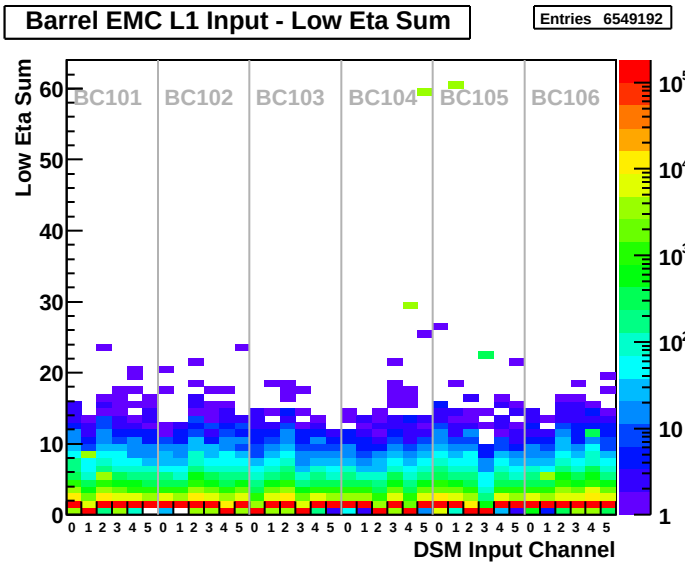
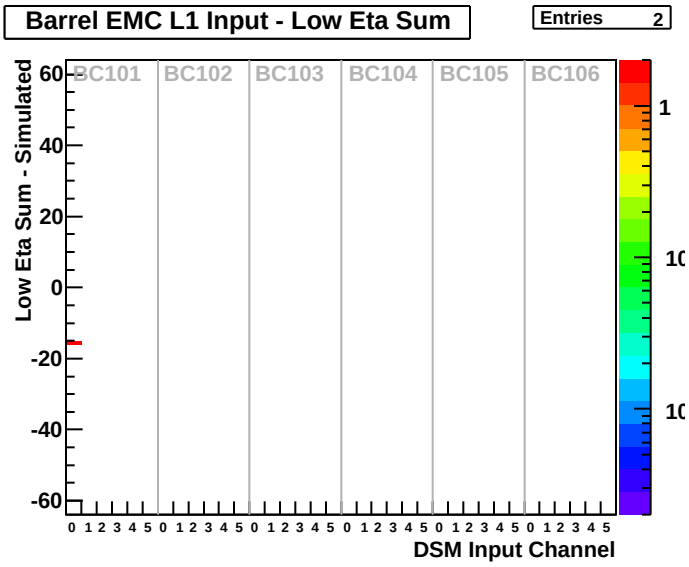
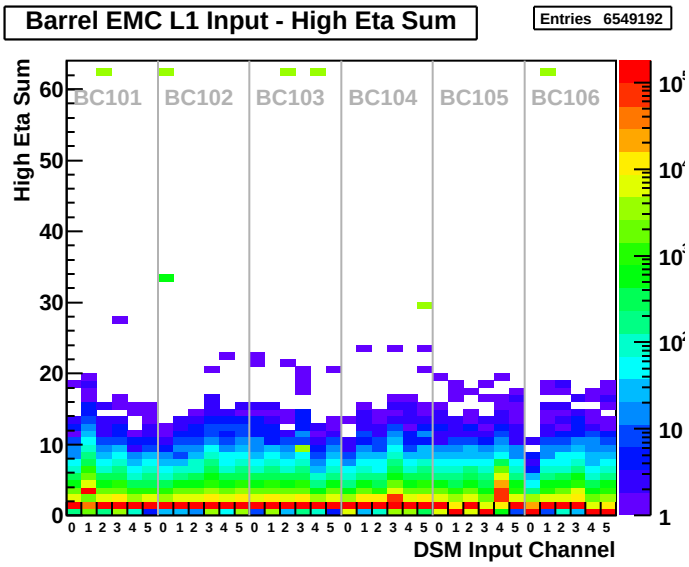
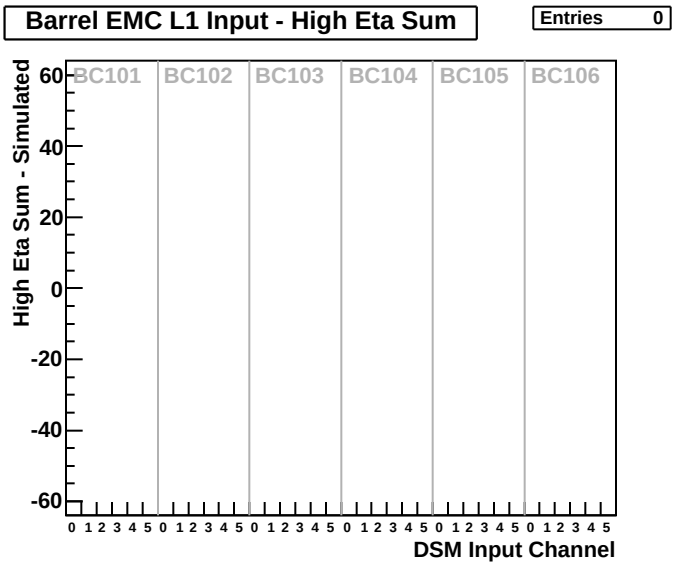
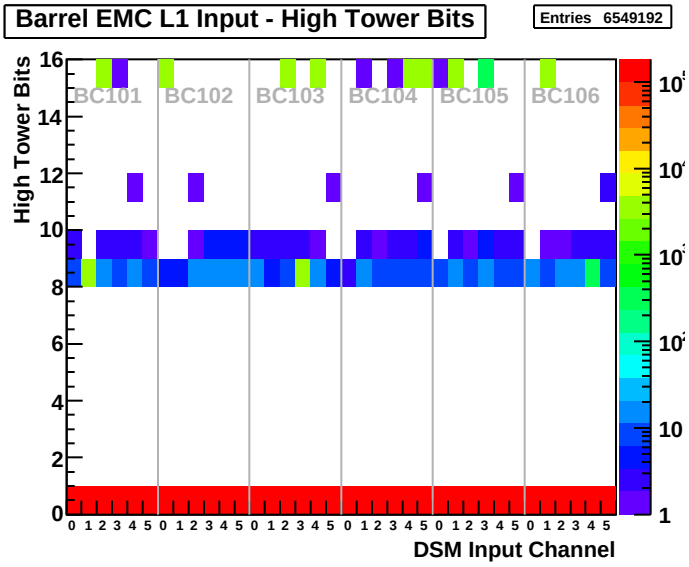
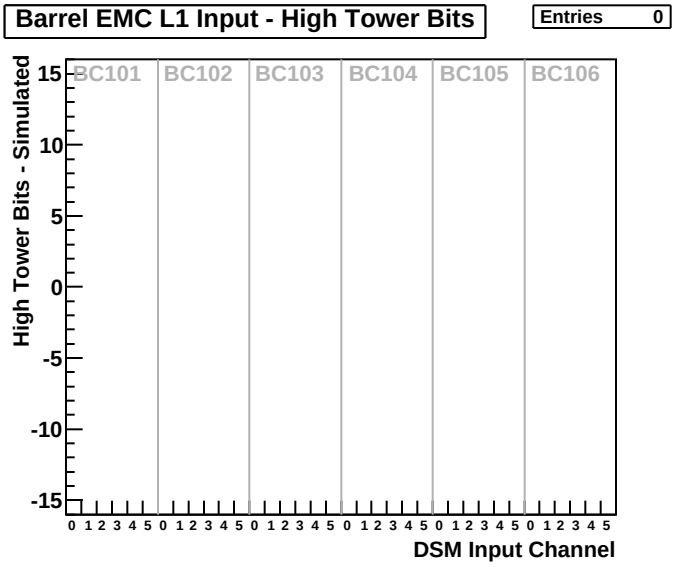

Barrel EMC L1 Input - Low Eta Sum
Entries 6549192
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

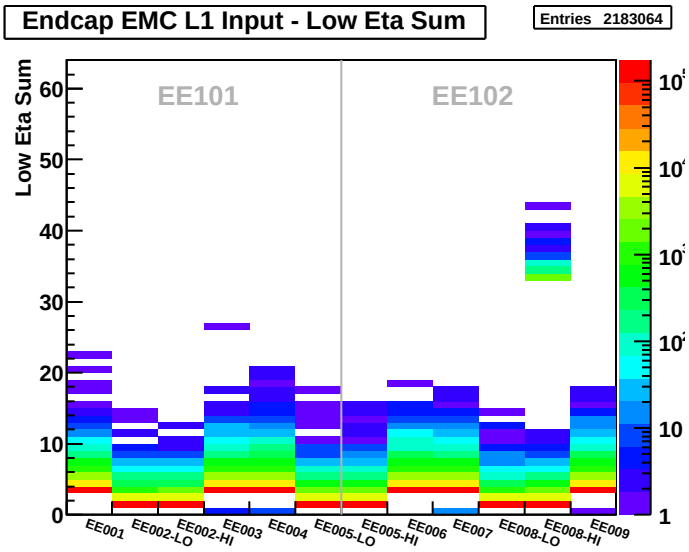

Barrel EMC L1 Input - Low Eta Sum
Entries 2
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

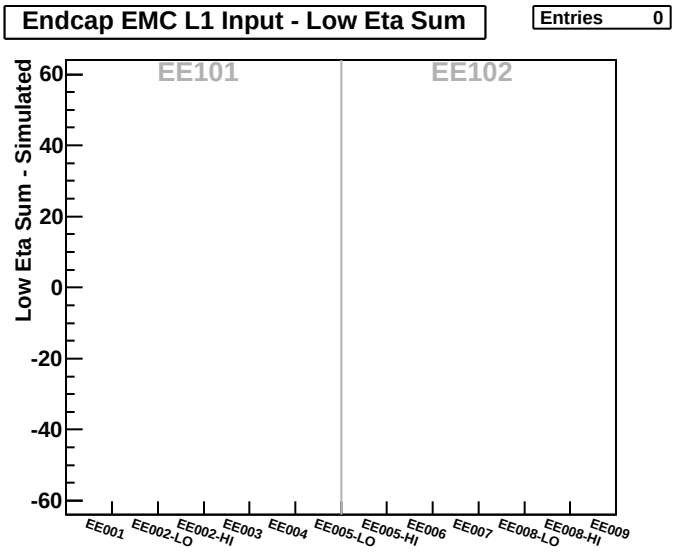

Barrel EMC L1 Input - High Eta Sum
Entries 6549192
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

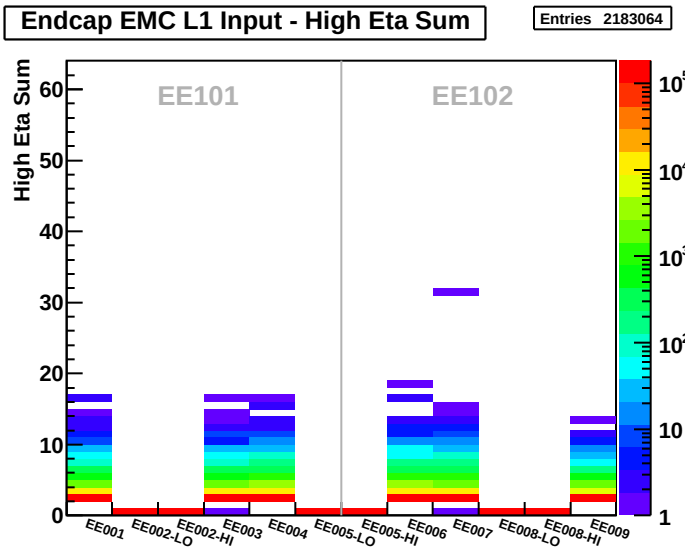

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

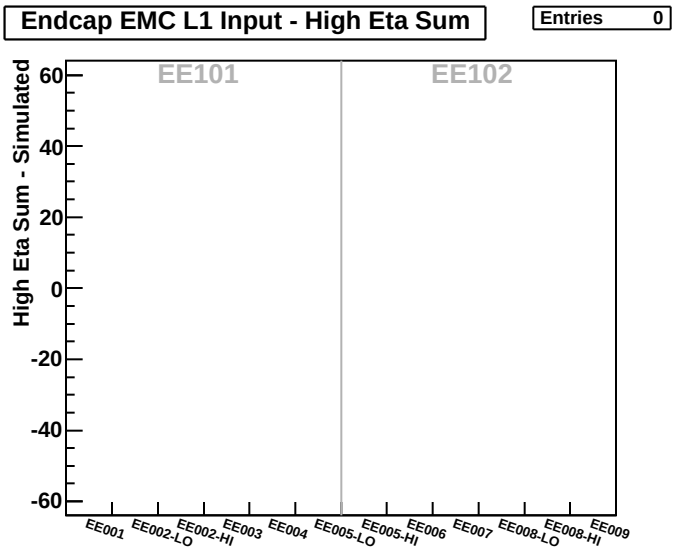

Barrel EMC L1 Input - High Tower Bits
Entries 6549192
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

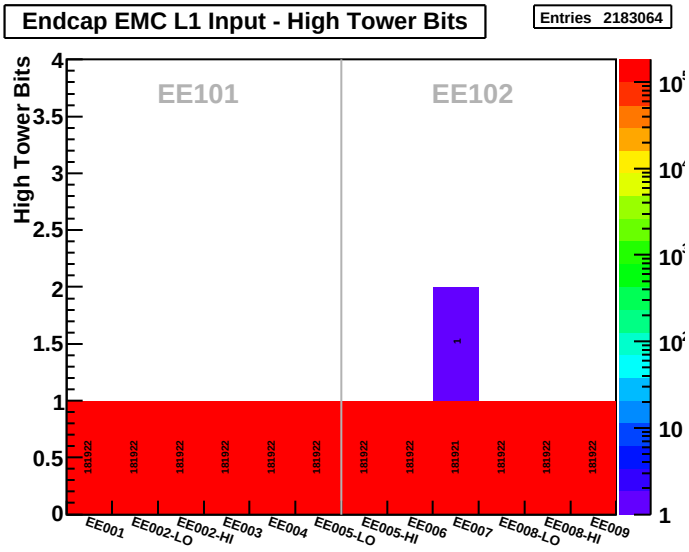

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

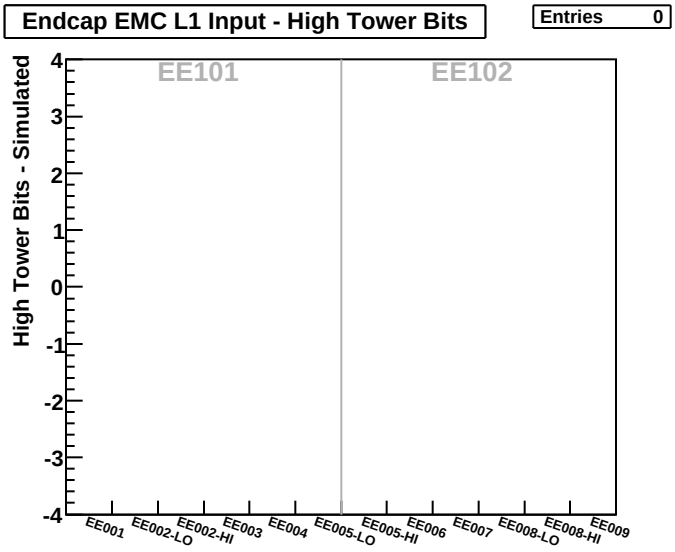

Endcap EMC L1 Input - Low Eta Sum
Entries 2183064
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

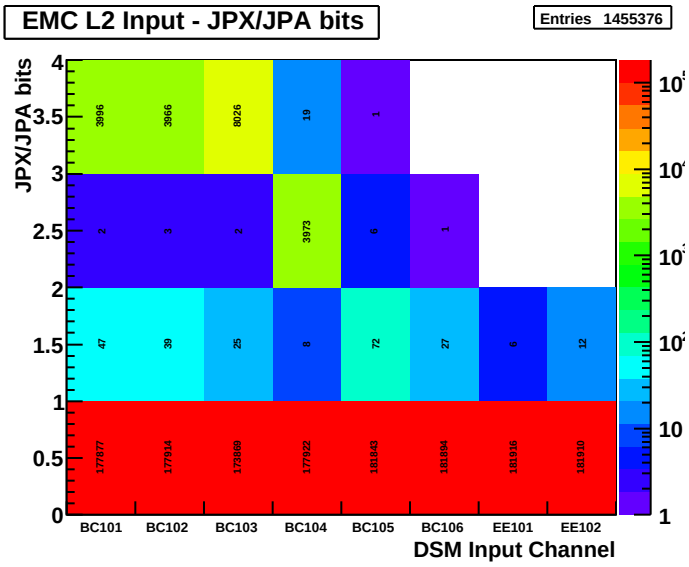

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

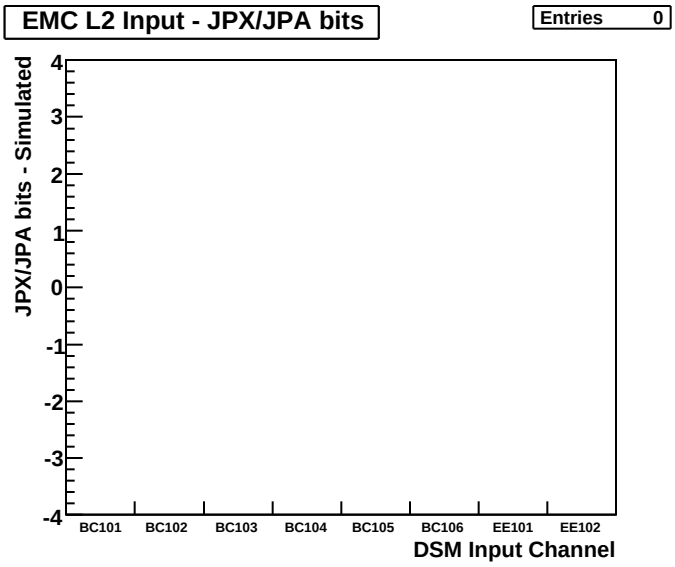

Endcap EMC L1 Input - High Eta Sum
Entries 2183064
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

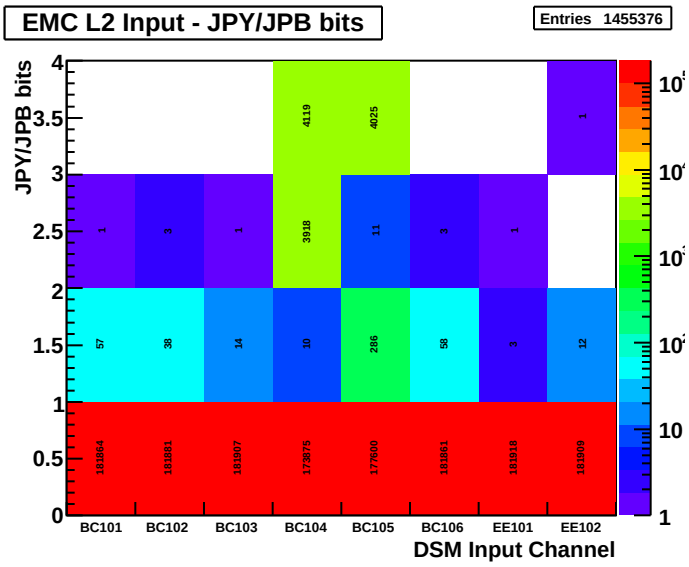

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

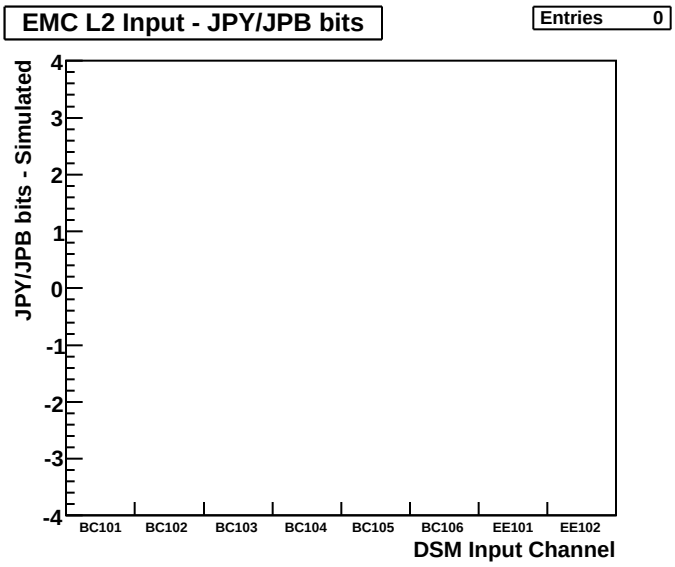

Endcap EMC L1 Input - High Tower Bits
Entries 2183064
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

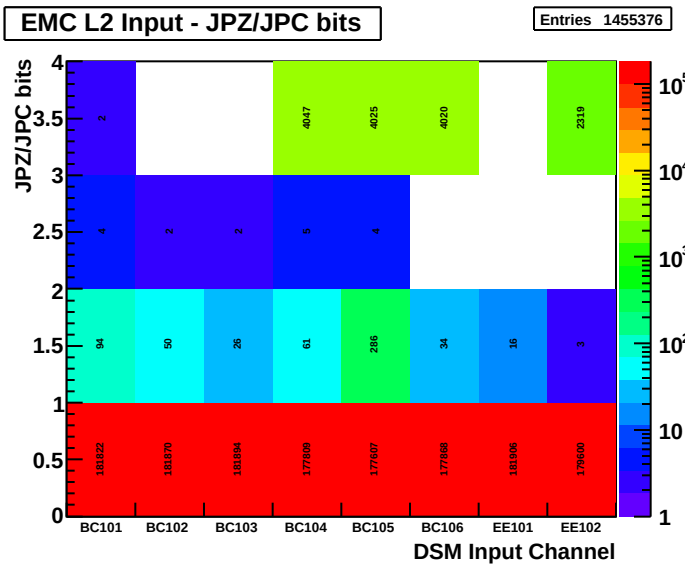

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

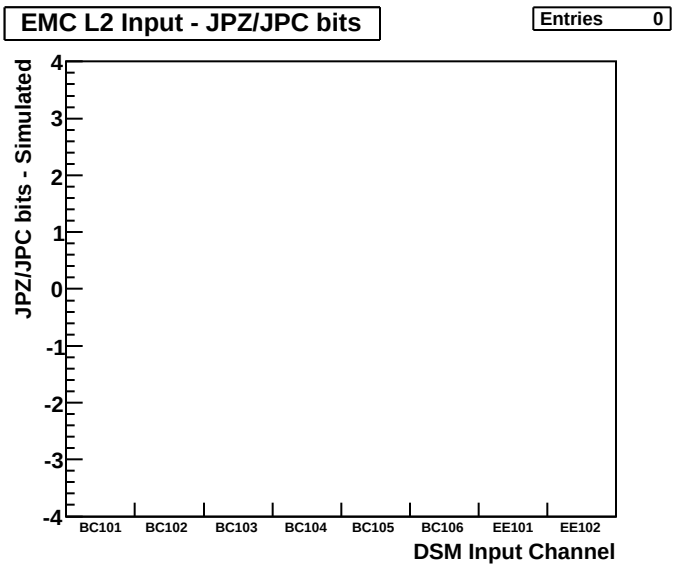

EMC L2 Input - JPX/JPA bits
Entries 1455376
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

