
HT ADC - simulated
QT board

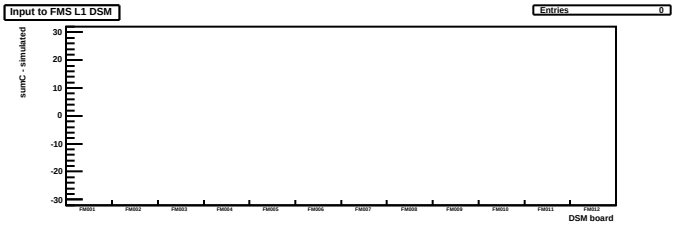

Input to FMS L0 DSM
Entries 1.571285e+07
HT ID
QT board

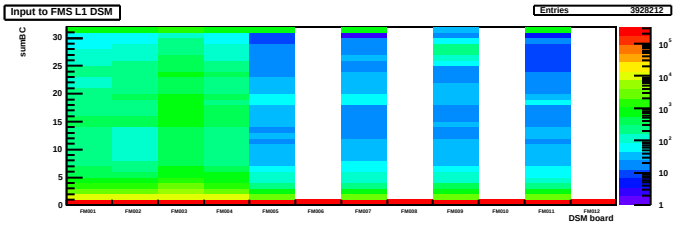

Input to FMS L0 DSM
Entries 340440
HT ID - simulated
QT board

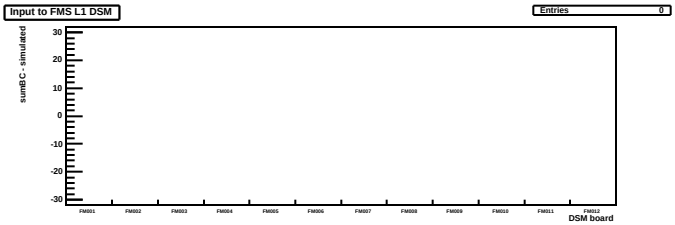

Input to FMS L1 DSM
Entries 3928212
sumD
DSM board

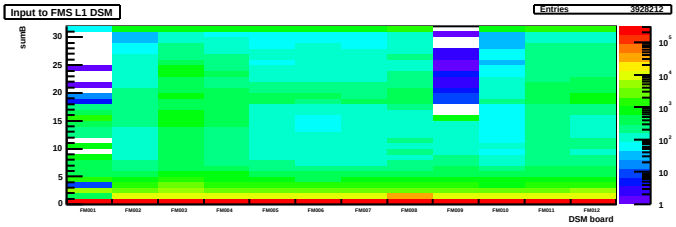

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

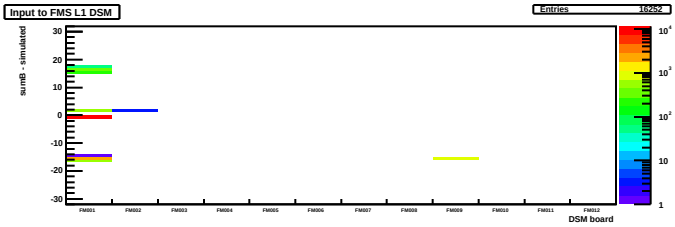

Input to FMS L1 DSM
Entries 3928212
sumC
DSM board

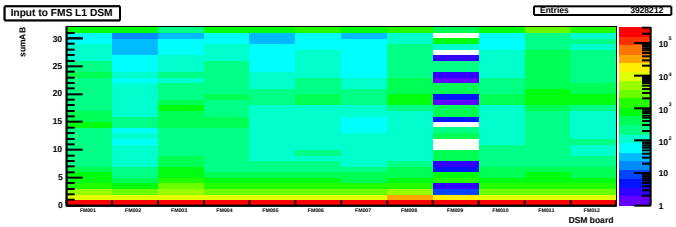

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

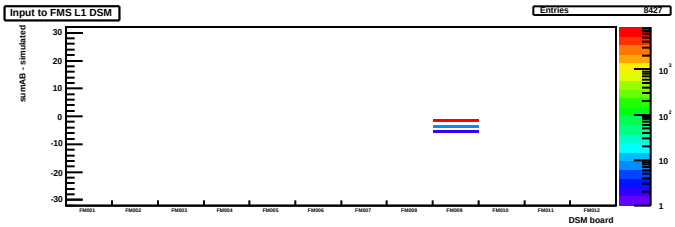

