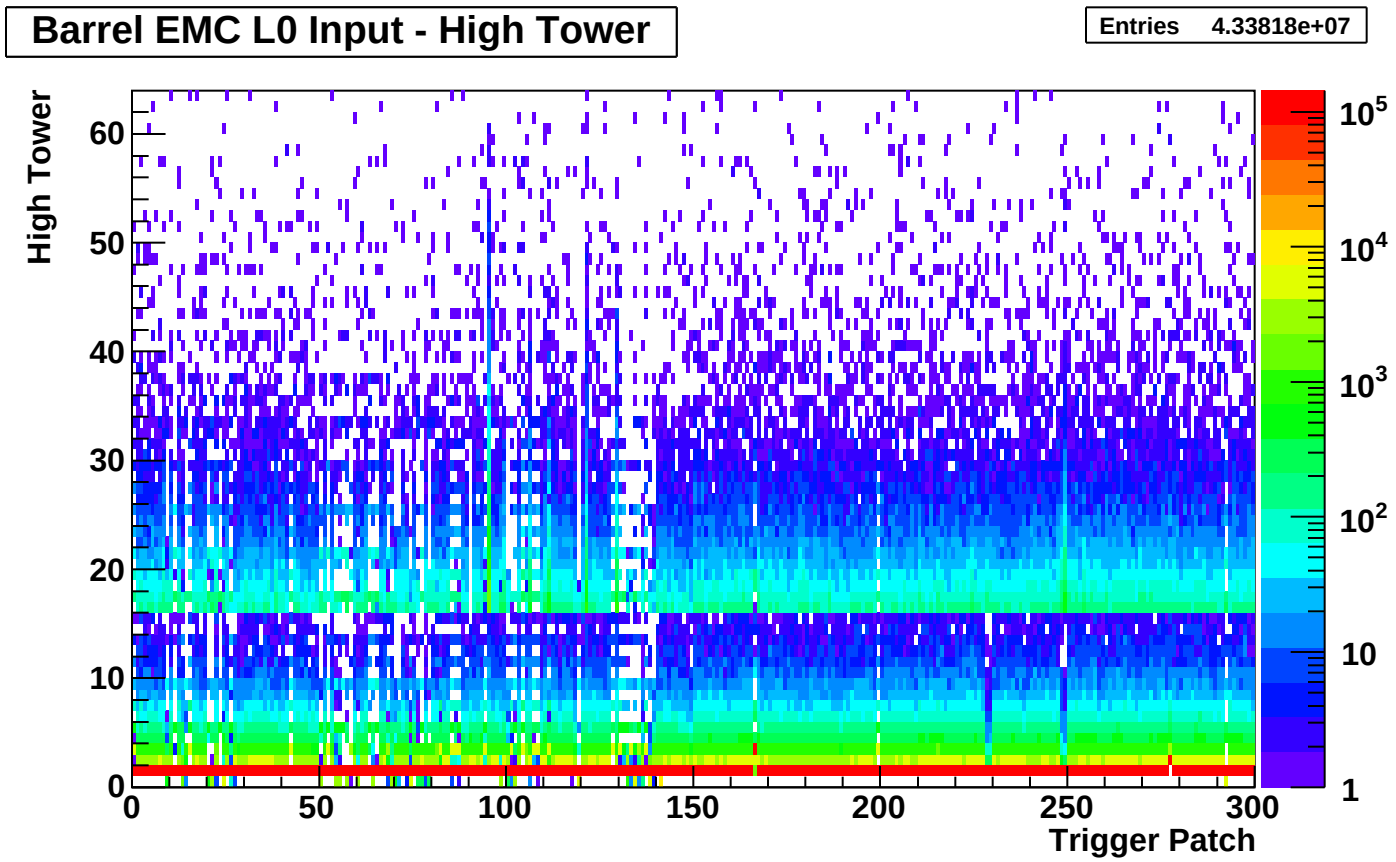
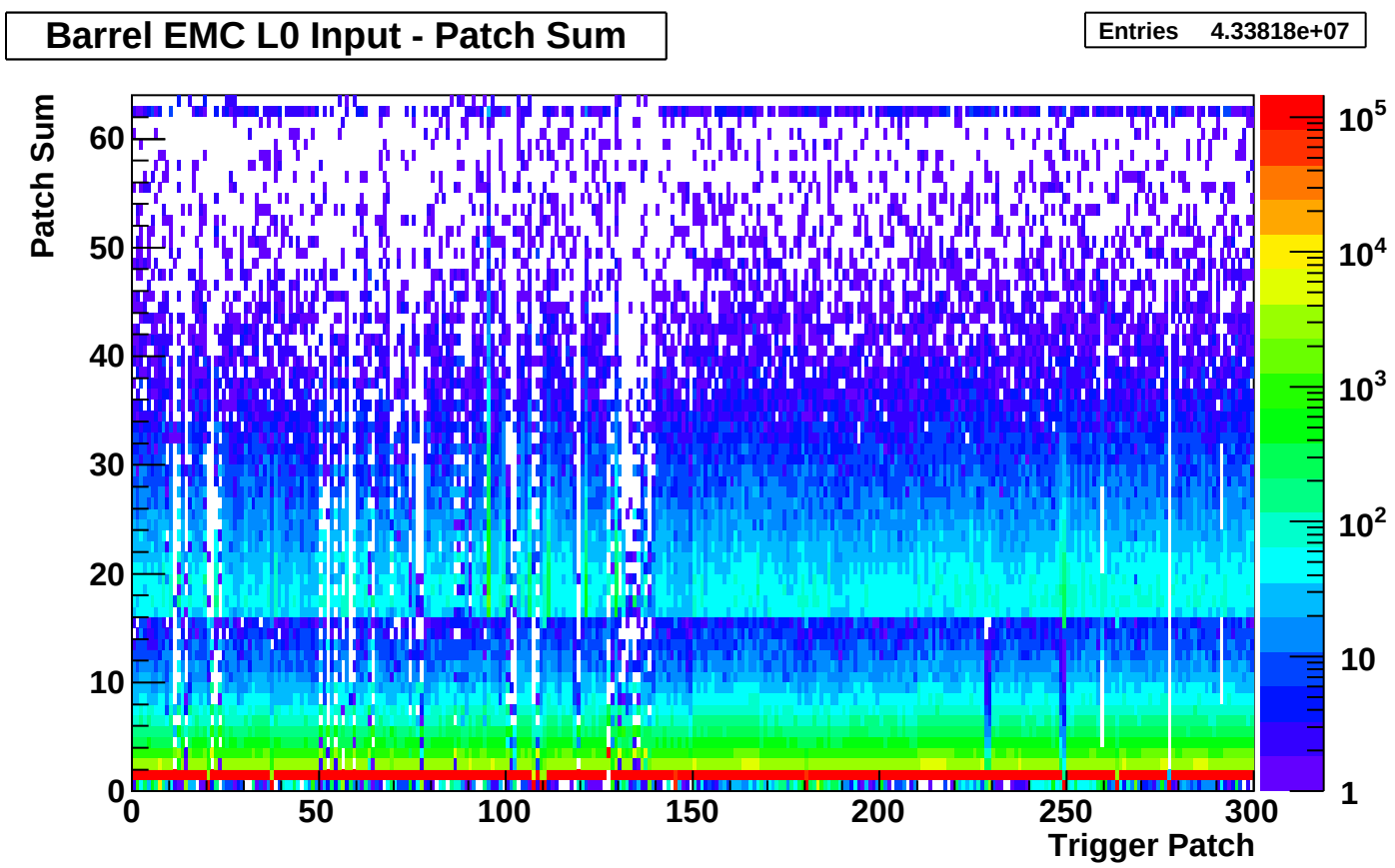
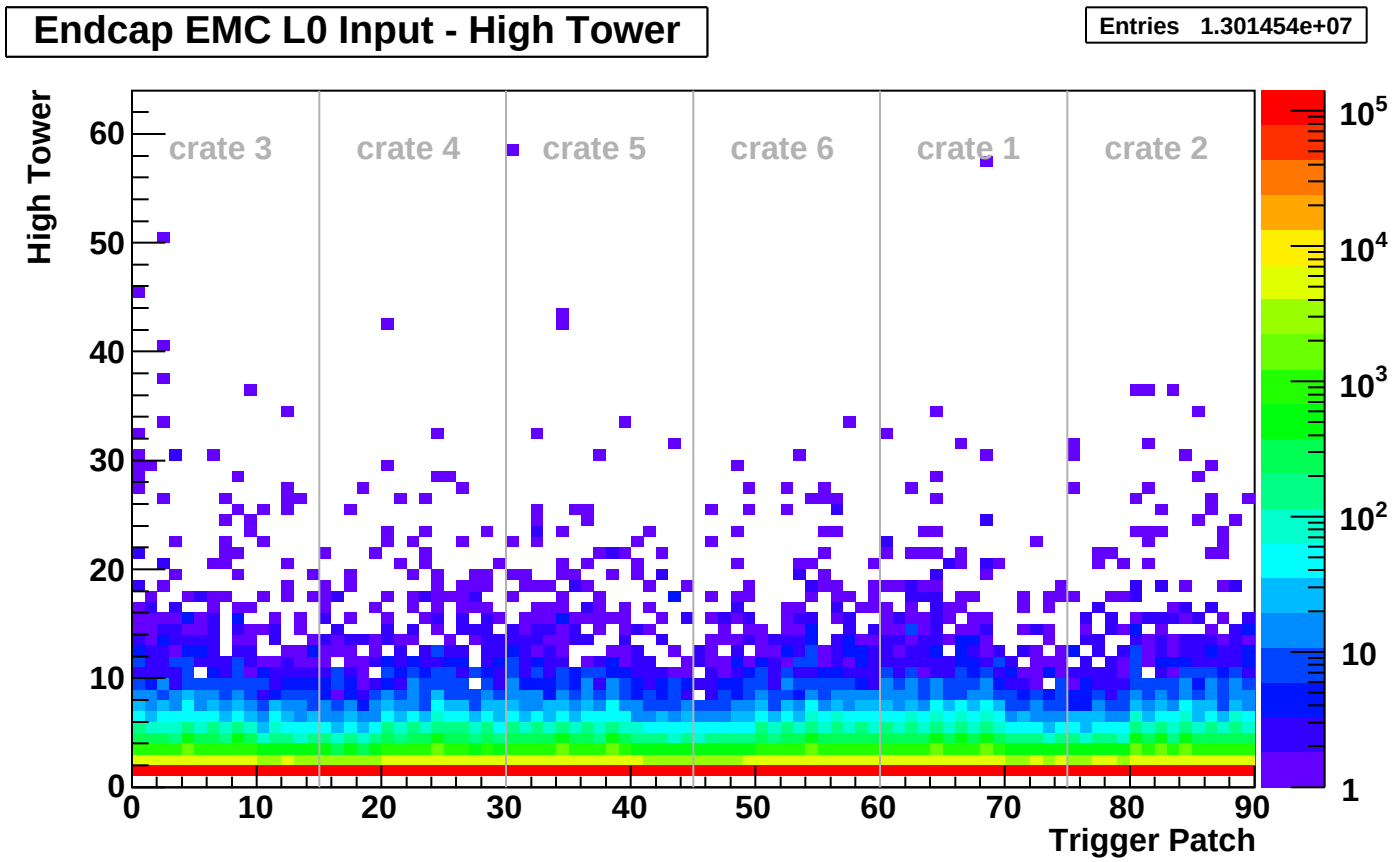
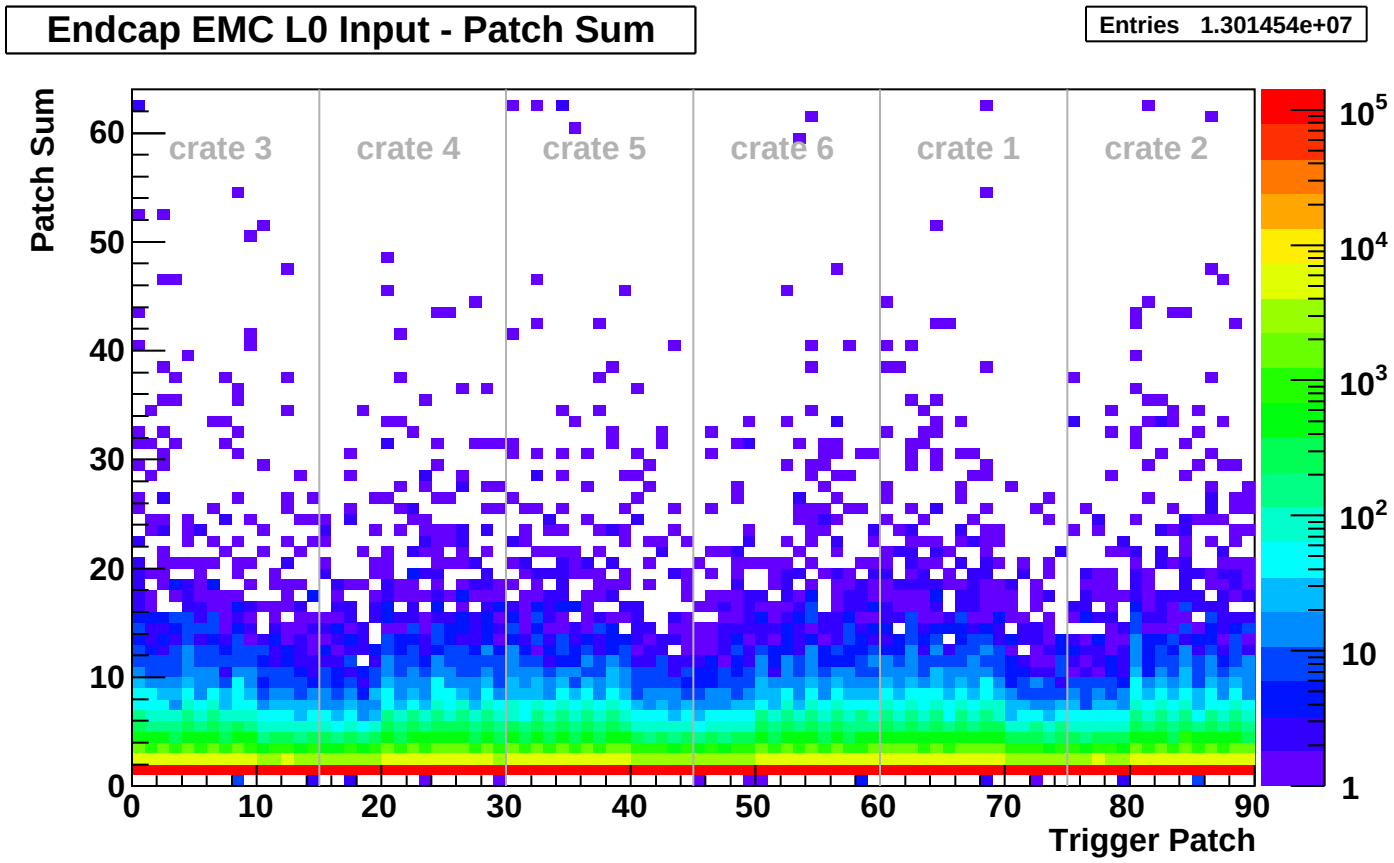
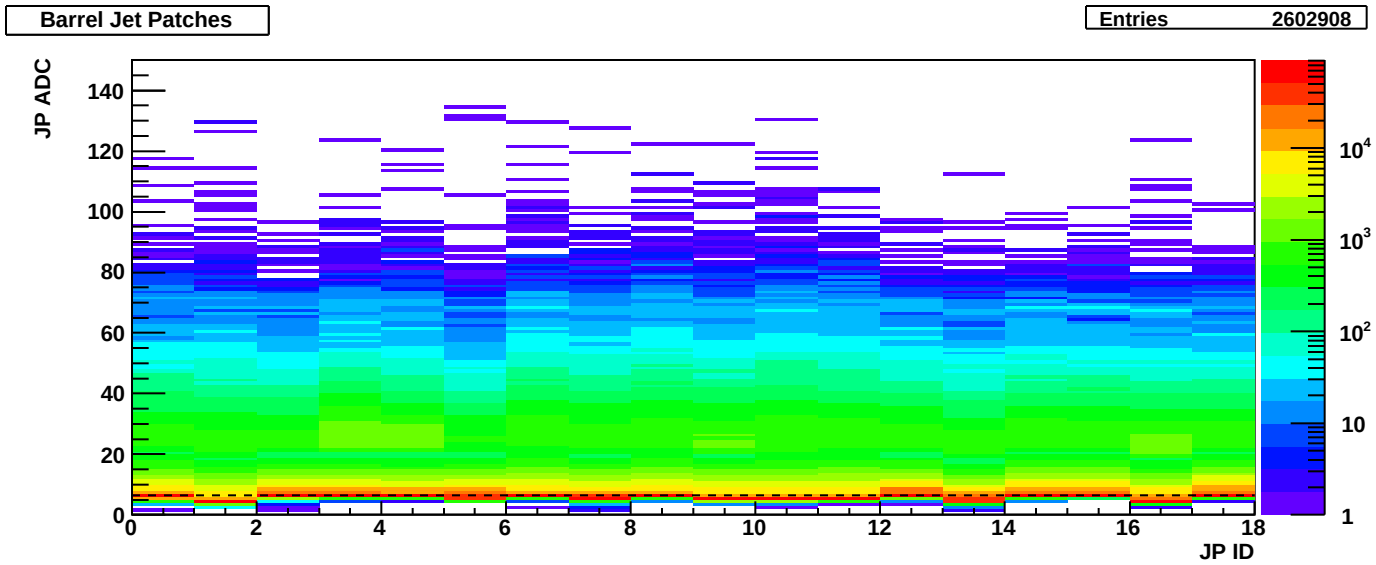
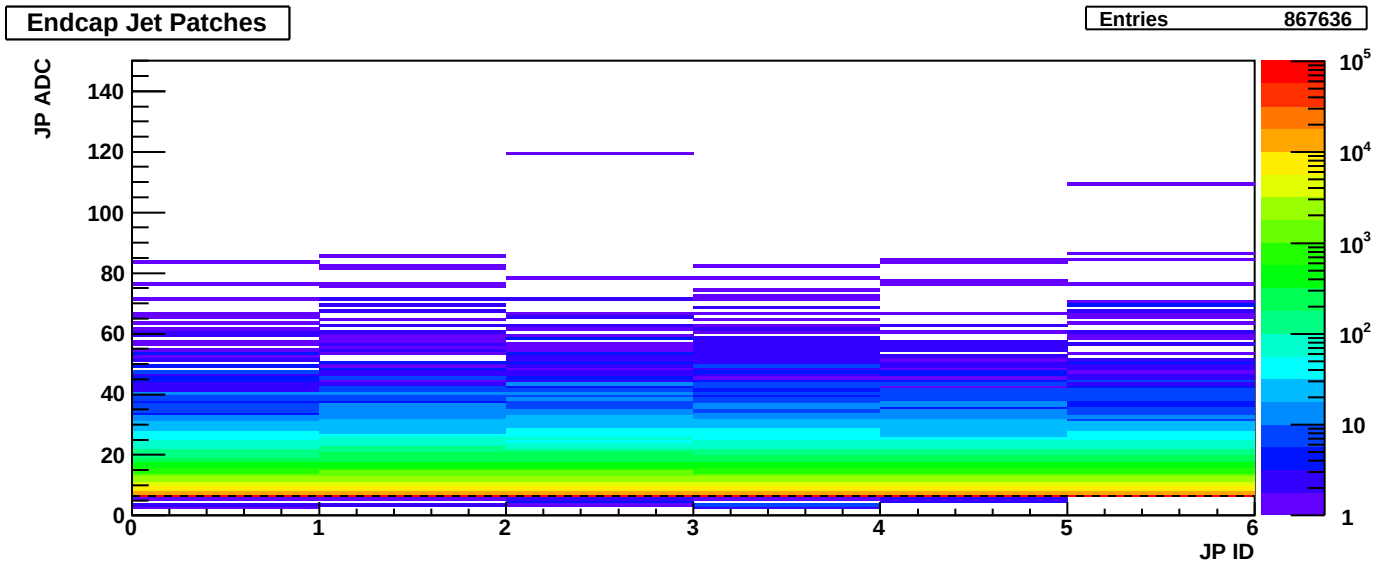

Barrel EMC L0 Input - High Tower
Entries 4.33818e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

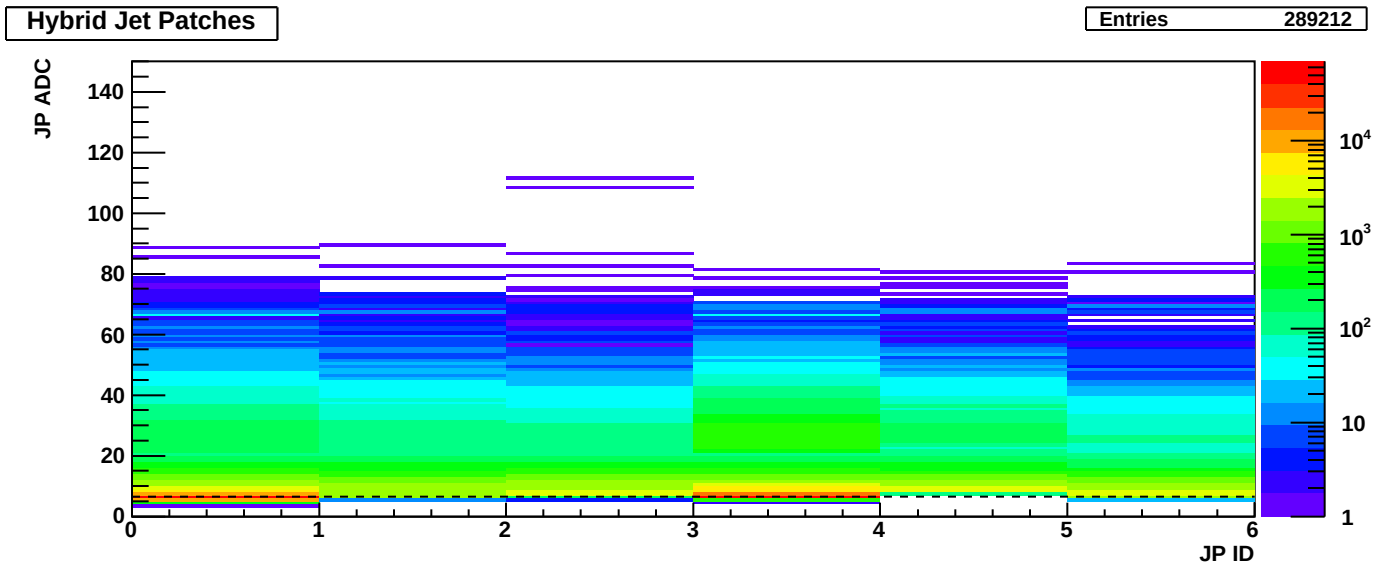

Barrel EMC L0 Input - Patch Sum
Entries 4.33818e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

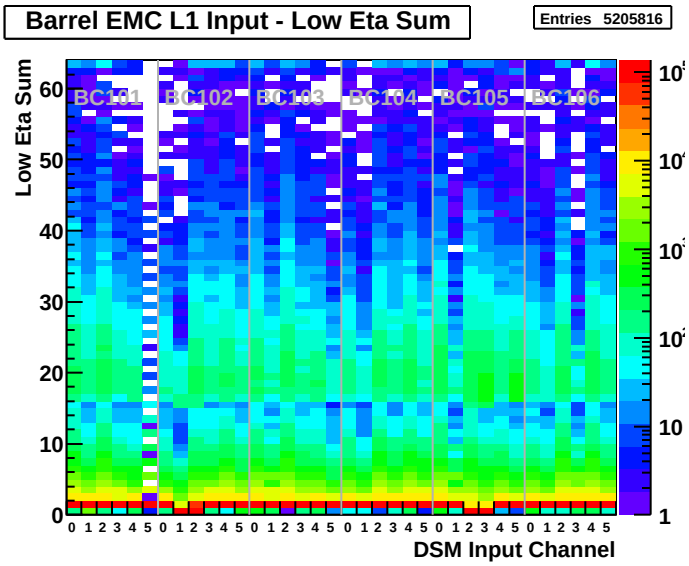

Endcap EMC L0 Input - High Tower
Entries 1.301454e+07
High Tower
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

