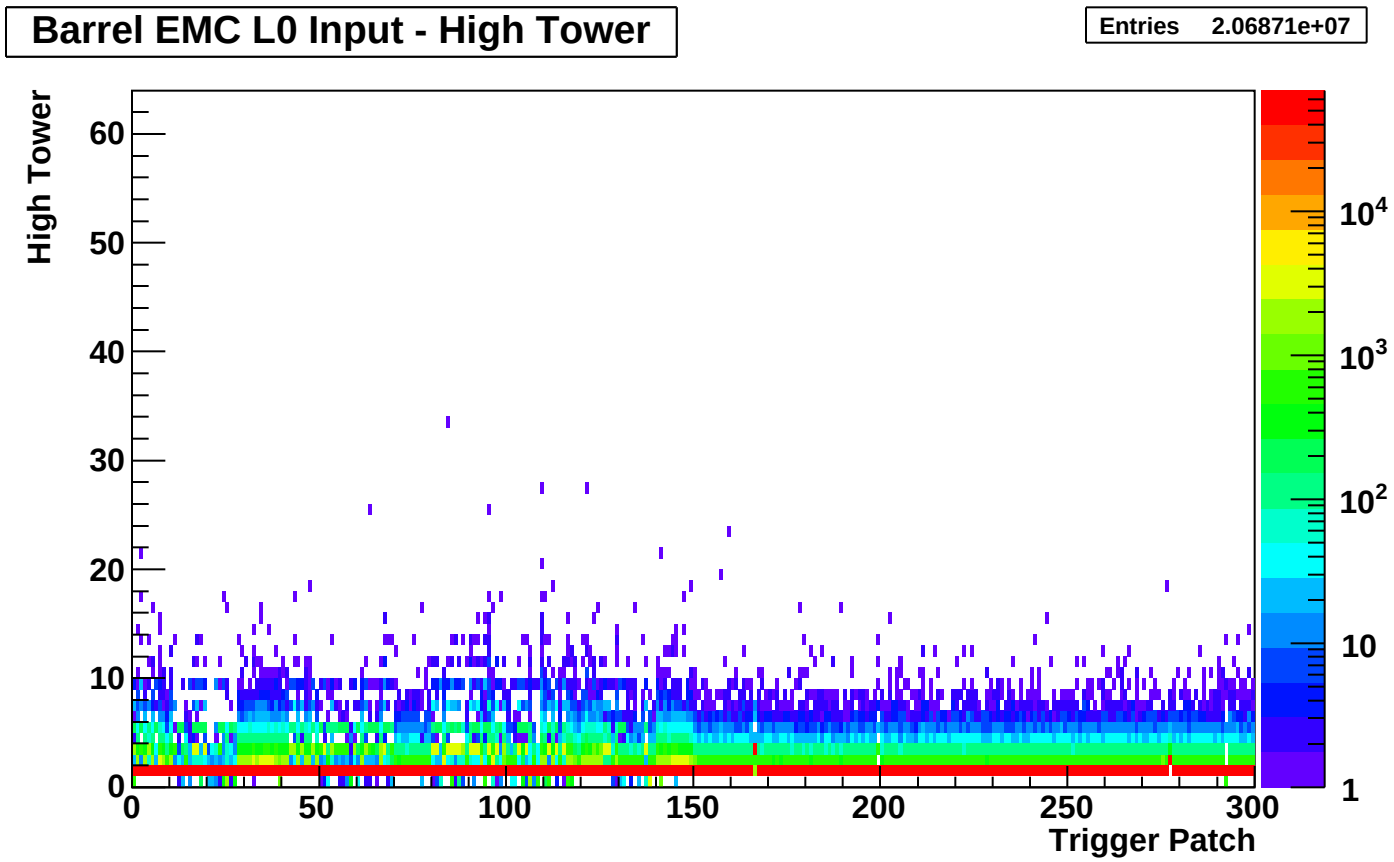
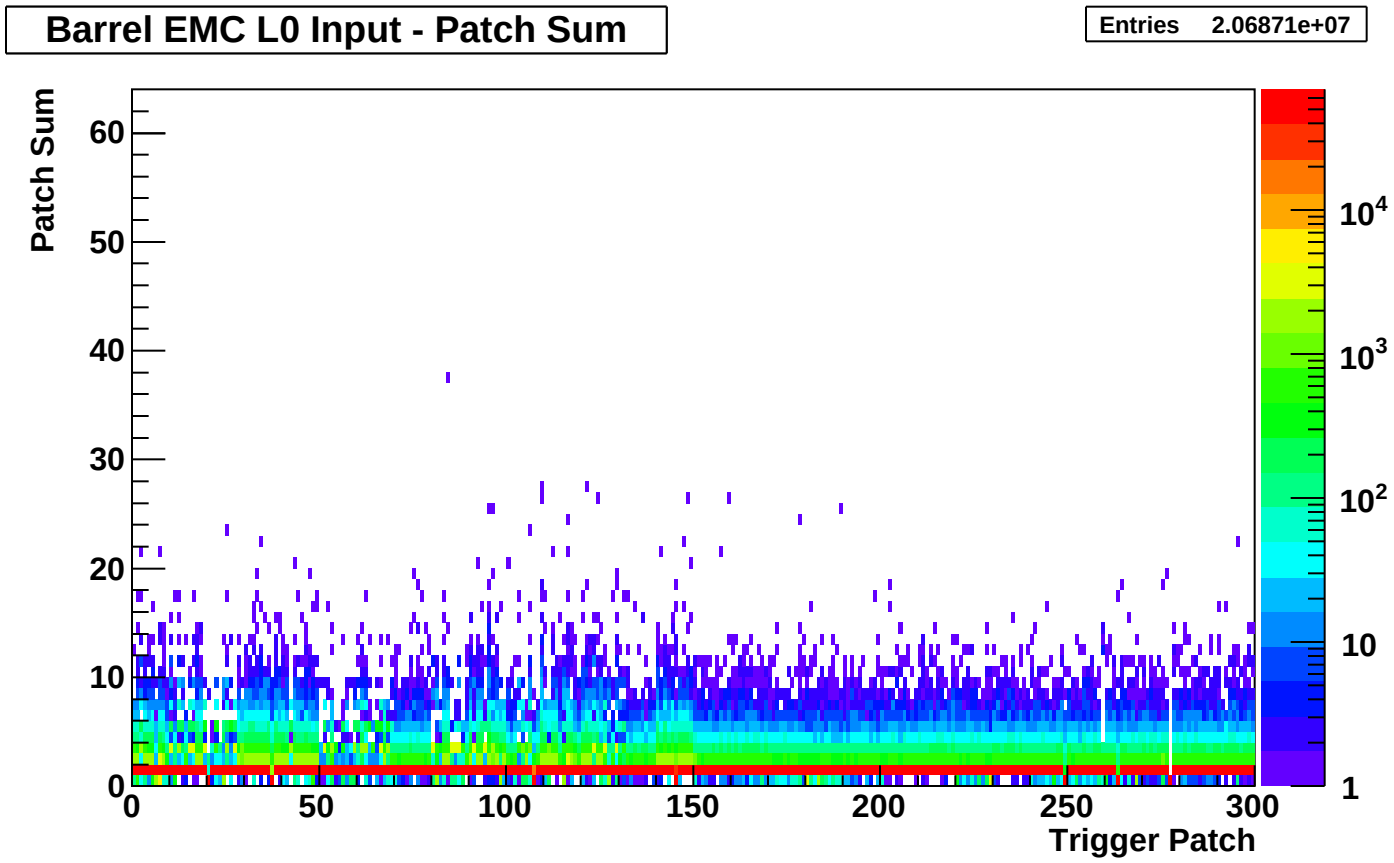
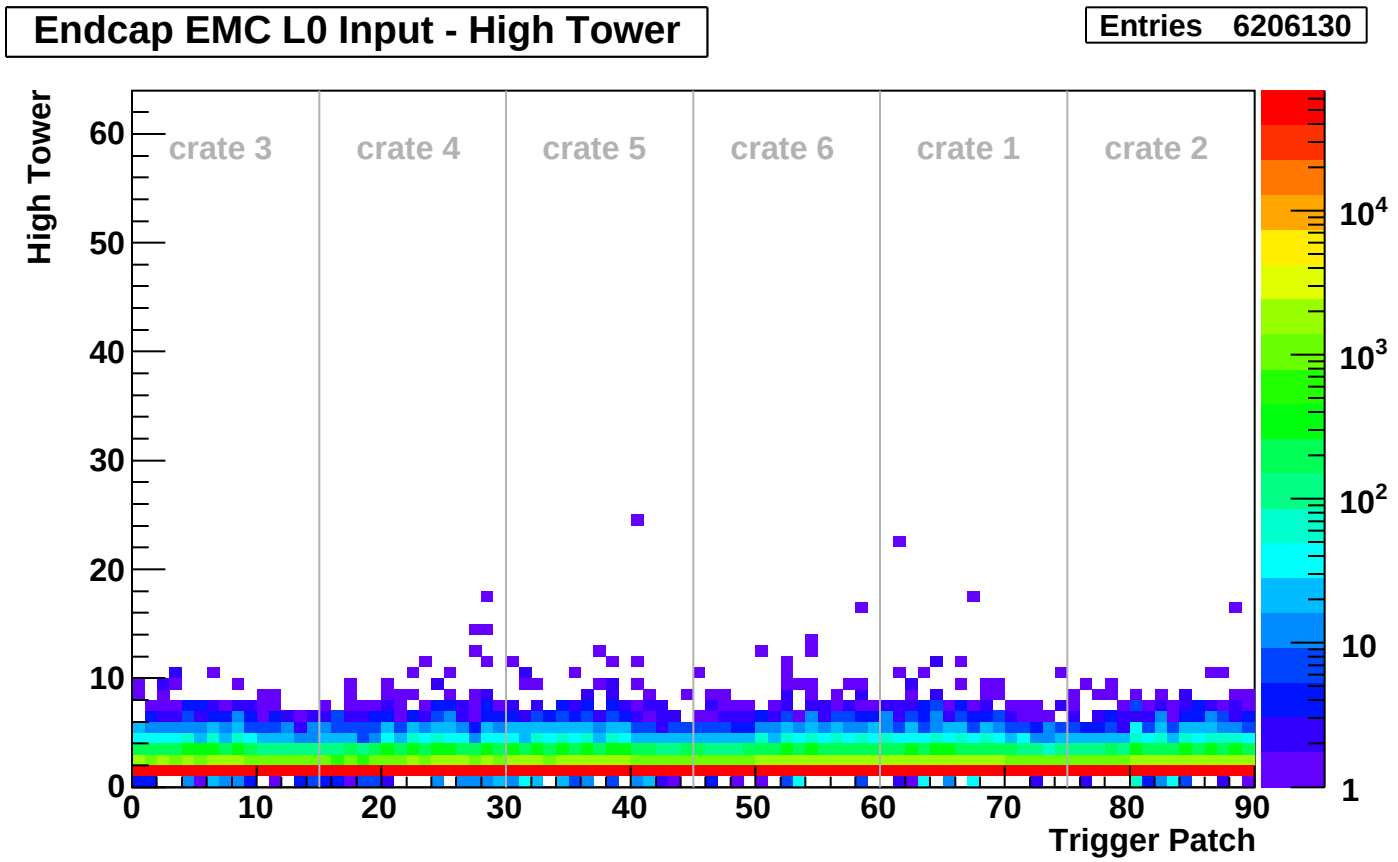
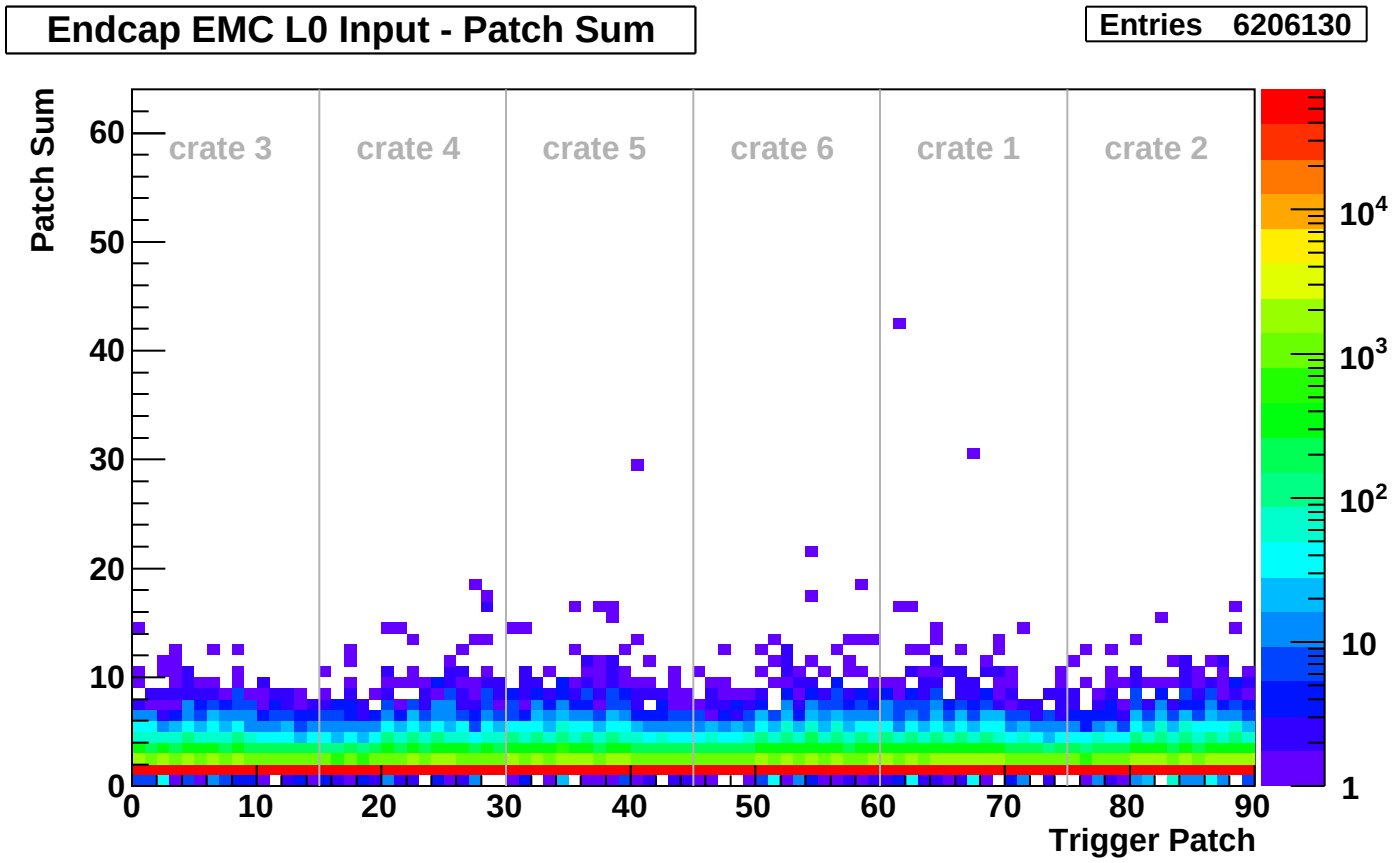
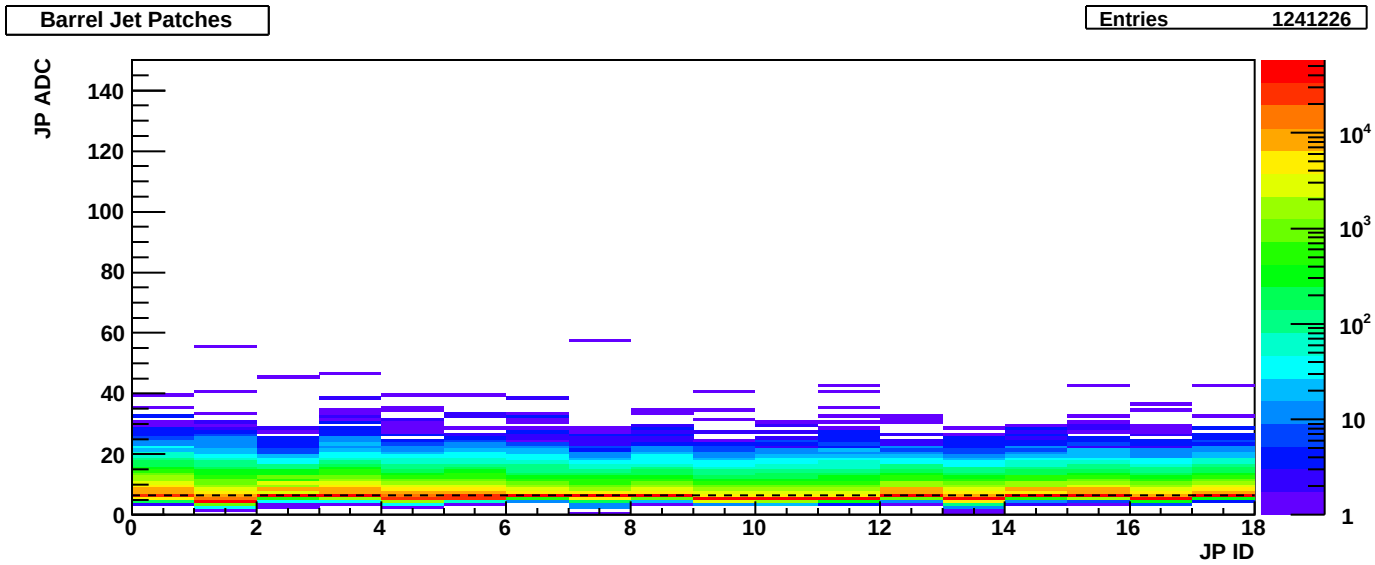
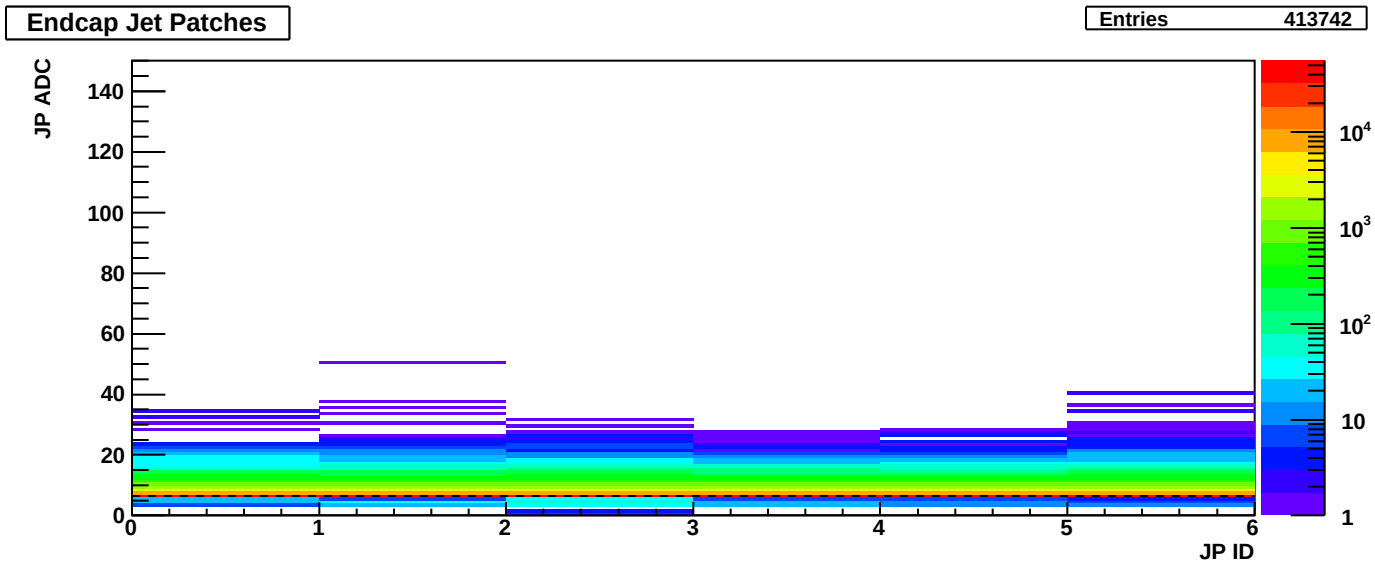

Barrel EMC L0 Input - High Tower
Entries 2.06871e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

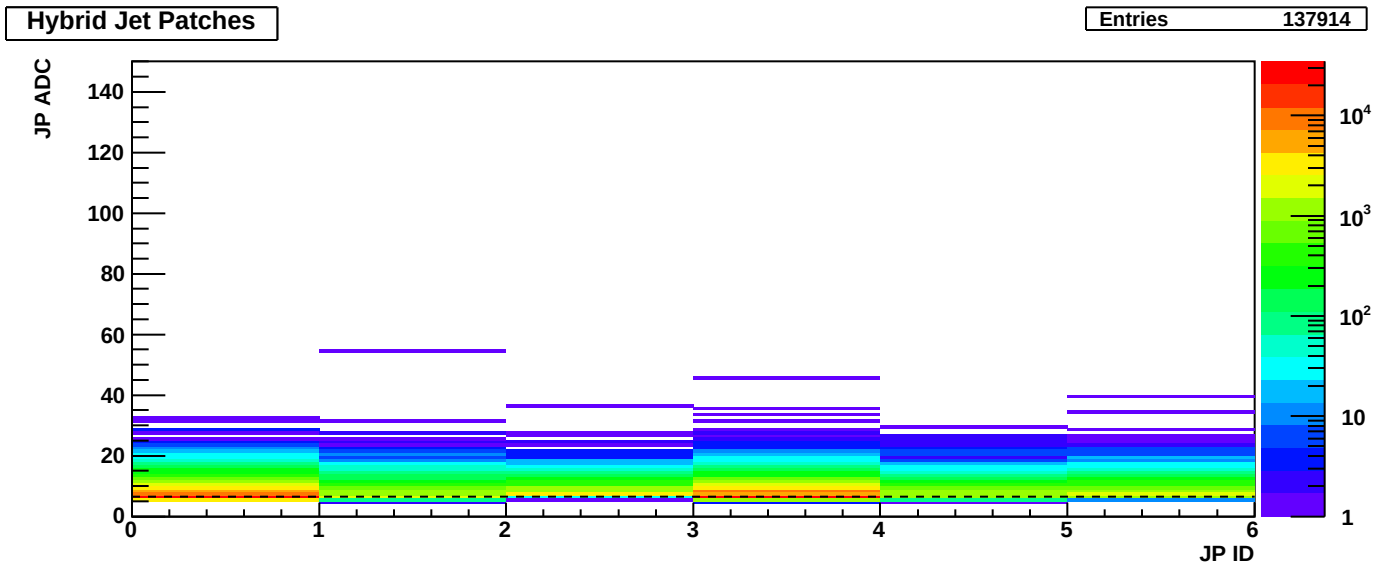

Barrel EMC L0 Input - Patch Sum
Entries 2.06871e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

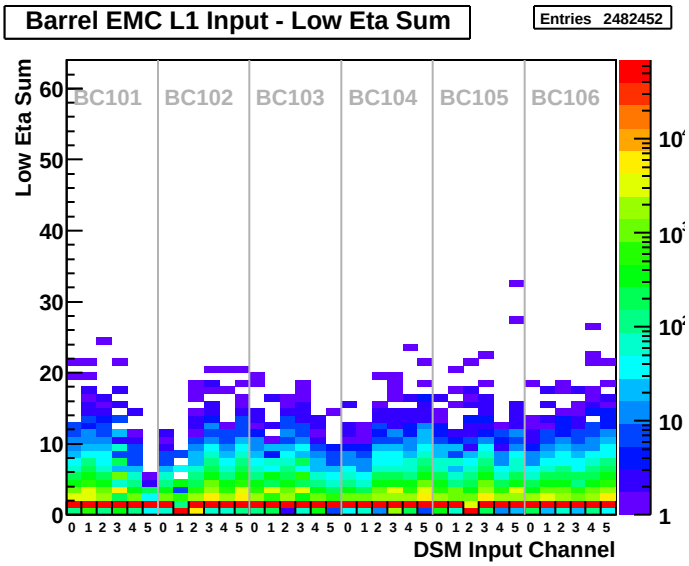

Endcap EMC L0 Input - High Tower
Entries 6206130
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

