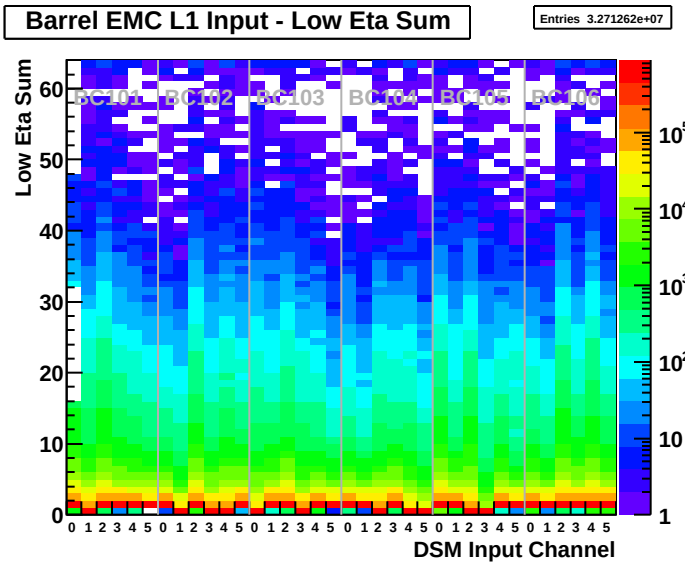
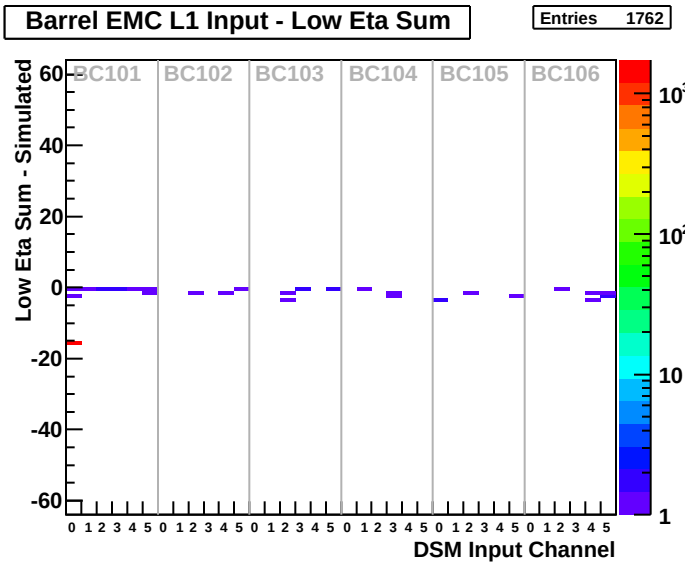
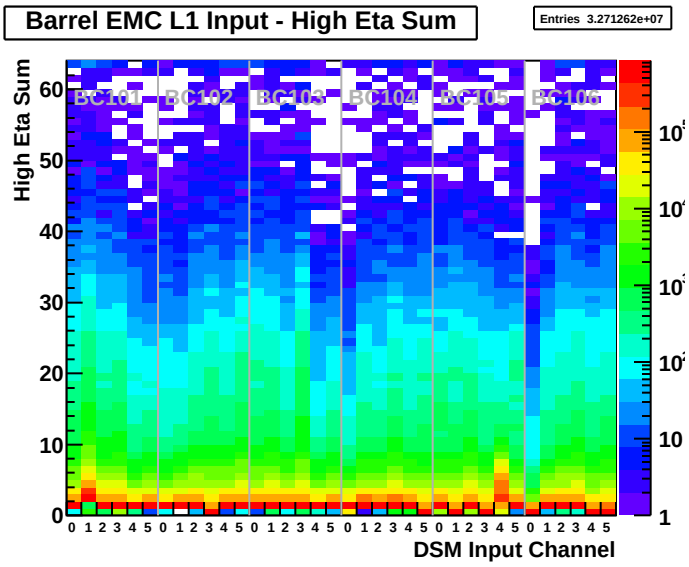
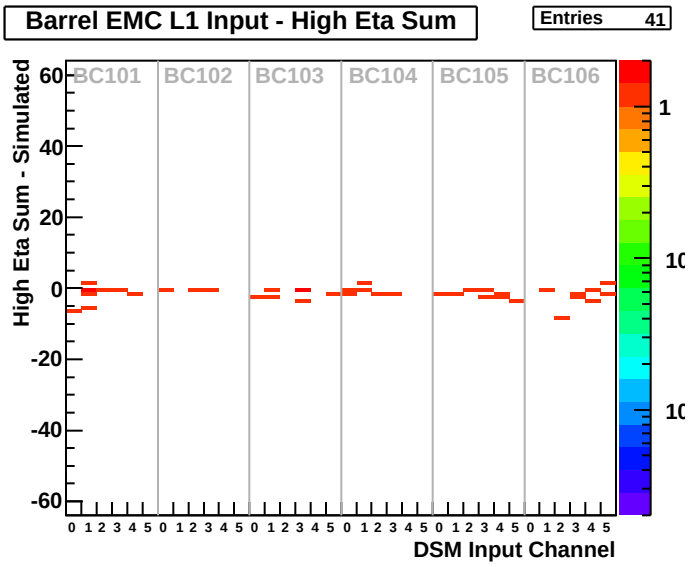
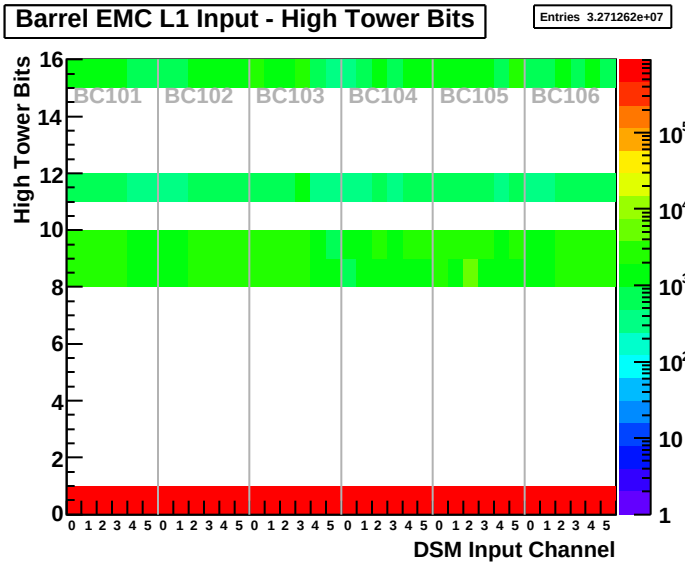
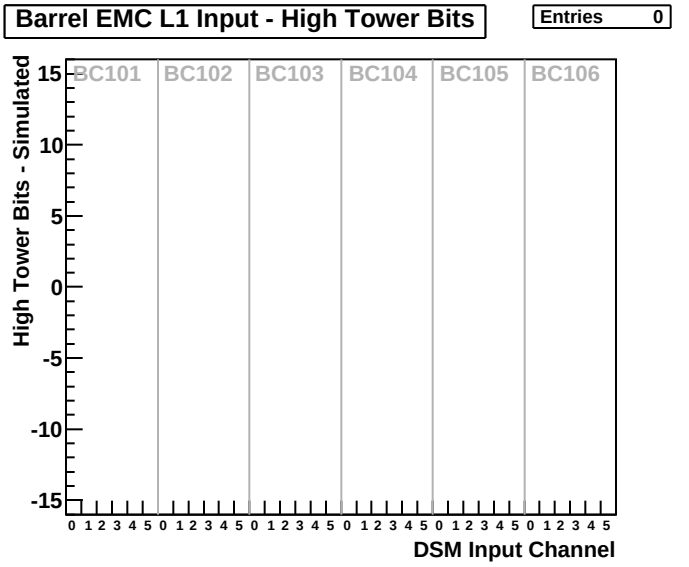

Barrel EMC L1 Input - Low Eta Sum
Entries 3.271262e+07
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

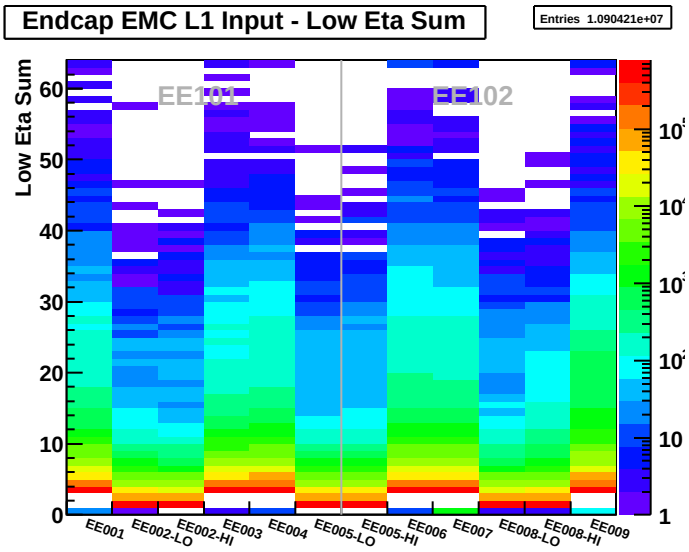

Barrel EMC L1 Input - Low Eta Sum
Entries 1762
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

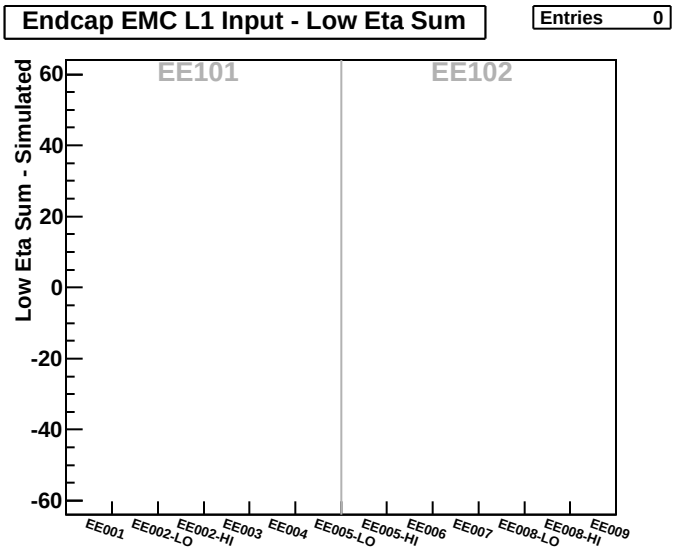

Barrel EMC L1 Input - High Eta Sum
Entries 3.271262e+07
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

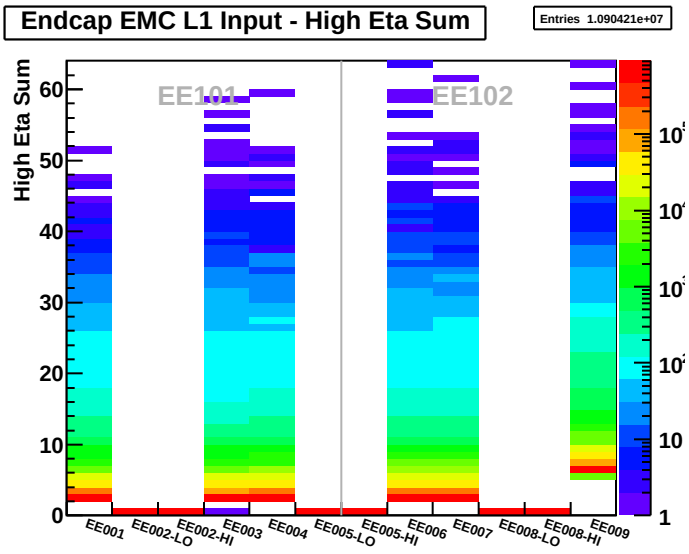

Barrel EMC L1 Input - High Eta Sum
Entries 41
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

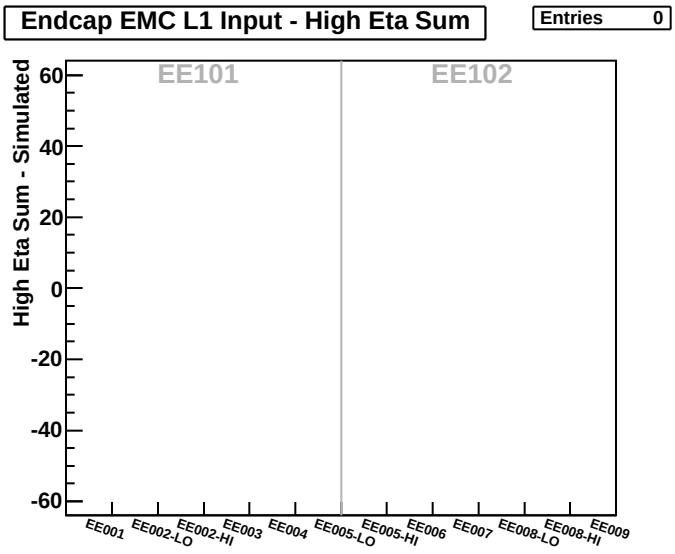

Barrel EMC L1 Input - High Tower Bits
Entries 3.271262e+07
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

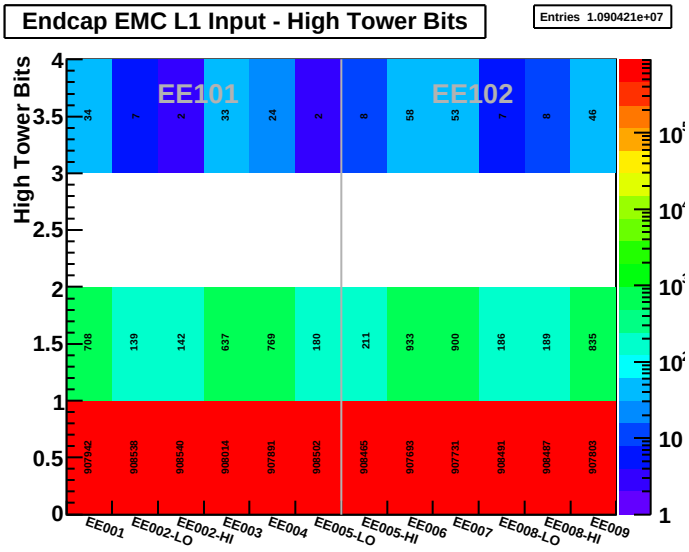

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

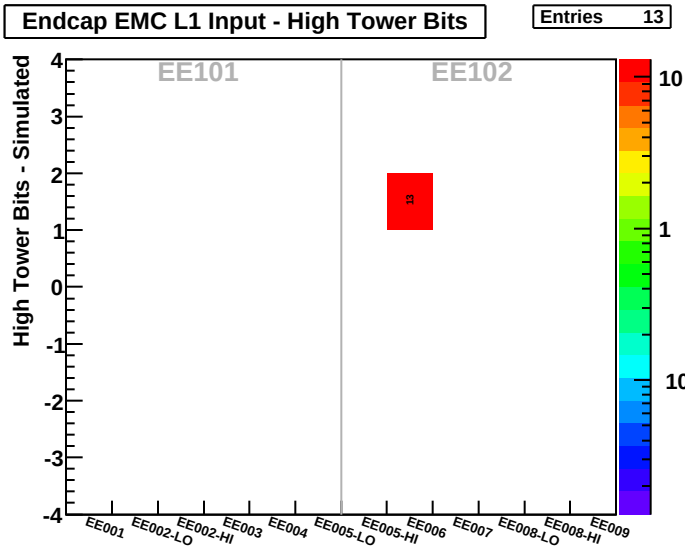

Endcap EMC L1 Input - Low Eta Sum
Entries 1.090421e+07
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

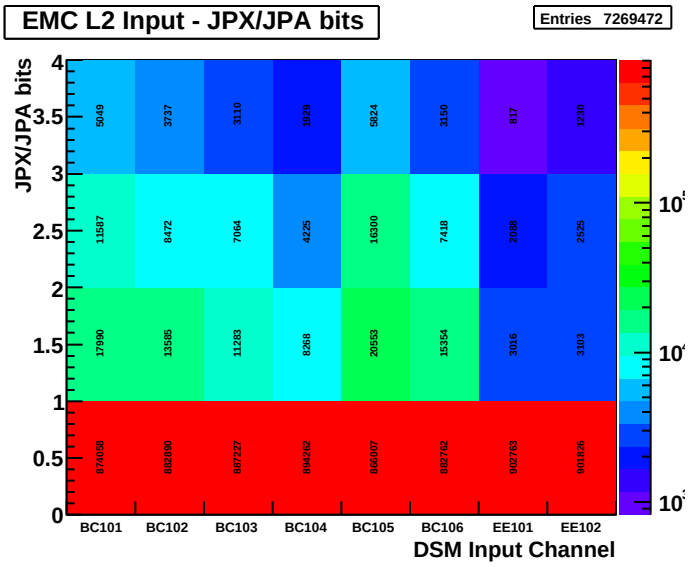

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

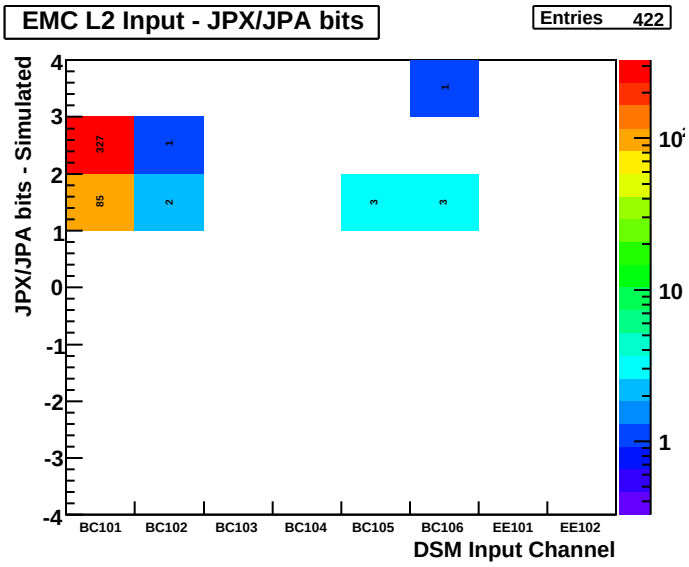

Endcap EMC L1 Input - High Eta Sum
Entries 1.090421e+07
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

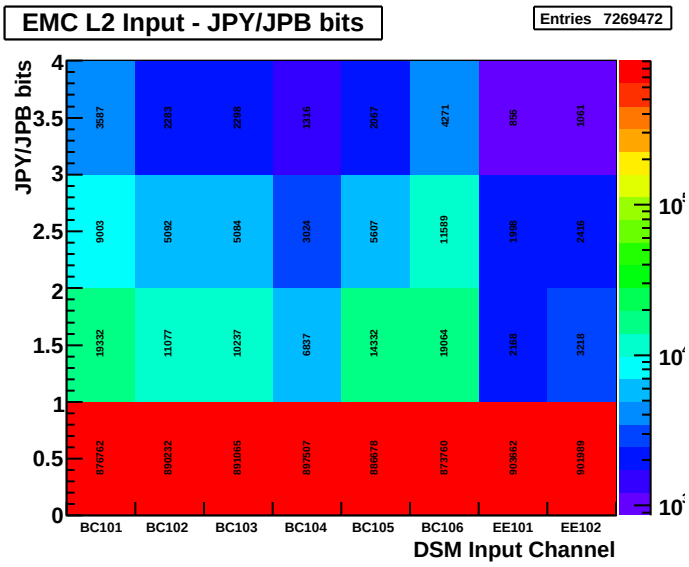

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

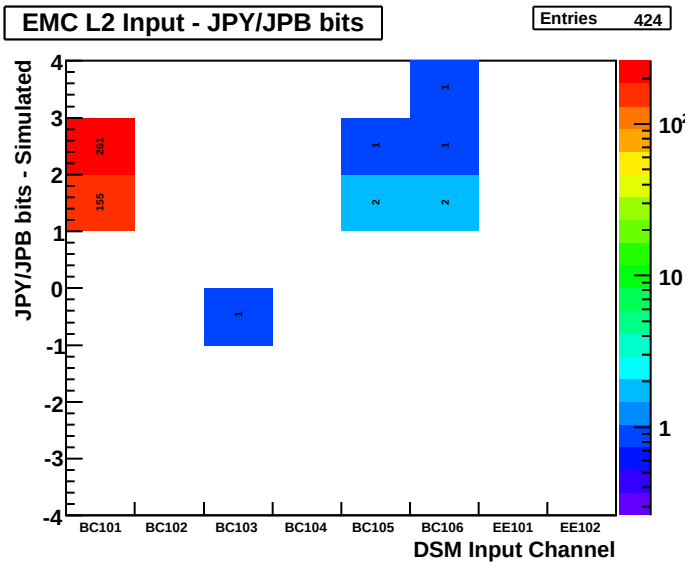

Endcap EMC L1 Input - High Tower Bits
Entries 1.090421e+07
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

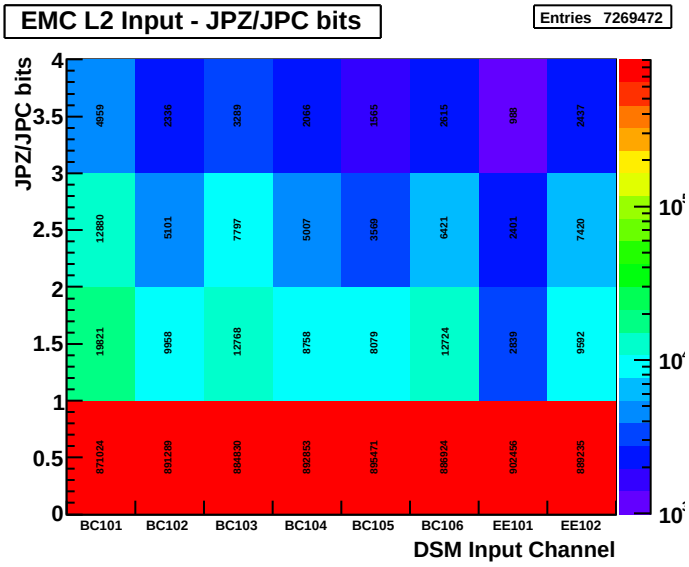

Endcap EMC L1 Input - High Tower Bits
Entries 13
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

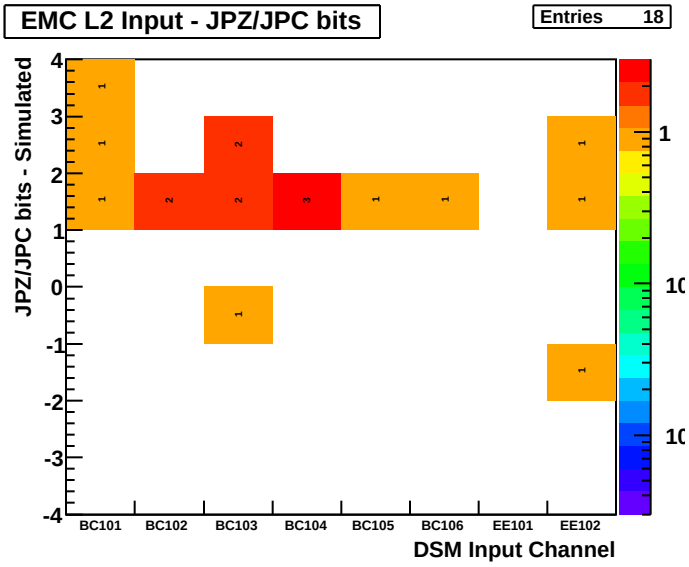

EMC L2 Input - JPX/JPA bits
Entries 7269472
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
5049 3737 3110 1929 5824 3150 817 1230
11587 8472 7064 4225 16300 7418 2088 2525
17990 13585 11263 8268 20553 15354 3016 3103
874098 882890 887227 894262 886007 882762 902763 901826

