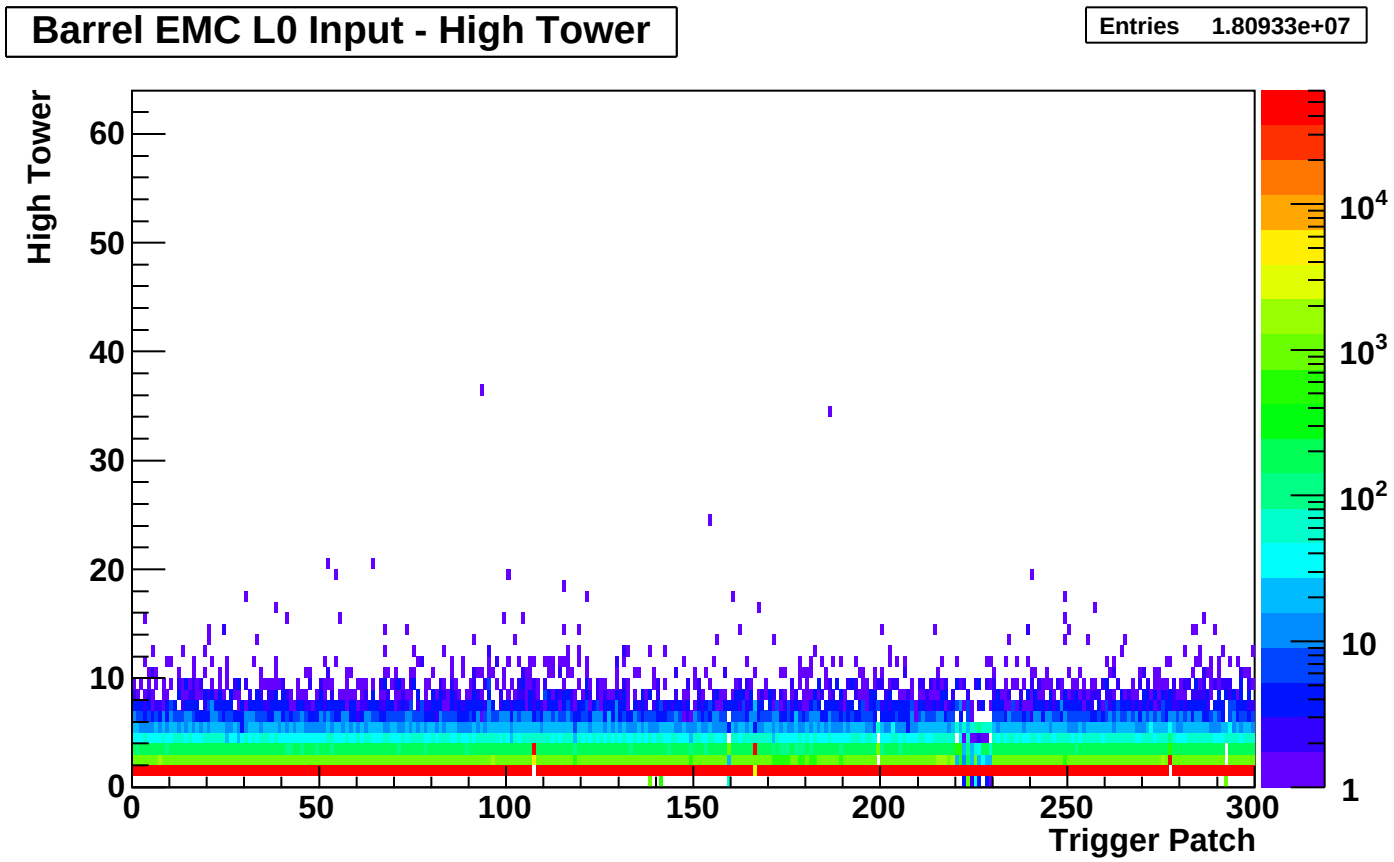
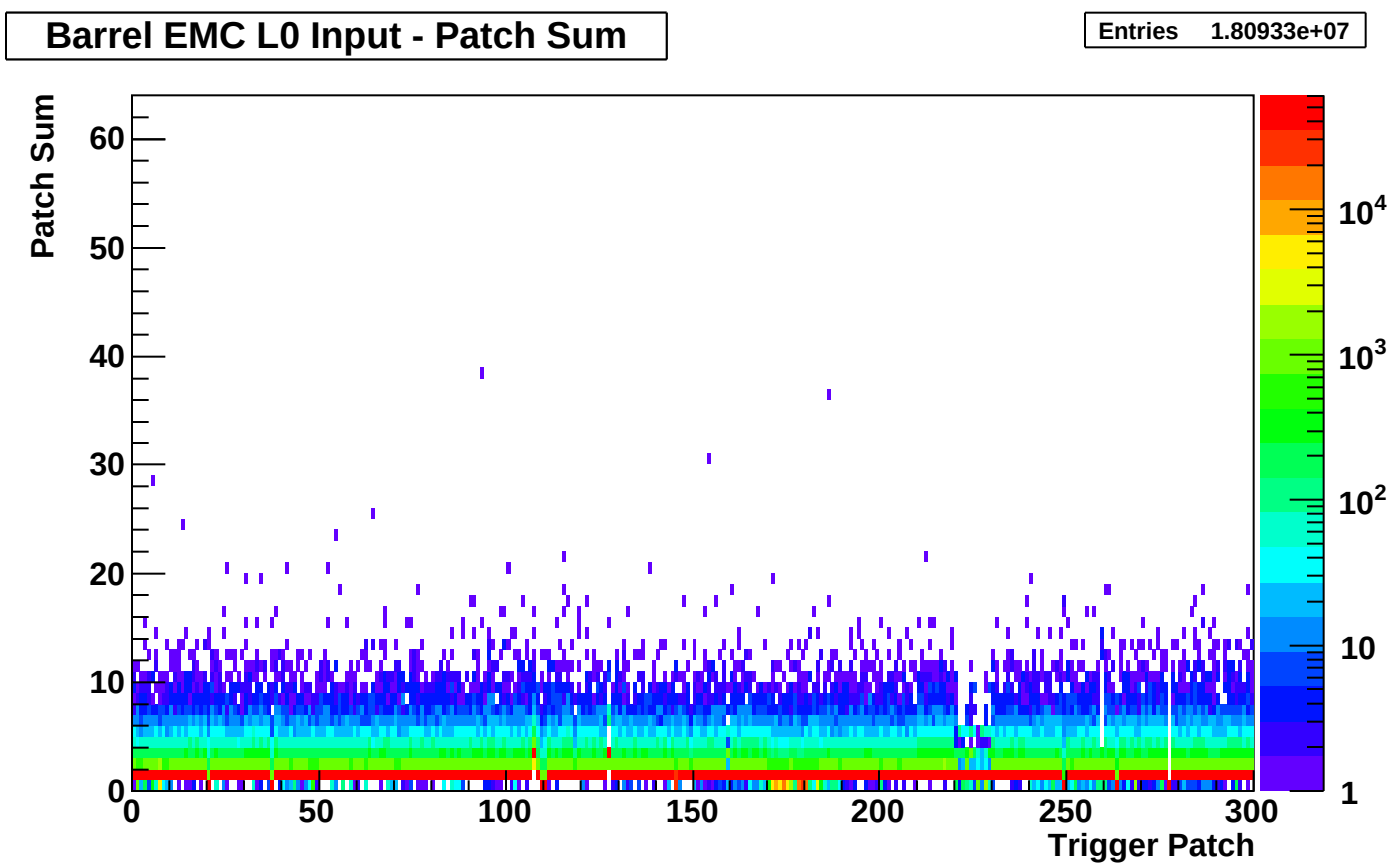
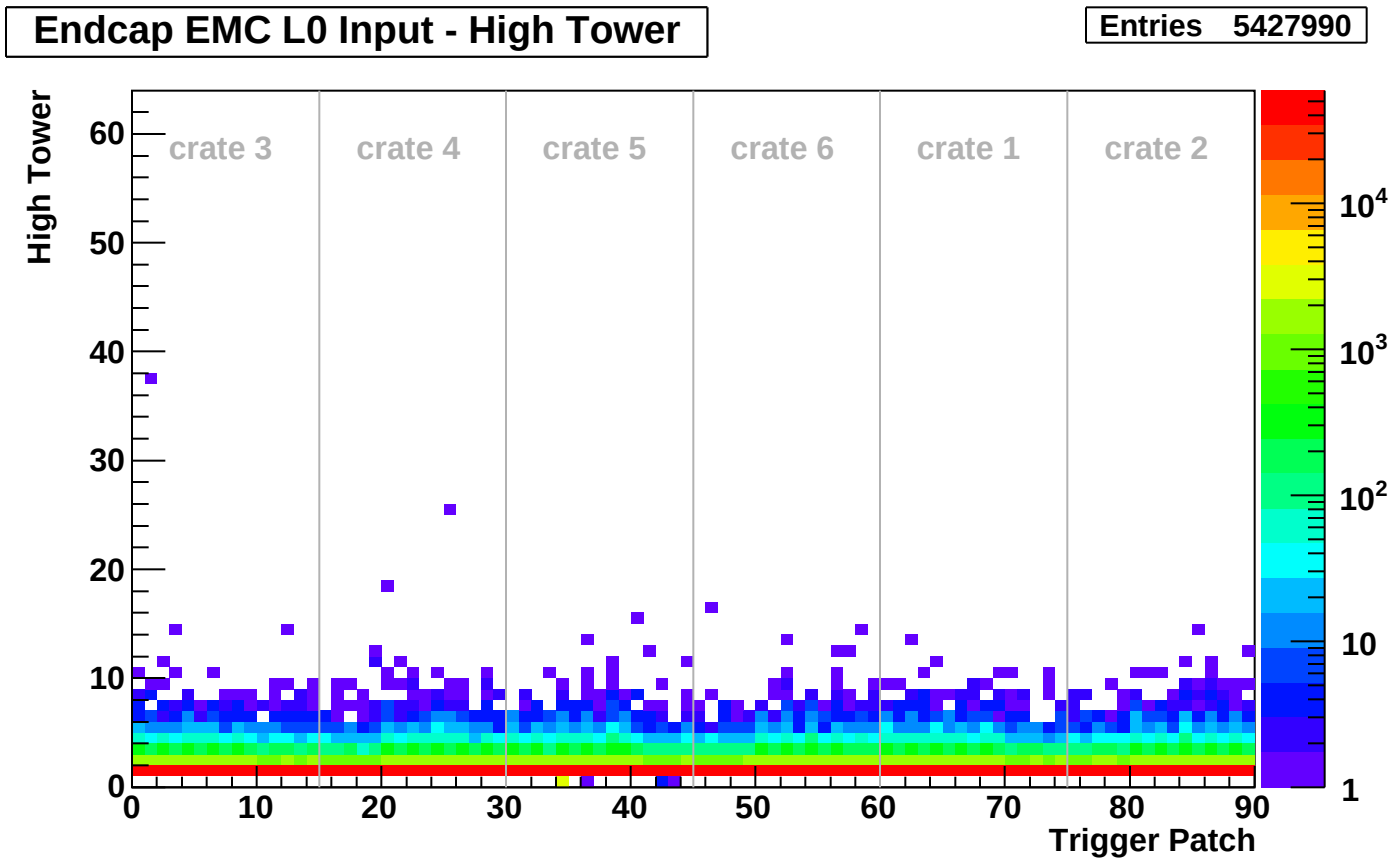
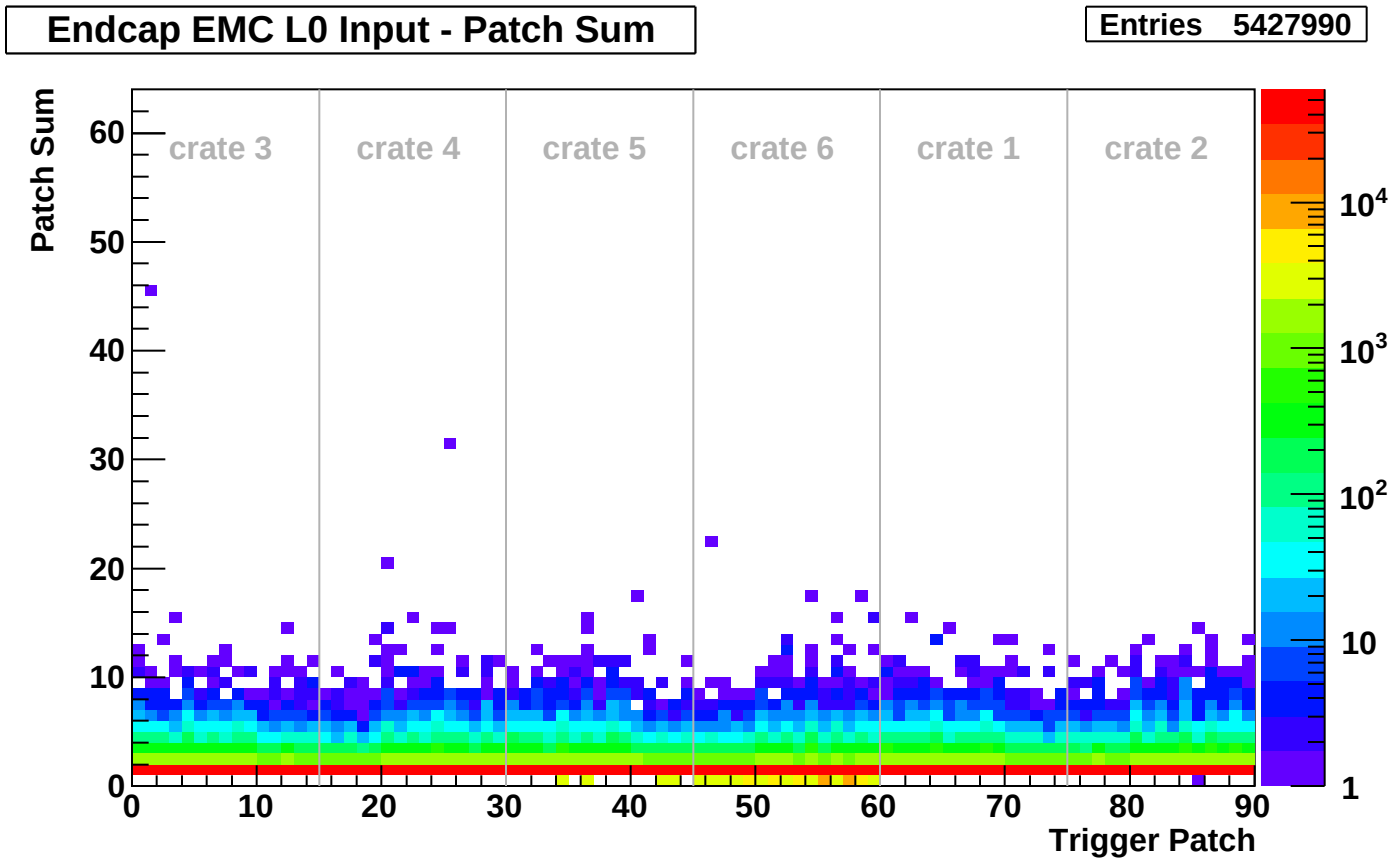
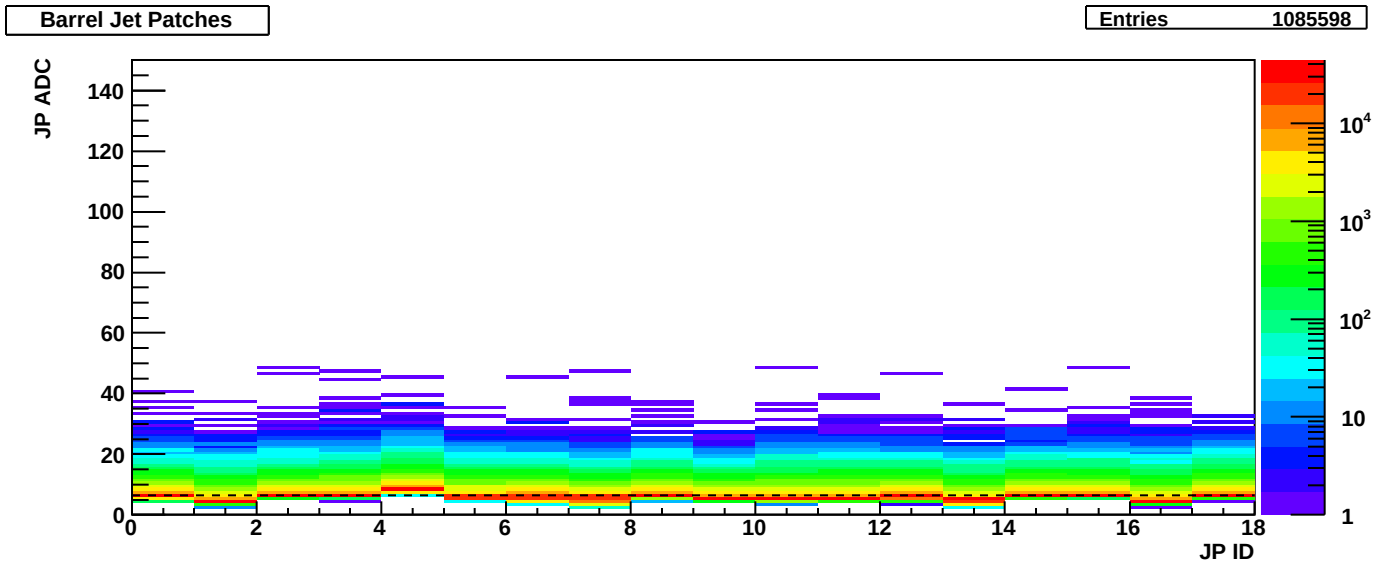
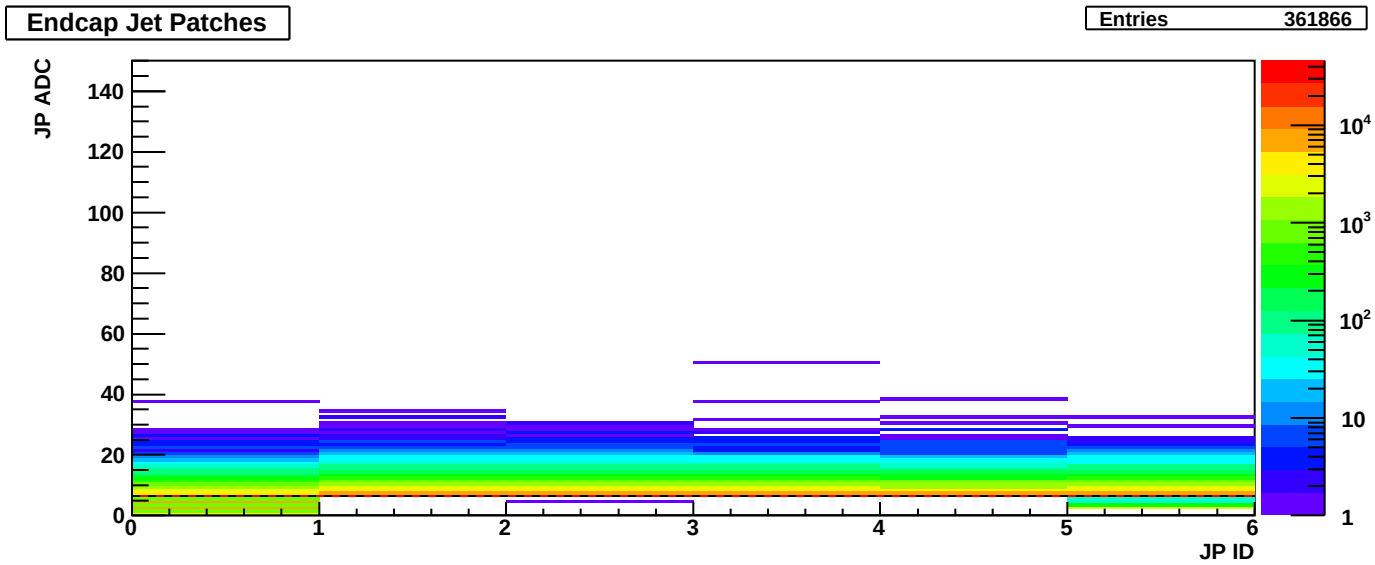

Barrel EMC L0 Input - High Tower
Entries 1.80933e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

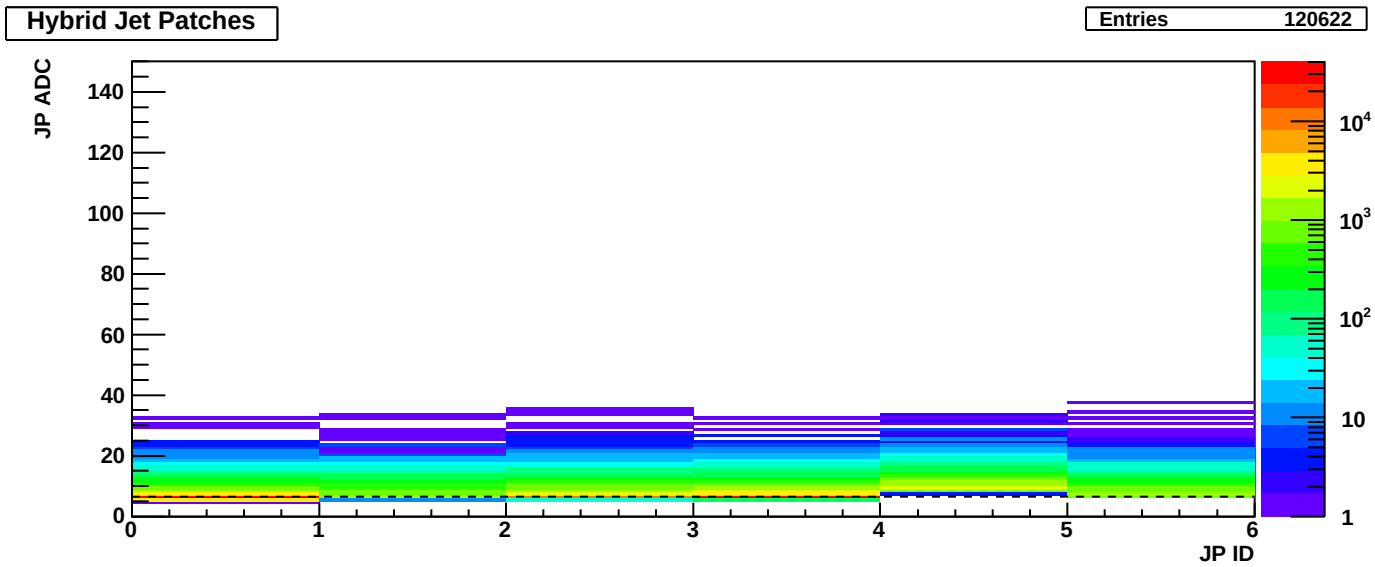

Barrel EMC L0 Input - Patch Sum
Entries 1.80933e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

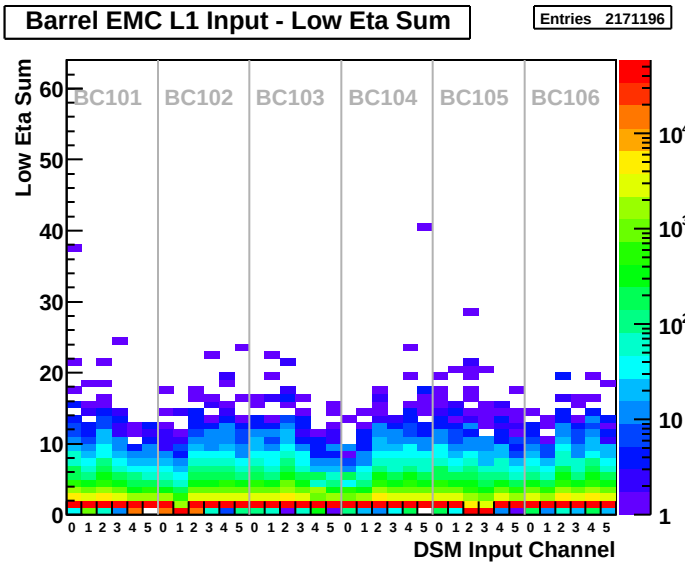

Endcap EMC L0 Input - High Tower
Entries 5427990
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