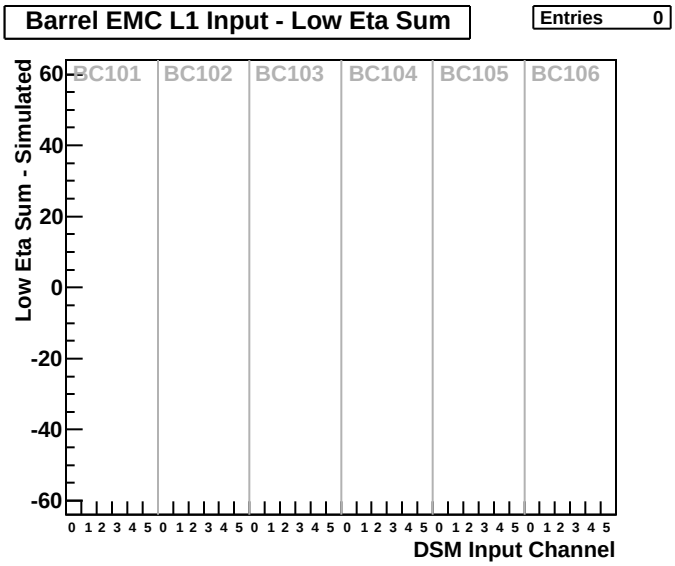

Endcap EMC L0 Input - Patch Sum
Entries 6206130
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

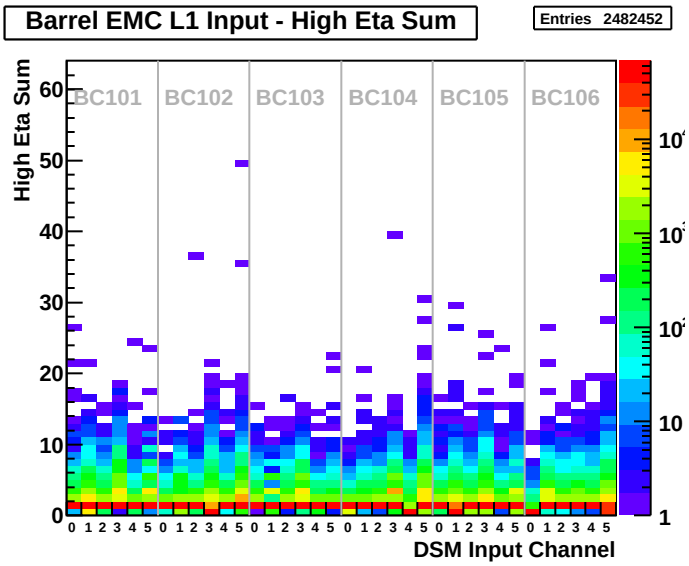

Barrel Jet Patches
Entries 1241226
JP ADC
JP ID

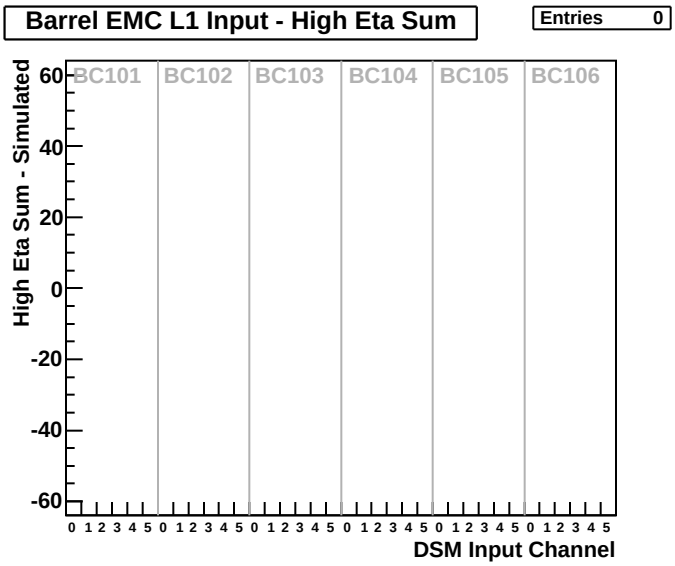

Endcap Jet Patches
Entries 413742
JP ADC
JP ID

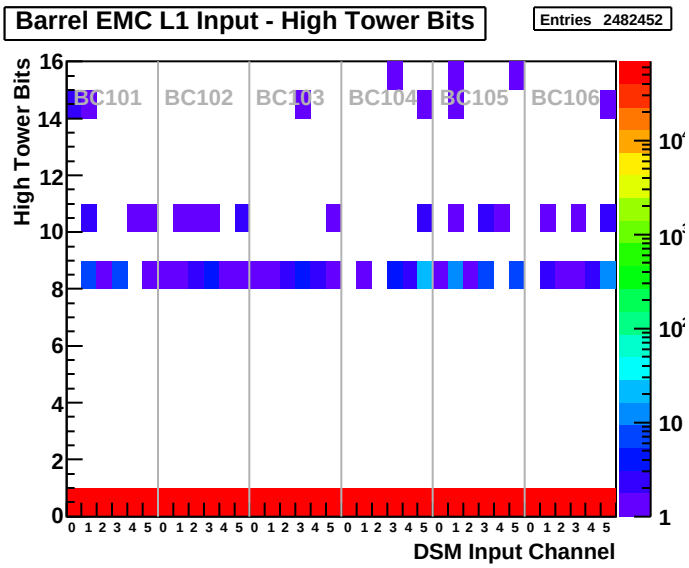

Hybrid Jet Patches
Entries 137914
JP ADC
JP ID

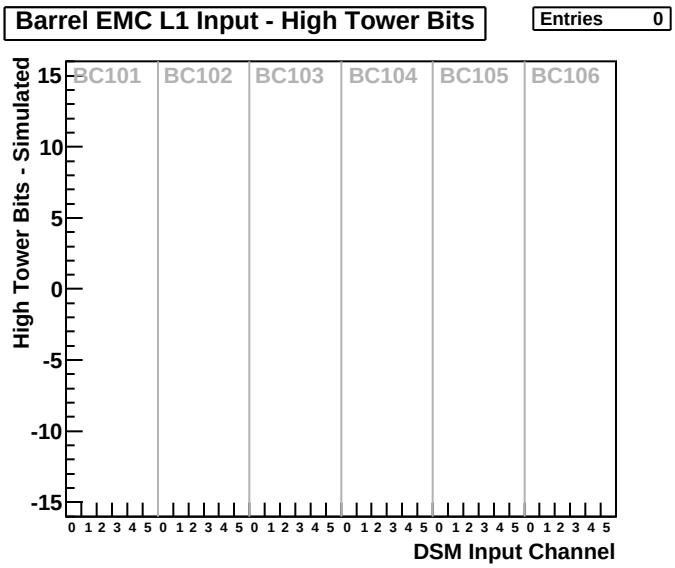

Barrel EMC L1 Input - Low Eta Sum
Entries 2482452
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

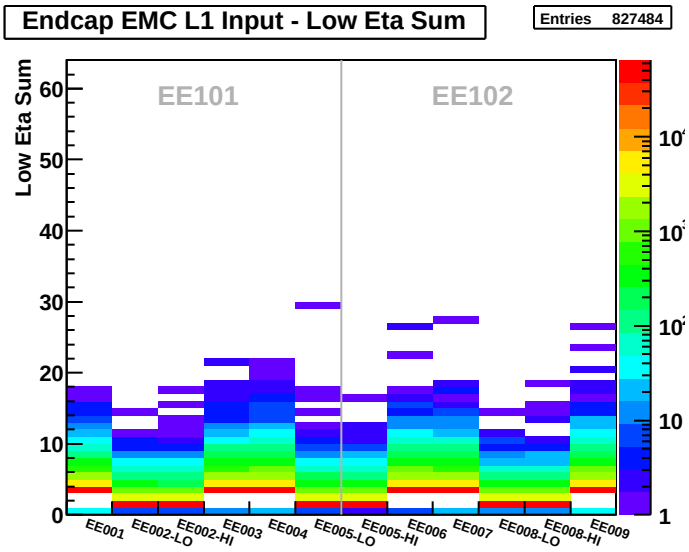

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

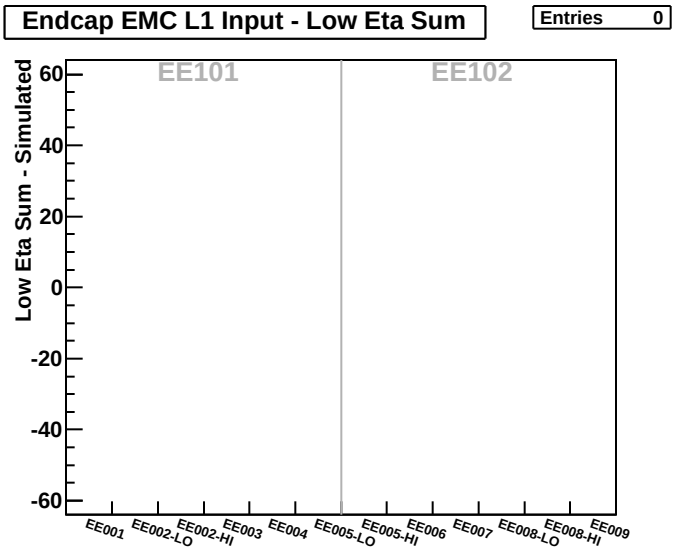

Barrel EMC L1 Input - High Eta Sum
Entries 2482452
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

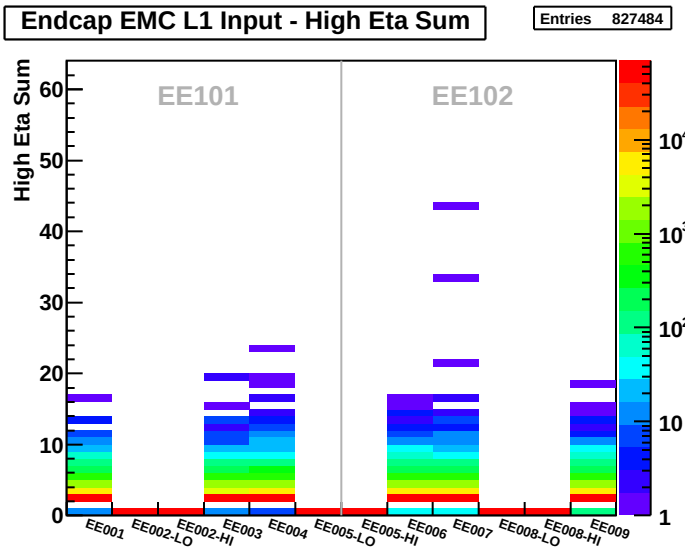

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

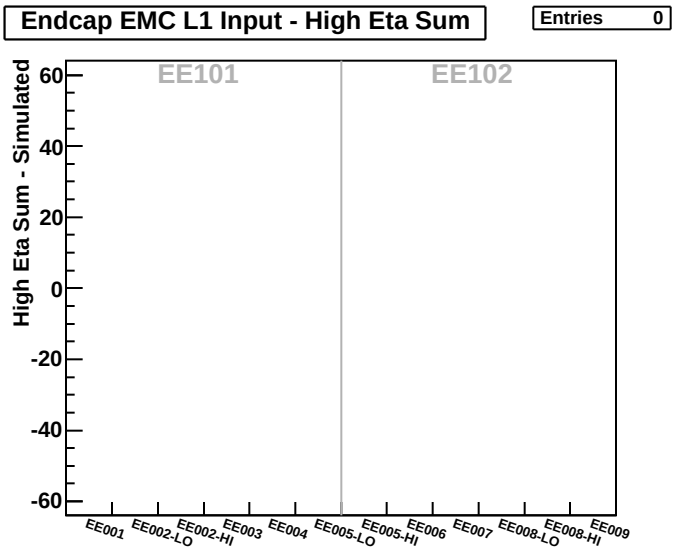

Barrel EMC L1 Input - High Tower Bits
Entries 2482452
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

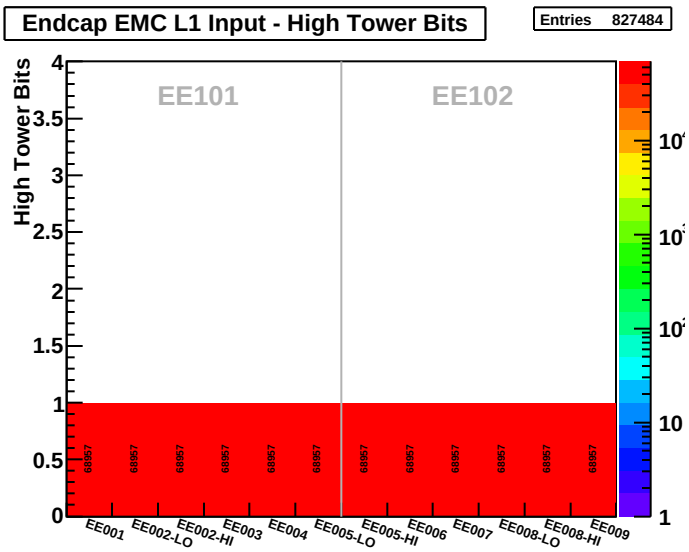

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

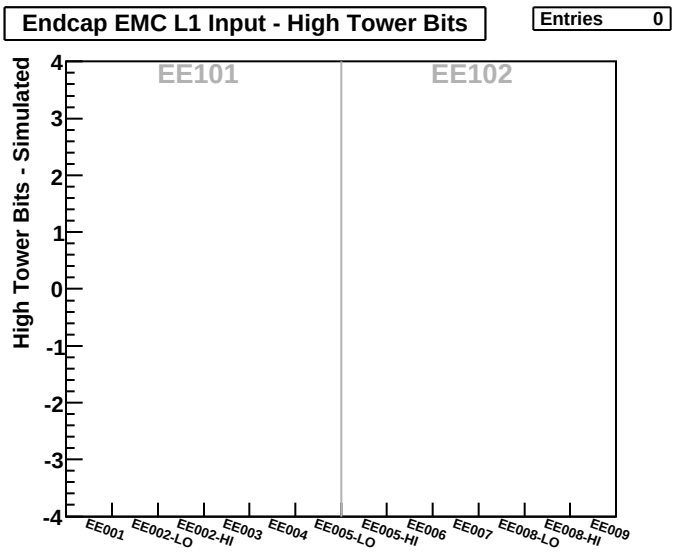

Endcap EMC L1 Input - Low Eta Sum
Entries 827484
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

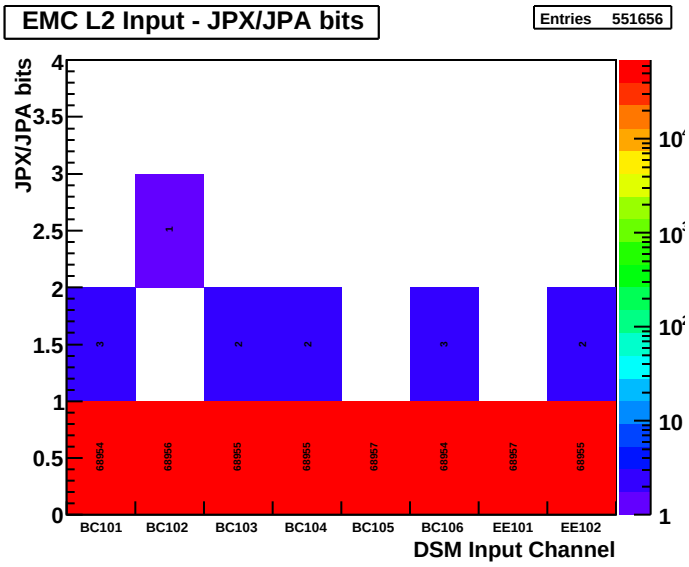

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

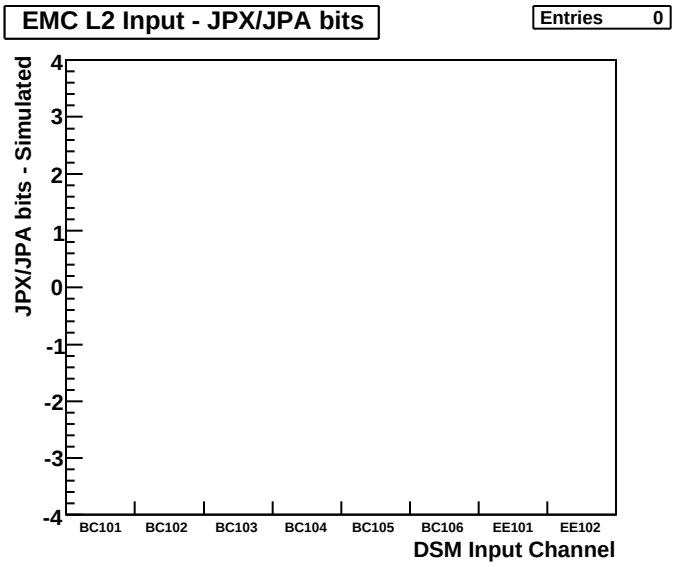

Endcap EMC L1 Input - High Eta Sum
Entries 827484
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

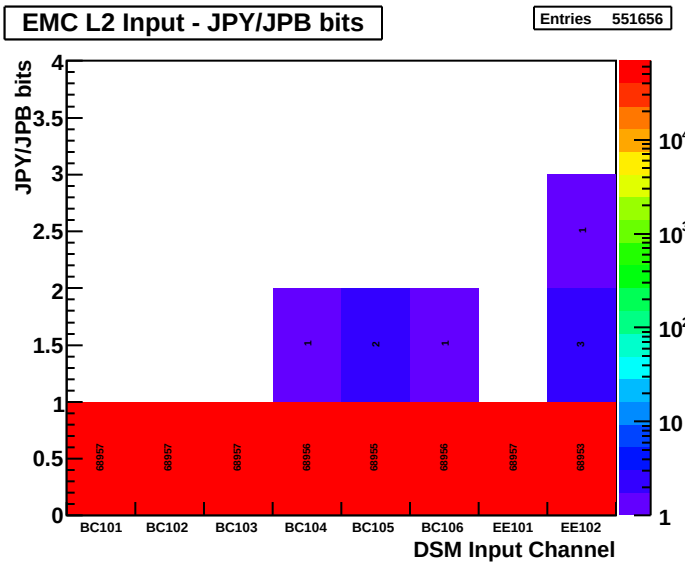

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

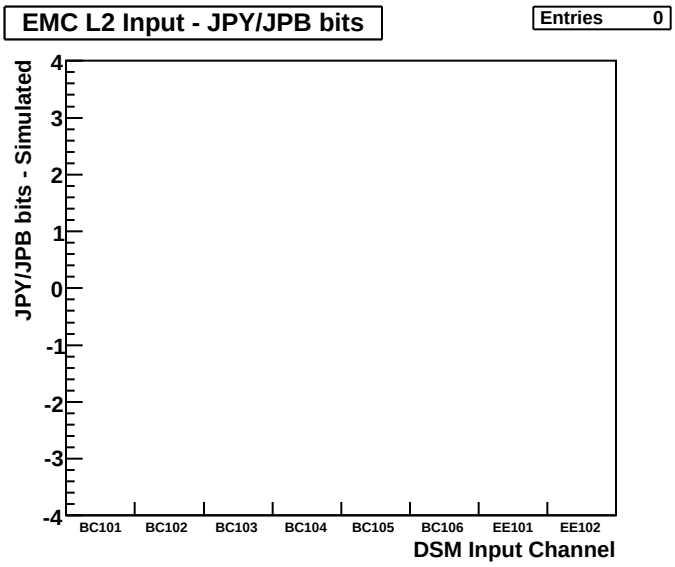

Endcap EMC L1 Input - High Tower Bits
Entries 827484
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

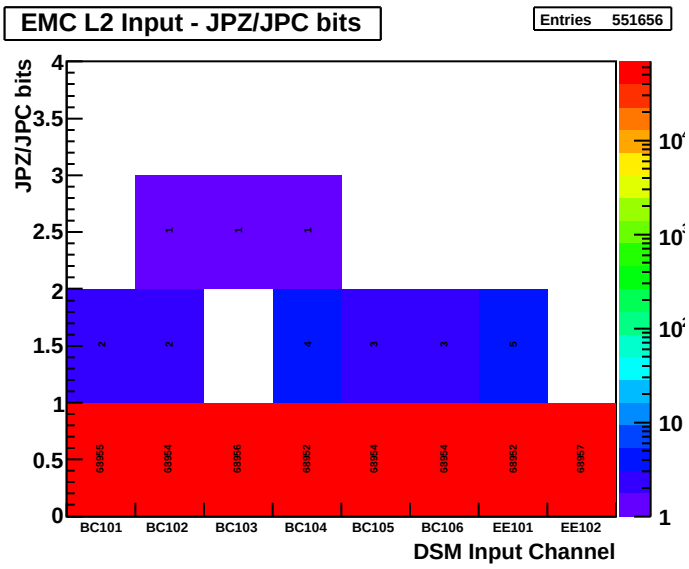

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

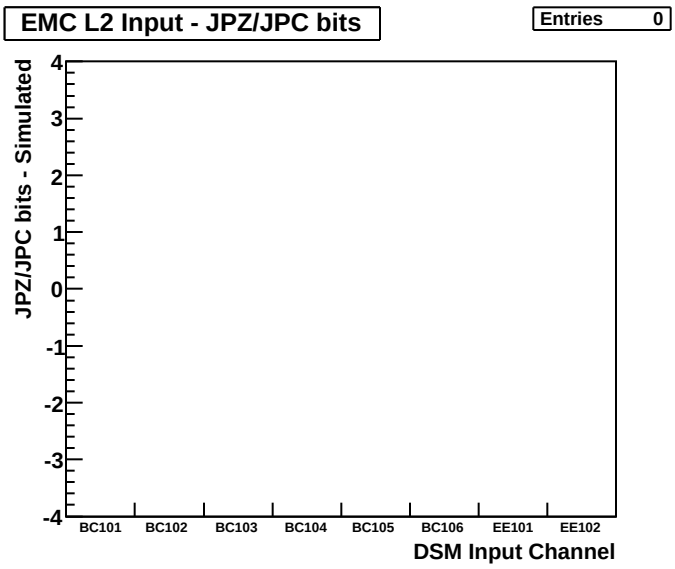

EMC L2 Input - JPX/JPA bits
Entries 551656
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

