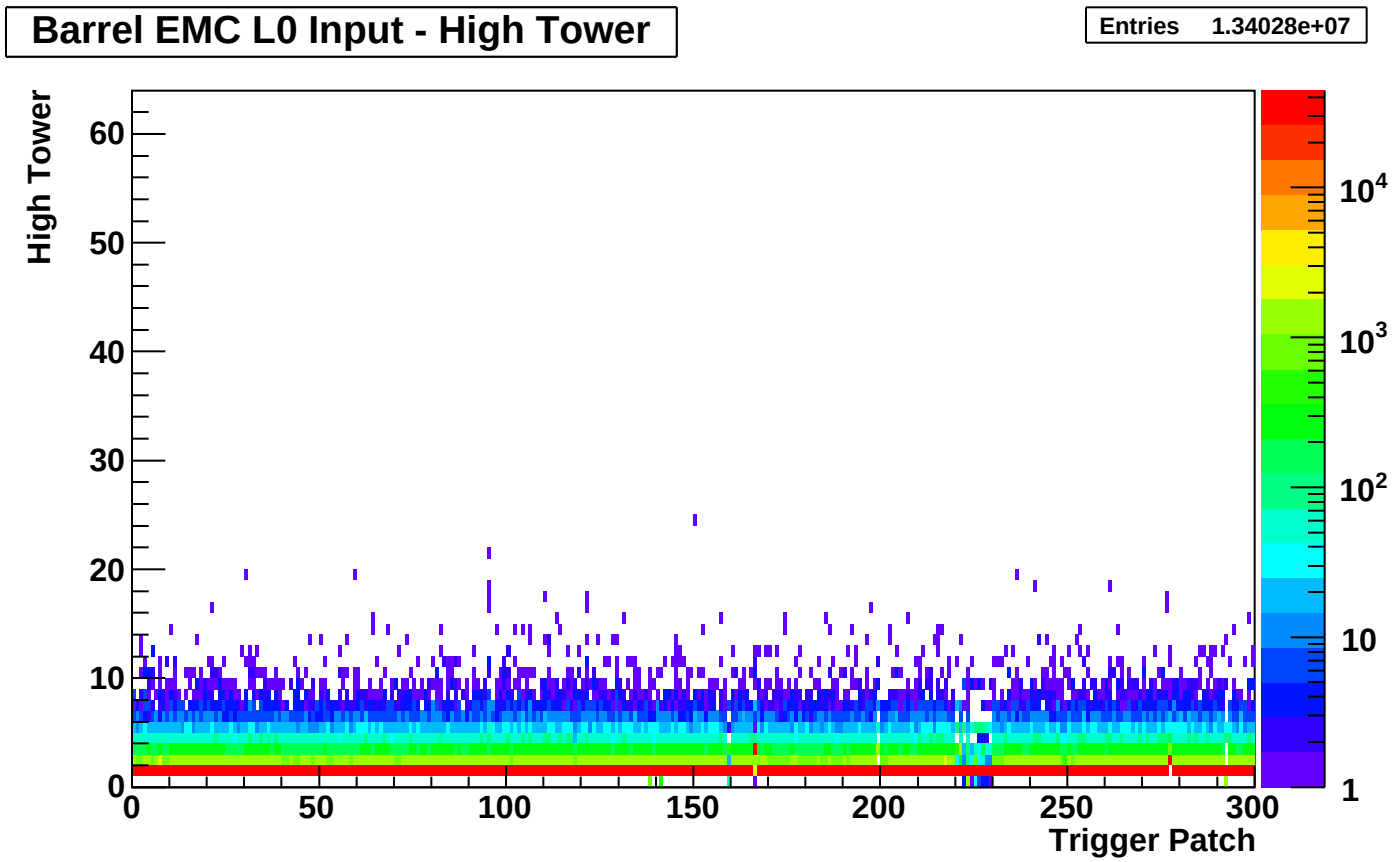
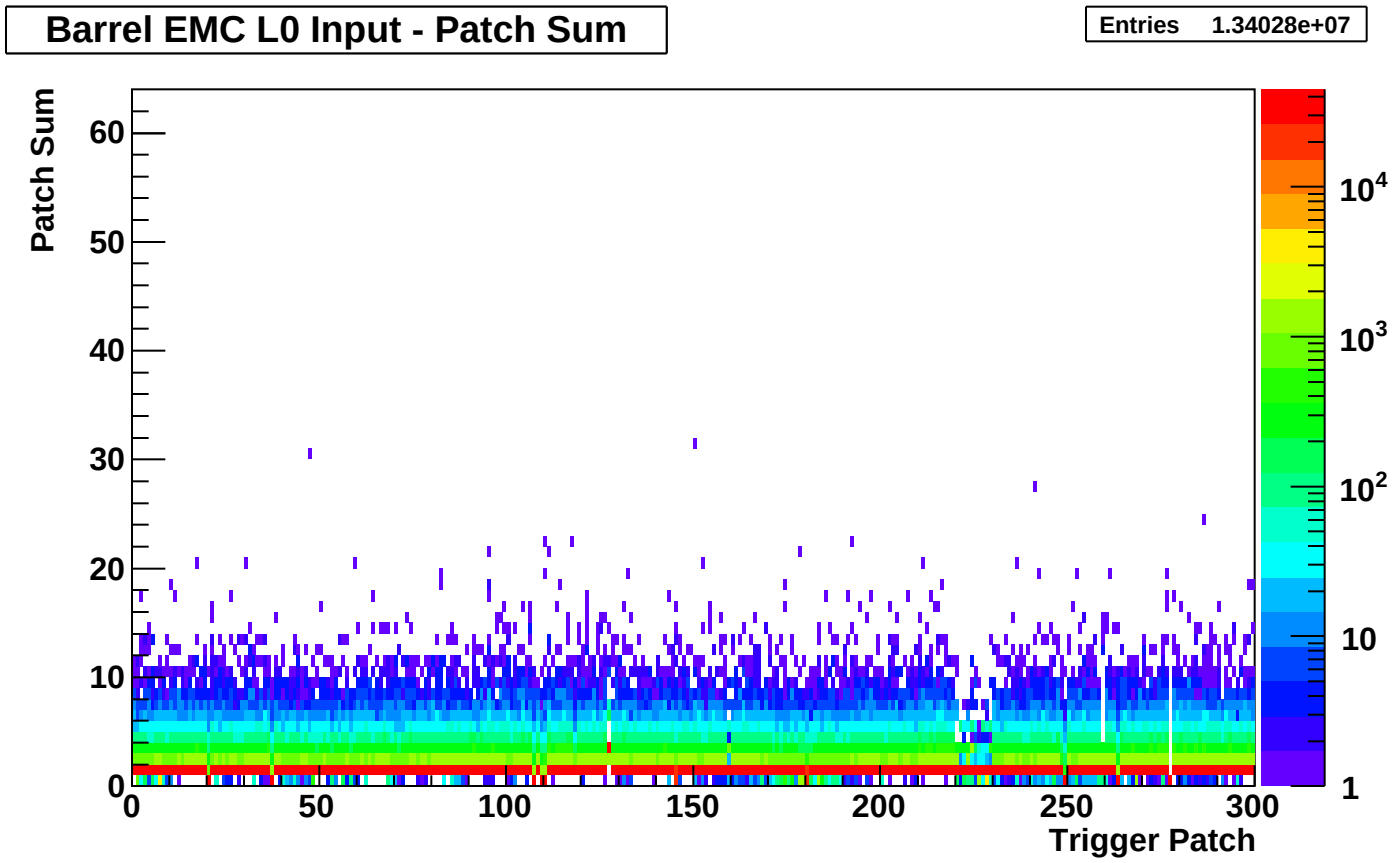
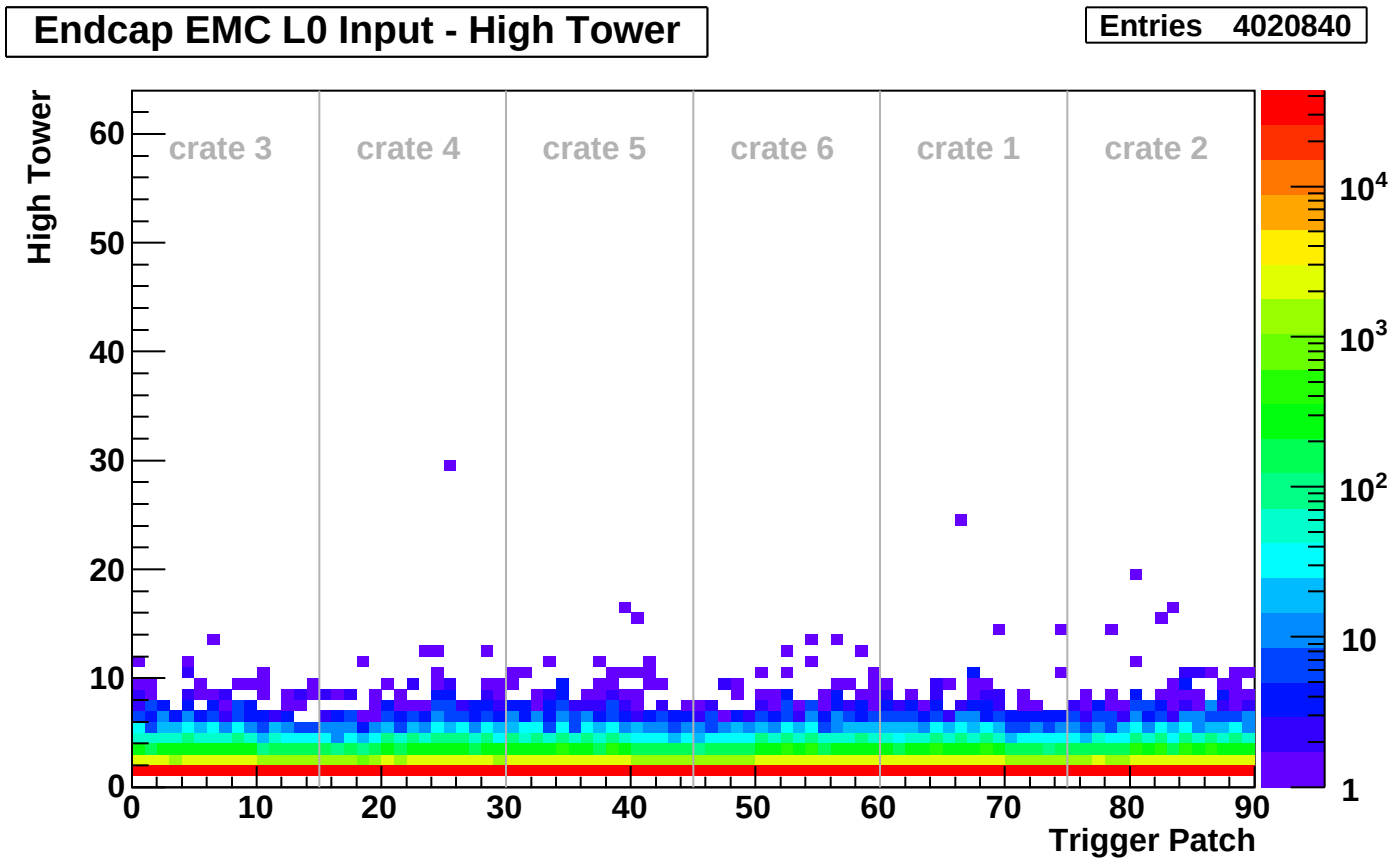
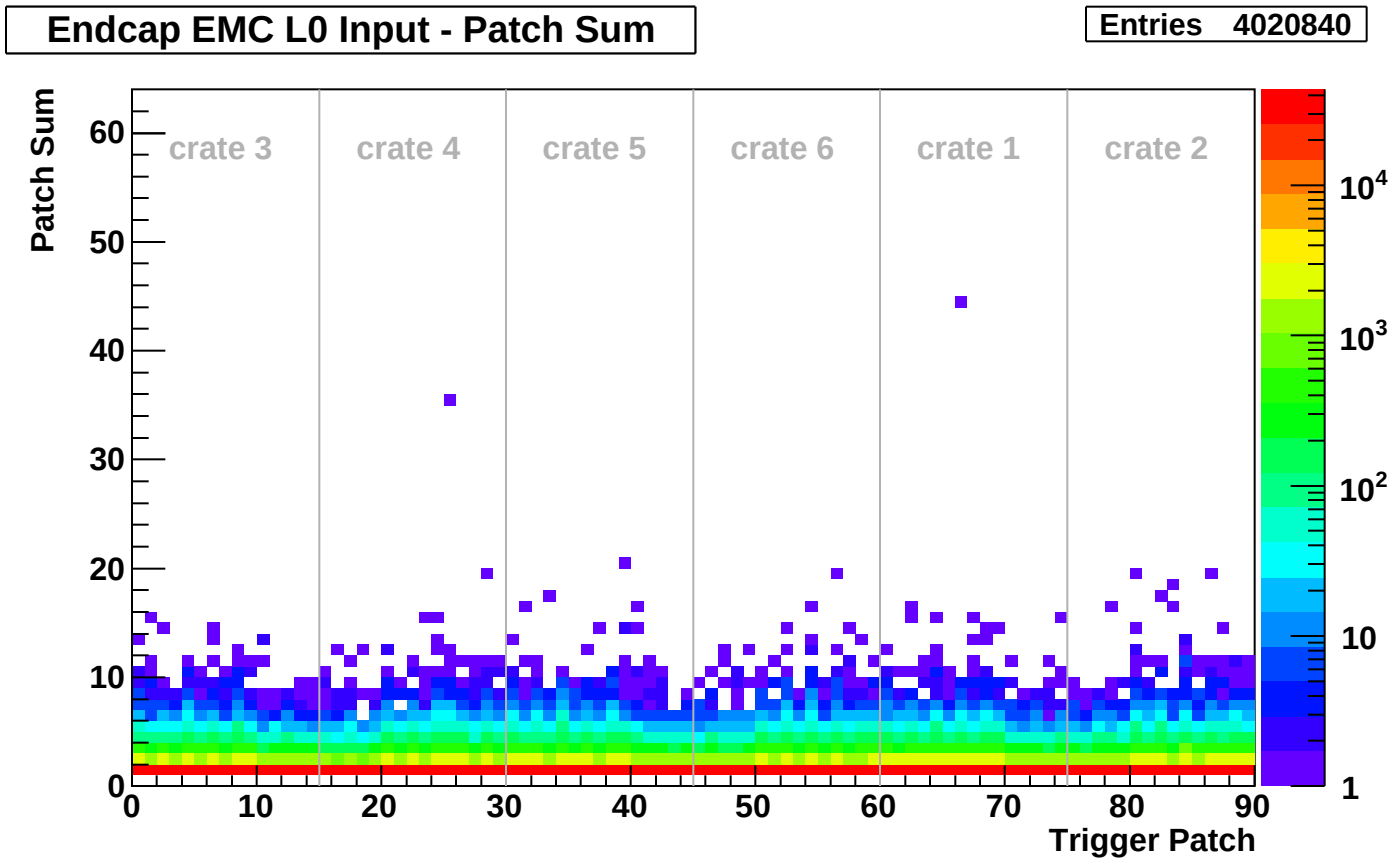
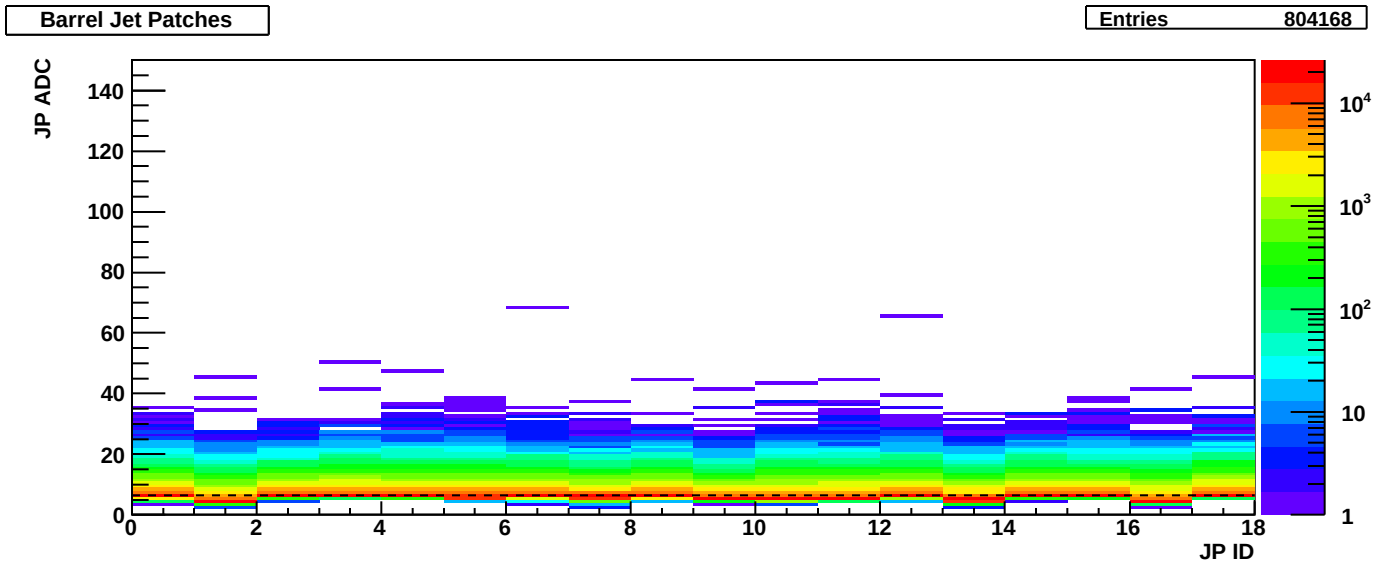
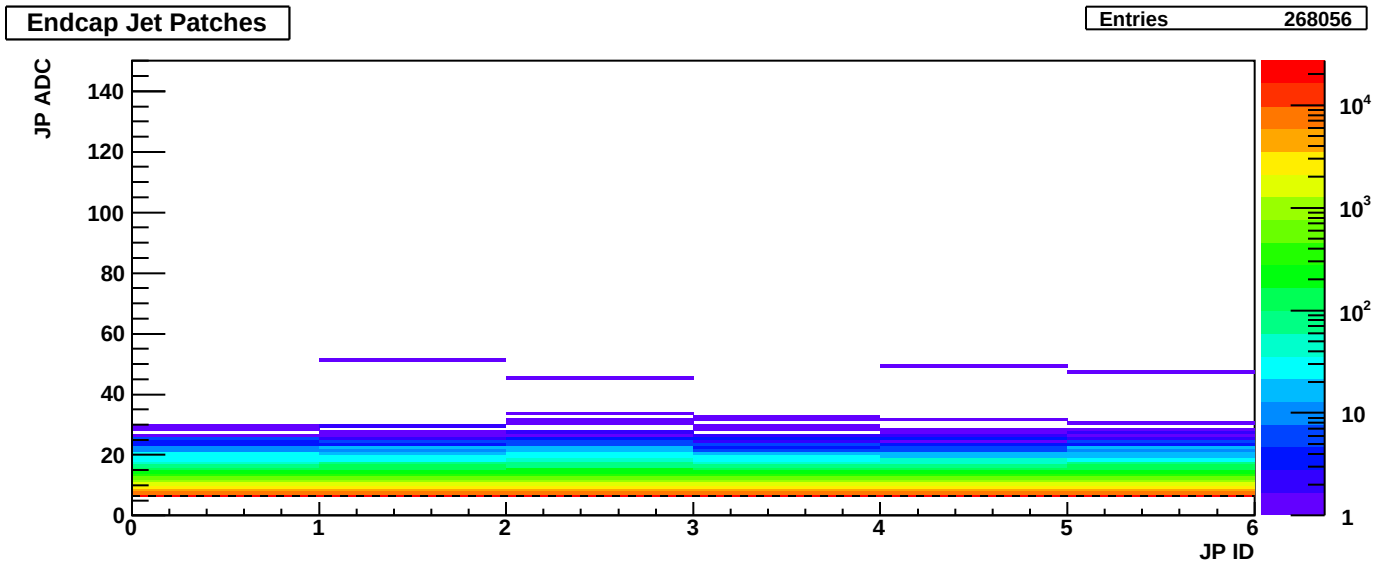

Barrel EMC L0 Input - High Tower
Entries 1.34028e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

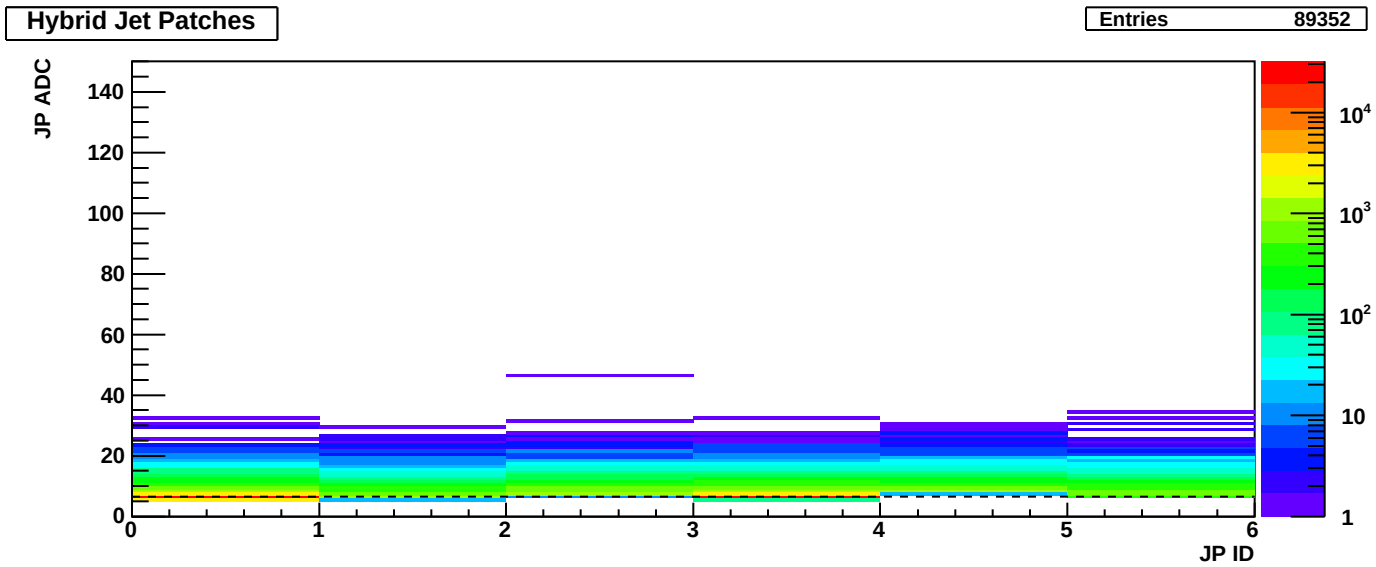

Barrel EMC L0 Input - Patch Sum
Entries 1.34028e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

