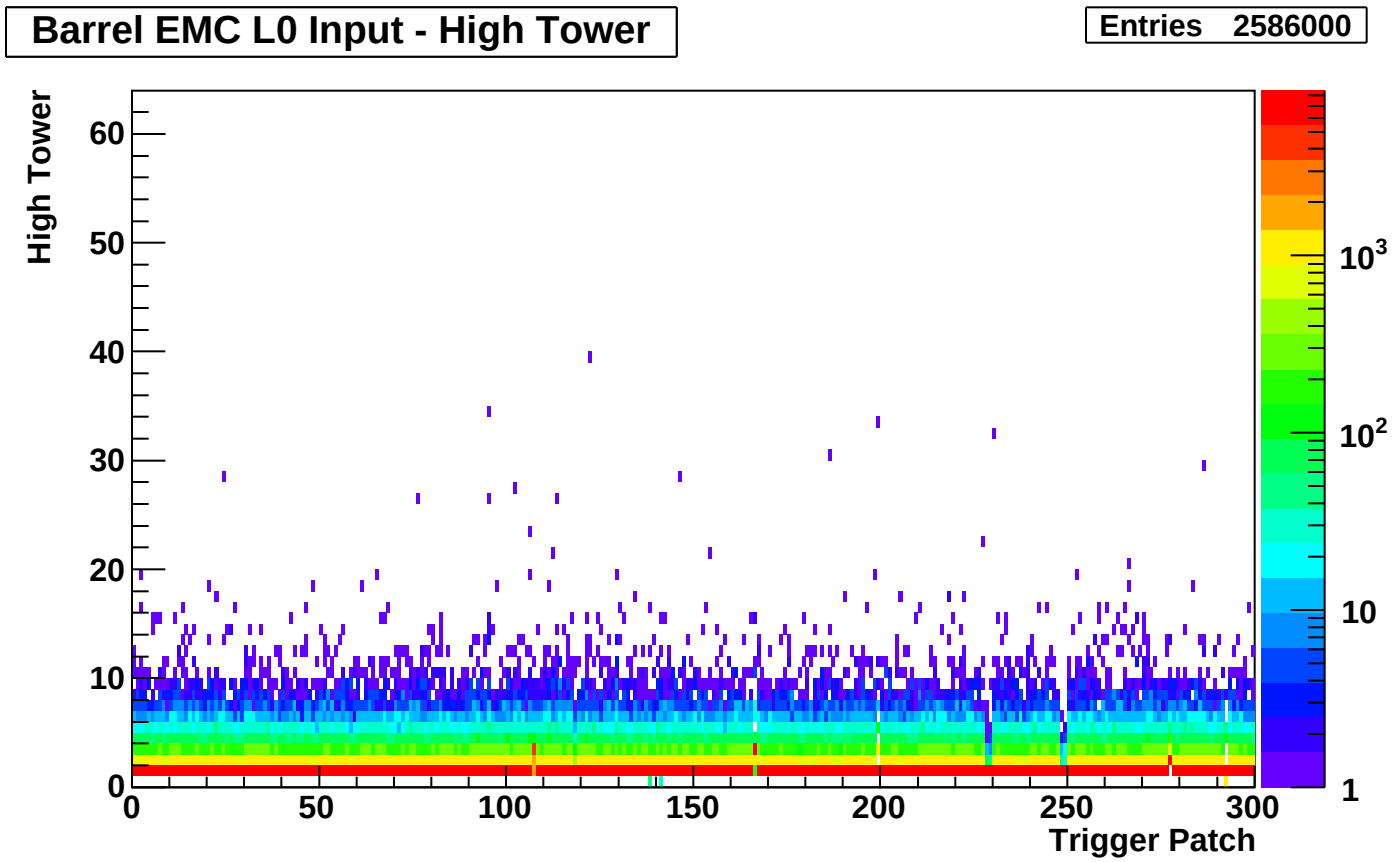
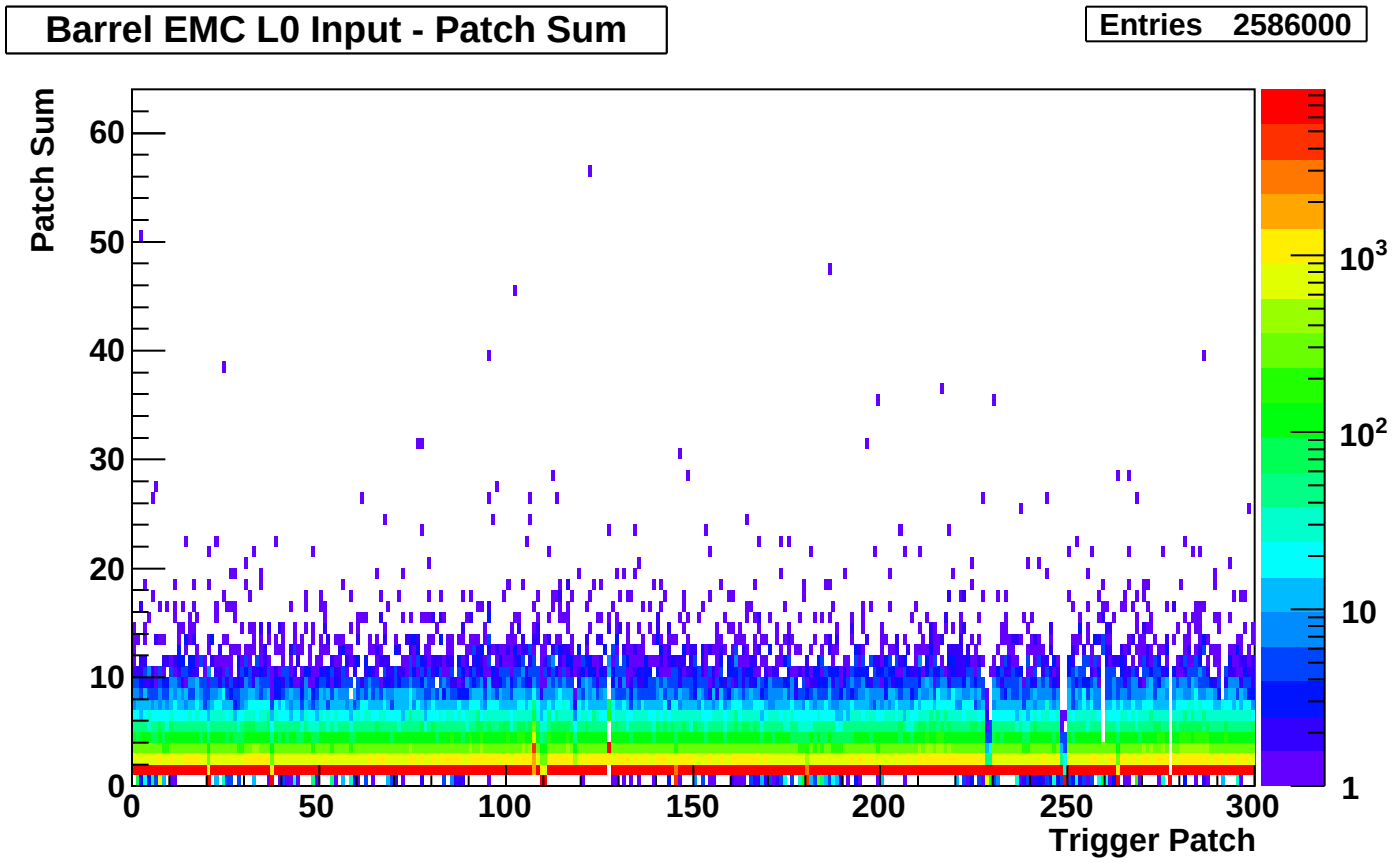
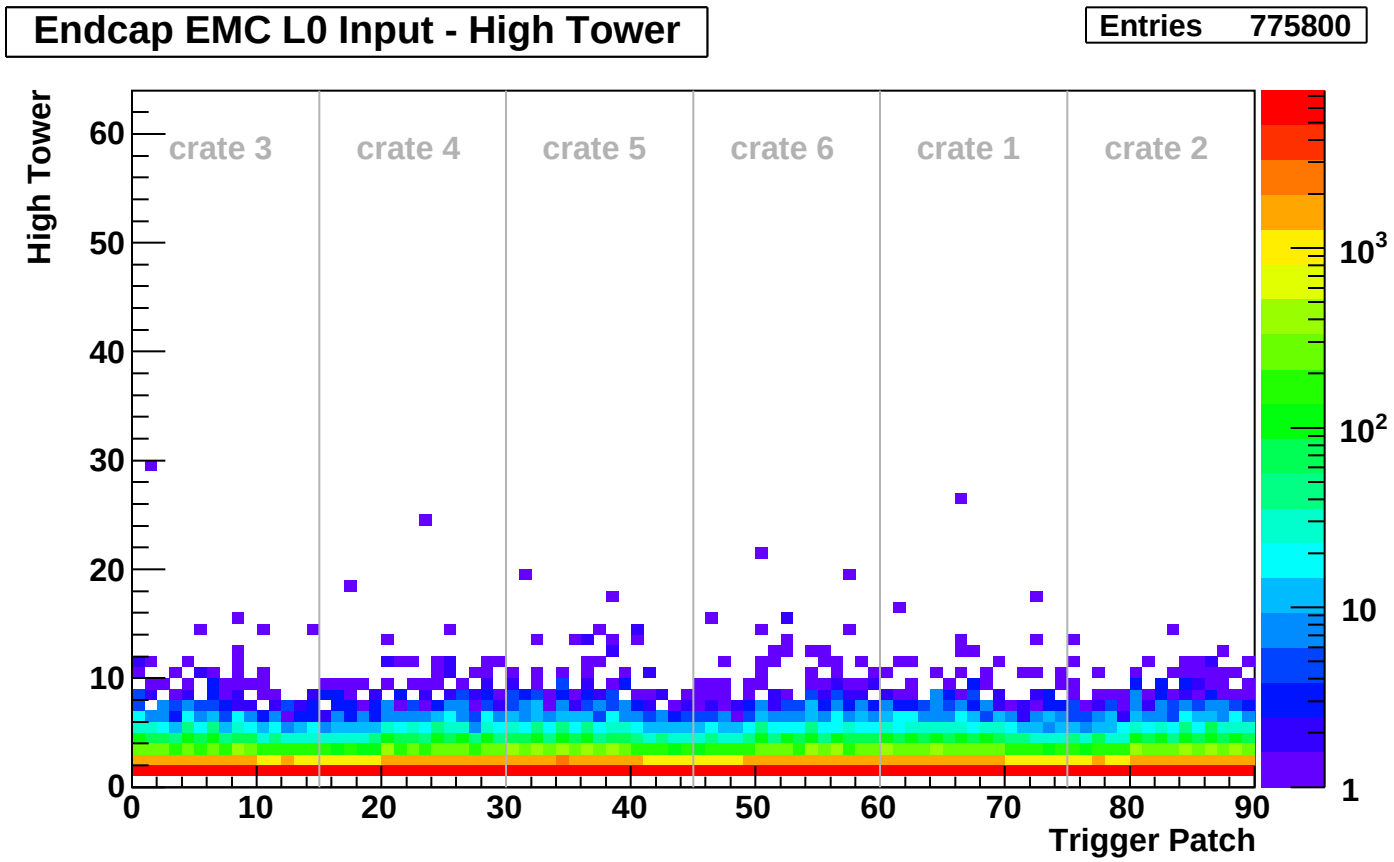
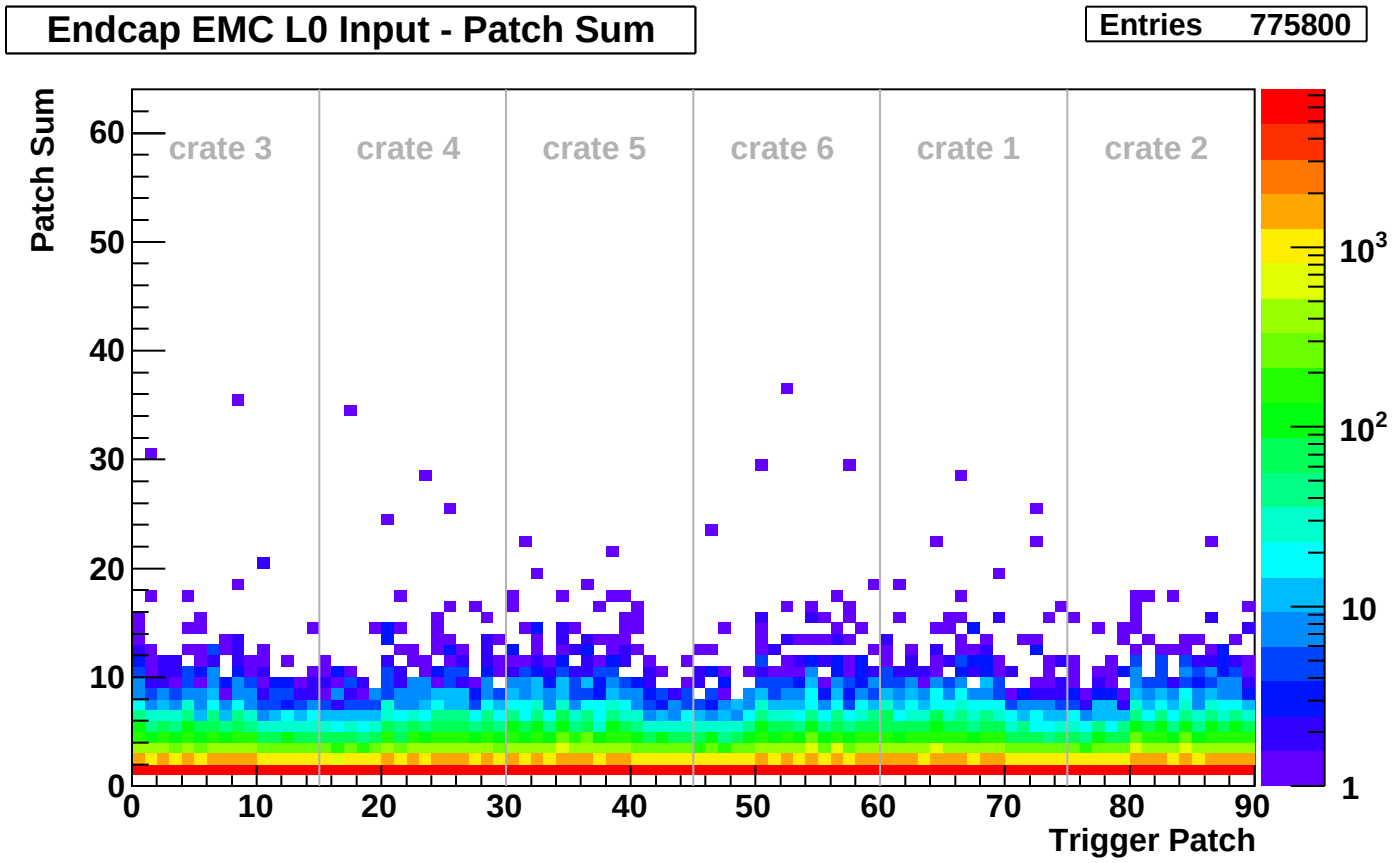
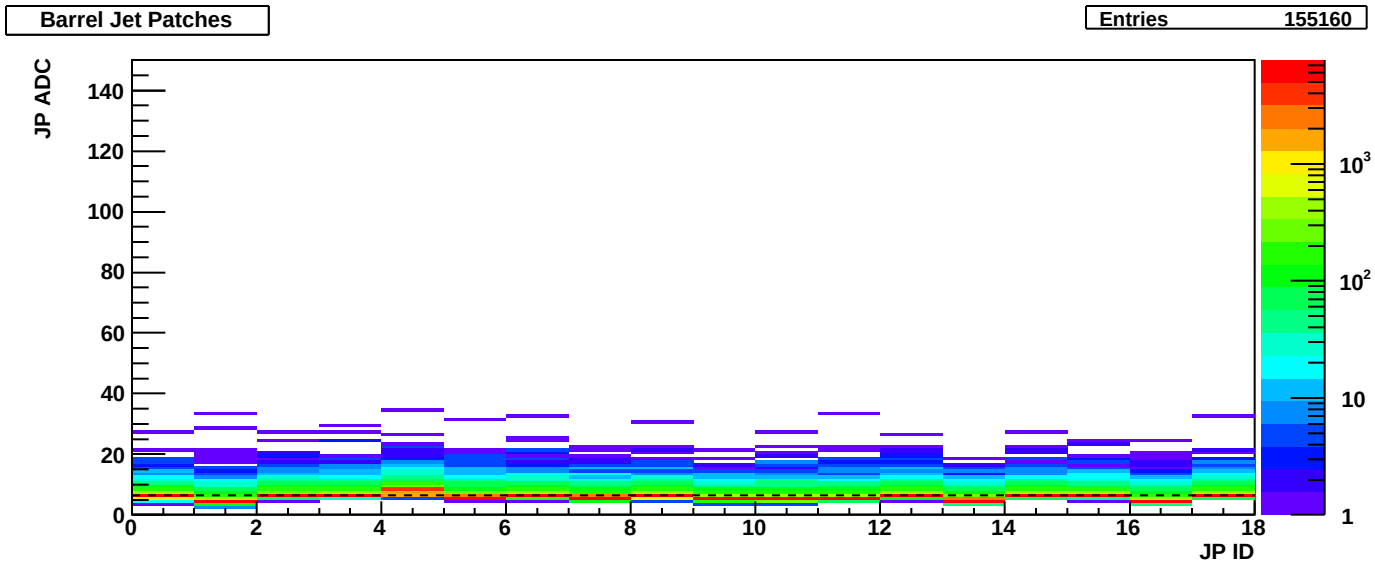
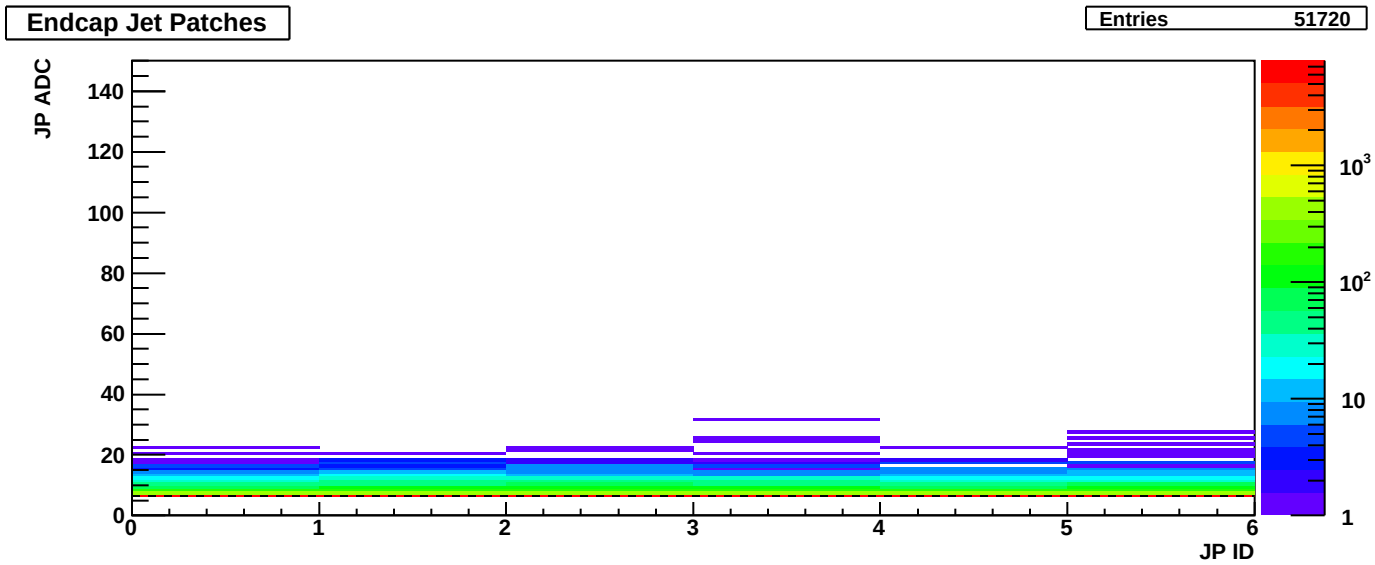

Barrel EMC L0 Input - High Tower
Entries 2586000
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

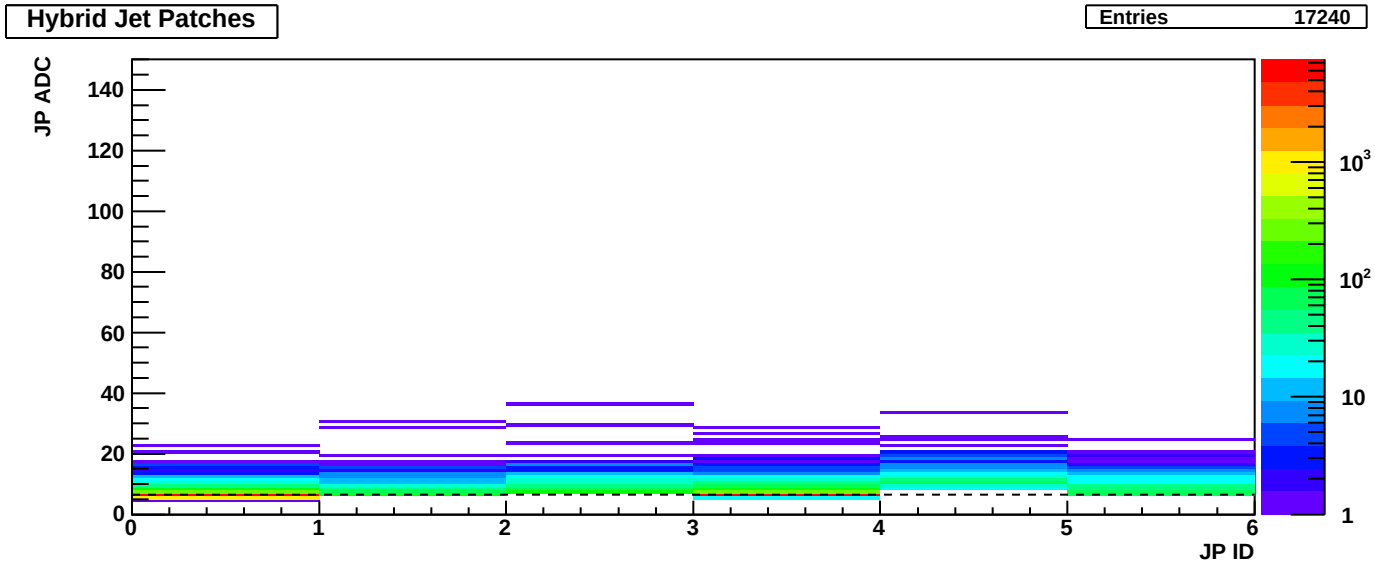

Barrel EMC L0 Input - Patch Sum
Entries 2586000
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

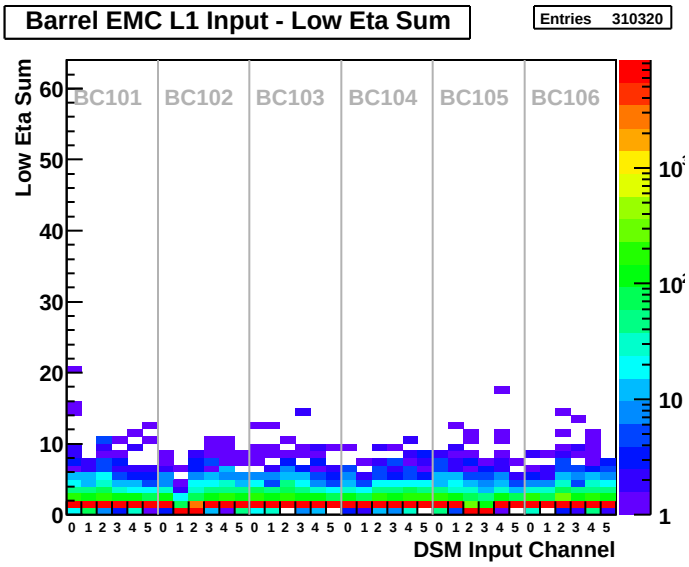

Endcap EMC L0 Input - High Tower
Entries 775800
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