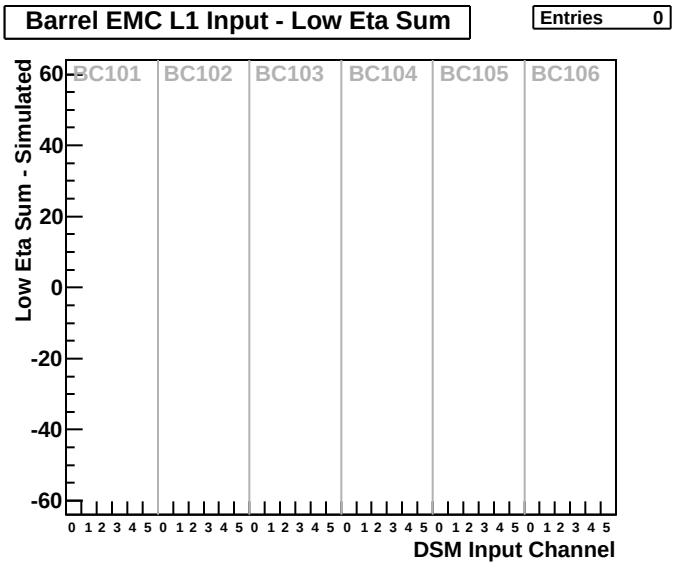

Endcap EMC L0 Input - Patch Sum
Entries 5427990
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

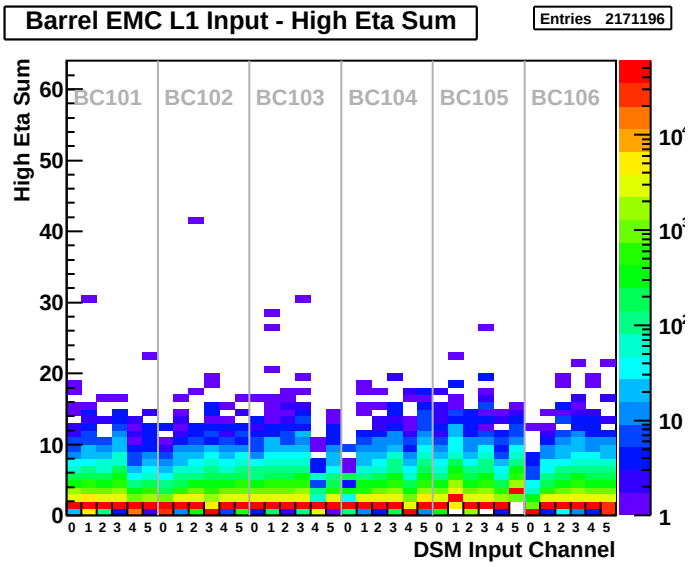

Barrel Jet Patches
Entries 1085598
JP ADC
JP ID

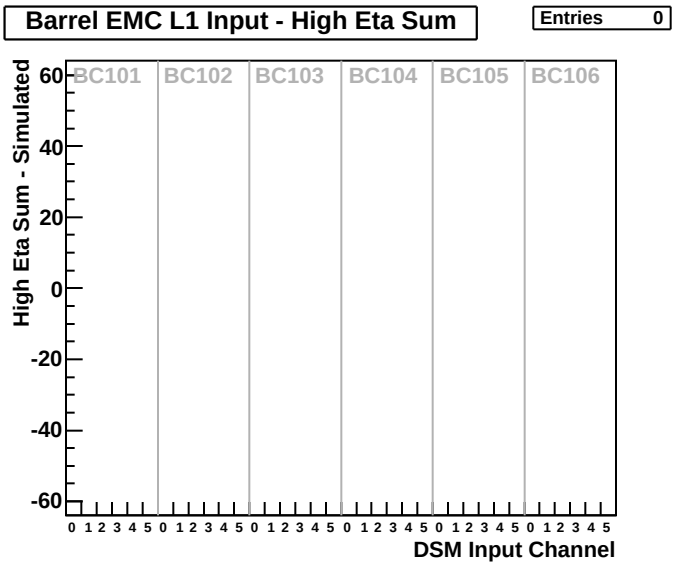

Endcap Jet Patches
Entries 361866
JP ADC
JP ID

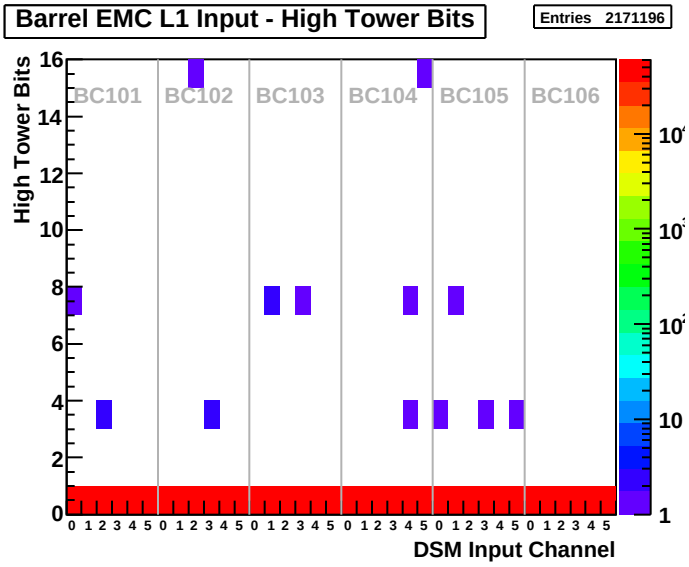

Hybrid Jet Patches
Entries 120622
JP ADC
JP ID

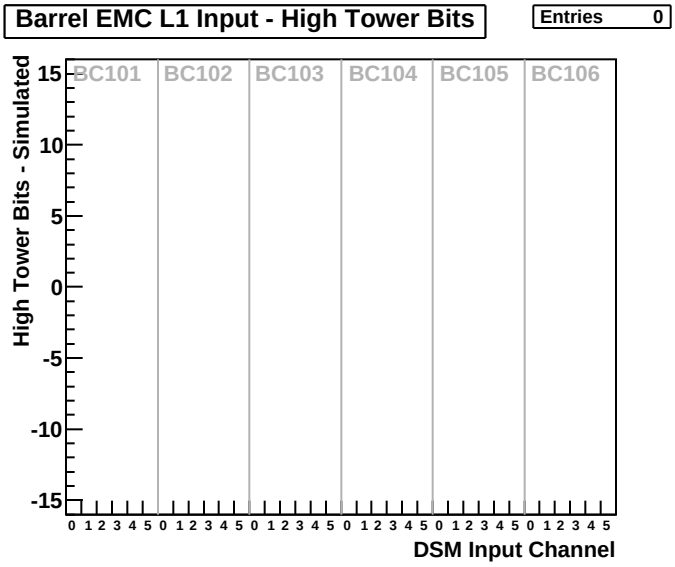

Barrel EMC L1 Input - Low Eta Sum
Entries 2171196
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

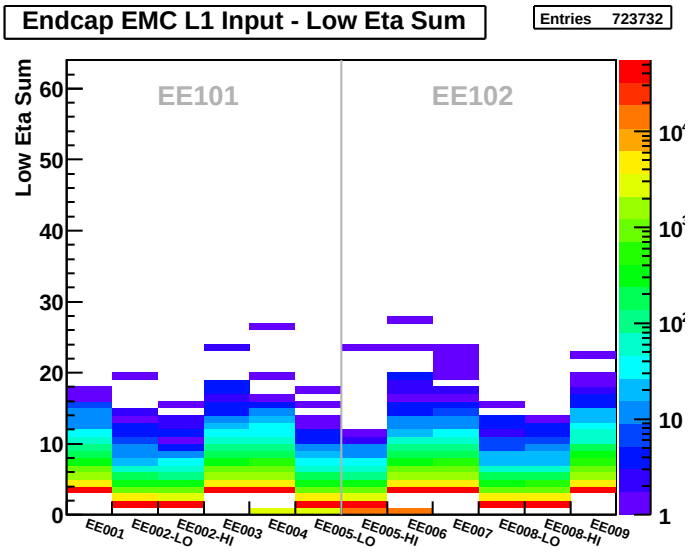

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

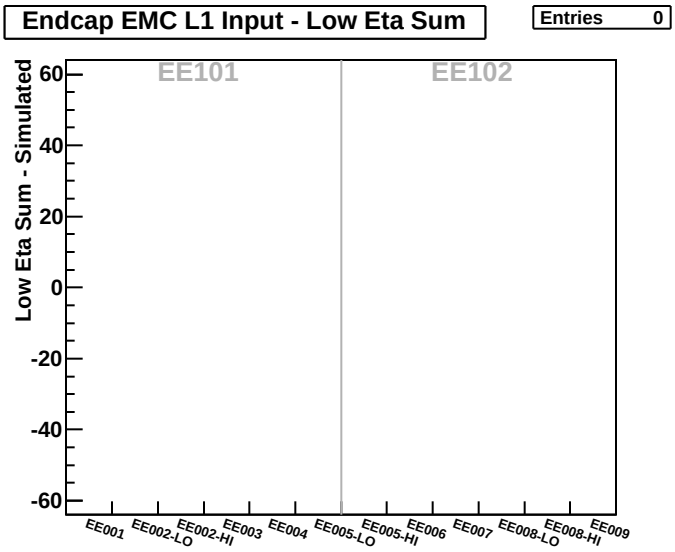

Barrel EMC L1 Input - High Eta Sum
Entries 2171196
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

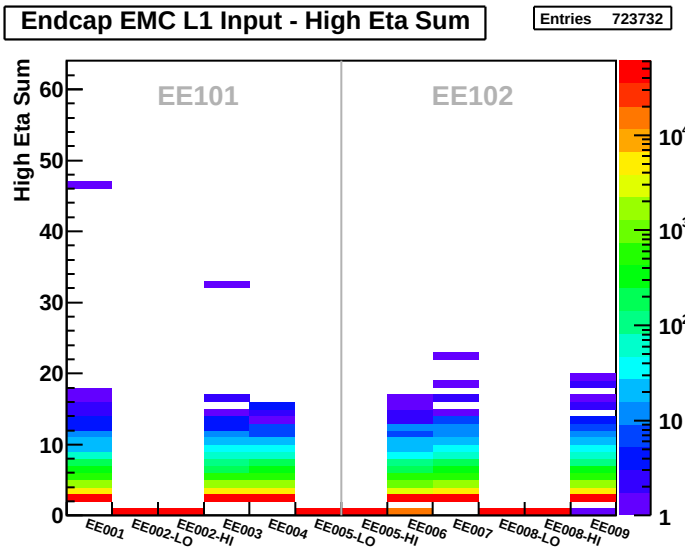

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

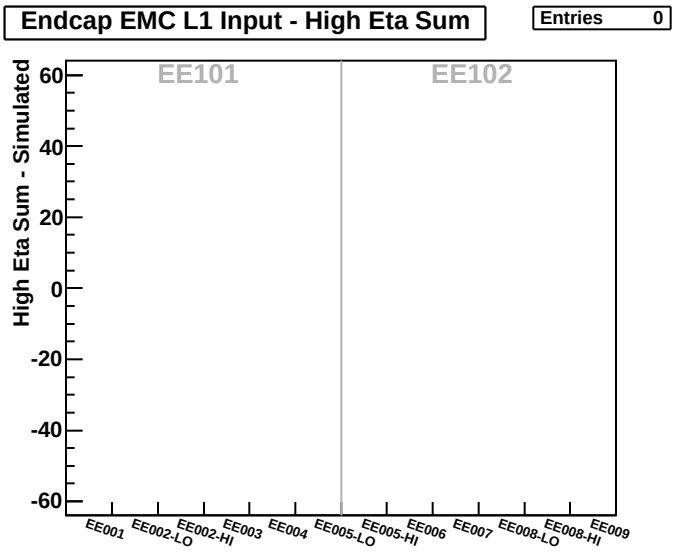

Barrel EMC L1 Input - High Tower Bits
Entries 2171196
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

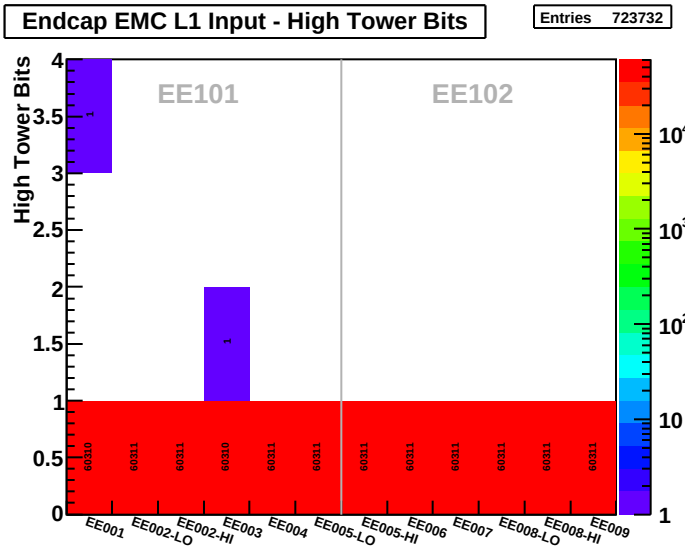

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

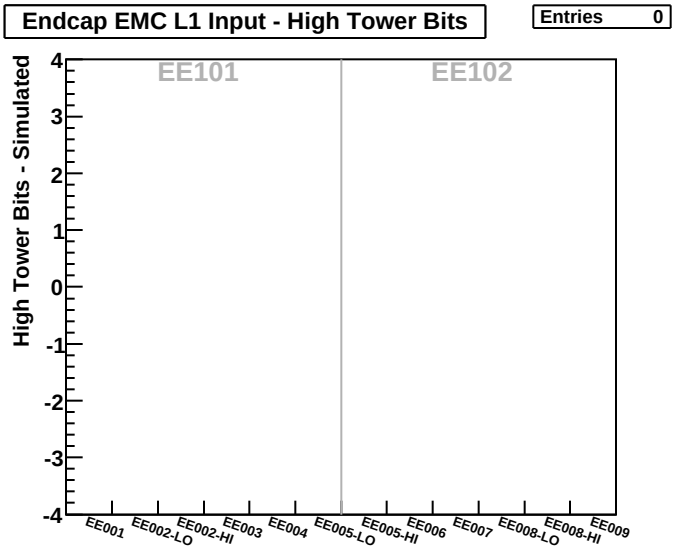

Endcap EMC L1 Input - Low Eta Sum
Entries 723732
Low Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

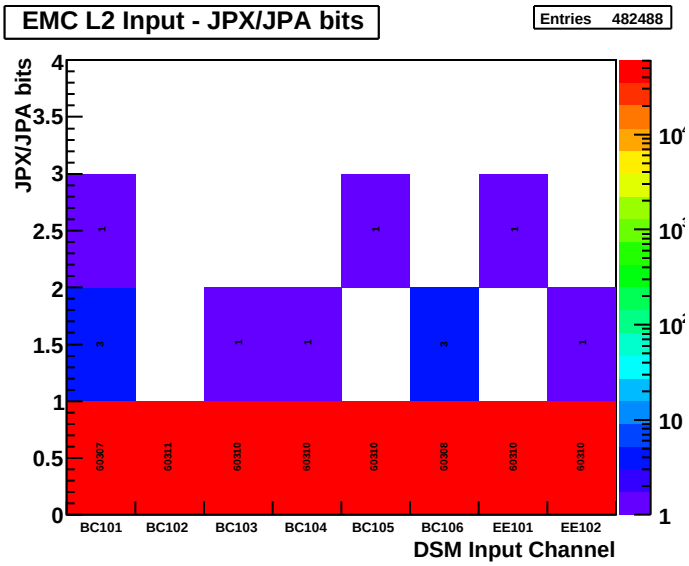

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

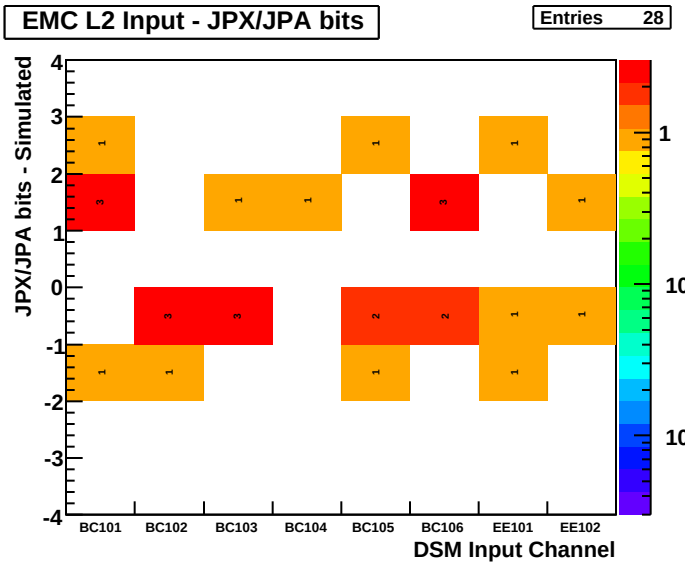

Endcap EMC L1 Input - High Eta Sum
Entries 723732
High Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

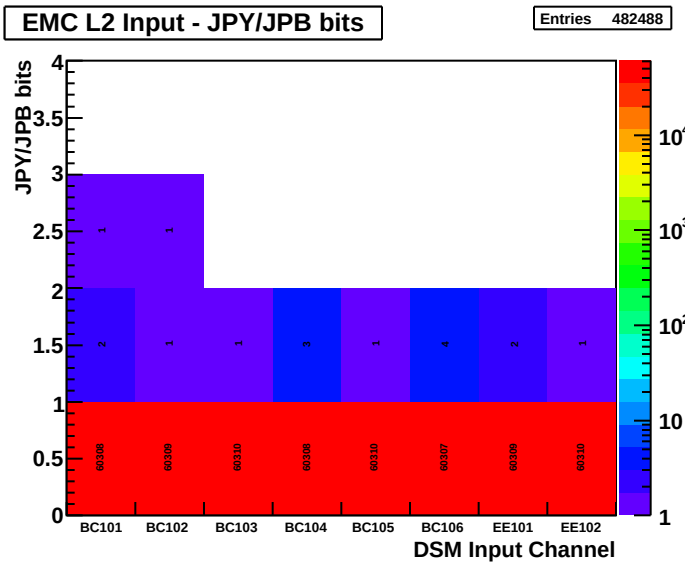

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

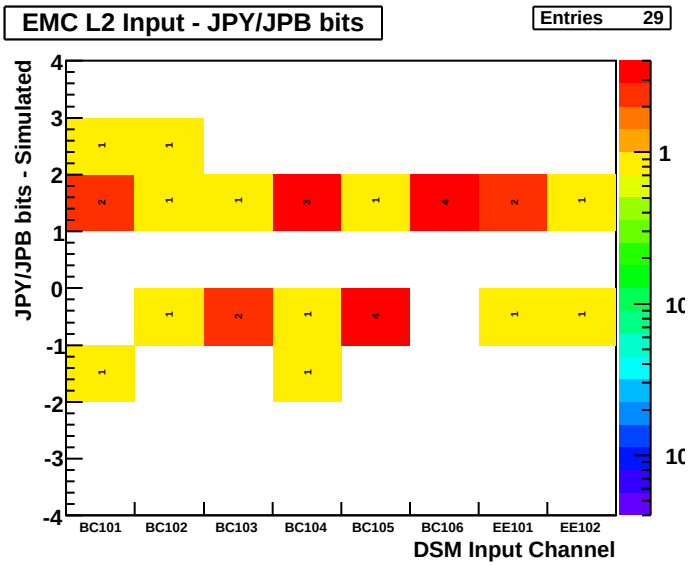

Endcap EMC L1 Input - High Tower Bits
Entries 723732
High Tower Bits
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

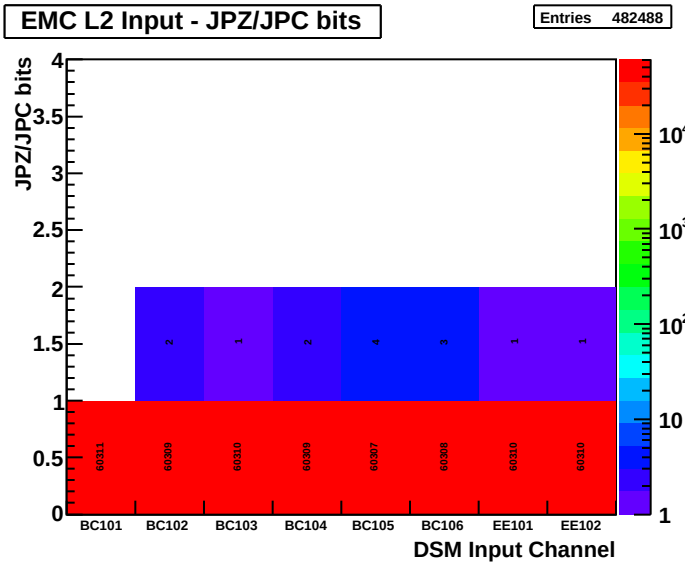

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

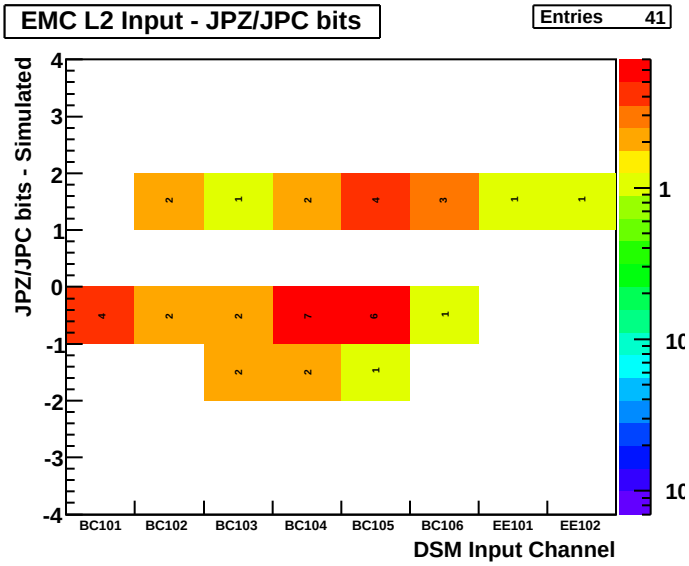

EMC L2 Input - JPX/JPA bits
Entries 482488
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

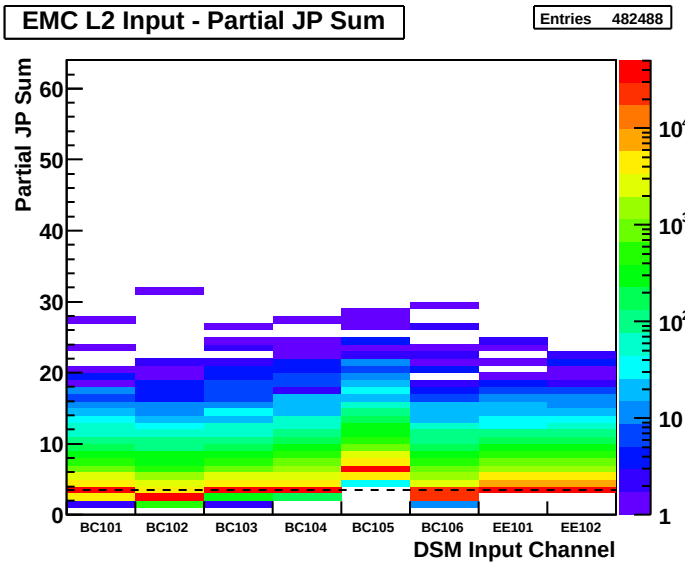

EMC L2 Input - JPX/JPA bits
Entries 28
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

