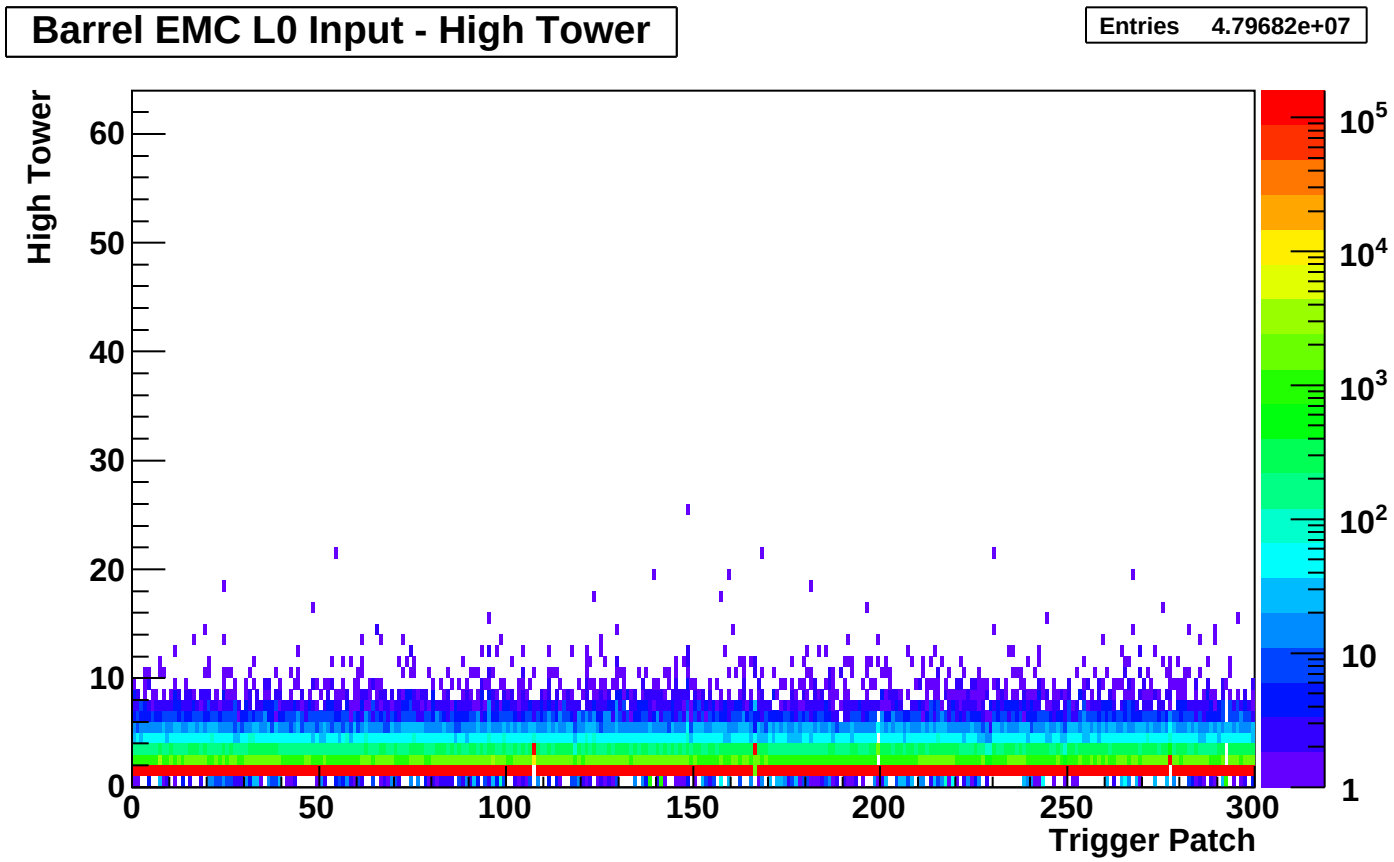
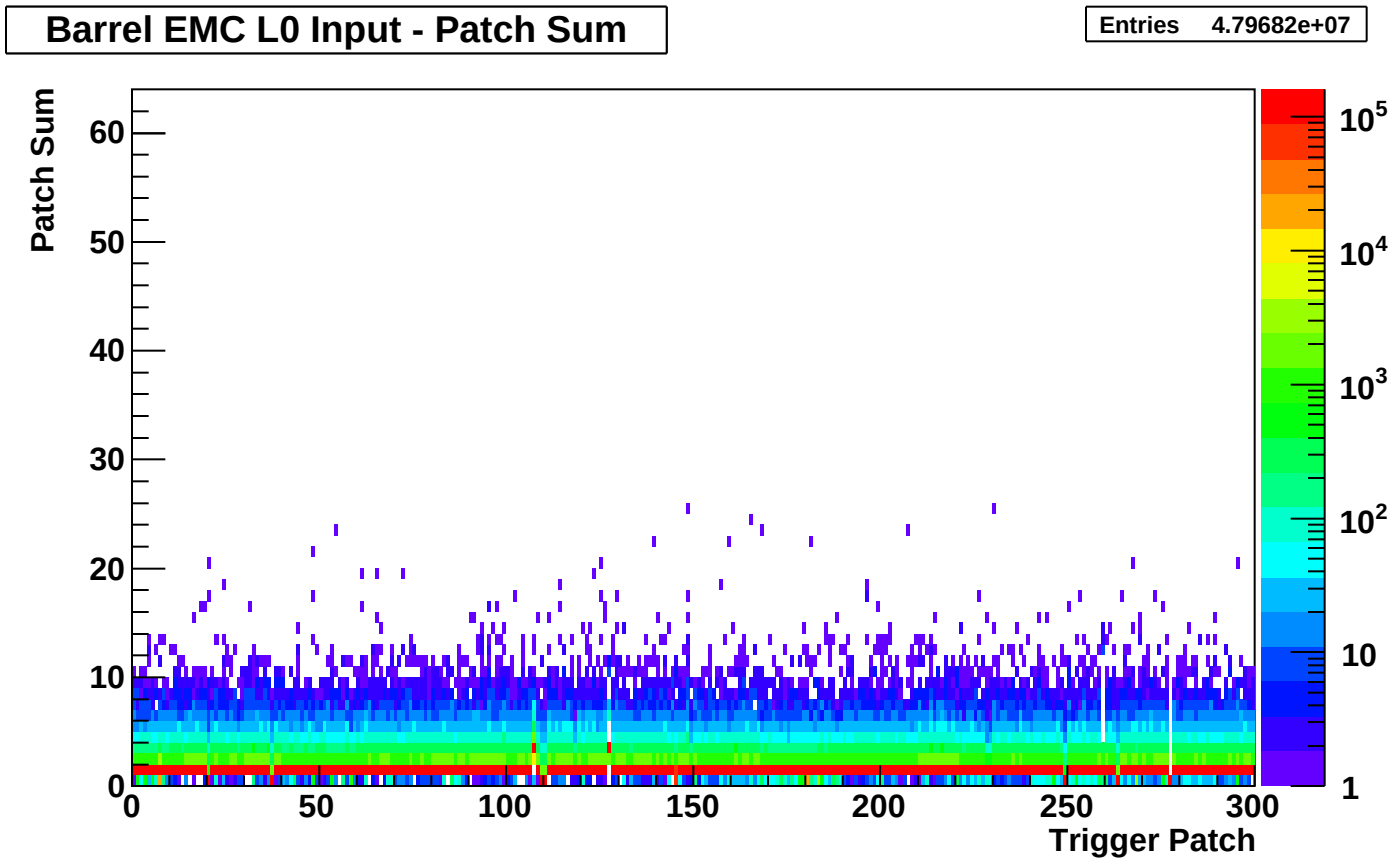
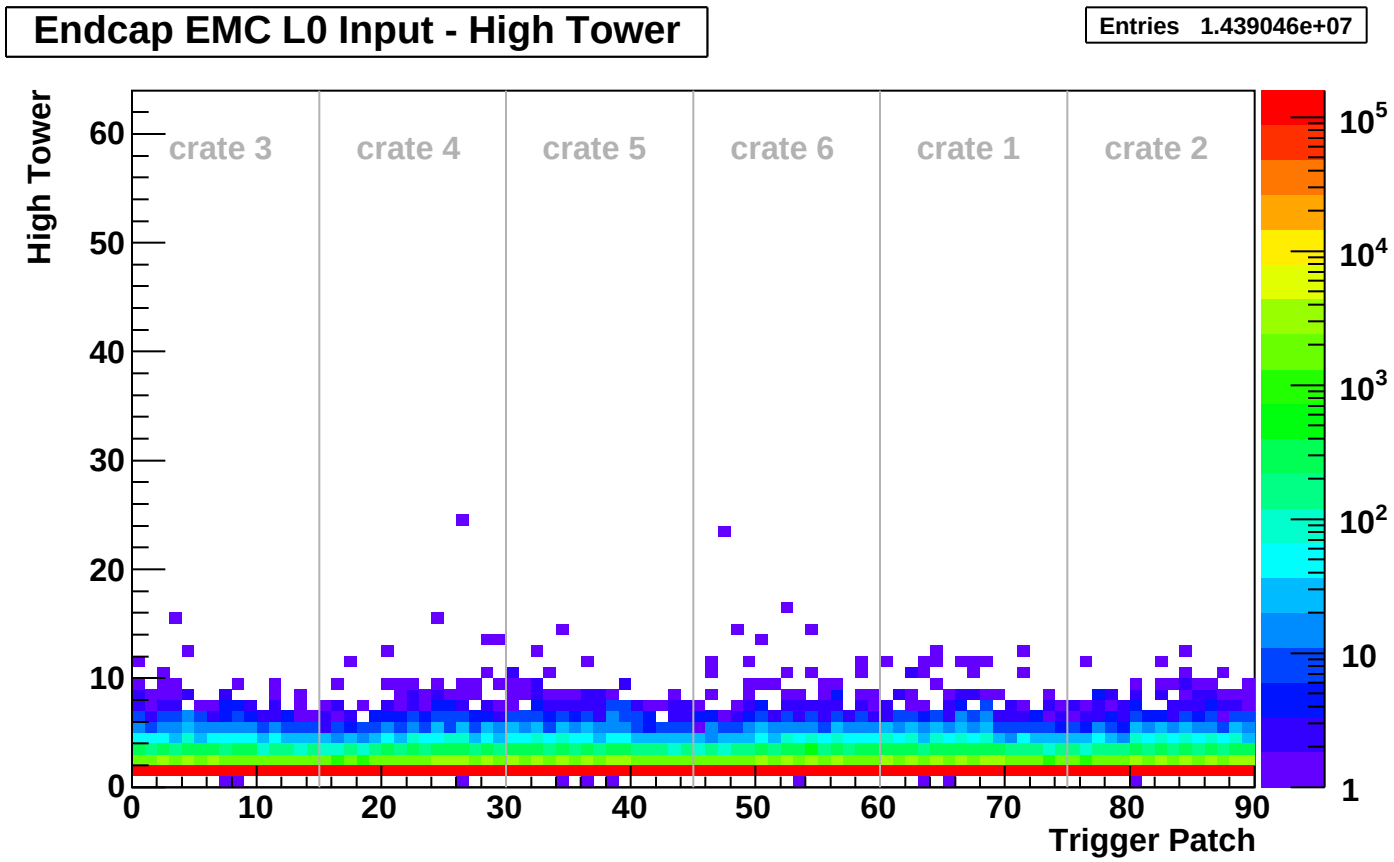
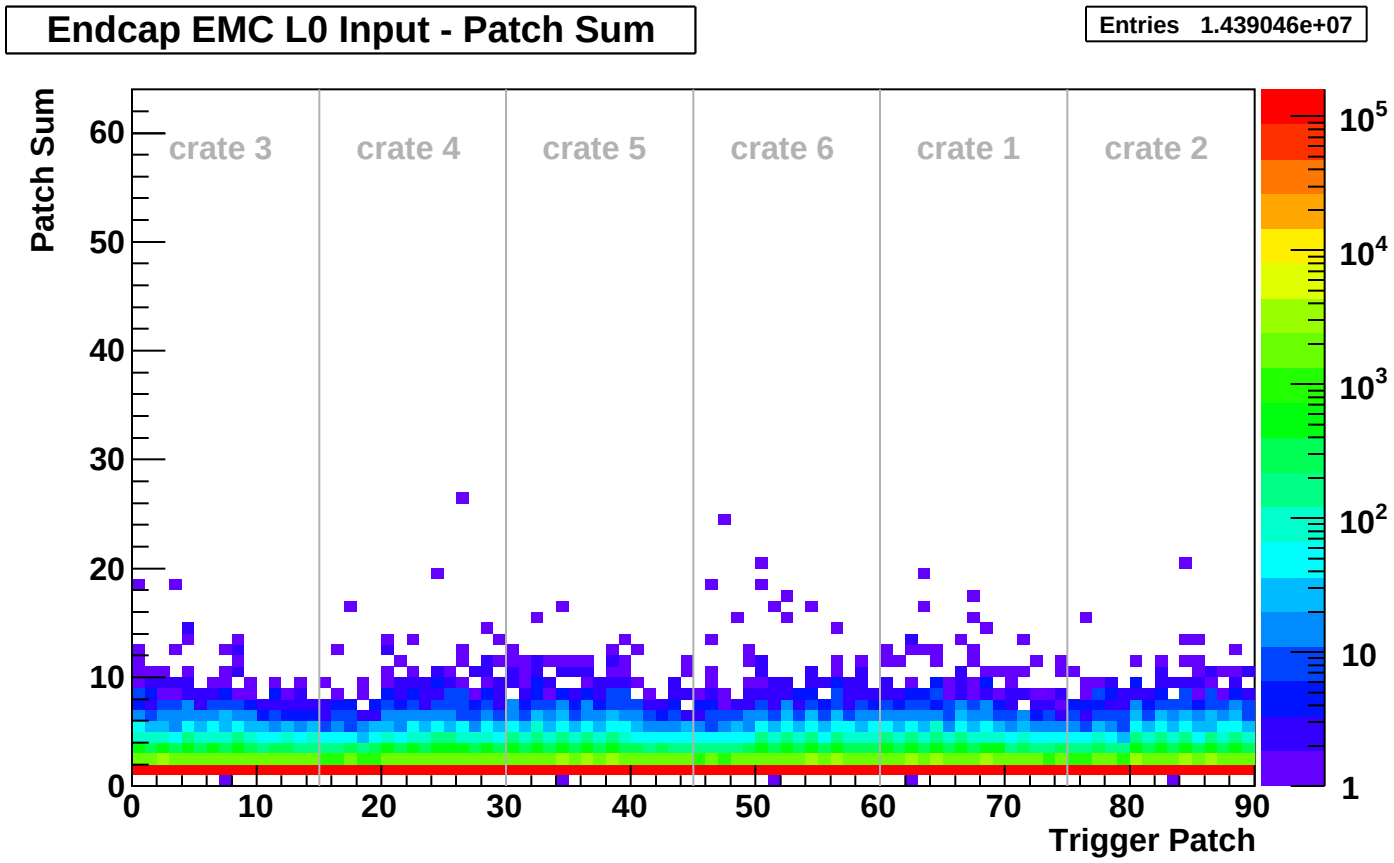
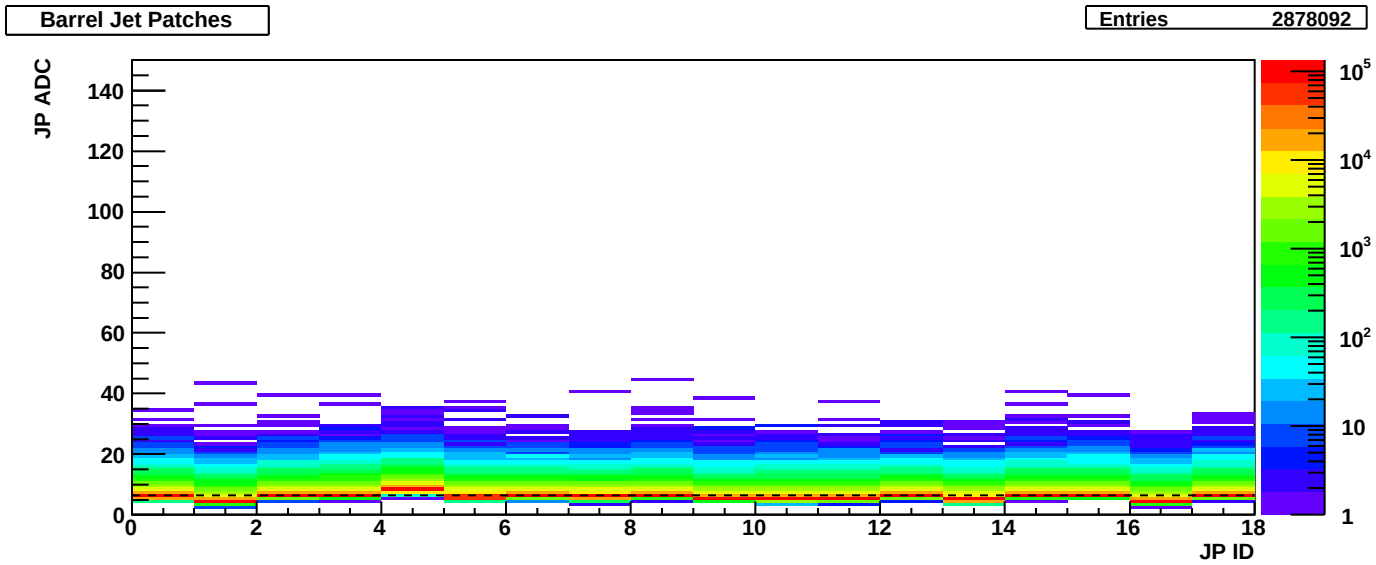
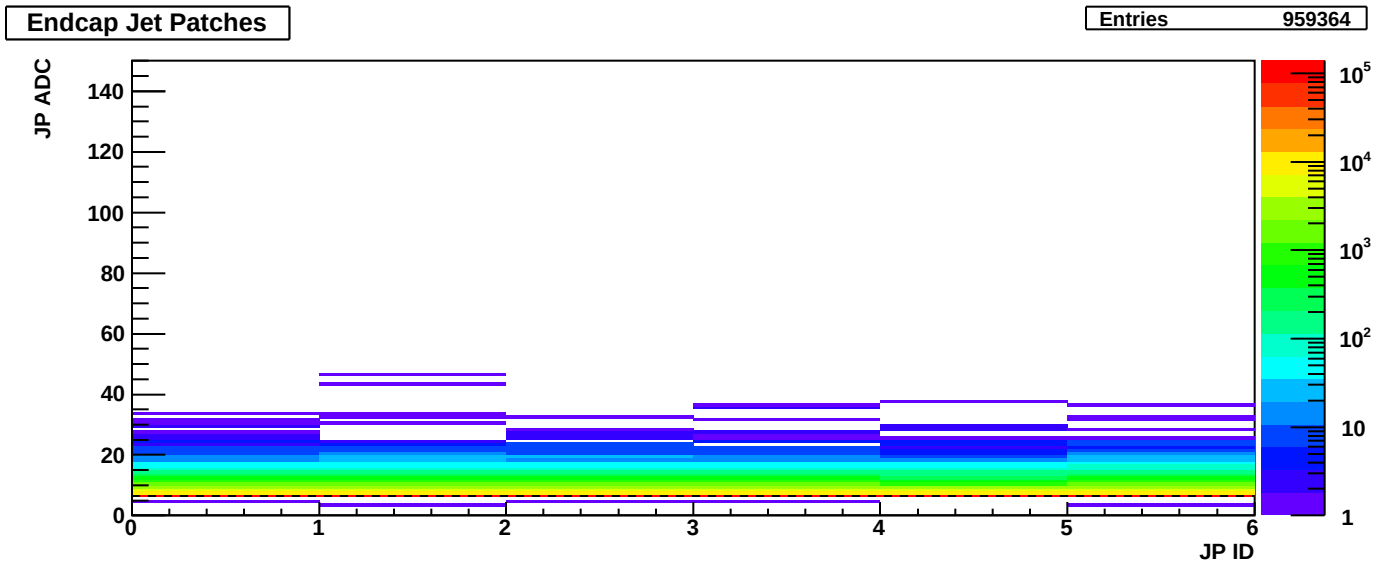

Barrel EMC L0 Input - High Tower
Entries 4.79682e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

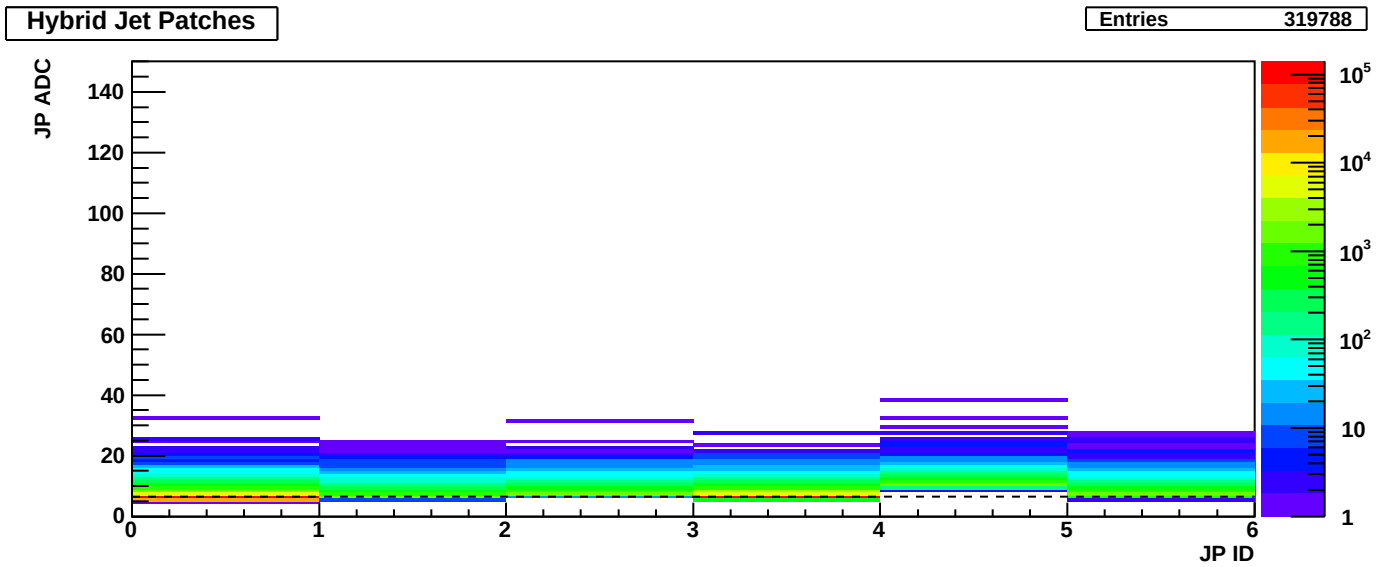

Barrel EMC L0 Input - Patch Sum
Entries 4.79682e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

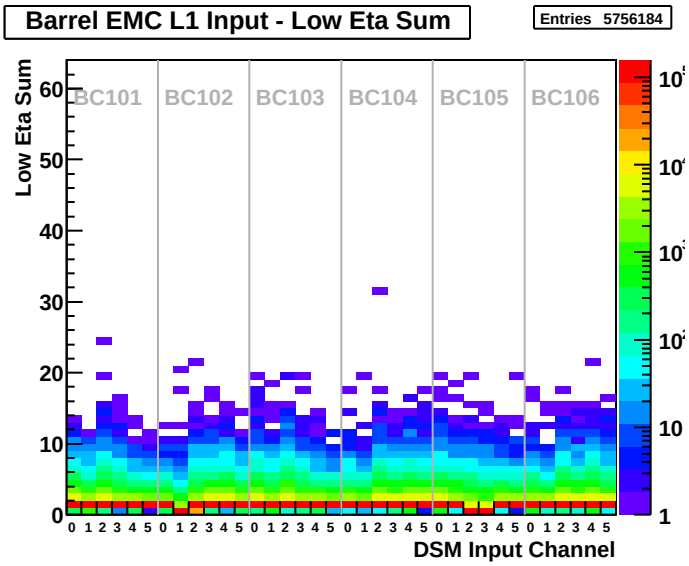

Endcap EMC L0 Input - High Tower
Entries 1.439046e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

