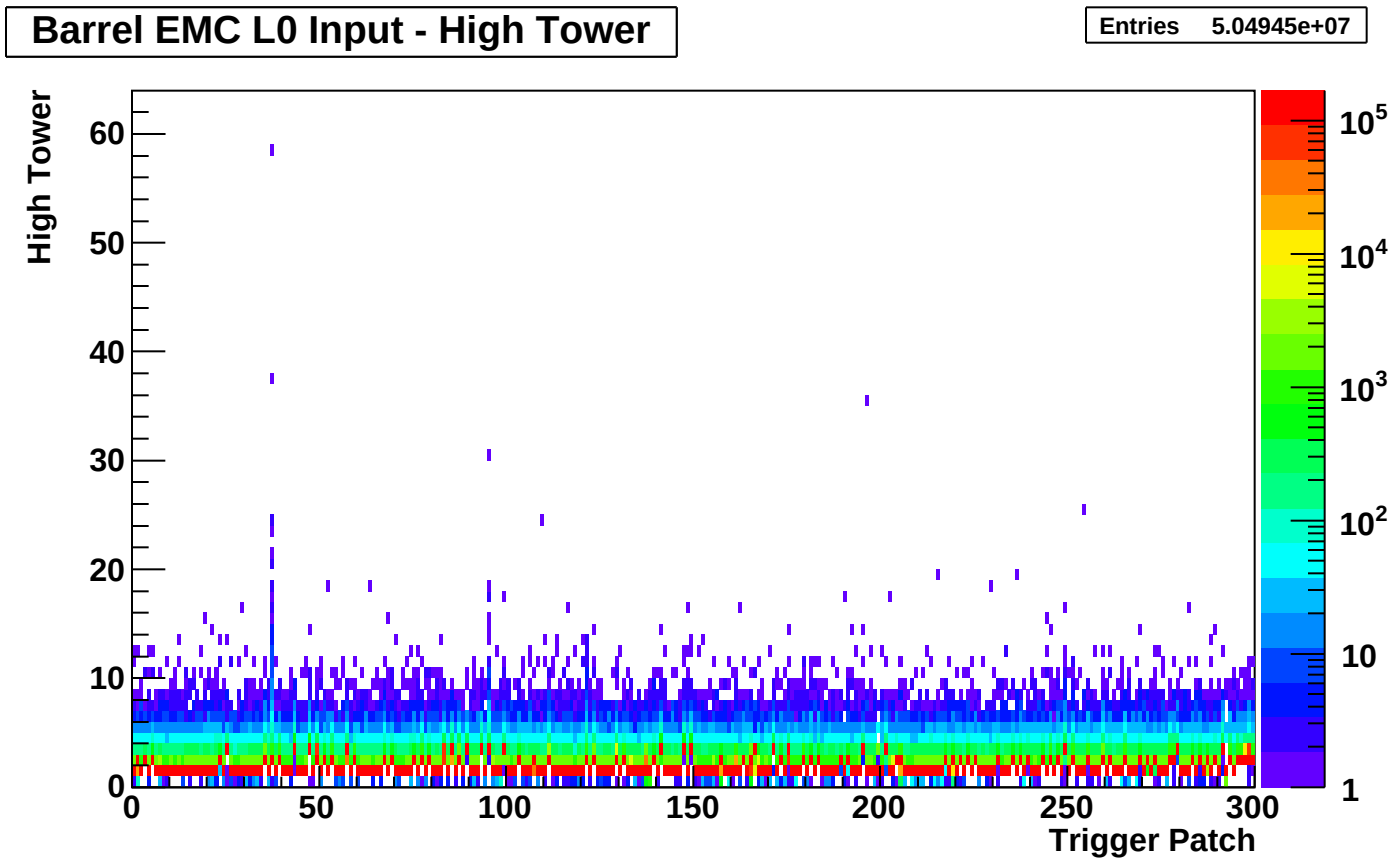
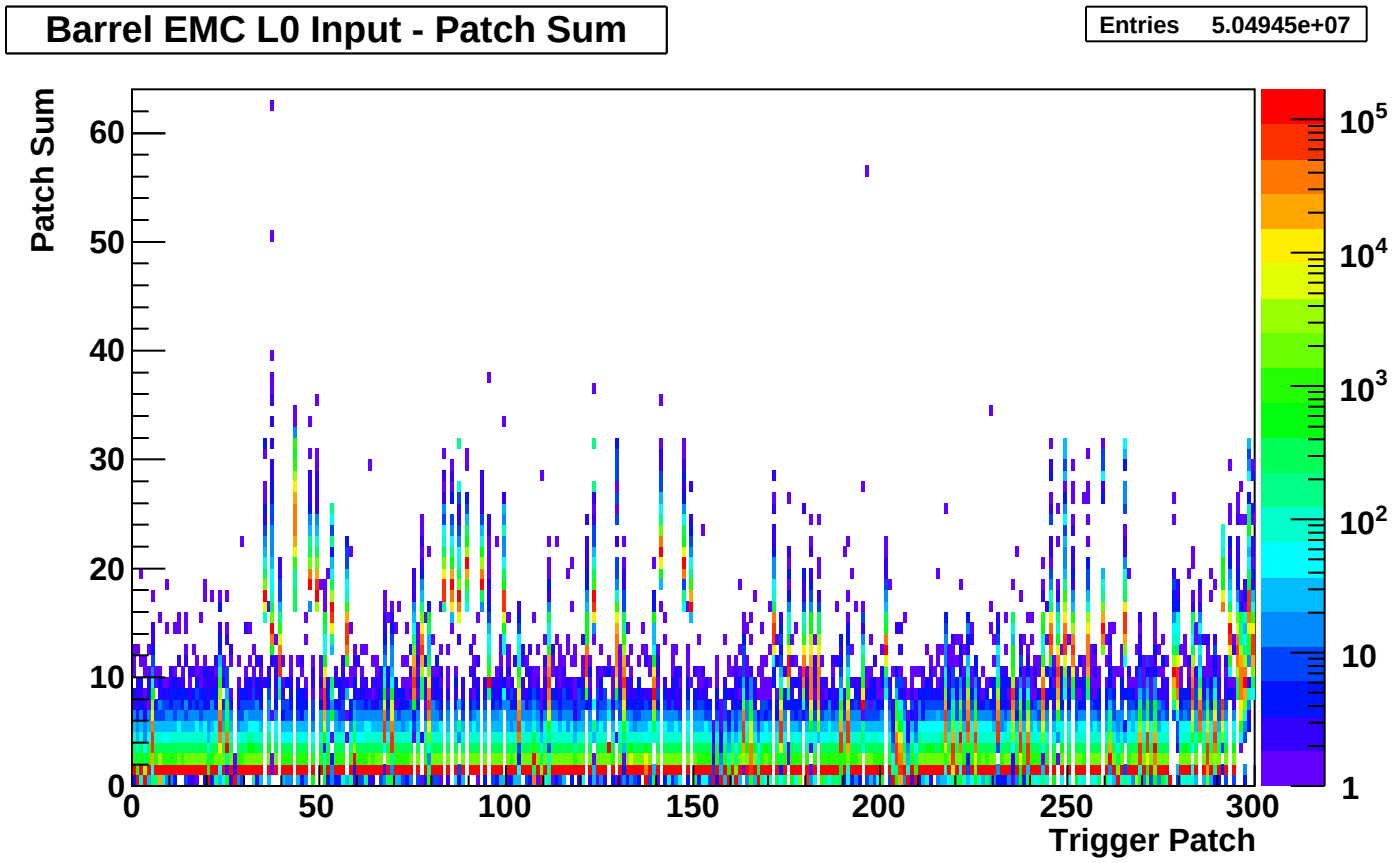
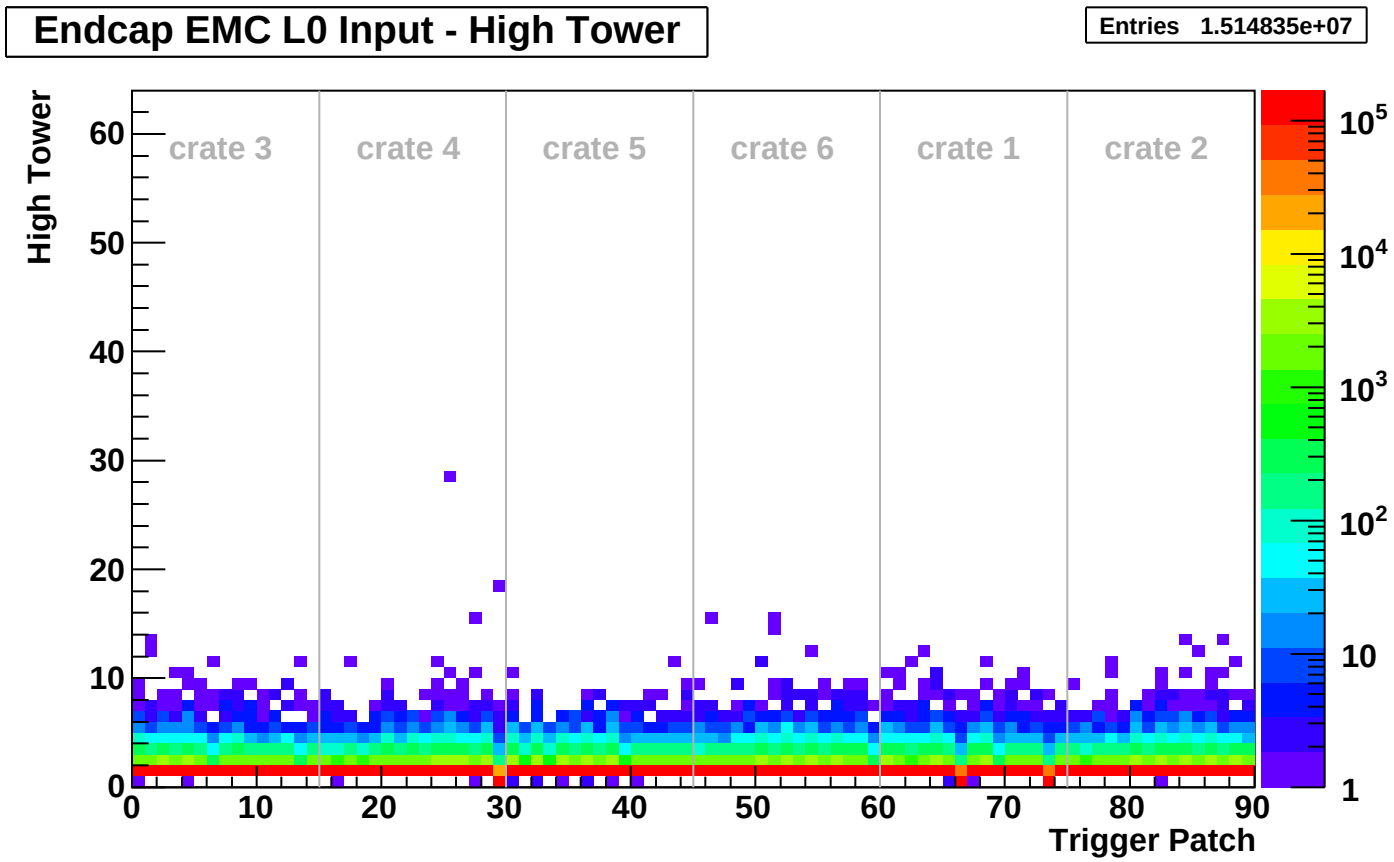
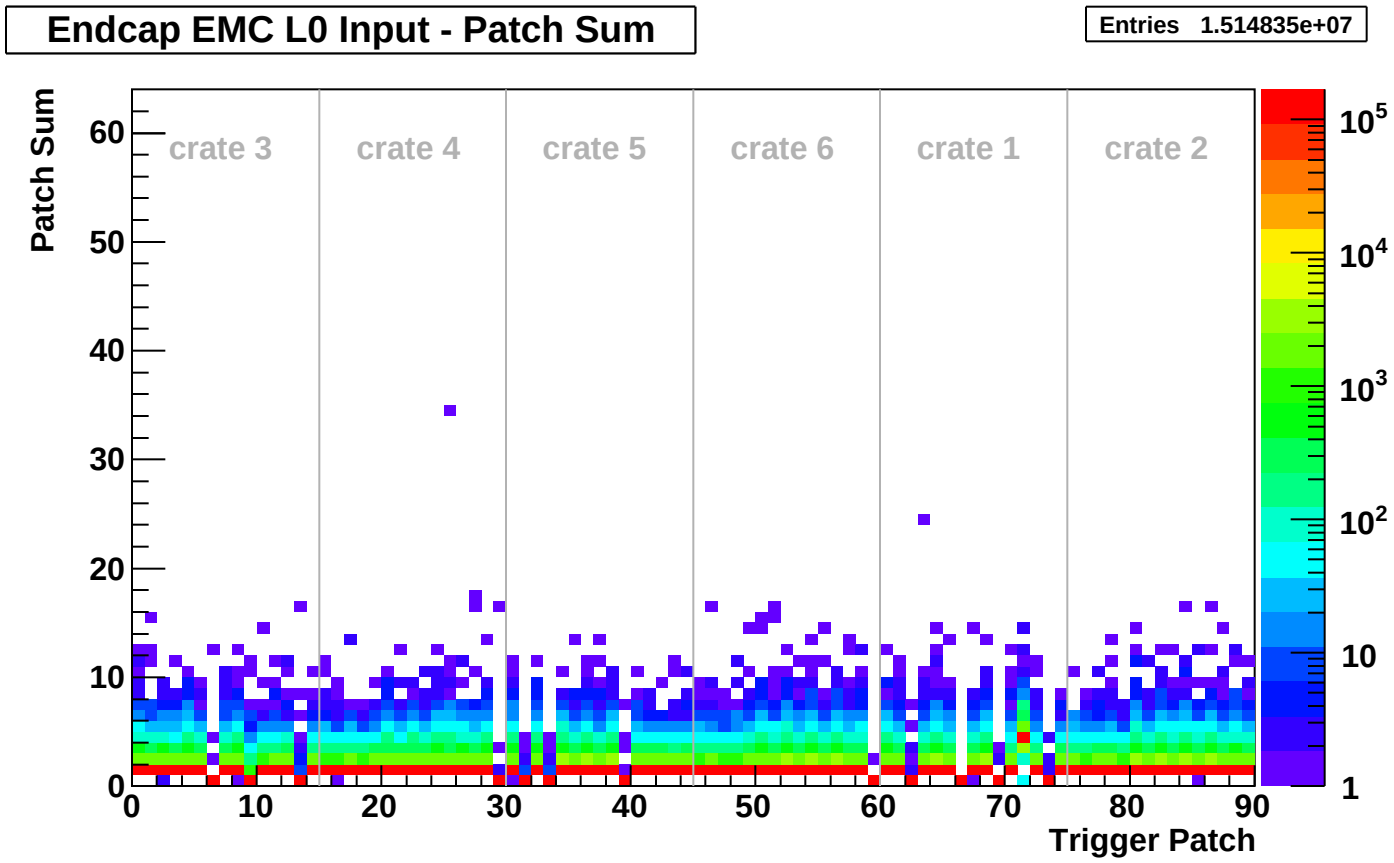
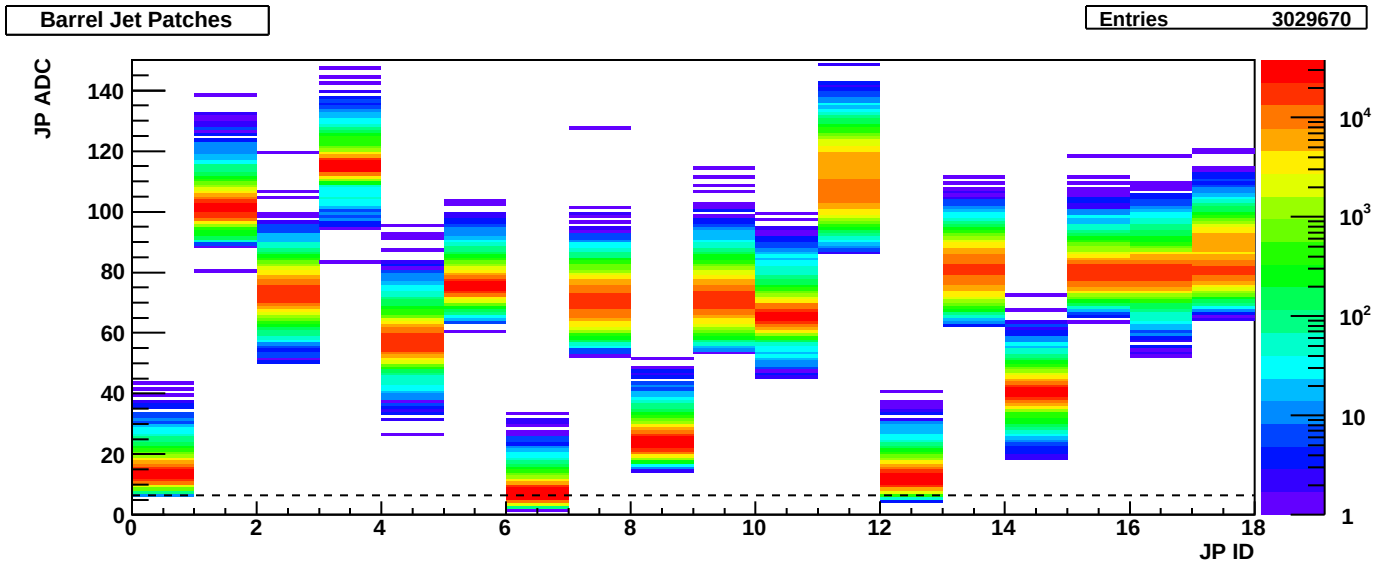
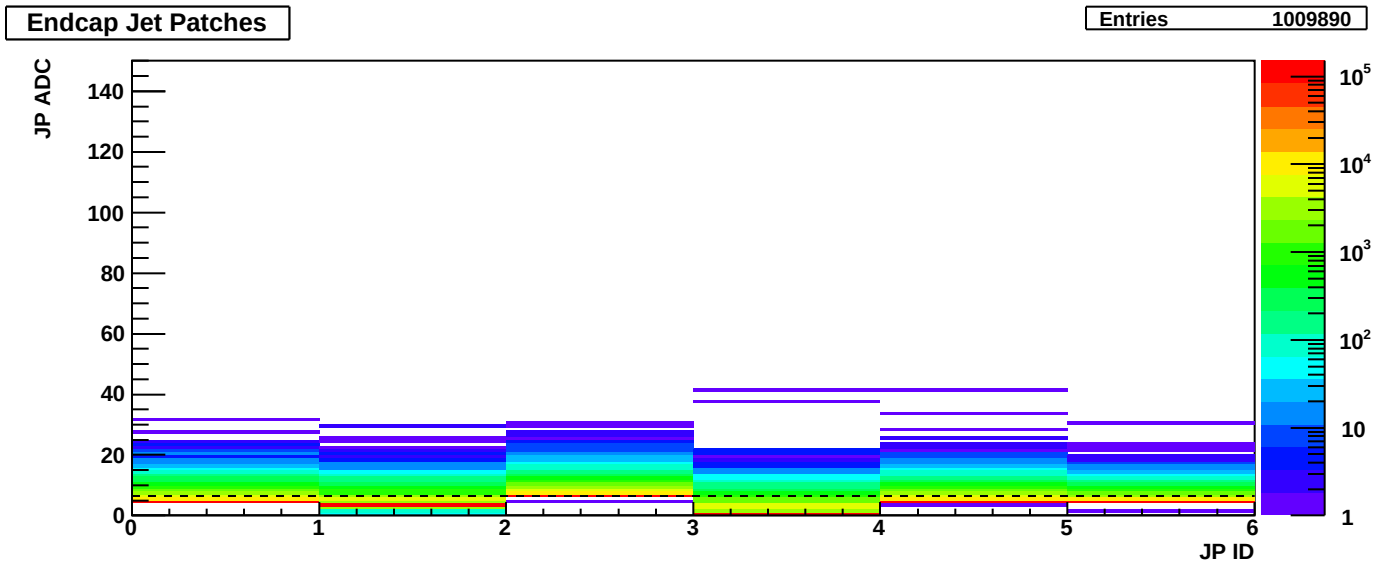

Barrel EMC L0 Input - High Tower
Entries 5.04945e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

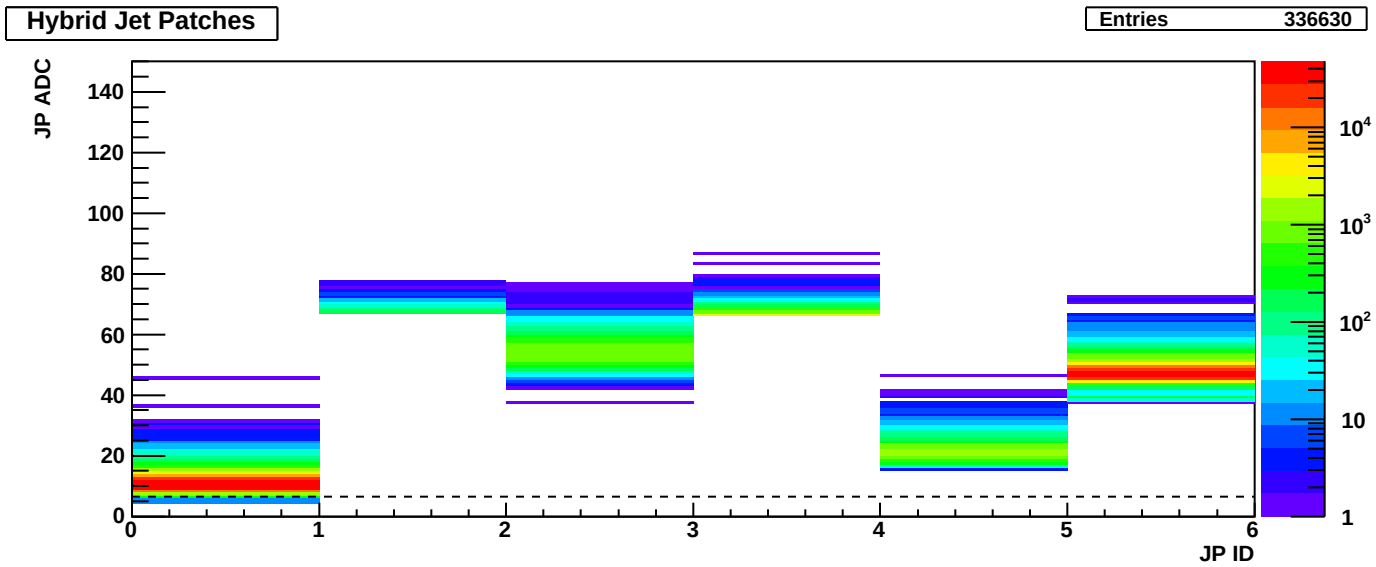

Barrel EMC L0 Input - Patch Sum
Entries 5.04945e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

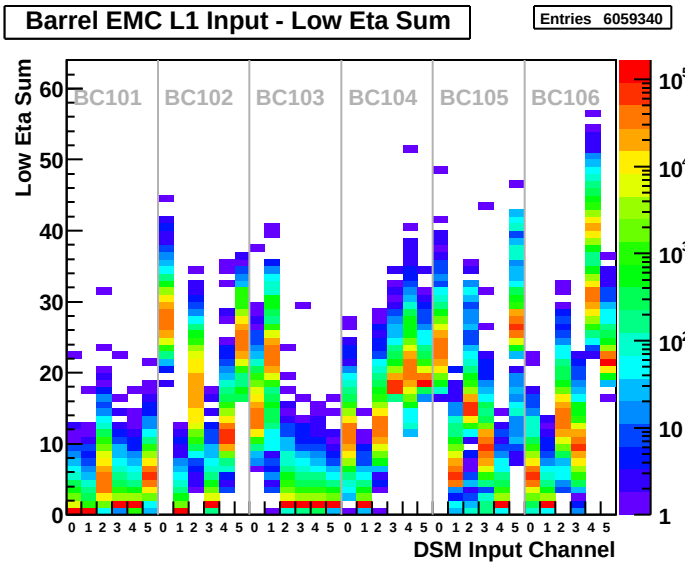

Endcap EMC L0 Input - High Tower
Entries 1.514835e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

