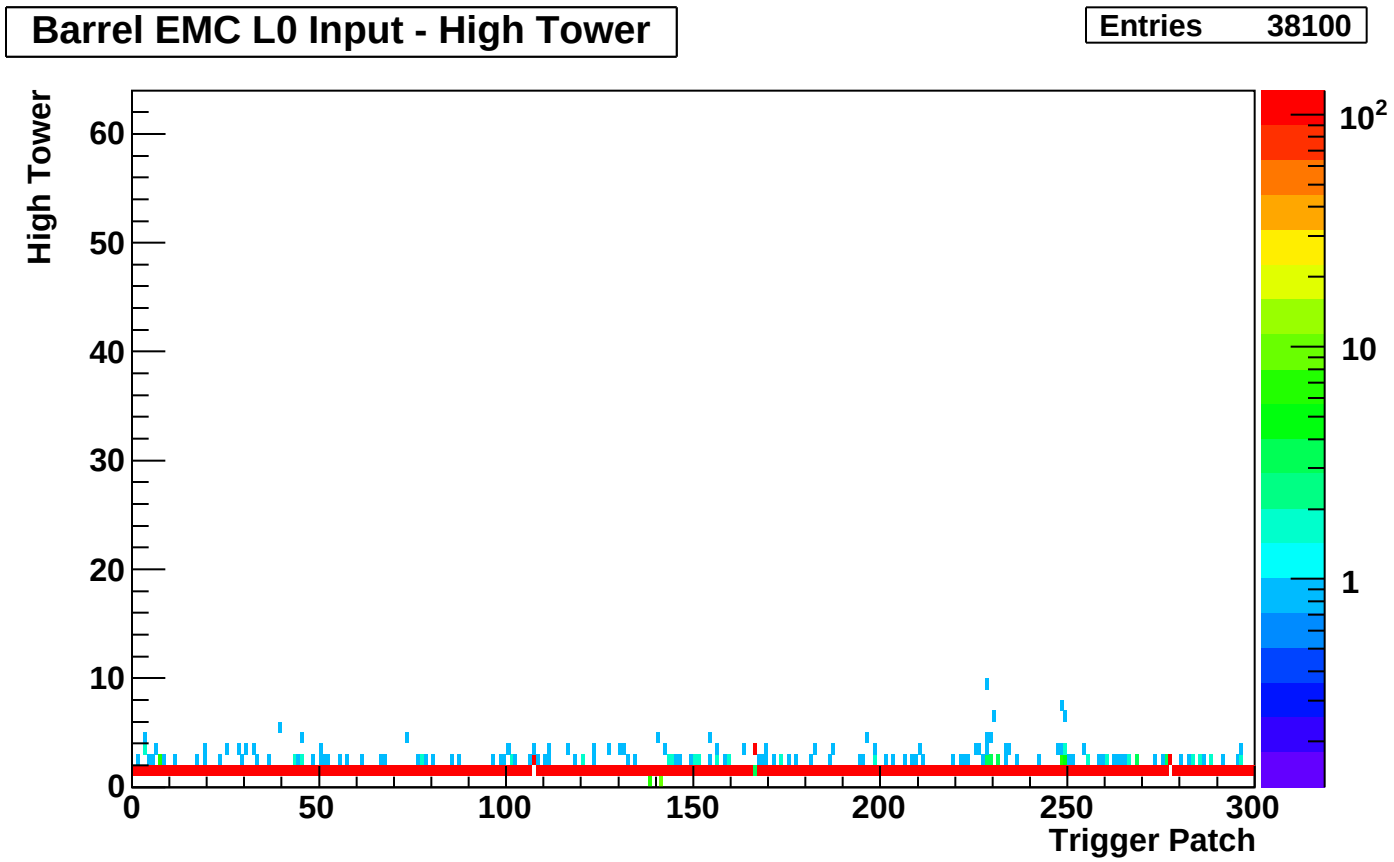
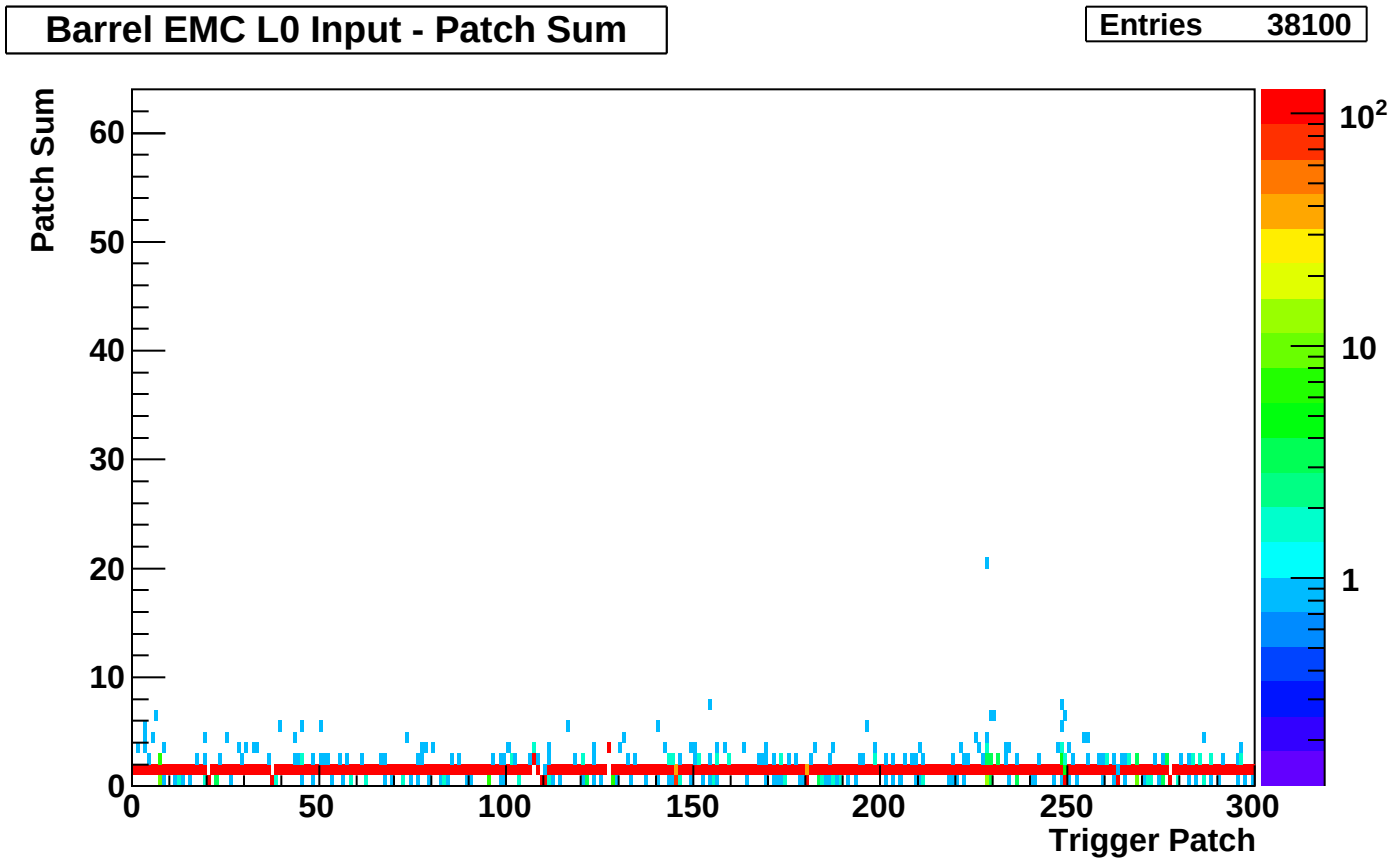
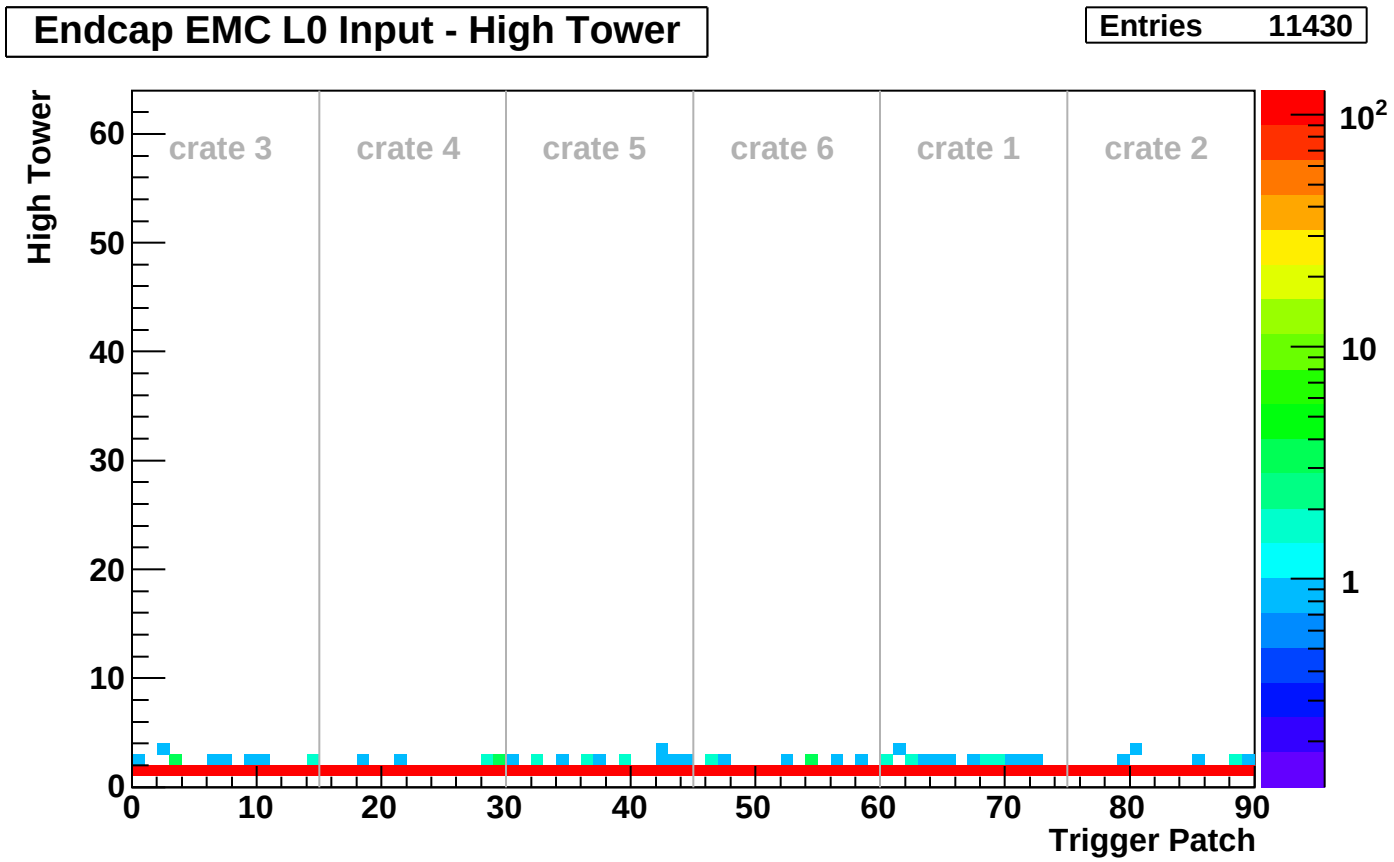
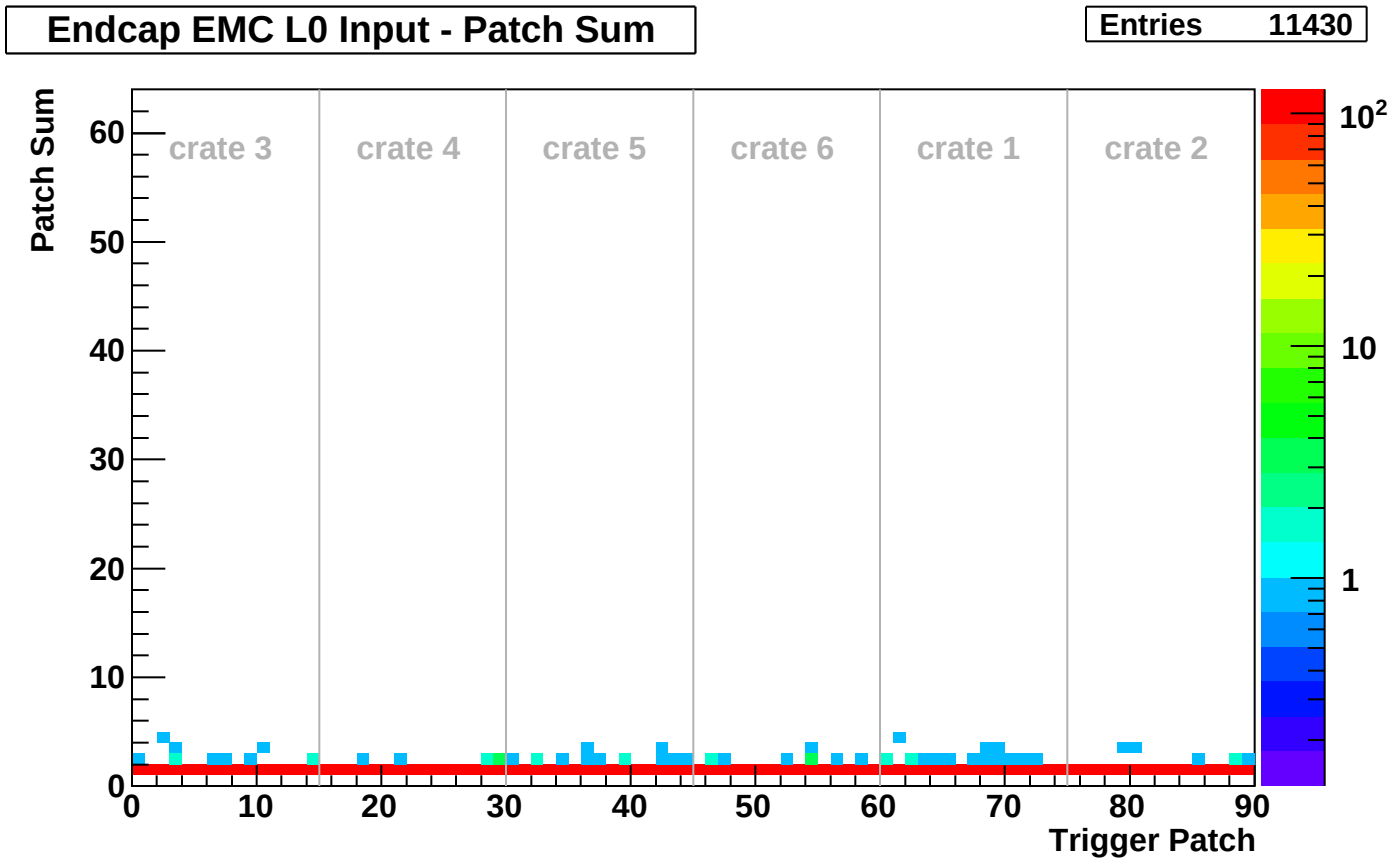
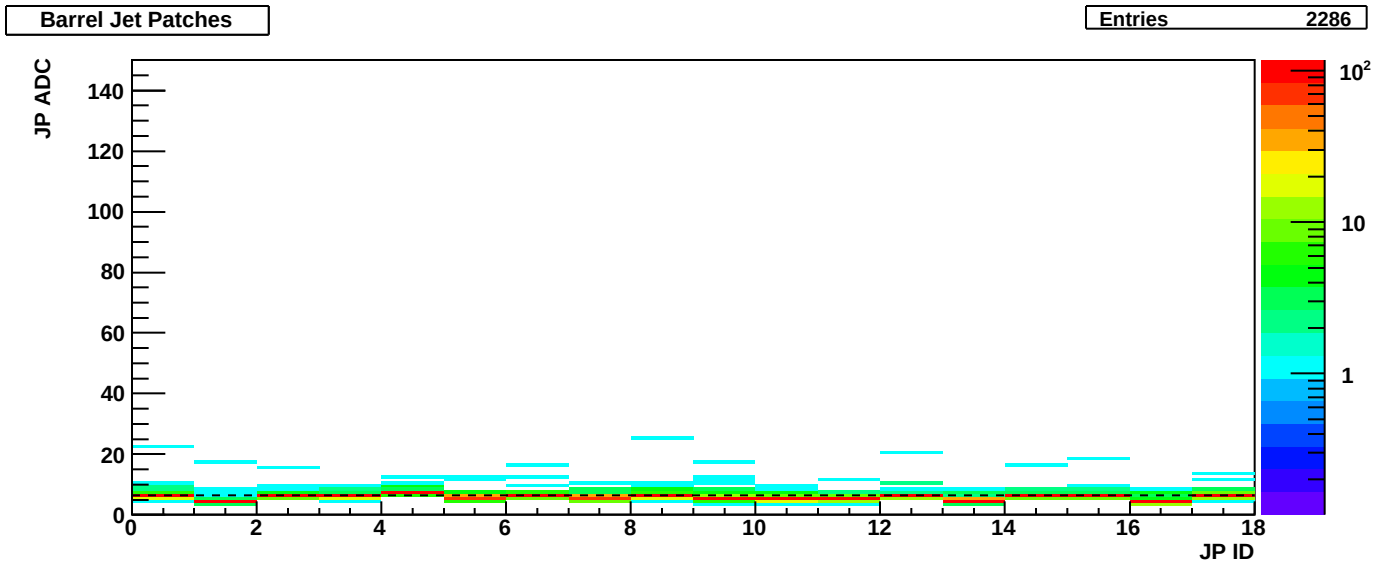
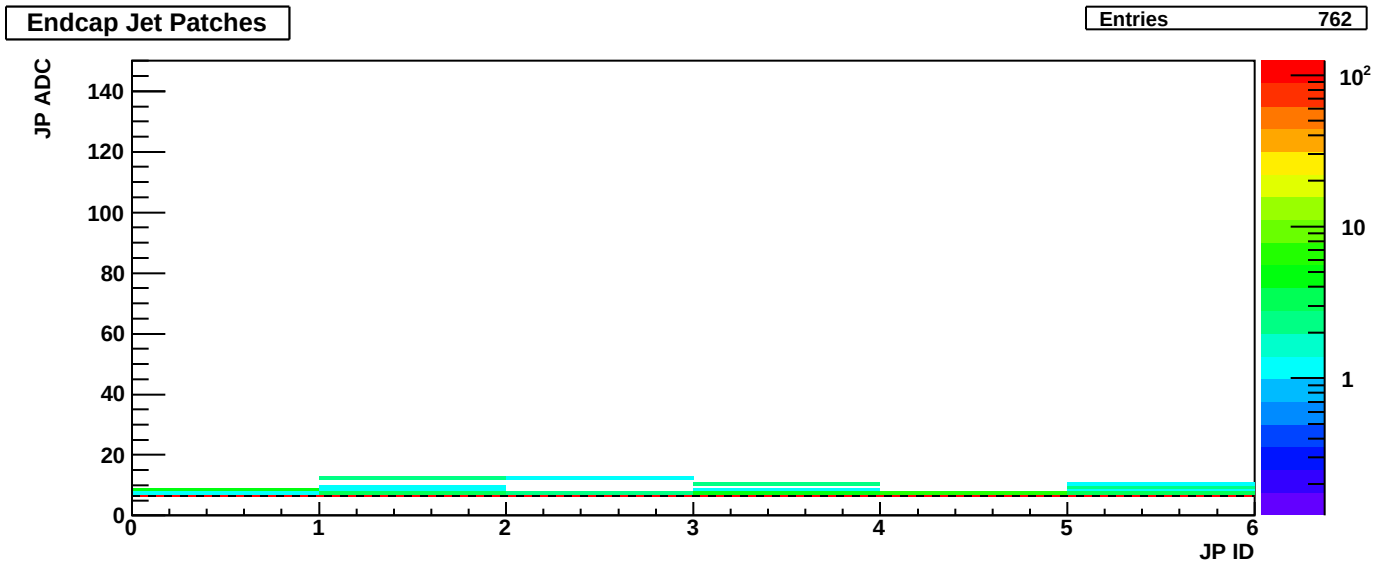

Barrel EMC L0 Input - High Tower
Entries 38100
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
10^2
10
1

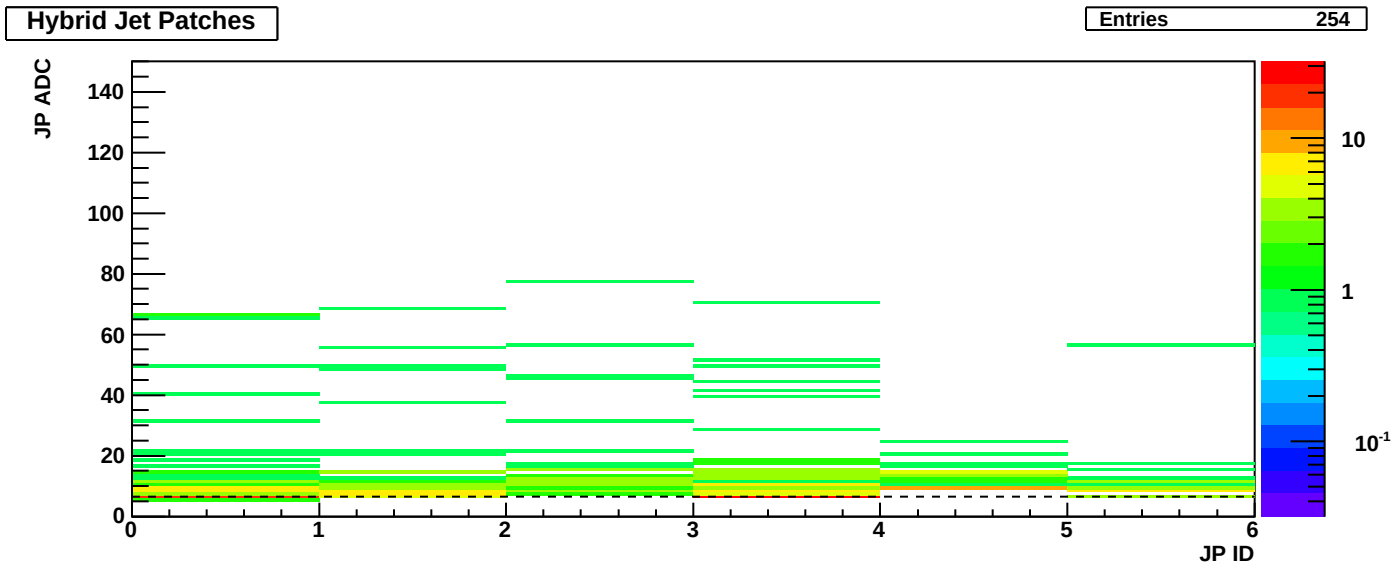

Barrel EMC L0 Input - Patch Sum
Entries 38100
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
10^2
10
1

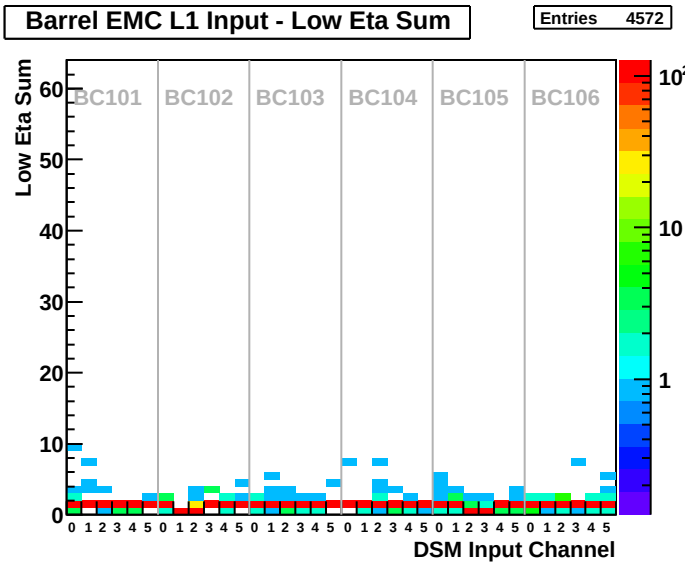

Endcap EMC L0 Input - High Tower
Entries 11430
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch
10^2
10
1