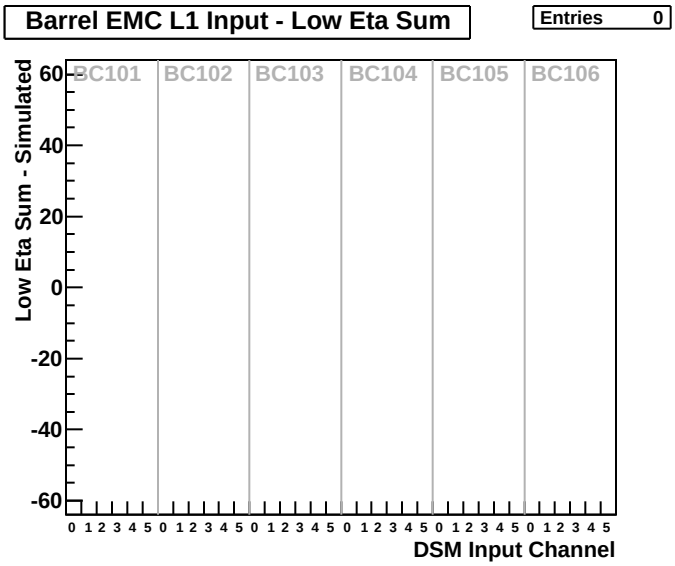

Endcap EMC L0 Input - Patch Sum
Entries 1.439046e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

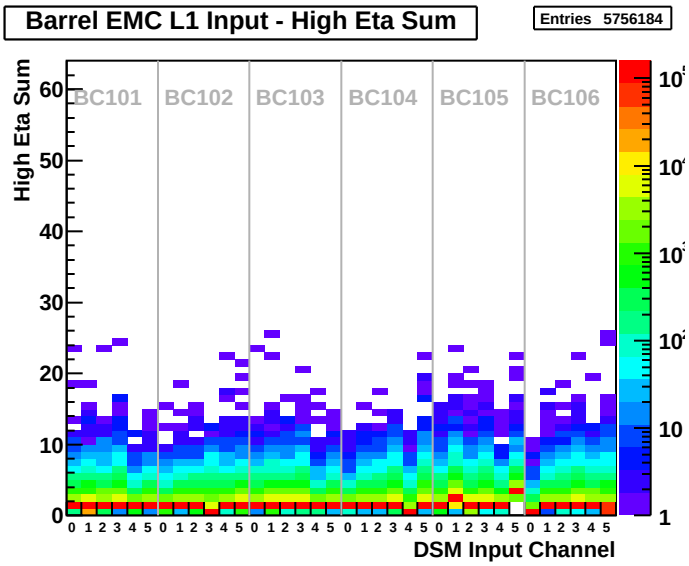

Barrel Jet Patches
Entries 2878092
JP ADC
JP ID

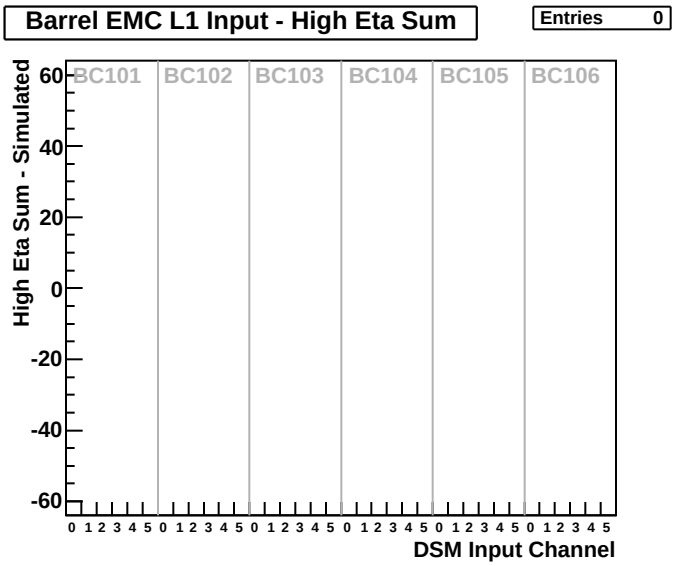

Endcap Jet Patches
Entries 959364
JP ADC
JP ID

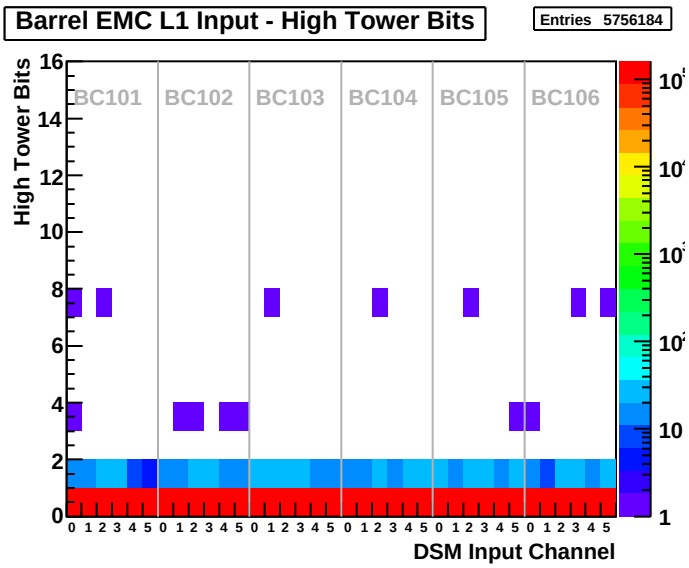

Hybrid Jet Patches
Entries 319788
JP ADC
JP ID

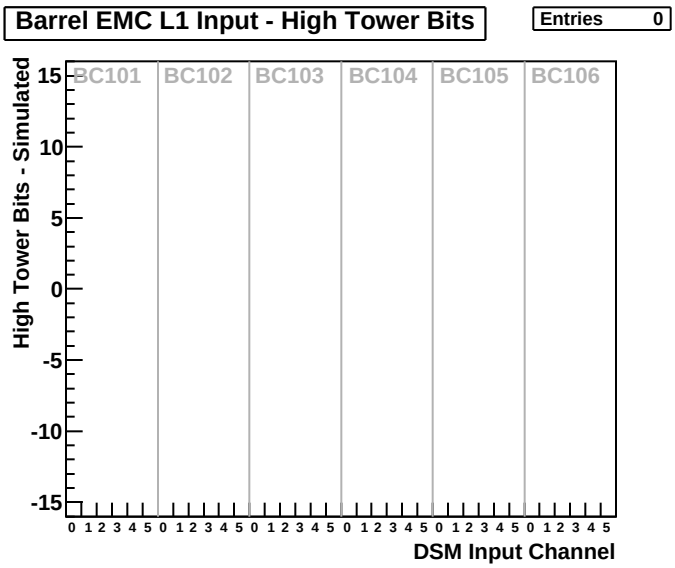

Barrel EMC L1 Input - Low Eta Sum
Entries 5756184
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

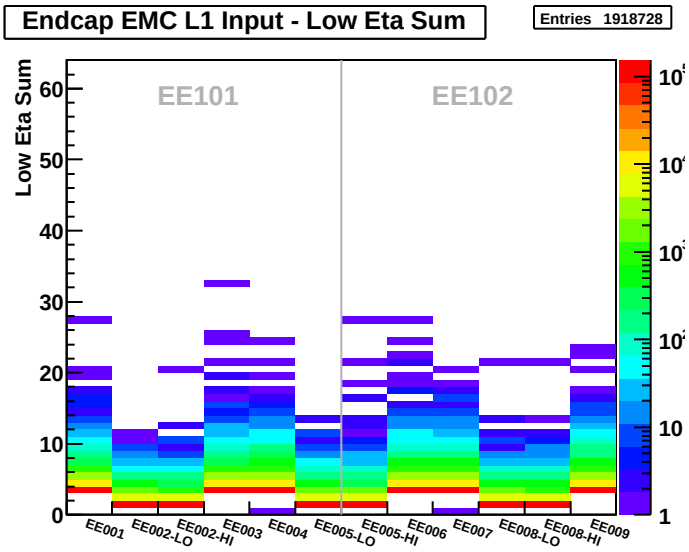

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

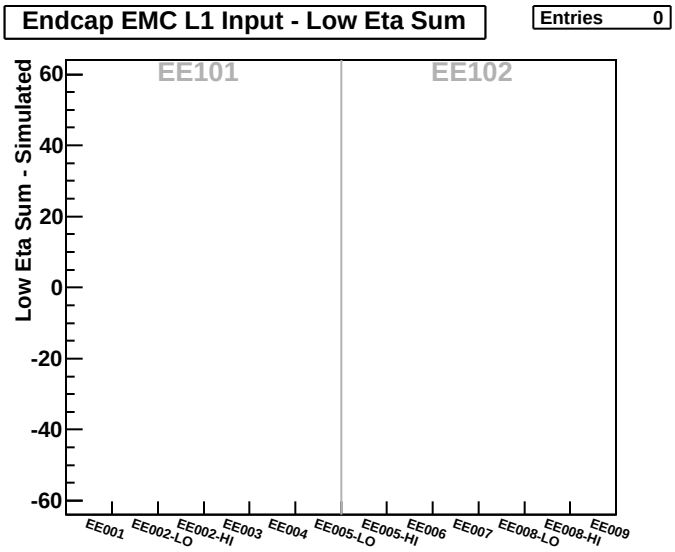

Barrel EMC L1 Input - High Eta Sum
Entries 5756184
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

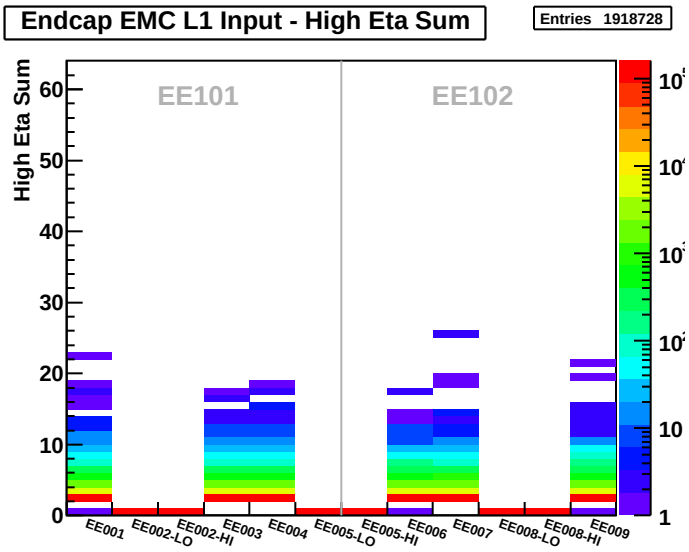

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

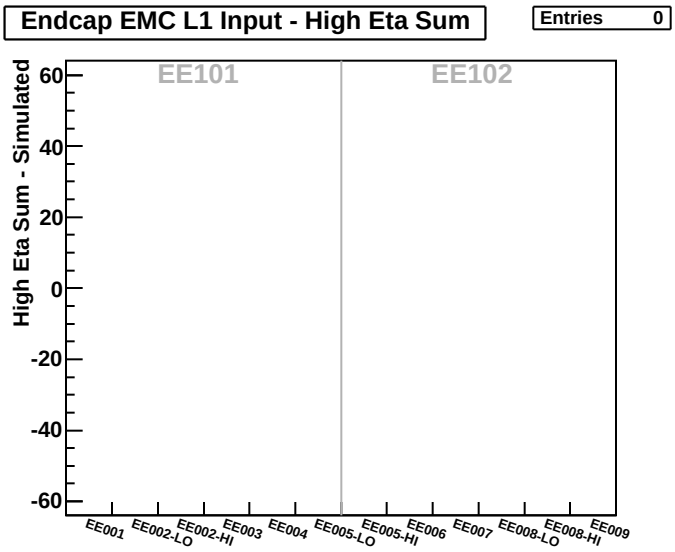

Barrel EMC L1 Input - High Tower Bits
Entries 5756184
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

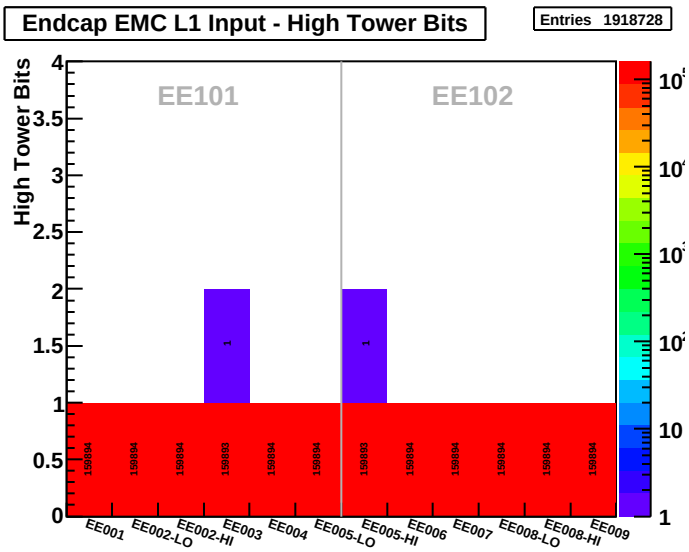

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

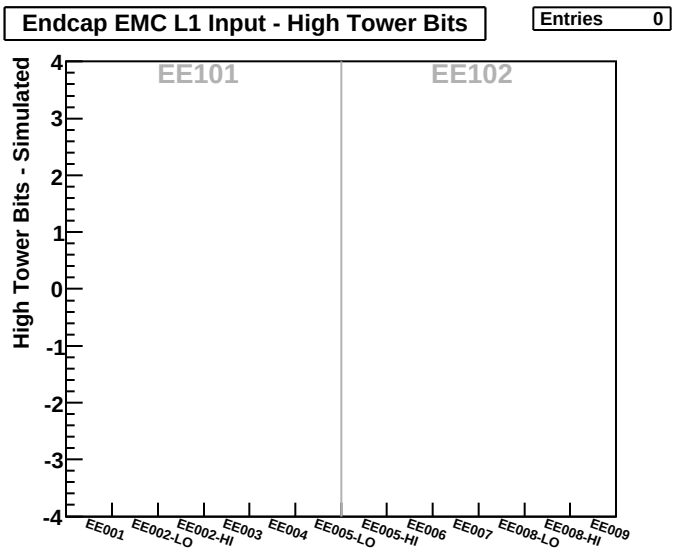

Endcap EMC L1 Input - Low Eta Sum
Entries 1918728
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

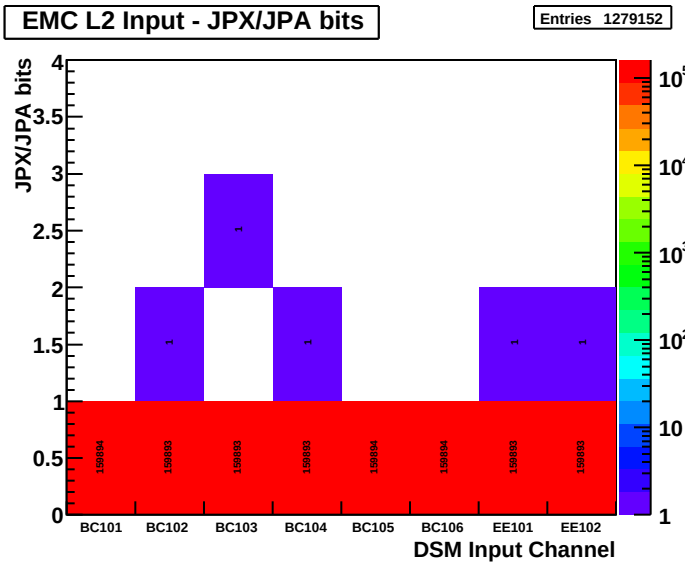

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

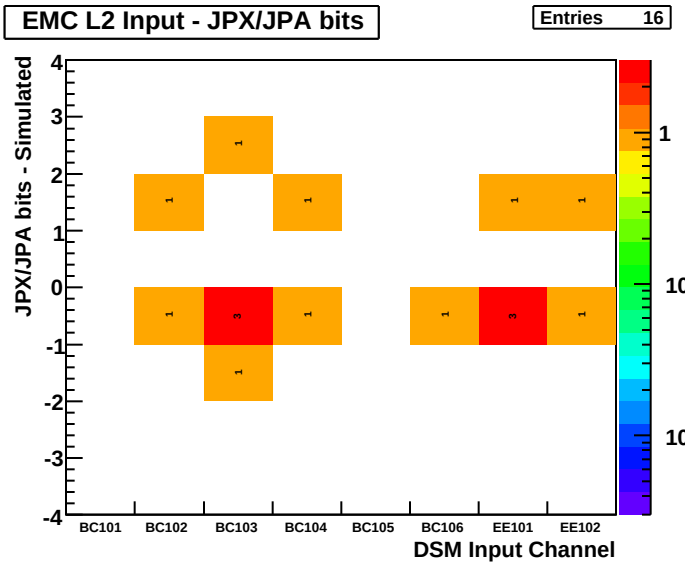

Endcap EMC L1 Input - High Eta Sum
Entries 1918728
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

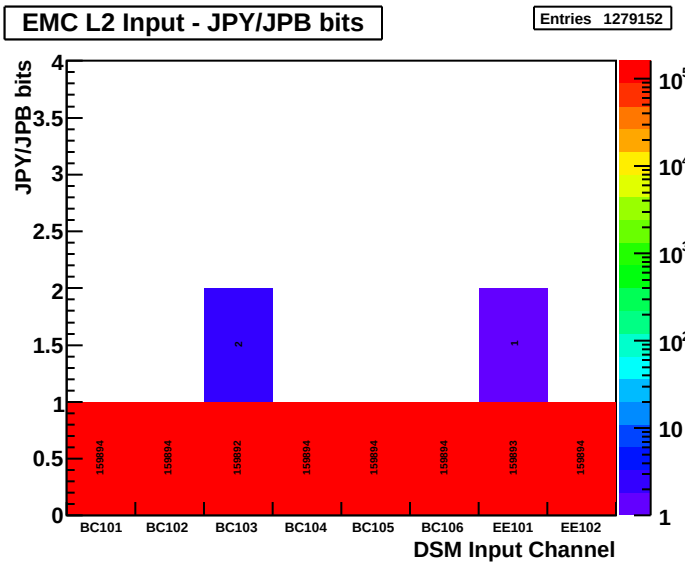

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

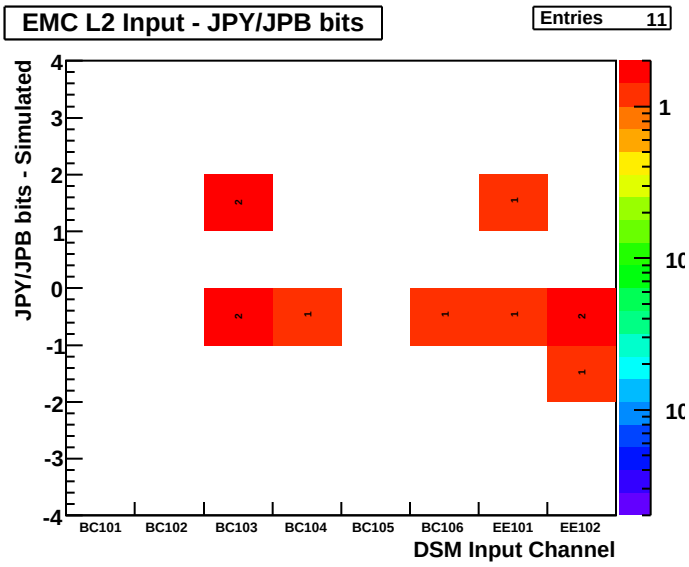

Endcap EMC L1 Input - High Tower Bits
Entries 1918728
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

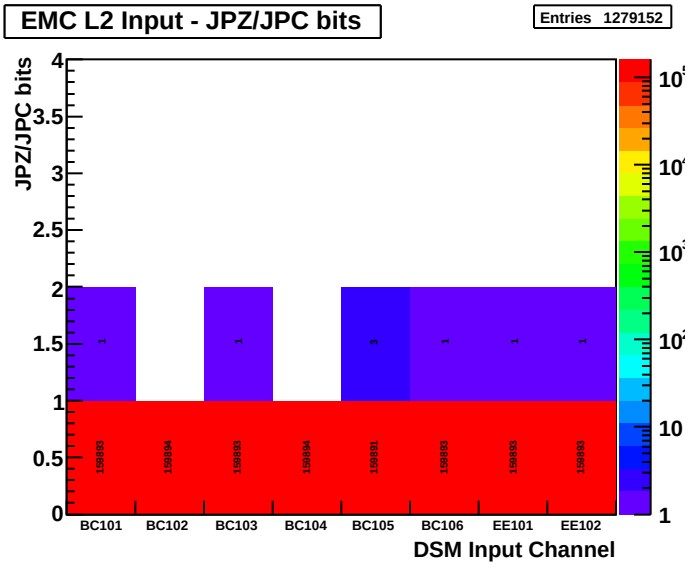

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

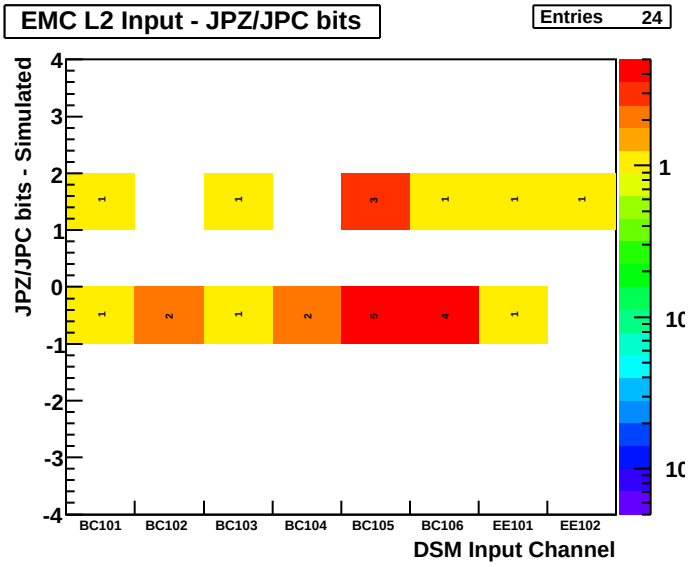

EMC L2 Input - JPX/JPA bits
Entries 1279152
JPX/JPA bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

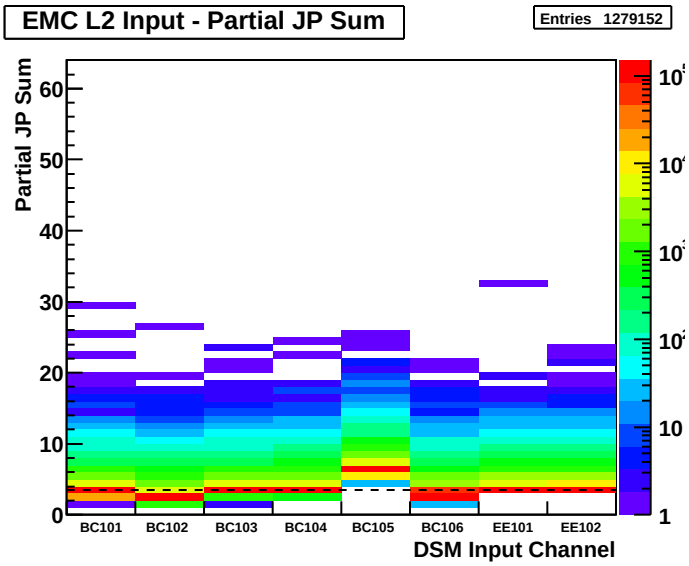

EMC L2 Input - JPX/JPA bits
Entries 16
JPX/JPA bits - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