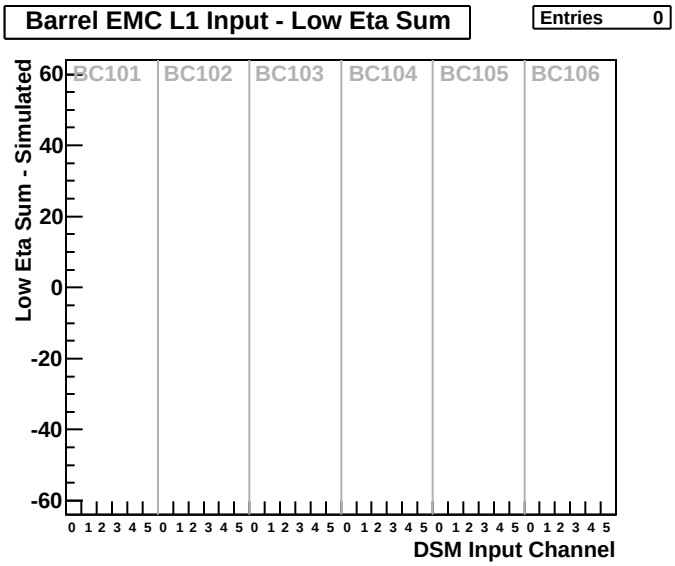

Endcap EMC L0 Input - Patch Sum
Entries 1.514835e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

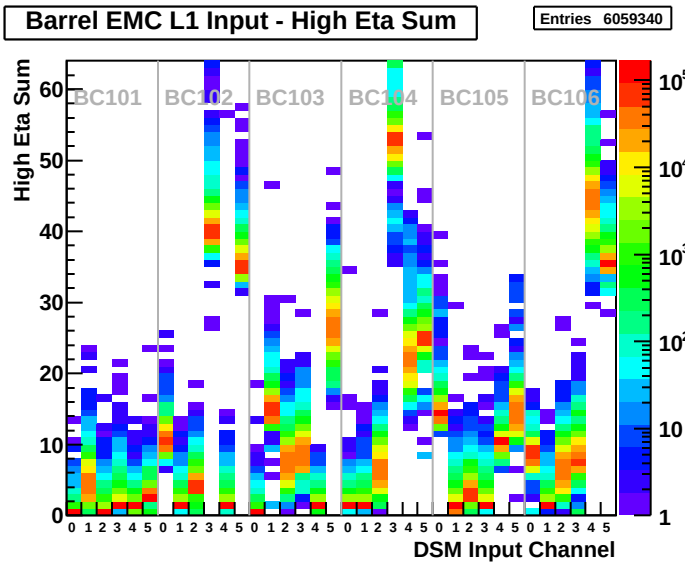

Barrel Jet Patches
Entries 3029670
JP ADC
JP ID

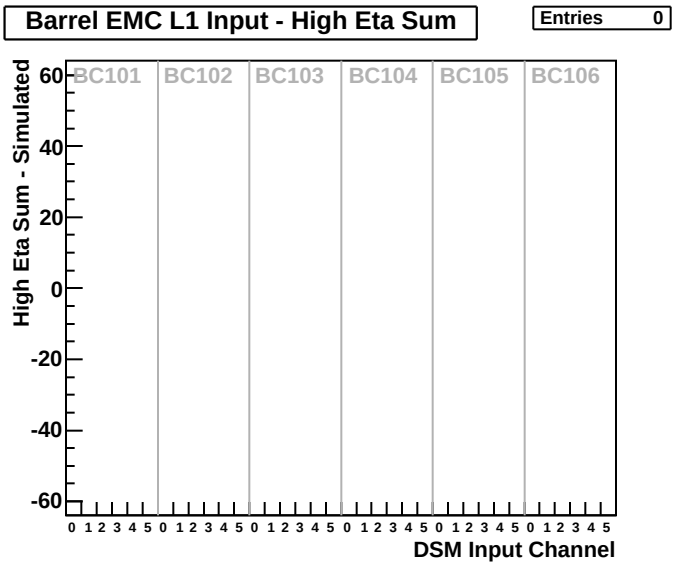

Endcap Jet Patches
Entries 1009890
JP ADC
JP ID

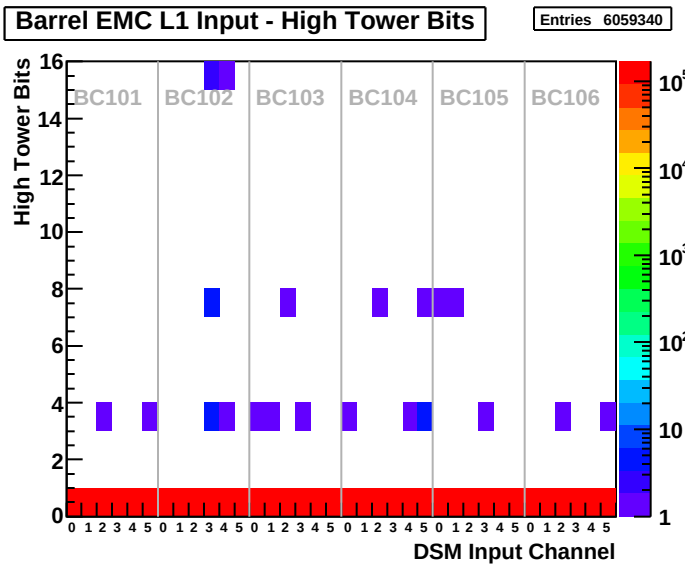

Hybrid Jet Patches
Entries 336630
JP ADC
JP ID

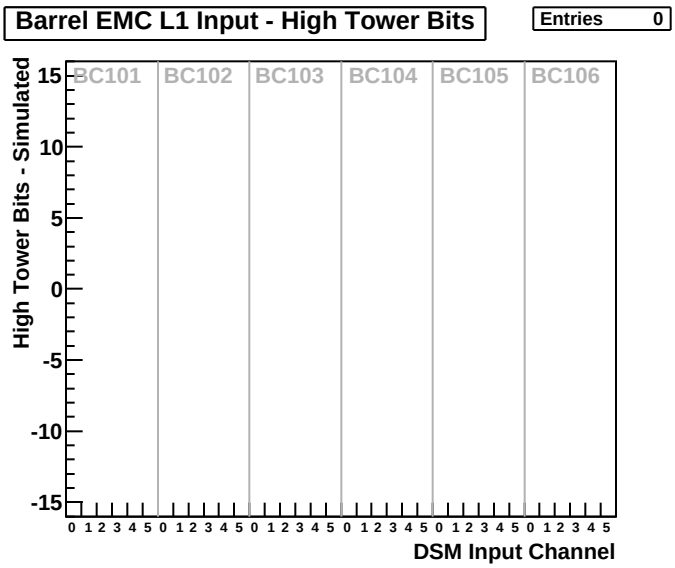

Barrel EMC L1 Input - Low Eta Sum
Entries 6059340
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

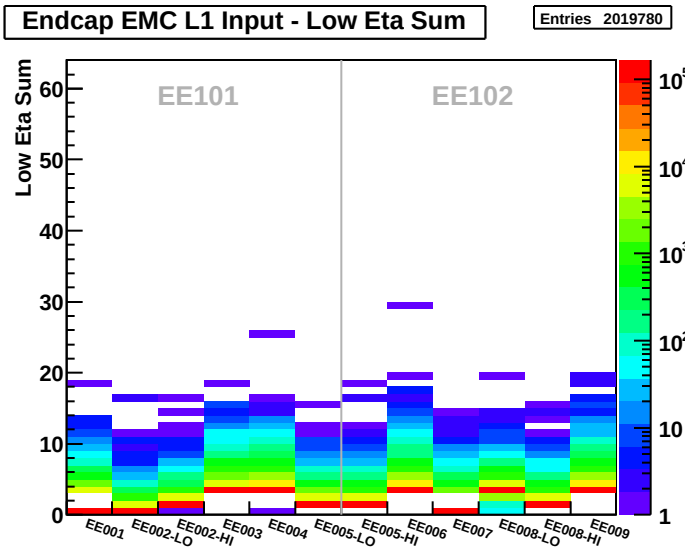

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

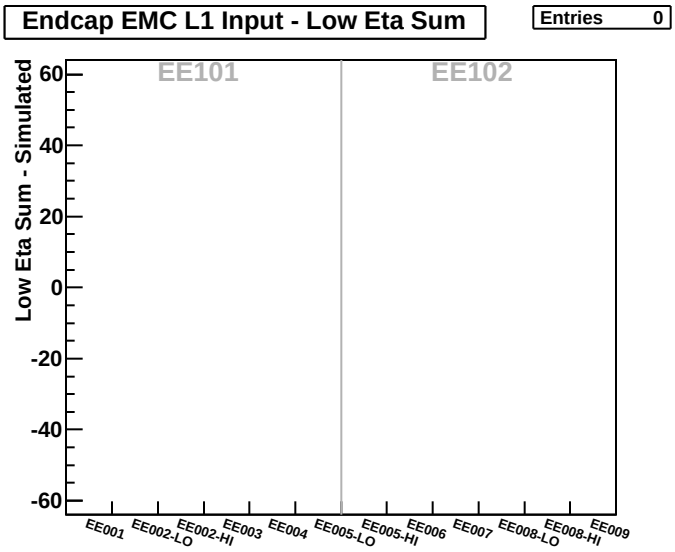

Barrel EMC L1 Input - High Eta Sum
Entries 6059340
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

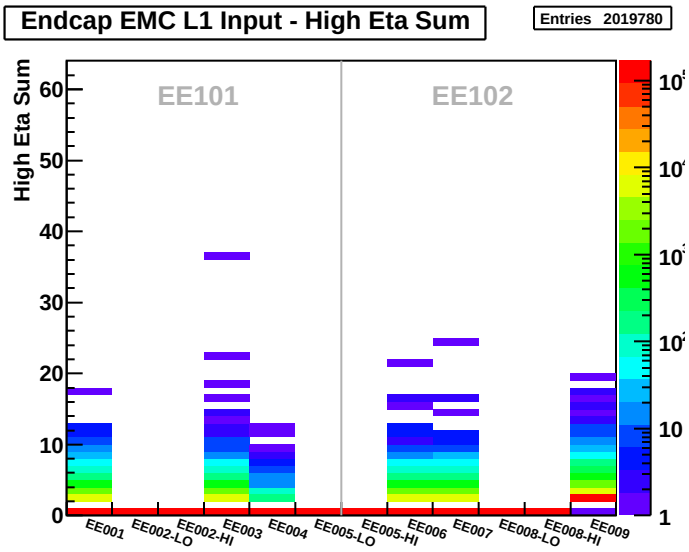

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

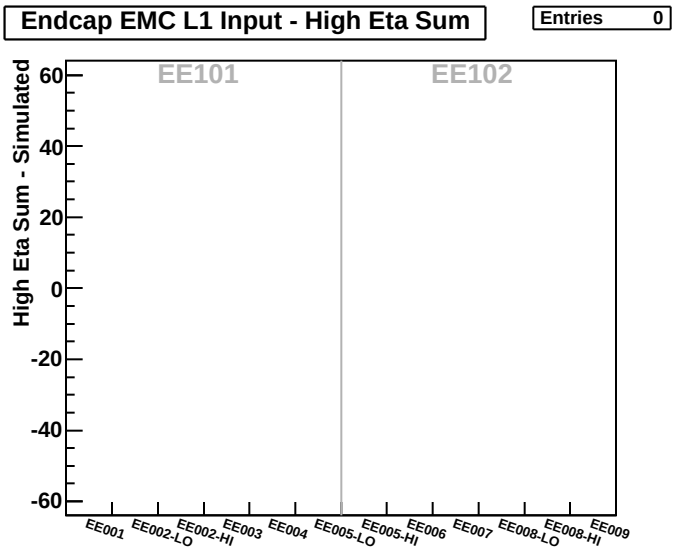

Barrel EMC L1 Input - High Tower Bits
Entries 6059340
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

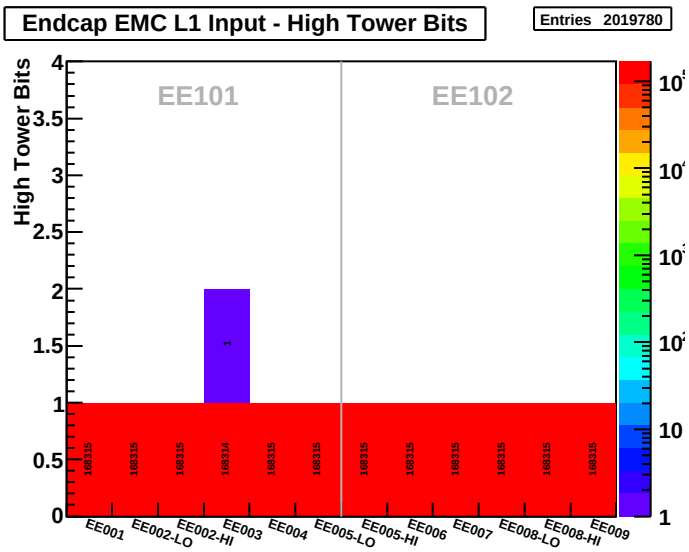

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

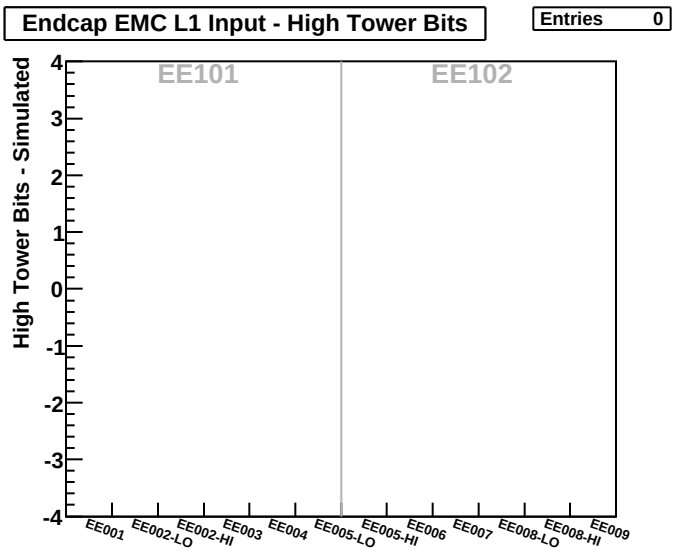

Endcap EMC L1 Input - Low Eta Sum
Entries 2019780
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

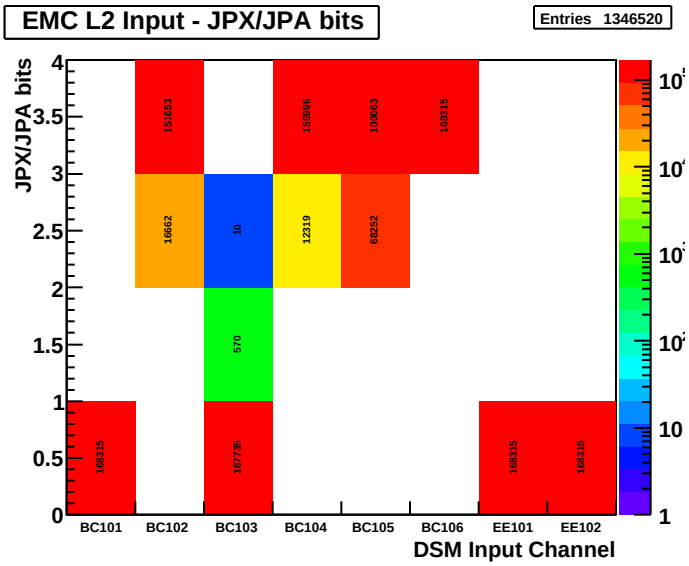

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

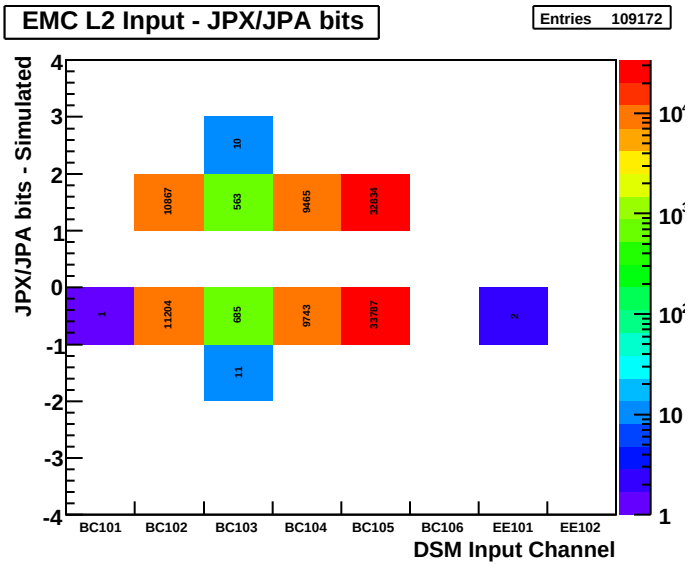

Endcap EMC L1 Input - High Eta Sum
Entries 2019780
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

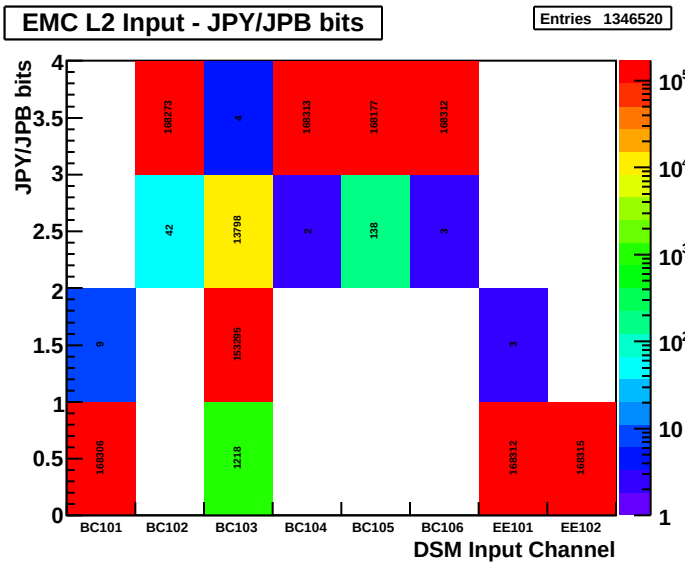

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

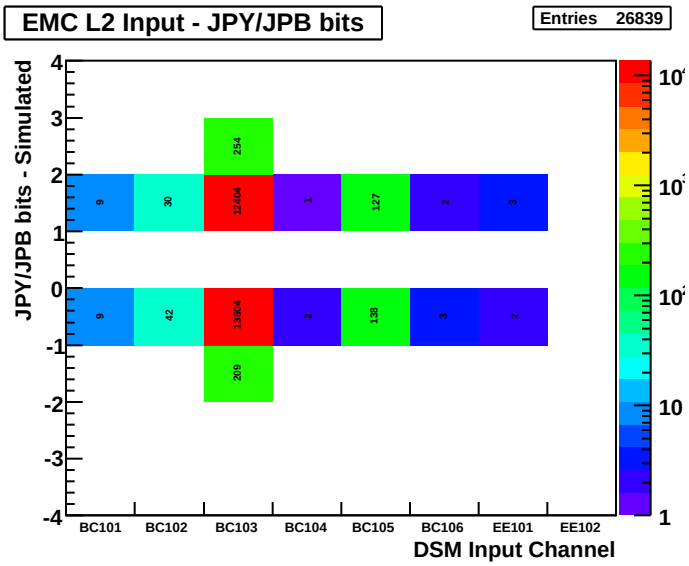

Endcap EMC L1 Input - High Tower Bits
Entries 2019780
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

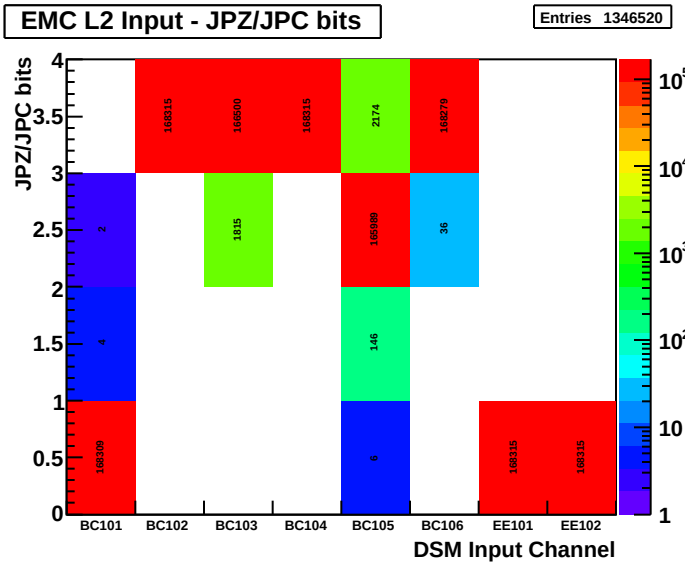

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

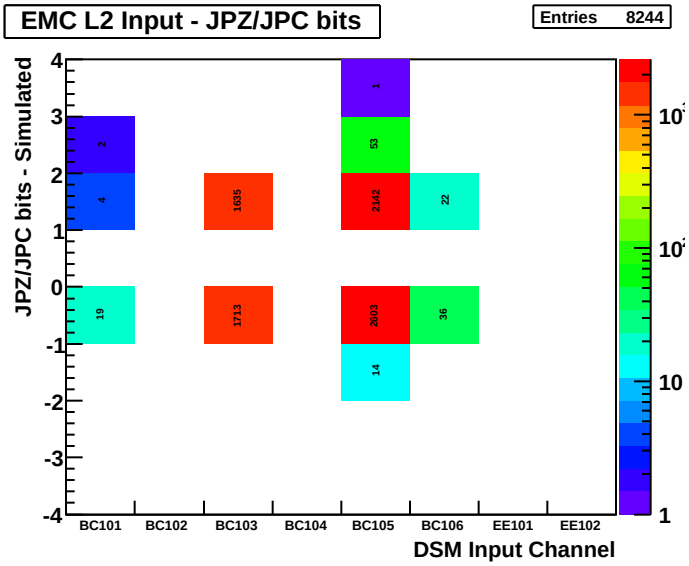

EMC L2 Input - JPX/JPA bits
Entries 1346520
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

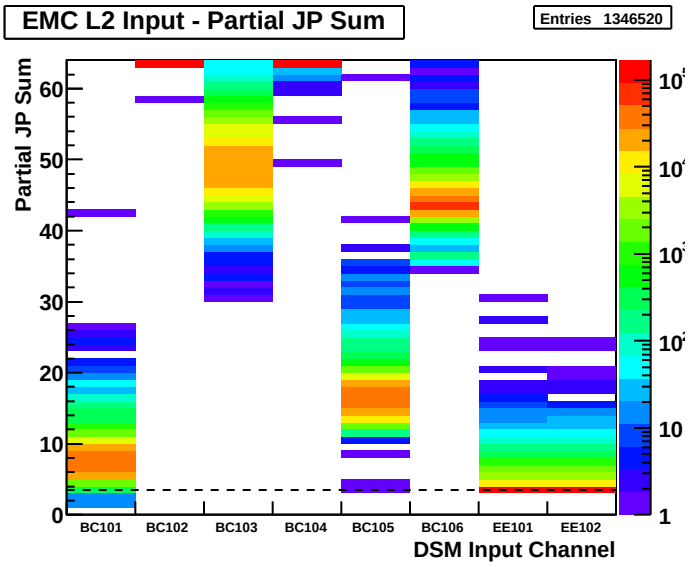

EMC L2 Input - JPX/JPA bits
Entries 109172
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

