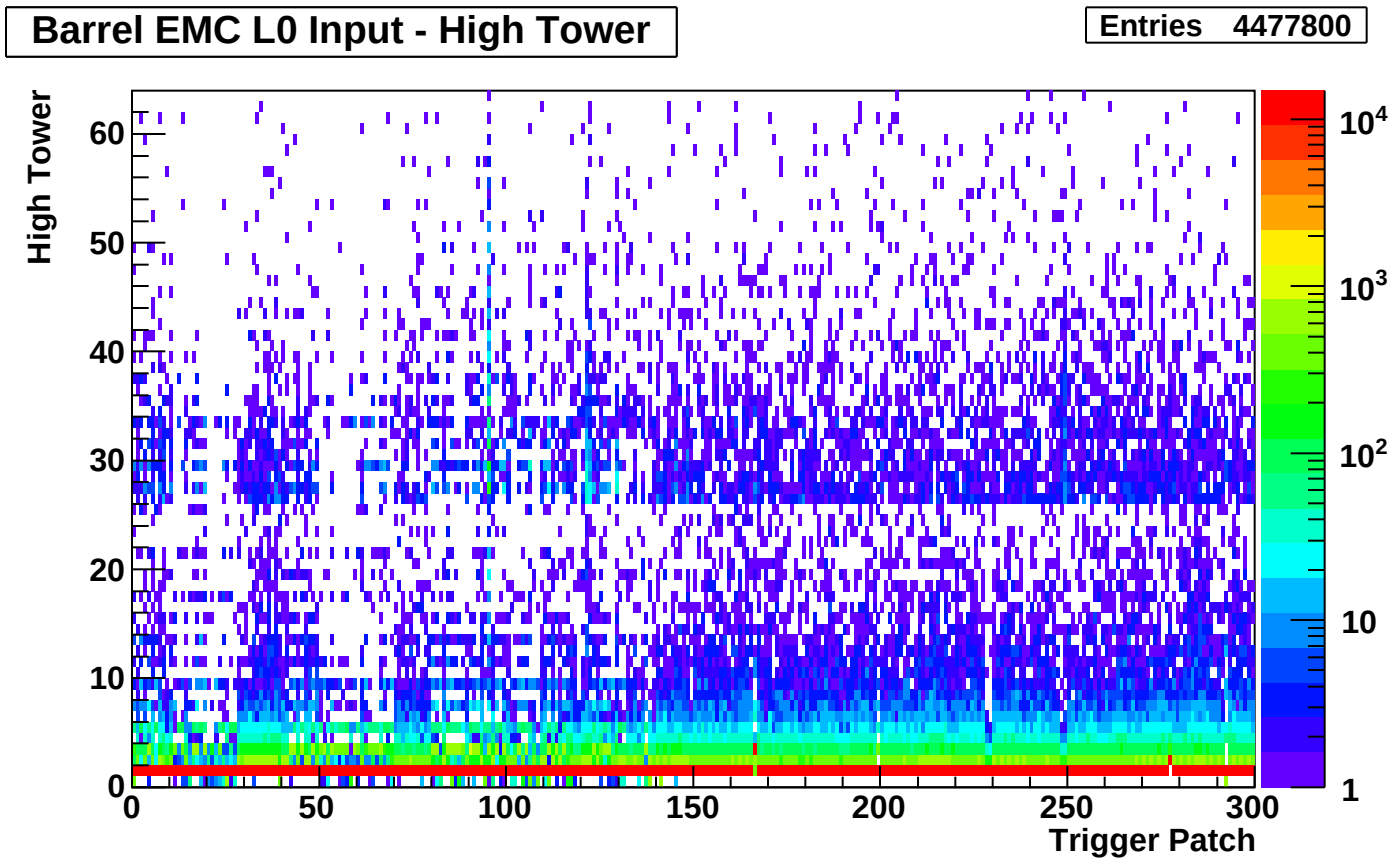
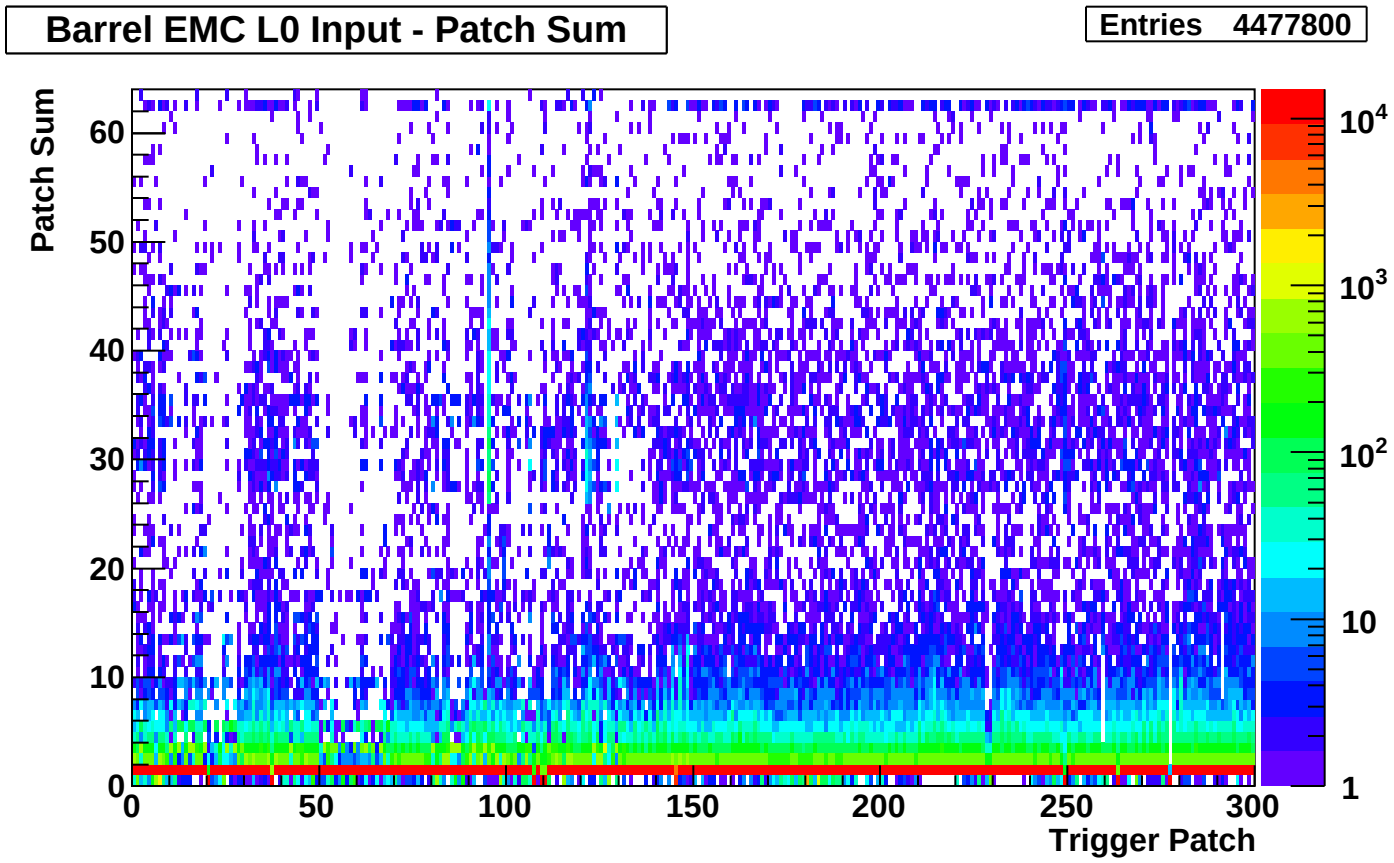
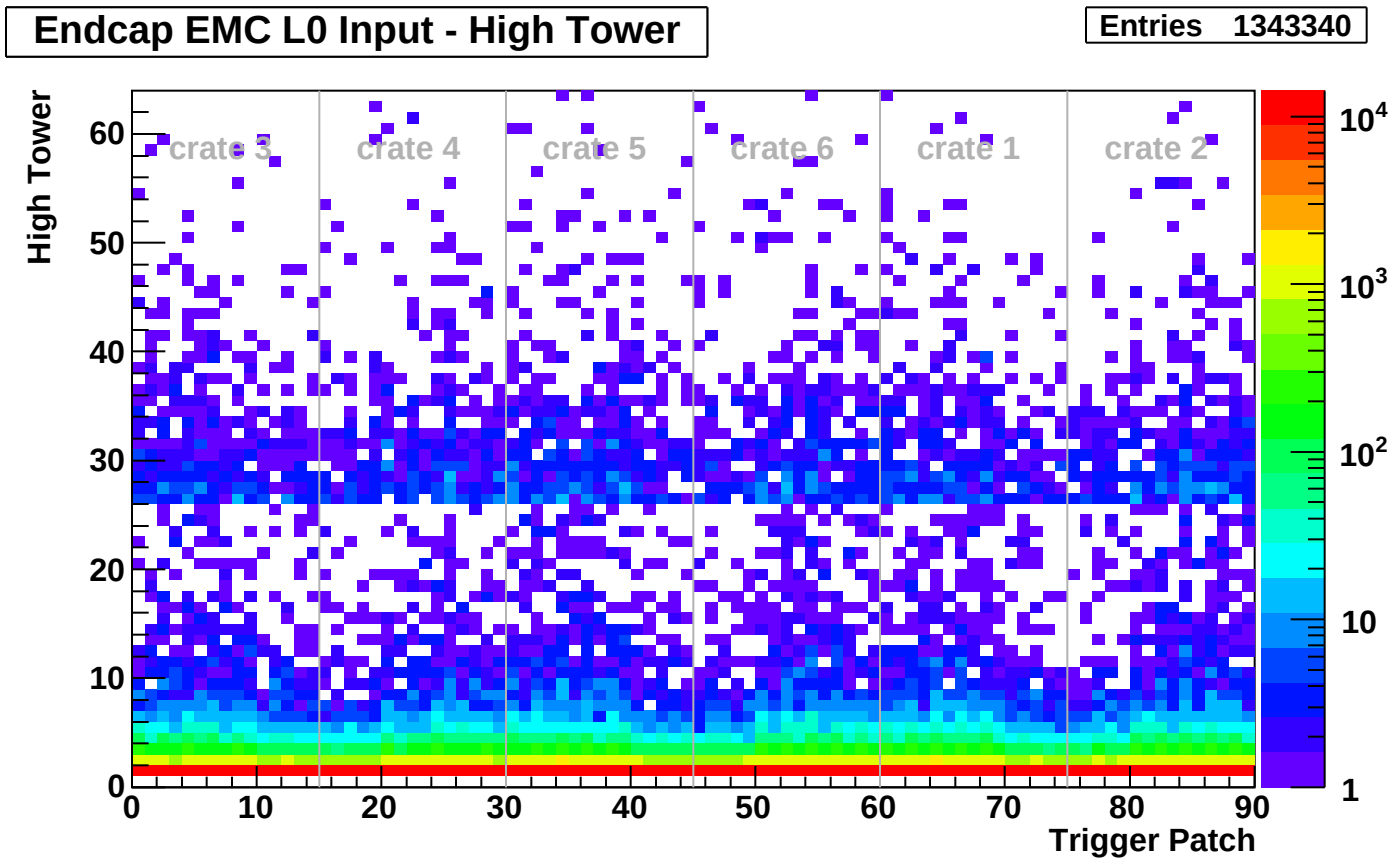
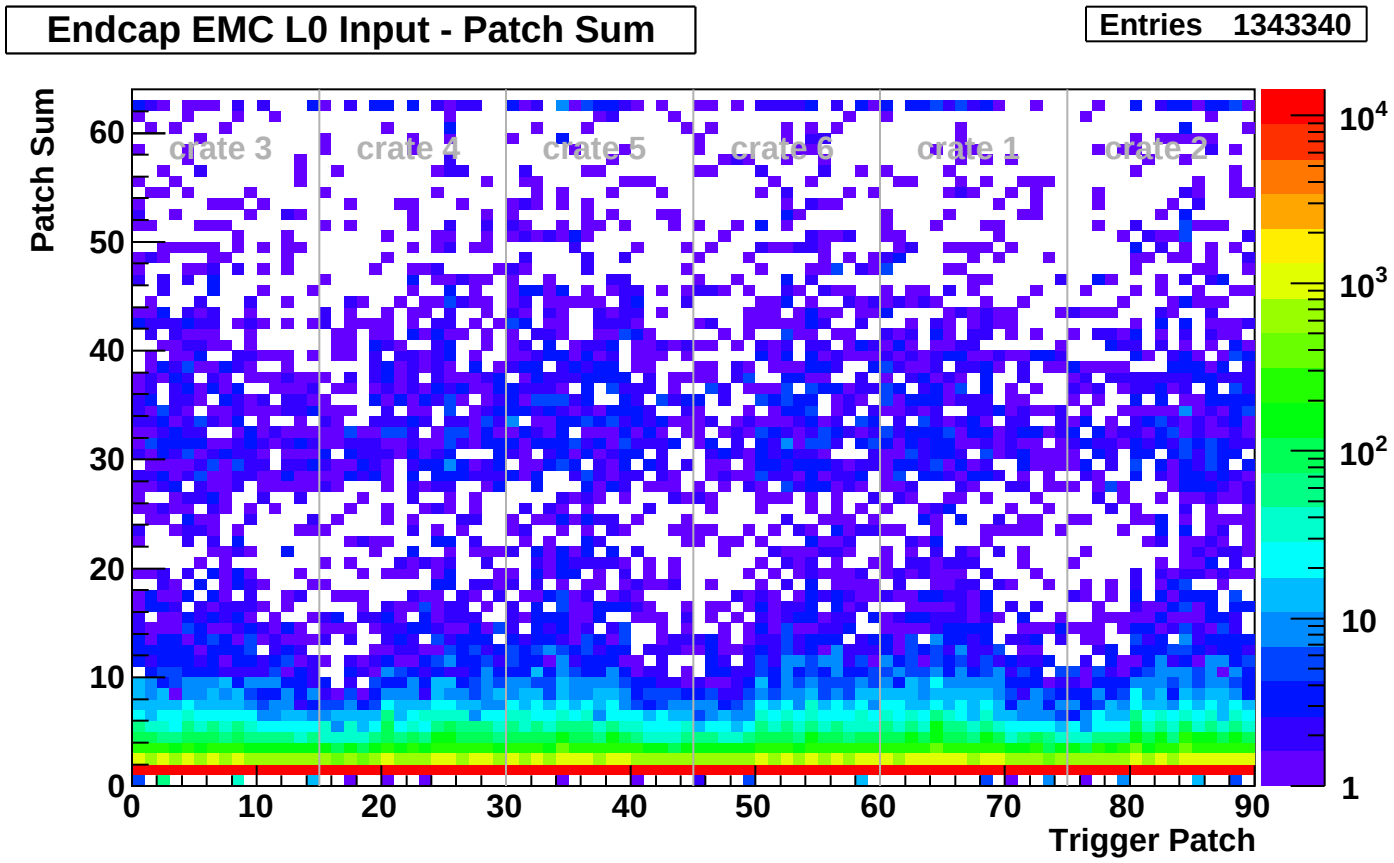
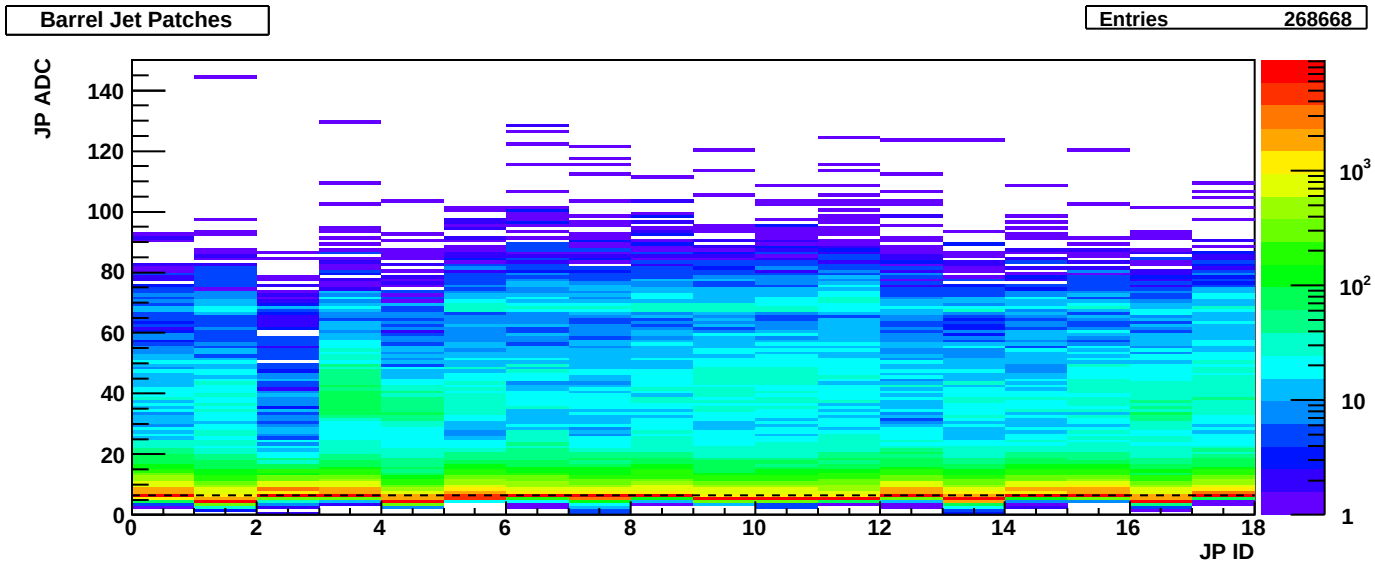
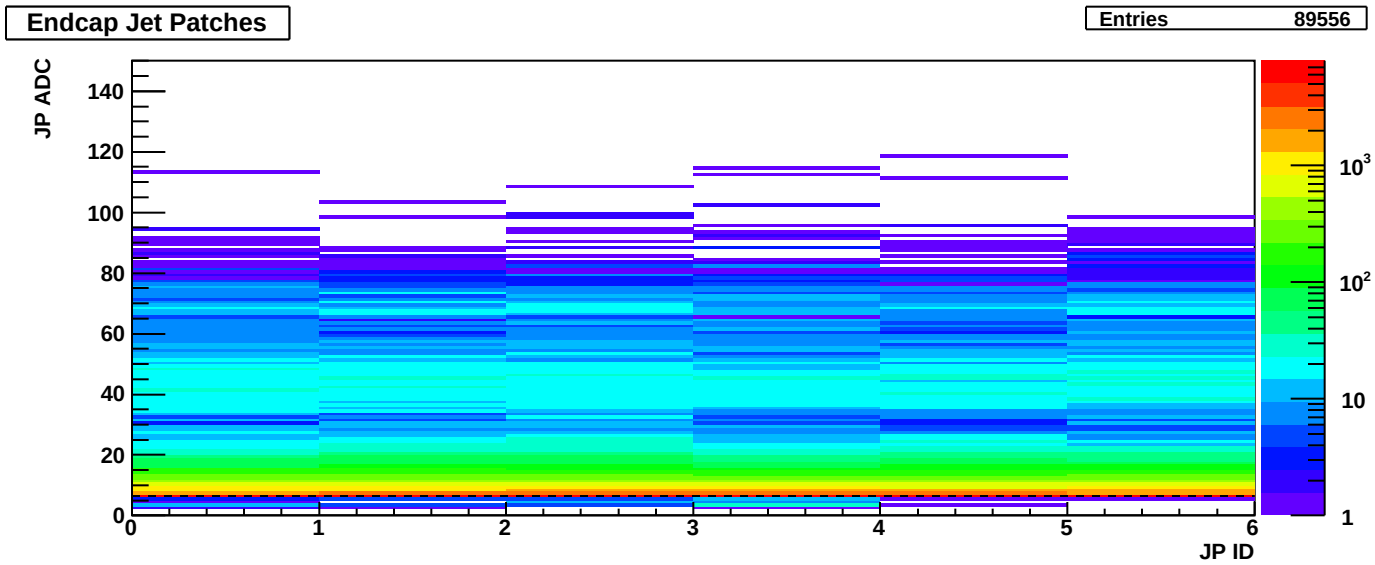

