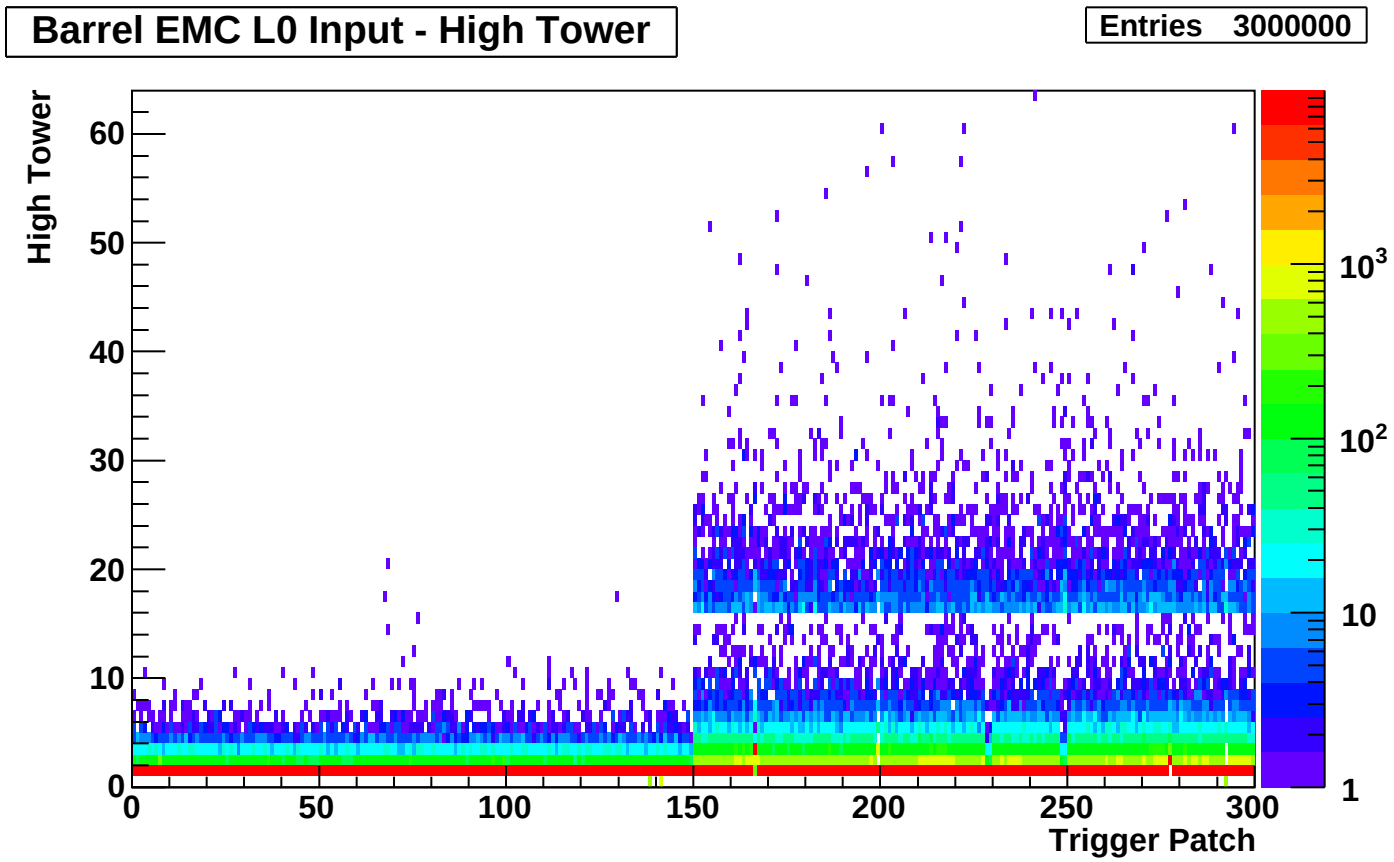
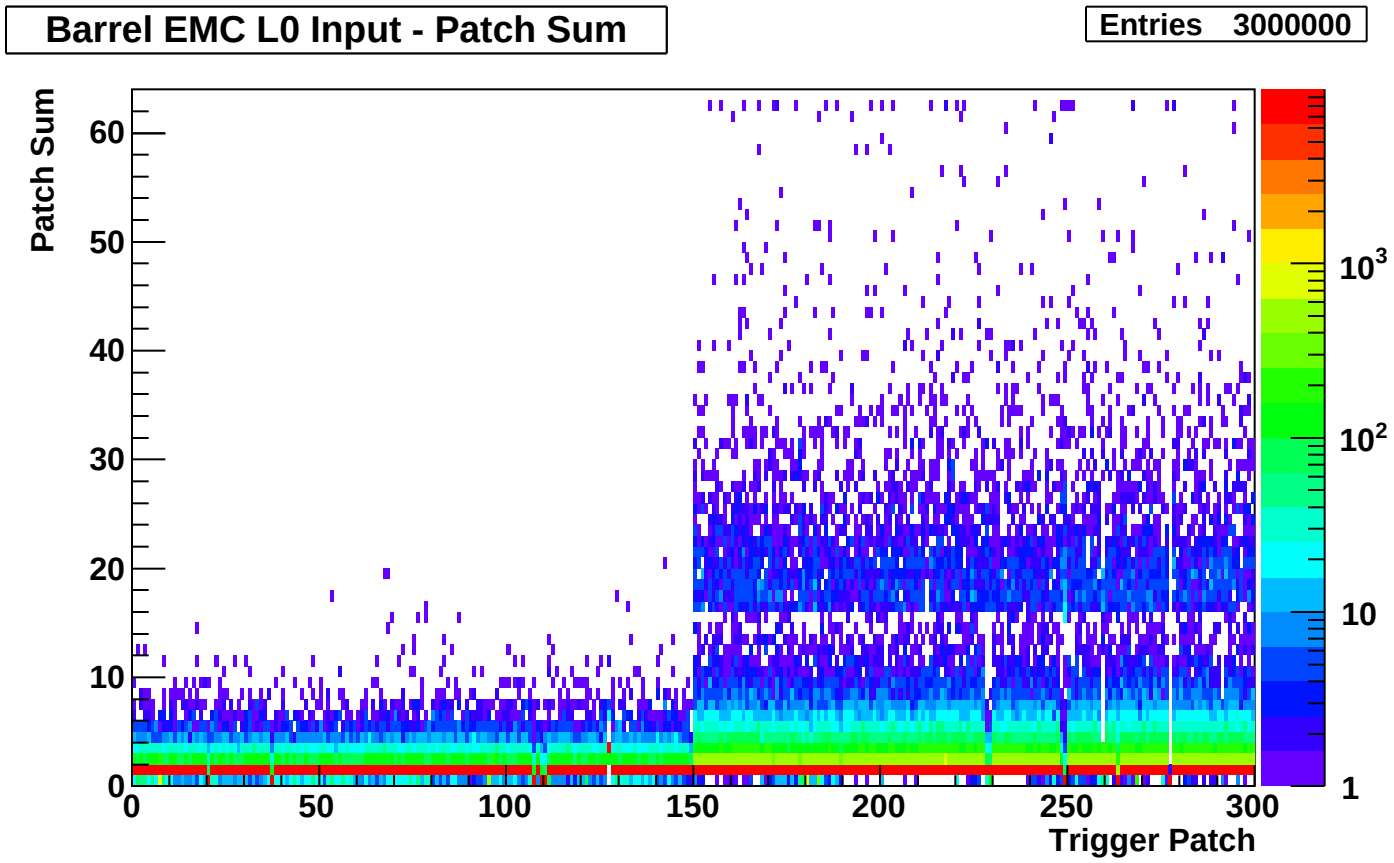
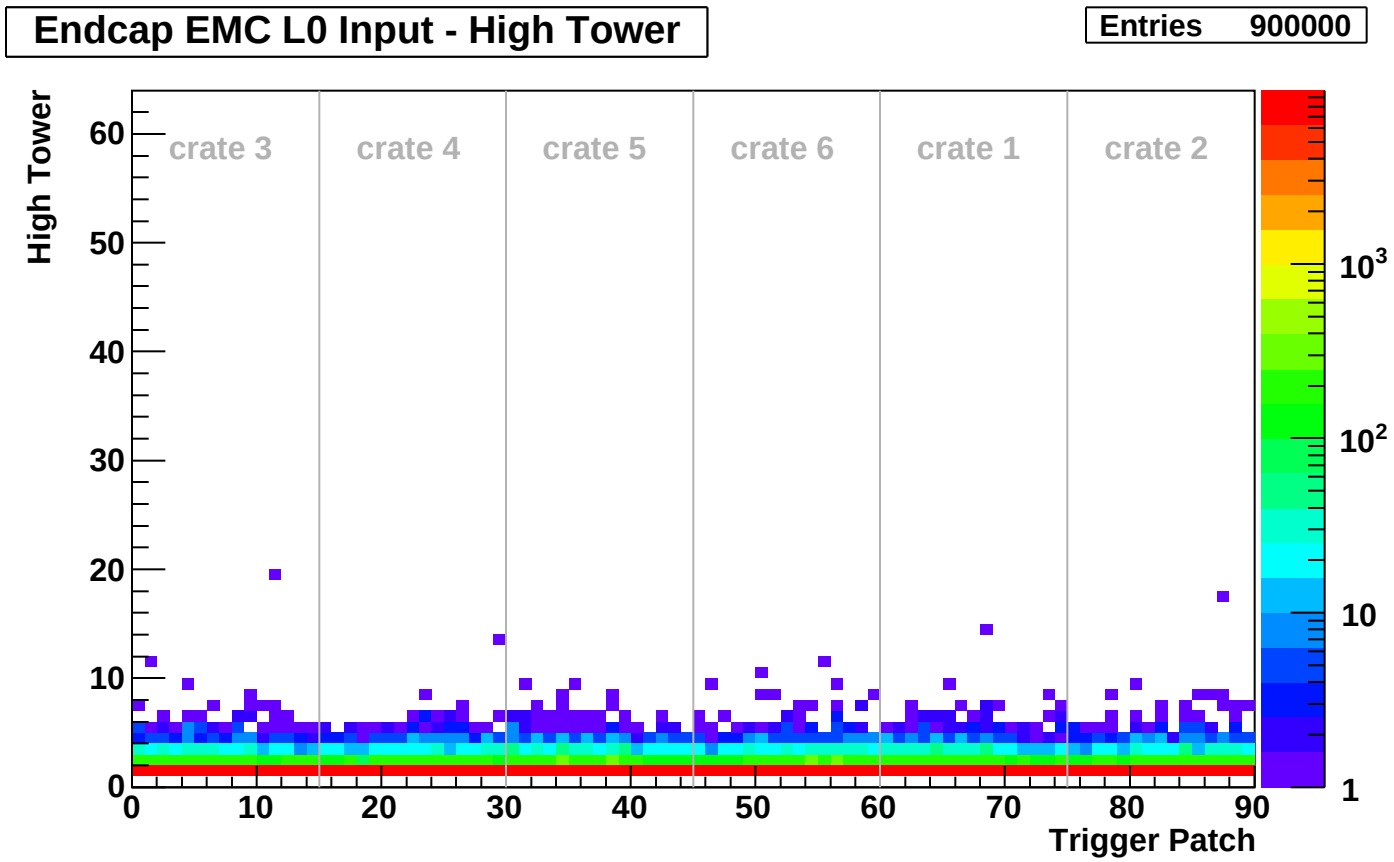
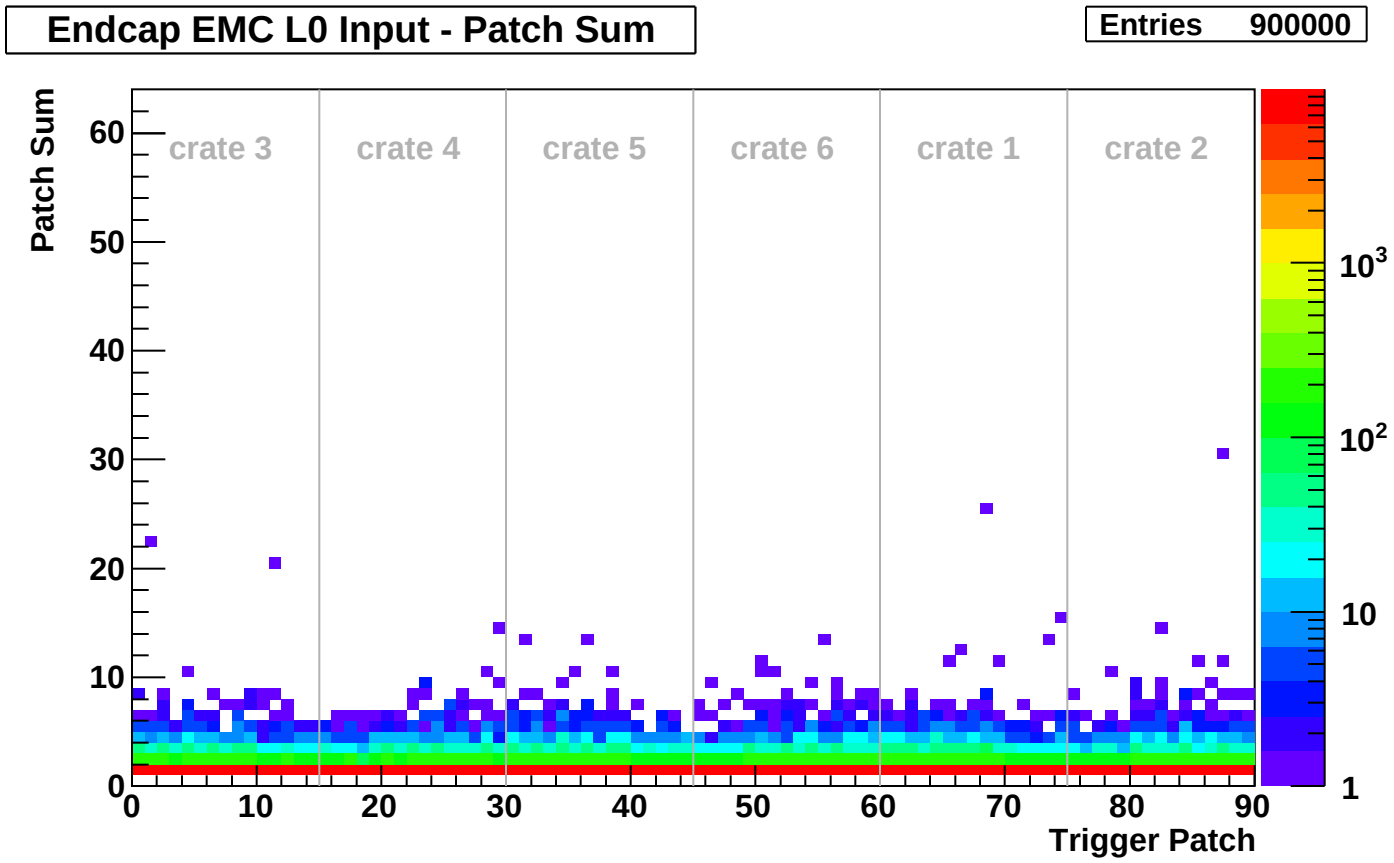
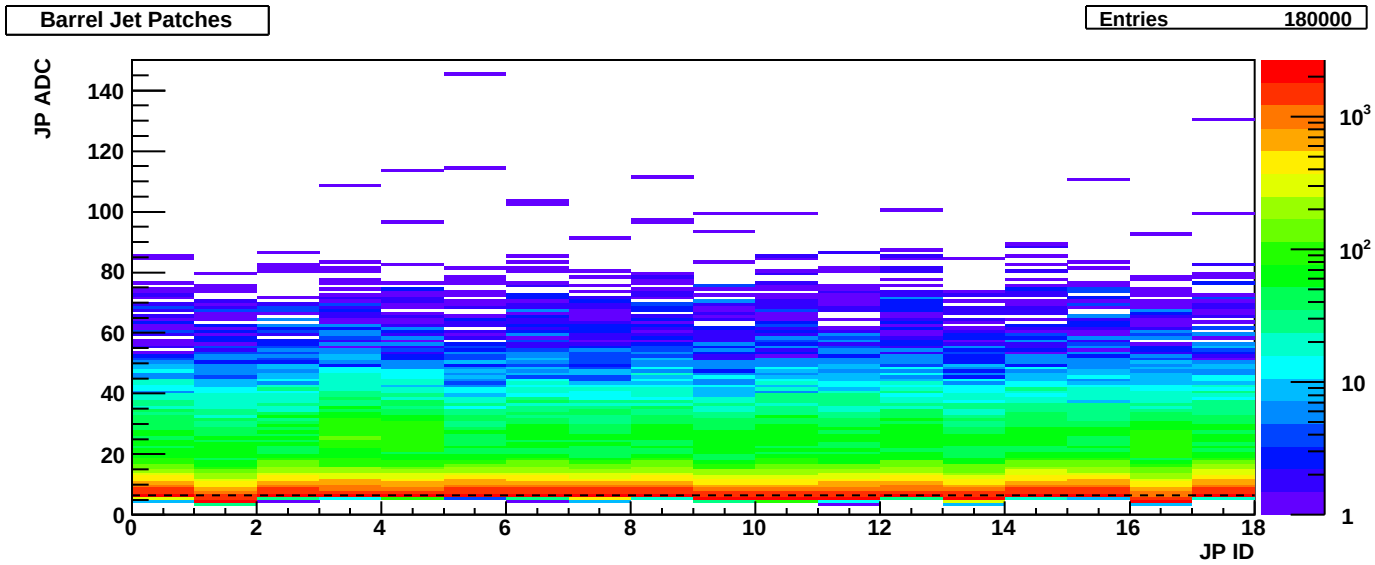
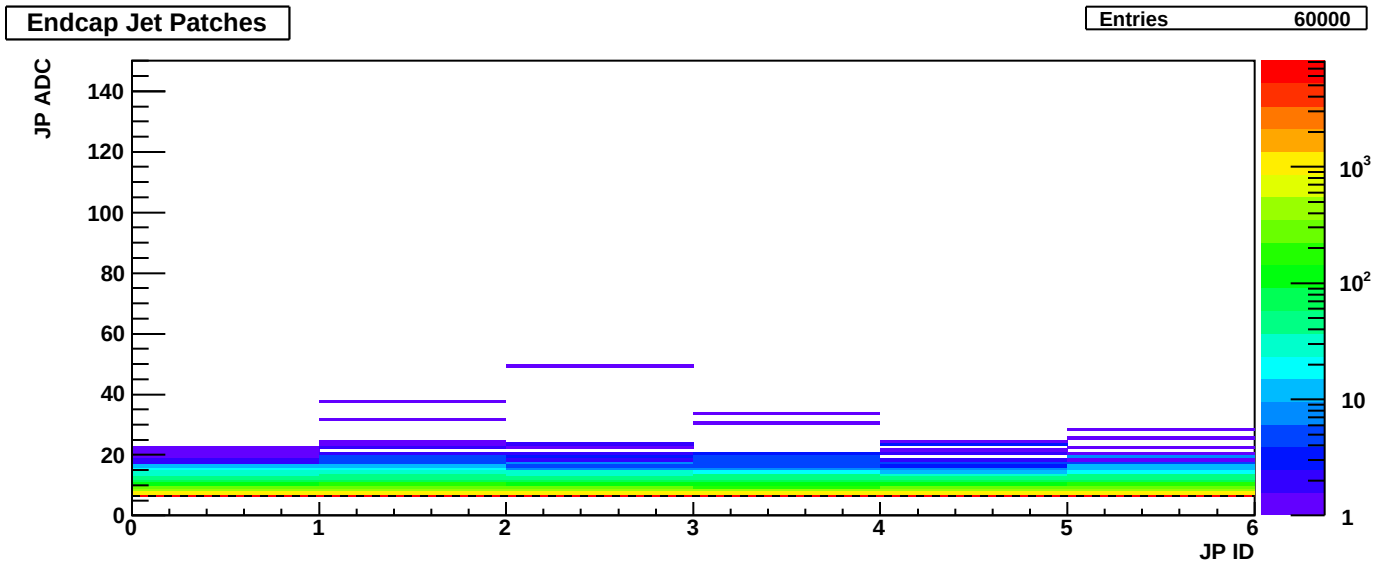

Barrel EMC L0 Input - High Tower
Entries 3000000
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

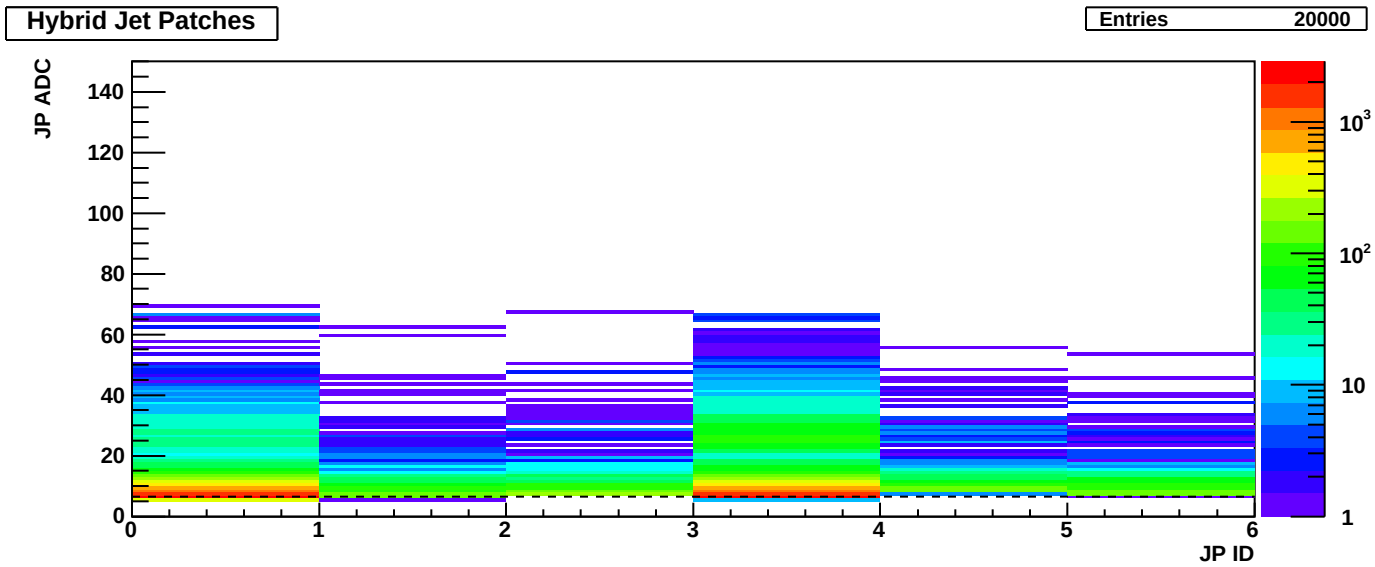

Barrel EMC L0 Input - Patch Sum
Entries 3000000
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

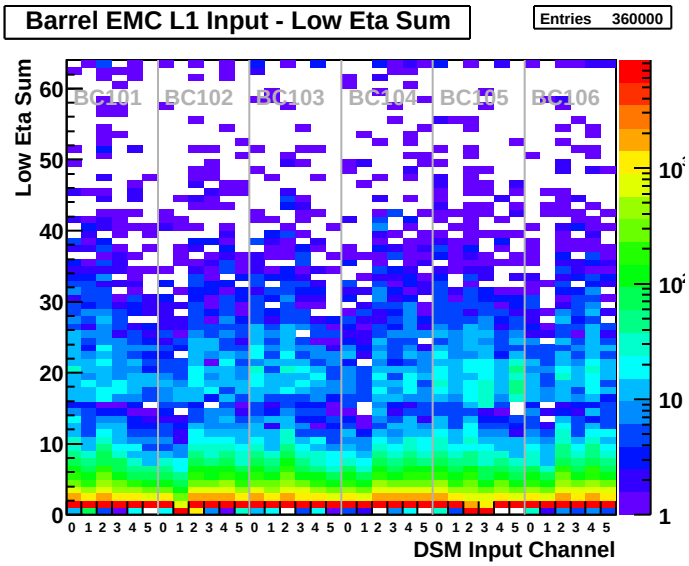

Endcap EMC L0 Input - High Tower
Entries 900000
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

