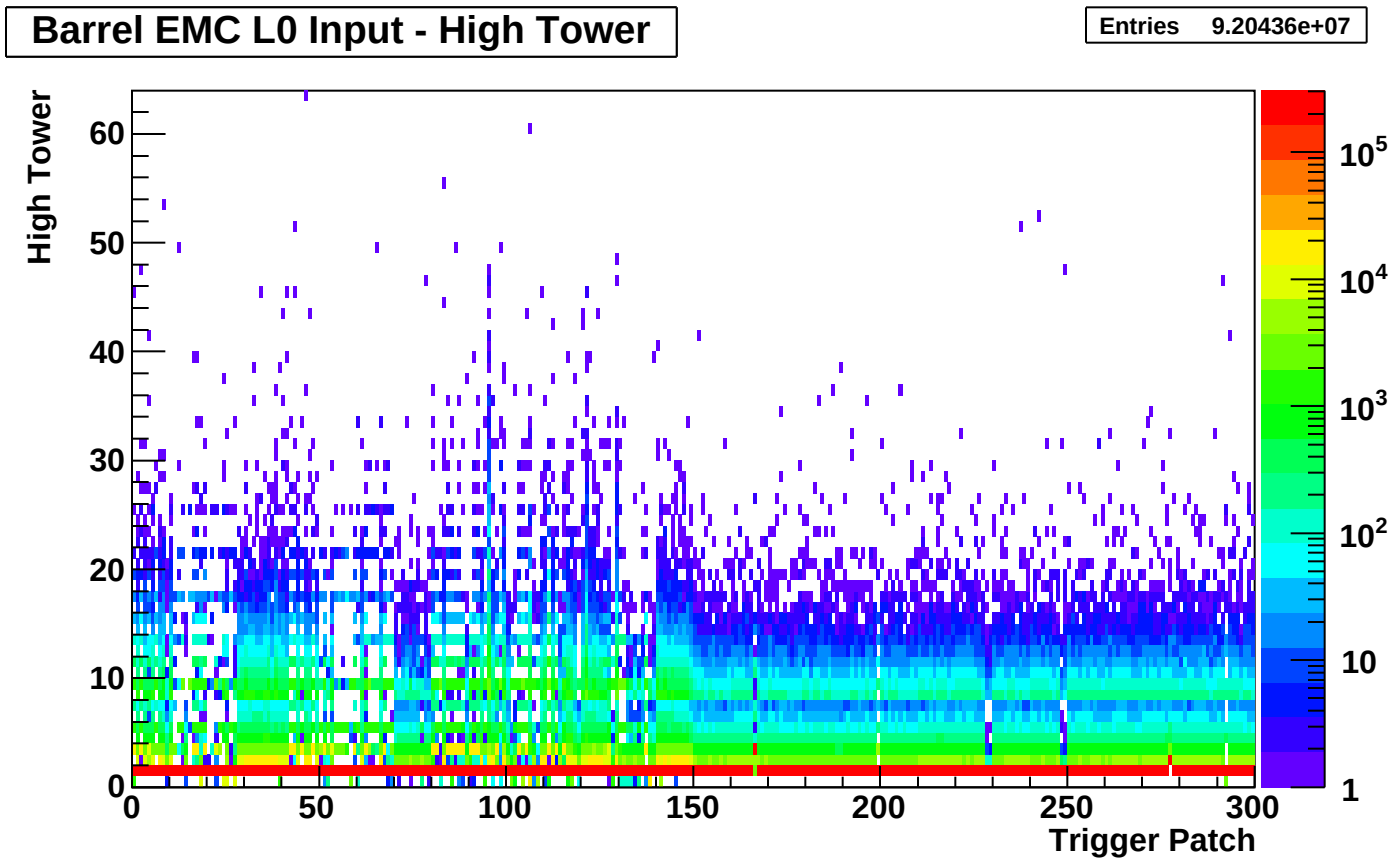
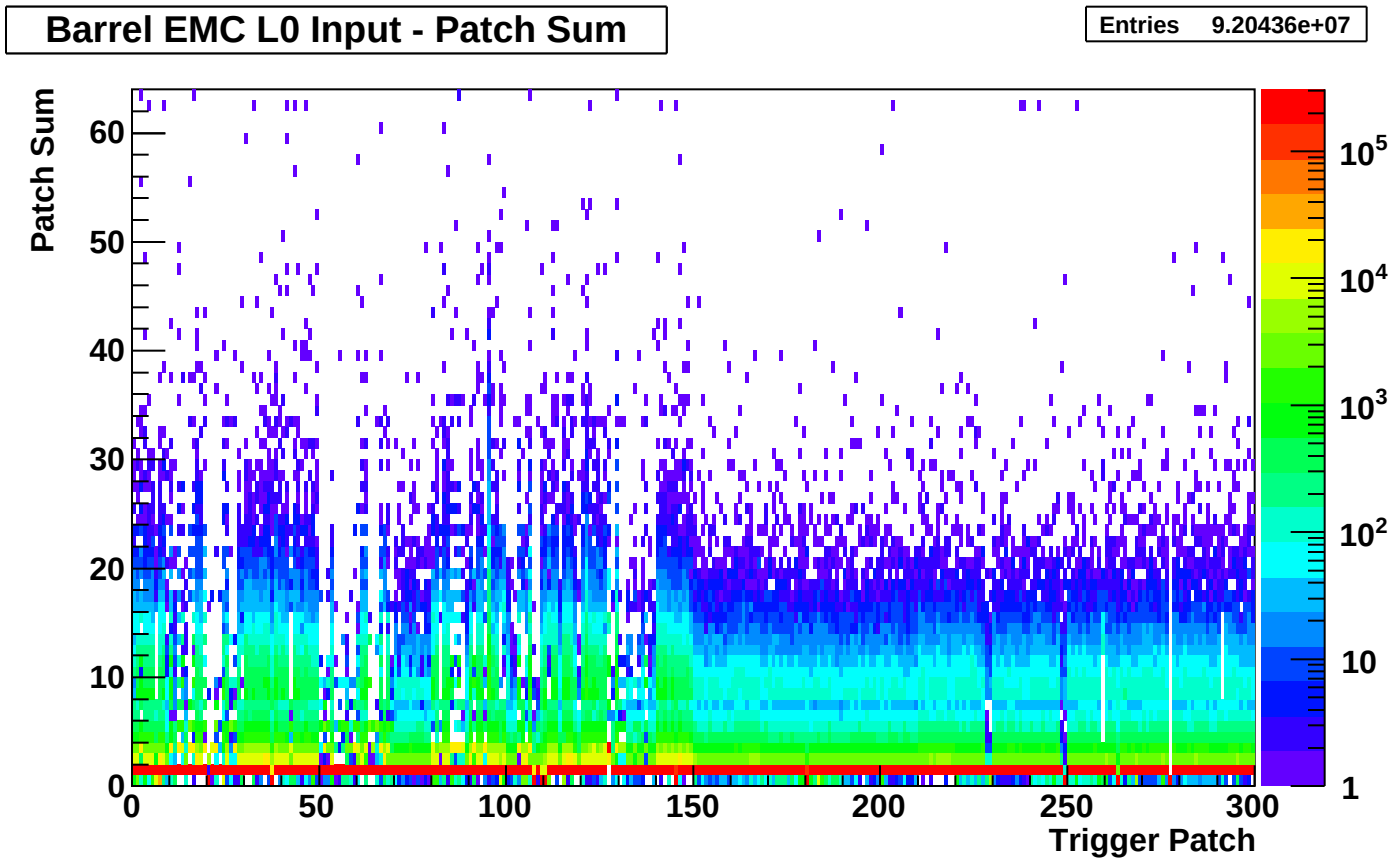
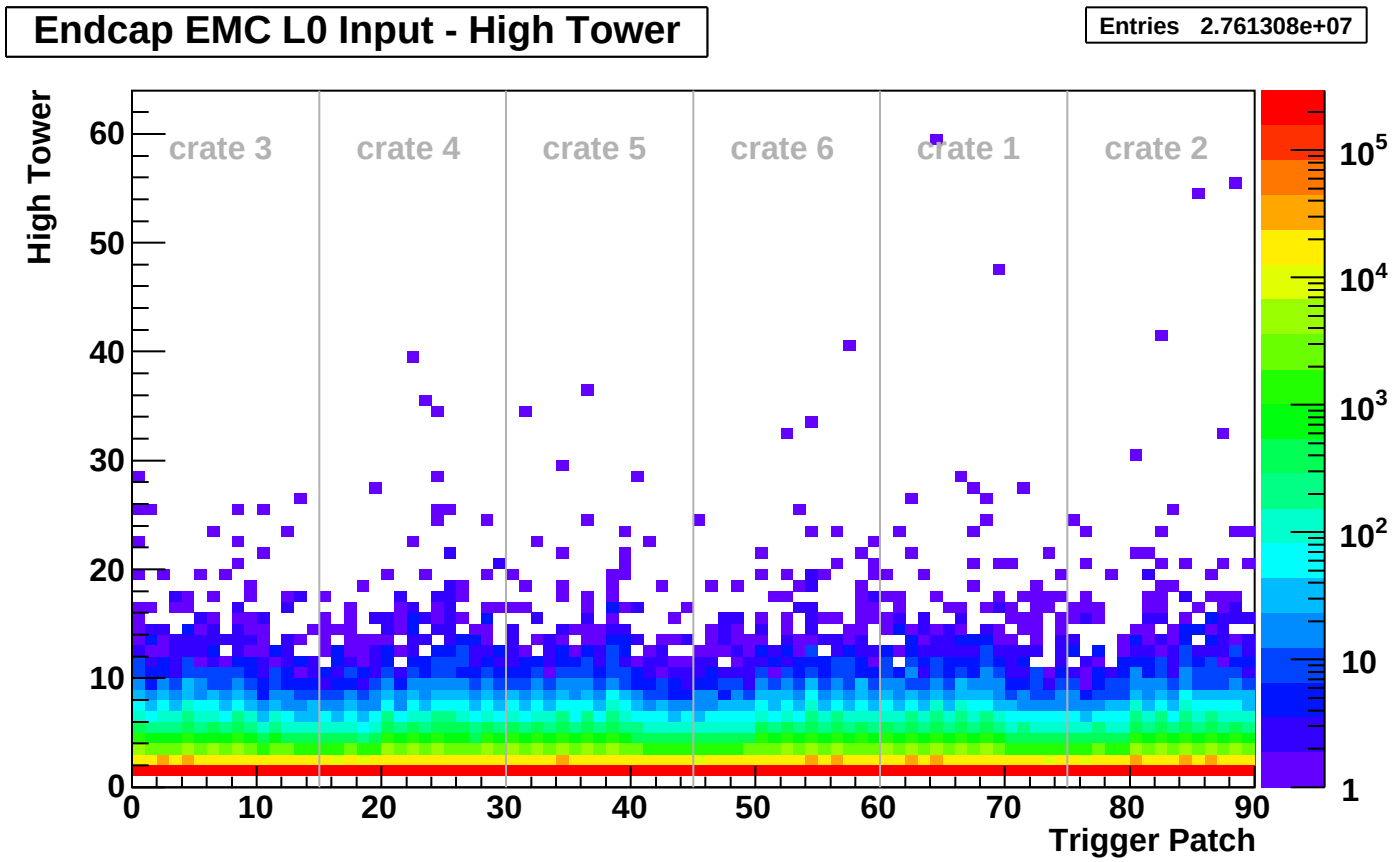
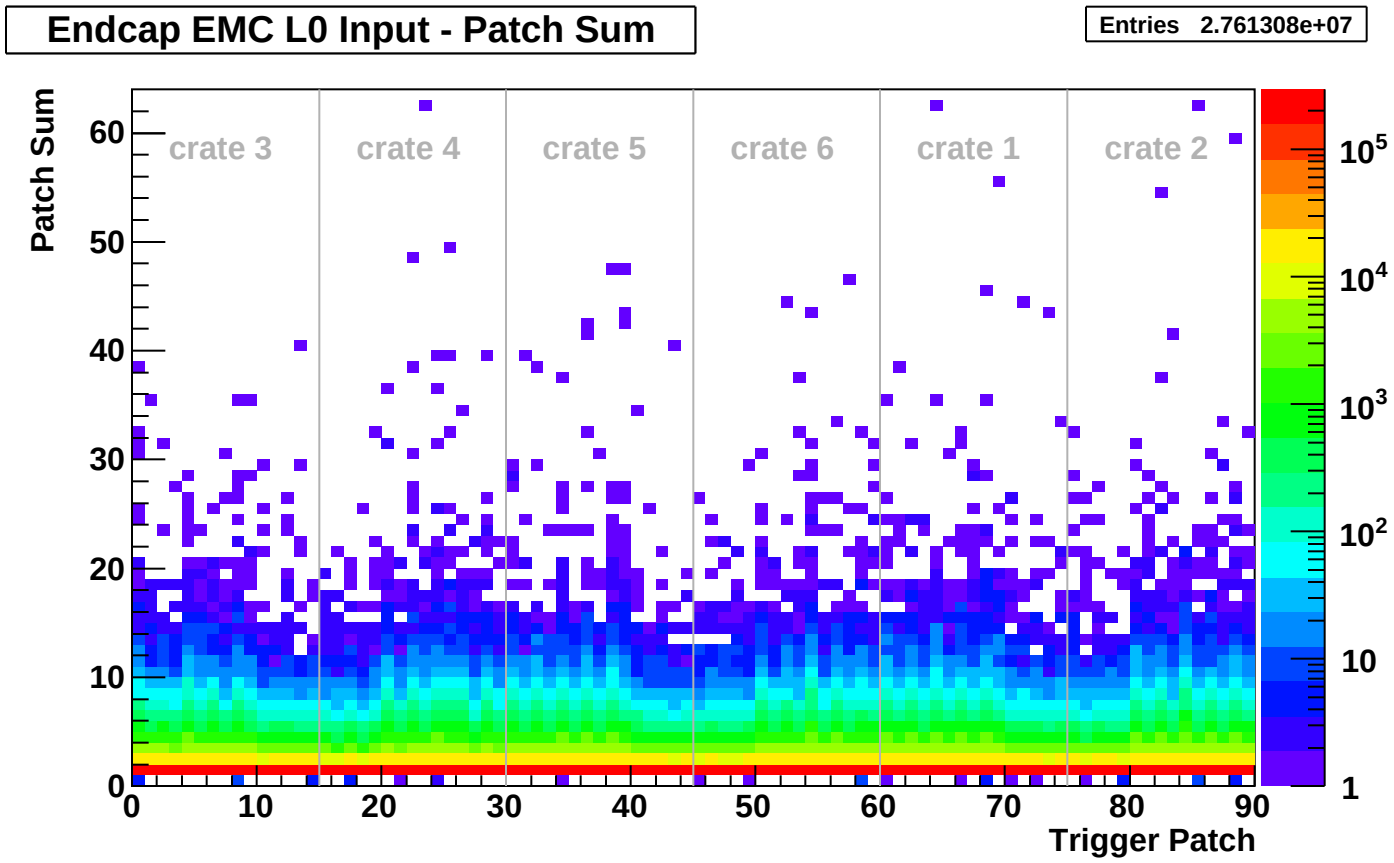
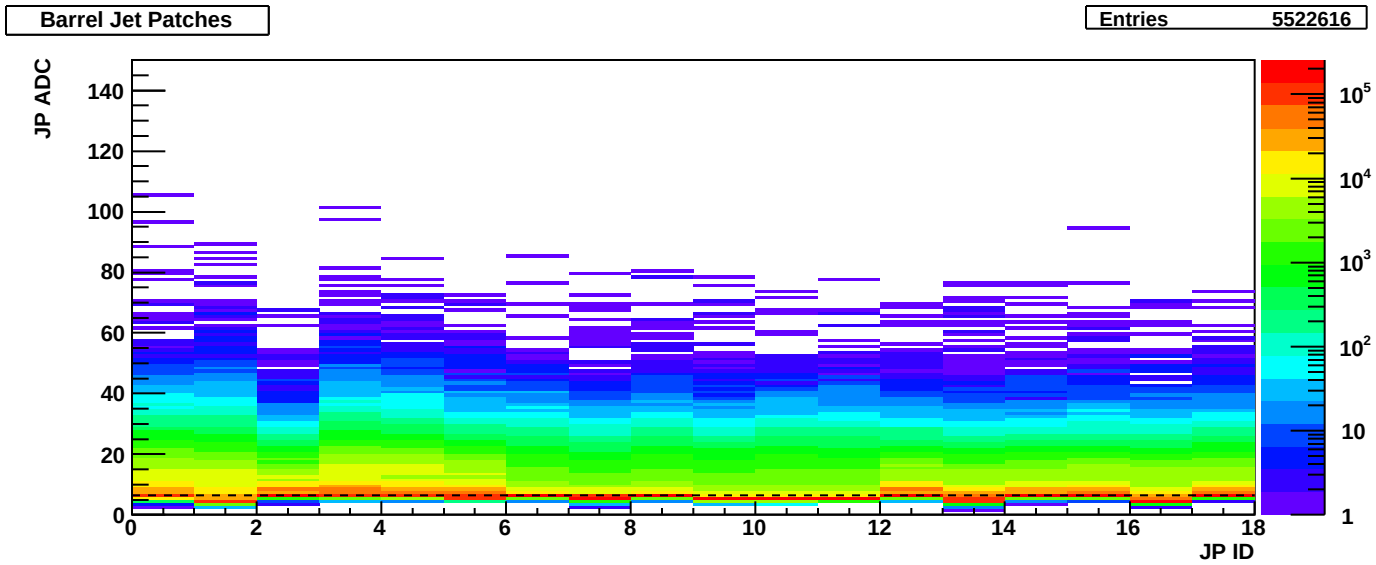
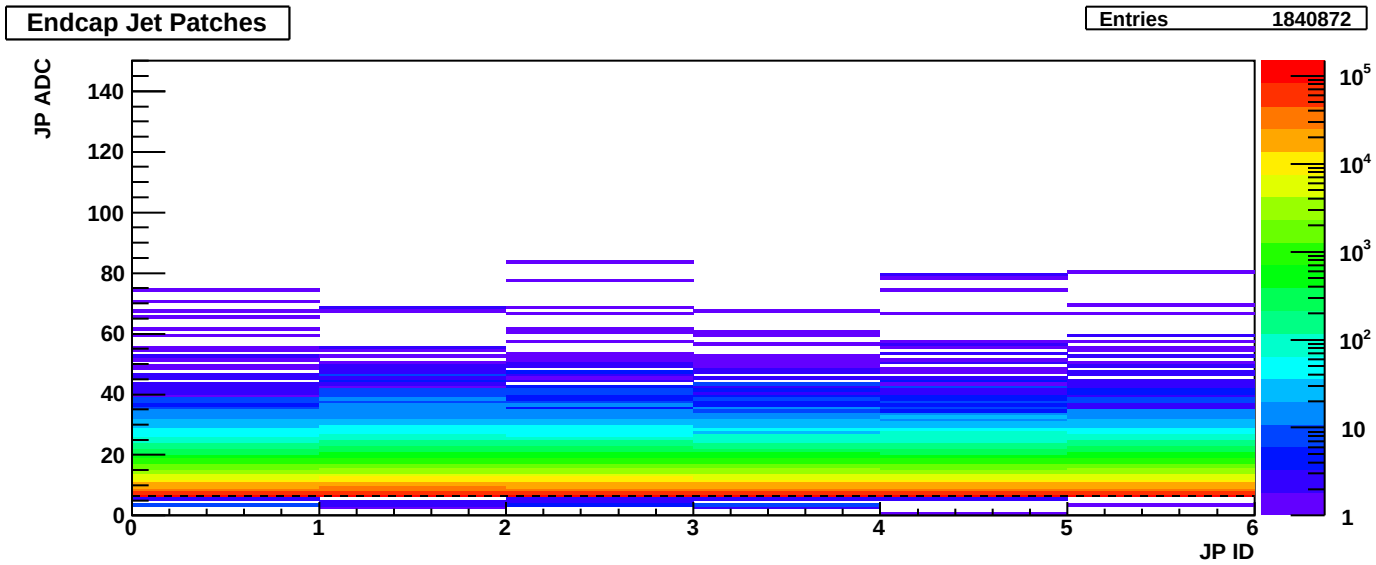

Barrel EMC L0 Input - High Tower
Entries 9.20436e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

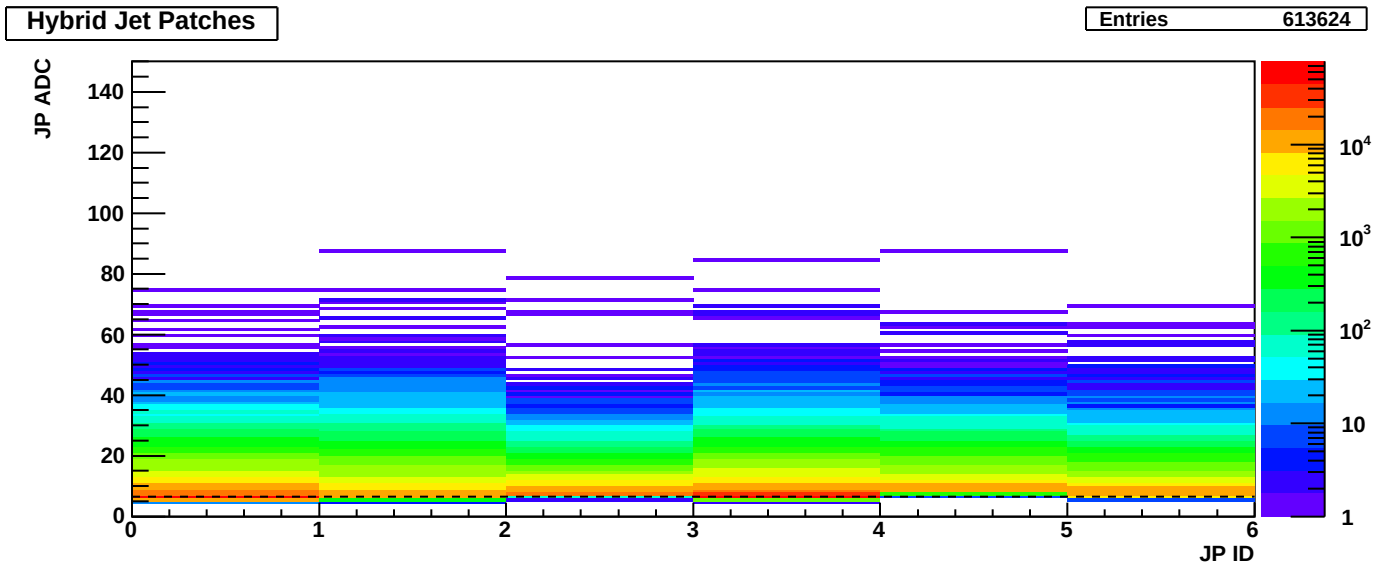

Barrel EMC L0 Input - Patch Sum
Entries 9.20436e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

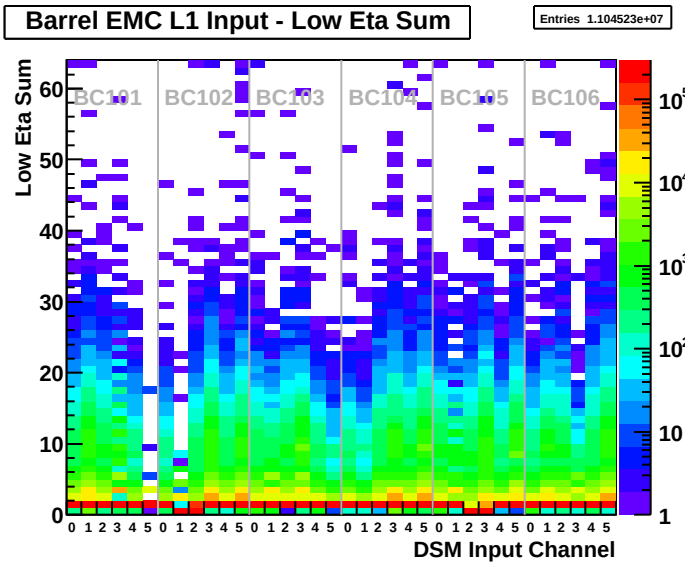

Endcap EMC L0 Input - High Tower
Entries 2.761308e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

