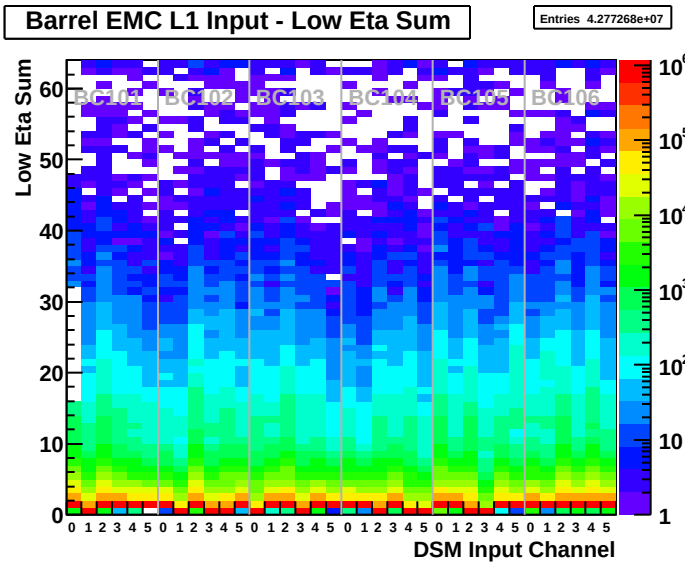
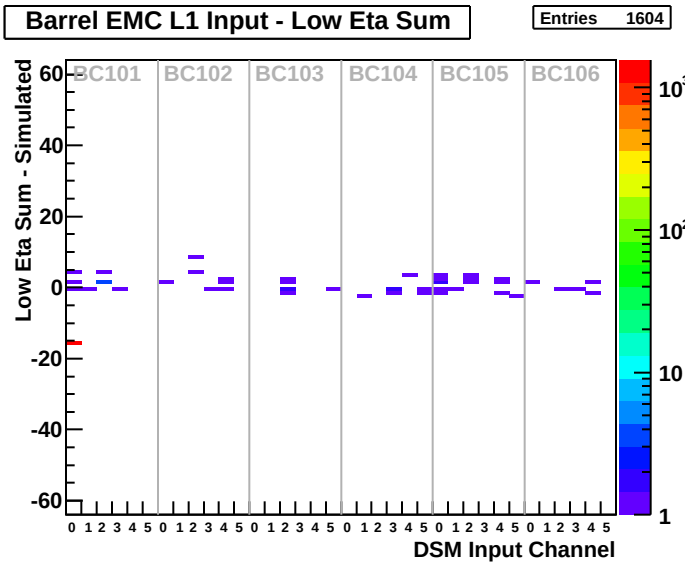
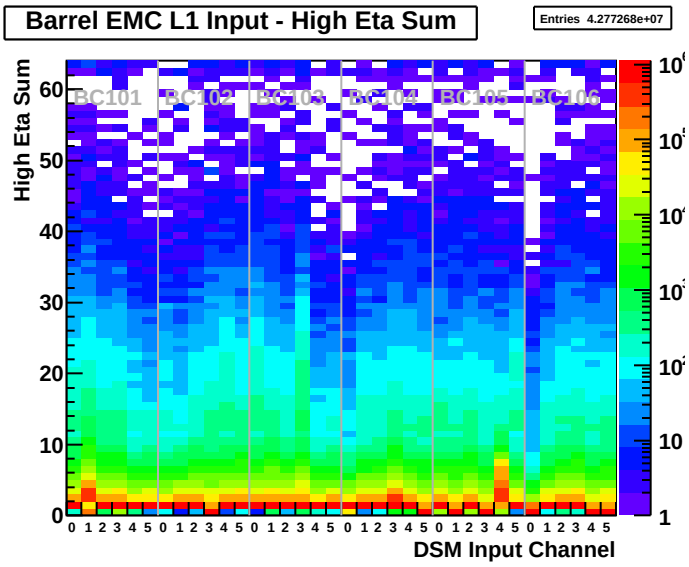
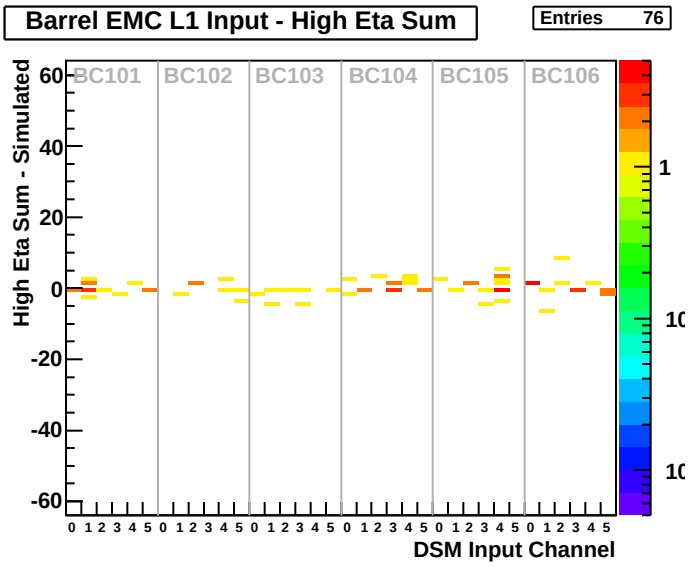
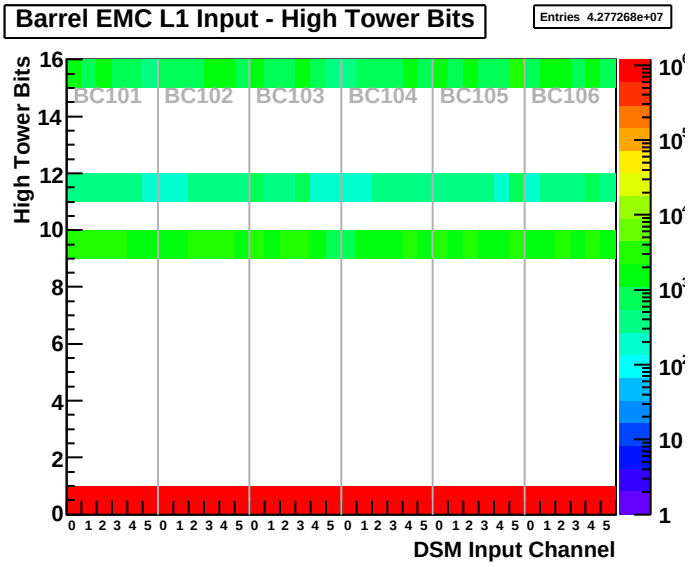
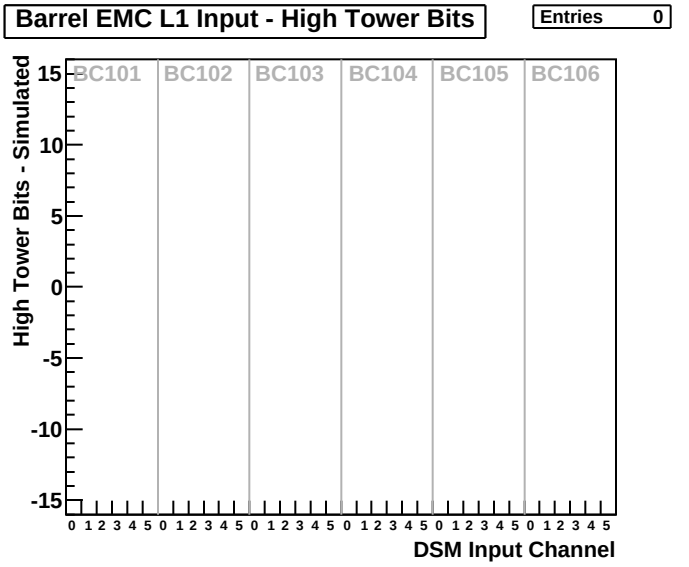

Barrel EMC L1 Input - Low Eta Sum
Entries 4.277268e+07
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

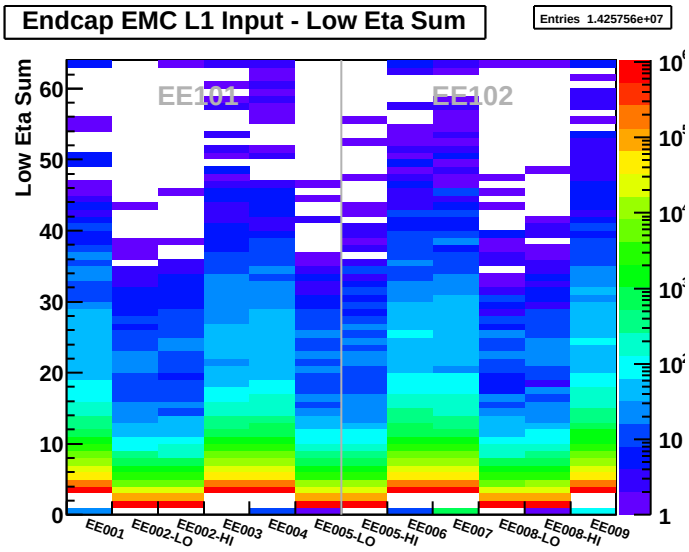

Barrel EMC L1 Input - Low Eta Sum
Entries 1604
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

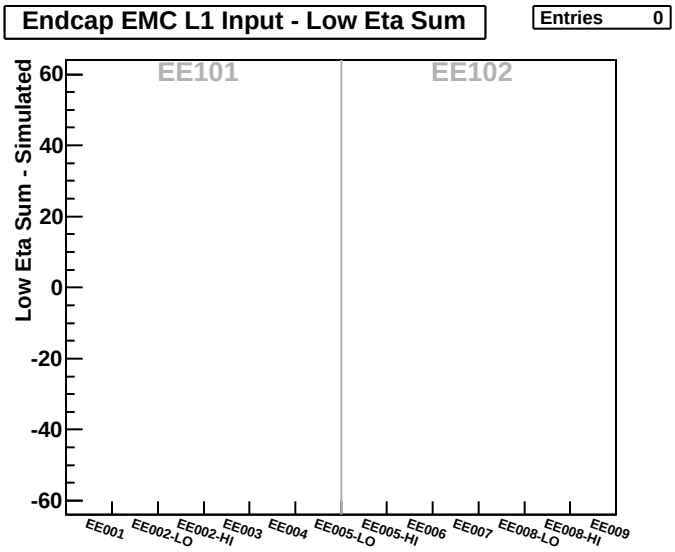

Barrel EMC L1 Input - High Eta Sum
Entries 4.277268e+07
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

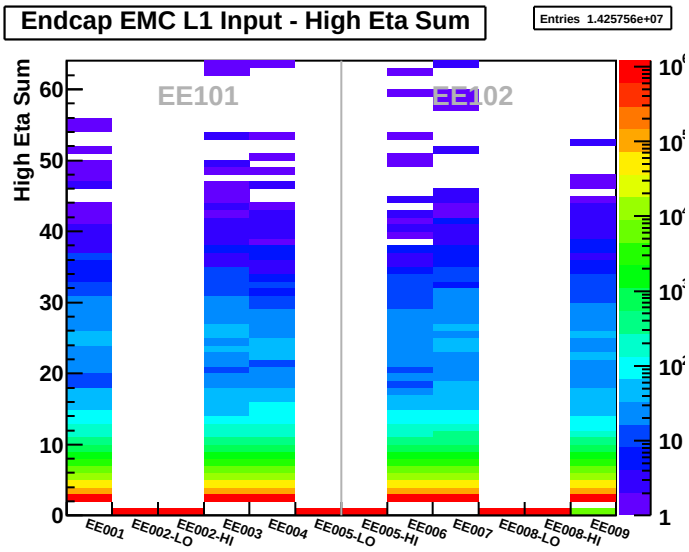

Barrel EMC L1 Input - High Eta Sum
Entries 76
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

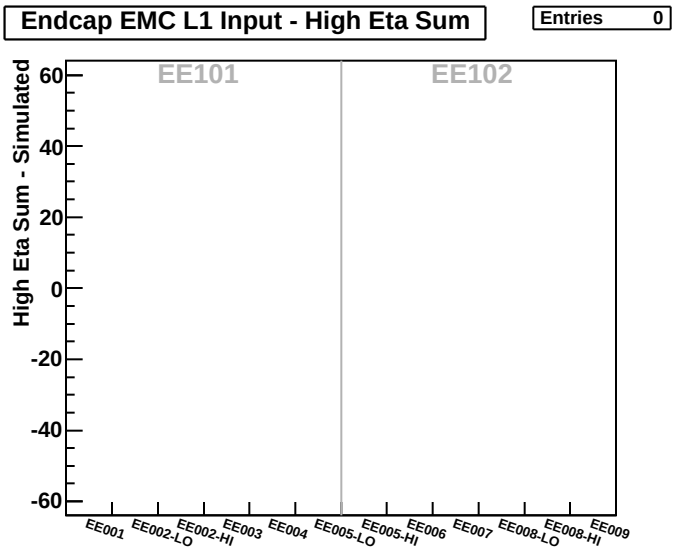

Barrel EMC L1 Input - High Tower Bits
Entries 4.277268e+07
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

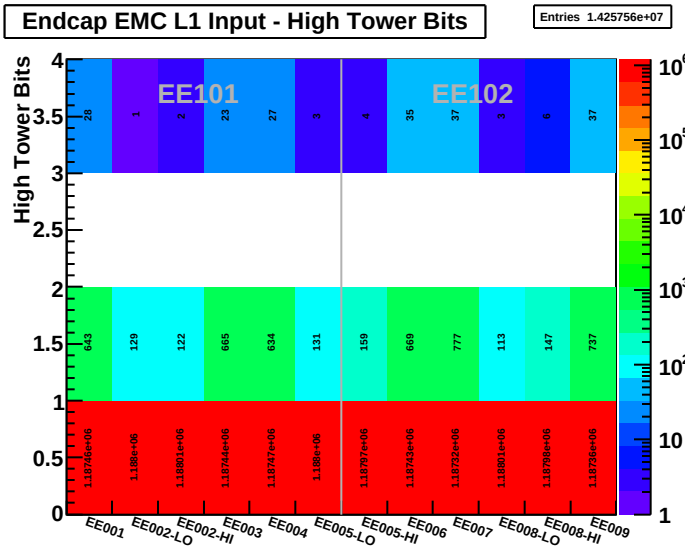

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

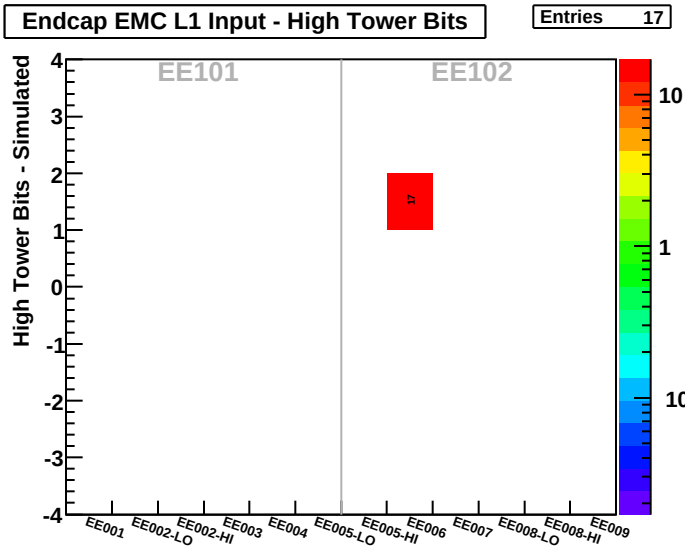

Endcap EMC L1 Input - Low Eta Sum
Entries 1.425756e+07
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

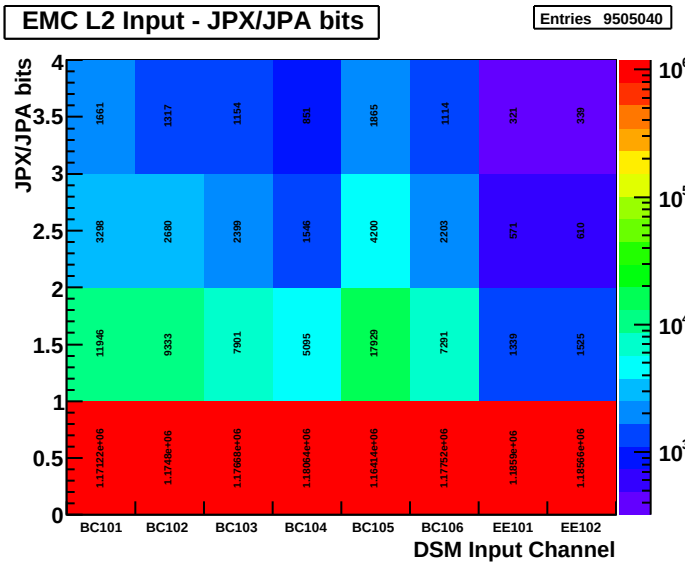

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

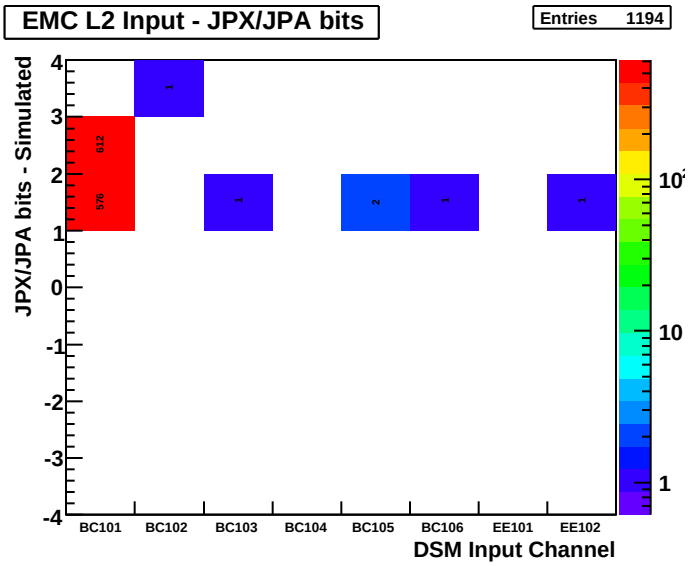

Endcap EMC L1 Input - High Eta Sum
Entries 1.425756e+07
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

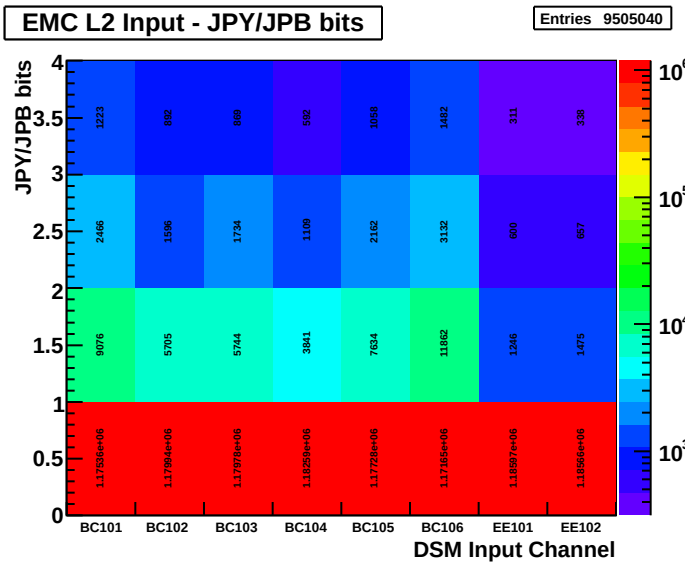

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

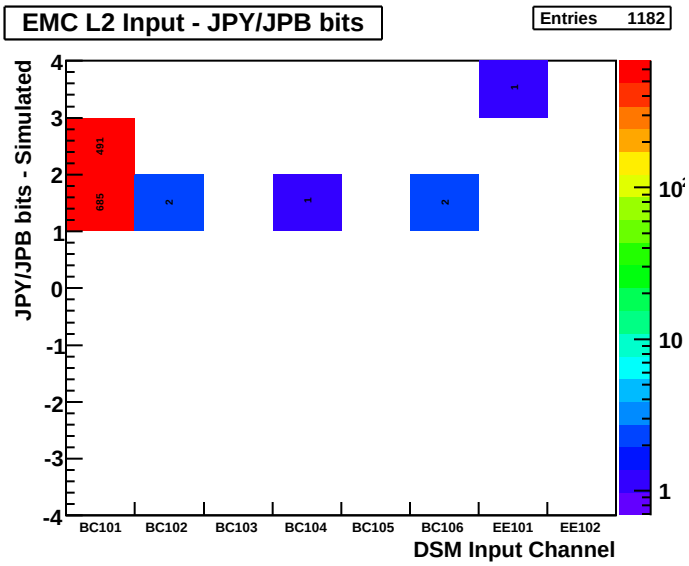

Endcap EMC L1 Input - High Tower Bits
Entries 1.425756e+07
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

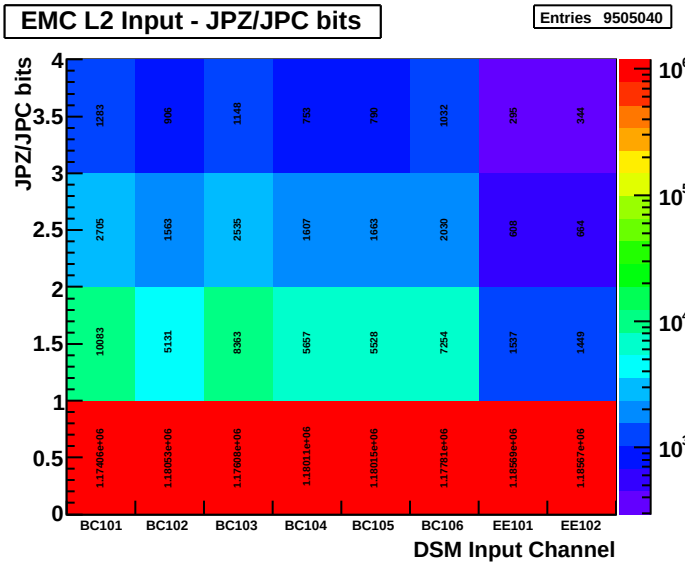

Endcap EMC L1 Input - High Tower Bits
Entries 17
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

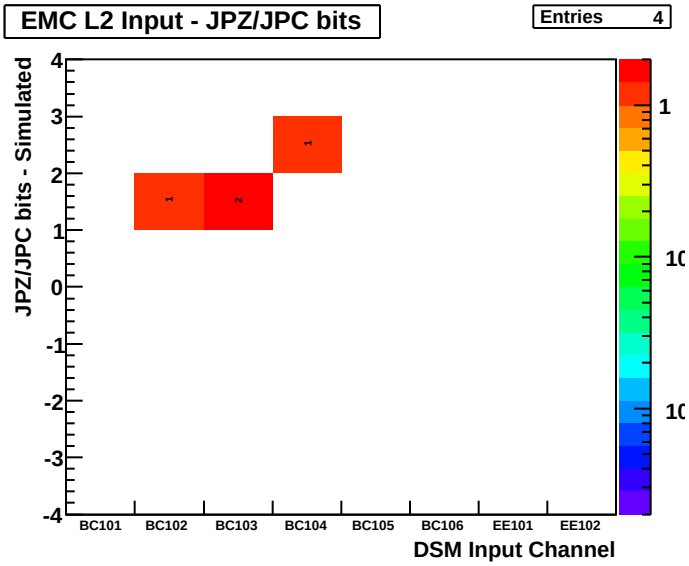

EMC L2 Input - JPX/JPA bits
Entries 9505040
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

