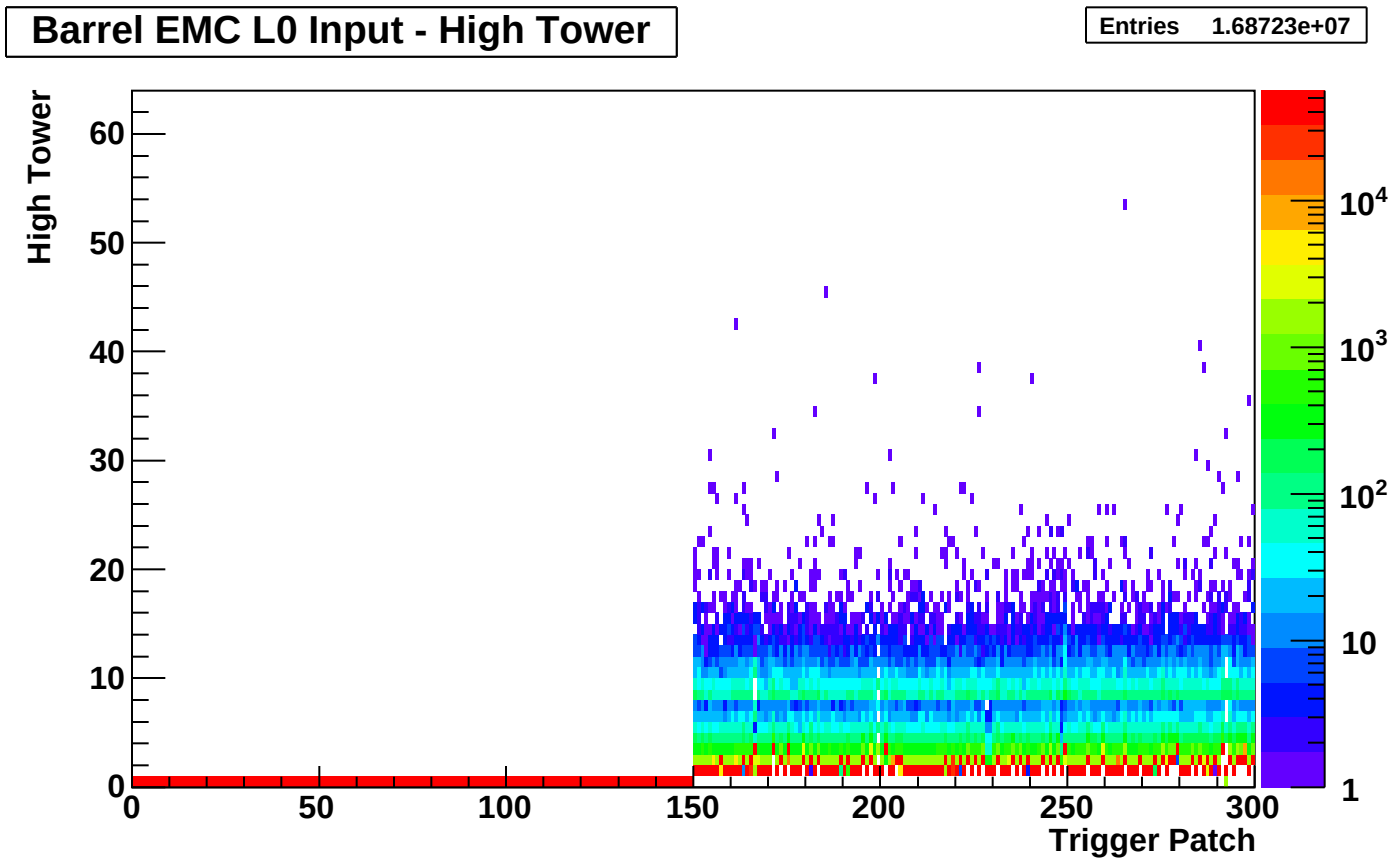
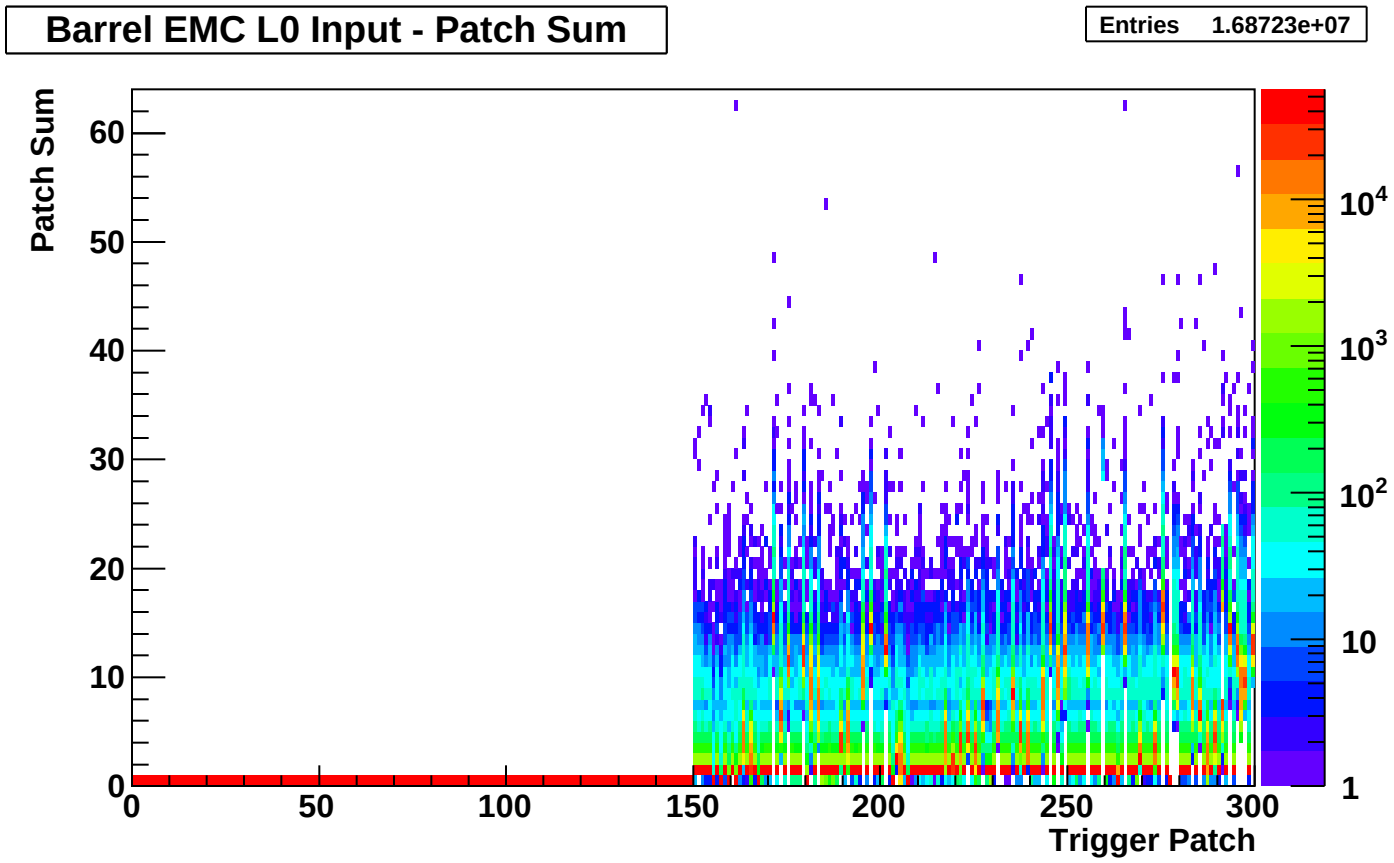
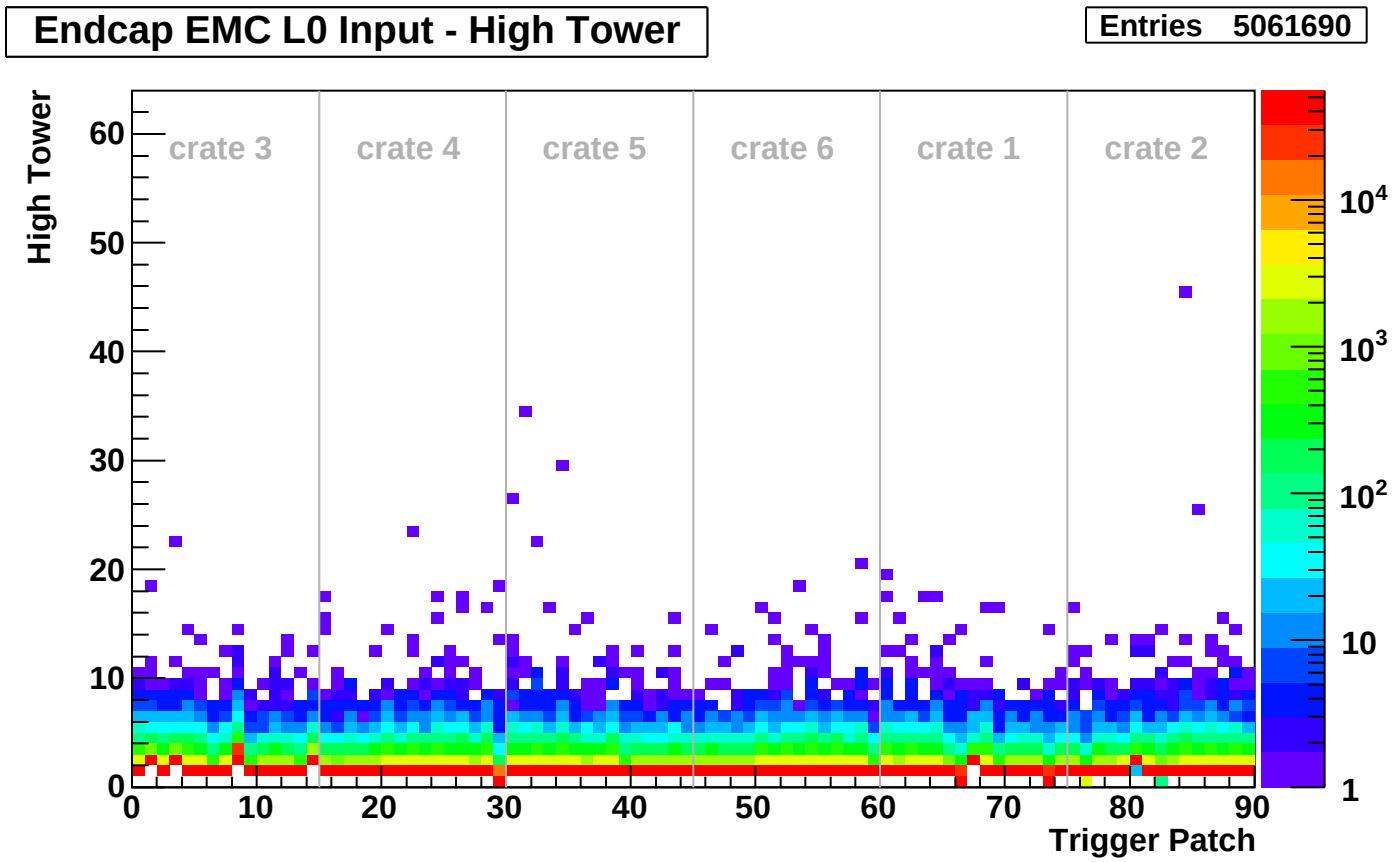
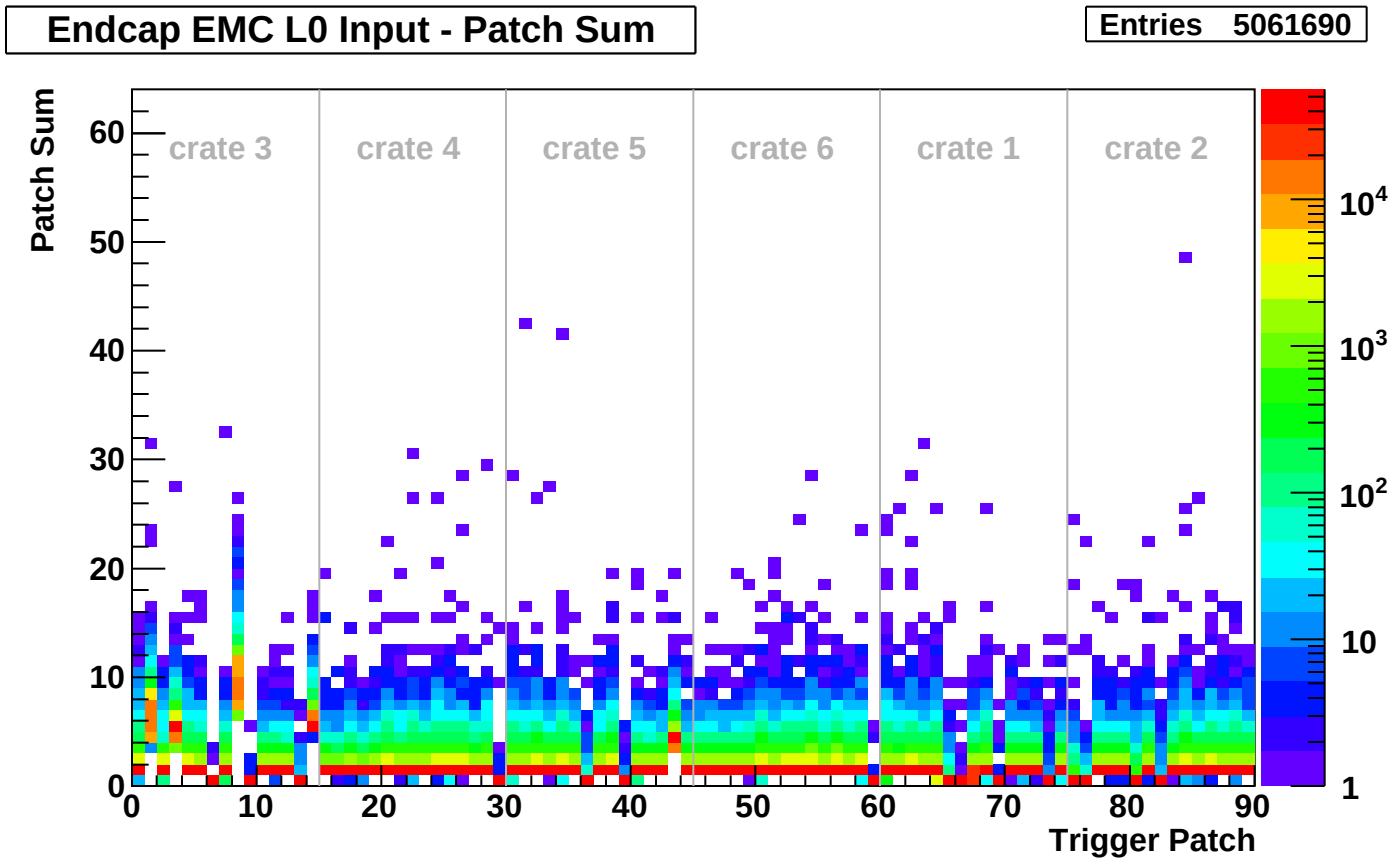
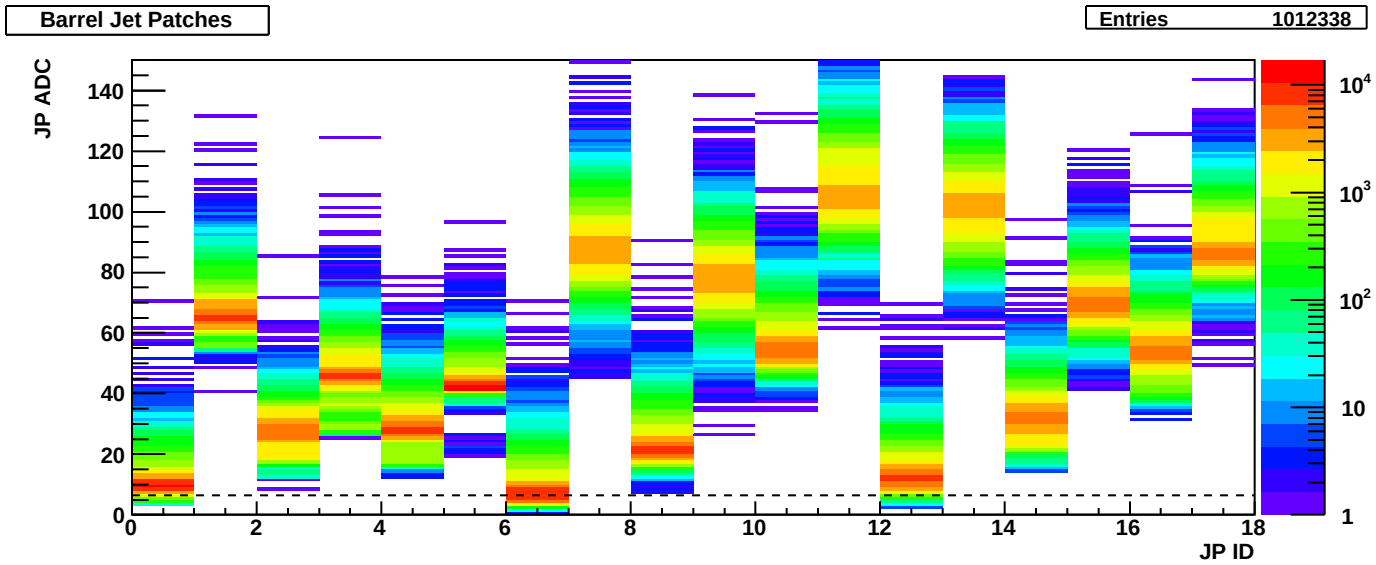
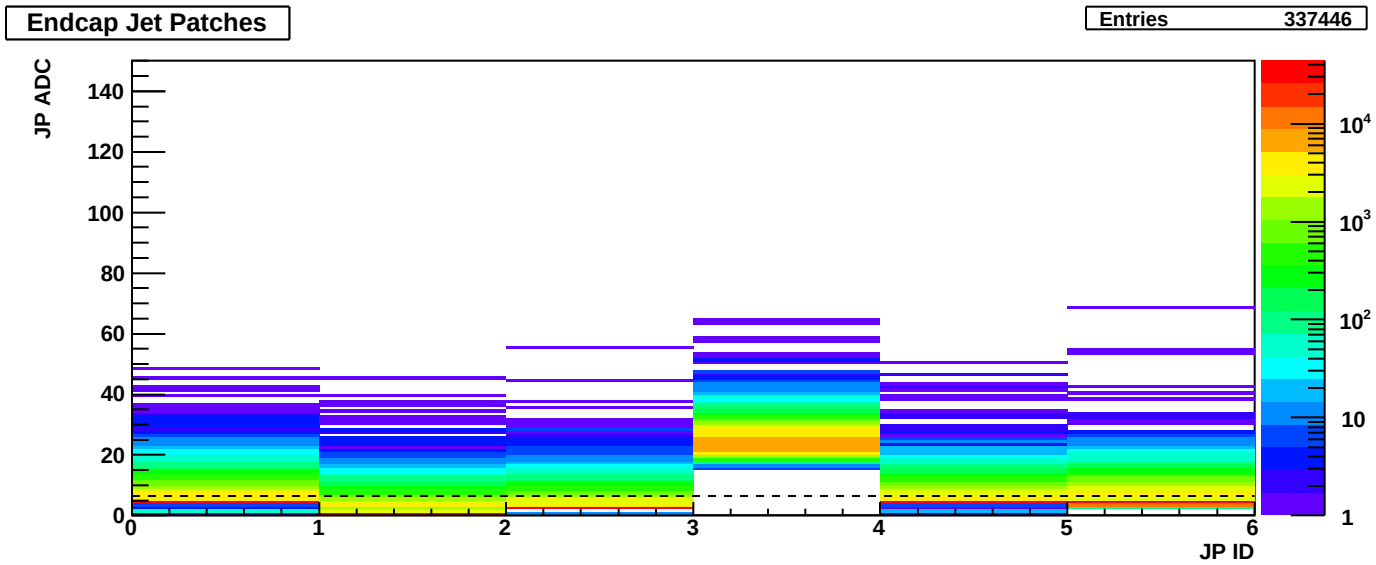

Barrel EMC L0 Input - High Tower
Entries 1.68723e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

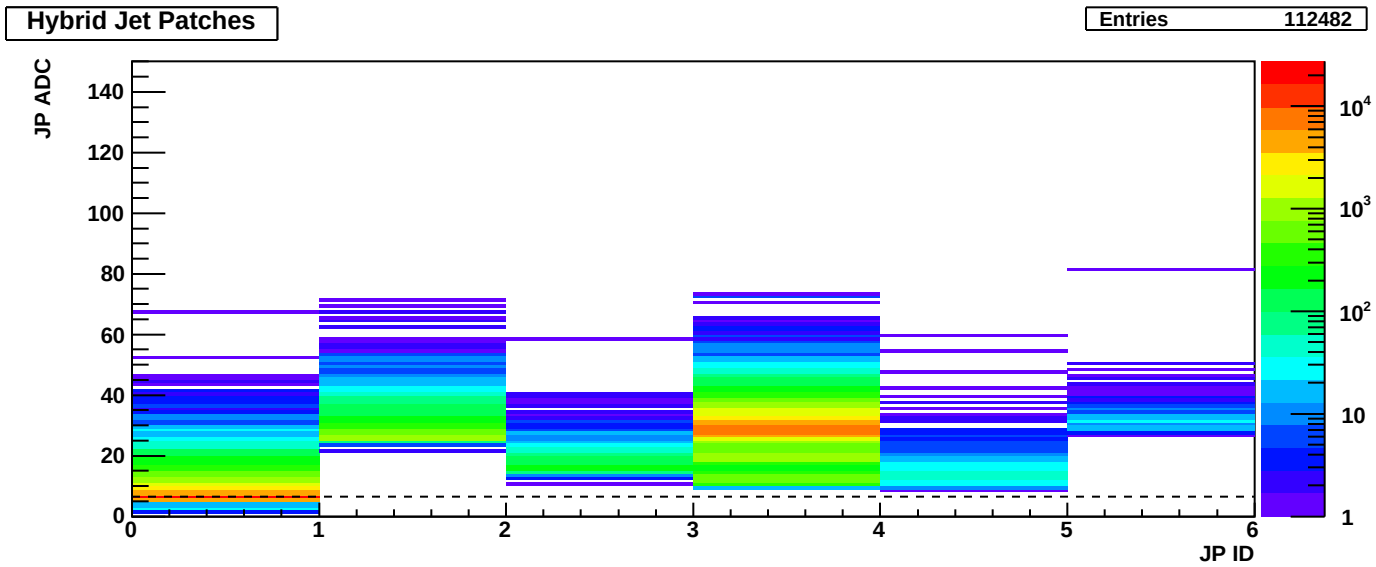

Barrel EMC L0 Input - Patch Sum
Entries 1.68723e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