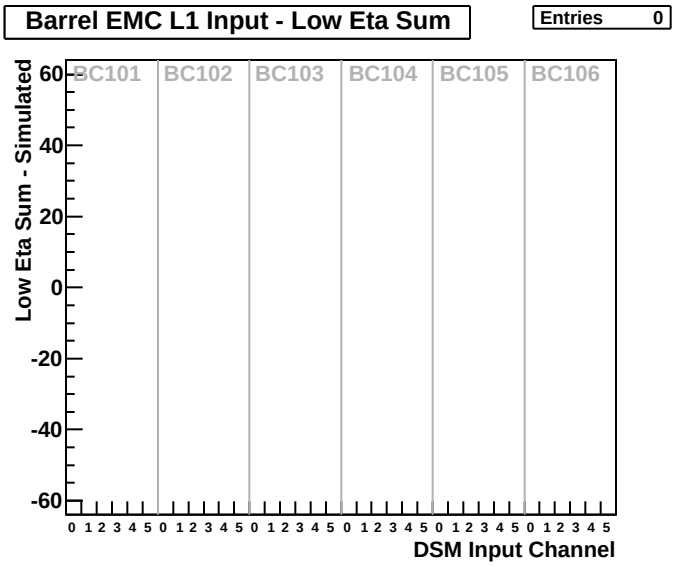

Endcap EMC L0 Input - Patch Sum
Entries 2.761308e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

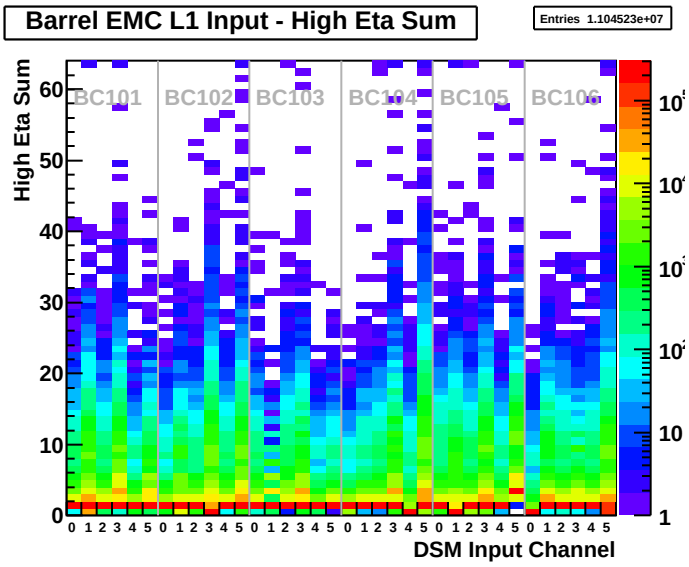

Barrel Jet Patches
Entries 5522616
JP ADC
JP ID

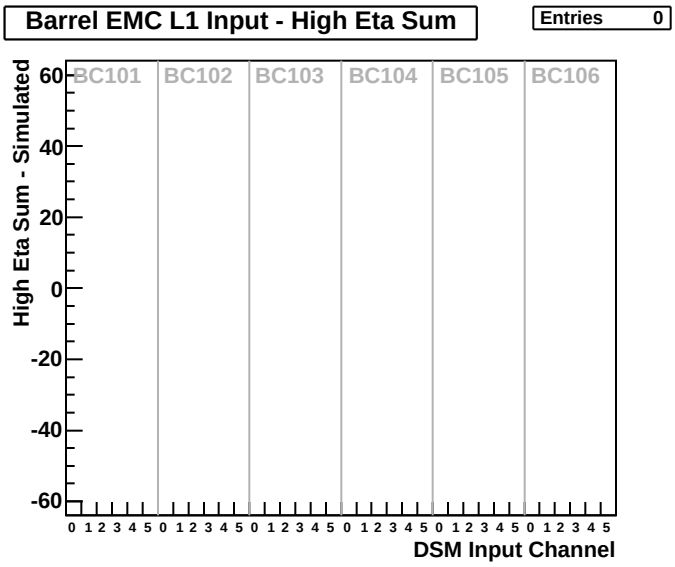

Endcap Jet Patches
Entries 1840872
JP ADC
JP ID

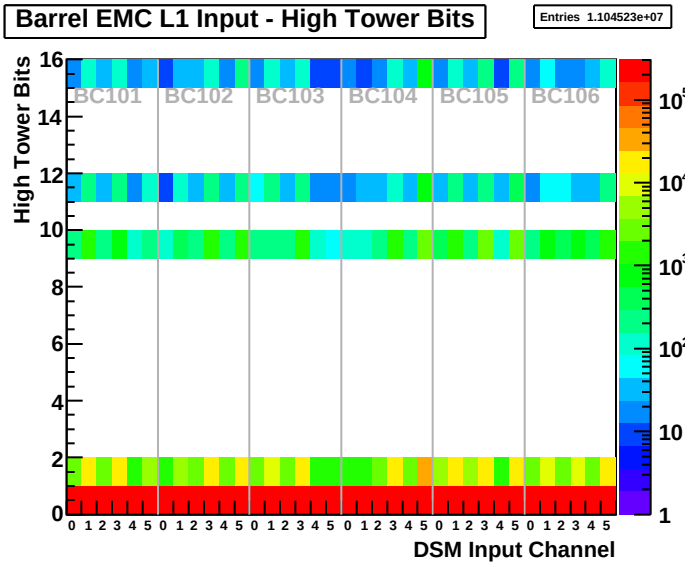

Hybrid Jet Patches
Entries 613624
JP ADC
JP ID

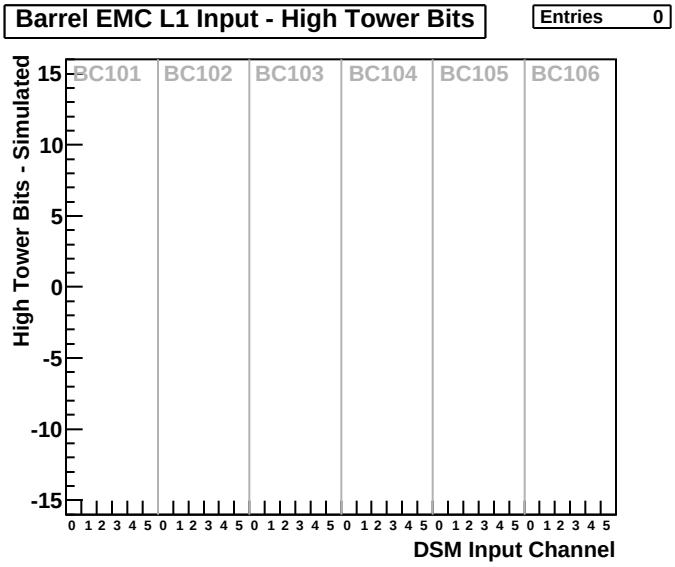

Barrel EMC L1 Input - Low Eta Sum
Entries 1.104523e+07
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

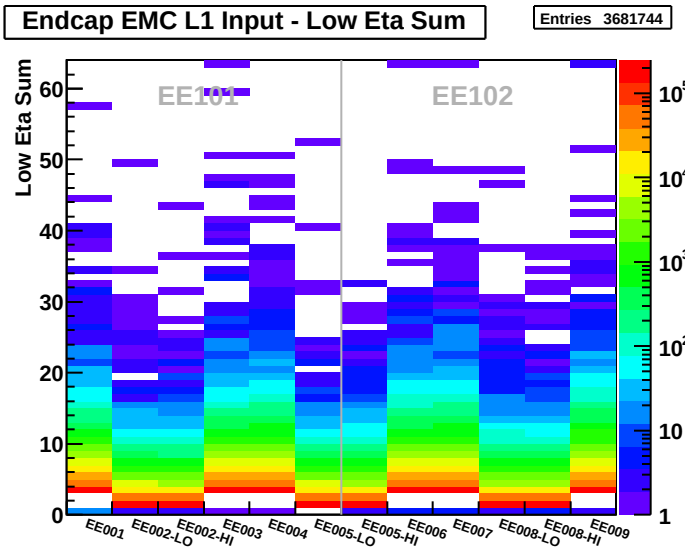

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

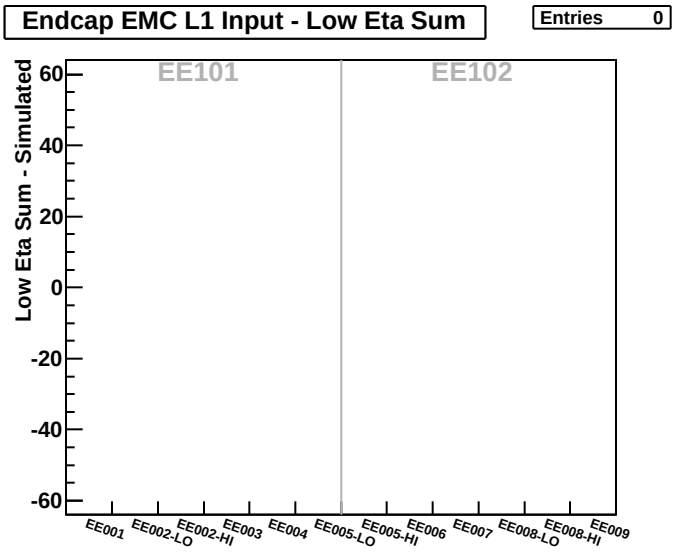

Barrel EMC L1 Input - High Eta Sum
Entries 1.104523e+07
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

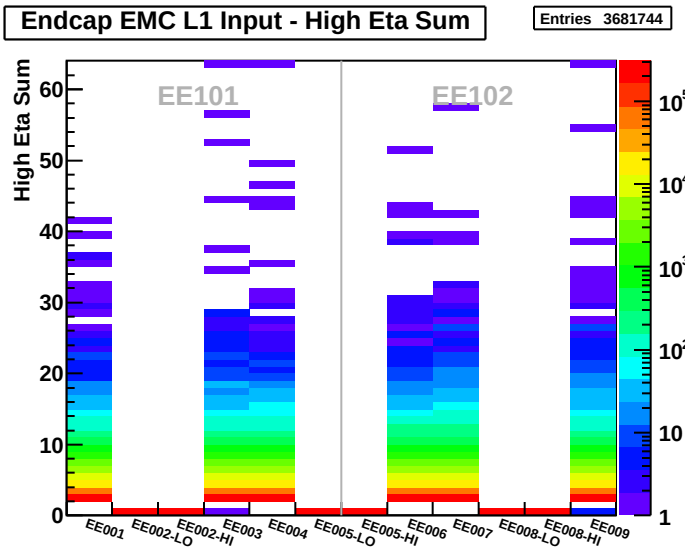

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

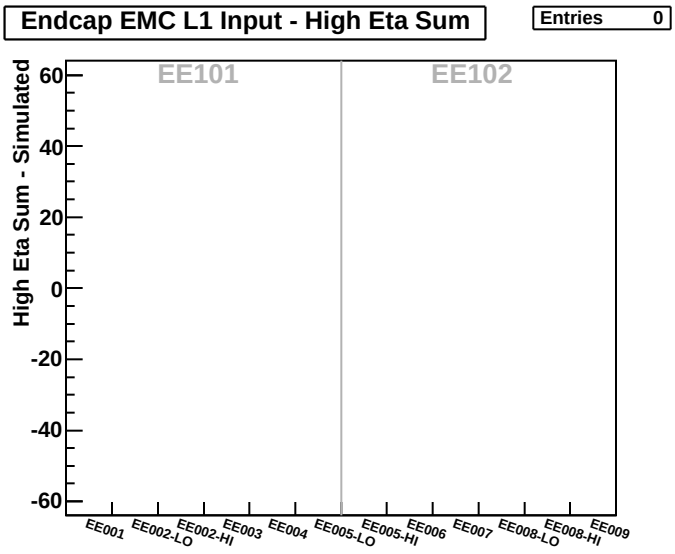

Barrel EMC L1 Input - High Tower Bits
Entries 1.104523e+07
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

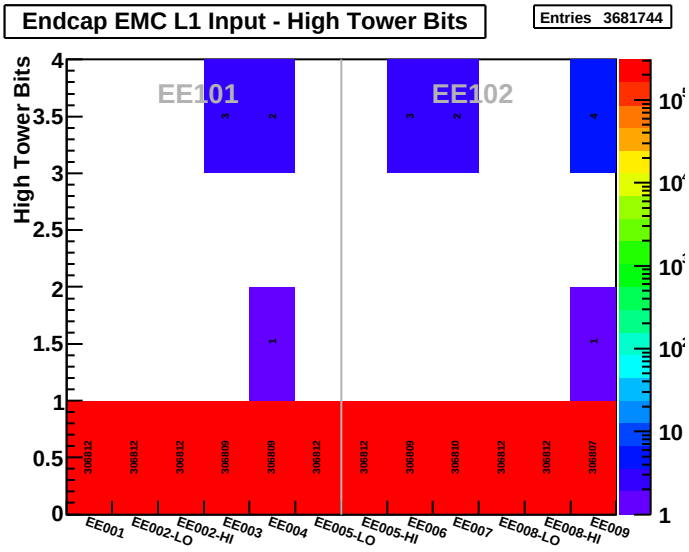

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

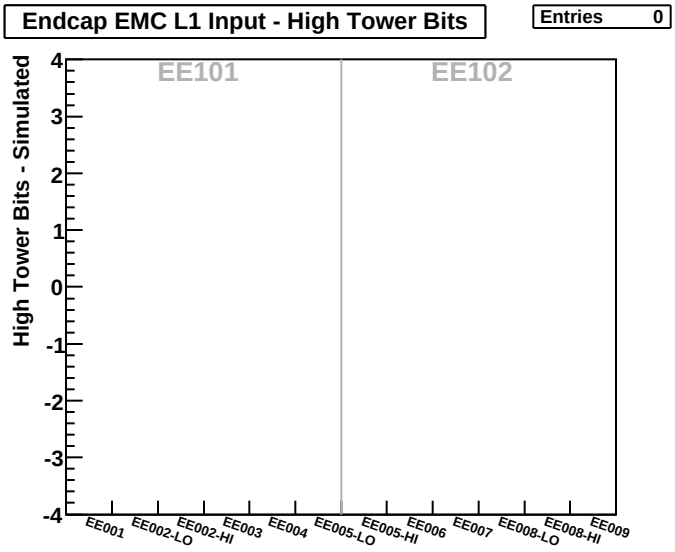

Endcap EMC L1 Input - Low Eta Sum
Entries 3681744
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

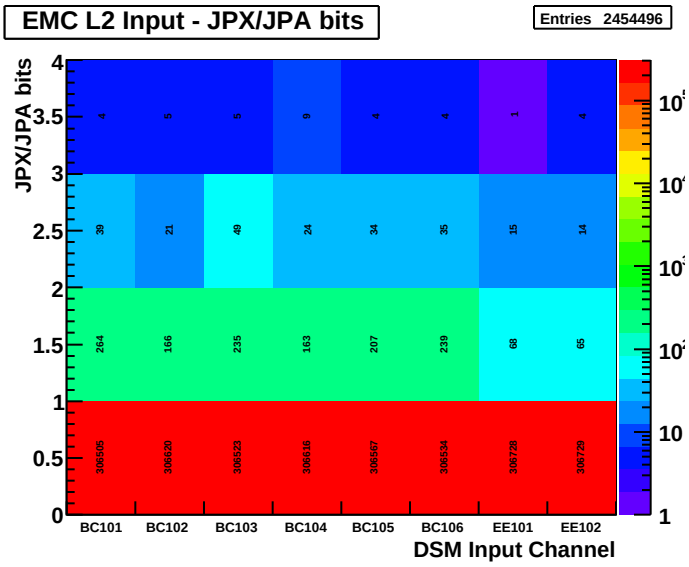

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

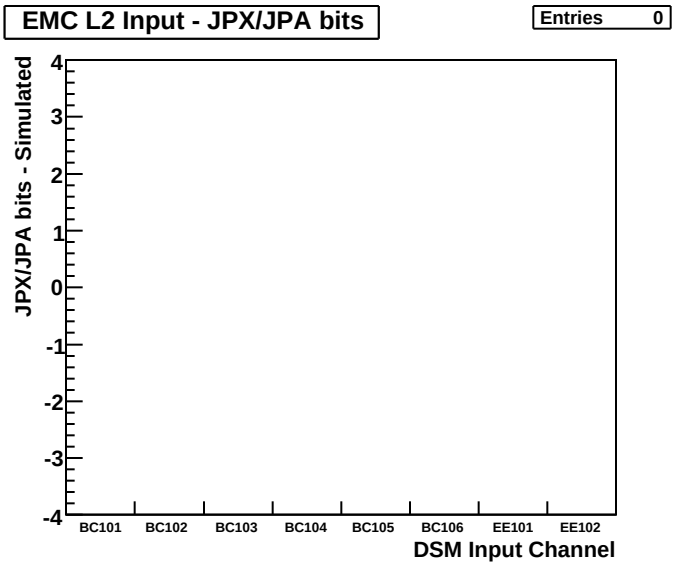

Endcap EMC L1 Input - High Eta Sum
Entries 3681744
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

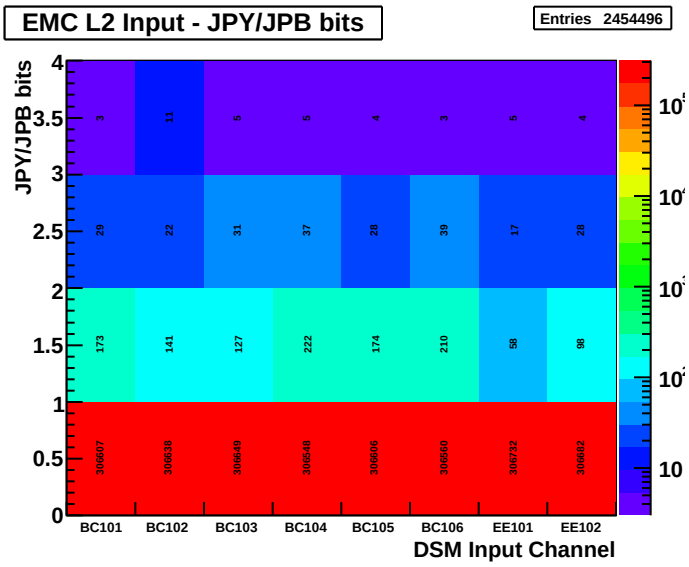

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

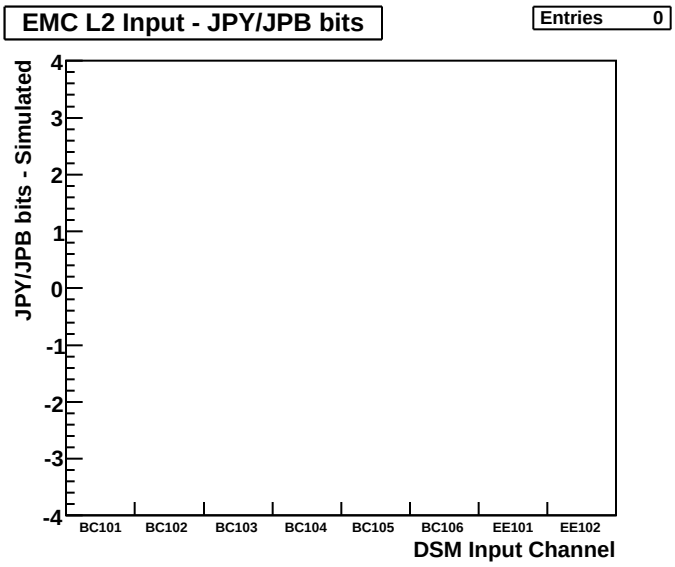

Endcap EMC L1 Input - High Tower Bits
Entries 3681744
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

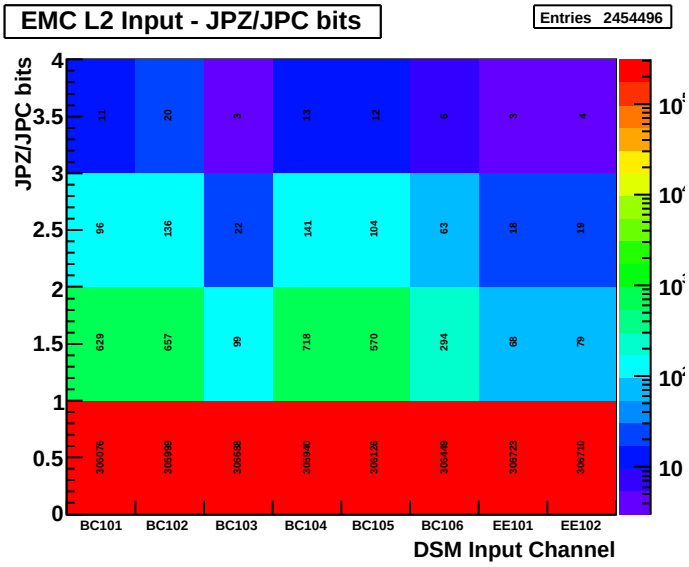

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

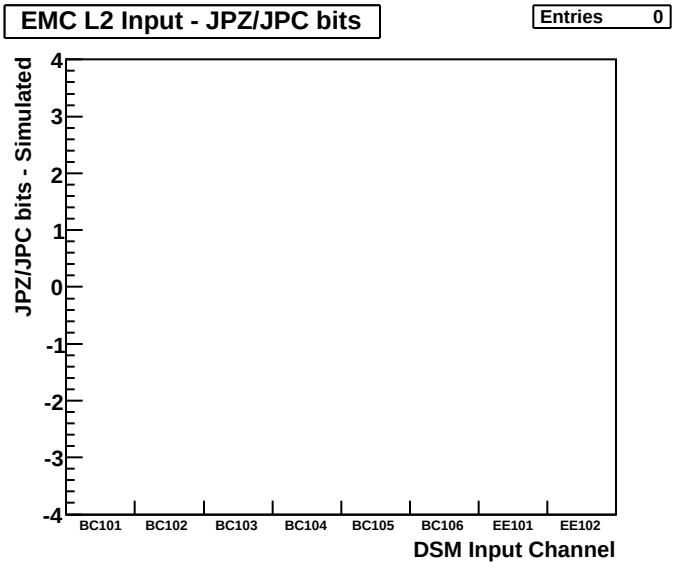

EMC L2 Input - JPX/JPA bits
Entries 2454496
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
4 5 5 9 4 4 1 4
39 21 49 24 34 35 15 14
264 166 235 163 207 239 68 65
306505 306620 306523 306616 306567 306534 306728 306729