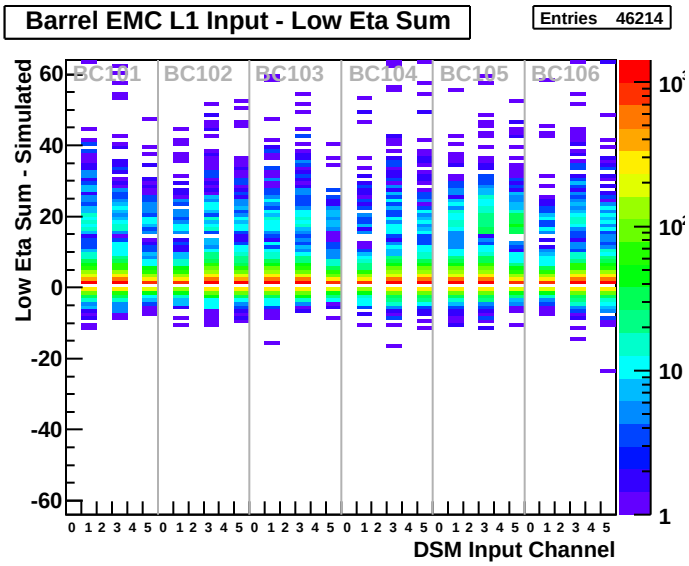

Endcap EMC L0 Input - Patch Sum
Entries 900000
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

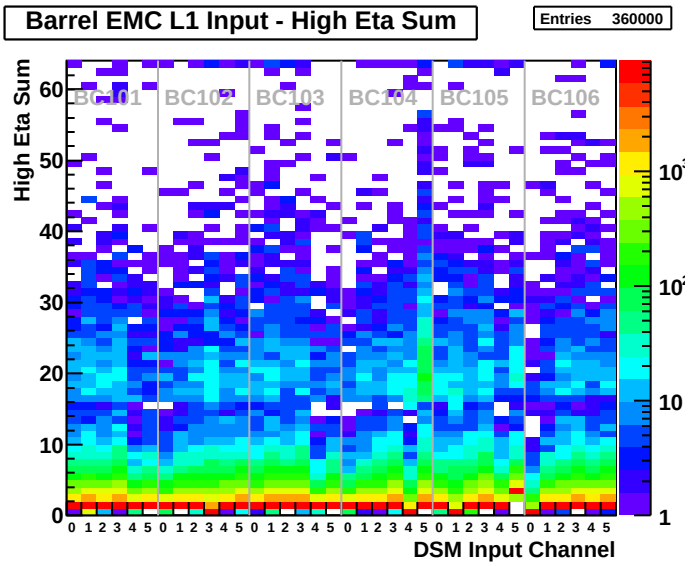

Barrel Jet Patches
Entries 180000
JP ADC
JP ID

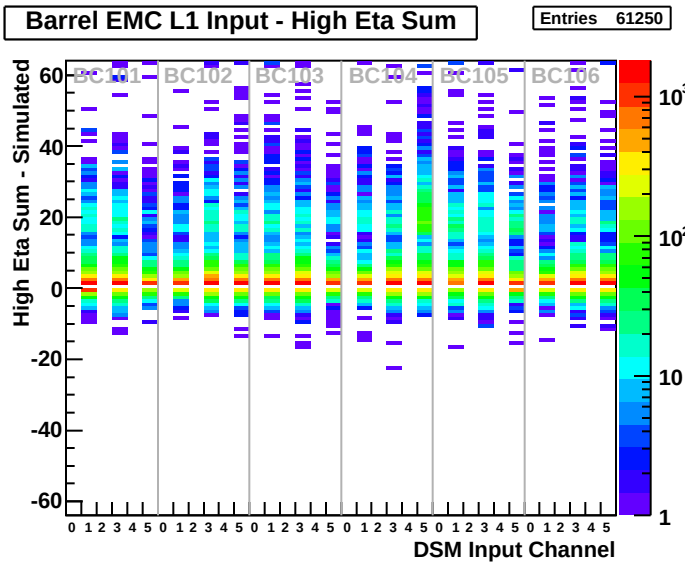

Endcap Jet Patches
Entries 60000
JP ADC
JP ID

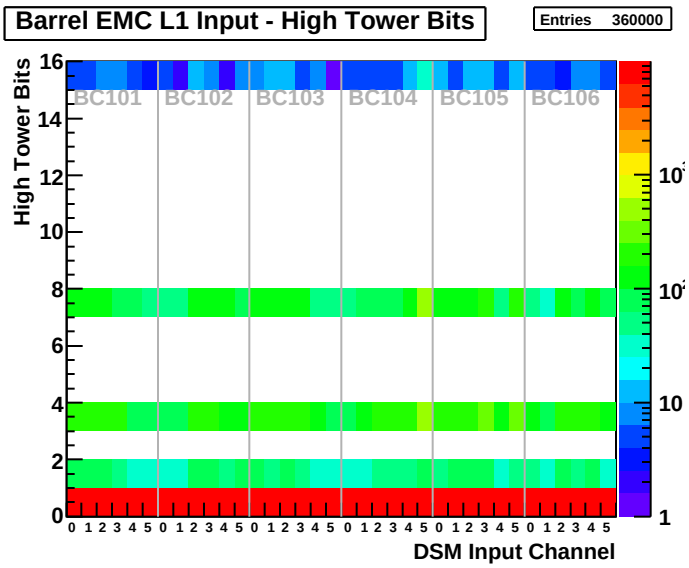

Hybrid Jet Patches
Entries 20000
JP ADC
JP ID

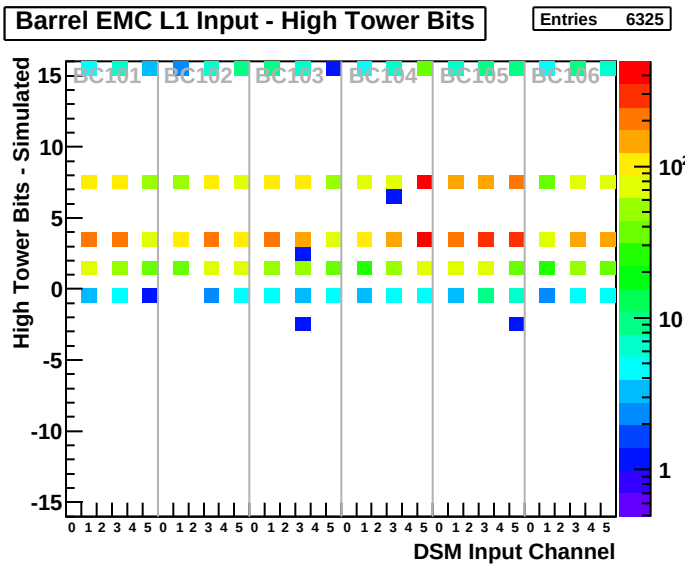

Barrel EMC L1 Input - Low Eta Sum
Entries 360000
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

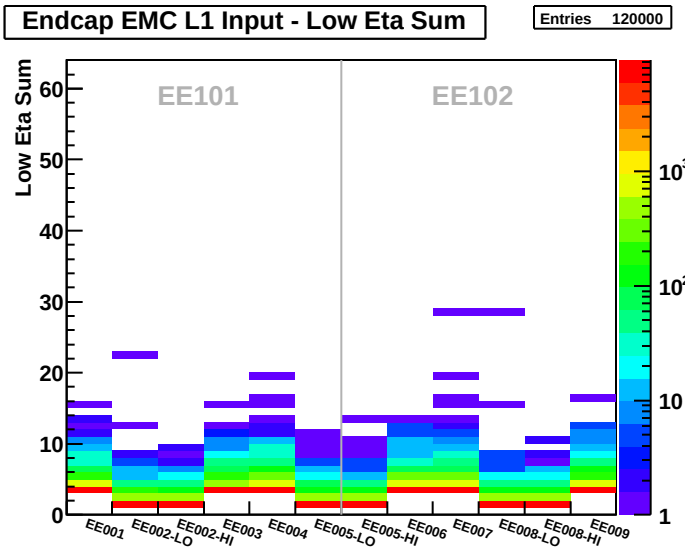

Barrel EMC L1 Input - Low Eta Sum
Entries 46214
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

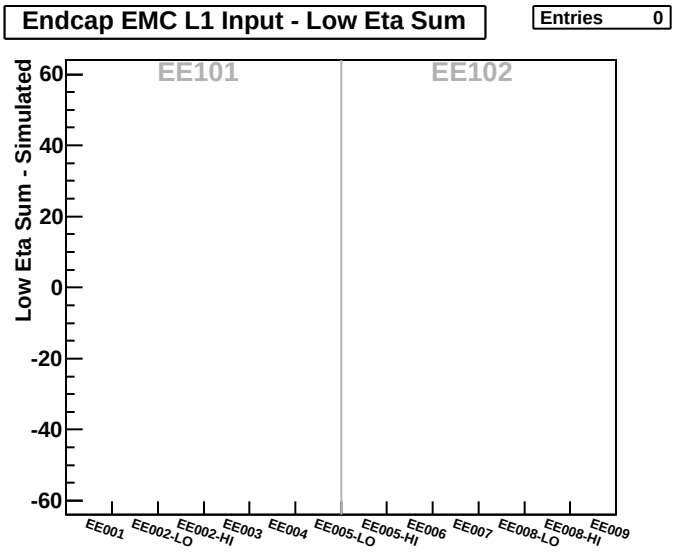

Barrel EMC L1 Input - High Eta Sum
Entries 360000
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

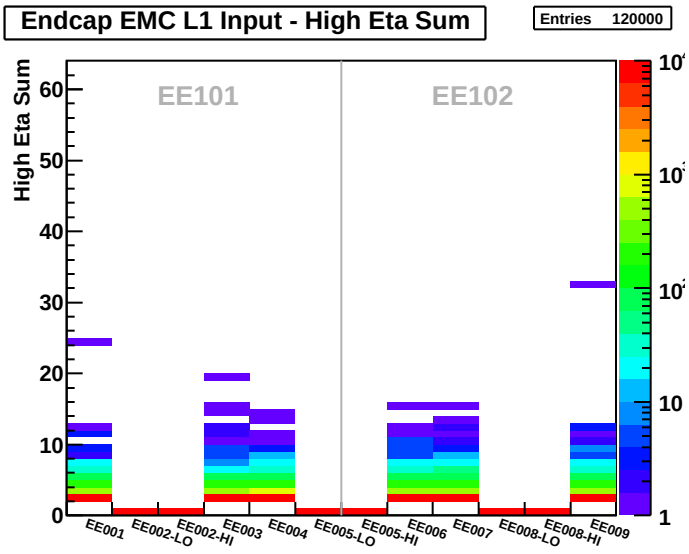

Barrel EMC L1 Input - High Eta Sum
Entries 61250
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

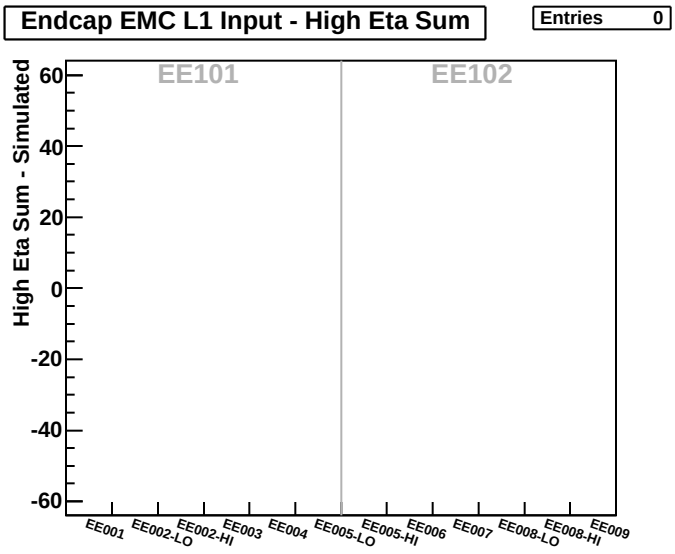

Barrel EMC L1 Input - High Tower Bits
Entries 360000
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

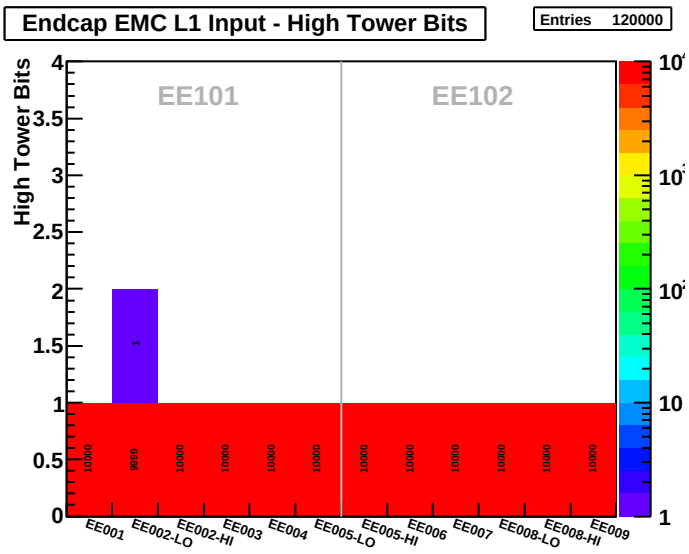

Barrel EMC L1 Input - High Tower Bits
Entries 6325
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

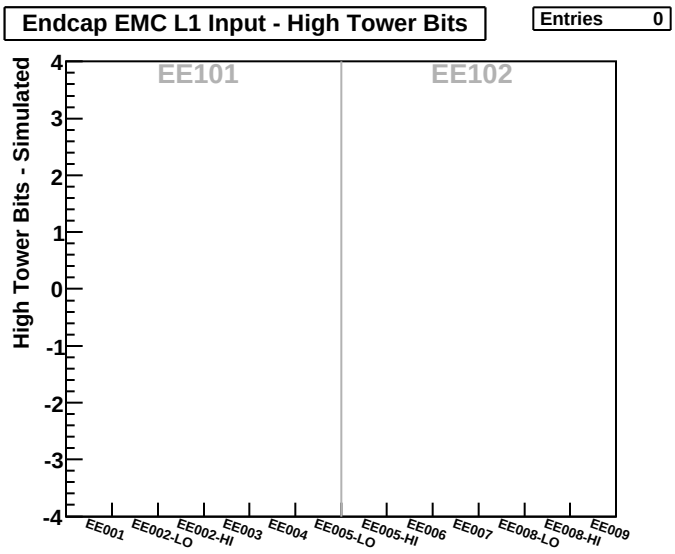

Endcap EMC L1 Input - Low Eta Sum
Entries 120000
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

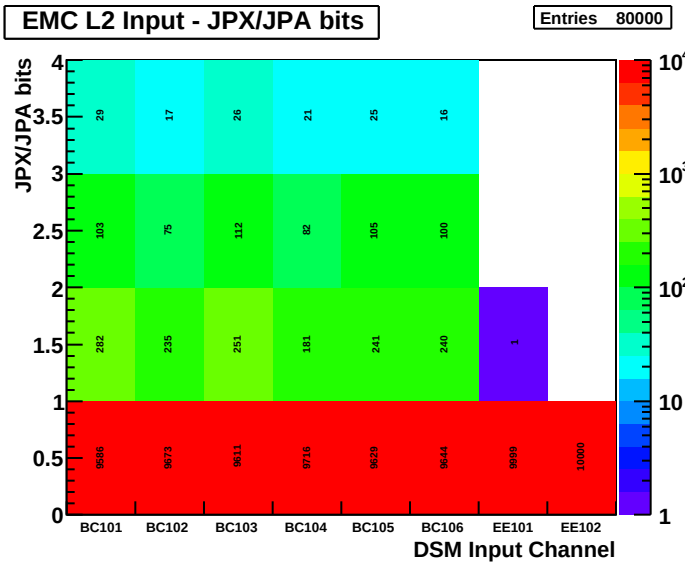

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

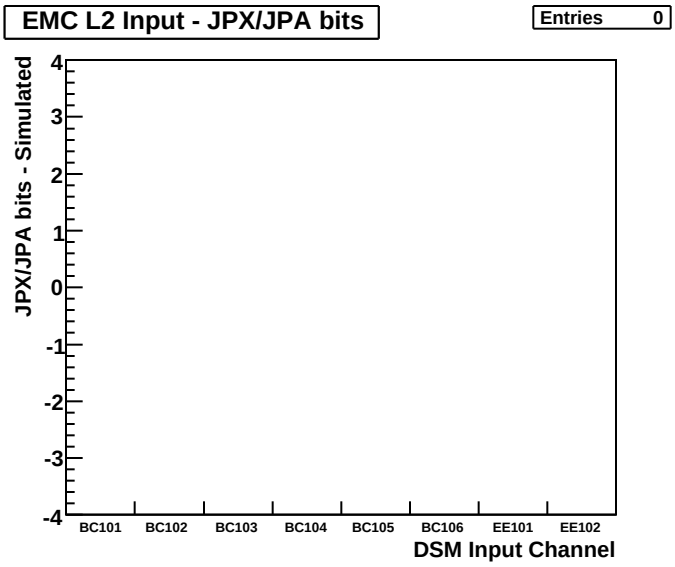

Endcap EMC L1 Input - High Eta Sum
Entries 120000
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

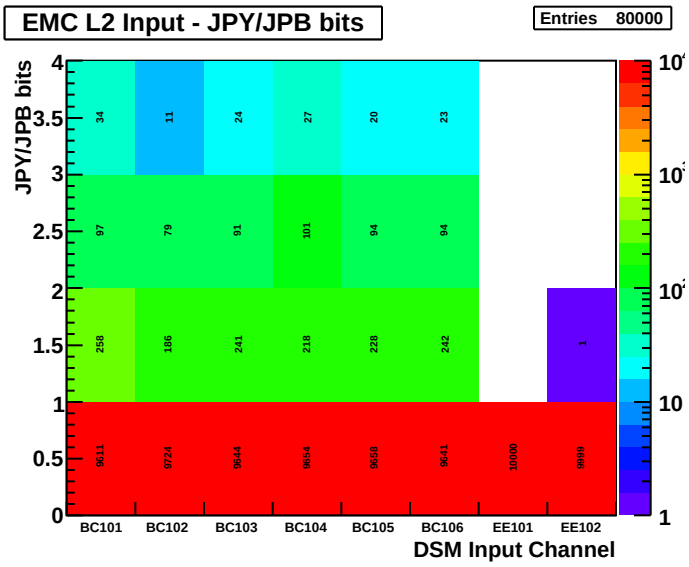

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

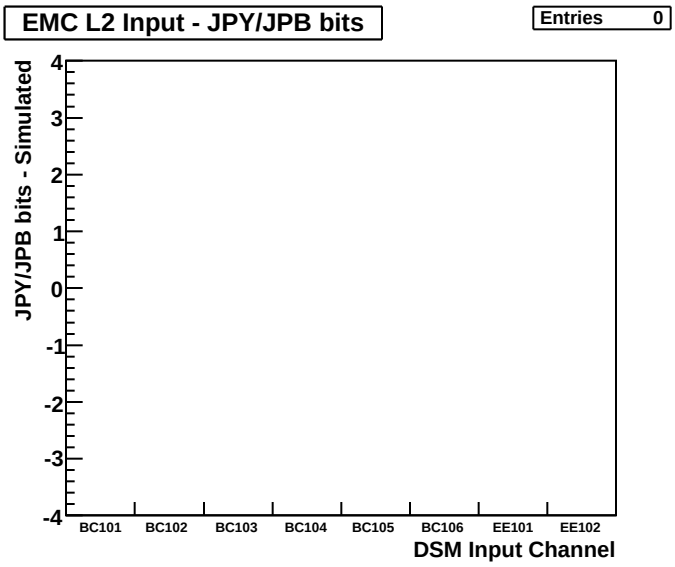

Endcap EMC L1 Input - High Tower Bits
Entries 120000
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

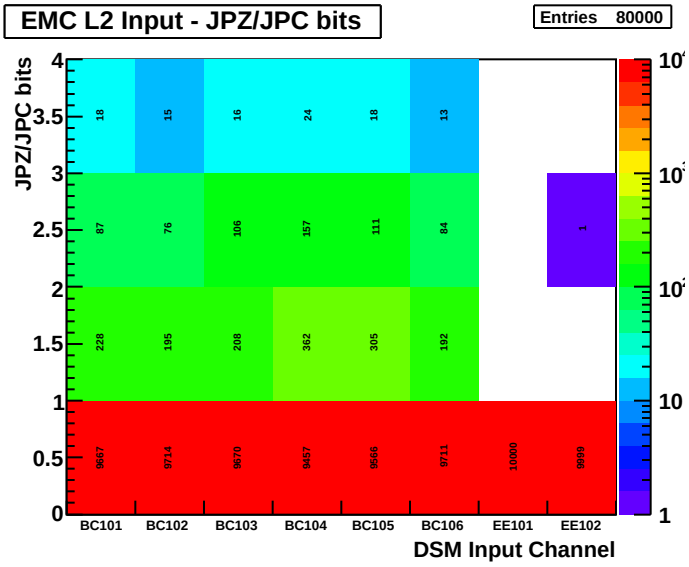

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

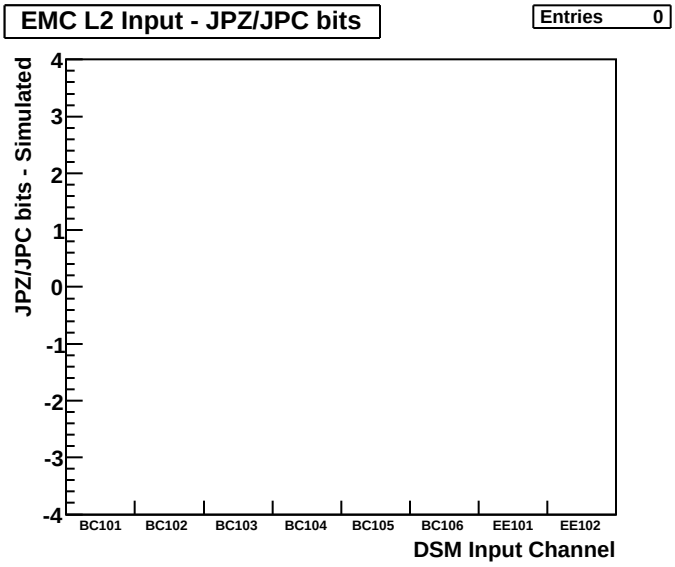

EMC L2 Input - JPX/JPA bits
Entries 80000
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
29 17 26 21 25 16
103 75 112 82 105 100
282 235 251 181 241 240 1
9586 9673 9611 9716 9629 9644 9999 10000

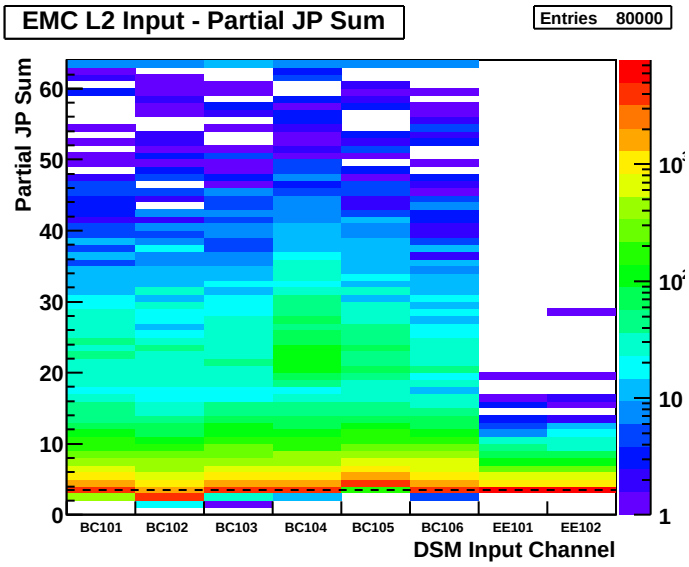

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

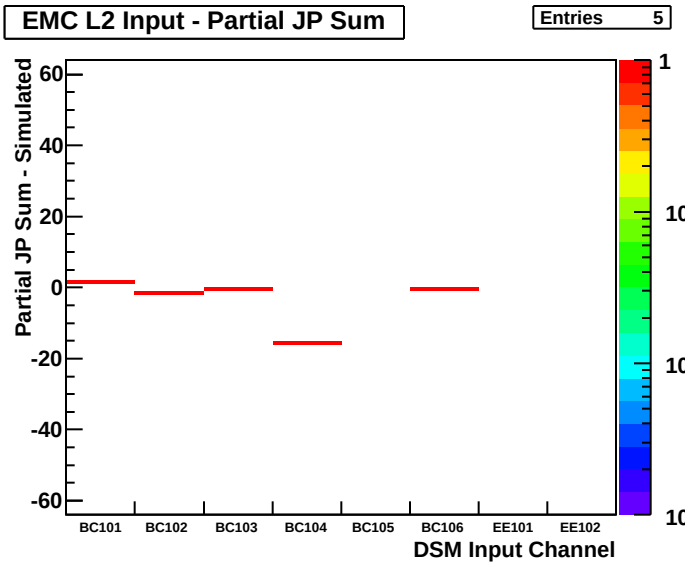

EMC L2 Input - JPY/JPB bits
Entries 80000
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
34 11 24 27 20 23
97 79 91 101 94 94
258 186 241 218 228 242 1
9611 9724 9644 9654 9658 9641 10000 9999