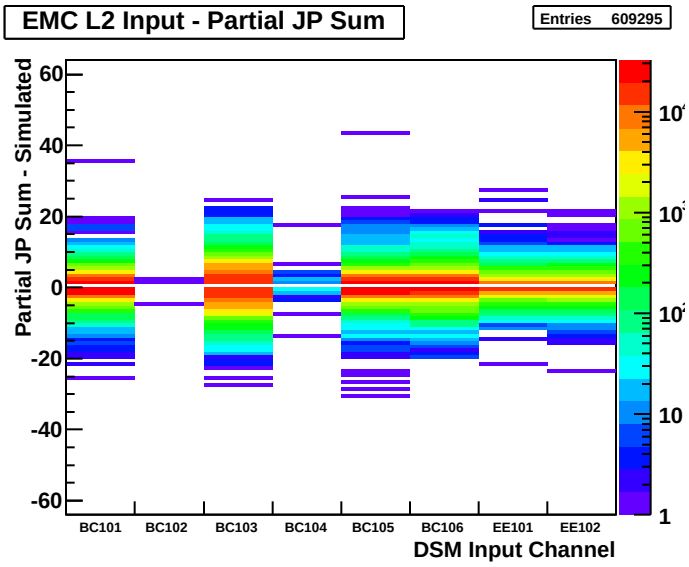

EMC L2 Input - JPY/JPB bits
Entries 1346520
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

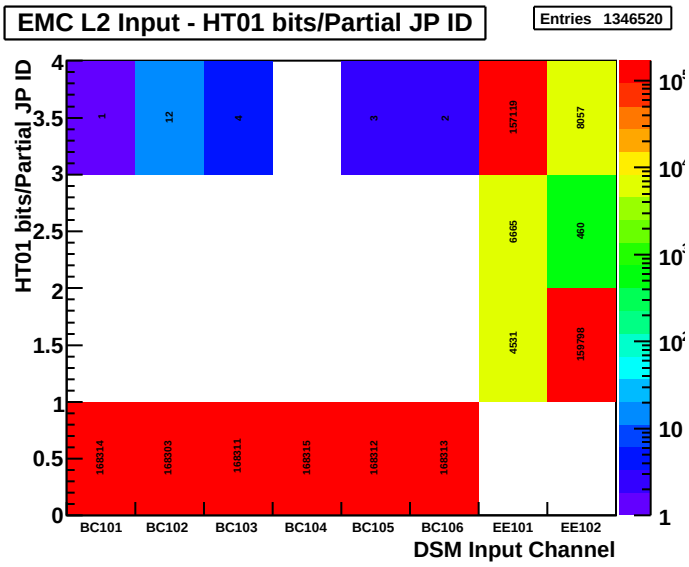

EMC L2 Input - JPY/JPB bits
Entries 26839
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

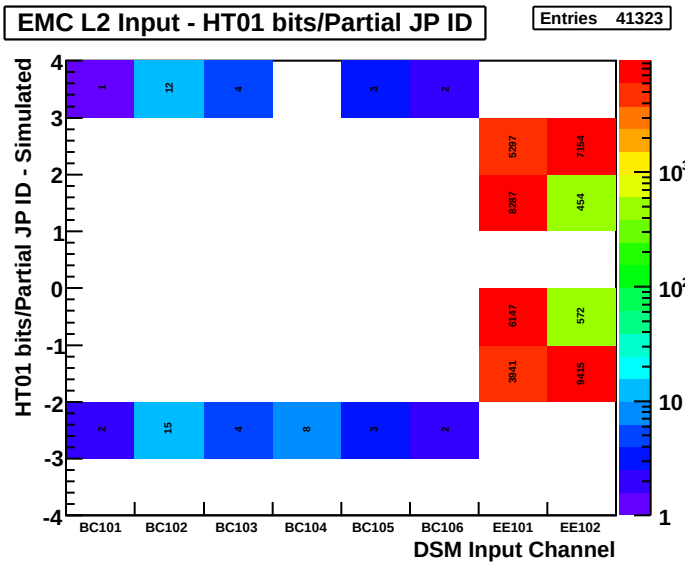

EMC L2 Input - JPZ/JPC bits
Entries 1346520
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

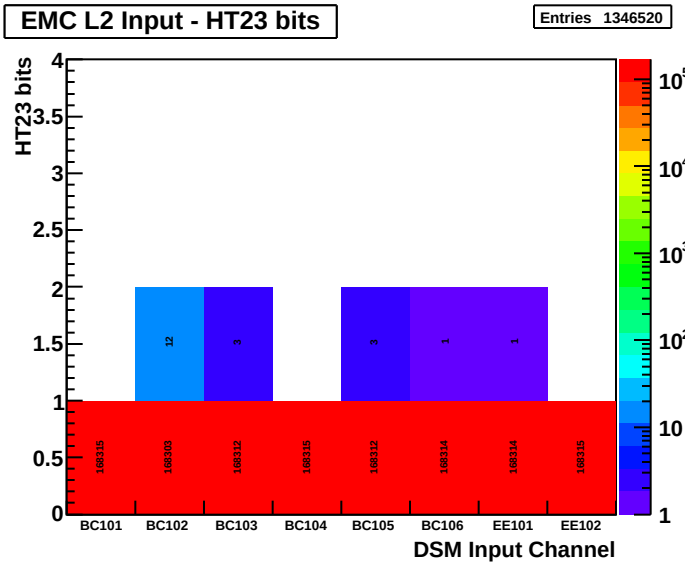

EMC L2 Input - JPZ/JPC bits
Entries 8244
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

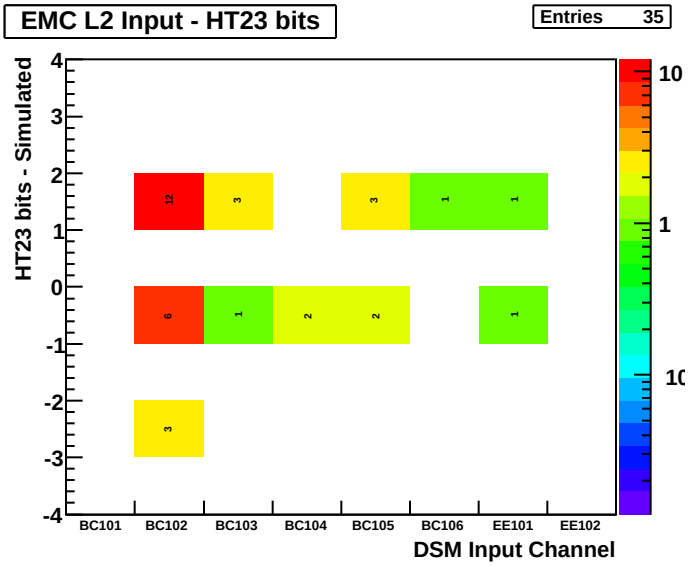

EMC L2 Input - Partial JP Sum
Entries 1346520
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

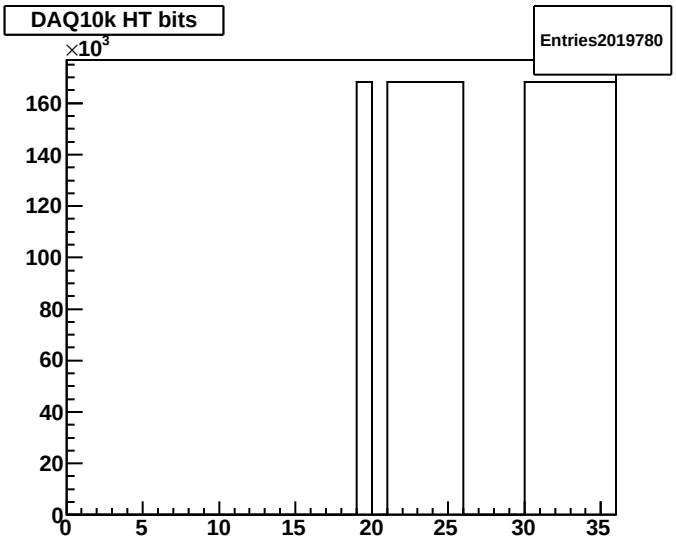

EMC L2 Input - Partial JP Sum
Entries 609295
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

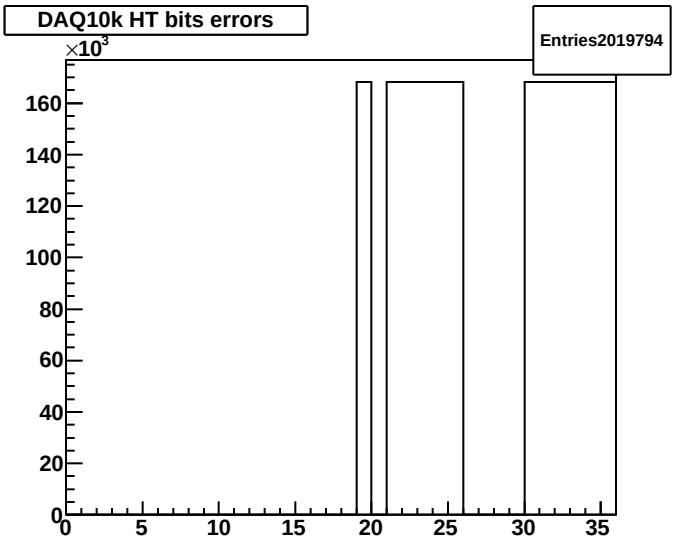

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1346520
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

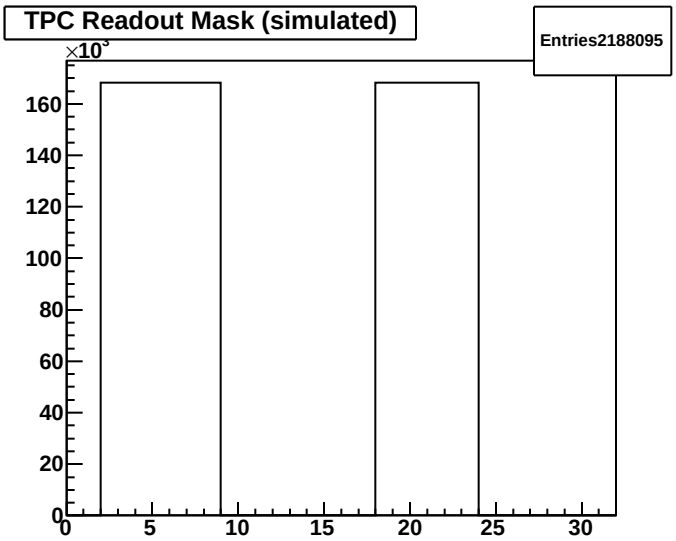

EMC L2 Input - HT01 bits/Partial JP ID
Entries 41323
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

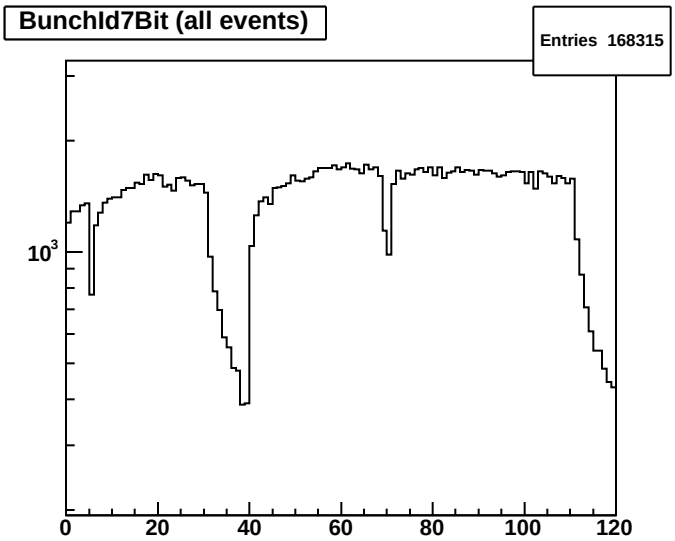

EMC L2 Input - HT23 bits
Entries 1346520
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

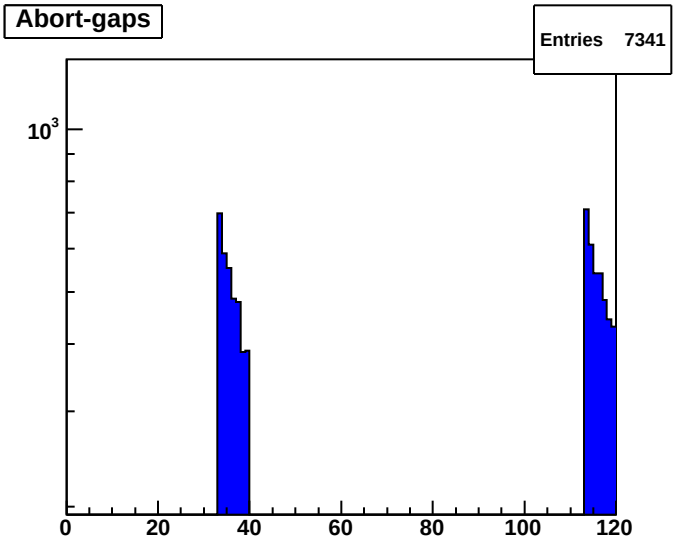

EMC L2 Input - HT23 bits
Entries 35
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

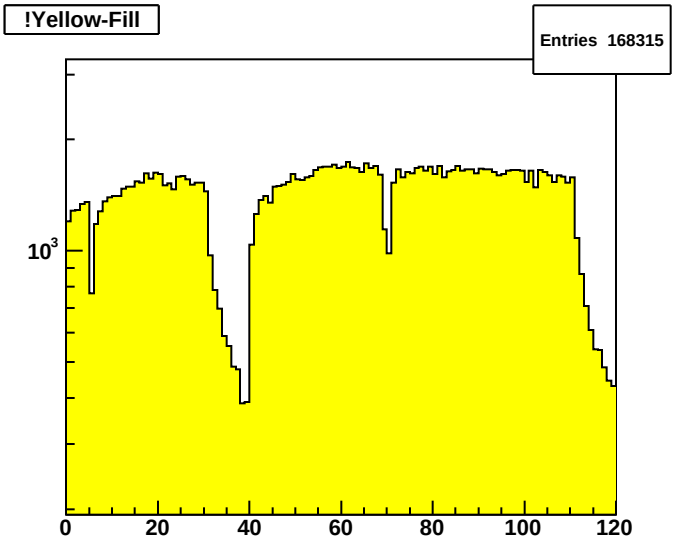

DAQ10k HT bits
Entries2019780
×10^3
160
140
120
100
80
60
40
20
0
0 5 10 15 20 25 30 35

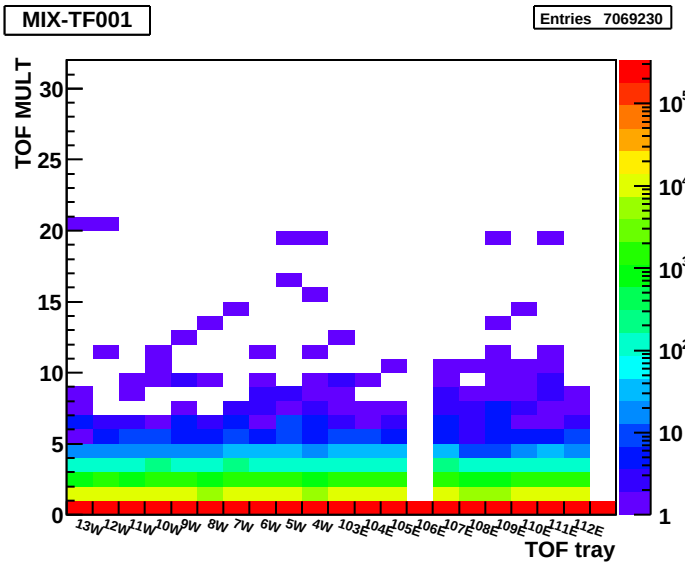

DAQ10k HT bits errors
Entries2019794
×10^3
160
140
120
100
80
60
40
20
0
0 5 10 15 20 25 30 35

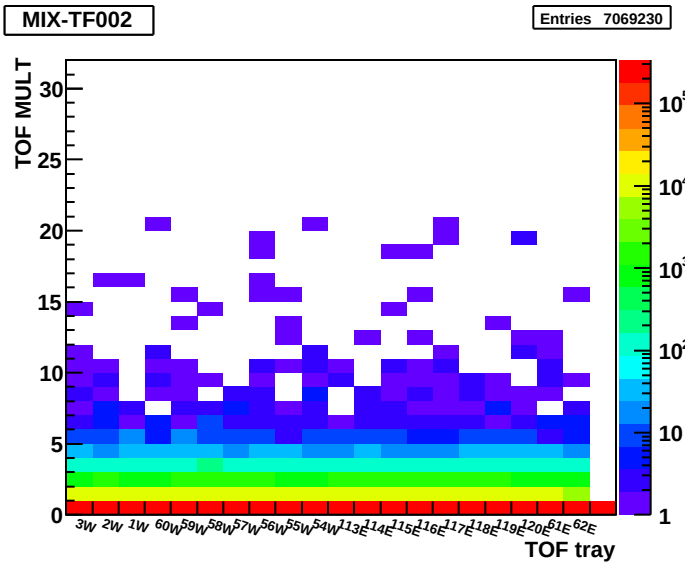

TPC Readout Mask (simulated)
Entries2188095
×10^3
160
140
120
100
80
60
40
20
0
0 5 10 15 20 25 30