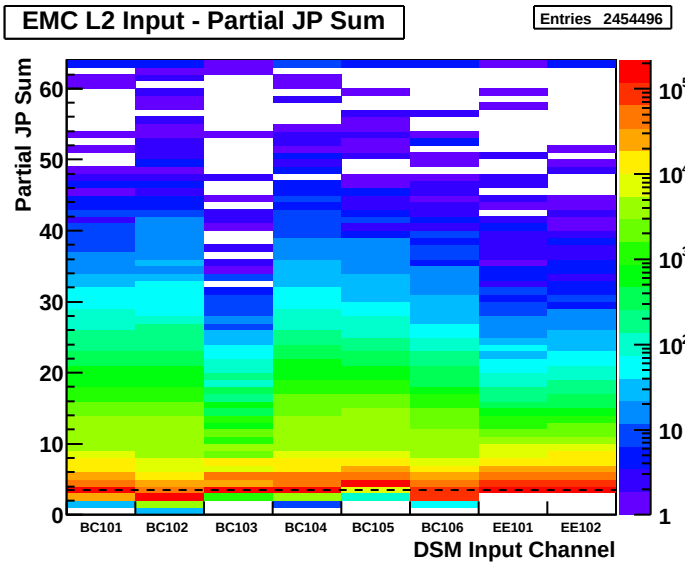

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

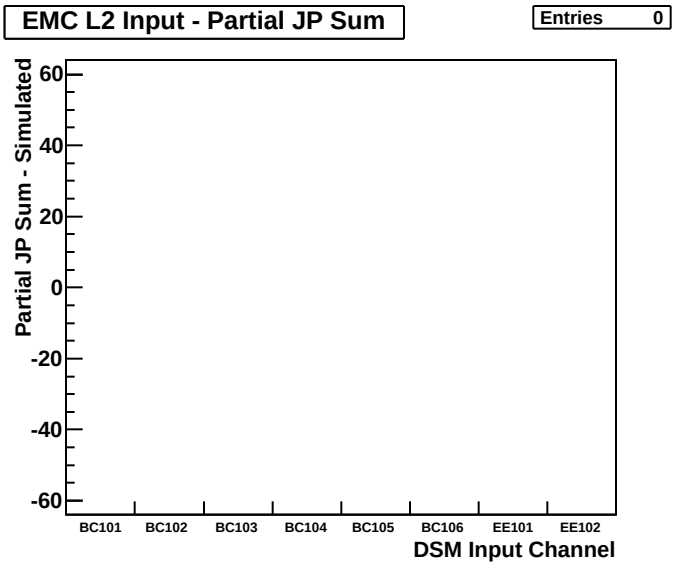

EMC L2 Input - JPY/JPB bits
Entries 2454496
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
3 11 5 5 4 3 5 4
29 22 31 37 28 39 17 28
173 141 127 222 174 210 58 98
306607 306638 306649 306548 306606 306560 306732 306682

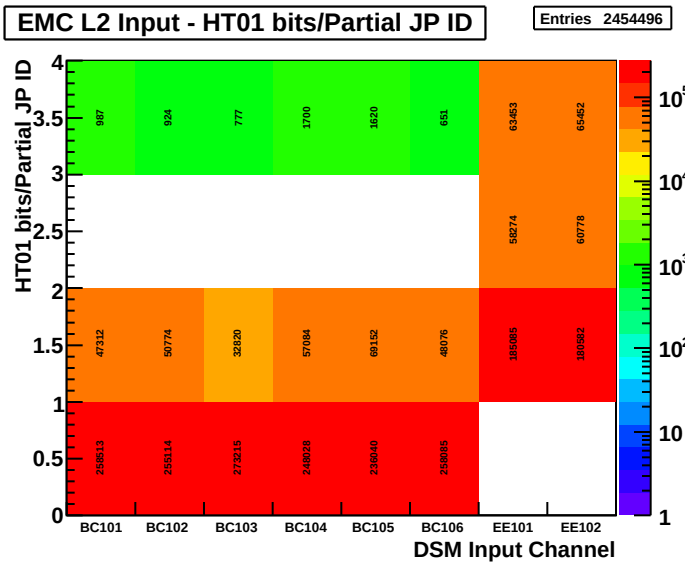

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

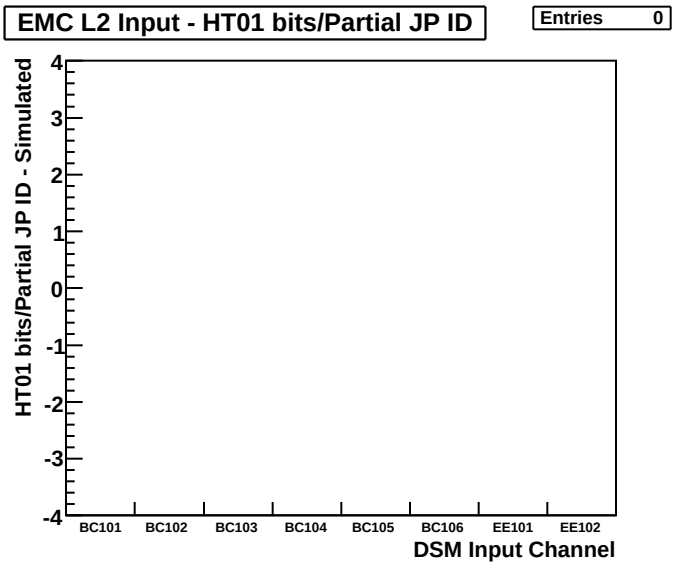

EMC L2 Input - JPZ/JPC bits
Entries 2454496
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
11 20 3 13 12 6 3 4
96 136 22 141 104 63 18 19
629 657 99 718 570 294 68 79
306376 305999 306588 305940 306126 306449 306723 306710

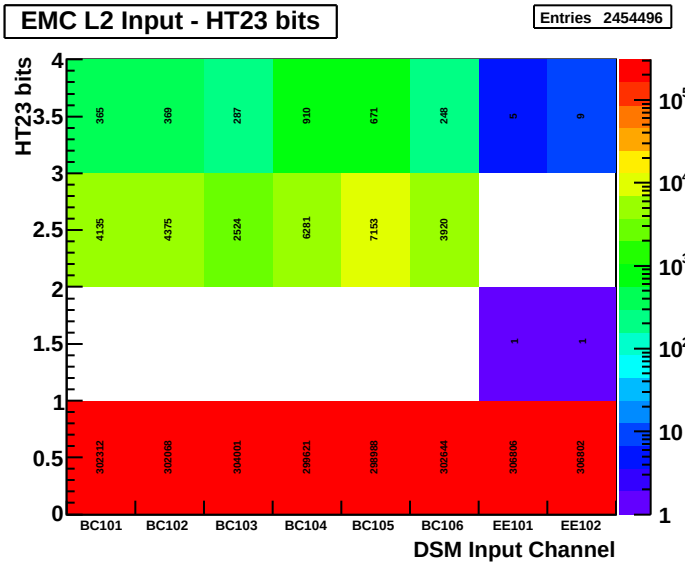

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

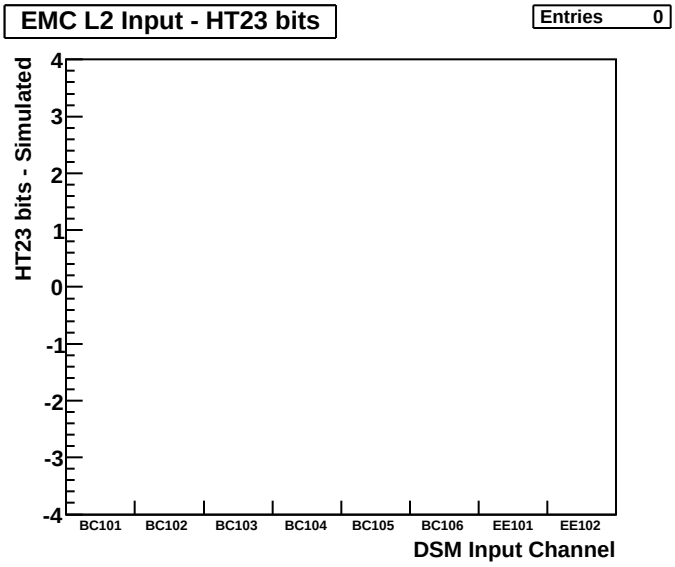

EMC L2 Input - Partial JP Sum
Entries 2454496
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

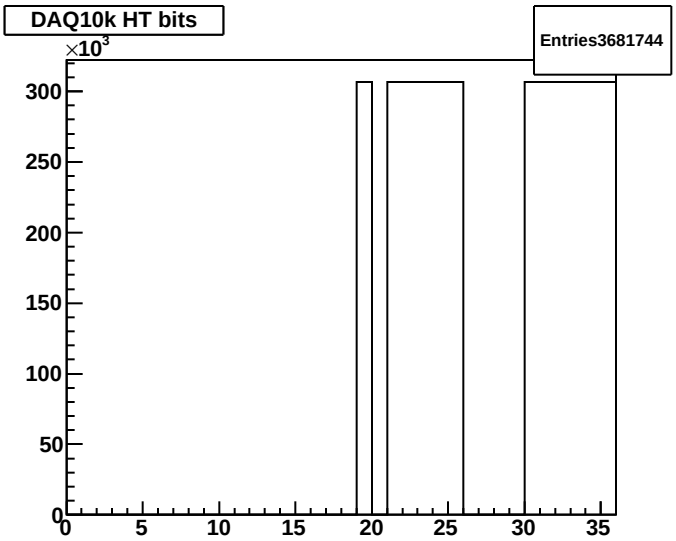

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

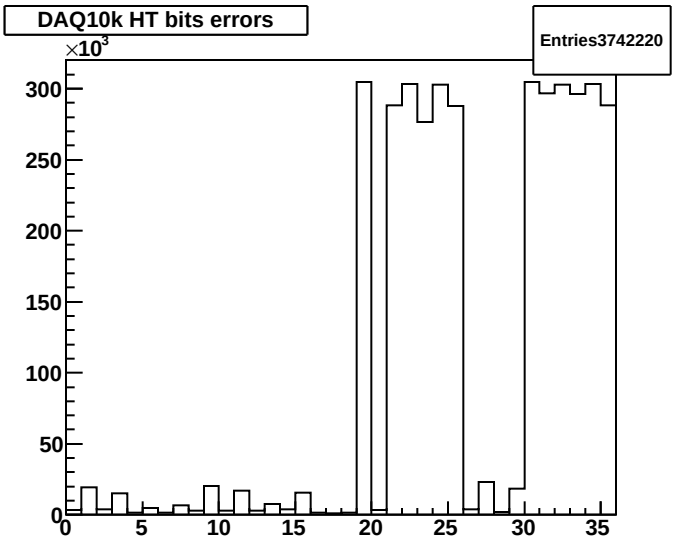

EMC L2 Input - HT01 bits/Partial JP ID
Entries 2454496
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

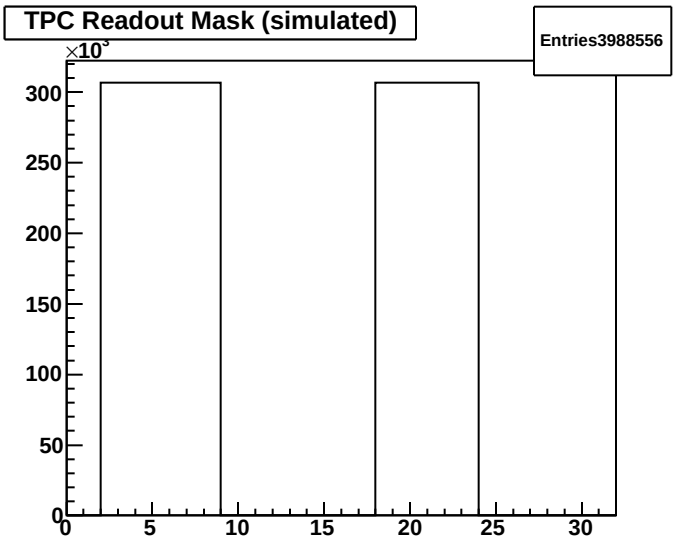

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

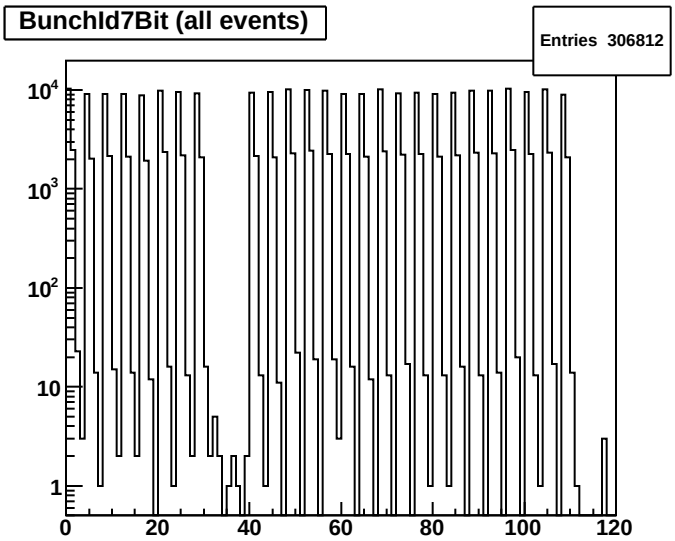

EMC L2 Input - HT23 bits
Entries 2454496
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

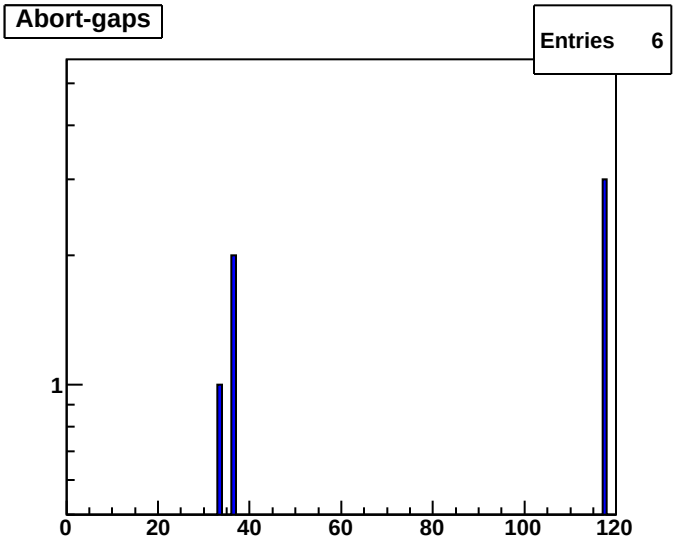

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102


DAQ10k HT bits
Entries3681744
×10^3
300
250
200
150
100
50
0
0 5 10 15 20 25 30 35

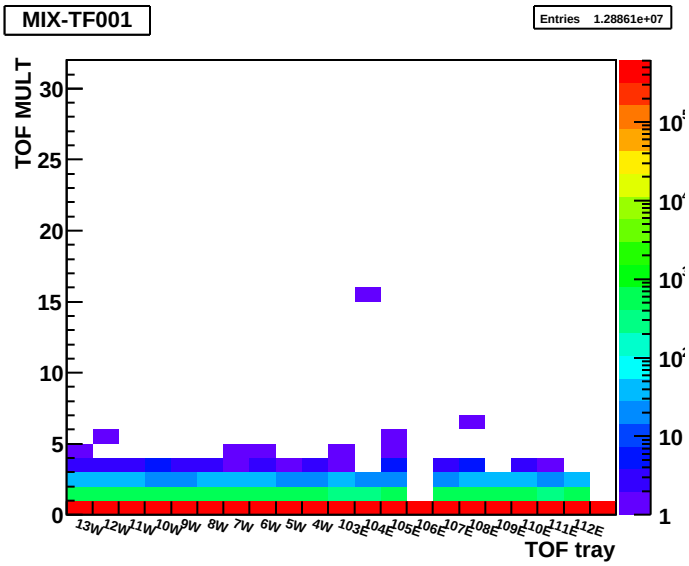

DAQ10k HT bits errors
Entries3742220
×10^3
300
250
200
150
100
50
0
0 5 10 15 20 25 30 35

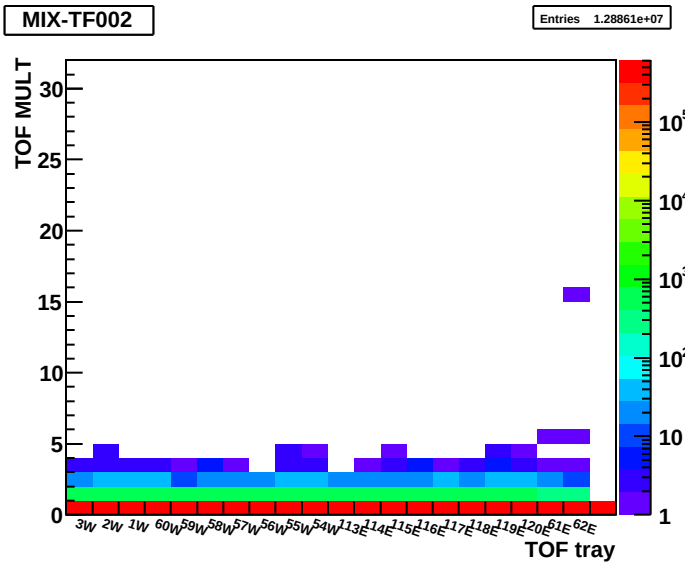

TPC Readout Mask (simulated)
Entries3988556
×10^3
300
250
200
150
100
50
0
0 5 10 15 20 25 30

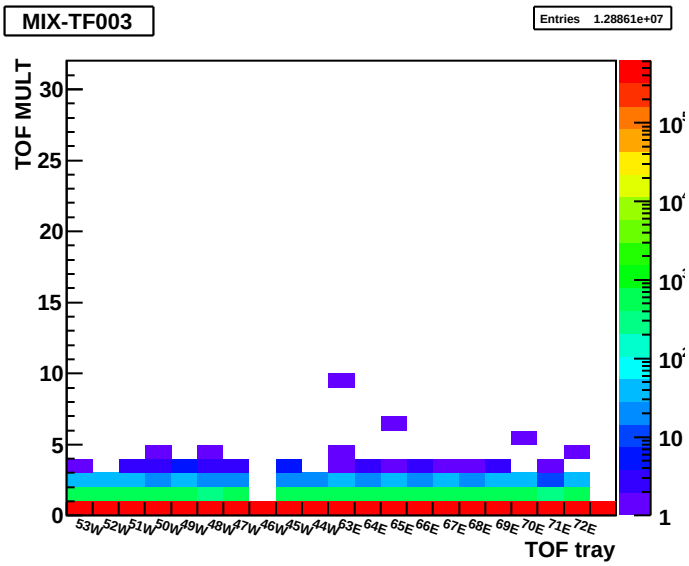

BunchId7Bit (all events)
Entries 306812
10^4
10^3
10^2
10
1
0 20 40 60 80 100 120

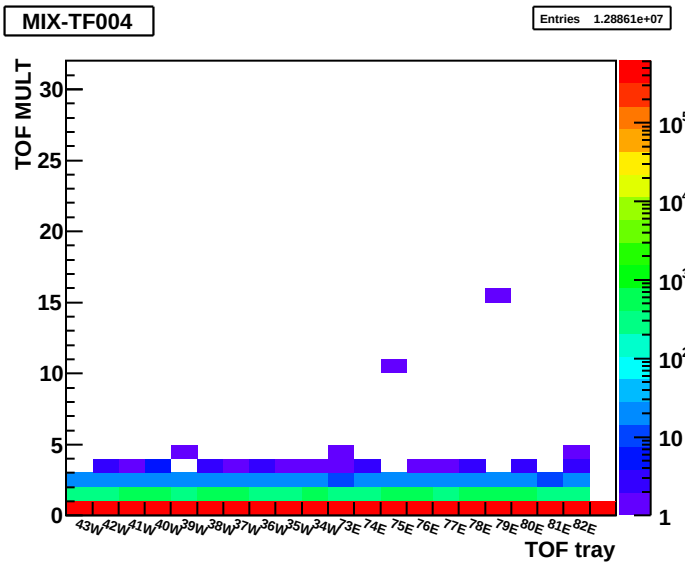

Abort-gaps
Entries 6
1
0 20 40 60 80 100 120

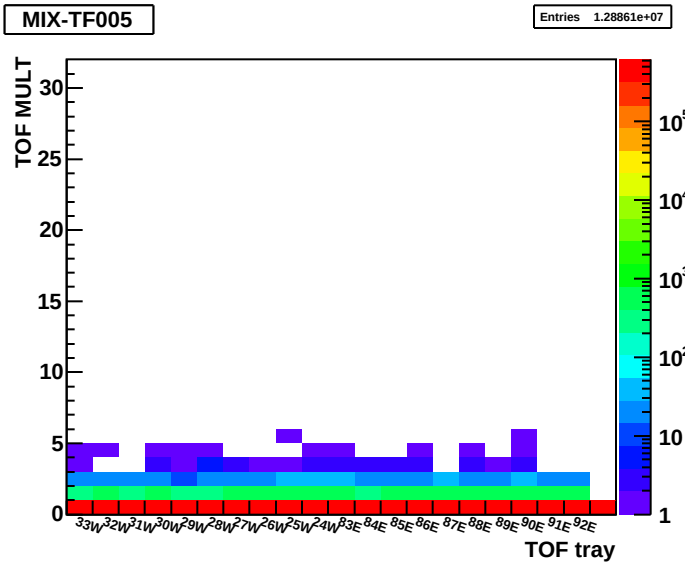
!Yellow-Fill
Entries 306812
10^4
10^3
10^2
10
1
0 20 40 60 80 100 120

