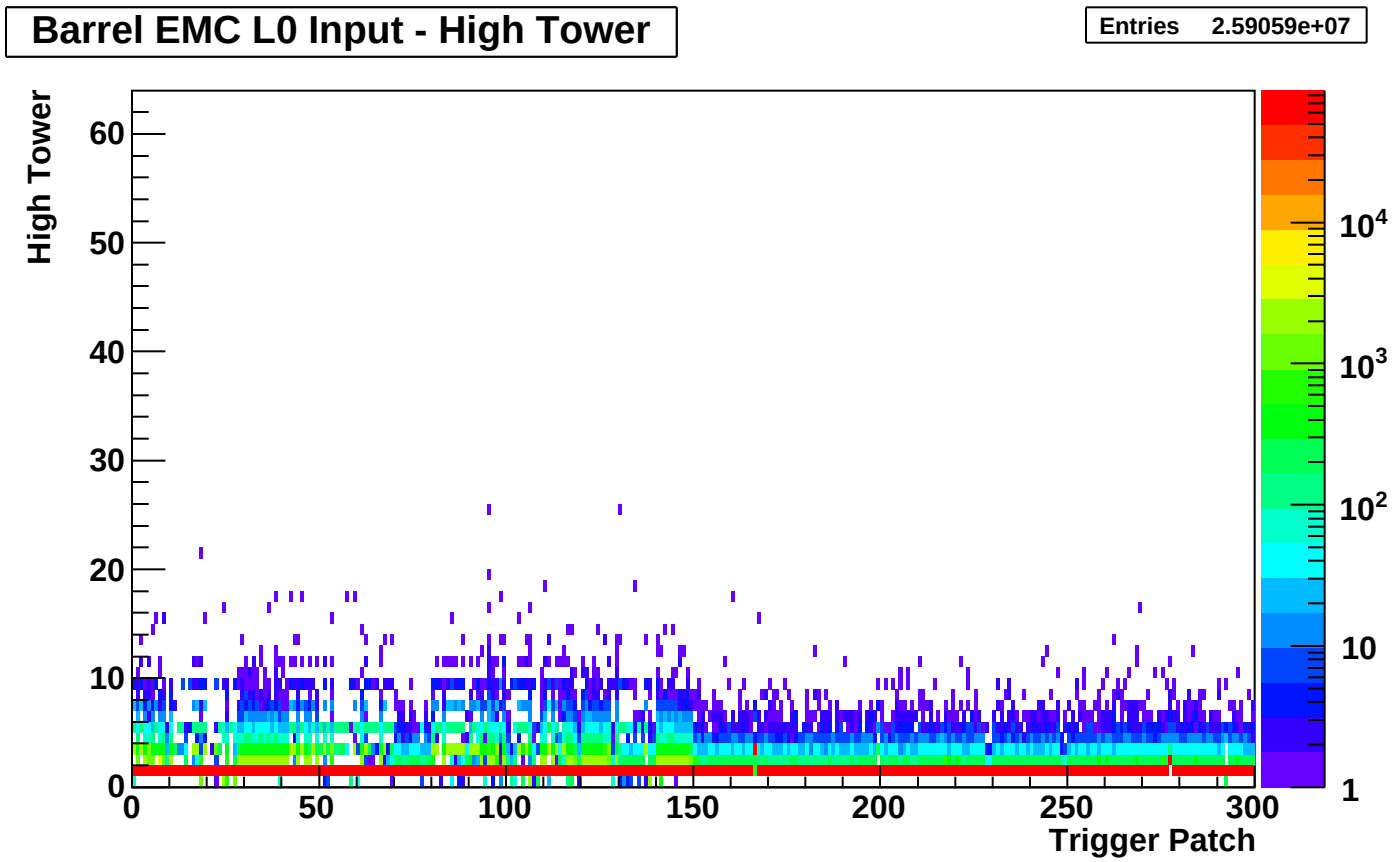
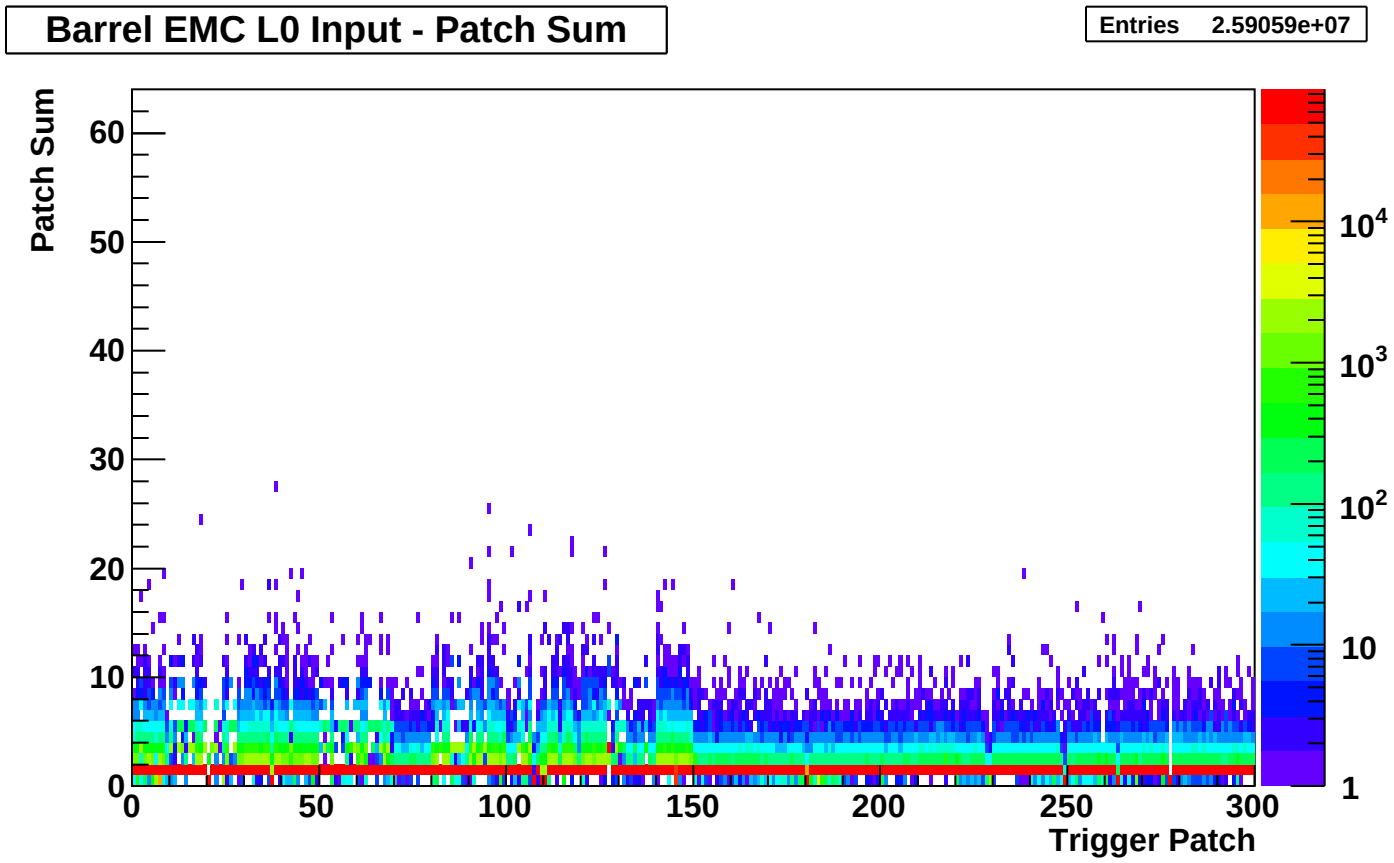
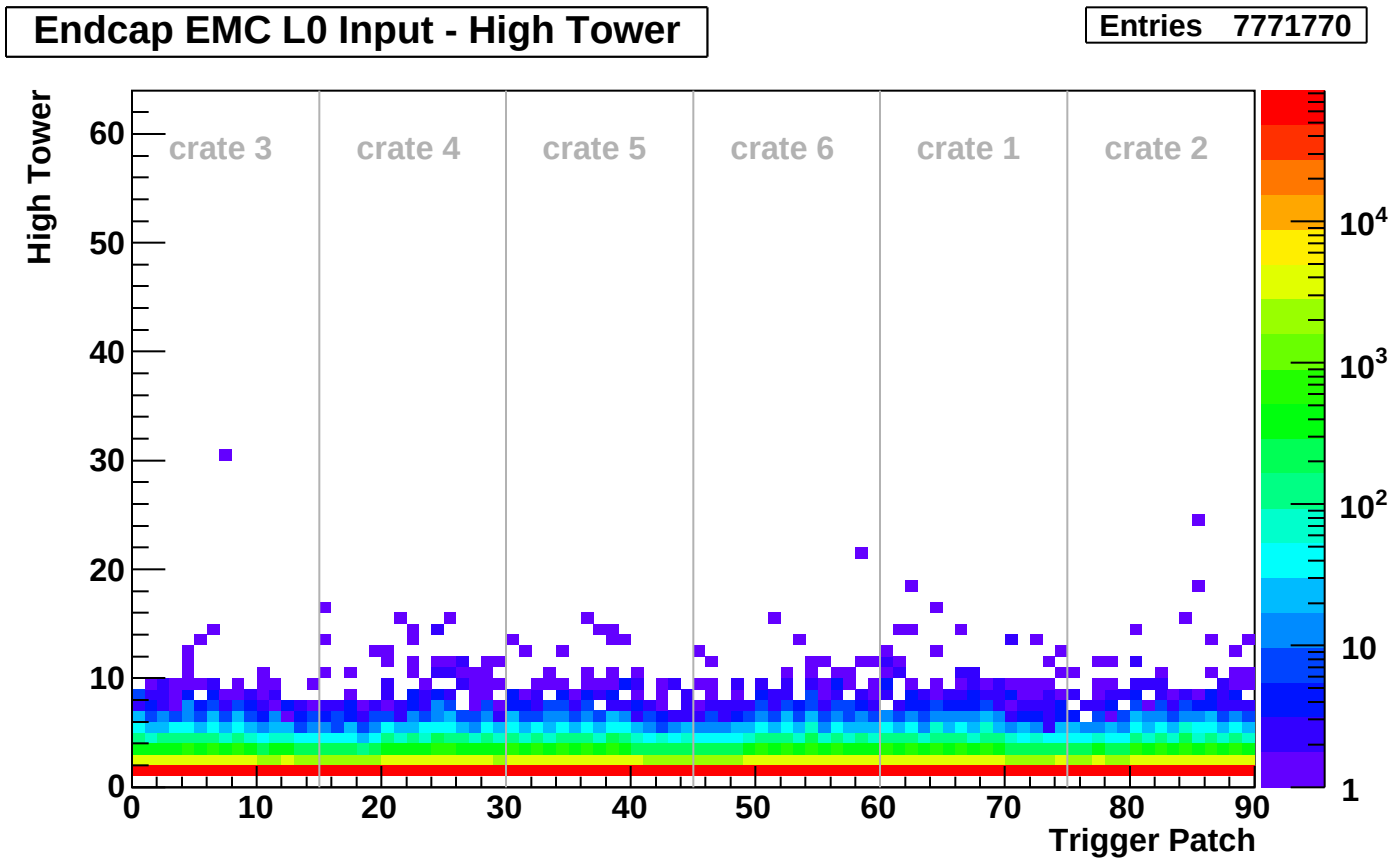
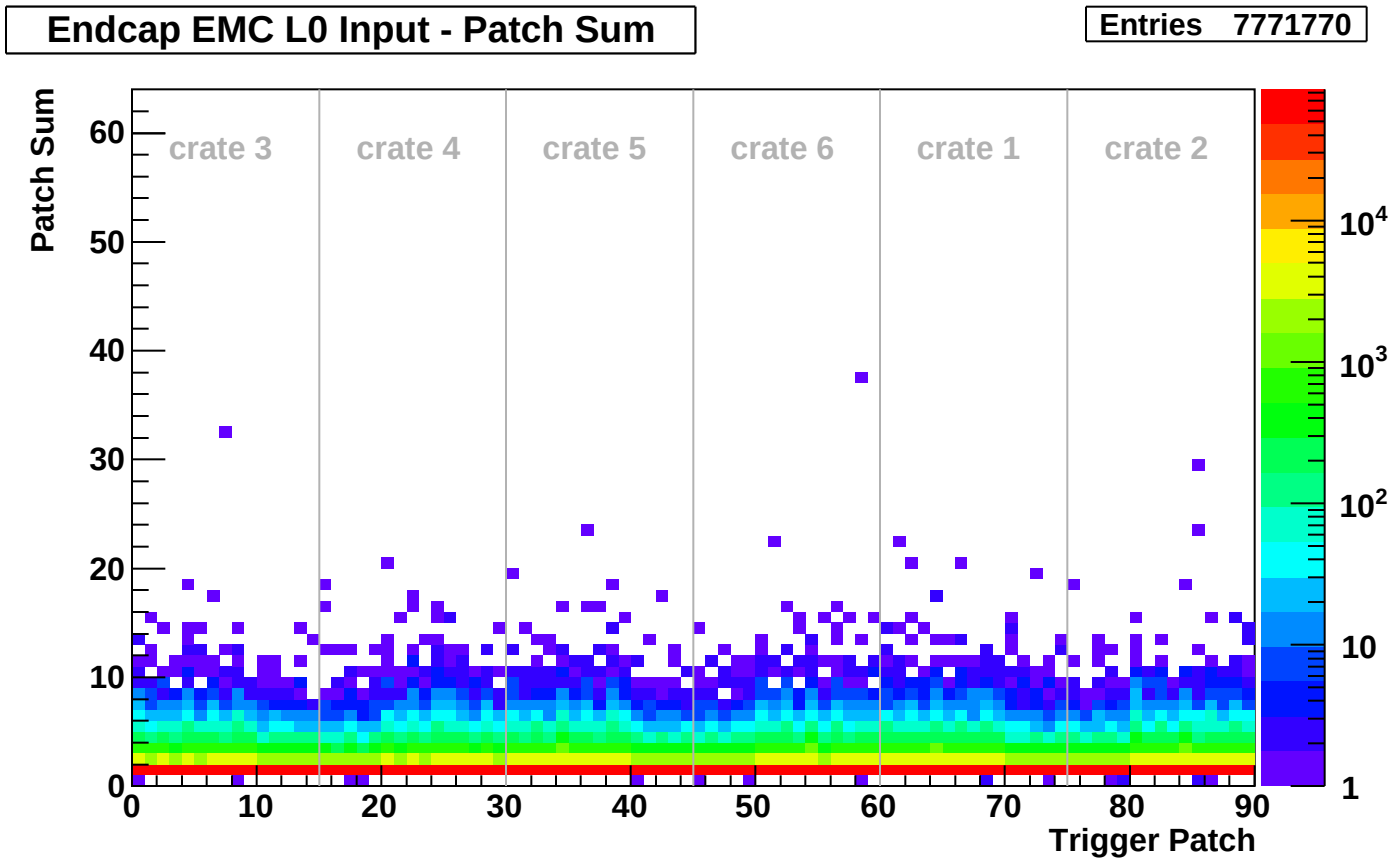
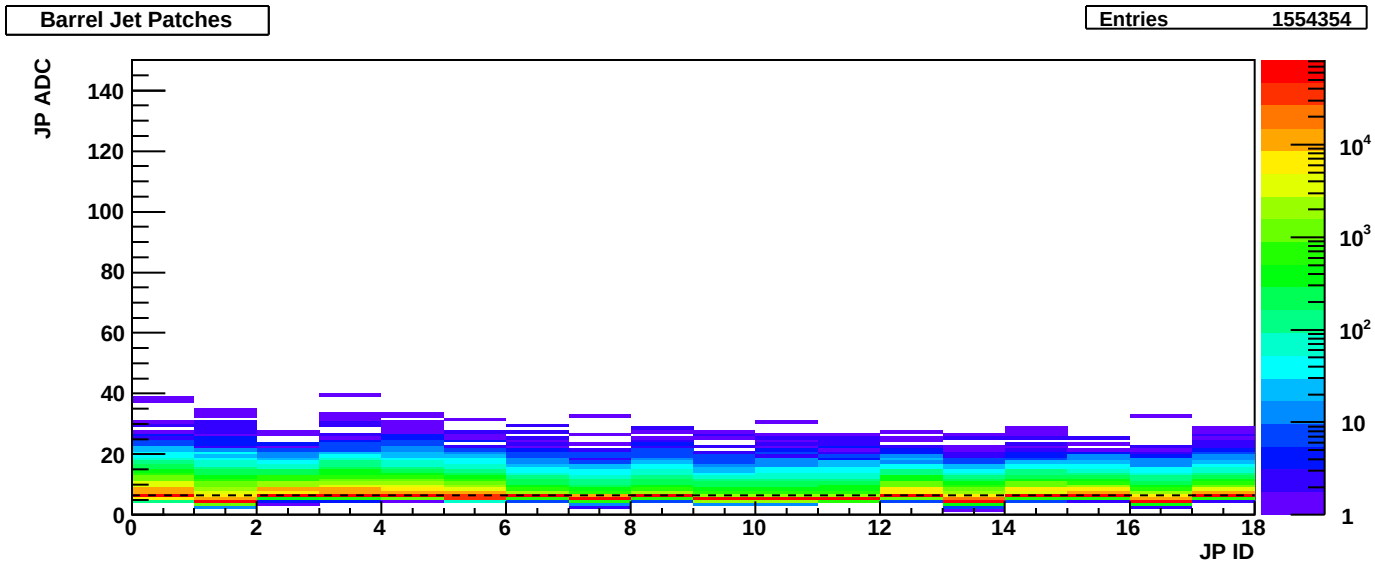
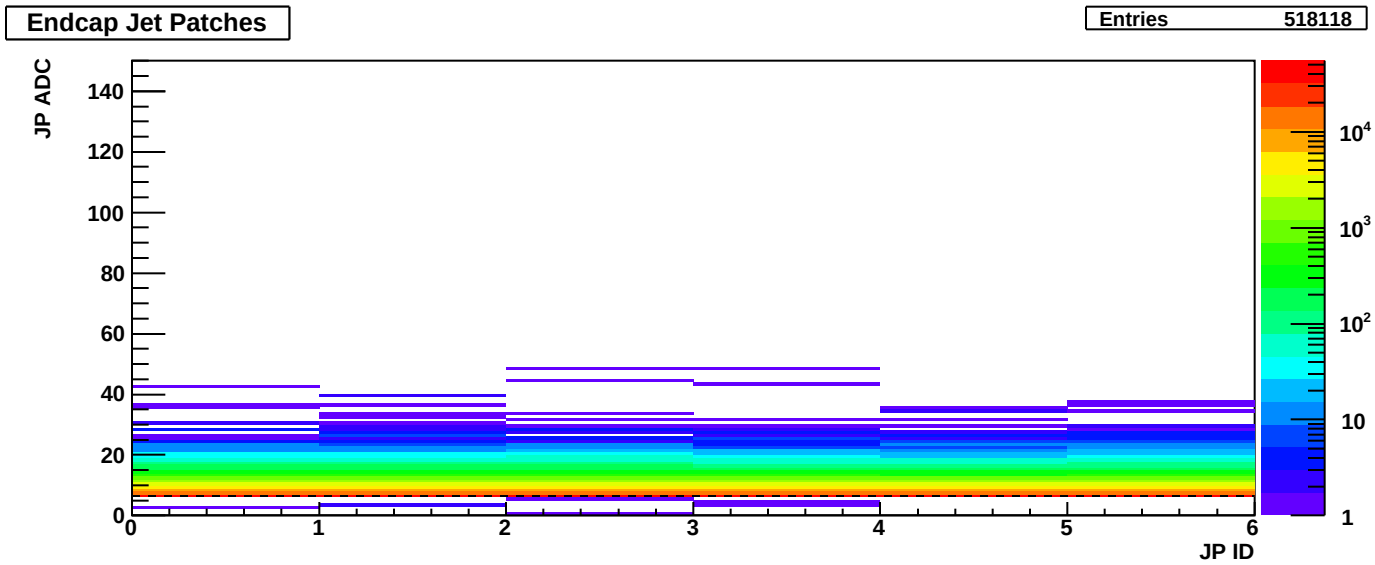

Barrel EMC L0 Input - High Tower
Entries 2.59059e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

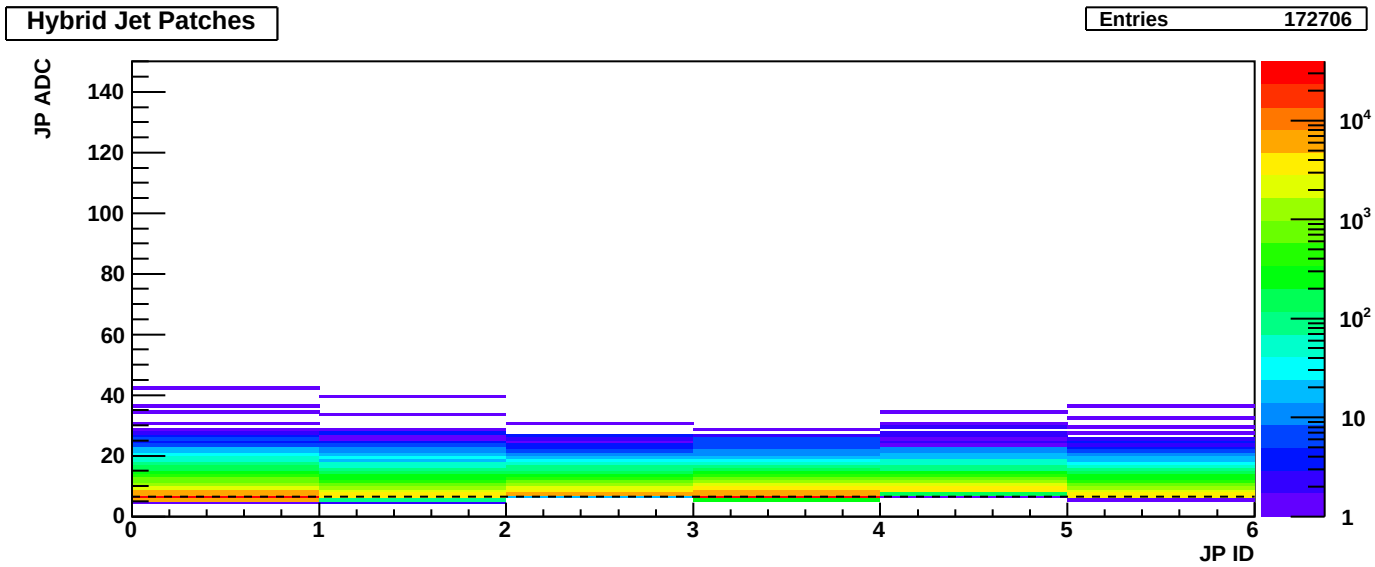

Barrel EMC L0 Input - Patch Sum
Entries 2.59059e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

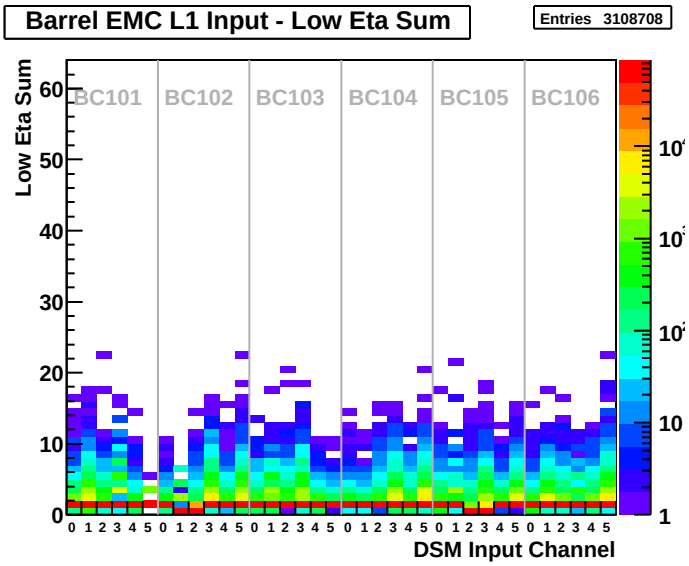

Endcap EMC L0 Input - High Tower
Entries 7771770
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