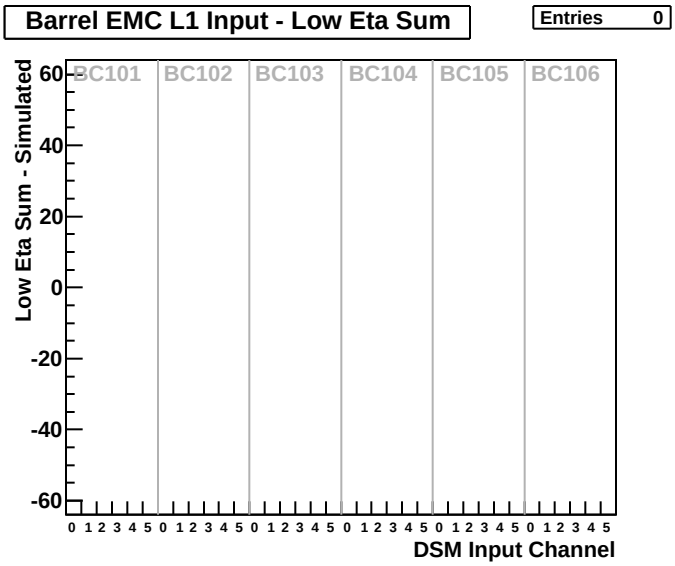

Endcap EMC L0 Input - Patch Sum
Entries 1.301454e+07
Patch Sum
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

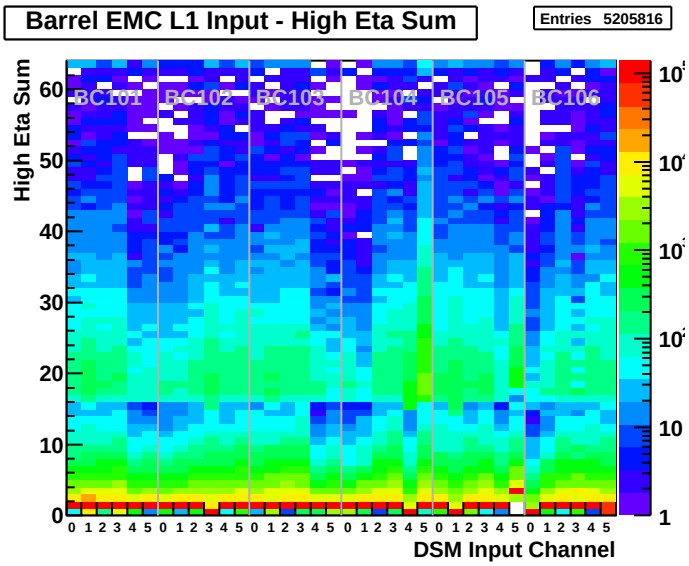

Barrel Jet Patches
Entries 2602908
JP ADC
JP ID

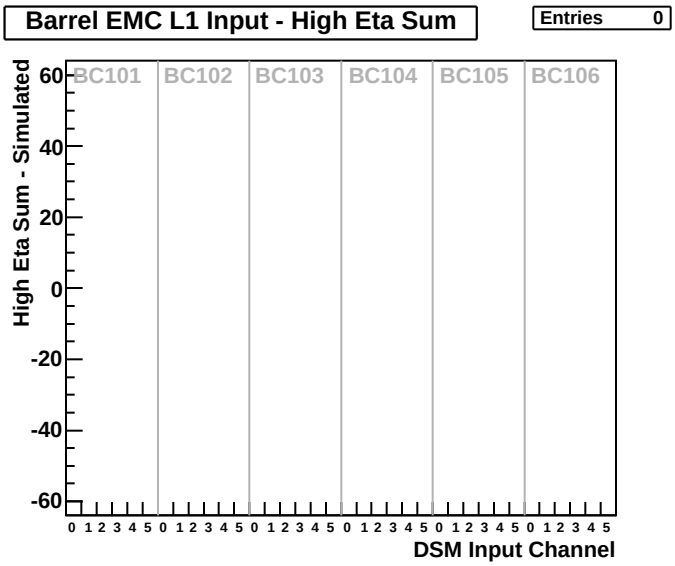

Endcap Jet Patches
Entries 867636
JP ADC
JP ID

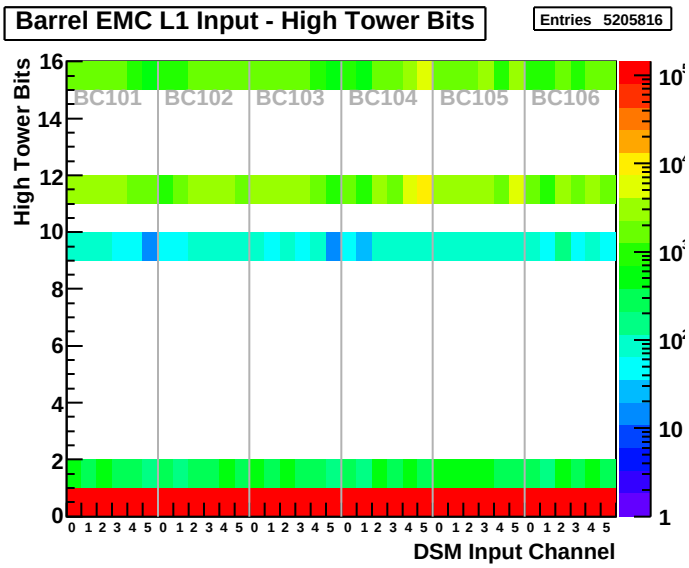

Hybrid Jet Patches
Entries 289212
JP ADC
JP ID

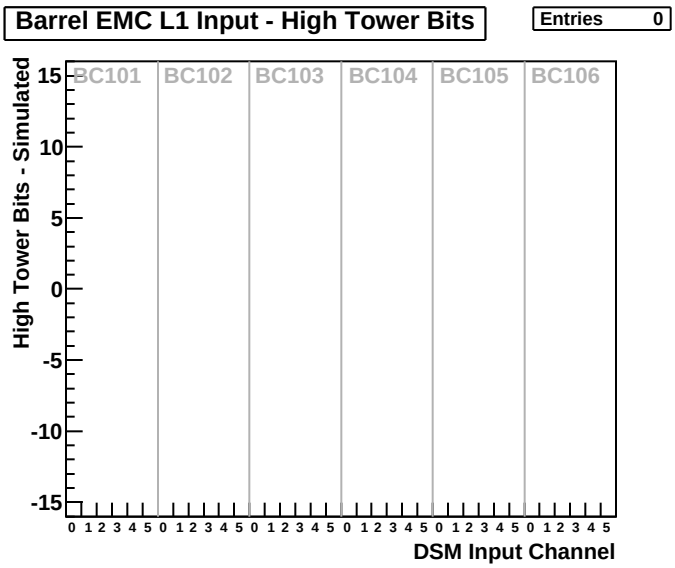

Barrel EMC L1 Input - Low Eta Sum
Entries 5205816
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

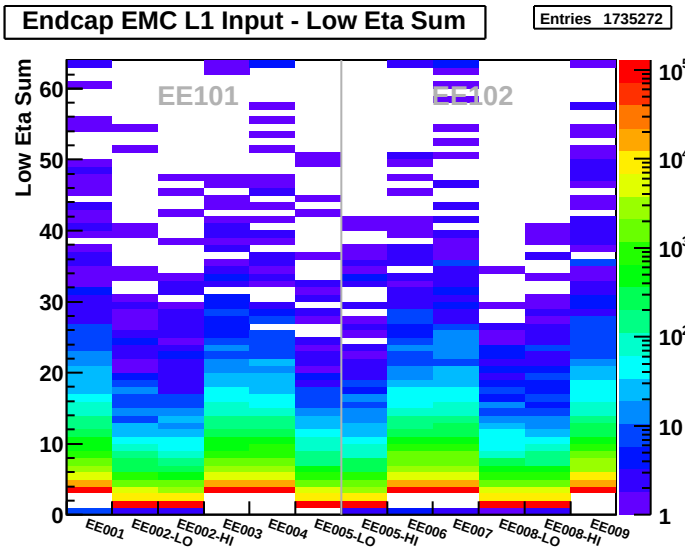

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

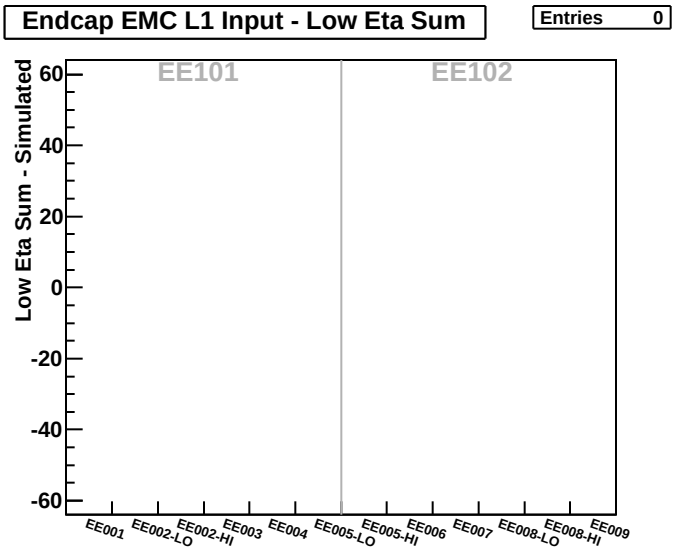

Barrel EMC L1 Input - High Eta Sum
Entries 5205816
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

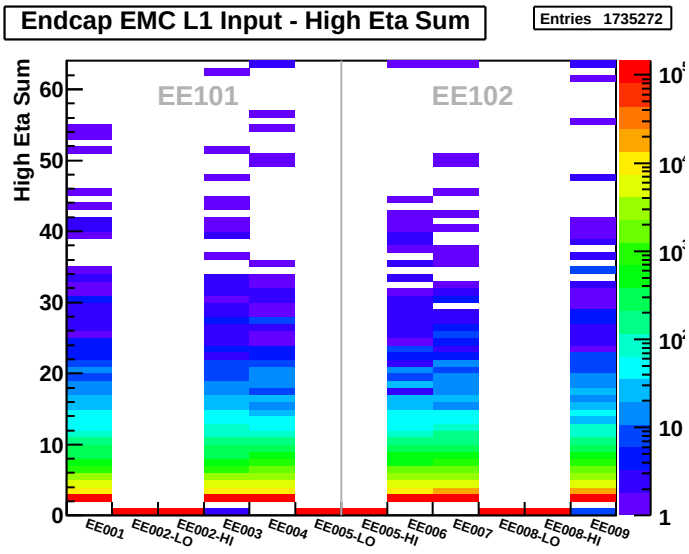

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

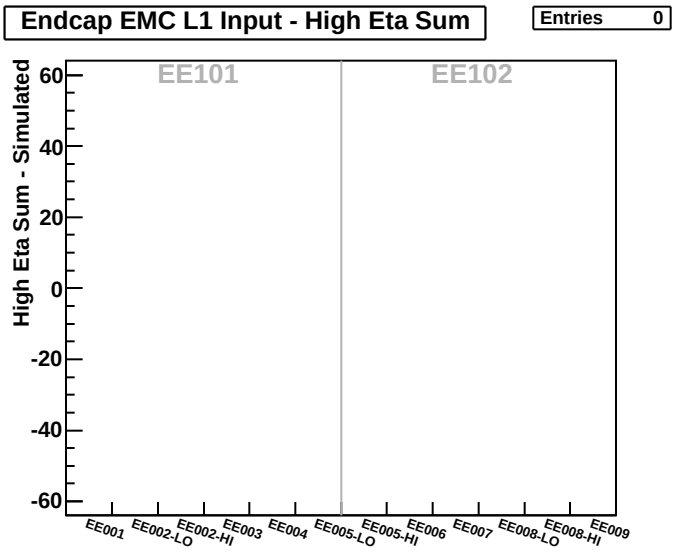

Barrel EMC L1 Input - High Tower Bits
Entries 5205816
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

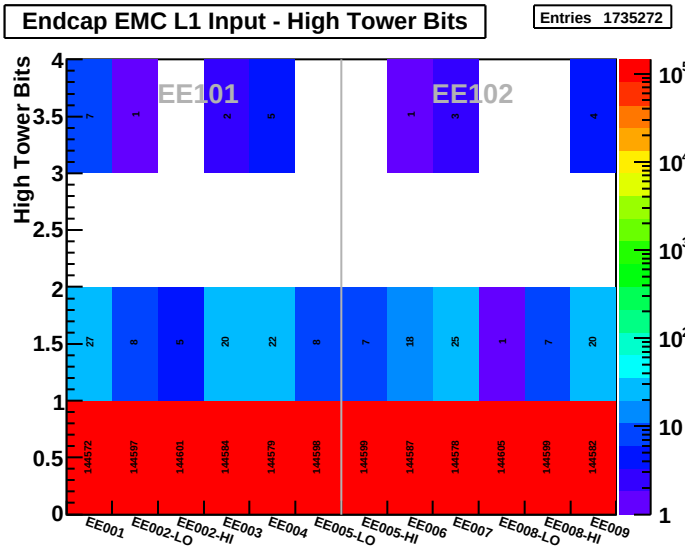

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

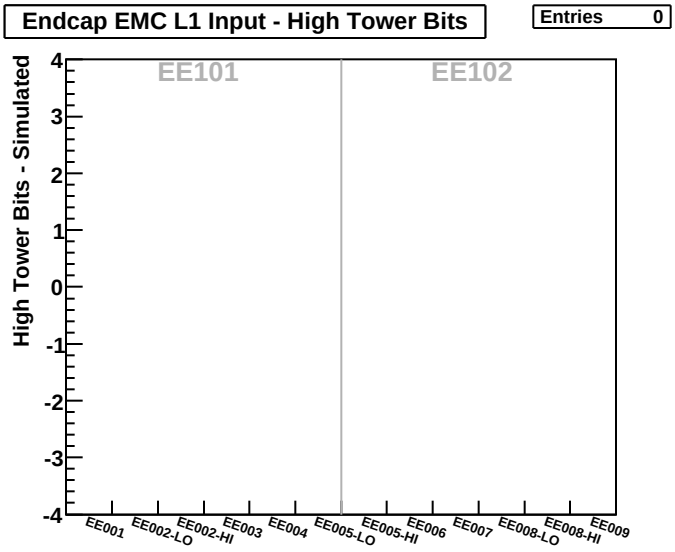

Endcap EMC L1 Input - Low Eta Sum
Entries 1735272
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

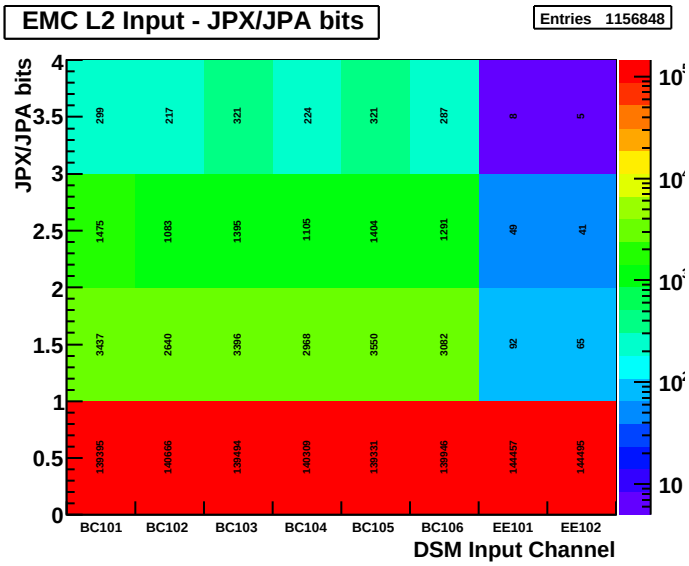

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

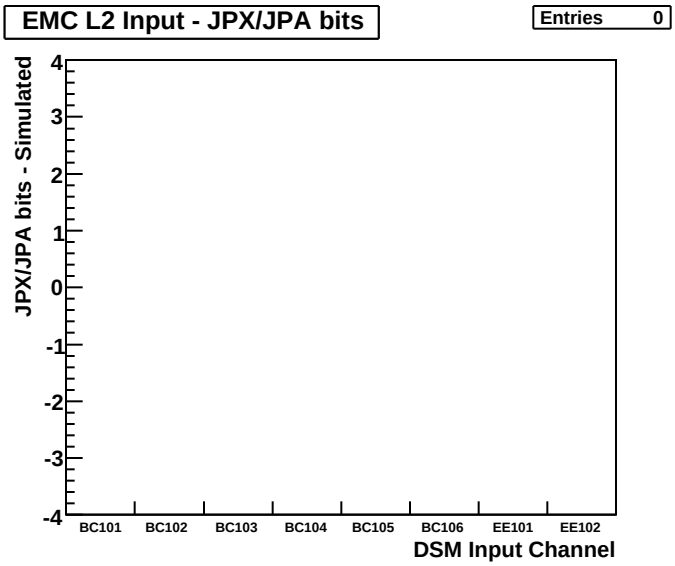

Endcap EMC L1 Input - High Eta Sum
Entries 1735272
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

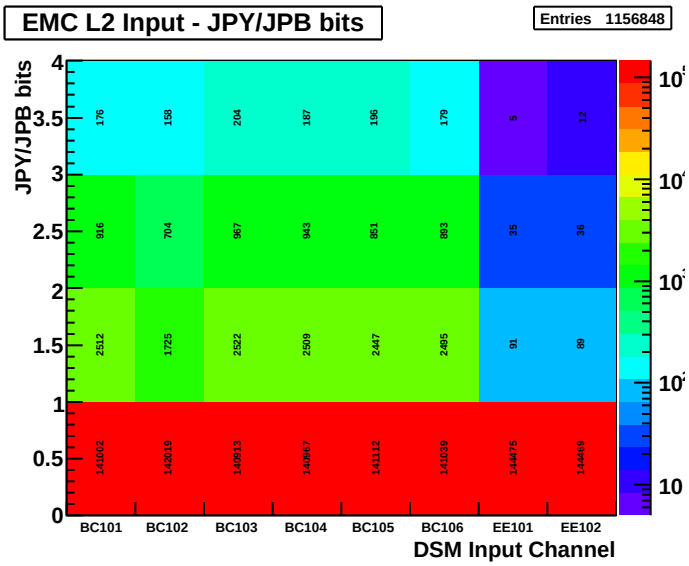

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

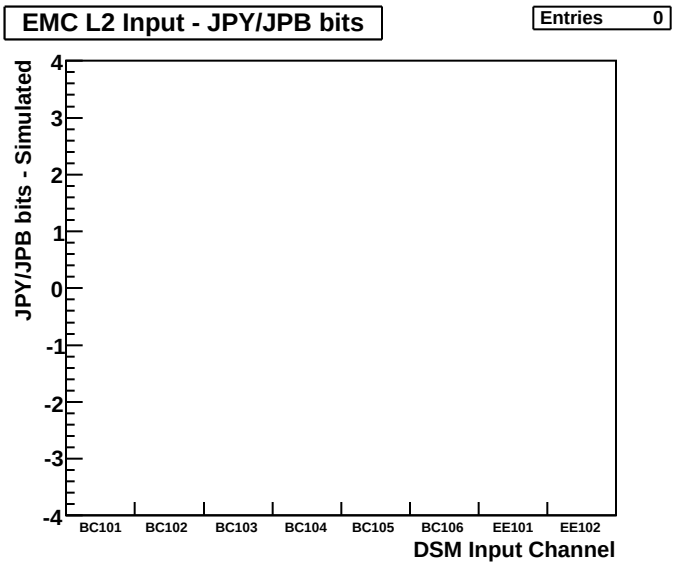

Endcap EMC L1 Input - High Tower Bits
Entries 1735272
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

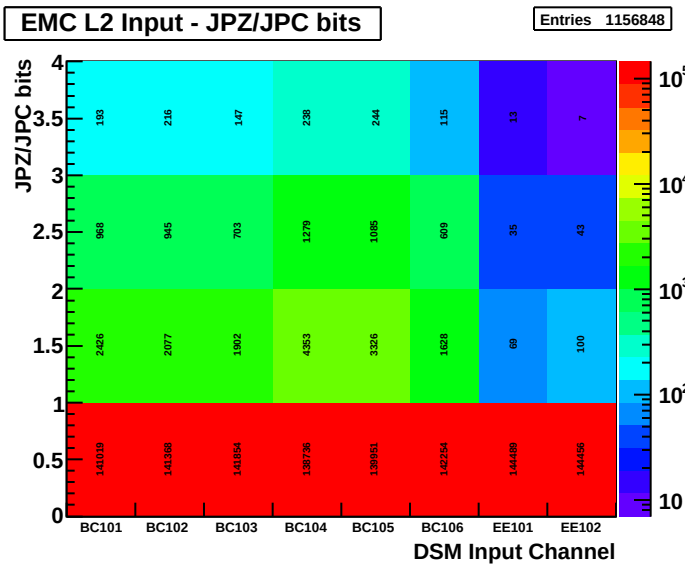

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

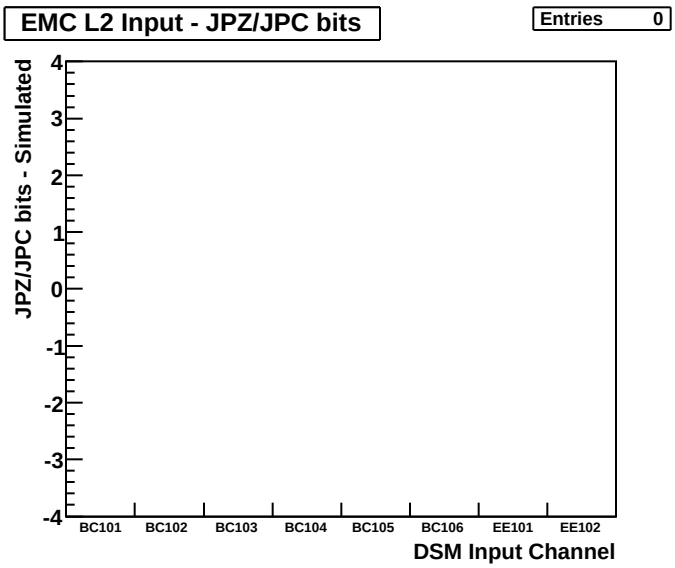

EMC L2 Input - JPX/JPA bits
Entries 1156848
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
299 217 321 224 321 287 8 5
1475 1083 1395 1105 1404 1291 49 41
3437 2640 3396 2968 3550 3082 92 65
139395 140666 139494 140309 139331 139946 144457 144495