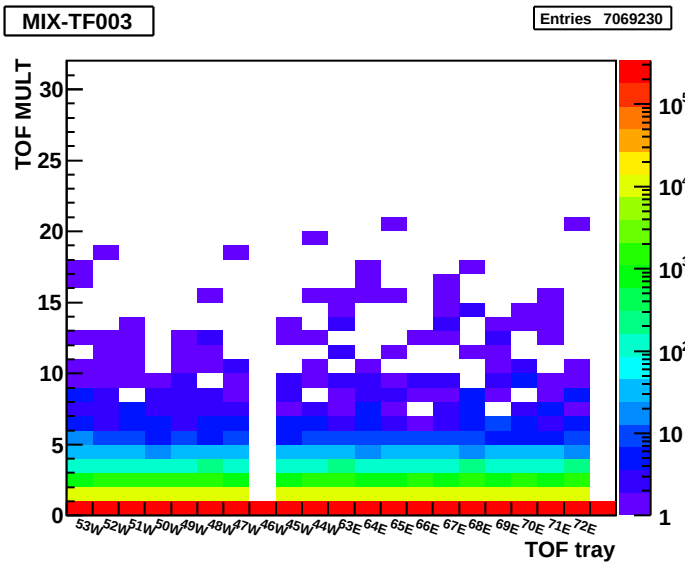

BunchId7Bit (all events)
Entries 168315
10^3
0 20 40 60 80 100 120

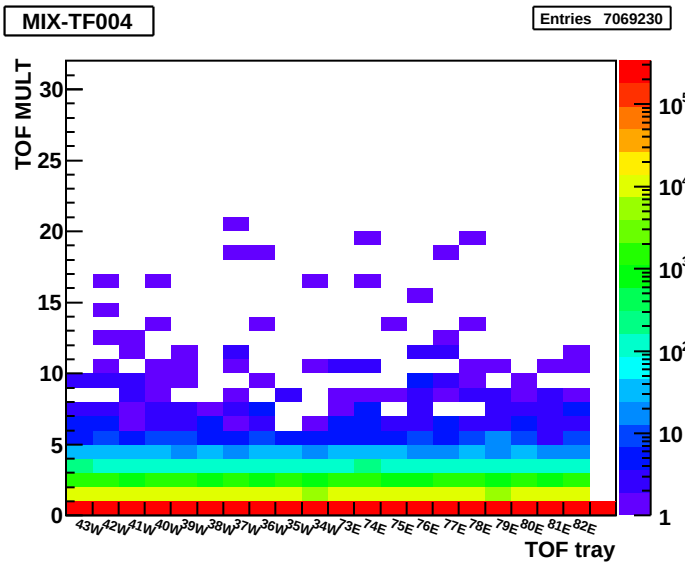

Abort-gaps
Entries 7341
10^3
0 20 40 60 80 100 120

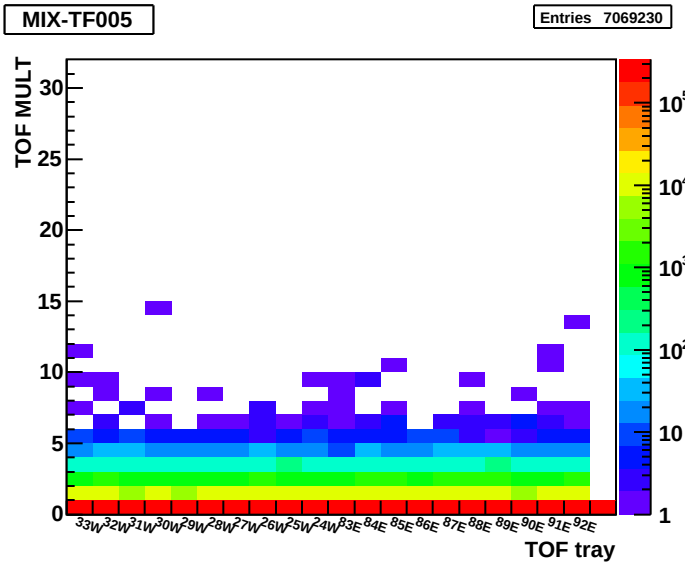

!Yellow-Fill
Entries 168315
10^3
0 20 40 60 80 100 120

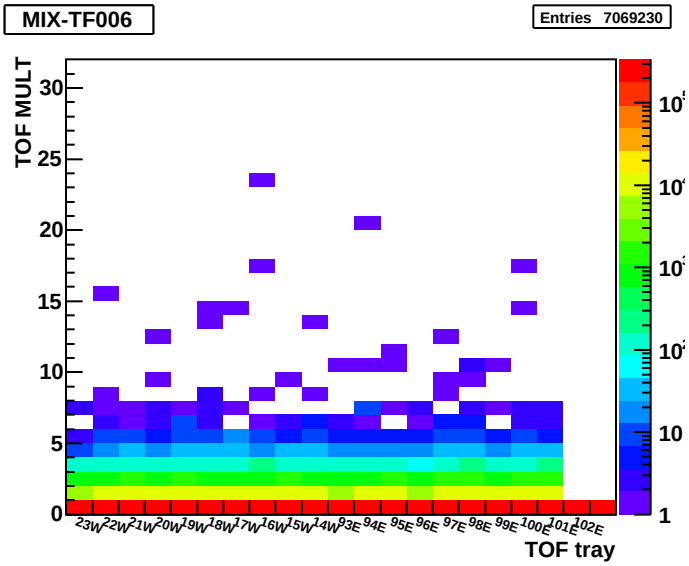

MIX-TF001
Entries 7069230
TOF MULT
TOF tray

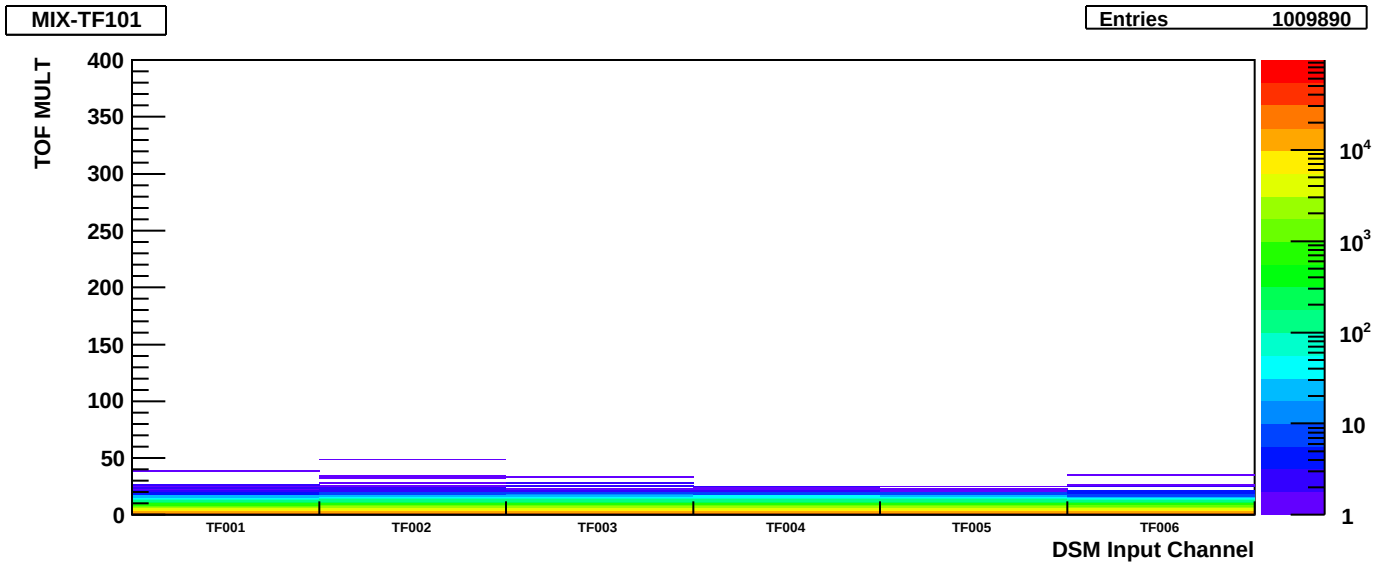

MIX-TF002
Entries 7069230
TOF MULT
TOF tray

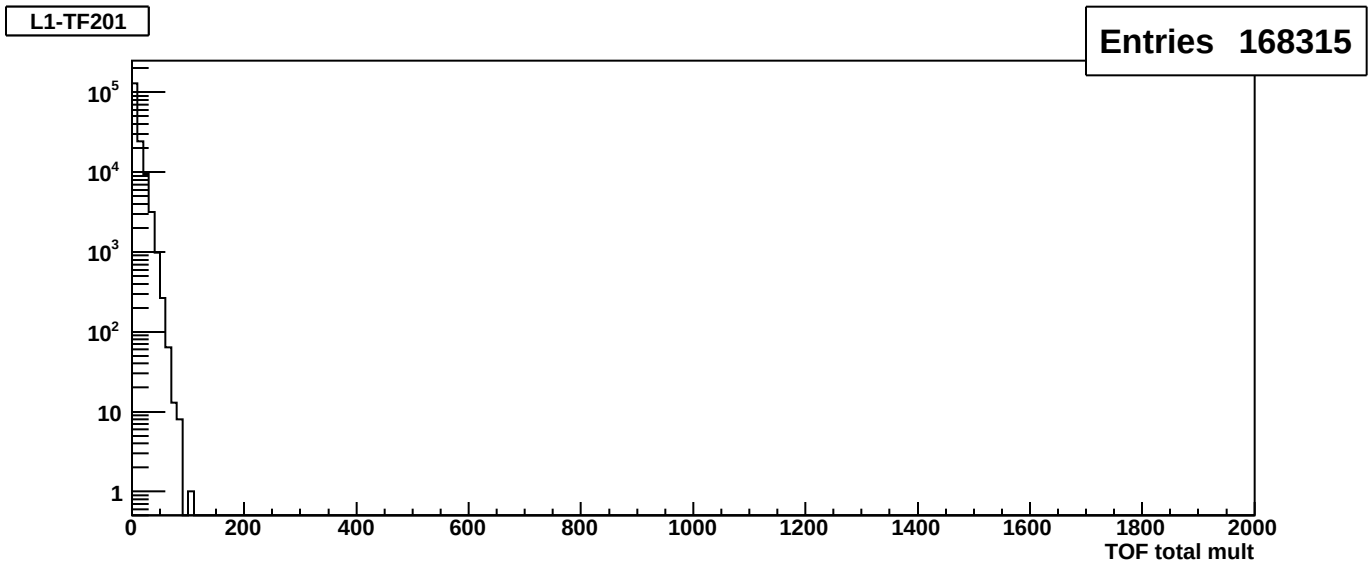

MIX-TF003
Entries 7069230
TOF MULT
TOF tray

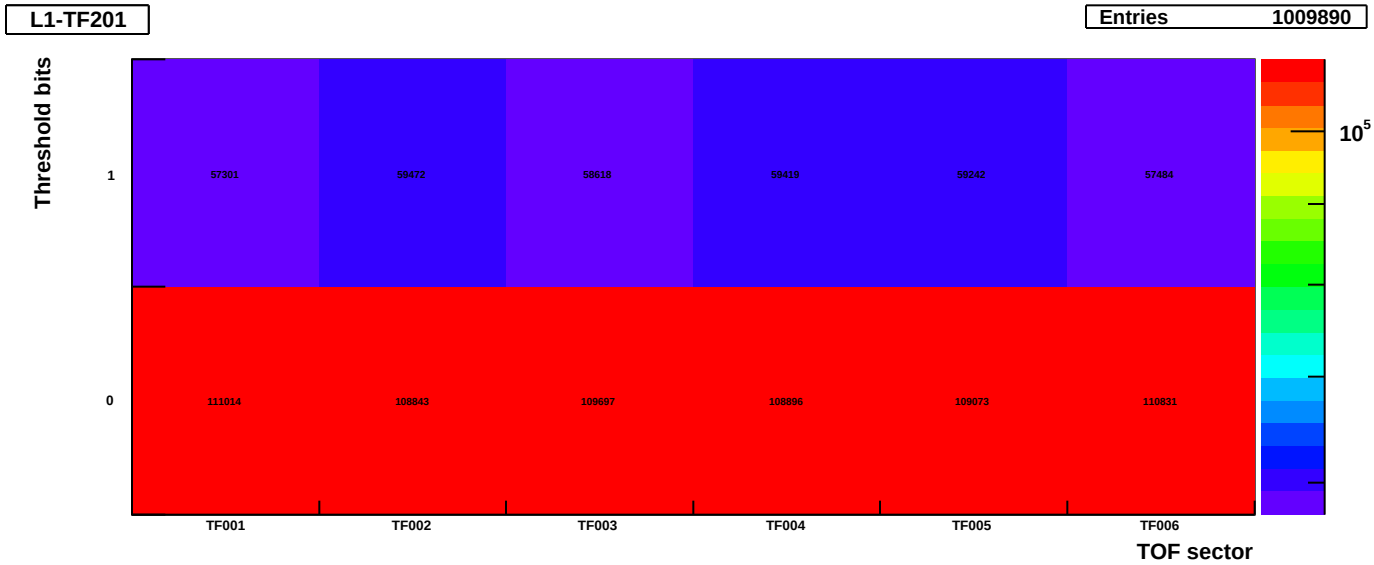

MIX-TF004
Entries 7069230
TOF MULT
TOF tray

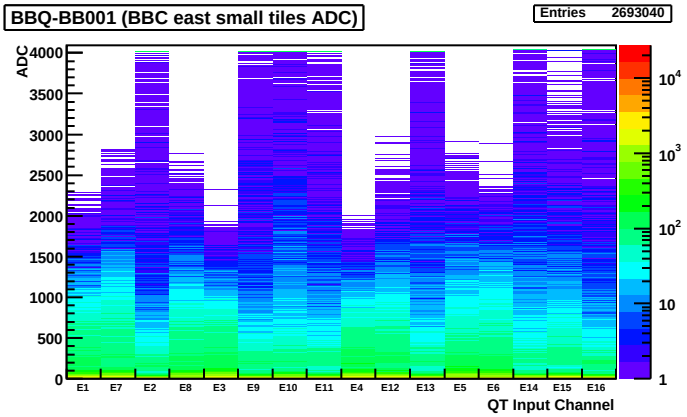

MIX-TF005
Entries 7069230
TOF MULT
TOF tray

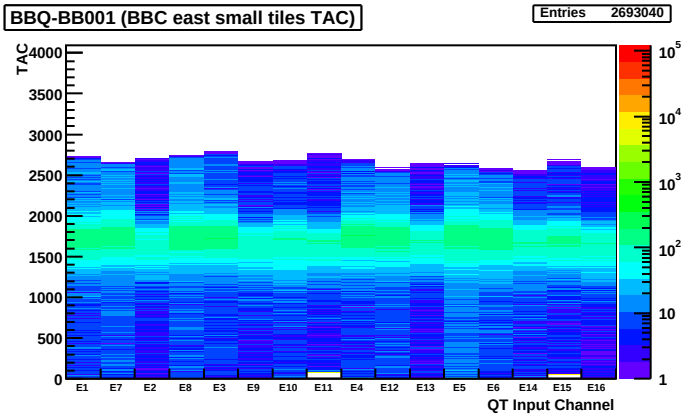

MIX-TF006
Entries 7069230
TOF MULT
TOF tray

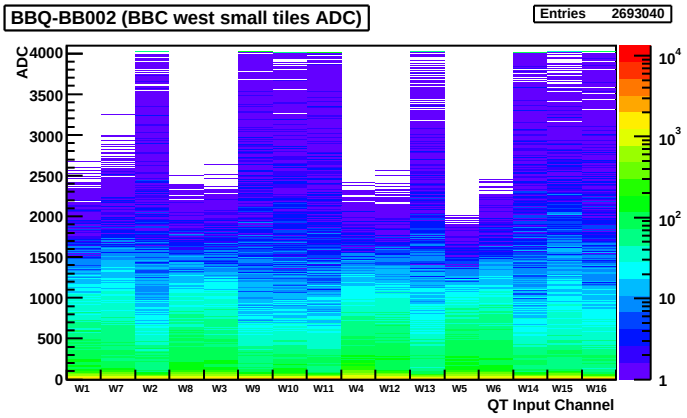

MIX-TF101
Entries 1009890
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

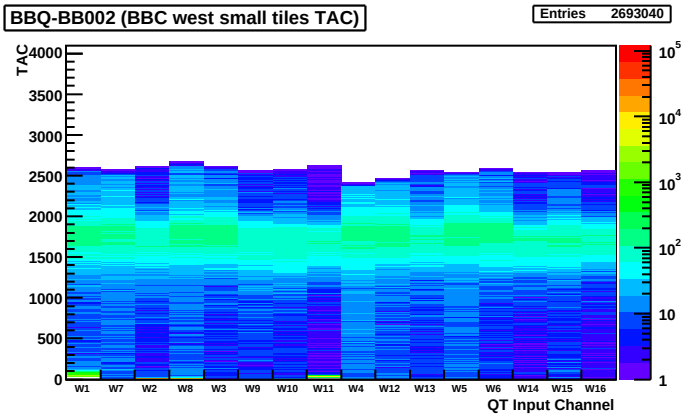

L1-TF201
Entries 168315
10^5
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

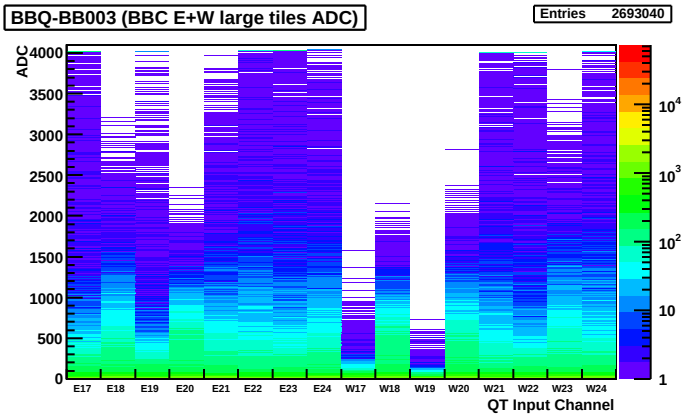

L1-TF201
Entries 1009890
Threshold bits
1
0
57301
59472
58618
59419
59242
57484
111014
108843
109697
108896
109073
110831
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^5

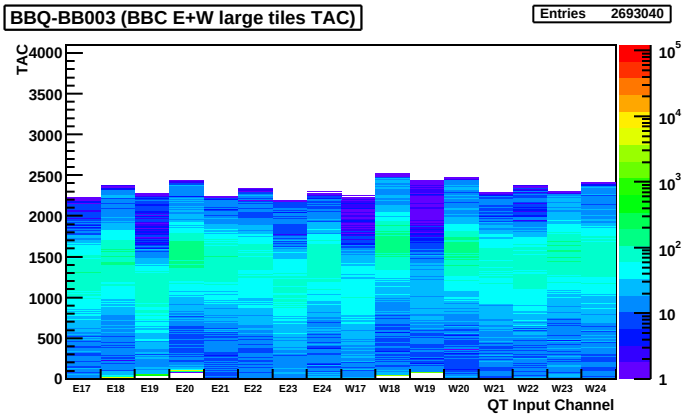

BBQ-BB001 (BBC east small tiles ADC)
Entries 2693040
ADC
QT Input Channel

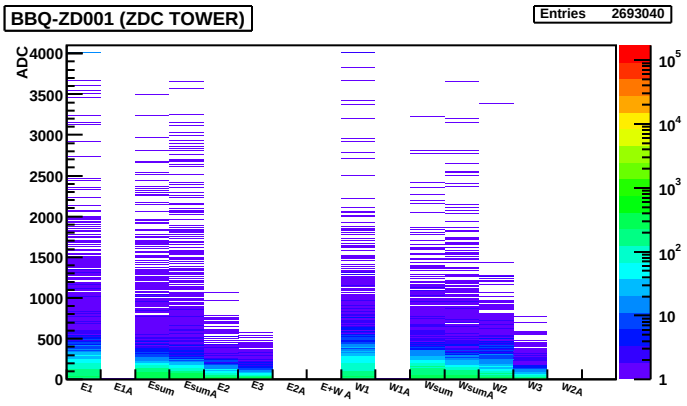

BBQ-BB001 (BBC east small tiles TAC)
Entries 2693040
TAC
QT Input Channel

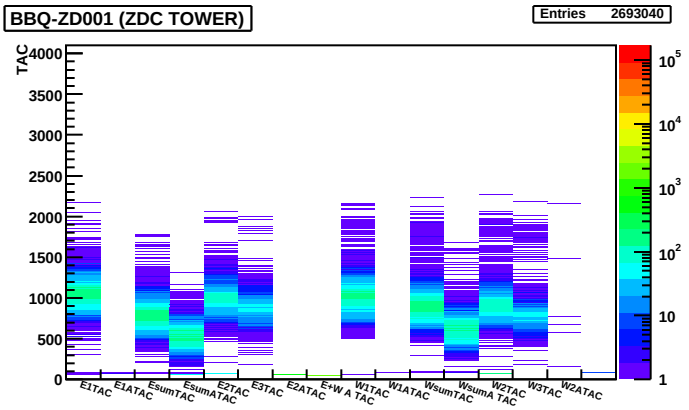

BBQ-BB002 (BBC west small tiles ADC)
Entries 2693040
ADC
QT Input Channel

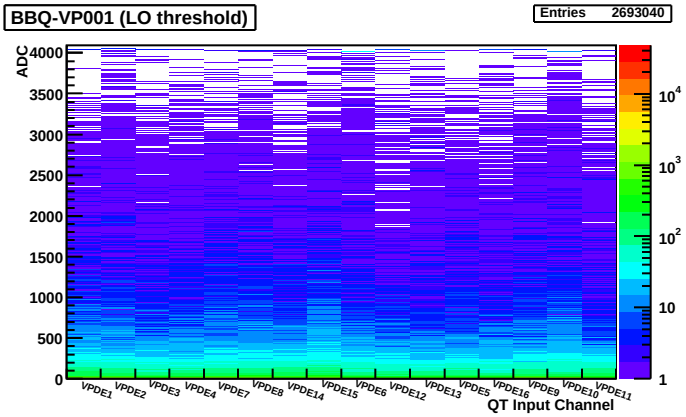

BBQ-BB002 (BBC west small tiles TAC)
Entries 2693040
TAC
QT Input Channel

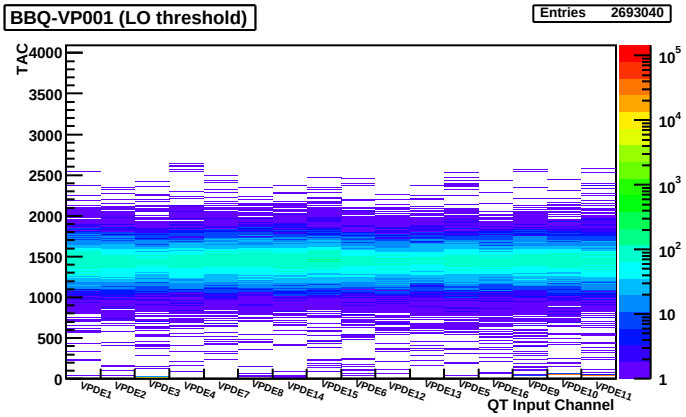

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 2693040
ADC
QT Input Channel

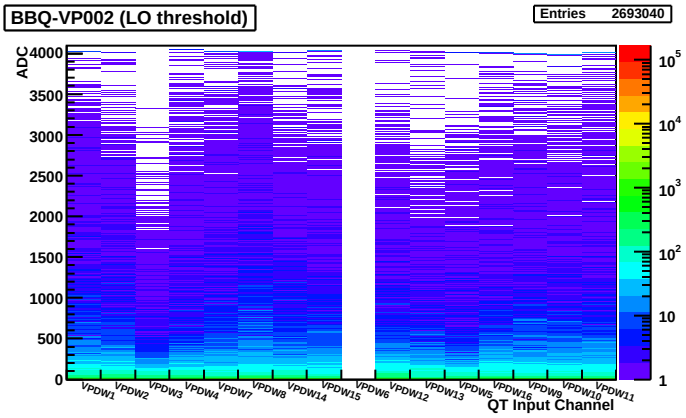

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 2693040
TAC
QT Input Channel