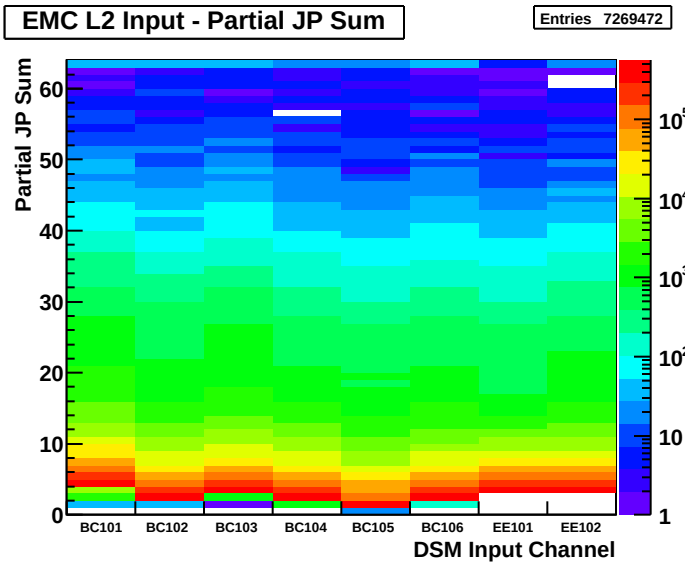

EMC L2 Input - JPX/JPA bits
Entries 422
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
327 1 1
85 2 3 3

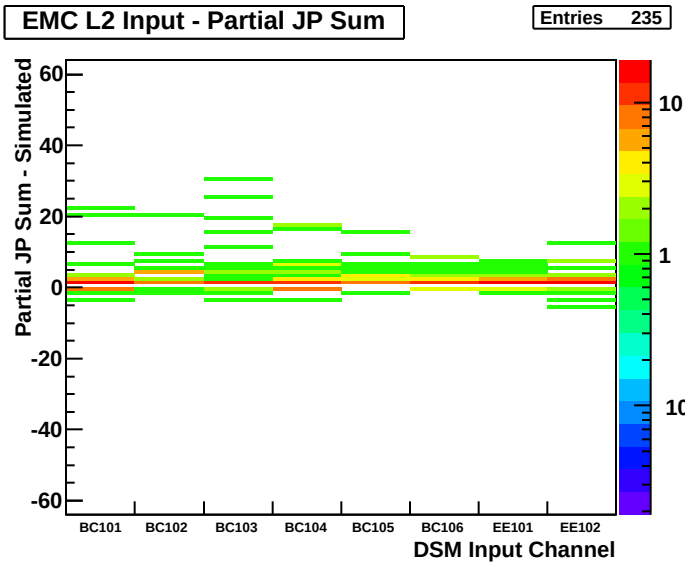

EMC L2 Input - JPY/JPB bits
Entries 7269472
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
3587 2283 2298 1316 2067 4271 856 1061
9003 5092 5084 3024 5607 11589 1998 2416
19332 11077 10237 6837 14332 19064 2168 3218
876762 890232 891065 897507 888678 873760 903662 901989

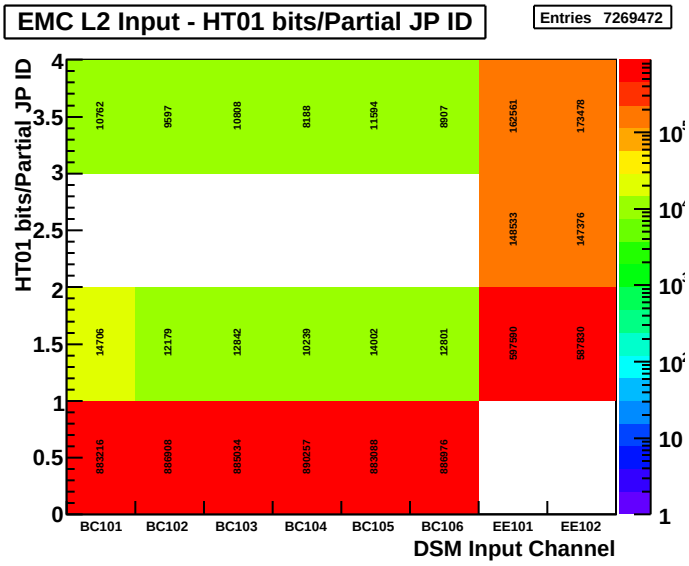

EMC L2 Input - JPY/JPB bits
Entries 424
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1 1 1
261 1 1
155 2 2
1

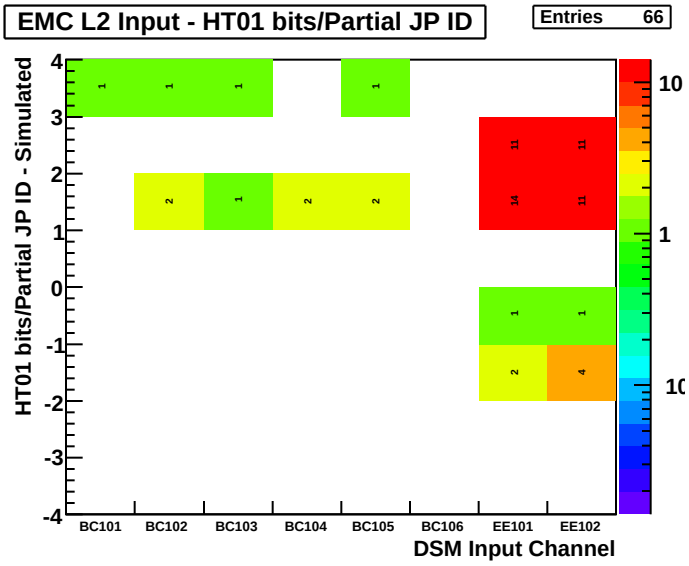

EMC L2 Input - JPZ/JPC bits
Entries 7269472
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
4959 2336 3289 2066 1565 2515 988 2437
12880 5101 7797 5007 3569 6421 2401 7420
19821 9958 12768 8758 8079 12724 2839 9592
871024 891289 894830 892853 895471 886924 902456 889235

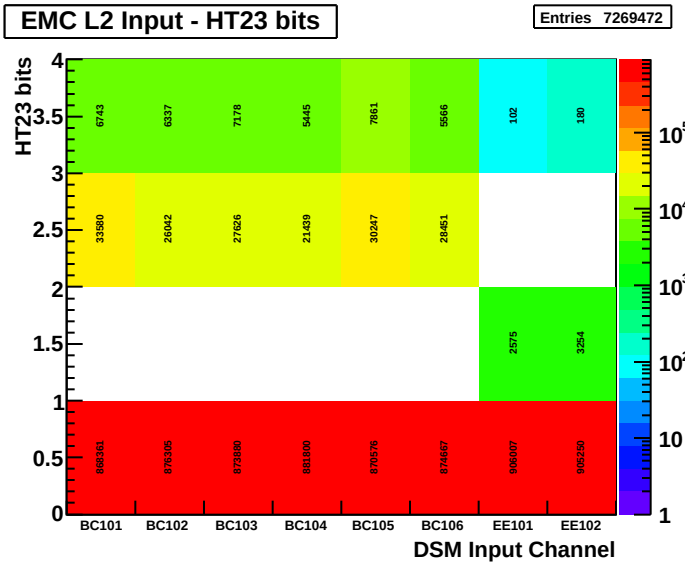

EMC L2 Input - JPZ/JPC bits
Entries 18
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1 1 1 1
2 2 2 3 1 1 1
1 1

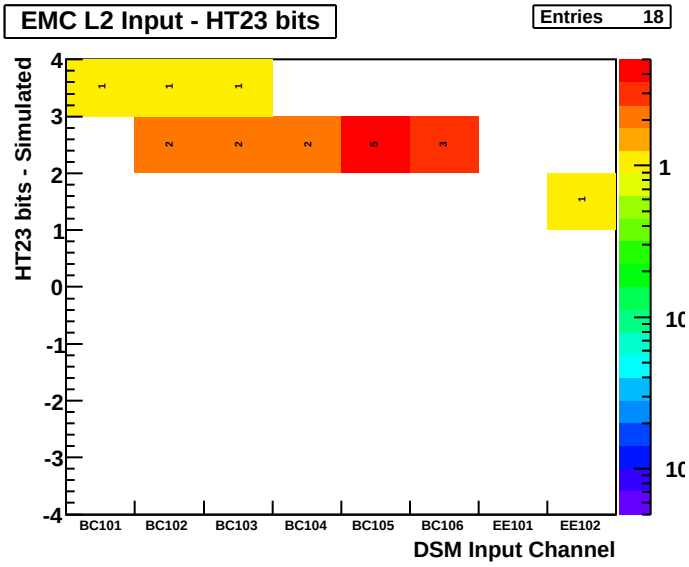

EMC L2 Input - Partial JP Sum
Entries 7269472
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

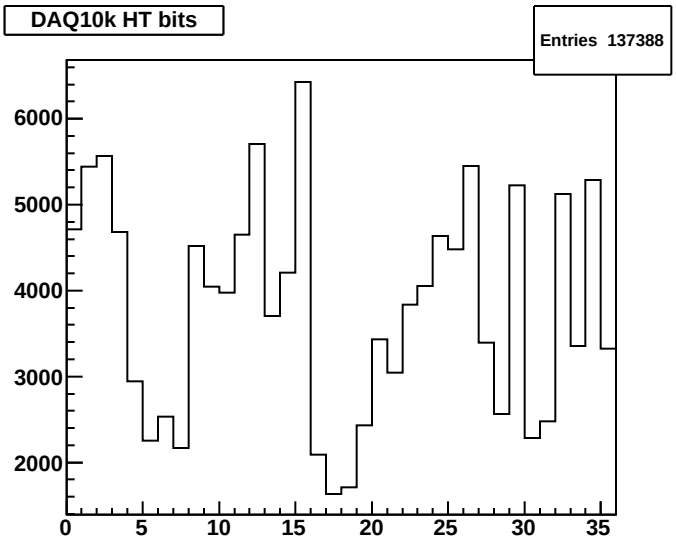

EMC L2 Input - Partial JP Sum
Entries 235
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

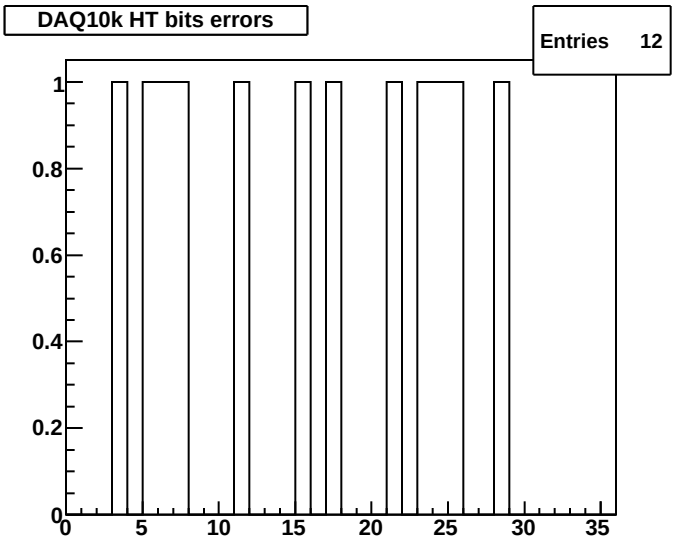

EMC L2 Input - HT01 bits/Partial JP ID
Entries 7269472
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

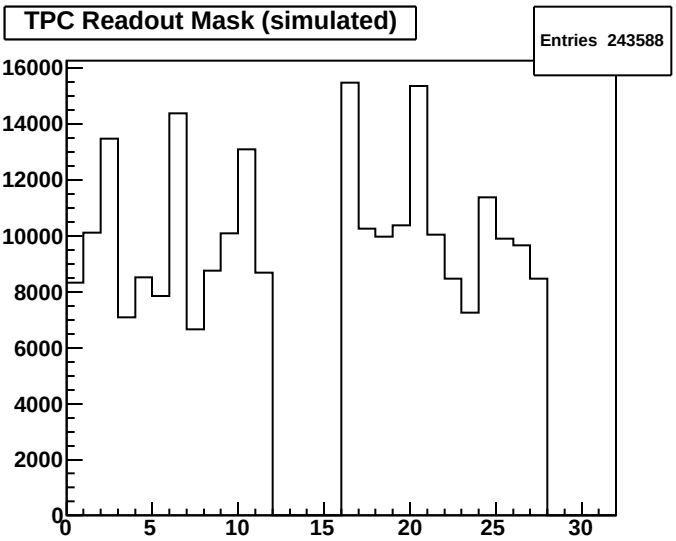

EMC L2 Input - HT01 bits/Partial JP ID
Entries 66
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

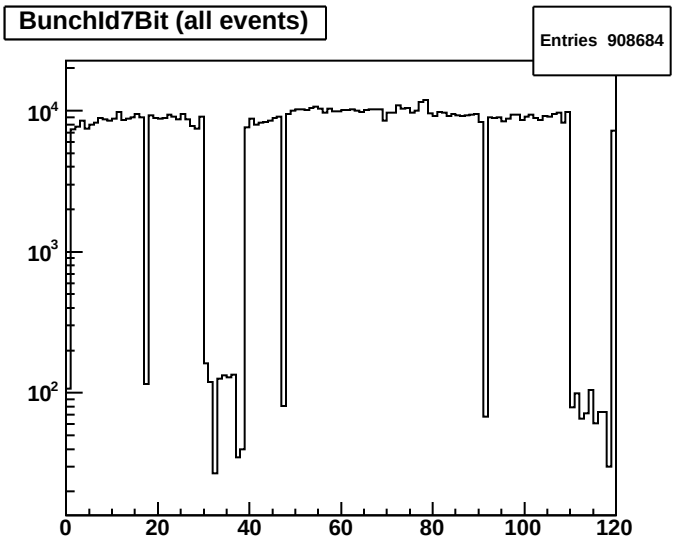

EMC L2 Input - HT23 bits
Entries 7269472
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

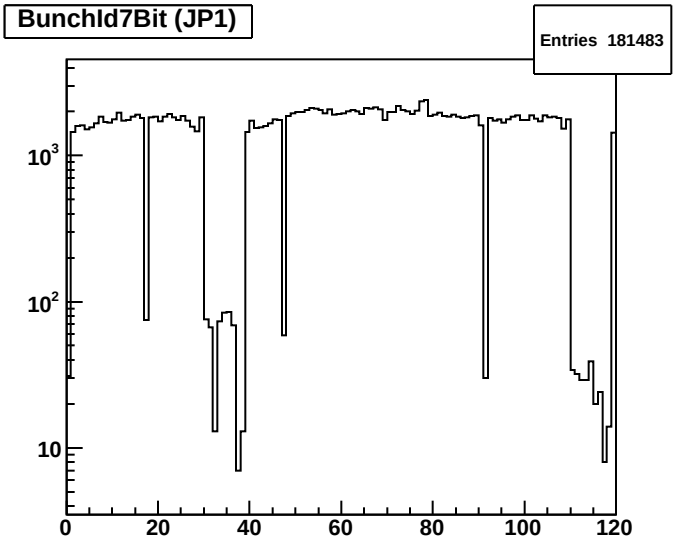

EMC L2 Input - HT23 bits
Entries 18
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

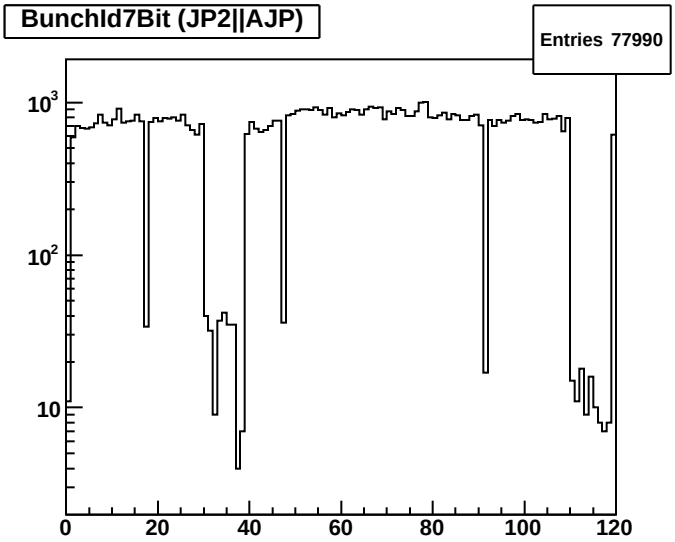

DAQ10k HT bits
Entries 137388
6000
5000
4000
3000
2000
0
5
10
15
20
25
30
35

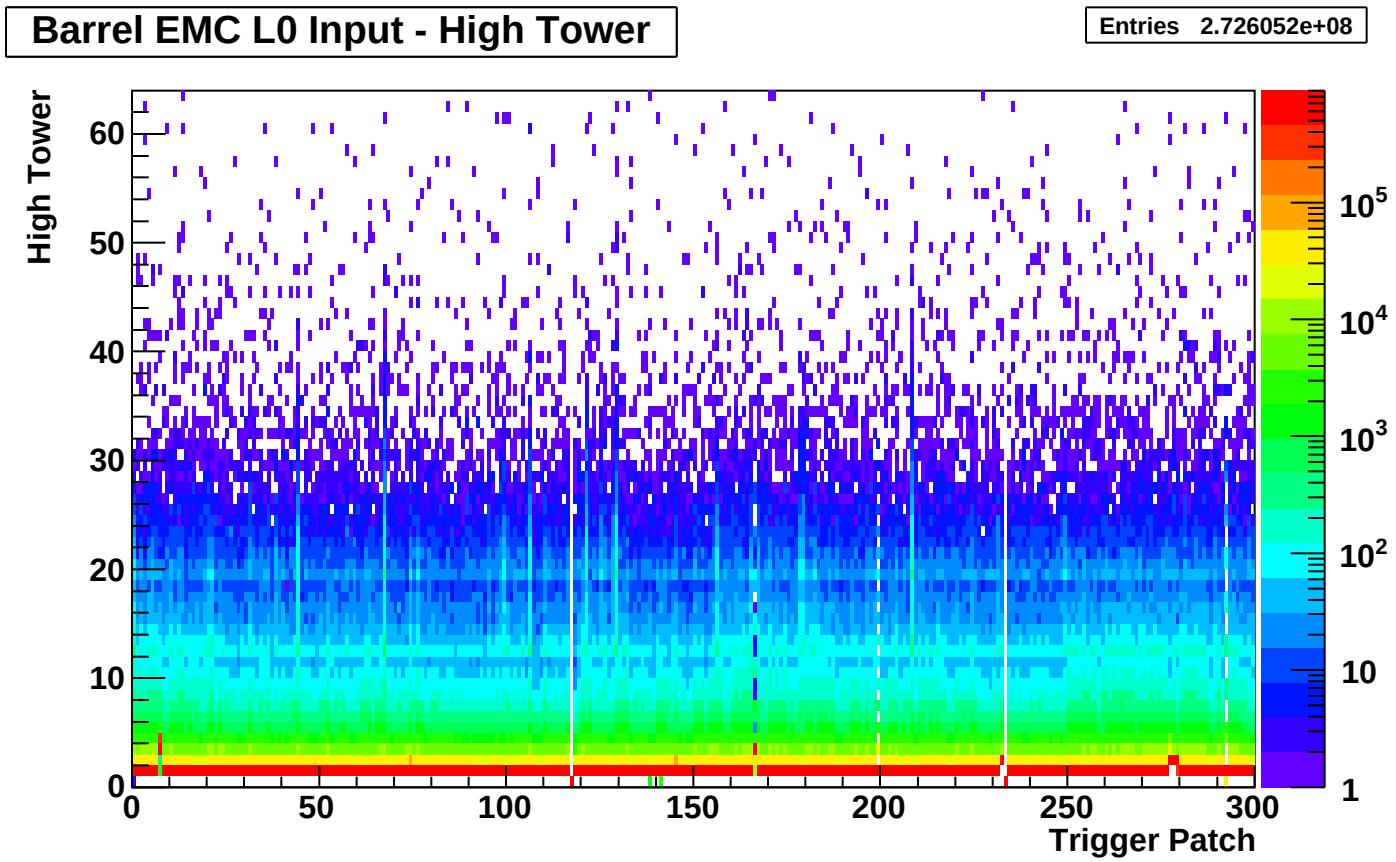

DAQ10k HT bits errors
Entries 12
1
0.8
0.6
0.4
0.2
0
0
5
10
15
20
25
30
35

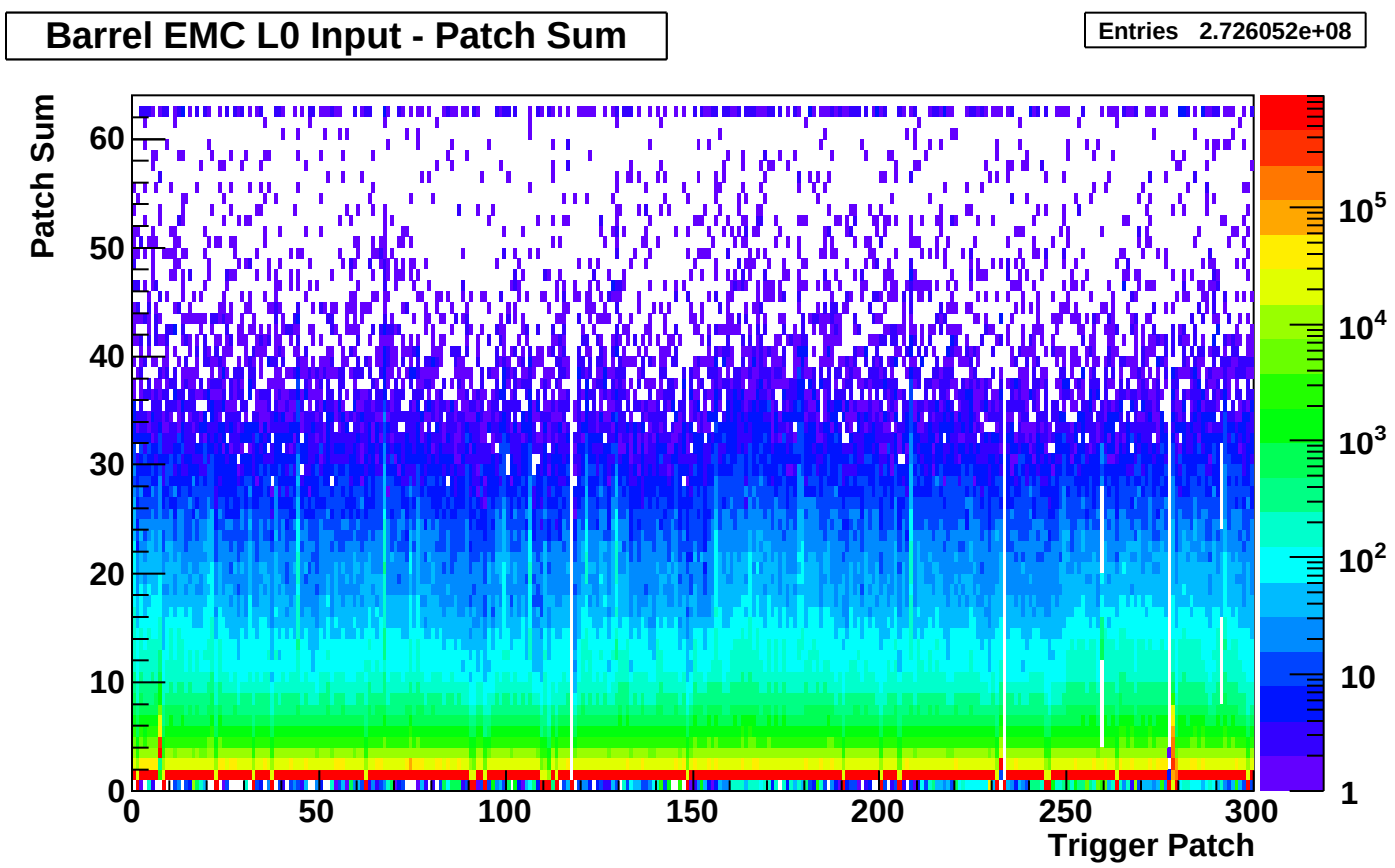

TPC Readout Mask (simulated)
Entries 243588
16000
14000
12000
10000
8000
6000
4000
2000
0
0
5
10
15
20
25
30