Barrel EMC L0 Input - High Tower
Entries 4477800
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$

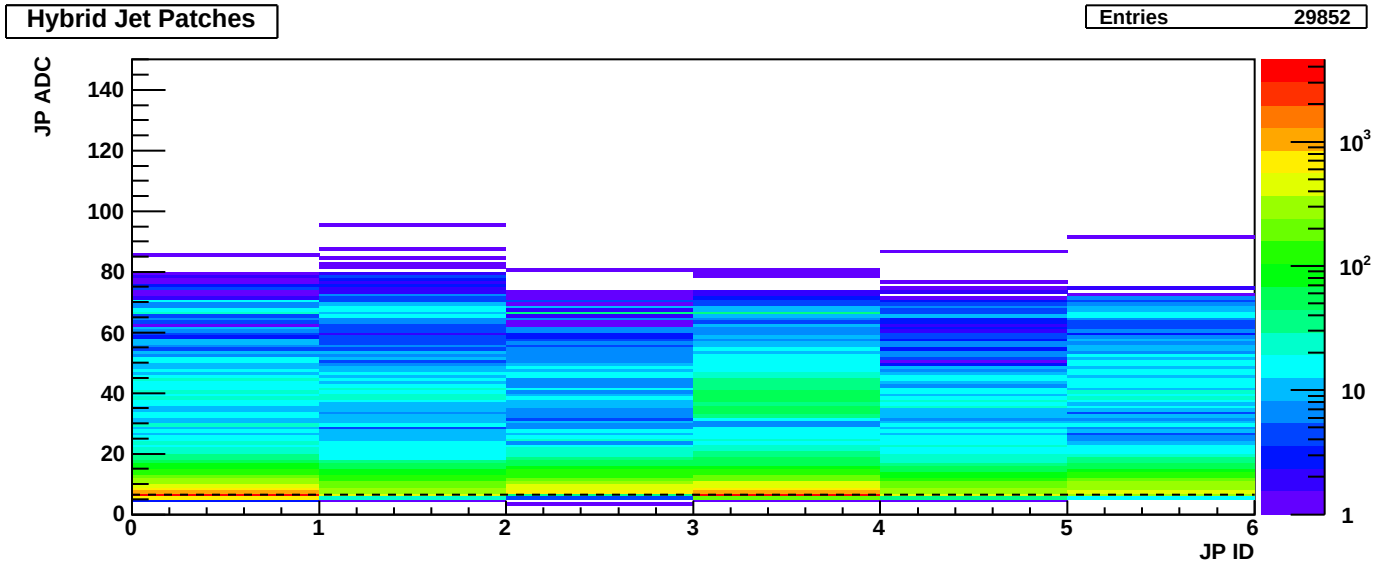

Barrel EMC L0 Input - Patch Sum
Entries 4477800
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$

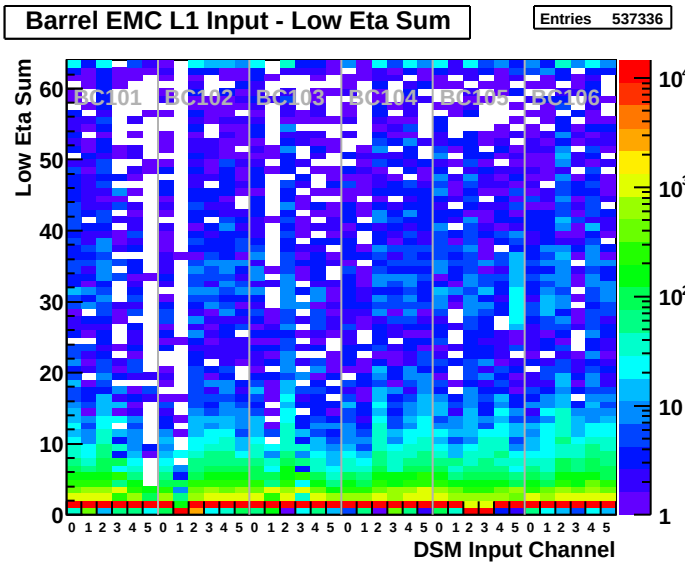

Endcap EMC L0 Input - High Tower
Entries 1343340
High Tower
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

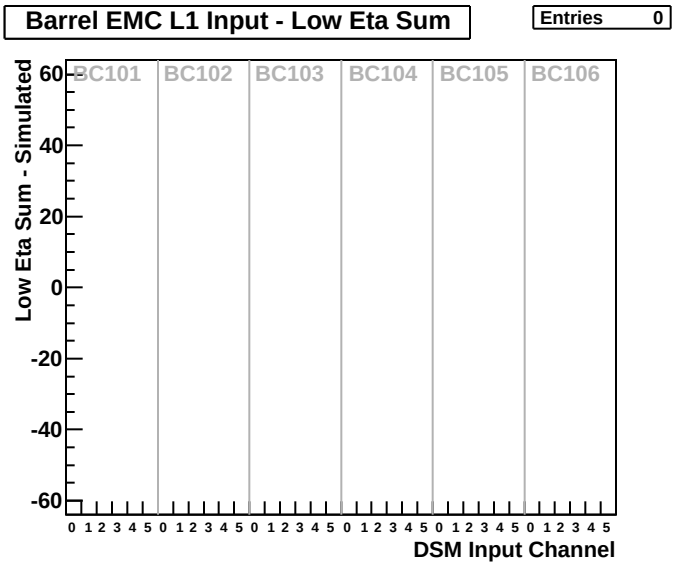

Endcap EMC L0 Input - Patch Sum
Entries 1343340
Patch Sum
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