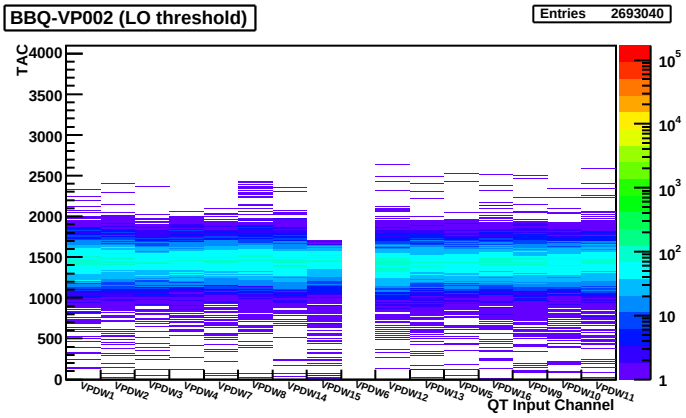

BBQ-ZD001 (ZDC TOWER)
Entries 2693040
ADC

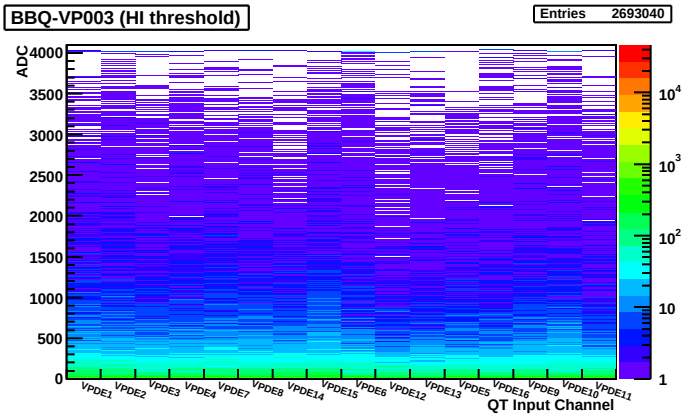

BBQ-ZD001 (ZDC TOWER)
Entries 2693040
TAC

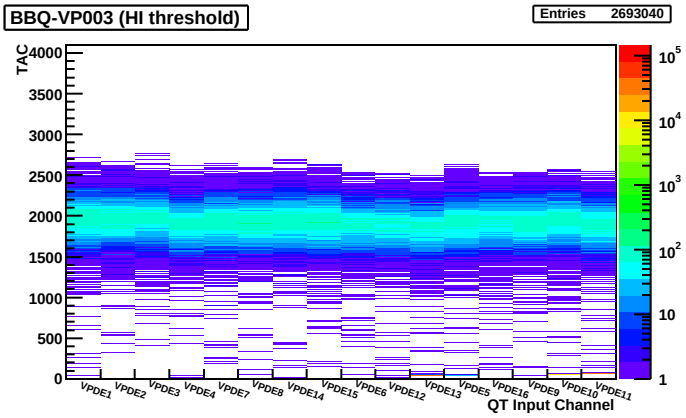

BBQ-VP001 (LO threshold)
Entries 2693040
ADC
QT Input Channel

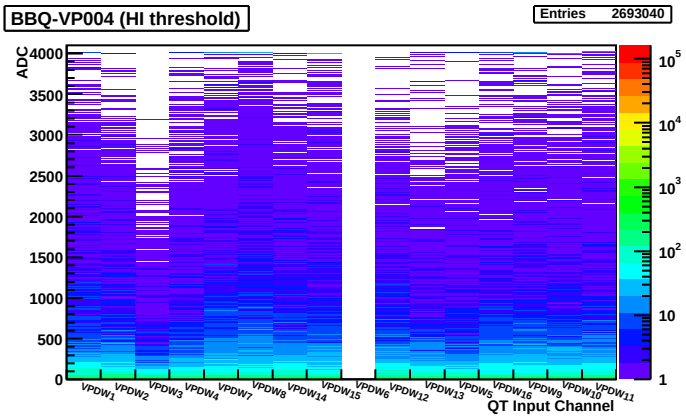

BBQ-VP001 (LO threshold)
Entries 2693040
TAC
QT Input Channel

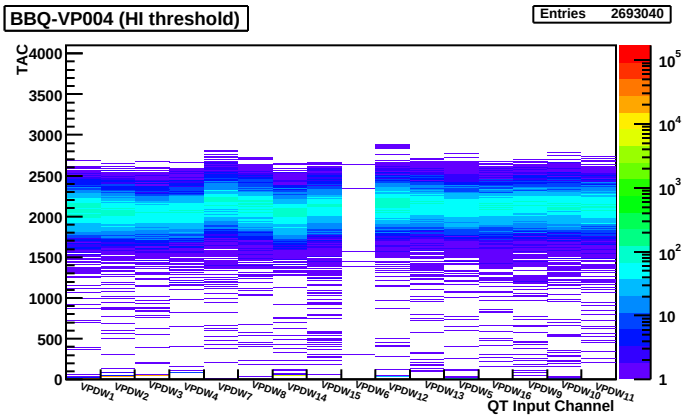

BBQ-VP002 (LO threshold)
Entries 2693040
ADC
QT Input Channel

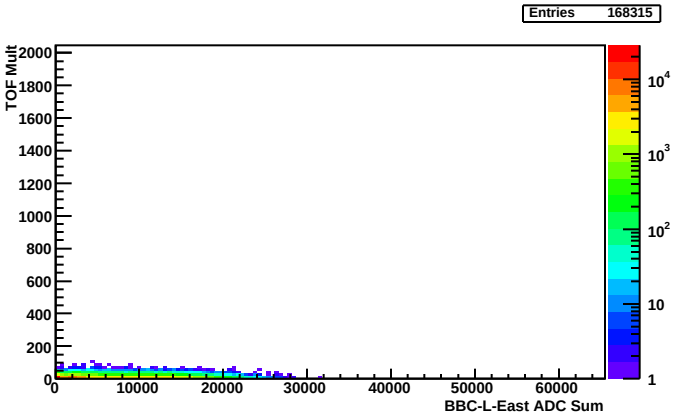

BBQ-VP002 (LO threshold)
Entries 2693040
TAC
QT Input Channel

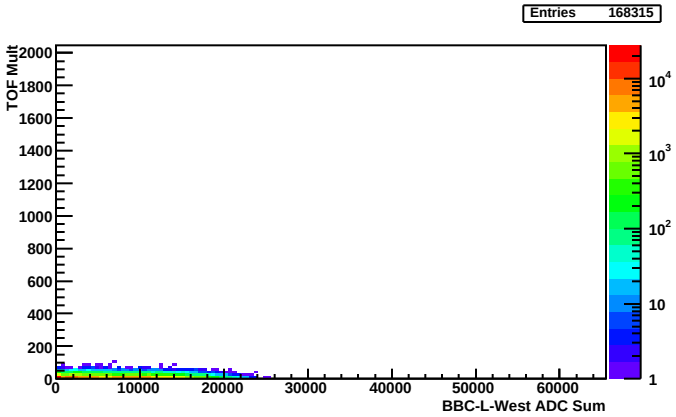

BBQ-VP003 (HI threshold)
Entries 2693040
ADC
QT Input Channel

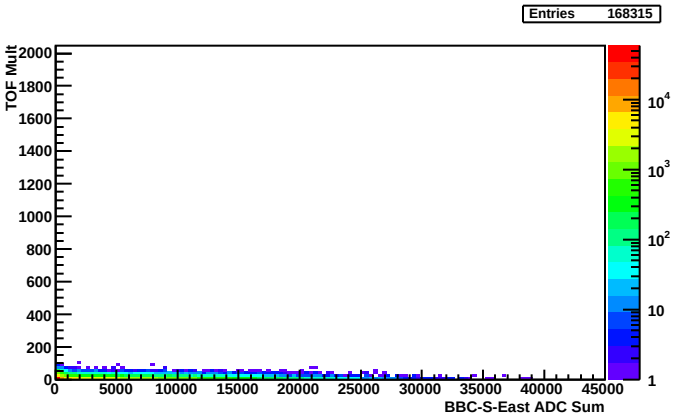

BBQ-VP003 (HI threshold)
Entries 2693040
TAC
QT Input Channel

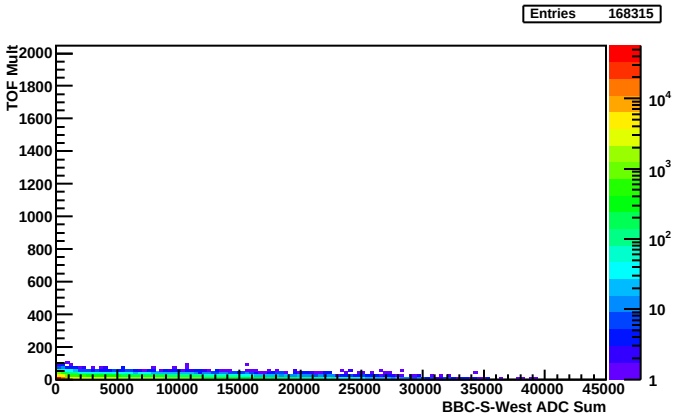

BBQ-VP004 (HI threshold)
Entries 2693040
ADC
QT Input Channel

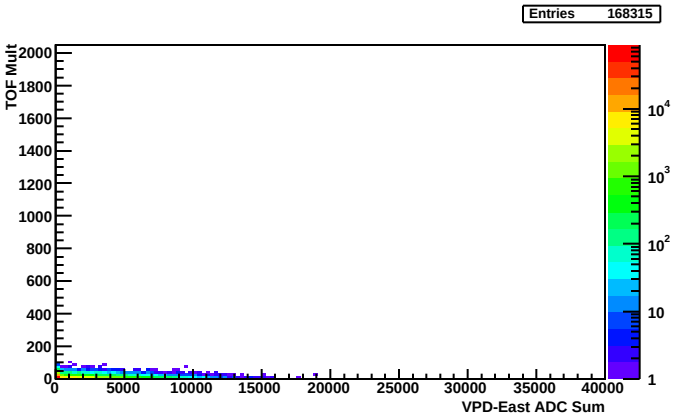

BBQ-VP004 (HI threshold)
Entries 2693040
TAC
QT Input Channel

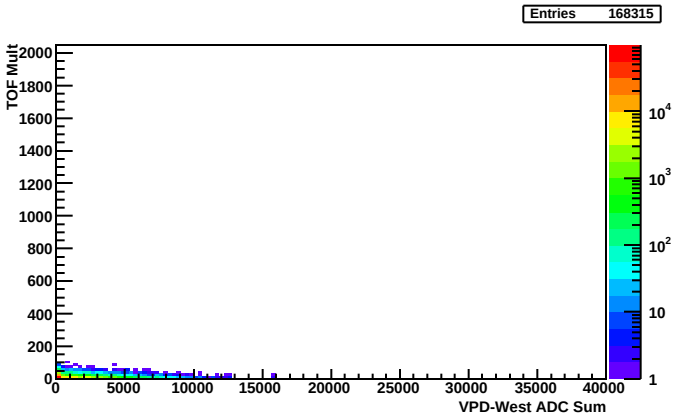

Entries 168315
TOF Mult
BBC-L-East ADC Sum

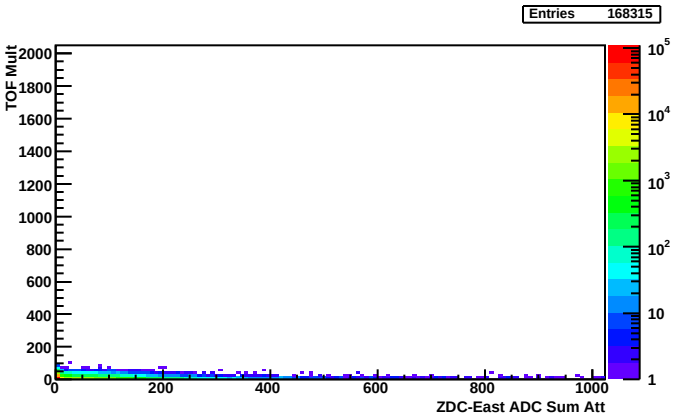

Entries 168315
TOF Mult
BBC-L-West ADC Sum

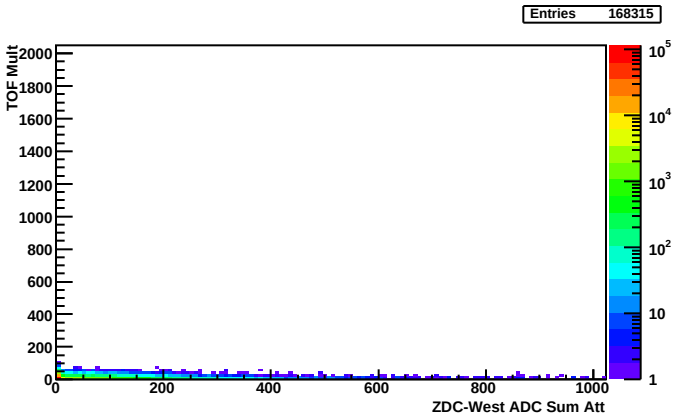

Entries 168315
TOF Mult
BBC-S-East ADC Sum

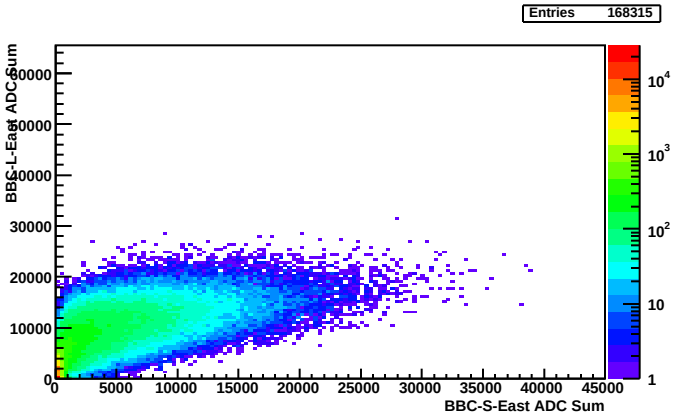

Entries 168315
TOF Mult
BBC-S-West ADC Sum

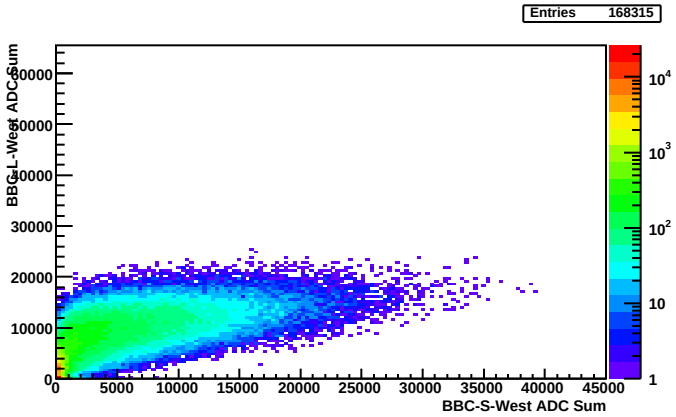

Entries 168315
TOF Mult
VPD-East ADC Sum

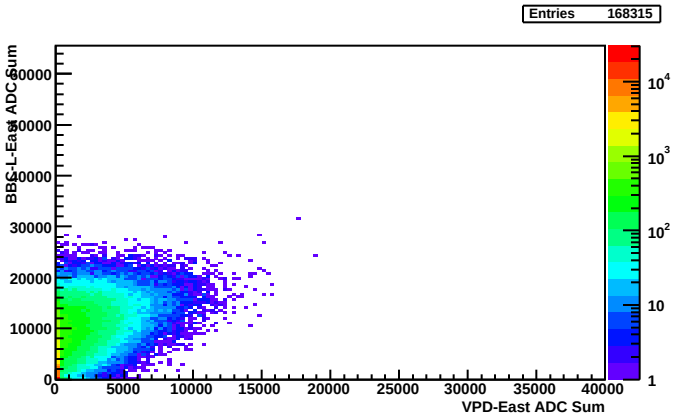

Entries 168315
TOF Mult
VPD-West ADC Sum

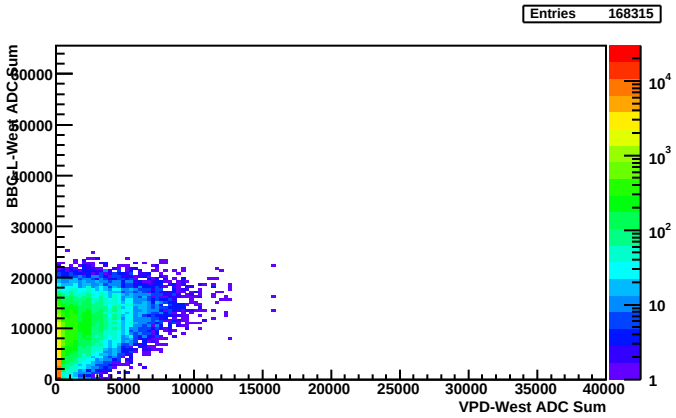

Entries 168315
TOF Mult
ZDC-East ADC Sum Att

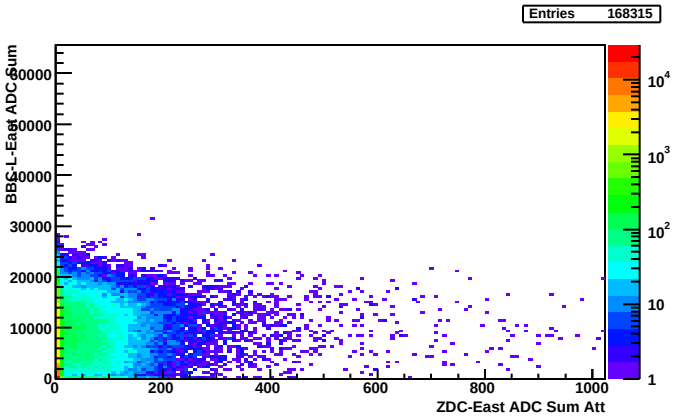

Entries 168315
TOF Mult
ZDC-West ADC Sum Att

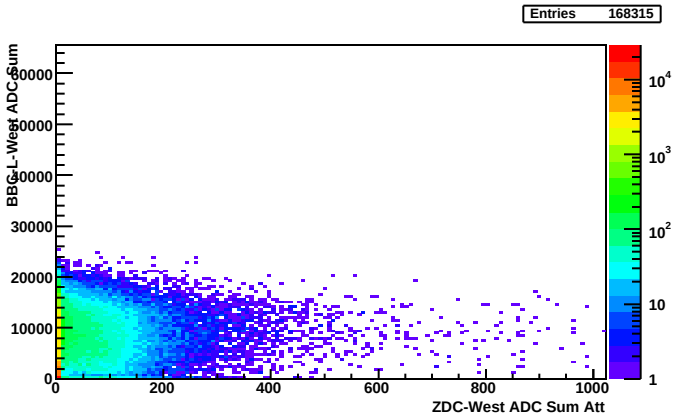

Entries 168315
BBC-L-East ADC Sum
BBC-S-East ADC Sum

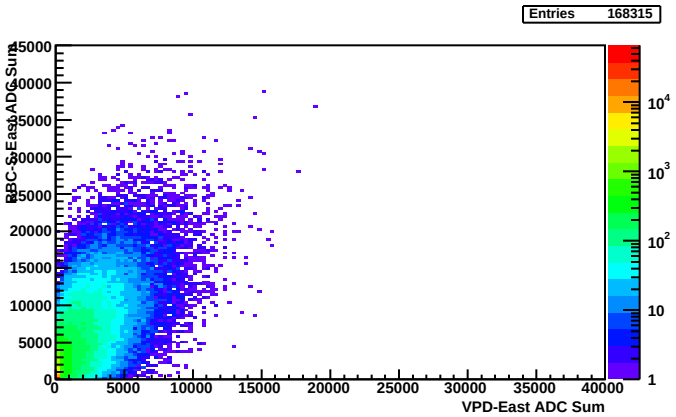

Entries 168315
BBC-L-West ADC Sum
BBC-S-West ADC Sum

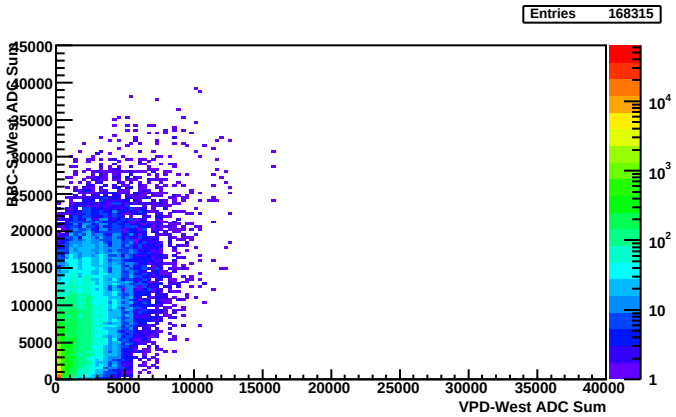

Entries 168315
BBC-L-East ADC Sum
VPD-East ADC Sum

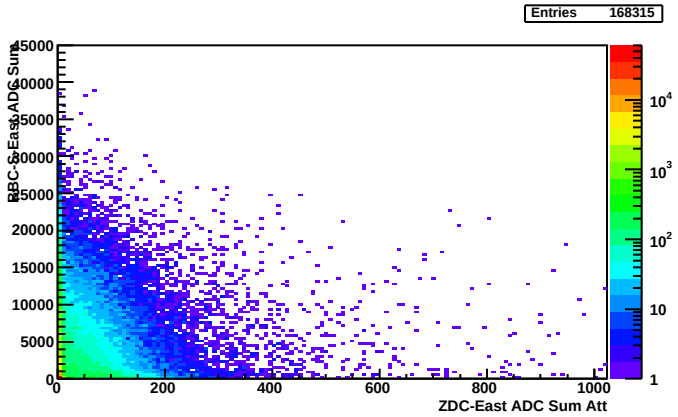

Entries 168315
BBC-L-West ADC Sum
VPD-West ADC Sum

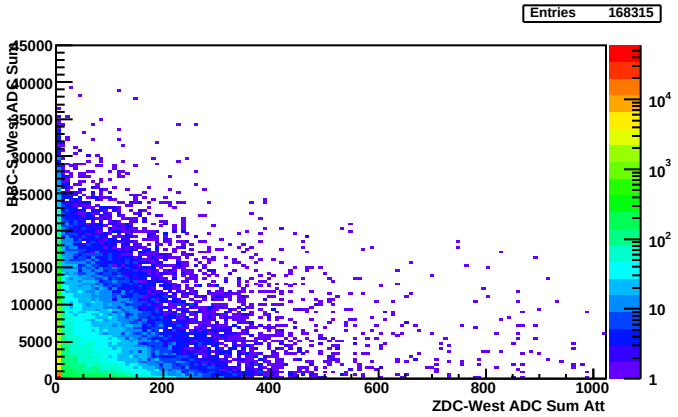

Entries 168315
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

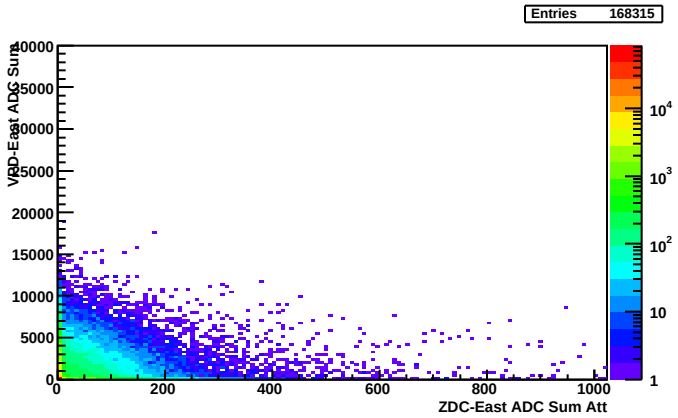

Entries 168315
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

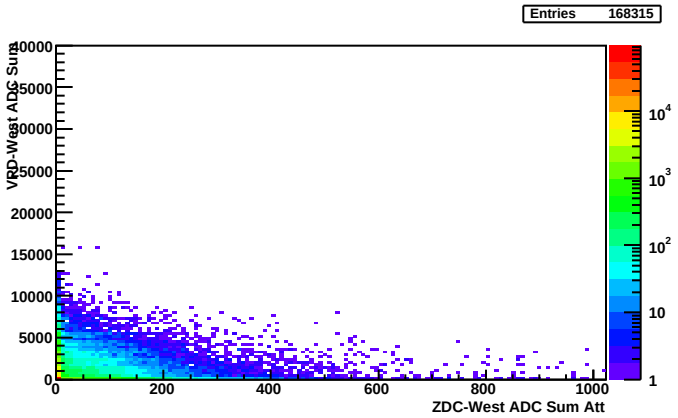

Entries 168315
BBC-S-East ADC Sum
VPD-East ADC Sum

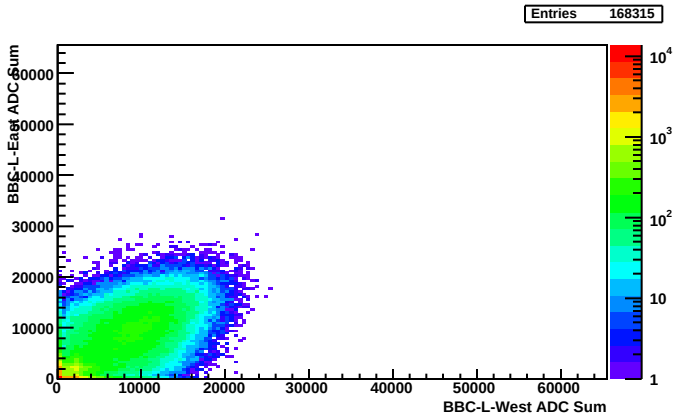

Entries 168315
BBC-S-West ADC Sum
VPD-West ADC Sum

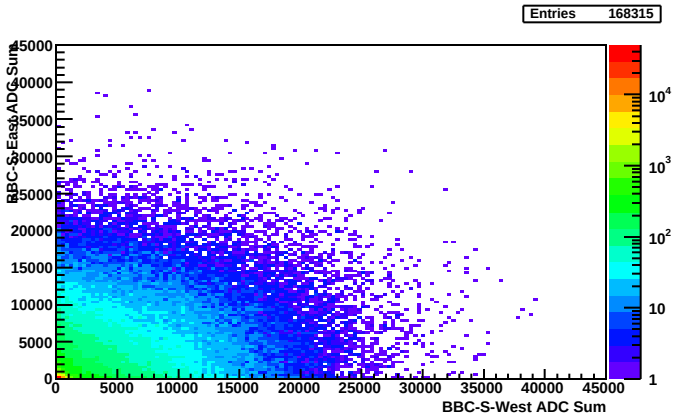

Entries 168315
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

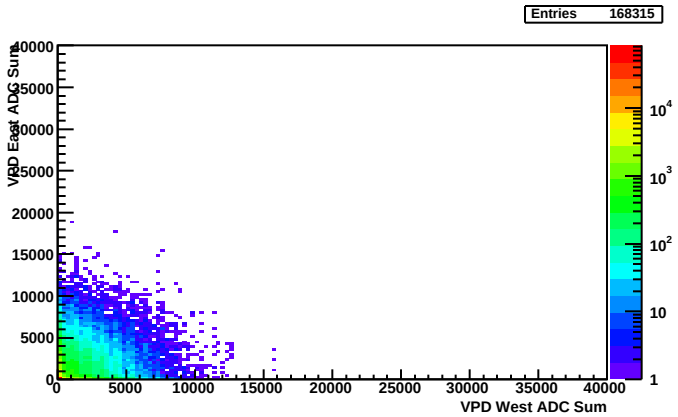

Entries 168315
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

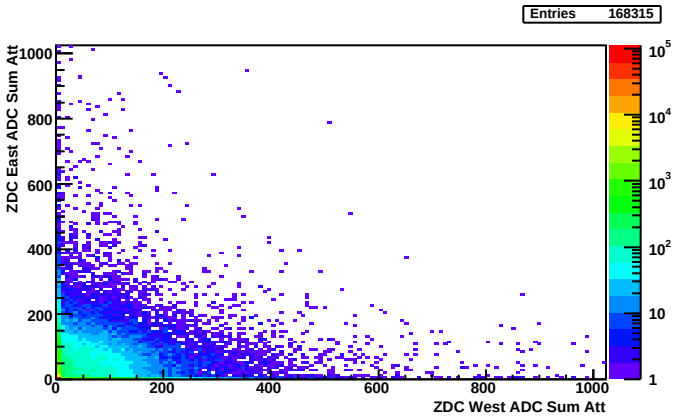

Entries 168315
VPD-East ADC Sum
ZDC-East ADC Sum Att

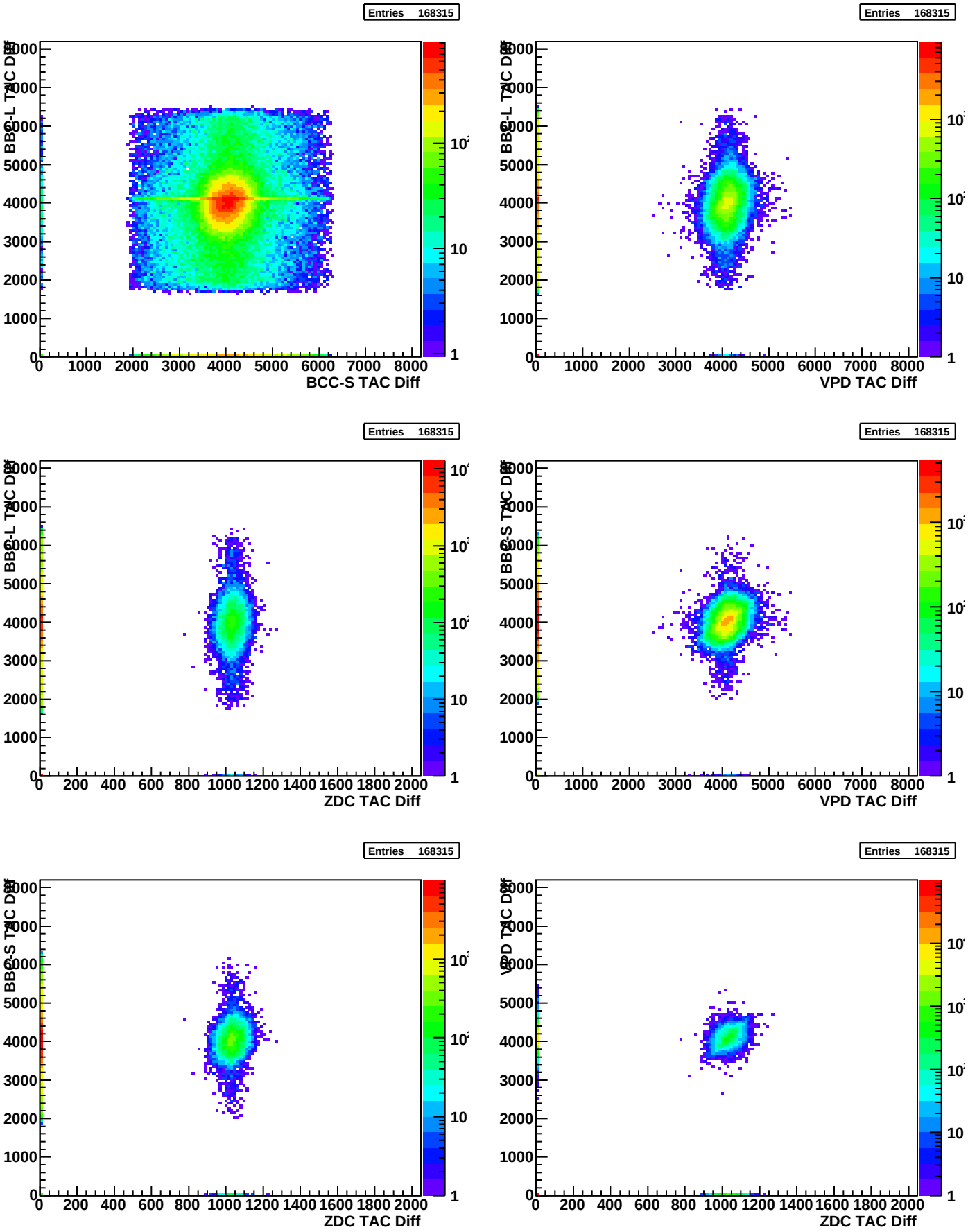

Entries 168315
VPD-West ADC Sum
ZDC-West ADC Sum Att

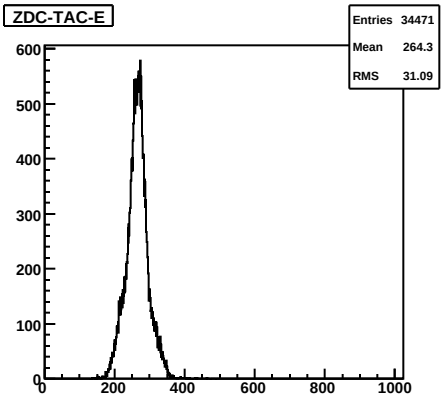

Entries 168315
BBC-L-East ADC Sum
BBC-L-West ADC Sum

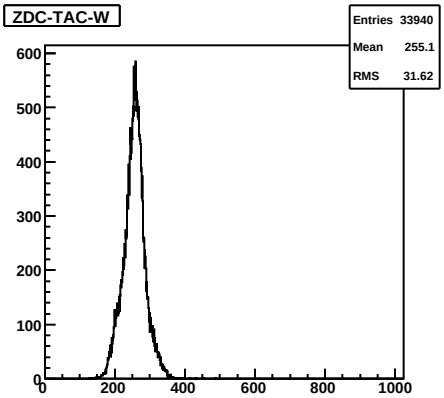

Entries 168315
BBC-S-East ADC Sum
BBC-S-West ADC Sum

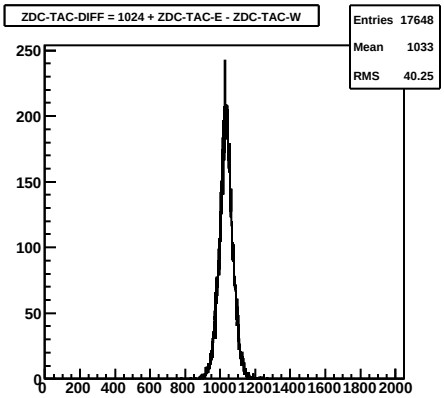

Entries 168315
VPD East ADC Sum
VPD West ADC Sum

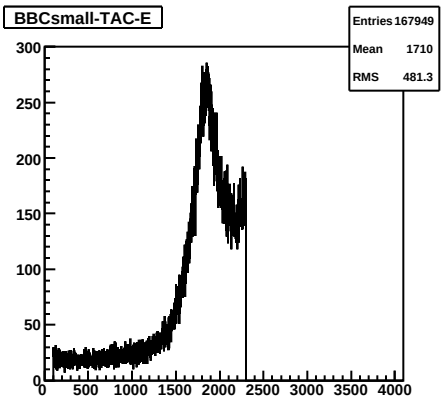

Entries 168315
ZDC East ADC Sum Att
ZDC West ADC Sum Att

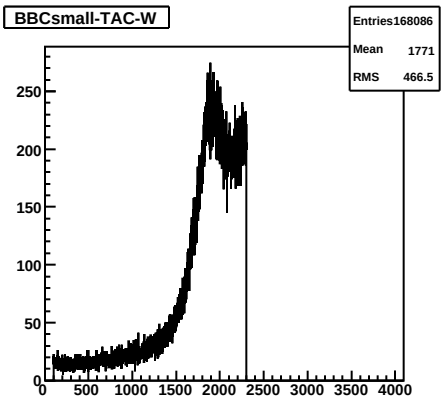

Entries 168315
BBC-L TAC Diff
BCC-S TAC Diff
Entries 168315
BBC-L TAC Diff
VPD TAC Diff
Entries 168315
BBC-L TAC Diff
ZDC TAC Diff
Entries 168315
BBC-S TAC Diff
VPD TAC Diff
Entries 168315
BBC-S TAC Diff
ZDC TAC Diff
Entries 168315
VPD TAC Diff
ZDC TAC Diff