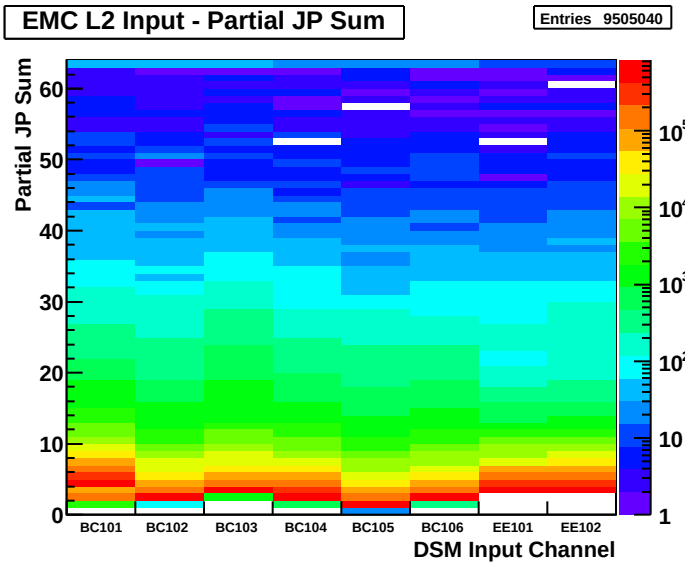

EMC L2 Input - JPX/JPA bits
Entries 1194
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

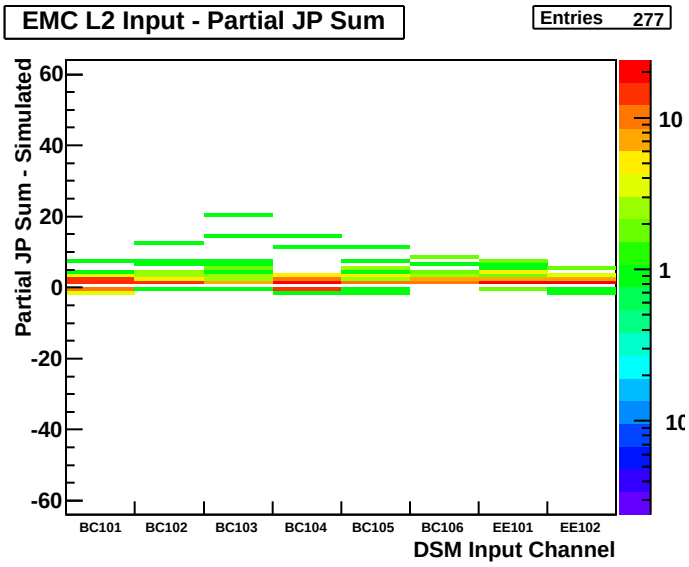

EMC L2 Input - JPY/JPB bits
Entries 9505040
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

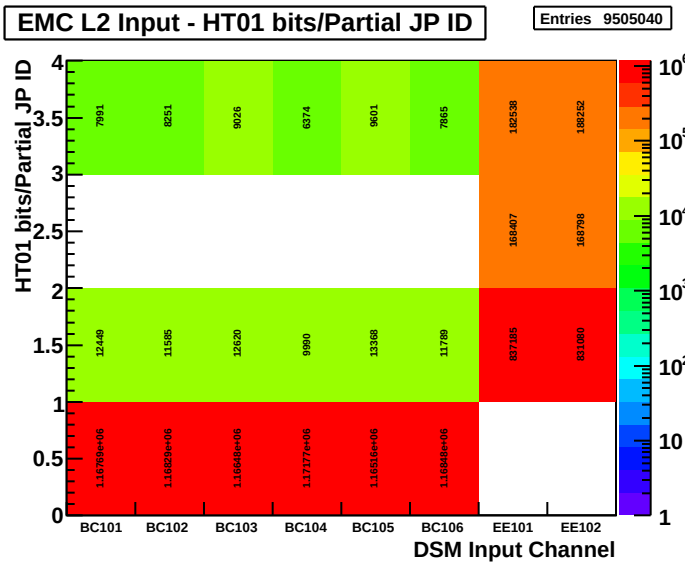

EMC L2 Input - JPY/JPB bits
Entries 1182
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

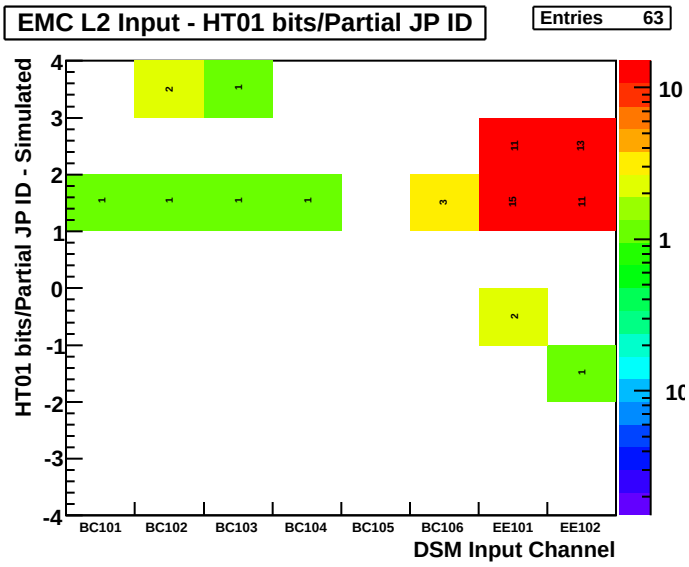

EMC L2 Input - JPZ/JPC bits
Entries 9505040
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

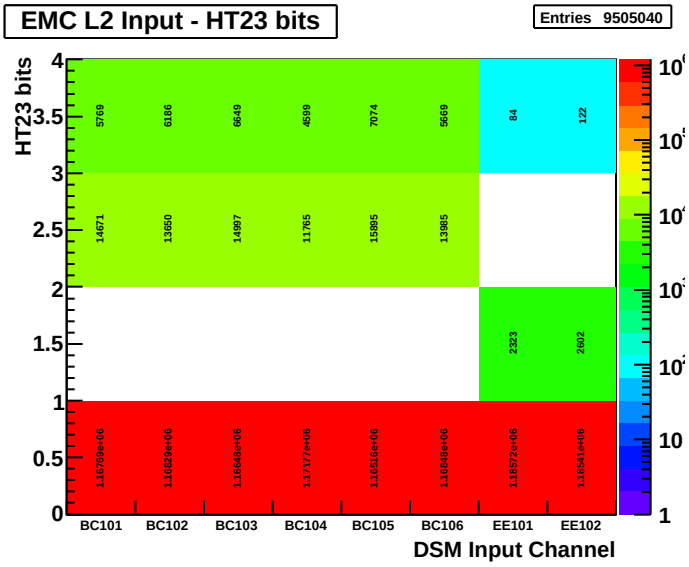

EMC L2 Input - JPZ/JPC bits
Entries 4
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

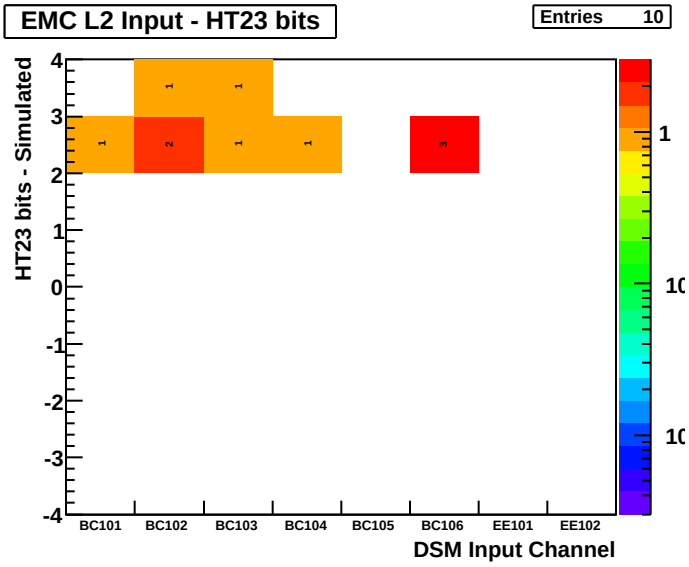

EMC L2 Input - Partial JP Sum
Entries 9505040
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

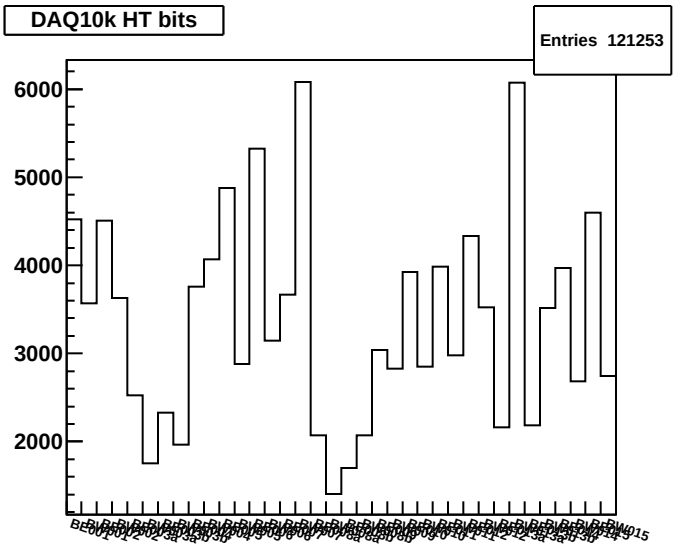

EMC L2 Input - Partial JP Sum
Entries 277
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

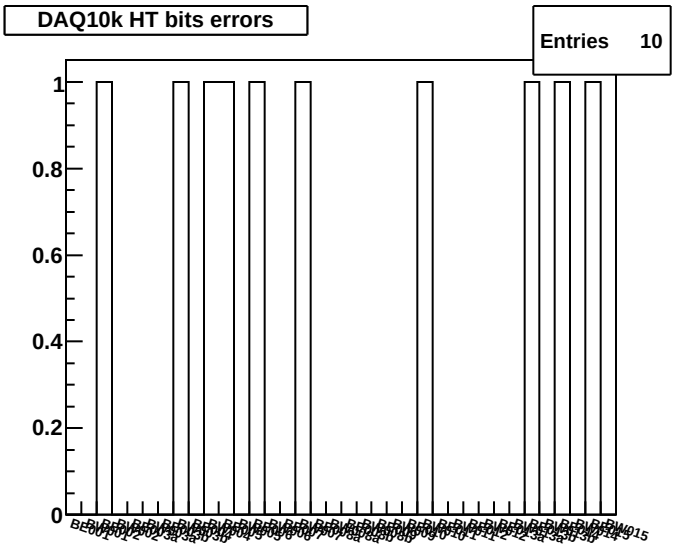

EMC L2 Input - HT01 bits/Partial JP ID
Entries 9505040
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

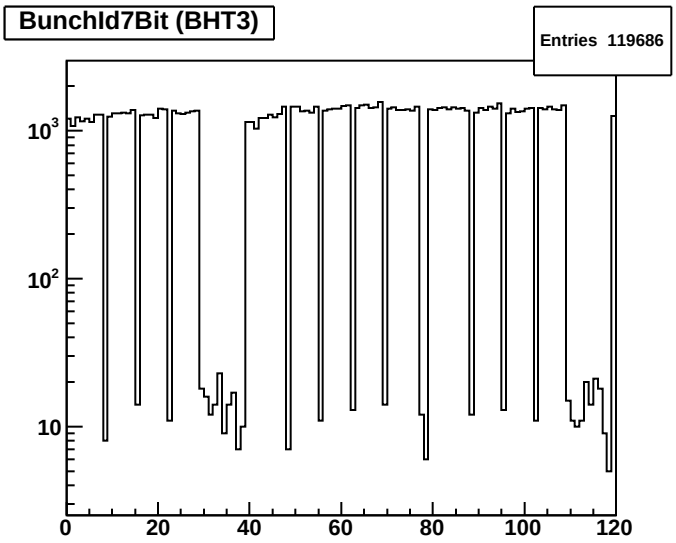

EMC L2 Input - HT01 bits/Partial JP ID
Entries 63
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

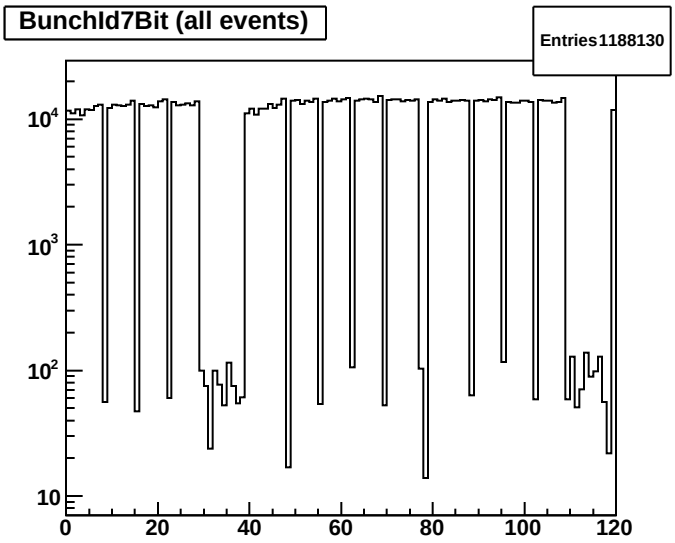

EMC L2 Input - HT23 bits
Entries 9505040
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

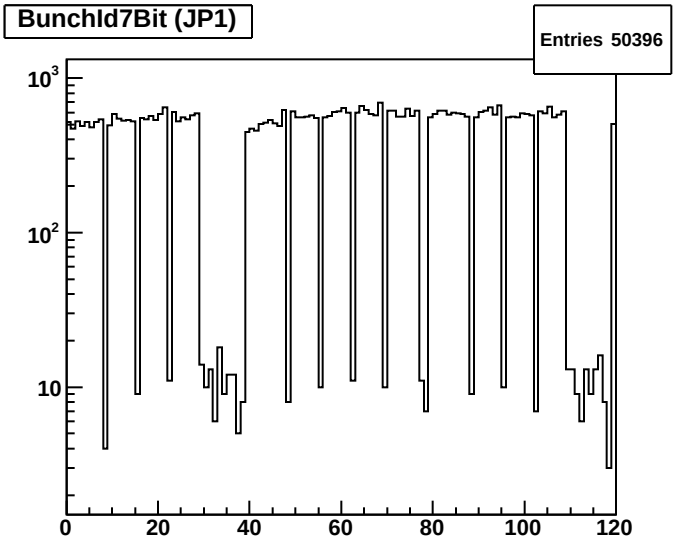

EMC L2 Input - HT23 bits
Entries 10
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

