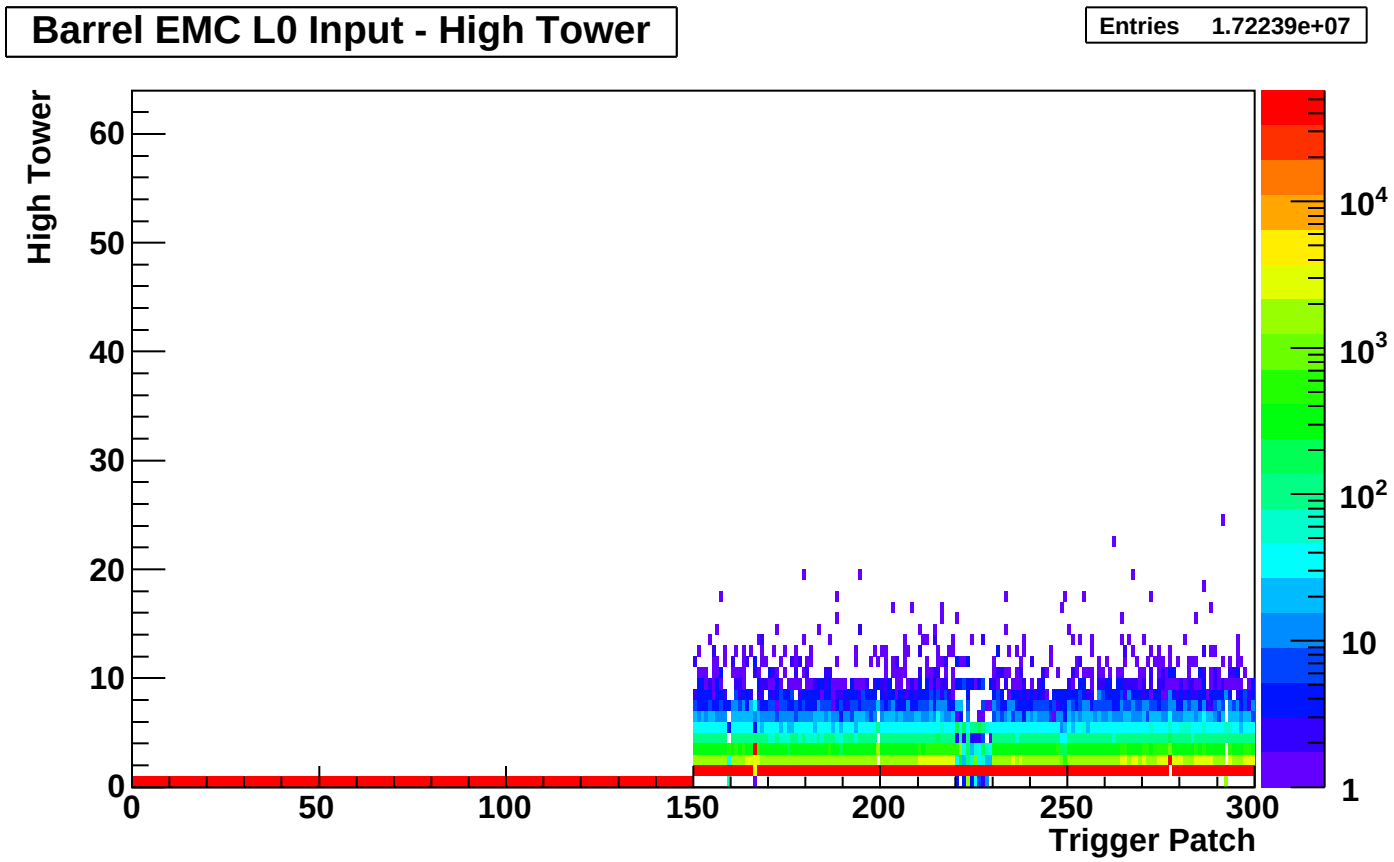
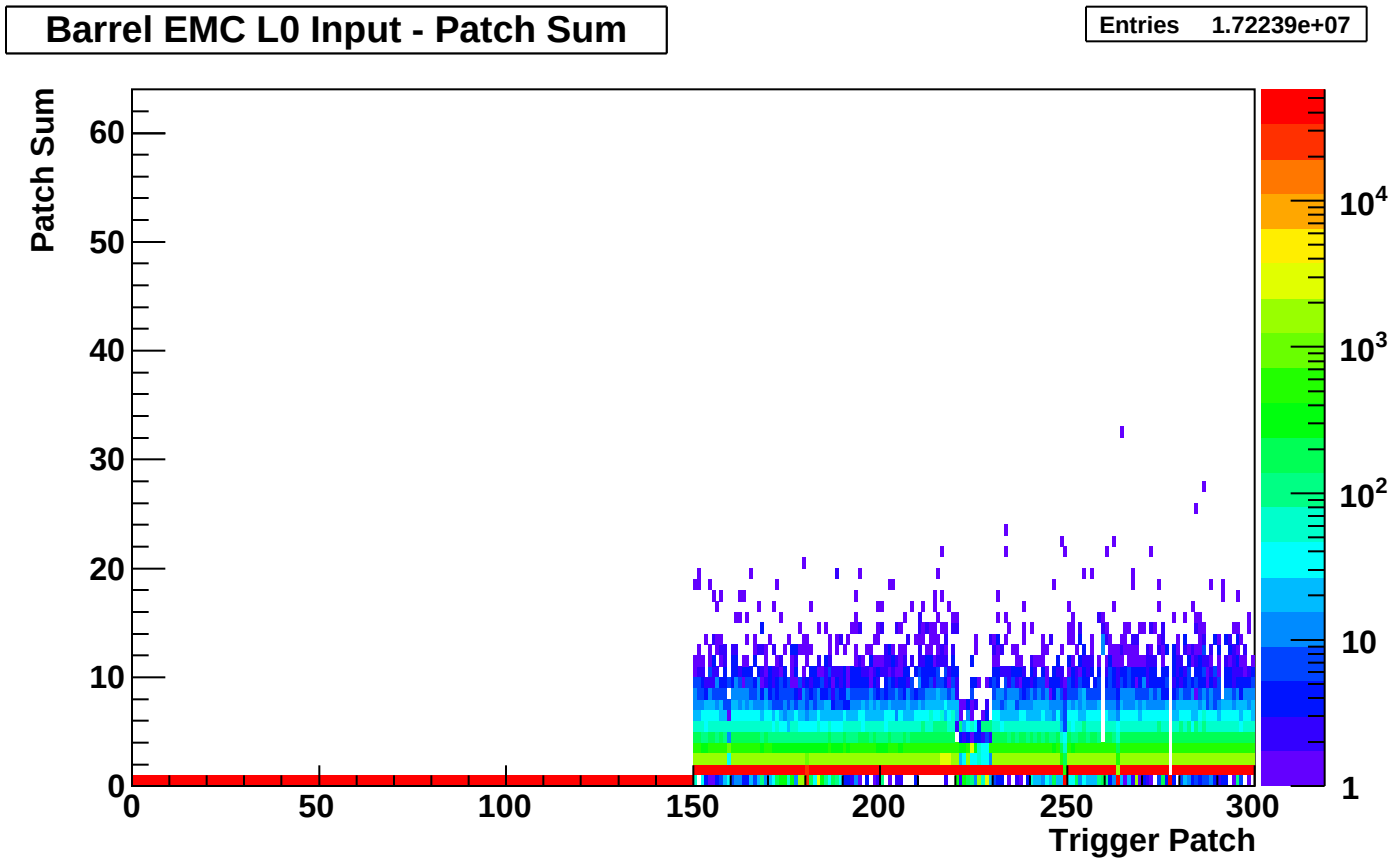
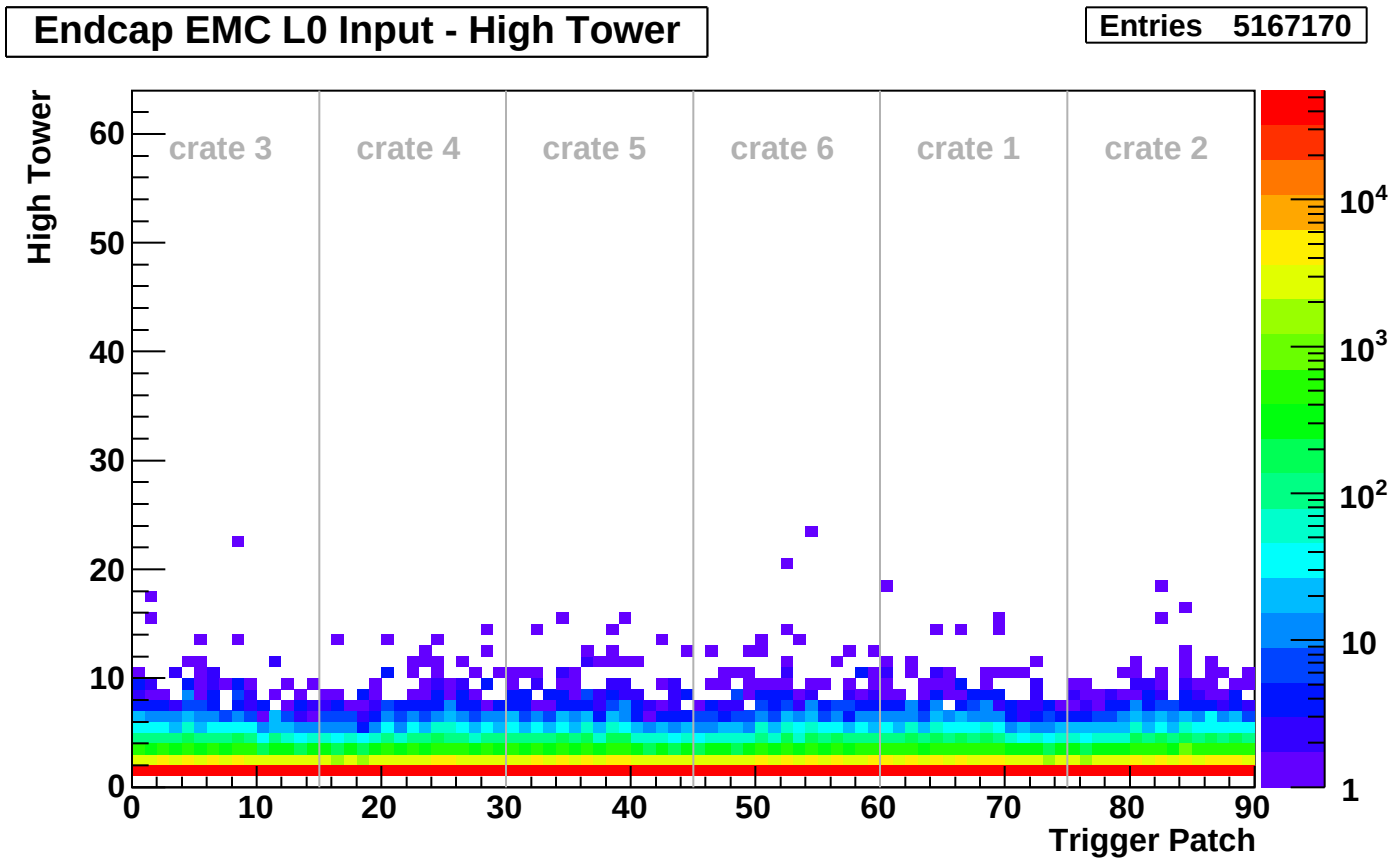
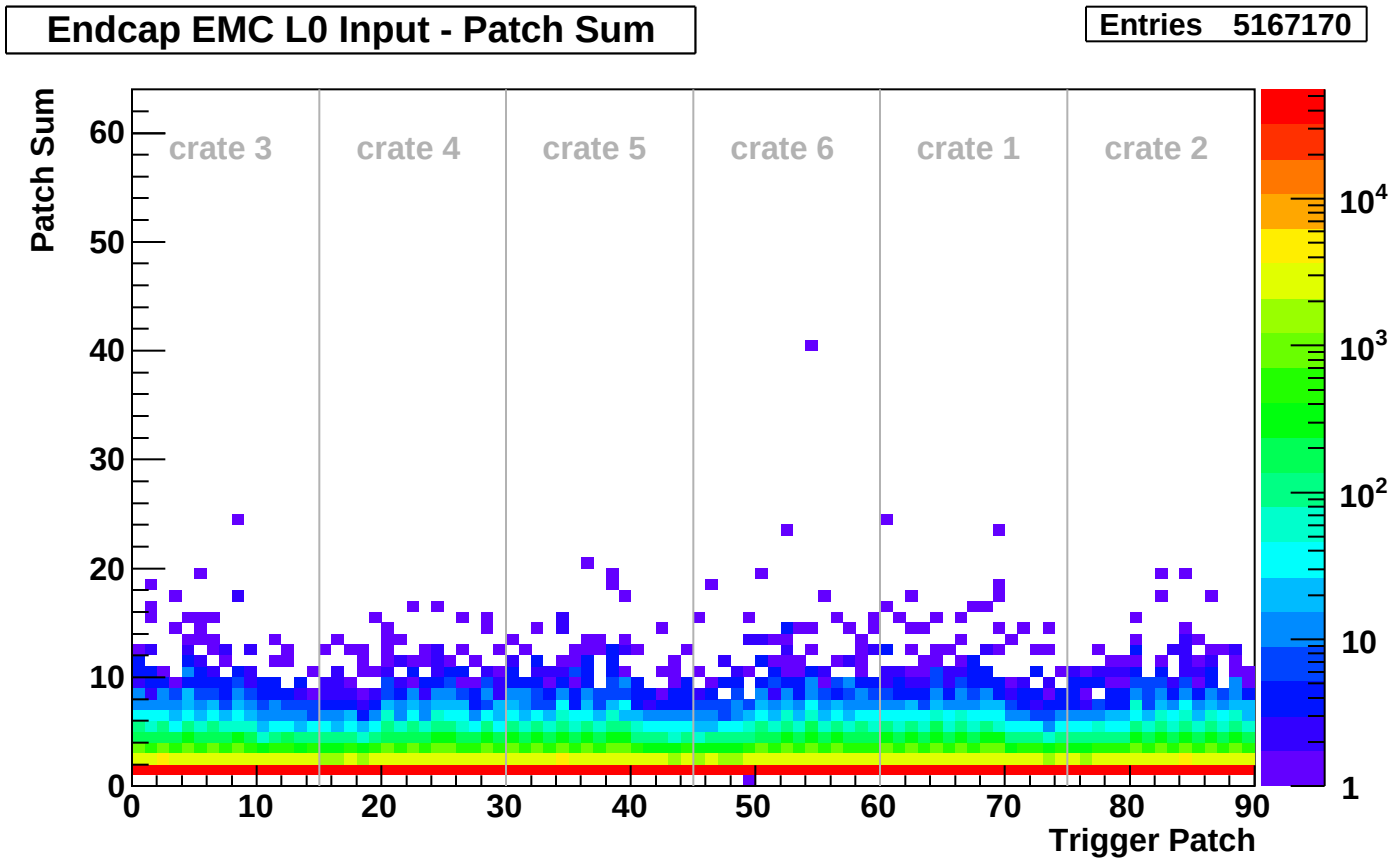
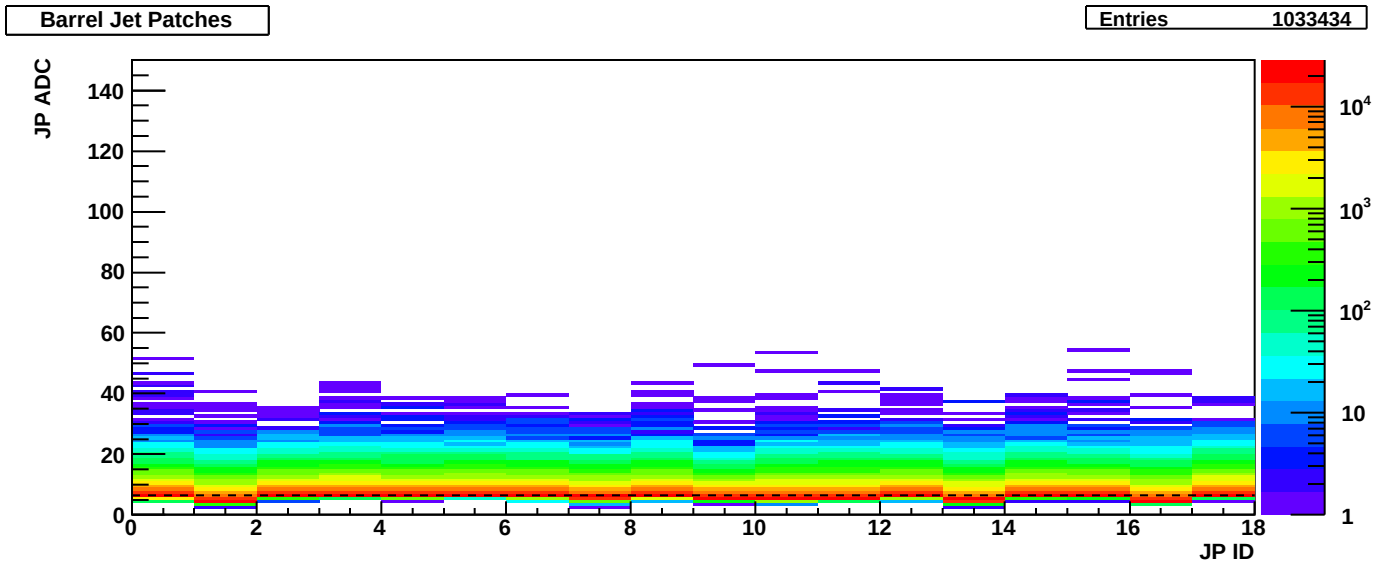
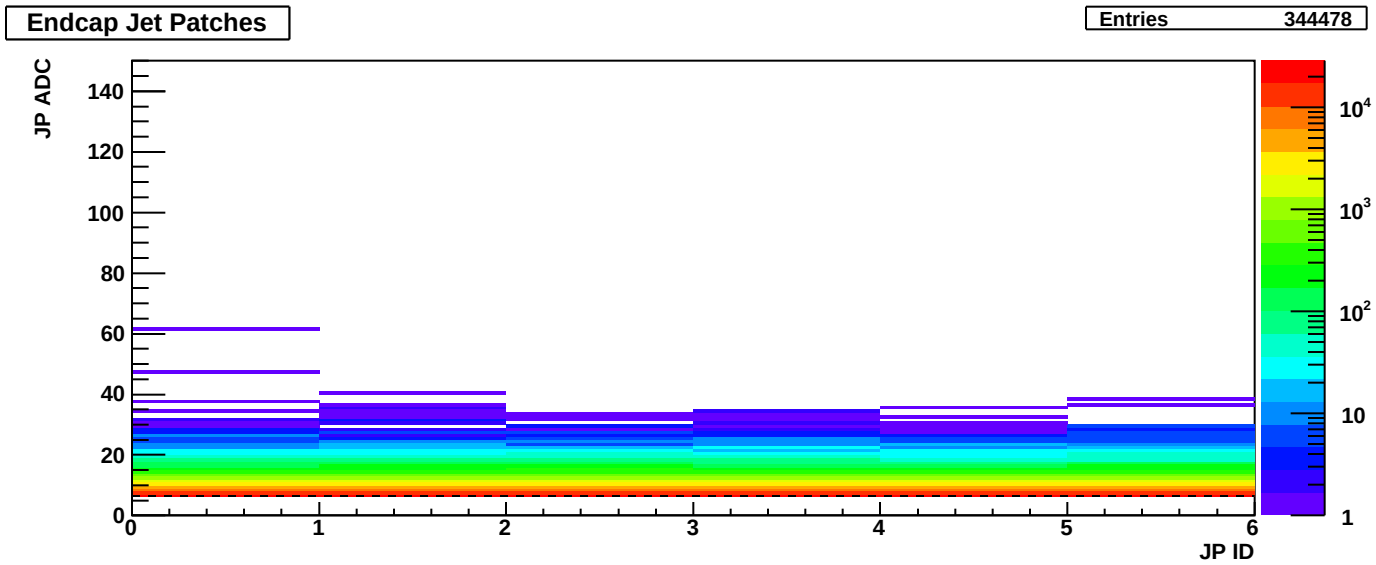

Barrel EMC L0 Input - High Tower
Entries 1.72239e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

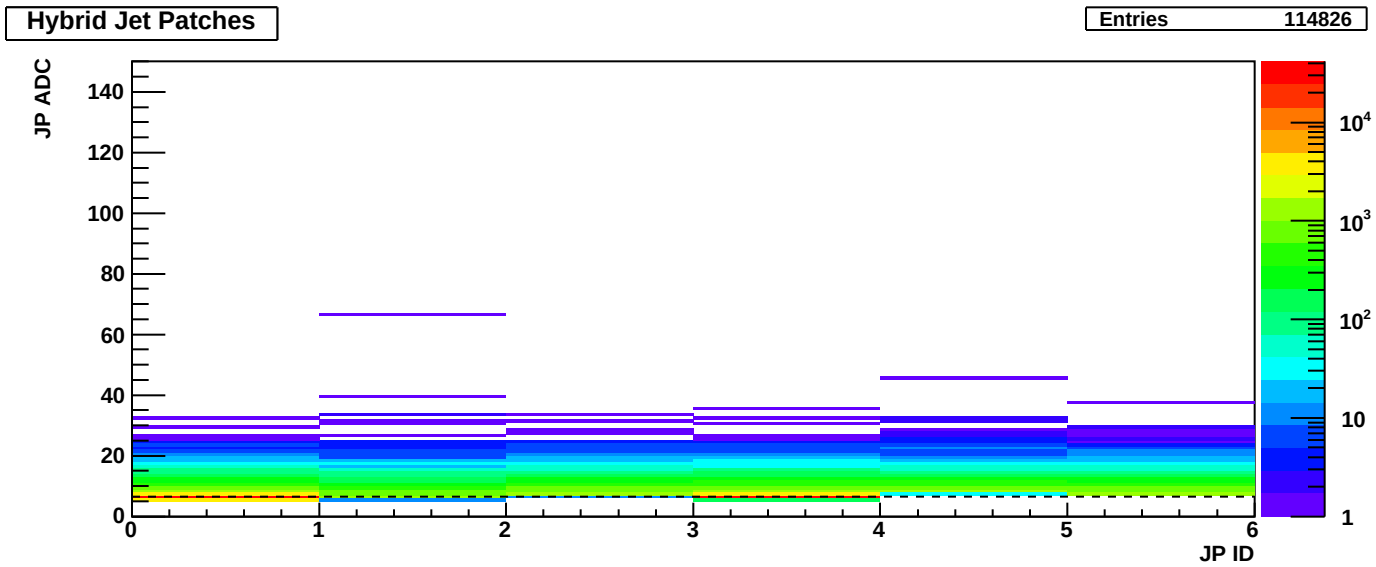

Barrel EMC L0 Input - Patch Sum
Entries 1.72239e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

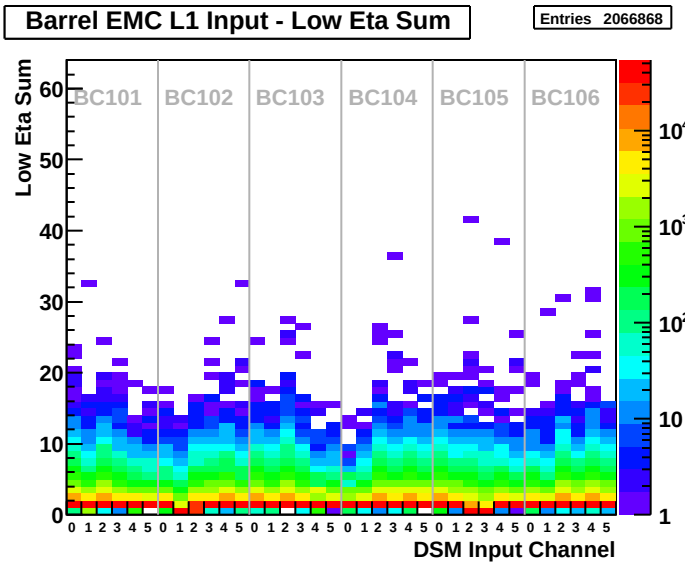

Endcap EMC L0 Input - High Tower
Entries 5167170
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