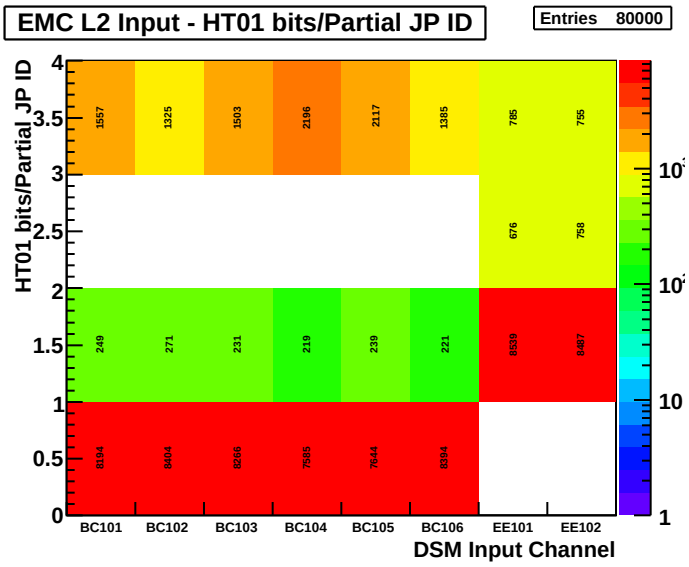

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

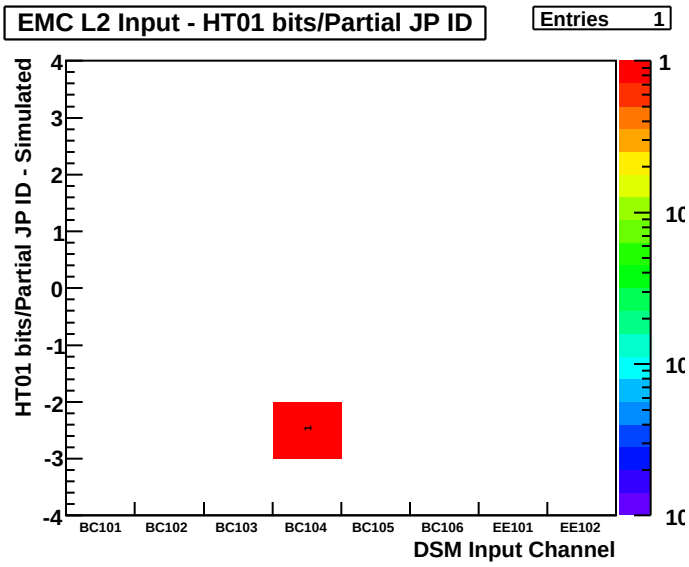

EMC L2 Input - JPZ/JPC bits
Entries 80000
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
18 15 16 24 18 13
87 76 106 157 111 84 1
228 195 208 362 305 192
9667 9714 9670 9457 9566 9711 10000 9999

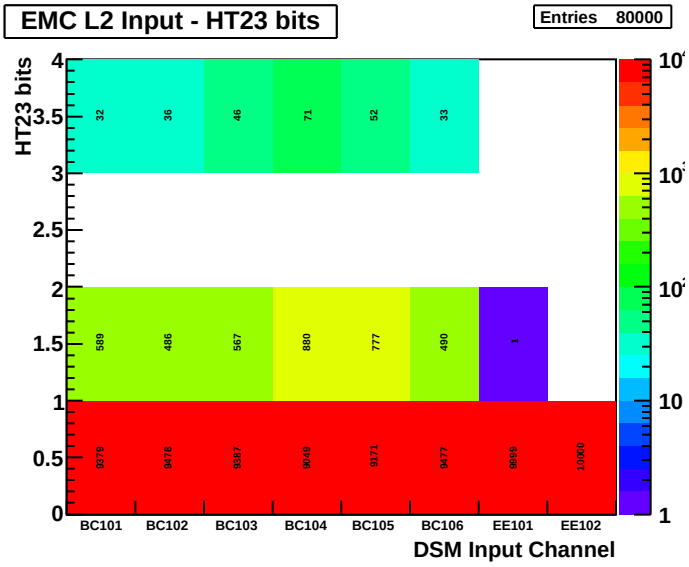

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

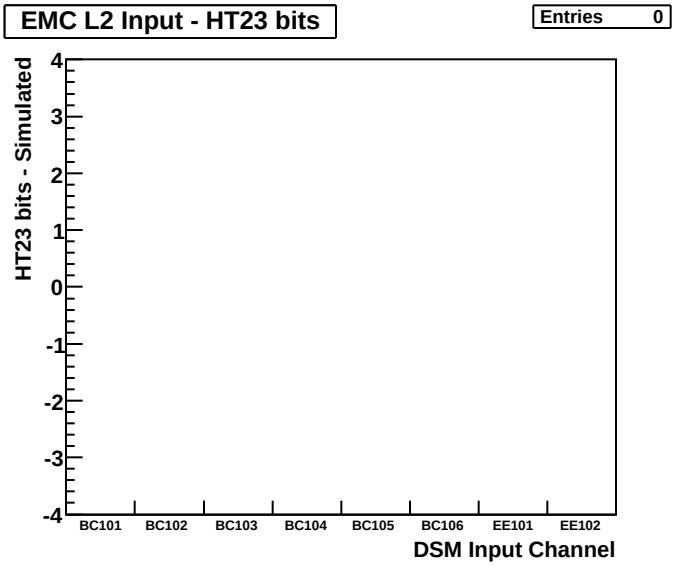

EMC L2 Input - Partial JP Sum
Entries 80000
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

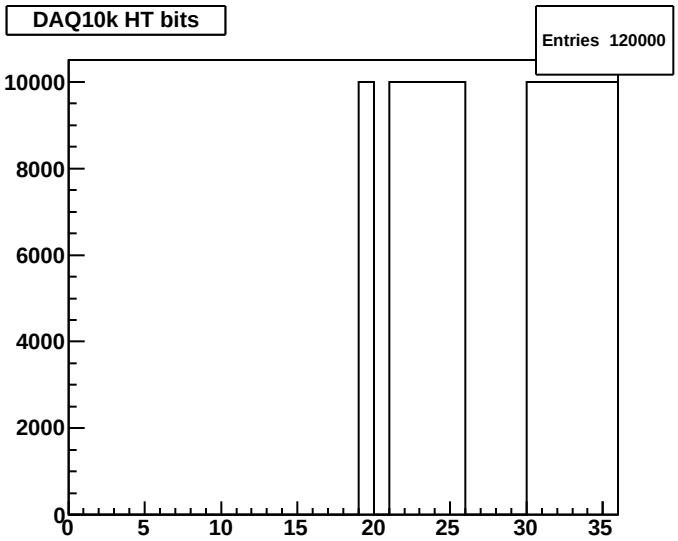

EMC L2 Input - Partial JP Sum
Entries 5
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

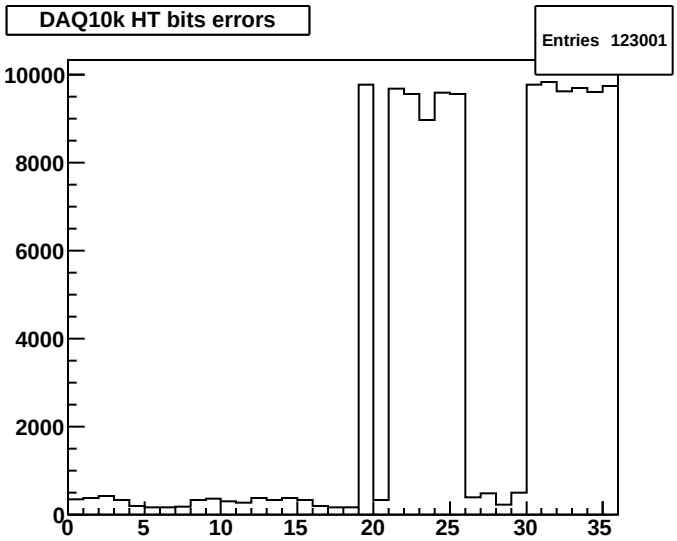

EMC L2 Input - HT01 bits/Partial JP ID
Entries 80000
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

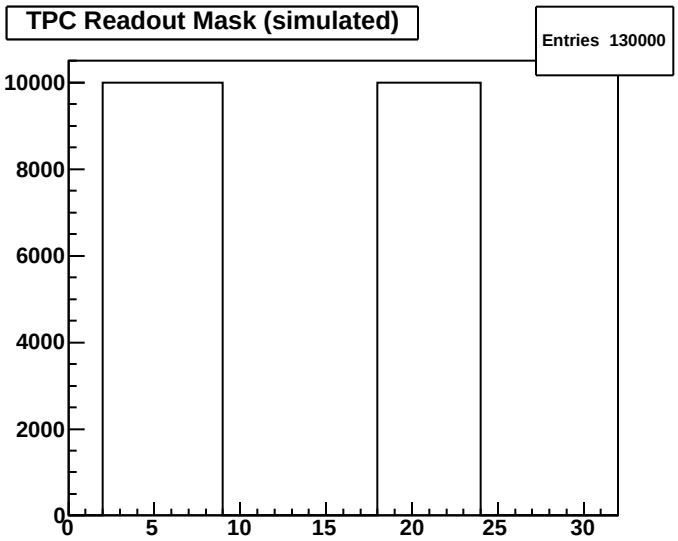

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

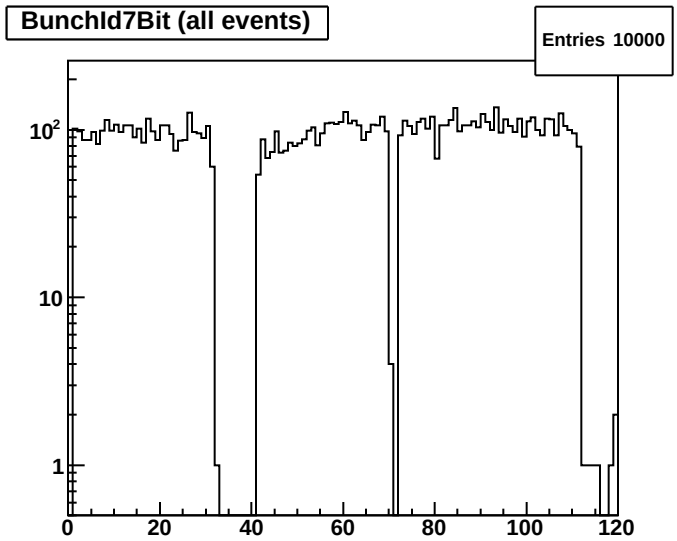

EMC L2 Input - HT23 bits
Entries 80000
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

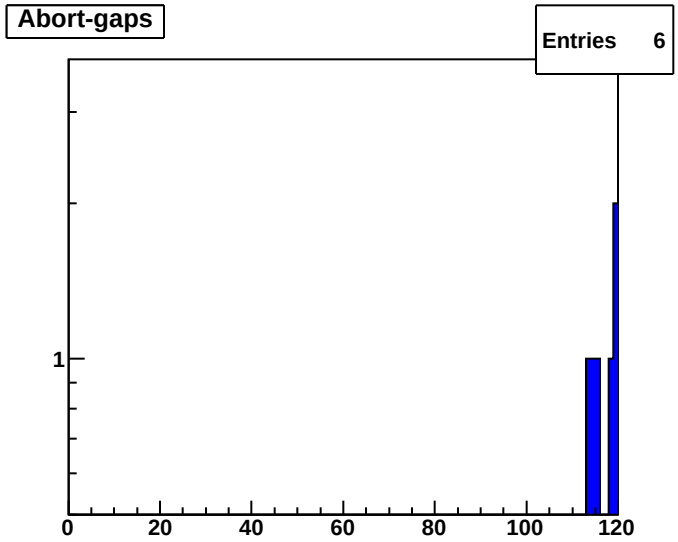

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

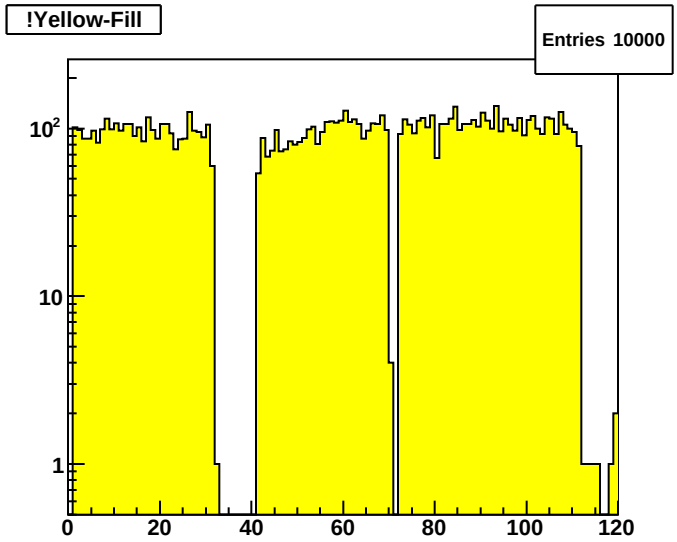

DAQ10k HT bits
Entries 120000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

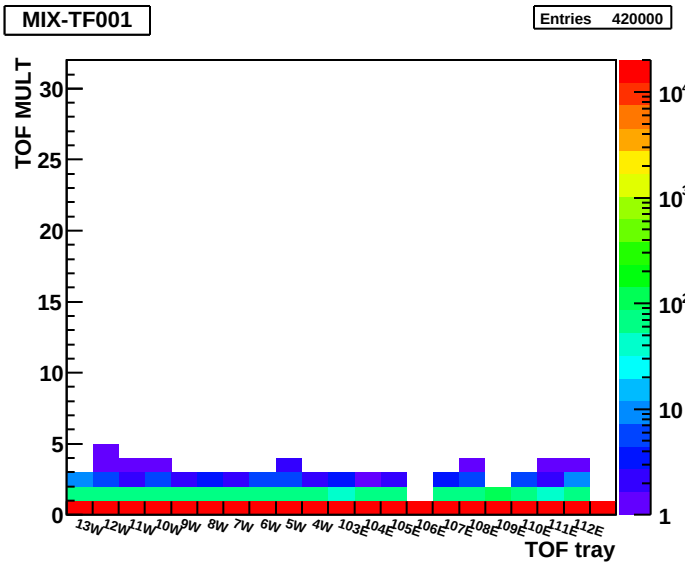

DAQ10k HT bits errors
Entries 123001
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

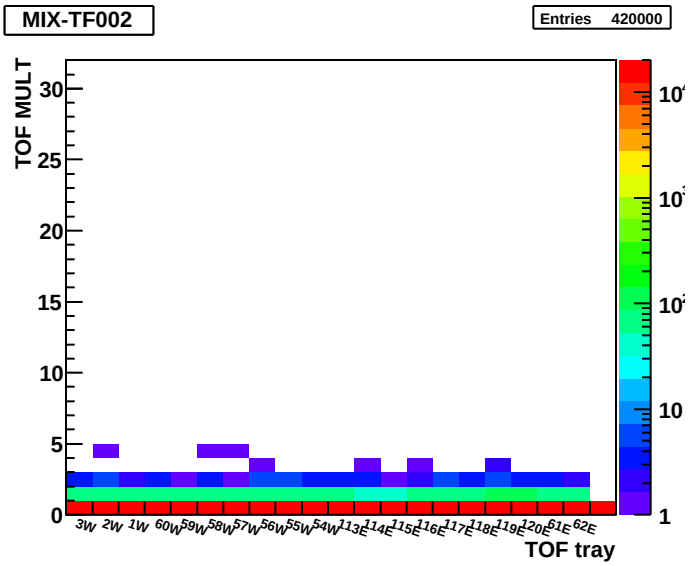

TPC Readout Mask (simulated)
Entries 130000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30