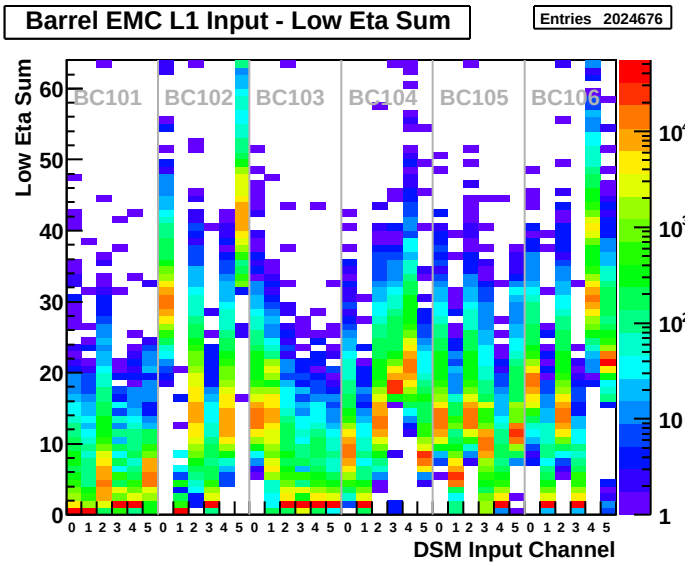

Endcap EMC L0 Input - High Tower
Entries 5061690
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

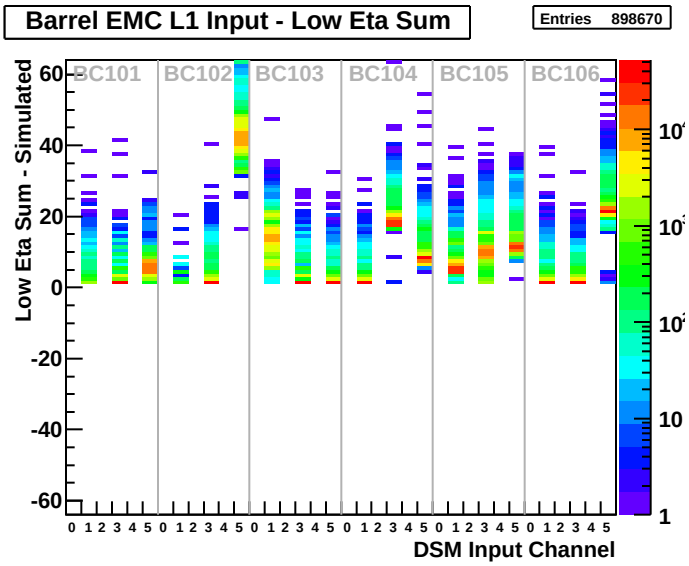

Endcap EMC L0 Input - Patch Sum
Entries 5061690
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

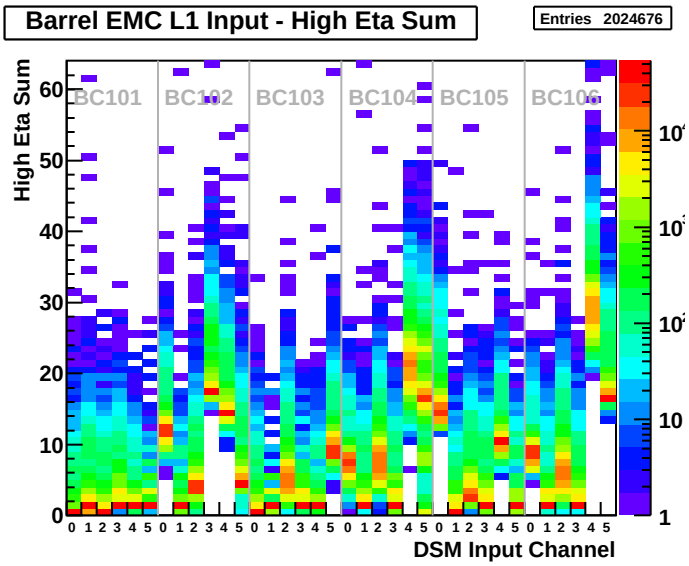

Barrel Jet Patches
Entries 1012338
JP ADC
JP ID

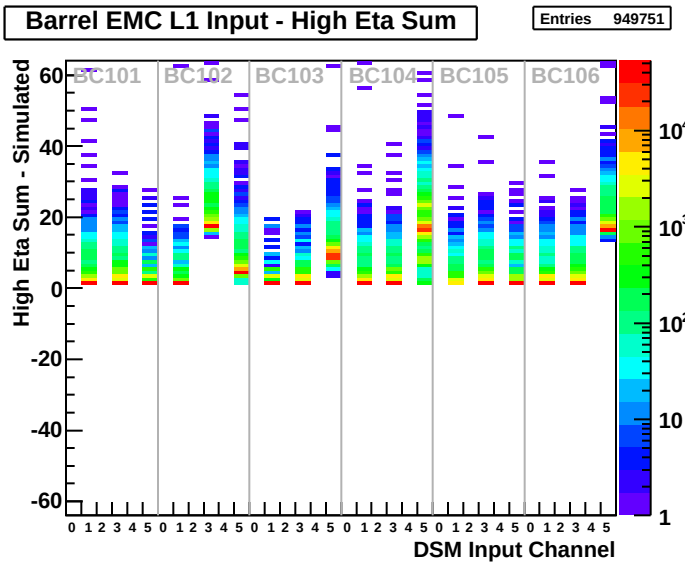

Endcap Jet Patches
Entries 337446
JP ADC
JP ID

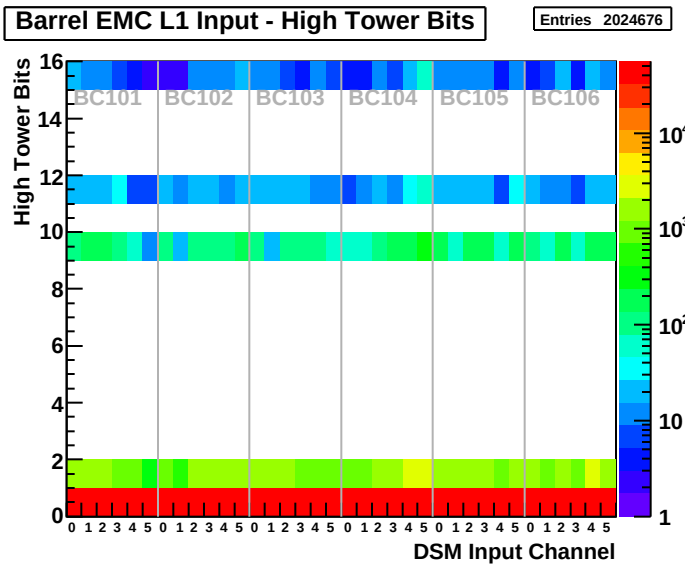

Hybrid Jet Patches
Entries 112482
JP ADC
JP ID

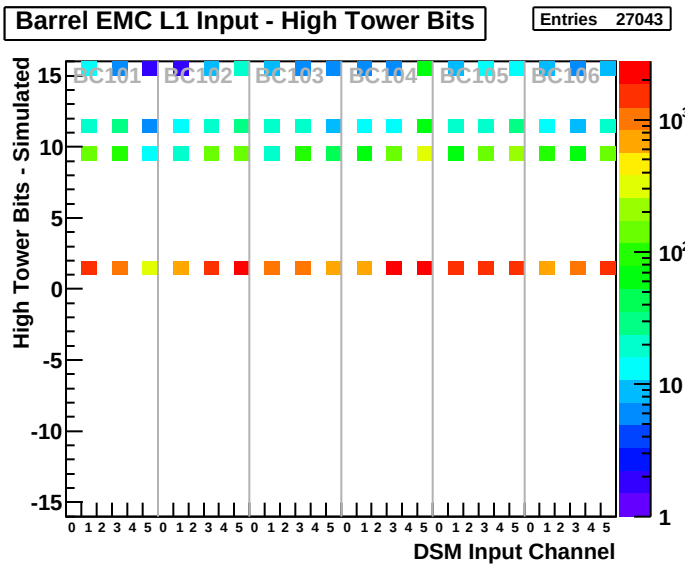

Barrel EMC L1 Input - Low Eta Sum
Entries 2024676
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

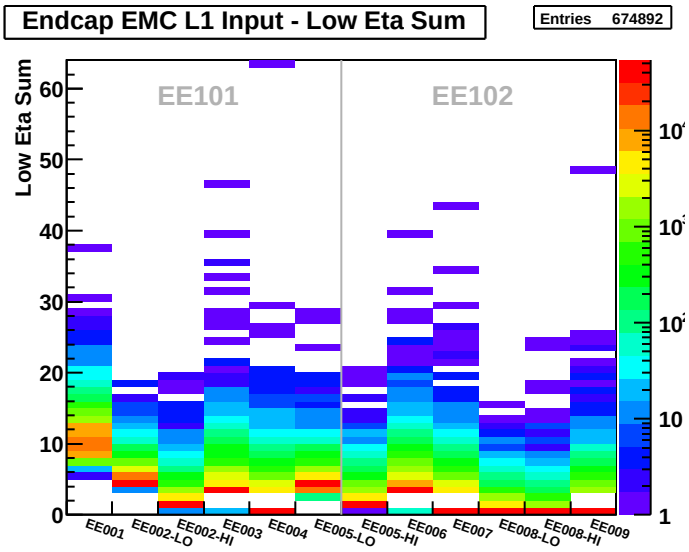

Barrel EMC L1 Input - Low Eta Sum
Entries 898670
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

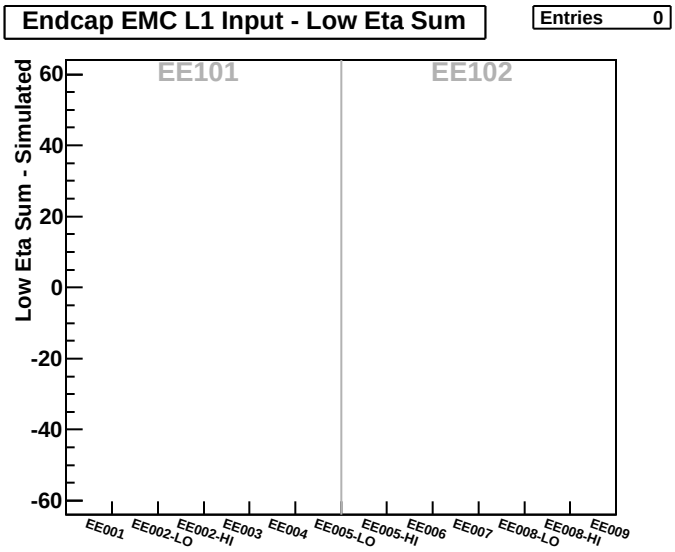

Barrel EMC L1 Input - High Eta Sum
Entries 2024676
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

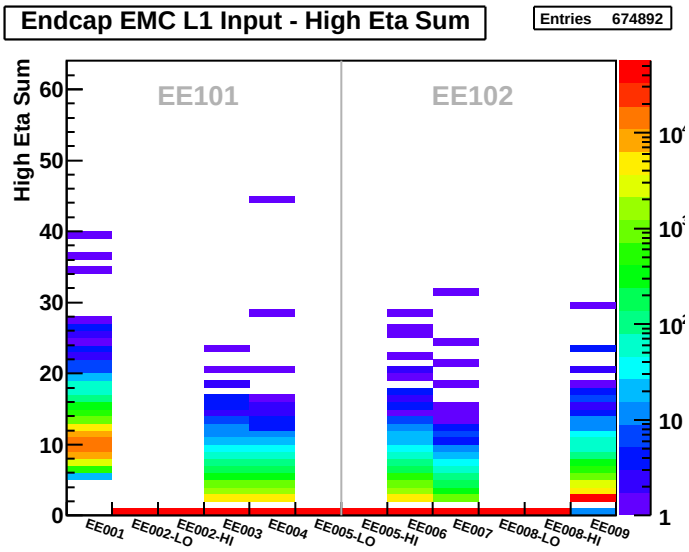

Barrel EMC L1 Input - High Eta Sum
Entries 949751
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

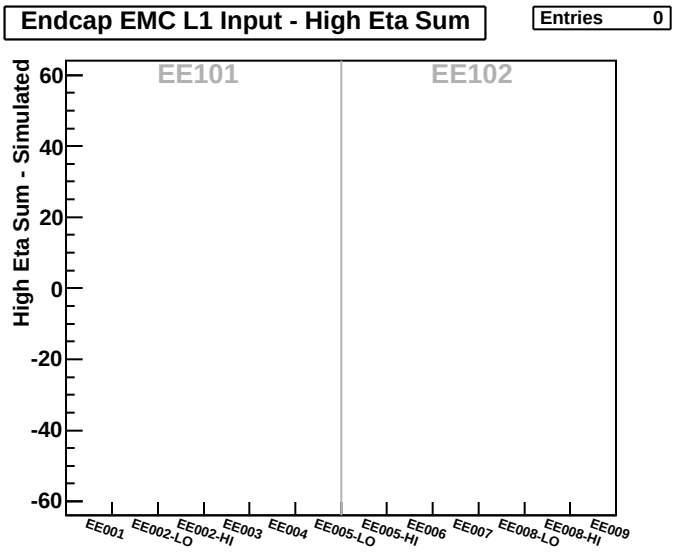

Barrel EMC L1 Input - High Tower Bits
Entries 2024676
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

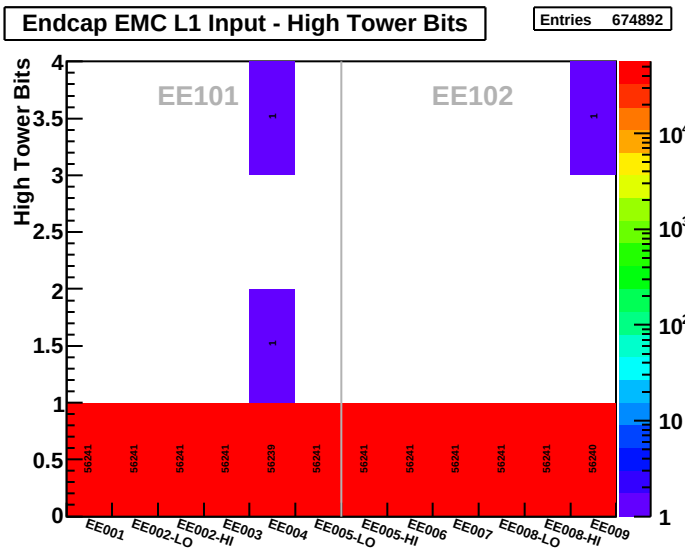

Barrel EMC L1 Input - High Tower Bits
Entries 27043
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

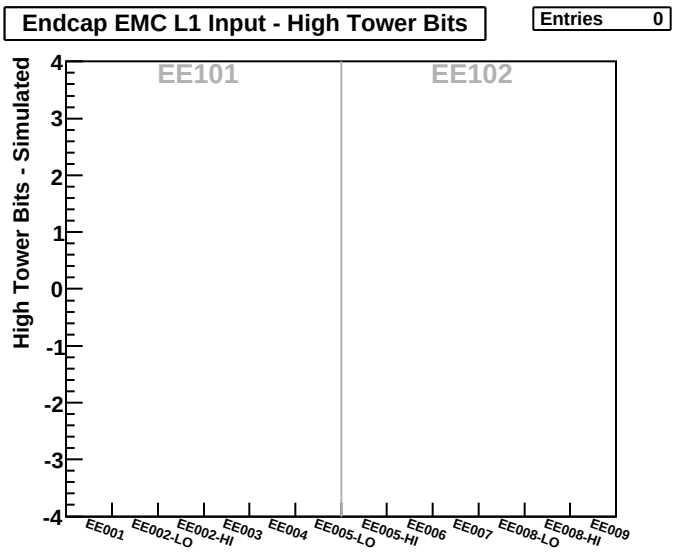

Endcap EMC L1 Input - Low Eta Sum
Entries 674892
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

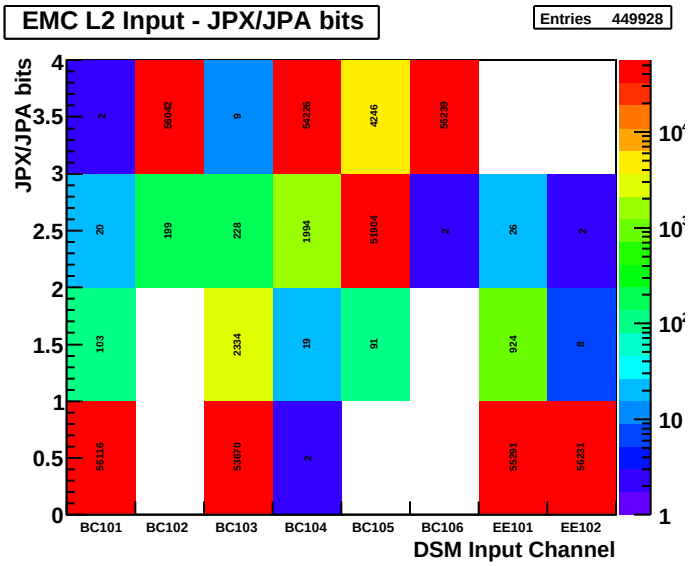

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

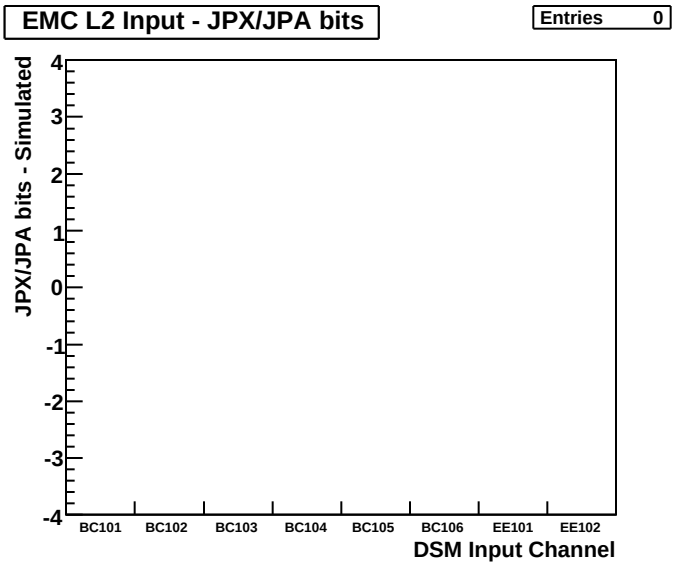

Endcap EMC L1 Input - High Eta Sum
Entries 674892
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

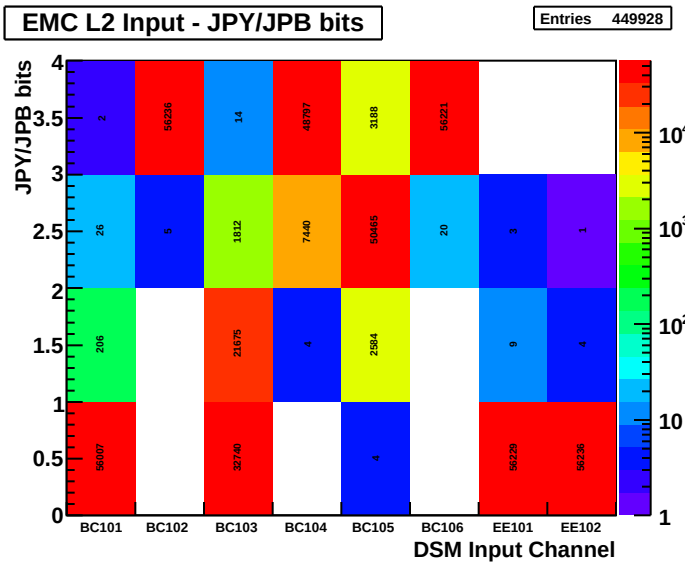

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

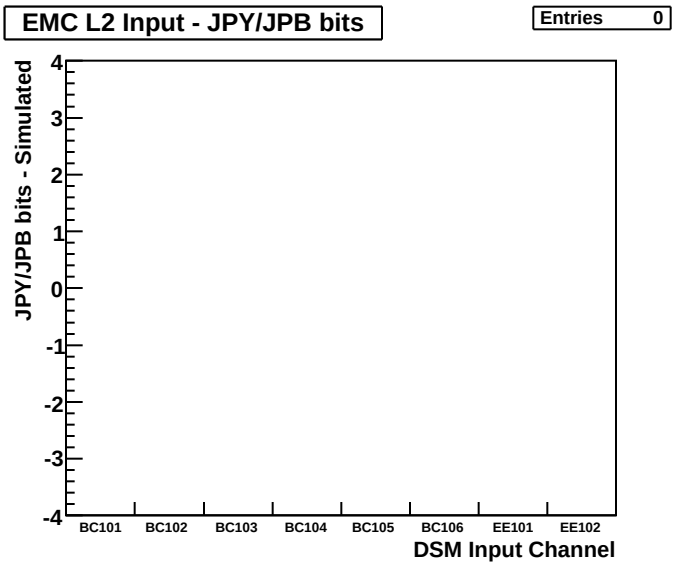

Endcap EMC L1 Input - High Tower Bits
Entries 674892
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

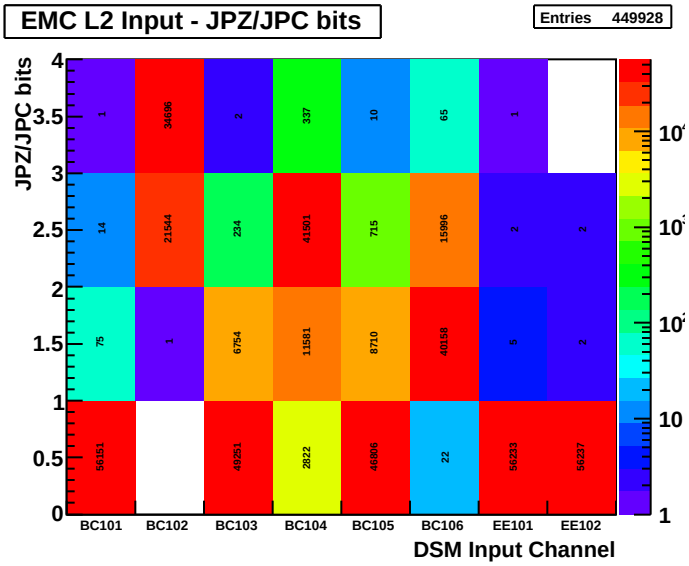

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

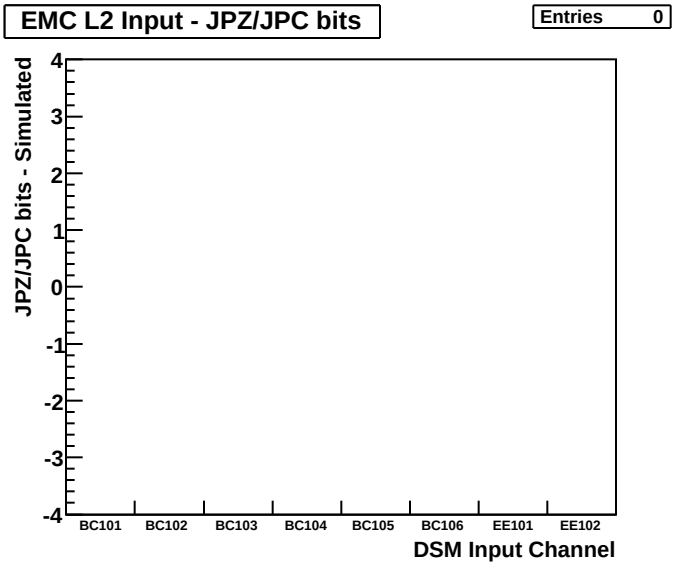

EMC L2 Input - JPX/JPA bits
Entries 449928
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