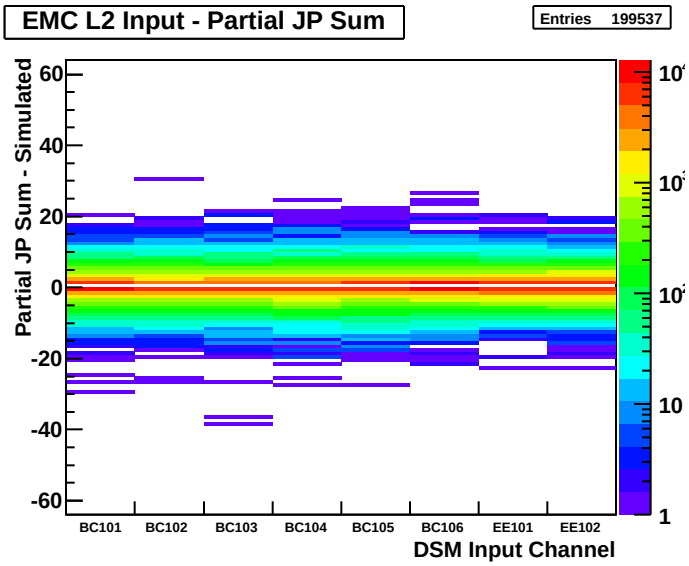

EMC L2 Input - JPY/JPB bits
Entries 482488
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

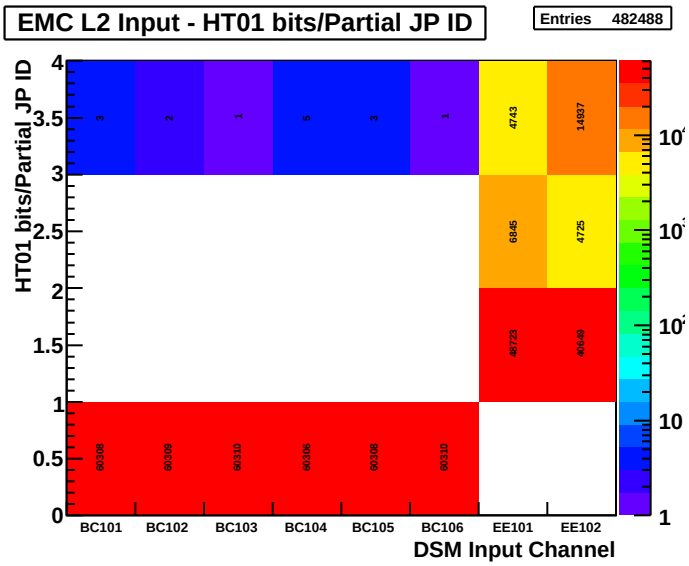

EMC L2 Input - JPY/JPB bits
Entries 29
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

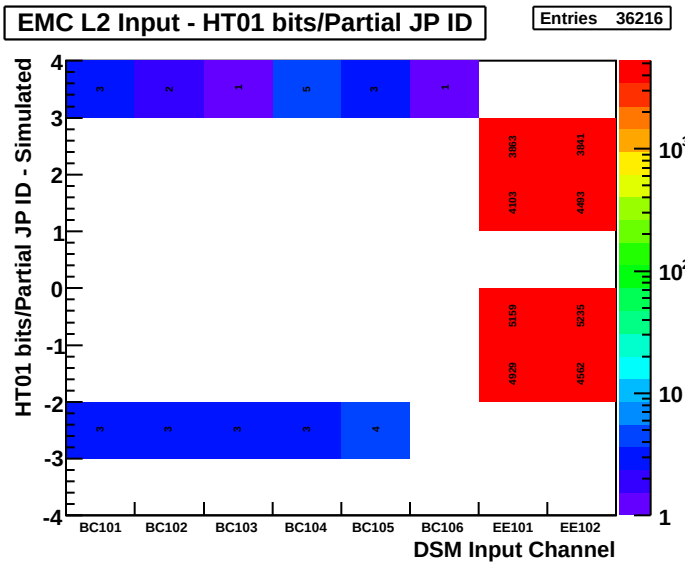

EMC L2 Input - JPZ/JPC bits
Entries 482488
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

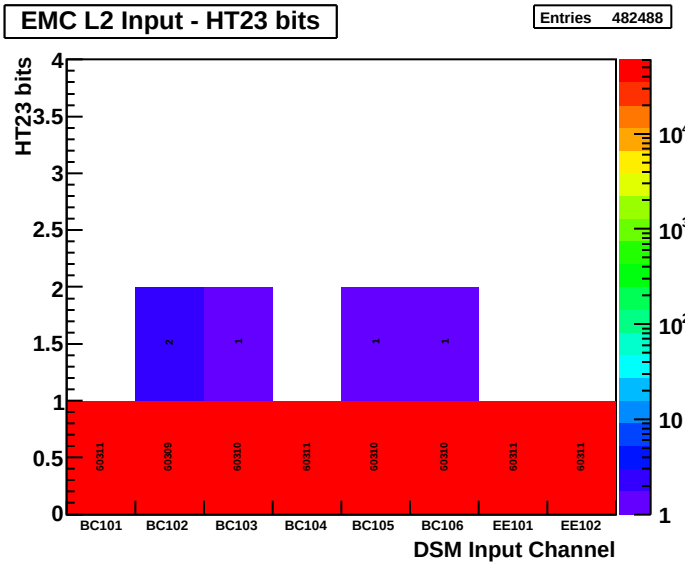

EMC L2 Input - JPZ/JPC bits
Entries 41
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

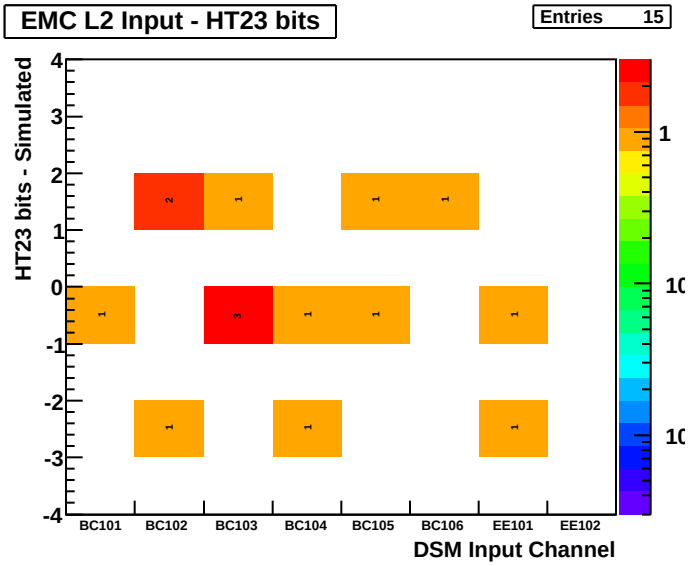

EMC L2 Input - Partial JP Sum
Entries 482488
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

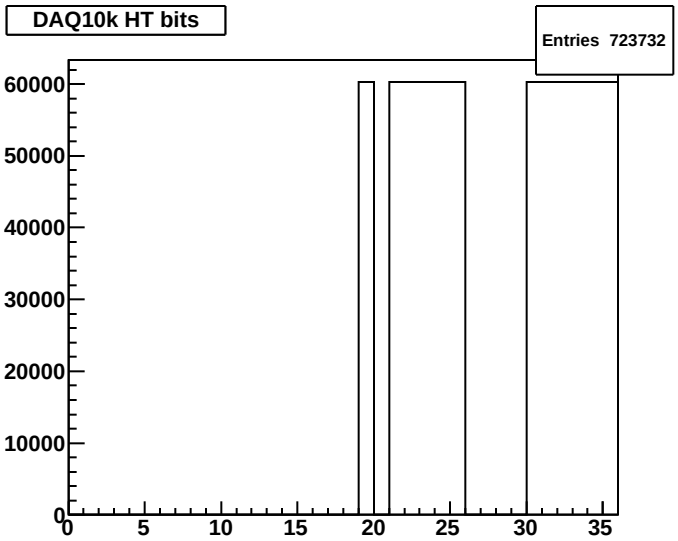

EMC L2 Input - Partial JP Sum
Entries 199537
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

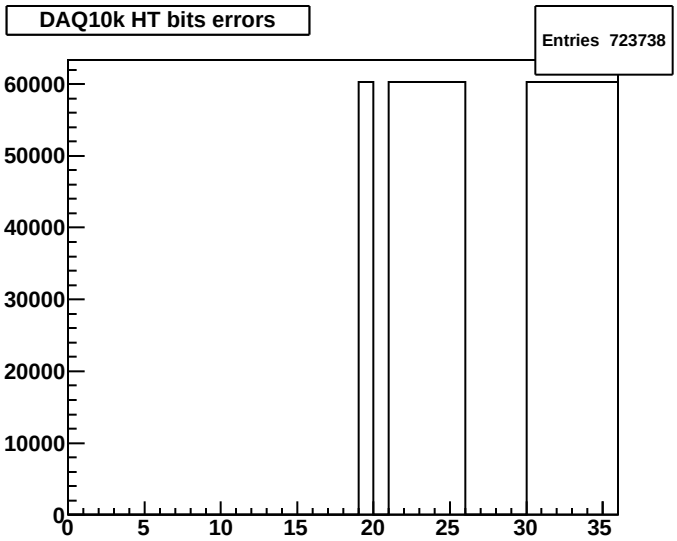

EMC L2 Input - HT01 bits/Partial JP ID
Entries 482488
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

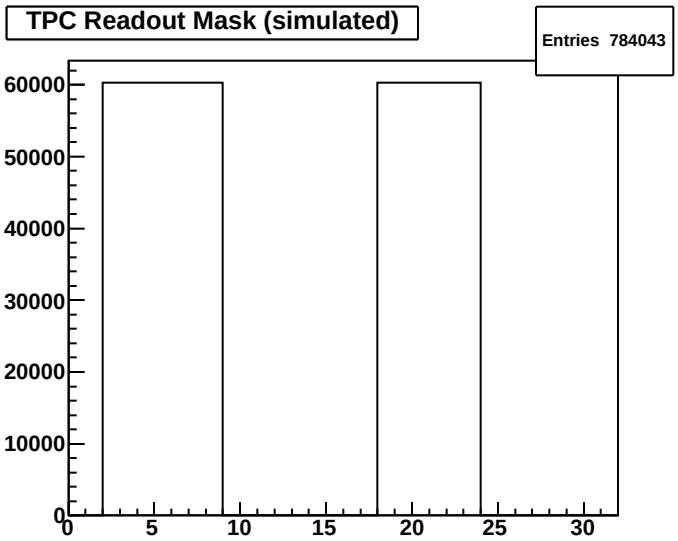

EMC L2 Input - HT01 bits/Partial JP ID
Entries 36216
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

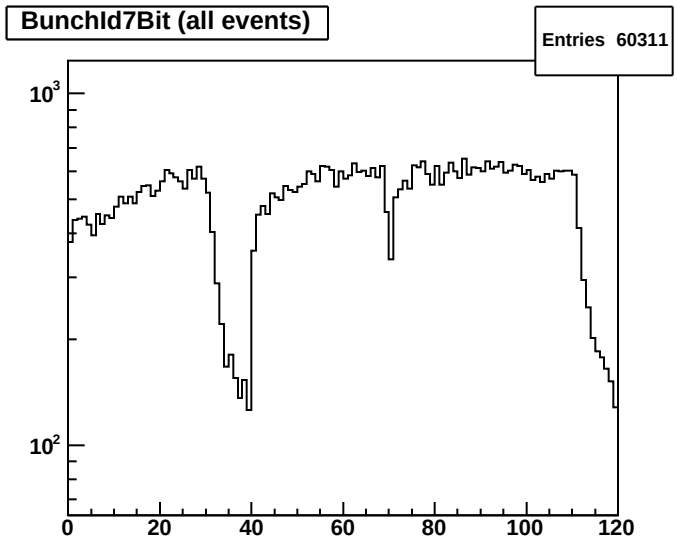

EMC L2 Input - HT23 bits
Entries 482488
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

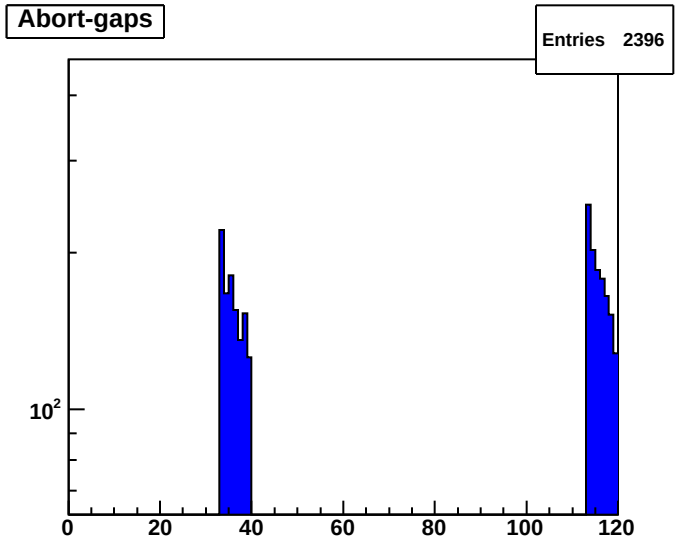

EMC L2 Input - HT23 bits
Entries 15
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102


DAQ10k HT bits
Entries 723732
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

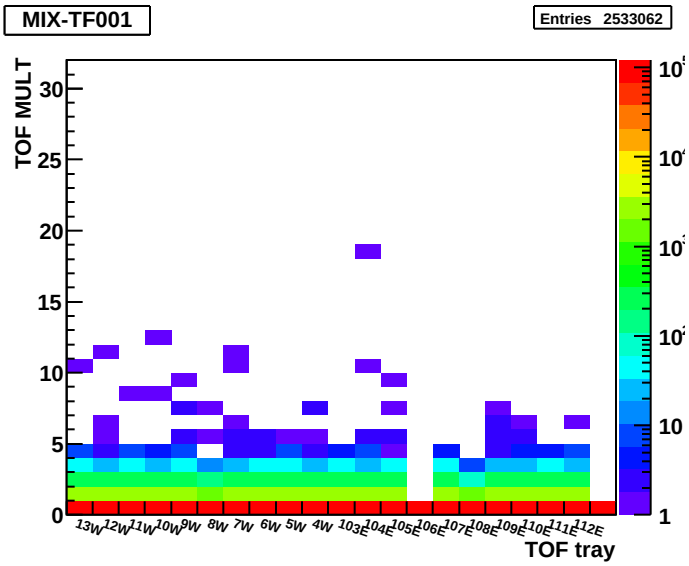

DAQ10k HT bits errors
Entries 723738
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

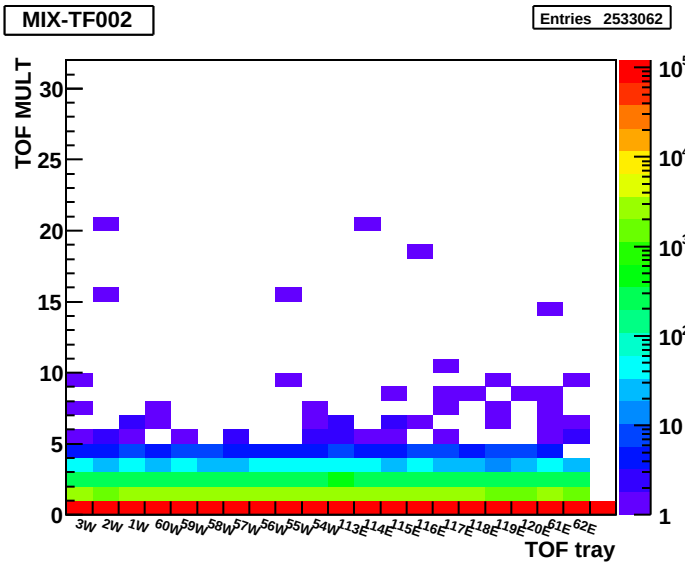

TPC Readout Mask (simulated)
Entries 784043
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30

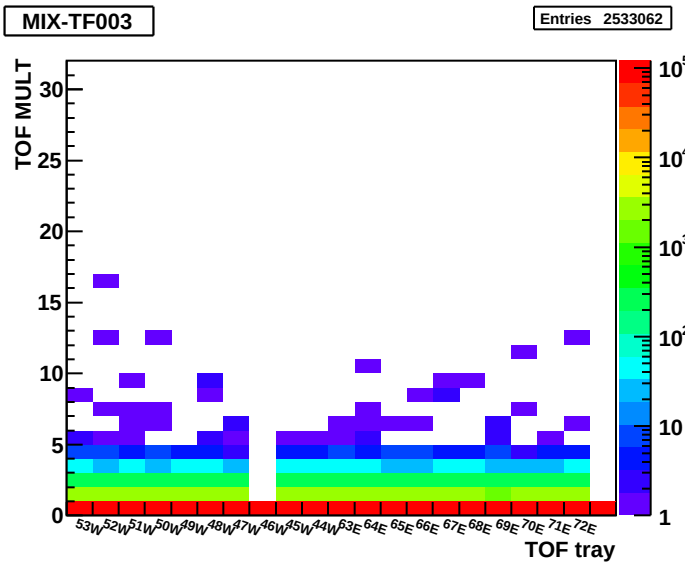

BunchId7Bit (all events)
Entries 60311
10^3
10^2
0 20 40 60 80 100 120

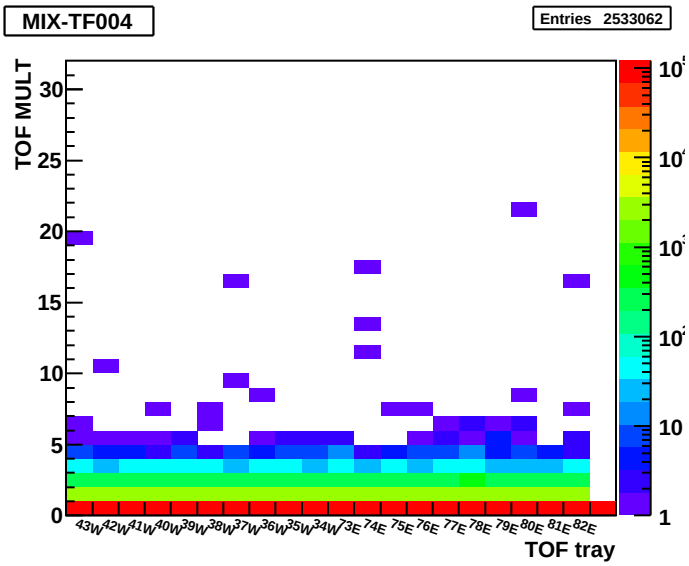

Abort-gaps
Entries 2396
10^2
0 20 40 60 80 100 120

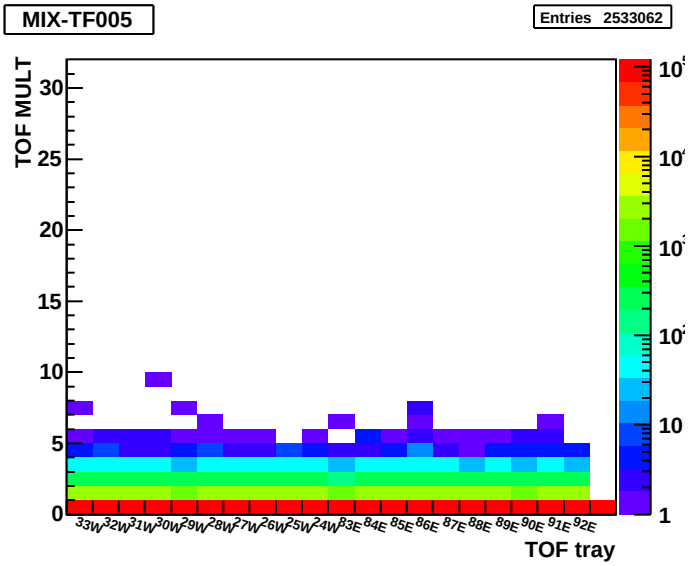
!Yellow-Fill
Entries 60311
10^3
10^2
0 20 40 60 80 100 120