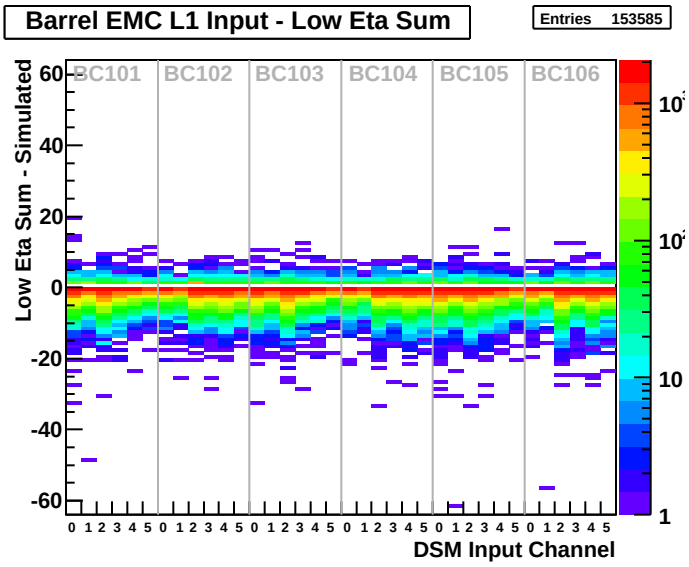

Endcap EMC L0 Input - Patch Sum
Entries 775800
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

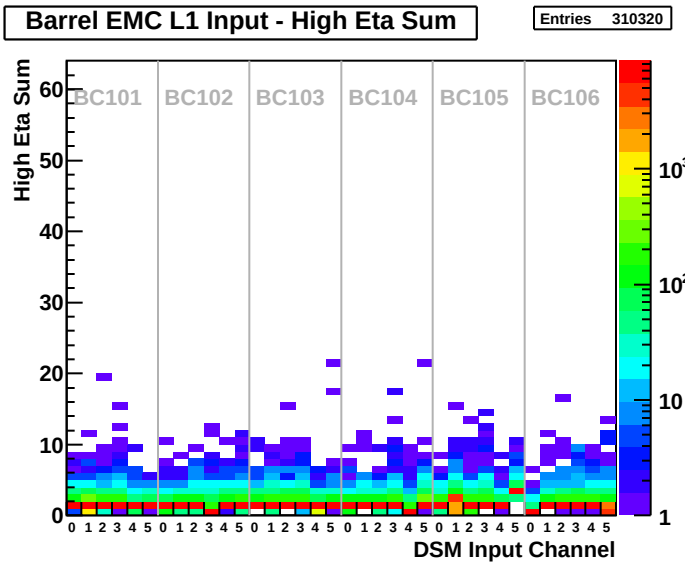

Barrel Jet Patches
Entries 155160
JP ADC
JP ID

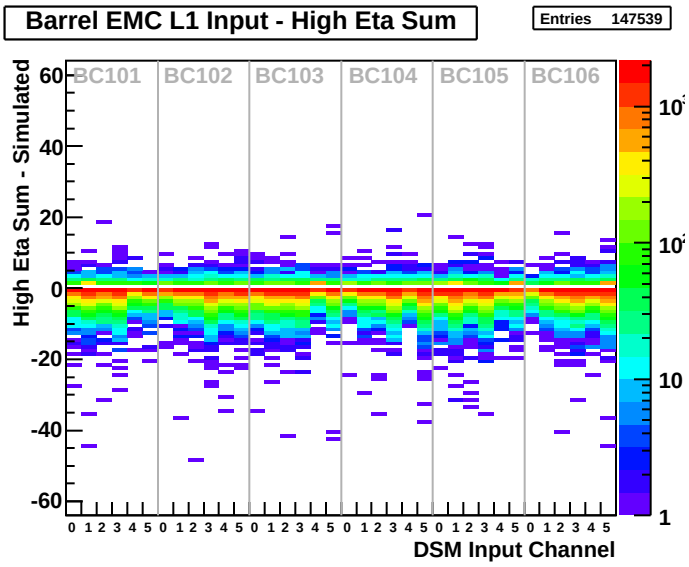

Endcap Jet Patches
Entries 51720
JP ADC
JP ID

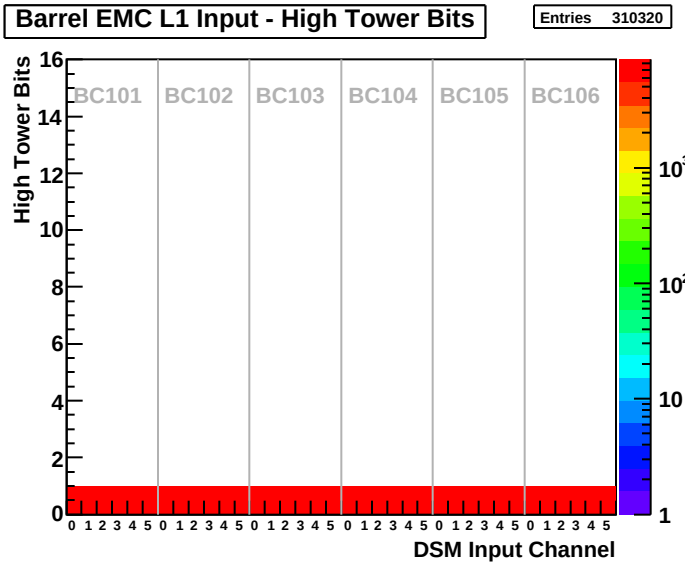

Hybrid Jet Patches
Entries 17240
JP ADC
JP ID

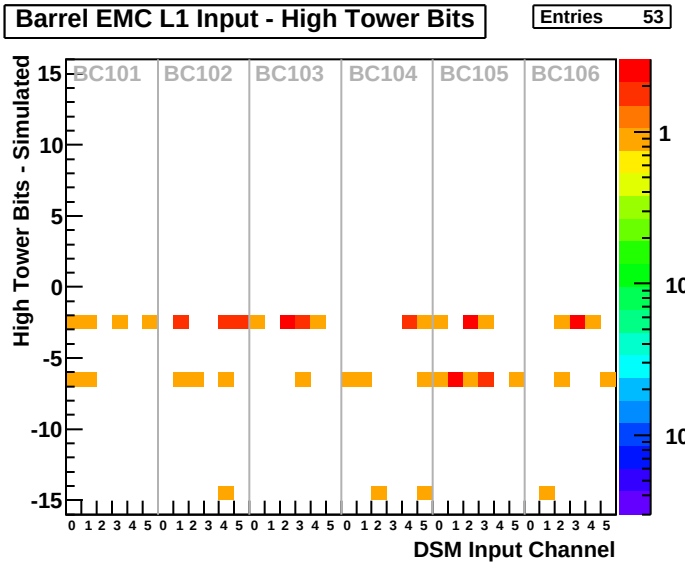

Barrel EMC L1 Input - Low Eta Sum
Entries 310320
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

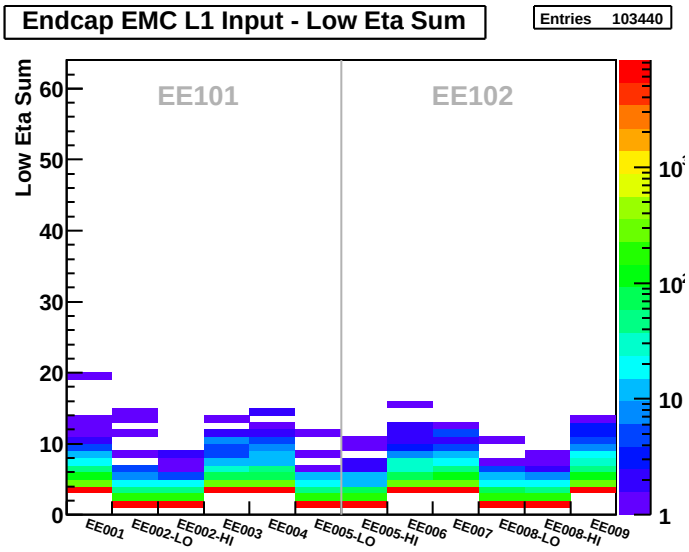

Barrel EMC L1 Input - Low Eta Sum
Entries 153585
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

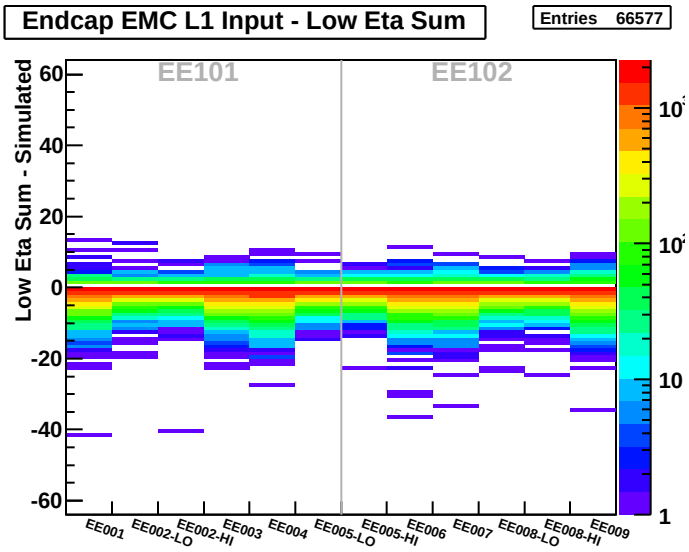

Barrel EMC L1 Input - High Eta Sum
Entries 310320
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

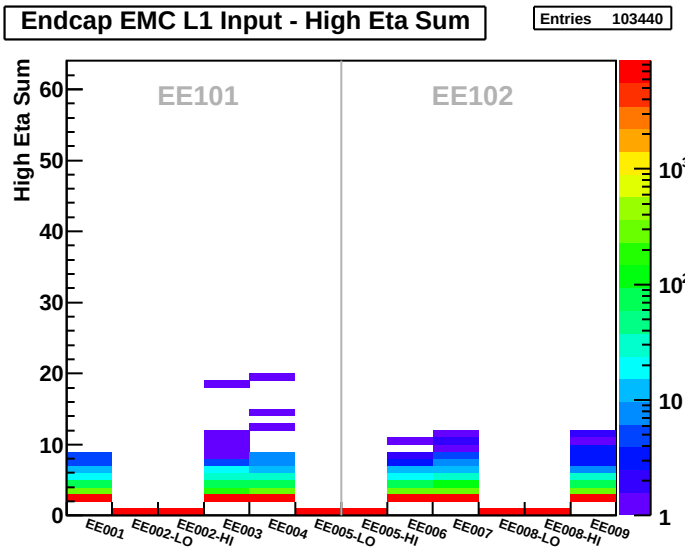

Barrel EMC L1 Input - High Eta Sum
Entries 147539
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

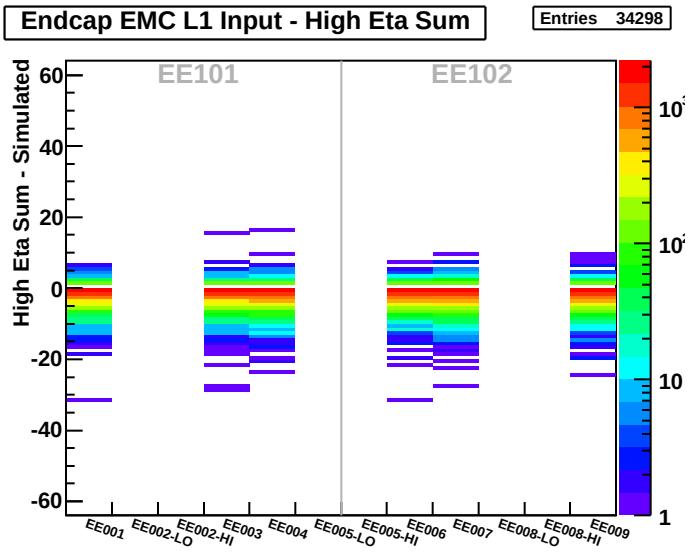

Barrel EMC L1 Input - High Tower Bits
Entries 310320
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

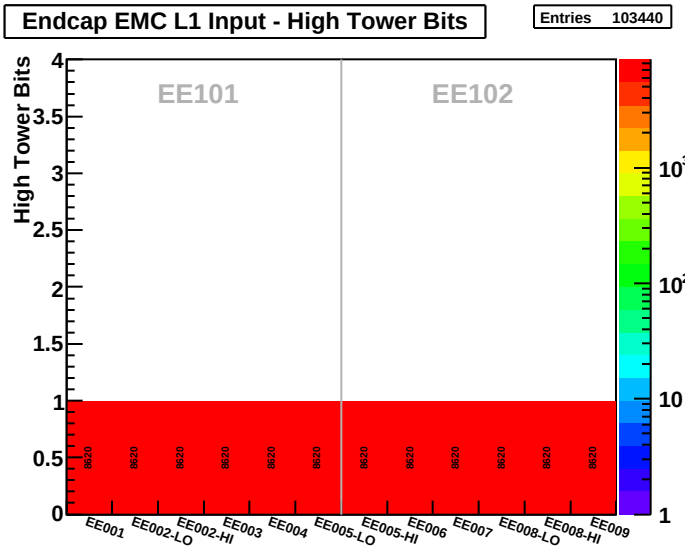

Barrel EMC L1 Input - High Tower Bits
Entries 53
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

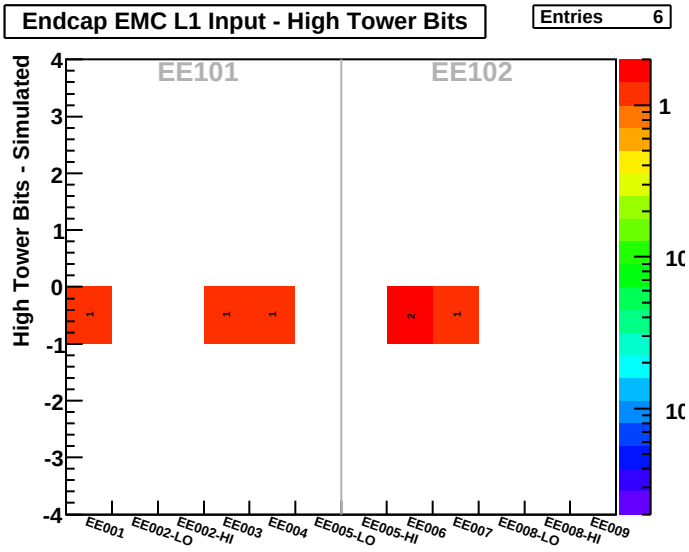

Endcap EMC L1 Input - Low Eta Sum
Entries 103440
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

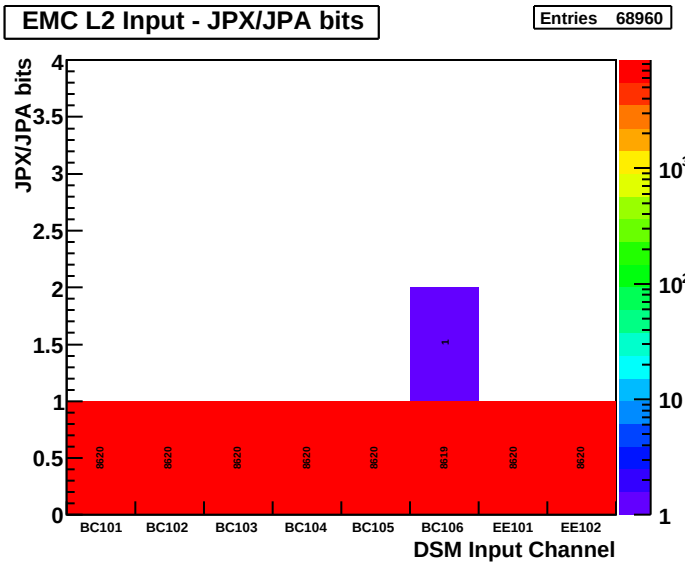

Endcap EMC L1 Input - Low Eta Sum
Entries 66577
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

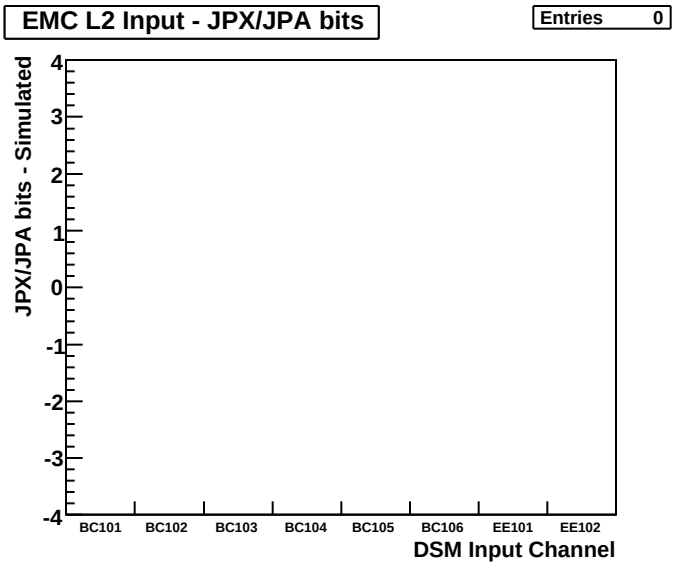

Endcap EMC L1 Input - High Eta Sum
Entries 103440
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

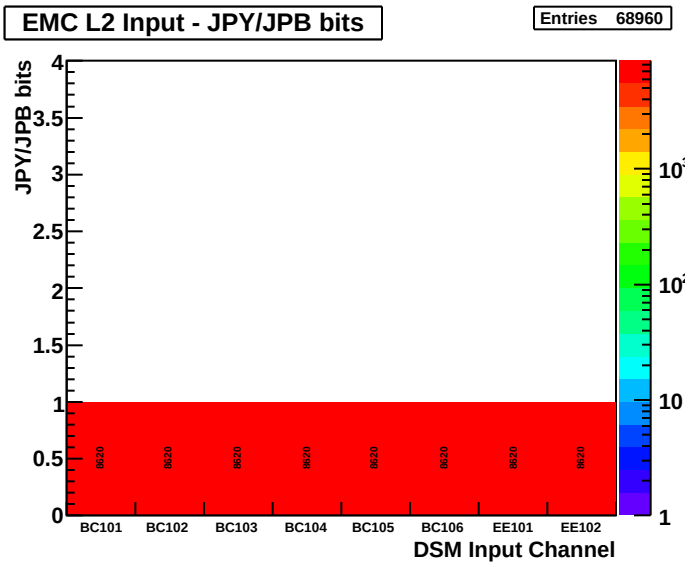

Endcap EMC L1 Input - High Eta Sum
Entries 34298
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

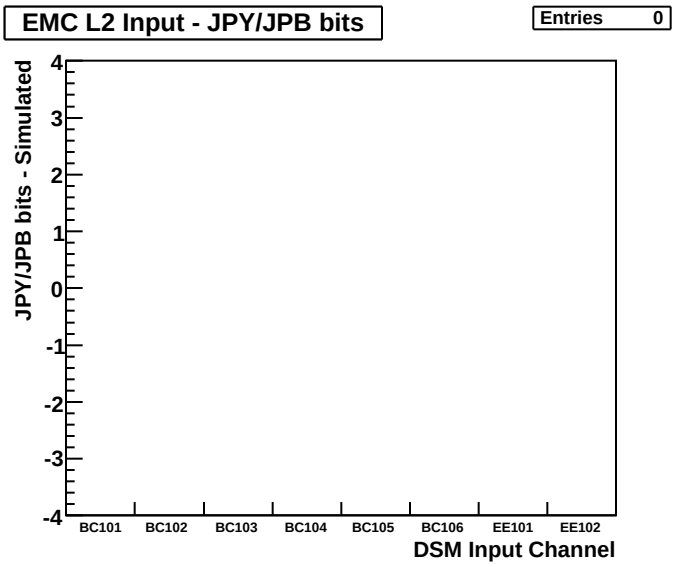

Endcap EMC L1 Input - High Tower Bits
Entries 103440
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

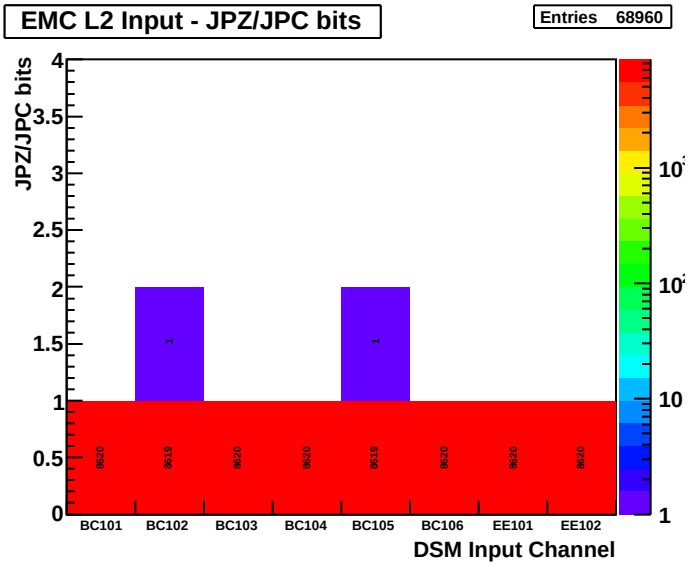

Endcap EMC L1 Input - High Tower Bits
Entries 6
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

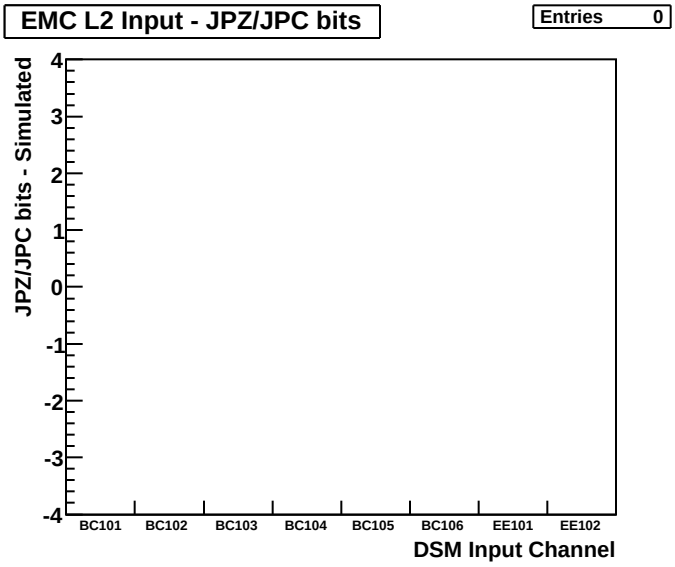

EMC L2 Input - JPX/JPA bits
Entries 68960
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