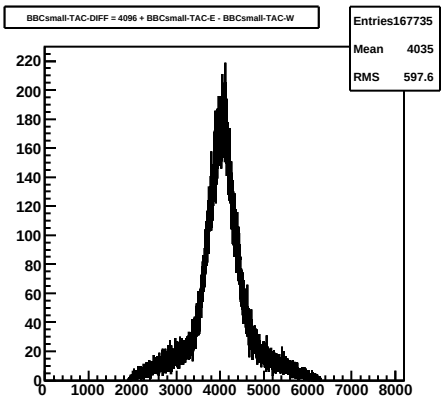

ZDC-TAC-E
Entries 34471
Mean 264.3
RMS 31.09

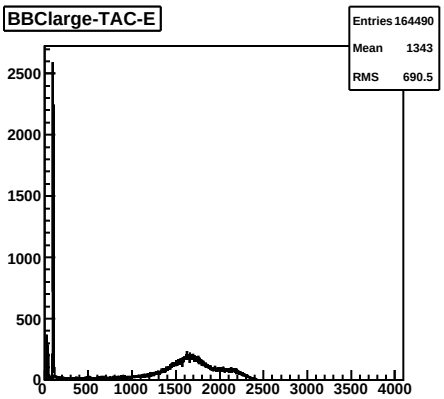

ZDC-TAC-W
Entries 33940
Mean 255.1
RMS 31.62

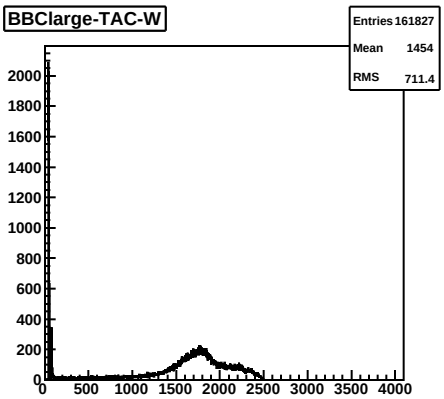

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 17648
Mean 1033
RMS 40.25

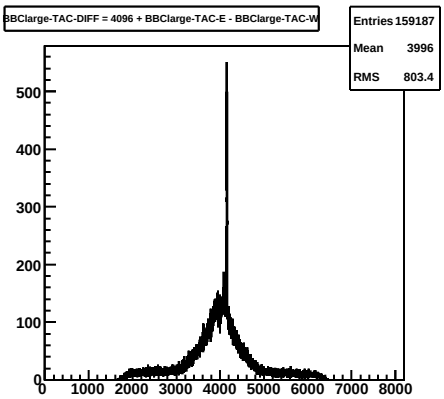

BBCsmall-TAC-E
Entries 167949
Mean 1710
RMS 481.3

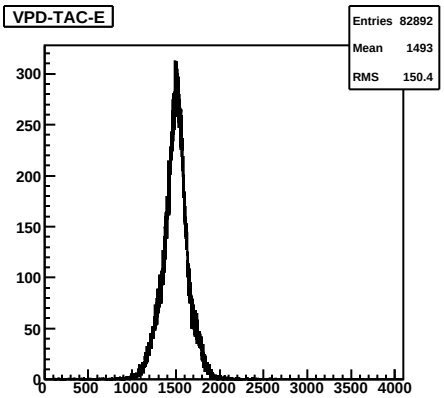

BBCsmall-TAC-W
Entries 168086
Mean 1771
RMS 466.5

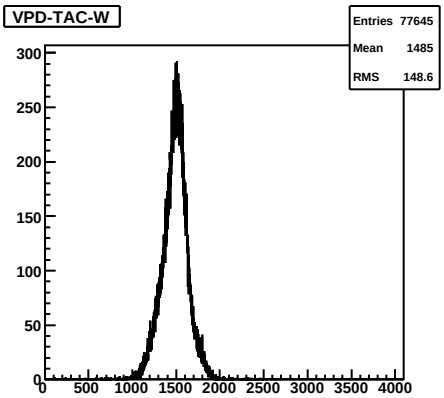

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 167735
Mean 4035
RMS 597.6

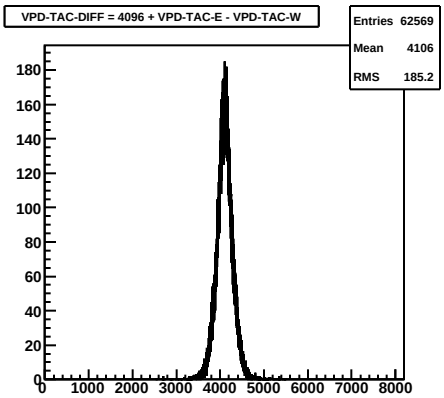

BBClarge-TAC-E
Entries 164490
Mean 1343
RMS 690.5

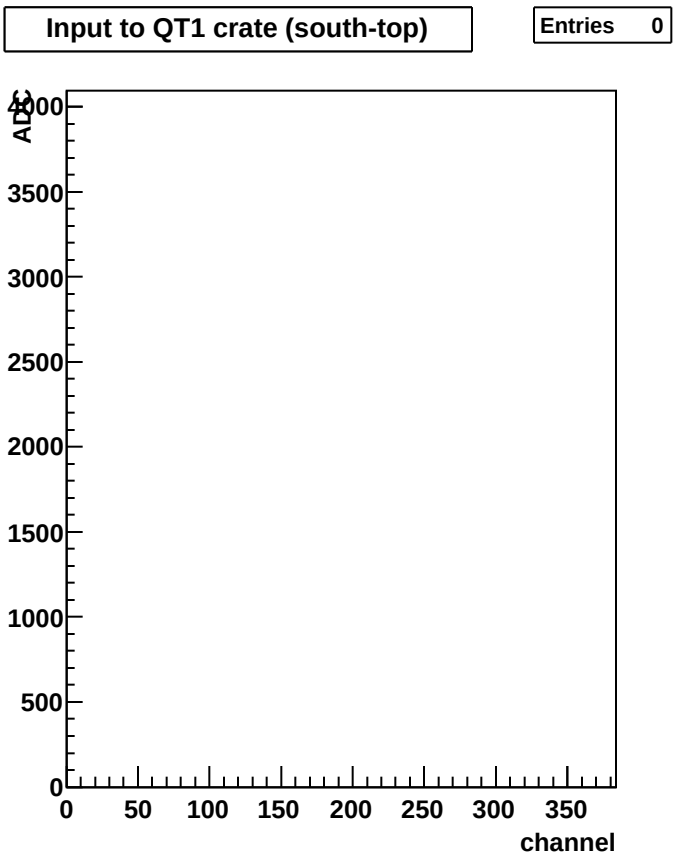

BBClarge-TAC-W
Entries 161827
Mean 1454
RMS 711.4

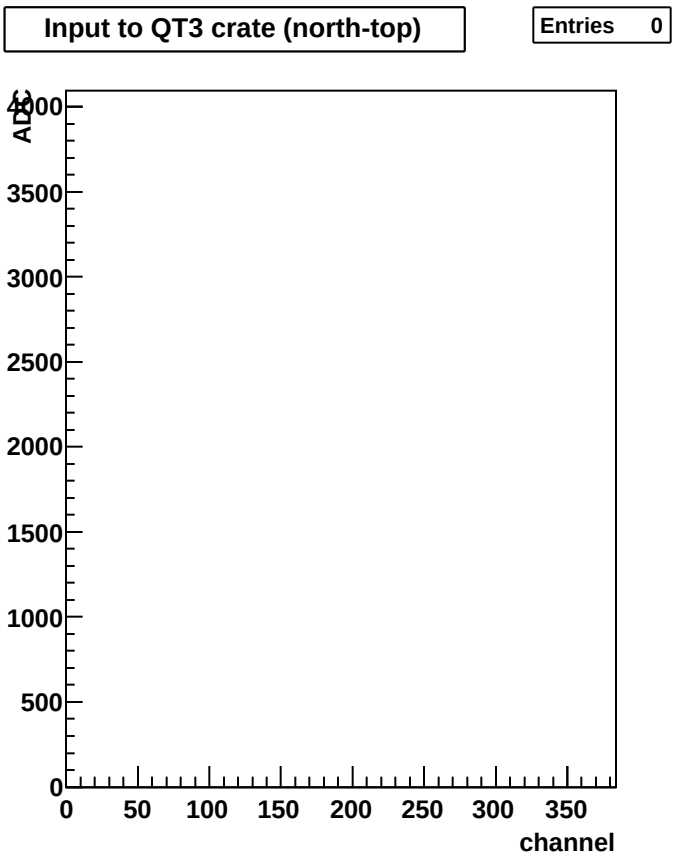

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 159187
Mean 3996
RMS 803.4

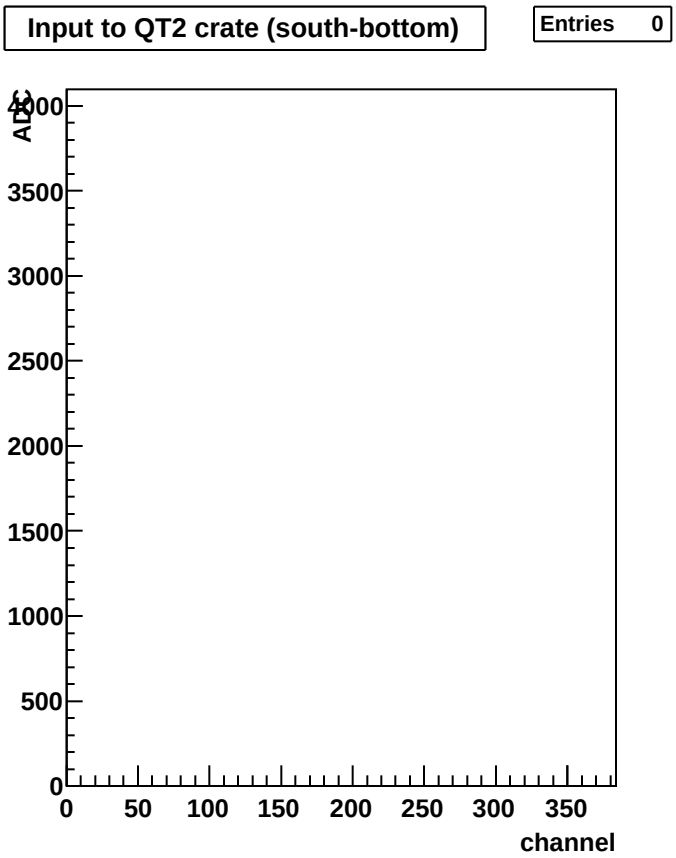

VPD-TAC-E
Entries 82892
Mean 1493
RMS 150.4

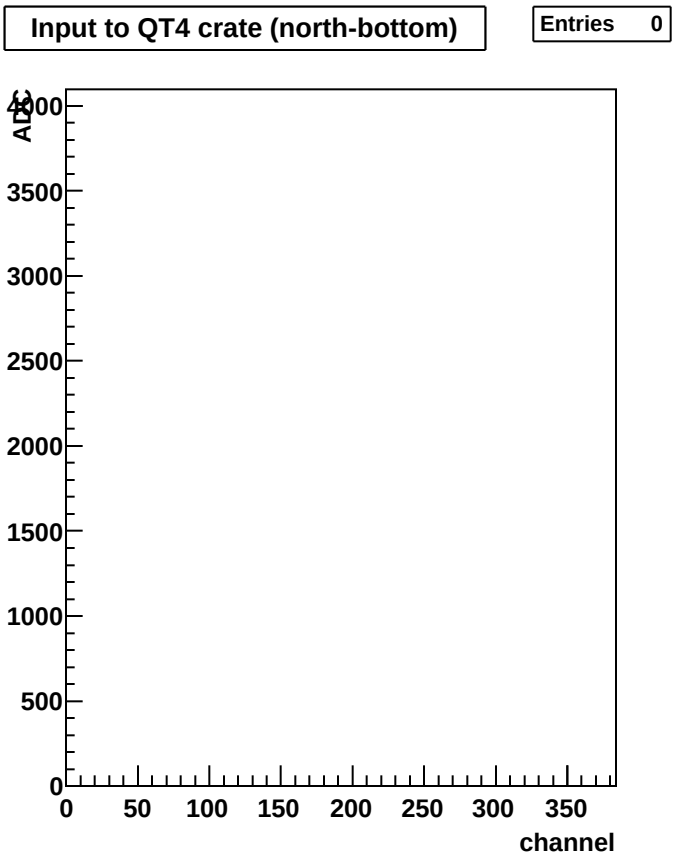

VPD-TAC-W
Entries 77645
Mean 1485
RMS 148.6

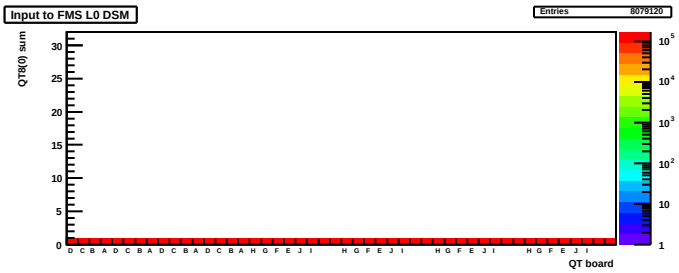

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 62569
Mean 4106
RMS 185.2

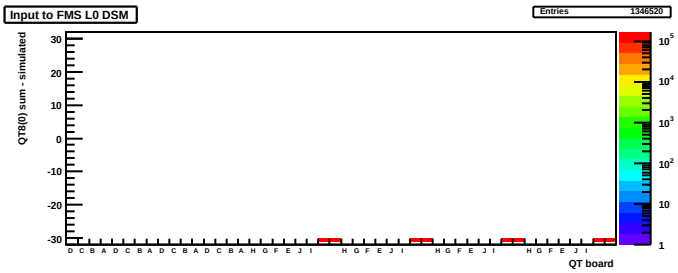

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

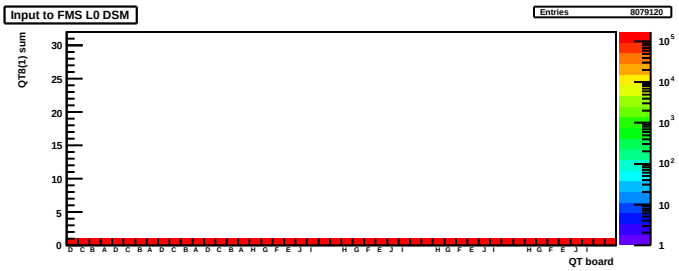

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

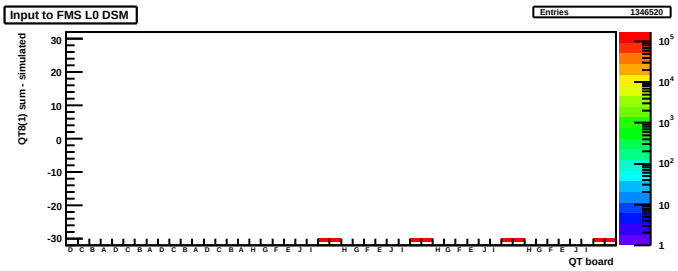

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

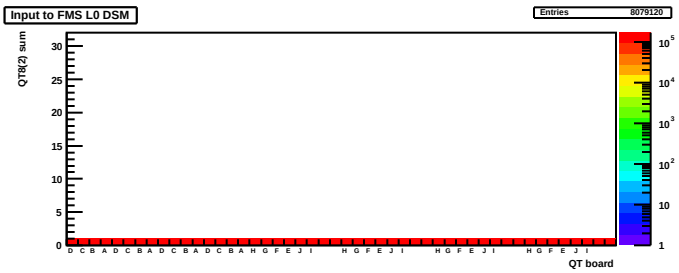

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

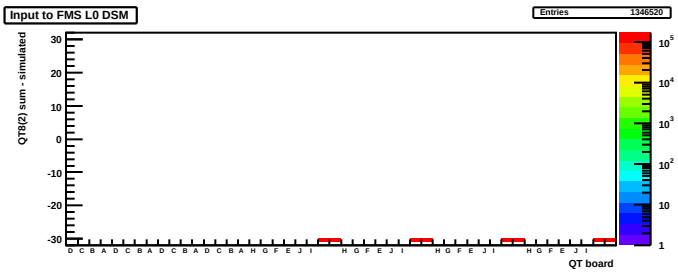

Input to FMS L0 DSM
Entries 8079120
QT8(0) sum
QT board

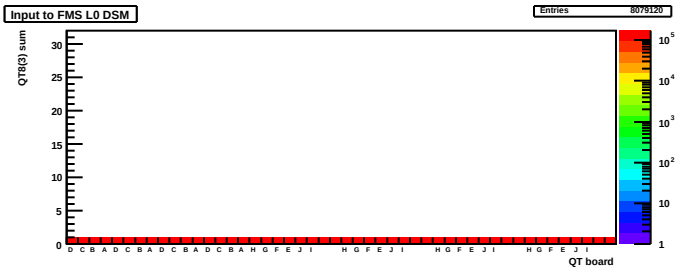

Input to FMS L0 DSM
Entries 1346520
QT8(0) sum - simulated
QT board

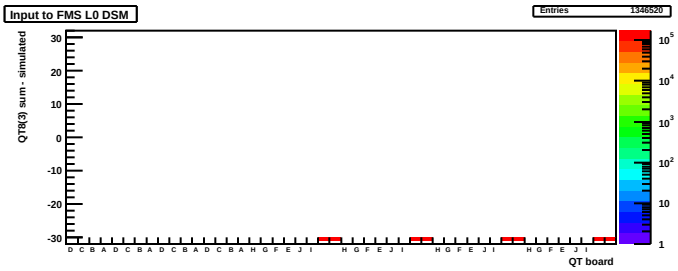

Input to FMS L0 DSM
Entries 8079120
QT8(1) sum
QT board

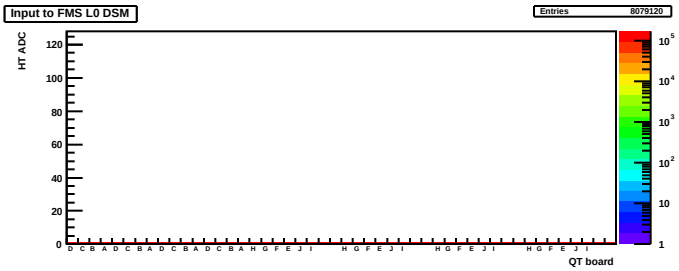

Input to FMS L0 DSM
Entries 1346520
QT8(1) sum - simulated
QT board

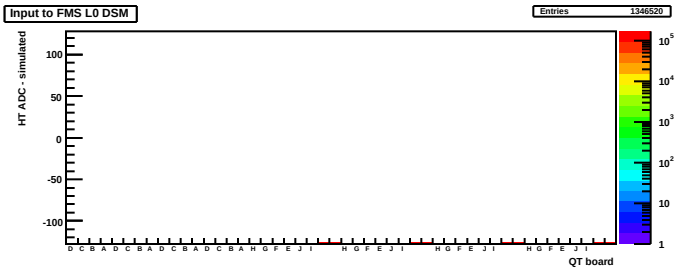

Input to FMS L0 DSM
Entries 8079120
QT8(2) sum
QT board

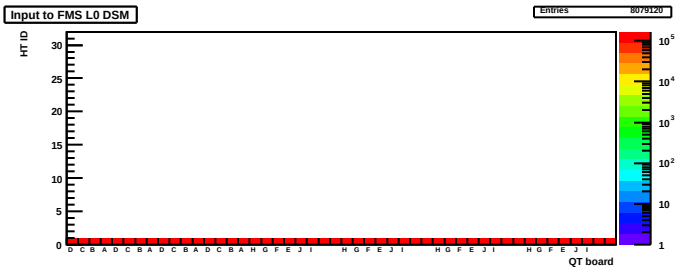

Input to FMS L0 DSM
Entries 1346520
QT8(2) sum - simulated
QT board

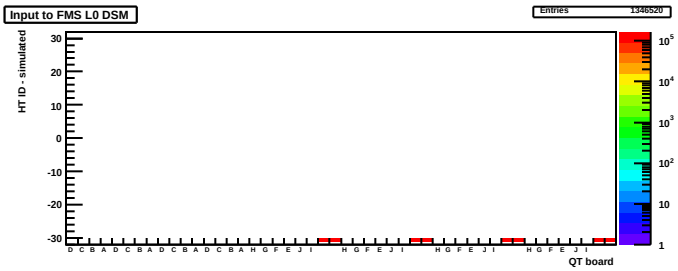

Input to FMS L0 DSM