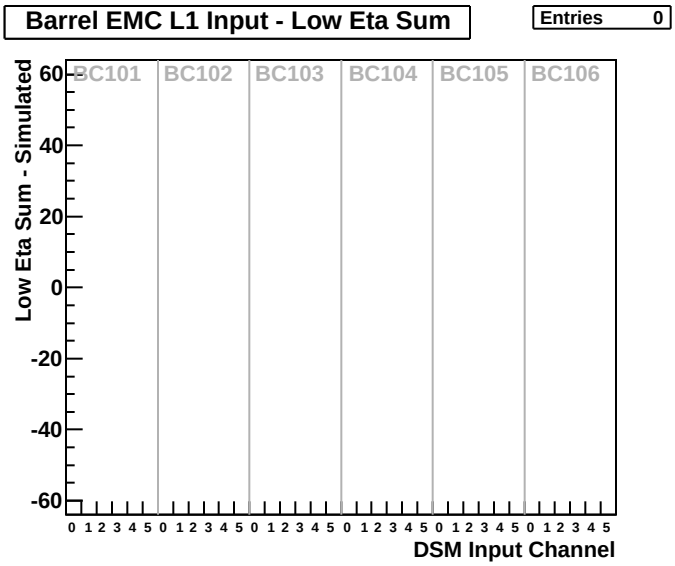

Endcap EMC L0 Input - Patch Sum
Entries 7771770
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

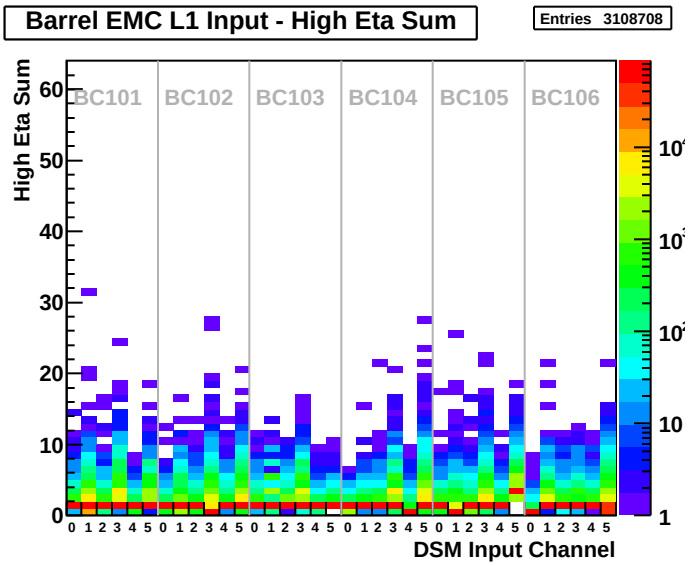

Barrel Jet Patches
Entries 1554354
JP ADC
JP ID

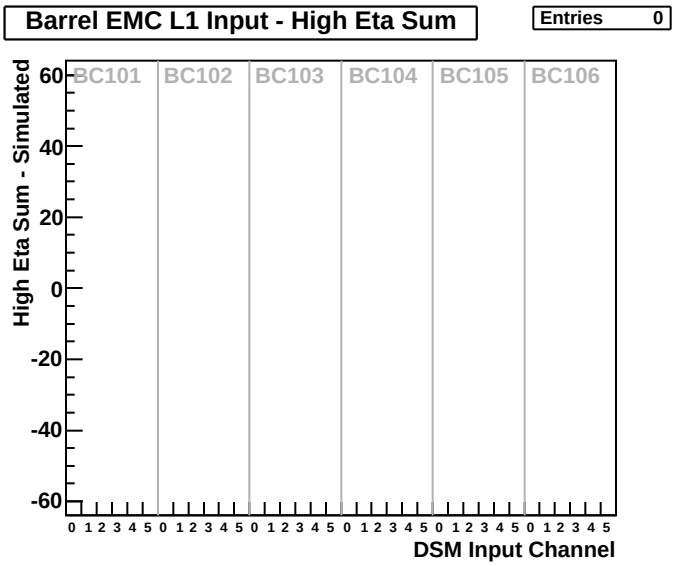

Endcap Jet Patches
Entries 518118
JP ADC
JP ID

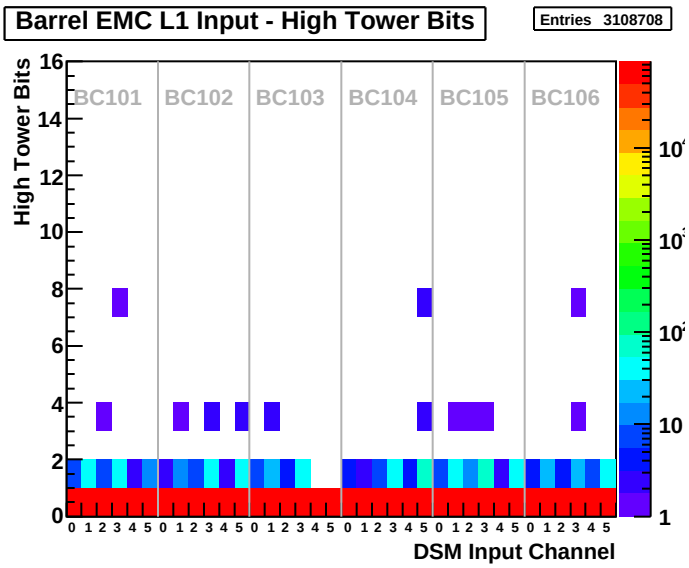

Hybrid Jet Patches
Entries 172706
JP ADC
JP ID

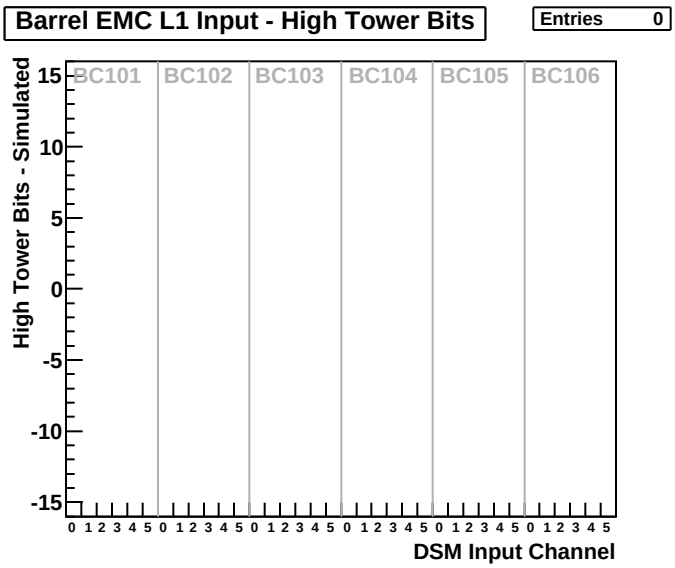

Barrel EMC L1 Input - Low Eta Sum
Entries 3108708
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

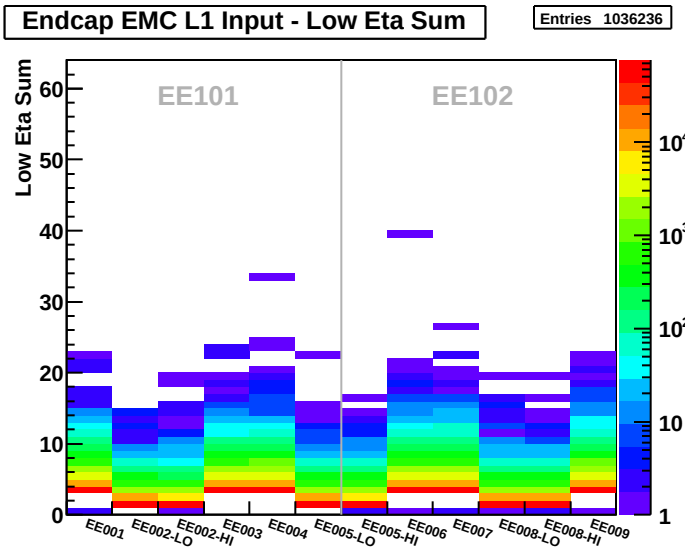

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

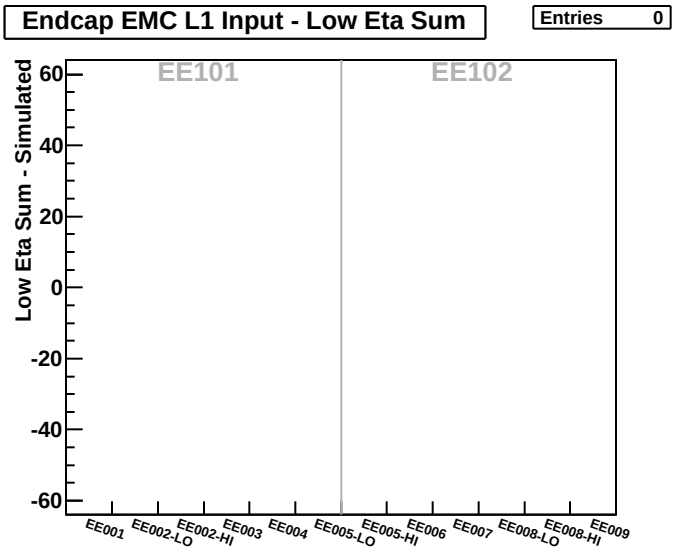

Barrel EMC L1 Input - High Eta Sum
Entries 3108708
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

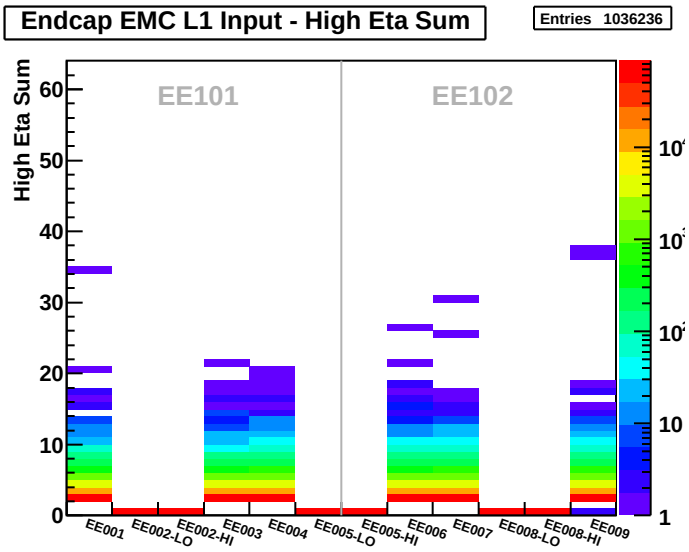

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

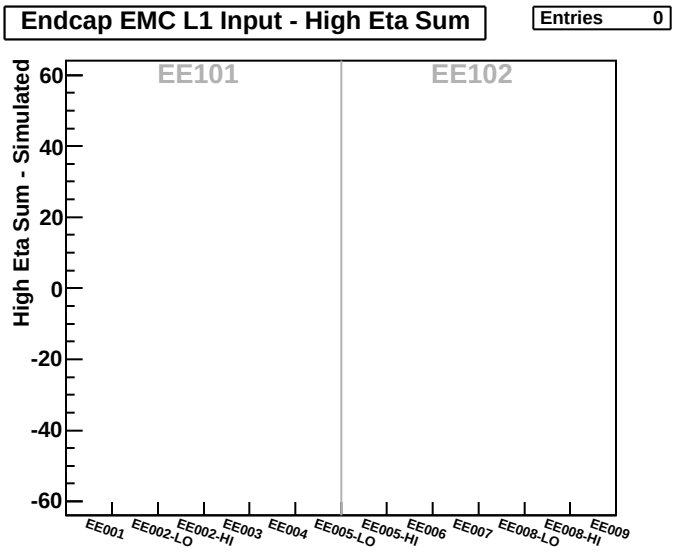

Barrel EMC L1 Input - High Tower Bits
Entries 3108708
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

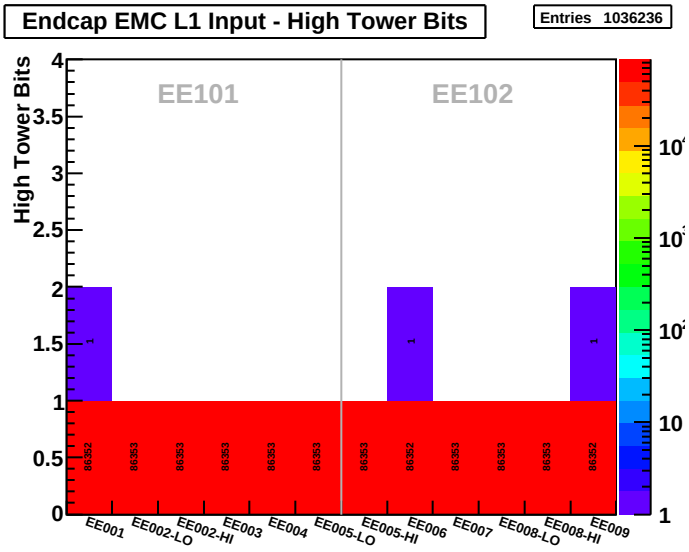

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

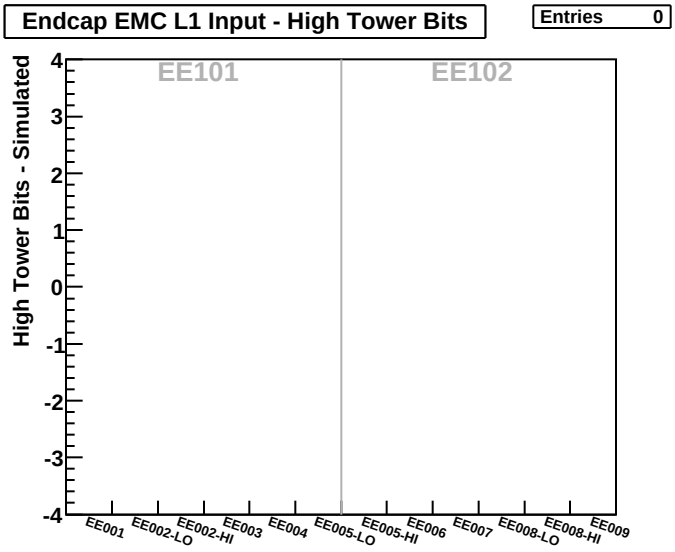

Endcap EMC L1 Input - Low Eta Sum
Entries 1036236
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

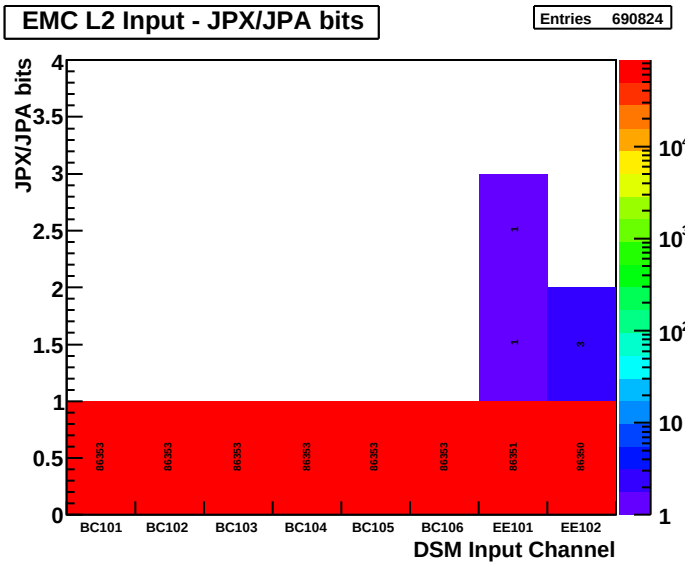

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

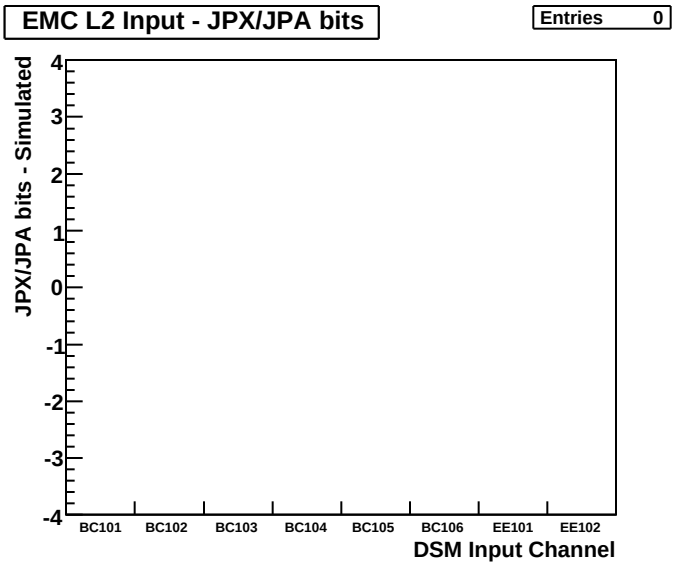

Endcap EMC L1 Input - High Eta Sum
Entries 1036236
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

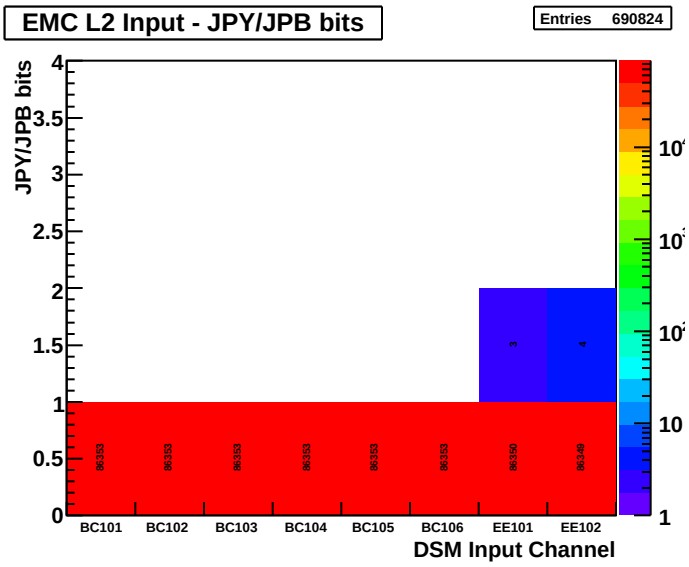

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

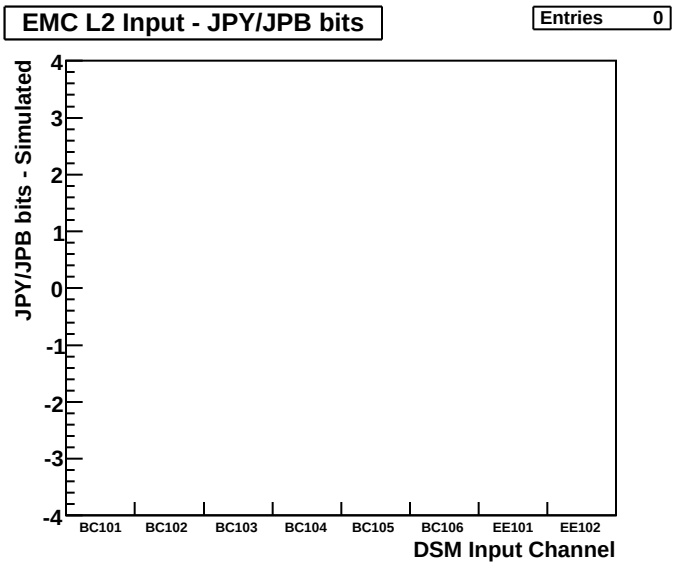

Endcap EMC L1 Input - High Tower Bits
Entries 1036236
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

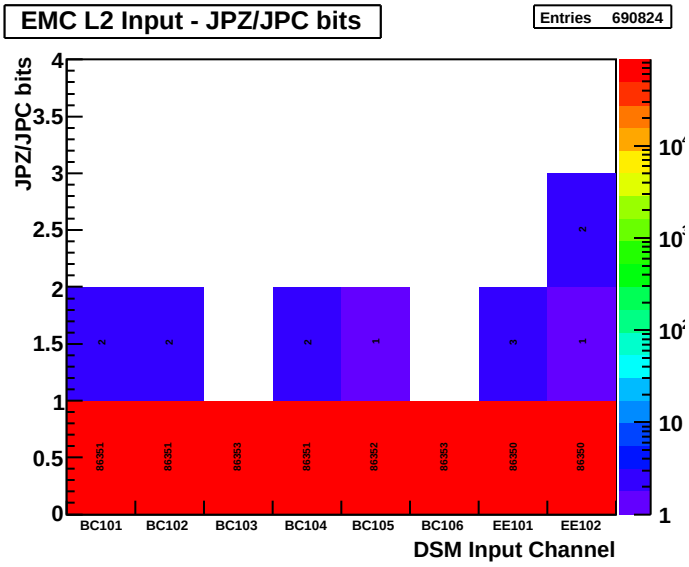

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

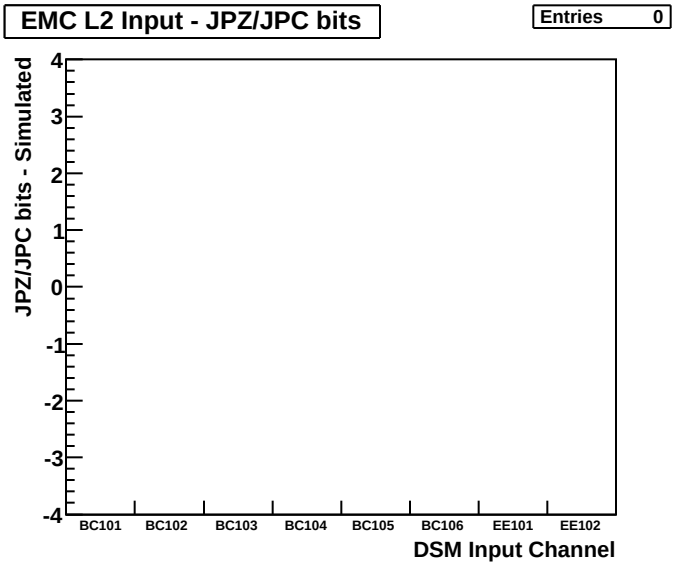

EMC L2 Input - JPX/JPA bits
Entries 690824
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