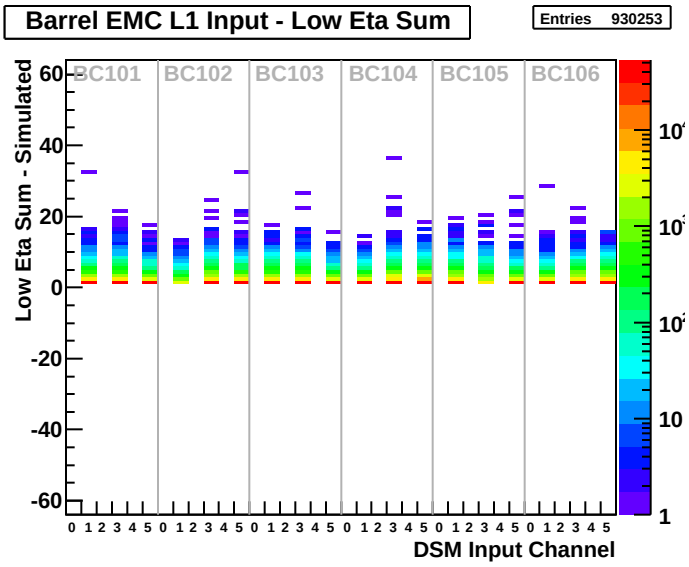

Endcap EMC L0 Input - Patch Sum
Entries 5167170
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

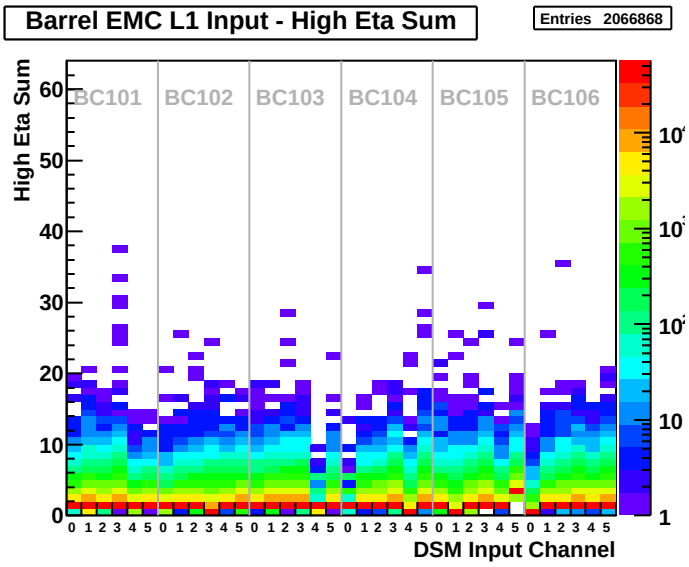

Barrel Jet Patches
Entries 1033434
JP ADC
JP ID

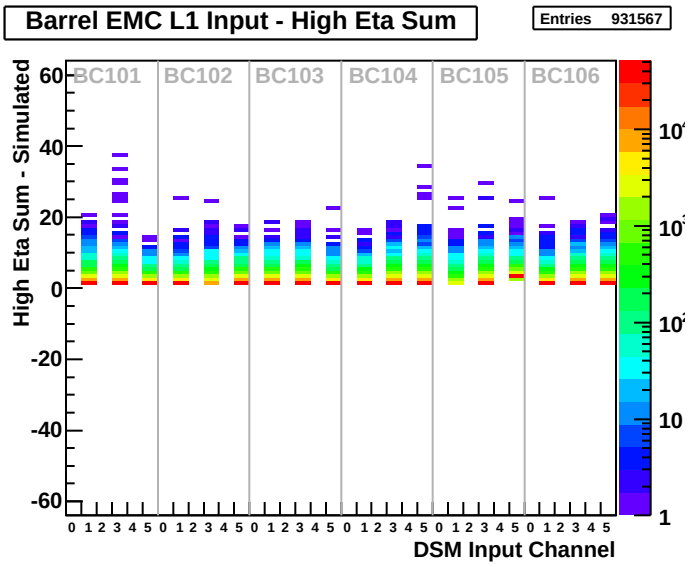

Endcap Jet Patches
Entries 344478
JP ADC
JP ID

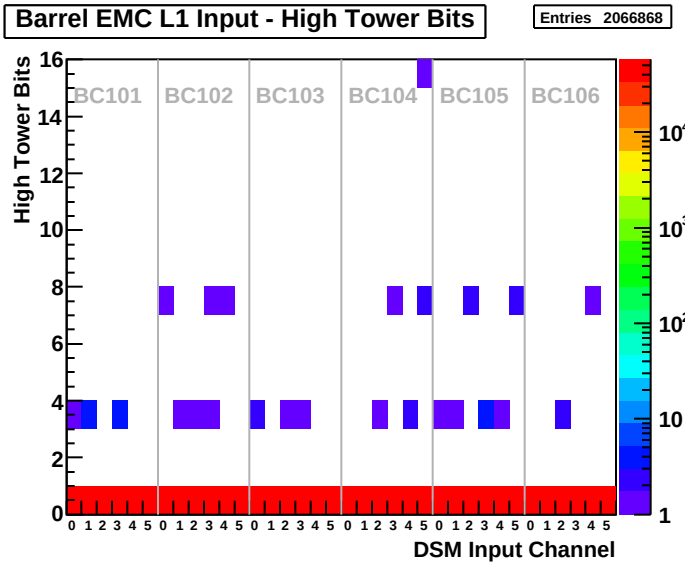

Hybrid Jet Patches
Entries 114826
JP ADC
JP ID

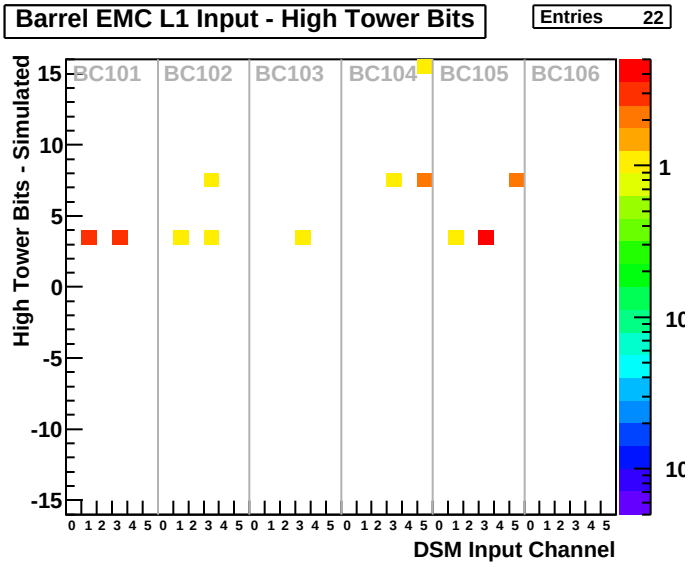

Barrel EMC L1 Input - Low Eta Sum
Entries 2066868
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

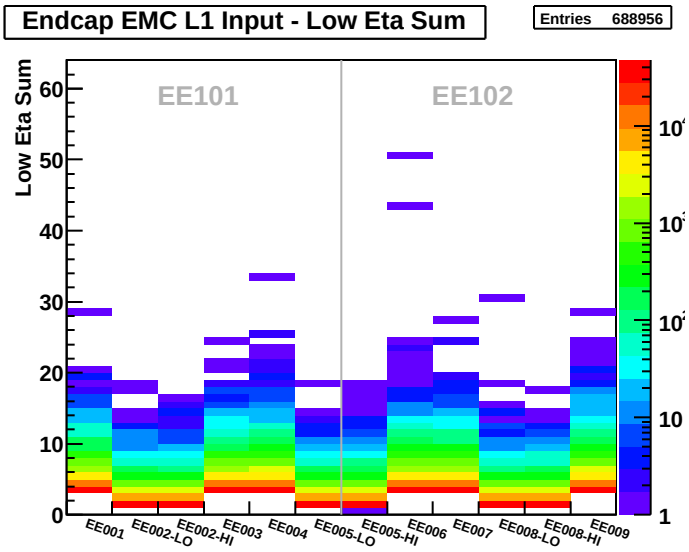

Barrel EMC L1 Input - Low Eta Sum
Entries 930253
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

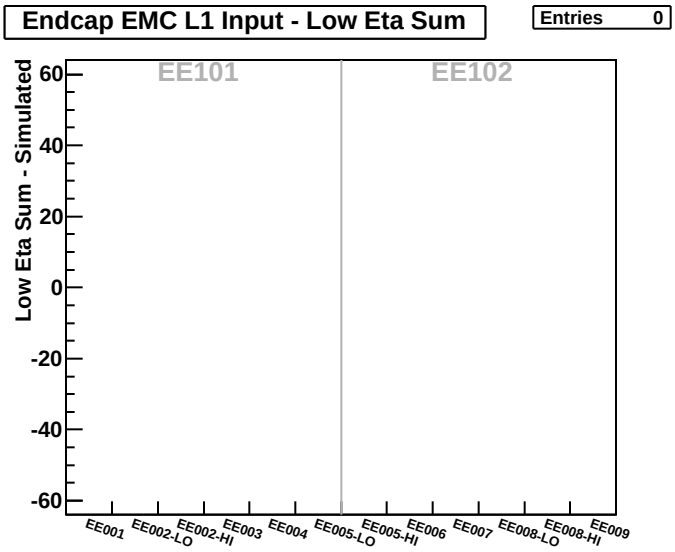

Barrel EMC L1 Input - High Eta Sum
Entries 2066868
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

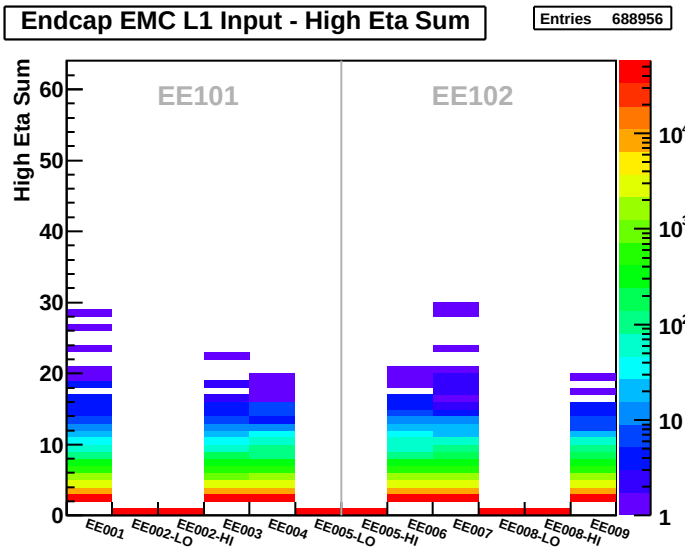

Barrel EMC L1 Input - High Eta Sum
Entries 931567
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

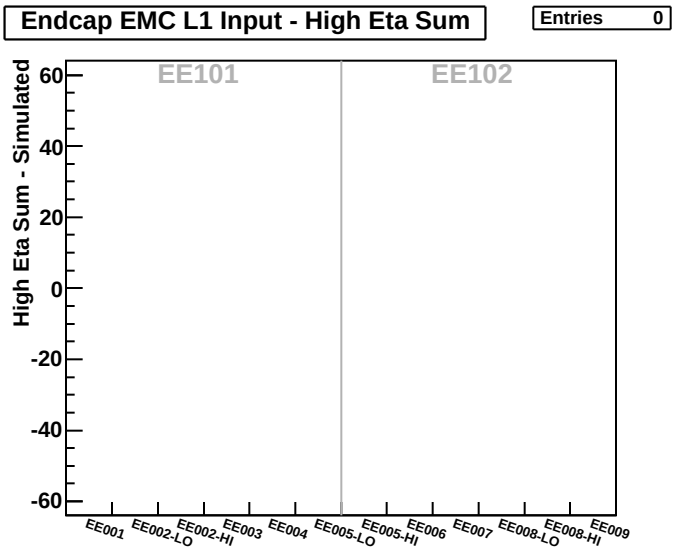

Barrel EMC L1 Input - High Tower Bits
Entries 2066868
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

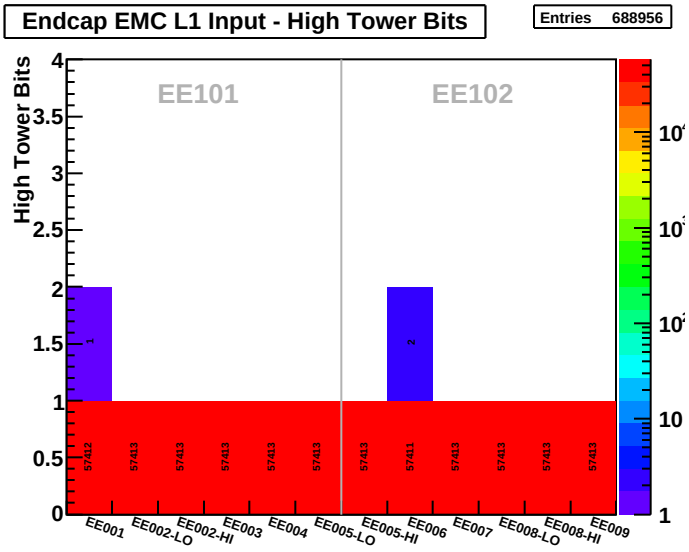

Barrel EMC L1 Input - High Tower Bits
Entries 22
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

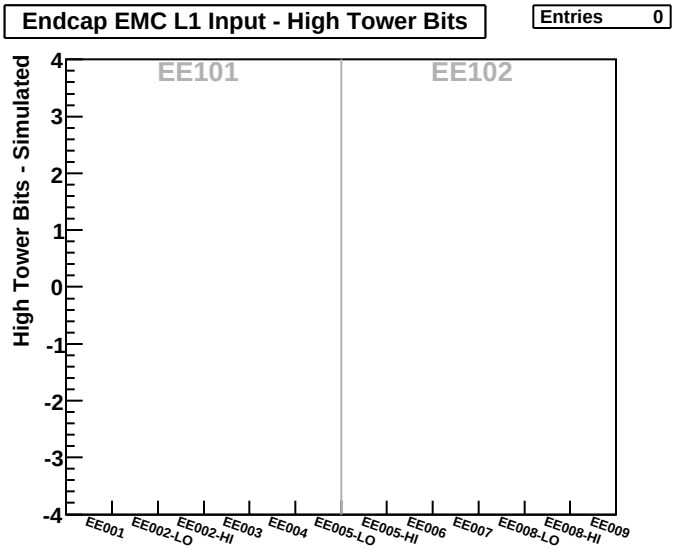

Endcap EMC L1 Input - Low Eta Sum
Entries 688956
Low Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

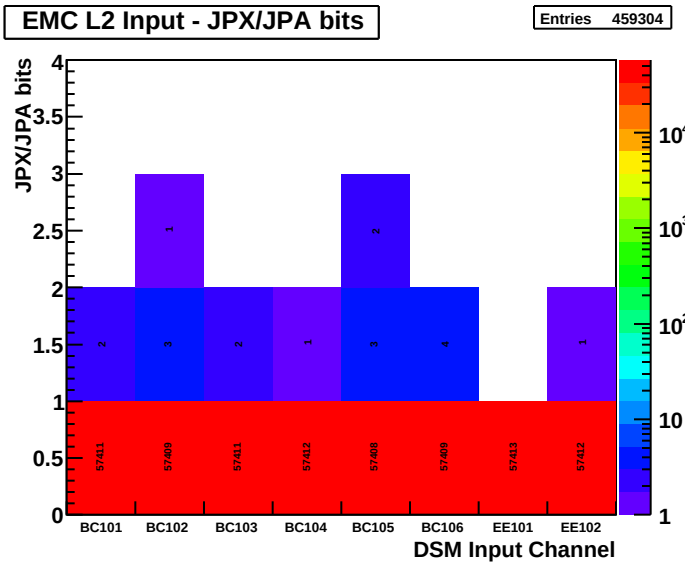

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

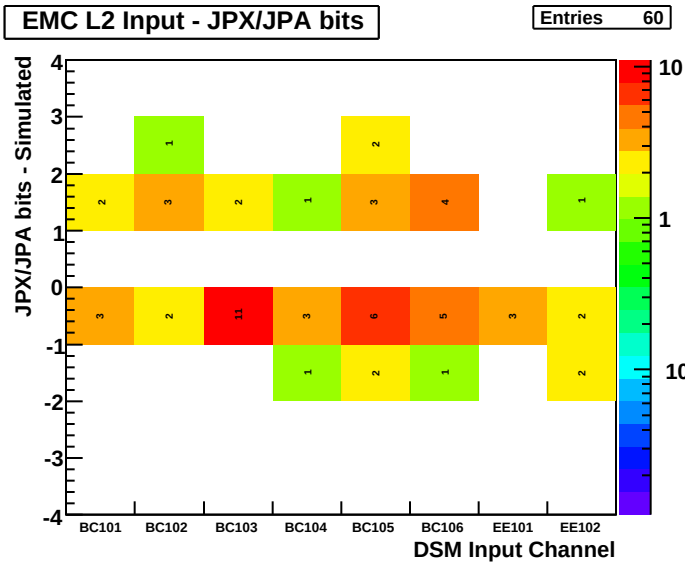

Endcap EMC L1 Input - High Eta Sum
Entries 688956
High Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

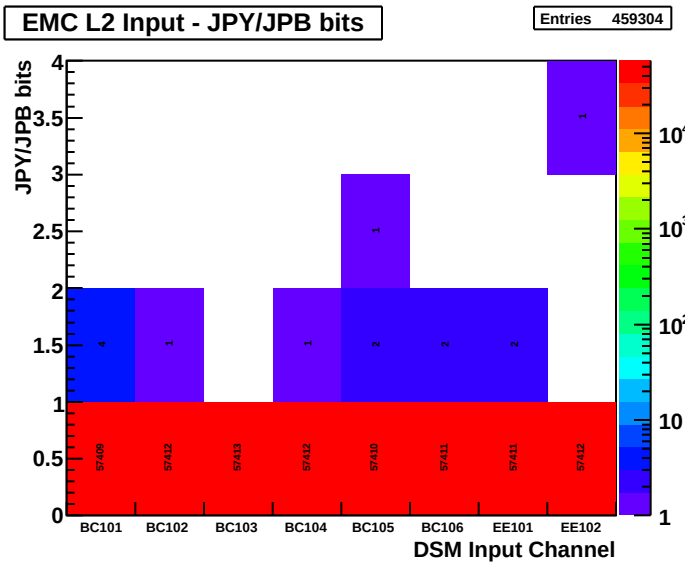

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

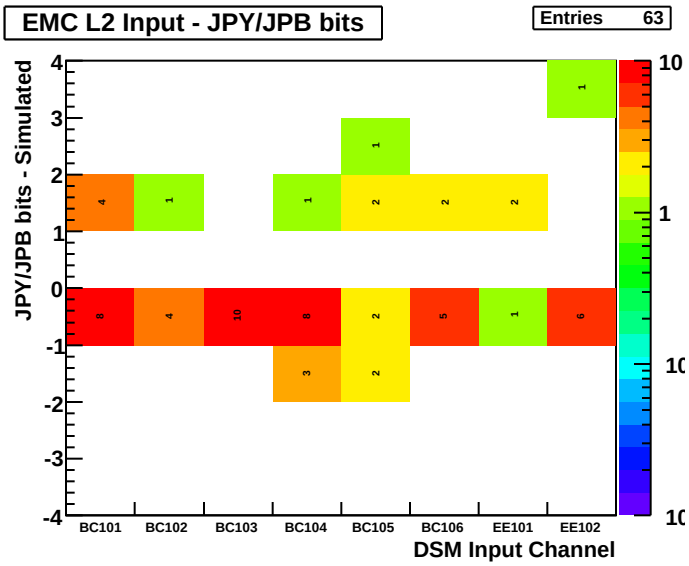

Endcap EMC L1 Input - High Tower Bits
Entries 688956
High Tower Bits
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

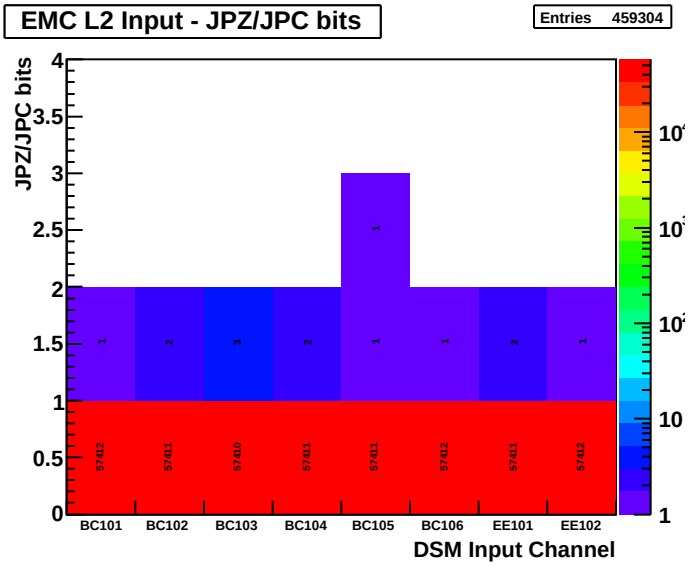

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

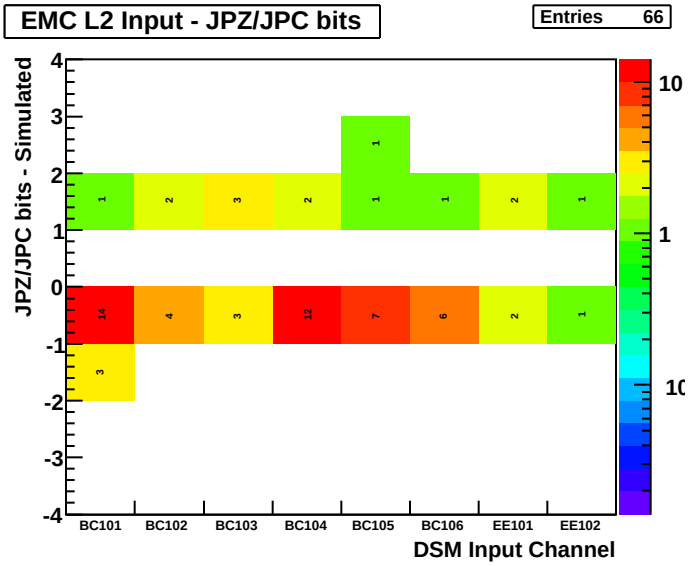

EMC L2 Input - JPX/JPA bits
Entries 459304
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

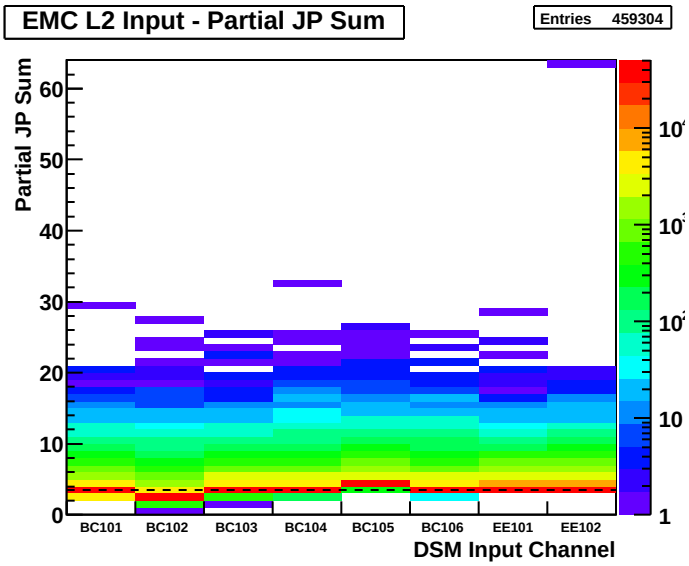

EMC L2 Input - JPX/JPA bits
Entries 60
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