Input to FMS L1 DSM
Entries 3928212
sumBC
DSM board

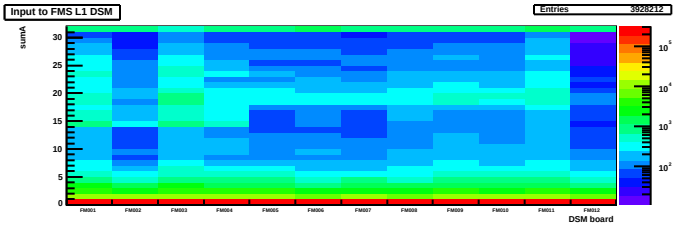

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

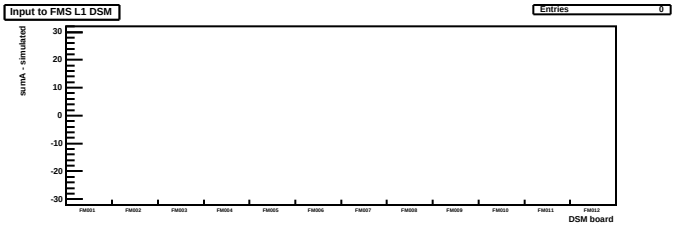

Input to FMS L1 DSM
Entries 3928212
sumB
DSM board

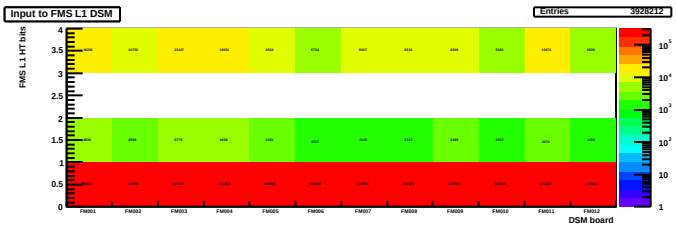

Input to FMS L1 DSM
Entries 16252
sumB - simulated
DSM board

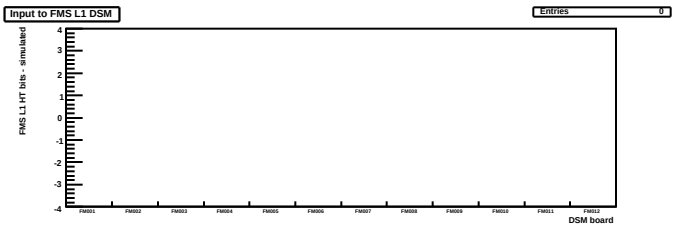

Input to FMS L1 DSM
Entries 3928212
sumAB
DSM board

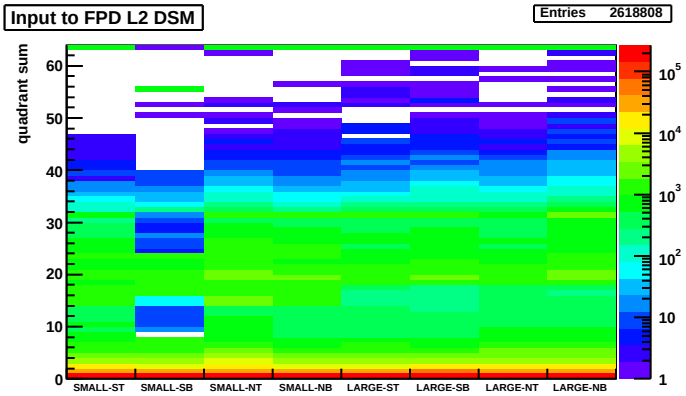

Input to FMS L1 DSM
Entries 8427
sumAB - simulated
DSM board

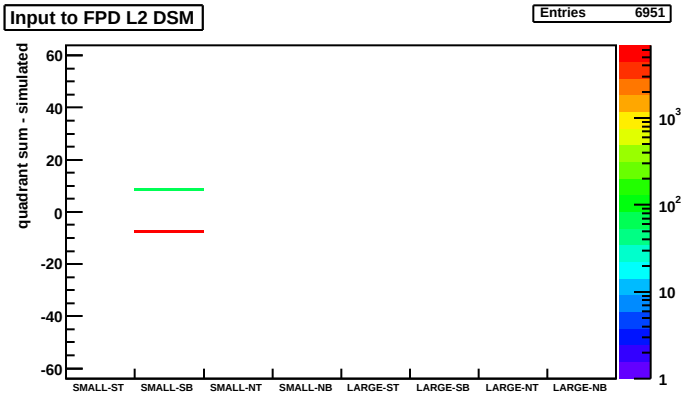

Input to FMS L1 DSM
Entries 3928212
sumA