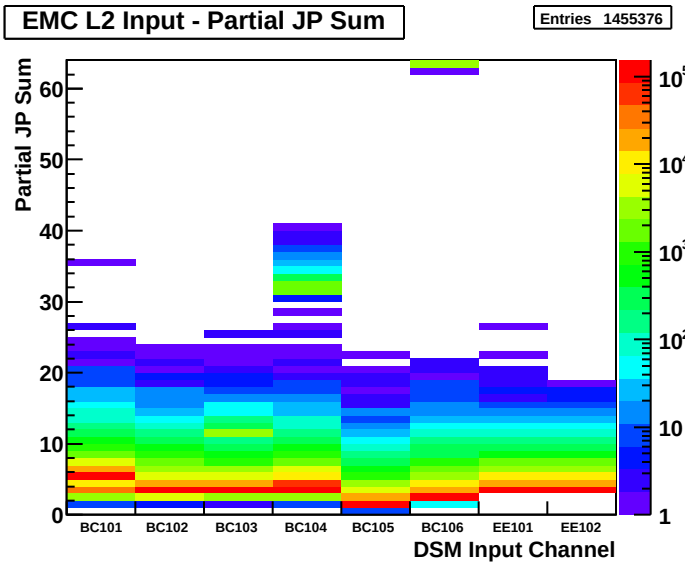

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

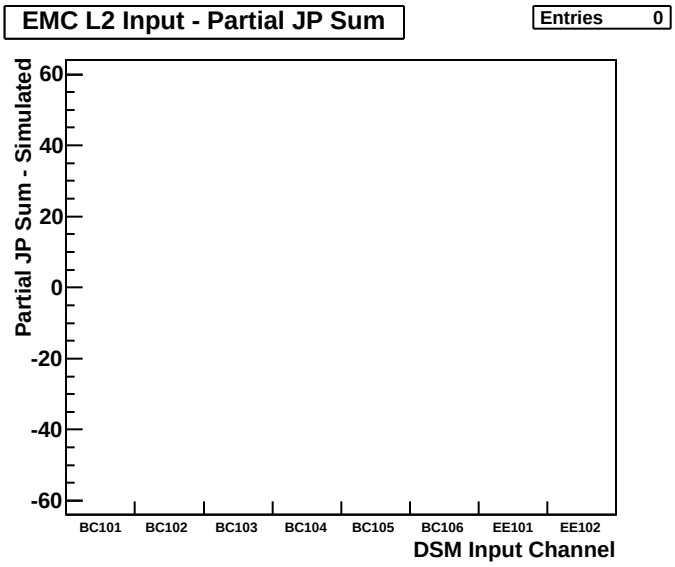

EMC L2 Input - JPY/JPB bits
Entries 1455376
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

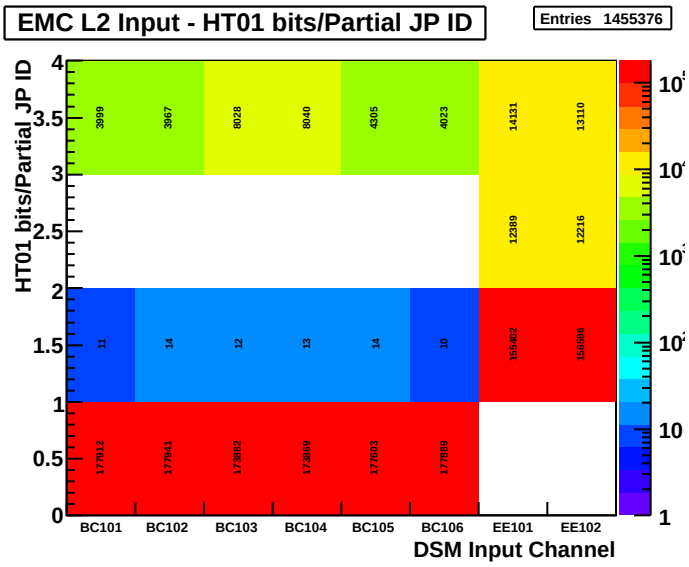

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

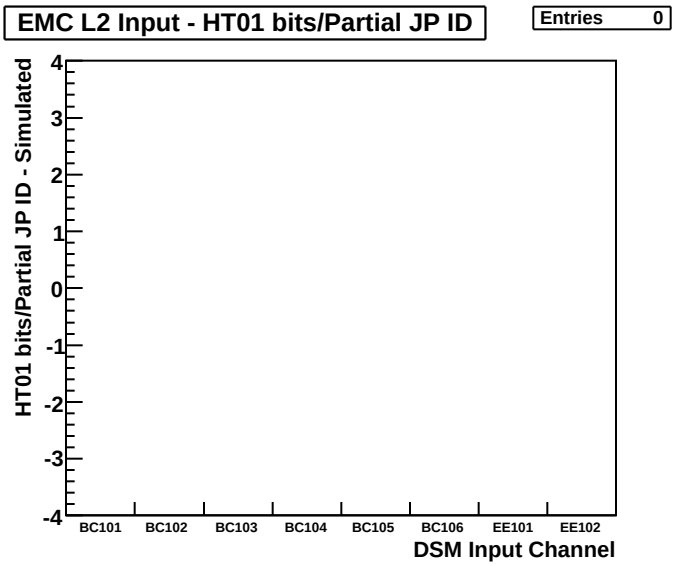

EMC L2 Input - JPZ/JPC bits
Entries 1455376
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

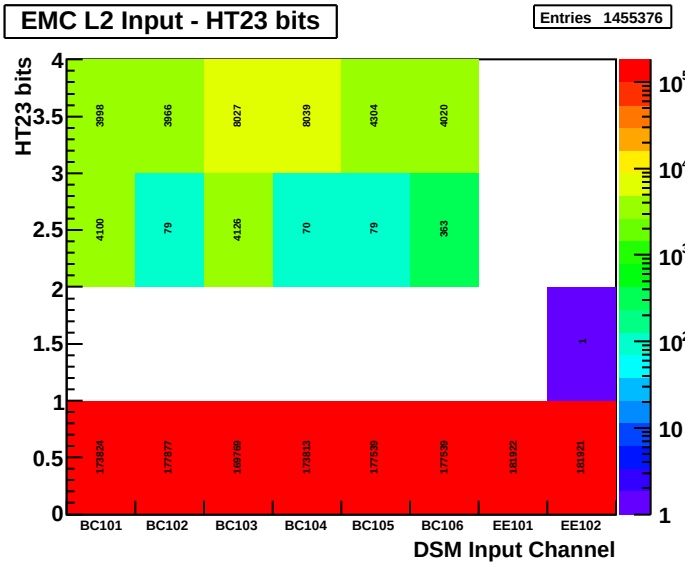

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

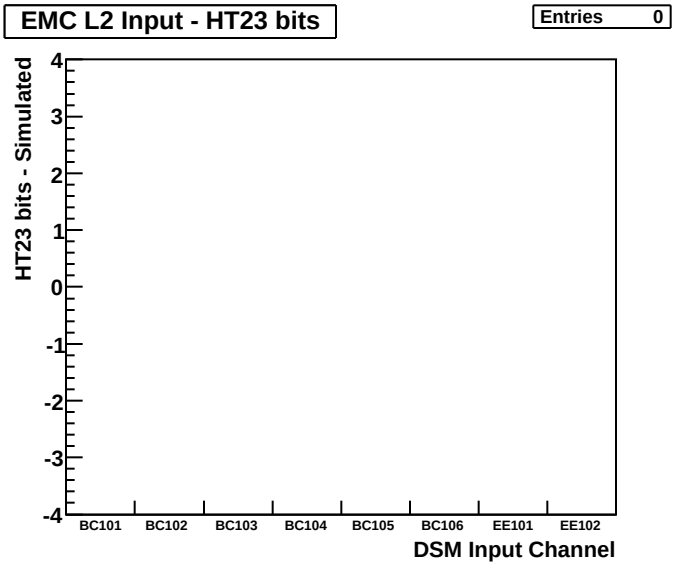

EMC L2 Input - Partial JP Sum
Entries 1455376
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

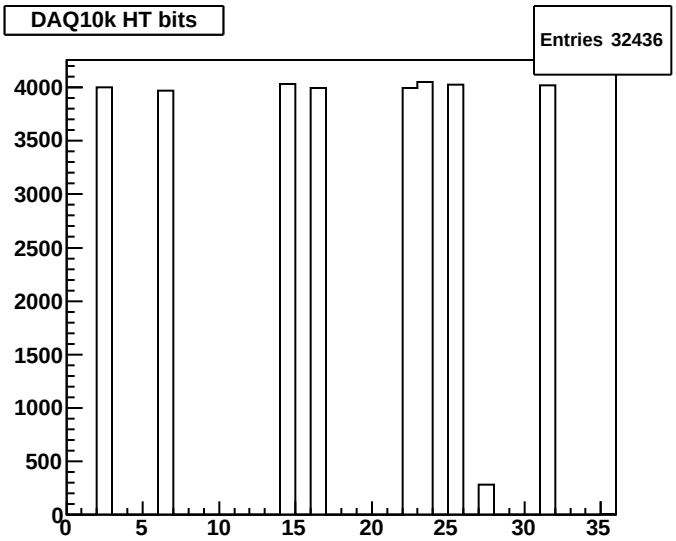

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

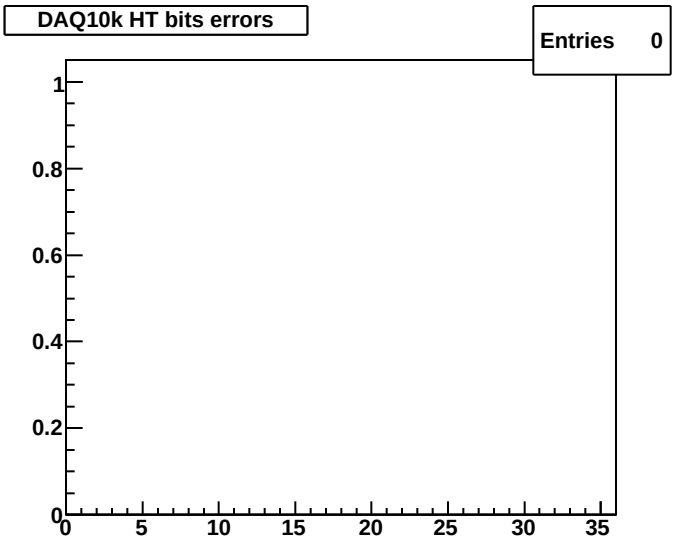

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1455376
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

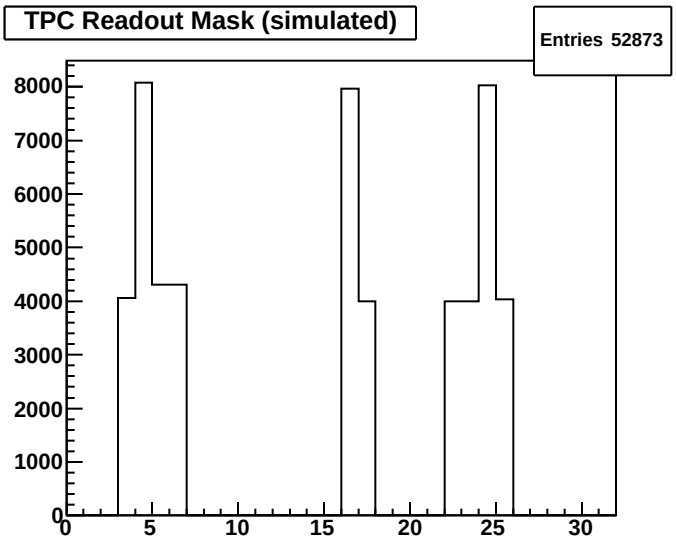

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

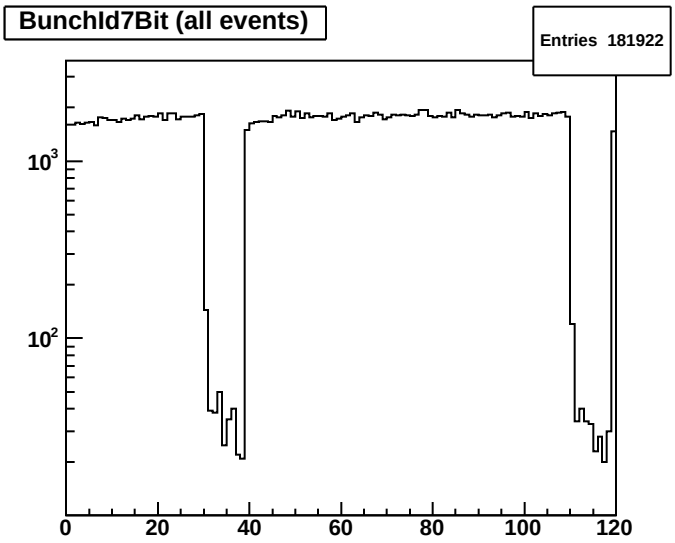

EMC L2 Input - HT23 bits
Entries 1455376
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

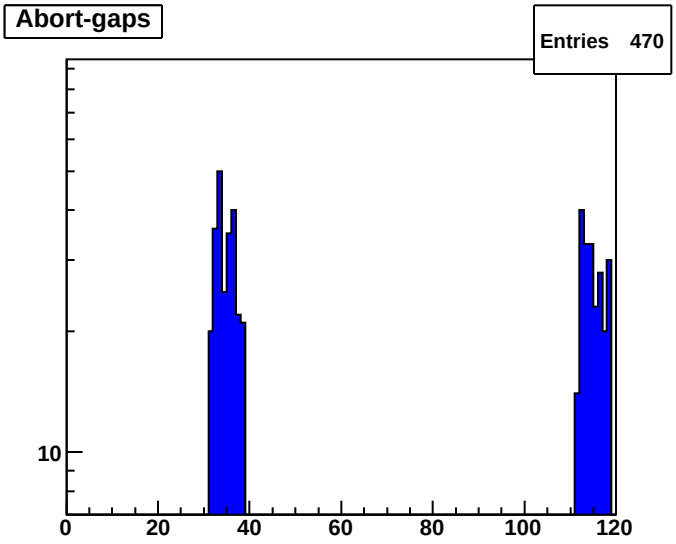

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

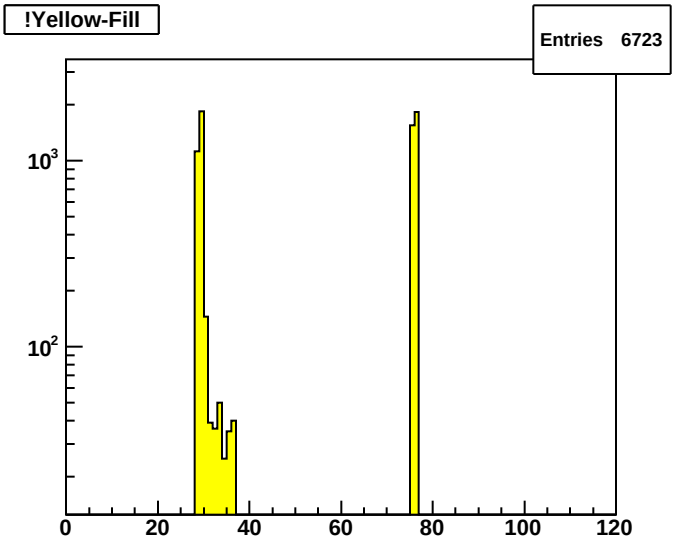

DAQ10k HT bits
Entries 32436
4000
3500
3000
2500
2000
1500
1000
500
0
0 5 10 15 20 25 30 35

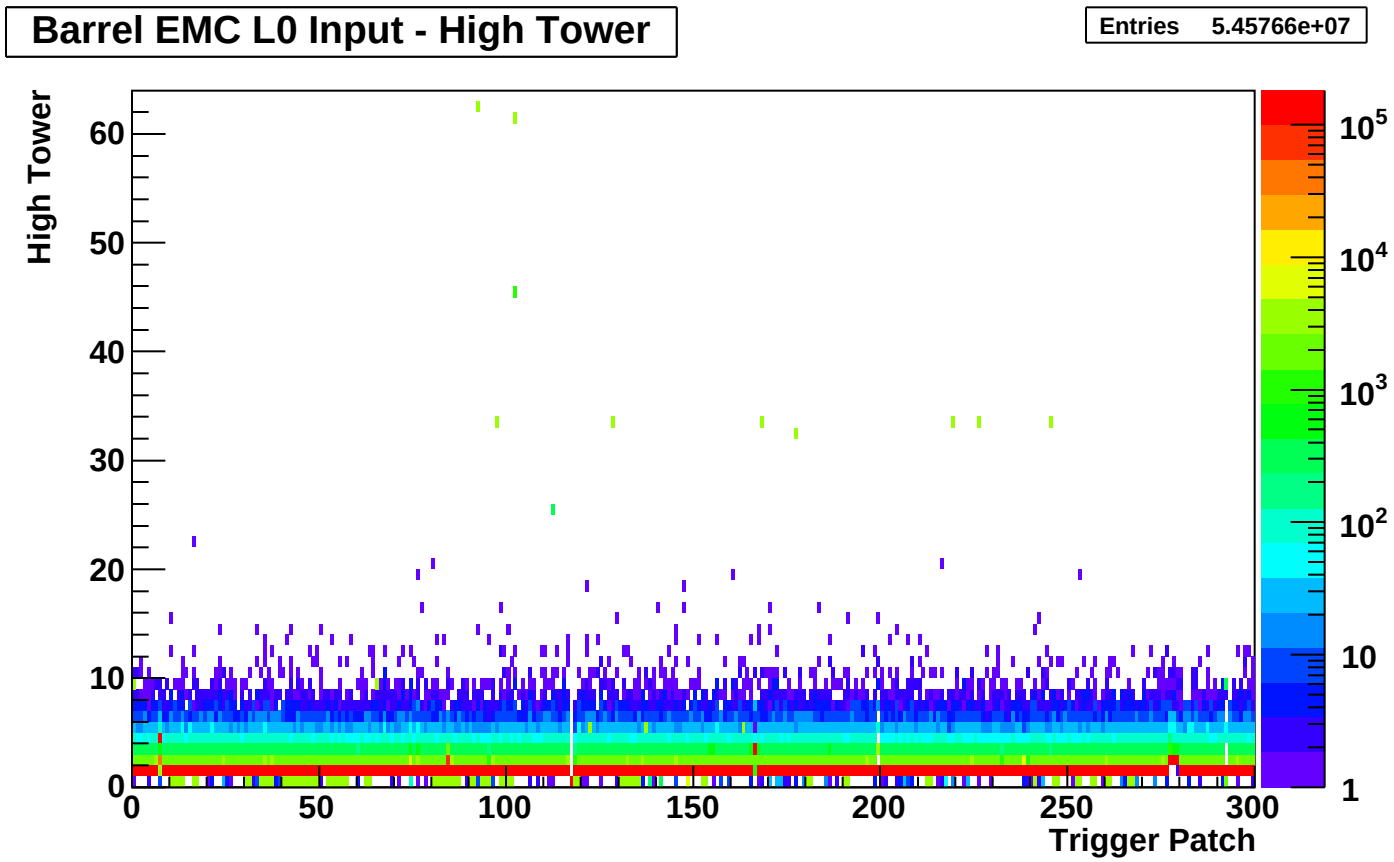

DAQ10k HT bits errors
Entries 0
1
0.8
0.6
0.4
0.2
0
0 5 10 15 20 25 30 35

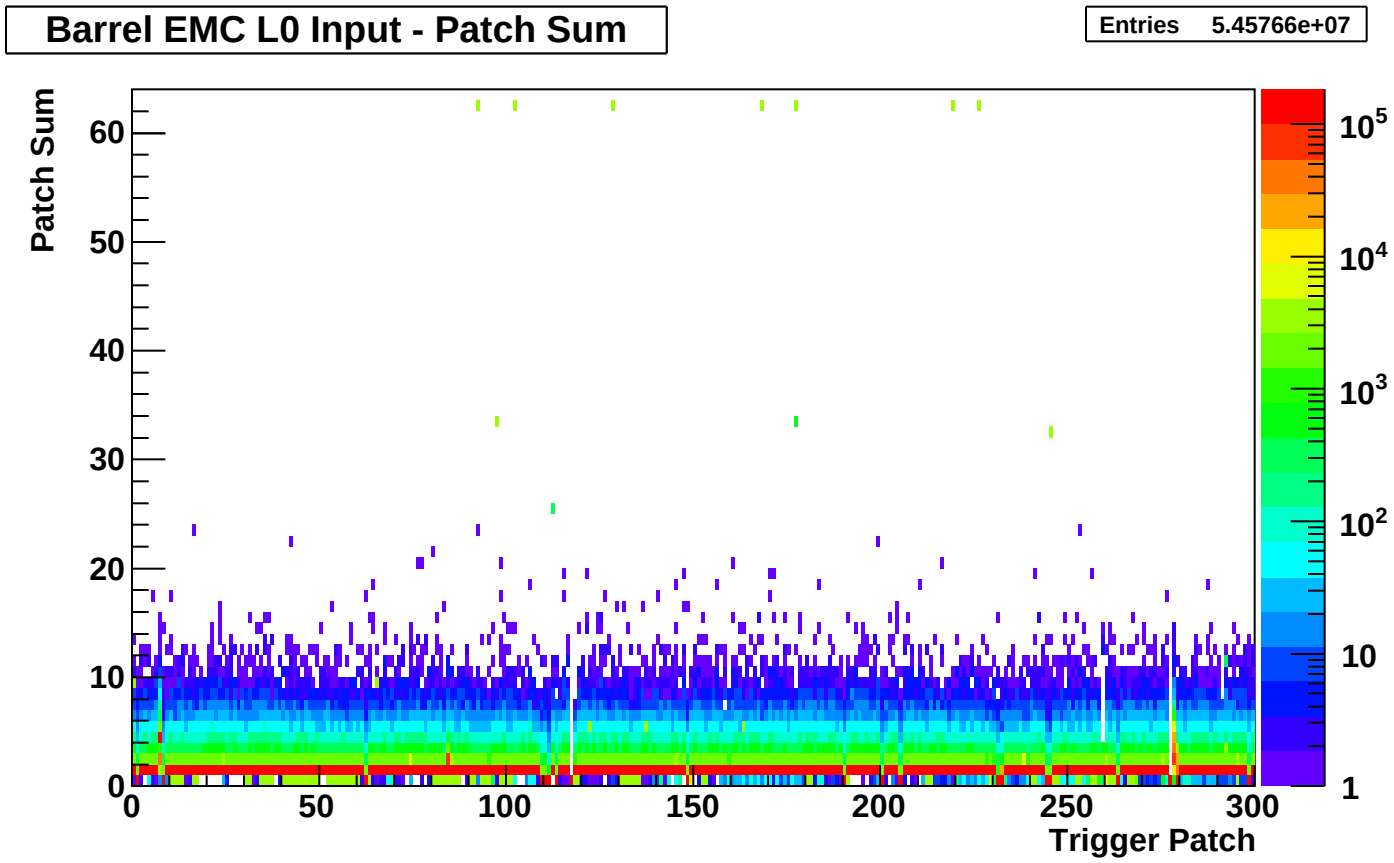

TPC Readout Mask (simulated)
Entries 52873
8000
7000
6000
5000
4000
3000
2000
1000
0
0 5 10 15 20 25 30