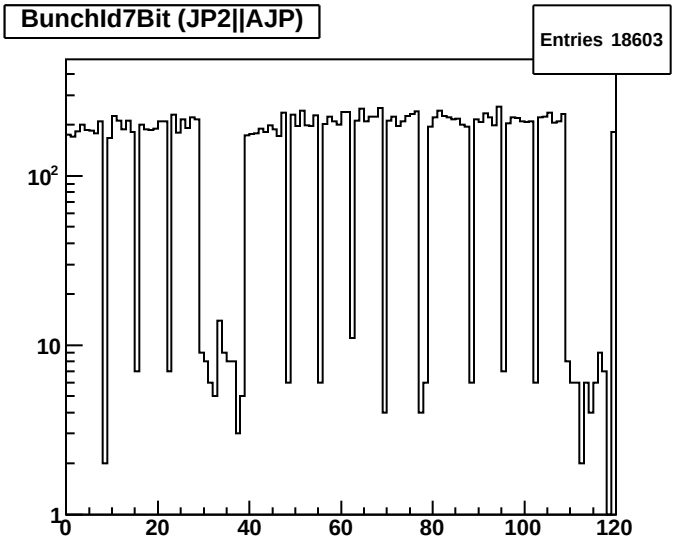

DAQ10k HT bits
Entries 121253
6000
5000
4000
3000
2000

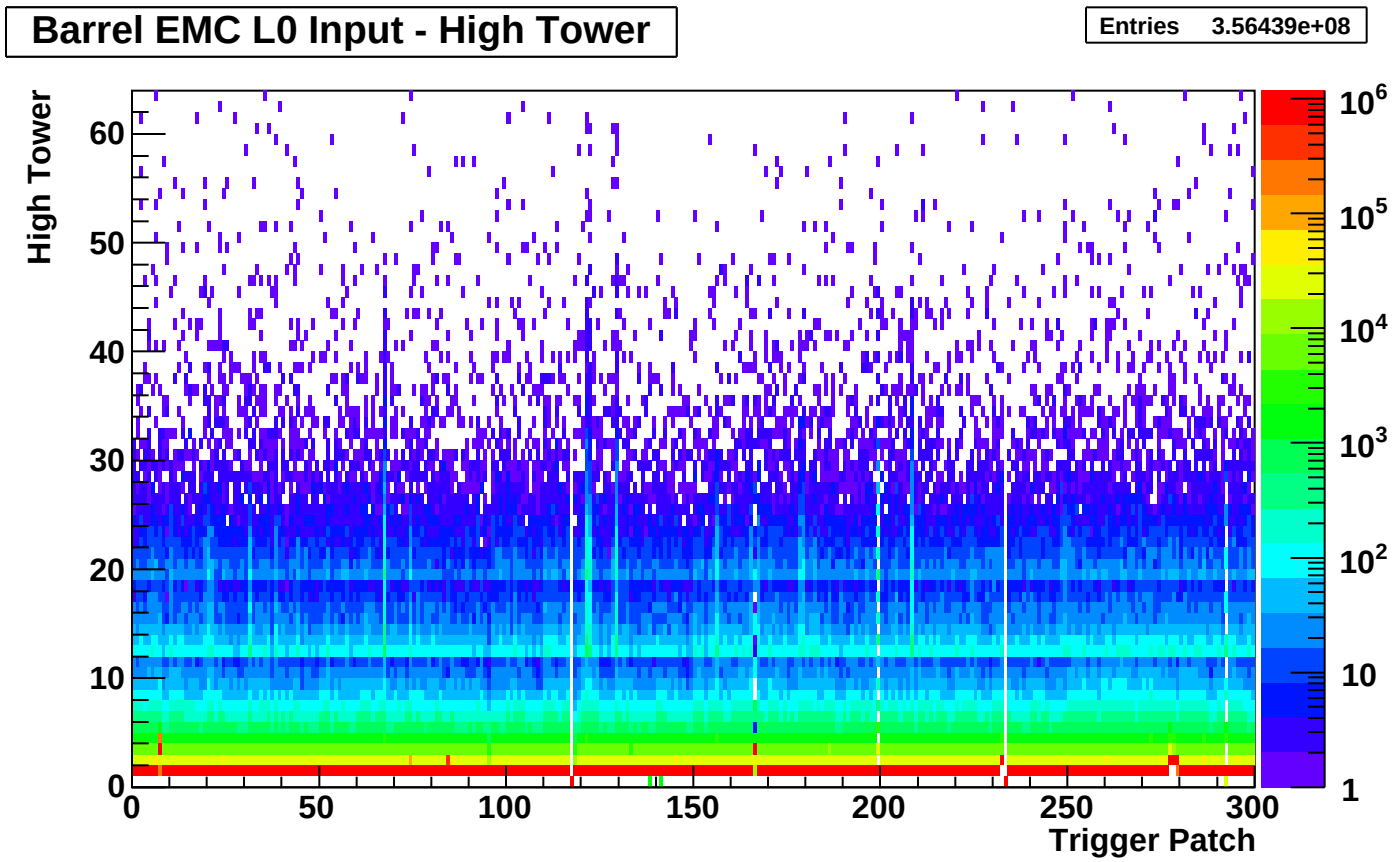

DAQ10k HT bits errors
Entries 10
1
0.8
0.6
0.4
0.2
0

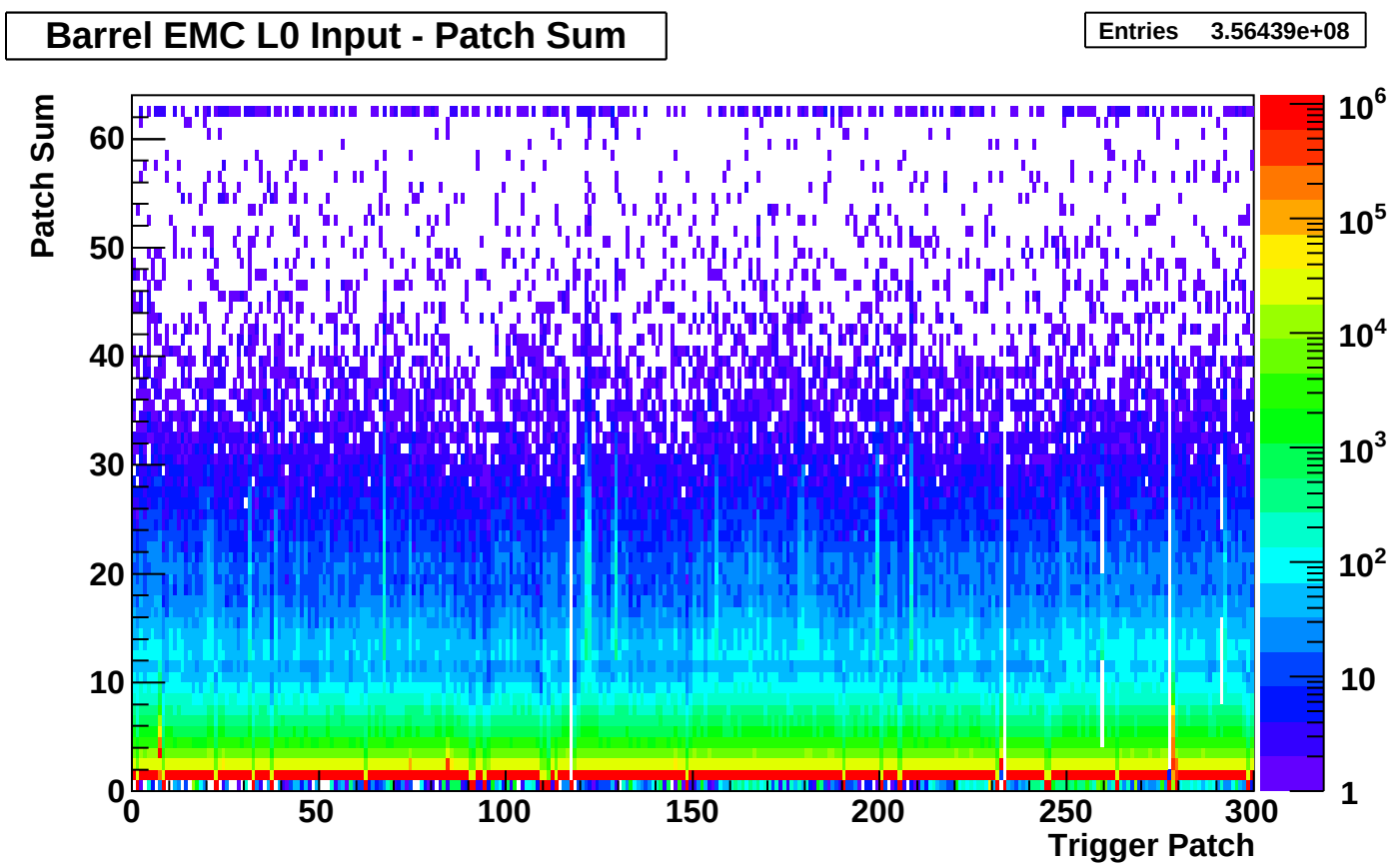

BunchId7Bit (BHT3)
Entries 119686
10^3
10^2
10
0
20
40
60
80
100
120

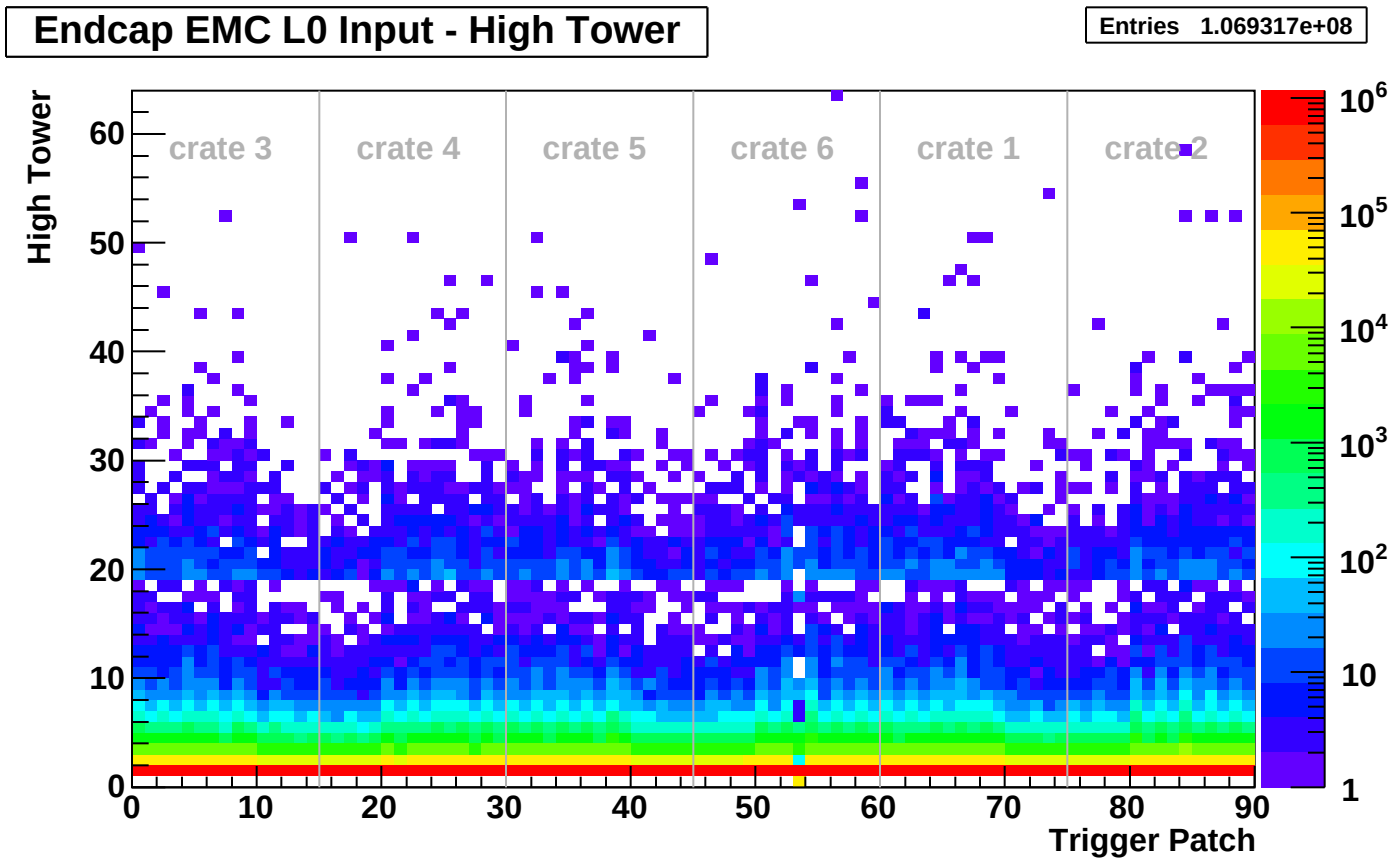

BunchId7Bit (all events)
Entries 1188130
10^4
10^3
10^2
10
0
20
40
60
80
100
120

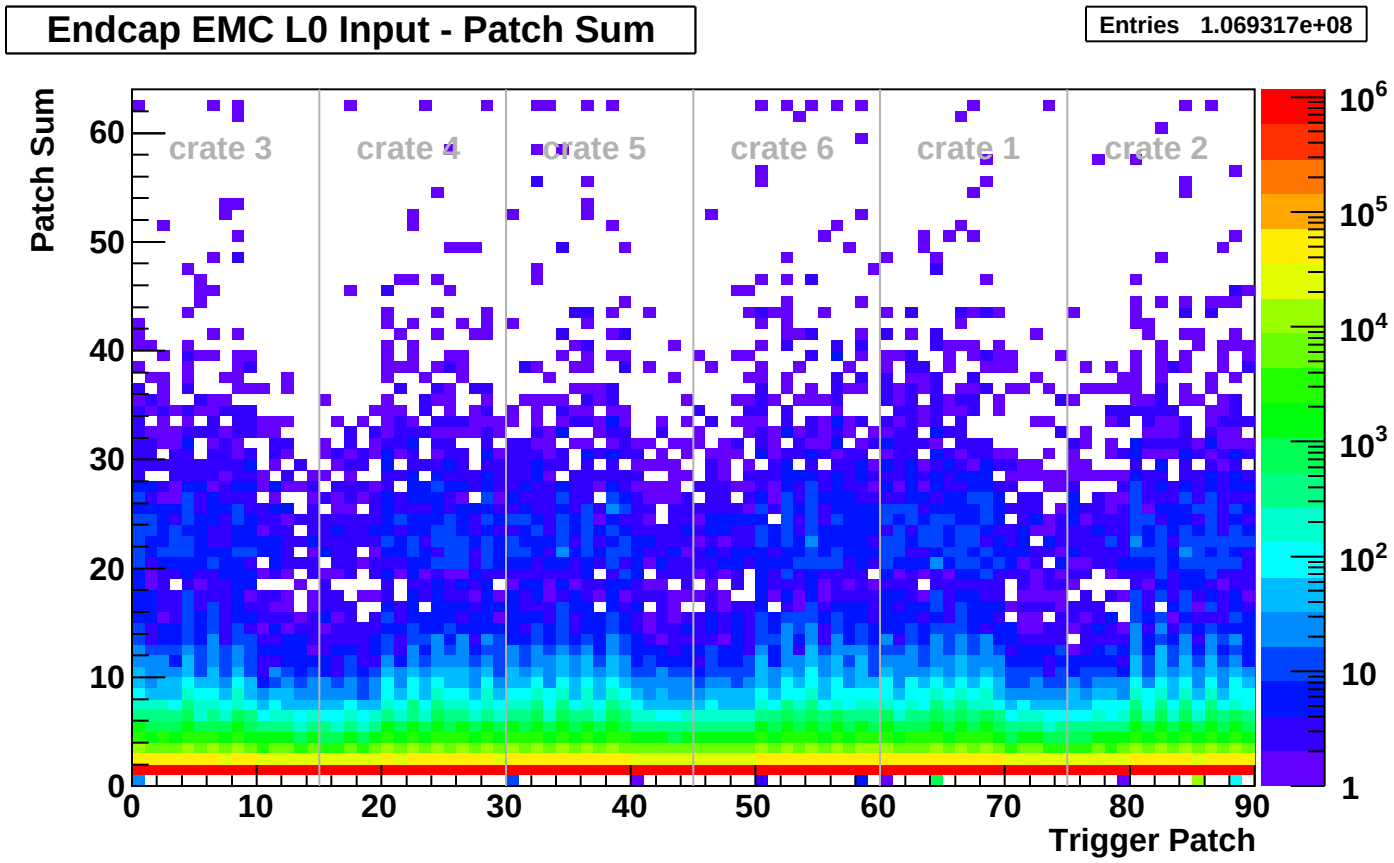

BunchId7Bit (JP1)
Entries 50396
10^3
10^2
10
0
20
40
60
80
100
120

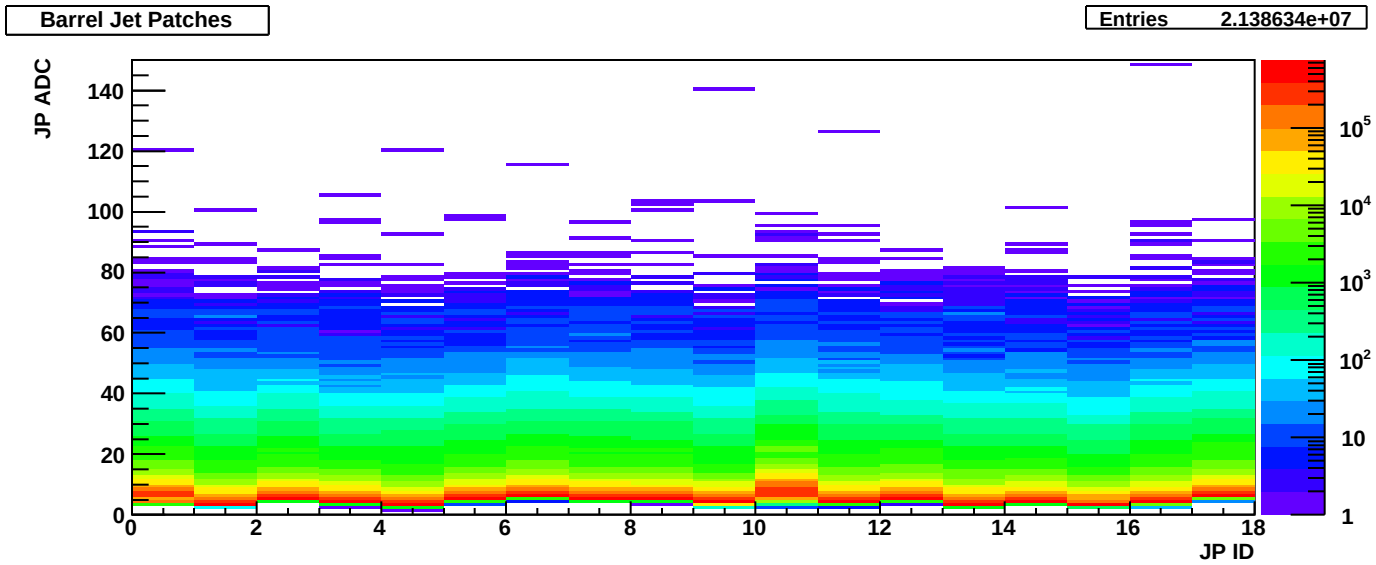

BunchId7Bit (JP2||AJP)
Entries 18603
10^2
10
1
0
20
40
60
80
100
120

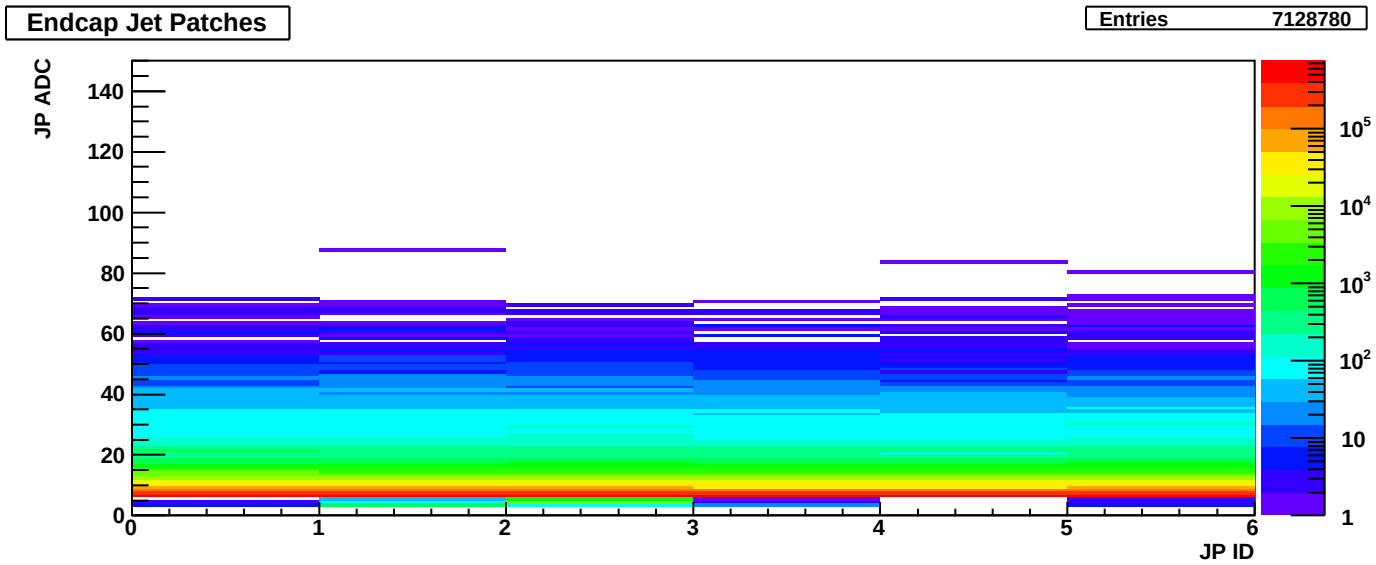

Barrel EMC L0 Input - High Tower
Entries 3.56439e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

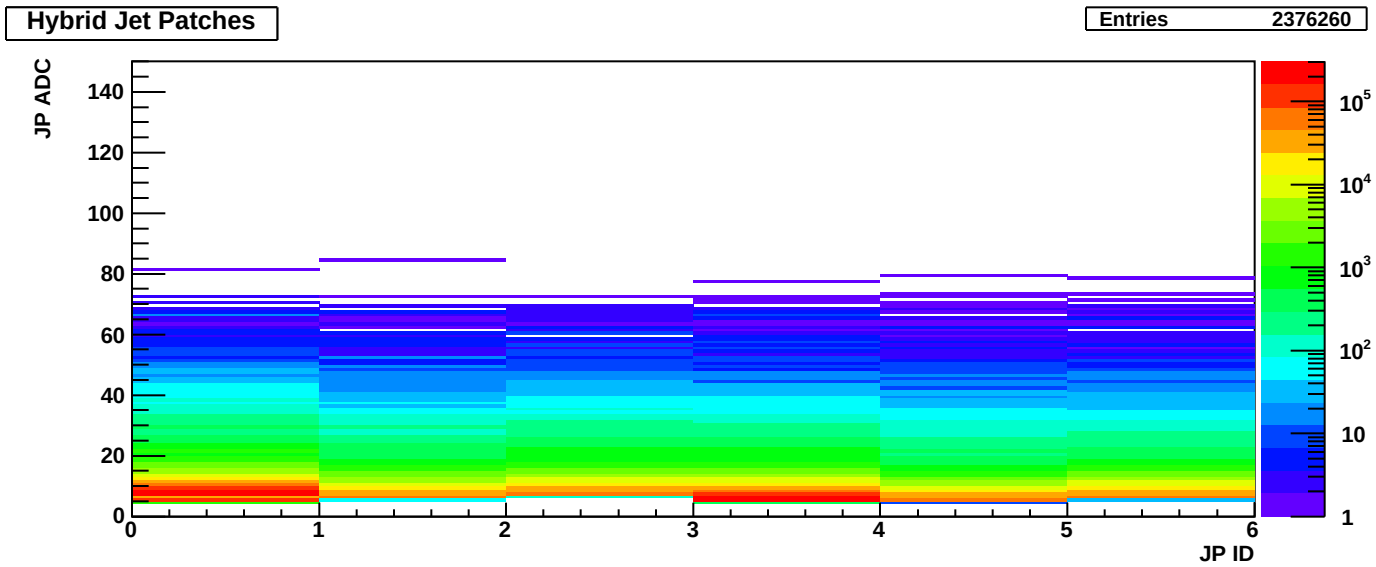

Barrel EMC L0 Input - Patch Sum
Entries 3.56439e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

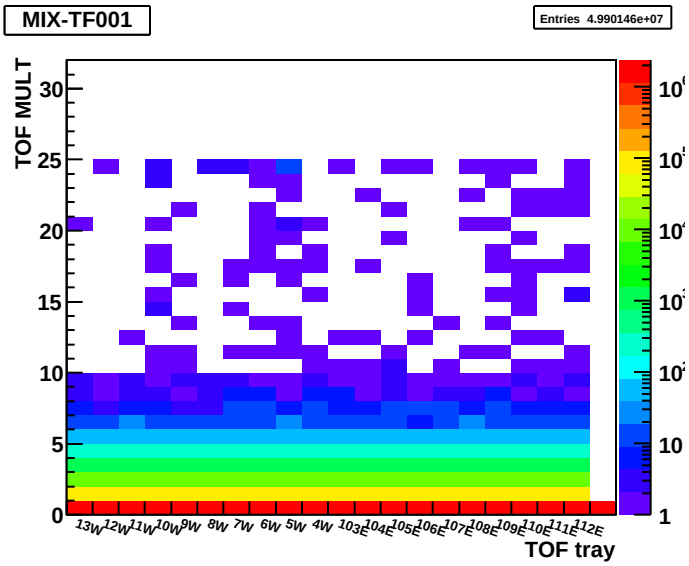

Endcap EMC L0 Input - High Tower
Entries 1.069317e+08
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

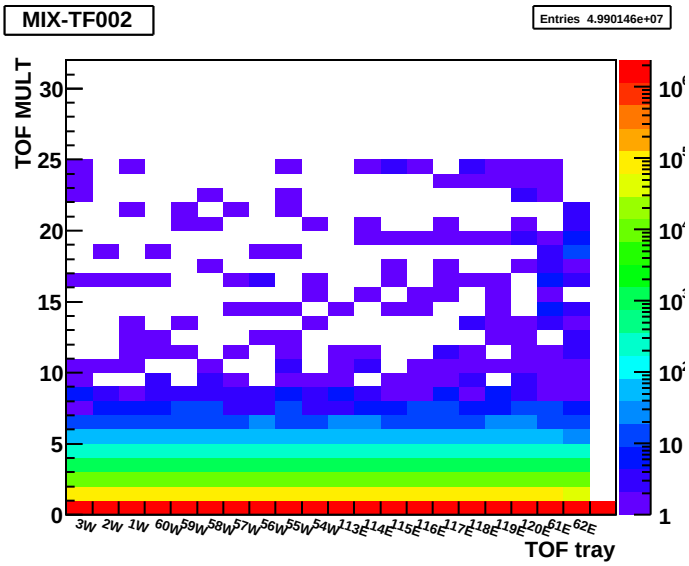

Endcap EMC L0 Input - Patch Sum
Entries 1.069317e+08
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