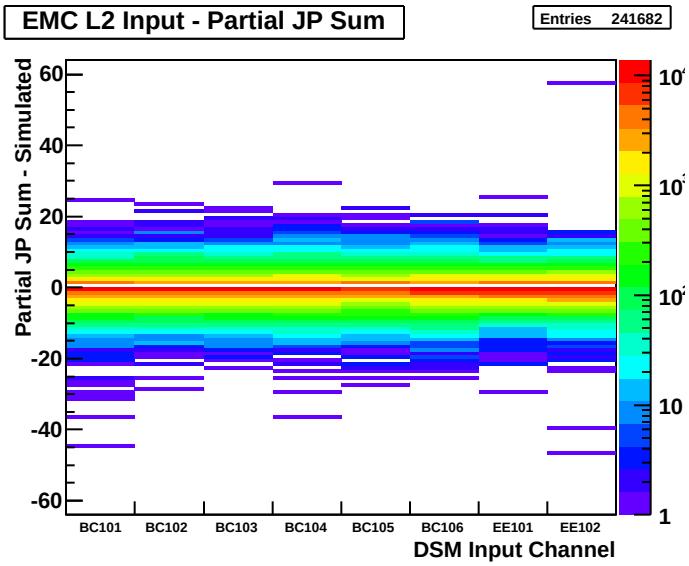

EMC L2 Input - JPY/JPB bits
Entries 459304
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

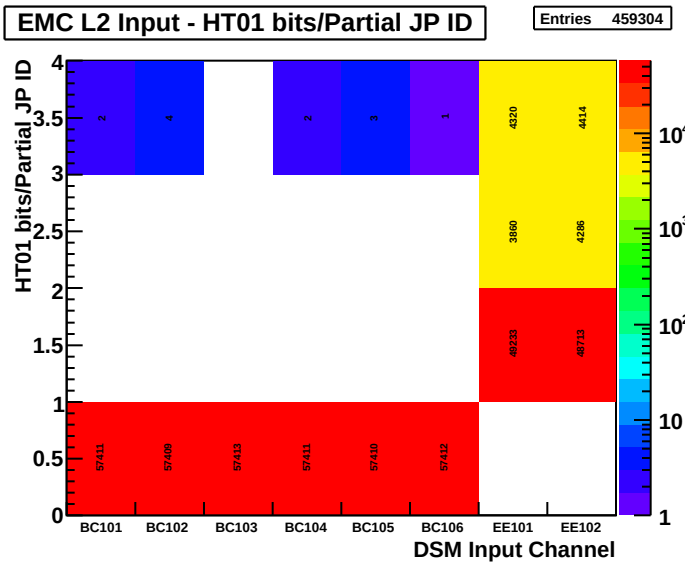

EMC L2 Input - JPY/JPB bits
Entries 63
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

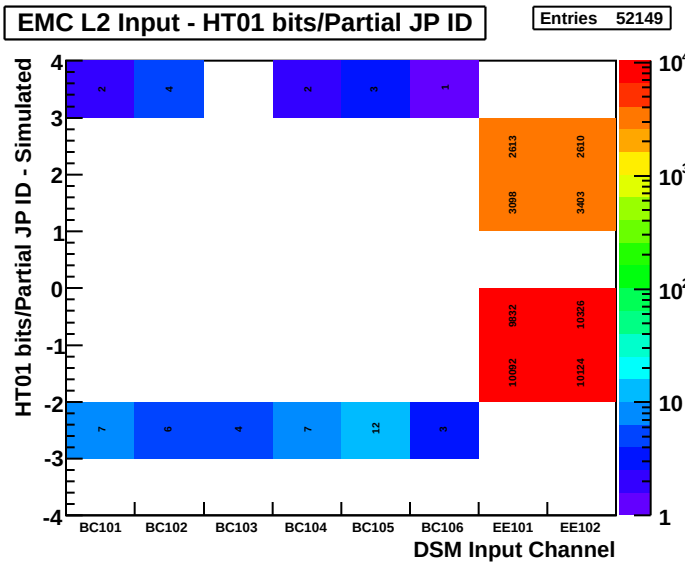

EMC L2 Input - JPZ/JPC bits
Entries 459304
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

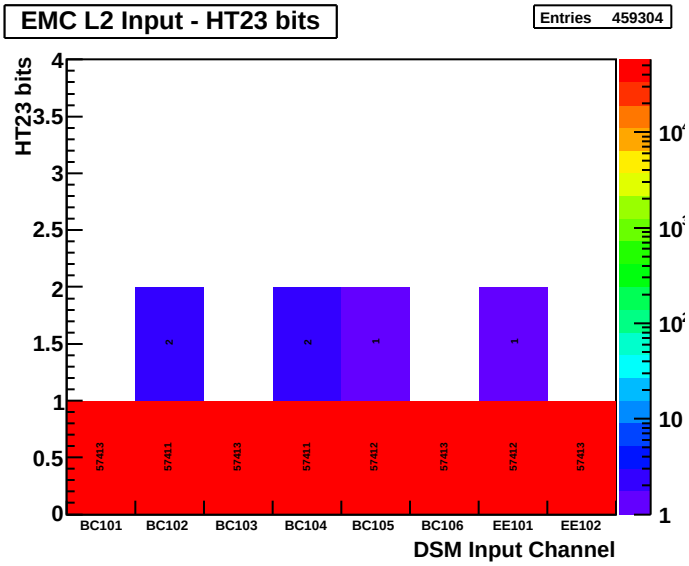

EMC L2 Input - JPZ/JPC bits
Entries 66
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

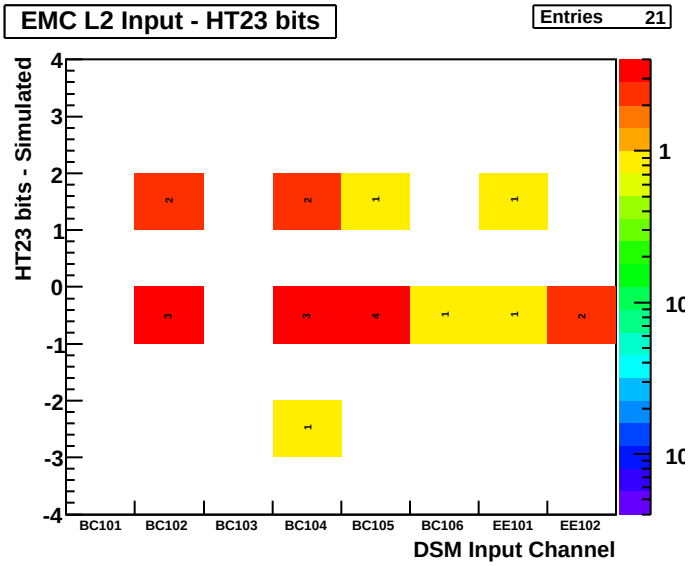

EMC L2 Input - Partial JP Sum
Entries 459304
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

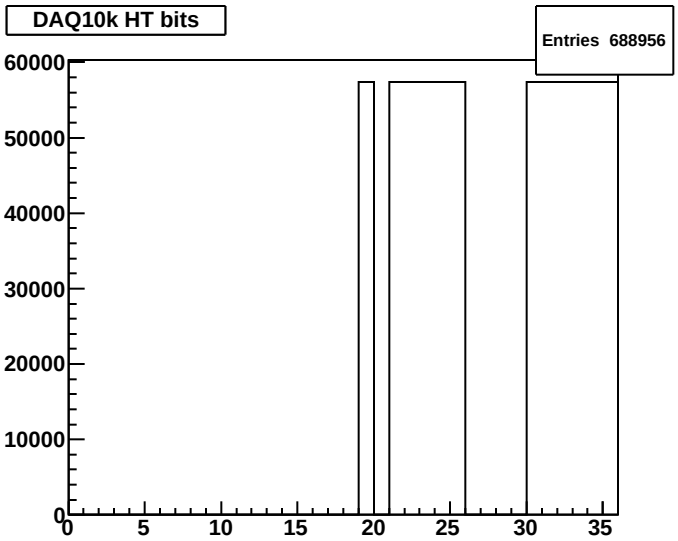

EMC L2 Input - Partial JP Sum
Entries 241682
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

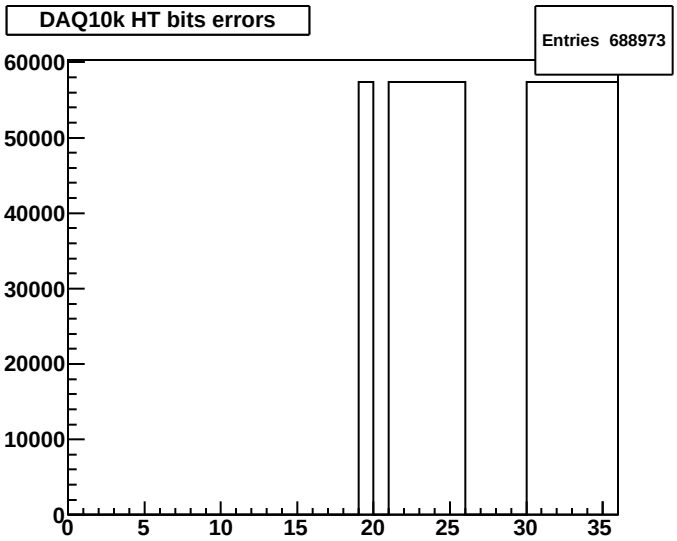

EMC L2 Input - HT01 bits/Partial JP ID
Entries 459304
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

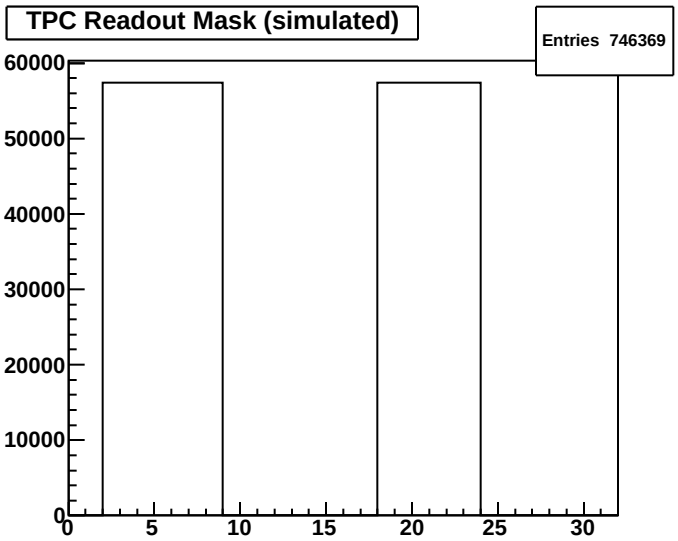

EMC L2 Input - HT01 bits/Partial JP ID
Entries 52149
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

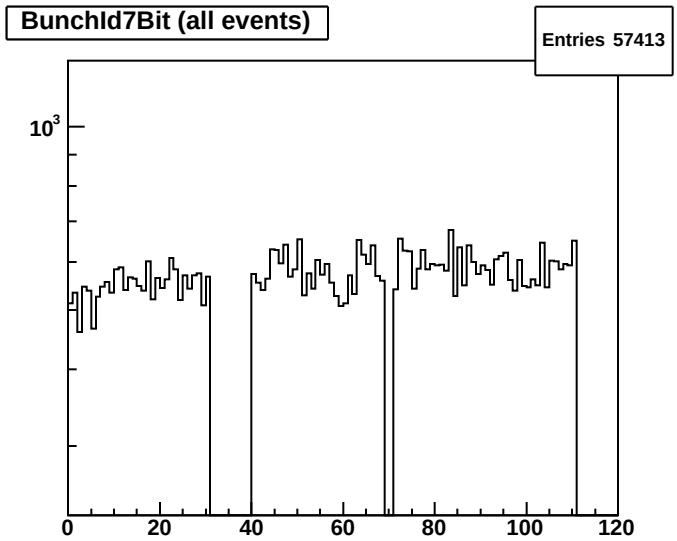

EMC L2 Input - HT23 bits
Entries 459304
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

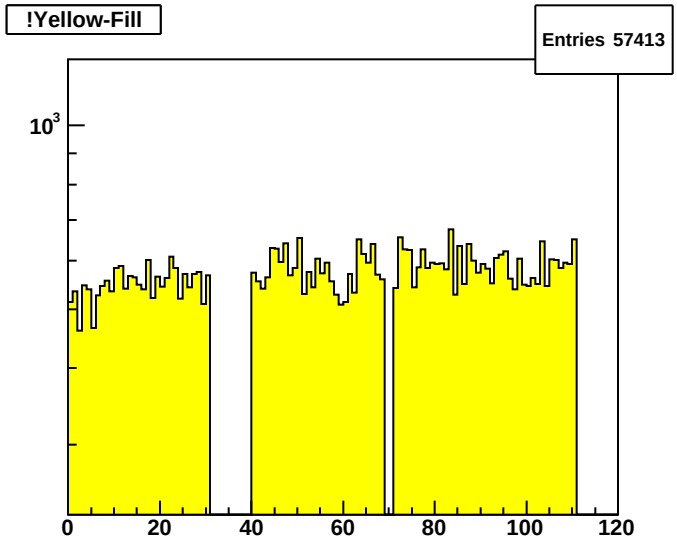

EMC L2 Input - HT23 bits
Entries 21
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

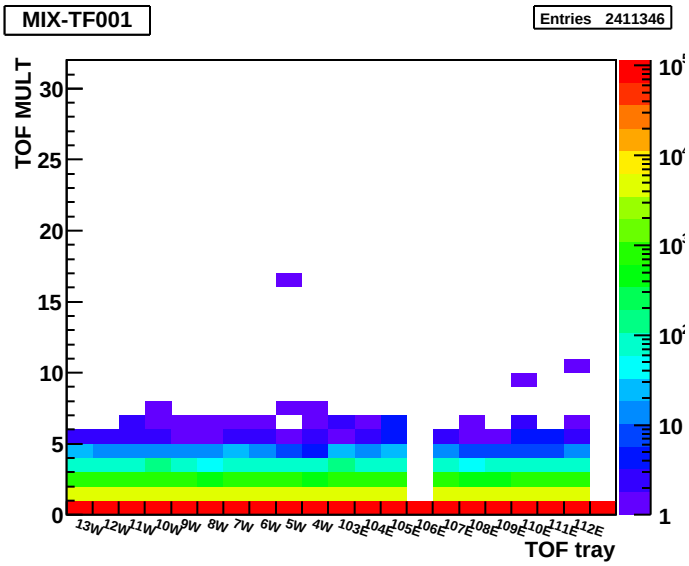

DAQ10k HT bits
Entries 688956
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

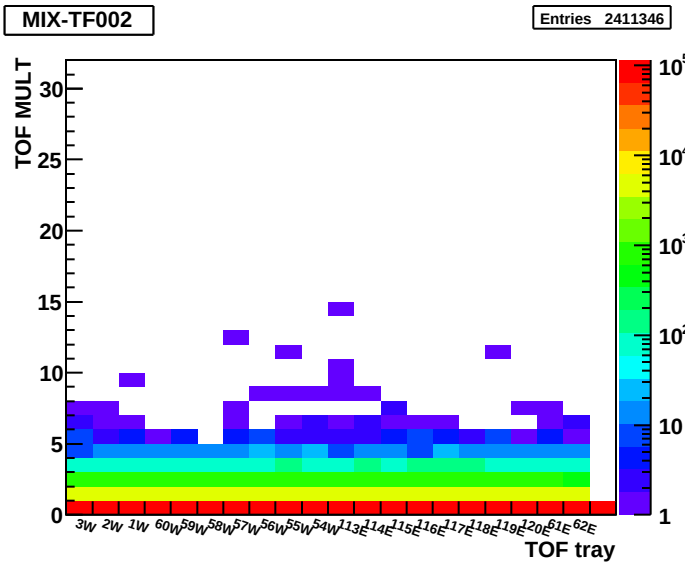

DAQ10k HT bits errors
Entries 688973
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

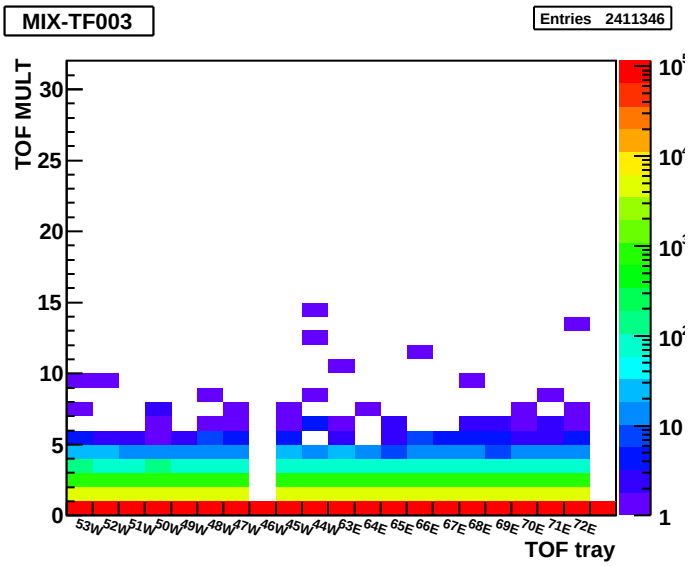

TPC Readout Mask (simulated)
Entries 746369
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30