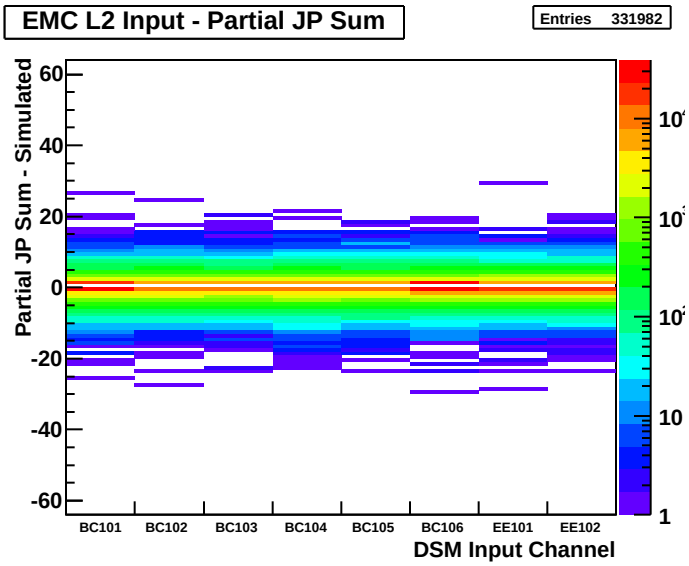

EMC L2 Input - JPY/JPB bits
Entries 1279152
JPY/JPB bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

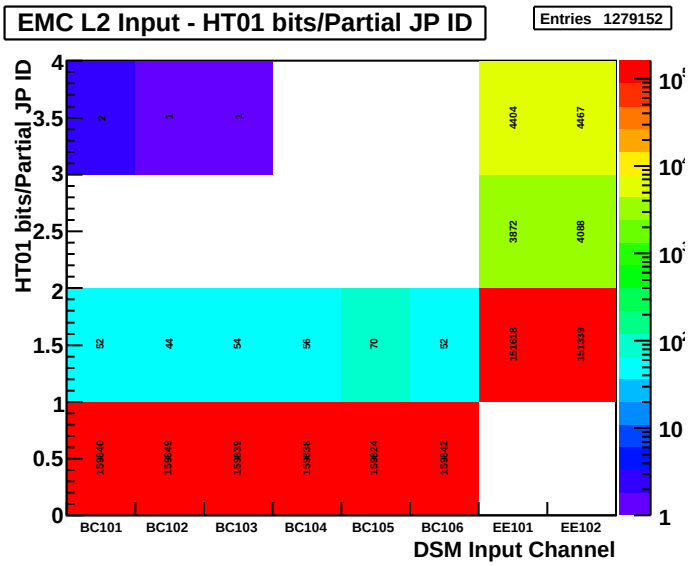

EMC L2 Input - JPY/JPB bits
Entries 11
JPY/JPB bits - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

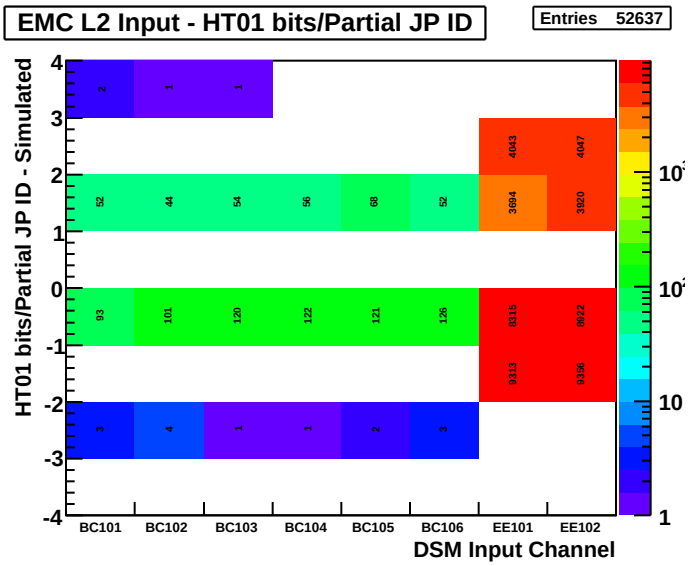

EMC L2 Input - JPZ/JPC bits
Entries 1279152
JPZ/JPC bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

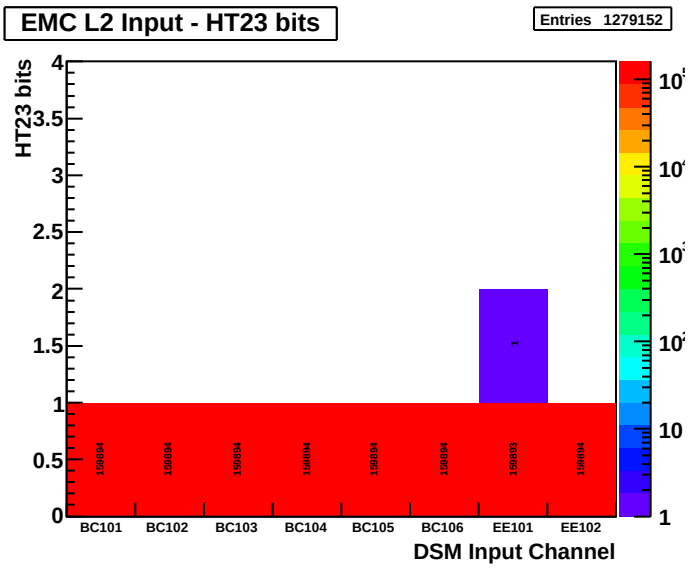

EMC L2 Input - JPZ/JPC bits
Entries 24
JPZ/JPC bits - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

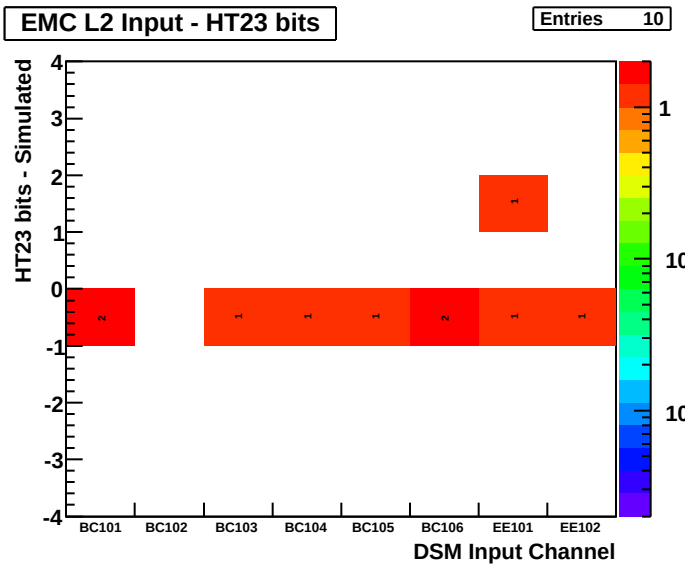

EMC L2 Input - Partial JP Sum
Entries 1279152
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

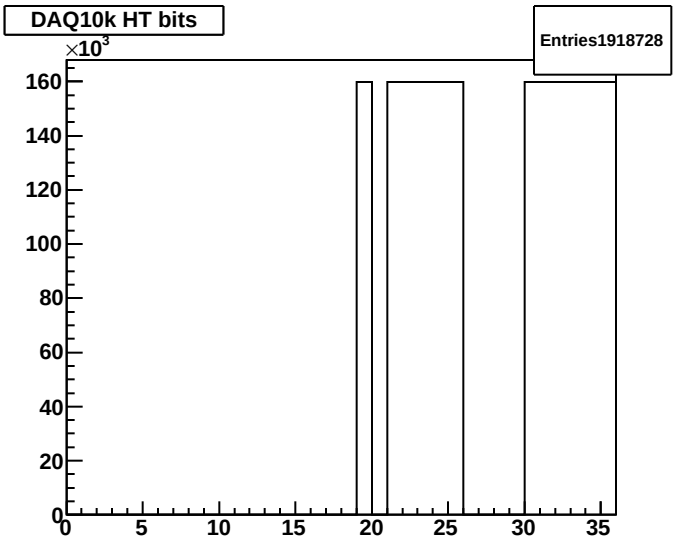

EMC L2 Input - Partial JP Sum
Entries 331982
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

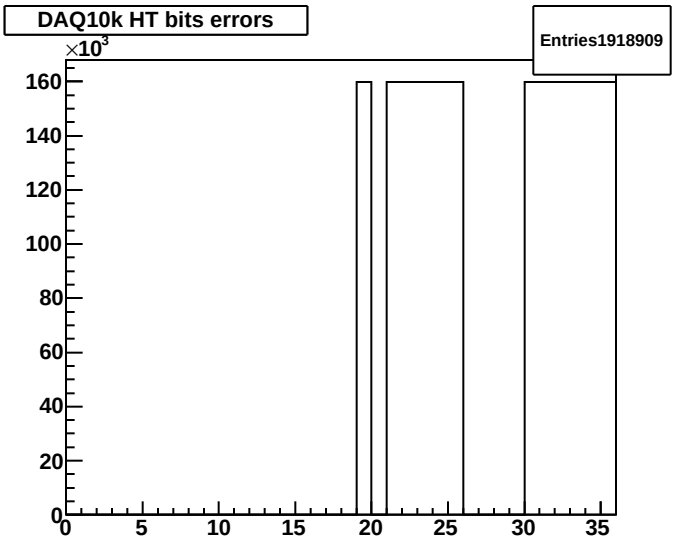

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1279152
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

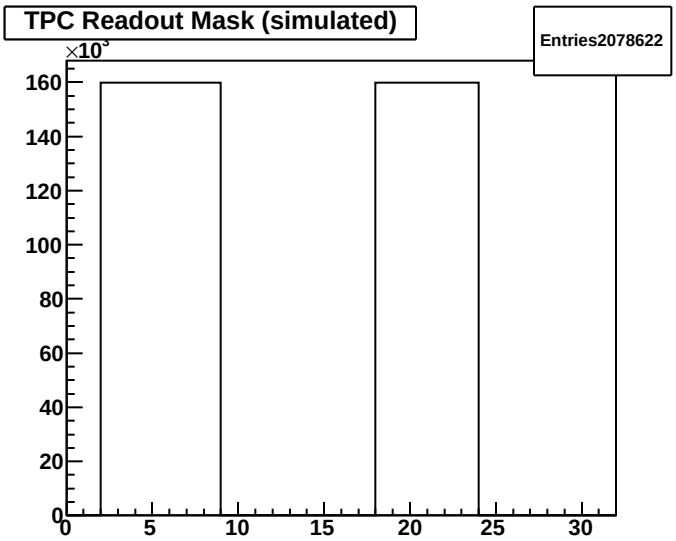

EMC L2 Input - HT01 bits/Partial JP ID
Entries 52637
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

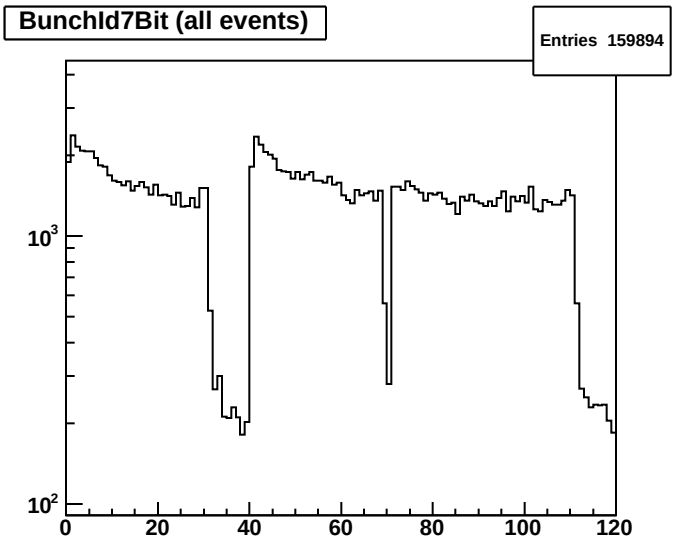

EMC L2 Input - HT23 bits
Entries 1279152
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

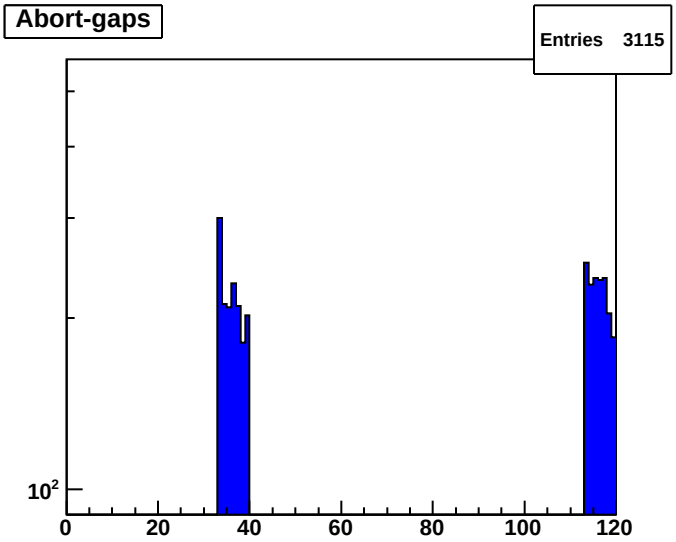

EMC L2 Input - HT23 bits
Entries 10
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

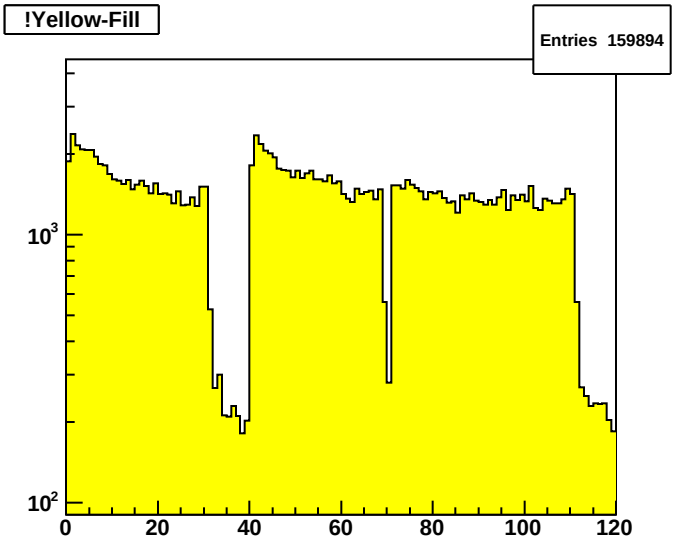

DAQ10k HT bits
Entries1918728
×10^3
160
140
120
100
80
60
40
20
0
0 5 10 15 20 25 30 35

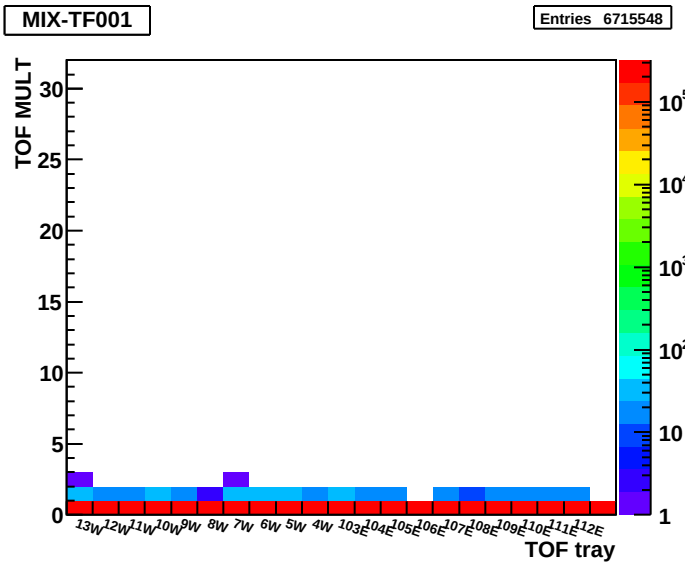

DAQ10k HT bits errors
Entries1918909
×10^3
160
140
120
100
80
60
40
20
0
0 5 10 15 20 25 30 35

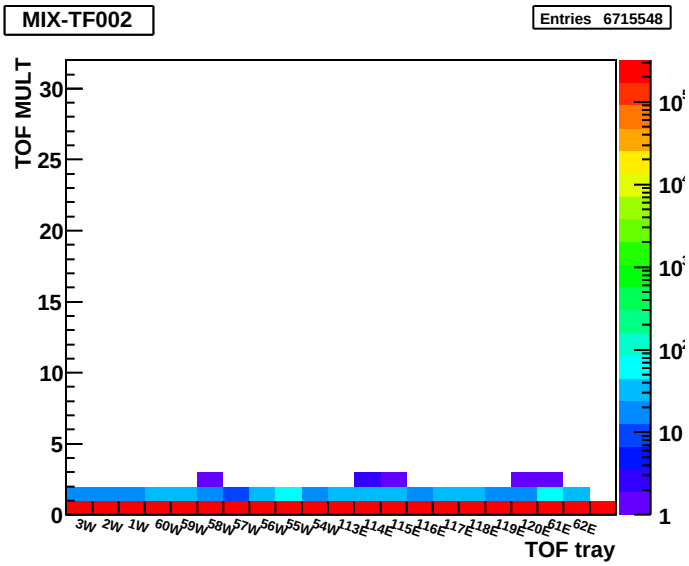

TPC Readout Mask (simulated)
Entries2078622
×10^3
160
140
120
100
80
60
40
20
0
0 5 10 15 20 25 30