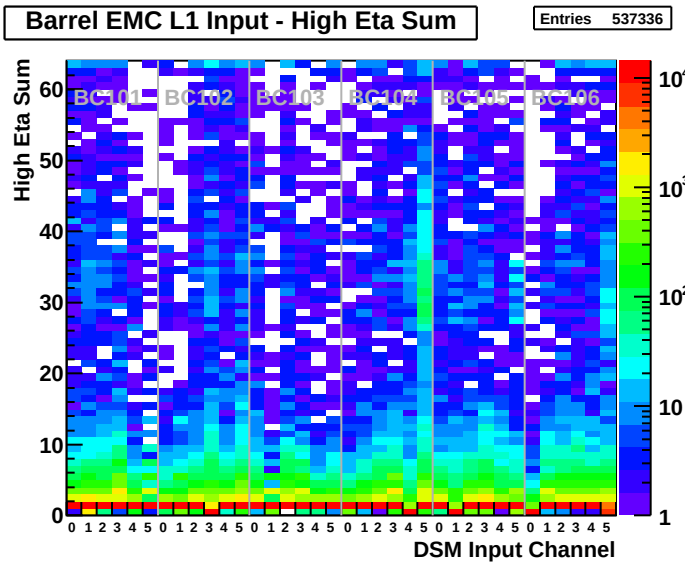

Barrel Jet Patches
Entries 268668
JP ADC
JP ID

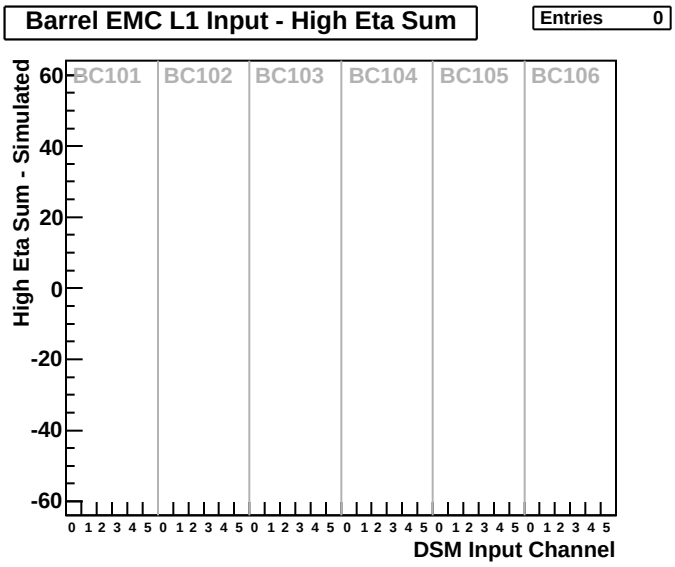

Endcap Jet Patches
Entries 89556
JP ADC
JP ID

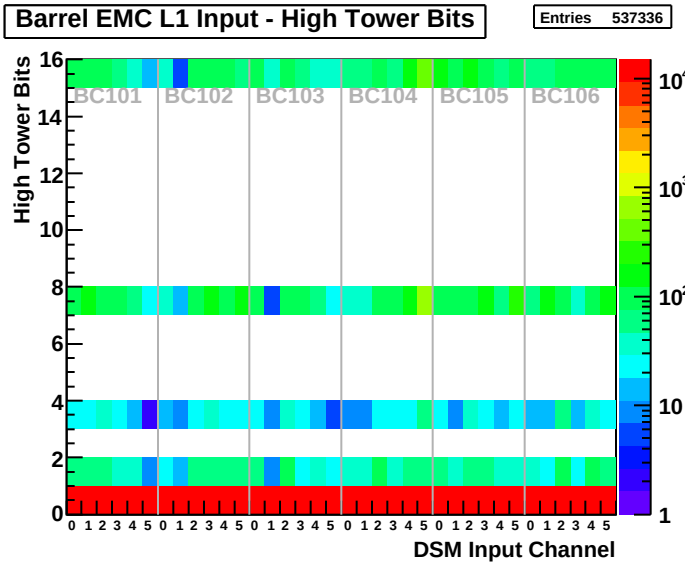

Hybrid Jet Patches
Entries 29852
JP ADC
JP ID

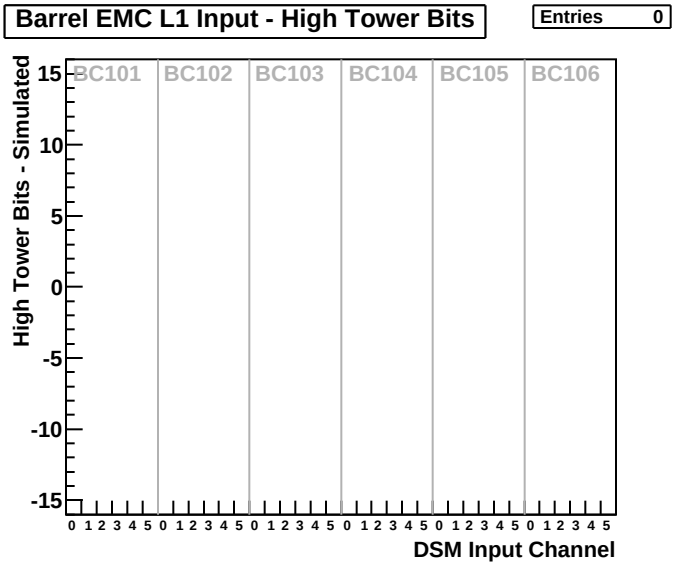

Barrel EMC L1 Input - Low Eta Sum
Entries 537336
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

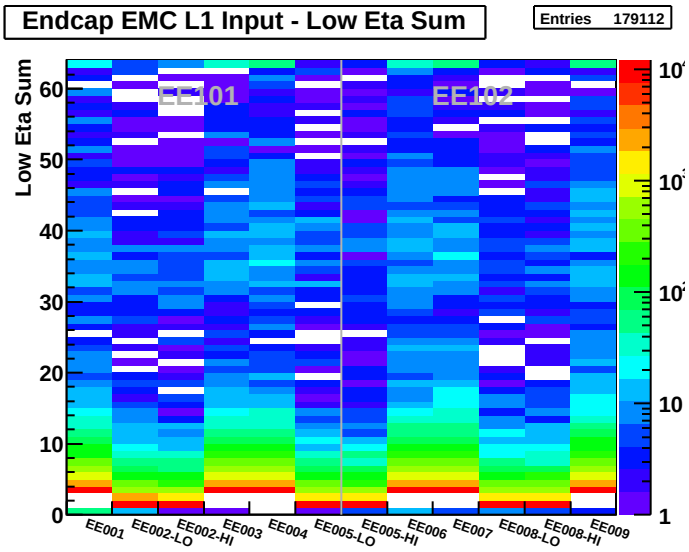

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

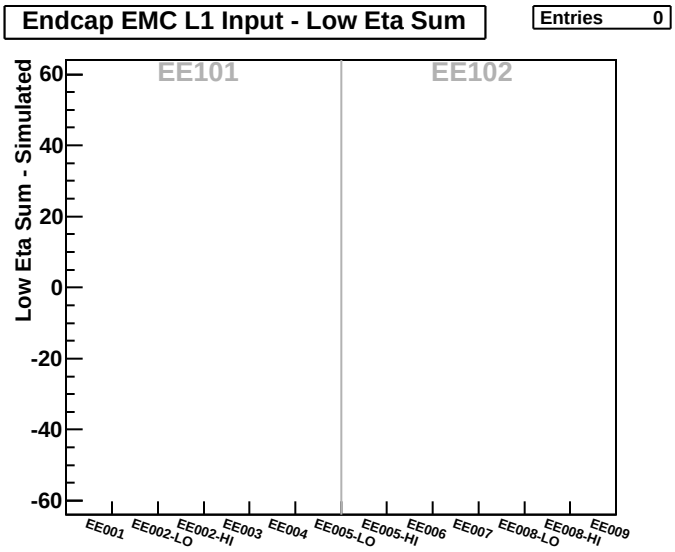

Barrel EMC L1 Input - High Eta Sum
Entries 537336
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

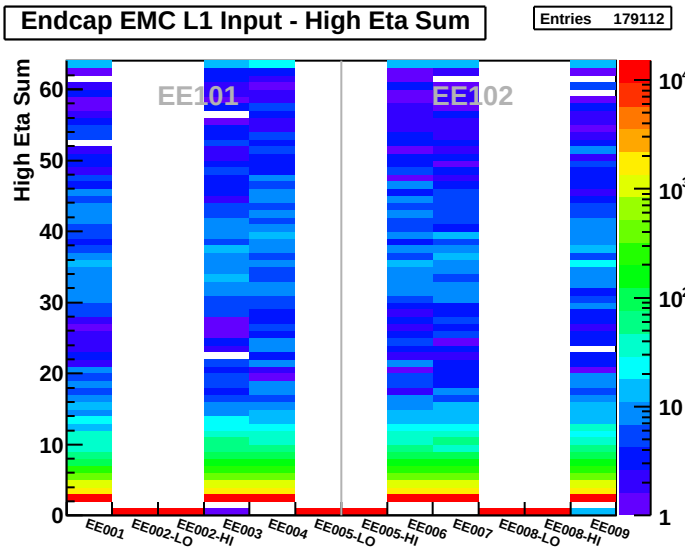

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

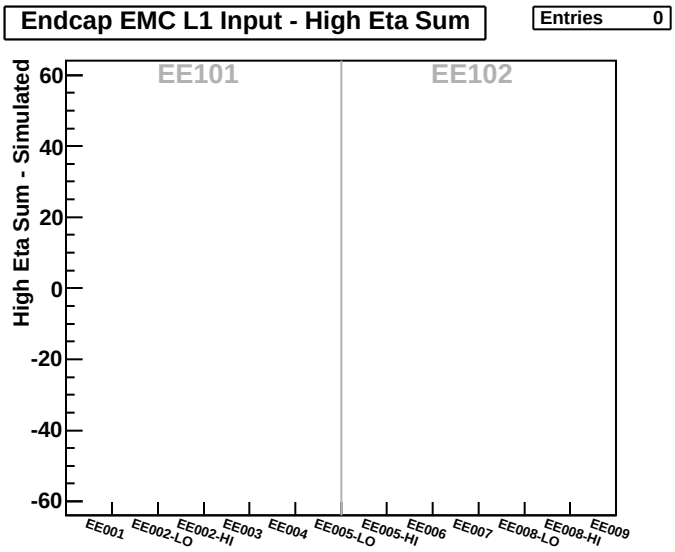

Barrel EMC L1 Input - High Tower Bits
Entries 537336
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

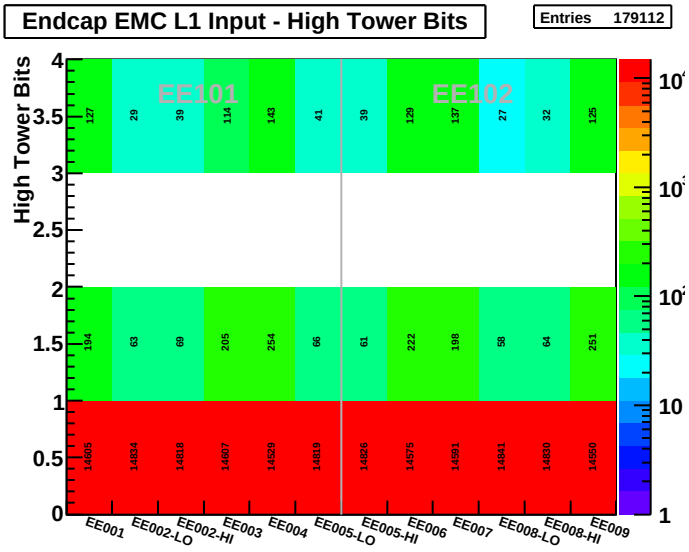

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

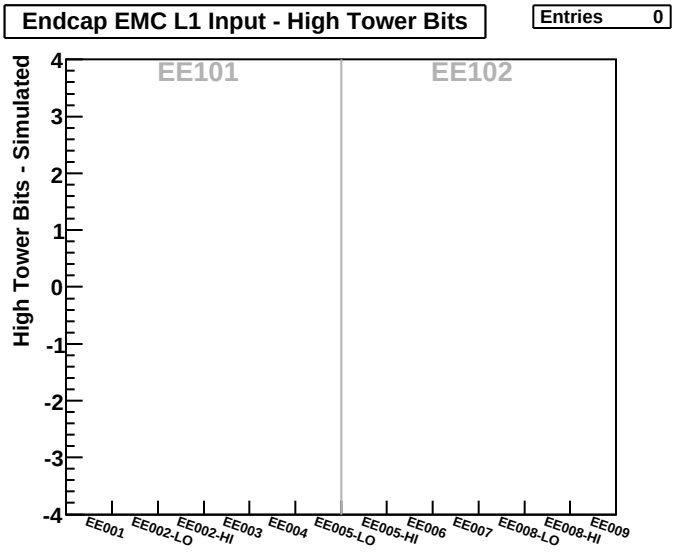

Endcap EMC L1 Input - Low Eta Sum
Entries 179112
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

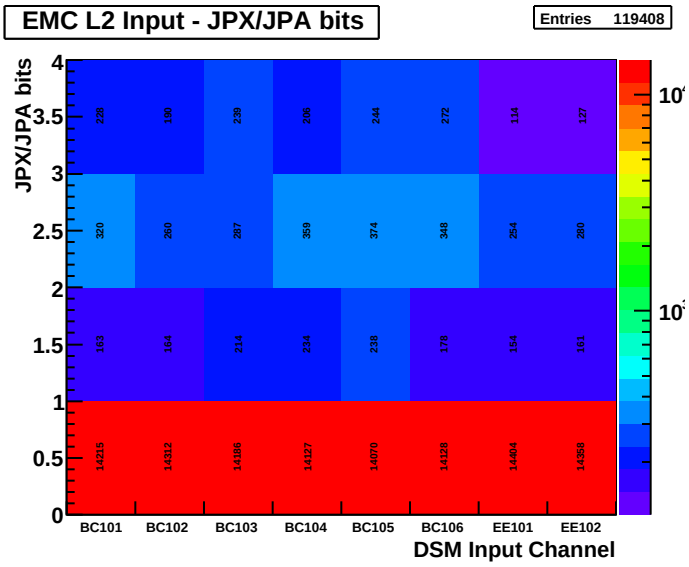

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

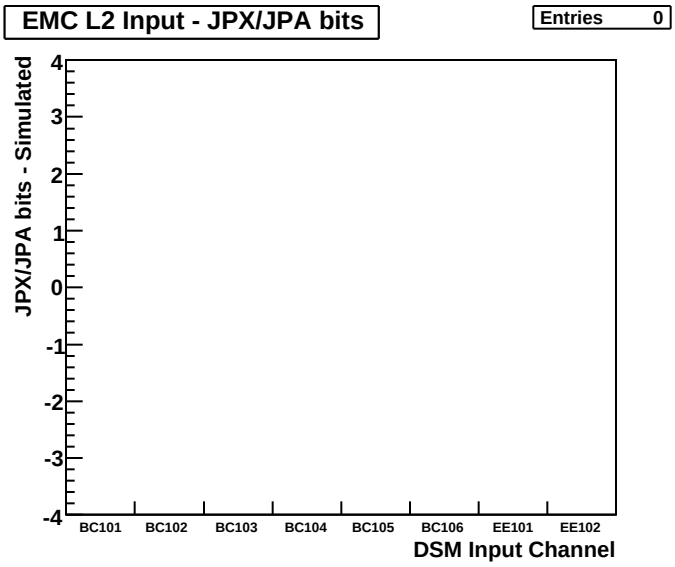

Endcap EMC L1 Input - High Eta Sum
Entries 179112
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