DSM board

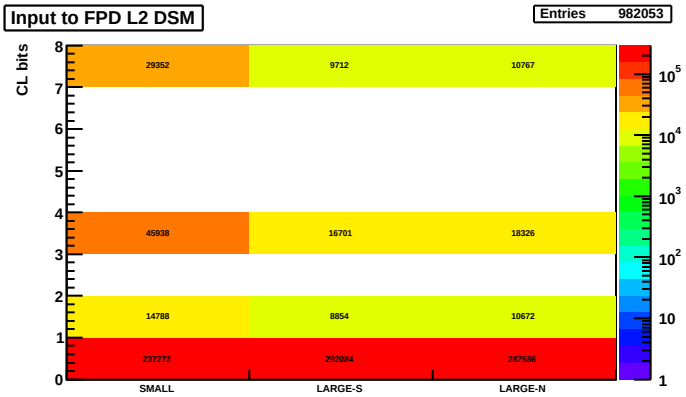

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

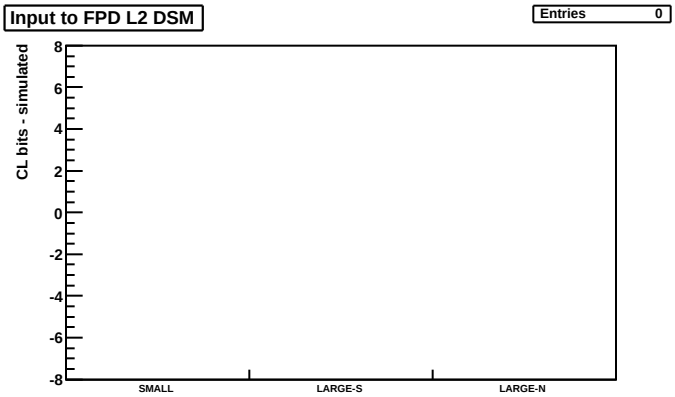

Input to FMS L1 DSM
Entries 3928212
FMS L1 HT bits
DSM board

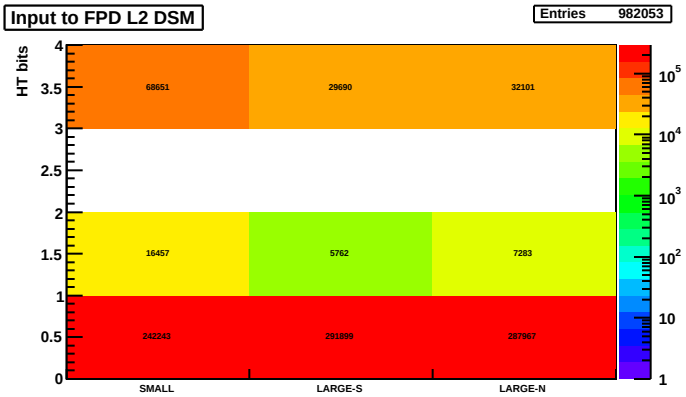

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

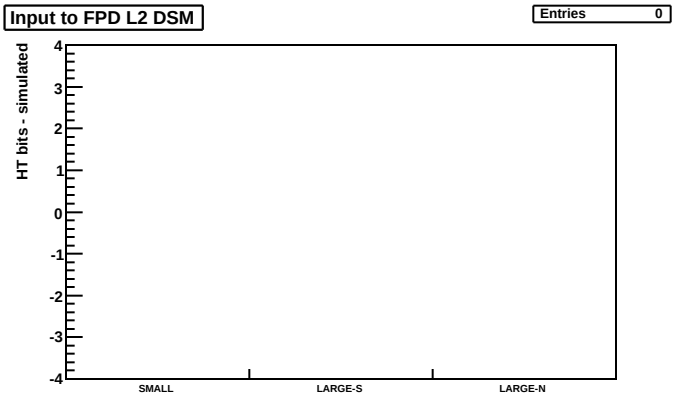

Input to FPD L2 DSM
Entries 2618808
quadrant sum
SMALL-ST
SMALL-SB
SMALL-NT
SMALL-NB
LARGE-ST
LARGE-SB
LARGE-NT
LARGE-NB

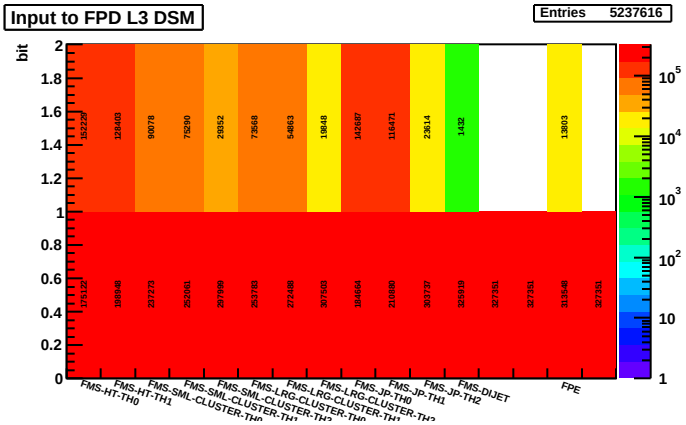

Input to FPD L2 DSM
Entries 6951
quadrant sum - simulated
SMALL-ST
SMALL-SB
SMALL-NT
SMALL-NB
LARGE-ST
LARGE-SB
LARGE-NT
LARGE-NB