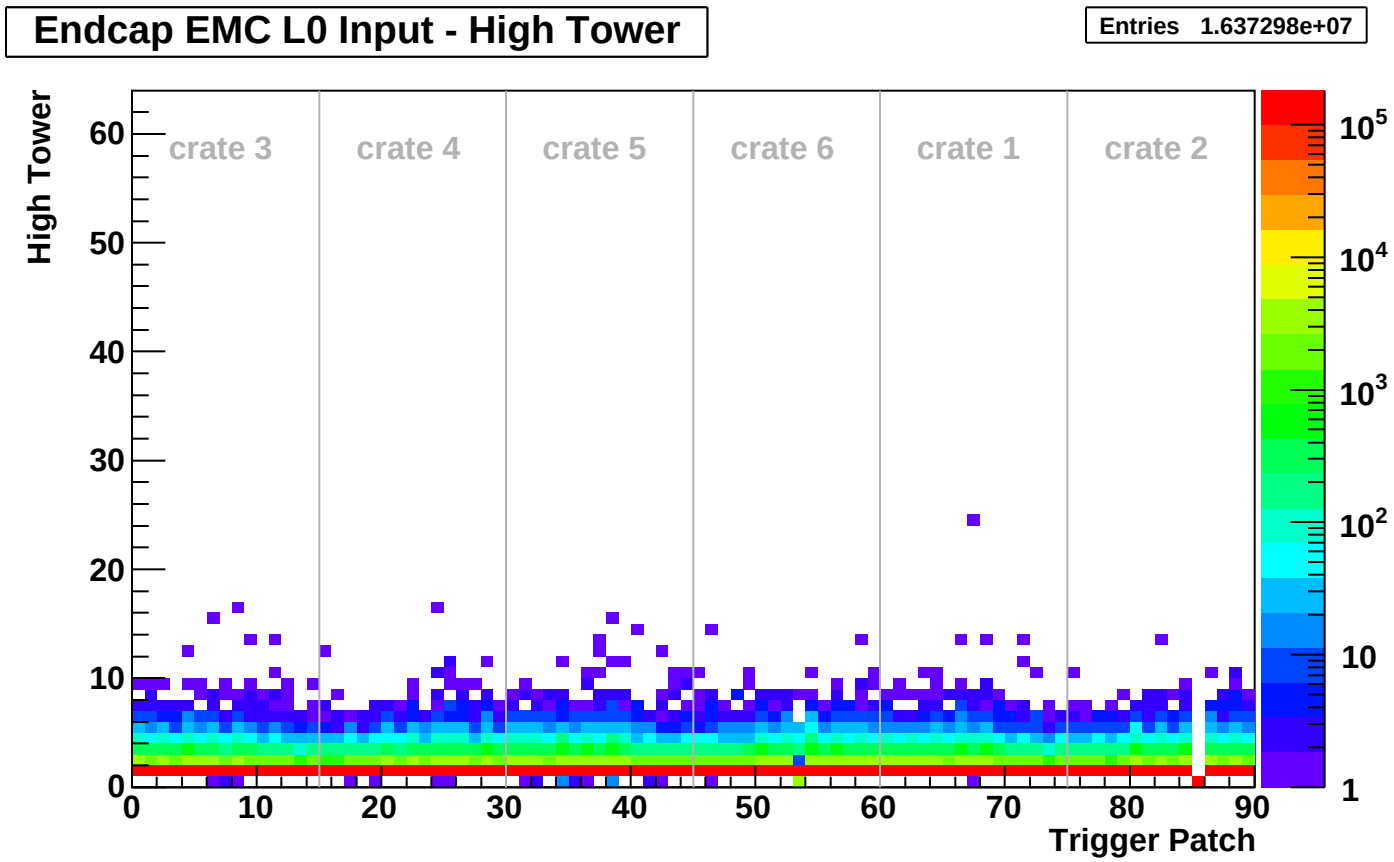

BunchId7Bit (all events)
Entries 181922
10^3
10^2
0 20 40 60 80 100 120

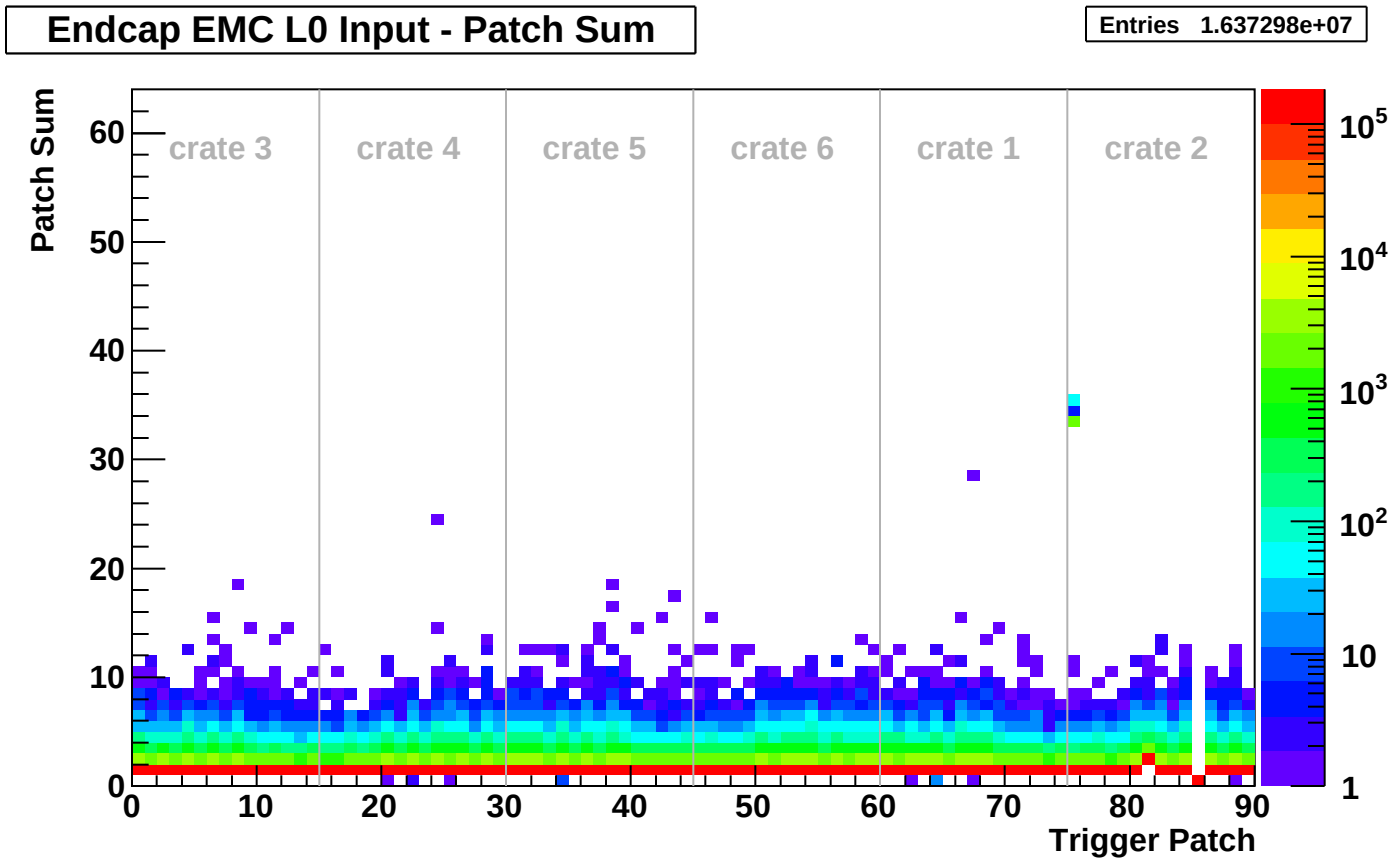

Abort-gaps
Entries 470
10
0 20 40 60 80 100 120

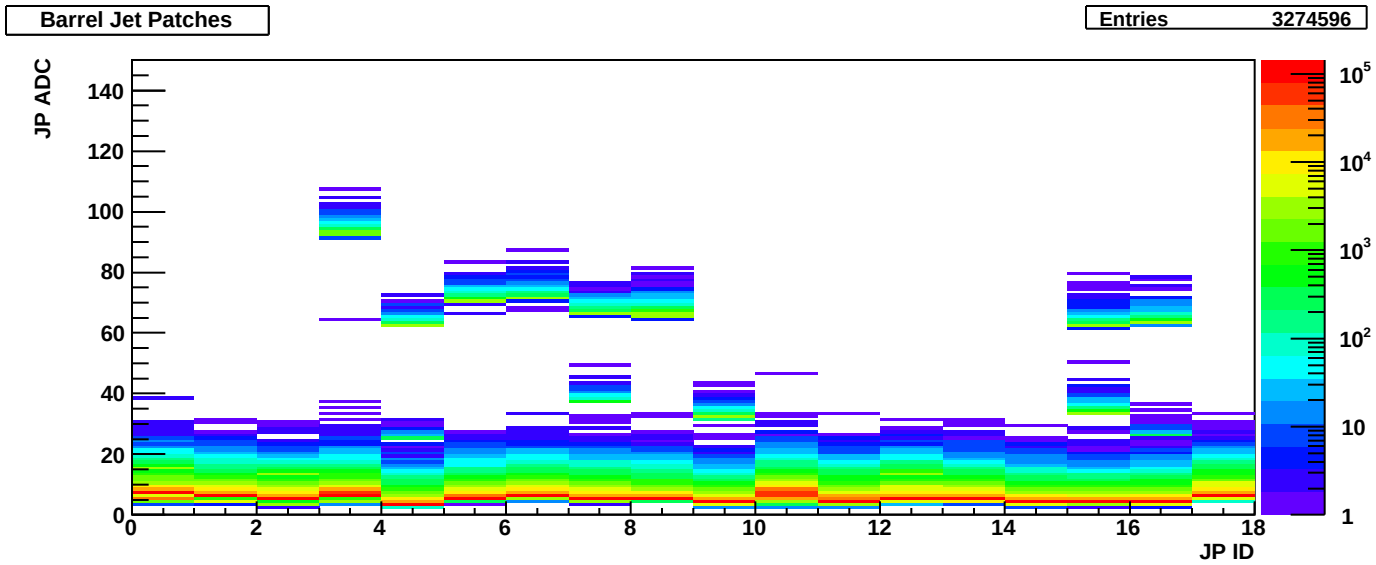

!Yellow-Fill
Entries 6723
10^3
10^2
0 20 40 60 80 100 120

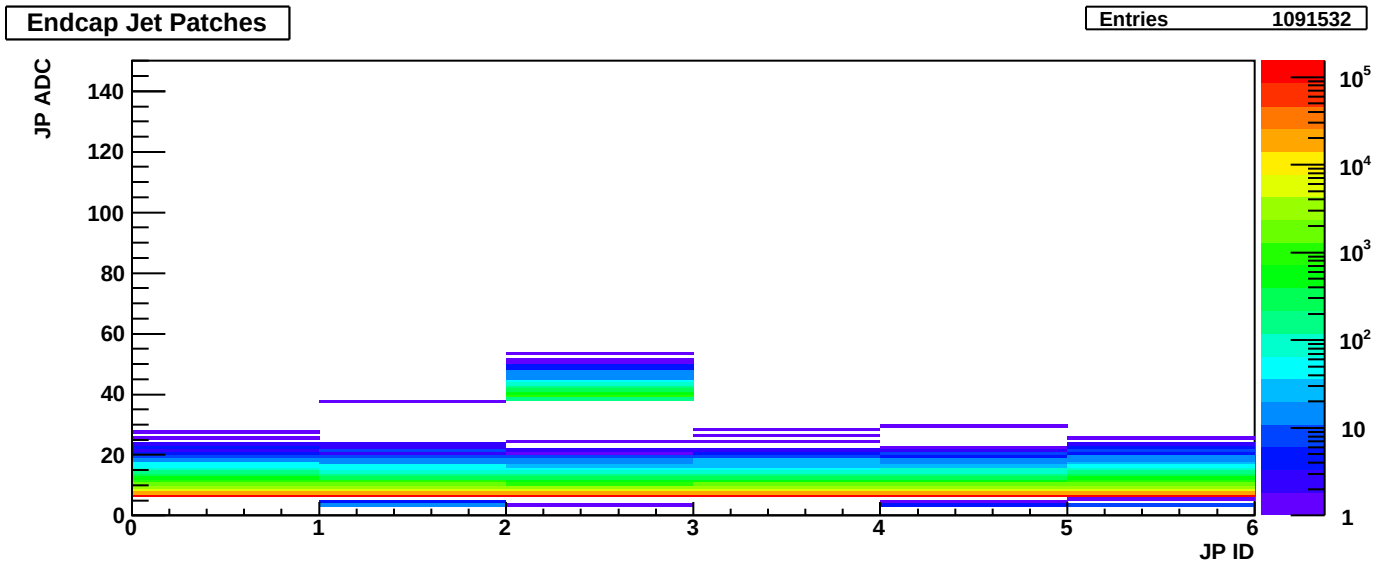

Barrel EMC L0 Input - High Tower
Entries 5.45766e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

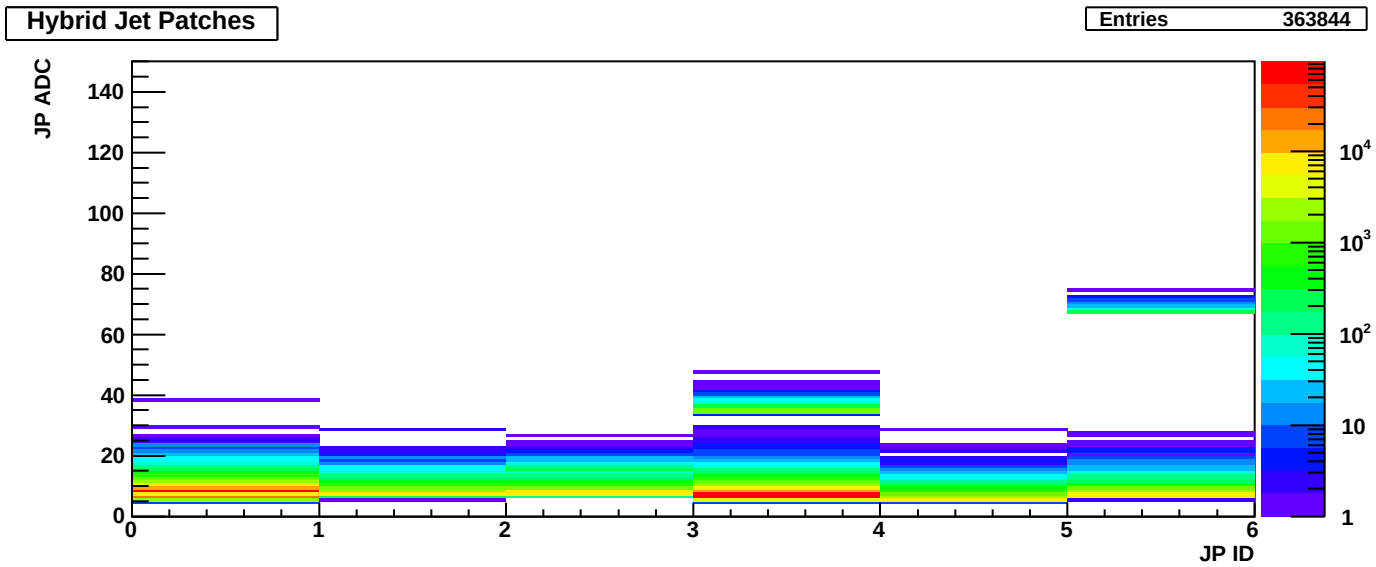

Barrel EMC L0 Input - Patch Sum
Entries 5.45766e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

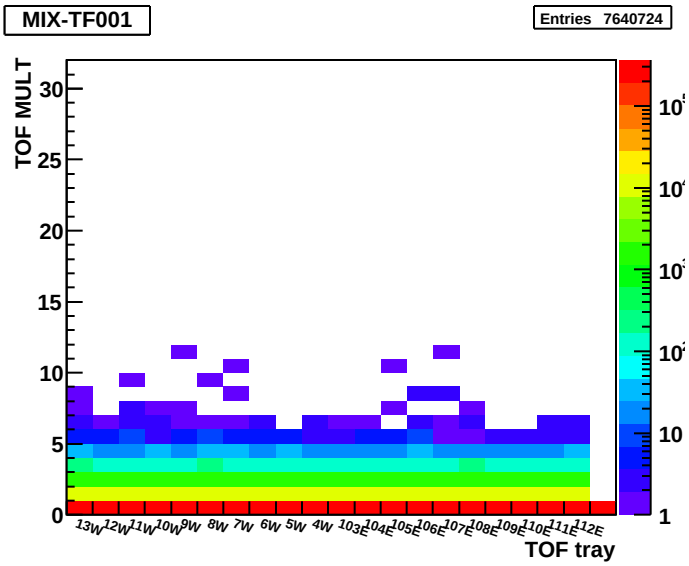

Endcap EMC L0 Input - High Tower
Entries 1.637298e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

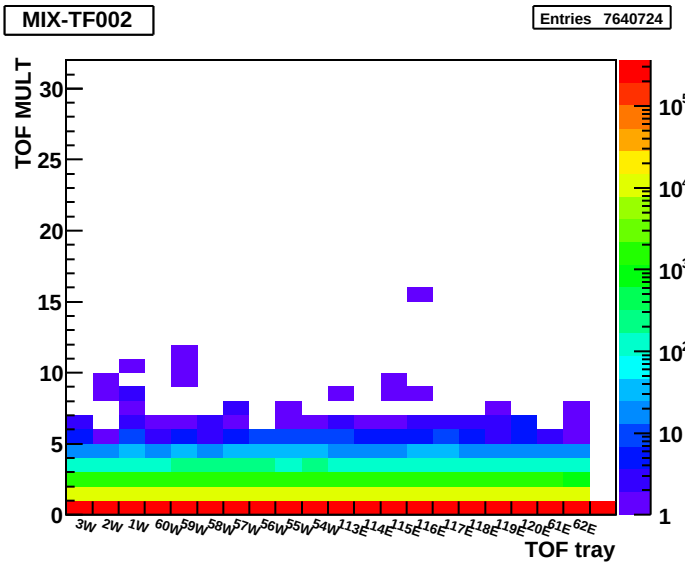

Endcap EMC L0 Input - Patch Sum
Entries 1.637298e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