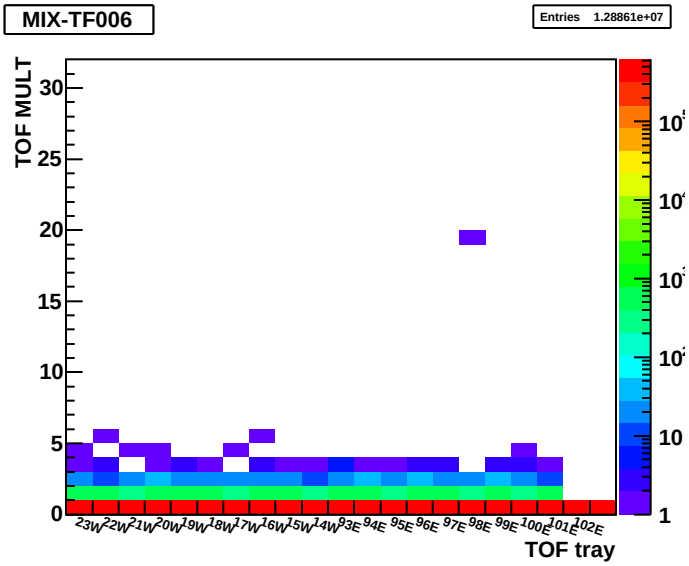

MIX-TF001
Entries 1.28861e+07
TOF MULT
TOF tray

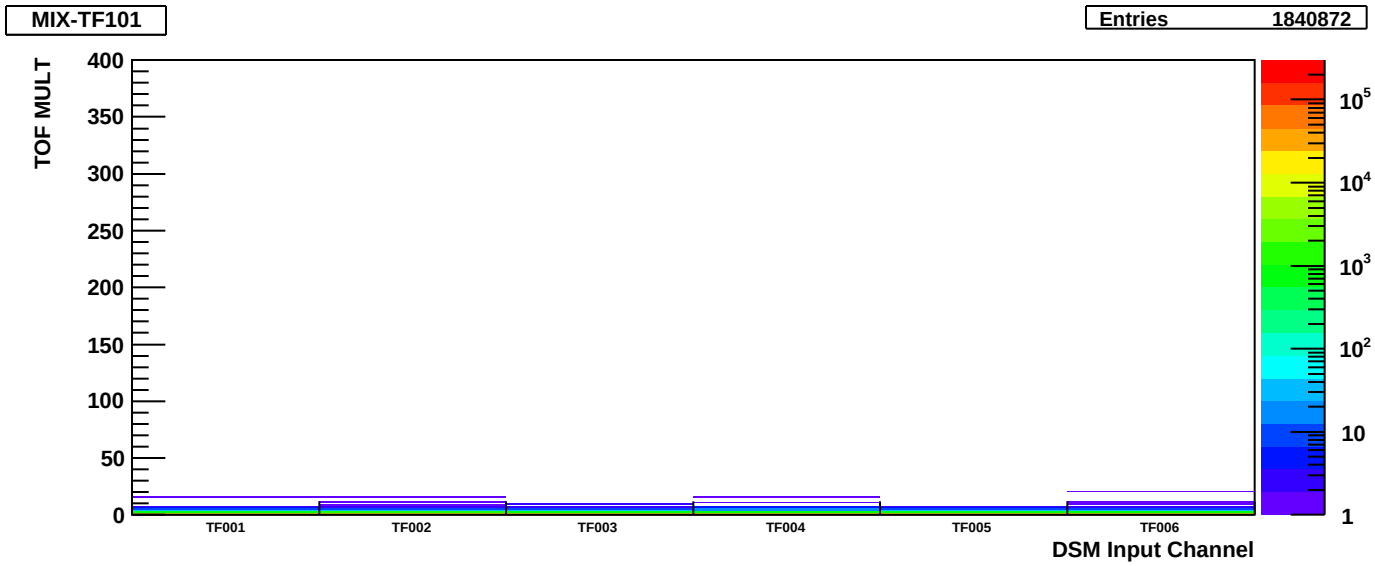

MIX-TF002
Entries 1.28861e+07
TOF MULT
TOF tray

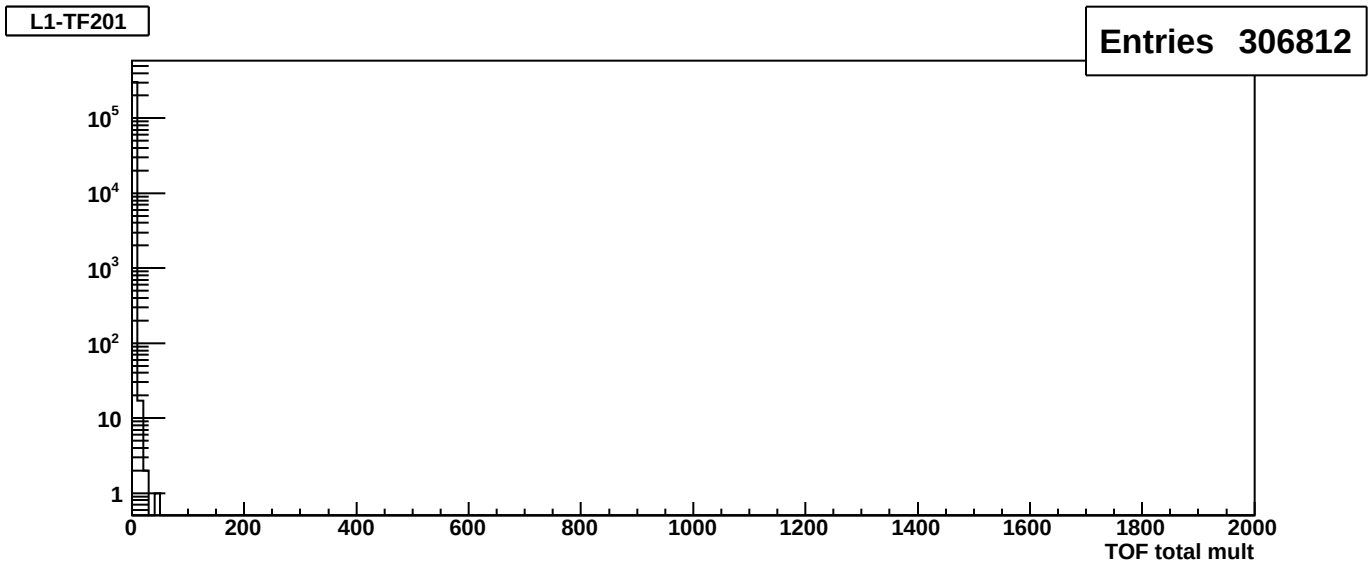

MIX-TF003
Entries 1.28861e+07
TOF MULT
TOF tray

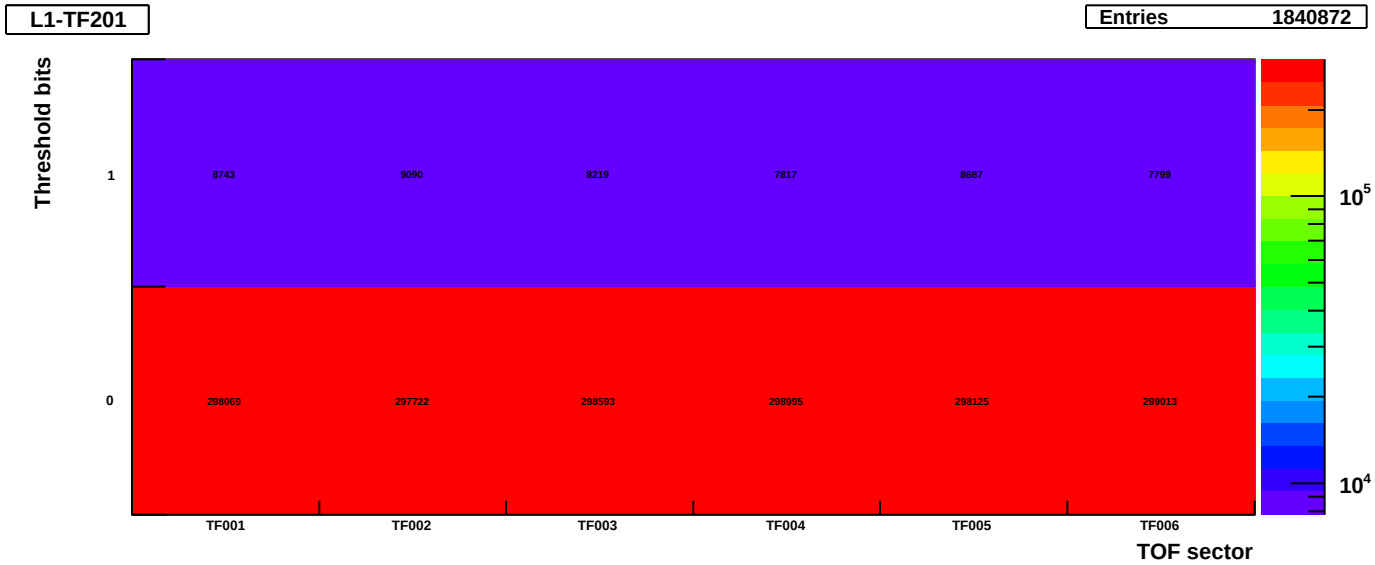

MIX-TF004
Entries 1.28861e+07
TOF MULT
TOF tray

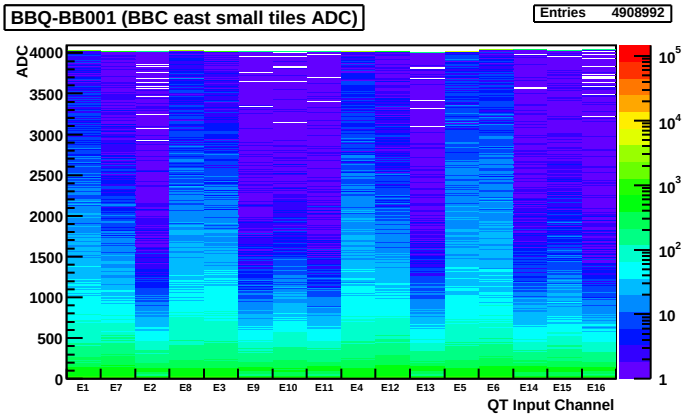

MIX-TF005
Entries 1.28861e+07
TOF MULT
TOF tray

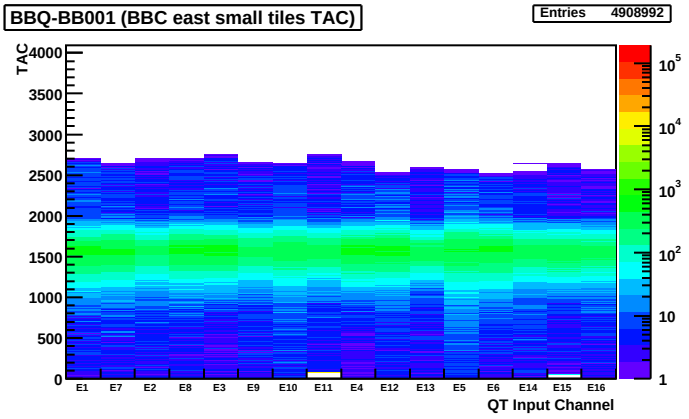

MIX-TF006
Entries 1.28861e+07
TOF MULT
TOF tray

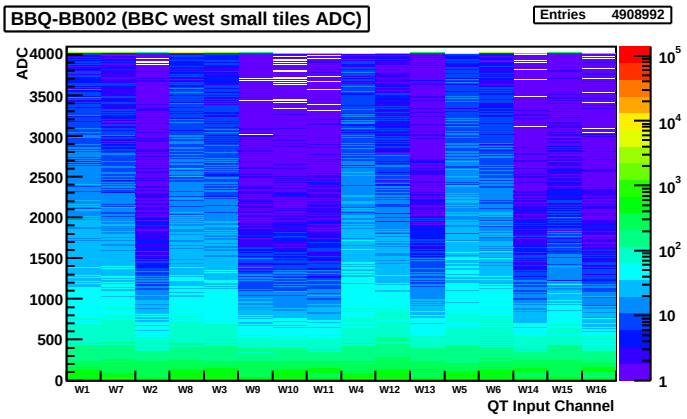

MIX-TF101
Entries 1840872
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

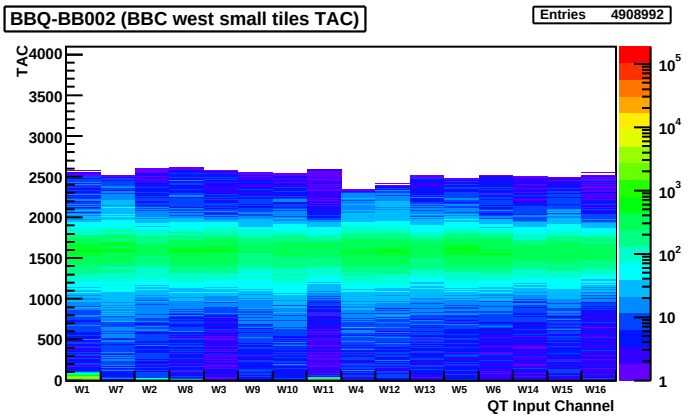

L1-TF201
Entries 306812
10^5
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

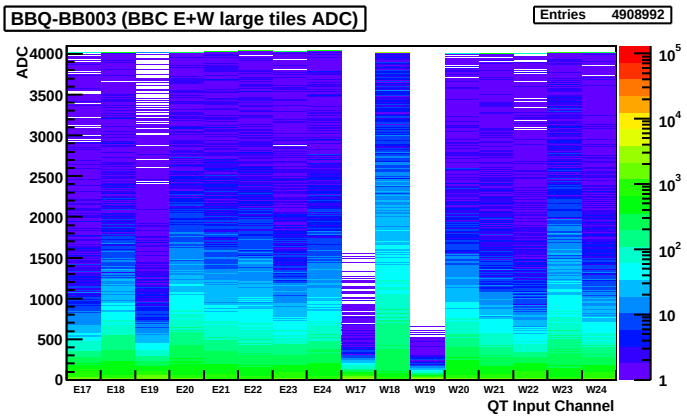

L1-TF201
Entries 1840872
Threshold bits
1
0
8743
9090
8219
7817
8687
7799
298069
297722
298593
298995
298125
299013
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^5
10^4

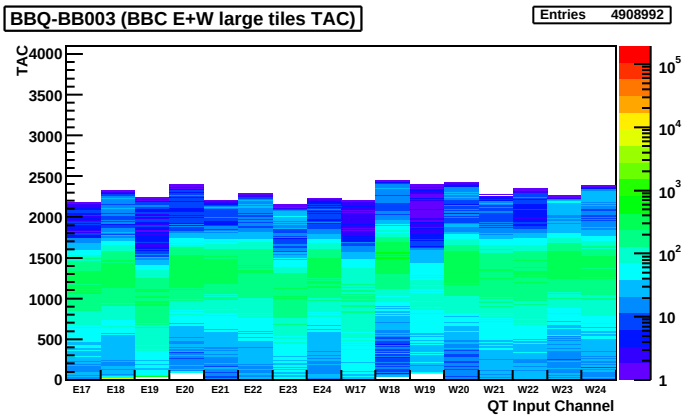

BBQ-BB001 (BBC east small tiles ADC)
Entries 4908992
ADC
QT Input Channel

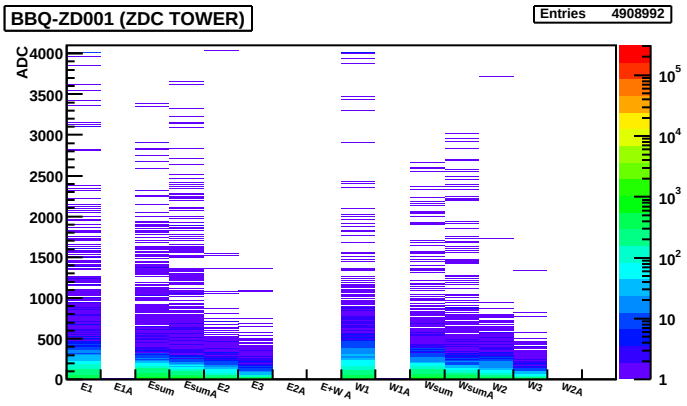

BBQ-BB001 (BBC east small tiles TAC)
Entries 4908992
TAC
QT Input Channel

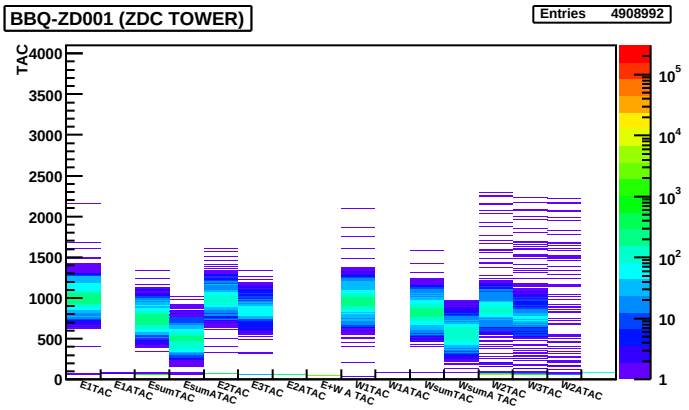

BBQ-BB002 (BBC west small tiles ADC)
Entries 4908992
ADC
QT Input Channel

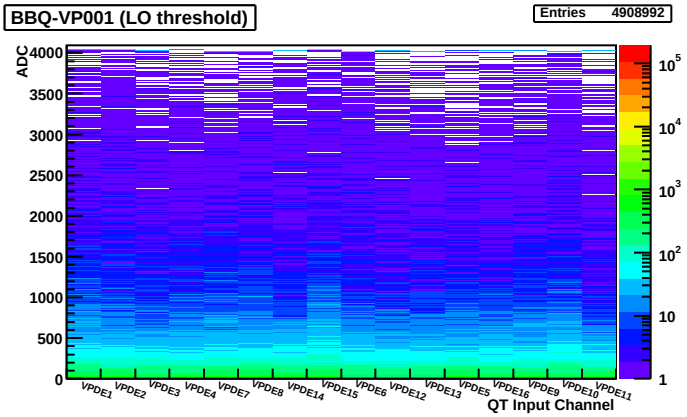

BBQ-BB002 (BBC west small tiles TAC)
Entries 4908992
TAC
QT Input Channel

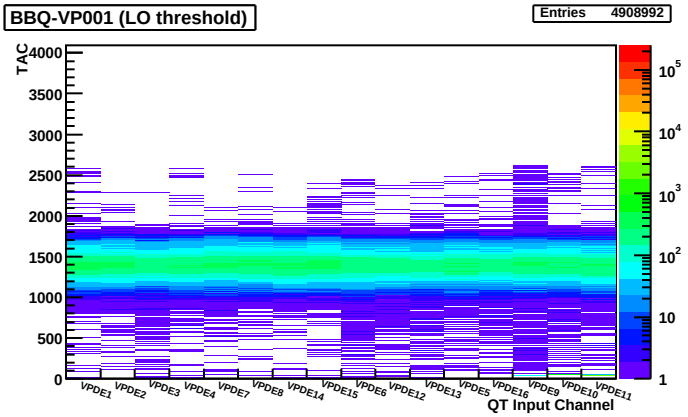

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 4908992
ADC
QT Input Channel

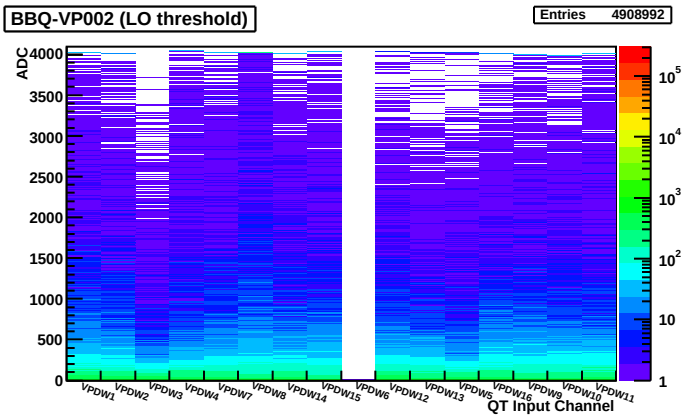

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 4908992
TAC
QT Input Channel