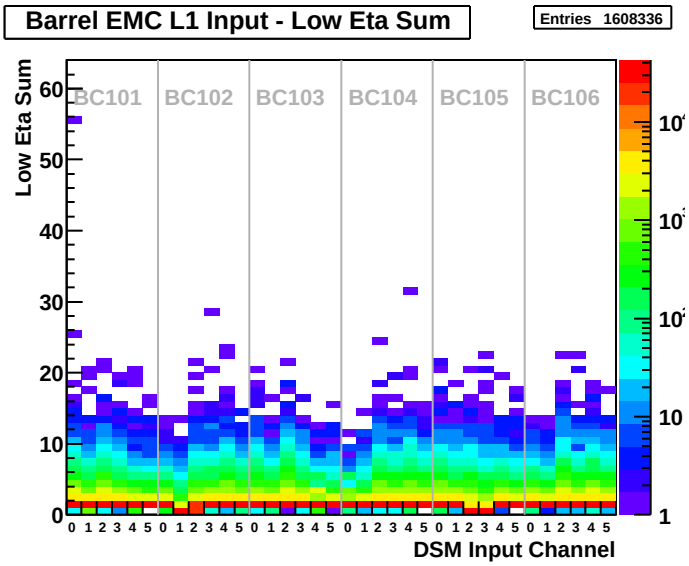

Endcap EMC L0 Input - High Tower
Entries 4020840
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

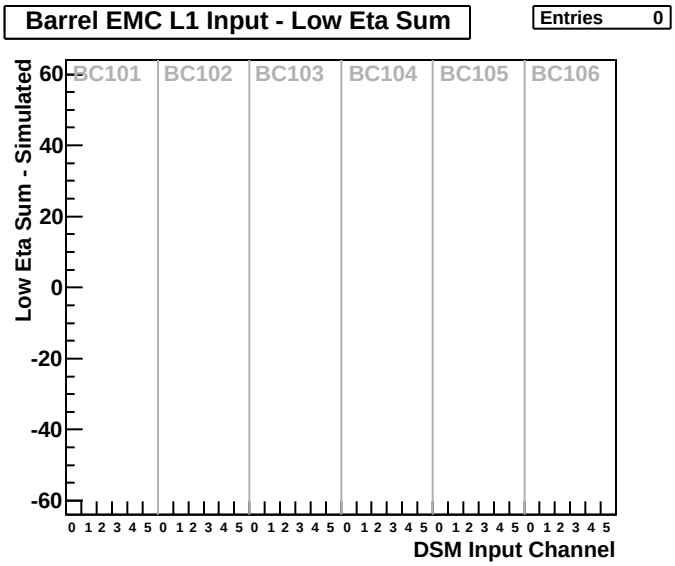

Endcap EMC L0 Input - Patch Sum
Entries 4020840
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

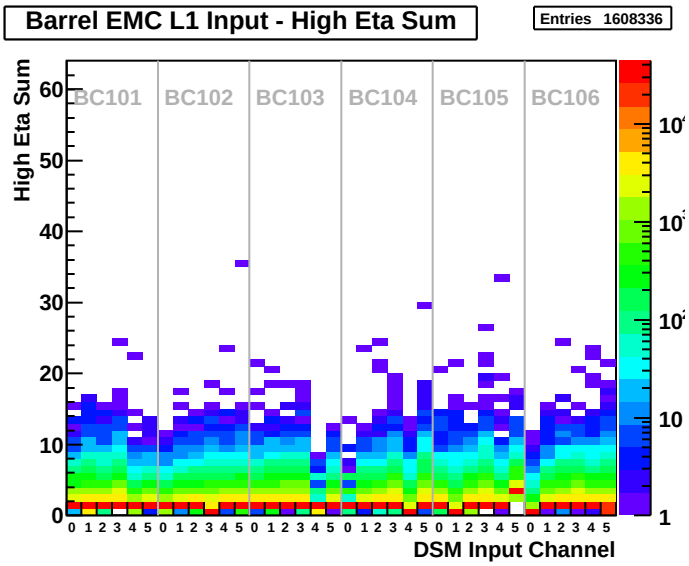

Barrel Jet Patches
Entries 804168
JP ADC
JP ID

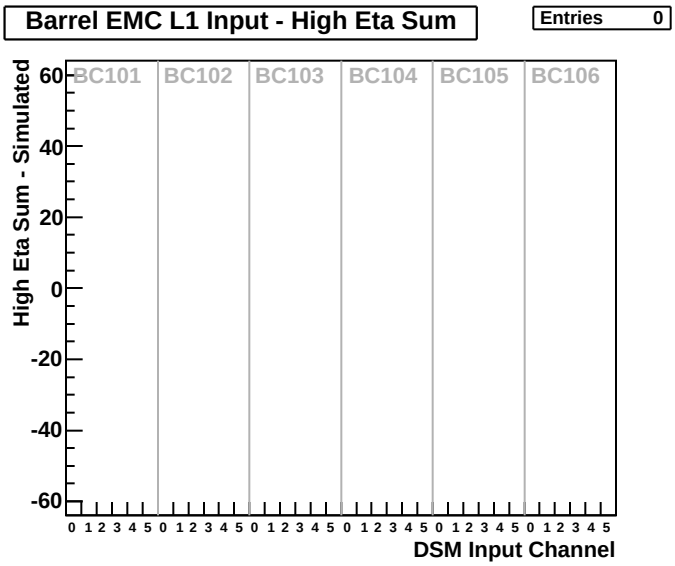

Endcap Jet Patches
Entries 268056
JP ADC
JP ID

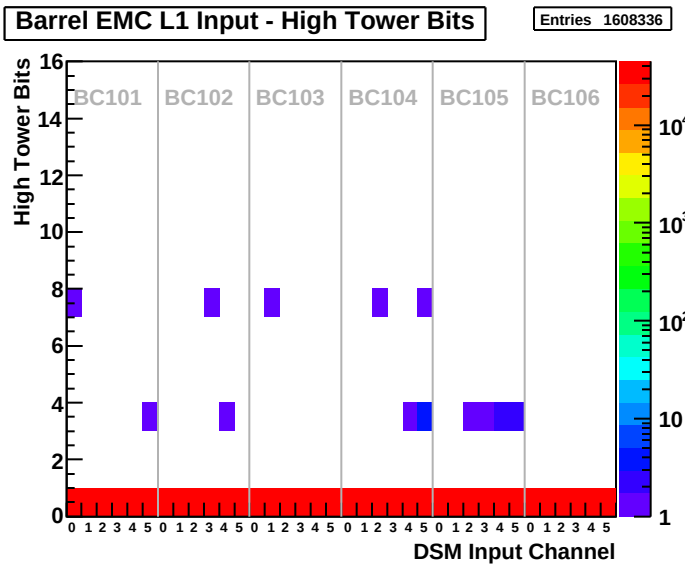

Hybrid Jet Patches
Entries 89352
JP ADC
JP ID

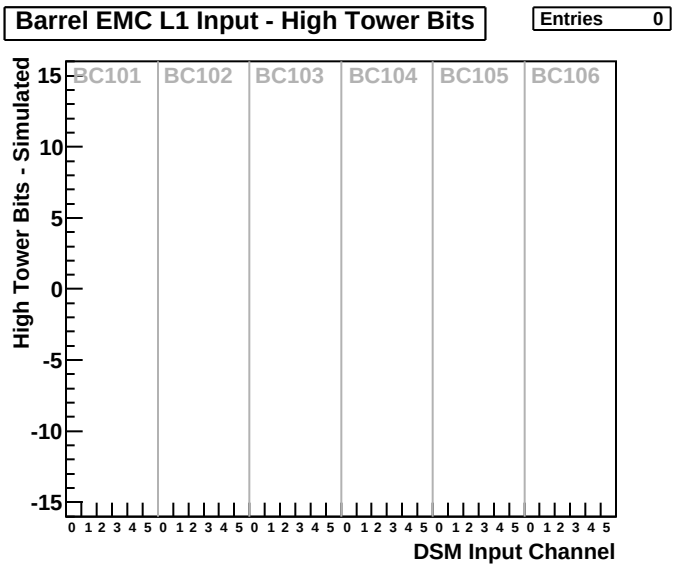

Barrel EMC L1 Input - Low Eta Sum
Entries 1608336
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

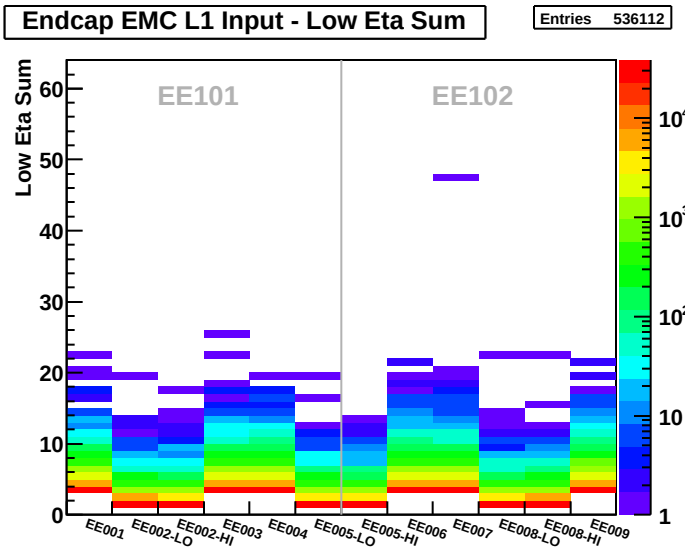

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

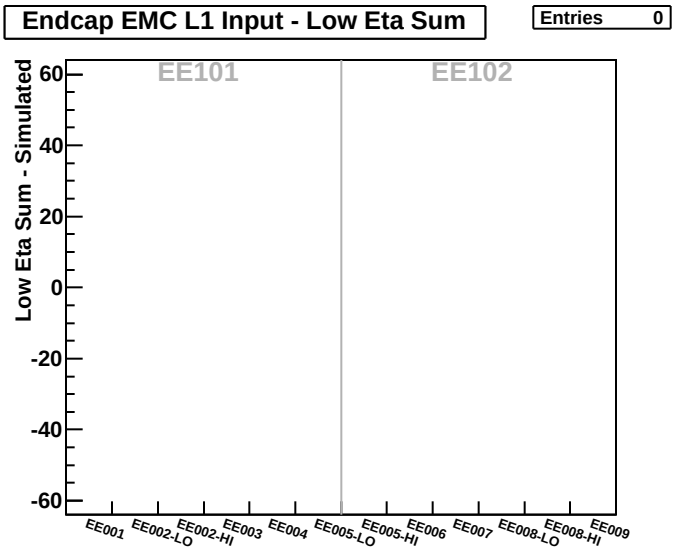

Barrel EMC L1 Input - High Eta Sum
Entries 1608336
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

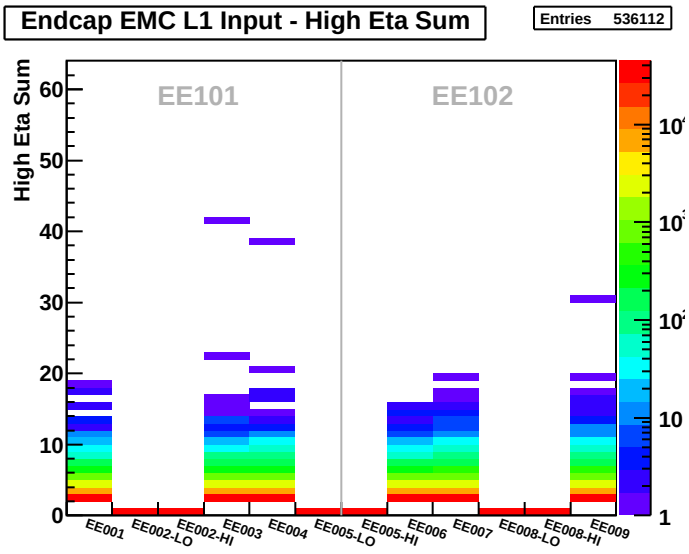

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

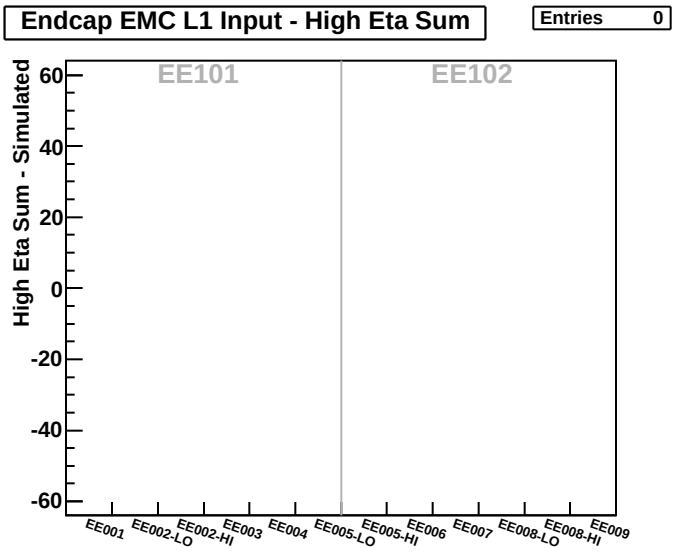

Barrel EMC L1 Input - High Tower Bits
Entries 1608336
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

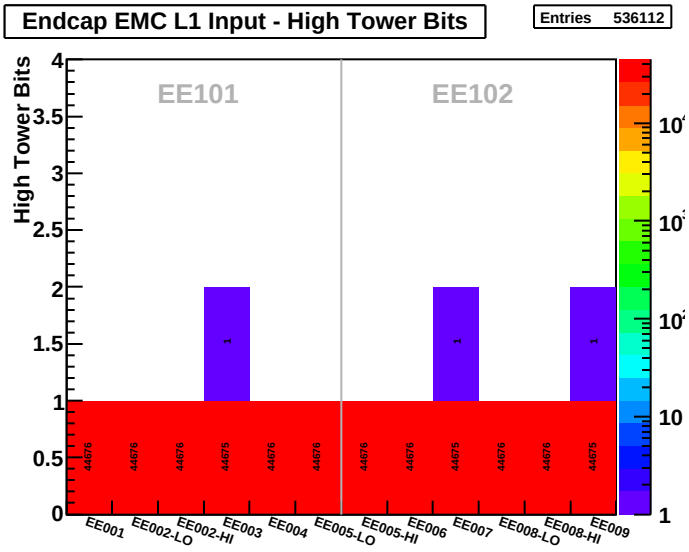

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

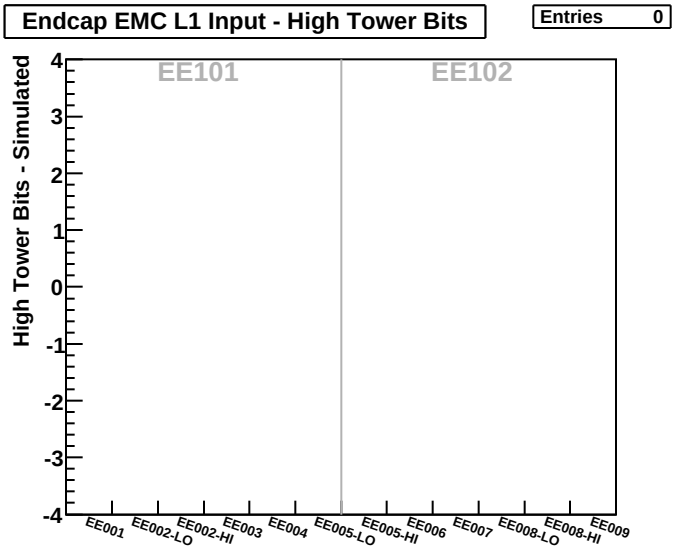

Endcap EMC L1 Input - Low Eta Sum
Entries 536112
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

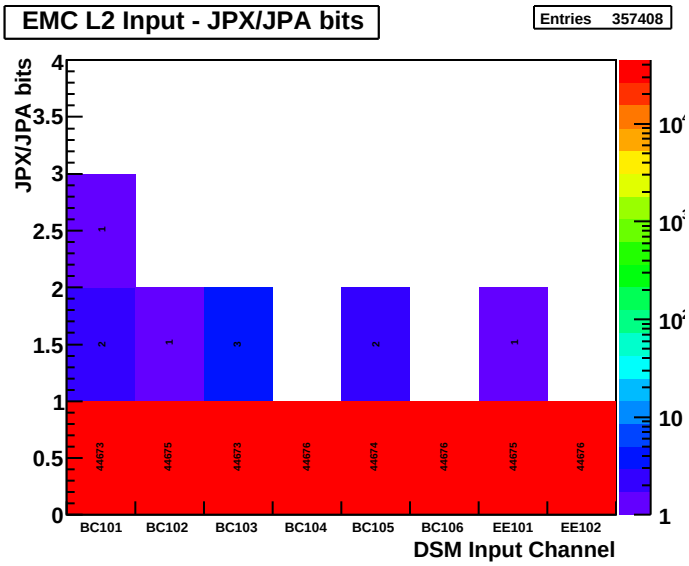

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

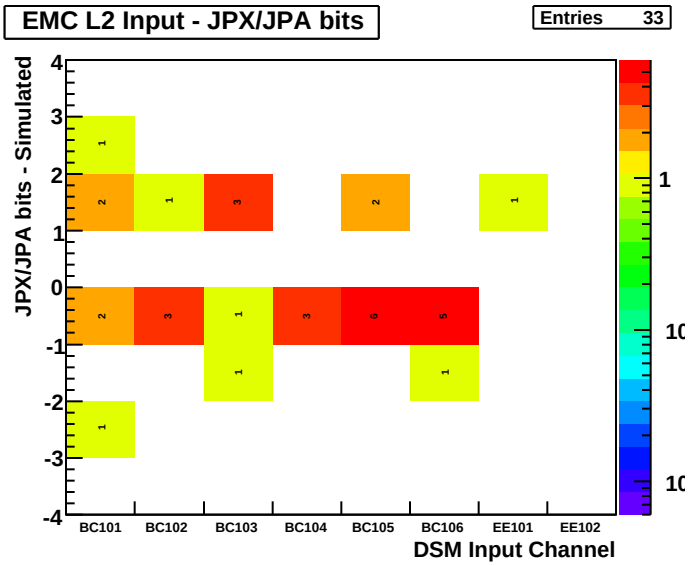

Endcap EMC L1 Input - High Eta Sum
Entries 536112
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

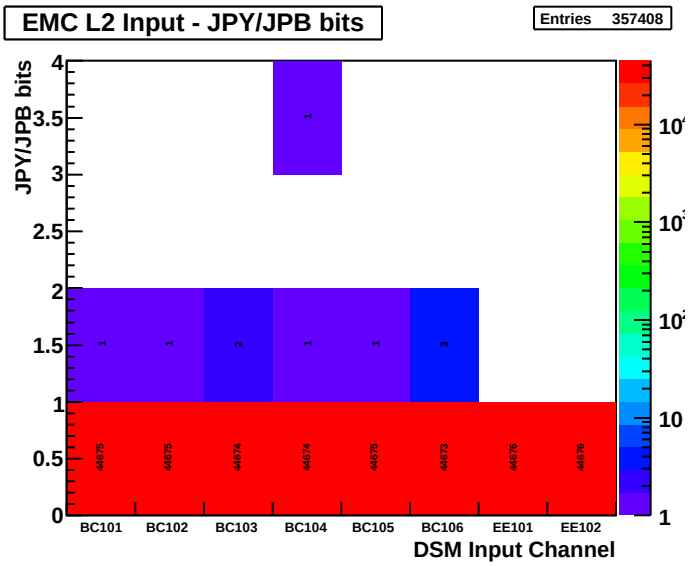

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

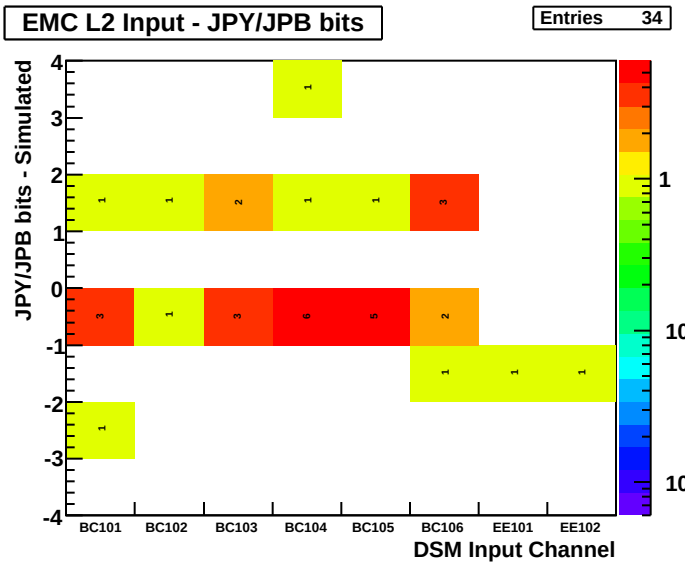

Endcap EMC L1 Input - High Tower Bits
Entries 536112
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

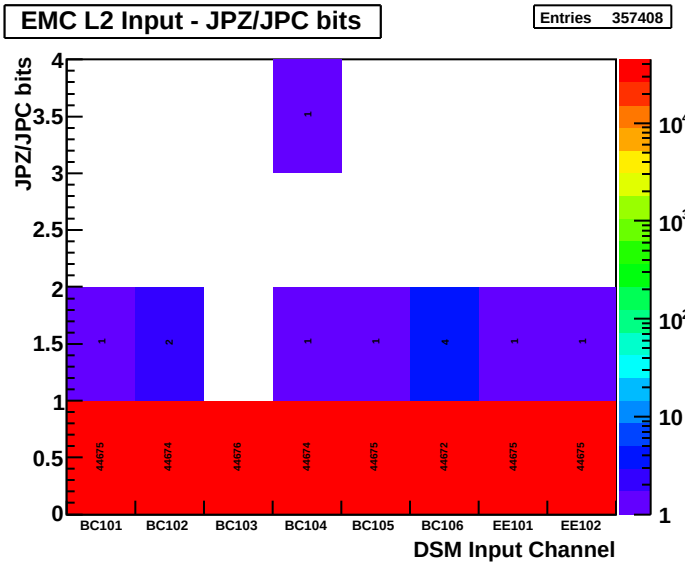

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

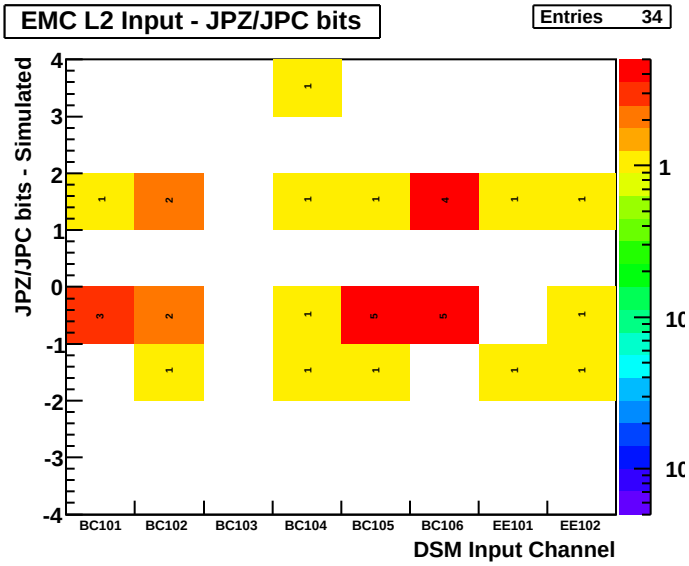

EMC L2 Input - JPX/JPA bits
Entries 357408
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