Entries 8079120
QT8(3) sum
QT board

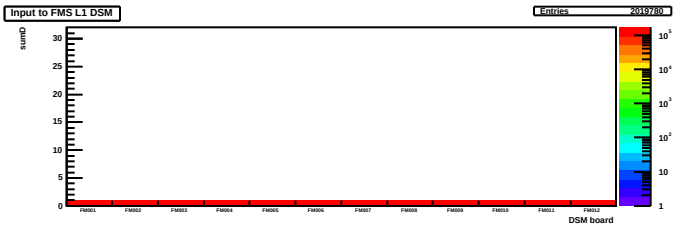

Input to FMS L0 DSM
Entries 1346520
QT8(3) sum - simulated
QT board

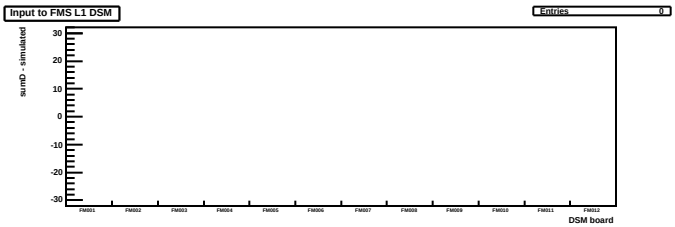

Input to FMS L0 DSM
Entries 8079120
HT ADC
QT board

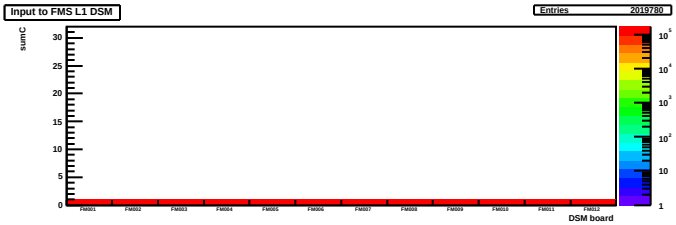

Input to FMS L0 DSM
Entries 1346520
HT ADC - simulated
QT board

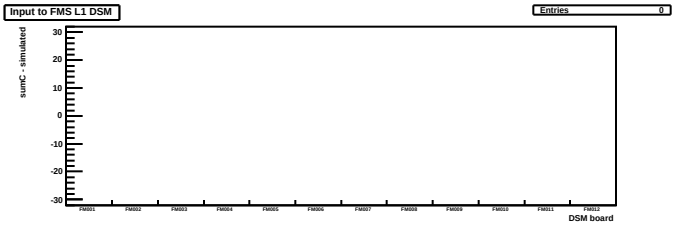

Input to FMS L0 DSM
Entries 8079120
HT ID
QT board

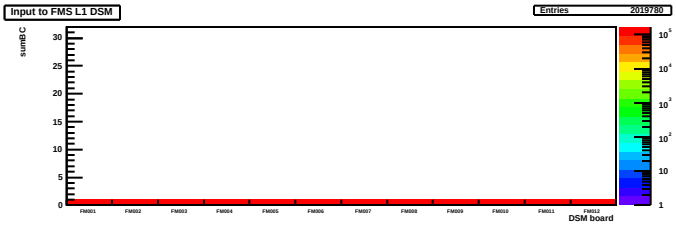

Input to FMS L0 DSM
Entries 1346520
HT ID - simulated
QT board

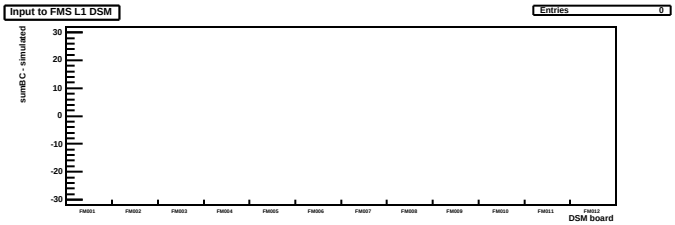

Input to FMS L1 DSM
Entries 2019780
sumD
DSM board

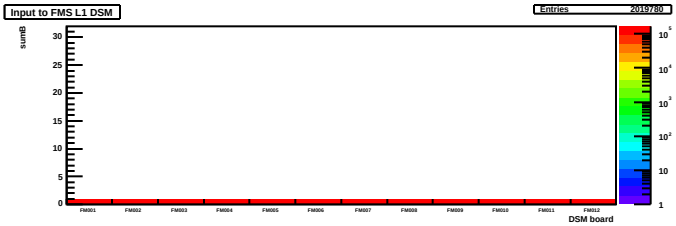

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

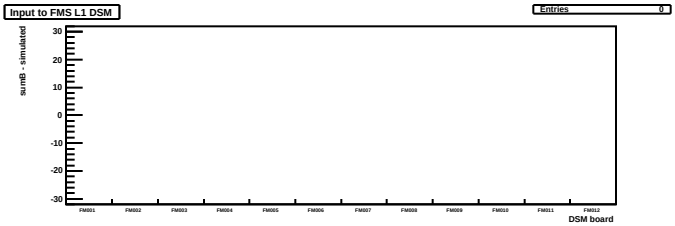

Input to FMS L1 DSM
Entries 2019780
sumC
DSM board

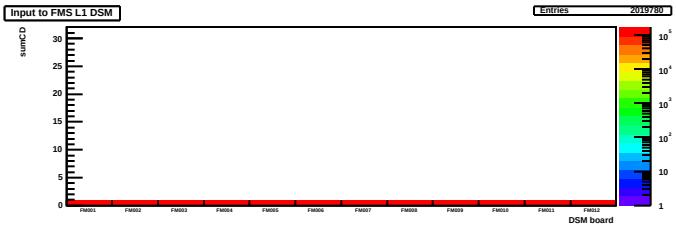

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

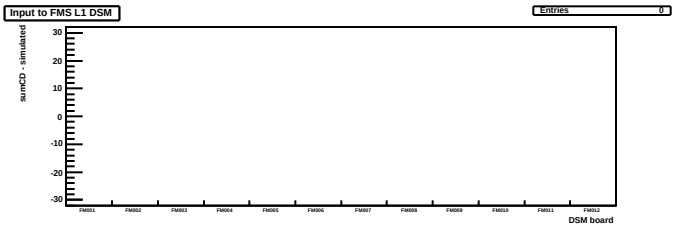

Input to FMS L1 DSM
Entries 2019780
sumBC
DSM board

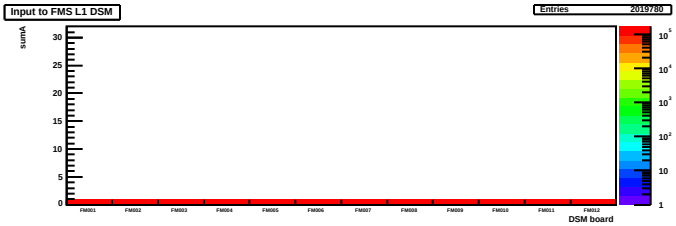

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

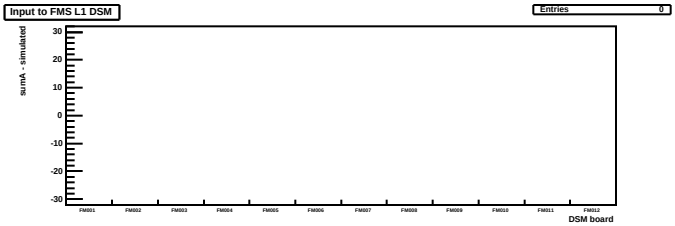

Input to FMS L1 DSM
Entries 2019780
sumB
DSM board

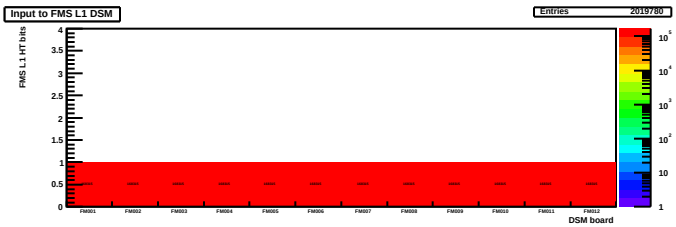

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

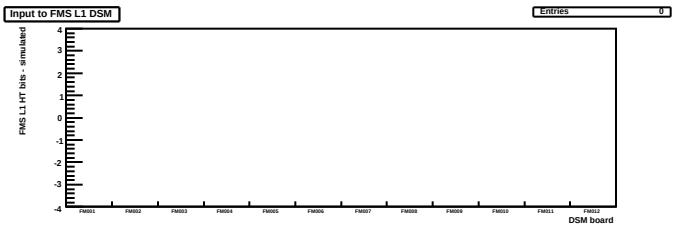

Input to FMS L1 DSM
Entries 2019780
sumCD
DSM board

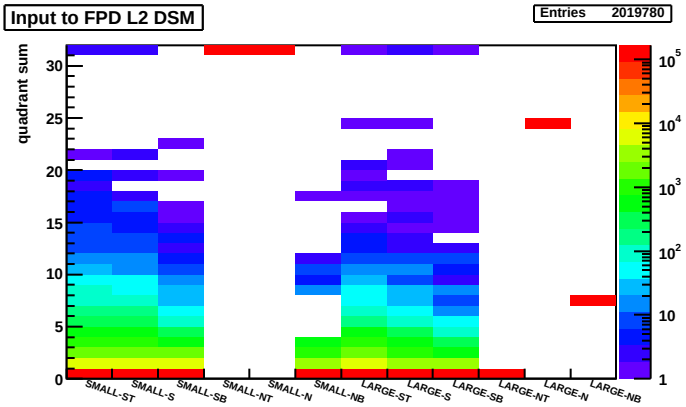

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

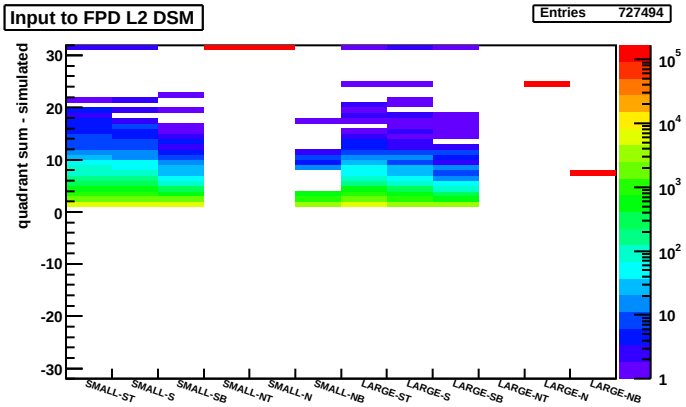

Input to FMS L1 DSM
Entries 2019780
sumA
DSM board

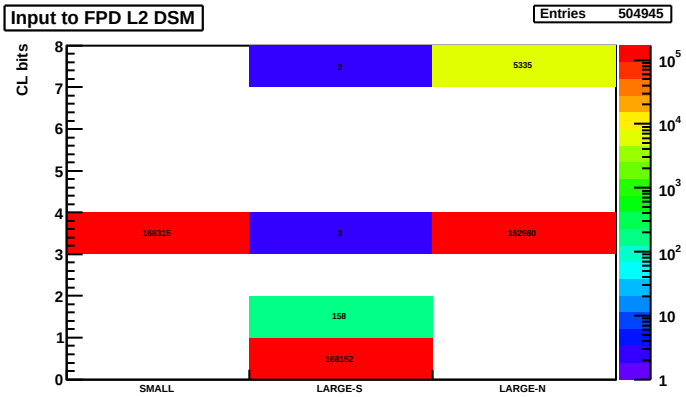

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

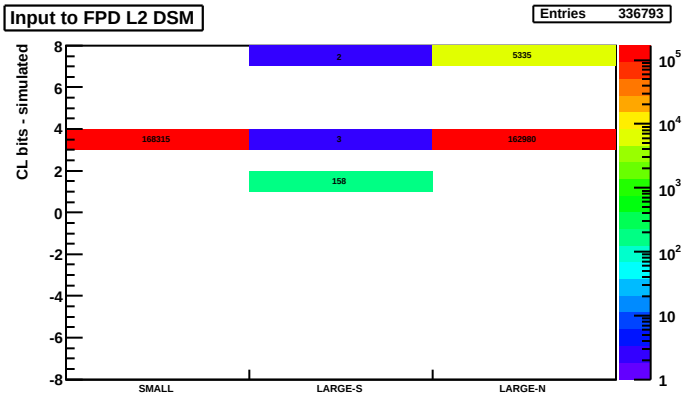

Input to FMS L1 DSM
Entries 2019780
FMS L1 HT bits
DSM board

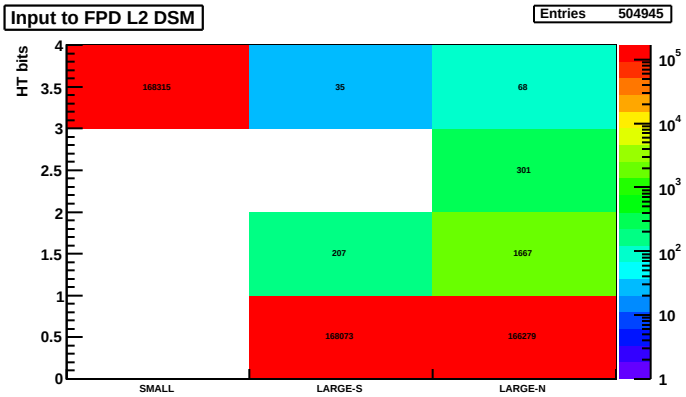

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

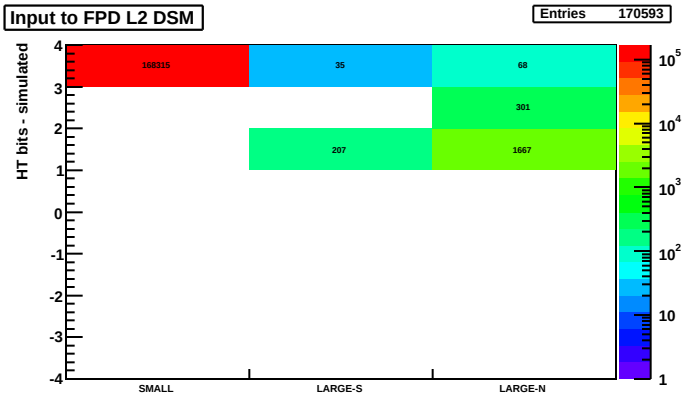

Input to FPD L2 DSM
Entries 2019780
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

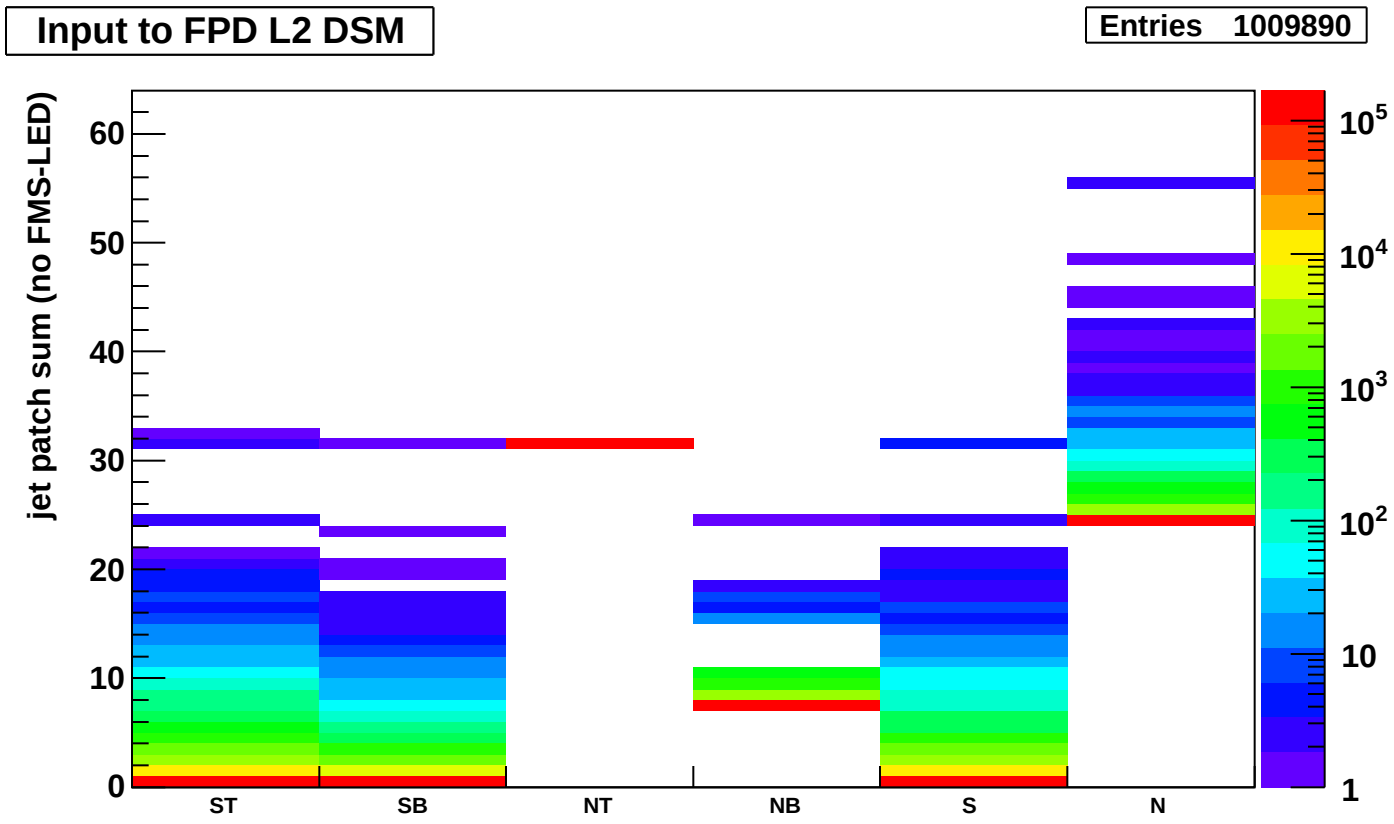

Input to FPD L2 DSM
Entries 727494
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

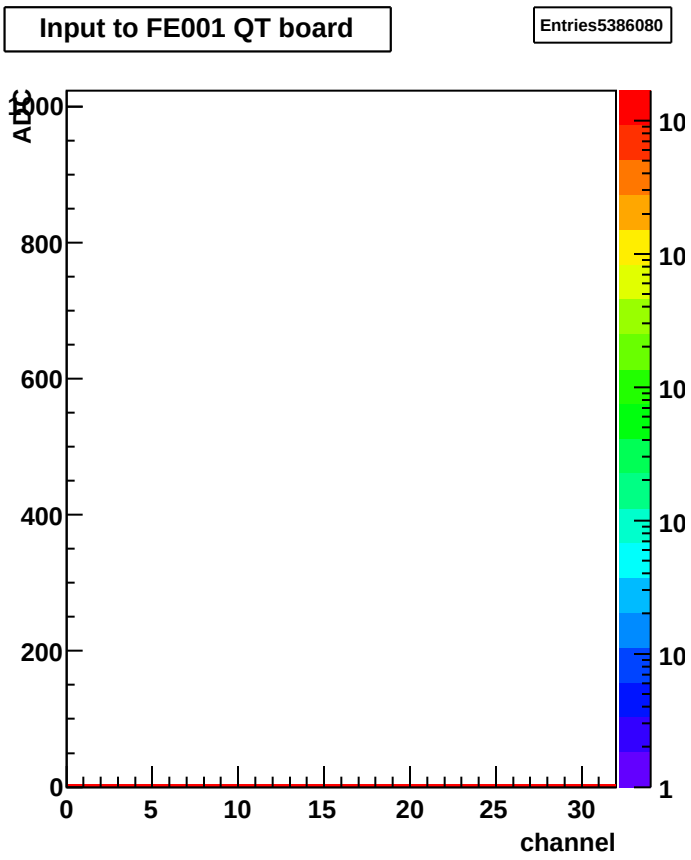

Input to FPD L2 DSM
Entries 504945
CL bits
2
5335
168315
3
162980
158
168152
SMALL
LARGE-S
LARGE-N

