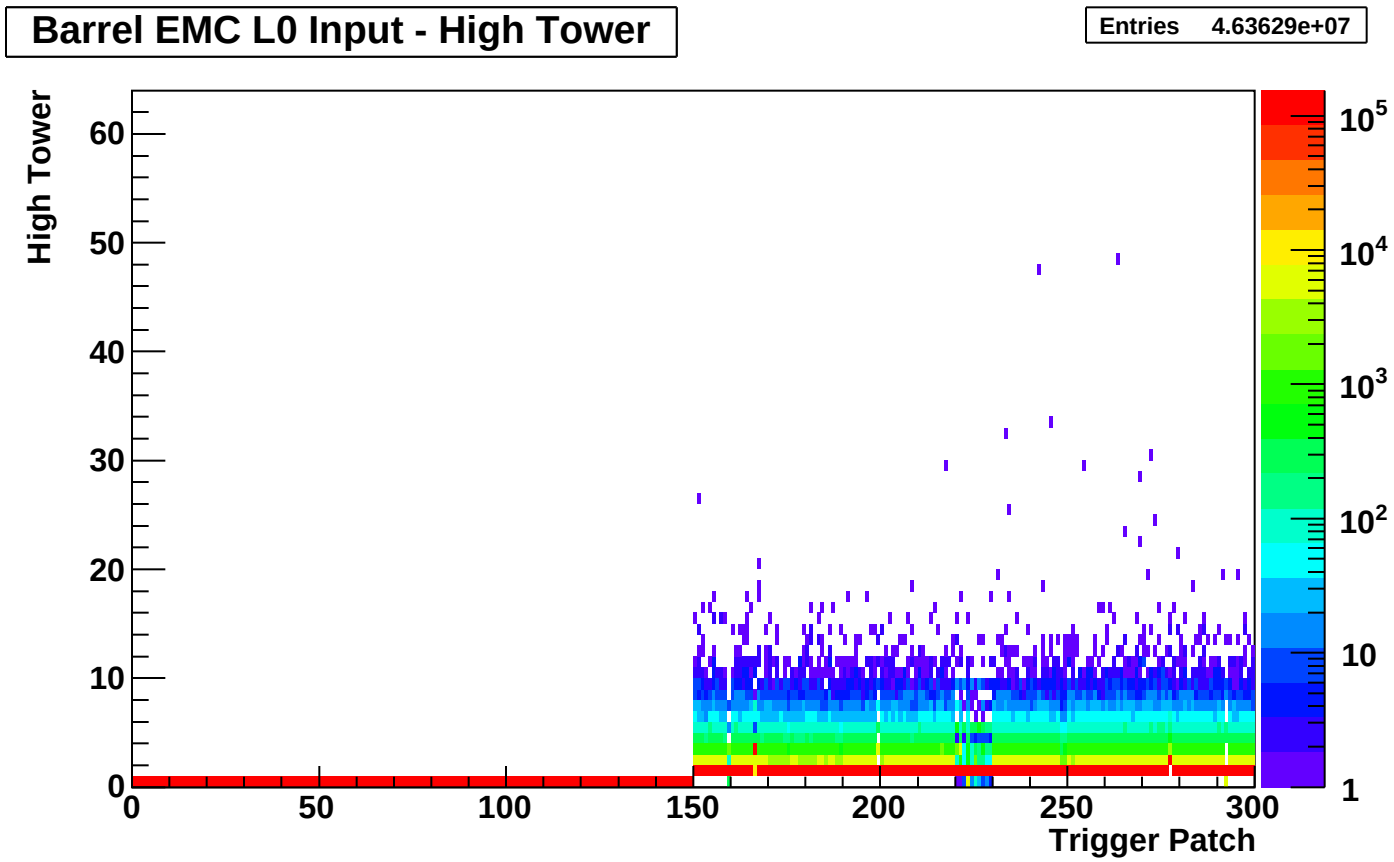
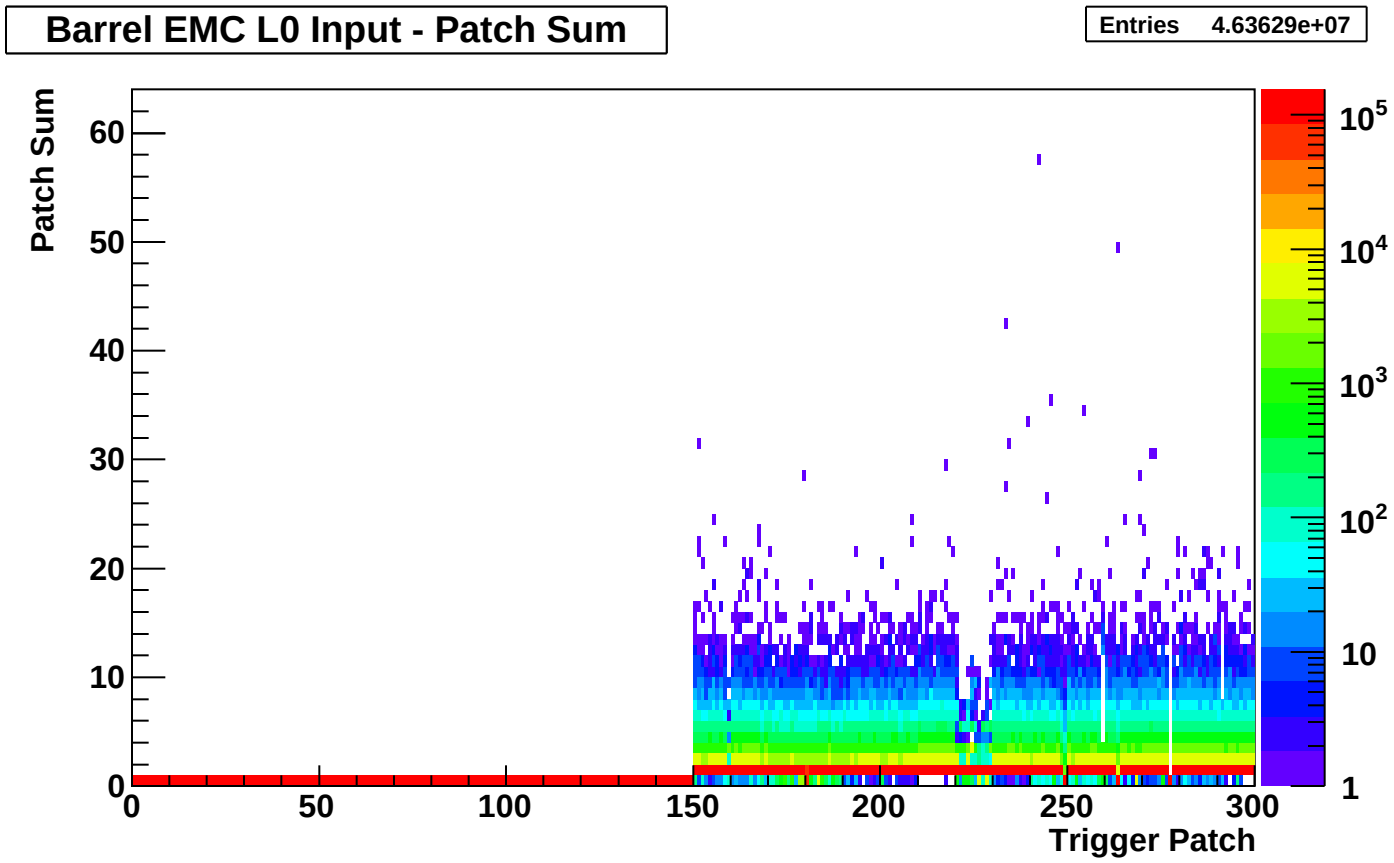
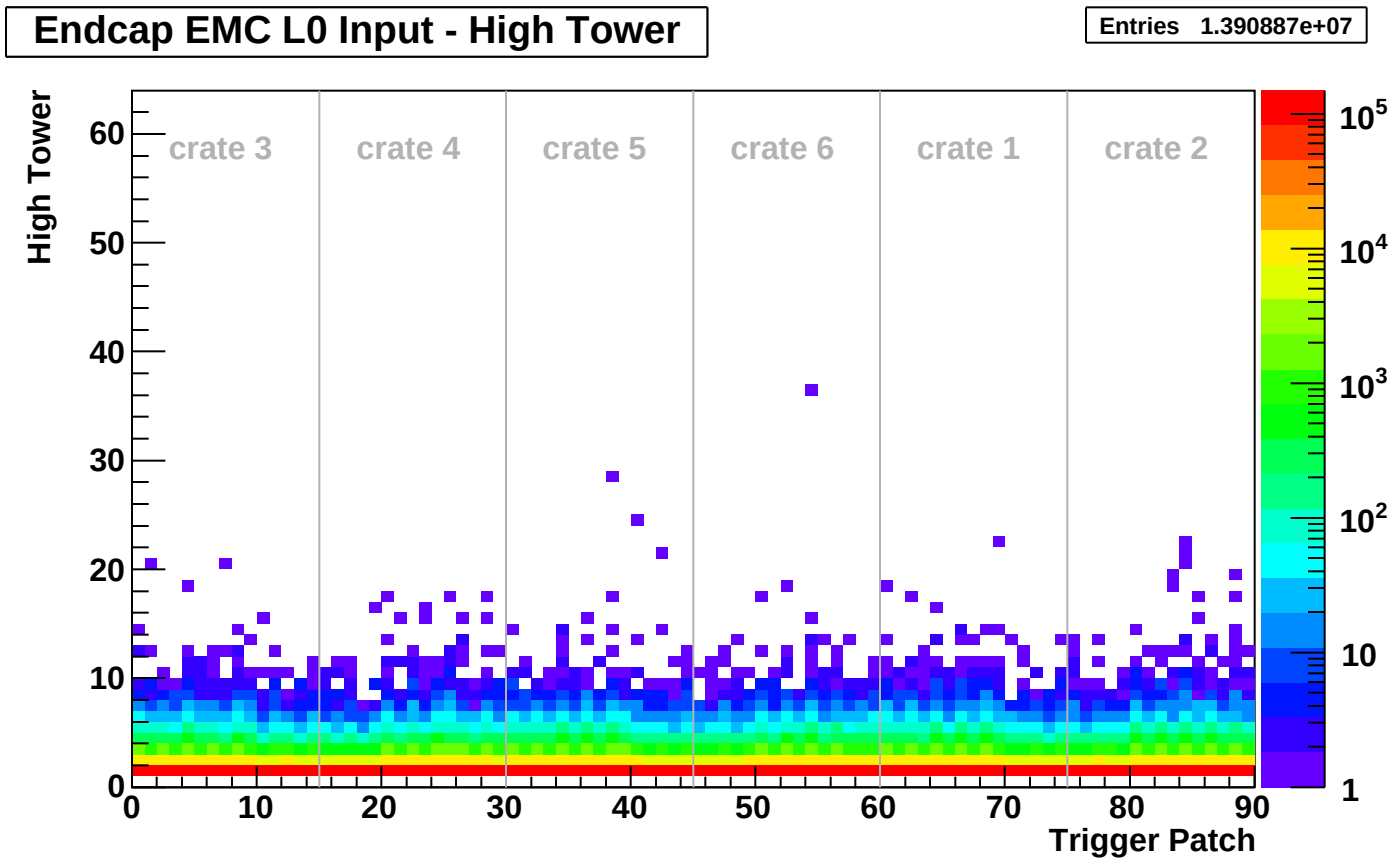
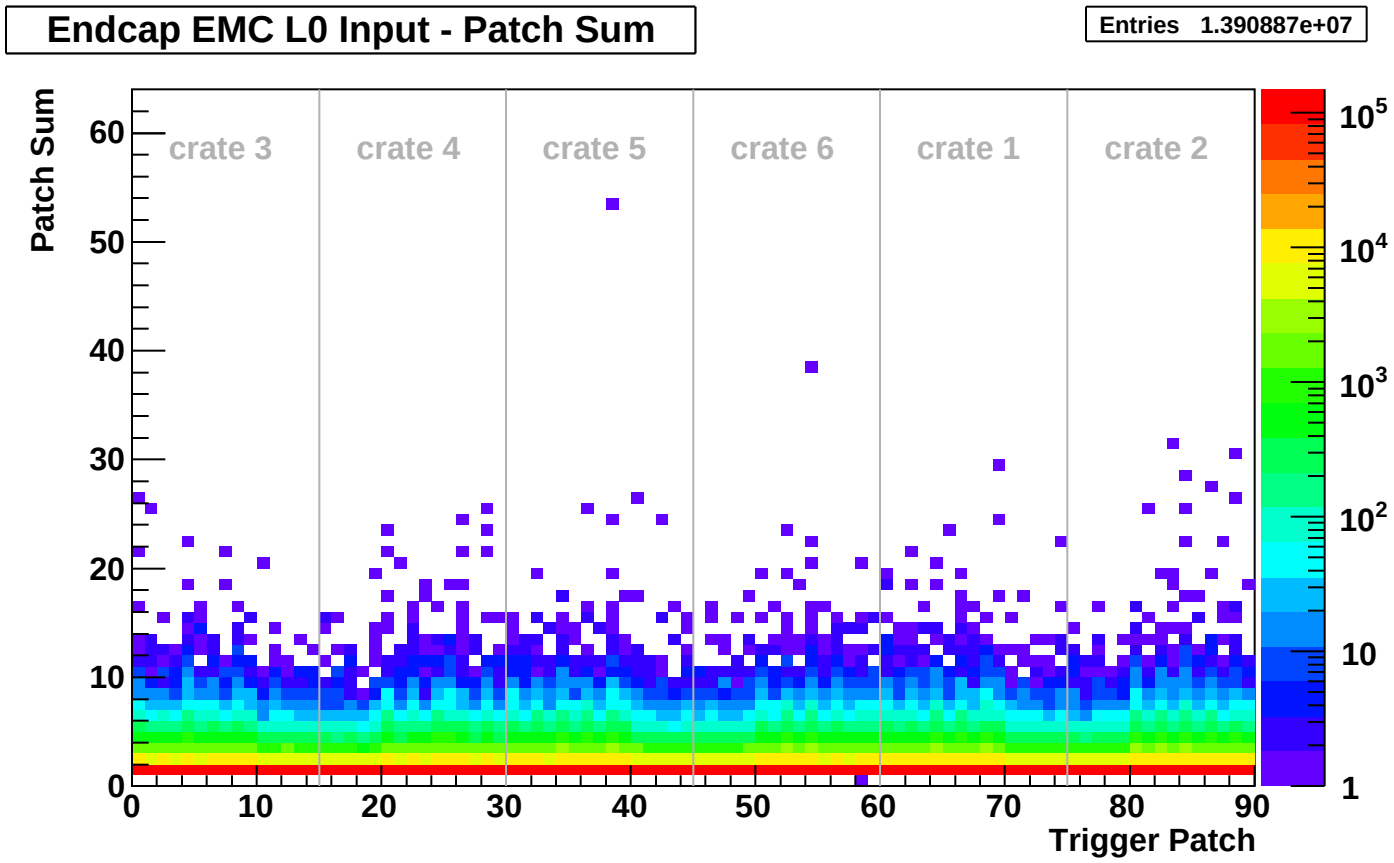
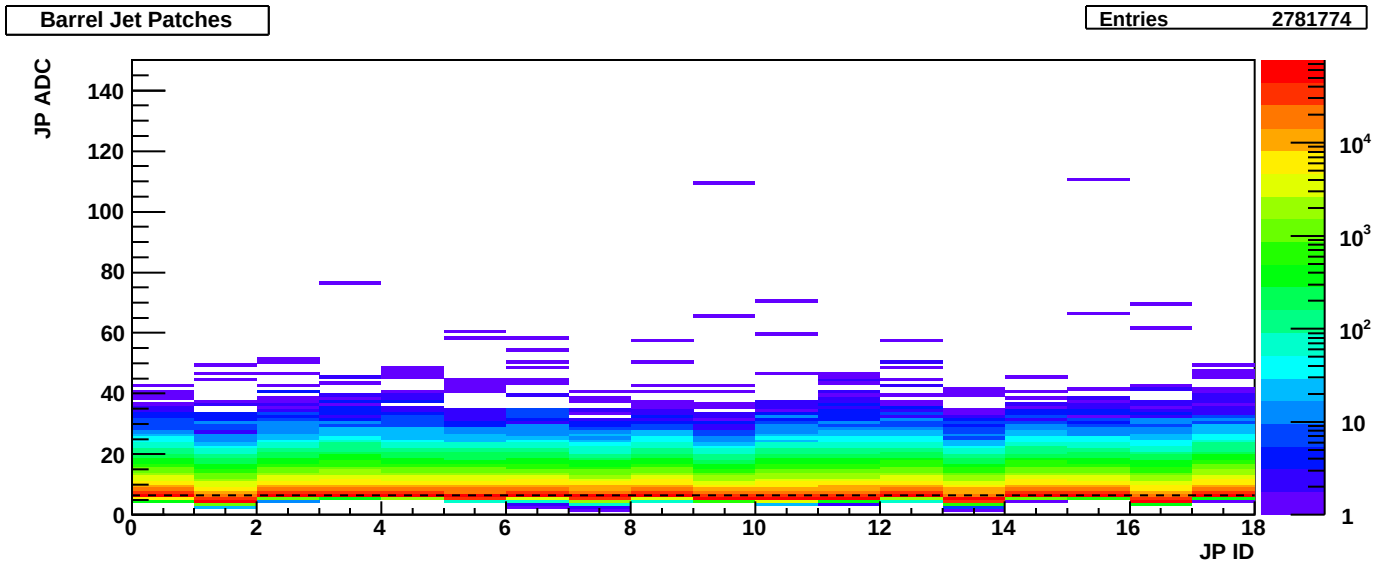
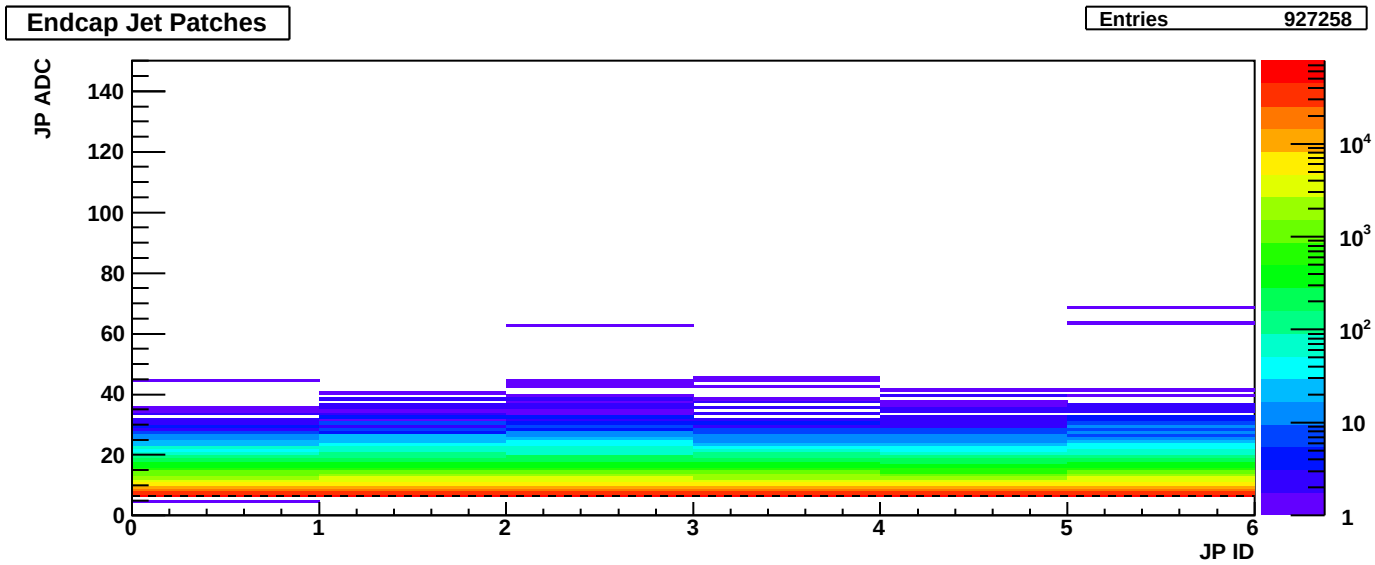

Barrel EMC L0 Input - High Tower
Entries 4.63629e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

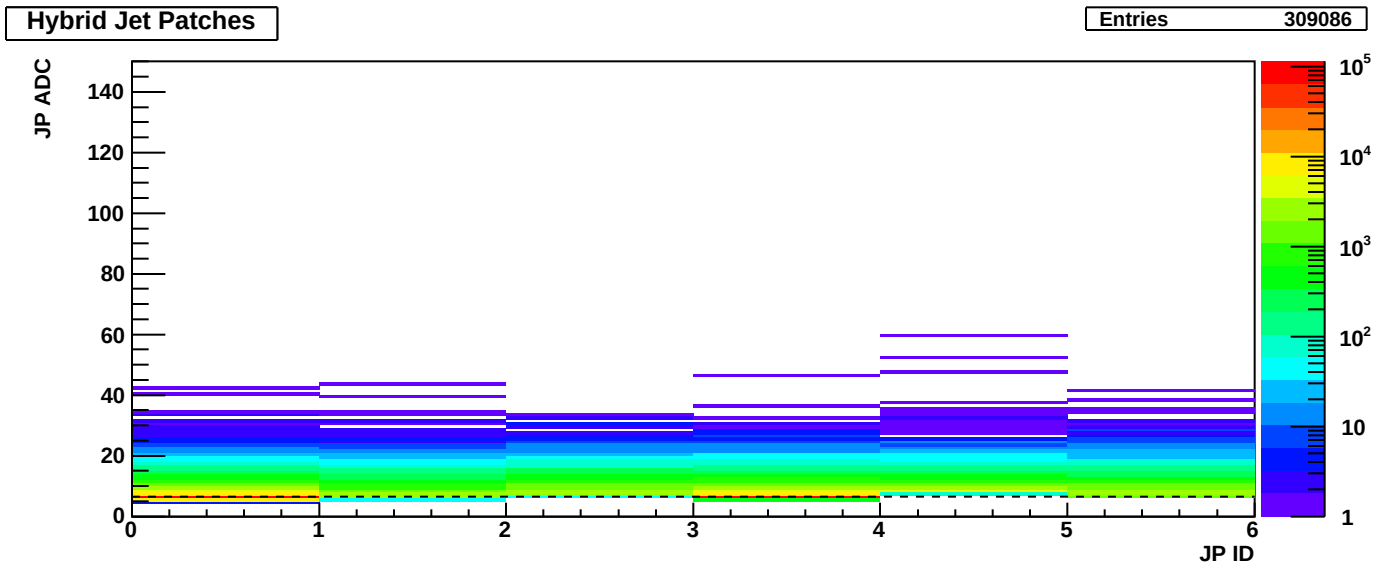

Barrel EMC L0 Input - Patch Sum
Entries 4.63629e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