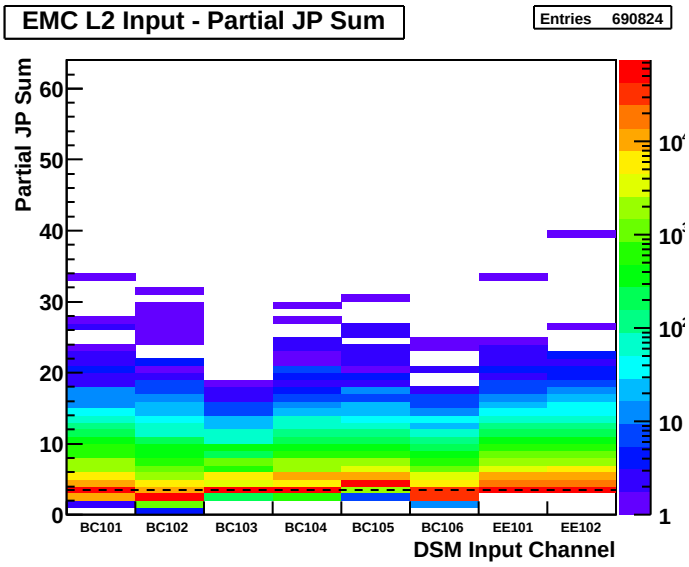

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

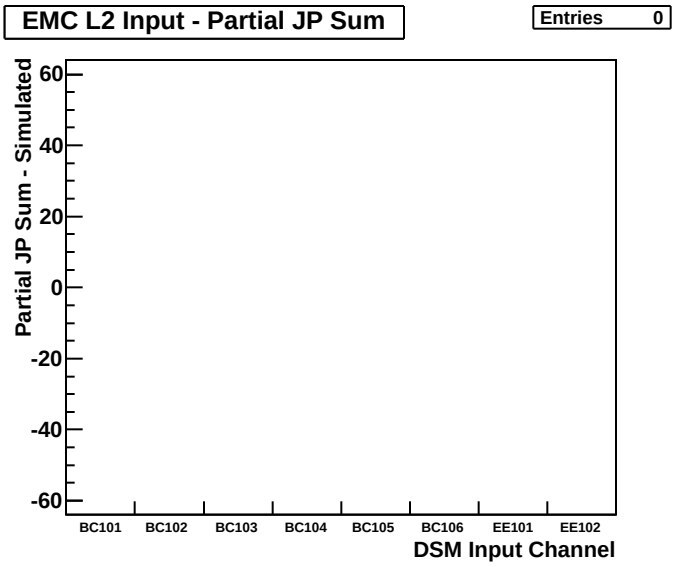

EMC L2 Input - JPY/JPB bits
Entries 690824
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

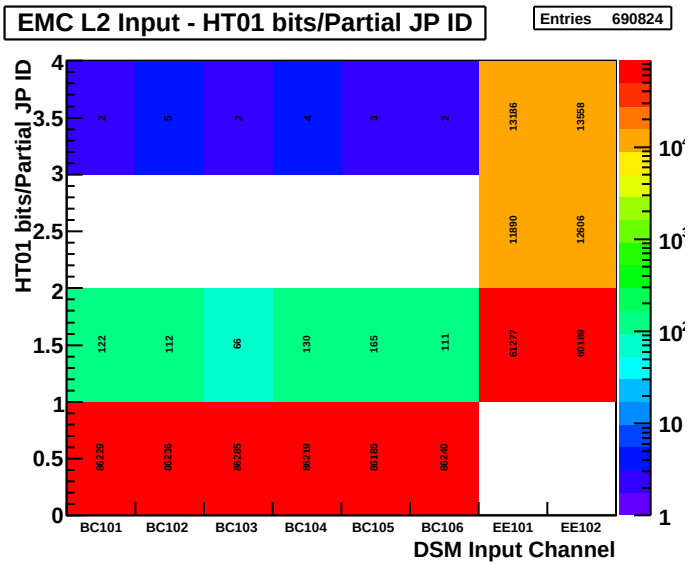

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

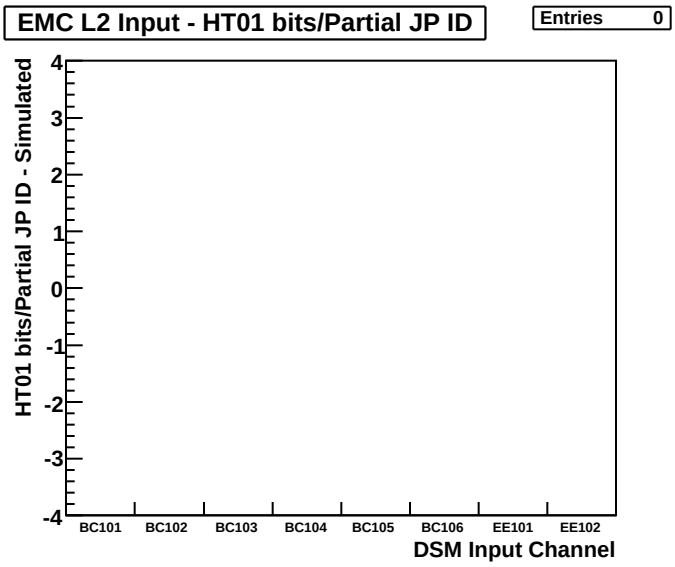

EMC L2 Input - JPZ/JPC bits
Entries 690824
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

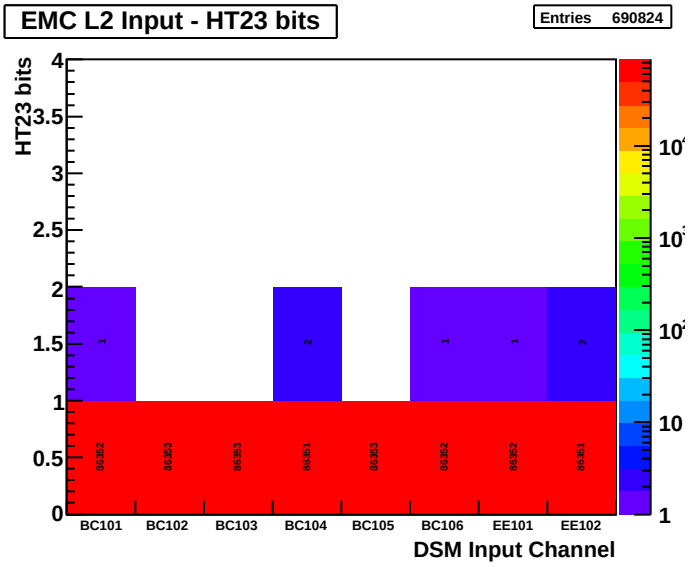

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

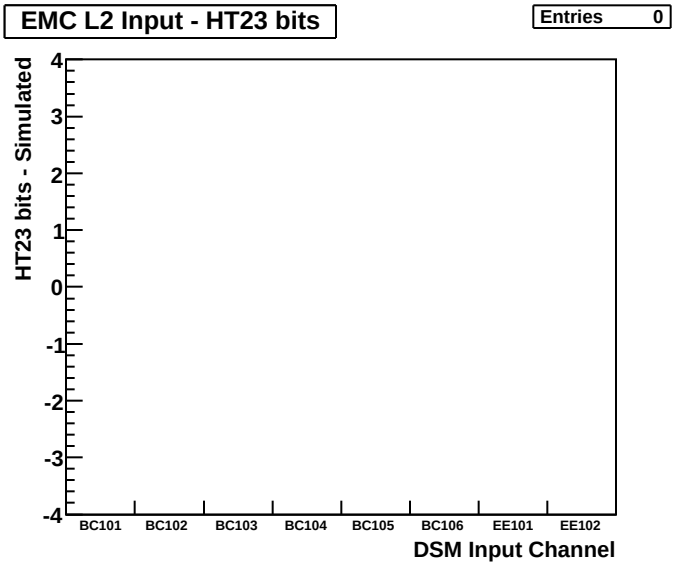

EMC L2 Input - Partial JP Sum
Entries 690824
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

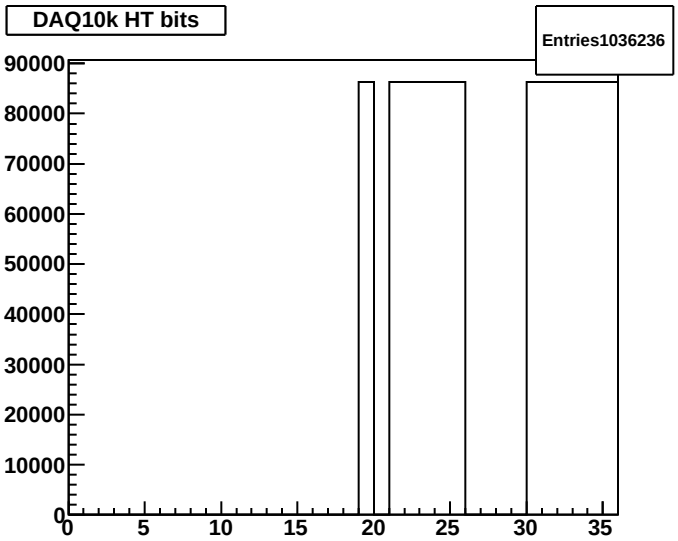

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

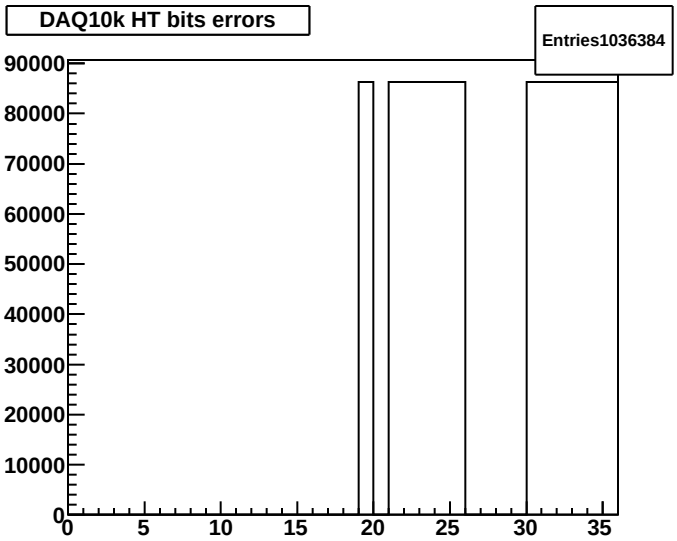

EMC L2 Input - HT01 bits/Partial JP ID
Entries 690824
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

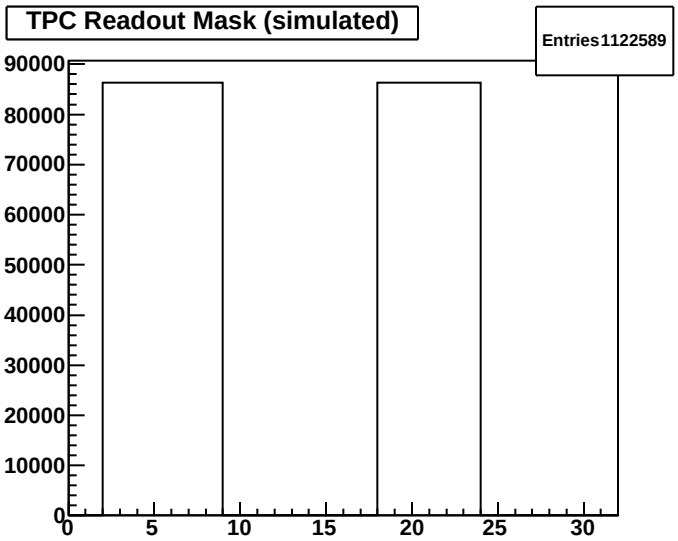

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

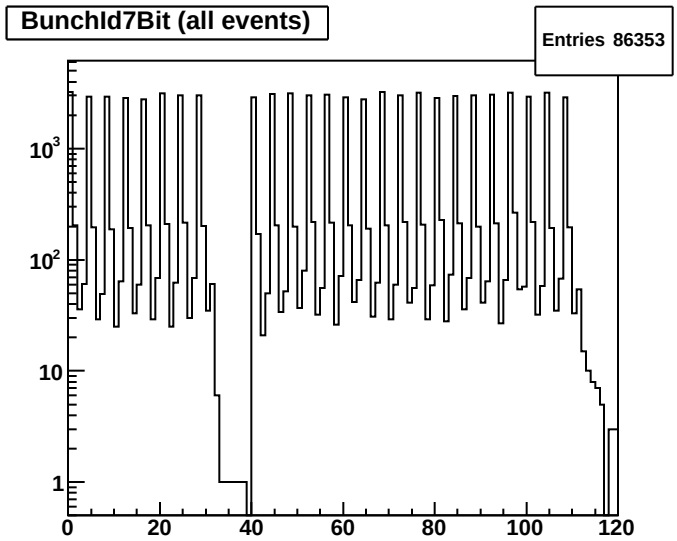

EMC L2 Input - HT23 bits
Entries 690824
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

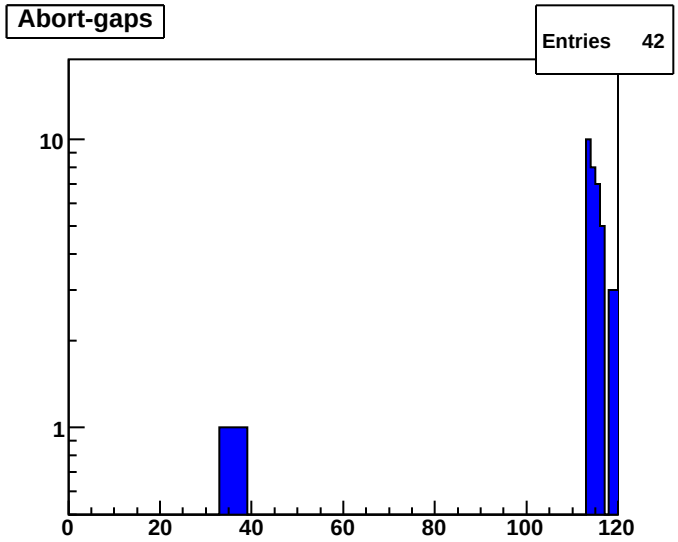

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

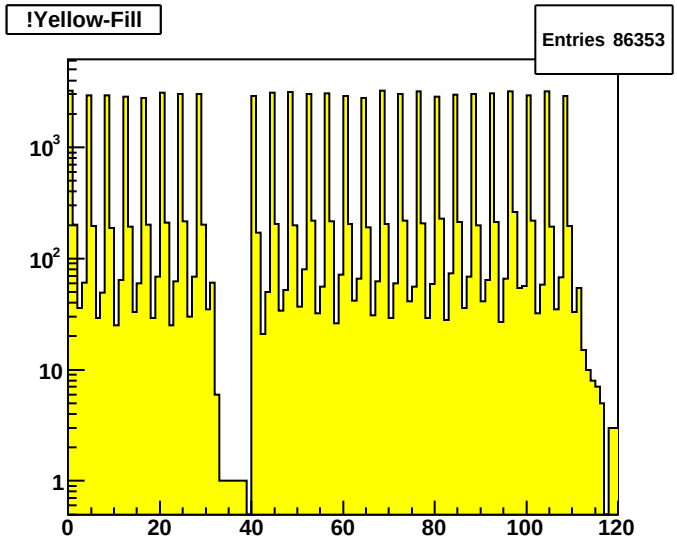

DAQ10k HT bits
Entries1036236
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

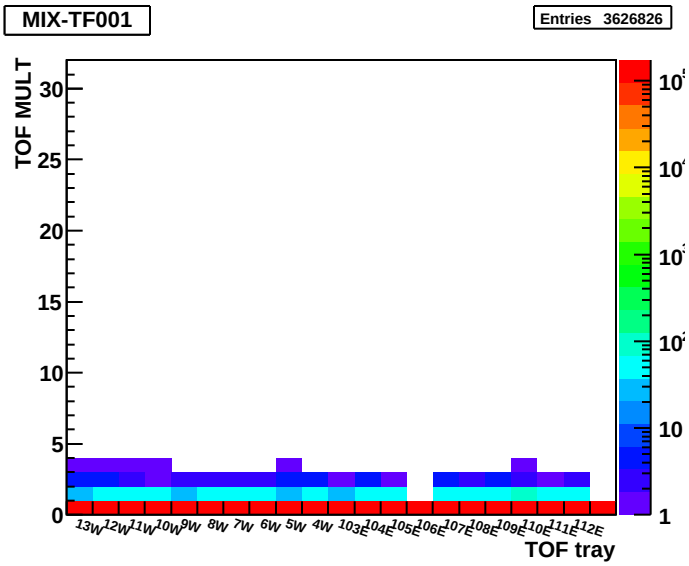

DAQ10k HT bits errors
Entries1036384
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

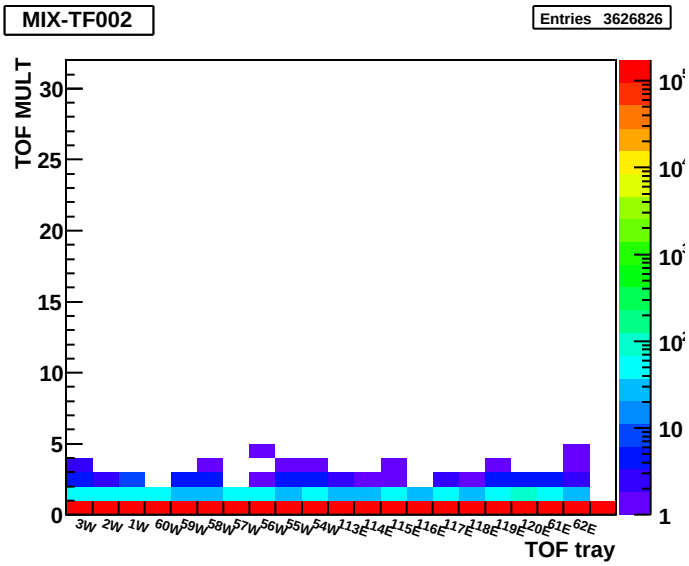

TPC Readout Mask (simulated)
Entries1122589
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30