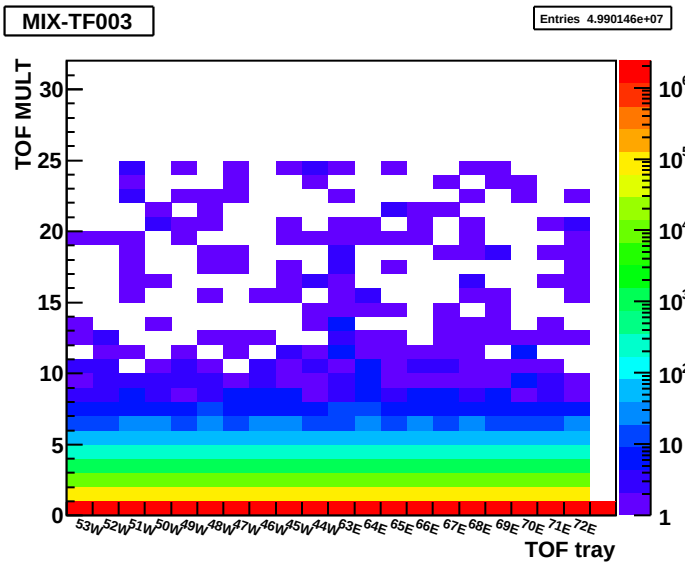

Barrel Jet Patches
Entries 2.138634e+07
JP ADC
JP ID

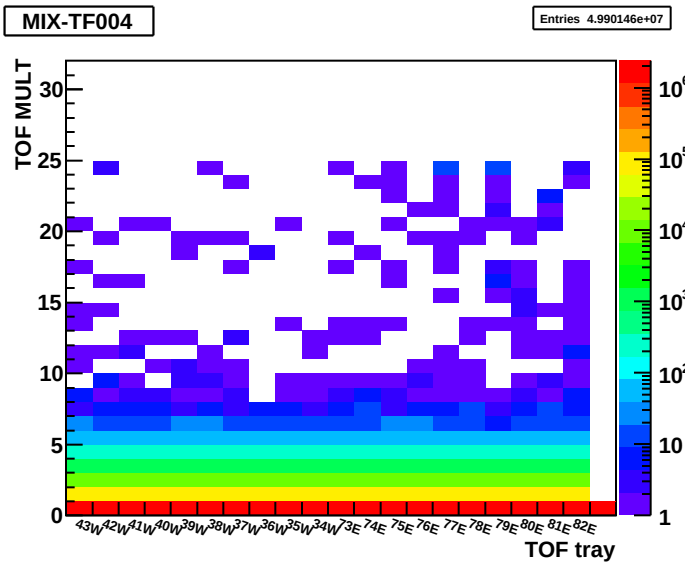

Endcap Jet Patches
Entries 7128780
JP ADC
JP ID

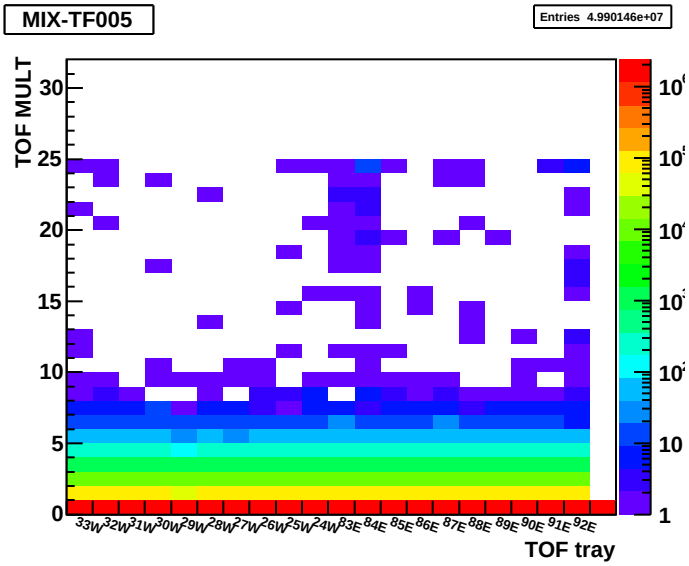

Hybrid Jet Patches
Entries 2376260
JP ADC
JP ID

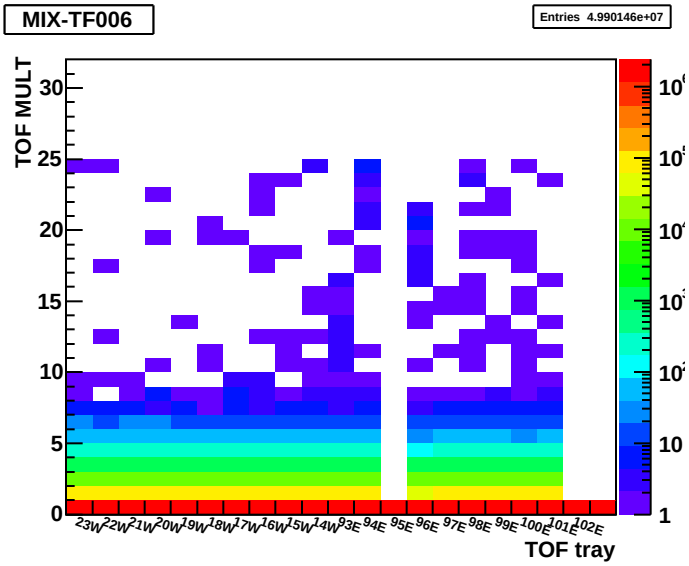

MIX-TF001
Entries 4.990146e+07
TOF MULT
TOF tray

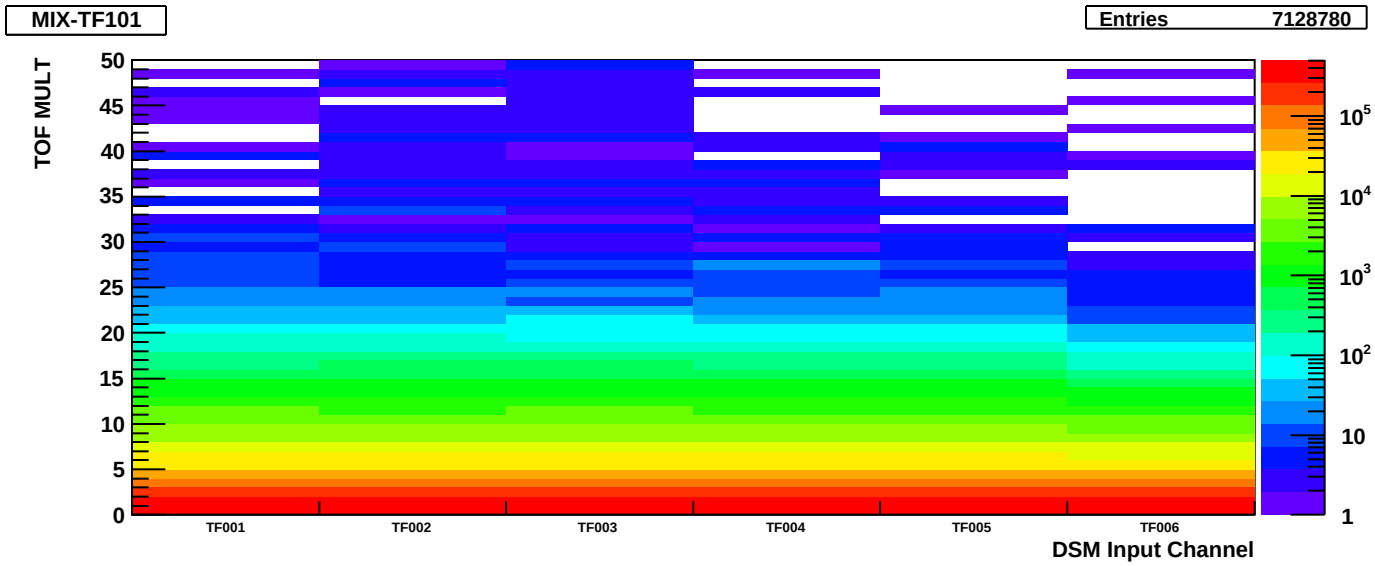

MIX-TF002
Entries 4.990146e+07
TOF MULT
TOF tray

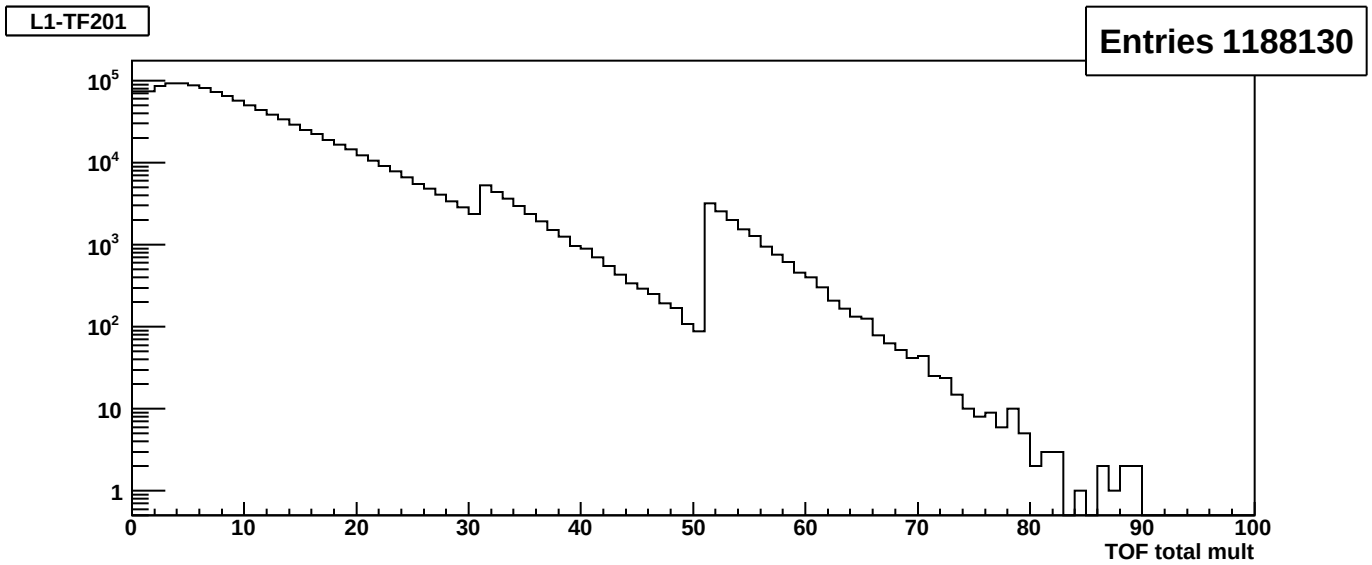

MIX-TF003
Entries 4.990146e+07
TOF MULT
TOF tray

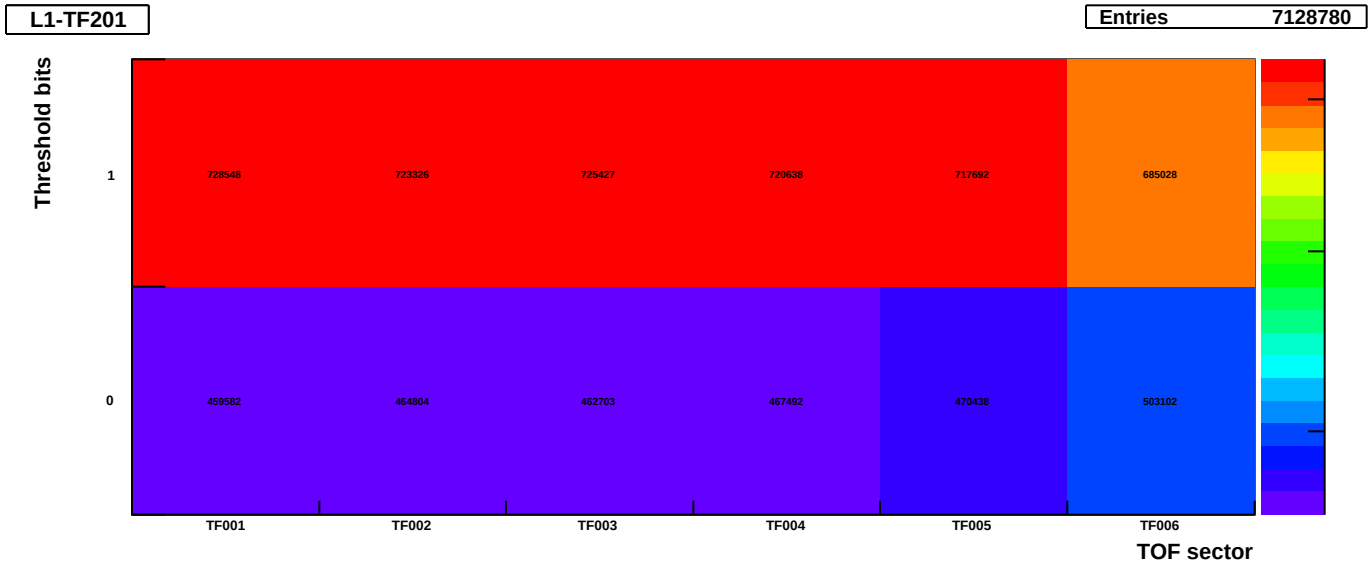

MIX-TF004
Entries 4.990146e+07
TOF MULT
TOF tray

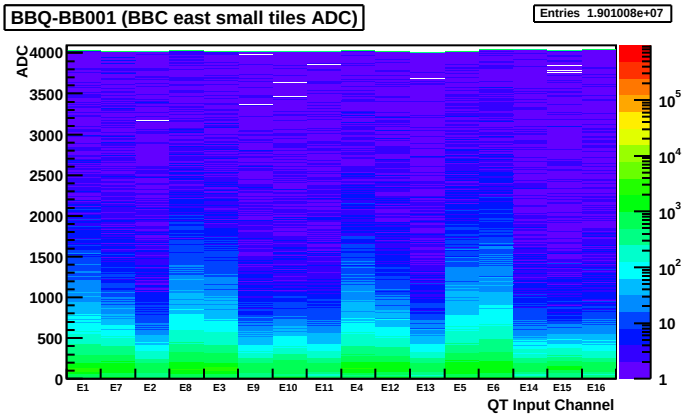

MIX-TF005
Entries 4.990146e+07
TOF MULT
TOF tray

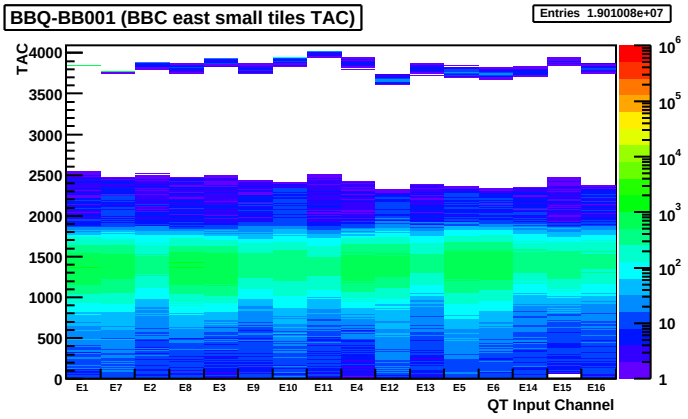

MIX-TF006
Entries 4.990146e+07
TOF MULT
TOF tray

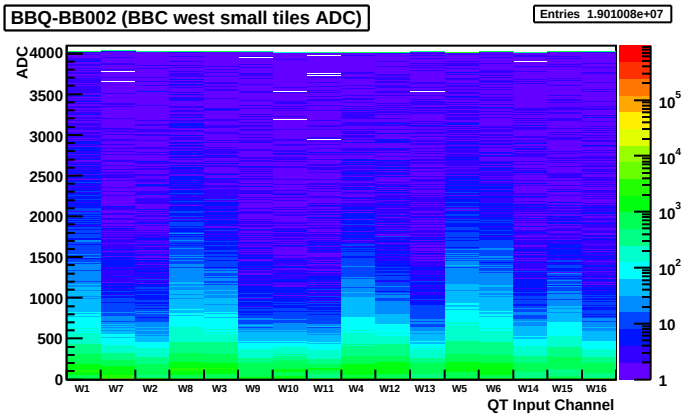

MIX-TF101
Entries 7128780
TOF MULT
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

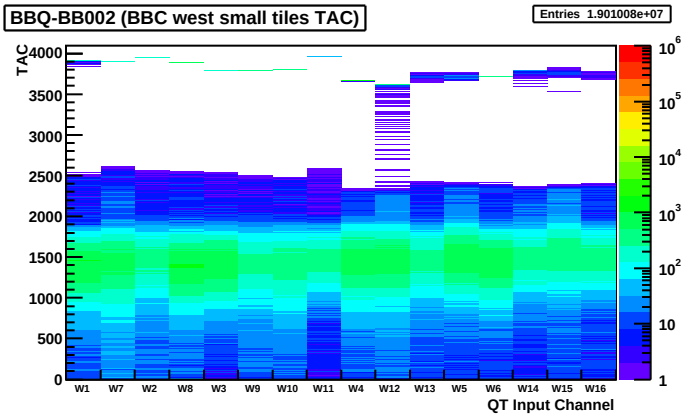

L1-TF201
Entries 1188130
TOF total mult

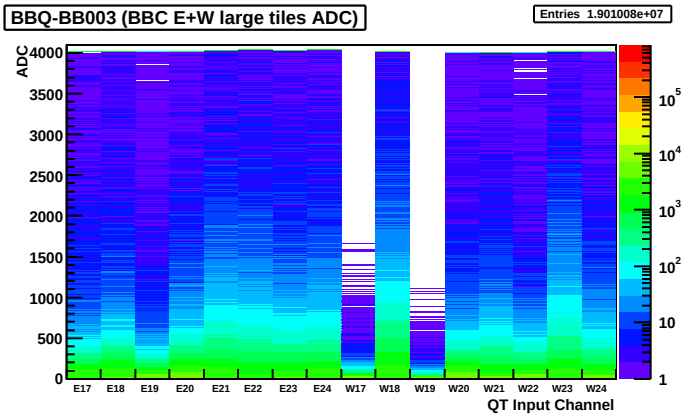

L1-TF201
Entries 7128780
Threshold bits
728548
723326
725427
720638
717692
685028
459582
464804
462703
467492
470438
503102
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

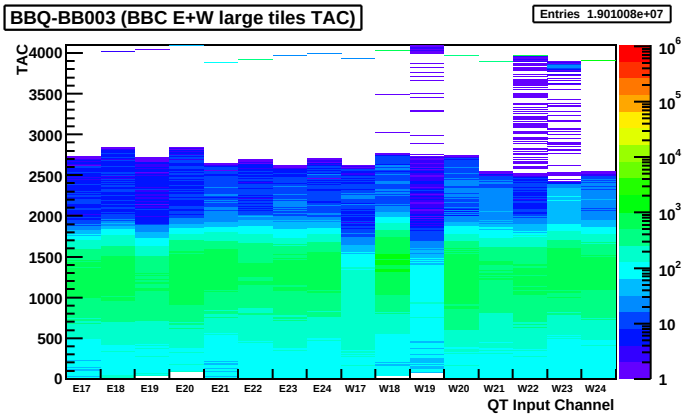

BBQ-BB001 (BBC east small tiles ADC)
Entries 1.901008e+07
ADC
QT Input Channel

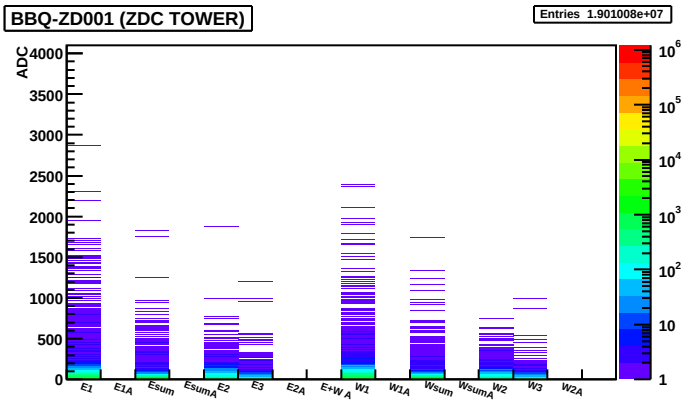

BBQ-BB001 (BBC east small tiles TAC)
Entries 1.901008e+07
TAC
QT Input Channel

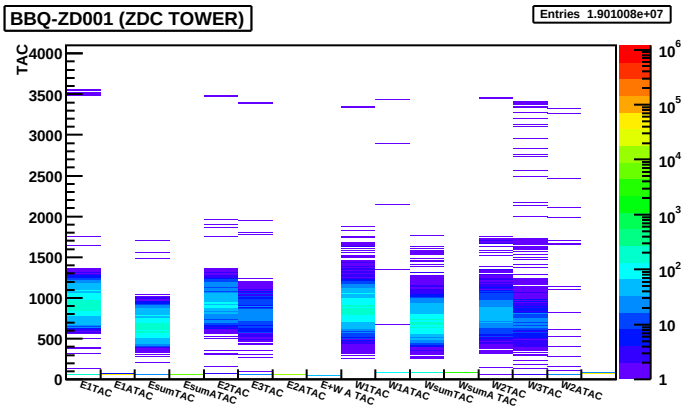

BBQ-BB002 (BBC west small tiles ADC)
Entries 1.901008e+07
ADC
QT Input Channel

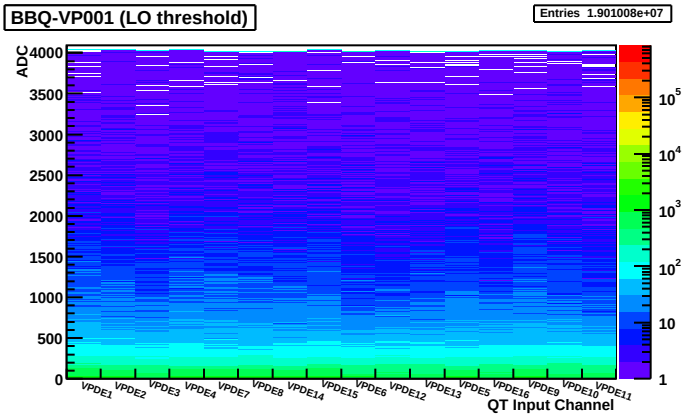

BBQ-BB002 (BBC west small tiles TAC)
Entries 1.901008e+07
TAC
QT Input Channel

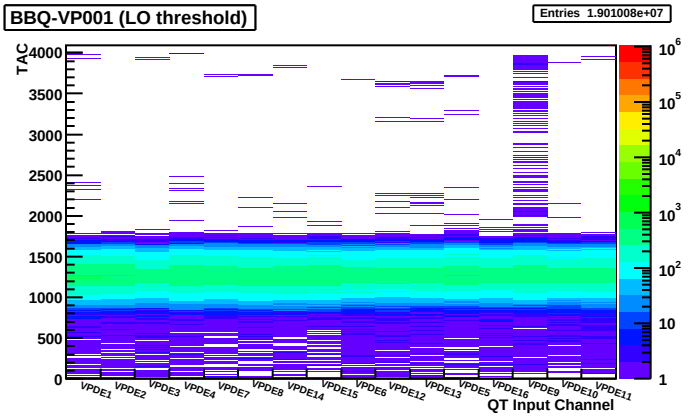

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 1.901008e+07
ADC
QT Input Channel

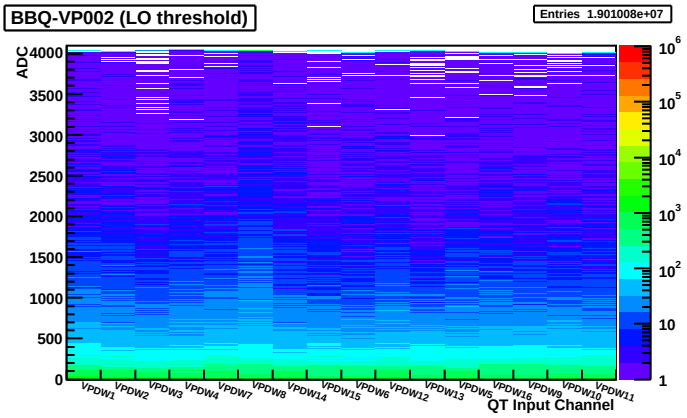

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 1.901008e+07
TAC
QT Input Channel