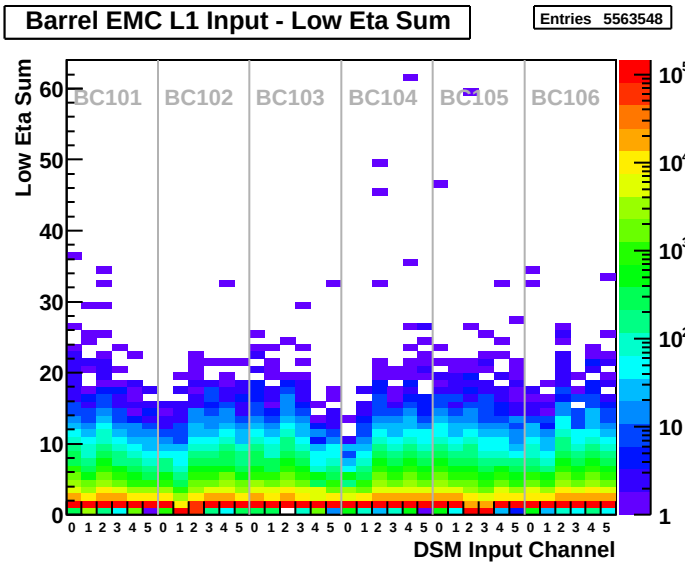

Endcap EMC L0 Input - High Tower
Entries 1.390887e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

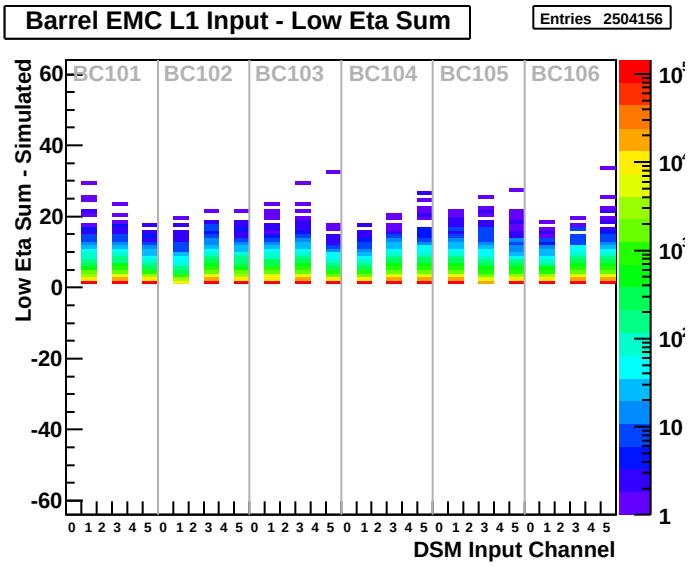

Endcap EMC L0 Input - Patch Sum
Entries 1.390887e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

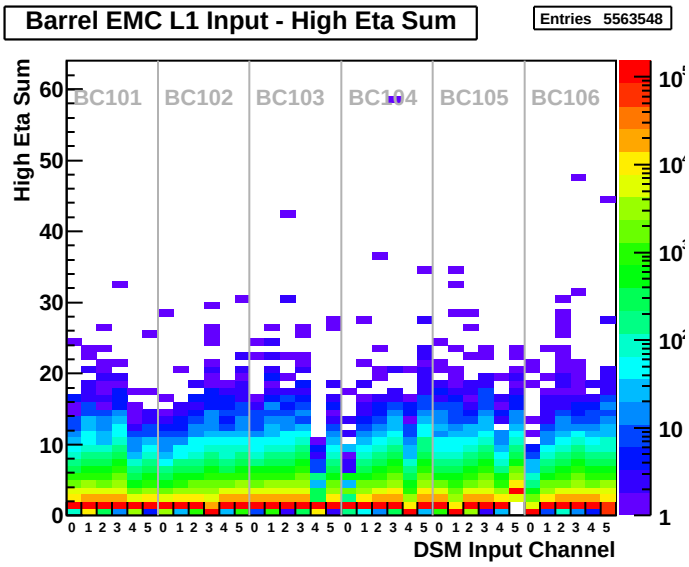

Barrel Jet Patches
Entries 2781774
JP ADC
JP ID

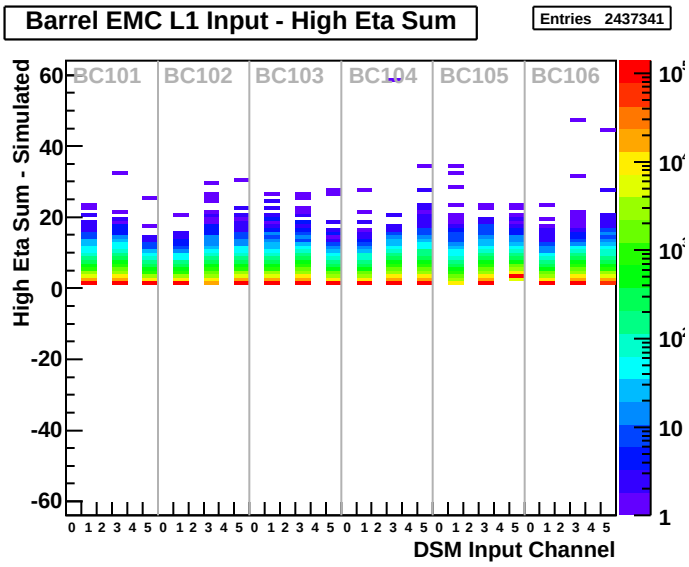

Endcap Jet Patches
Entries 927258
JP ADC
JP ID

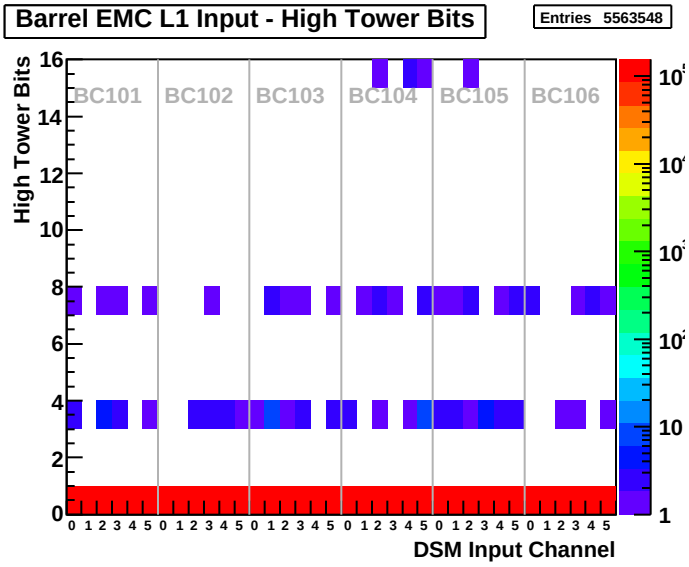

Hybrid Jet Patches
Entries 309086
JP ADC
JP ID

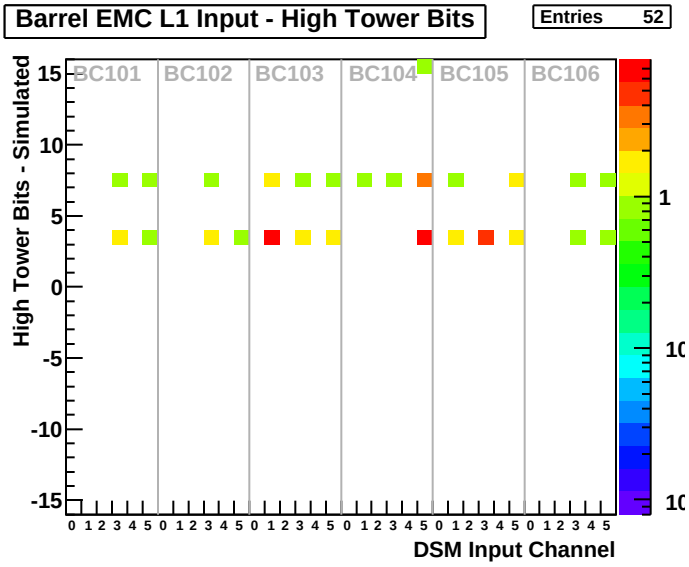

Barrel EMC L1 Input - Low Eta Sum
Entries 5563548
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

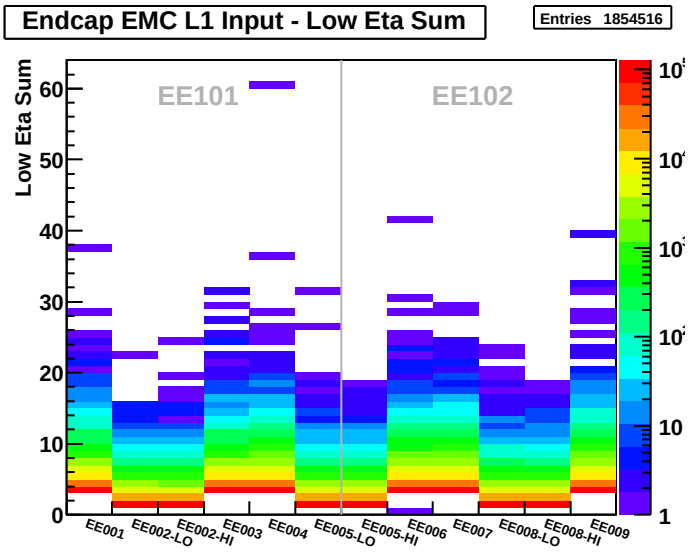

Barrel EMC L1 Input - Low Eta Sum
Entries 2504156
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

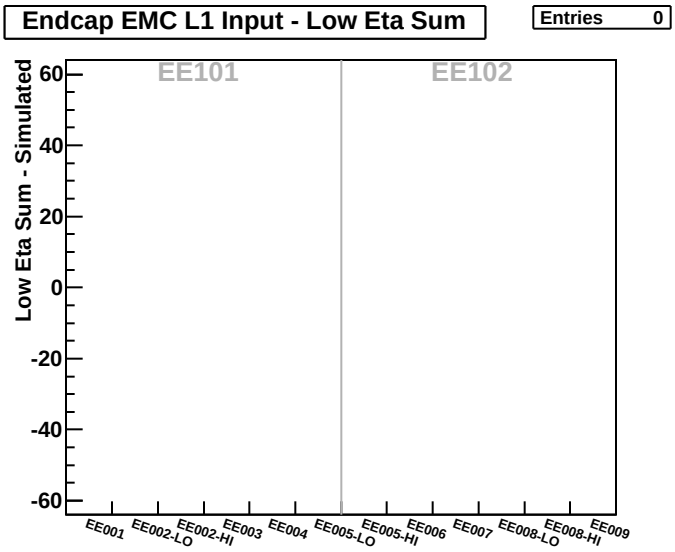

Barrel EMC L1 Input - High Eta Sum
Entries 5563548
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

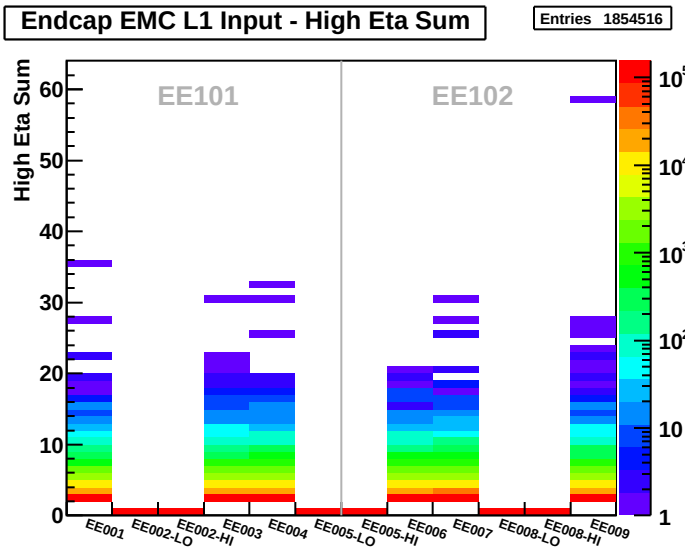

Barrel EMC L1 Input - High Eta Sum
Entries 2437341
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

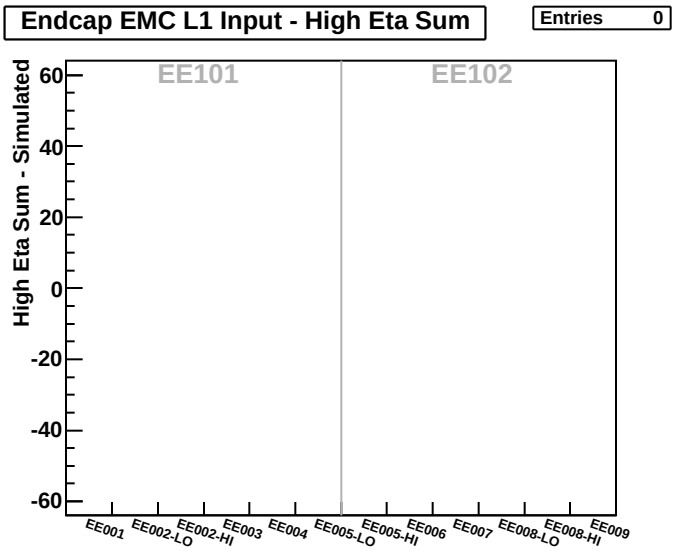

Barrel EMC L1 Input - High Tower Bits
Entries 5563548
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

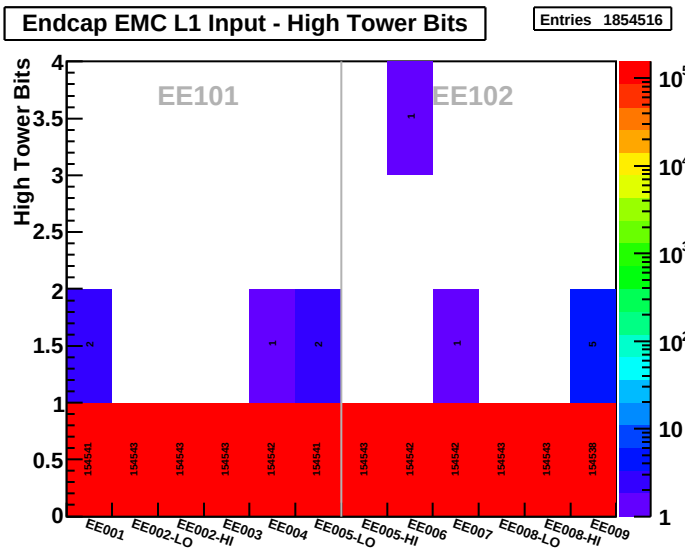

Barrel EMC L1 Input - High Tower Bits
Entries 52
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

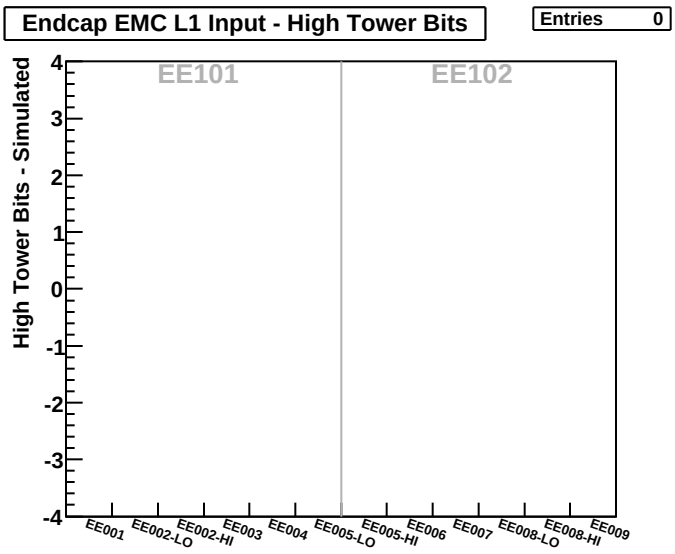

Endcap EMC L1 Input - Low Eta Sum
Entries 1854516
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

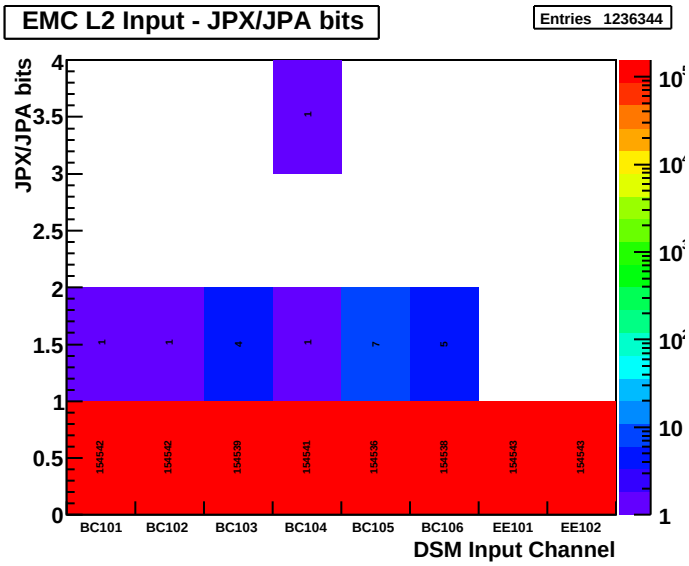

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

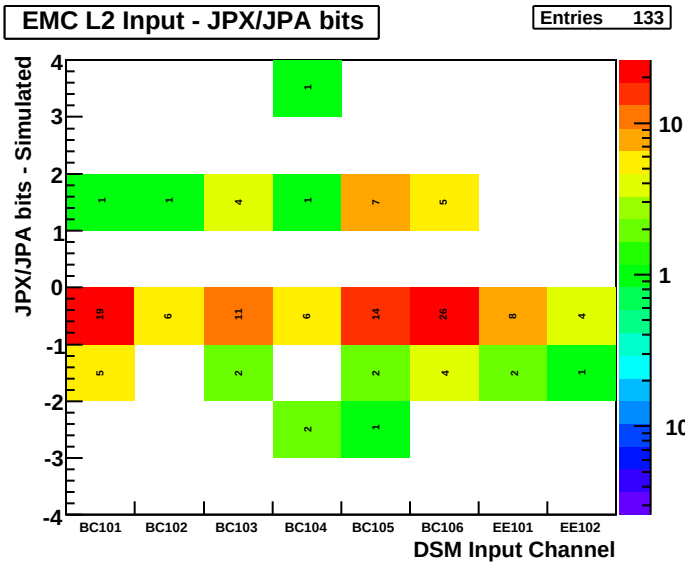

Endcap EMC L1 Input - High Eta Sum
Entries 1854516
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

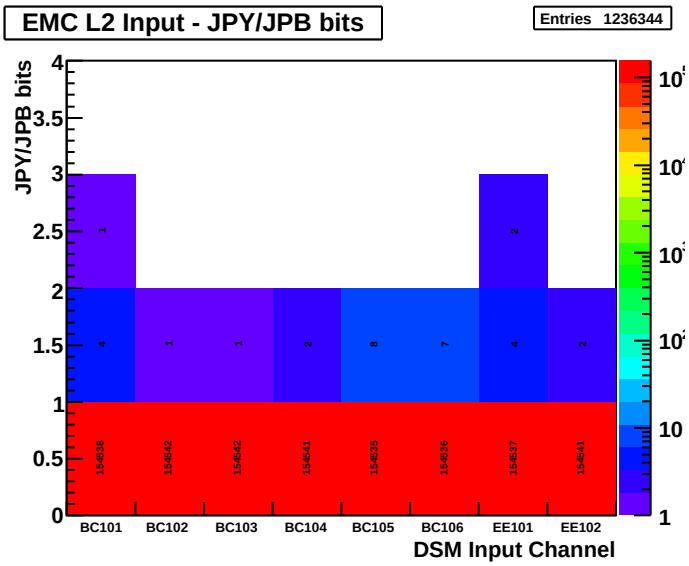

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

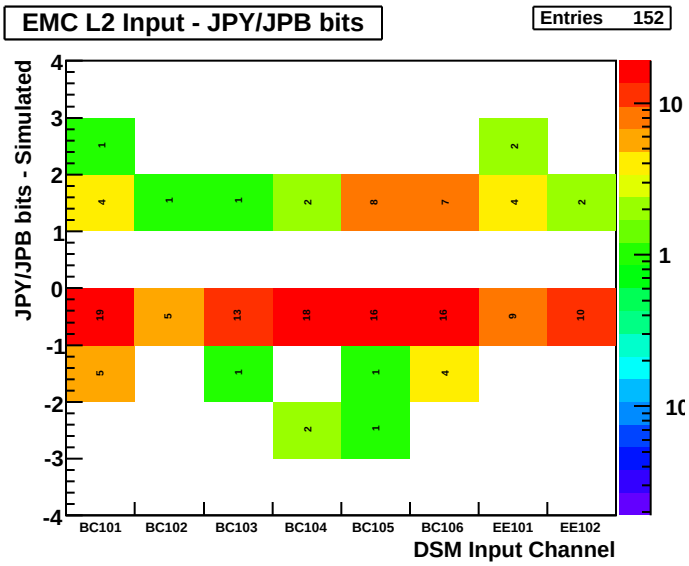

Endcap EMC L1 Input - High Tower Bits
Entries 1854516
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

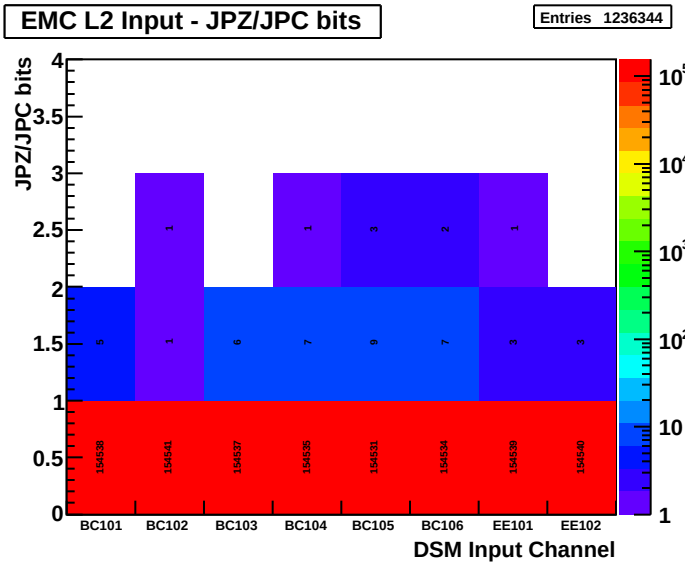

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

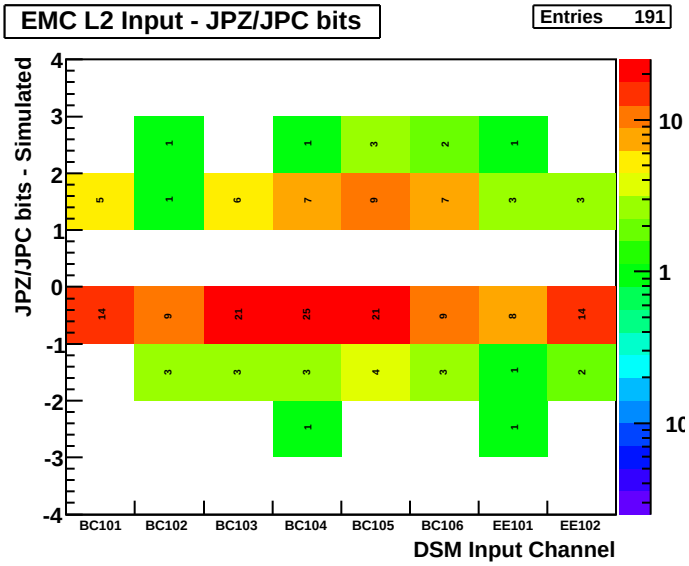

EMC L2 Input - JPX/JPA bits
Entries 1236344
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