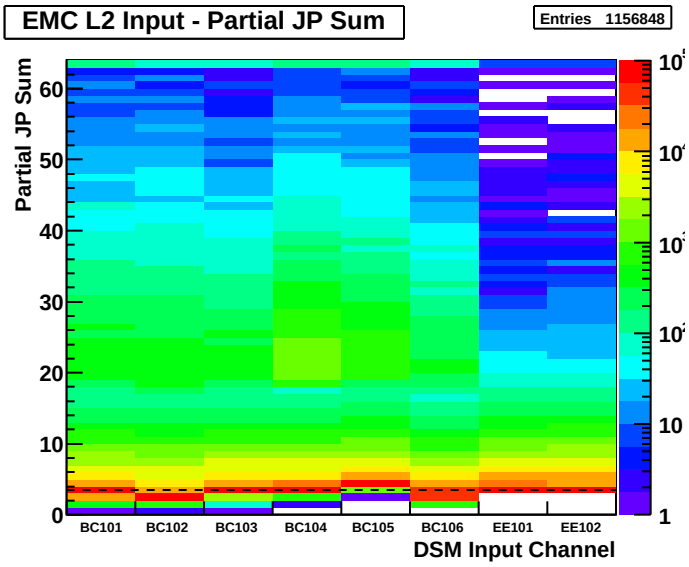

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

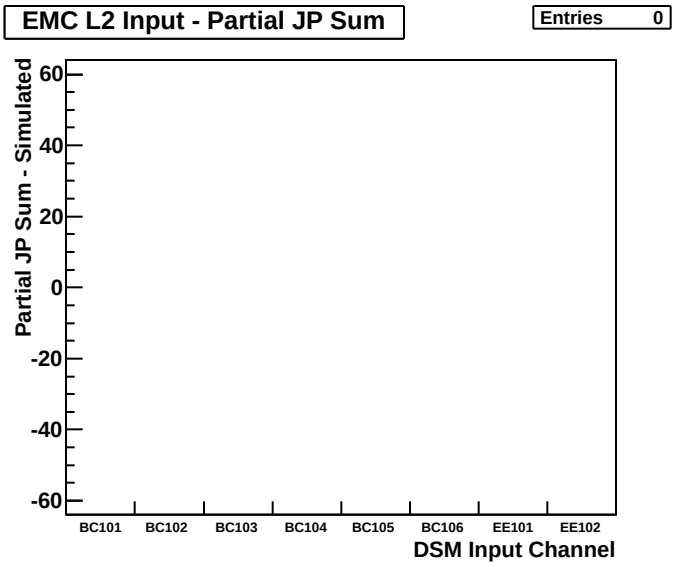

EMC L2 Input - JPY/JPB bits
Entries 1156848
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
176 158 204 187 196 179 5 12
916 704 967 943 851 893 35 36
2512 1725 2522 2509 2447 2495 91 89
141002 142019 140913 140967 141112 141039 144475 144469

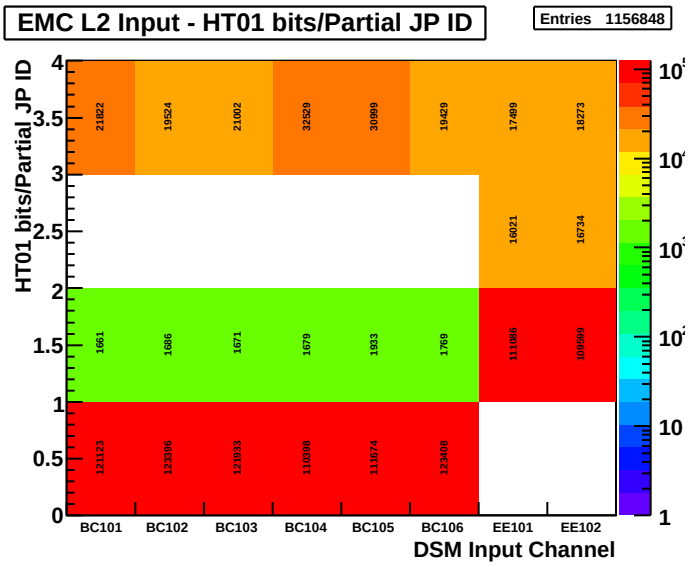

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

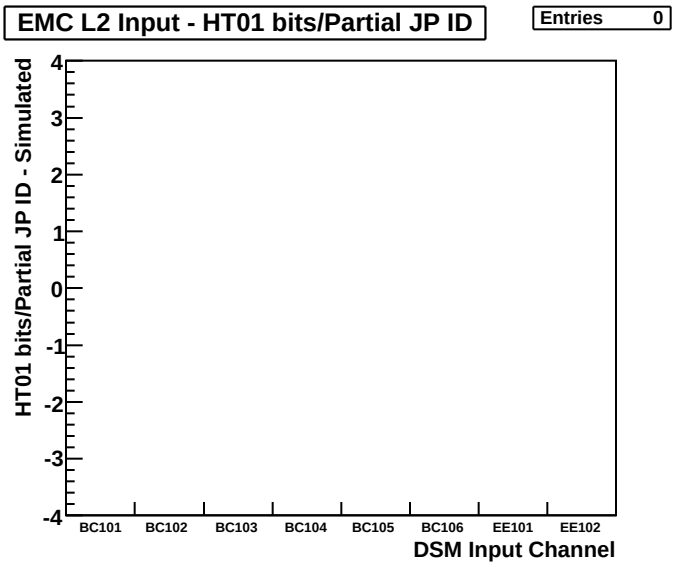

EMC L2 Input - JPZ/JPC bits
Entries 1156848
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
193 216 147 238 244 115 13 7
968 945 703 1279 1085 609 35 43
2426 2077 1902 4353 3326 1628 69 100
141019 141368 141854 138736 139951 142254 144489 144456

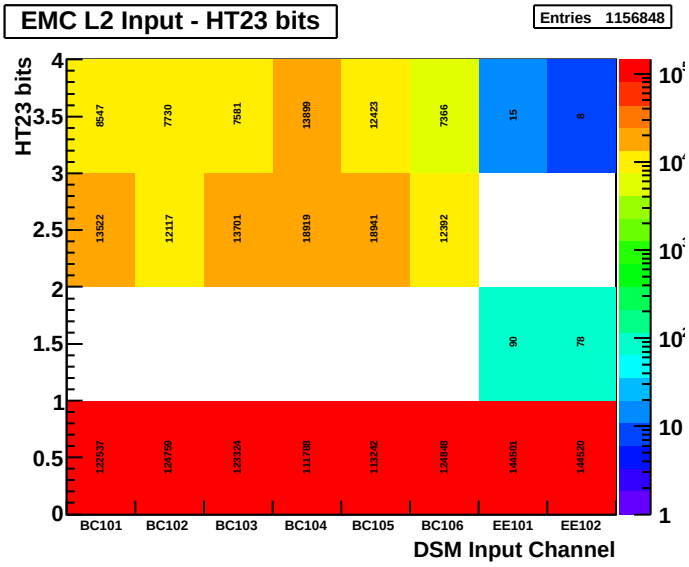

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

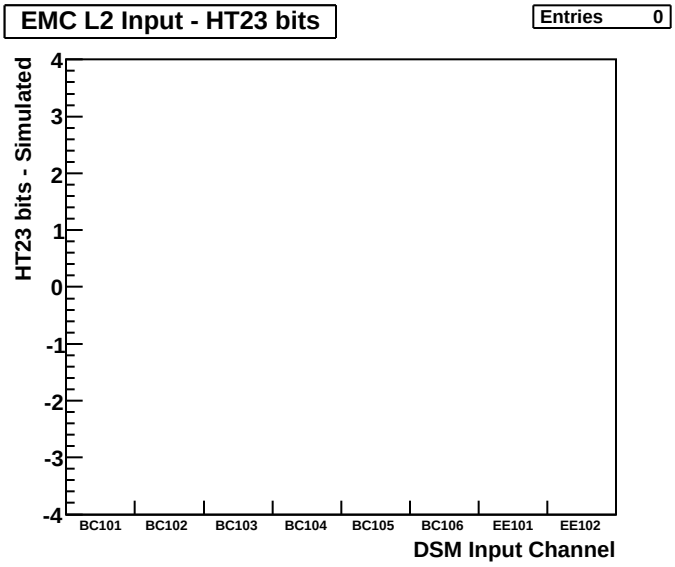

EMC L2 Input - Partial JP Sum
Entries 1156848
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

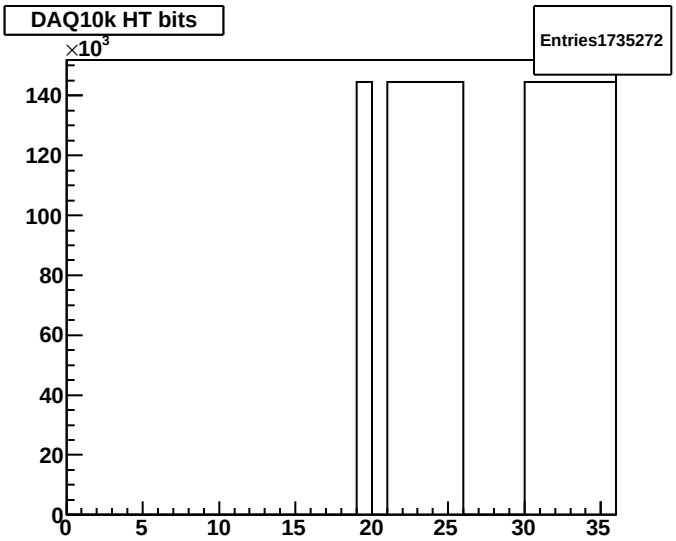

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

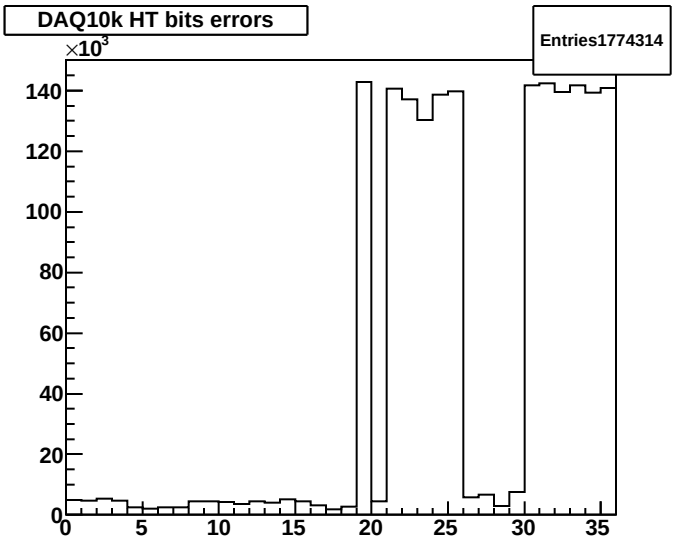

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1156848
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

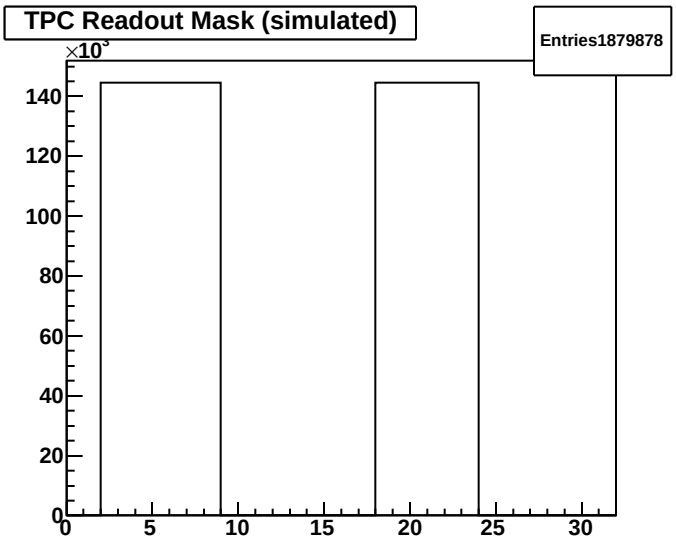

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

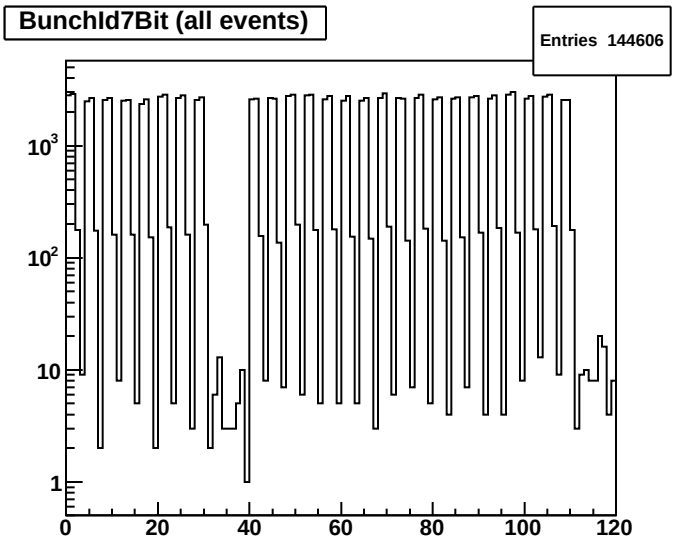

EMC L2 Input - HT23 bits
Entries 1156848
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

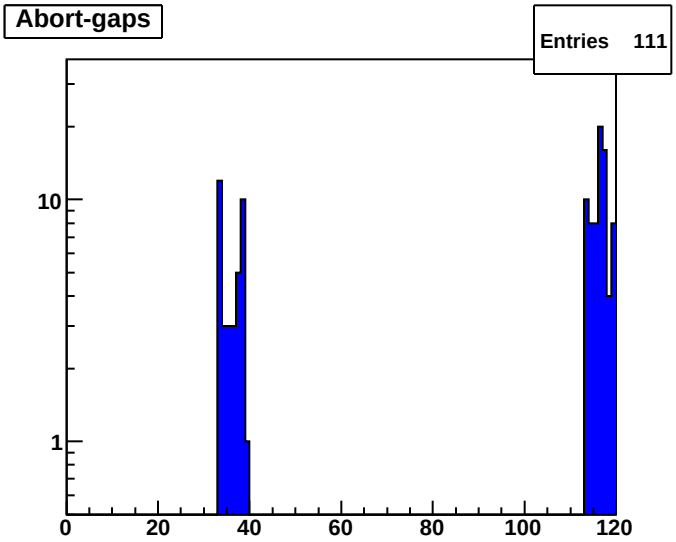

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

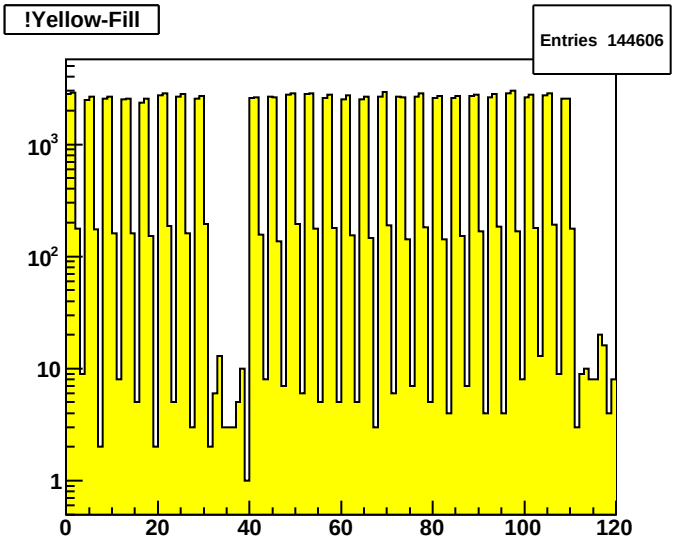

DAQ10k HT bits
Entries1735272
×10^3
140
120
100
80
60
40
20
0
0 5 10 15 20 25 30 35

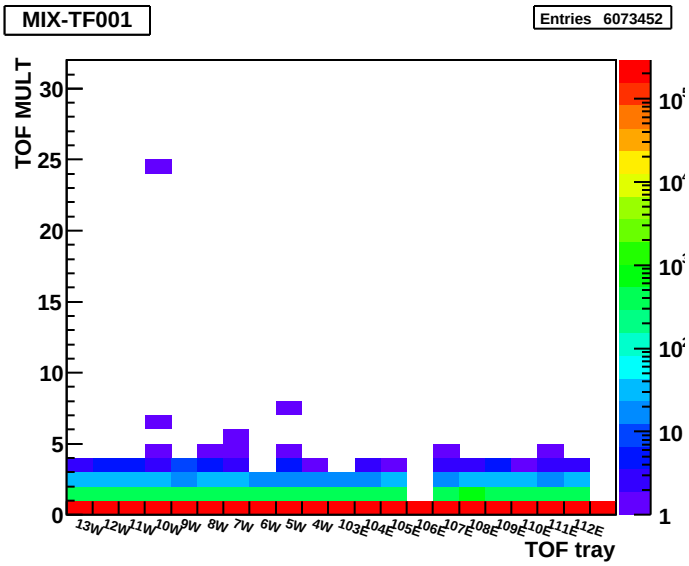

DAQ10k HT bits errors
Entries1774314
×10^3
140
120
100
80
60
40
20
0
0 5 10 15 20 25 30 35

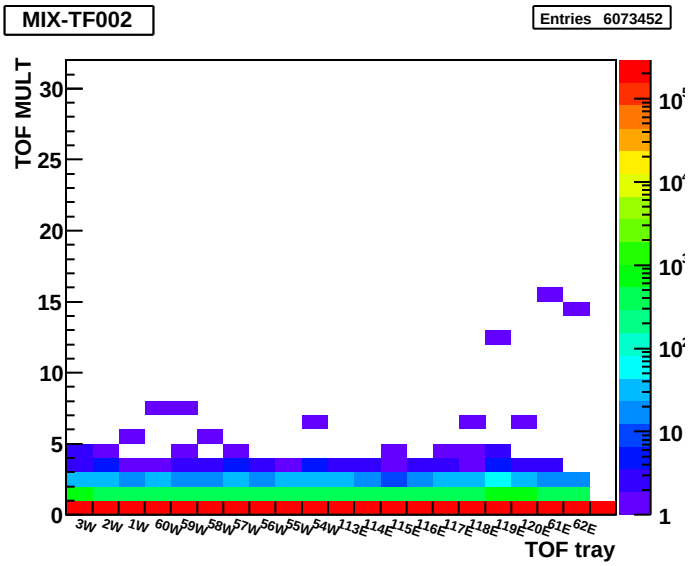

TPC Readout Mask (simulated)
Entries1879878
×10^3
140
120
100
80
60
40
20
0
0 5 10 15 20 25 30