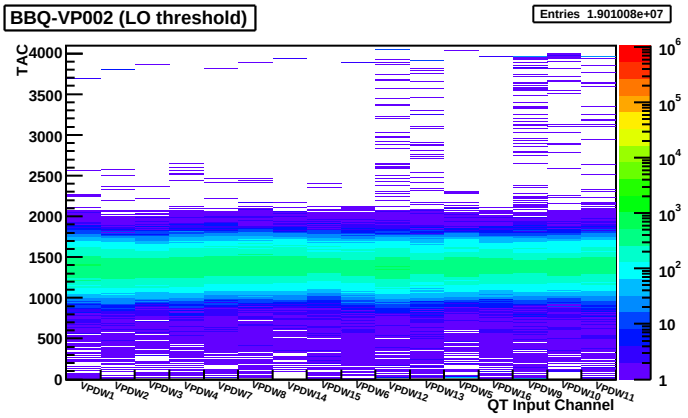

BBQ-ZD001 (ZDC TOWER)
Entries 1.901008e+07
ADC

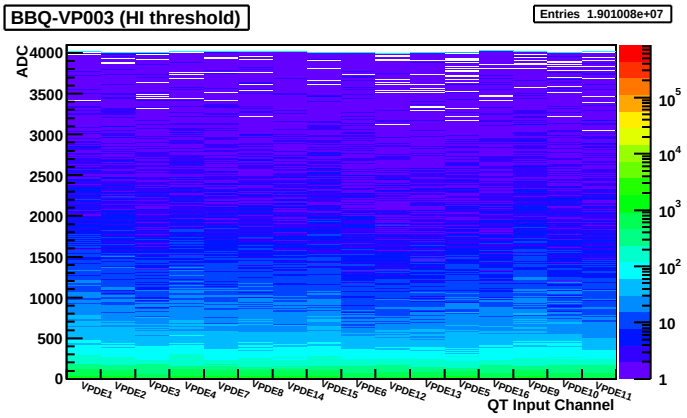

BBQ-ZD001 (ZDC TOWER)
Entries 1.901008e+07
TAC

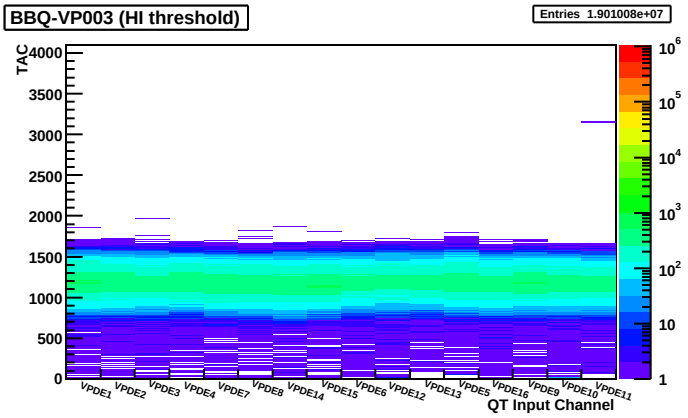

BBQ-VP001 (LO threshold)
Entries 1.901008e+07
ADC
QT Input Channel

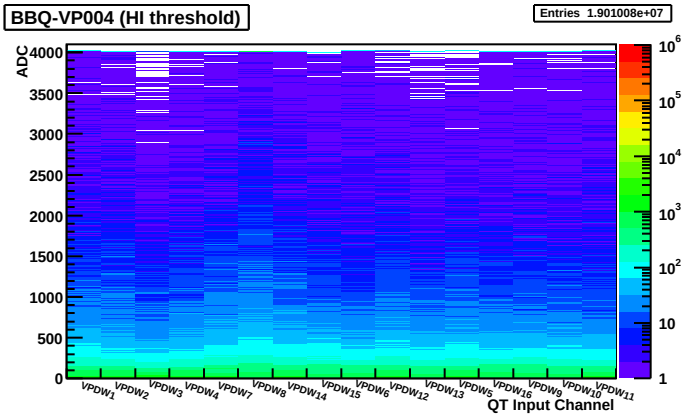

BBQ-VP001 (LO threshold)
Entries 1.901008e+07
TAC
QT Input Channel

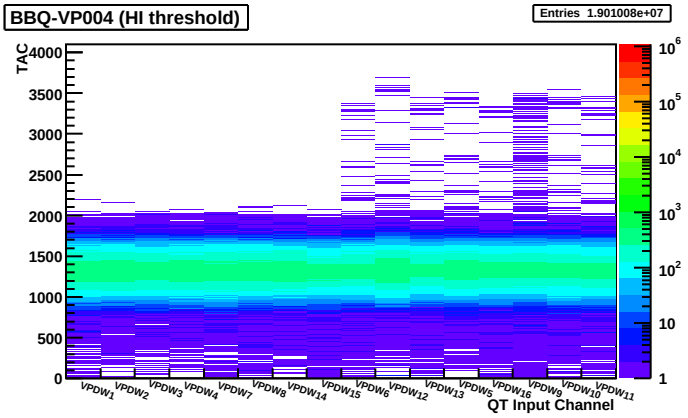

BBQ-VP002 (LO threshold)
Entries 1.901008e+07
ADC
QT Input Channel

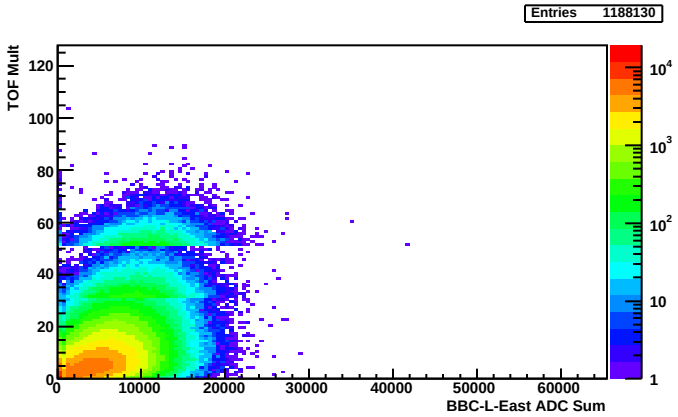

BBQ-VP002 (LO threshold)
Entries 1.901008e+07
TAC
QT Input Channel

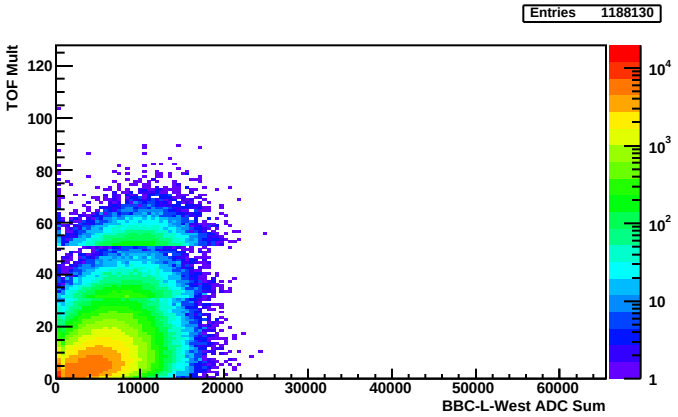

BBQ-VP003 (HI threshold)
Entries 1.901008e+07
ADC
QT Input Channel

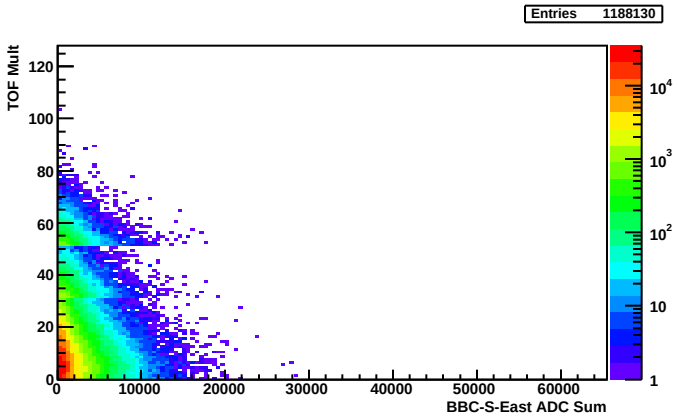

BBQ-VP003 (HI threshold)
Entries 1.901008e+07
TAC
QT Input Channel

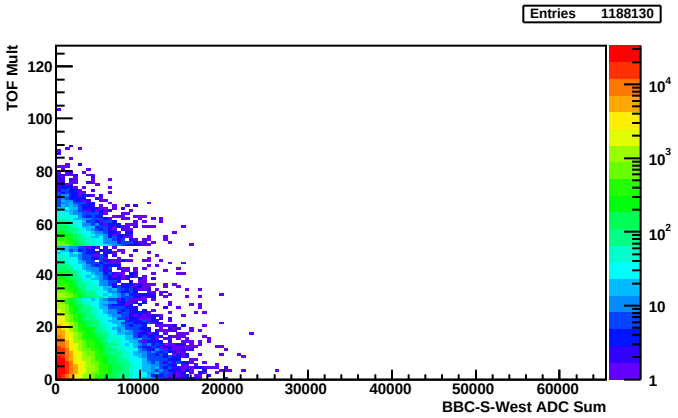

BBQ-VP004 (HI threshold)
Entries 1.901008e+07
ADC
QT Input Channel

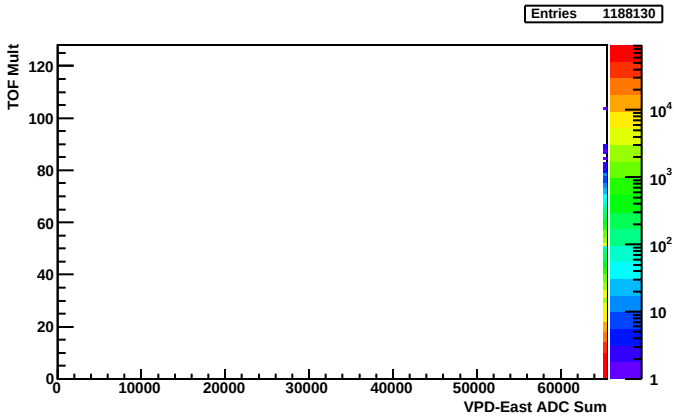

BBQ-VP004 (HI threshold)
Entries 1.901008e+07
TAC
QT Input Channel

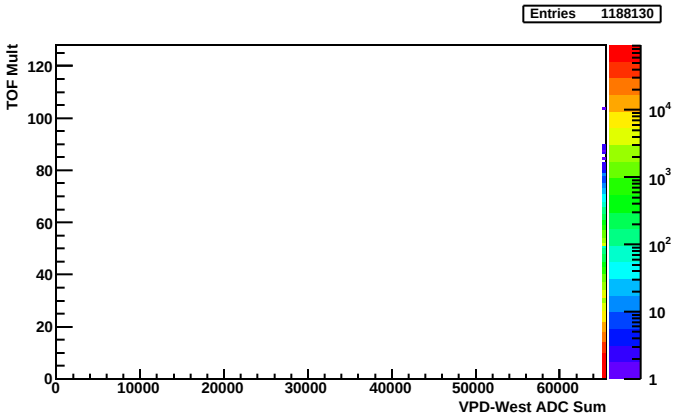

Entries 1188130
TOF Mult
BBC-L-East ADC Sum

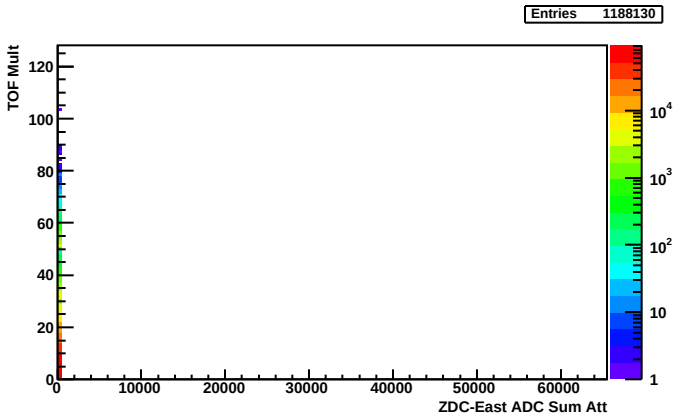

Entries 1188130
TOF Mult
BBC-L-West ADC Sum

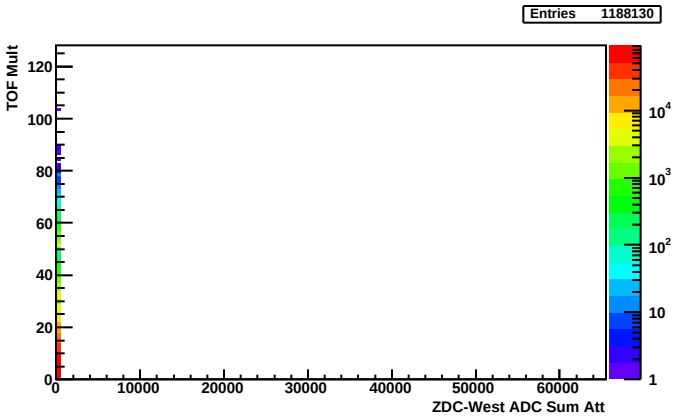

Entries 1188130
TOF Mult
BBC-S-East ADC Sum

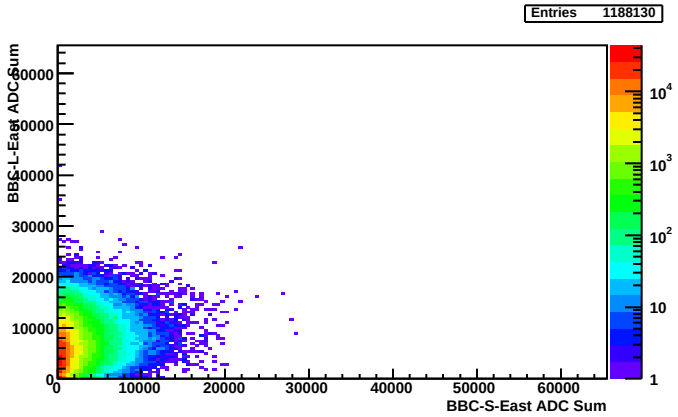

Entries 1188130
TOF Mult
BBC-S-West ADC Sum

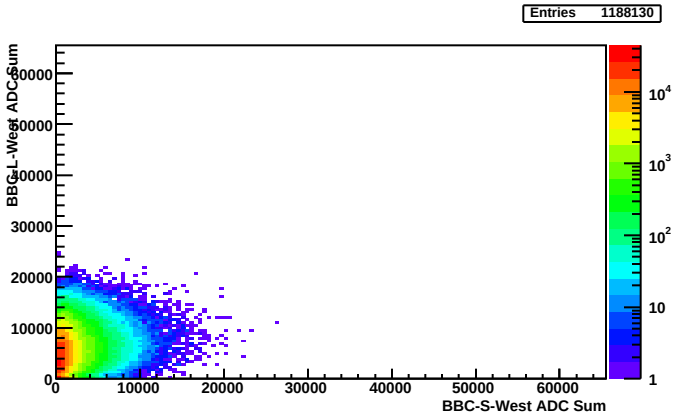

Entries 1188130
TOF Mult
VPD-East ADC Sum

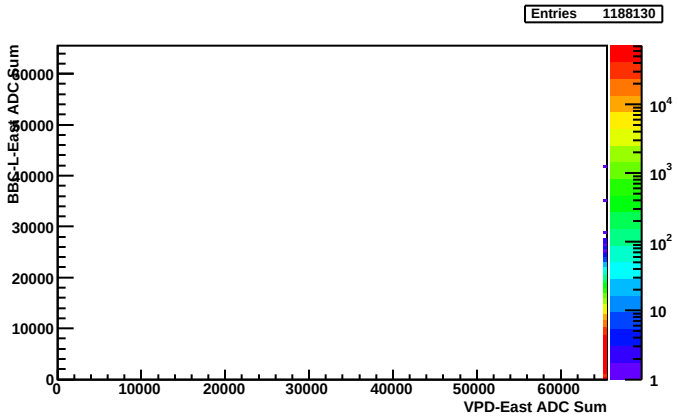

Entries 1188130
TOF Mult
VPD-West ADC Sum

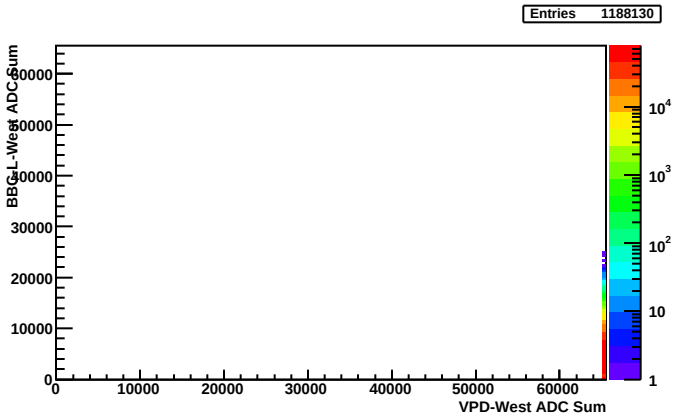

Entries 1188130
TOF Mult
ZDC-East ADC Sum Att

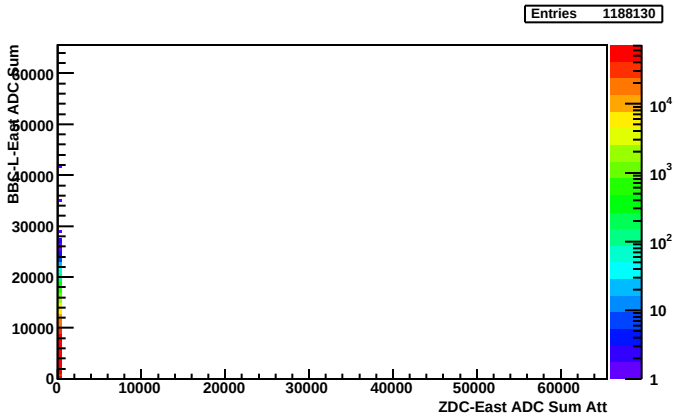

Entries 1188130
TOF Mult
ZDC-West ADC Sum Att

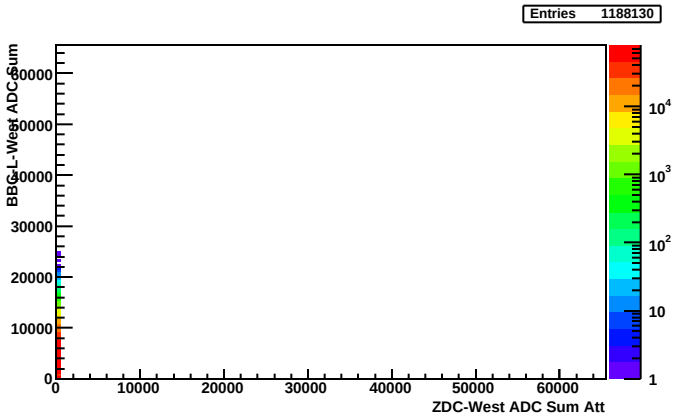

Entries 1188130
BBC-L-East ADC Sum
BBC-S-East ADC Sum

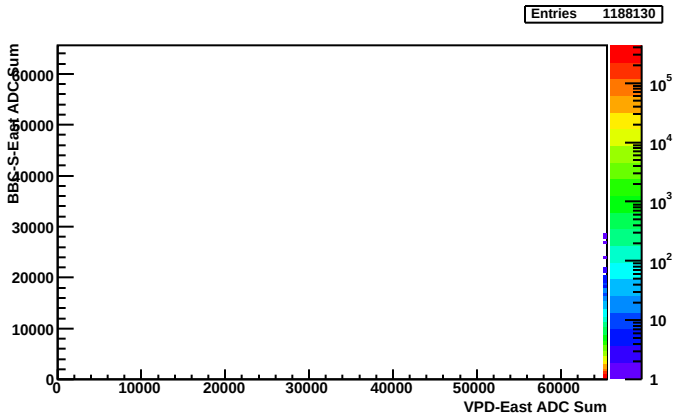

Entries 1188130
BBC-L-West ADC Sum
BBC-S-West ADC Sum

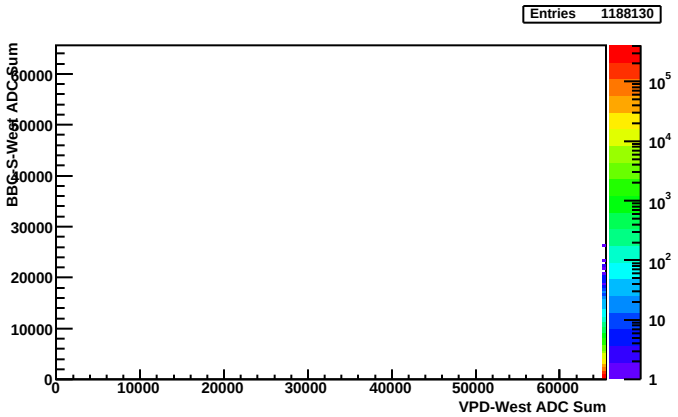

Entries 1188130
BBC-L-East ADC Sum
VPD-East ADC Sum

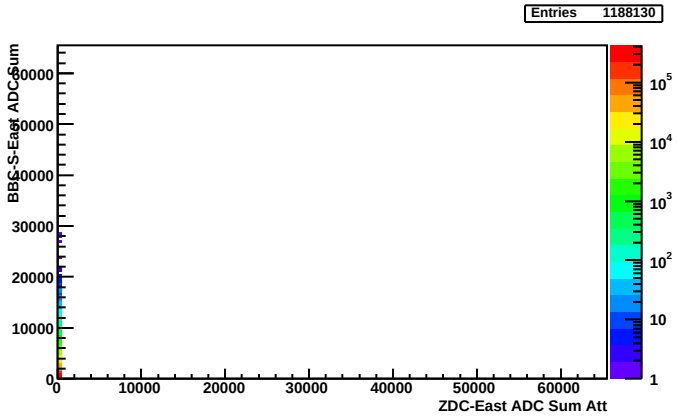

Entries 1188130
BBC-L-West ADC Sum
VPD-West ADC Sum