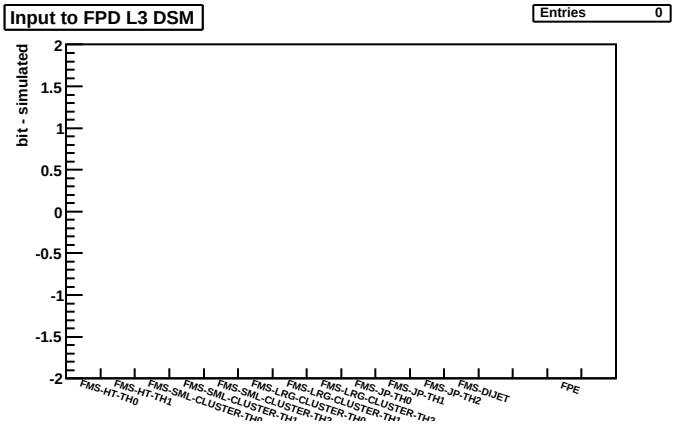

Input to FPD L2 DSM
Entries 982053
CL bits
29352
9712
10767
45938
16701
18326
14788
8854
10672
237273
292084
287586
SMALL
LARGE-S
LARGE-N

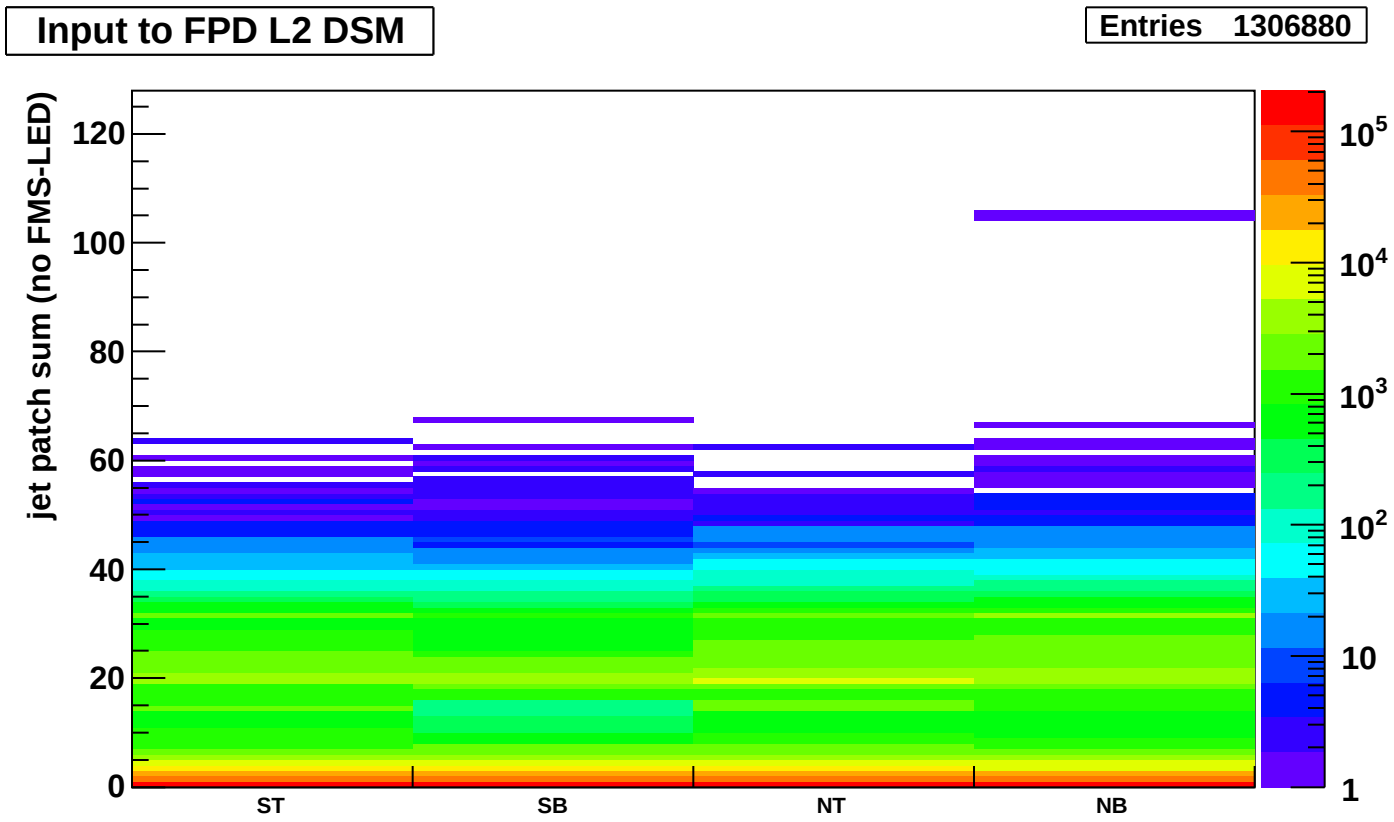

