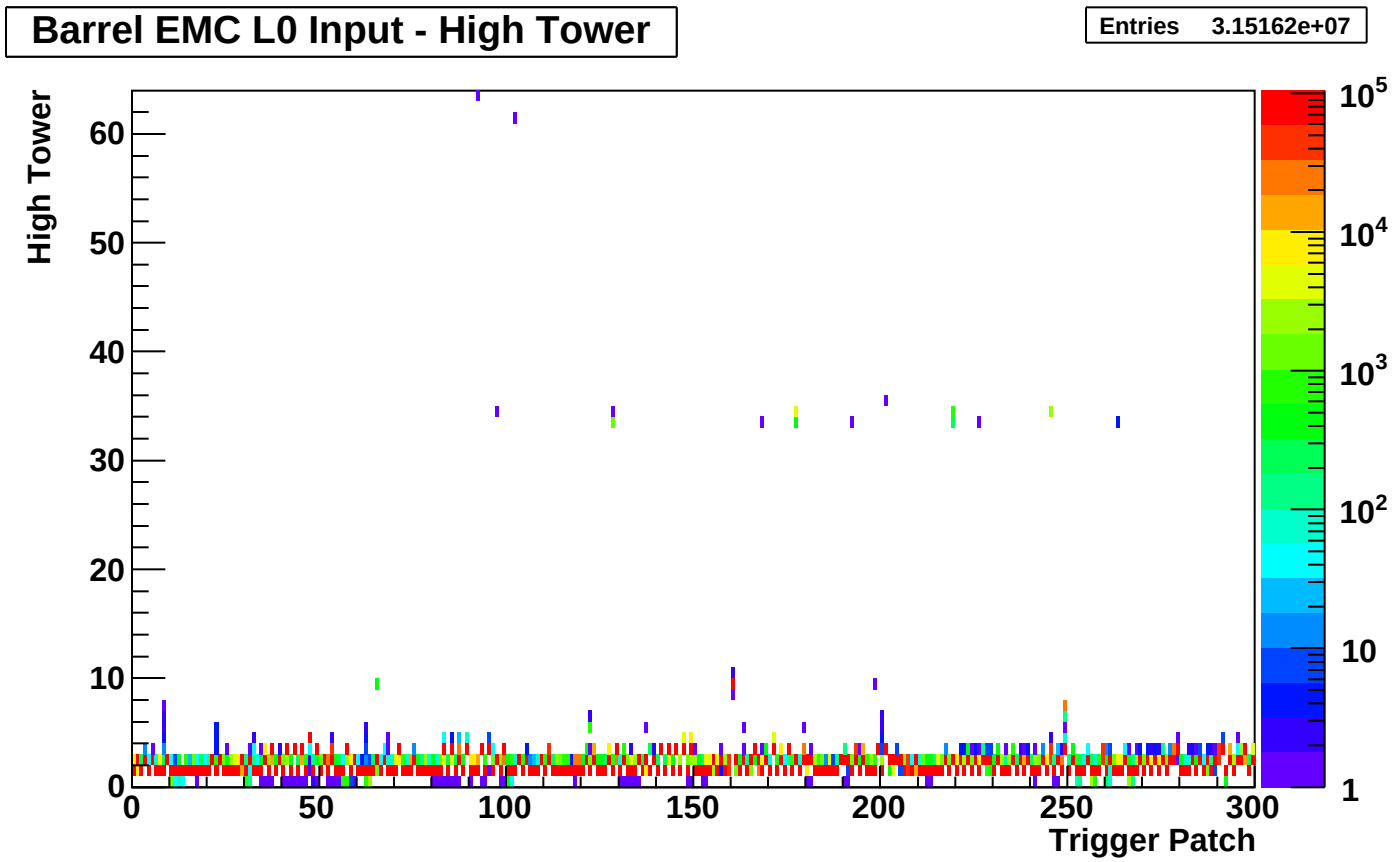
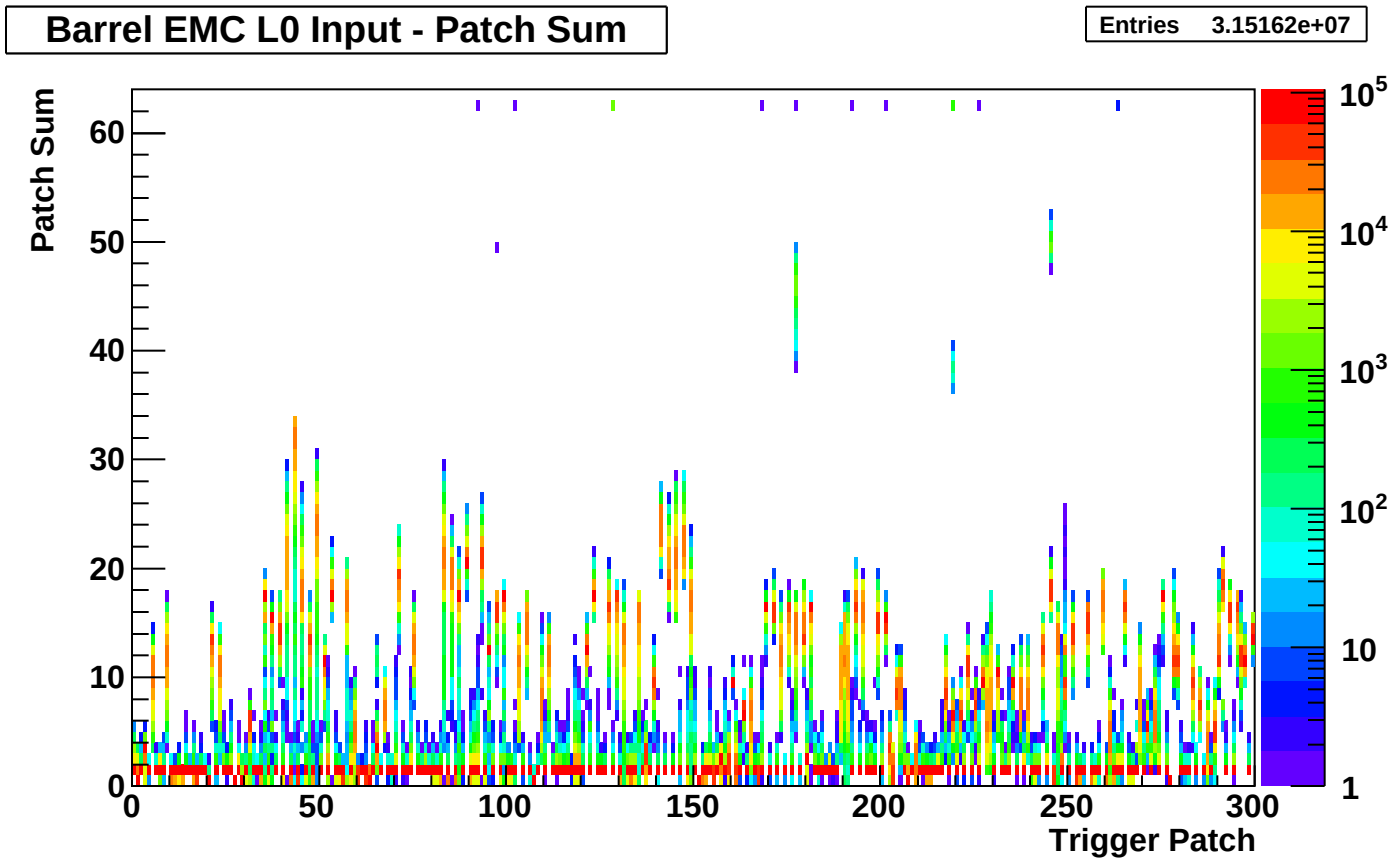
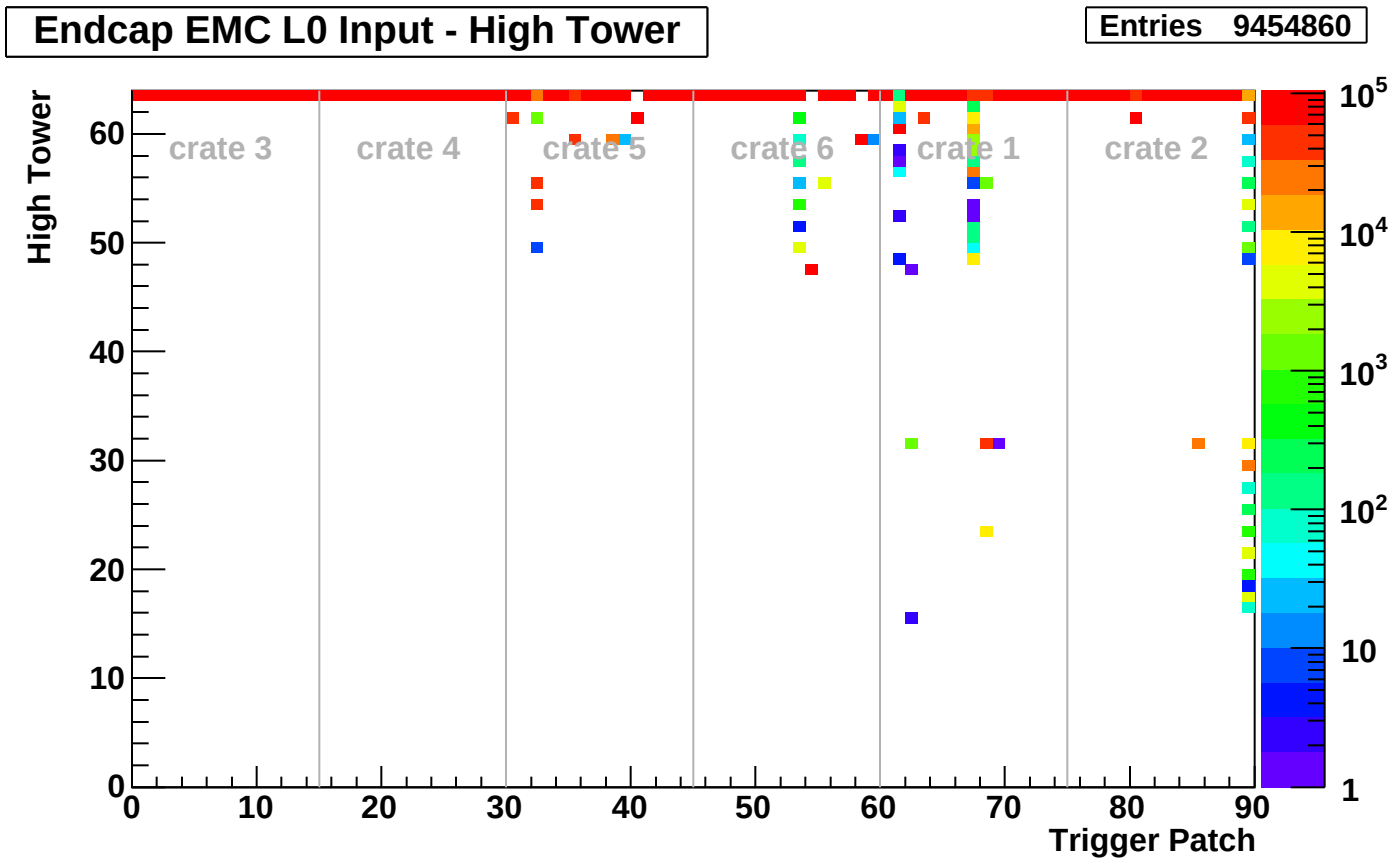
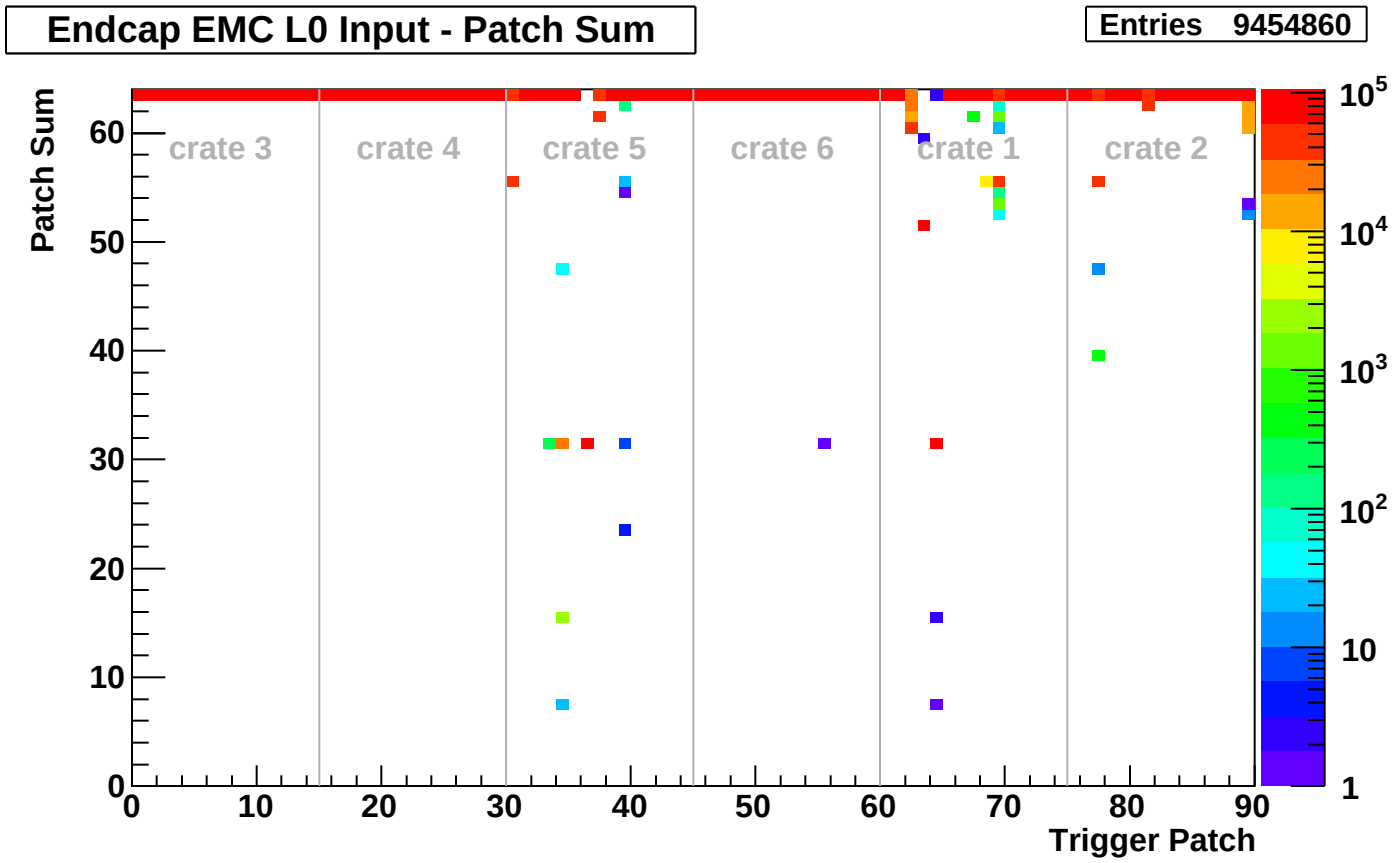
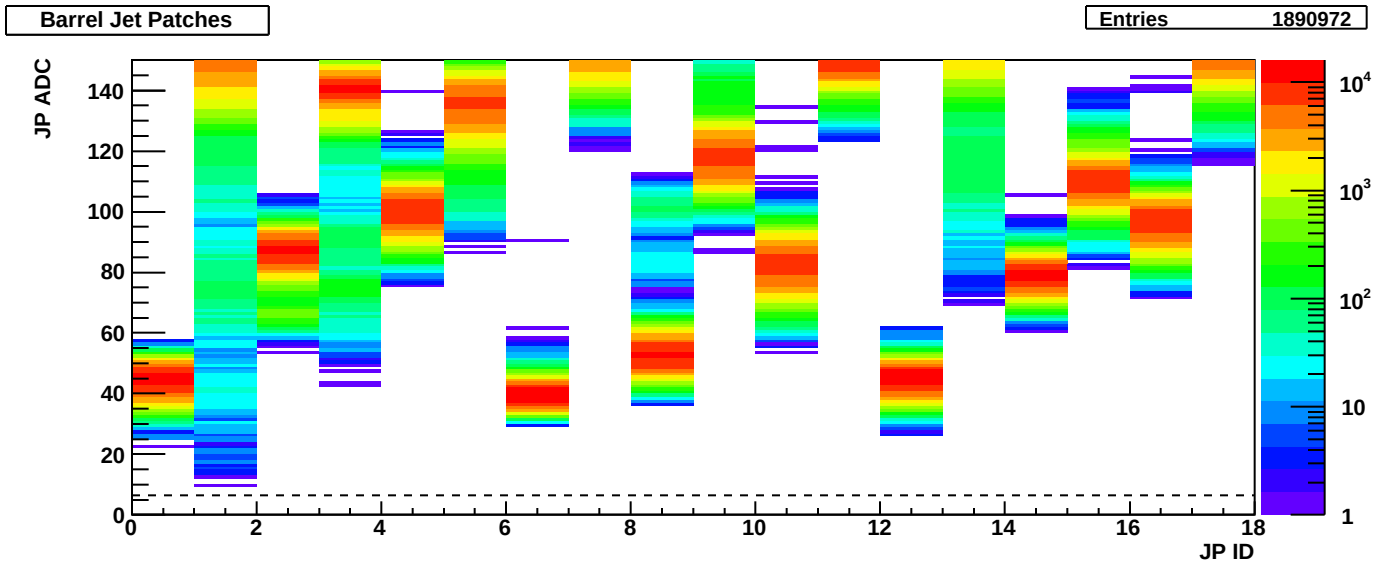
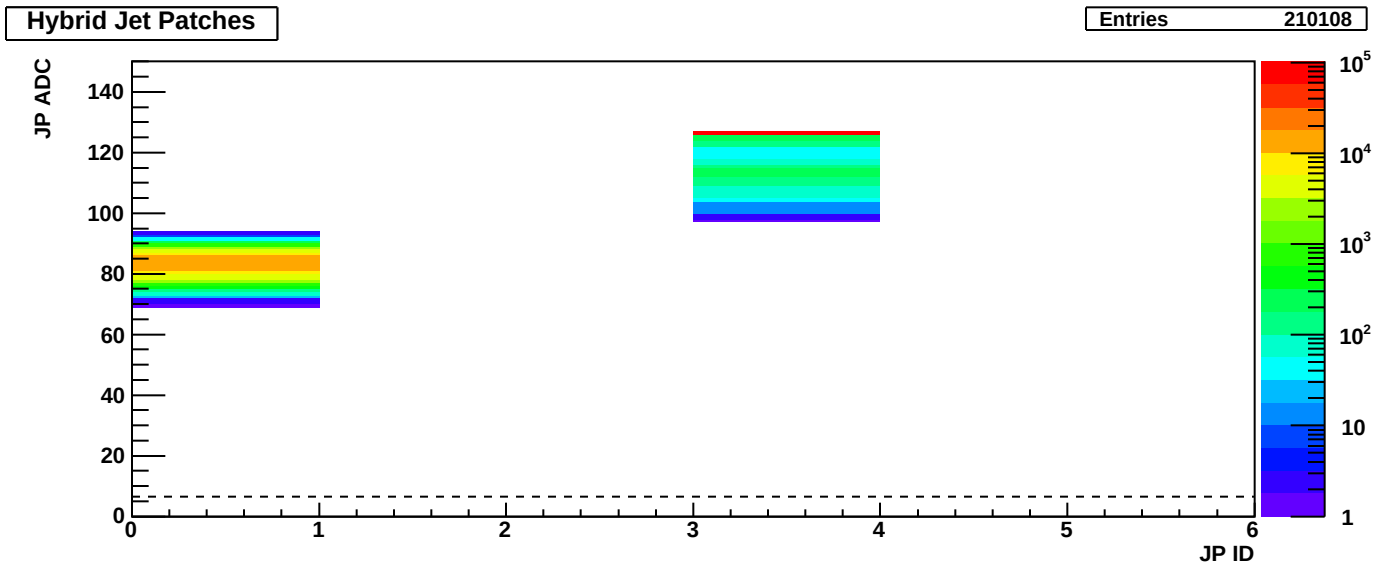

Barrel EMC L0 Input - High Tower
Entries 3.15162e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

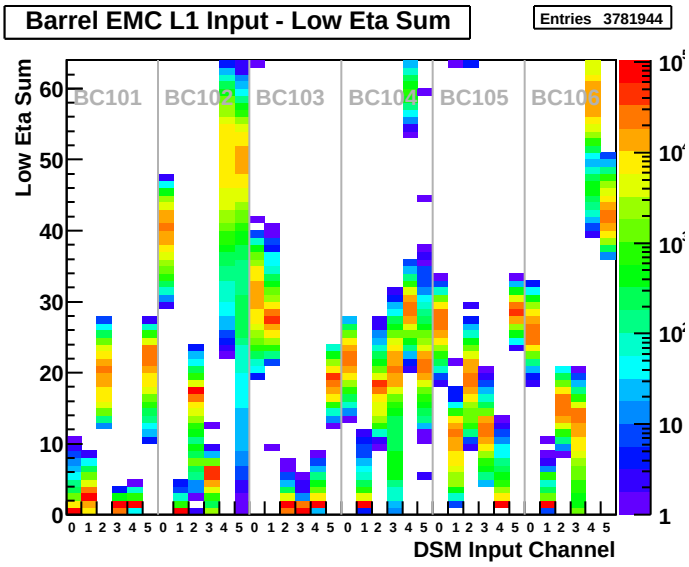

Barrel EMC L0 Input - Patch Sum
Entries 3.15162e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

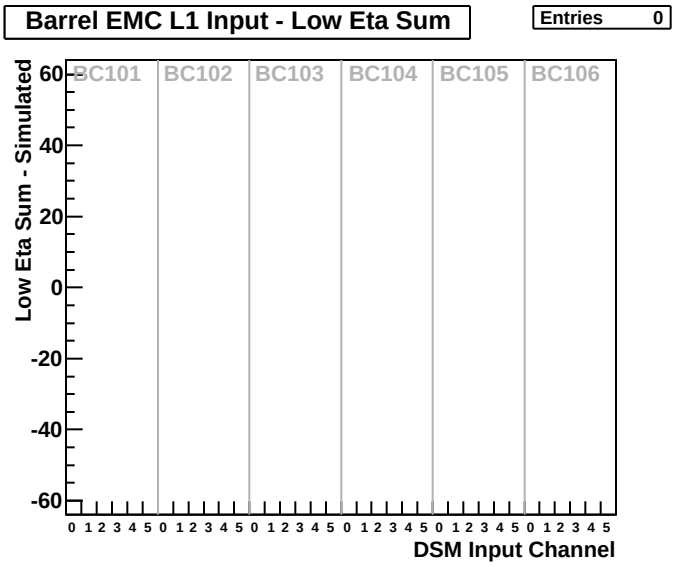

Endcap EMC L0 Input - High Tower
Entries 9454860
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