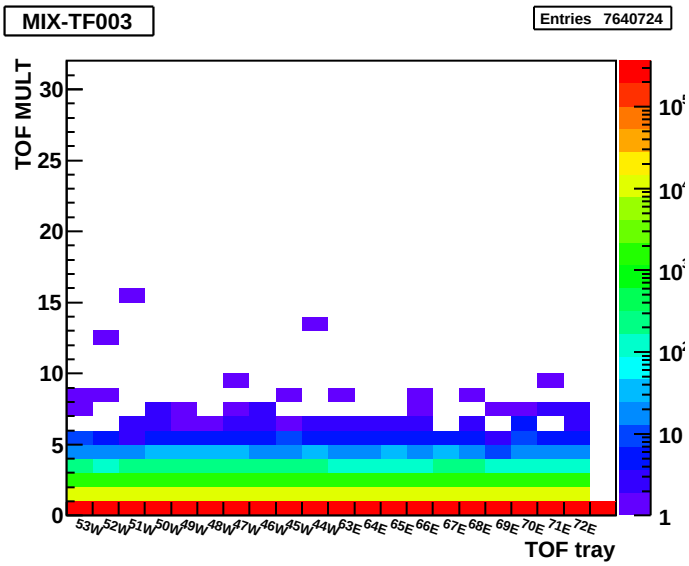

Barrel Jet Patches
Entries 3274596
JP ADC
JP ID

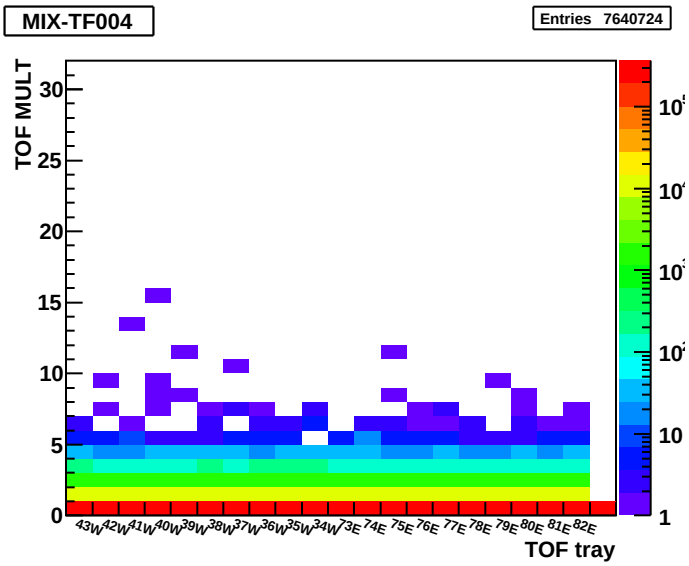

Endcap Jet Patches
Entries 1091532
JP ADC
JP ID

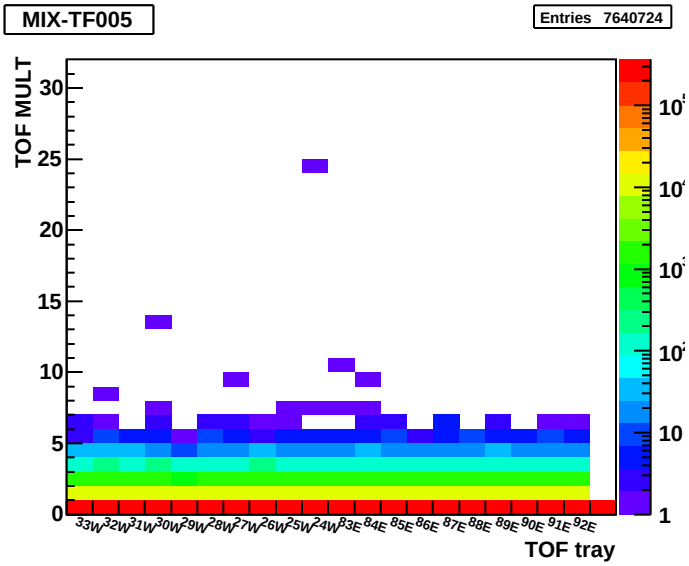

Hybrid Jet Patches
Entries 363844
JP ADC
JP ID

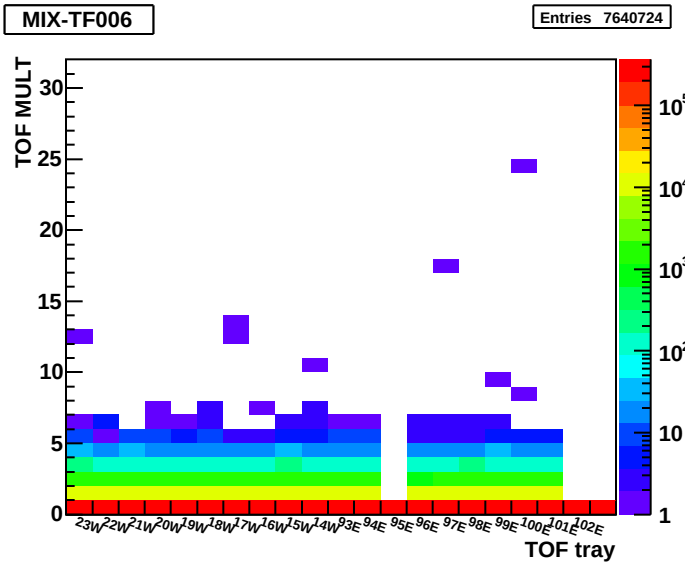

MIX-TF001
Entries 7640724
TOF MULT
TOF tray

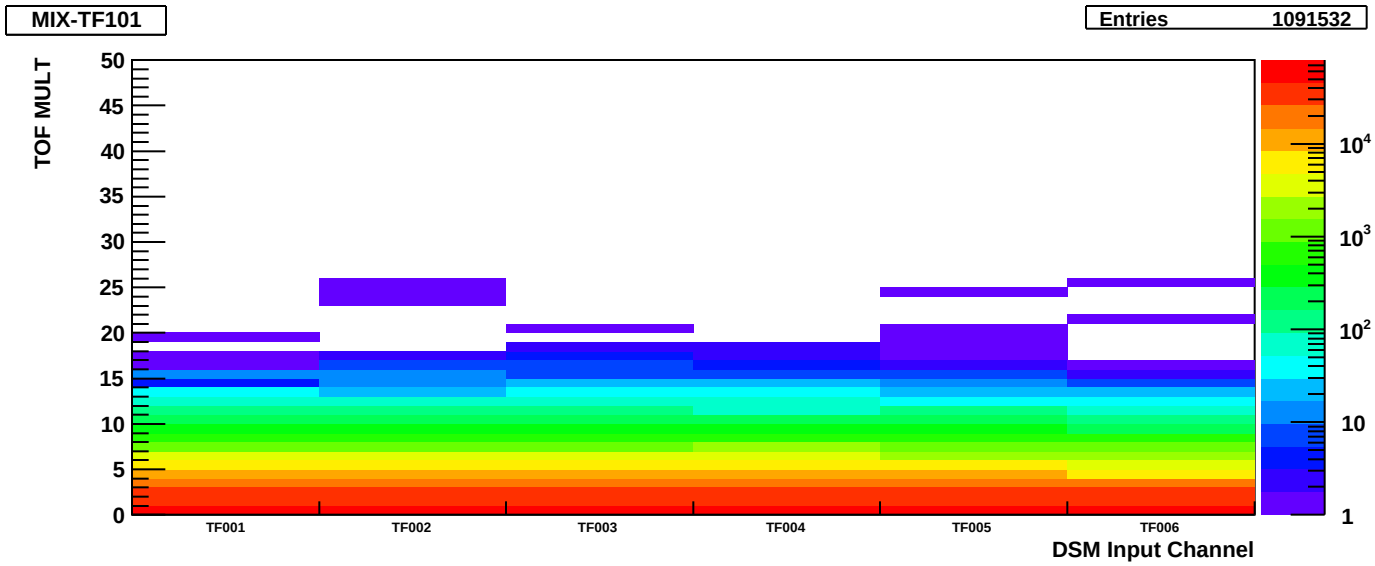

MIX-TF002
Entries 7640724
TOF MULT
TOF tray

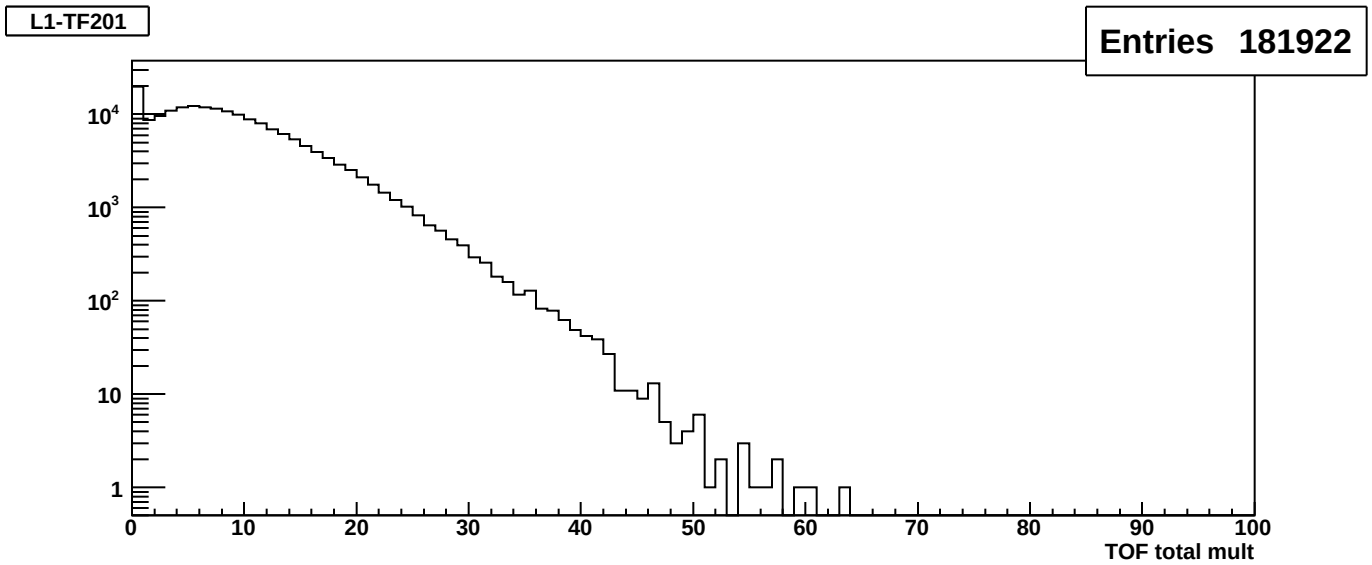

MIX-TF003
Entries 7640724
TOF MULT
TOF tray

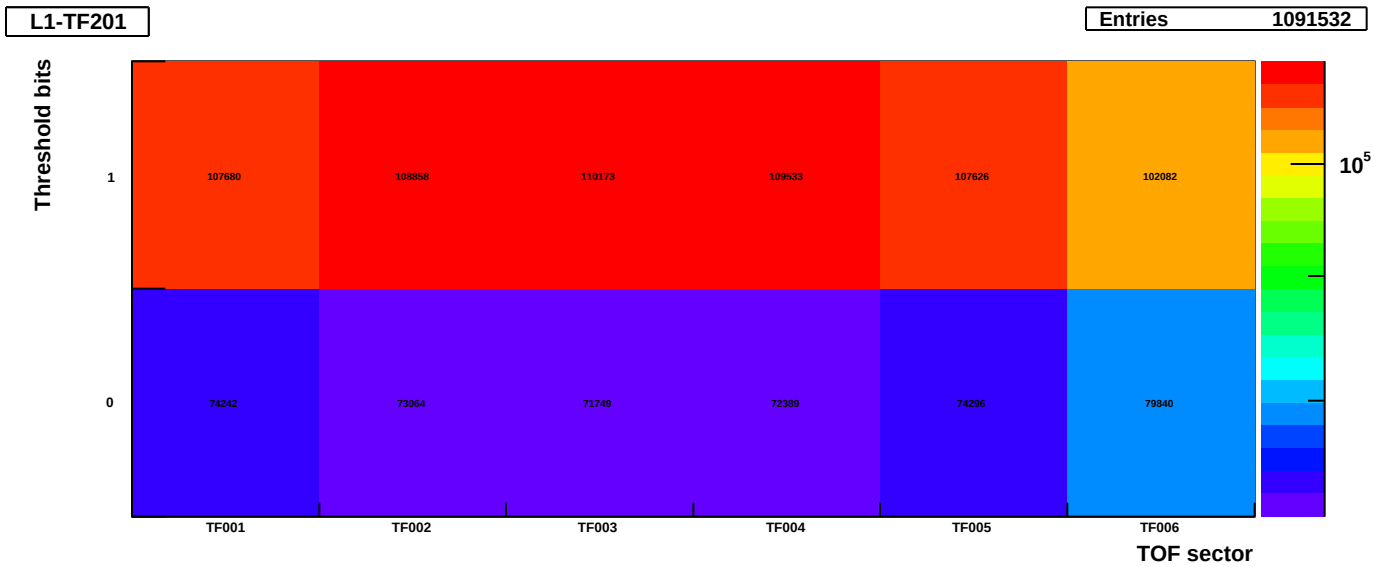

MIX-TF004
Entries 7640724
TOF MULT
TOF tray

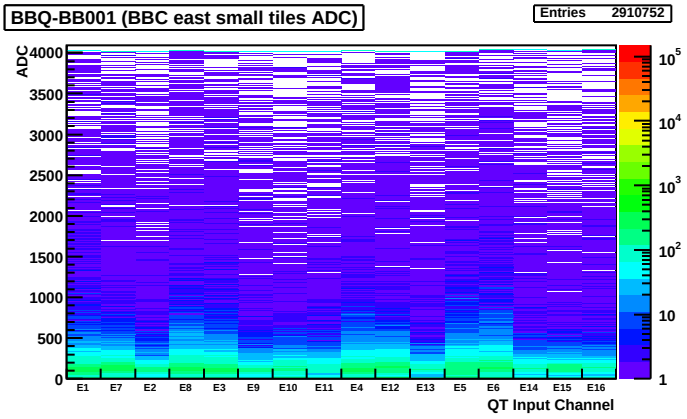

MIX-TF005
Entries 7640724
TOF MULT
TOF tray

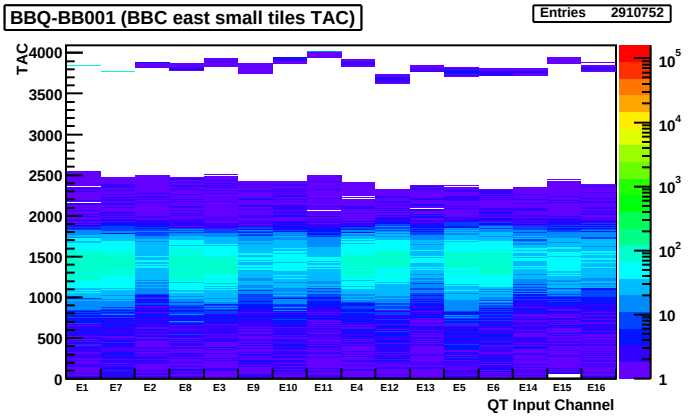

MIX-TF006
Entries 7640724
TOF MULT
TOF tray

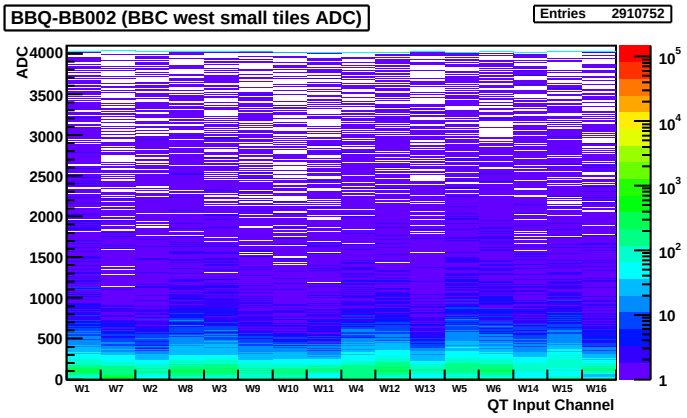

MIX-TF101
Entries 1091532
TOF MULT
50
45
40
35
30
25
20
15
10
5
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

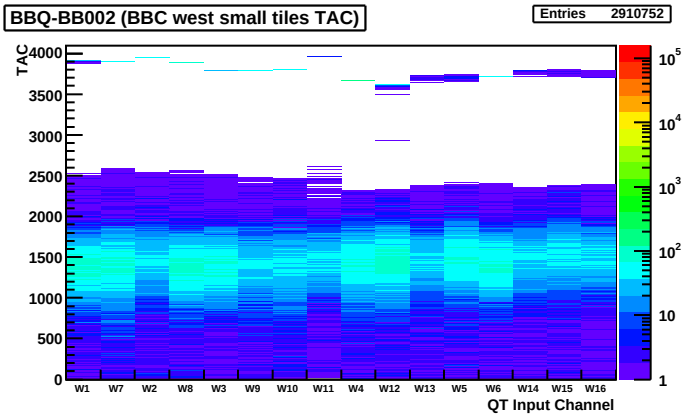

L1-TF201
Entries 181922
10^4
10^3
10^2
10
1
0
10
20
30
40
50
60
70
80
90
100
TOF total mult

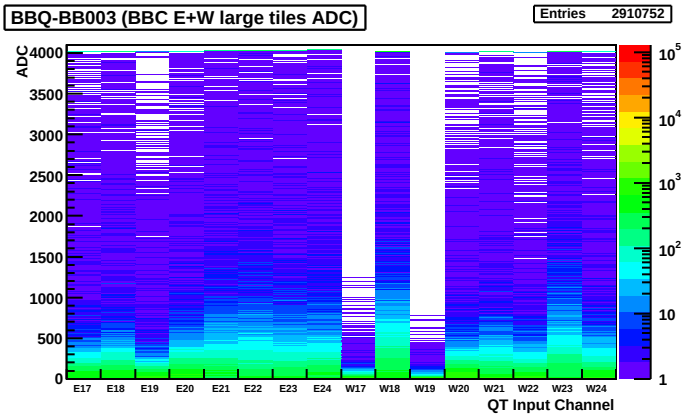

L1-TF201
Entries 1091532
Threshold bits
1
0
107680
108858
110173
109533
107626
102082
74242
73064
71749
72389
74296
79840
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^5

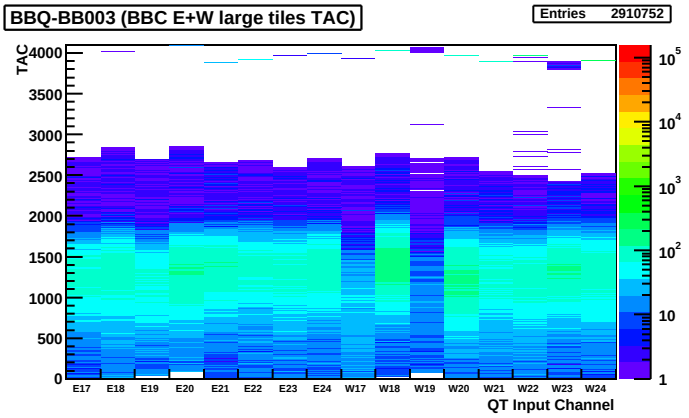

BBQ-BB001 (BBC east small tiles ADC)
Entries 2910752
ADC
QT Input Channel

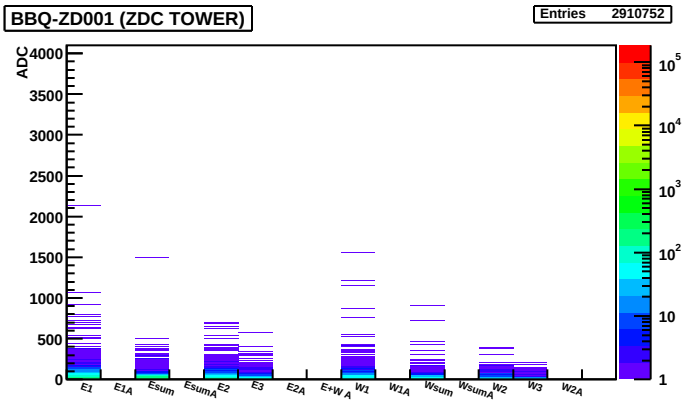

BBQ-BB001 (BBC east small tiles TAC)
Entries 2910752
TAC
QT Input Channel

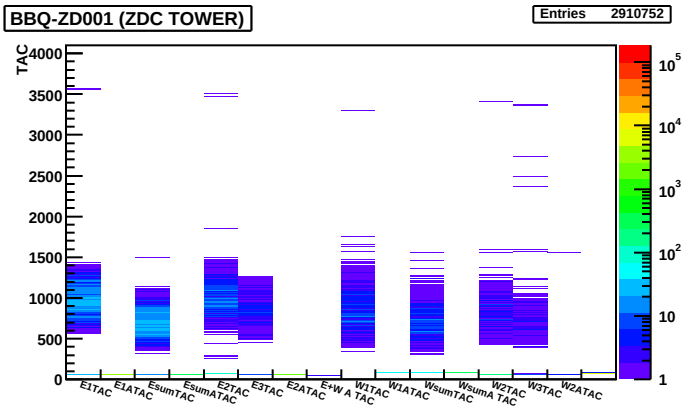

BBQ-BB002 (BBC west small tiles ADC)
Entries 2910752
ADC
QT Input Channel

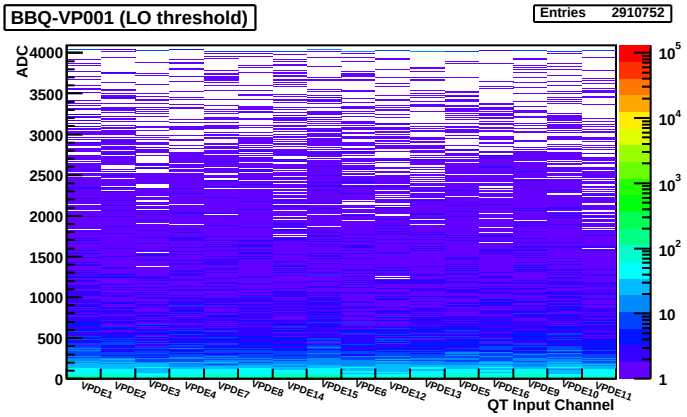

BBQ-BB002 (BBC west small tiles TAC)
Entries 2910752
TAC
QT Input Channel

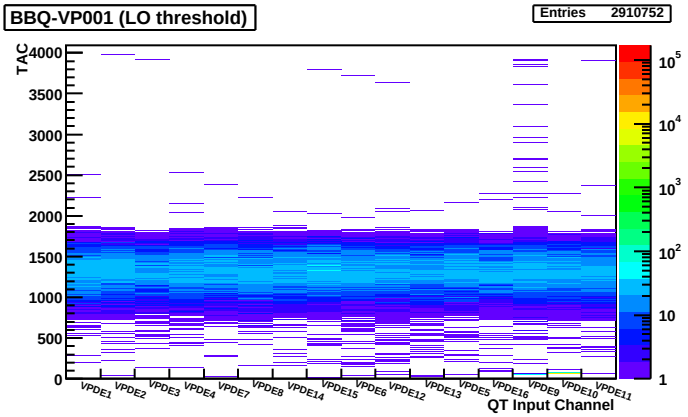

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 2910752
ADC
QT Input Channel

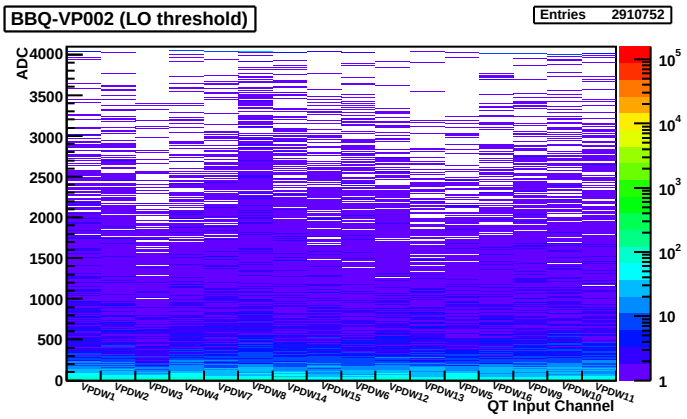

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 2910752
TAC
QT Input Channel