Input to FPD L2 DSM
Entries 0
CL bits - simulated
SMALL
LARGE-S
LARGE-N

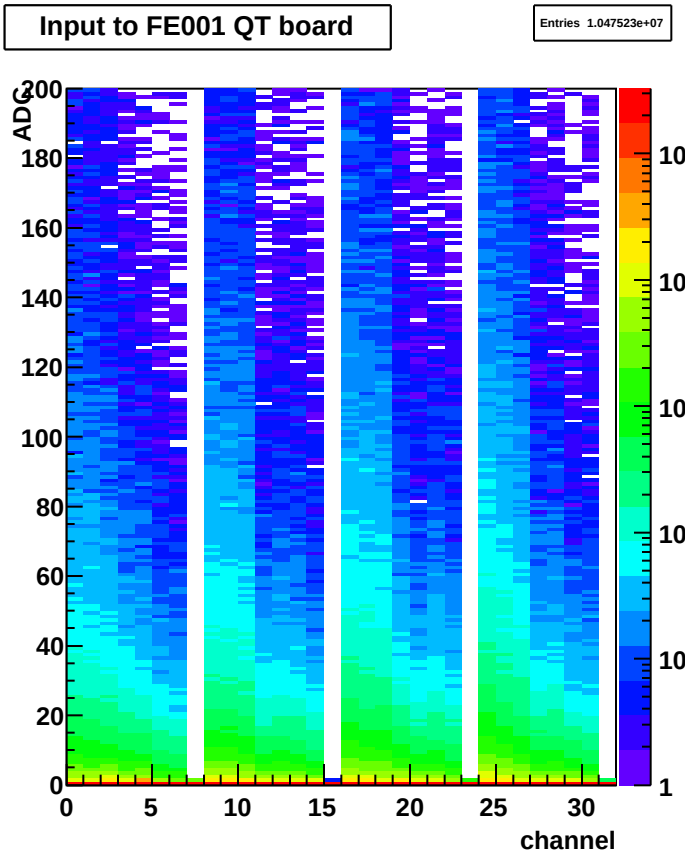

Input to FPD L2 DSM
Entries 982053
HT bits
68651
29690
32101
16457
5762
7283
242243
291899
287967
SMALL
LARGE-S
LARGE-N