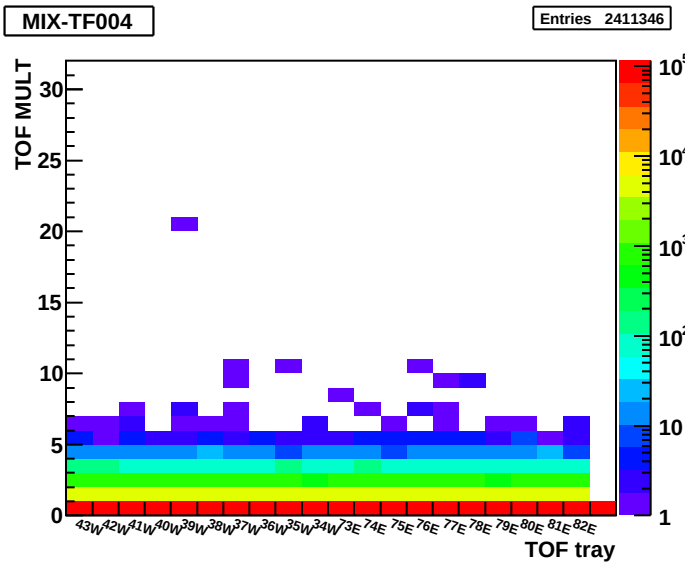

BunchId7Bit (all events)
Entries 57413
10^3
0 20 40 60 80 100 120

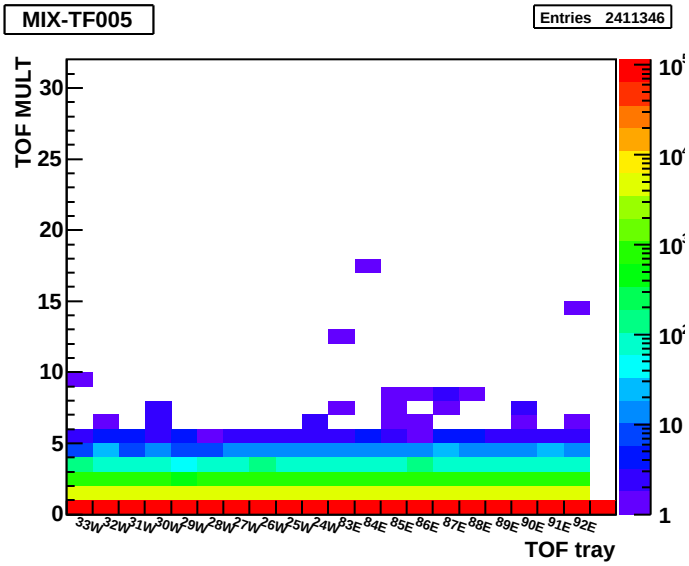

!Yellow-Fill
Entries 57413
10^3
0 20 40 60 80 100 120

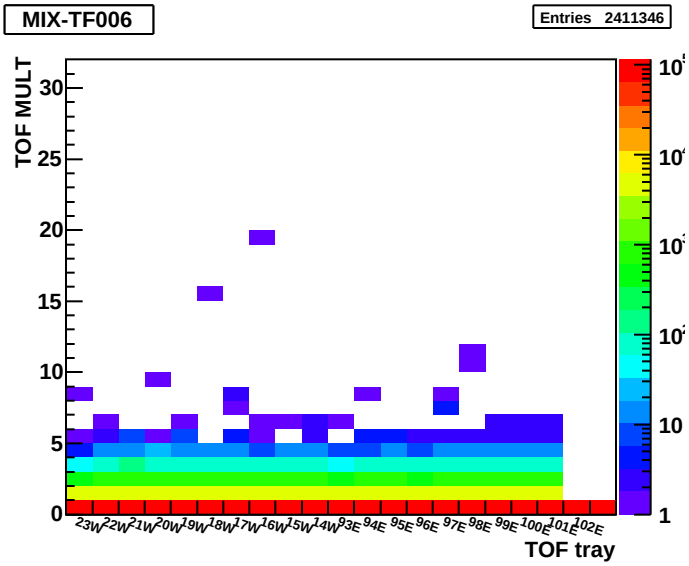

MIX-TF001
Entries 2411346
TOF MULT
TOF tray

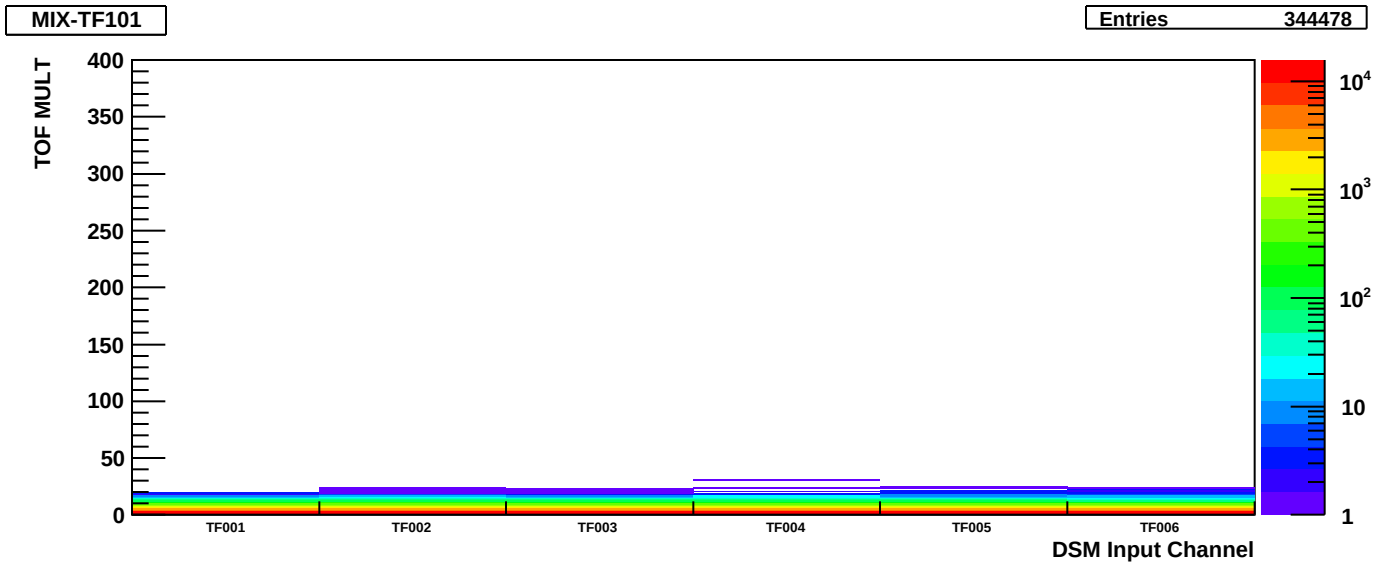

MIX-TF002
Entries 2411346
TOF MULT
TOF tray

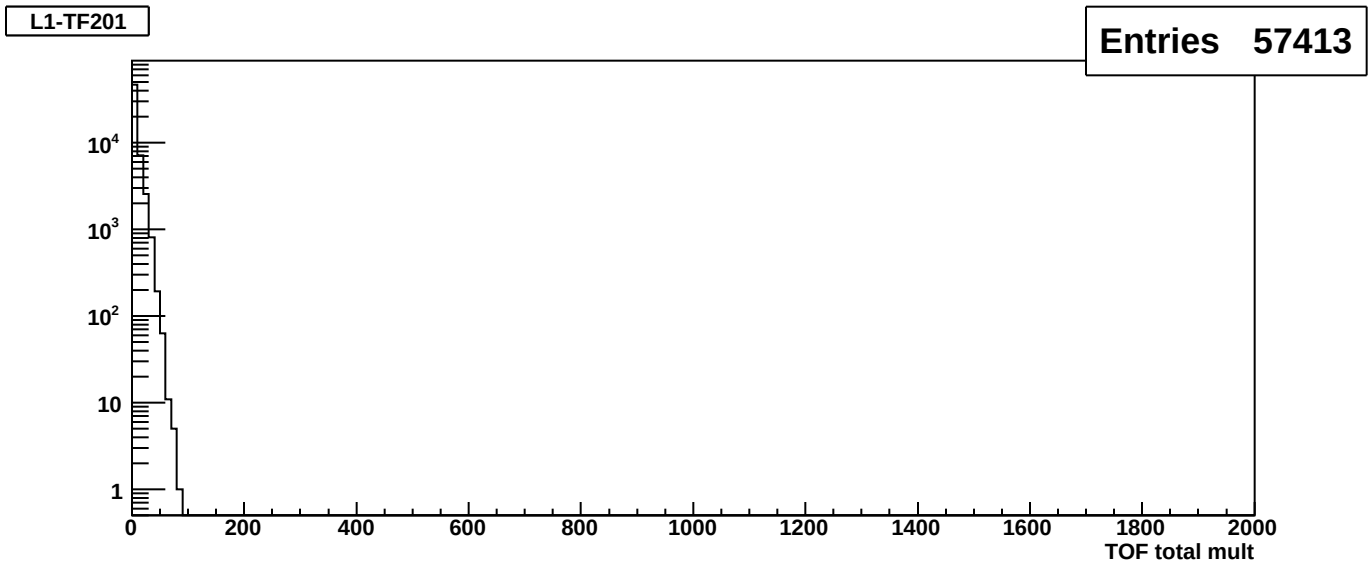

MIX-TF003
Entries 2411346
TOF MULT
TOF tray

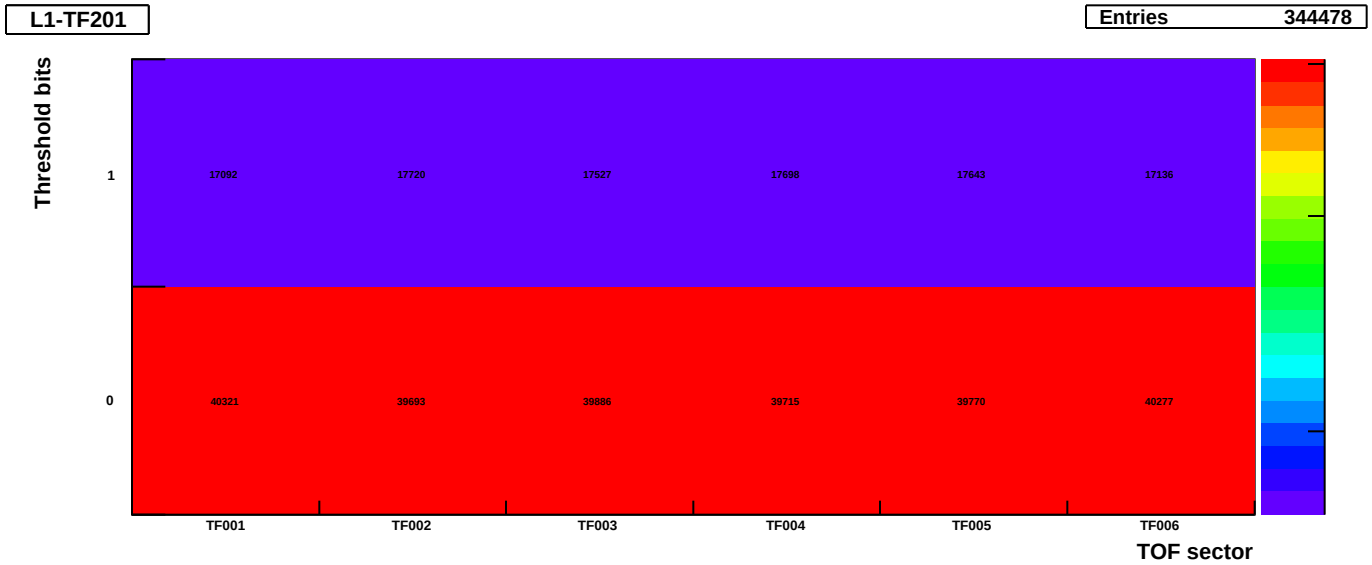

MIX-TF004
Entries 2411346
TOF MULT
TOF tray

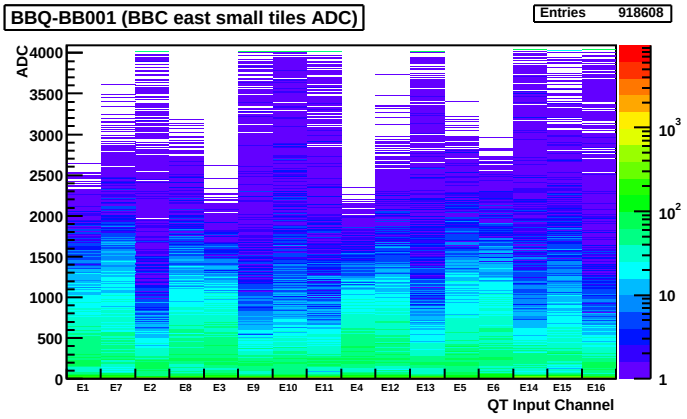

MIX-TF005
Entries 2411346
TOF MULT
TOF tray

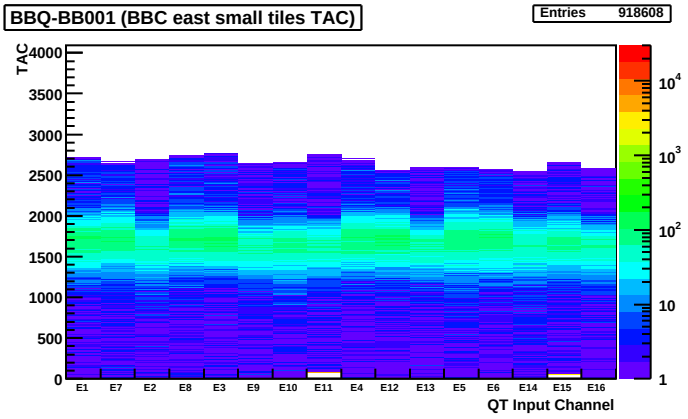

MIX-TF006
Entries 2411346
TOF MULT
TOF tray

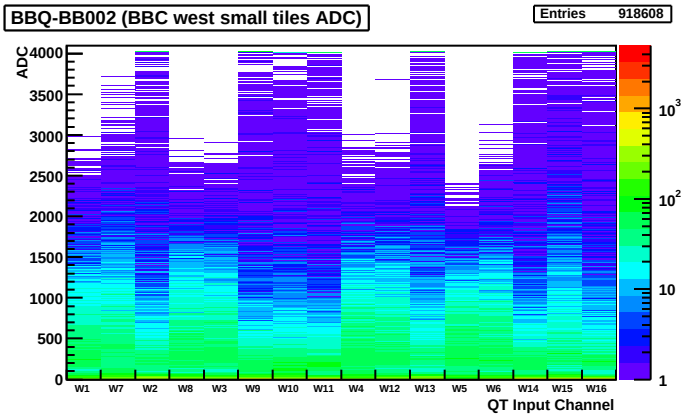

MIX-TF101
Entries 344478
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

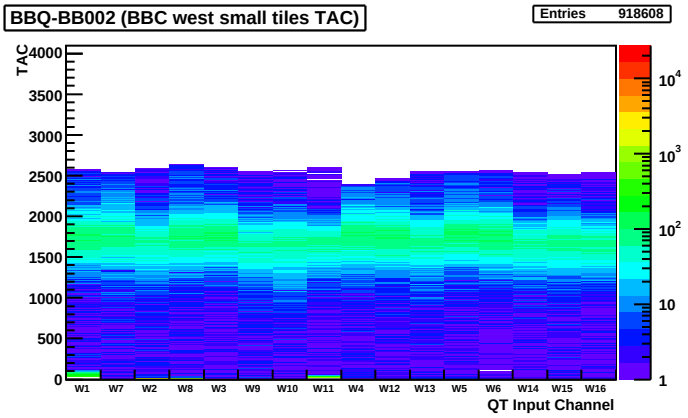

L1-TF201
Entries 57413
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

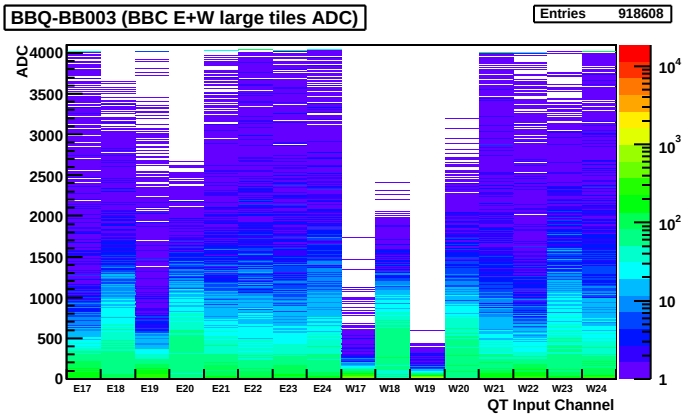

L1-TF201
Entries 344478
Threshold bits
1
0
17092
17720
17527
17698
17643
17136
40321
39693
39886
39715
39770
40277
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

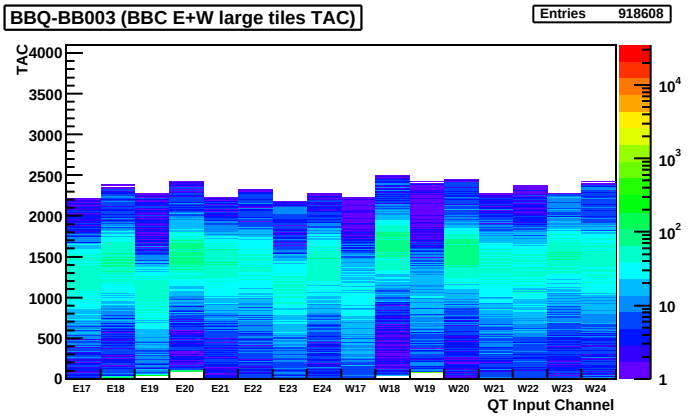

BBQ-BB001 (BBC east small tiles ADC)
Entries 918608
ADC
QT Input Channel

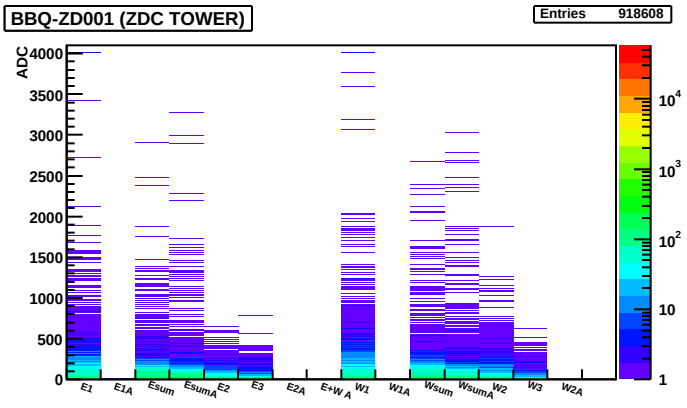

BBQ-BB001 (BBC east small tiles TAC)
Entries 918608
TAC
QT Input Channel

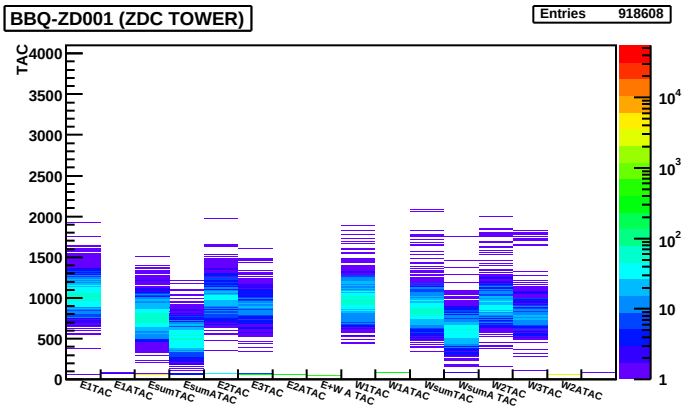

BBQ-BB002 (BBC west small tiles ADC)
Entries 918608
ADC
QT Input Channel

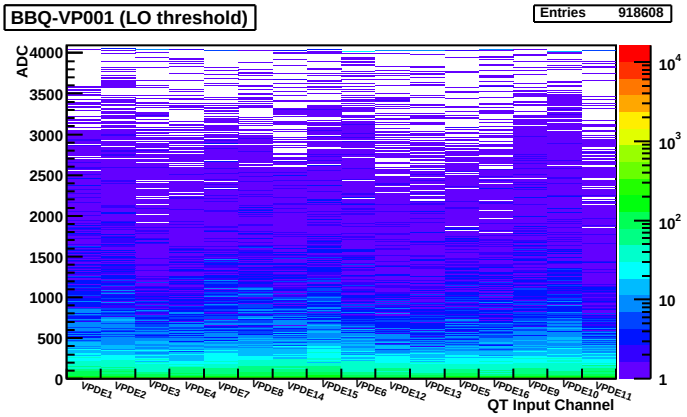

BBQ-BB002 (BBC west small tiles TAC)
Entries 918608
TAC
QT Input Channel

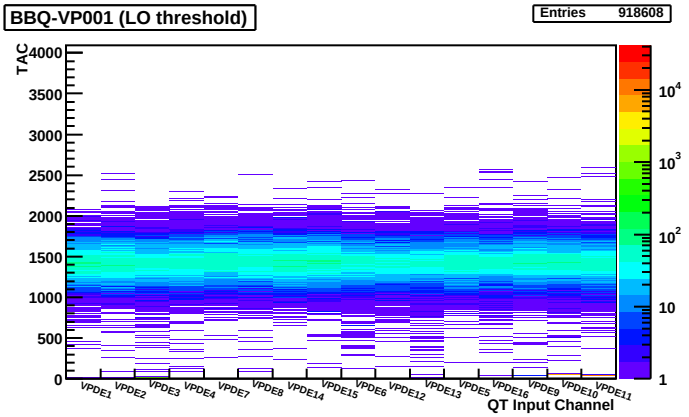

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 918608
ADC
QT Input Channel

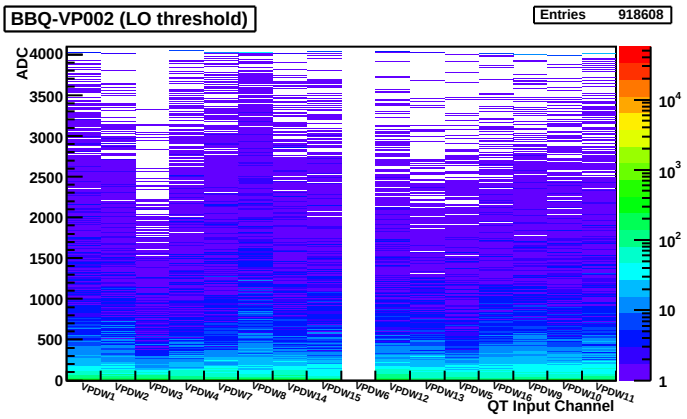

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 918608
TAC
QT Input Channel