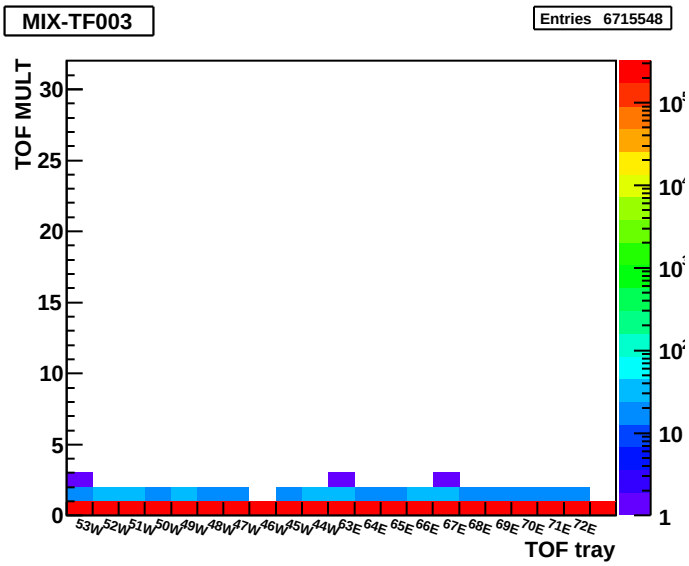

BunchId7Bit (all events)
Entries 159894
10^3
10^2
0 20 40 60 80 100 120

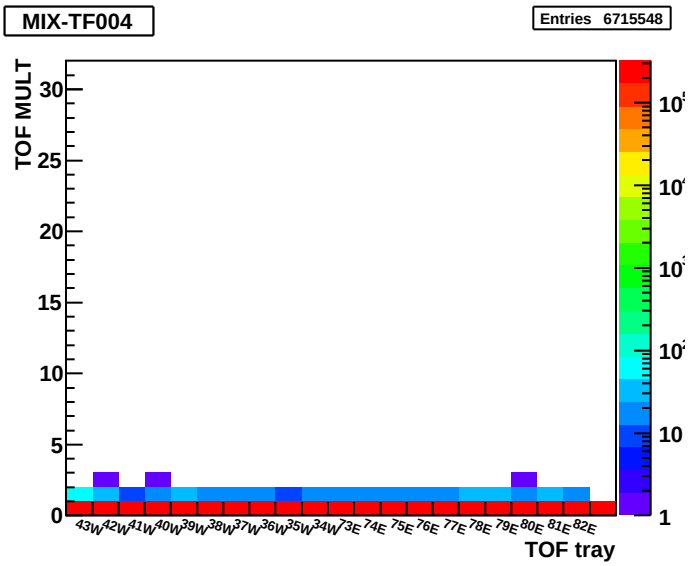

Abort-gaps
Entries 3115
10^2
0 20 40 60 80 100 120

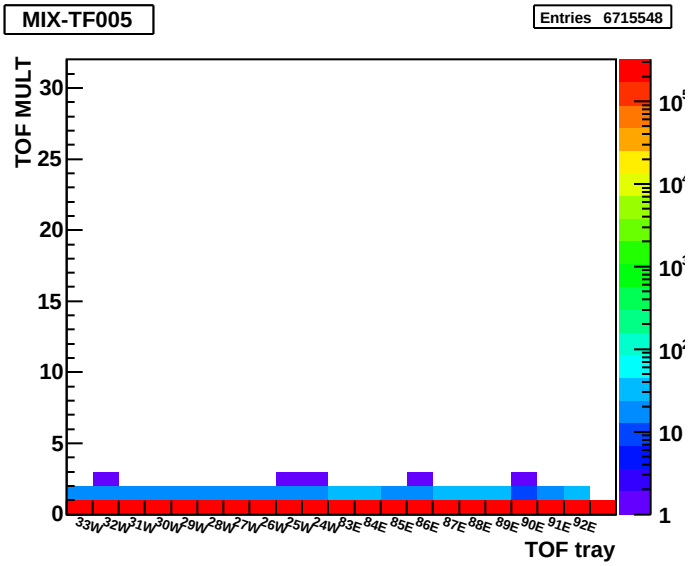

!Yellow-Fill
Entries 159894
10^3
10^2
0 20 40 60 80 100 120

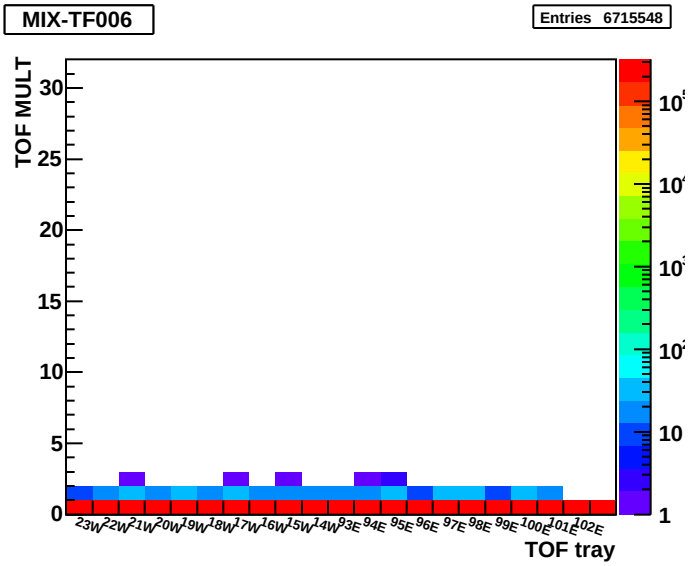

MIX-TF001
Entries 6715548
TOF MULT
TOF tray

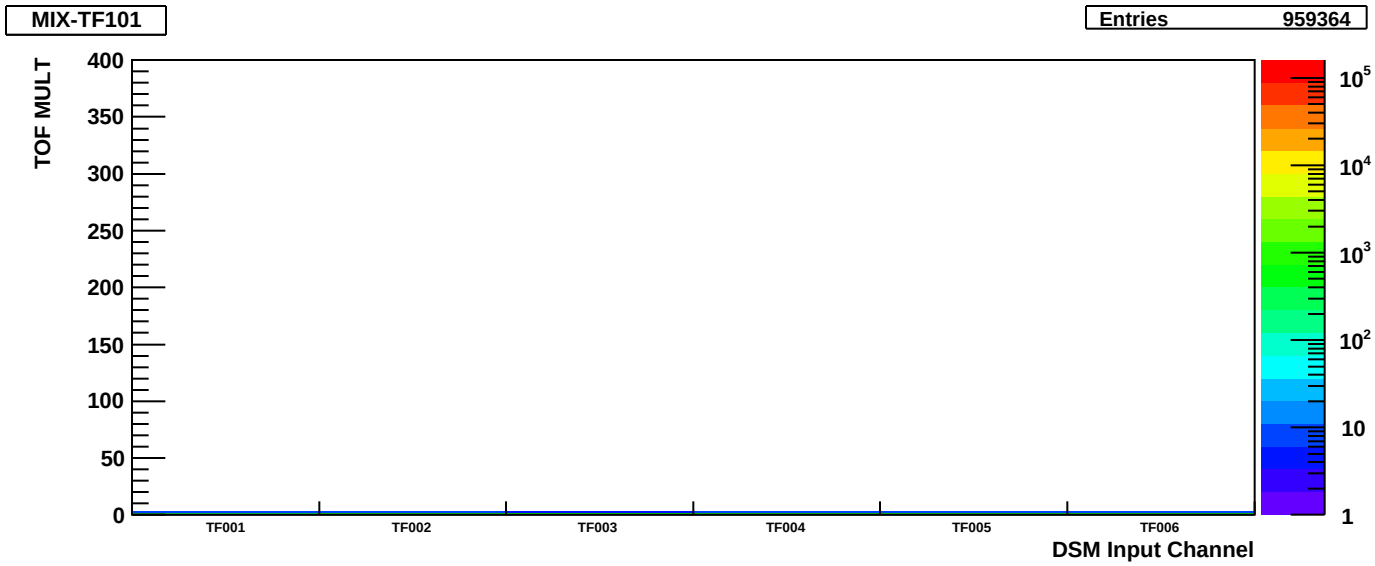

MIX-TF002
Entries 6715548
TOF MULT
TOF tray

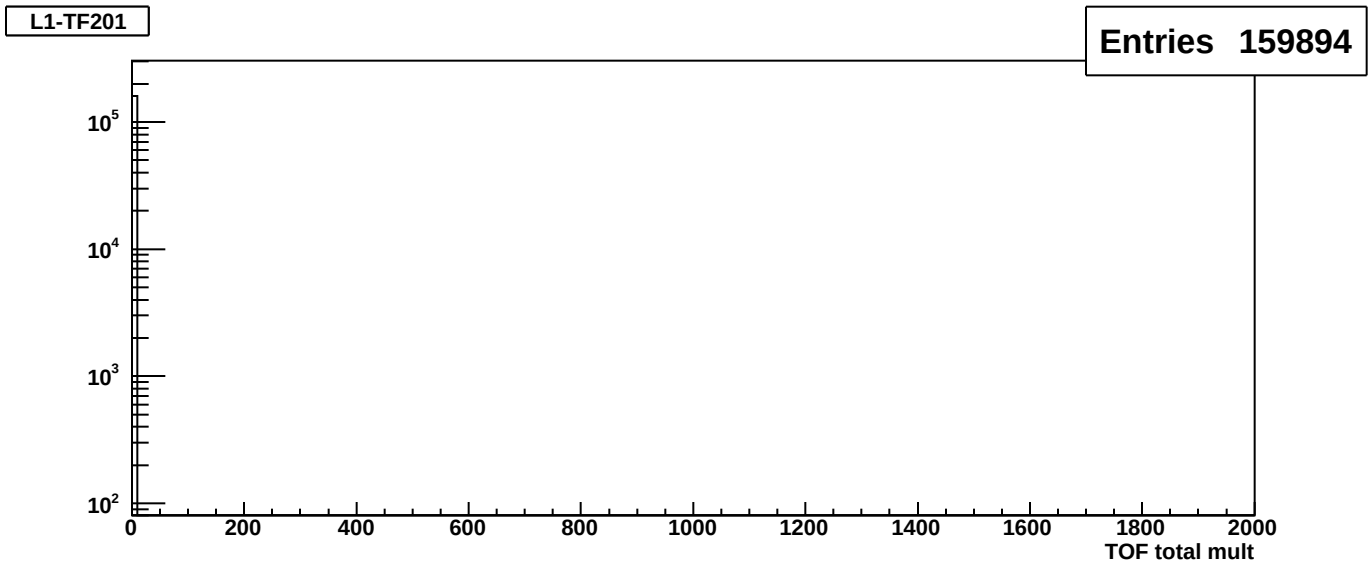

MIX-TF003
Entries 6715548
TOF MULT
TOF tray

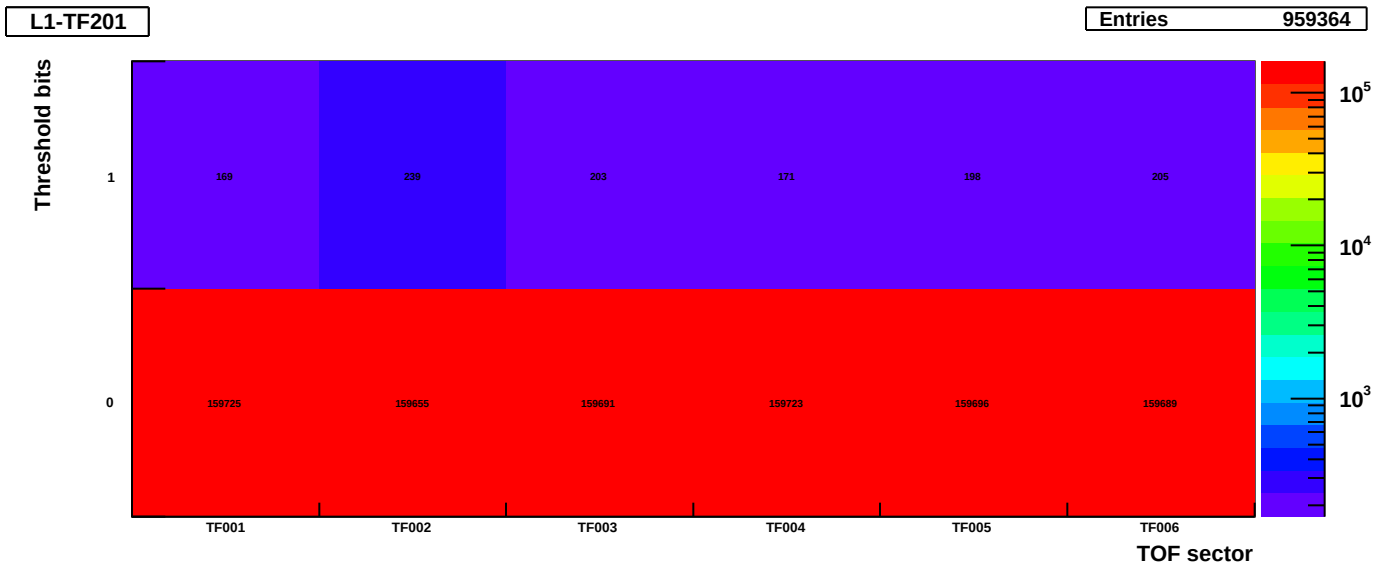

MIX-TF004
Entries 6715548
TOF MULT
TOF tray

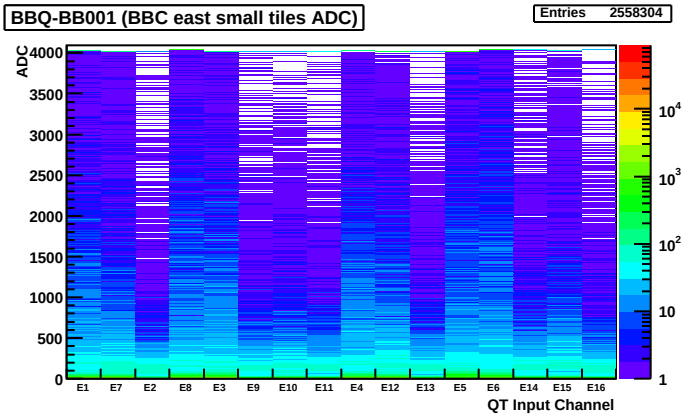

MIX-TF005
Entries 6715548
TOF MULT
TOF tray

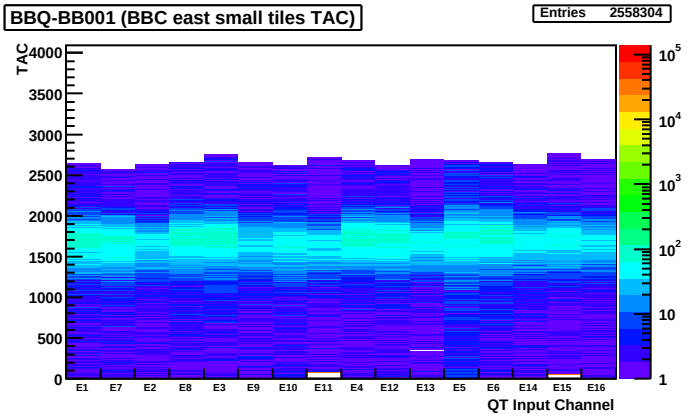

MIX-TF006
Entries 6715548
TOF MULT
TOF tray

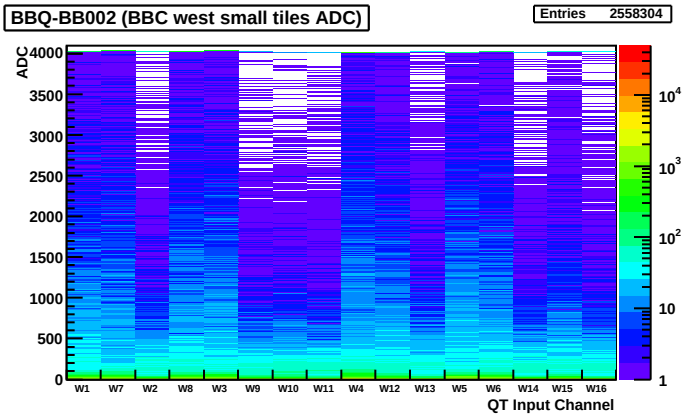

MIX-TF101
Entries 959364
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

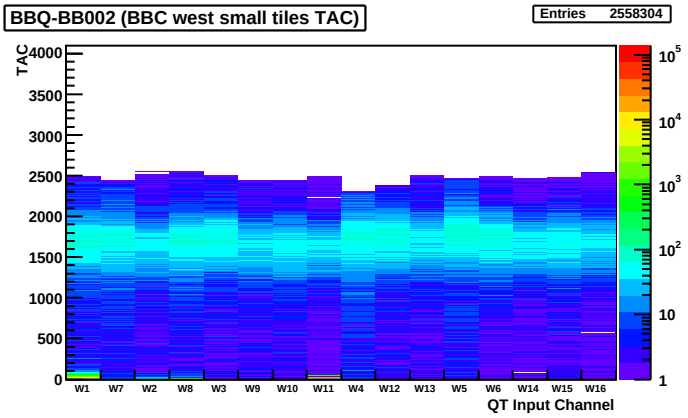

L1-TF201
Entries 159894
10^5
10^4
10^3
10^2
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

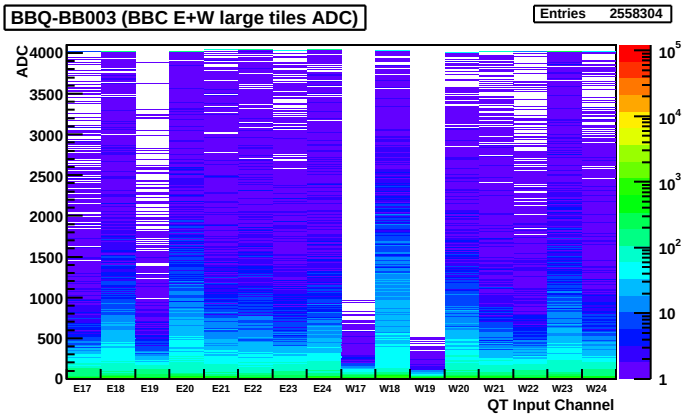

L1-TF201
Entries 959364
Threshold bits
1
0
169
239
203
171
198
205
159725
159655
159691
159723
159696
159689
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^5
10^4
10^3

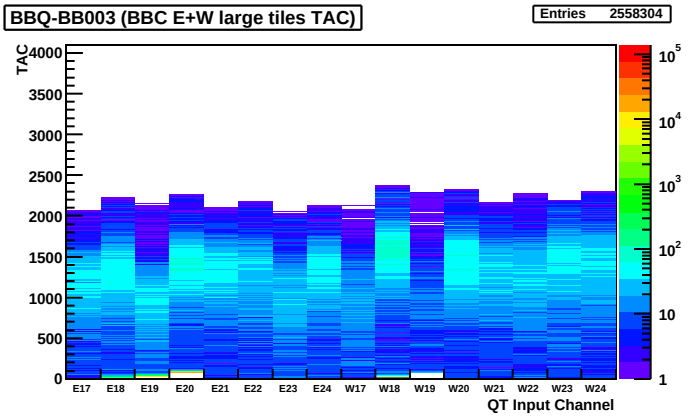

BBQ-BB001 (BBC east small tiles ADC)
Entries 2558304
ADC
QT Input Channel

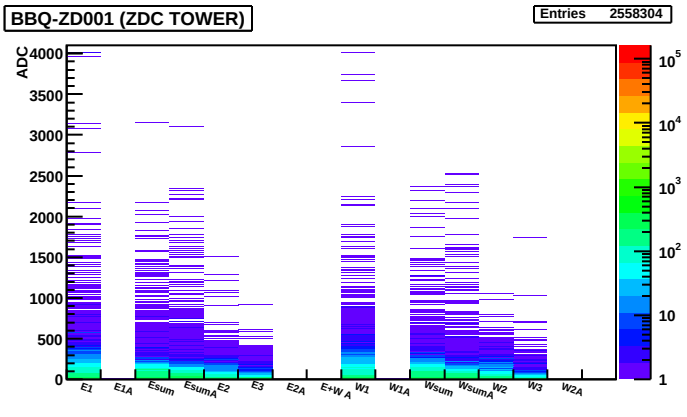

BBQ-BB001 (BBC east small tiles TAC)
Entries 2558304
TAC
QT Input Channel

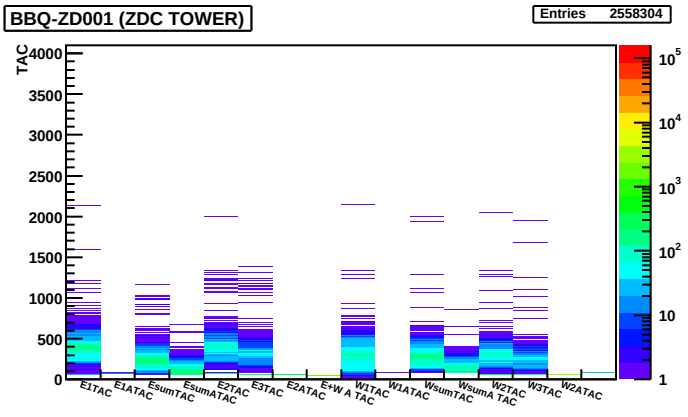

BBQ-BB002 (BBC west small tiles ADC)
Entries 2558304
ADC
QT Input Channel

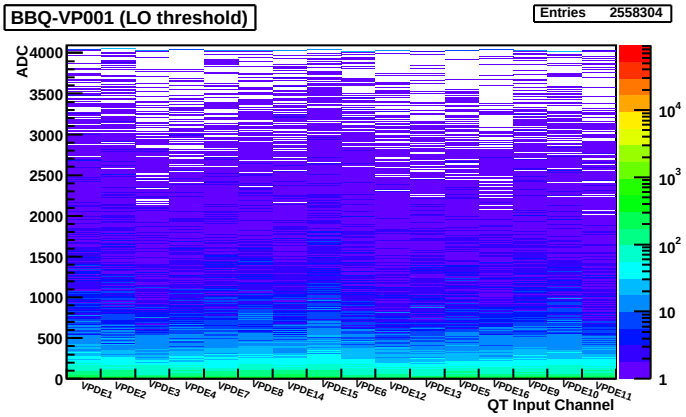

BBQ-BB002 (BBC west small tiles TAC)
Entries 2558304
TAC
QT Input Channel

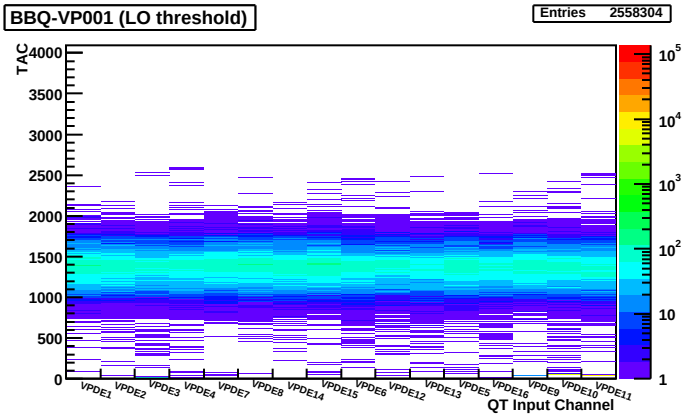

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 2558304
ADC
QT Input Channel

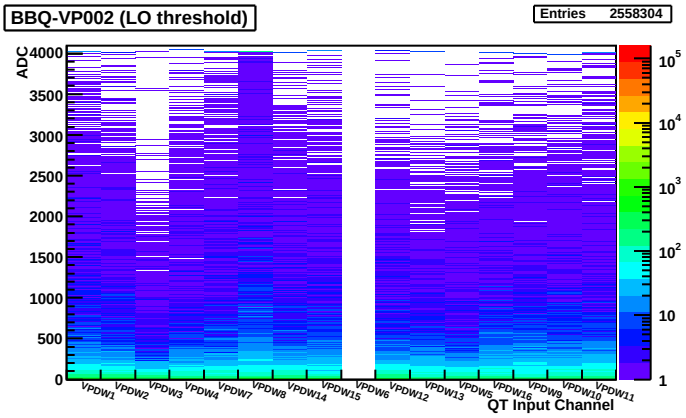

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 2558304
TAC
QT Input Channel