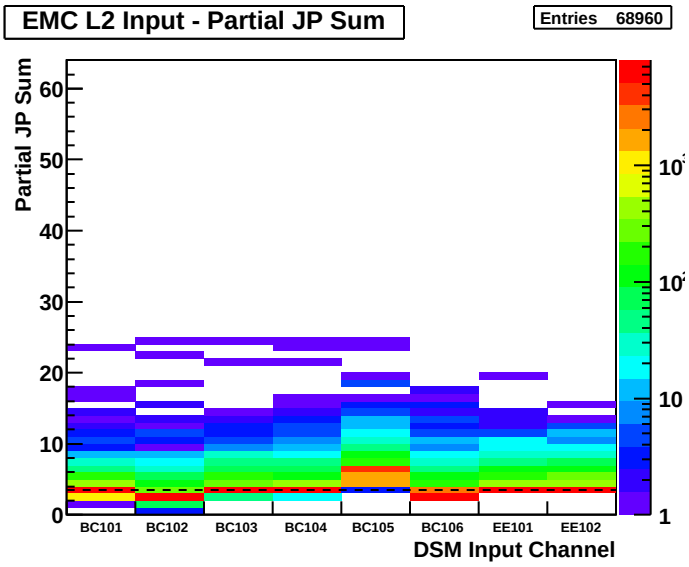

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

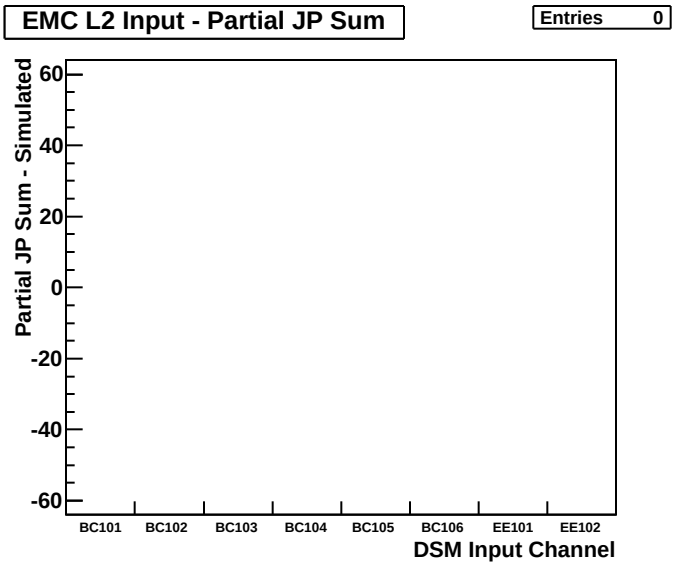

EMC L2 Input - JPY/JPB bits
Entries 68960
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

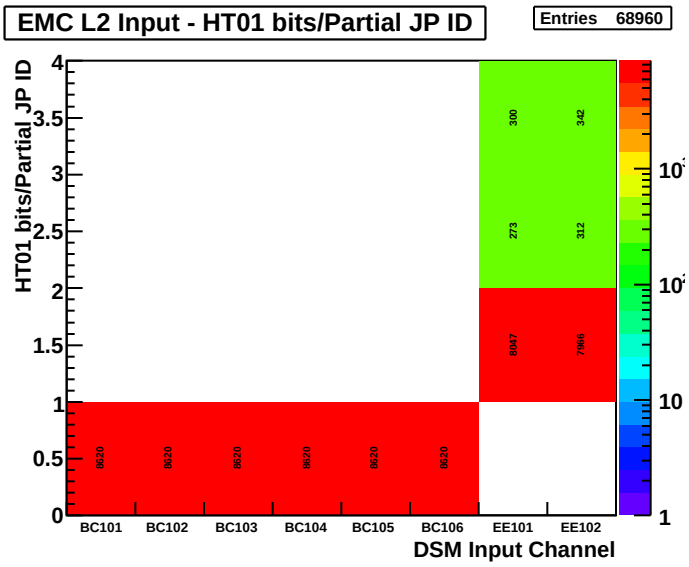

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

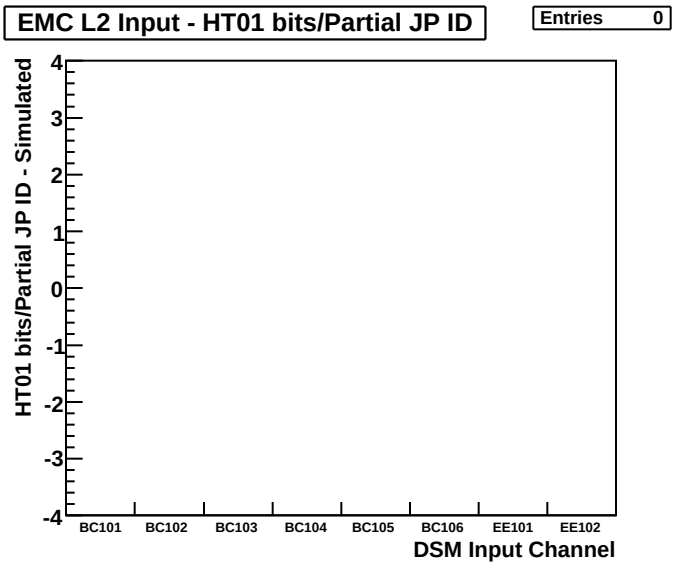

EMC L2 Input - JPZ/JPC bits
Entries 68960
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

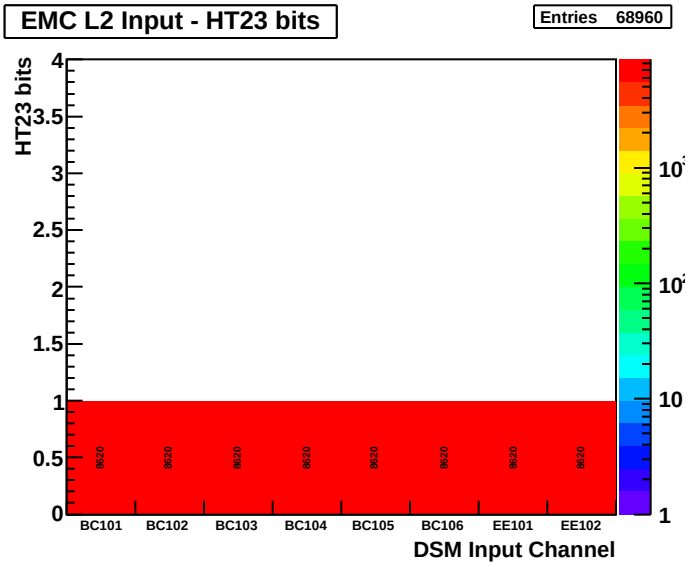

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

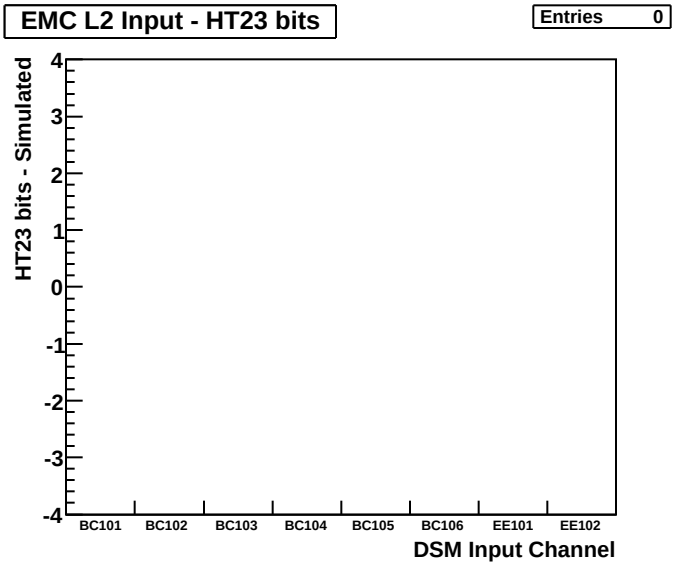

EMC L2 Input - Partial JP Sum
Entries 68960
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

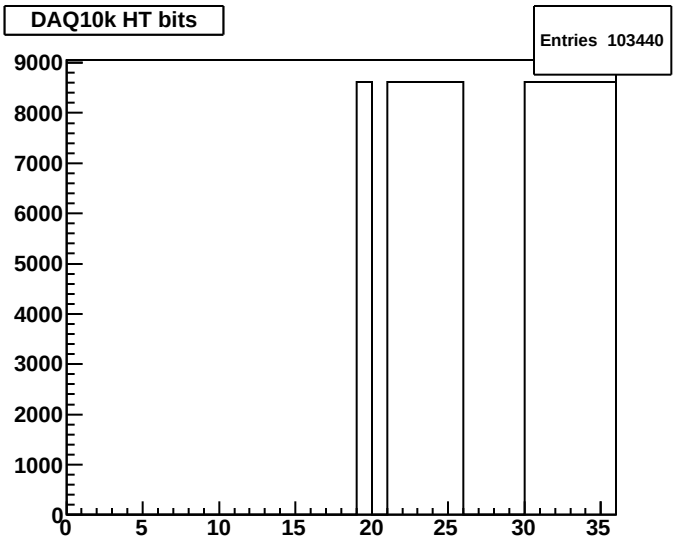

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

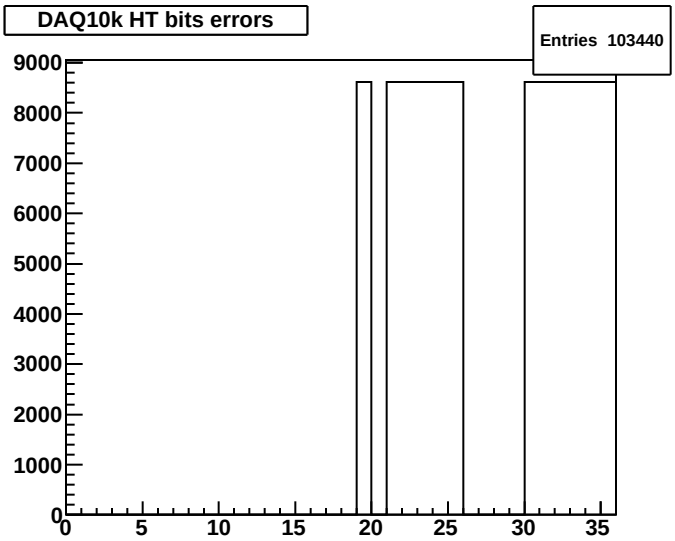

EMC L2 Input - HT01 bits/Partial JP ID
Entries 68960
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

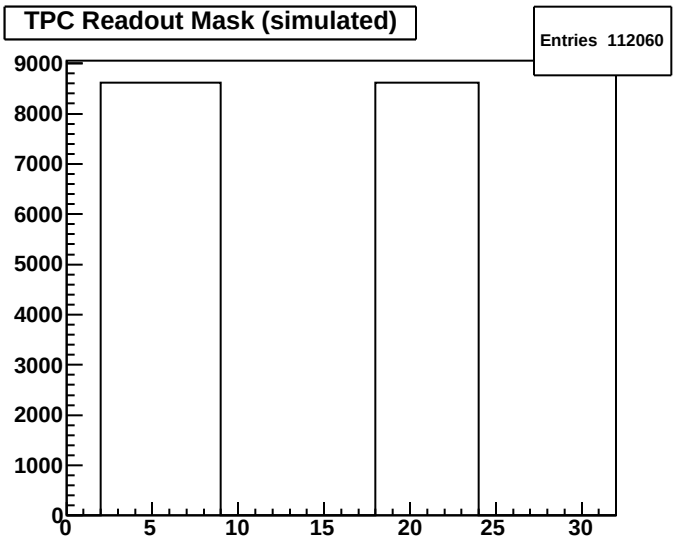

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

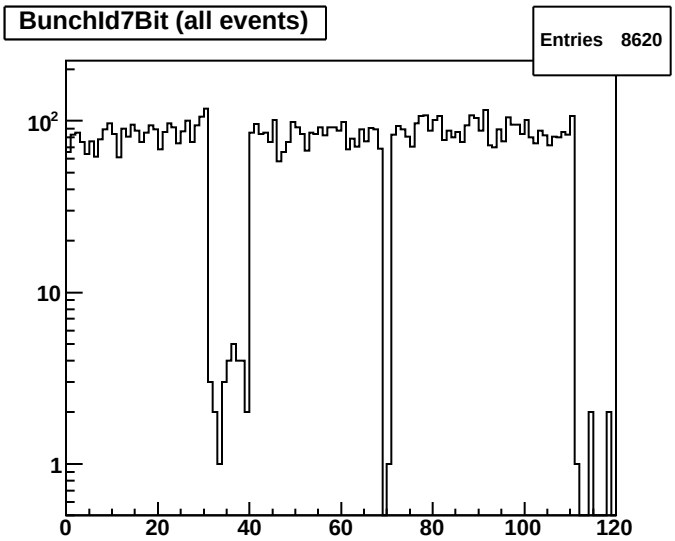

EMC L2 Input - HT23 bits
Entries 68960
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

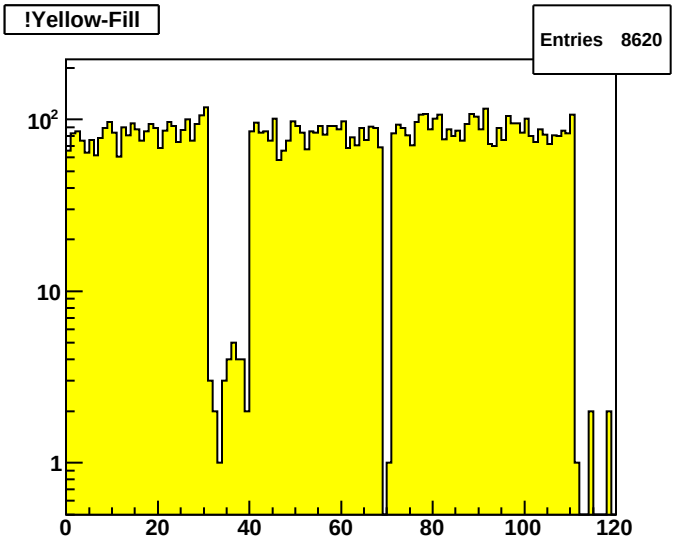

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

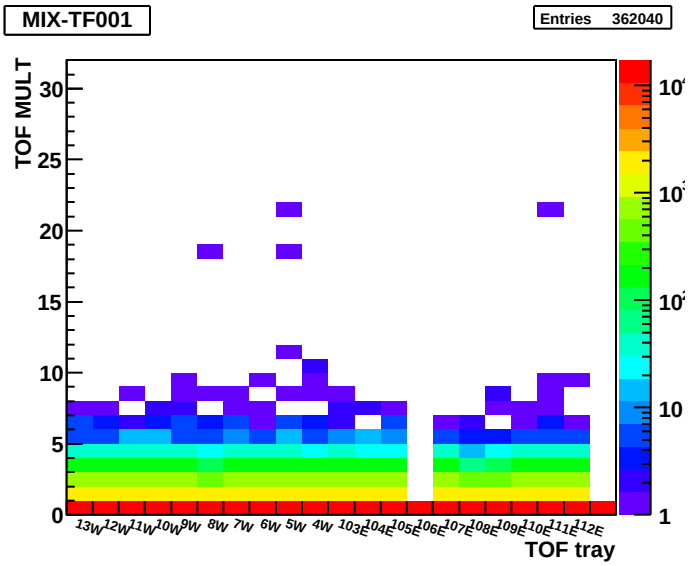

DAQ10k HT bits
Entries 103440
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
0
5
10
15
20
25
30
35

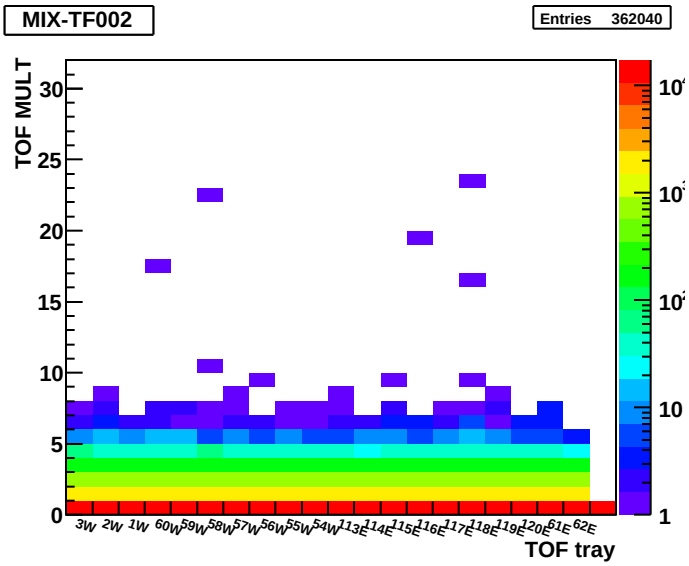

DAQ10k HT bits errors
Entries 103440
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
0
5
10
15
20
25
30
35

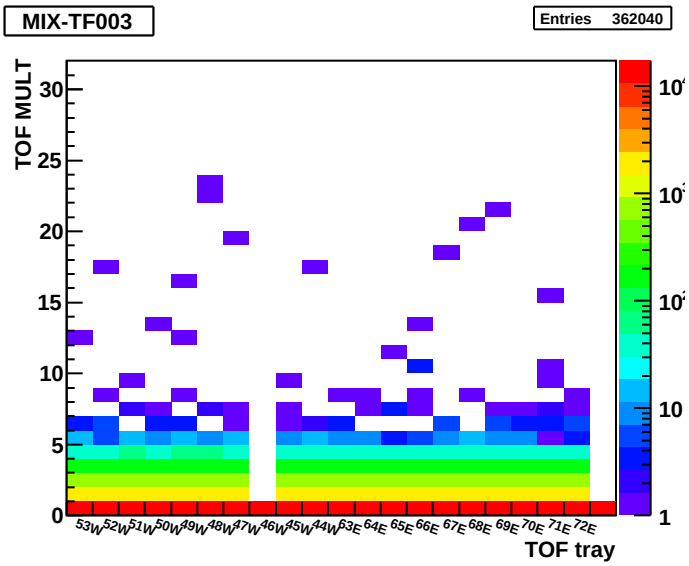

TPC Readout Mask (simulated)
Entries 112060
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
0
5
10
15
20
25
30