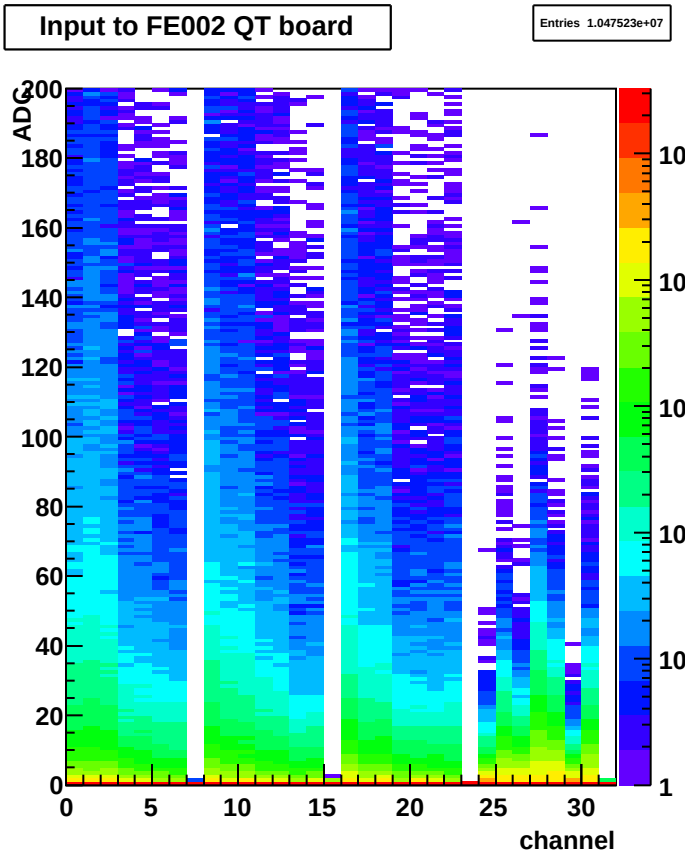

Input to FPD L2 DSM
Entries 0
HT bits - simulated
SMALL
LARGE-S
LARGE-N

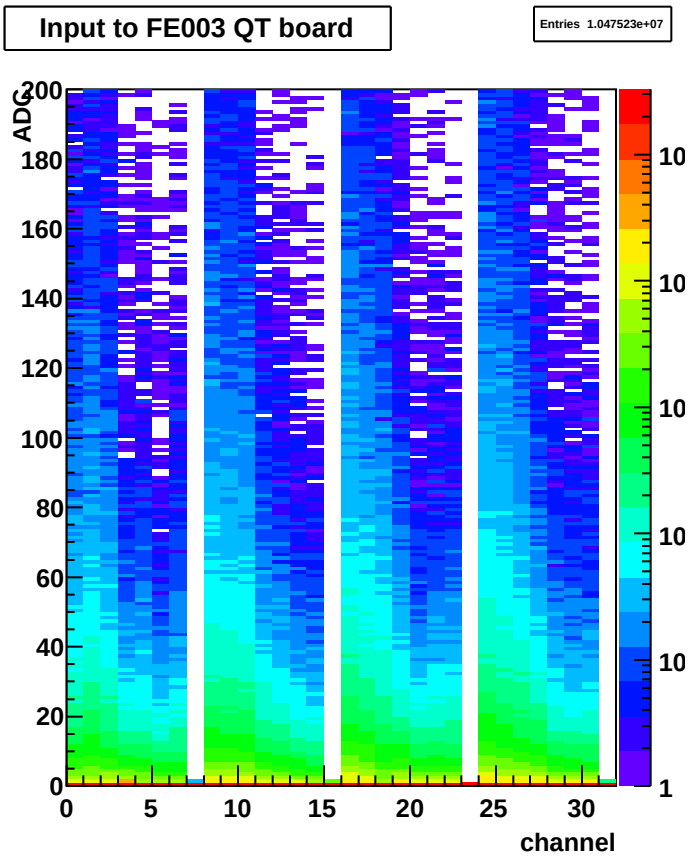

Input to FPD L3 DSM
Entries 5237616
bit
FMS-HT-TH0
FMS-HT-TH1
FMS-SML-CLUSTER-TH0
FMS-SML-CLUSTER-TH1
FMS-SML-CLUSTER-TH2
FMS-LRG-CLUSTER-TH0
FMS-LRG-CLUSTER-TH1
FMS-LRG-CLUSTER-TH2
FMS-JP-TH0
FMS-JP-TH1
FMS-JP-TH2
FMS-DIJET
FPE