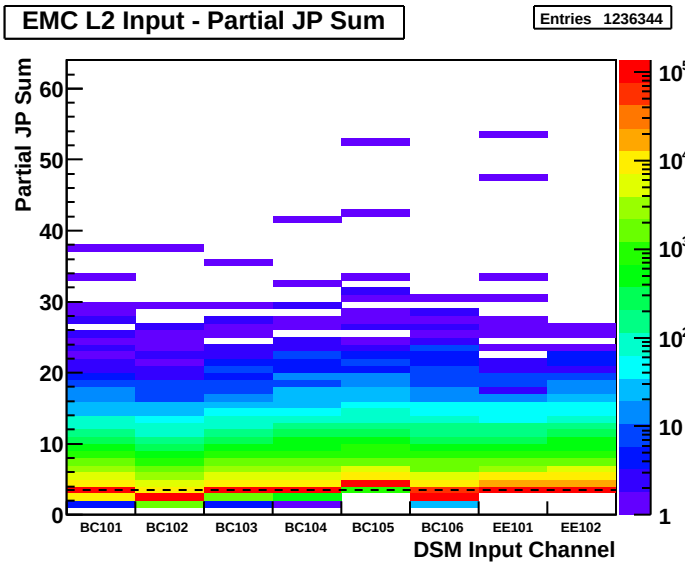

EMC L2 Input - JPX/JPA bits
Entries 133
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

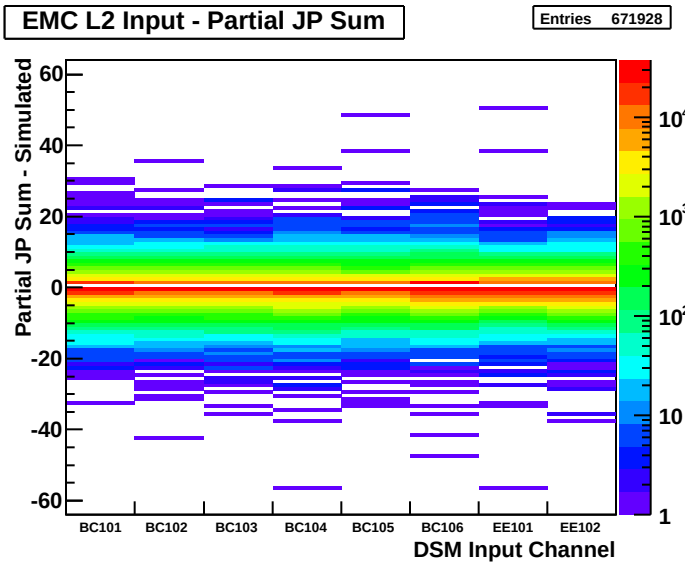

EMC L2 Input - JPY/JPB bits
Entries 1236344
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

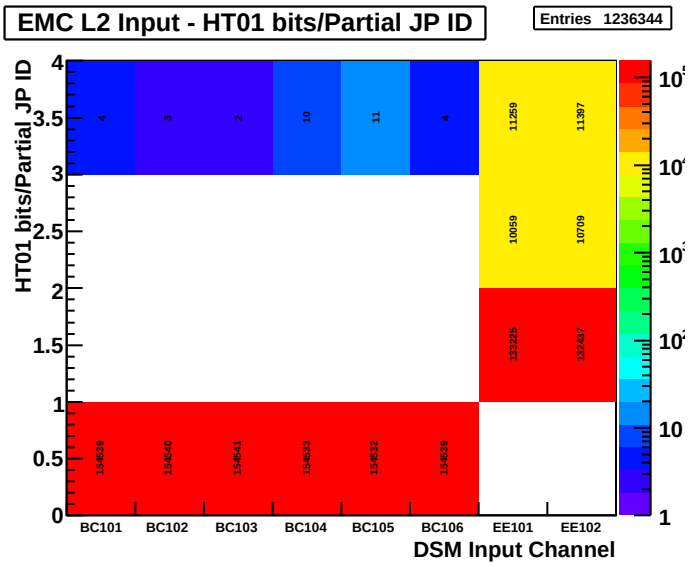

EMC L2 Input - JPY/JPB bits
Entries 152
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

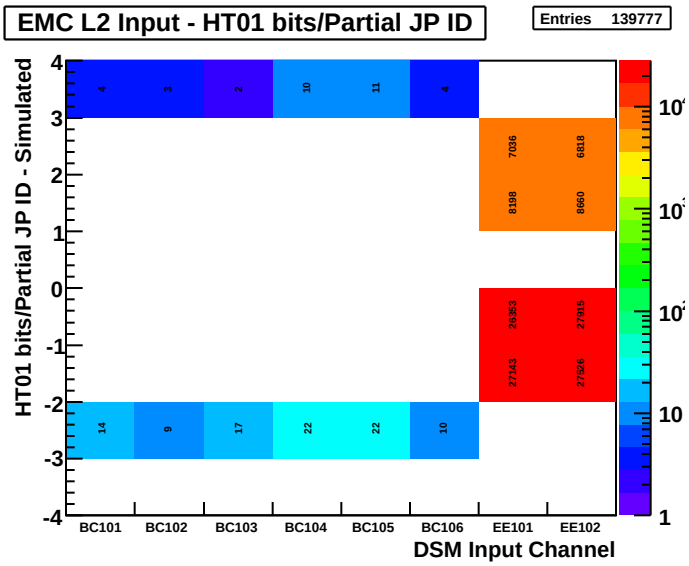

EMC L2 Input - JPZ/JPC bits
Entries 1236344
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

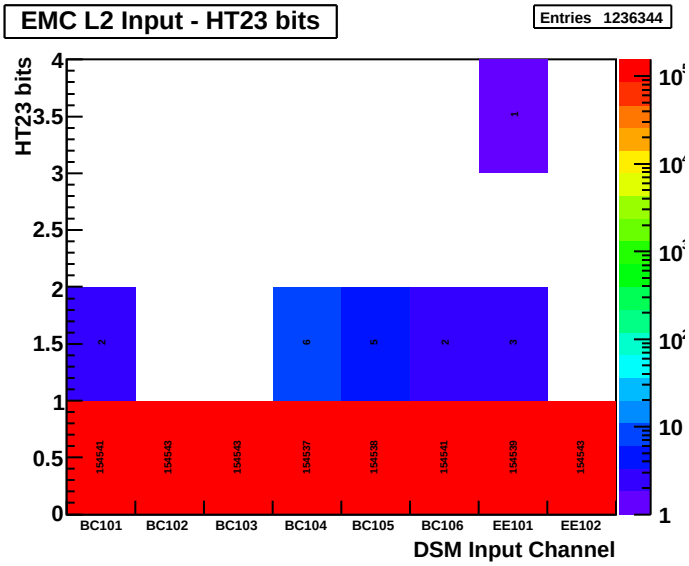

EMC L2 Input - JPZ/JPC bits
Entries 191
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

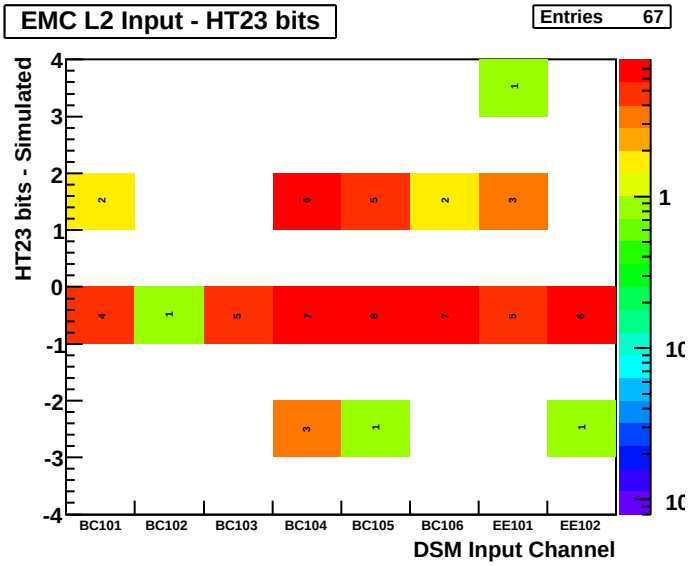

EMC L2 Input - Partial JP Sum
Entries 1236344
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

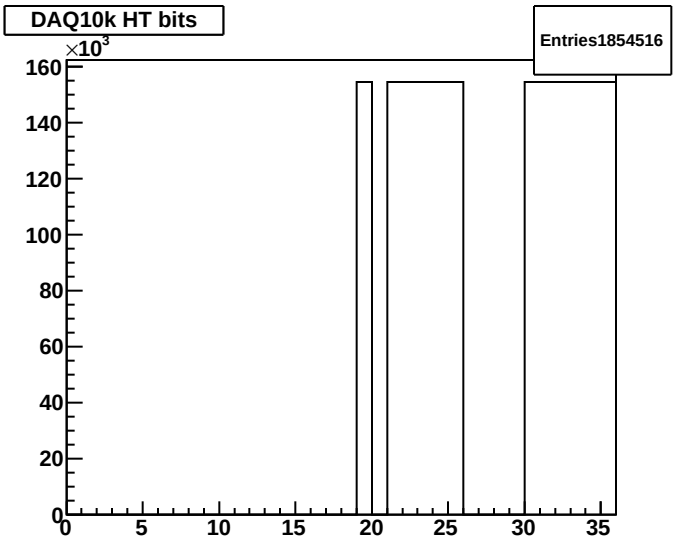

EMC L2 Input - Partial JP Sum
Entries 671928
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

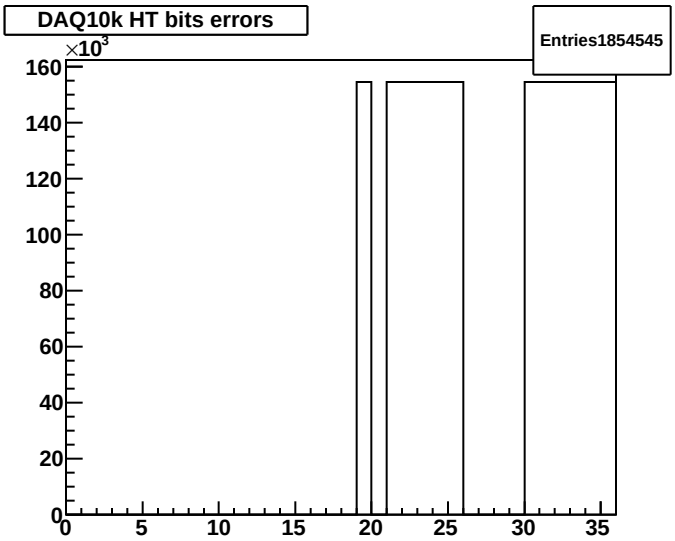

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1236344
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

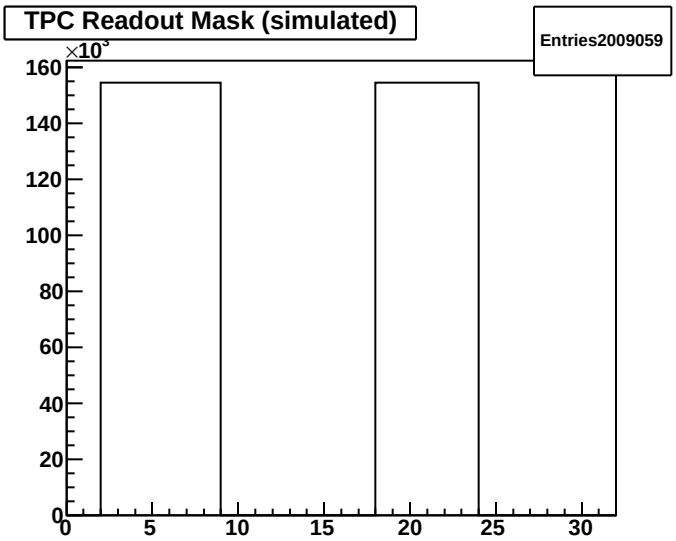

EMC L2 Input - HT01 bits/Partial JP ID
Entries 139777
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

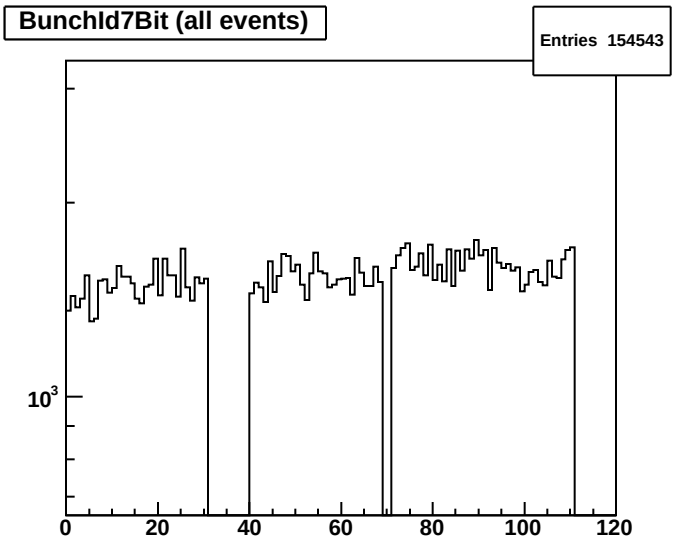

EMC L2 Input - HT23 bits
Entries 1236344
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

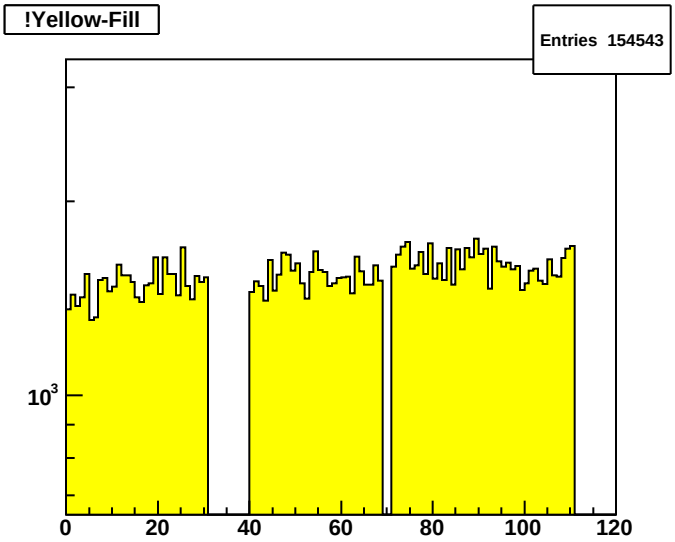

EMC L2 Input - HT23 bits
Entries 67
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

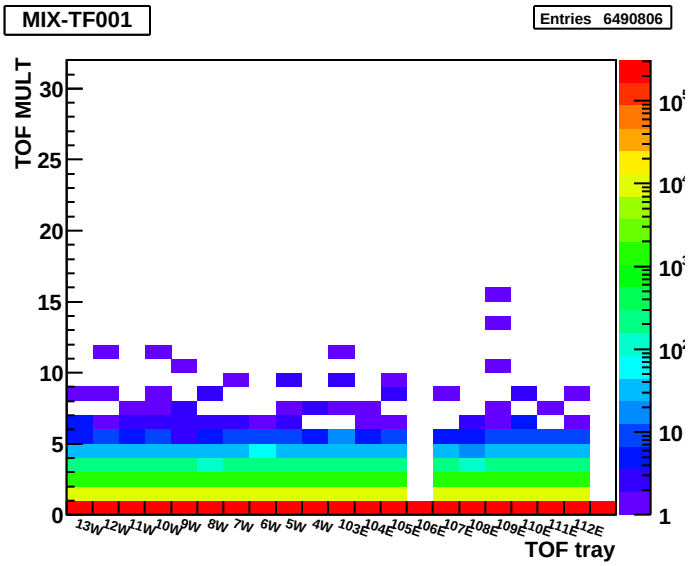

DAQ10k HT bits
Entries1854516
×10^3
160
140
120
100
80
60
40
20
0
0
5
10
15
20
25
30
35

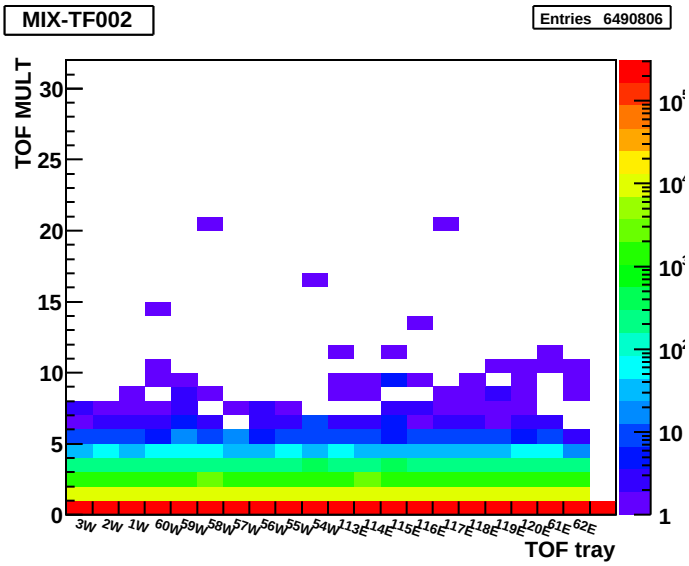

DAQ10k HT bits errors
Entries1854545
×10^3
160
140
120
100
80
60
40
20
0
0
5
10
15
20
25
30
35

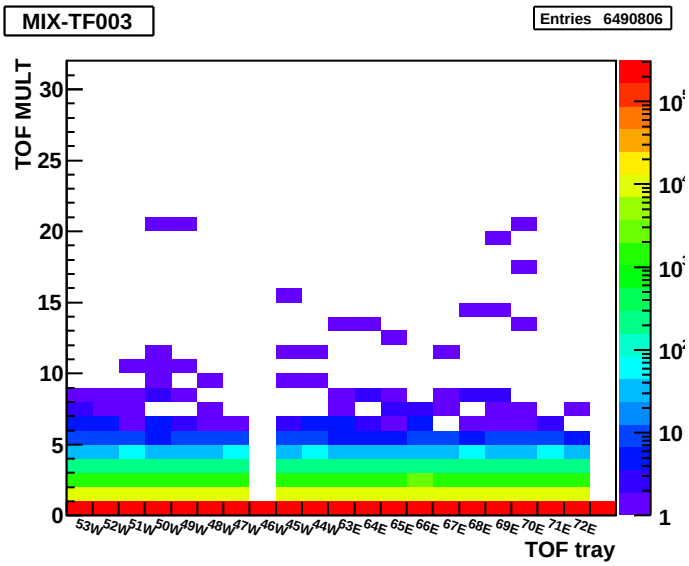

TPC Readout Mask (simulated)
Entries2009059
×10^3
160
140
120
100
80
60
40
20
0
0
5
10
15
20
25
30