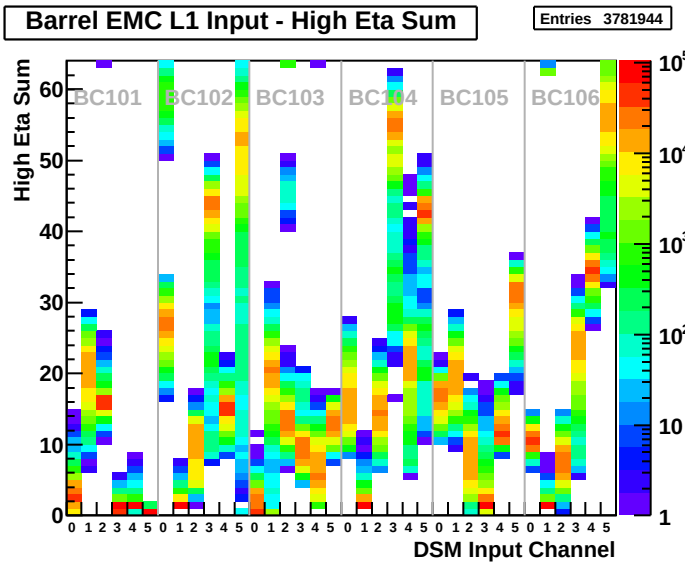

Endcap EMC L0 Input - Patch Sum
Entries 9454860
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

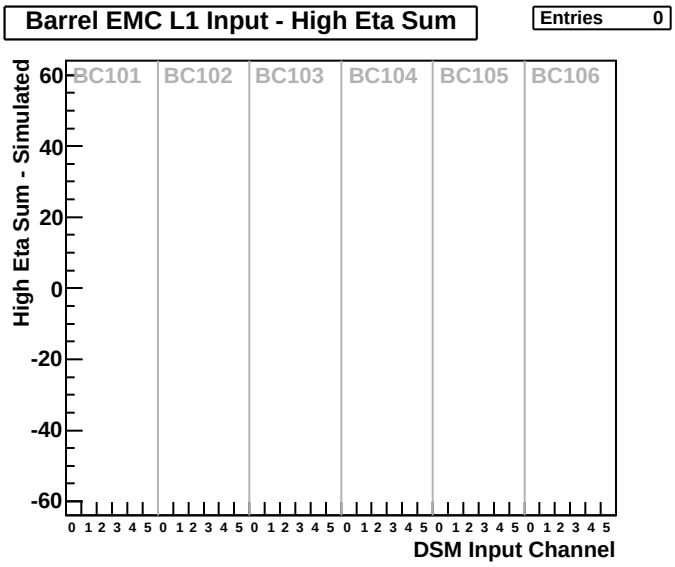

Barrel Jet Patches
Entries 1890972
JP ADC
JP ID

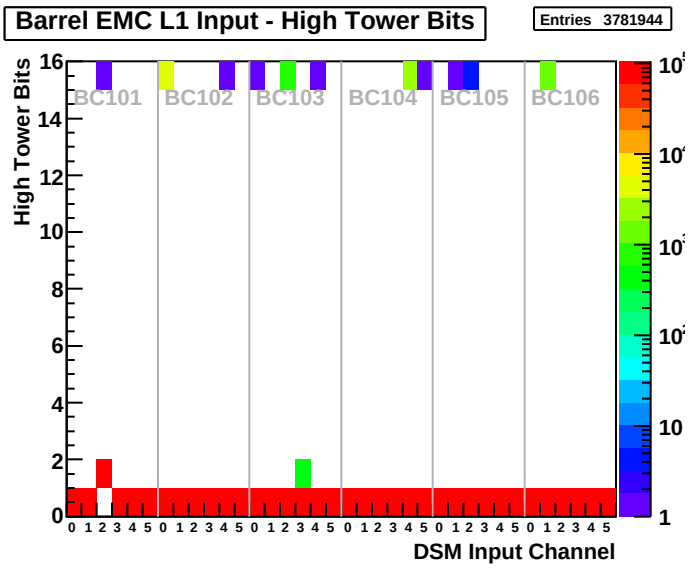

Hybrid Jet Patches
Entries 210108
JP ADC
JP ID

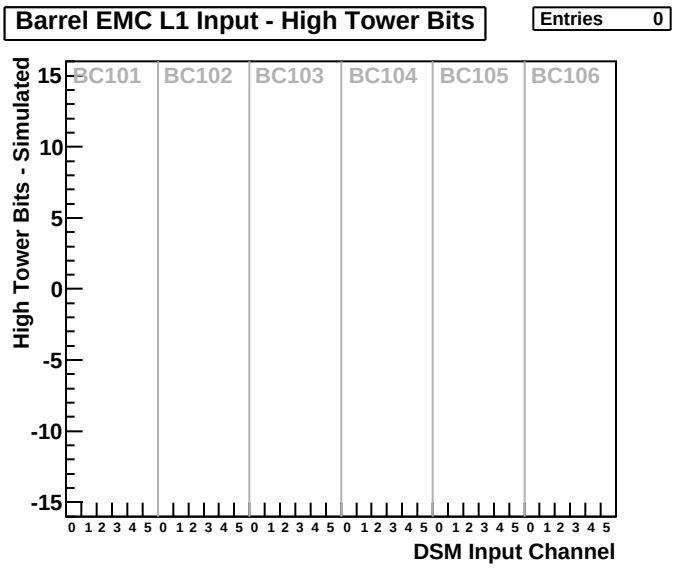

Barrel EMC L1 Input - Low Eta Sum
Entries 3781944
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

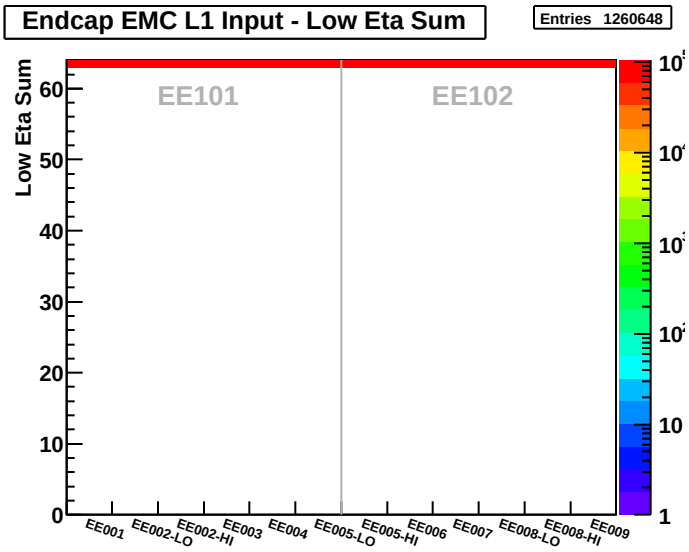

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

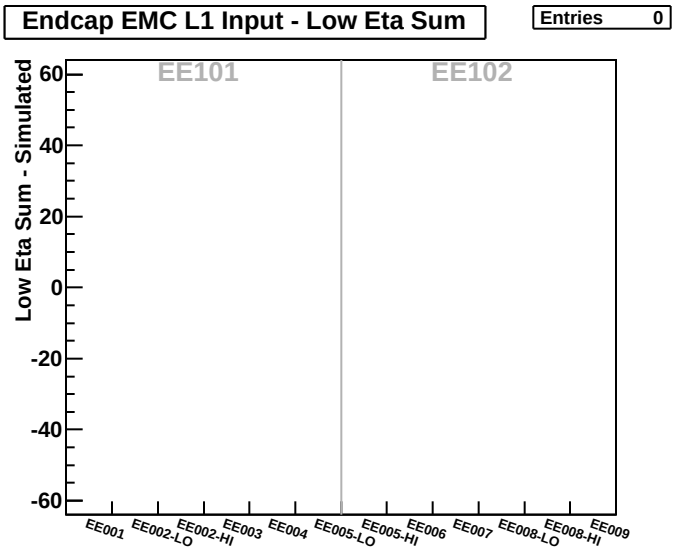

Barrel EMC L1 Input - High Eta Sum
Entries 3781944
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

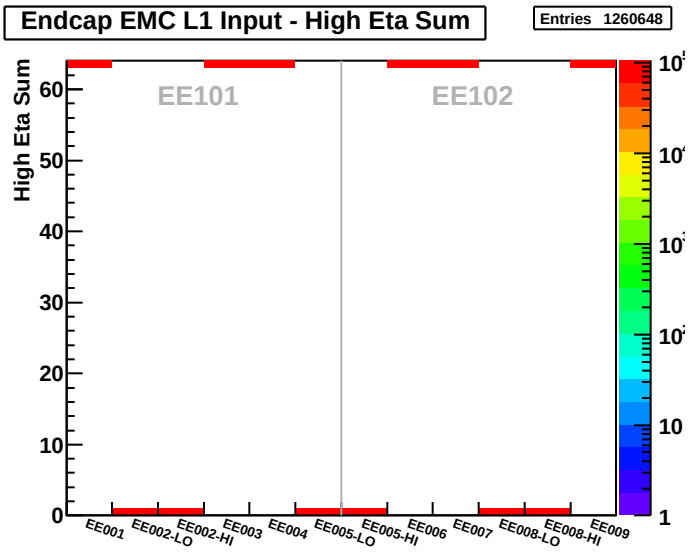

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

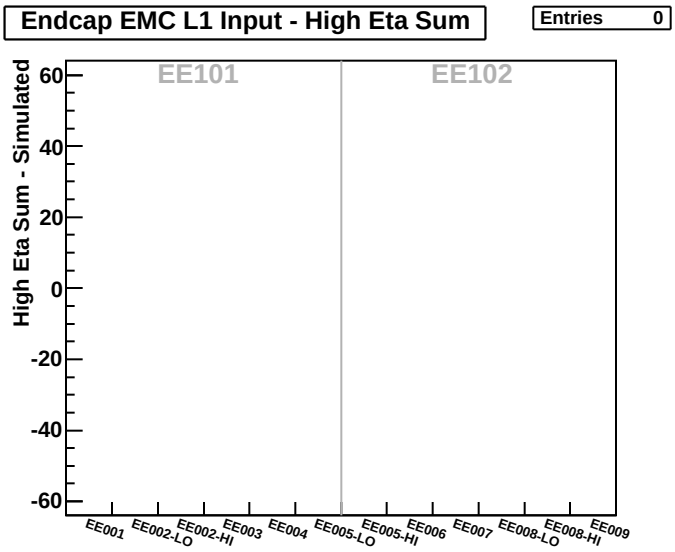

Barrel EMC L1 Input - High Tower Bits
Entries 3781944
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

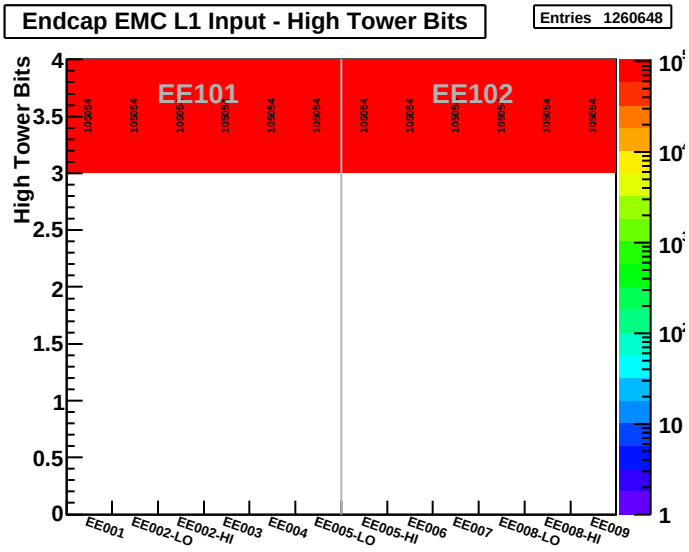

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

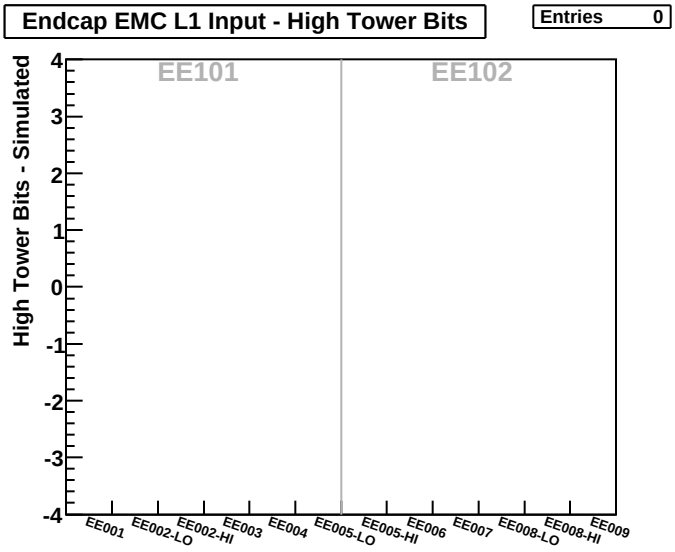

Endcap EMC L1 Input - Low Eta Sum
Entries 1260648
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

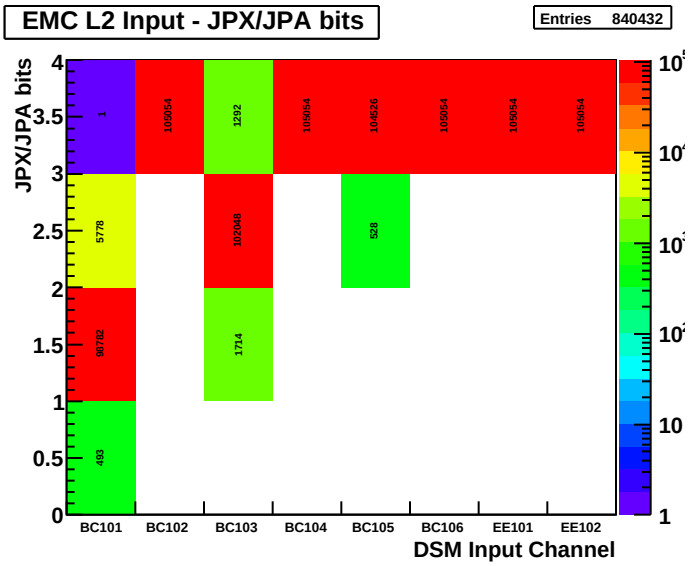

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

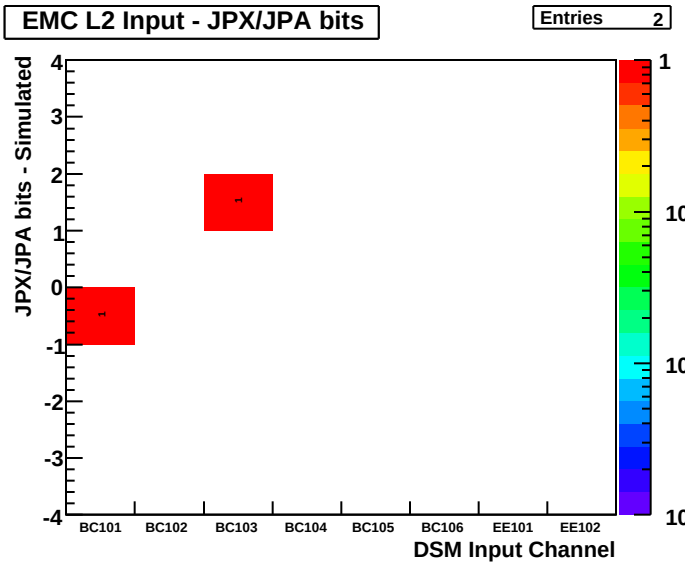

Endcap EMC L1 Input - High Eta Sum
Entries 1260648
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

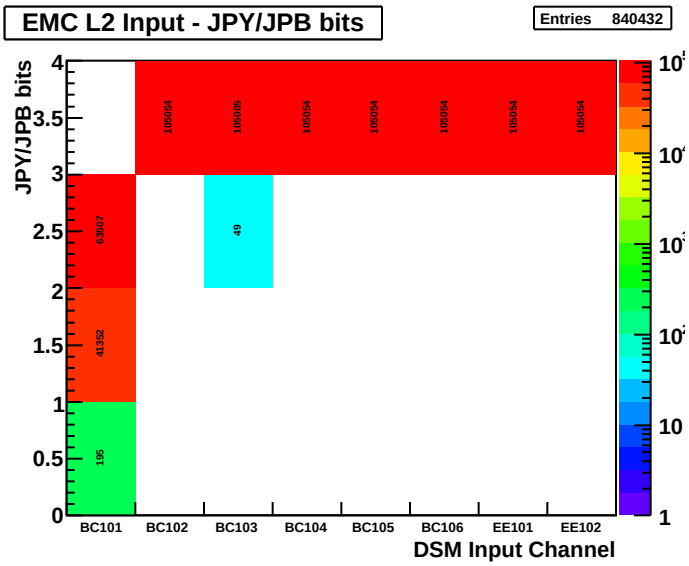

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

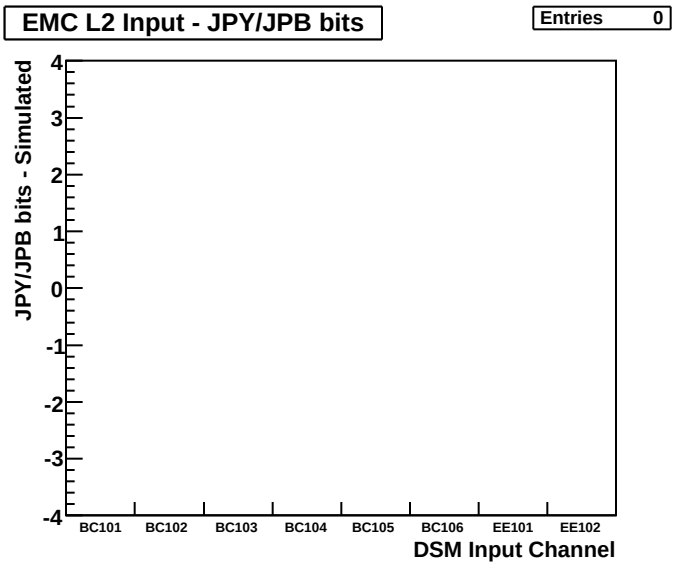

Endcap EMC L1 Input - High Tower Bits
Entries 1260648
High Tower Bits
EE101
EE102
105054
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

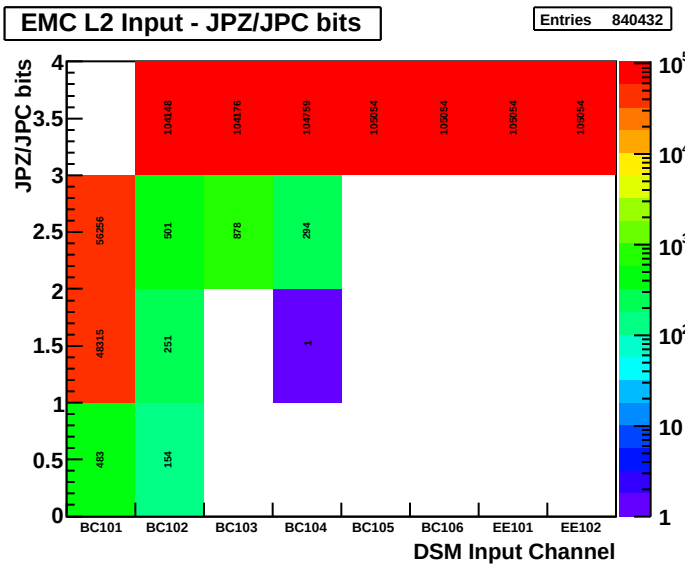

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

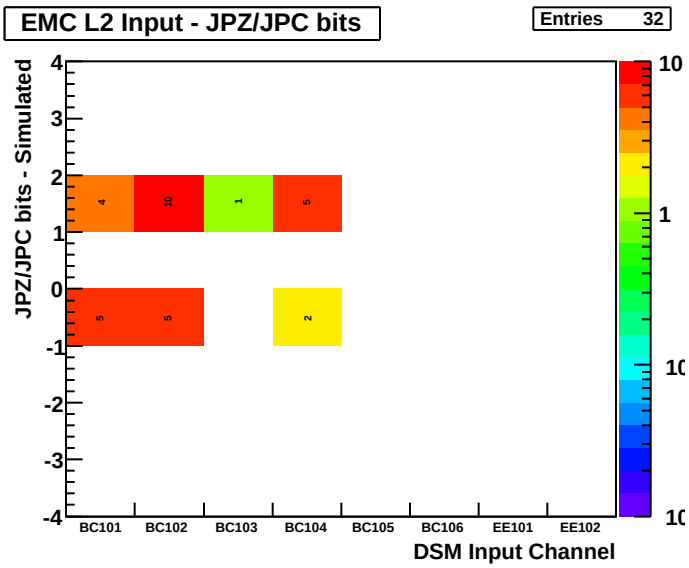

EMC L2 Input - JPX/JPA bits
Entries 840432
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

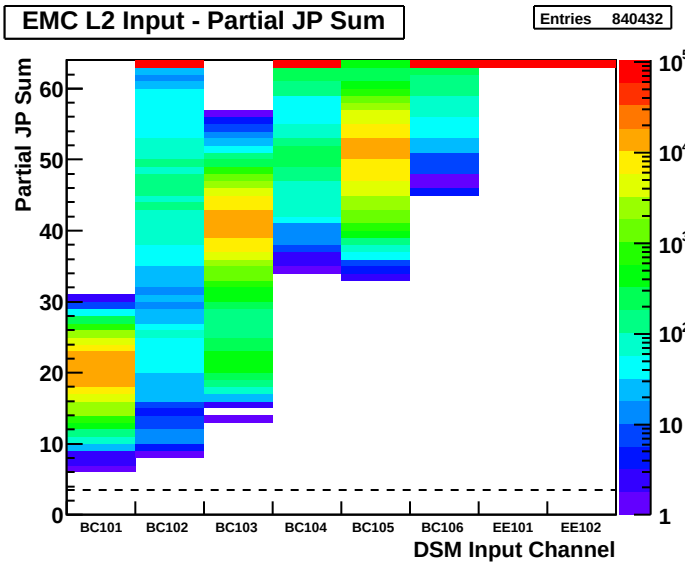

EMC L2 Input - JPX/JPA bits
Entries 2
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

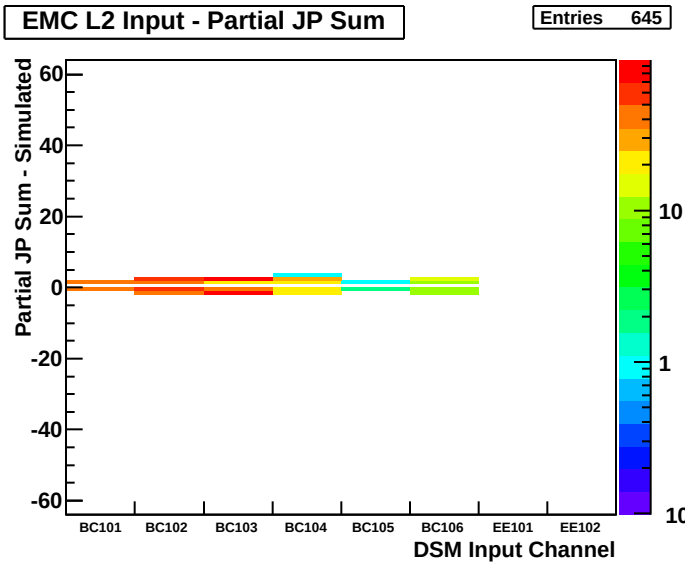

EMC L2 Input - JPY/JPB bits
Entries 840432
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