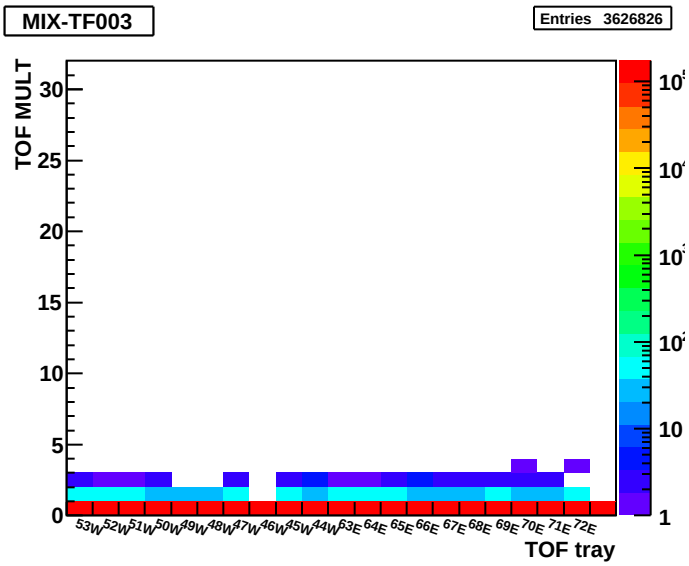

BunchId7Bit (all events)
Entries 86353
10^3
10^2
10
1
0 20 40 60 80 100 120

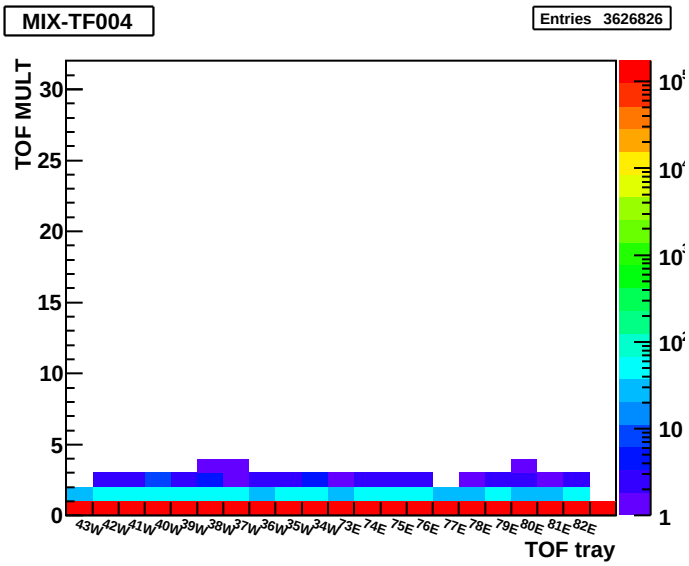

Abort-gaps
Entries 42
10
1
0 20 40 60 80 100 120

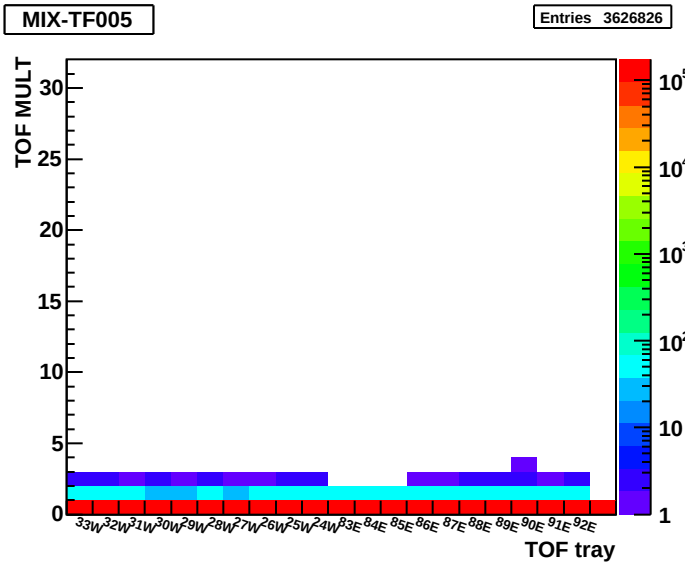

!Yellow-Fill
Entries 86353
10^3
10^2
10
1
0 20 40 60 80 100 120

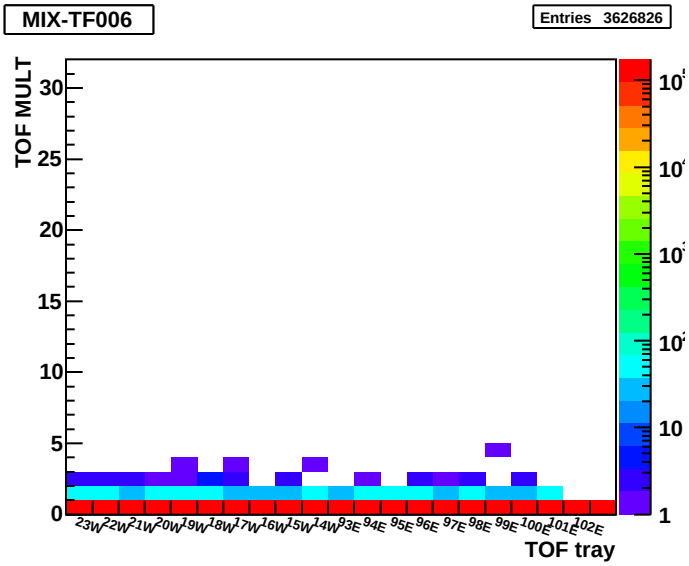

MIX-TF001
Entries 3626826
TOF MULT
TOF tray

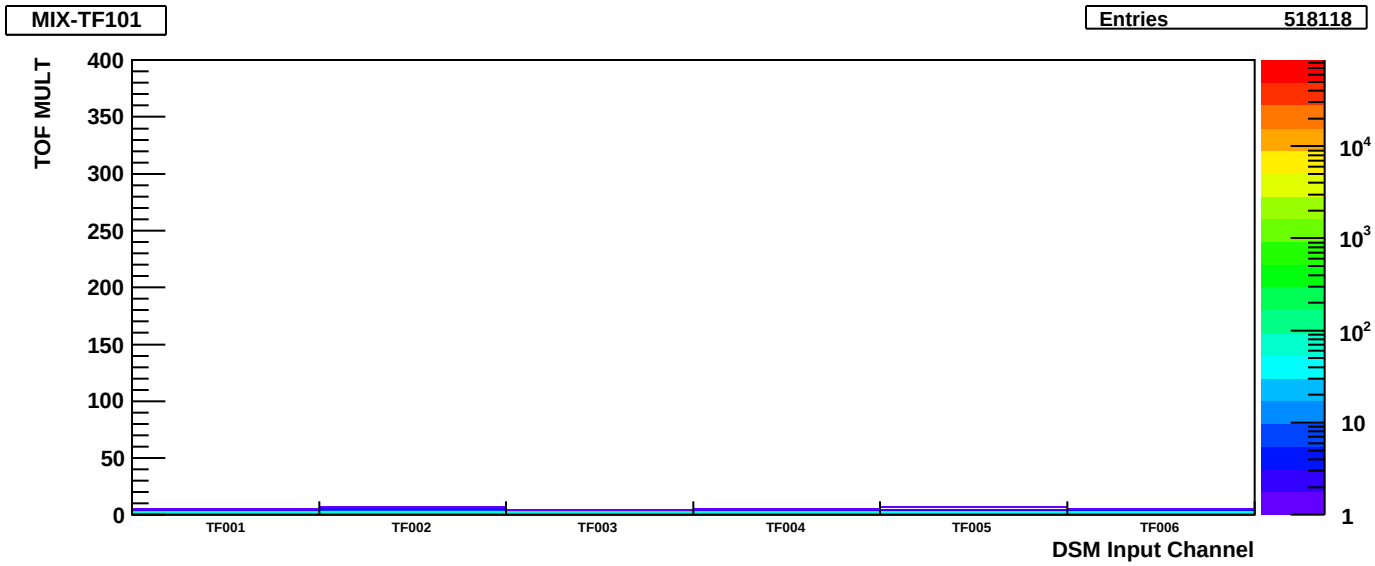

MIX-TF002
Entries 3626826
TOF MULT
TOF tray

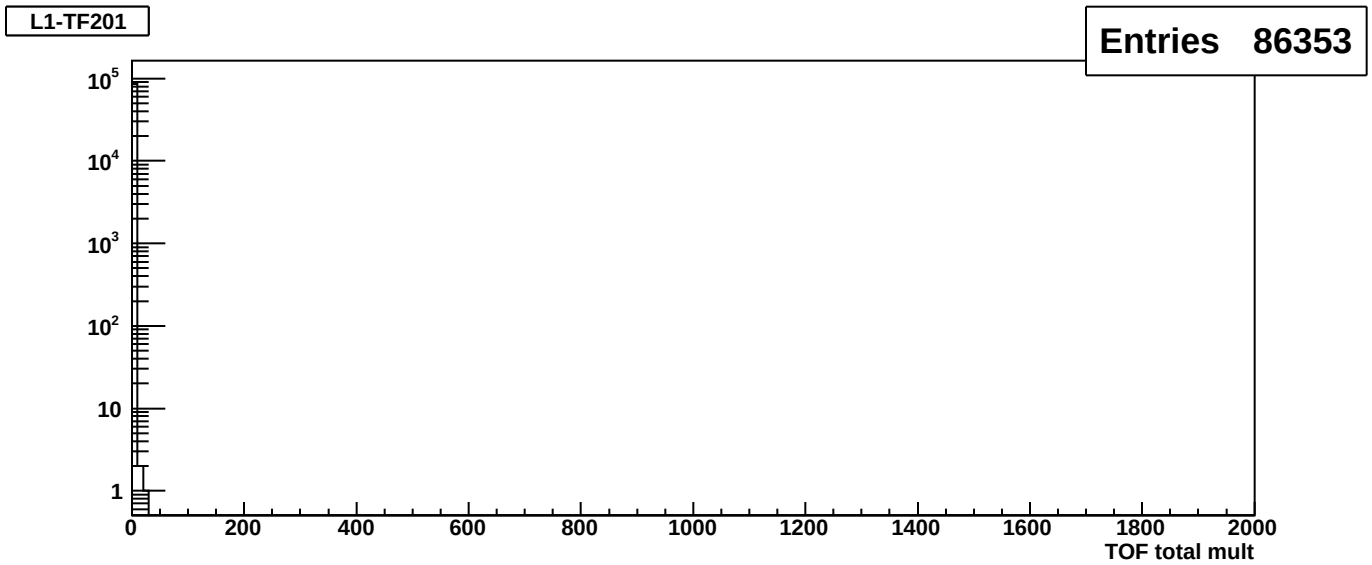

MIX-TF003
Entries 3626826
TOF MULT
TOF tray

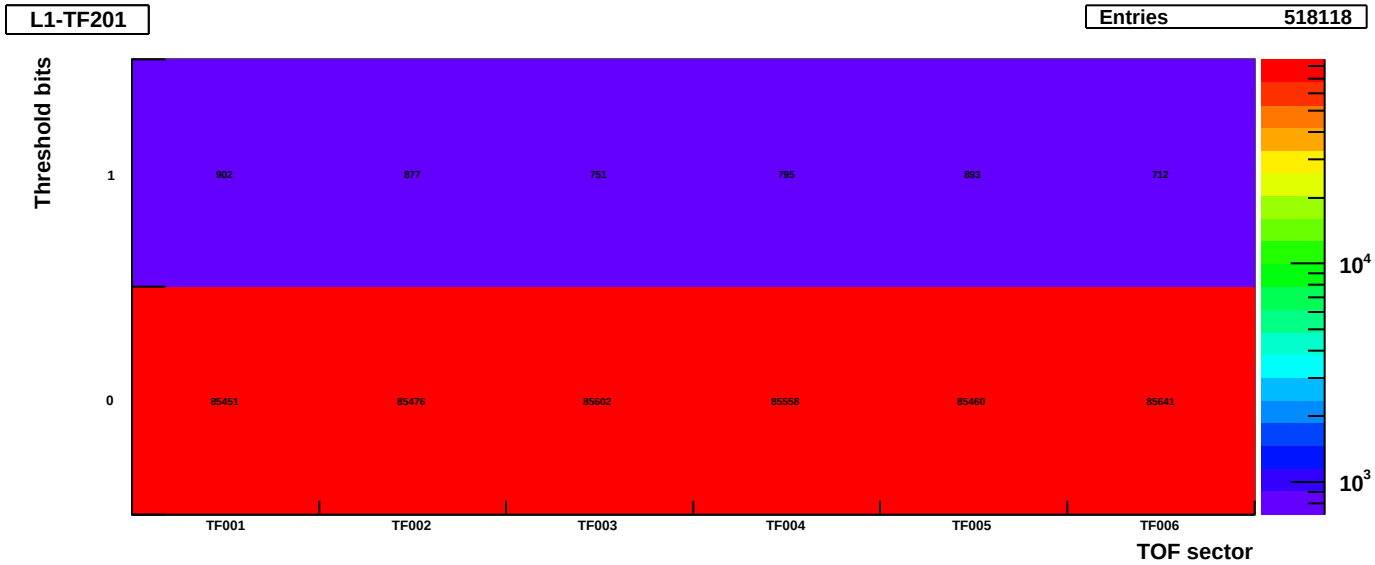

MIX-TF004
Entries 3626826
TOF MULT
TOF tray

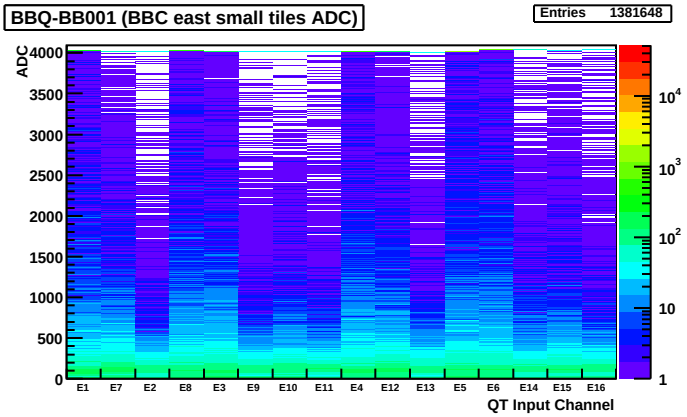

MIX-TF005
Entries 3626826
TOF MULT
TOF tray

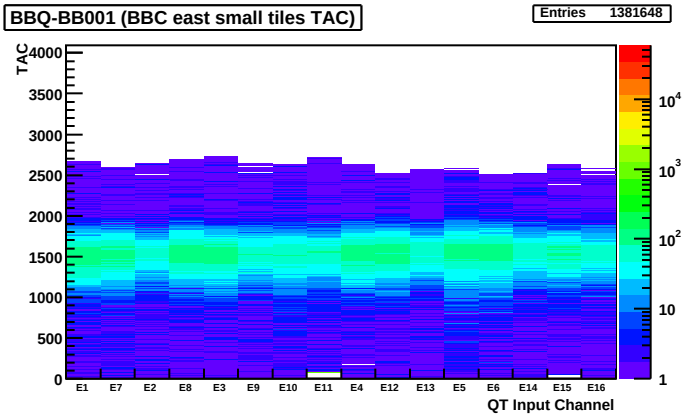

MIX-TF006
Entries 3626826
TOF MULT
TOF tray

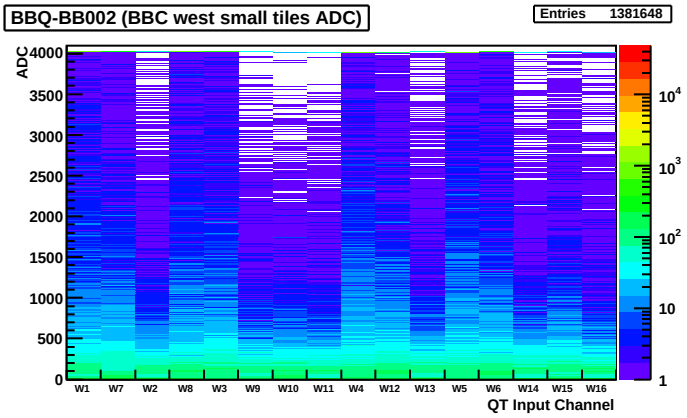

MIX-TF101
Entries 518118
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

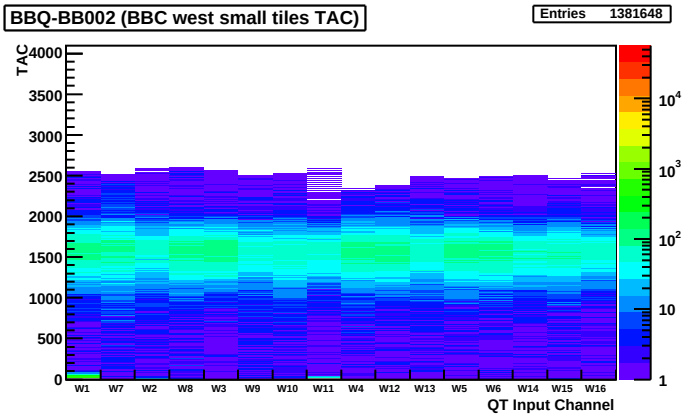

L1-TF201
Entries 86353
10^5
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

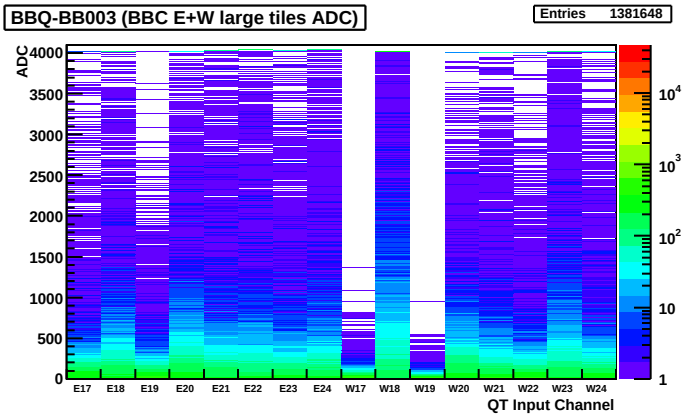

L1-TF201
Entries 518118
Threshold bits
1
0
902
877
751
795
893
712
85451
85476
85602
85558
85460
85641
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4
10^3

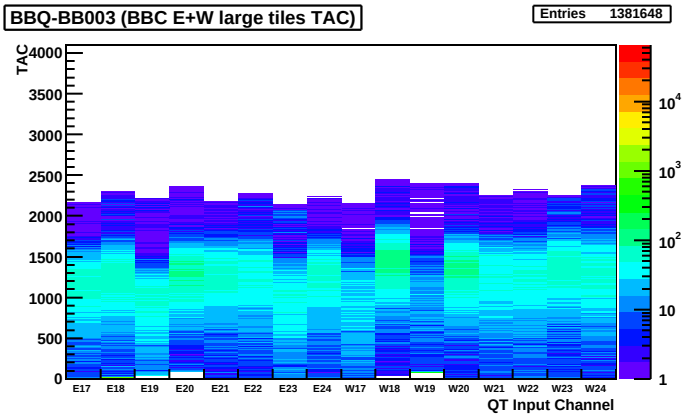

BBQ-BB001 (BBC east small tiles ADC)
Entries 1381648
ADC
QT Input Channel

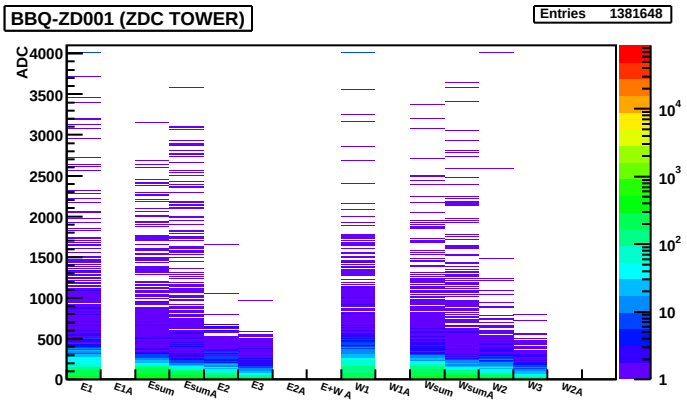

BBQ-BB001 (BBC east small tiles TAC)
Entries 1381648
TAC
QT Input Channel

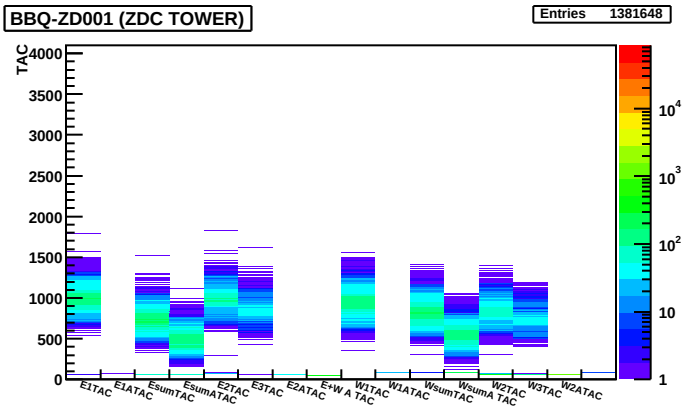

BBQ-BB002 (BBC west small tiles ADC)
Entries 1381648
ADC
QT Input Channel

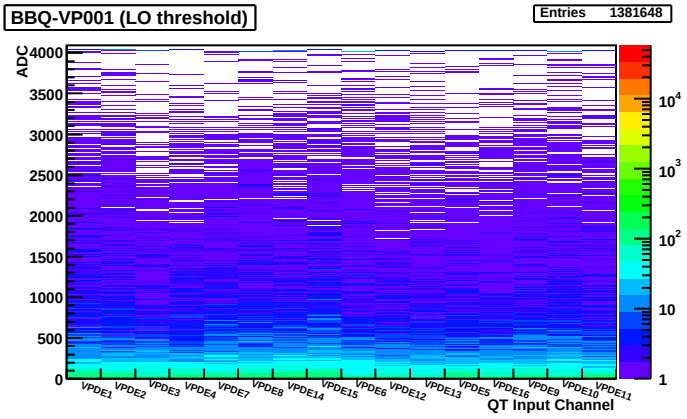

BBQ-BB002 (BBC west small tiles TAC)
Entries 1381648
TAC
QT Input Channel

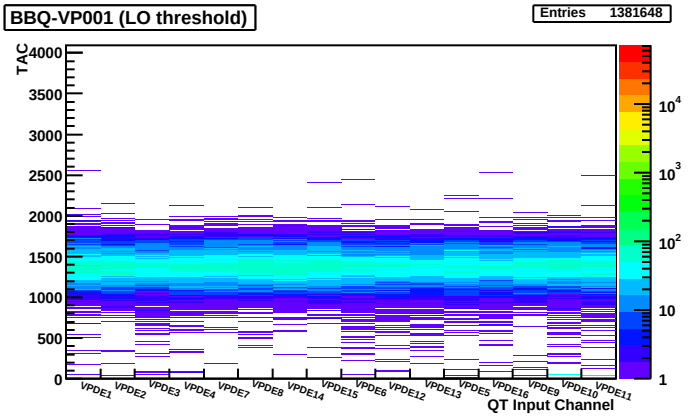

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 1381648
ADC
QT Input Channel

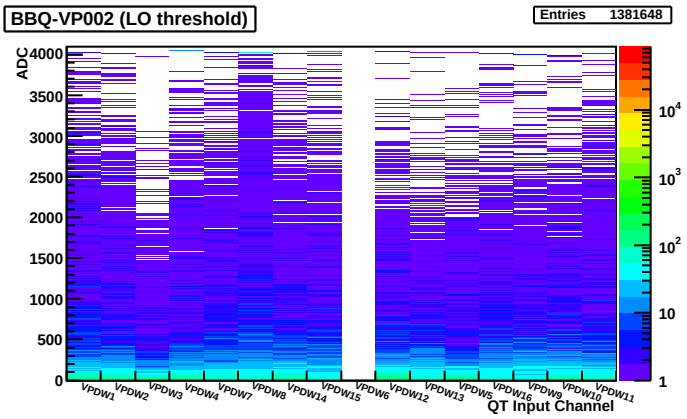

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 1381648
TAC
QT Input Channel