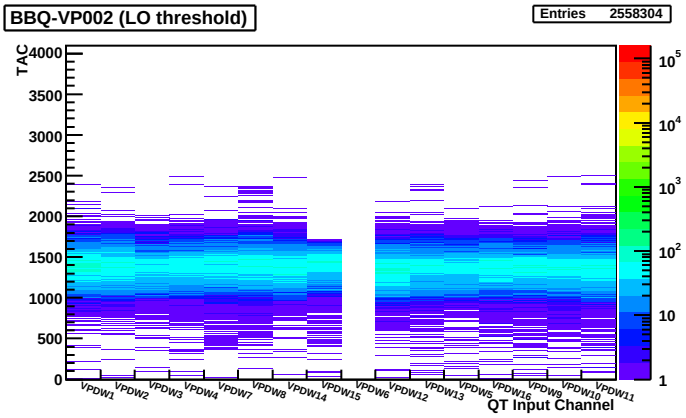

BBQ-ZD001 (ZDC TOWER)
Entries 2558304
ADC

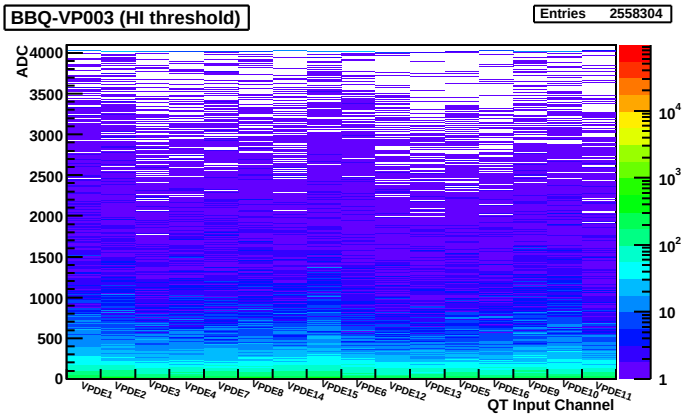

BBQ-ZD001 (ZDC TOWER)
Entries 2558304
TAC

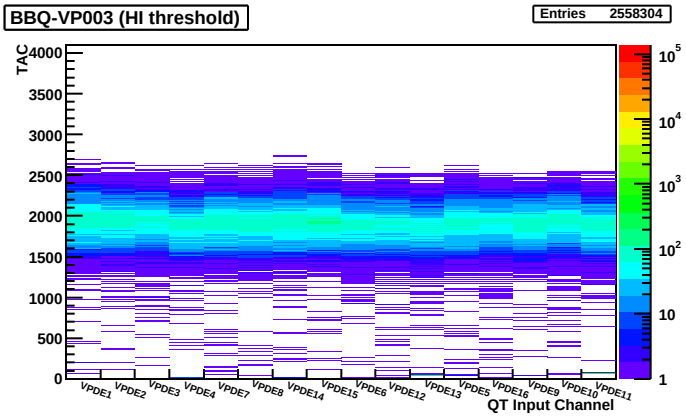

BBQ-VP001 (LO threshold)
Entries 2558304
ADC
QT Input Channel

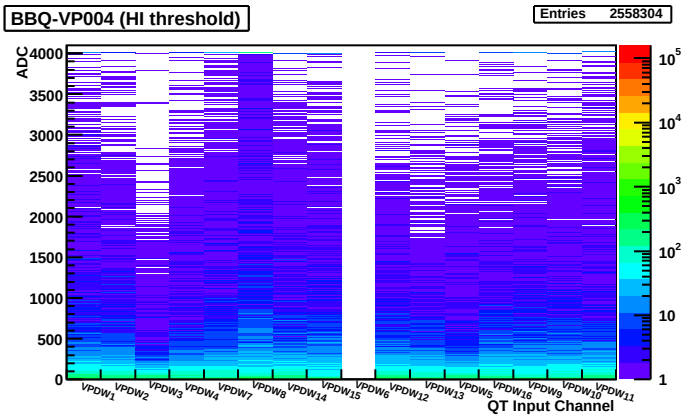

BBQ-VP001 (LO threshold)
Entries 2558304
TAC
QT Input Channel

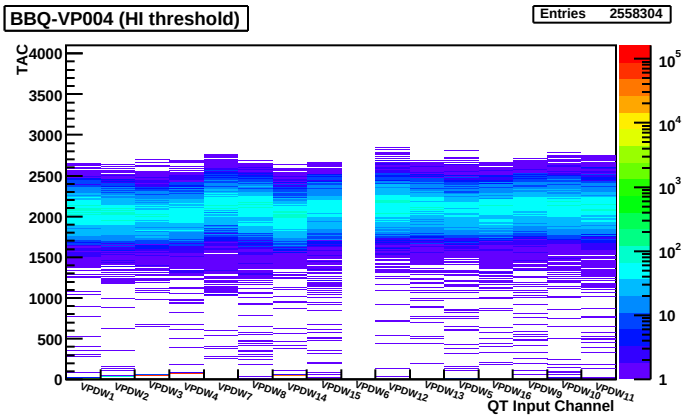

BBQ-VP002 (LO threshold)
Entries 2558304
ADC
QT Input Channel

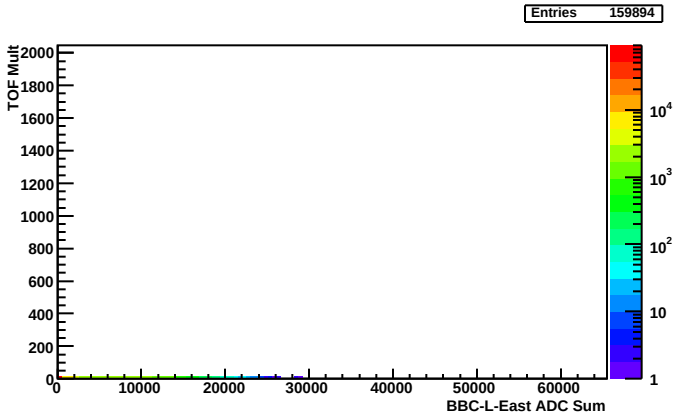

BBQ-VP002 (LO threshold)
Entries 2558304
TAC
QT Input Channel

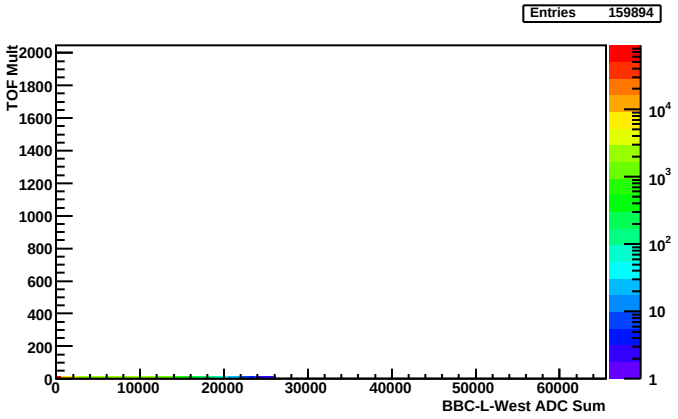

BBQ-VP003 (HI threshold)
Entries 2558304
ADC
QT Input Channel

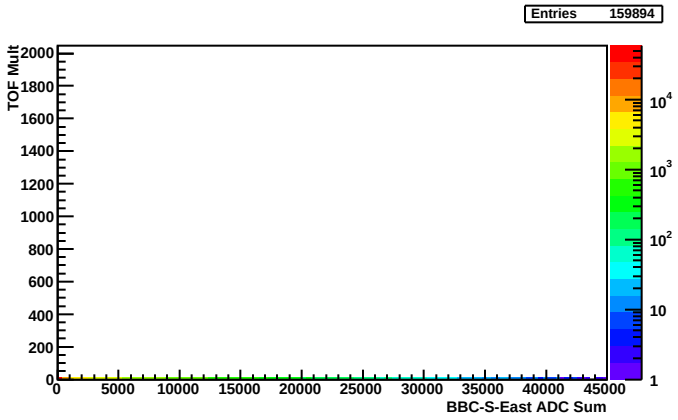

BBQ-VP003 (HI threshold)
Entries 2558304
TAC
QT Input Channel

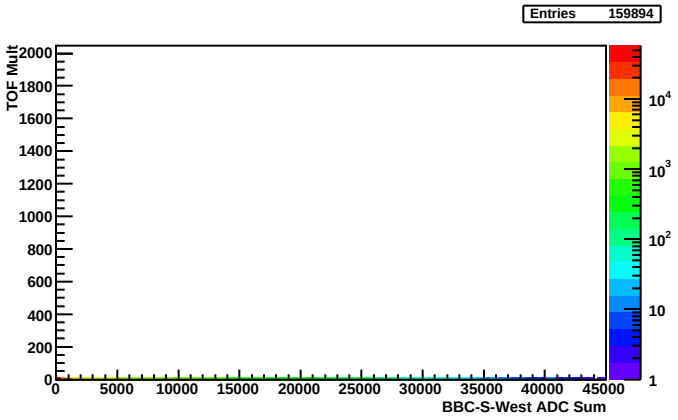

BBQ-VP004 (HI threshold)
Entries 2558304
ADC
QT Input Channel

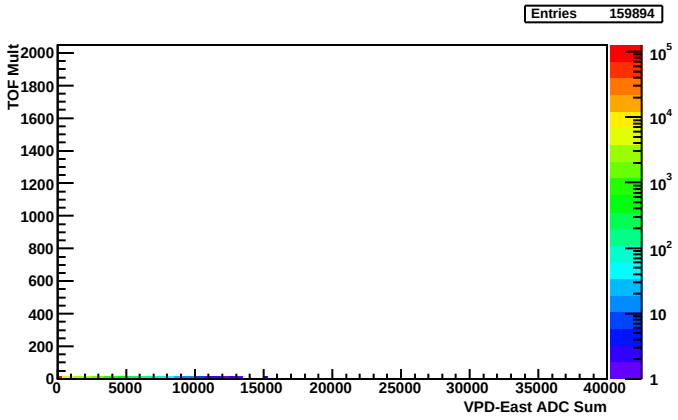

BBQ-VP004 (HI threshold)
Entries 2558304
TAC
QT Input Channel

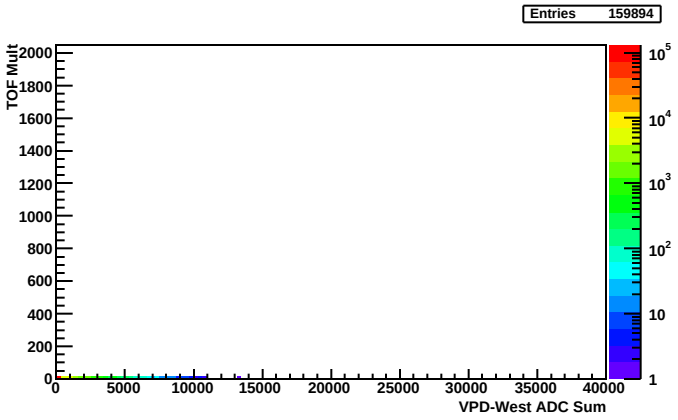

Entries 159894
TOF Mult
BBC-L-East ADC Sum

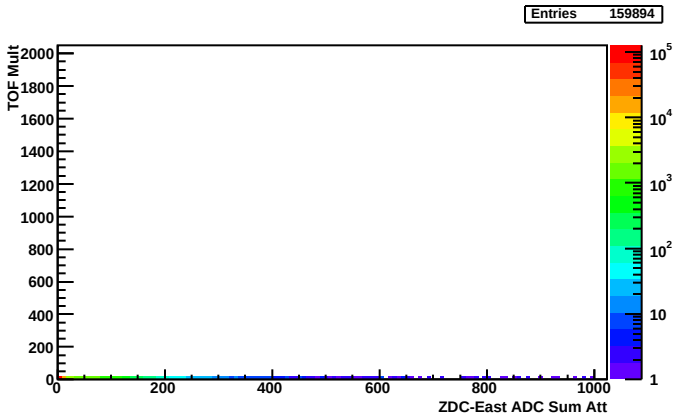

Entries 159894
TOF Mult
BBC-L-West ADC Sum

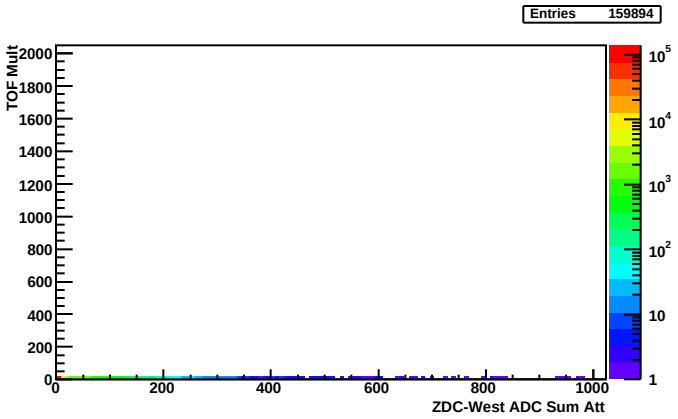

Entries 159894
TOF Mult
BBC-S-East ADC Sum

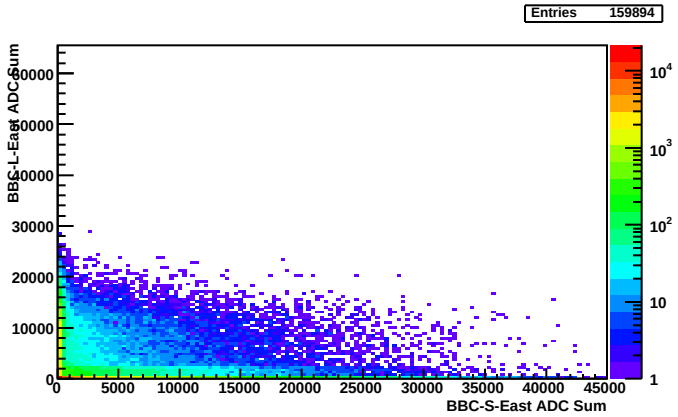

Entries 159894
TOF Mult
BBC-S-West ADC Sum

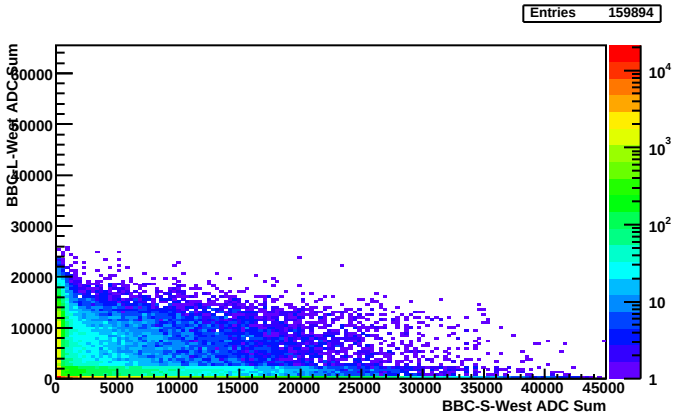

Entries 159894
TOF Mult
VPD-East ADC Sum

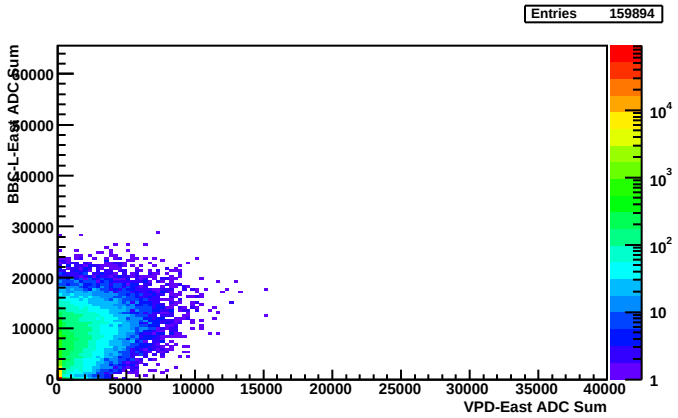

Entries 159894
TOF Mult
VPD-West ADC Sum

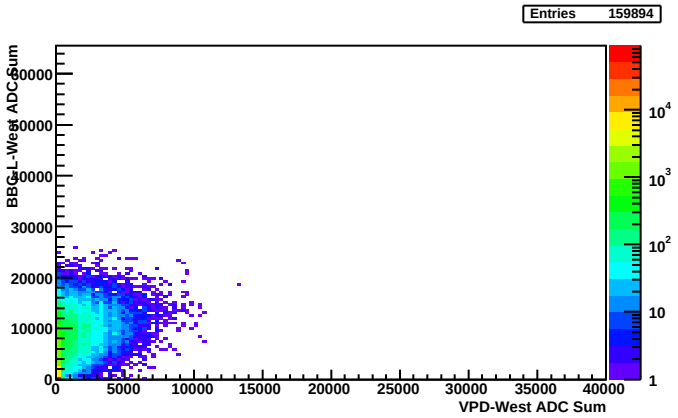

Entries 159894
TOF Mult
ZDC-East ADC Sum Att

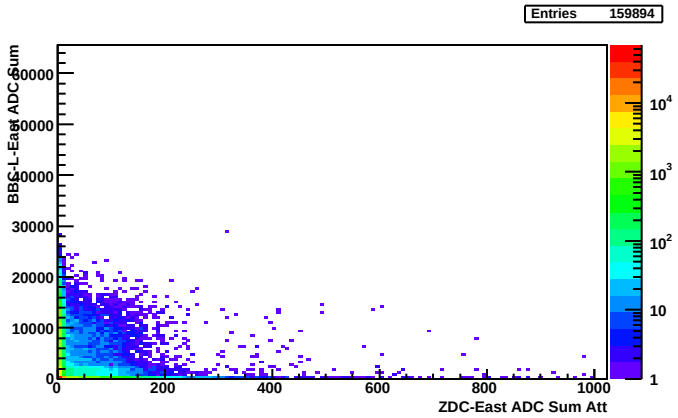

Entries 159894
TOF Mult
ZDC-West ADC Sum Att

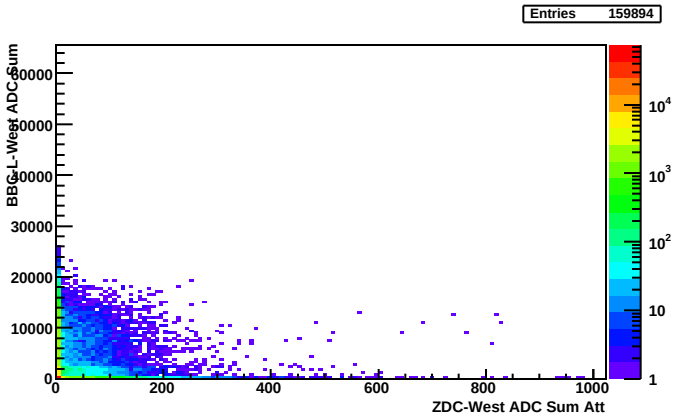

Entries 159894
BBC-L-East ADC Sum
BBC-S-East ADC Sum

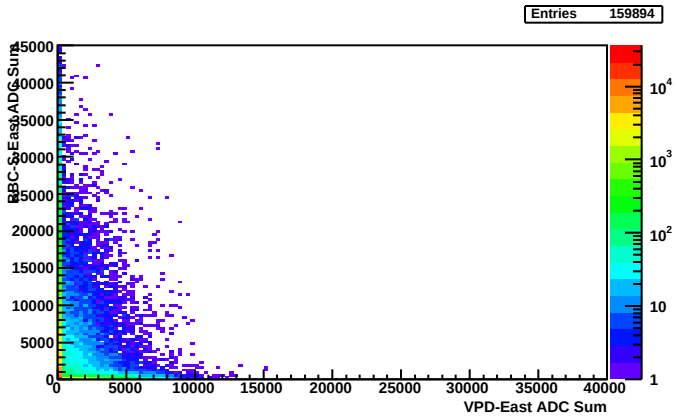

Entries 159894
BBC-L-West ADC Sum
BBC-S-West ADC Sum

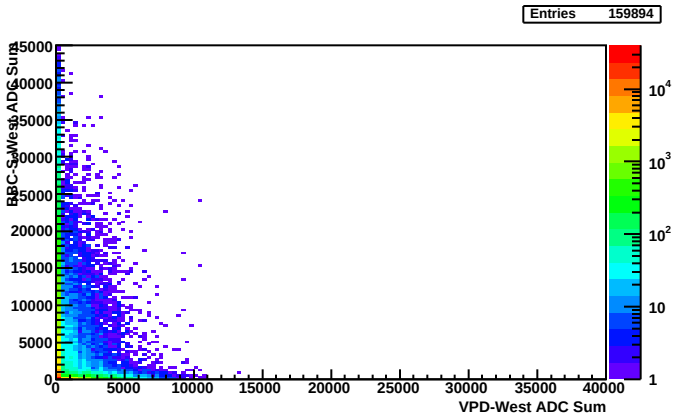

Entries 159894
BBC-L-East ADC Sum
VPD-East ADC Sum

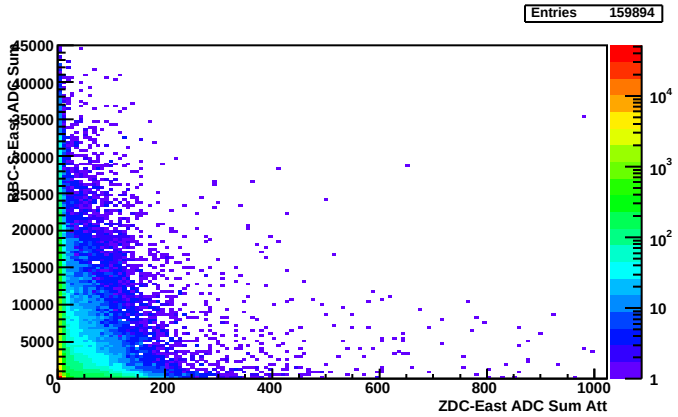

Entries 159894
BBC-L-West ADC Sum
VPD-West ADC Sum

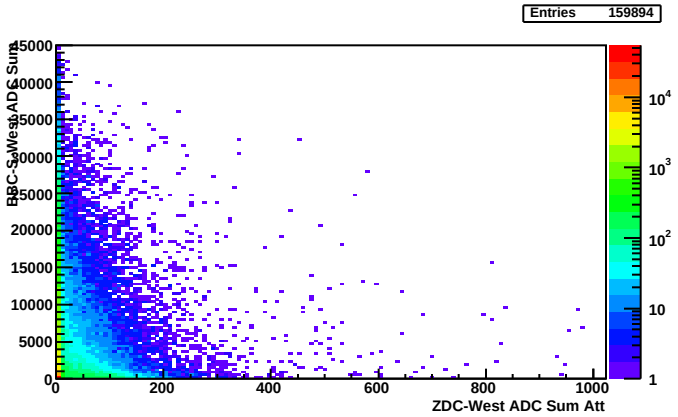

Entries 159894
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

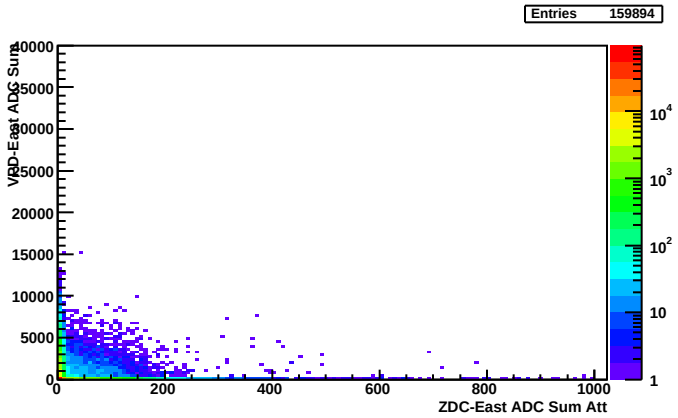

Entries 159894
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

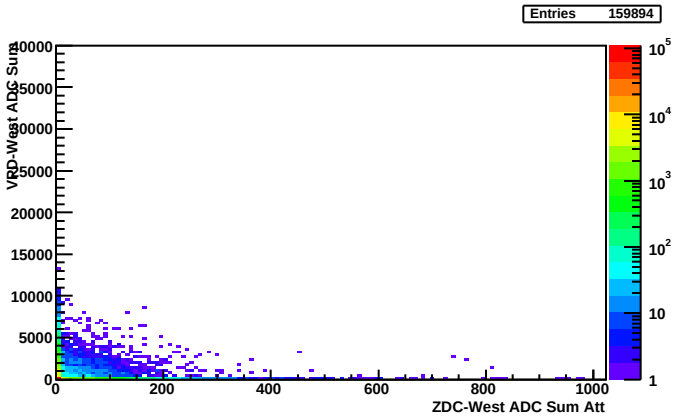

Entries 159894
BBC-S-East ADC Sum
VPD-East ADC Sum


Entries 159894
BBC-S-West ADC Sum
VPD-West ADC Sum


Entries 159894
BBC-S-East ADC Sum
ZDC-East ADC Sum Att


Entries 159894
BBC-S-West ADC Sum
ZDC-West ADC Sum Att


Entries 159894
VPD-East ADC Sum
ZDC-East ADC Sum Att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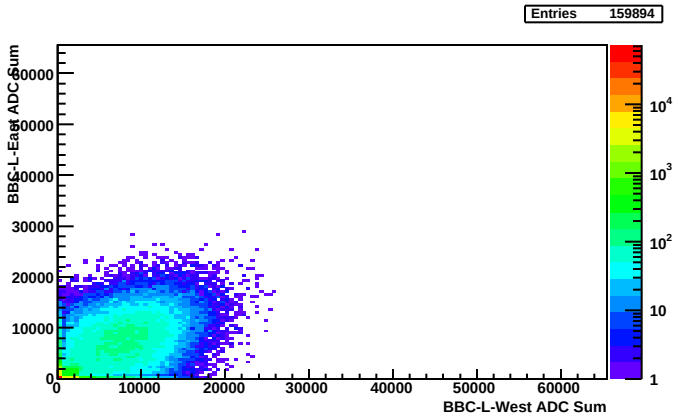
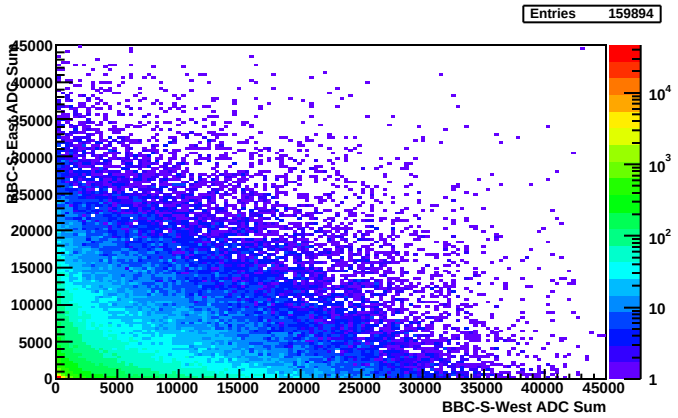
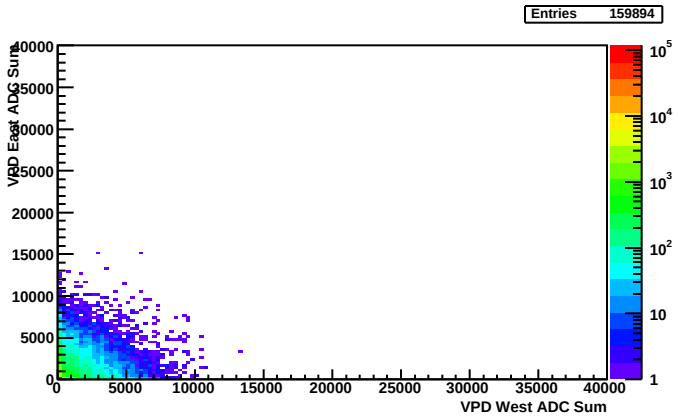
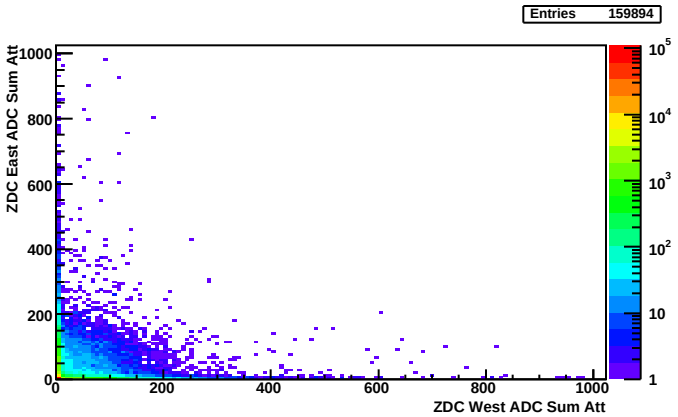
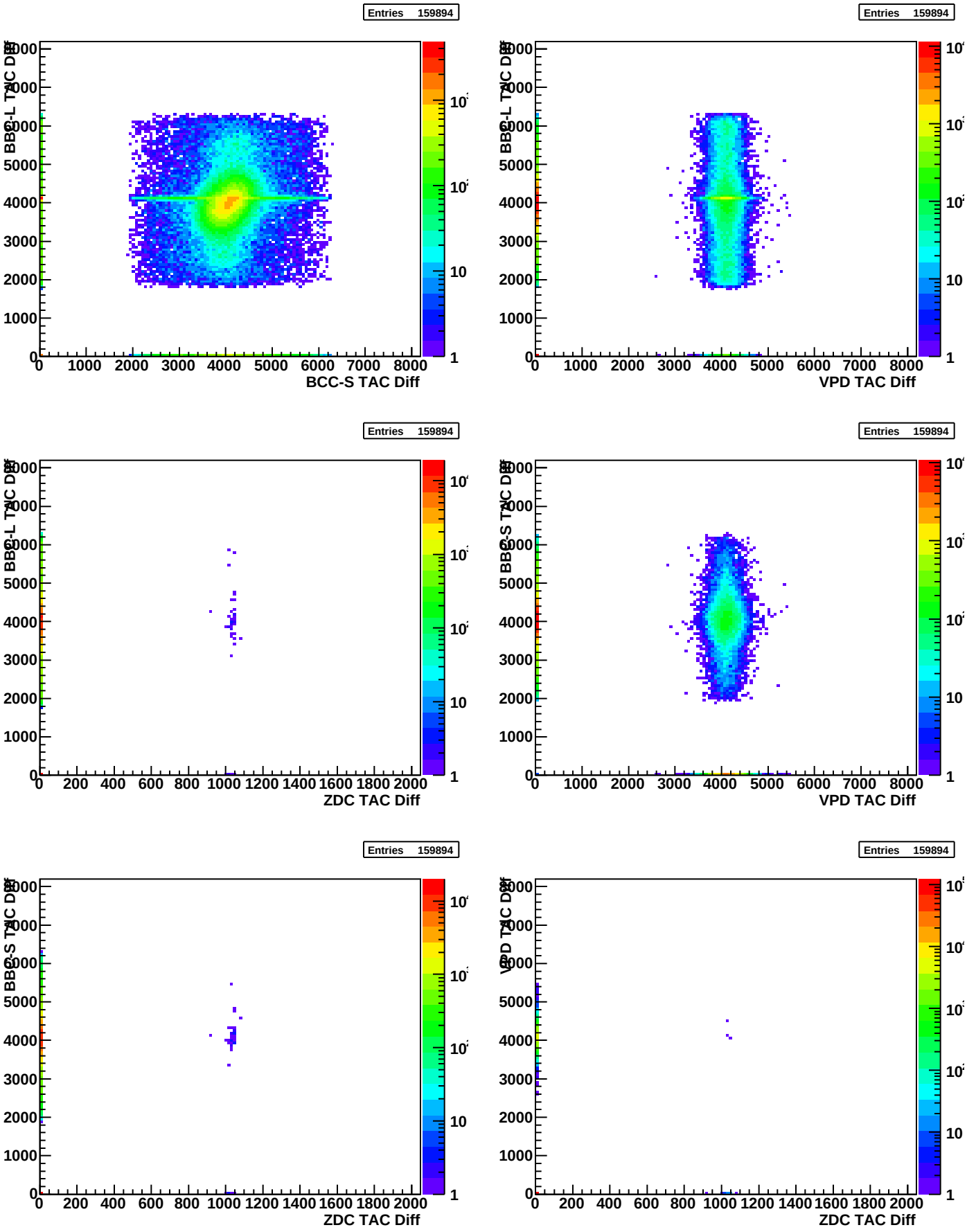
VPD-West ADC Sum
ZDC-West ADC Sum Att