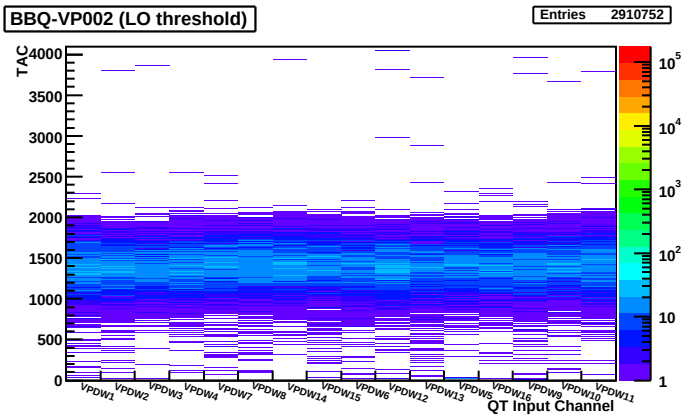

BBQ-ZD001 (ZDC TOWER)
Entries 2910752
ADC

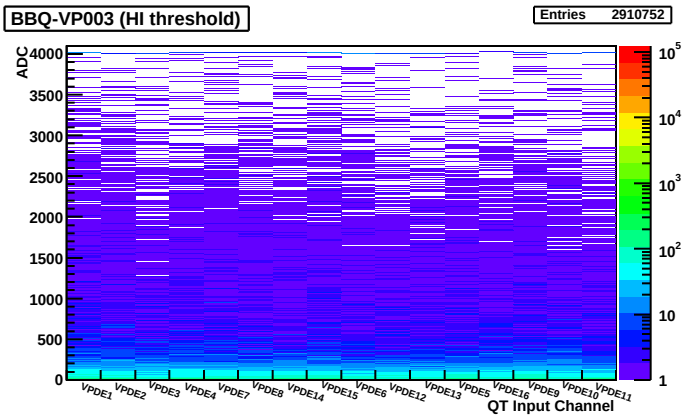

BBQ-ZD001 (ZDC TOWER)
Entries 2910752
TAC

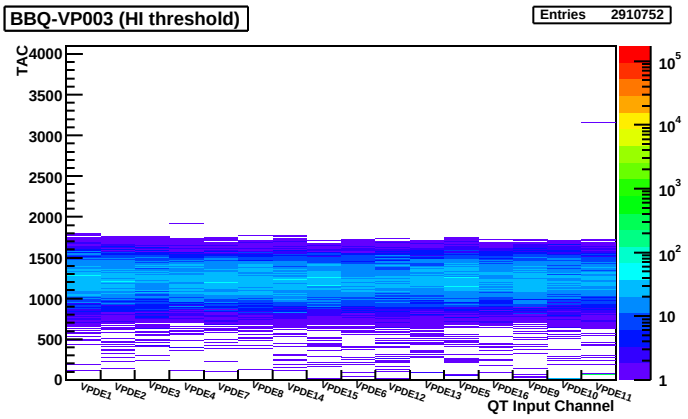

BBQ-VP001 (LO threshold)
Entries 2910752
ADC
QT Input Channel

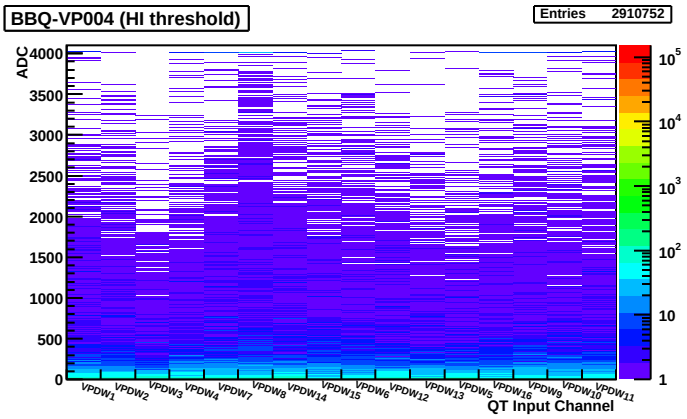

BBQ-VP001 (LO threshold)
Entries 2910752
TAC
QT Input Channel

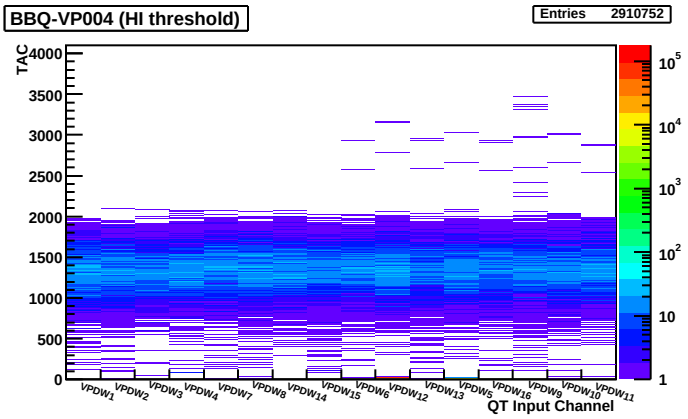

BBQ-VP002 (LO threshold)
Entries 2910752
ADC
QT Input Channel

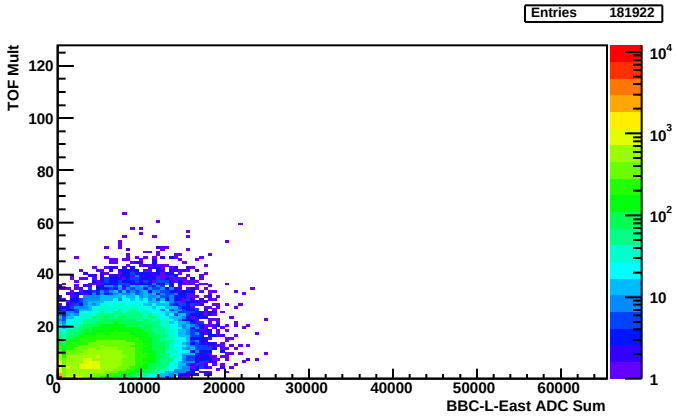

BBQ-VP002 (LO threshold)
Entries 2910752
TAC
QT Input Channel

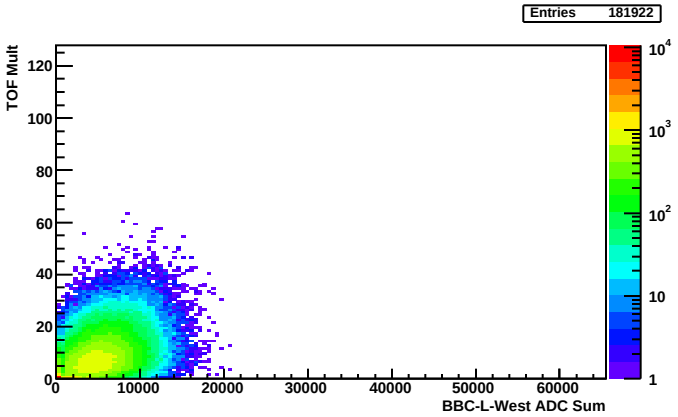

BBQ-VP003 (HI threshold)
Entries 2910752
ADC
QT Input Channel

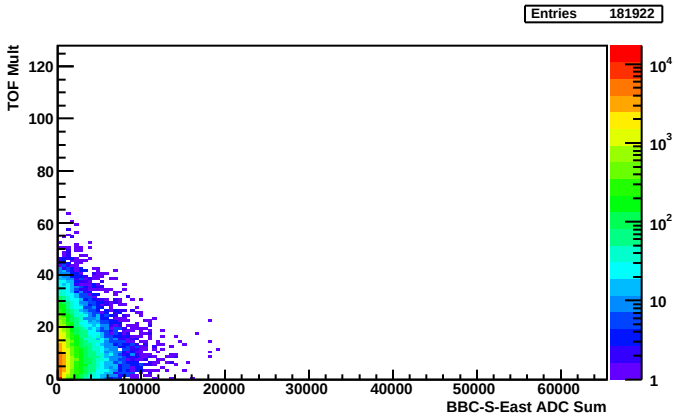

BBQ-VP003 (HI threshold)
Entries 2910752
TAC
QT Input Channel

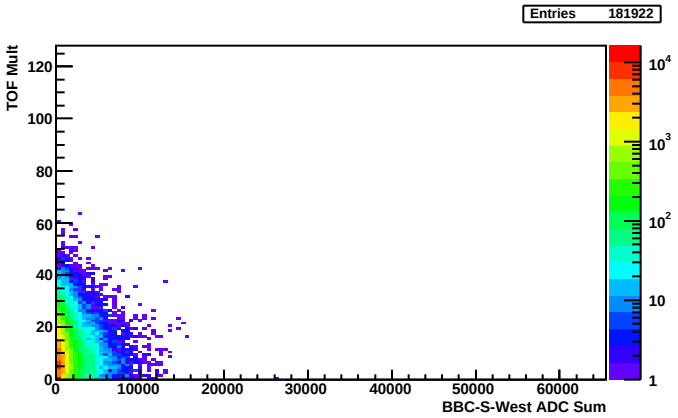

BBQ-VP004 (HI threshold)
Entries 2910752
ADC
QT Input Channel

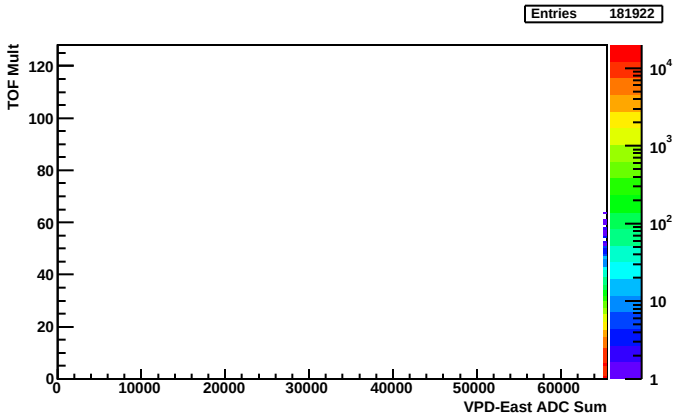

BBQ-VP004 (HI threshold)
Entries 2910752
TAC
QT Input Channel

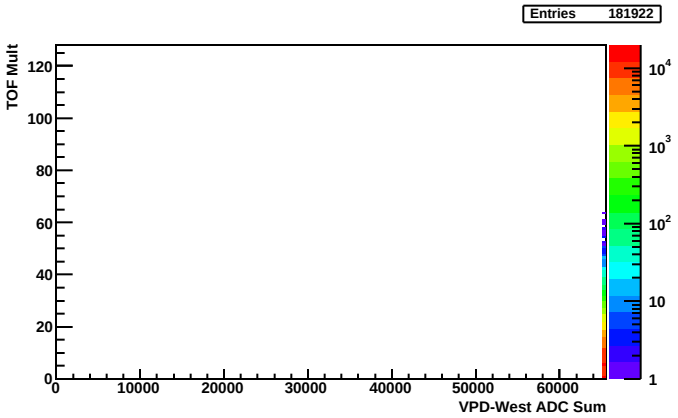

Entries 181922
TOF Mult
BBC-L-East ADC Sum

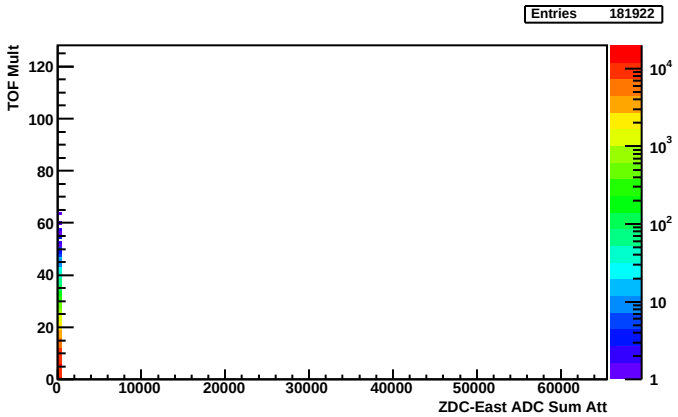

Entries 181922
TOF Mult
BBC-L-West ADC Sum

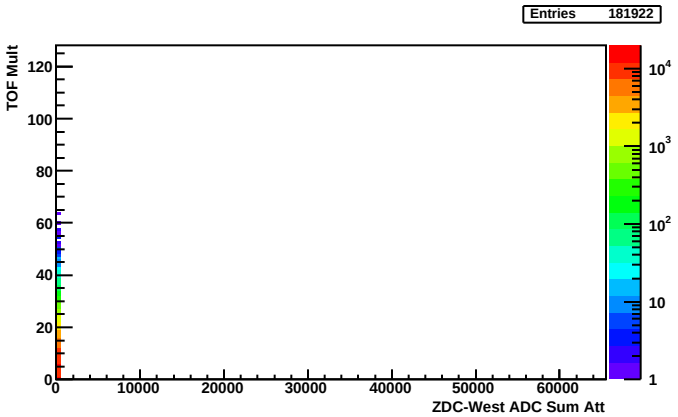

Entries 181922
TOF Mult
BBC-S-East ADC Sum

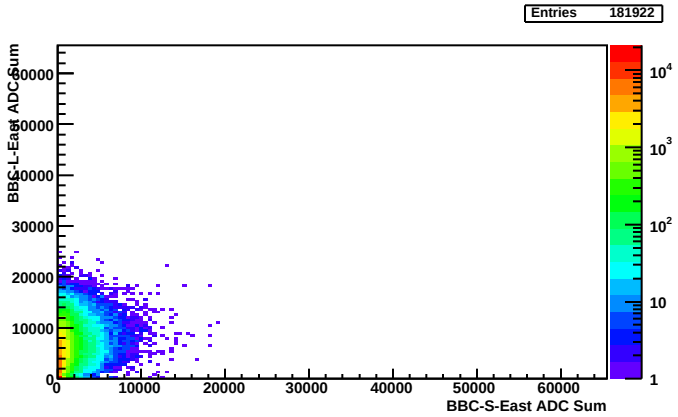

Entries 181922
TOF Mult
BBC-S-West ADC Sum

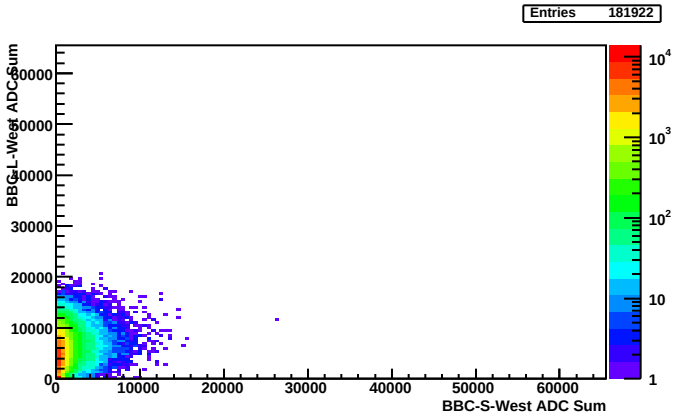

Entries 181922
TOF Mult
VPD-East ADC Sum

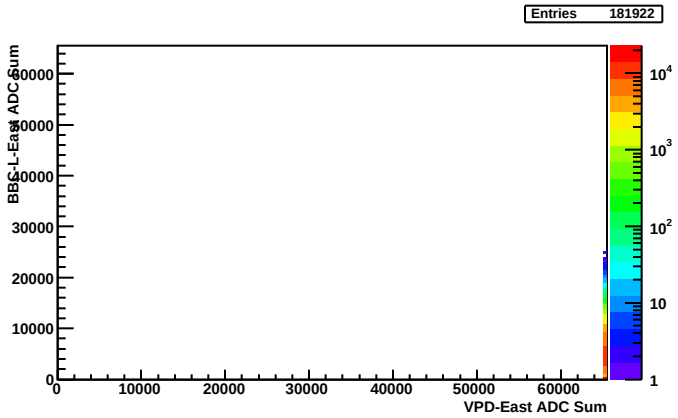

Entries 181922
TOF Mult
VPD-West ADC Sum

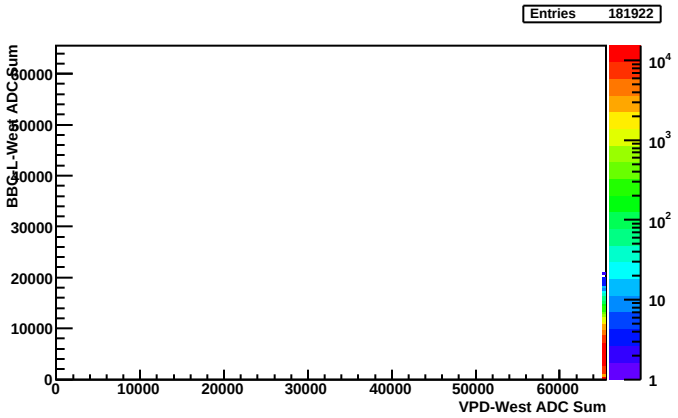

Entries 181922
TOF Mult
ZDC-East ADC Sum Att

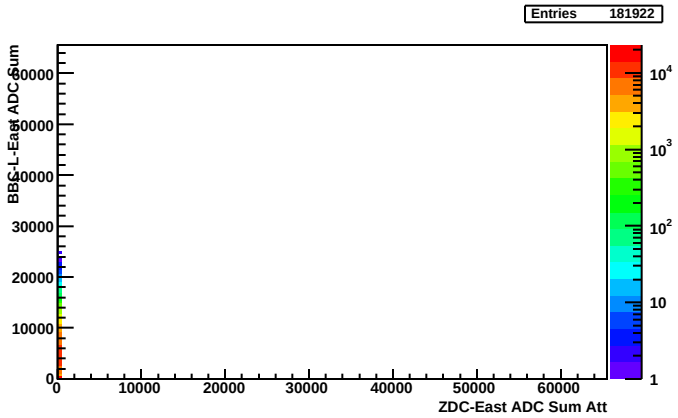

Entries 181922
TOF Mult
ZDC-West ADC Sum Att

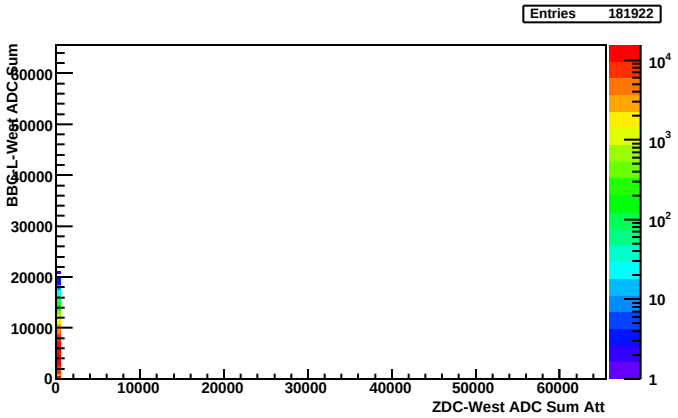

Entries 181922
BBC-L-East ADC Sum
BBC-S-East ADC Sum

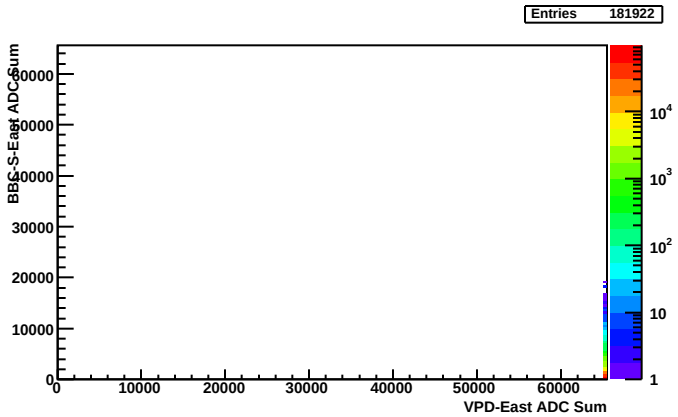

Entries 181922
BBC-L-West ADC Sum
BBC-S-West ADC Sum

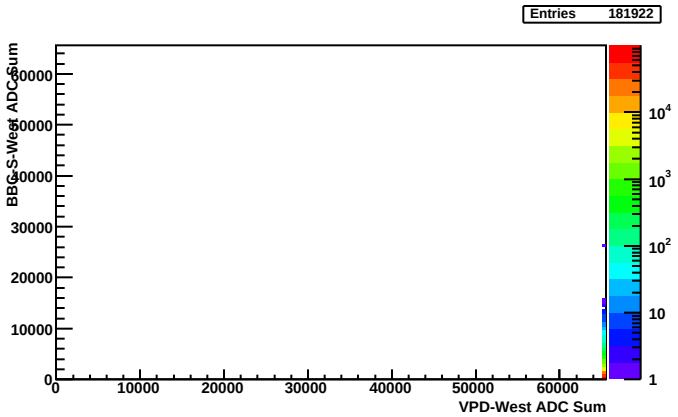

Entries 181922
BBC-L-East ADC Sum
VPD-East ADC Sum

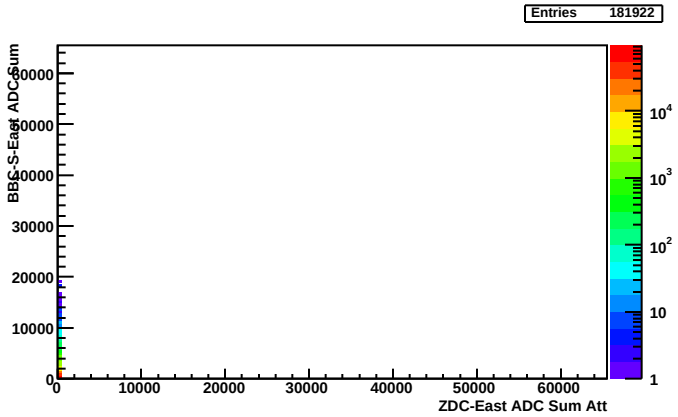

Entries 181922
BBC-L-West ADC Sum
VPD-West ADC Sum

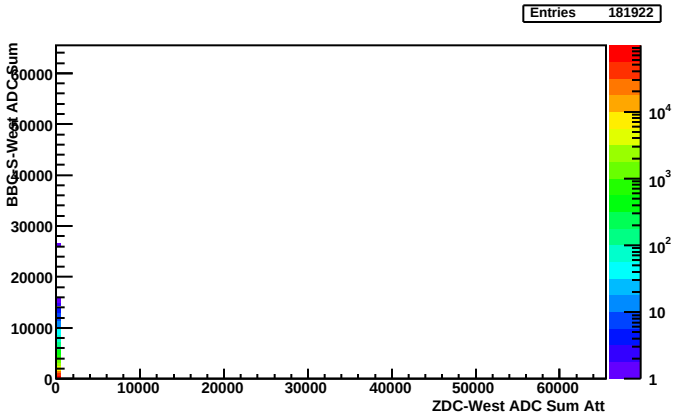

Entries 181922
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

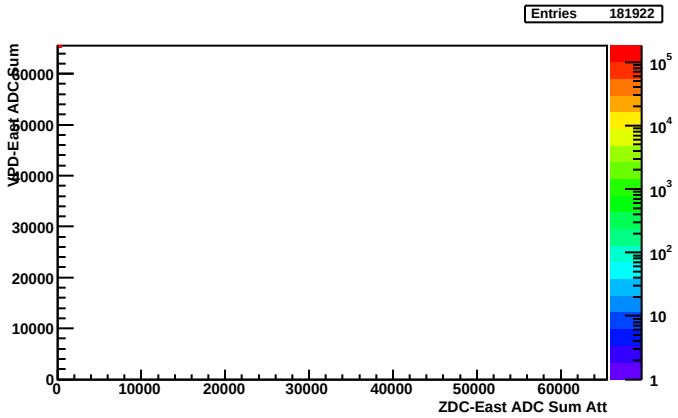

Entries 181922
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

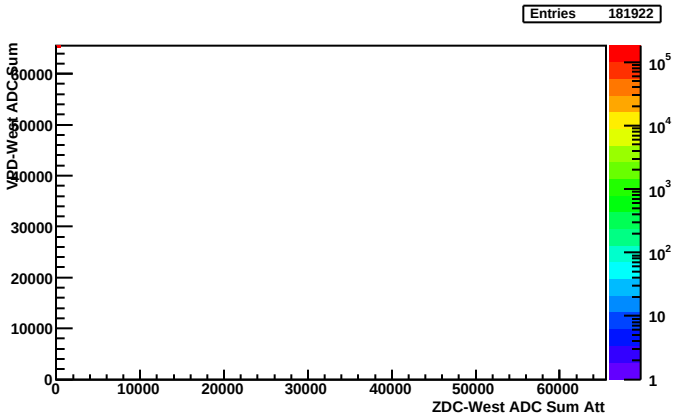

Entries 181922
BBC-S-East ADC Sum
VPD-East ADC Sum

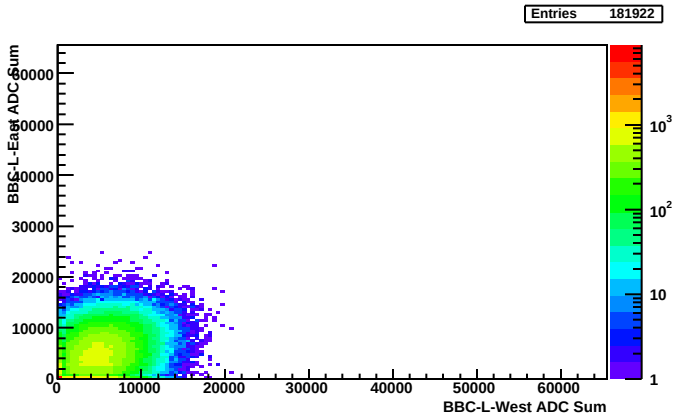

Entries 181922
BBC-S-West ADC Sum
VPD-West ADC Sum

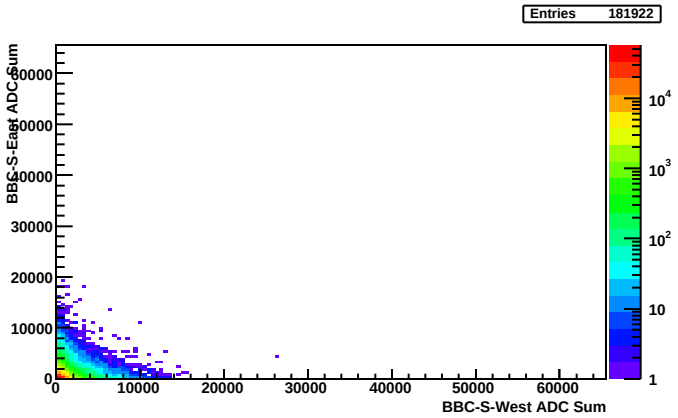

Entries 181922
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

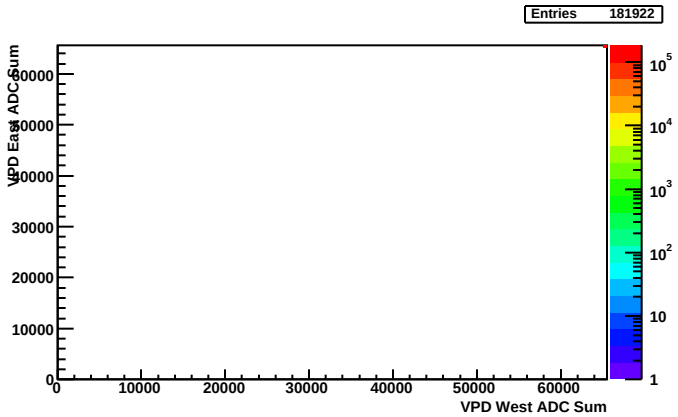

Entries 181922
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

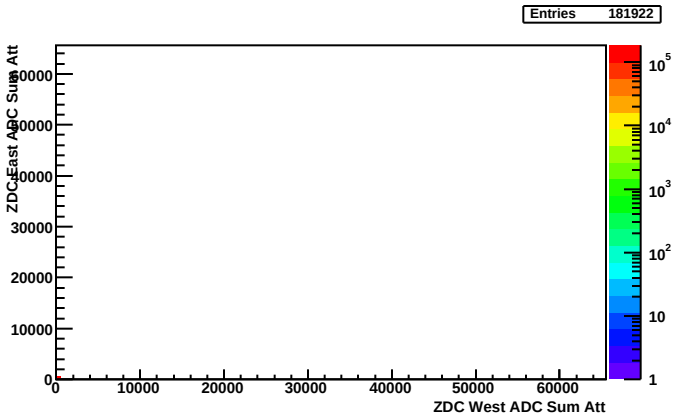

Entries 181922
VPD-East ADC Sum
ZDC-East ADC Sum Att

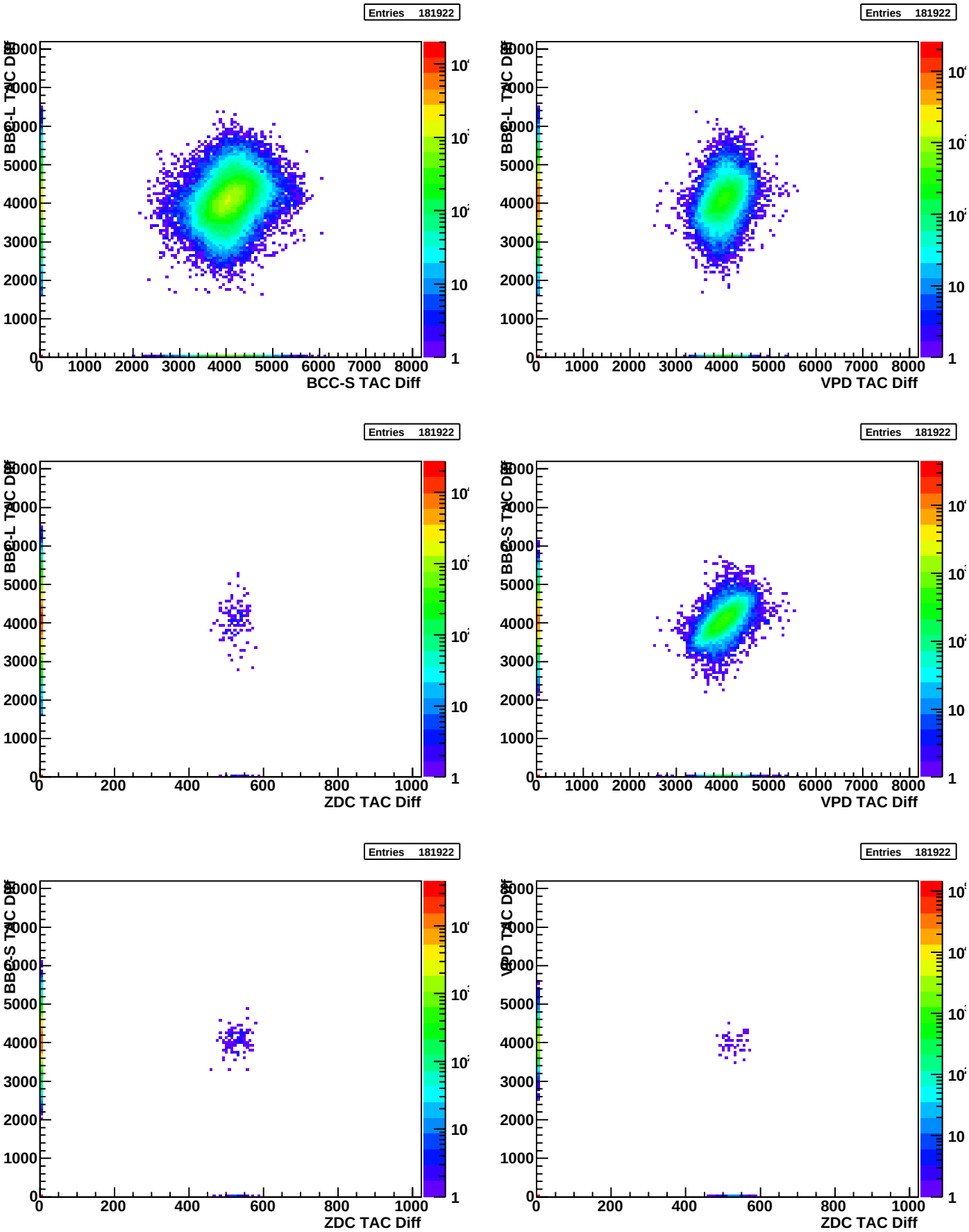

Entries 181922
VPD-West ADC Sum
ZDC-West ADC Sum Att

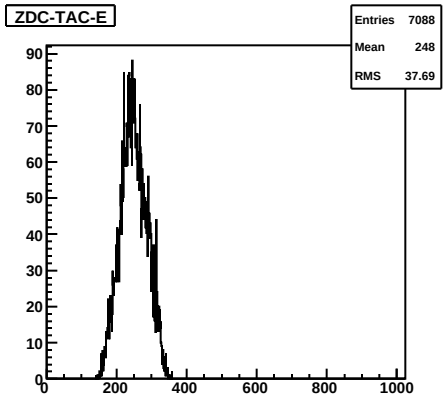

Entries 181922
BBC-L-East ADC Sum
BBC-L-West ADC Sum

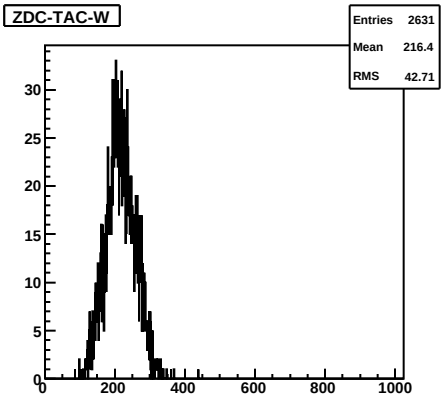

Entries 181922
BBC-S-East ADC Sum
BBC-S-West ADC Sum

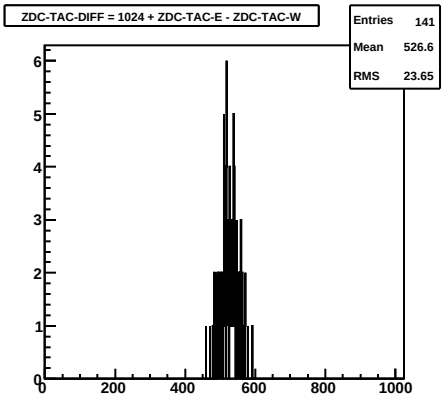

Entries 181922
VPD East ADC Sum
VPD West ADC Sum

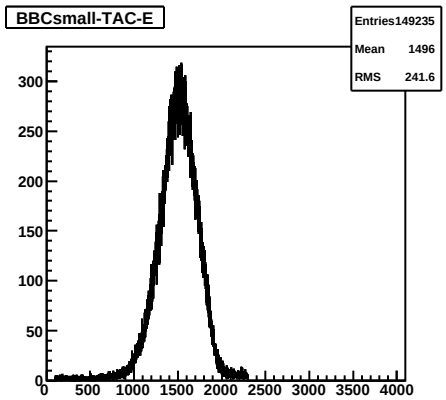

Entries 181922
ZDC East ADC Sum Att
ZDC West ADC Sum Att

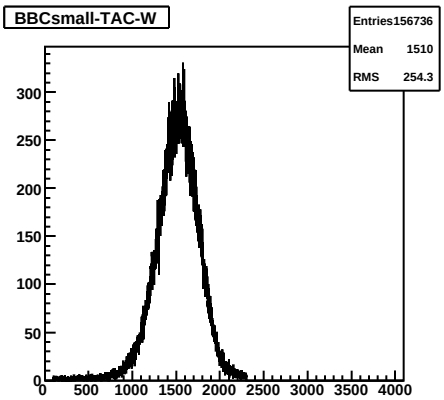

Entries 181922
BBC-L TAC Diff
BCC-S TAC Diff
Entries 181922
BBC-L TAC Diff
VPD TAC Diff
Entries 181922
BBC-L TAC Diff
ZDC TAC Diff
Entries 181922
BBC-S TAC Diff
VPD TAC Diff
Entries 181922
BBC-S TAC Diff
ZDC TAC Diff
Entries 181922
VPD TAC Diff
ZDC TAC Diff