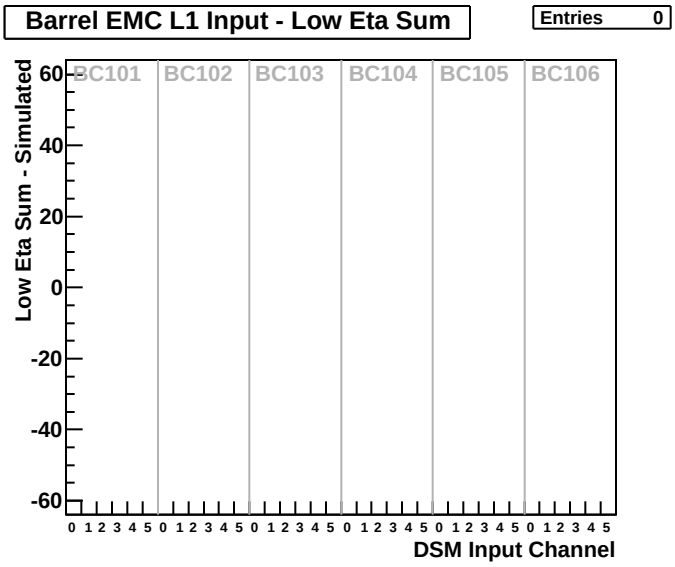

Endcap EMC L0 Input - Patch Sum
Entries 11430
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch
10^2
10
1

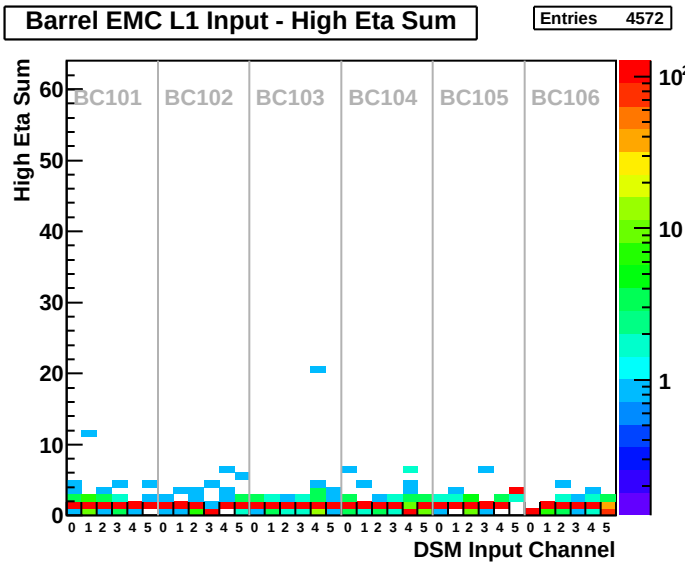

Barrel Jet Patches
Entries 2286
JP ADC
JP ID

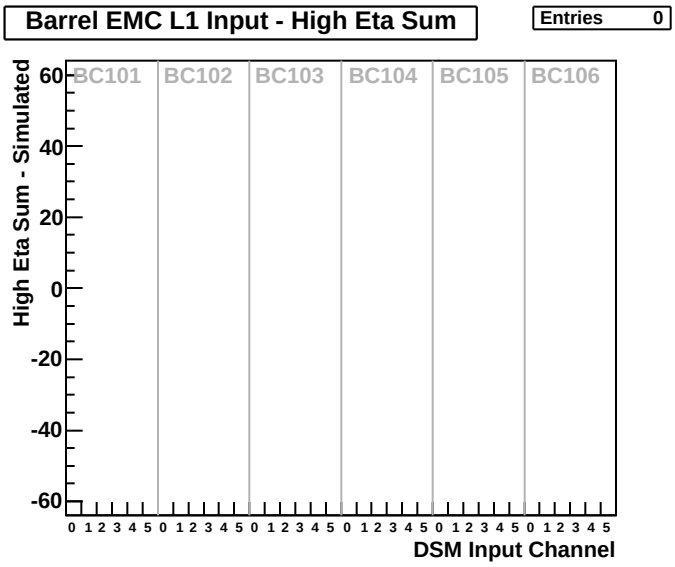

Endcap Jet Patches
Entries 762
JP ADC
JP ID

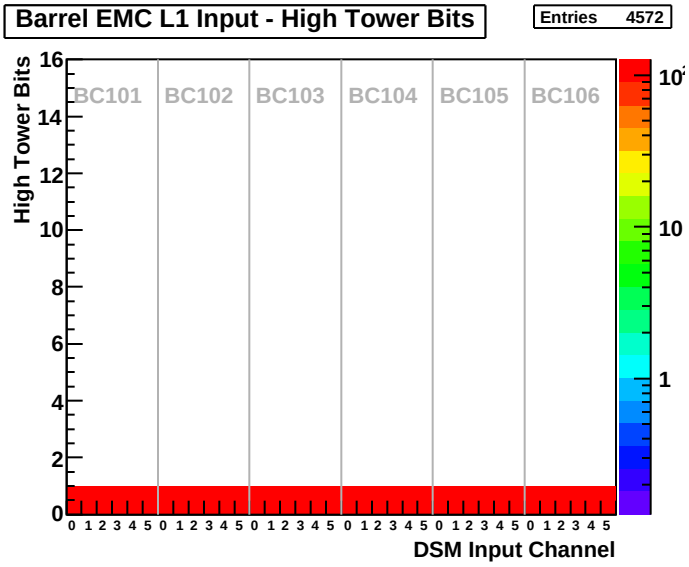

Hybrid Jet Patches
Entries 254
JP ADC
JP ID

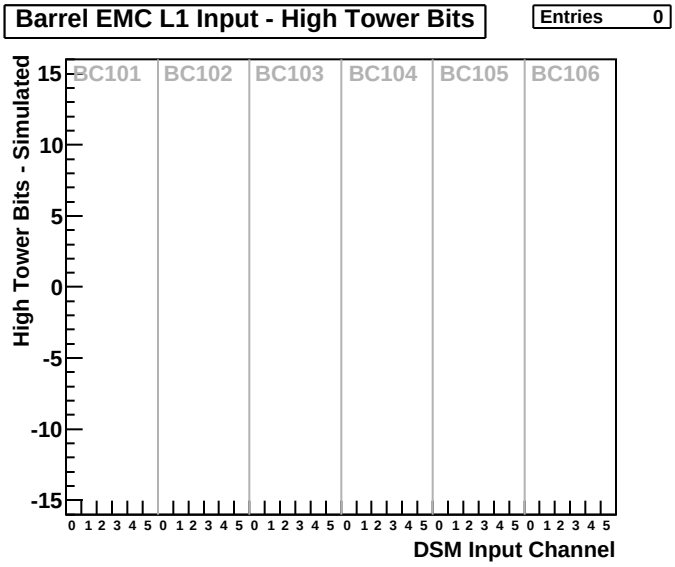

Barrel EMC L1 Input - Low Eta Sum
Entries 4572
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

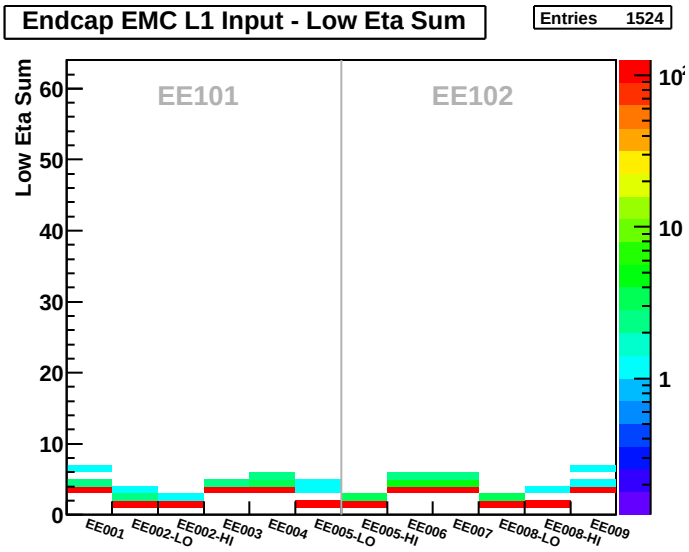

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

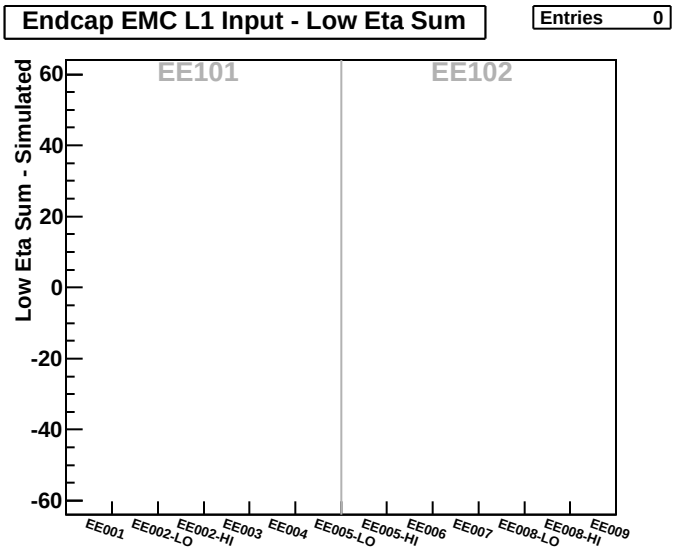

Barrel EMC L1 Input - High Eta Sum
Entries 4572
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

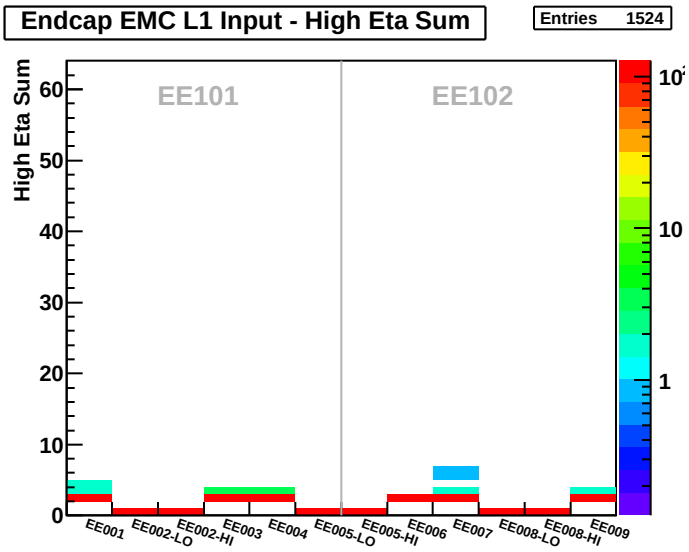

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

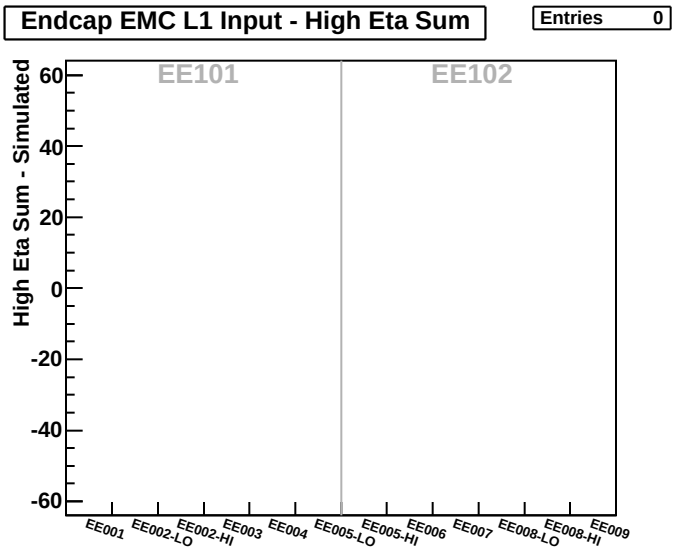

Barrel EMC L1 Input - High Tower Bits
Entries 4572
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

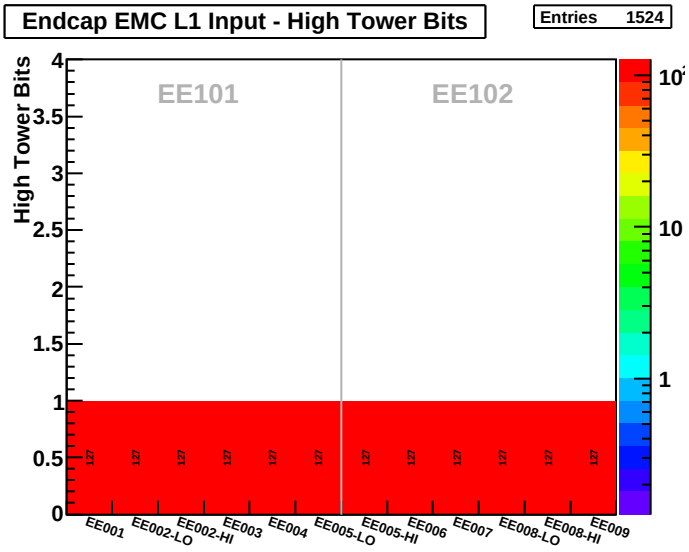

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

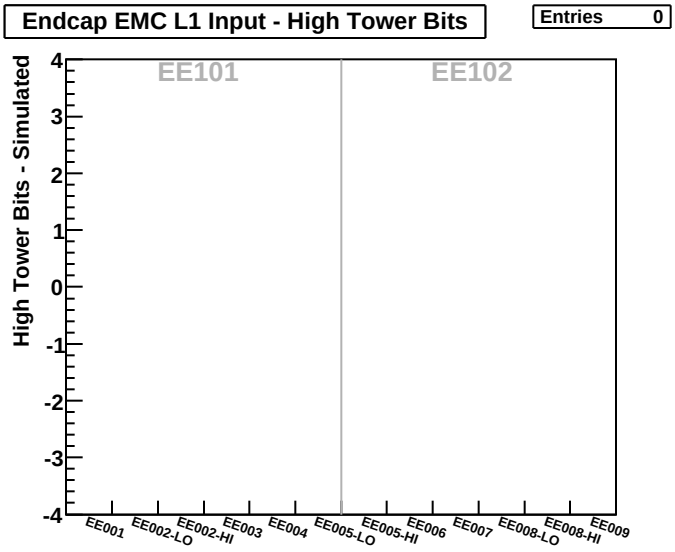

Endcap EMC L1 Input - Low Eta Sum
Entries 1524
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

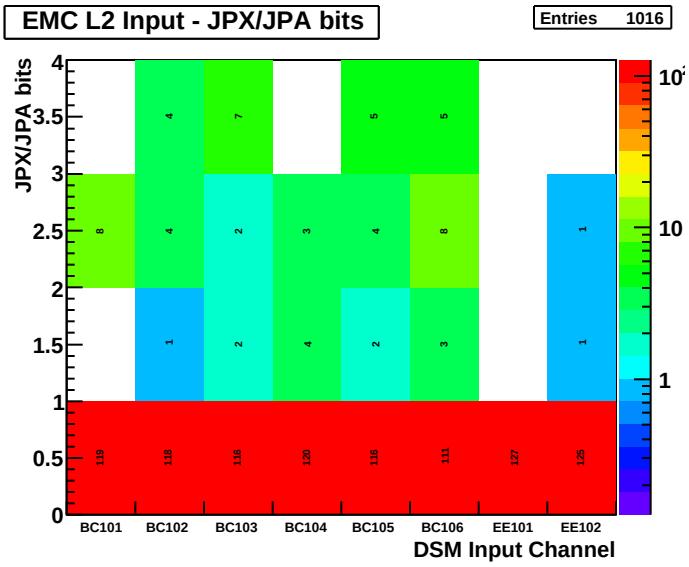

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

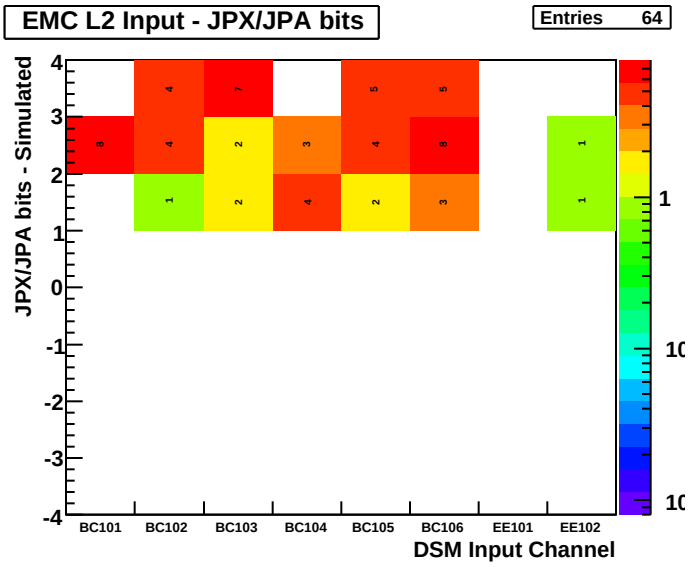

Endcap EMC L1 Input - High Eta Sum
Entries 1524
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

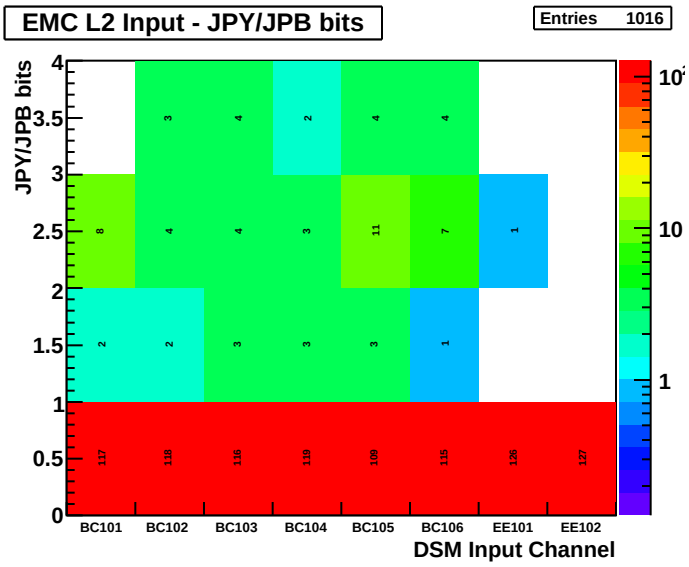

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

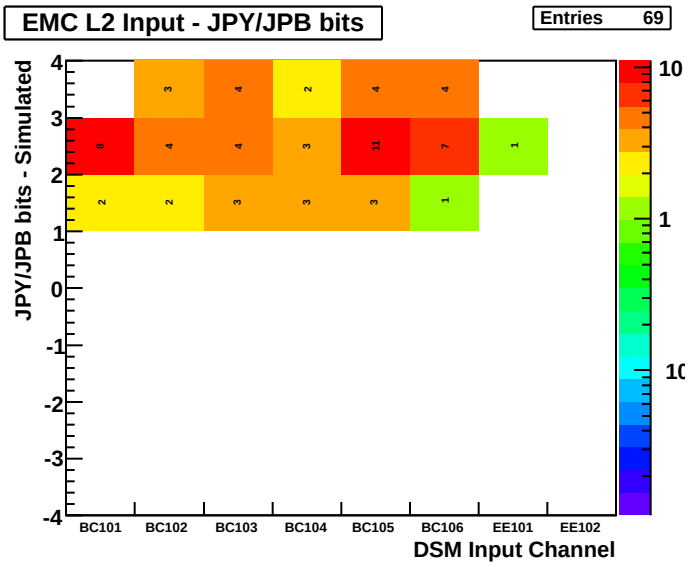

Endcap EMC L1 Input - High Tower Bits
Entries 1524
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

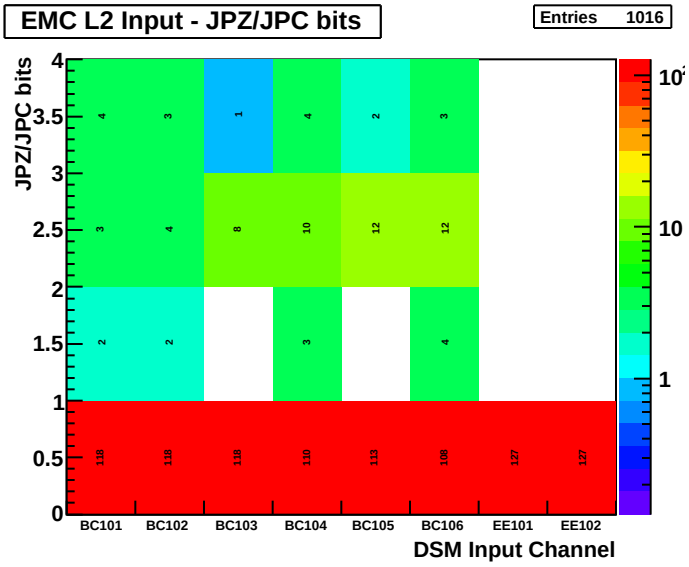

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

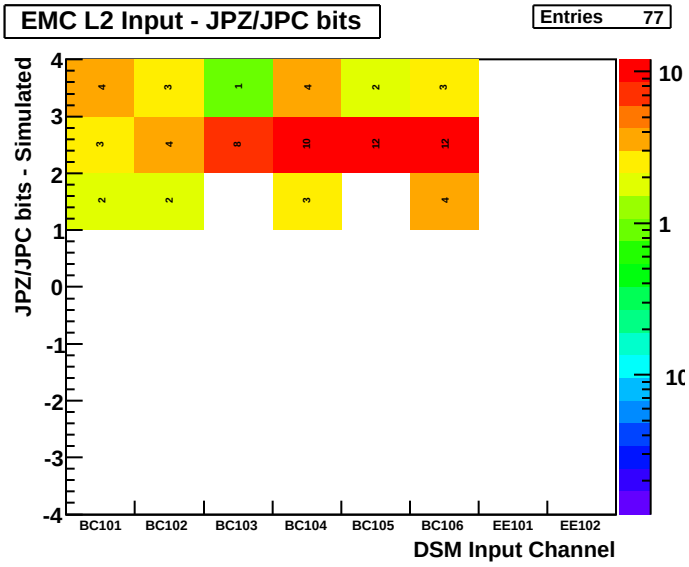

EMC L2 Input - JPX/JPA bits
Entries 1016
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

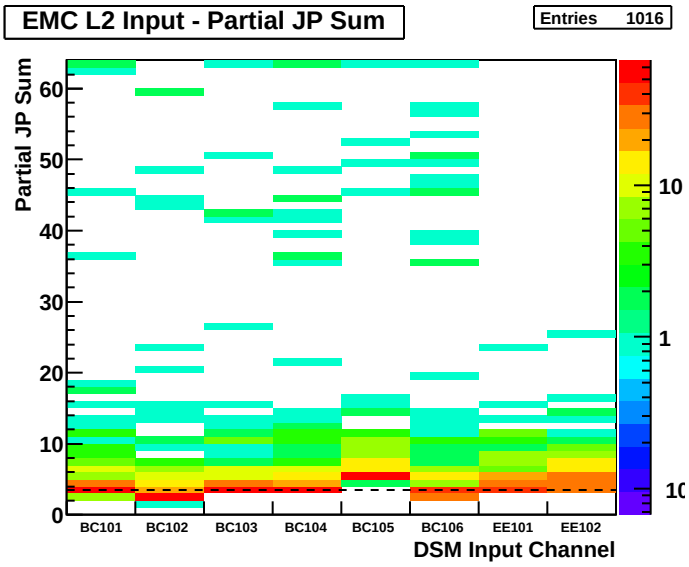

EMC L2 Input - JPX/JPA bits
Entries 64
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