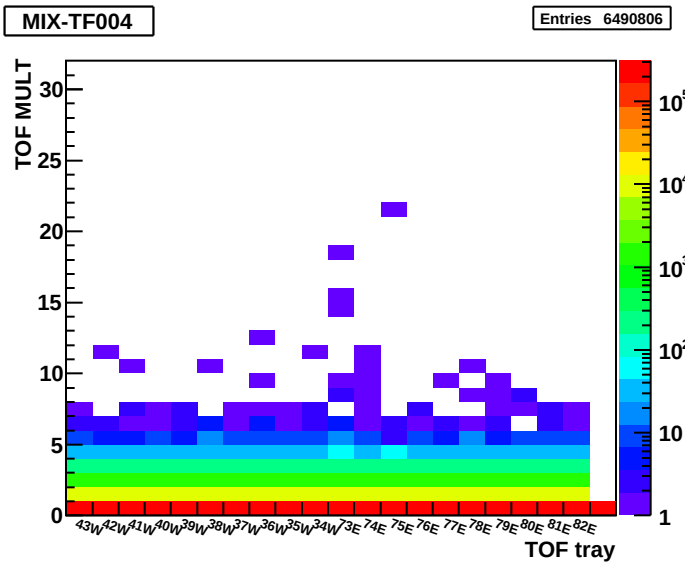

BunchId7Bit (all events)
Entries 154543
10^3
0
20
40
60
80
100
120

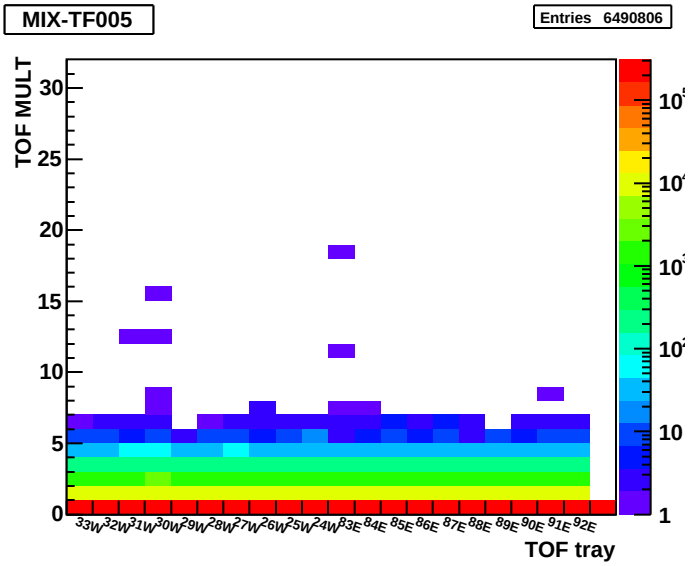

!Yellow-Fill
Entries 154543
10^3
0
20
40
60
80
100
120

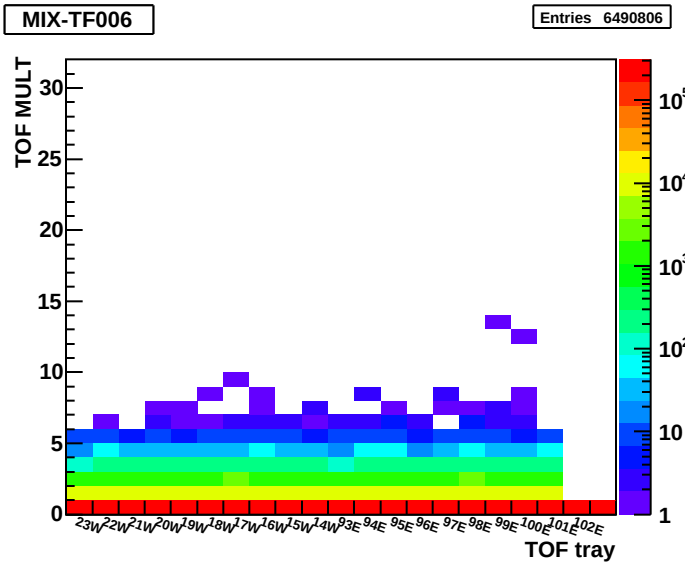

MIX-TF001
Entries 6490806
TOF MULT
TOF tray

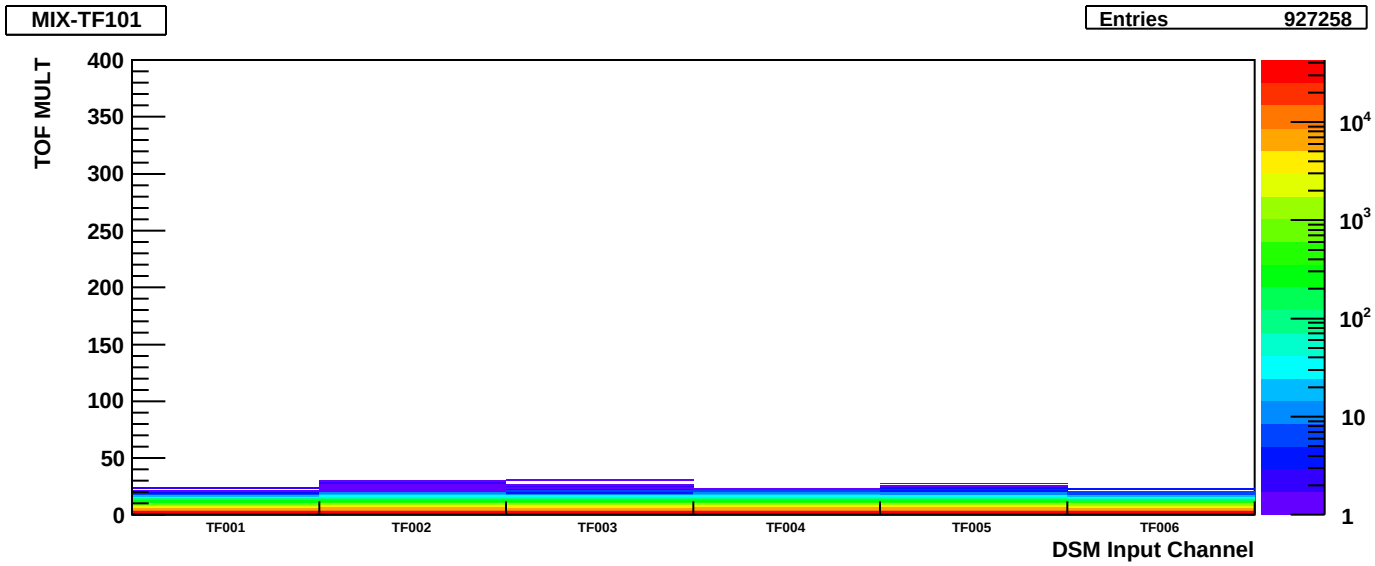

MIX-TF002
Entries 6490806
TOF MULT
TOF tray

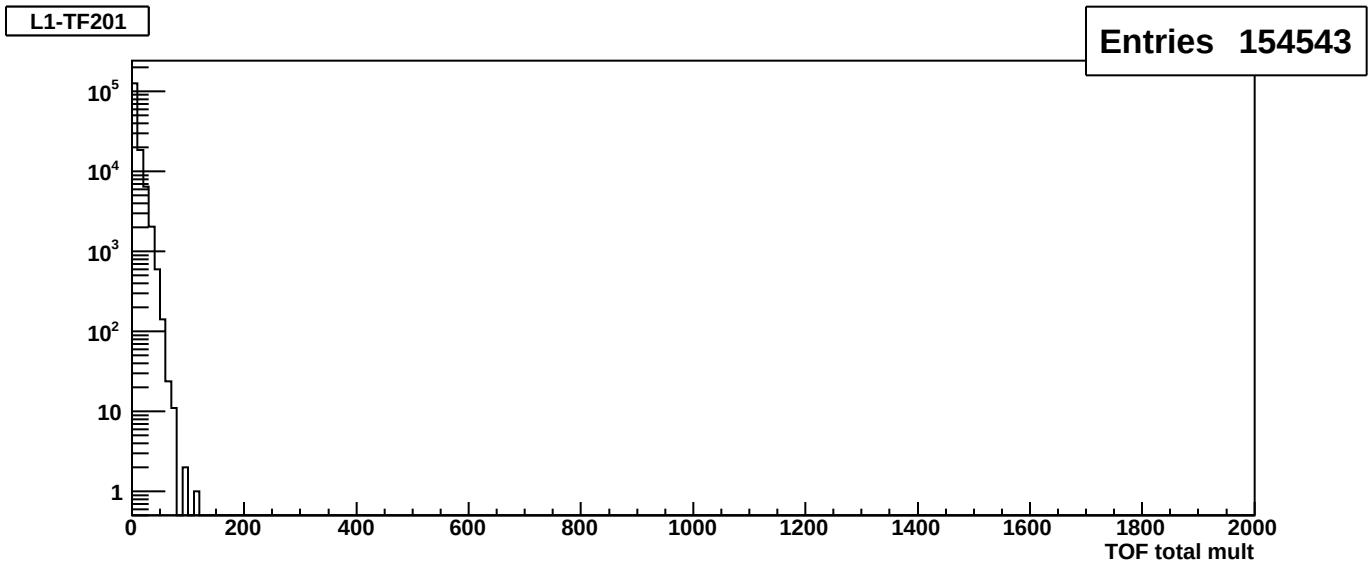

MIX-TF003
Entries 6490806
TOF MULT
TOF tray

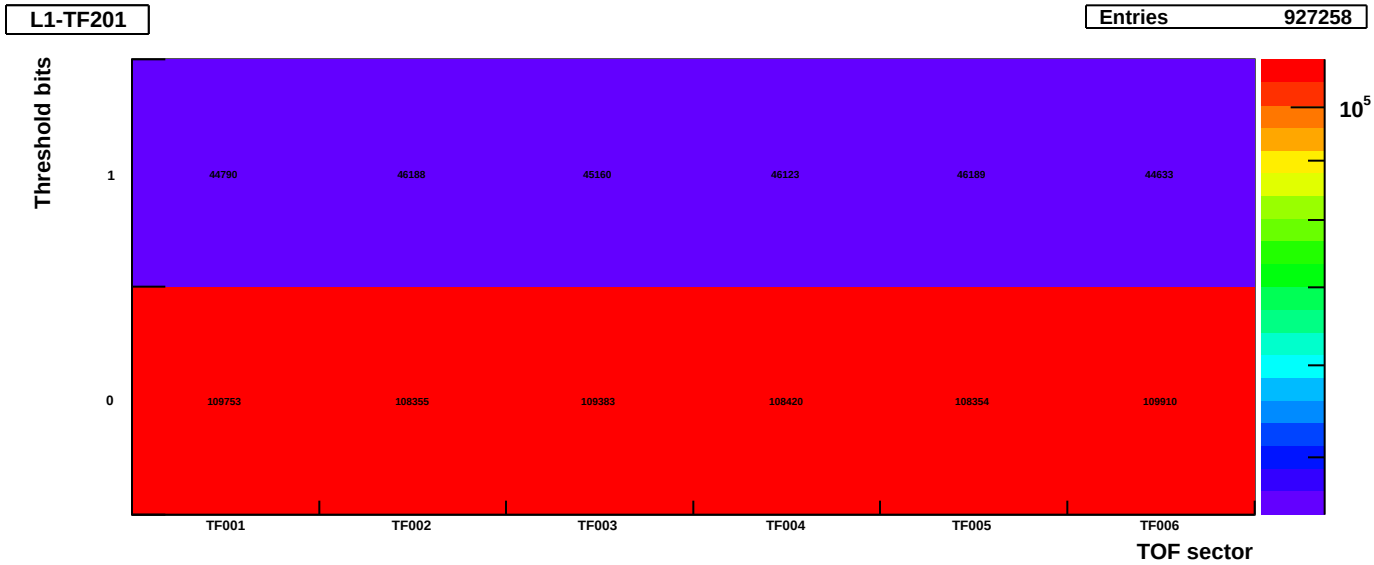

MIX-TF004
Entries 6490806
TOF MULT
TOF tray

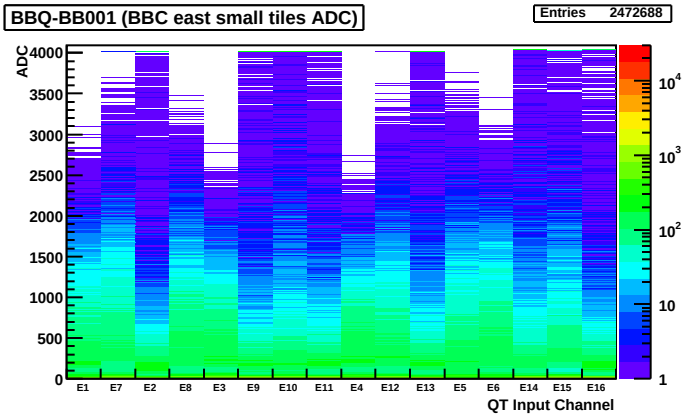

MIX-TF005
Entries 6490806
TOF MULT
TOF tray

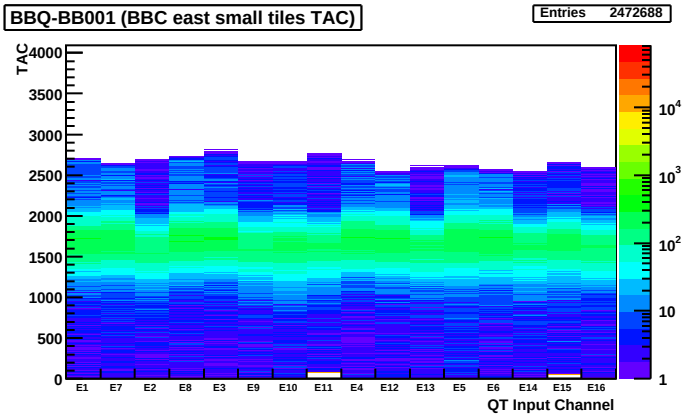

MIX-TF006
Entries 6490806
TOF MULT
TOF tray

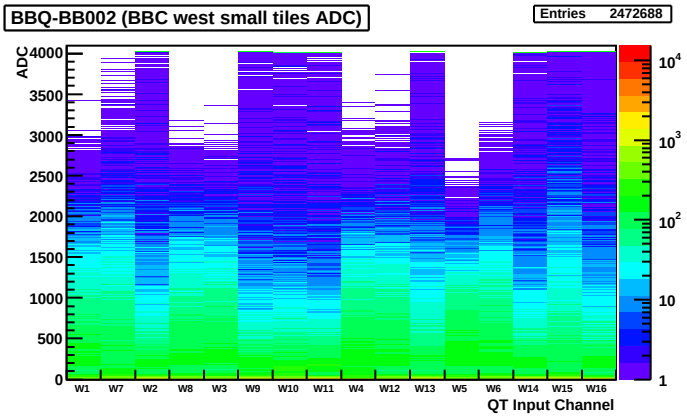

MIX-TF101
Entries 927258
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

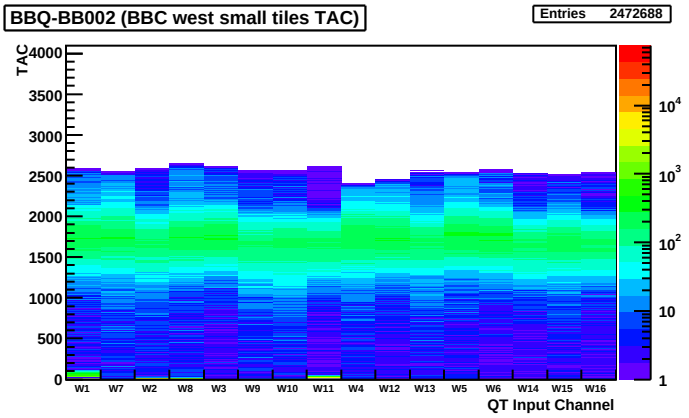

L1-TF201
Entries 154543
10^5
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

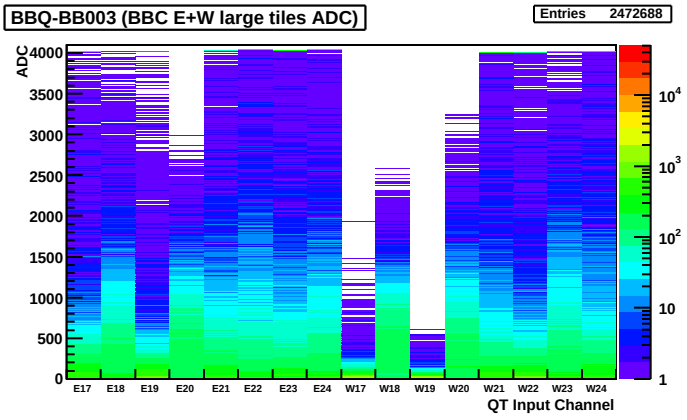

L1-TF201
Entries 927258
Threshold bits
1
0
44790
46188
45160
46123
46189
44633
109753
108355
109383
108420
108354
109910
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^5

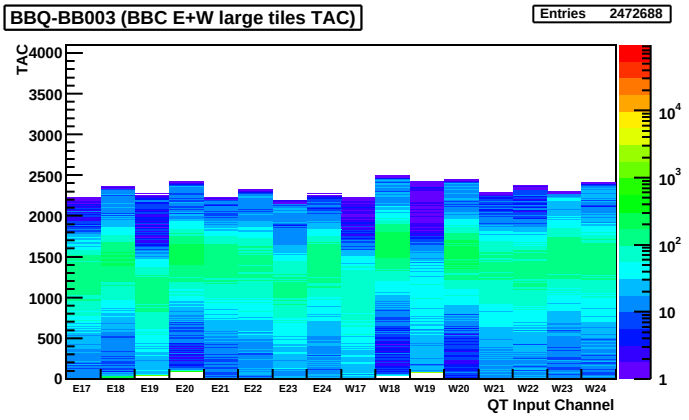

BBQ-BB001 (BBC east small tiles ADC)
Entries 2472688
ADC
QT Input Channel

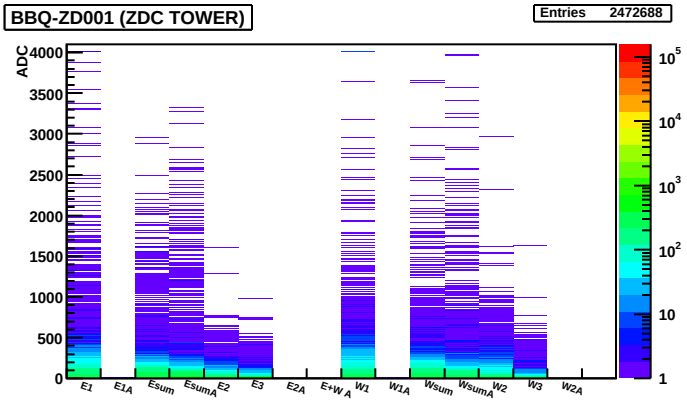

BBQ-BB001 (BBC east small tiles TAC)
Entries 2472688
TAC
QT Input Channel

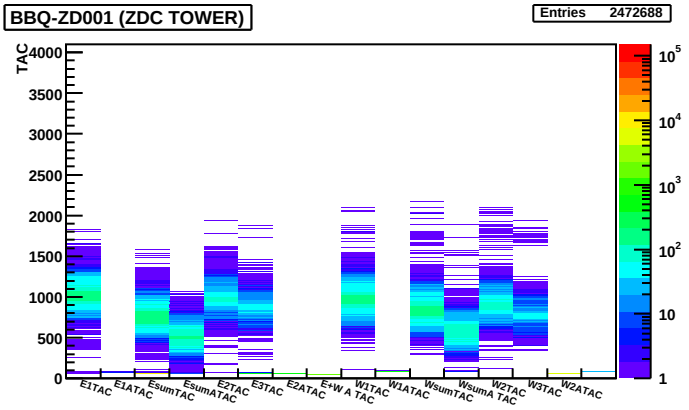

BBQ-BB002 (BBC west small tiles ADC)
Entries 2472688
ADC
QT Input Channel

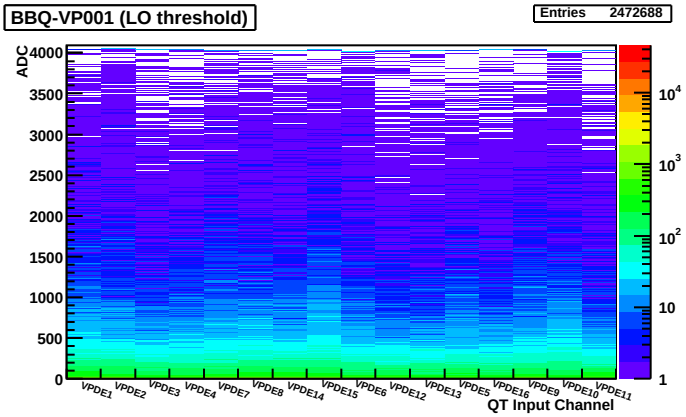

BBQ-BB002 (BBC west small tiles TAC)
Entries 2472688
TAC
QT Input Channel

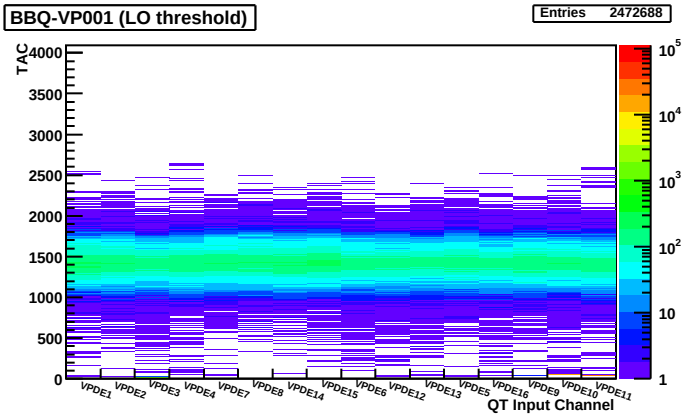

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 2472688
ADC
QT Input Channel

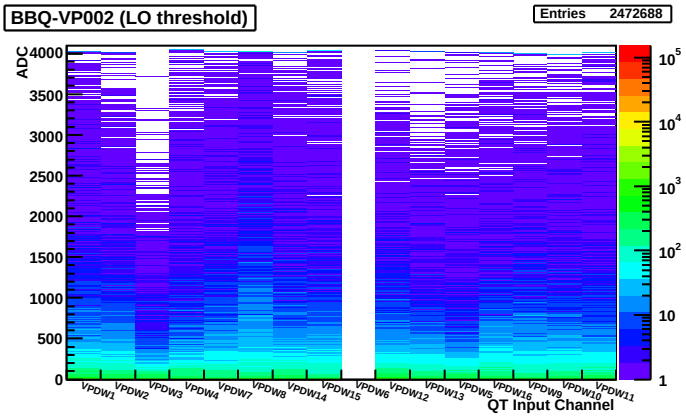

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 2472688
TAC
QT Input Channel