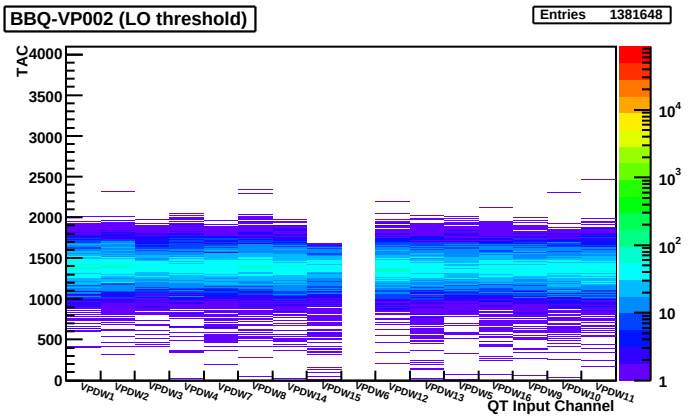

BBQ-ZD001 (ZDC TOWER)
Entries 1381648
ADC

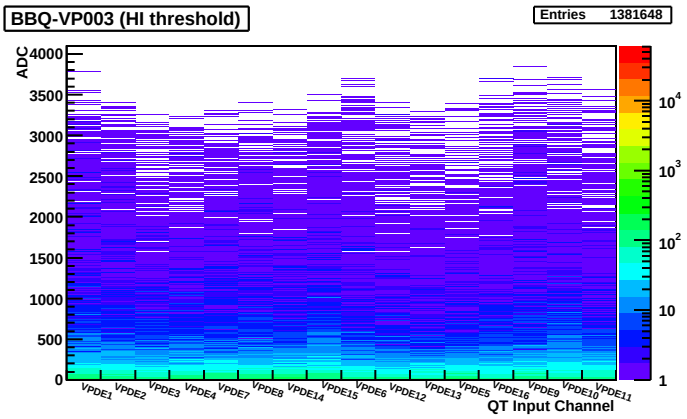

BBQ-ZD001 (ZDC TOWER)
Entries 1381648
TAC

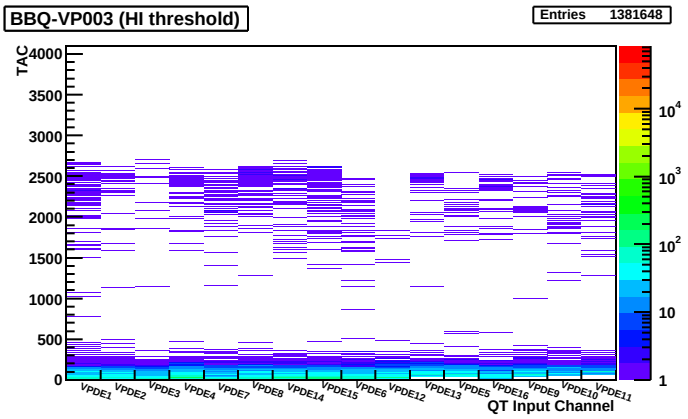

BBQ-VP001 (LO threshold)
Entries 1381648
ADC
QT Input Channel

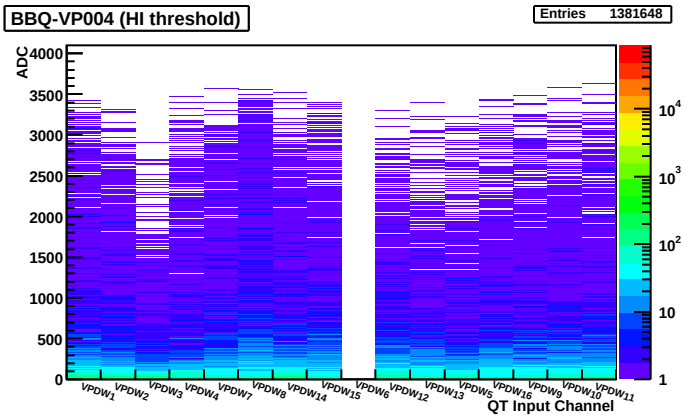

BBQ-VP001 (LO threshold)
Entries 1381648
TAC
QT Input Channel

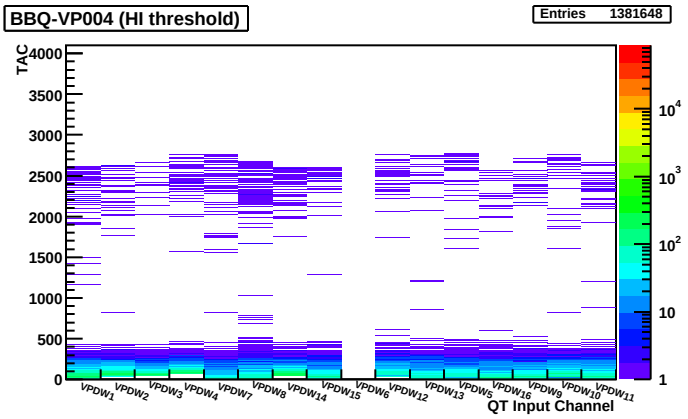

BBQ-VP002 (LO threshold)
Entries 1381648
ADC
QT Input Channel

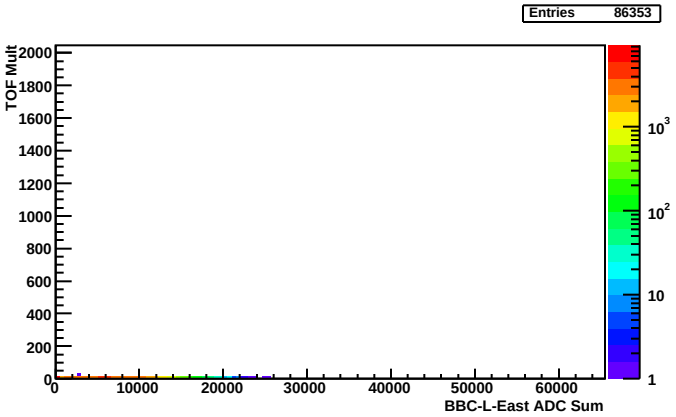

BBQ-VP002 (LO threshold)
Entries 1381648
TAC
QT Input Channel

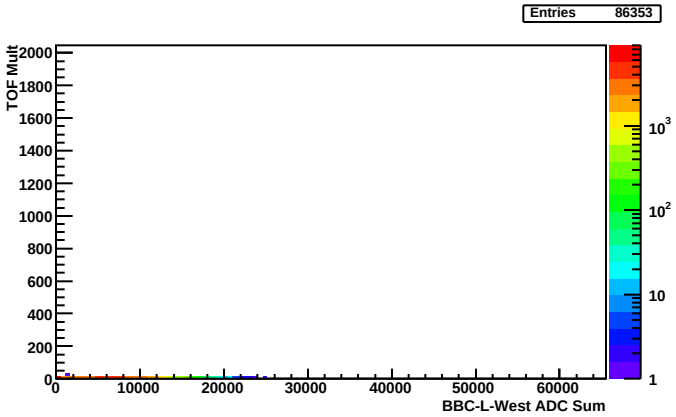

BBQ-VP003 (HI threshold)
Entries 1381648
ADC
QT Input Channel

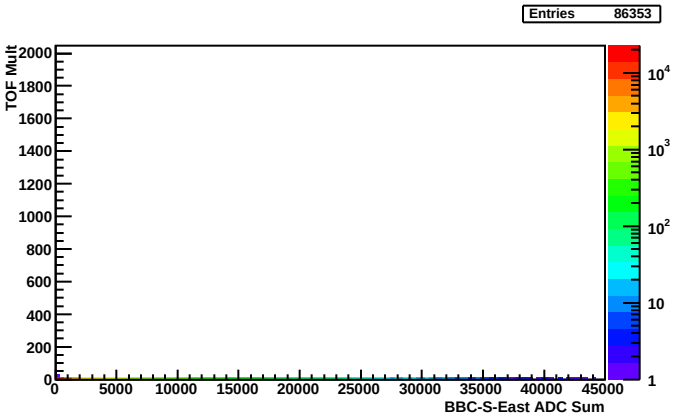

BBQ-VP003 (HI threshold)
Entries 1381648
TAC
QT Input Channel

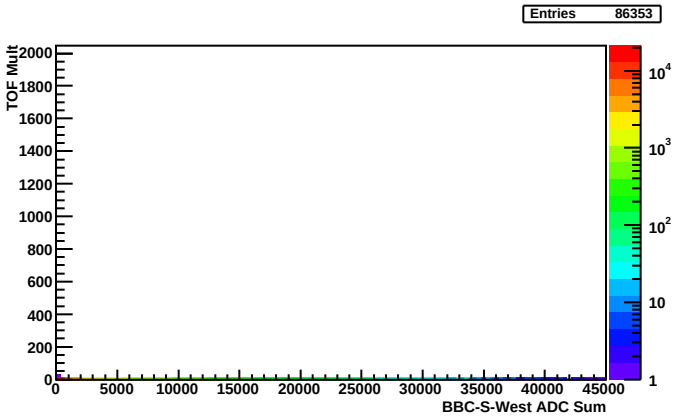

BBQ-VP004 (HI threshold)
Entries 1381648
ADC
QT Input Channel

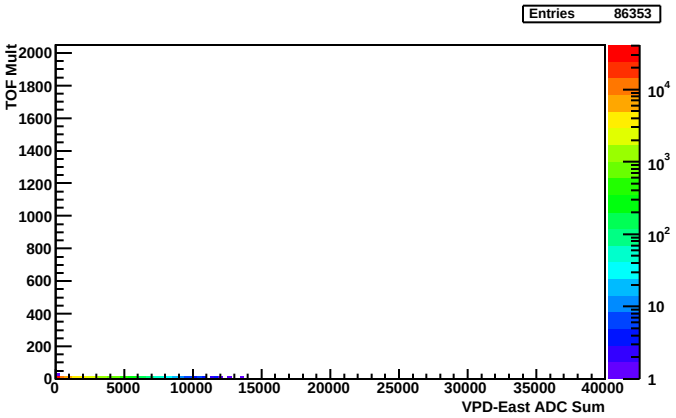

BBQ-VP004 (HI threshold)
Entries 1381648
TAC
QT Input Channel

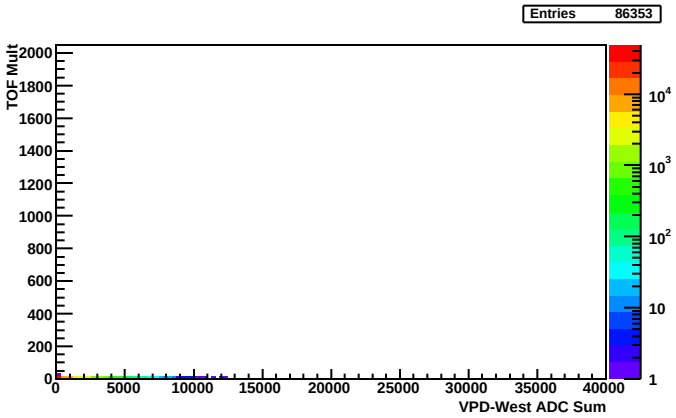

Entries 86353
TOF Mult
BBC-L-East ADC Sum

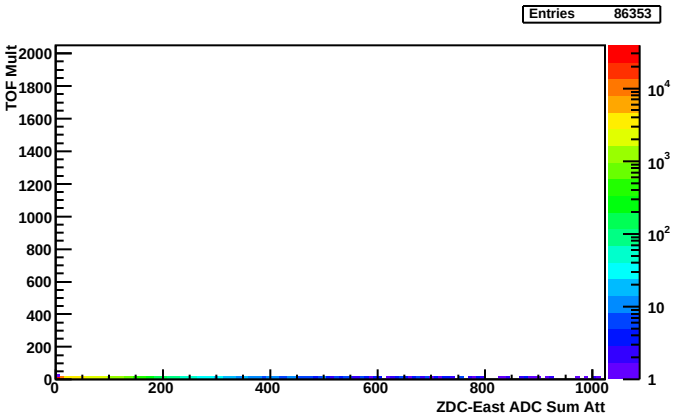

Entries 86353
TOF Mult
BBC-L-West ADC Sum

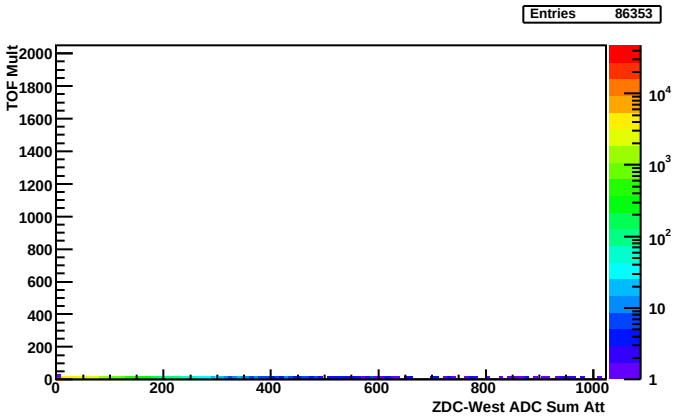

Entries 86353
TOF Mult
BBC-S-East ADC Sum

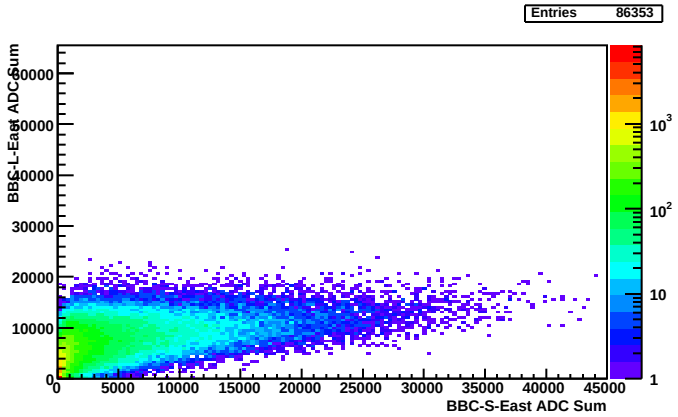

Entries 86353
TOF Mult
BBC-S-West ADC Sum

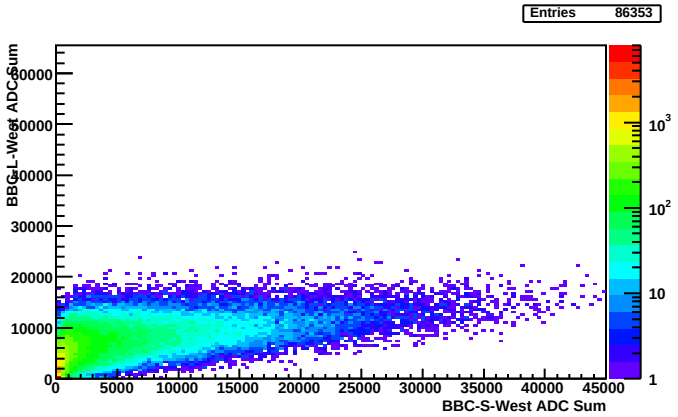

Entries 86353
TOF Mult
VPD-East ADC Sum

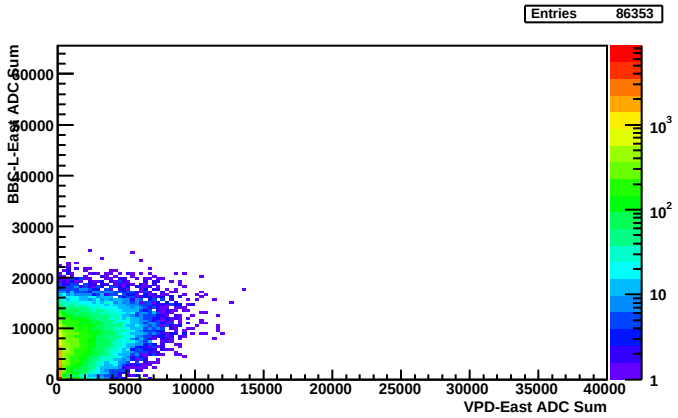

Entries 86353
TOF Mult
VPD-West ADC Sum

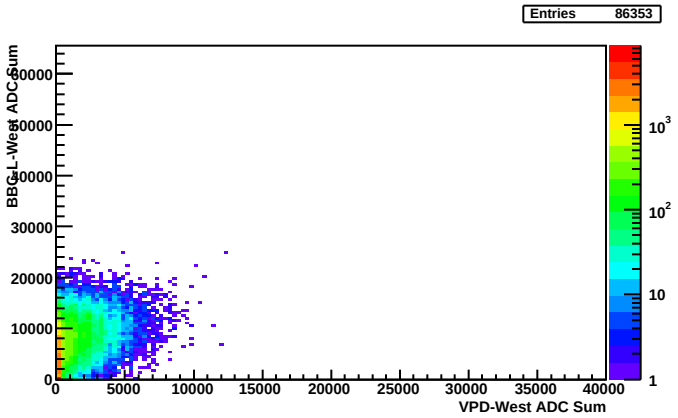

Entries 86353
TOF Mult
ZDC-East ADC Sum Att

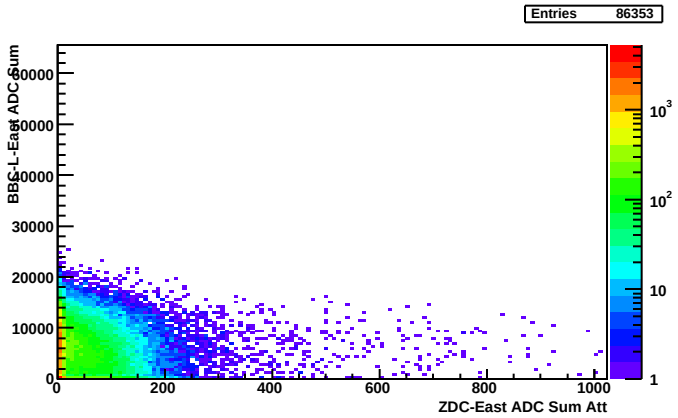

Entries 86353
TOF Mult
ZDC-West ADC Sum Att

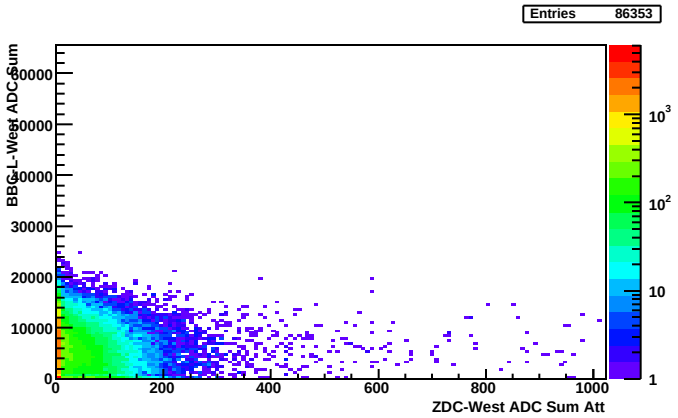

Entries 86353
BBC-L-East ADC Sum
BBC-S-East ADC Sum

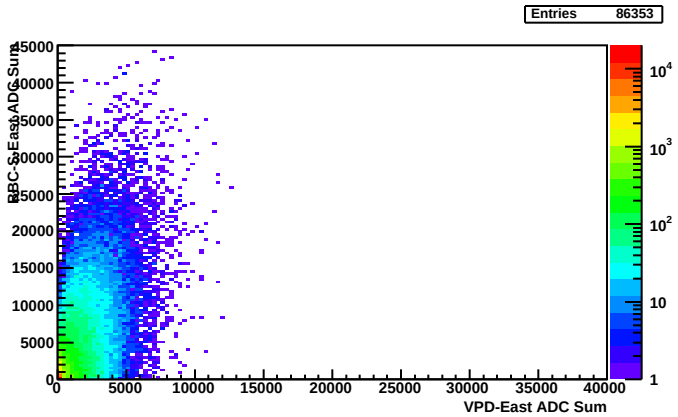

Entries 86353
BBC-L-West ADC Sum
BBC-S-West ADC Sum

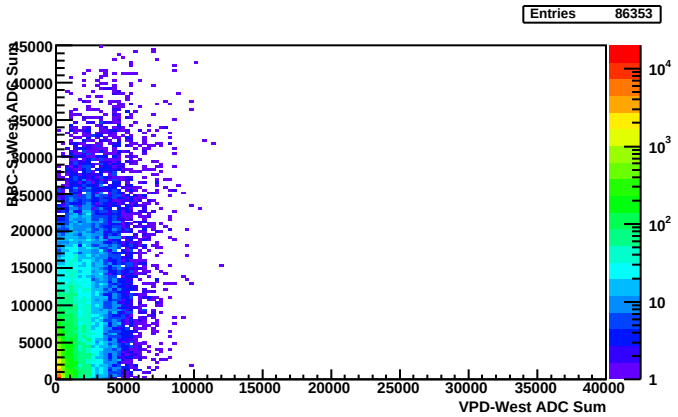

Entries 86353
BBC-L-East ADC Sum
VPD-East ADC Sum

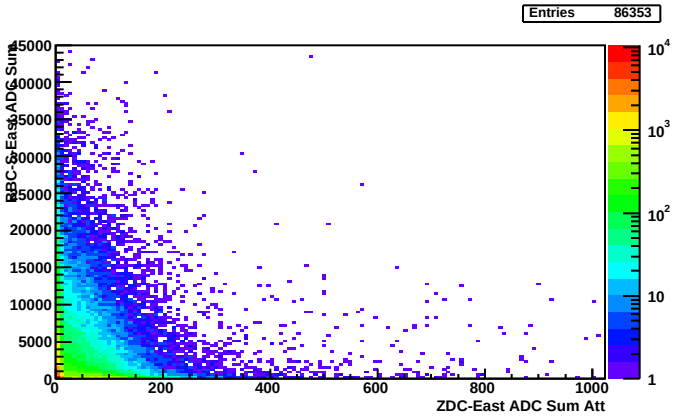

Entries 86353
BBC-L-West ADC Sum
VPD-West ADC Sum

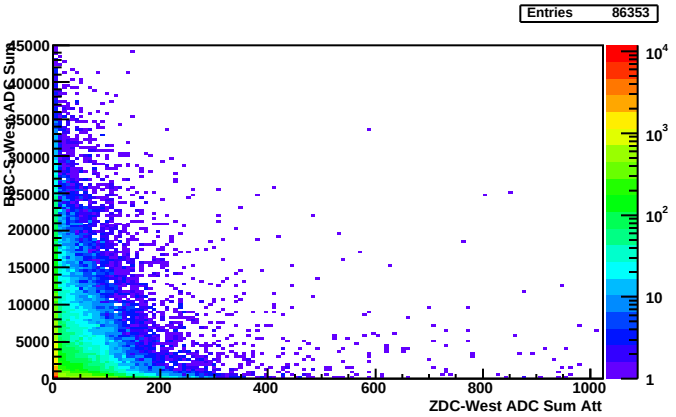

Entries 86353
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

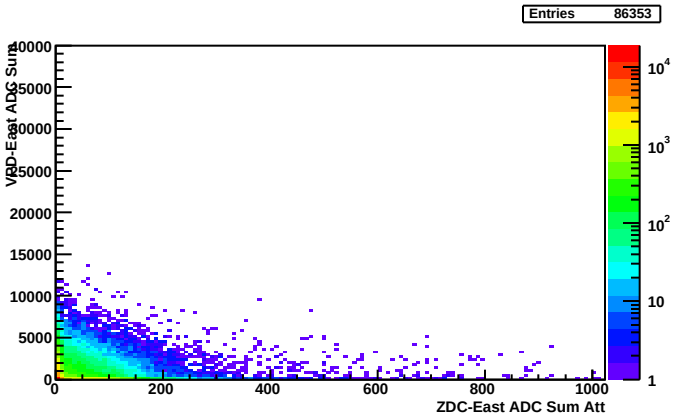

Entries 86353
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

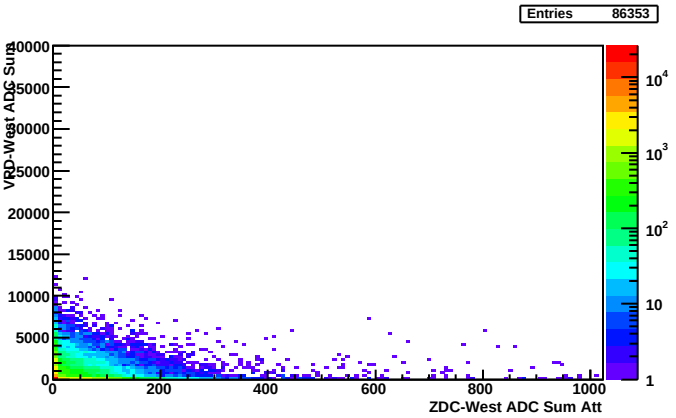

Entries 86353
BBC-S-East ADC Sum
VPD-East ADC Sum

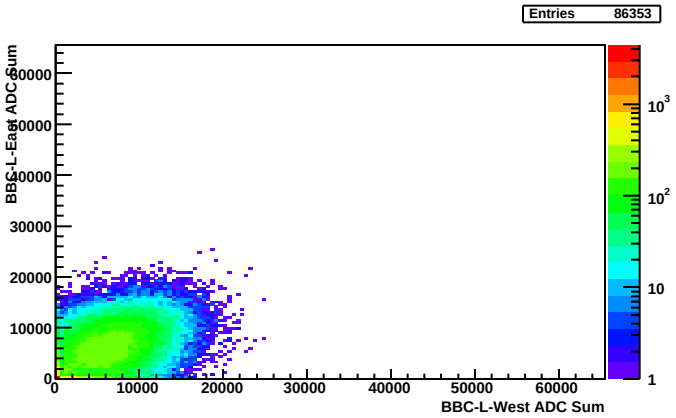

Entries 86353
BBC-S-West ADC Sum
VPD-West ADC Sum

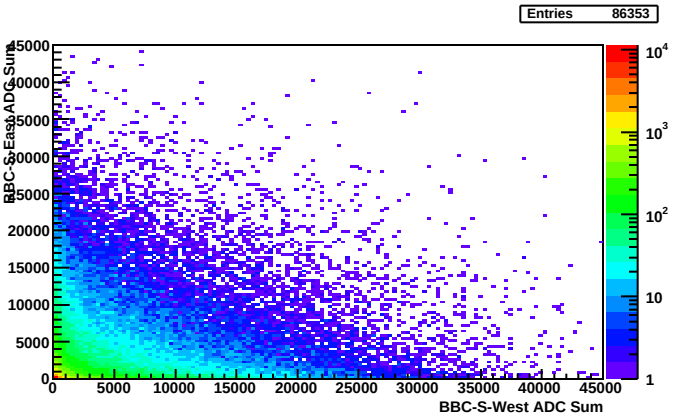

Entries 86353
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

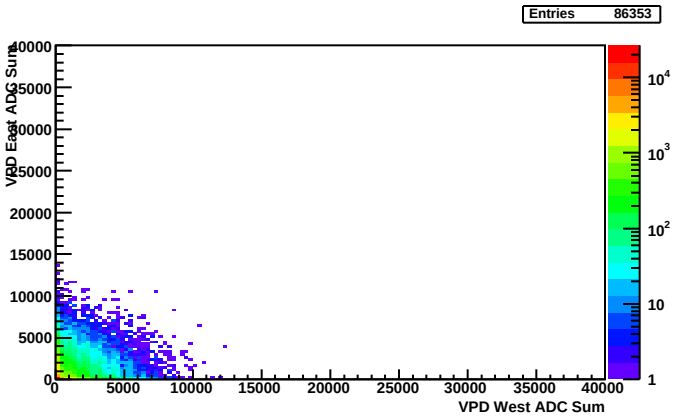

Entries 86353
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

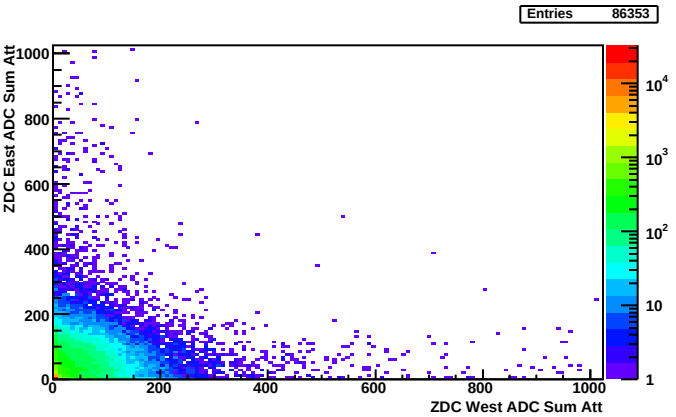

Entries 86353
VPD-East ADC Sum
ZDC-East ADC Sum Att

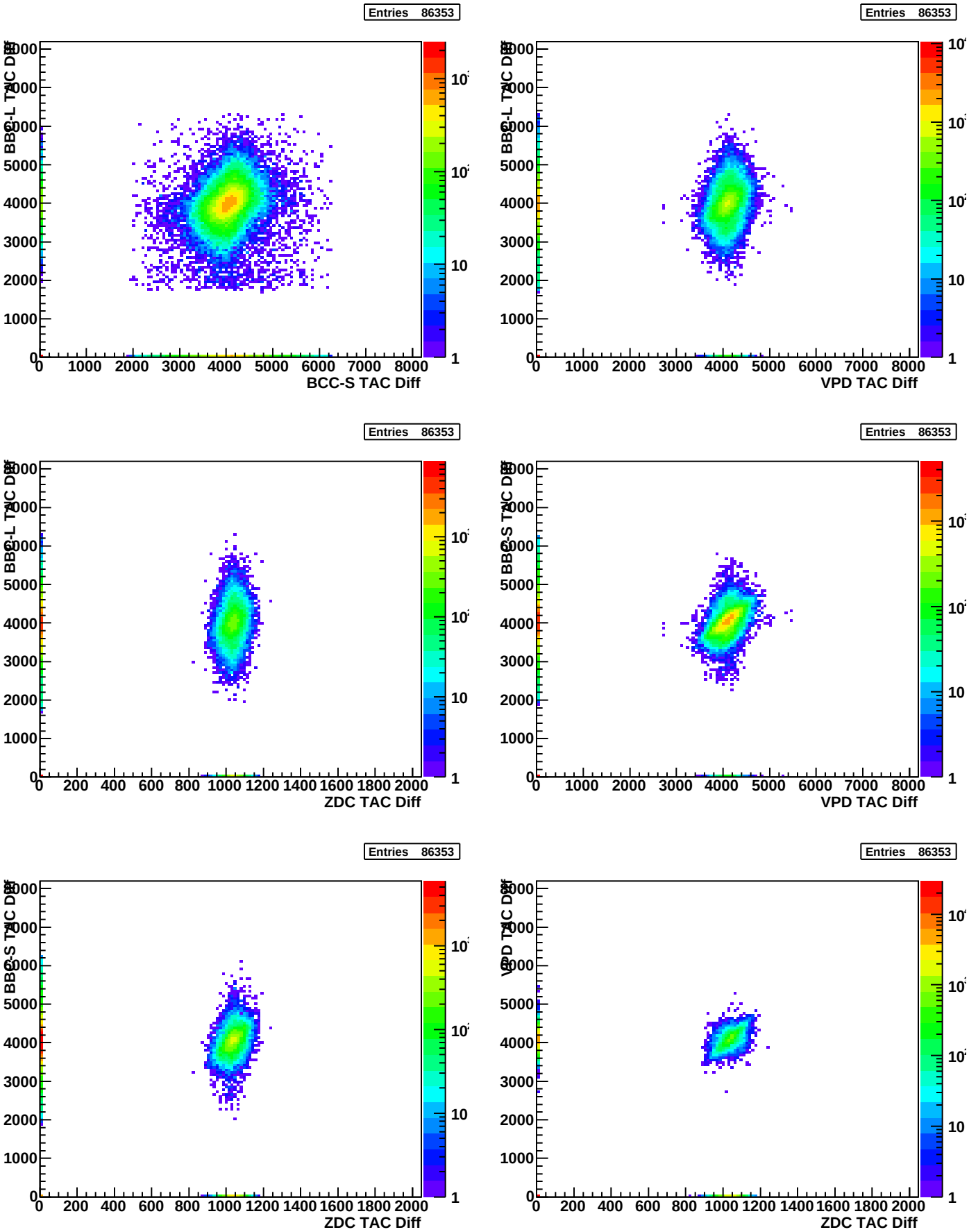

Entries 86353
VPD-West ADC Sum
ZDC-West ADC Sum Att

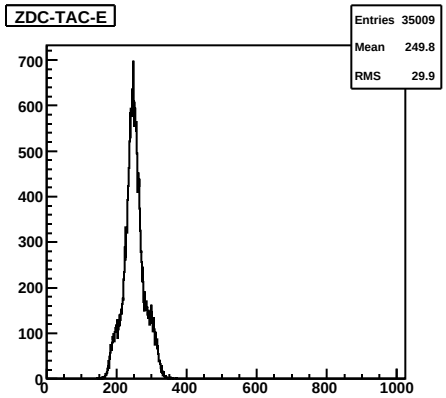

Entries 86353
BBC-L-East ADC Sum
BBC-L-West ADC Sum

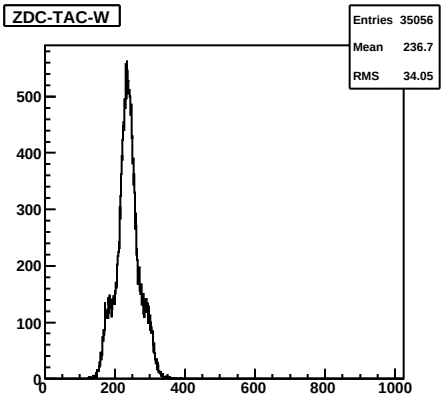

Entries 86353
BBC-S-East ADC Sum
BBC-S-West ADC Sum

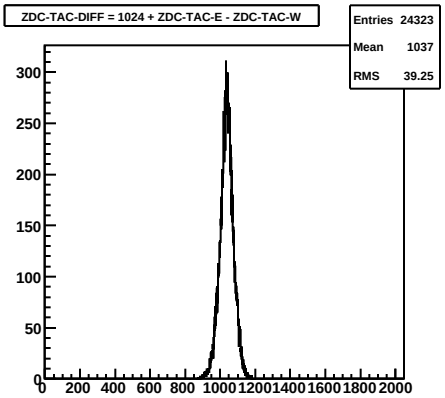

Entries 86353
VPD East ADC Sum
VPD West ADC Sum

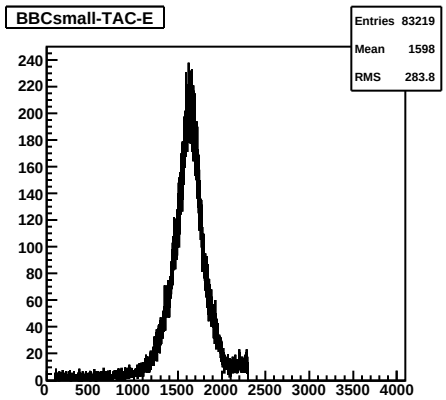

Entries 86353
ZDC East ADC Sum Att
ZDC West ADC Sum Att

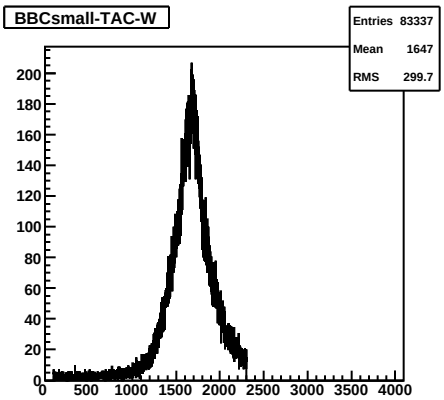

Entries 86353
BBC-L TAC Diff
BCC-S TAC Diff
Entries 86353
BBC-L TAC Diff
VPD TAC Diff
Entries 86353
BBC-L TAC Diff
ZDC TAC Diff
Entries 86353
BBC-S TAC Diff
VPD TAC Diff
Entries 86353
BBC-S TAC Diff
ZDC TAC Diff
Entries 86353
VPD TAC Diff
ZDC TAC Diff