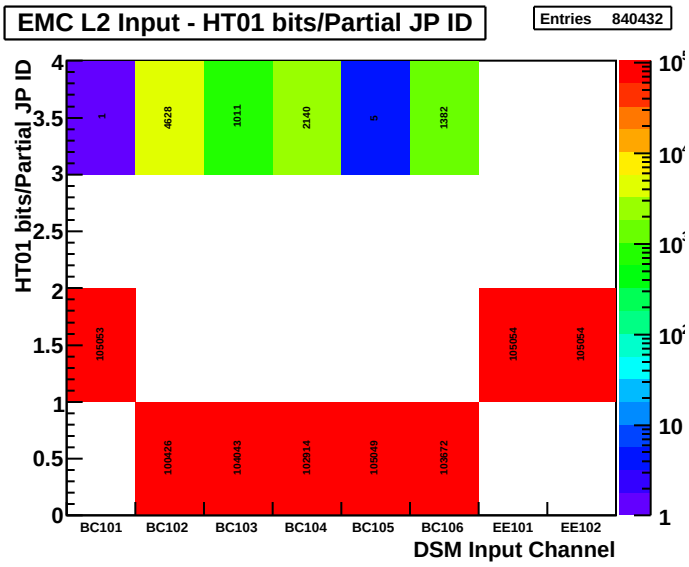

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

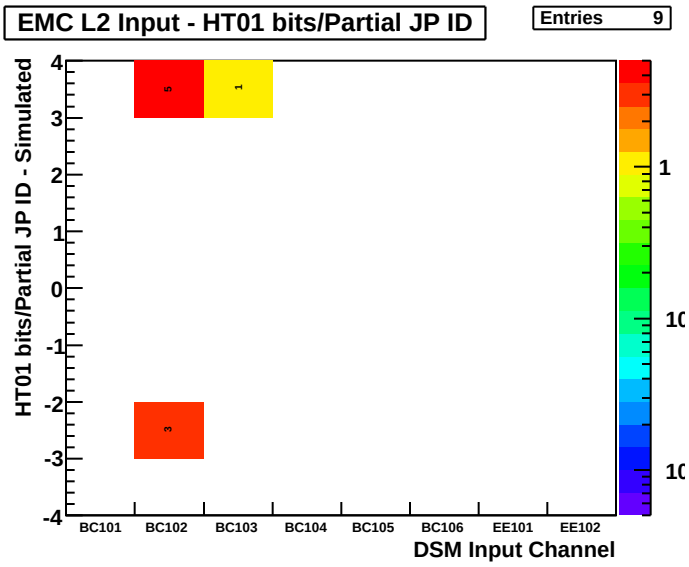

EMC L2 Input - JPZ/JPC bits
Entries 840432
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

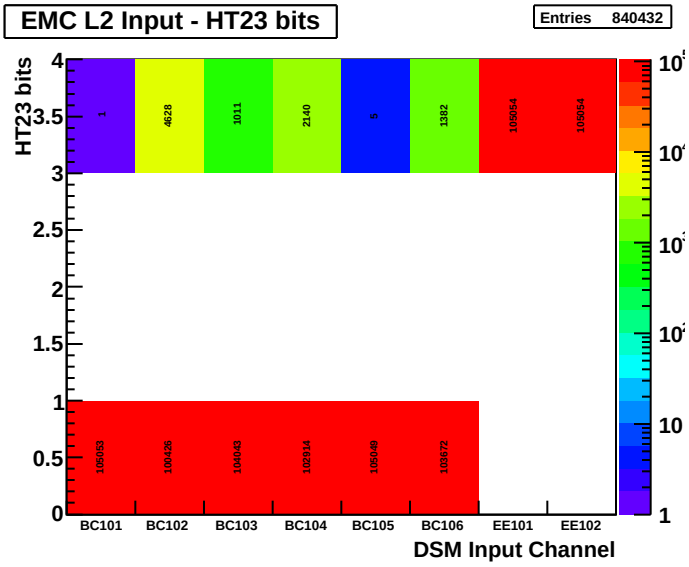

EMC L2 Input - JPZ/JPC bits
Entries 32
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

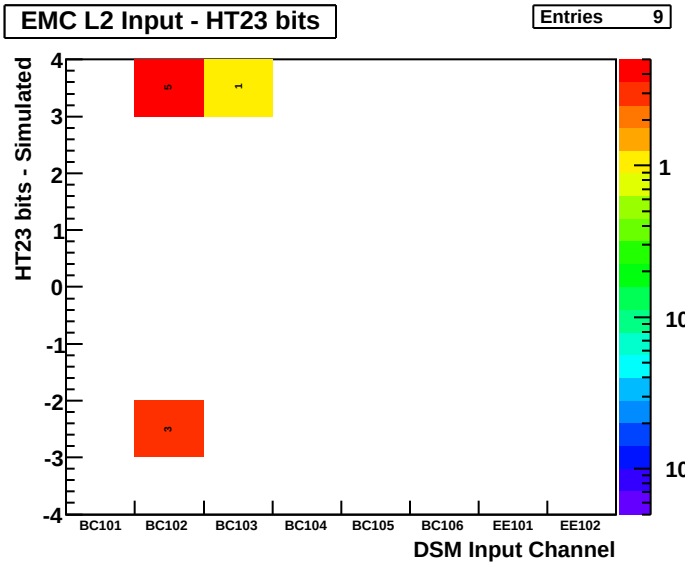

EMC L2 Input - Partial JP Sum
Entries 840432
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

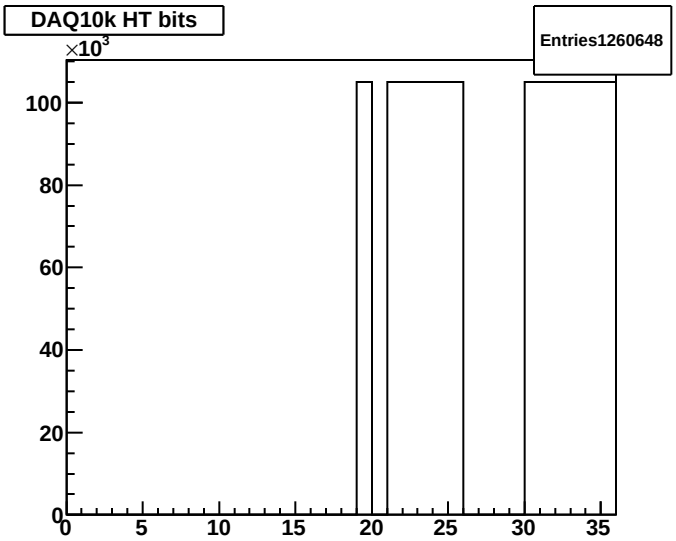

EMC L2 Input - Partial JP Sum
Entries 645
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

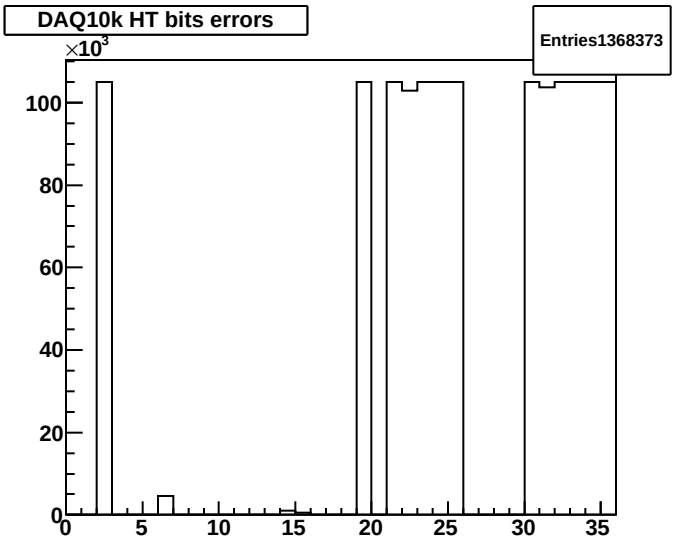

EMC L2 Input - HT01 bits/Partial JP ID
Entries 840432
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

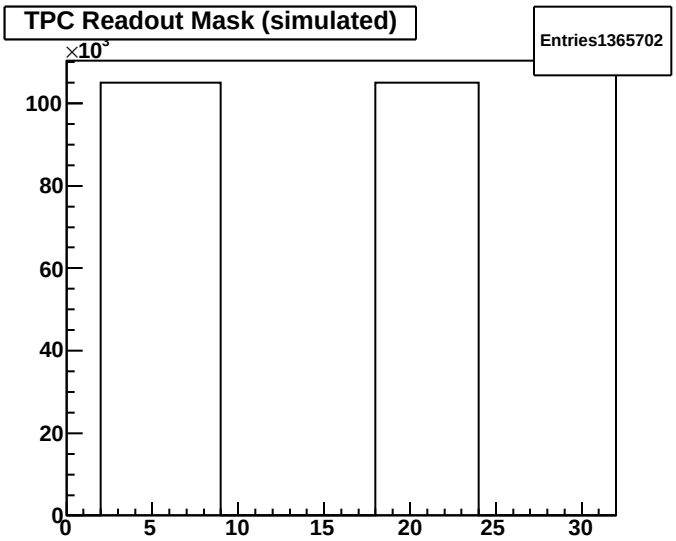

EMC L2 Input - HT01 bits/Partial JP ID
Entries 9
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

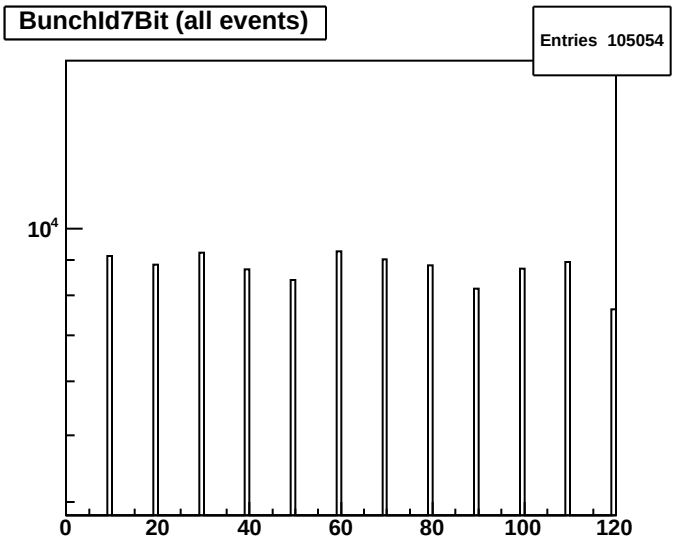

EMC L2 Input - HT23 bits
Entries 840432
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

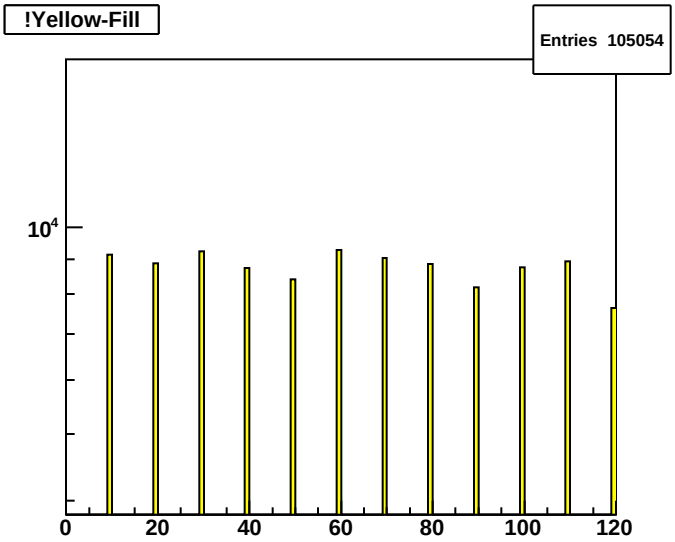

EMC L2 Input - HT23 bits
Entries 9
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

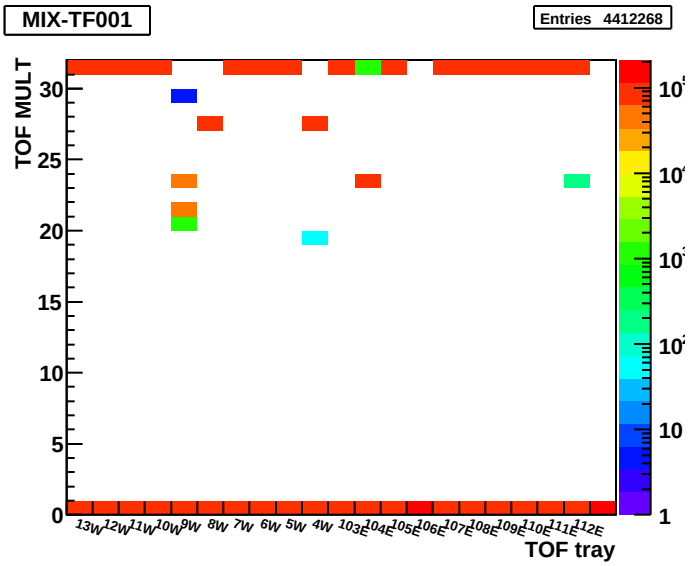

DAQ10k HT bits
Entries1260648
×10^3
100
80
60
40
20
0
0 5 10 15 20 25 30 35

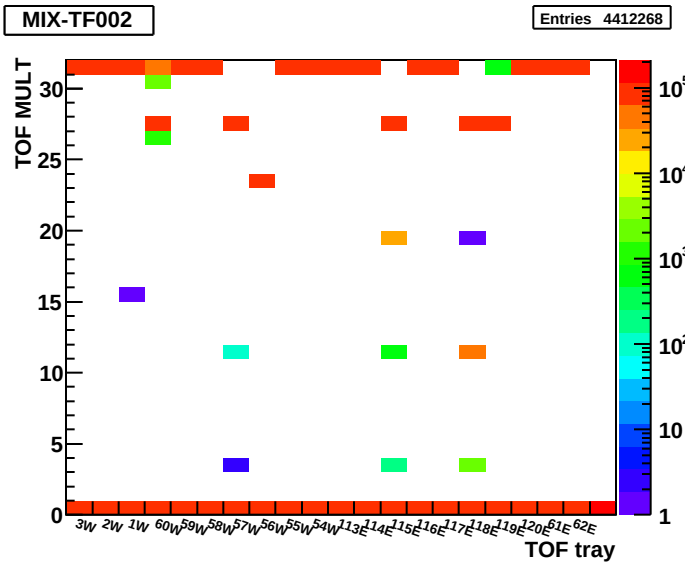

DAQ10k HT bits errors
Entries1368373
×10^3
100
80
60
40
20
0
0 5 10 15 20 25 30 35

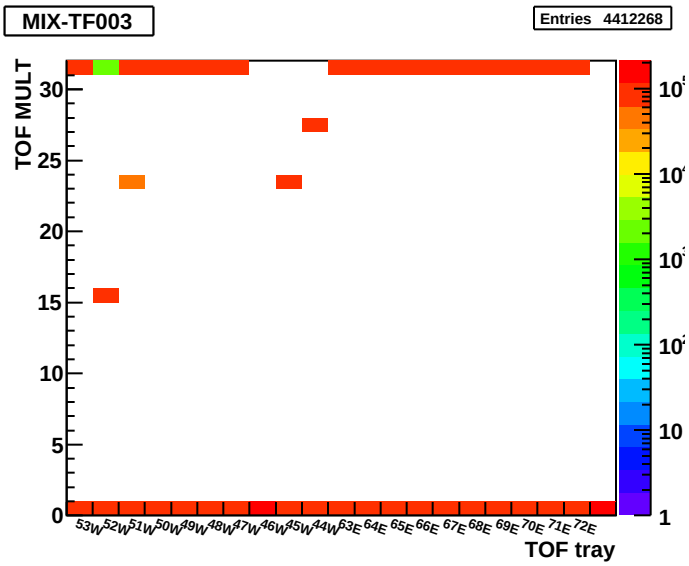

TPC Readout Mask (simulated)
Entries1365702
×10^3
100
80
60
40
20
0
0 5 10 15 20 25 30