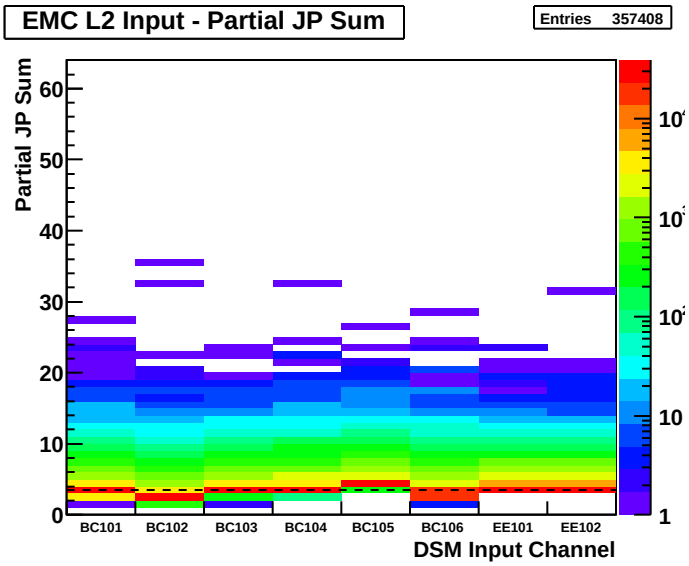

EMC L2 Input - JPX/JPA bits
Entries 33
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

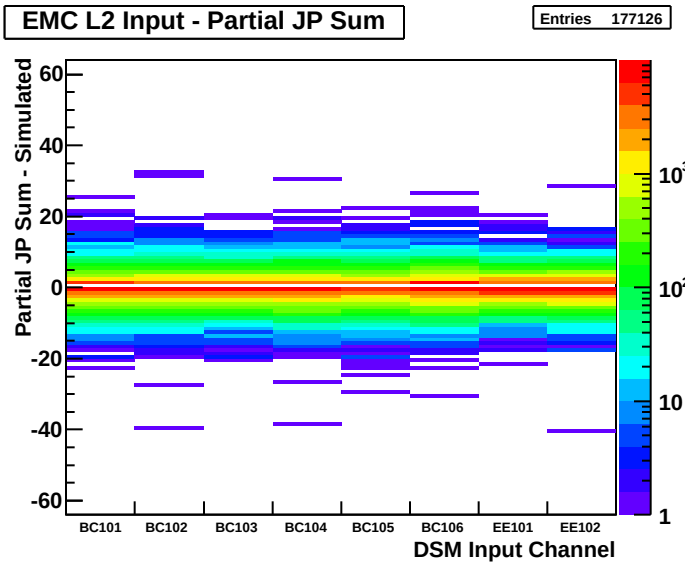

EMC L2 Input - JPY/JPB bits
Entries 357408
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

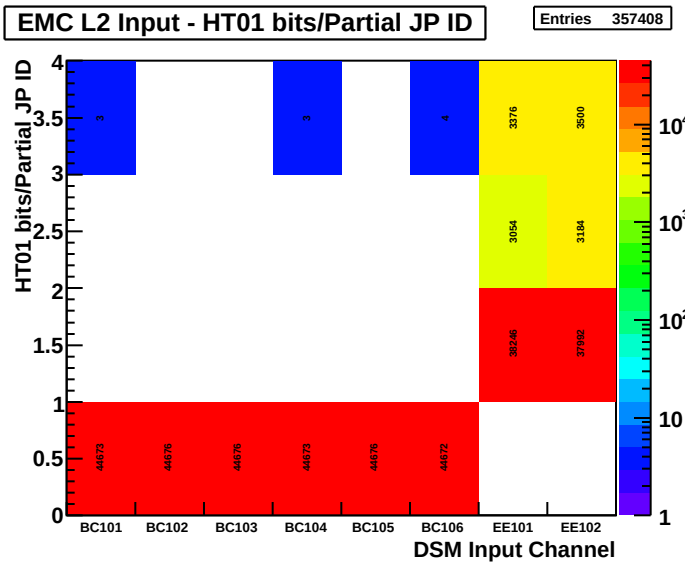

EMC L2 Input - JPY/JPB bits
Entries 34
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

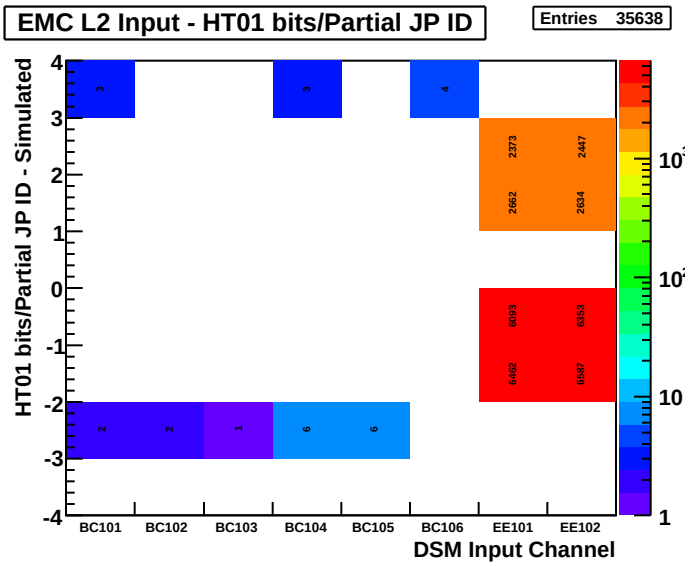

EMC L2 Input - JPZ/JPC bits
Entries 357408
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

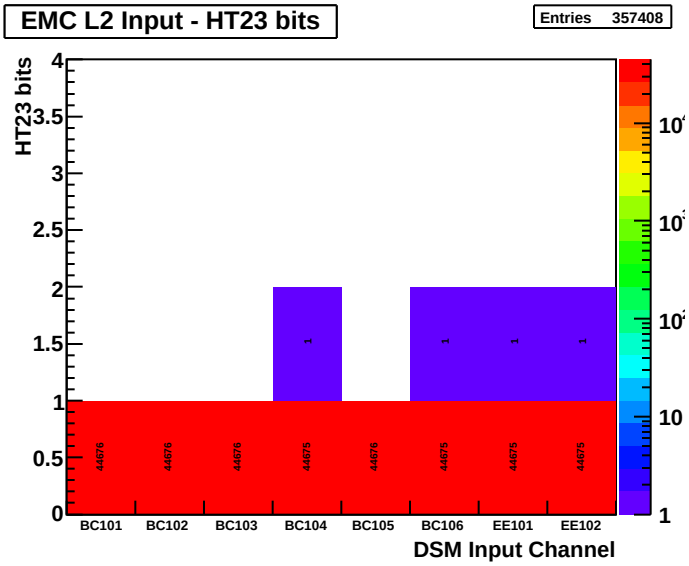

EMC L2 Input - JPZ/JPC bits
Entries 34
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

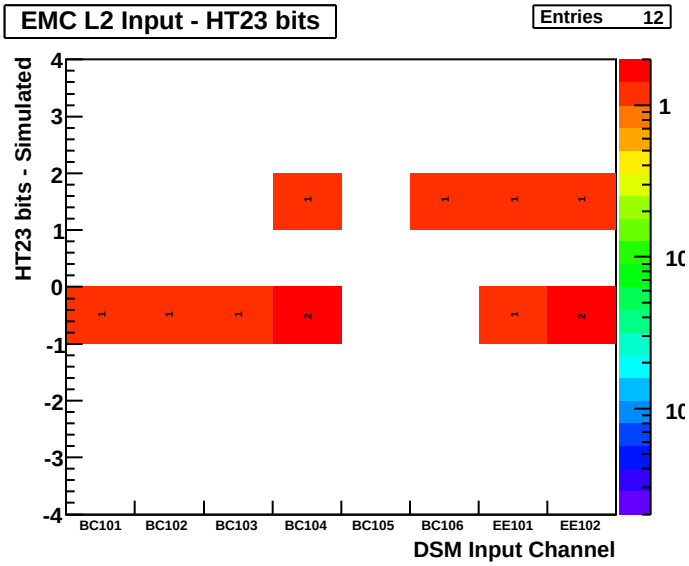

EMC L2 Input - Partial JP Sum
Entries 357408
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

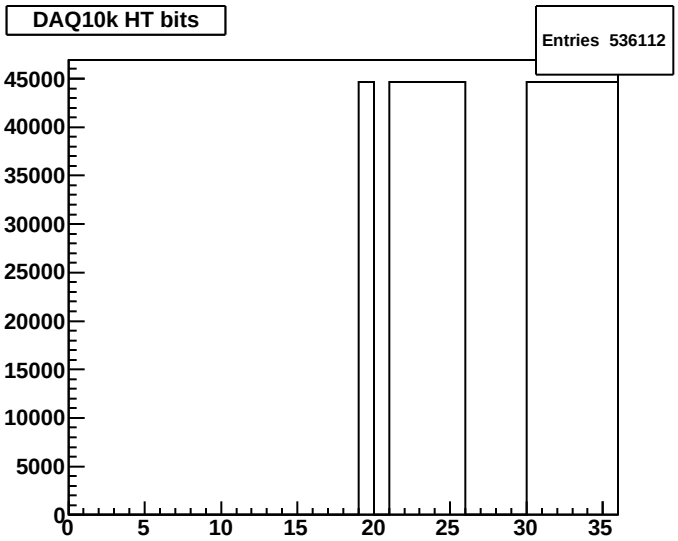

EMC L2 Input - Partial JP Sum
Entries 177126
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

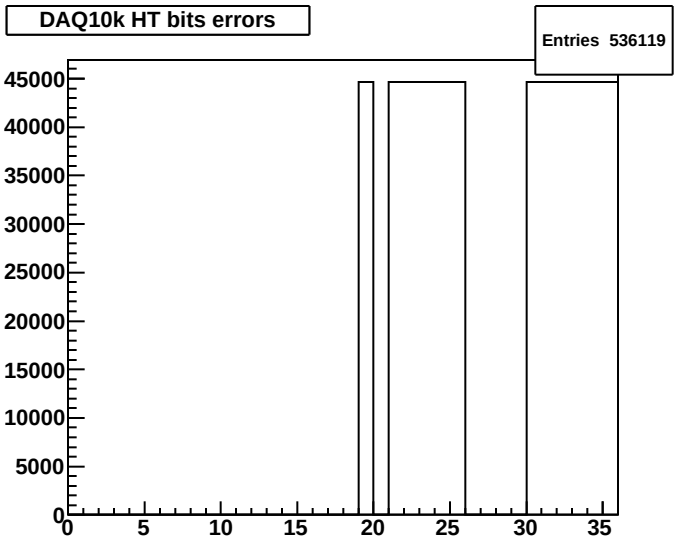

EMC L2 Input - HT01 bits/Partial JP ID
Entries 357408
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

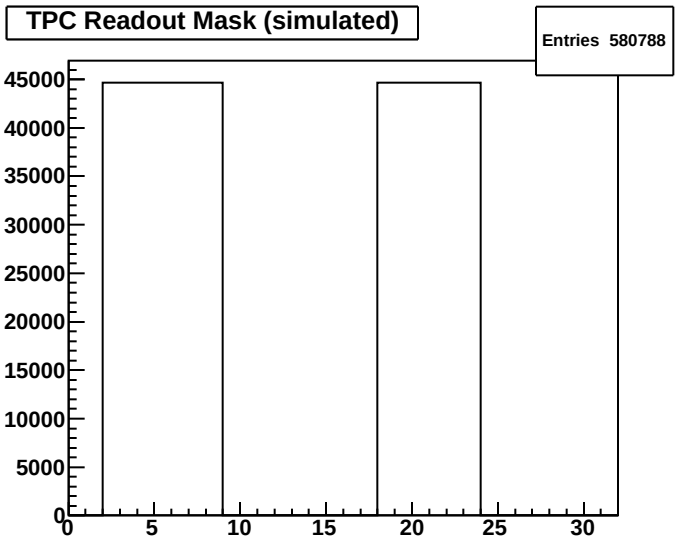

EMC L2 Input - HT01 bits/Partial JP ID
Entries 35638
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

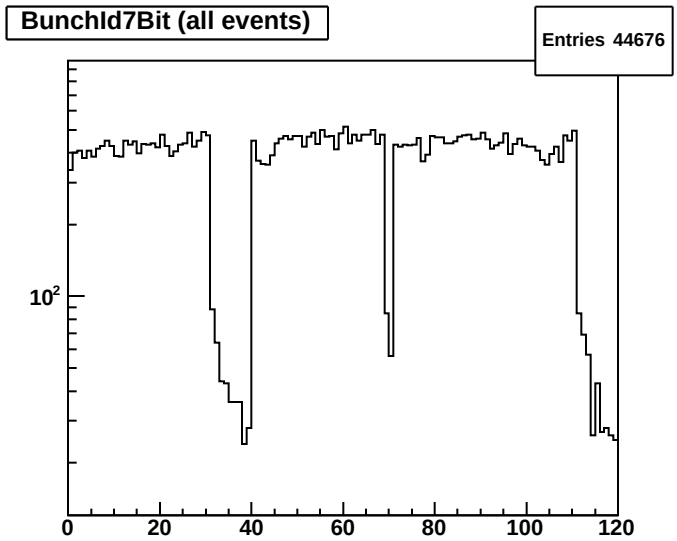

EMC L2 Input - HT23 bits
Entries 357408
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

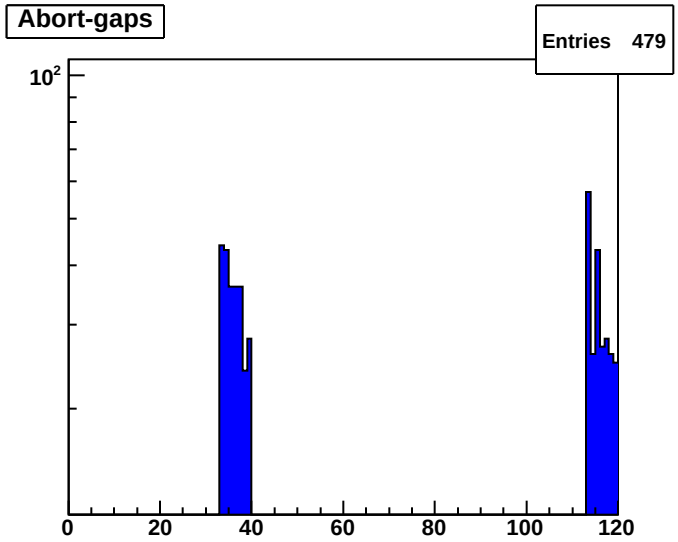

EMC L2 Input - HT23 bits
Entries 12
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

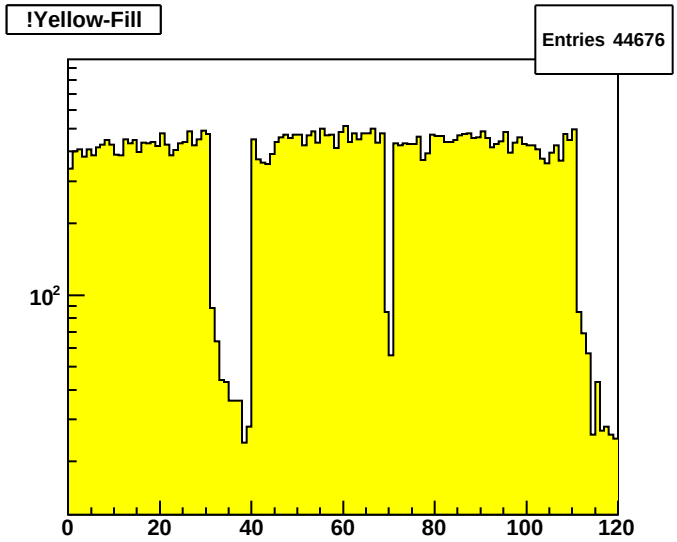

DAQ10k HT bits
Entries 536112
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

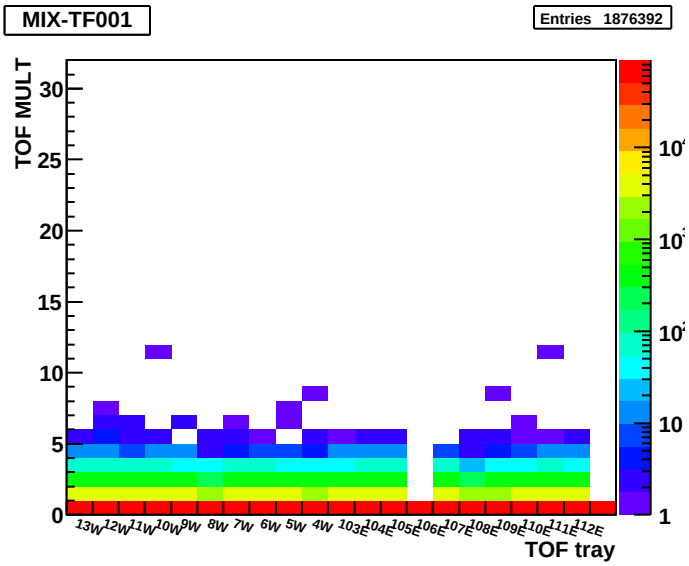

DAQ10k HT bits errors
Entries 536119
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

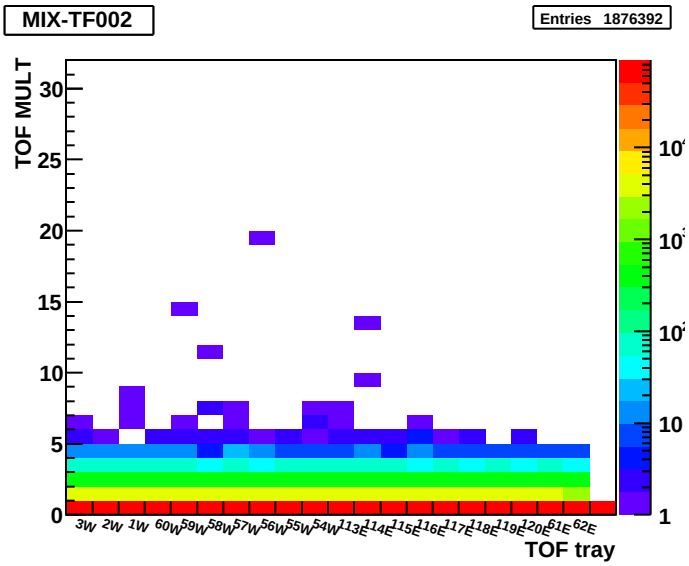

TPC Readout Mask (simulated)
Entries 580788
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30