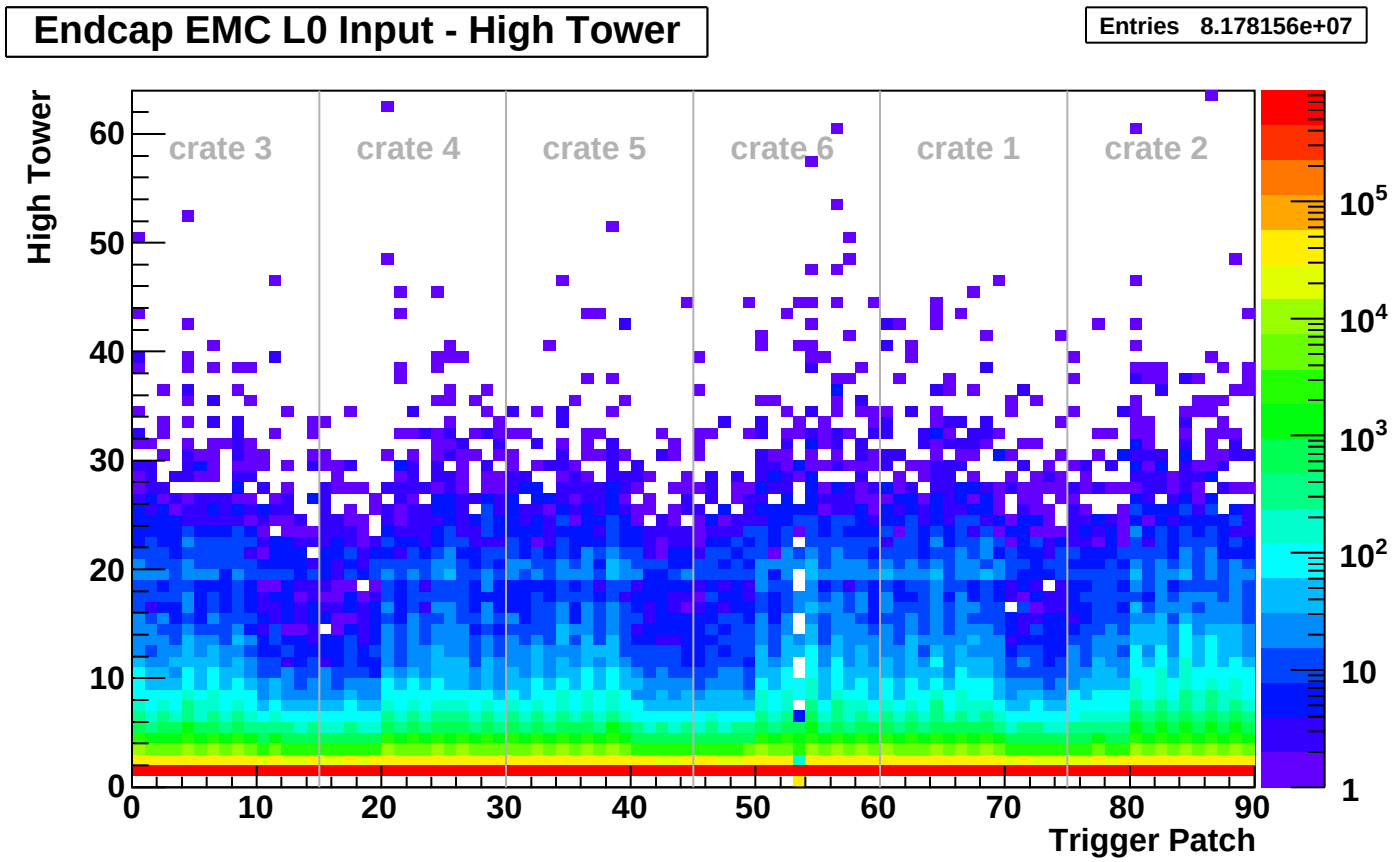

BunchId7Bit (all events)
Entries 908684
10^4
10^3
10^2
0
20
40
60
80
100
120

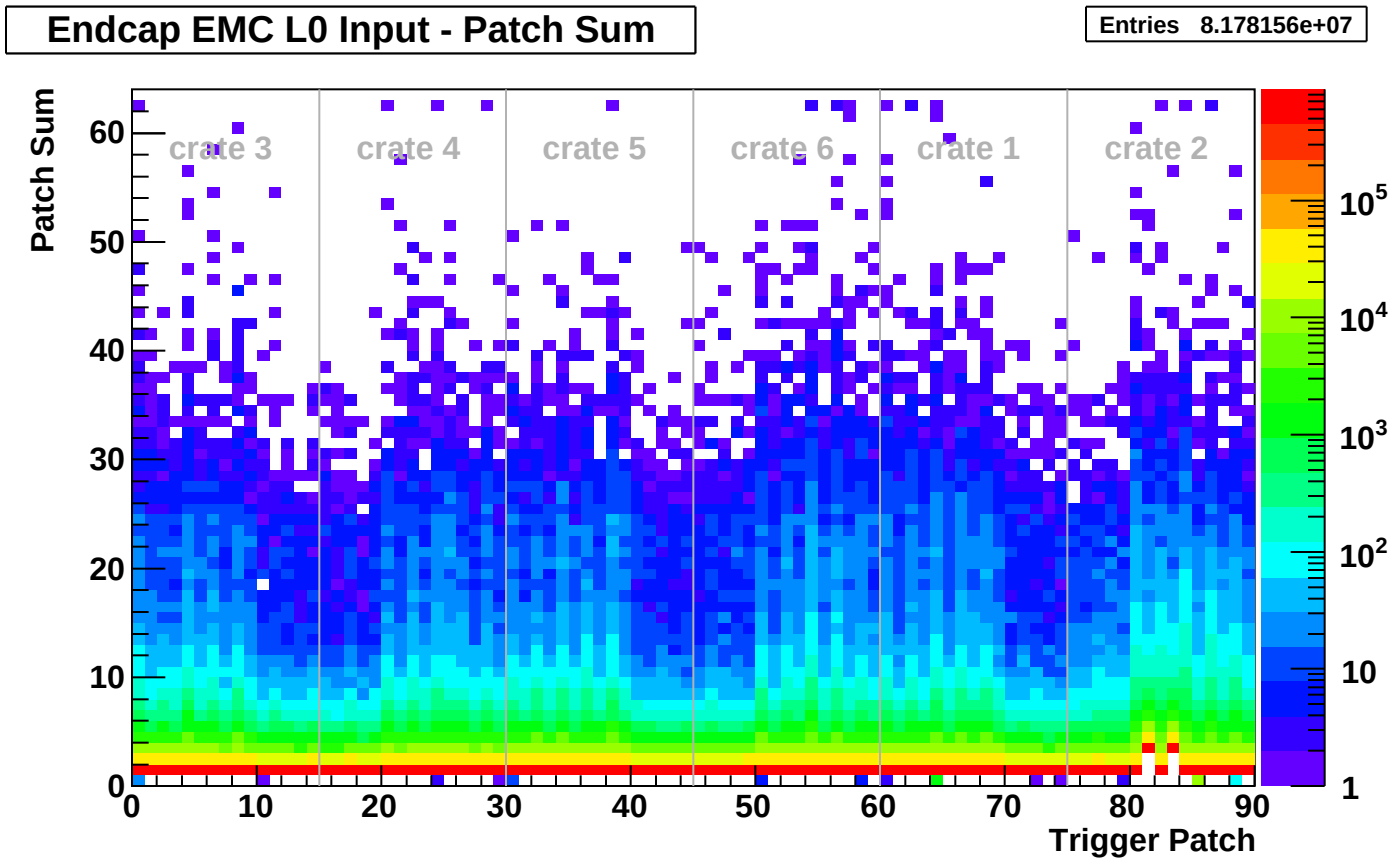

BunchId7Bit (JP1)
Entries 181483
10^3
10^2
10
0
20
40
60
80
100
120

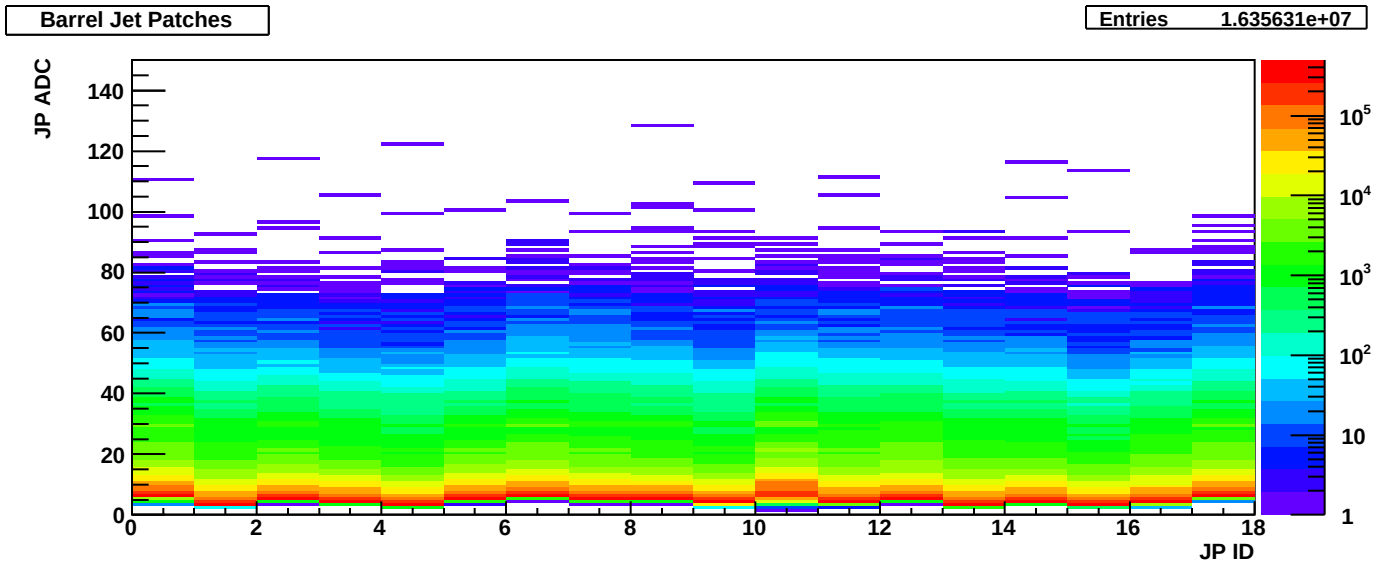

BunchId7Bit (JP2||AJP)
Entries 77990
10^3
10^2
10
0
20
40
60
80
100
120

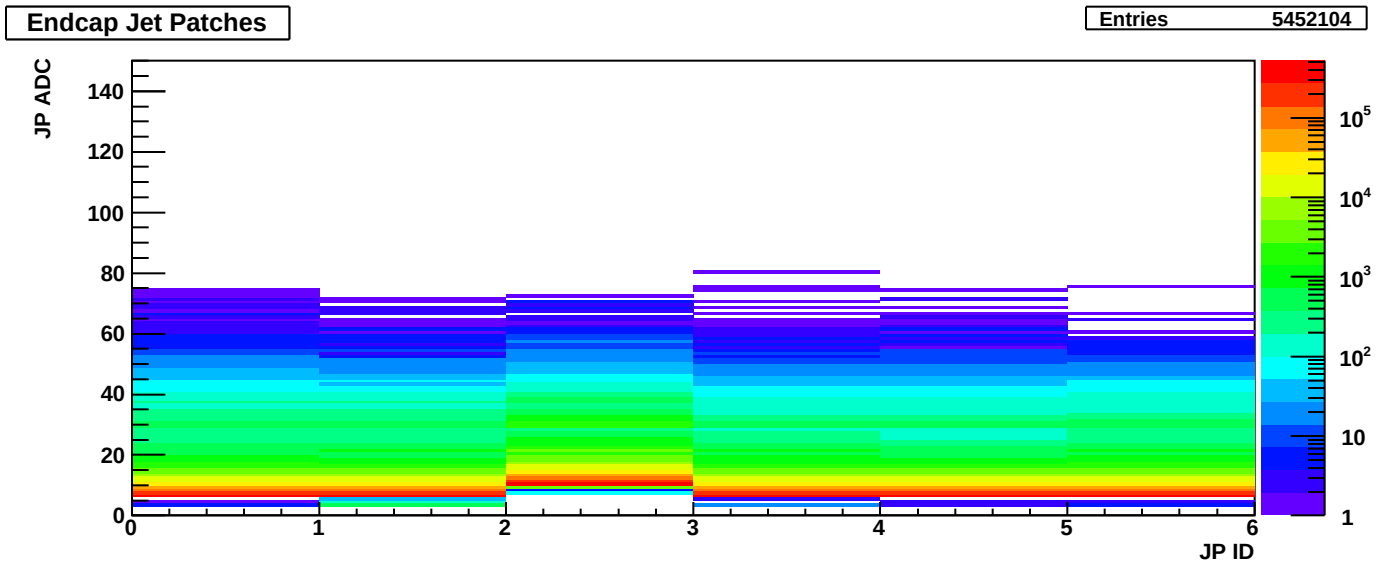

Barrel EMC L0 Input - High Tower
Entries 2.726052e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

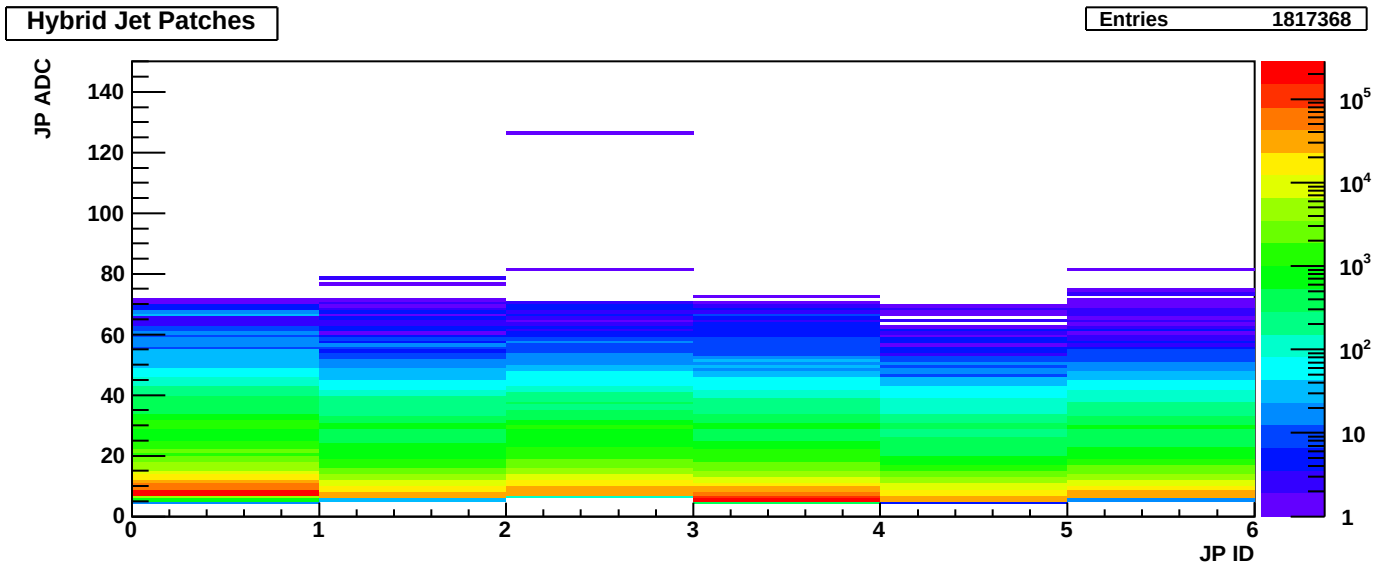

Barrel EMC L0 Input - Patch Sum
Entries 2.726052e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

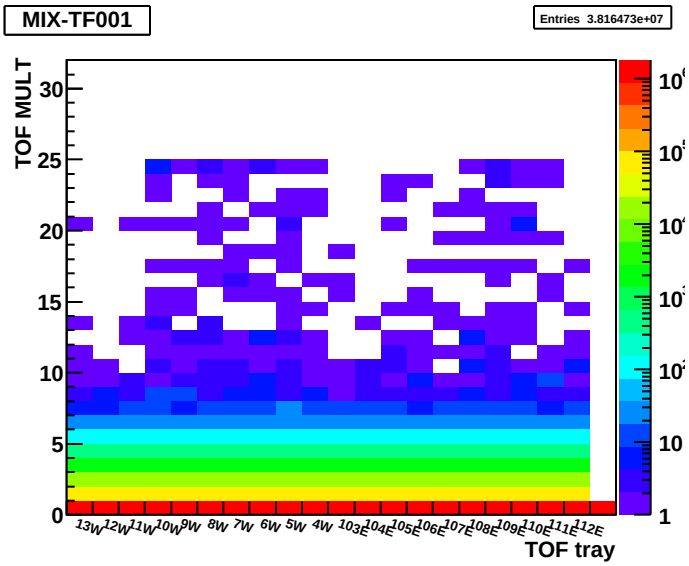

Endcap EMC L0 Input - High Tower
Entries 8.178156e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

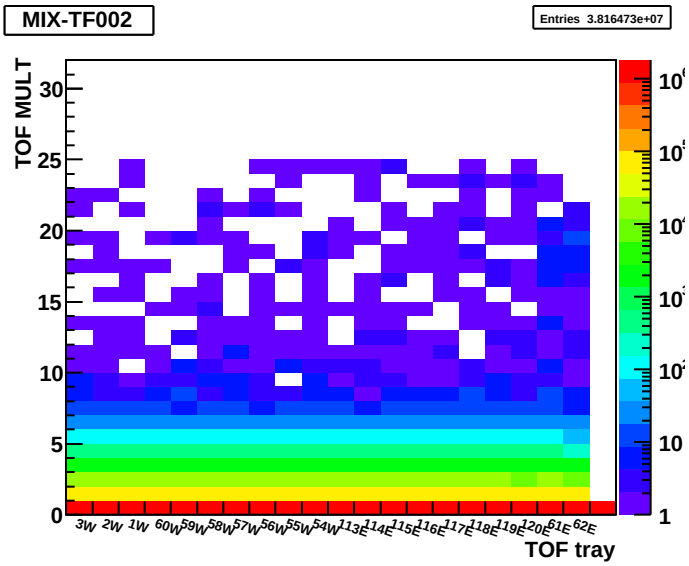

Endcap EMC L0 Input - Patch Sum
Entries 8.178156e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