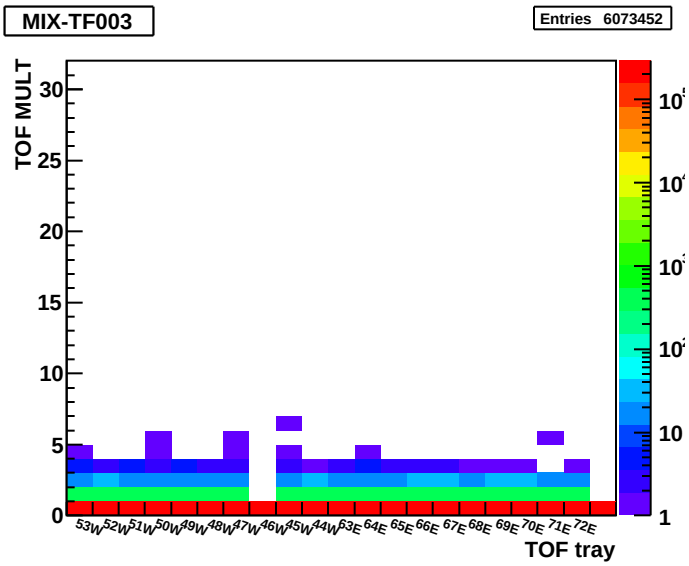

BunchId7Bit (all events)
Entries 144606
10^3
10^2
10
1
0 20 40 60 80 100 120

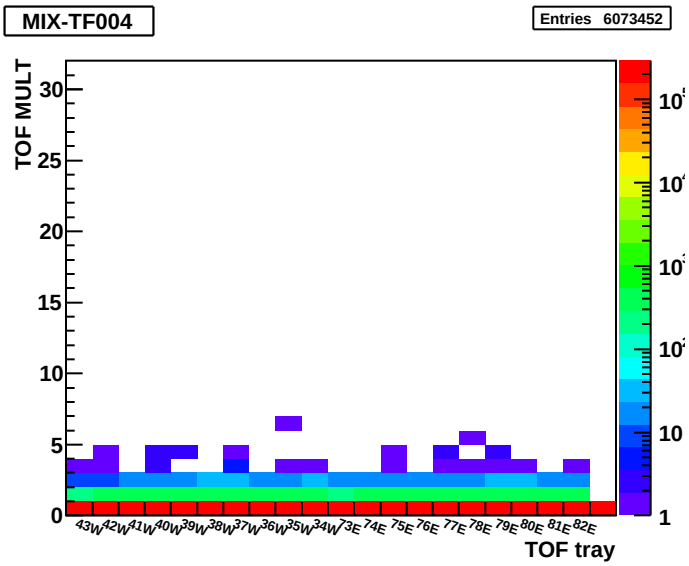

Abort-gaps
Entries 111
10
1
0 20 40 60 80 100 120

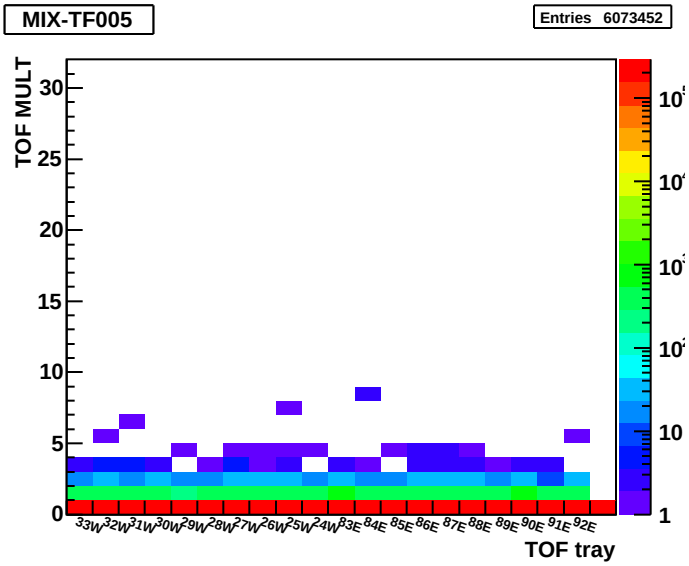

!Yellow-Fill
Entries 144606
10^3
10^2
10
1
0 20 40 60 80 100 120

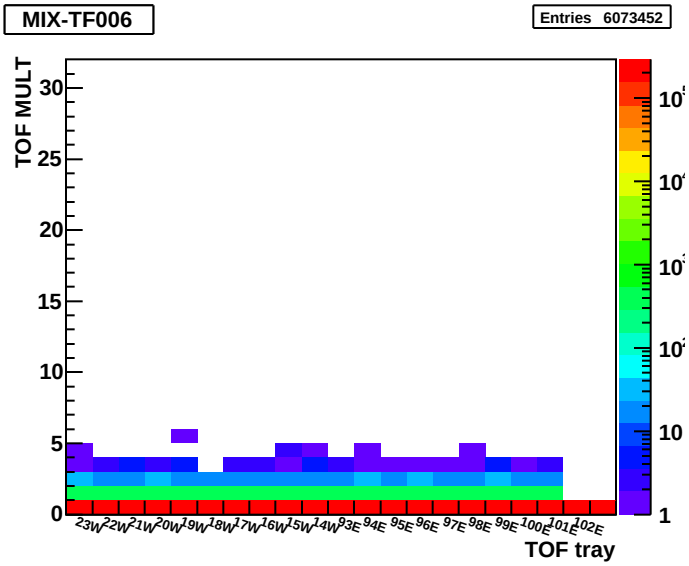

MIX-TF001
Entries 6073452
TOF MULT
TOF tray

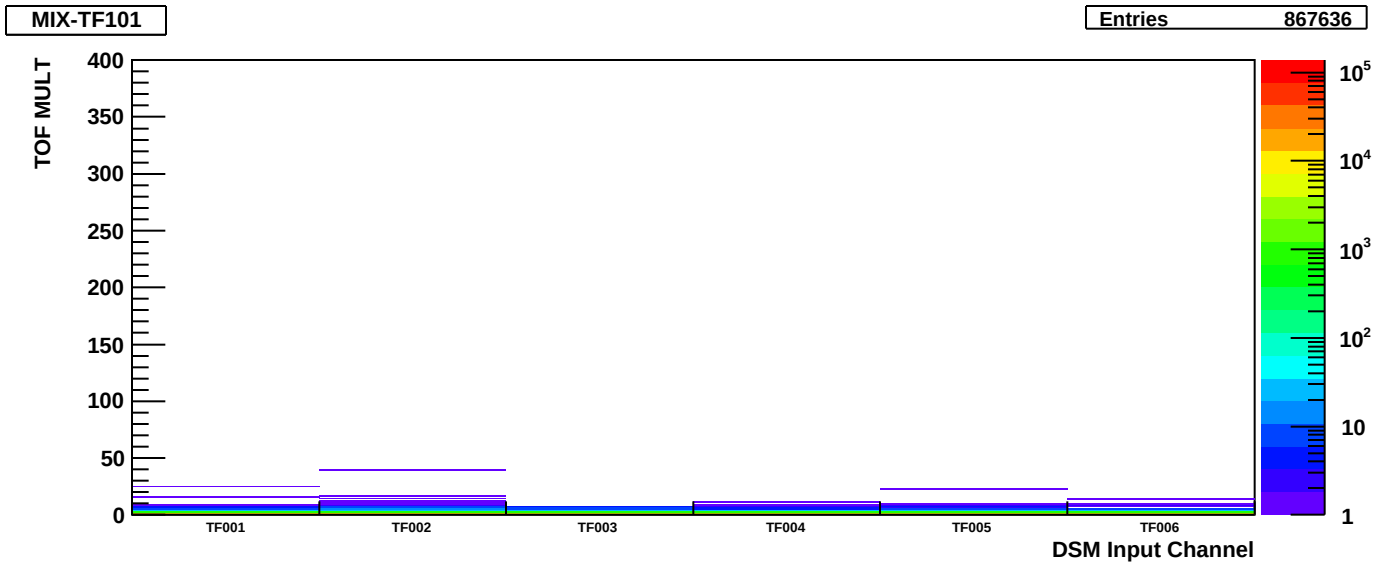

MIX-TF002
Entries 6073452
TOF MULT
TOF tray

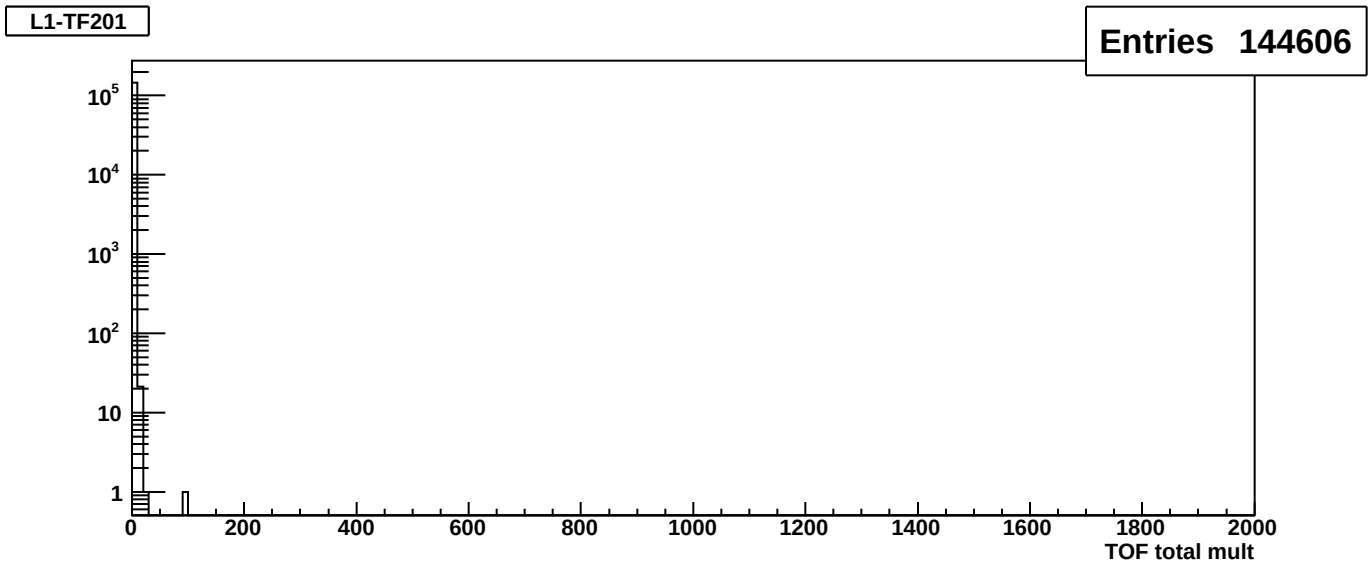

MIX-TF003
Entries 6073452
TOF MULT
TOF tray

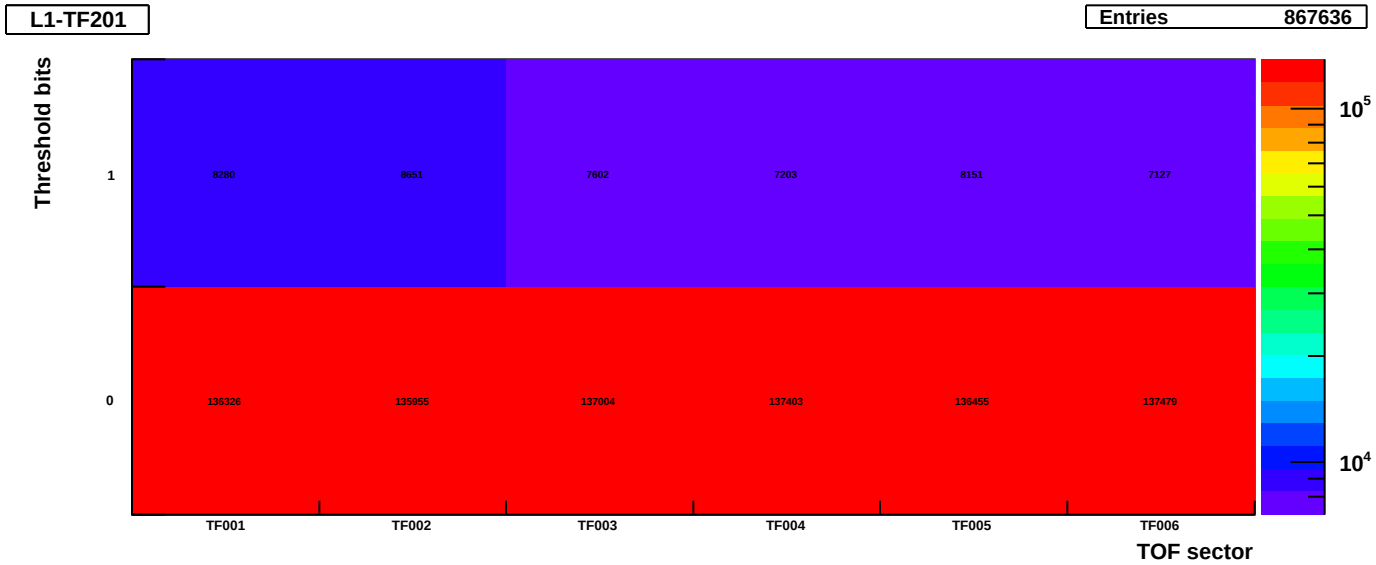

MIX-TF004
Entries 6073452
TOF MULT
TOF tray

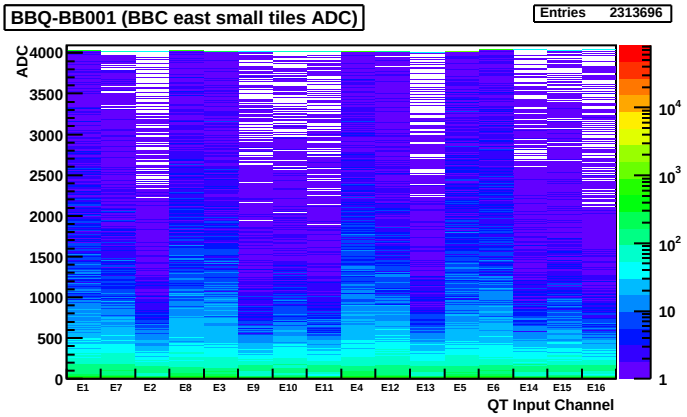

MIX-TF005
Entries 6073452
TOF MULT
TOF tray

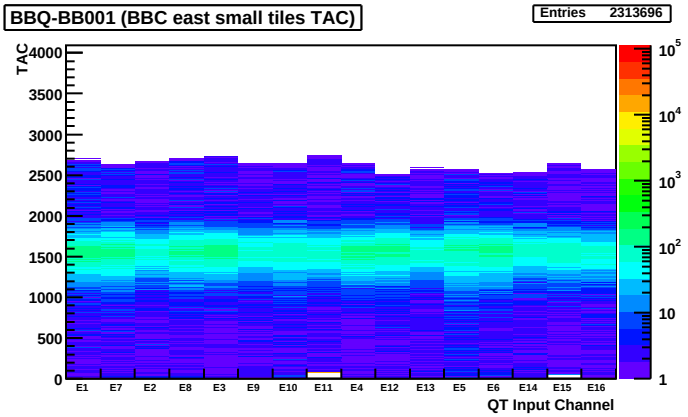

MIX-TF006
Entries 6073452
TOF MULT
TOF tray

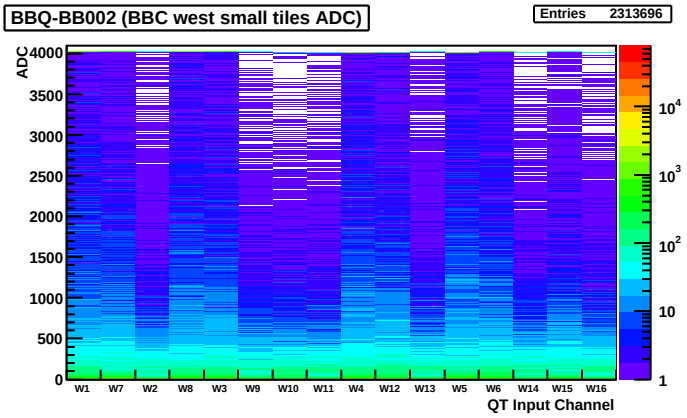

MIX-TF101
Entries 867636
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

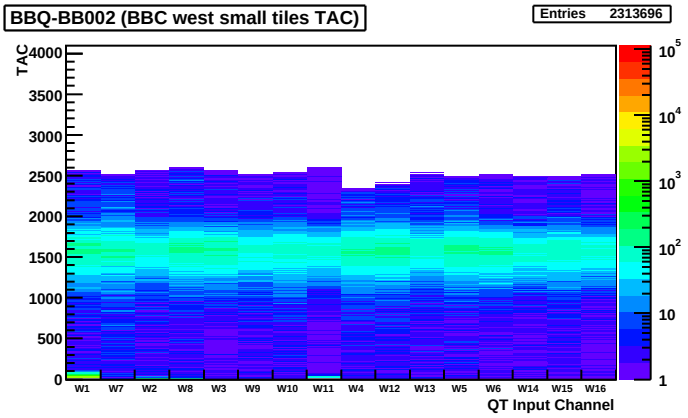

L1-TF201
Entries 144606
10^5
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

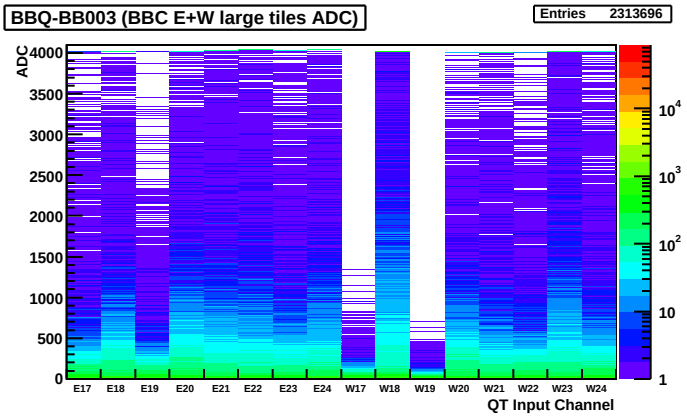

L1-TF201
Entries 867636
Threshold bits
1
0
8280
8651
7602
7203
8151
7127
136326
135955
137004
137403
136455
137479
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^5
10^4

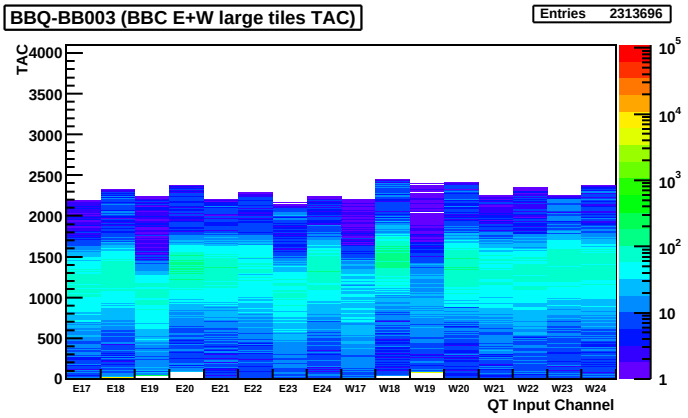

BBQ-BB001 (BBC east small tiles ADC)
Entries 2313696
ADC
QT Input Channel

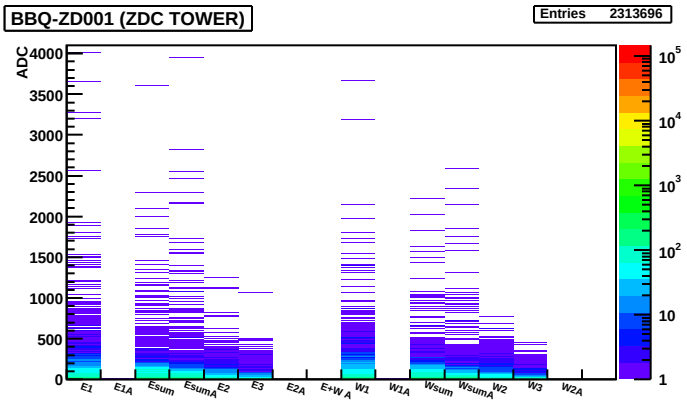

BBQ-BB001 (BBC east small tiles TAC)
Entries 2313696
TAC
QT Input Channel

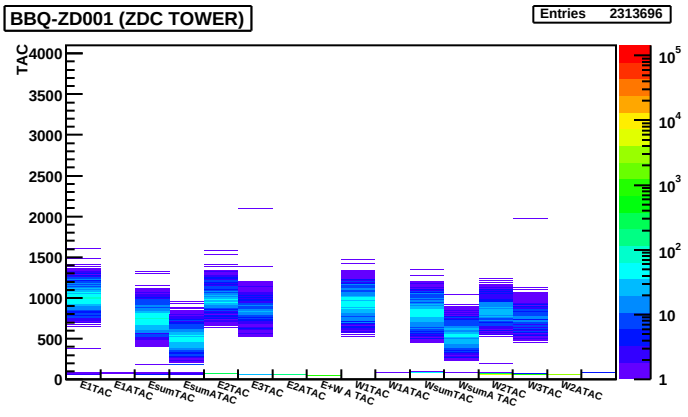

BBQ-BB002 (BBC west small tiles ADC)
Entries 2313696
ADC
QT Input Channel

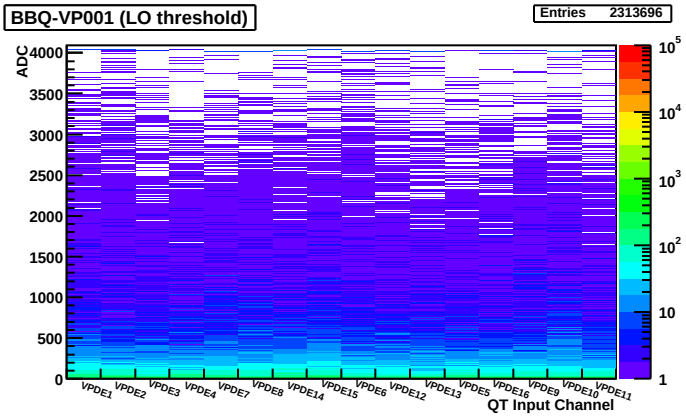

BBQ-BB002 (BBC west small tiles TAC)
Entries 2313696
TAC
QT Input Channel

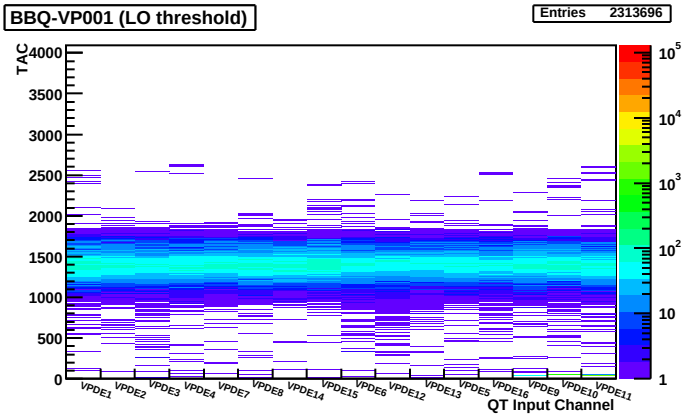

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 2313696
ADC
QT Input Channel

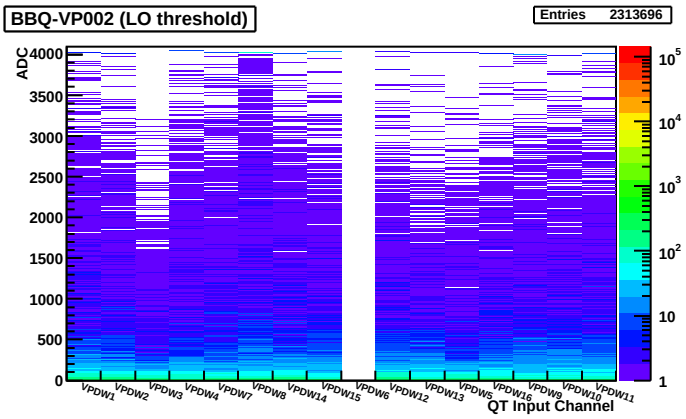

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 2313696
TAC
QT Input Channel