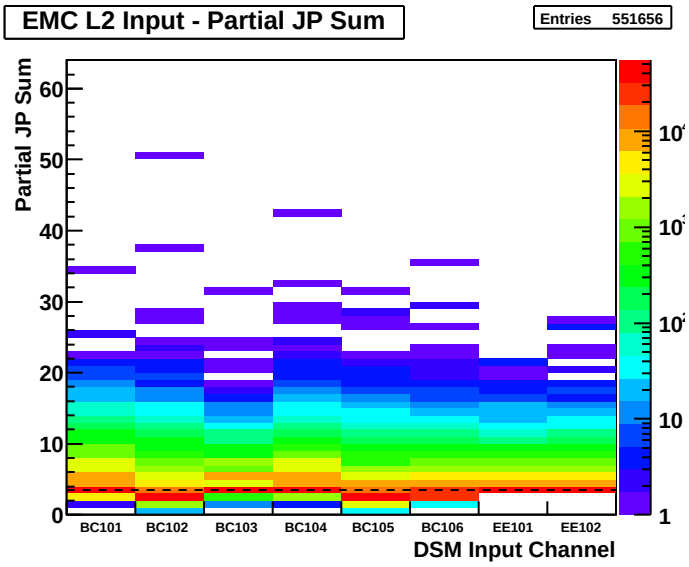

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

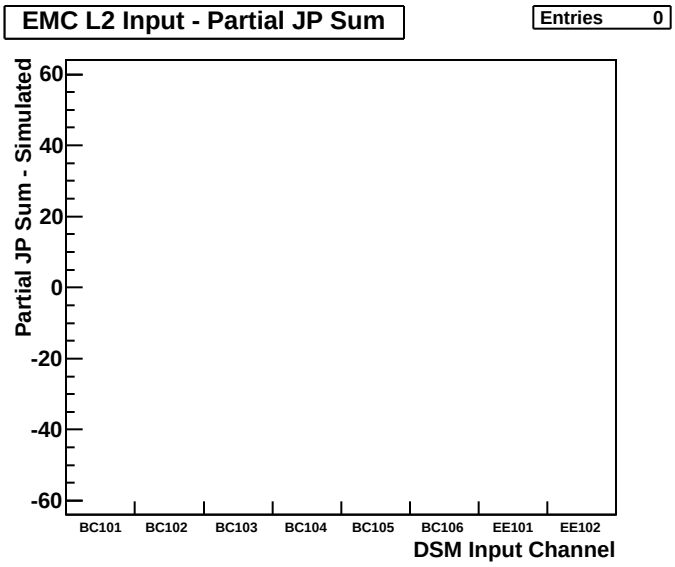

EMC L2 Input - JPY/JPB bits
Entries 551656
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

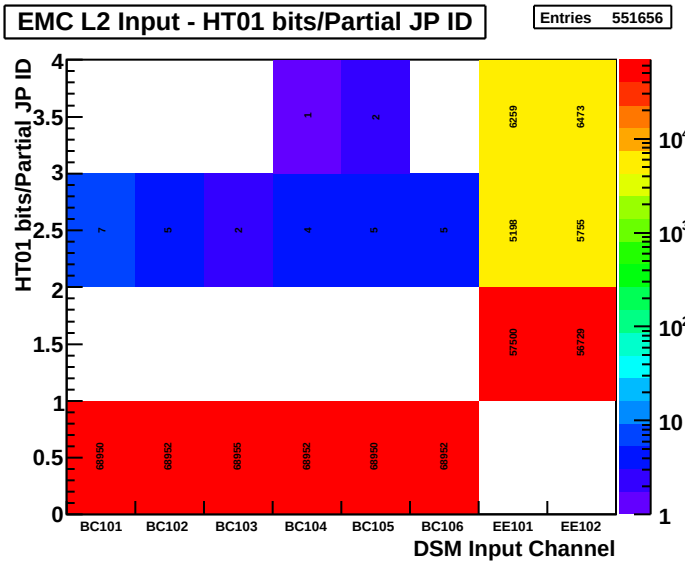

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

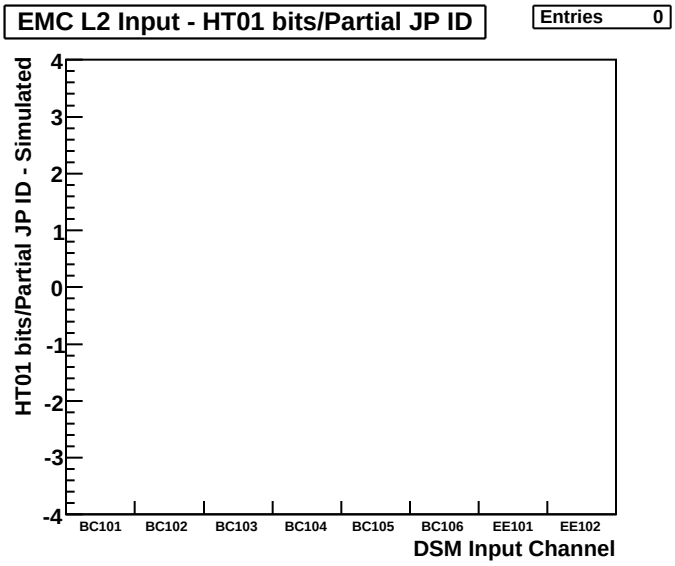

EMC L2 Input - JPZ/JPC bits
Entries 551656
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

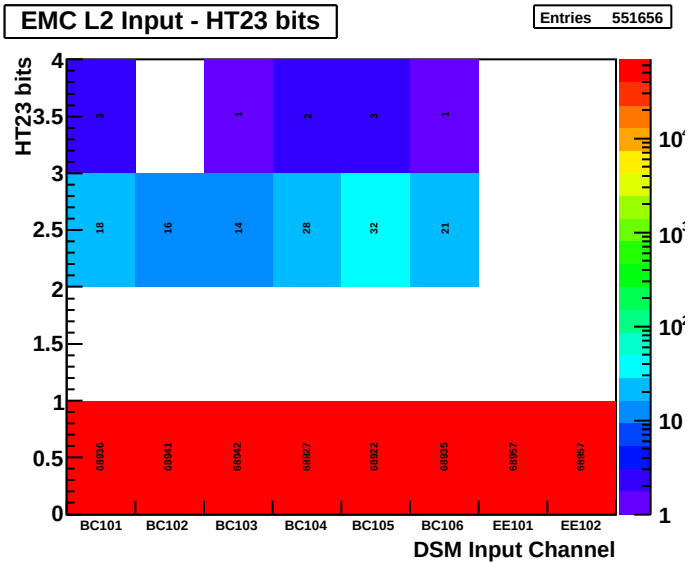

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

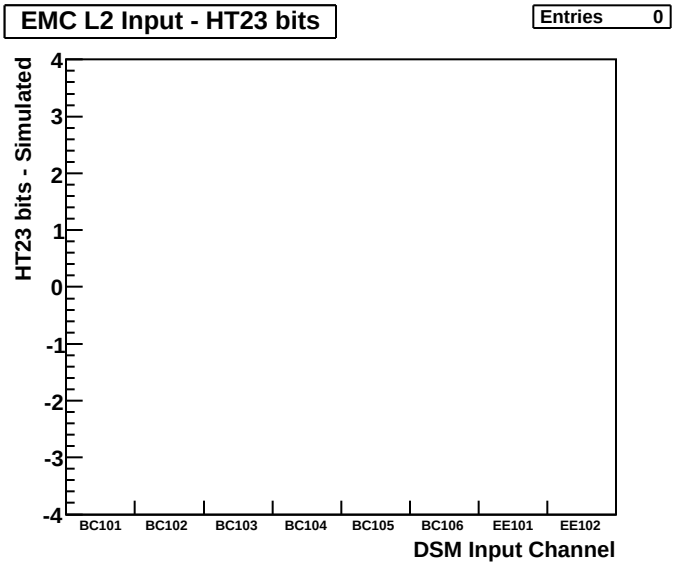

EMC L2 Input - Partial JP Sum
Entries 551656
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

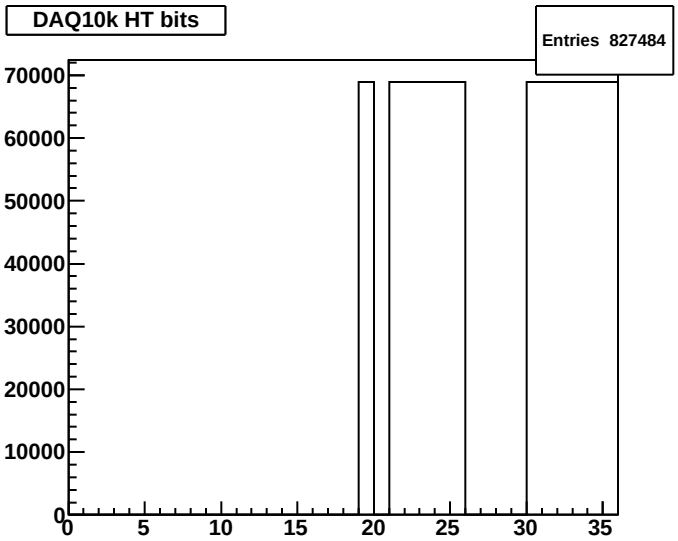

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

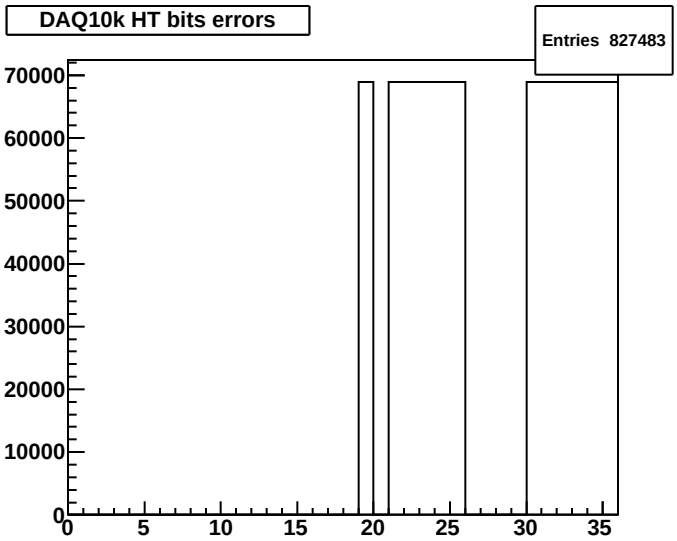

EMC L2 Input - HT01 bits/Partial JP ID
Entries 551656
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

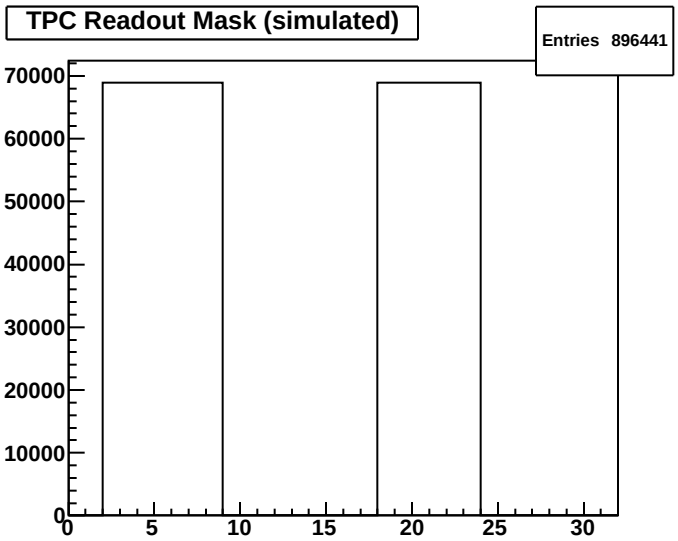

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

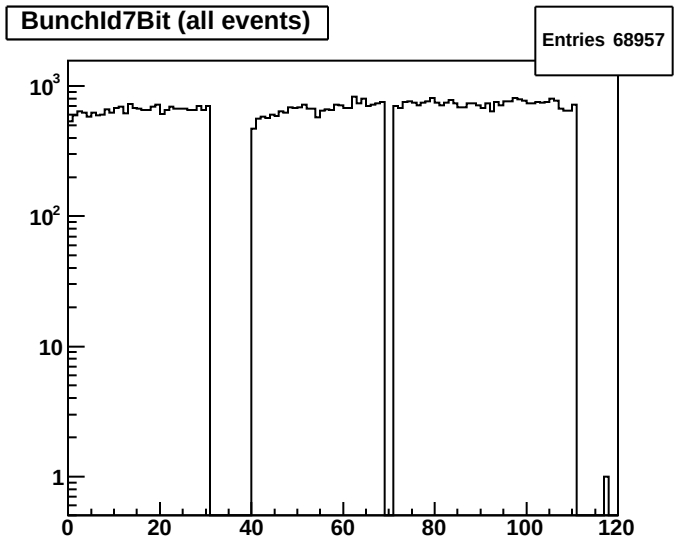

EMC L2 Input - HT23 bits
Entries 551656
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

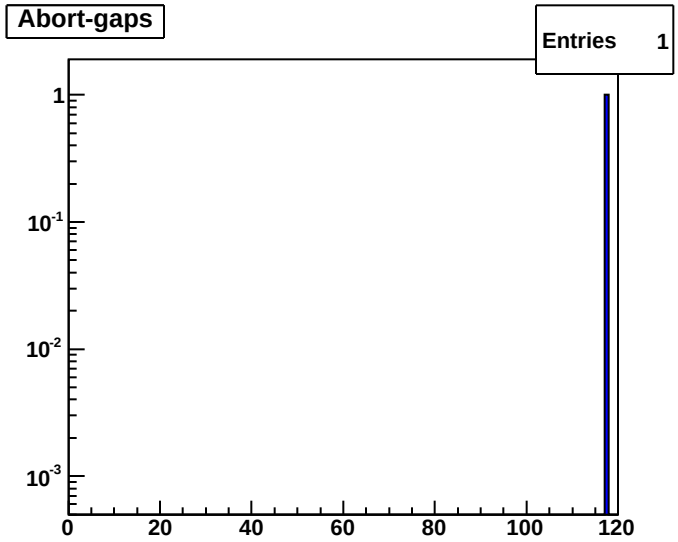

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

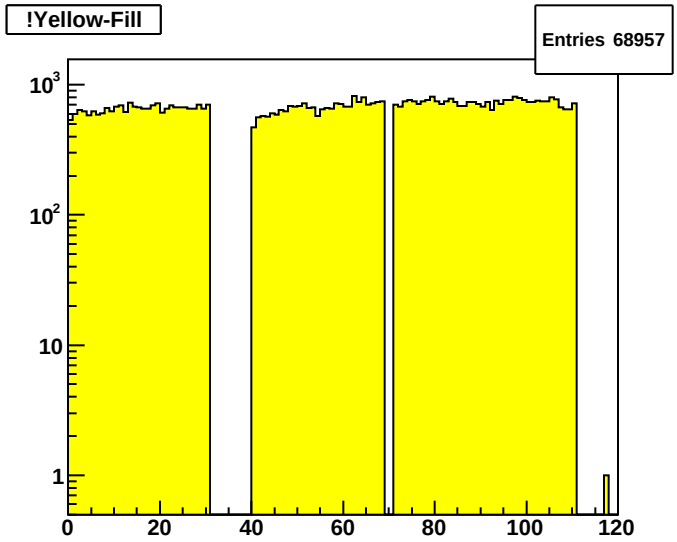

DAQ10k HT bits
Entries 827484
70000
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

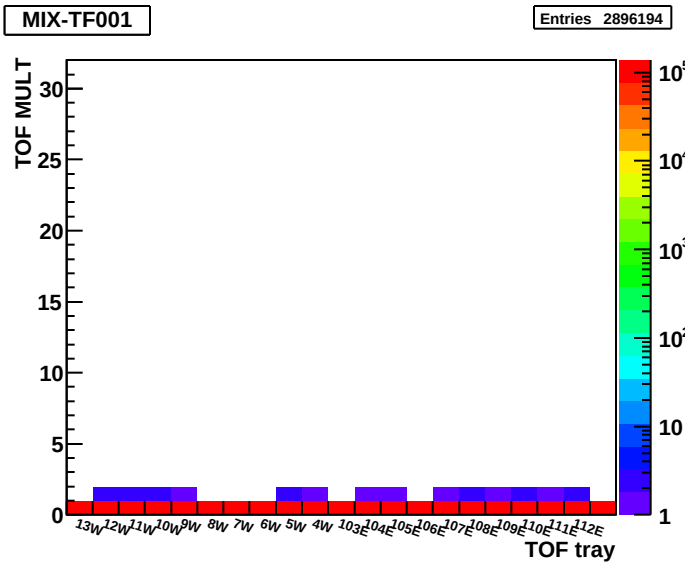

DAQ10k HT bits errors
Entries 827483
70000
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

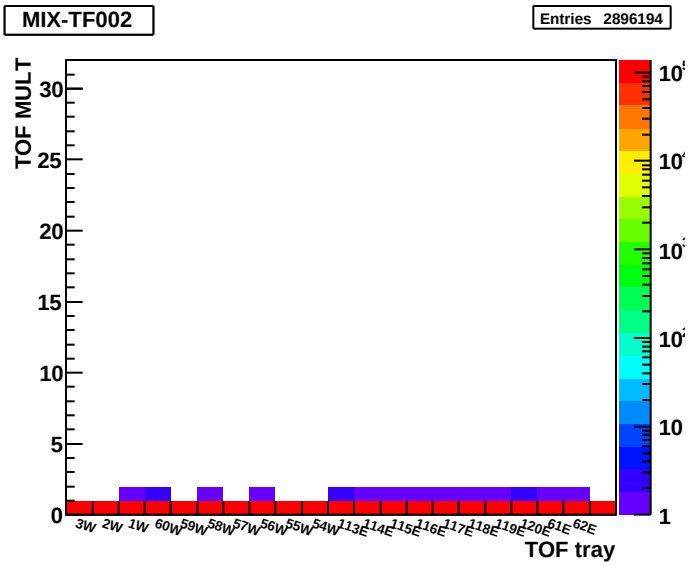

TPC Readout Mask (simulated)
Entries 896441
70000
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30