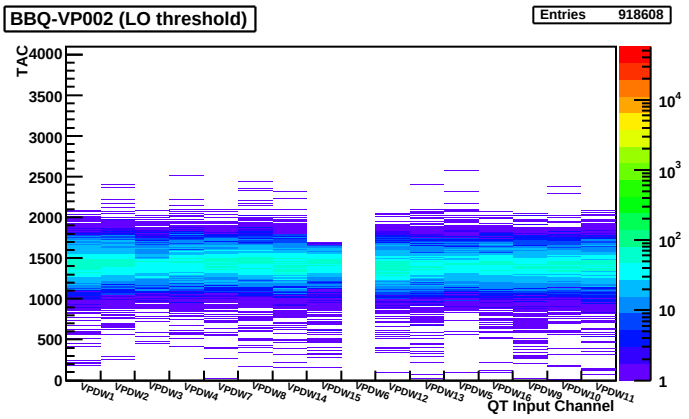

BBQ-ZD001 (ZDC TOWER)
Entries 918608
ADC

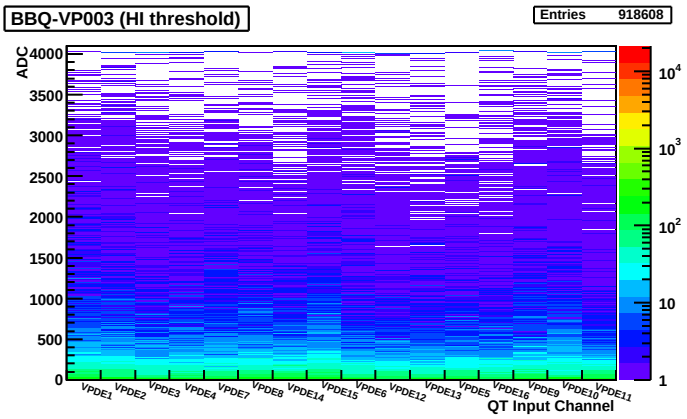

BBQ-ZD001 (ZDC TOWER)
Entries 918608
TAC

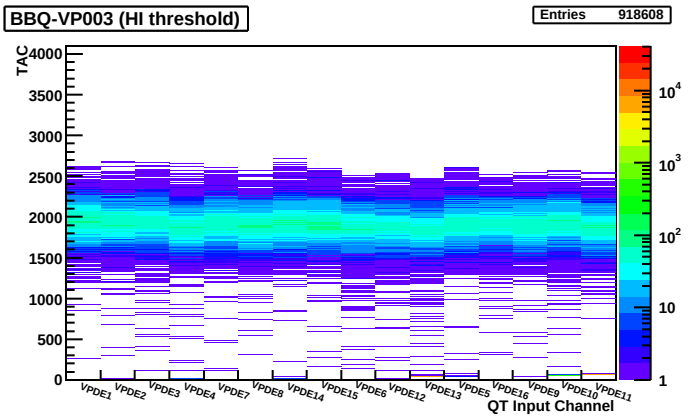

BBQ-VP001 (LO threshold)
Entries 918608
ADC
QT Input Channel

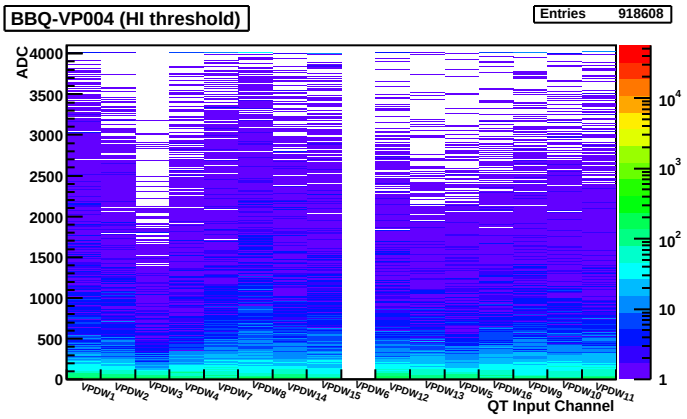

BBQ-VP001 (LO threshold)
Entries 918608
TAC
QT Input Channel

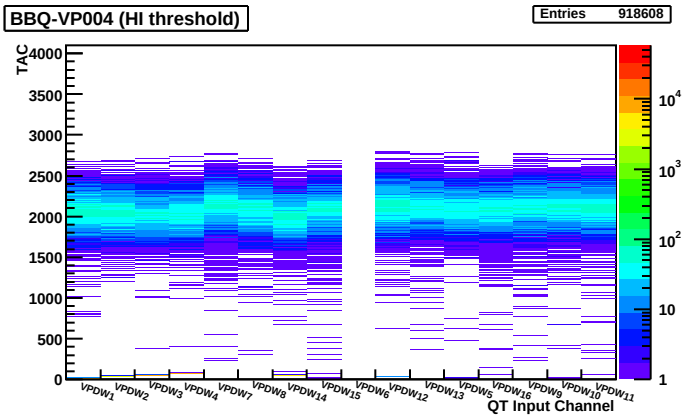

BBQ-VP002 (LO threshold)
Entries 918608
ADC
QT Input Channel

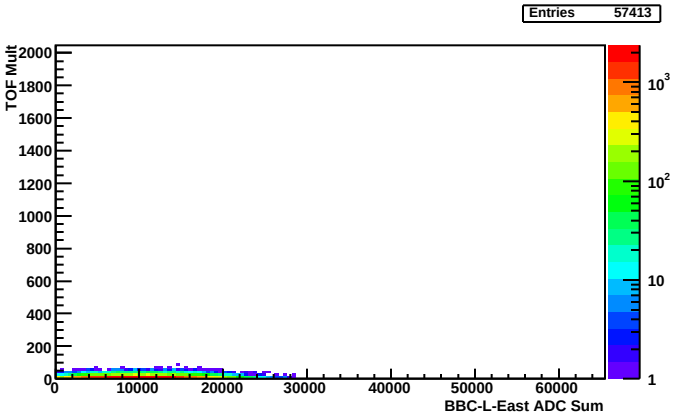

BBQ-VP002 (LO threshold)
Entries 918608
TAC
QT Input Channel

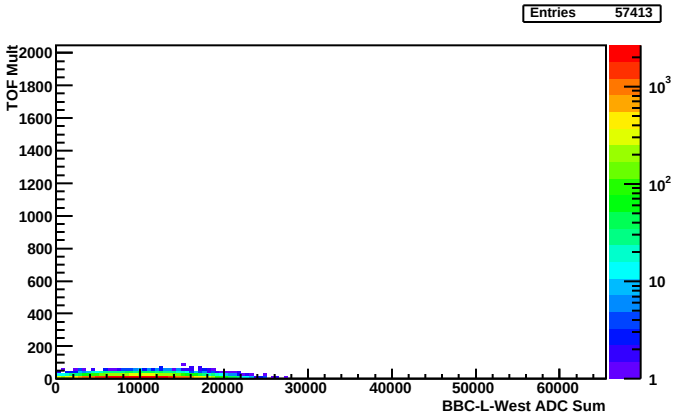

BBQ-VP003 (HI threshold)
Entries 918608
ADC
QT Input Channel

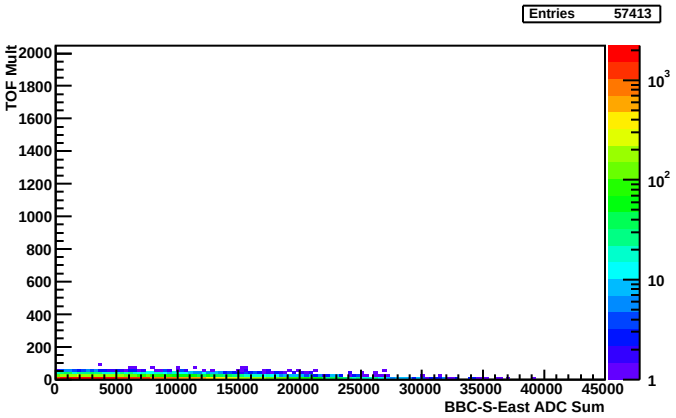

BBQ-VP003 (HI threshold)
Entries 918608
TAC
QT Input Channel

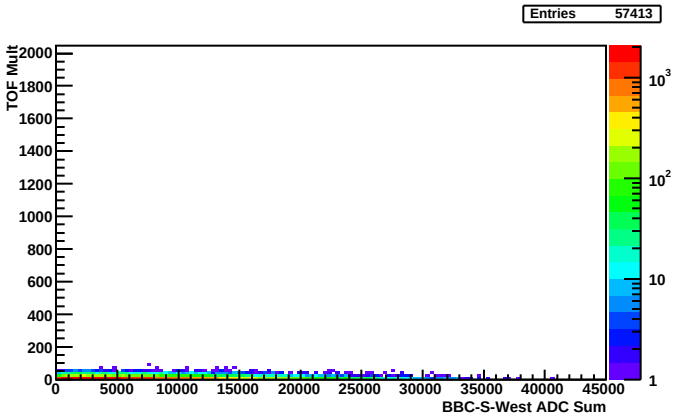

BBQ-VP004 (HI threshold)
Entries 918608
ADC
QT Input Channel

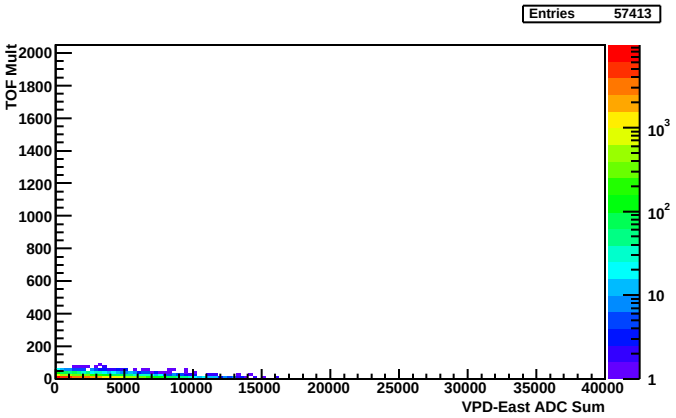

BBQ-VP004 (HI threshold)
Entries 918608
TAC
QT Input Channel

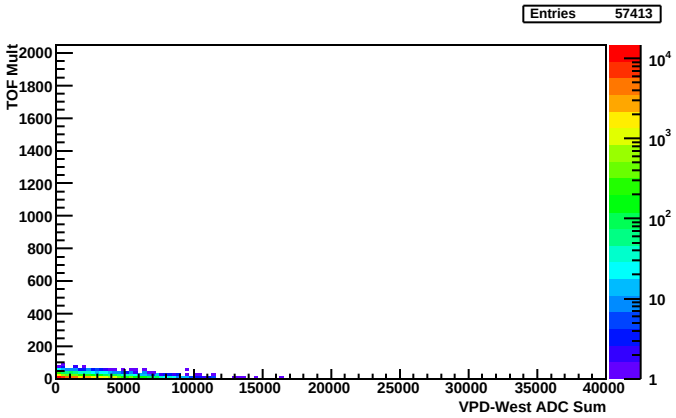

Entries 57413
TOF Mult
BBC-L-East ADC Sum

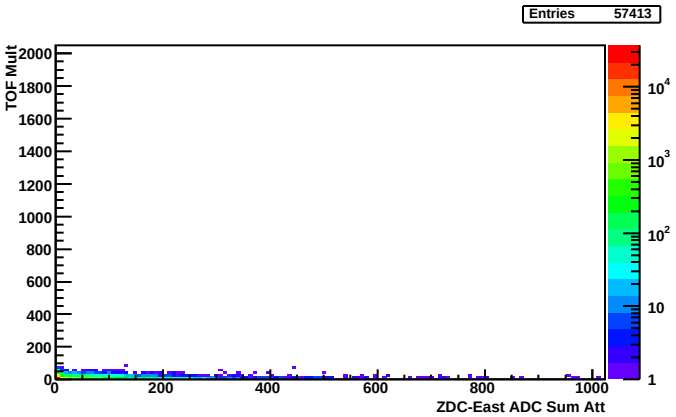

Entries 57413
TOF Mult
BBC-L-West ADC Sum

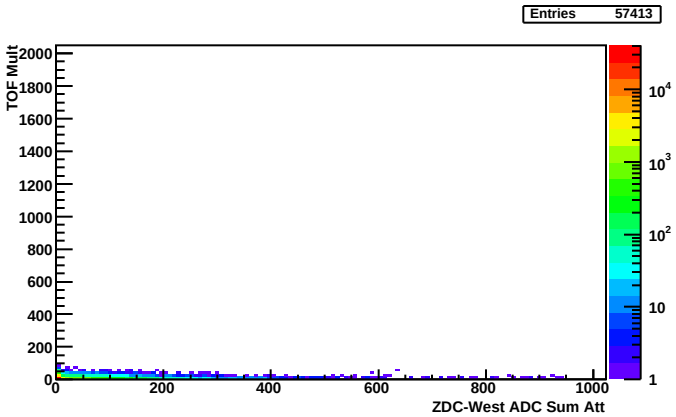

Entries 57413
TOF Mult
BBC-S-East ADC Sum

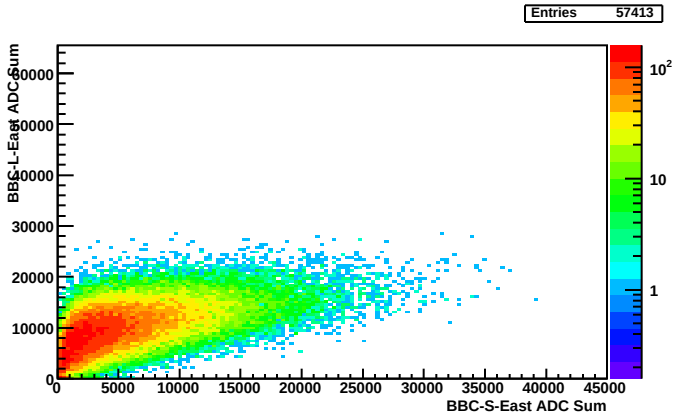

Entries 57413
TOF Mult
BBC-S-West ADC Sum

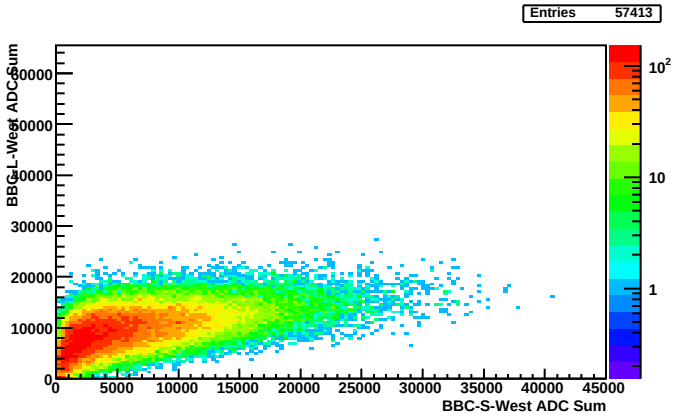

Entries 57413
TOF Mult
VPD-East ADC Sum

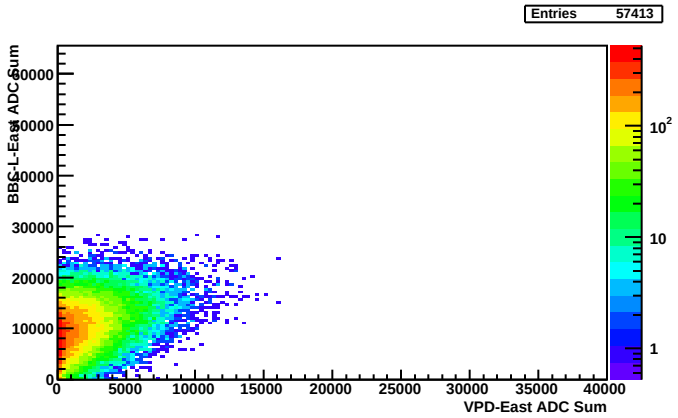

Entries 57413
TOF Mult
VPD-West ADC Sum

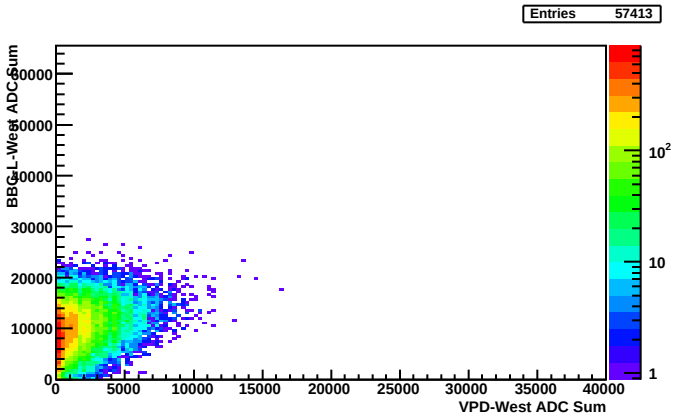

Entries 57413
TOF Mult
ZDC-East ADC Sum Att

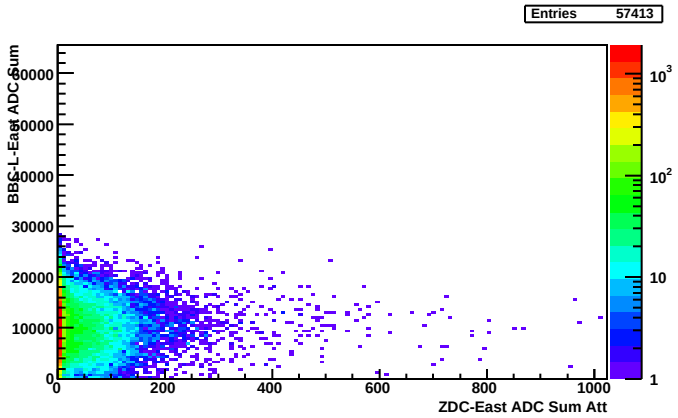

Entries 57413
TOF Mult
ZDC-West ADC Sum Att

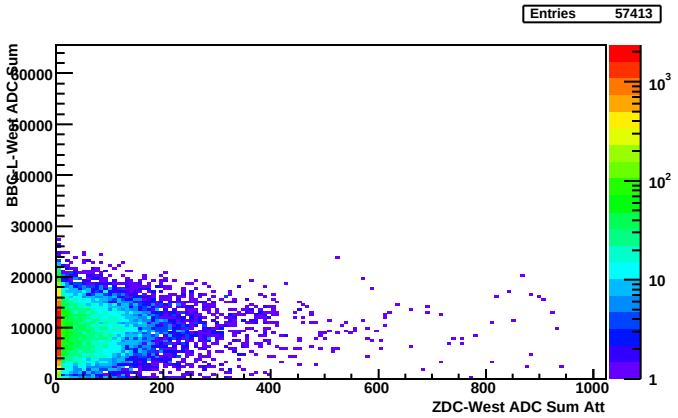

Entries 57413
BBC-L-East ADC Sum
BBC-S-East ADC Sum


Entries 57413
BBC-L-West ADC Sum
BBC-S-West ADC Sum


Entries 57413
BBC-L-East ADC Sum
VPD-East ADC Sum


Entries 57413
BBC-L-West ADC Sum
VPD-West ADC Sum


Entries 57413
BBC-L-East ADC Sum
ZDC-East ADC Sum Att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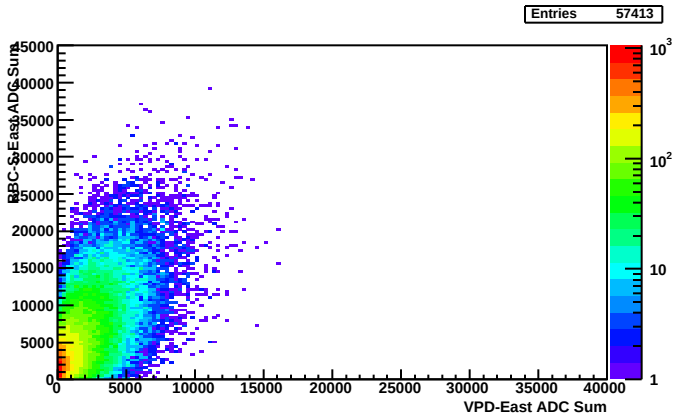
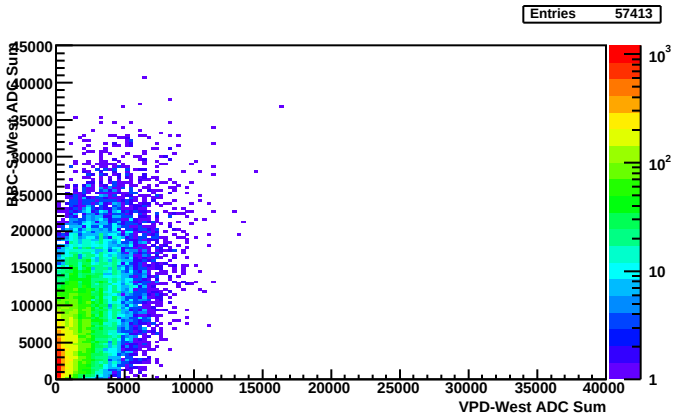
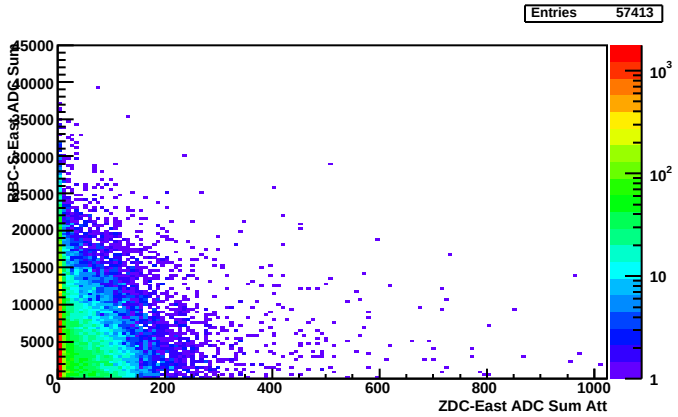
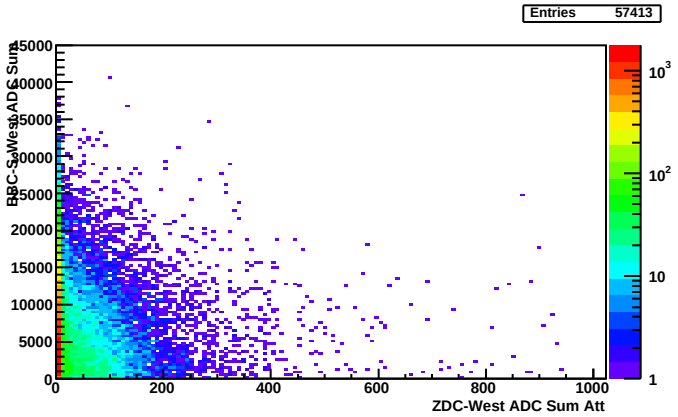
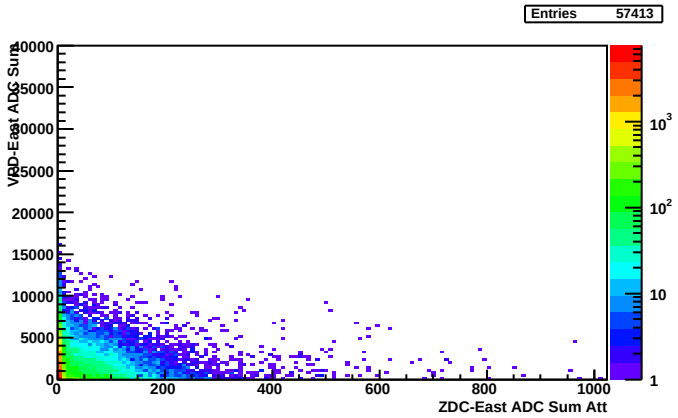
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