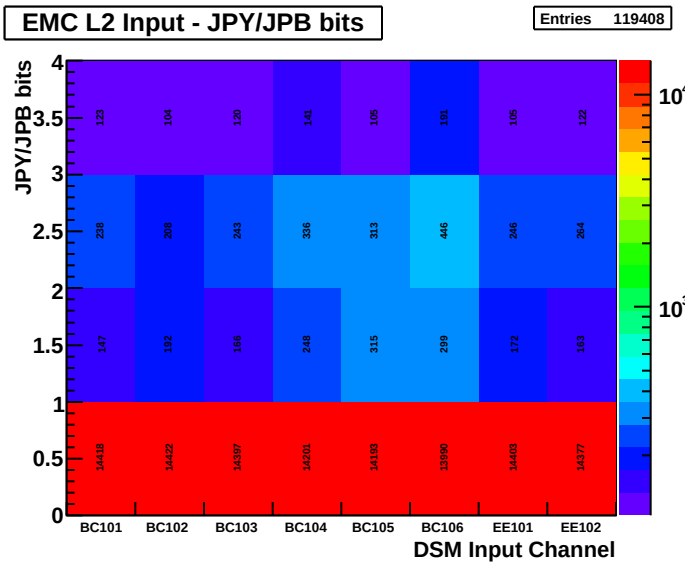

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

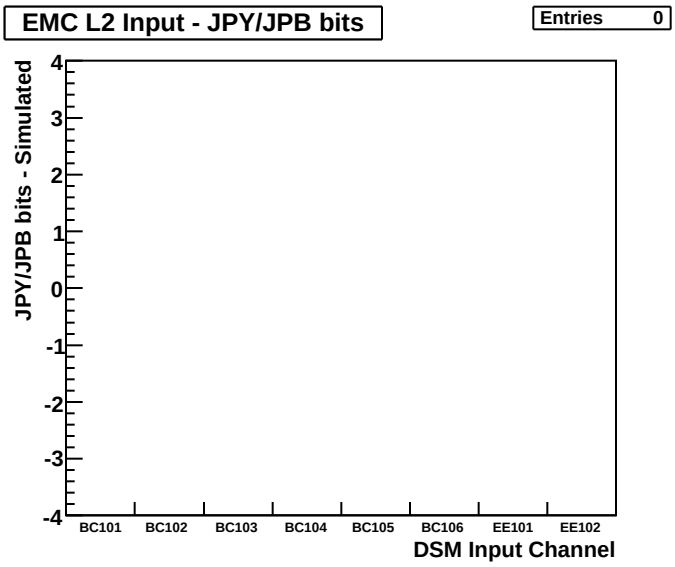

Endcap EMC L1 Input - High Tower Bits
Entries 179112
High Tower Bits
EE101
EE102
127 29 39 114 143 41 39 129 137 27 32 125
194 63 69 205 254 66 61 222 198 58 64 251
14605 14834 14818 14607 14529 14819 14826 14575 14591 14941 14830 14550
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

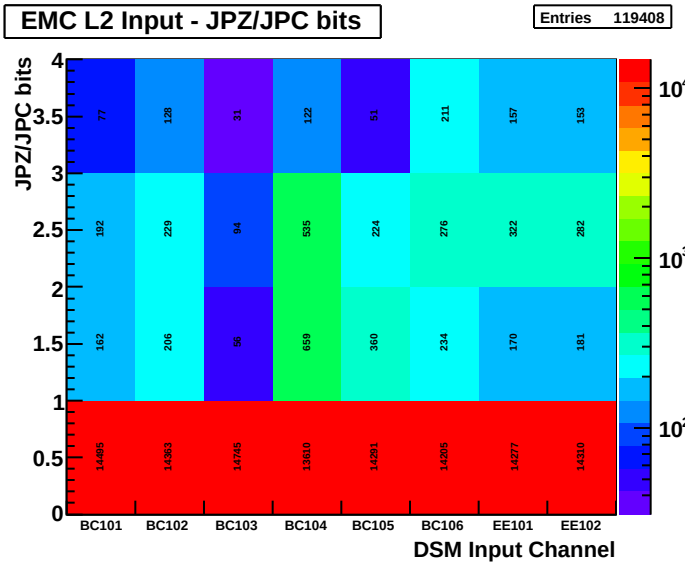

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

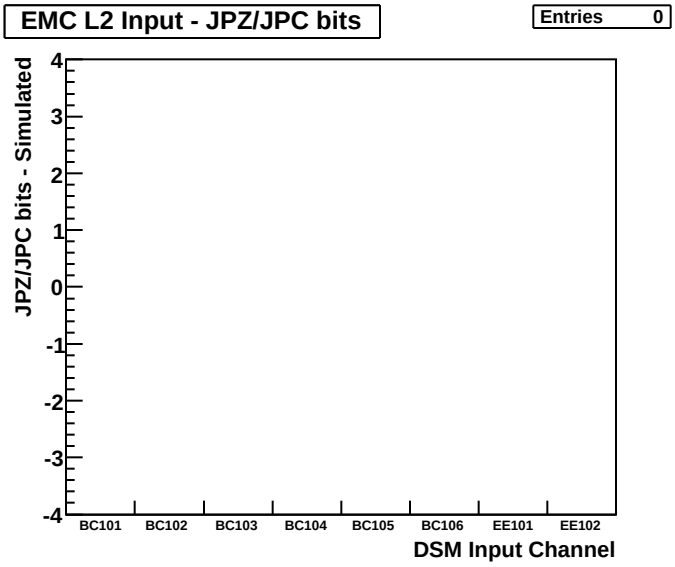

EMC L2 Input - JPX/JPA bits
Entries 119408
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
228 190 239 206 244 272 114 127
320 260 287 359 374 348 254 280
163 164 214 234 238 176 154 161
14215 14312 14186 14127 14070 14128 14404 14358

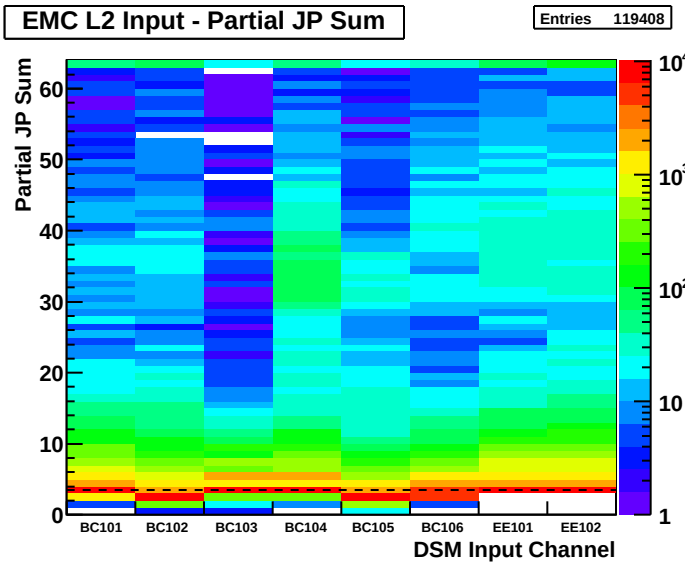

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

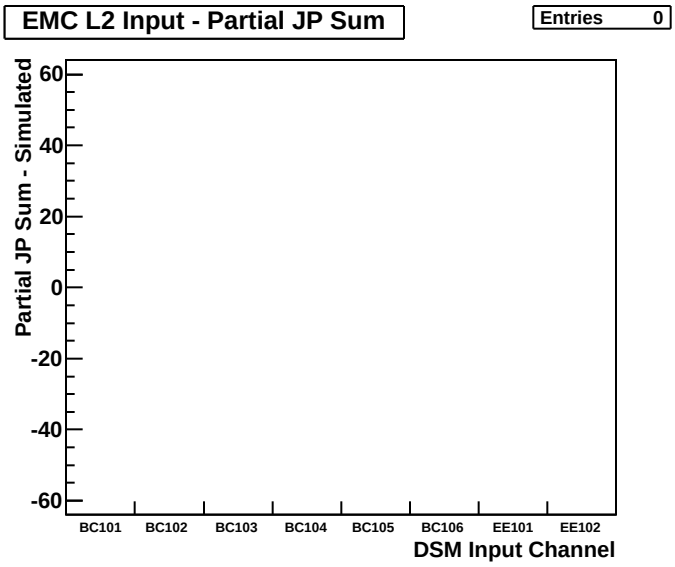

EMC L2 Input - JPY/JPB bits
Entries 119408
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
123 104 120 141 105 191 105 122
238 208 243 336 313 446 246 264
147 192 166 248 315 299 172 163
14418 14422 14397 14201 14193 13990 14403 14377

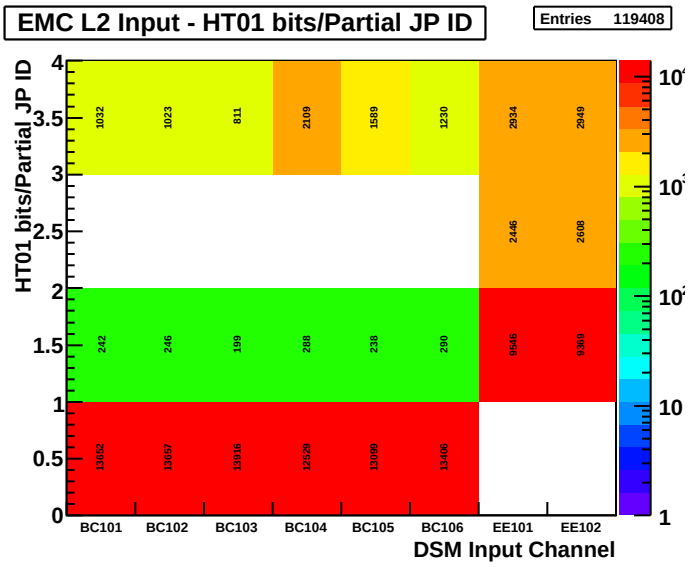

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

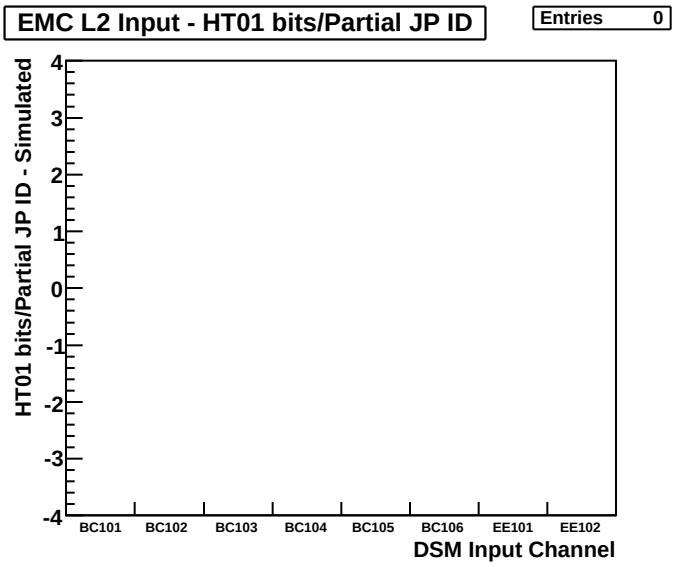

EMC L2 Input - JPZ/JPC bits
Entries 119408
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
77 128 31 122 51 211 157 153
192 229 94 535 224 276 322 282
162 206 56 659 360 234 170 181
14495 14363 14745 13610 14391 14205 14277 14310