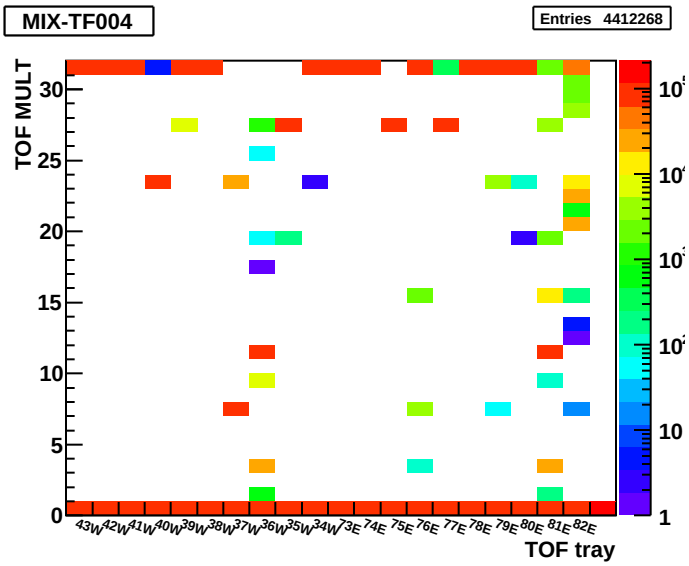

BunchId7Bit (all events)
Entries 105054
10^4
0 20 40 60 80 100 120

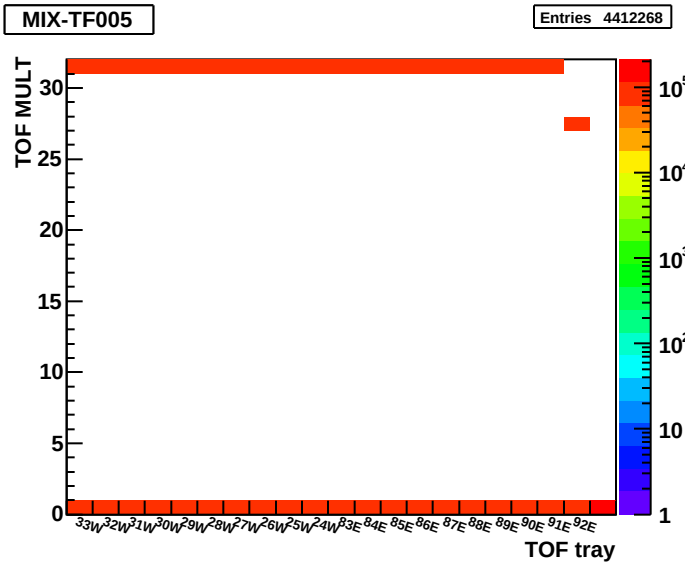

!Yellow-Fill
Entries 105054
10^4
0 20 40 60 80 100 120

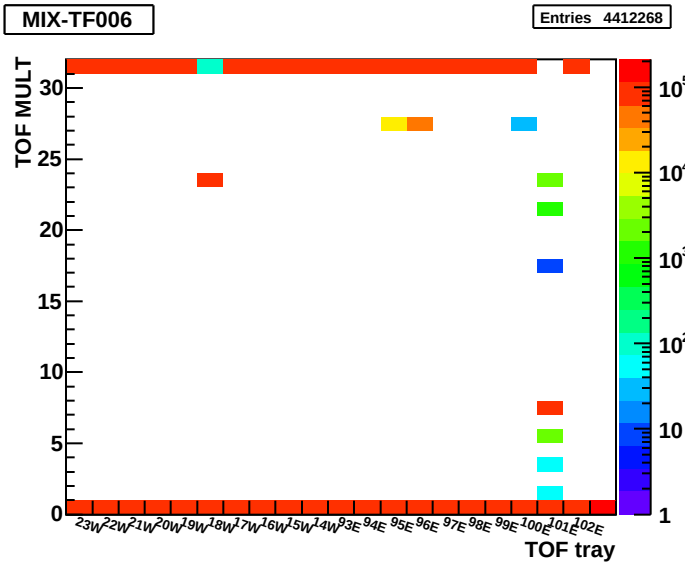

MIX-TF001
Entries 4412268
TOF MULT
TOF tray

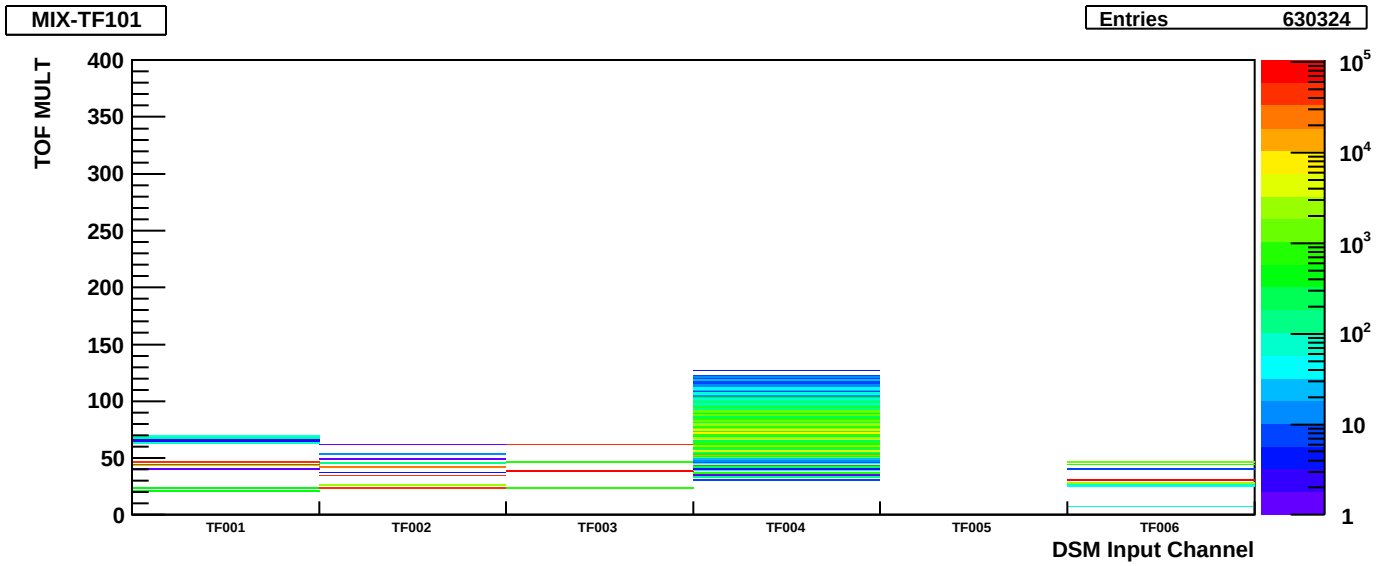

MIX-TF002
Entries 4412268
TOF MULT
TOF tray

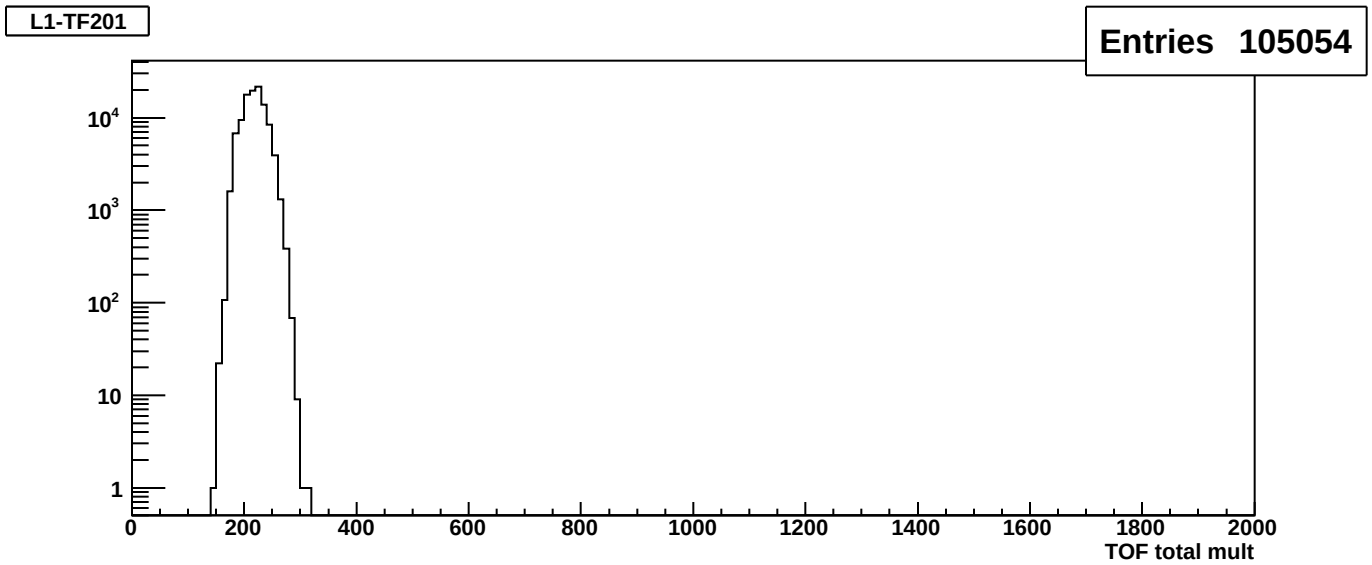

MIX-TF003
Entries 4412268
TOF MULT
TOF tray

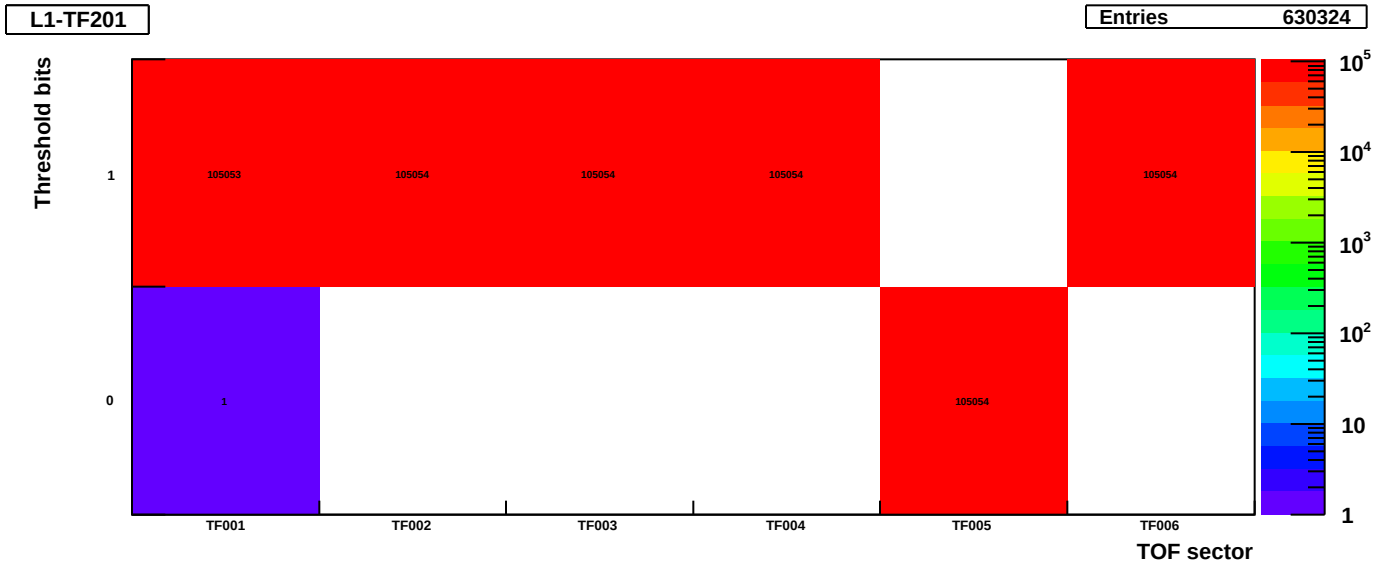

MIX-TF004
Entries 4412268
TOF MULT
TOF tray

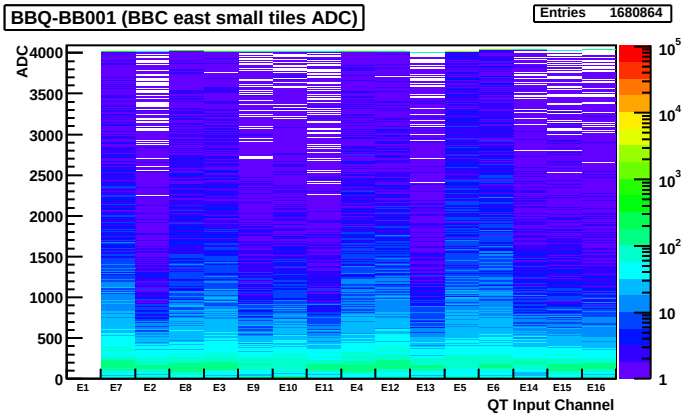

MIX-TF005
Entries 4412268
TOF MULT
TOF tray

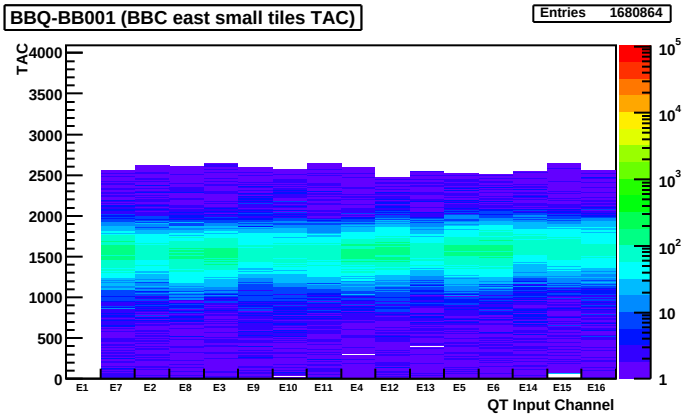

MIX-TF006
Entries 4412268
TOF MULT
TOF tray

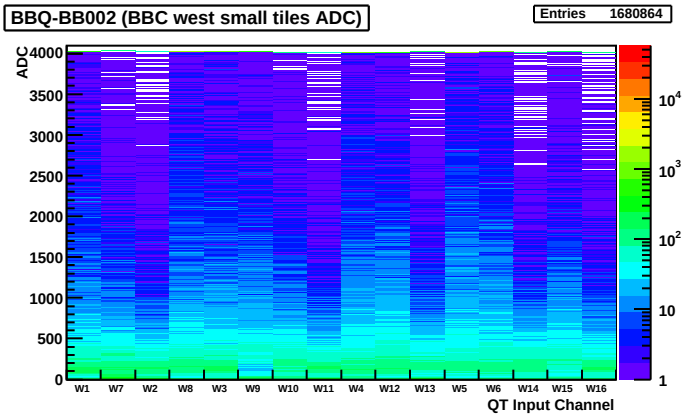

MIX-TF101
Entries 630324
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

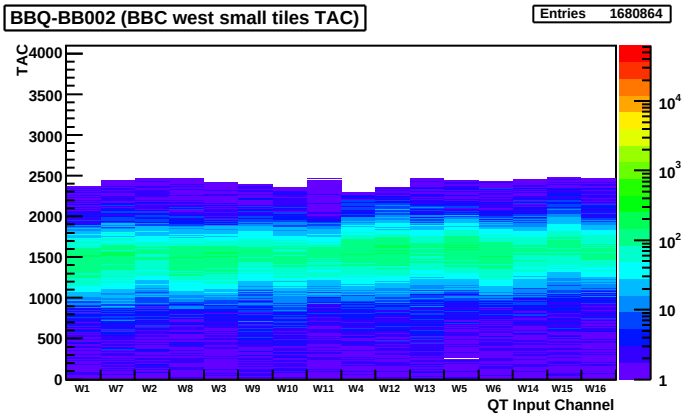

L1-TF201
Entries 105054
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

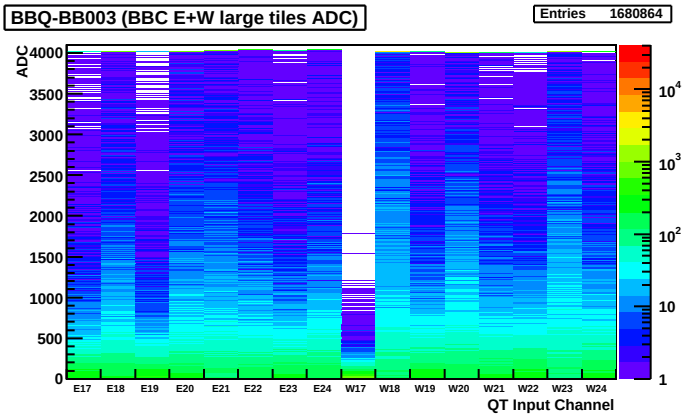

L1-TF201
Entries 630324
Threshold bits
1
0
105053
105054
105054
105054
105054
1
105054
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^5
10^4
10^3
10^2
10
1

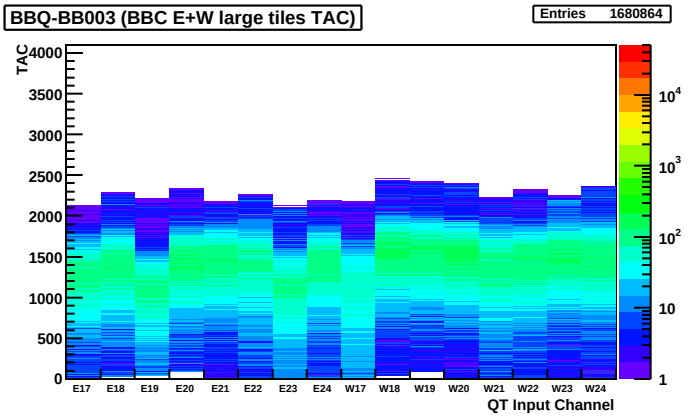

BBQ-BB001 (BBC east small tiles ADC)
Entries 1680864
ADC
QT Input Channel

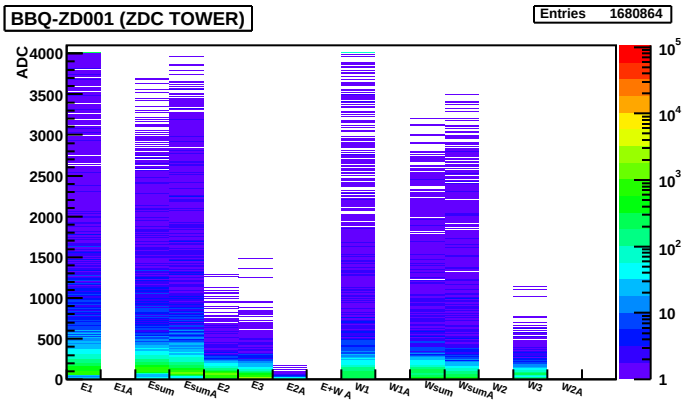

BBQ-BB001 (BBC east small tiles TAC)
Entries 1680864
TAC
QT Input Channel

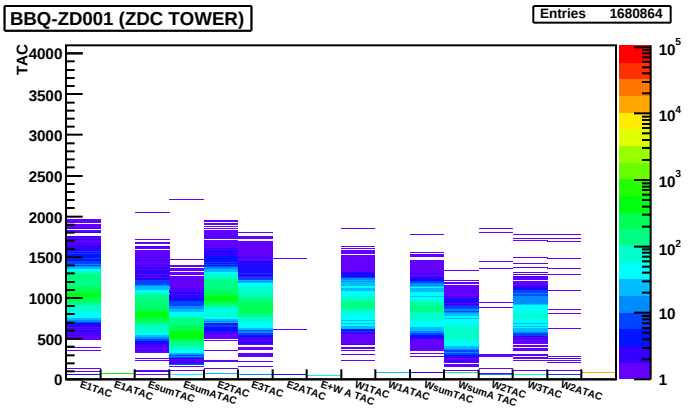

BBQ-BB002 (BBC west small tiles ADC)
Entries 1680864
ADC
QT Input Channel

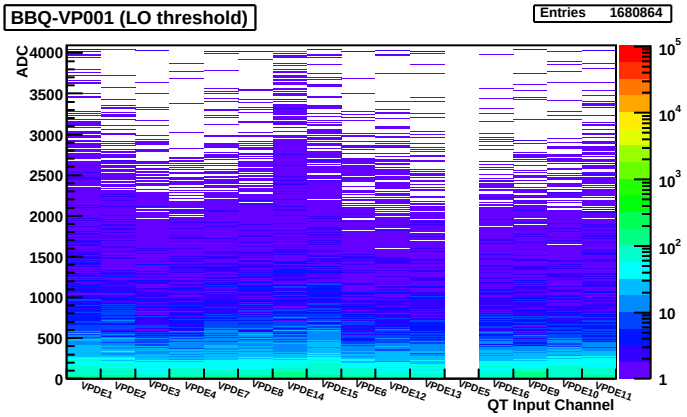

BBQ-BB002 (BBC west small tiles TAC)
Entries 1680864
TAC
QT Input Channel

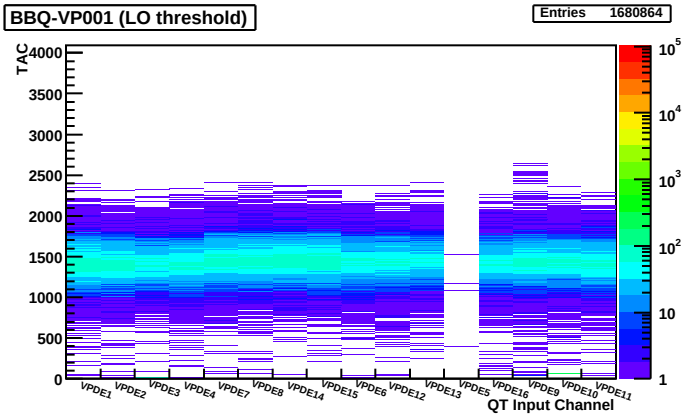

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 1680864
ADC
QT Input Channel

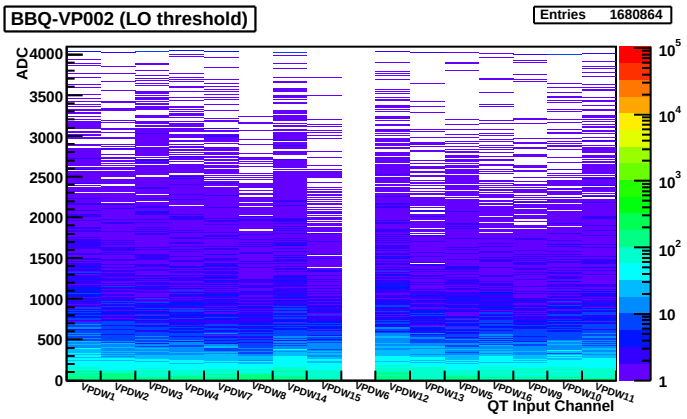

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 1680864
TAC
QT Input Channel