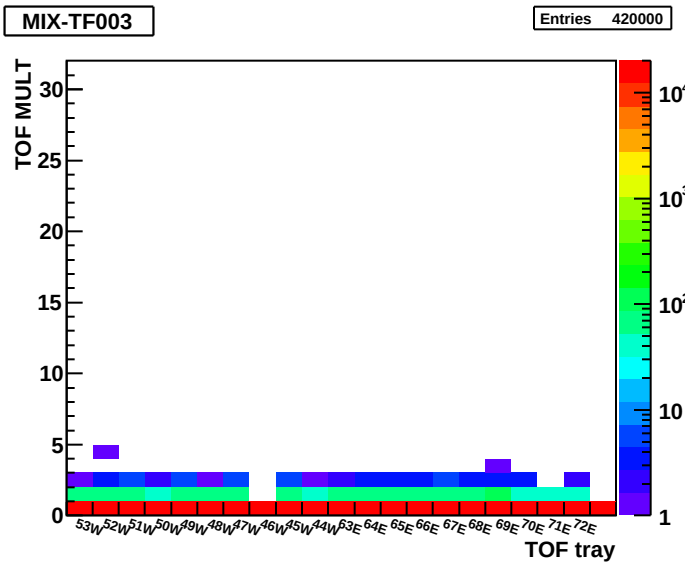

BunchId7Bit (all events)
Entries 10000
10^2
10
1
0 20 40 60 80 100 120

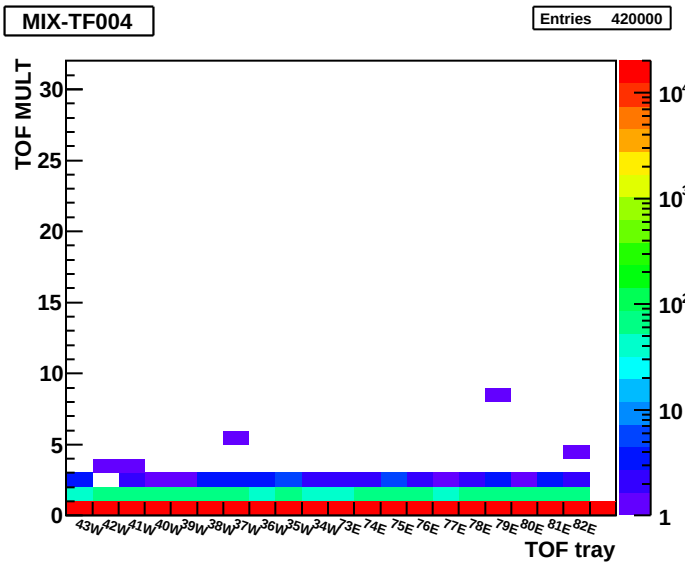

Abort-gaps
Entries 6
1
0 20 40 60 80 100 120

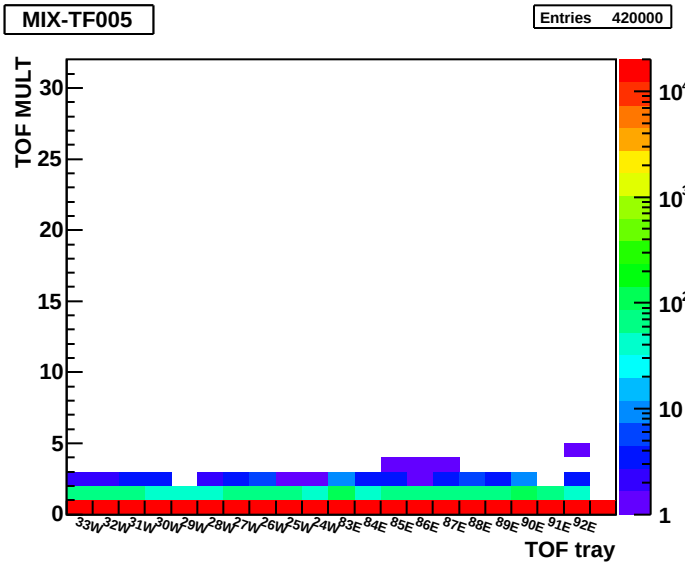

!Yellow-Fill
Entries 10000
10^2
10
1
0 20 40 60 80 100 120

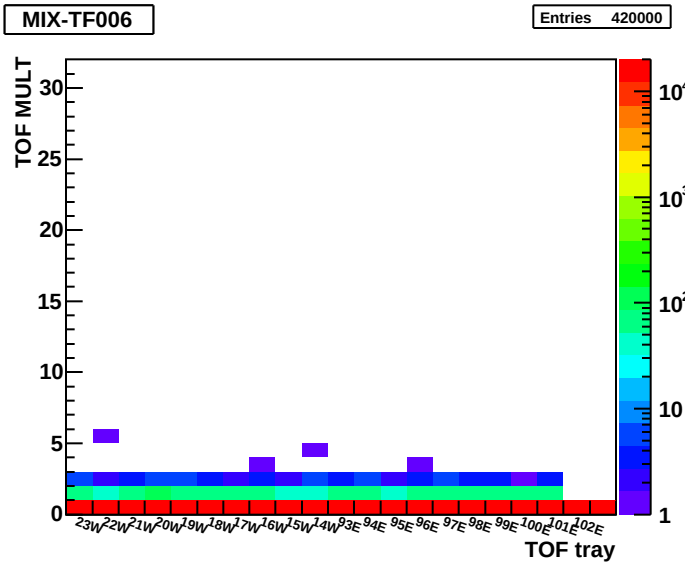

MIX-TF001
Entries 420000
TOF MULT
TOF tray

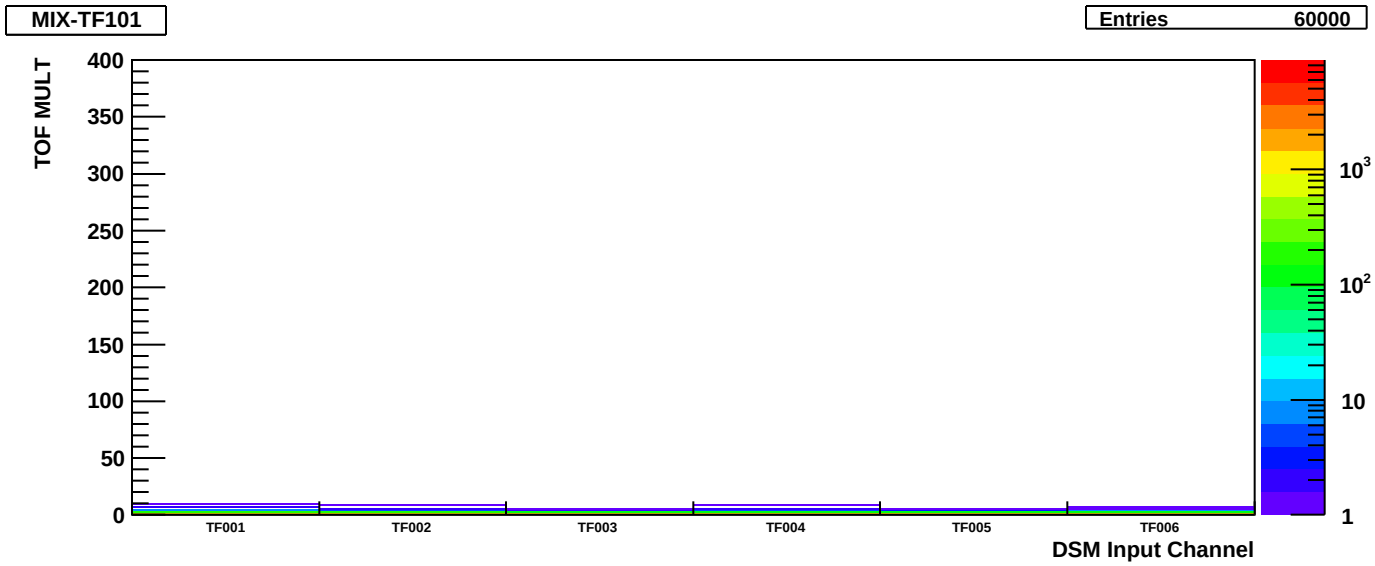

MIX-TF002
Entries 420000
TOF MULT
TOF tray

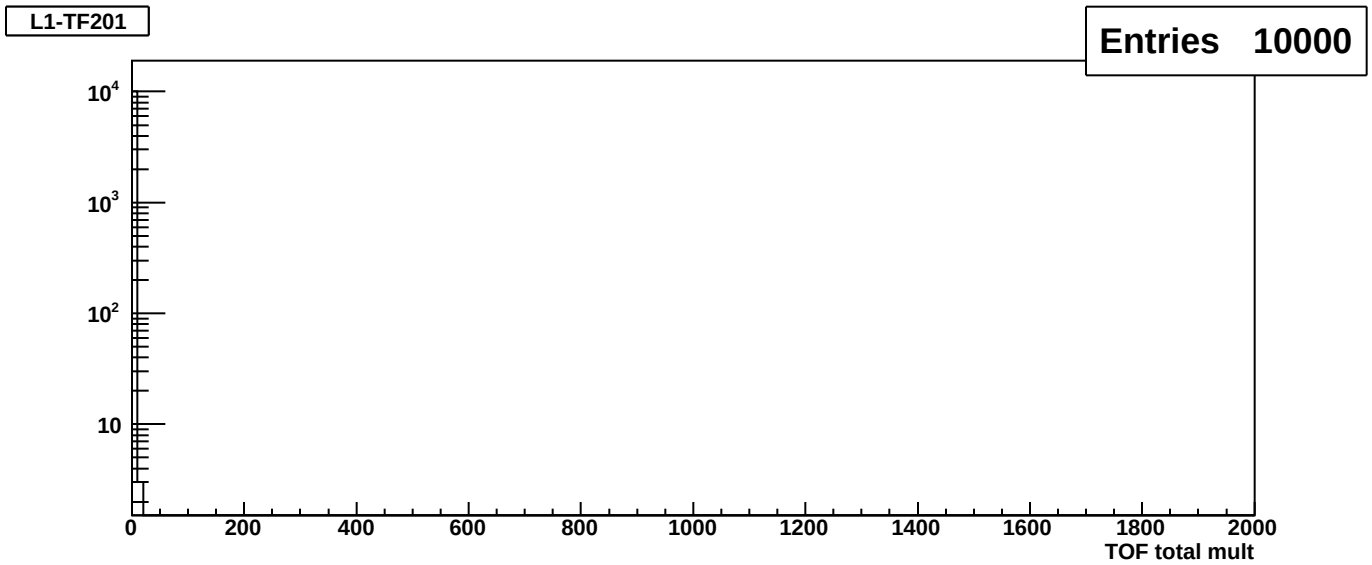

MIX-TF003
Entries 420000
TOF MULT
TOF tray

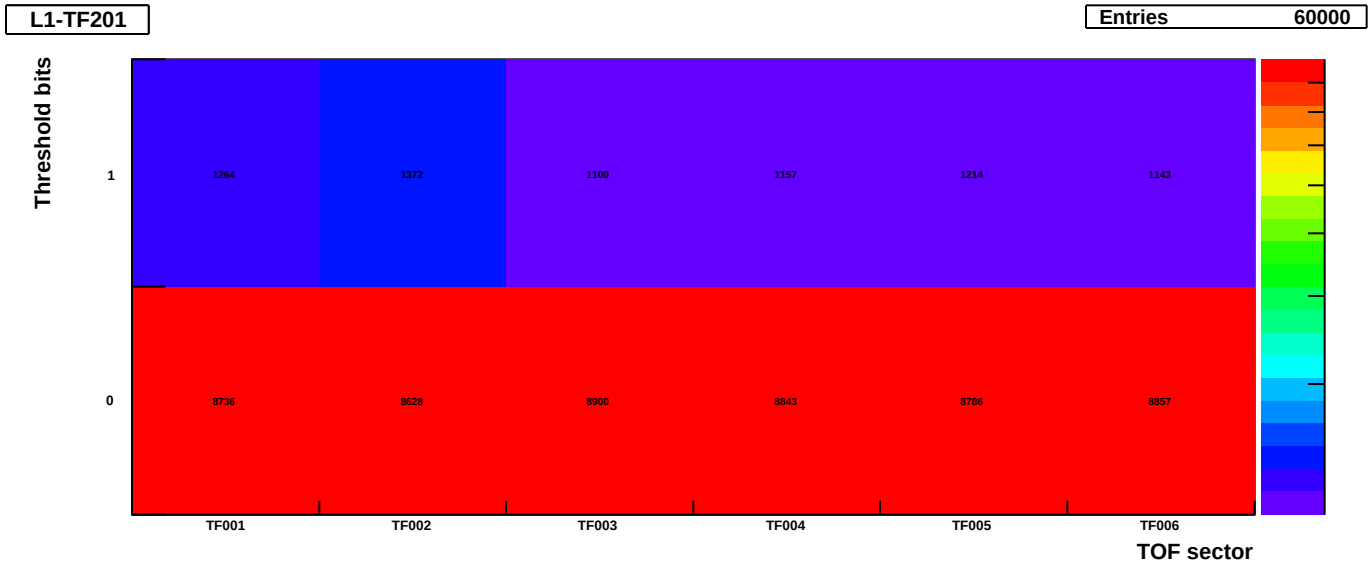

MIX-TF004
Entries 420000
TOF MULT
TOF tray

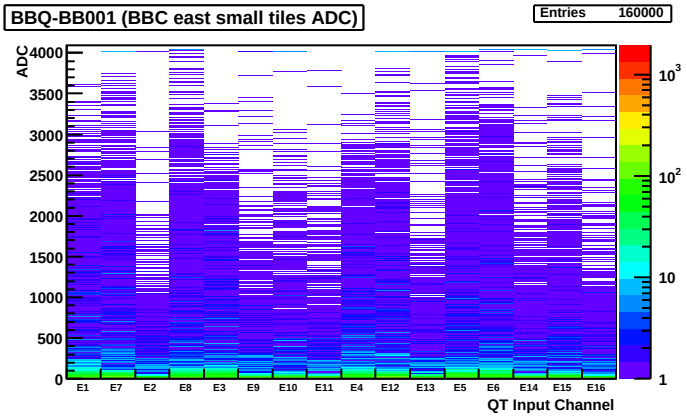

MIX-TF005
Entries 420000
TOF MULT
TOF tray

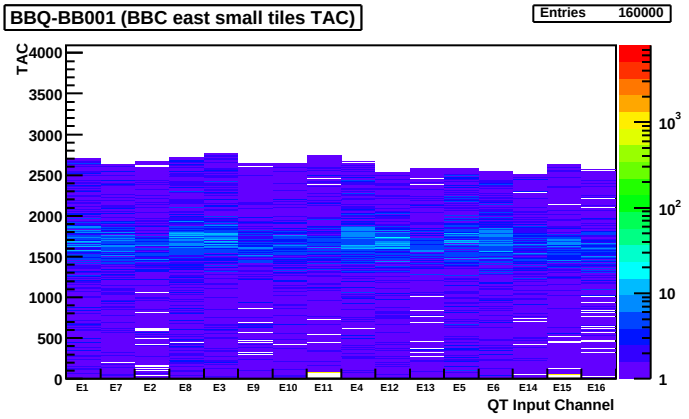

MIX-TF006
Entries 420000
TOF MULT
TOF tray

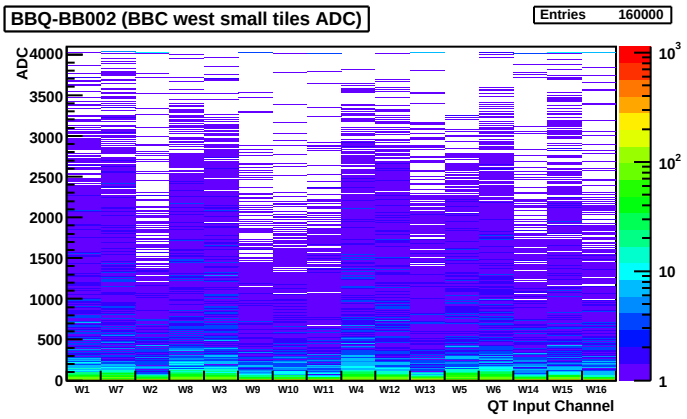

MIX-TF101
Entries 60000
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^3
10^2
10
1

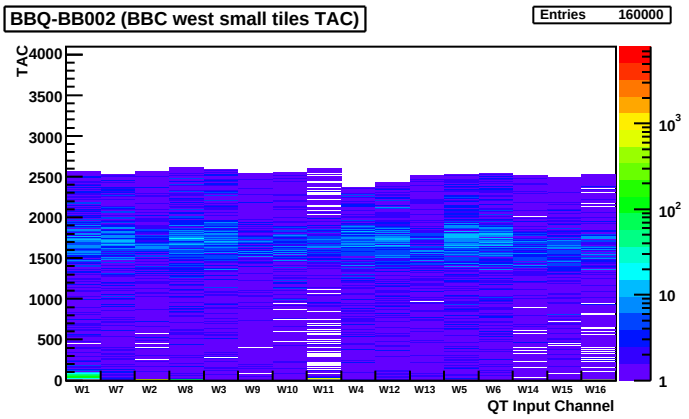

L1-TF201
Entries 10000
10^4
10^3
10^2
10
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

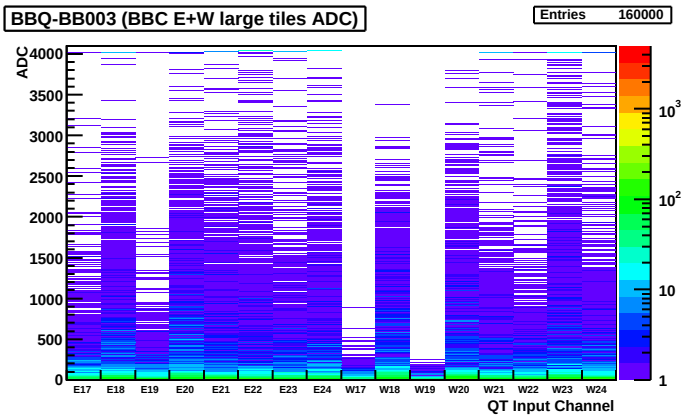

L1-TF201
Entries 60000
Threshold bits
1
0
1264
1372
1100
1157
1214
1143
8736
8628
8900
8843
8786
8857
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

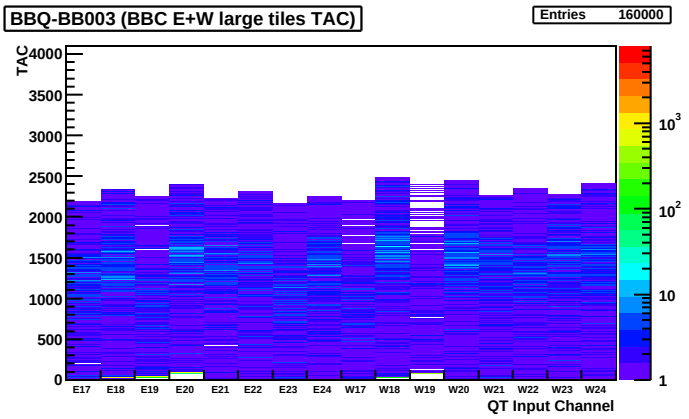

BBQ-BB001 (BBC east small tiles ADC)
Entries 160000
ADC
QT Input Channel

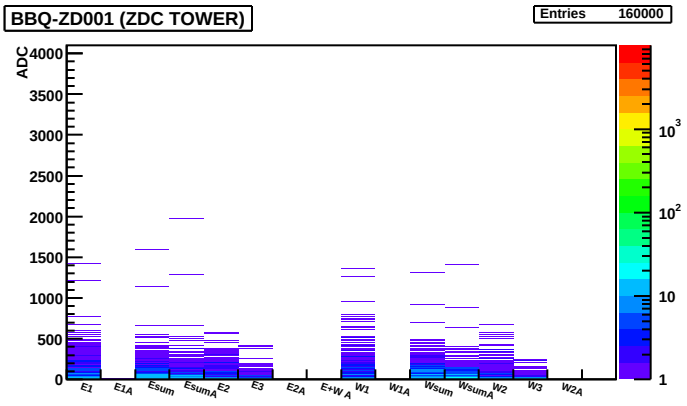

BBQ-BB001 (BBC east small tiles TAC)
Entries 160000
TAC
QT Input Channel

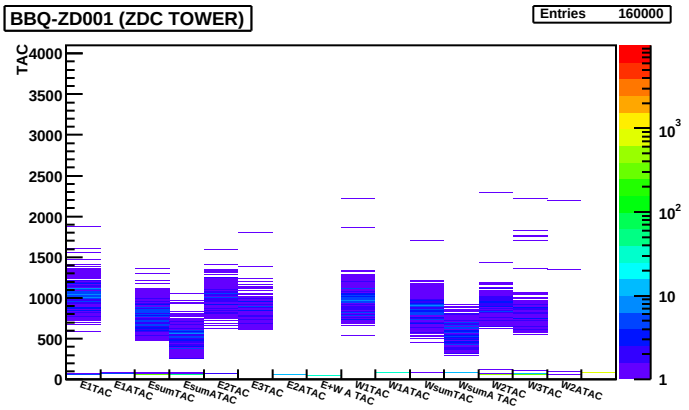

BBQ-BB002 (BBC west small tiles ADC)
Entries 160000
ADC
QT Input Channel

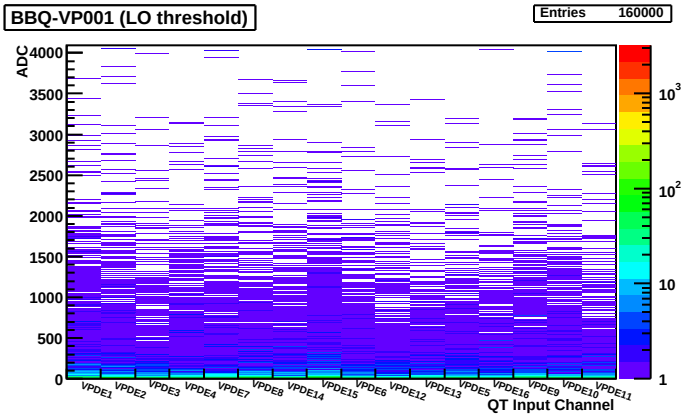

BBQ-BB002 (BBC west small tiles TAC)
Entries 160000
TAC
QT Input Channel

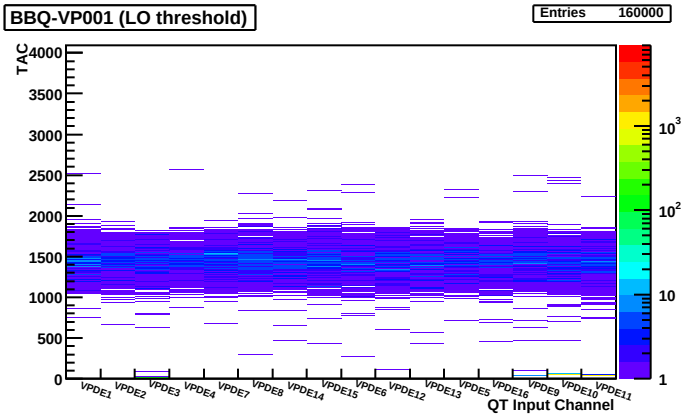

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 160000
ADC
QT Input Channel

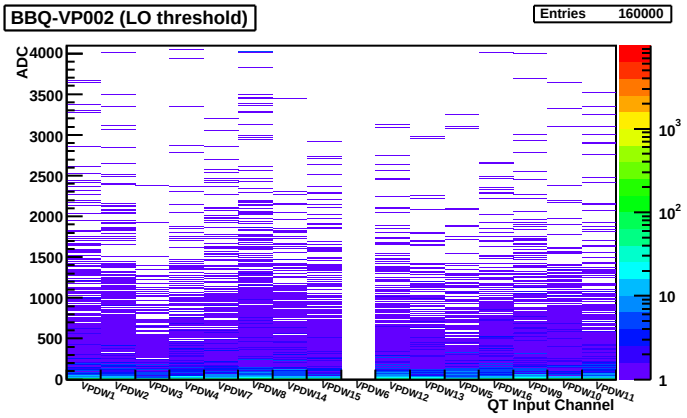

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 160000
TAC
QT Input Channel