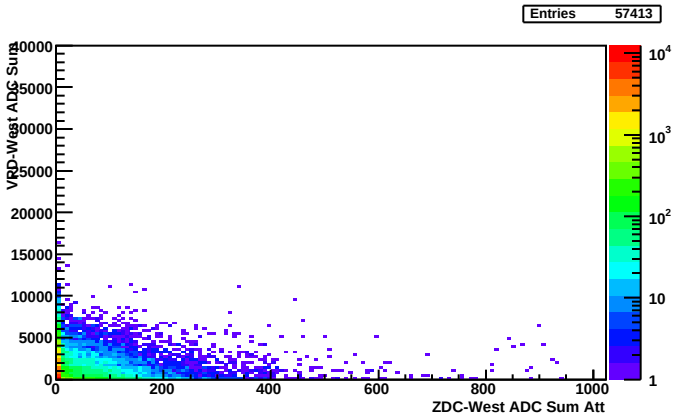

Entries 57413
BBC-S-East ADC Sum
VPD-East ADC Sum

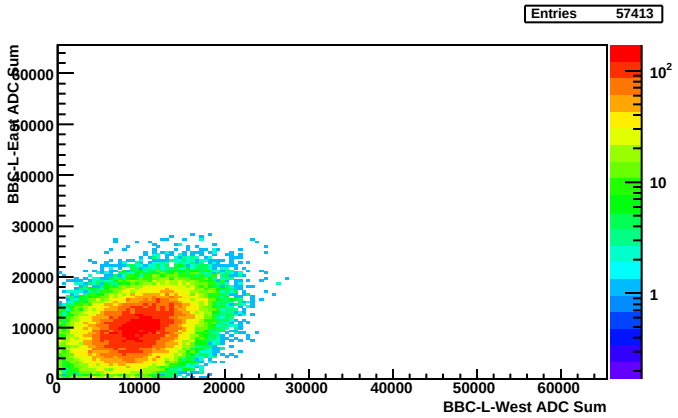

Entries 57413
BBC-S-West ADC Sum
VPD-West ADC Sum

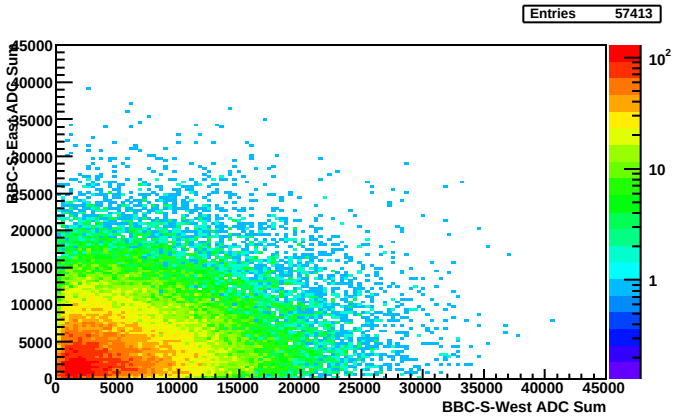

Entries 57413
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

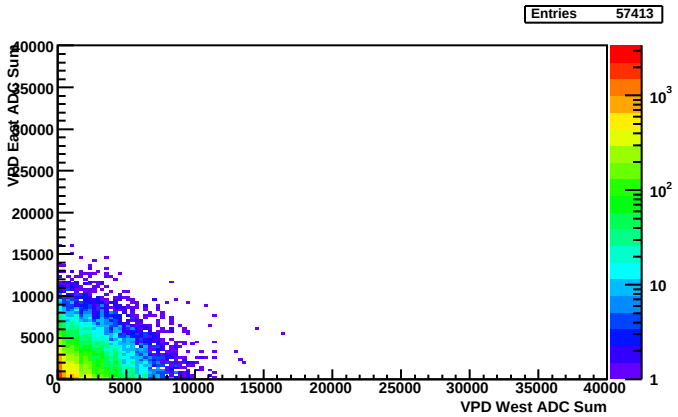

Entries 57413
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

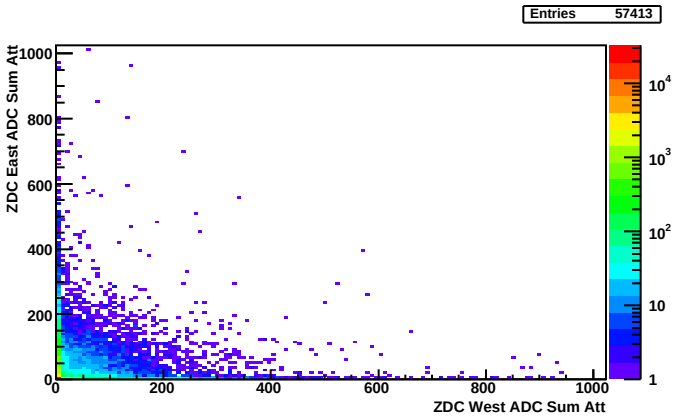

Entries 57413
VPD-East ADC Sum
ZDC-East ADC Sum Att

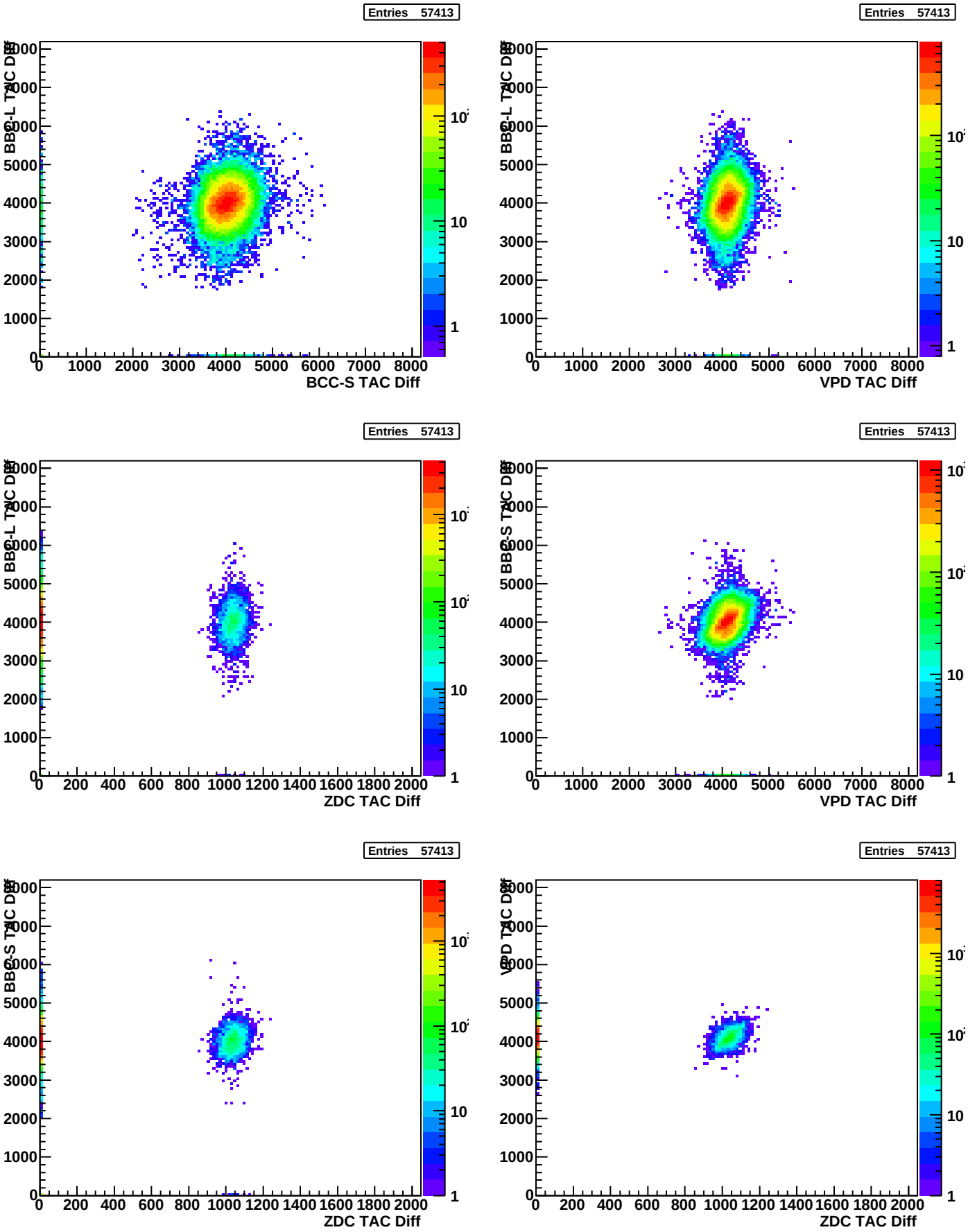

Entries 57413
VPD-West ADC Sum
ZDC-West ADC Sum Att

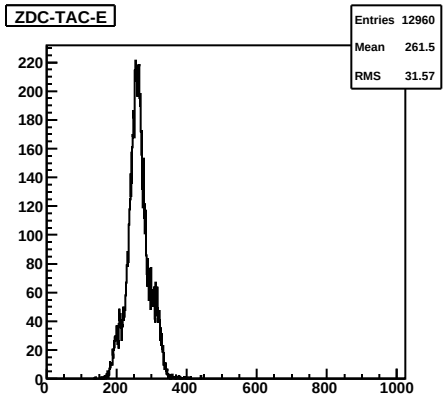

Entries 57413
BBC-L-East ADC Sum
BBC-L-West ADC Sum

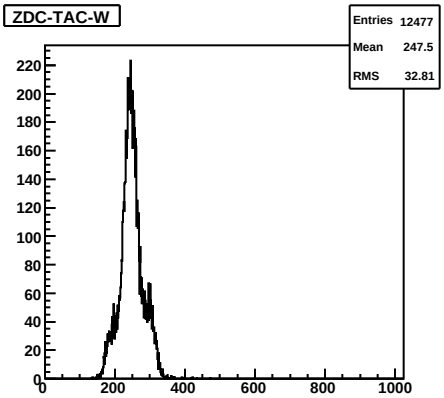

Entries 57413
BBC-S-East ADC Sum
BBC-S-West ADC Sum

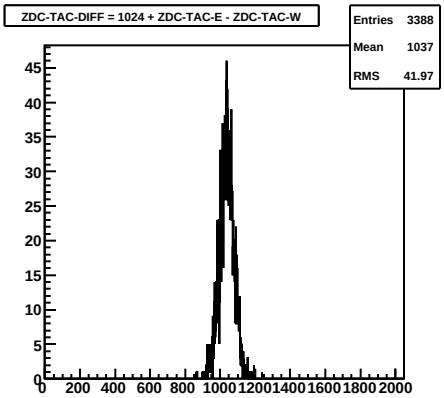

Entries 57413
VPD East ADC Sum
VPD West ADC Sum

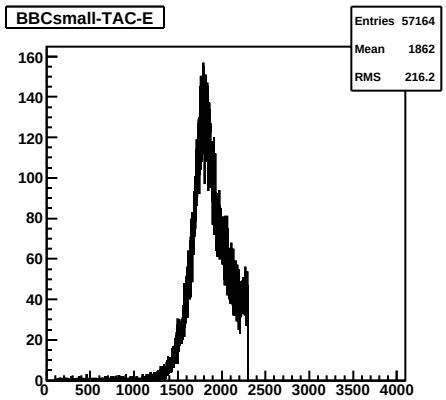

Entries 57413
ZDC East ADC Sum Att
ZDC West ADC Sum Att

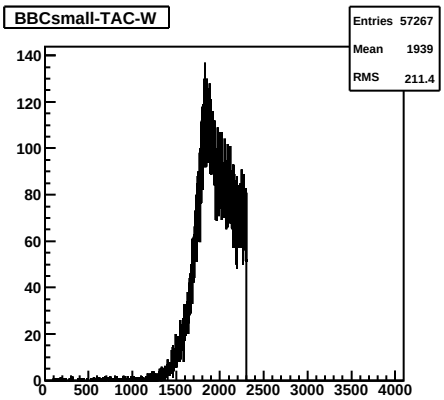

Entries 57413
BBC-L TAC Diff
BCC-S TAC Diff
Entries 57413
BBC-L TAC Diff
VPD TAC Diff
Entries 57413
BBC-L TAC Diff
ZDC TAC Diff
Entries 57413
BBC-S TAC Diff
VPD TAC Diff
Entries 57413
BBC-S TAC Diff
ZDC TAC Diff
Entries 57413
VPD TAC Diff
ZDC TAC Diff