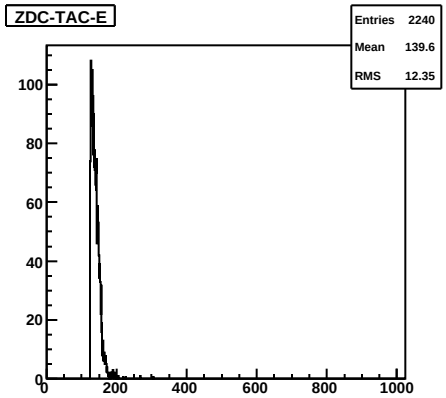

Entries 159894
BBC-L-East ADC Sum
BBC-L-West ADC Sum

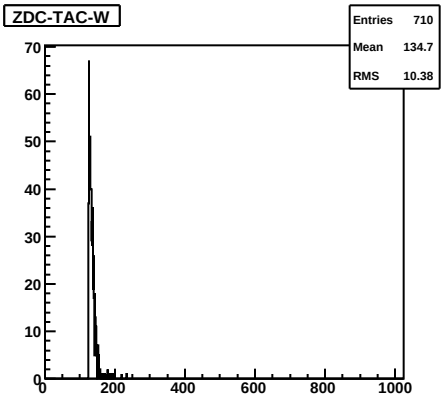

Entries 159894
BBC-S-East ADC Sum
BBC-S-West ADC Sum

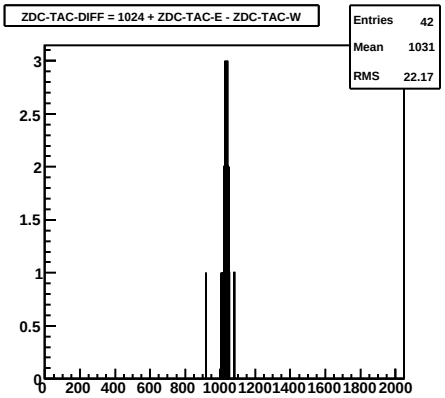

Entries 159894
VPD East ADC Sum
VPD West ADC Sum

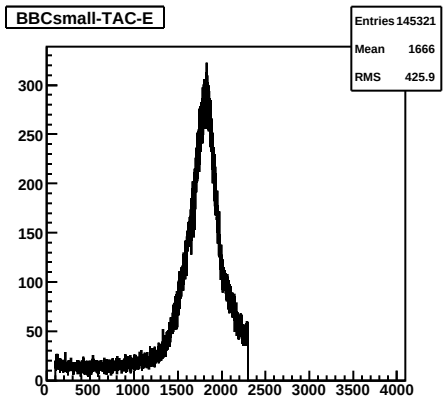

Entries 159894
ZDC East ADC Sum Att
ZDC West ADC Sum Att

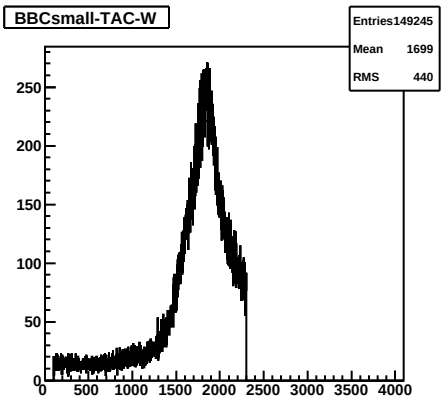

Entries 159894
BBC-L TAC Diff
BCC-S TAC Diff
Entries 159894
BBC-L TAC Diff
VPD TAC Diff
Entries 159894
BBC-L TAC Diff
ZDC TAC Diff
Entries 159894
BBC-S TAC Diff
VPD TAC Diff
Entries 159894
BBC-S TAC Diff
ZDC TAC Diff
Entries 159894
VPD TAC Diff
ZDC TAC Diff