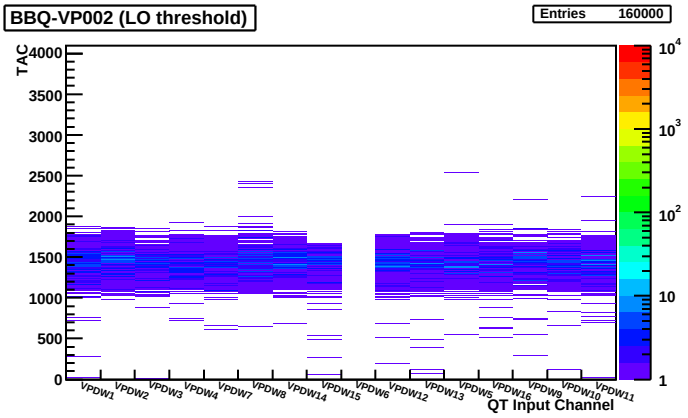

BBQ-ZD001 (ZDC TOWER)
Entries 160000
ADC

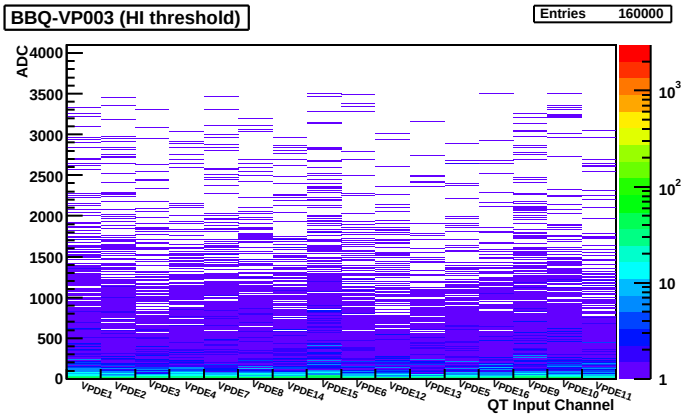

BBQ-ZD001 (ZDC TOWER)
Entries 160000
TAC

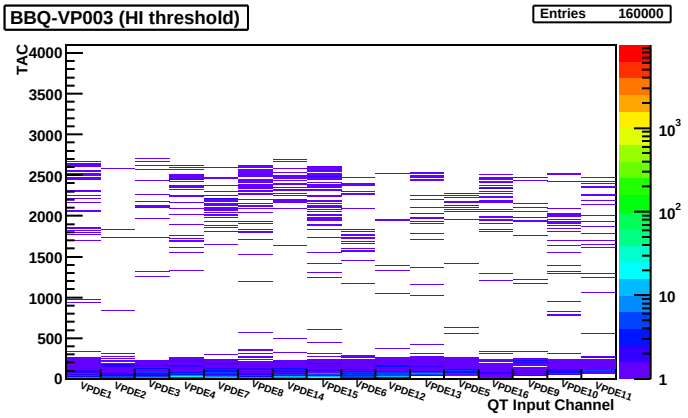

BBQ-VP001 (LO threshold)
Entries 160000
ADC
QT Input Channel

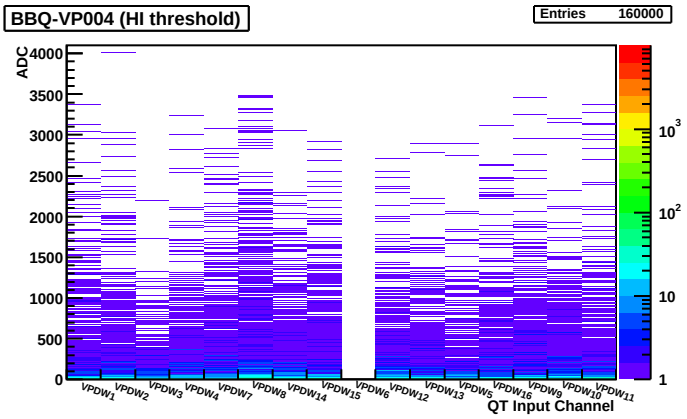

BBQ-VP001 (LO threshold)
Entries 160000
TAC
QT Input Channel

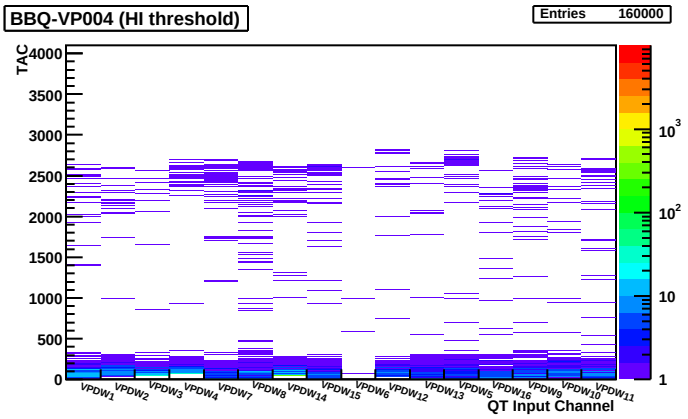

BBQ-VP002 (LO threshold)
Entries 160000
ADC
QT Input Channel

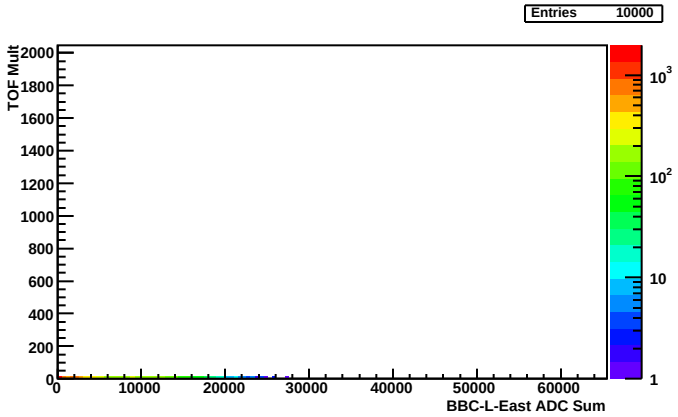

BBQ-VP002 (LO threshold)
Entries 160000
TAC
QT Input Channel

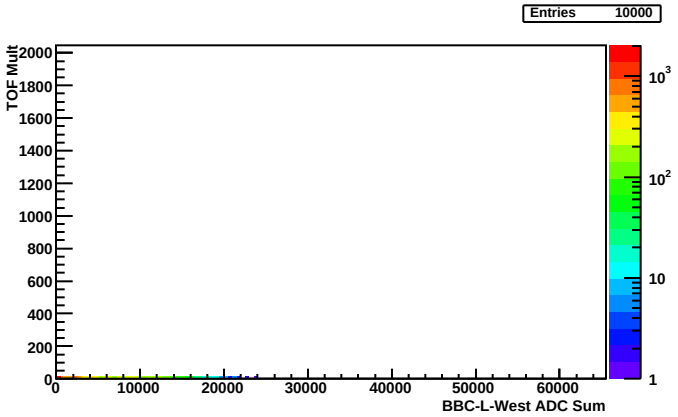

BBQ-VP003 (HI threshold)
Entries 160000
ADC
QT Input Channel

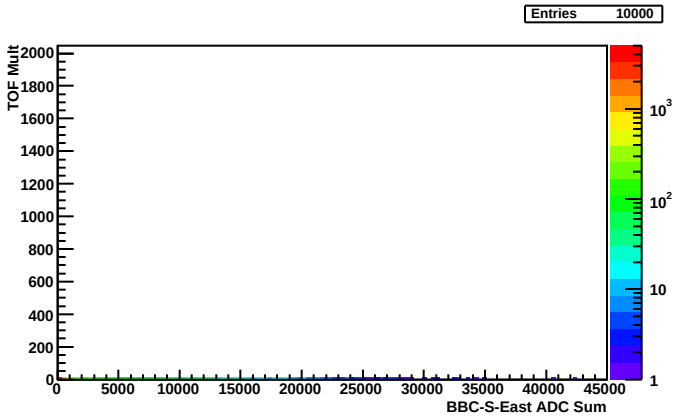

BBQ-VP003 (HI threshold)
Entries 160000
TAC
QT Input Channel

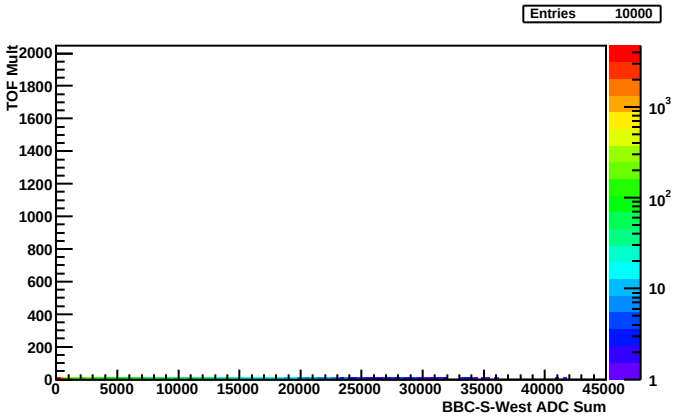

BBQ-VP004 (HI threshold)
Entries 160000
ADC
QT Input Channel

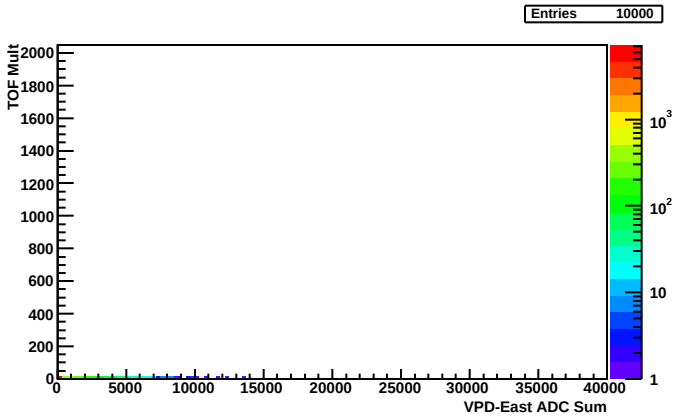

BBQ-VP004 (HI threshold)
Entries 160000
TAC
QT Input Channel

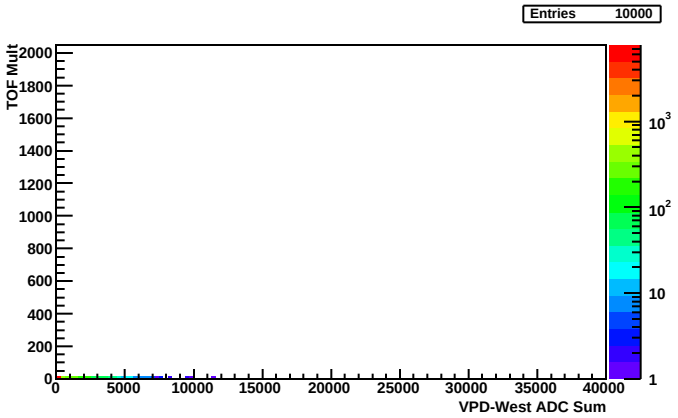

Entries 10000
TOF Mult
BBC-L-East ADC Sum

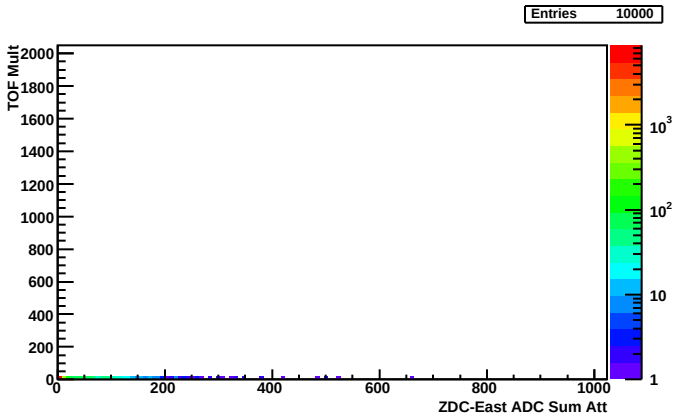

Entries 10000
TOF Mult
BBC-L-West ADC Sum

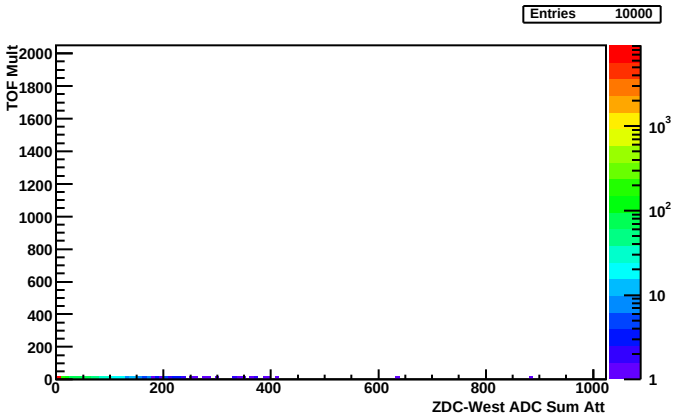

Entries 10000
TOF Mult
BBC-S-East ADC Sum

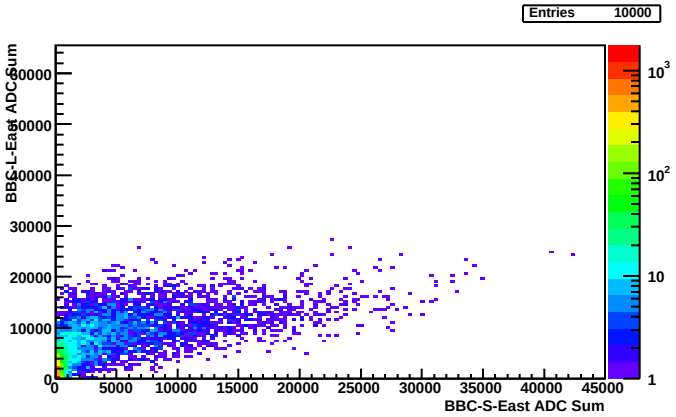

Entries 10000
TOF Mult
BBC-S-West ADC Sum

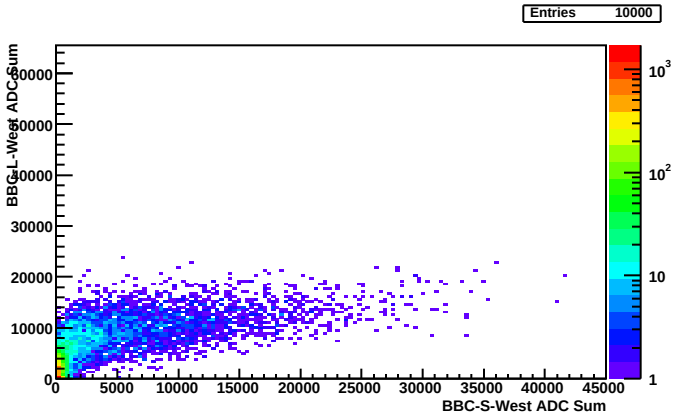

Entries 10000
TOF Mult
VPD-East ADC Sum

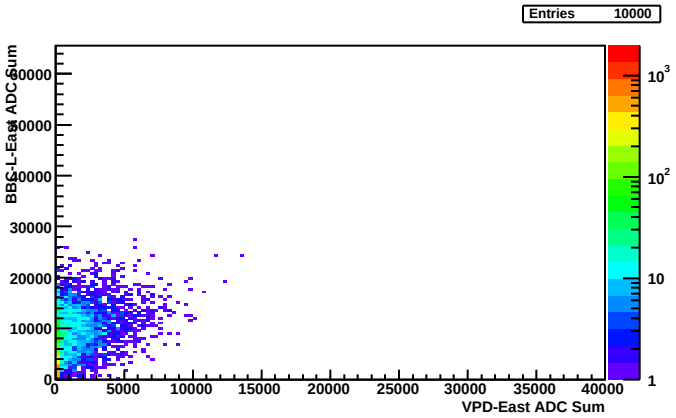

Entries 10000
TOF Mult
VPD-West ADC Sum

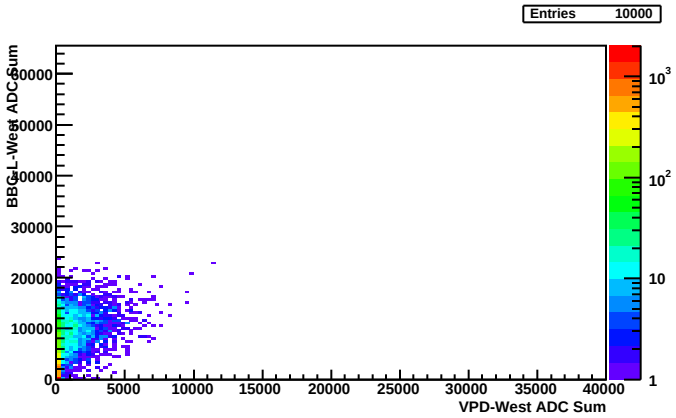

Entries 10000
TOF Mult
ZDC-East ADC Sum Att

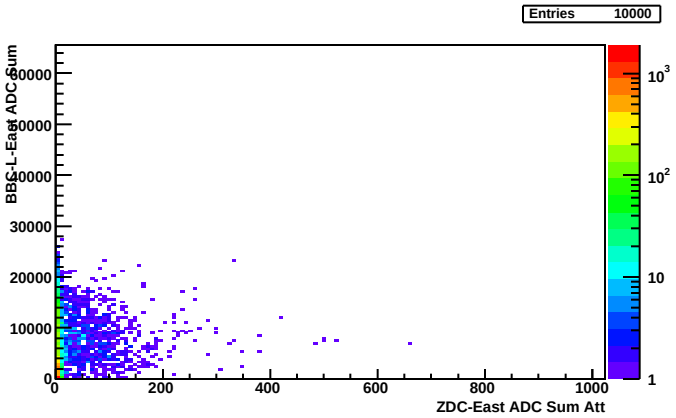

Entries 10000
TOF Mult
ZDC-West ADC Sum Att

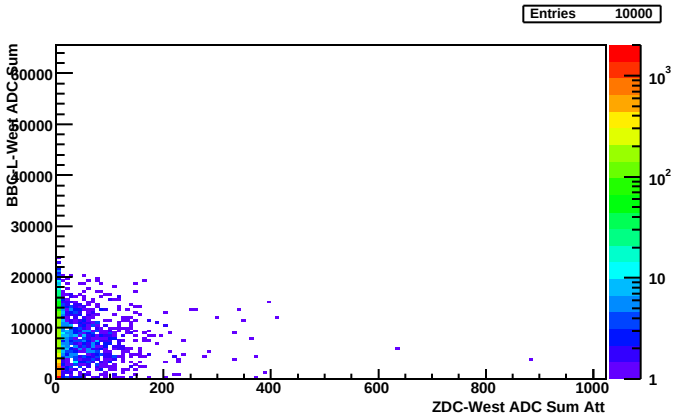

Entries 10000
BBC-L-East ADC Sum
BBC-S-East ADC Sum

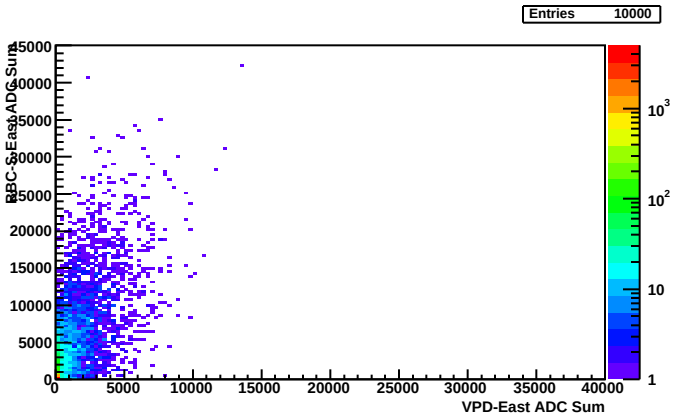

Entries 10000
BBC-L-West ADC Sum
BBC-S-West ADC Sum

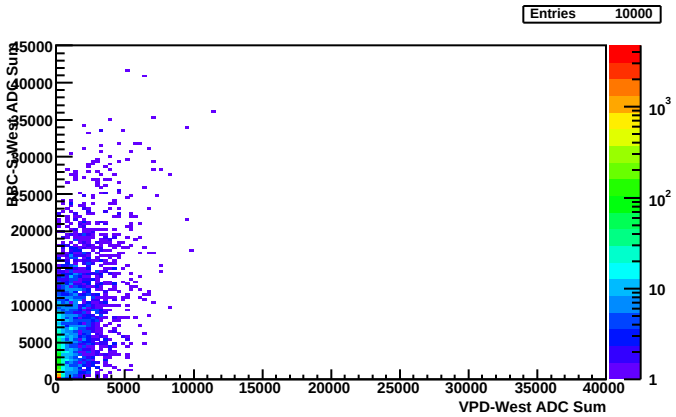

Entries 10000
BBC-L-East ADC Sum
VPD-East ADC Sum

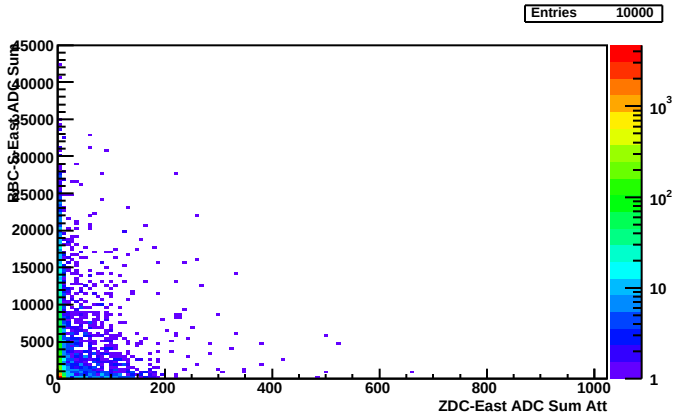

Entries 10000
BBC-L-West ADC Sum
VPD-West ADC Sum

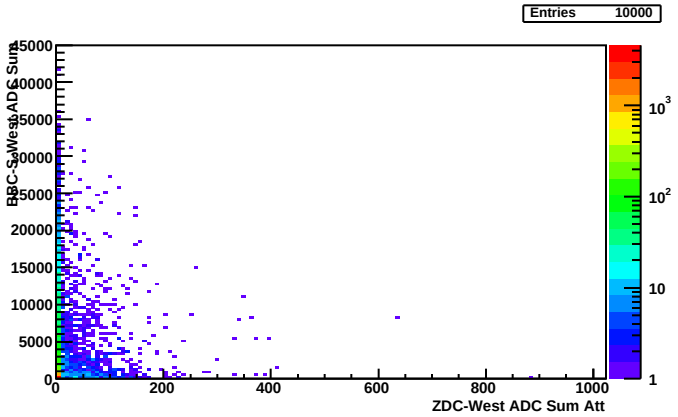

Entries 10000
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

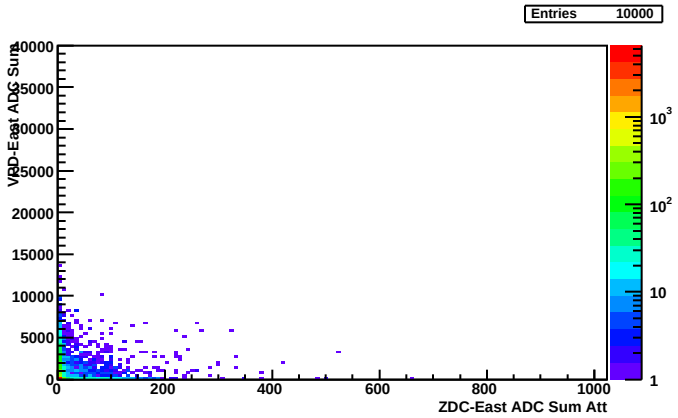

Entries 10000
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

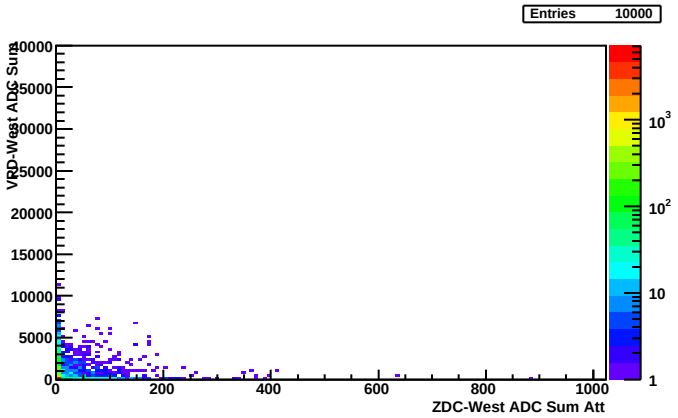

Entries 10000
BBC-S-East ADC Sum
VPD-East ADC Sum

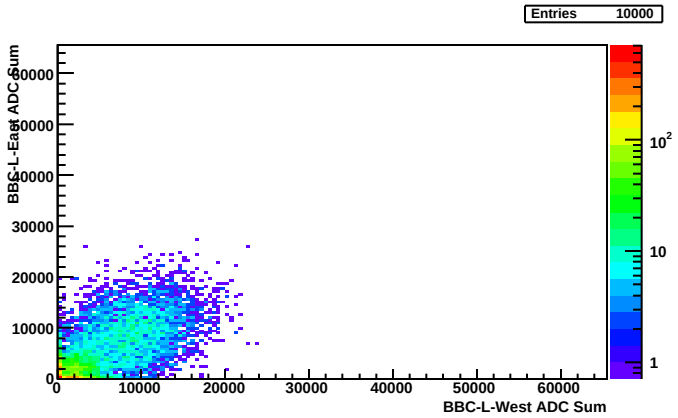

Entries 10000
BBC-S-West ADC Sum
VPD-West ADC Sum

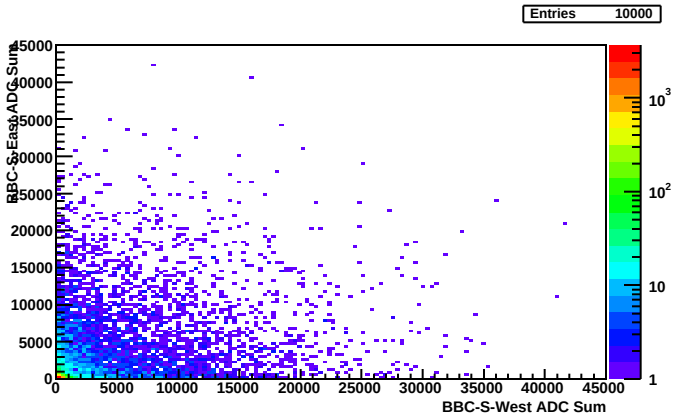

Entries 10000
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

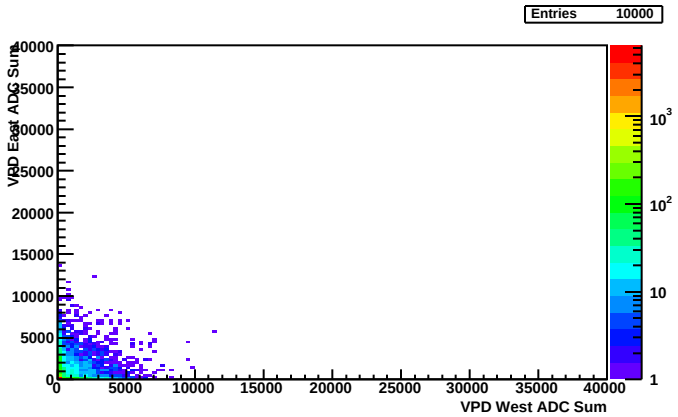

Entries 10000
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

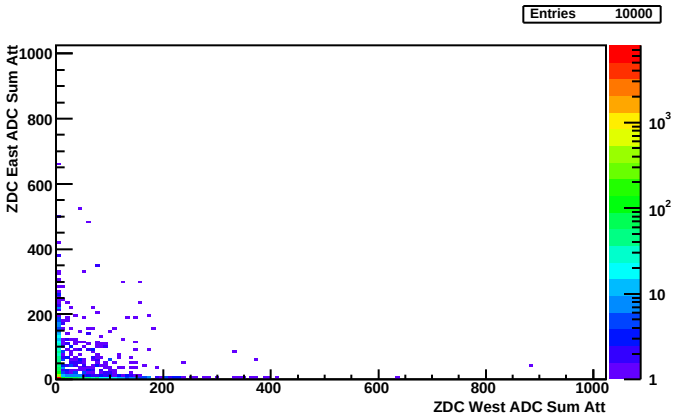

Entries 10000
VPD-East ADC Sum
ZDC-East ADC Sum Att

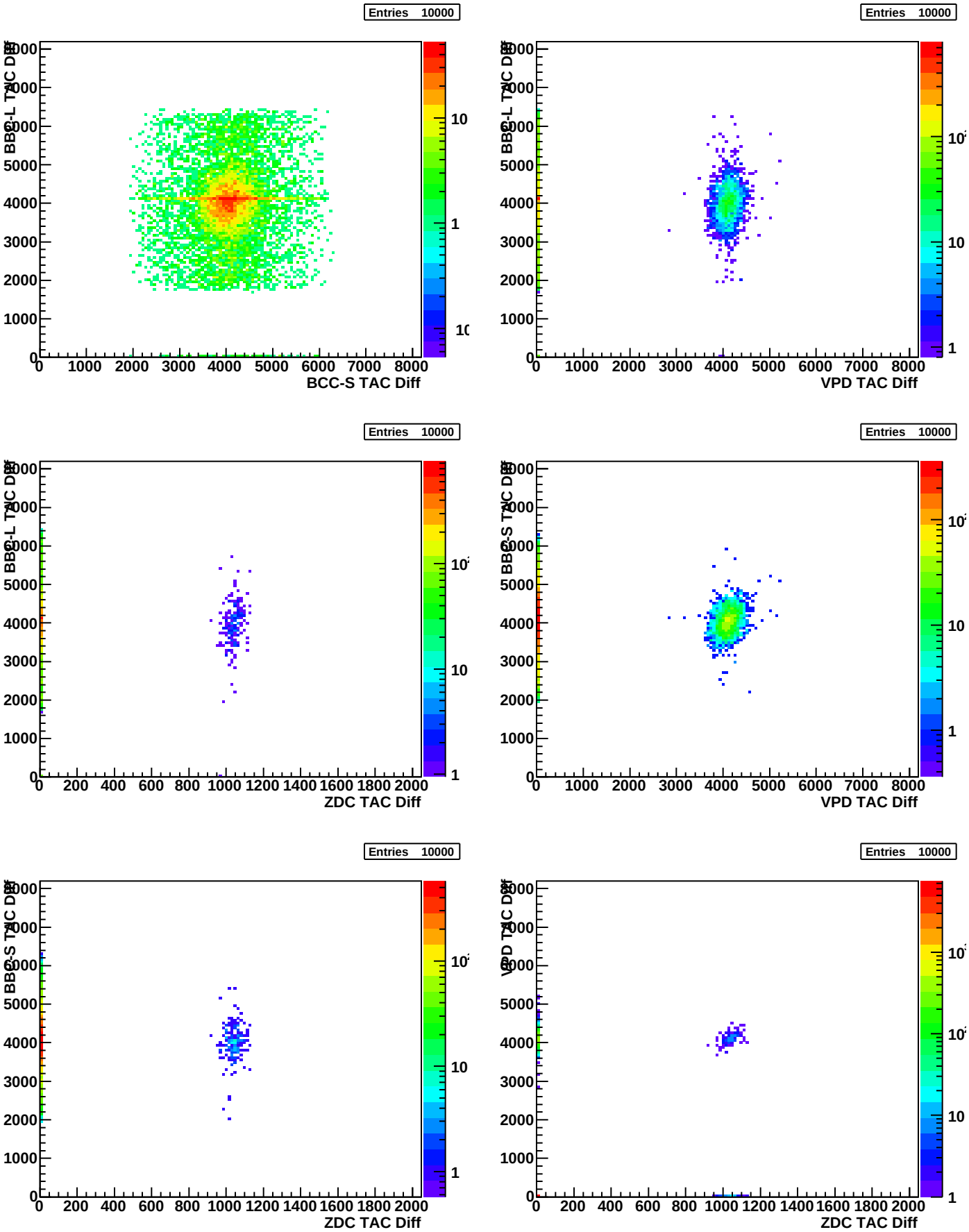

Entries 10000
VPD-West ADC Sum
ZDC-West ADC Sum Att

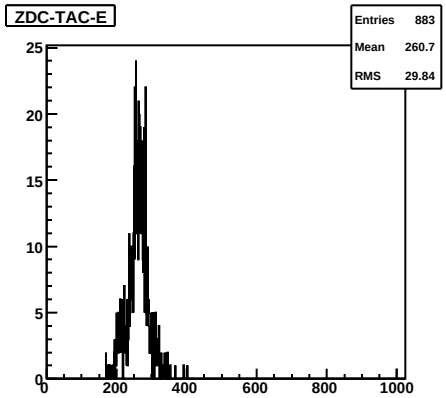

Entries 10000
BBC-L-East ADC Sum
BBC-L-West ADC Sum

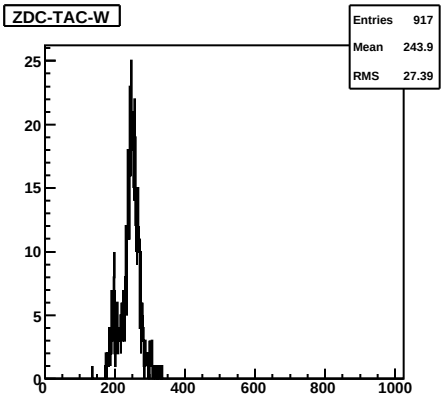

Entries 10000
BBC-S-East ADC Sum
BBC-S-West ADC Sum

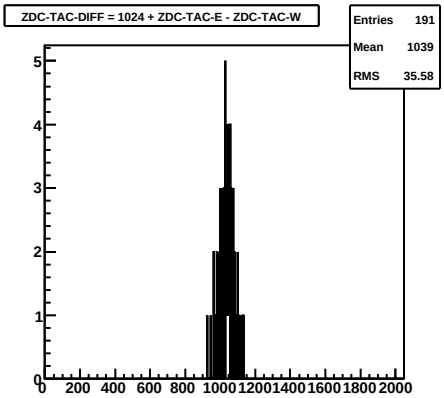

Entries 10000
VPD East ADC Sum
VPD West ADC Sum

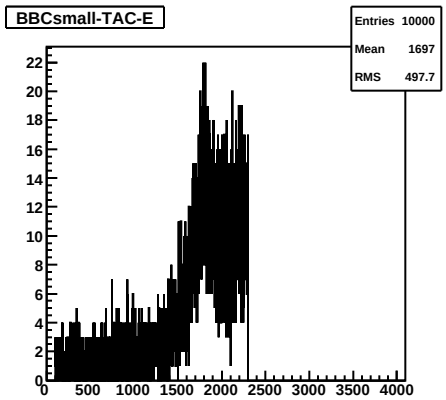

Entries 10000
ZDC East ADC Sum Att
ZDC West ADC Sum Att

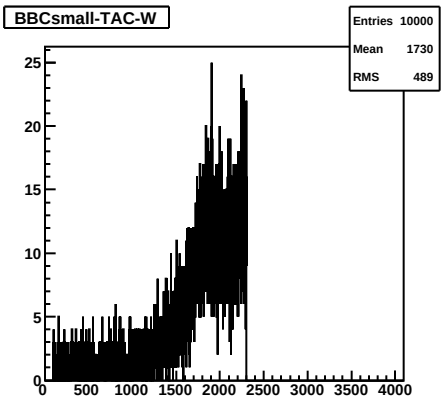

Entries 10000
BBC-L TAC Diff
BCC-S TAC Diff
Entries 10000
BBC-L TAC Diff
VPD TAC Diff
Entries 10000
BBC-L TAC Diff
ZDC TAC Diff
Entries 10000
BBC-S TAC Diff
VPD TAC Diff
Entries 10000
BBC-S TAC Diff
ZDC TAC Diff
Entries 10000
VPD TAC Diff
ZDC TAC Diff