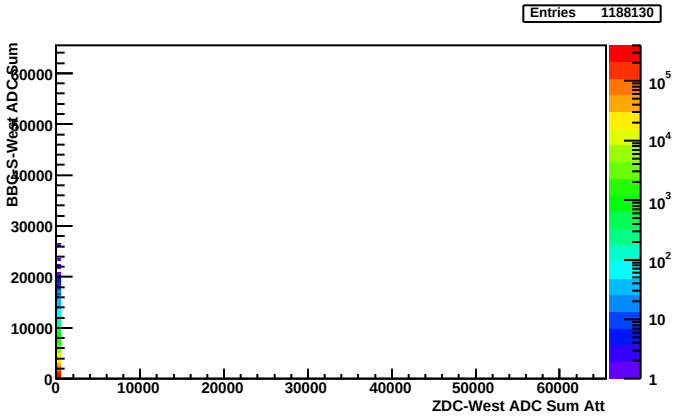

Entries 1188130
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

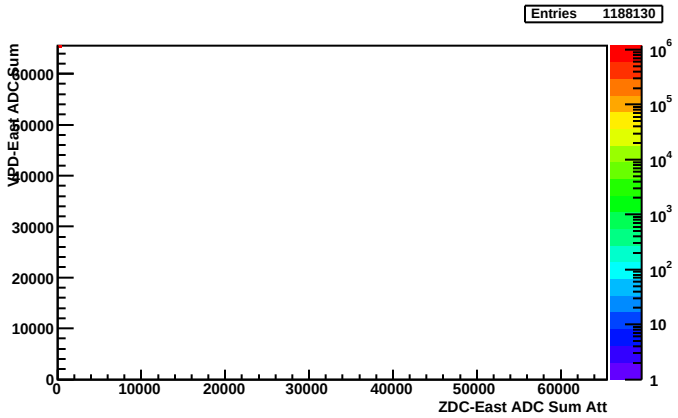

Entries 1188130
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

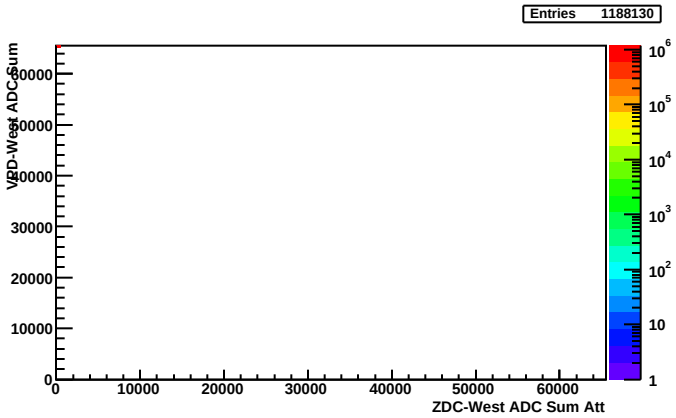

Entries 1188130
BBC-S-East ADC Sum
VPD-East ADC Sum

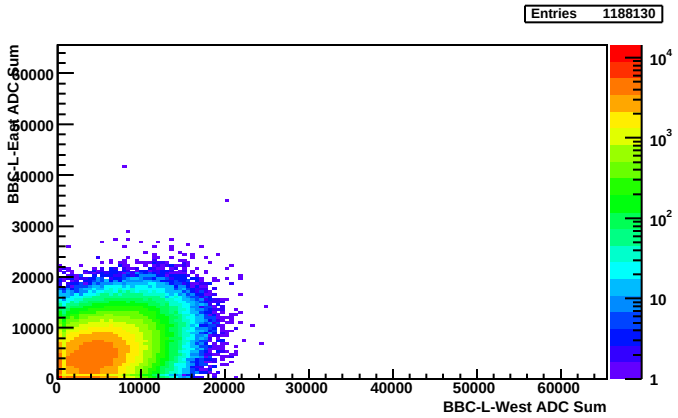

Entries 1188130
BBC-S-West ADC Sum
VPD-West ADC Sum

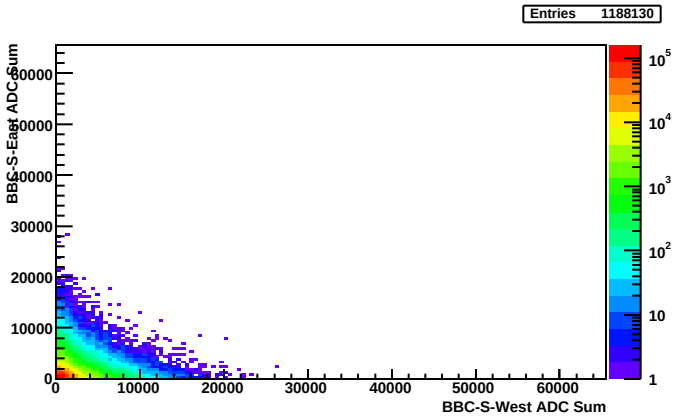

Entries 1188130
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

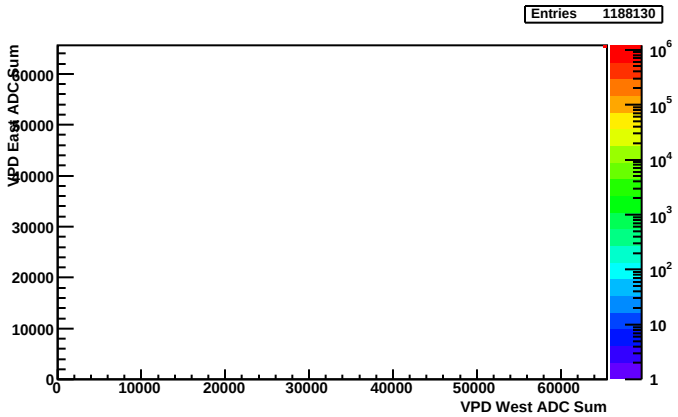

Entries 1188130
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

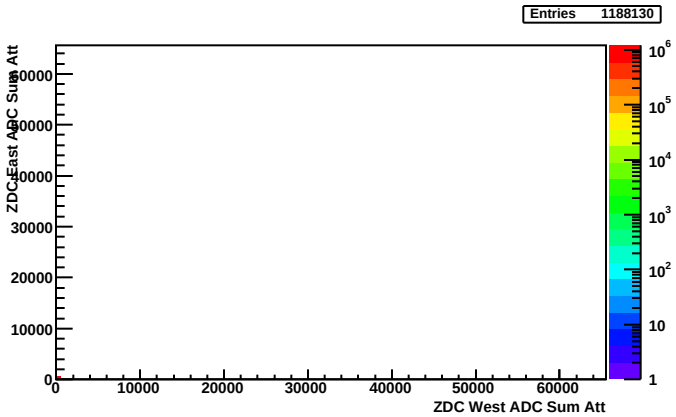

Entries 1188130
VPD-East ADC Sum
ZDC-East ADC Sum Att

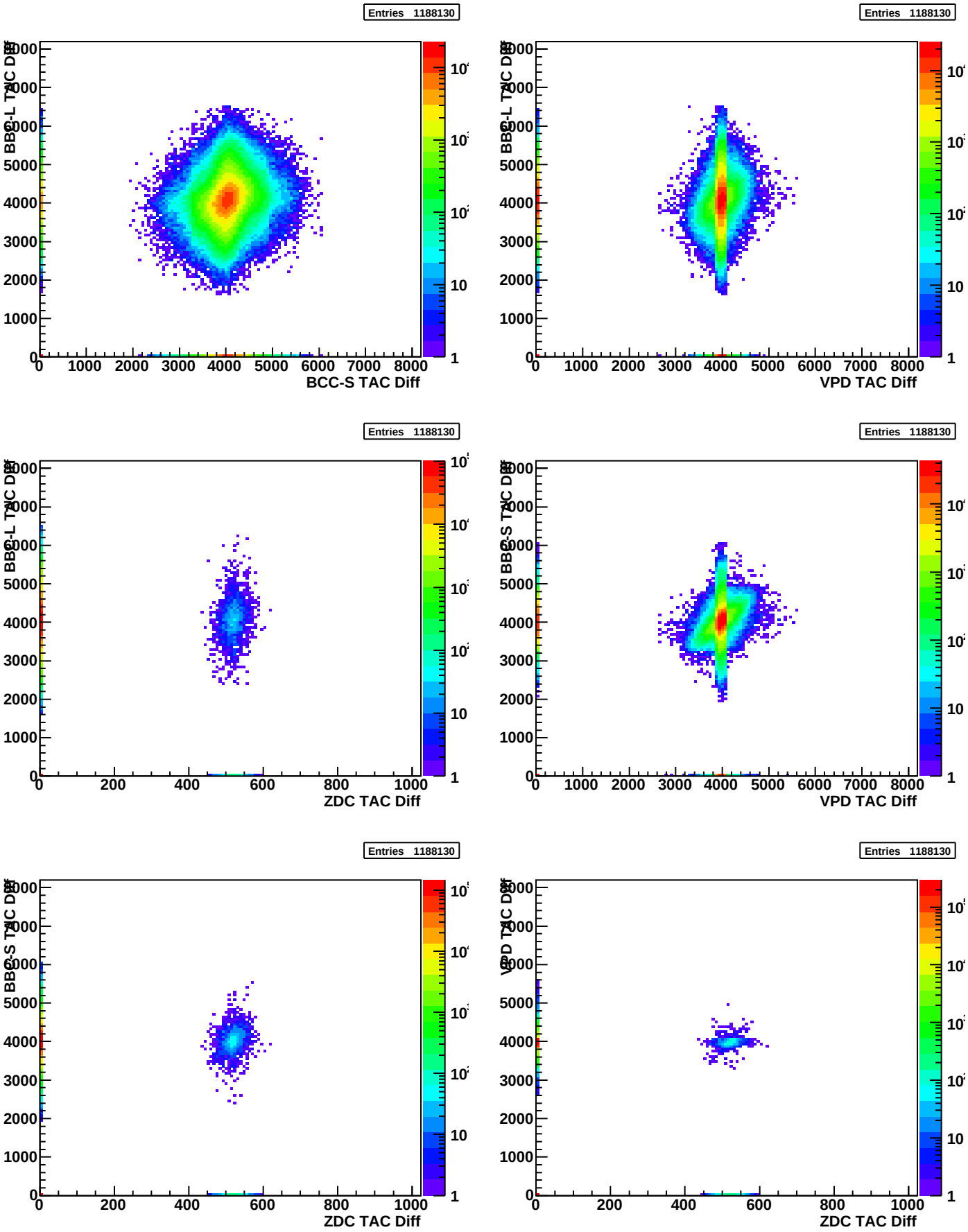

Entries 1188130
VPD-West ADC Sum
ZDC-West ADC Sum Att

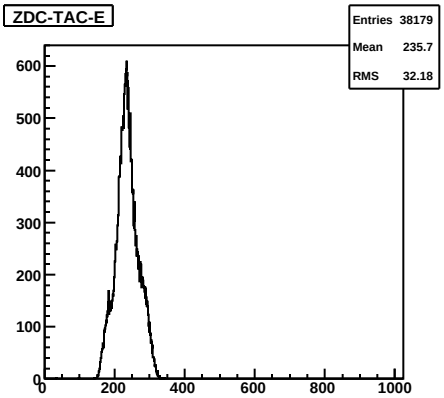

Entries 1188130
BBC-L-East ADC Sum
BBC-L-West ADC Sum

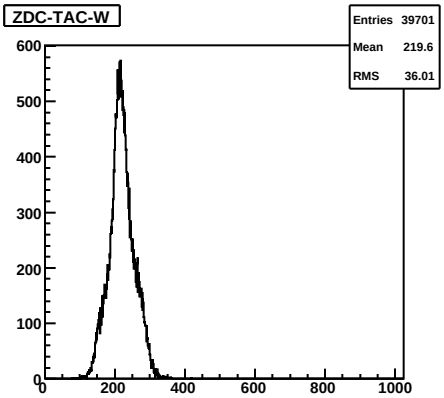

Entries 1188130
BBC-S-East ADC Sum
BBC-S-West ADC Sum

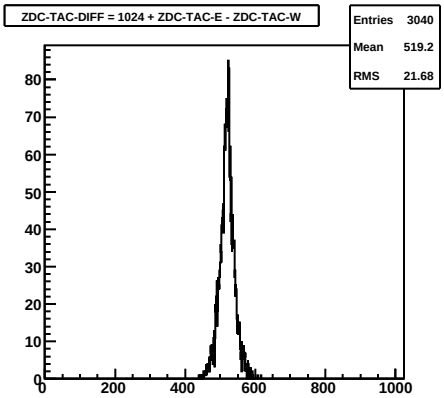

Entries 1188130
VPD East ADC Sum
VPD West ADC Sum

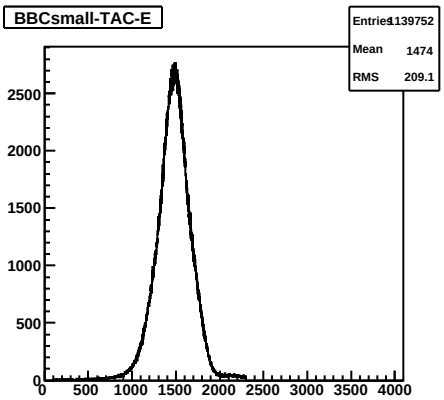

Entries 1188130
ZDC East ADC Sum Att
ZDC West ADC Sum Att

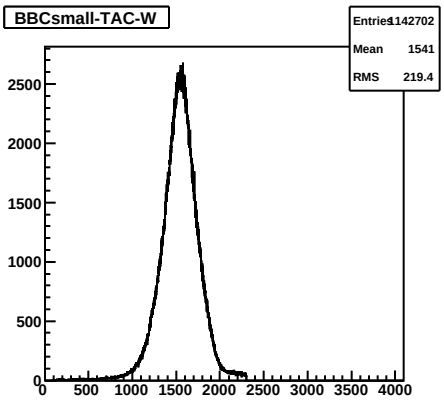

Entries 1188130
BBC-L TAC Diff
BCC-S TAC Diff
Entries 1188130
BBC-L TAC Diff
VPD TAC Diff
Entries 1188130
BBC-L TAC Diff
ZDC TAC Diff
Entries 1188130
BBC-S TAC Diff
VPD TAC Diff
Entries 1188130
BBC-S TAC Diff
ZDC TAC Diff
Entries 1188130
VPD TAC Diff
ZDC TAC Diff

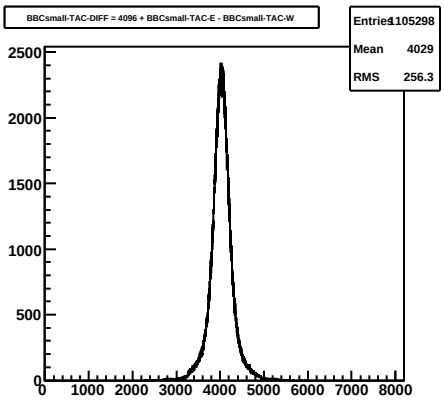

ZDC-TAC-E
Entries 38179
Mean 235.7
RMS 32.18

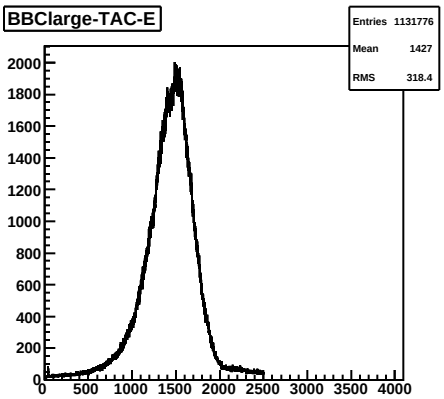

ZDC-TAC-W
Entries 39701
Mean 219.6
RMS 36.01

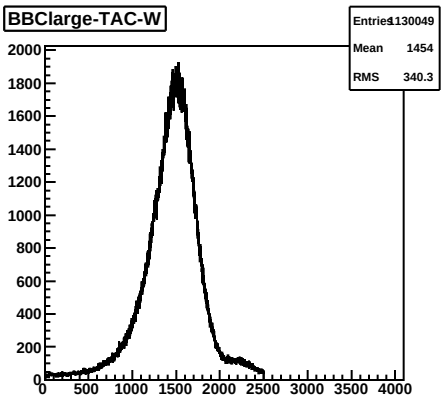

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 3040
Mean 519.2
RMS 21.68

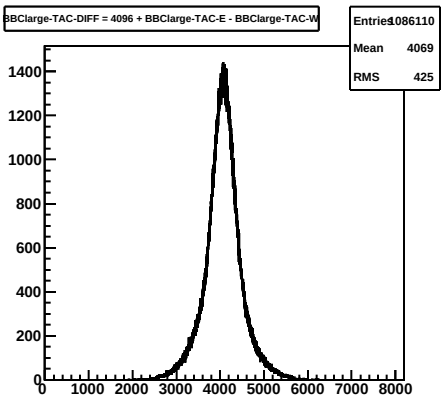

BBCsmall-TAC-E
Entries 1139752
Mean 1474
RMS 209.1

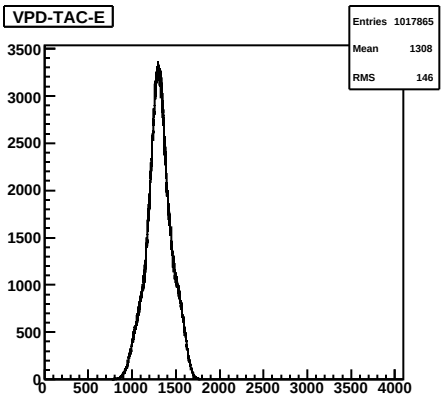

BBCsmall-TAC-W
Entries 1142702
Mean 1541
RMS 219.4

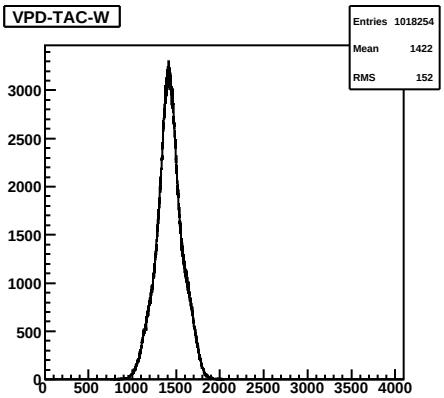

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 1105298
Mean 4029
RMS 256.3