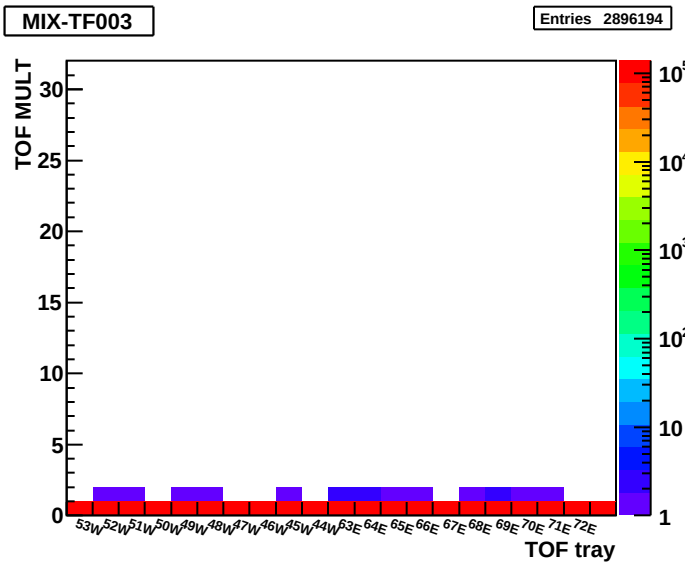

BunchId7Bit (all events)
Entries 68957
10^3
10^2
10
1
0 20 40 60 80 100 120

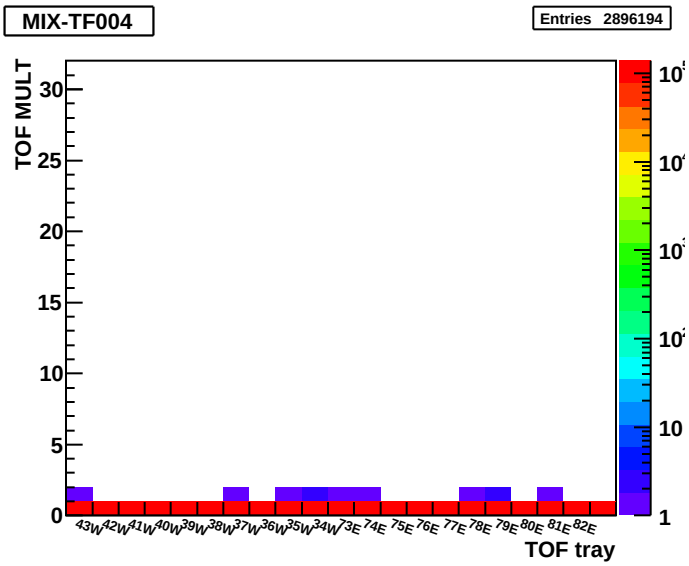

Abort-gaps
Entries 1
1
10^{-1}
10^{-2}
10^{-3}
0 20 40 60 80 100 120

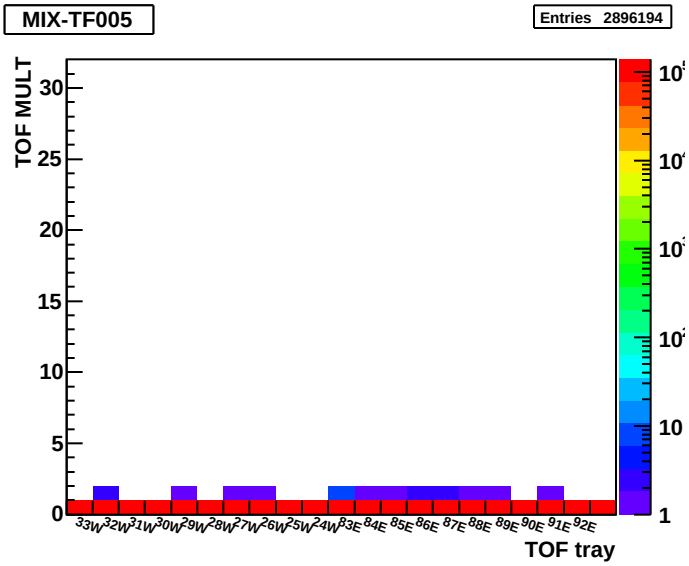

!Yellow-Fill
Entries 68957
10^3
10^2
10
1
0 20 40 60 80 100 120

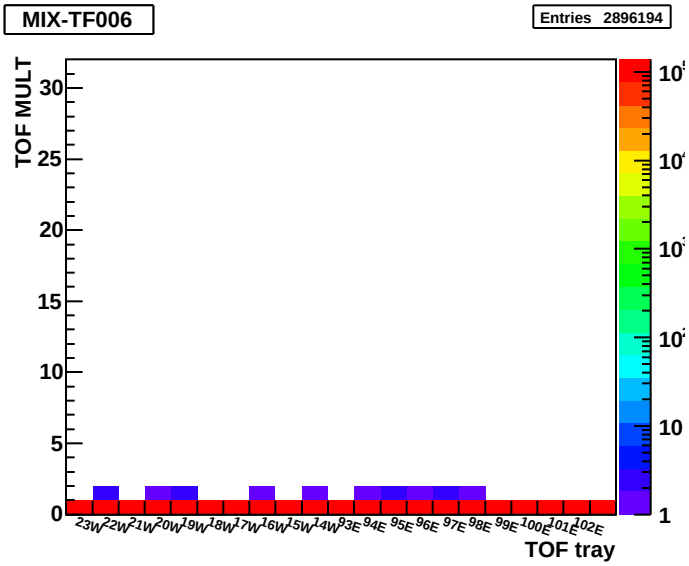

MIX-TF001
Entries 2896194
TOF MULT
TOF tray

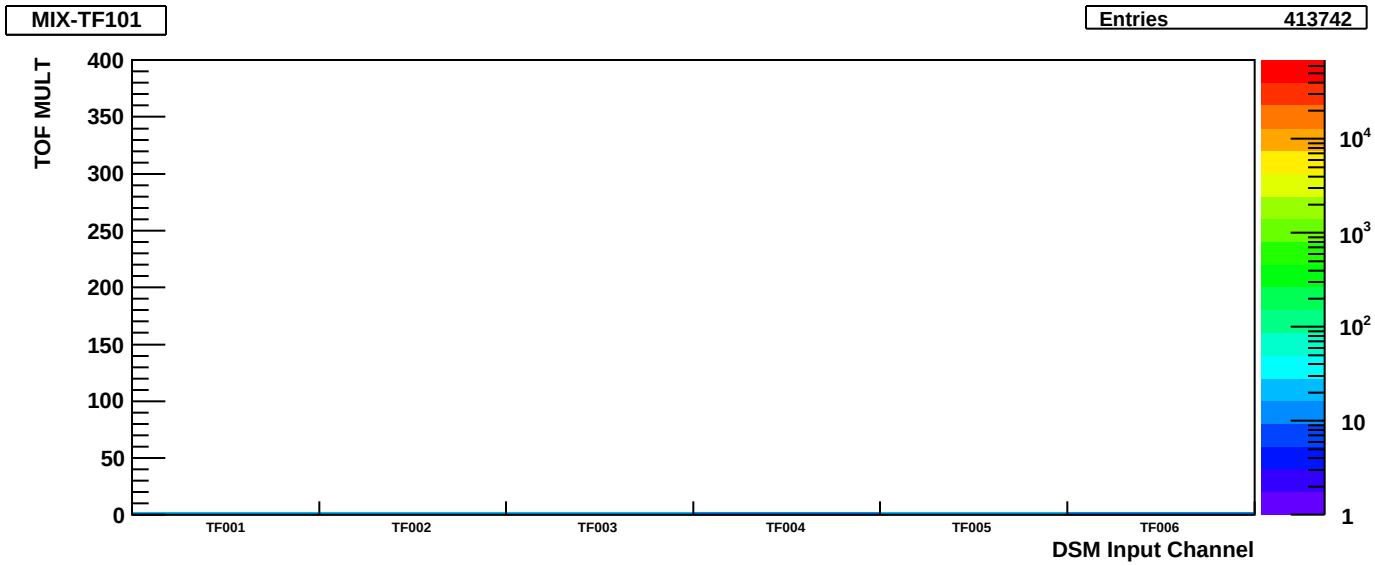

MIX-TF002
Entries 2896194
TOF MULT
TOF tray

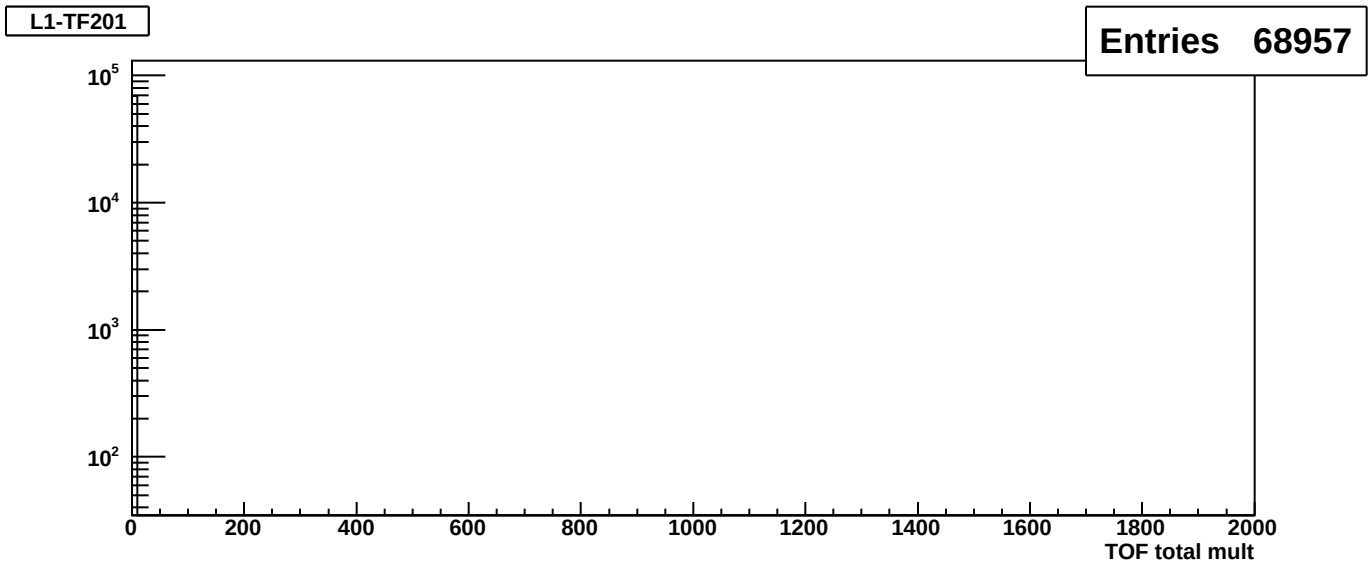

MIX-TF003
Entries 2896194
TOF MULT
TOF tray

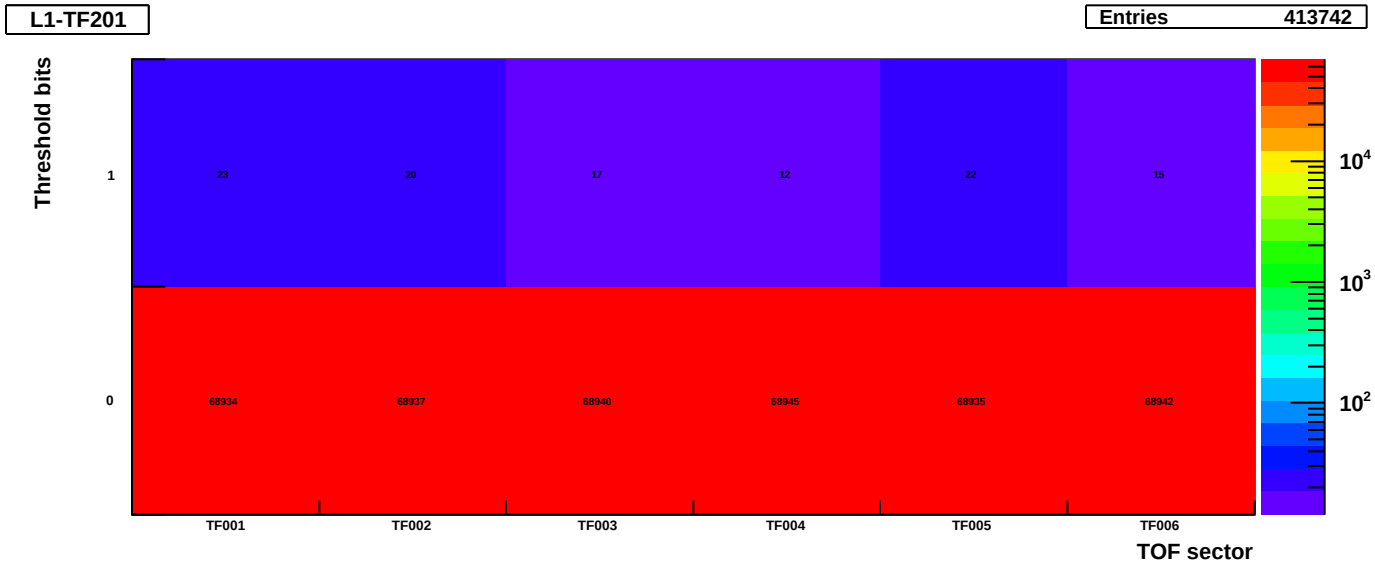

MIX-TF004
Entries 2896194
TOF MULT
TOF tray

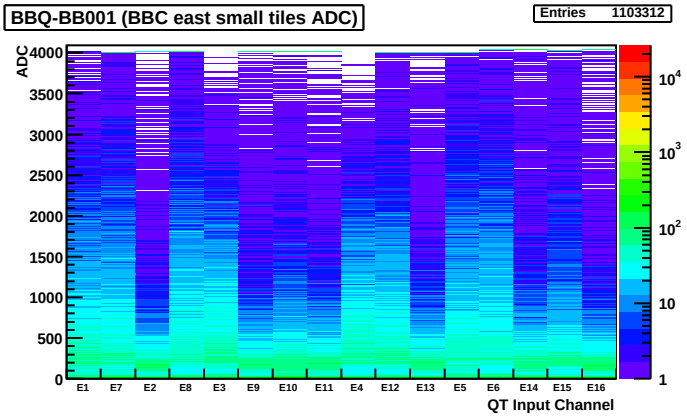

MIX-TF005
Entries 2896194
TOF MULT
TOF tray

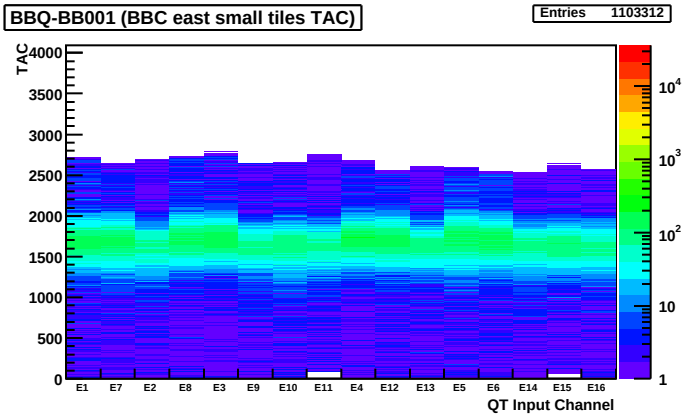

MIX-TF006
Entries 2896194
TOF MULT
TOF tray

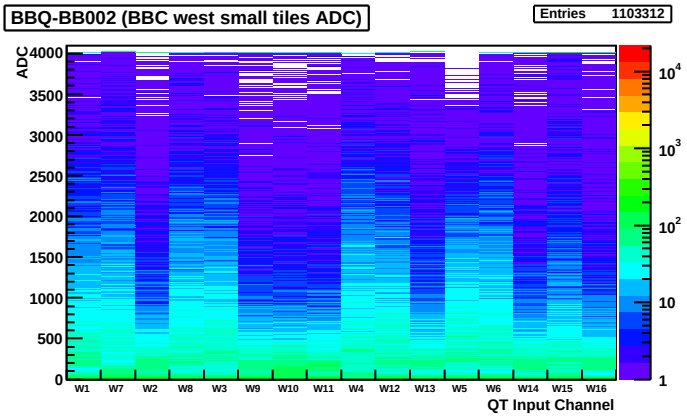

MIX-TF101
Entries 413742
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

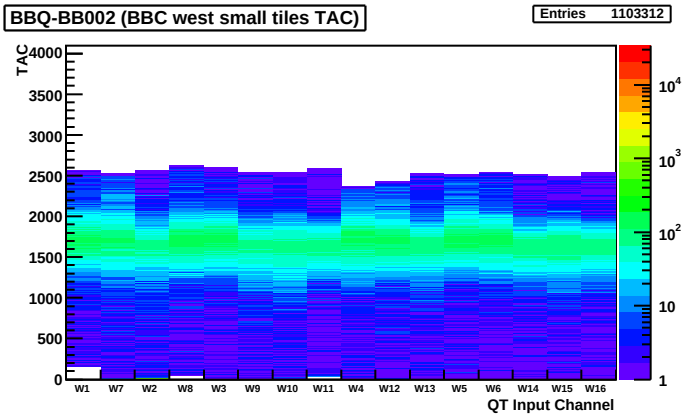

L1-TF201
Entries 68957
10^5
10^4
10^3
10^2
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

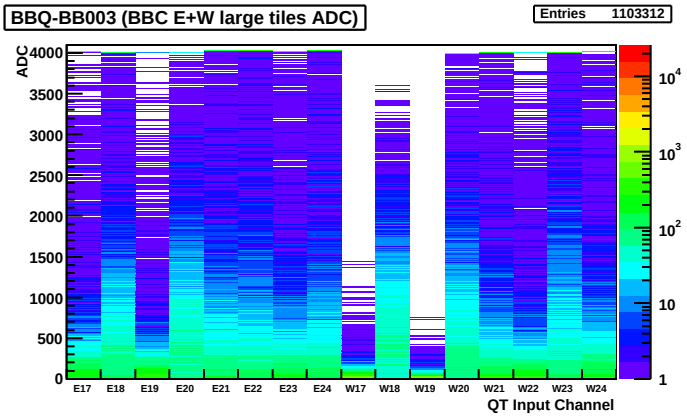

L1-TF201
Entries 413742
Threshold bits
1
0
23
20
17
12
22
15
68934
68937
68940
68945
68935
68942
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4
10^3
10^2

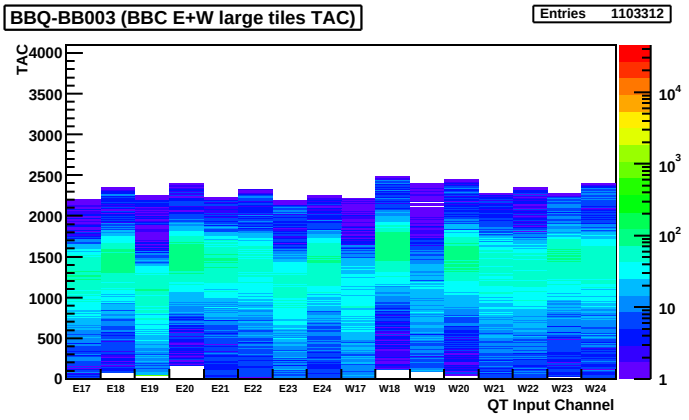

BBQ-BB001 (BBC east small tiles ADC)
Entries 1103312
ADC
QT Input Channel

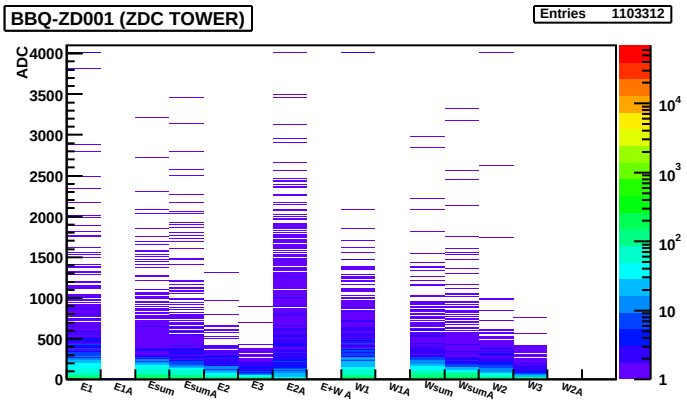

BBQ-BB001 (BBC east small tiles TAC)
Entries 1103312
TAC
QT Input Channel

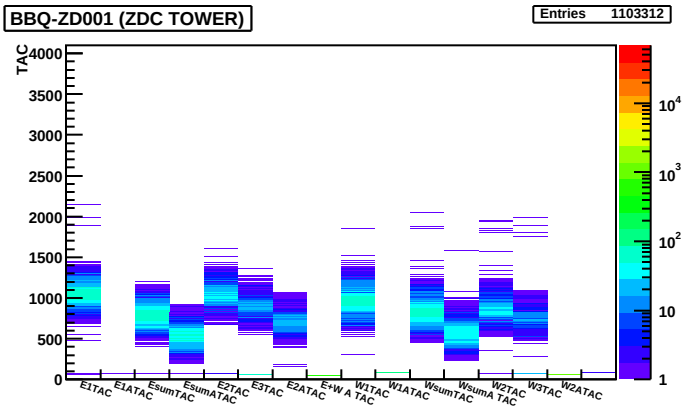

BBQ-BB002 (BBC west small tiles ADC)
Entries 1103312
ADC
QT Input Channel

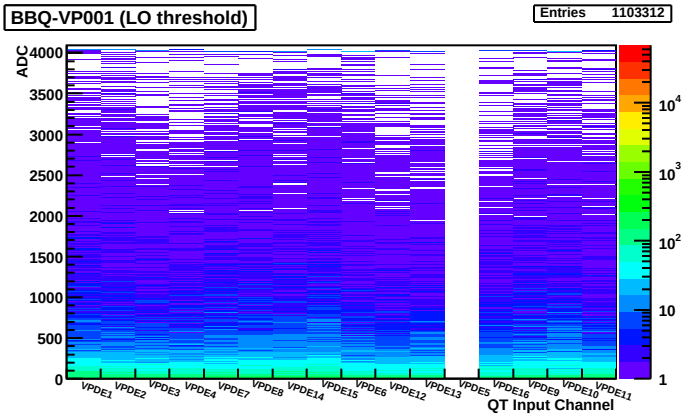

BBQ-BB002 (BBC west small tiles TAC)
Entries 1103312
TAC
QT Input Channel

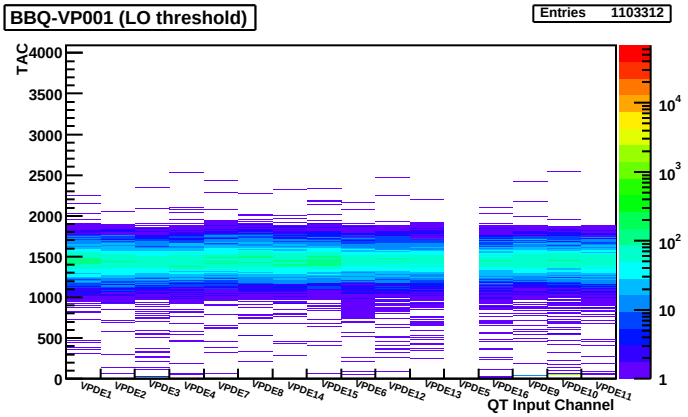

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 1103312
ADC
QT Input Channel

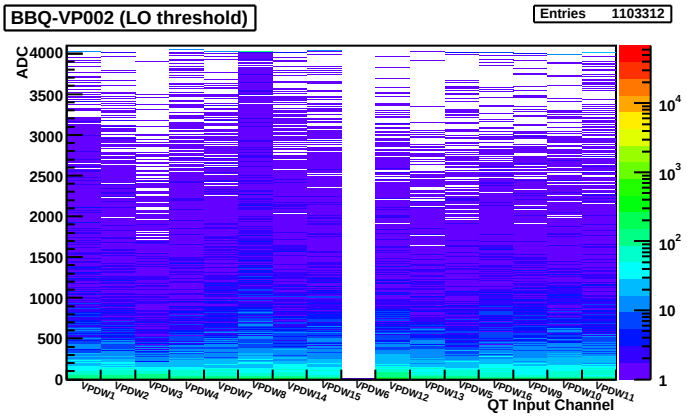

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 1103312
TAC
QT Input Channel