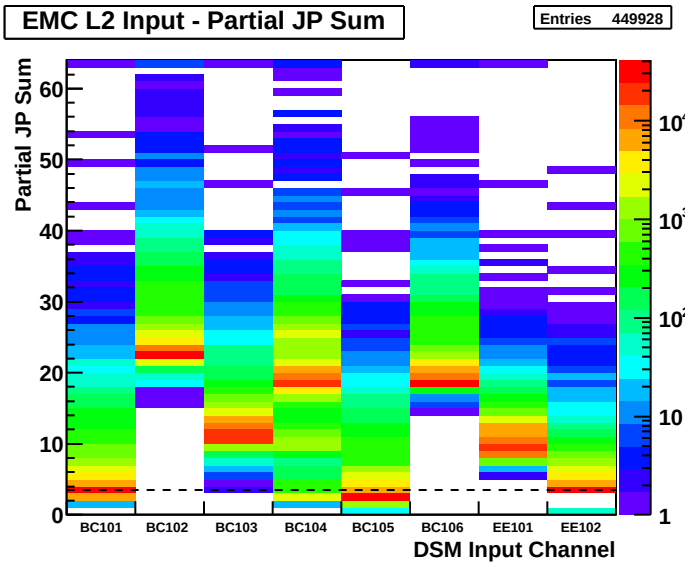

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

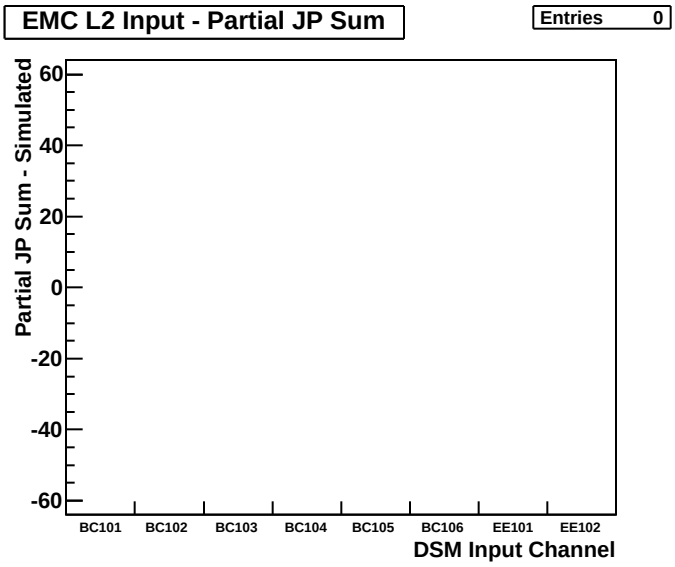

EMC L2 Input - JPY/JPB bits
Entries 449928
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

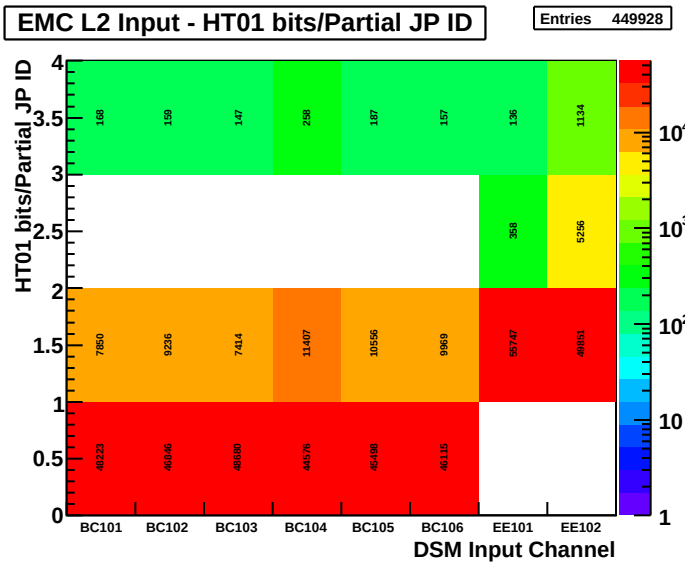

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

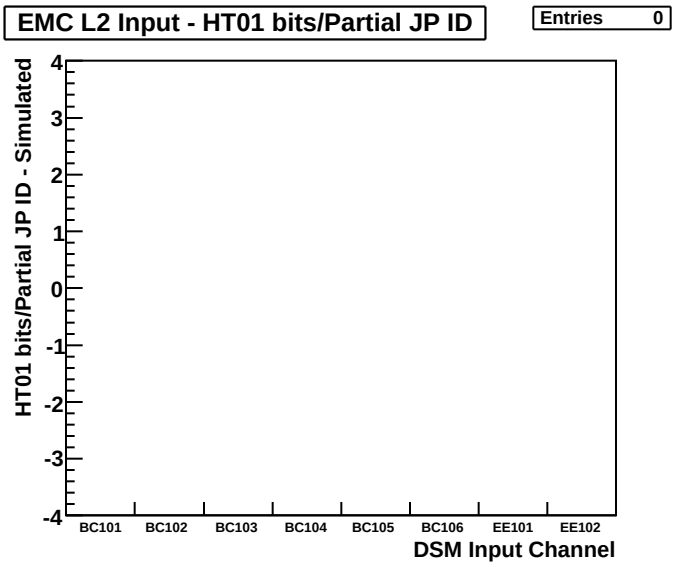

EMC L2 Input - JPZ/JPC bits
Entries 449928
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

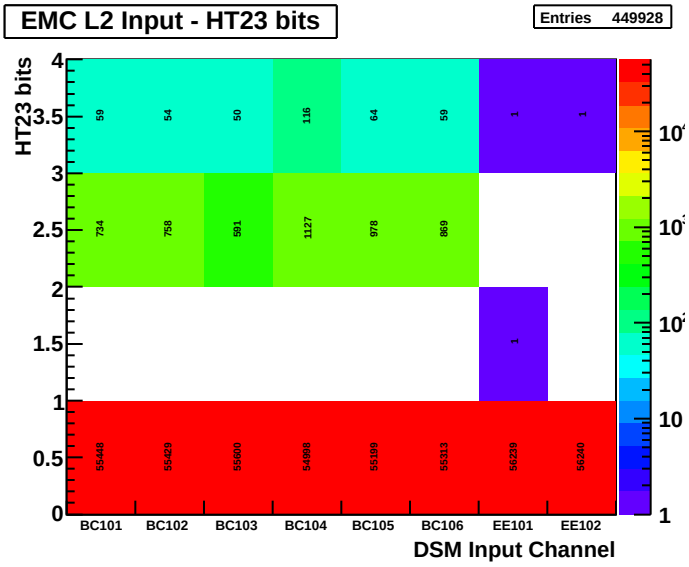

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

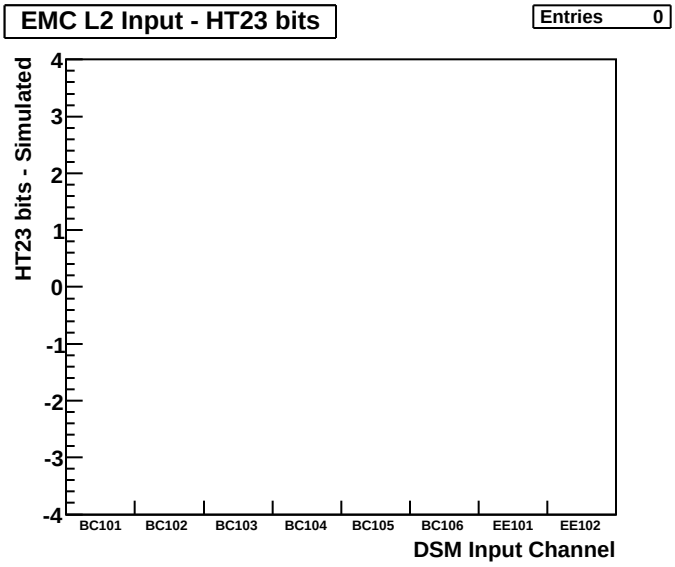

EMC L2 Input - Partial JP Sum
Entries 449928
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

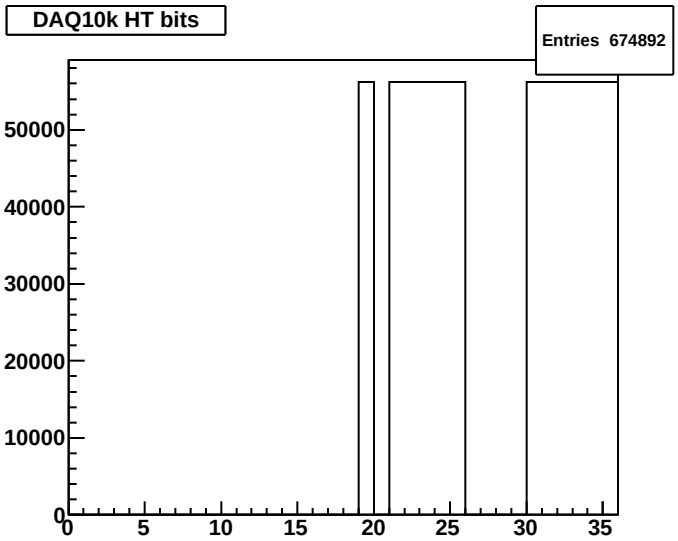

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

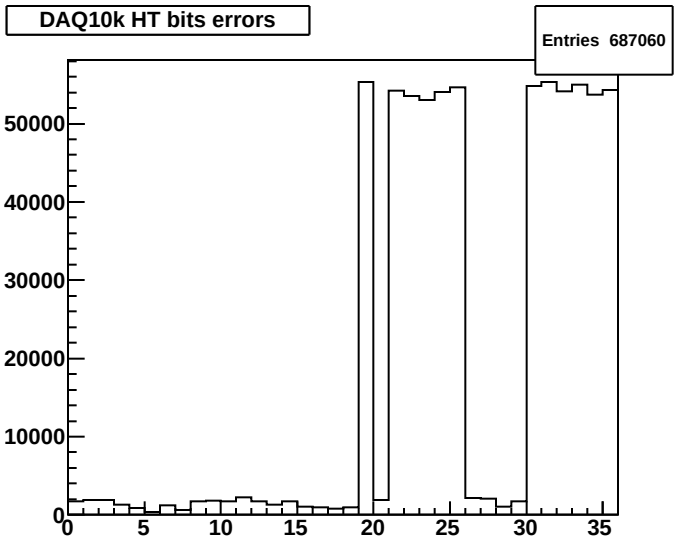

EMC L2 Input - HT01 bits/Partial JP ID
Entries 449928
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

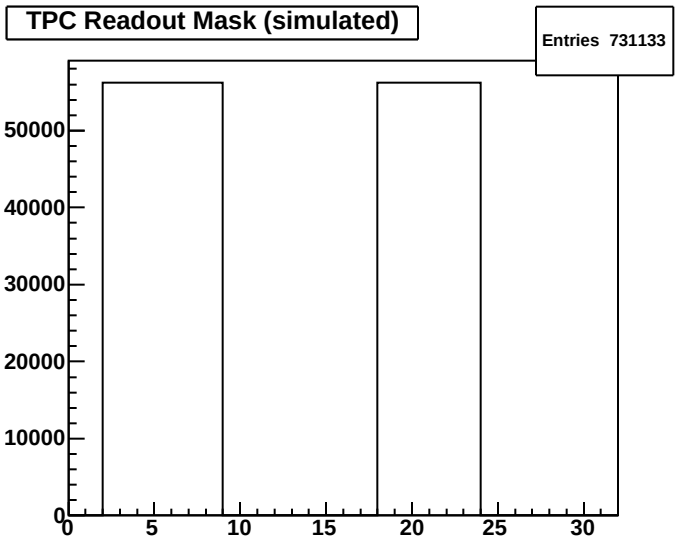

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

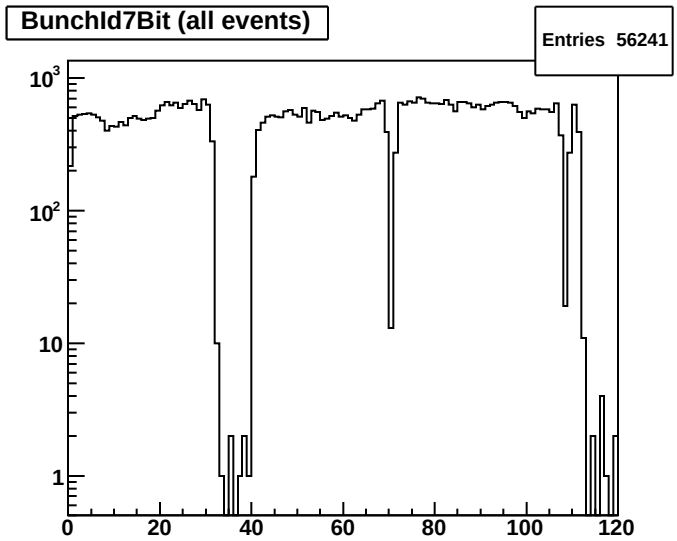

EMC L2 Input - HT23 bits
Entries 449928
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

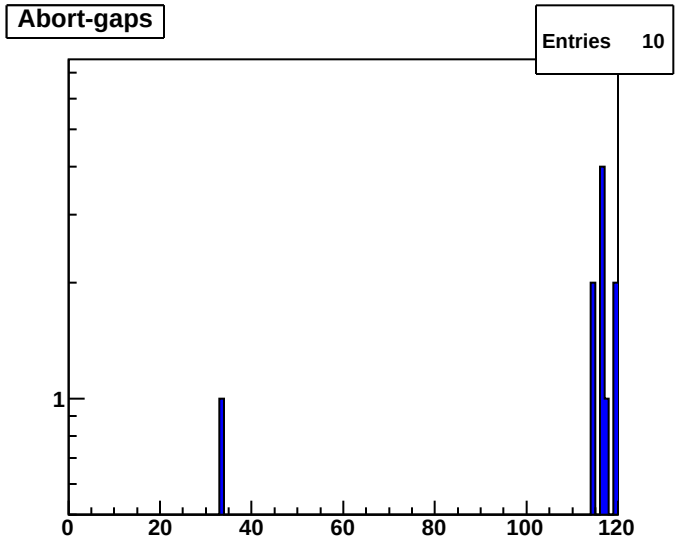

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

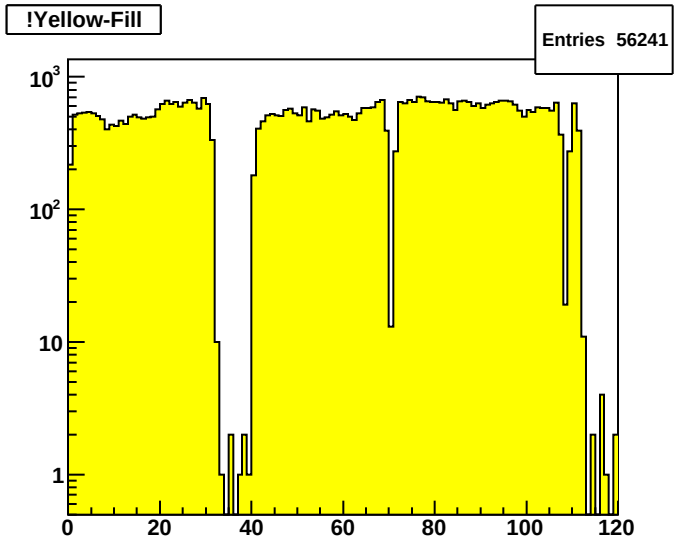

DAQ10k HT bits
Entries 674892
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

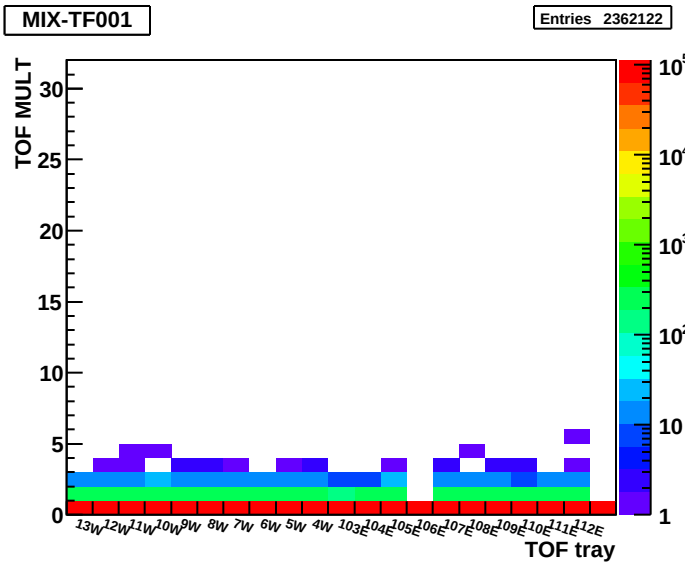

DAQ10k HT bits errors
Entries 687060
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

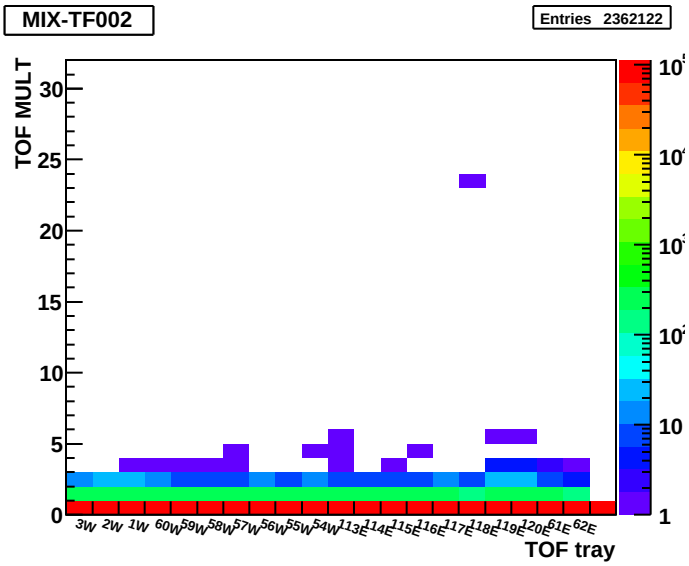

TPC Readout Mask (simulated)
Entries 731133
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30