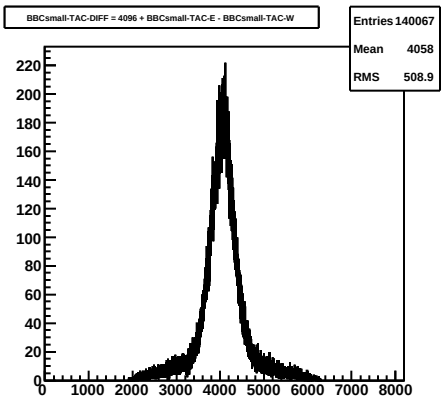

ZDC-TAC-E
Entries 2240
Mean 139.6
RMS 12.35

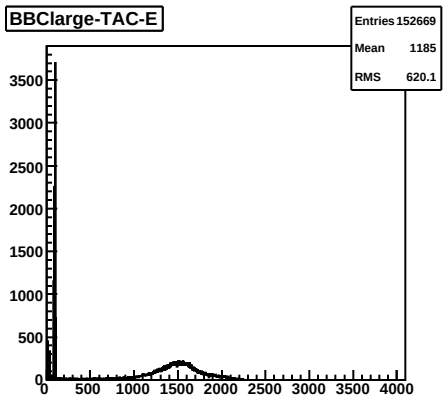

ZDC-TAC-W
Entries 710
Mean 134.7
RMS 10.38

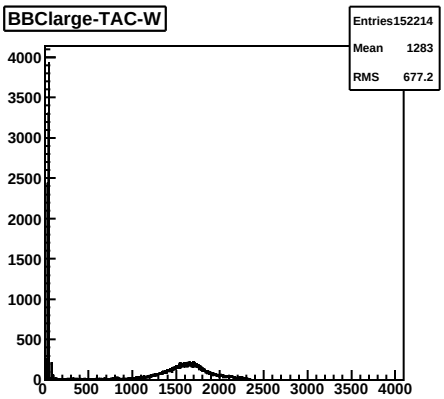

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 42
Mean 1031
RMS 22.17

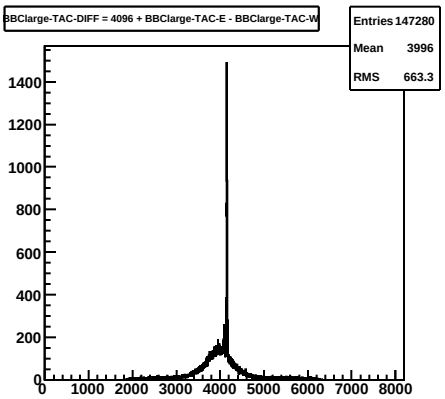

BBCsmall-TAC-E
Entries 145321
Mean 1666
RMS 425.9

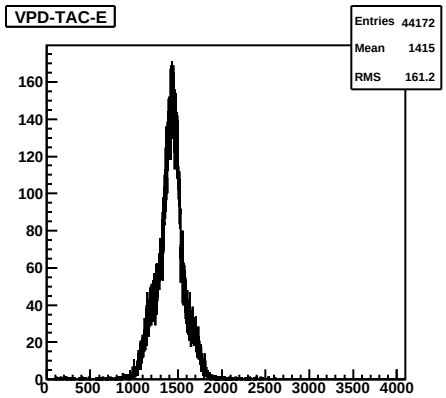

BBCsmall-TAC-W
Entries 149245
Mean 1699
RMS 440

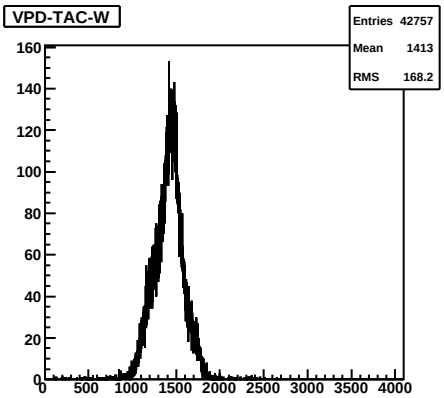

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 140067
Mean 4058
RMS 508.9

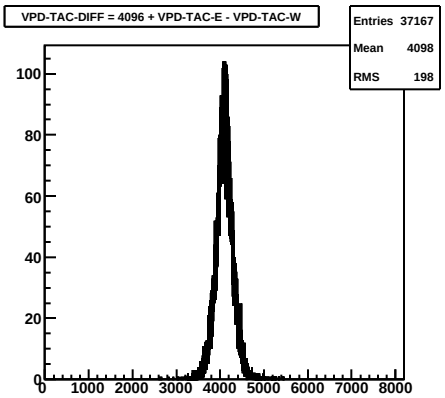

BBClarge-TAC-E
Entries 152669
Mean 1185
RMS 620.1

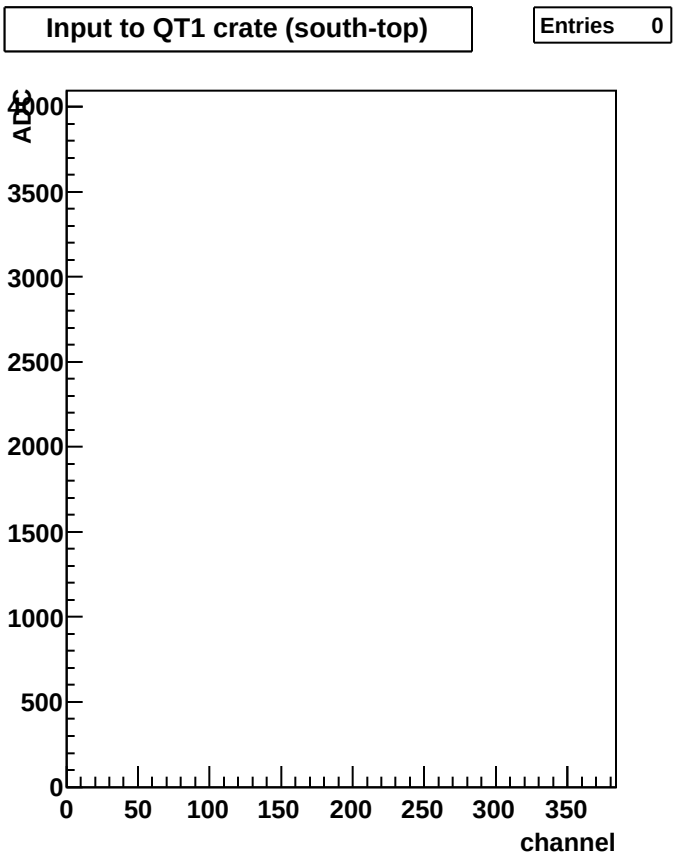

BBClarge-TAC-W
Entries 152214
Mean 1283
RMS 677.2

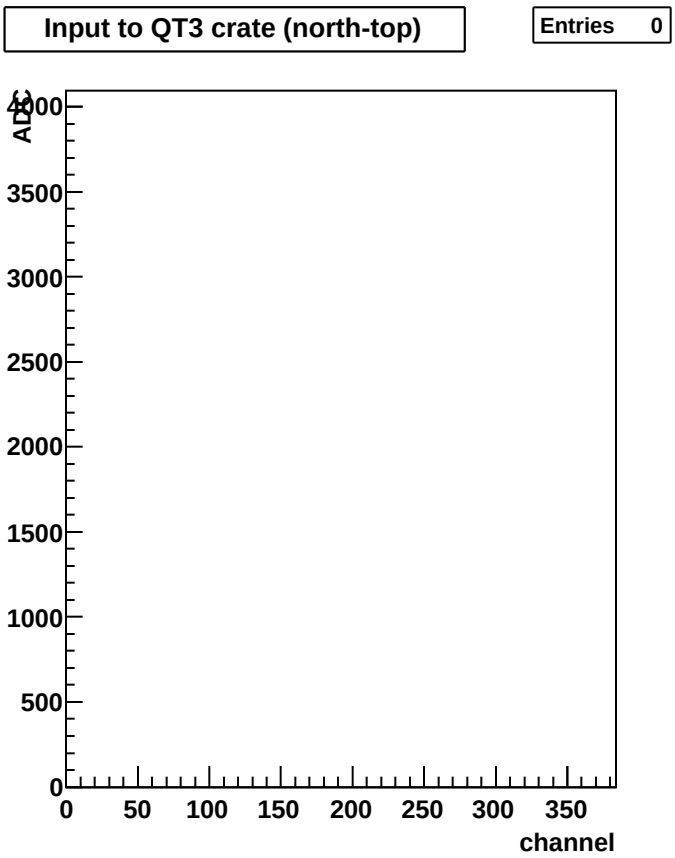

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 147280
Mean 3996
RMS 663.3

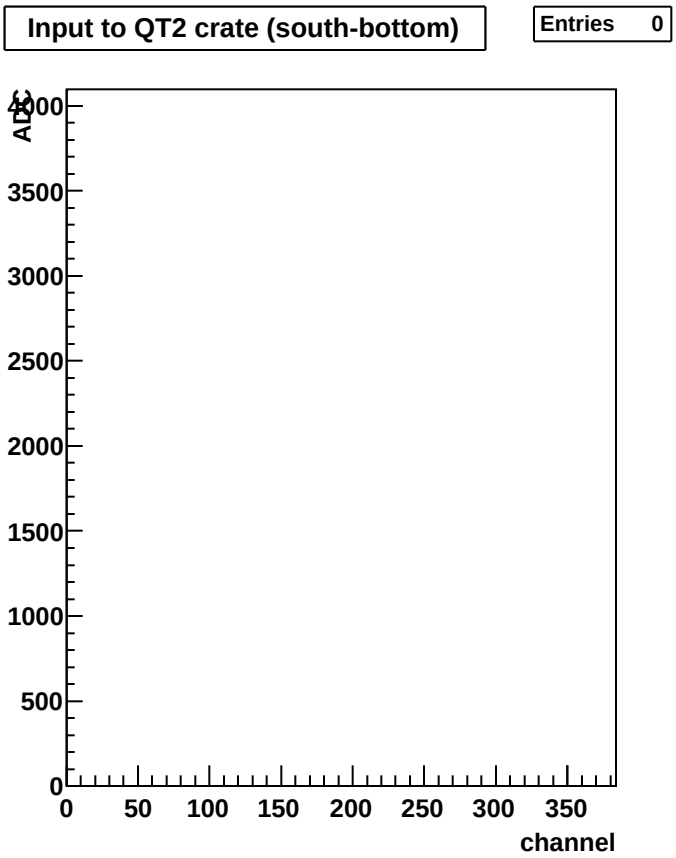

VPD-TAC-E
Entries 44172
Mean 1415
RMS 161.2

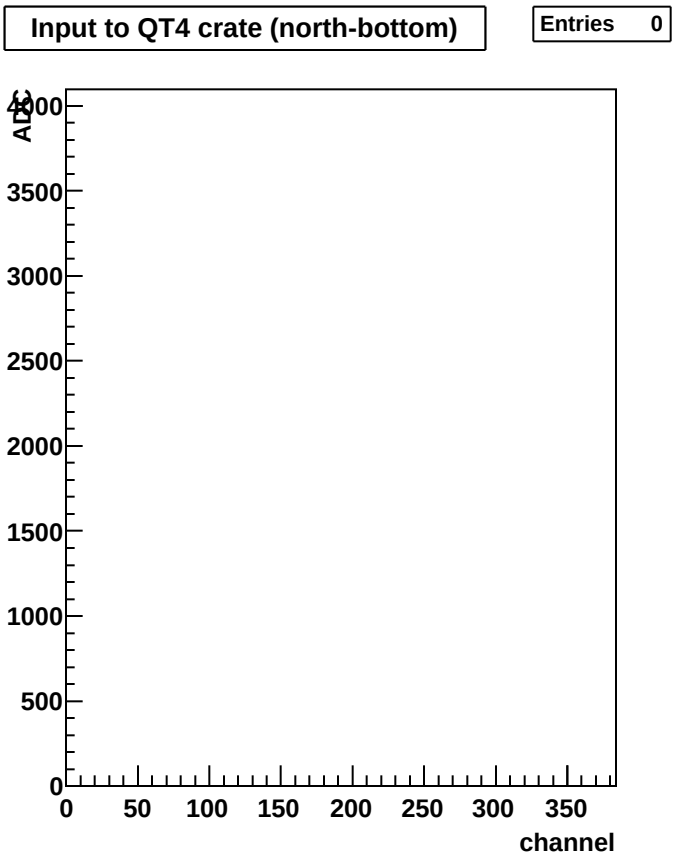

VPD-TAC-W
Entries 42757
Mean 1413
RMS 168.2

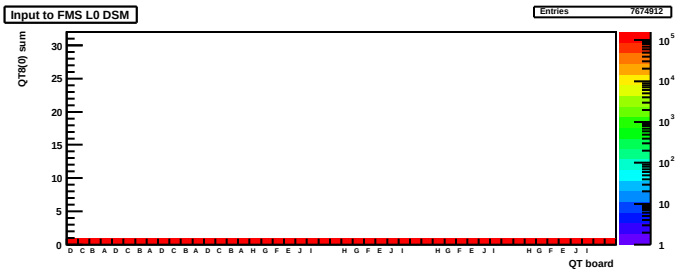

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 37167
Mean 4098
RMS 198

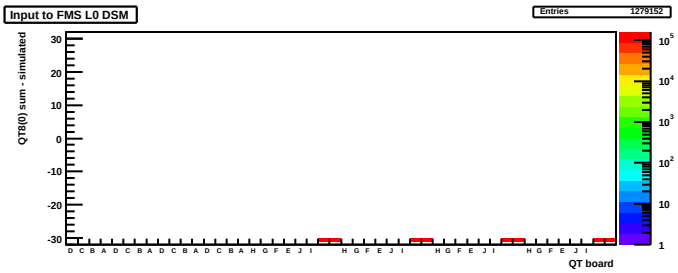

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

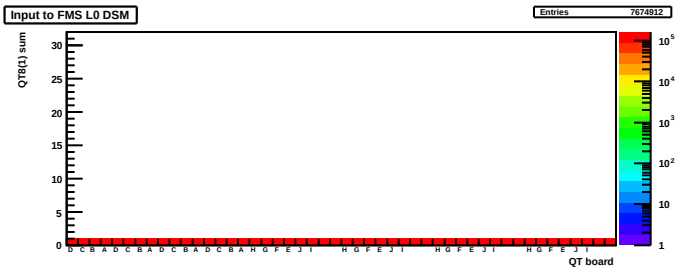

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

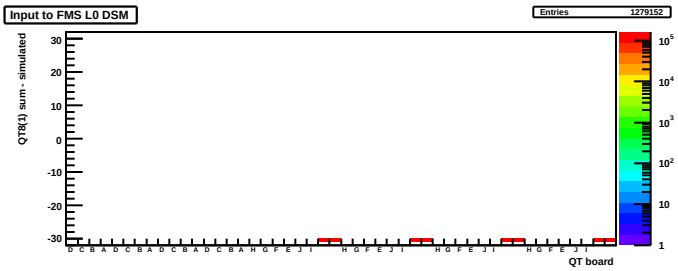

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

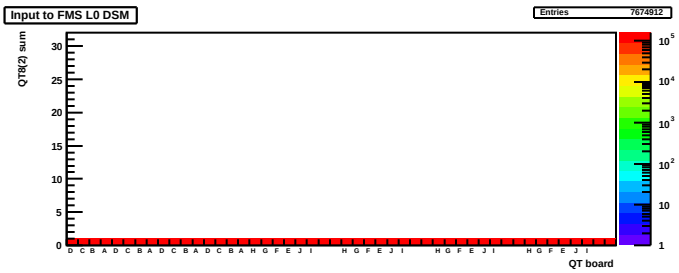

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

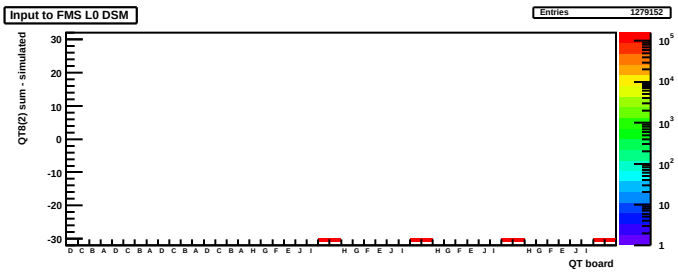

Input to FMS L0 DSM
Entries 7674912
QT8(0) sum
QT board

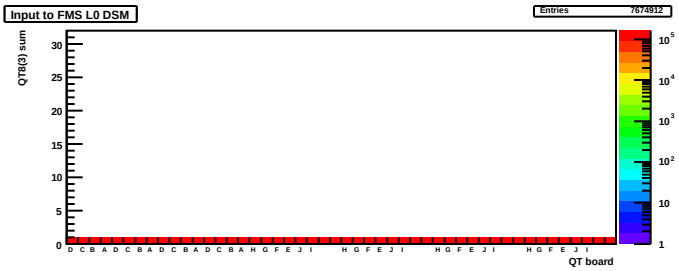

Input to FMS L0 DSM
Entries 1279152
QT8(0) sum - simulated
QT board

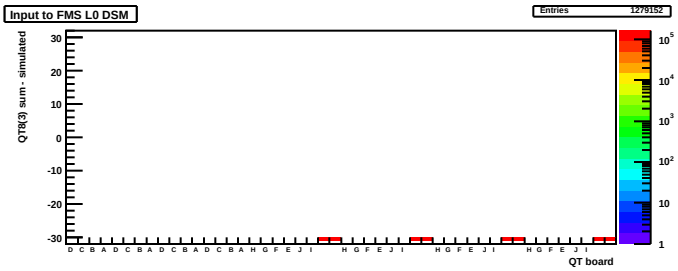

Input to FMS L0 DSM
Entries 7674912
QT8(1) sum
QT board

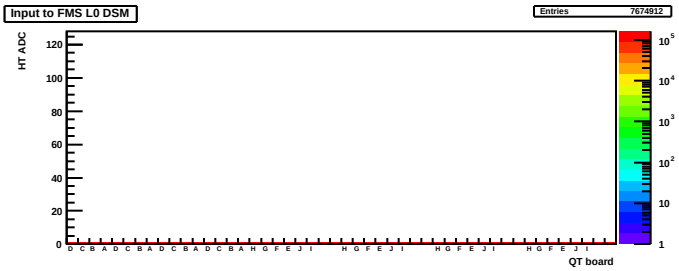

Input to FMS L0 DSM
Entries 1279152
QT8(1) sum - simulated
QT board

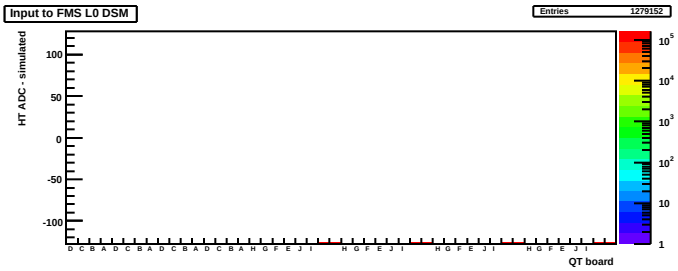

Input to FMS L0 DSM
Entries 7674912
QT8(2) sum
QT board

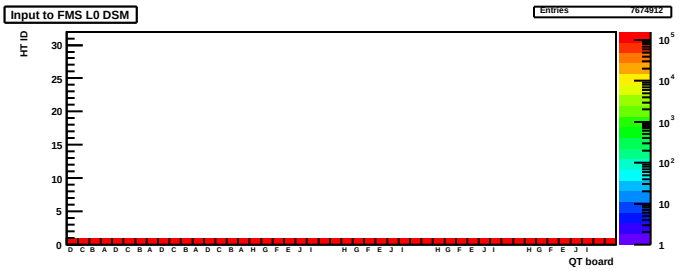

Input to FMS L0 DSM
Entries 1279152
QT8(2) sum - simulated
QT board

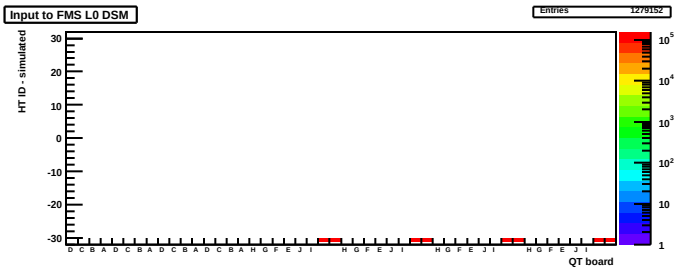

Input to FMS L0 DSM
Entries 7674912
QT8(3) sum
QT board

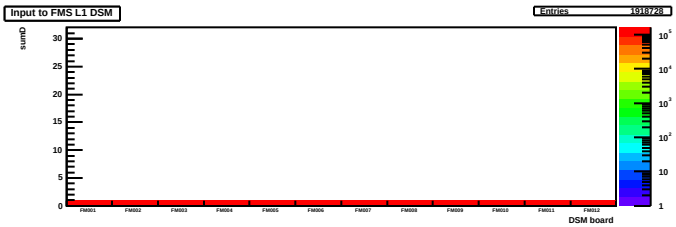

Input to FMS L0 DSM
Entries 1279152
QT8(3) sum - simulated
QT board

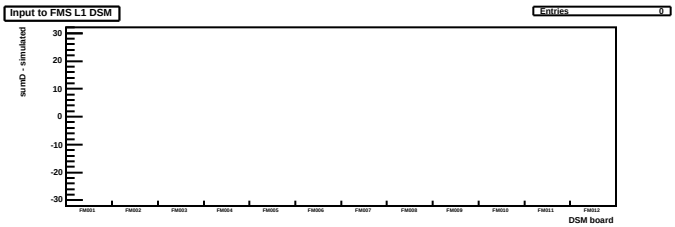

Input to FMS L0 DSM
Entries 7674912
HT ADC
QT board

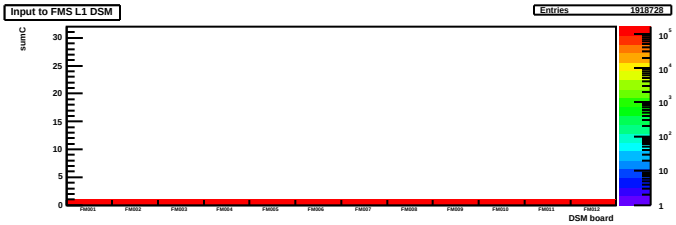

Input to FMS L0 DSM
Entries 1279152
HT ADC - simulated
QT board

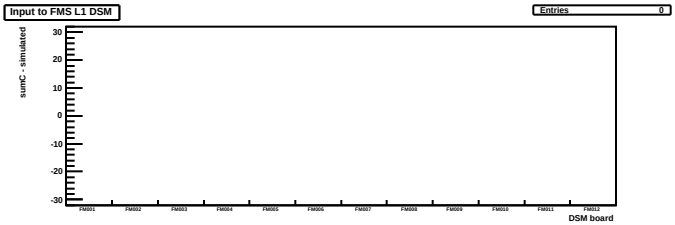

Input to FMS L0 DSM
Entries 7674912
HT ID
QT board

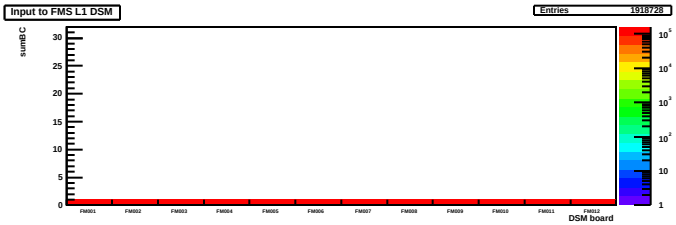

Input to FMS L0 DSM
Entries 1279152
HT ID - simulated
QT board

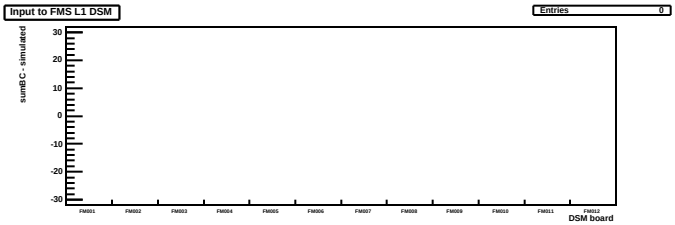

Input to FMS L1 DSM
Entries 1918728
sumD
DSM board

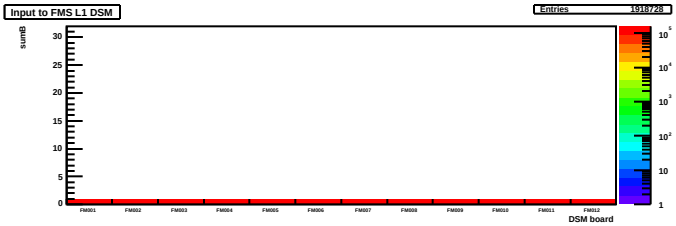

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

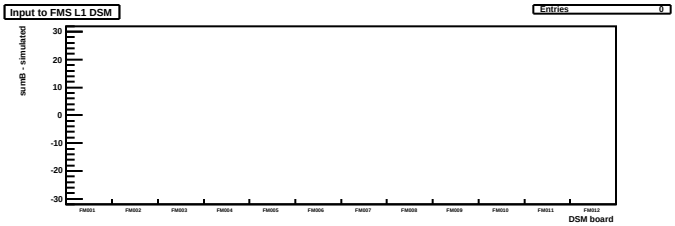

Input to FMS L1 DSM
Entries 1918728
sumC
DSM board

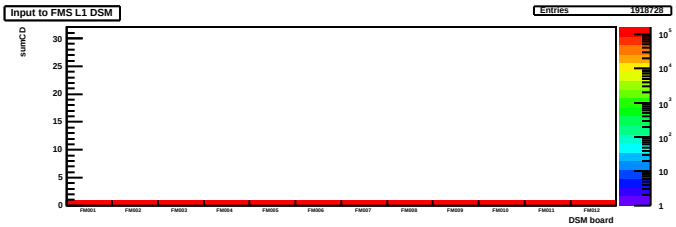

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

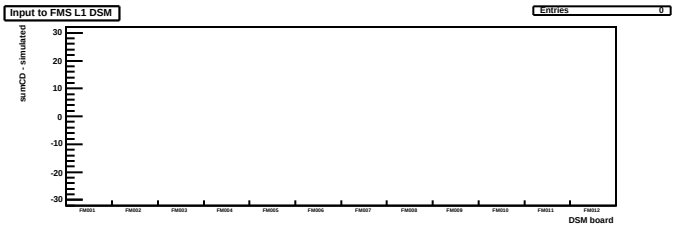

Input to FMS L1 DSM
Entries 1918728
sumBC
DSM board

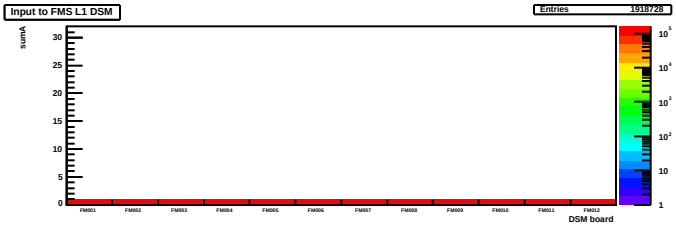

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

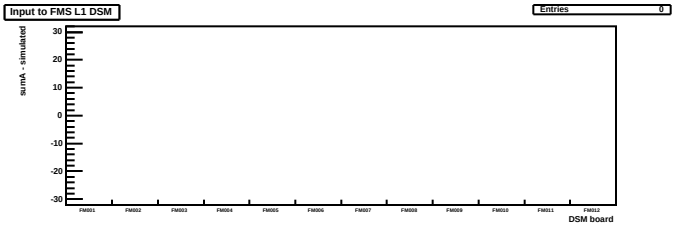

Input to FMS L1 DSM
Entries 1918728
sumB
DSM board

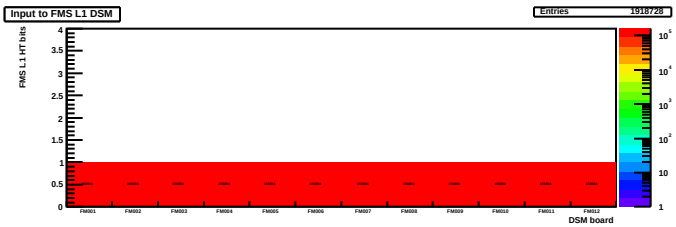

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

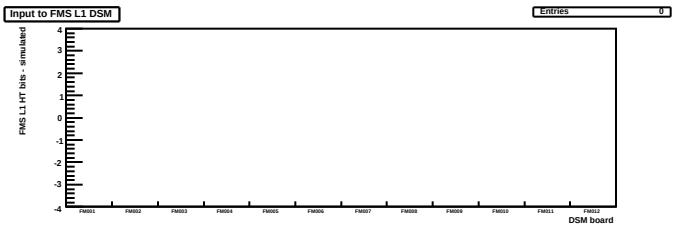

Input to FMS L1 DSM
Entries 1918728
sumCD
DSM board

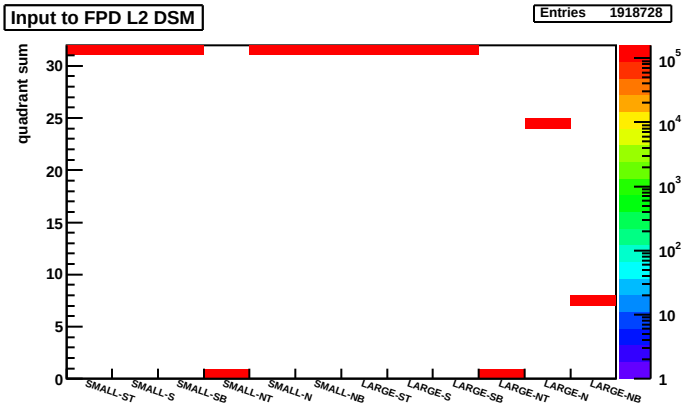

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

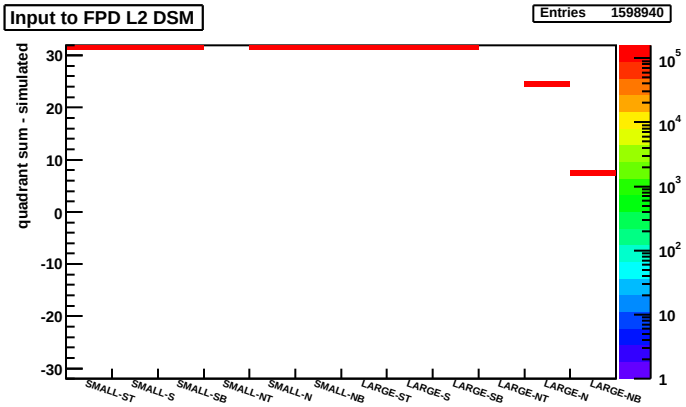

Input to FMS L1 DSM
Entries 1918728
sumA
DSM board

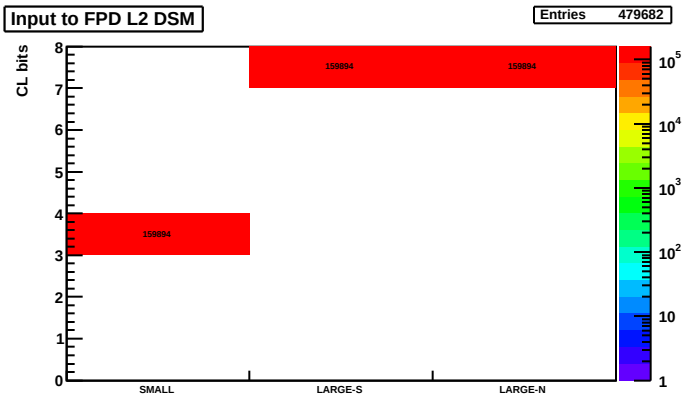

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

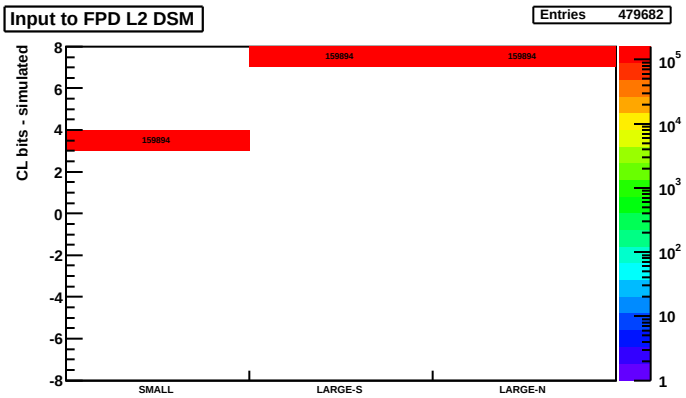

Input to FMS L1 DSM
Entries 1918728
FMS L1 HT bits
DSM board

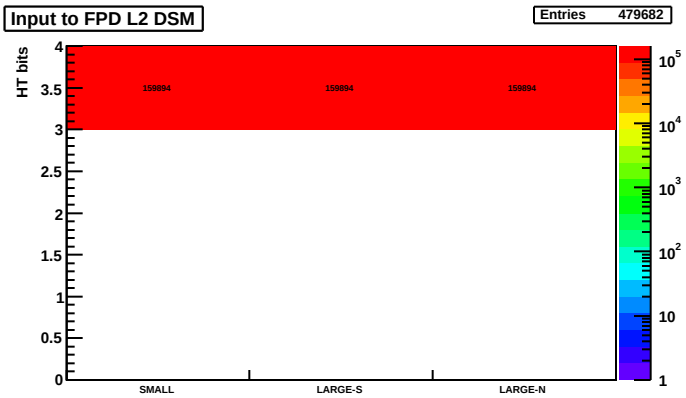

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

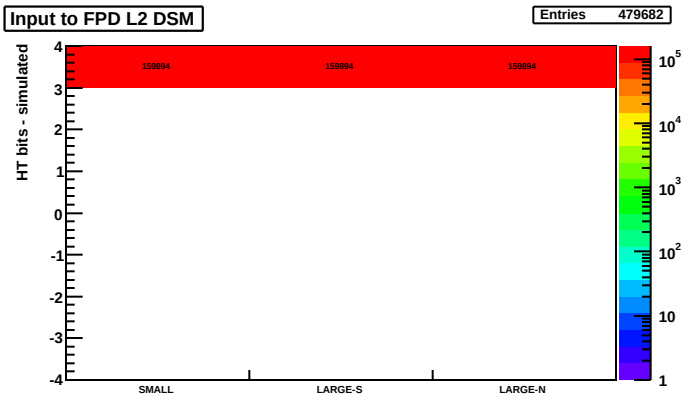

Input to FPD L2 DSM
Entries 1918728
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

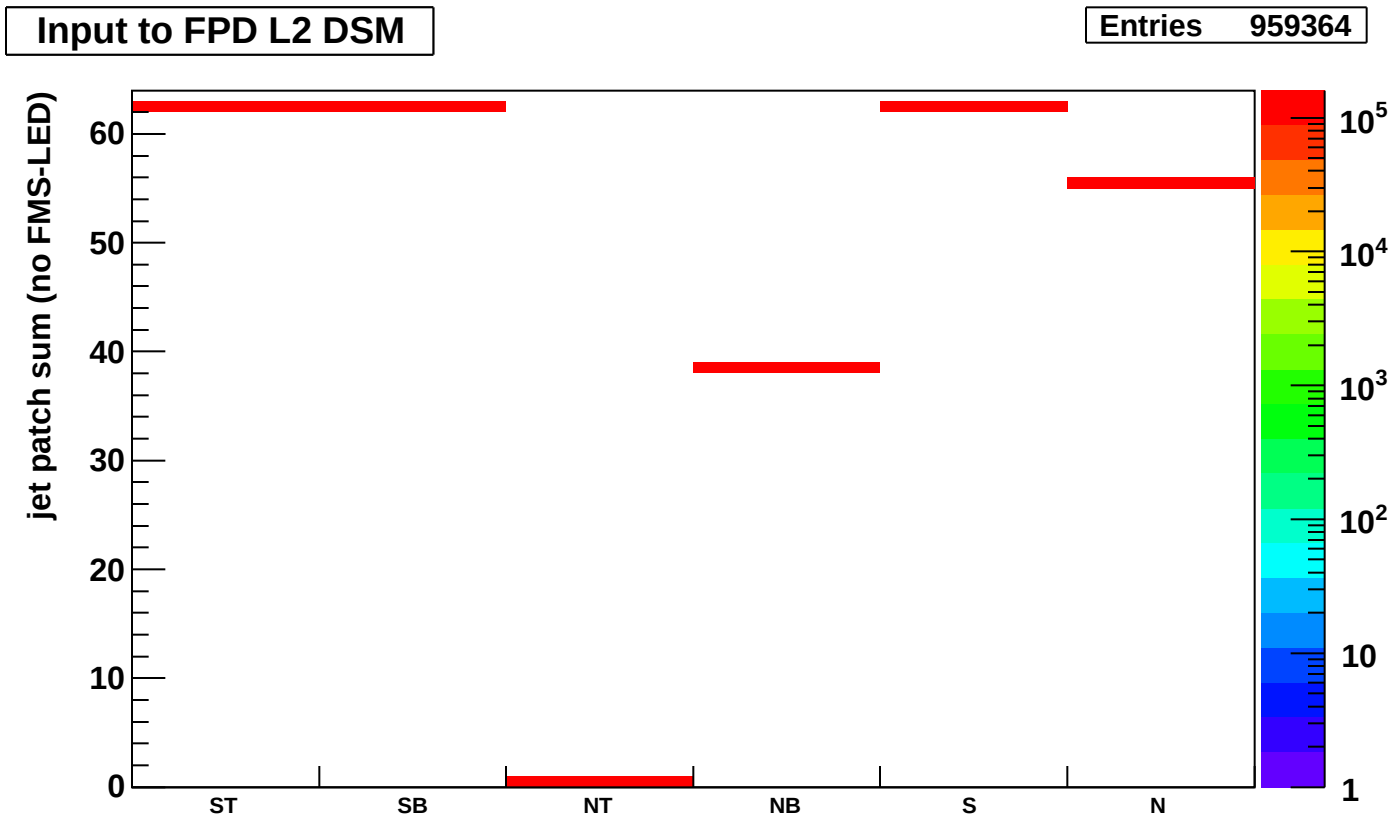

Input to FPD L2 DSM
Entries 1598940
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

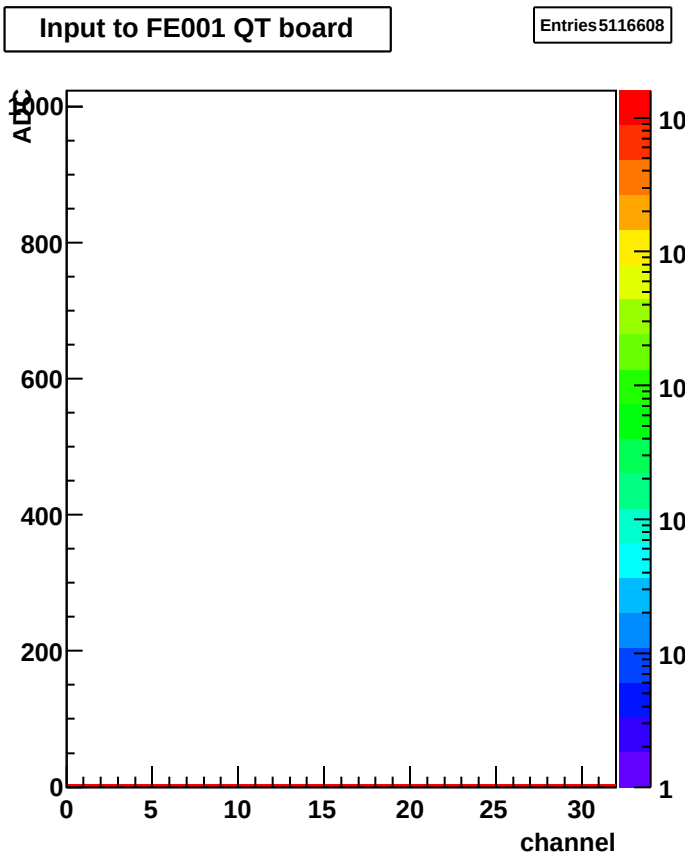

Input to FPD L2 DSM
Entries 479682
CL bits
159894
SMALL
LARGE-S
LARGE-N

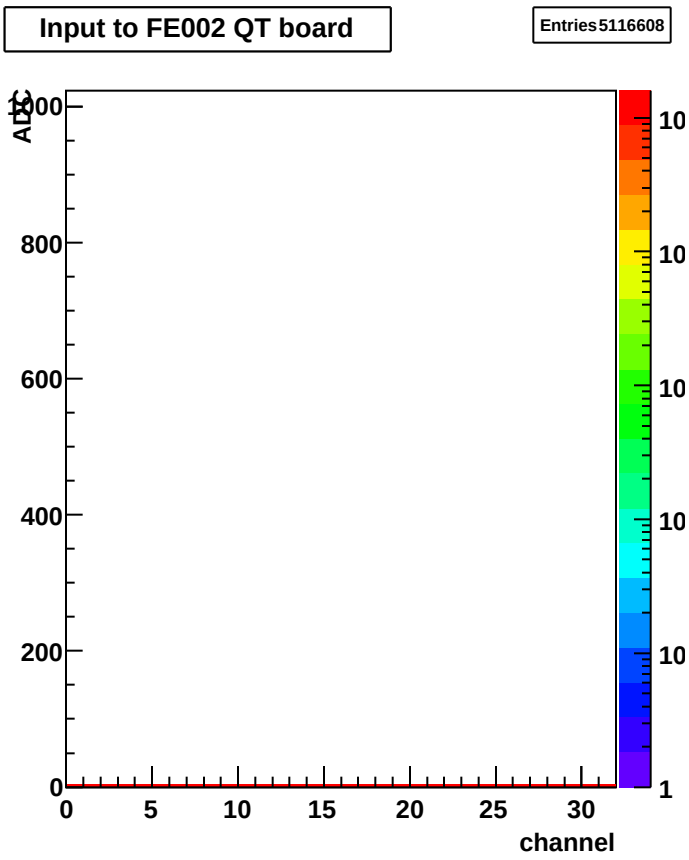

Input to FPD L2 DSM
Entries 479682
CL bits - simulated
159894
SMALL
LARGE-S
LARGE-N