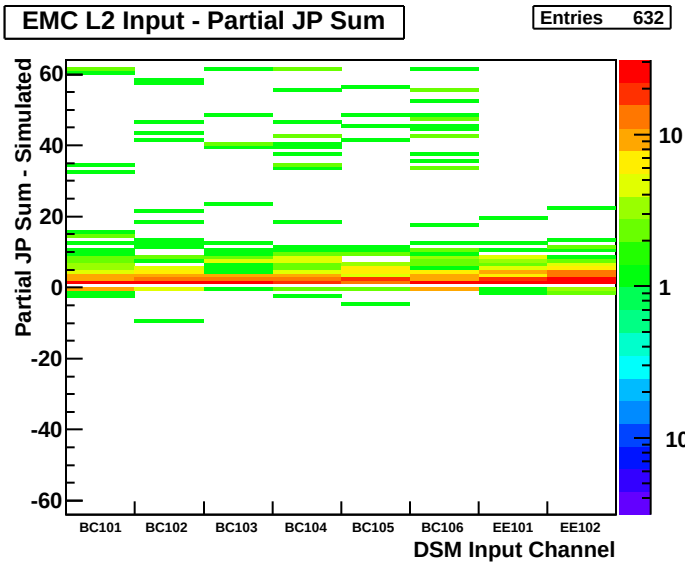

EMC L2 Input - JPY/JPB bits
Entries 1016
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

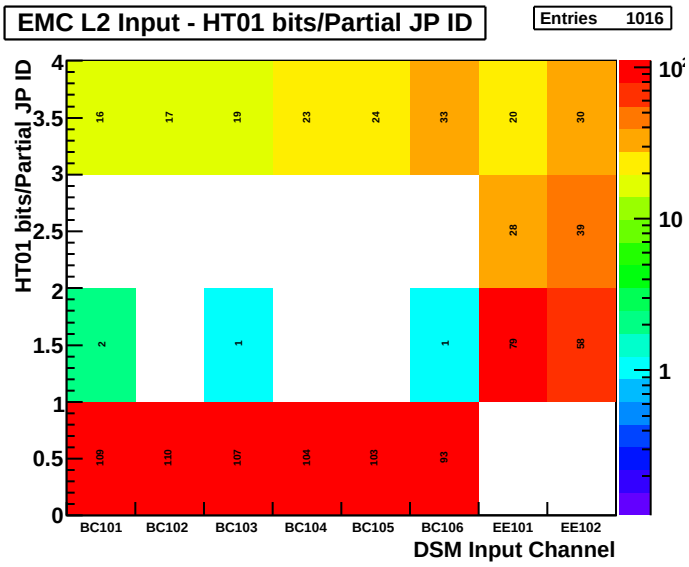

EMC L2 Input - JPY/JPB bits
Entries 69
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

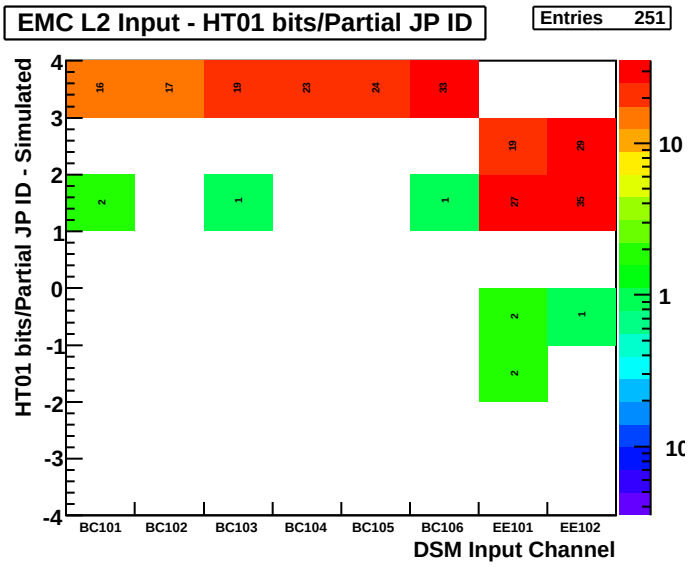

EMC L2 Input - JPZ/JPC bits
Entries 1016
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

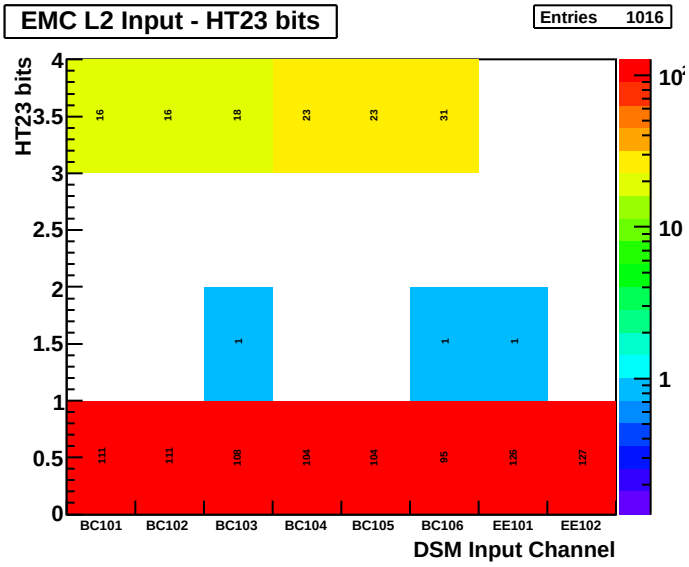

EMC L2 Input - JPZ/JPC bits
Entries 77
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

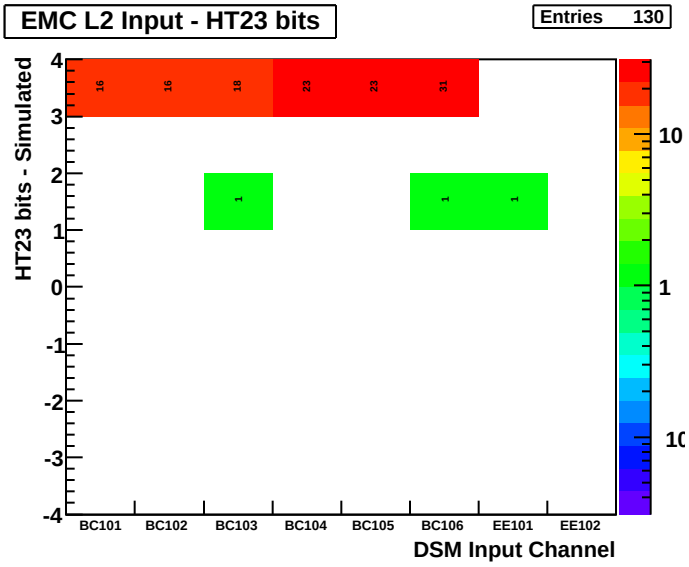

EMC L2 Input - Partial JP Sum
Entries 1016
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

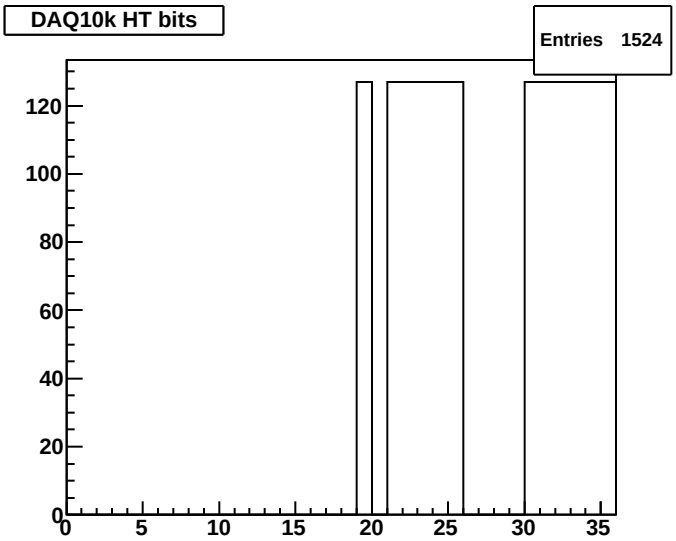

EMC L2 Input - Partial JP Sum
Entries 632
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

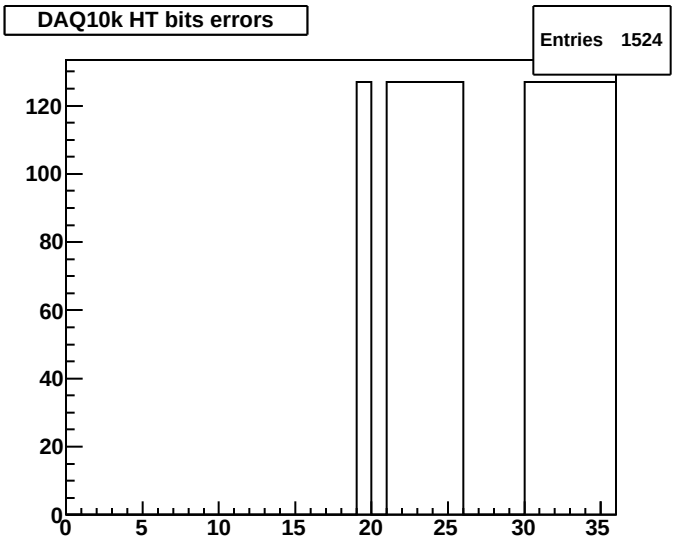

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1016
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

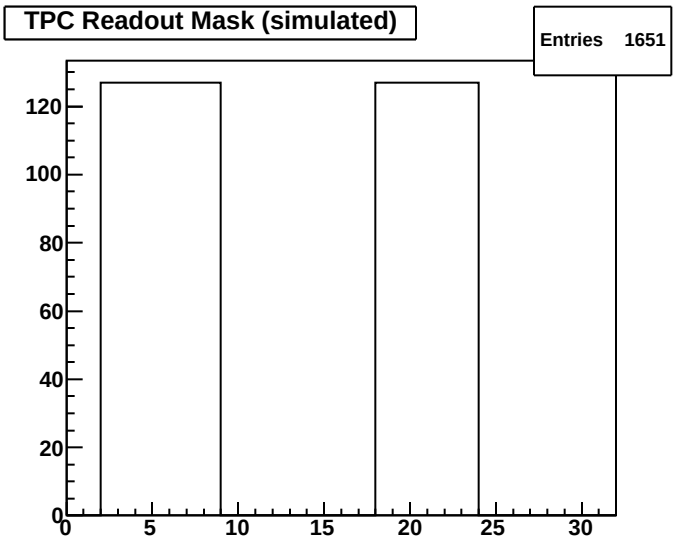

EMC L2 Input - HT01 bits/Partial JP ID
Entries 251
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

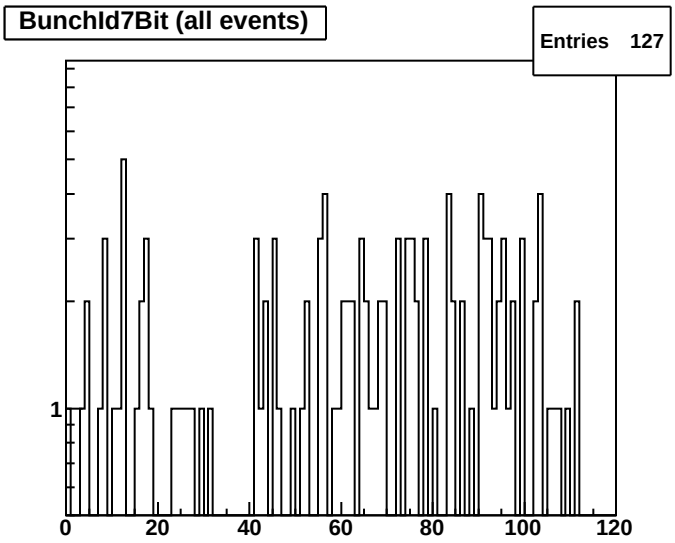

EMC L2 Input - HT23 bits
Entries 1016
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

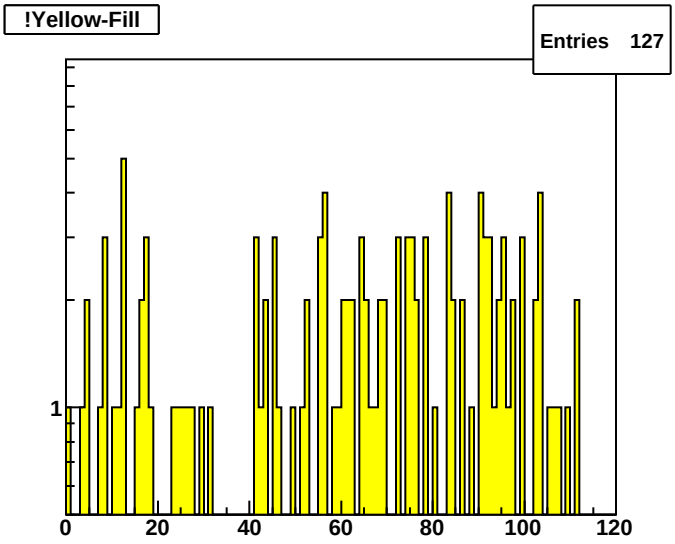

EMC L2 Input - HT23 bits
Entries 130
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

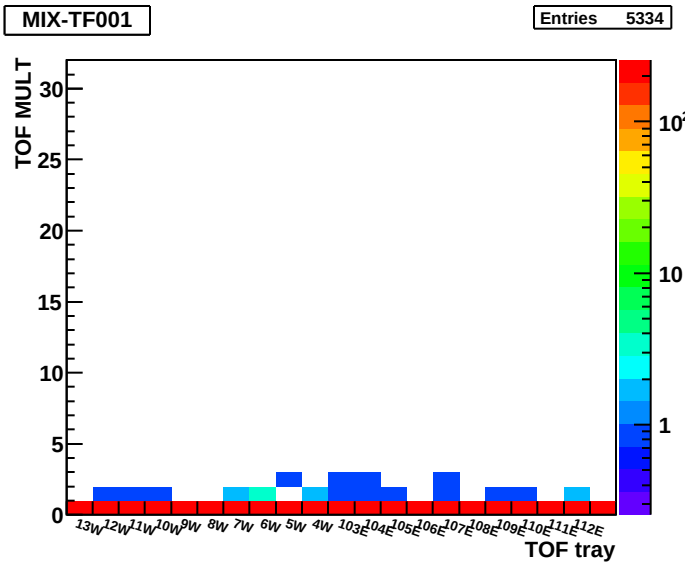

DAQ10k HT bits
Entries 1524
120
100
80
60
40
20
0
0 5 10 15 20 25 30 35

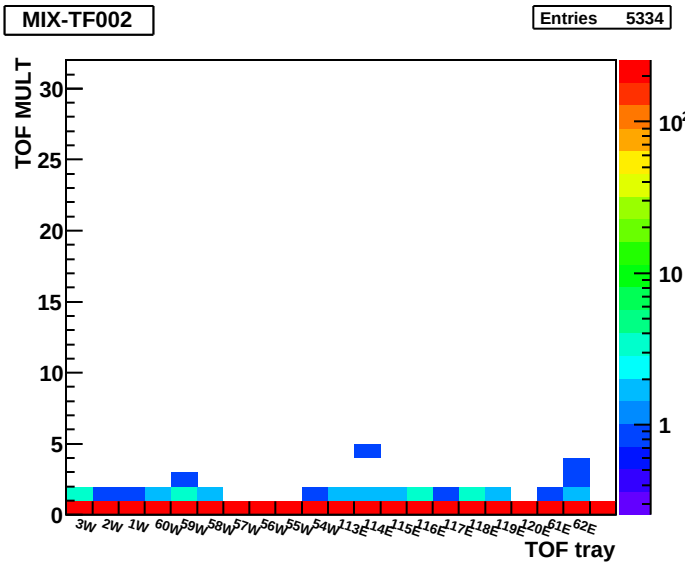

DAQ10k HT bits errors
Entries 1524
120
100
80
60
40
20
0
0 5 10 15 20 25 30 35

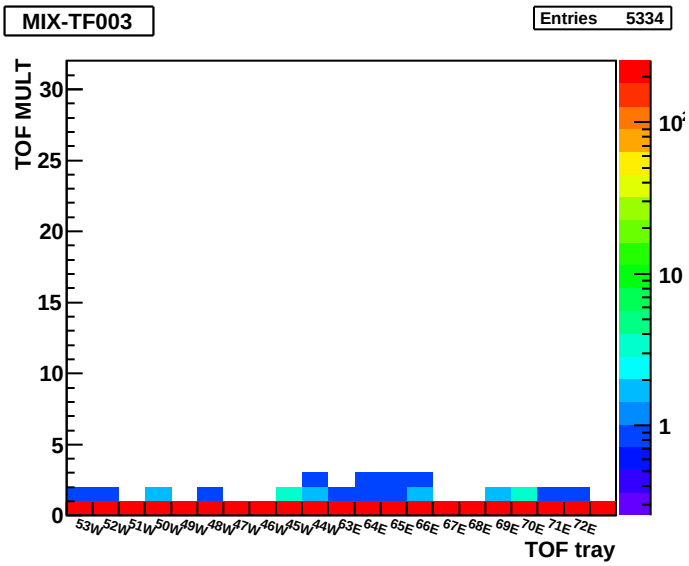

TPC Readout Mask (simulated)
Entries 1651
120
100
80
60
40
20
0
0 5 10 15 20 25 30