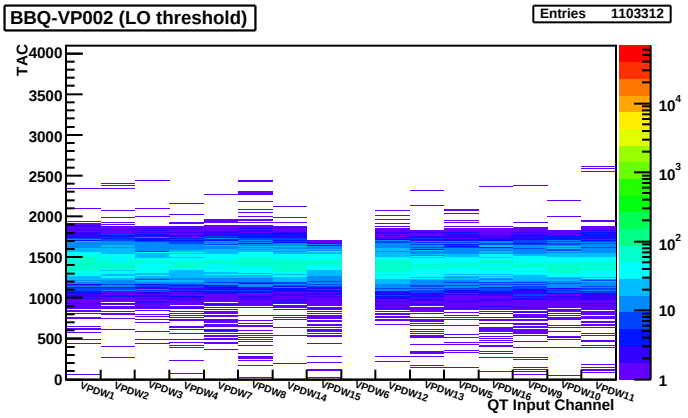

BBQ-ZD001 (ZDC TOWER)
Entries 1103312
ADC

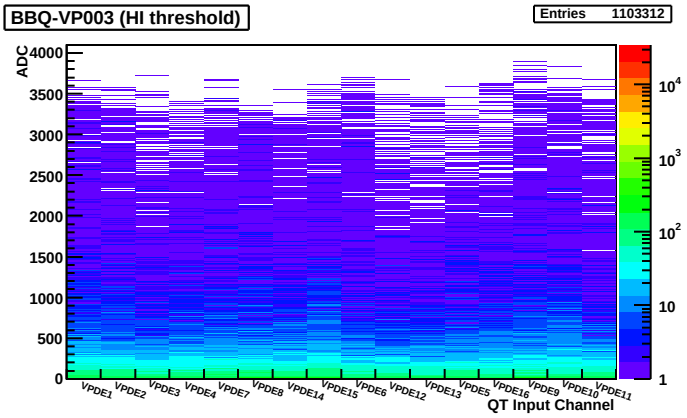

BBQ-ZD001 (ZDC TOWER)
Entries 1103312
TAC

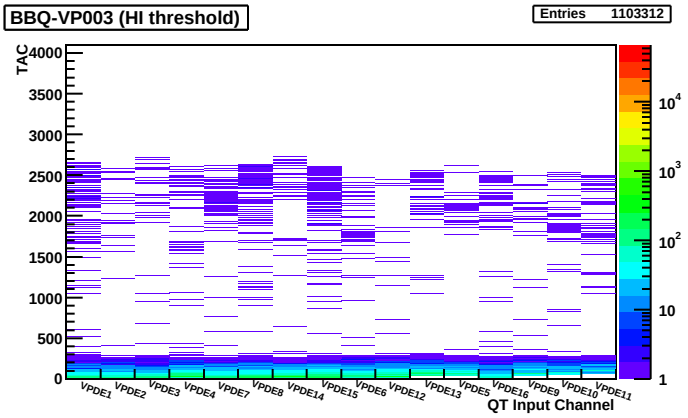

BBQ-VP001 (LO threshold)
Entries 1103312
ADC
QT Input Channel

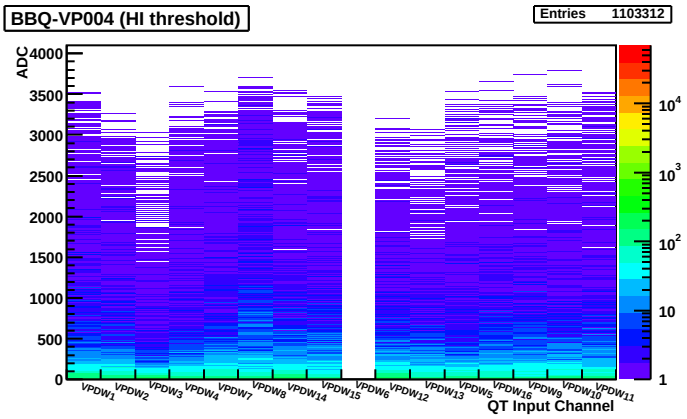

BBQ-VP001 (LO threshold)
Entries 1103312
TAC
QT Input Channel

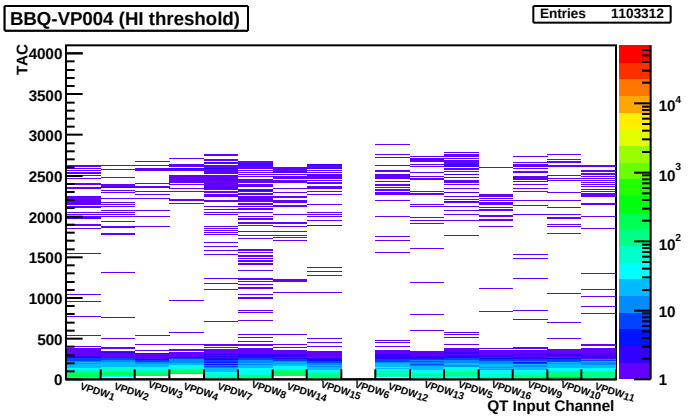

BBQ-VP002 (LO threshold)
Entries 1103312
ADC
QT Input Channel

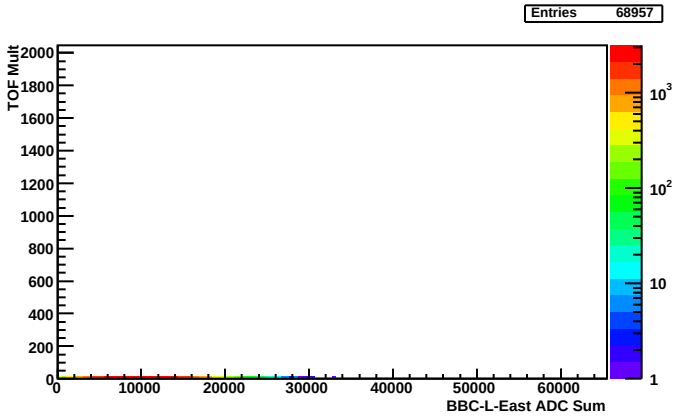

BBQ-VP002 (LO threshold)
Entries 1103312
TAC
QT Input Channel

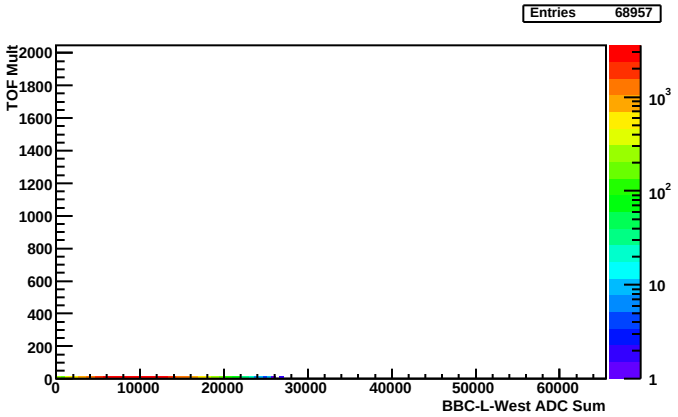

BBQ-VP003 (HI threshold)
Entries 1103312
ADC
QT Input Channel

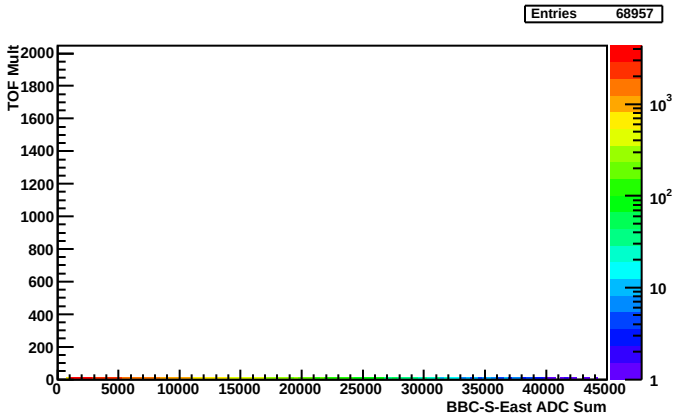

BBQ-VP003 (HI threshold)
Entries 1103312
TAC
QT Input Channel

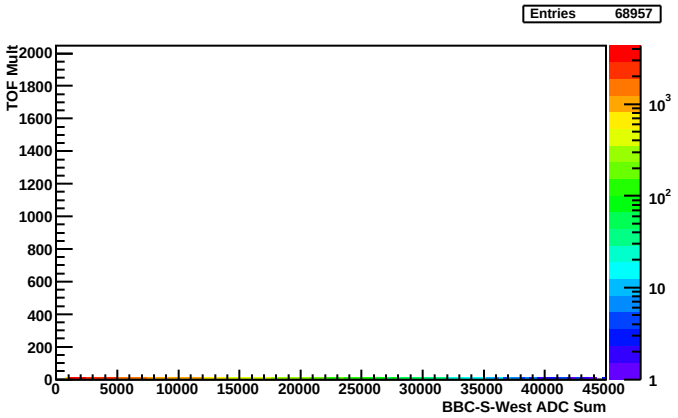

BBQ-VP004 (HI threshold)
Entries 1103312
ADC
QT Input Channel

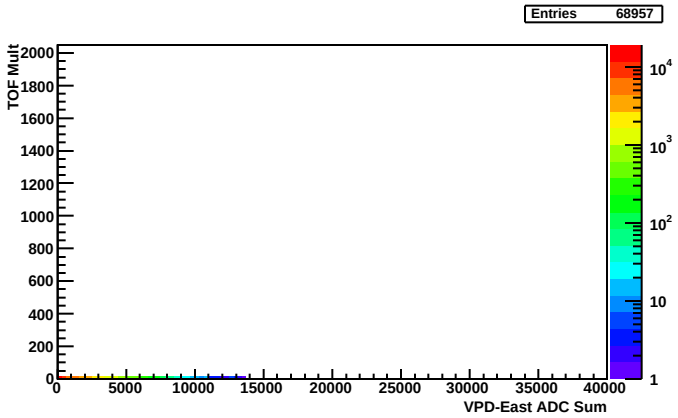

BBQ-VP004 (HI threshold)
Entries 1103312
TAC
QT Input Channel

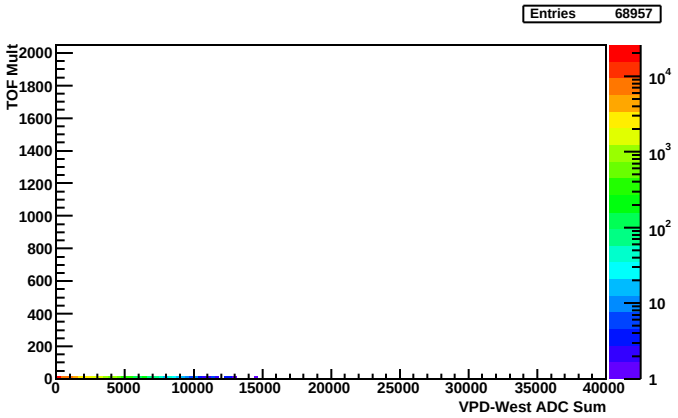

Entries 68957
TOF Mult
BBC-L-East ADC Sum

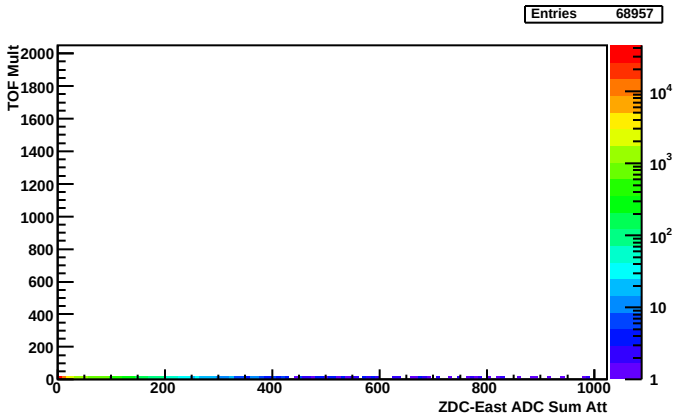

Entries 68957
TOF Mult
BBC-L-West ADC Sum

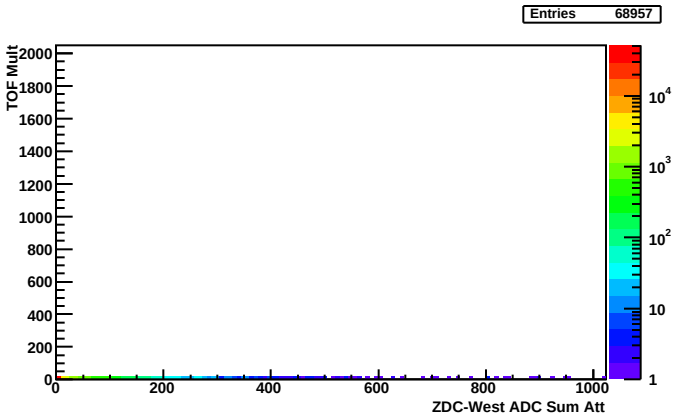

Entries 68957
TOF Mult
BBC-S-East ADC Sum

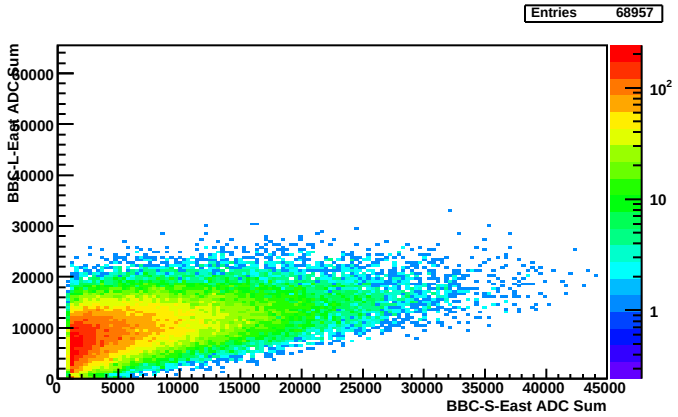

Entries 68957
TOF Mult
BBC-S-West ADC Sum

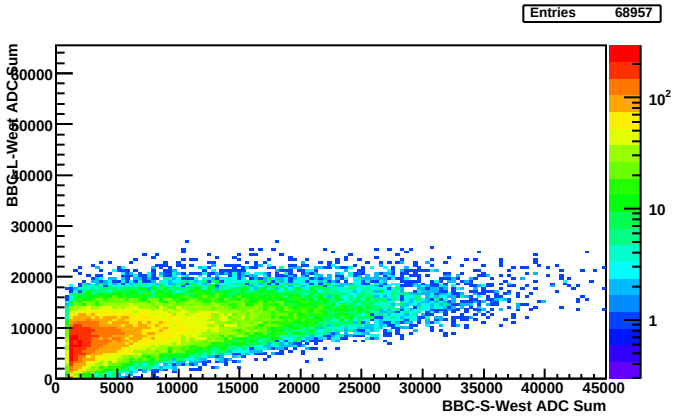

Entries 68957
TOF Mult
VPD-East ADC Sum

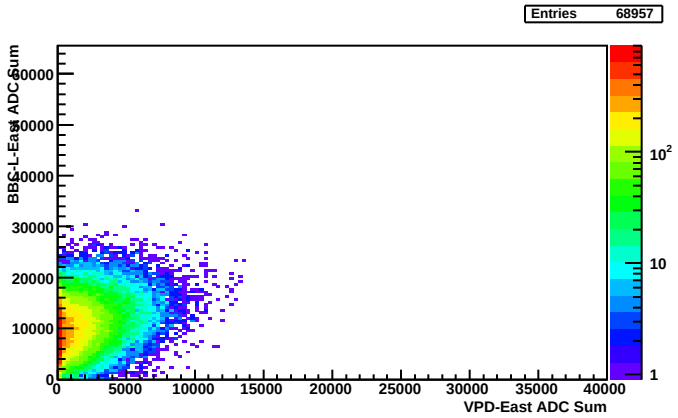

Entries 68957
TOF Mult
VPD-West ADC Sum

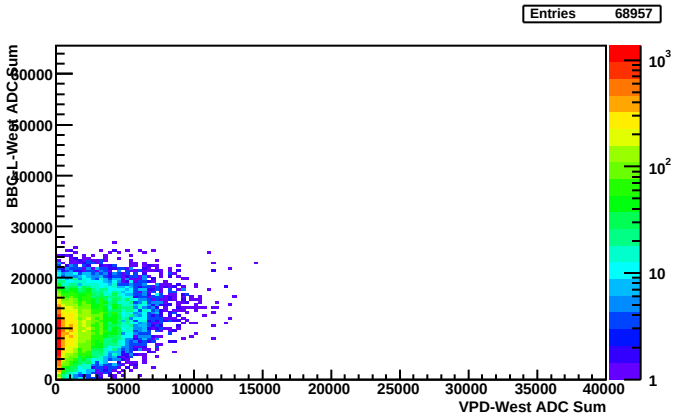

Entries 68957
TOF Mult
ZDC-East ADC Sum Att

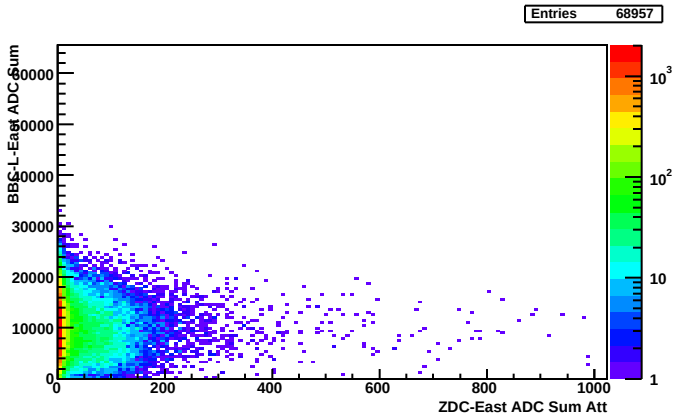

Entries 68957
TOF Mult
ZDC-West ADC Sum Att

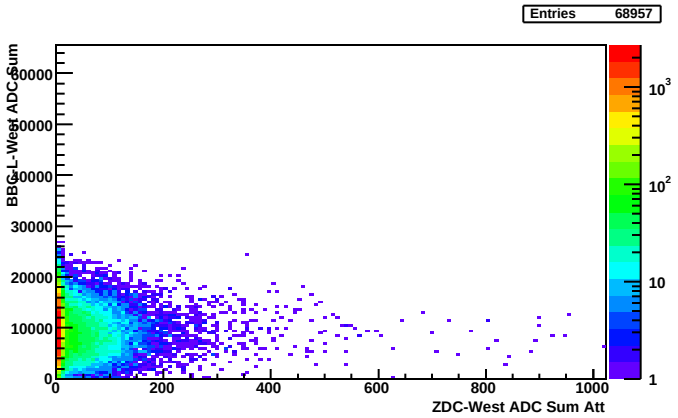

Entries 68957
BBC-L-East ADC Sum
BBC-S-East ADC Sum

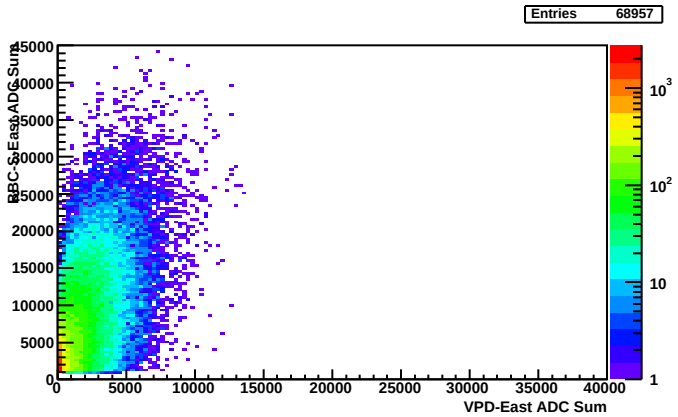

Entries 68957
BBC-L-West ADC Sum
BBC-S-West ADC Sum

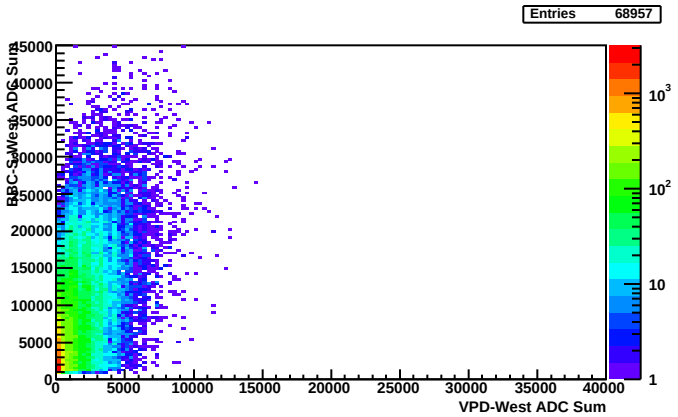

Entries 68957
BBC-L-East ADC Sum
VPD-East ADC Sum

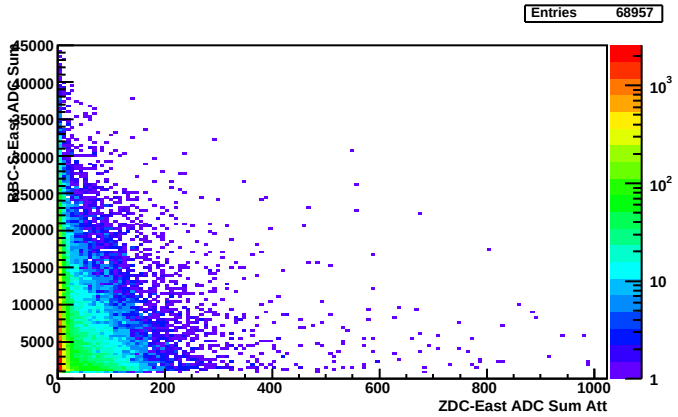

Entries 68957
BBC-L-West ADC Sum
VPD-West ADC Sum

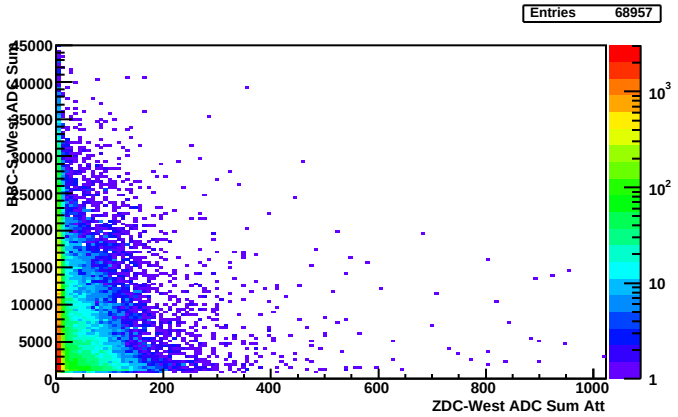

Entries 68957
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

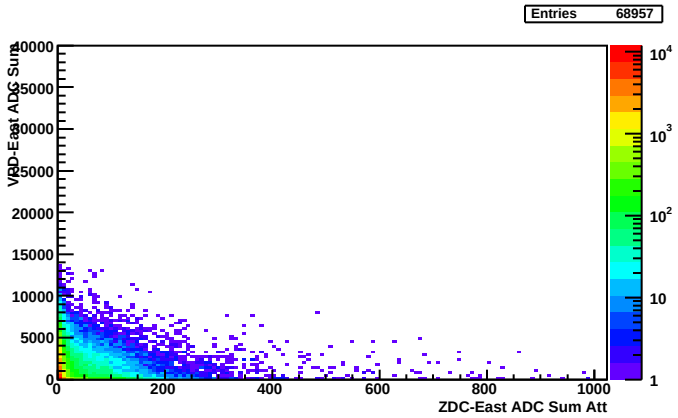

Entries 68957
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

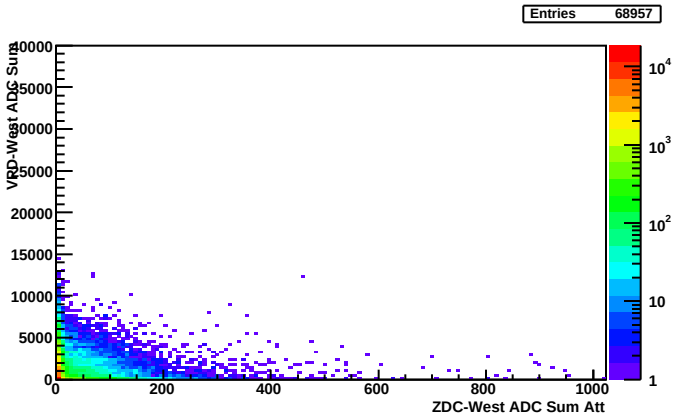

Entries 68957
BBC-S-East ADC Sum
VPD-East ADC Sum

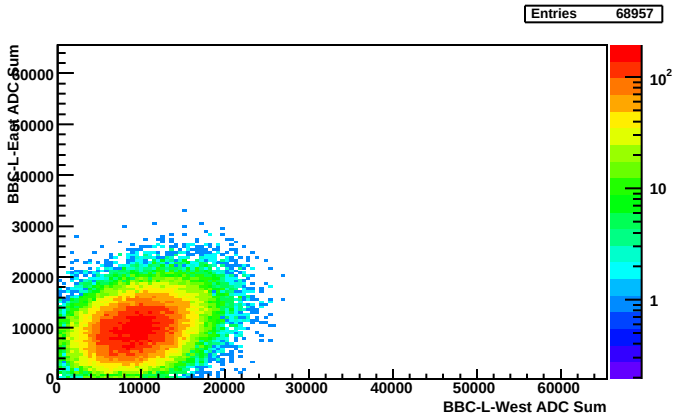

Entries 68957
BBC-S-West ADC Sum
VPD-West ADC Sum

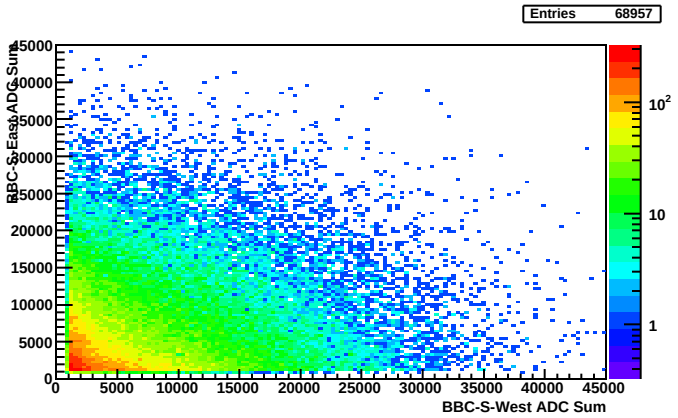

Entries 68957
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

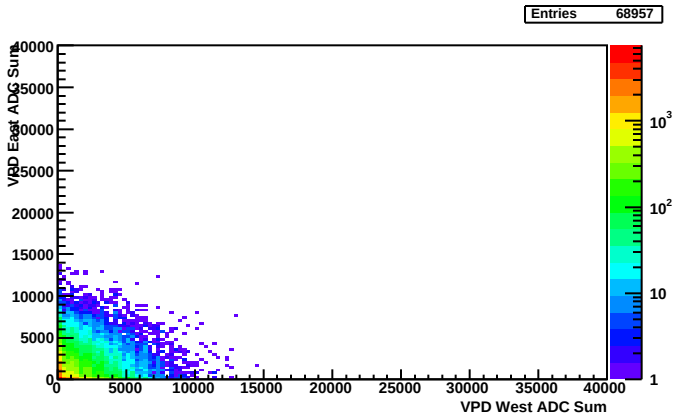

Entries 68957
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

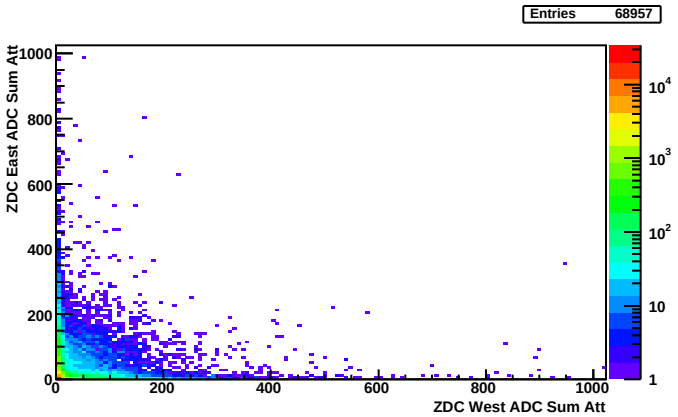

Entries 68957
VPD-East ADC Sum
ZDC-East ADC Sum Att

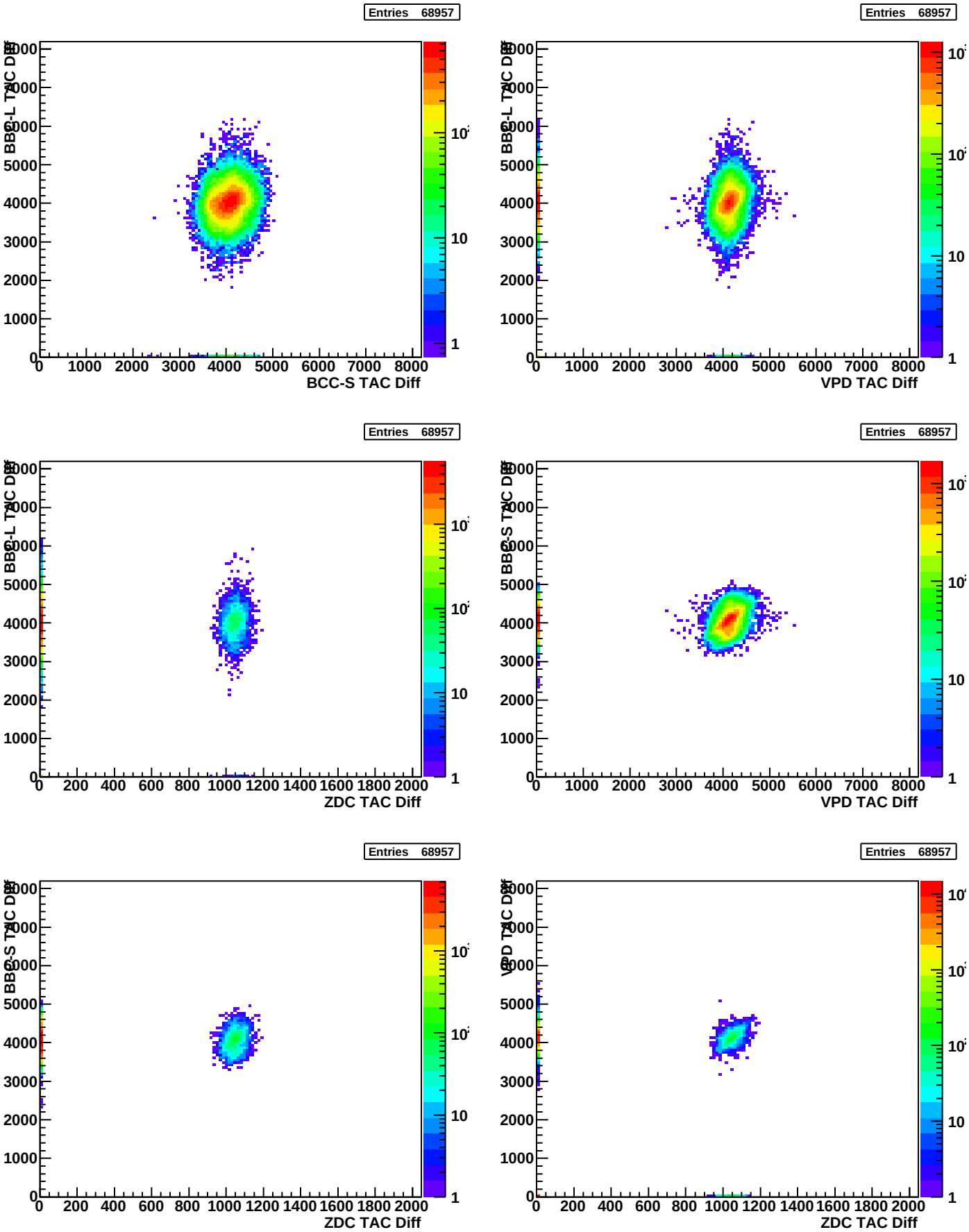

Entries 68957
VPD-West ADC Sum
ZDC-West ADC Sum Att

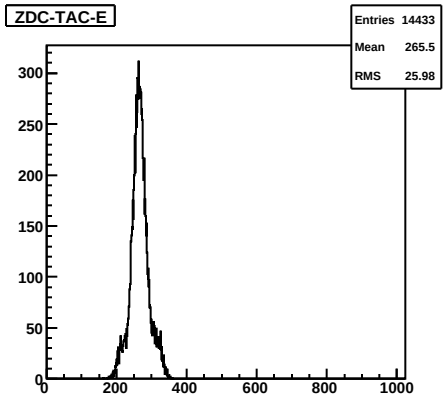

Entries 68957
BBC-L-East ADC Sum
BBC-L-West ADC Sum

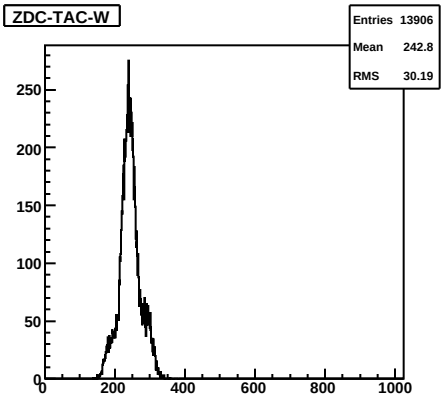

Entries 68957
BBC-S-East ADC Sum
BBC-S-West ADC Sum

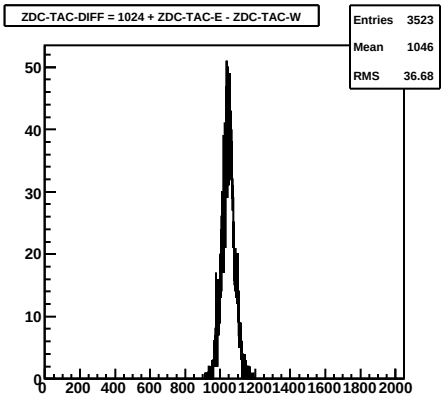

Entries 68957
VPD East ADC Sum
VPD West ADC Sum

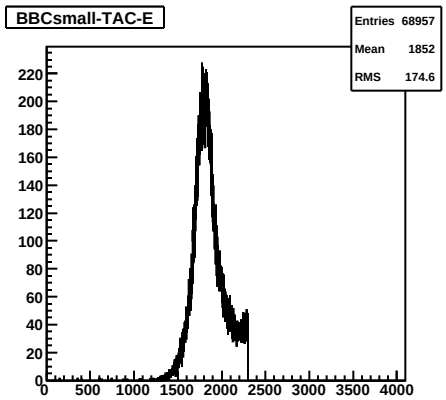

Entries 68957
ZDC East ADC Sum Att
ZDC West ADC Sum Att

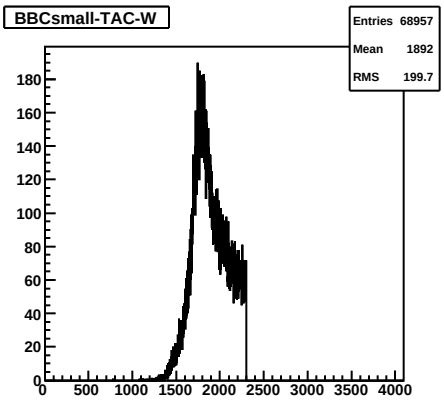

Entries 68957
BBC-L TAC Diff
BCC-S TAC Diff
Entries 68957
BBC-L TAC Diff
VPD TAC Diff
Entries 68957
BBC-L TAC Diff
ZDC TAC Diff
Entries 68957
BBC-S TAC Diff
VPD TAC Diff
Entries 68957
BBC-S TAC Diff
ZDC TAC Diff
Entries 68957
VPD TAC Diff
ZDC TAC Diff