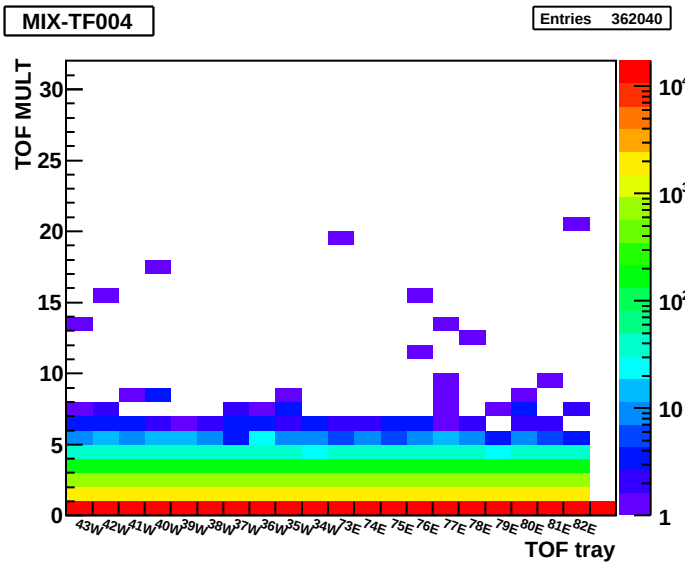

BunchId7Bit (all events)
Entries 8620
10^2
10
1
0
20
40
60
80
100
120

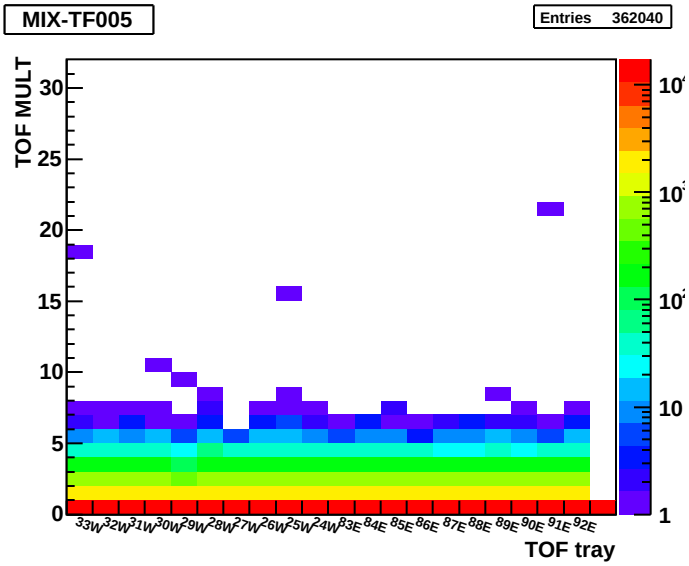

!Yellow-Fill
Entries 8620
10^2
10
1
0
20
40
60
80
100
120

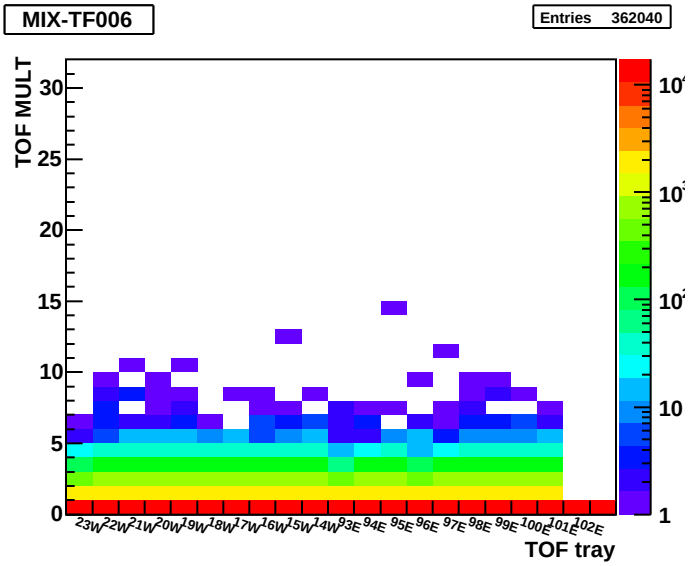

MIX-TF001
Entries 362040
TOF MULT
TOF tray

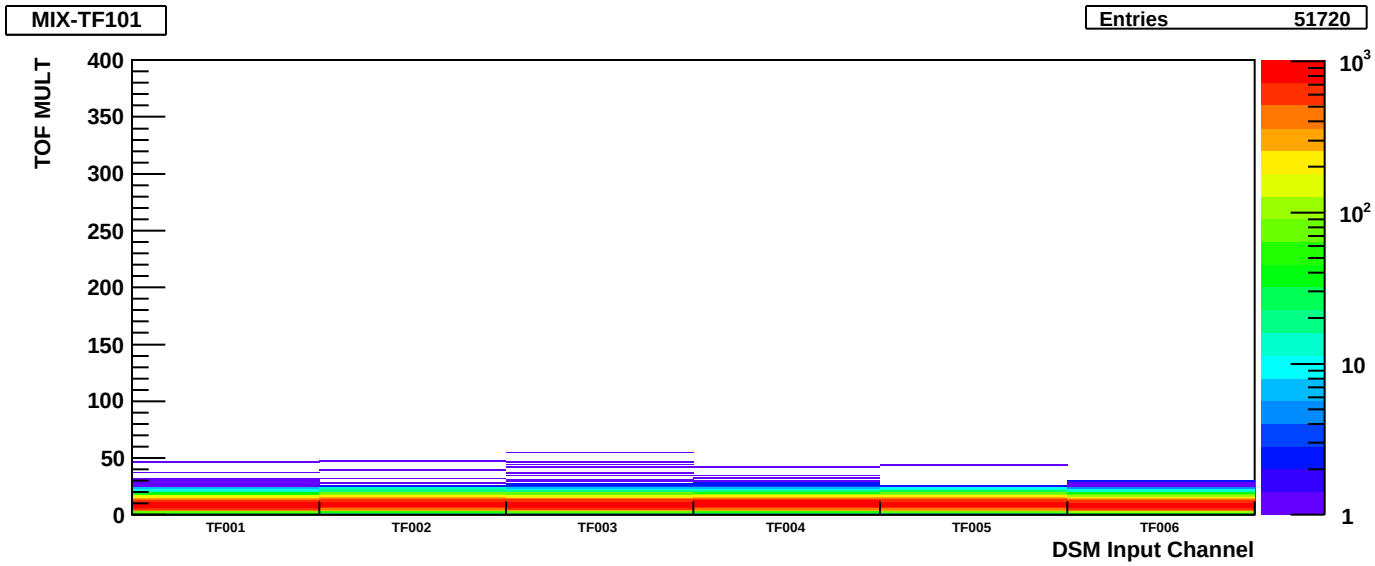

MIX-TF002
Entries 362040
TOF MULT
TOF tray

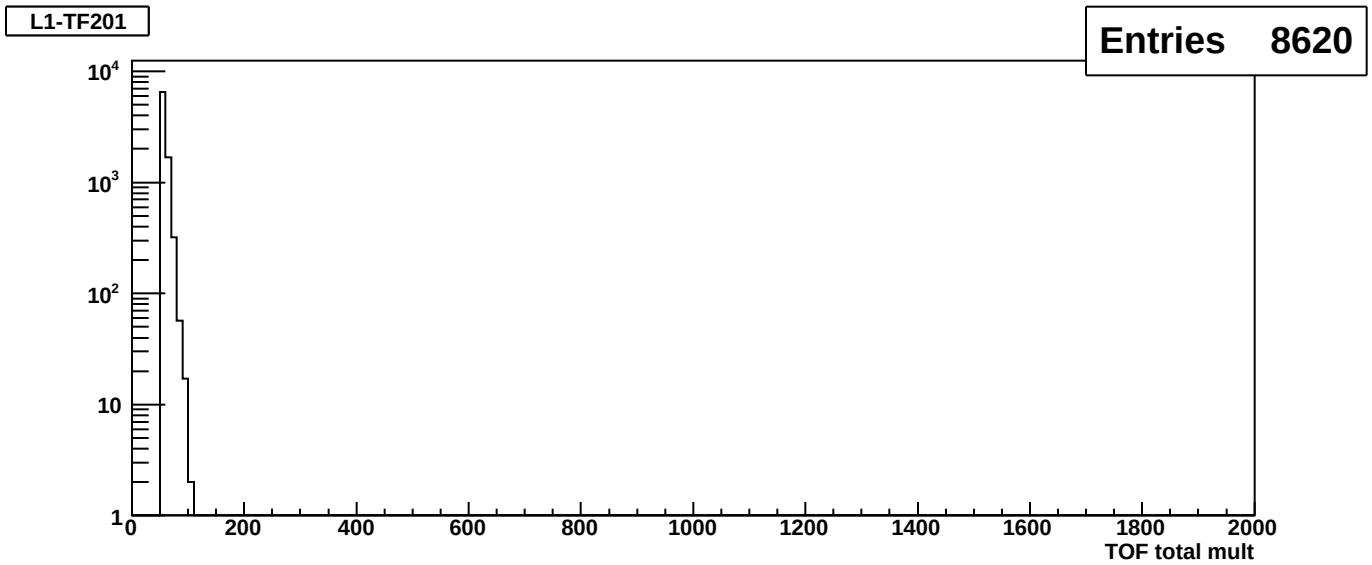

MIX-TF003
Entries 362040
TOF MULT
TOF tray

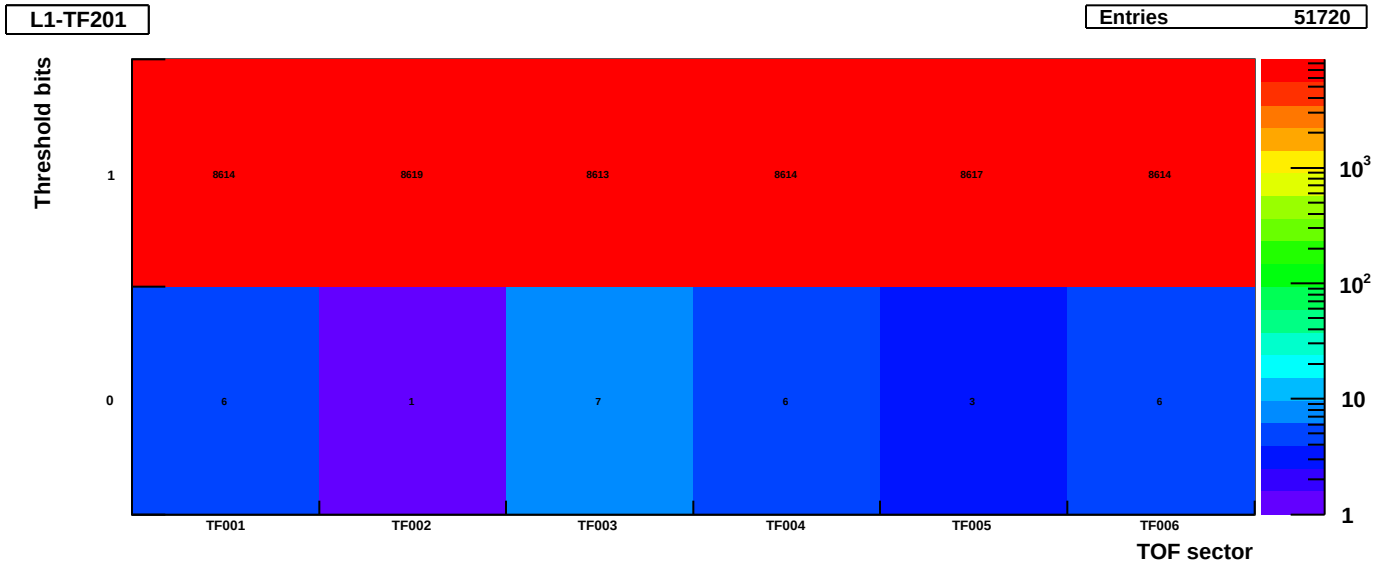

MIX-TF004
Entries 362040
TOF MULT
TOF tray

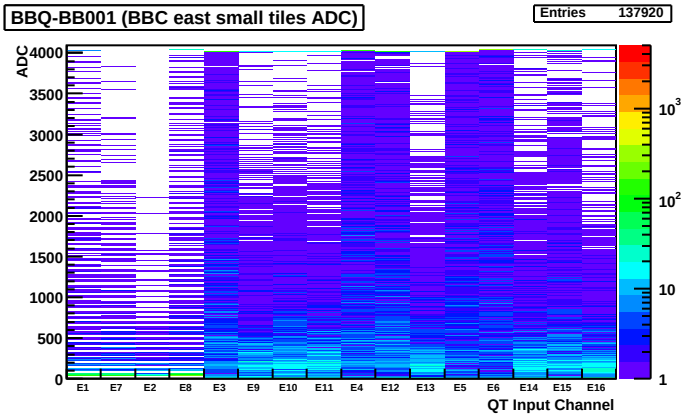

MIX-TF005
Entries 362040
TOF MULT
TOF tray

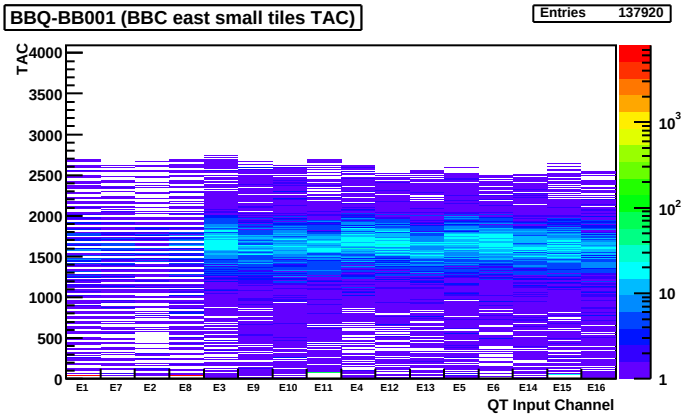

MIX-TF006
Entries 362040
TOF MULT
TOF tray

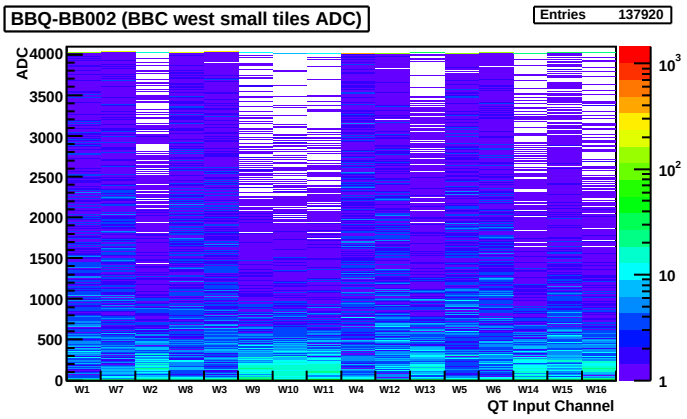

MIX-TF101
Entries 51720
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^3
10^2
10
1

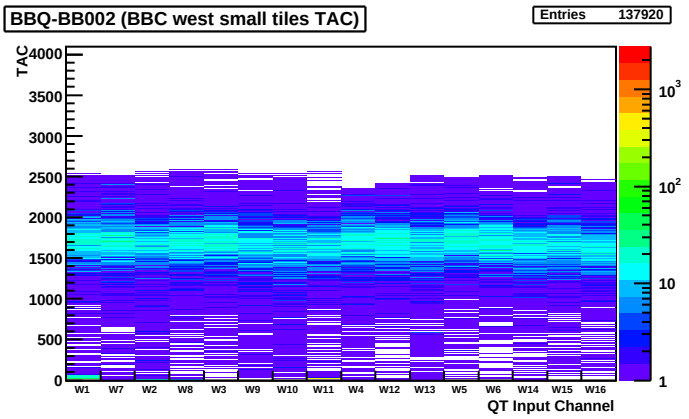

L1-TF201
Entries 8620
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

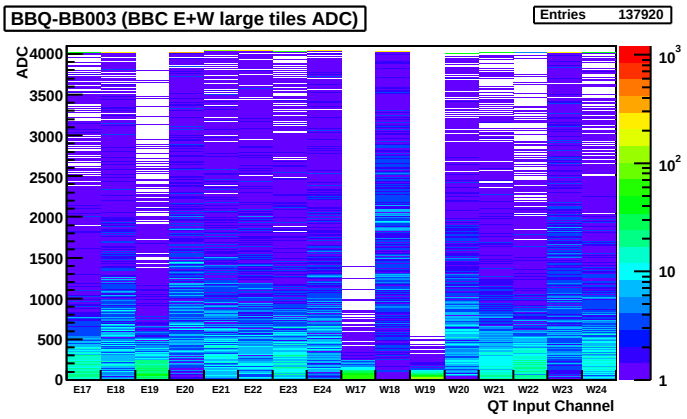

L1-TF201
Entries 51720
Threshold bits
1
0
8614
8619
8613
8614
8617
8614
6
1
7
6
3
6
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^3
10^2
10
1

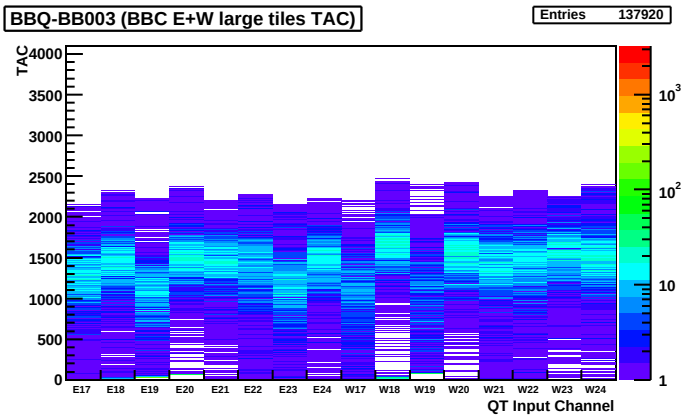

BBQ-BB001 (BBC east small tiles ADC)
Entries 137920
ADC
QT Input Channel

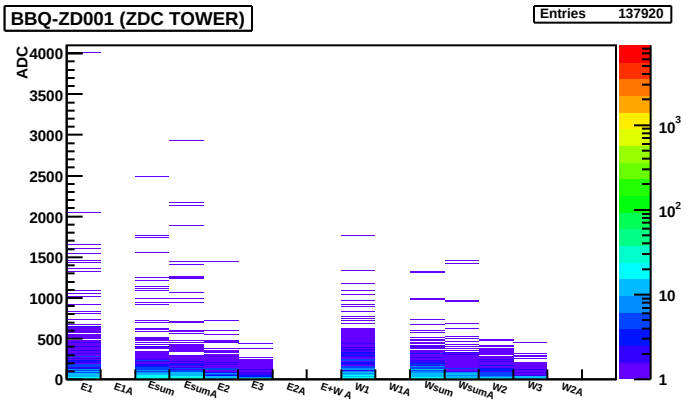

BBQ-BB001 (BBC east small tiles TAC)
Entries 137920
TAC
QT Input Channel

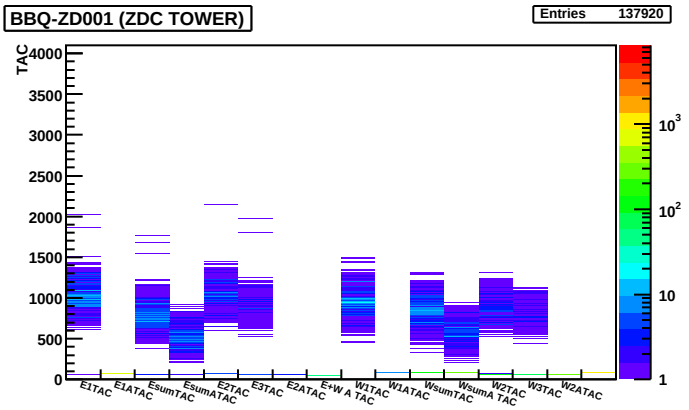

BBQ-BB002 (BBC west small tiles ADC)
Entries 137920
ADC
QT Input Channel

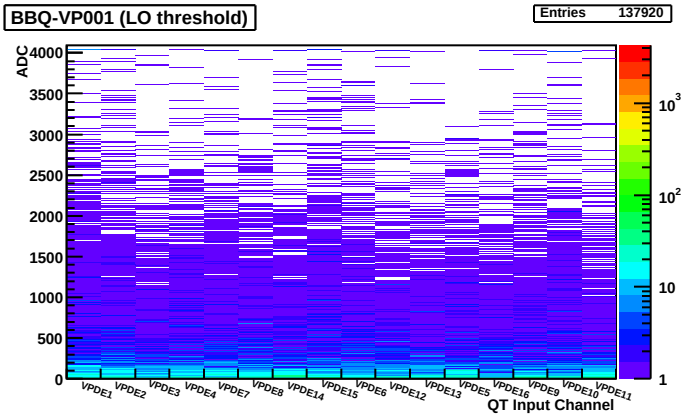

BBQ-BB002 (BBC west small tiles TAC)
Entries 137920
TAC
QT Input Channel

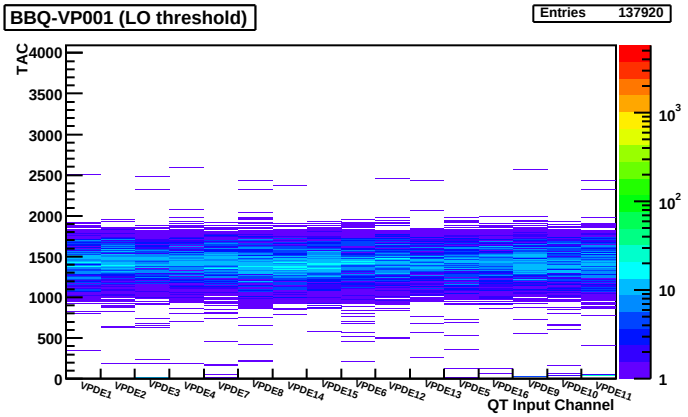

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 137920
ADC
QT Input Channel

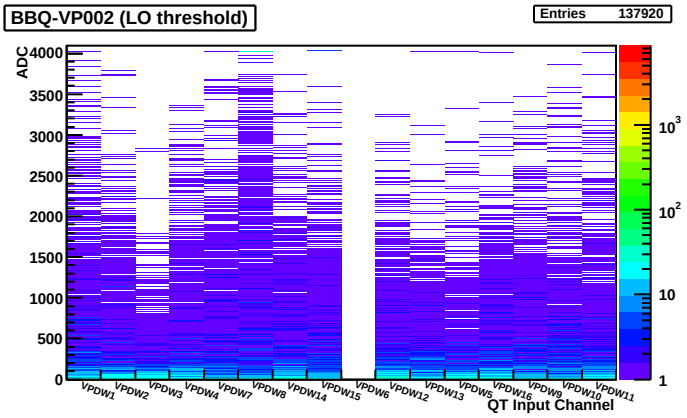

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 137920
TAC
QT Input Channel