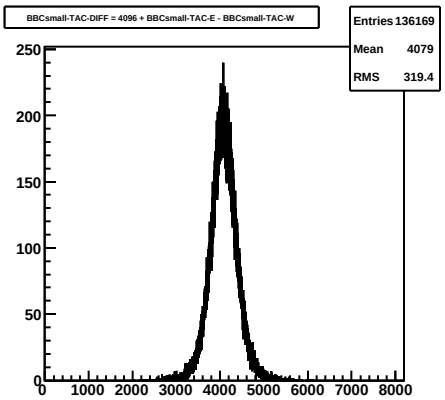

ZDC-TAC-E
Entries 7088
Mean 248
RMS 37.69

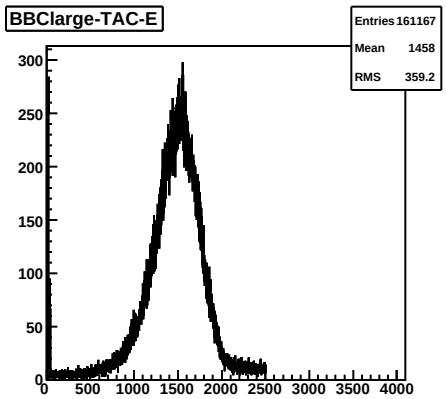

ZDC-TAC-W
Entries 2631
Mean 216.4
RMS 42.71

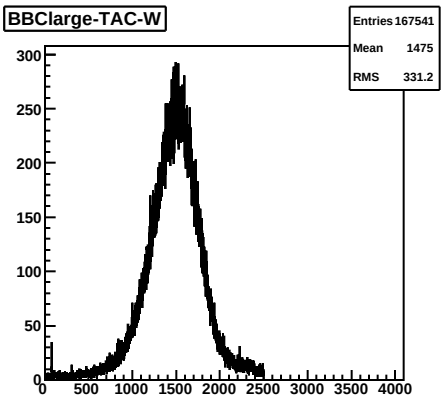

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 141
Mean 526.6
RMS 23.65

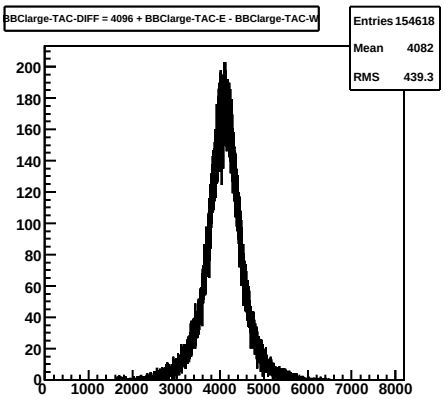

BBCsmall-TAC-E
Entries 149235
Mean 1496
RMS 241.6

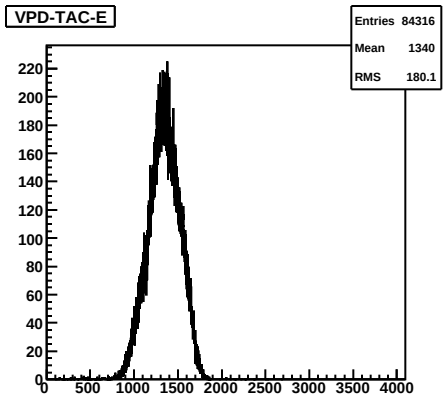

BBCsmall-TAC-W
Entries 156736
Mean 1510
RMS 254.3

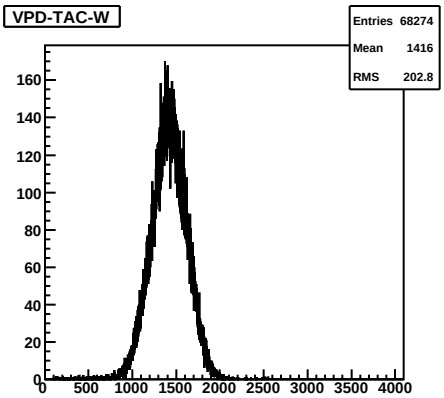

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 136169
Mean 4079
RMS 319.4

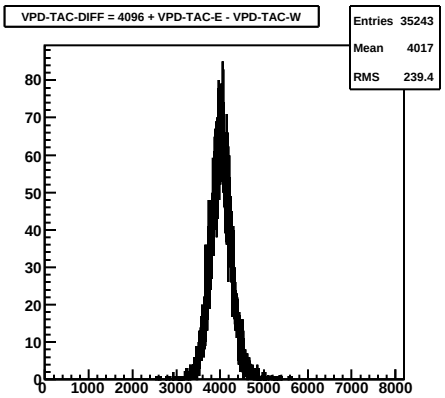

BBClarge-TAC-E
Entries 161167
Mean 1458
RMS 359.2

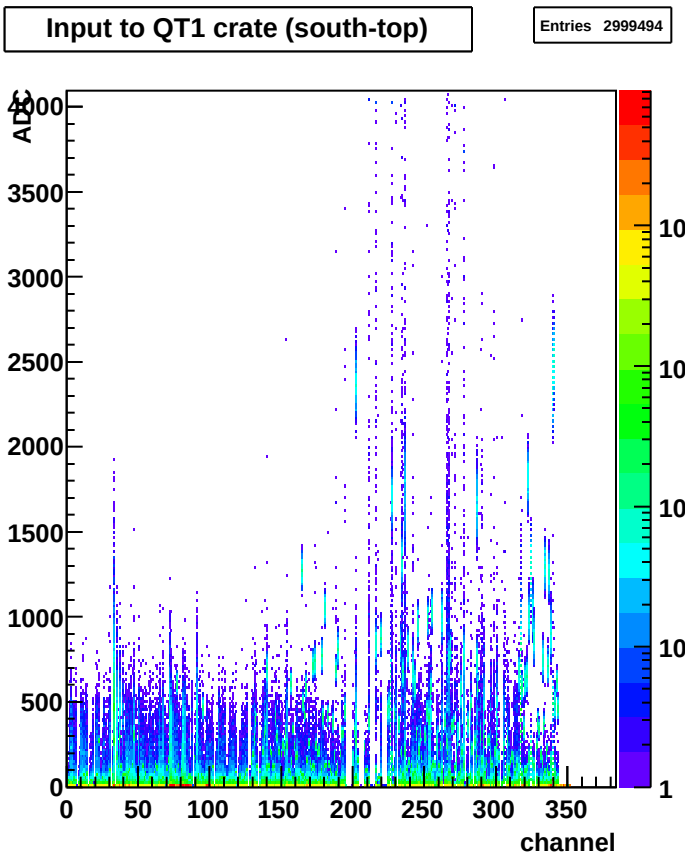

BBClarge-TAC-W
Entries 167541
Mean 1475
RMS 331.2

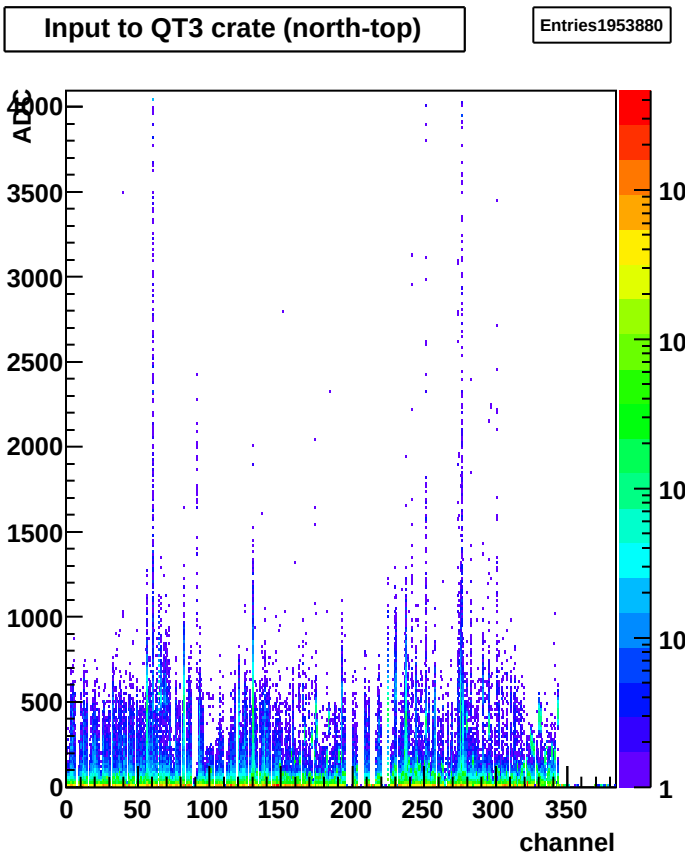

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 154618
Mean 4082
RMS 439.3

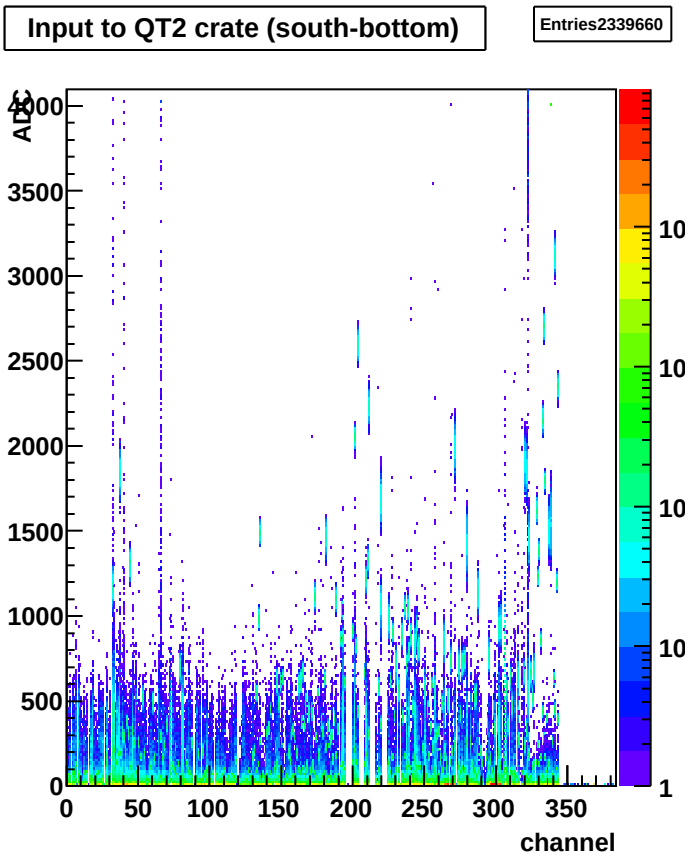

VPD-TAC-E
Entries 84316
Mean 1340
RMS 180.1

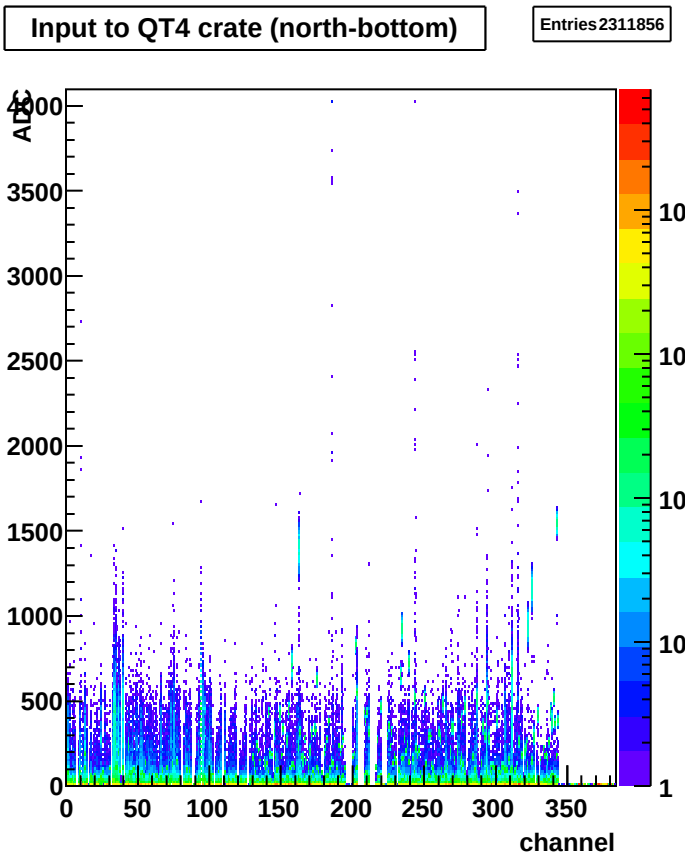

VPD-TAC-W
Entries 68274
Mean 1416
RMS 202.8

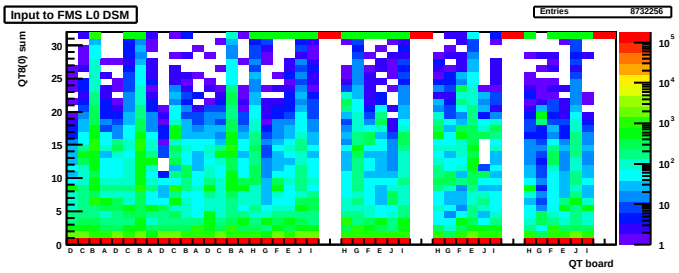

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 35243
Mean 4017
RMS 239.4

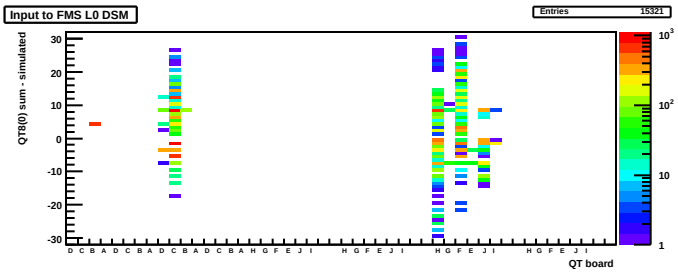

Input to QT1 crate (south-top)
Entries 2999494
ADC
channel

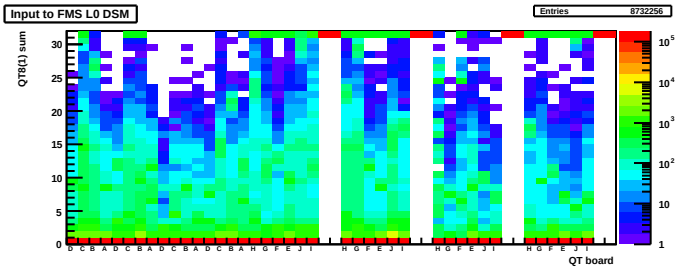

Input to QT3 crate (north-top)
Entries1953880
ADC
channel

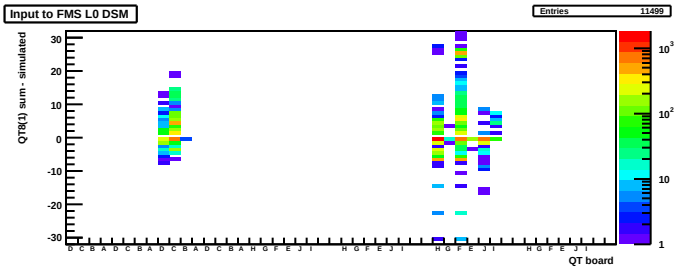

Input to QT2 crate (south-bottom)
Entries2339660
ADC
channel

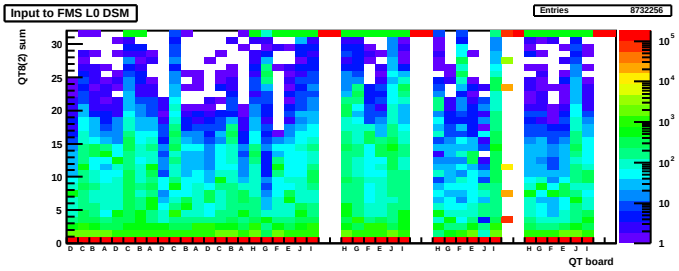

Input to QT4 crate (north-bottom)
Entries2311856
ADC
channel

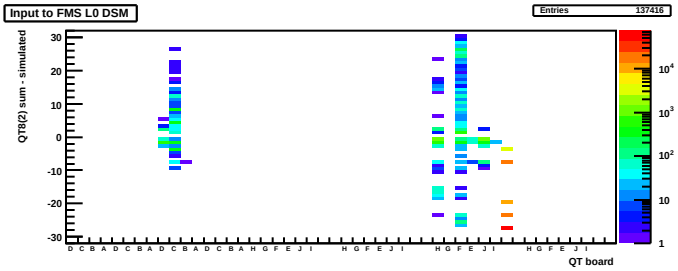

Input to FMS L0 DSM
Entries 8732256
QT8(0) sum
QT board

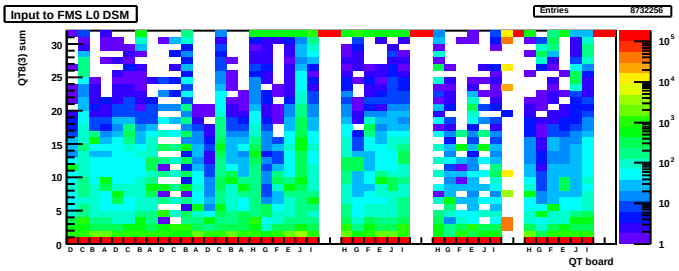

Input to FMS L0 DSM
Entries 15321
QT8(0) sum - simulated
QT board

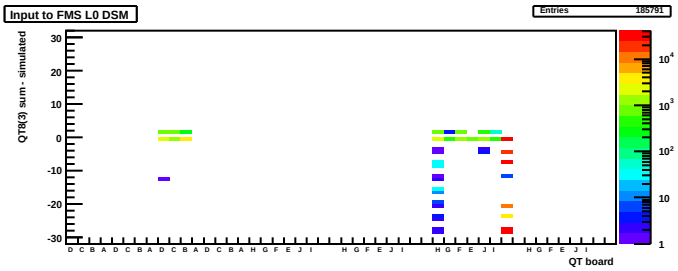

Input to FMS L0 DSM
Entries 8732256
QT8(1) sum
QT board

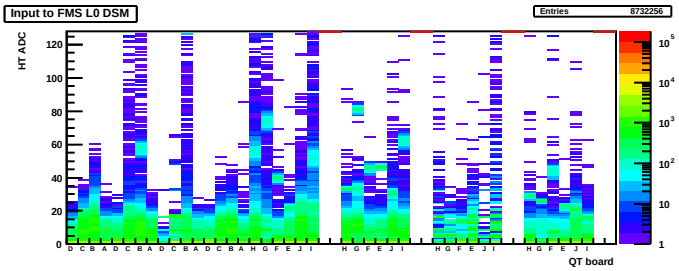

Input to FMS L0 DSM
Entries 11499
QT8(1) sum - simulated
QT board

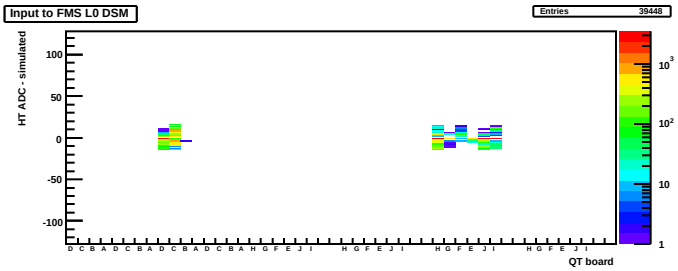

Input to FMS L0 DSM
Entries 8732256
QT8(2) sum
QT board

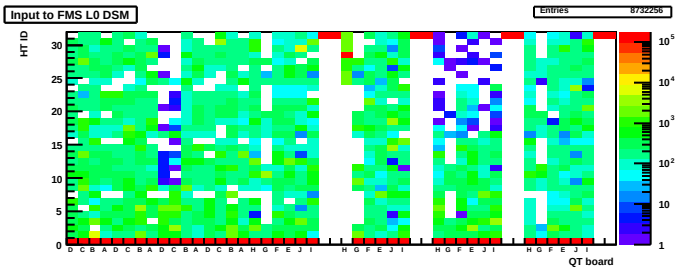

Input to FMS L0 DSM
Entries 137416
QT8(2) sum - simulated
QT board

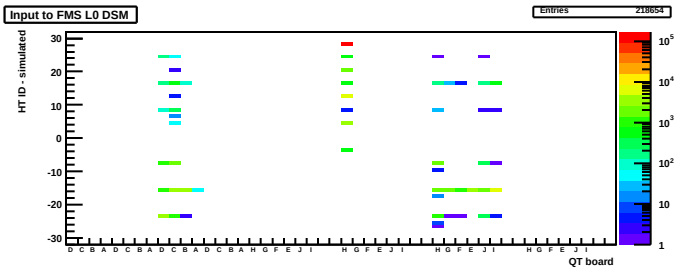

Input to FMS L0 DSM
Entries 8732256