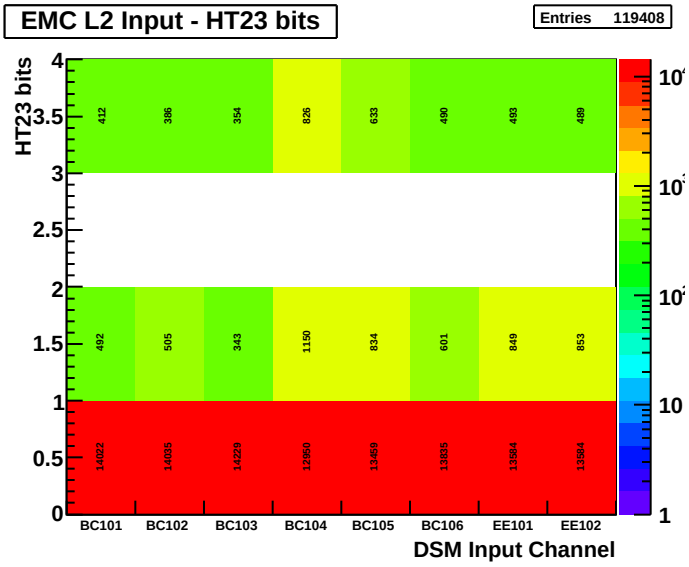

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

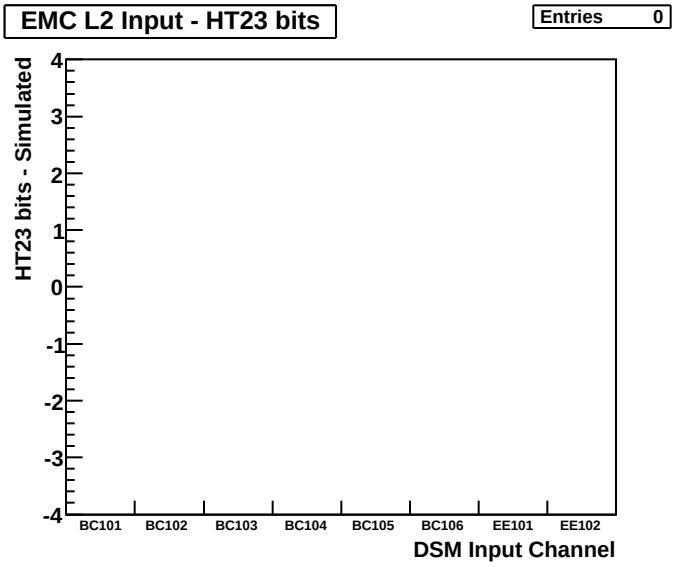

EMC L2 Input - Partial JP Sum
Entries 119408
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

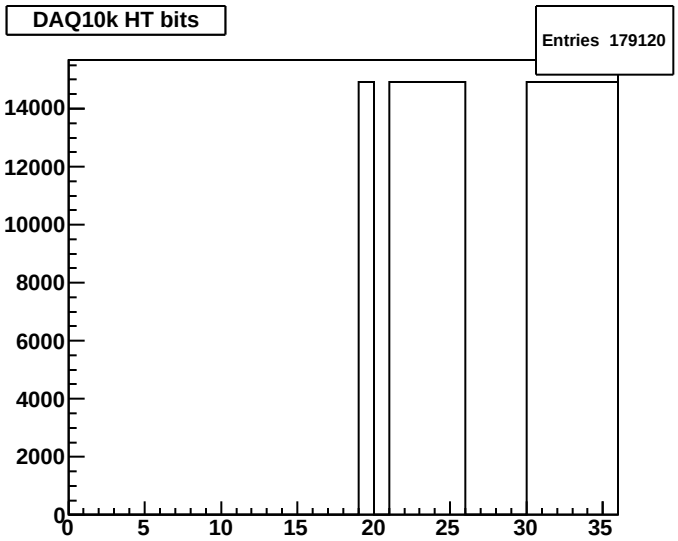

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

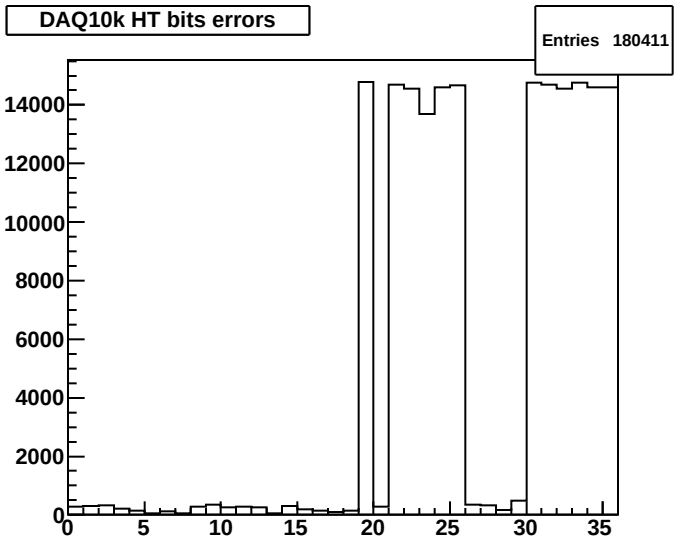

EMC L2 Input - HT01 bits/Partial JP ID
Entries 119408
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

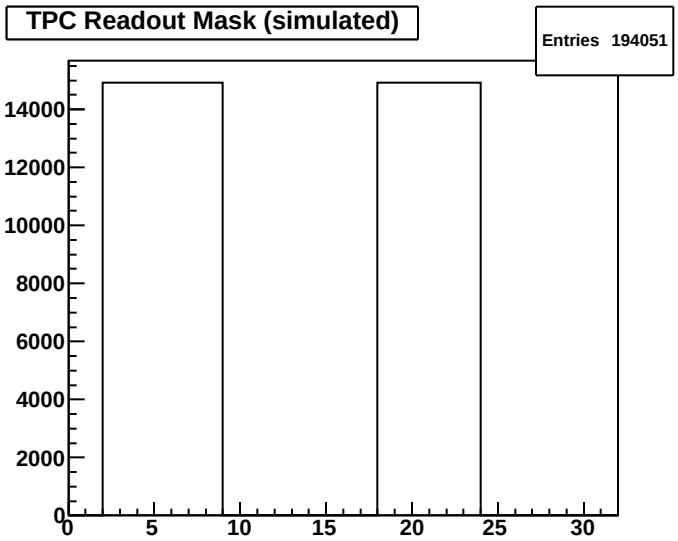

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

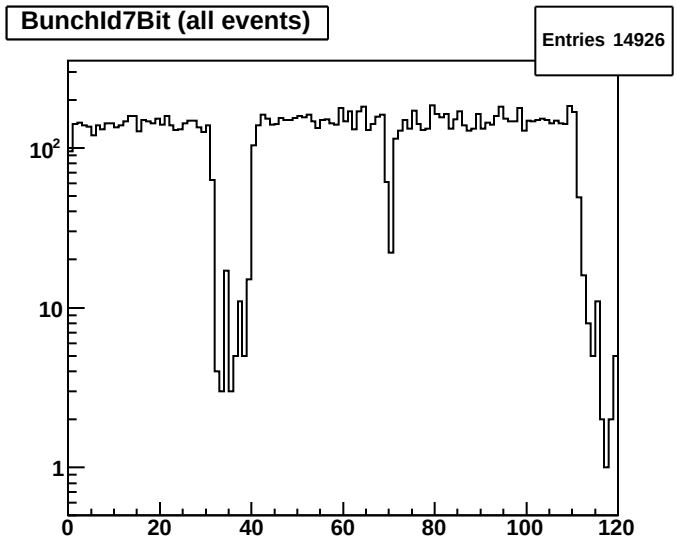

EMC L2 Input - HT23 bits
Entries 119408
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

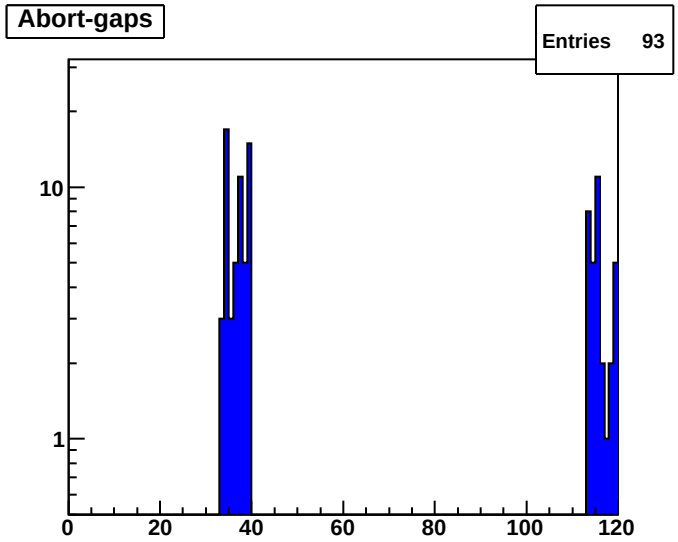

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

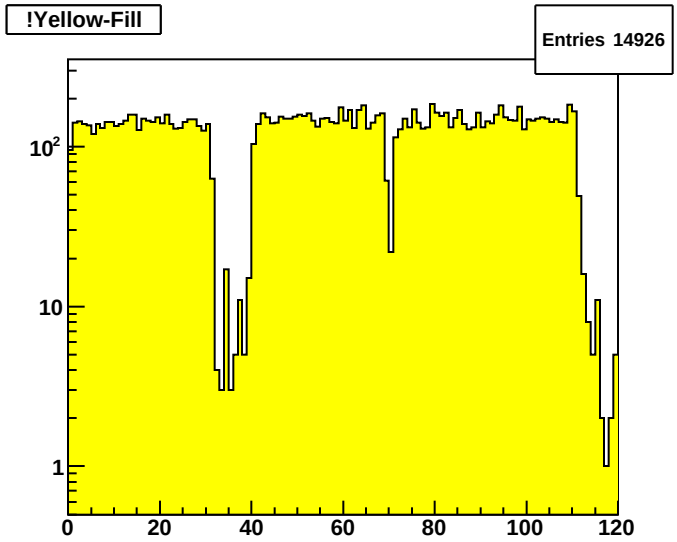

DAQ10k HT bits
Entries 179120
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

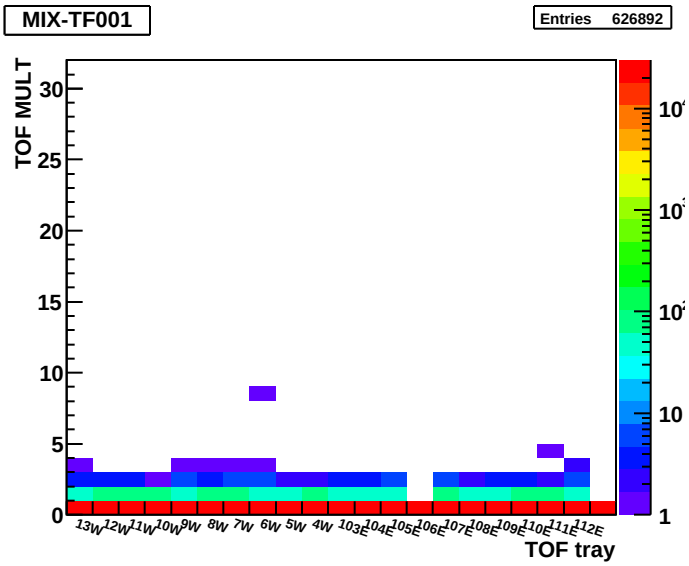

DAQ10k HT bits errors
Entries 180411
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

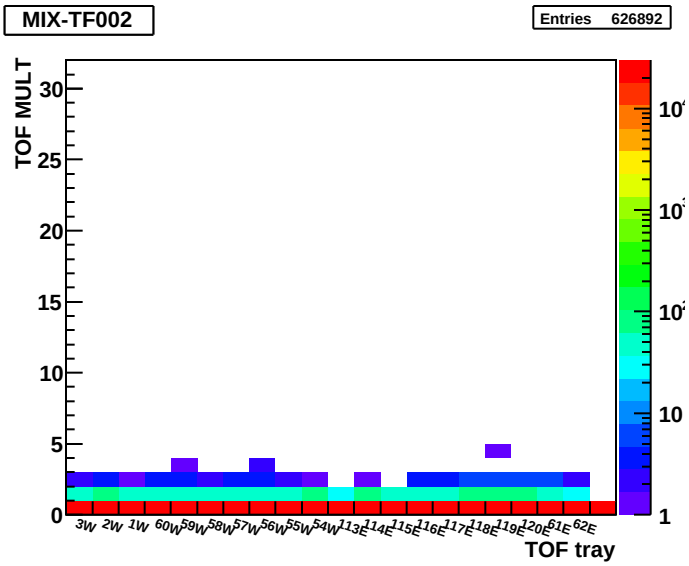

TPC Readout Mask (simulated)
Entries 194051
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30