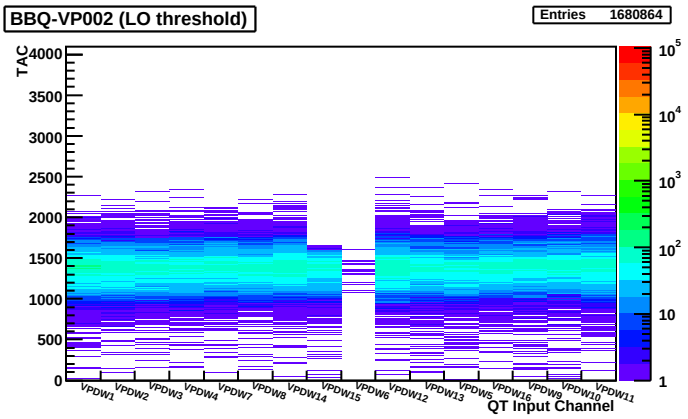

BBQ-ZD001 (ZDC TOWER)
Entries 1680864
ADC

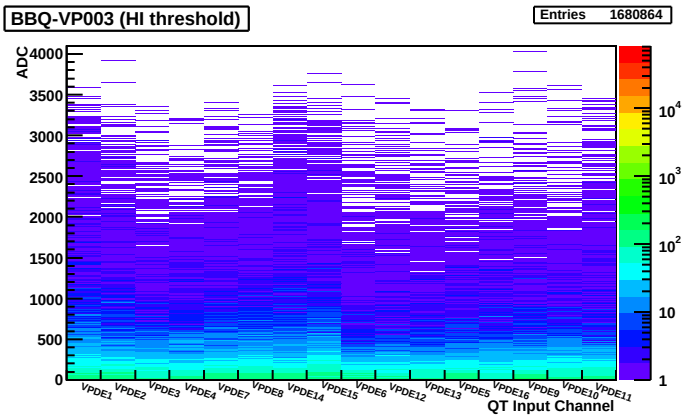

BBQ-ZD001 (ZDC TOWER)
Entries 1680864
TAC

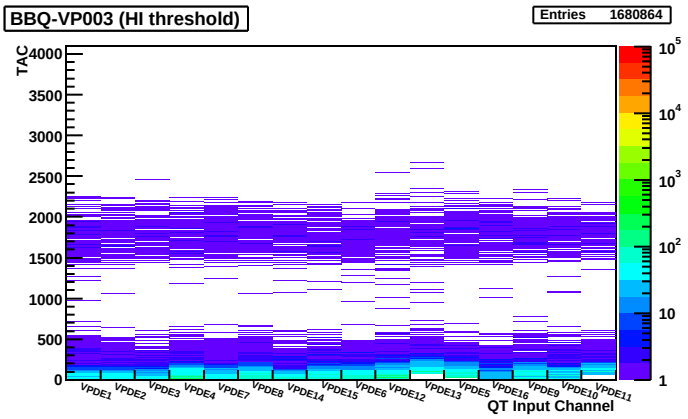

BBQ-VP001 (LO threshold)
Entries 1680864
ADC
QT Input Channel

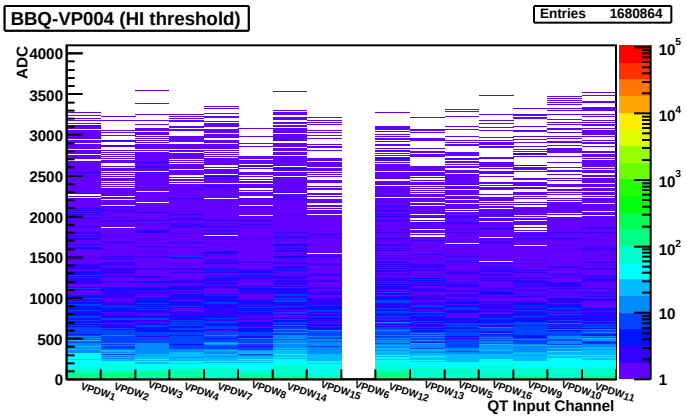

BBQ-VP001 (LO threshold)
Entries 1680864
TAC
QT Input Channel

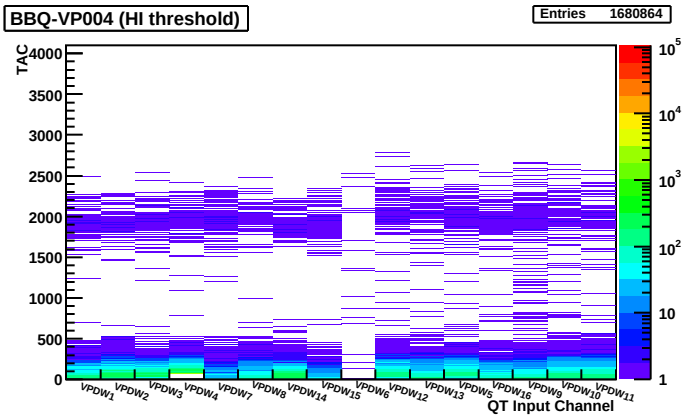

BBQ-VP002 (LO threshold)
Entries 1680864
ADC
QT Input Channel

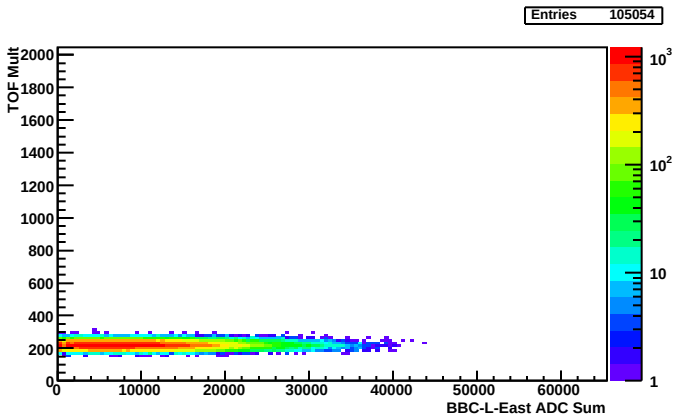

BBQ-VP002 (LO threshold)
Entries 1680864
TAC
QT Input Channel

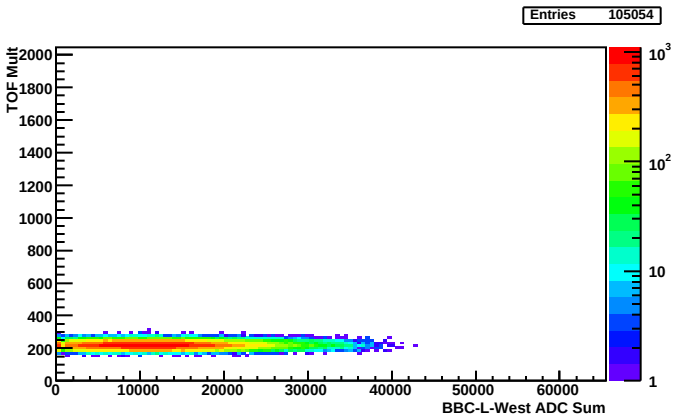

BBQ-VP003 (HI threshold)
Entries 1680864
ADC
QT Input Channel

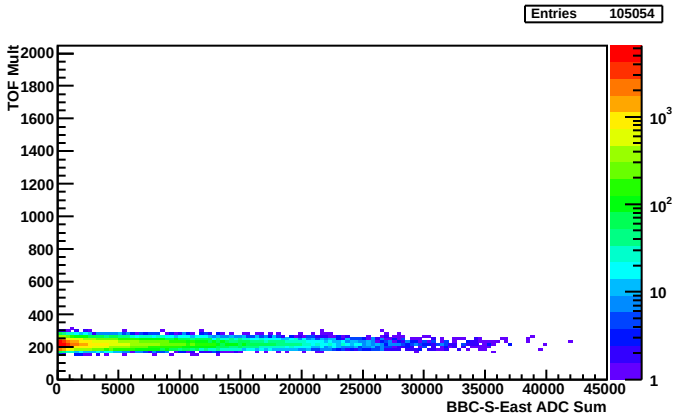

BBQ-VP003 (HI threshold)
Entries 1680864
TAC
QT Input Channel

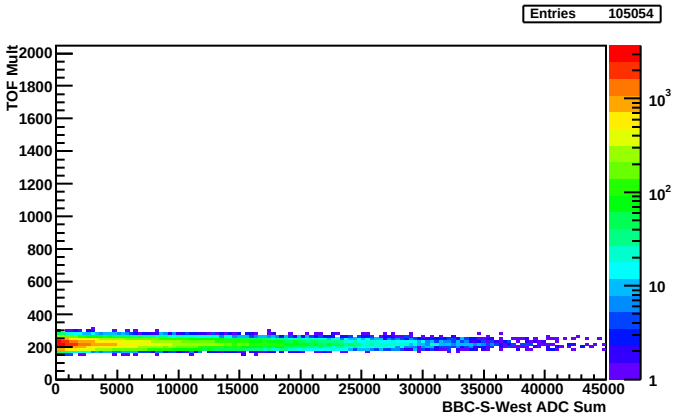

BBQ-VP004 (HI threshold)
Entries 1680864
ADC
QT Input Channel

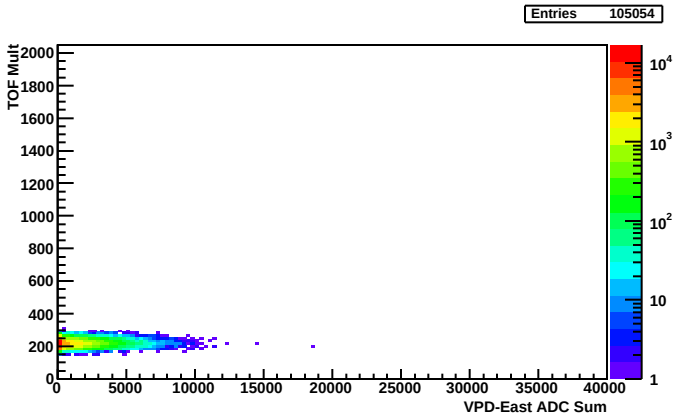

BBQ-VP004 (HI threshold)
Entries 1680864
TAC
QT Input Channel

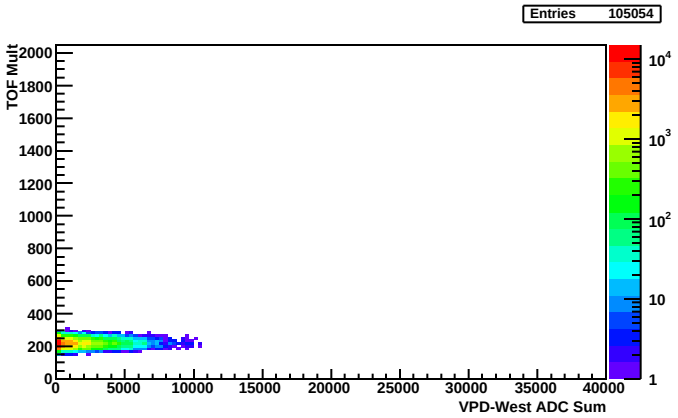

Entries 105054
TOF Mult
BBC-L-East ADC Sum

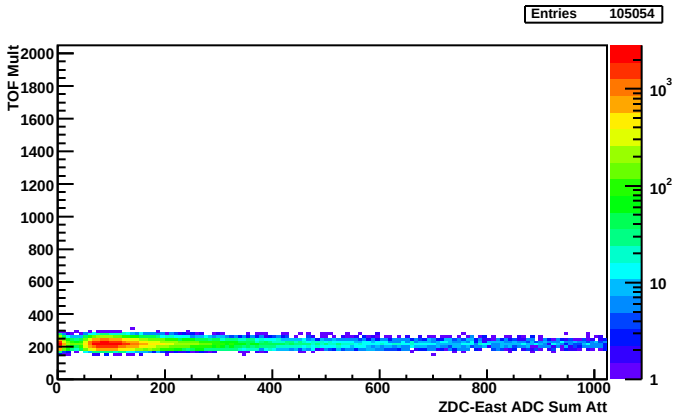

Entries 105054
TOF Mult
BBC-L-West ADC Sum

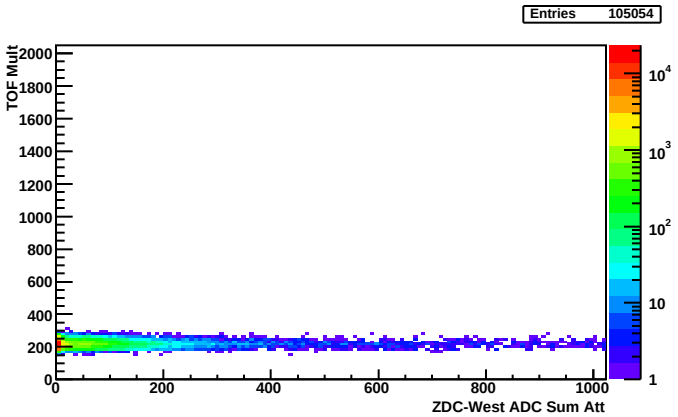

Entries 105054
TOF Mult
BBC-S-East ADC Sum

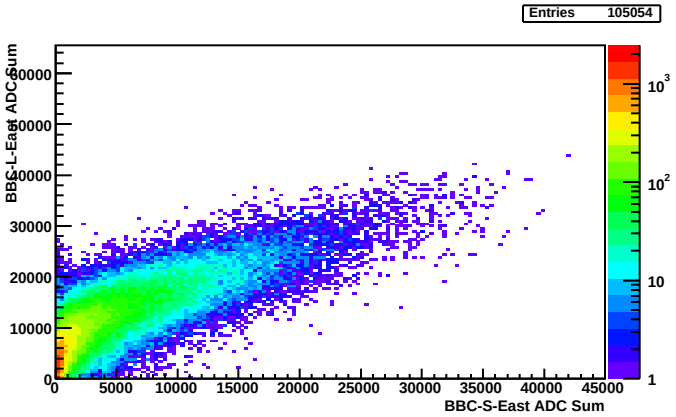

Entries 105054
TOF Mult
BBC-S-West ADC Sum

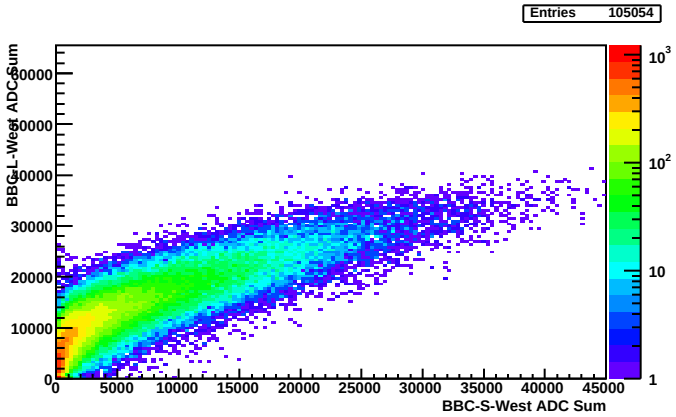

Entries 105054
TOF Mult
VPD-East ADC Sum

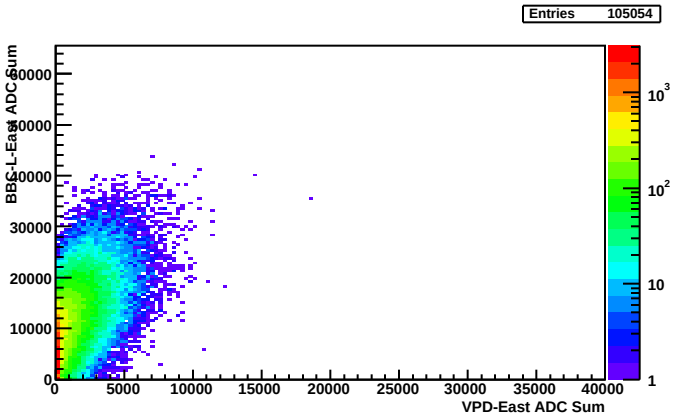

Entries 105054
TOF Mult
VPD-West ADC Sum

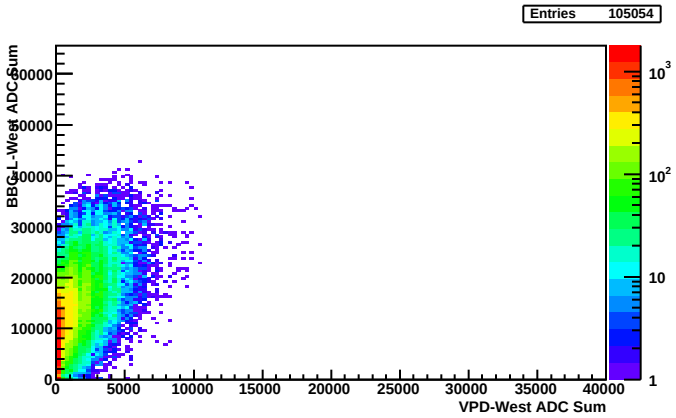

Entries 105054
TOF Mult
ZDC-East ADC Sum Att

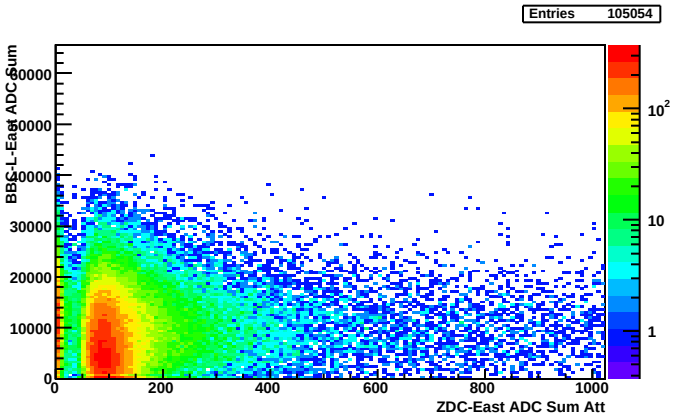

Entries 105054
TOF Mult
ZDC-West ADC Sum Att


Entries 105054
BBC-L-East ADC Sum
BBC-S-East ADC Sum


Entries 105054
BBC-L-West ADC Sum
BBC-S-West ADC Sum


Entries 105054
BBC-L-East ADC Sum
VPD-East ADC Sum


Entries 105054
BBC-L-West ADC Sum
VPD-West ADC Sum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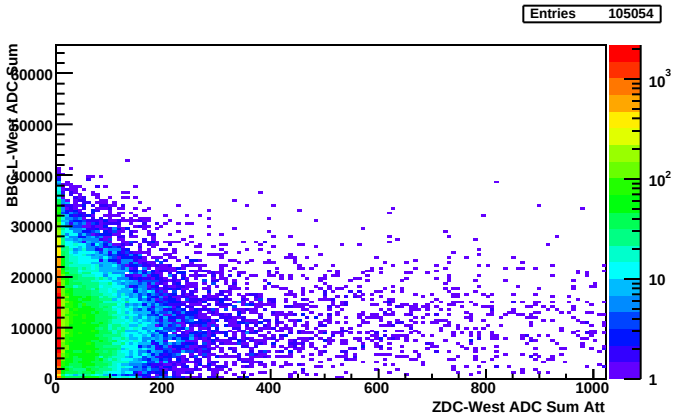
BBC-L-East ADC Sum
ZDC-East ADC Sum Att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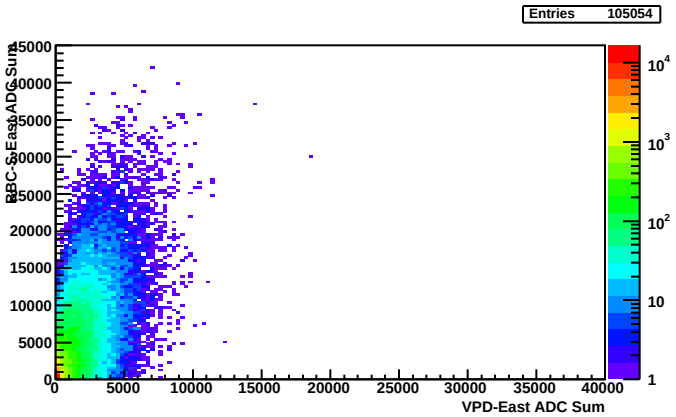
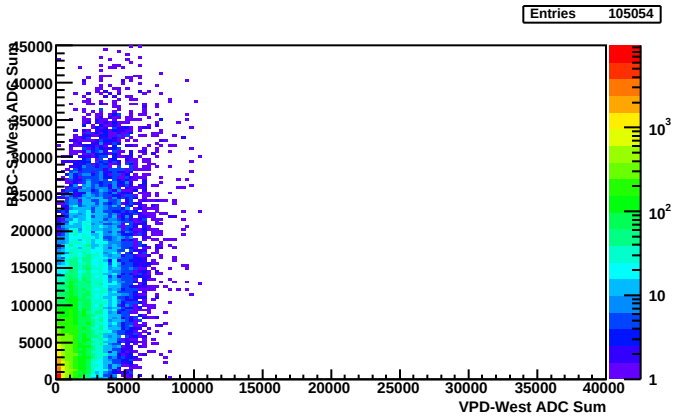
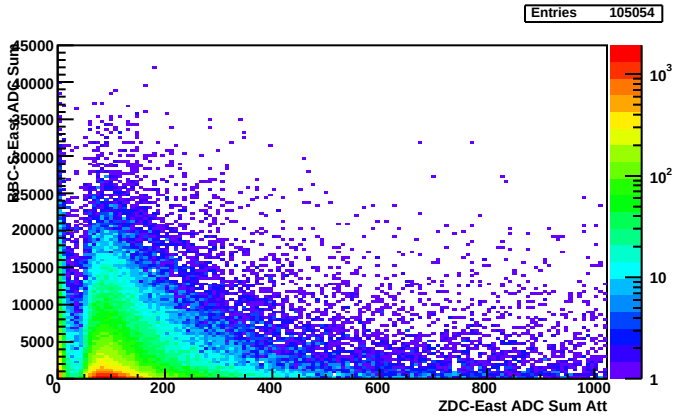
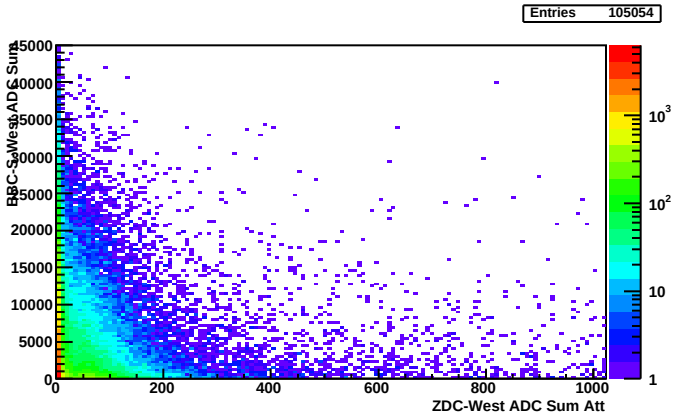
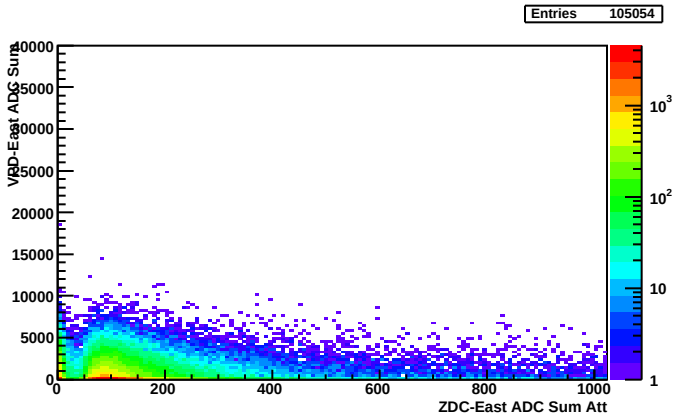
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