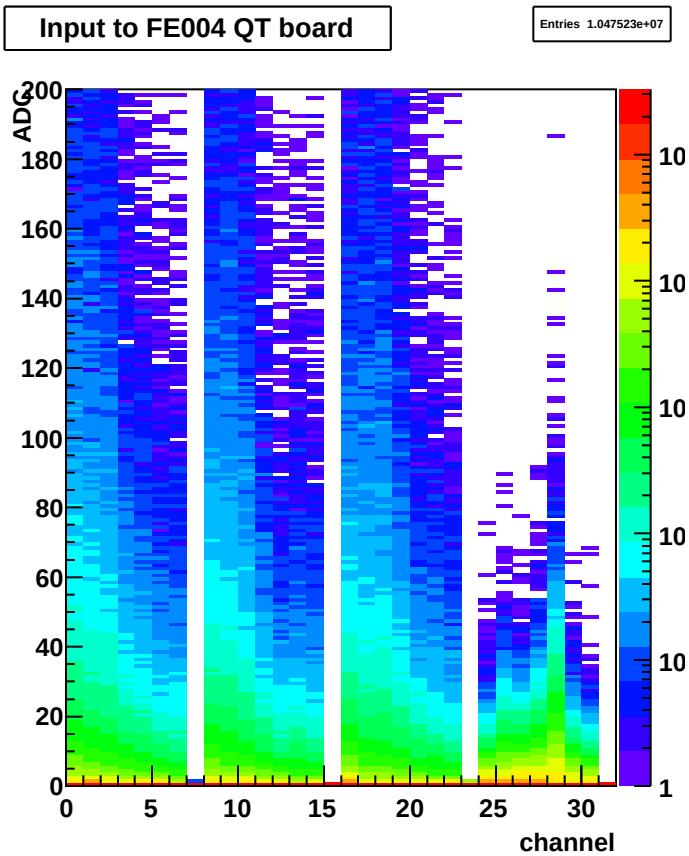

Input to FPD L3 DSM
Entries 0
bit - simulated
FMS-HT-TH0
FMS-HT-TH1
FMS-SML-CLUSTER-TH0
FMS-SML-CLUSTER-TH1
FMS-SML-CLUSTER-TH2
FMS-LRG-CLUSTER-TH0
FMS-LRG-CLUSTER-TH1
FMS-LRG-CLUSTER-TH2
FMS-JP-TH0
FMS-JP-TH1
FMS-JP-TH2
FMS-DIJET
FPE

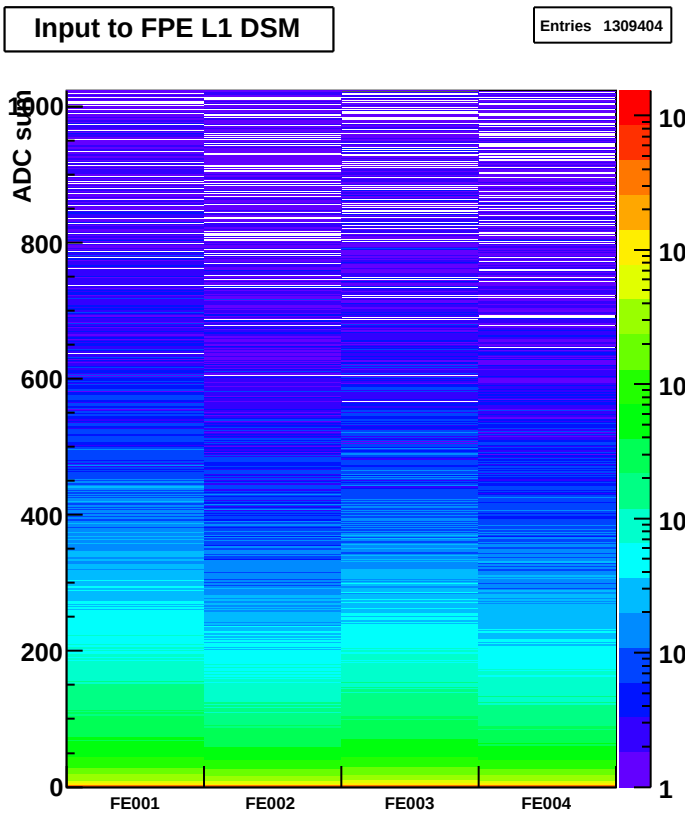

Input to FPD L2 DSM
Entries 1306880
jet patch sum (no FMS-LED)
0
20
40
60
80
100
120
ST
SB
NT
NB
1
10
10^2
10^3
10^4
10^5