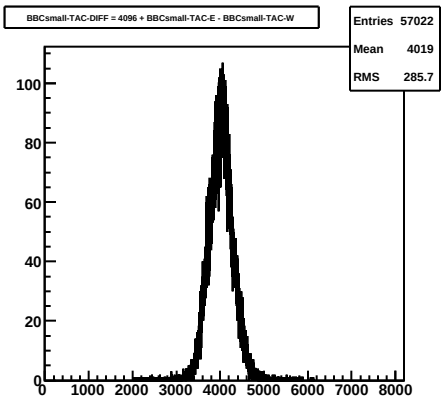

ZDC-TAC-E
Entries 12960
Mean 261.5
RMS 31.57

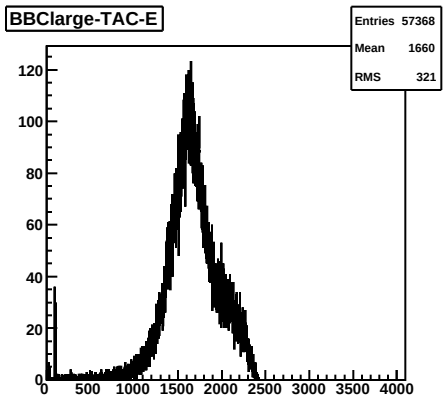

ZDC-TAC-W
Entries 12477
Mean 247.5
RMS 32.81

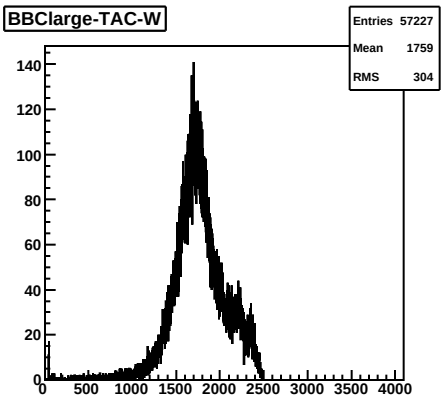

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 3388
Mean 1037
RMS 41.97

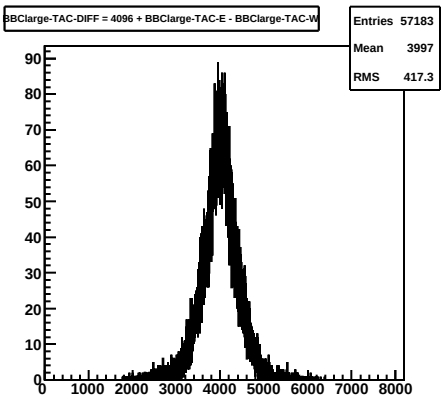

BBCsmall-TAC-E
Entries 57164
Mean 1862
RMS 216.2

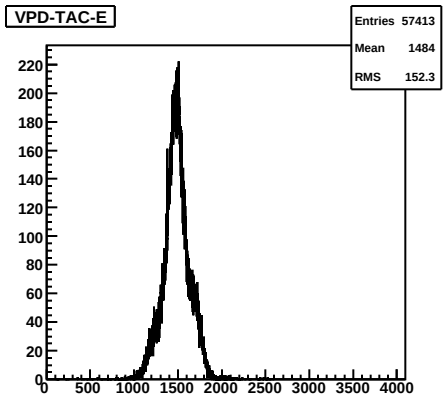

BBCsmall-TAC-W
Entries 57267
Mean 1939
RMS 211.4

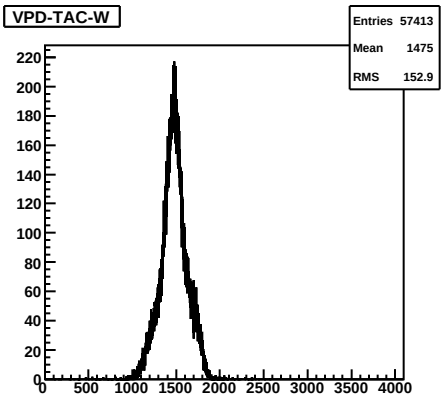

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 57022
Mean 4019
RMS 285.7

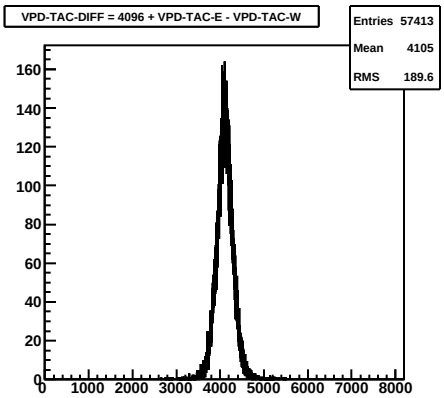

BBClarge-TAC-E
Entries 57368
Mean 1660
RMS 321

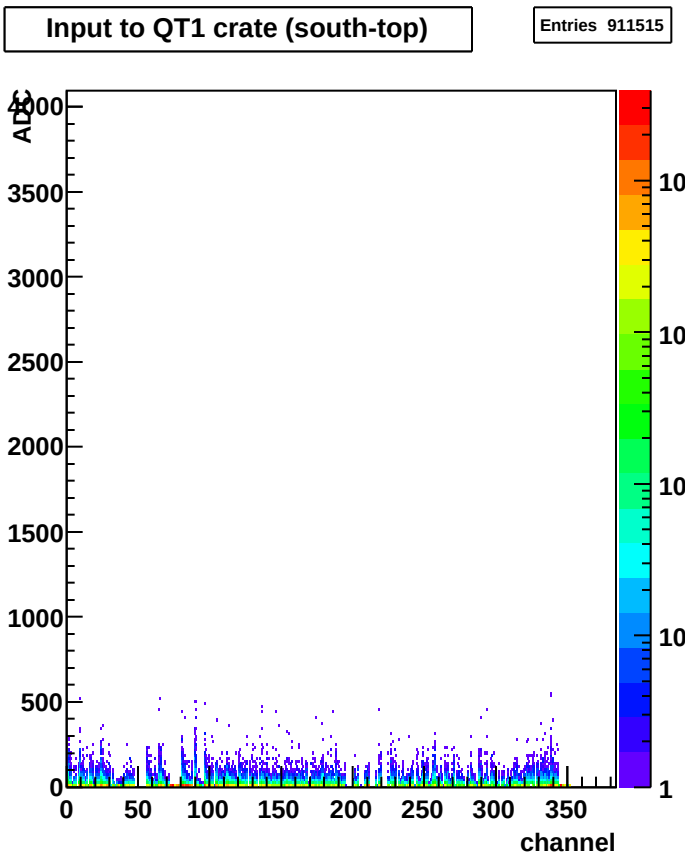

BBClarge-TAC-W
Entries 57227
Mean 1759
RMS 304

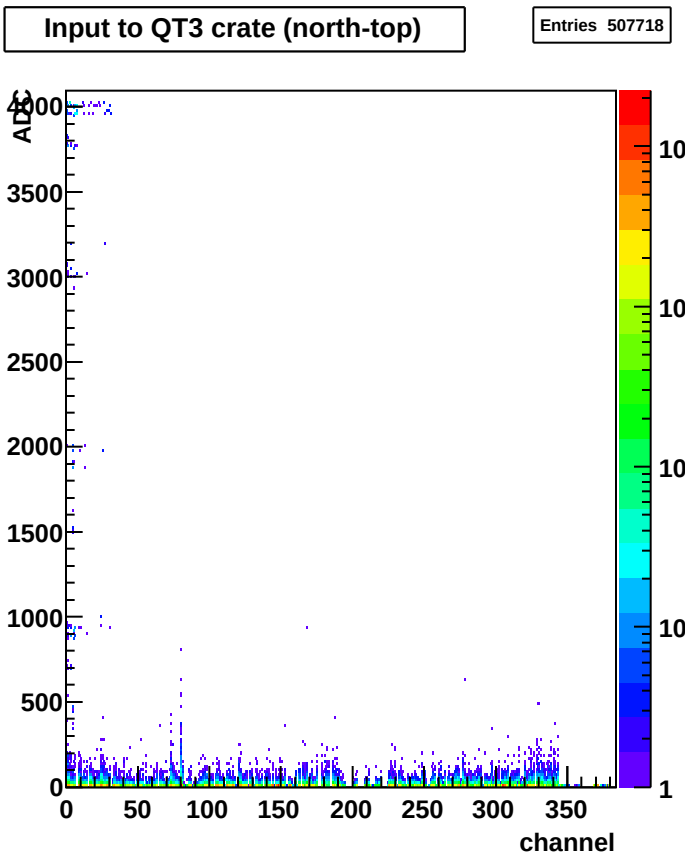

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 57183
Mean 3997
RMS 417.3

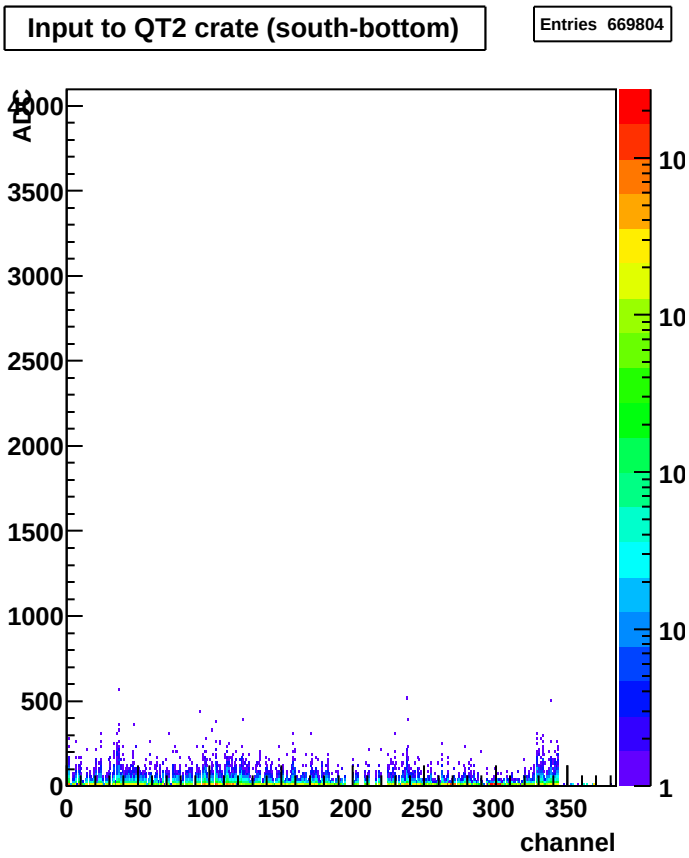

VPD-TAC-E
Entries 57413
Mean 1484
RMS 152.3

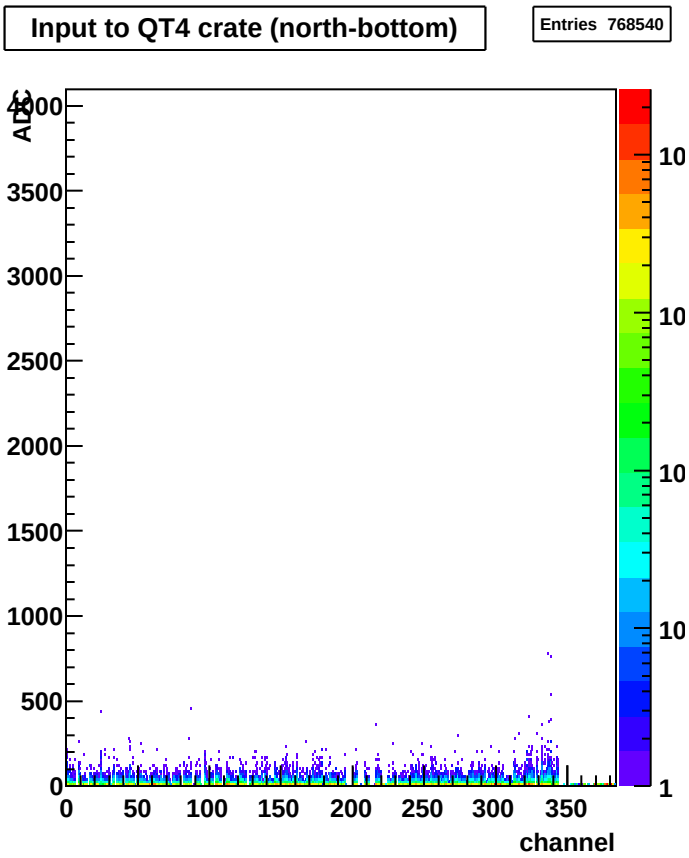

VPD-TAC-W
Entries 57413
Mean 1475
RMS 152.9

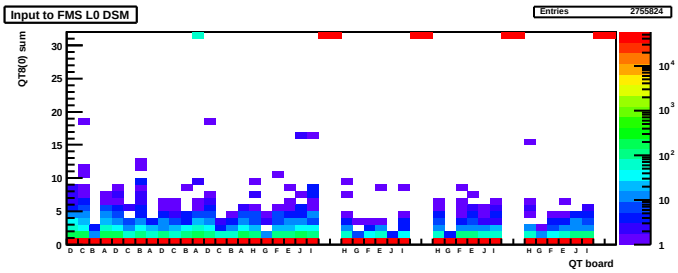

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 57413
Mean 4105
RMS 189.6

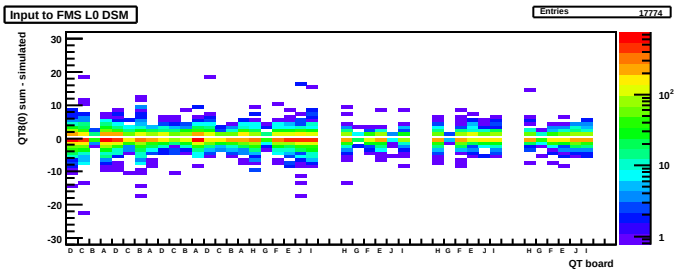

Input to QT1 crate (south-top)
Entries 911515
ADC
channel

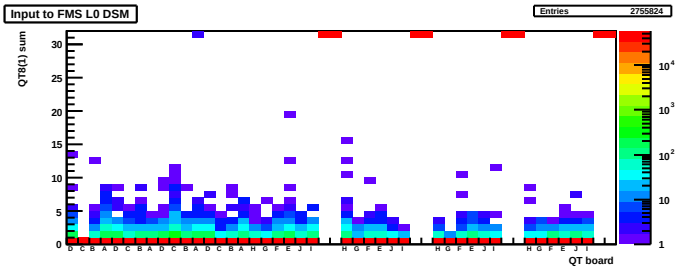

Input to QT3 crate (north-top)
Entries 507718
ADC
channel

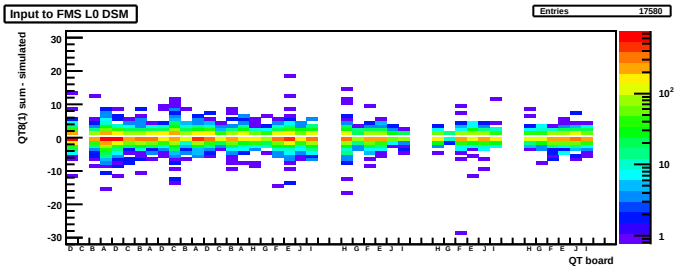

Input to QT2 crate (south-bottom)
Entries 669804
ADC
channel

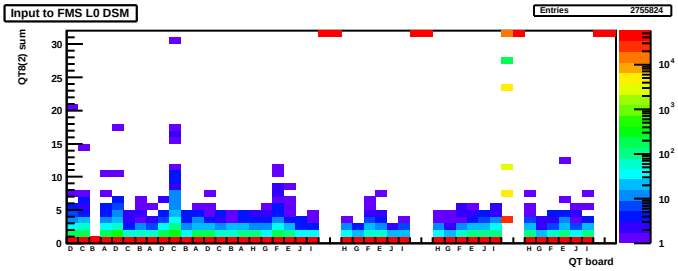

Input to QT4 crate (north-bottom)
Entries 768540
ADC
channel

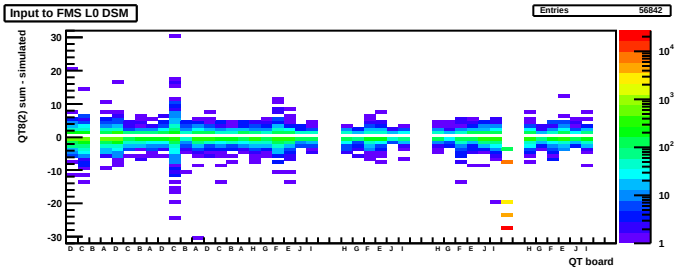

Input to FMS L0 DSM
Entries 2755824
QT8(0) sum
QT board

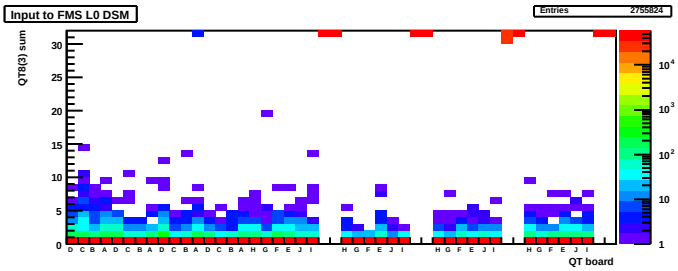

Input to FMS L0 DSM
Entries 17774
QT8(0) sum - simulated
QT board

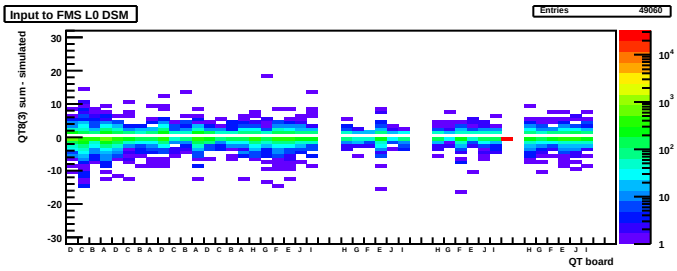

Input to FMS L0 DSM
Entries 2755824
QT8(1) sum
QT board

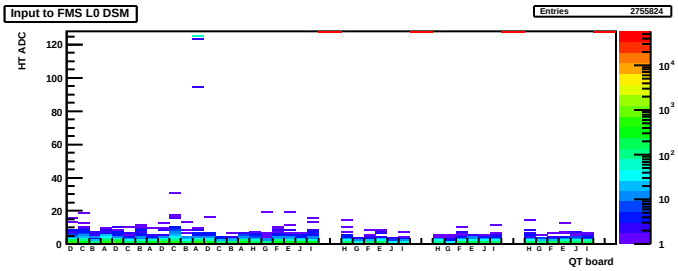

Input to FMS L0 DSM
Entries 17580
QT8(1) sum - simulated
QT board

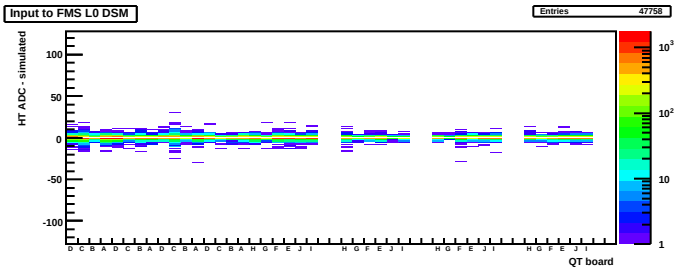

Input to FMS L0 DSM
Entries 2755824
QT8(2) sum
QT board

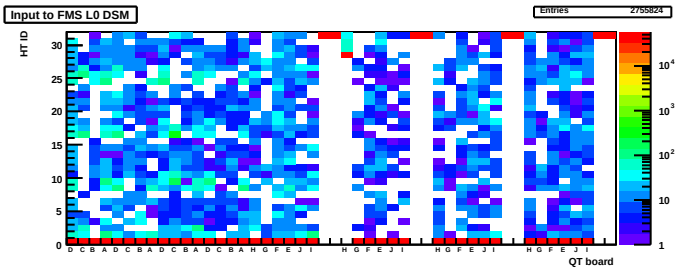

Input to FMS L0 DSM
Entries 56842
QT8(2) sum - simulated
QT board

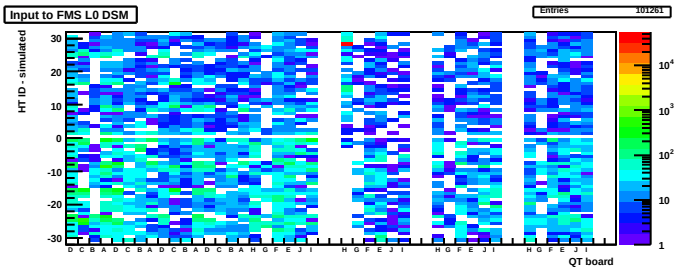

Input to FMS L0 DSM
Entries 2755824
QT8(3) sum
QT board

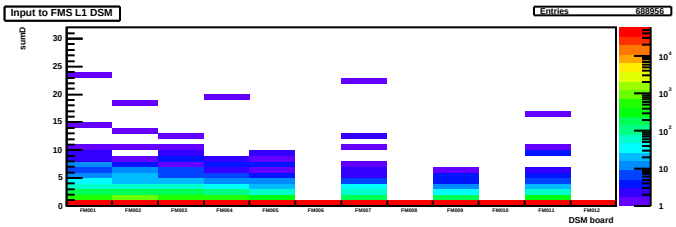

Input to FMS L0 DSM
Entries 49060
QT8(3) sum - simulated
QT board

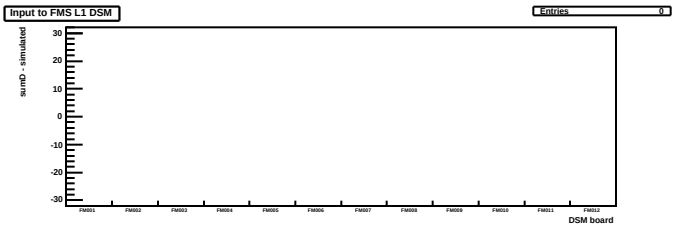

Input to FMS L0 DSM
Entries 2755824
HT ADC
QT board

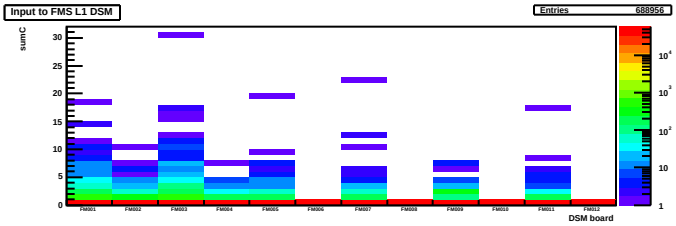

Input to FMS L0 DSM
Entries 47758
HT ADC - simulated
QT board

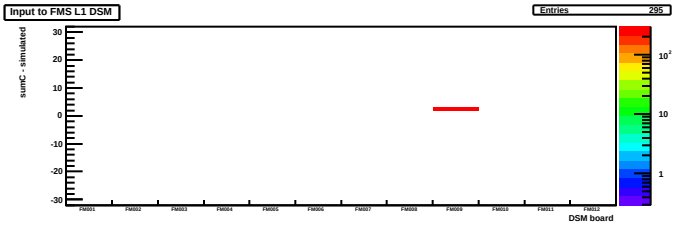

Input to FMS L0 DSM
Entries 2755824
HT ID
QT board

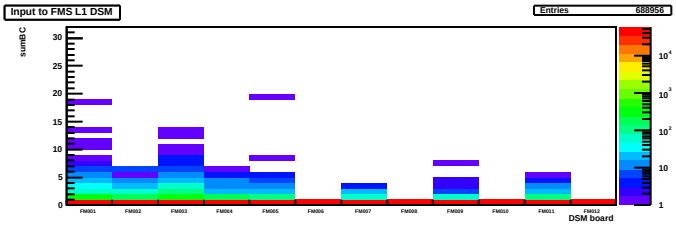

Input to FMS L0 DSM
Entries 101261
HT ID - simulated
QT board

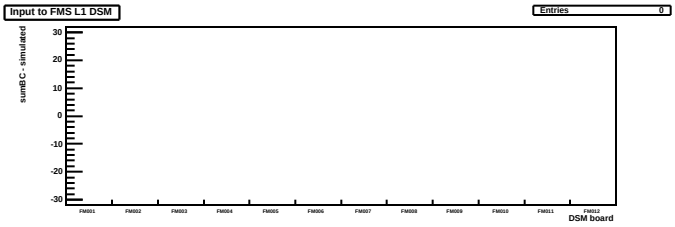

Input to FMS L1 DSM
Entries 688956
sumD
DSM board

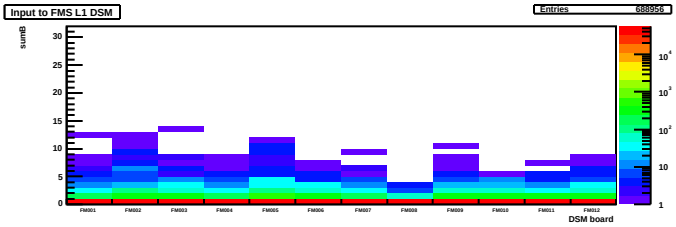

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

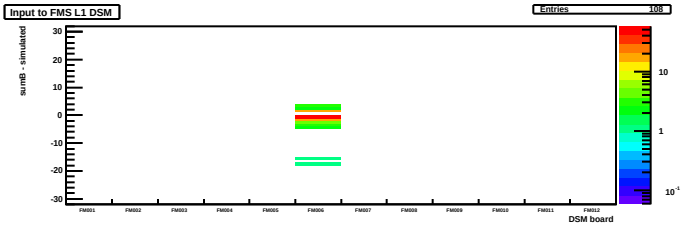

Input to FMS L1 DSM
Entries 688956
sumC
DSM board

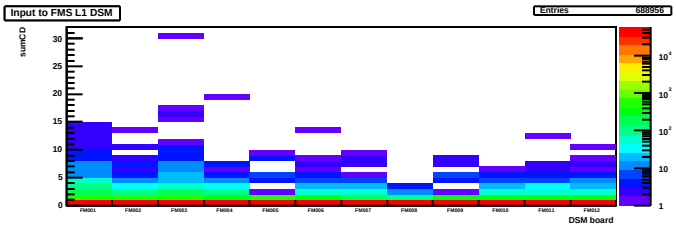

Input to FMS L1 DSM
Entries 295
sumC - simulated
DSM board

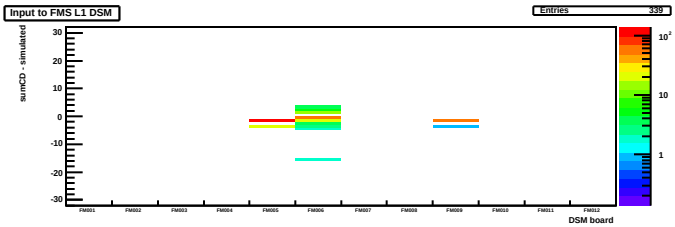

Input to FMS L1 DSM
Entries 688956
sumBC
DSM board

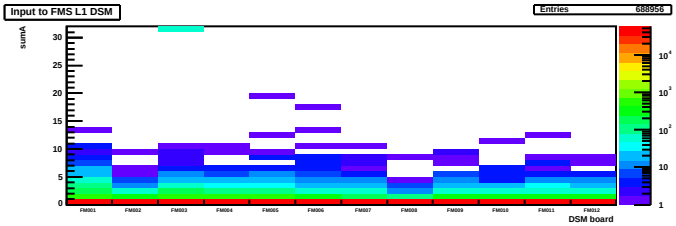

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

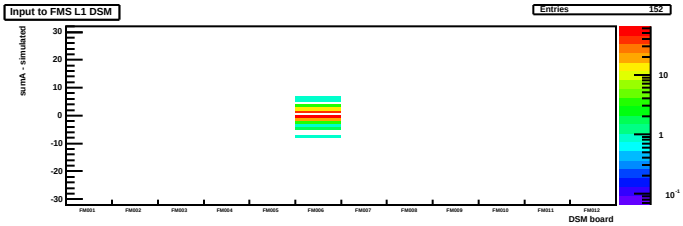

Input to FMS L1 DSM
Entries 688956
sumB
DSM board

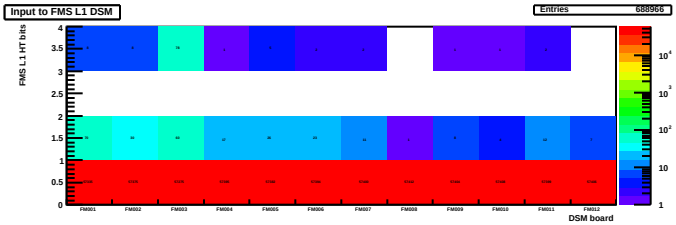

Input to FMS L1 DSM
Entries 108
sumB - simulated
DSM board

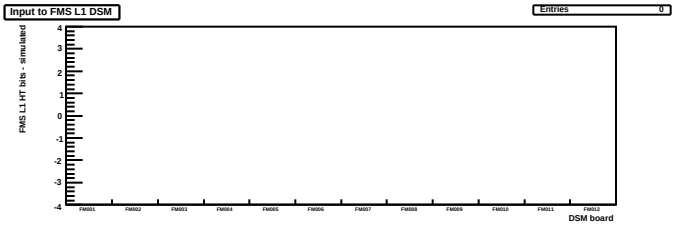

Input to FMS L1 DSM
Entries 688956
sumCD
DSM board

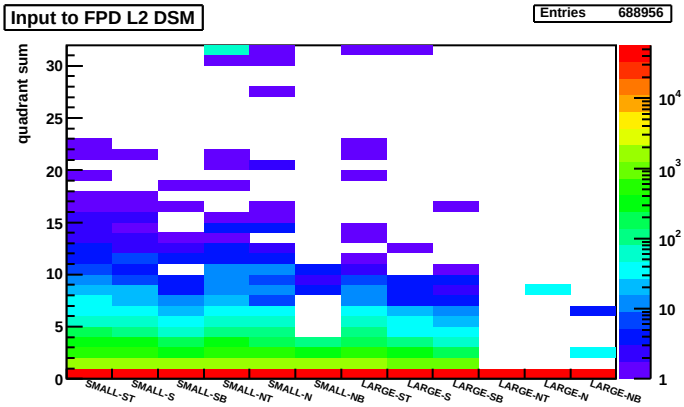

Input to FMS L1 DSM
Entries 339
sumCD - simulated
DSM board

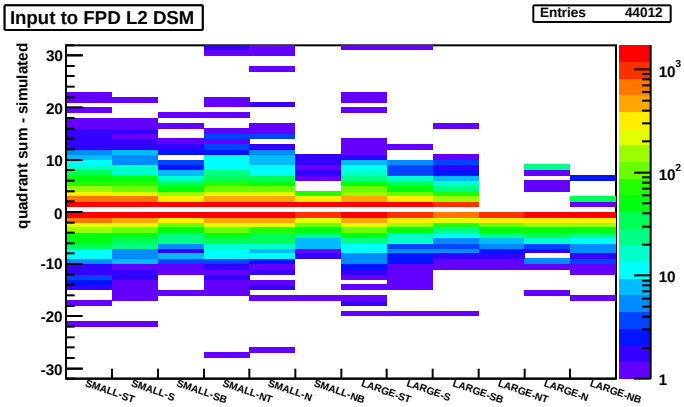

Input to FMS L1 DSM
Entries 688956
sumA
DSM board

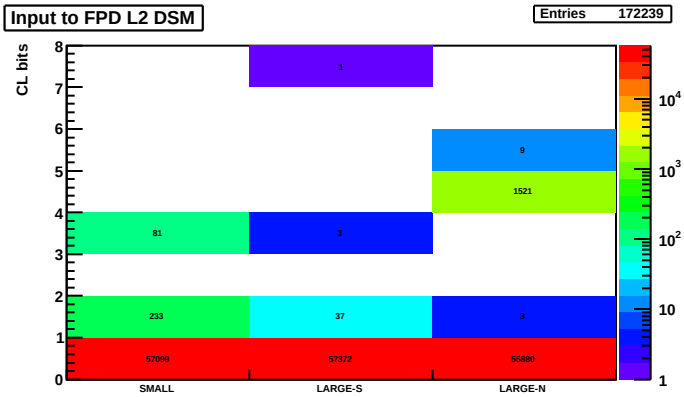

Input to FMS L1 DSM
Entries 152
sumA - simulated
DSM board

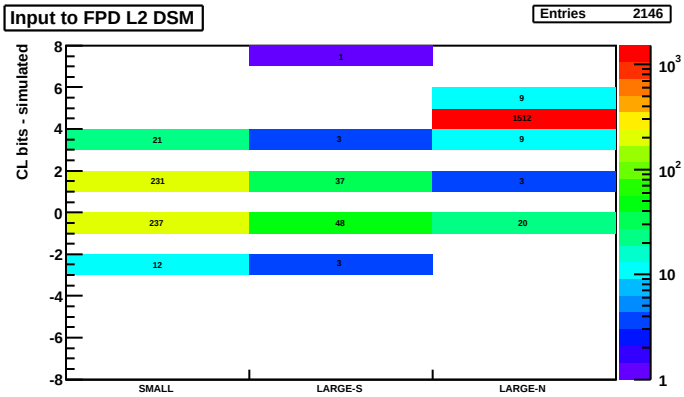

Input to FMS L1 DSM
Entries 688966
FMS L1 HT bits
DSM board

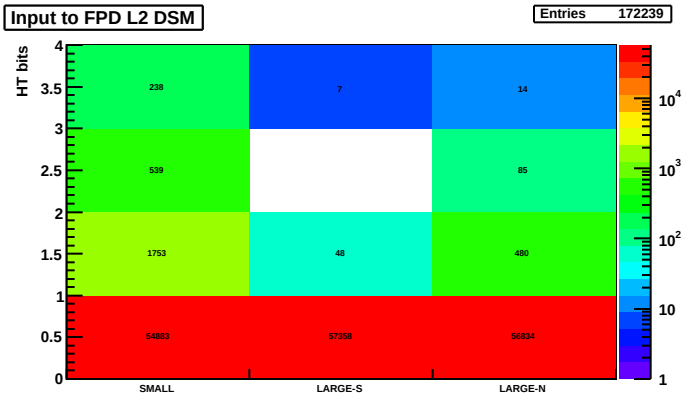

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

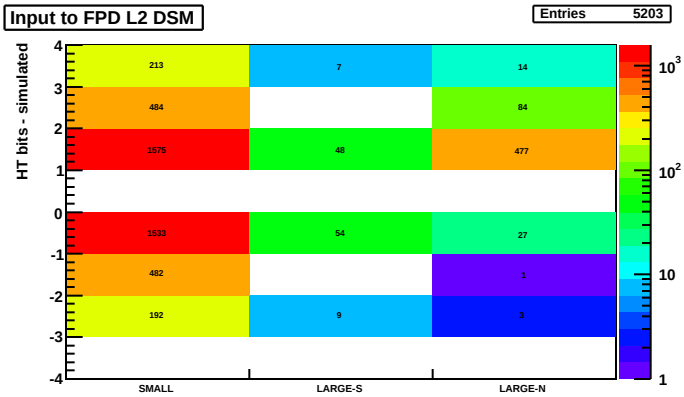

Input to FPD L2 DSM
Entries 688956
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

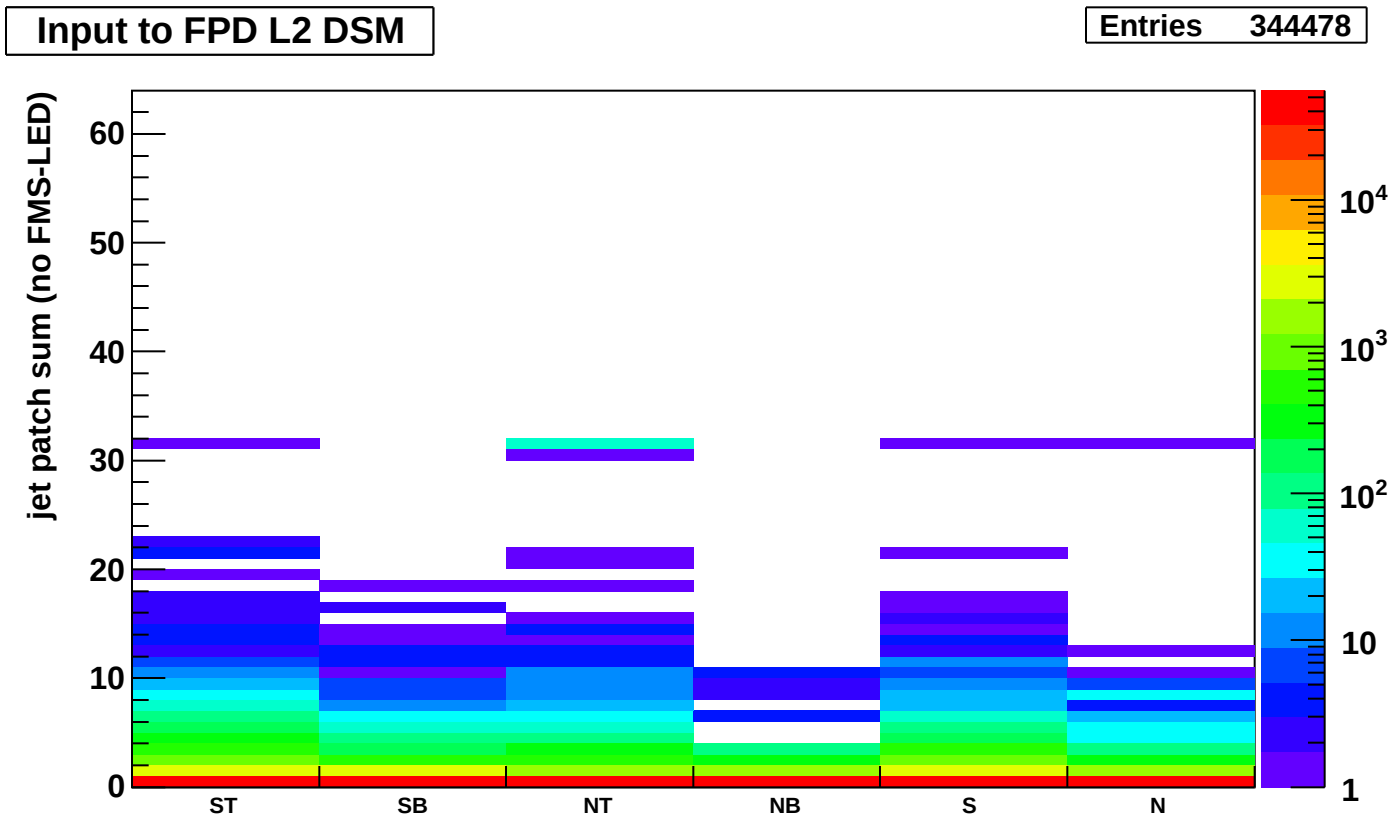

Input to FPD L2 DSM
Entries 44012
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

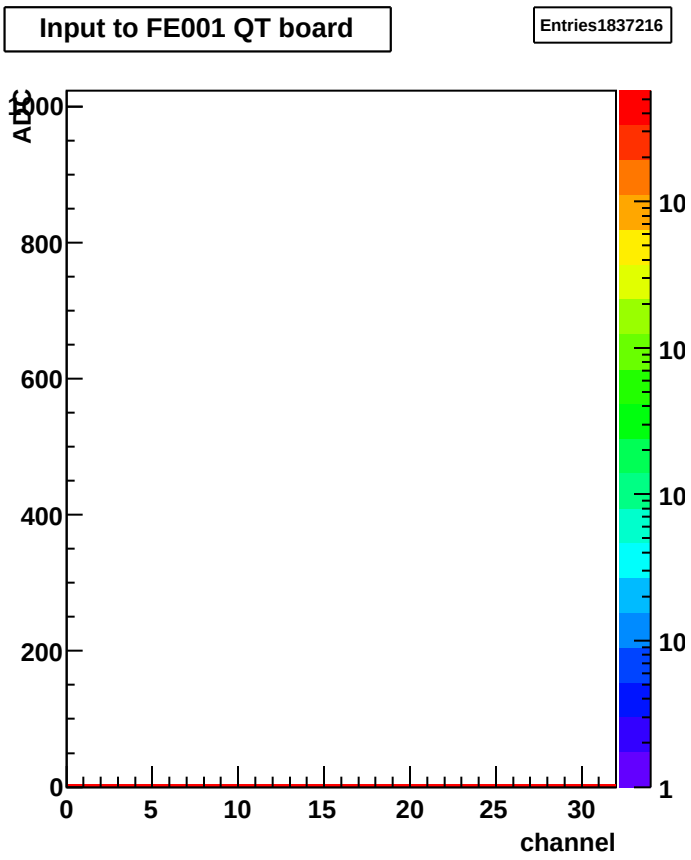

Input to FPD L2 DSM
Entries 172239
CL bits
1
9
1521
81
3
233
37
3
57099
57372
55880
SMALL
LARGE-S
LARGE-N