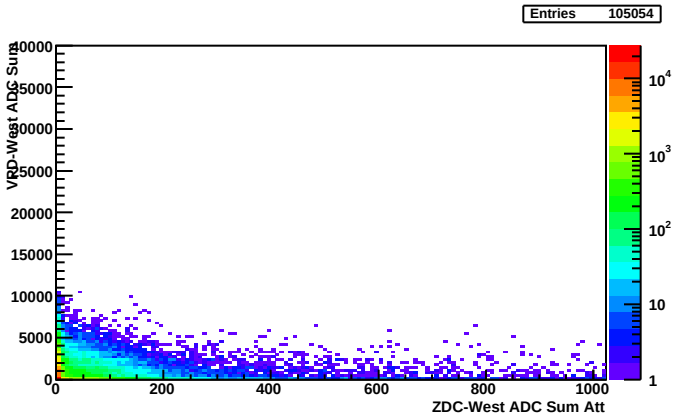

Entries 105054
BBC-S-East ADC Sum
VPD-East ADC Sum

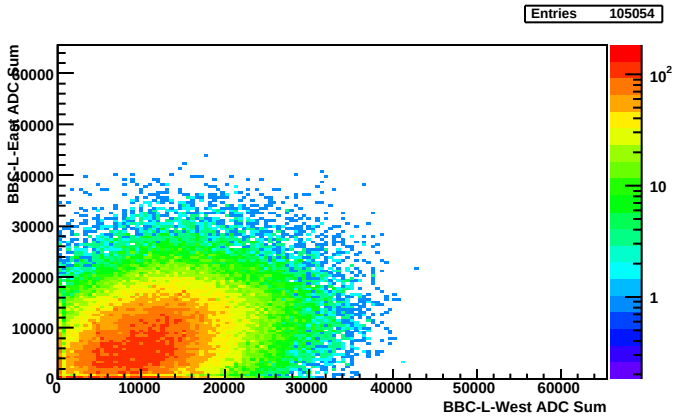

Entries 105054
BBC-S-West ADC Sum
VPD-West ADC Sum

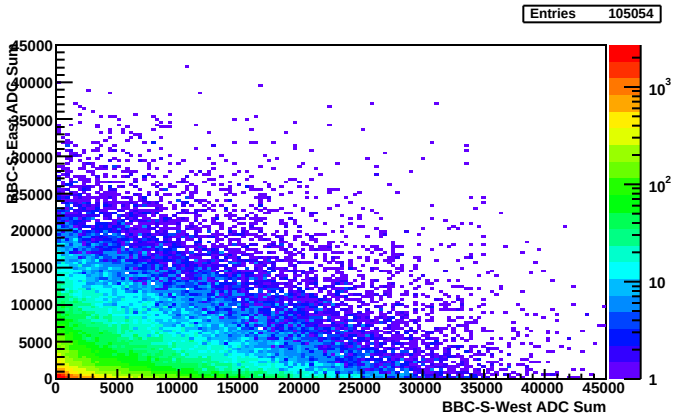

Entries 105054
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

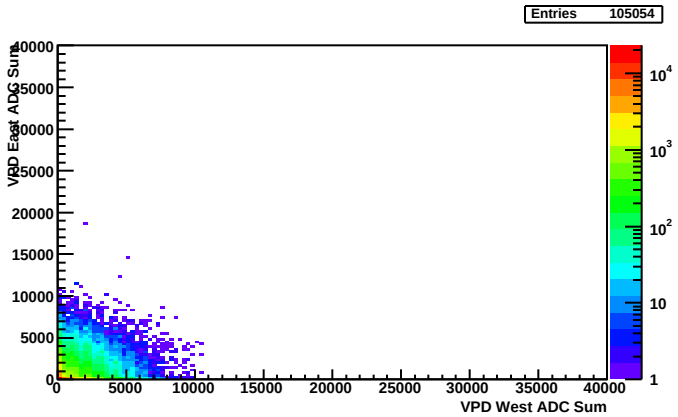

Entries 105054
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

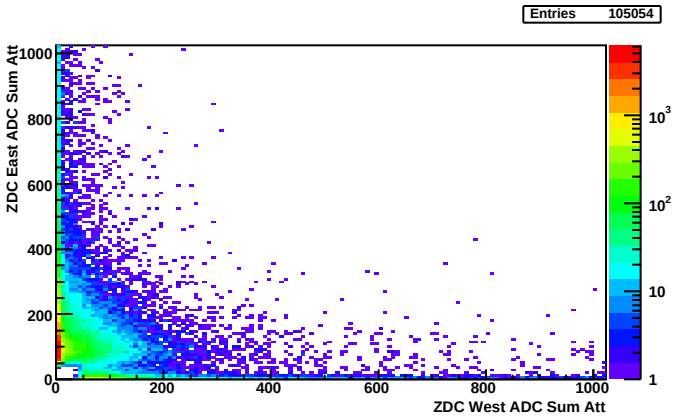

Entries 105054
VPD-East ADC Sum
ZDC-East ADC Sum Att

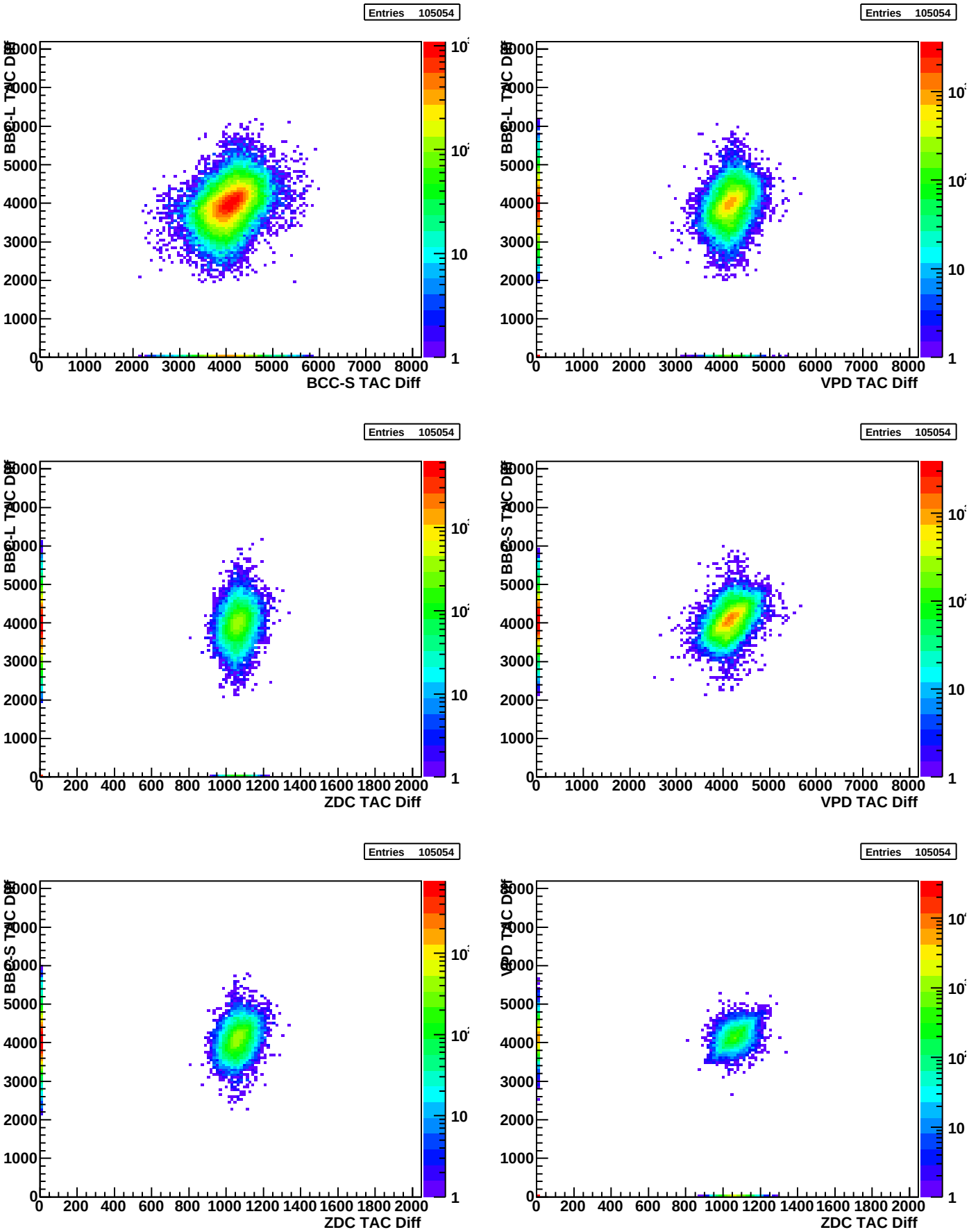

Entries 105054
VPD-West ADC Sum
ZDC-West ADC Sum Att

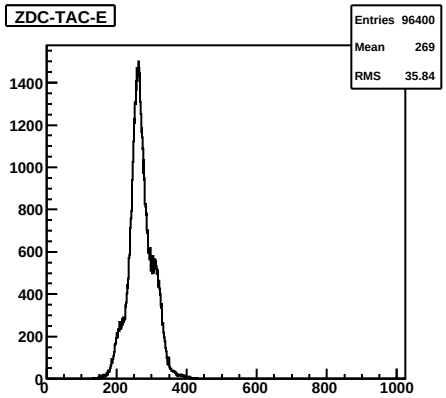

Entries 105054
BBC-L-East ADC Sum
BBC-L-West ADC Sum

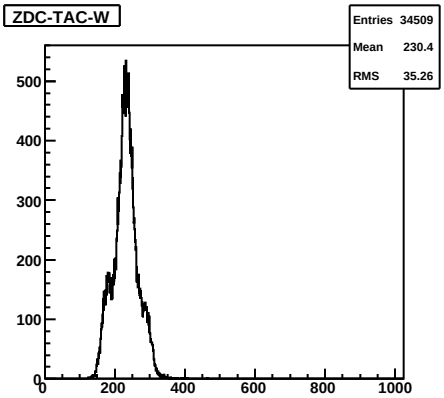

Entries 105054
BBC-S-East ADC Sum
BBC-S-West ADC Sum

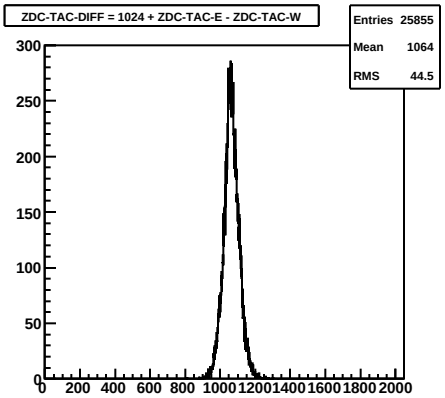

Entries 105054
VPD East ADC Sum
VPD West ADC Sum

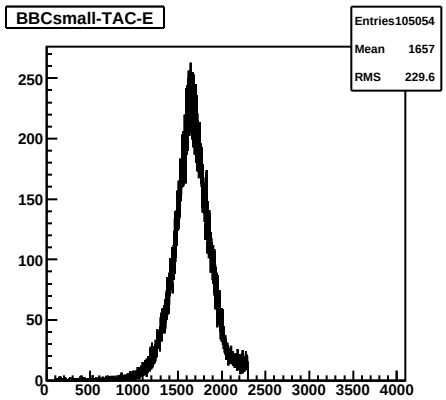

Entries 105054
ZDC East ADC Sum Att
ZDC West ADC Sum Att

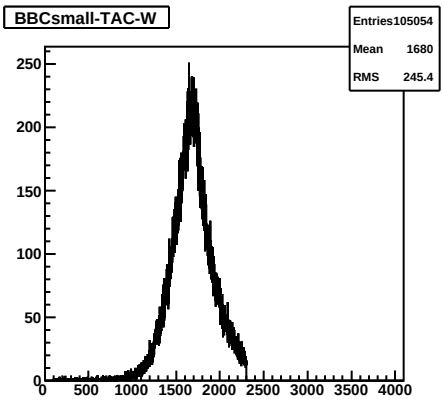

Entries 105054
BBC-L TAC Diff
BCC-S TAC Diff
Entries 105054
BBC-L TAC Diff
VPD TAC Diff
Entries 105054
BBC-L TAC Diff
ZDC TAC Diff
Entries 105054
BBC-S TAC Diff
VPD TAC Diff
Entries 105054
BBC-S TAC Diff
ZDC TAC Diff
Entries 105054
VPD TAC Diff
ZDC TAC Diff

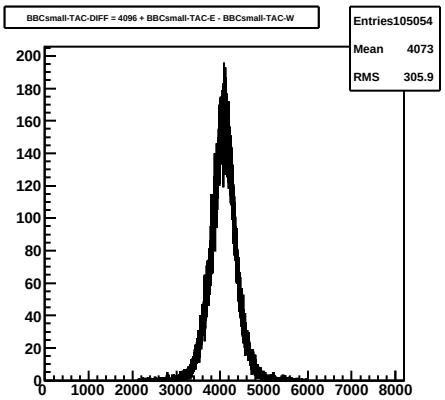

ZDC-TAC-E
Entries 96400
Mean 269
RMS 35.84

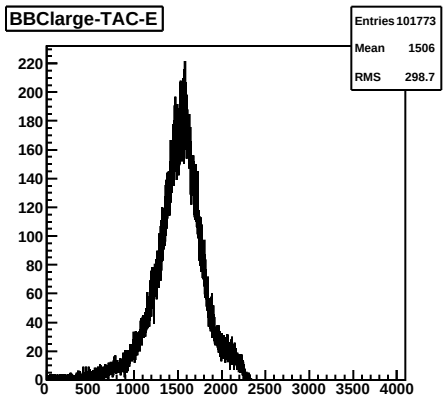

ZDC-TAC-W
Entries 34509
Mean 230.4
RMS 35.26

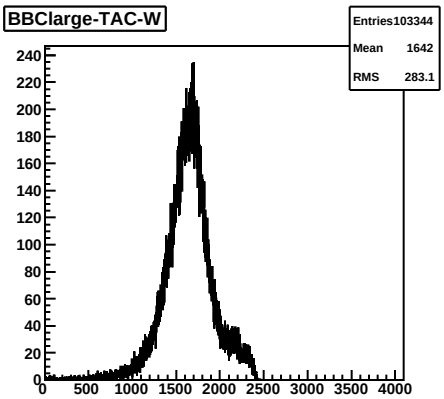

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 25855
Mean 1064
RMS 44.5

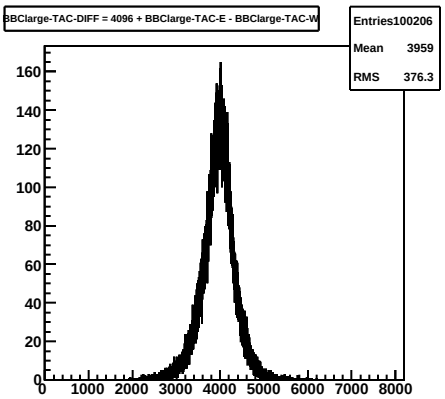

BBCsmall-TAC-E
Entries105054
Mean 1657
RMS 229.6

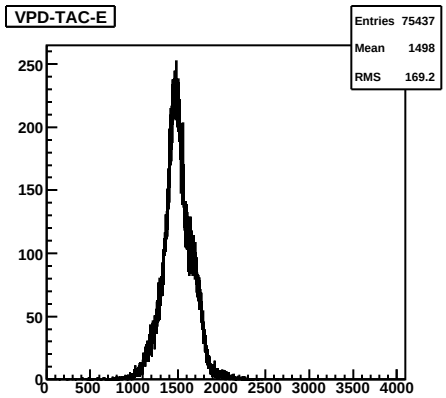

BBCsmall-TAC-W
Entries105054
Mean 1680
RMS 245.4

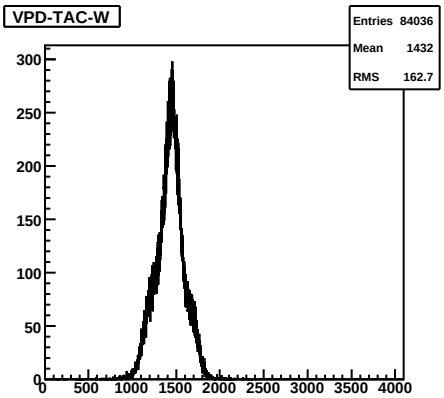

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries105054
Mean 4073
RMS 305.9

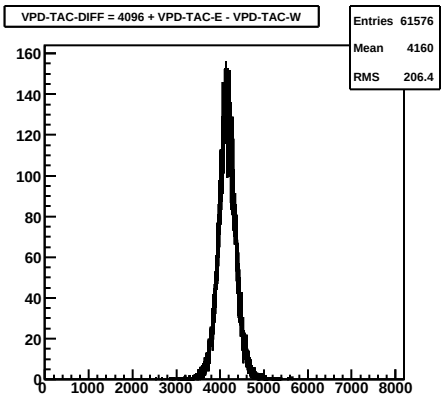

BBClarge-TAC-E
Entries101773
Mean 1506
RMS 298.7

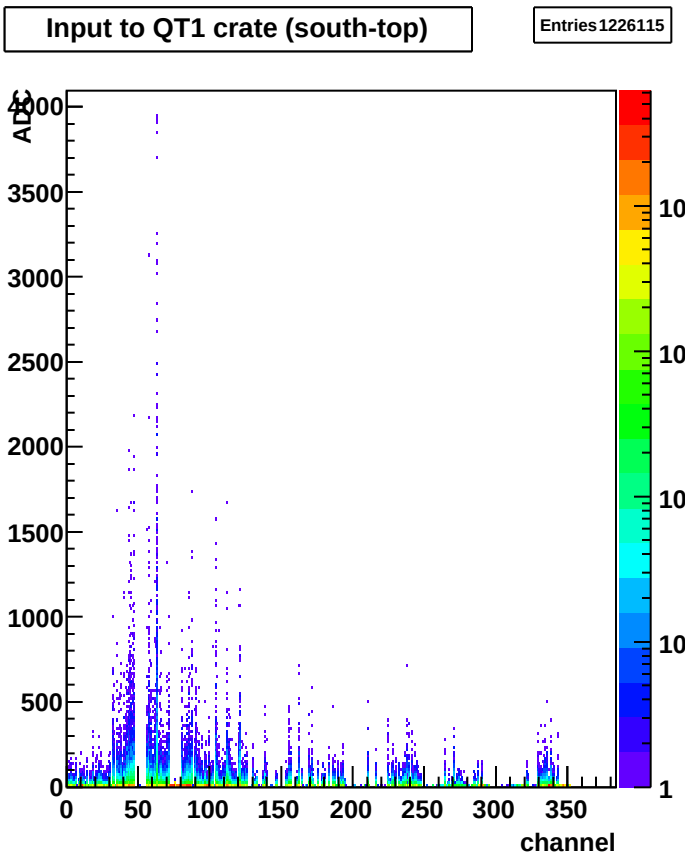

BBClarge-TAC-W
Entries103344
Mean 1642
RMS 283.1

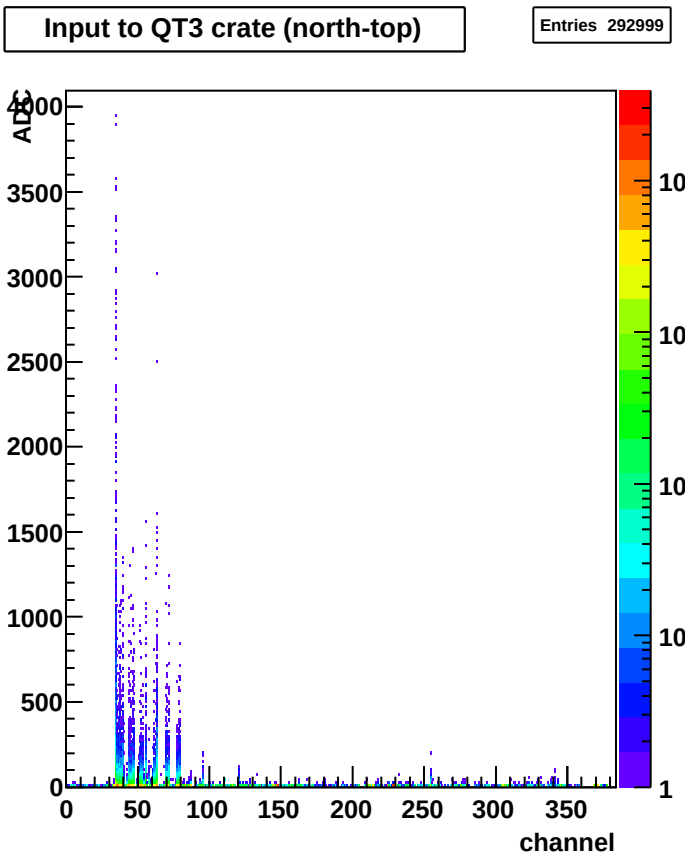

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries100206
Mean 3959
RMS 376.3