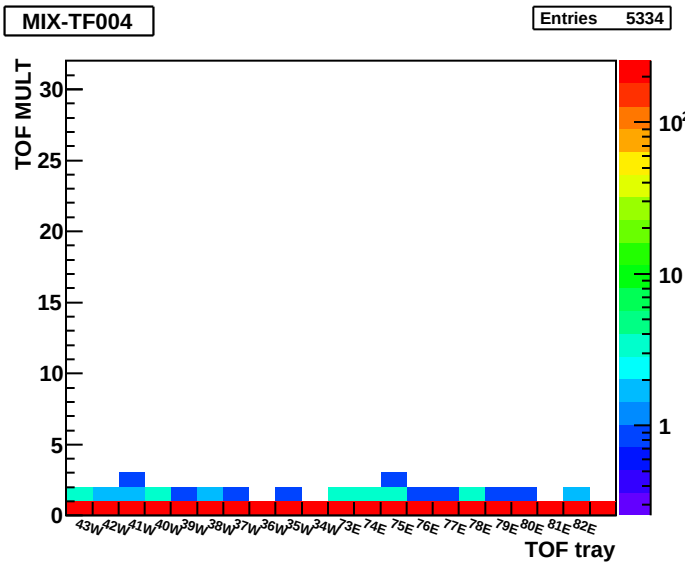

BunchId7Bit (all events)
Entries 127
1
0 20 40 60 80 100 120

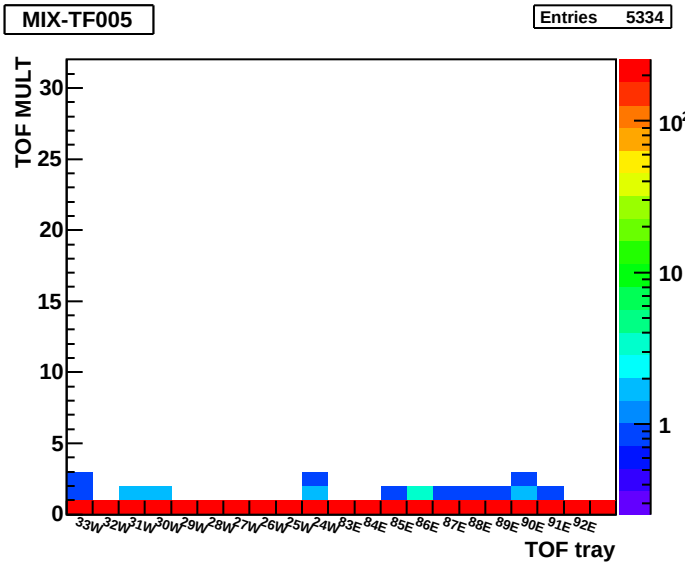

!Yellow-Fill
Entries 127
1
0 20 40 60 80 100 120

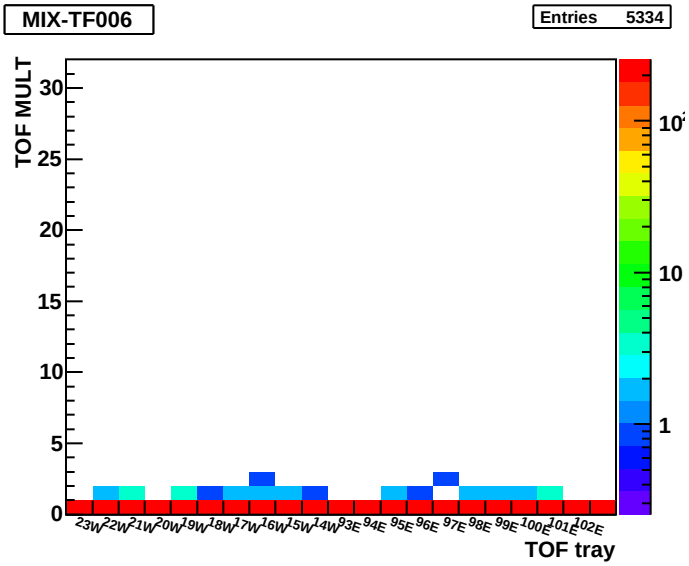

MIX-TF001
Entries 5334
TOF MULT
TOF tray

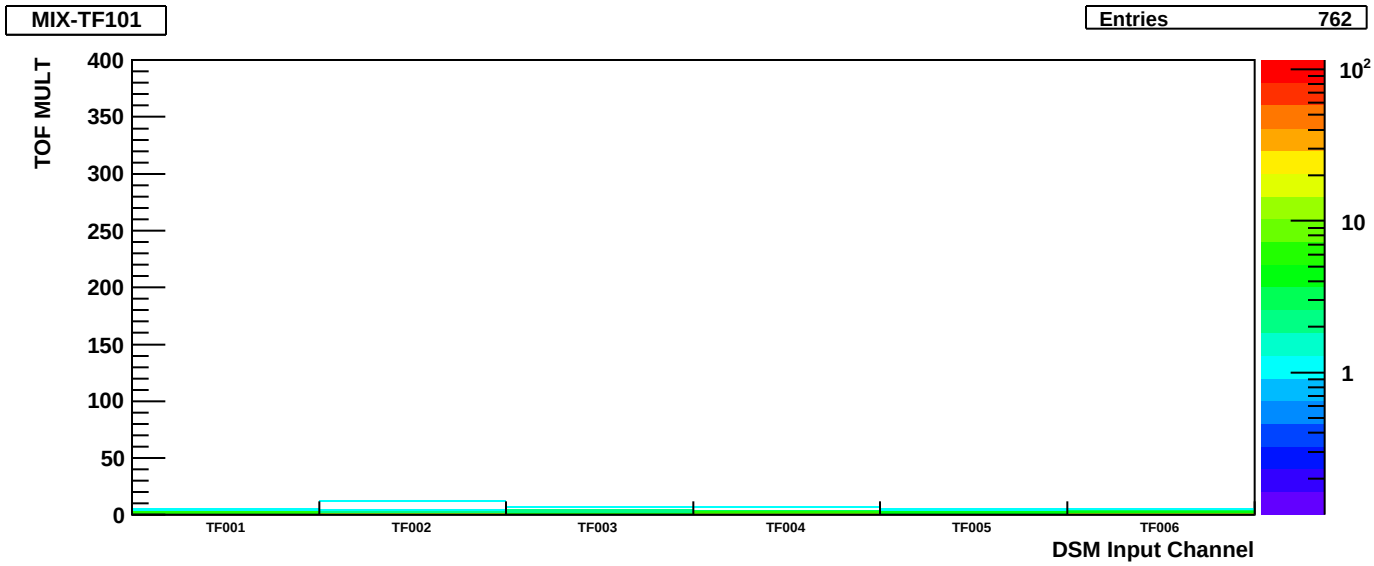

MIX-TF002
Entries 5334
TOF MULT
TOF tray

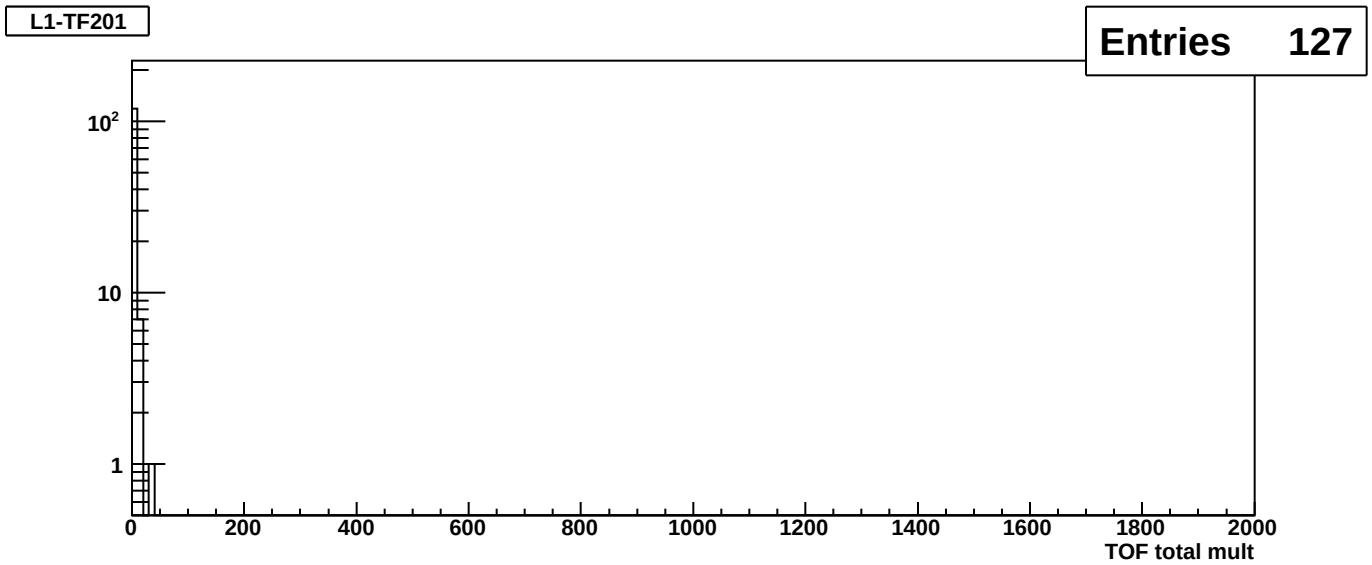

MIX-TF003
Entries 5334
TOF MULT
TOF tray

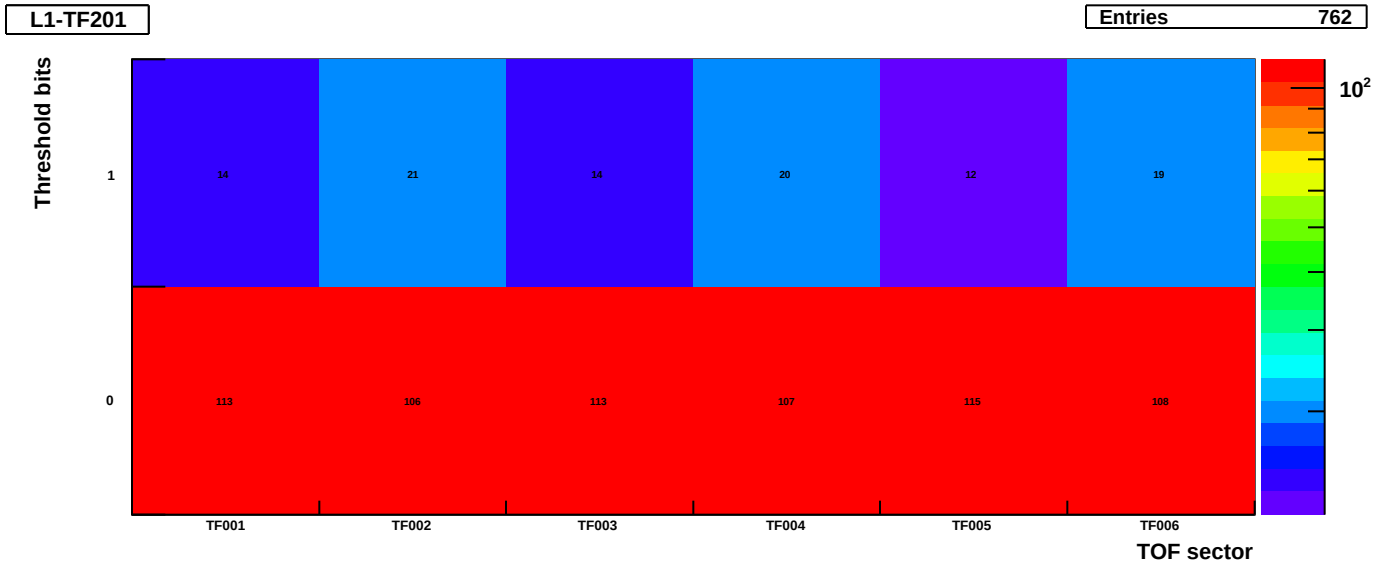

MIX-TF004
Entries 5334
TOF MULT
TOF tray

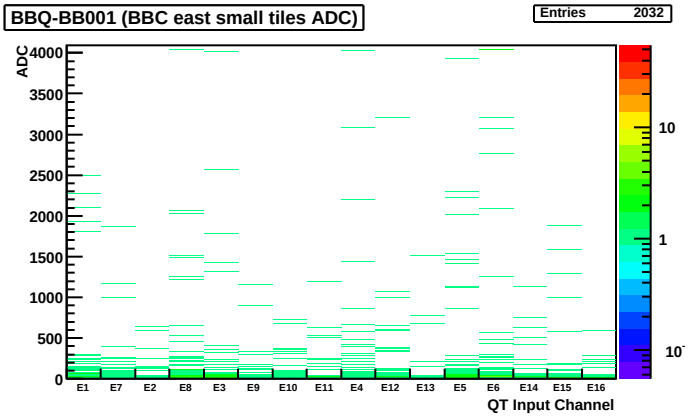

MIX-TF005
Entries 5334
TOF MULT
TOF tray

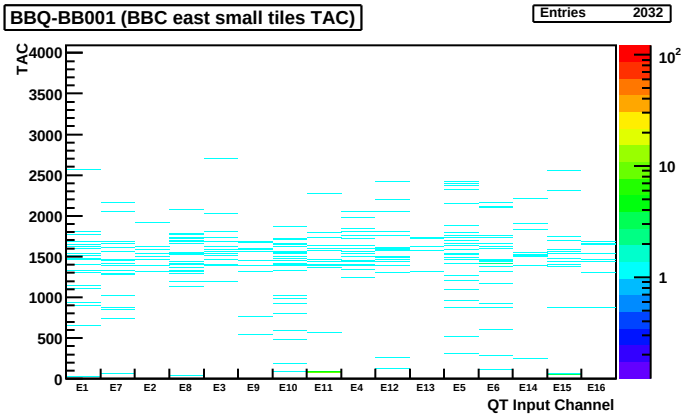

MIX-TF006
Entries 5334
TOF MULT
TOF tray

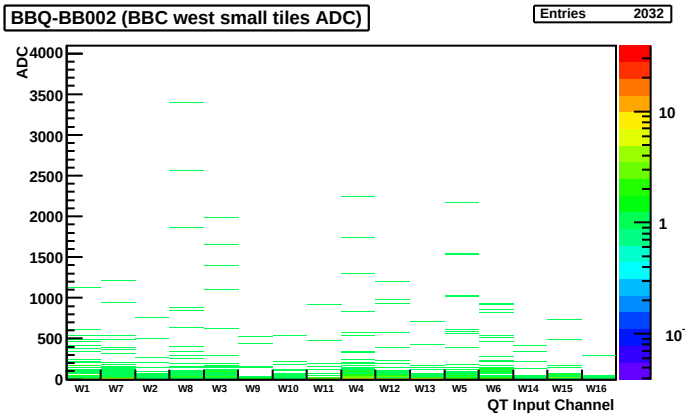

MIX-TF101
Entries 762
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^2
10
1

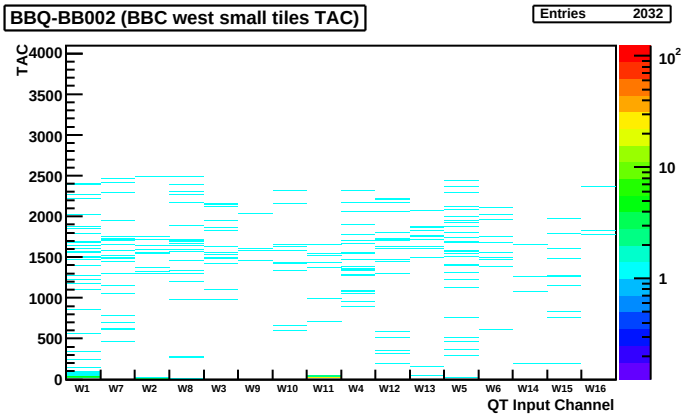

L1-TF201
Entries 127
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

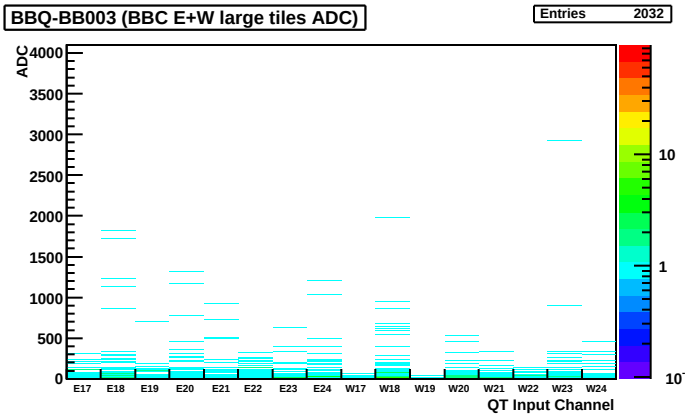

L1-TF201
Entries 762
Threshold bits
1
0
14
21
14
20
12
19
113
106
113
107
115
108
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^2