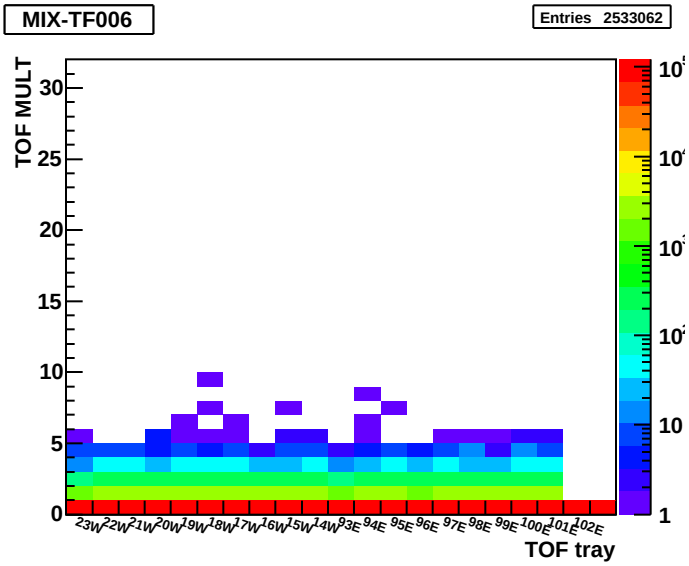

MIX-TF001
Entries 2533062
TOF MULT
TOF tray

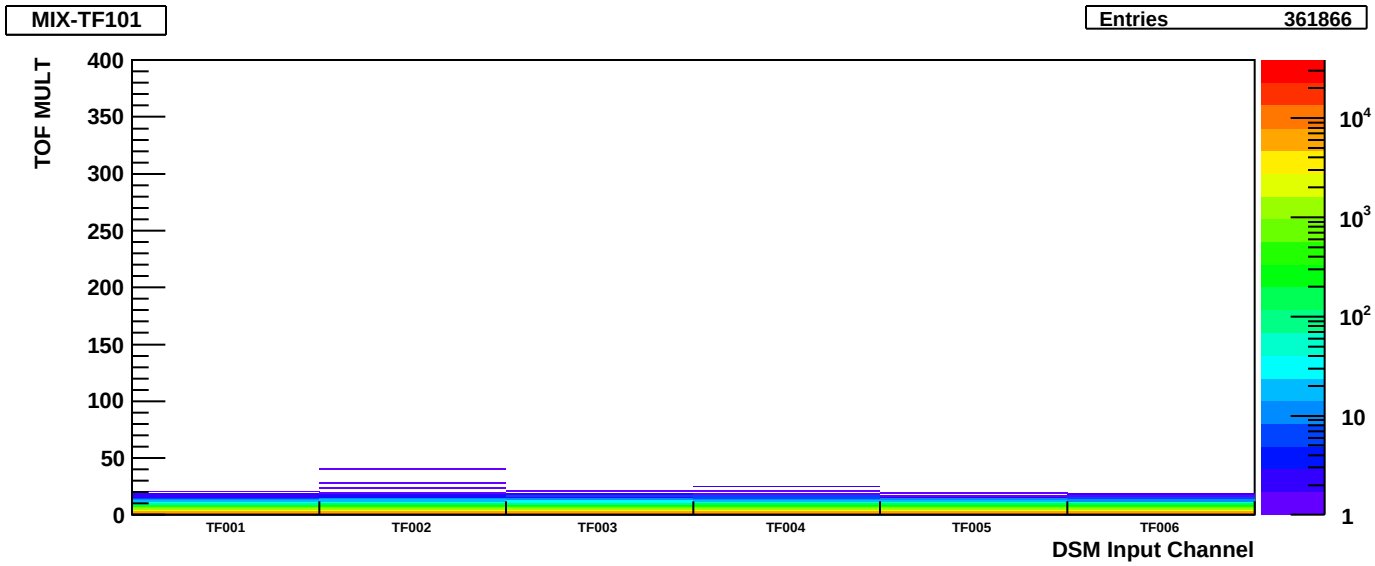

MIX-TF002
Entries 2533062
TOF MULT
TOF tray

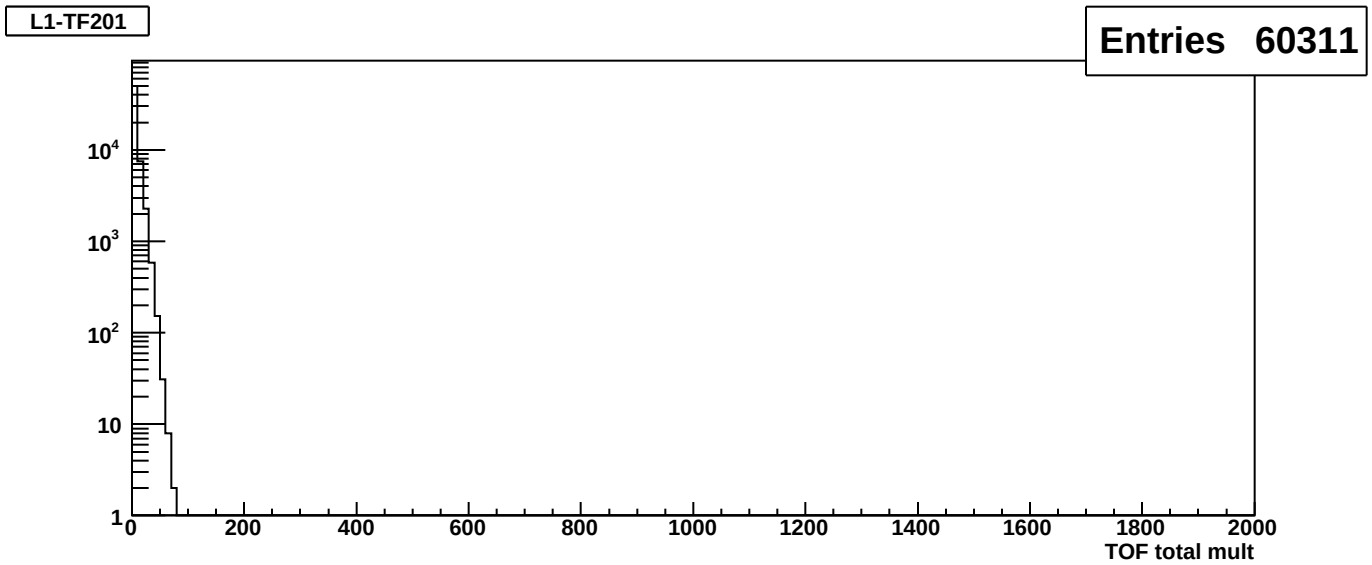

MIX-TF003
Entries 2533062
TOF MULT
TOF tray

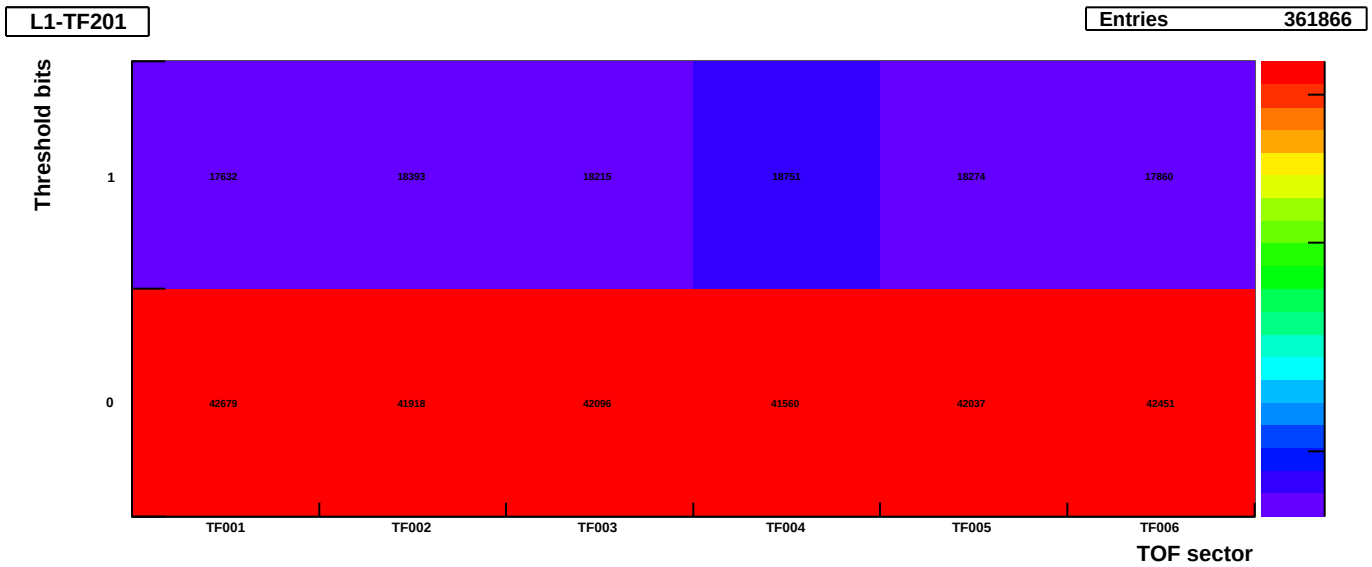

MIX-TF004
Entries 2533062
TOF MULT
TOF tray

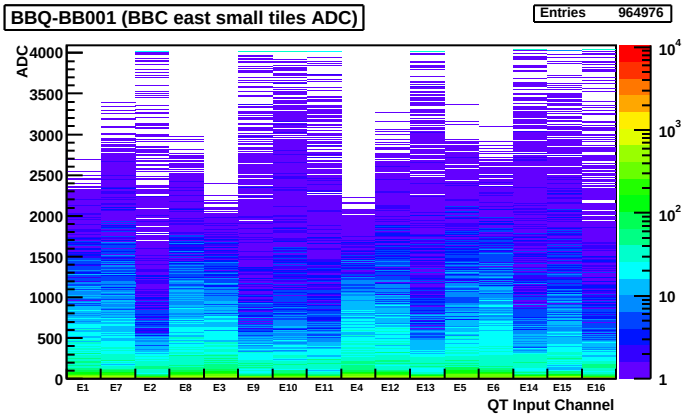

MIX-TF005
Entries 2533062
TOF MULT
TOF tray

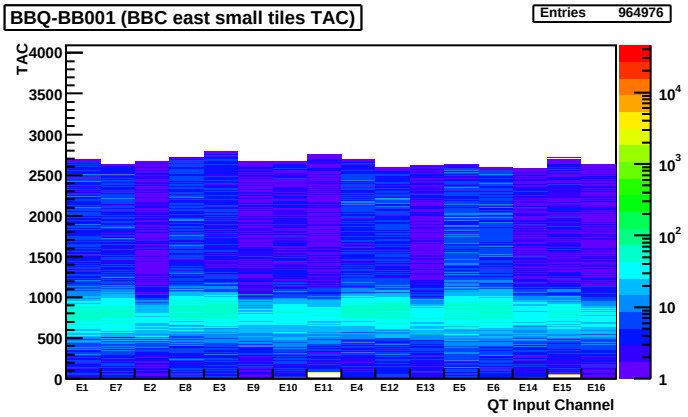

MIX-TF006
Entries 2533062
TOF MULT
TOF tray

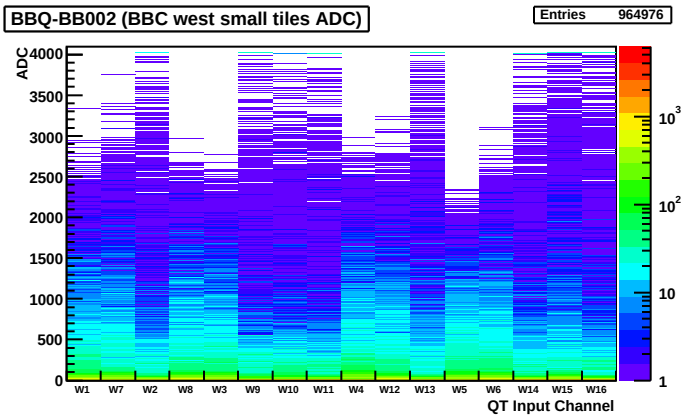

MIX-TF101
Entries 361866
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

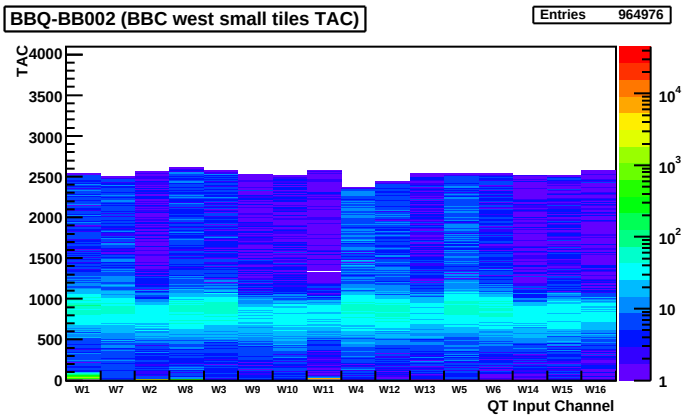

L1-TF201
Entries 60311
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

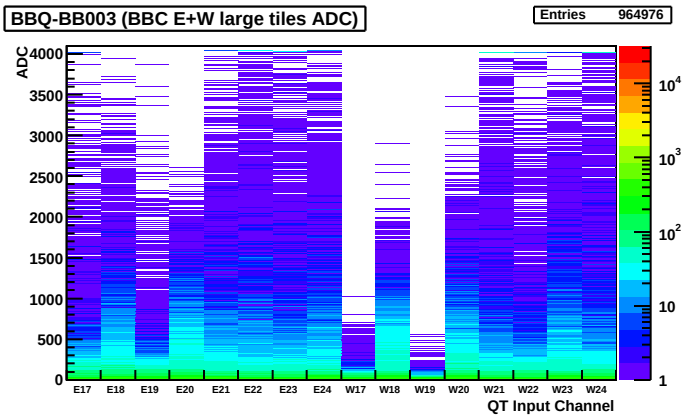

L1-TF201
Entries 361866
Threshold bits
1
0
17632
18393
18215
18751
18274
17860
42679
41918
42096
41560
42037
42451
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

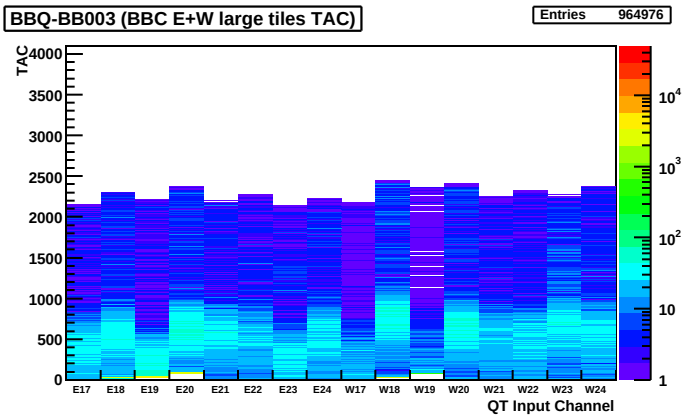

BBQ-BB001 (BBC east small tiles ADC)
Entries 964976
ADC
QT Input Channel
E1 E7 E2 E8 E3 E9 E10 E11 E4 E12 E13 E5 E6 E14 E15 E16

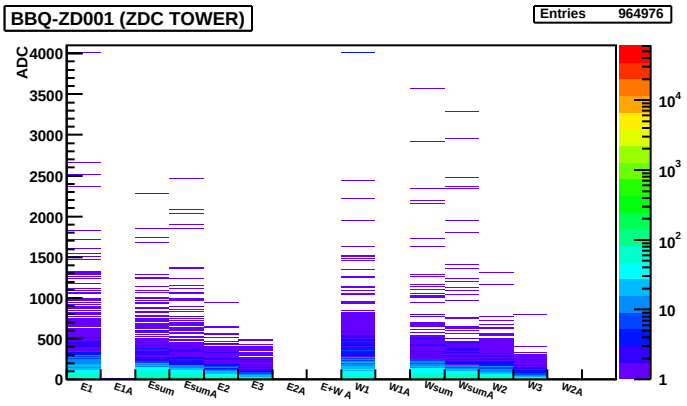

BBQ-BB001 (BBC east small tiles TAC)
Entries 964976
TAC
QT Input Channel
E1 E7 E2 E8 E3 E9 E10 E11 E4 E12 E13 E5 E6 E14 E15 E16

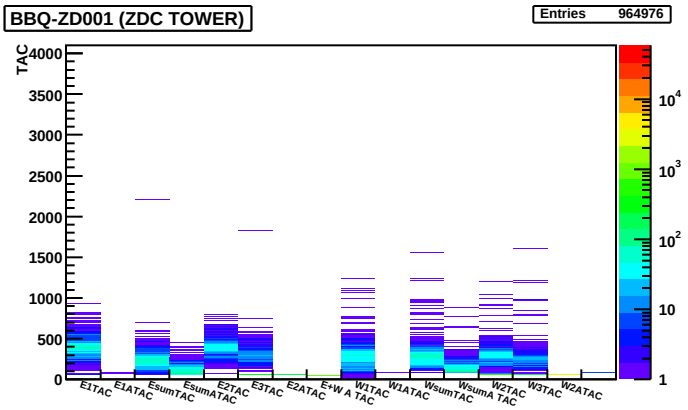

BBQ-BB002 (BBC west small tiles ADC)
Entries 964976
ADC
QT Input Channel
W1 W7 W2 W8 W3 W9 W10 W11 W4 W12 W13 W5 W6 W14 W15 W16

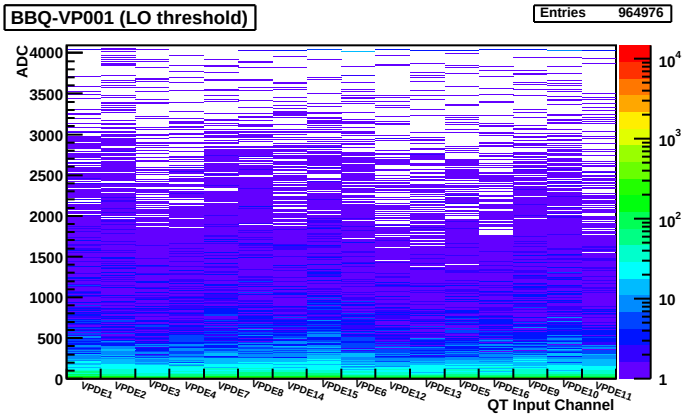

BBQ-BB002 (BBC west small tiles TAC)
Entries 964976
TAC
QT Input Channel
W1 W7 W2 W8 W3 W9 W10 W11 W4 W12 W13 W5 W6 W14 W15 W16

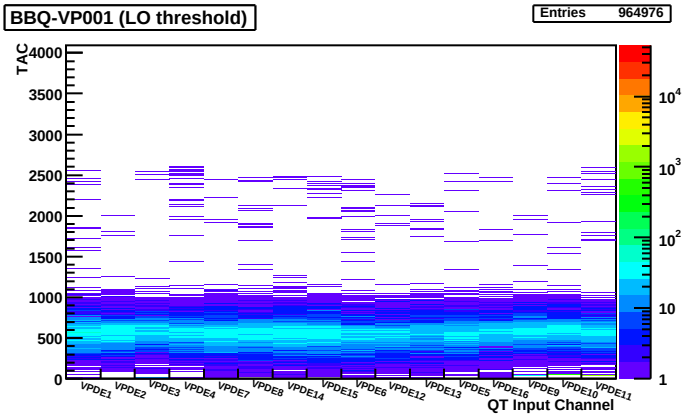

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 964976
ADC
QT Input Channel
E17 E18 E19 E20 E21 E22 E23 E24 W17 W18 W19 W20 W21 W22 W23 W24

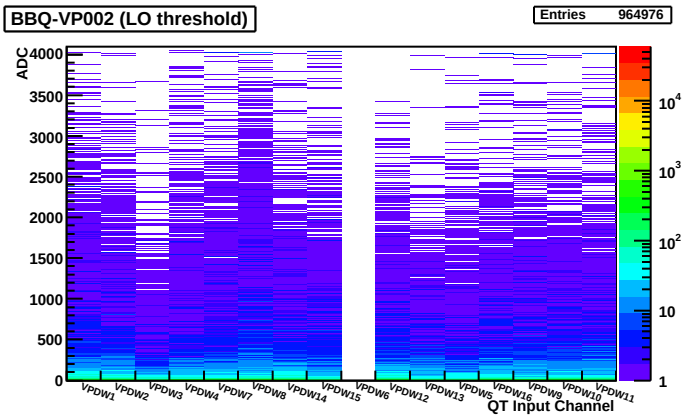

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 964976
TAC
QT Input Channel
E17 E18 E19 E20 E21 E22 E23 E24 W17 W18 W19 W20 W21 W22 W23 W24

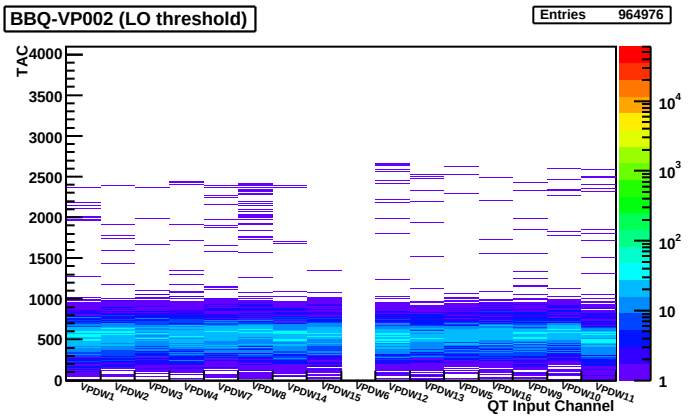

BBQ-ZD001 (ZDC TOWER)
Entries 964976
ADC
E1 E1A Esum EsumA E2 E3 E2A E+W A W1 W1A Wsum WsumA W2 W3 W2A

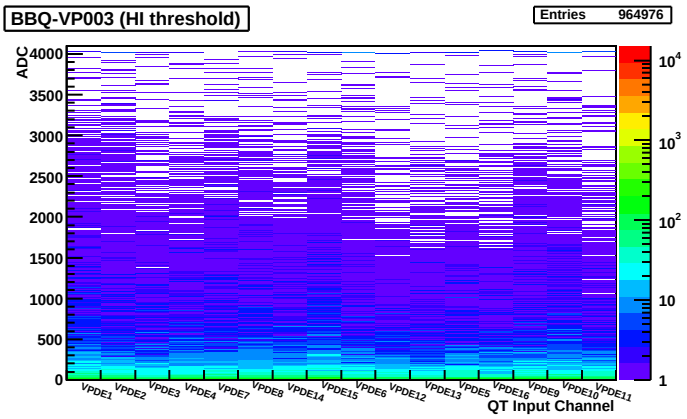

BBQ-ZD001 (ZDC TOWER)
Entries 964976
TAC
E1TAC E1ATAC EsumTAC EsumATAC E2TAC E3TAC E2ATAC E+W A TAC W1TAC W1ATAC WsumTAC WsumA TAC W2TAC W3TAC W2ATAC