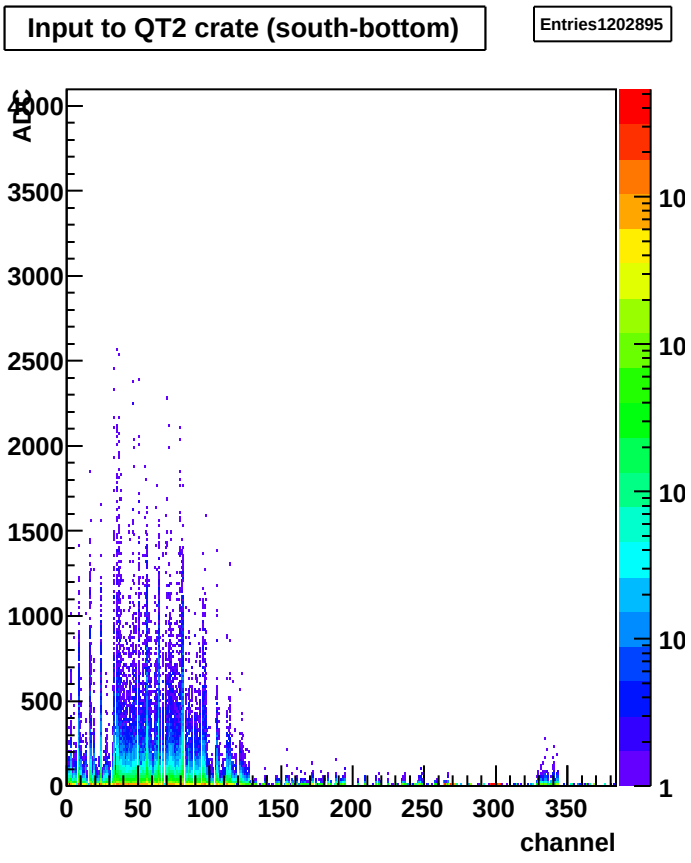

VPD-TAC-E
Entries 75437
Mean 1498
RMS 169.2

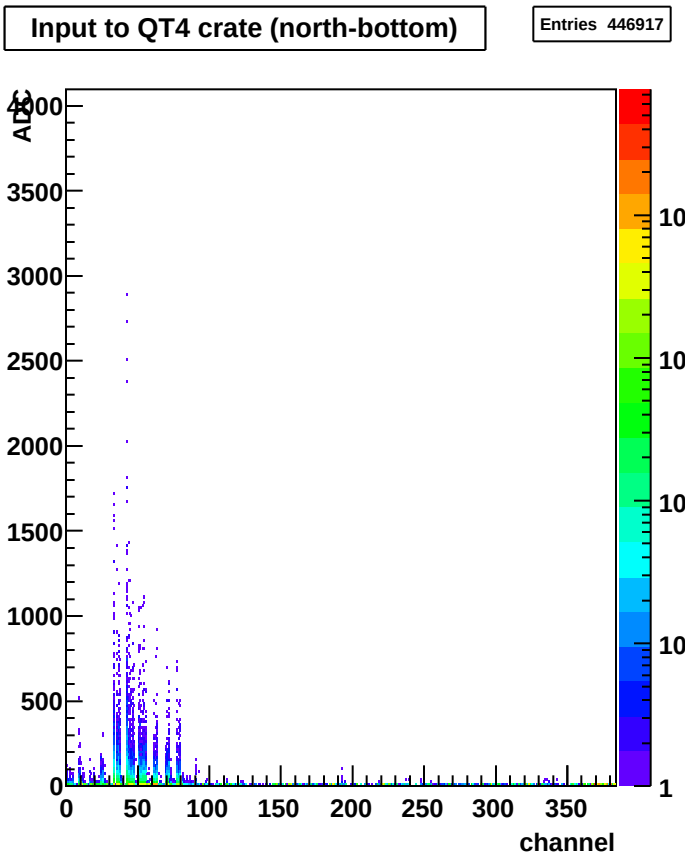

VPD-TAC-W
Entries 84036
Mean 1432
RMS 162.7

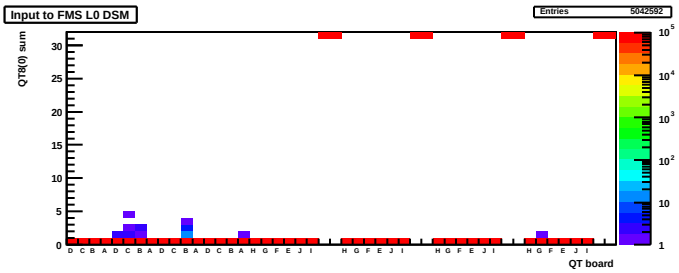

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 61576
Mean 4160
RMS 206.4

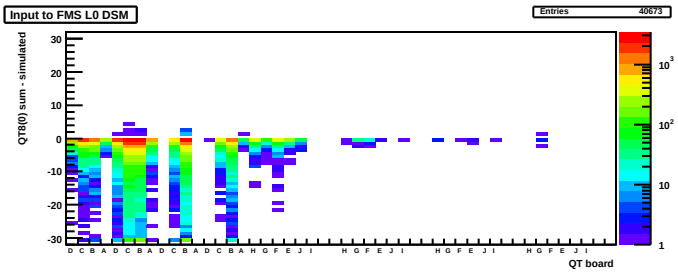

Input to QT1 crate (south-top)
Entries 1226115
ADC
channel

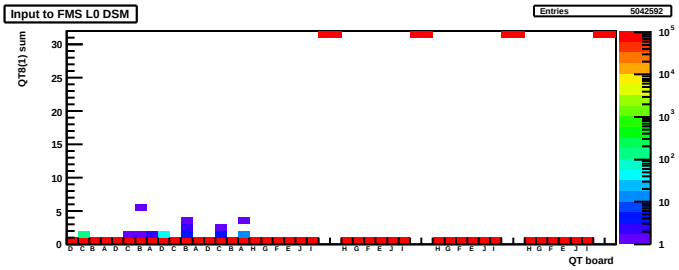

Input to QT3 crate (north-top)
Entries 292999
ADC
channel

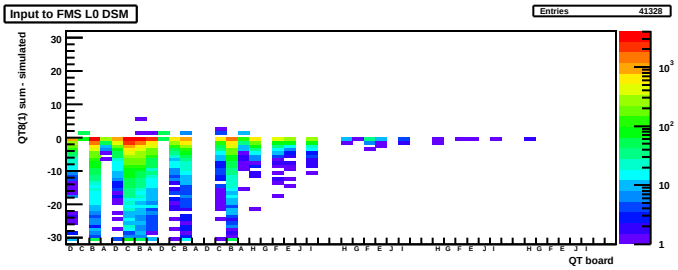

Input to QT2 crate (south-bottom)
Entries 1202895
ADC
channel

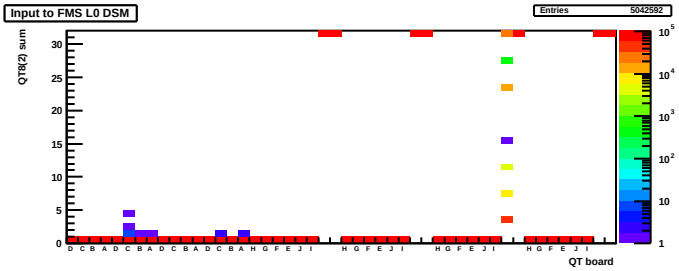

Input to QT4 crate (north-bottom)
Entries 446917
ADC
channel

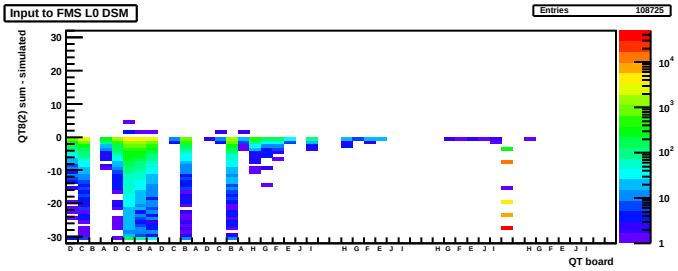

Input to FMS L0 DSM
Entries 5042592
QT8(0) sum
QT board

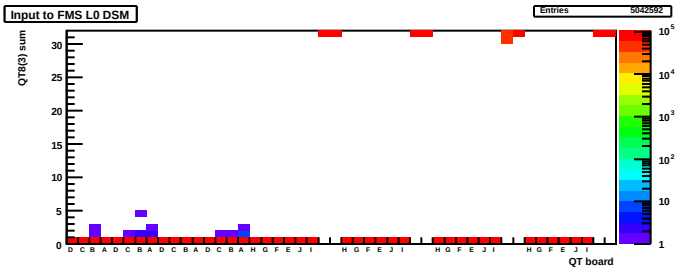

Input to FMS L0 DSM
Entries 40673
QT8(0) sum - simulated
QT board

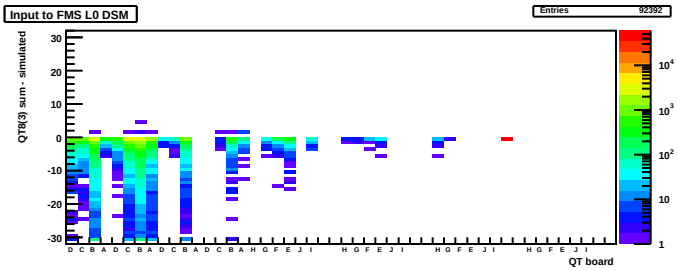

Input to FMS L0 DSM
Entries 5042592
QT8(1) sum
QT board

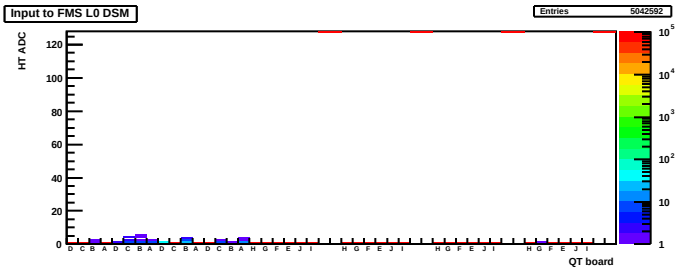

Input to FMS L0 DSM
Entries 41328
QT8(1) sum - simulated
QT board

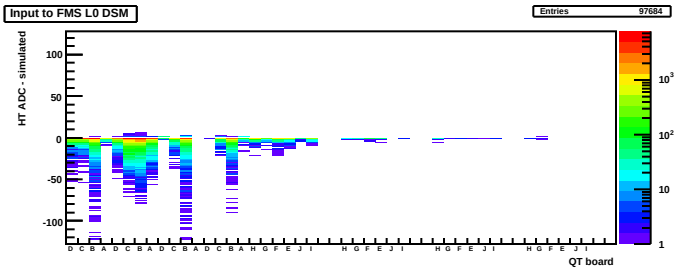

Input to FMS L0 DSM
Entries 5042592
QT8(2) sum
QT board

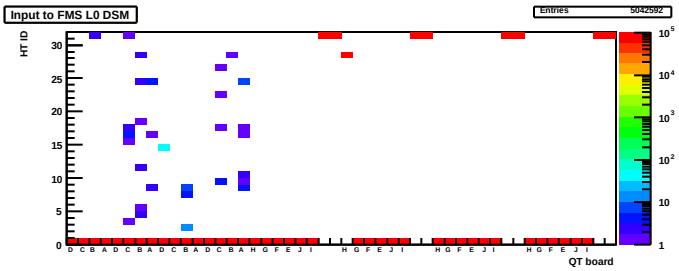

Input to FMS L0 DSM
Entries 108725
QT8(2) sum - simulated
QT board

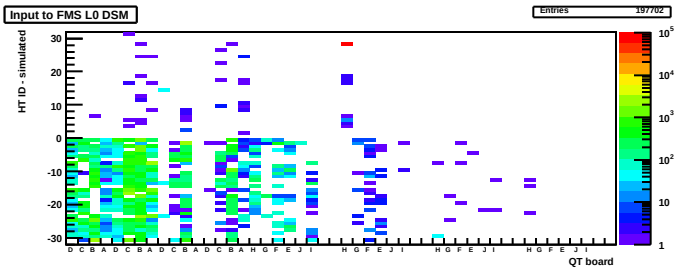

Input to FMS L0 DSM
Entries 5042592
QT8(3) sum
QT board

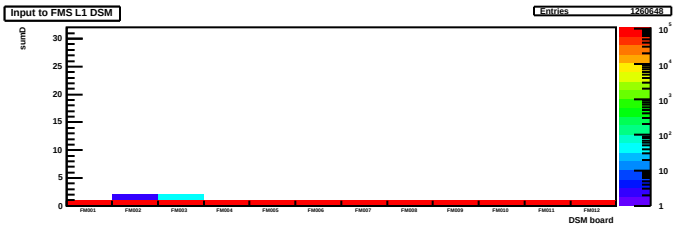

Input to FMS L0 DSM
Entries 92392
QT8(3) sum - simulated
QT board

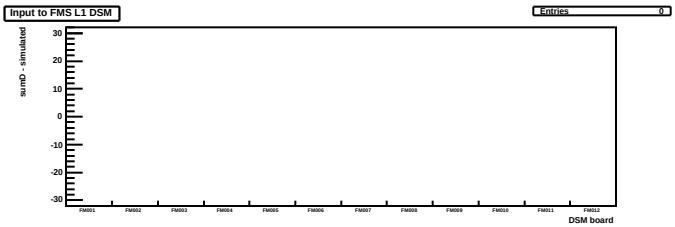

Input to FMS L0 DSM
Entries 5042592
HT ADC
QT board

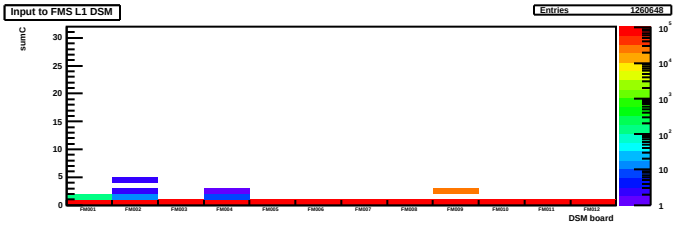

Input to FMS L0 DSM
Entries 97684
HT ADC - simulated
QT board

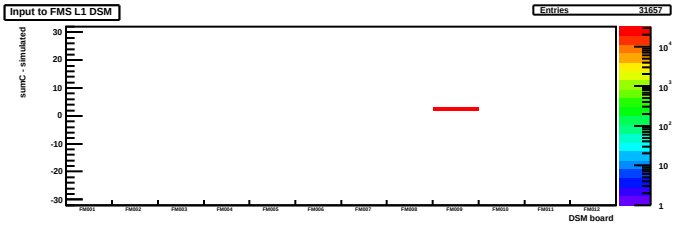

Input to FMS L0 DSM
Entries 5042592
HT ID
QT board

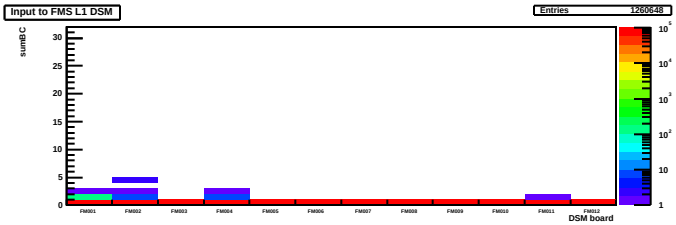

Input to FMS L0 DSM
Entries 197702
HT ID - simulated
QT board

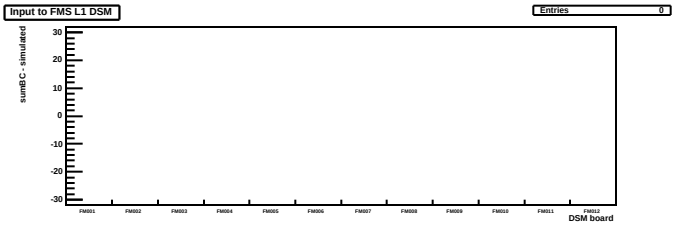

Input to FMS L1 DSM
Entries 1260648
sumD
DSM board

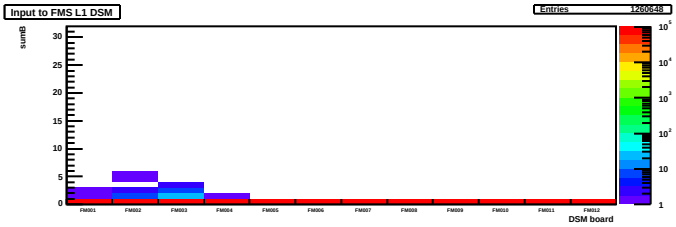

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

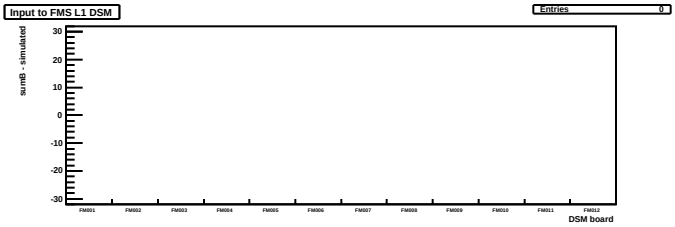

Input to FMS L1 DSM
Entries 1260648
sumC
DSM board

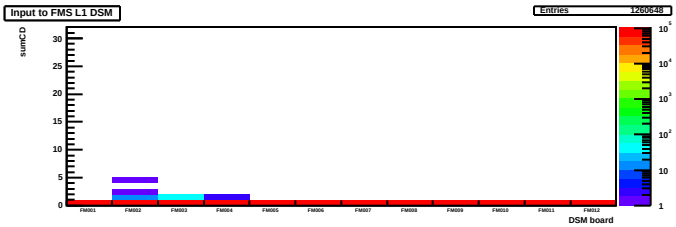

Input to FMS L1 DSM
Entries 31657
sumC - simulated
DSM board

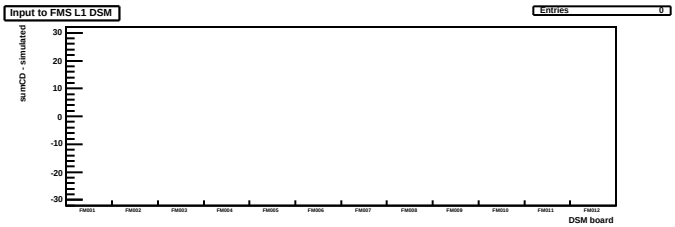

Input to FMS L1 DSM
Entries 1260648
sumBC
DSM board

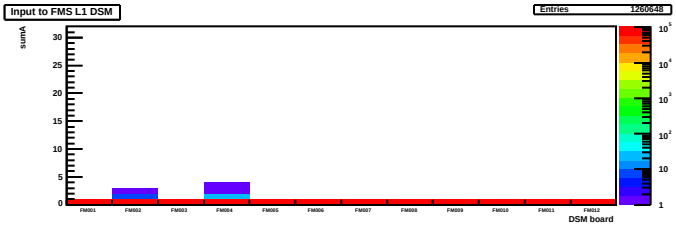

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

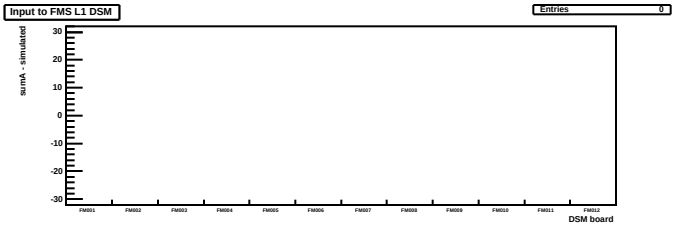

Input to FMS L1 DSM
Entries 1260648
sumB
DSM board

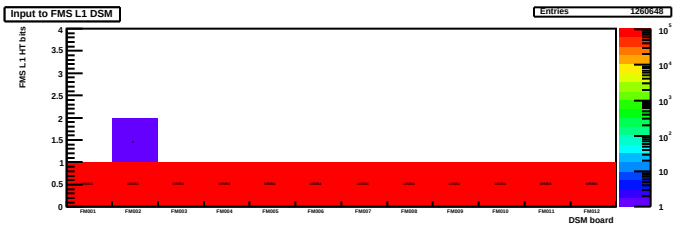

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

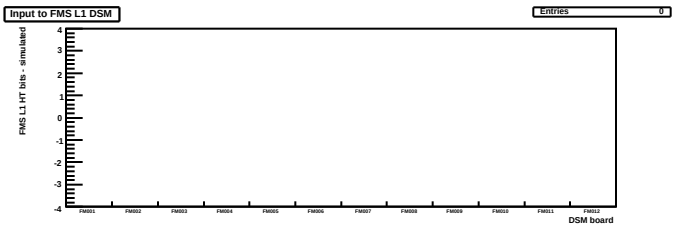

Input to FMS L1 DSM
Entries 1260648
sumCD
DSM board

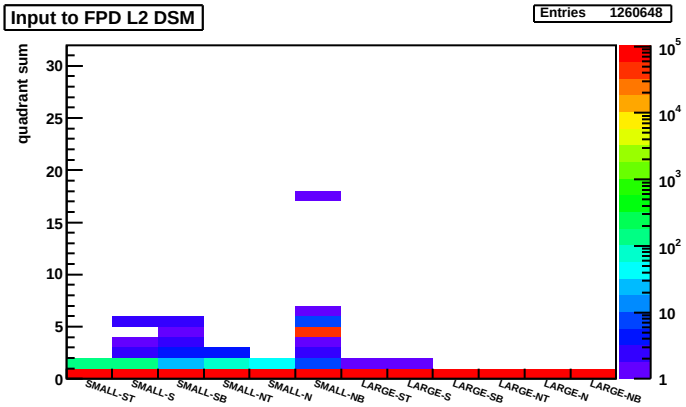

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

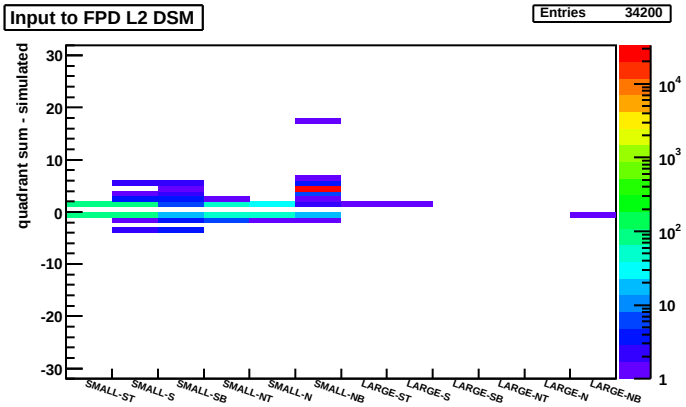

Input to FMS L1 DSM
Entries 1260648
sumA
DSM board

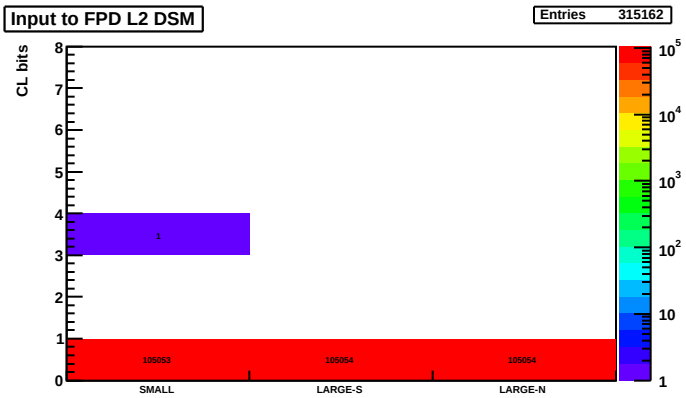

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

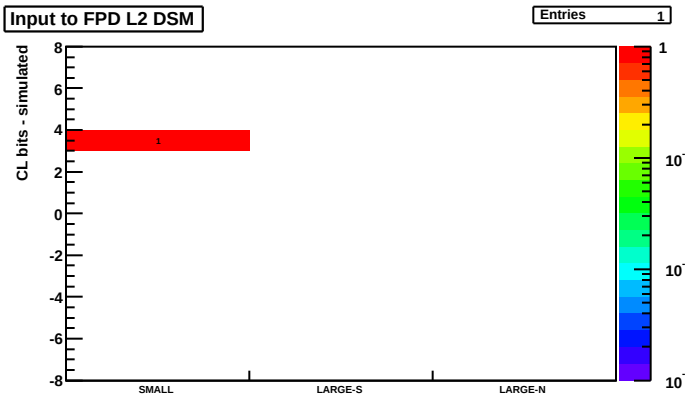

Input to FMS L1 DSM
Entries 1260648
FMS L1 HT bits
DSM board

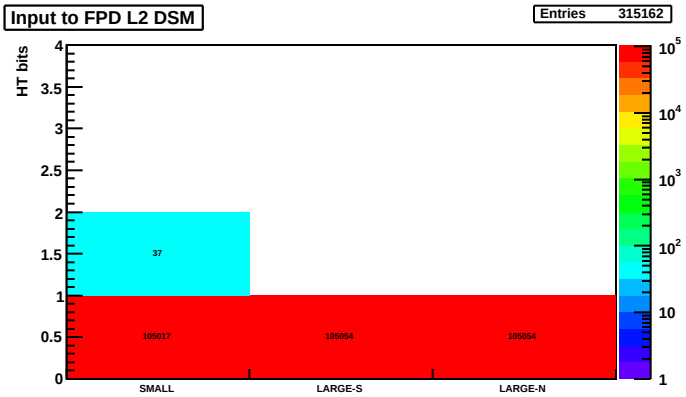

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

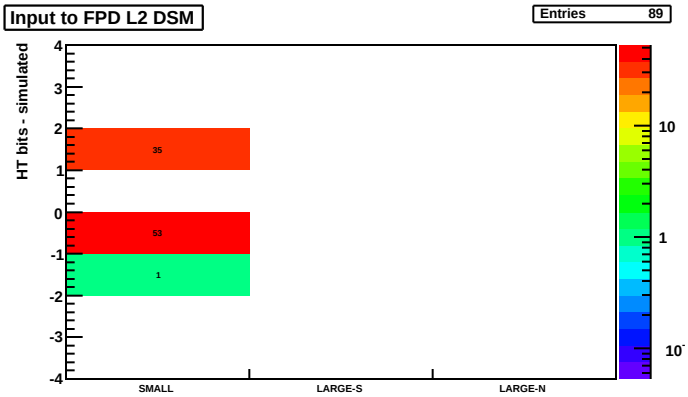

Input to FPD L2 DSM
Entries 1260648
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

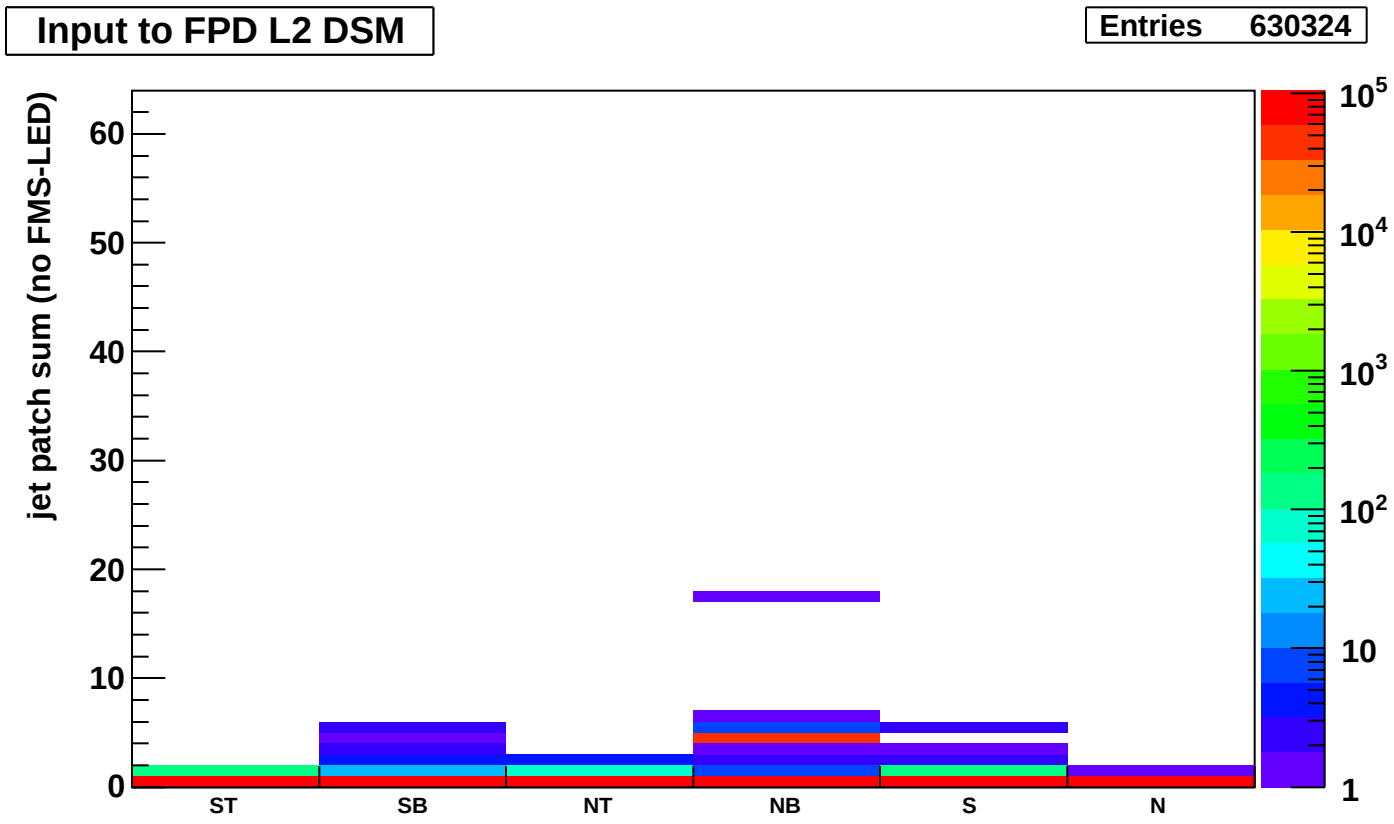

Input to FPD L2 DSM
Entries 34200
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

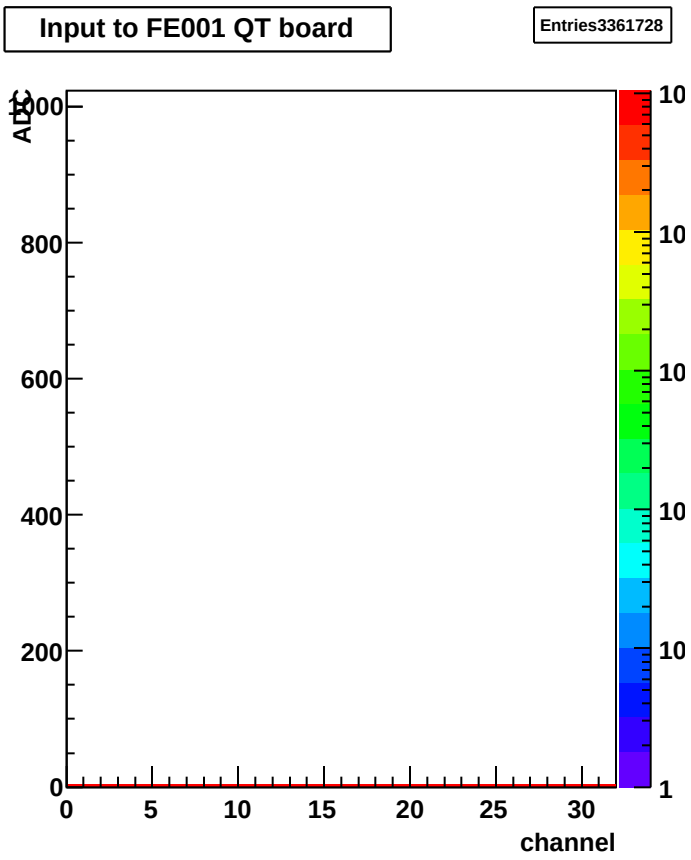

Input to FPD L2 DSM
Entries 315162
CL bits
1
105053
105054
105054
SMALL
LARGE-S
LARGE-N