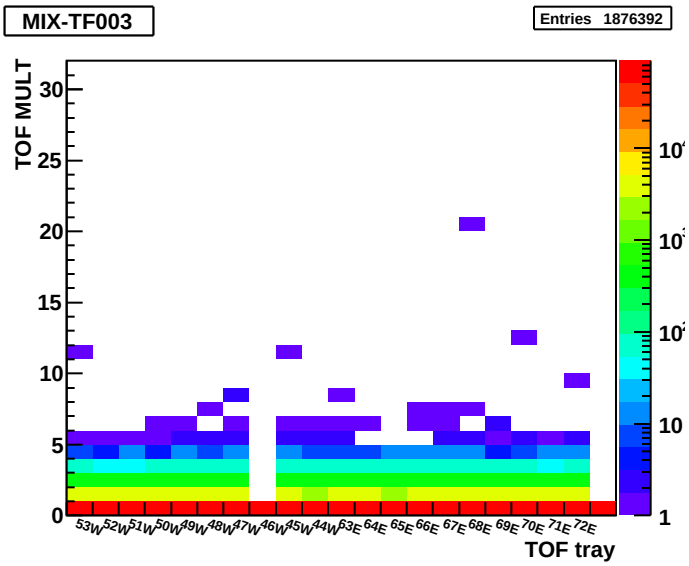

BunchId7Bit (all events)
Entries 44676
10^2
0 20 40 60 80 100 120

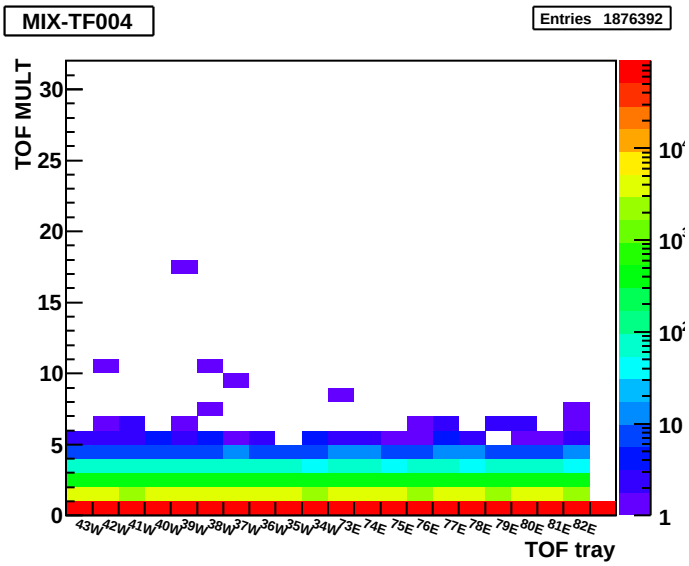

Abort-gaps
Entries 479
10^2
0 20 40 60 80 100 120

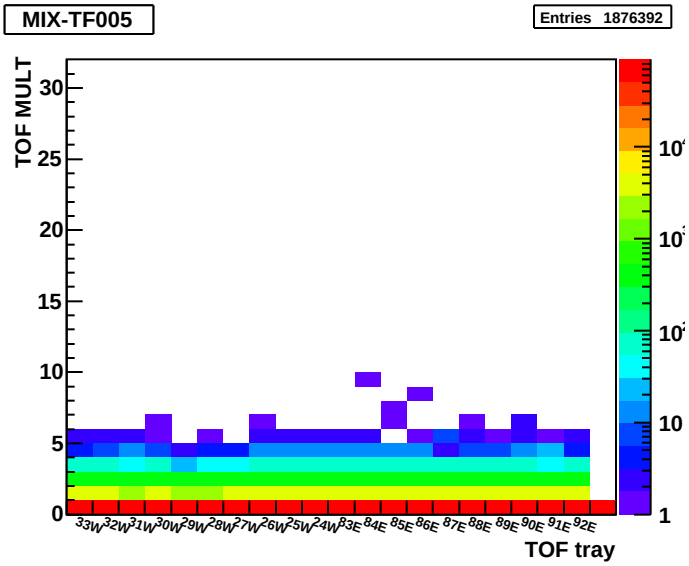

!Yellow-Fill
Entries 44676
10^2
0 20 40 60 80 100 120

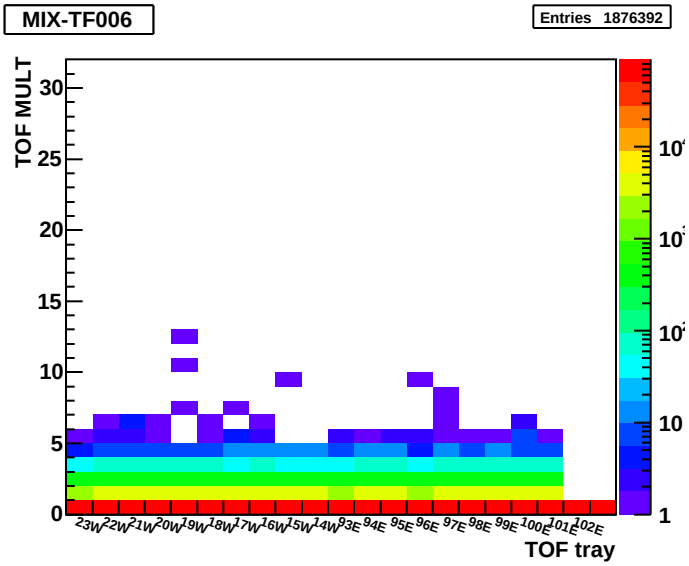

MIX-TF001
Entries 1876392
TOF MULT
TOF tray

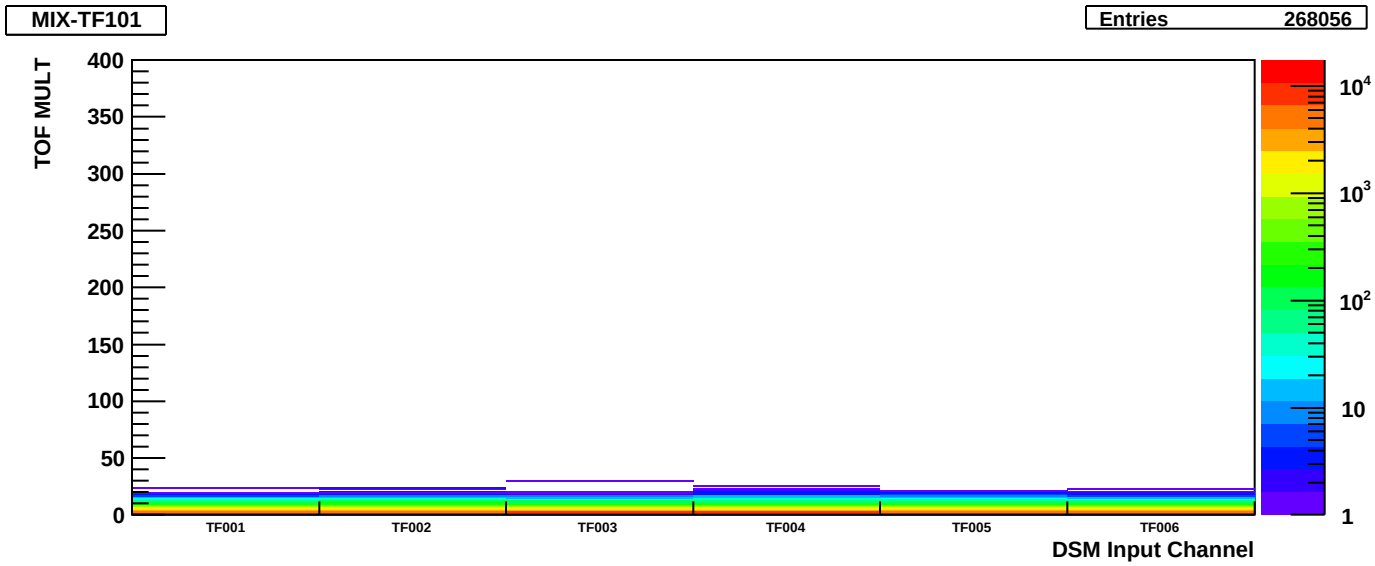

MIX-TF002
Entries 1876392
TOF MULT
TOF tray

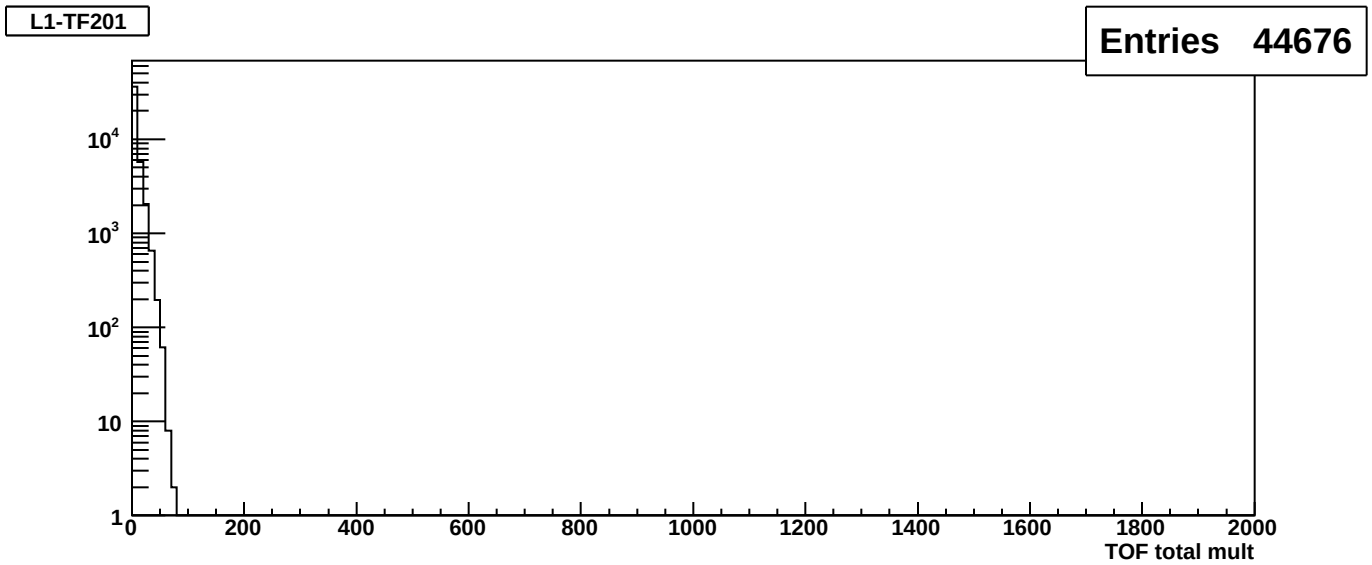

MIX-TF003
Entries 1876392
TOF MULT
TOF tray

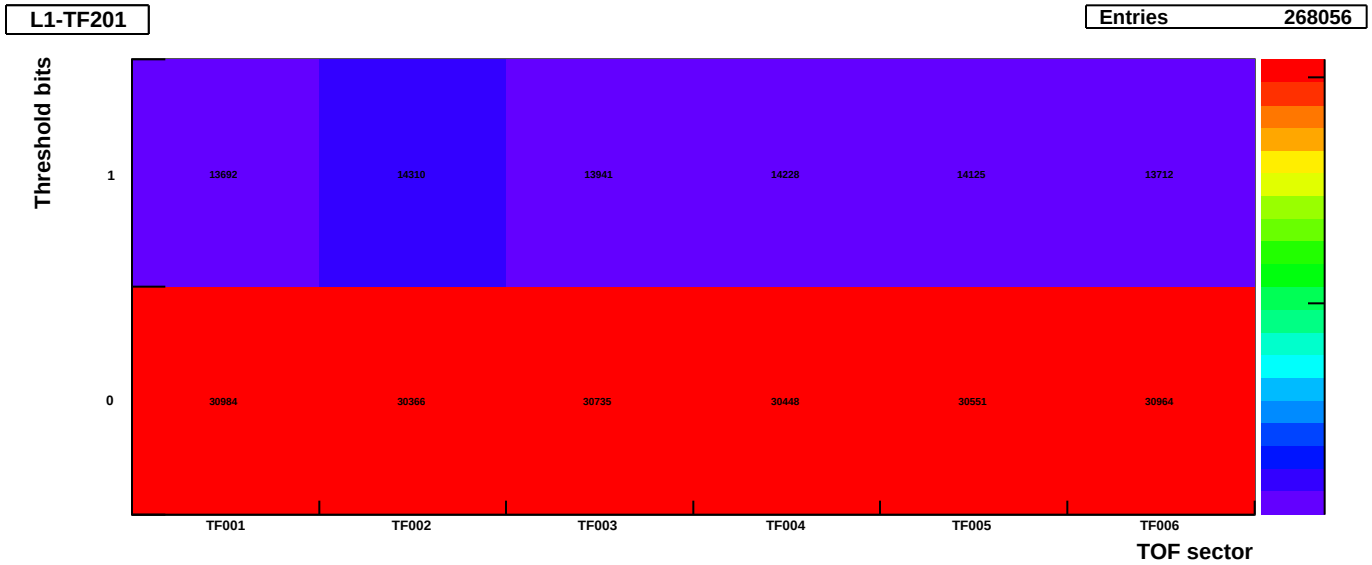

MIX-TF004
Entries 1876392
TOF MULT
TOF tray

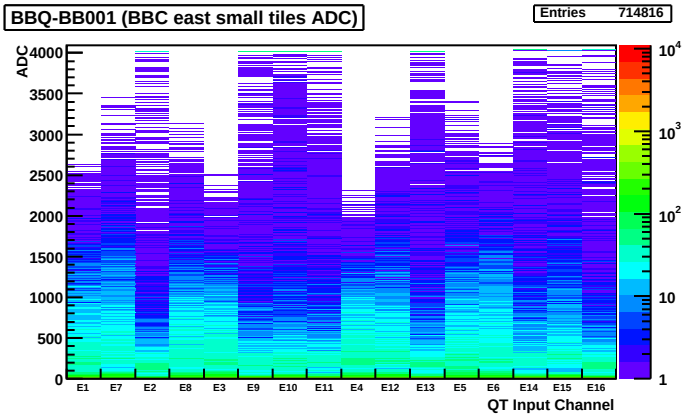

MIX-TF005
Entries 1876392
TOF MULT
TOF tray

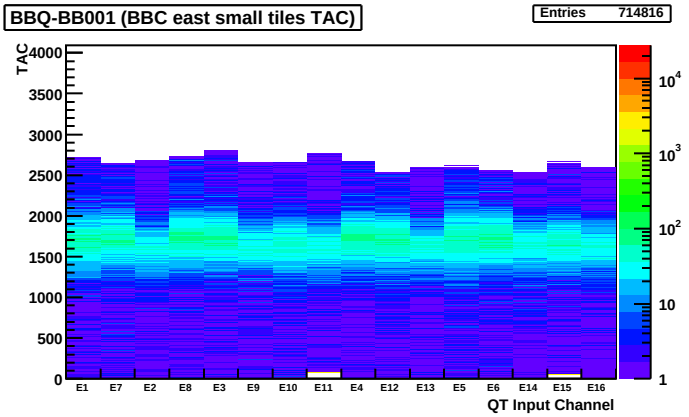

MIX-TF006
Entries 1876392
TOF MULT
TOF tray

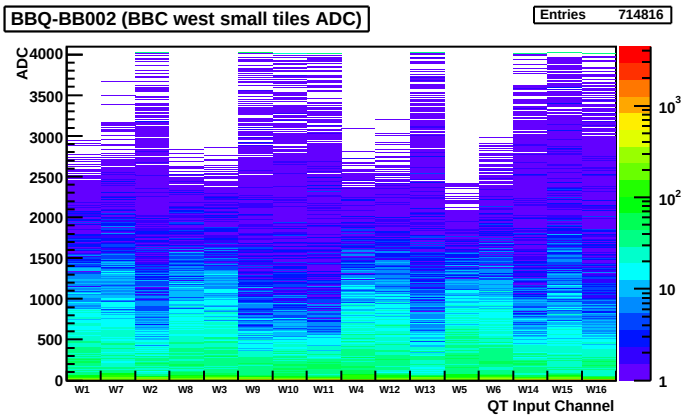

MIX-TF101
Entries 268056
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

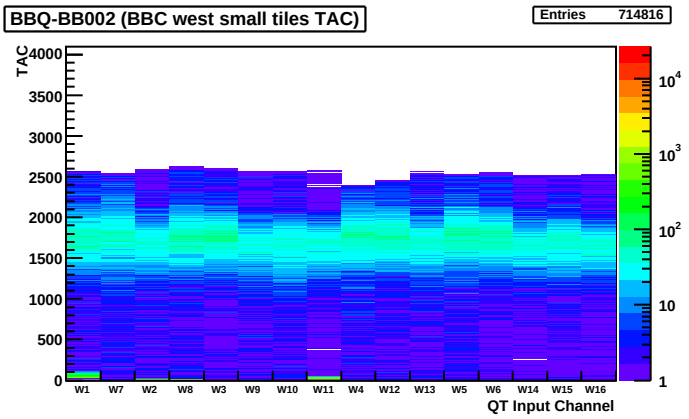

L1-TF201
Entries 44676
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

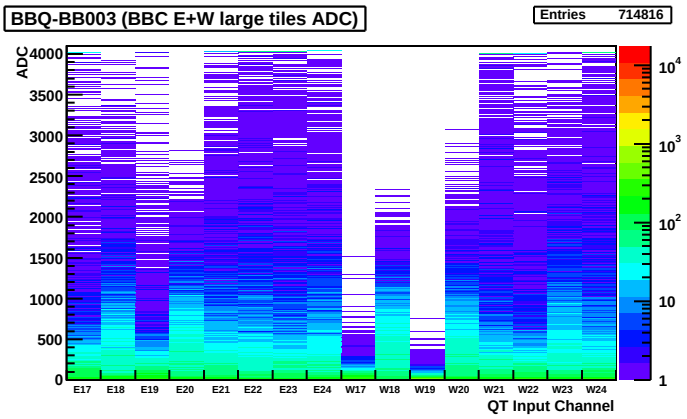

L1-TF201
Entries 268056
Threshold bits
1
0
13692
14310
13941
14228
14125
13712
30984
30366
30735
30448
30551
30964
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

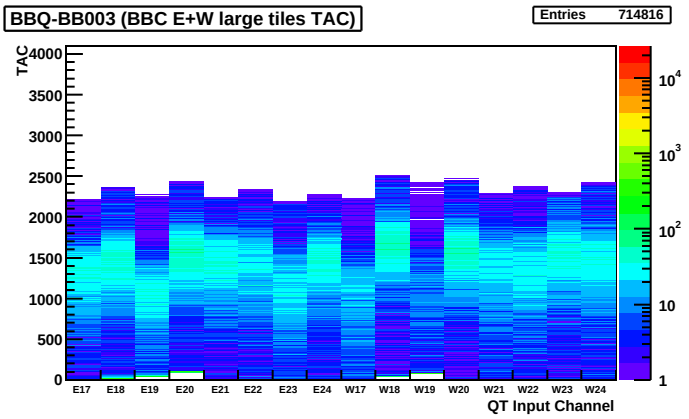

BBQ-BB001 (BBC east small tiles ADC)
Entries 714816
ADC
QT Input Channel

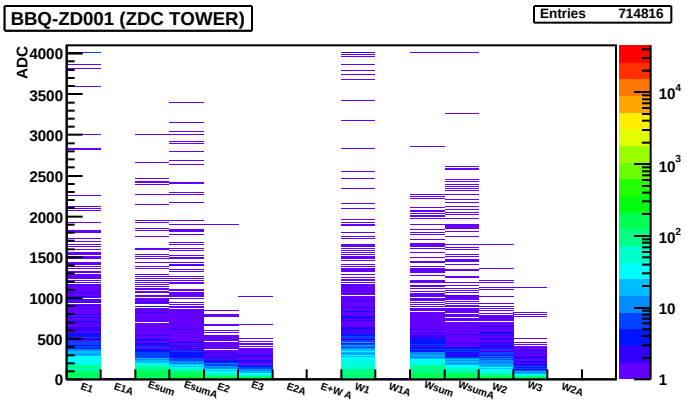

BBQ-BB001 (BBC east small tiles TAC)
Entries 714816
TAC
QT Input Channel

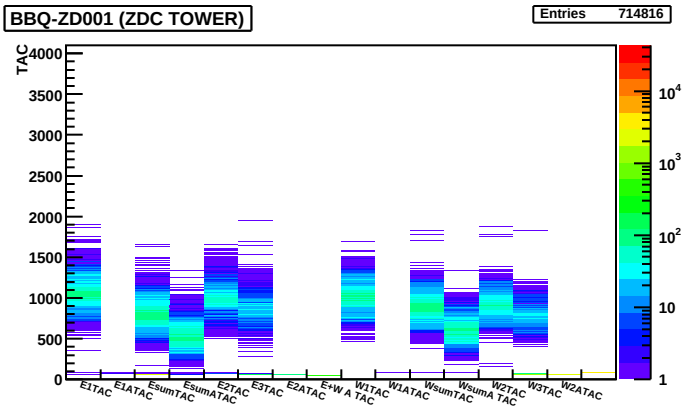

BBQ-BB002 (BBC west small tiles ADC)
Entries 714816
ADC
QT Input Channel

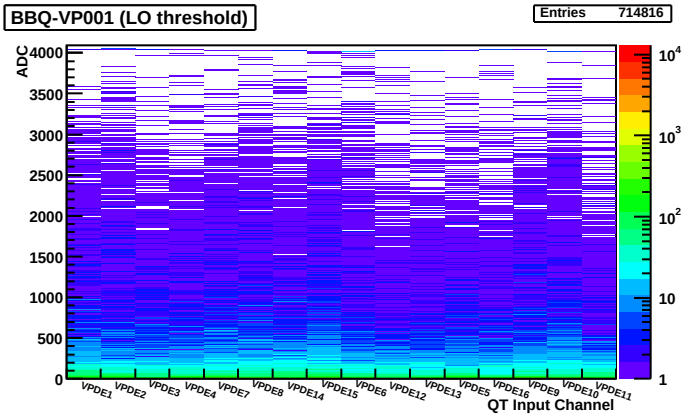

BBQ-BB002 (BBC west small tiles TAC)
Entries 714816
TAC
QT Input Channel

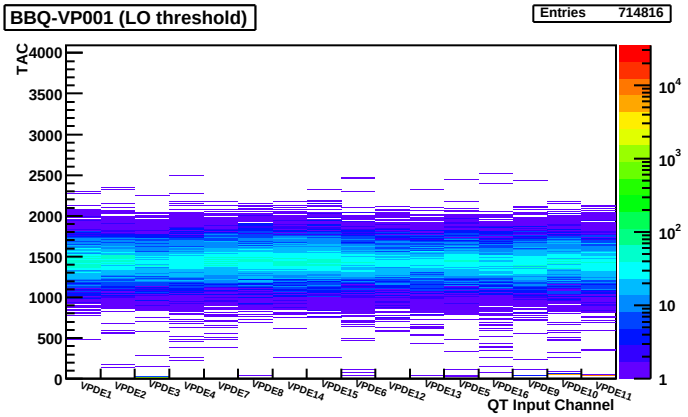

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 714816
ADC
QT Input Channel

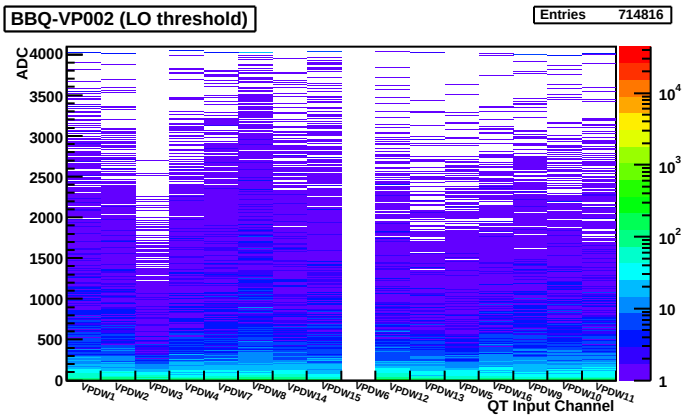

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 714816
TAC
QT Input Channel