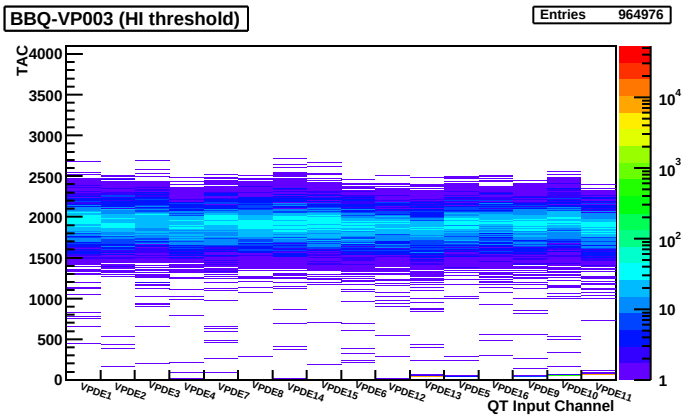

BBQ-VP001 (LO threshold)
Entries 964976
ADC
QT Input Channel

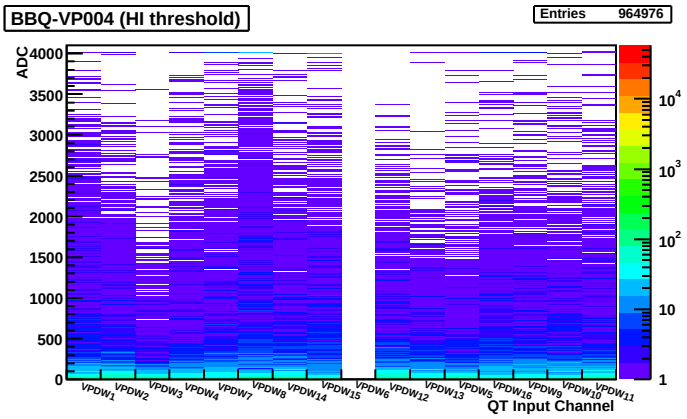

BBQ-VP001 (LO threshold)
Entries 964976
TAC
QT Input Channel

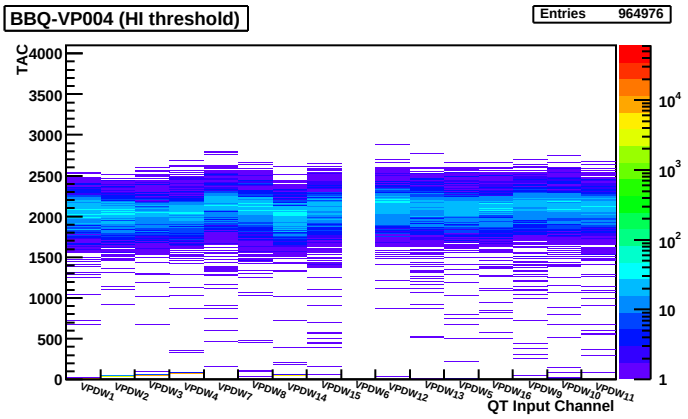

BBQ-VP002 (LO threshold)
Entries 964976
ADC
QT Input Channel

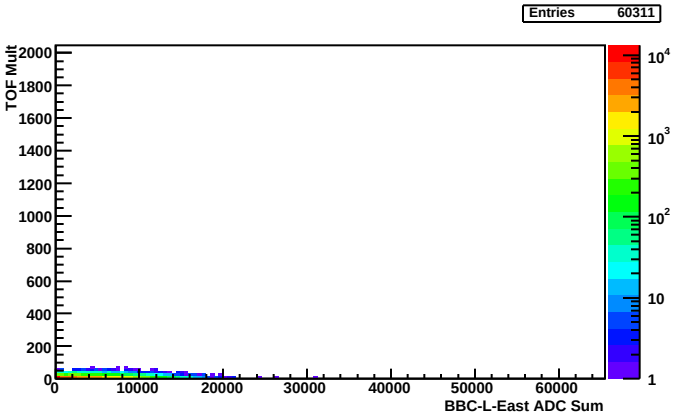

BBQ-VP002 (LO threshold)
Entries 964976
TAC
QT Input Channel

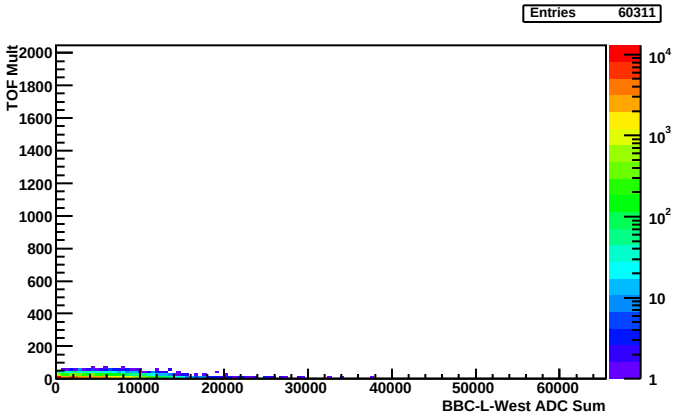

BBQ-VP003 (HI threshold)
Entries 964976
ADC
QT Input Channel

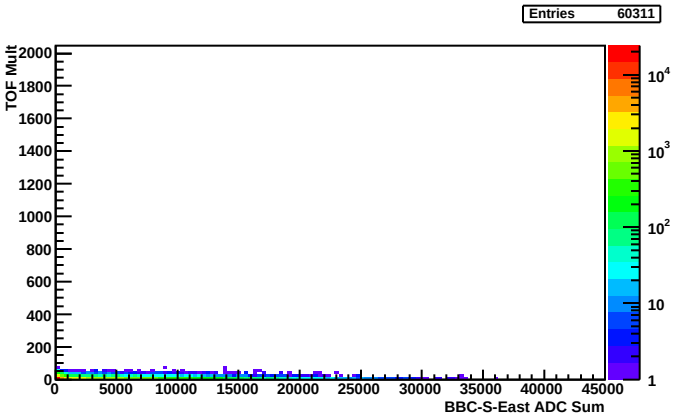

BBQ-VP003 (HI threshold)
Entries 964976
TAC
QT Input Channel

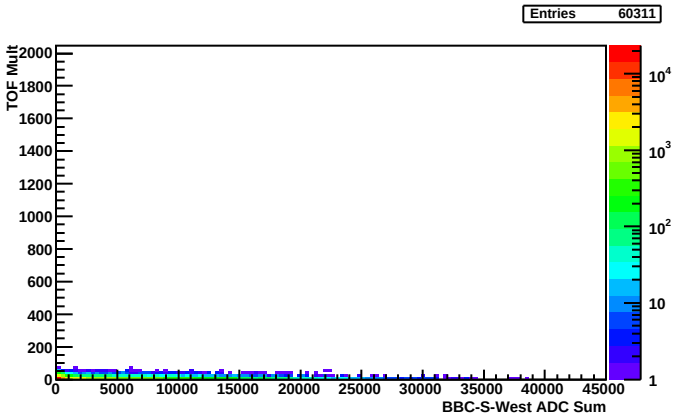

BBQ-VP004 (HI threshold)
Entries 964976
ADC
QT Input Channel

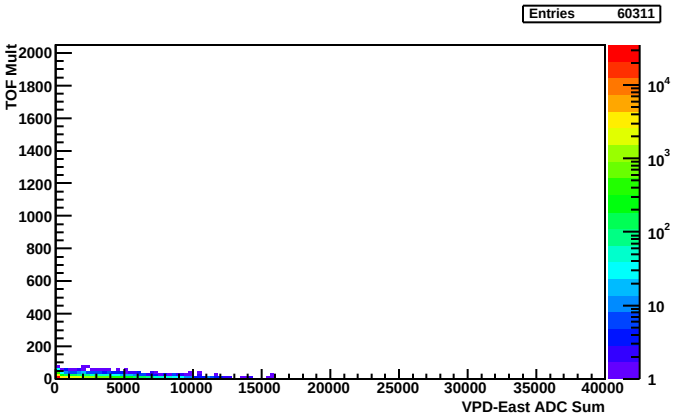

BBQ-VP004 (HI threshold)
Entries 964976
TAC
QT Input Channel

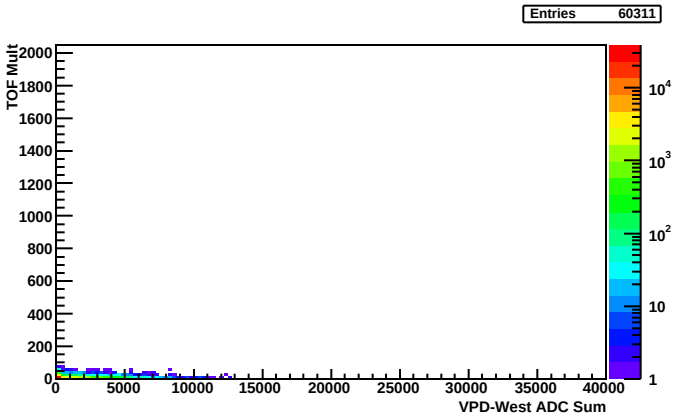

Entries 60311
TOF Mult
BBC-L-East ADC Sum

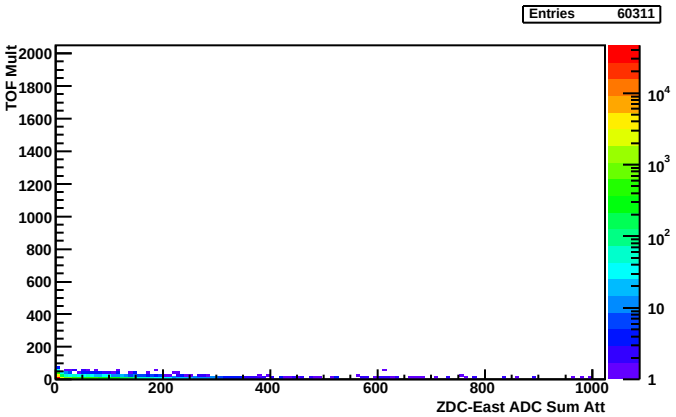

Entries 60311
TOF Mult
BBC-L-West ADC Sum

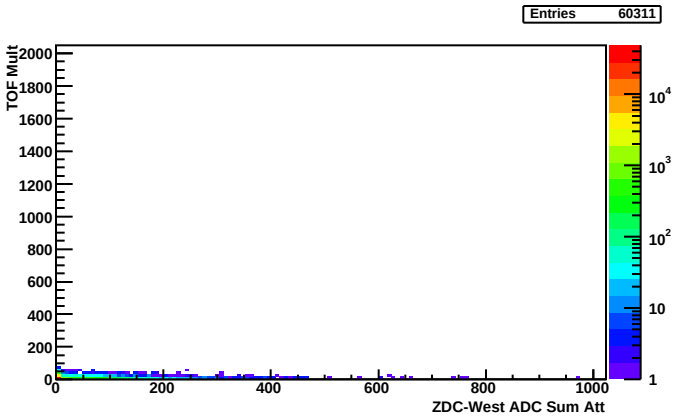

Entries 60311
TOF Mult
BBC-S-East ADC Sum

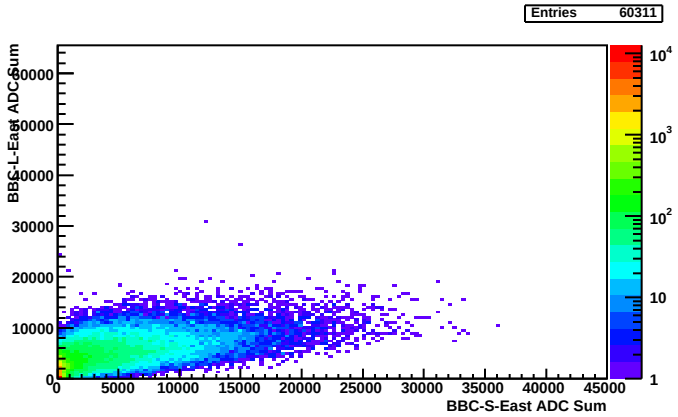

Entries 60311
TOF Mult
BBC-S-West ADC Sum

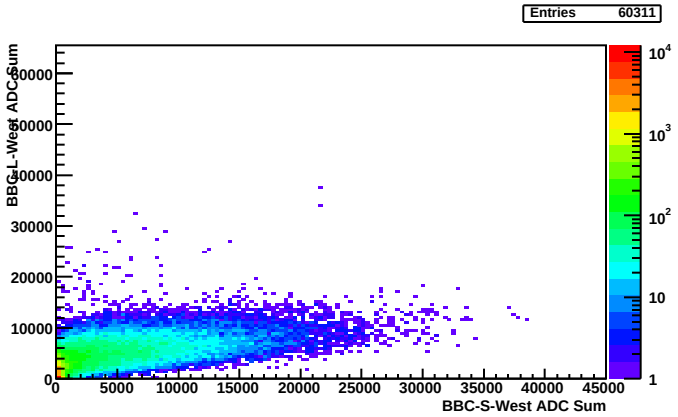

Entries 60311
TOF Mult
VPD-East ADC Sum

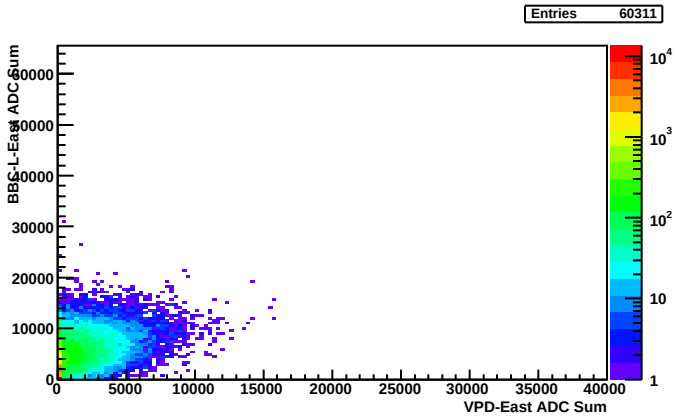

Entries 60311
TOF Mult
VPD-West ADC Sum

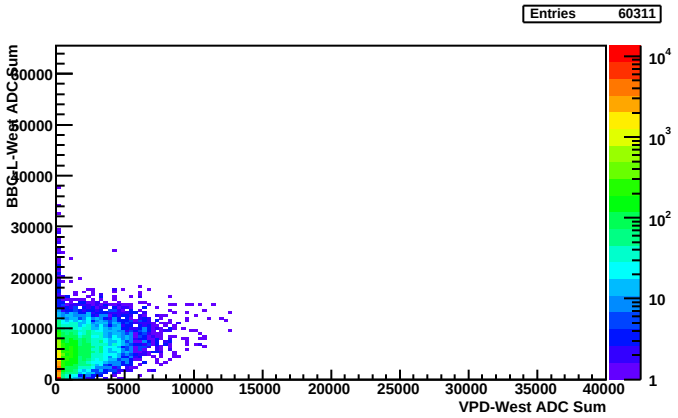

Entries 60311
TOF Mult
ZDC-East ADC Sum Att

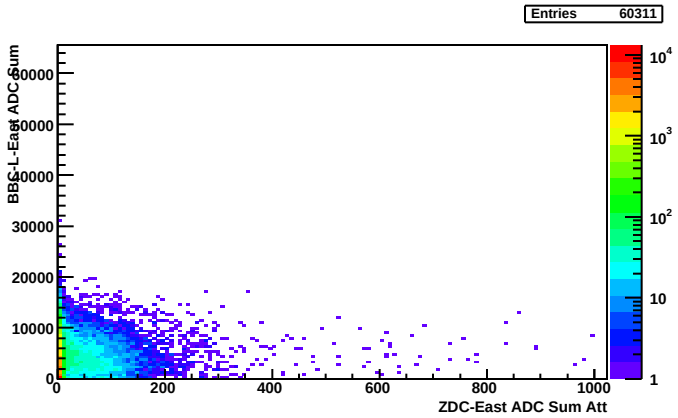

Entries 60311
TOF Mult
ZDC-West ADC Sum Att

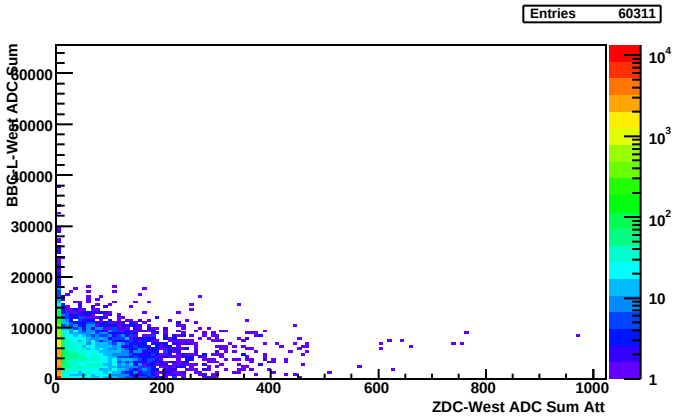

Entries 60311
BBC-L-East ADC Sum
BBC-S-East ADC Sum

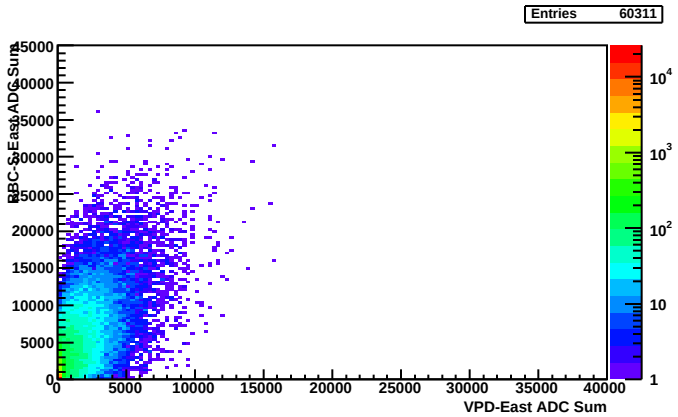

Entries 60311
BBC-L-West ADC Sum
BBC-S-West ADC Sum

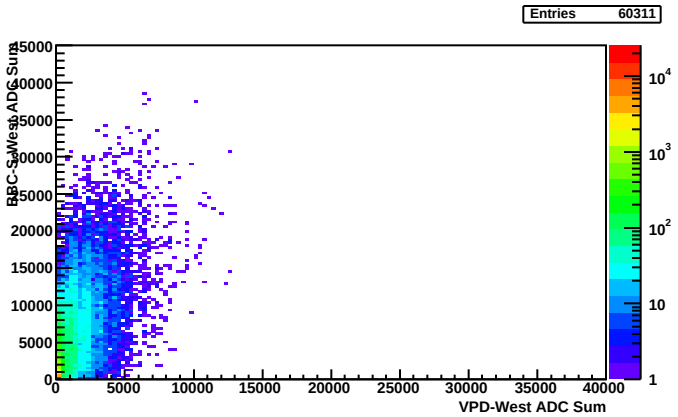

Entries 60311
BBC-L-East ADC Sum
VPD-East ADC Sum

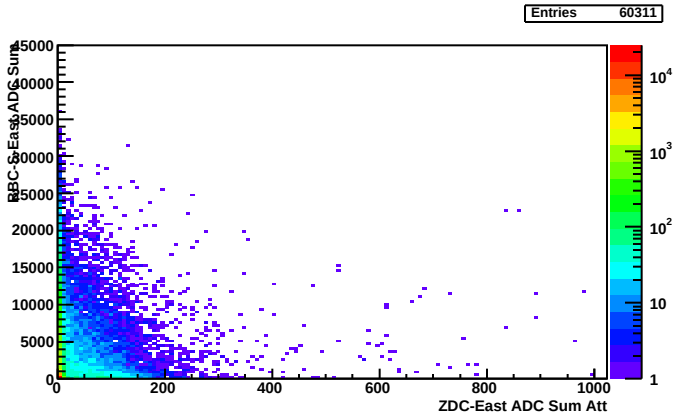

Entries 60311
BBC-L-West ADC Sum
VPD-West ADC Sum

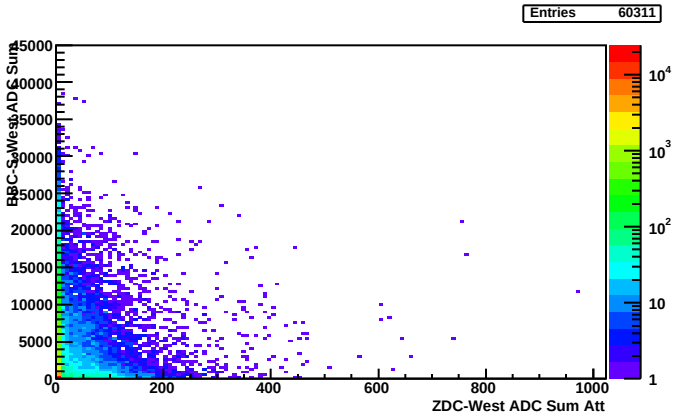

Entries 60311
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

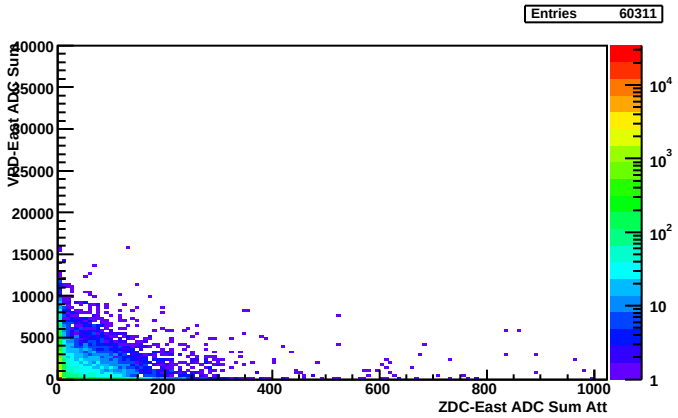

Entries 60311
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

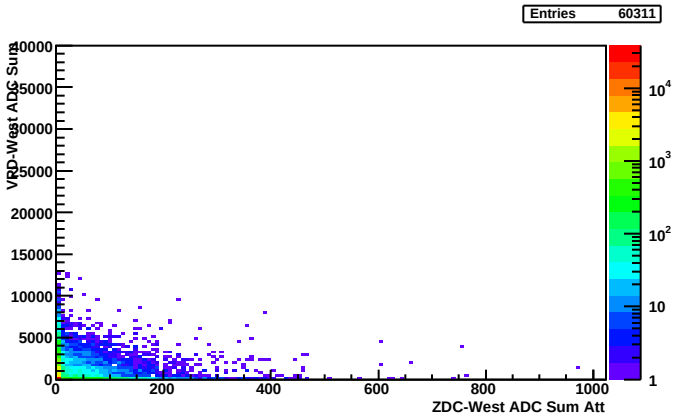

Entries 60311
BBC-S-East ADC Sum
VPD-East ADC Sum

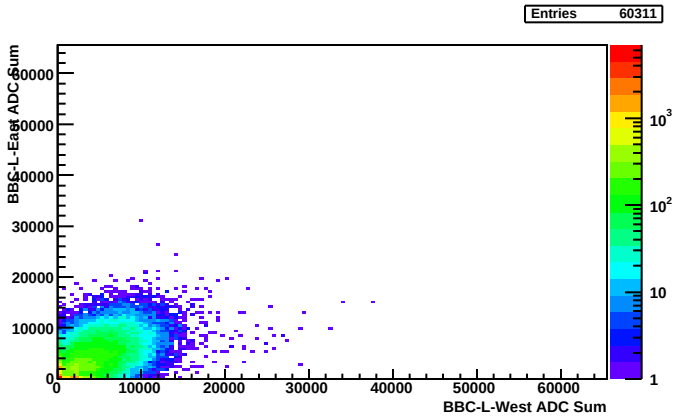

Entries 60311
BBC-S-West ADC Sum
VPD-West ADC Sum

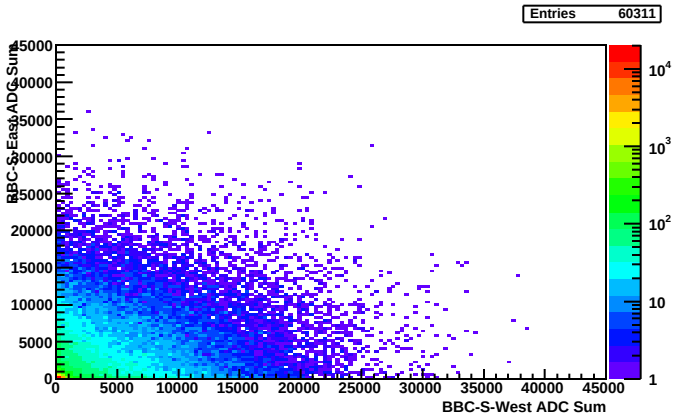

Entries 60311
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

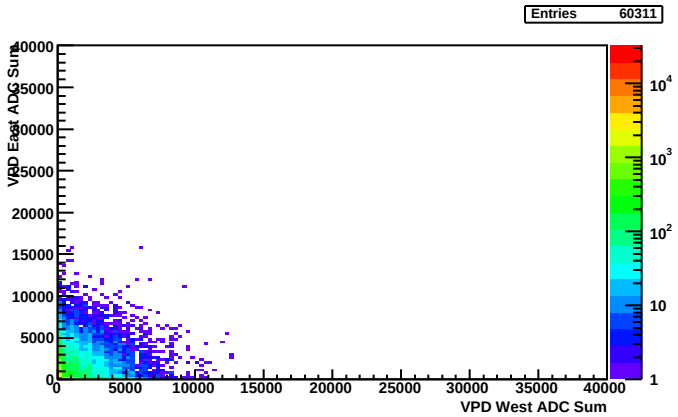

Entries 60311
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

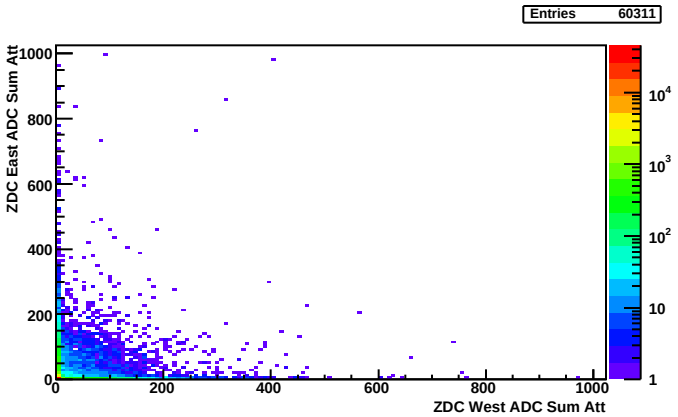

Entries 60311
VPD-East ADC Sum
ZDC-East ADC Sum Att

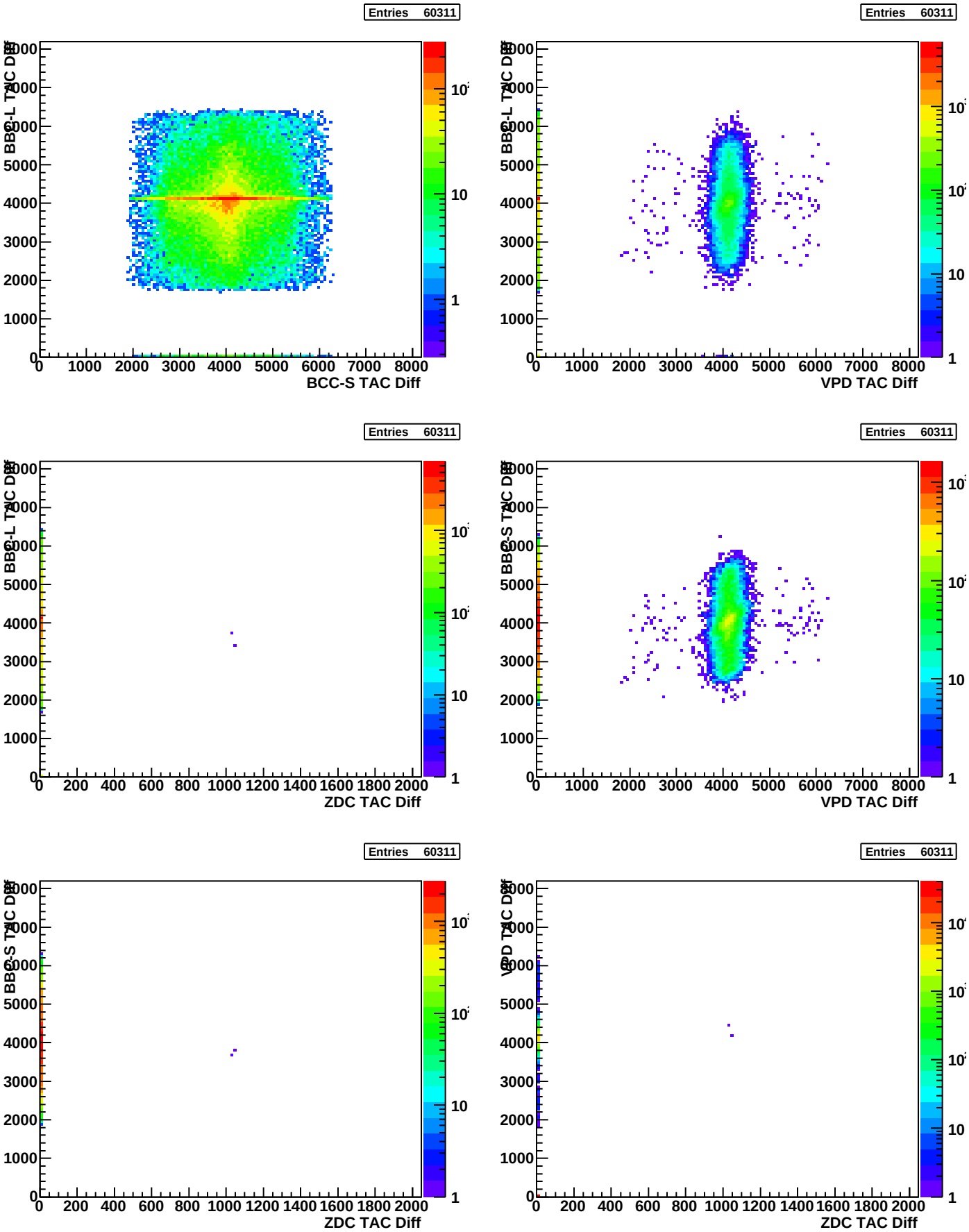

Entries 60311
VPD-West ADC Sum
ZDC-West ADC Sum Att

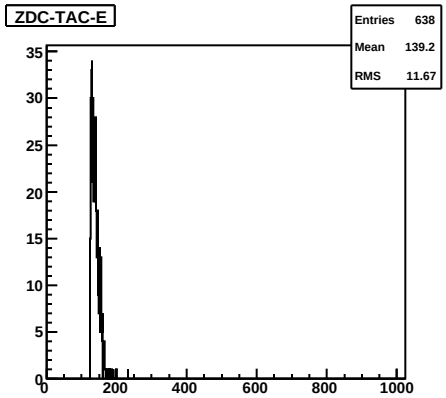

Entries 60311
BBC-L-East ADC Sum
BBC-L-West ADC Sum

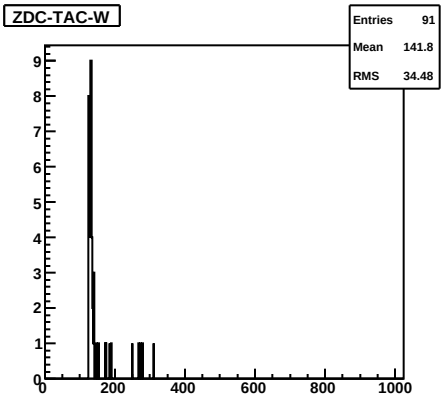

Entries 60311
BBC-S-East ADC Sum
BBC-S-West ADC Sum

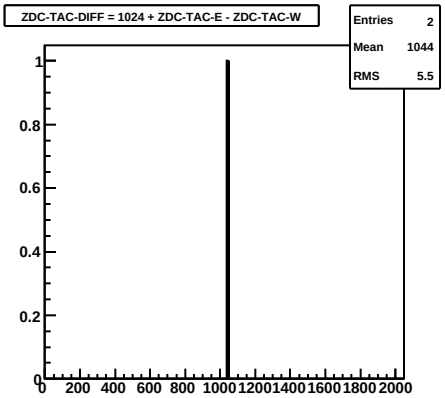

Entries 60311
VPD East ADC Sum
VPD West ADC Sum

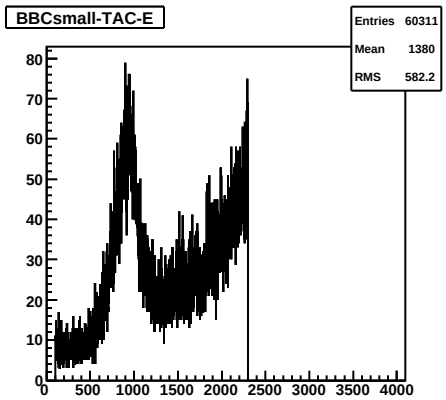

Entries 60311
ZDC East ADC Sum Att
ZDC West ADC Sum Att

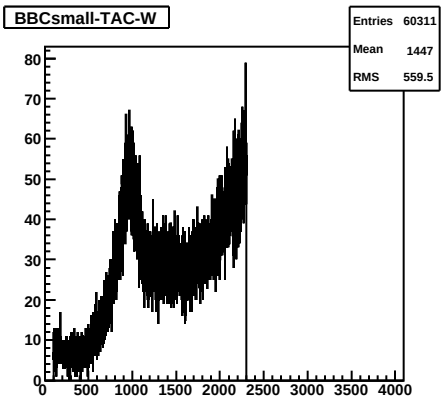

Entries 60311
BBC-L TAC Diff
BCC-S TAC Diff
Entries 60311
BBC-L TAC Diff
VPD TAC Diff
Entries 60311
BBC-L TAC Diff
ZDC TAC Diff
Entries 60311
BBC-S TAC Diff
VPD TAC Diff
Entries 60311
BBC-S TAC Diff
ZDC TAC Diff
Entries 60311
VPD TAC Diff
ZDC TAC Diff