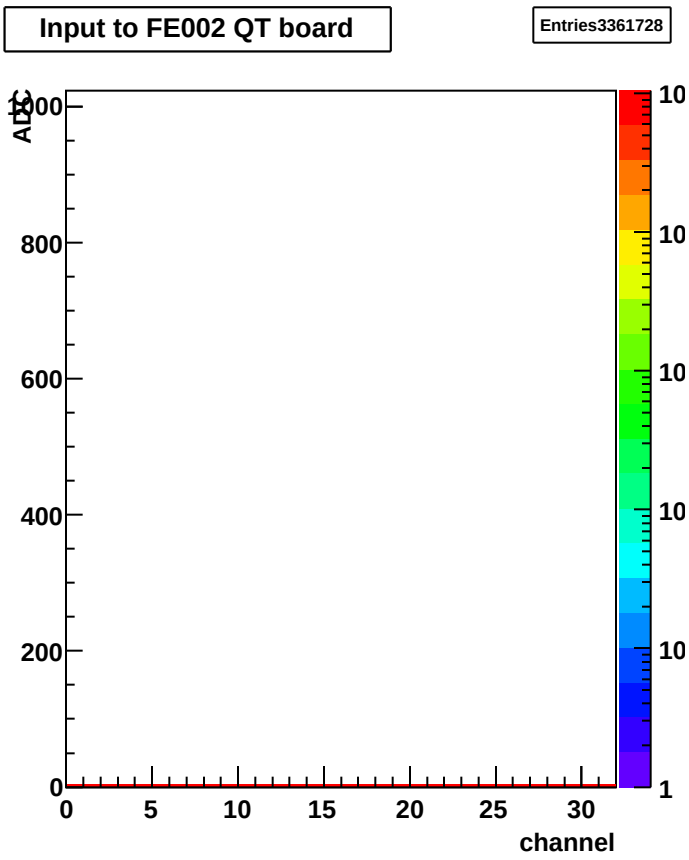

Input to FPD L2 DSM
Entries 1
CL bits - simulated
1
SMALL
LARGE-S
LARGE-N

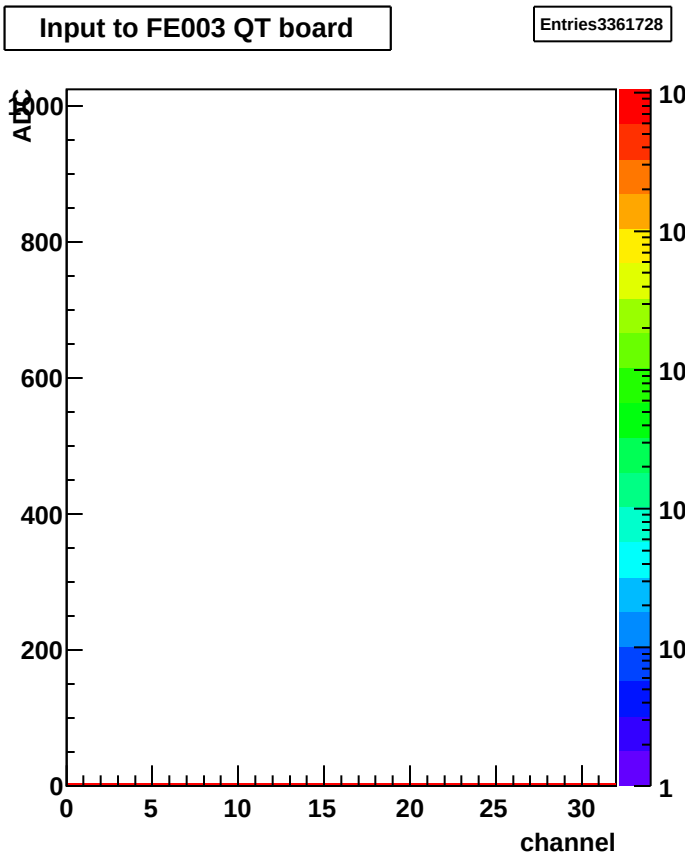

Input to FPD L2 DSM
Entries 315162
HT bits
37
105017
105054
105054
SMALL
LARGE-S
LARGE-N

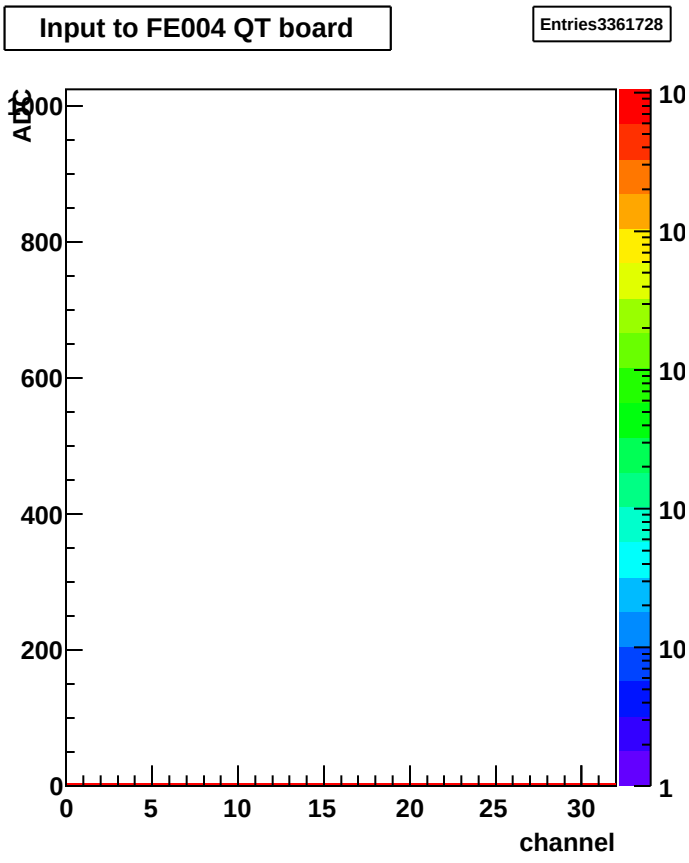

Input to FPD L2 DSM
Entries 89
HT bits - simulated
35
53
1
SMALL
LARGE-S
LARGE-N

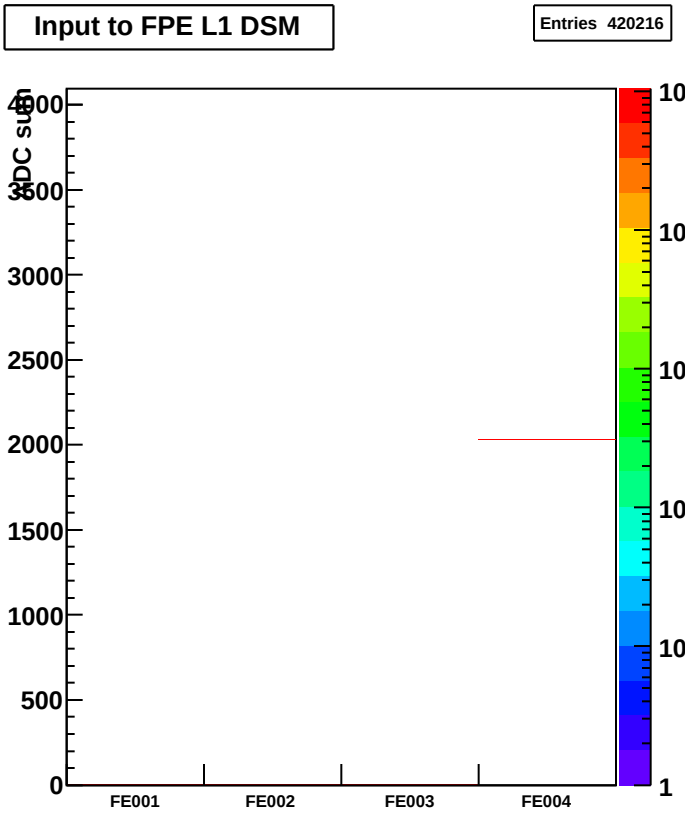

Input to FPD L2 DSM
Entries 630324
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

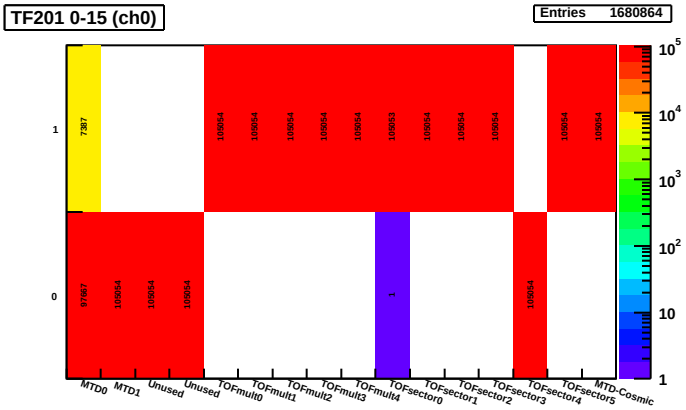

Input to FE001 QT board
Entries3361728
ADC
channel

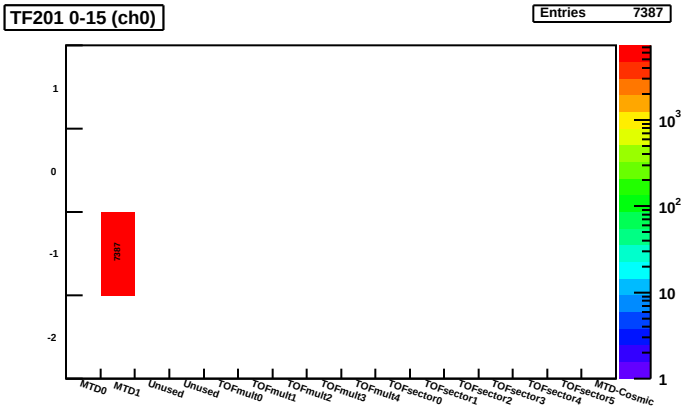

Input to FE002 QT board
Entries3361728
ADC
channel

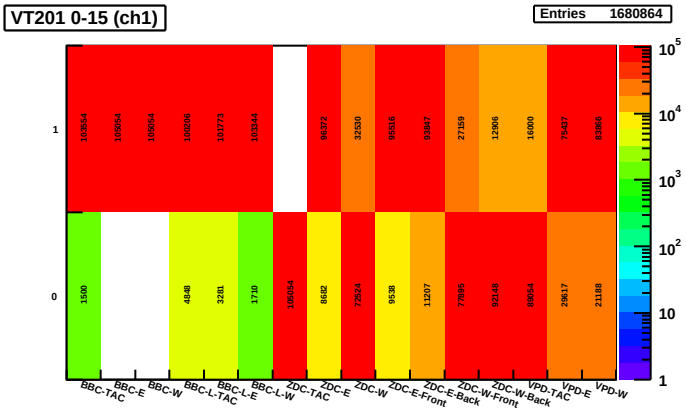

Input to FE003 QT board
Entries3361728
ADC
channel

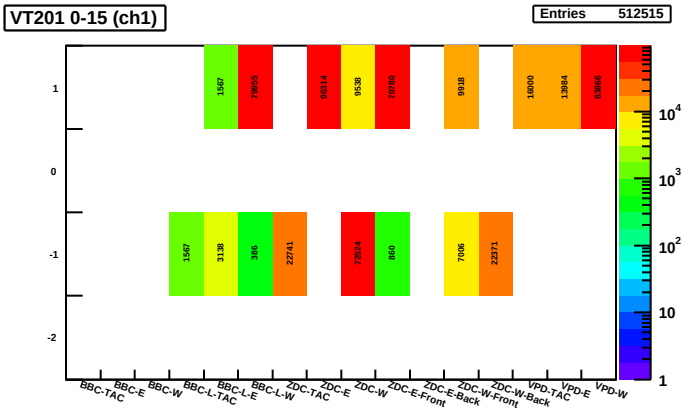

Input to FE004 QT board
Entries3361728
ADC
channel

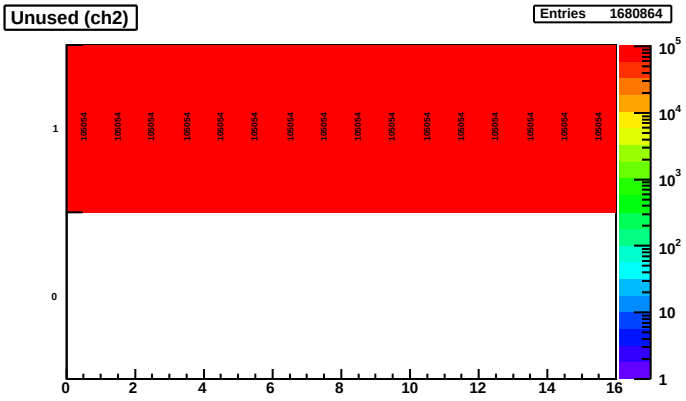

Input to FPE L1 DSM
Entries 420216
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1

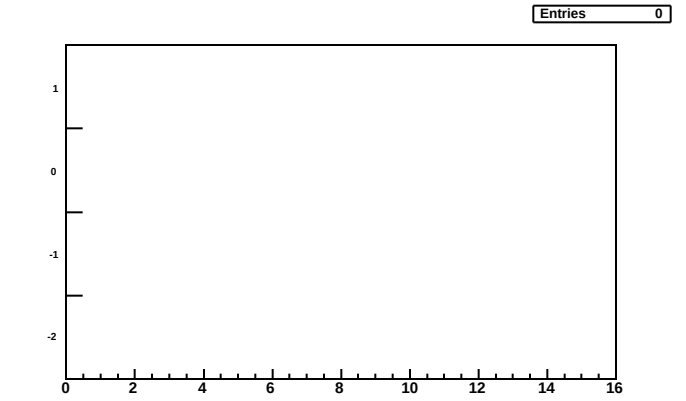

TF201 0-15 (ch0)
Entries 1680864
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

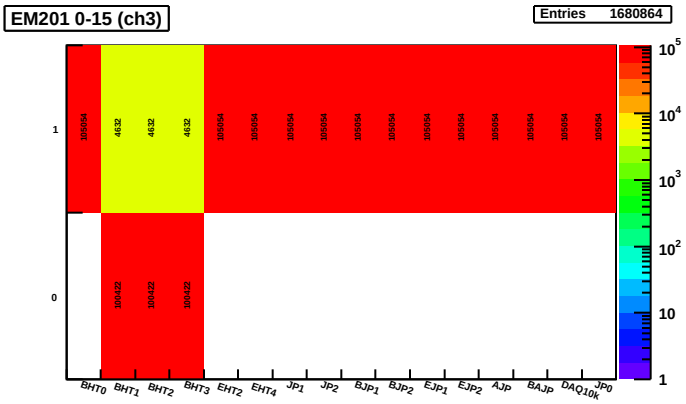

TF201 0-15 (ch0)
Entries 7387
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

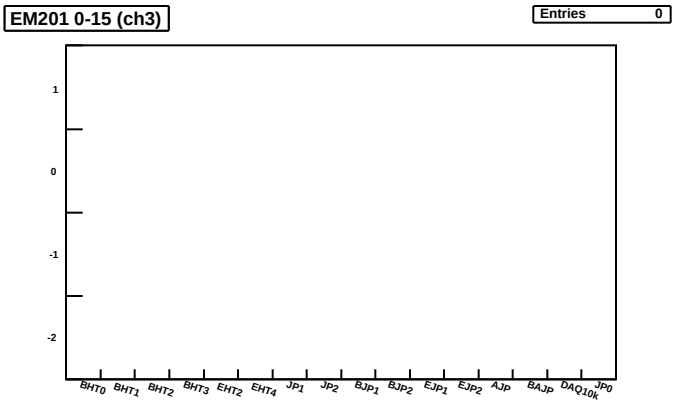

VT201 0-15 (ch1)
Entries 1680864
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 512515
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 1680864


Entries 0


EM201 0-15 (ch3)
Entries 1680864
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0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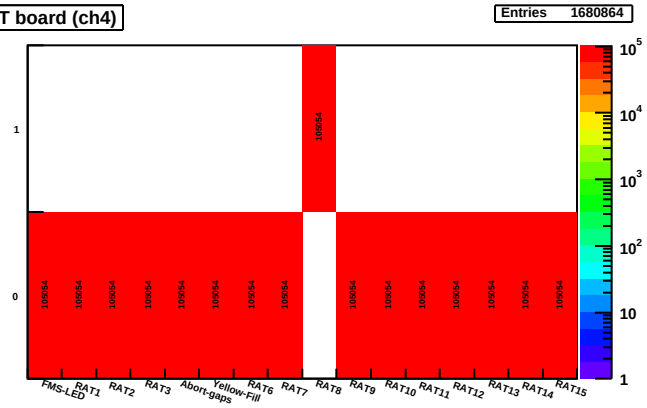

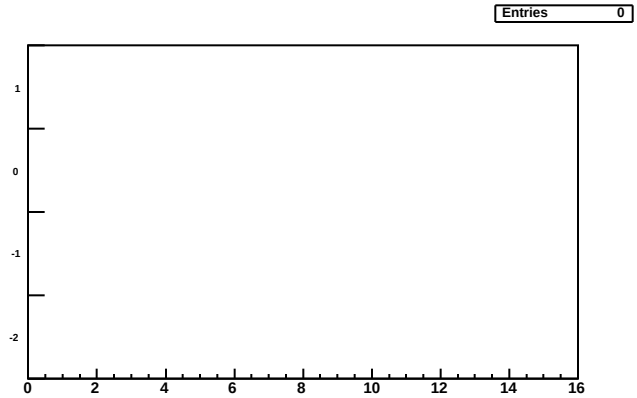

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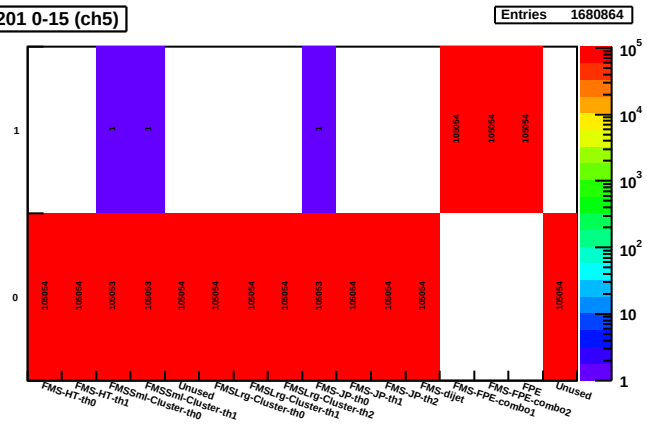

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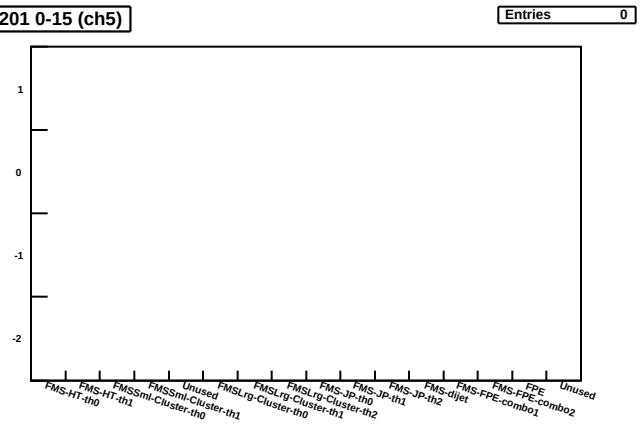

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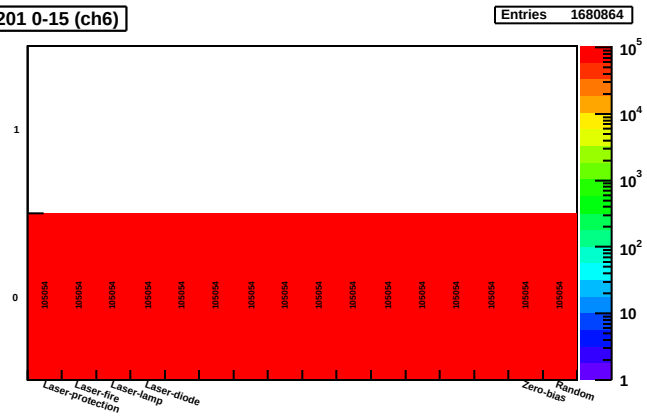

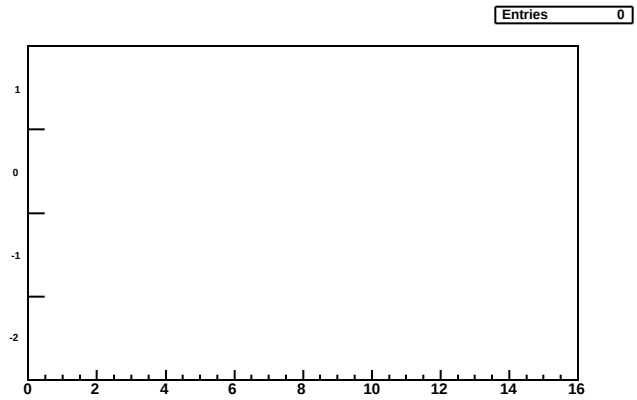
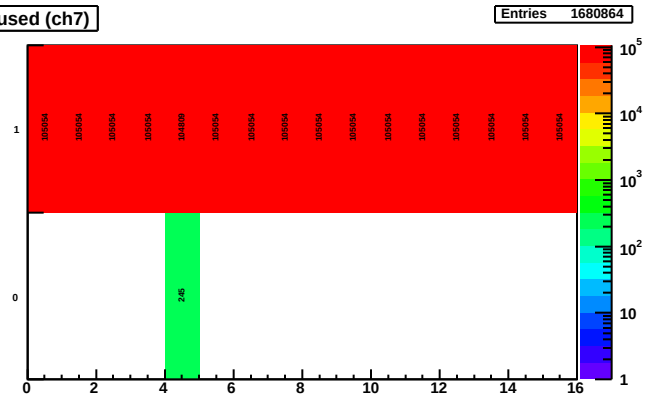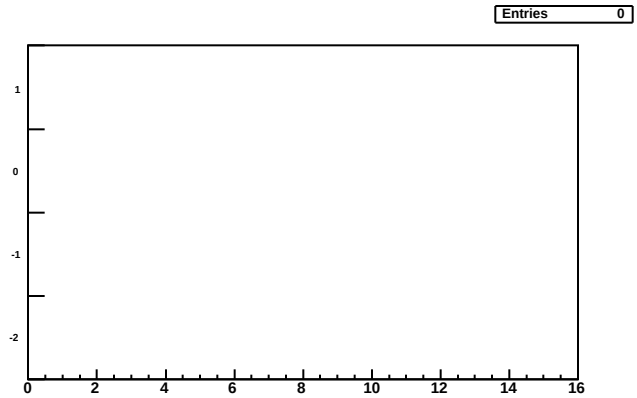
Unused (ch7)