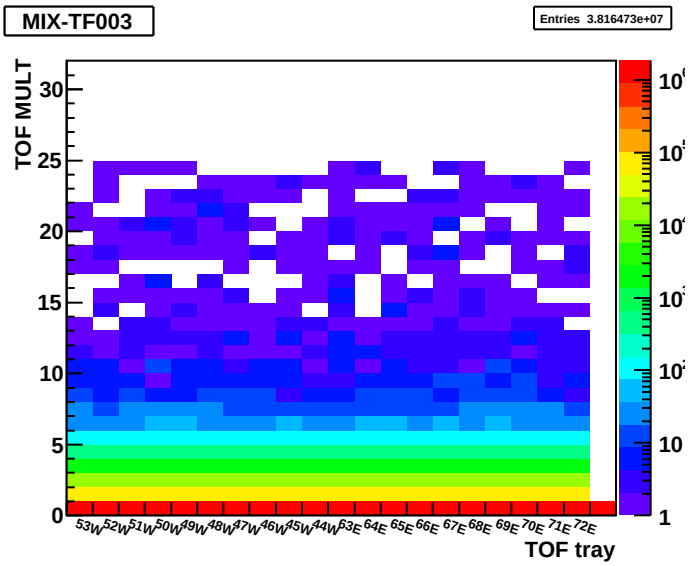

Barrel Jet Patches
Entries 1.635631e+07
JP ADC
JP ID

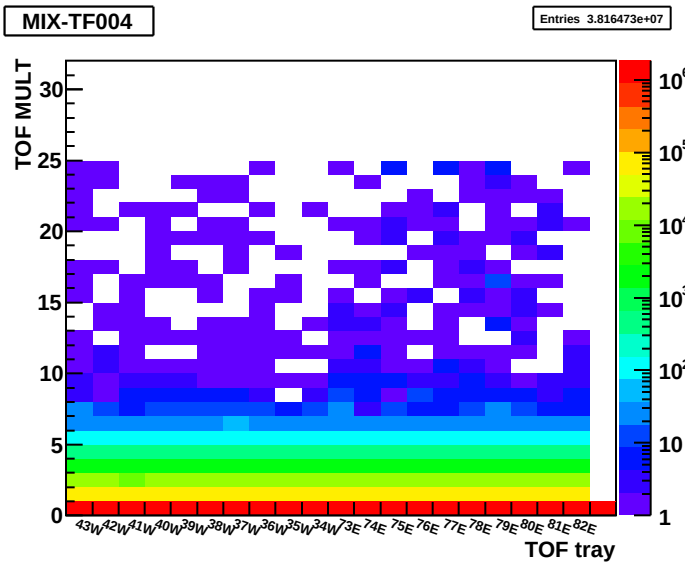

Endcap Jet Patches
Entries 5452104
JP ADC
JP ID

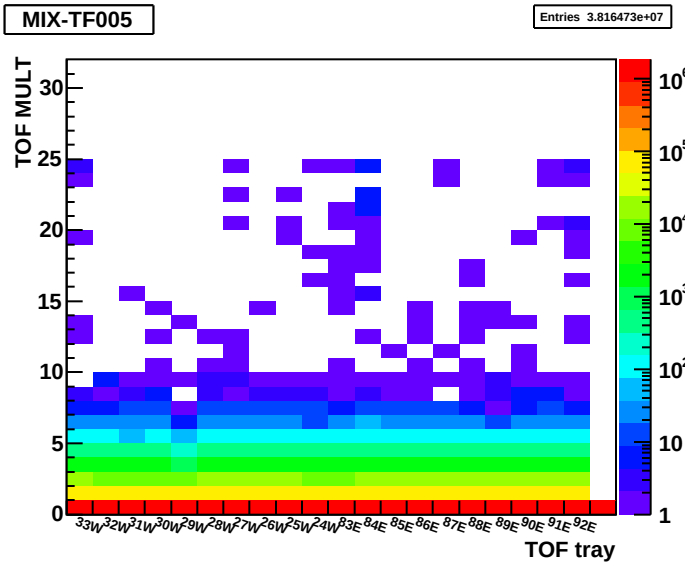

Hybrid Jet Patches
Entries 1817368
JP ADC
JP ID

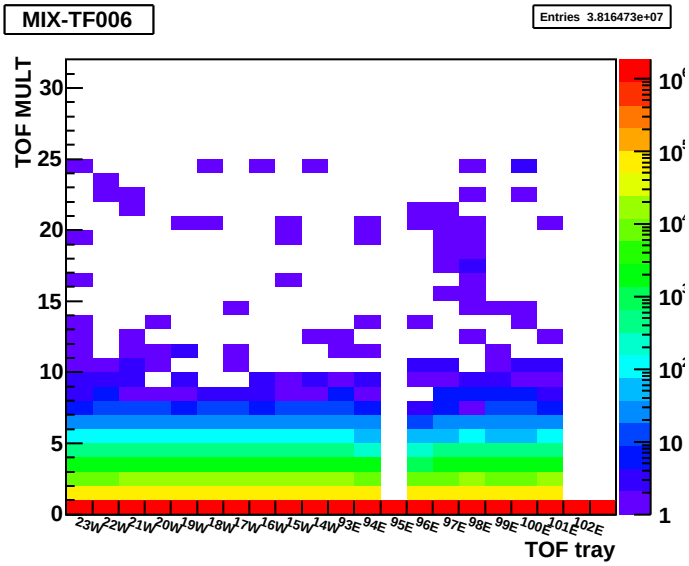

MIX-TF001
Entries 3.816473e+07
TOF MULT
TOF tray

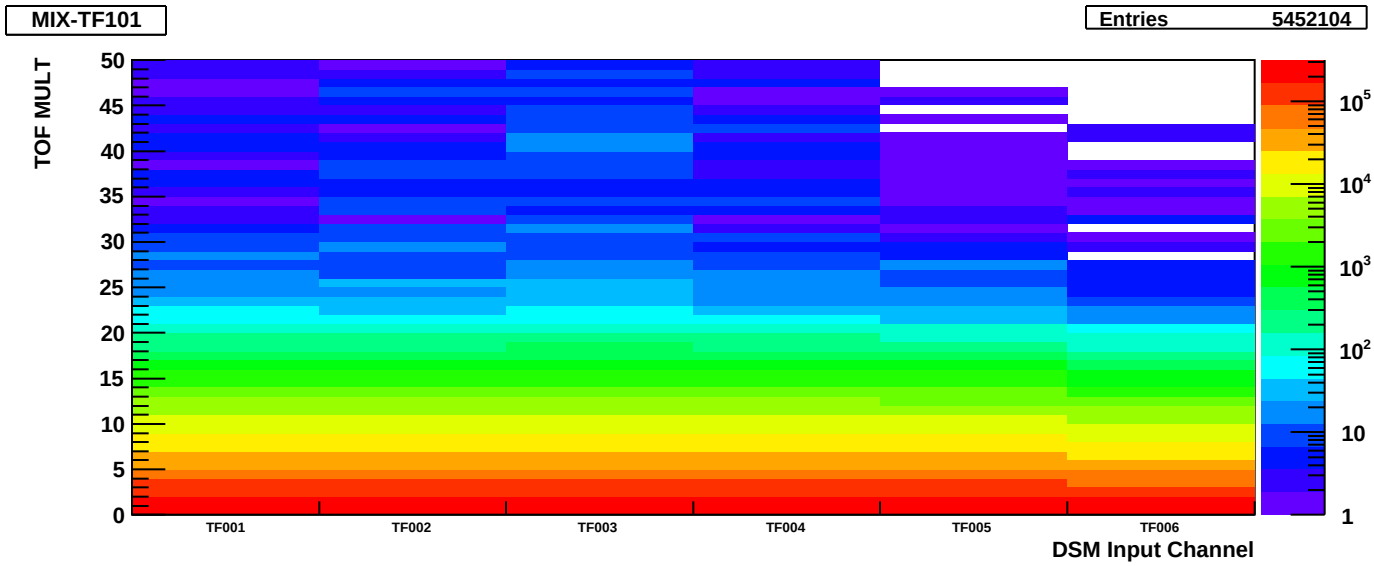

MIX-TF002
Entries 3.816473e+07
TOF MULT
TOF tray

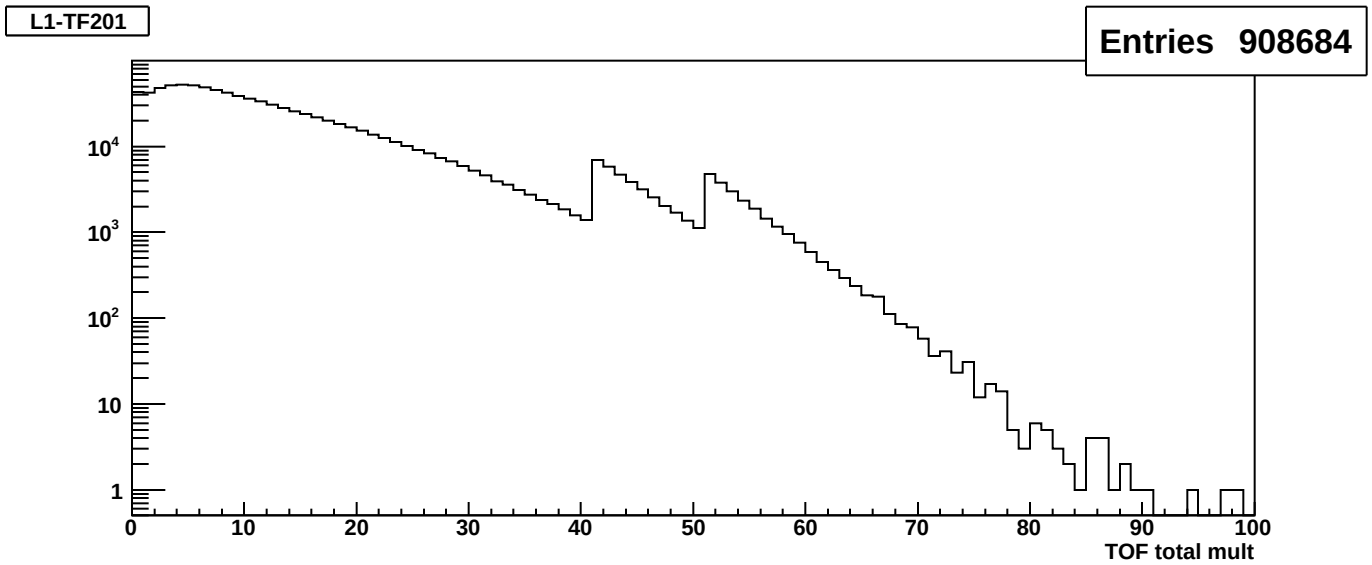

MIX-TF003
Entries 3.816473e+07
TOF MULT
TOF tray

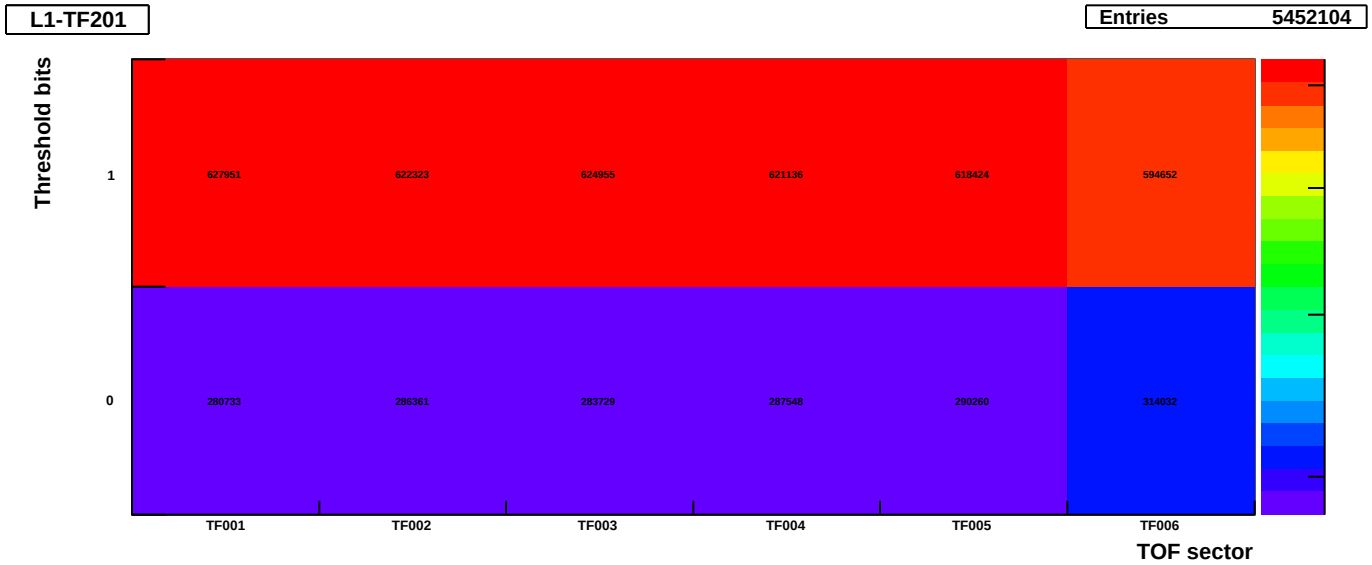

MIX-TF004
Entries 3.816473e+07
TOF MULT
TOF tray

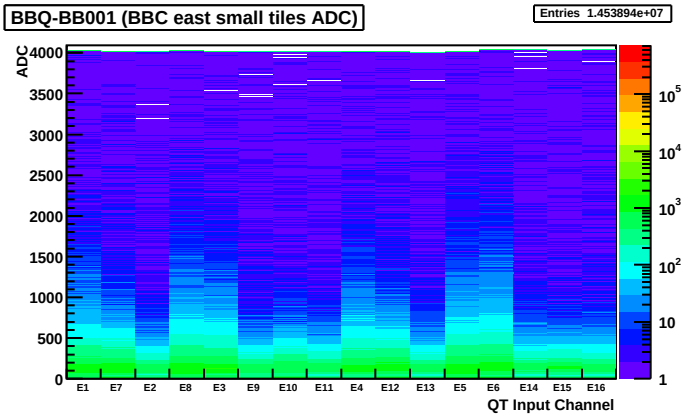

MIX-TF005
Entries 3.816473e+07
TOF MULT
TOF tray

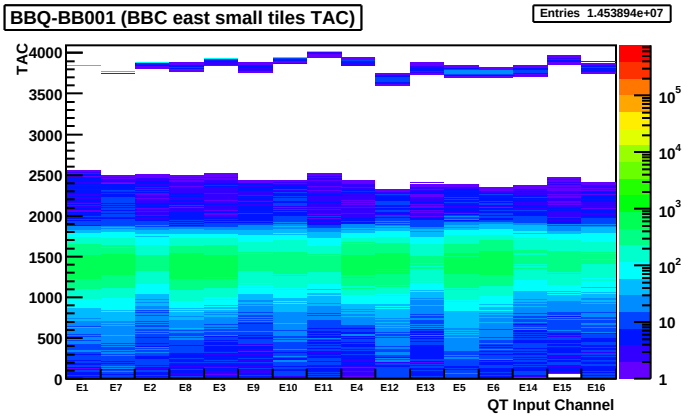

MIX-TF006
Entries 3.816473e+07
TOF MULT
TOF tray

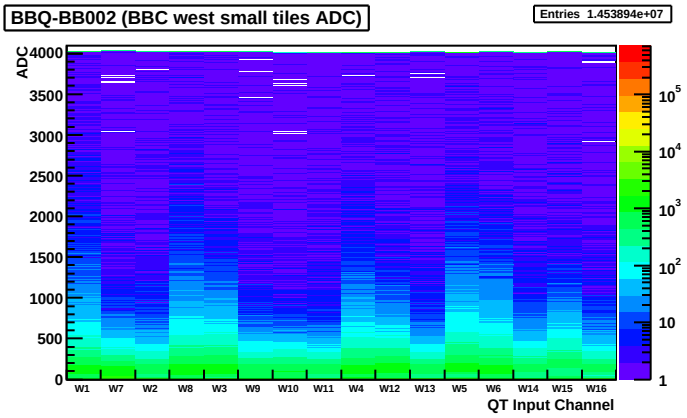

MIX-TF101
Entries 5452104
TOF MULT
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

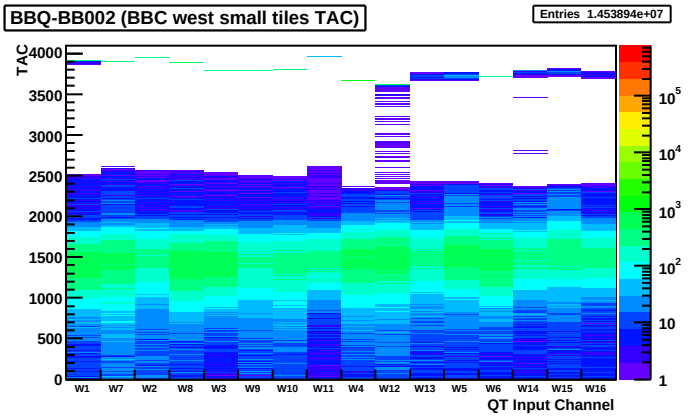

L1-TF201
Entries 908684
TOF total mult

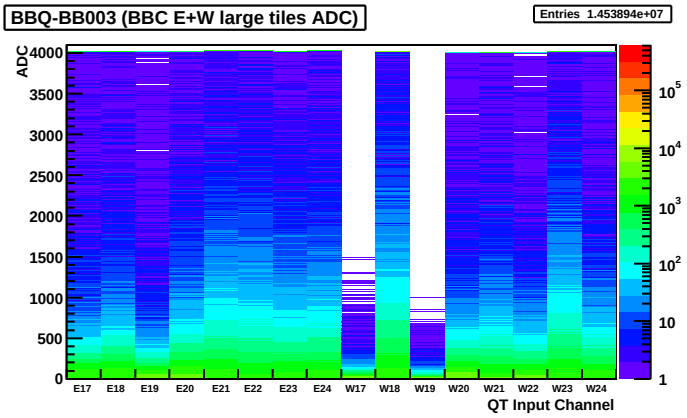

L1-TF201
Entries 5452104
Threshold bits
627951
622323
624955
621136
618424
594652
280733
286361
283729
287548
290260
314032
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

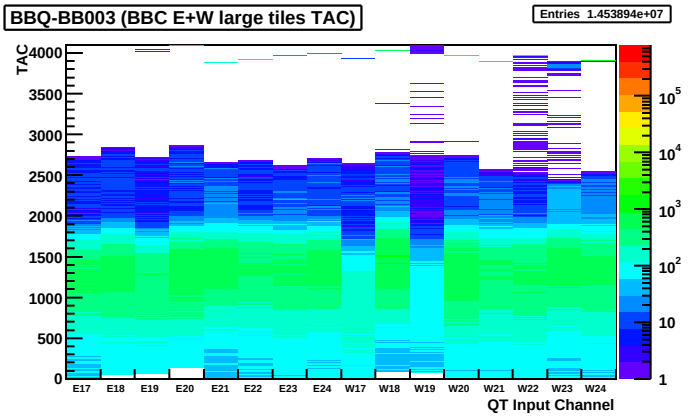

BBQ-BB001 (BBC east small tiles ADC)
Entries 1.453894e+07
ADC
QT Input Channel

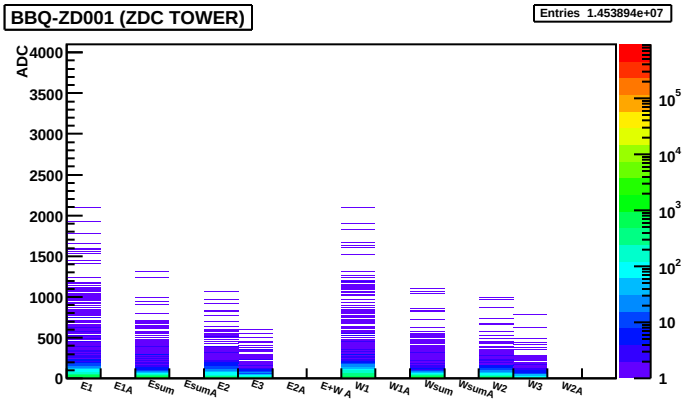

BBQ-BB001 (BBC east small tiles TAC)
Entries 1.453894e+07
TAC
QT Input Channel

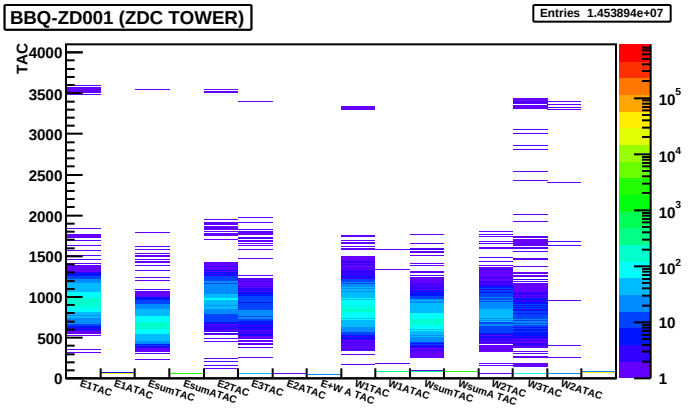

BBQ-BB002 (BBC west small tiles ADC)
Entries 1.453894e+07
ADC
QT Input Channel

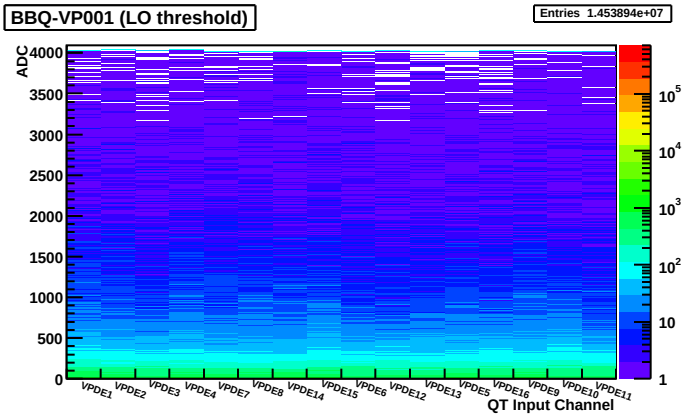

BBQ-BB002 (BBC west small tiles TAC)
Entries 1.453894e+07
TAC
QT Input Channel

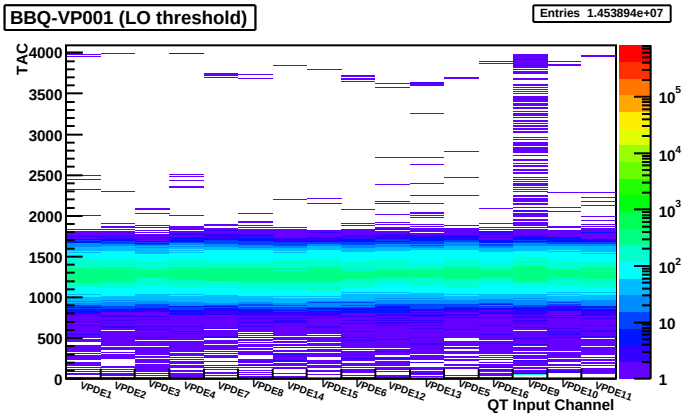

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 1.453894e+07
ADC
QT Input Channel

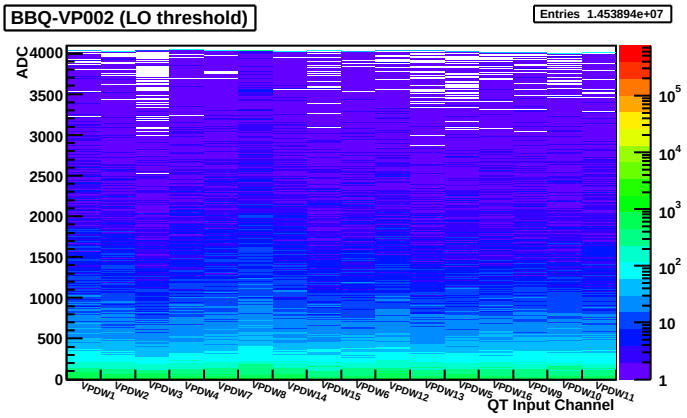

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 1.453894e+07
TAC
QT Input Channel