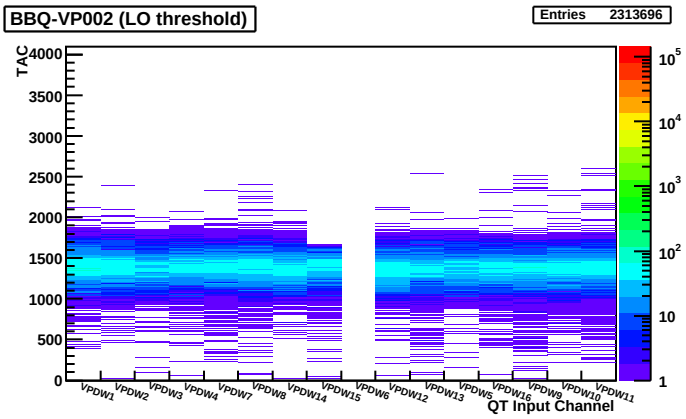

BBQ-ZD001 (ZDC TOWER)
Entries 2313696
ADC

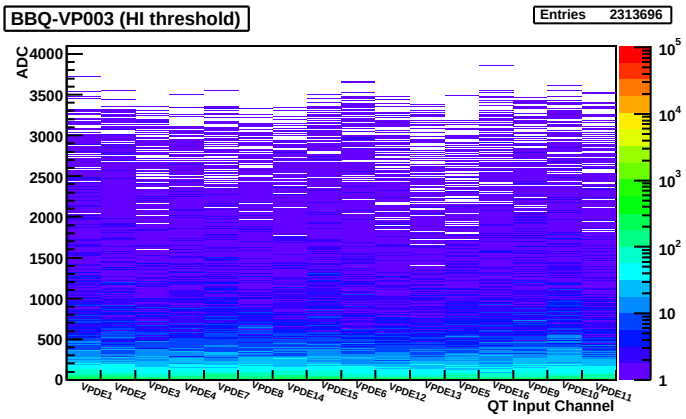

BBQ-ZD001 (ZDC TOWER)
Entries 2313696
TAC

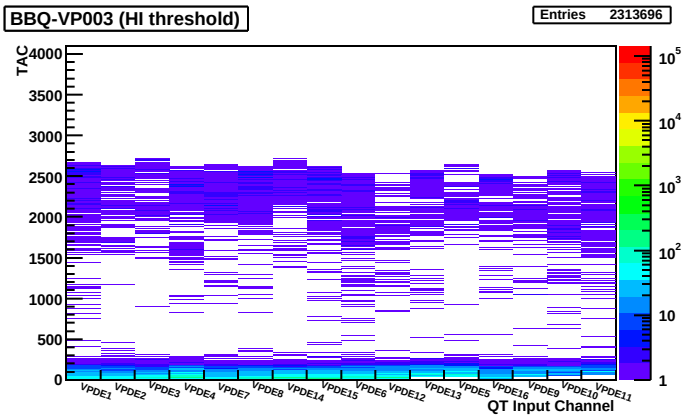

BBQ-VP001 (LO threshold)
Entries 2313696
ADC
QT Input Channel

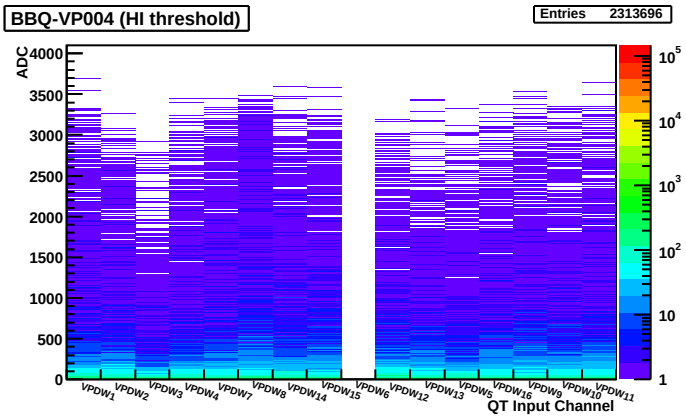

BBQ-VP001 (LO threshold)
Entries 2313696
TAC
QT Input Channel

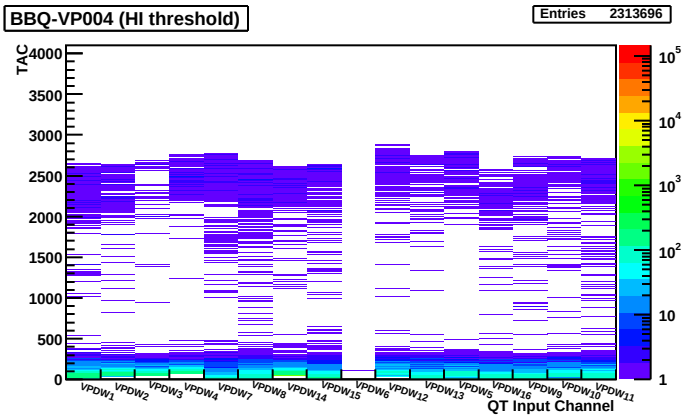

BBQ-VP002 (LO threshold)
Entries 2313696
ADC
QT Input Channel

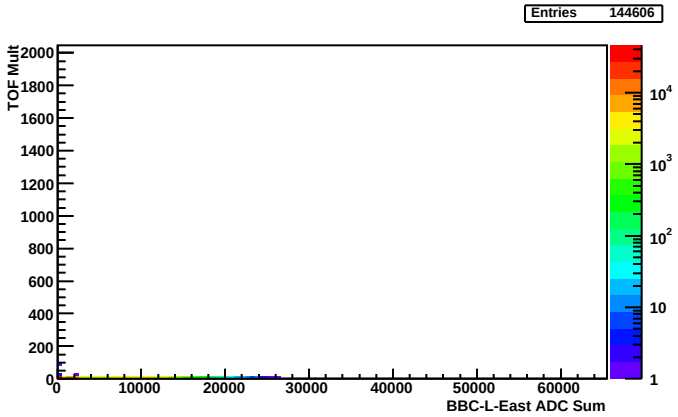

BBQ-VP002 (LO threshold)
Entries 2313696
TAC
QT Input Channel

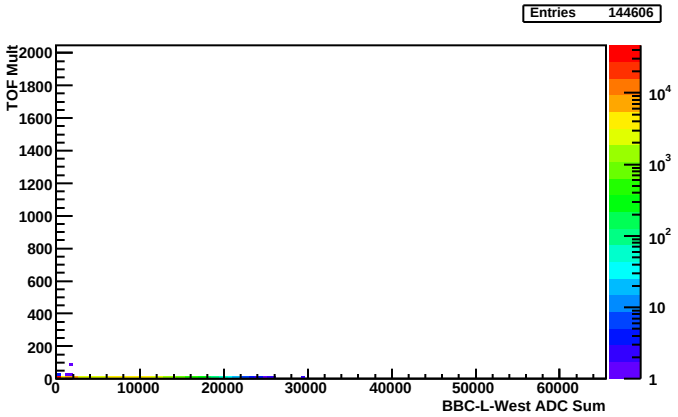

BBQ-VP003 (HI threshold)
Entries 2313696
ADC
QT Input Channel

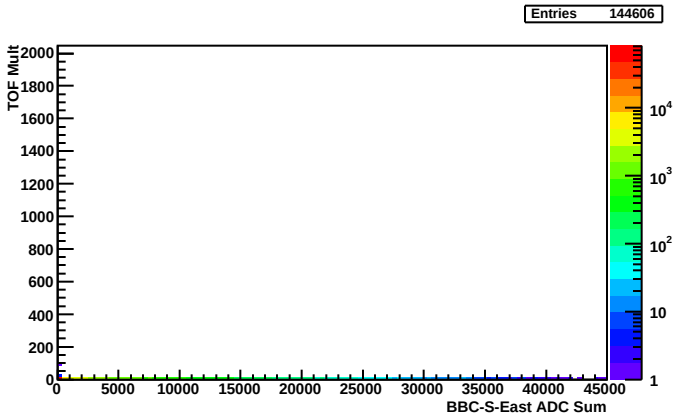

BBQ-VP003 (HI threshold)
Entries 2313696
TAC
QT Input Channel

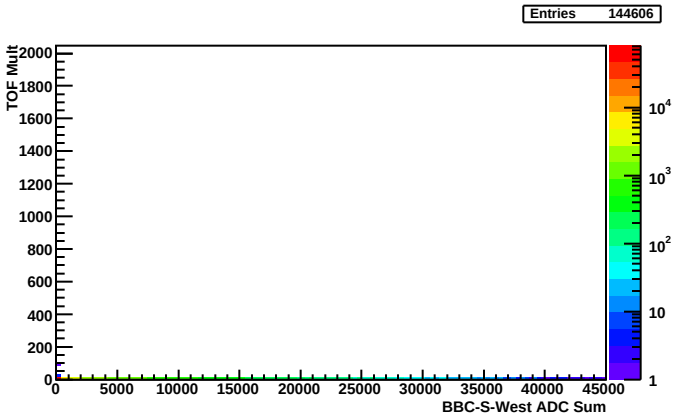

BBQ-VP004 (HI threshold)
Entries 2313696
ADC
QT Input Channel

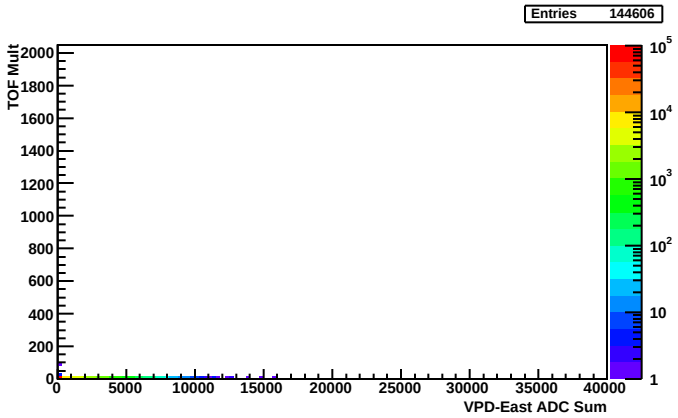

BBQ-VP004 (HI threshold)
Entries 2313696
TAC
QT Input Channel

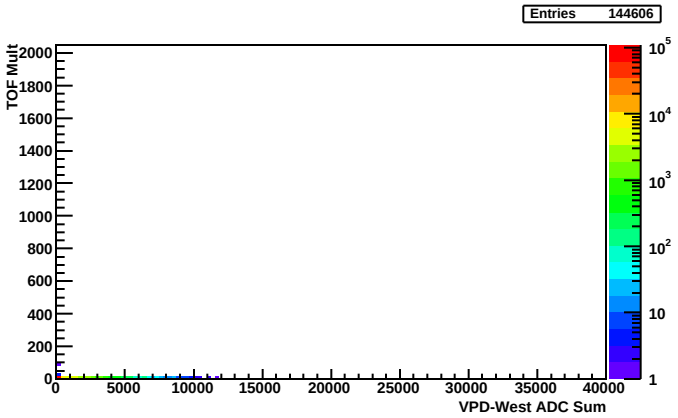

Entries 144606
TOF Mult
BBC-L-East ADC Sum

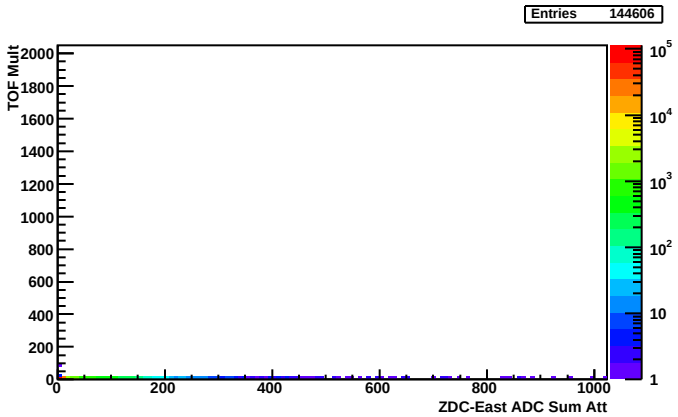

Entries 144606
TOF Mult
BBC-L-West ADC Sum

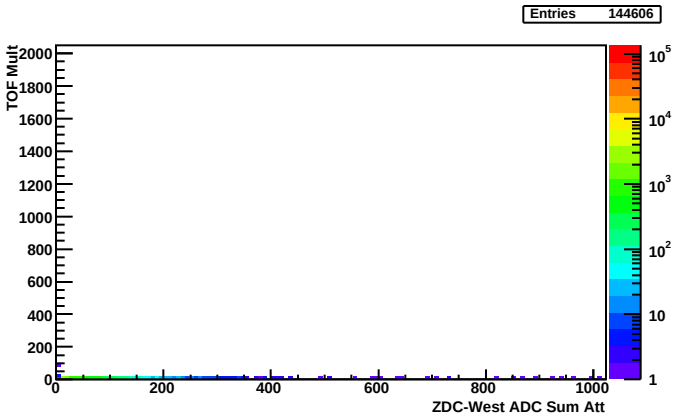

Entries 144606
TOF Mult
BBC-S-East ADC Sum

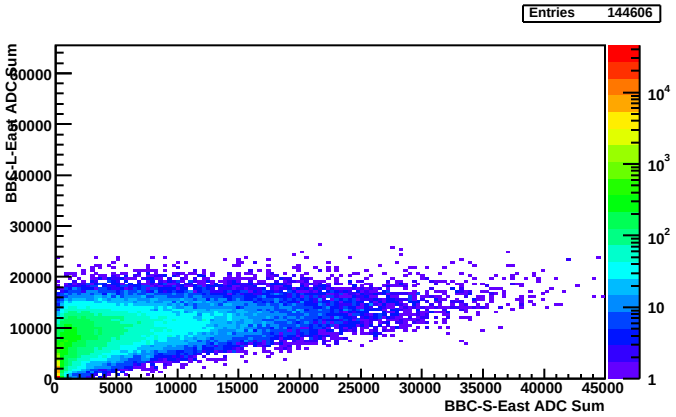

Entries 144606
TOF Mult
BBC-S-West ADC Sum

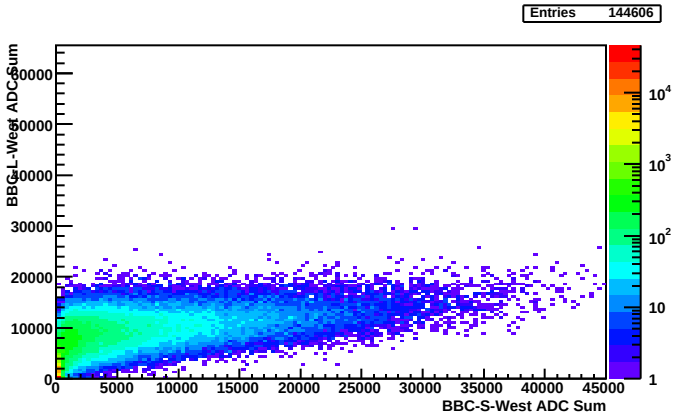

Entries 144606
TOF Mult
VPD-East ADC Sum

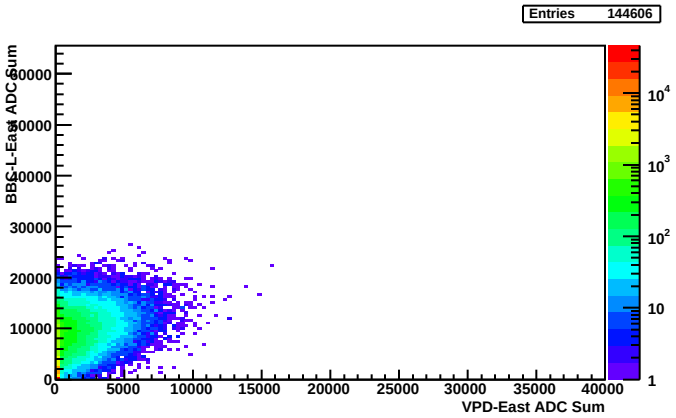

Entries 144606
TOF Mult
VPD-West ADC Sum

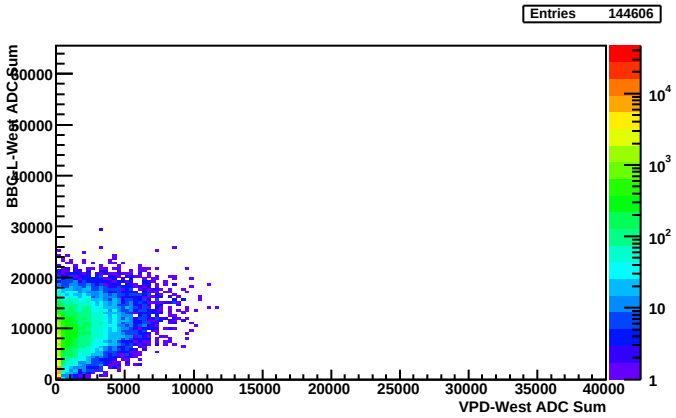

Entries 144606
TOF Mult
ZDC-East ADC Sum Att

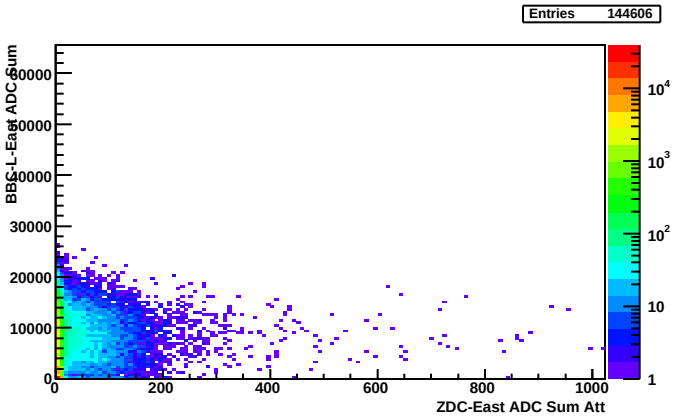

Entries 144606
TOF Mult
ZDC-West ADC Sum Att

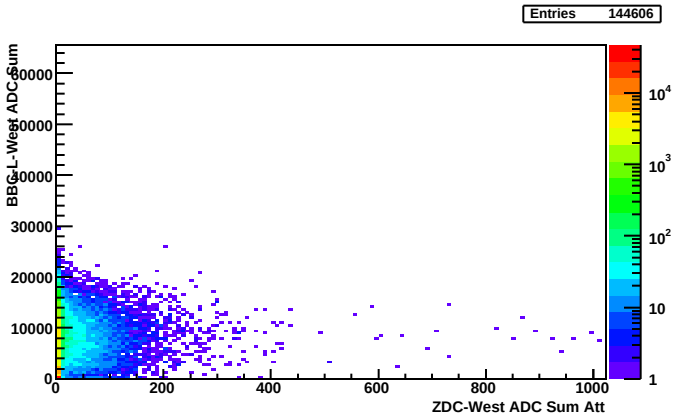

Entries 144606
BBC-L-East ADC Sum
BBC-S-East ADC Sum

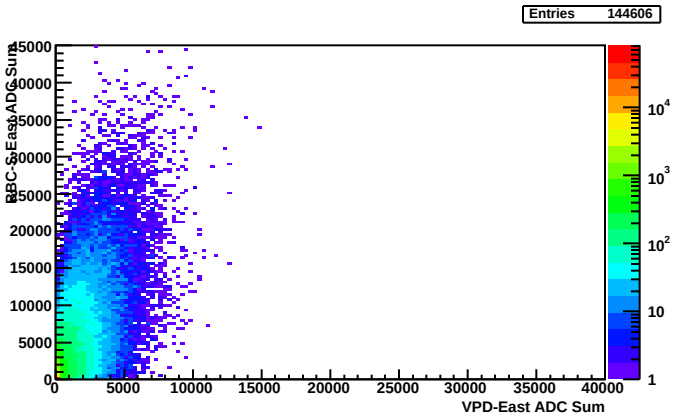

Entries 144606
BBC-L-West ADC Sum
BBC-S-West ADC Sum

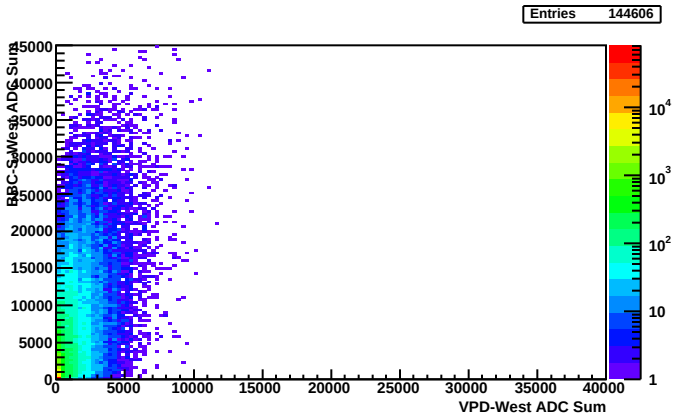

Entries 144606
BBC-L-East ADC Sum
VPD-East ADC Sum

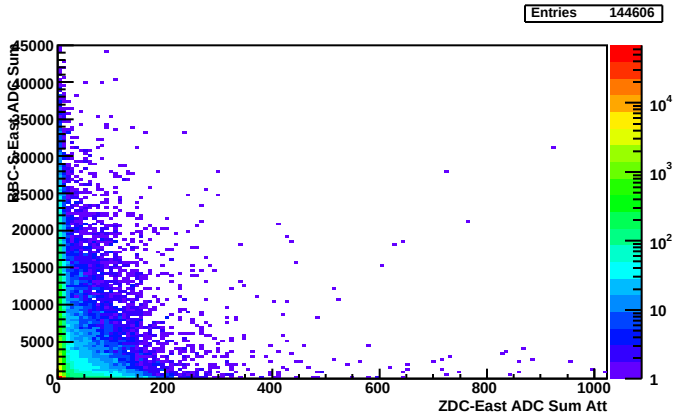

Entries 144606
BBC-L-West ADC Sum
VPD-West ADC Sum

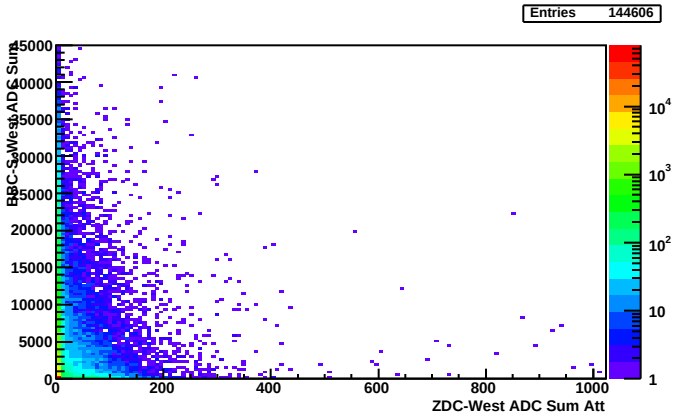

Entries 144606
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

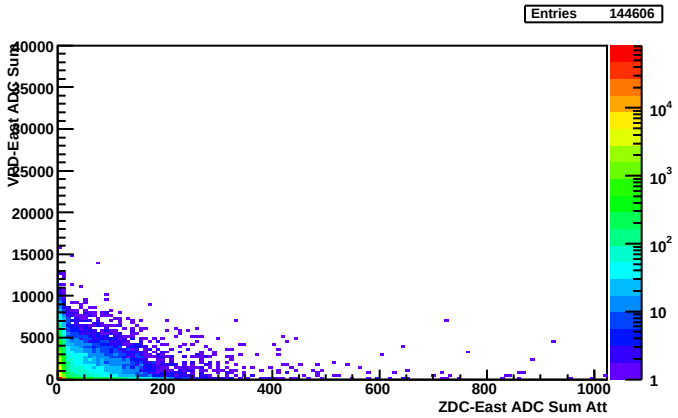

Entries 144606
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

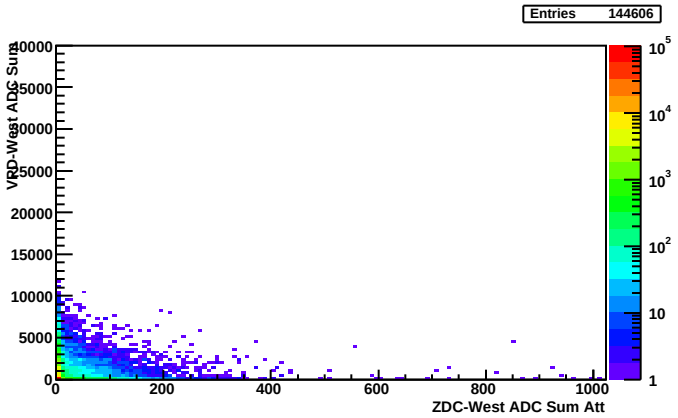

Entries 144606
BBC-S-East ADC Sum
VPD-East ADC Sum

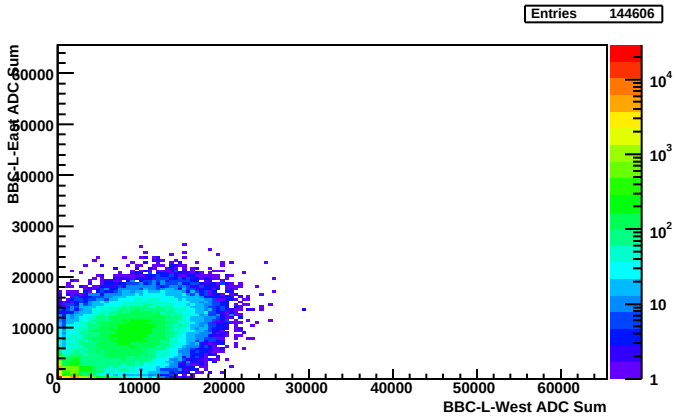

Entries 144606
BBC-S-West ADC Sum
VPD-West ADC Sum


Entries 144606
BBC-S-East ADC Sum
ZDC-East ADC Sum Att


Entries 144606
BBC-S-West ADC Sum
ZDC-West ADC Sum Att


Entries 144606
VPD-East ADC Sum
ZDC-East ADC Sum Att


Entries 144606
VPD-West ADC Sum
ZDC-West ADC Sum Att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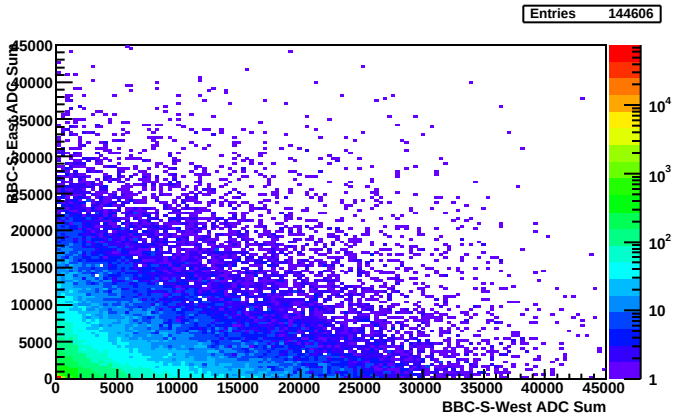
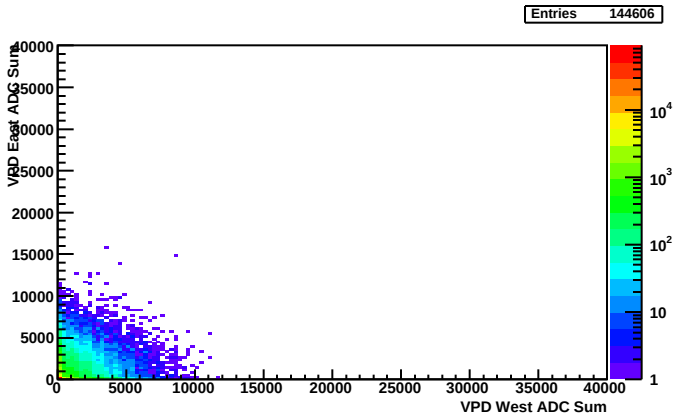
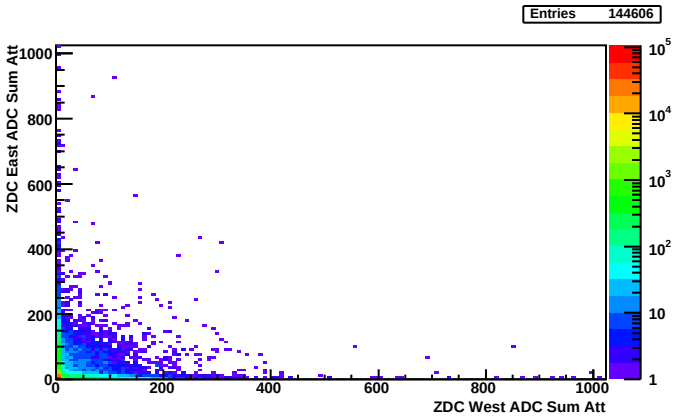
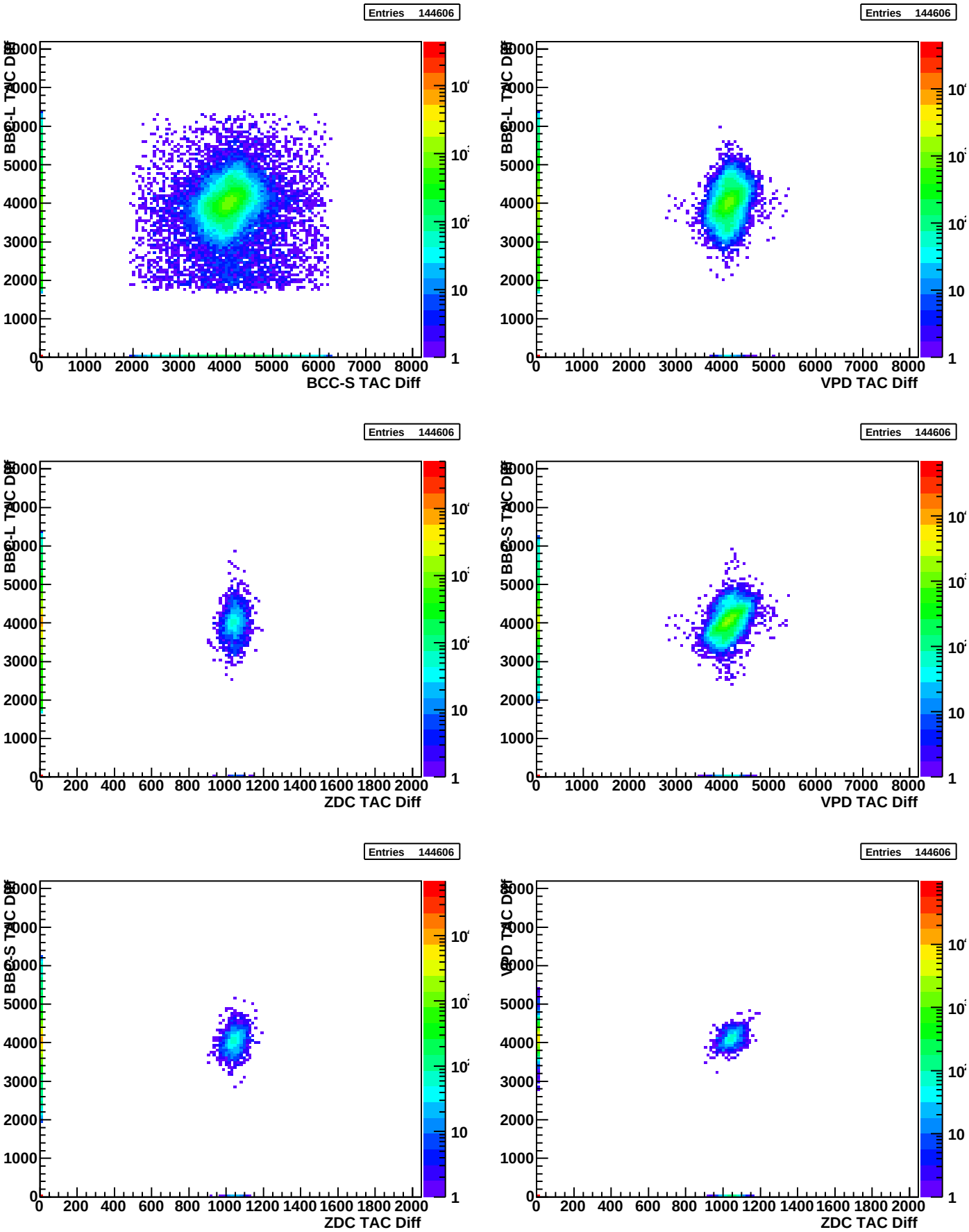
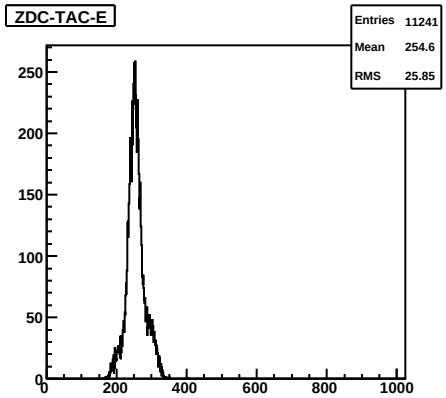
BBC-L-East ADC Sum
BBC-L-West ADC Sum