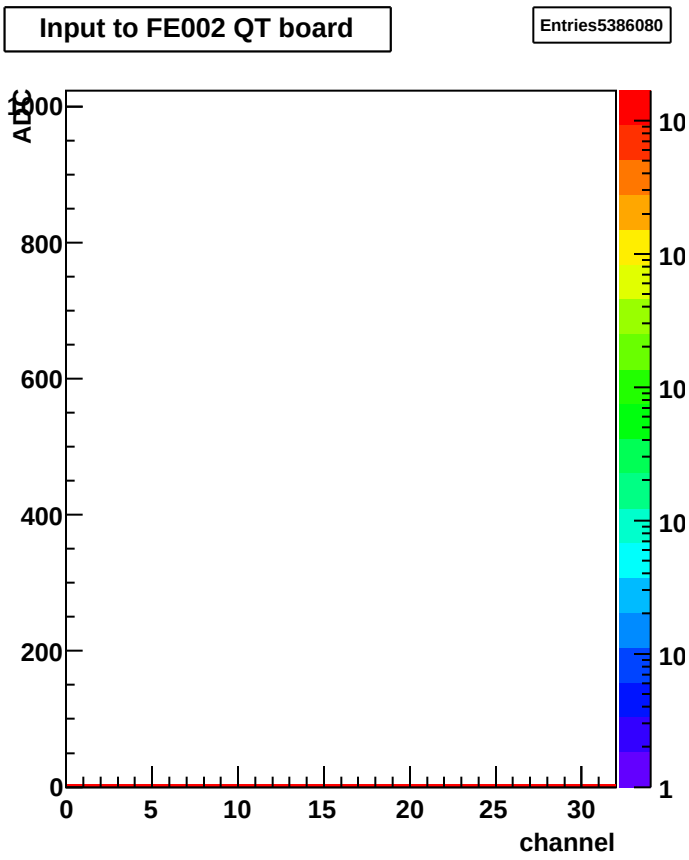

Input to FPD L2 DSM
Entries 336793
CL bits - simulated
2
5335
168315
3
162980
158
SMALL
LARGE-S
LARGE-N

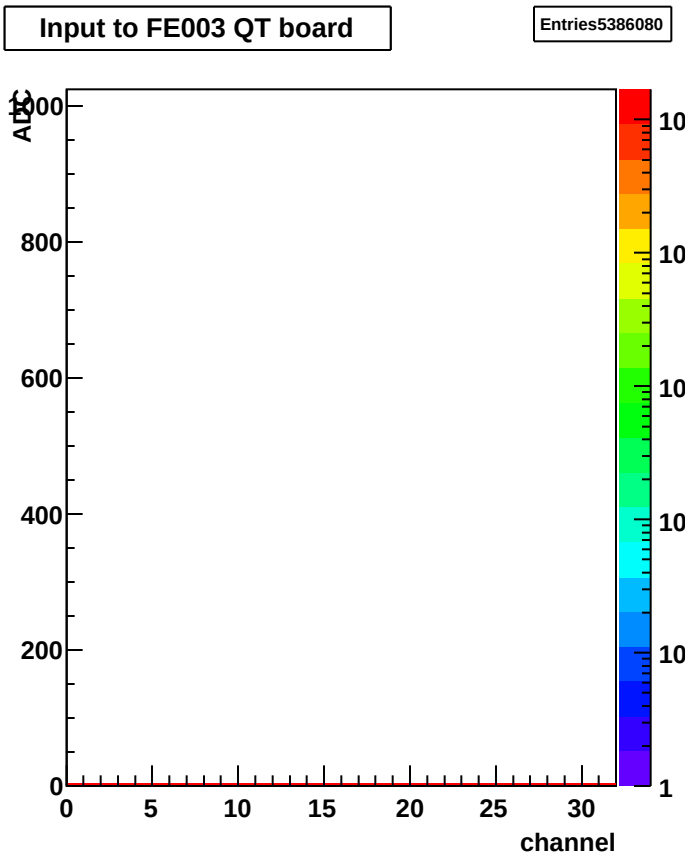

Input to FPD L2 DSM
Entries 504945
HT bits
168315
35
68
301
207
1667
168073
166279
SMALL
LARGE-S
LARGE-N

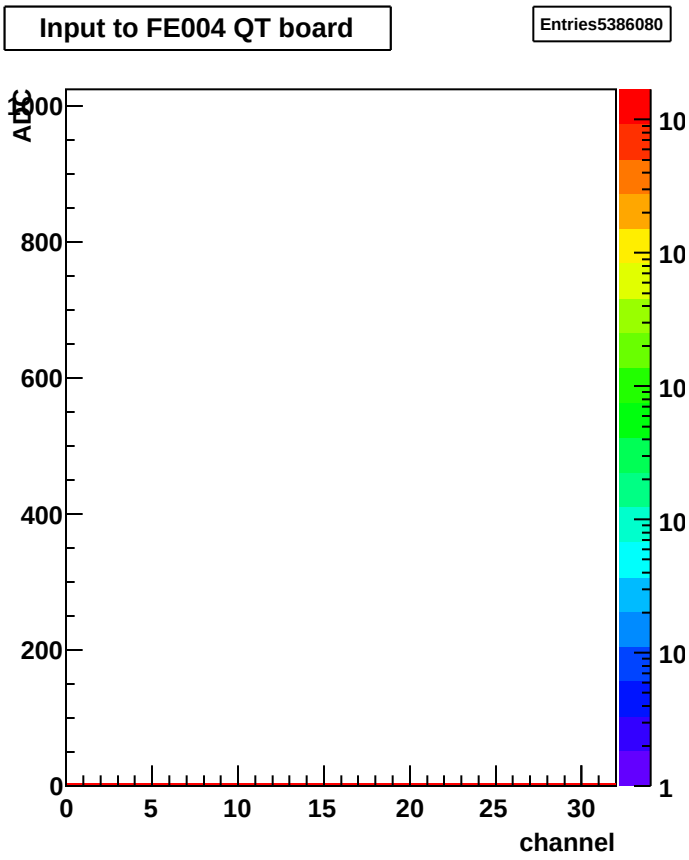

Input to FPD L2 DSM
Entries 170593
HT bits - simulated
168315
35
68
301
207
1667
SMALL
LARGE-S
LARGE-N

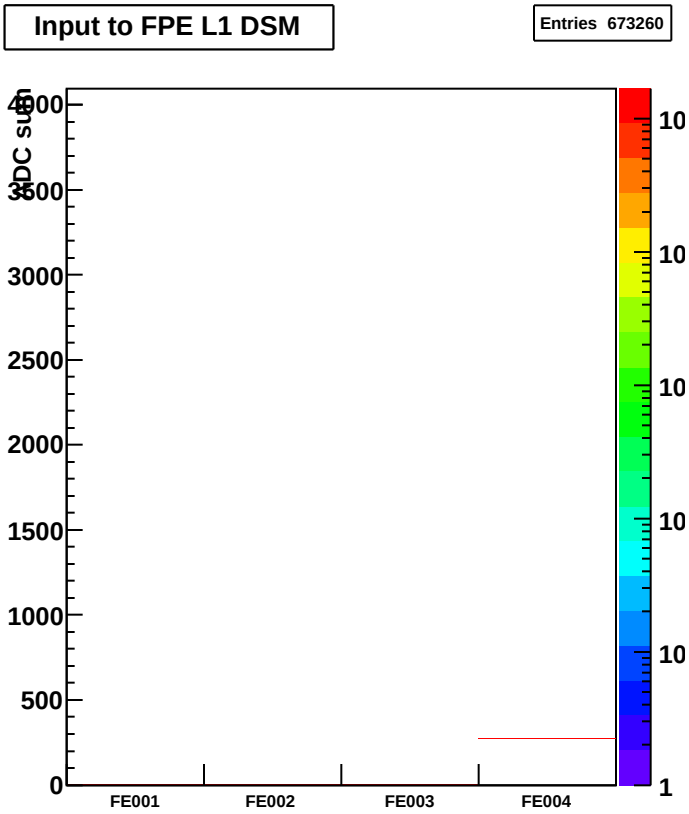

Input to FPD L2 DSM
Entries 1009890
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

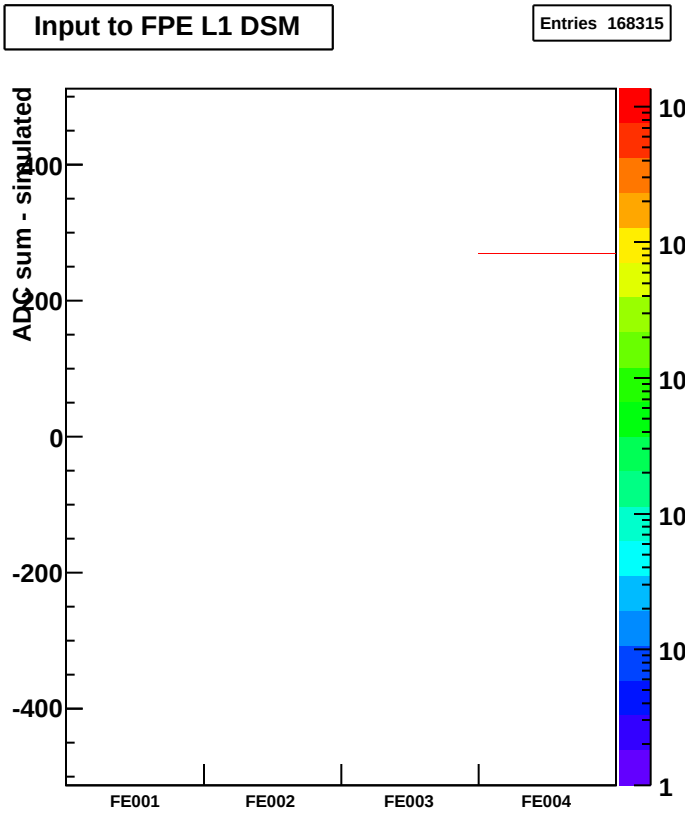

Input to FE001 QT board
Entries5386080
ADC
channel

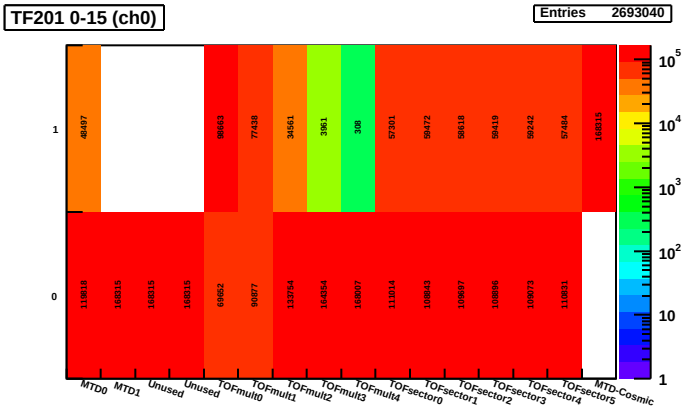

Input to FE002 QT board
Entries5386080
ADC
channel

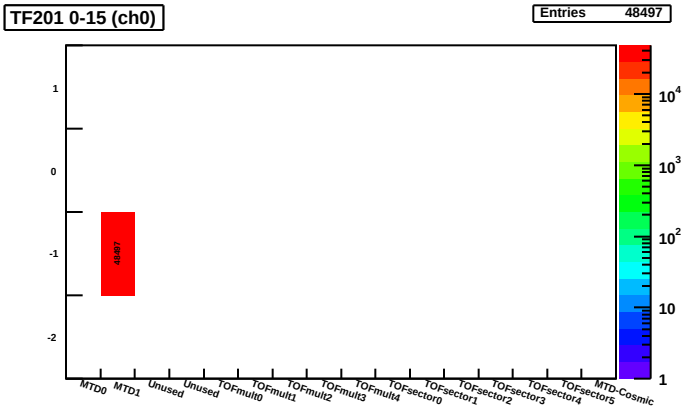

Input to FE003 QT board
Entries5386080
ADC
channel

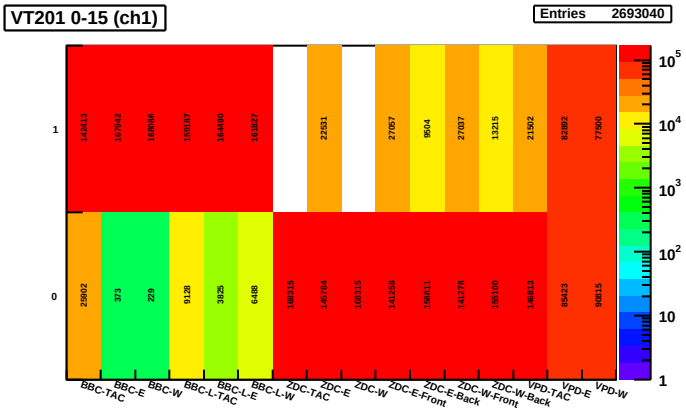

Input to FE004 QT board
Entries5386080
ADC
channel

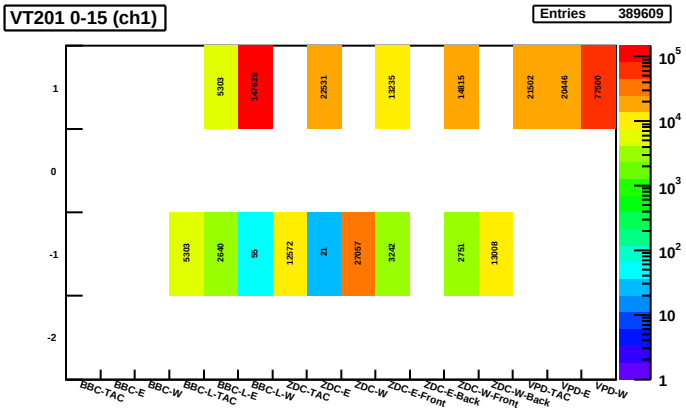

Input to FPE L1 DSM
Entries 673260
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1

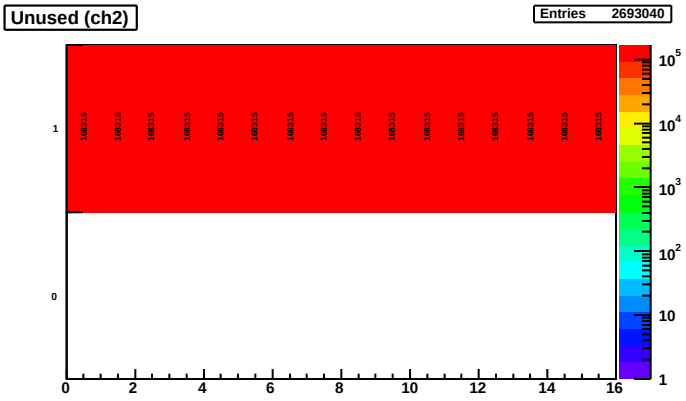

Input to FPE L1 DSM
Entries 168315
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
10
1

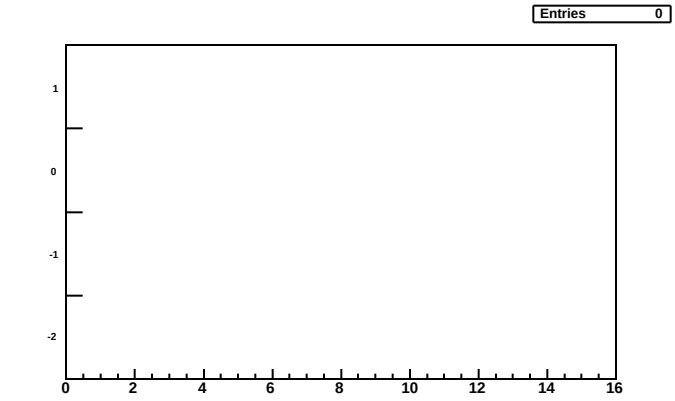

TF201 0-15 (ch0)
Entries 2693040
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

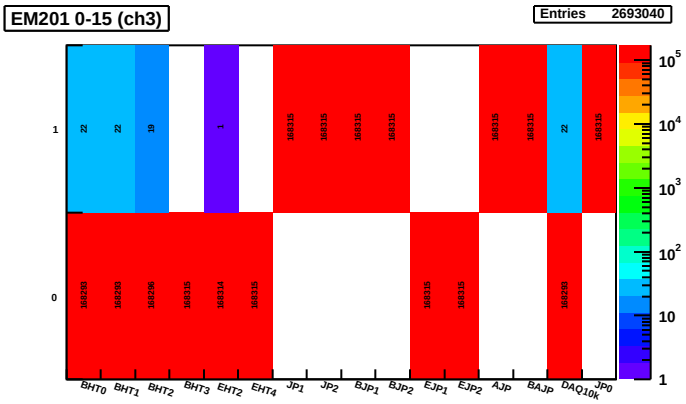

TF201 0-15 (ch0)
Entries 48497
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

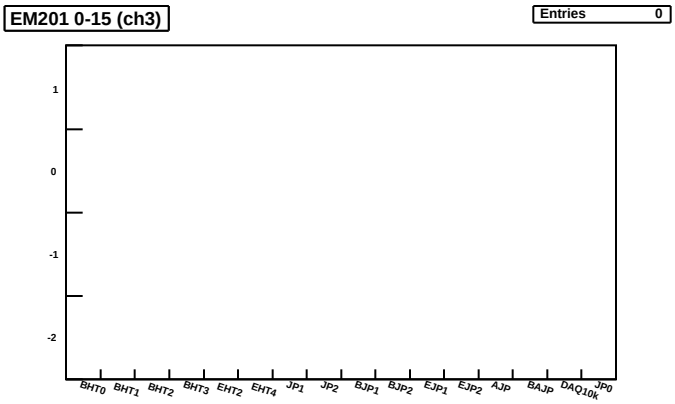

VT201 0-15 (ch1)
Entries 2693040
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 389609
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

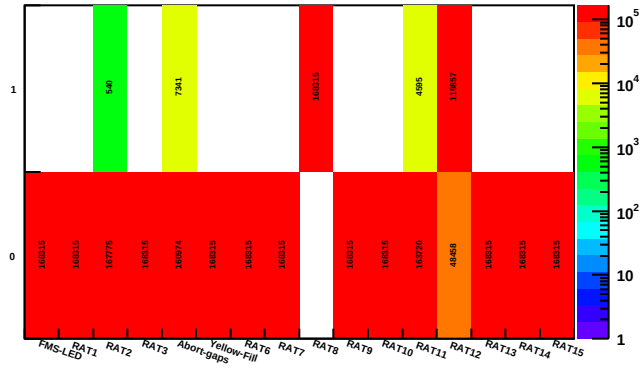

Unused (ch2)
Entries 2693040

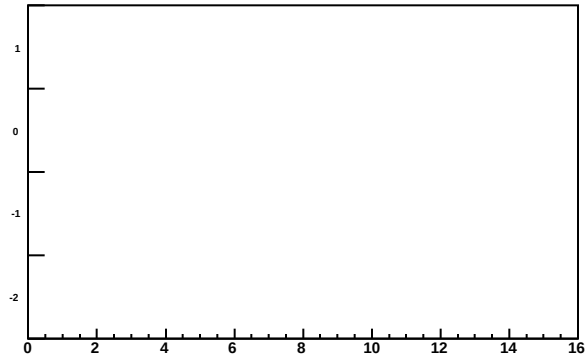

Entries 0


EM201 0-15 (ch3)
Entries 2693040
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

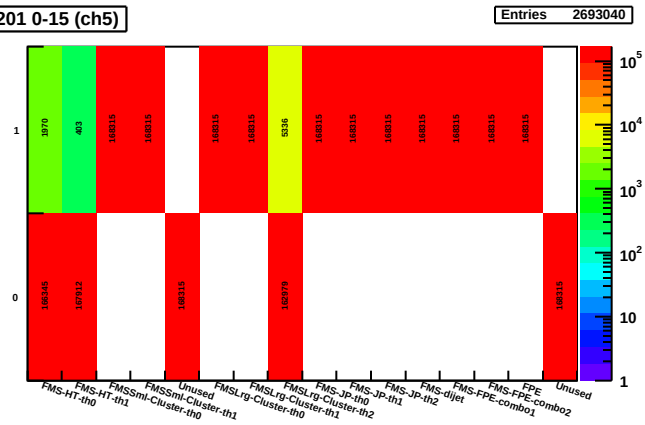

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

RAT board (ch4)

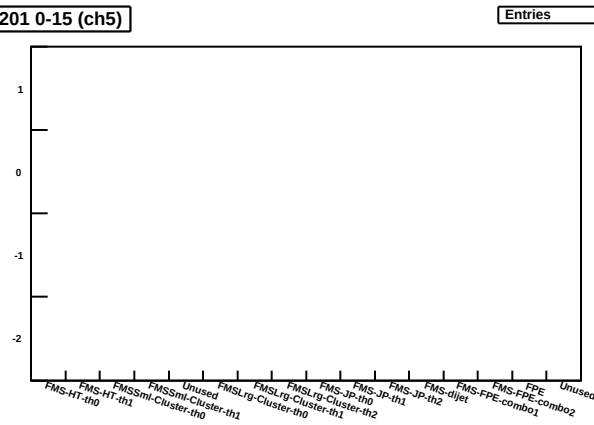




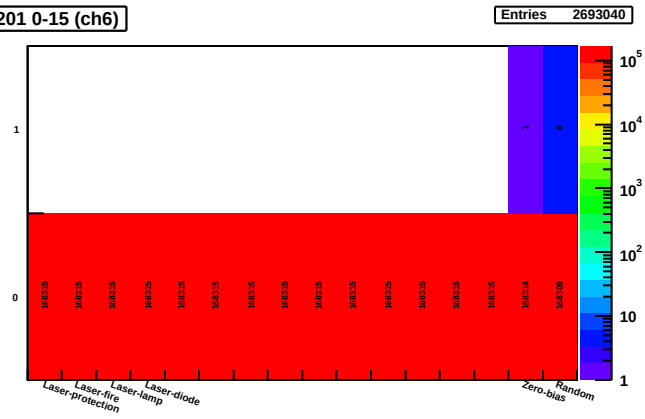
FP201 0-15 (ch5)

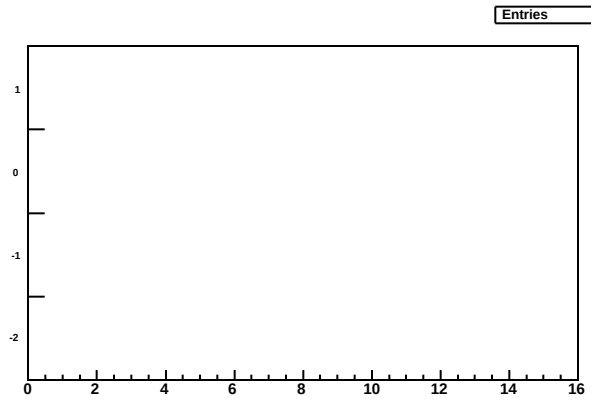
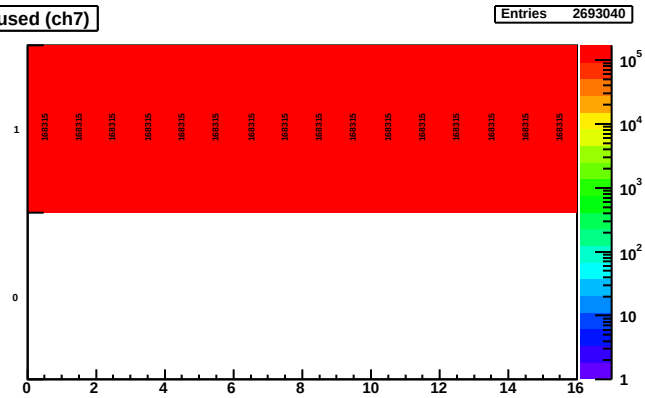
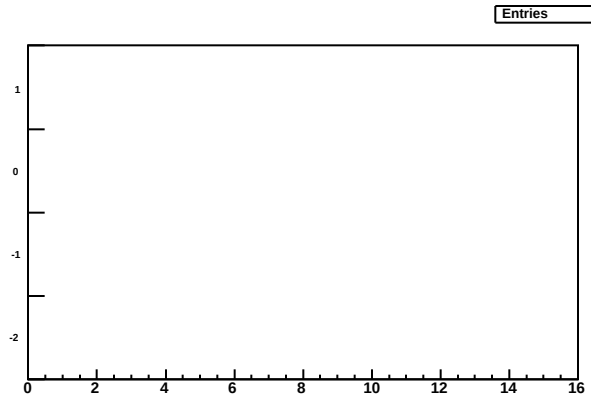


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)