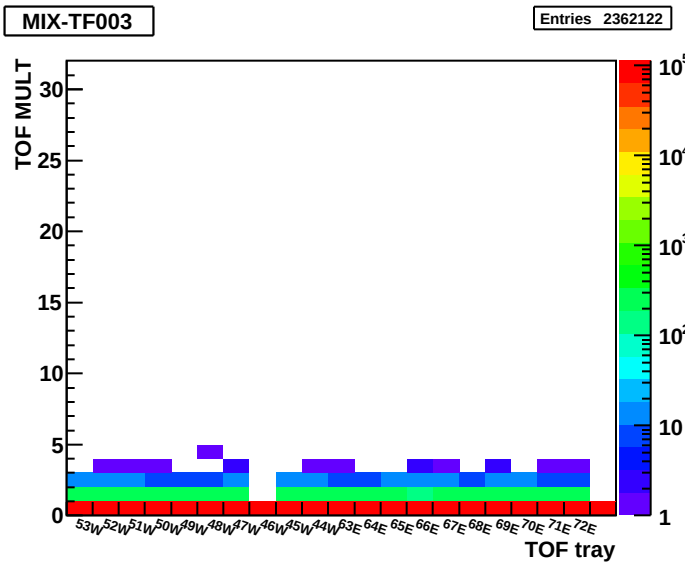

BunchId7Bit (all events)
Entries 56241
10^3
10^2
10
1
0 20 40 60 80 100 120

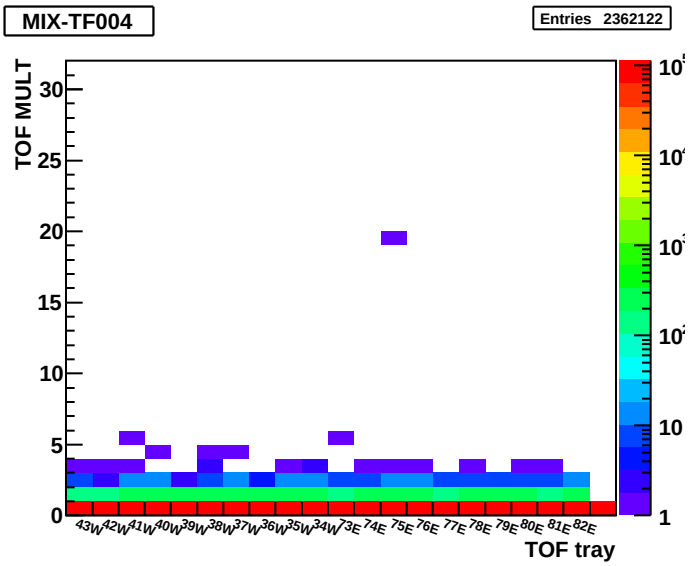

Abort-gaps
Entries 10
1
0 20 40 60 80 100 120

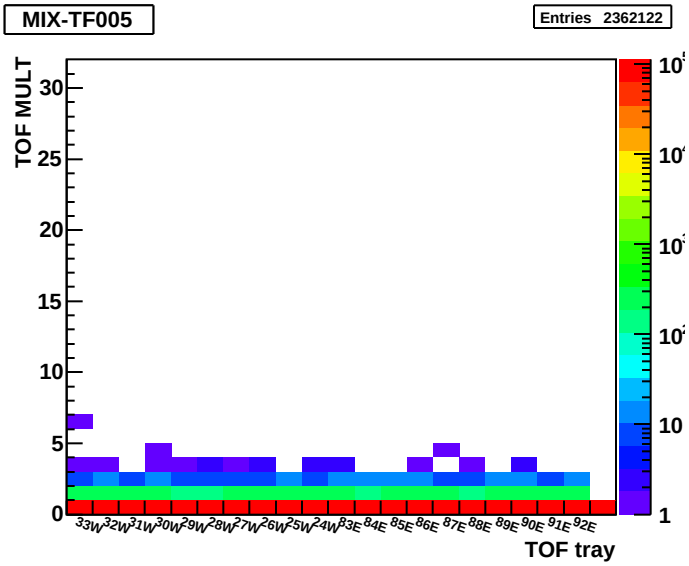

!Yellow-Fill
Entries 56241
10^3
10^2
10
1
0 20 40 60 80 100 120

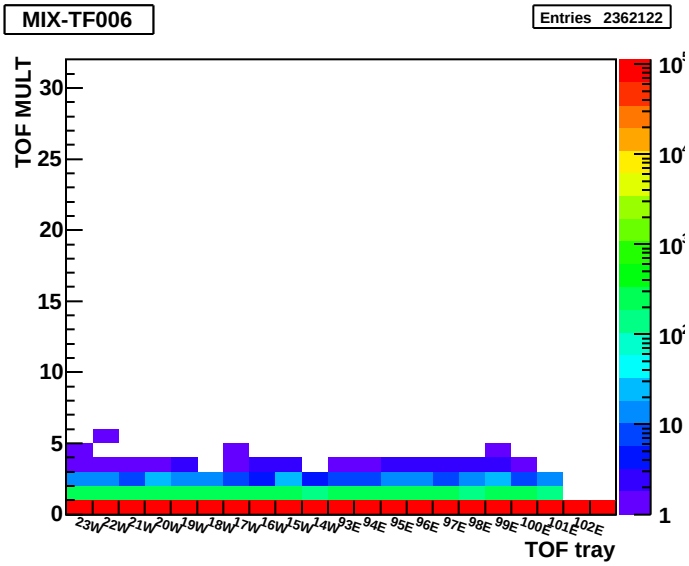

MIX-TF001
Entries 2362122
TOF MULT
TOF tray

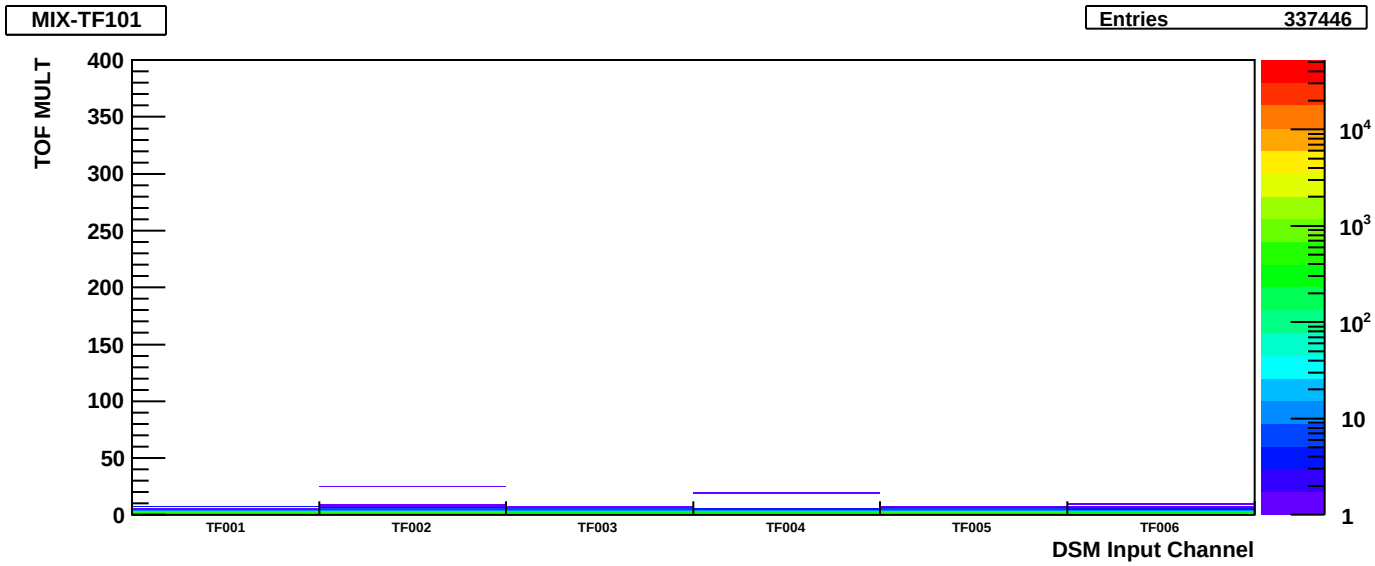

MIX-TF002
Entries 2362122
TOF MULT
TOF tray

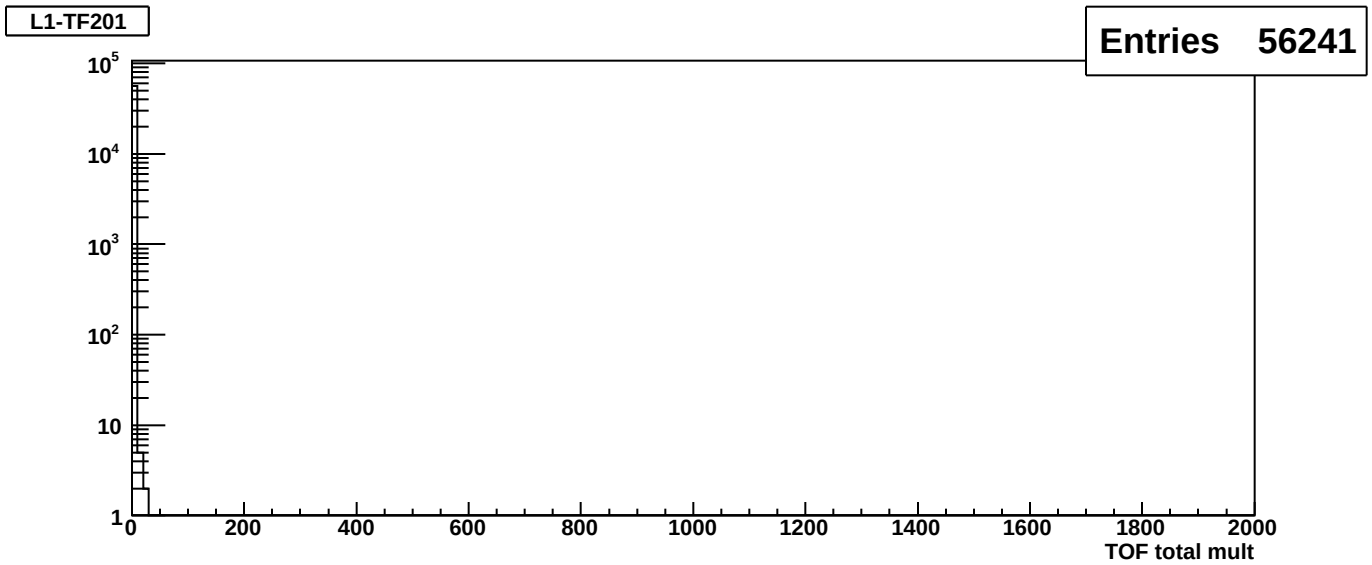

MIX-TF003
Entries 2362122
TOF MULT
TOF tray

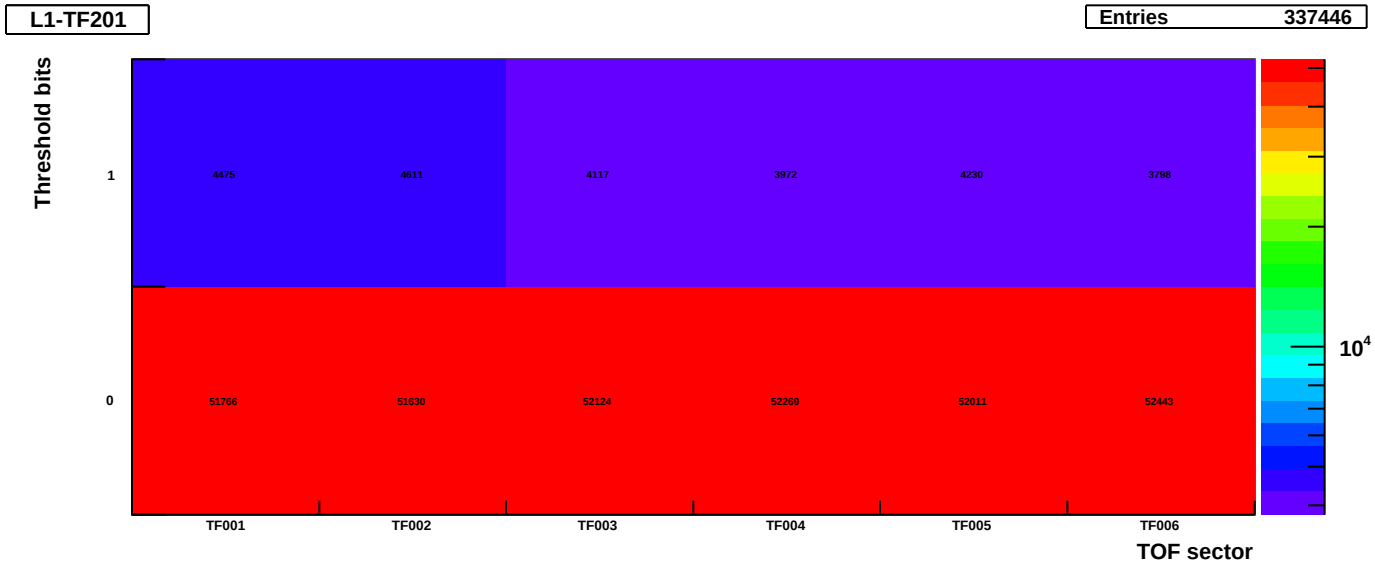

MIX-TF004
Entries 2362122
TOF MULT
TOF tray

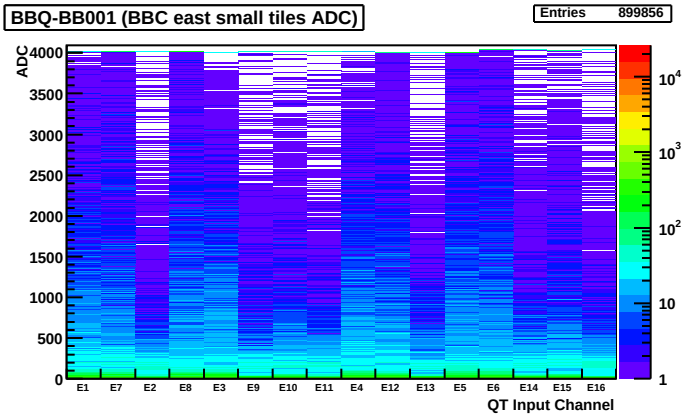

MIX-TF005
Entries 2362122
TOF MULT
TOF tray

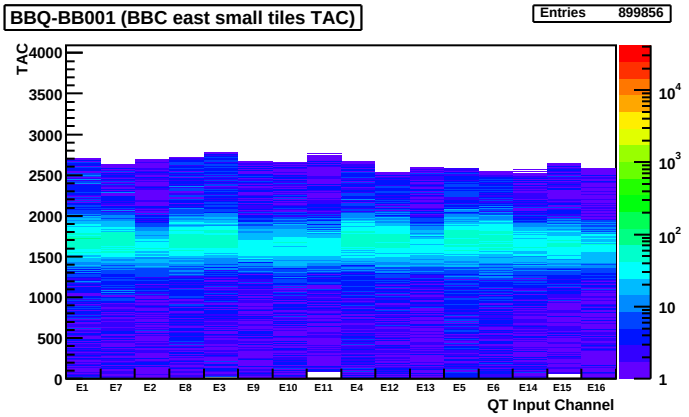

MIX-TF006
Entries 2362122
TOF MULT
TOF tray

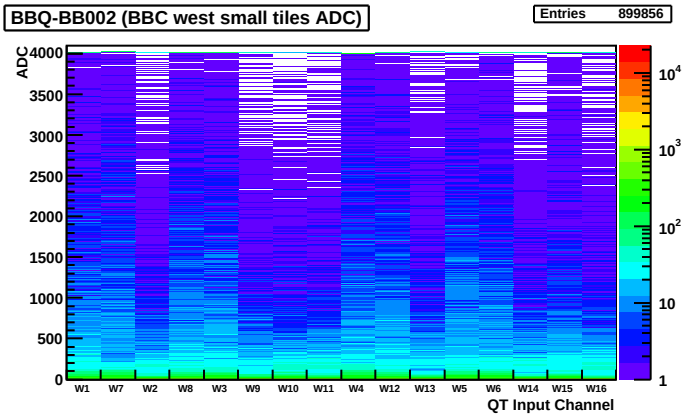

MIX-TF101
Entries 337446
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

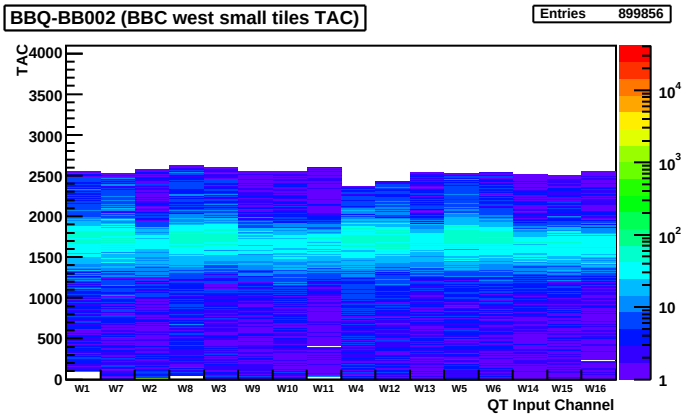

L1-TF201
Entries 56241
10^5
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

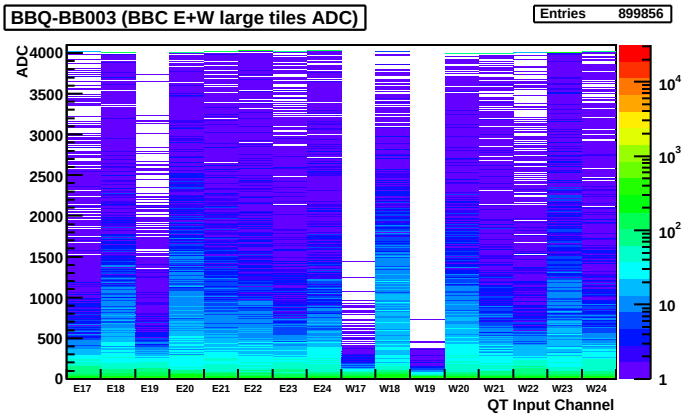

L1-TF201
Entries 337446
Threshold bits
1
0
4475
4611
4117
3972
4230
3798
51766
51630
52124
52269
52011
52443
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4

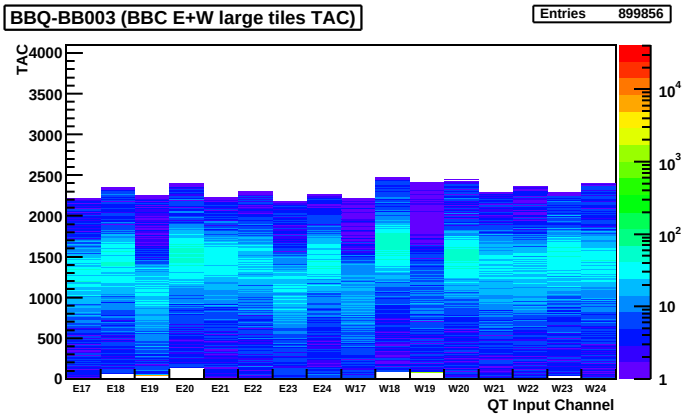

BBQ-BB001 (BBC east small tiles ADC)
Entries 899856
ADC
QT Input Channel

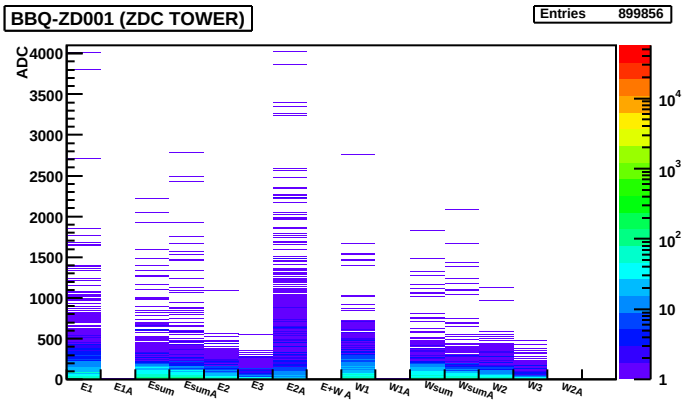

BBQ-BB001 (BBC east small tiles TAC)
Entries 899856
TAC
QT Input Channel

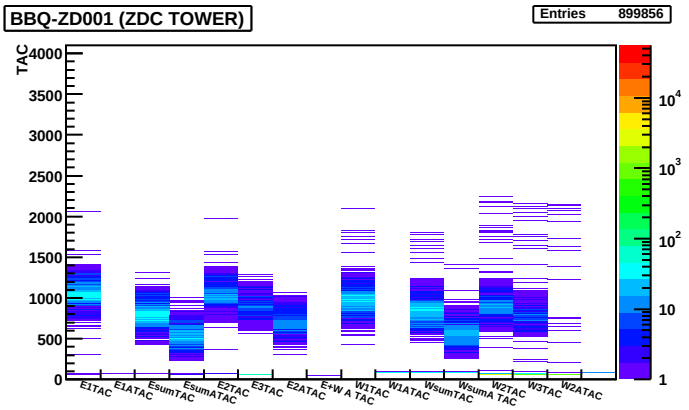

BBQ-BB002 (BBC west small tiles ADC)
Entries 899856
ADC
QT Input Channel

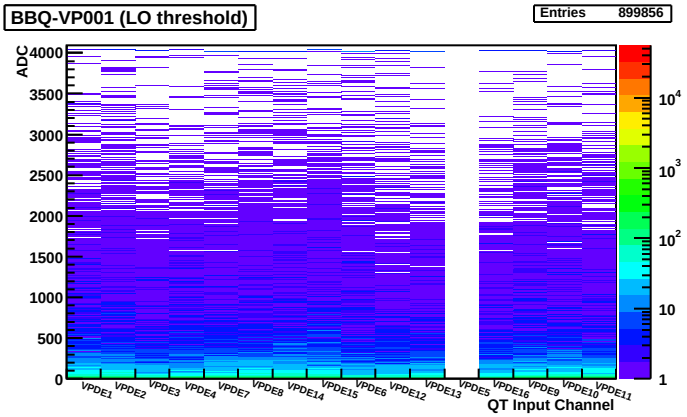

BBQ-BB002 (BBC west small tiles TAC)
Entries 899856
TAC
QT Input Channel

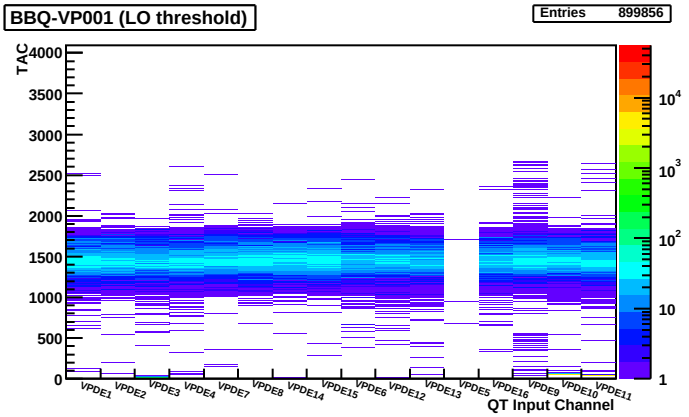

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 899856
ADC
QT Input Channel

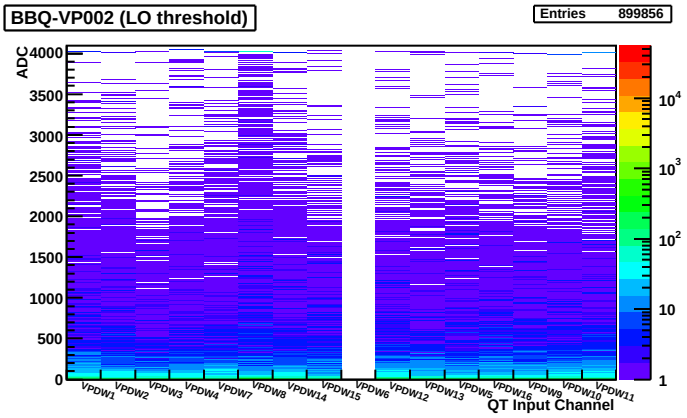

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 899856
TAC
QT Input Channel