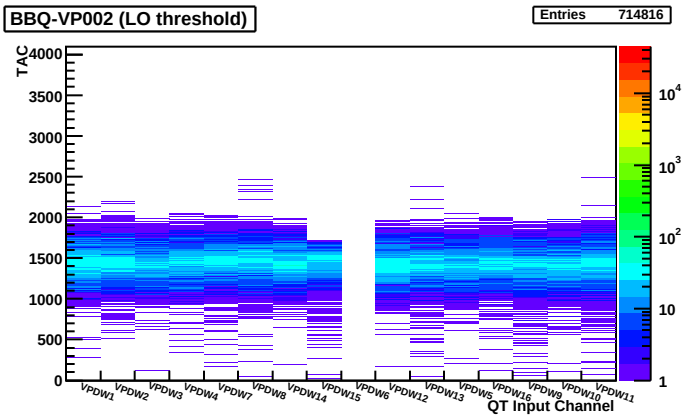

BBQ-ZD001 (ZDC TOWER)
Entries 714816
ADC

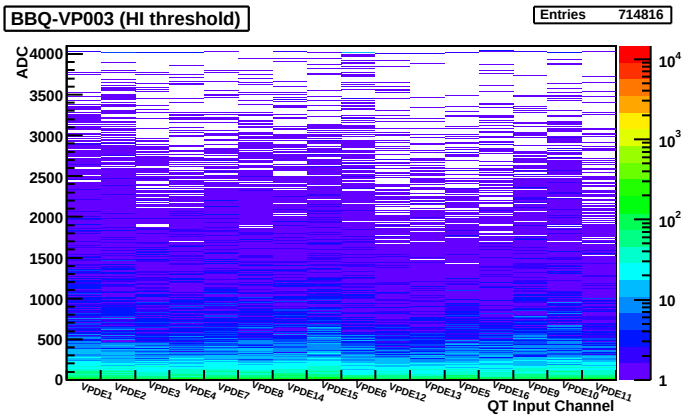

BBQ-ZD001 (ZDC TOWER)
Entries 714816
TAC

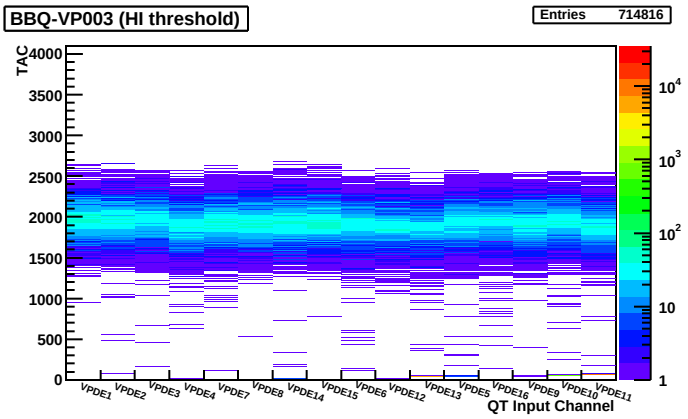

BBQ-VP001 (LO threshold)
Entries 714816
ADC
QT Input Channel

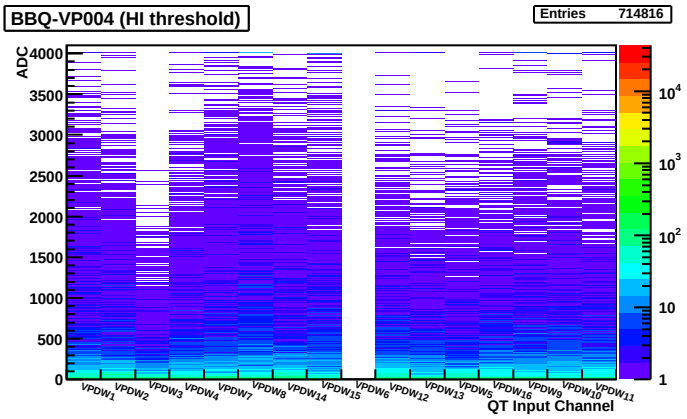

BBQ-VP001 (LO threshold)
Entries 714816
TAC
QT Input Channel

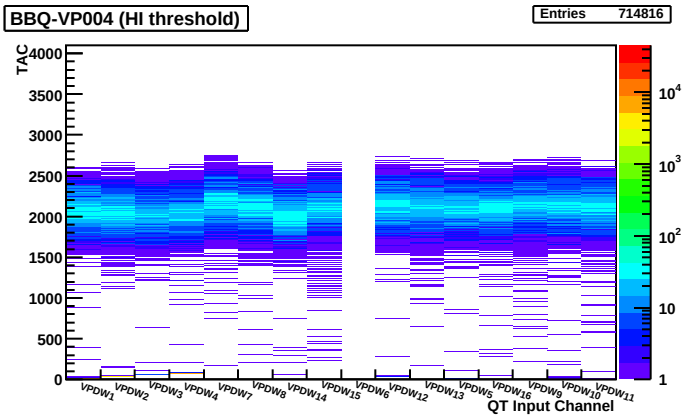

BBQ-VP002 (LO threshold)
Entries 714816
ADC
QT Input Channel

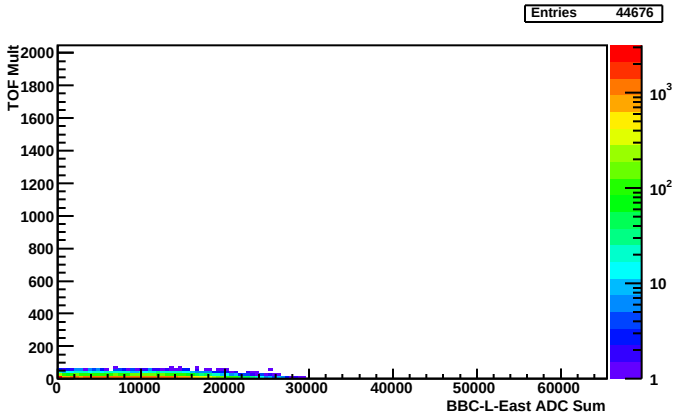

BBQ-VP002 (LO threshold)
Entries 714816
TAC
QT Input Channel

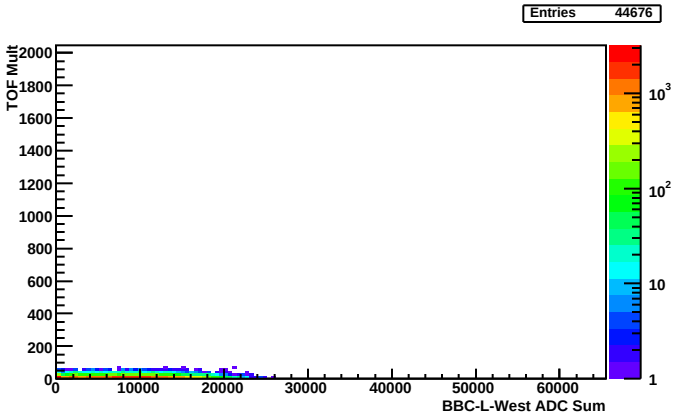

BBQ-VP003 (HI threshold)
Entries 714816
ADC
QT Input Channel

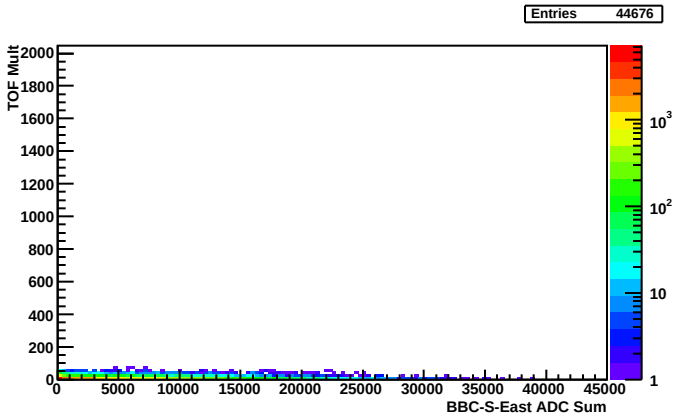

BBQ-VP003 (HI threshold)
Entries 714816
TAC
QT Input Channel

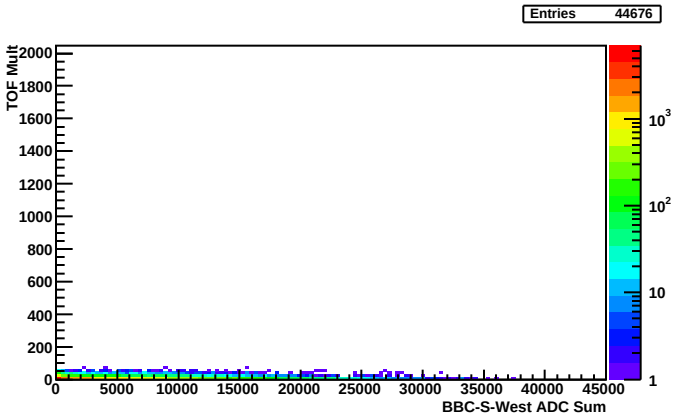

BBQ-VP004 (HI threshold)
Entries 714816
ADC
QT Input Channel

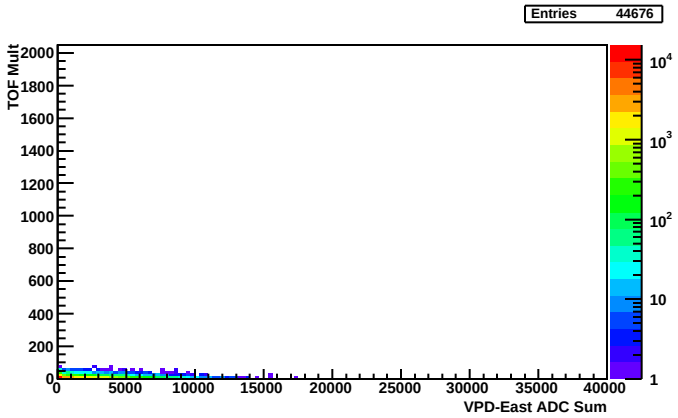

BBQ-VP004 (HI threshold)
Entries 714816
TAC
QT Input Channel

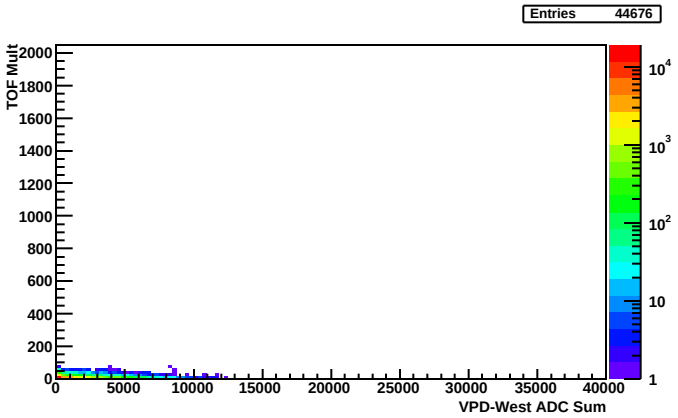

Entries 44676
TOF Mult
BBC-L-East ADC Sum

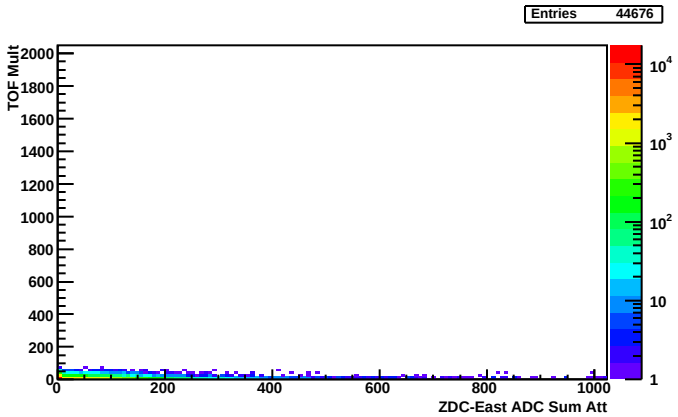

Entries 44676
TOF Mult
BBC-L-West ADC Sum

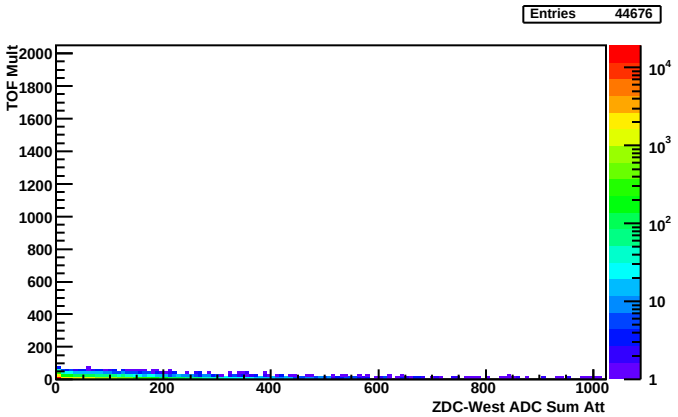

Entries 44676
TOF Mult
BBC-S-East ADC Sum

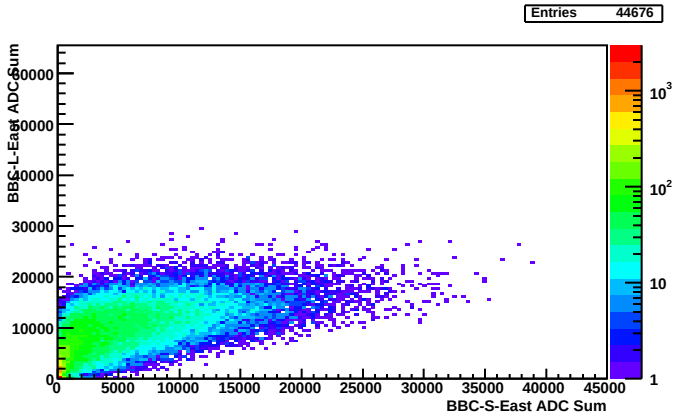

Entries 44676
TOF Mult
BBC-S-West ADC Sum

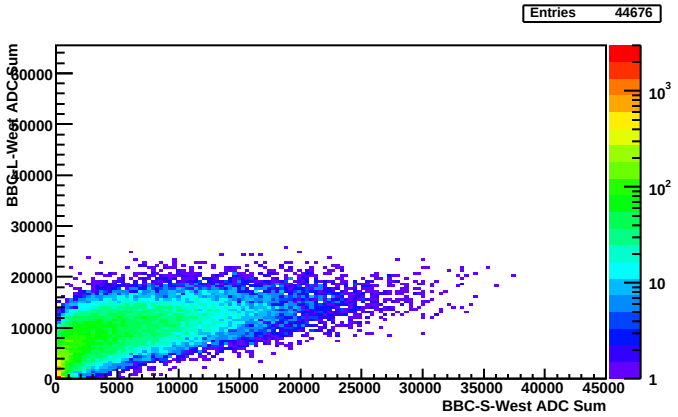

Entries 44676
TOF Mult
VPD-East ADC Sum

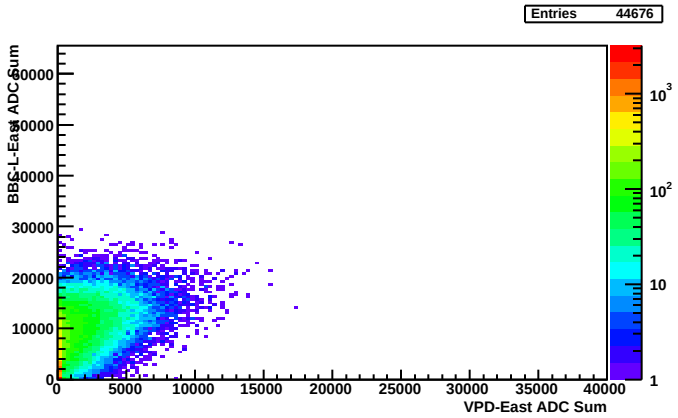

Entries 44676
TOF Mult
VPD-West ADC Sum

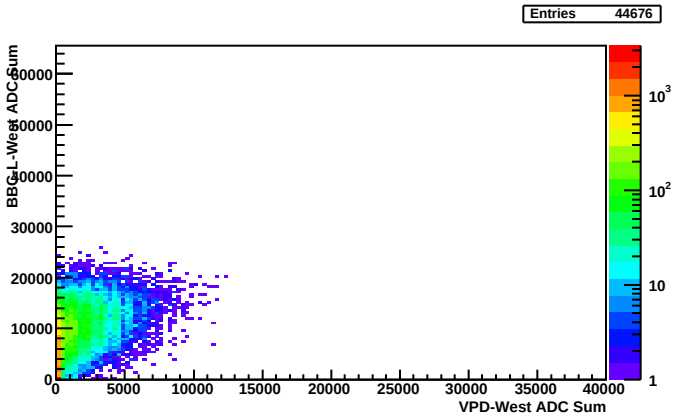

Entries 44676
TOF Mult
ZDC-East ADC Sum Att

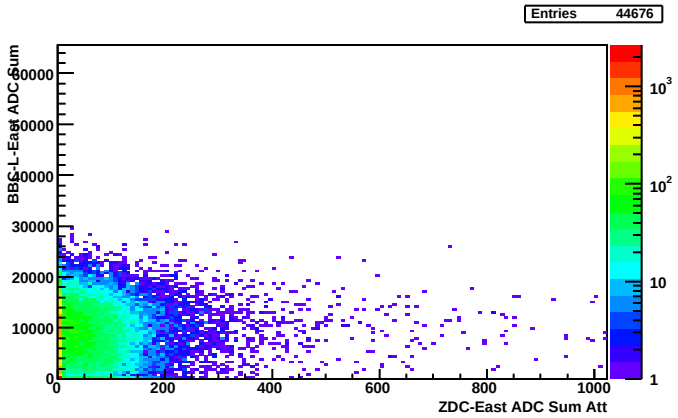

Entries 44676
TOF Mult
ZDC-West ADC Sum Att

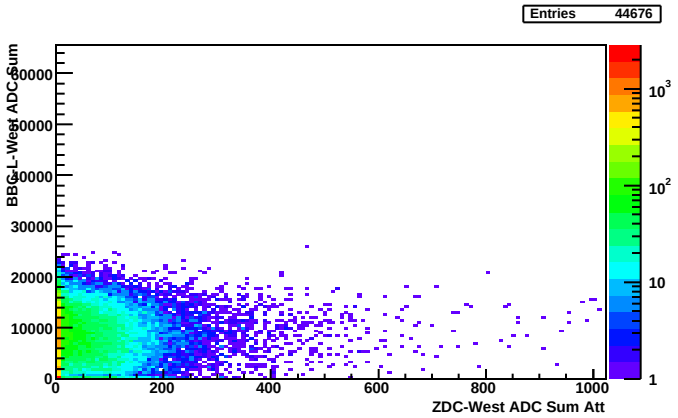

Entries 44676
BBC-L-East ADC Sum
BBC-S-East ADC Sum

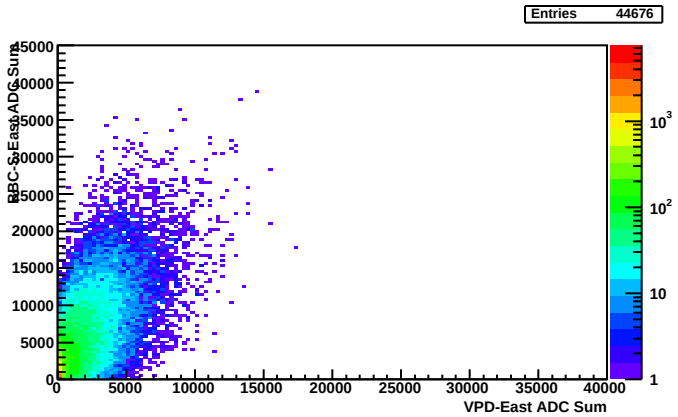

Entries 44676
BBC-L-West ADC Sum
BBC-S-West ADC Sum

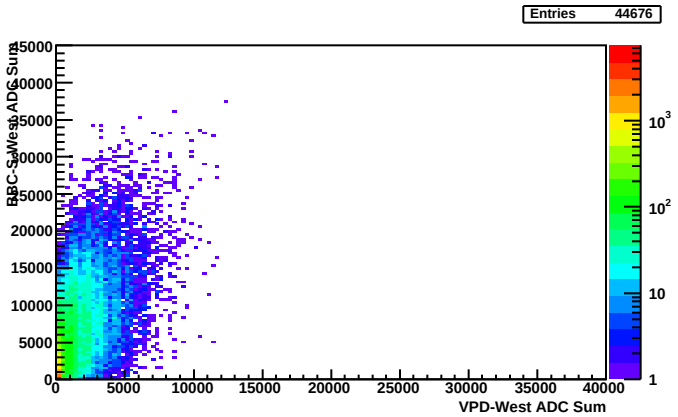

Entries 44676
BBC-L-East ADC Sum
VPD-East ADC Sum

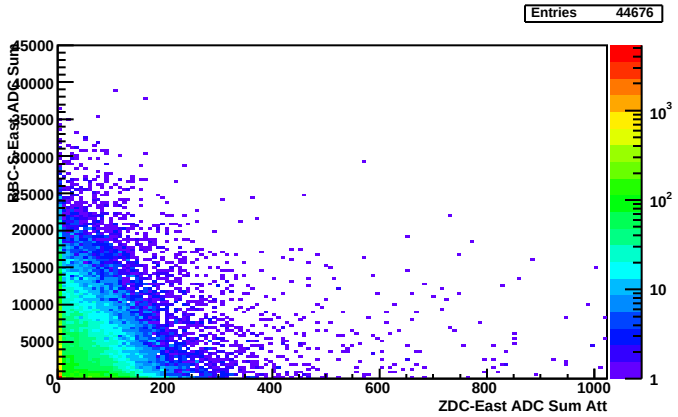

Entries 44676
BBC-L-West ADC Sum
VPD-West ADC Sum

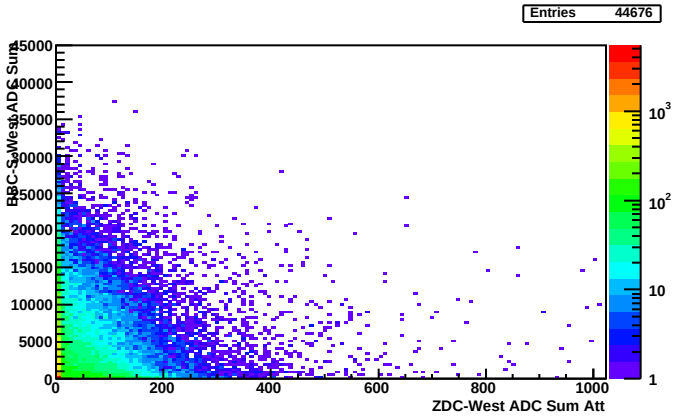

Entries 44676
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

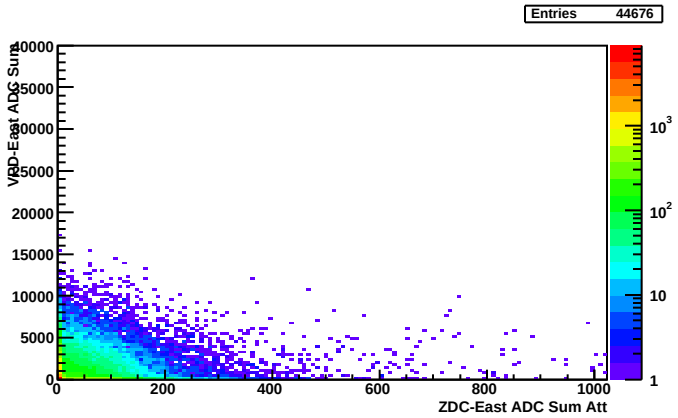

Entries 44676
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

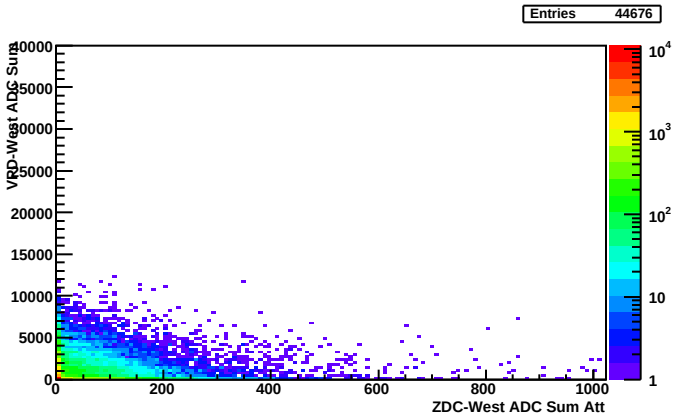

Entries 44676
BBC-S-East ADC Sum
VPD-East ADC Sum

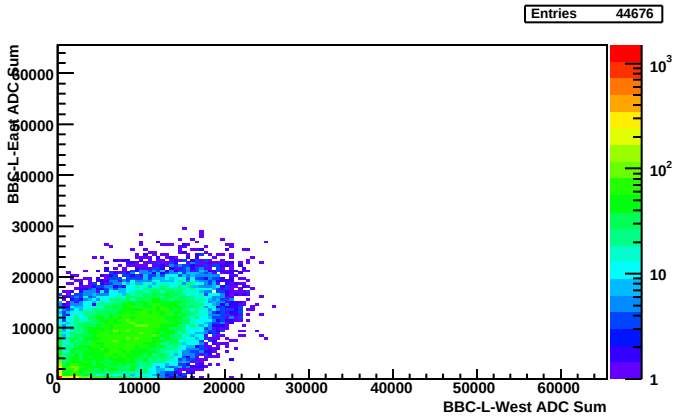

Entries 44676
BBC-S-West ADC Sum
VPD-West ADC Sum

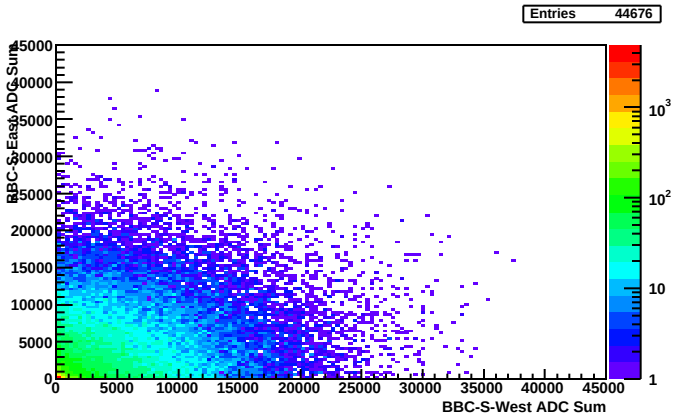

Entries 44676
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

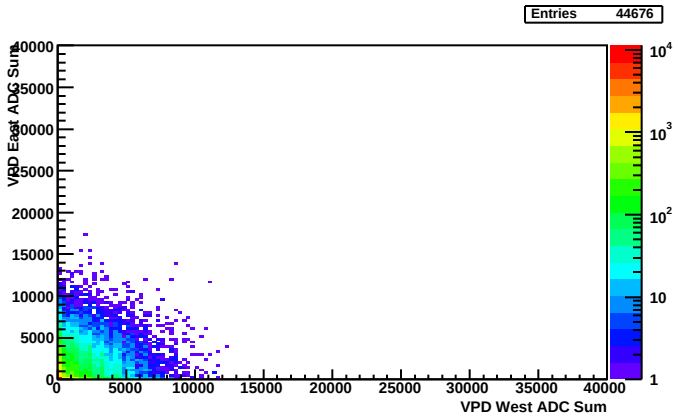

Entries 44676
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

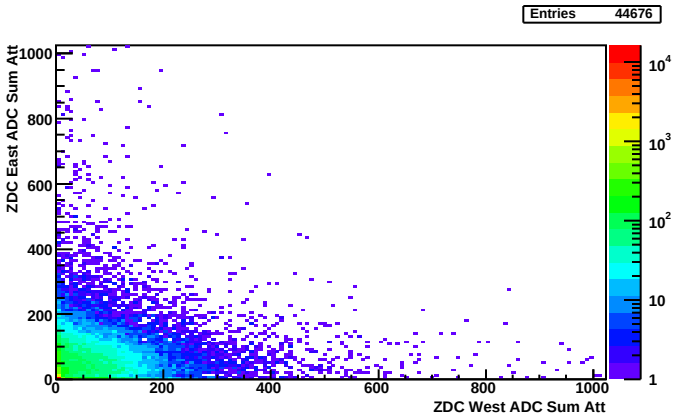

Entries 44676
VPD-East ADC Sum
ZDC-East ADC Sum Att

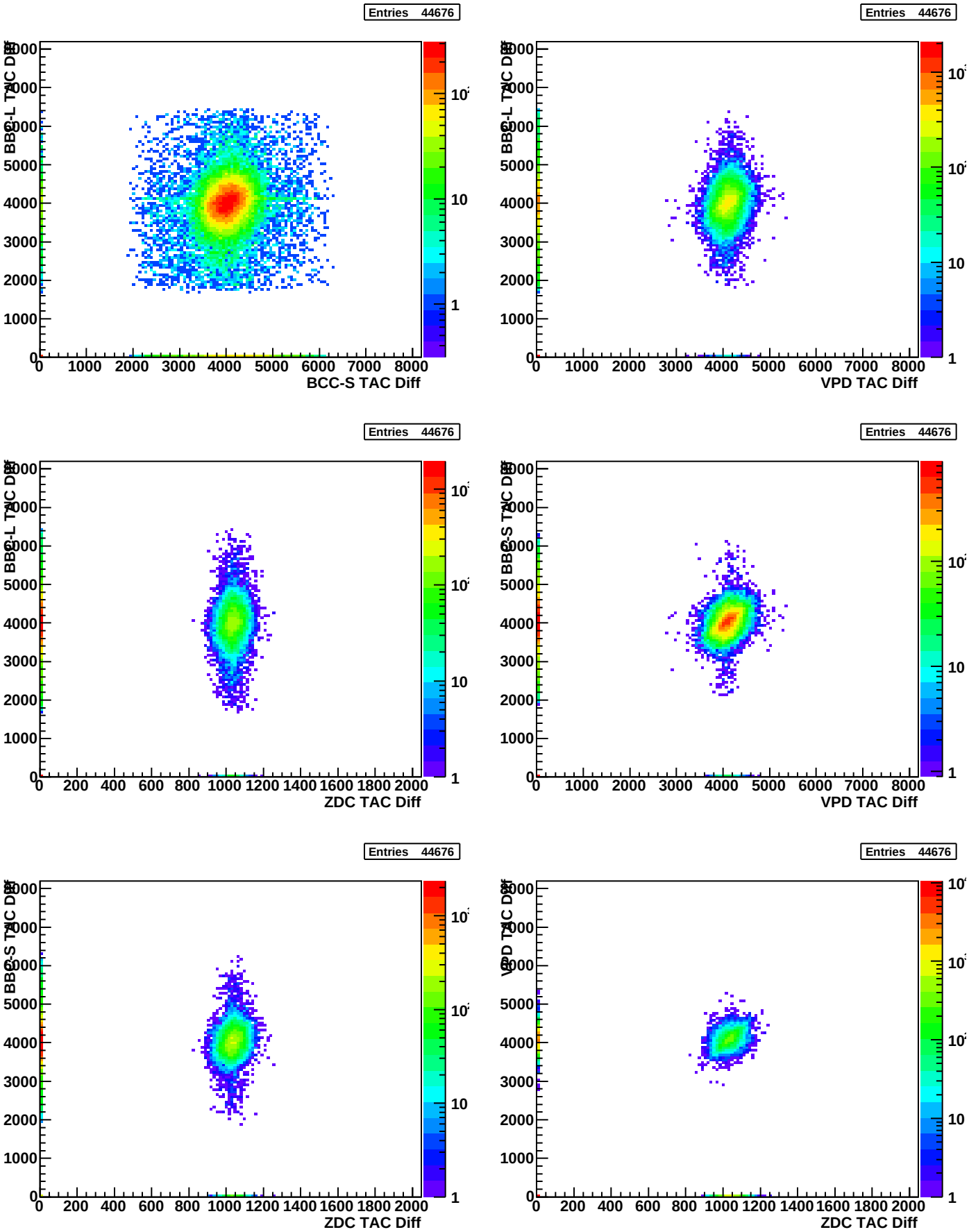

Entries 44676
VPD-West ADC Sum
ZDC-West ADC Sum Att

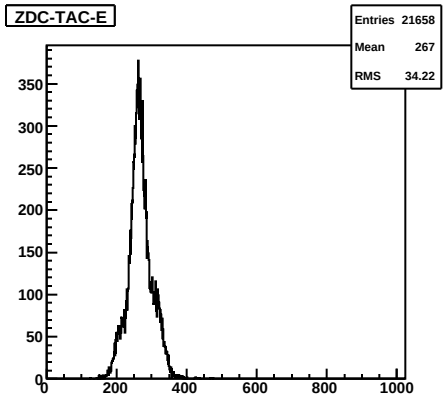

Entries 44676
BBC-L-East ADC Sum
BBC-L-West ADC Sum

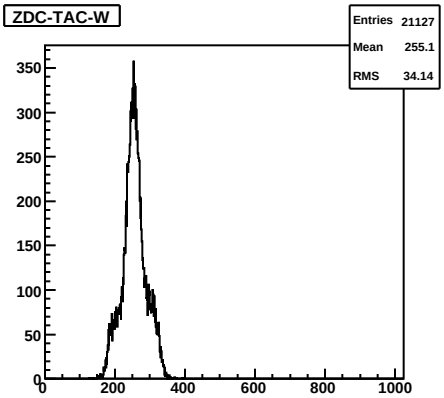

Entries 44676
BBC-S-East ADC Sum
BBC-S-West ADC Sum

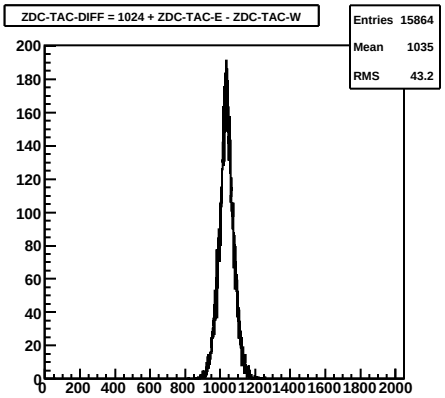

Entries 44676
VPD East ADC Sum
VPD West ADC Sum

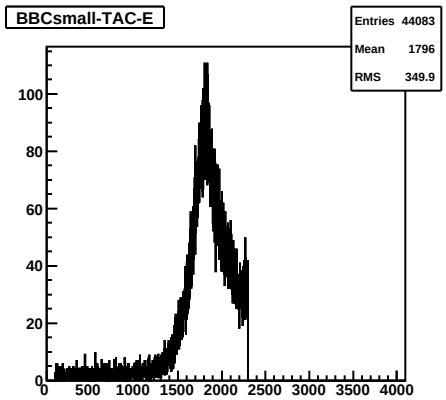

Entries 44676
ZDC East ADC Sum Att
ZDC West ADC Sum Att

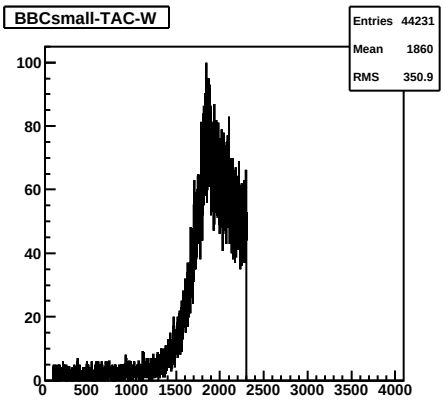

Entries 44676
BBC-L TAC Diff
BCC-S TAC Diff
Entries 44676
BBC-L TAC Diff
VPD TAC Diff
Entries 44676
BBC-L TAC Diff
ZDC TAC Diff
Entries 44676
BBC-S TAC Diff
VPD TAC Diff
Entries 44676
BBC-S TAC Diff
ZDC TAC Diff
Entries 44676
VPD TAC Diff
ZDC TAC Diff