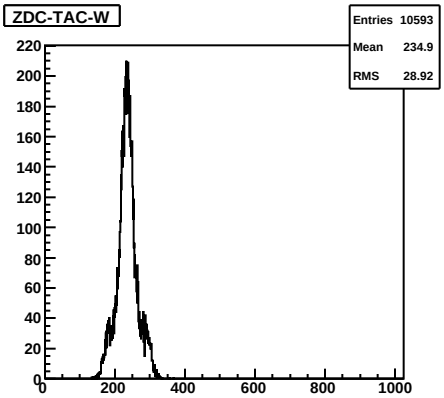

Entries 144606
BBC-S-East ADC Sum
BBC-S-West ADC Sum

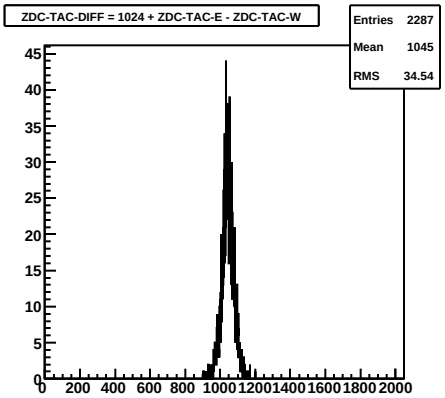

Entries 144606
VPD East ADC Sum
VPD West ADC Sum

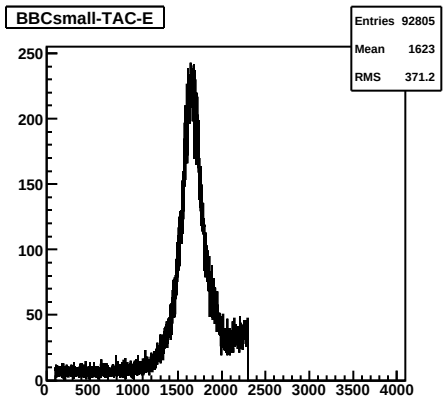

Entries 144606
ZDC East ADC Sum Att
ZDC West ADC Sum Att

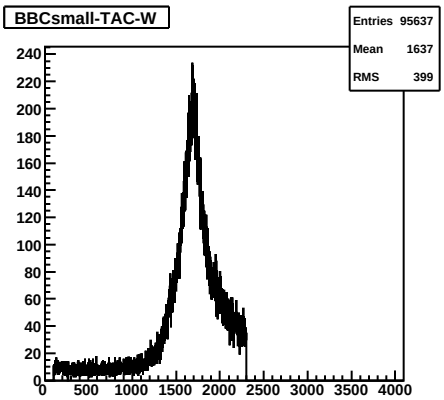

Entries 144606
BBC-L TAC Diff
BCC-S TAC Diff
Entries 144606
BBC-L TAC Diff
VPD TAC Diff
Entries 144606
BBC-L TAC Diff
ZDC TAC Diff
Entries 144606
BBC-S TAC Diff
VPD TAC Diff
Entries 144606
BBC-S TAC Diff
ZDC TAC Diff
Entries 144606
VPD TAC Diff
ZDC TAC Diff