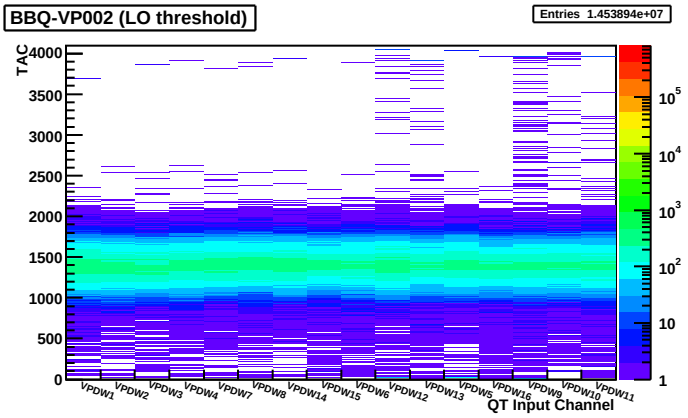

BBQ-ZD001 (ZDC TOWER)
Entries 1.453894e+07
ADC

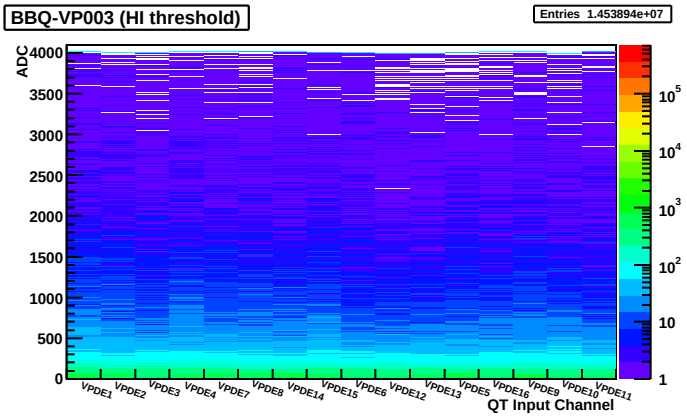

BBQ-ZD001 (ZDC TOWER)
Entries 1.453894e+07
TAC

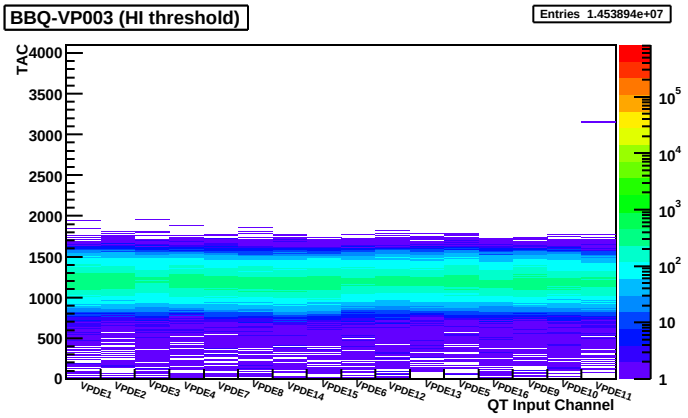

BBQ-VP001 (LO threshold)
Entries 1.453894e+07
ADC
QT Input Channel

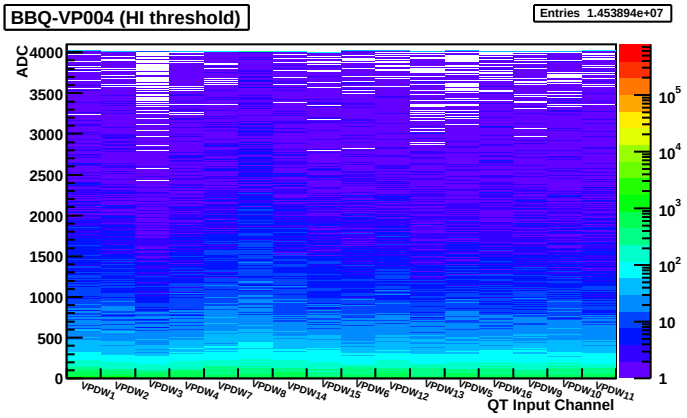

BBQ-VP001 (LO threshold)
Entries 1.453894e+07
TAC
QT Input Channel

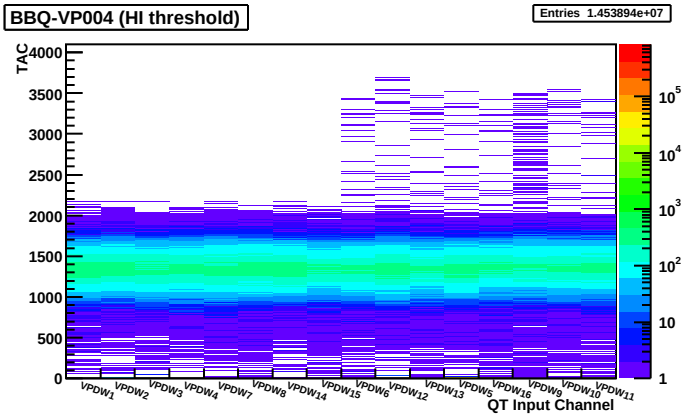

BBQ-VP002 (LO threshold)
Entries 1.453894e+07
ADC
QT Input Channel

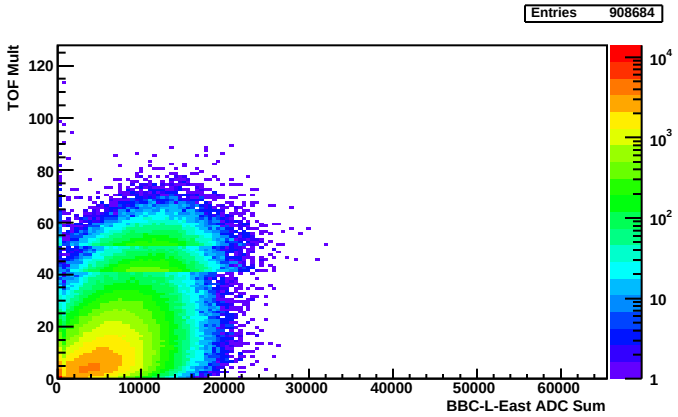

BBQ-VP002 (LO threshold)
Entries 1.453894e+07
TAC
QT Input Channel

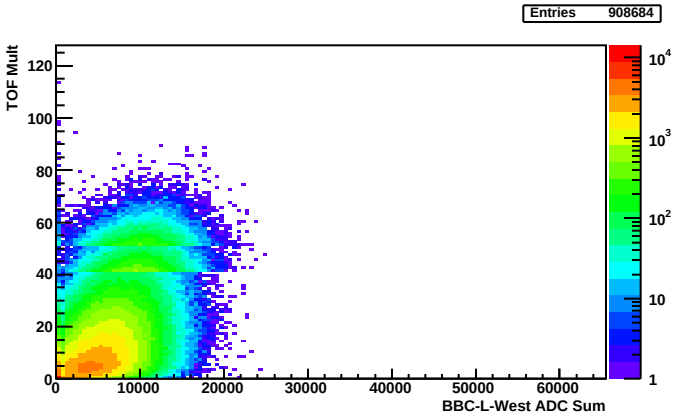

BBQ-VP003 (HI threshold)
Entries 1.453894e+07
ADC
QT Input Channel

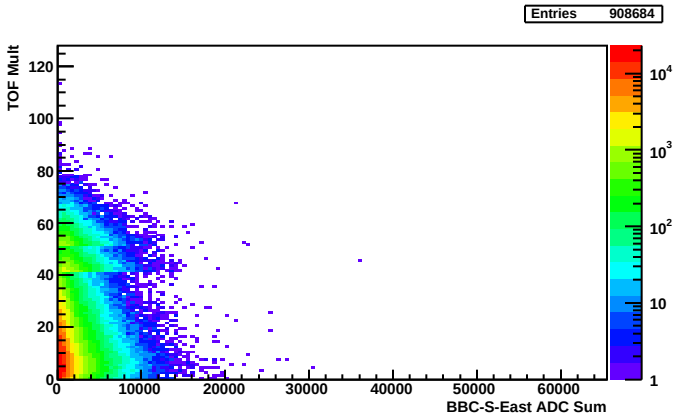

BBQ-VP003 (HI threshold)
Entries 1.453894e+07
TAC
QT Input Channel

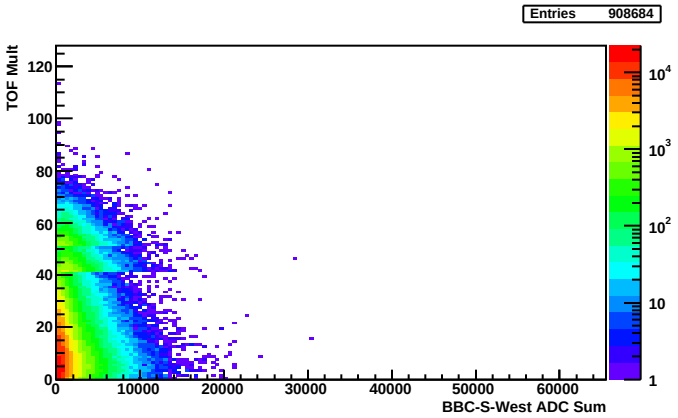

BBQ-VP004 (HI threshold)
Entries 1.453894e+07
ADC
QT Input Channel

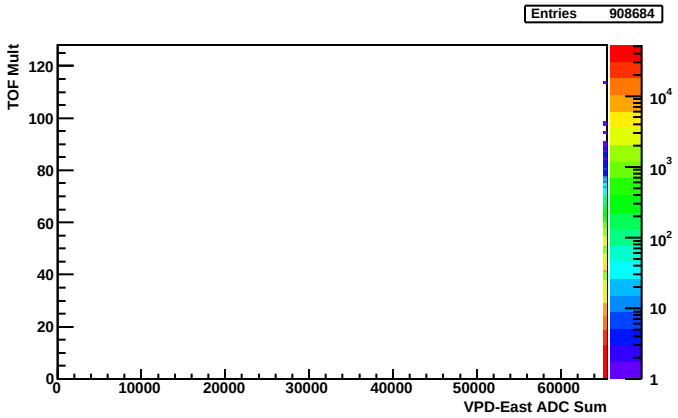

BBQ-VP004 (HI threshold)
Entries 1.453894e+07
TAC
QT Input Channel

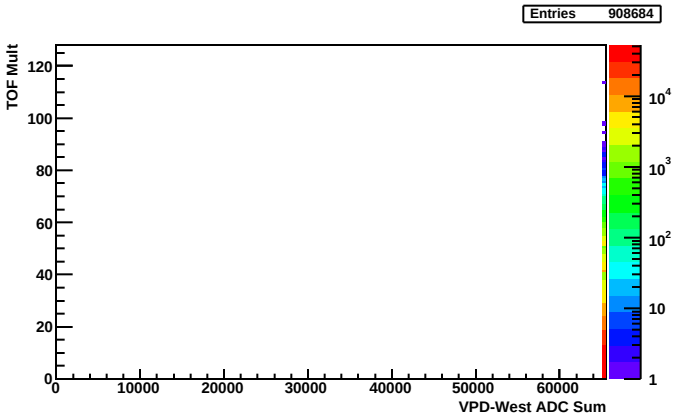

Entries 908684
TOF Mult
BBC-L-East ADC Sum

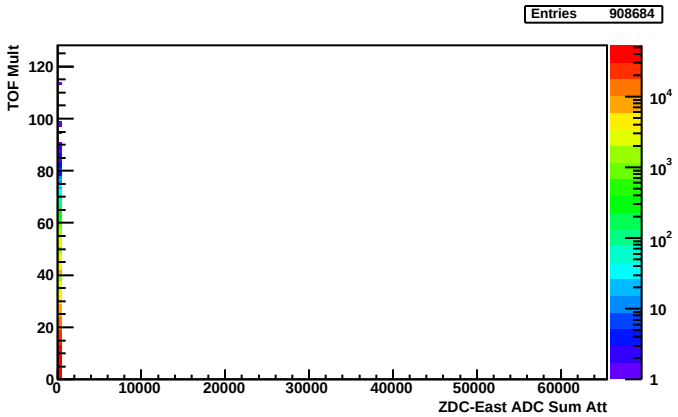

Entries 908684
TOF Mult
BBC-L-West ADC Sum

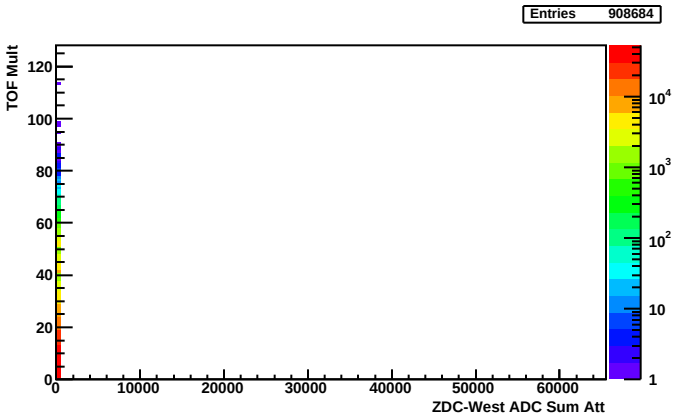

Entries 908684
TOF Mult
BBC-S-East ADC Sum

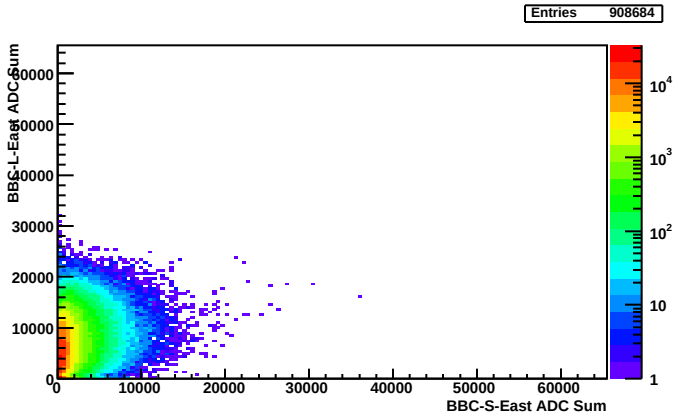

Entries 908684
TOF Mult
BBC-S-West ADC Sum

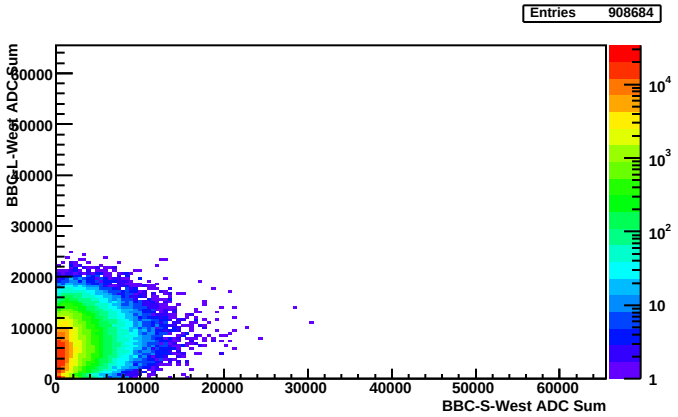

Entries 908684
TOF Mult
VPD-East ADC Sum

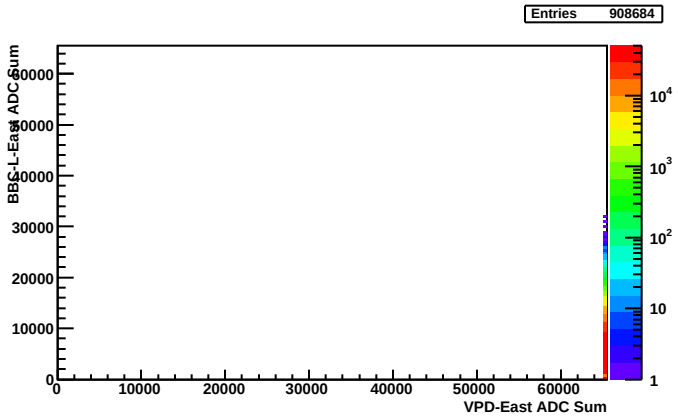

Entries 908684
TOF Mult
VPD-West ADC Sum

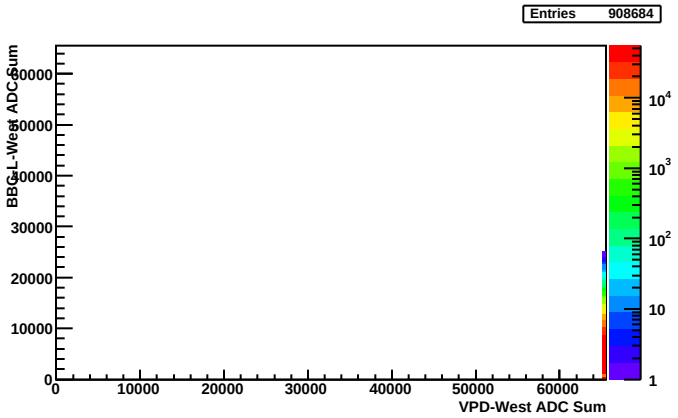

Entries 908684
TOF Mult
ZDC-East ADC Sum Att

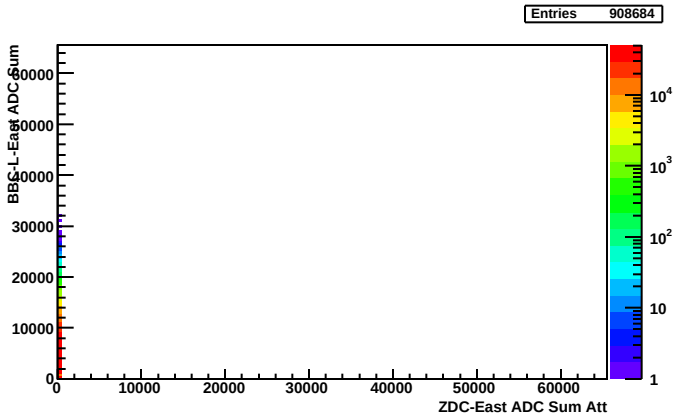

Entries 908684
TOF Mult
ZDC-West ADC Sum Att

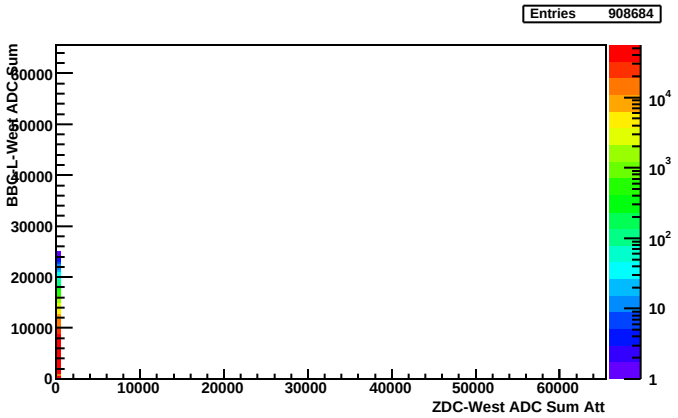

Entries 908684
BBC-L-East ADC Sum
BBC-S-East ADC Sum

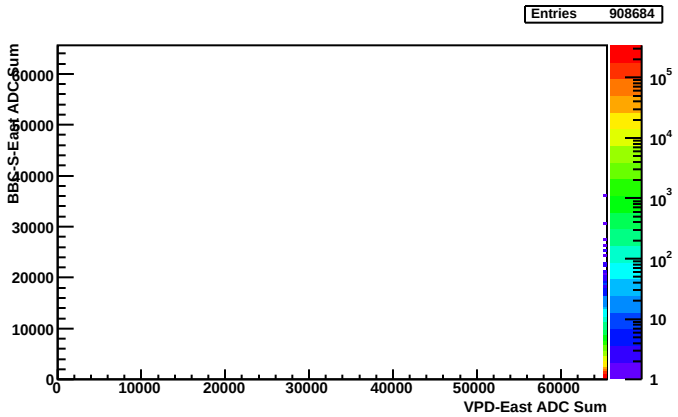

Entries 908684
BBC-L-West ADC Sum
BBC-S-West ADC Sum

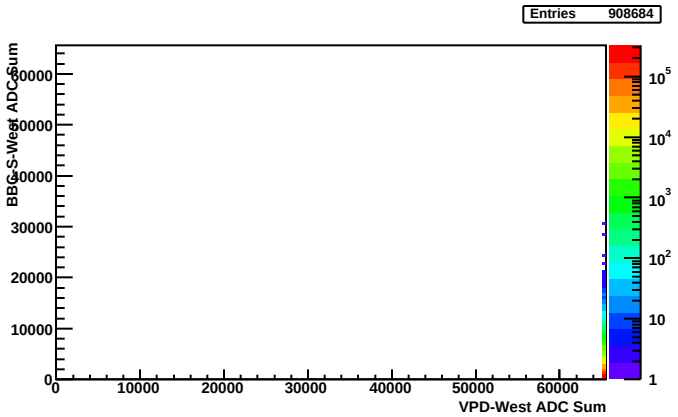

Entries 908684
BBC-L-East ADC Sum
VPD-East ADC Sum

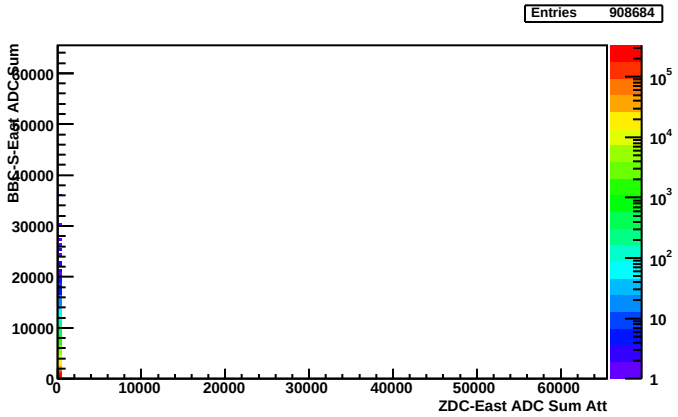

Entries 908684
BBC-L-West ADC Sum
VPD-West ADC Sum

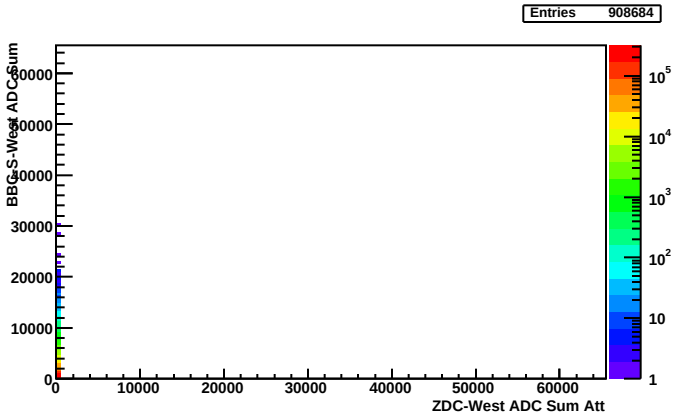

Entries 908684
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

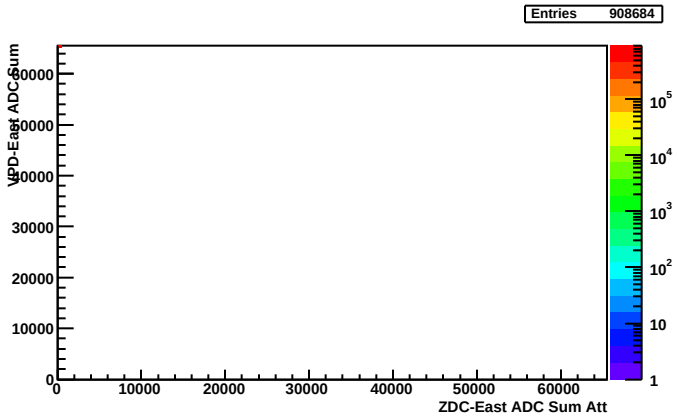

Entries 908684
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

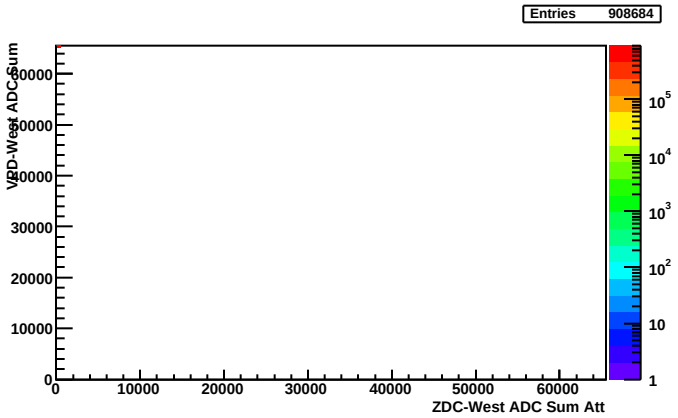

Entries 908684
BBC-S-East ADC Sum
VPD-East ADC Sum

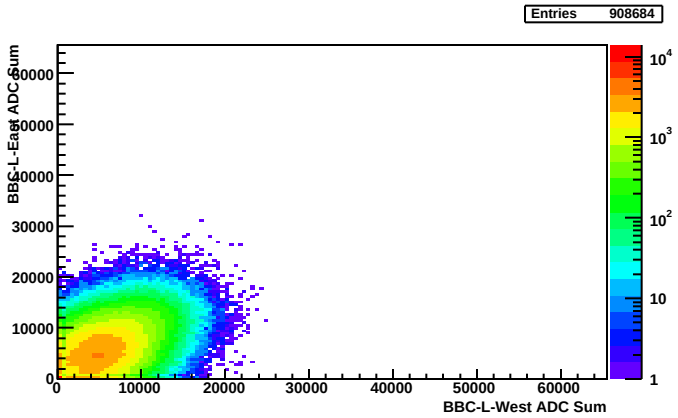

Entries 908684
BBC-S-West ADC Sum
VPD-West ADC Sum

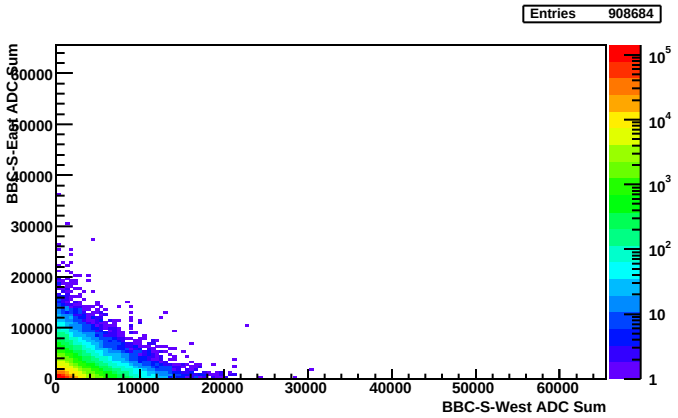

Entries 908684
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

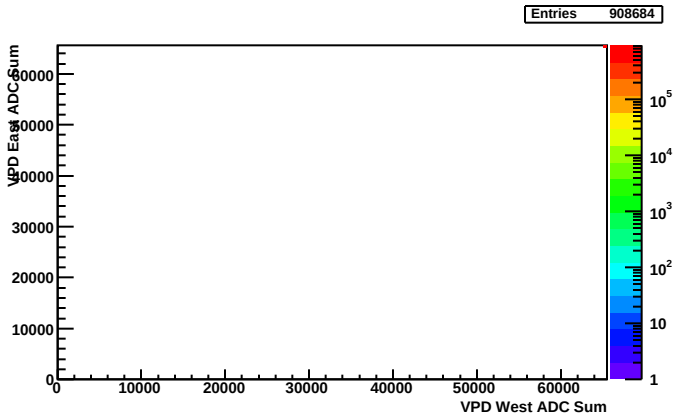

Entries 908684
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

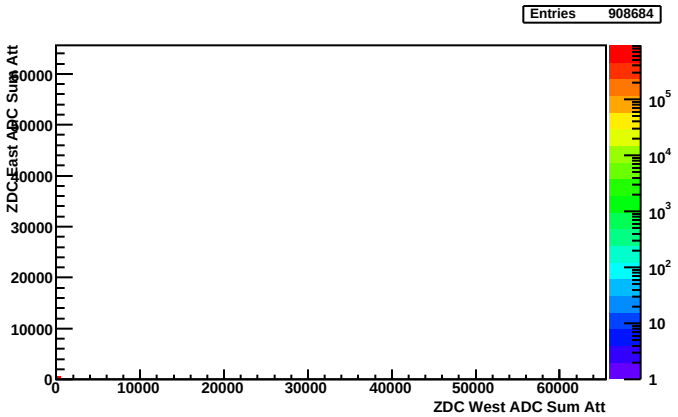

Entries 908684
VPD-East ADC Sum
ZDC-East ADC Sum Att

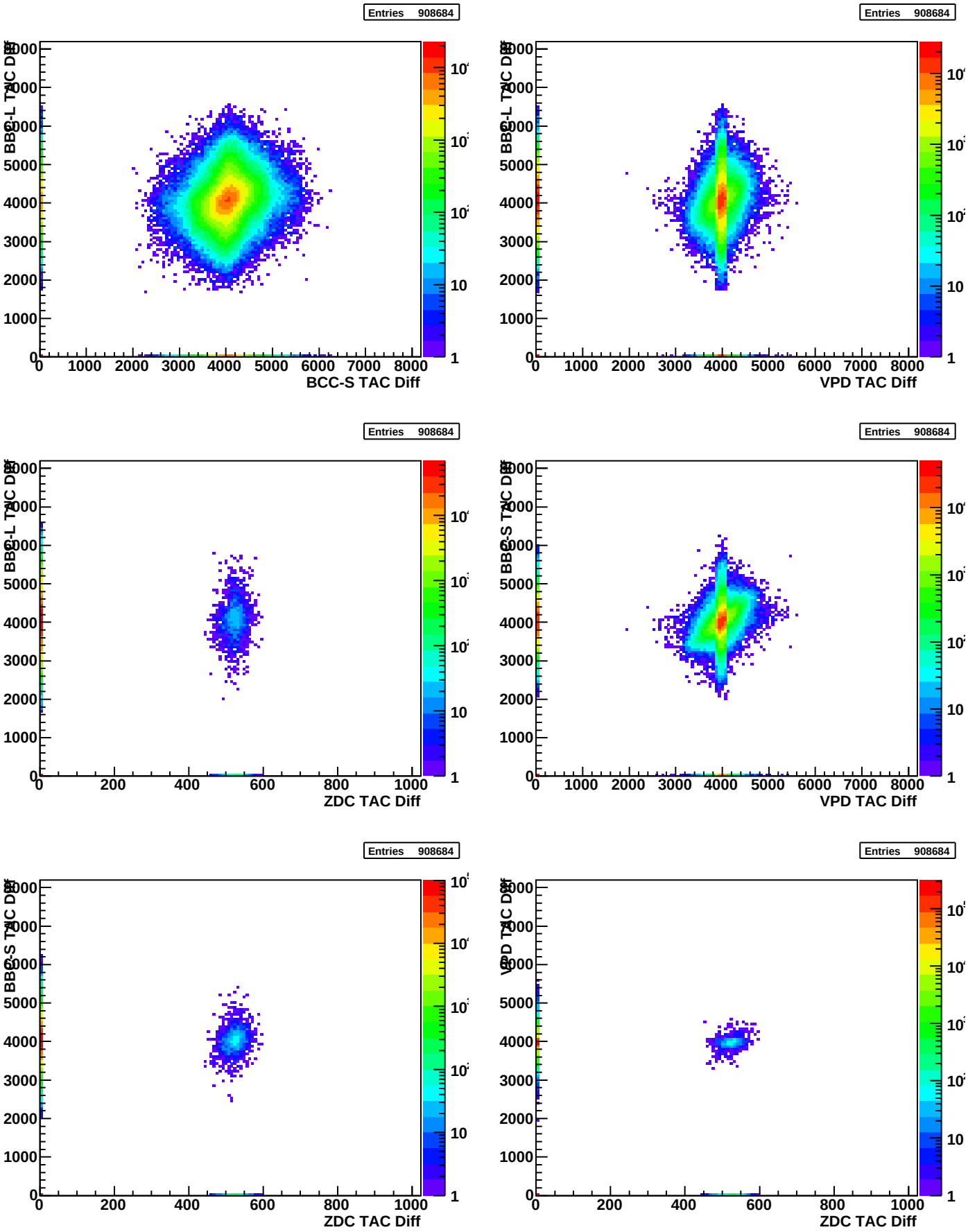

Entries 908684
VPD-West ADC Sum
ZDC-West ADC Sum Att

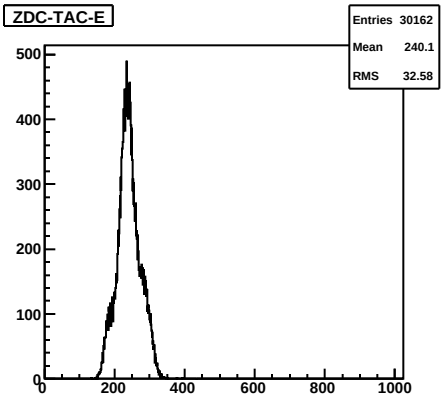

Entries 908684
BBC-L-East ADC Sum
BBC-L-West ADC Sum

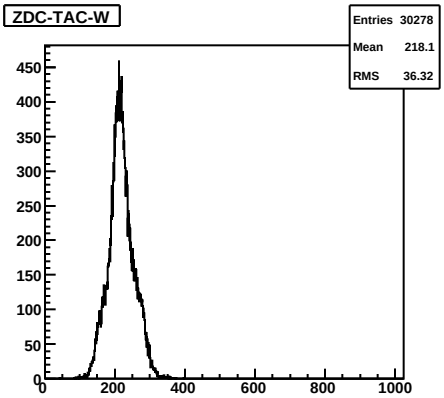

Entries 908684
BBC-S-East ADC Sum
BBC-S-West ADC Sum

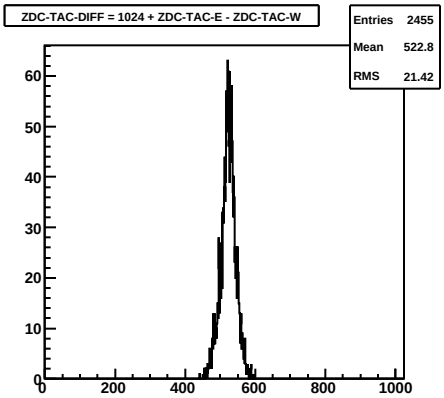

Entries 908684
VPD East ADC Sum
VPD West ADC Sum

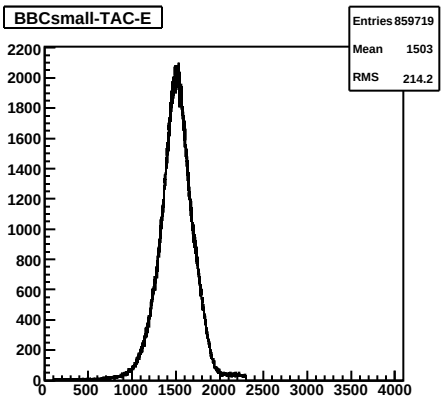

Entries 908684
ZDC East ADC Sum Att
ZDC West ADC Sum Att

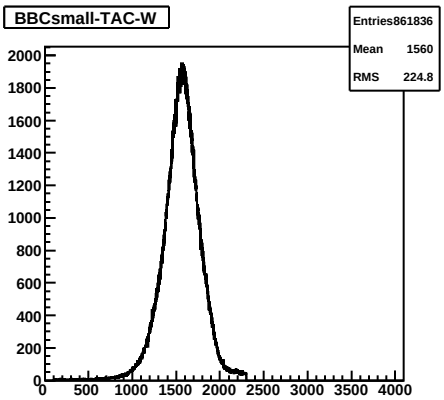

Entries 908684
BBC-L TAC Diff
BCC-S TAC Diff
Entries 908684
BBC-L TAC Diff
VPD TAC Diff
Entries 908684
BBC-L TAC Diff
ZDC TAC Diff
Entries 908684
BBC-S TAC Diff
VPD TAC Diff
Entries 908684
BBC-S TAC Diff
ZDC TAC Diff
Entries 908684
VPD TAC Diff
ZDC TAC Diff