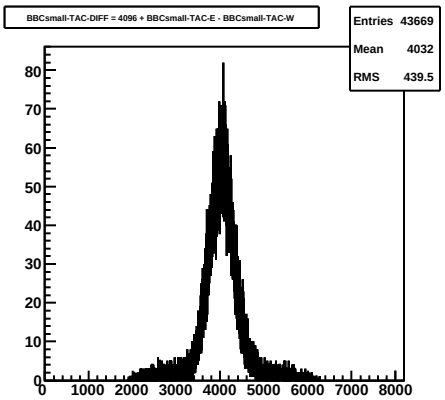

ZDC-TAC-E
Entries 21658
Mean 267
RMS 34.22

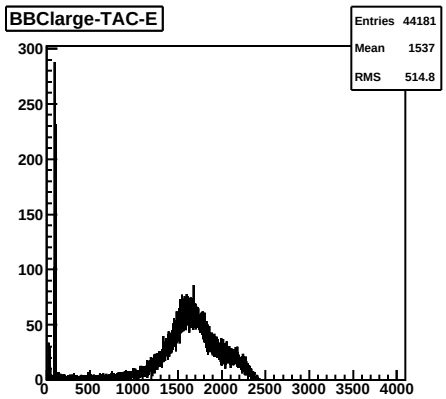

ZDC-TAC-W
Entries 21127
Mean 255.1
RMS 34.14

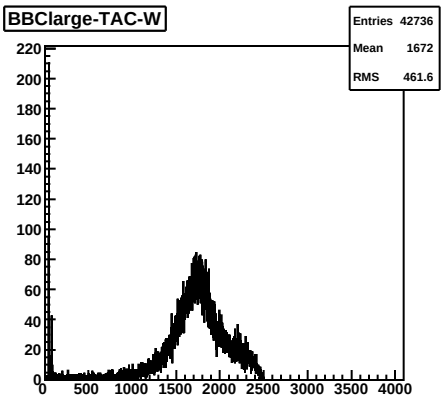

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 15864
Mean 1035
RMS 43.2

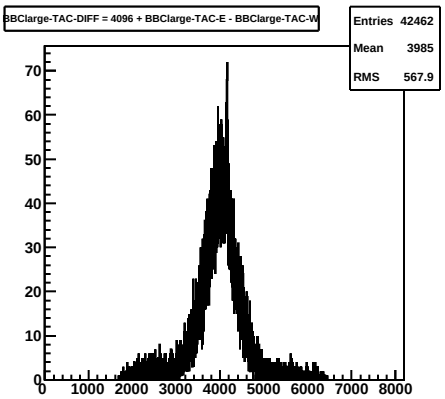

BBCsmall-TAC-E
Entries 44083
Mean 1796
RMS 349.9

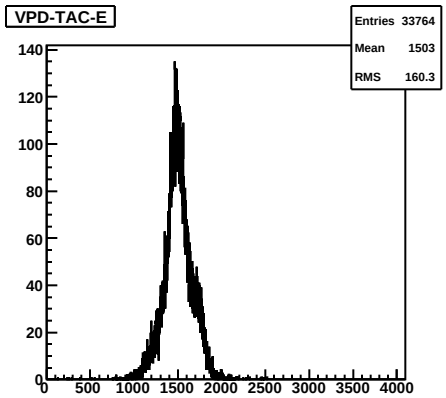

BBCsmall-TAC-W
Entries 44231
Mean 1860
RMS 350.9

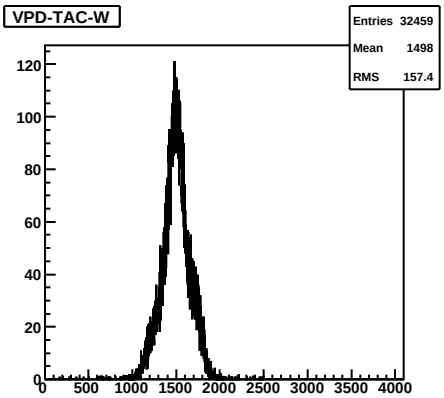

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 43669
Mean 4032
RMS 439.5

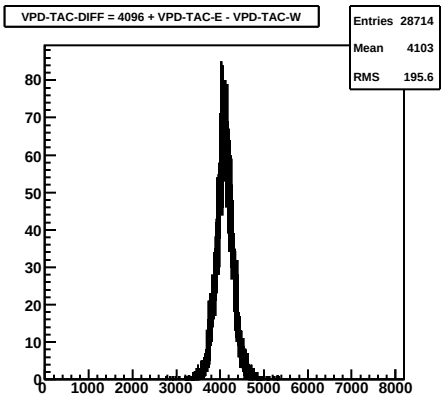

BBClarge-TAC-E
Entries 44181
Mean 1537
RMS 514.8

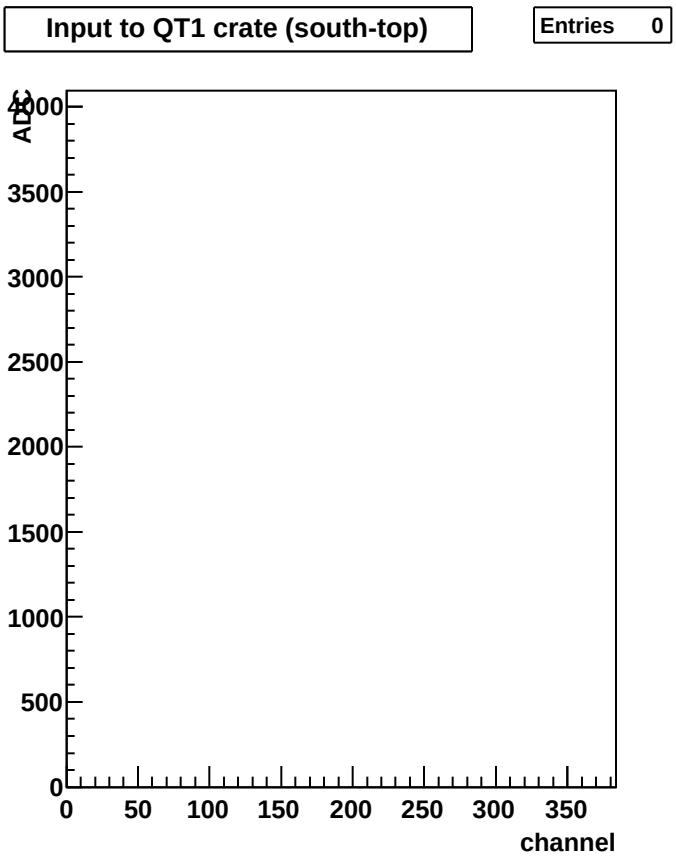

BBClarge-TAC-W
Entries 42736
Mean 1672
RMS 461.6

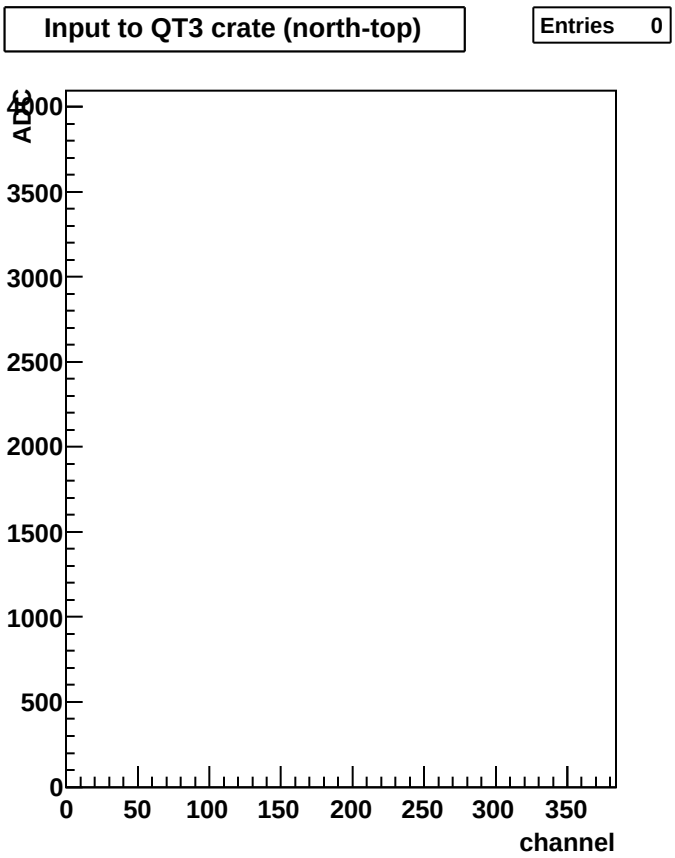

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 42462
Mean 3985
RMS 567.9

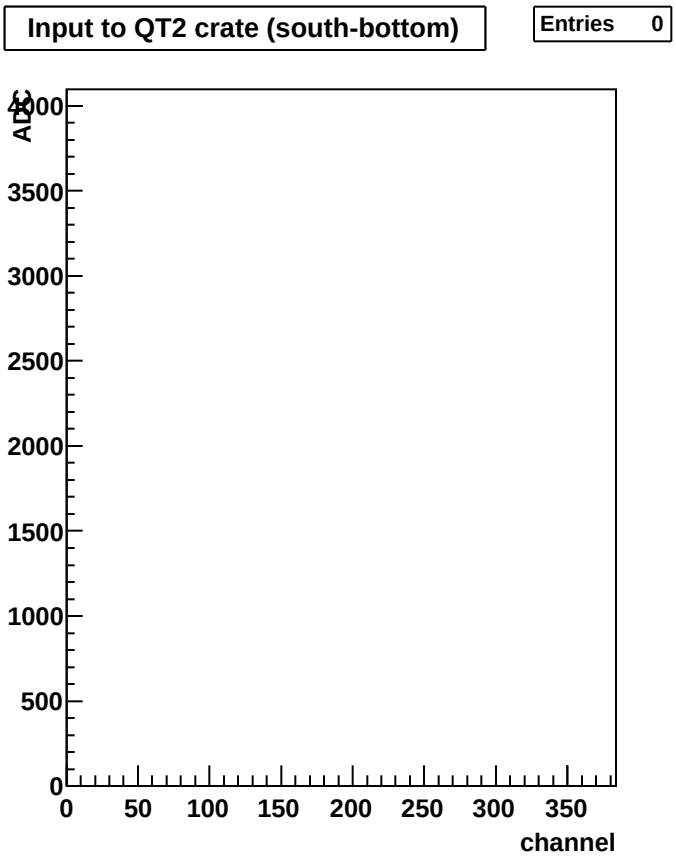

VPD-TAC-E
Entries 33764
Mean 1503
RMS 160.3

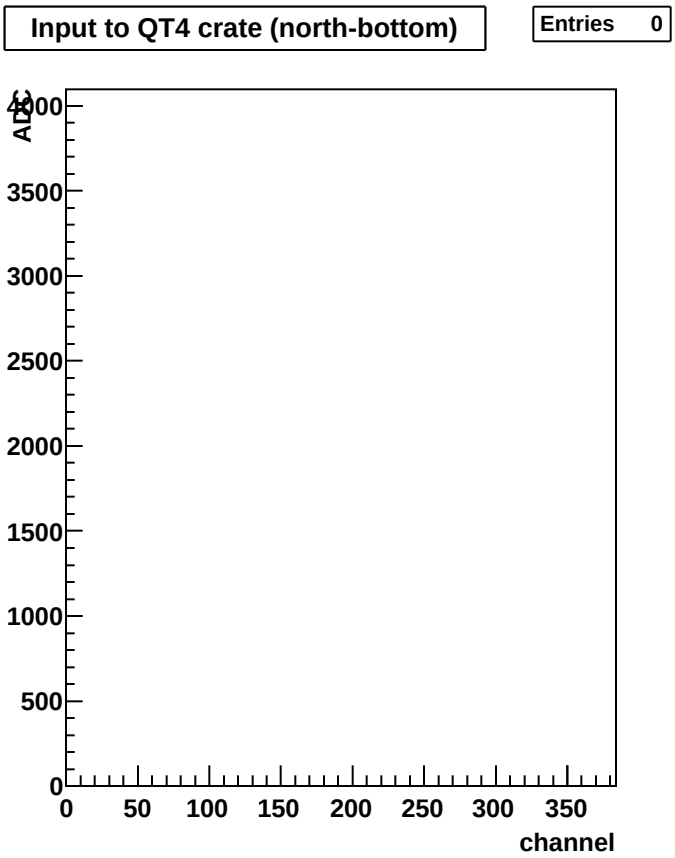

VPD-TAC-W
Entries 32459
Mean 1498
RMS 157.4

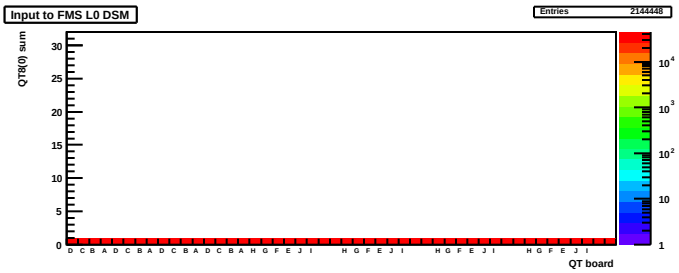

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 28714
Mean 4103
RMS 195.6

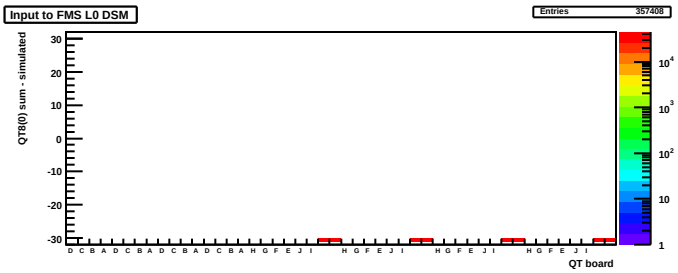

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

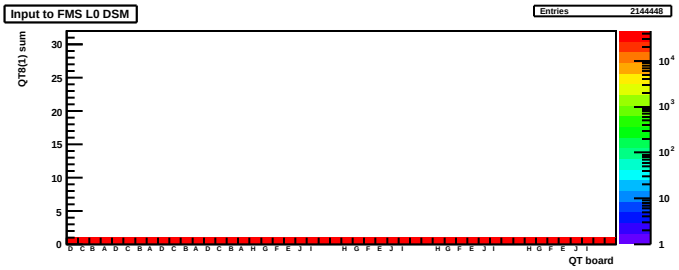

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

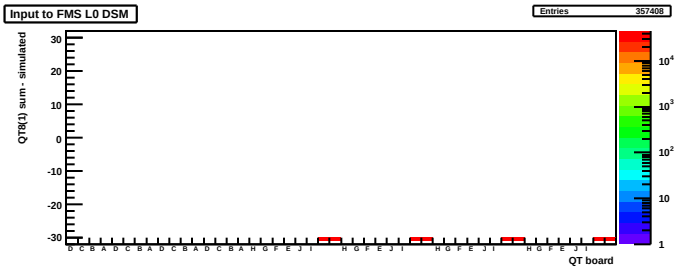

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

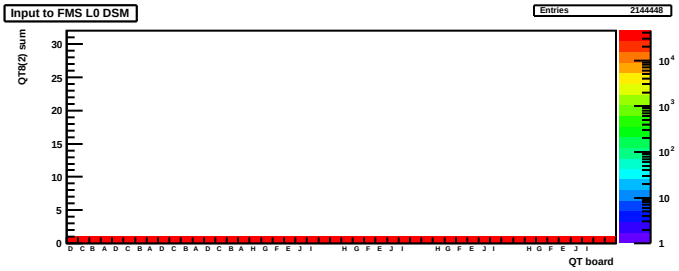

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

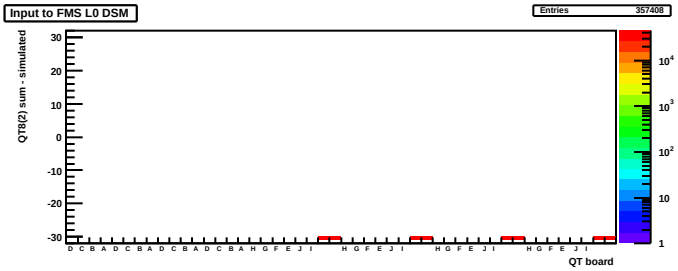

Input to FMS L0 DSM
Entries 2144448
QT8(0) sum
QT board

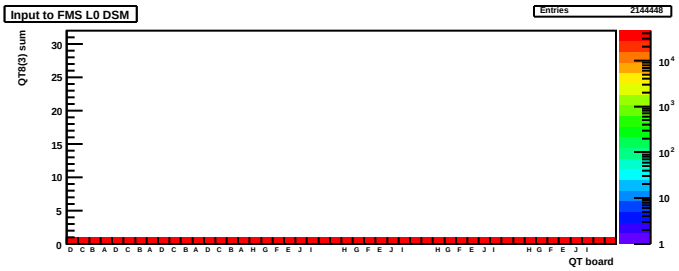

Input to FMS L0 DSM
Entries 357408
QT8(0) sum - simulated
QT board

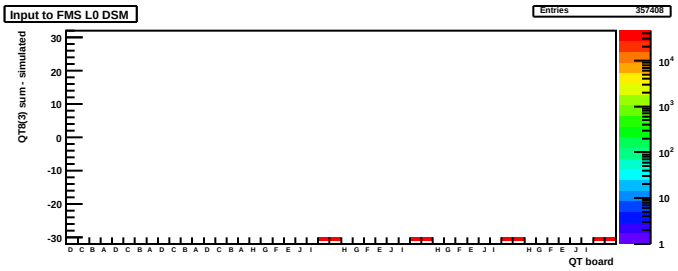

Input to FMS L0 DSM
Entries 2144448
QT8(1) sum
QT board

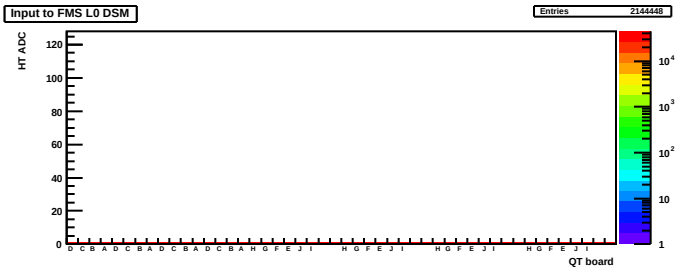

Input to FMS L0 DSM
Entries 357408
QT8(1) sum - simulated
QT board

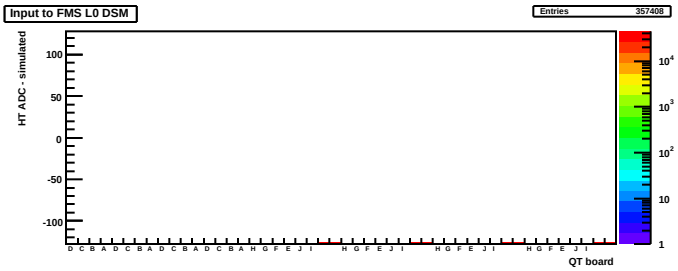

Input to FMS L0 DSM
Entries 2144448
QT8(2) sum
QT board

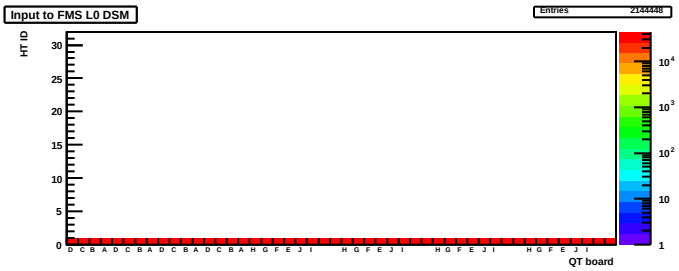

Input to FMS L0 DSM
Entries 357408
QT8(2) sum - simulated
QT board