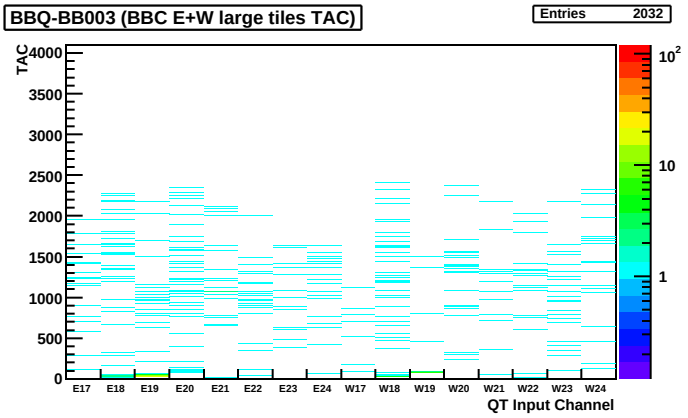

BBQ-BB001 (BBC east small tiles ADC)
Entries 2032
ADC
QT Input Channel

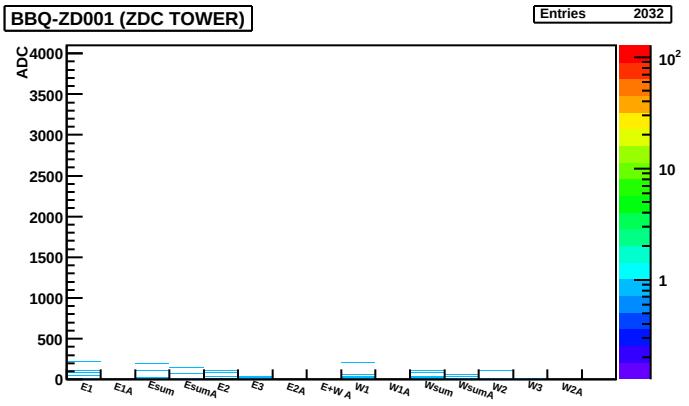

BBQ-BB001 (BBC east small tiles TAC)
Entries 2032
TAC
QT Input Channel

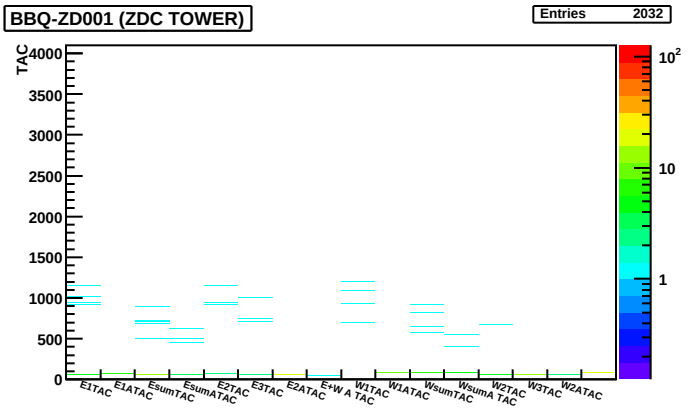

BBQ-BB002 (BBC west small tiles ADC)
Entries 2032
ADC
QT Input Channel

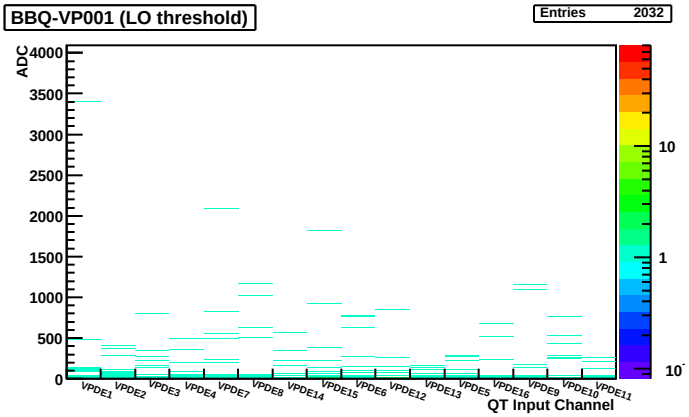

BBQ-BB002 (BBC west small tiles TAC)
Entries 2032
TAC
QT Input Channel

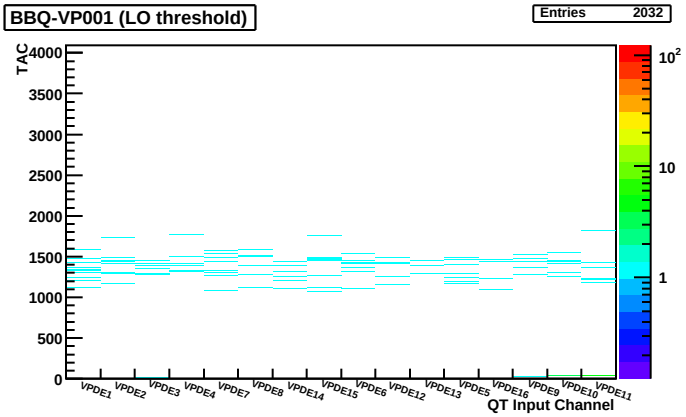

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 2032
ADC
QT Input Channel

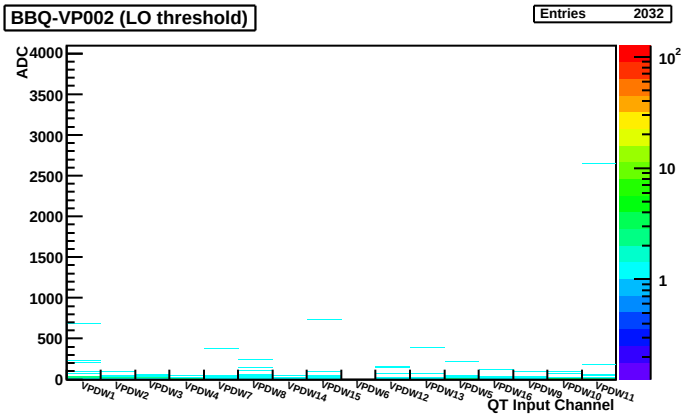

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 2032
TAC
QT Input Channel

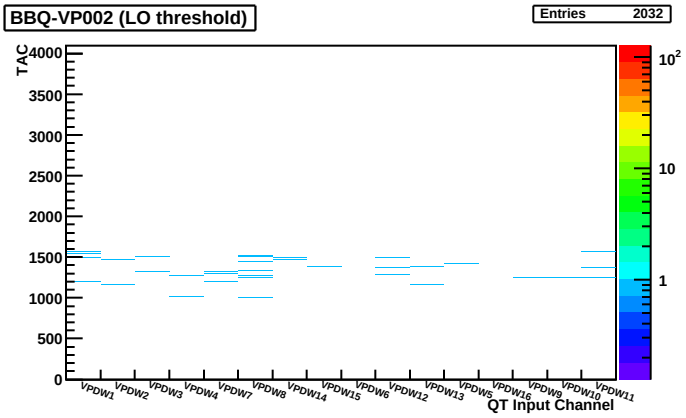

BBQ-ZD001 (ZDC TOWER)
Entries 2032
ADC

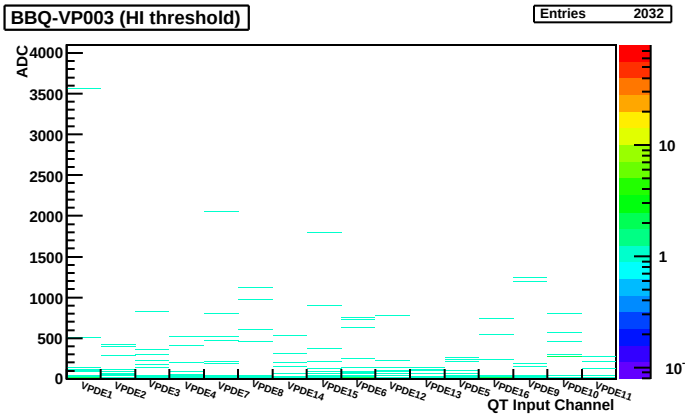

BBQ-ZD001 (ZDC TOWER)
Entries 2032
TAC

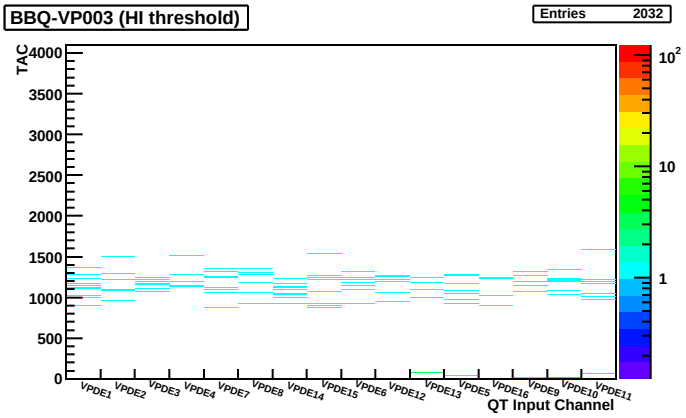

BBQ-VP001 (LO threshold)
Entries 2032
ADC
QT Input Channel

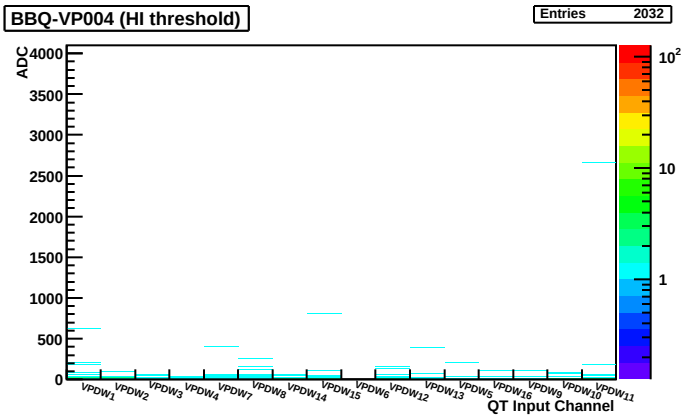

BBQ-VP001 (LO threshold)
Entries 2032
TAC
QT Input Channel

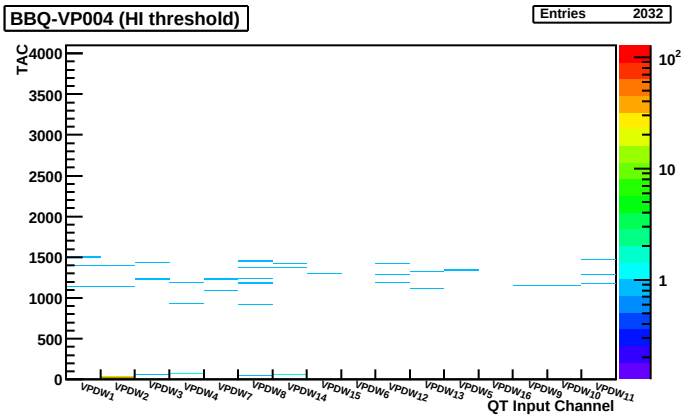

BBQ-VP002 (LO threshold)
Entries 2032
ADC
QT Input Channel

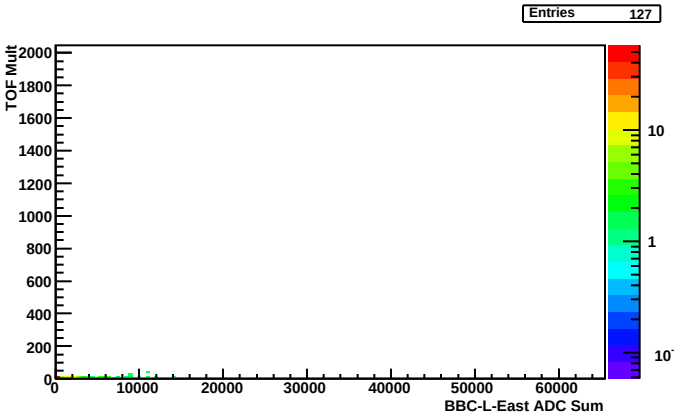

BBQ-VP002 (LO threshold)
Entries 2032
TAC
QT Input Channel

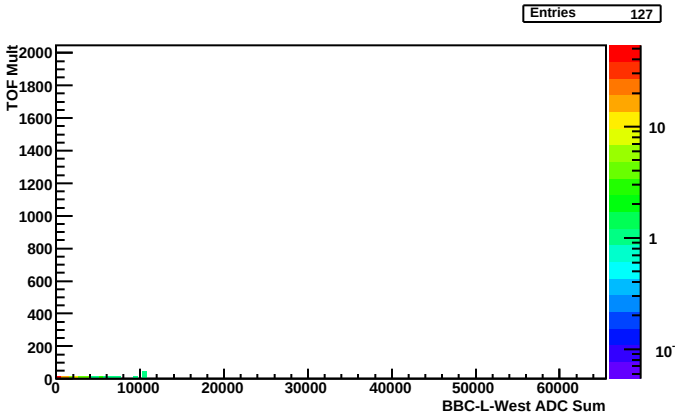

BBQ-VP003 (HI threshold)
Entries 2032
ADC
QT Input Channel

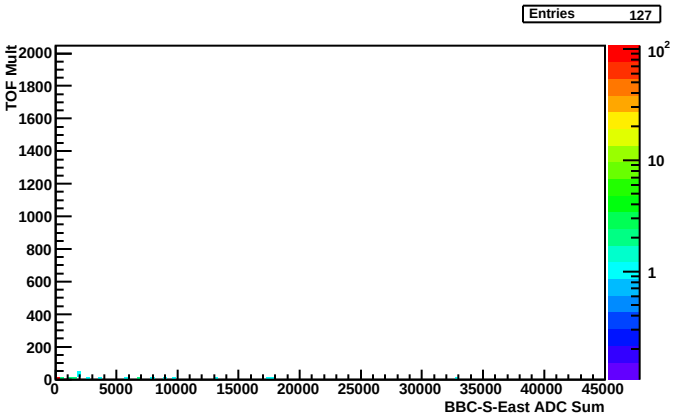

BBQ-VP003 (HI threshold)
Entries 2032
TAC
QT Input Channel

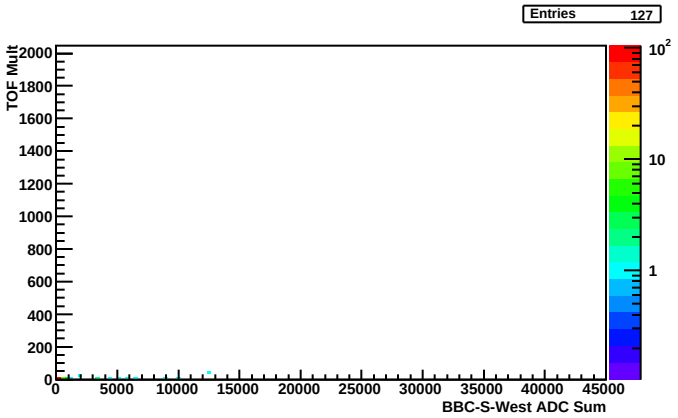

BBQ-VP004 (HI threshold)
Entries 2032
ADC
QT Input Channel

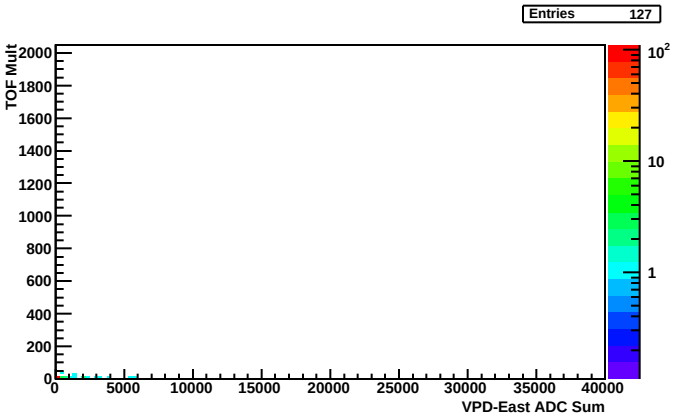

BBQ-VP004 (HI threshold)
Entries 2032
TAC
QT Input Channel

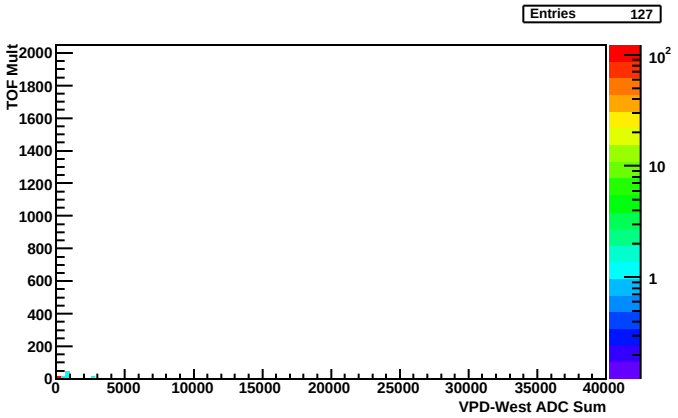

Entries 127
TOF Mult
BBC-L-East ADC Sum

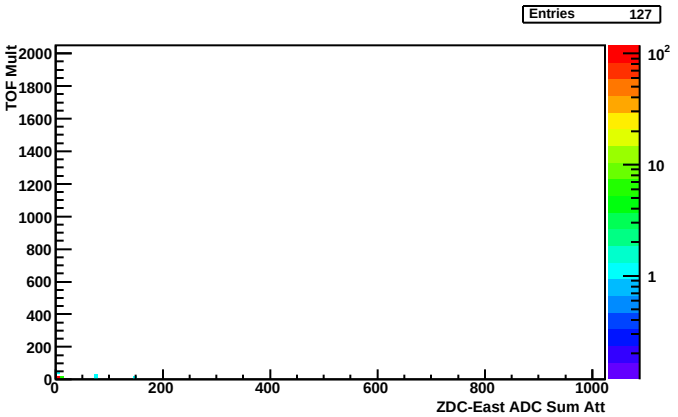

Entries 127
TOF Mult
BBC-L-West ADC Sum

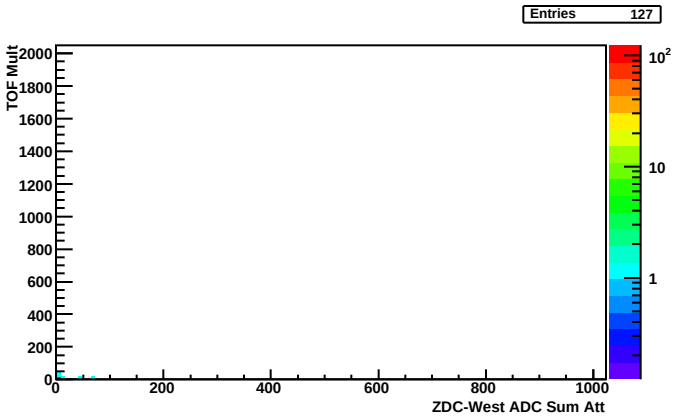

Entries 127
TOF Mult
BBC-S-East ADC Sum

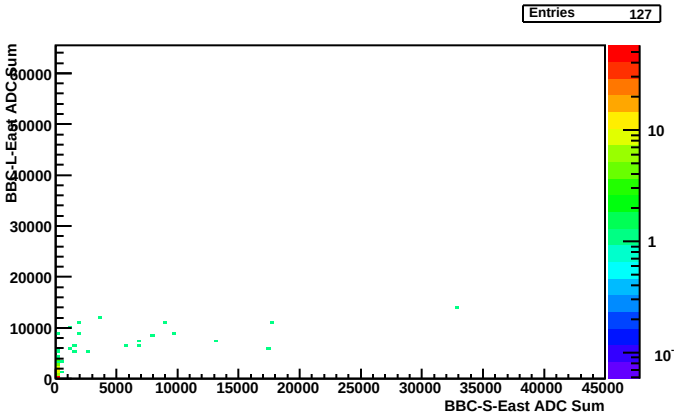

Entries 127
TOF Mult
BBC-S-West ADC Sum

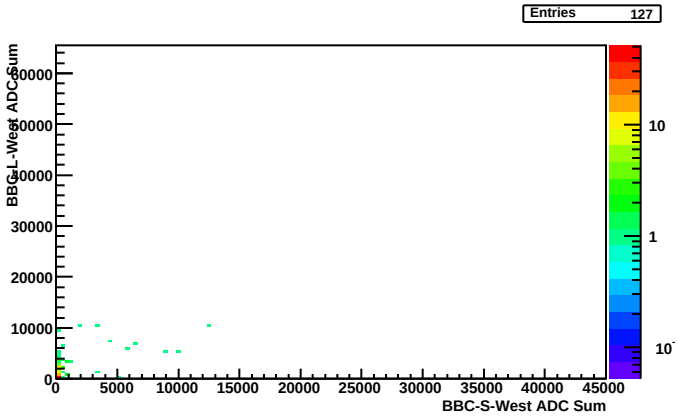

Entries 127
TOF Mult
VPD-East ADC Sum

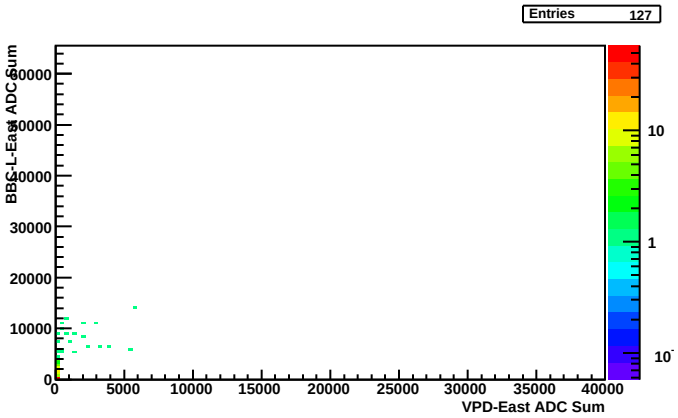

Entries 127
TOF Mult
VPD-West ADC Sum

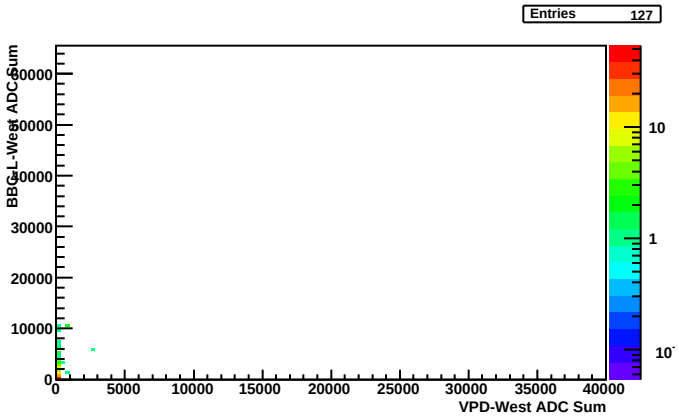

Entries 127
TOF Mult
ZDC-East ADC Sum Att

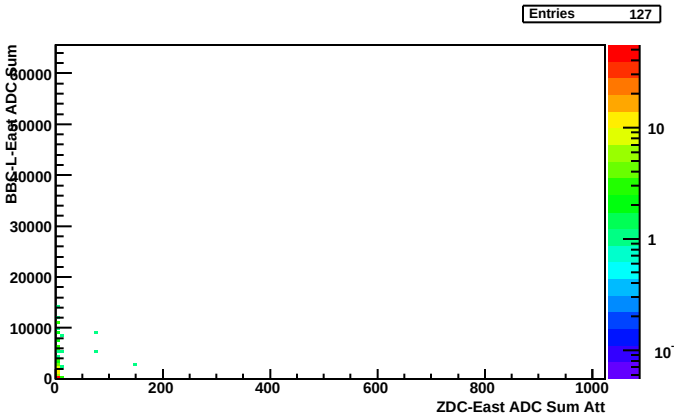

Entries 127
TOF Mult
ZDC-West ADC Sum Att

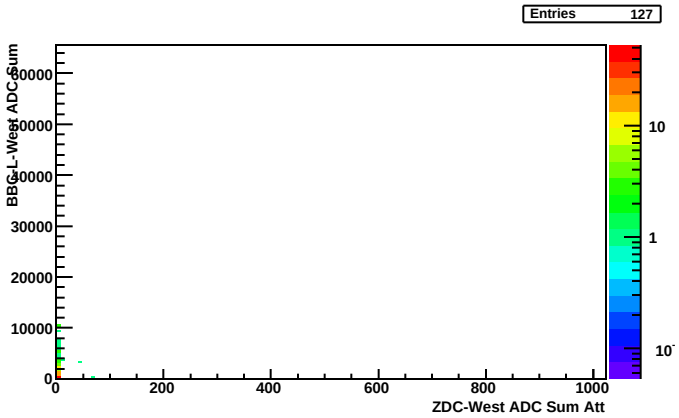

Entries 127
BBC-L-East ADC Sum
BBC-S-East ADC Sum

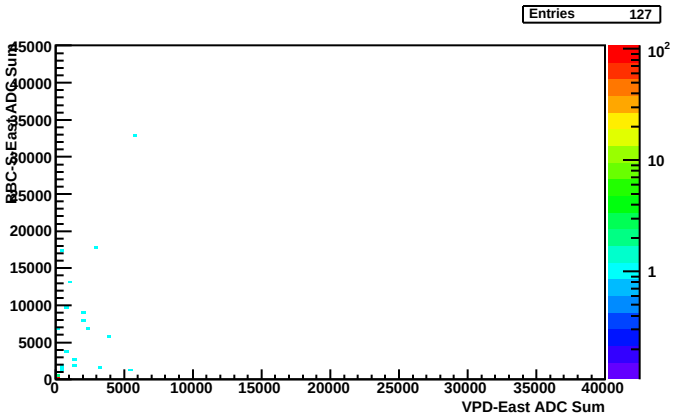

Entries 127
BBC-L-West ADC Sum
BBC-S-West ADC Sum

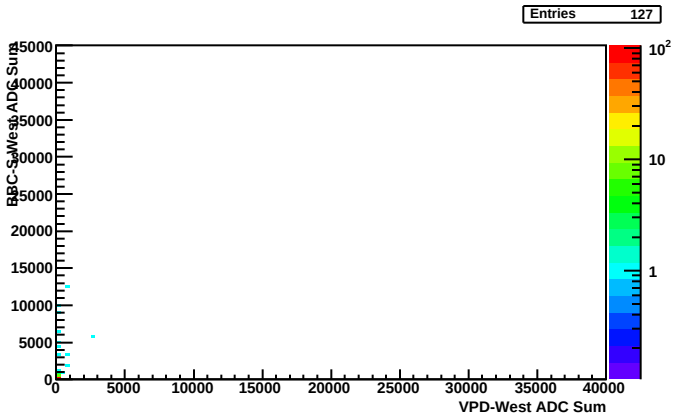

Entries 127
BBC-L-East ADC Sum
VPD-East ADC Sum

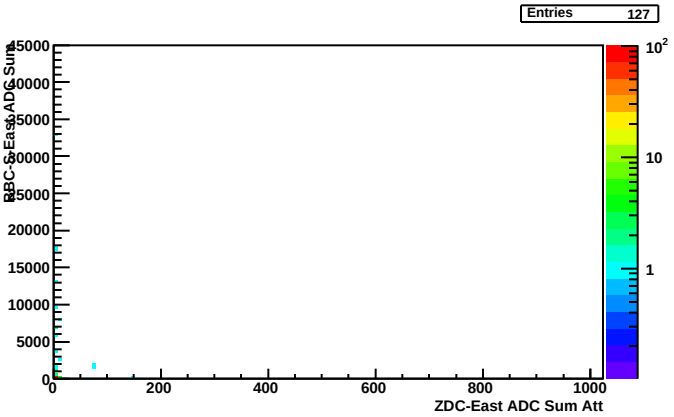

Entries 127
BBC-L-West ADC Sum
VPD-West ADC Sum

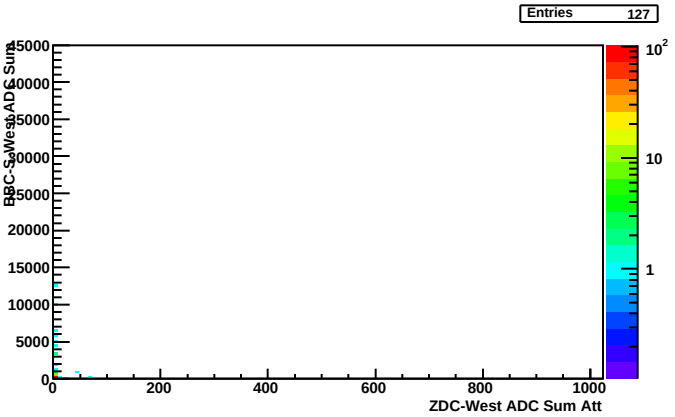

Entries 127
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

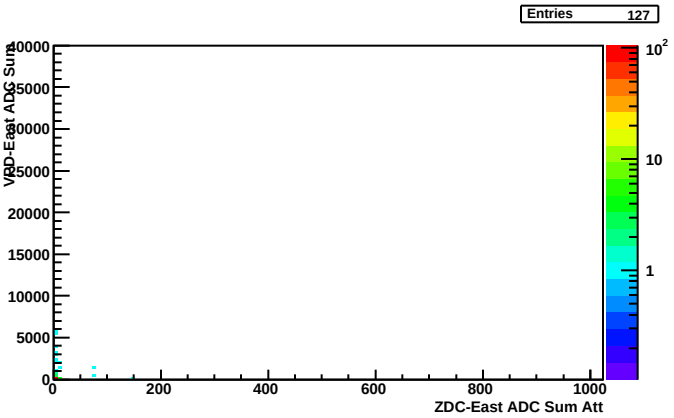

Entries 127
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

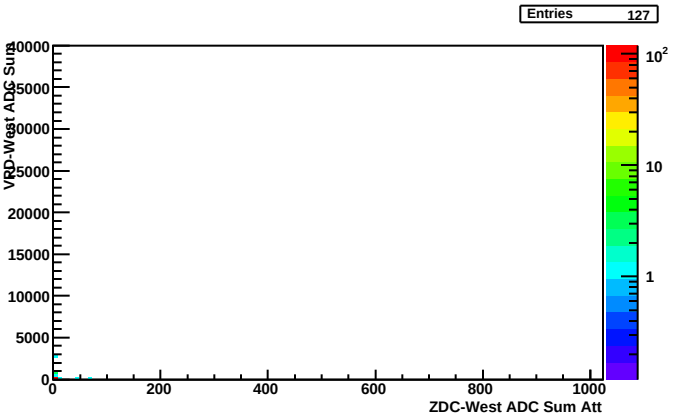

Entries 127