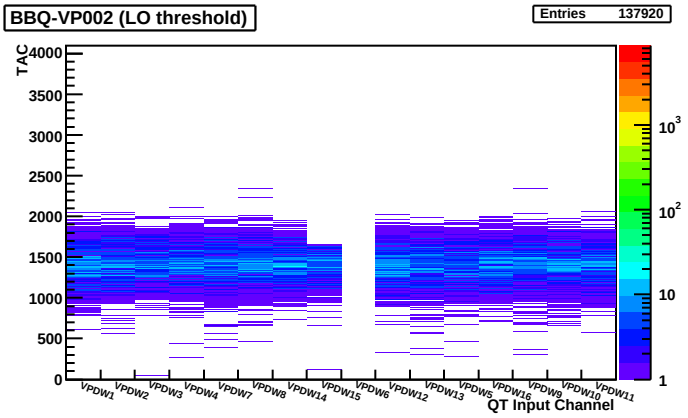

BBQ-ZD001 (ZDC TOWER)
Entries 137920
ADC

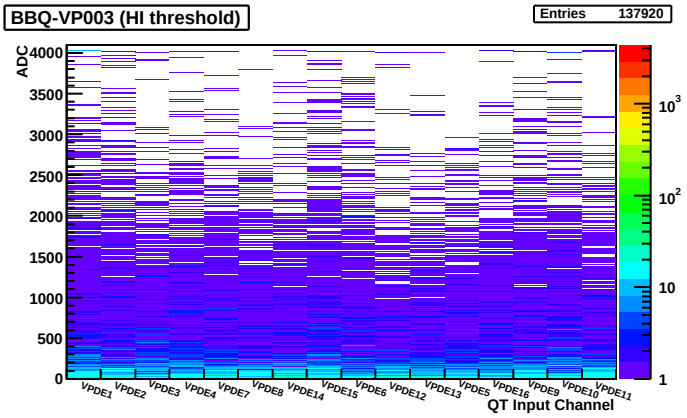

BBQ-ZD001 (ZDC TOWER)
Entries 137920
TAC

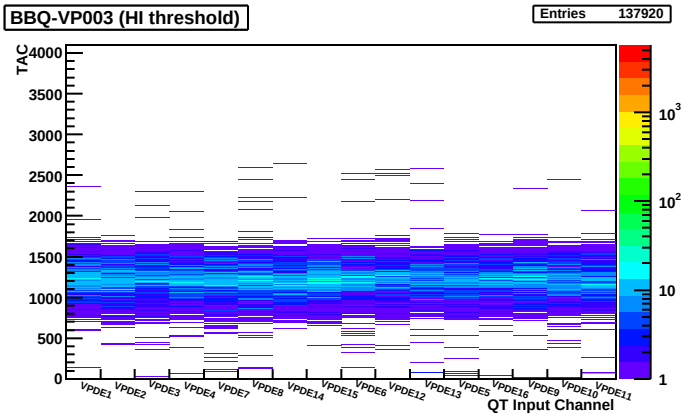

BBQ-VP001 (LO threshold)
Entries 137920
ADC
QT Input Channel

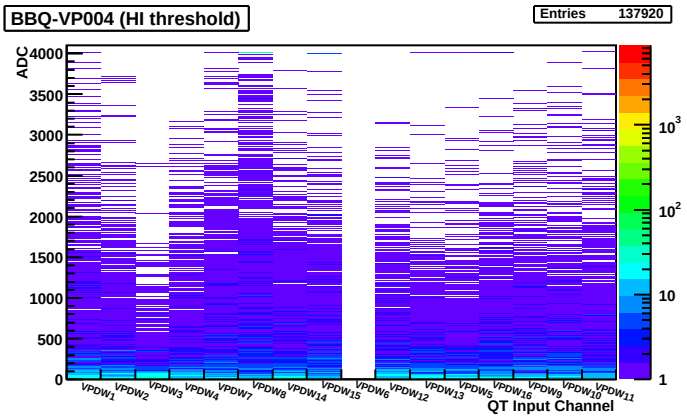

BBQ-VP001 (LO threshold)
Entries 137920
TAC
QT Input Channel

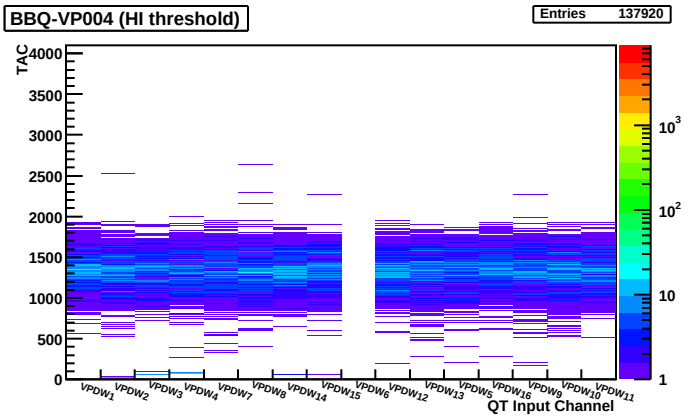

BBQ-VP002 (LO threshold)
Entries 137920
ADC
QT Input Channel

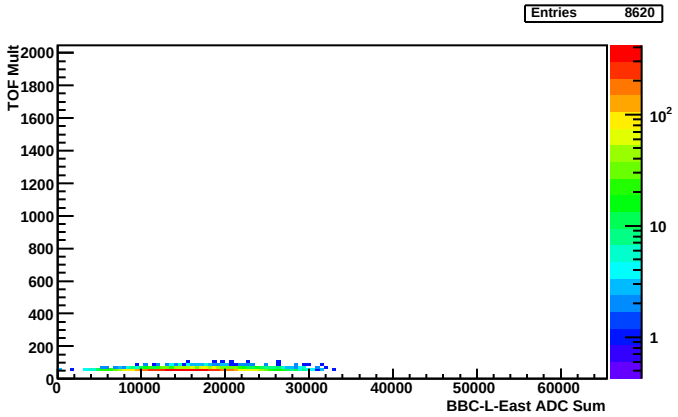

BBQ-VP002 (LO threshold)
Entries 137920
TAC
QT Input Channel

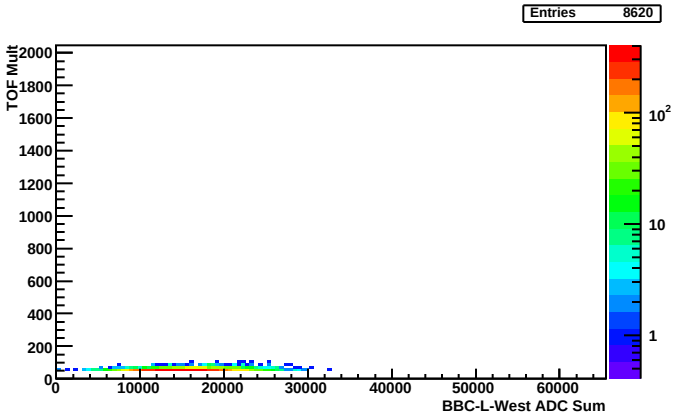

BBQ-VP003 (HI threshold)
Entries 137920
ADC
QT Input Channel

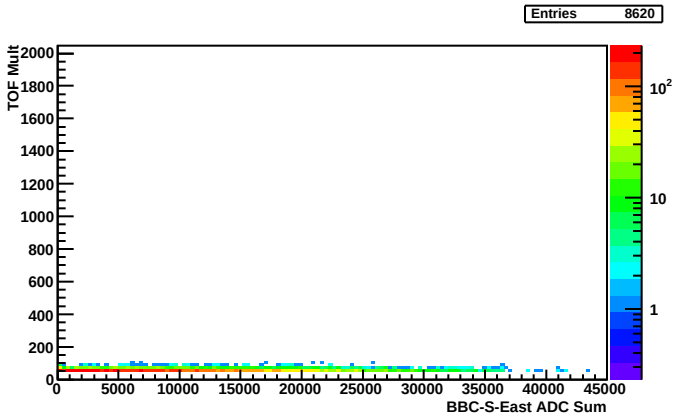

BBQ-VP003 (HI threshold)
Entries 137920
TAC
QT Input Channel

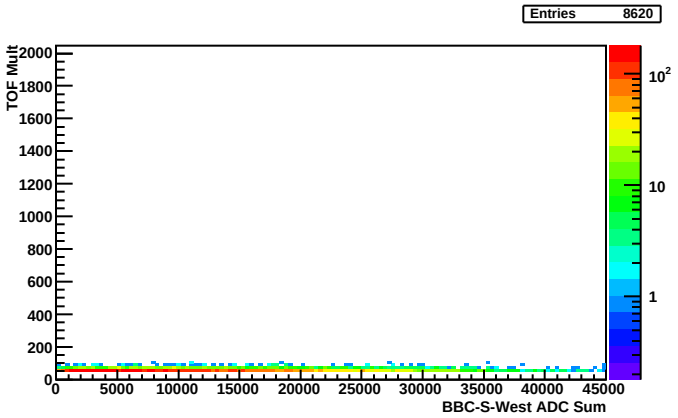

BBQ-VP004 (HI threshold)
Entries 137920
ADC
QT Input Channel

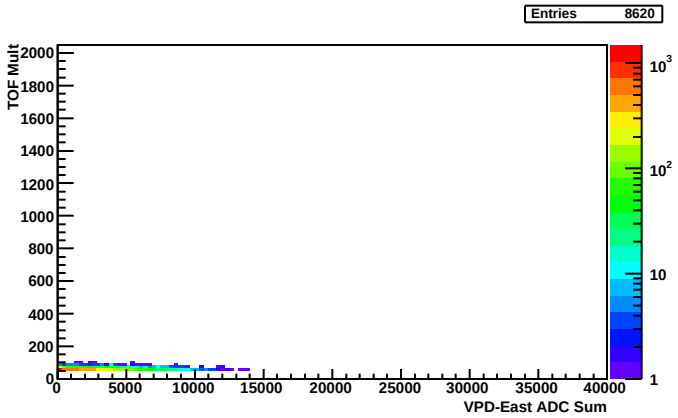

BBQ-VP004 (HI threshold)
Entries 137920
TAC
QT Input Channel

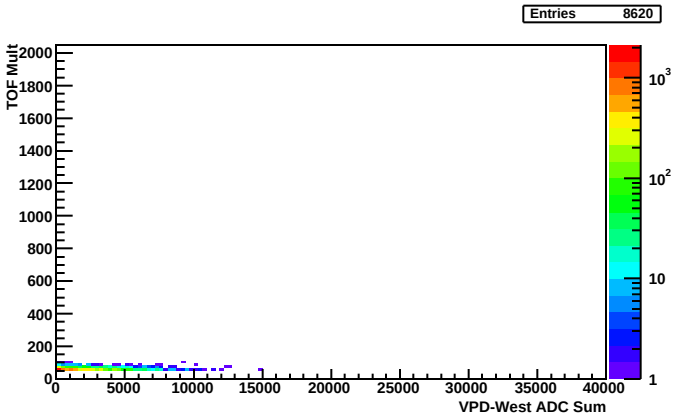

Entries 8620
TOF Mult
BBC-L-East ADC Sum

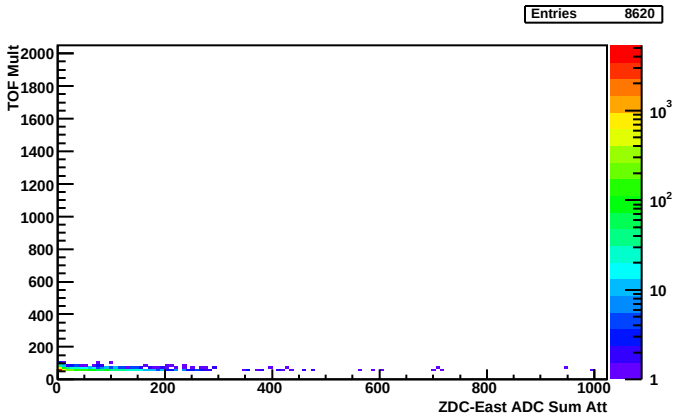

Entries 8620
TOF Mult
BBC-L-West ADC Sum

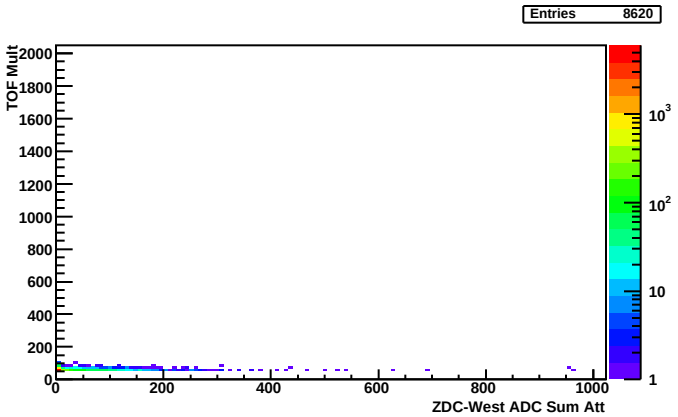

Entries 8620
TOF Mult
BBC-S-East ADC Sum

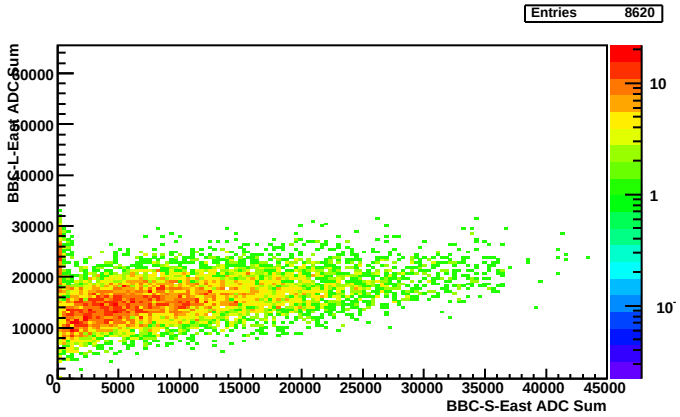

Entries 8620
TOF Mult
BBC-S-West ADC Sum

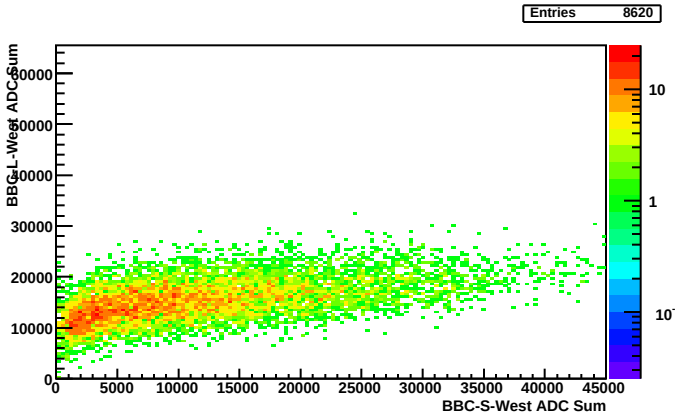

Entries 8620
TOF Mult
VPD-East ADC Sum

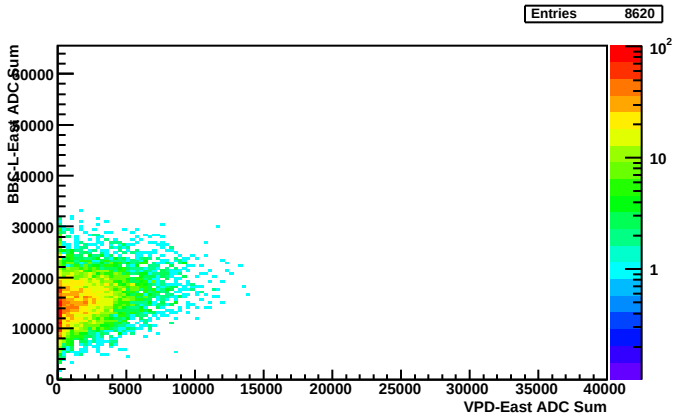

Entries 8620
TOF Mult
VPD-West ADC Sum

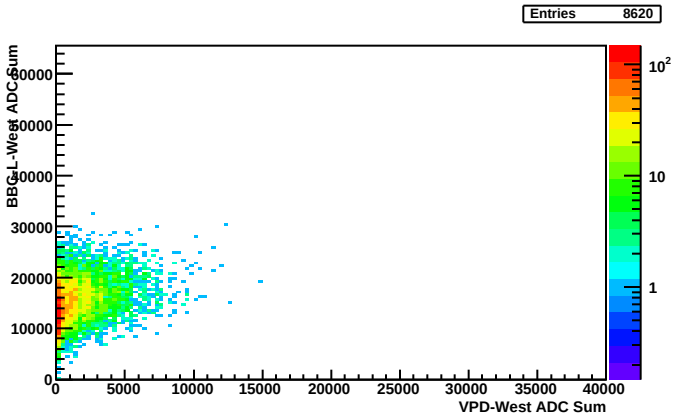

Entries 8620
TOF Mult
ZDC-East ADC Sum Att

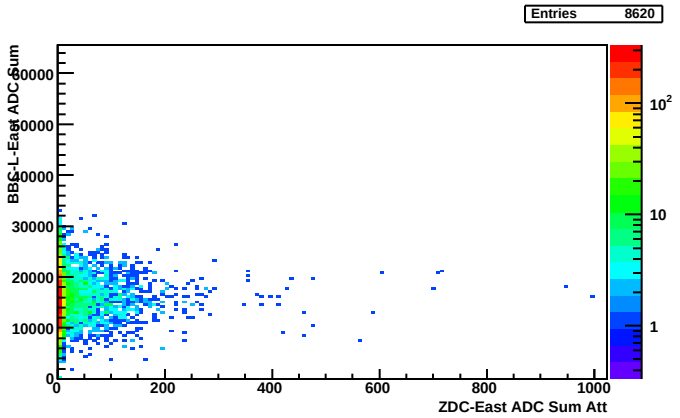

Entries 8620
TOF Mult
ZDC-West ADC Sum Att

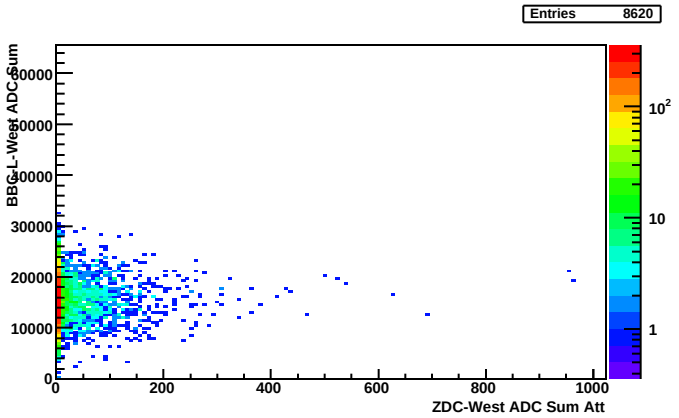

Entries 8620
BBC-L-East ADC Sum
BBC-S-East ADC Sum


Entries 8620
BBC-L-West ADC Sum
BBC-S-West ADC Sum


Entries 8620
BBC-L-East ADC Sum
VPD-East ADC Sum


Entries 8620
BBC-L-West ADC Sum
VPD-West ADC Sum


Entries 8620
BBC-L-East ADC Sum
ZDC-East ADC Sum Att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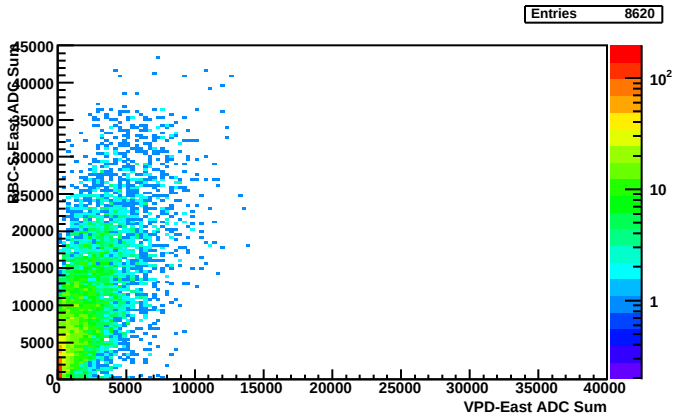
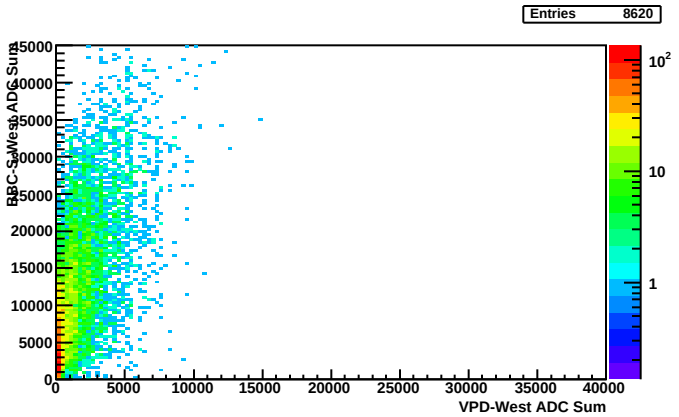
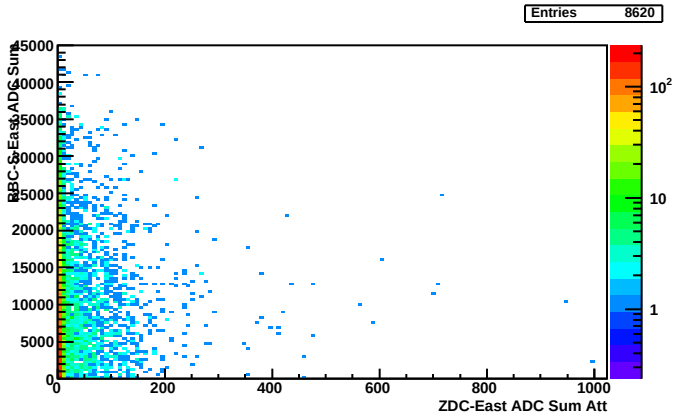
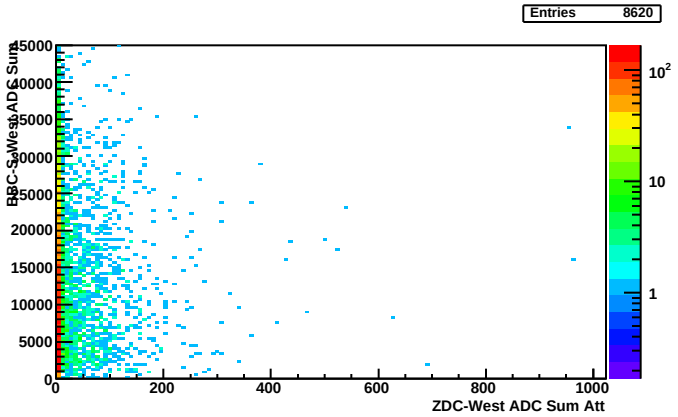
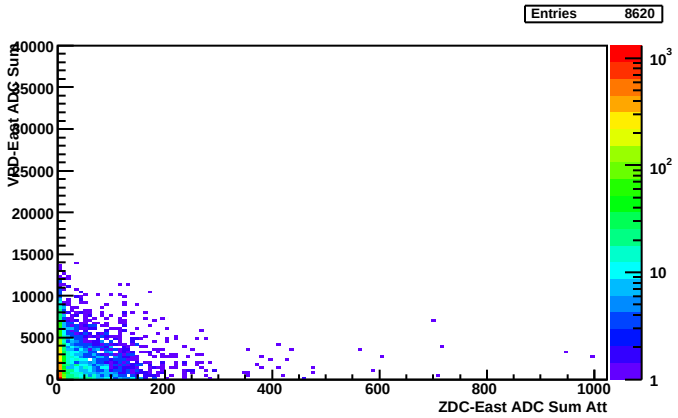
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

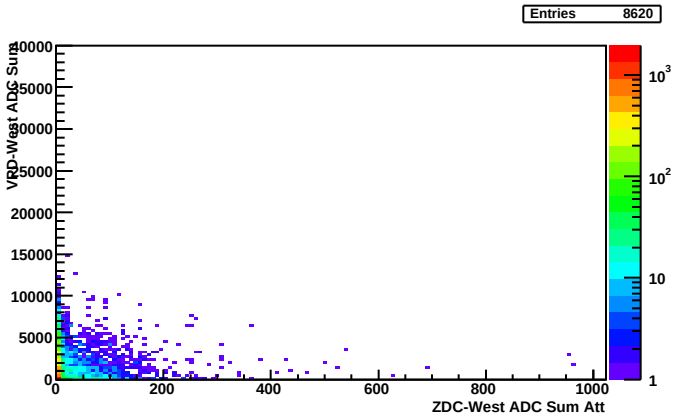

Entries 8620
BBC-S-East ADC Sum
VPD-East ADC Sum


Entries 8620
BBC-S-West ADC Sum
VPD-West ADC Sum


Entries 8620
BBC-S-East ADC Sum
ZDC-East ADC Sum Att


Entries 8620
BBC-S-West ADC Sum
ZDC-West ADC Sum Att


Entries 8620
VPD-East ADC Sum
ZDC-East ADC Sum Att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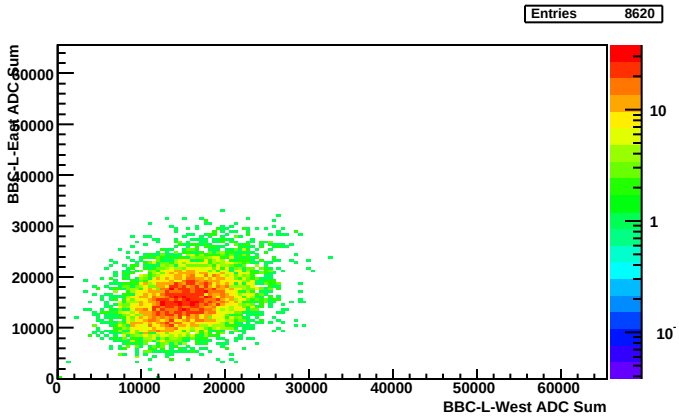
VPD-West ADC Sum
ZDC-West ADC Sum Att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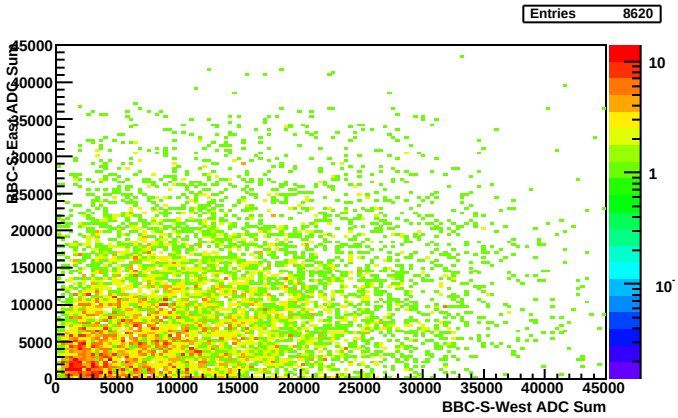
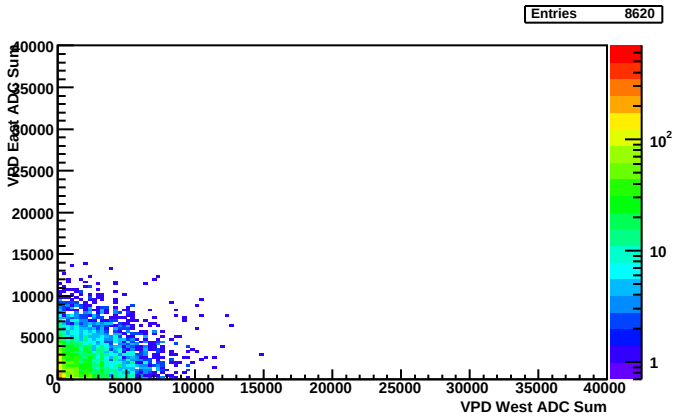
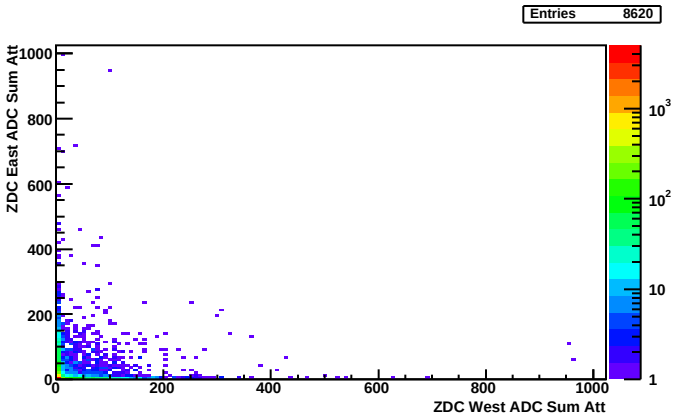
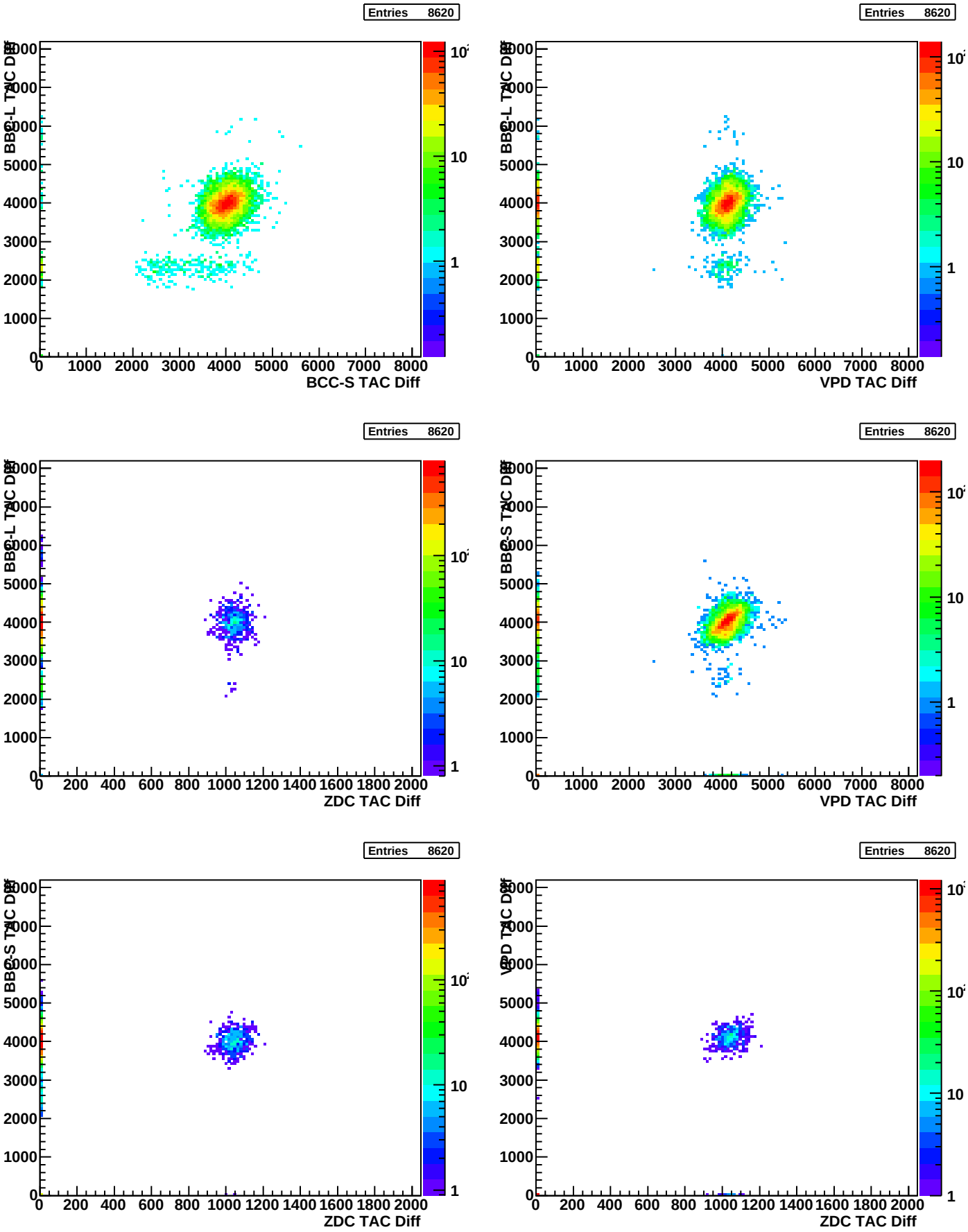
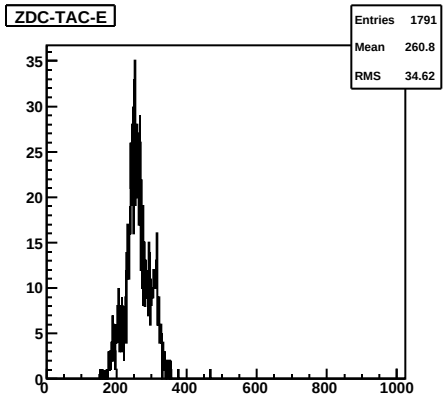
BBC-L-East ADC Sum
BBC-L-West ADC Sum