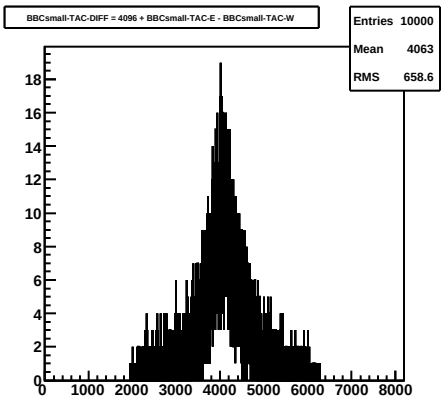

ZDC-TAC-E
Entries 883
Mean 260.7
RMS 29.84

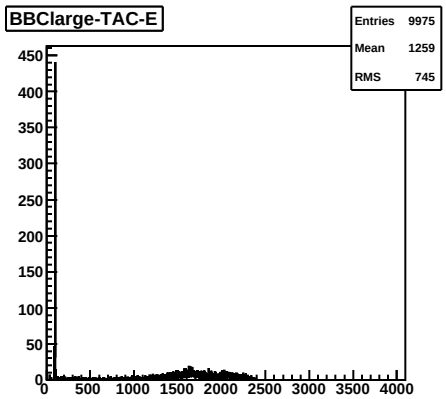

ZDC-TAC-W
Entries 917
Mean 243.9
RMS 27.39

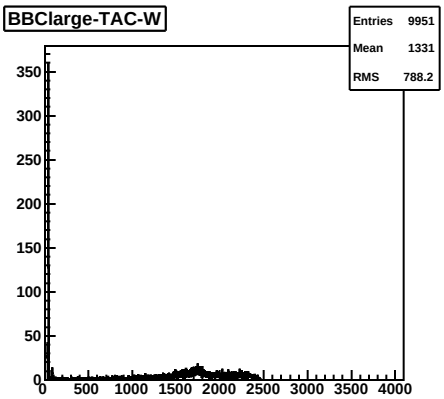

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 191
Mean 1039
RMS 35.58

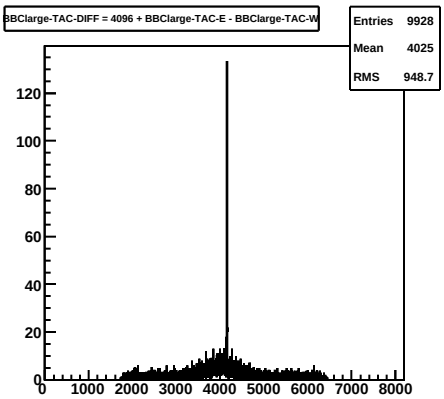

BBCsmall-TAC-E
Entries 10000
Mean 1697
RMS 497.7

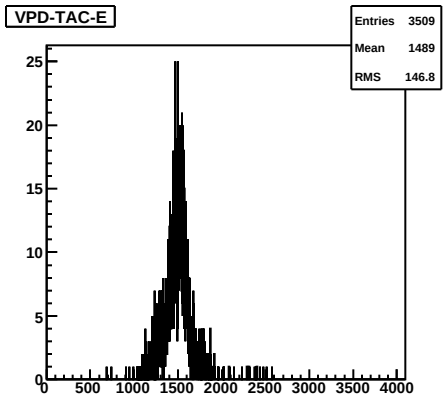

BBCsmall-TAC-W
Entries 10000
Mean 1730
RMS 489

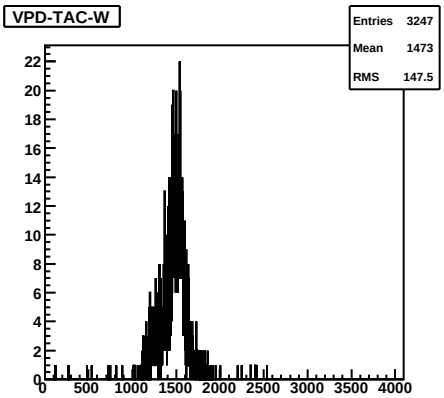

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 10000
Mean 4063
RMS 658.6

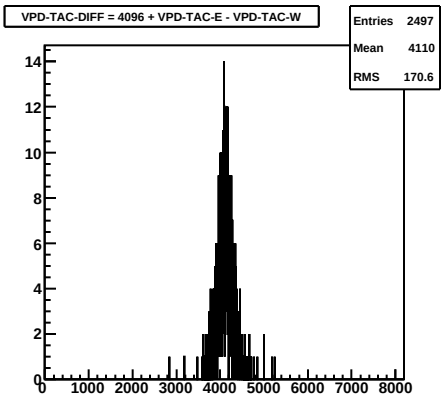

BBClarge-TAC-E
Entries 9975
Mean 1259
RMS 745

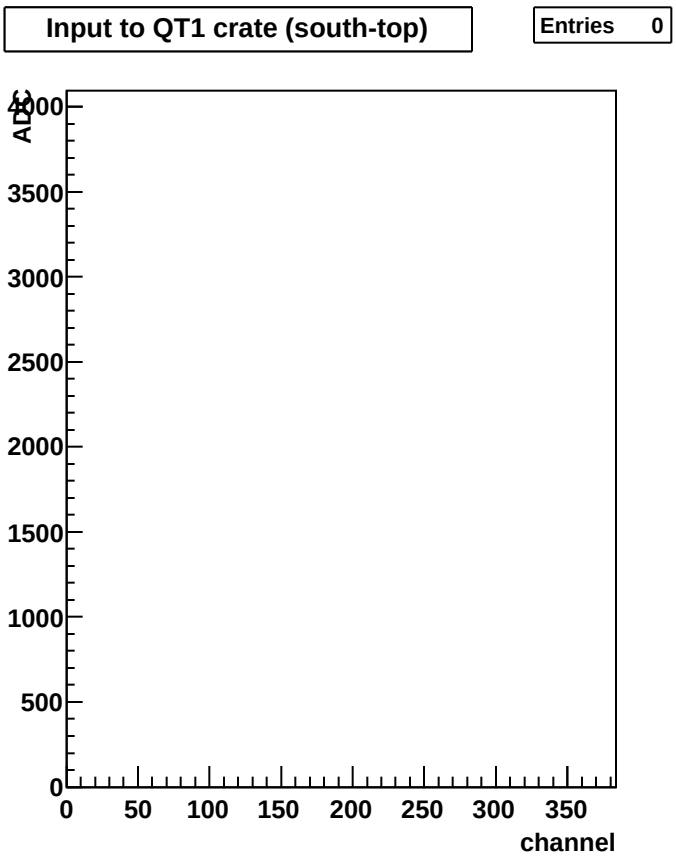

BBClarge-TAC-W
Entries 9951
Mean 1331
RMS 788.2

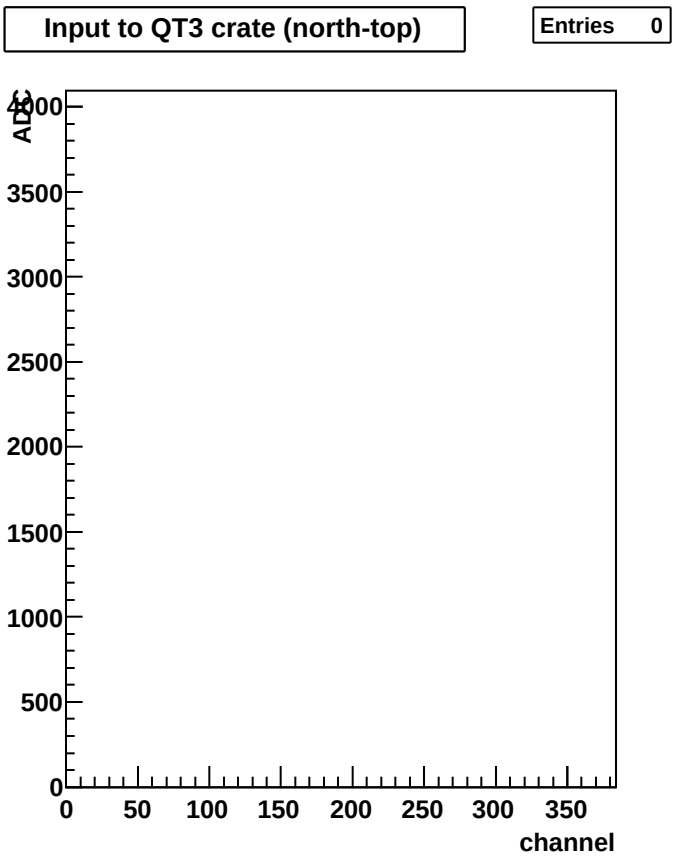

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 9928
Mean 4025
RMS 948.7

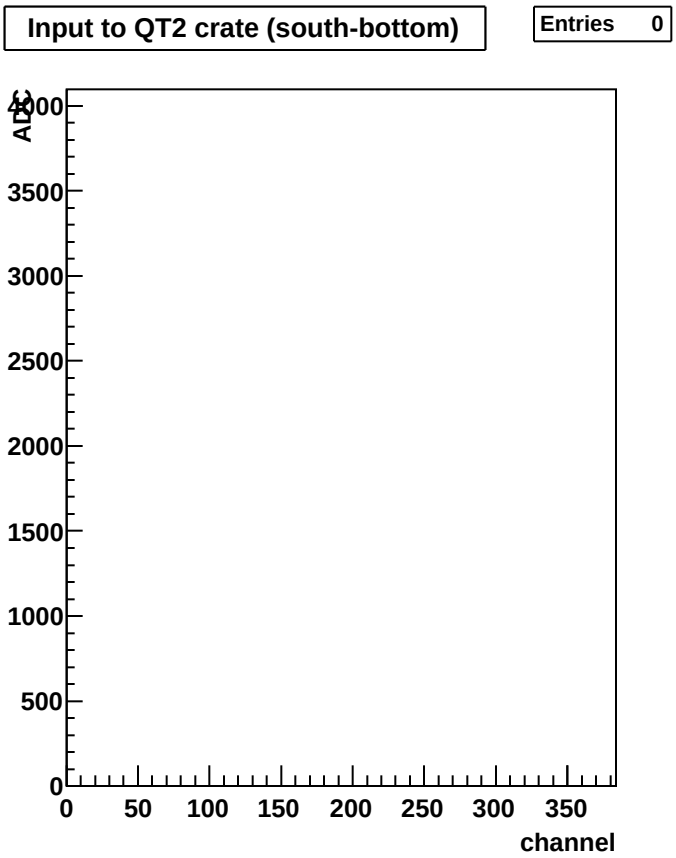

VPD-TAC-E
Entries 3509
Mean 1489
RMS 146.8

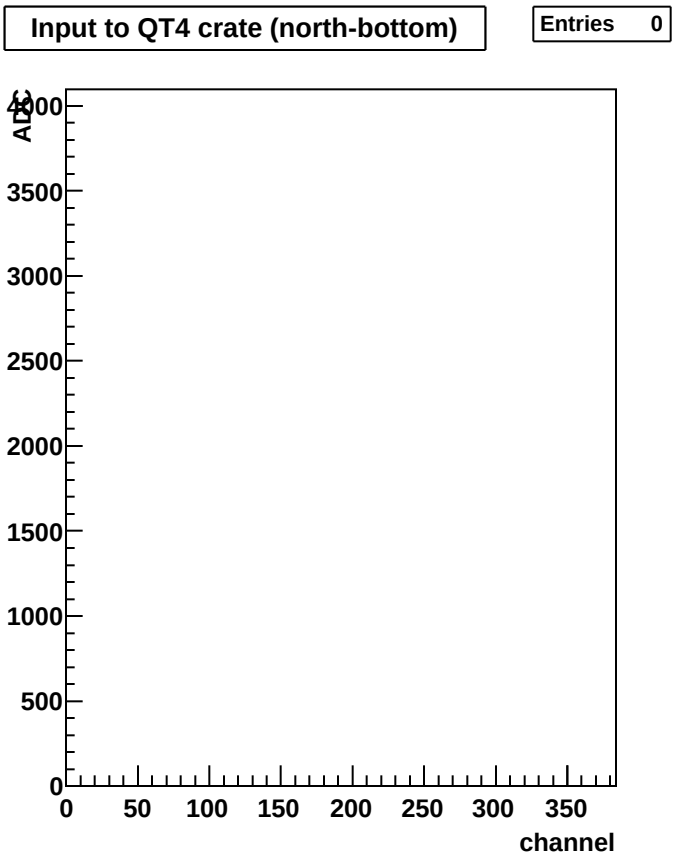

VPD-TAC-W
Entries 3247
Mean 1473
RMS 147.5

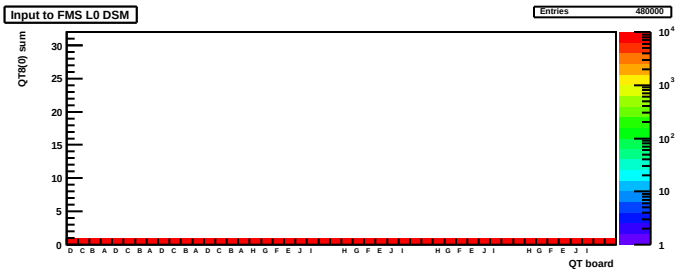

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 2497
Mean 4110
RMS 170.6

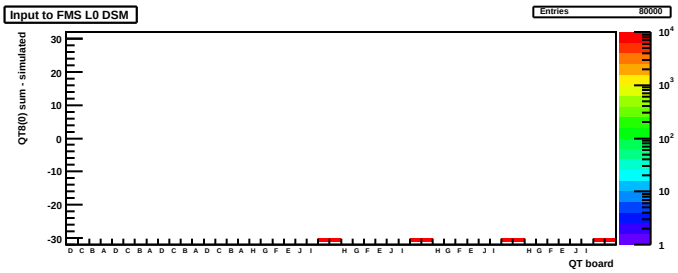

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

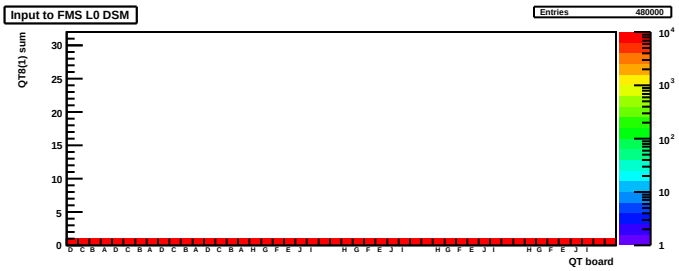

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

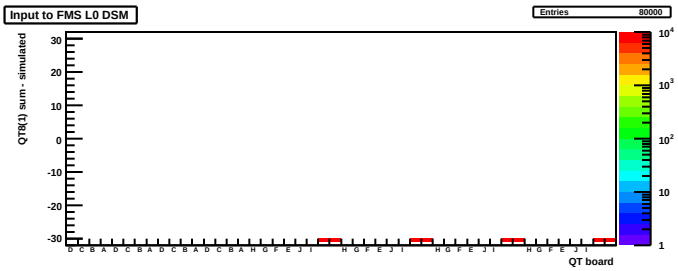

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

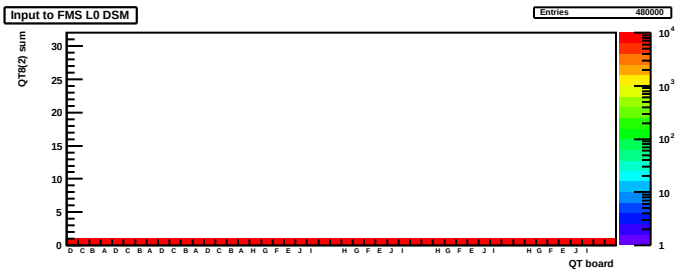

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

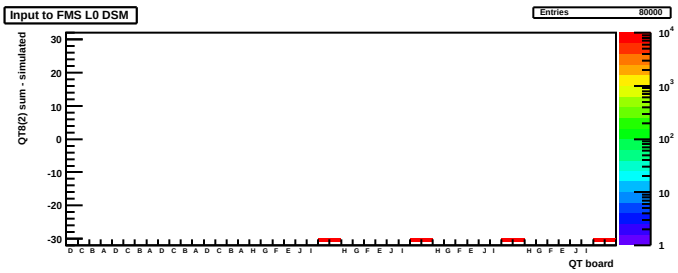

Input to FMS L0 DSM
Entries 480000
QT8(0) sum
QT board

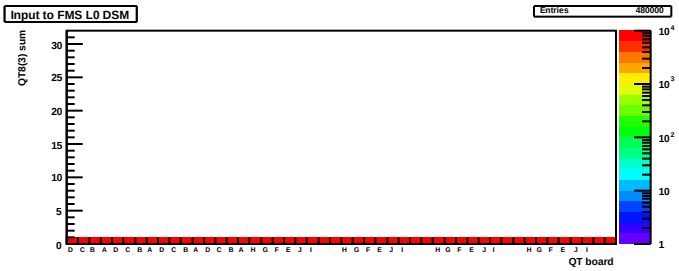

Input to FMS L0 DSM
Entries 80000
QT8(0) sum - simulated
QT board

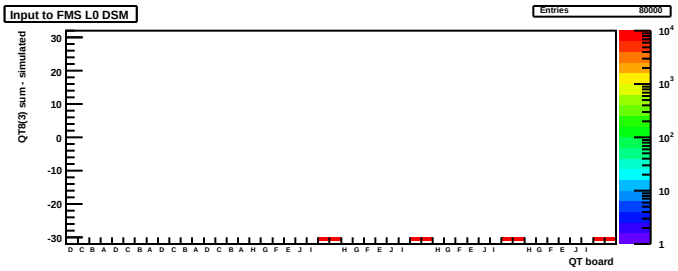

Input to FMS L0 DSM
Entries 480000
QT8(1) sum
QT board

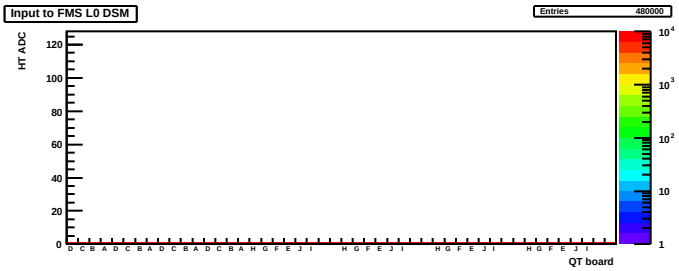

Input to FMS L0 DSM
Entries 80000
QT8(1) sum - simulated
QT board

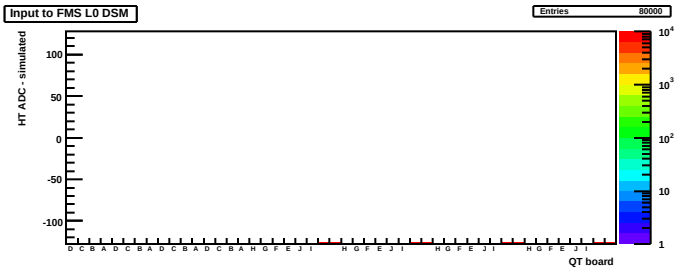

Input to FMS L0 DSM
Entries 480000
QT8(2) sum
QT board

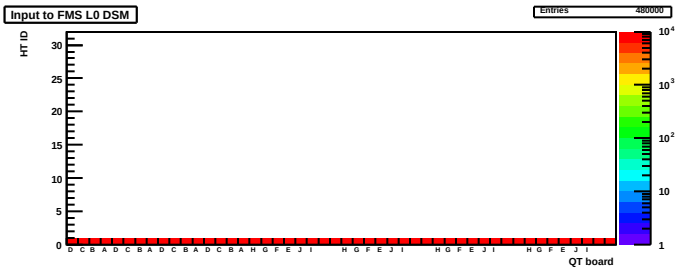

Input to FMS L0 DSM
Entries 80000
QT8(2) sum - simulated
QT board

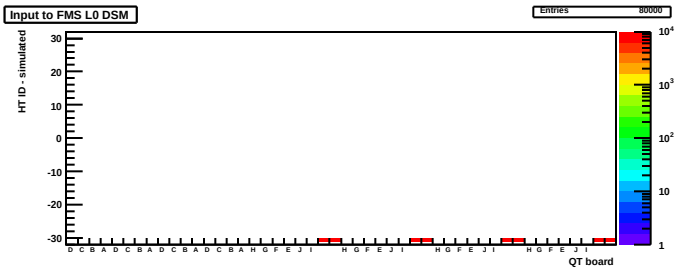

Input to FMS L0 DSM
Entries 480000
QT8(3) sum
QT board

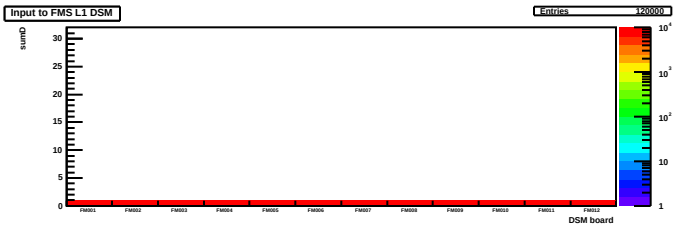