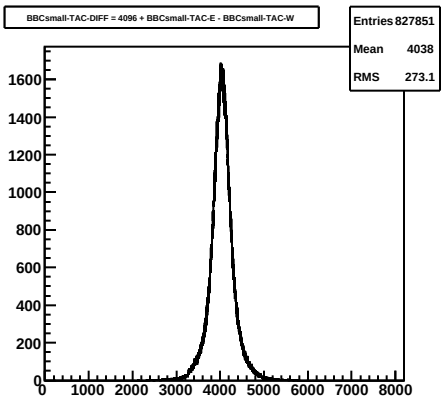

ZDC-TAC-E
Entries 30162
Mean 240.1
RMS 32.58

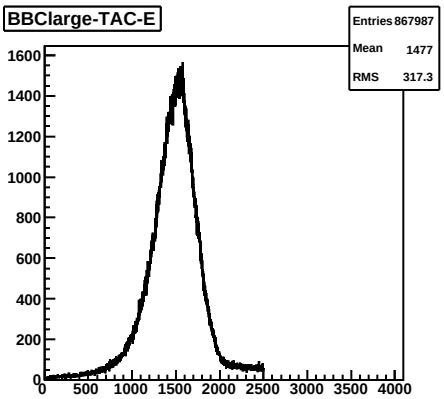

ZDC-TAC-W
Entries 30278
Mean 218.1
RMS 36.32

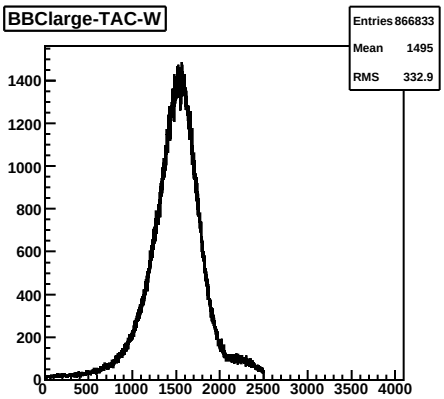

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 2455
Mean 522.8
RMS 21.42

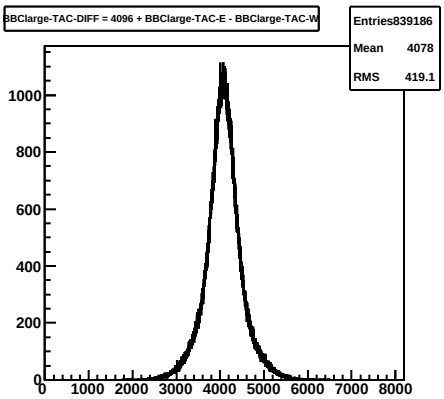

BBCsmall-TAC-E
Entries 859719
Mean 1503
RMS 214.2

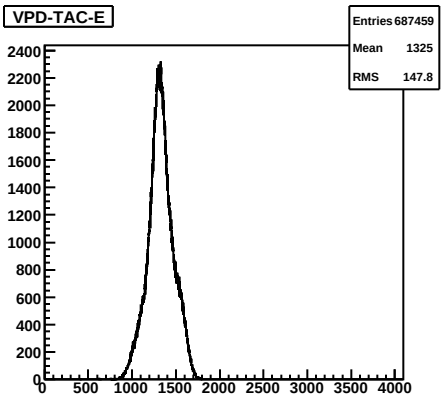

BBCsmall-TAC-W
Entries 861836
Mean 1560
RMS 224.8

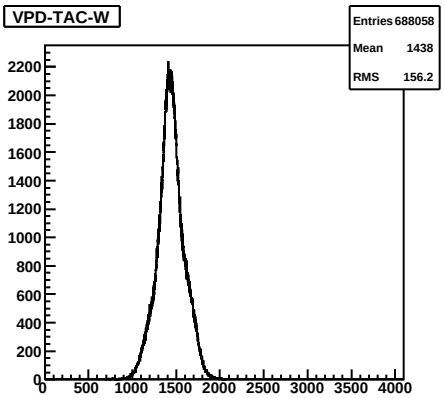

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 827851
Mean 4038
RMS 273.1

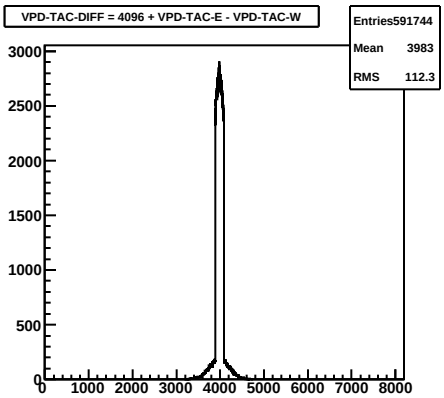

BBClarge-TAC-E
Entries 867987
Mean 1477
RMS 317.3

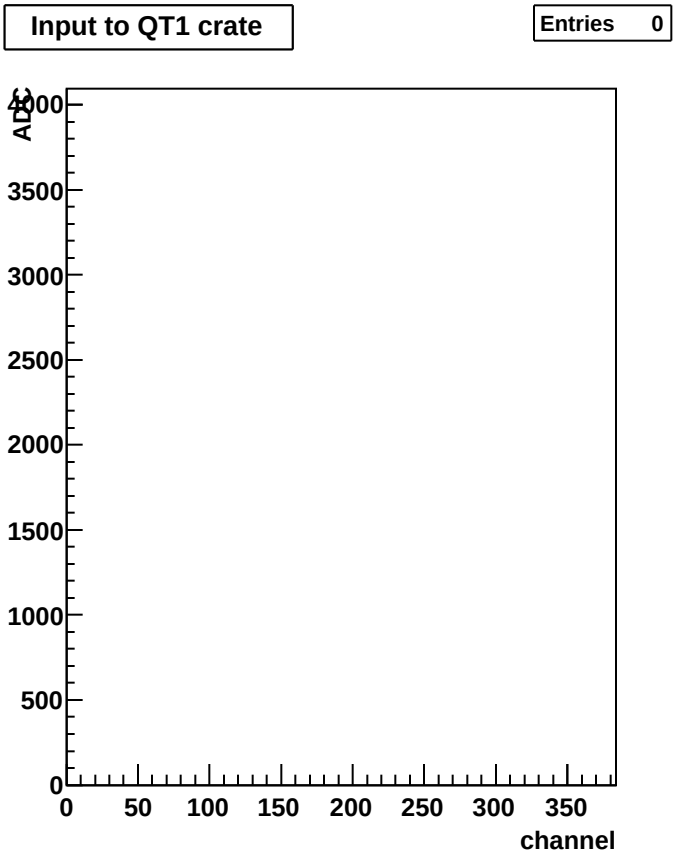

BBClarge-TAC-W
Entries 866833
Mean 1495
RMS 332.9

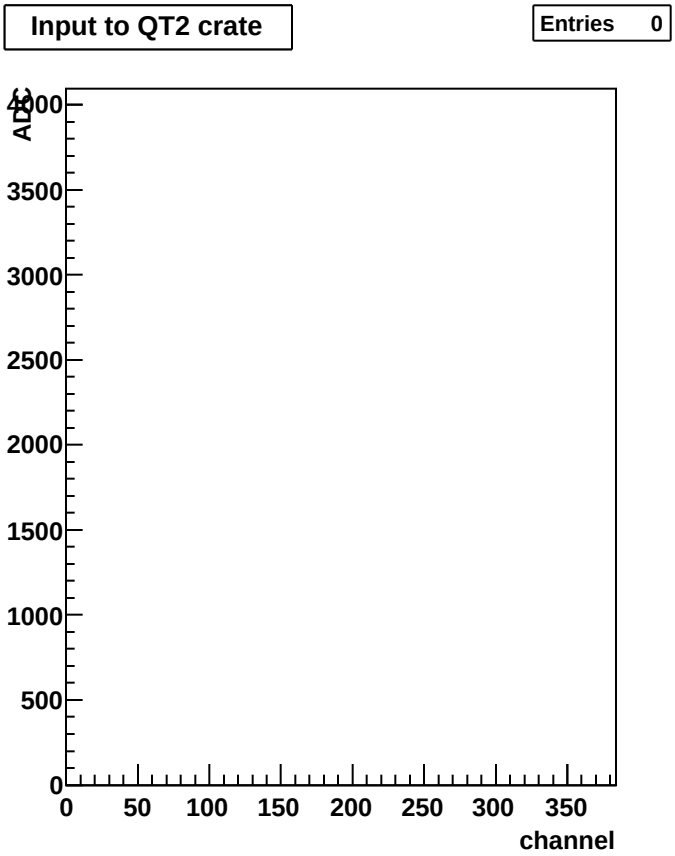

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 839186
Mean 4078
RMS 419.1

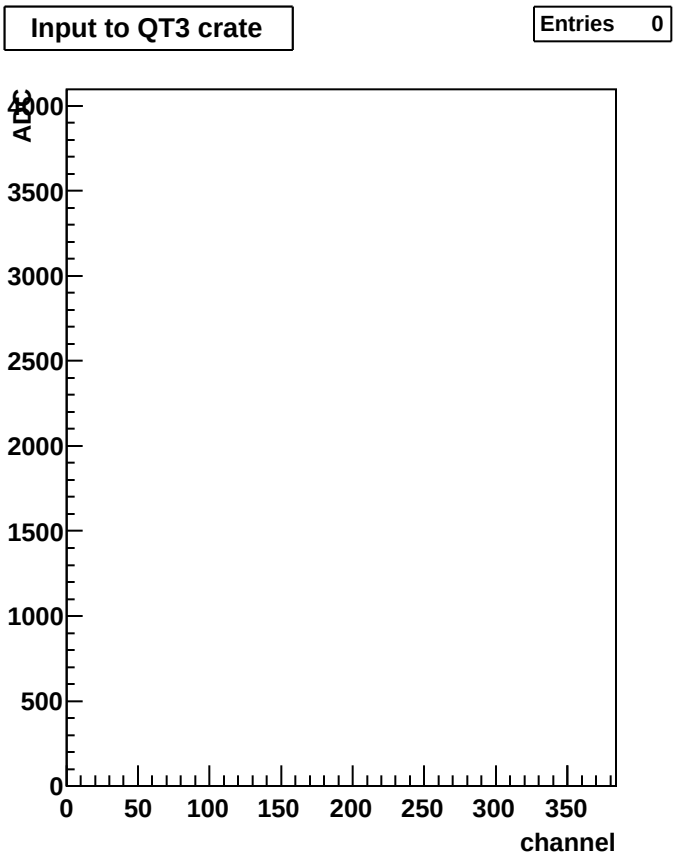

VPD-TAC-E
Entries 687459
Mean 1325
RMS 147.8

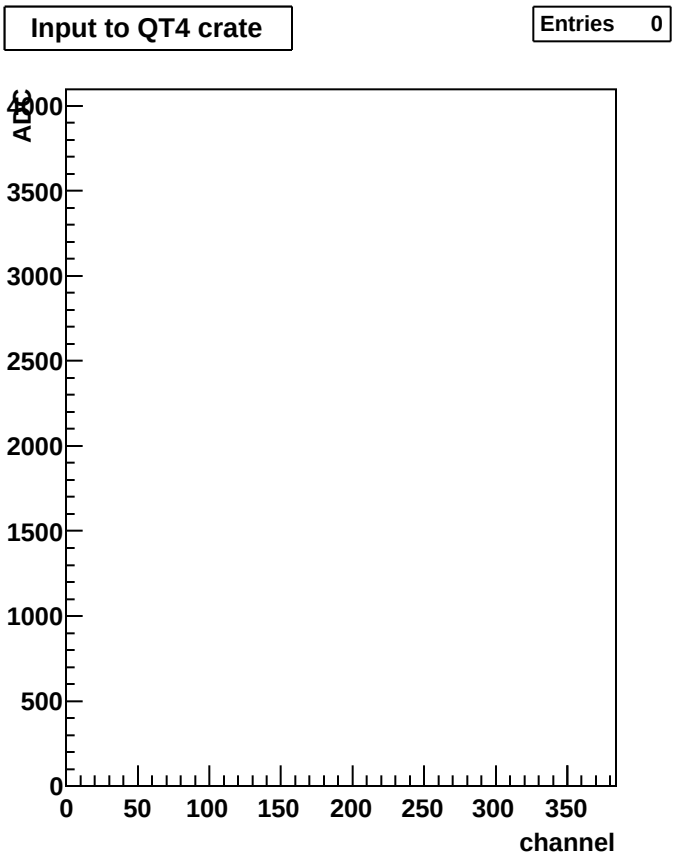

VPD-TAC-W
Entries 688058
Mean 1438
RMS 156.2

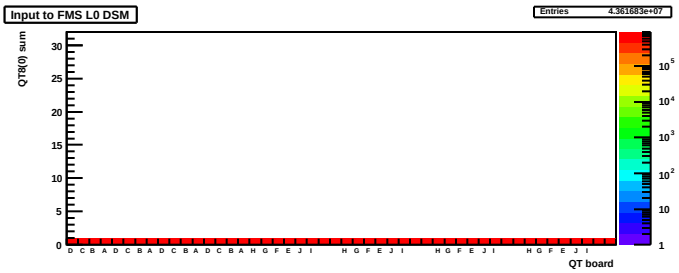

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 591744
Mean 3983
RMS 112.3

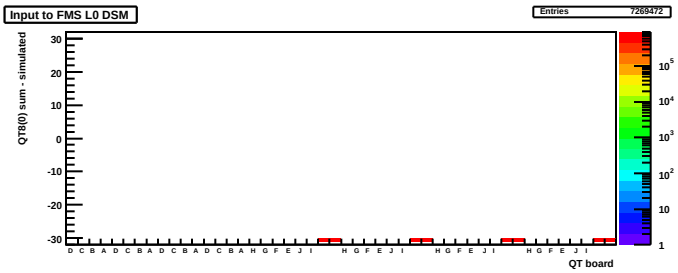

Input to QT1 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

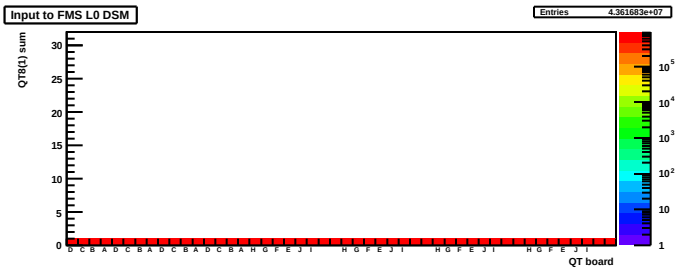

Input to QT2 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

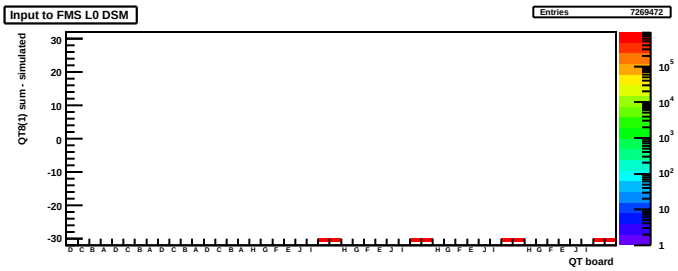

Input to QT3 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

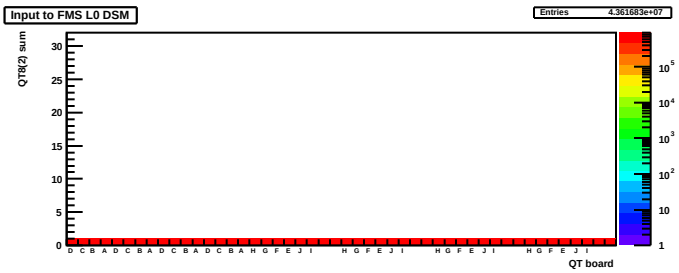

Input to QT4 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

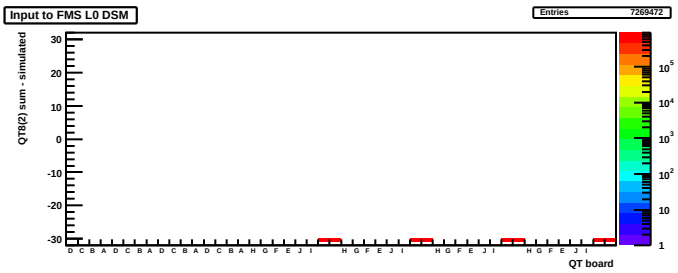

Input to FMS L0 DSM
Entries 4.361683e+07
QT8(0) sum
QT board

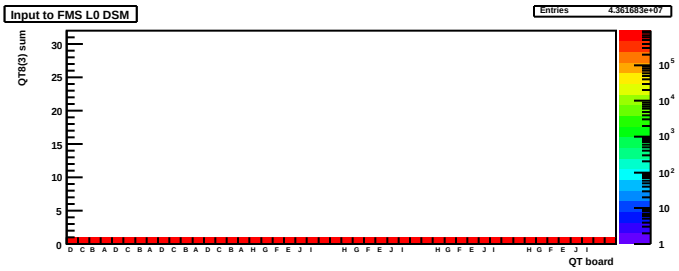

Input to FMS L0 DSM
Entries 7269472
QT8(0) sum - simulated
QT board

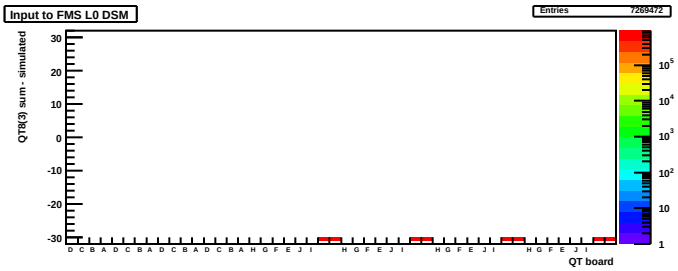

Input to FMS L0 DSM
Entries 4.361683e+07
QT8(1) sum
QT board

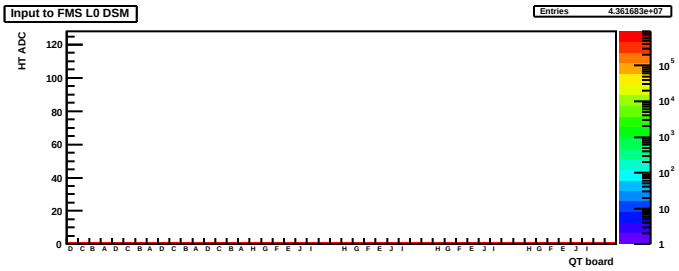

Input to FMS L0 DSM
Entries 7269472
QT8(1) sum - simulated
QT board

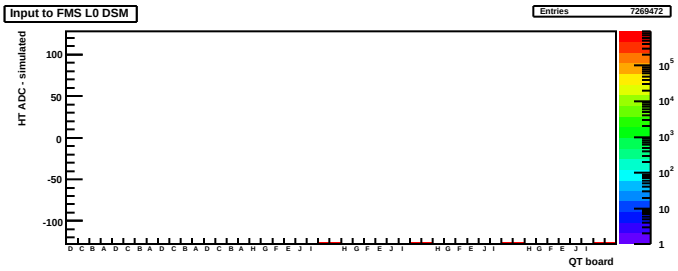

Input to FMS L0 DSM
Entries 4.361683e+07
QT8(2) sum
QT board

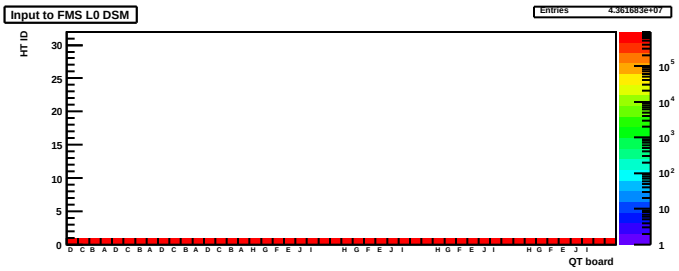

Input to FMS L0 DSM
Entries 7269472
QT8(2) sum - simulated
QT board

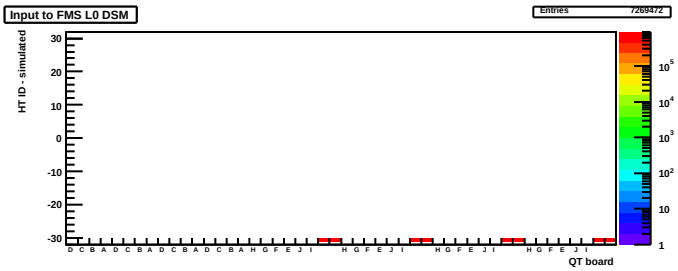

Input to FMS L0 DSM