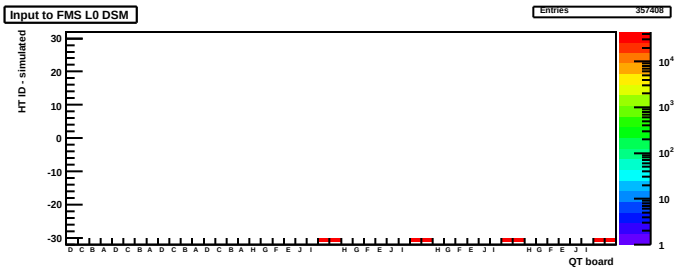

Input to FMS L0 DSM
Entries 2144448
QT8(3) sum
QT board

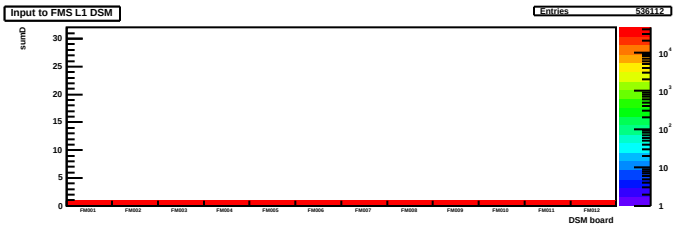

Input to FMS L0 DSM
Entries 357408
QT8(3) sum - simulated
QT board

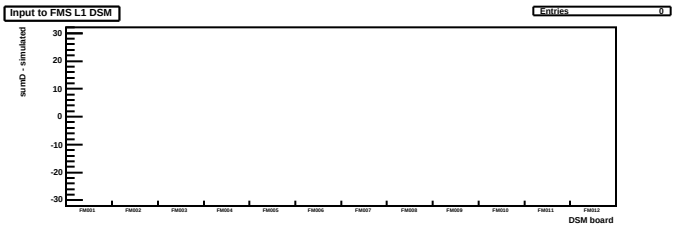

Input to FMS L0 DSM
Entries 2144448
HT ADC
QT board

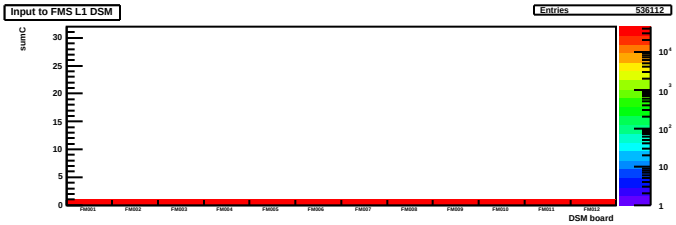

Input to FMS L0 DSM
Entries 357408
HT ADC - simulated
QT board

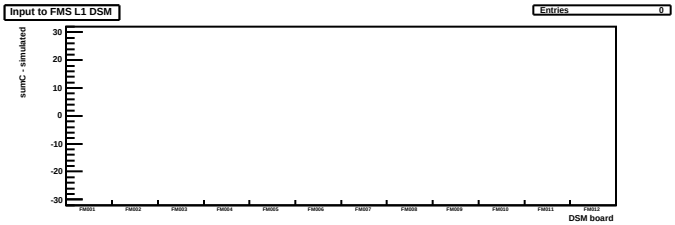

Input to FMS L0 DSM
Entries 2144448
HT ID
QT board

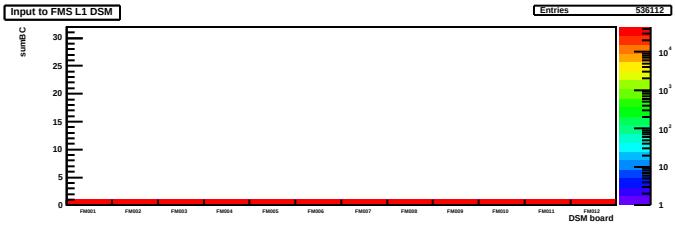

Input to FMS L0 DSM
Entries 357408
HT ID - simulated
QT board

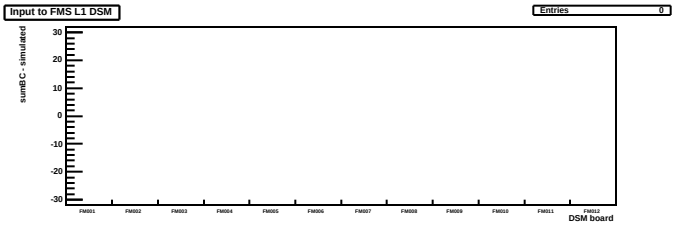

Input to FMS L1 DSM
Entries 536112
sumD
DSM board

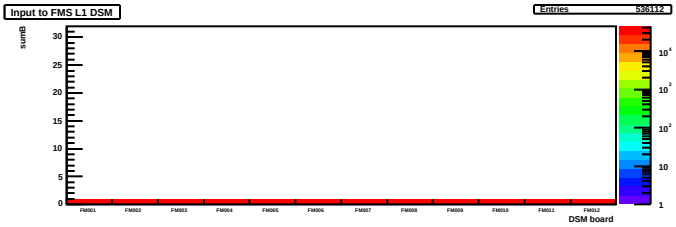

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

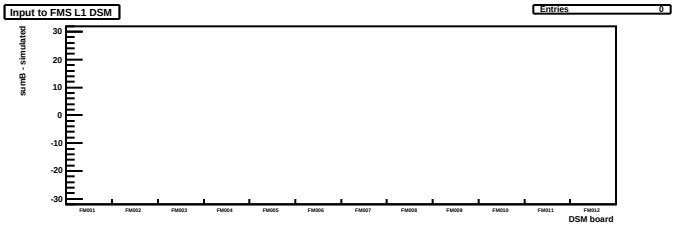

Input to FMS L1 DSM
Entries 536112
sumC
DSM board

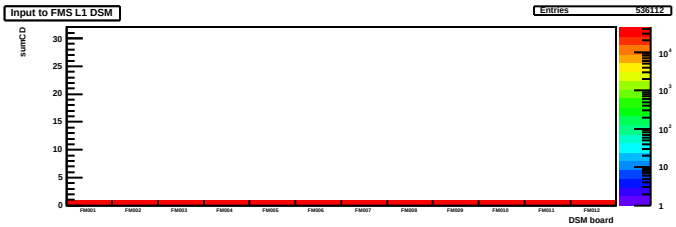

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

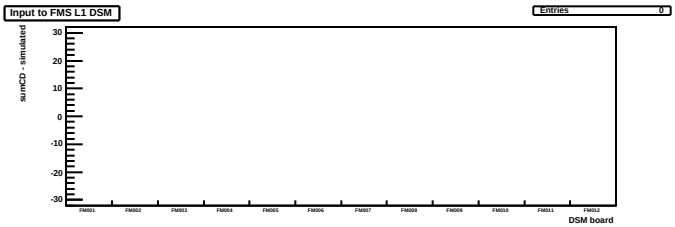

Input to FMS L1 DSM
Entries 536112
sumBC
DSM board

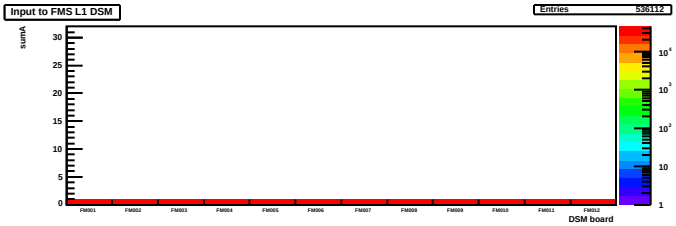

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

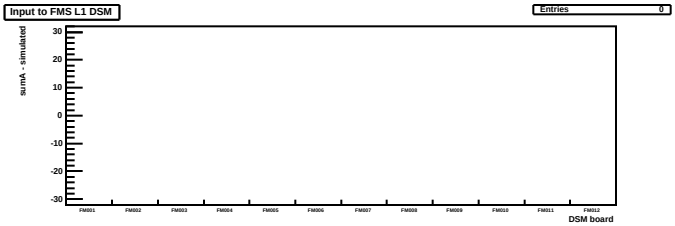

Input to FMS L1 DSM
Entries 536112
sumB
DSM board

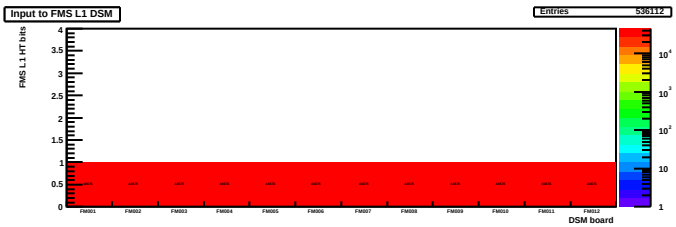

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

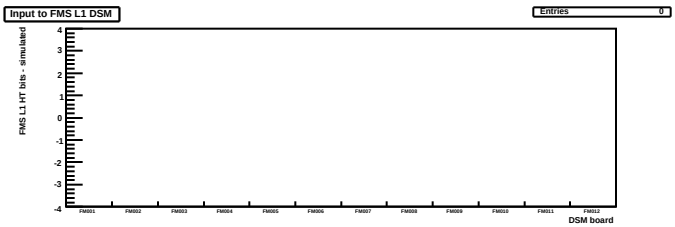

Input to FMS L1 DSM
Entries 536112
sumCD
DSM board

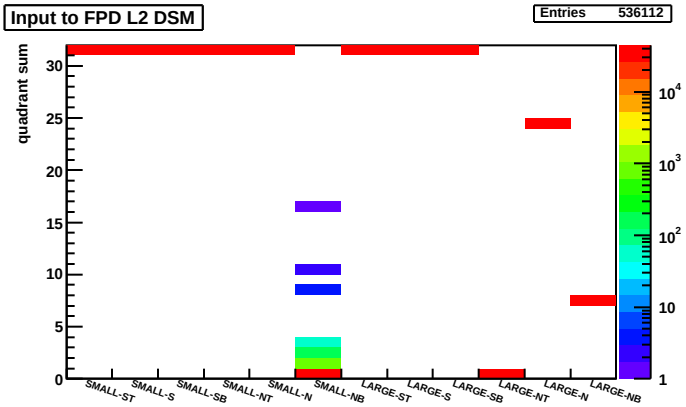

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

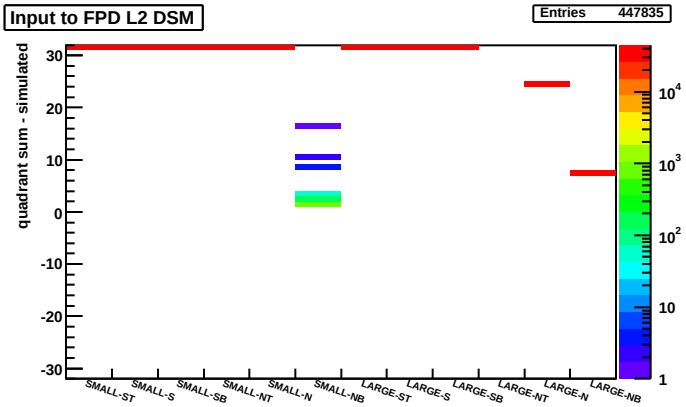

Input to FMS L1 DSM
Entries 536112
sumA
DSM board

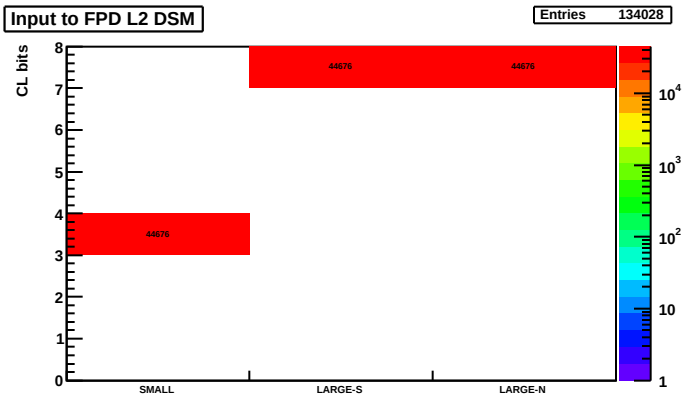

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

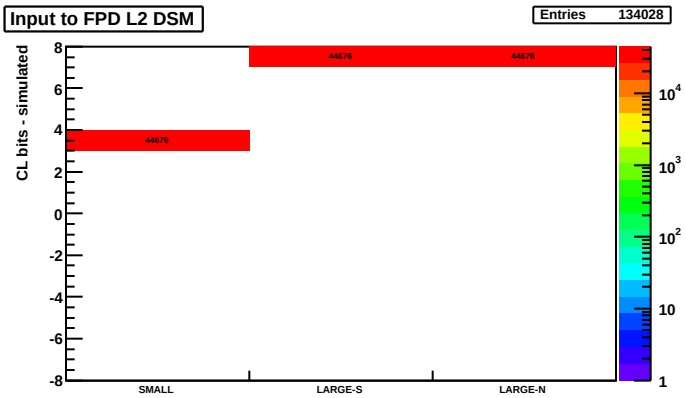

Input to FMS L1 DSM
Entries 536112
FMS L1 HT bits
DSM board

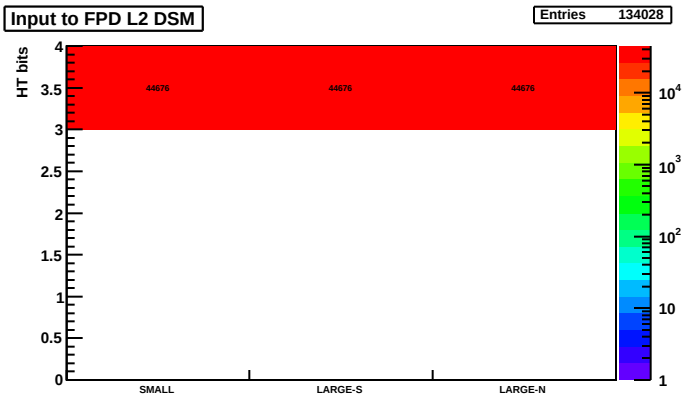

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

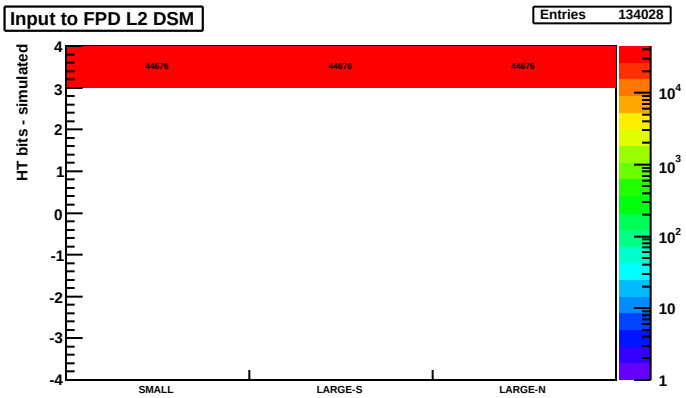

Input to FPD L2 DSM
Entries 536112
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

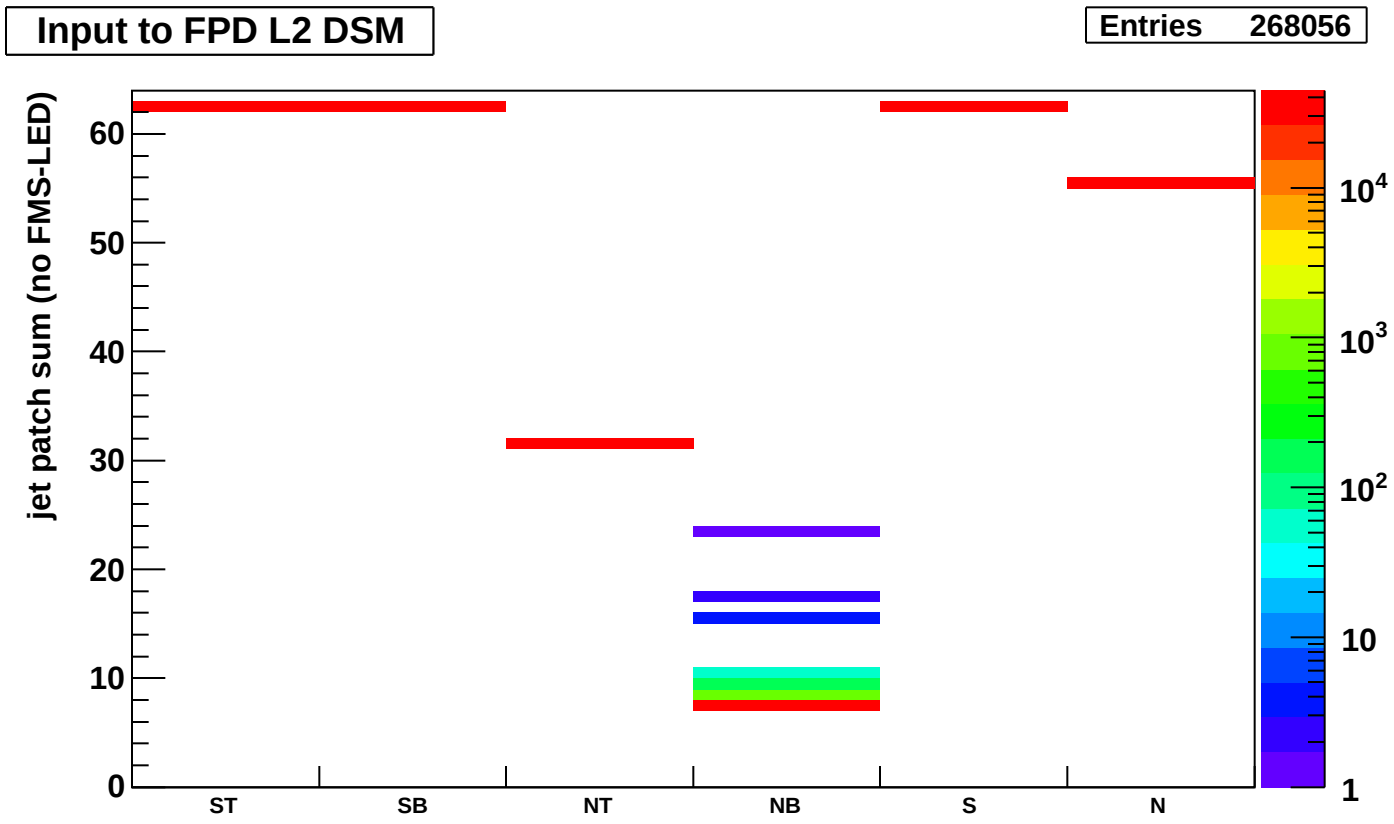

Input to FPD L2 DSM
Entries 447835
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