Input to FMS L0 DSM
Entries 80000
QT8(3) sum - simulated
QT board

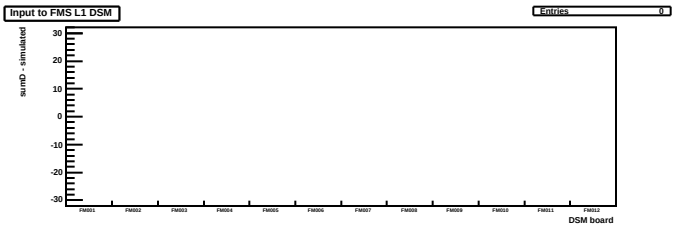

Input to FMS L0 DSM
Entries 480000
HT ADC
QT board

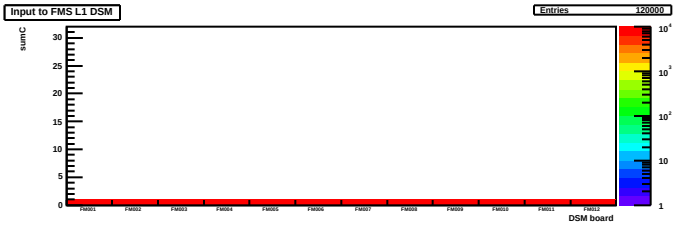

Input to FMS L0 DSM
Entries 80000
HT ADC - simulated
QT board

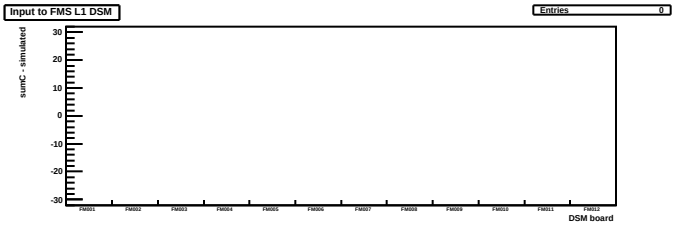

Input to FMS L0 DSM
Entries 480000
HT ID
QT board

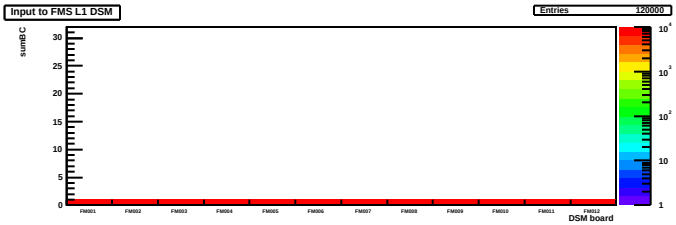

Input to FMS L0 DSM
Entries 80000
HT ID - simulated
QT board

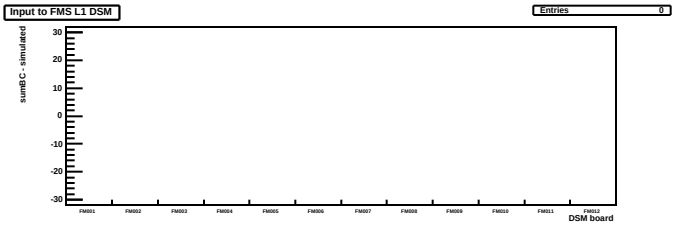

Input to FMS L1 DSM
Entries 120000
sumD
DSM board

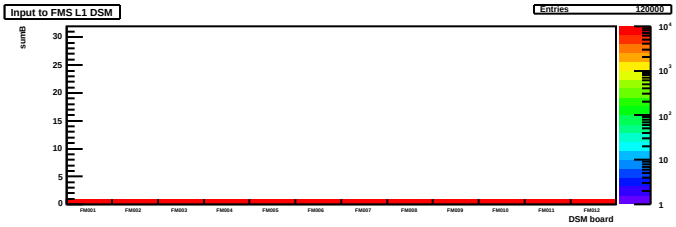

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

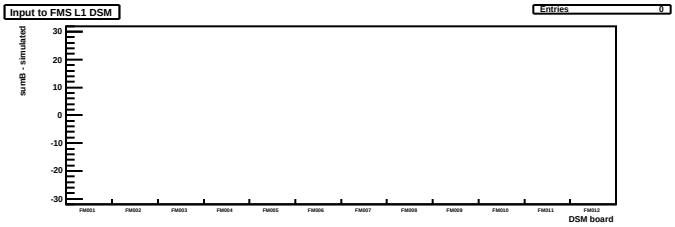

Input to FMS L1 DSM
Entries 120000
sumC
DSM board

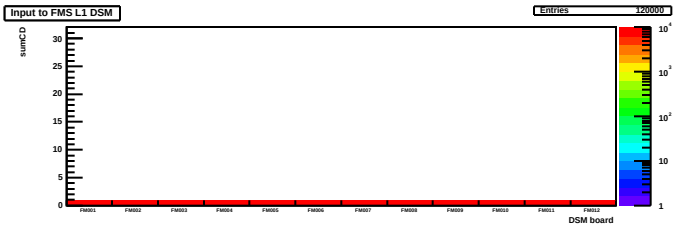

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

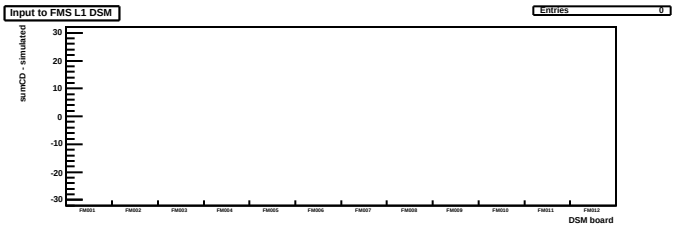

Input to FMS L1 DSM
Entries 120000
sumBC
DSM board

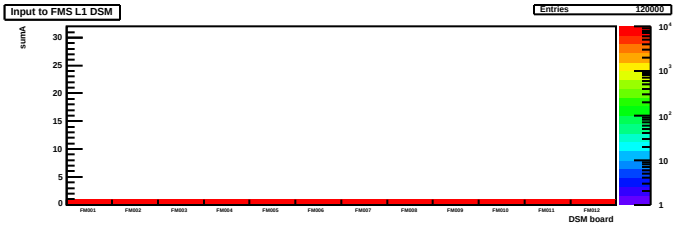

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

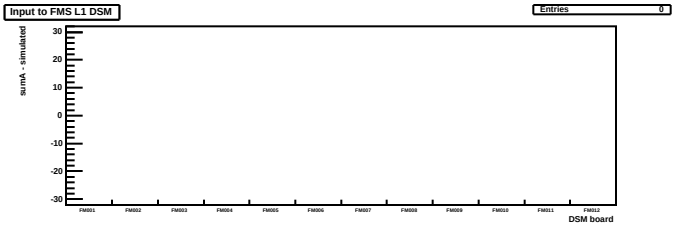

Input to FMS L1 DSM
Entries 120000
sumB
DSM board

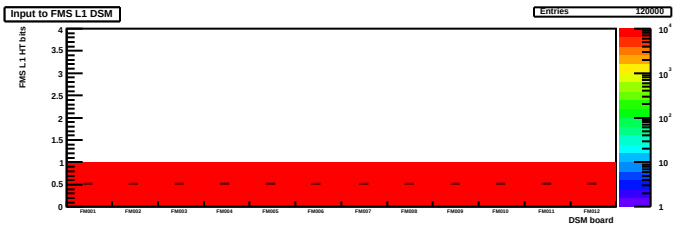

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

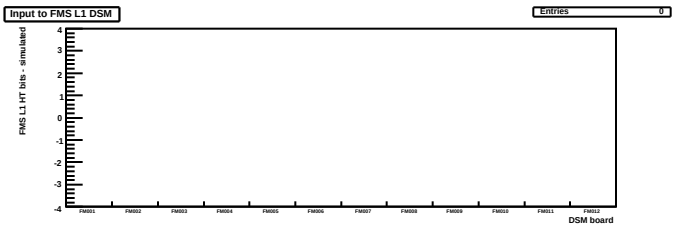

Input to FMS L1 DSM
Entries 120000
sumCD
DSM board

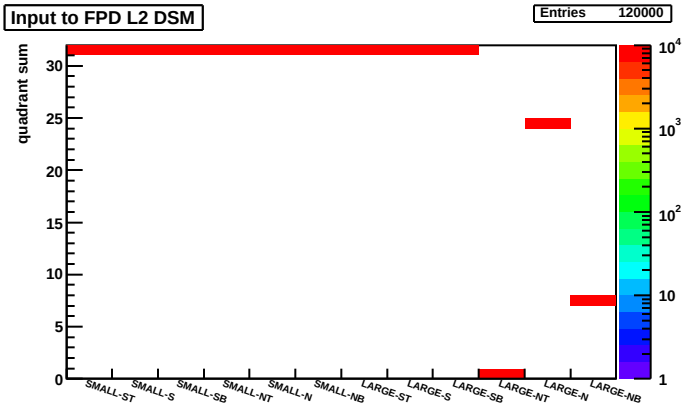

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

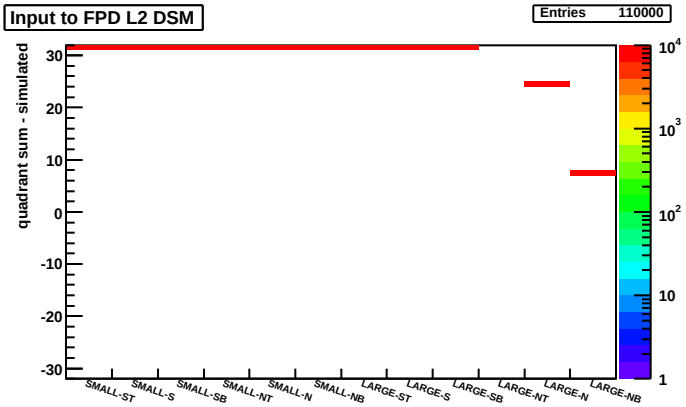

Input to FMS L1 DSM
Entries 120000
sumA
DSM board

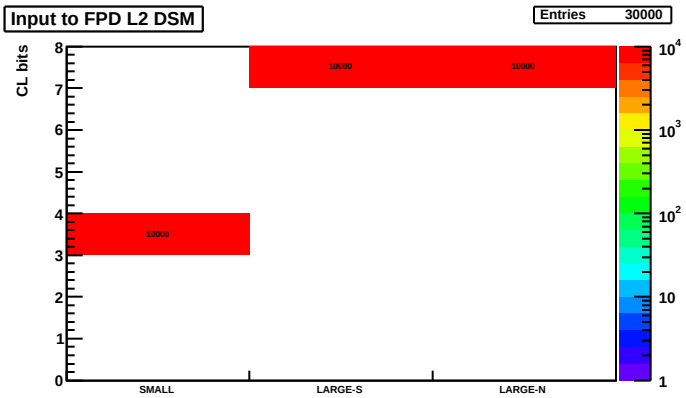

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

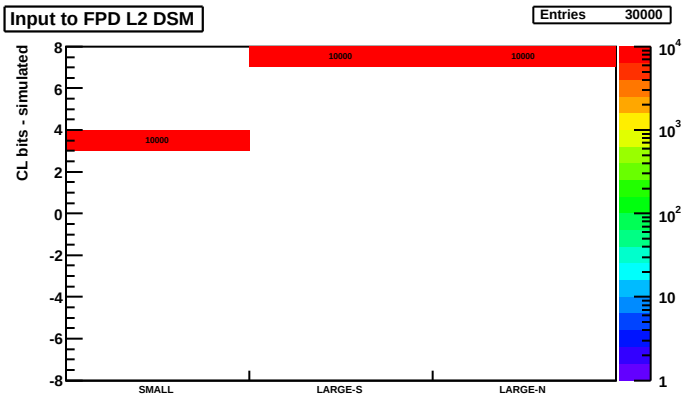

Input to FMS L1 DSM
Entries 120000
FMS L1 HT bits
DSM board

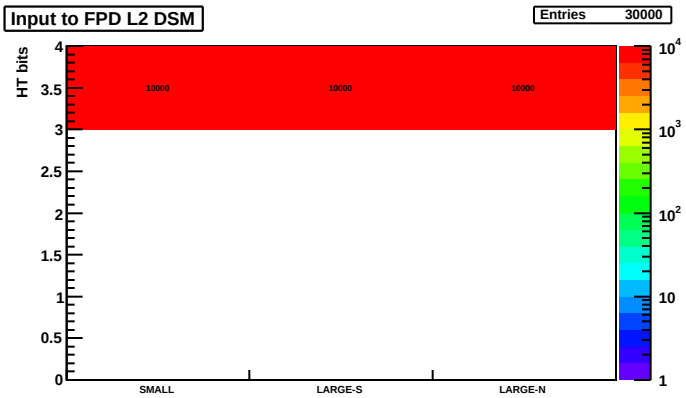

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

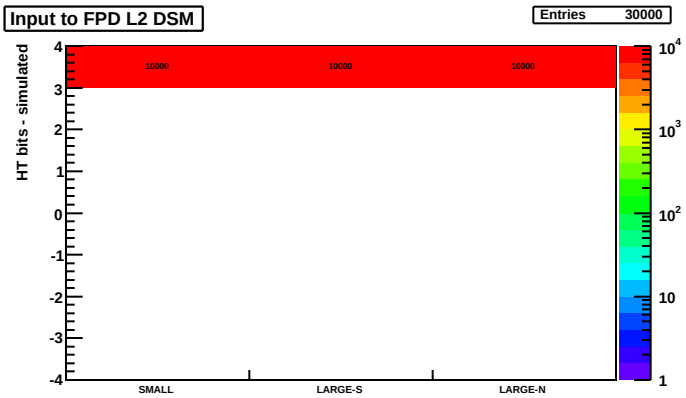

Input to FPD L2 DSM
Entries 120000
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

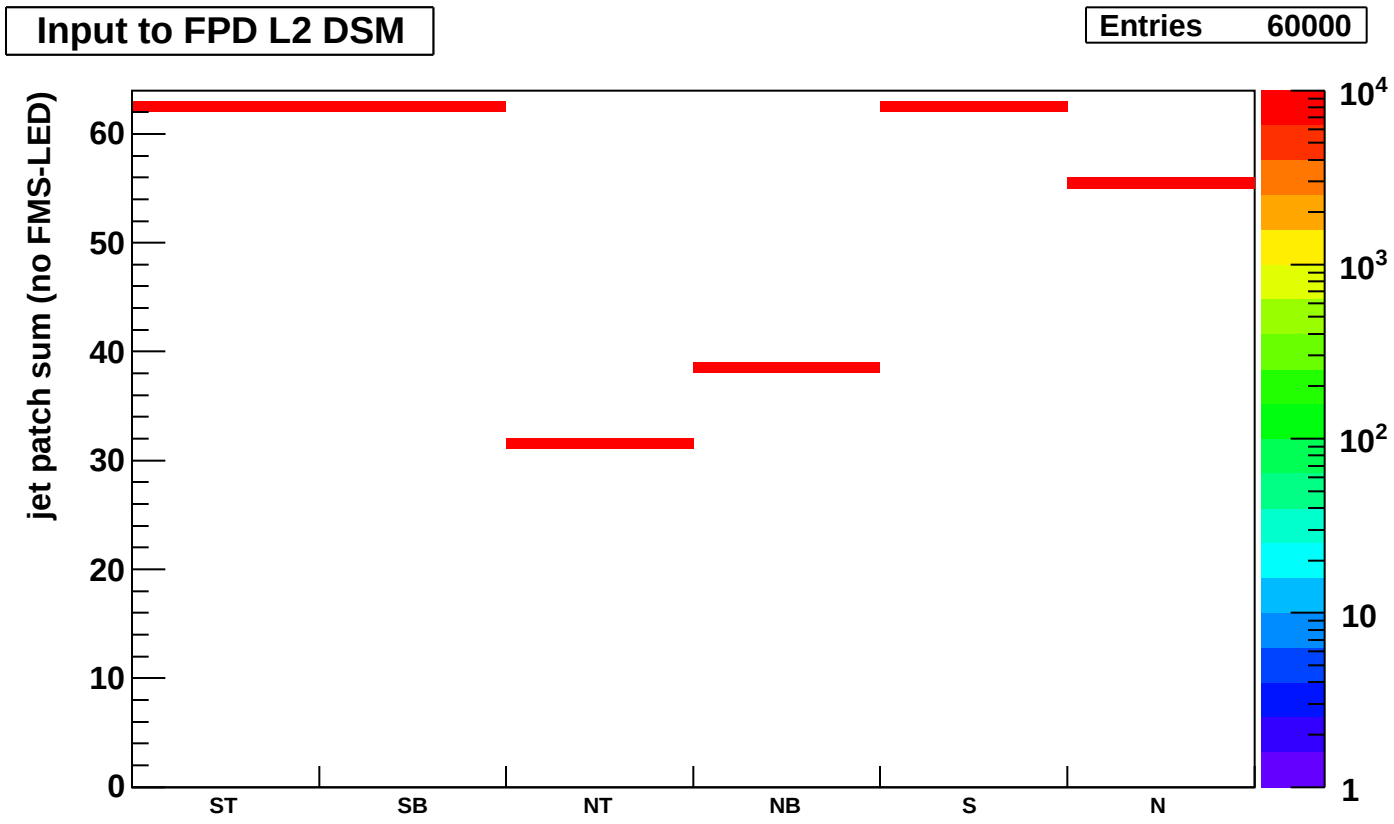

Input to FPD L2 DSM
Entries 110000
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

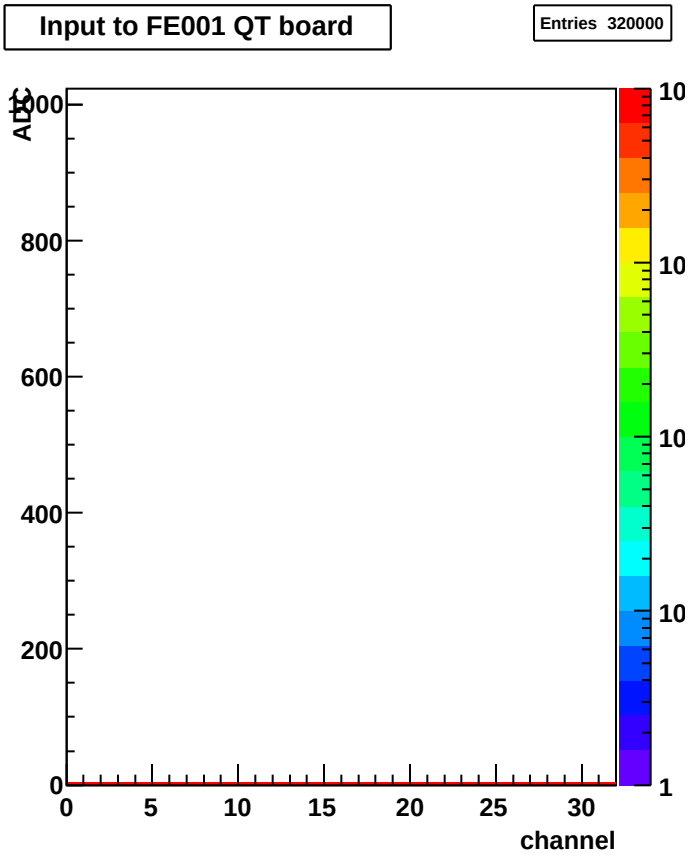

Input to FPD L2 DSM
Entries 30000
CL bits
10000
10000
10000
SMALL
LARGE-S
LARGE-N

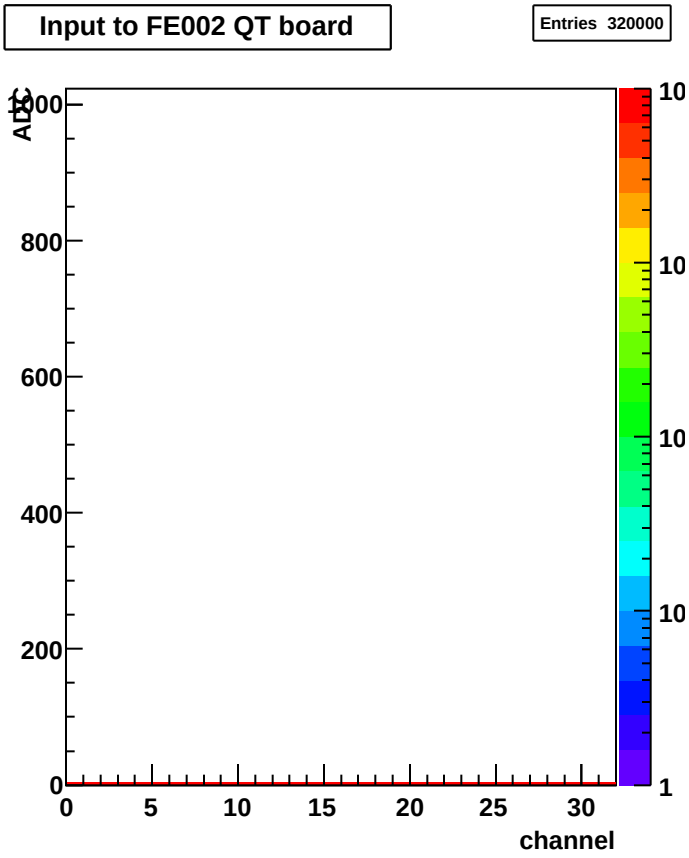

Input to FPD L2 DSM
Entries 30000
CL bits - simulated
10000
10000
10000
SMALL
LARGE-S
LARGE-N