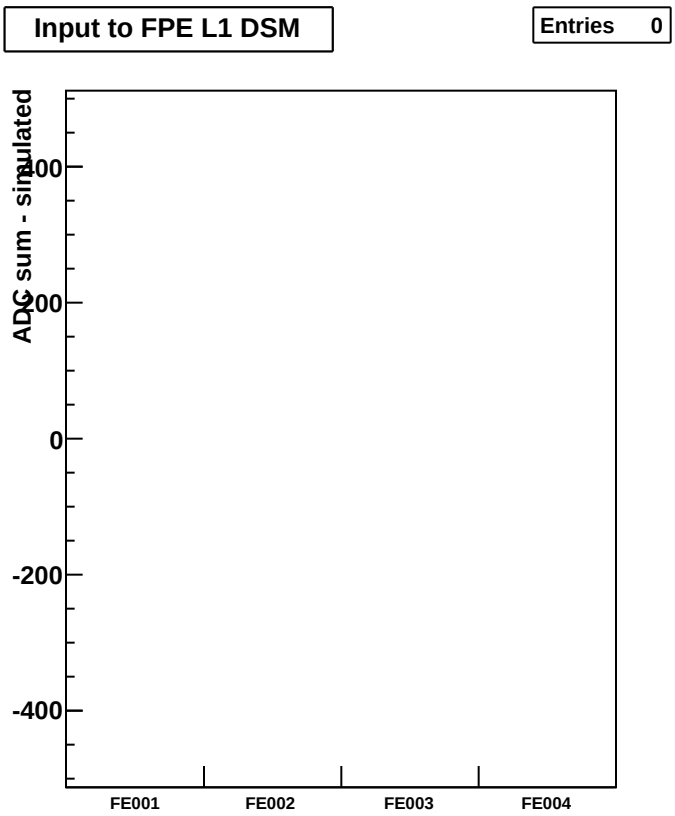

Input to FE001 QT board
Entries 1.047523e+07
ADC
channel

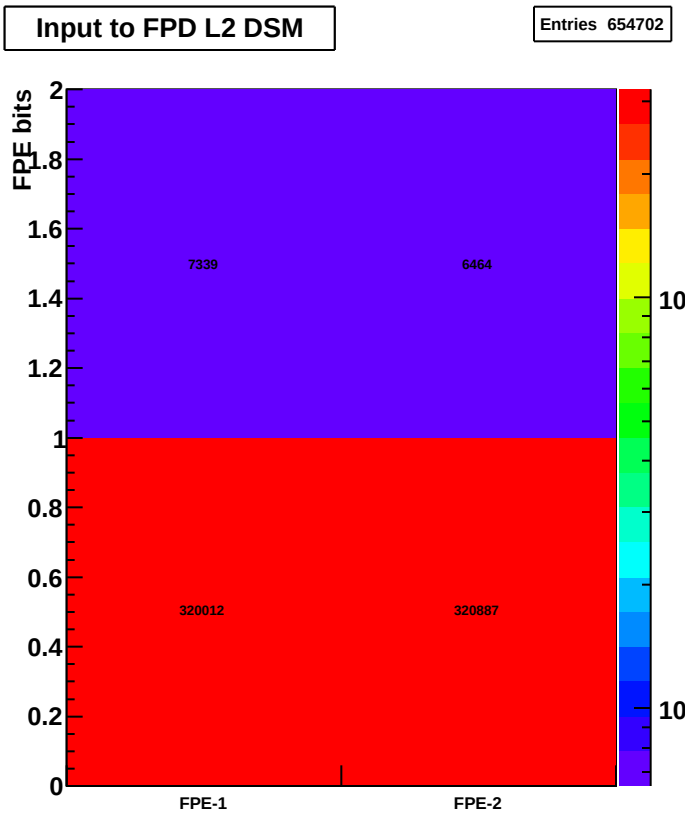

Input to FE002 QT board
Entries 1.047523e+07
ADC
channel

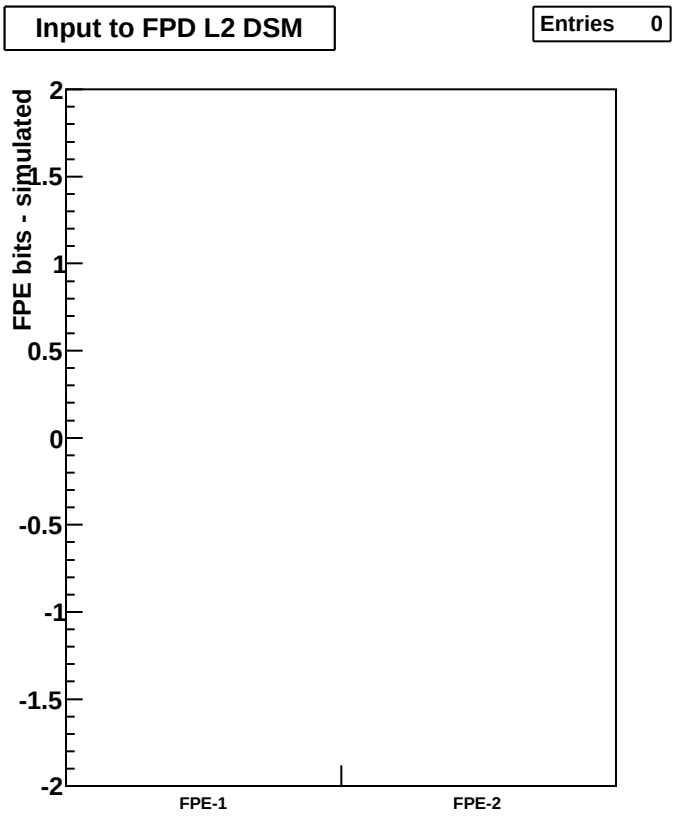

Input to FE003 QT board
Entries 1.047523e+07
ADC
channel


Input to FE004 QT board
Entries 1.047523e+07
ADC
channel


Input to FPE L1 DSM
Entries 1309404
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 654702
FPE bits
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
7339
6464
320012
320887
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