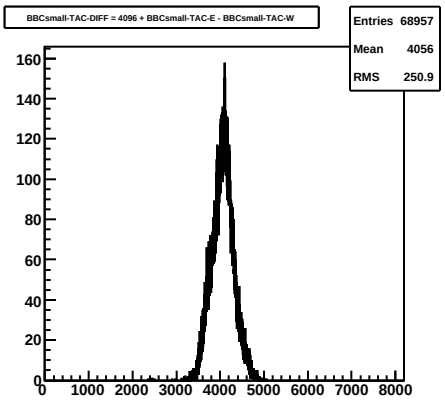

ZDC-TAC-E
Entries 14433
Mean 265.5
RMS 25.98

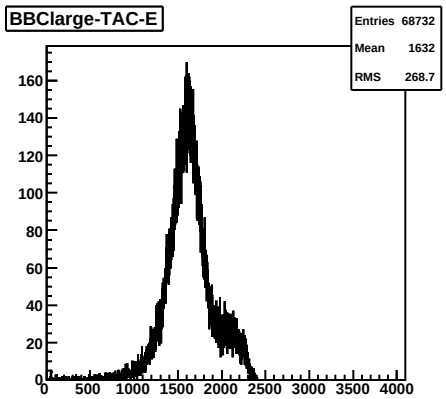

ZDC-TAC-W
Entries 13906
Mean 242.8
RMS 30.19

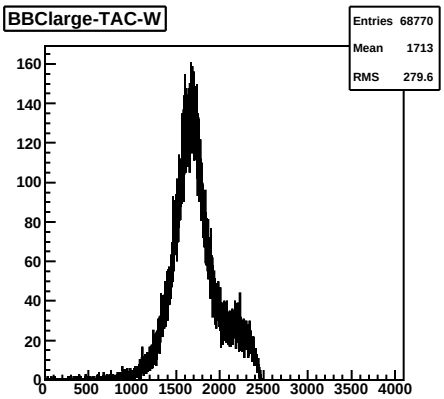

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 3523
Mean 1046
RMS 36.68

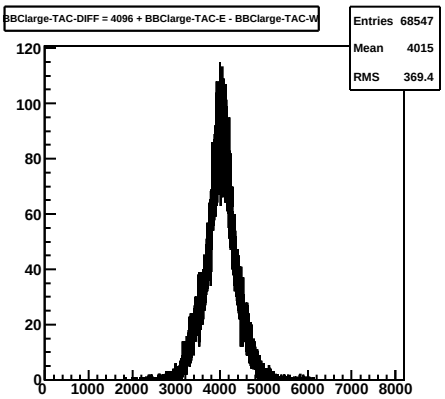

BBCsmall-TAC-E
Entries 68957
Mean 1852
RMS 174.6

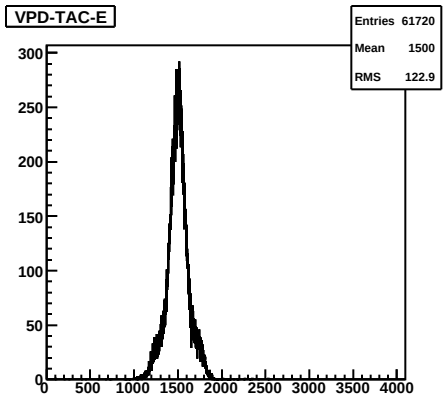

BBCsmall-TAC-W
Entries 68957
Mean 1892
RMS 199.7

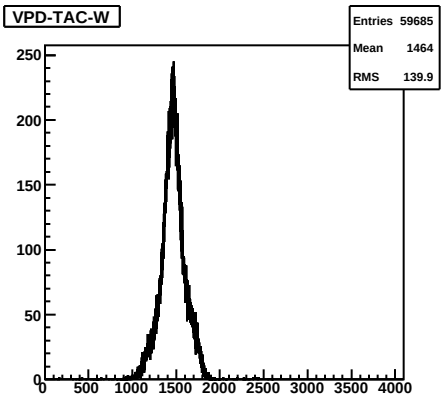

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 68957
Mean 4056
RMS 250.9

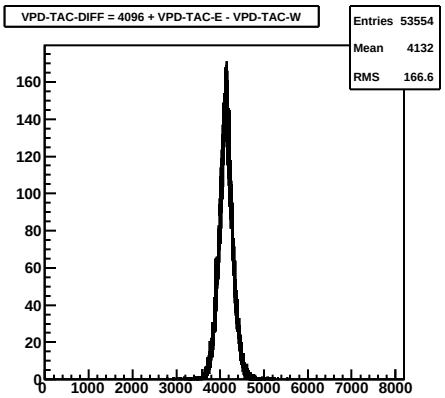

BBClarge-TAC-E
Entries 68732
Mean 1632
RMS 268.7

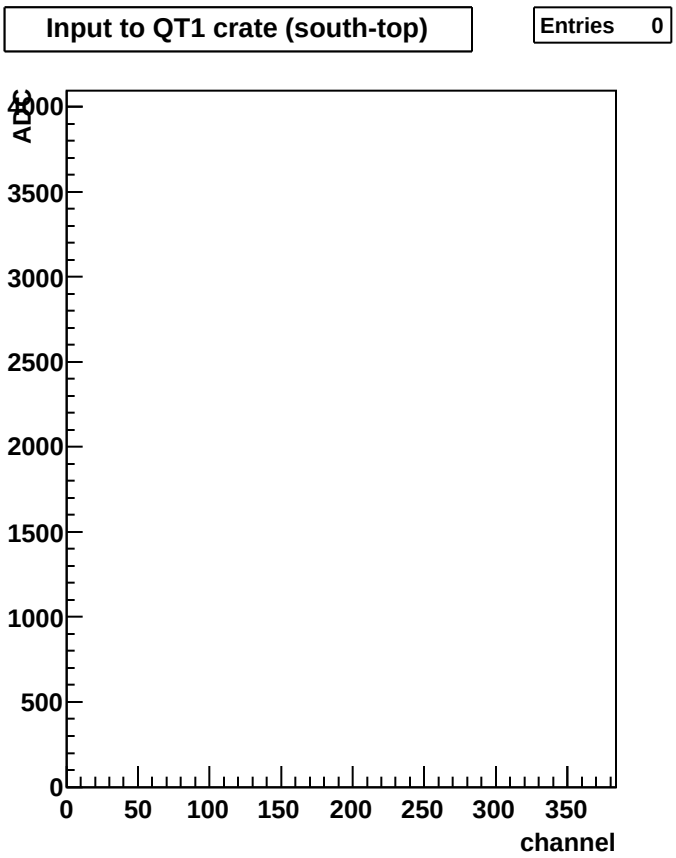

BBClarge-TAC-W
Entries 68770
Mean 1713
RMS 279.6

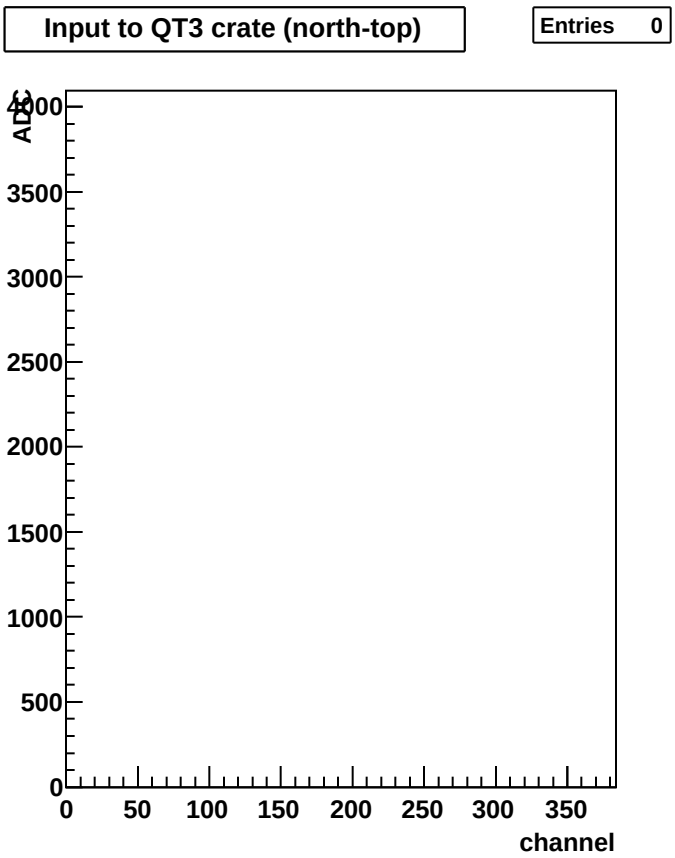

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 68547
Mean 4015
RMS 369.4

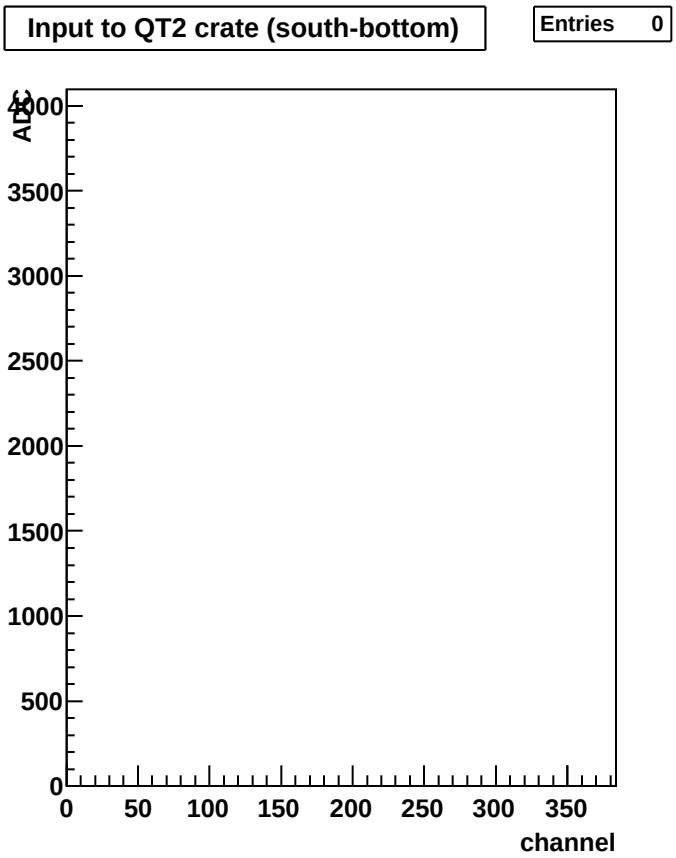

VPD-TAC-E
Entries 61720
Mean 1500
RMS 122.9

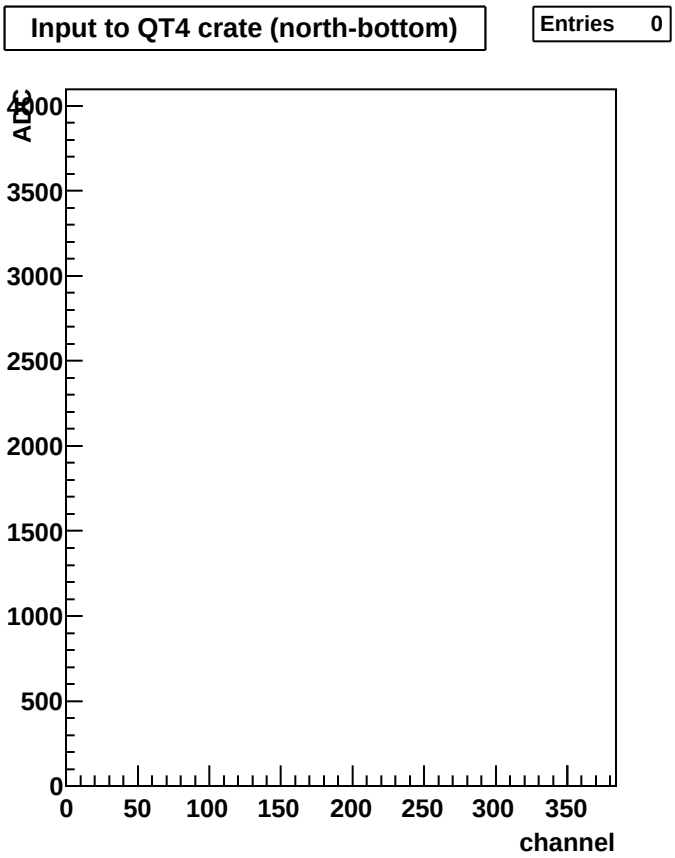

VPD-TAC-W
Entries 59685
Mean 1464
RMS 139.9

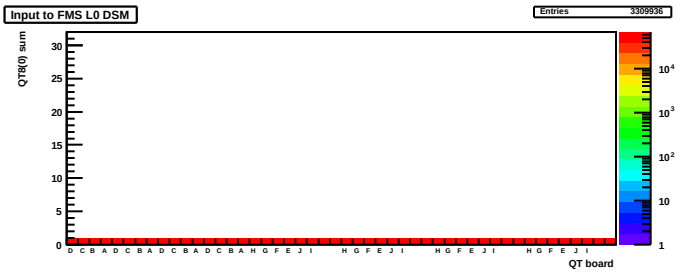

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 53554
Mean 4132
RMS 166.6

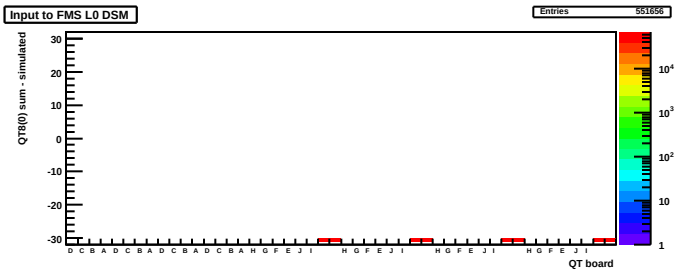

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

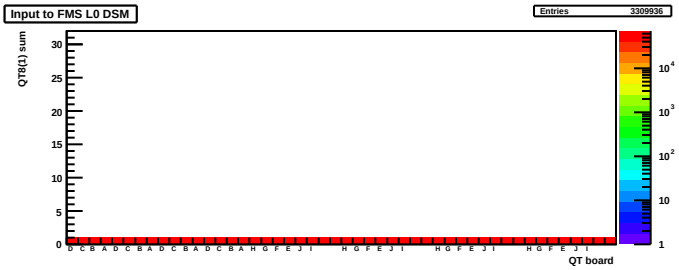

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

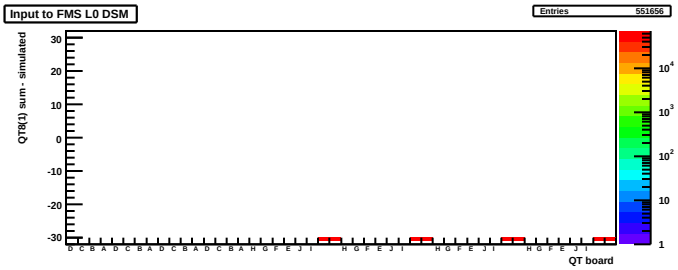

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

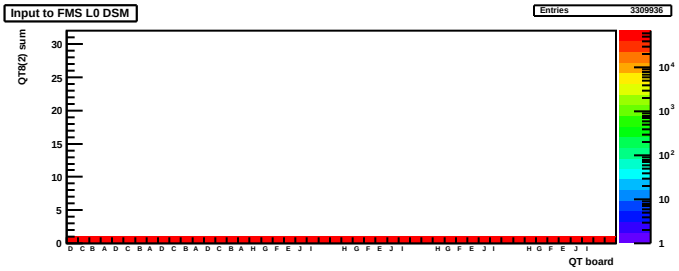

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

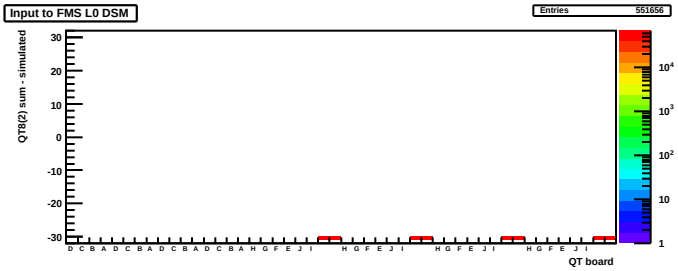

Input to FMS L0 DSM
Entries 3309936
QT8(0) sum
QT board

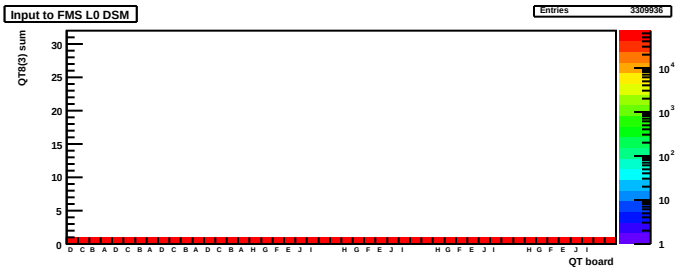

Input to FMS L0 DSM
Entries 551656
QT8(0) sum - simulated
QT board

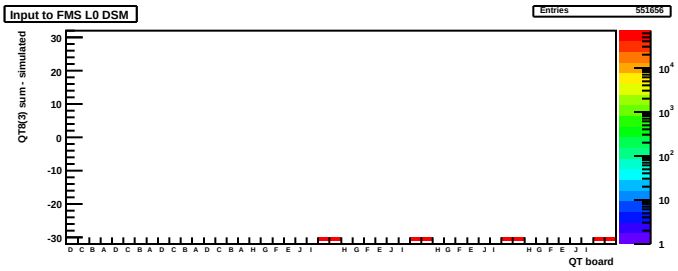

Input to FMS L0 DSM
Entries 3309936
QT8(1) sum
QT board

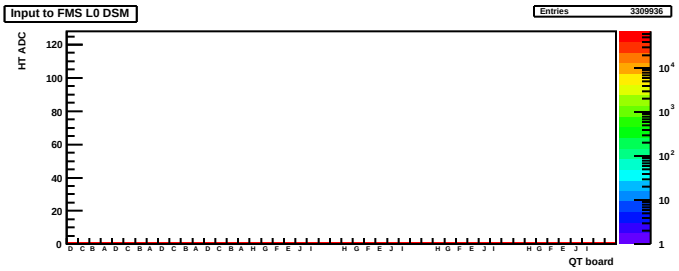

Input to FMS L0 DSM
Entries 551656
QT8(1) sum - simulated
QT board

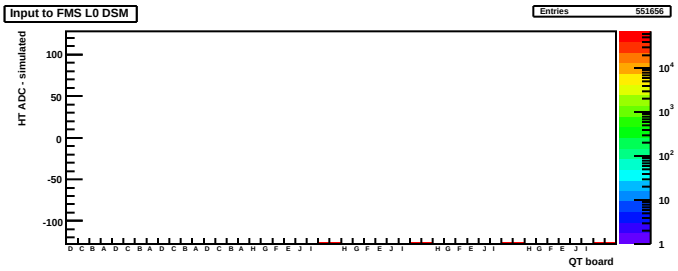

Input to FMS L0 DSM
Entries 3309936
QT8(2) sum
QT board

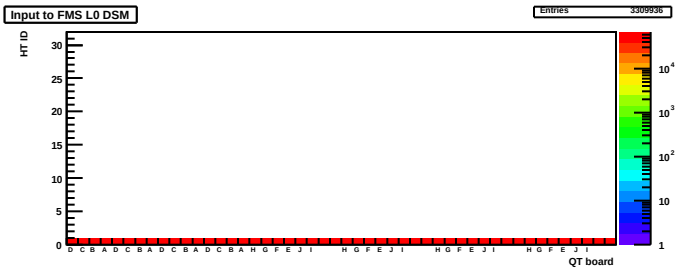

Input to FMS L0 DSM
Entries 551656
QT8(2) sum - simulated
QT board

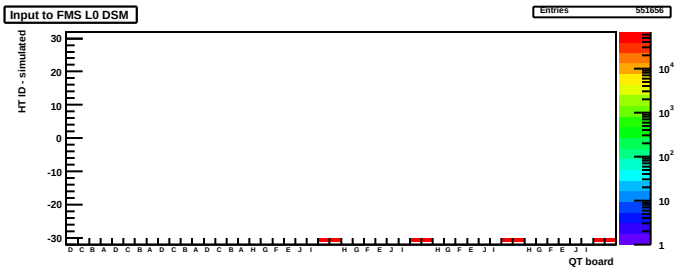

Input to FMS L0 DSM