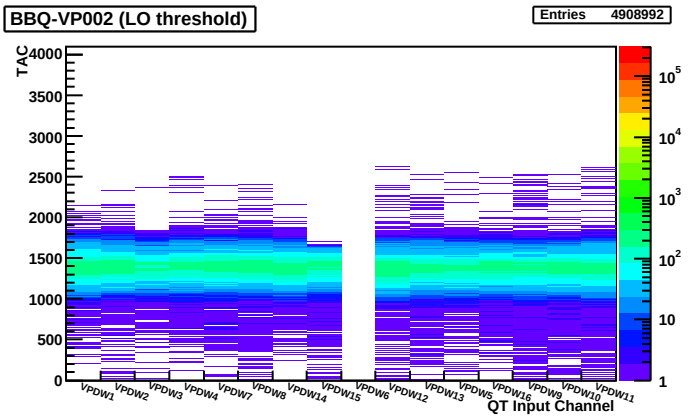

BBQ-ZD001 (ZDC TOWER)
Entries 4908992
ADC

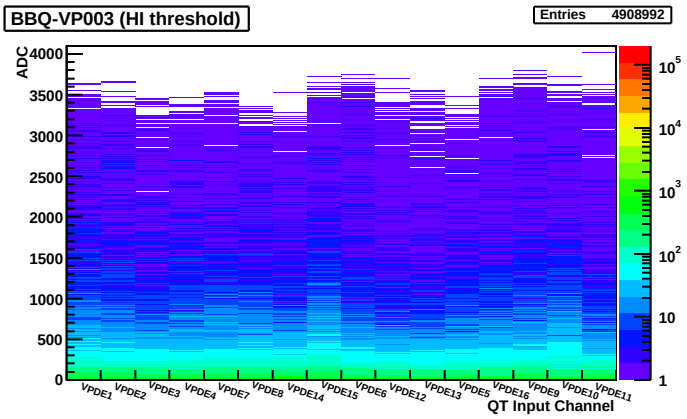

BBQ-ZD001 (ZDC TOWER)
Entries 4908992
TAC

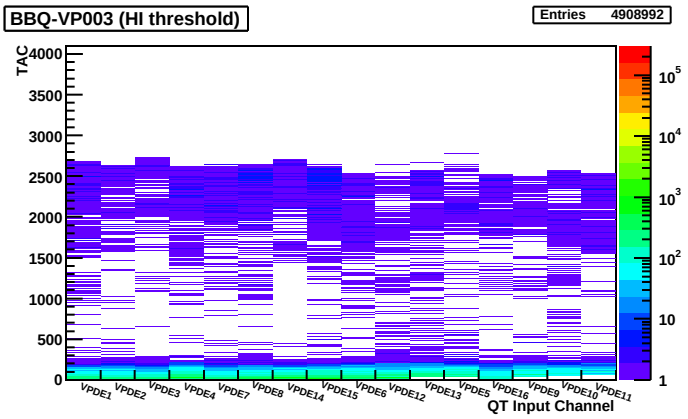

BBQ-VP001 (LO threshold)
Entries 4908992
ADC
QT Input Channel

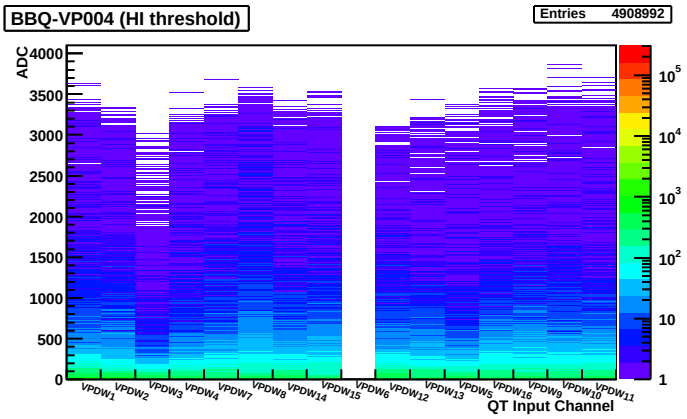

BBQ-VP001 (LO threshold)
Entries 4908992
TAC
QT Input Channel

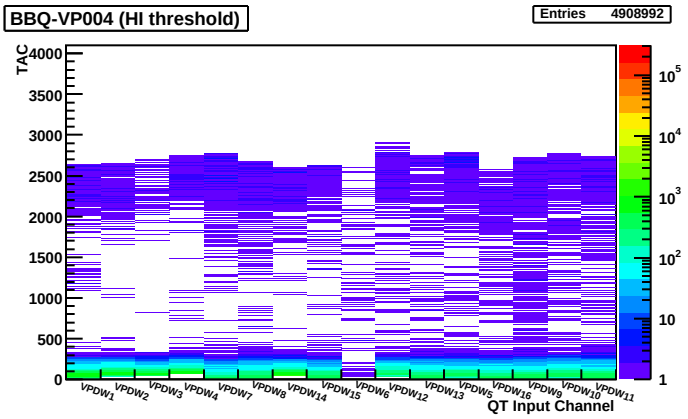

BBQ-VP002 (LO threshold)
Entries 4908992
ADC
QT Input Channel

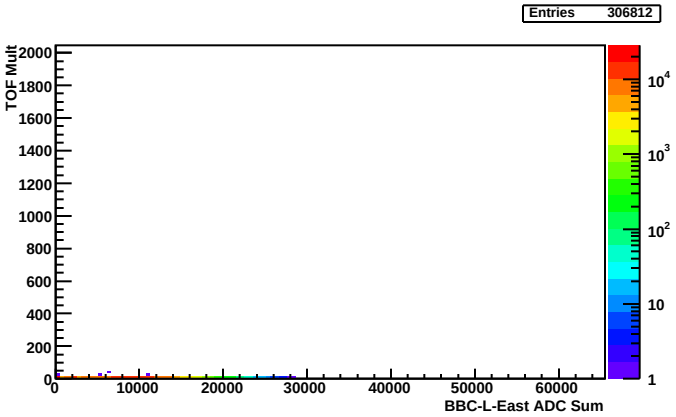

BBQ-VP002 (LO threshold)
Entries 4908992
TAC
QT Input Channel

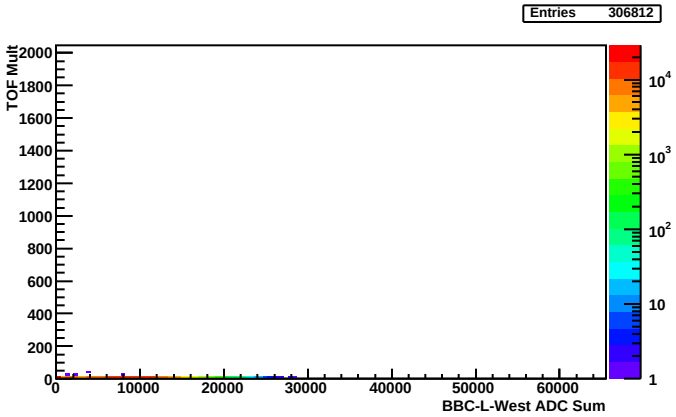

BBQ-VP003 (HI threshold)
Entries 4908992
ADC
QT Input Channel

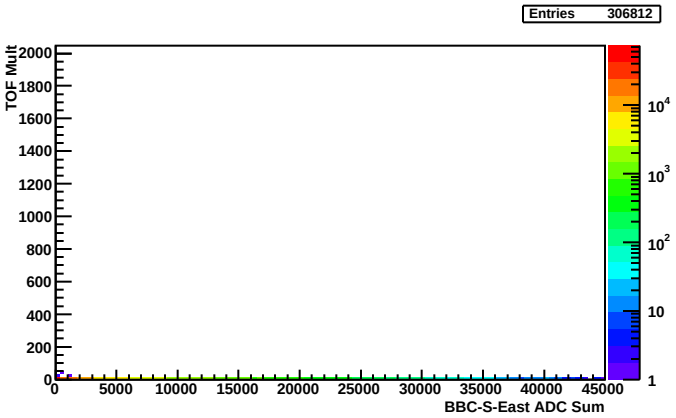

BBQ-VP003 (HI threshold)
Entries 4908992
TAC
QT Input Channel

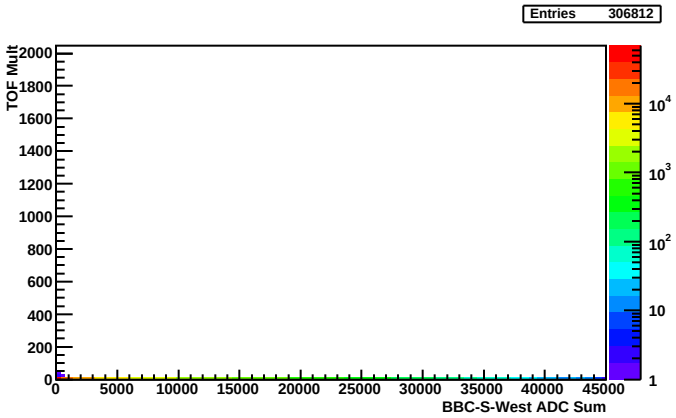

BBQ-VP004 (HI threshold)
Entries 4908992
ADC
QT Input Channel

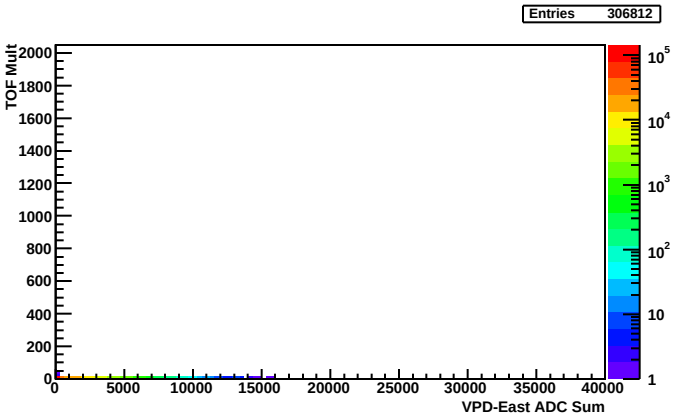

BBQ-VP004 (HI threshold)
Entries 4908992
TAC
QT Input Channel

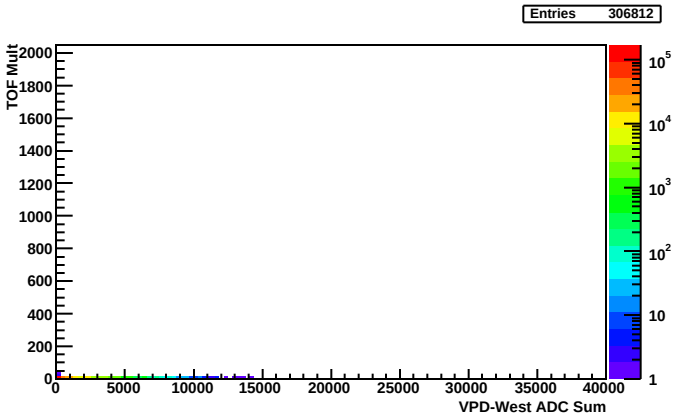

Entries 306812
TOF Mult
BBC-L-East ADC Sum

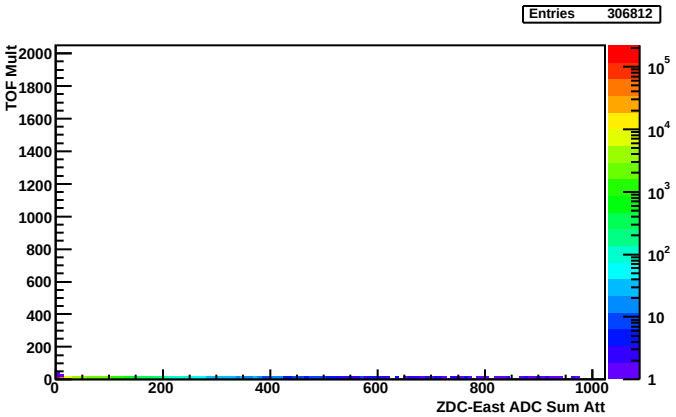

Entries 306812
TOF Mult
BBC-L-West ADC Sum

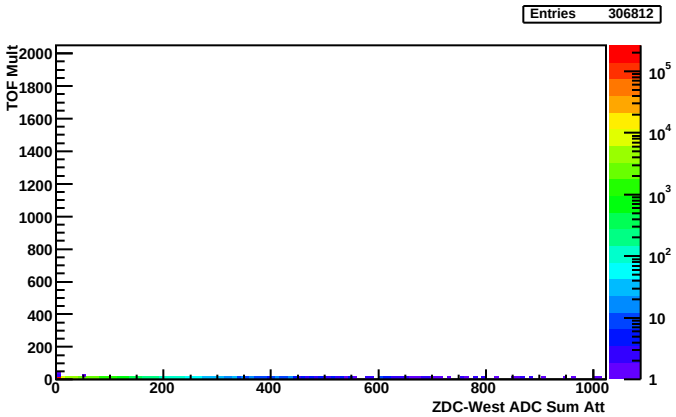

Entries 306812
TOF Mult
BBC-S-East ADC Sum

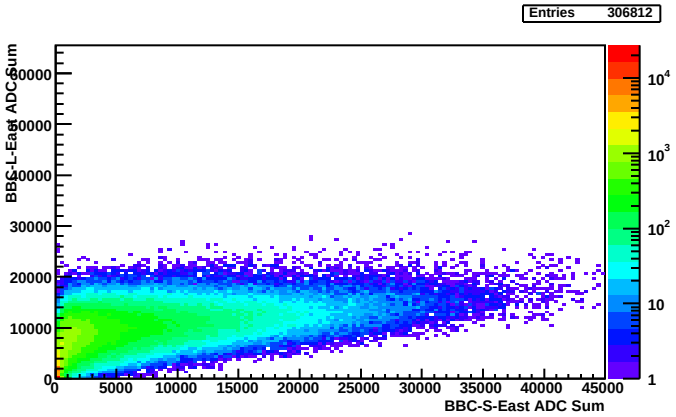

Entries 306812
TOF Mult
BBC-S-West ADC Sum

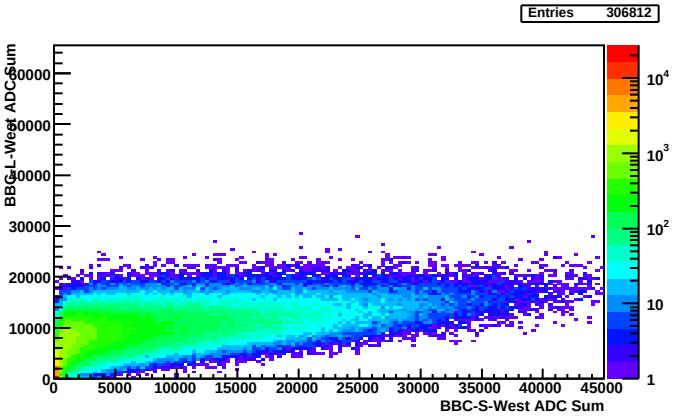

Entries 306812
TOF Mult
VPD-East ADC Sum

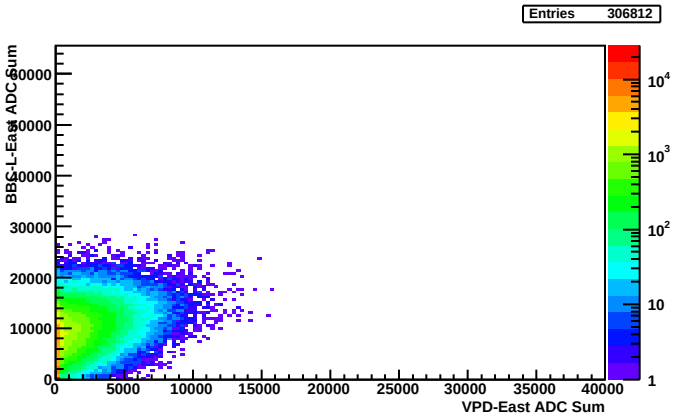

Entries 306812
TOF Mult
VPD-West ADC Sum

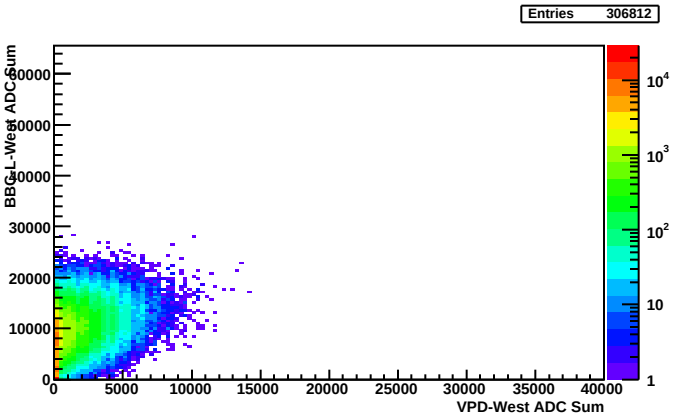

Entries 306812
TOF Mult
ZDC-East ADC Sum Att

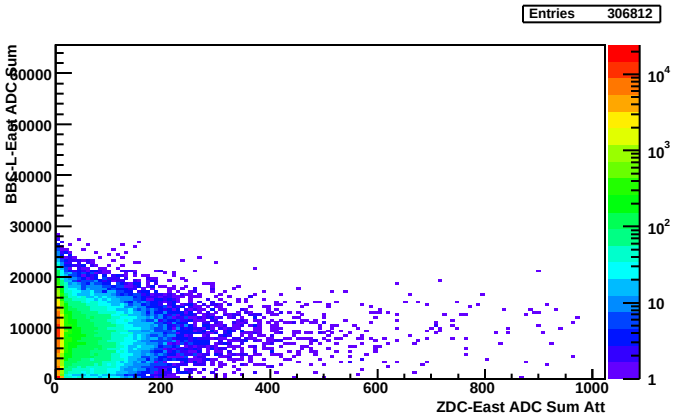

Entries 306812
TOF Mult
ZDC-West ADC Sum Att

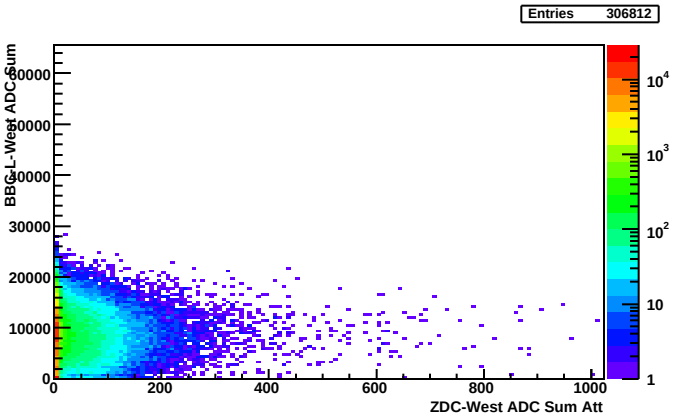

Entries 306812
BBC-L-East ADC Sum
BBC-S-East ADC Sum

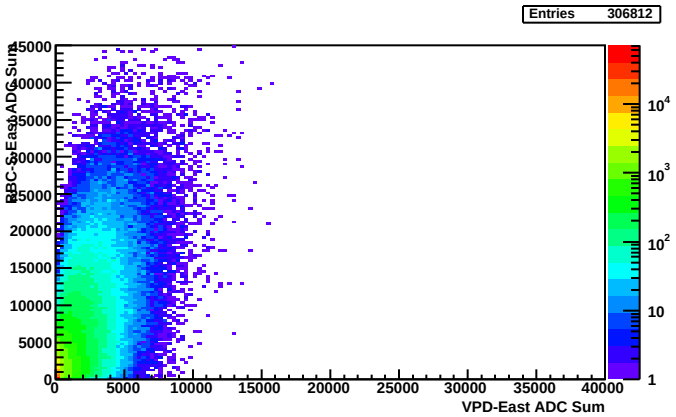

Entries 306812
BBC-L-West ADC Sum
BBC-S-West ADC Sum

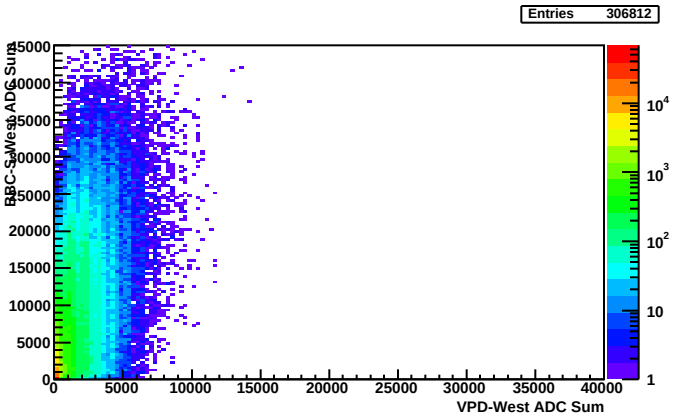

Entries 306812
BBC-L-East ADC Sum
VPD-East ADC Sum

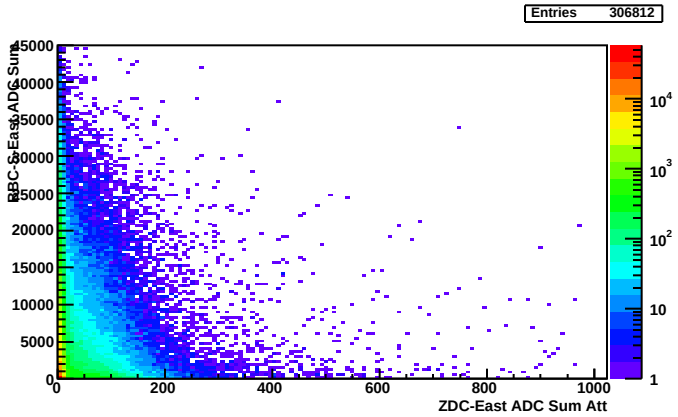

Entries 306812
BBC-L-West ADC Sum
VPD-West ADC Sum

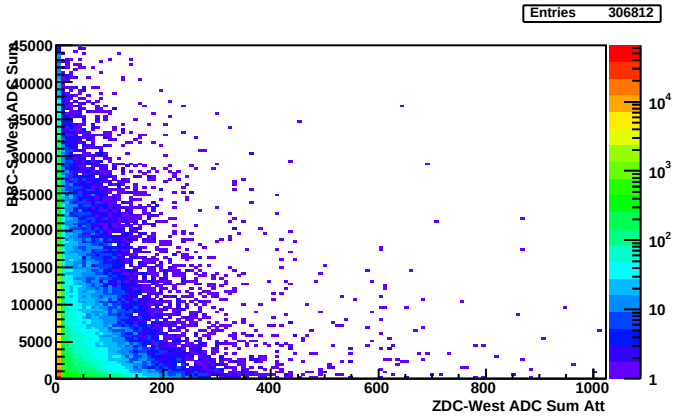

Entries 306812
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

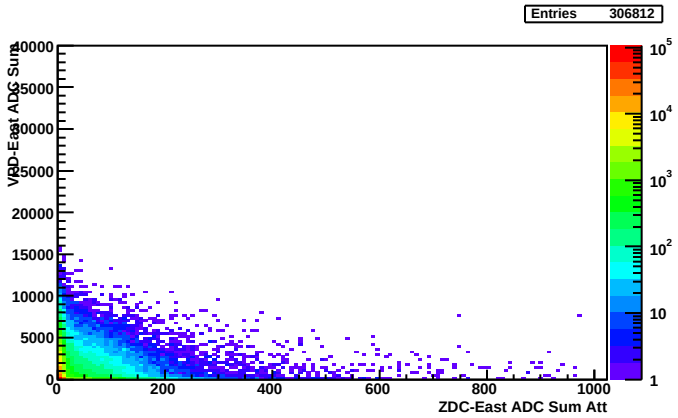

Entries 306812
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

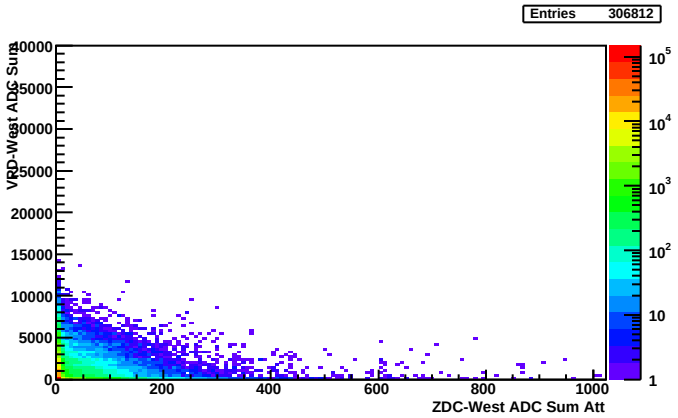

Entries 306812
BBC-S-East ADC Sum
VPD-East ADC Sum

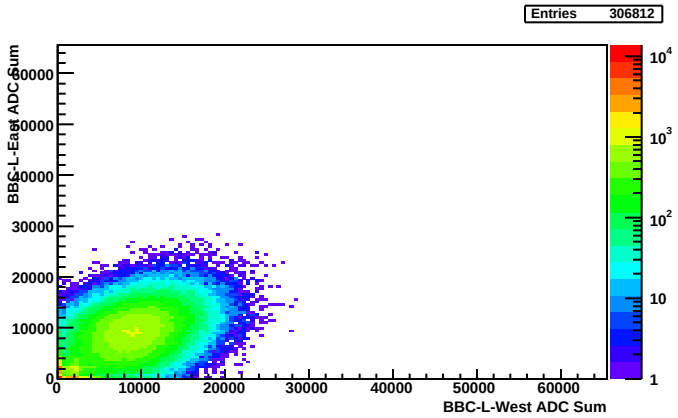

Entries 306812
BBC-S-West ADC Sum
VPD-West ADC Sum

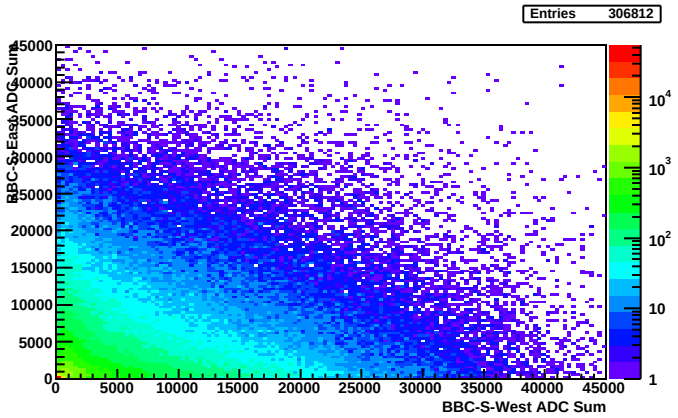

Entries 306812
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

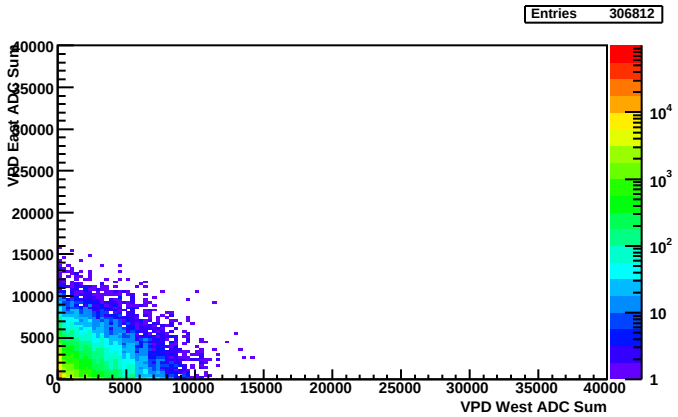

Entries 306812
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

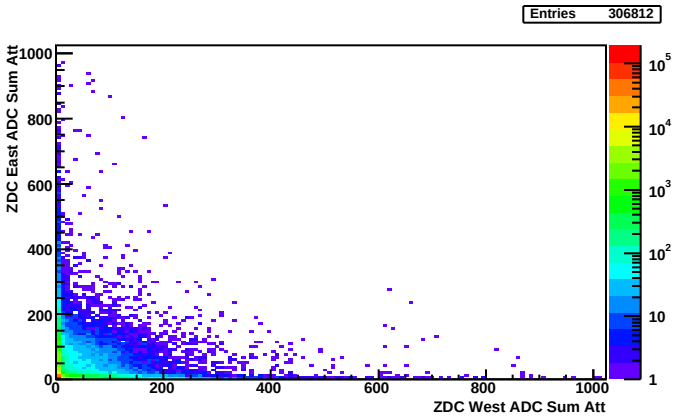

Entries 306812
VPD-East ADC Sum
ZDC-East ADC Sum Att

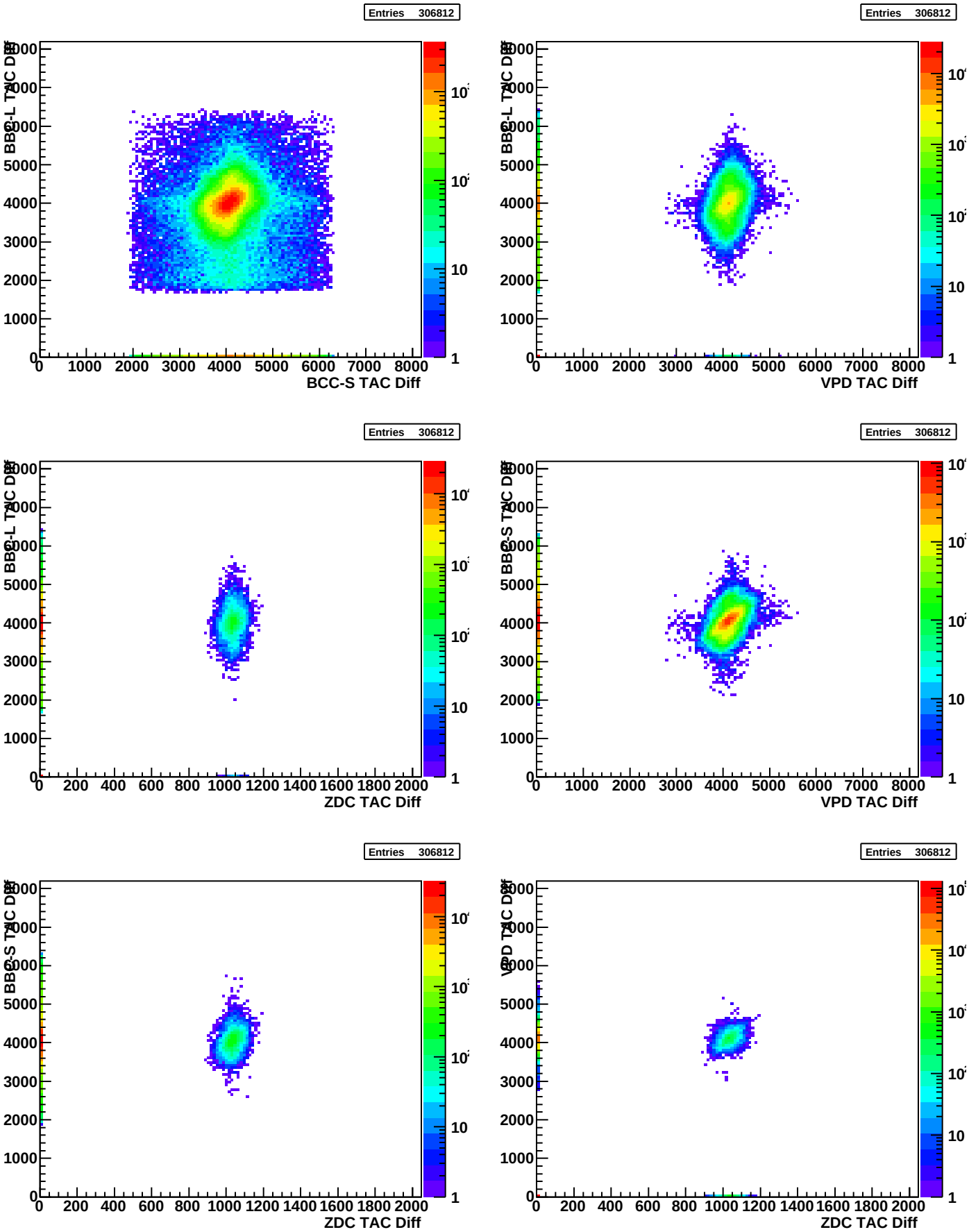

Entries 306812
VPD-West ADC Sum
ZDC-West ADC Sum Att

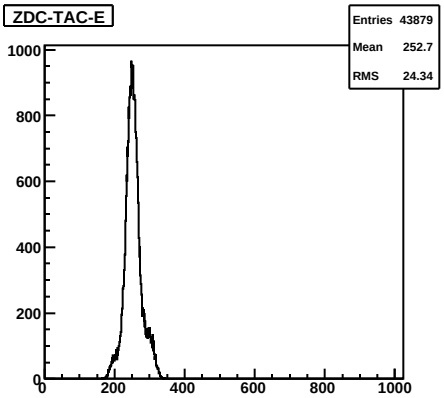

Entries 306812
BBC-L-East ADC Sum
BBC-L-West ADC Sum

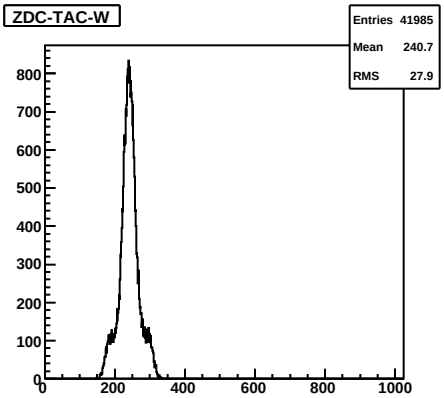

Entries 306812
BBC-S-East ADC Sum
BBC-S-West ADC Sum

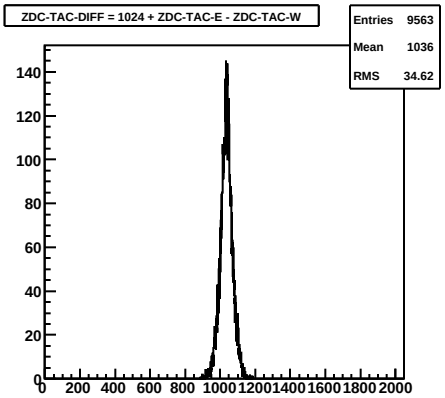

Entries 306812
VPD East ADC Sum
VPD West ADC Sum

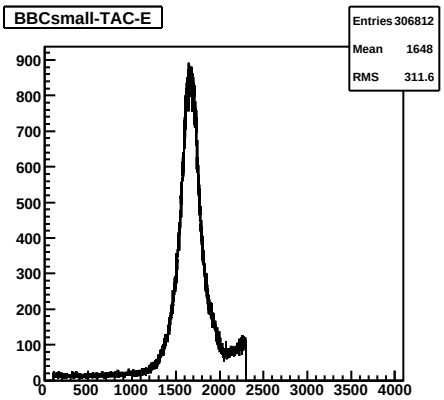

Entries 306812
ZDC East ADC Sum Att
ZDC West ADC Sum Att

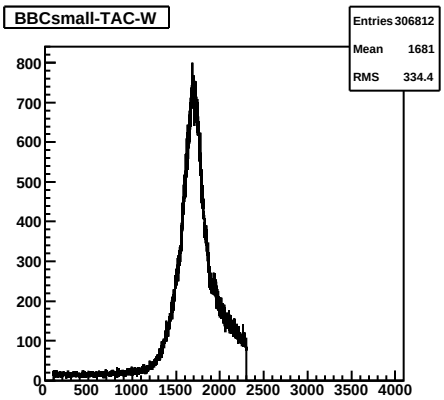

Entries 306812
BBC-L TAC Diff
BCC-S TAC Diff
Entries 306812
BBC-L TAC Diff
VPD TAC Diff
Entries 306812
BBC-L TAC Diff
ZDC TAC Diff
Entries 306812
BBC-S TAC Diff
VPD TAC Diff
Entries 306812
BBC-S TAC Diff
ZDC TAC Diff
Entries 306812
VPD TAC Diff
ZDC TAC Diff