QT8(3) sum
QT board

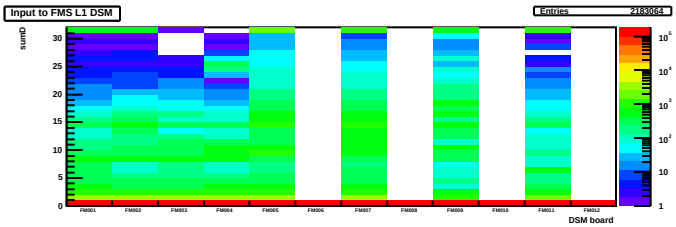

Input to FMS L0 DSM
Entries 185791
QT8(3) sum - simulated
QT board

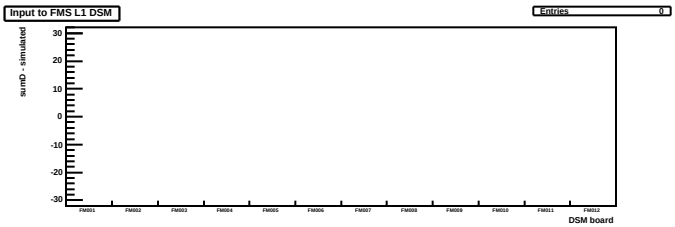

Input to FMS L0 DSM
Entries 8732256
HT ADC
QT board

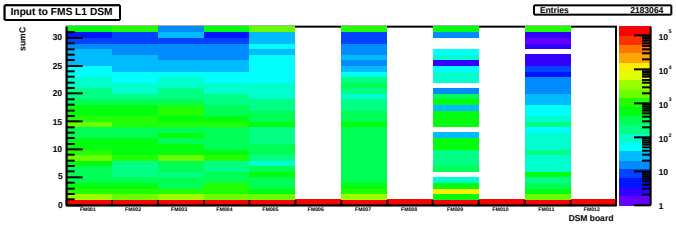

Input to FMS L0 DSM
Entries 39448
HT ADC - simulated
QT board

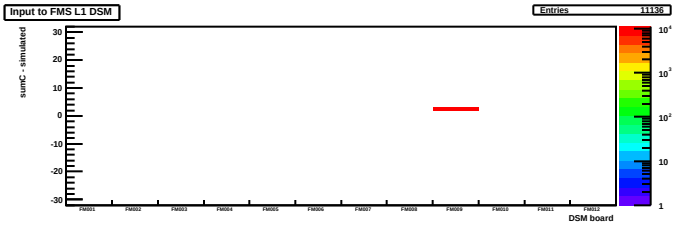

Input to FMS L0 DSM
Entries 8732256
HT ID
QT board

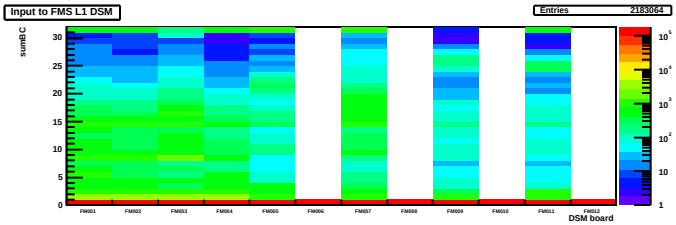

Input to FMS L0 DSM
Entries 218654
HT ID - simulated
QT board

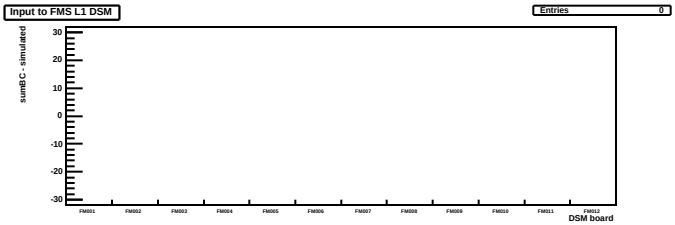

Input to FMS L1 DSM
Entries 2183064
sumD
DSM board

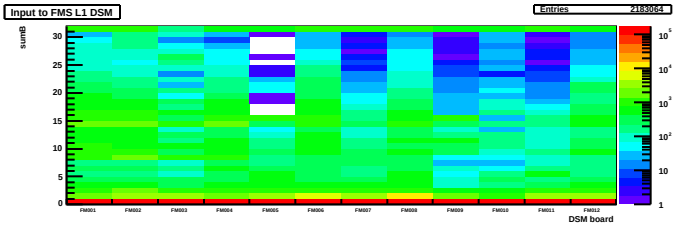

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

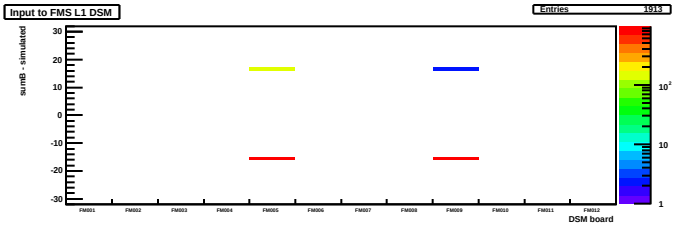

Input to FMS L1 DSM
Entries 2183064
sumC
DSM board

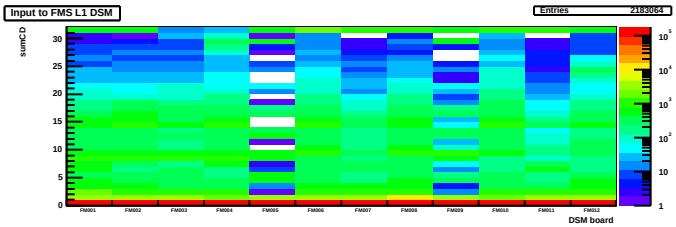

Input to FMS L1 DSM
Entries 11136
sumC - simulated
DSM board

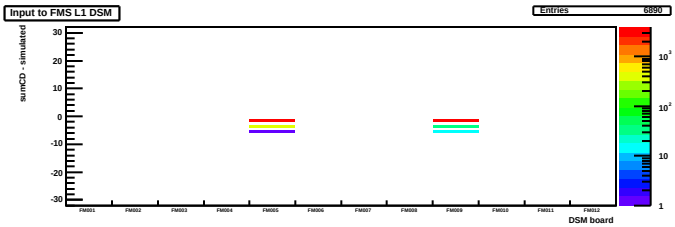

Input to FMS L1 DSM
Entries 2183064
sumBC
DSM board

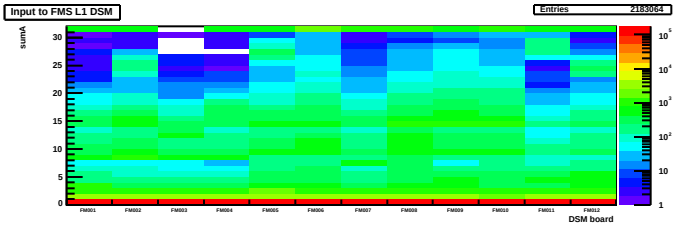

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

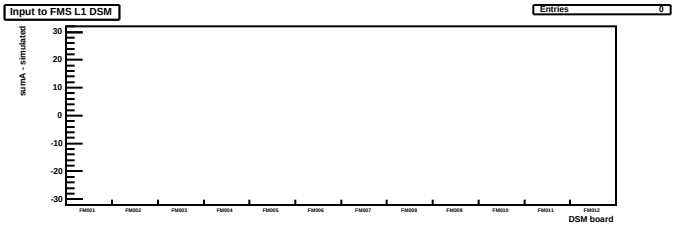

Input to FMS L1 DSM
Entries 2183064
sumB
DSM board

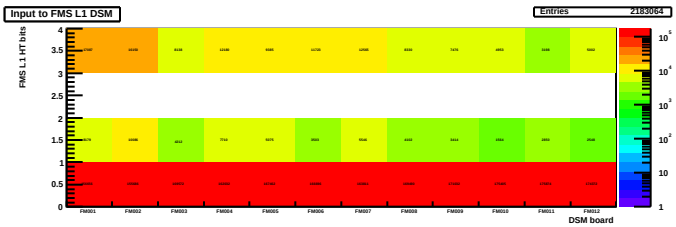

Input to FMS L1 DSM
Entries 1913
sumB - simulated
DSM board

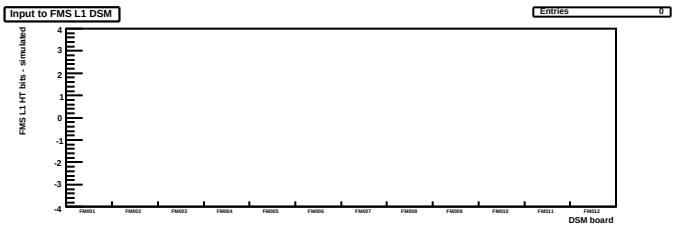

Input to FMS L1 DSM
Entries 2183064
sumCD
DSM board

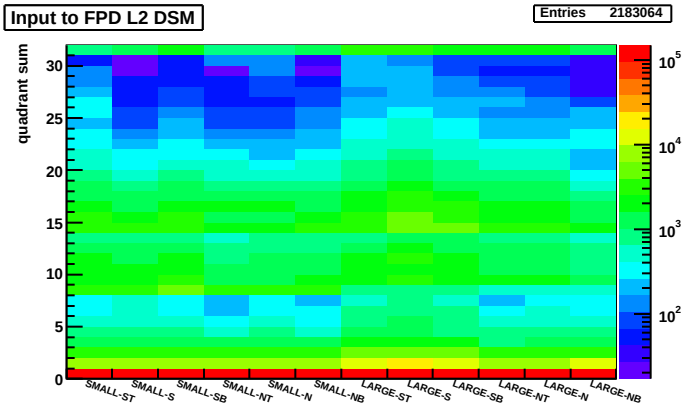

Input to FMS L1 DSM
Entries 6890
sumCD - simulated
DSM board

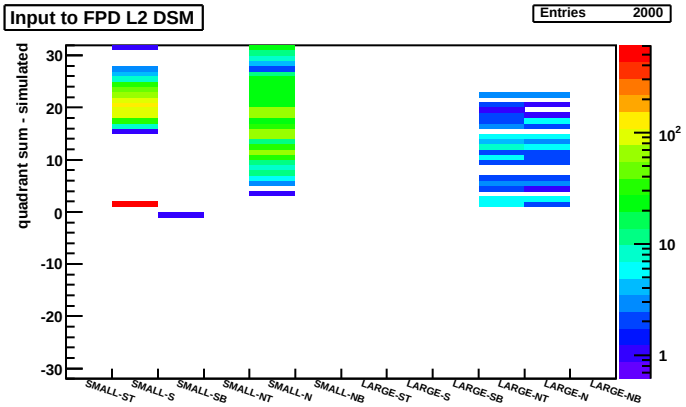

Input to FMS L1 DSM
Entries 2183064
sumA
DSM board

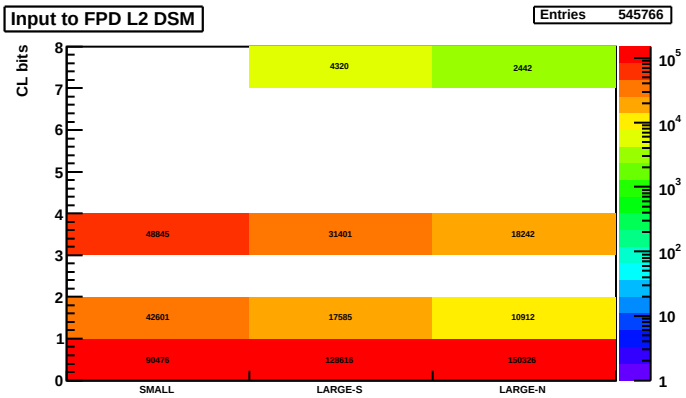

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

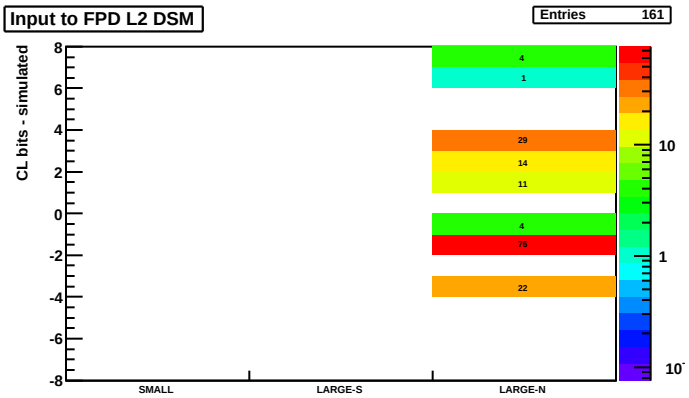

Input to FMS L1 DSM
Entries 2183064
FMS L1 HT bits
DSM board

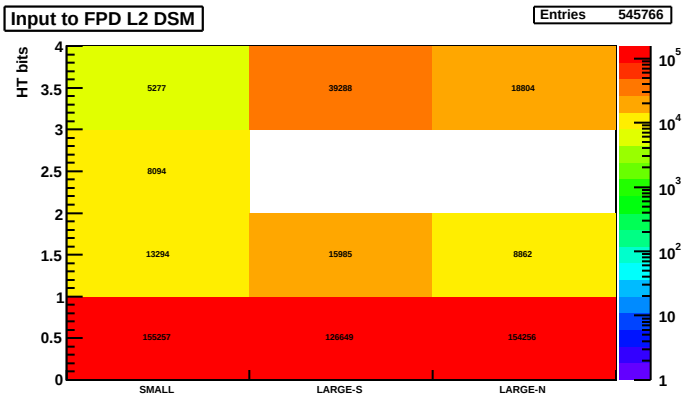

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

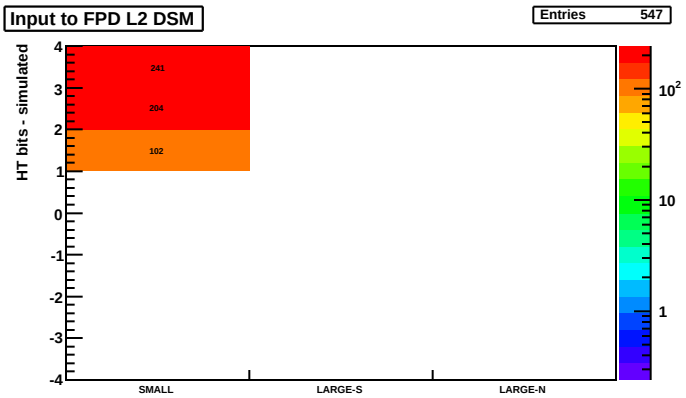

Input to FPD L2 DSM
Entries 2183064
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

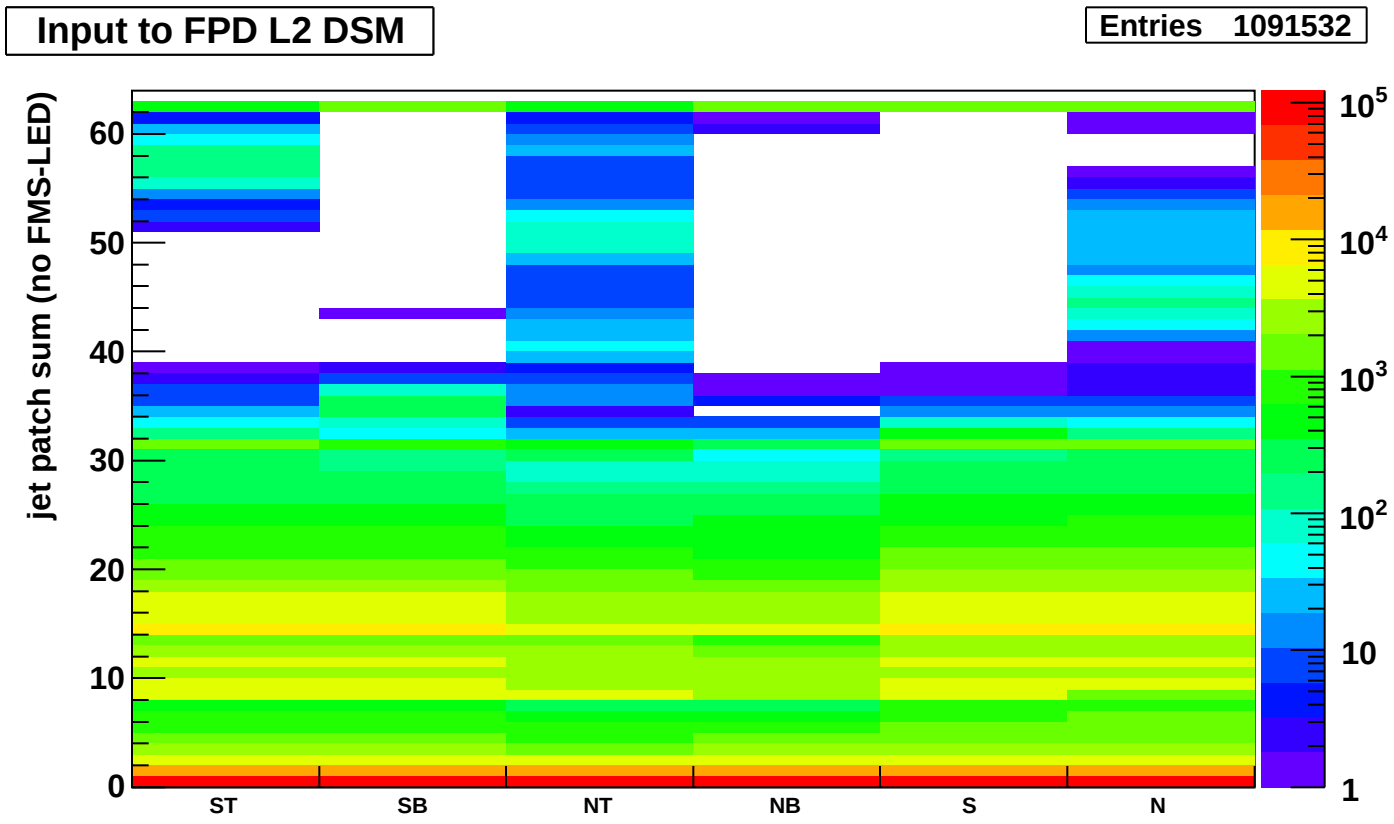

Input to FPD L2 DSM
Entries 2000
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

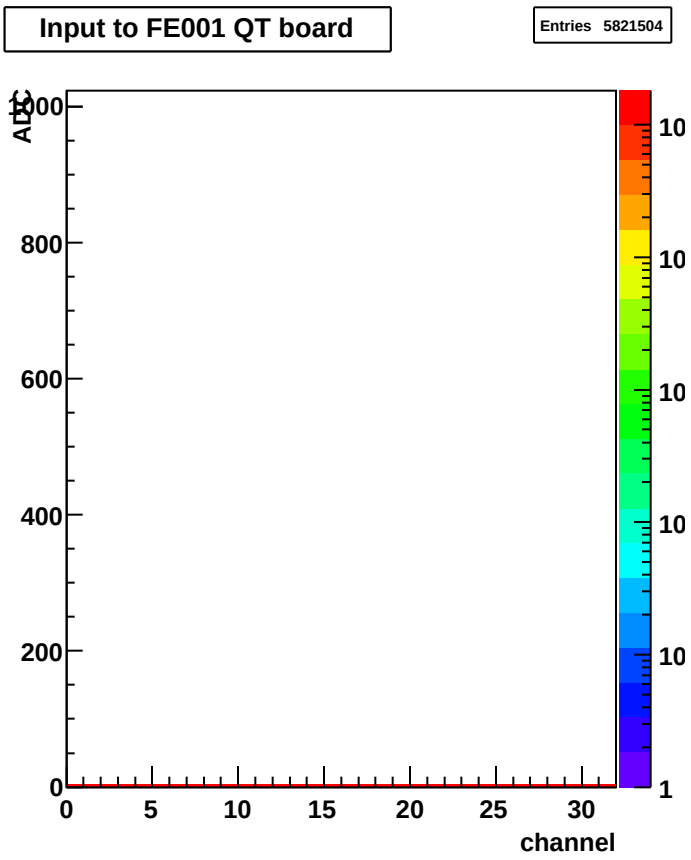

Input to FPD L2 DSM
Entries 545766
CL bits
4320
2442
48845
31401
18242
42601
17585
10912
90476
128616
150326
SMALL
LARGE-S
LARGE-N