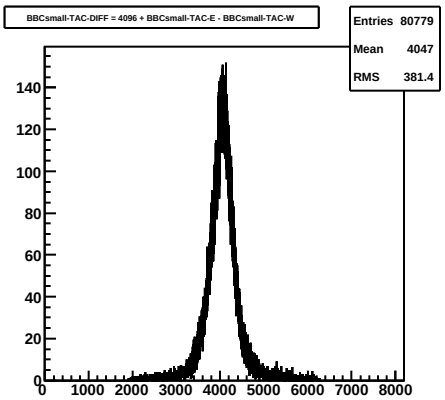

ZDC-TAC-E
Entries 35009
Mean 249.8
RMS 29.9

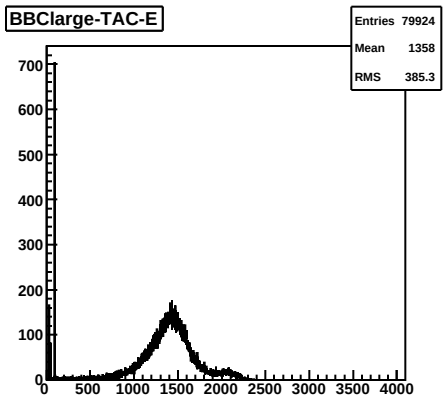

ZDC-TAC-W
Entries 35056
Mean 236.7
RMS 34.05

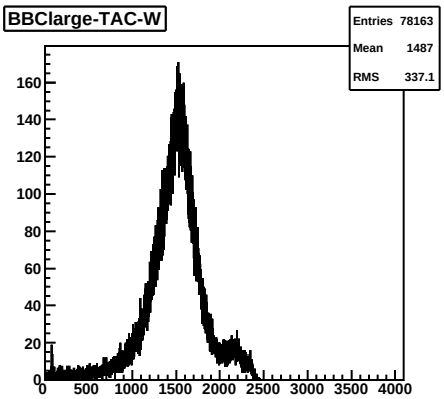

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 24323
Mean 1037
RMS 39.25

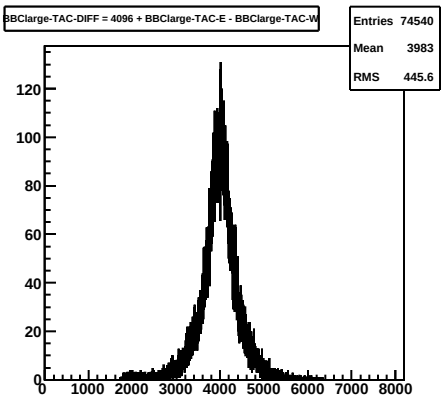

BBCsmall-TAC-E
Entries 83219
Mean 1598
RMS 283.8

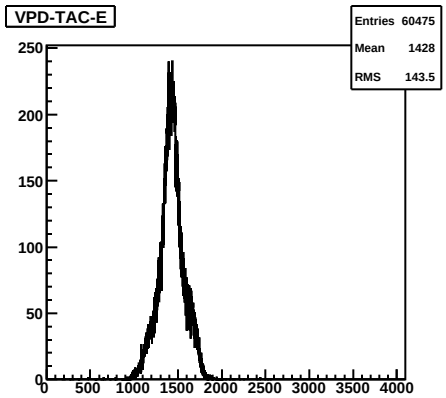

BBCsmall-TAC-W
Entries 83337
Mean 1647
RMS 299.7

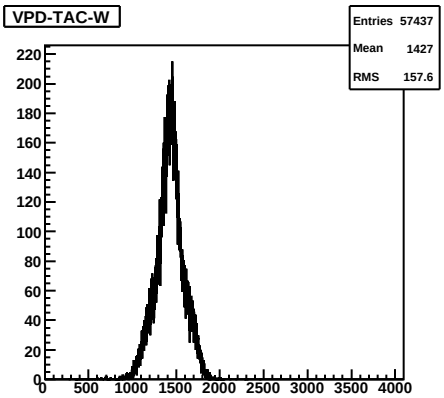

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 80779
Mean 4047
RMS 381.4

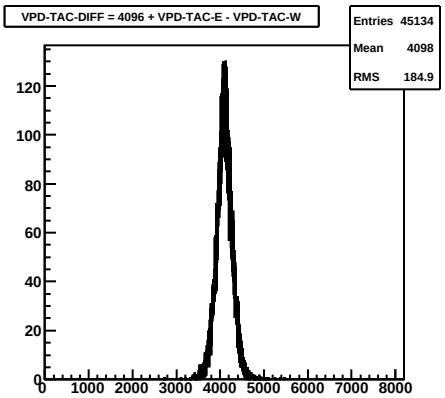

BBClarge-TAC-E
Entries 79924
Mean 1358
RMS 385.3

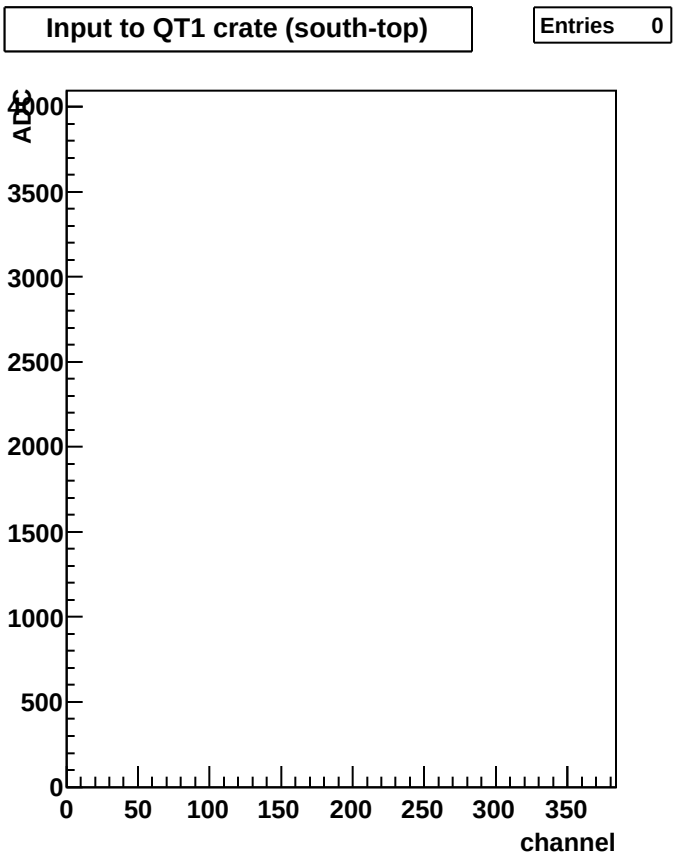

BBClarge-TAC-W
Entries 78163
Mean 1487
RMS 337.1

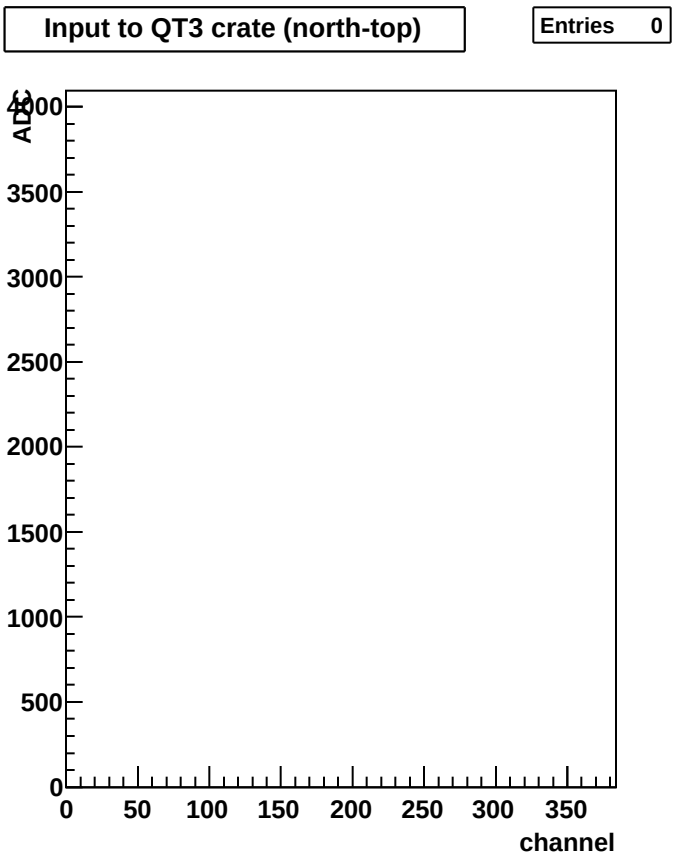

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 74540
Mean 3983
RMS 445.6

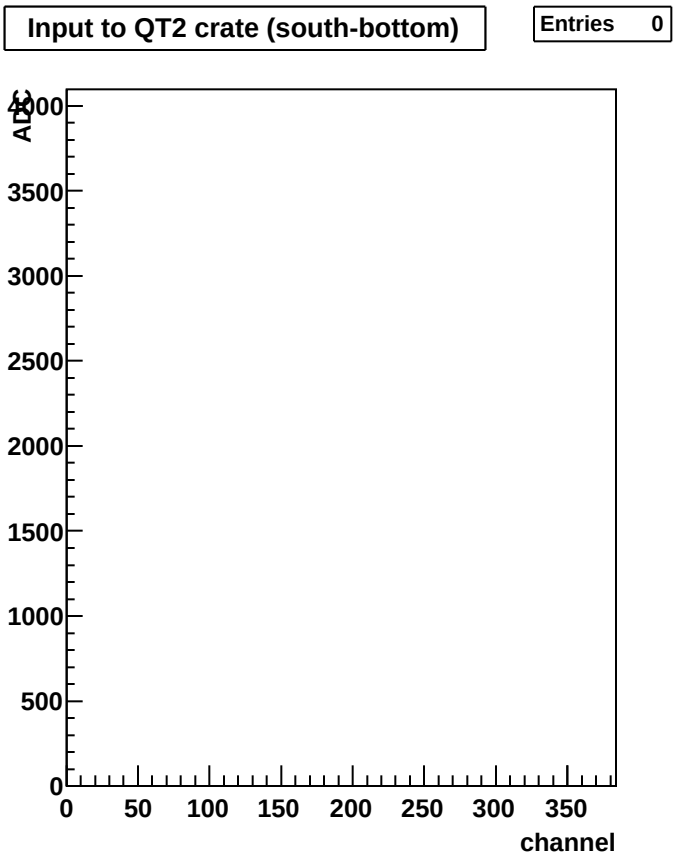

VPD-TAC-E
Entries 60475
Mean 1428
RMS 143.5

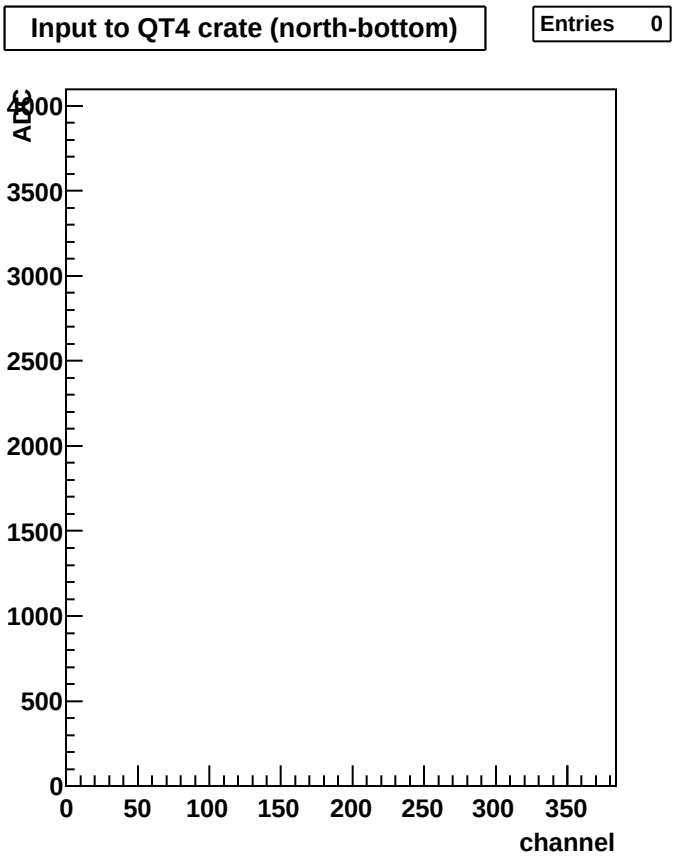

VPD-TAC-W
Entries 57437
Mean 1427
RMS 157.6

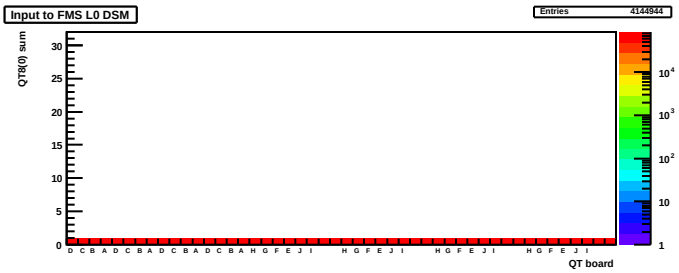

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 45134
Mean 4098
RMS 184.9

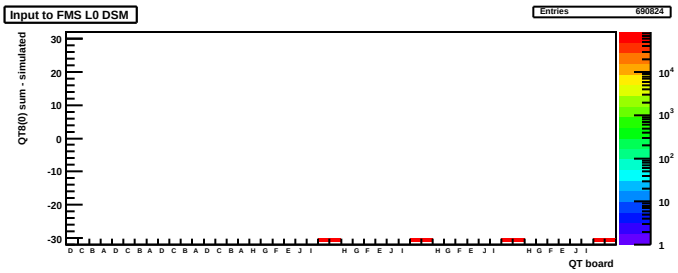

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

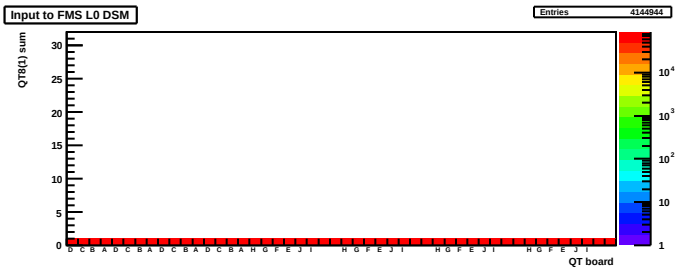

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

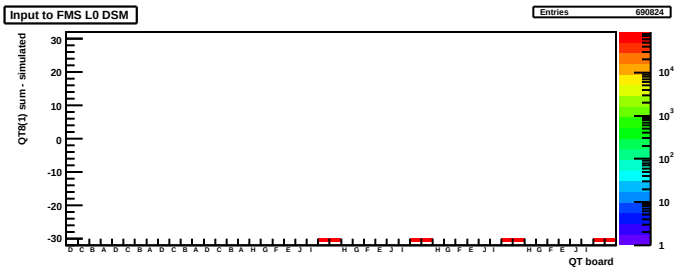

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

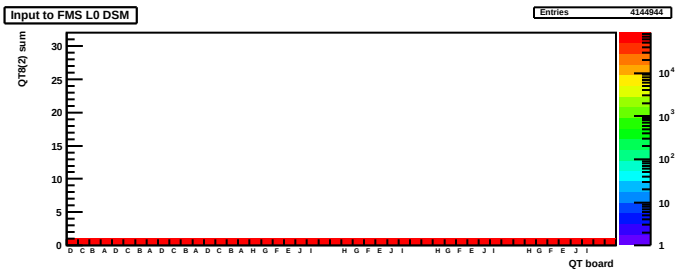

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

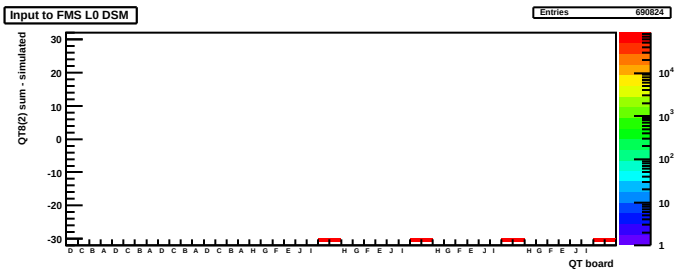

Input to FMS L0 DSM
Entries 4144944
QT8(0) sum
QT board

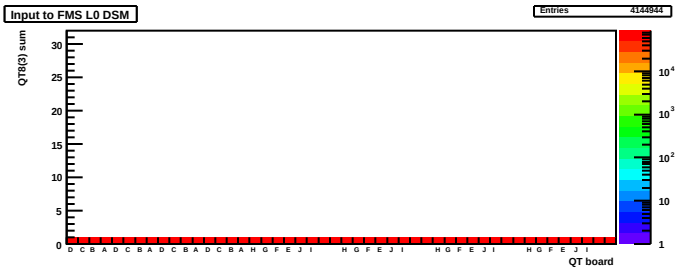

Input to FMS L0 DSM
Entries 690824
QT8(0) sum - simulated
QT board

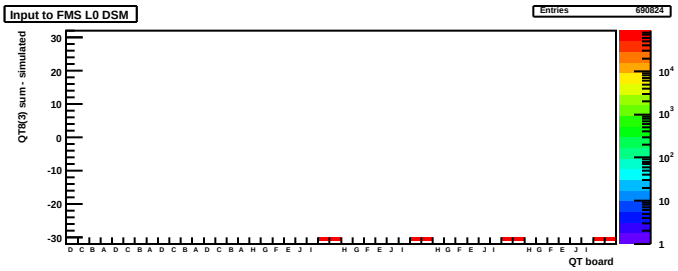

Input to FMS L0 DSM
Entries 4144944
QT8(1) sum
QT board

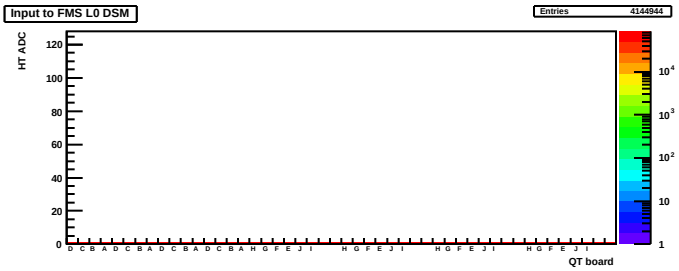

Input to FMS L0 DSM
Entries 690824
QT8(1) sum - simulated
QT board

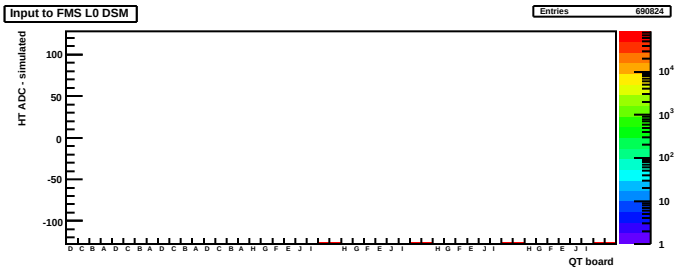

Input to FMS L0 DSM
Entries 4144944
QT8(2) sum
QT board

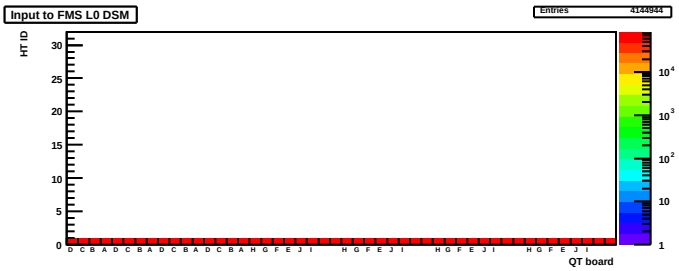

Input to FMS L0 DSM
Entries 690824
QT8(2) sum - simulated
QT board

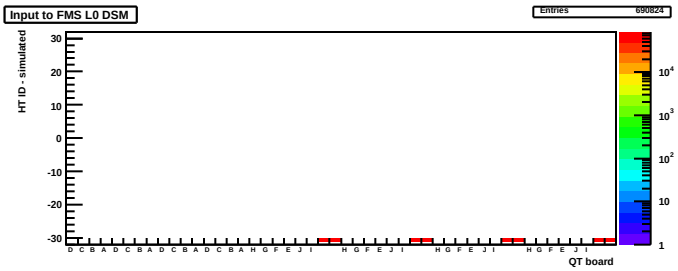

Input to FMS L0 DSM