Entries 3309936
QT8(3) sum
QT board

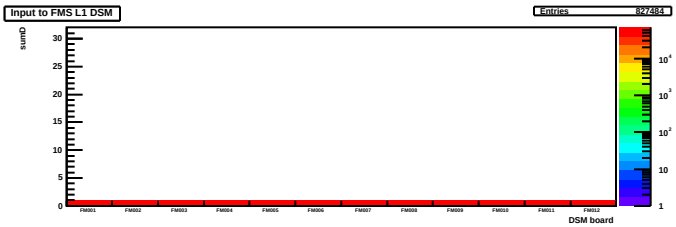

Input to FMS L0 DSM
Entries 551656
QT8(3) sum - simulated
QT board

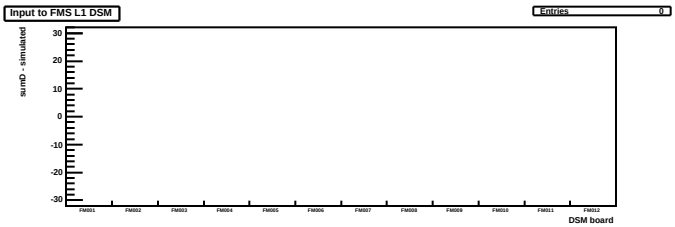

Input to FMS L0 DSM
Entries 3309936
HT ADC
QT board

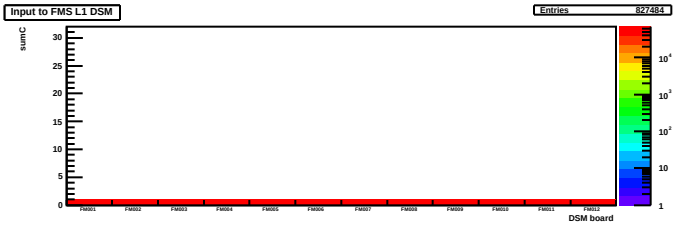

Input to FMS L0 DSM
Entries 551656
HT ADC - simulated
QT board

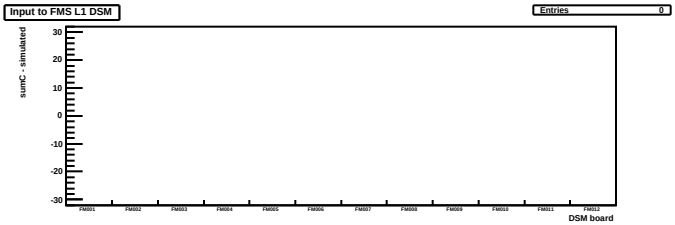

Input to FMS L0 DSM
Entries 3309936
HT ID
QT board

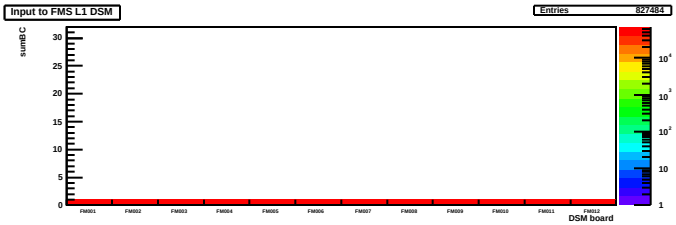

Input to FMS L0 DSM
Entries 551656
HT ID - simulated
QT board

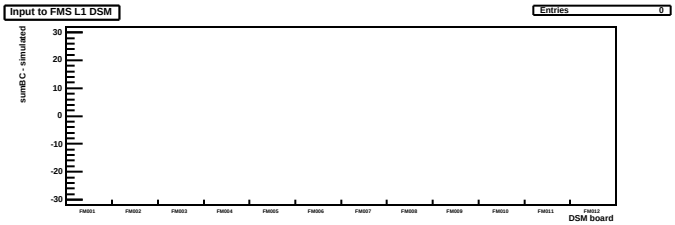

Input to FMS L1 DSM
Entries 827484
sumD
DSM board

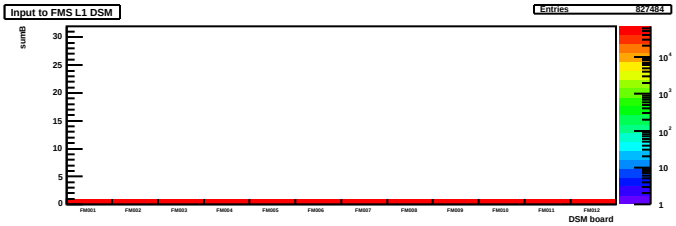

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

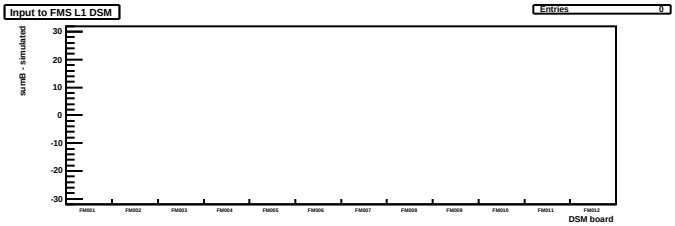

Input to FMS L1 DSM
Entries 827484
sumC
DSM board

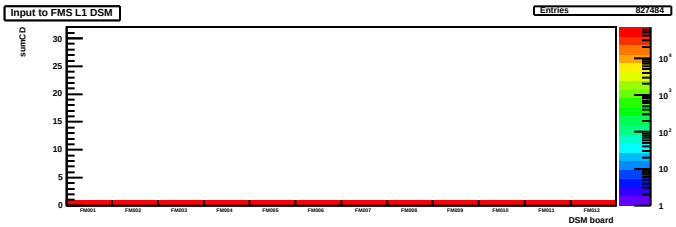

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

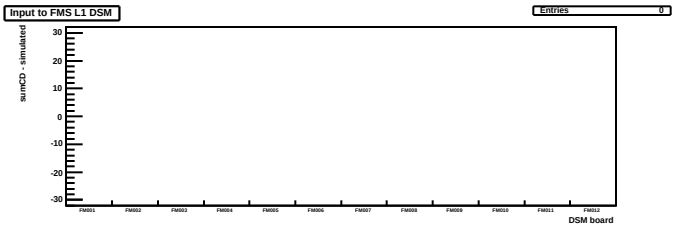

Input to FMS L1 DSM
Entries 827484
sumBC
DSM board

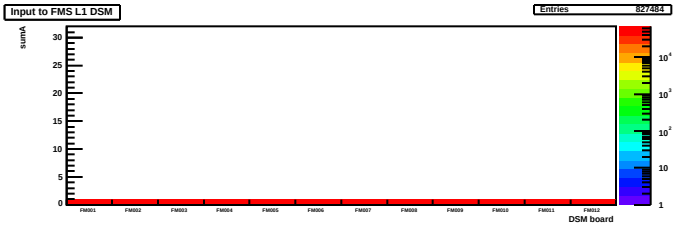

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

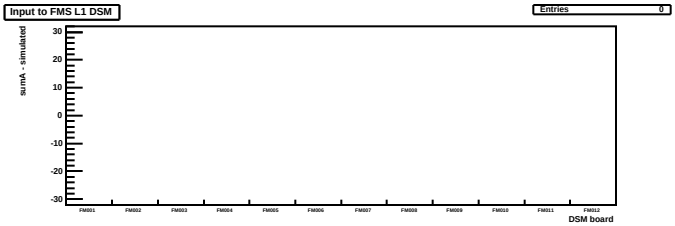

Input to FMS L1 DSM
Entries 827484
sumB
DSM board

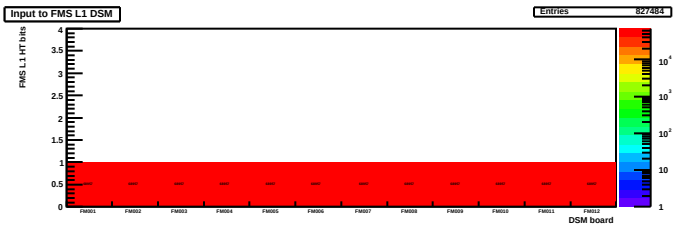

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

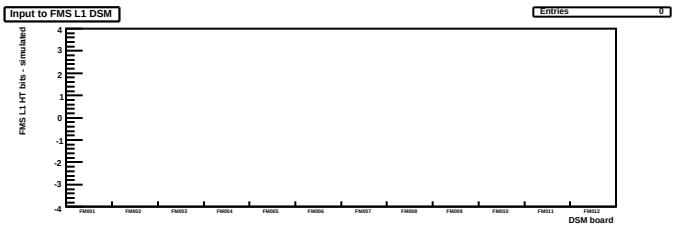

Input to FMS L1 DSM
Entries 827484
sumCD
DSM board

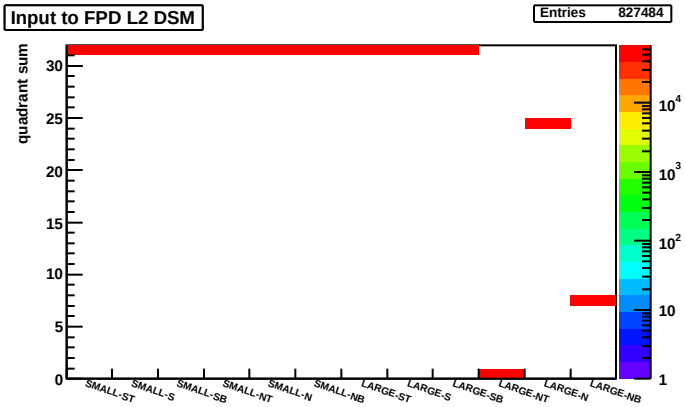

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

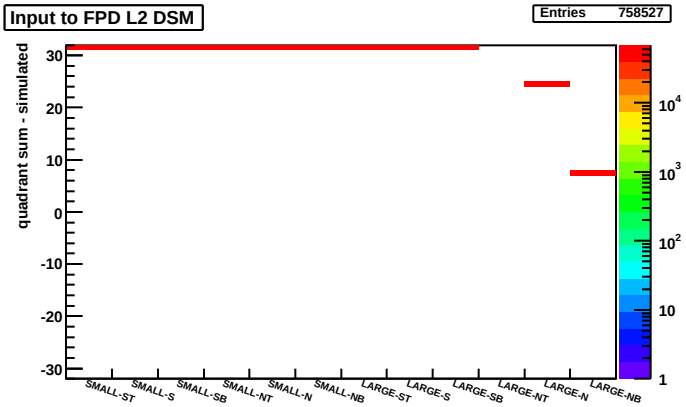

Input to FMS L1 DSM
Entries 827484
sumA
DSM board

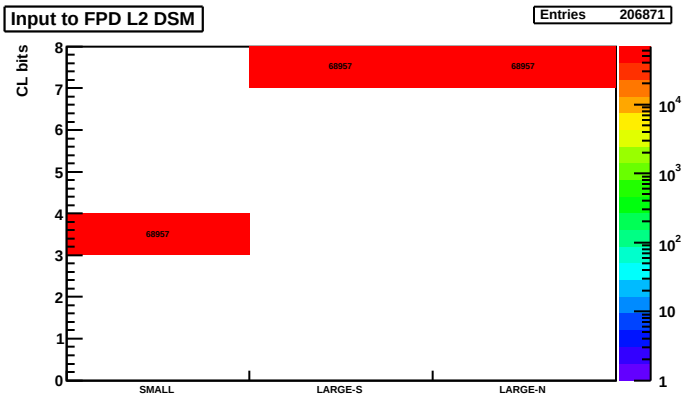

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

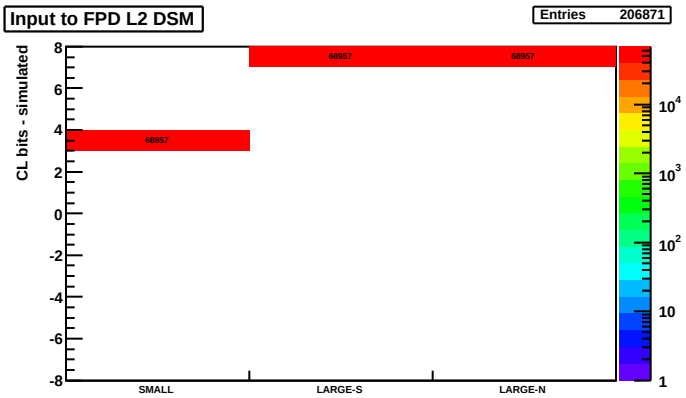

Input to FMS L1 DSM
Entries 827484
FMS L1 HT bits
DSM board

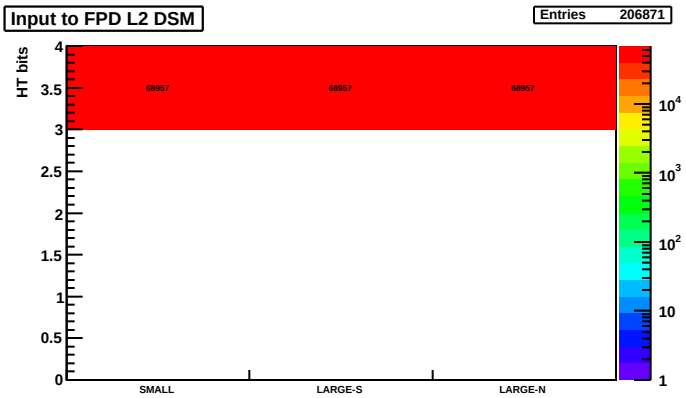

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

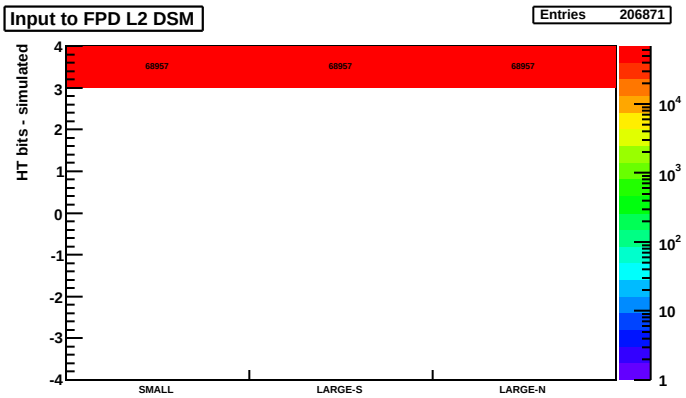

Input to FPD L2 DSM
Entries 827484
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

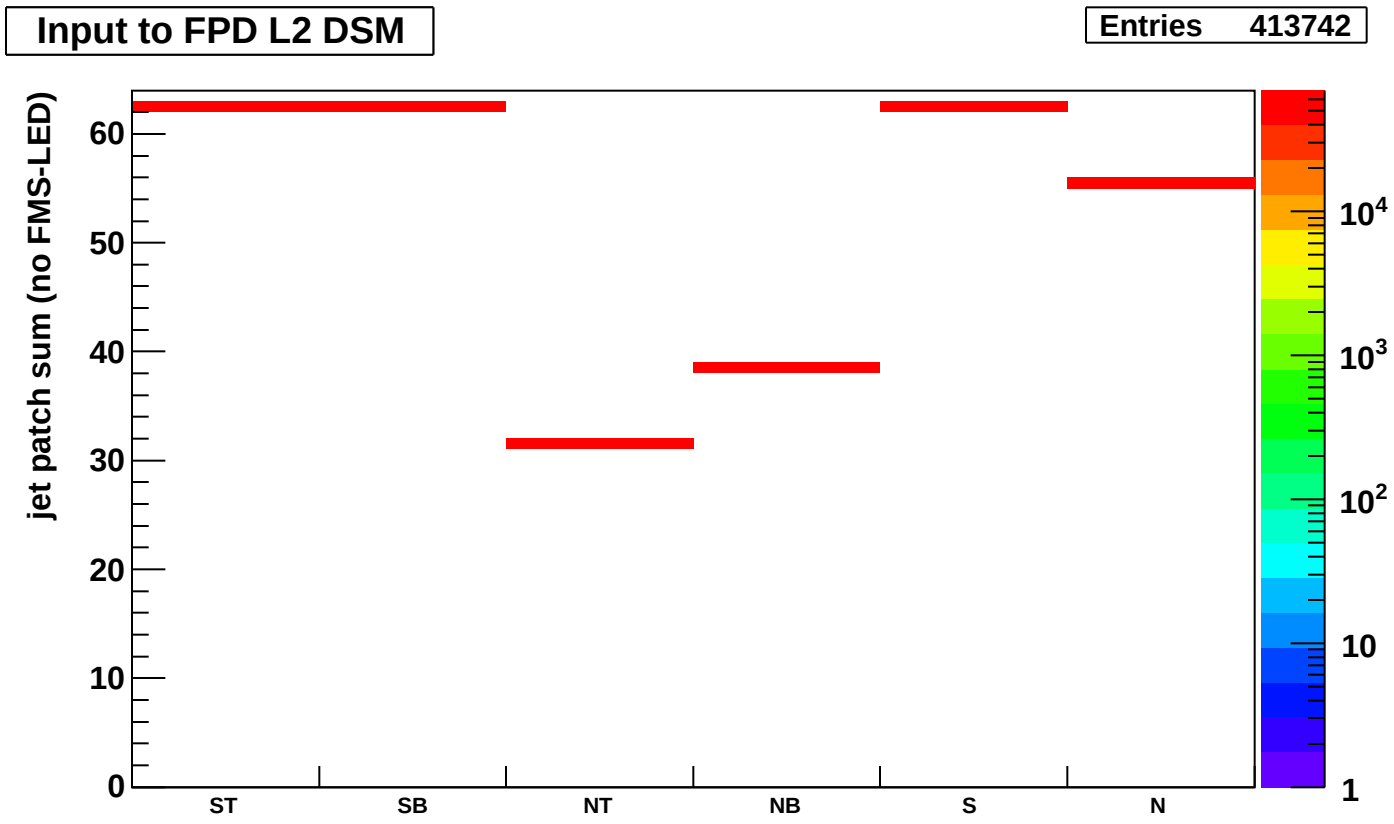

Input to FPD L2 DSM
Entries 758527
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

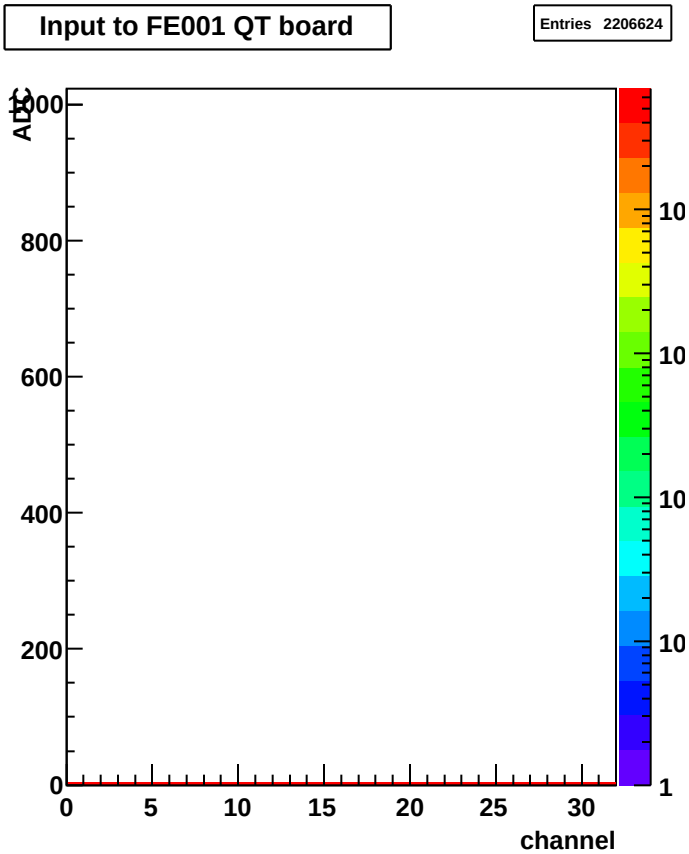

Input to FPD L2 DSM
Entries 206871
CL bits
68957
68957
68957
SMALL
LARGE-S
LARGE-N