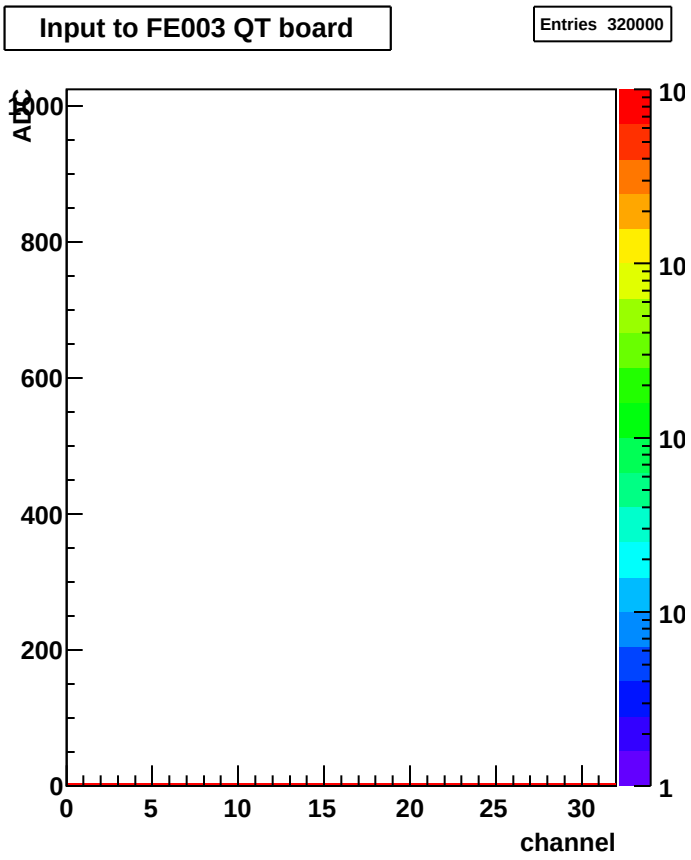

Input to FPD L2 DSM
Entries 30000
HT bits
10000
10000
10000
SMALL
LARGE-S
LARGE-N

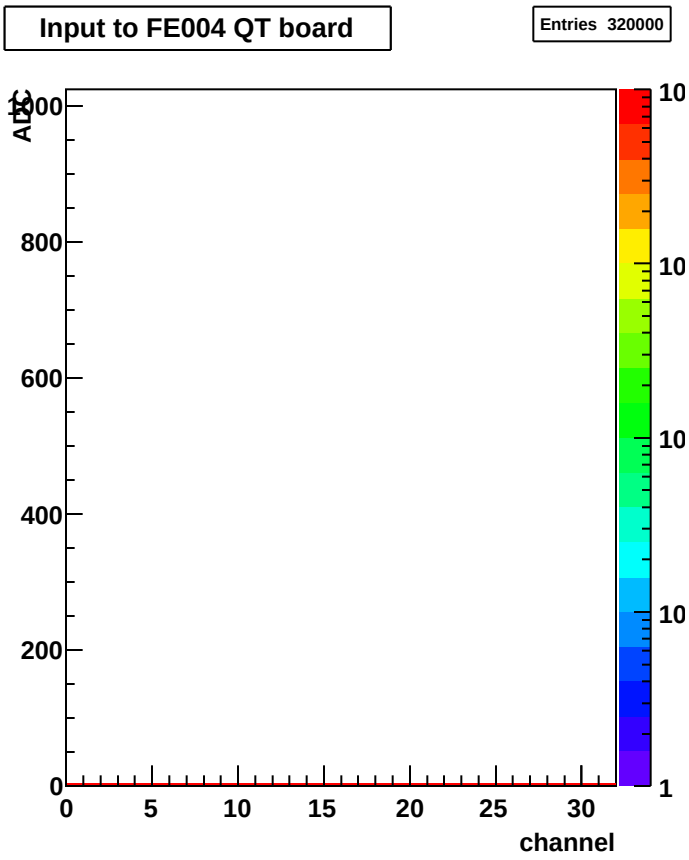

Input to FPD L2 DSM
Entries 30000
HT bits - simulated
10000
10000
10000
SMALL
LARGE-S
LARGE-N

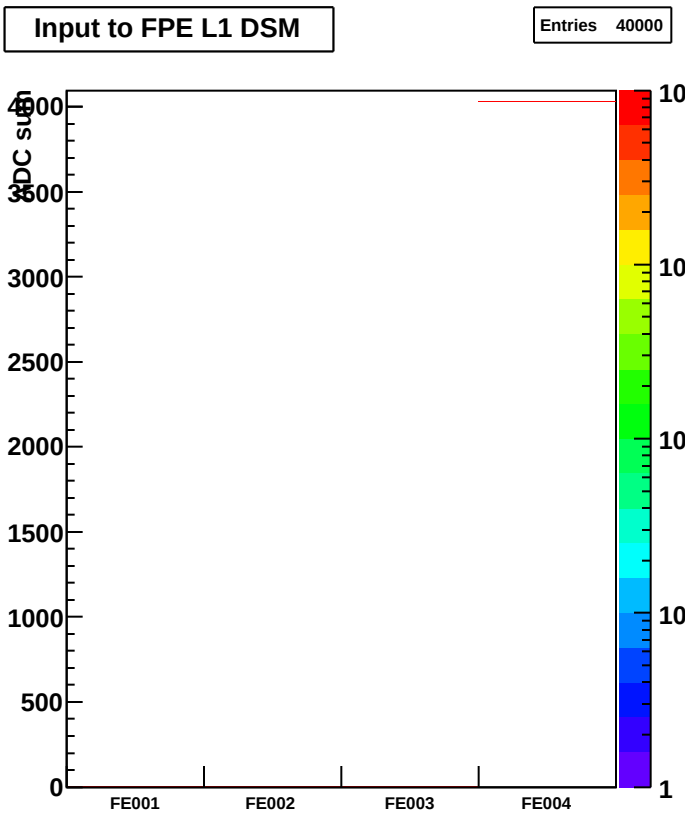

Input to FPD L2 DSM
Entries 60000
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

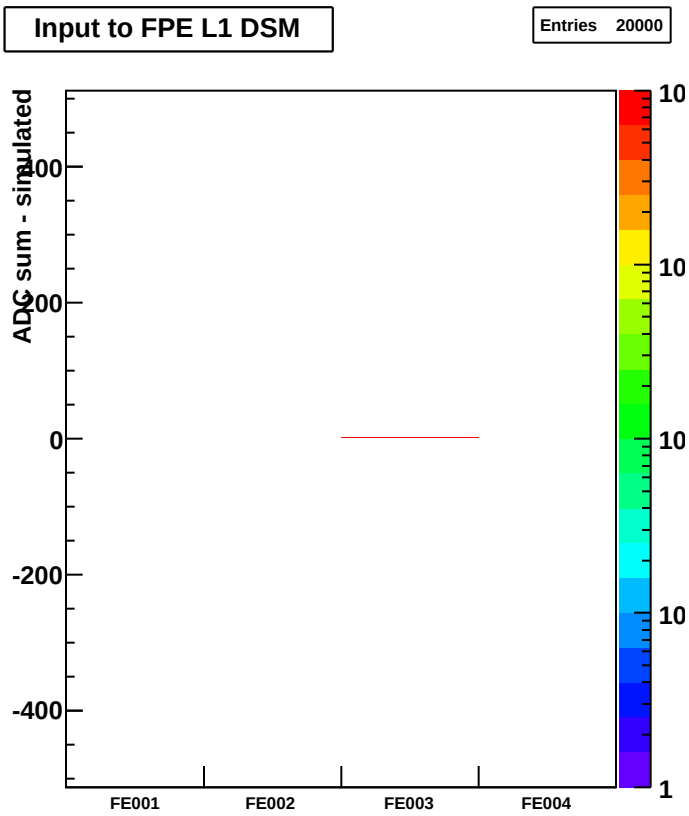

Input to FE001 QT board
Entries 320000
ADC
channel

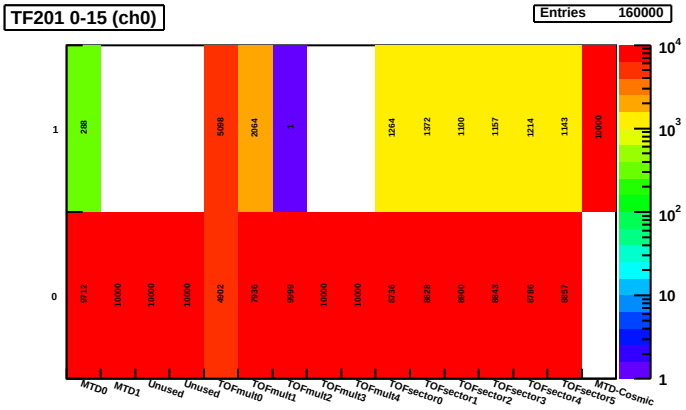

Input to FE002 QT board
Entries 320000
ADC
channel

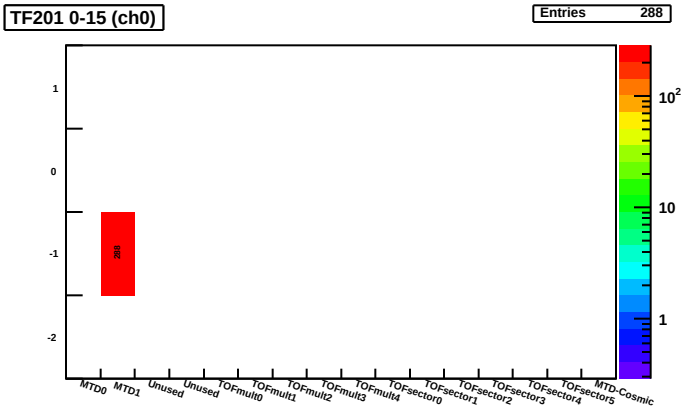

Input to FE003 QT board
Entries 320000
ADC
channel

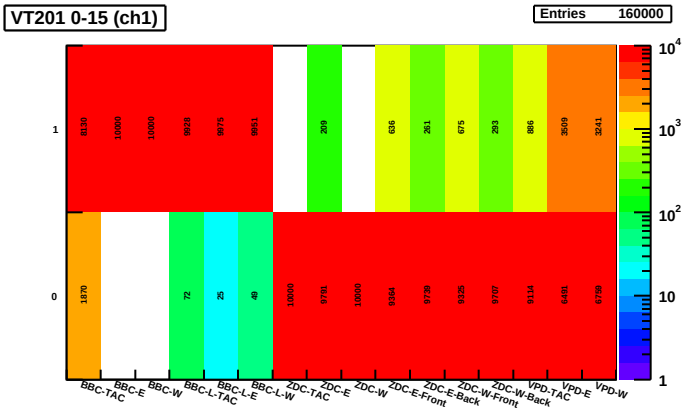

Input to FE004 QT board
Entries 320000
ADC
channel

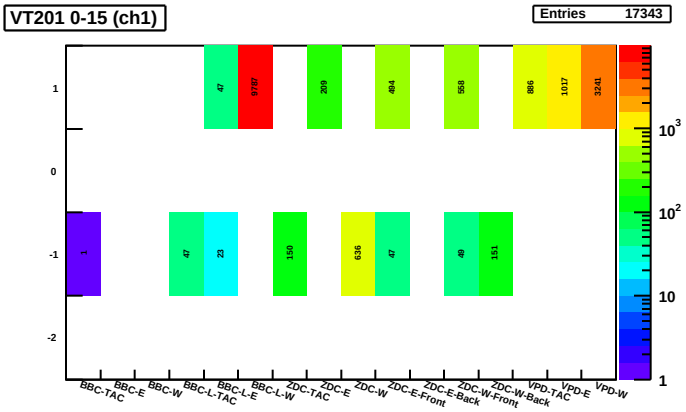

Input to FPE L1 DSM
Entries 40000
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1

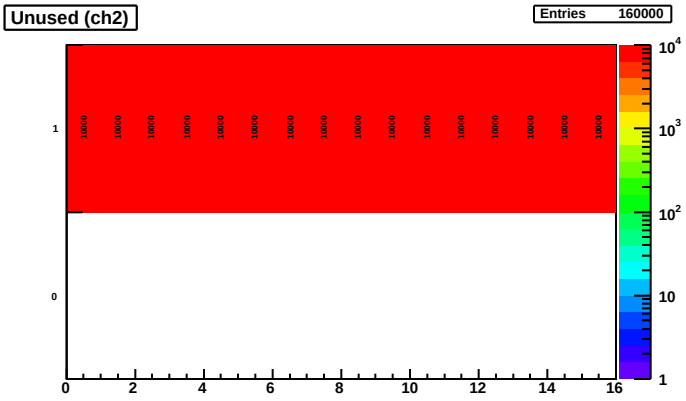

Input to FPE L1 DSM
Entries 20000
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1

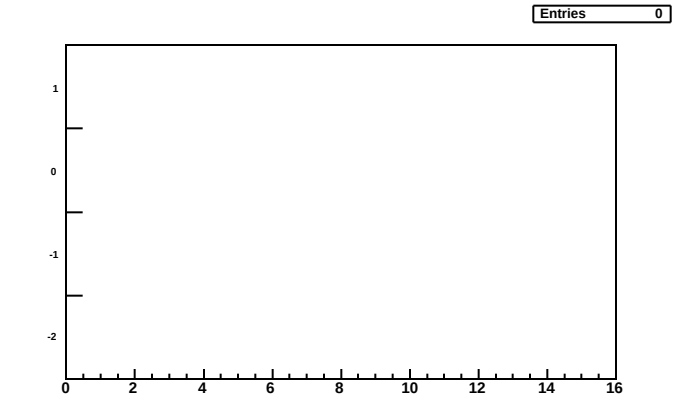

TF201 0-15 (ch0)
Entries 160000
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

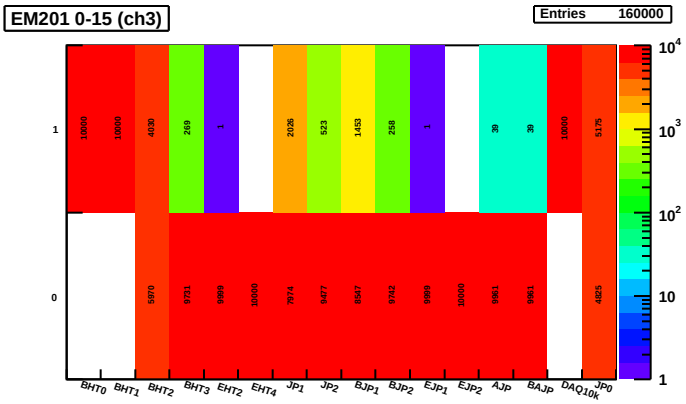

TF201 0-15 (ch0)
Entries 288
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

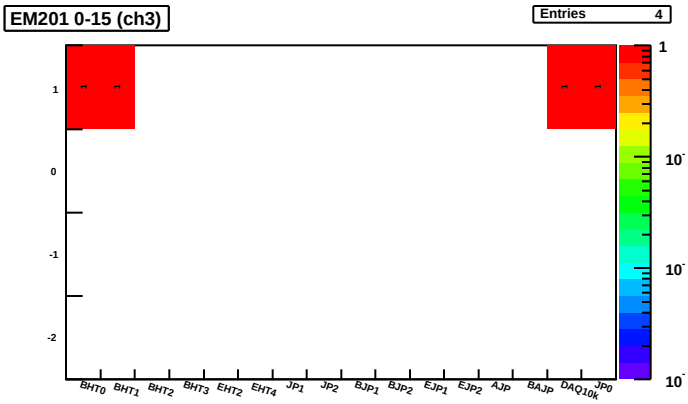

VT201 0-15 (ch1)
Entries 160000
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W

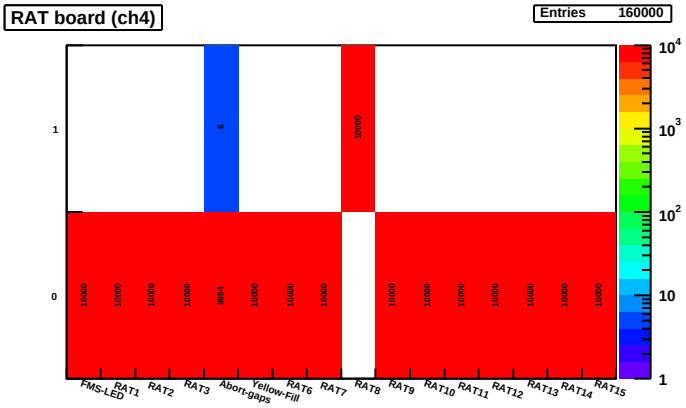

VT201 0-15 (ch1)
Entries 17343
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W

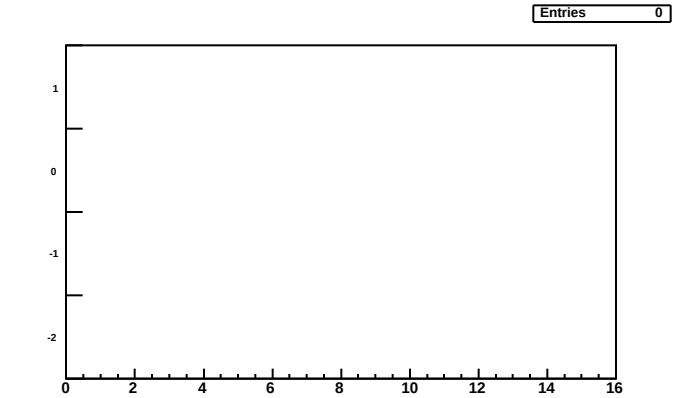

Unused (ch2)
Entries 160000

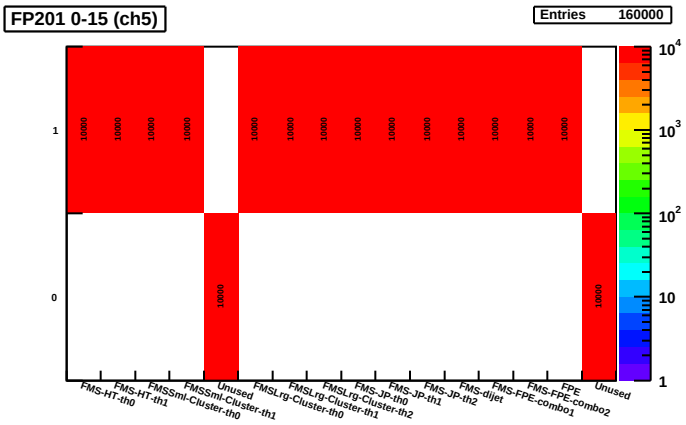

Entries 0

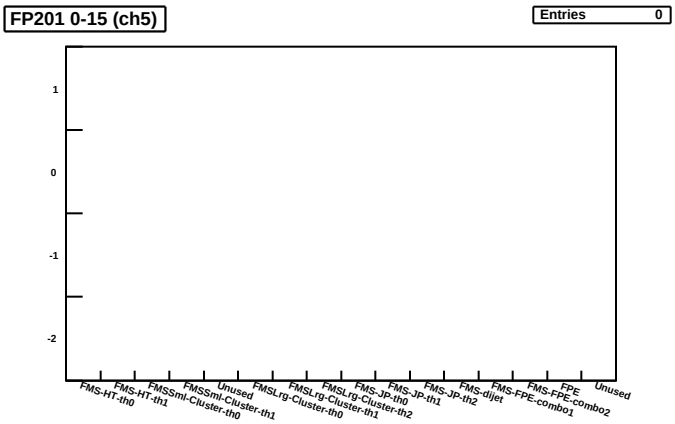

EM201 0-15 (ch3)
Entries 160000
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

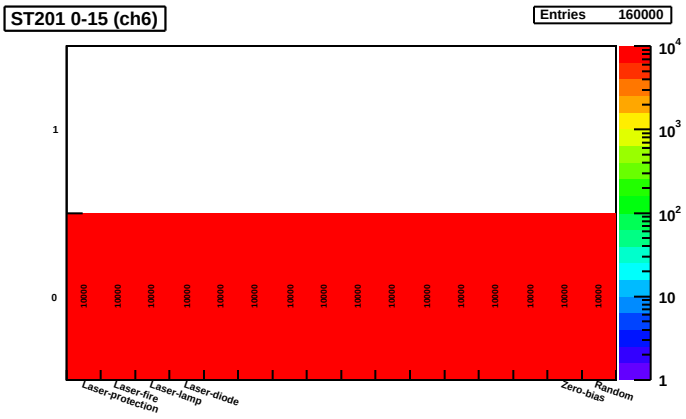

EM201 0-15 (ch3)
Entries 4
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

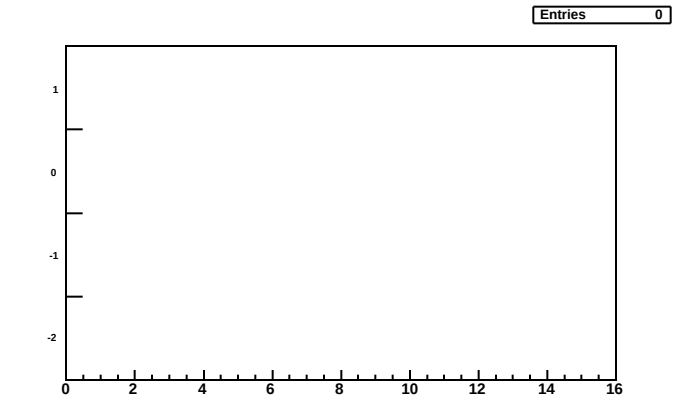

RAT board (ch4)
Entries 160000
FMS-LED
RAT1
RAT2
RAT3
Abort-gaps
Yellow-Fill
RAT6
RAT7
RAT8
RAT9
RAT10
RAT11
RAT12
RAT13
RAT14
RAT15

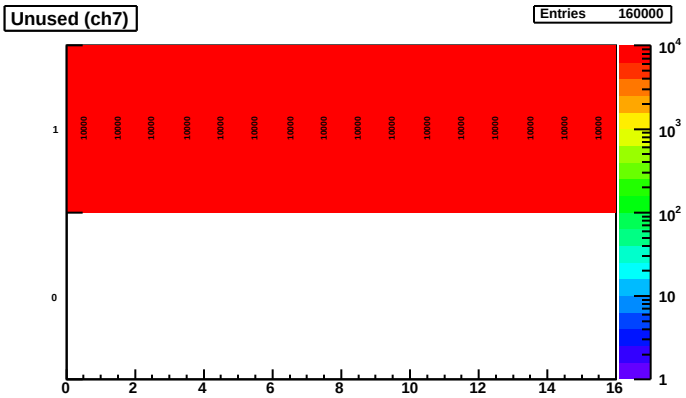

Entries 0

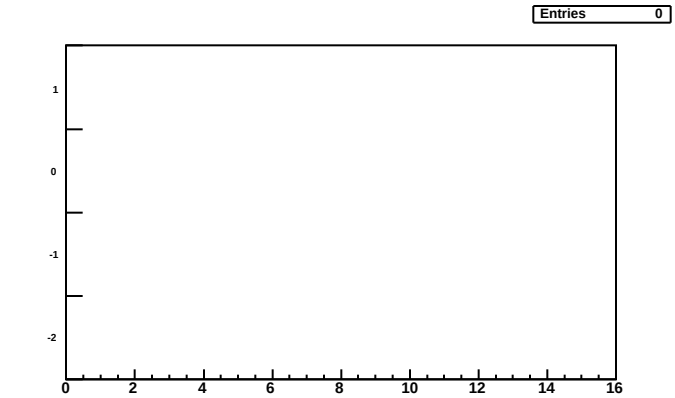

FP201 0-15 (ch5)
Entries 160000
FMS-HT-th0
FMS-HT-th1
FMSSml-Cluster-th0
FMSSml-Cluster-th1
Unused
FMSLrg-Cluster-th0
FMSLrg-Cluster-th1
FMSLrg-Cluster-th2
FMS-JP-th0
FMS-JP-th1
FMS-JP-th2
FMS-dijet
FMS-FPE-combo1
FPE
FMS-FPE-combo2
Unused


FP201 0-15 (ch5)
Entries 0
FMS-HT-th0
FMS-HT-th1
FMSSml-Cluster-th0
FMSSml-Cluster-th1
Unused
FMSLrg-Cluster-th0
FMSLrg-Cluster-th1
FMSLrg-Cluster-th2
FMS-JP-th0
FMS-JP-th1
FMS-JP-th2
FMS-dijet
FMS-FPE-combo1
FPE
FMS-FPE-combo2
Unused


ST201 0-15 (ch6)
Entries 160000
Laser-protection
Laser-fire
Laser-lamp
Laser-diode
Zero-bias
Random


Entries 0


Unused (ch7)
Entries 160000


Entries 0