BBC-S-East ADC Sum
VPD-East ADC Sum

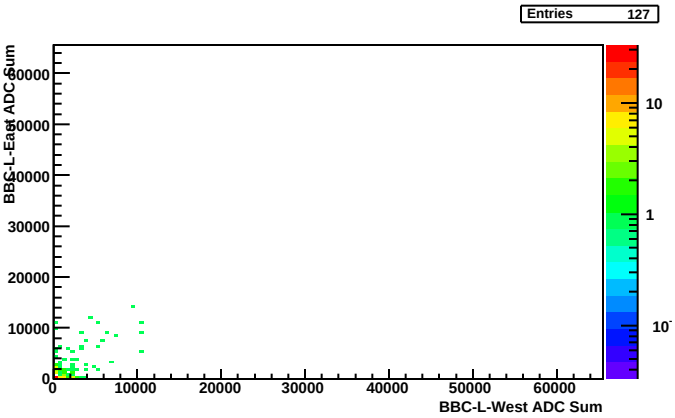

Entries 127
BBC-S-West ADC Sum
VPD-West ADC Sum

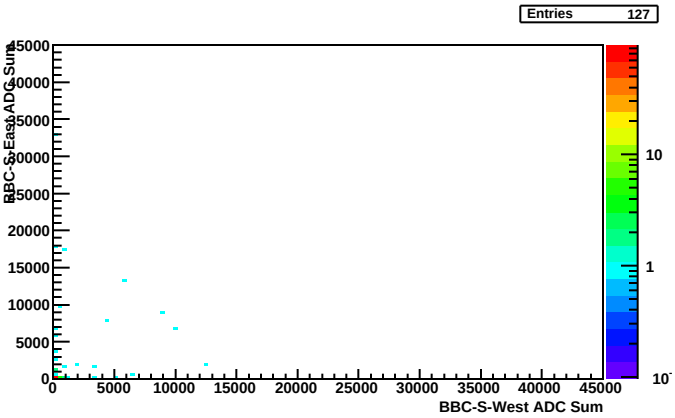

Entries 127
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

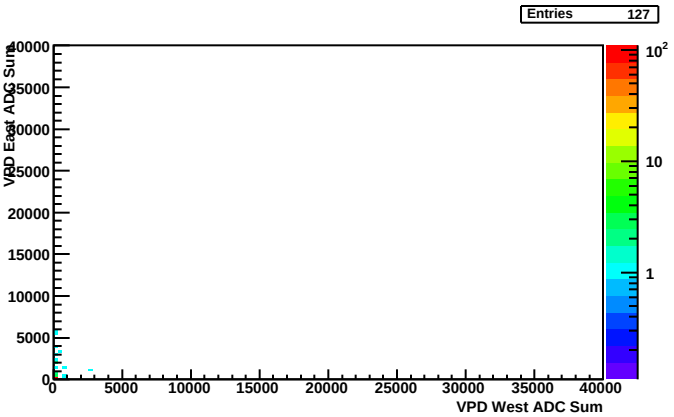

Entries 127
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

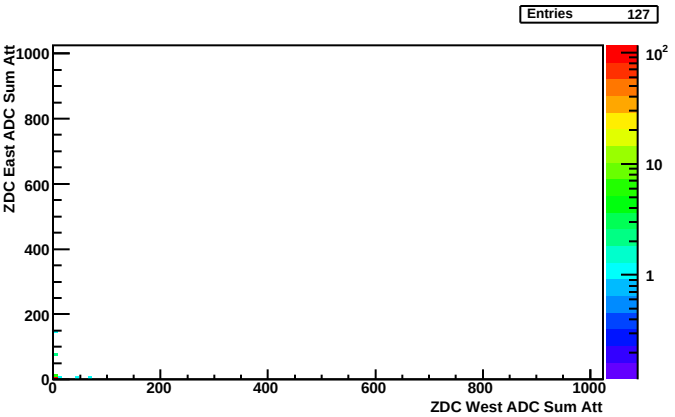

Entries 127
VPD-East ADC Sum
ZDC-East ADC Sum Att

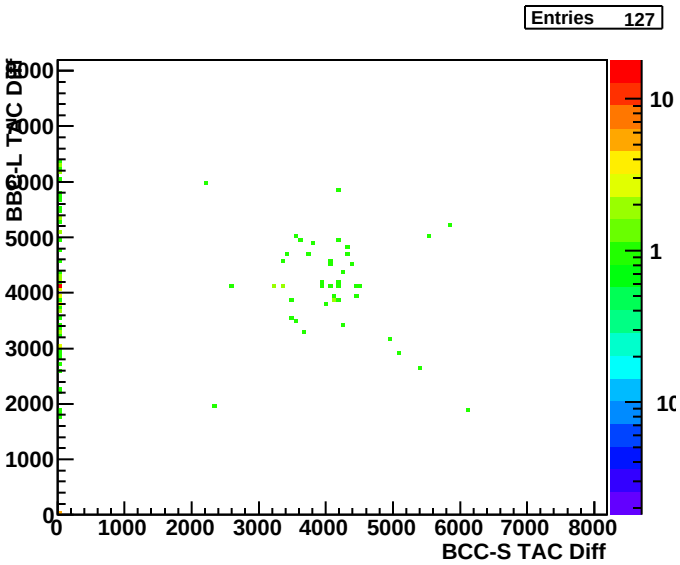

Entries 127
VPD-West ADC Sum
ZDC-West ADC Sum Att

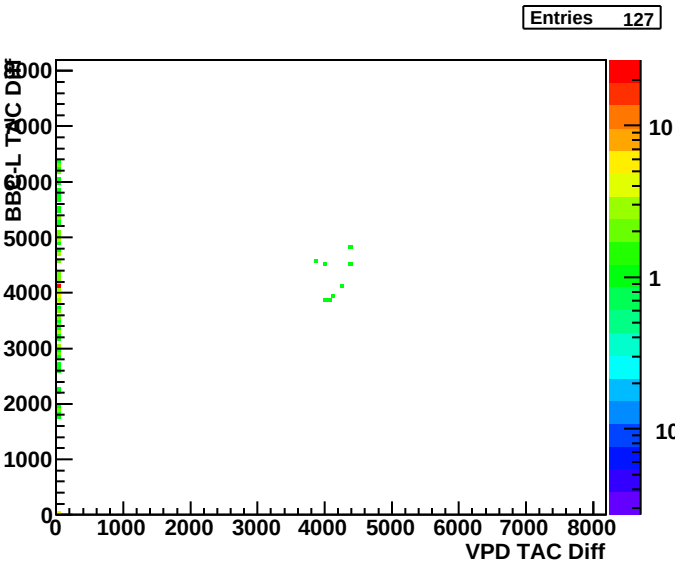

Entries 127
BBC-L-East ADC Sum
BBC-L-West ADC Sum

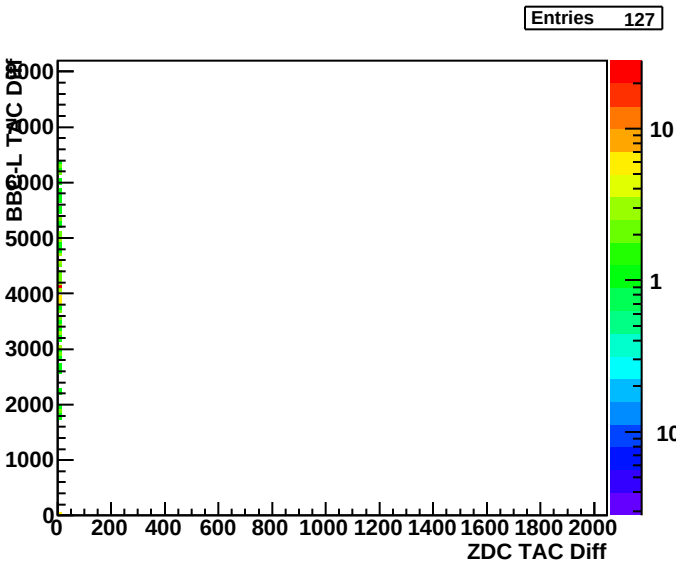

Entries 127
BBC-S-East ADC Sum
BBC-S-West ADC Sum

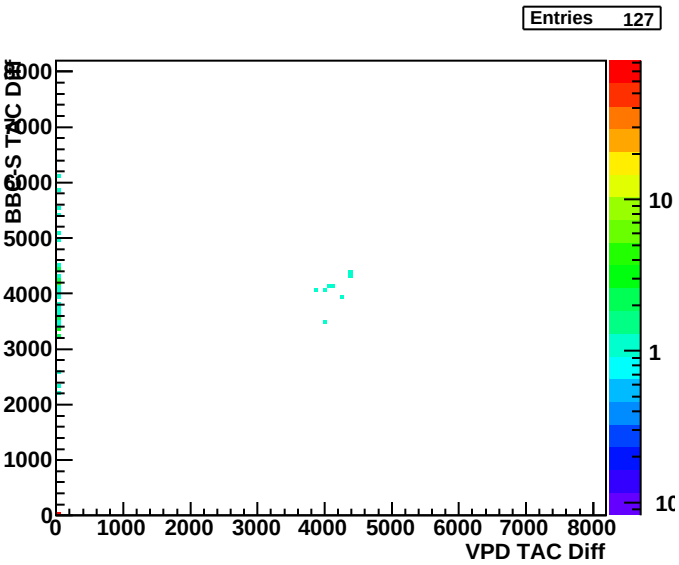

Entries 127
VPD East ADC Sum
VPD West ADC Sum

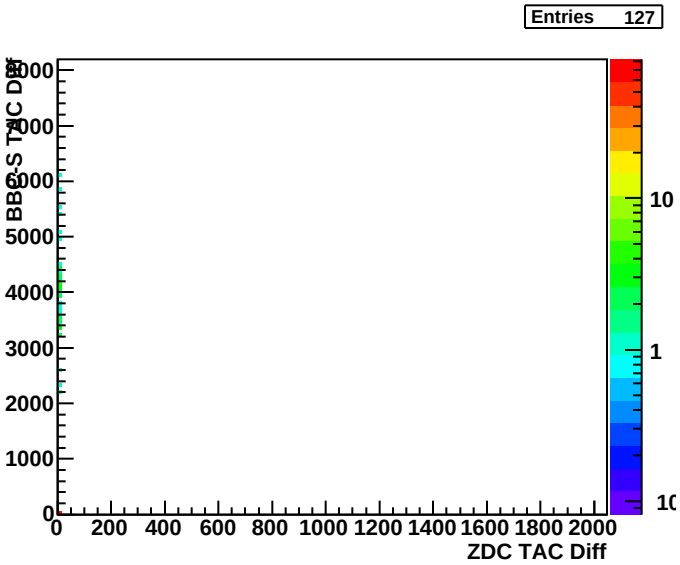

Entries 127
ZDC East ADC Sum Att
ZDC West ADC Sum Att

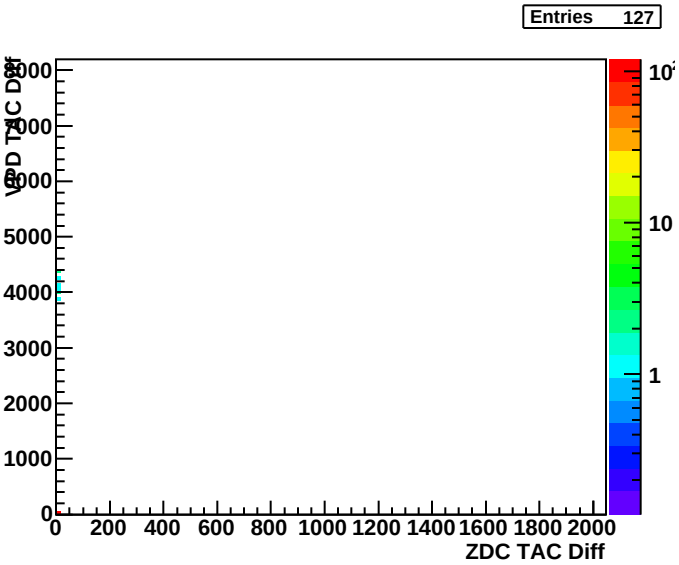

Entries 127
BBC-L TAC Diff
BCC-S TAC Diff

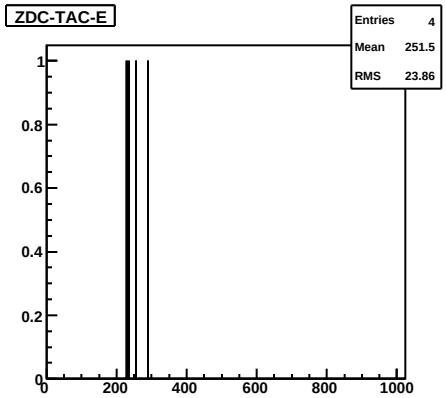

Entries 127
BBC-L TAC Diff
VPD TAC Diff

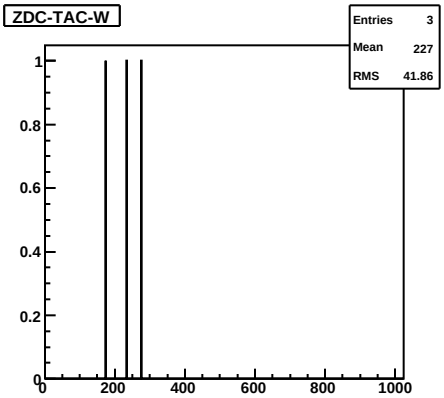

Entries 127
BBC-L TAC Diff
ZDC TAC Diff

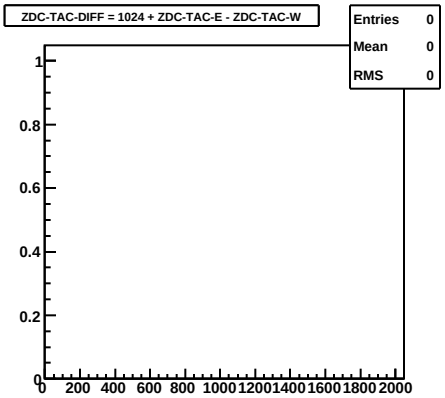

Entries 127
BBC-S TAC Diff
VPD TAC Diff

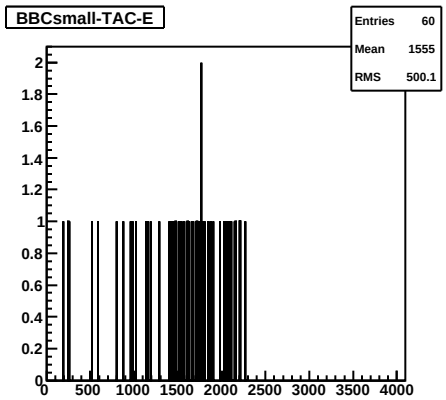

Entries 127
BBC-S TAC Diff
ZDC TAC Diff

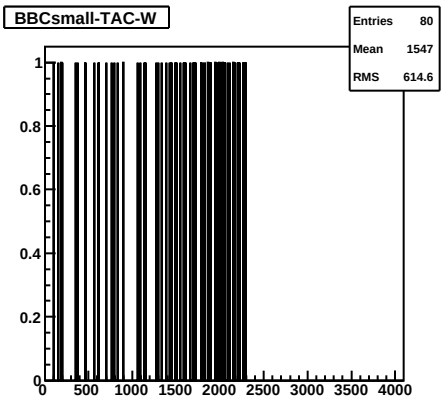

Entries 127
VPD TAC Diff
ZDC TAC Diff

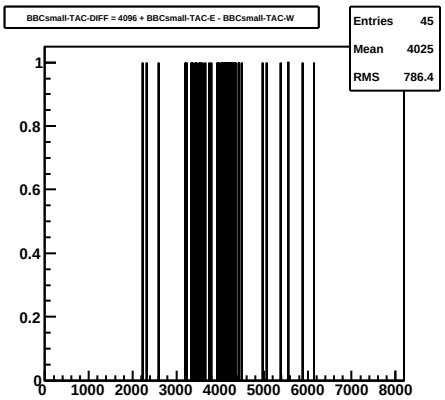

ZDC-TAC-E
Entries 4
Mean 251.5
RMS 23.86

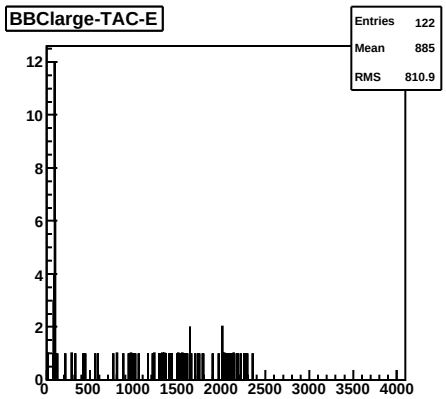

ZDC-TAC-W
Entries 3
Mean 227
RMS 41.86

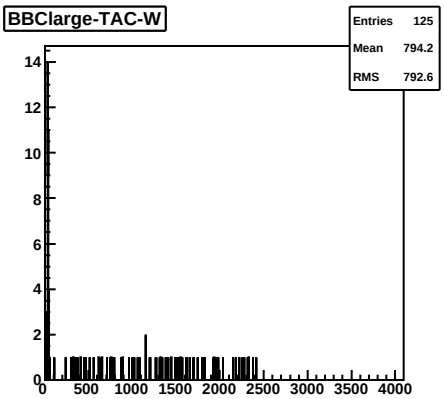

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 0
Mean 0
RMS 0

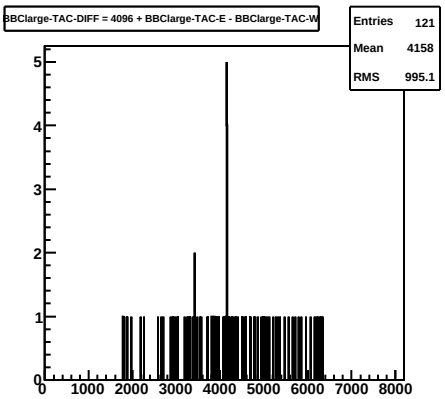

BBCsmall-TAC-E
Entries 60
Mean 1555
RMS 500.1

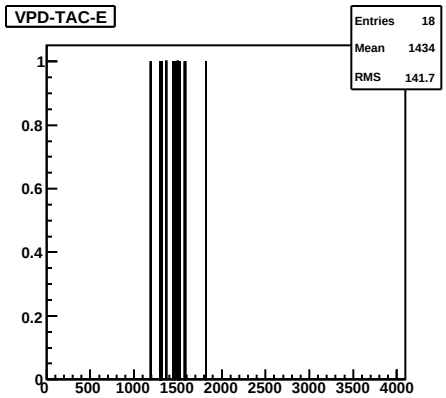

BBCsmall-TAC-W
Entries 80
Mean 1547
RMS 614.6

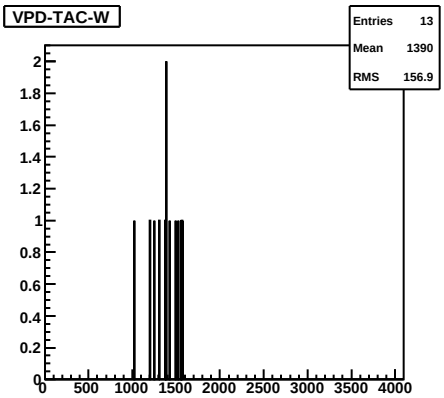

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 45
Mean 4025
RMS 786.4

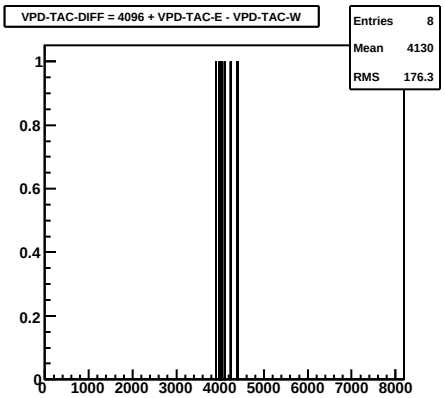

BBClarge-TAC-E
Entries 122
Mean 885
RMS 810.9

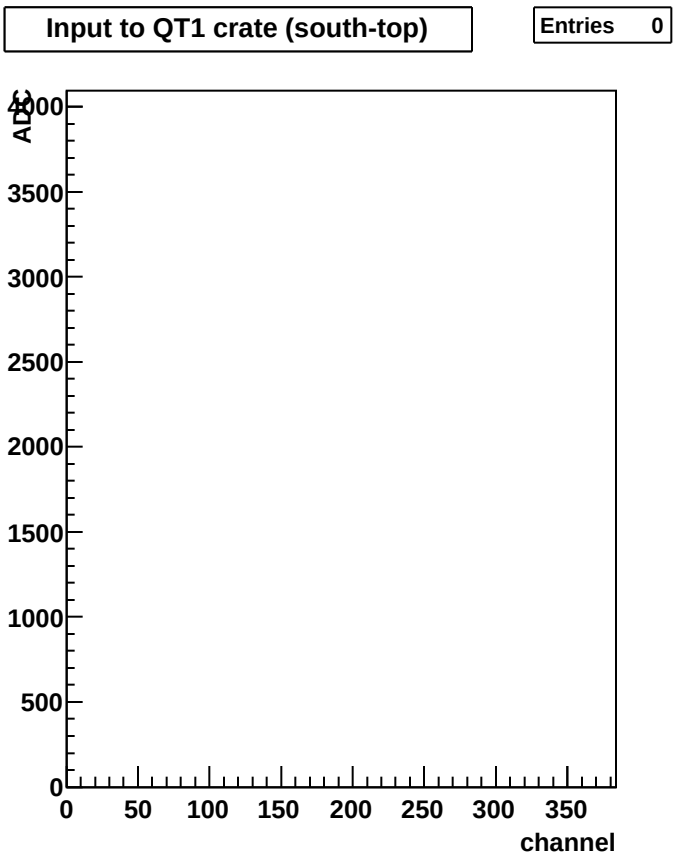

BBClarge-TAC-W
Entries 125
Mean 794.2
RMS 792.6

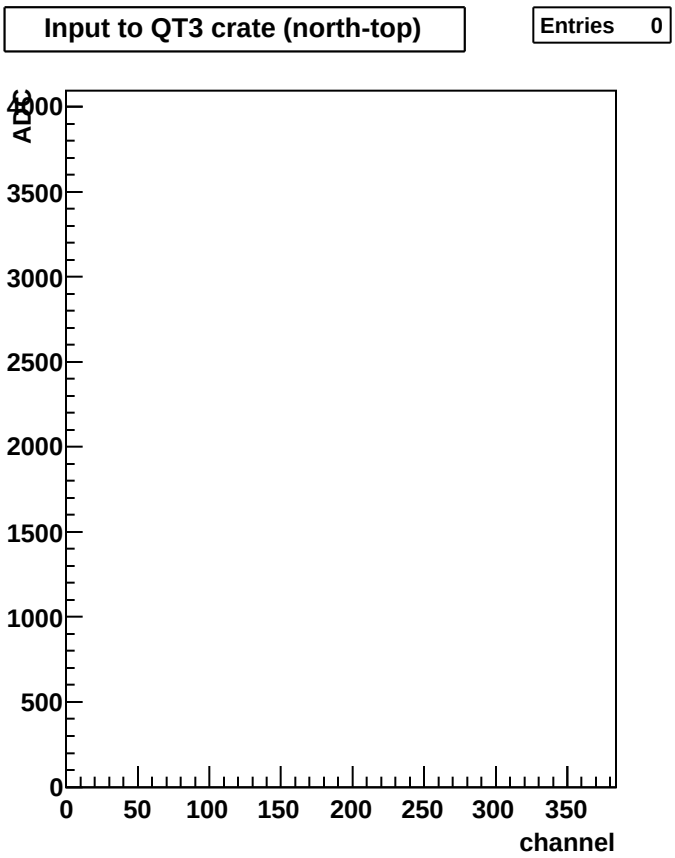

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 121
Mean 4158
RMS 995.1

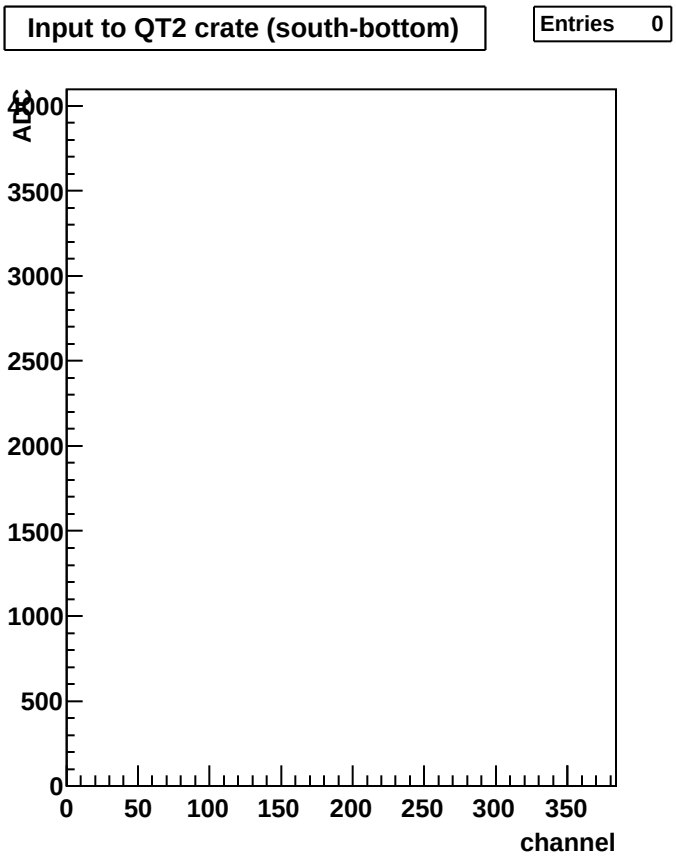

VPD-TAC-E
Entries 18
Mean 1434
RMS 141.7

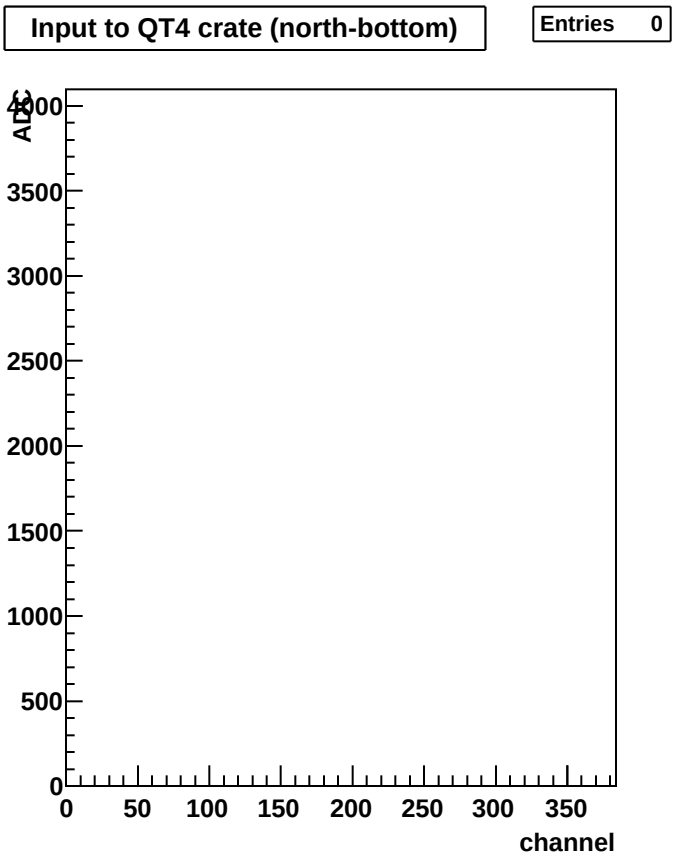

VPD-TAC-W
Entries 13
Mean 1390
RMS 156.9

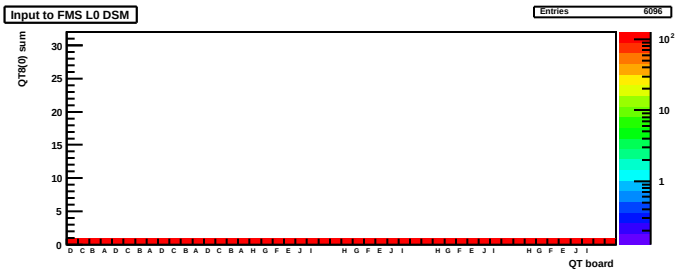

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 8
Mean 4130
RMS 176.3

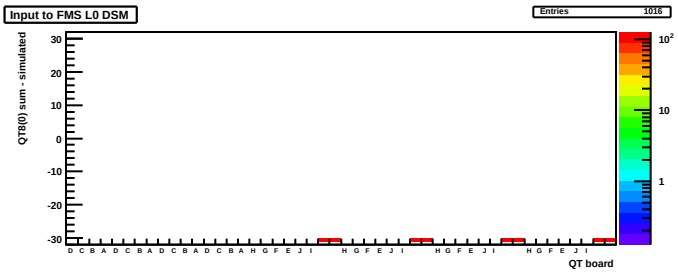

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

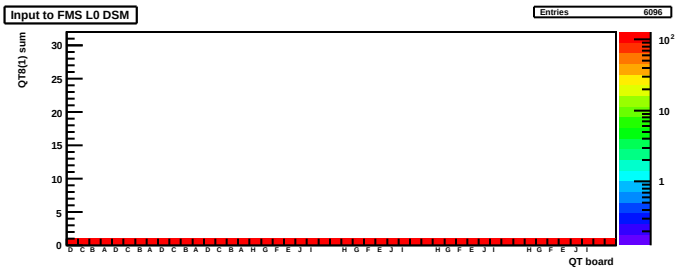

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

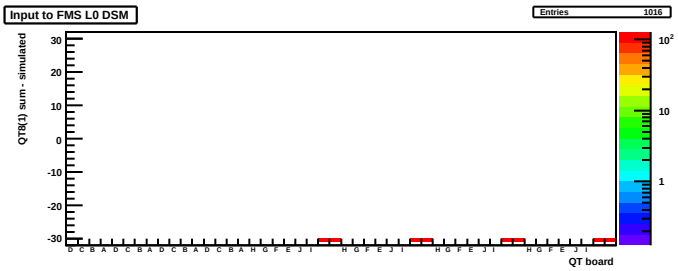

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

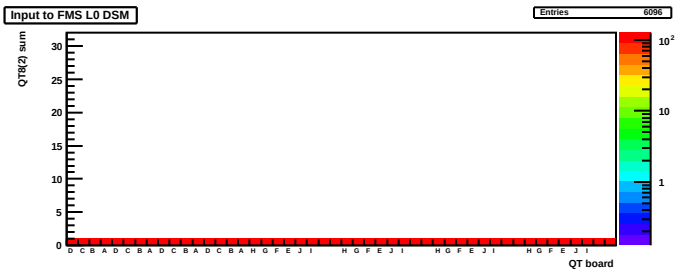

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

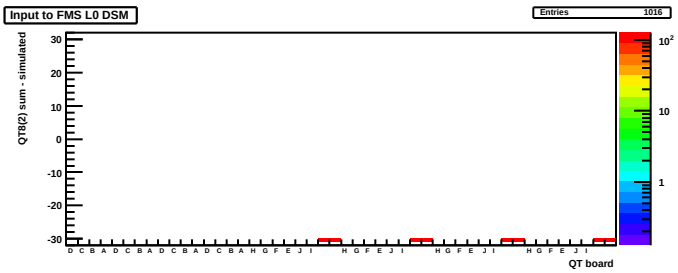