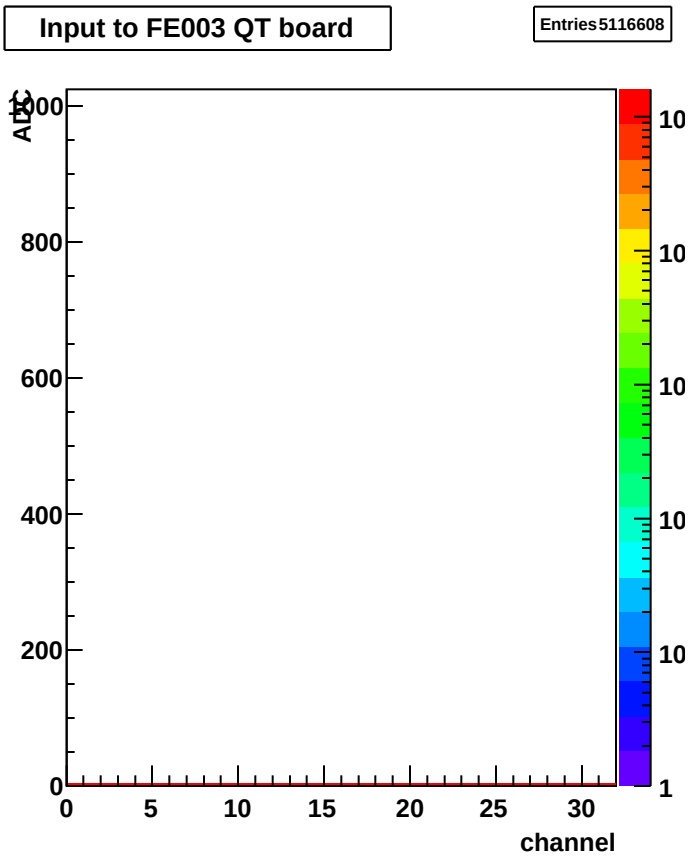

Input to FPD L2 DSM
Entries 479682
HT bits
159894
SMALL
LARGE-S
LARGE-N

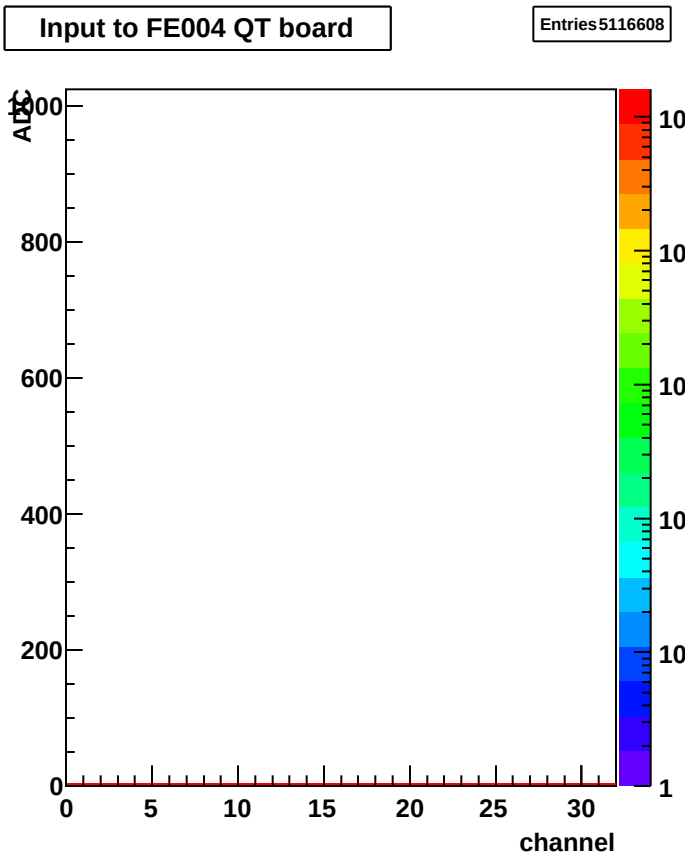

Input to FPD L2 DSM
Entries 479682
HT bits - simulated
159894
SMALL
LARGE-S
LARGE-N

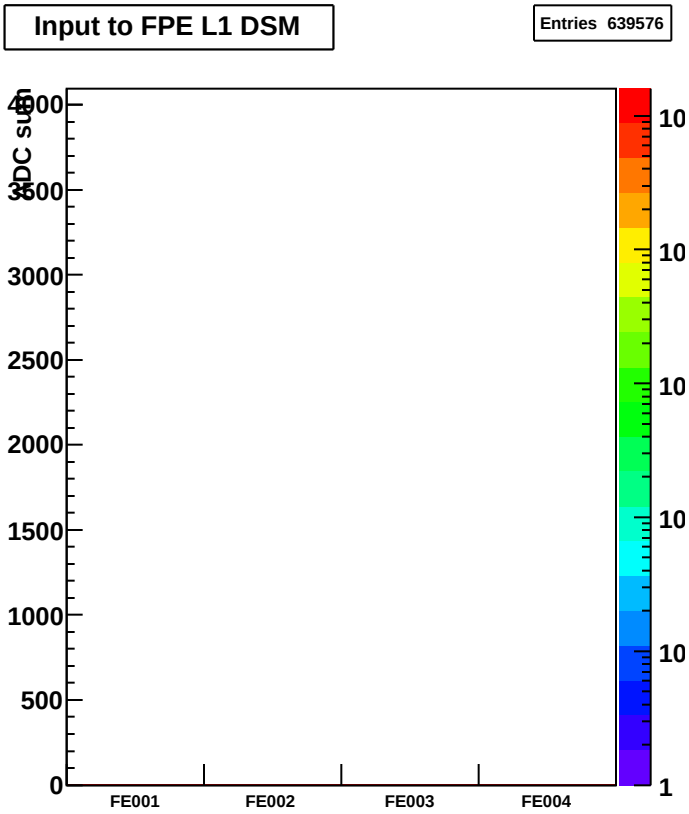

Input to FPD L2 DSM
Entries 959364
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

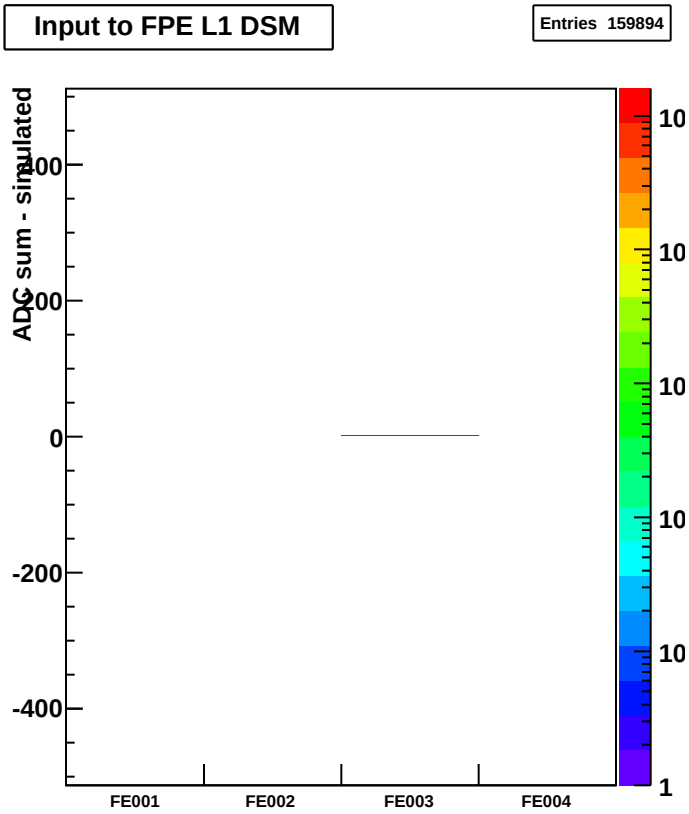

Input to FE001 QT board
Entries 5116608
ADC
channel

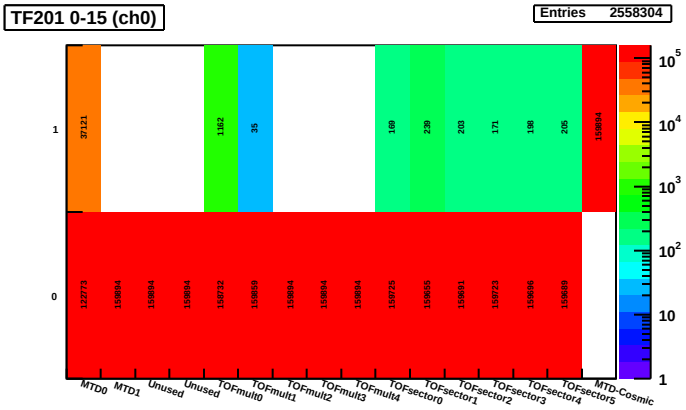

Input to FE002 QT board
Entries 5116608
ADC
channel

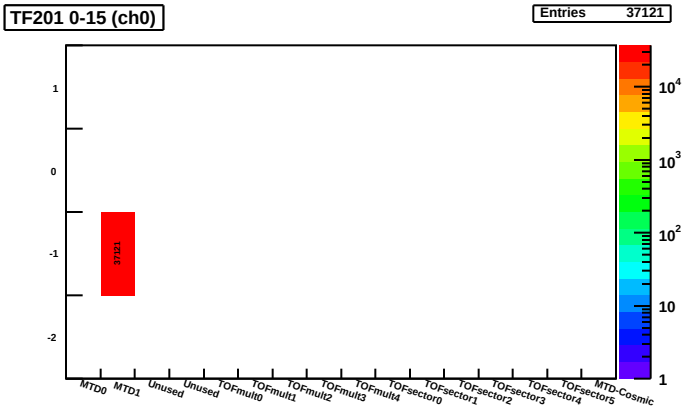

Input to FE003 QT board
Entries 5116608
ADC
channel

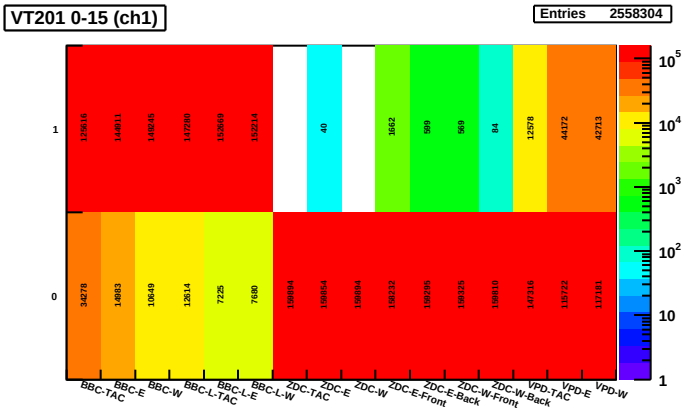

Input to FE004 QT board
Entries 5116608
ADC
channel

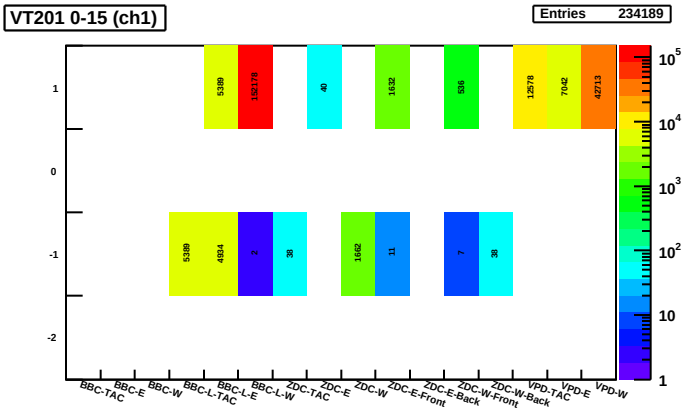

Input to FPE L1 DSM
Entries 639576
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1


Input to FPE L1 DSM
Entries 159894
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
10
1


TF201 0-15 (ch0)
Entries 2558304
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 37121
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 2558304
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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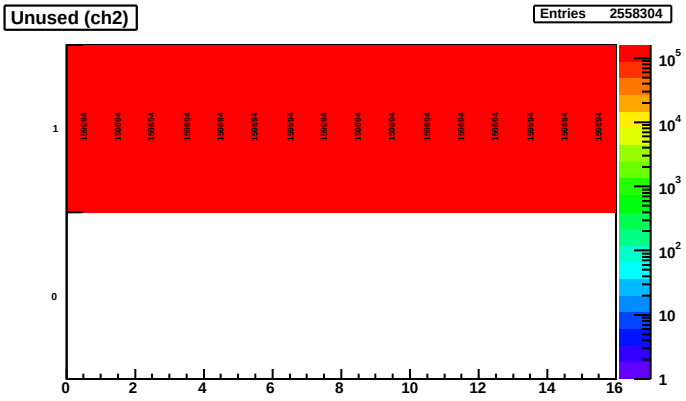
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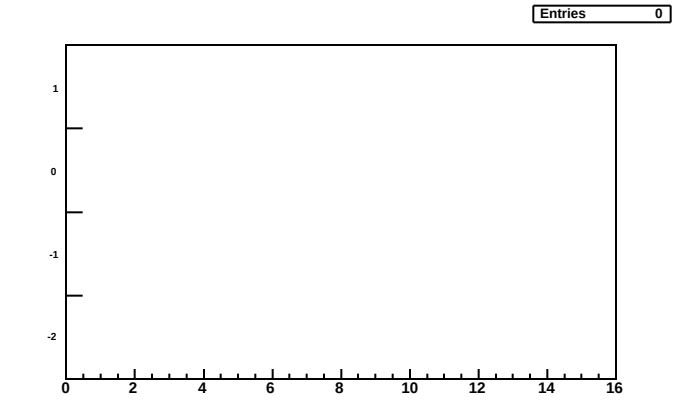
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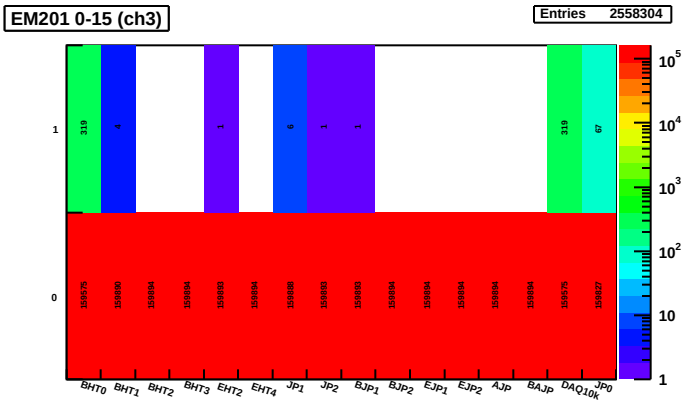
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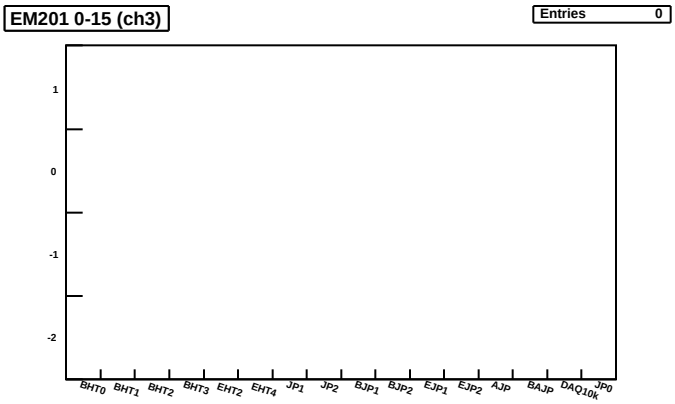
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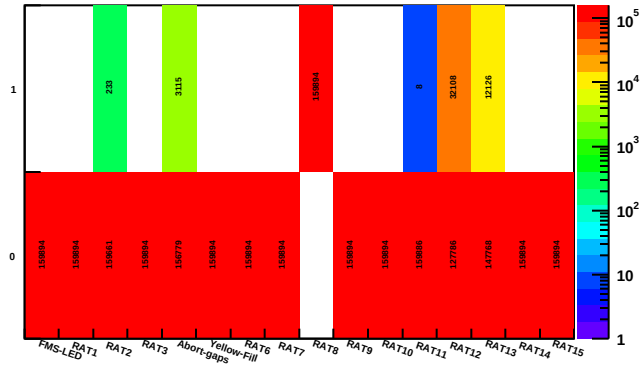
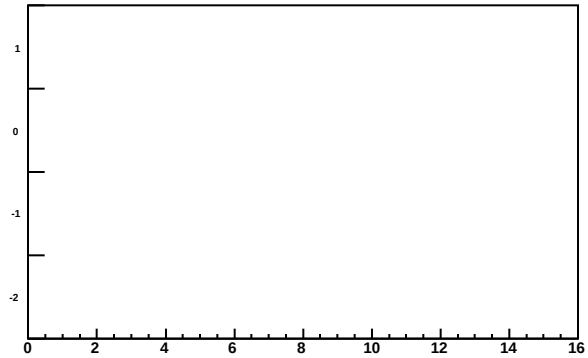
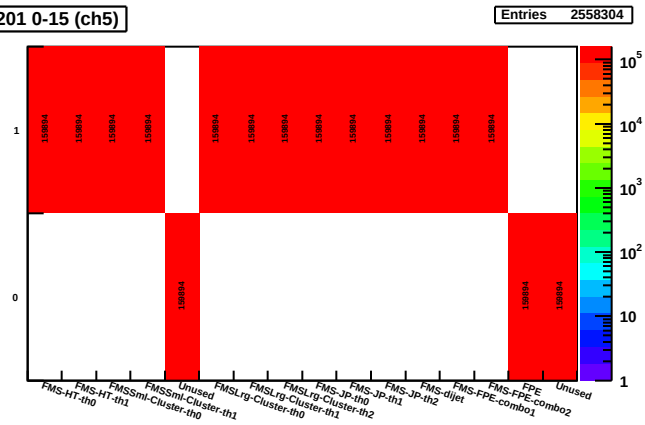
RAT board (ch4)





FP201 0-15 (ch5)



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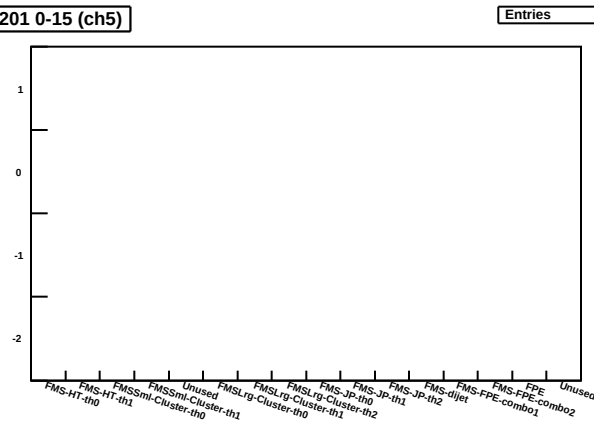
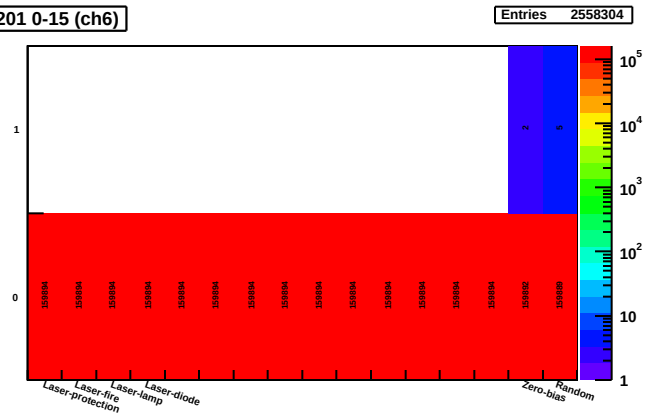
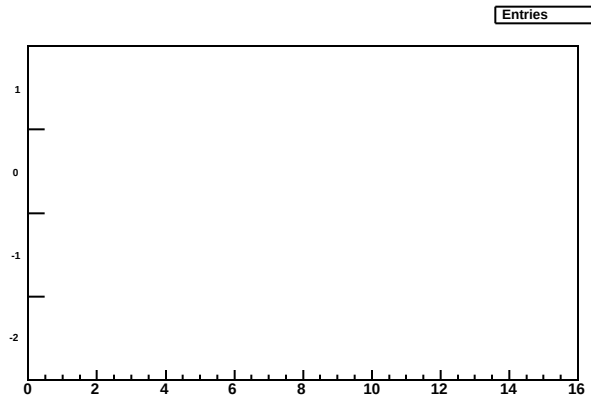
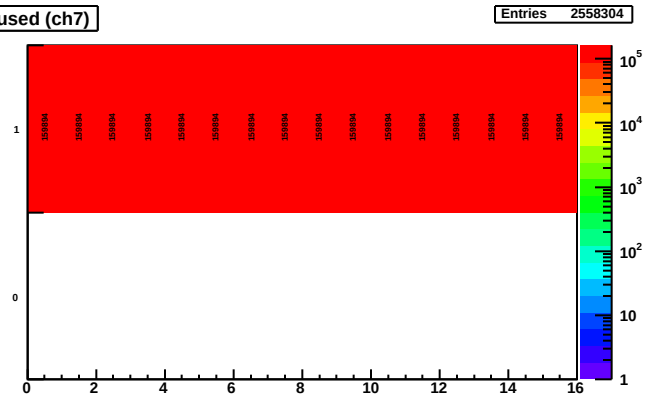
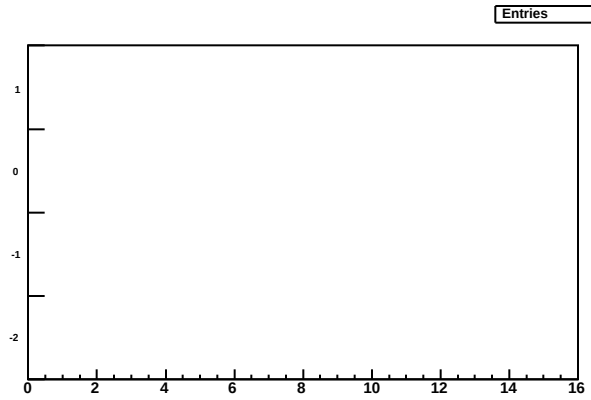


ST201 0-15 (ch6)





Unused (ch7)