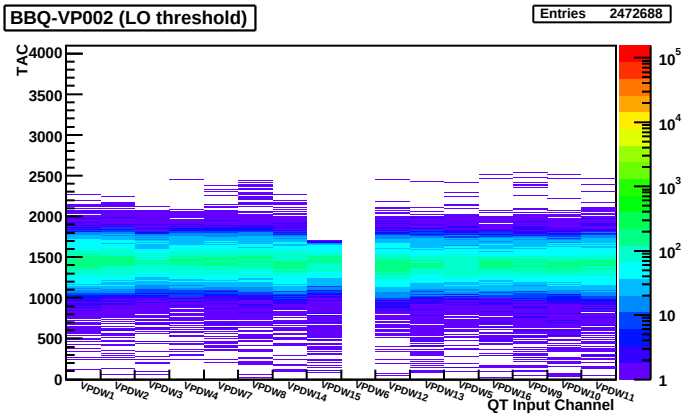

BBQ-ZD001 (ZDC TOWER)
Entries 2472688
ADC

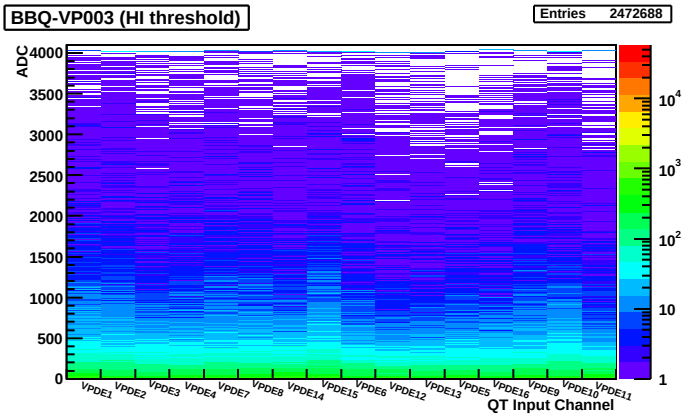

BBQ-ZD001 (ZDC TOWER)
Entries 2472688
TAC

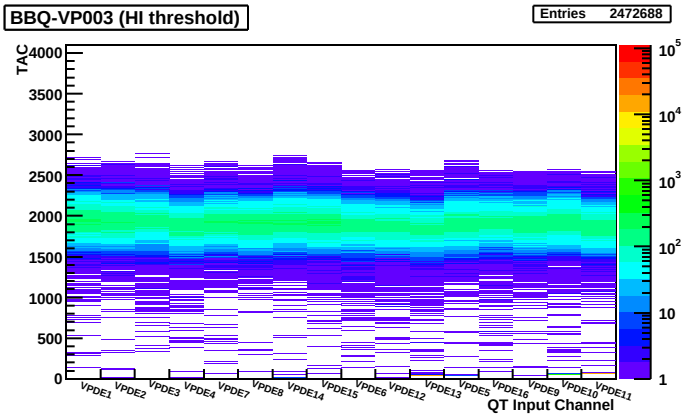

BBQ-VP001 (LO threshold)
Entries 2472688
ADC
QT Input Channel

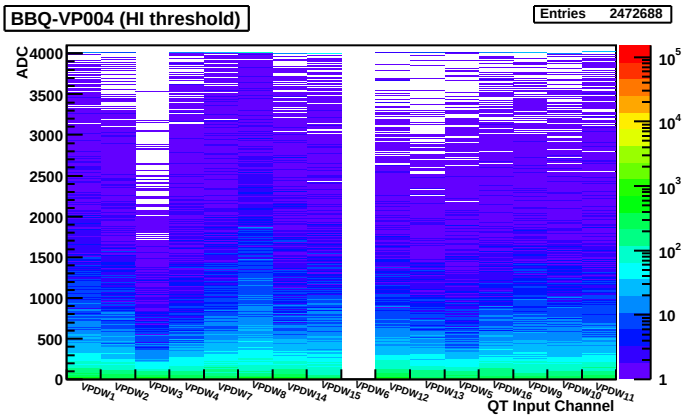

BBQ-VP001 (LO threshold)
Entries 2472688
TAC
QT Input Channel

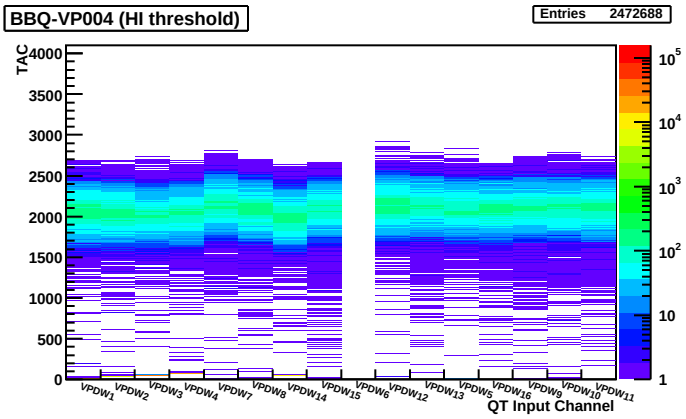

BBQ-VP002 (LO threshold)
Entries 2472688
ADC
QT Input Channel

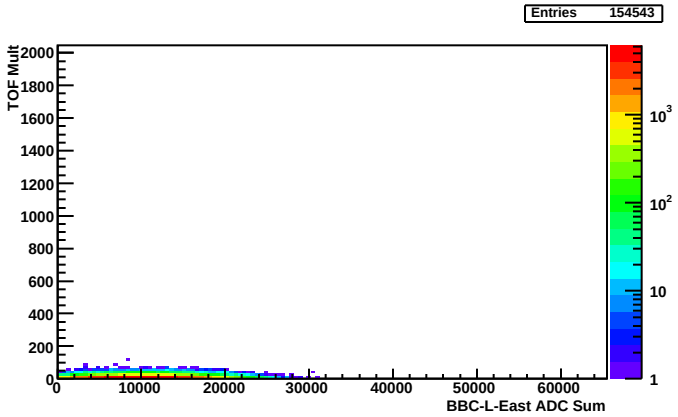

BBQ-VP002 (LO threshold)
Entries 2472688
TAC
QT Input Channel

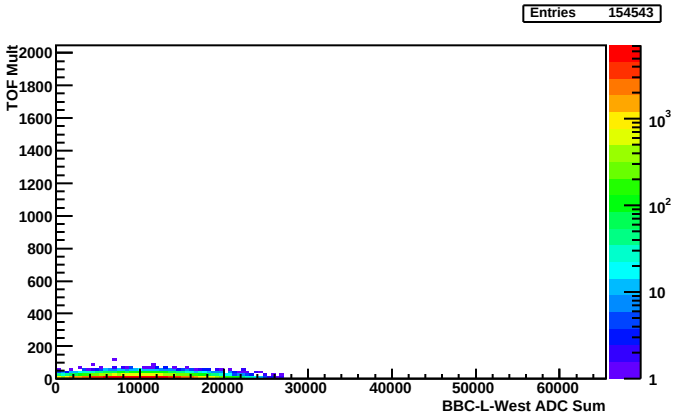

BBQ-VP003 (HI threshold)
Entries 2472688
ADC
QT Input Channel

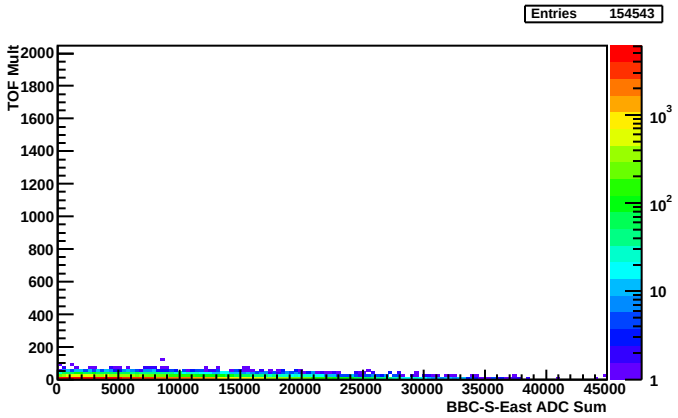

BBQ-VP003 (HI threshold)
Entries 2472688
TAC
QT Input Channel

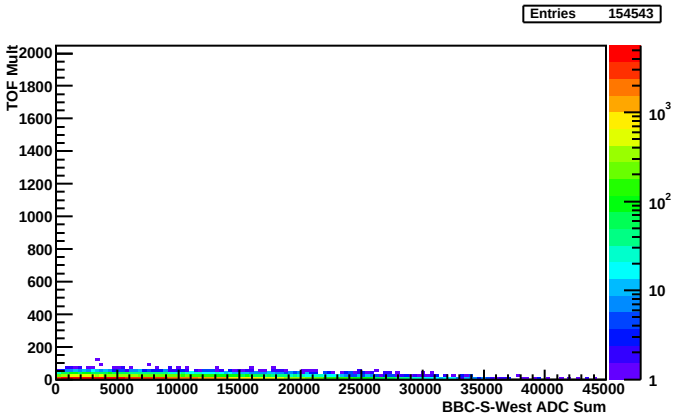

BBQ-VP004 (HI threshold)
Entries 2472688
ADC
QT Input Channel

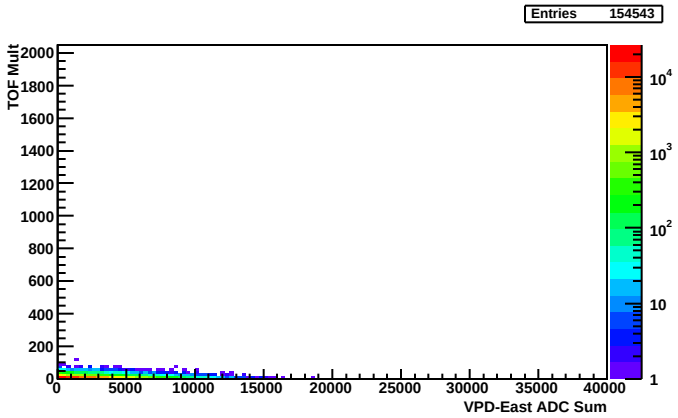

BBQ-VP004 (HI threshold)
Entries 2472688
TAC
QT Input Channel

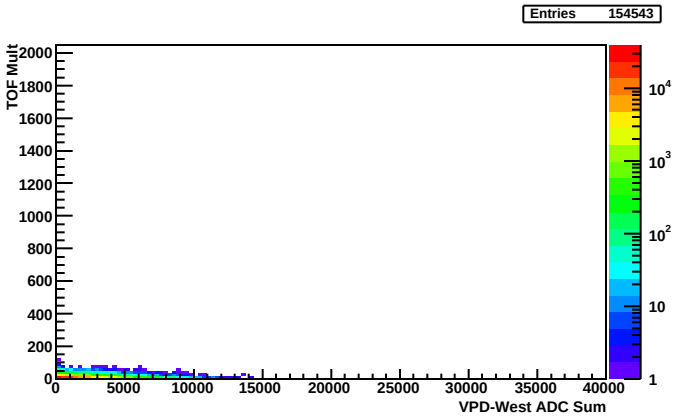

Entries 154543
TOF Mult
BBC-L-East ADC Sum

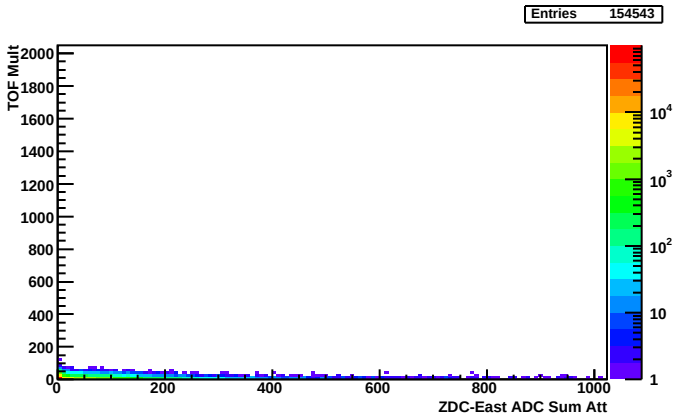

Entries 154543
TOF Mult
BBC-L-West ADC Sum

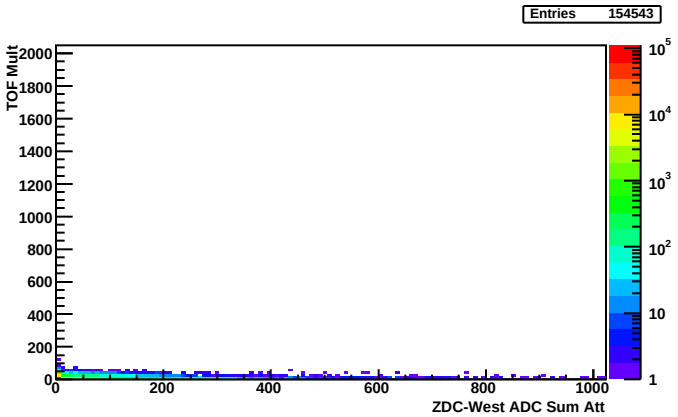

Entries 154543
TOF Mult
BBC-S-East ADC Sum

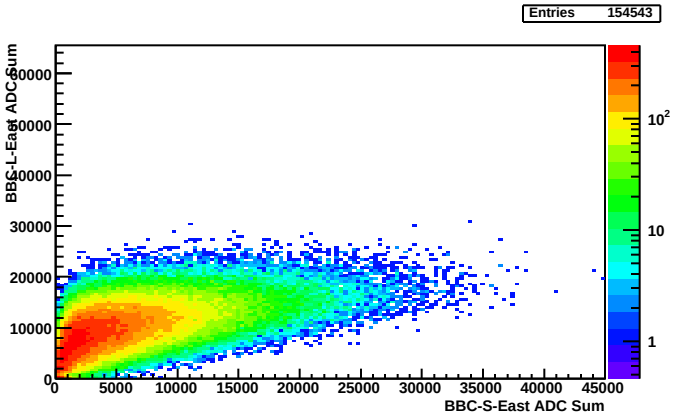

Entries 154543
TOF Mult
BBC-S-West ADC Sum

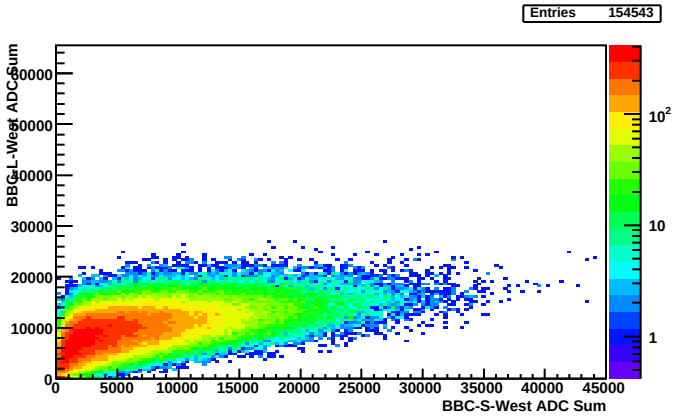

Entries 154543
TOF Mult
VPD-East ADC Sum

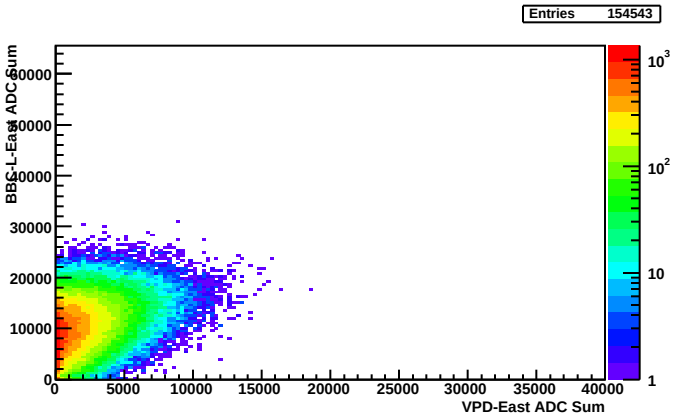

Entries 154543
TOF Mult
VPD-West ADC Sum

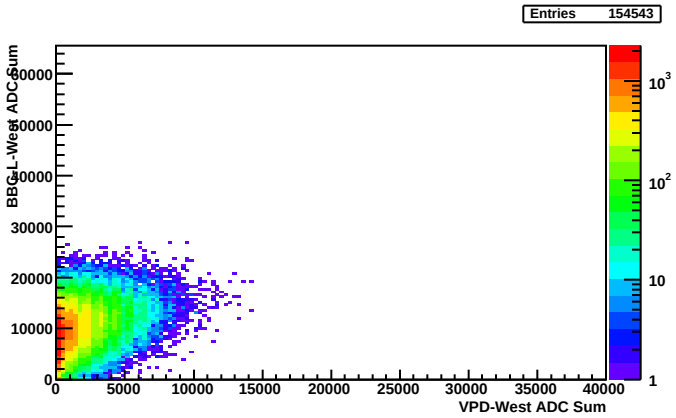

Entries 154543
TOF Mult
ZDC-East ADC Sum Att

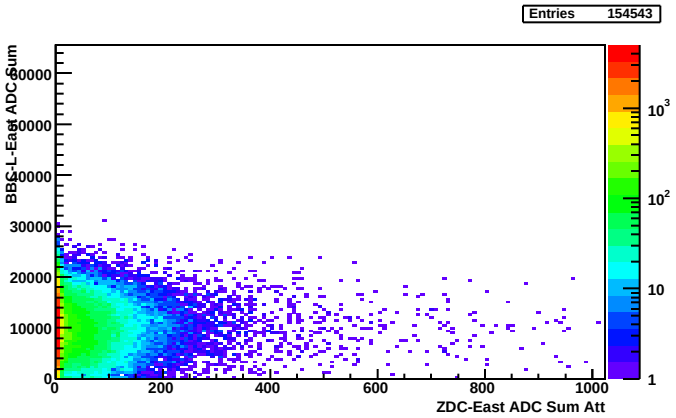

Entries 154543
TOF Mult
ZDC-West ADC Sum Att


Entries 154543
BBC-L-East ADC Sum
BBC-S-East ADC Sum


Entries 154543
BBC-L-West ADC Sum
BBC-S-West ADC Sum


Entries 154543
BBC-L-East ADC Sum
VPD-East ADC Sum


Entries 154543
BBC-L-West ADC Sum
VPD-West ADC Sum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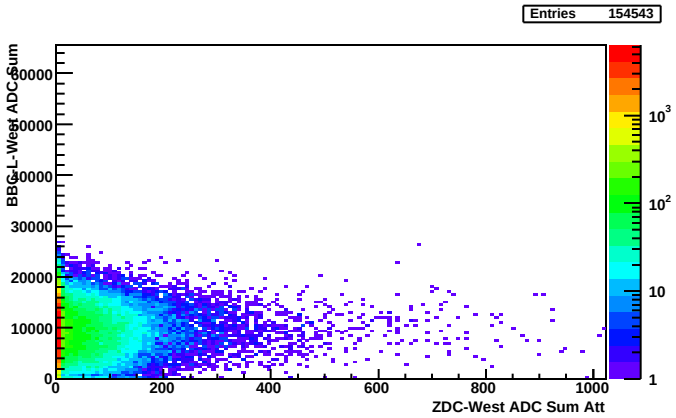
BBC-L-East ADC Sum
ZDC-East ADC Sum Att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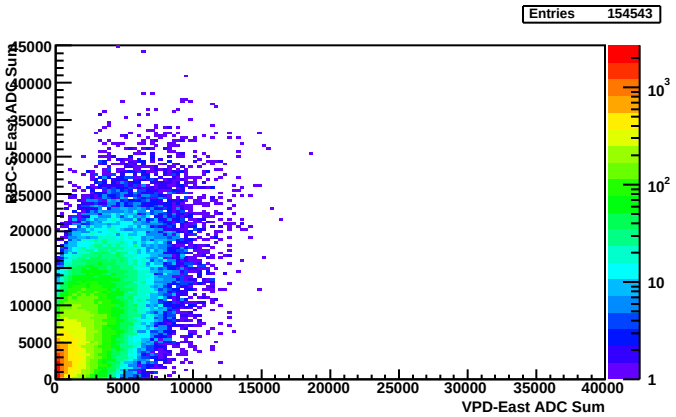
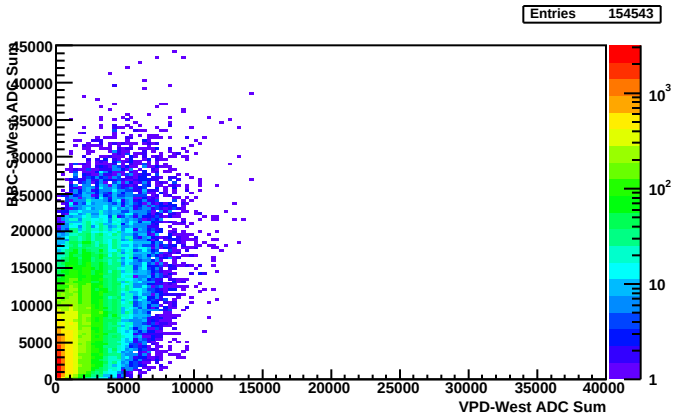
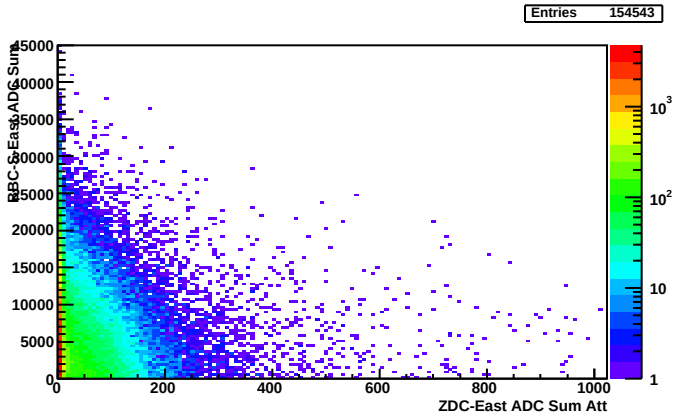
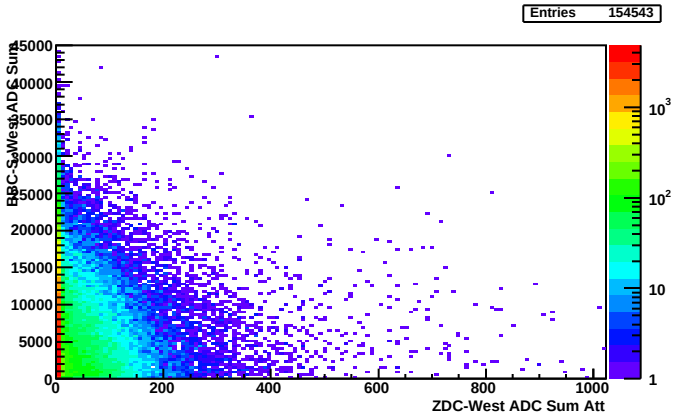
BBC-L-West ADC Sum
ZDC-West ADC Sum Att


Entries 154543
BBC-S-East ADC Sum
VPD-East ADC Sum


Entries 154543
BBC-S-West ADC Sum
VPD-West ADC Sum


Entries 154543
BBC-S-East ADC Sum
ZDC-East ADC Sum Att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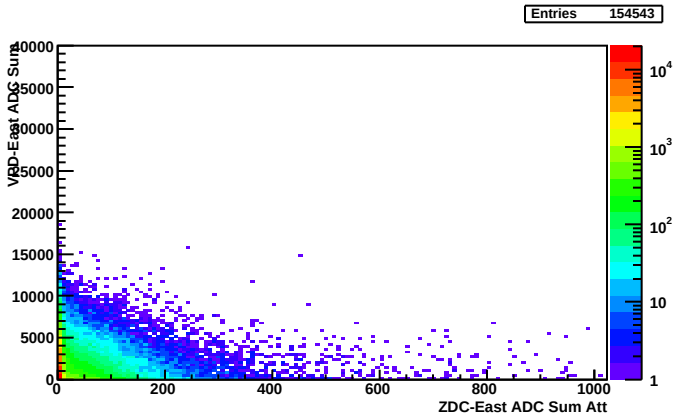
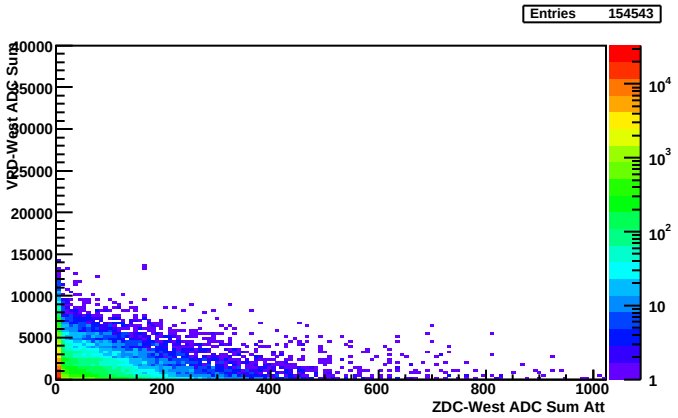
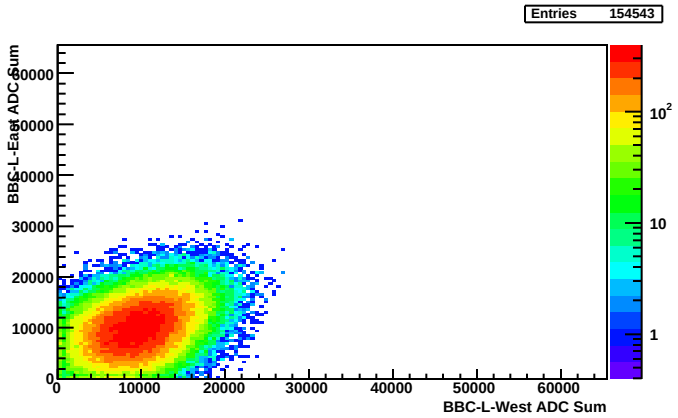
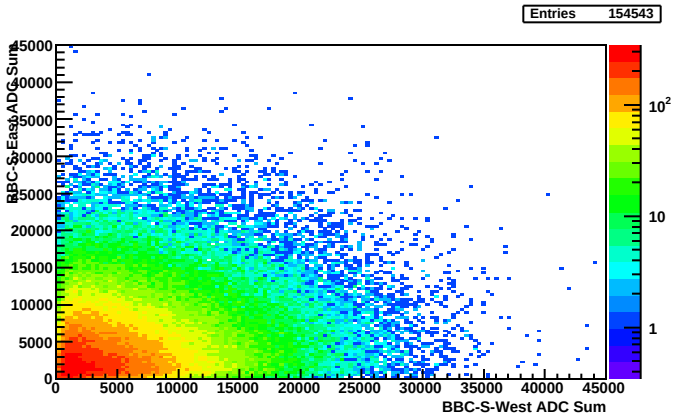
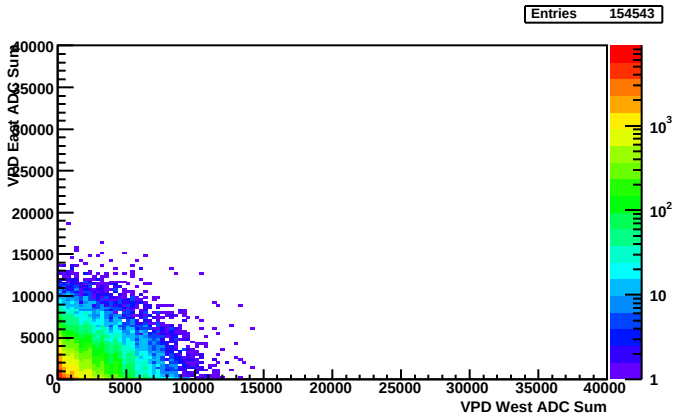
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