Input to FMS L0 DSM
Entries 6096
QT8(0) sum
QT board

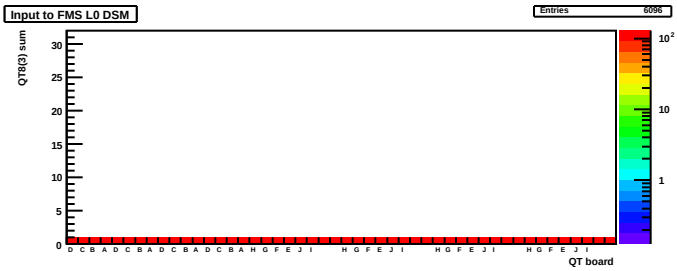

Input to FMS L0 DSM
Entries 1016
QT8(0) sum - simulated
QT board

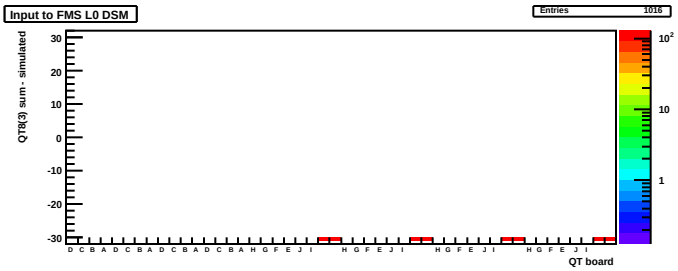

Input to FMS L0 DSM
Entries 6096
QT8(1) sum
QT board

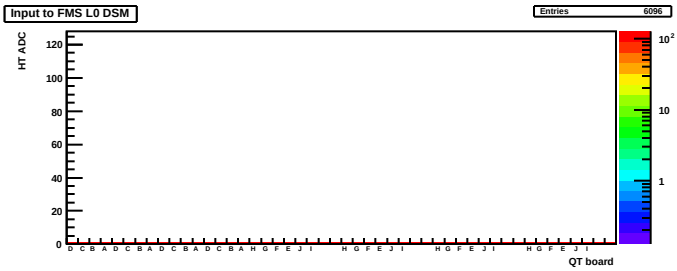

Input to FMS L0 DSM
Entries 1016
QT8(1) sum - simulated
QT board

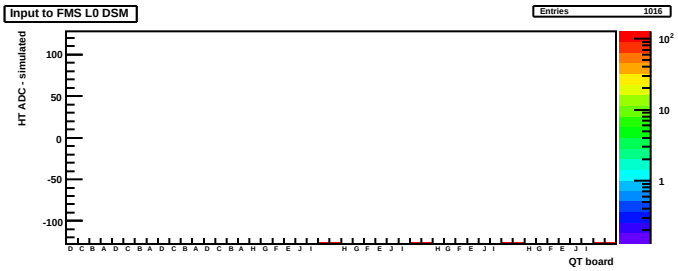

Input to FMS L0 DSM
Entries 6096
QT8(2) sum
QT board

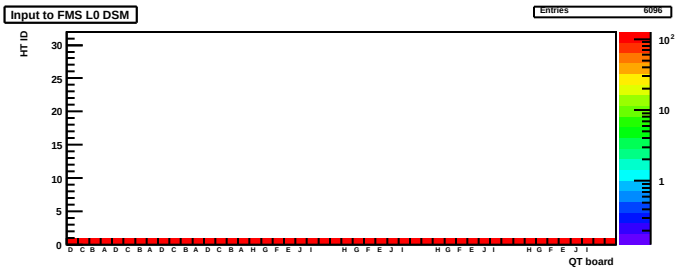

Input to FMS L0 DSM
Entries 1016
QT8(2) sum - simulated
QT board

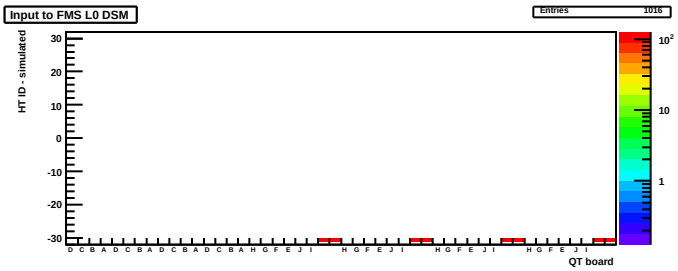

Input to FMS L0 DSM
Entries 6096
QT8(3) sum
QT board

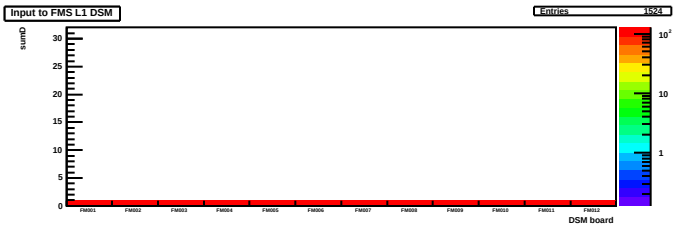

Input to FMS L0 DSM
Entries 1016
QT8(3) sum - simulated
QT board

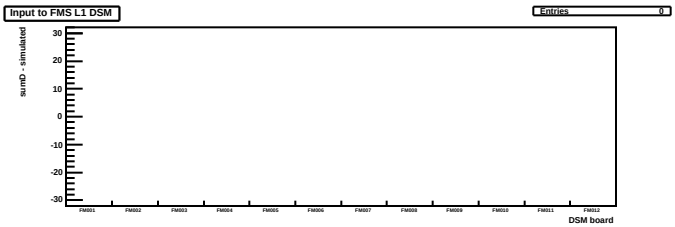

Input to FMS L0 DSM
Entries 6096
HT ADC
QT board

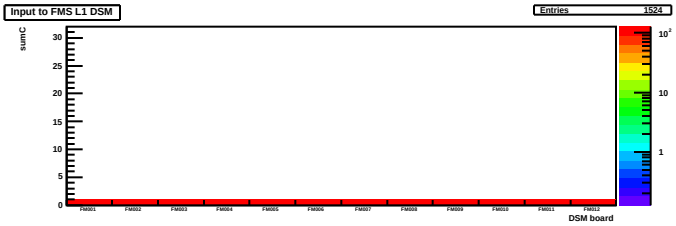

Input to FMS L0 DSM
Entries 1016
HT ADC - simulated
QT board

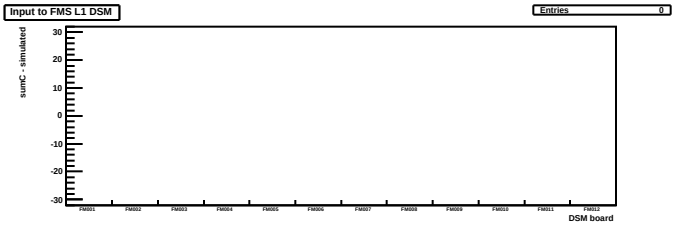

Input to FMS L0 DSM
Entries 6096
HT ID
QT board

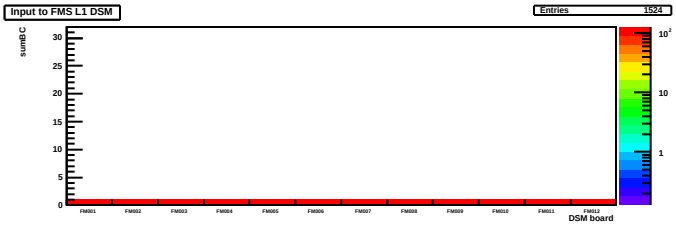

Input to FMS L0 DSM
Entries 1016
HT ID - simulated
QT board

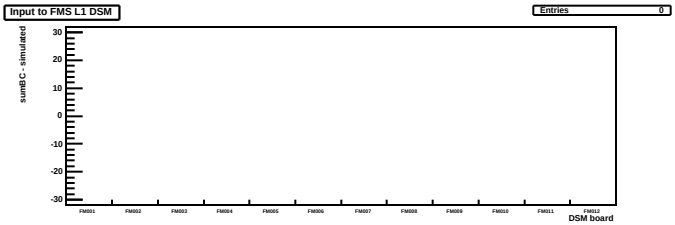

Input to FMS L1 DSM
Entries 1524
sumD
DSM board

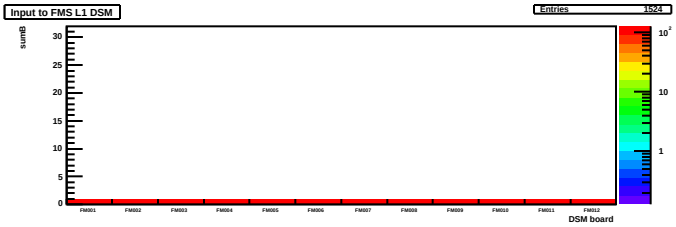

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

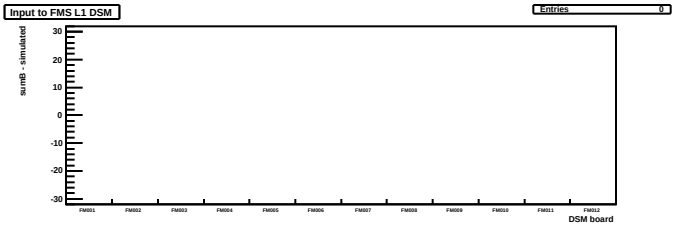

Input to FMS L1 DSM
Entries 1524
sumC
DSM board

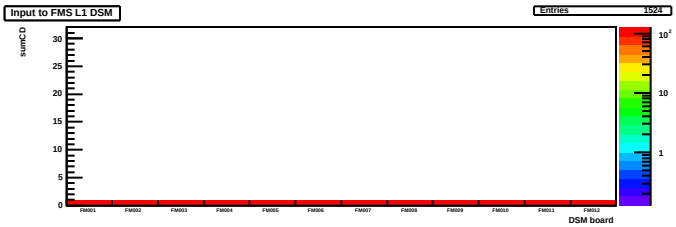

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

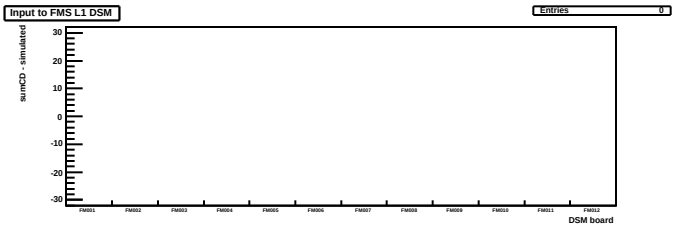

Input to FMS L1 DSM
Entries 1524
sumBC
DSM board

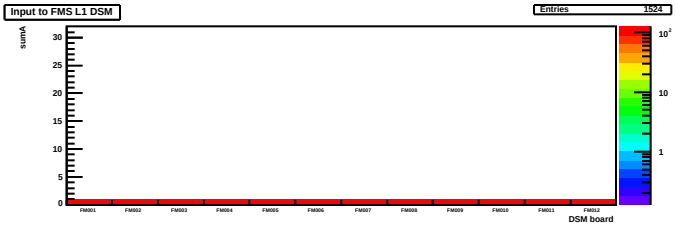

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

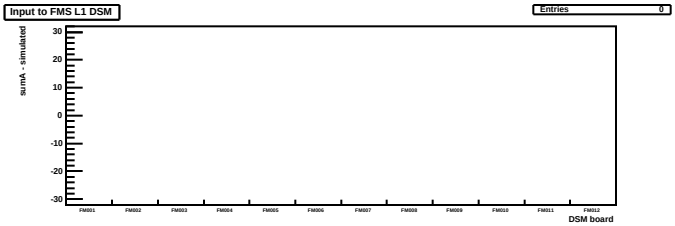

Input to FMS L1 DSM
Entries 1524
sumB
DSM board

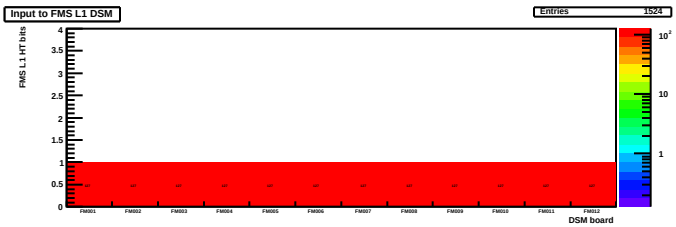

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

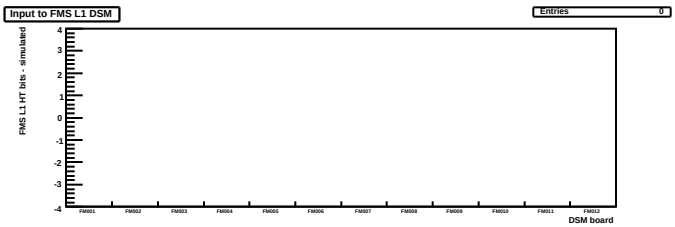

Input to FMS L1 DSM
Entries 1524
sumCD
DSM board

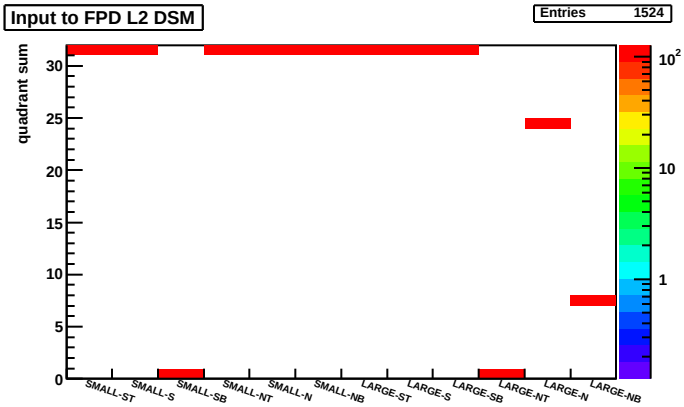

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

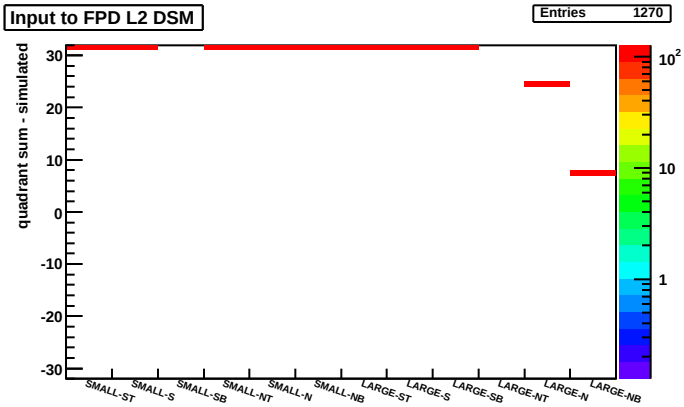

Input to FMS L1 DSM
Entries 1524
sumA
DSM board

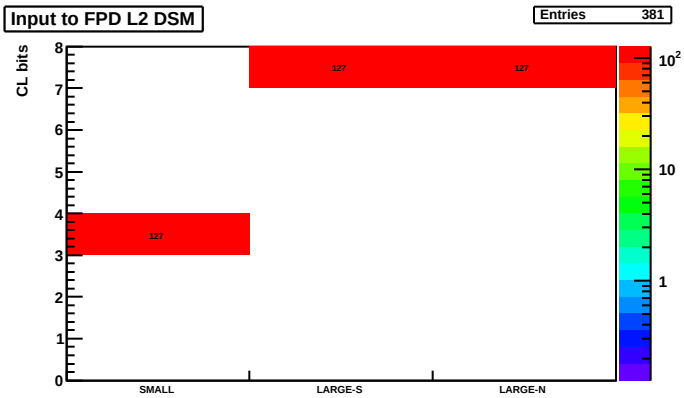

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

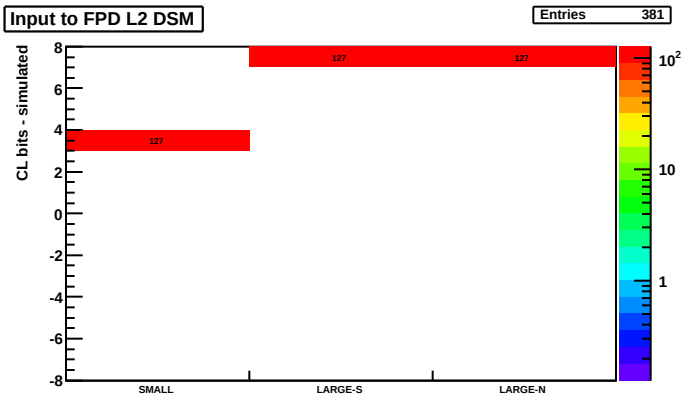

Input to FMS L1 DSM
Entries 1524
FMS L1 HT bits
DSM board

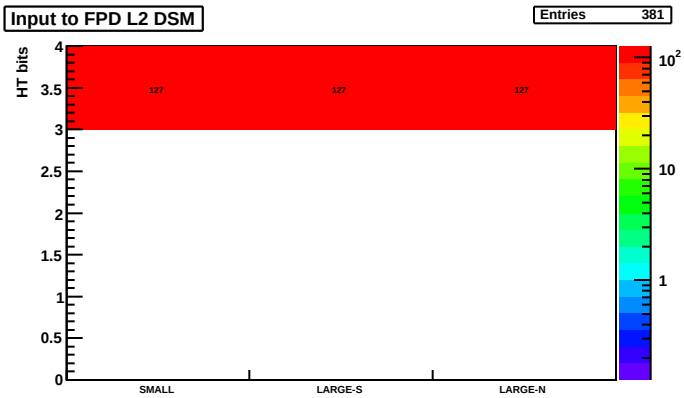

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

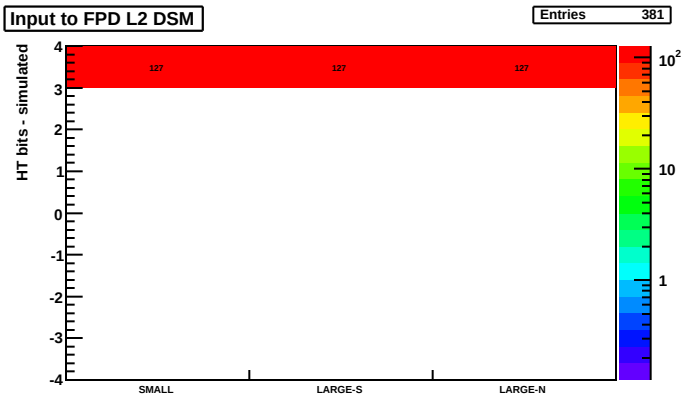

Input to FPD L2 DSM
Entries 1524
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

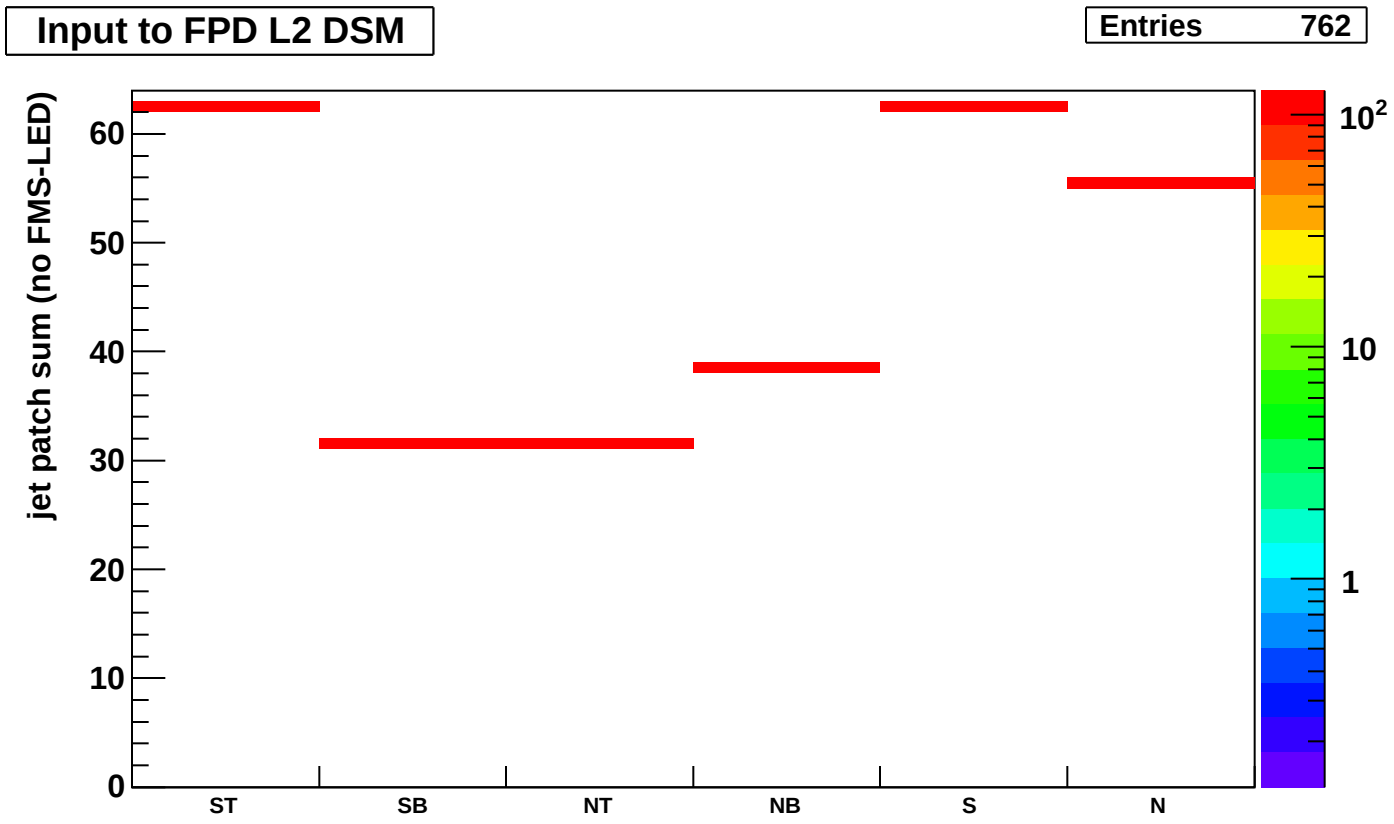

Input to FPD L2 DSM
Entries 1270
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

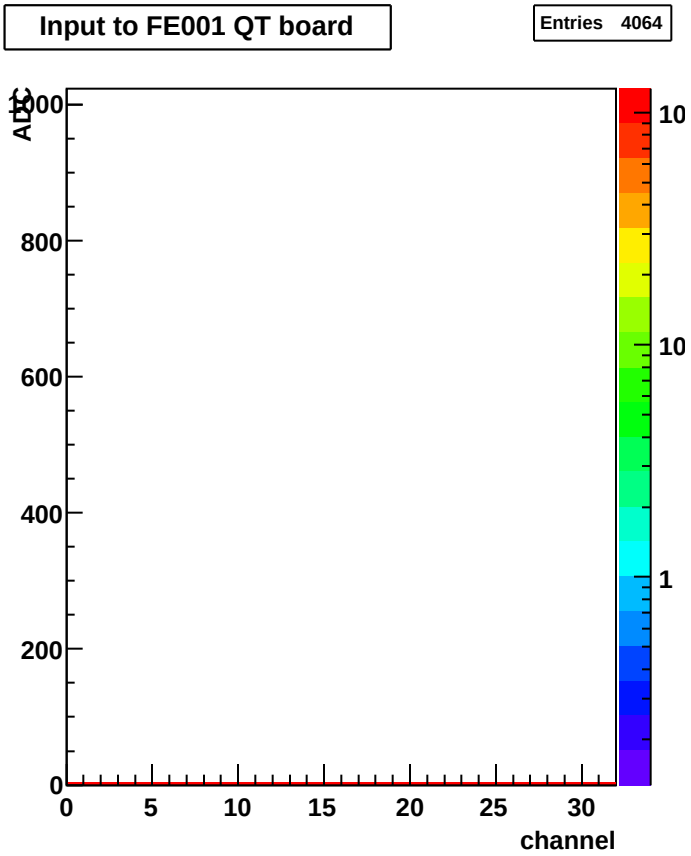

Input to FPD L2 DSM
Entries 381
CL bits
127
127
127
SMALL
LARGE-S
LARGE-N

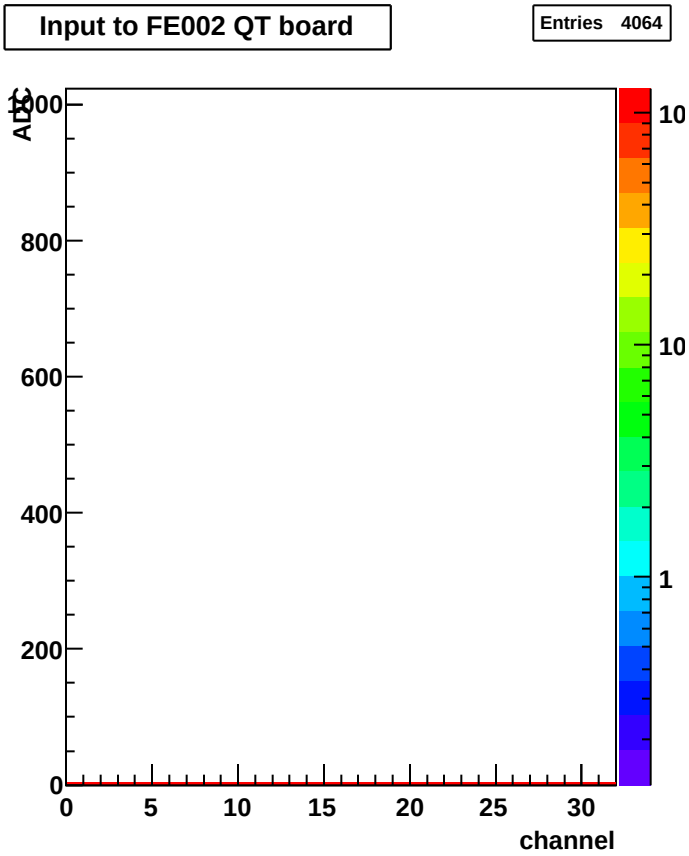

Input to FPD L2 DSM
Entries 381
CL bits - simulated
127
127
127
SMALL
LARGE-S
LARGE-N