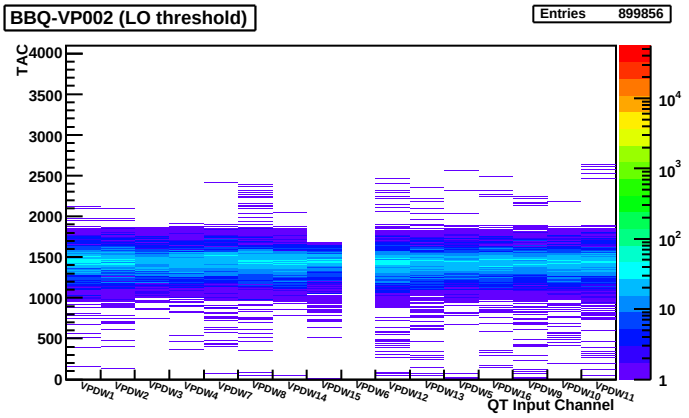

BBQ-ZD001 (ZDC TOWER)
Entries 899856
ADC

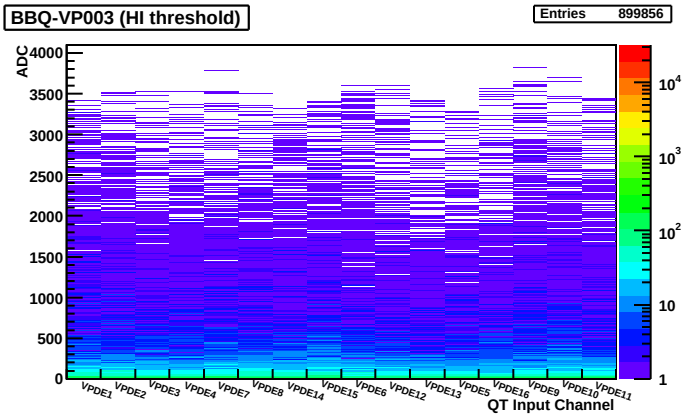

BBQ-ZD001 (ZDC TOWER)
Entries 899856
TAC

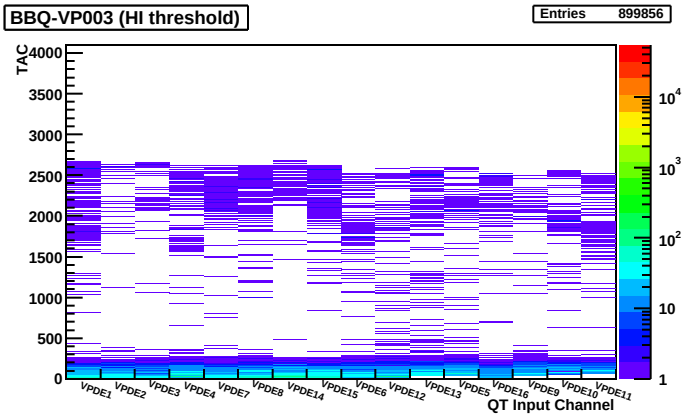

BBQ-VP001 (LO threshold)
Entries 899856
ADC
QT Input Channel

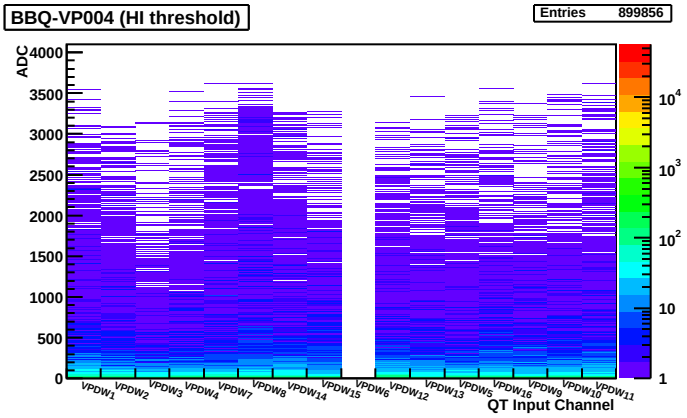

BBQ-VP001 (LO threshold)
Entries 899856
TAC
QT Input Channel

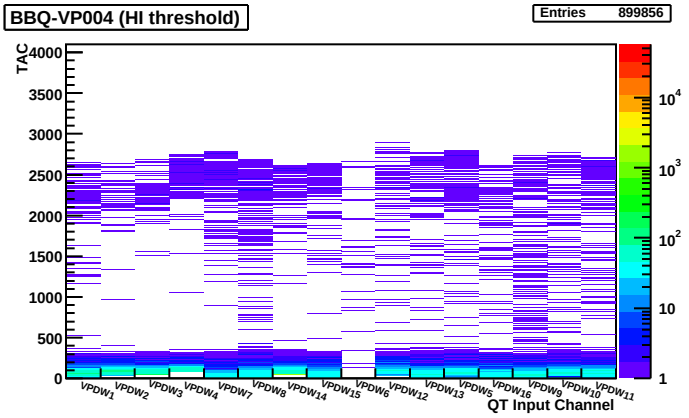

BBQ-VP002 (LO threshold)
Entries 899856
ADC
QT Input Channel

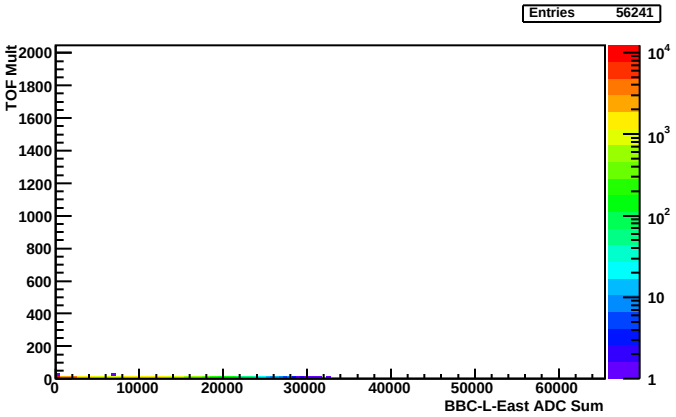

BBQ-VP002 (LO threshold)
Entries 899856
TAC
QT Input Channel

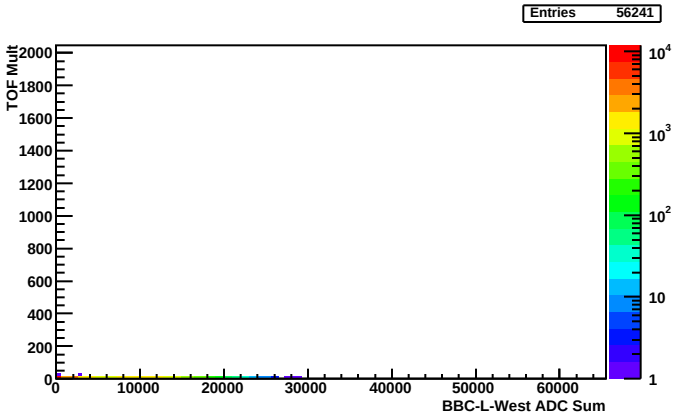

BBQ-VP003 (HI threshold)
Entries 899856
ADC
QT Input Channel

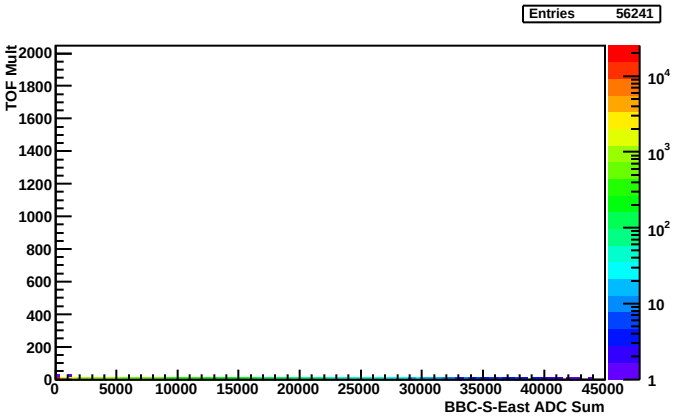

BBQ-VP003 (HI threshold)
Entries 899856
TAC
QT Input Channel

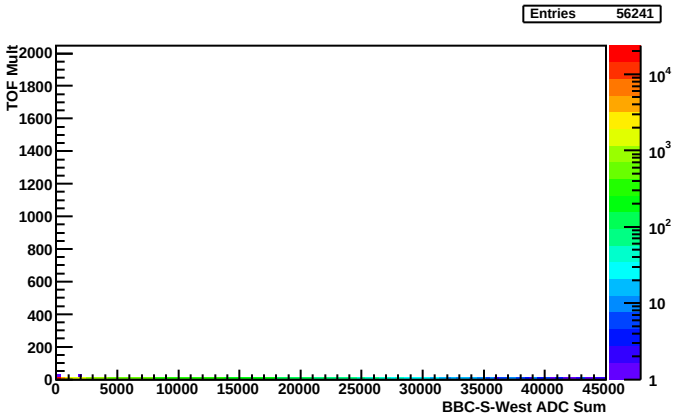

BBQ-VP004 (HI threshold)
Entries 899856
ADC
QT Input Channel

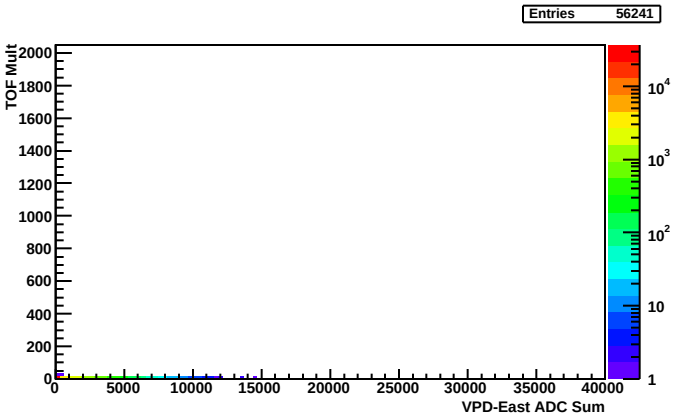

BBQ-VP004 (HI threshold)
Entries 899856
TAC
QT Input Channel

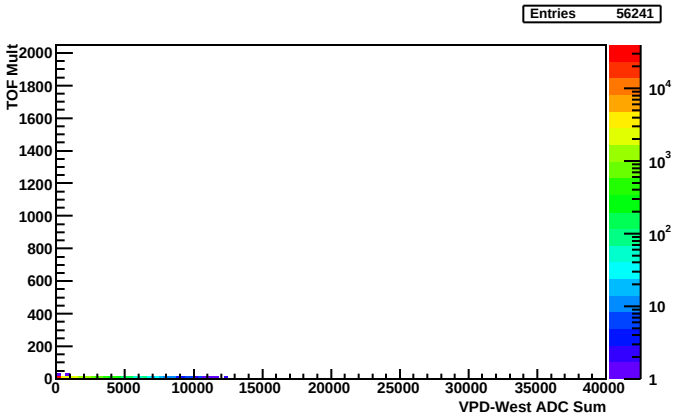

Entries 56241
TOF Mult
BBC-L-East ADC Sum

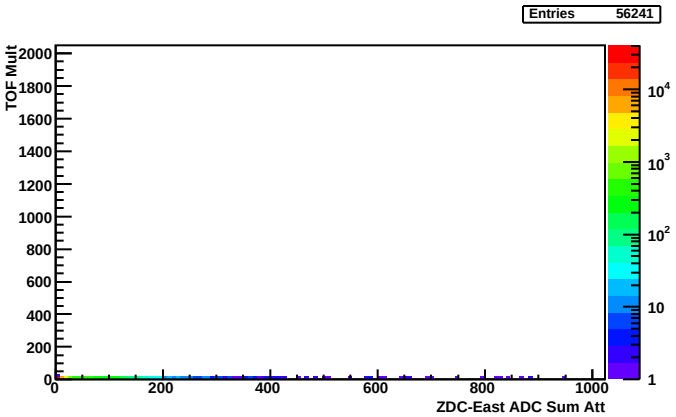

Entries 56241
TOF Mult
BBC-L-West ADC Sum

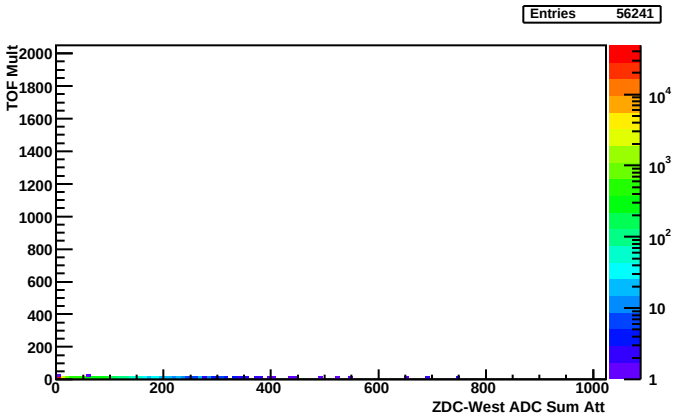

Entries 56241
TOF Mult
BBC-S-East ADC Sum

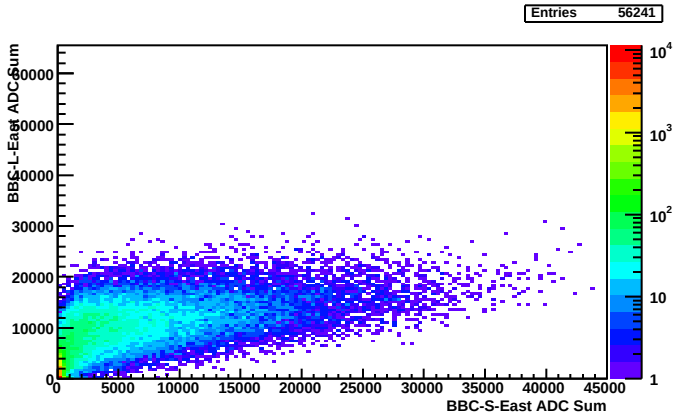

Entries 56241
TOF Mult
BBC-S-West ADC Sum

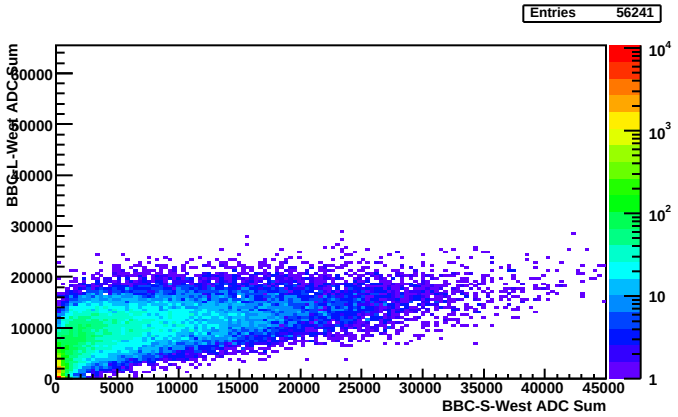

Entries 56241
TOF Mult
VPD-East ADC Sum

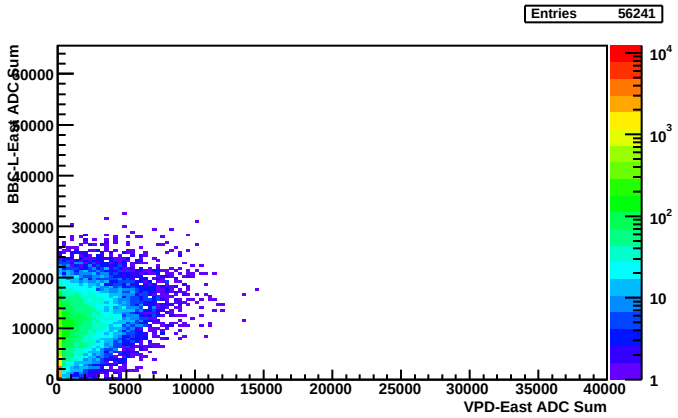

Entries 56241
TOF Mult
VPD-West ADC Sum

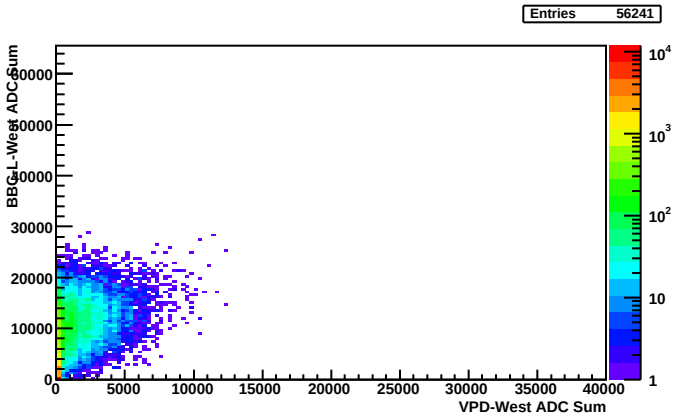

Entries 56241
TOF Mult
ZDC-East ADC Sum Att

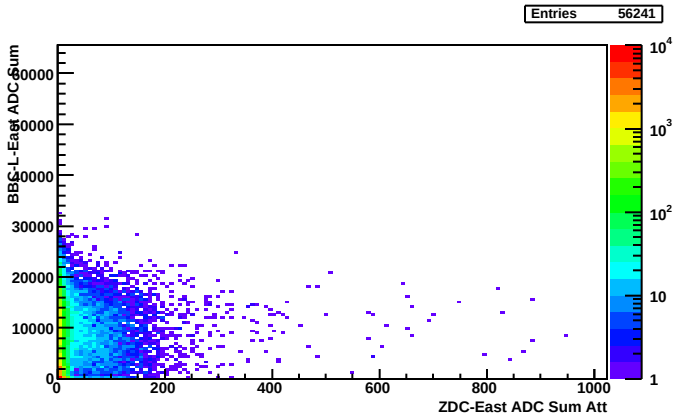

Entries 56241
TOF Mult
ZDC-West ADC Sum Att

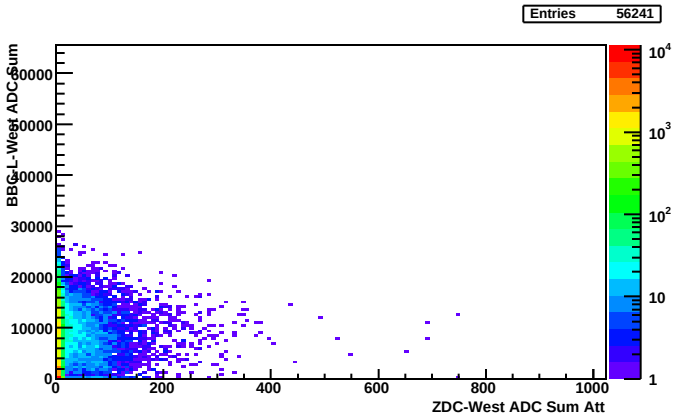

Entries 56241
BBC-L-East ADC Sum
BBC-S-East ADC Sum

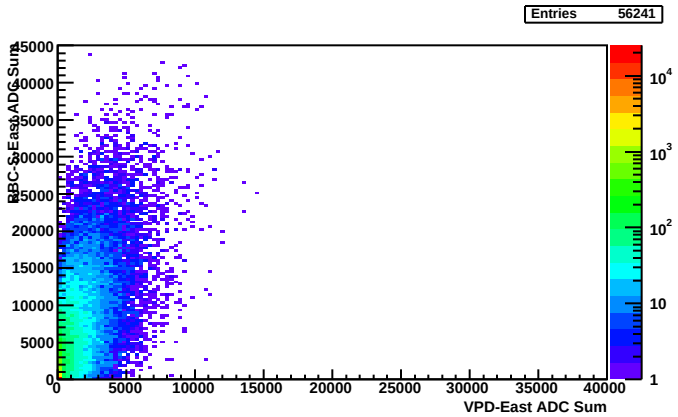

Entries 56241
BBC-L-West ADC Sum
BBC-S-West ADC Sum

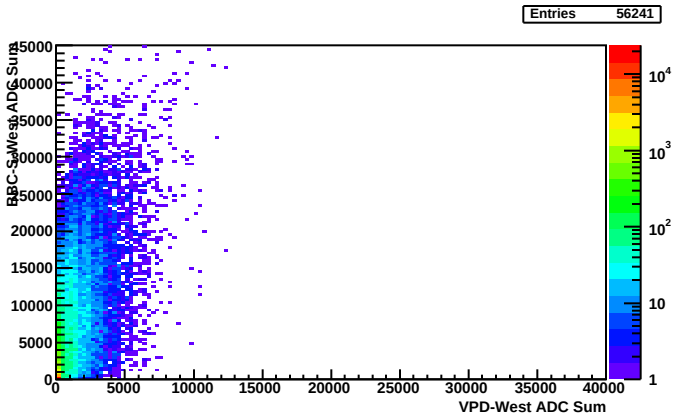

Entries 56241
BBC-L-East ADC Sum
VPD-East ADC Sum

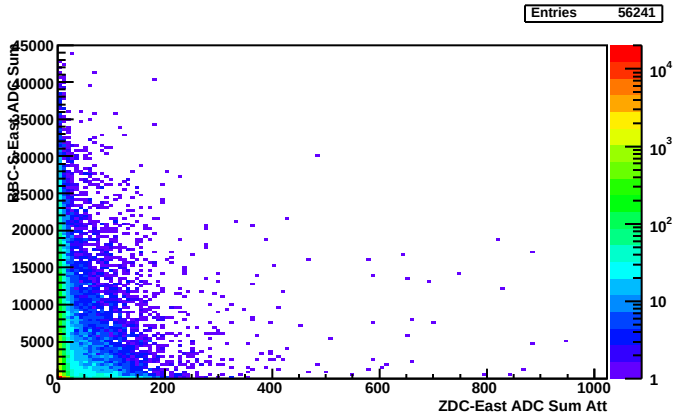

Entries 56241
BBC-L-West ADC Sum
VPD-West ADC Sum

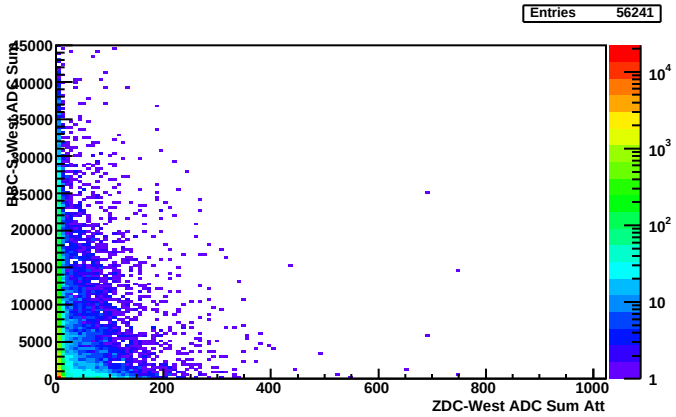

Entries 56241
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

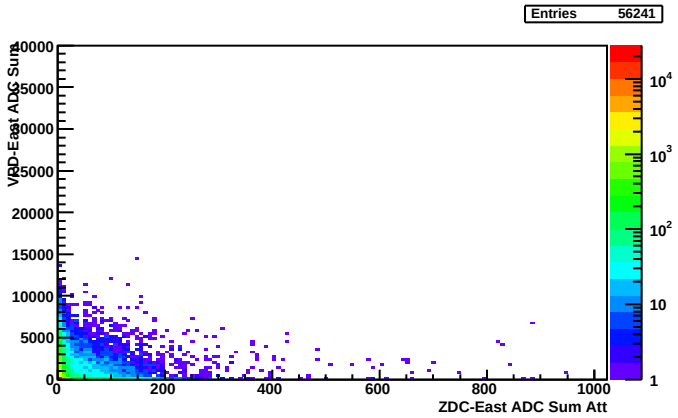

Entries 56241
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

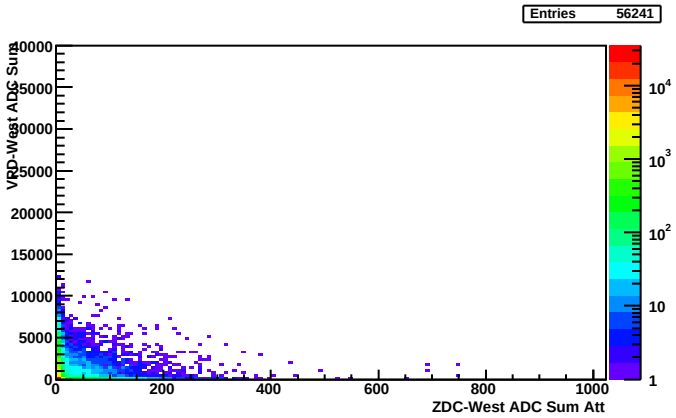

Entries 56241
BBC-S-East ADC Sum
VPD-East ADC Sum

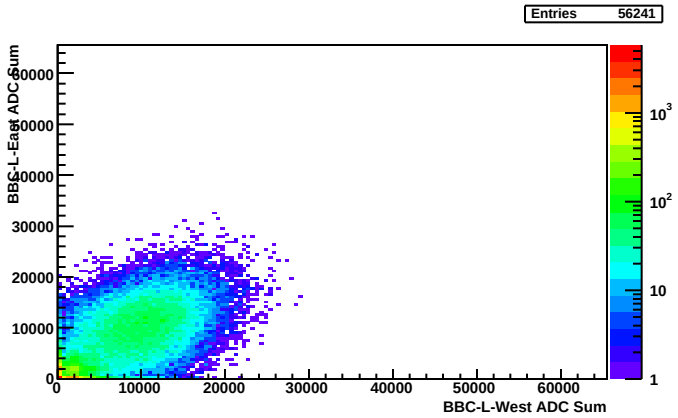

Entries 56241
BBC-S-West ADC Sum
VPD-West ADC Sum

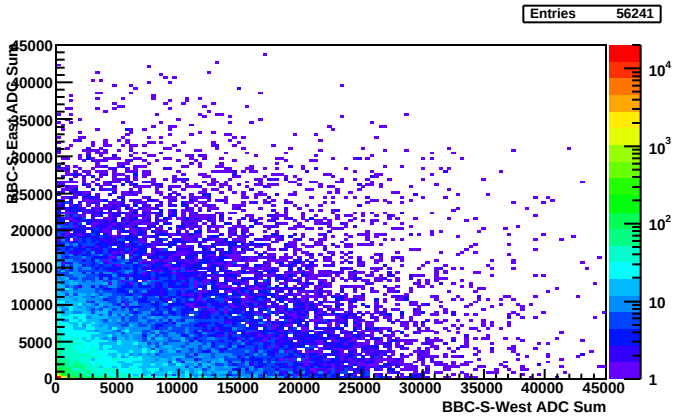

Entries 56241
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

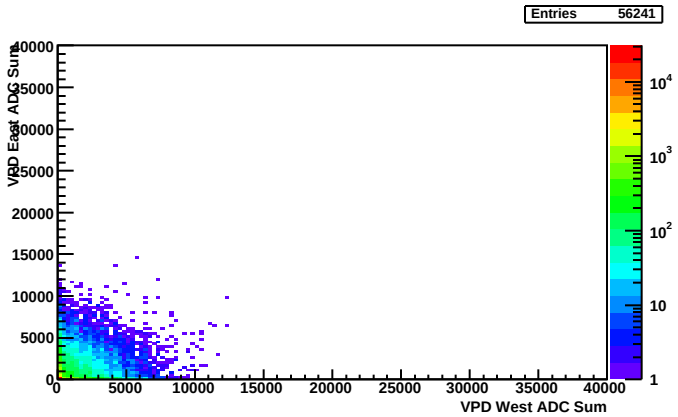

Entries 56241
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

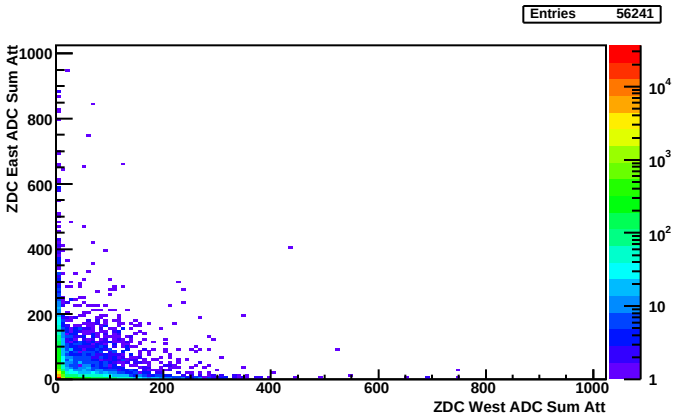

Entries 56241
VPD-East ADC Sum
ZDC-East ADC Sum Att

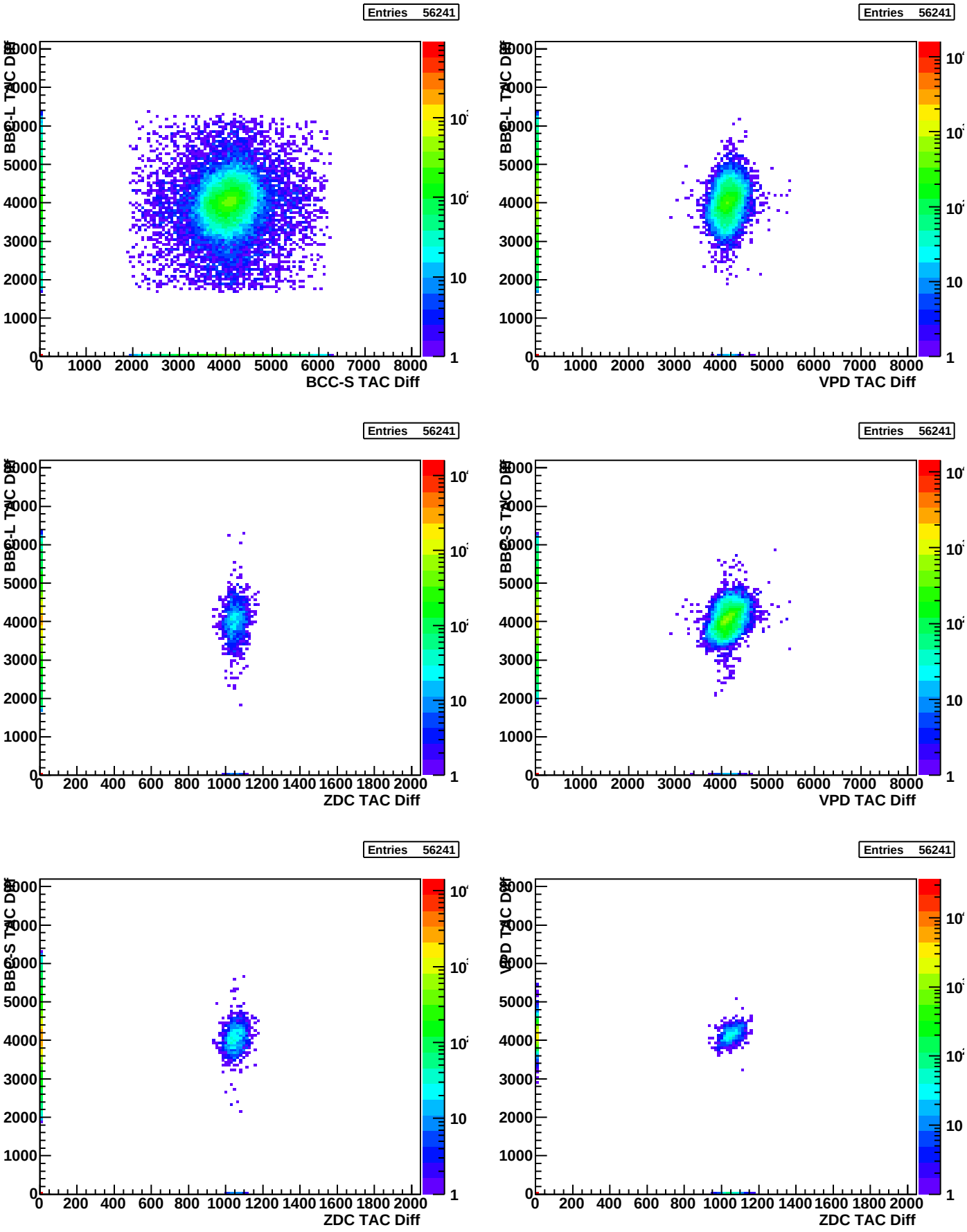

Entries 56241
VPD-West ADC Sum
ZDC-West ADC Sum Att

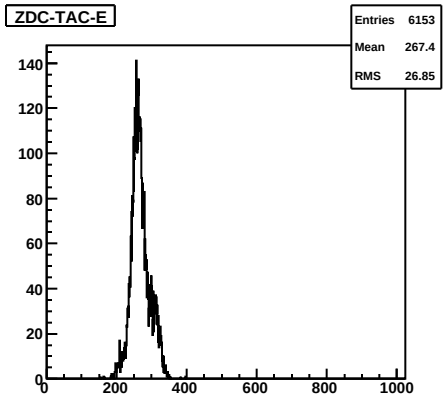

Entries 56241
BBC-L-East ADC Sum
BBC-L-West ADC Sum

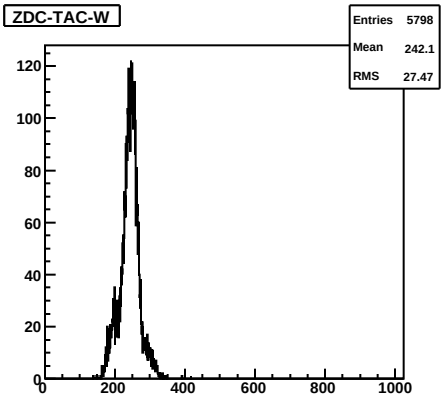

Entries 56241
BBC-S-East ADC Sum
BBC-S-West ADC Sum

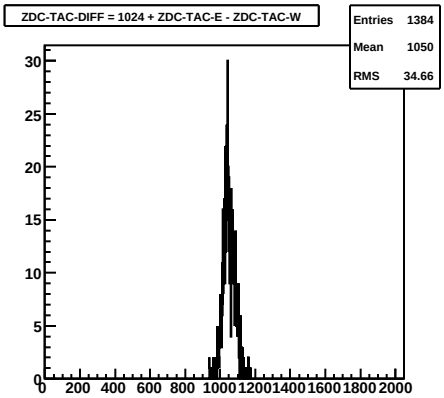

Entries 56241
VPD East ADC Sum
VPD West ADC Sum

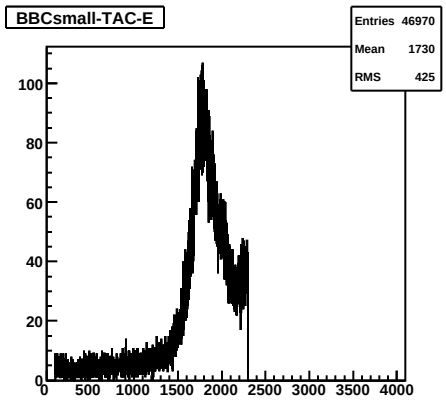

Entries 56241
ZDC East ADC Sum Att
ZDC West ADC Sum Att

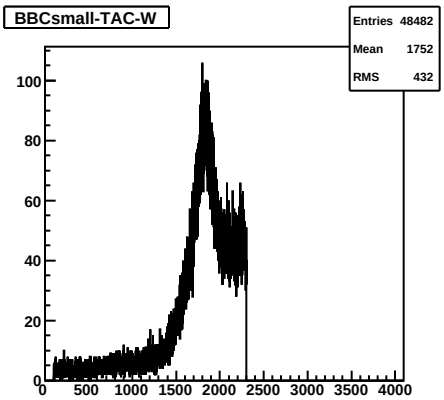

Entries 56241
BBC-L TAC Diff
BCC-S TAC Diff
Entries 56241
BBC-L TAC Diff
VPD TAC Diff
Entries 56241
BBC-L TAC Diff
ZDC TAC Diff
Entries 56241
BBC-S TAC Diff
VPD TAC Diff
Entries 56241
BBC-S TAC Diff
ZDC TAC Diff
Entries 56241
VPD TAC Diff
ZDC TAC Diff