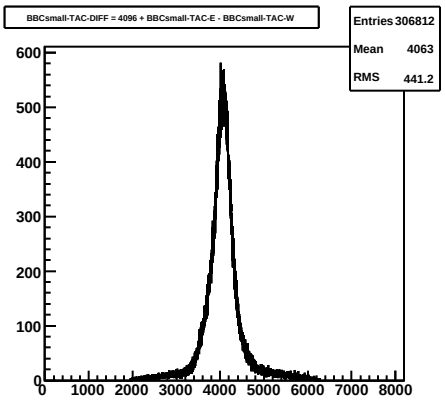

ZDC-TAC-E
Entries 43879
Mean 252.7
RMS 24.34

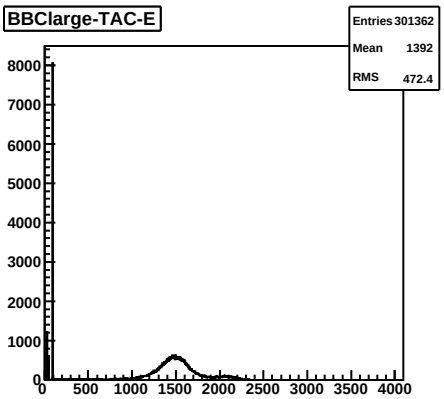

ZDC-TAC-W
Entries 41985
Mean 240.7
RMS 27.9

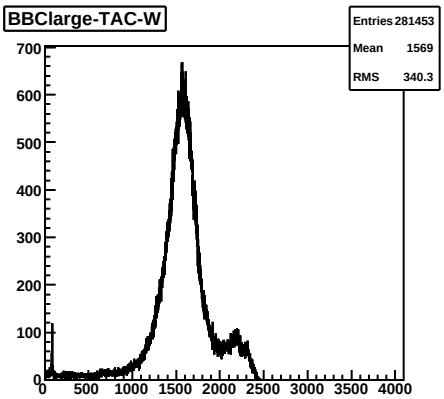

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 9563
Mean 1036
RMS 34.62

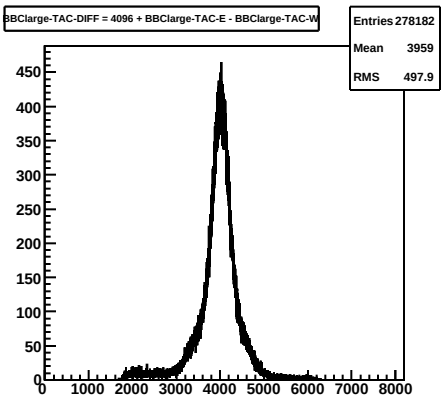

BBCsmall-TAC-E
Entries 306812
Mean 1648
RMS 311.6

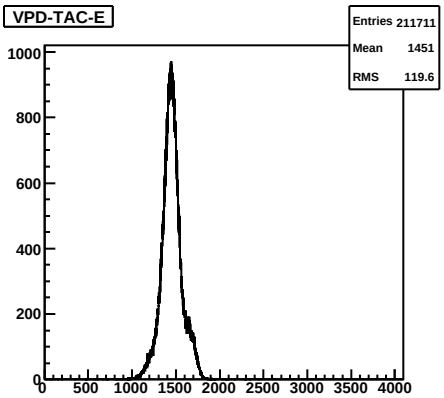

BBCsmall-TAC-W
Entries 306812
Mean 1681
RMS 334.4

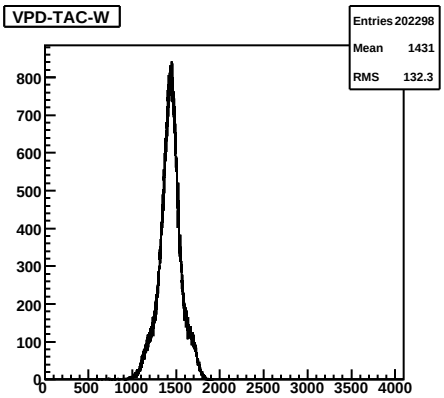

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 306812
Mean 4063
RMS 441.2

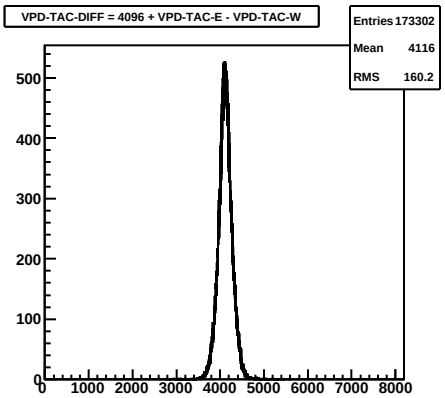

BBClarge-TAC-E
Entries 301362
Mean 1392
RMS 472.4

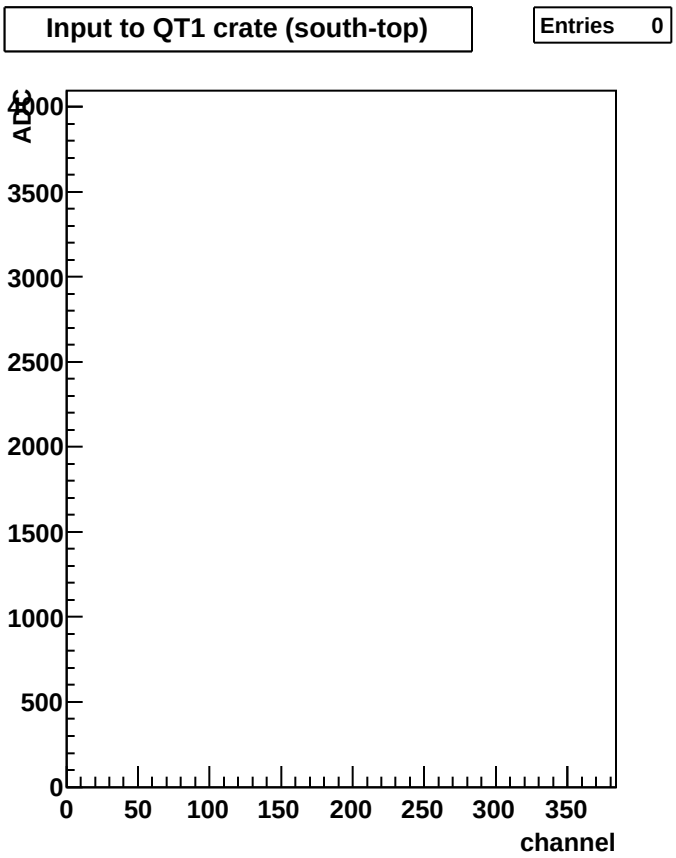

BBClarge-TAC-W
Entries 281453
Mean 1569
RMS 340.3

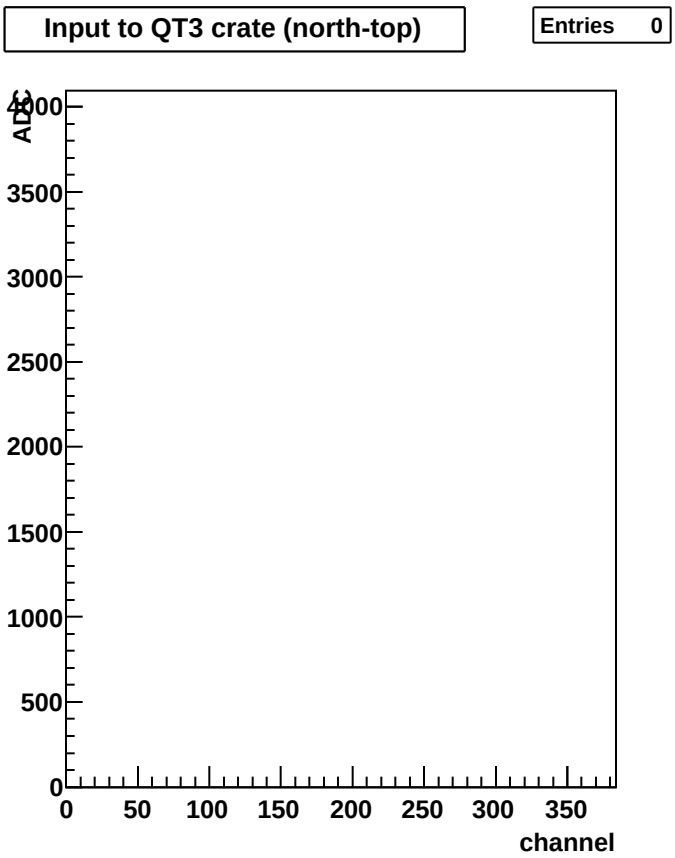

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 278182
Mean 3959
RMS 497.9

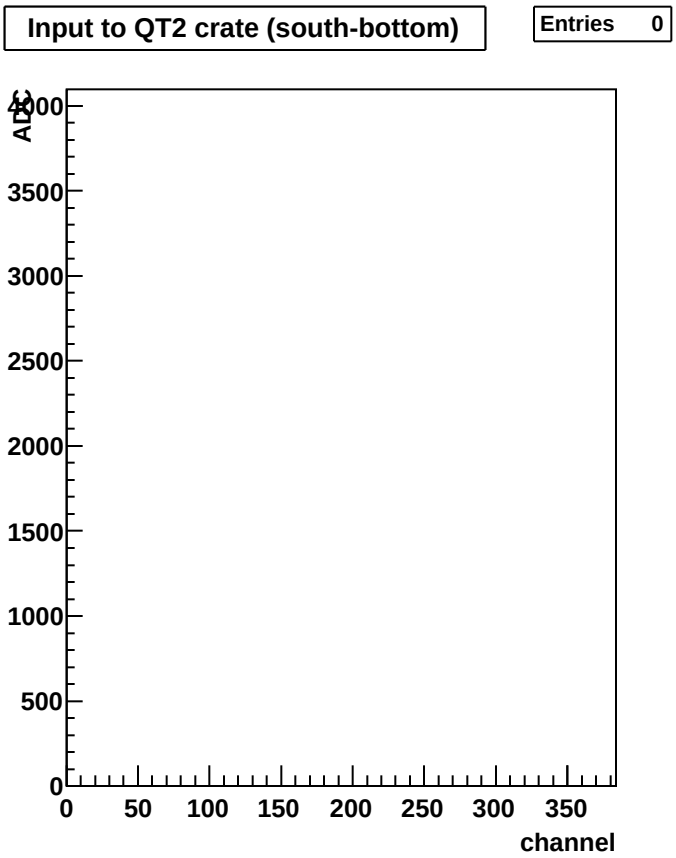

VPD-TAC-E
Entries 211711
Mean 1451
RMS 119.6

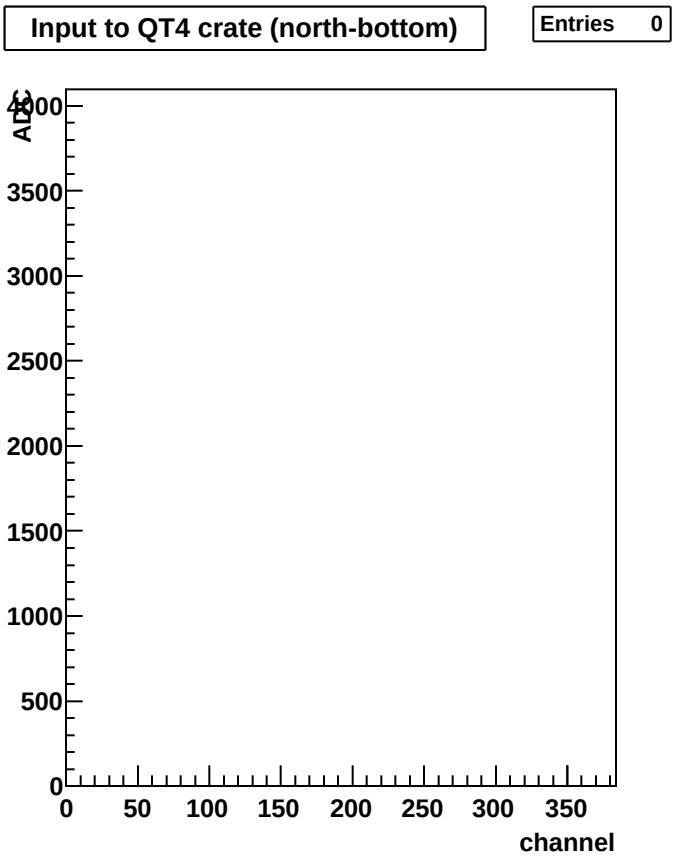

VPD-TAC-W
Entries 202298
Mean 1431
RMS 132.3

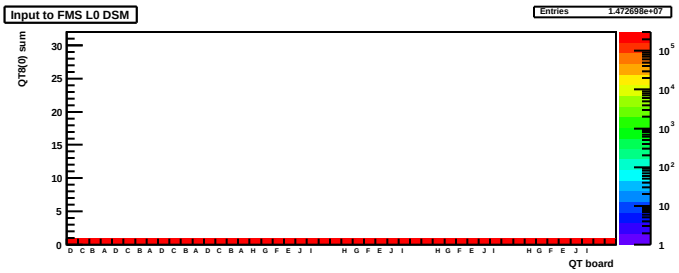

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 173302
Mean 4116
RMS 160.2

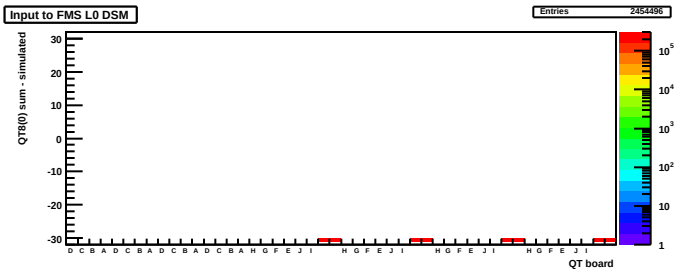

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

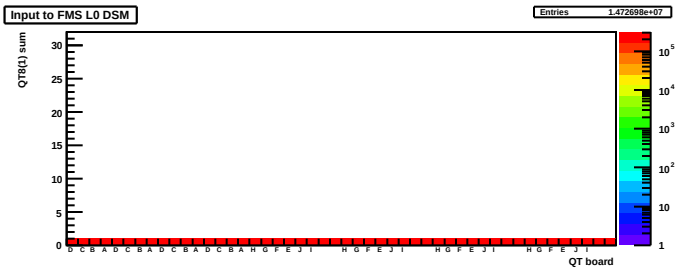

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

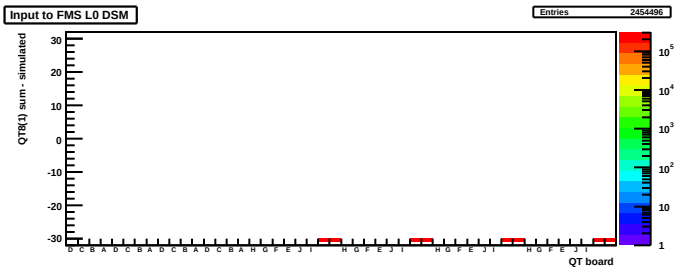

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

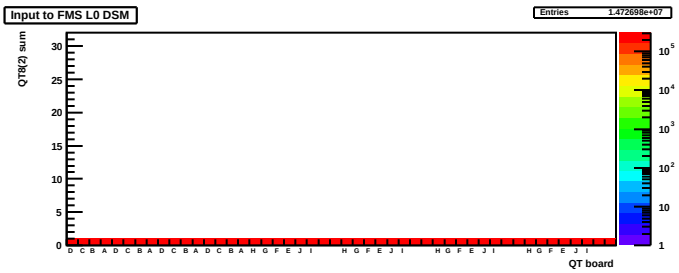

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

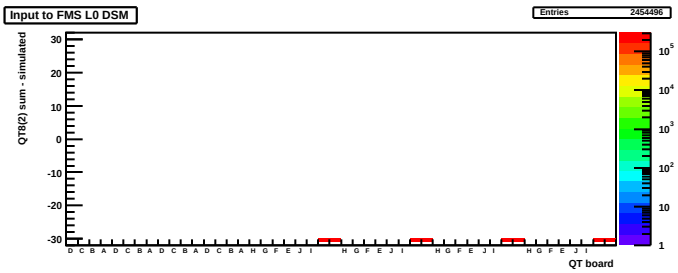

Input to FMS L0 DSM
Entries 1.472698e+07
QT8(0) sum
QT board

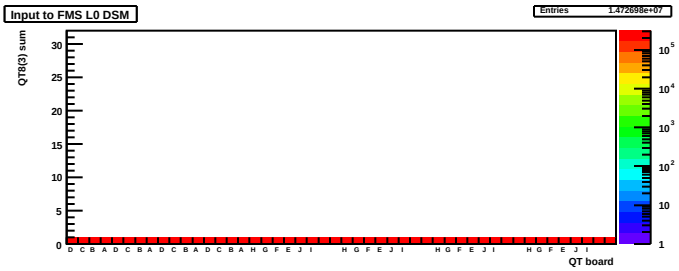

Input to FMS L0 DSM
Entries 2454496
QT8(0) sum - simulated
QT board

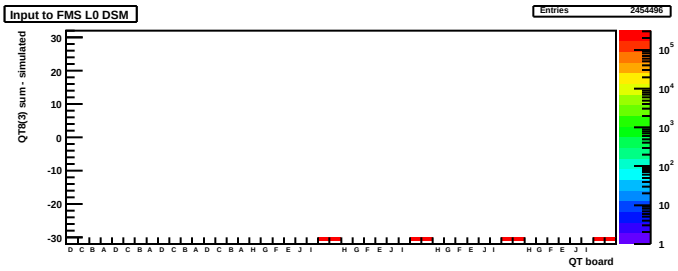

Input to FMS L0 DSM
Entries 1.472698e+07
QT8(1) sum
QT board

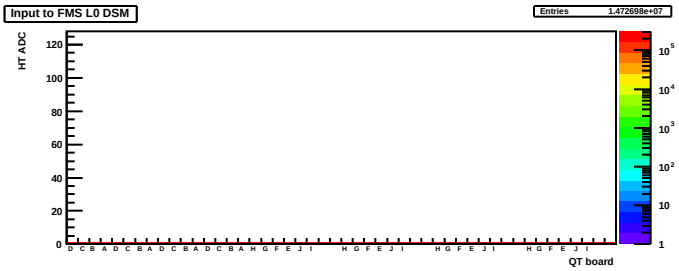

Input to FMS L0 DSM
Entries 2454496
QT8(1) sum - simulated
QT board

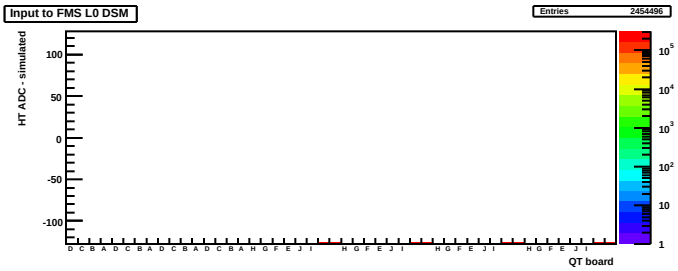

Input to FMS L0 DSM
Entries 1.472698e+07
QT8(2) sum
QT board

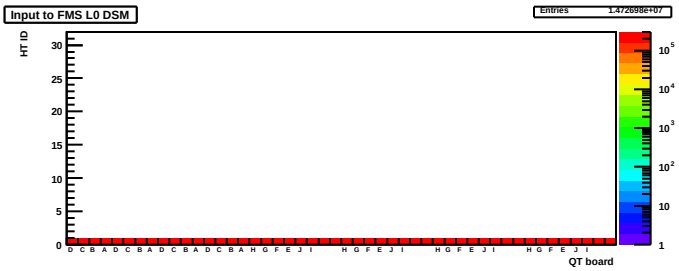

Input to FMS L0 DSM
Entries 2454496
QT8(2) sum - simulated
QT board

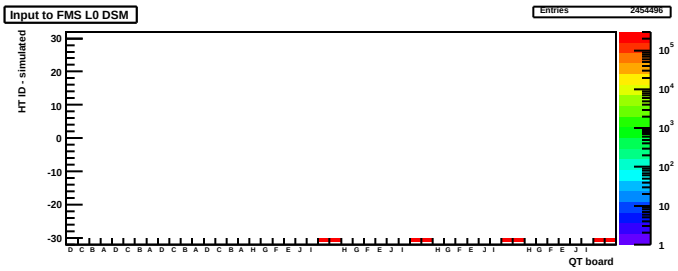

Input to FMS L0 DSM
Entries 1.472698e+07
QT8(3) sum
QT board

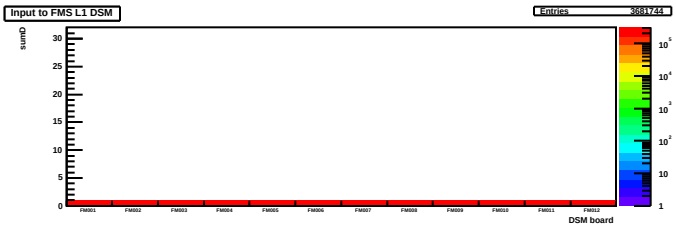