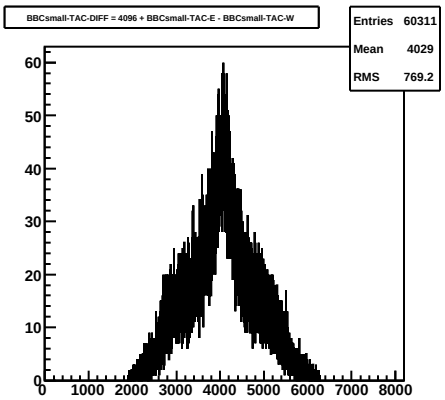

ZDC-TAC-E
Entries 638
Mean 139.2
RMS 11.67

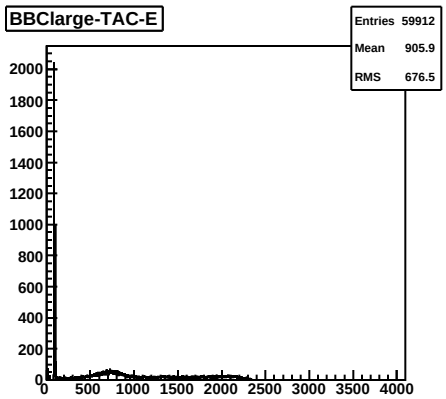

ZDC-TAC-W
Entries 91
Mean 141.8
RMS 34.48

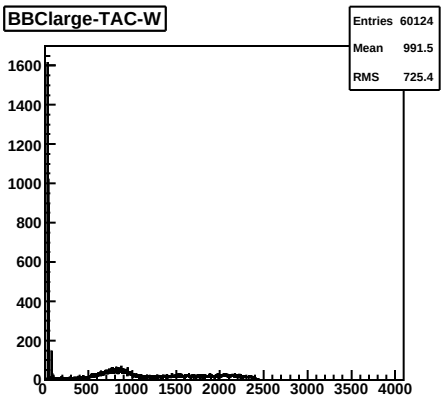

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 2
Mean 1044
RMS 5.5

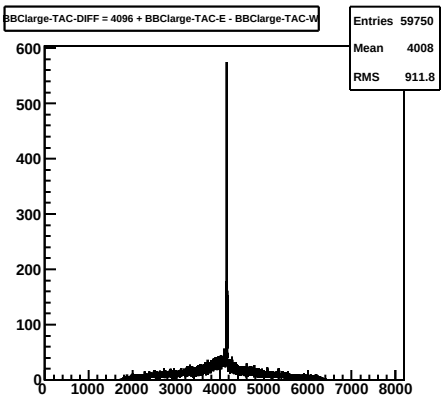

BBCsmall-TAC-E
Entries 60311
Mean 1380
RMS 582.2

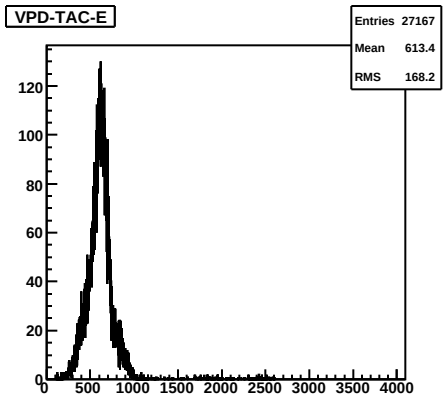

BBCsmall-TAC-W
Entries 60311
Mean 1447
RMS 559.5

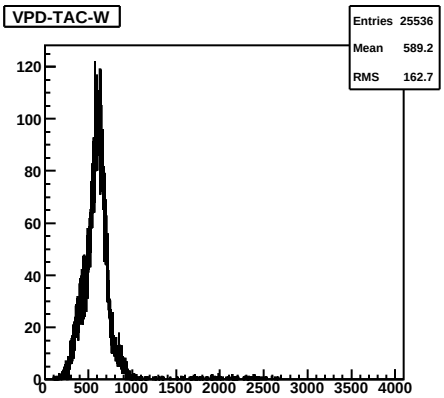

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 60311
Mean 4029
RMS 769.2

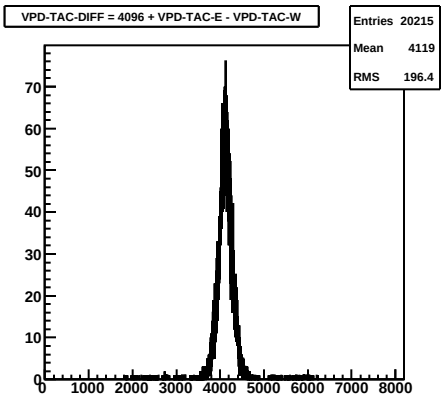

BBClarge-TAC-E
Entries 59912
Mean 905.9
RMS 676.5

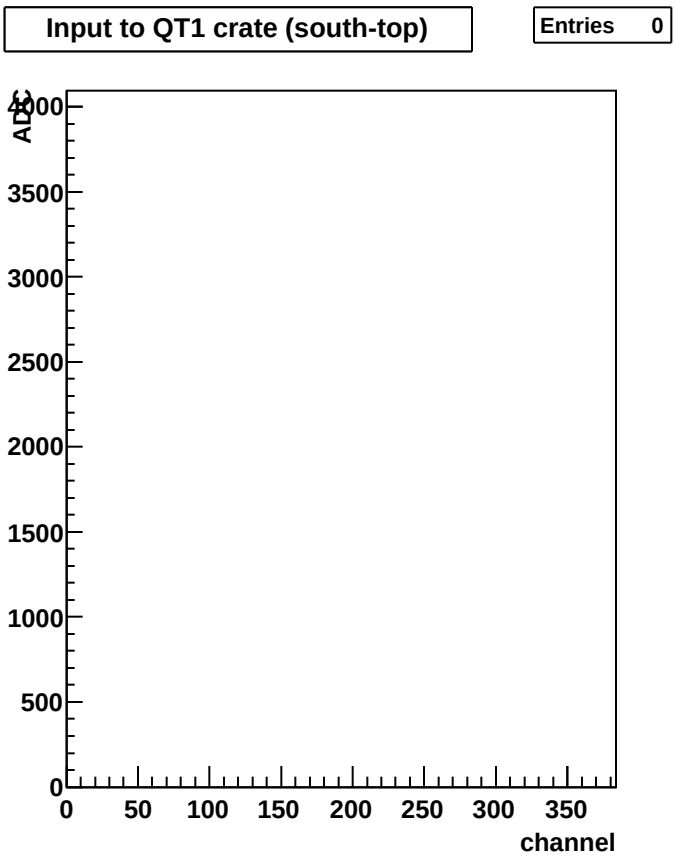

BBClarge-TAC-W
Entries 60124
Mean 991.5
RMS 725.4

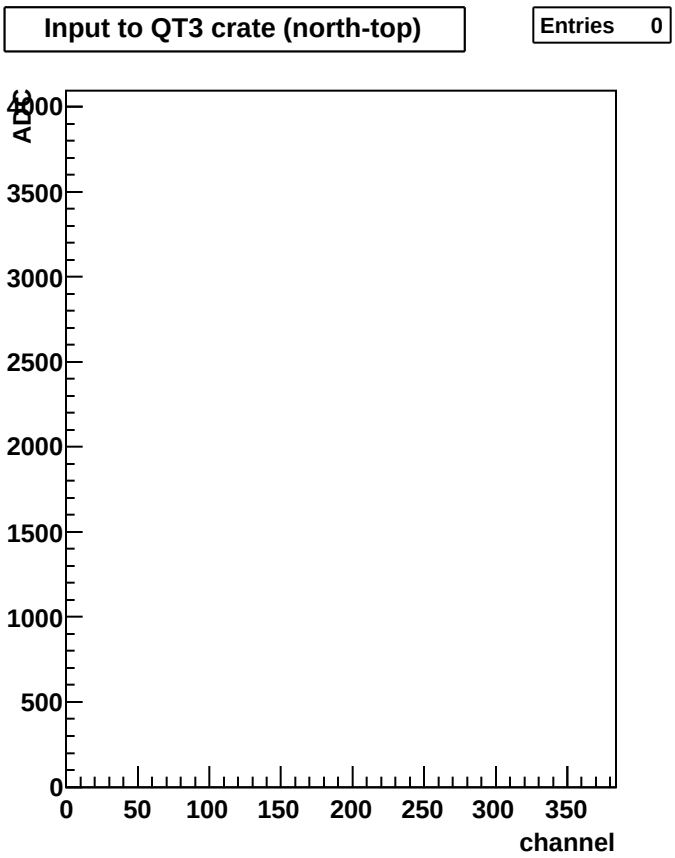

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 59750
Mean 4008
RMS 911.8

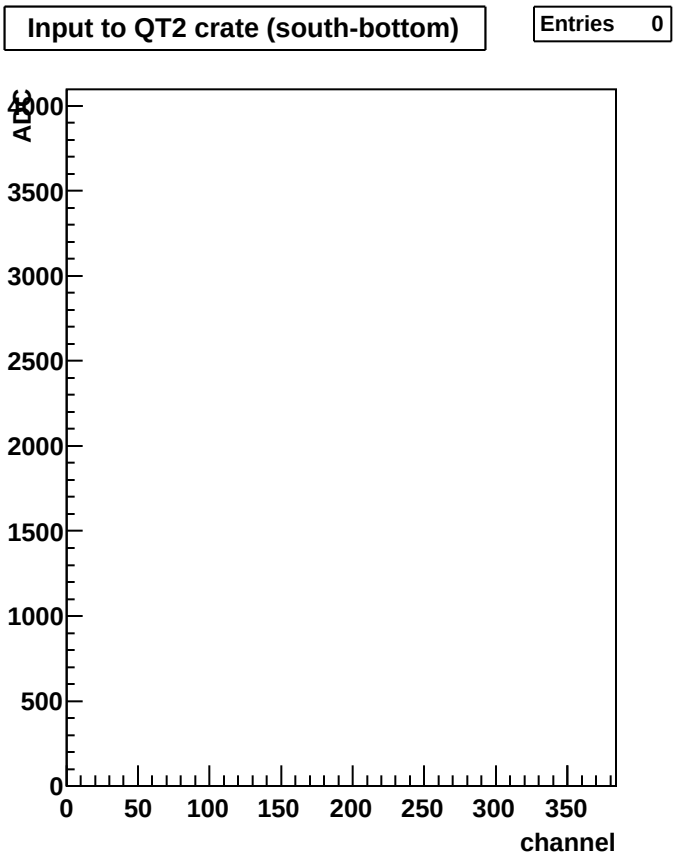

VPD-TAC-E
Entries 27167
Mean 613.4
RMS 168.2

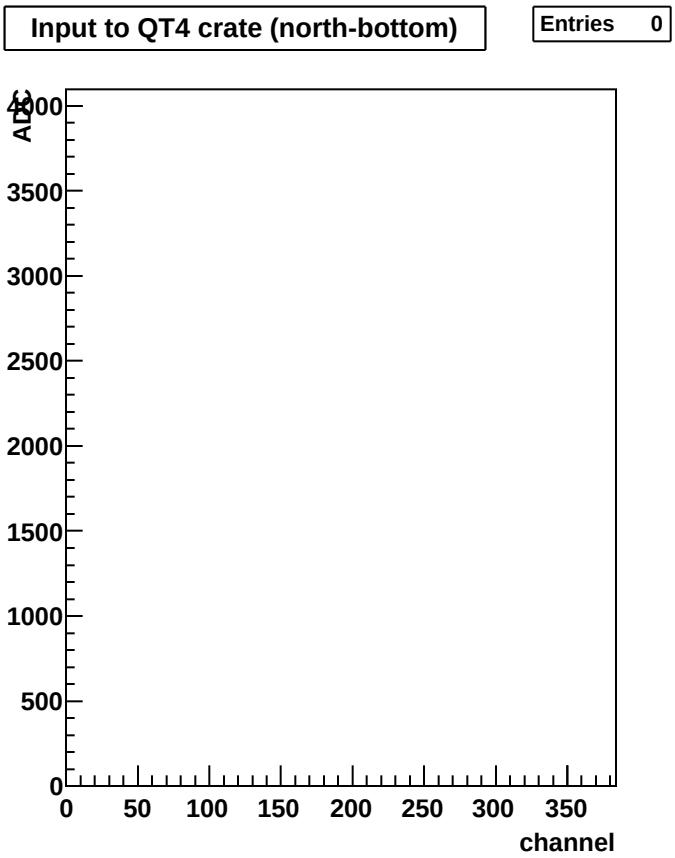

VPD-TAC-W
Entries 25536
Mean 589.2
RMS 162.7

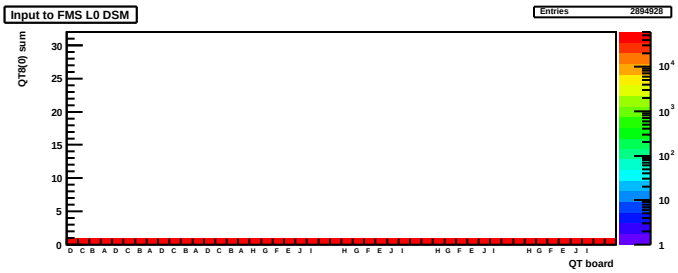

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 20215
Mean 4119
RMS 196.4

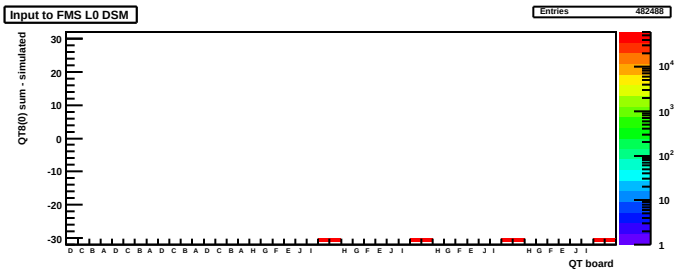

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

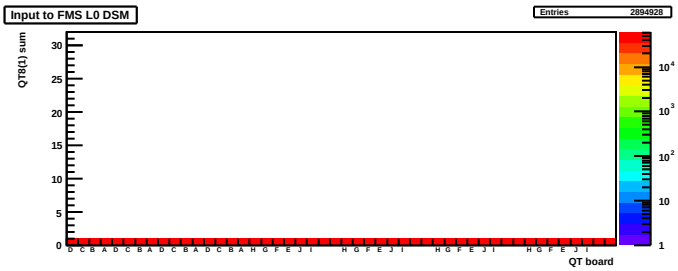

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

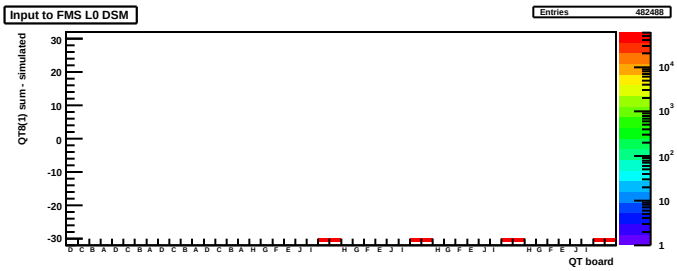

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

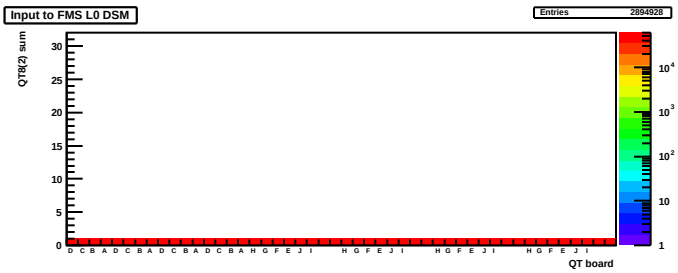

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

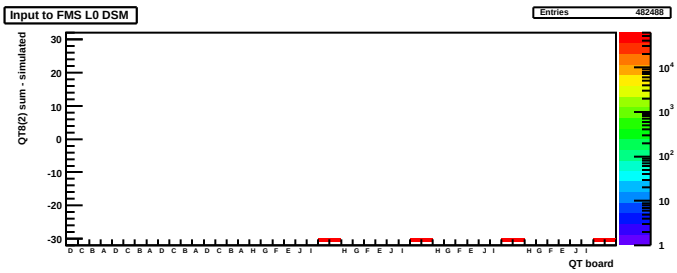

Input to FMS L0 DSM
Entries 2894928
QT8(0) sum
QT board

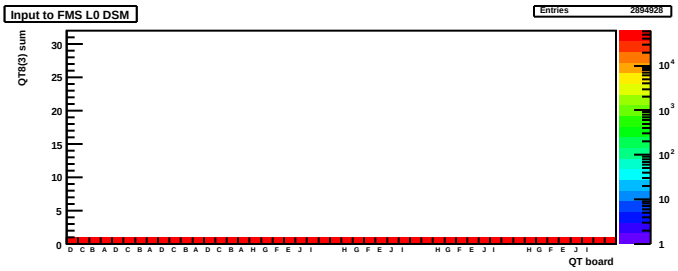

Input to FMS L0 DSM
Entries 482488
QT8(0) sum - simulated
QT board

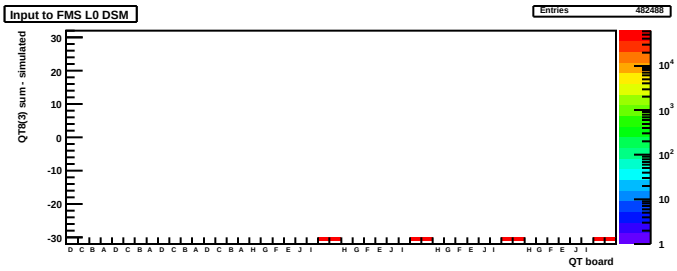

Input to FMS L0 DSM
Entries 2894928
QT8(1) sum
QT board

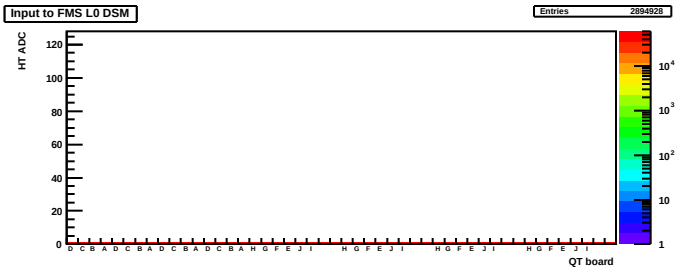

Input to FMS L0 DSM
Entries 482488
QT8(1) sum - simulated
QT board

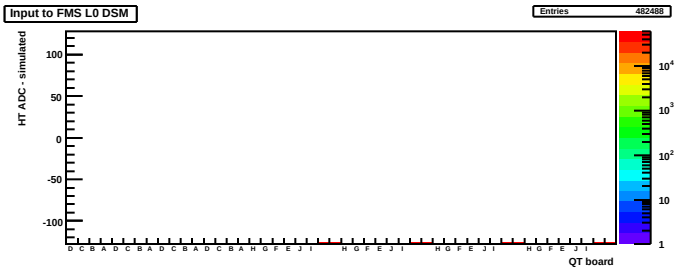

Input to FMS L0 DSM
Entries 2894928
QT8(2) sum
QT board

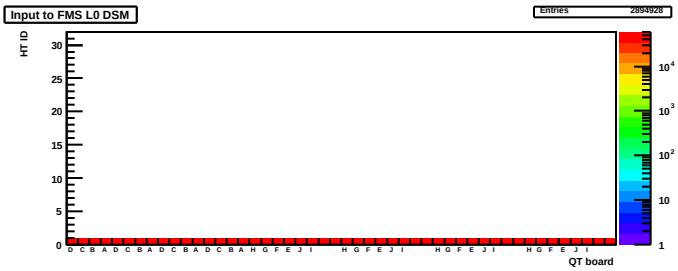

Input to FMS L0 DSM
Entries 482488
QT8(2) sum - simulated
QT board

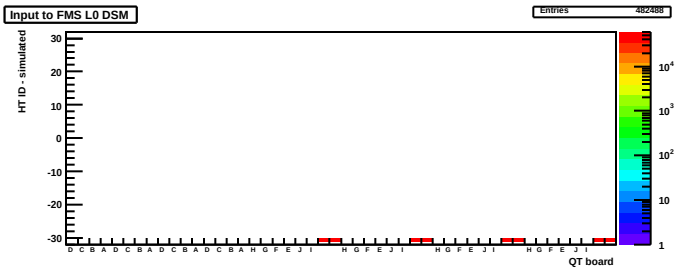

Input to FMS L0 DSM