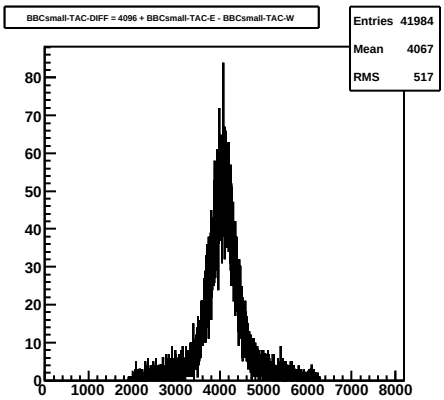

ZDC-TAC-E
Entries 6153
Mean 267.4
RMS 26.85

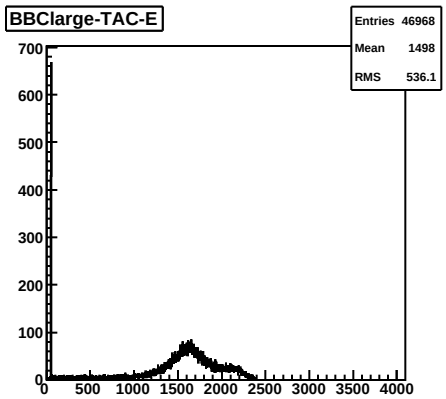

ZDC-TAC-W
Entries 5798
Mean 242.1
RMS 27.47

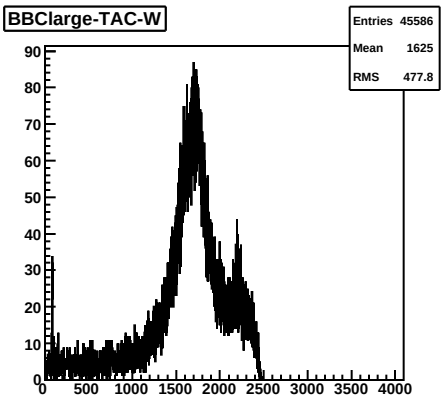

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 1384
Mean 1050
RMS 34.66

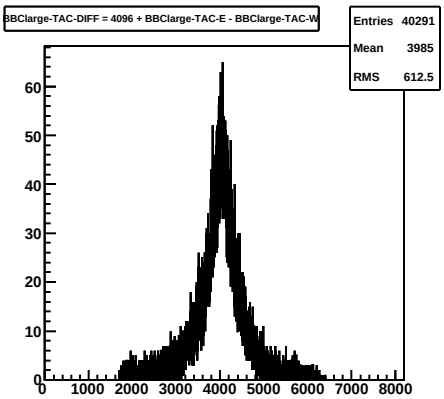

BBCsmall-TAC-E
Entries 46970
Mean 1730
RMS 425

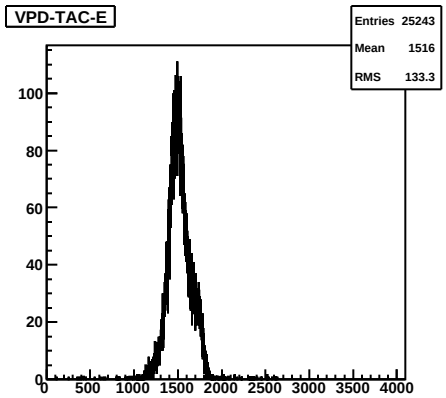

BBCsmall-TAC-W
Entries 48482
Mean 1752
RMS 432

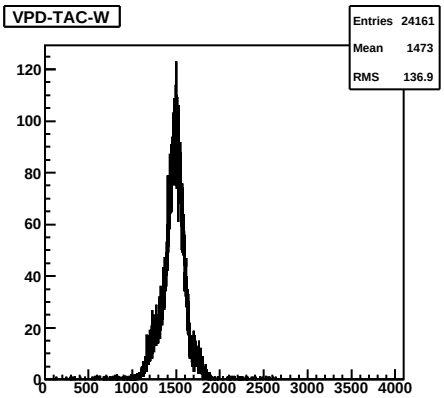

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 41984
Mean 4067
RMS 517

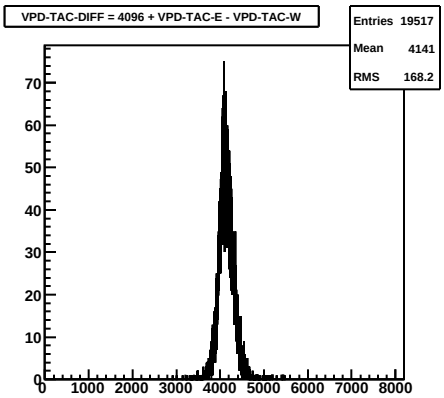

BBClarge-TAC-E
Entries 46968
Mean 1498
RMS 536.1

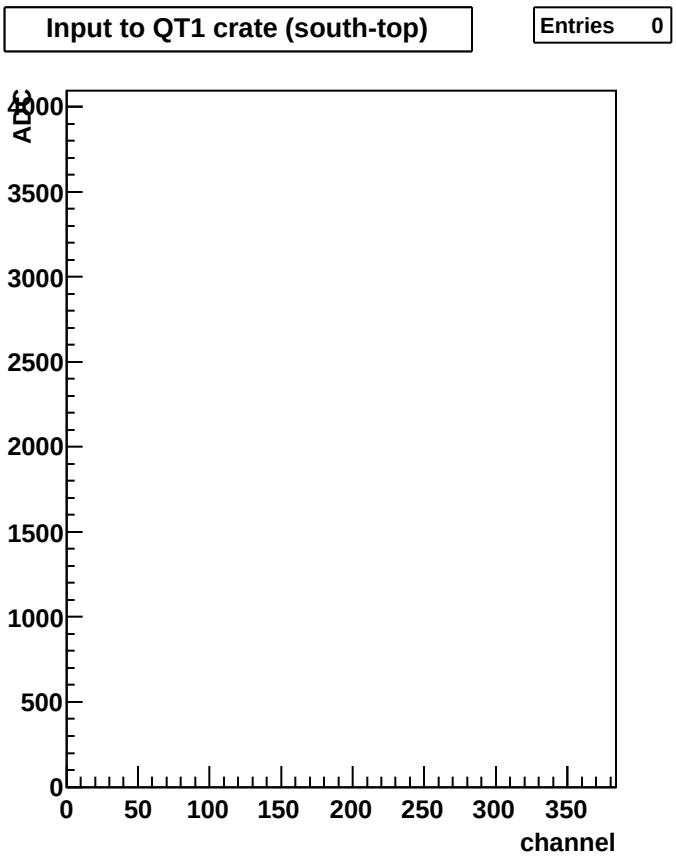

BBClarge-TAC-W
Entries 45586
Mean 1625
RMS 477.8

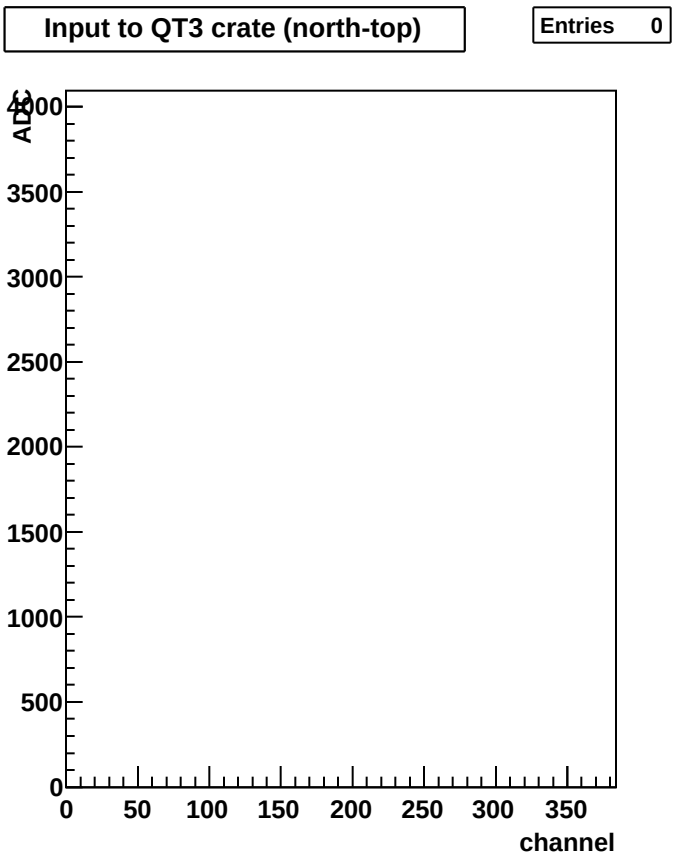

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 40291
Mean 3985
RMS 612.5

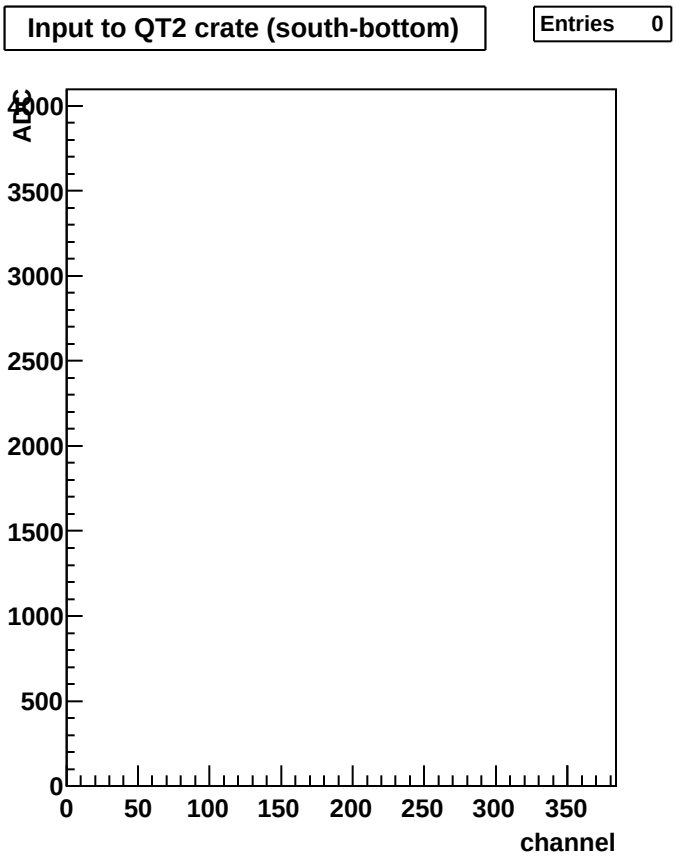

VPD-TAC-E
Entries 25243
Mean 1516
RMS 133.3

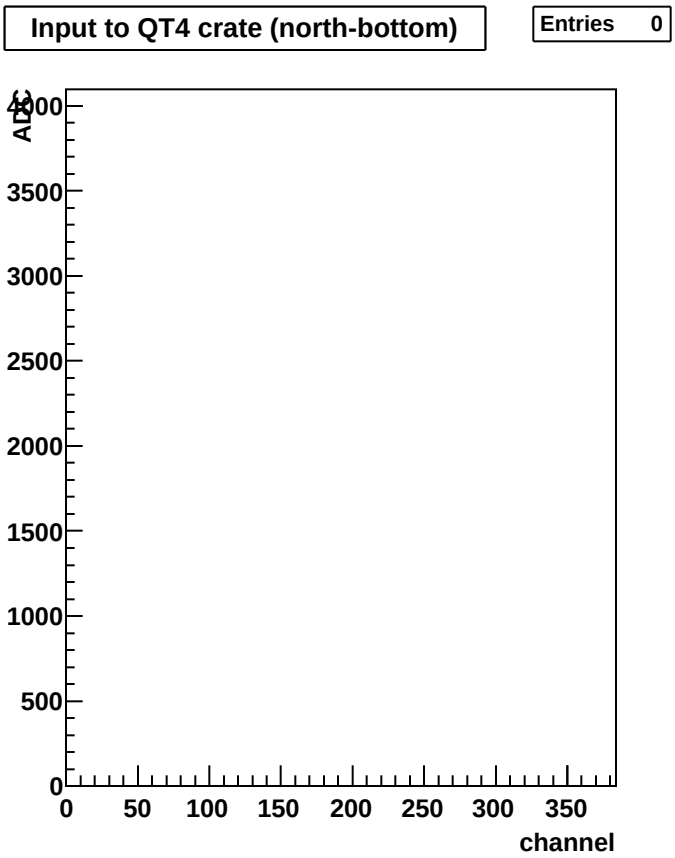

VPD-TAC-W
Entries 24161
Mean 1473
RMS 136.9

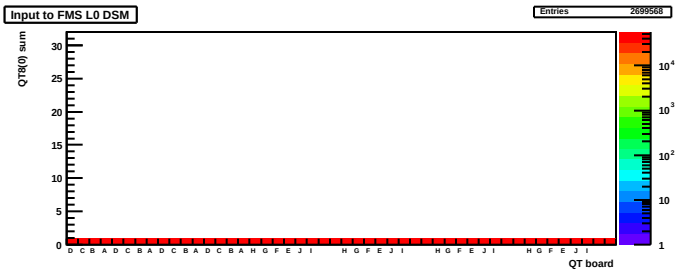

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 19517
Mean 4141
RMS 168.2

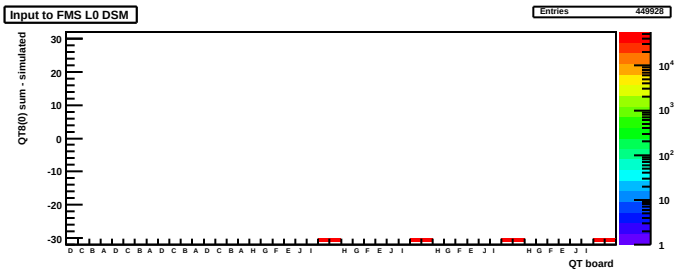

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

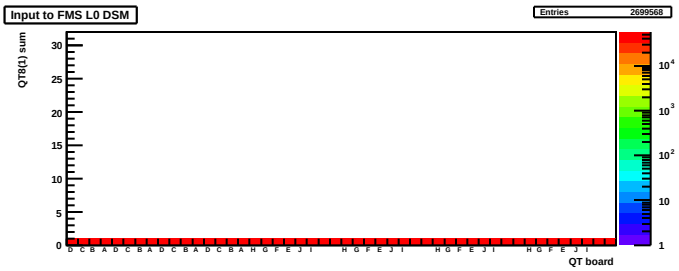

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

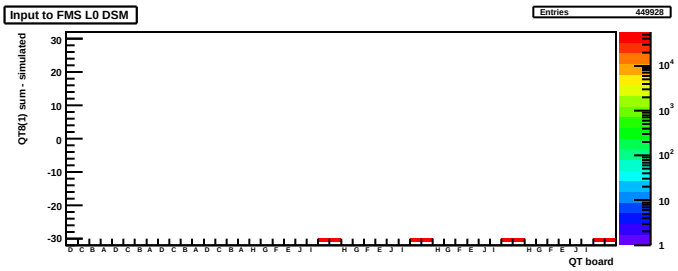

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

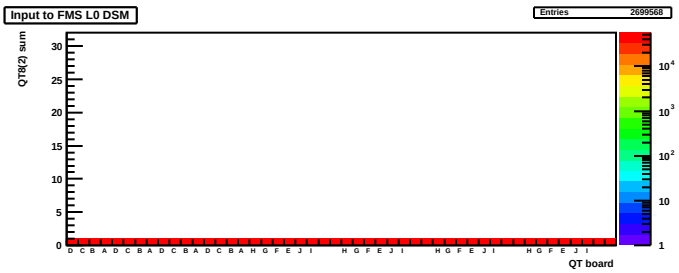

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

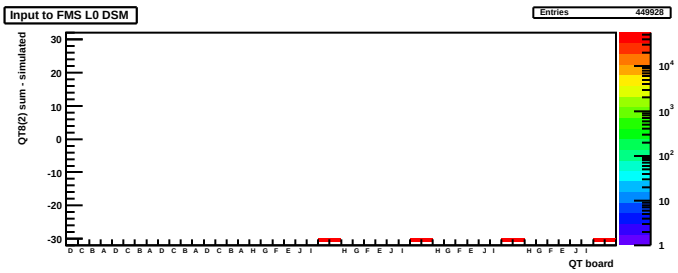

Input to FMS L0 DSM
Entries 2699568
QT8(0) sum
QT board

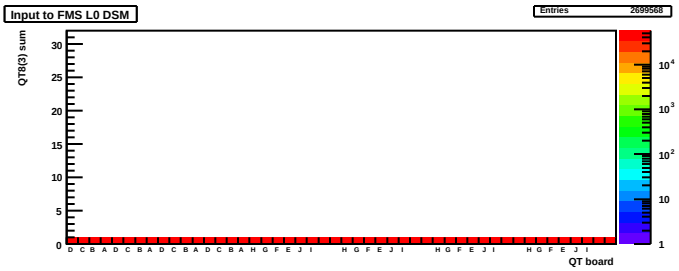

Input to FMS L0 DSM
Entries 449928
QT8(0) sum - simulated
QT board

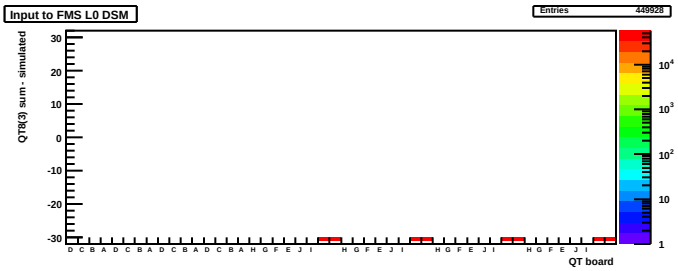

Input to FMS L0 DSM
Entries 2699568
QT8(1) sum
QT board

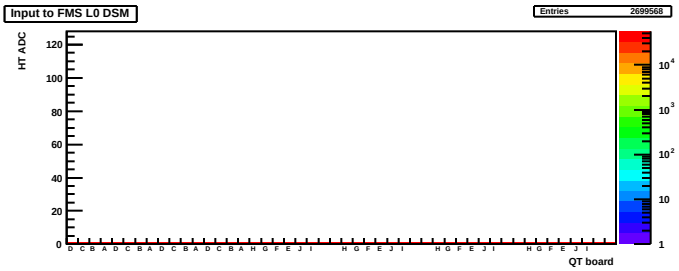

Input to FMS L0 DSM
Entries 449928
QT8(1) sum - simulated
QT board

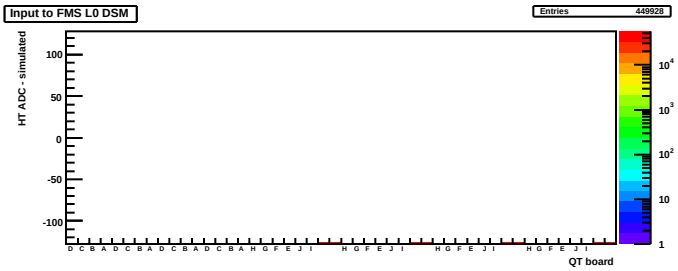

Input to FMS L0 DSM
Entries 2699568
QT8(2) sum
QT board

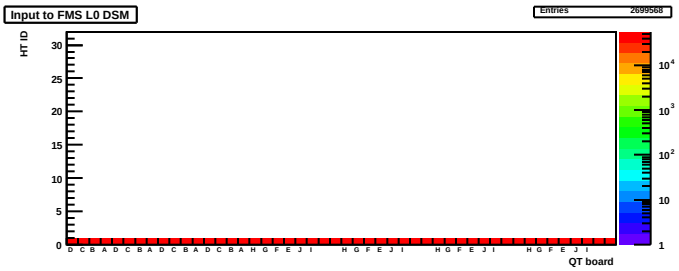

Input to FMS L0 DSM
Entries 449928
QT8(2) sum - simulated
QT board