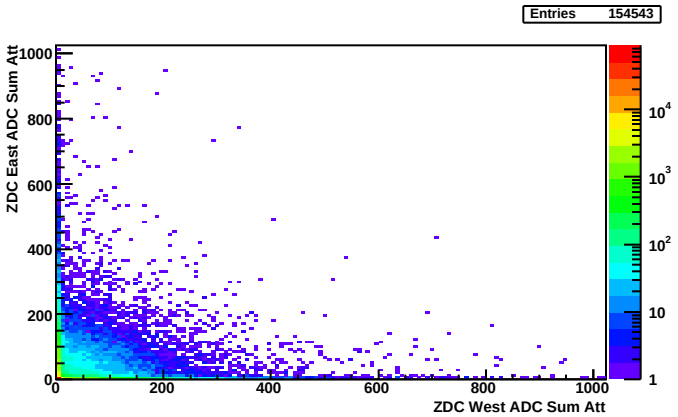

Entries 154543
VPD-East ADC Sum
ZDC-East ADC Sum Att

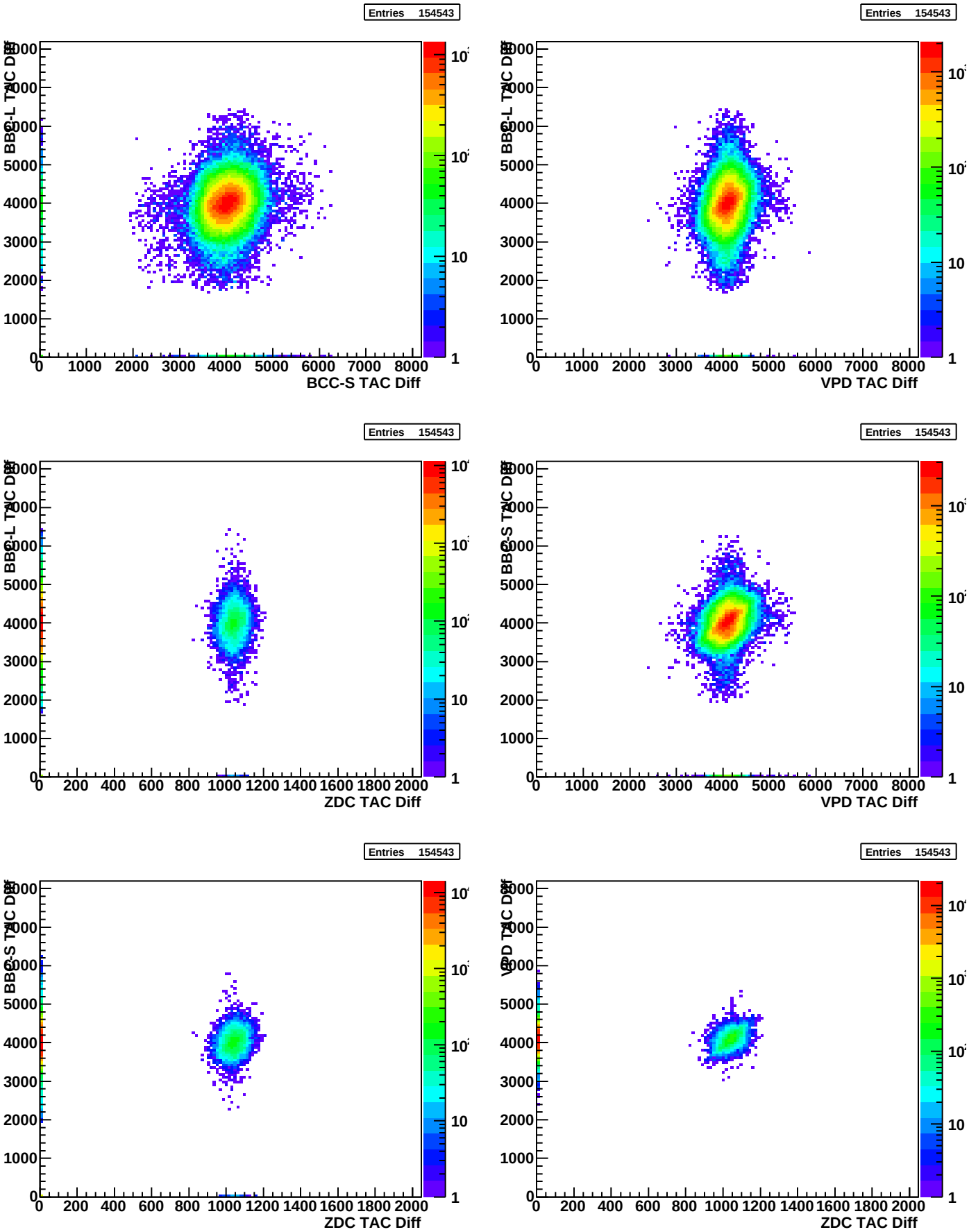

Entries 154543
VPD-West ADC Sum
ZDC-West ADC Sum Att

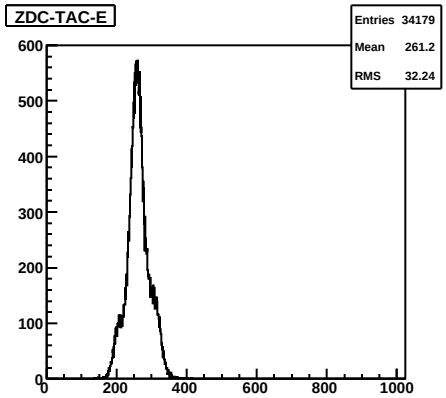

Entries 154543
BBC-L-East ADC Sum
BBC-L-West ADC Sum

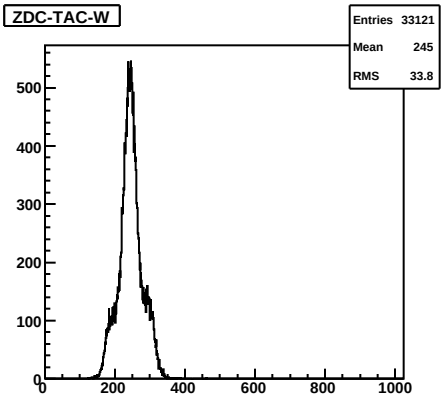

Entries 154543
BBC-S-East ADC Sum
BBC-S-West ADC Sum

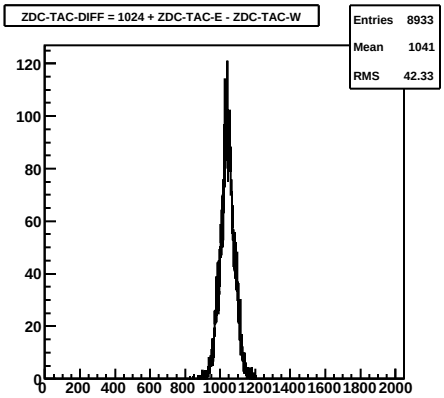

Entries 154543
VPD East ADC Sum
VPD West ADC Sum

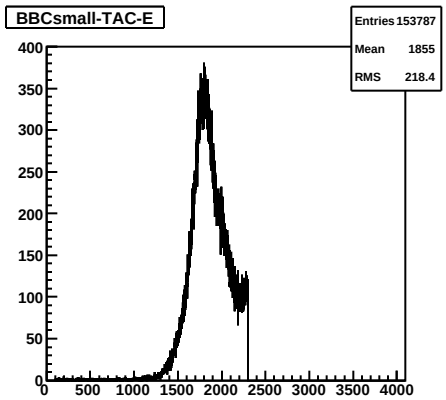

Entries 154543
ZDC East ADC Sum Att
ZDC West ADC Sum Att

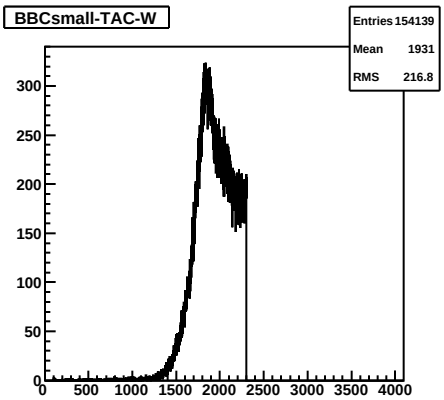

Entries 154543
BBC-L TAC Diff
BCC-S TAC Diff
Entries 154543
BBC-L TAC Diff
VPD TAC Diff
Entries 154543
BBC-L TAC Diff
ZDC TAC Diff
Entries 154543
BBC-S TAC Diff
VPD TAC Diff
Entries 154543
BBC-S TAC Diff
ZDC TAC Diff
Entries 154543
VPD TAC Diff
ZDC TAC Diff

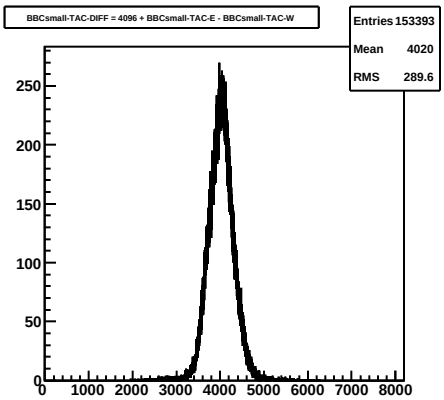

ZDC-TAC-E
Entries 34179
Mean 261.2
RMS 32.24

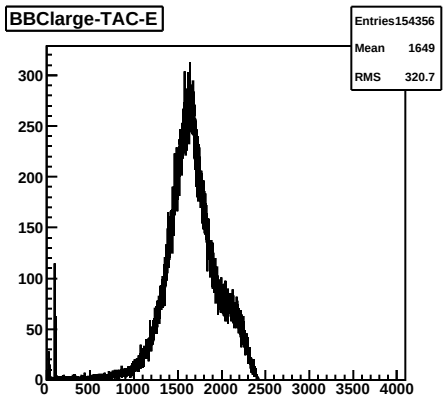

ZDC-TAC-W
Entries 33121
Mean 245
RMS 33.8

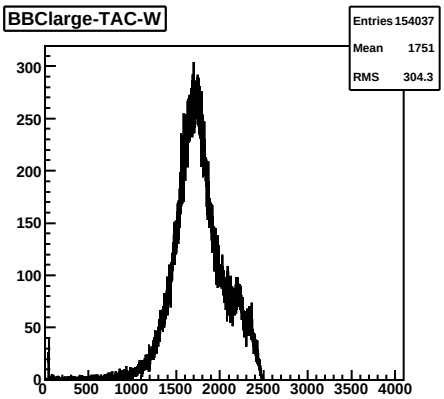

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 8933
Mean 1041
RMS 42.33

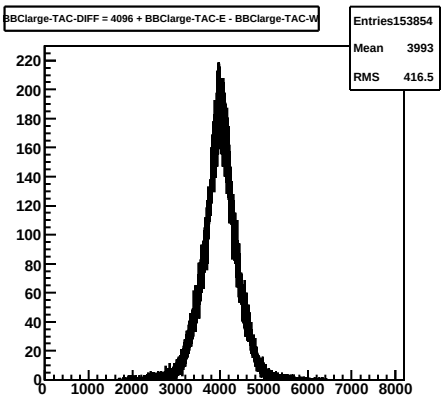

BBCsmall-TAC-E
Entries 153787
Mean 1855
RMS 218.4

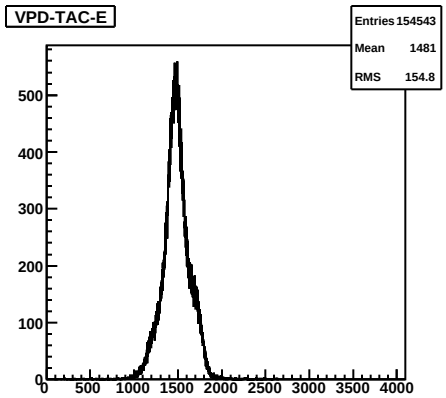

BBCsmall-TAC-W
Entries 154139
Mean 1931
RMS 216.8

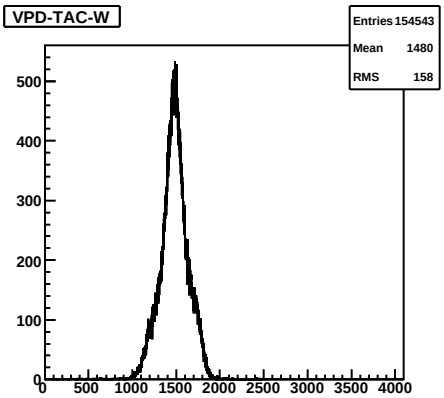

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 153393
Mean 4020
RMS 289.6

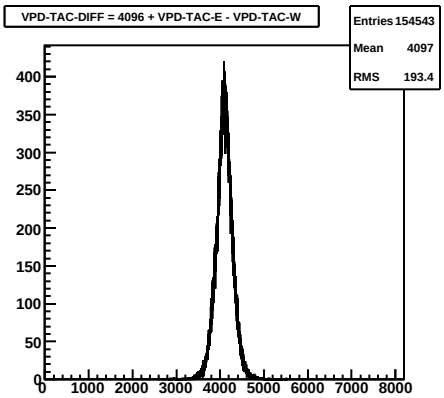

BBClarge-TAC-E
Entries 154356
Mean 1649
RMS 320.7

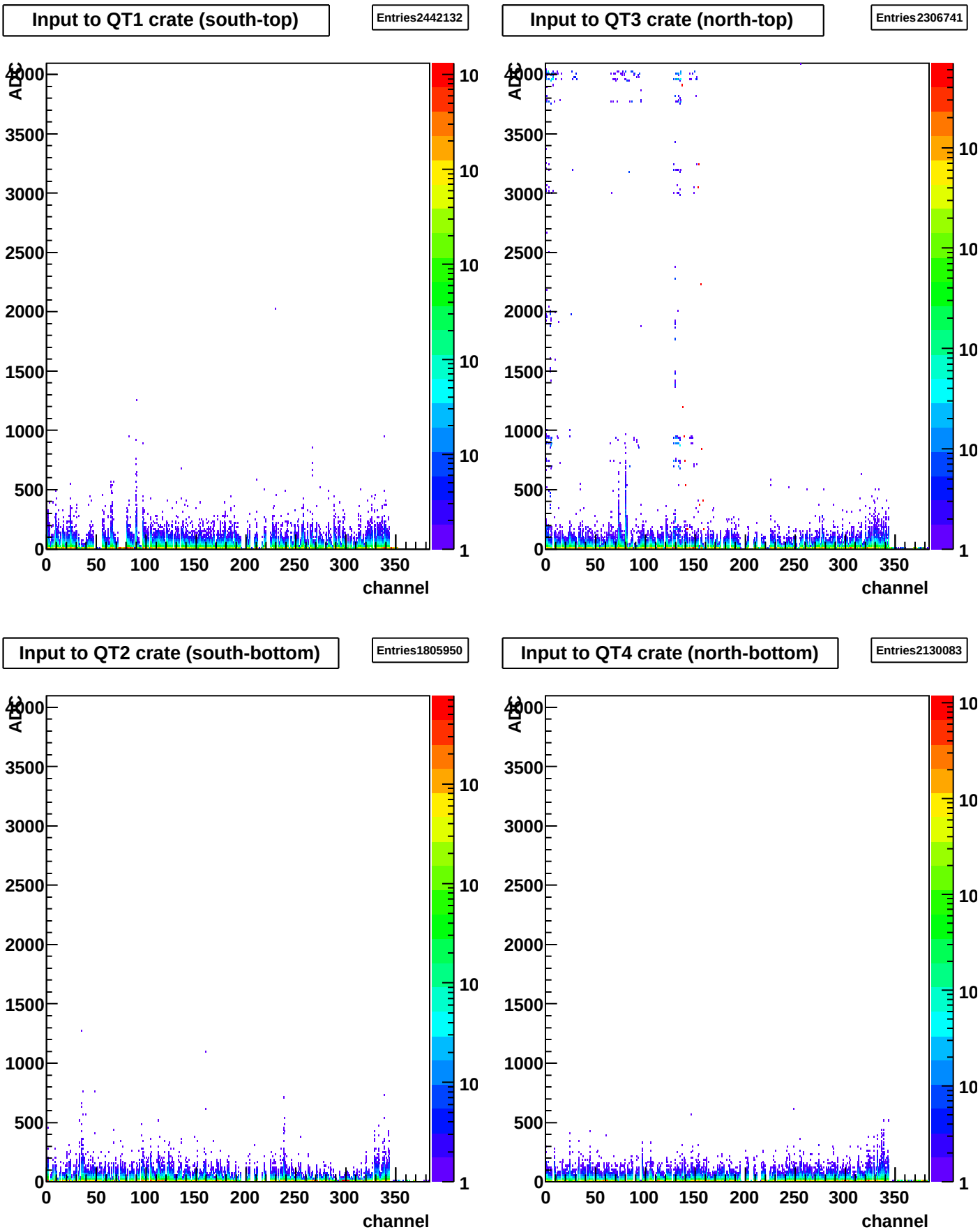

BBClarge-TAC-W
Entries 154037
Mean 1751
RMS 304.3

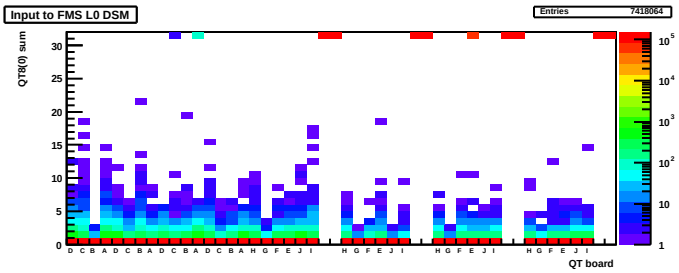

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 153854
Mean 3993
RMS 416.5

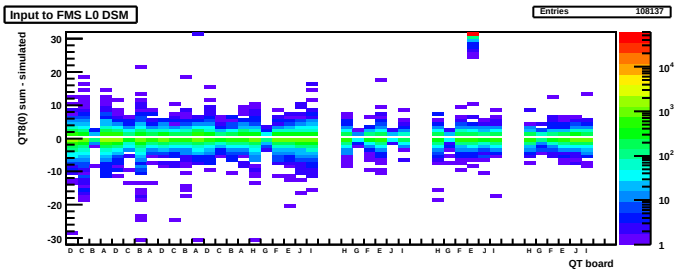

VPD-TAC-E
Entries 154543
Mean 1481
RMS 154.8

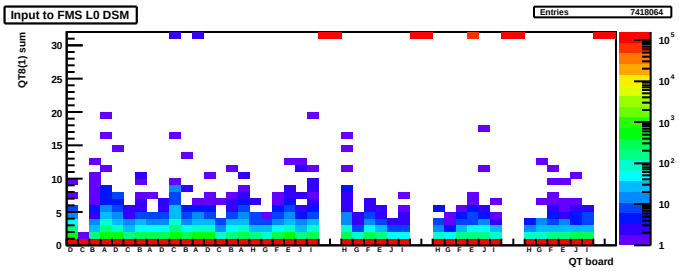

VPD-TAC-W
Entries 154543
Mean 1480
RMS 158

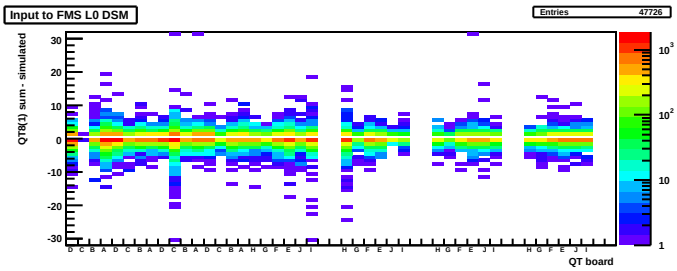

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 154543
Mean 4097
RMS 193.4

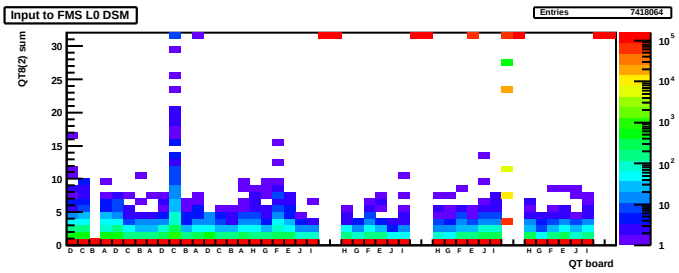

Input to QT1 crate (south-top)
Entries2442132
Input to QT3 crate (north-top)
Entries2306741
Input to QT2 crate (south-bottom)
Entries1805950
Input to QT4 crate (north-bottom)
Entries2130083
ADC
channel
0
500
1000
1500
2000
2500
3000
3500
4000
0
50
100
150
200
250
300
350
1
10