Entries 4144944
QT8(3) sum
QT board

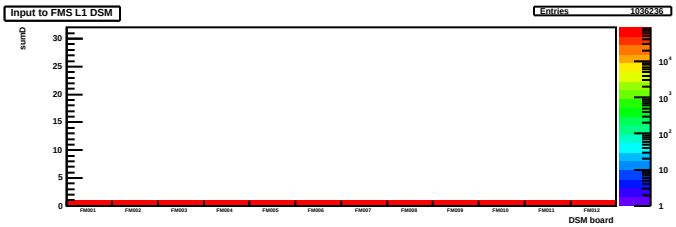

Input to FMS L0 DSM
Entries 690824
QT8(3) sum - simulated
QT board

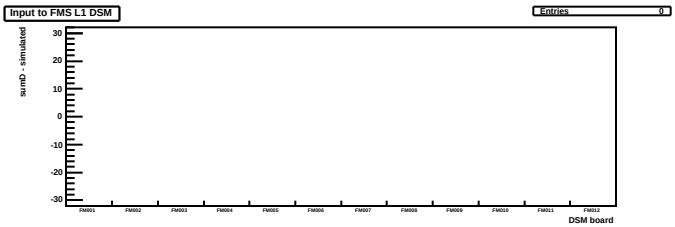

Input to FMS L0 DSM
Entries 4144944
HT ADC
QT board

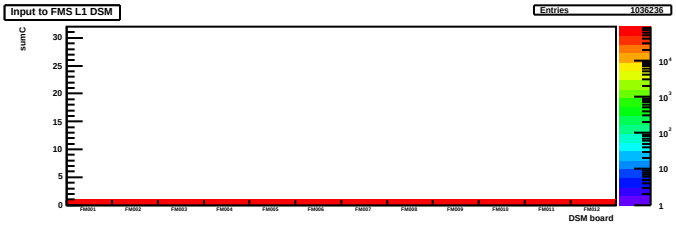

Input to FMS L0 DSM
Entries 690824
HT ADC - simulated
QT board

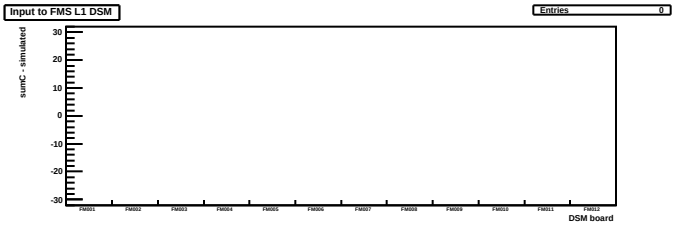

Input to FMS L0 DSM
Entries 4144944
HT ID
QT board

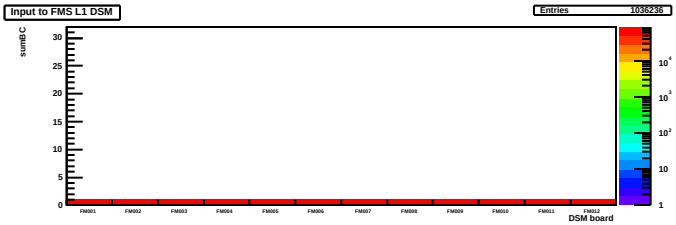

Input to FMS L0 DSM
Entries 690824
HT ID - simulated
QT board

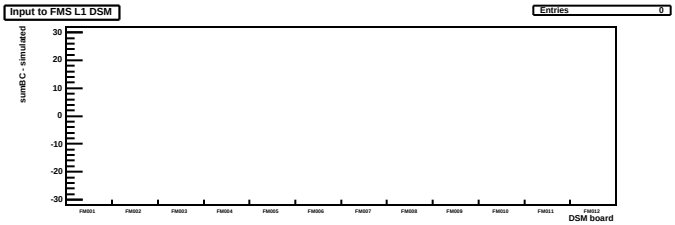

Input to FMS L1 DSM
Entries 1036236
sumD
DSM board

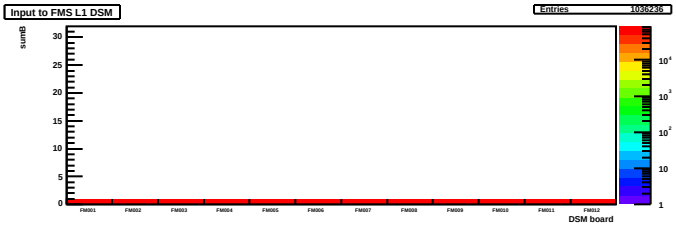

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

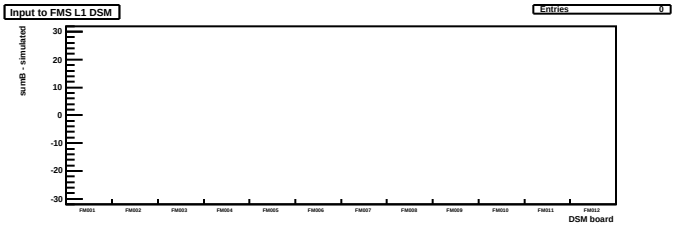

Input to FMS L1 DSM
Entries 1036236
sumC
DSM board

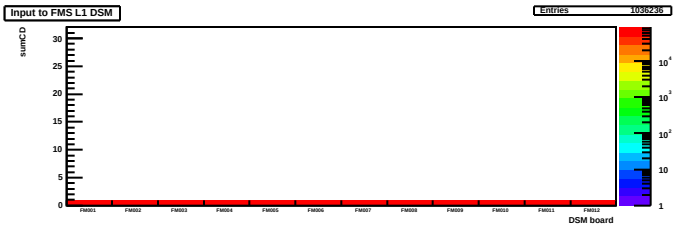

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

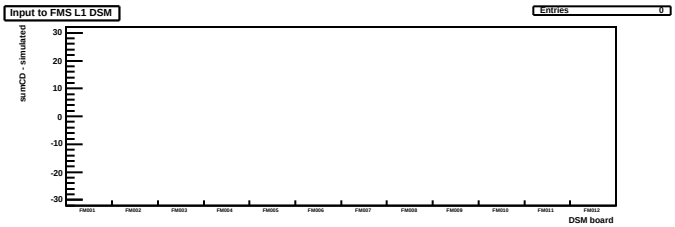

Input to FMS L1 DSM
Entries 1036236
sumBC
DSM board

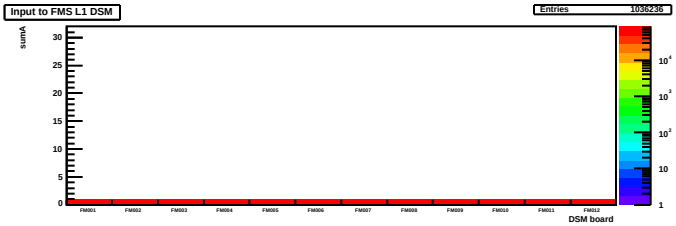

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

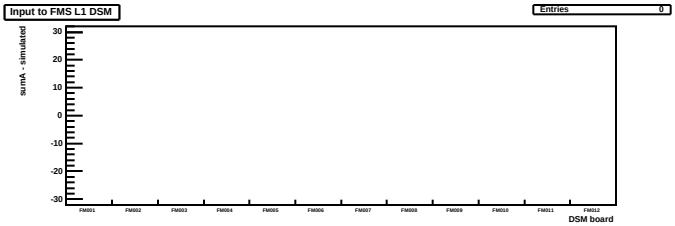

Input to FMS L1 DSM
Entries 1036236
sumB
DSM board

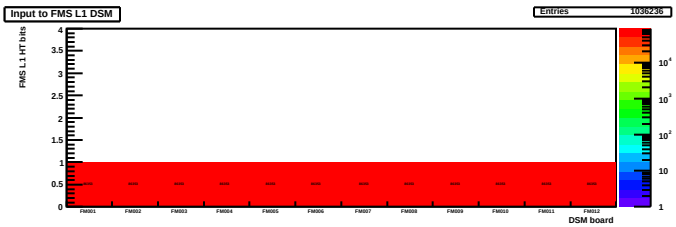

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

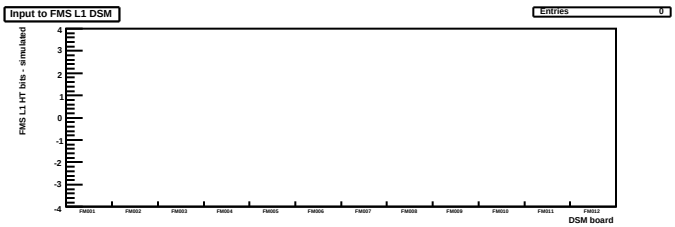

Input to FMS L1 DSM
Entries 1036236
sumCD
DSM board

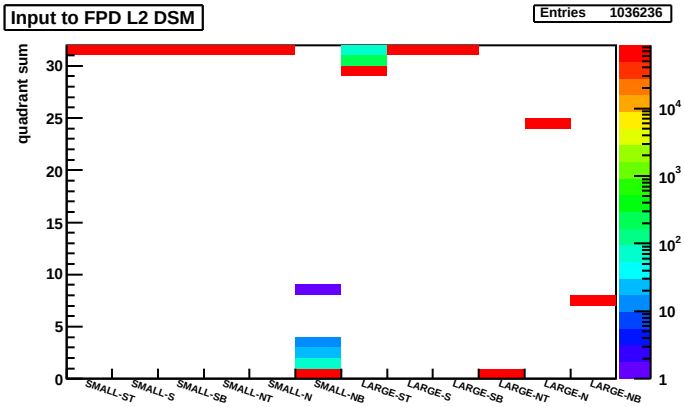

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

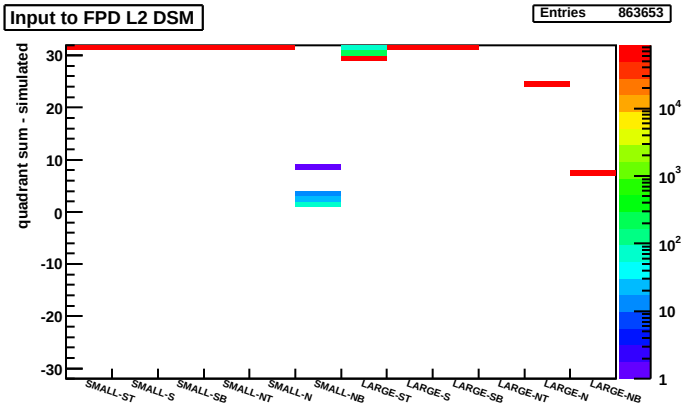

Input to FMS L1 DSM
Entries 1036236
sumA
DSM board

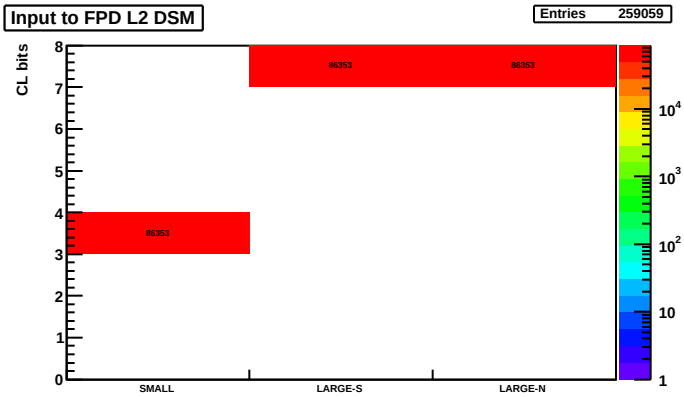

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

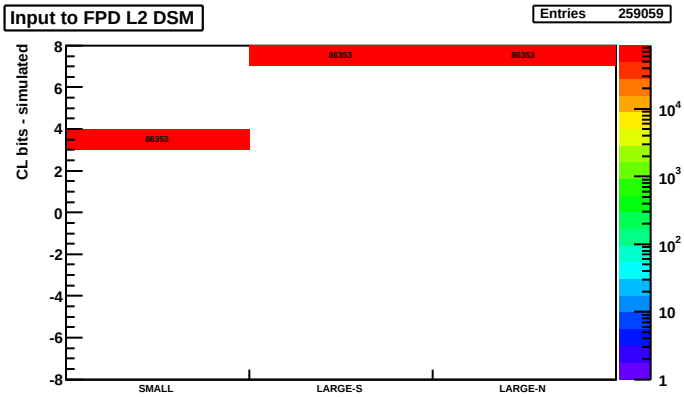

Input to FMS L1 DSM
Entries 1036236
FMS L1 HT bits
DSM board

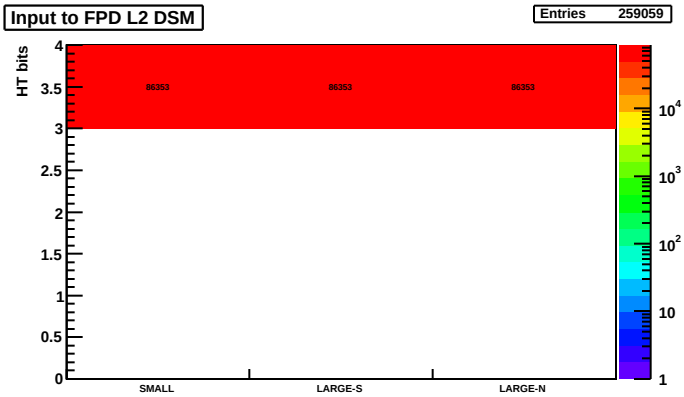

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

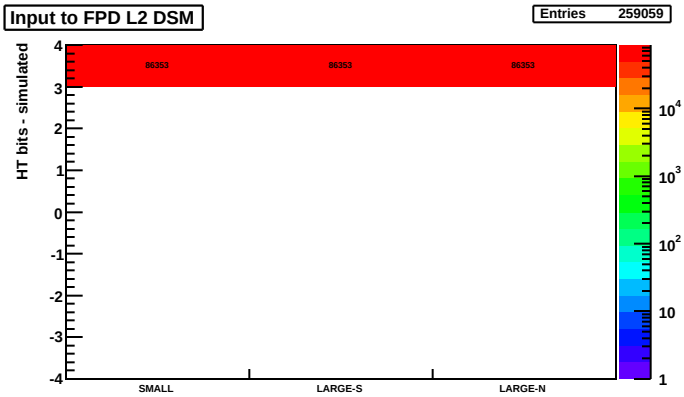

Input to FPD L2 DSM
Entries 1036236
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

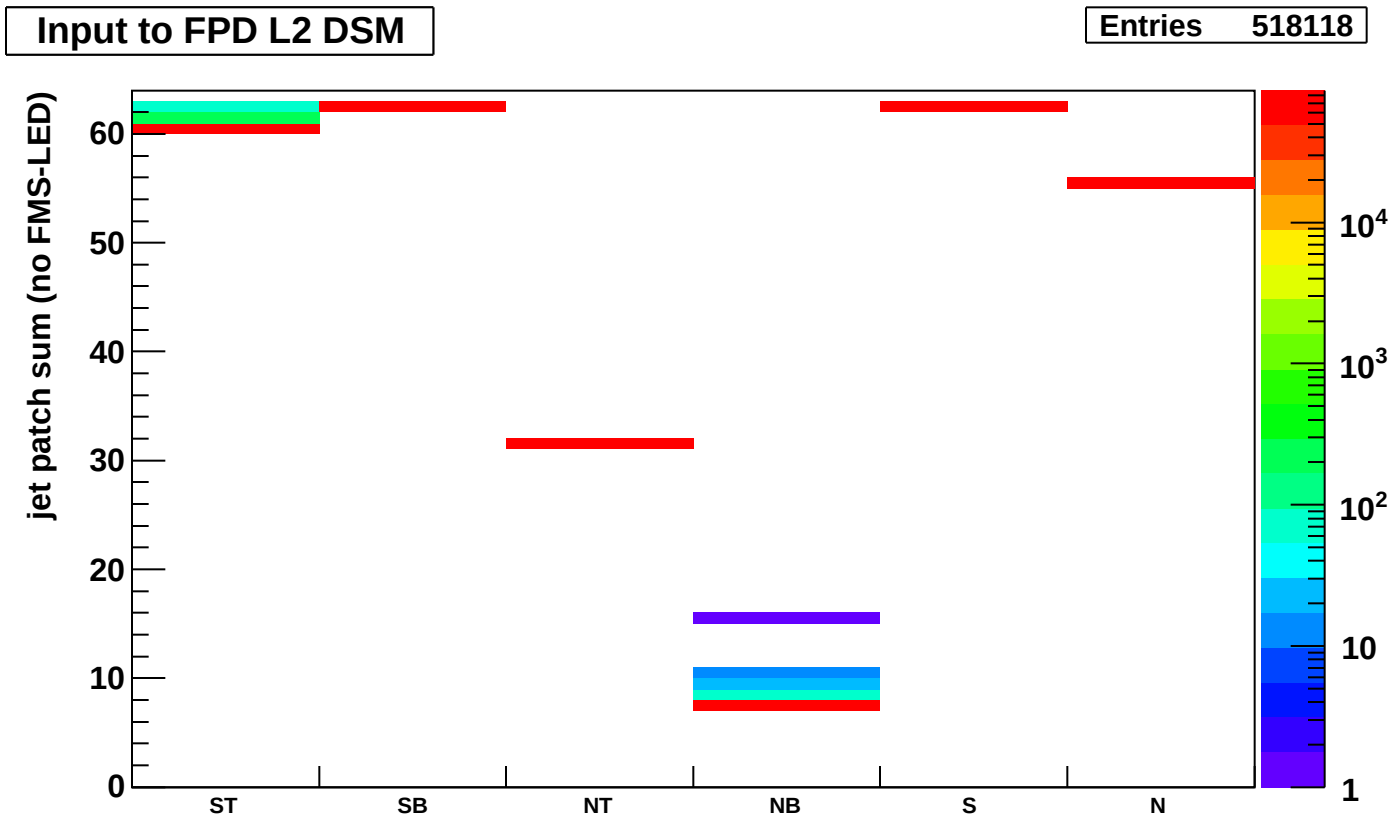

Input to FPD L2 DSM
Entries 863653
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

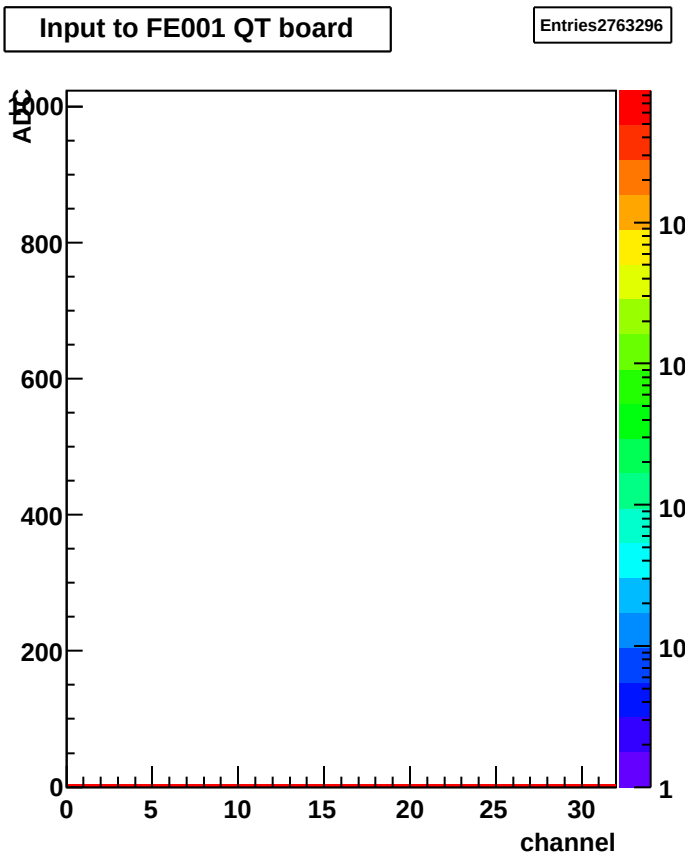

Input to FPD L2 DSM
Entries 259059
CL bits
86353
86353
86353
SMALL
LARGE-S
LARGE-N