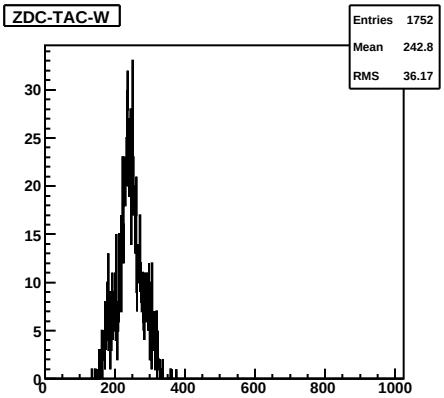

Entries 8620
BBC-S-East ADC Sum
BBC-S-West ADC Sum

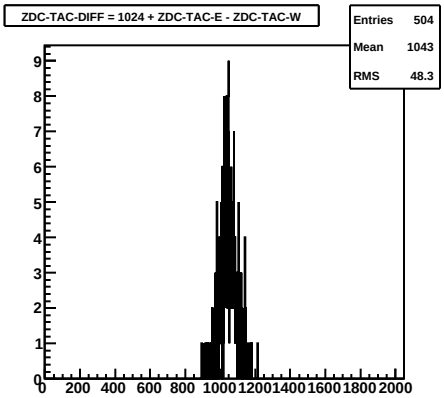

Entries 8620
VPD East ADC Sum
VPD West ADC Sum

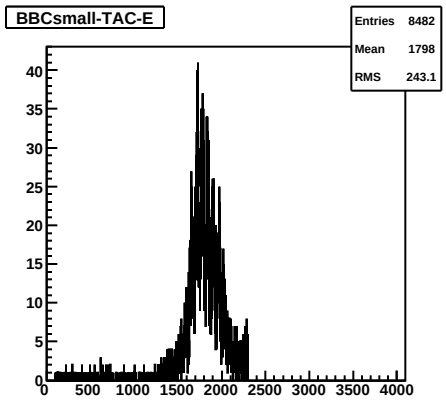

Entries 8620
ZDC East ADC Sum Att
ZDC West ADC Sum Att

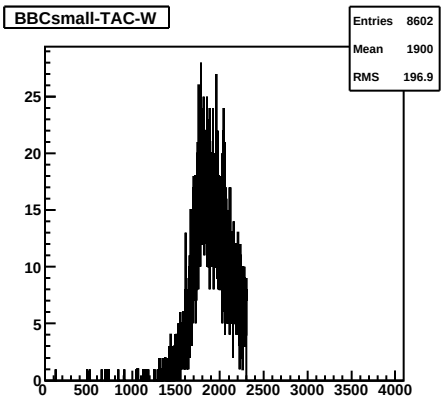

Entries 8620
BBC-L TAC Diff
BCC-S TAC Diff
Entries 8620
BBC-L TAC Diff
VPD TAC Diff
Entries 8620
BBC-L TAC Diff
ZDC TAC Diff
Entries 8620
BBC-S TAC Diff
VPD TAC Diff
Entries 8620
BBC-S TAC Diff
ZDC TAC Diff
Entries 8620
VPD TAC Diff
ZDC TAC Diff