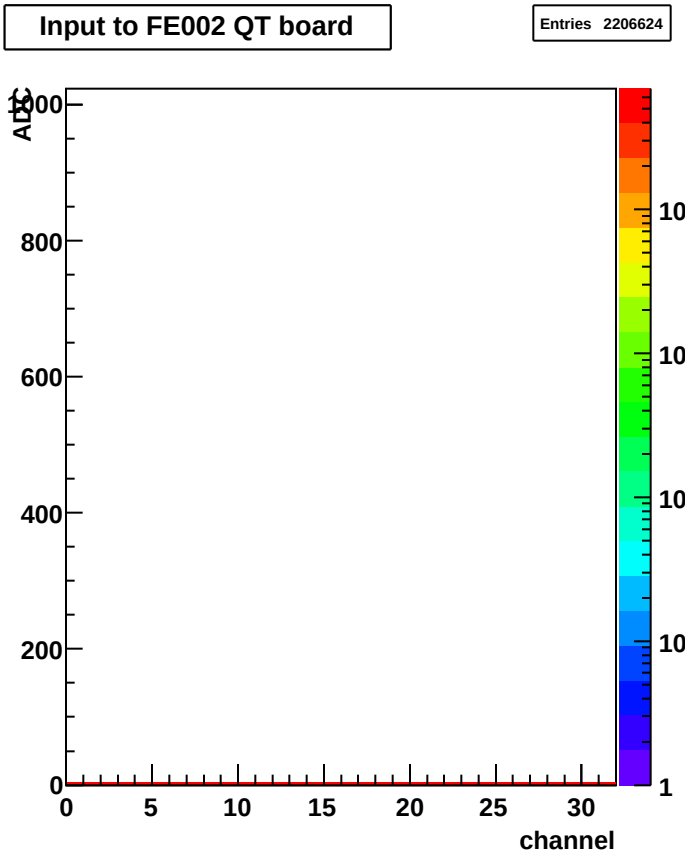

Input to FPD L2 DSM
Entries 206871
CL bits - simulated
68957
68957
68957
SMALL
LARGE-S
LARGE-N

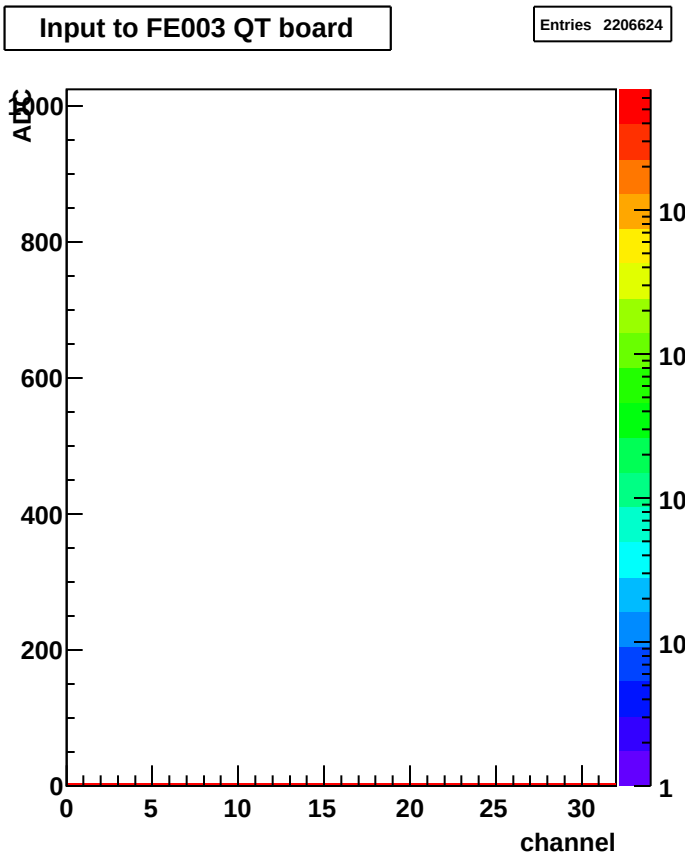

Input to FPD L2 DSM
Entries 206871
HT bits
68957
68957
68957
SMALL
LARGE-S
LARGE-N

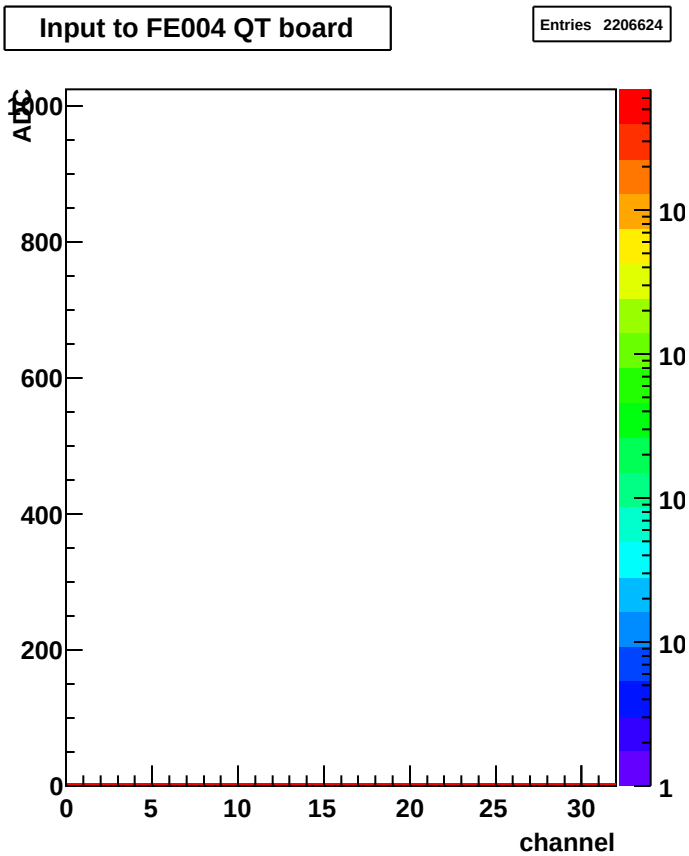

Input to FPD L2 DSM
Entries 206871
HT bits - simulated
68957
68957
68957
SMALL
LARGE-S
LARGE-N

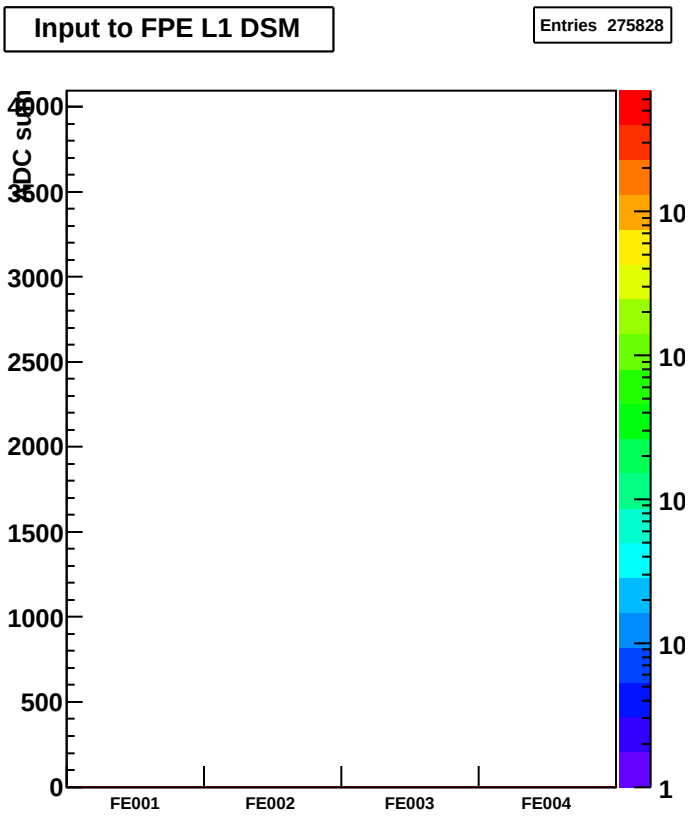

Input to FPD L2 DSM
Entries 413742
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

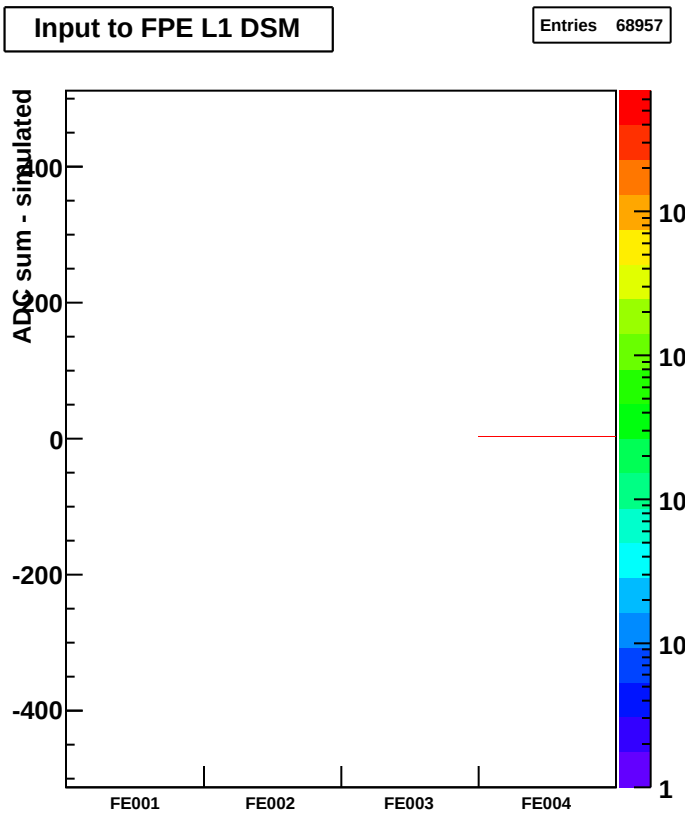

Input to FE001 QT board
Entries 2206624
ADC
channel

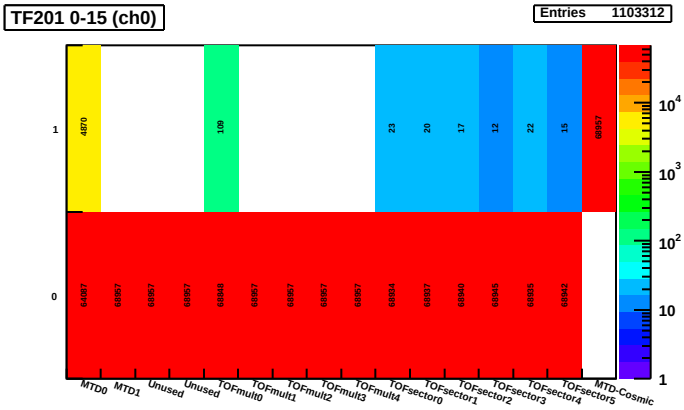

Input to FE002 QT board
Entries 2206624
ADC
channel

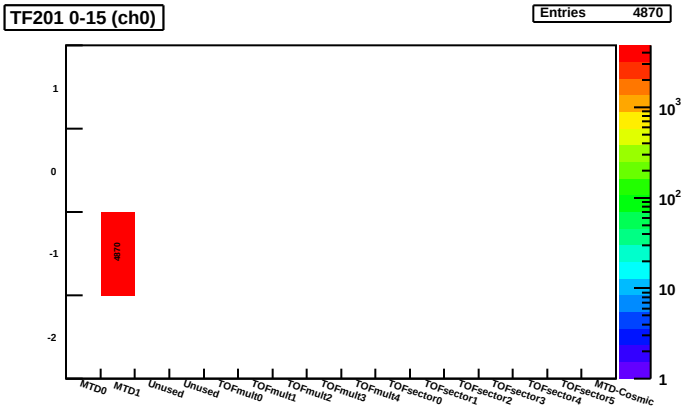

Input to FE003 QT board
Entries 2206624
ADC
channel

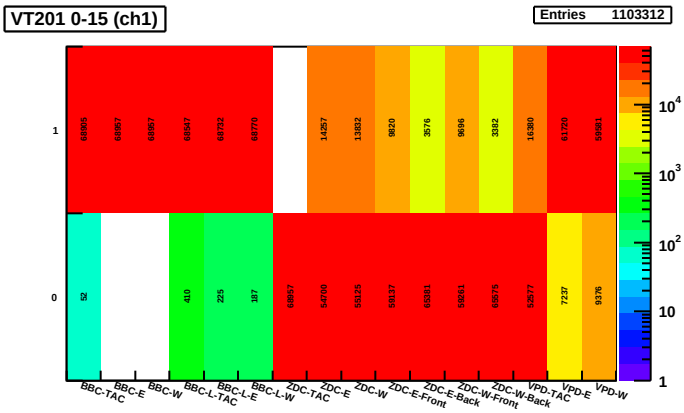

Input to FE004 QT board
Entries 2206624
ADC
channel

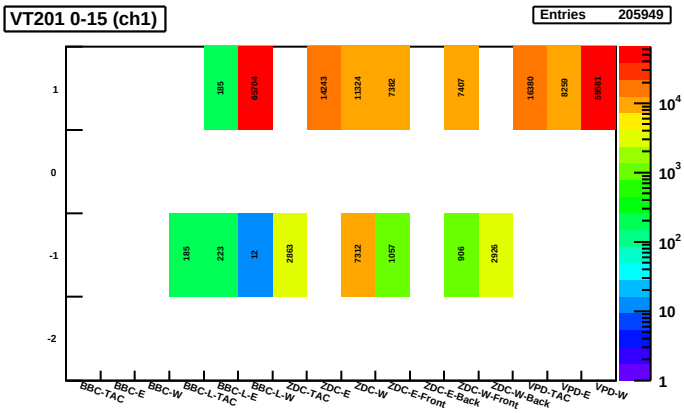

Input to FPE L1 DSM
Entries 275828
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


Input to FPE L1 DSM
Entries 68957
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1


TF201 0-15 (ch0)
Entries 1103312
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 4870
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 1103312
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
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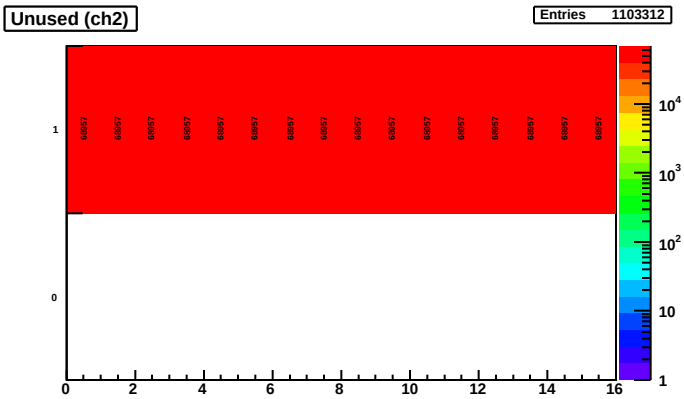
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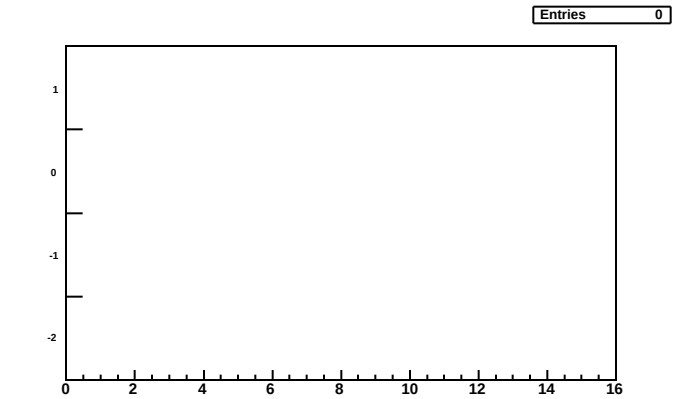
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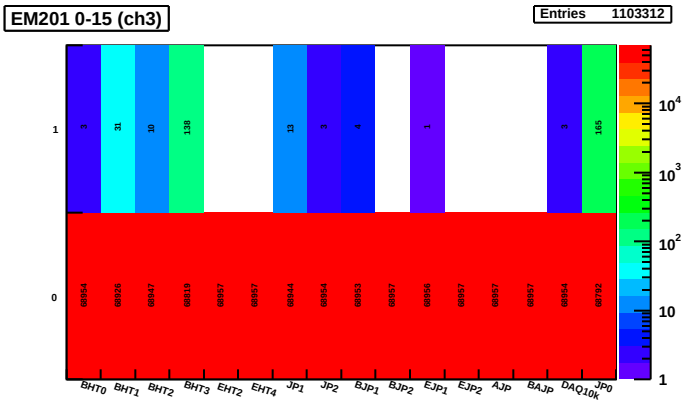
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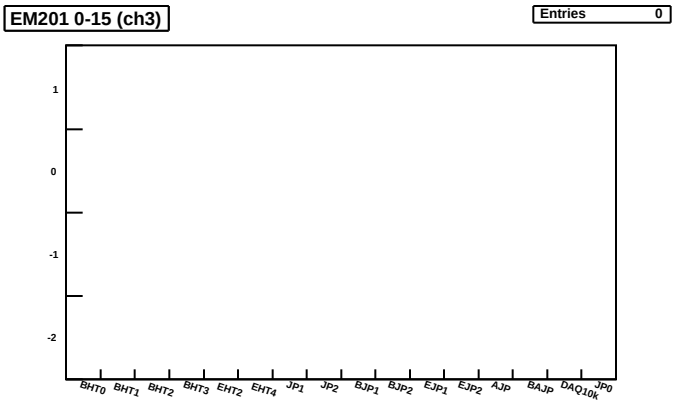
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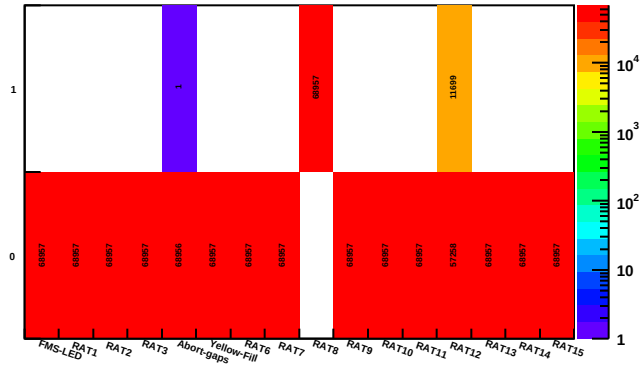
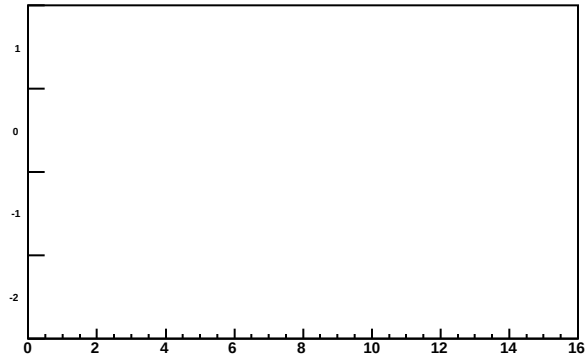
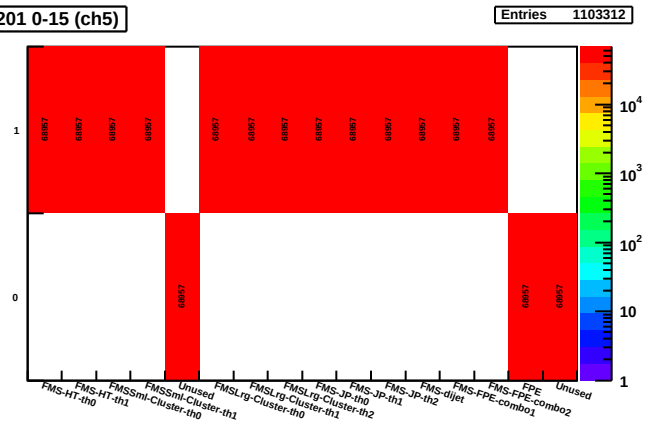
RAT board (ch4)





FP201 0-15 (ch5)



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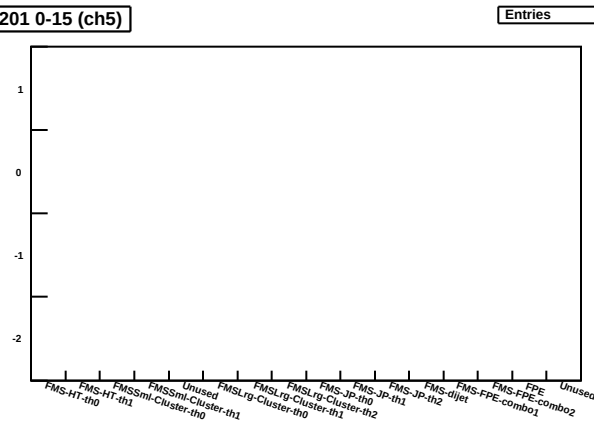
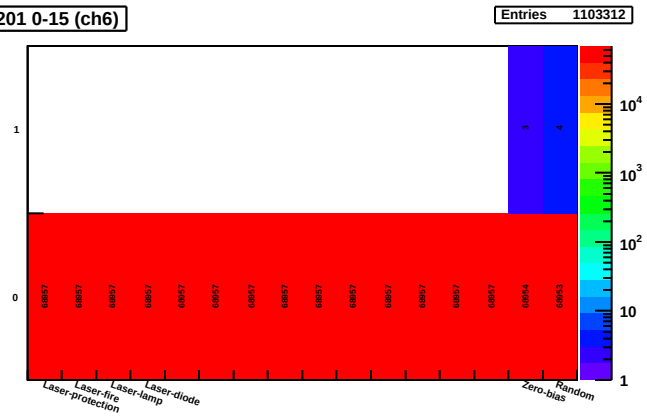
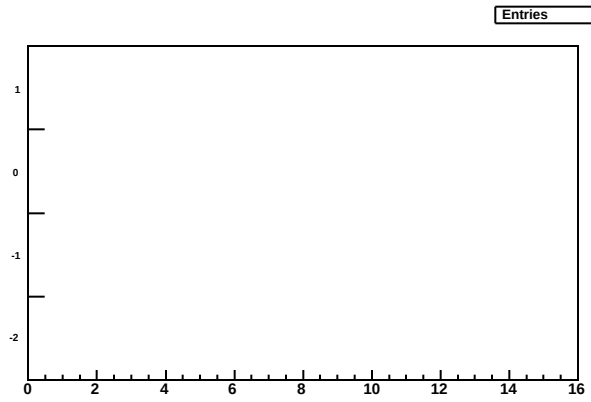
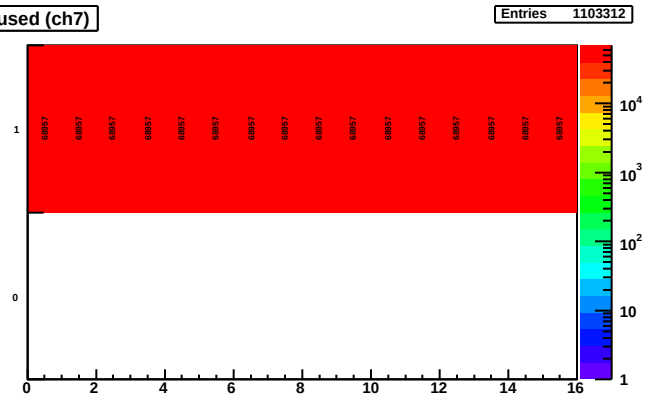
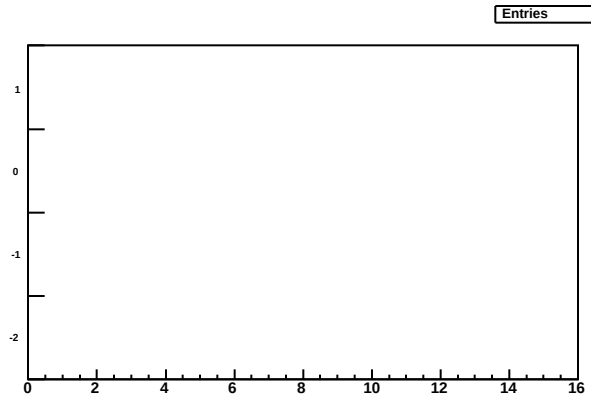


ST201 0-15 (ch6)





Unused (ch7)