Input to FMS L0 DSM
Entries 2454496
QT8(3) sum - simulated
QT board

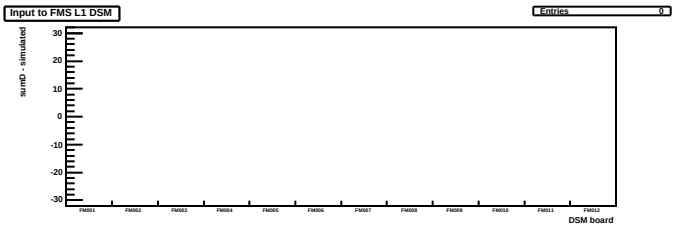

Input to FMS L0 DSM
Entries 1.472698e+07
HT ADC
QT board

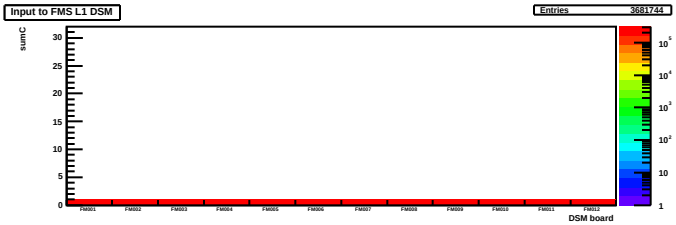

Input to FMS L0 DSM
Entries 2454496
HT ADC - simulated
QT board

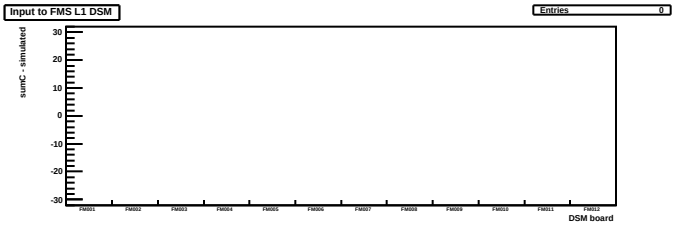

Input to FMS L0 DSM
Entries 1.472698e+07
HT ID
QT board

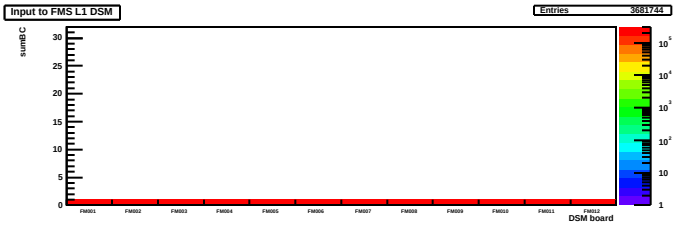

Input to FMS L0 DSM
Entries 2454496
HT ID - simulated
QT board

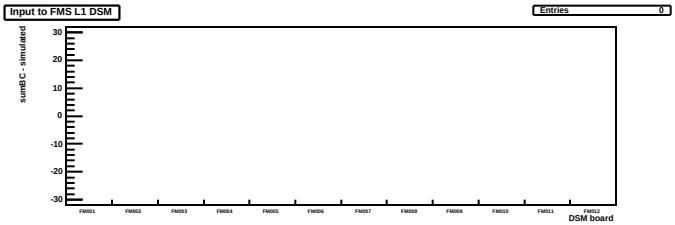

Input to FMS L1 DSM
Entries 3681744
sumD
DSM board

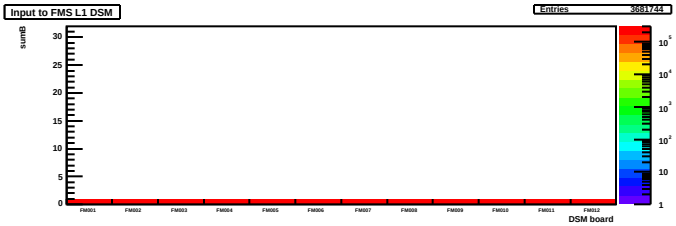

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

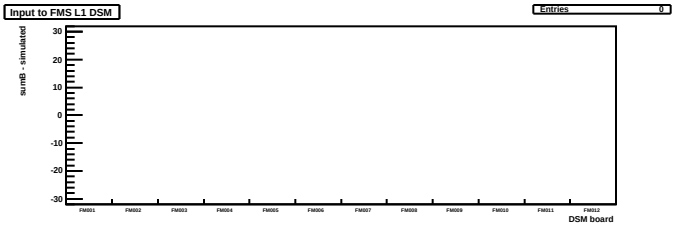

Input to FMS L1 DSM
Entries 3681744
sumC
DSM board

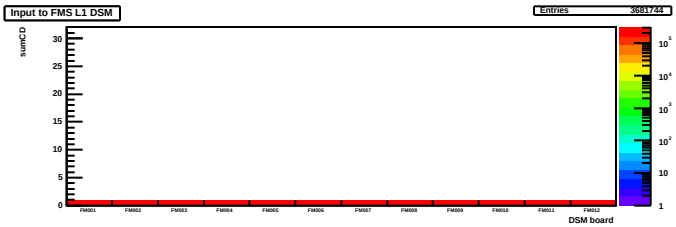

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

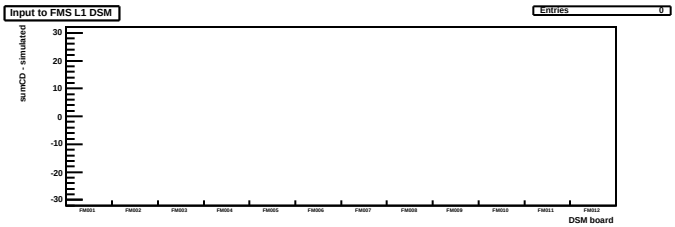

Input to FMS L1 DSM
Entries 3681744
sumBC
DSM board

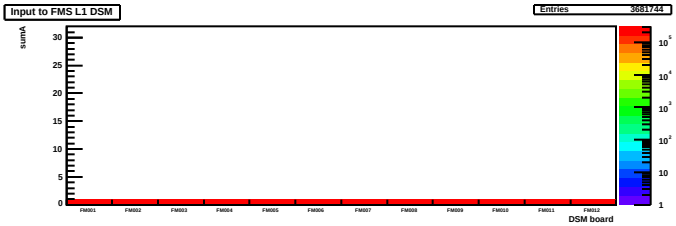

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

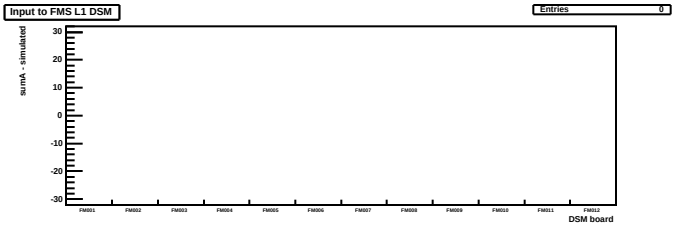

Input to FMS L1 DSM
Entries 3681744
sumB
DSM board

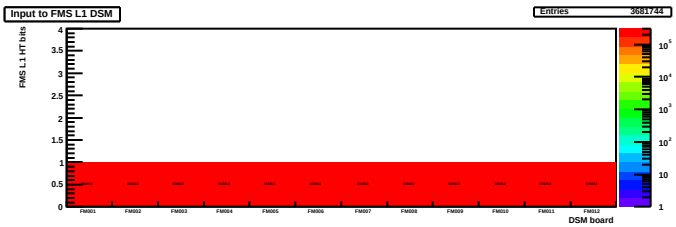

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

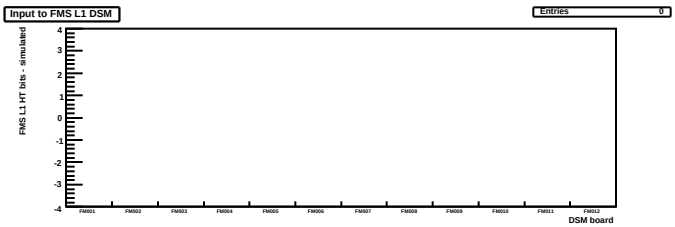

Input to FMS L1 DSM
Entries 3681744
sumCD
DSM board

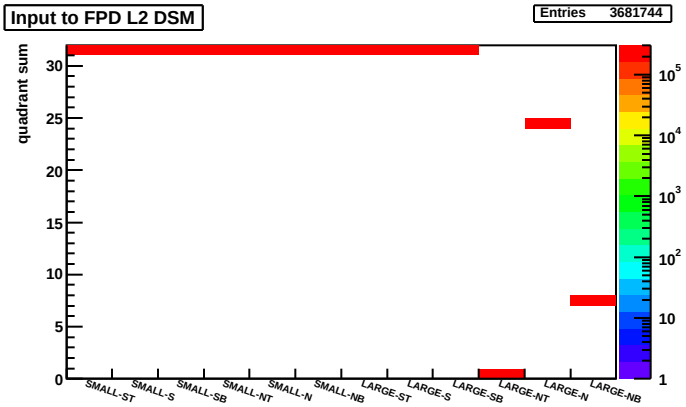

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

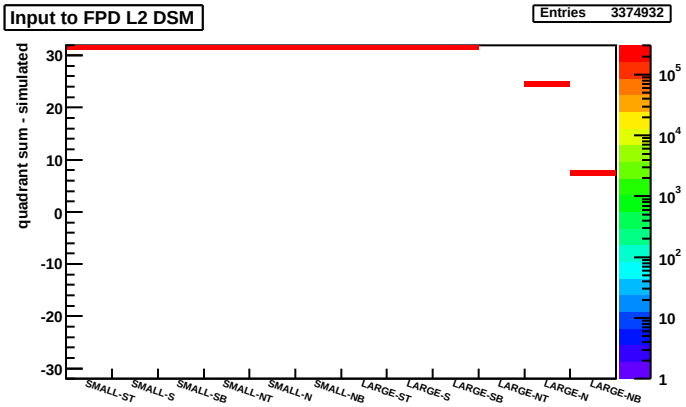

Input to FMS L1 DSM
Entries 3681744
sumA
DSM board

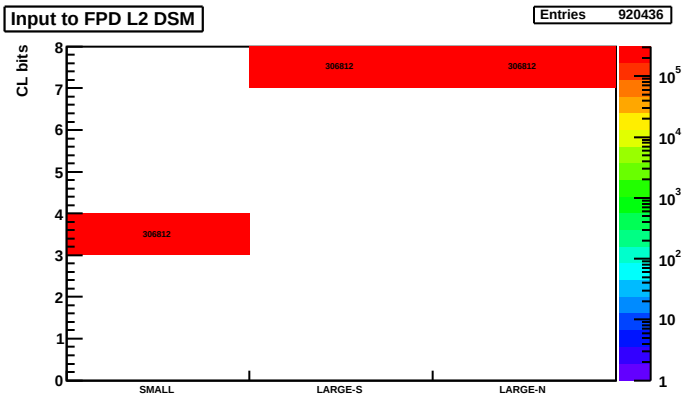

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

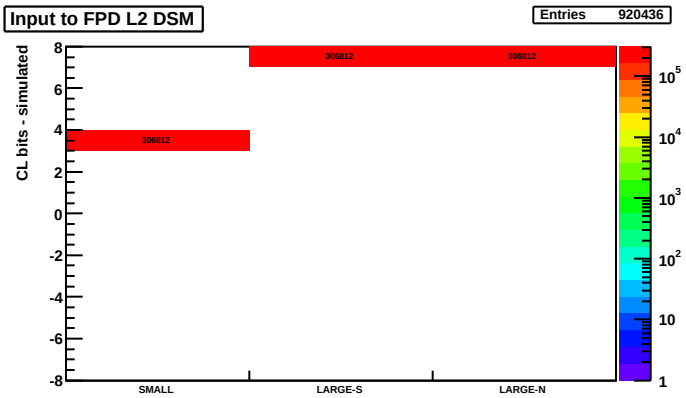

Input to FMS L1 DSM
Entries 3681744
FMS L1 HT bits
DSM board

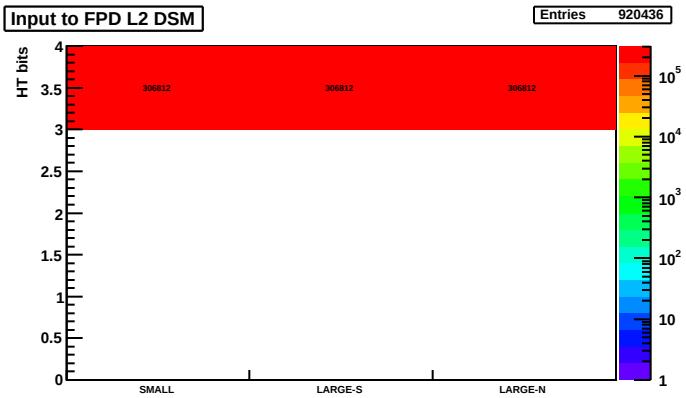

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

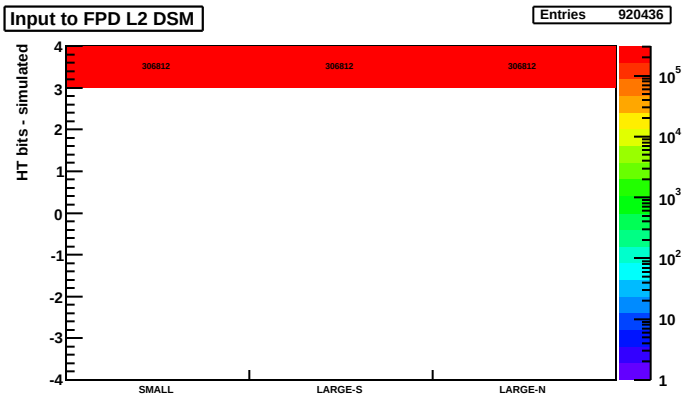

Input to FPD L2 DSM
Entries 3681744
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

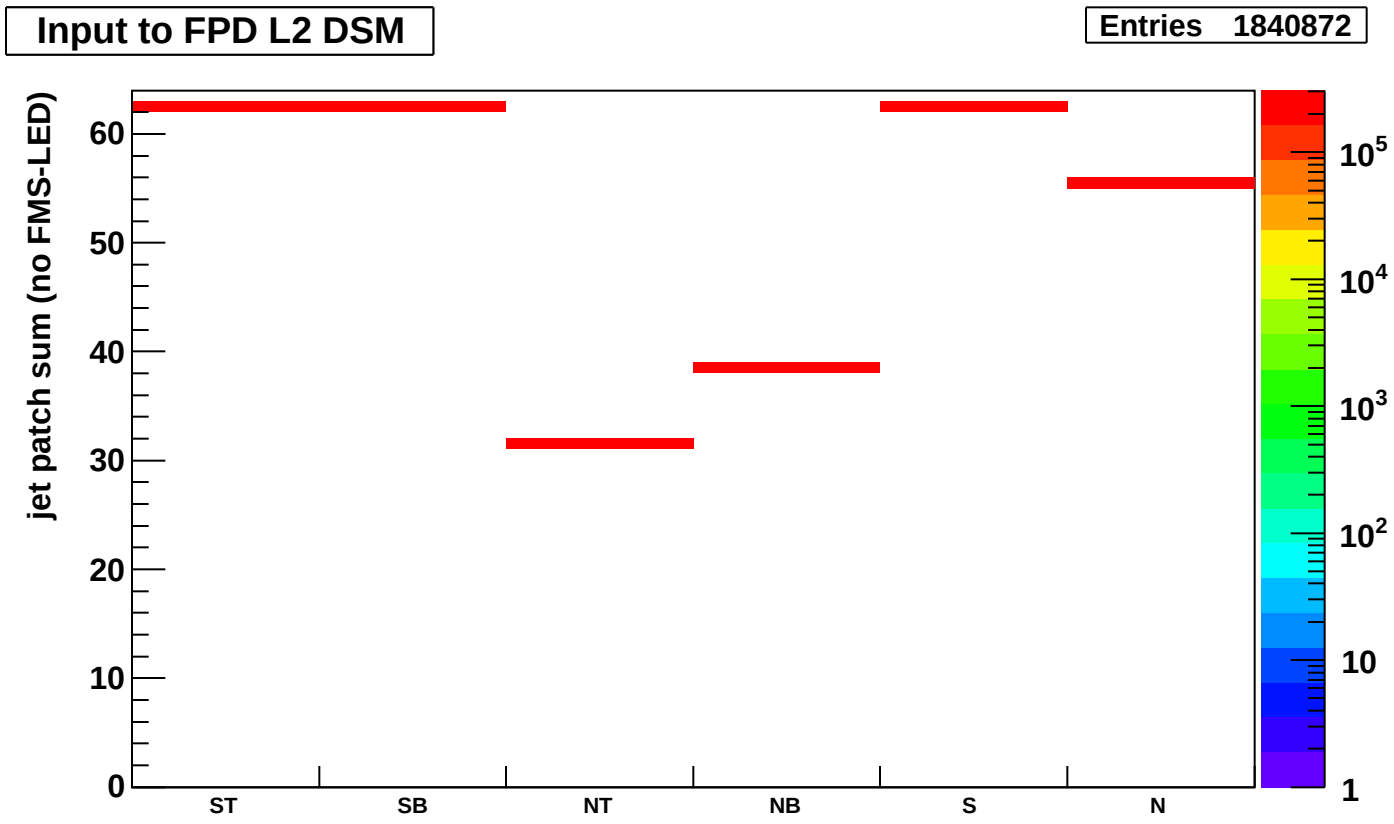

Input to FPD L2 DSM
Entries 3374932
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

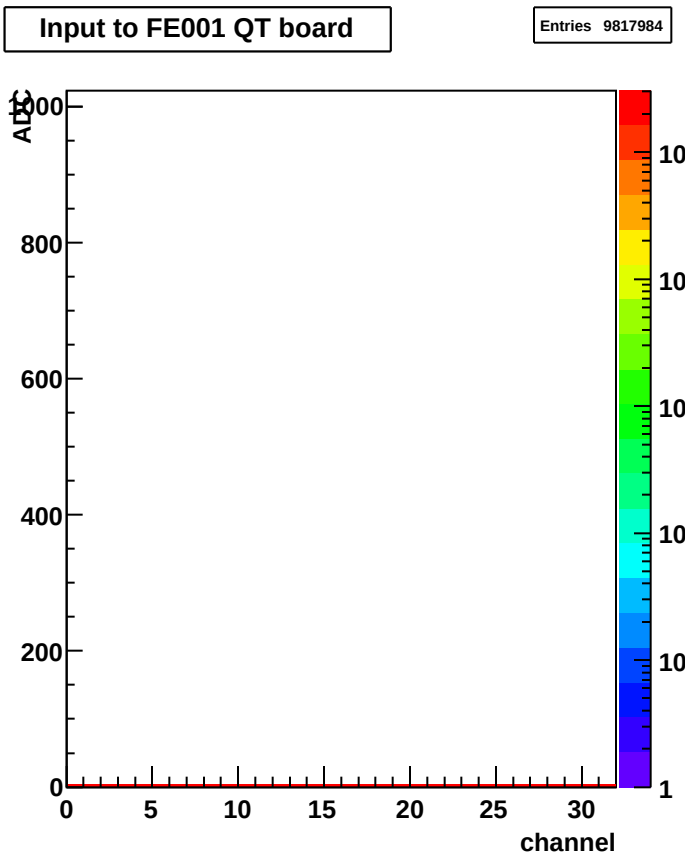

Input to FPD L2 DSM
Entries 920436
CL bits
306812
306812
306812
SMALL
LARGE-S
LARGE-N

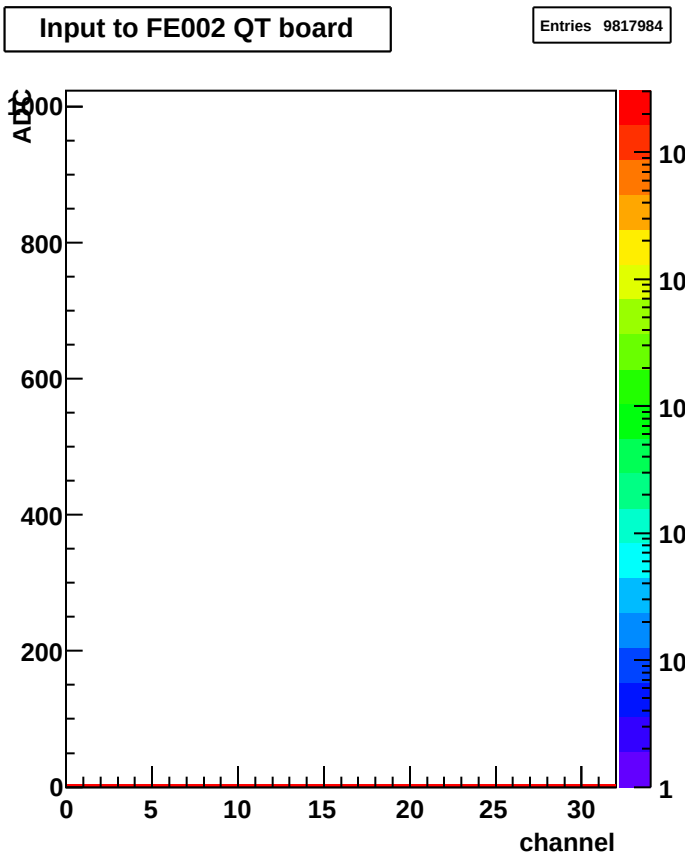

Input to FPD L2 DSM
Entries 920436
CL bits - simulated
306812
306812
306812
SMALL
LARGE-S
LARGE-N