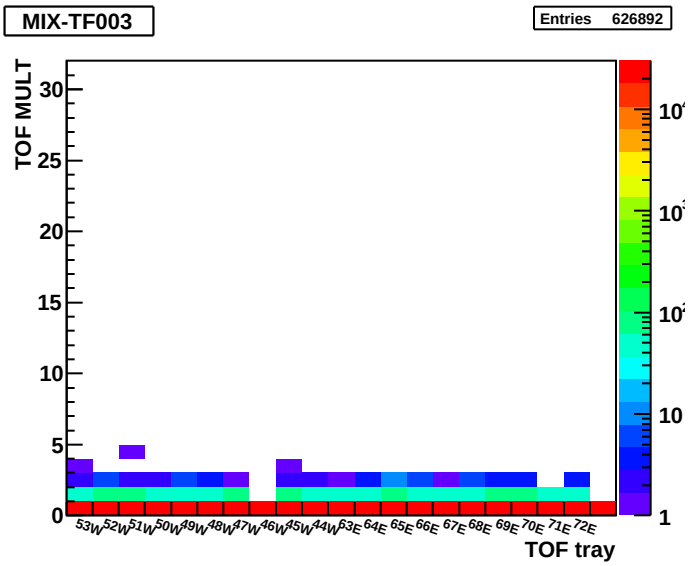

BunchId7Bit (all events)
Entries 14926
$10^2$
10
1
0 20 40 60 80 100 120

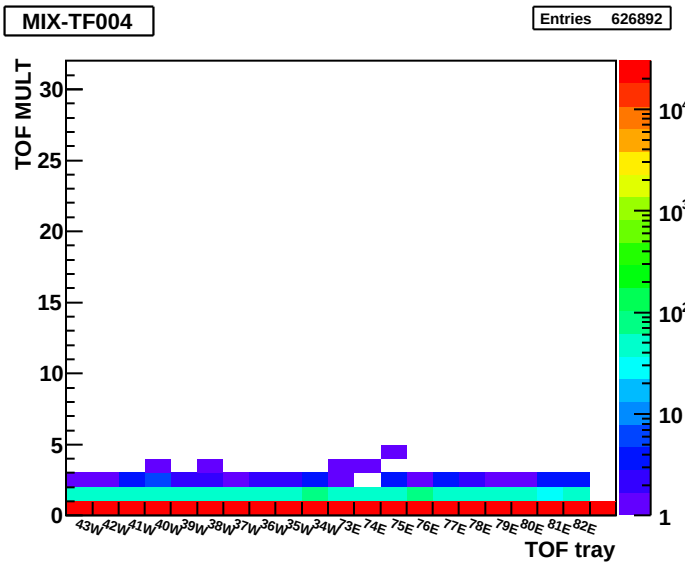

Abort-gaps
Entries 93
10
1
0 20 40 60 80 100 120

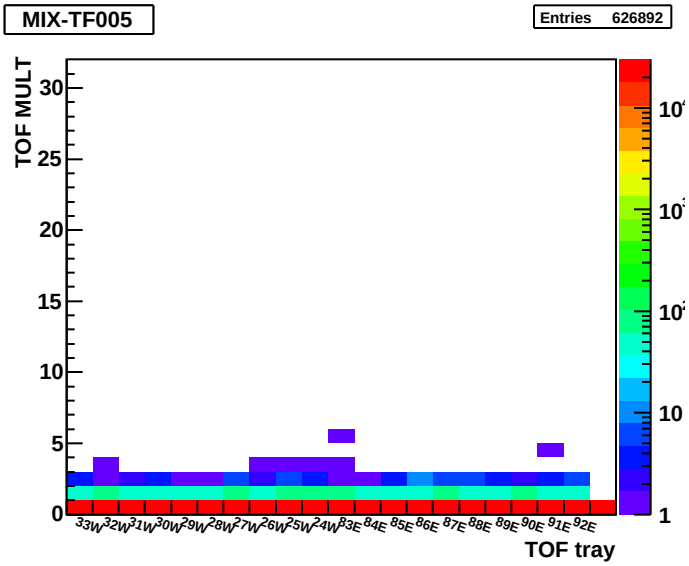

!Yellow-Fill
Entries 14926
$10^2$
10
1
0 20 40 60 80 100 120

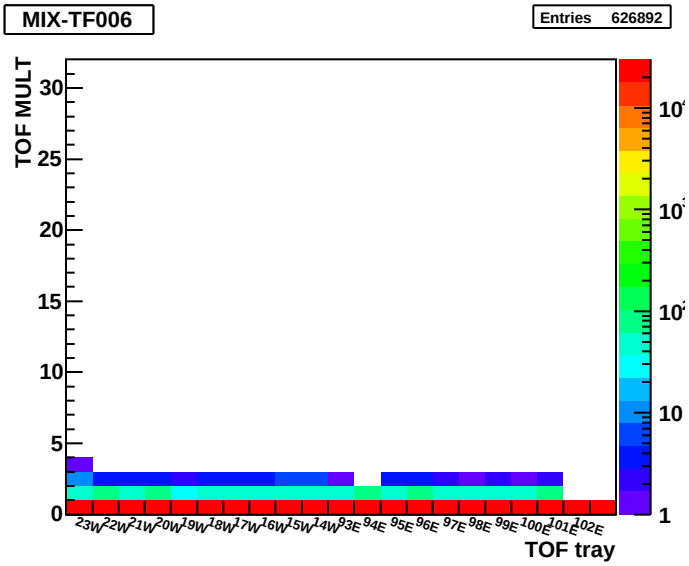

MIX-TF001
Entries 626892
TOF MULT
TOF tray

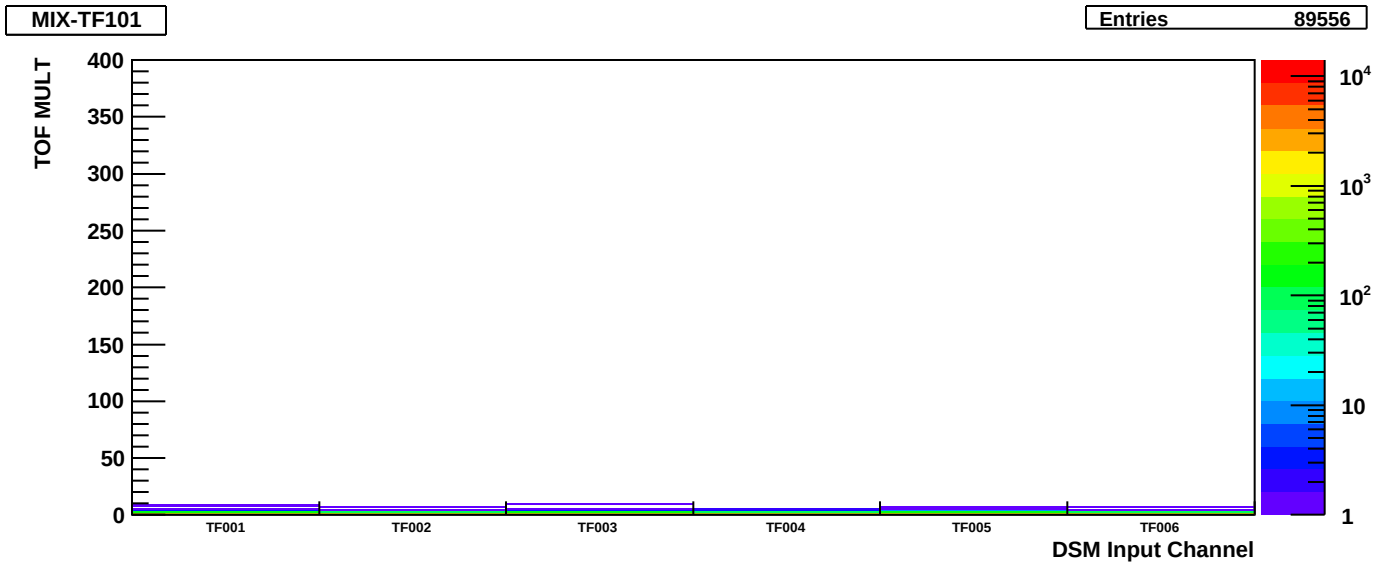

MIX-TF002
Entries 626892
TOF MULT
TOF tray

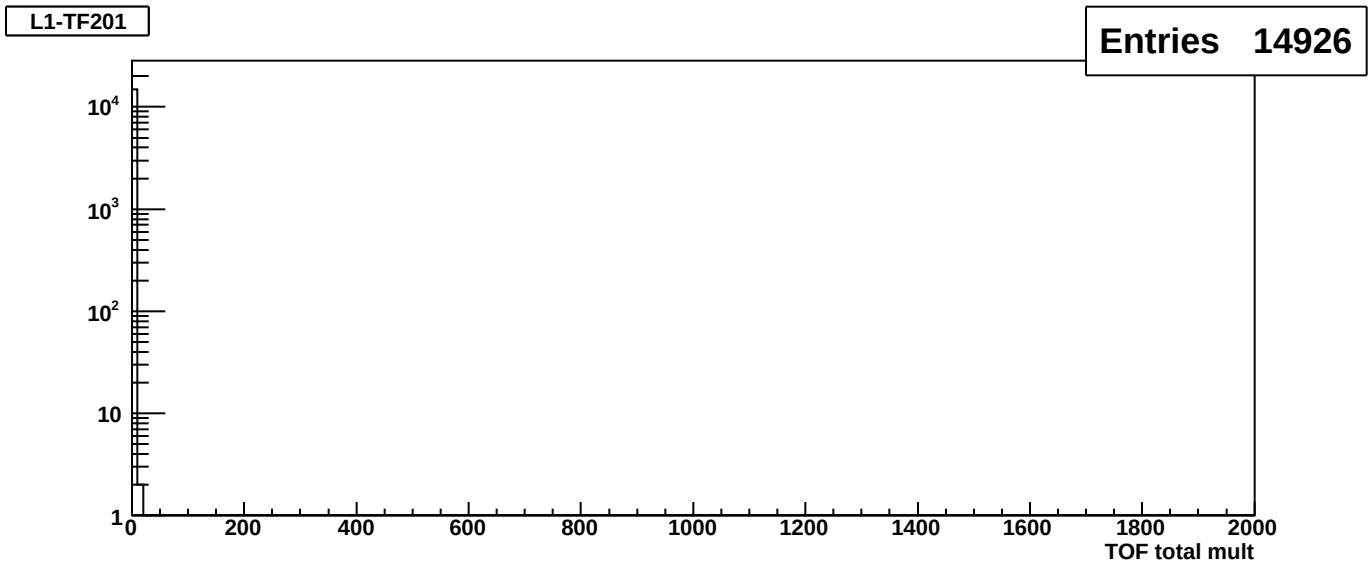

MIX-TF003
Entries 626892
TOF MULT
TOF tray

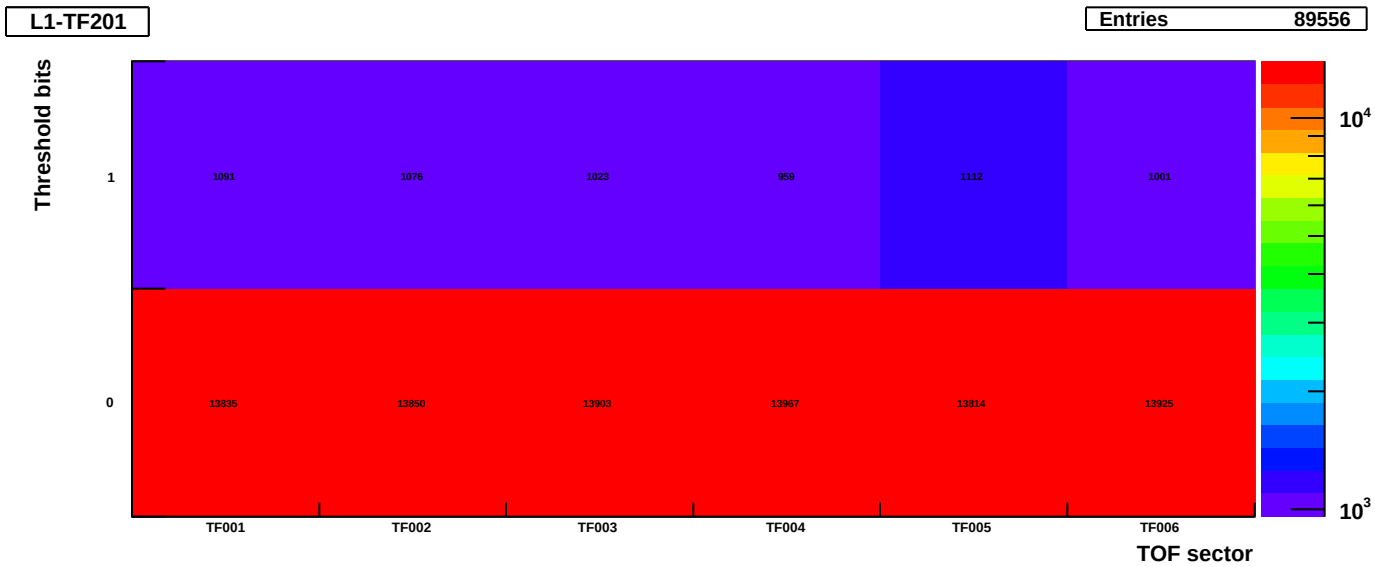

MIX-TF004
Entries 626892
TOF MULT
TOF tray

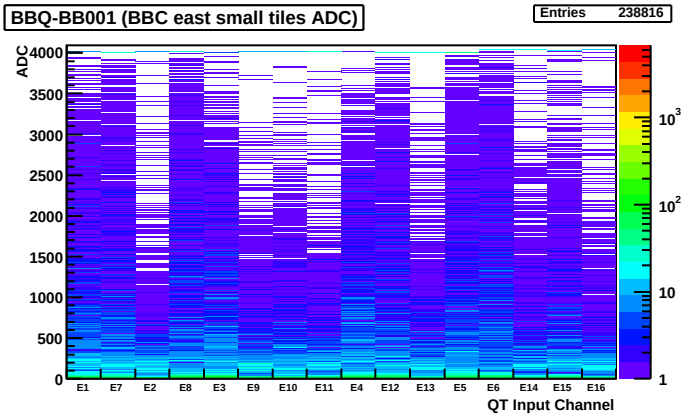

MIX-TF005
Entries 626892
TOF MULT
TOF tray

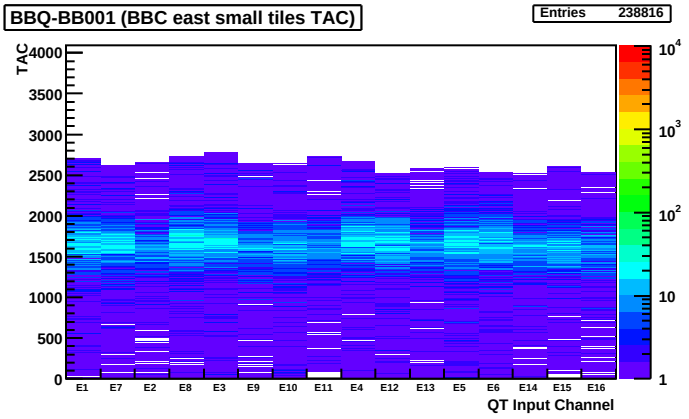

MIX-TF006
Entries 626892
TOF MULT
TOF tray

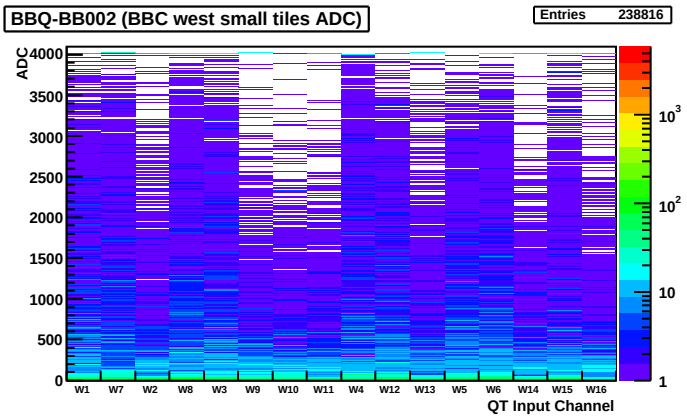

MIX-TF101
Entries 89556
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
$10^4$
$10^3$
$10^2$
10
1