Entries 4.361683e+07
QT8(3) sum
QT board

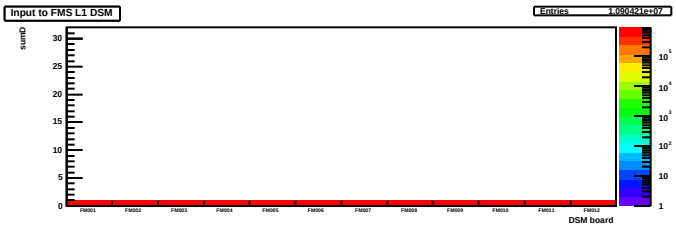

Input to FMS L0 DSM
Entries 7269472
QT8(3) sum - simulated
QT board

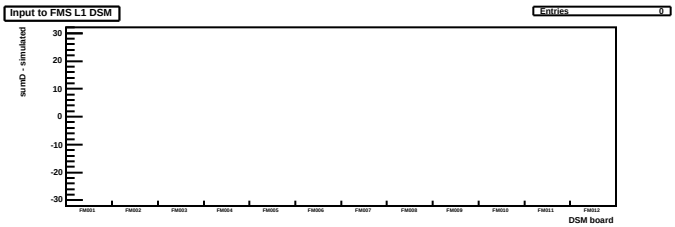

Input to FMS L0 DSM
Entries 4.361683e+07
HT ADC
QT board

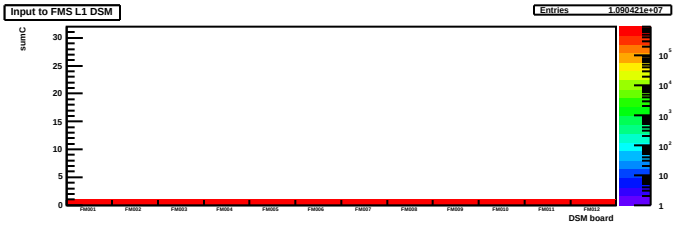

Input to FMS L0 DSM
Entries 7269472
HT ADC - simulated
QT board

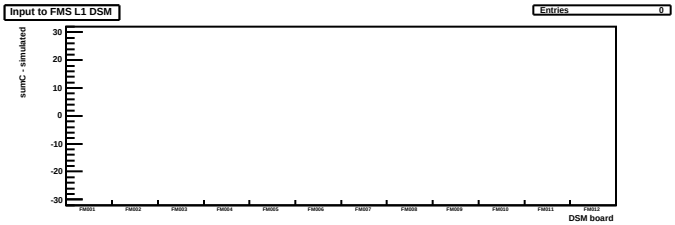

Input to FMS L0 DSM
Entries 4.361683e+07
HT ID
QT board

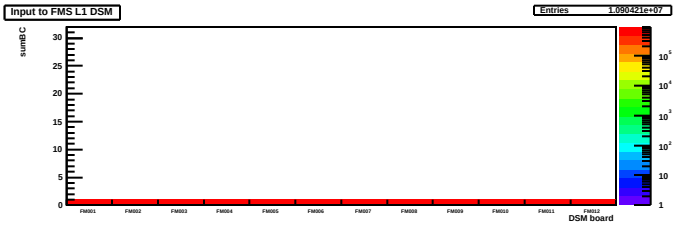

Input to FMS L0 DSM
Entries 7269472
HT ID - simulated
QT board

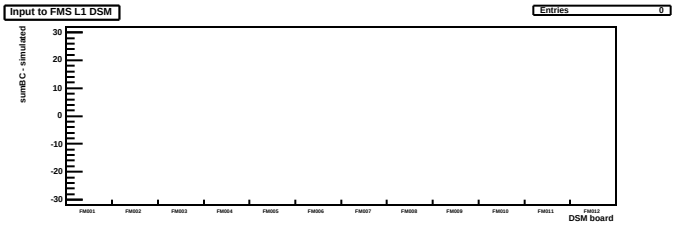

Input to FMS L1 DSM
Entries 1.090421e+07
sumD
DSM board

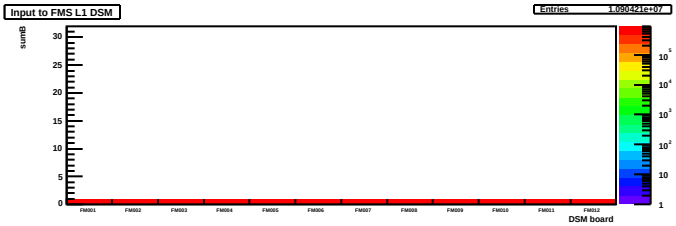

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

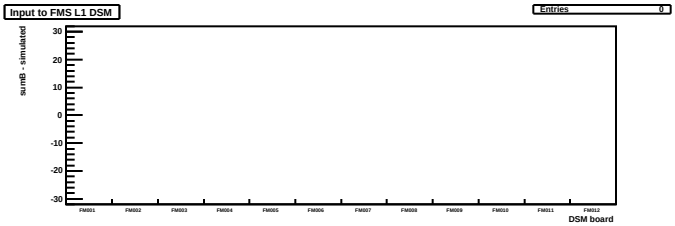

Input to FMS L1 DSM
Entries 1.090421e+07
sumC
DSM board

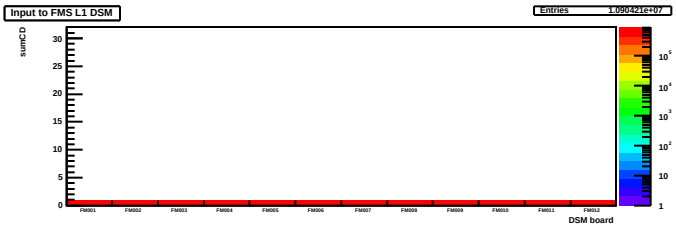

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

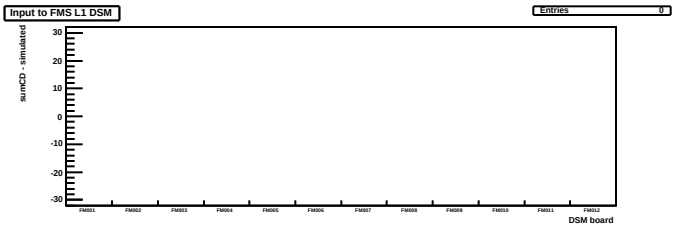

Input to FMS L1 DSM
Entries 1.090421e+07
sumBC
DSM board

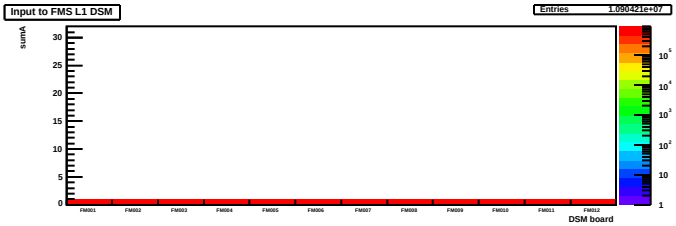

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

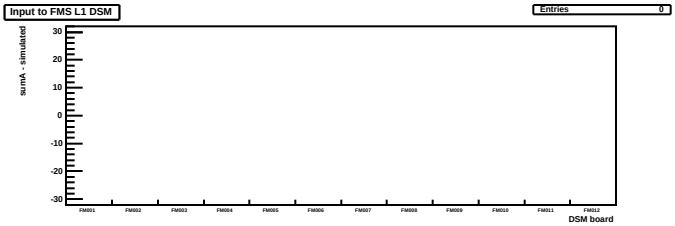

Input to FMS L1 DSM
Entries 1.090421e+07
sumB
DSM board

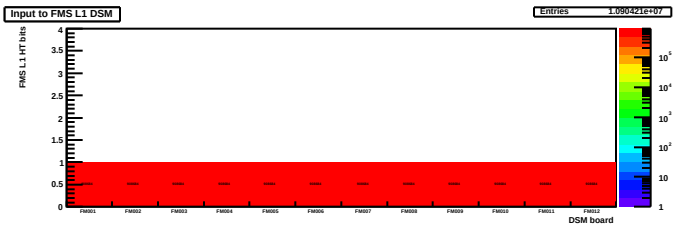

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

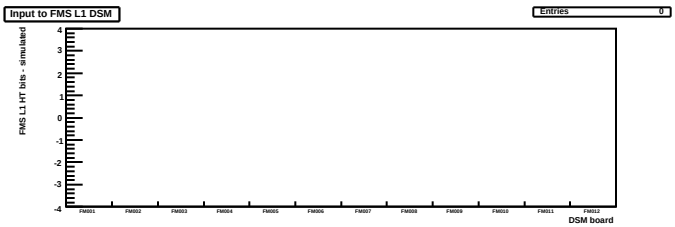

Input to FMS L1 DSM
Entries 1.090421e+07
sumCD
DSM board

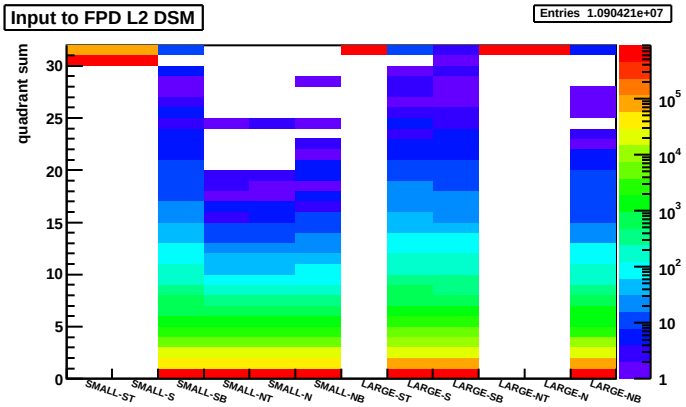

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

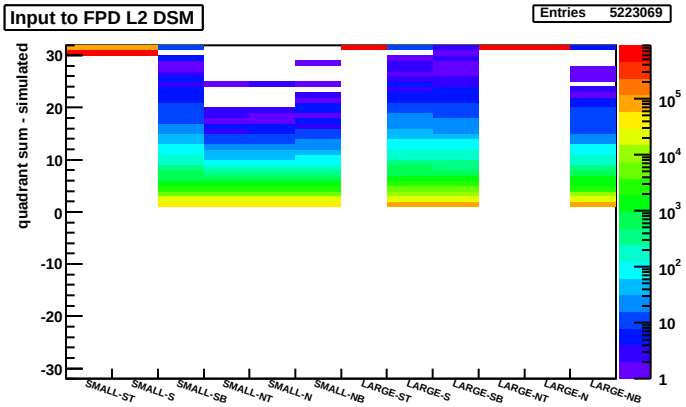

Input to FMS L1 DSM
Entries 1.090421e+07
sumA
DSM board

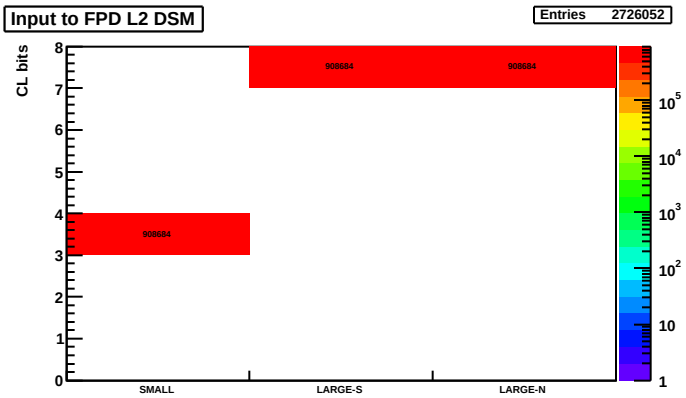

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

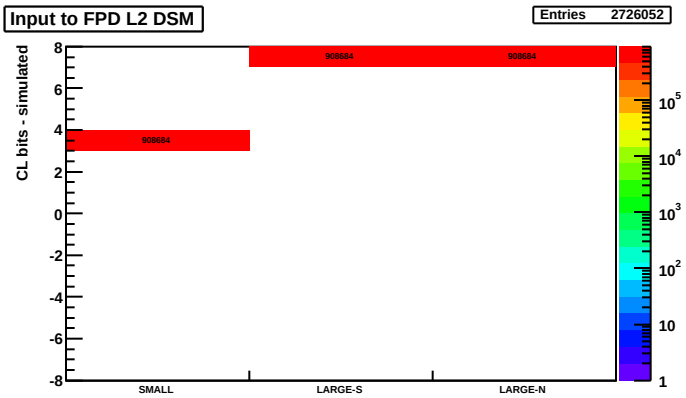

Input to FMS L1 DSM
Entries 1.090421e+07
FMS L1 HT bits
DSM board

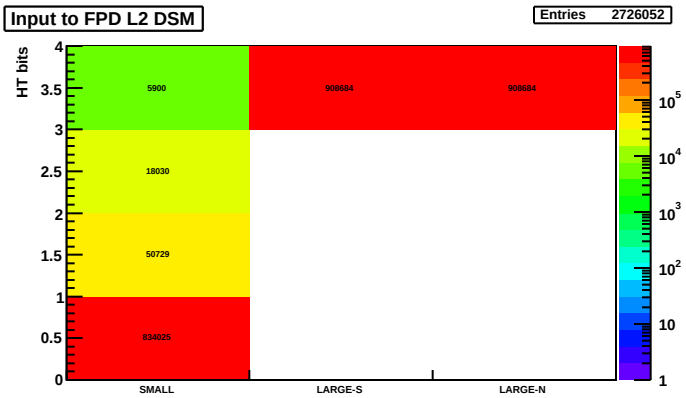

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

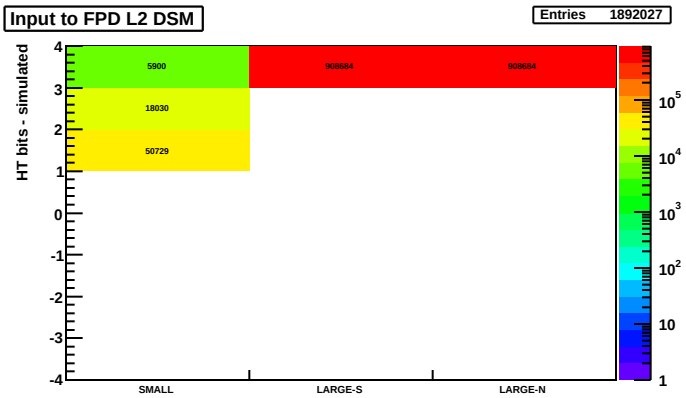

Input to FPD L2 DSM
Entries 1.090421e+07
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

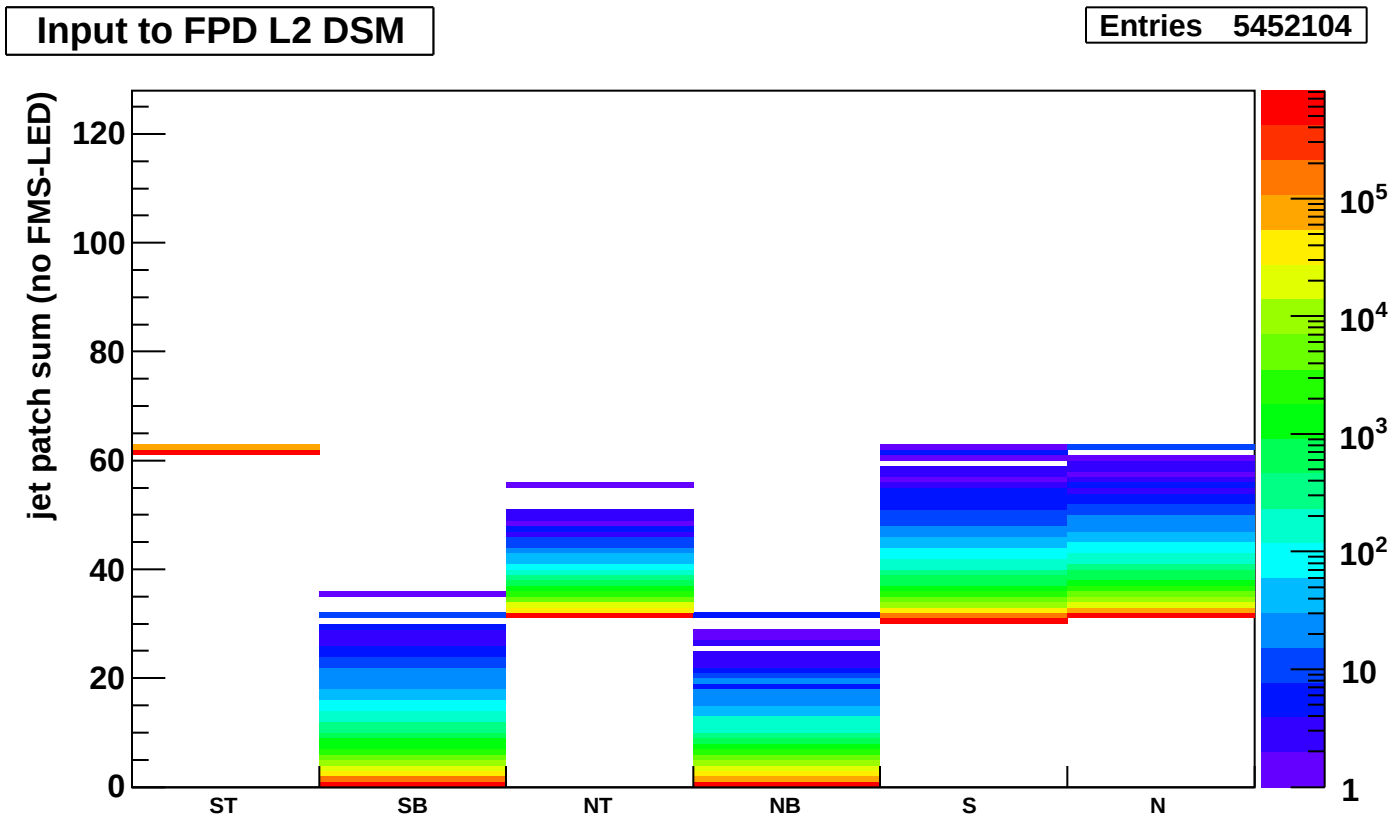

Input to FPD L2 DSM
Entries 5223069
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

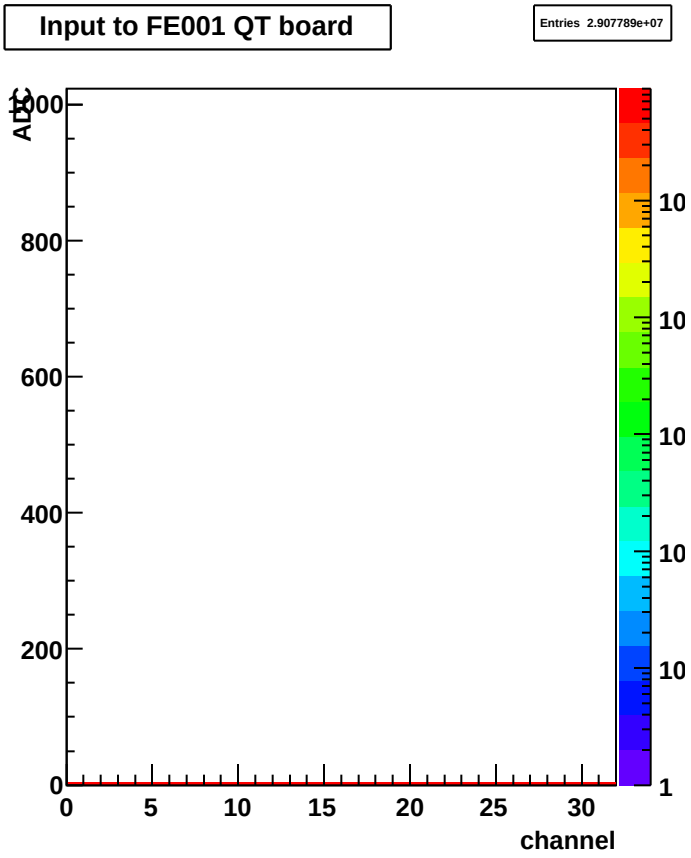

Input to FPD L2 DSM
Entries 2726052
CL bits
908684
908684
908684
SMALL
LARGE-S
LARGE-N