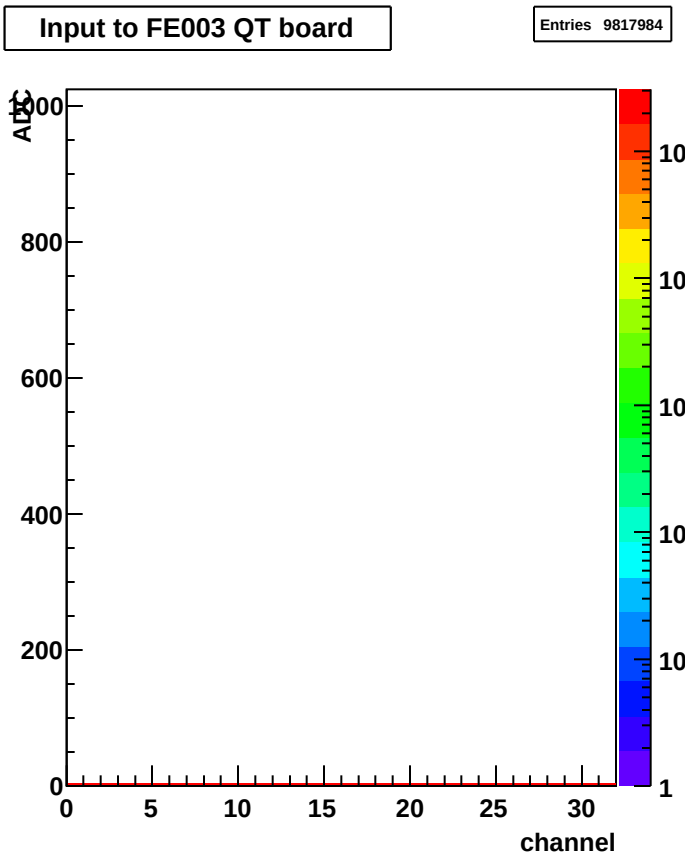

Input to FPD L2 DSM
Entries 920436
HT bits
306812
306812
306812
SMALL
LARGE-S
LARGE-N

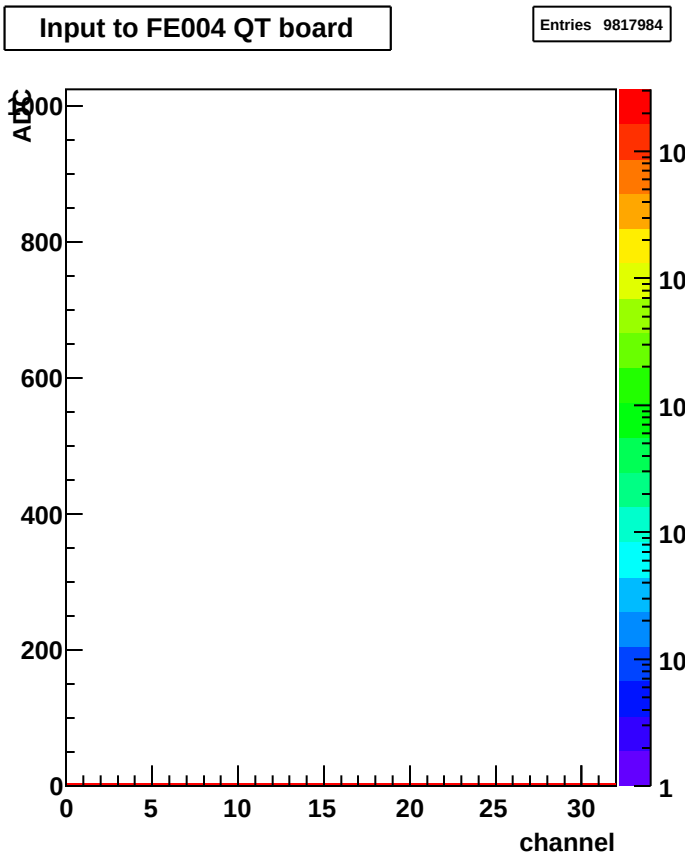

Input to FPD L2 DSM
Entries 920436
HT bits - simulated
306812
306812
306812
SMALL
LARGE-S
LARGE-N

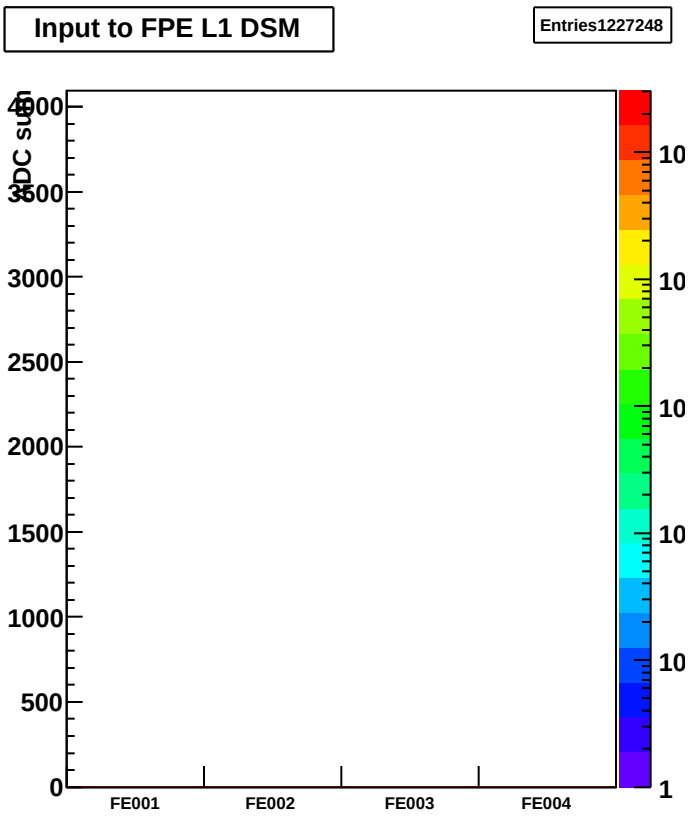

Input to FPD L2 DSM
Entries 1840872
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

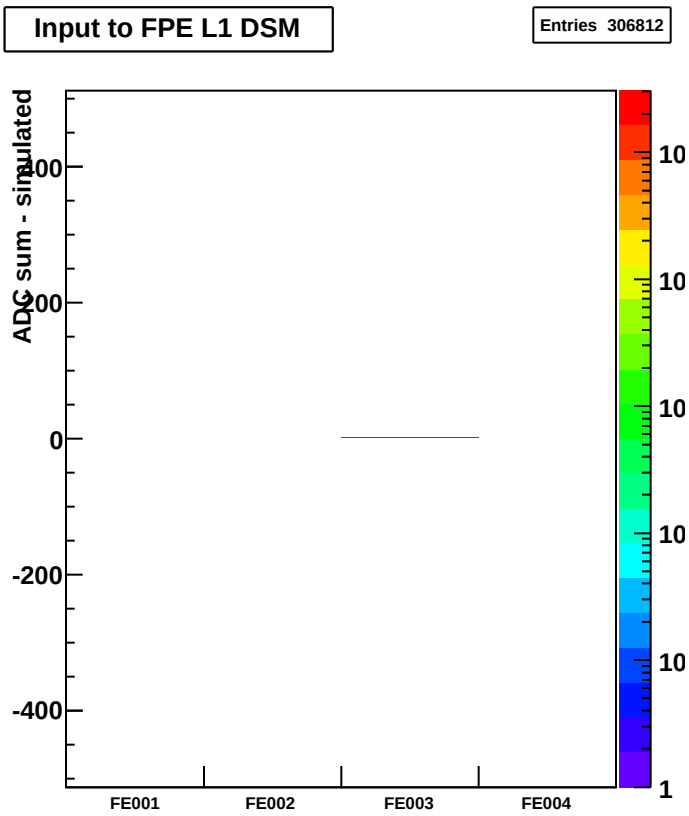

Input to FE001 QT board
Entries 9817984
ADC
channel

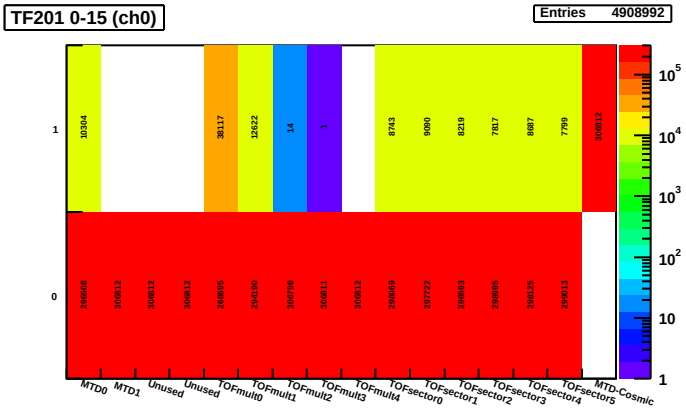

Input to FE002 QT board
Entries 9817984
ADC
channel

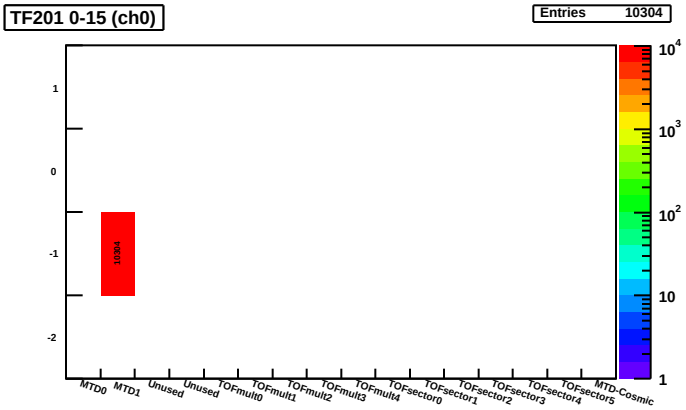

Input to FE003 QT board
Entries 9817984
ADC
channel

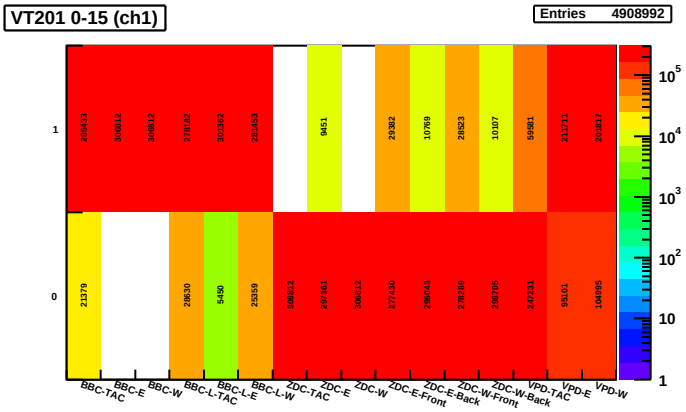

Input to FE004 QT board
Entries 9817984
ADC
channel

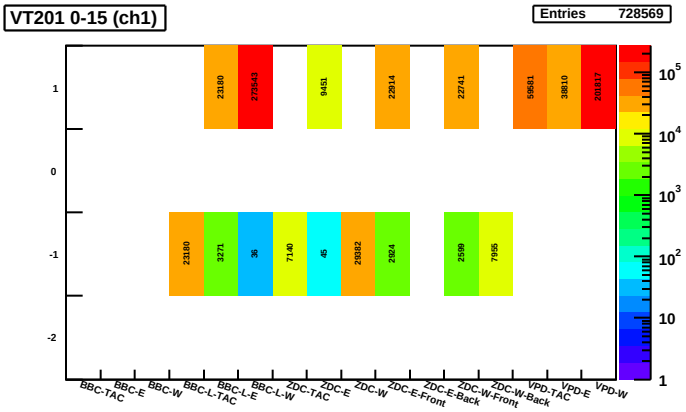

Input to FPE L1 DSM
Entries1227248
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1

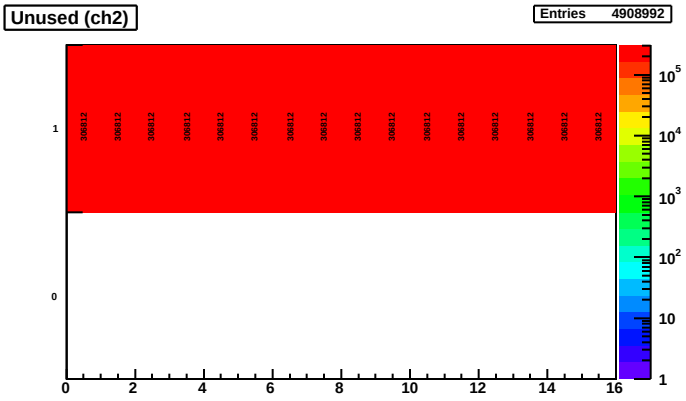

Input to FPE L1 DSM
Entries 306812
ADC sum - simulated
200
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
10
1

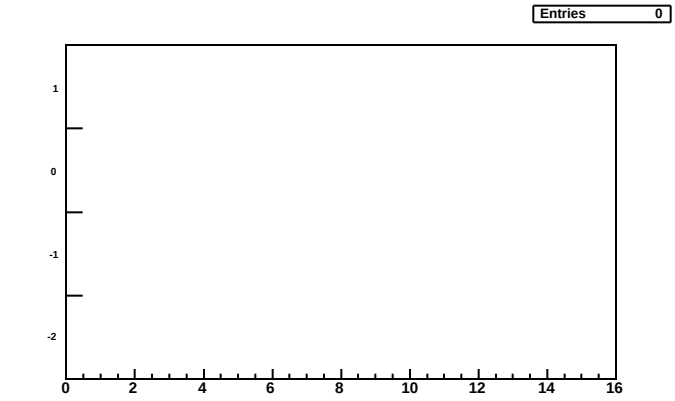

TF201 0-15 (ch0)
Entries 4908992
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

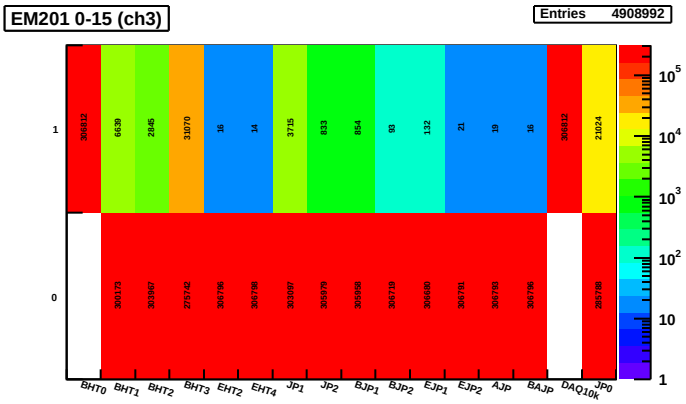

TF201 0-15 (ch0)
Entries 10304
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

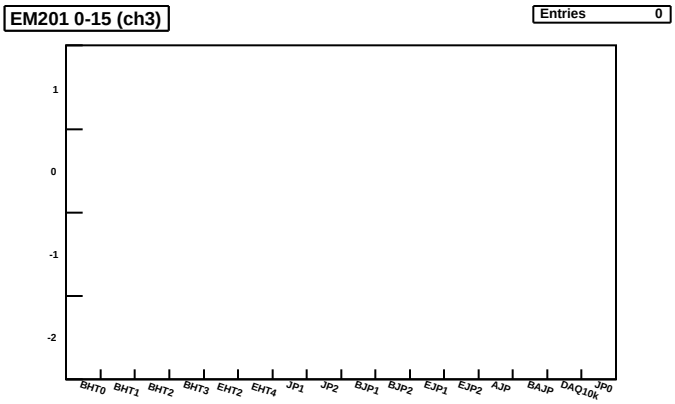

VT201 0-15 (ch1)
Entries 4908992
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 728569
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 4908992


Entries 0


EM201 0-15 (ch3)
Entries 4908992
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0


EM201 0-15 (ch3)
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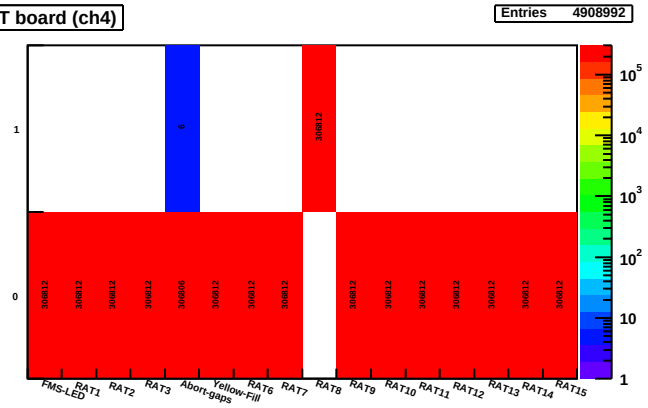
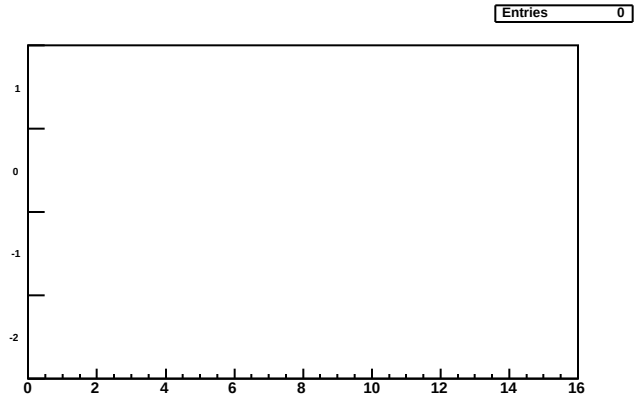
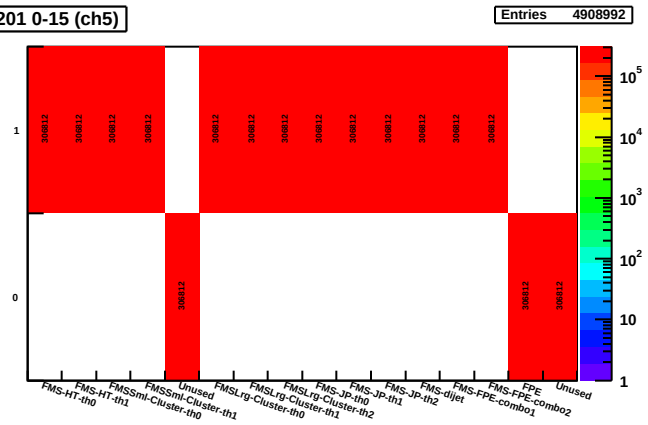
RAT board (ch4)





FP201 0-15 (ch5)



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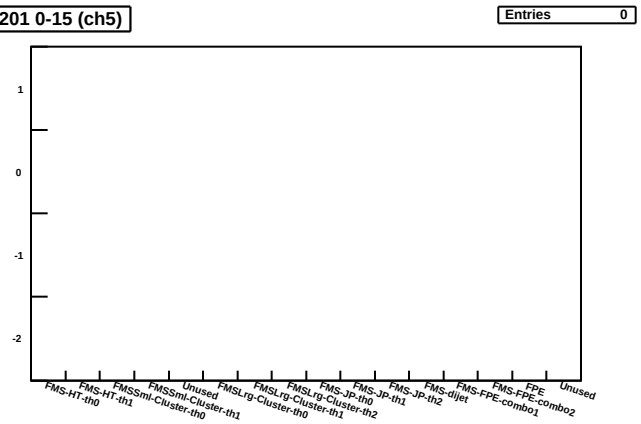
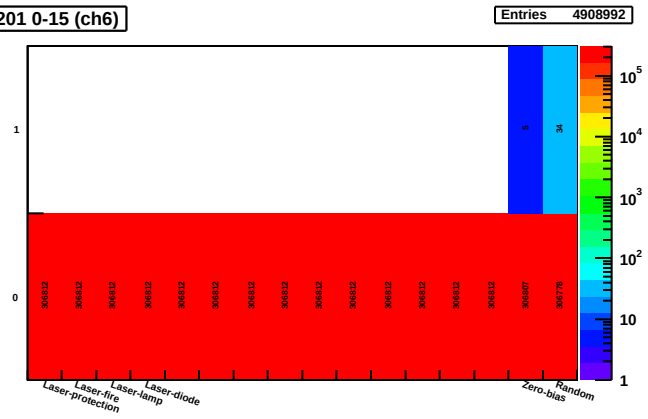
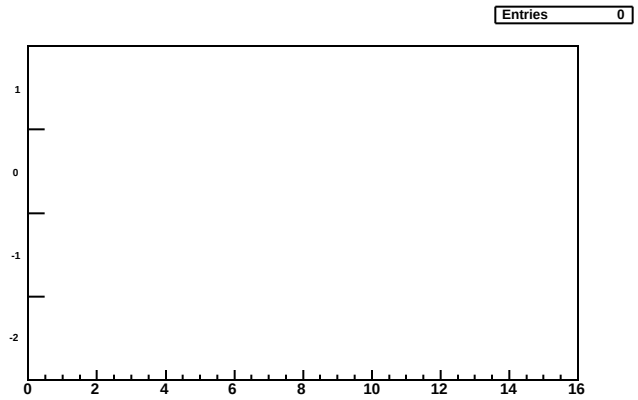
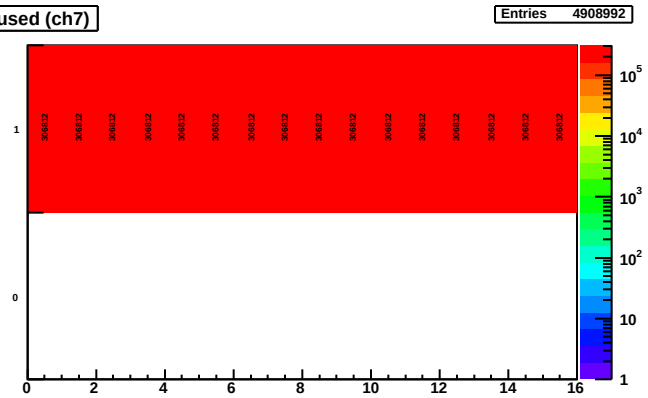
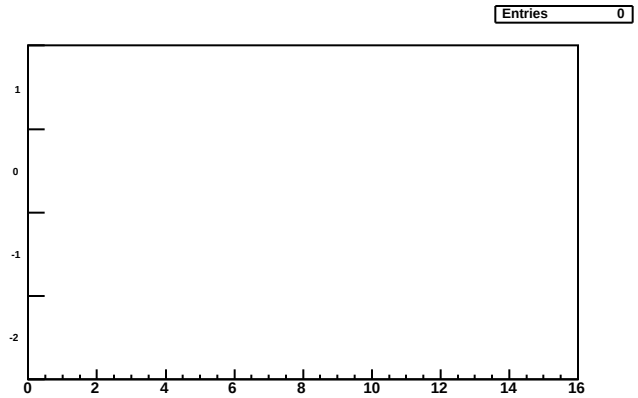


ST201 0-15 (ch6)





Unused (ch7)