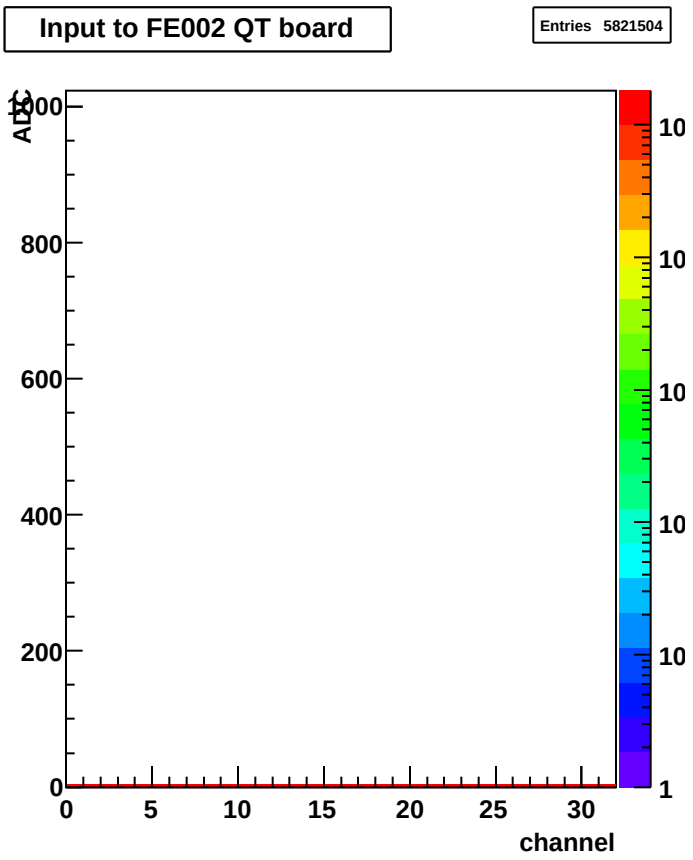

Input to FPD L2 DSM
Entries 161
CL bits - simulated
4
1
29
14
11
4
76
22
SMALL
LARGE-S
LARGE-N

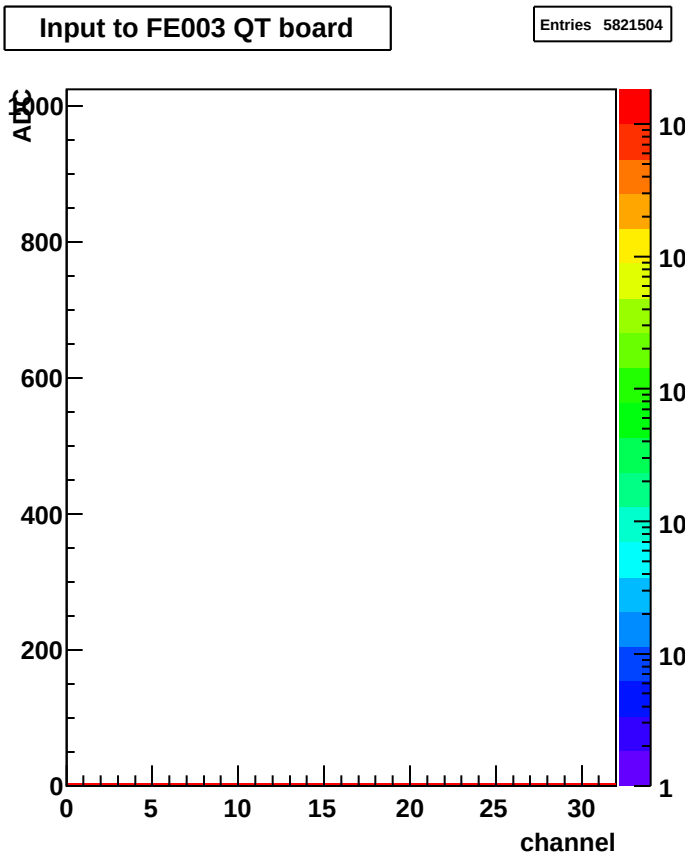

Input to FPD L2 DSM
Entries 545766
HT bits
5277
39288
18804
8094
13294
15985
8862
155257
126649
154256
SMALL
LARGE-S
LARGE-N

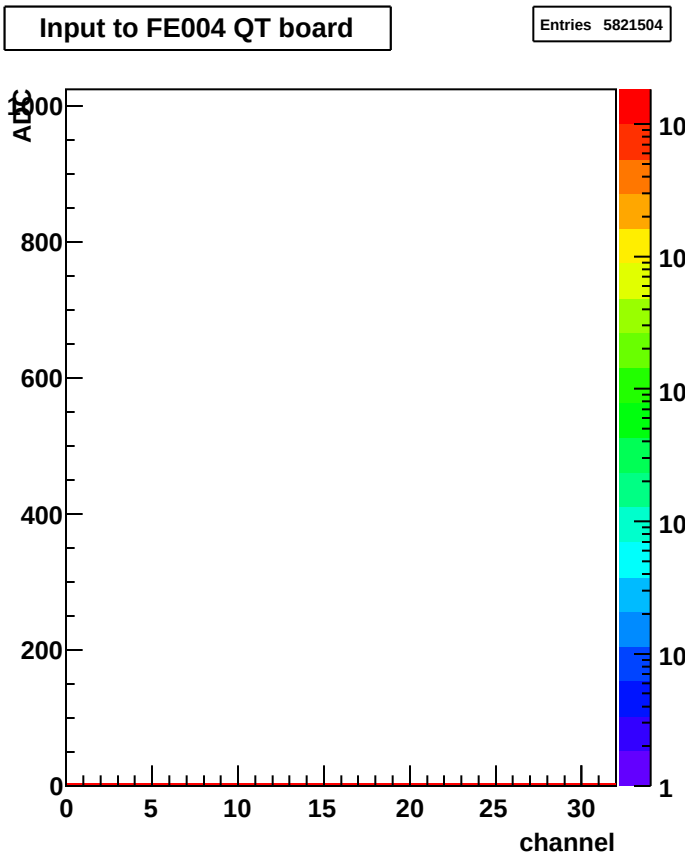

Input to FPD L2 DSM
Entries 547
HT bits - simulated
241
204
102
SMALL
LARGE-S
LARGE-N

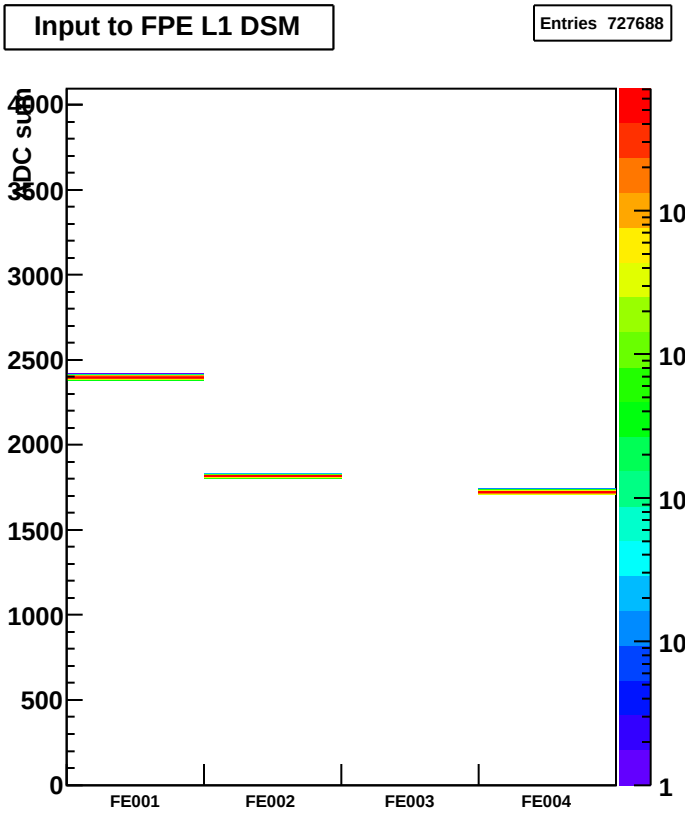

Input to FPD L2 DSM
Entries 1091532
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

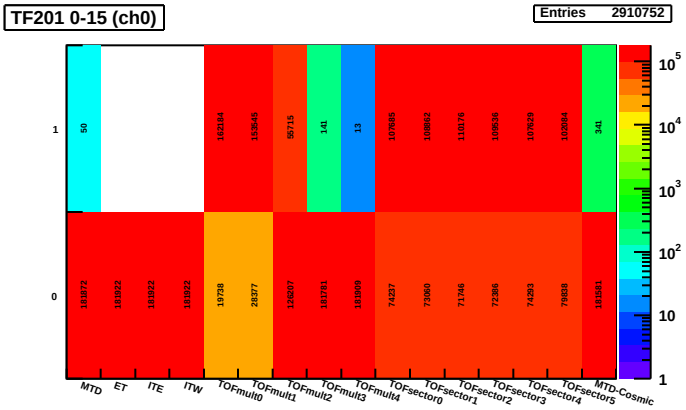

Input to FE001 QT board
Entries 5821504
ADC
channel

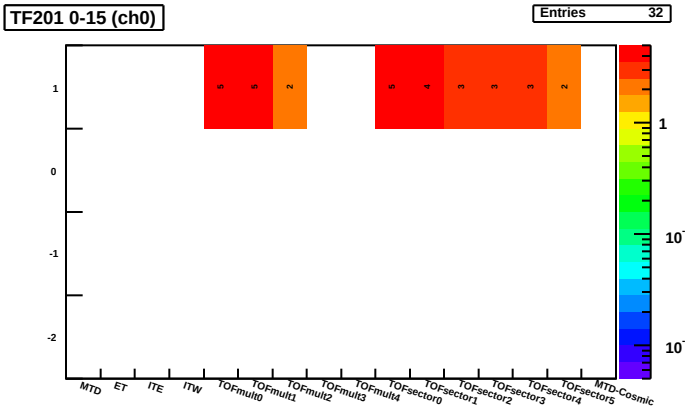

Input to FE002 QT board
Entries 5821504
ADC
channel

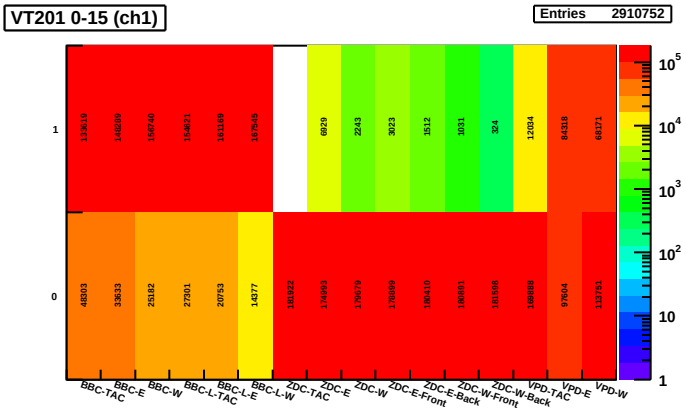

Input to FE003 QT board
Entries 5821504
ADC
channel

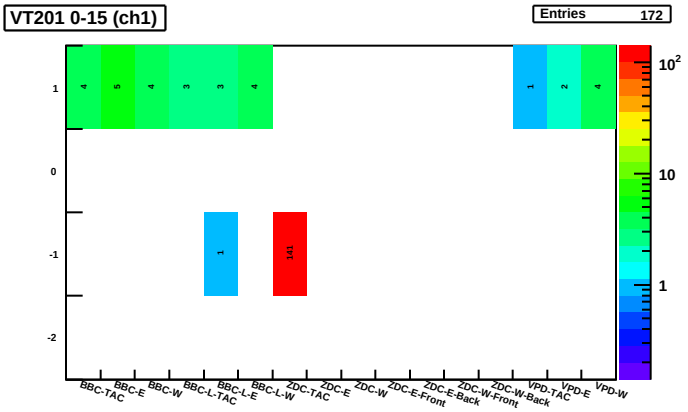

Input to FE004 QT board
Entries 5821504
ADC
channel

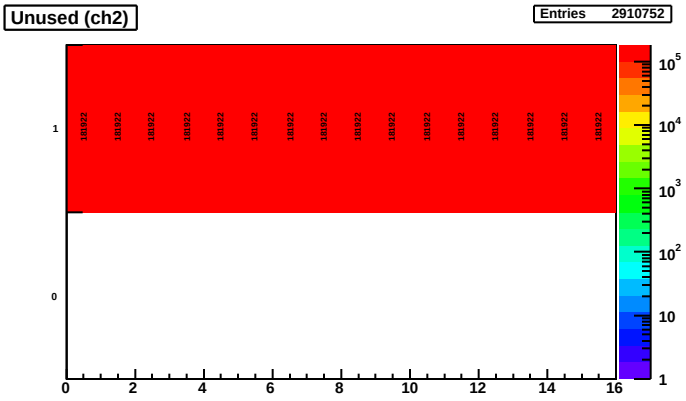

Input to FPE L1 DSM
Entries 727688
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1

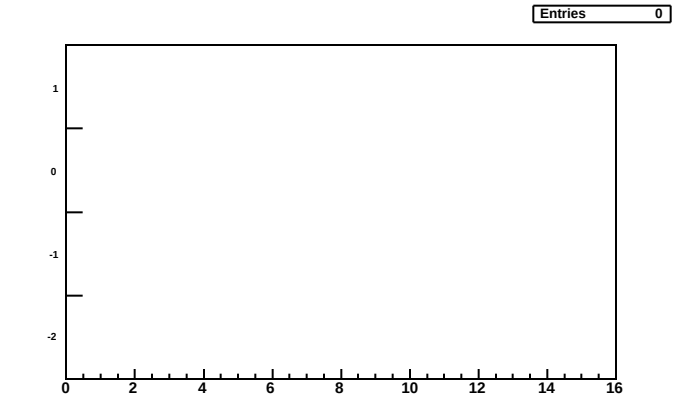

TF201 0-15 (ch0)
Entries 2910752
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

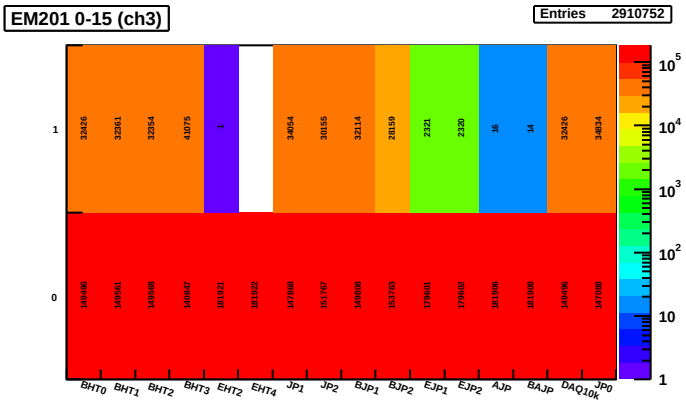

TF201 0-15 (ch0)
Entries 32
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

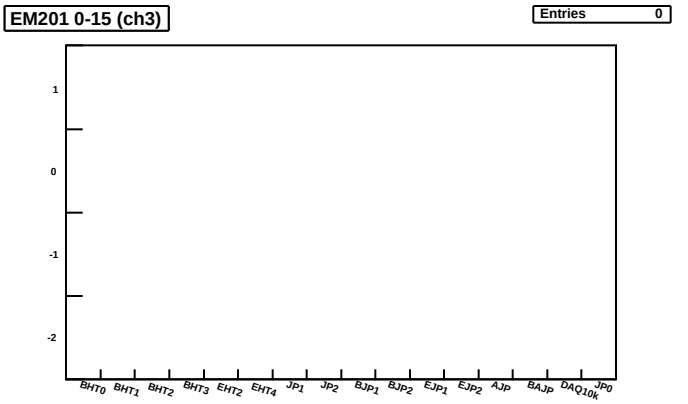

VT201 0-15 (ch1)
Entries 2910752
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 172
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W

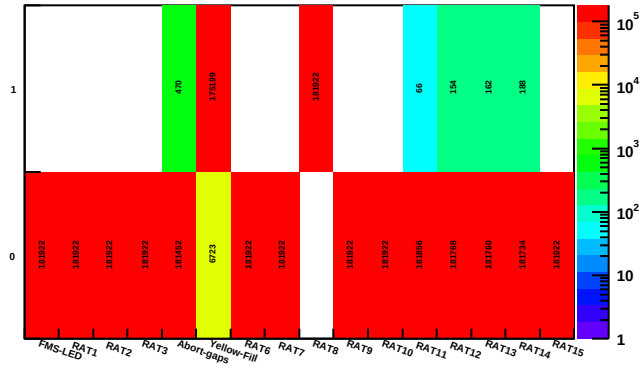

Unused (ch2)
Entries 2910752

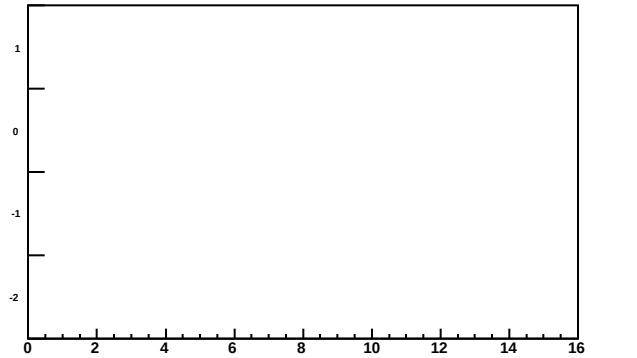

Entries 0


EM201 0-15 (ch3)
Entries 2910752
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

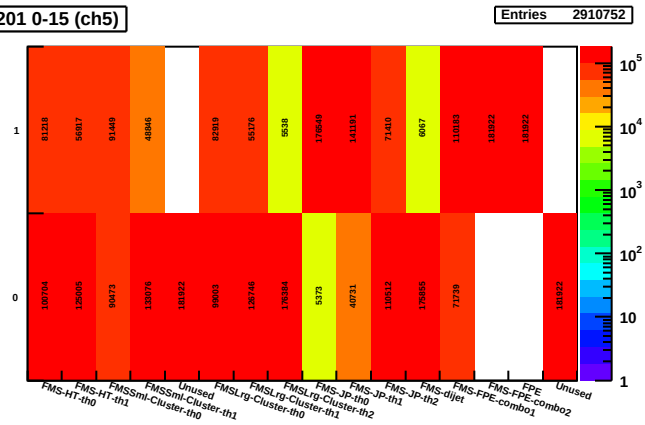

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

RAT board (ch4)

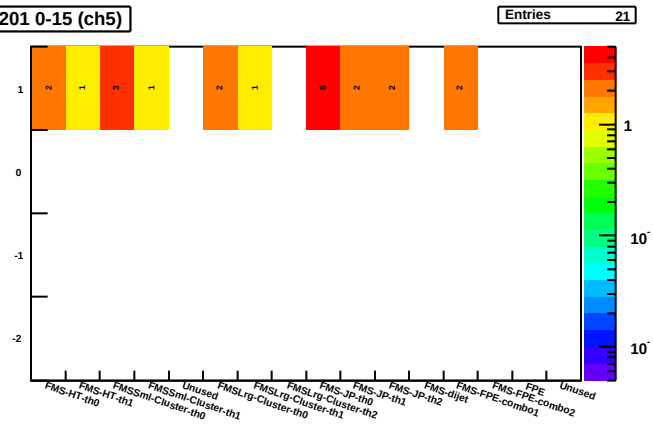




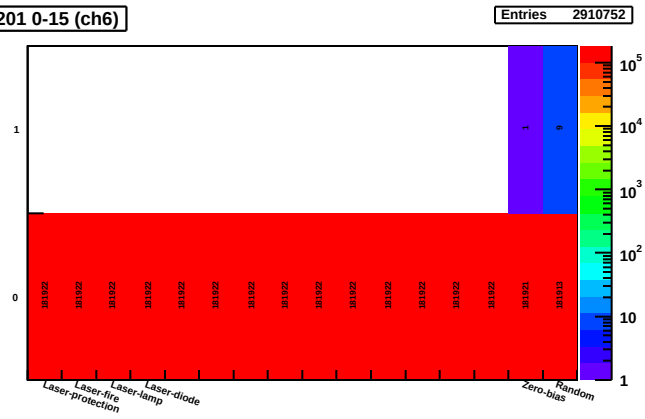
FP201 0-15 (ch5)

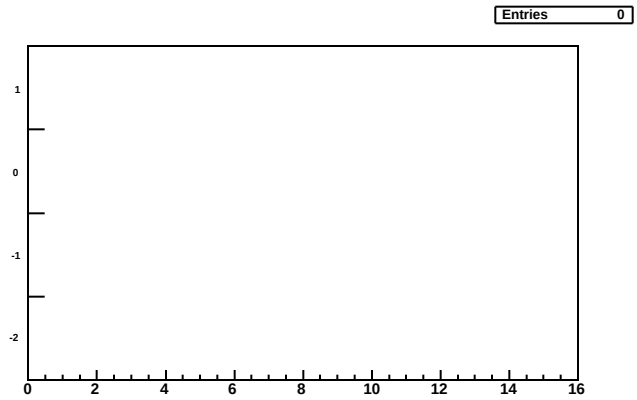
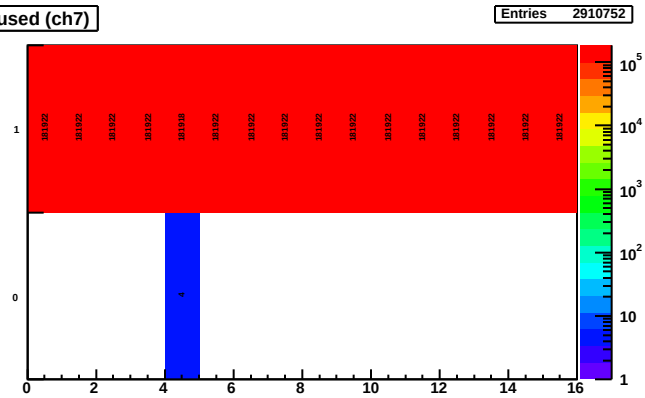
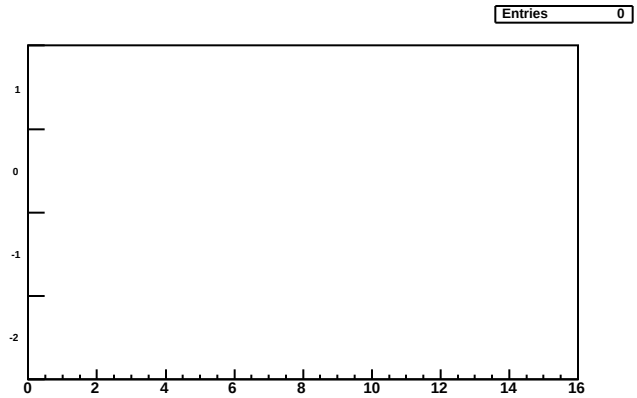


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)