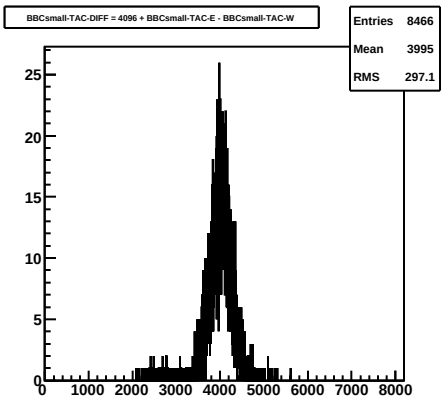

ZDC-TAC-E
Entries 1791
Mean 260.8
RMS 34.62

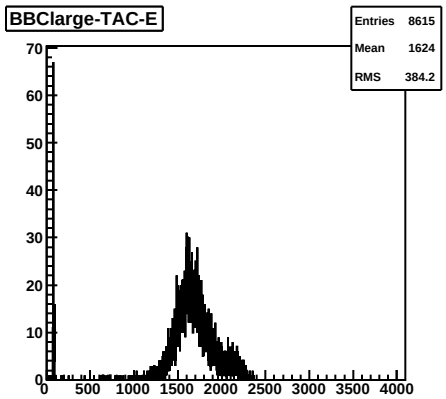

ZDC-TAC-W
Entries 1752
Mean 242.8
RMS 36.17

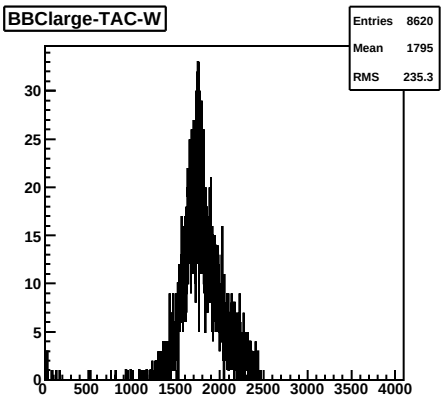

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 504
Mean 1043
RMS 48.3

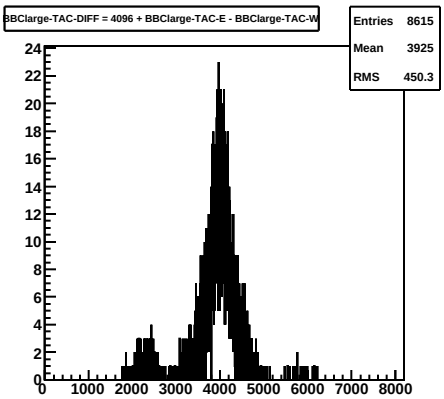

BBCsmall-TAC-E
Entries 8482
Mean 1798
RMS 243.1

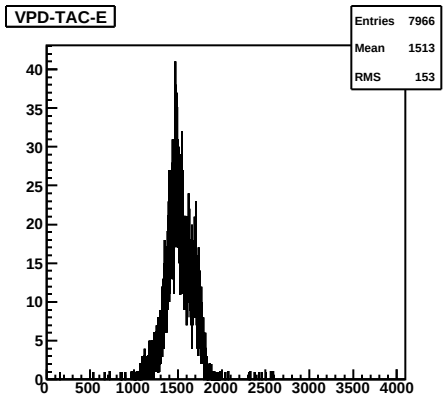

BBCsmall-TAC-W
Entries 8602
Mean 1900
RMS 196.9

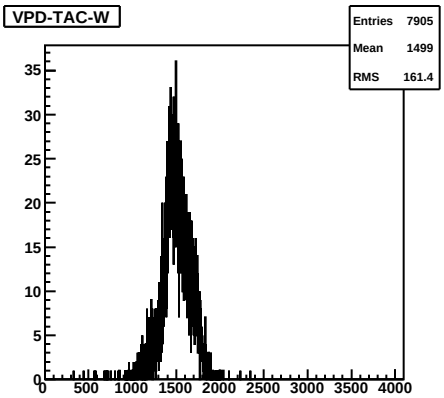

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 8466
Mean 3995
RMS 297.1

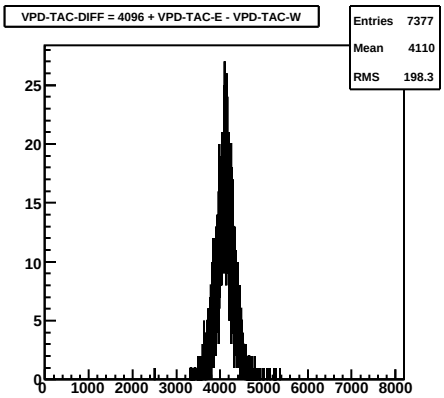

BBClarge-TAC-E
Entries 8615
Mean 1624
RMS 384.2

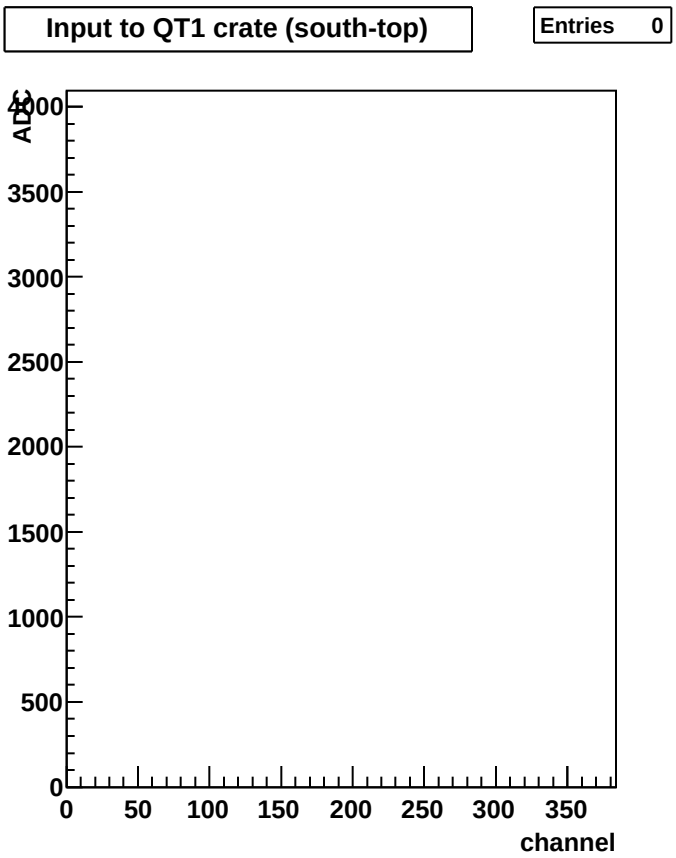

BBClarge-TAC-W
Entries 8620
Mean 1795
RMS 235.3

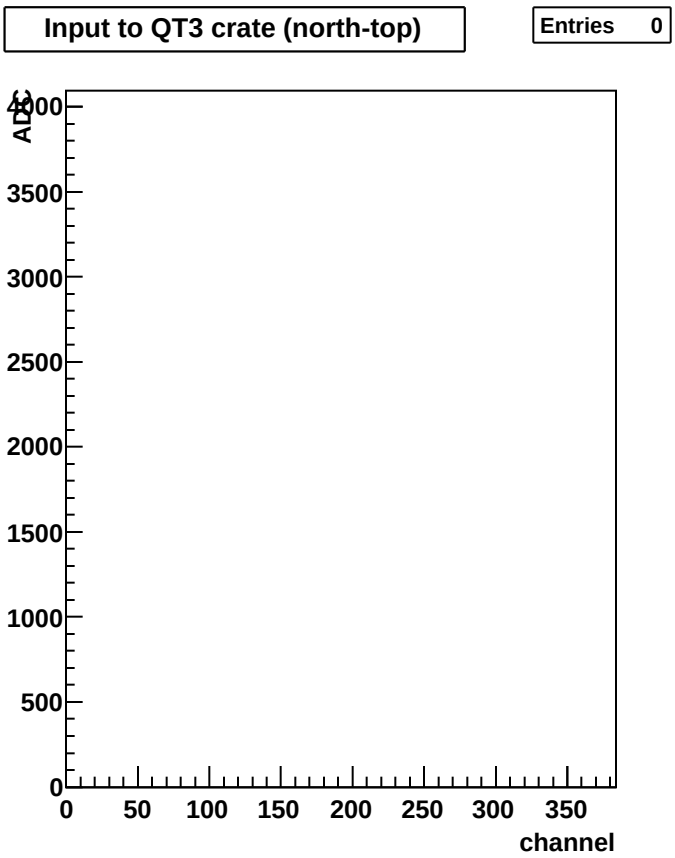

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 8615
Mean 3925
RMS 450.3

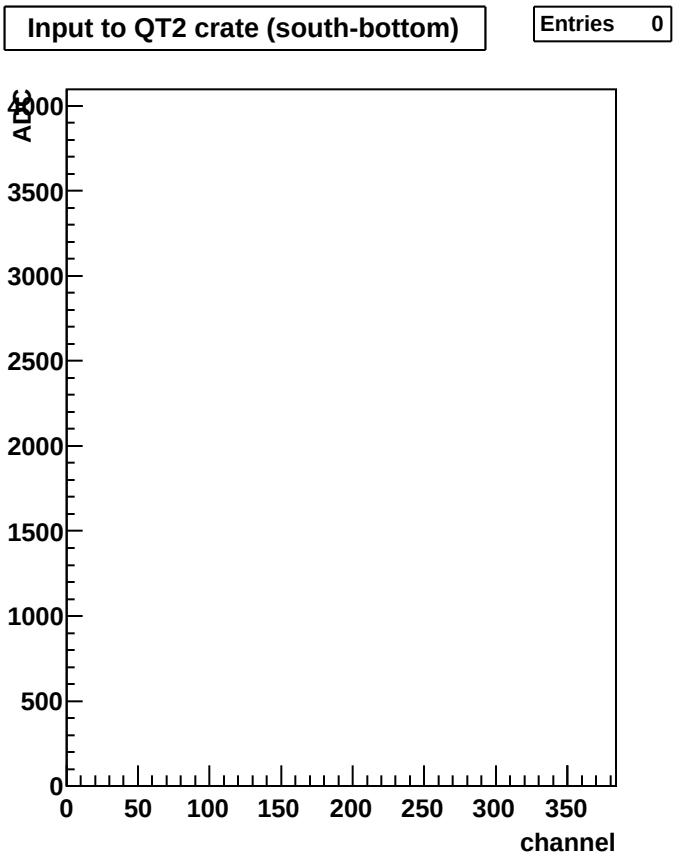

VPD-TAC-E
Entries 7966
Mean 1513
RMS 153

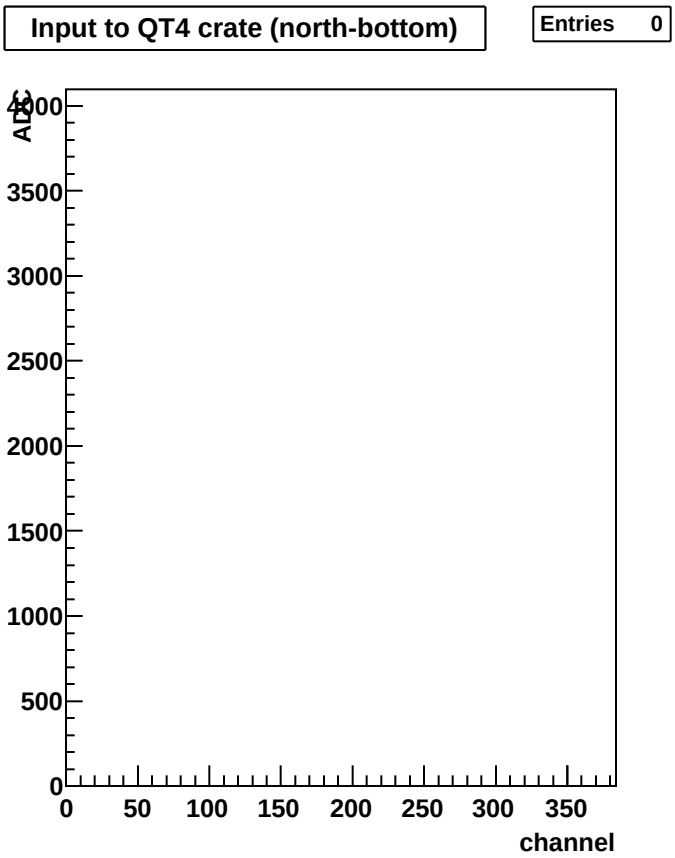

VPD-TAC-W
Entries 7905
Mean 1499
RMS 161.4

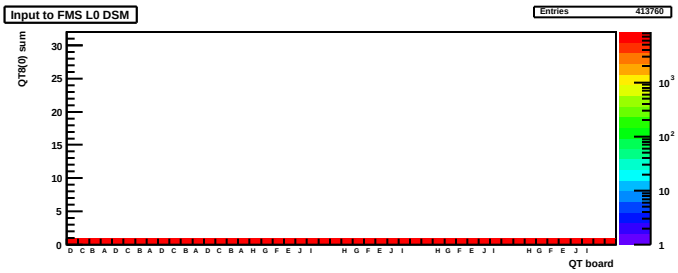

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 7377
Mean 4110
RMS 198.3

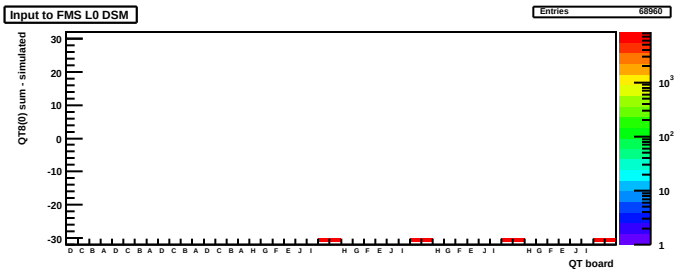

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

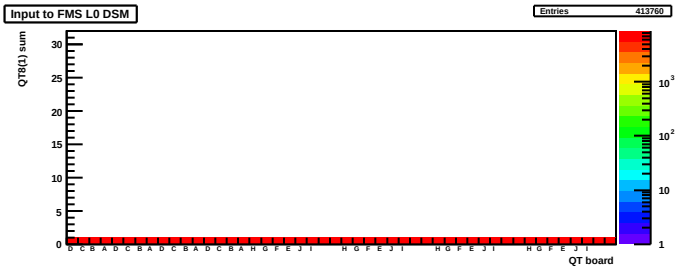

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

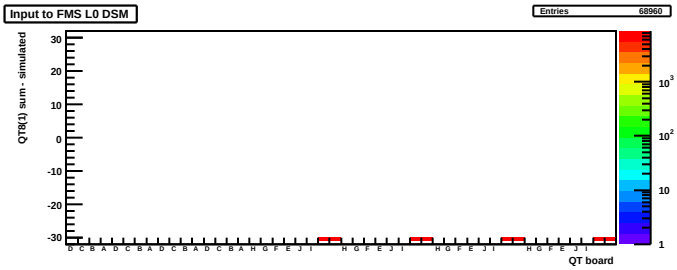

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

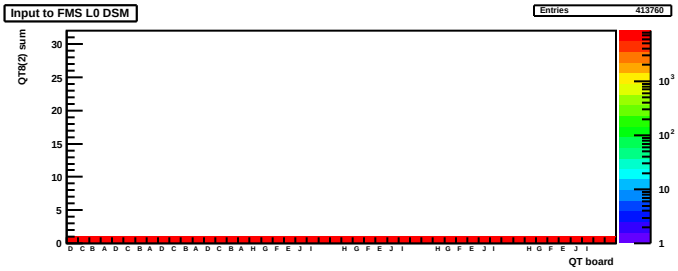

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

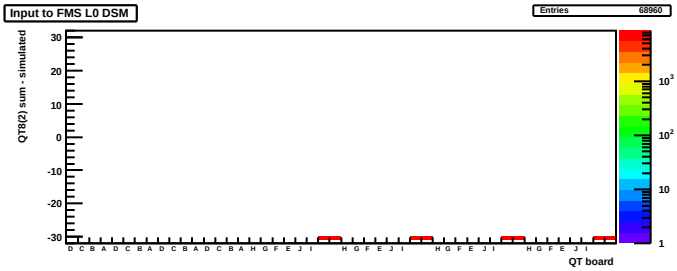

Input to FMS L0 DSM
Entries 413760
QT8(0) sum
QT board

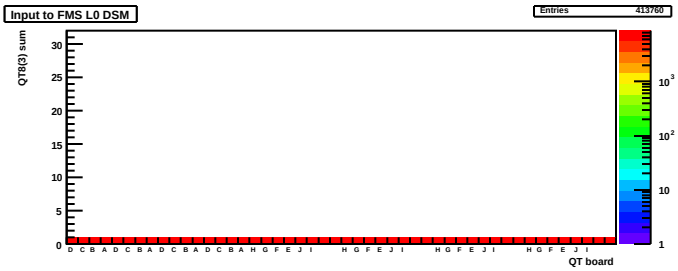

Input to FMS L0 DSM
Entries 68960
QT8(0) sum - simulated
QT board

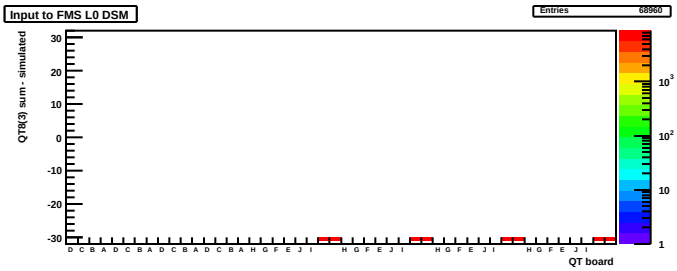

Input to FMS L0 DSM
Entries 413760
QT8(1) sum
QT board

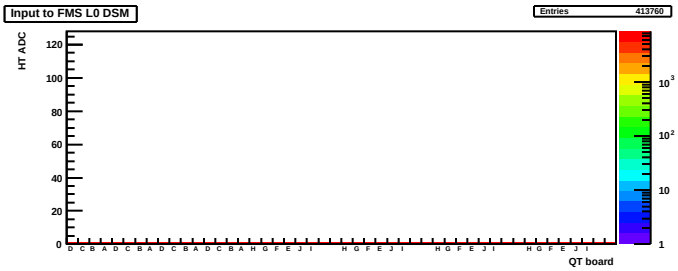

Input to FMS L0 DSM
Entries 68960
QT8(1) sum - simulated
QT board

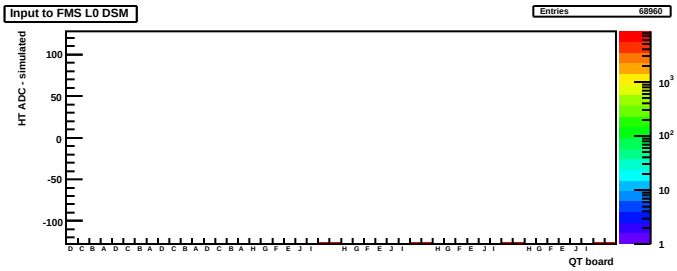

Input to FMS L0 DSM
Entries 413760
QT8(2) sum
QT board

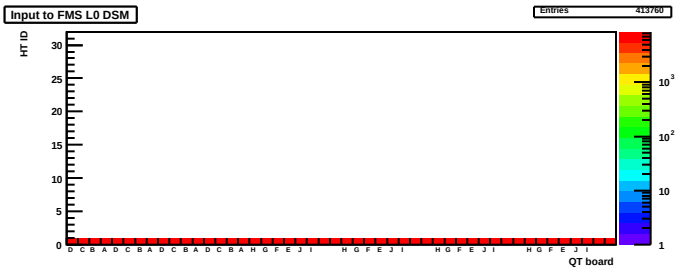

Input to FMS L0 DSM
Entries 68960
QT8(2) sum - simulated
QT board

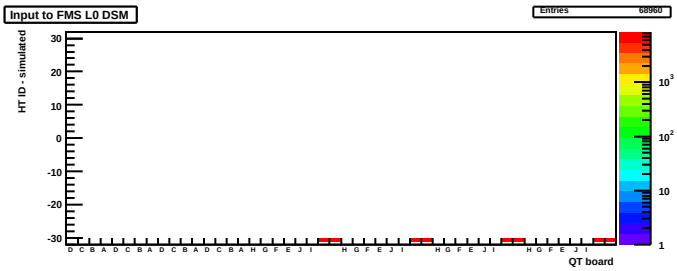

Input to FMS L0 DSM
Entries 413760
QT8(3) sum
QT board

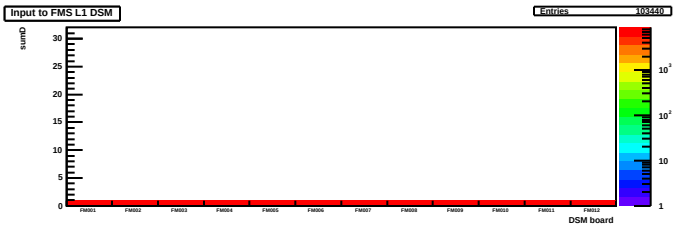

Input to FMS L0 DSM
Entries 68960
QT8(3) sum - simulated
QT board

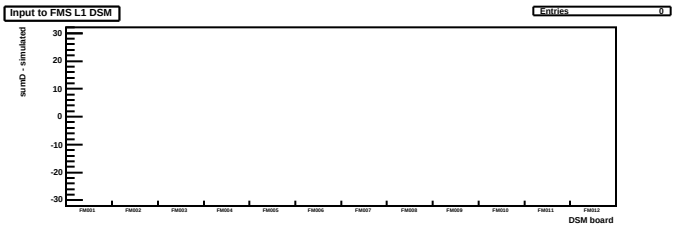

Input to FMS L0 DSM
Entries 413760
HT ADC
QT board

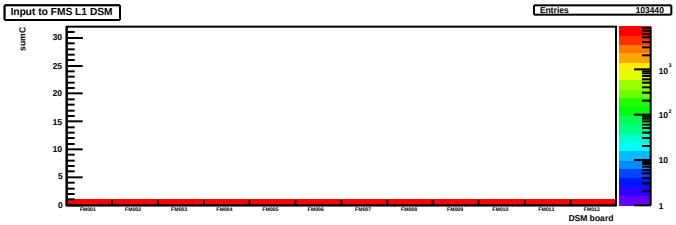

Input to FMS L0 DSM
Entries 68960
HT ADC - simulated
QT board

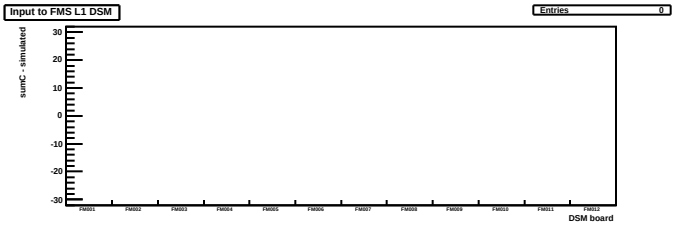

Input to FMS L0 DSM
Entries 413760
HT ID
QT board

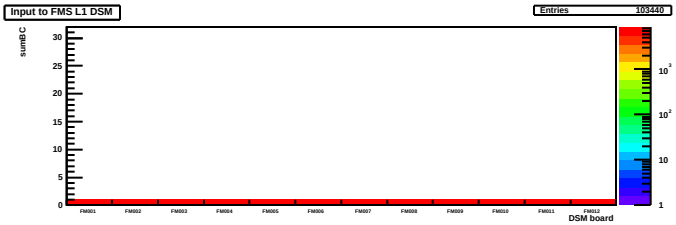

Input to FMS L0 DSM
Entries 68960
HT ID - simulated
QT board

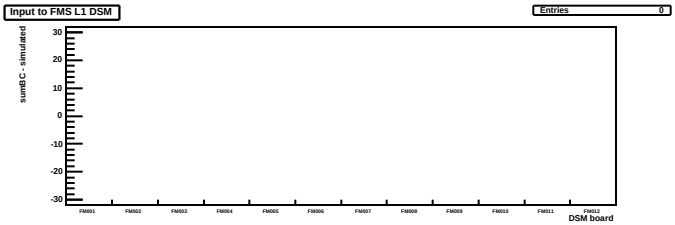

Input to FMS L1 DSM
Entries 103440
sumD
DSM board

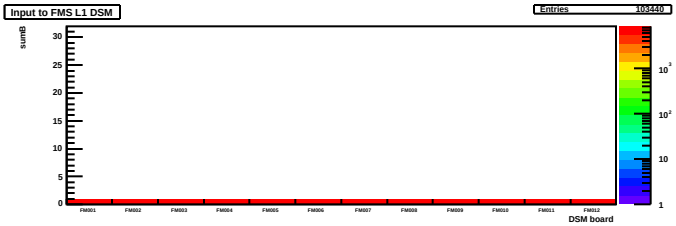

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

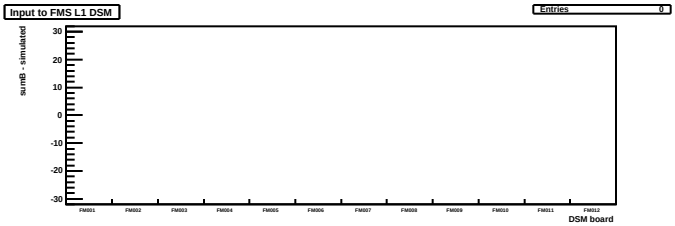

Input to FMS L1 DSM
Entries 103440
sumC
DSM board

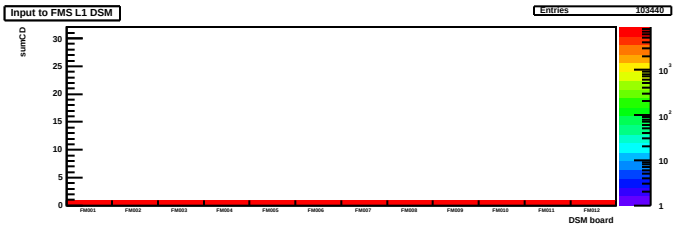

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

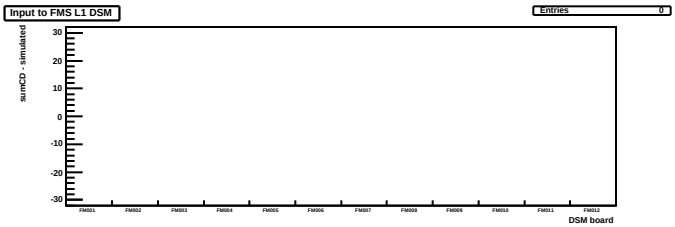

Input to FMS L1 DSM
Entries 103440
sumBC
DSM board

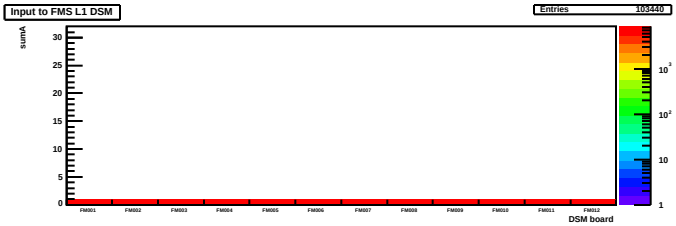

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

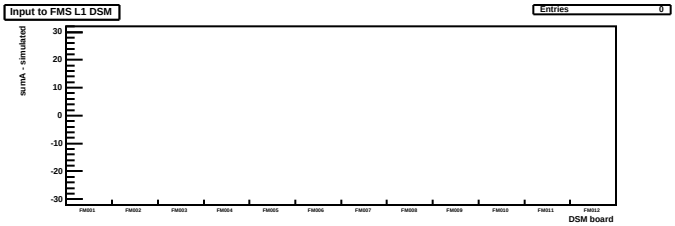

Input to FMS L1 DSM
Entries 103440
sumB
DSM board

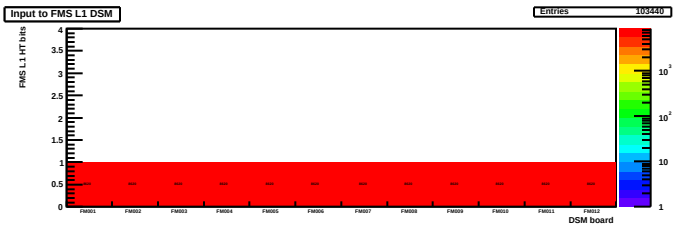

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

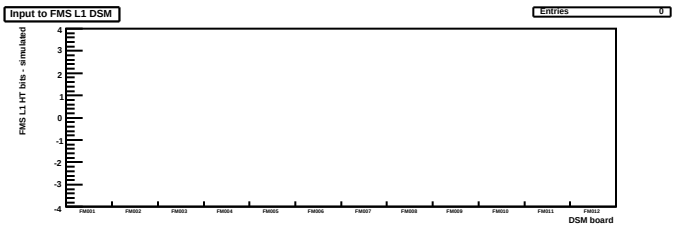

Input to FMS L1 DSM
Entries 103440
sumCD
DSM board

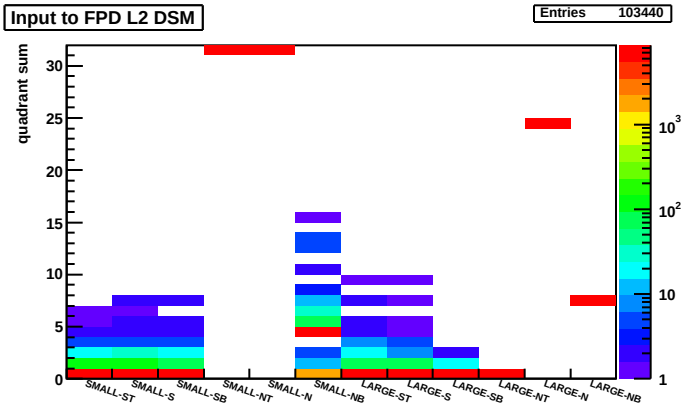

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

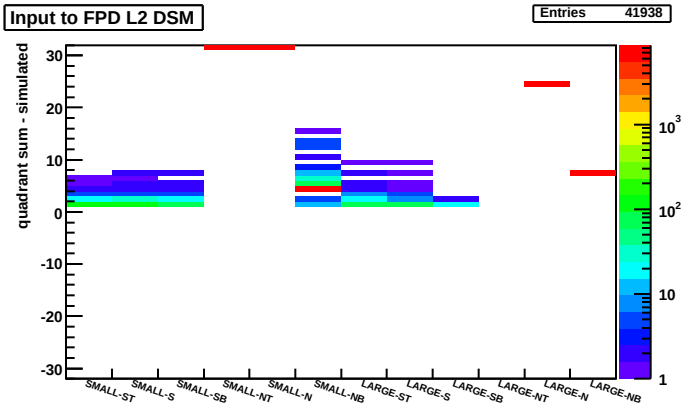

Input to FMS L1 DSM
Entries 103440
sumA
DSM board

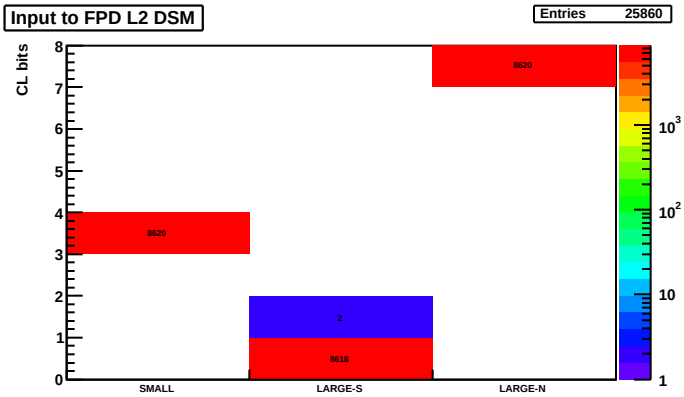

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

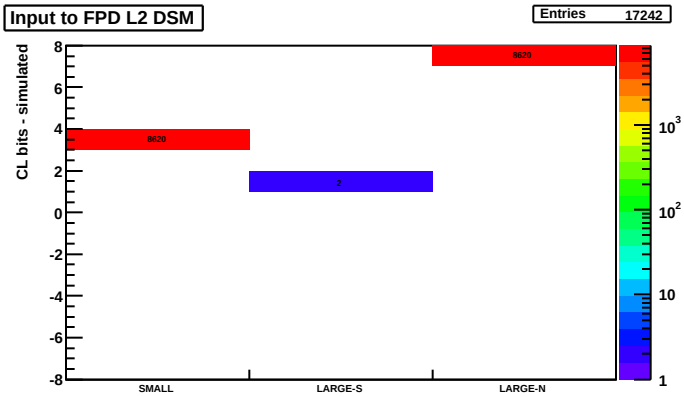

Input to FMS L1 DSM
Entries 103440
FMS L1 HT bits
DSM board

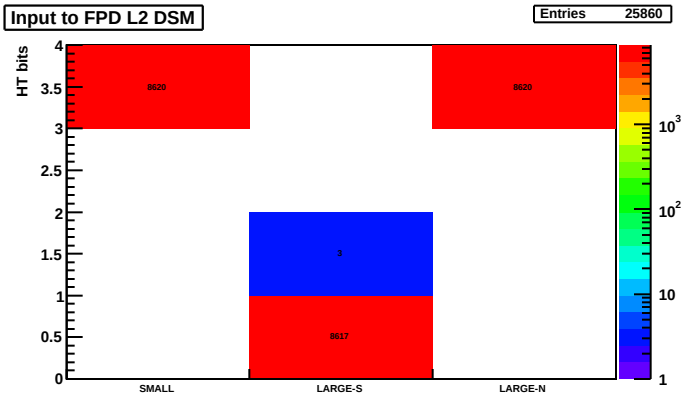

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

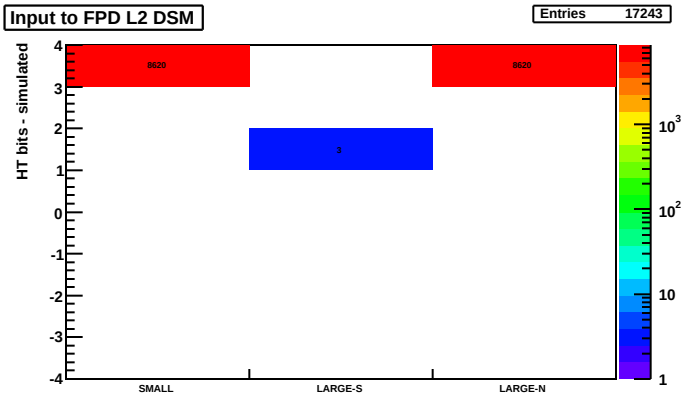

Input to FPD L2 DSM
Entries 103440
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

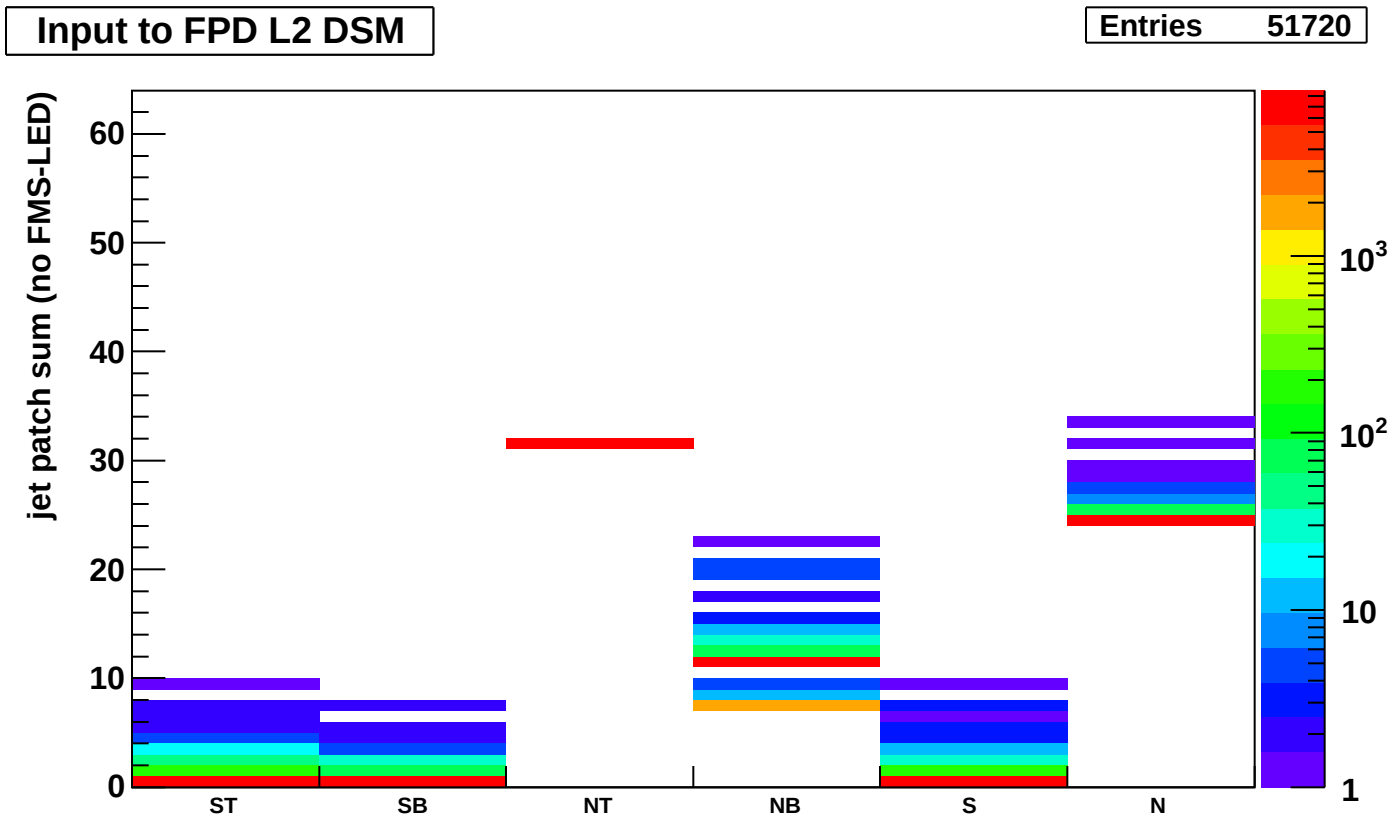

Input to FPD L2 DSM
Entries 41938
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

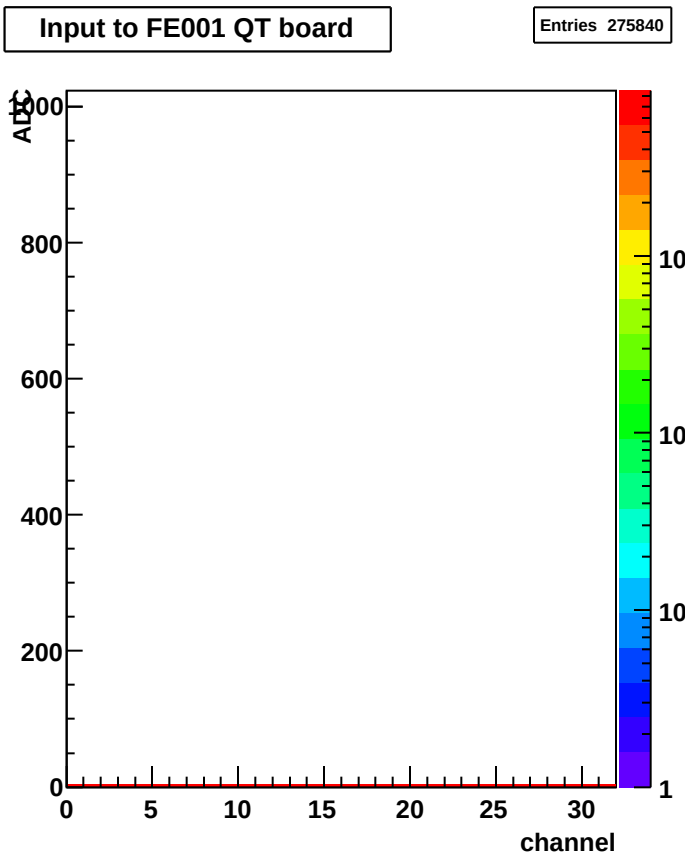

Input to FPD L2 DSM
Entries 25860
CL bits
8620
2
8618
SMALL
LARGE-S
LARGE-N

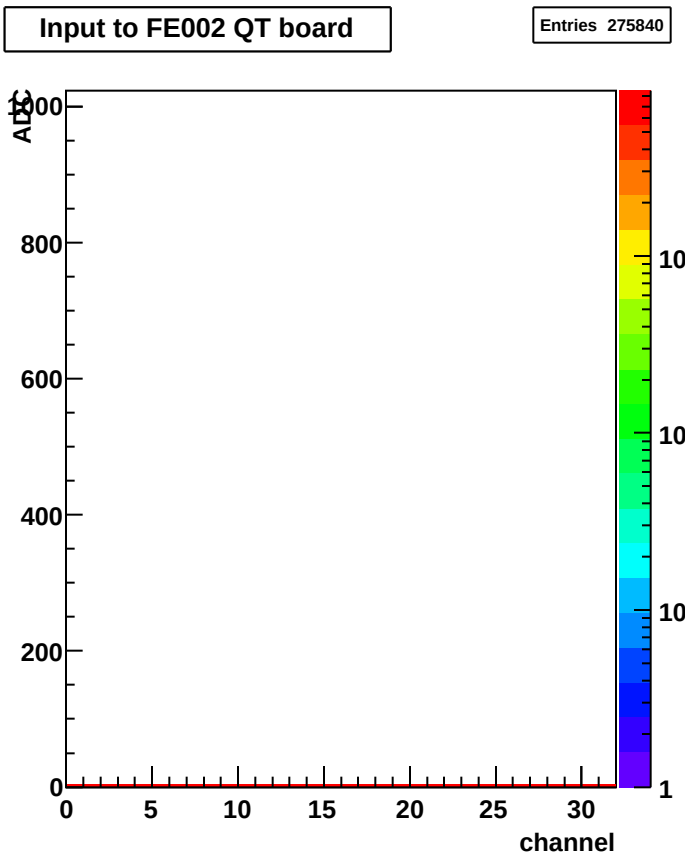

Input to FPD L2 DSM
Entries 17242
CL bits - simulated
8620
2
8620
SMALL
LARGE-S
LARGE-N