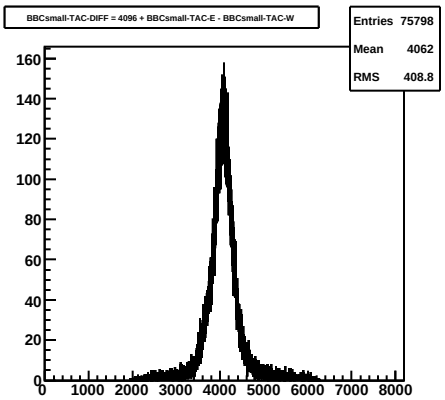

ZDC-TAC-E
Entries 11241
Mean 254.6
RMS 25.85

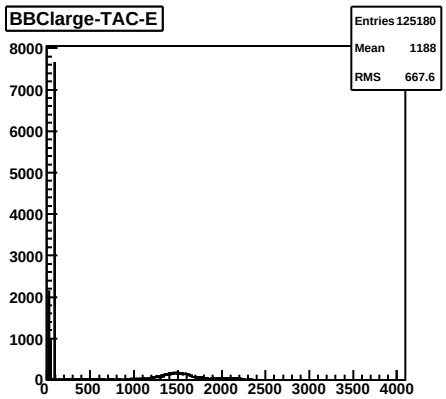

ZDC-TAC-W
Entries 10593
Mean 234.9
RMS 28.92

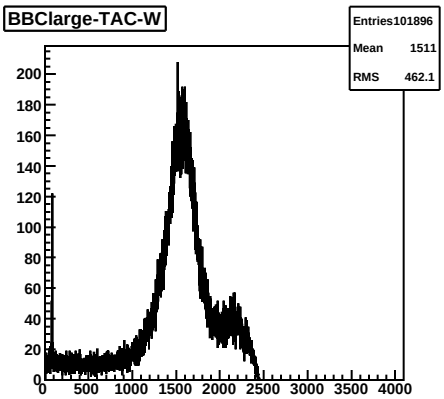

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 2287
Mean 1045
RMS 34.54

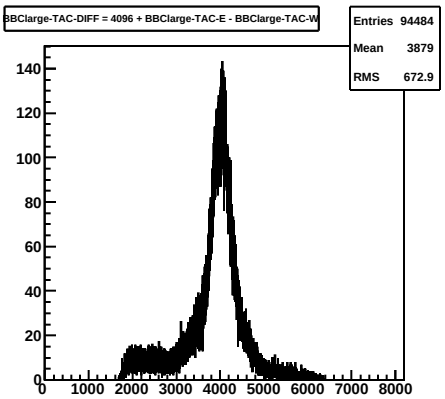

BBCsmall-TAC-E
Entries 92805
Mean 1623
RMS 371.2

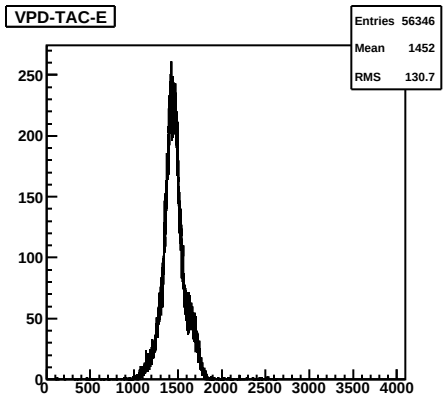

BBCsmall-TAC-W
Entries 95637
Mean 1637
RMS 399

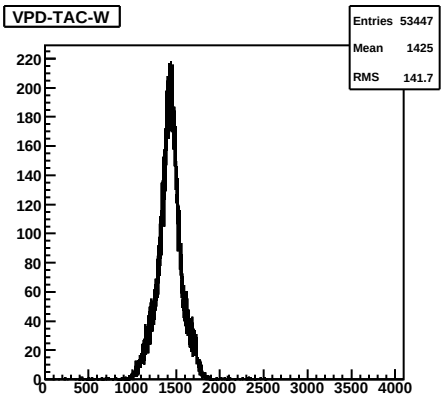

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 75798
Mean 4062
RMS 408.8

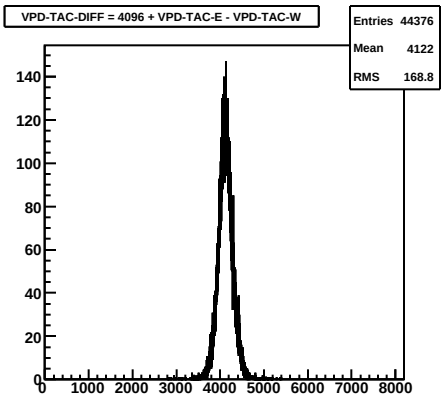

BBClarge-TAC-E
Entries 125180
Mean 1188
RMS 667.6

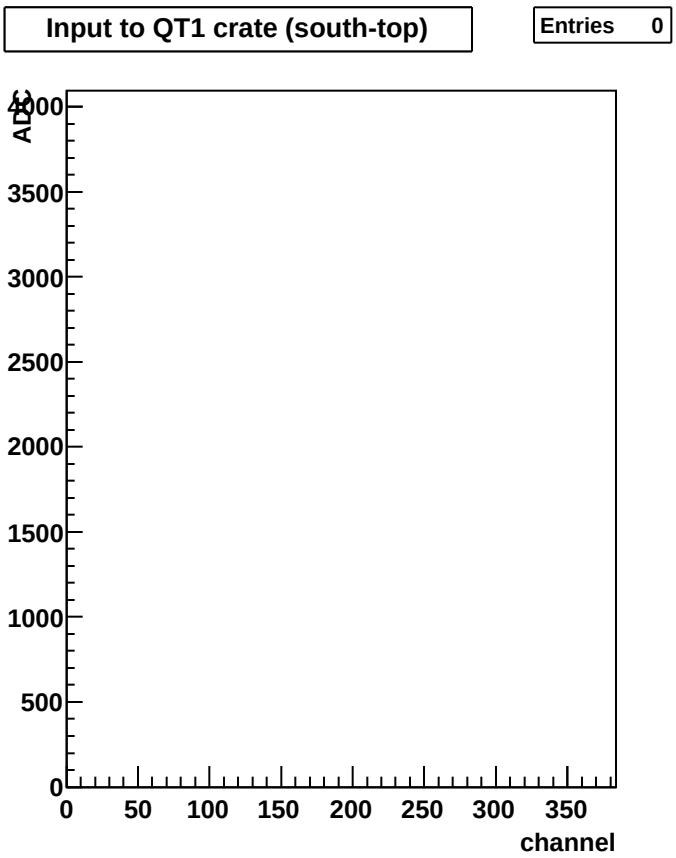

BBClarge-TAC-W
Entries 101896
Mean 1511
RMS 462.1

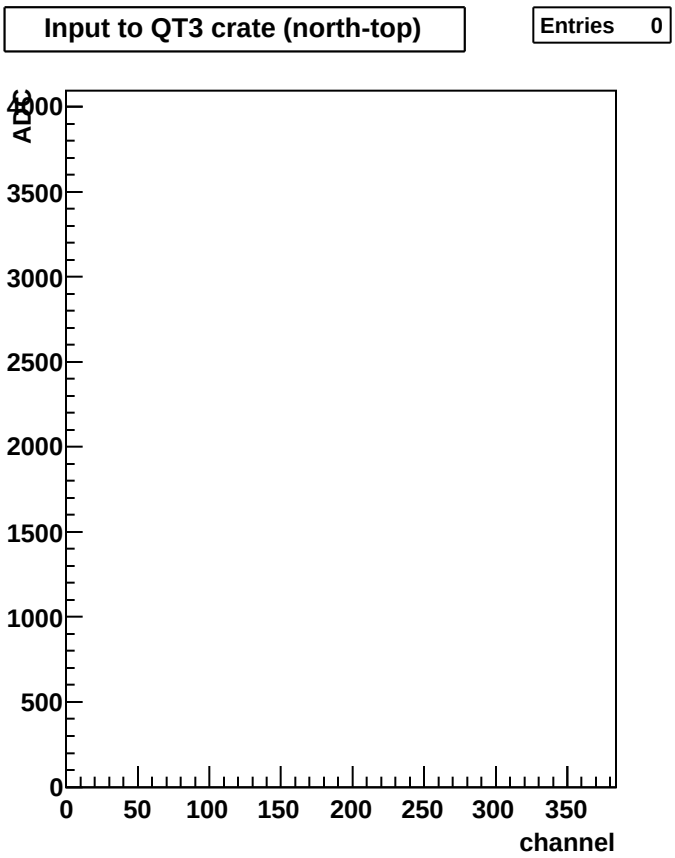

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 94484
Mean 3879
RMS 672.9

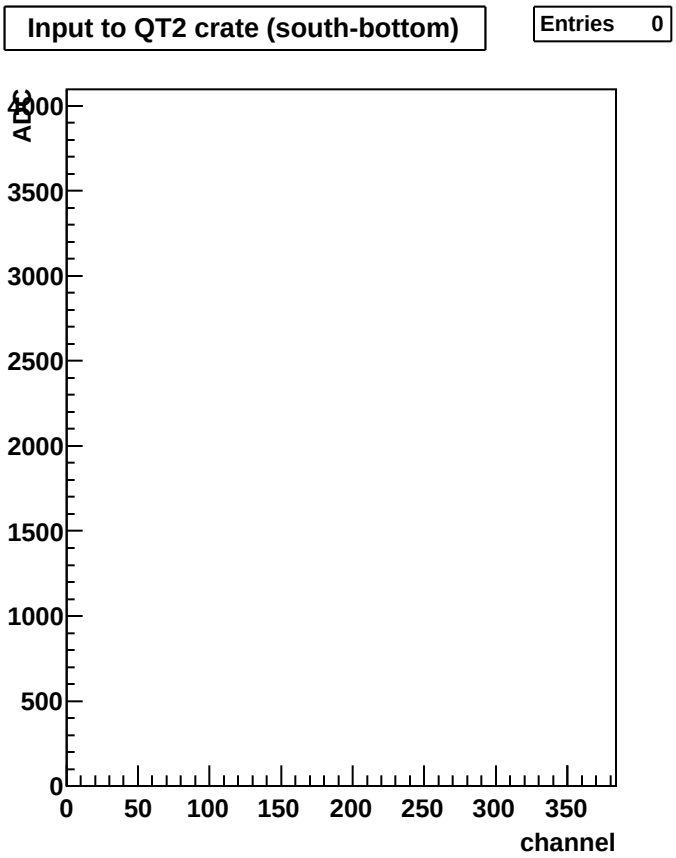

VPD-TAC-E
Entries 56346
Mean 1452
RMS 130.7

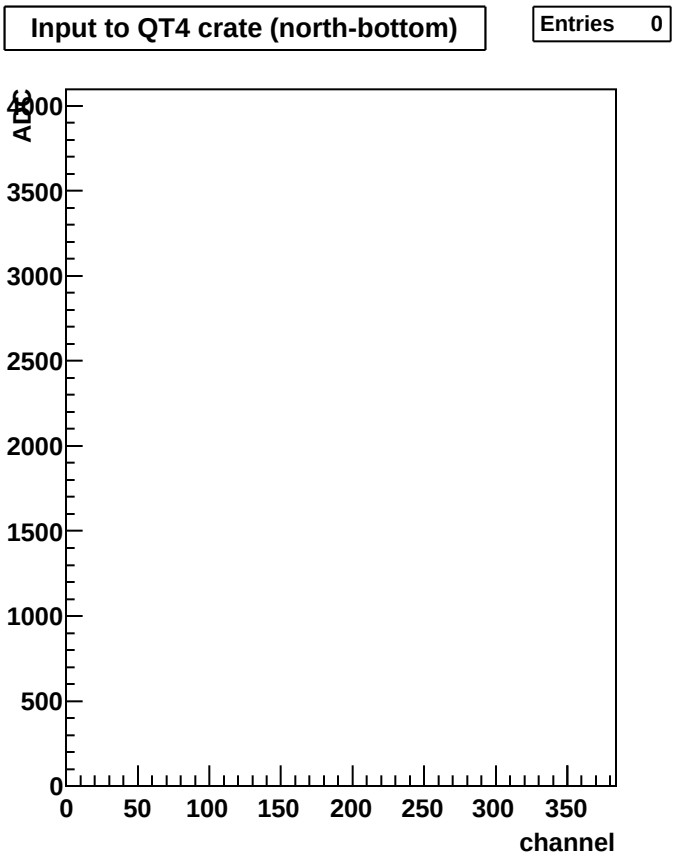

VPD-TAC-W
Entries 53447
Mean 1425
RMS 141.7

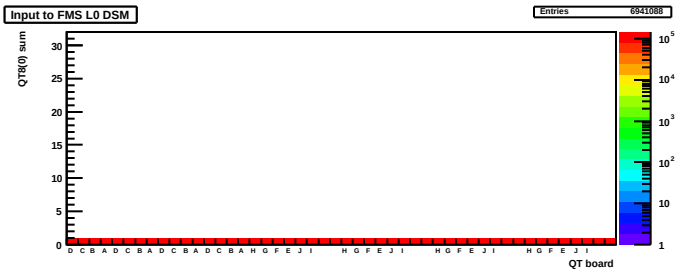

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 44376
Mean 4122
RMS 168.8

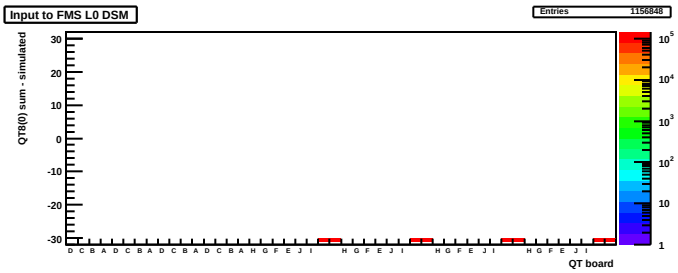

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

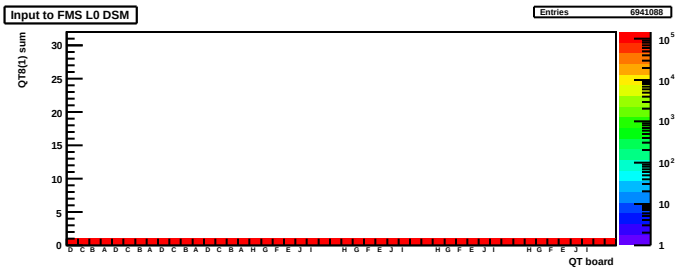

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

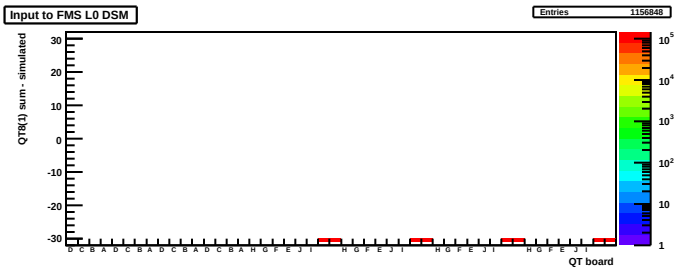

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

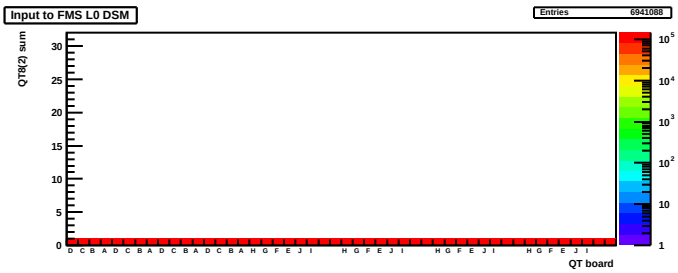

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

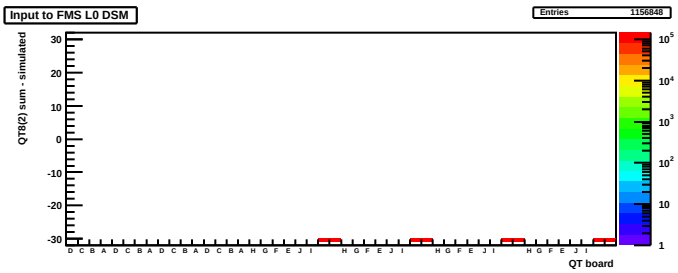

Input to FMS L0 DSM
Entries 6941088
QT8(0) sum
QT board

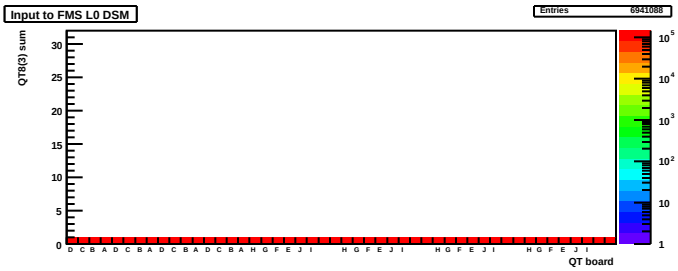

Input to FMS L0 DSM
Entries 1156848
QT8(0) sum - simulated
QT board

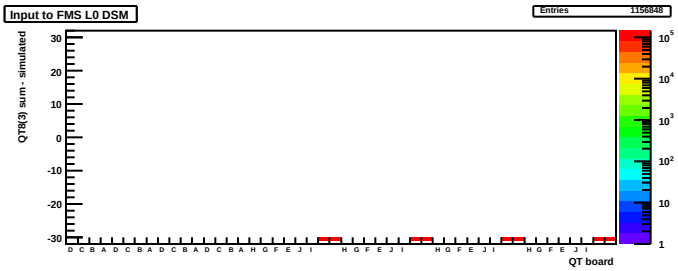

Input to FMS L0 DSM
Entries 6941088
QT8(1) sum
QT board

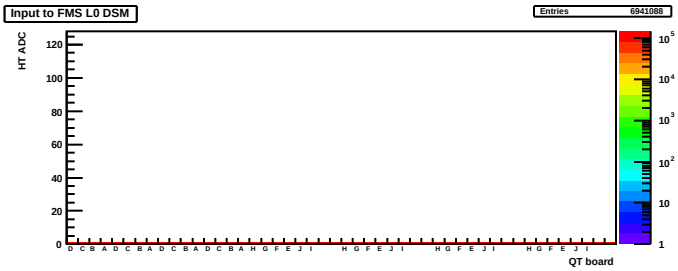

Input to FMS L0 DSM
Entries 1156848
QT8(1) sum - simulated
QT board

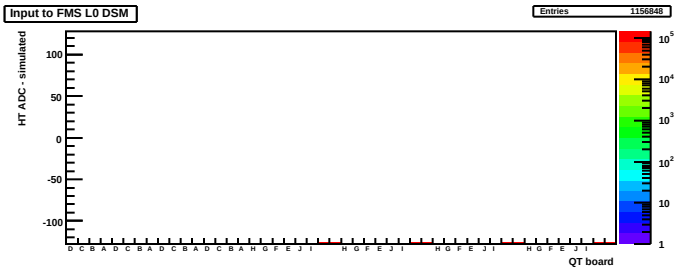

Input to FMS L0 DSM
Entries 6941088
QT8(2) sum
QT board

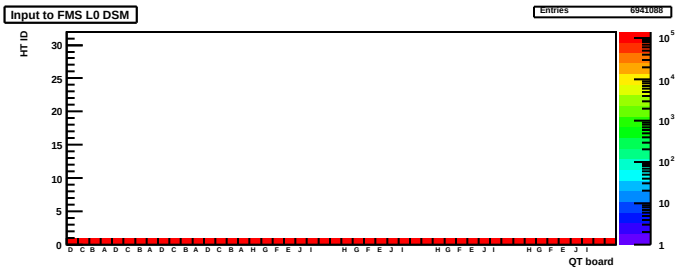

Input to FMS L0 DSM
Entries 1156848
QT8(2) sum - simulated
QT board

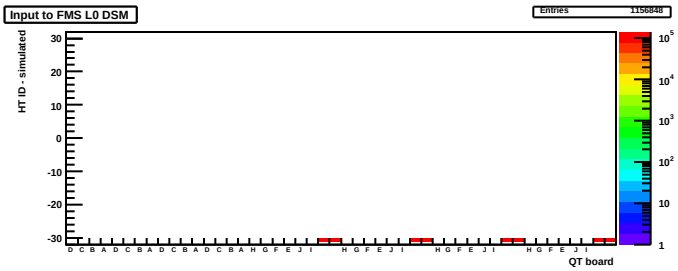

Input to FMS L0 DSM
Entries 6941088
QT8(3) sum
QT board

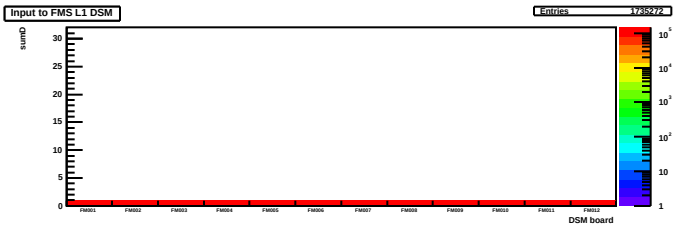

Input to FMS L0 DSM
Entries 1156848
QT8(3) sum - simulated
QT board

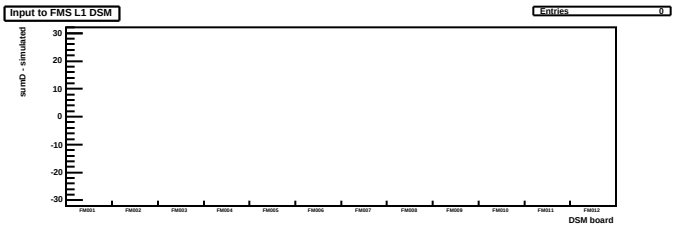

Input to FMS L0 DSM
Entries 6941088
HT ADC
QT board

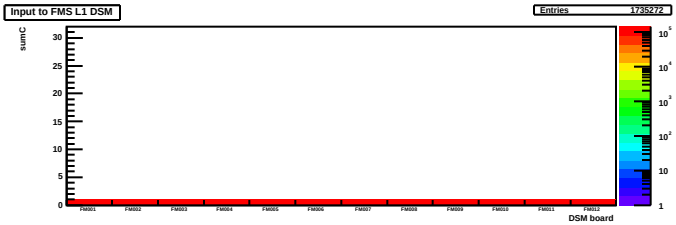

Input to FMS L0 DSM
Entries 1156848
HT ADC - simulated
QT board

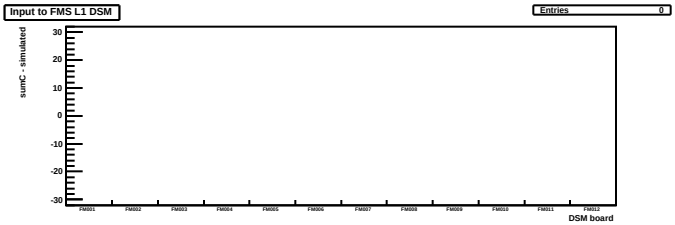

Input to FMS L0 DSM
Entries 6941088
HT ID
QT board

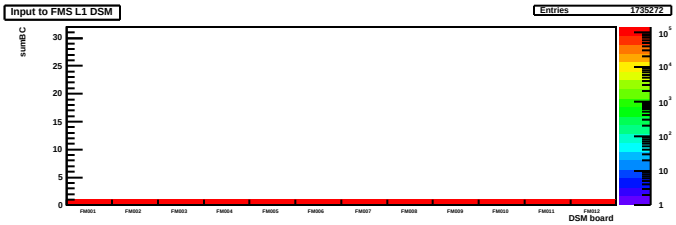

Input to FMS L0 DSM
Entries 1156848
HT ID - simulated
QT board

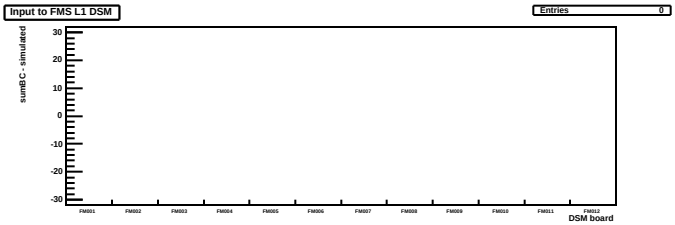

Input to FMS L1 DSM
Entries 1735272
sumD
DSM board

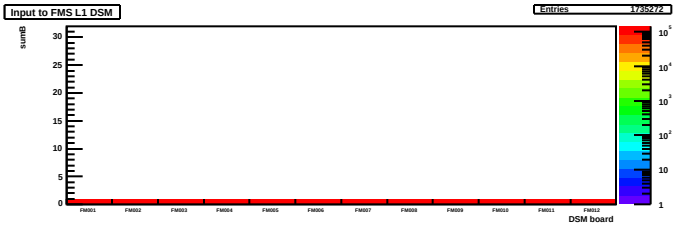

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

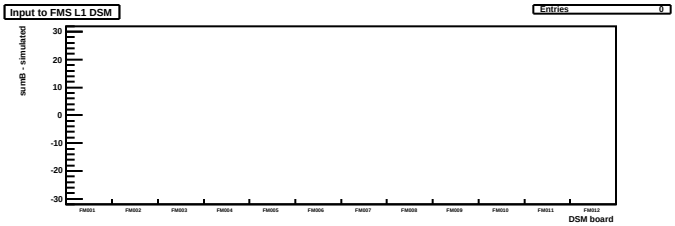

Input to FMS L1 DSM
Entries 1735272
sumC
DSM board

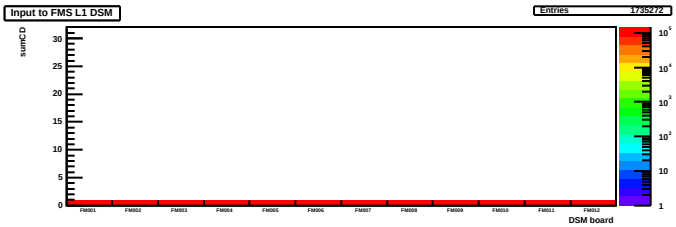

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

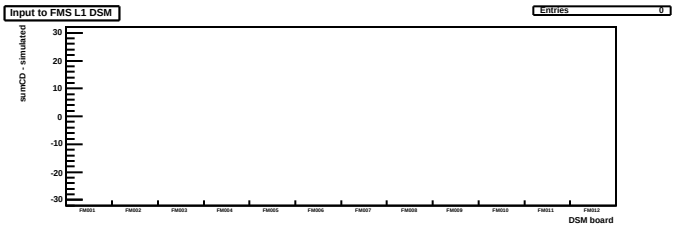

Input to FMS L1 DSM
Entries 1735272
sumBC
DSM board

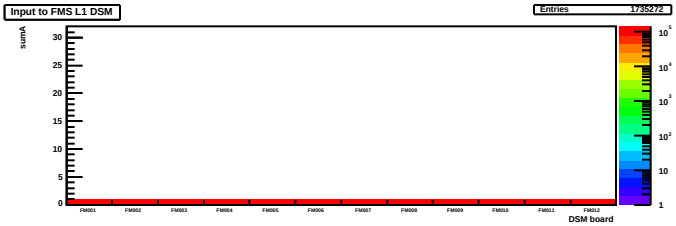

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

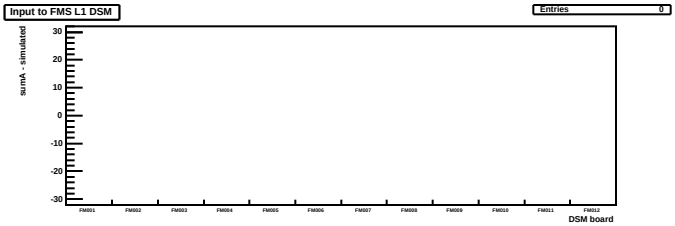

Input to FMS L1 DSM
Entries 1735272
sumB
DSM board

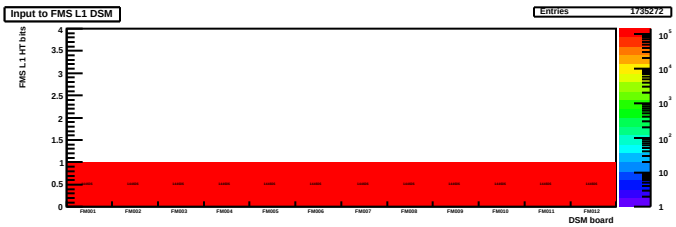

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

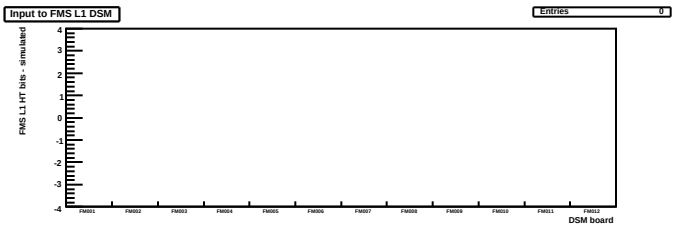

Input to FMS L1 DSM
Entries 1735272
sumCD
DSM board

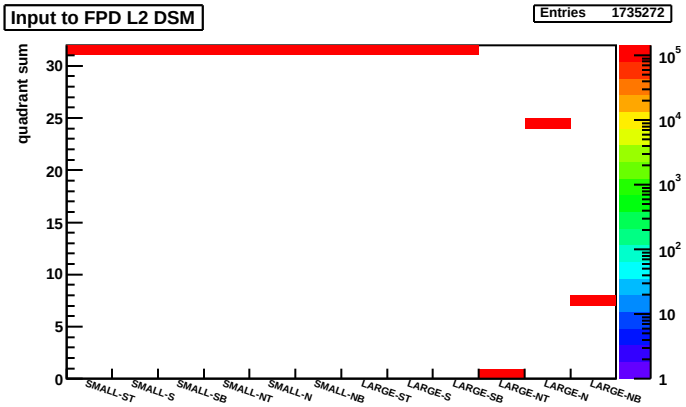

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

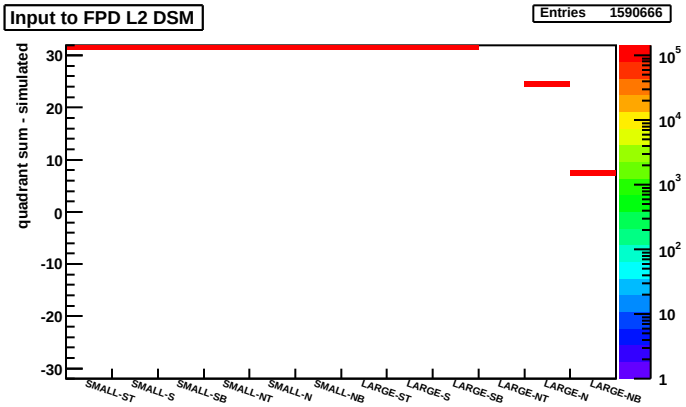

Input to FMS L1 DSM
Entries 1735272
sumA
DSM board

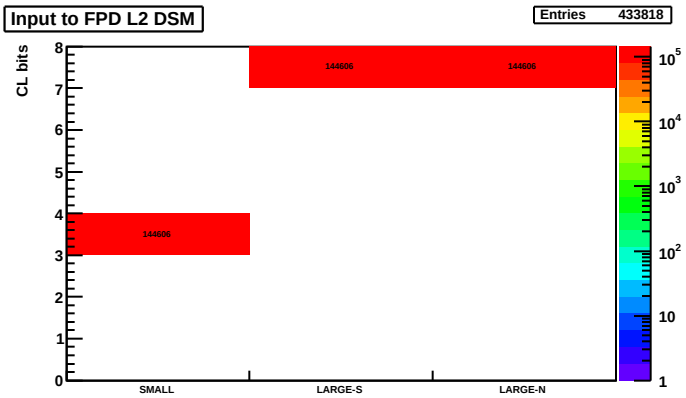

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

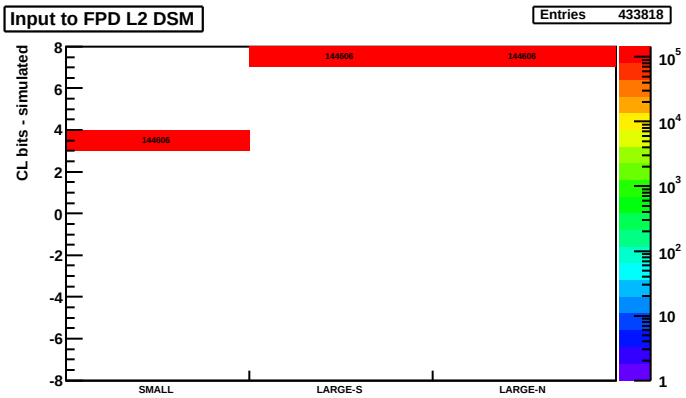

Input to FMS L1 DSM
Entries 1735272
FMS L1 HT bits
DSM board

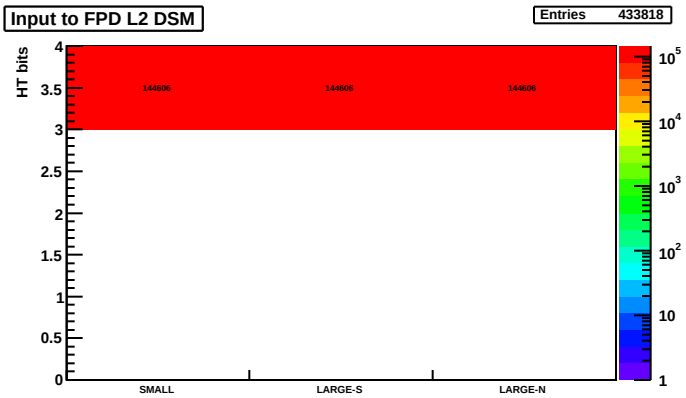

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

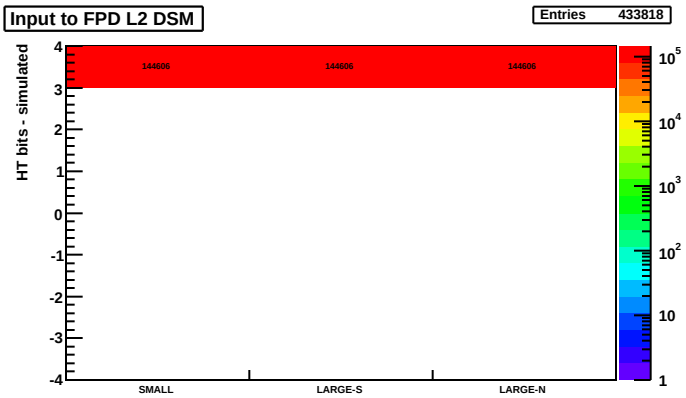

Input to FPD L2 DSM
Entries 1735272
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

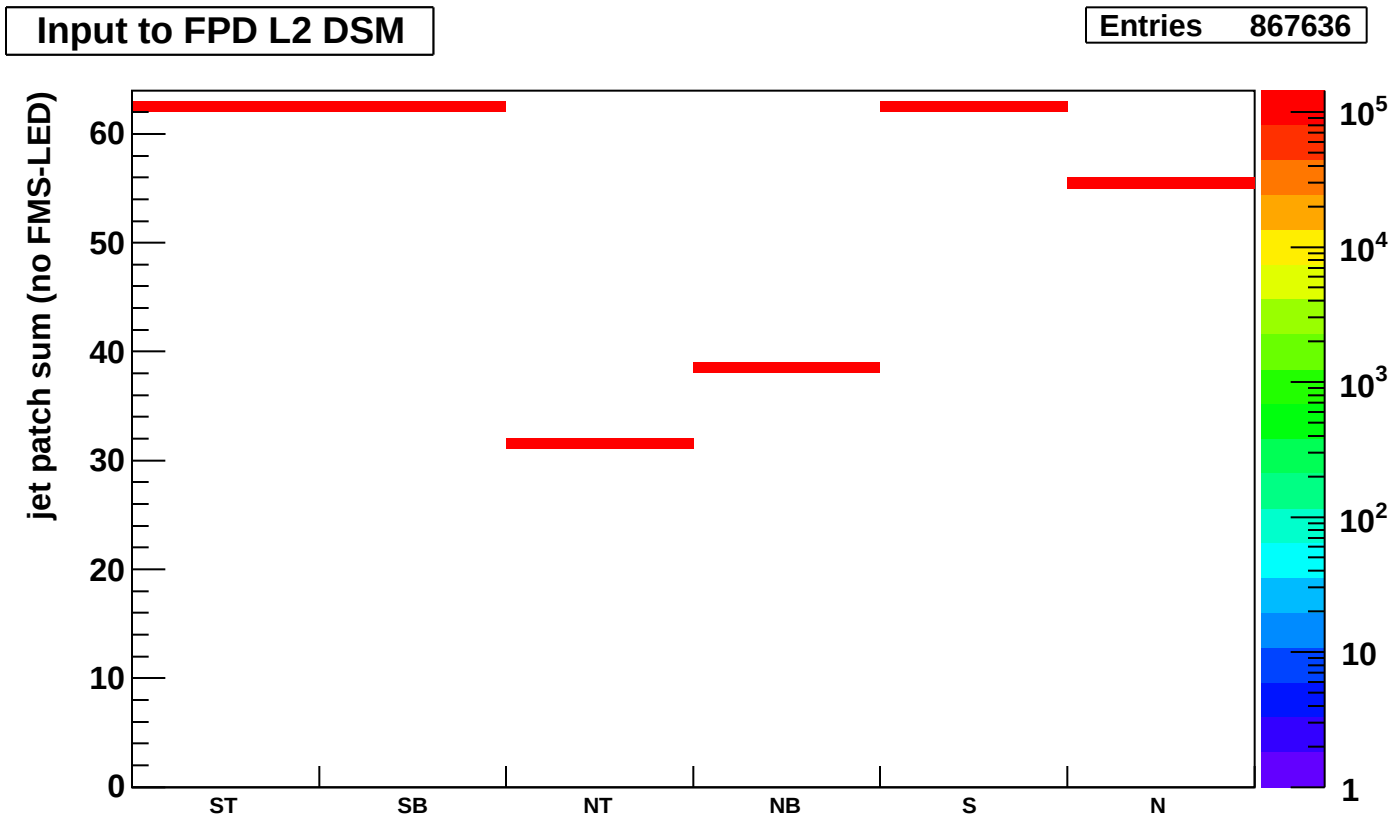

Input to FPD L2 DSM
Entries 1590666
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

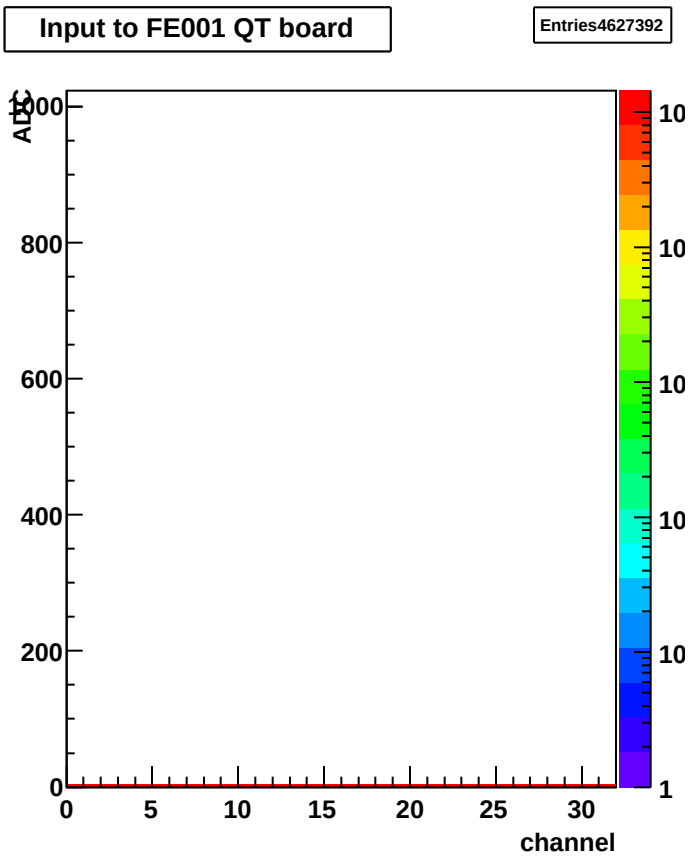

Input to FPD L2 DSM
Entries 433818
CL bits
144606
144606
144606
SMALL
LARGE-S
LARGE-N