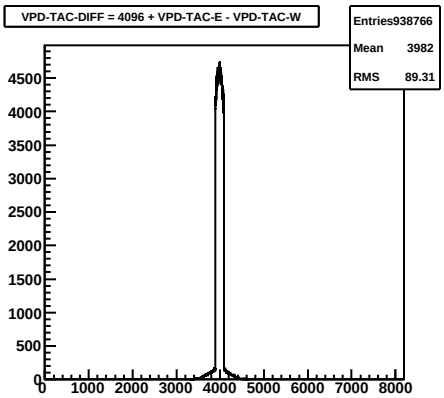

BBClarge-TAC-E
Entries 1131776
Mean 1427
RMS 318.4

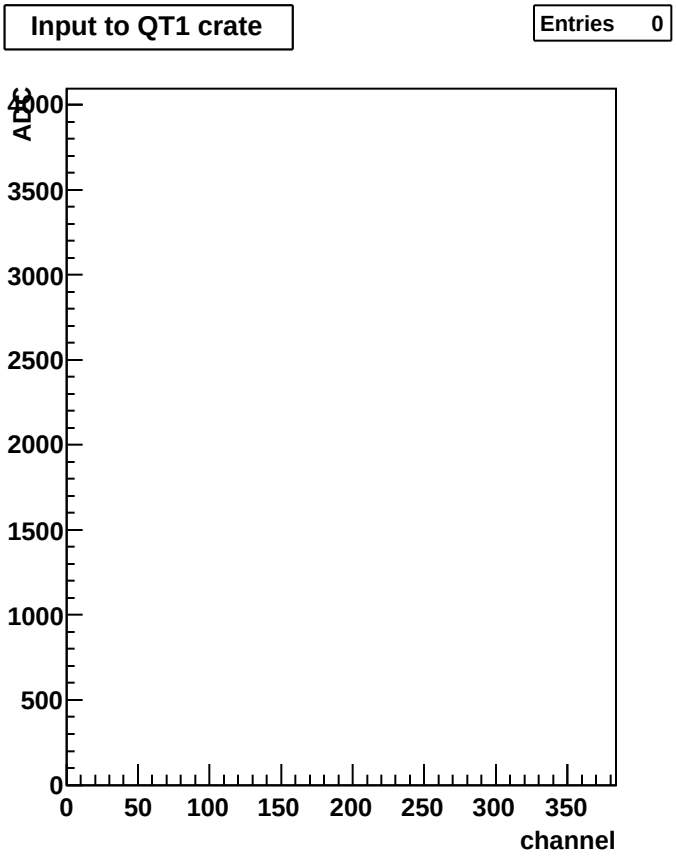

BBClarge-TAC-W
Entries 1130049
Mean 1454
RMS 340.3

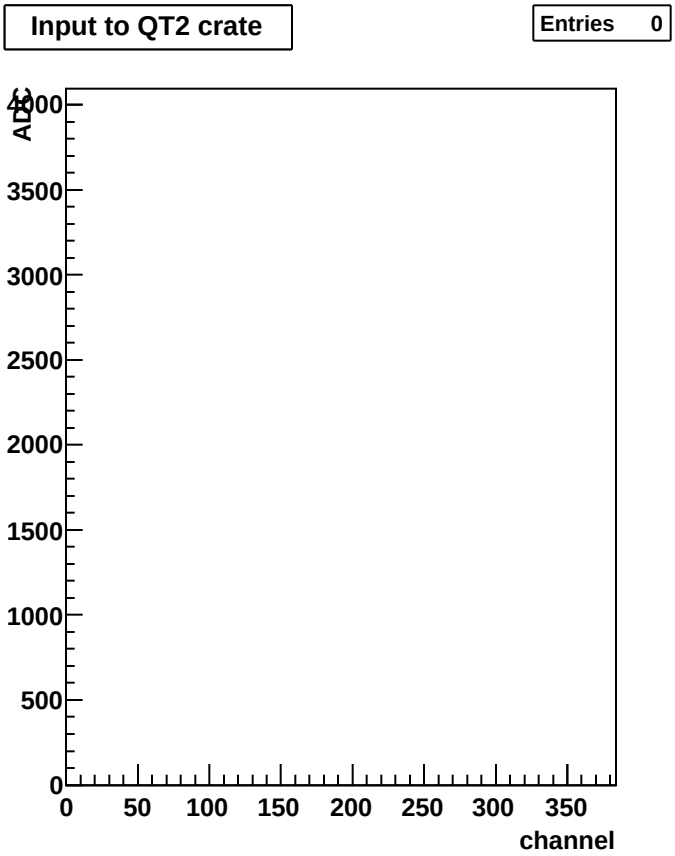

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 1086110
Mean 4069
RMS 425

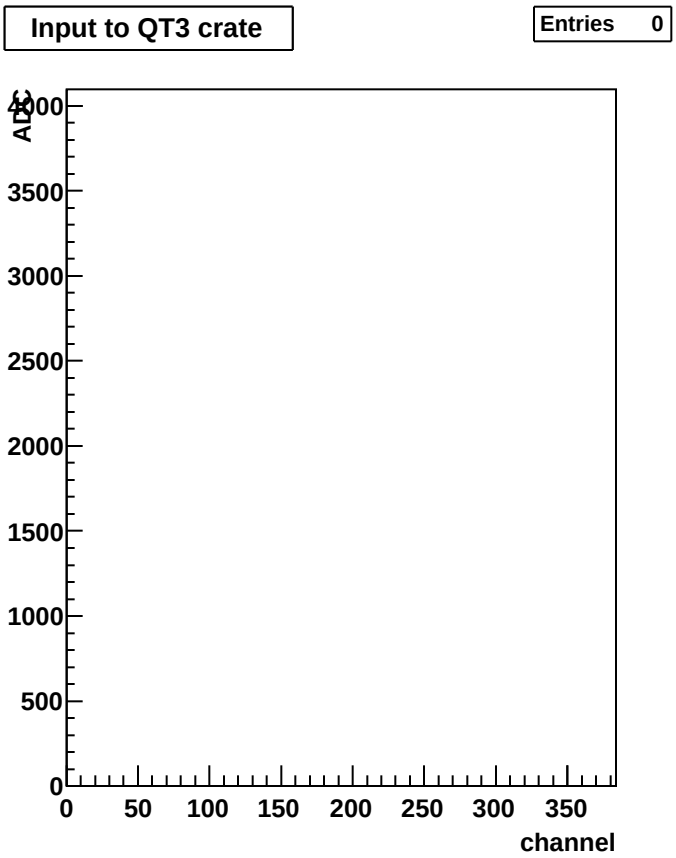

VPD-TAC-E
Entries 1017865
Mean 1308
RMS 146

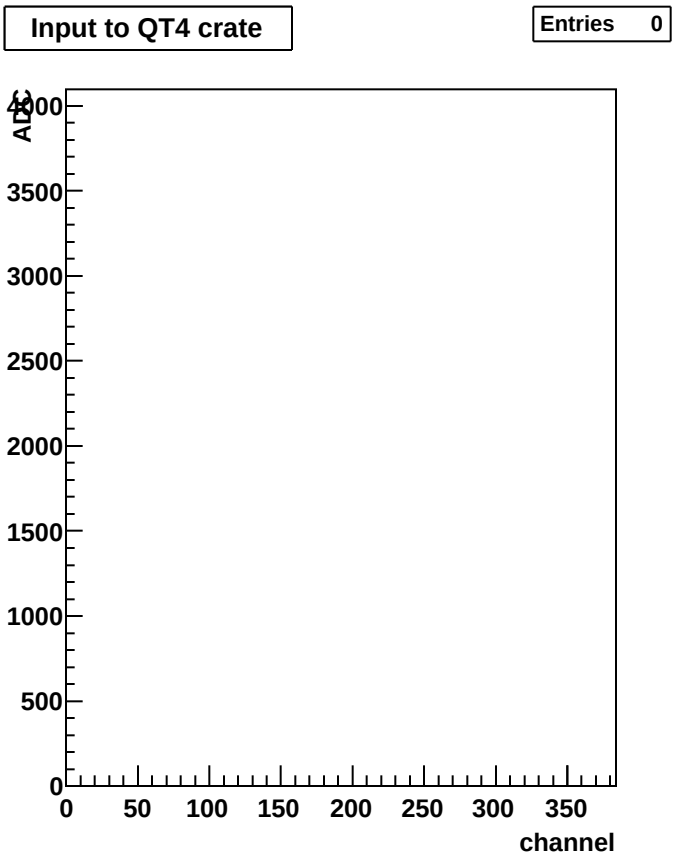

VPD-TAC-W
Entries 1018254
Mean 1422
RMS 152

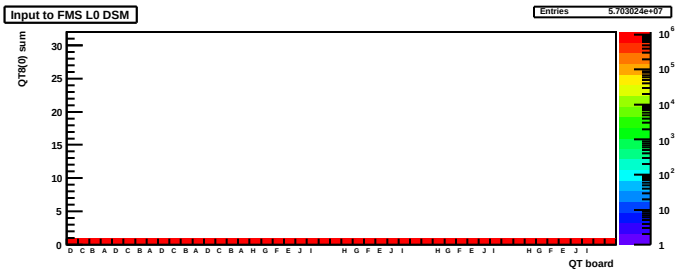

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 938766
Mean 3982
RMS 89.31

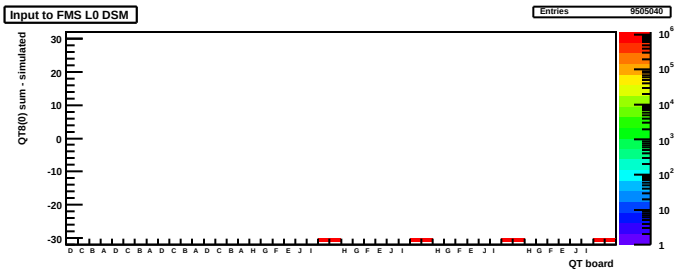

Input to QT1 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

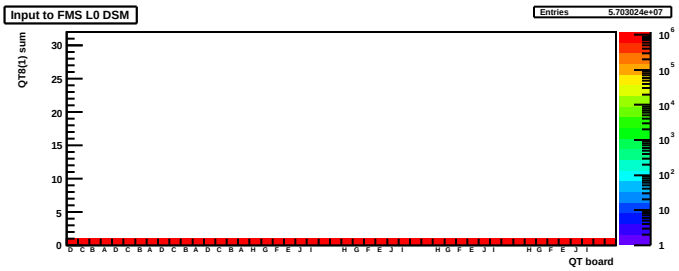

Input to QT2 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

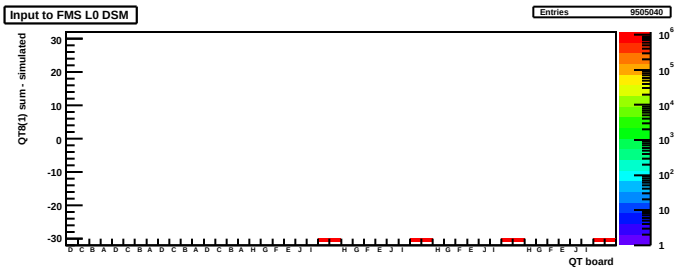

Input to QT3 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

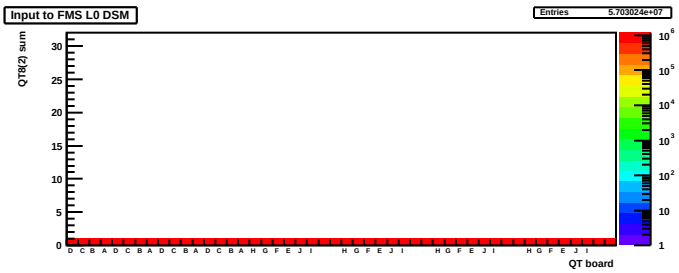

Input to QT4 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

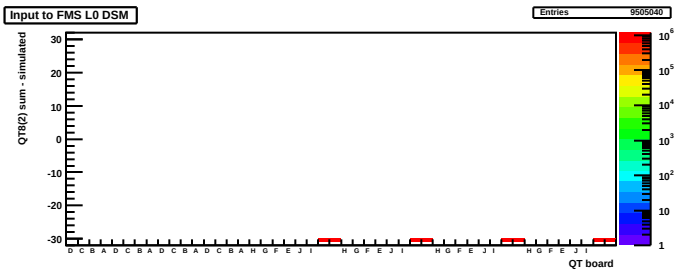

Input to FMS L0 DSM
Entries 5.703024e+07
QT8(0) sum
QT board

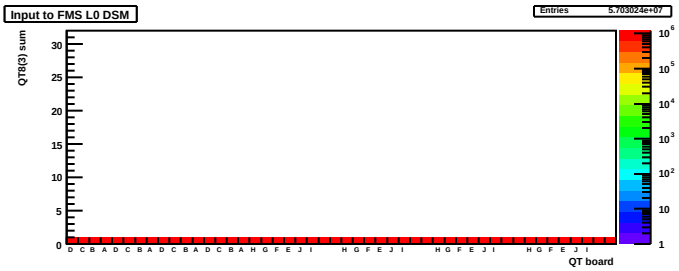

Input to FMS L0 DSM
Entries 9505040
QT8(0) sum - simulated
QT board

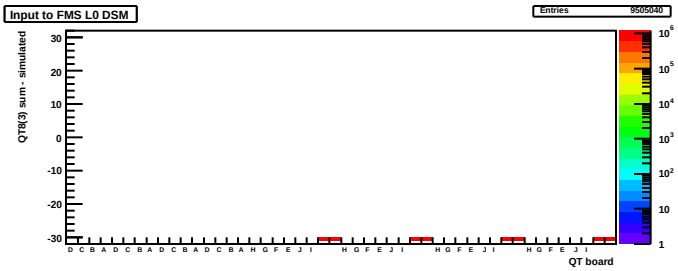

Input to FMS L0 DSM
Entries 5.703024e+07
QT8(1) sum
QT board

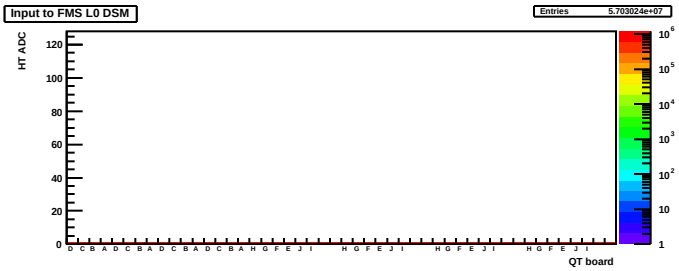

Input to FMS L0 DSM
Entries 9505040
QT8(1) sum - simulated
QT board

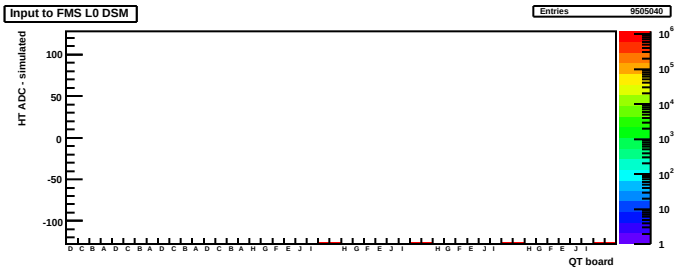

Input to FMS L0 DSM
Entries 5.703024e+07
QT8(2) sum
QT board

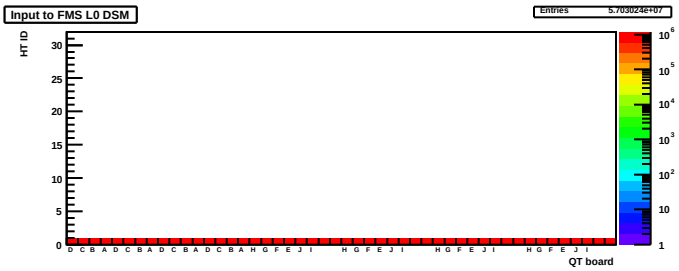

Input to FMS L0 DSM
Entries 9505040
QT8(2) sum - simulated
QT board

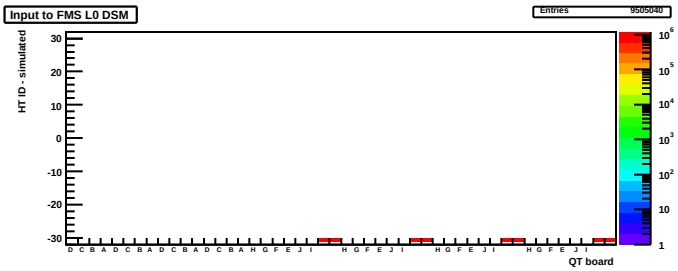

Input to FMS L0 DSM
Entries 5.703024e+07
QT8(3) sum
QT board

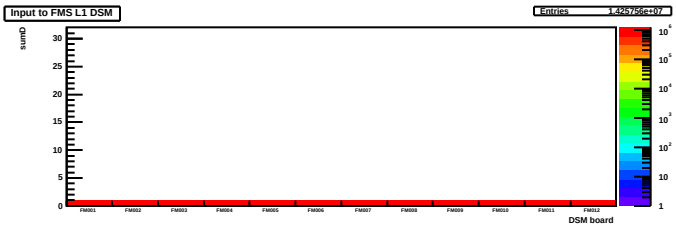

Input to FMS L0 DSM
Entries 9505040
QT8(3) sum - simulated
QT board

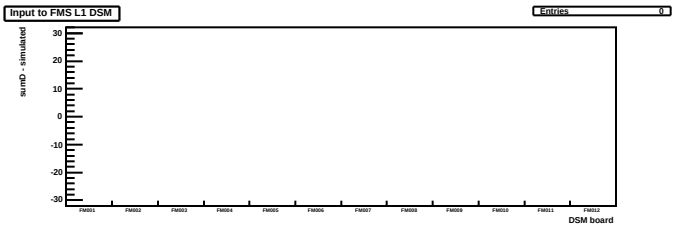

Input to FMS L0 DSM
Entries 5.703024e+07
HT ADC
QT board

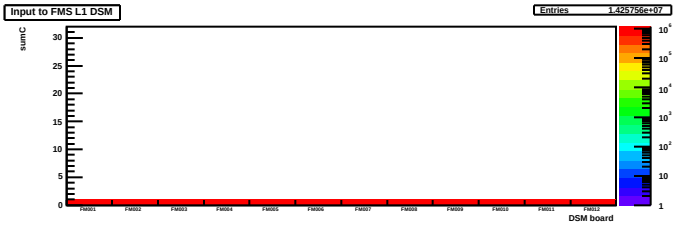

Input to FMS L0 DSM
Entries 9505040
HT ADC - simulated
QT board

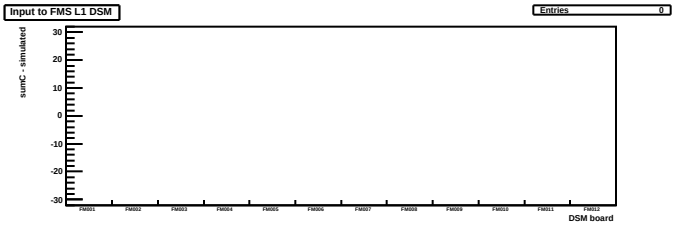

Input to FMS L0 DSM
Entries 5.703024e+07
HT ID
QT board

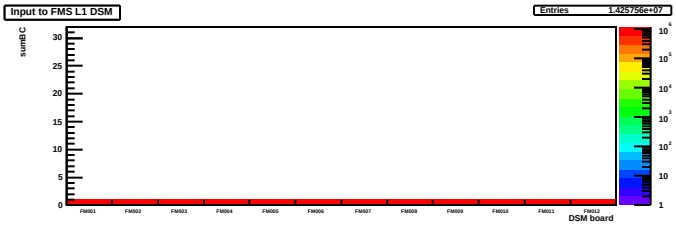

Input to FMS L0 DSM
Entries 9505040
HT ID - simulated
QT board

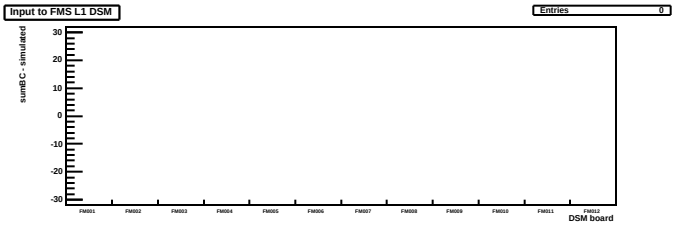

Input to FMS L1 DSM
Entries 1.425756e+07
sumD
DSM board

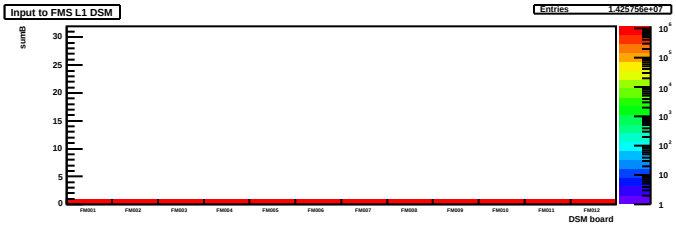

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

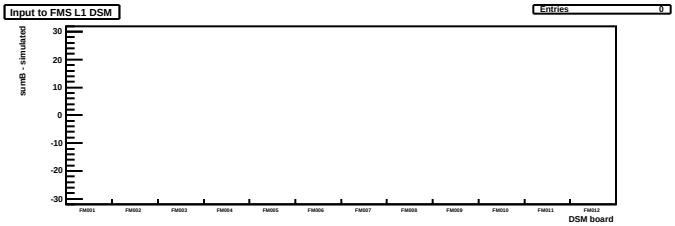

Input to FMS L1 DSM
Entries 1.425756e+07
sumC
DSM board

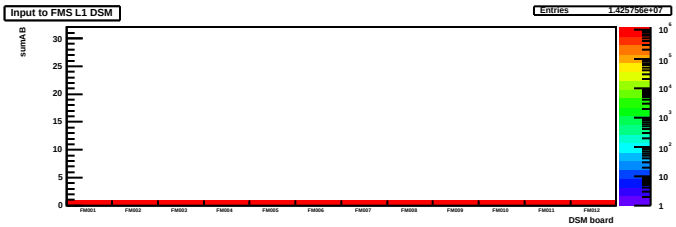

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

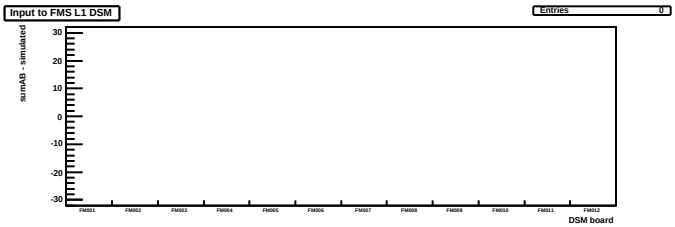

Input to FMS L1 DSM
Entries 1.425756e+07
sumBC
DSM board

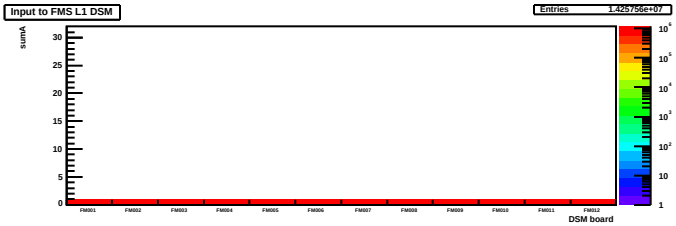

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

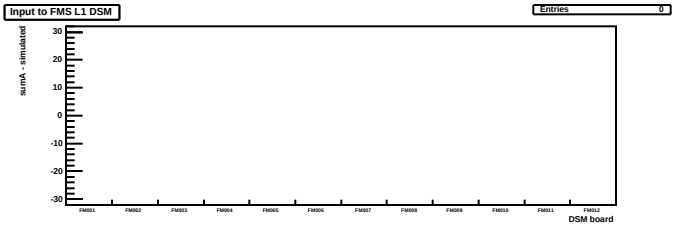

Input to FMS L1 DSM
Entries 1.425756e+07
sumB
DSM board

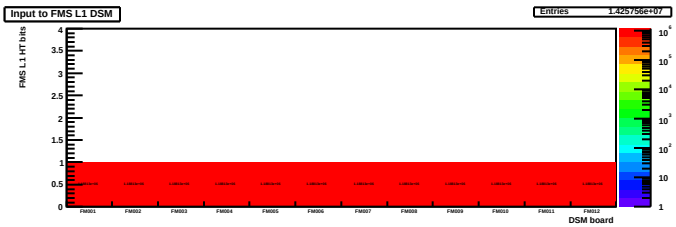

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

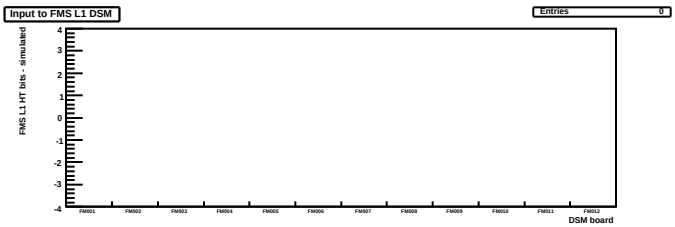

Input to FMS L1 DSM
Entries 1.425756e+07
sumAB
DSM board

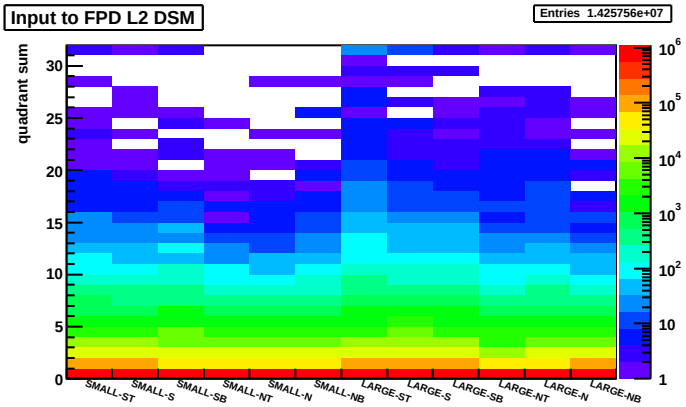

Input to FMS L1 DSM
Entries 0
sumAB - simulated
DSM board

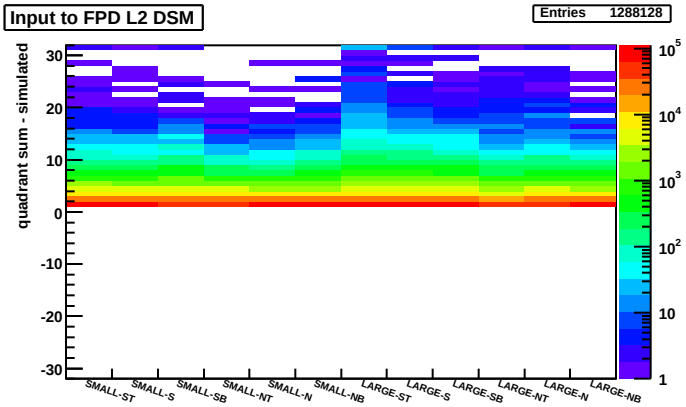

Input to FMS L1 DSM
Entries 1.425756e+07
sumA
DSM board

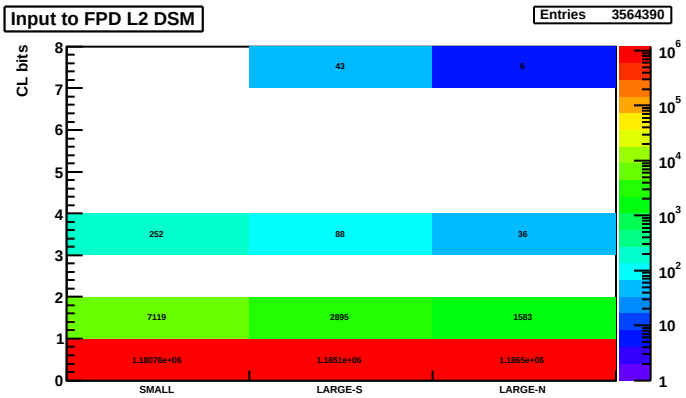

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

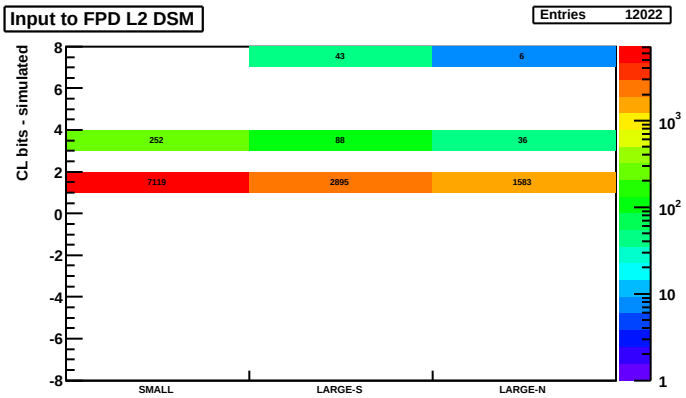

Input to FMS L1 DSM
Entries 1.425756e+07
FMS L1 HT bits
DSM board

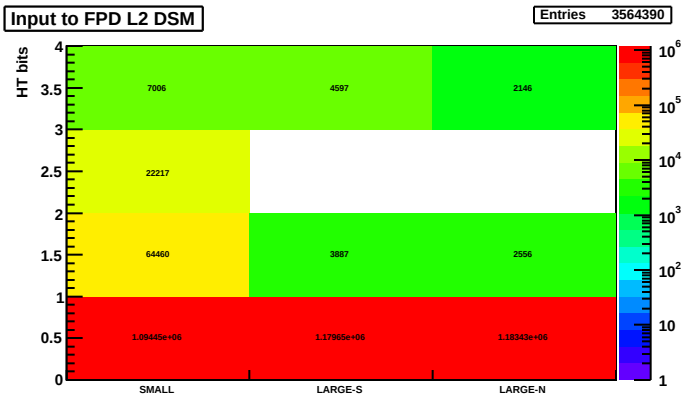

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

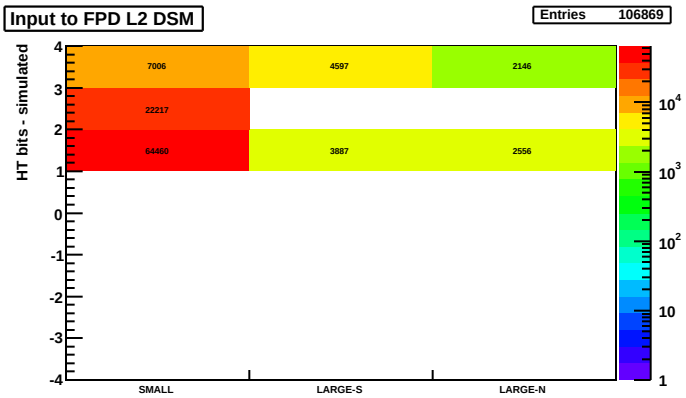

Input to FPD L2 DSM
Entries 1.425756e+07
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

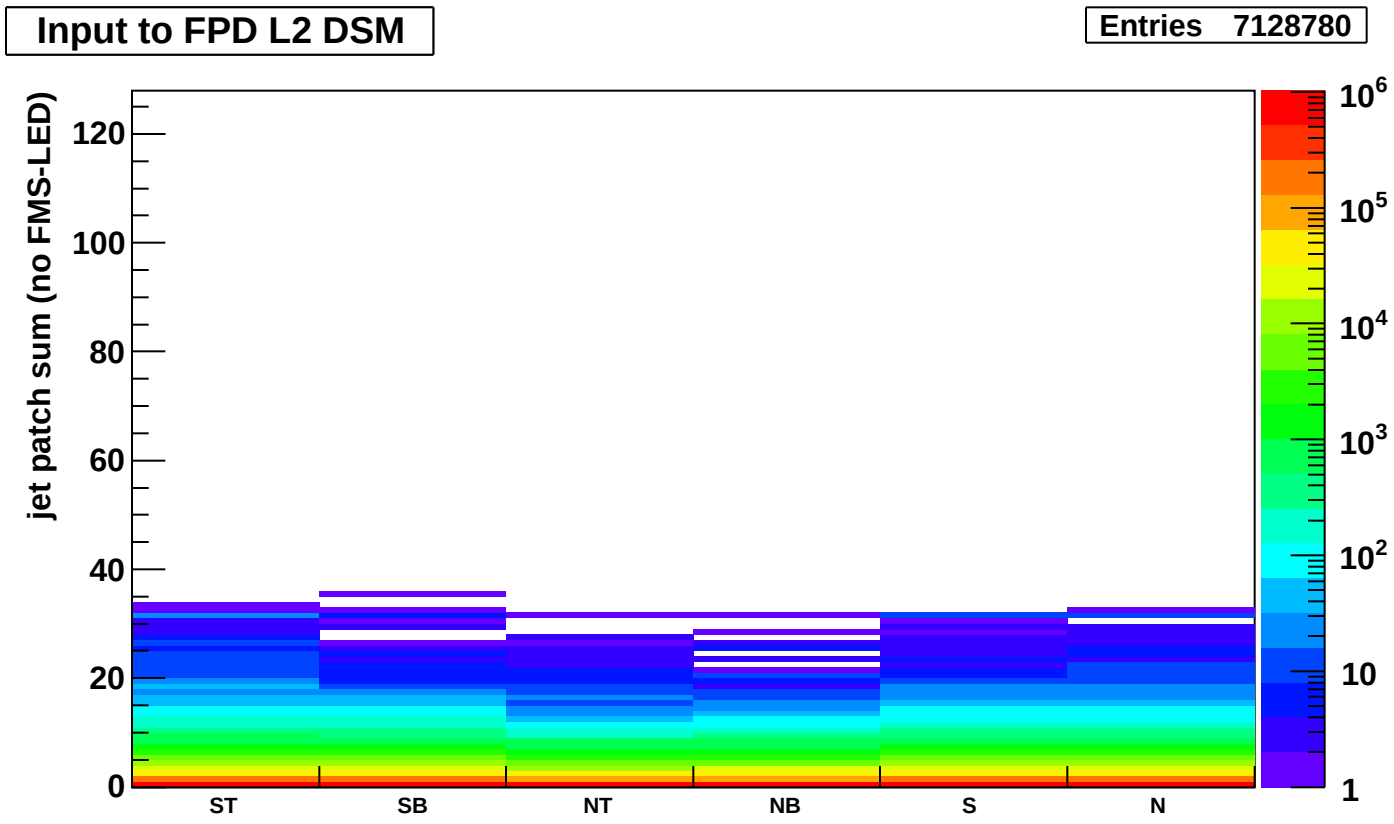

Input to FPD L2 DSM
Entries 1288128
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

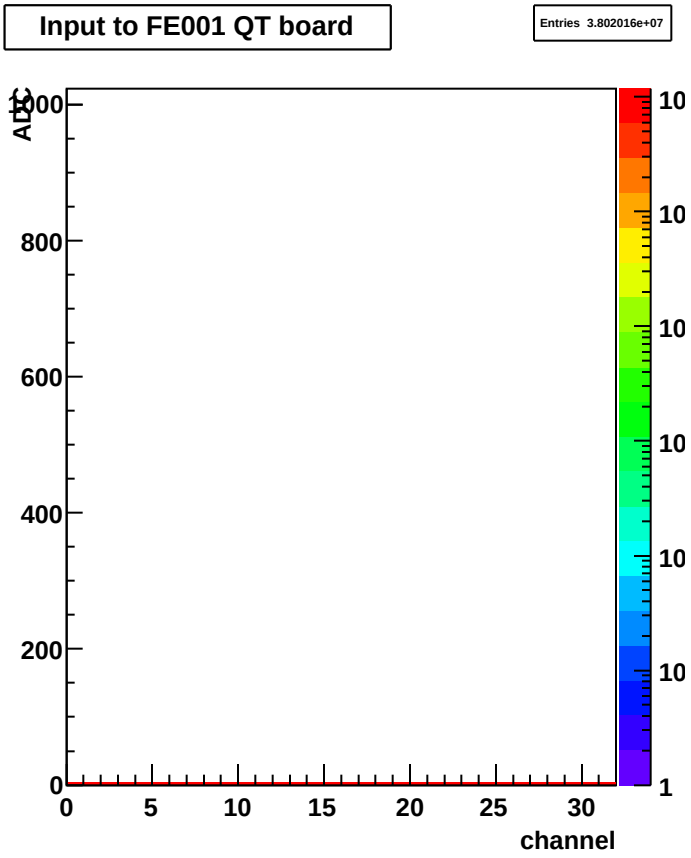

Input to FPD L2 DSM
Entries 3564390
CL bits
43
6
252
88
36
7119
2895
1583
1.18076e+06
1.1851e+06
1.1865e+06
SMALL
LARGE-S
LARGE-N