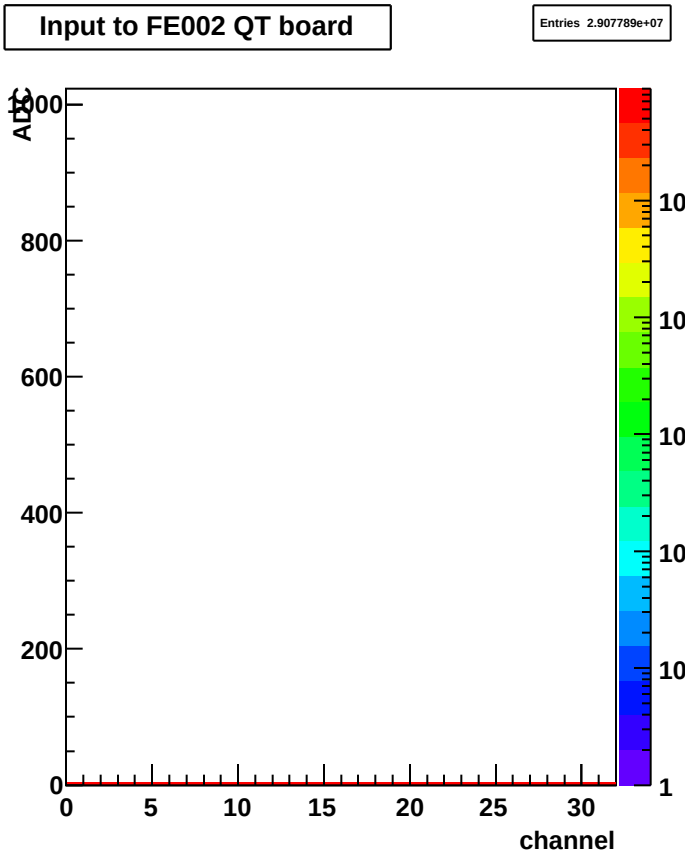

Input to FPD L2 DSM
Entries 2726052
CL bits - simulated
908684
908684
908684
SMALL
LARGE-S
LARGE-N

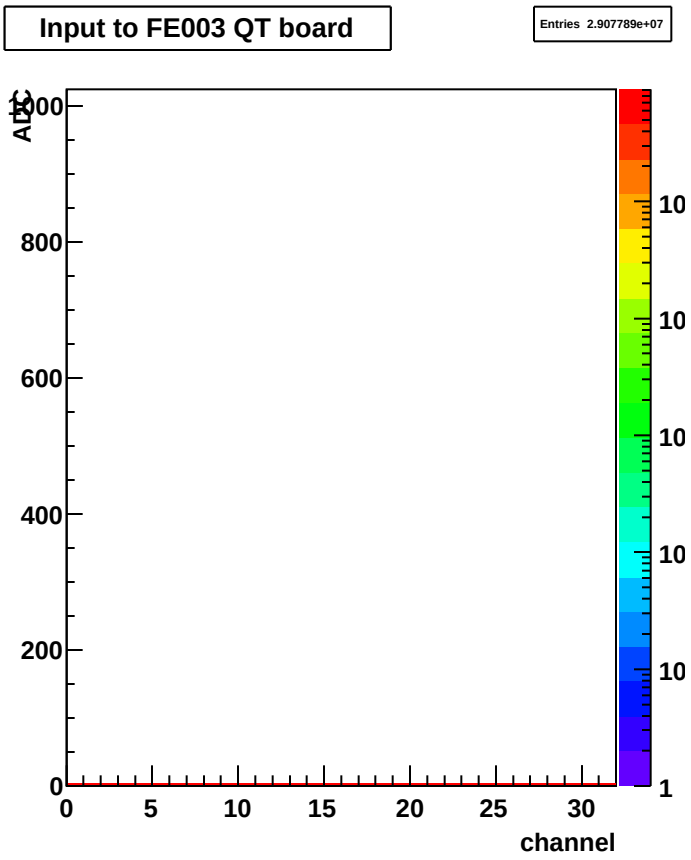

Input to FPD L2 DSM
Entries 2726052
HT bits
5900
18030
50729
834025
908684
908684
SMALL
LARGE-S
LARGE-N

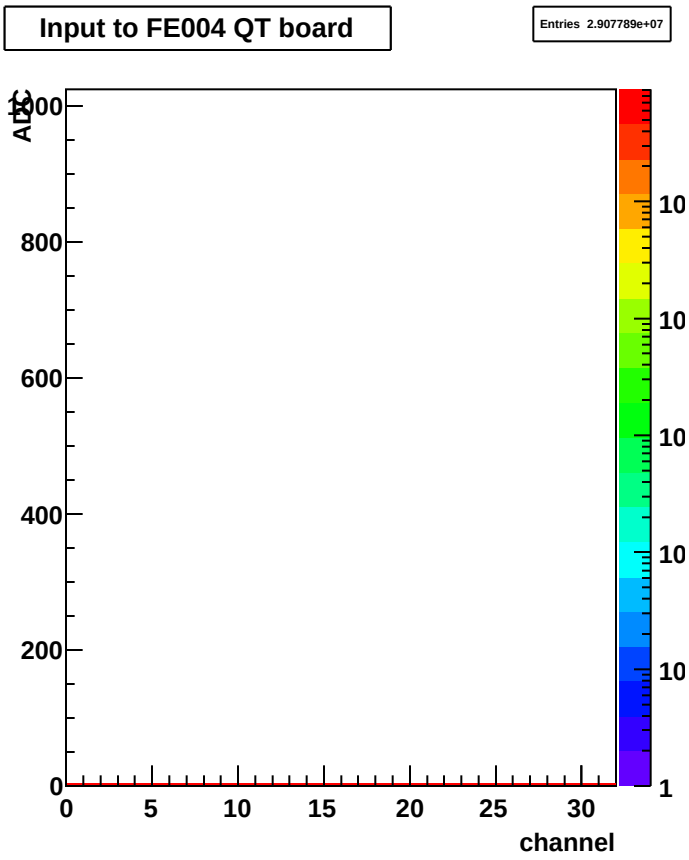

Input to FPD L2 DSM
Entries 1892027
HT bits - simulated
5900
18030
50729
908684
908684
SMALL
LARGE-S
LARGE-N

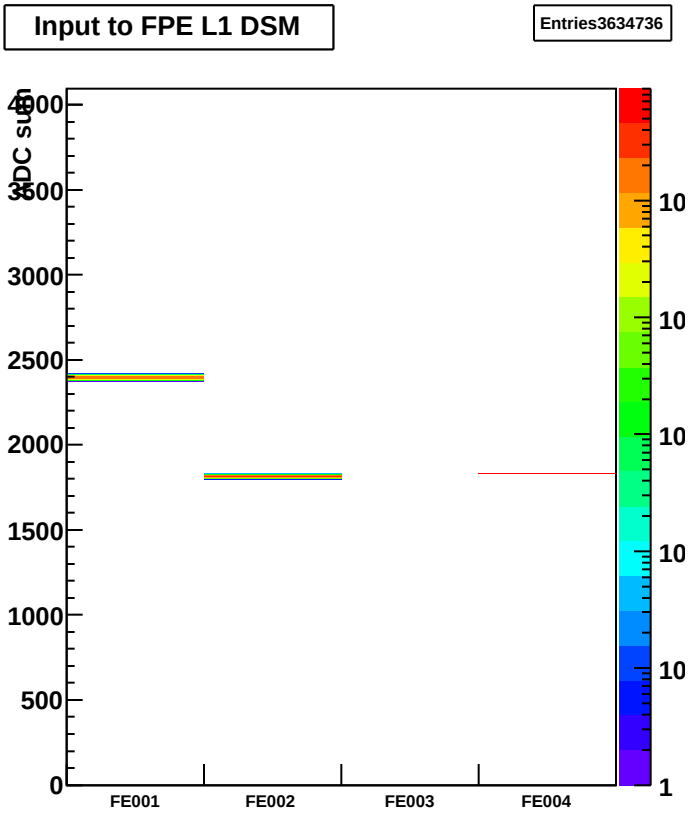

Input to FPD L2 DSM
Entries 5452104
jet patch sum (no FMS-LED)
0
20
40
60
80
100
120
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

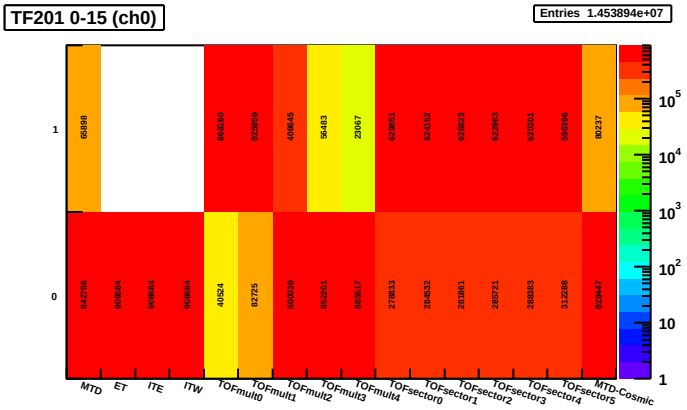

Input to FE001 QT board
Entries 2.907789e+07
ADC
channel

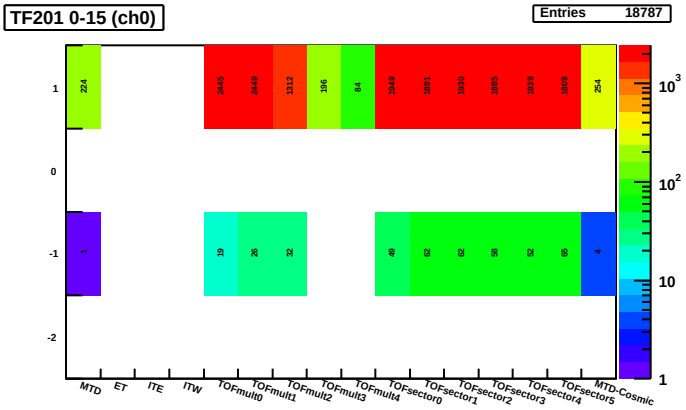

Input to FE002 QT board
Entries 2.907789e+07
ADC
channel

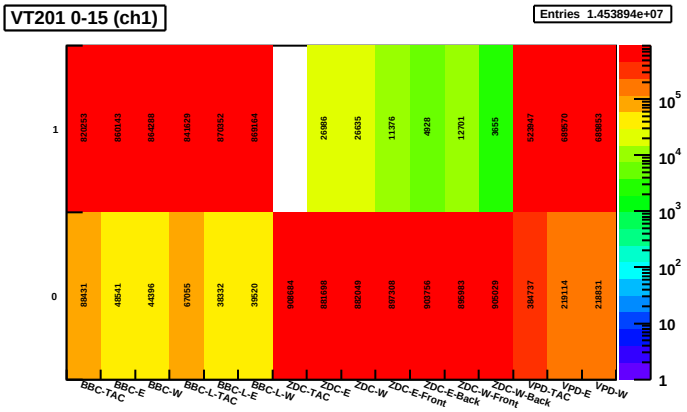

Input to FE003 QT board
Entries 2.907789e+07
ADC
channel

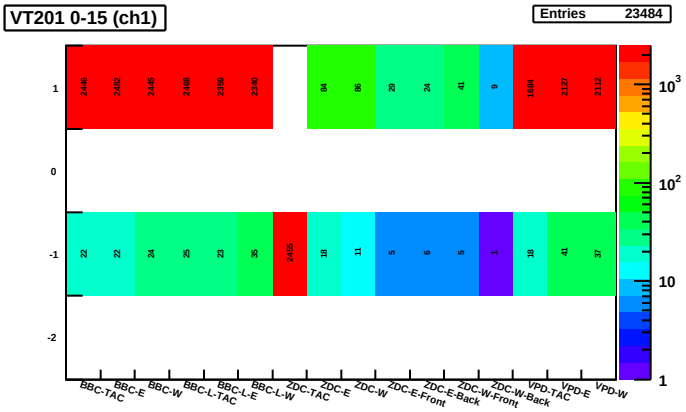

Input to FE004 QT board
Entries 2.907789e+07
ADC
channel

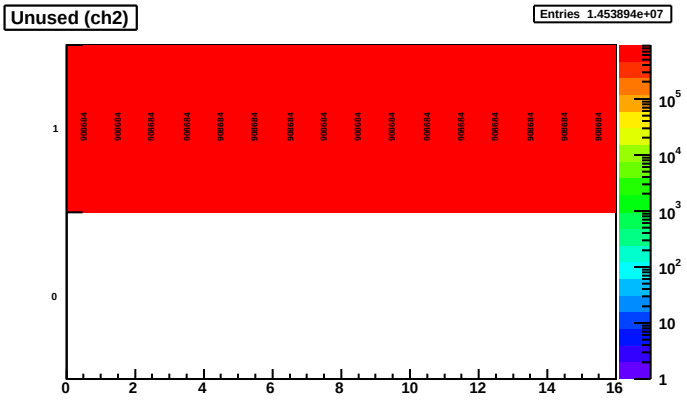

Input to FPE L1 DSM
Entries3634736
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1

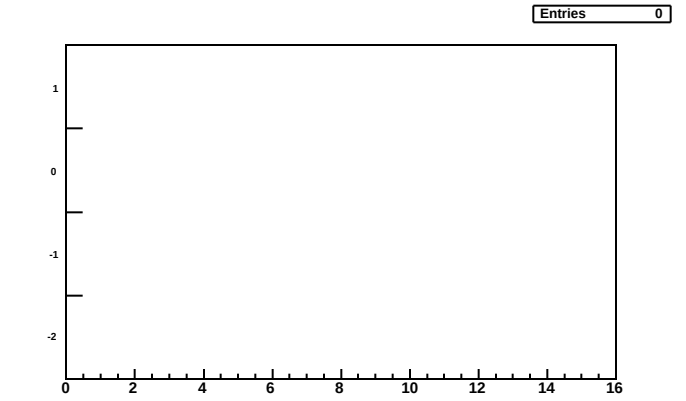

TF201 0-15 (ch0)
Entries 1.453894e+07
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

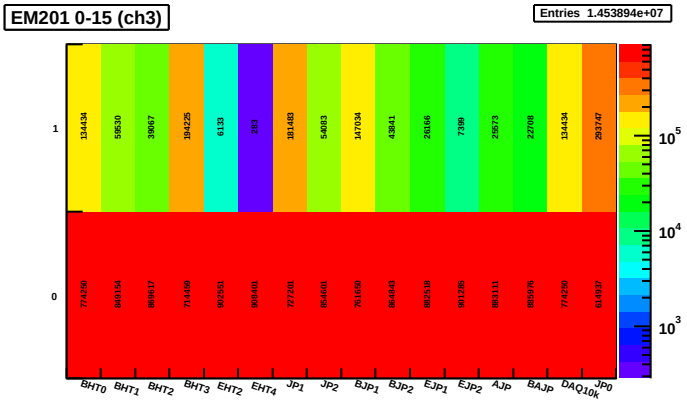

TF201 0-15 (ch0)
Entries 18787
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

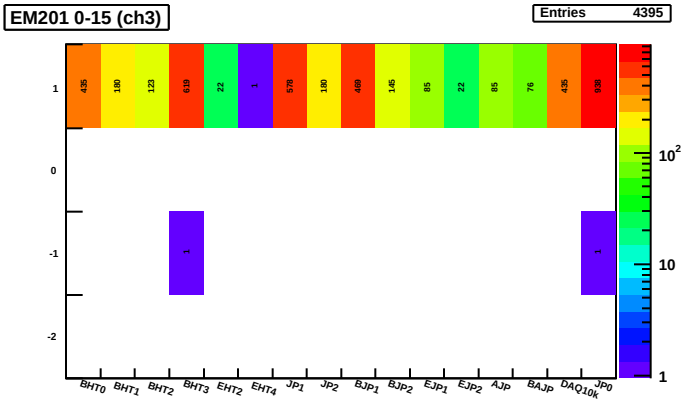

VT201 0-15 (ch1)
Entries 1.453894e+07
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W

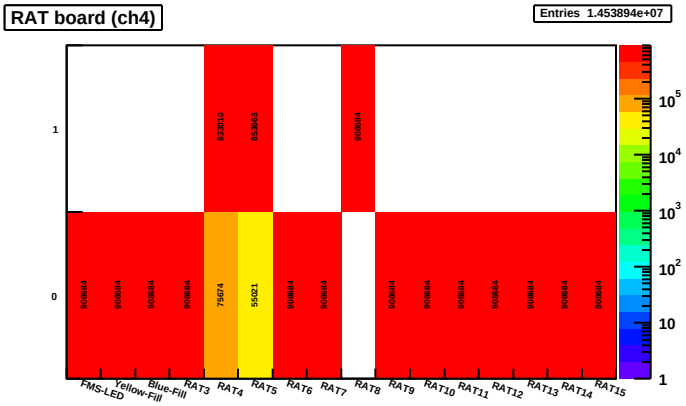

VT201 0-15 (ch1)
Entries 23484
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W

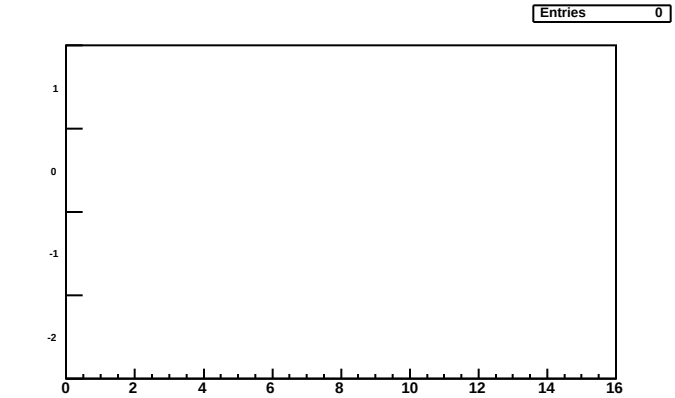

Unused (ch2)
Entries 1.453894e+07

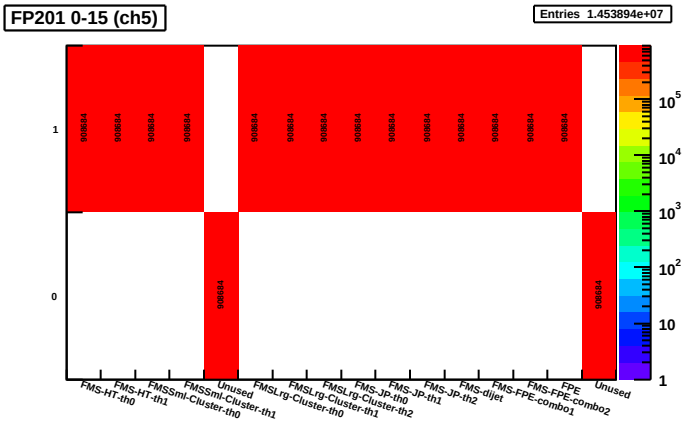

Entries 0

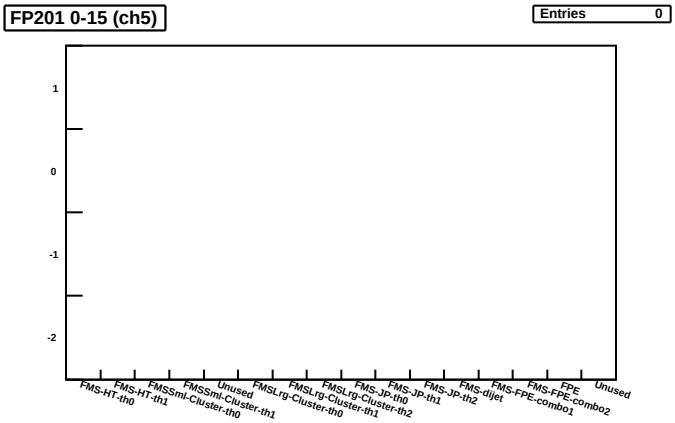

EM201 0-15 (ch3)
Entries 1.453894e+07
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

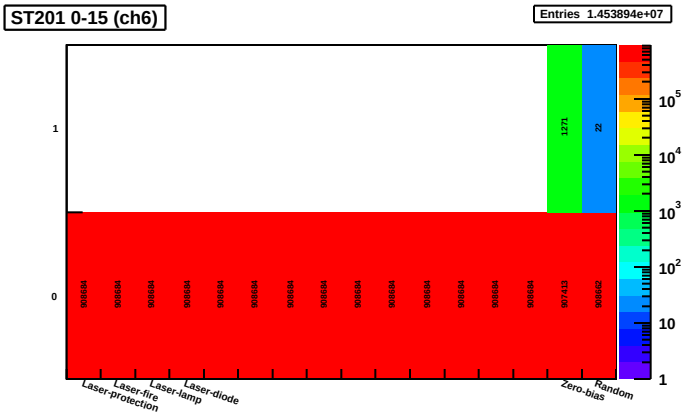

EM201 0-15 (ch3)
Entries 4395
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

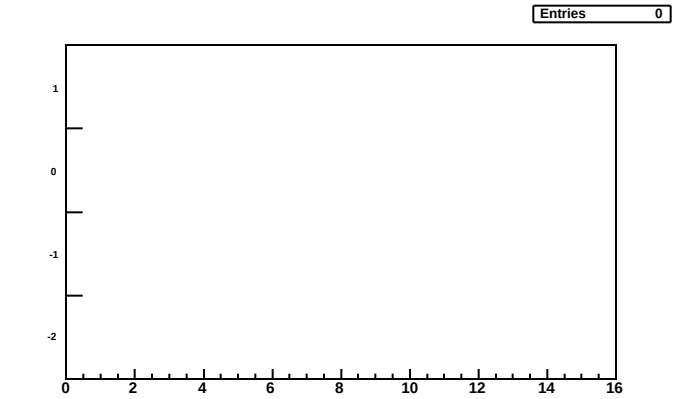

RAT board (ch4)
Entries 1.453894e+07
FMS-LED
Yellow-Fill
Blue-Fill
RAT3
RAT4
RAT5
RAT6
RAT7
RAT8
RAT9
RAT10
RAT11
RAT12
RAT13
RAT14
RAT15

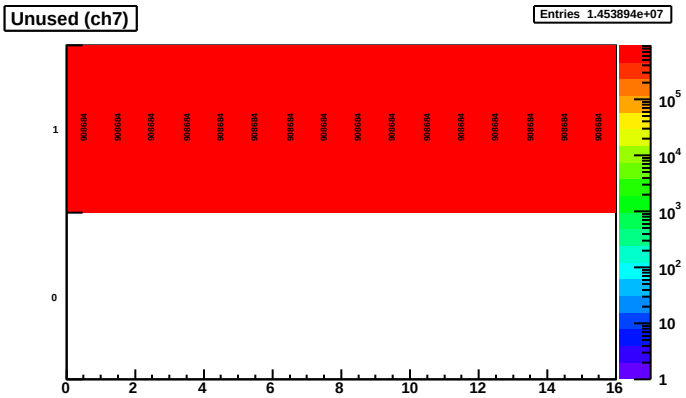

Entries 0

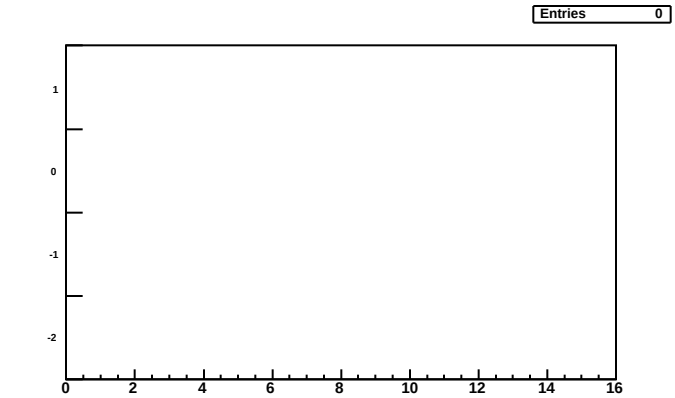

FP201 0-15 (ch5)
Entries 1.453894e+07
FMS-HT-th0
FMS-HT-th1
FMSSml-Cluster-th0
FMSSml-Cluster-th1
Unused
FMSLrg-Cluster-th0
FMSLrg-Cluster-th1
FMS-JP-th0
FMS-JP-th1
FMS-JP-th2
FMS-diJet
FMS-FPE-combo1
FPE
FMS-FPE-combo2
Unused


FP201 0-15 (ch5)
Entries 0


ST201 0-15 (ch6)
Entries 1.453894e+07
Laser-protection
Laser-fire
Laser-lamp
Laser-diode
Zero-bias
Random


Entries 0


Unused (ch7)
Entries 1.453894e+07


Entries 0