Entries 2894928
QT8(3) sum
QT board

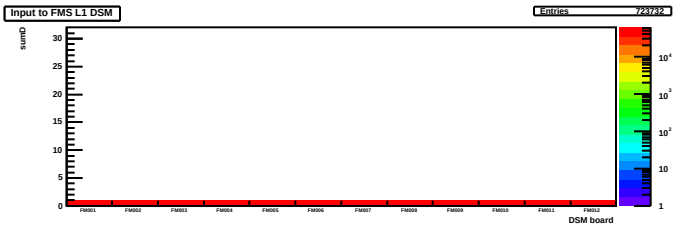

Input to FMS L0 DSM
Entries 482488
QT8(3) sum - simulated
QT board

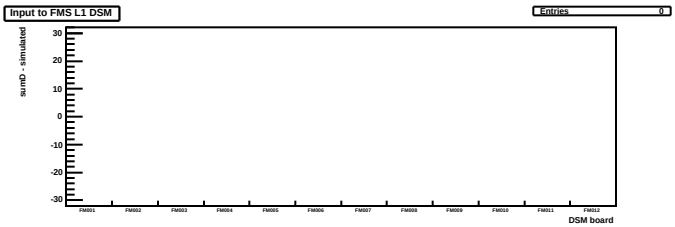

Input to FMS L0 DSM
Entries 2894928
HT ADC
QT board

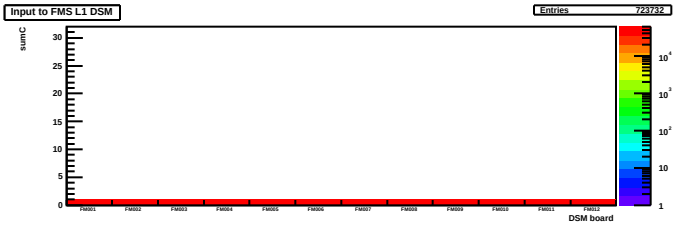

Input to FMS L0 DSM
Entries 482488
HT ADC - simulated
QT board

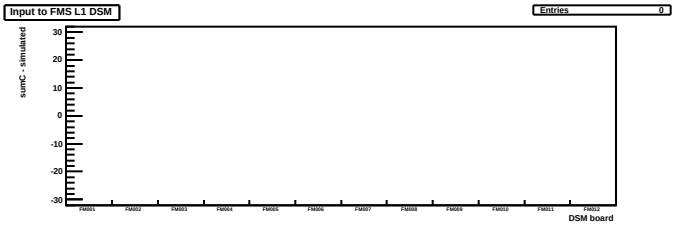

Input to FMS L0 DSM
Entries 2894928
HT ID
QT board

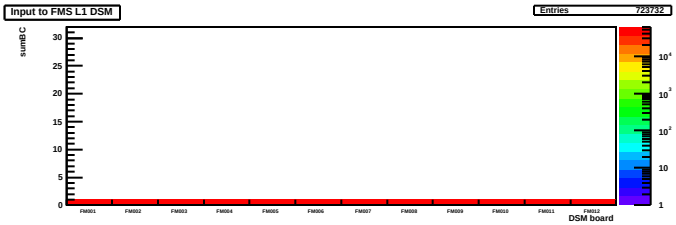

Input to FMS L0 DSM
Entries 482488
HT ID - simulated
QT board

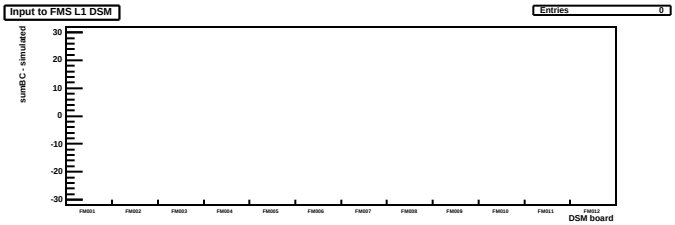

Input to FMS L1 DSM
Entries 723732
sumD
DSM board

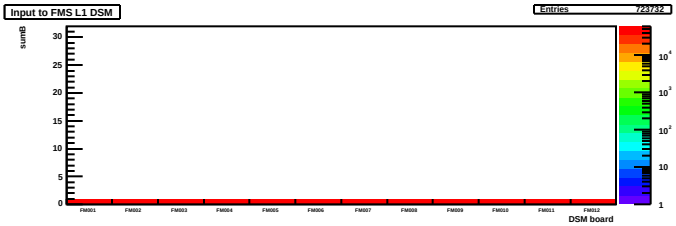

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

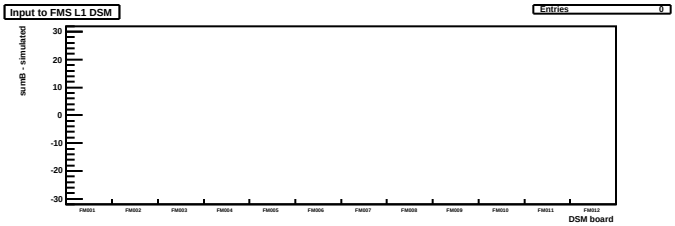

Input to FMS L1 DSM
Entries 723732
sumC
DSM board

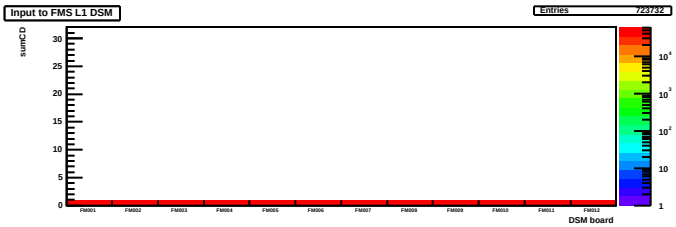

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

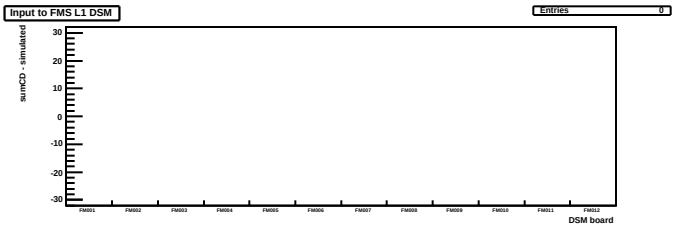

Input to FMS L1 DSM
Entries 723732
sumBC
DSM board

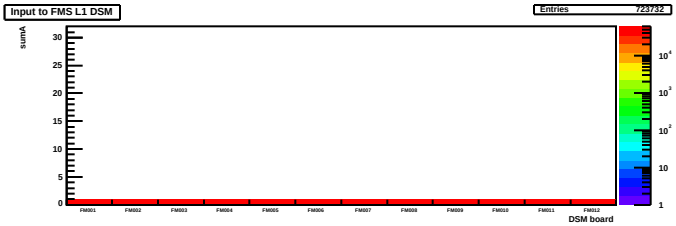

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

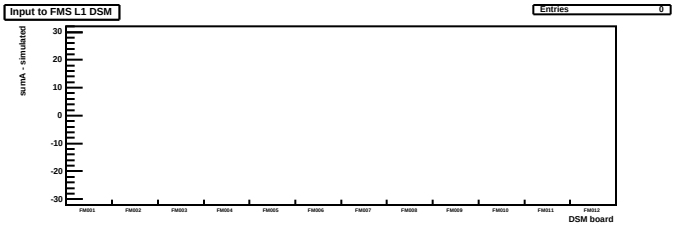

Input to FMS L1 DSM
Entries 723732
sumB
DSM board

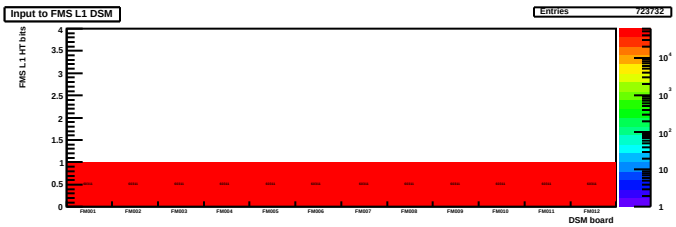

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

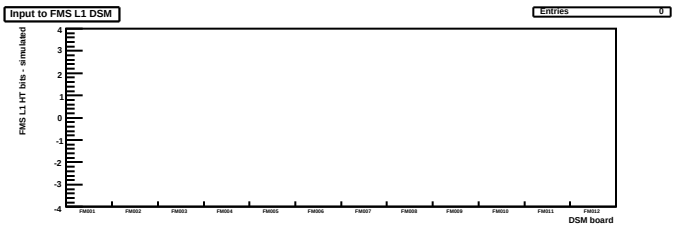

Input to FMS L1 DSM
Entries 723732
sumCD
DSM board

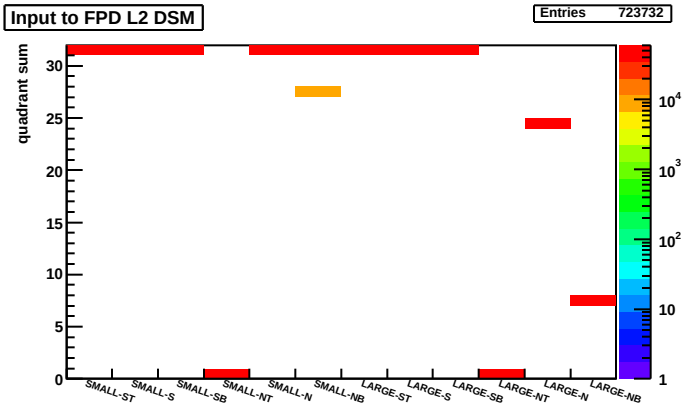

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

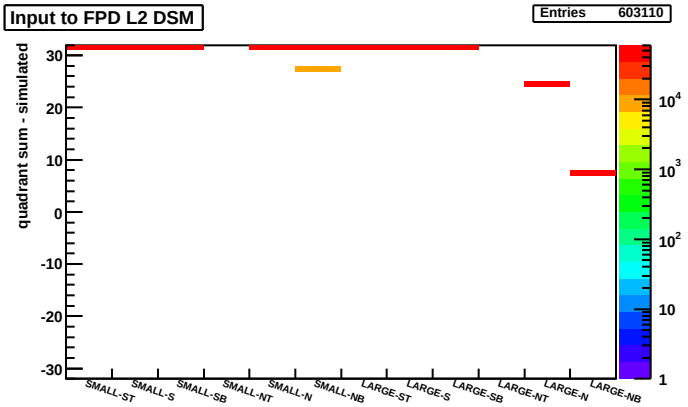

Input to FMS L1 DSM
Entries 723732
sumA
DSM board

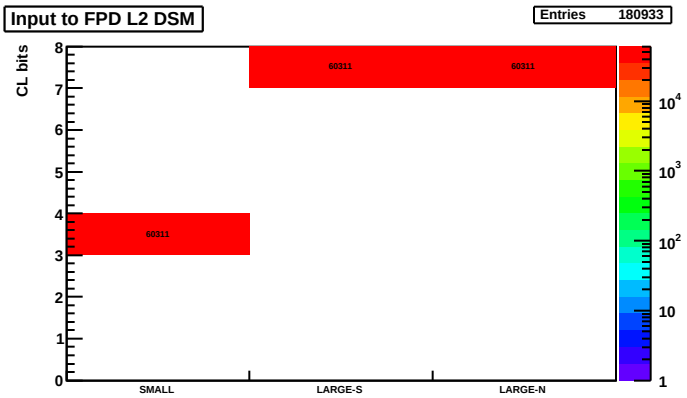

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

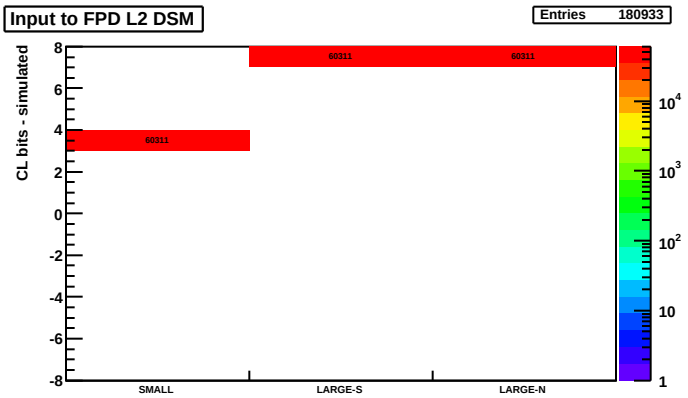

Input to FMS L1 DSM
Entries 723732
FMS L1 HT bits
DSM board

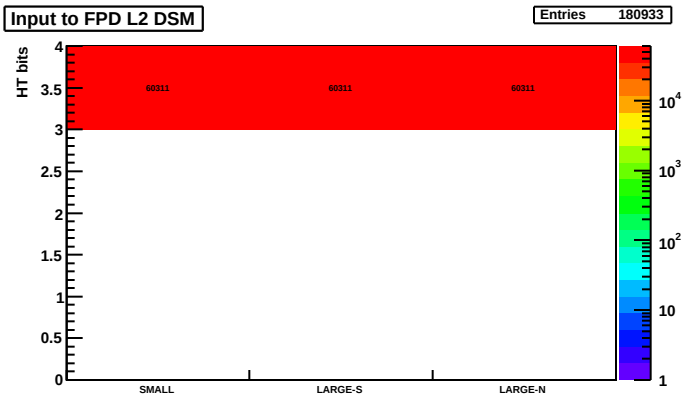

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

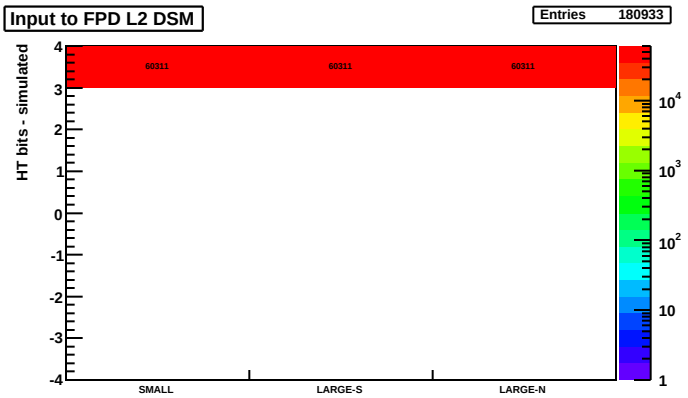

Input to FPD L2 DSM
Entries 723732
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

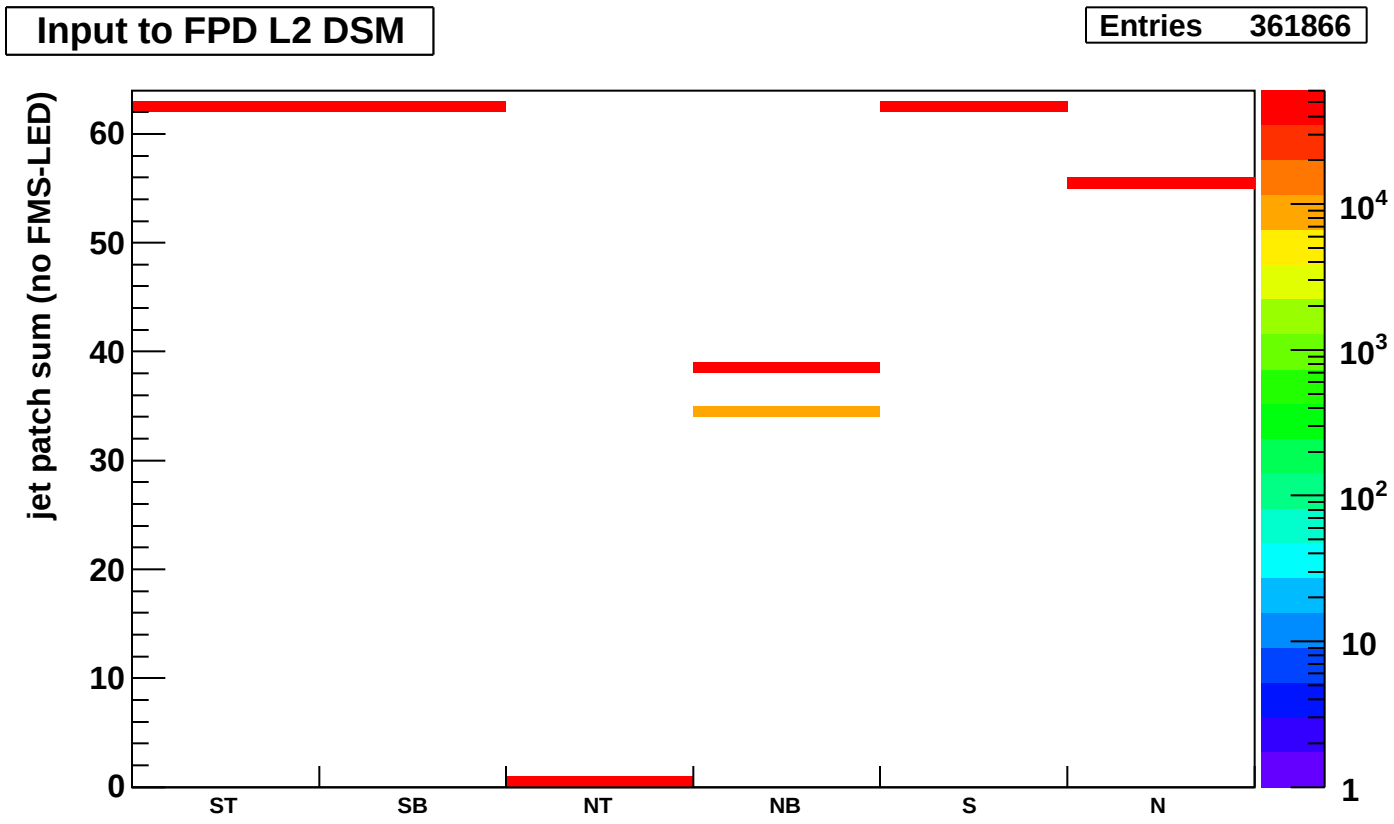

Input to FPD L2 DSM
Entries 603110
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

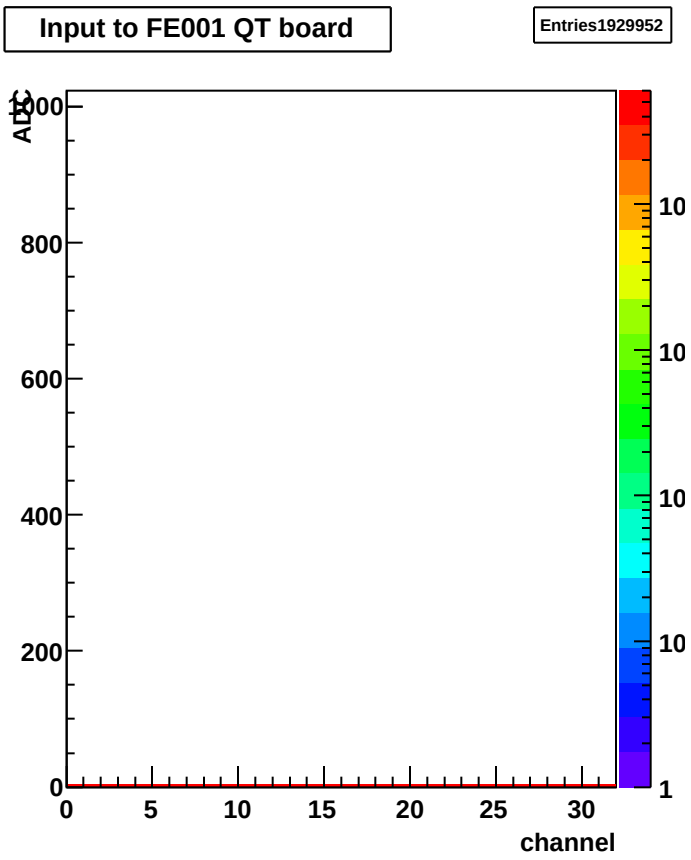

Input to FPD L2 DSM
Entries 180933
CL bits
60311
60311
60311
SMALL
LARGE-S
LARGE-N