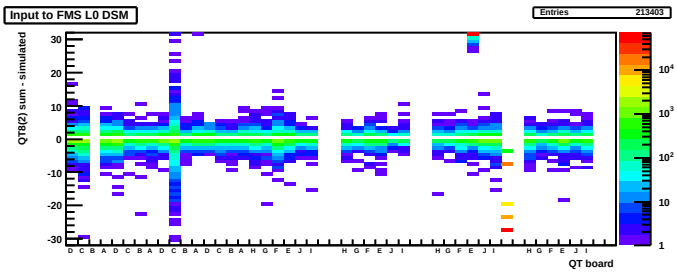

Input to FMS L0 DSM
Entries 7418064
QT8(0) sum
QT board

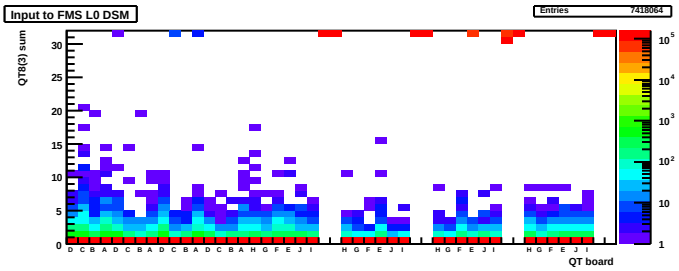

Input to FMS L0 DSM
Entries 108137
QT8(0) sum - simulated
QT board

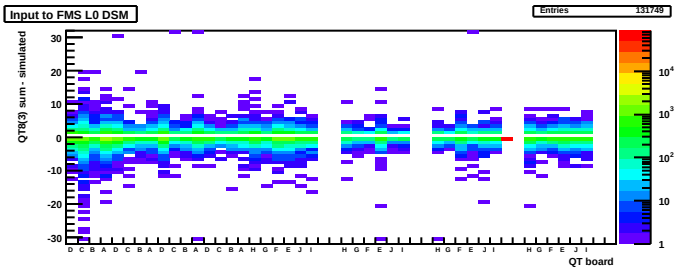

Input to FMS L0 DSM
Entries 7418064
QT8(1) sum
QT board

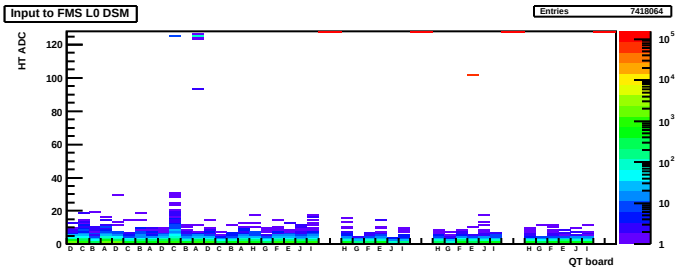

Input to FMS L0 DSM
Entries 47726
QT8(1) sum - simulated
QT board

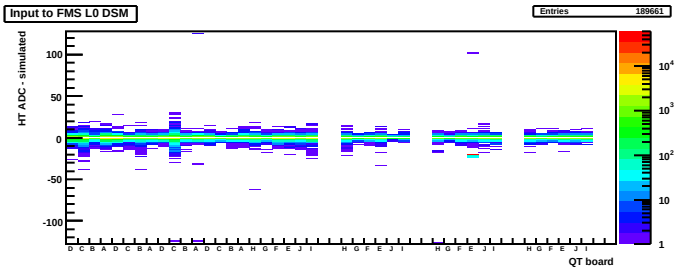

Input to FMS L0 DSM
Entries 7418064
QT8(2) sum
QT board

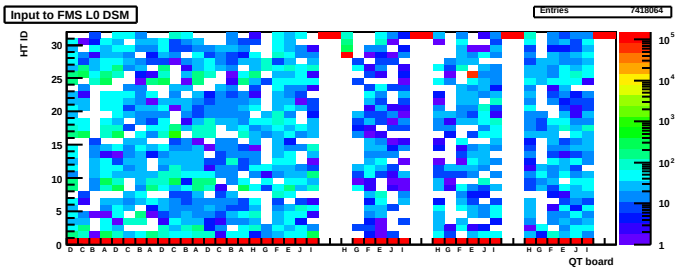

Input to FMS L0 DSM
Entries 213403
QT8(2) sum - simulated
QT board

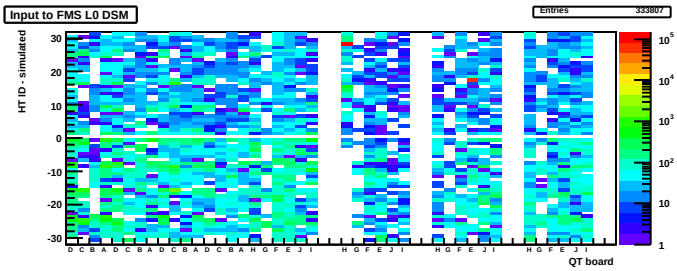

Input to FMS L0 DSM
Entries 7418064
QT8(3) sum
QT board

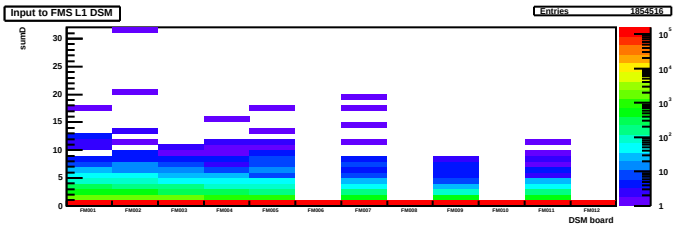

Input to FMS L0 DSM
Entries 131749
QT8(3) sum - simulated
QT board

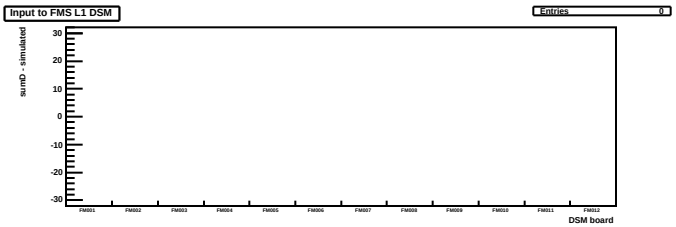

Input to FMS L0 DSM
Entries 7418064
HT ADC
QT board

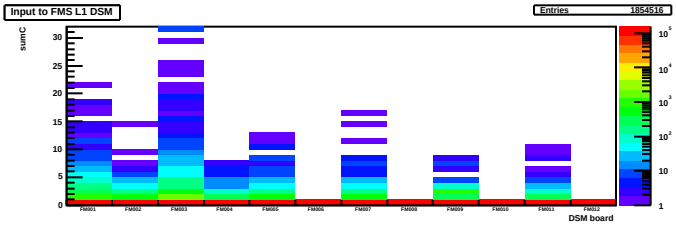

Input to FMS L0 DSM
Entries 189661
HT ADC - simulated
QT board

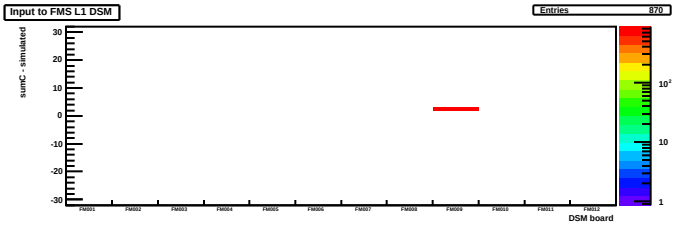

Input to FMS L0 DSM
Entries 7418064
HT ID
QT board

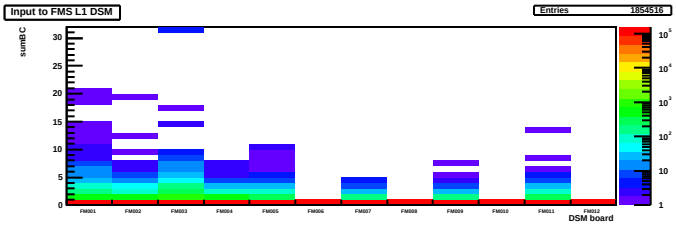

Input to FMS L0 DSM
Entries 333807
HT ID - simulated
QT board

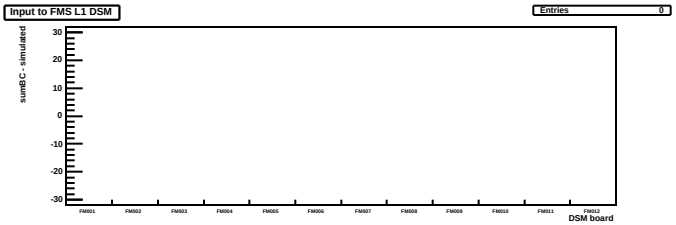

Input to FMS L1 DSM
Entries 1854516
sumD
DSM board

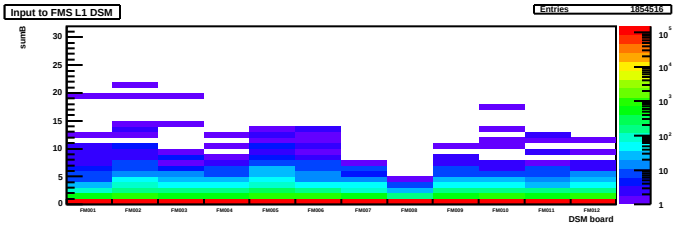

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

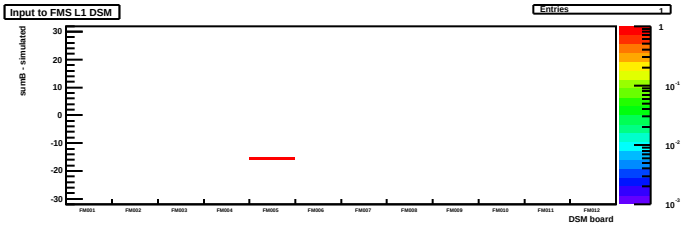

Input to FMS L1 DSM
Entries 1854516
sumC
DSM board

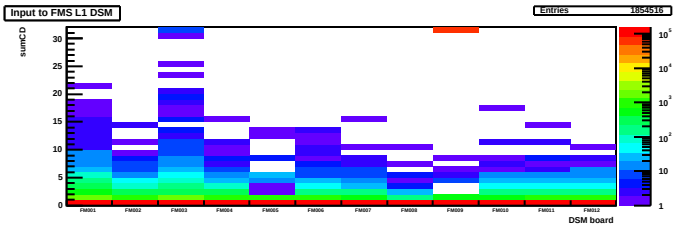

Input to FMS L1 DSM
Entries 870
sumC - simulated
DSM board

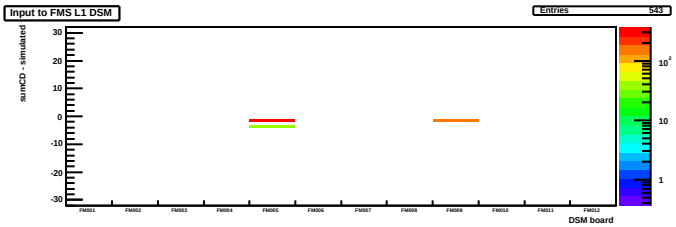

Input to FMS L1 DSM
Entries 1854516
sumBC
DSM board

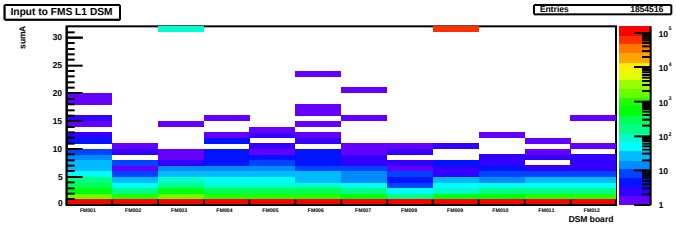

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

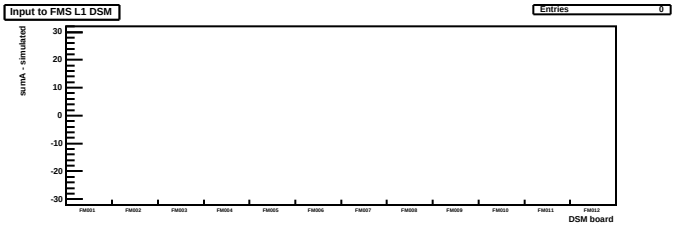

Input to FMS L1 DSM
Entries 1854516
sumB
DSM board

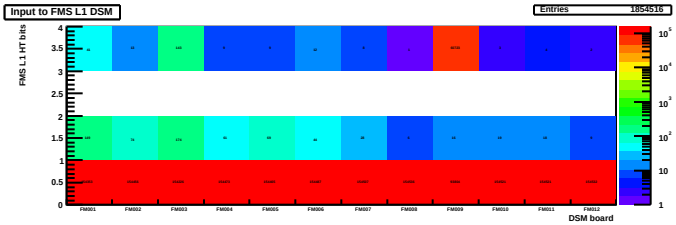

Input to FMS L1 DSM
Entries 1
sumB - simulated
DSM board

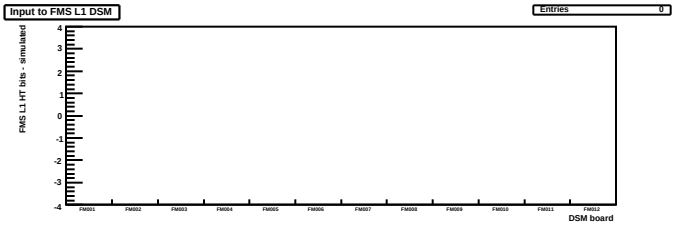

Input to FMS L1 DSM
Entries 1854516
sumCD
DSM board

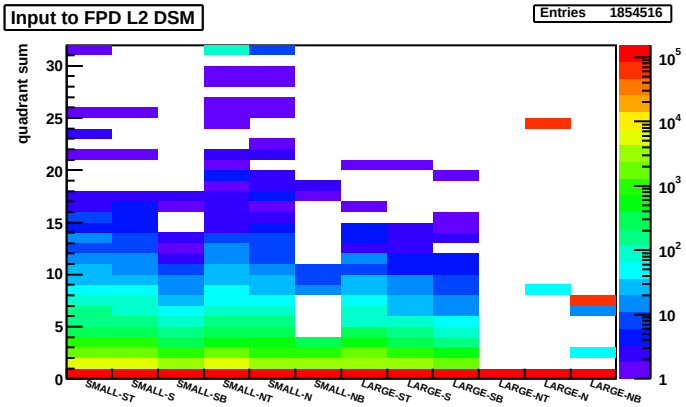

Input to FMS L1 DSM
Entries 543
sumCD - simulated
DSM board

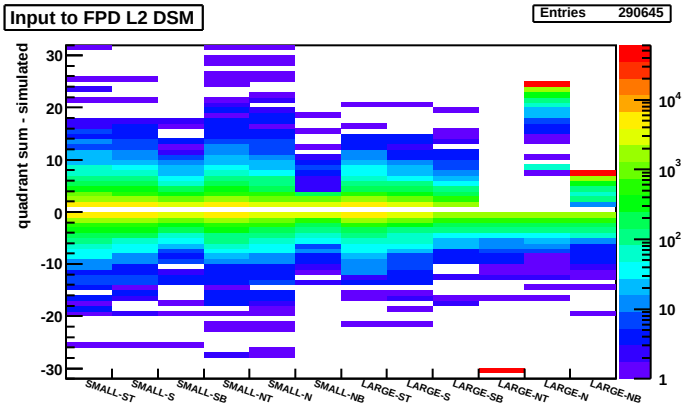

Input to FMS L1 DSM
Entries 1854516
sumA
DSM board

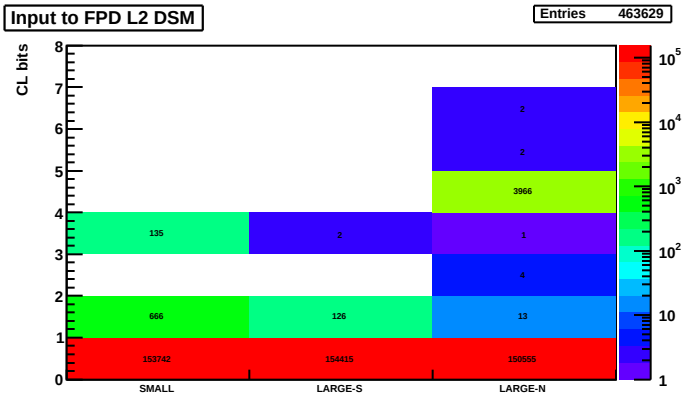

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

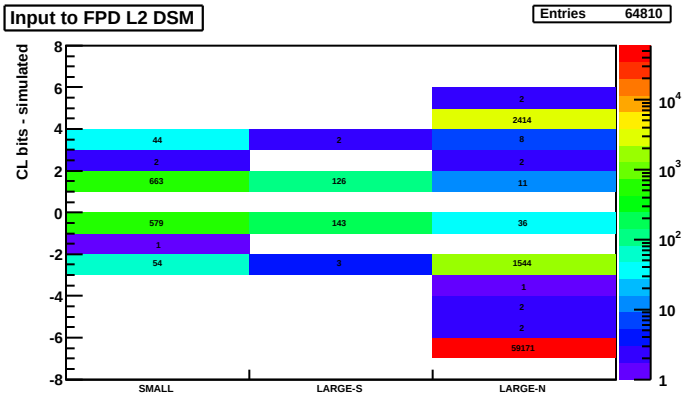

Input to FMS L1 DSM
Entries 1854516
FMS L1 HT bits
DSM board

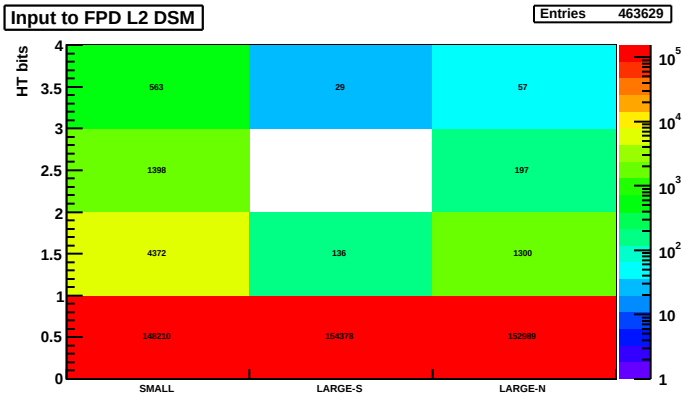

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

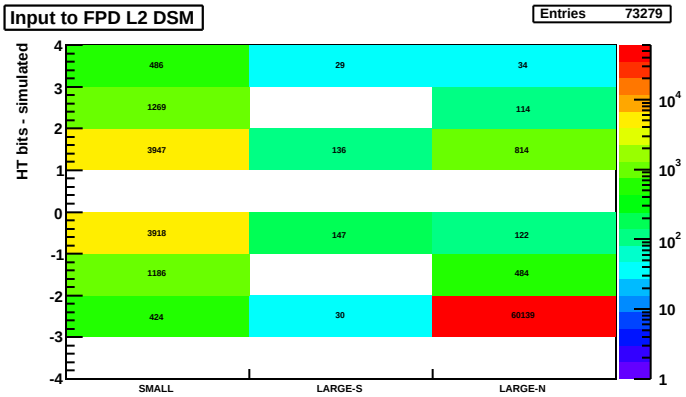

Input to FPD L2 DSM
Entries 1854516
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

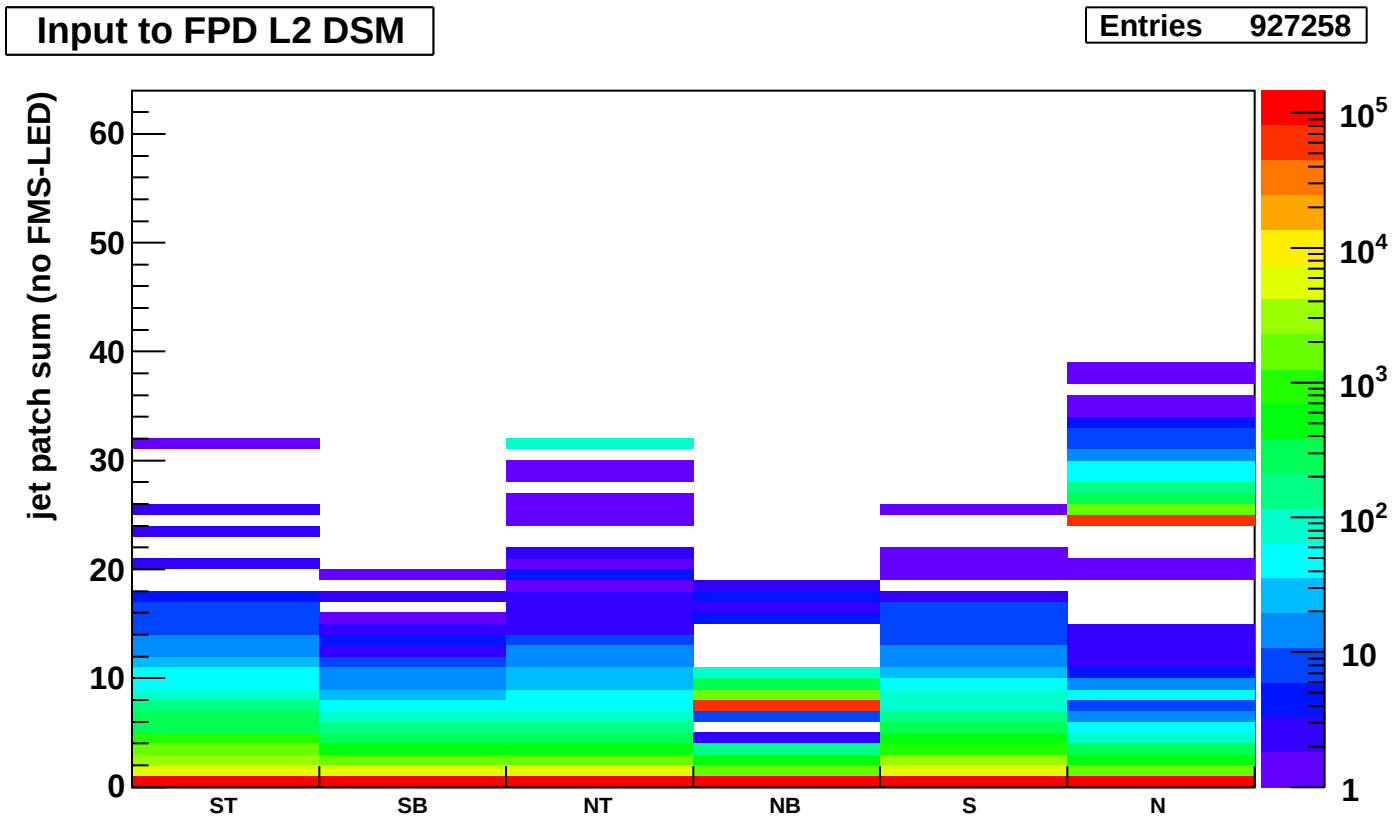

Input to FPD L2 DSM
Entries 290645
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