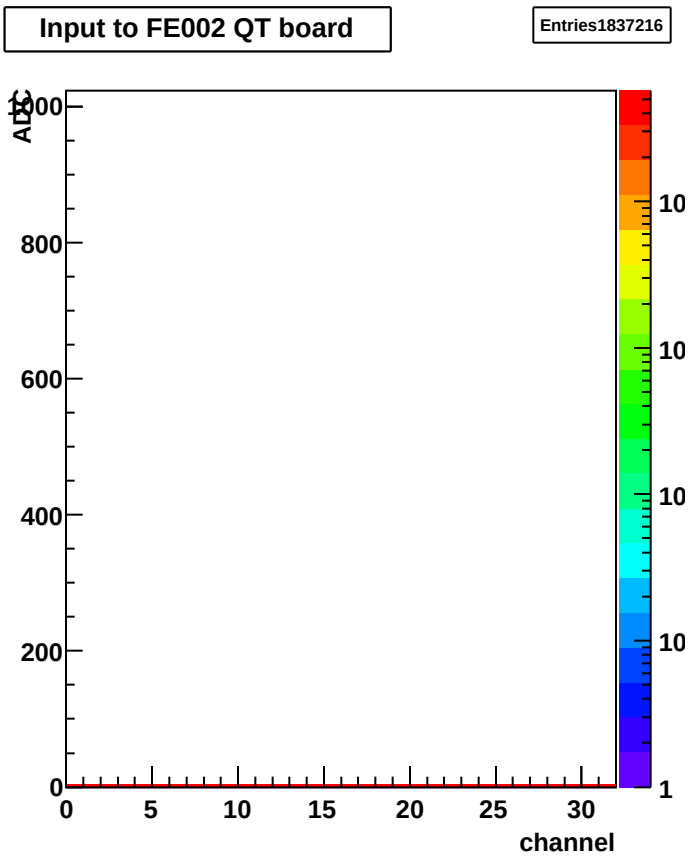

Input to FPD L2 DSM
Entries 2146
CL bits - simulated
1
9
1512
21
3
9
231
37
3
237
48
20
12
3
SMALL
LARGE-S
LARGE-N

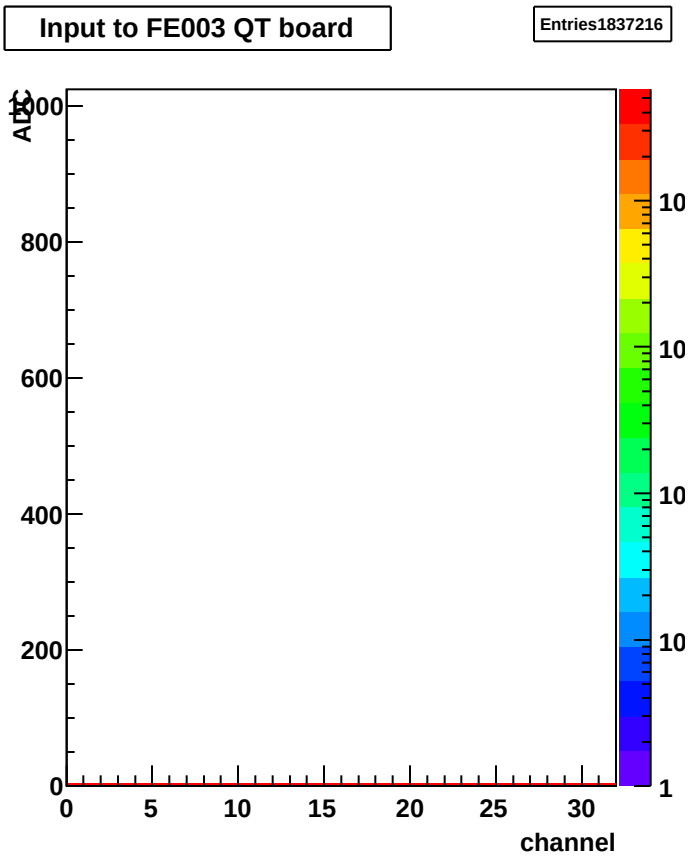

Input to FPD L2 DSM
Entries 172239
HT bits
238
7
14
539
85
1753
48
480
54883
57358
56834
SMALL
LARGE-S
LARGE-N

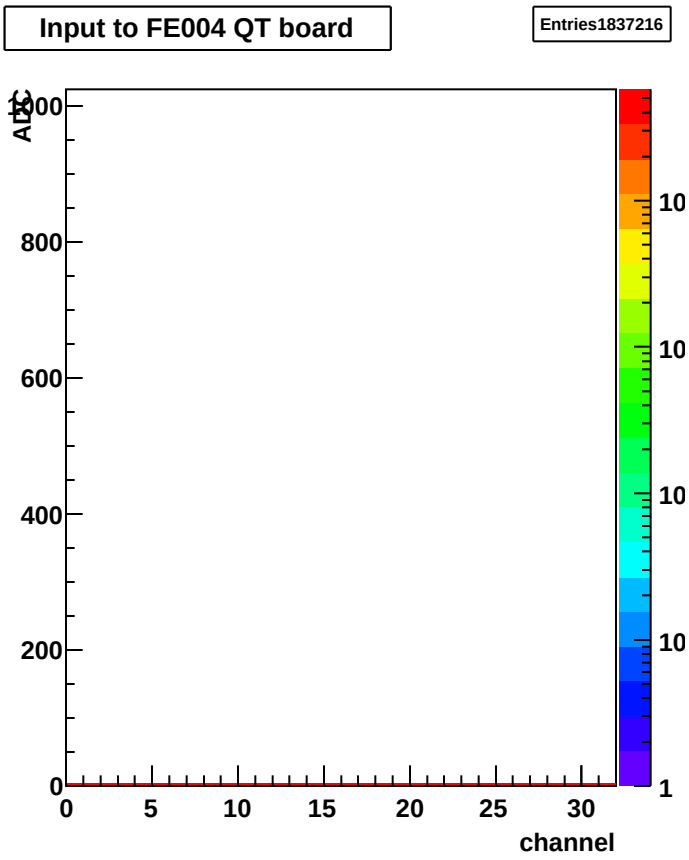

Input to FPD L2 DSM
Entries 5203
HT bits - simulated
213
7
14
484
84
1575
48
477
1533
54
27
482
1
192
9
3
SMALL
LARGE-S
LARGE-N

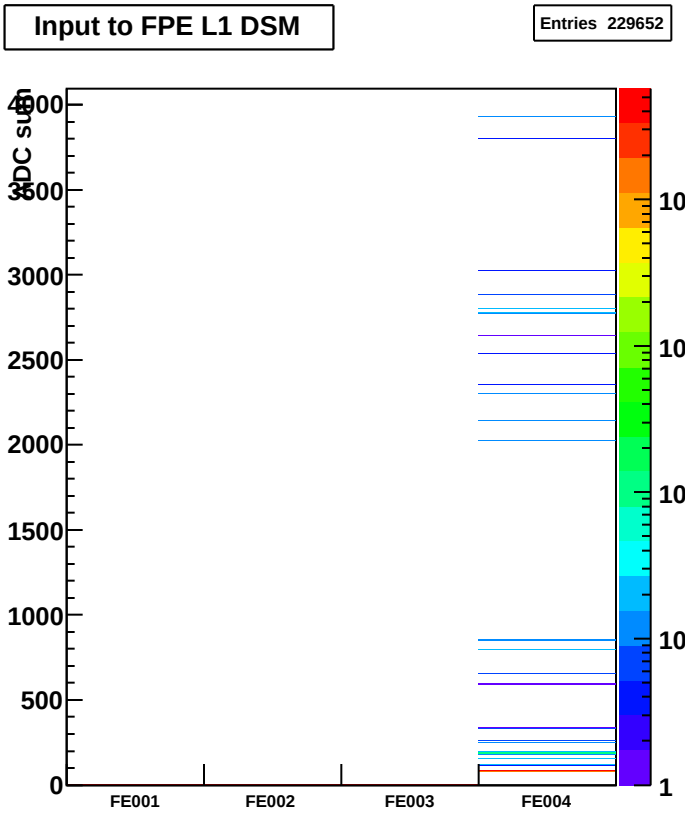

Input to FPD L2 DSM
Entries 344478
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

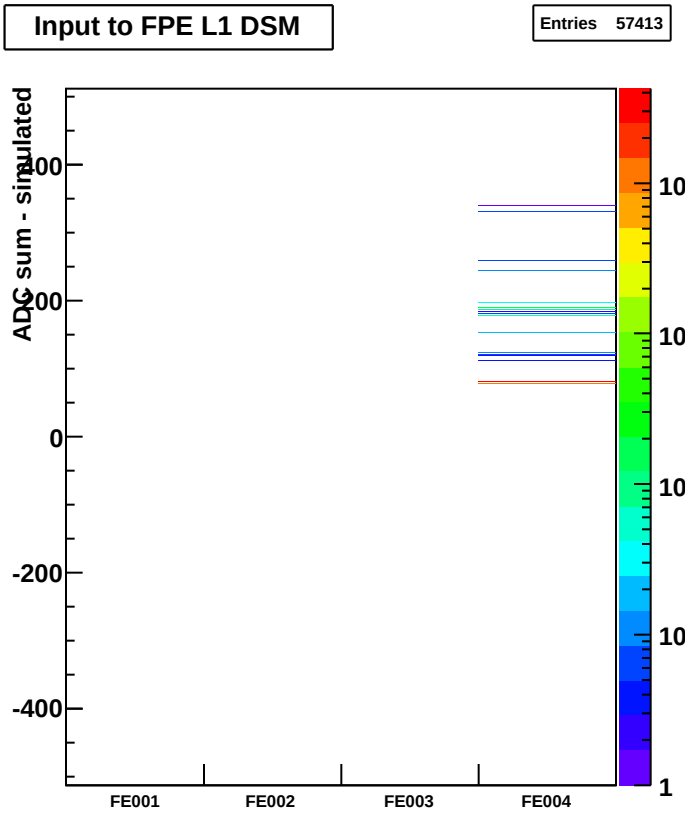

Input to FE001 QT board
Entries1837216
ADC
channel

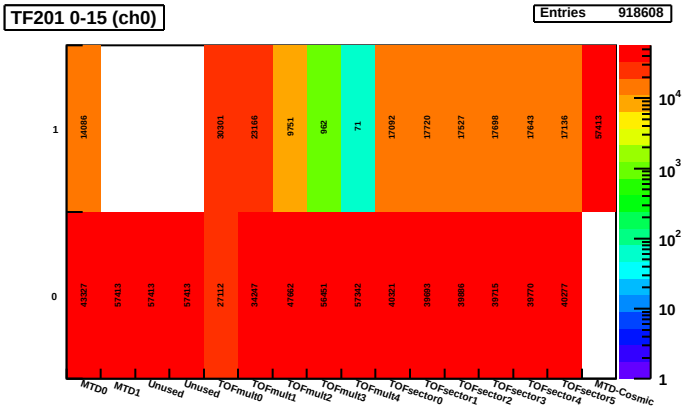

Input to FE002 QT board
Entries1837216
ADC
channel

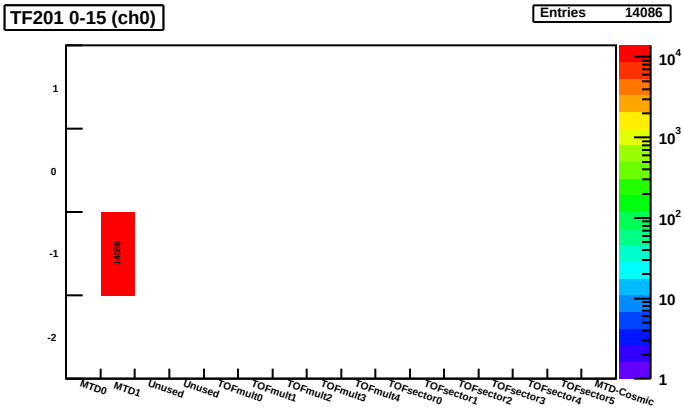

Input to FE003 QT board
Entries1837216
ADC
channel

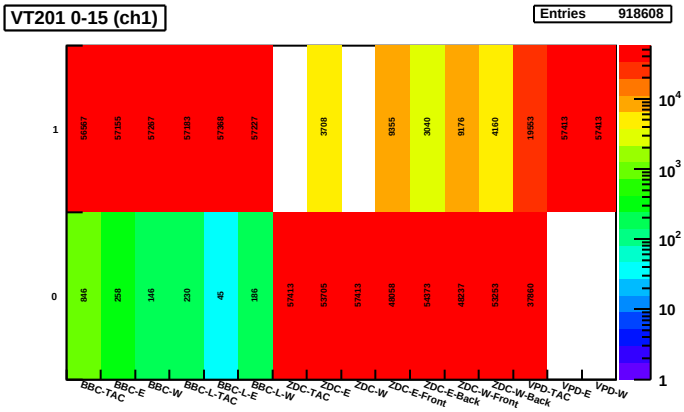

Input to FE004 QT board
Entries1837216
ADC
channel

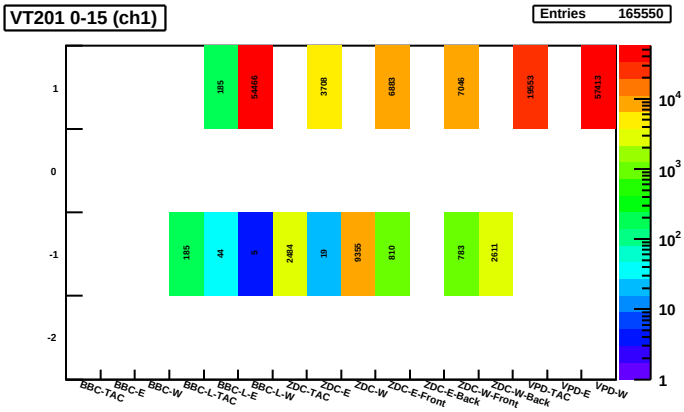

Input to FPE L1 DSM
Entries 229652
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


Input to FPE L1 DSM
Entries 57413
ADC sum - simulated
200
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1


TF201 0-15 (ch0)
Entries 918608
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 14086
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 918608
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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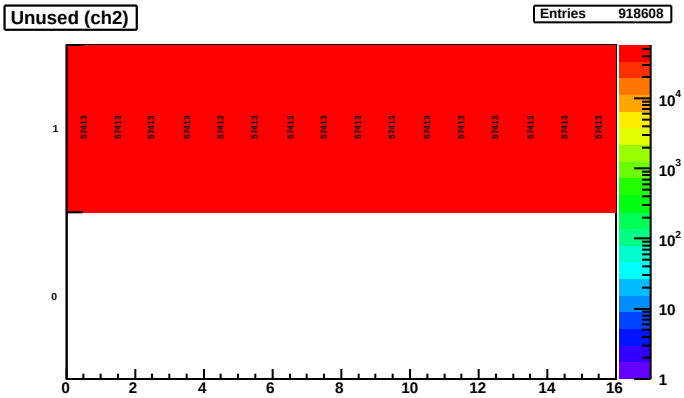
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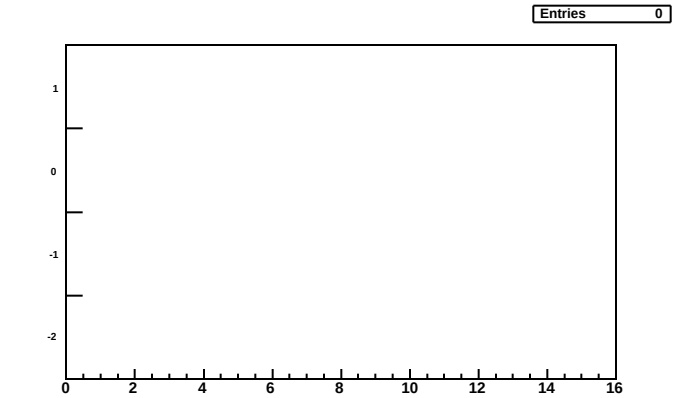
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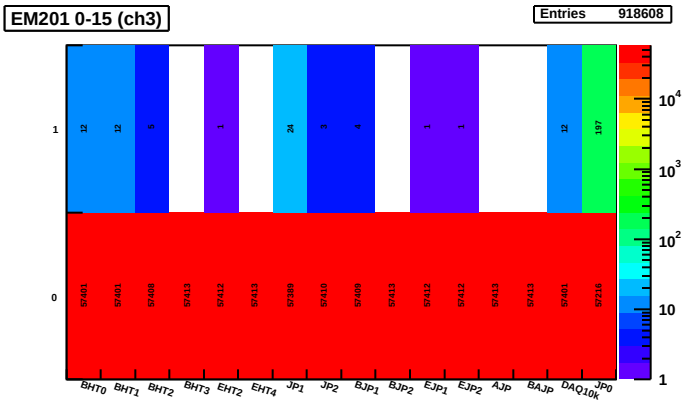
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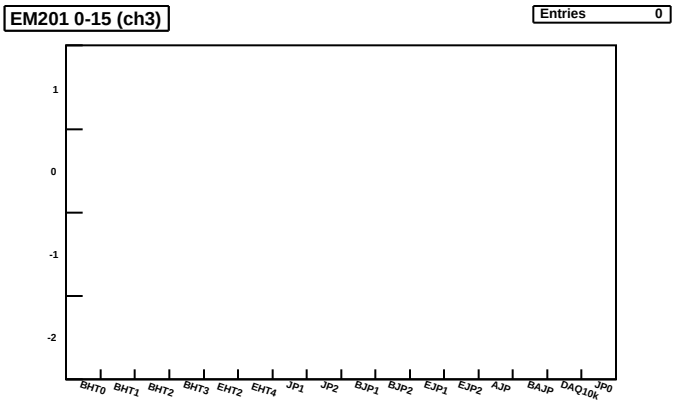
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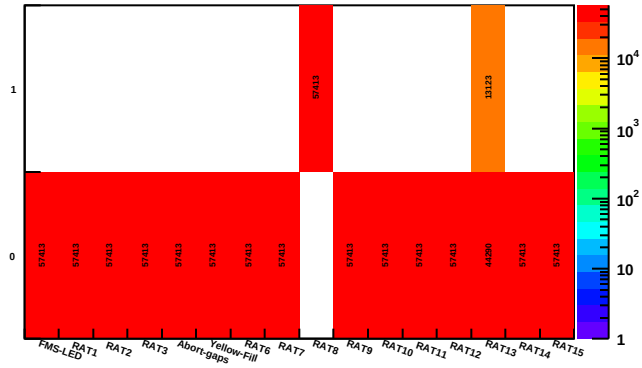
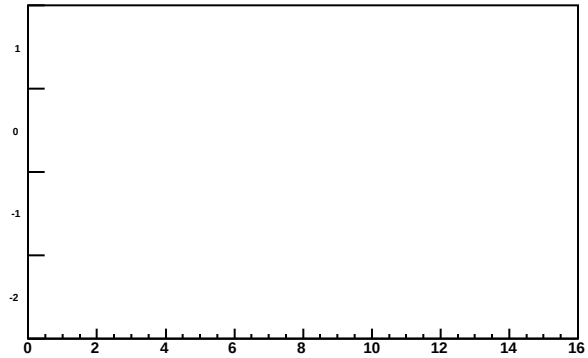
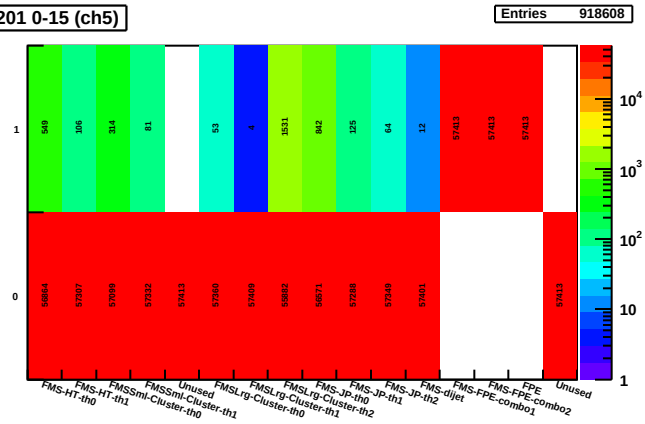
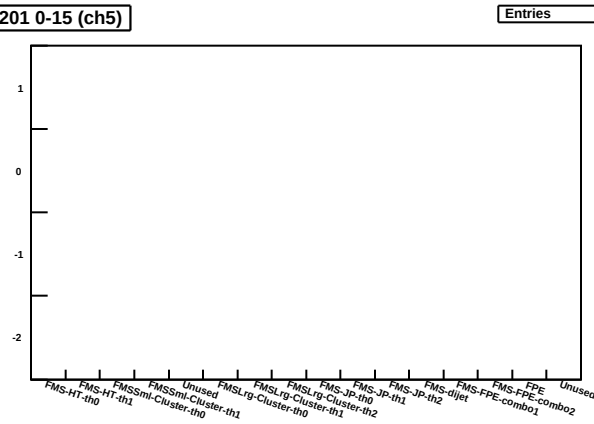
RAT board (ch4)



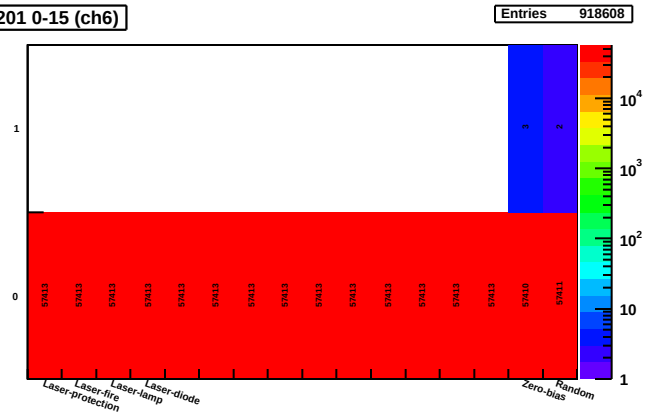


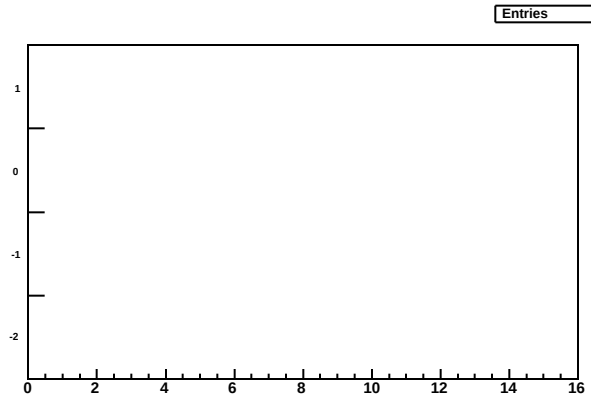
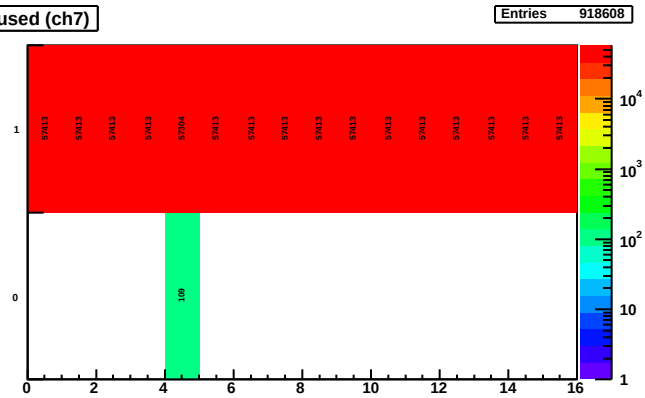
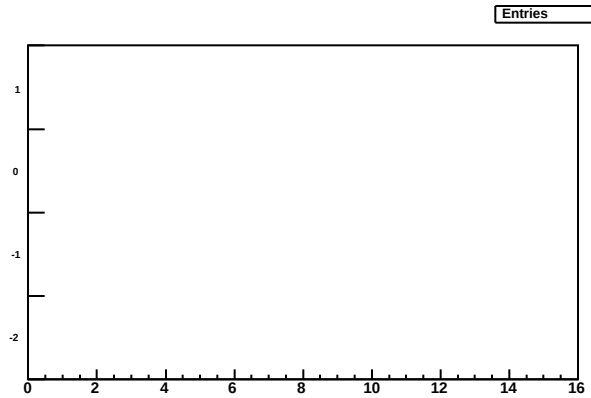
FP201 0-15 (ch5)





ST201 0-15 (ch6)





Unused (ch7)