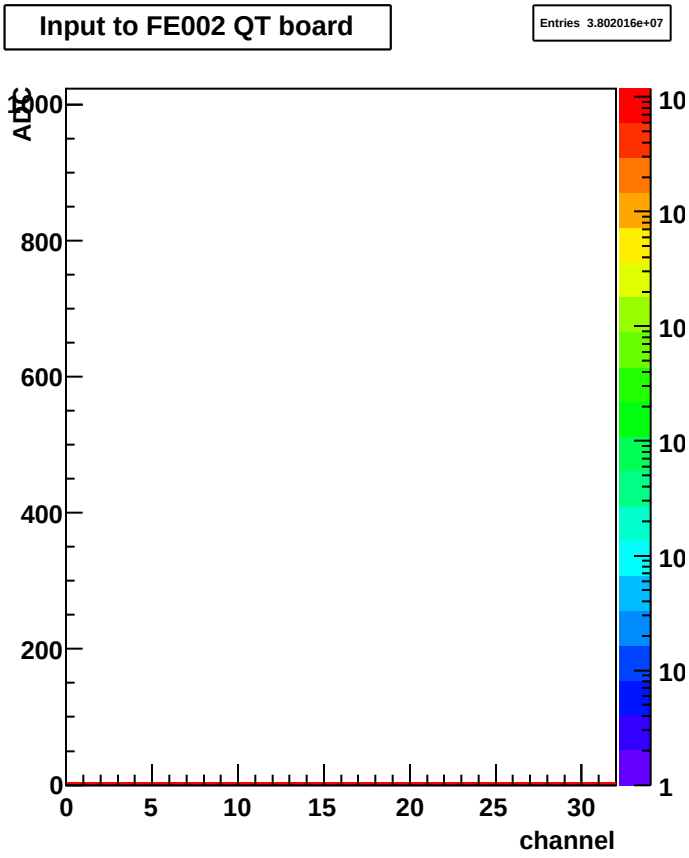

Input to FPD L2 DSM
Entries 12022
CL bits - simulated
43
6
252
88
36
7119
2895
1583
SMALL
LARGE-S
LARGE-N

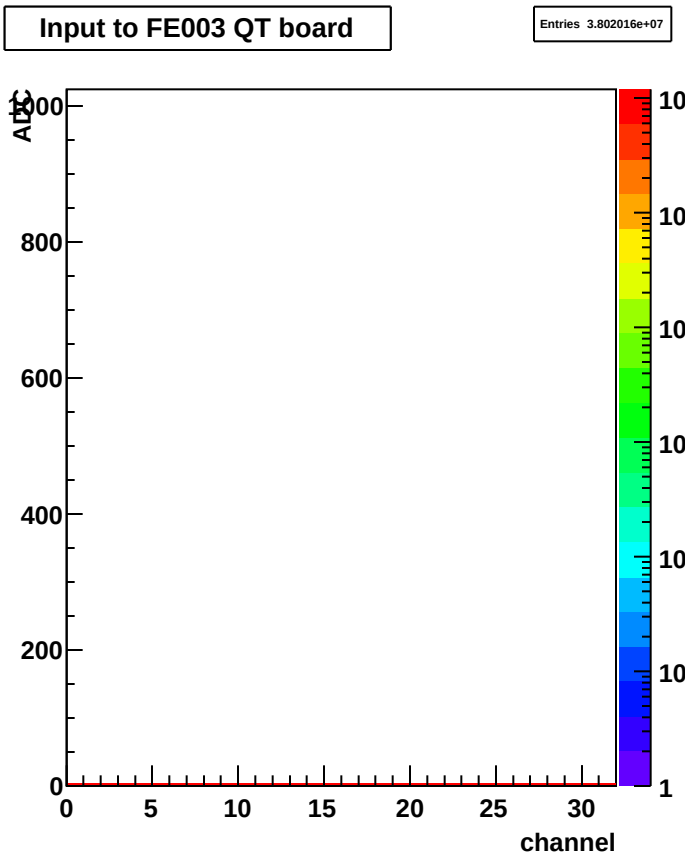

Input to FPD L2 DSM
Entries 3564390
HT bits
7006
4597
2146
22217
64460
3887
2556
1.09445e+06
1.17965e+06
1.18343e+06
SMALL
LARGE-S
LARGE-N

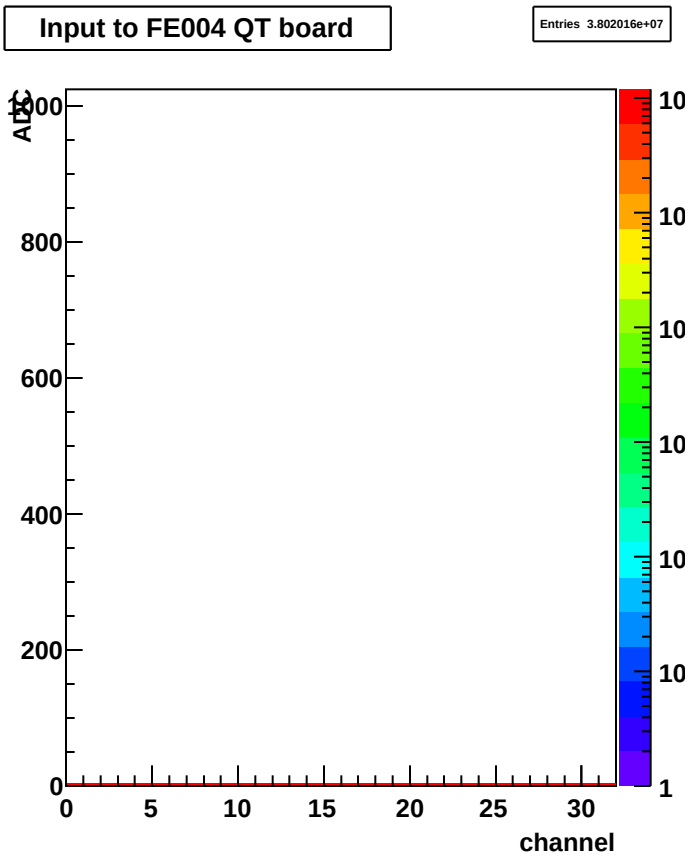

Input to FPD L2 DSM
Entries 106869
HT bits - simulated
7006
4597
2146
22217
64460
3887
2556
SMALL
LARGE-S
LARGE-N

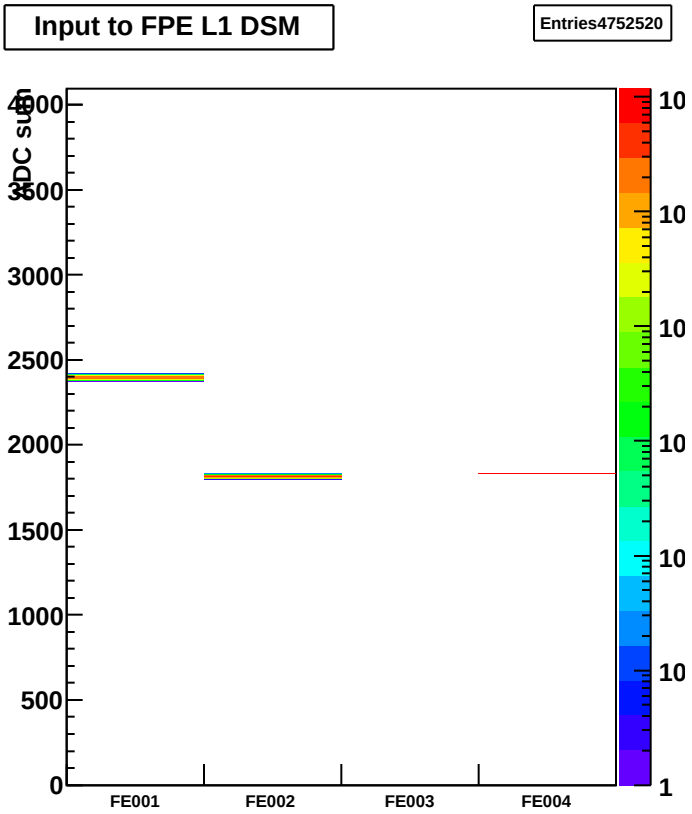

Input to FPD L2 DSM
Entries 7128780
jet patch sum (no FMS-LED)
0
20
40
60
80
100
120
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5
10^6

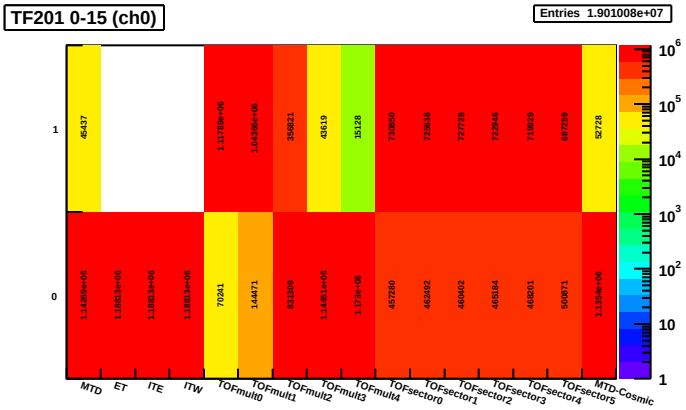

Input to FE001 QT board
Entries 3.802016e+07
ADC
channel

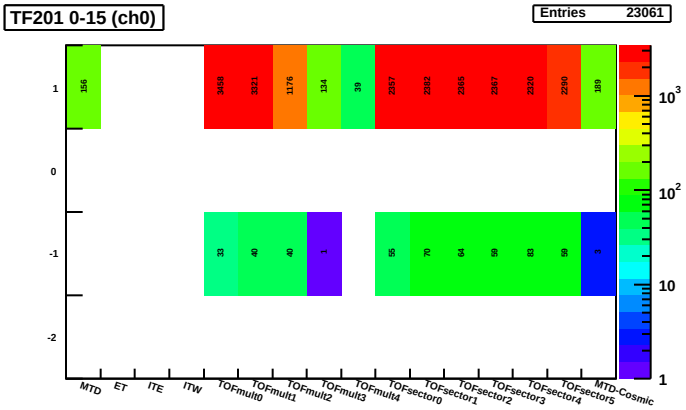

Input to FE002 QT board
Entries 3.802016e+07
ADC
channel

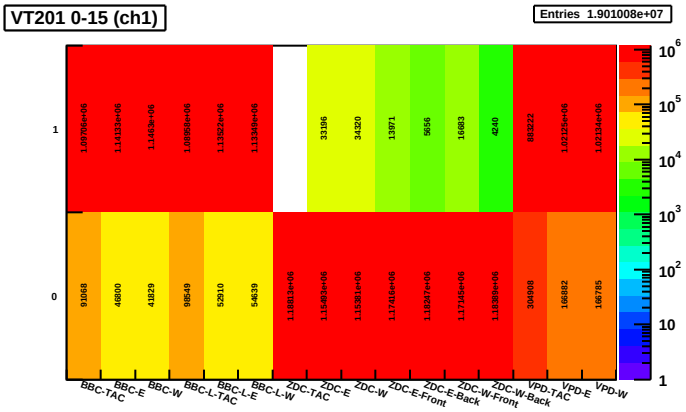

Input to FE003 QT board
Entries 3.802016e+07
ADC
channel

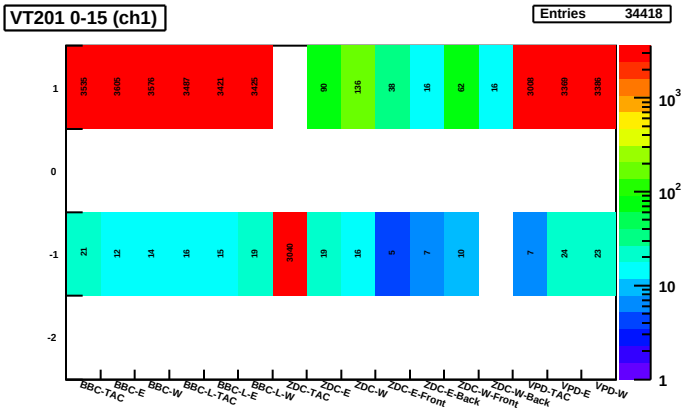

Input to FE004 QT board
Entries 3.802016e+07
ADC
channel

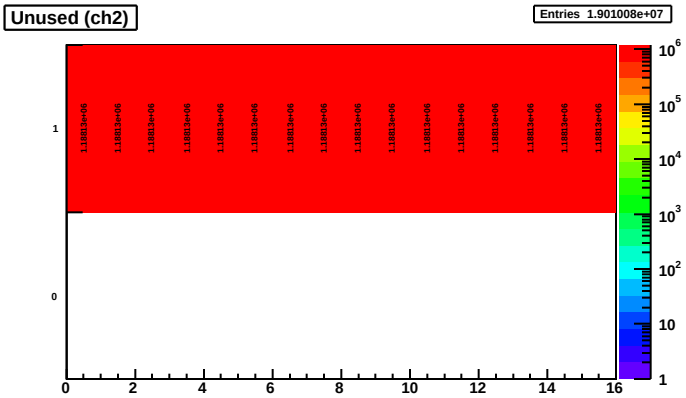

Input to FPE L1 DSM
Entries4752520
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
10
1

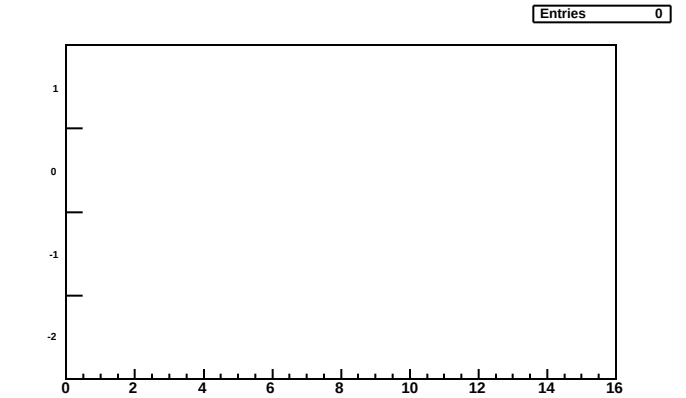

TF201 0-15 (ch0)
Entries 1.901008e+07
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

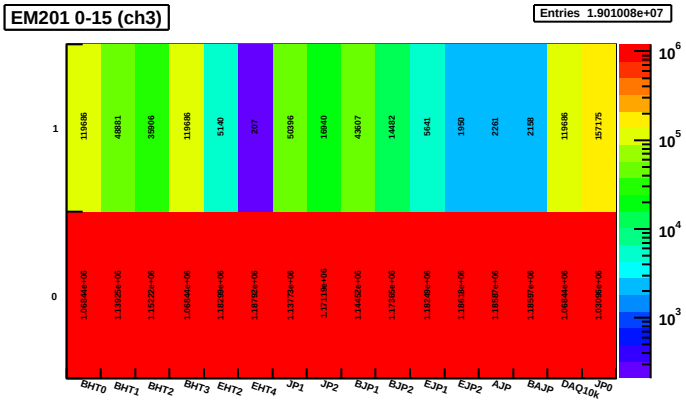

TF201 0-15 (ch0)
Entries 23061
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

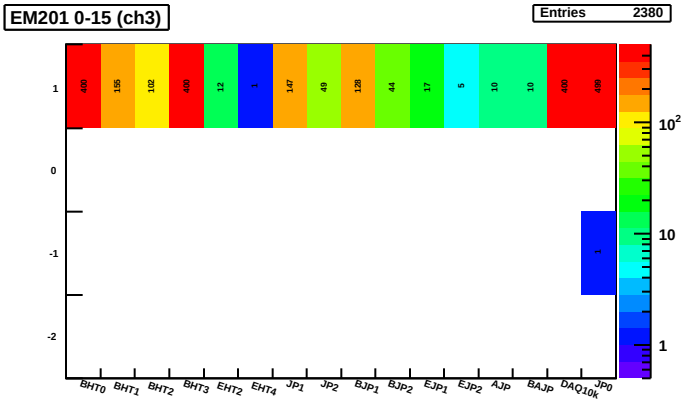

VT201 0-15 (ch1)
Entries 1.901008e+07
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 34418
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

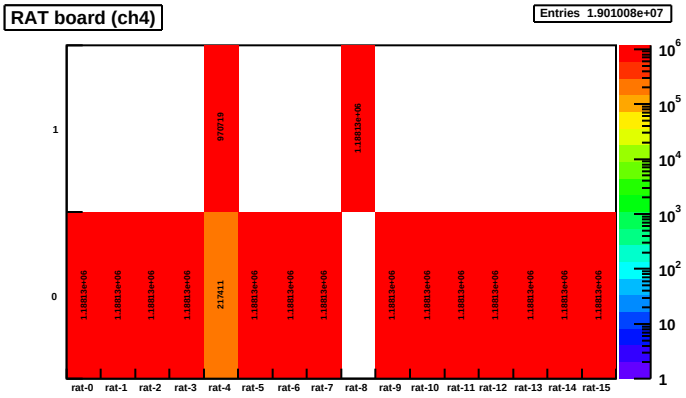

Unused (ch2)
Entries 1.901008e+07

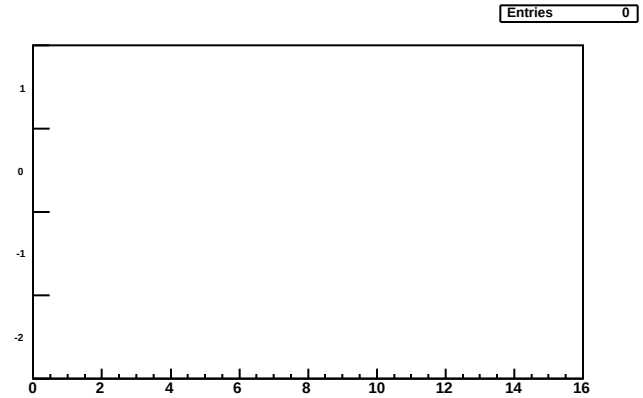

Entries 0


EM201 0-15 (ch3)
Entries 1.901008e+07
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

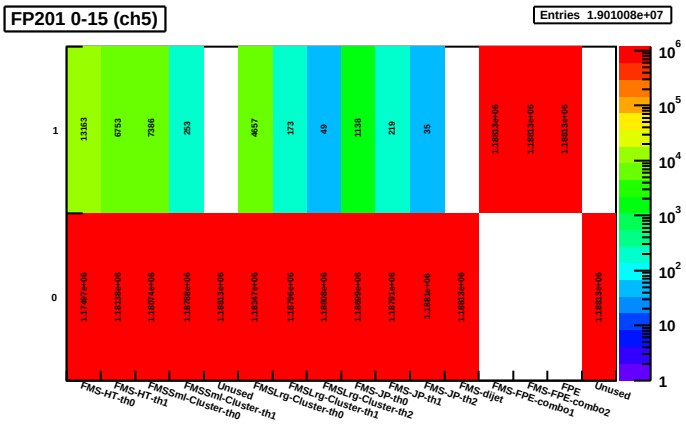

EM201 0-15 (ch3)
Entries 2380
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

RAT board (ch4)

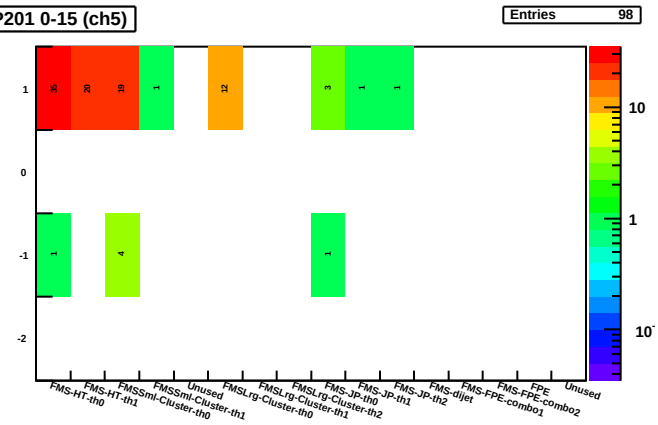




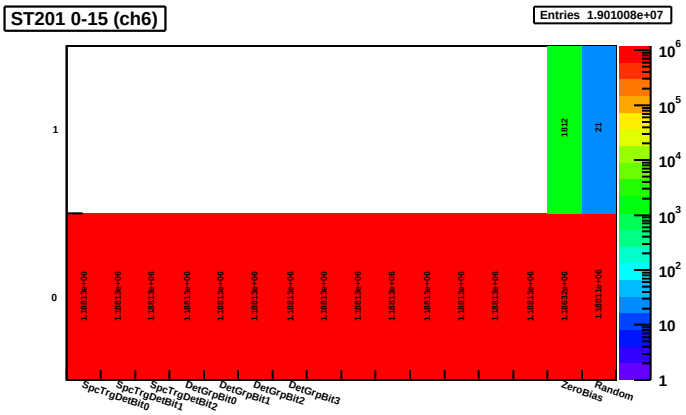
FP201 0-15 (ch5)

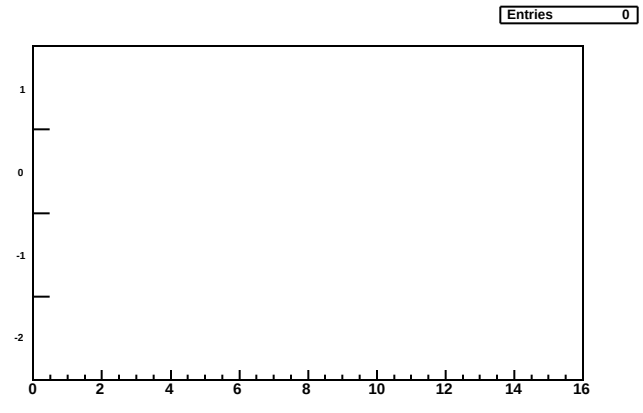
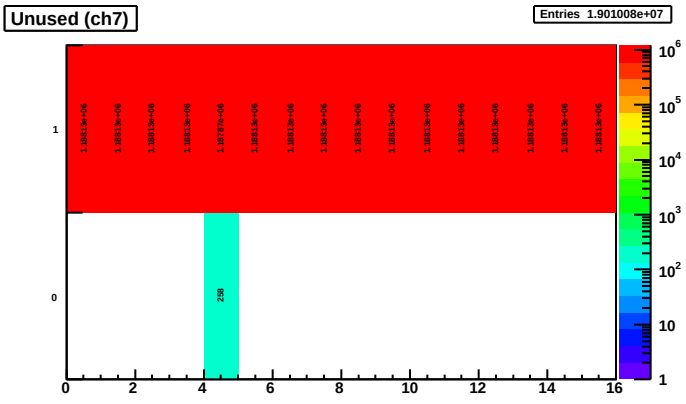
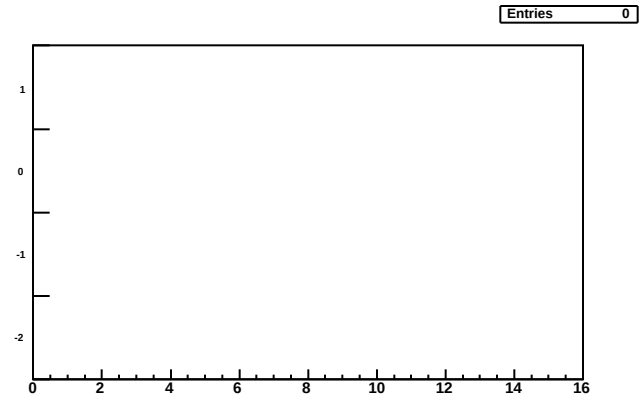


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)