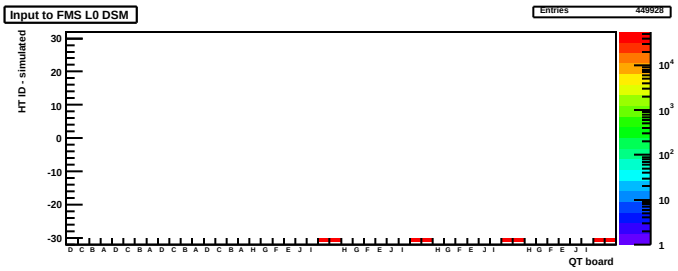

Input to FMS L0 DSM
Entries 2699568
QT8(3) sum
QT board

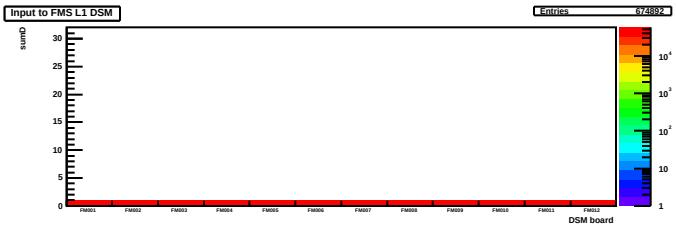

Input to FMS L0 DSM
Entries 449928
QT8(3) sum - simulated
QT board

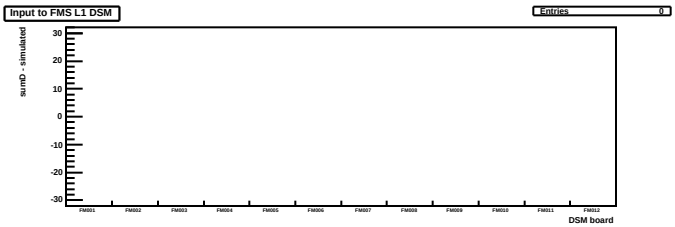

Input to FMS L0 DSM
Entries 2699568
HT ADC
QT board

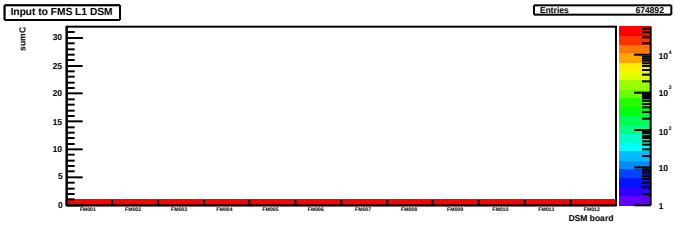

Input to FMS L0 DSM
Entries 449928
HT ADC - simulated
QT board

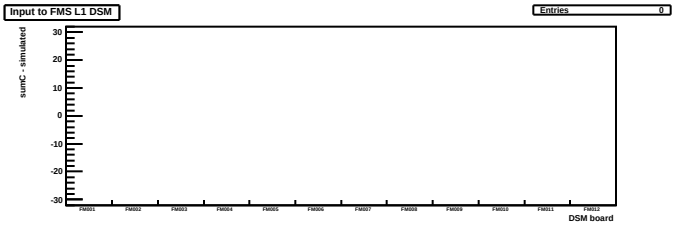

Input to FMS L0 DSM
Entries 2699568
HT ID
QT board

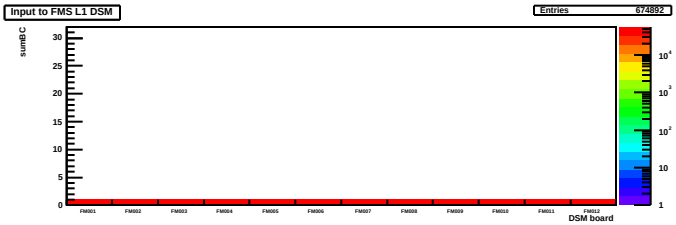

Input to FMS L0 DSM
Entries 449928
HT ID - simulated
QT board

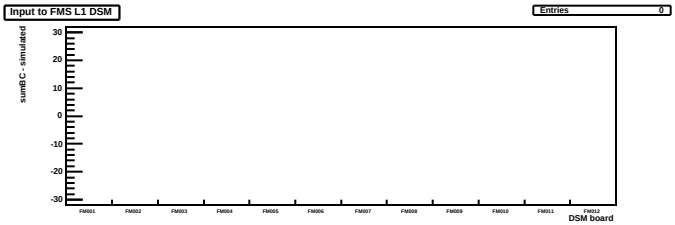

Input to FMS L1 DSM
Entries 674892
sumD
DSM board

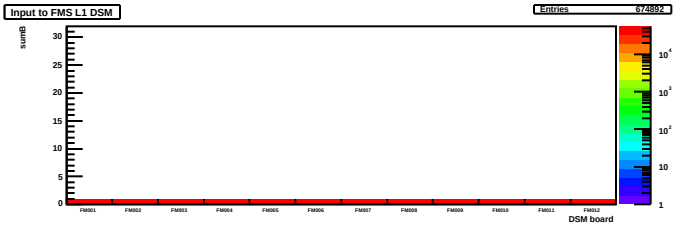

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

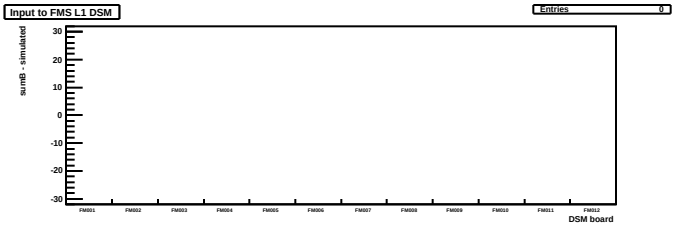

Input to FMS L1 DSM
Entries 674892
sumC
DSM board

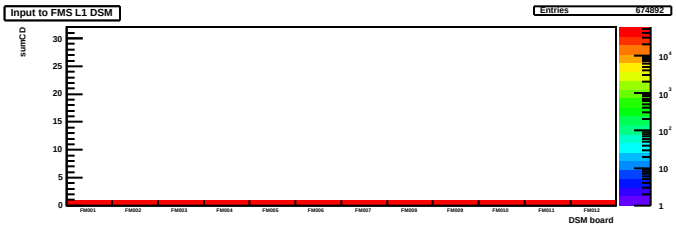

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

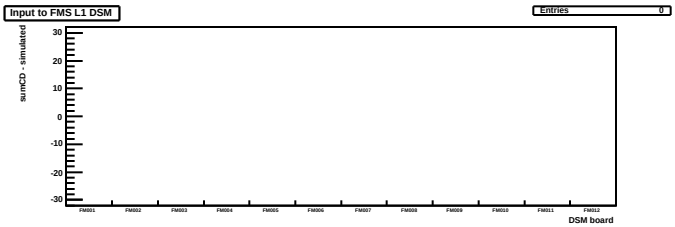

Input to FMS L1 DSM
Entries 674892
sumBC
DSM board

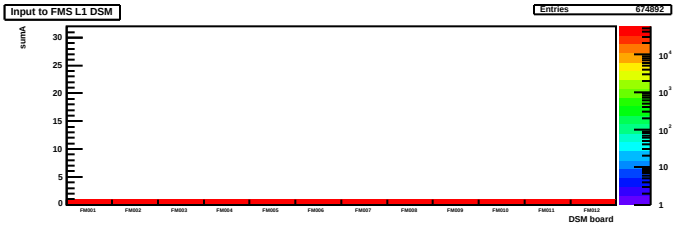

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

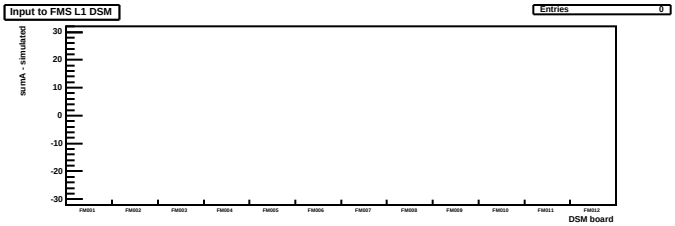

Input to FMS L1 DSM
Entries 674892
sumB
DSM board

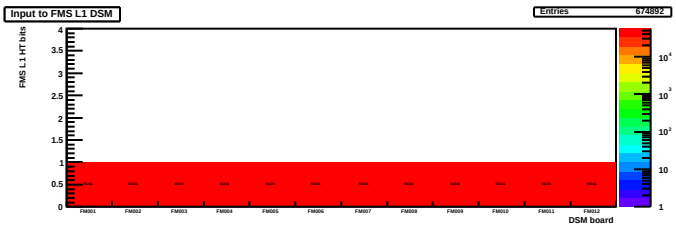

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

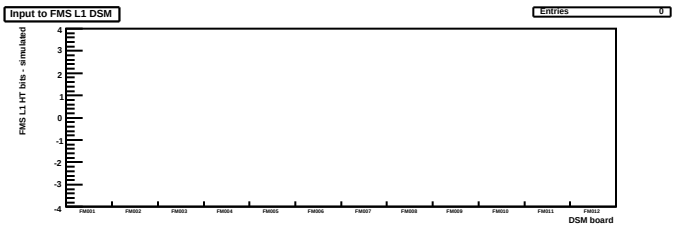

Input to FMS L1 DSM
Entries 674892
sumCD
DSM board

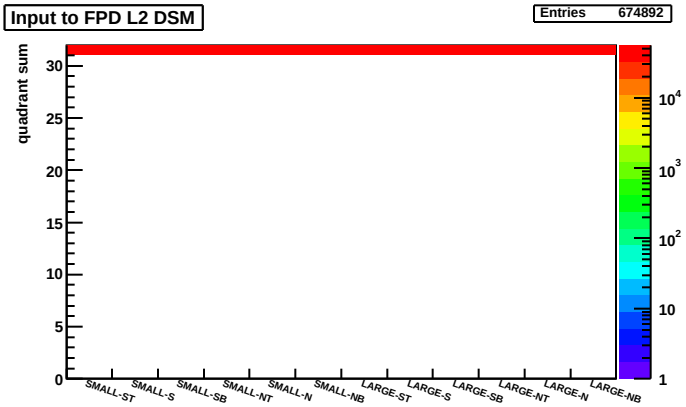

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

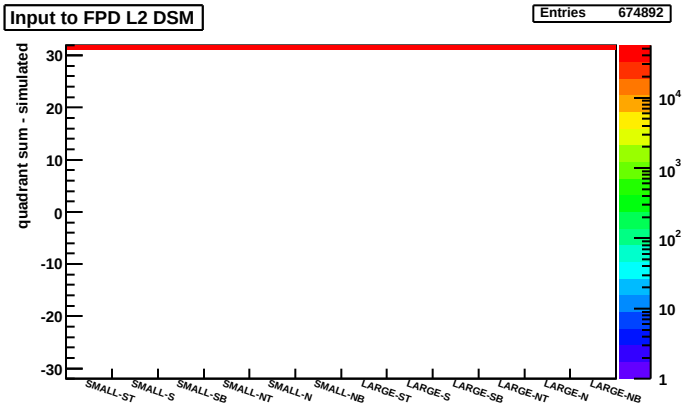

Input to FMS L1 DSM
Entries 674892
sumA
DSM board

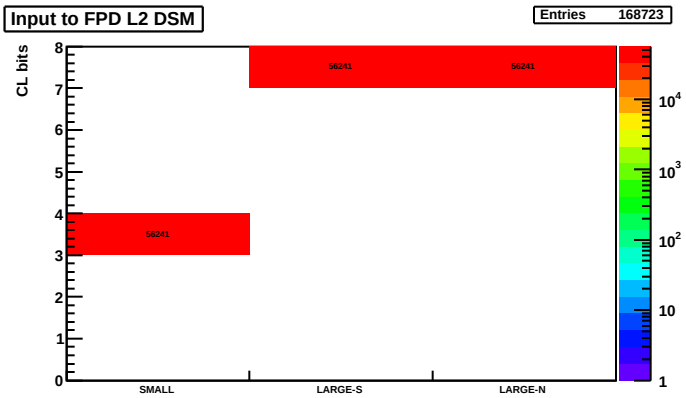

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

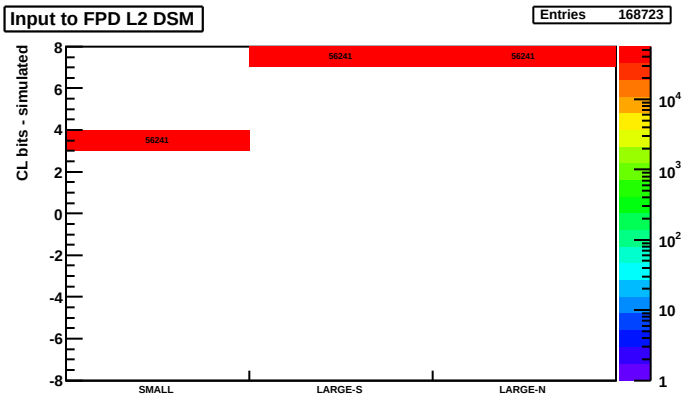

Input to FMS L1 DSM
Entries 674892
FMS L1 HT bits
DSM board

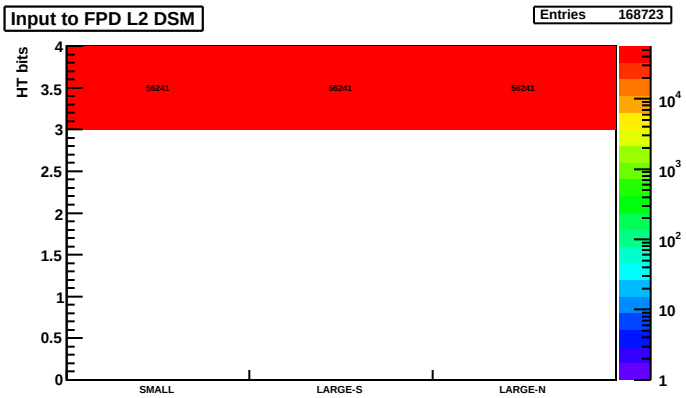

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

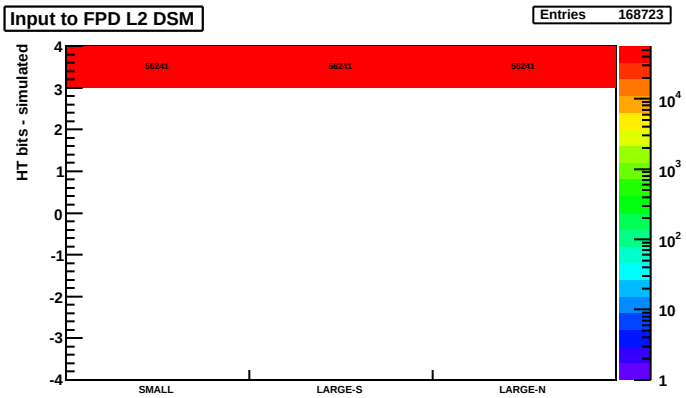

Input to FPD L2 DSM
Entries 674892
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

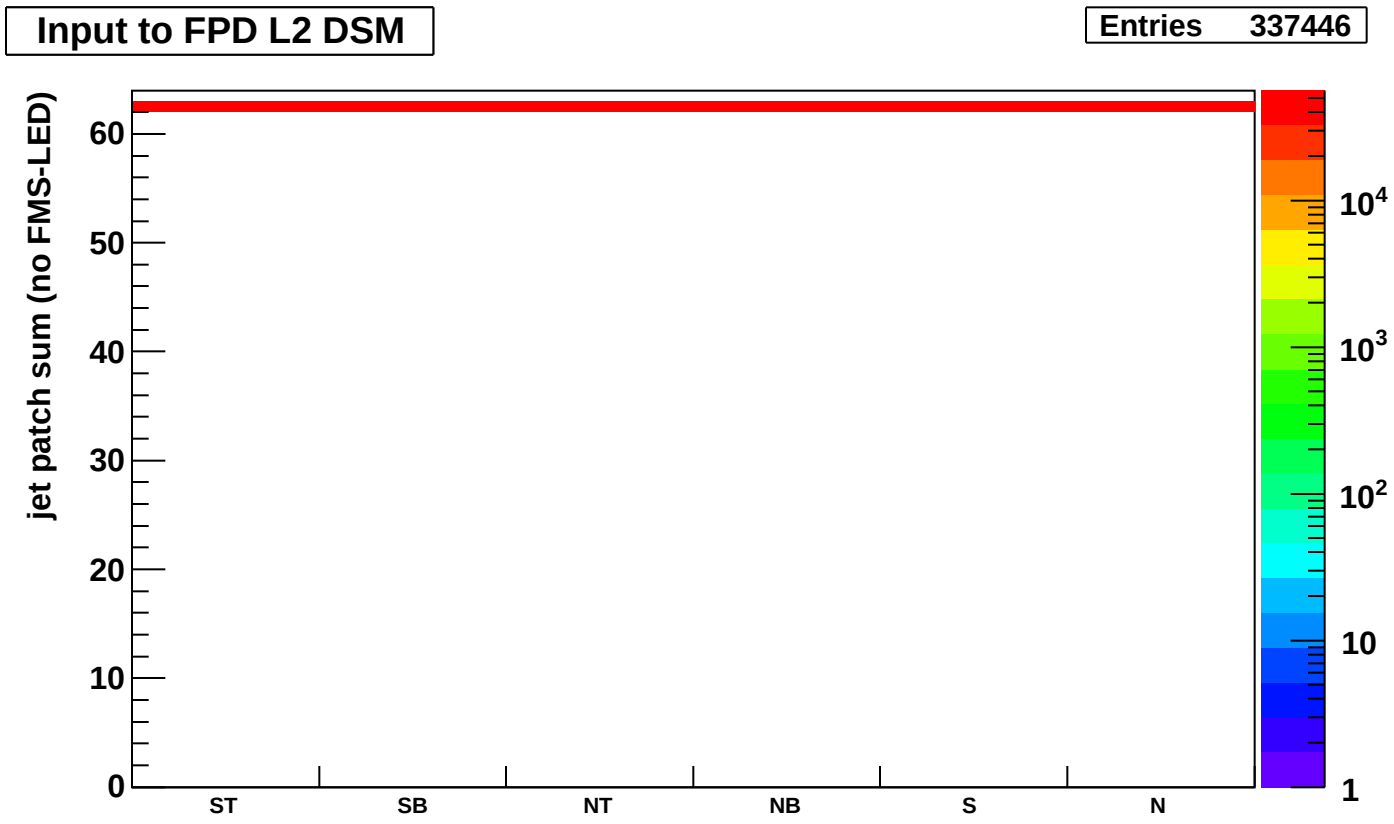

Input to FPD L2 DSM
Entries 674892
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