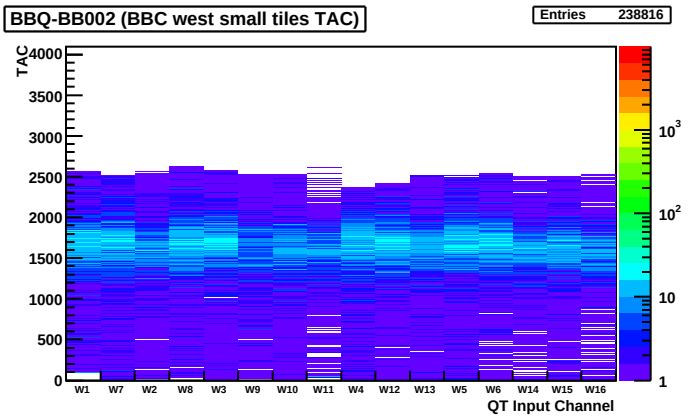

L1-TF201
Entries 14926
$10^4$
$10^3$
$10^2$
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

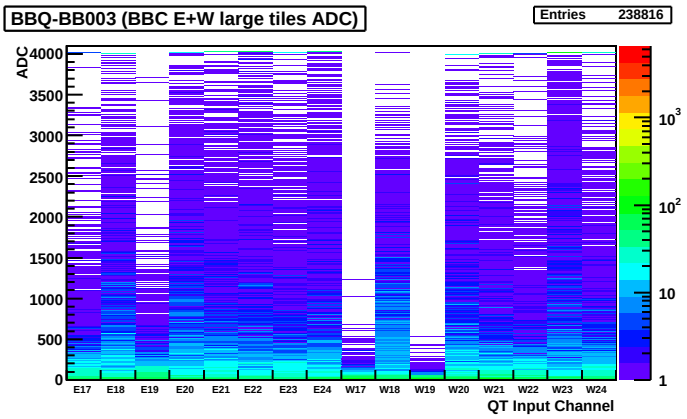

L1-TF201
Entries 89556
Threshold bits
1
0
1091
1076
1023
959
1112
1001
13835
13850
13903
13967
13814
13925
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
$10^4$
$10^3$

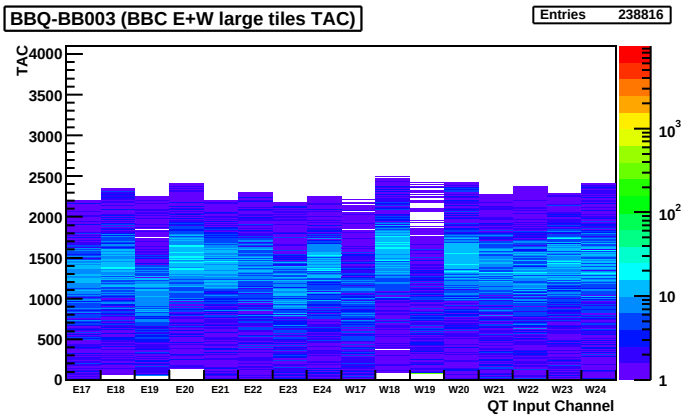

BBQ-BB001 (BBC east small tiles ADC)
Entries 238816
ADC
QT Input Channel

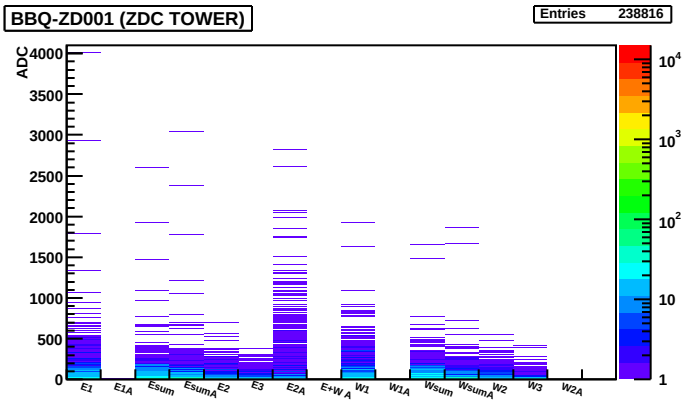

BBQ-BB001 (BBC east small tiles TAC)
Entries 238816
TAC
QT Input Channel

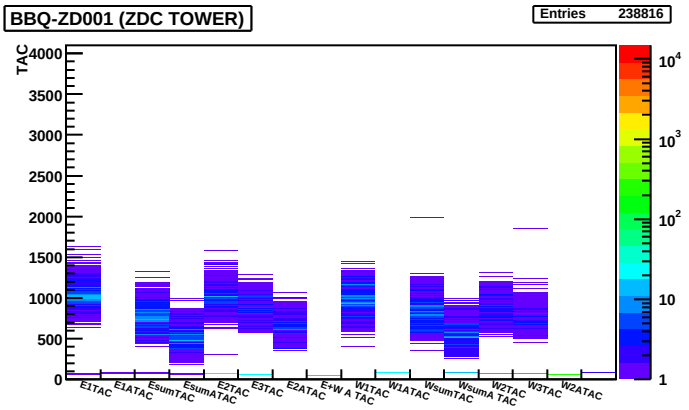

BBQ-BB002 (BBC west small tiles ADC)
Entries 238816
ADC
QT Input Channel

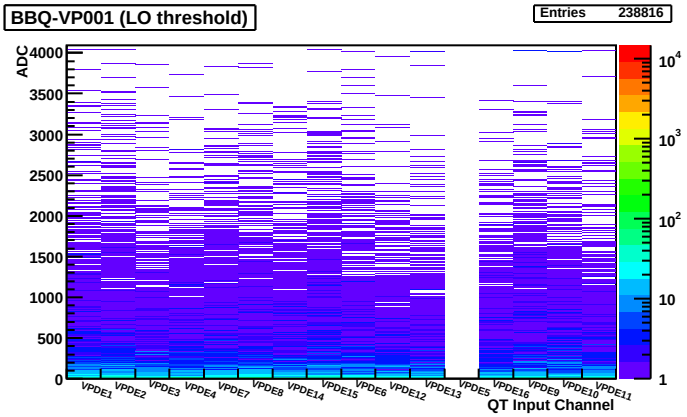

BBQ-BB002 (BBC west small tiles TAC)
Entries 238816
TAC
QT Input Channel

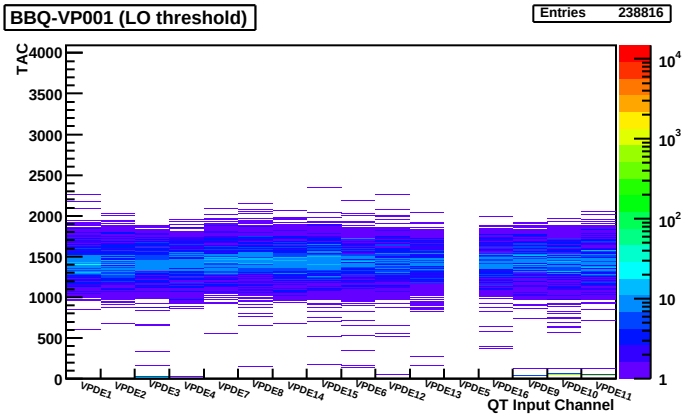

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 238816
ADC
QT Input Channel

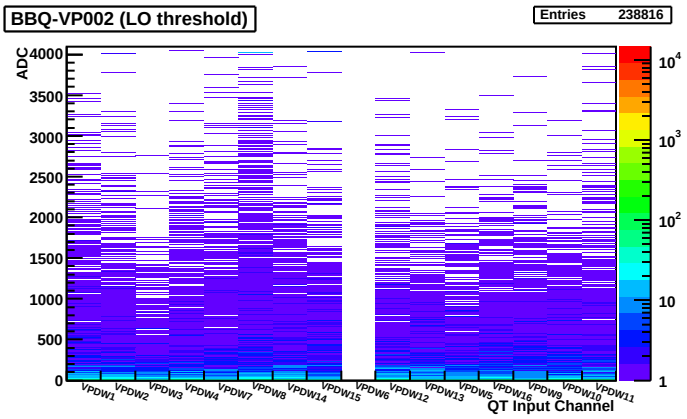

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 238816
TAC
QT Input Channel