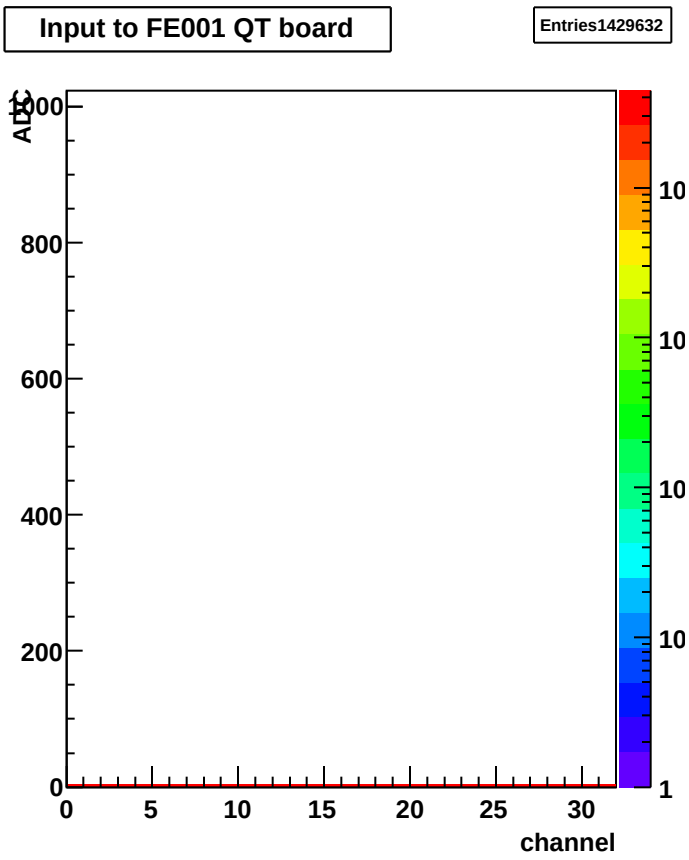

Input to FPD L2 DSM
Entries 134028
CL bits
44676
44676
44676
SMALL
LARGE-S
LARGE-N

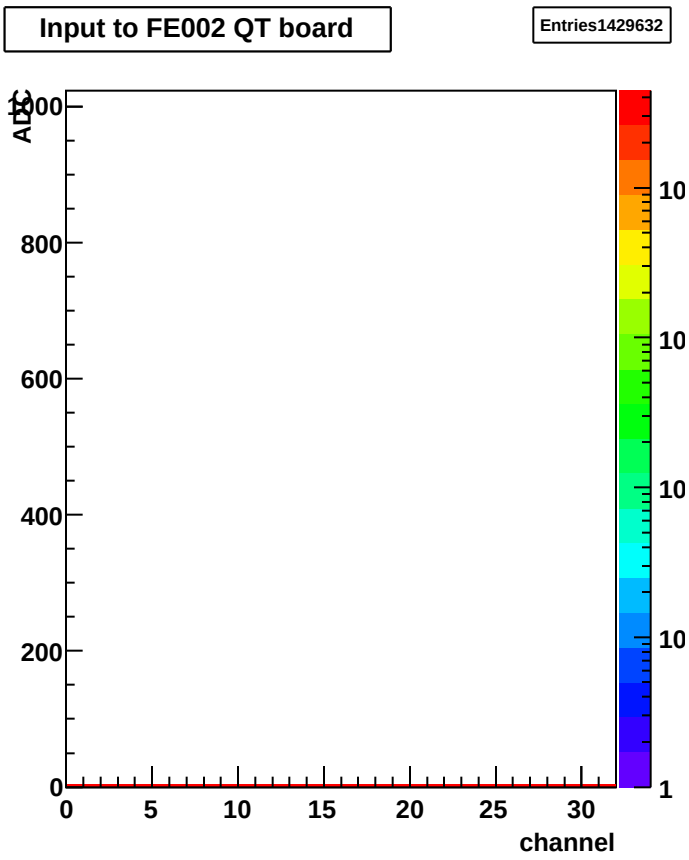

Input to FPD L2 DSM
Entries 134028
CL bits - simulated
44676
44676
44676
SMALL
LARGE-S
LARGE-N

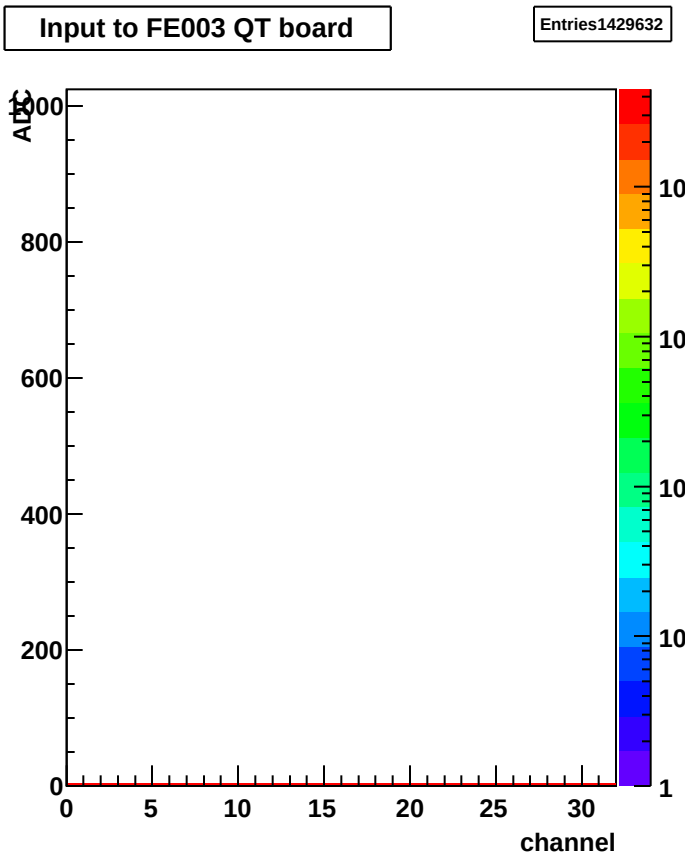

Input to FPD L2 DSM
Entries 134028
HT bits
44676
44676
44676
SMALL
LARGE-S
LARGE-N

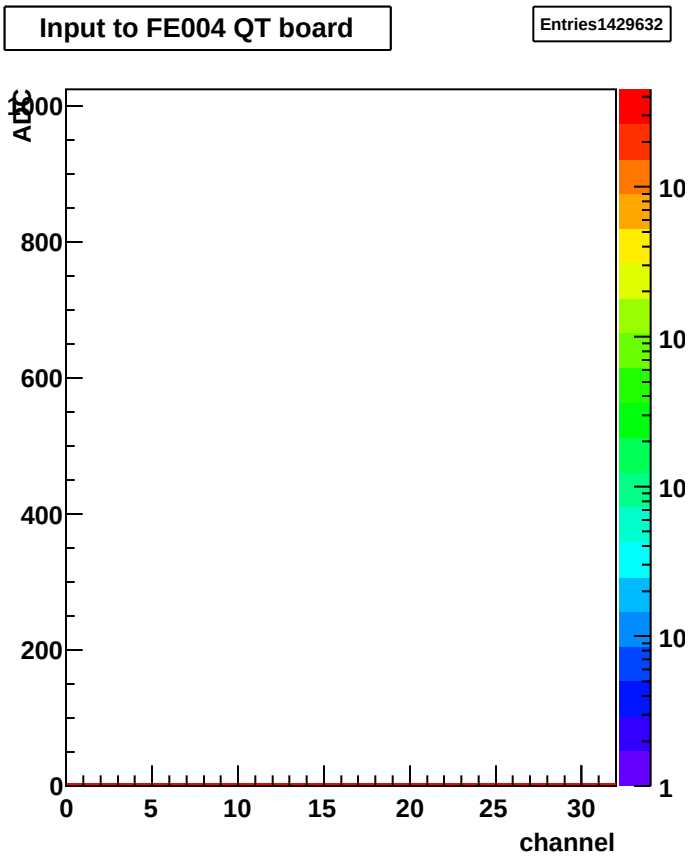

Input to FPD L2 DSM
Entries 134028
HT bits - simulated
44676
44676
44676
SMALL
LARGE-S
LARGE-N

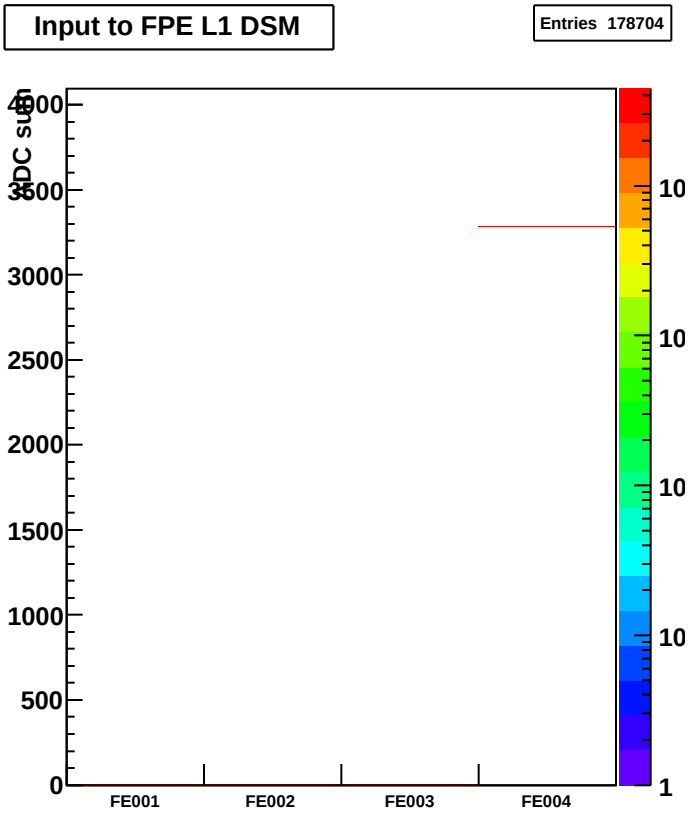

Input to FPD L2 DSM
Entries 268056
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

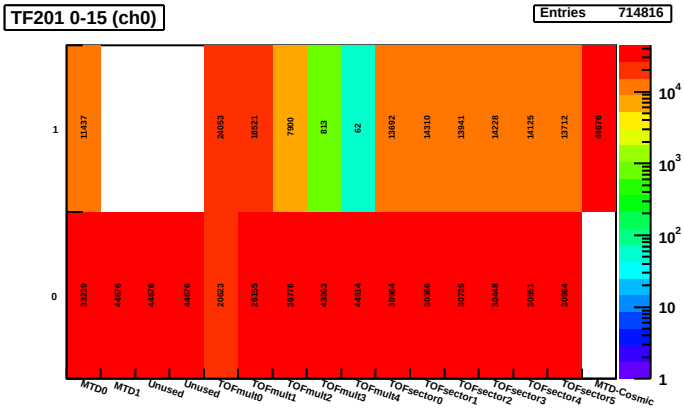

Input to FE001 QT board
Entries1429632
ADC
channel

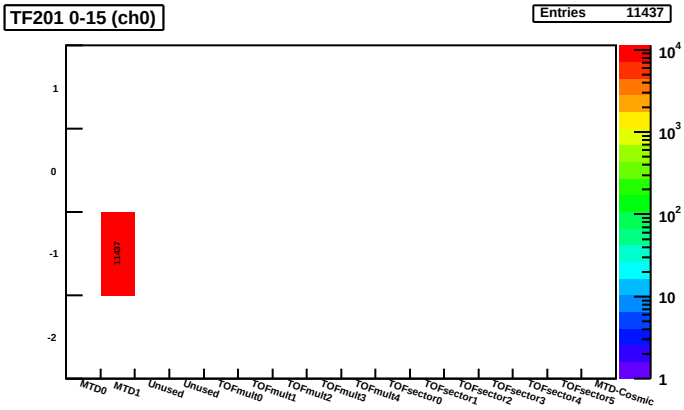

Input to FE002 QT board
Entries1429632
ADC
channel

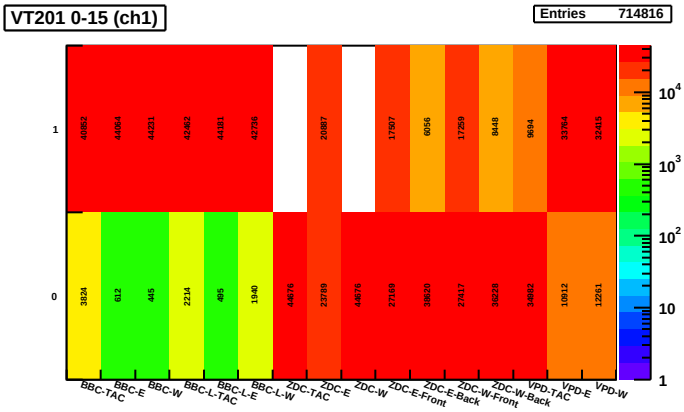

Input to FE003 QT board
Entries1429632
ADC
channel

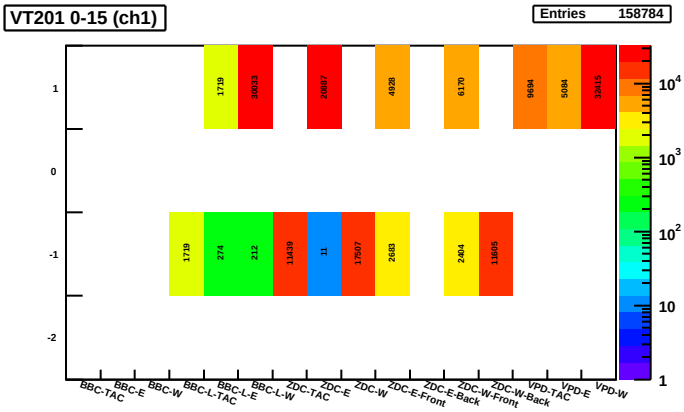

Input to FE004 QT board
Entries1429632
ADC
channel

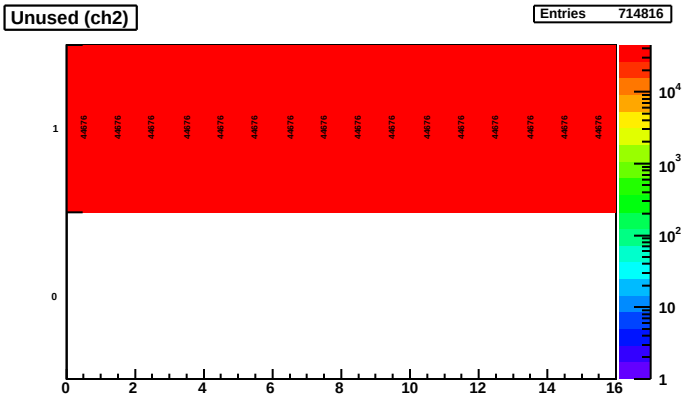

Input to FPE L1 DSM
Entries 178704
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


TF201 0-15 (ch0)
Entries 714816
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 11437
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 714816
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 158784
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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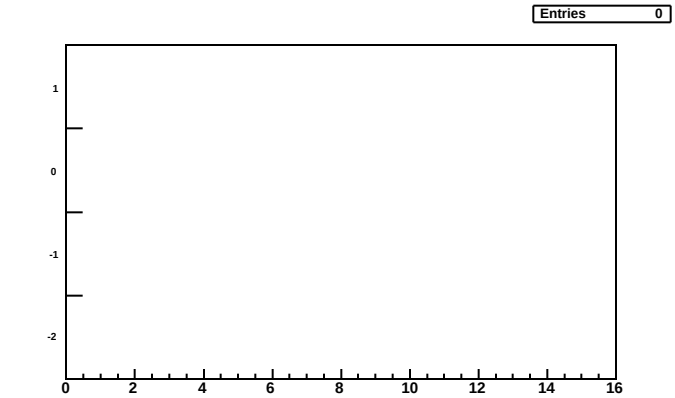
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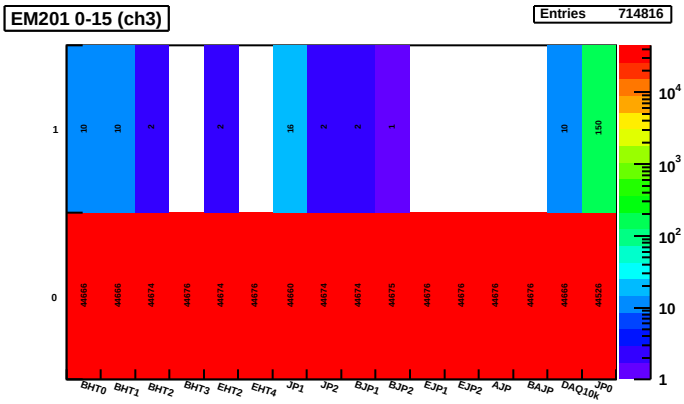
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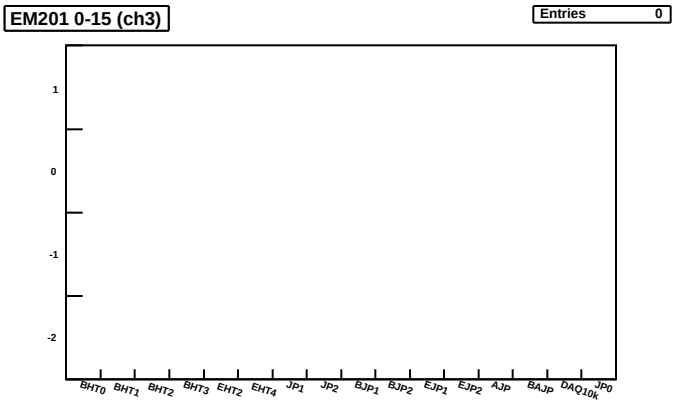
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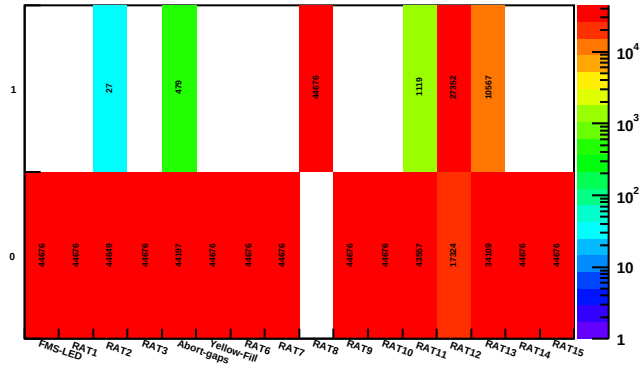
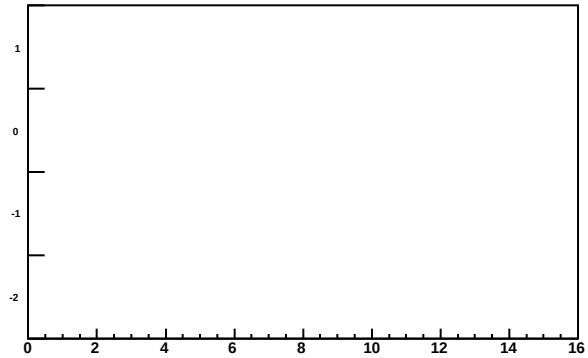
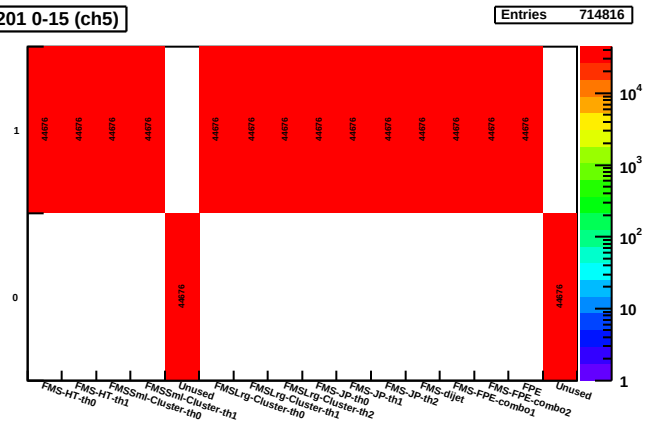
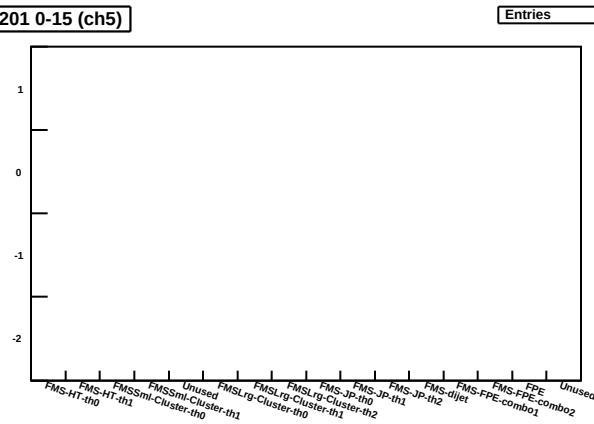
RAT board (ch4)



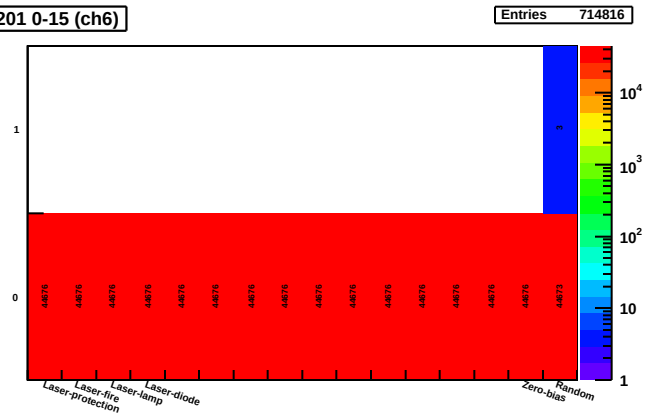


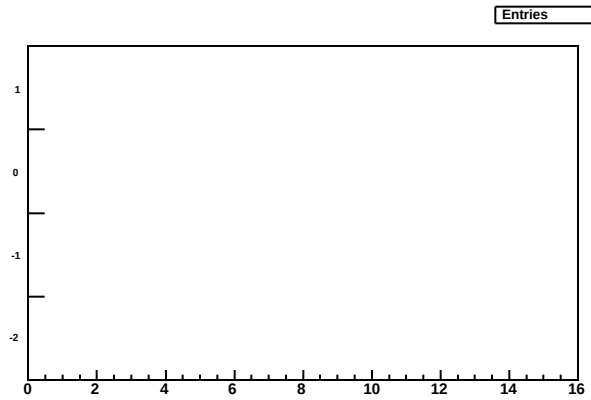
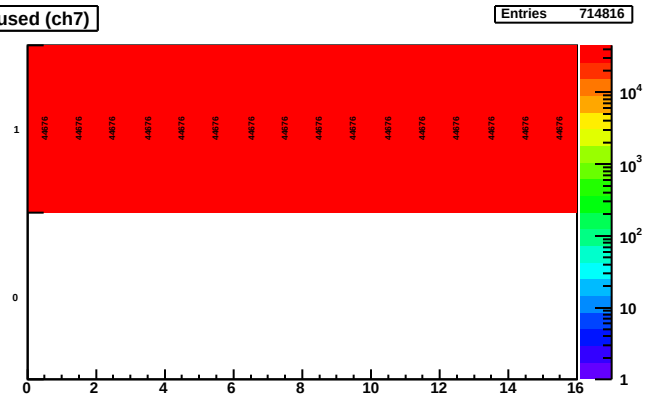
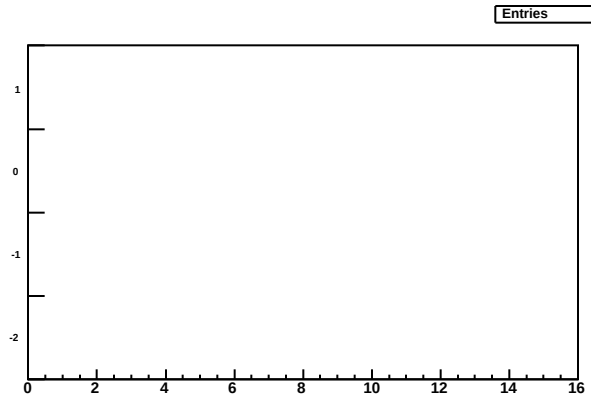
FP201 0-15 (ch5)





ST201 0-15 (ch6)





Unused (ch7)