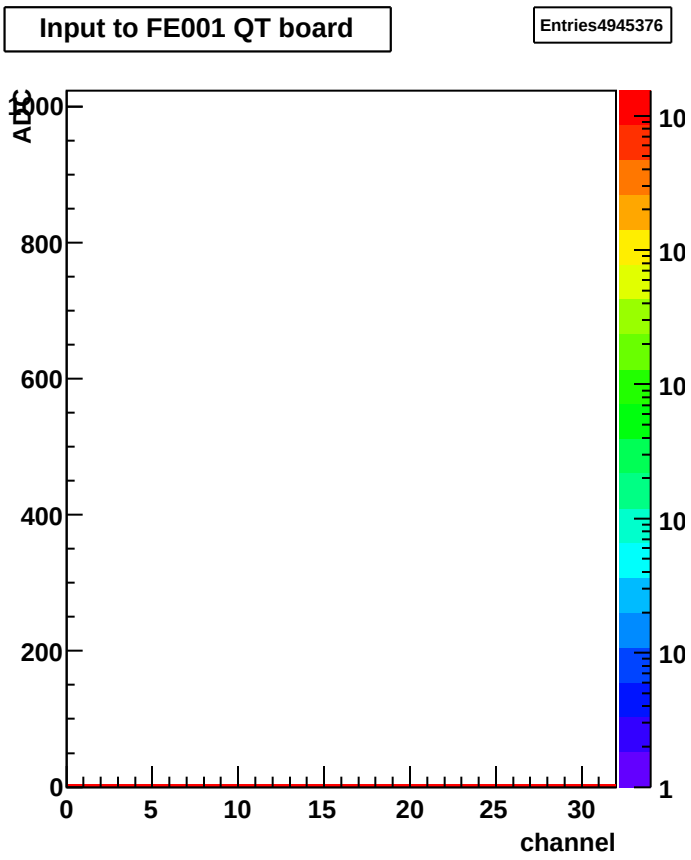

Input to FPD L2 DSM
Entries 463629
CL bits
SMALL
LARGE-S
LARGE-N

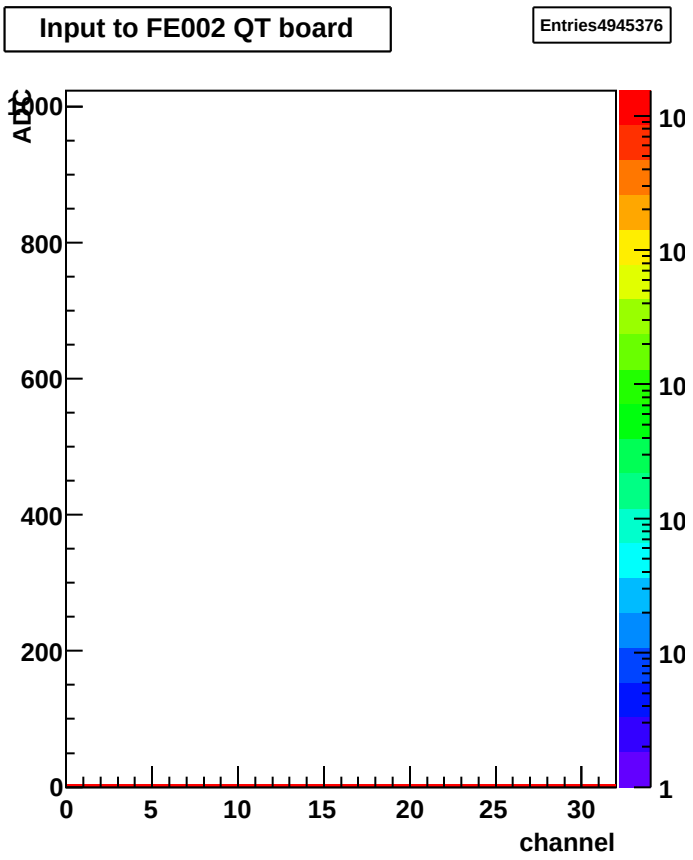

Input to FPD L2 DSM
Entries 64810
CL bits - simulated
SMALL
LARGE-S
LARGE-N

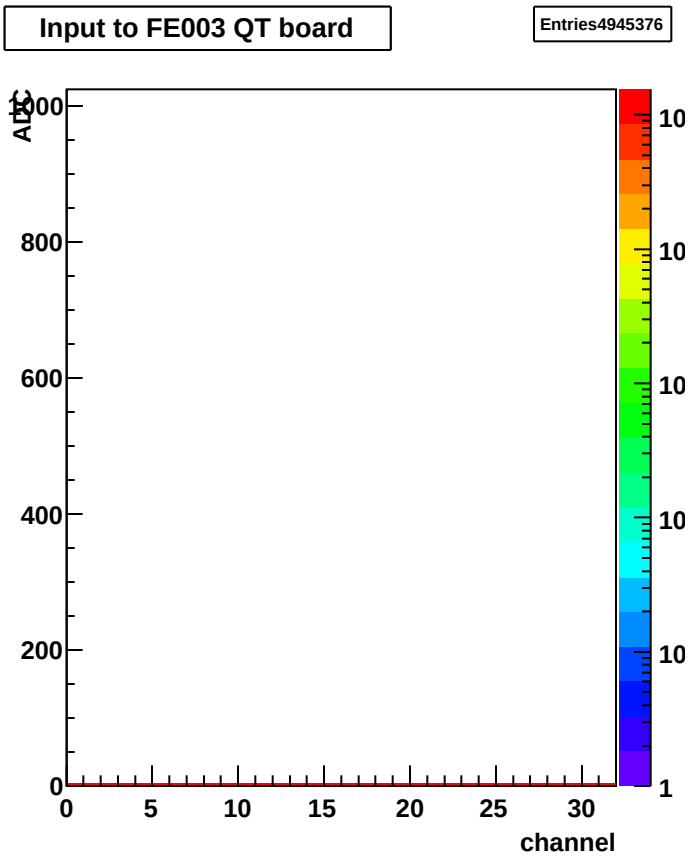

Input to FPD L2 DSM
Entries 463629
HT bits
SMALL
LARGE-S
LARGE-N

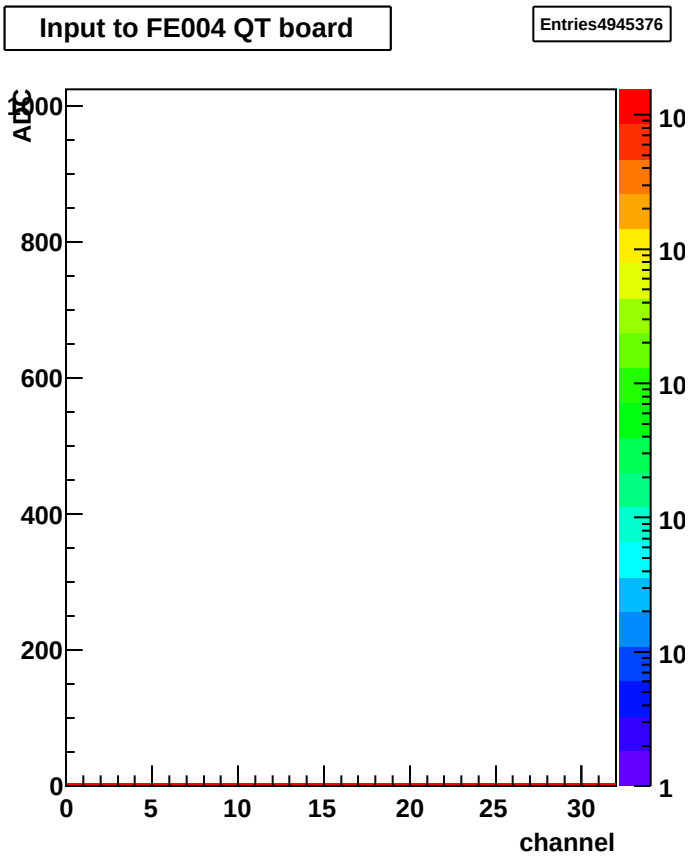

Input to FPD L2 DSM
Entries 73279
HT bits - simulated
SMALL
LARGE-S
LARGE-N

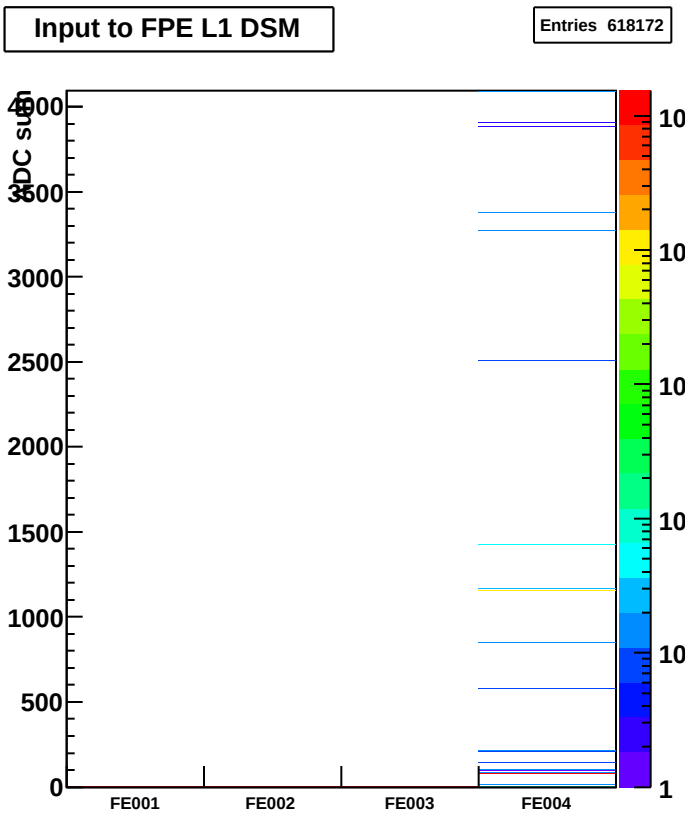

Input to FPD L2 DSM
Entries 927258
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

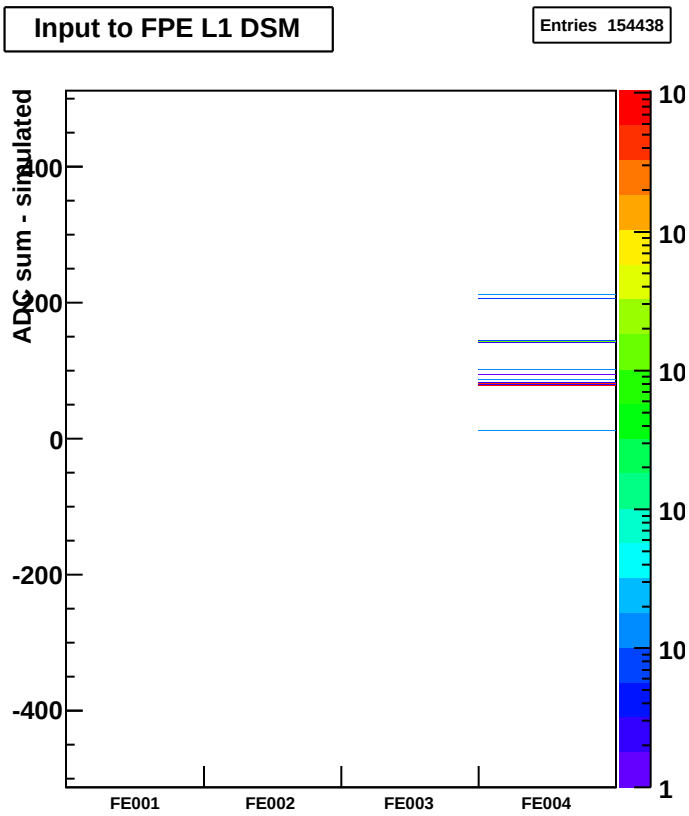

Input to FE001 QT board
Entries4945376
ADC
channel

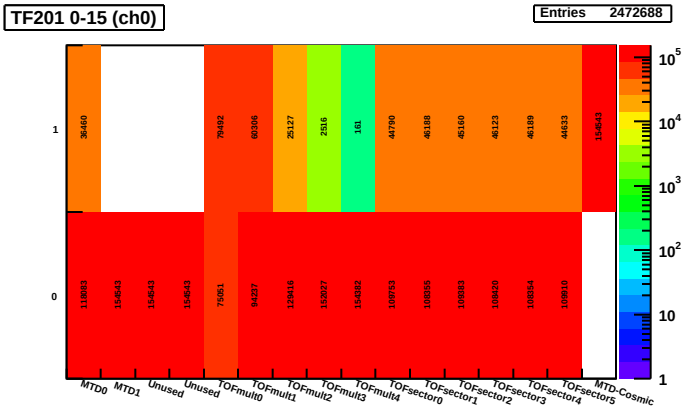

Input to FE002 QT board
Entries4945376
ADC
channel

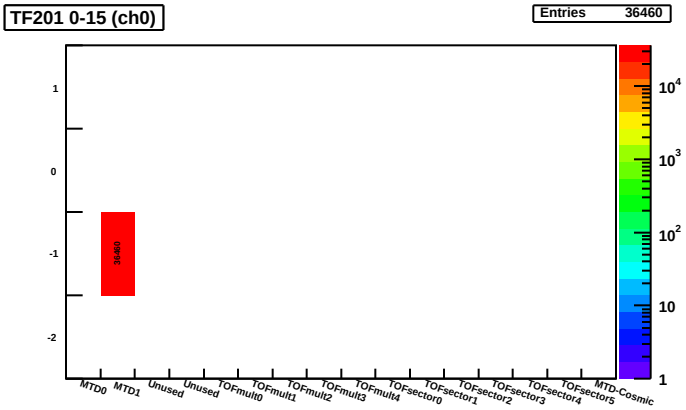

Input to FE003 QT board
Entries4945376
ADC
channel

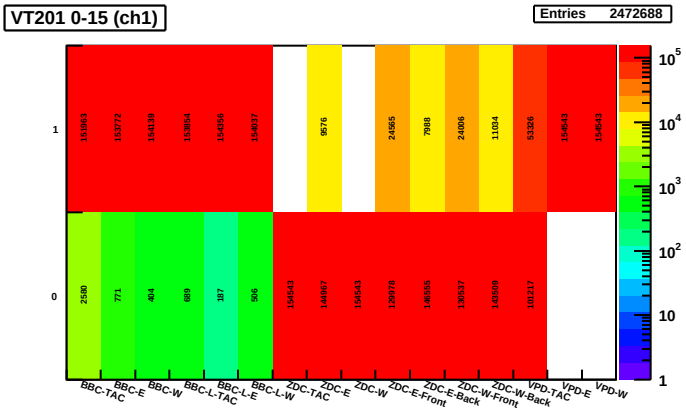

Input to FE004 QT board
Entries4945376
ADC
channel

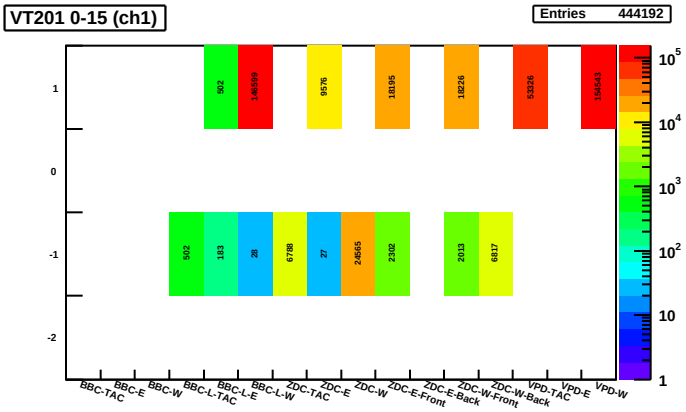

Input to FPE L1 DSM
Entries 618172
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1

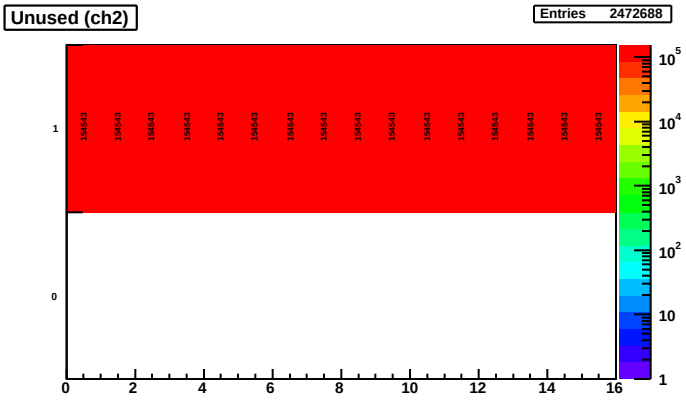

Input to FPE L1 DSM
Entries 154438
ADC sum - simulated
200
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
10
1

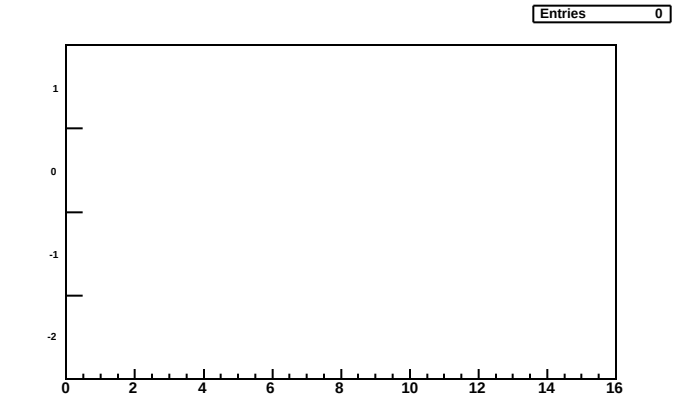

TF201 0-15 (ch0)
Entries 2472688
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

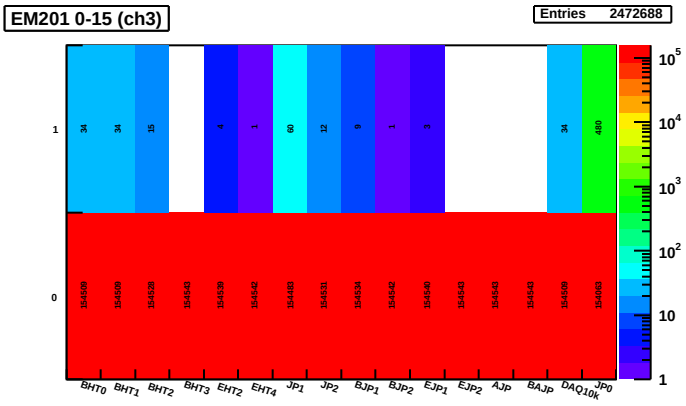

TF201 0-15 (ch0)
Entries 36460
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 2472688
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 444192
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


Unused (ch2)
Entries 2472688


Entries 0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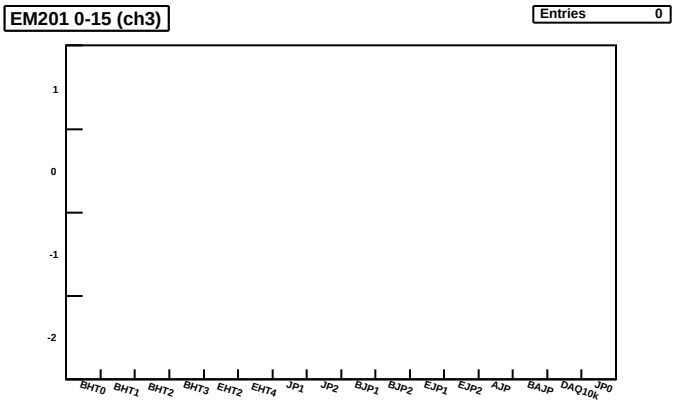
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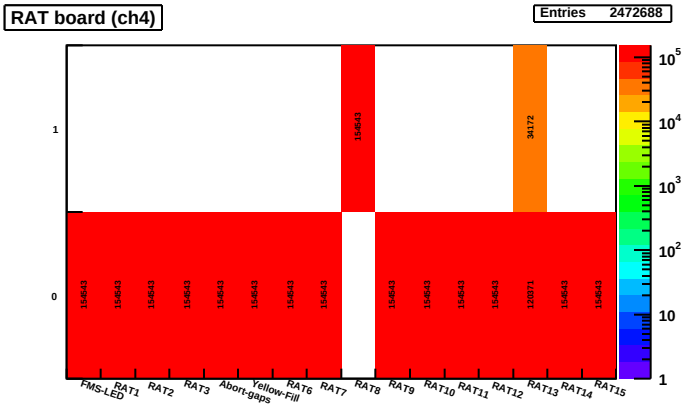
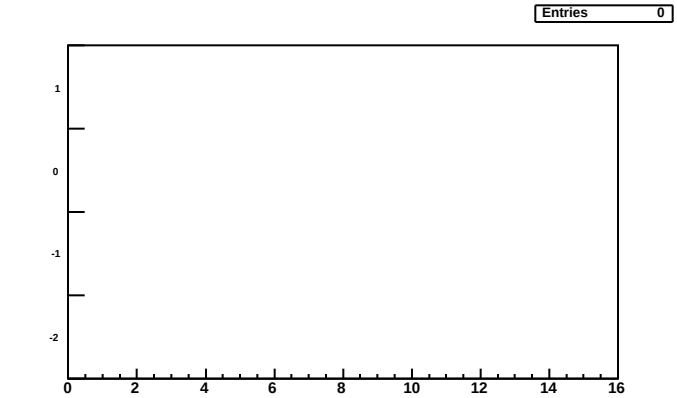
RAT board (ch4)





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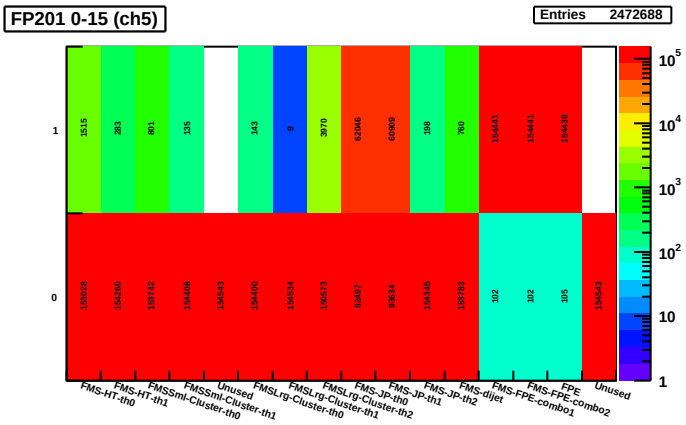

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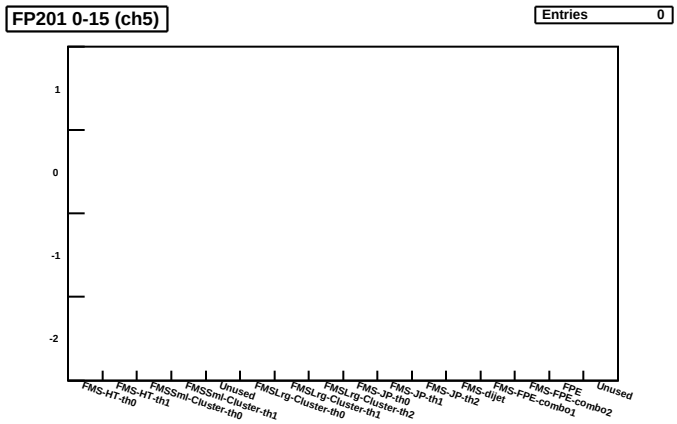

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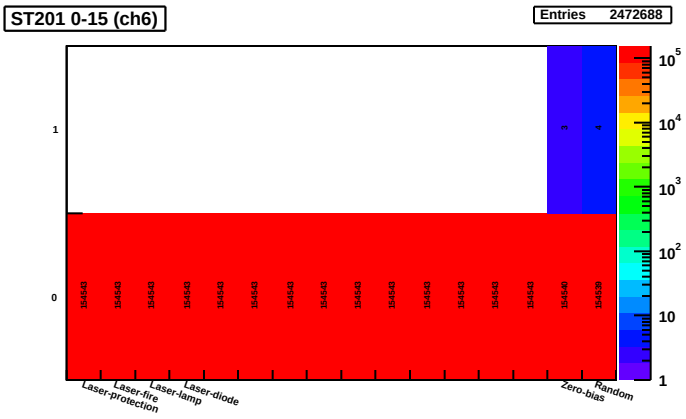

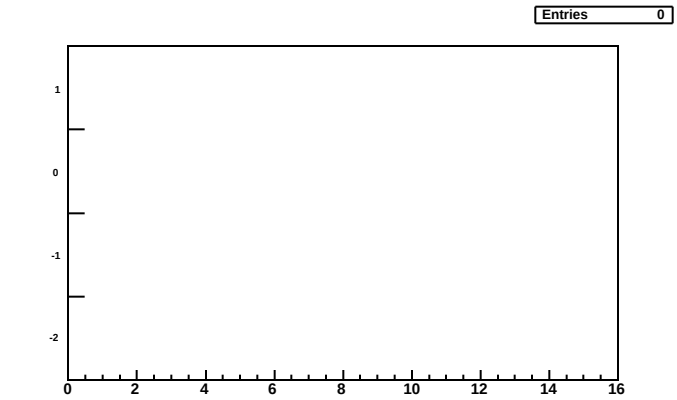
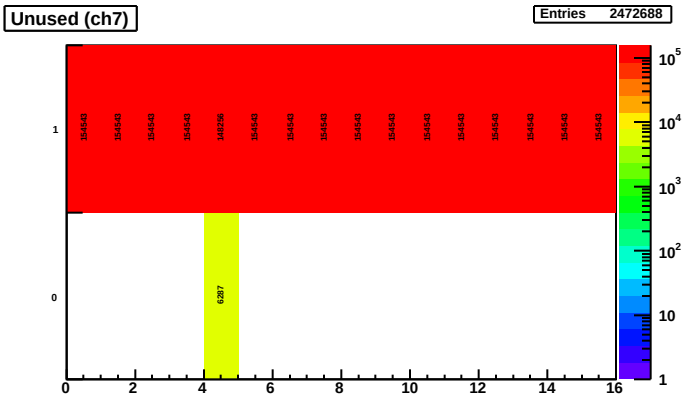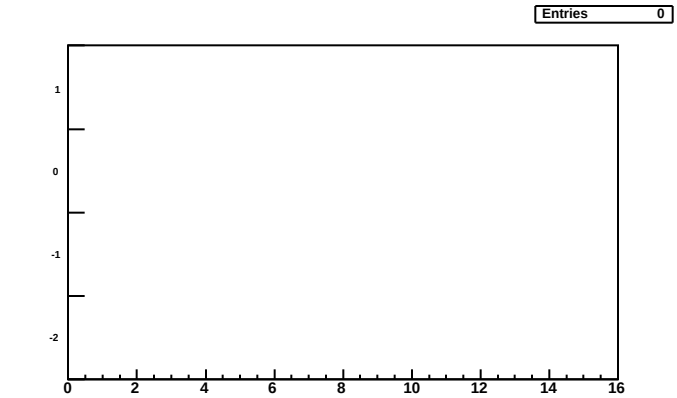
Unused (ch7)