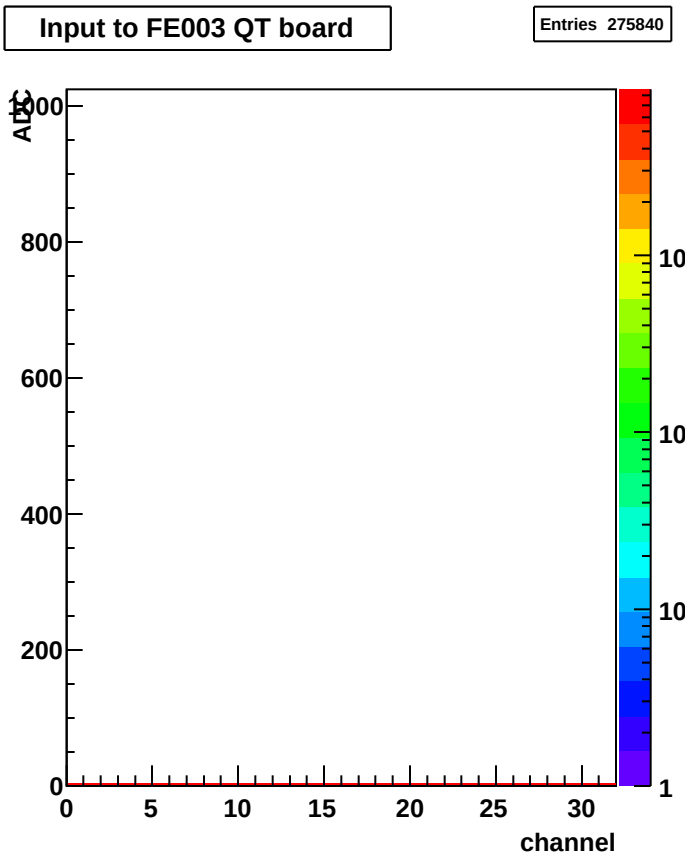

Input to FPD L2 DSM
Entries 25860
HT bits
8620
3
8617
8620
SMALL
LARGE-S
LARGE-N

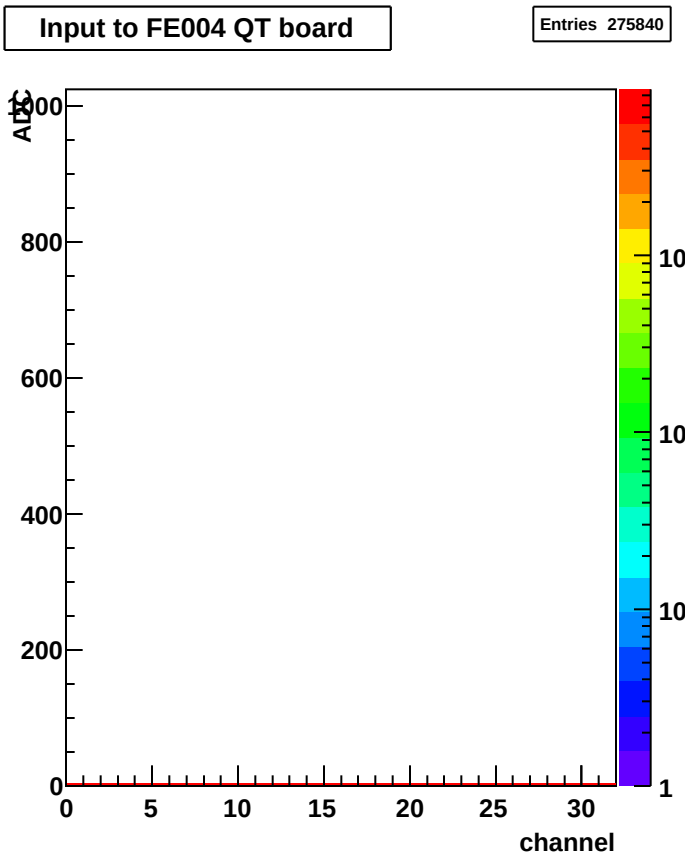

Input to FPD L2 DSM
Entries 17243
HT bits - simulated
8620
3
8620
SMALL
LARGE-S
LARGE-N

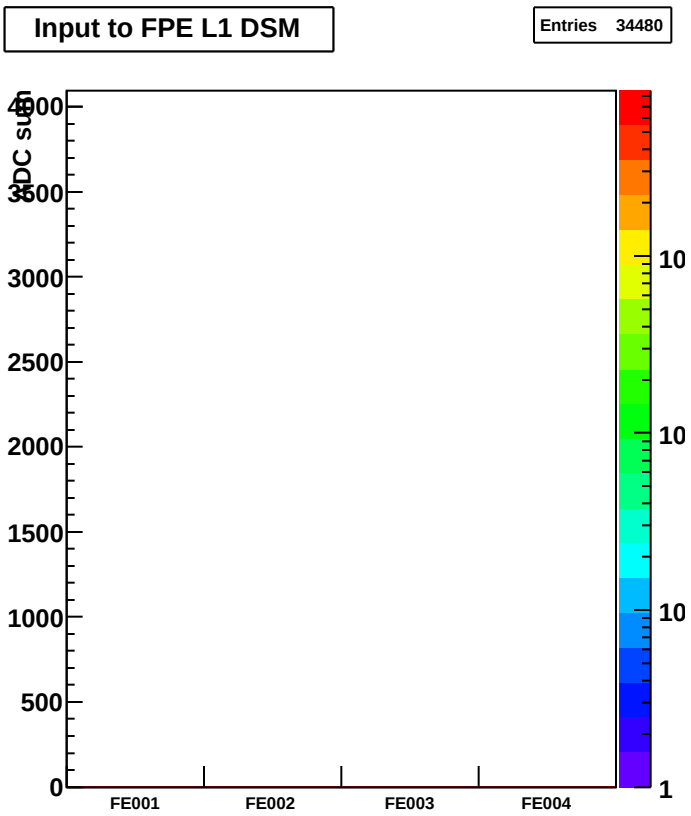

Input to FPD L2 DSM
Entries 51720
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3

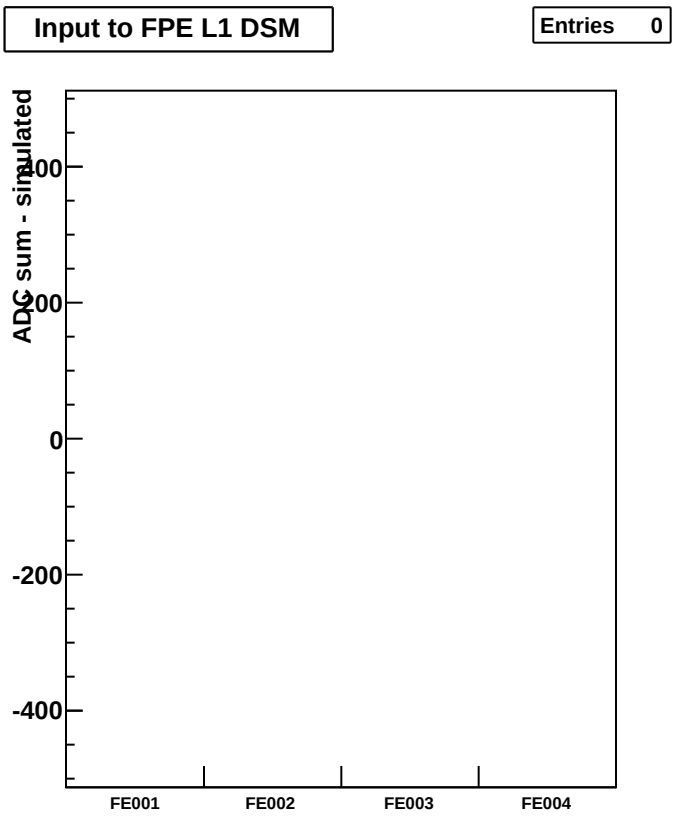

Input to FE001 QT board
Entries 275840
ADC
channel

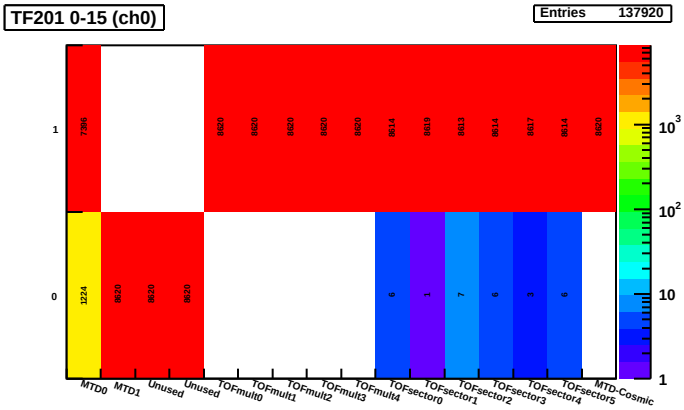

Input to FE002 QT board
Entries 275840
ADC
channel

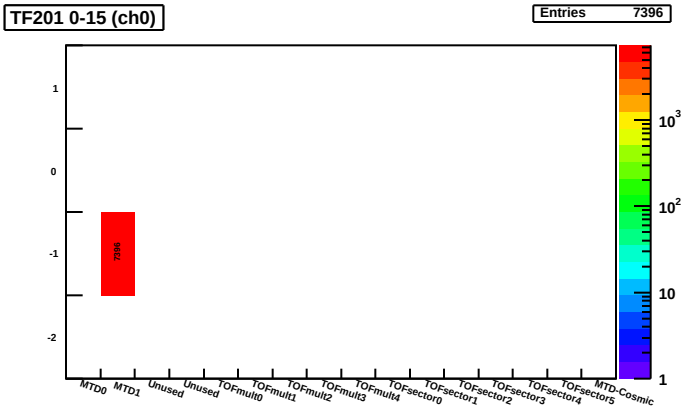

Input to FE003 QT board
Entries 275840
ADC
channel

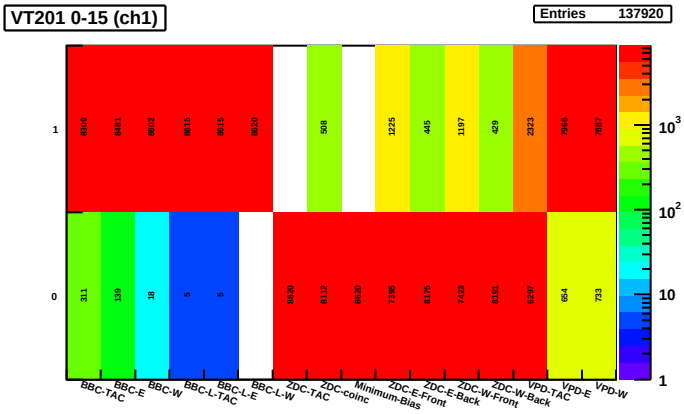

Input to FE004 QT board
Entries 275840
ADC
channel

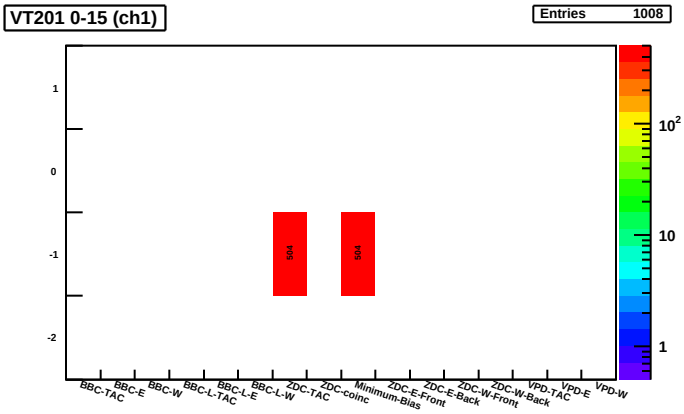

Input to FPE L1 DSM
Entries 34480
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
1

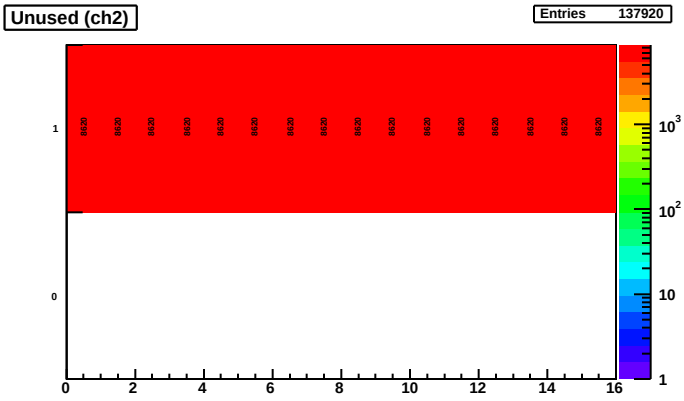

Input to FPE L1 DSM
Entries 0
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004

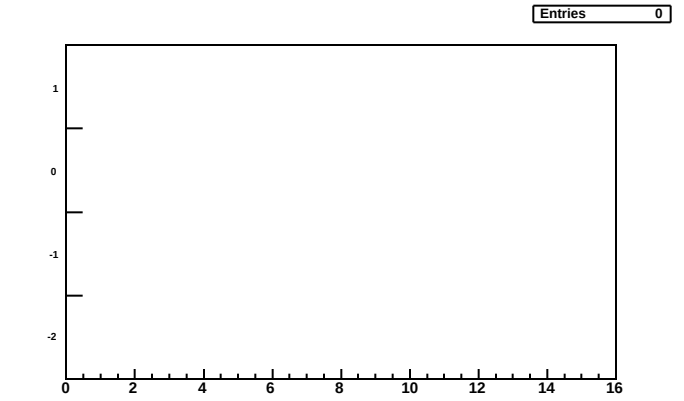

TF201 0-15 (ch0)
Entries 137920
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

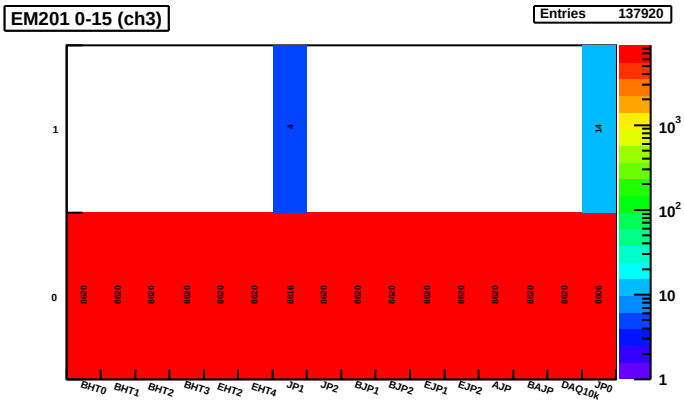

TF201 0-15 (ch0)
Entries 7396
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 137920
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 1008
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 137920


Entries 0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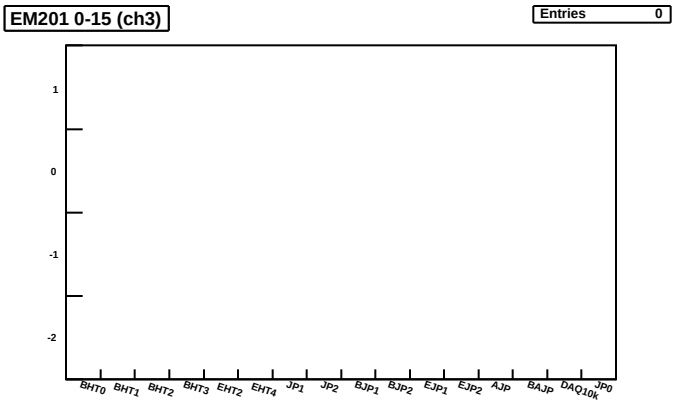
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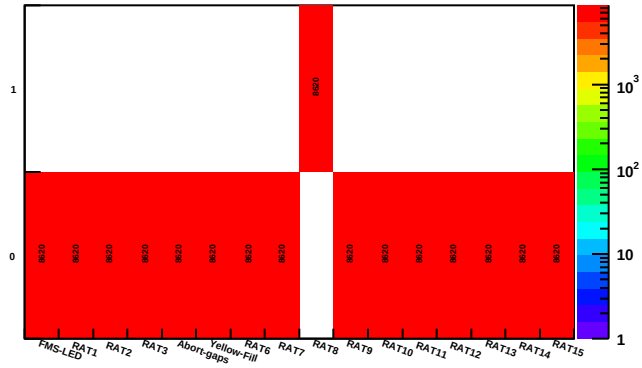
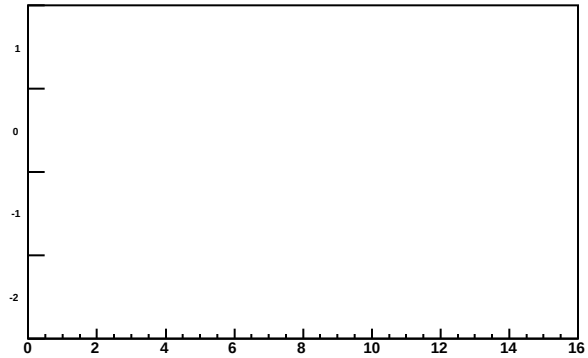
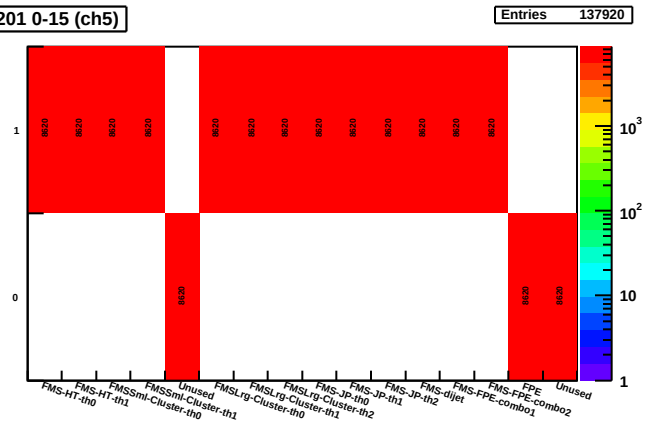
RAT board (ch4)





FP201 0-15 (ch5)



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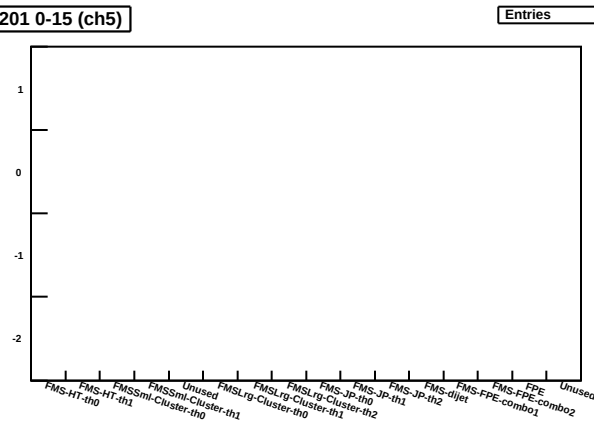
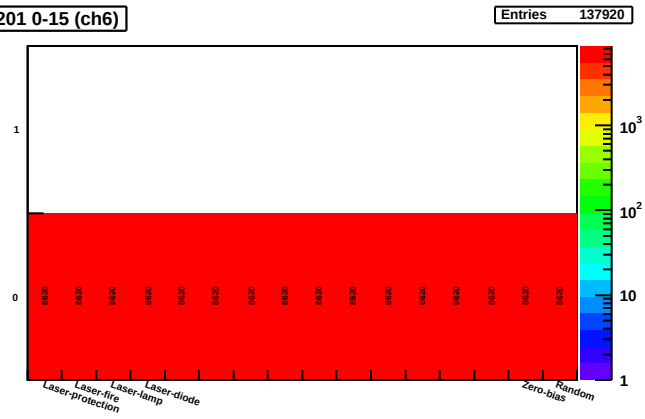
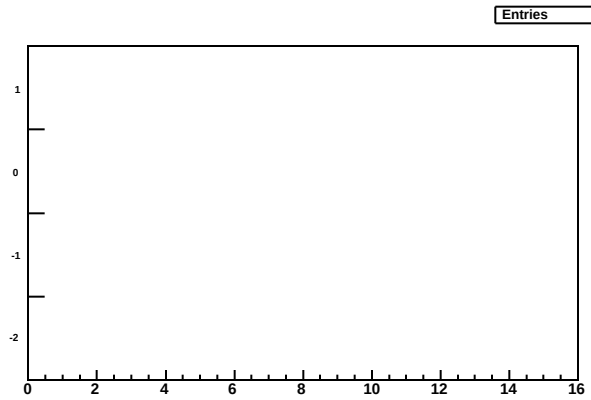
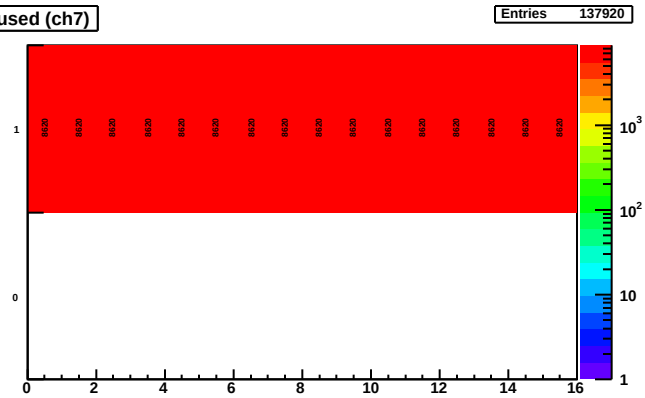
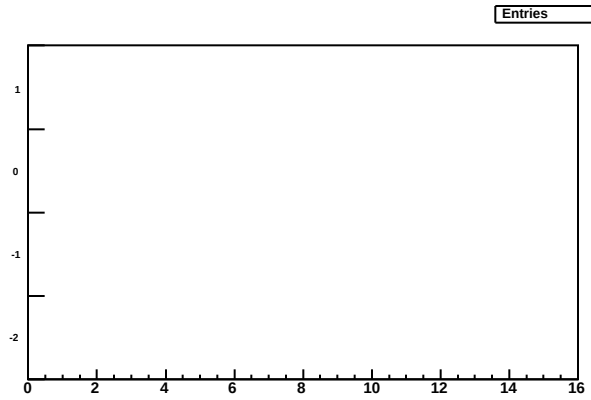


ST201 0-15 (ch6)





Unused (ch7)