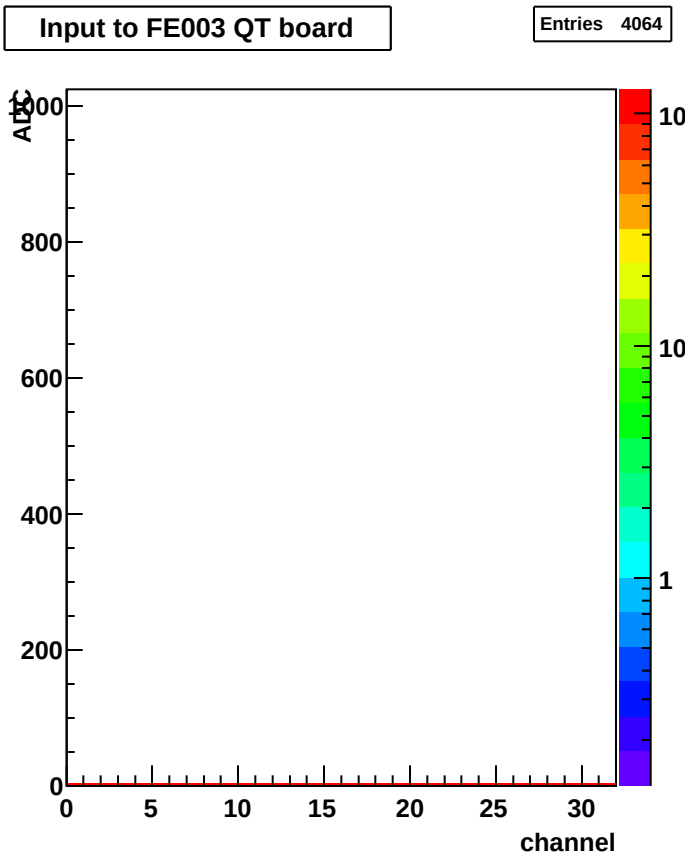

Input to FPD L2 DSM
Entries 381
HT bits
127
127
127
SMALL
LARGE-S
LARGE-N

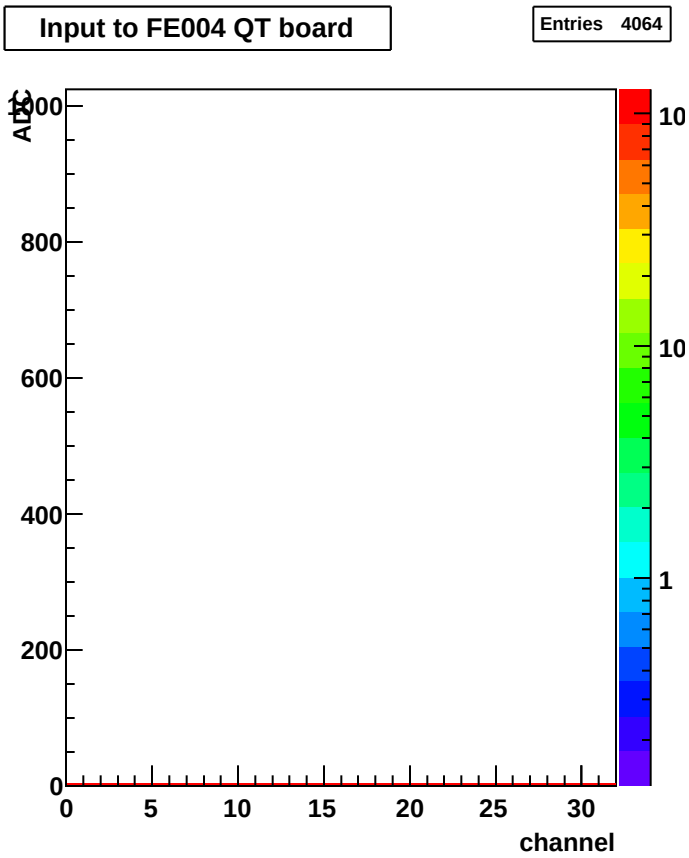

Input to FPD L2 DSM
Entries 381
HT bits - simulated
127
127
127
SMALL
LARGE-S
LARGE-N

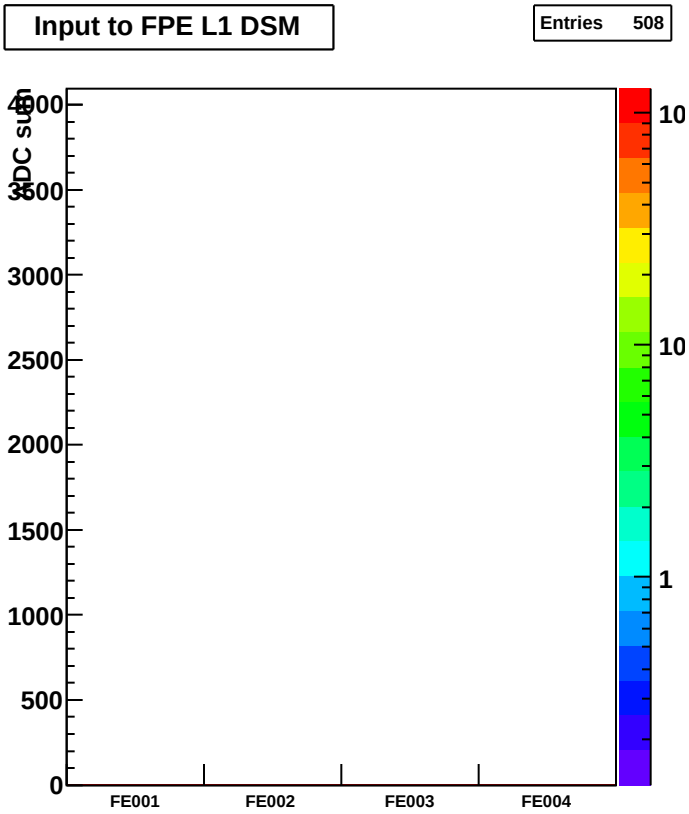

Input to FPD L2 DSM
Entries 762
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
10^2
10
1

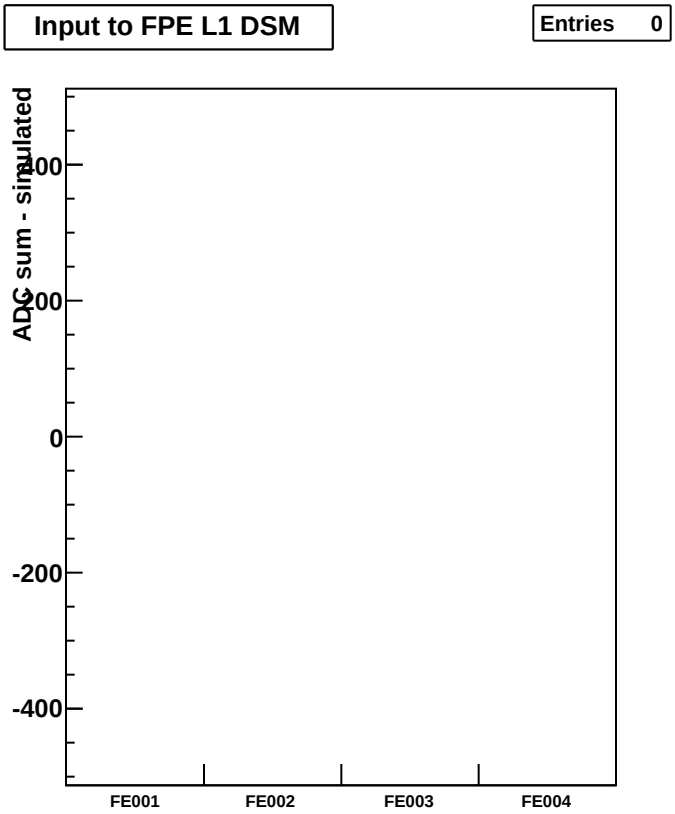

Input to FE001 QT board
Entries 4064
ADC
1000
800
600
400
200
0
0
5
10
15
20
25
30
channel
10
10
1

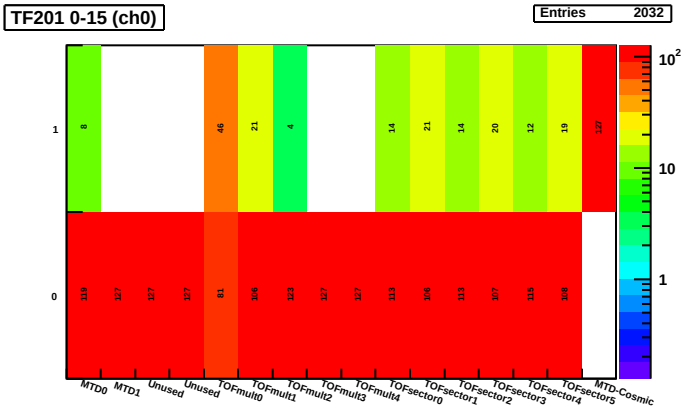

Input to FE002 QT board
Entries 4064
ADC
1000
800
600
400
200
0
0
5
10
15
20
25
30
channel
10
10
1

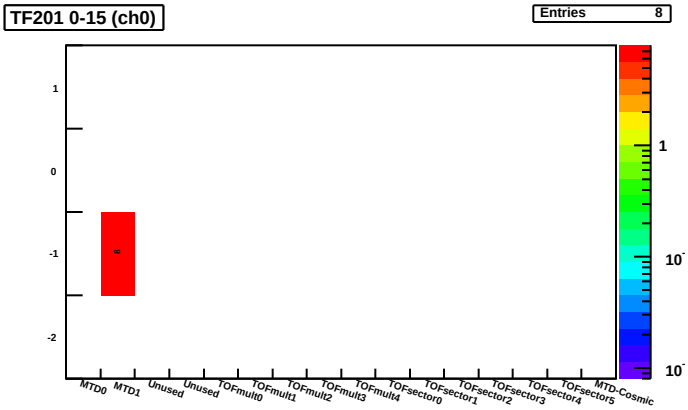

Input to FE003 QT board
Entries 4064
ADC
1000
800
600
400
200
0
0
5
10
15
20
25
30
channel
10
10
1

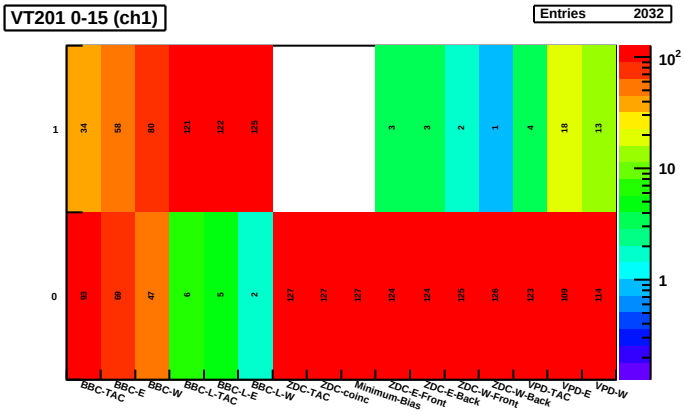

Input to FE004 QT board
Entries 4064
ADC
1000
800
600
400
200
0
0
5
10
15
20
25
30
channel
10
10
1

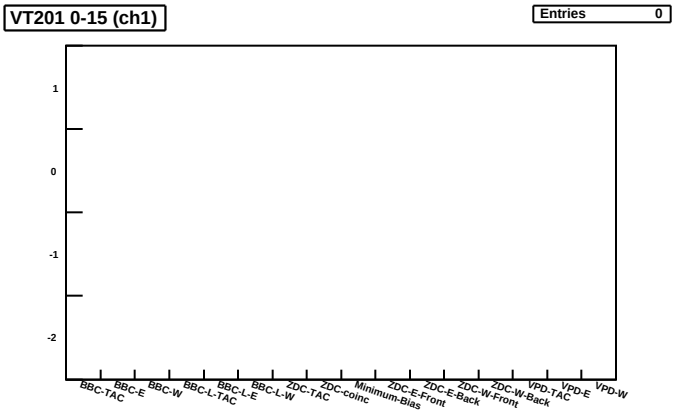

Input to FPE L1 DSM
Entries 508
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
1

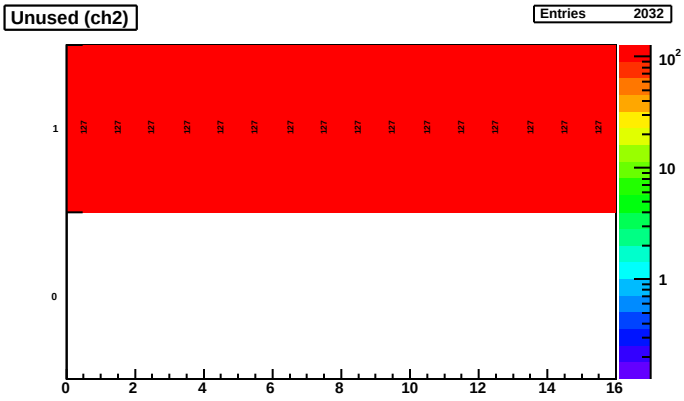

Input to FPE L1 DSM
Entries 0
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004

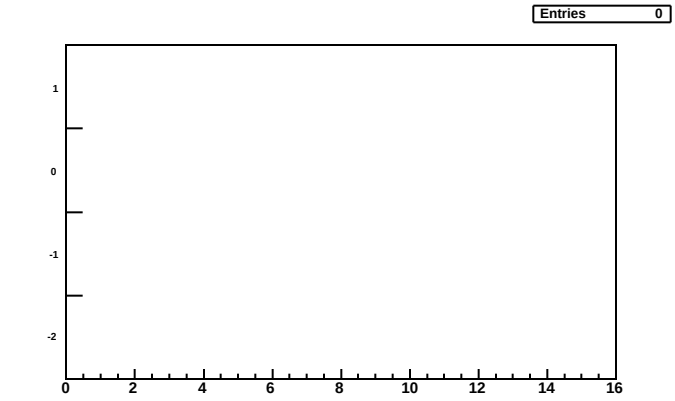

TF201 0-15 (ch0)
Entries 2032
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

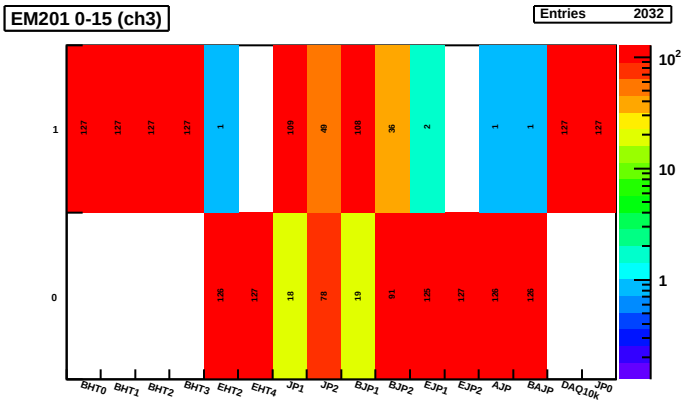

TF201 0-15 (ch0)
Entries 8
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

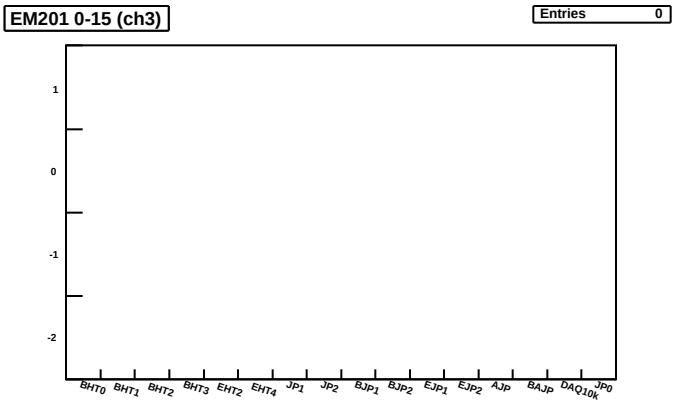

VT201 0-15 (ch1)
Entries 2032
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-coinc Minimum-Bias ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


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

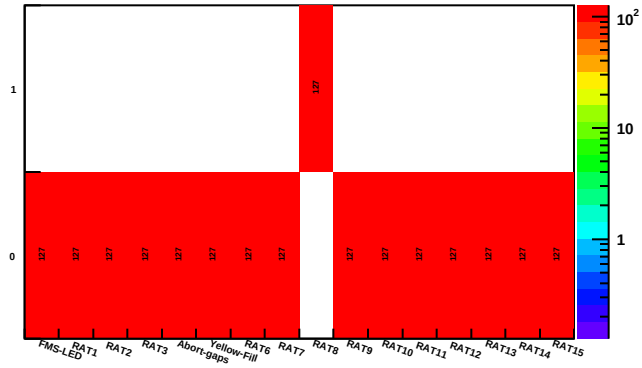

Unused (ch2)
Entries 2032

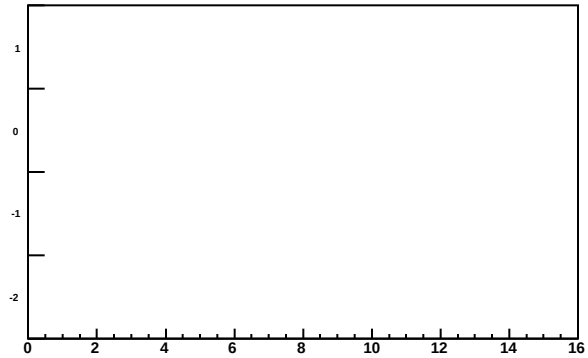

Entries 0


EM201 0-15 (ch3)
Entries 2032
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

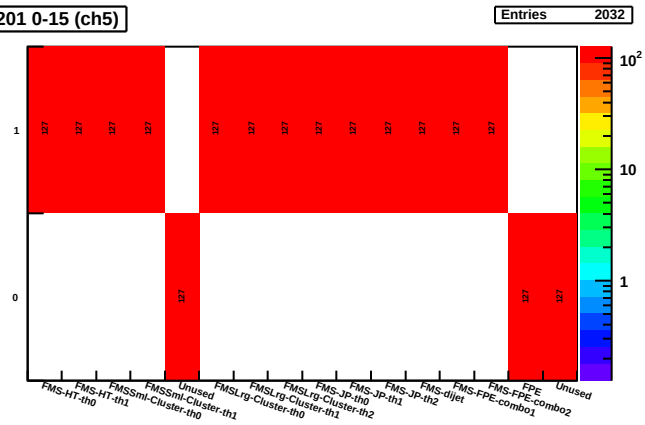

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

RAT board (ch4)





FP201 0-15 (ch5)



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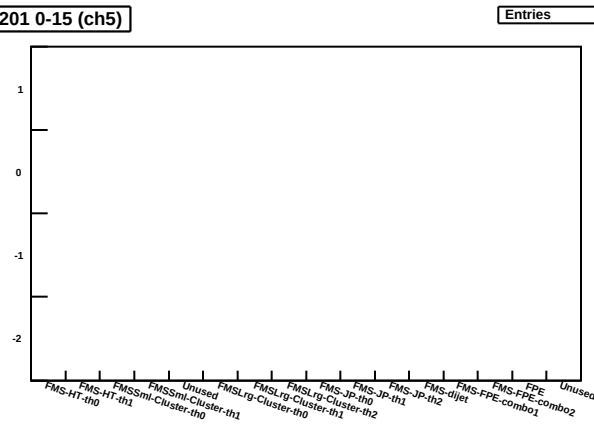
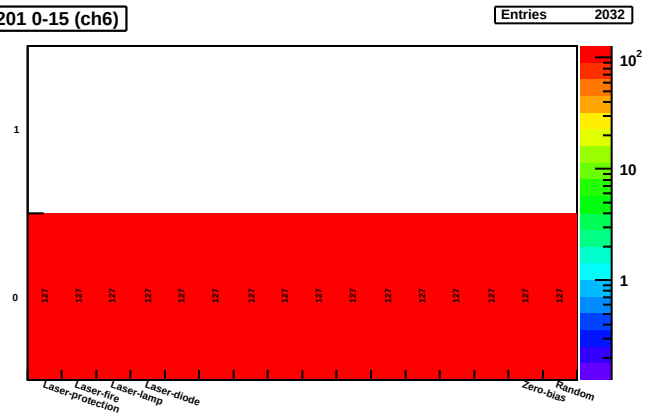
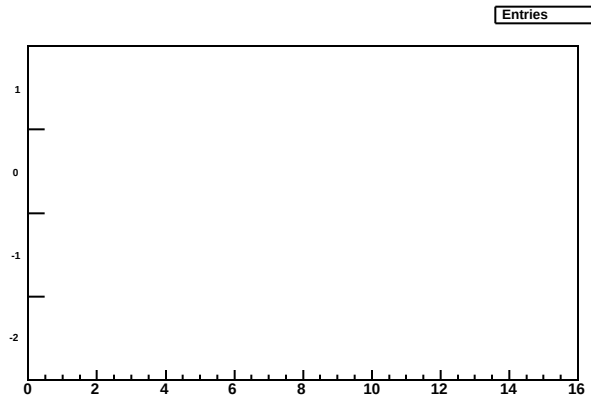
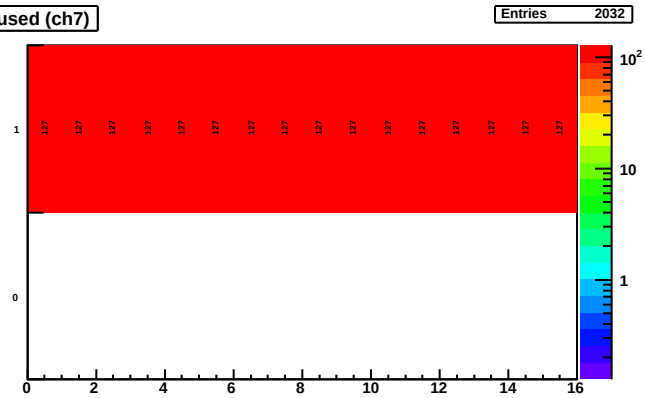
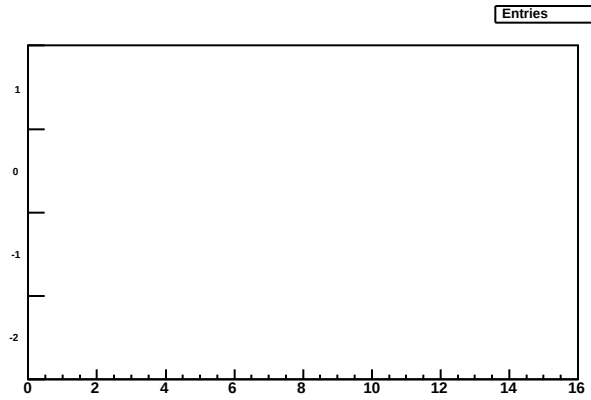


ST201 0-15 (ch6)





Unused (ch7)