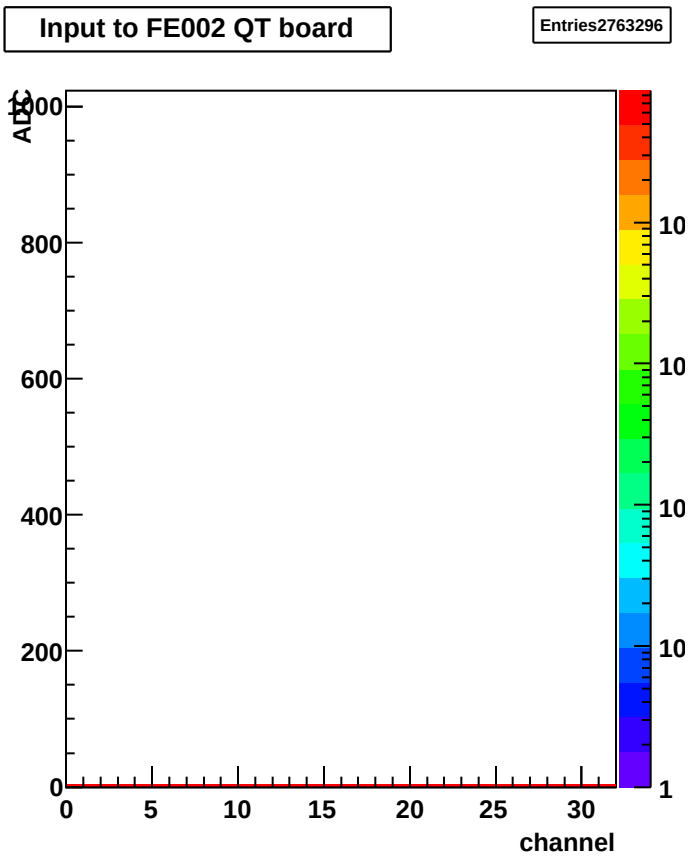

Input to FPD L2 DSM
Entries 259059
CL bits - simulated
86353
86353
86353
SMALL
LARGE-S
LARGE-N

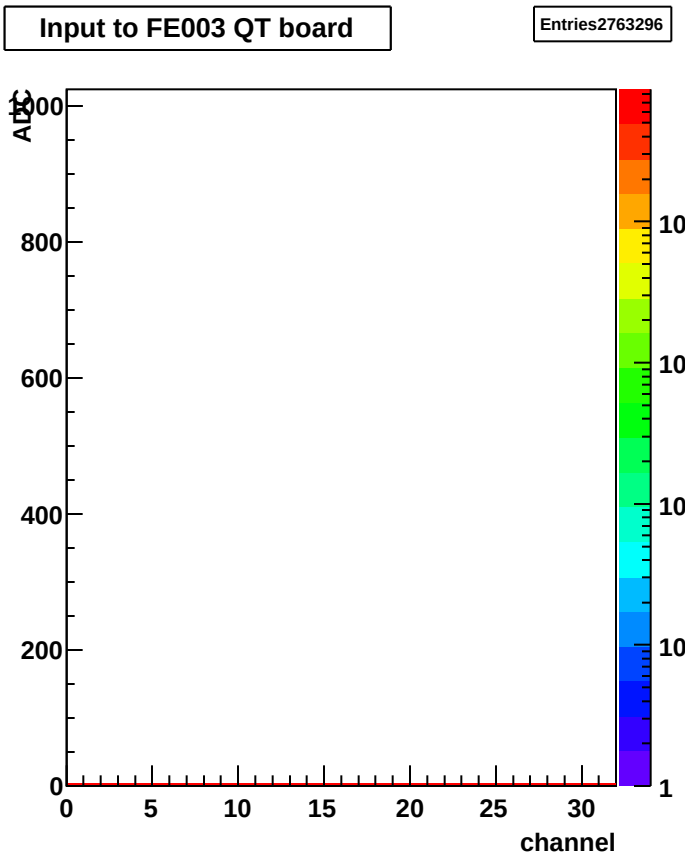

Input to FPD L2 DSM
Entries 259059
HT bits
86353
86353
86353
SMALL
LARGE-S
LARGE-N

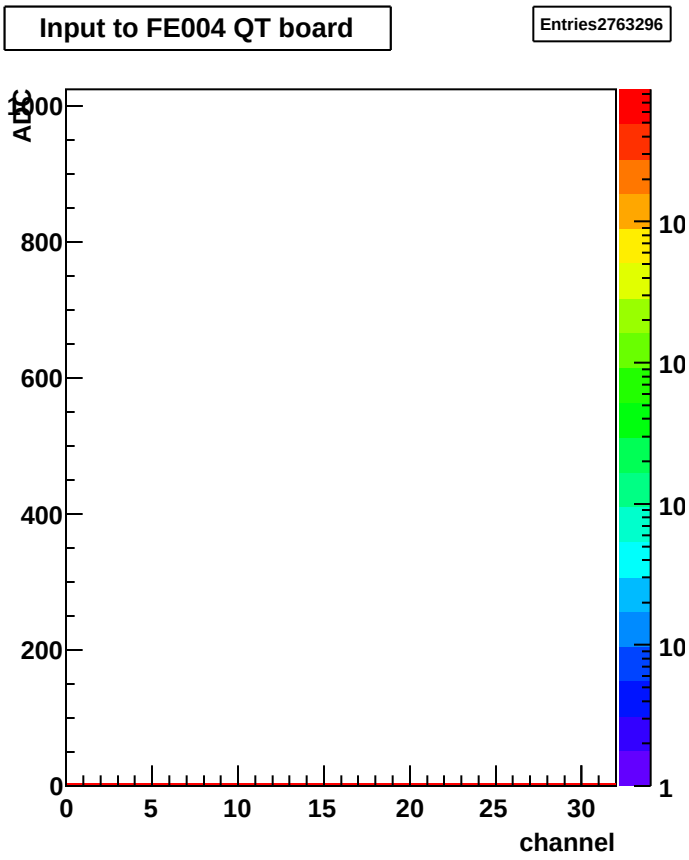

Input to FPD L2 DSM
Entries 259059
HT bits - simulated
86353
86353
86353
SMALL
LARGE-S
LARGE-N

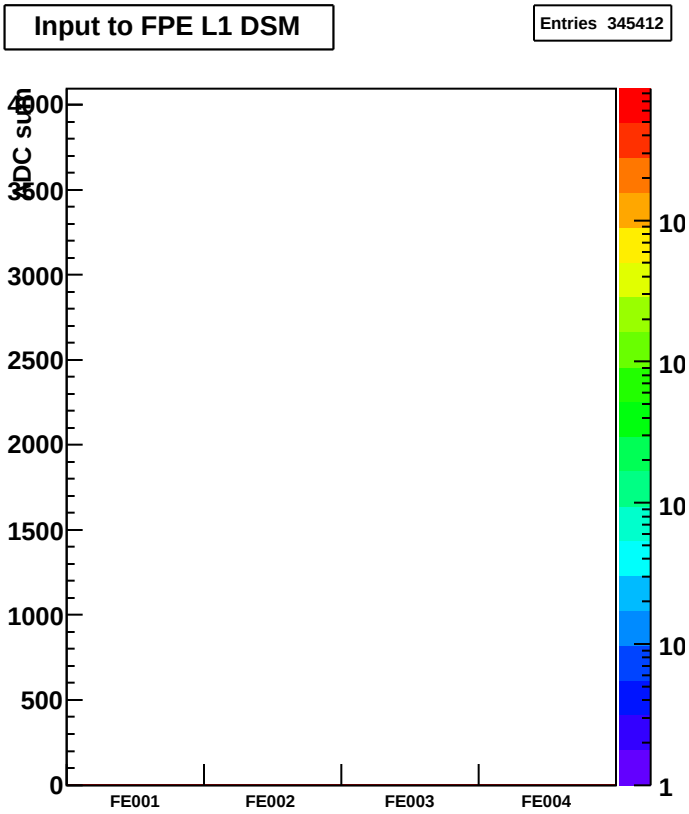

Input to FPD L2 DSM
Entries 518118
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

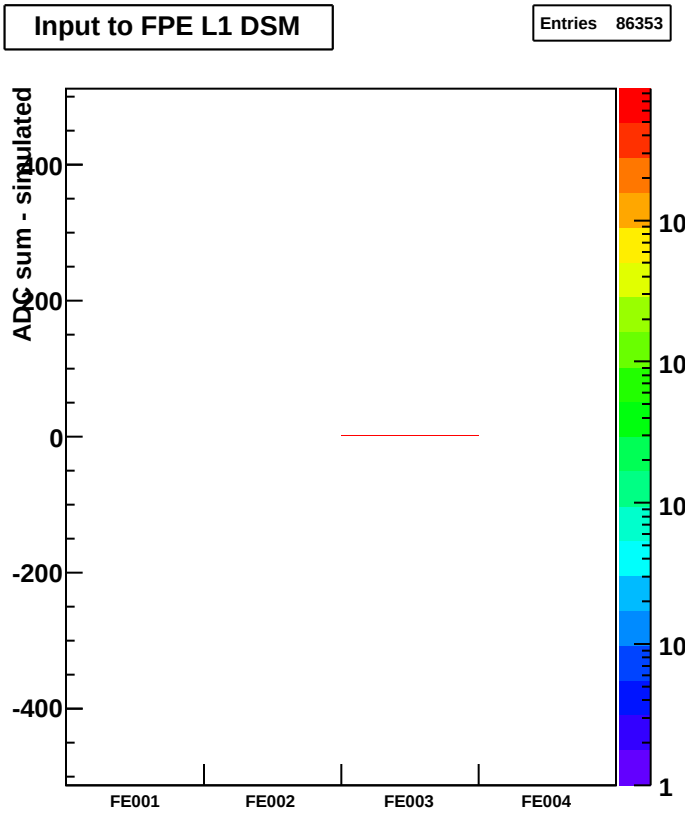

Input to FE001 QT board
Entries2763296
ADC
channel

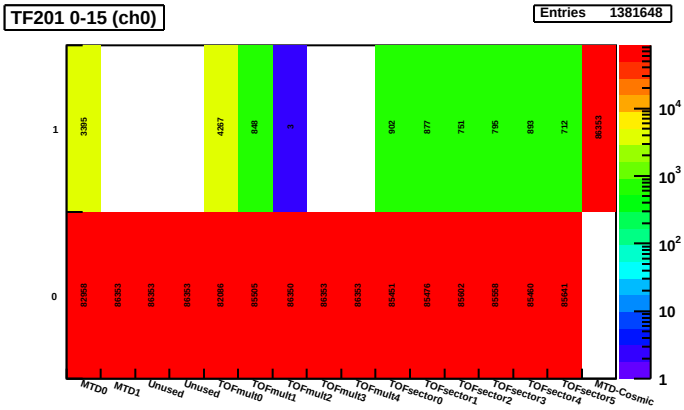

Input to FE002 QT board
Entries2763296
ADC
channel

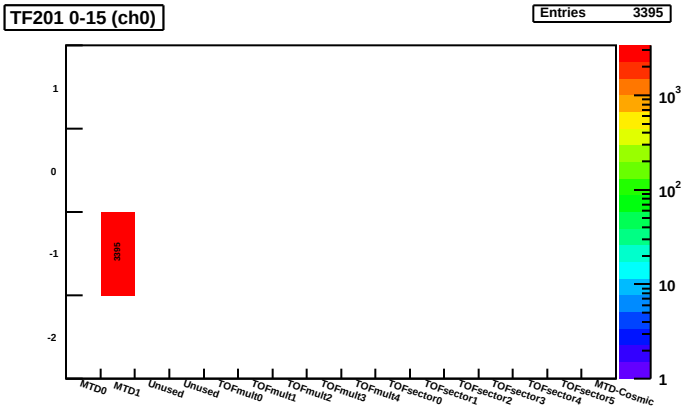

Input to FE003 QT board
Entries2763296
ADC
channel

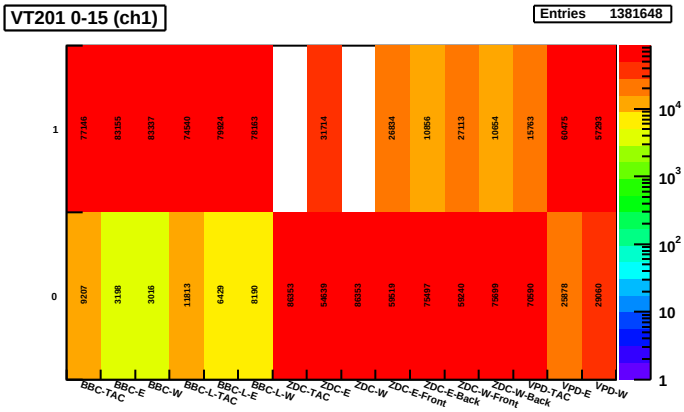

Input to FE004 QT board
Entries2763296
ADC
channel

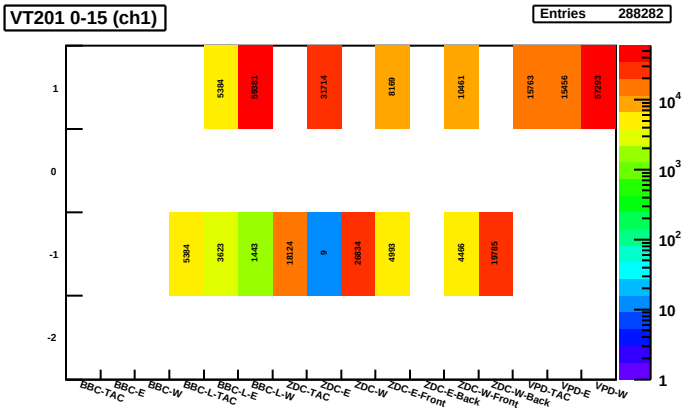

Input to FPE L1 DSM
Entries 345412
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


Input to FPE L1 DSM
Entries 86353
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1


TF201 0-15 (ch0)
Entries 1381648
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 3395
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 1381648
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 288282
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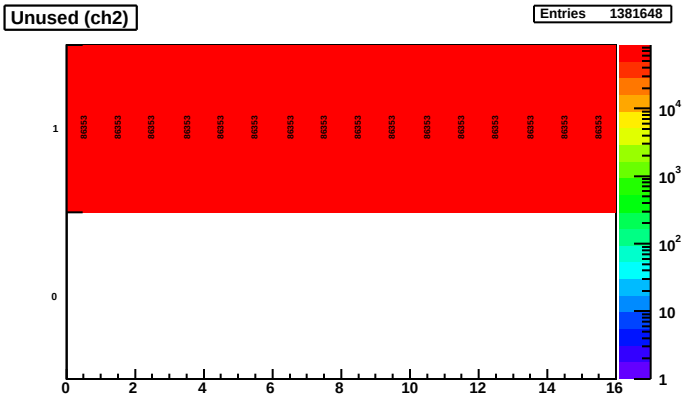
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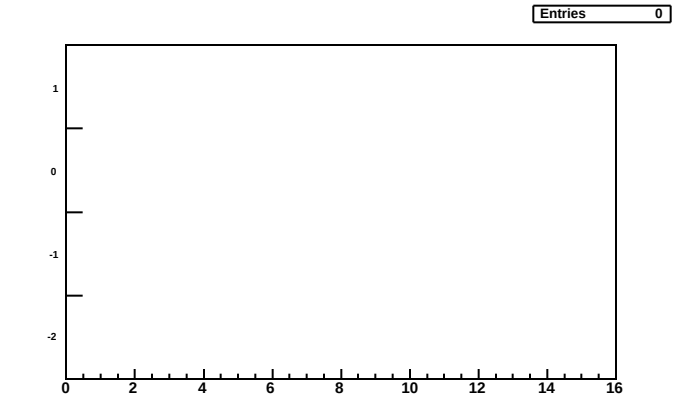
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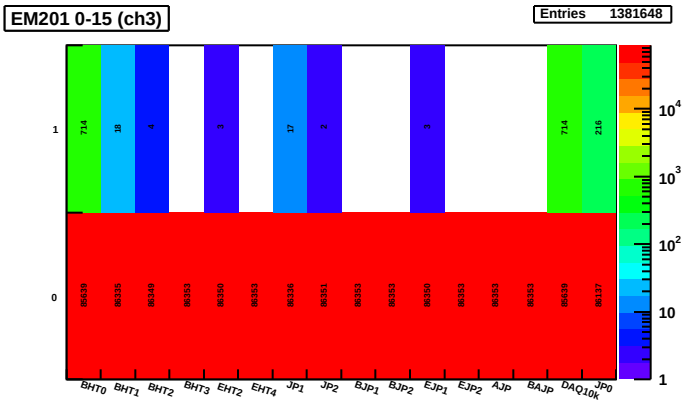
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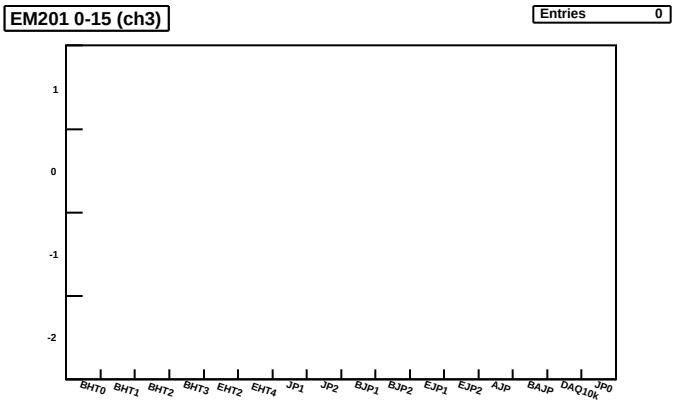
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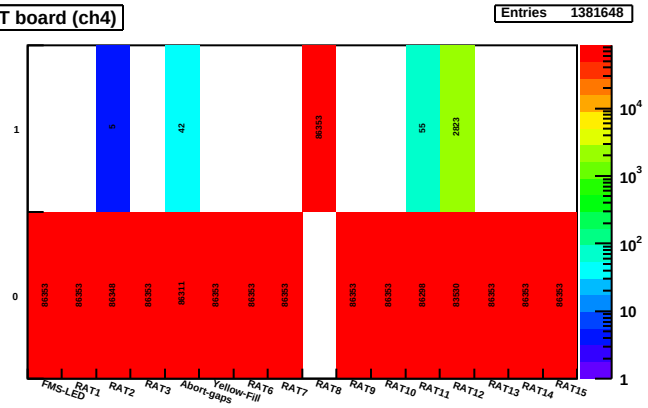
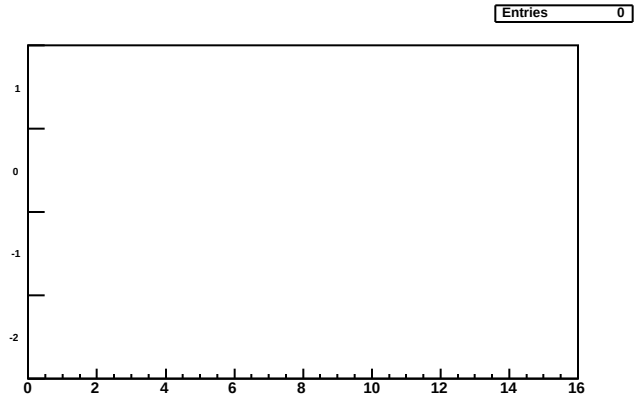
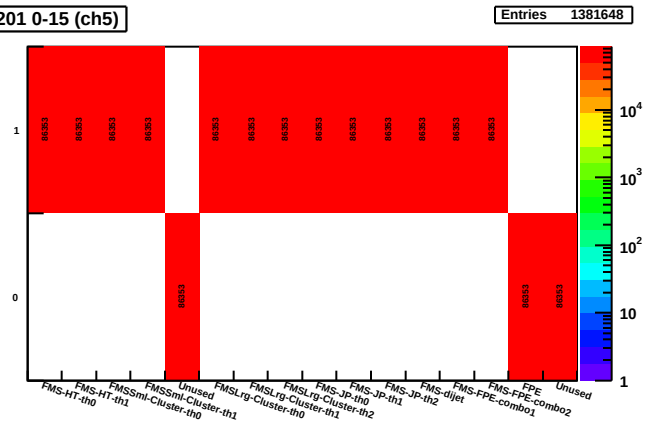
RAT board (ch4)

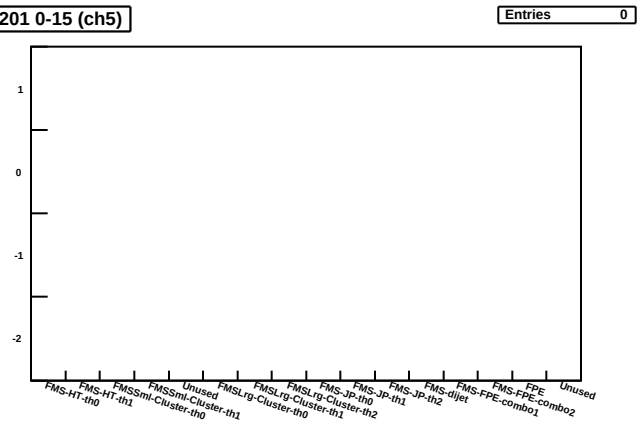




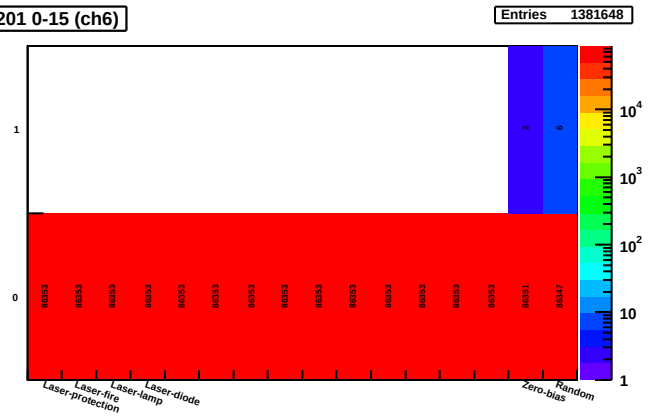
FP201 0-15 (ch5)

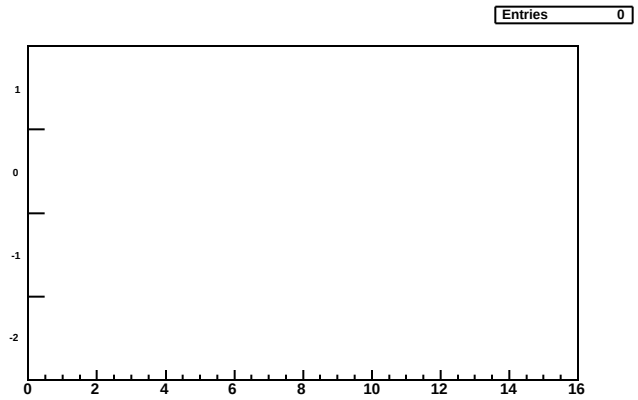
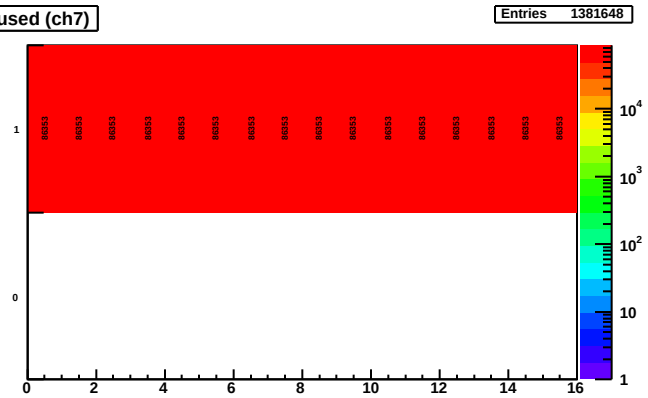
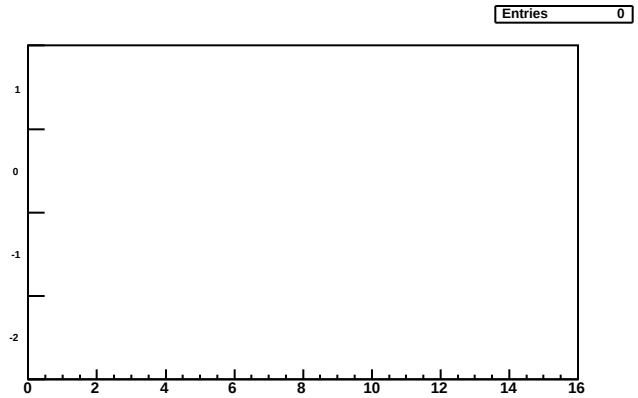


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)