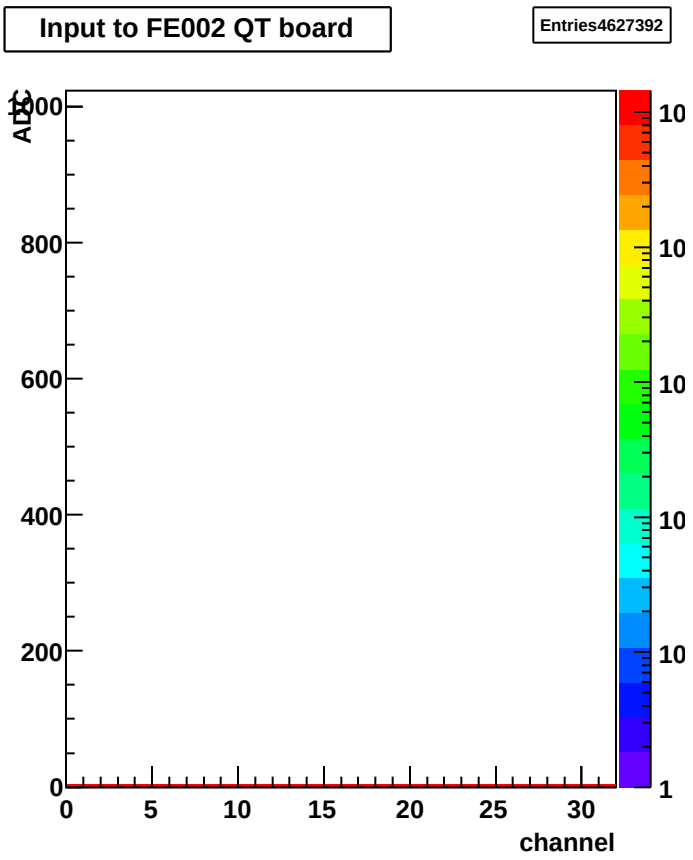

Input to FPD L2 DSM
Entries 433818
CL bits - simulated
144606
144606
144606
SMALL
LARGE-S
LARGE-N

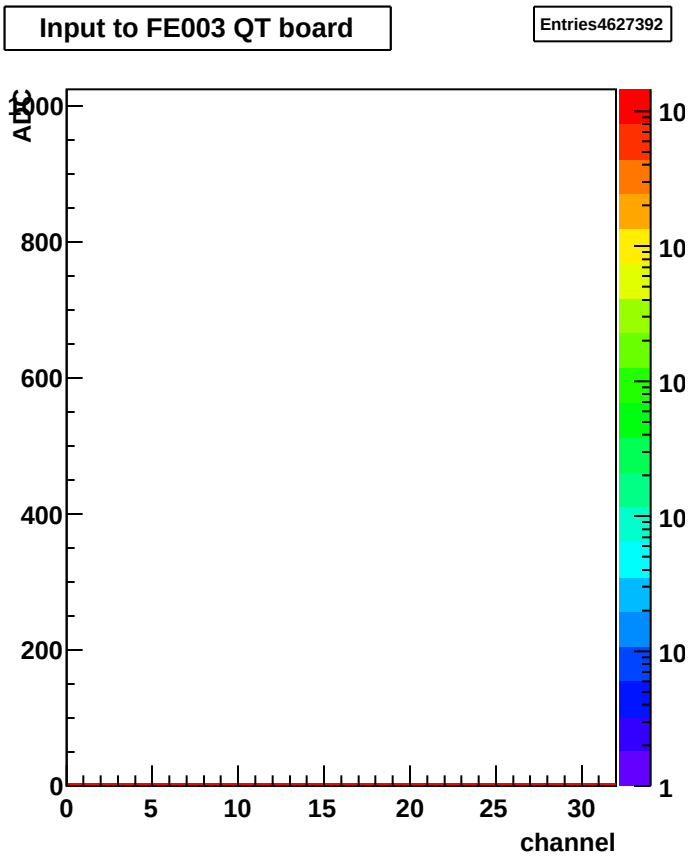

Input to FPD L2 DSM
Entries 433818
HT bits
144606
144606
144606
SMALL
LARGE-S
LARGE-N

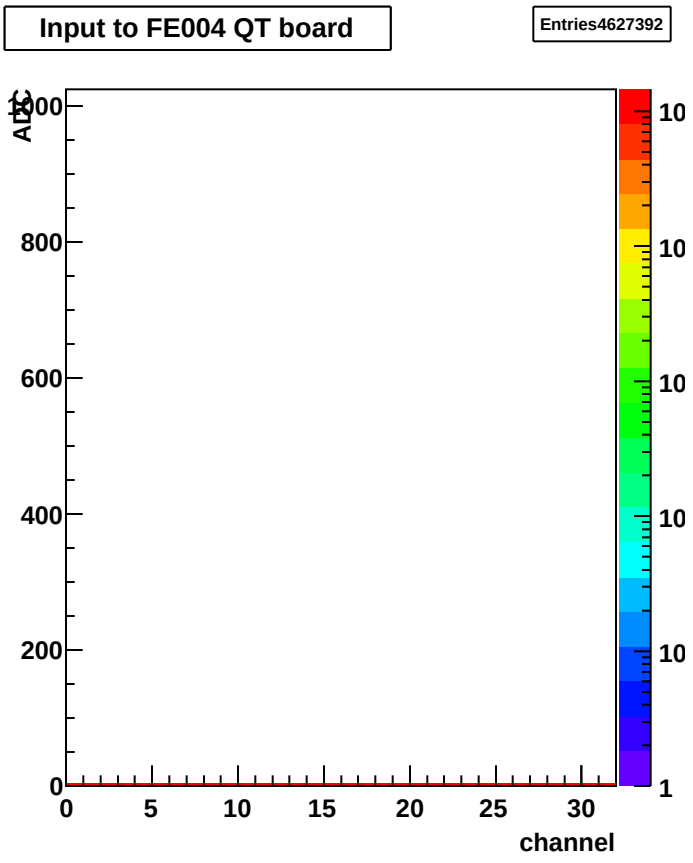

Input to FPD L2 DSM
Entries 433818
HT bits - simulated
144606
144606
144606
SMALL
LARGE-S
LARGE-N

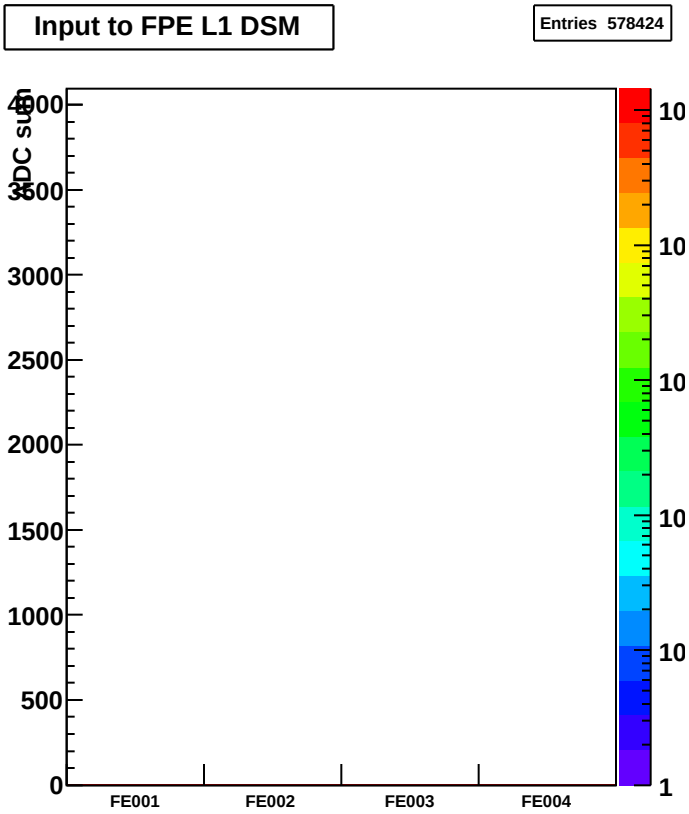

Input to FPD L2 DSM
Entries 867636
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

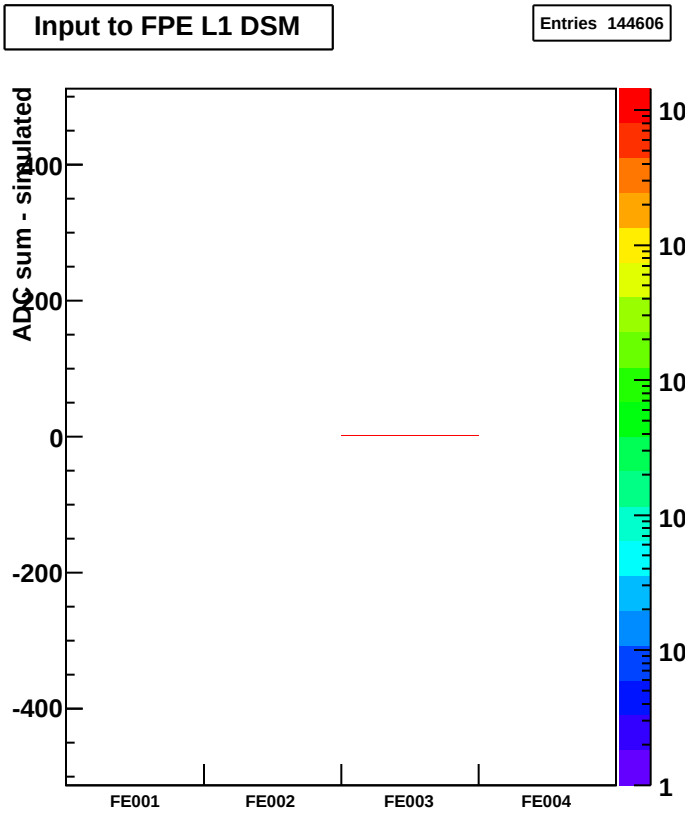

Input to FE001 QT board
Entries4627392
ADC
channel

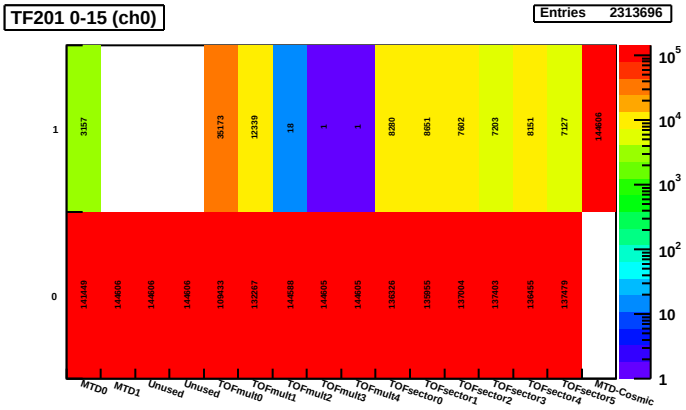

Input to FE002 QT board
Entries4627392
ADC
channel

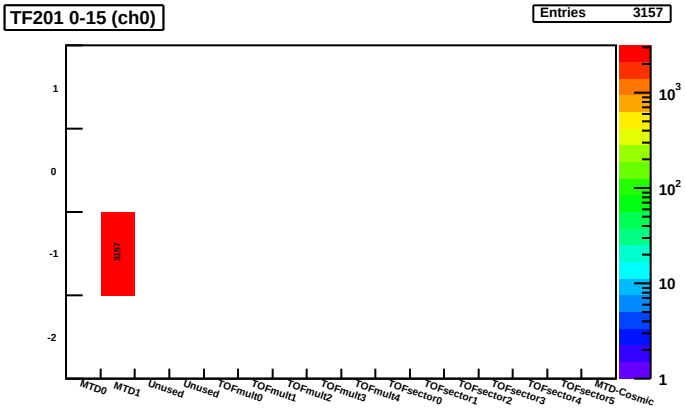

Input to FE003 QT board
Entries4627392
ADC
channel

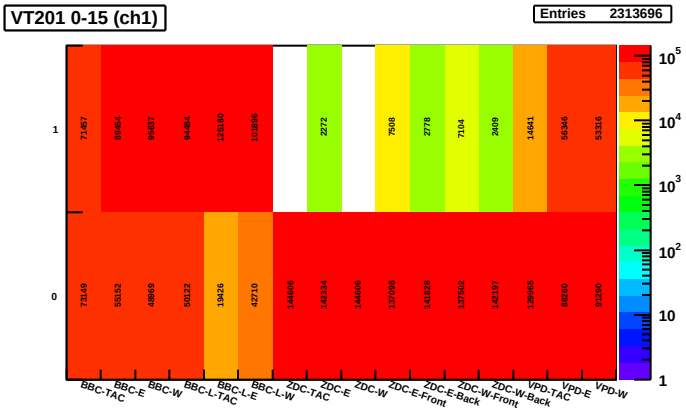

Input to FE004 QT board
Entries4627392
ADC
channel

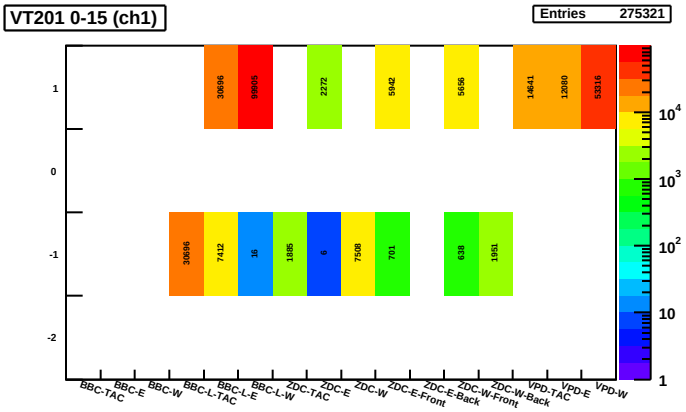

Input to FPE L1 DSM
Entries 578424
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1


Input to FPE L1 DSM
Entries 144606
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
10
1


TF201 0-15 (ch0)
Entries 2313696
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 3157
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 2313696
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 275321
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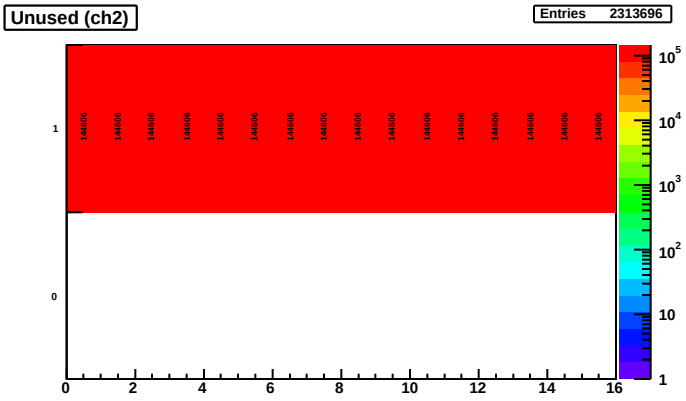
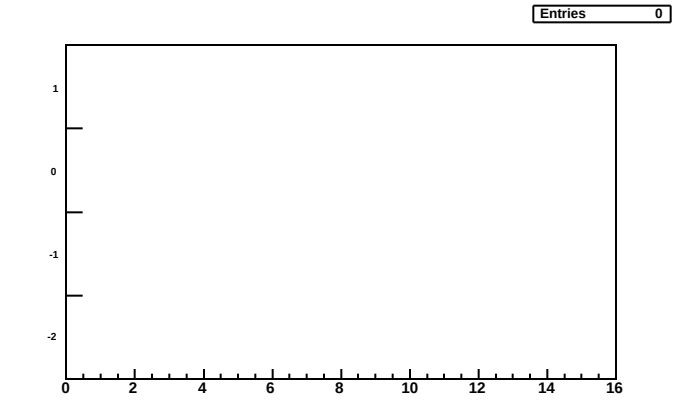
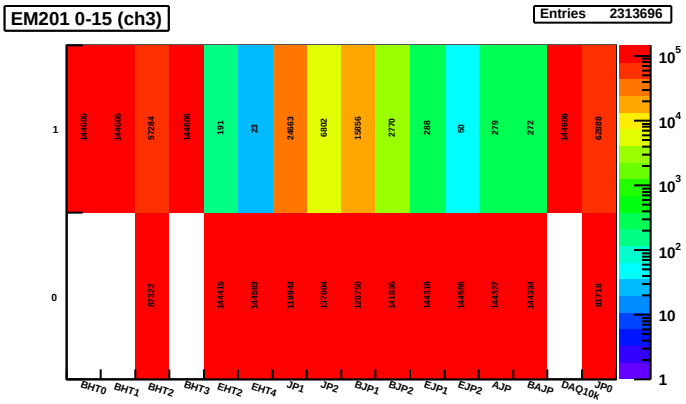
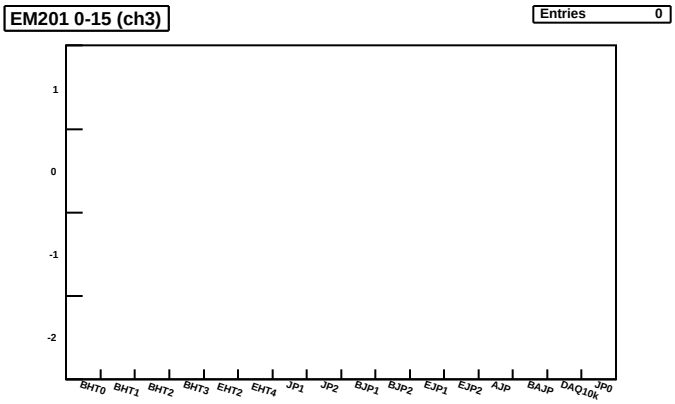
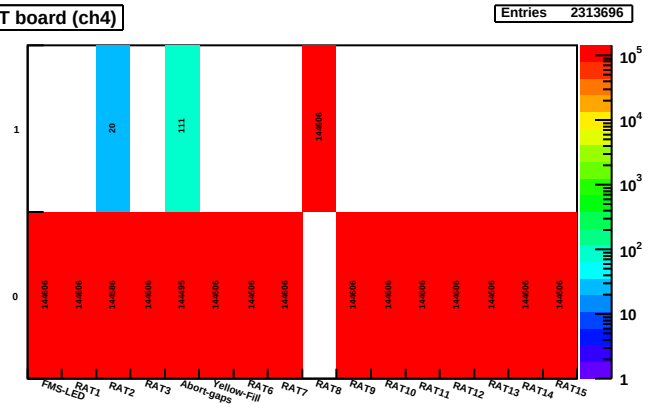

Unused (ch2)
Entries 2313696

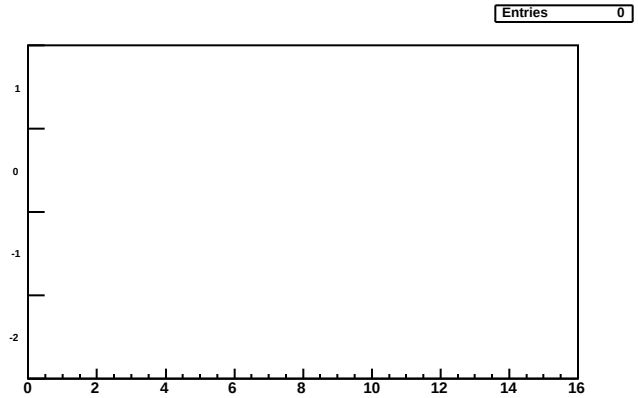

Entries 0


EM201 0-15 (ch3)
Entries 2313696
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

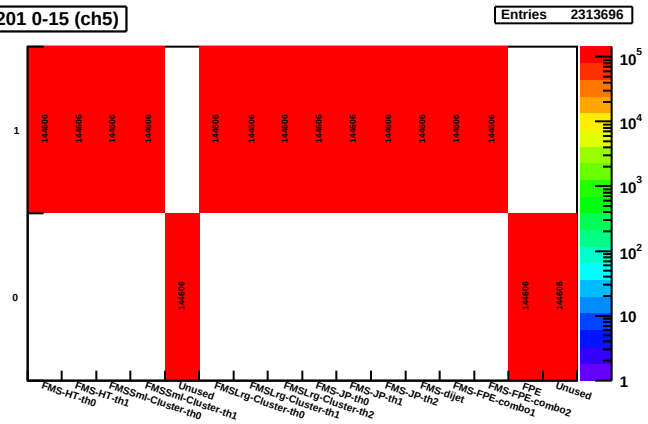

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

RAT board (ch4)





FP201 0-15 (ch5)



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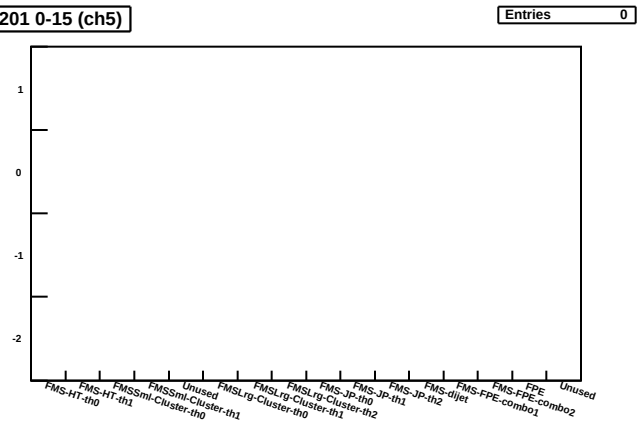
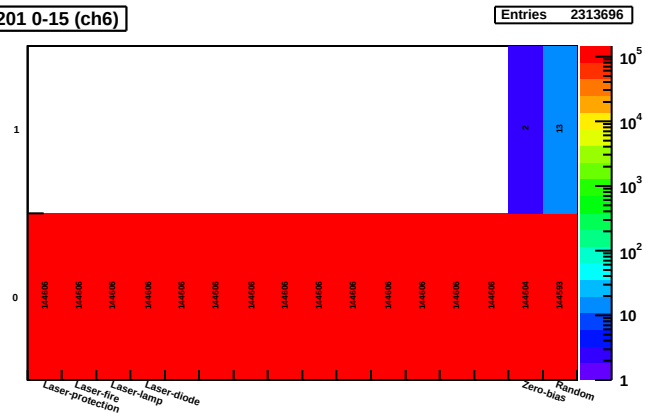
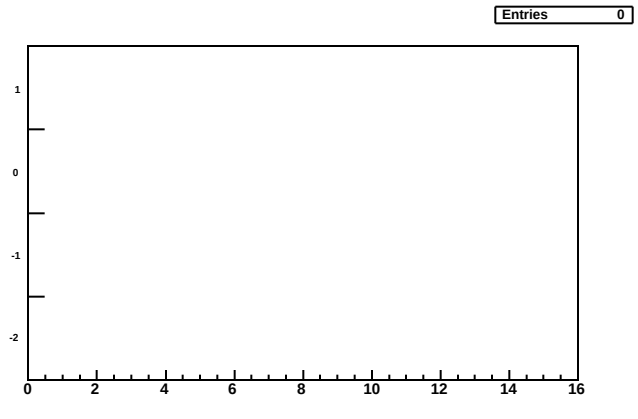
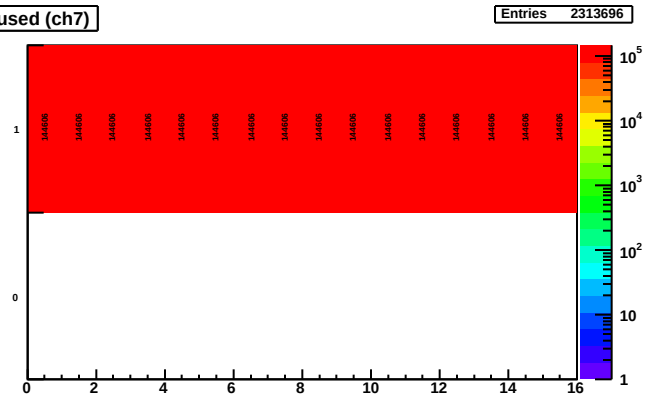
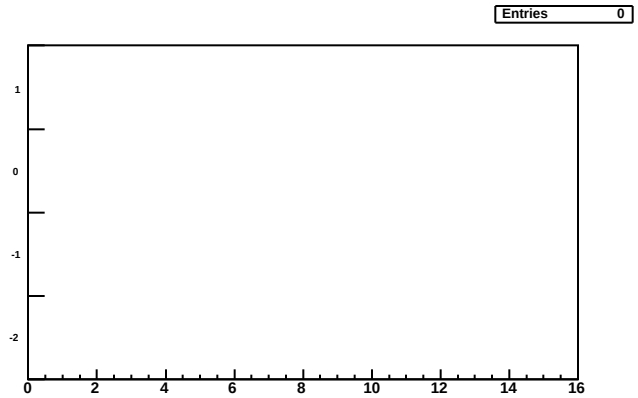


ST201 0-15 (ch6)





Unused (ch7)