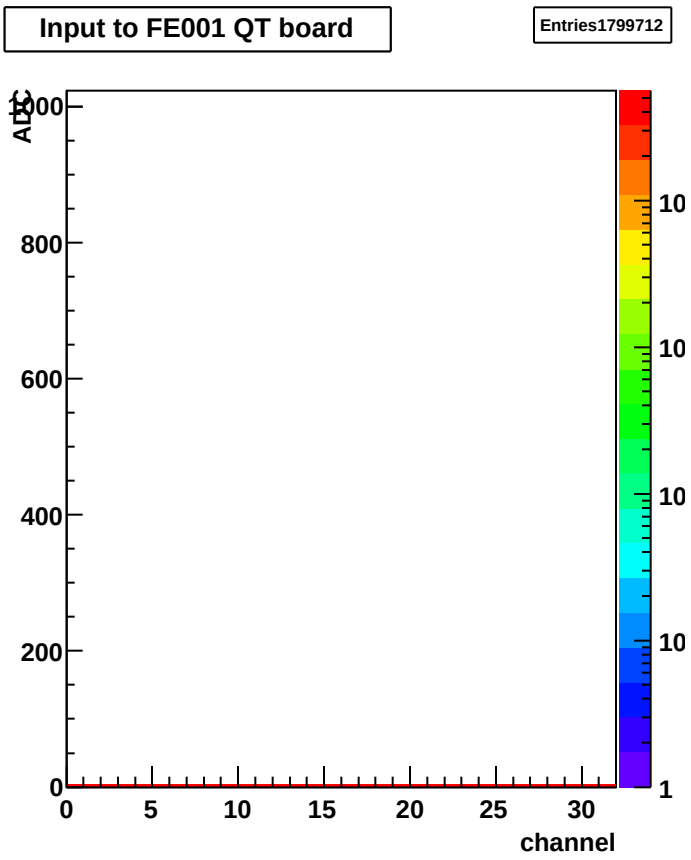

Input to FPD L2 DSM
Entries 168723
CL bits
56241
56241
56241
SMALL
LARGE-S
LARGE-N

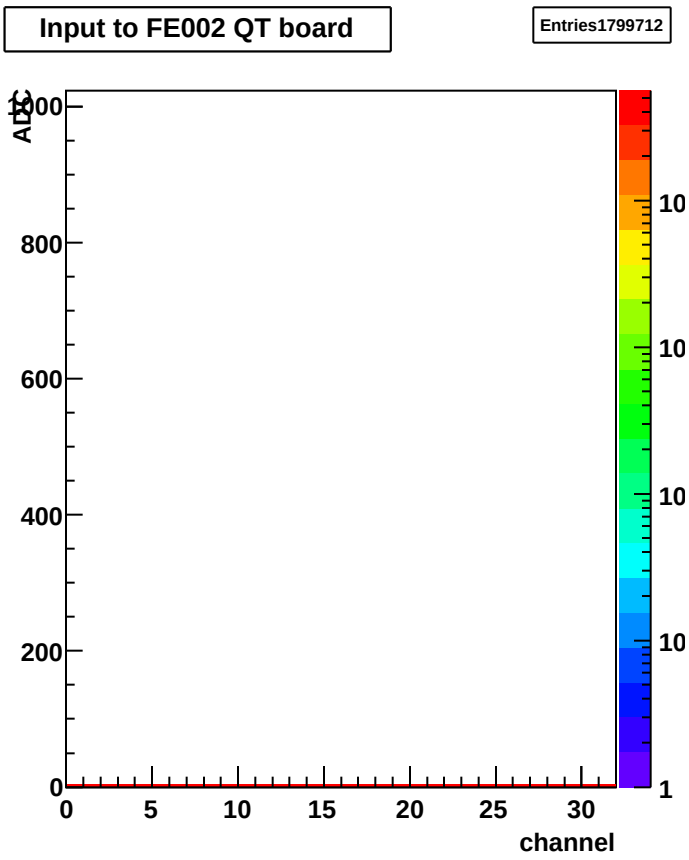

Input to FPD L2 DSM
Entries 168723
CL bits - simulated
56241
56241
56241
SMALL
LARGE-S
LARGE-N

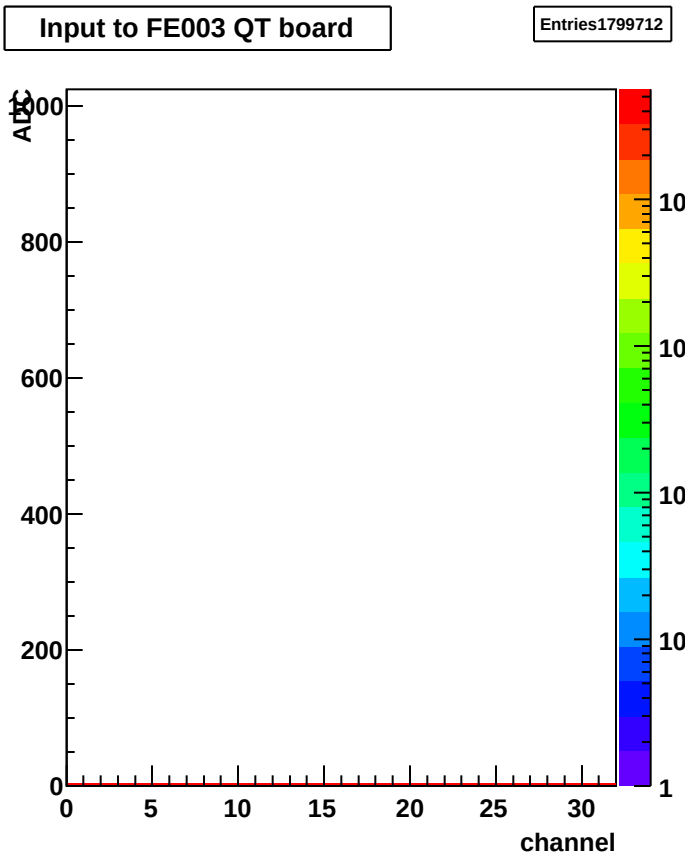

Input to FPD L2 DSM
Entries 168723
HT bits
56241
56241
56241
SMALL
LARGE-S
LARGE-N

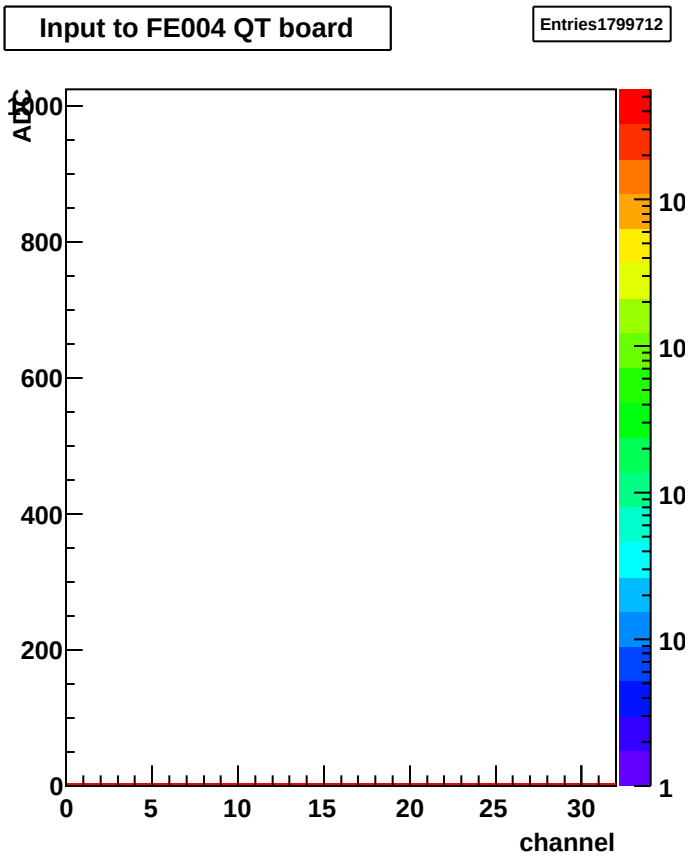

Input to FPD L2 DSM
Entries 168723
HT bits - simulated
56241
56241
56241
SMALL
LARGE-S
LARGE-N

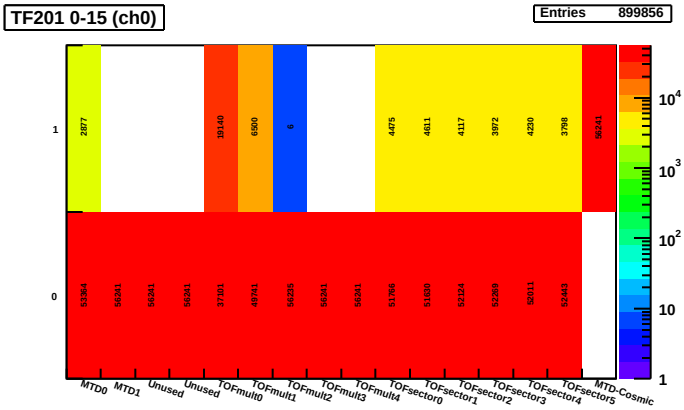

Input to FPD L2 DSM
Entries 337446
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

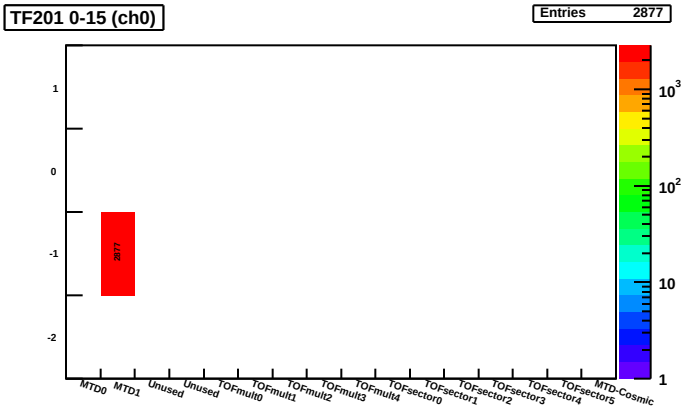

Input to FE001 QT board
Entries1799712
ADC
channel

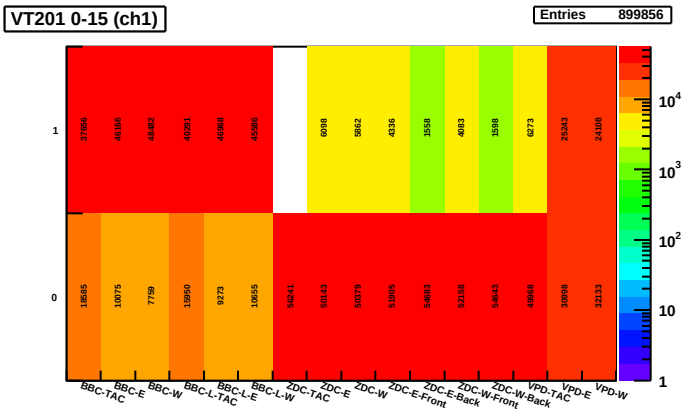

Input to FE002 QT board
Entries1799712
ADC
channel

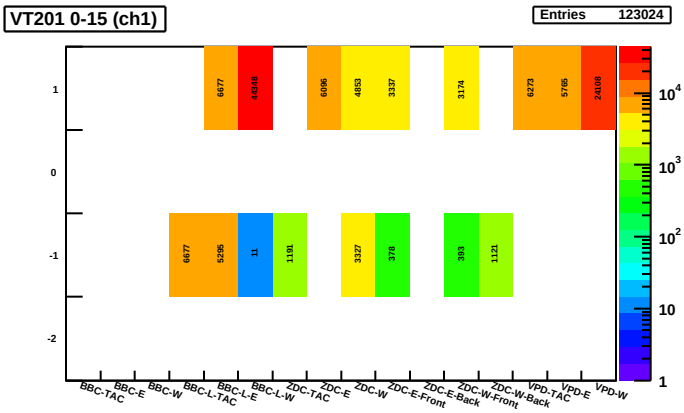

Input to FE003 QT board
Entries1799712
ADC
channel

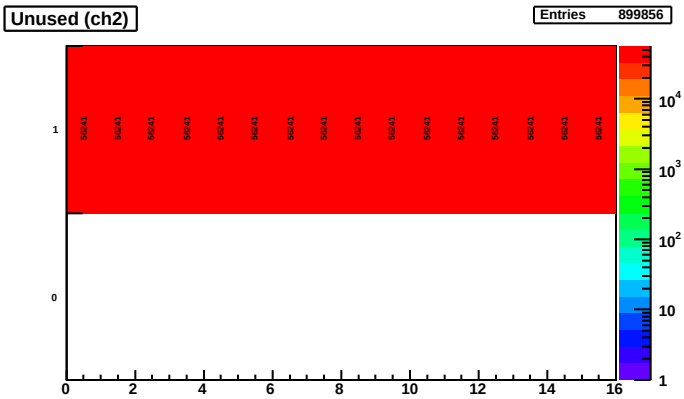

Input to FE004 QT board
Entries1799712
ADC
channel

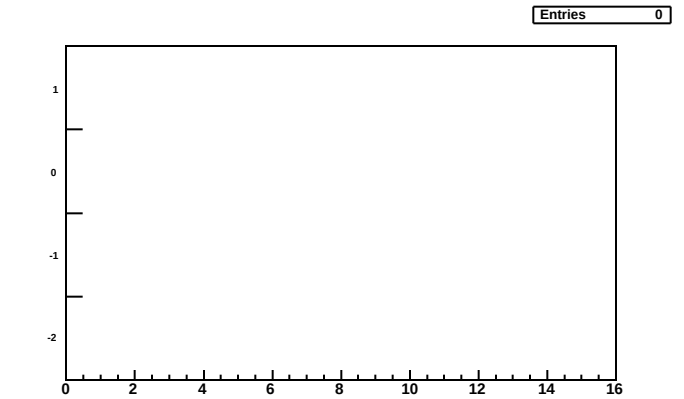

TF201 0-15 (ch0)
Entries 899856
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 2877
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 899856
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 123024
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 899856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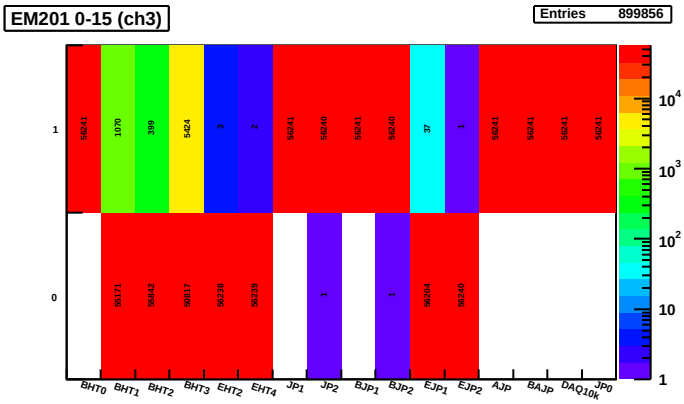
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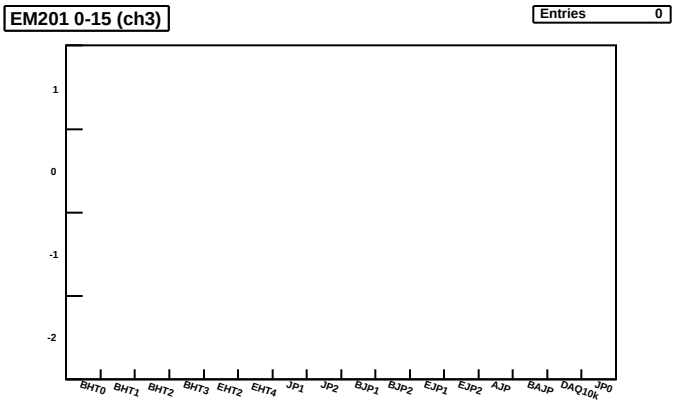
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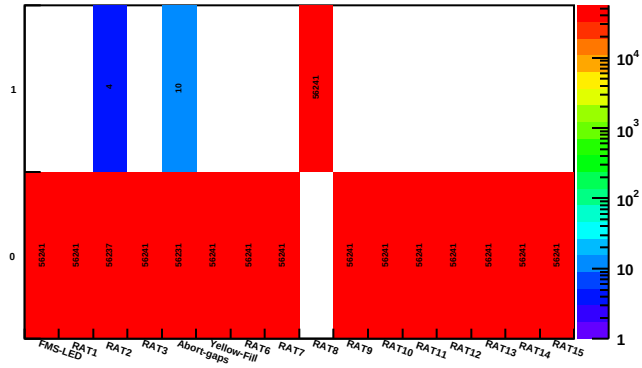
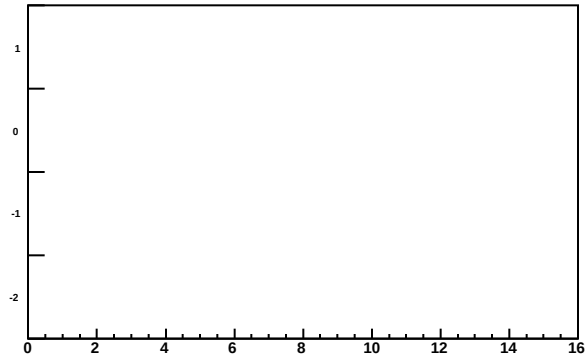
RAT board (ch4)





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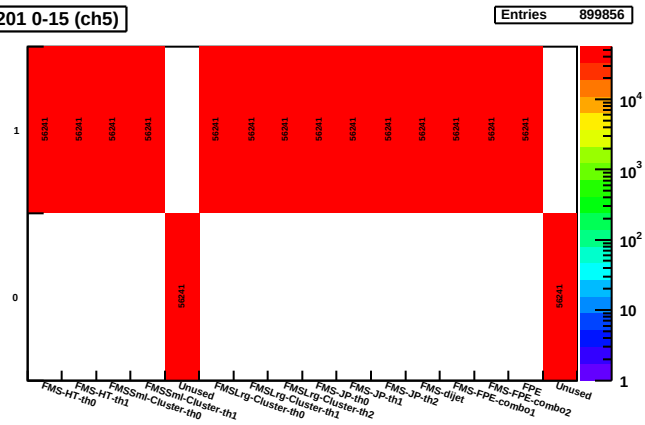

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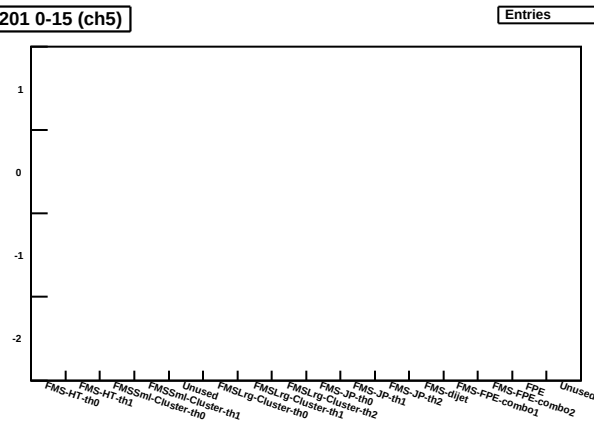
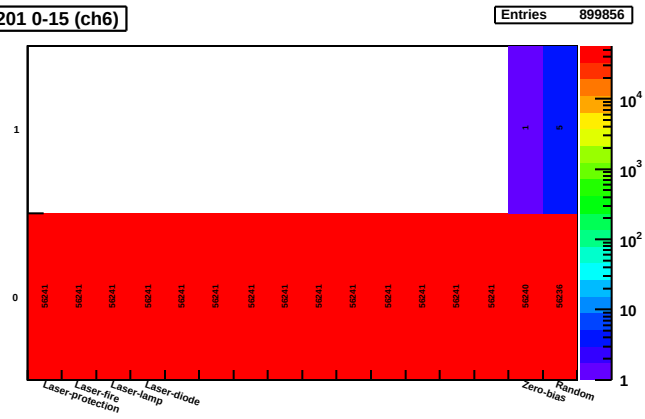
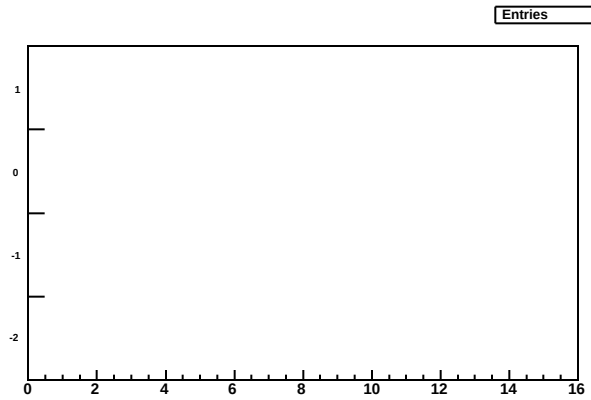
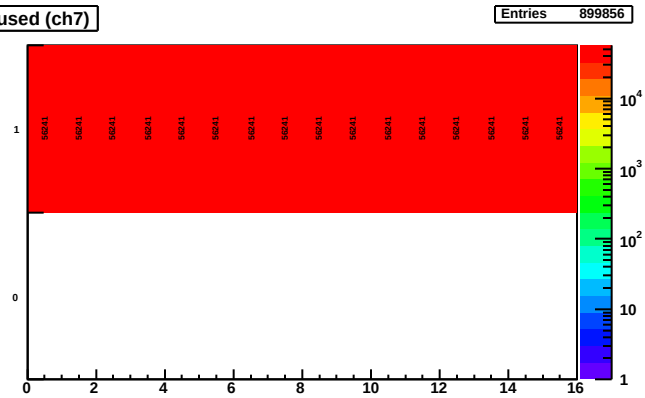
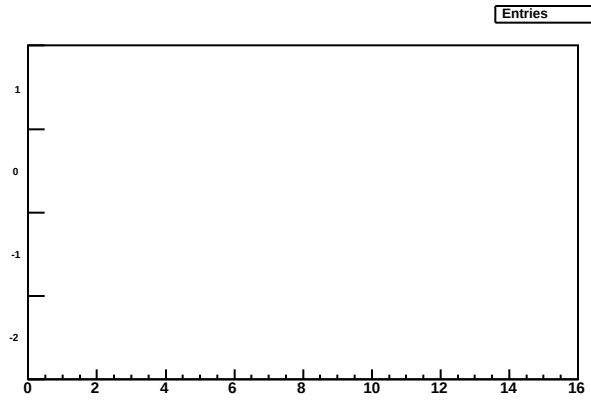


ST201 0-15 (ch6)





Unused (ch7)