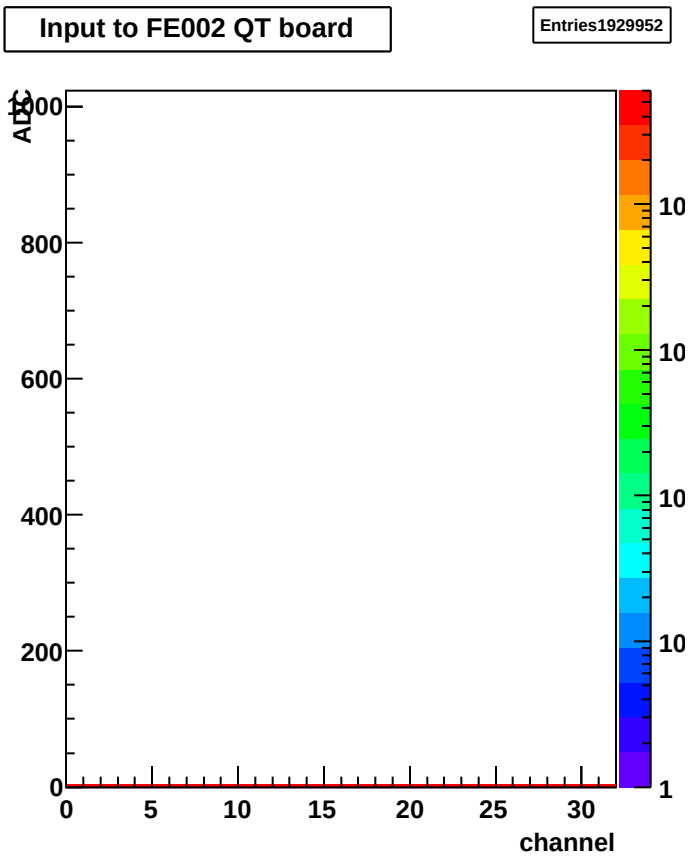

Input to FPD L2 DSM
Entries 180933
CL bits - simulated
60311
60311
60311
SMALL
LARGE-S
LARGE-N

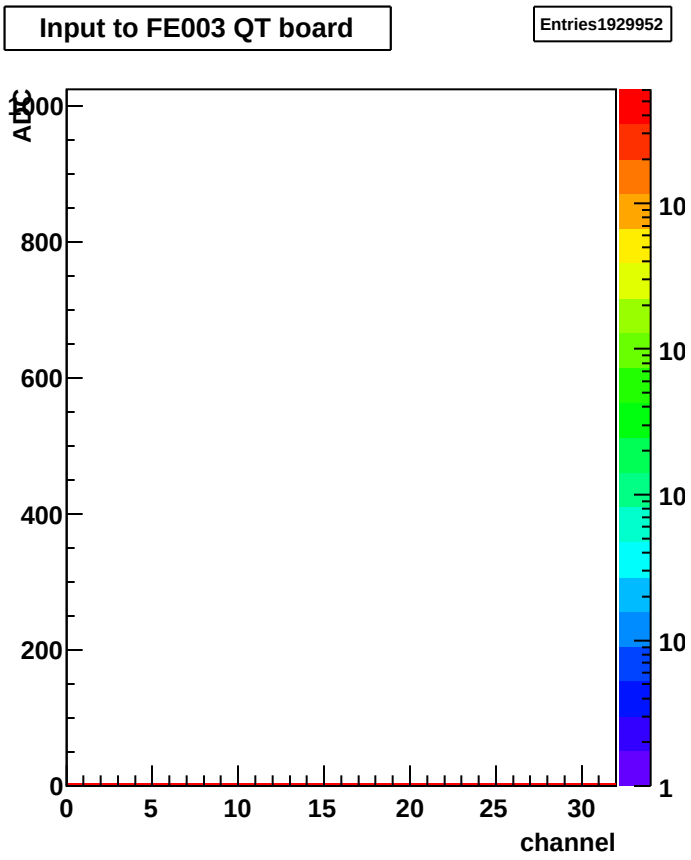

Input to FPD L2 DSM
Entries 180933
HT bits
60311
60311
60311
SMALL
LARGE-S
LARGE-N

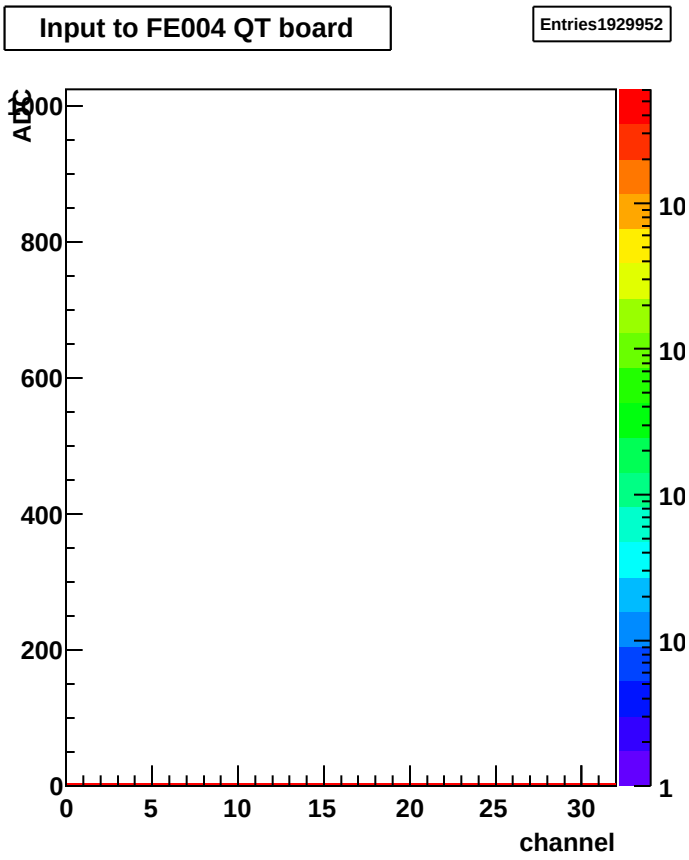

Input to FPD L2 DSM
Entries 180933
HT bits - simulated
60311
60311
60311
SMALL
LARGE-S
LARGE-N

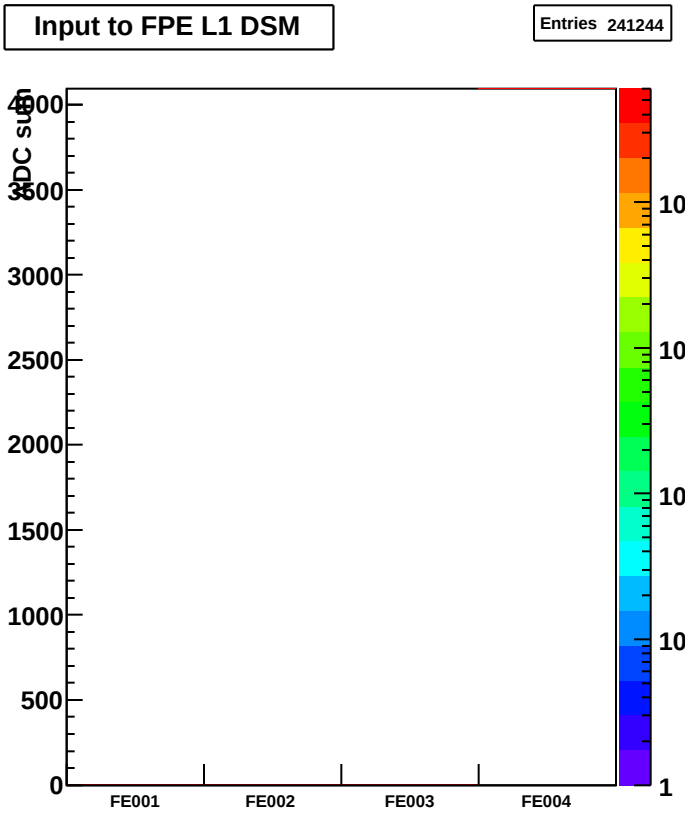

Input to FPD L2 DSM
Entries 361866
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

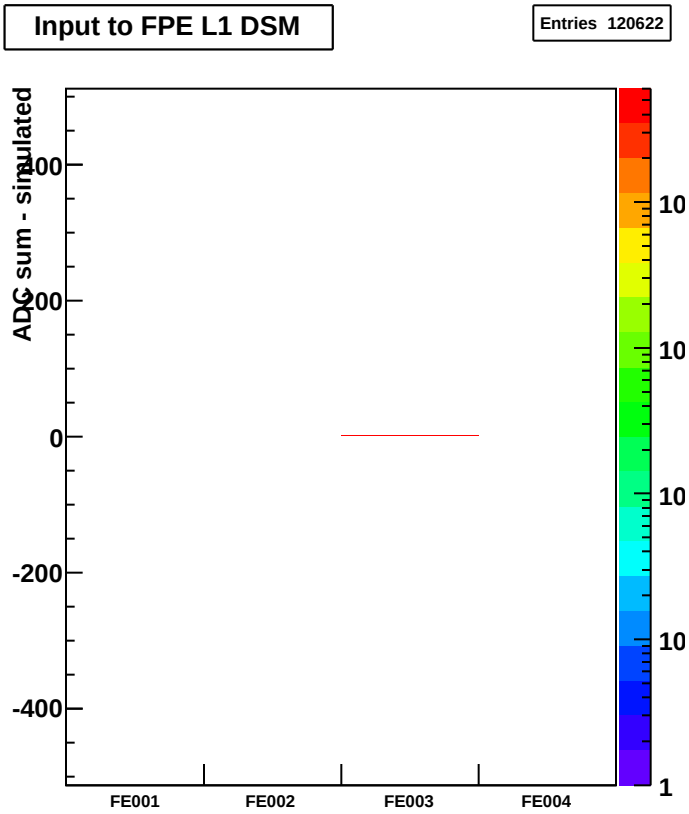

Input to FE001 QT board
Entries1929952
ADC
channel

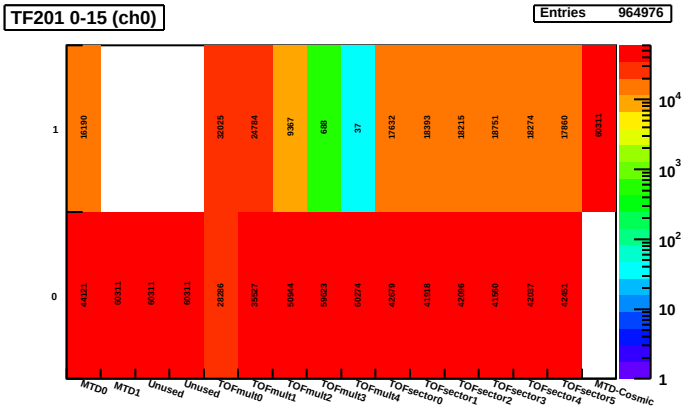

Input to FE002 QT board
Entries1929952
ADC
channel

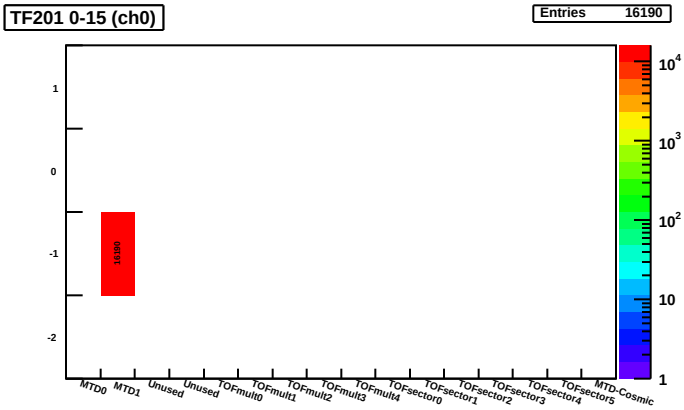

Input to FE003 QT board
Entries1929952
ADC
channel

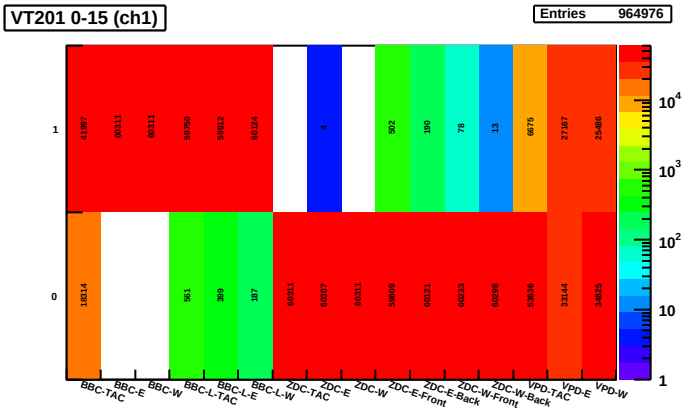

Input to FE004 QT board
Entries1929952
ADC
channel

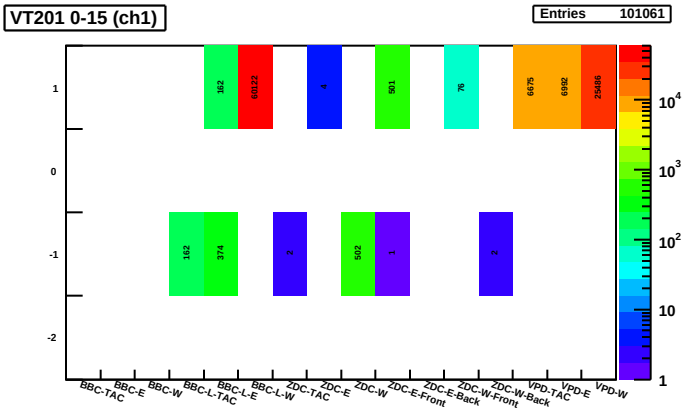

Input to FPE L1 DSM
Entries 241244
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1

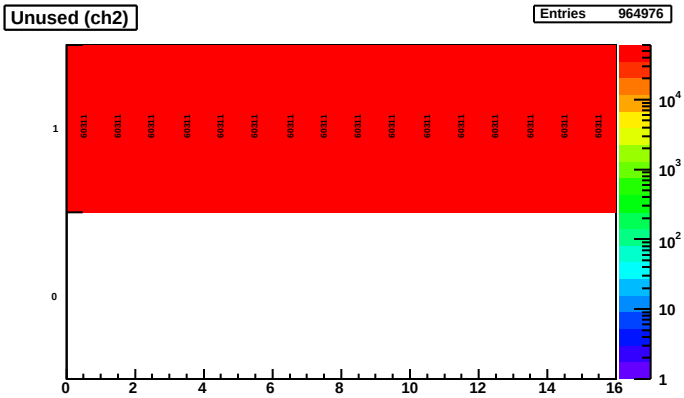

Input to FPE L1 DSM
Entries 120622
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1

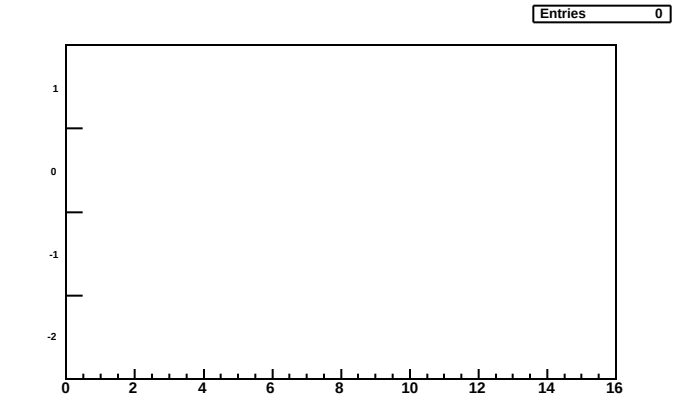

TF201 0-15 (ch0)
Entries 964976
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

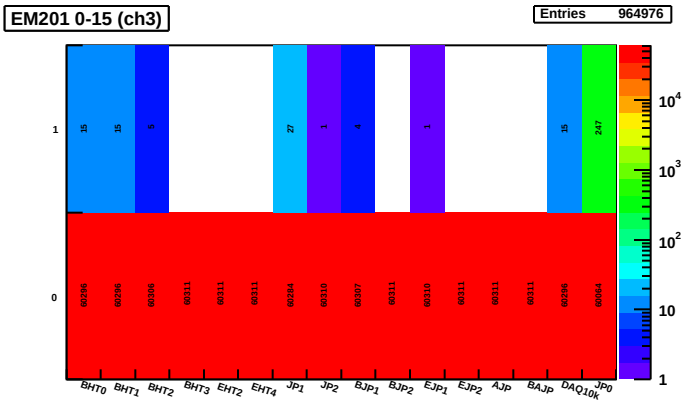

TF201 0-15 (ch0)
Entries 16190
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

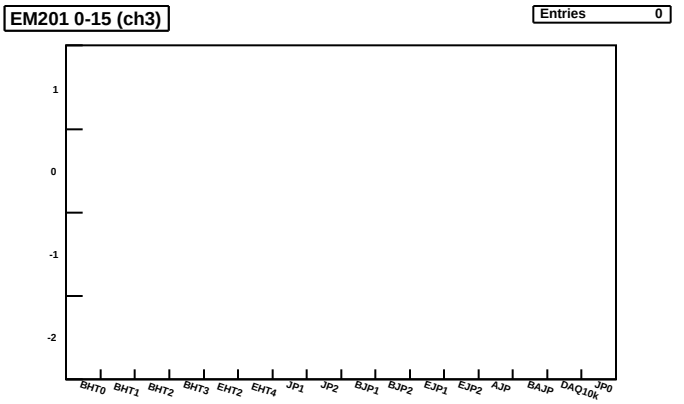

VT201 0-15 (ch1)
Entries 964976
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 101061
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

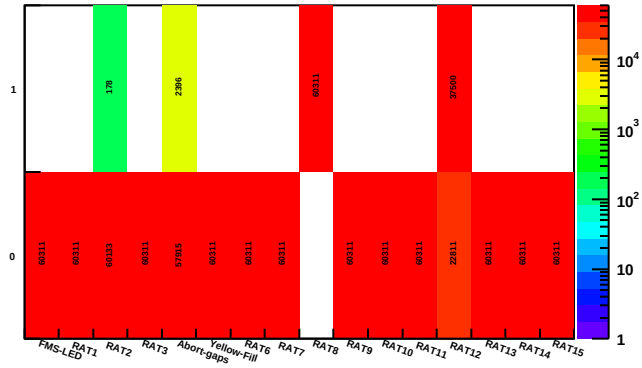

Unused (ch2)
Entries 964976

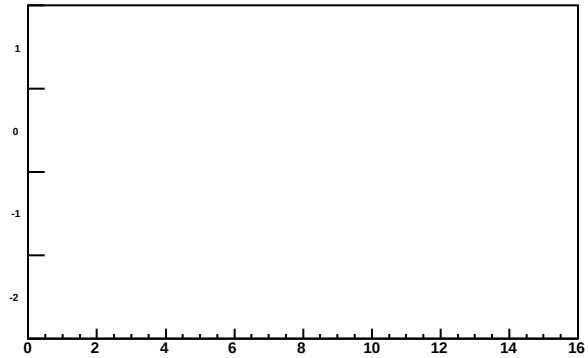

Entries 0


EM201 0-15 (ch3)
Entries 964976
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

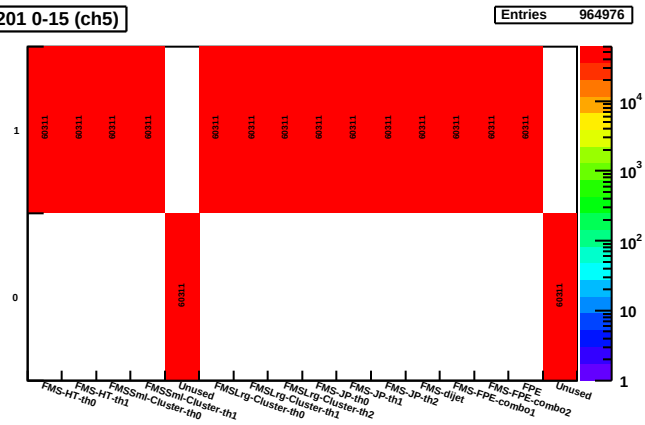

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

RAT board (ch4)





FP201 0-15 (ch5)



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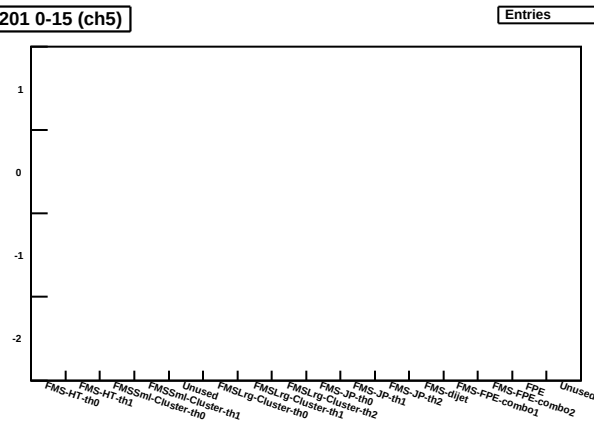
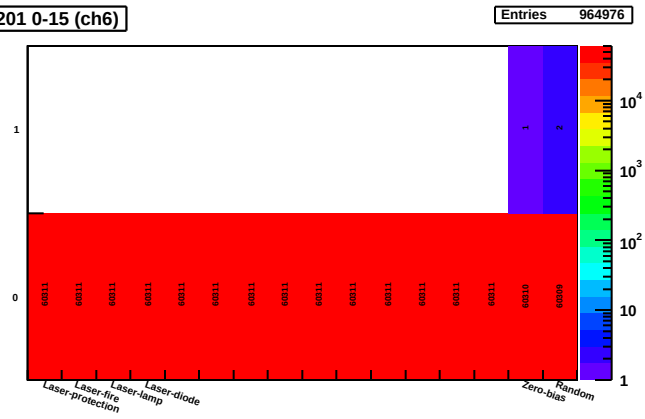
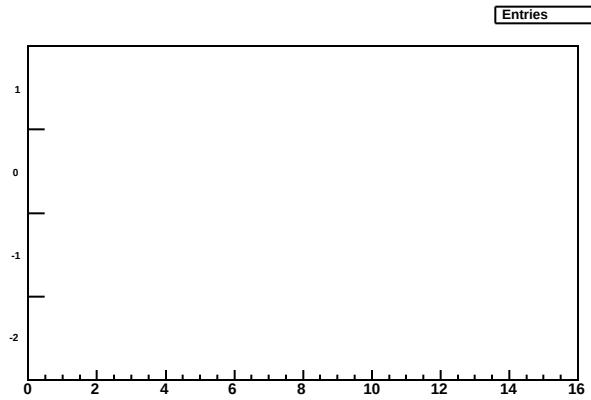
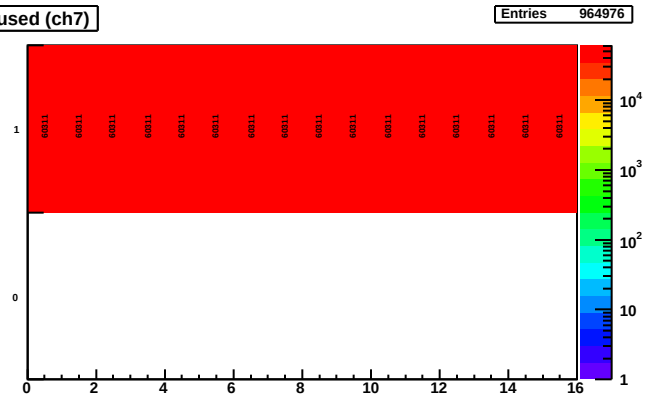
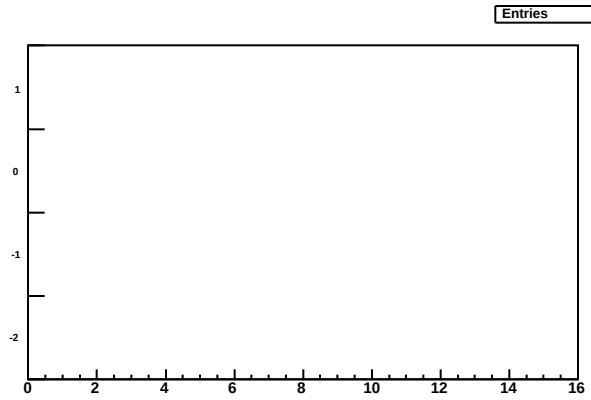


ST201 0-15 (ch6)





Unused (ch7)