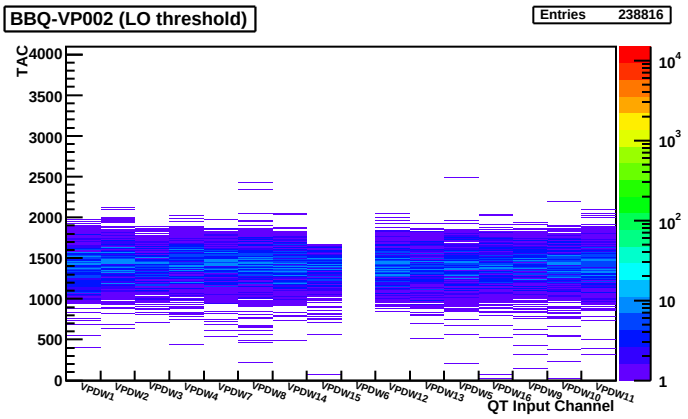

BBQ-ZD001 (ZDC TOWER)
Entries 238816
ADC

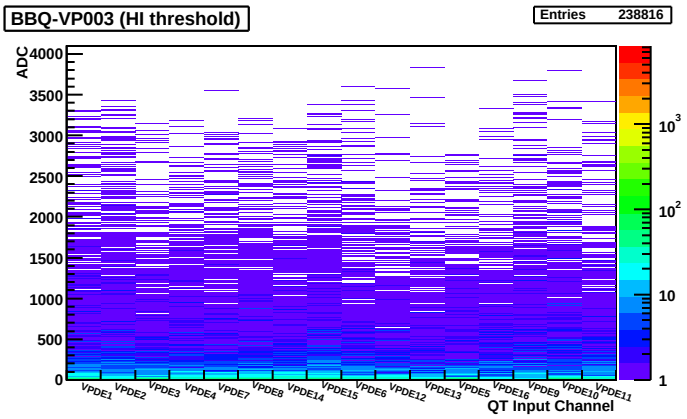

BBQ-ZD001 (ZDC TOWER)
Entries 238816
TAC

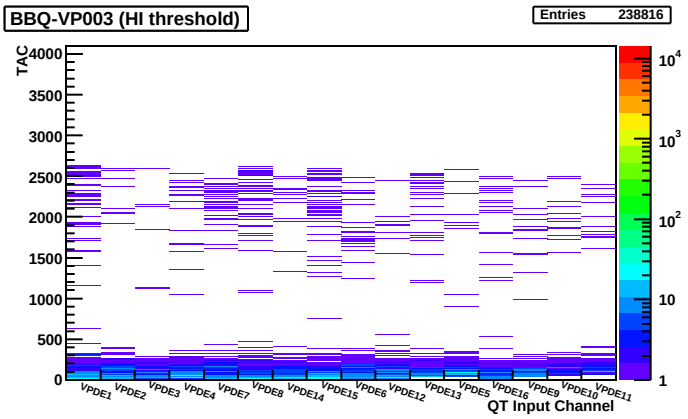

BBQ-VP001 (LO threshold)
Entries 238816
ADC
QT Input Channel

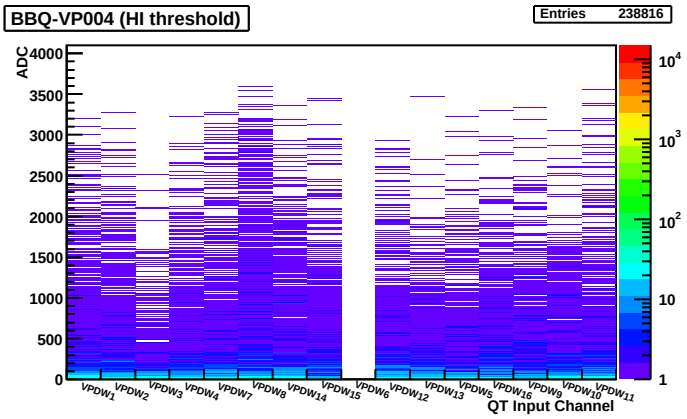

BBQ-VP001 (LO threshold)
Entries 238816
TAC
QT Input Channel

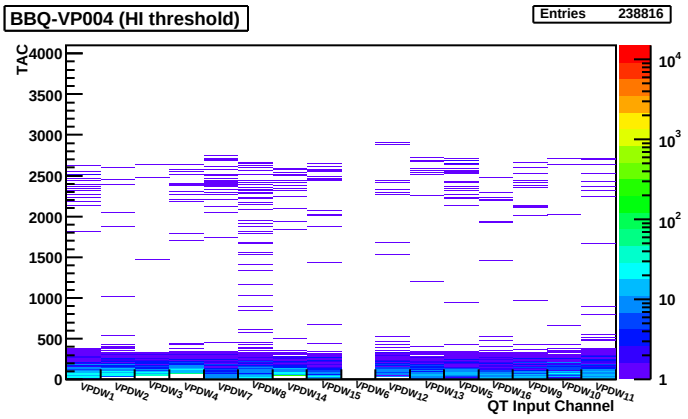

BBQ-VP002 (LO threshold)
Entries 238816
ADC
QT Input Channel

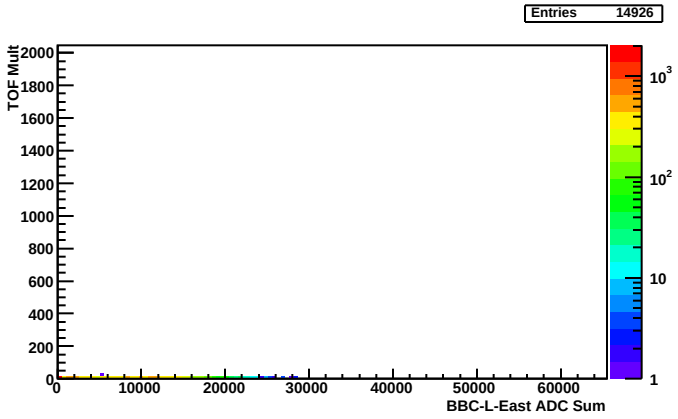

BBQ-VP002 (LO threshold)
Entries 238816
TAC
QT Input Channel

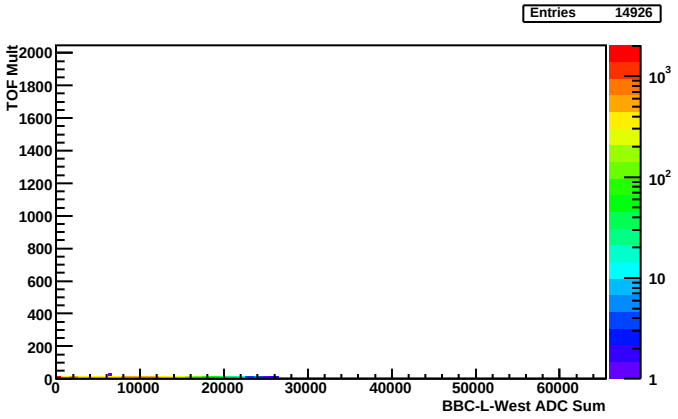

BBQ-VP003 (HI threshold)
Entries 238816
ADC
QT Input Channel

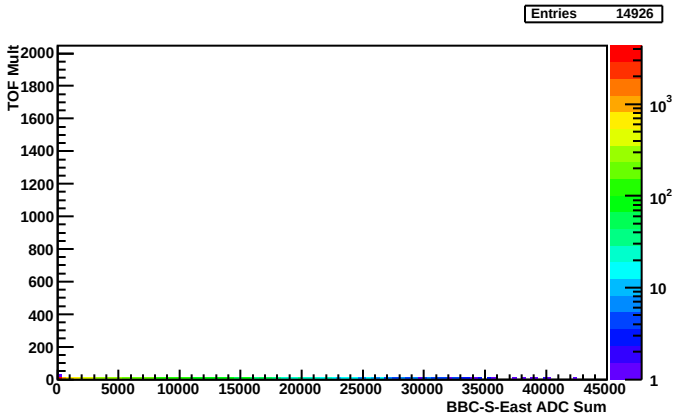

BBQ-VP003 (HI threshold)
Entries 238816
TAC
QT Input Channel

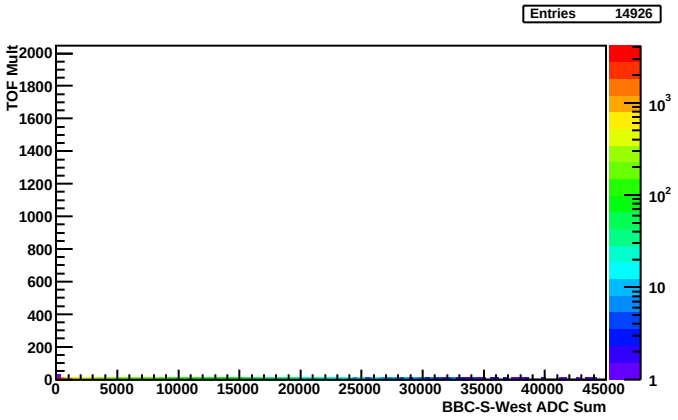

BBQ-VP004 (HI threshold)
Entries 238816
ADC
QT Input Channel

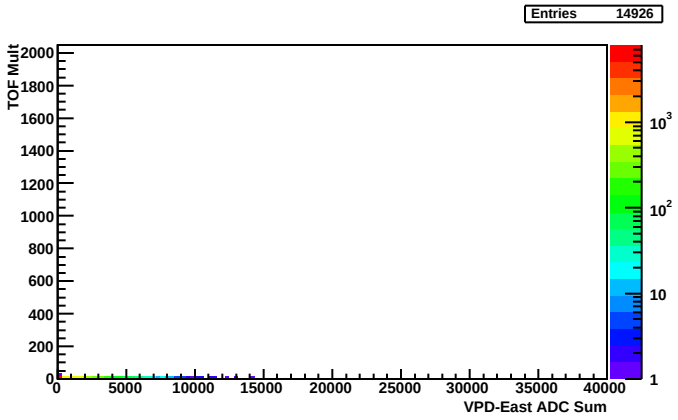

BBQ-VP004 (HI threshold)
Entries 238816
TAC
QT Input Channel

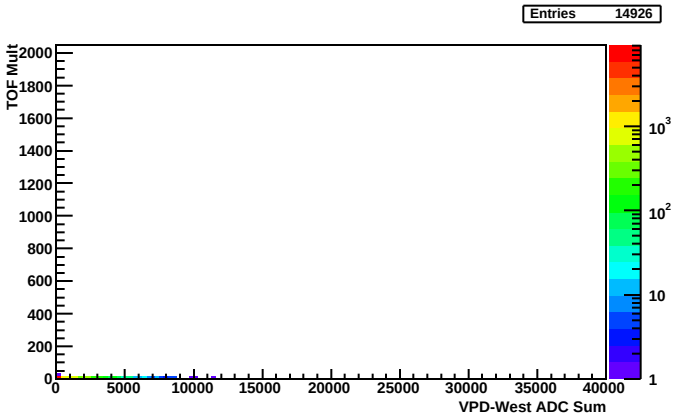

Entries 14926
TOF Mult
BBC-L-East ADC Sum

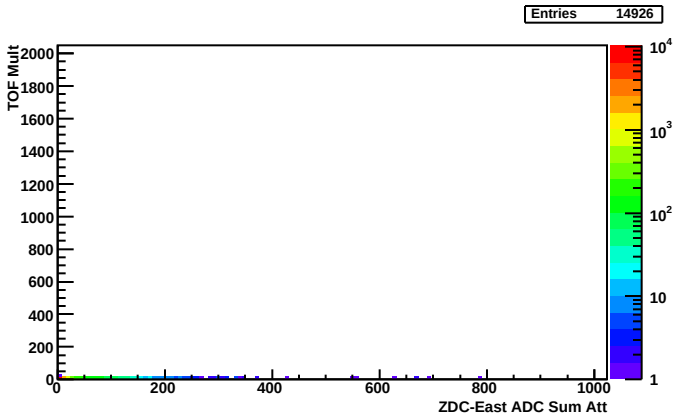

Entries 14926
TOF Mult
BBC-L-West ADC Sum

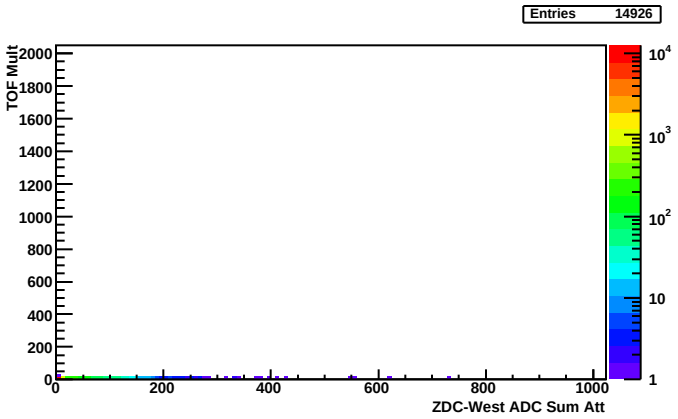

Entries 14926
TOF Mult
BBC-S-East ADC Sum

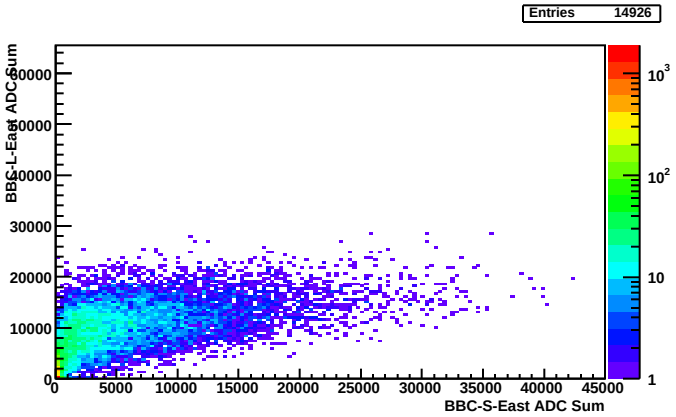

Entries 14926
TOF Mult
BBC-S-West ADC Sum

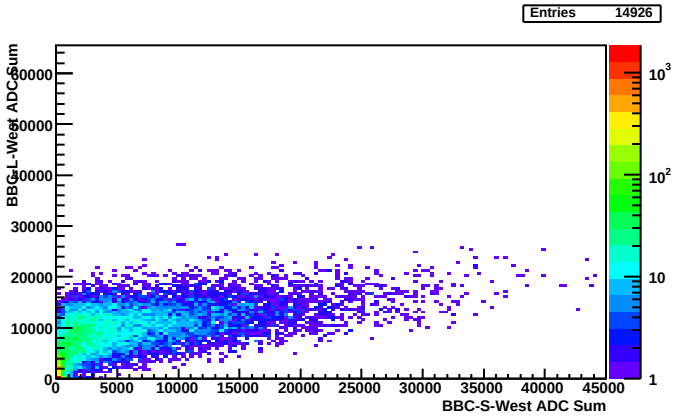

Entries 14926
TOF Mult
VPD-East ADC Sum

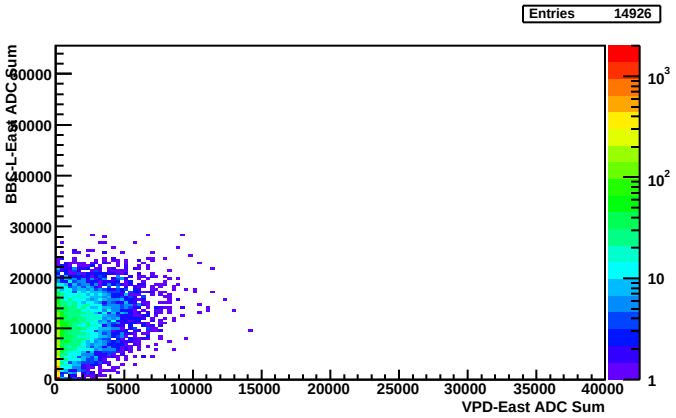

Entries 14926
TOF Mult
VPD-West ADC Sum

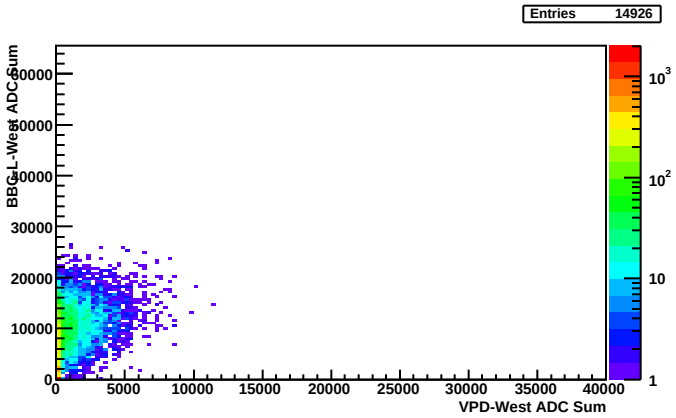

Entries 14926
TOF Mult
ZDC-East ADC Sum Att

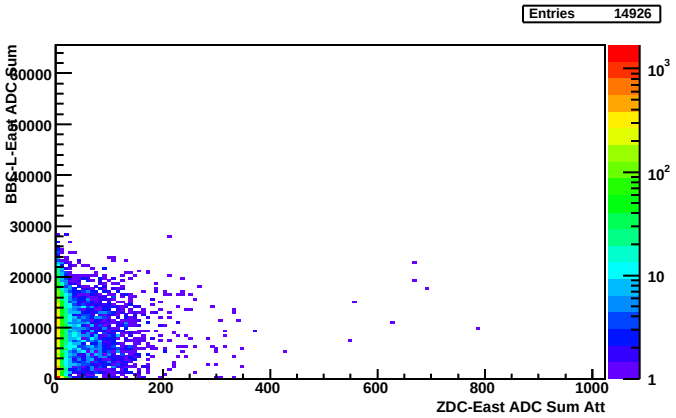

Entries 14926
TOF Mult
ZDC-West ADC Sum Att

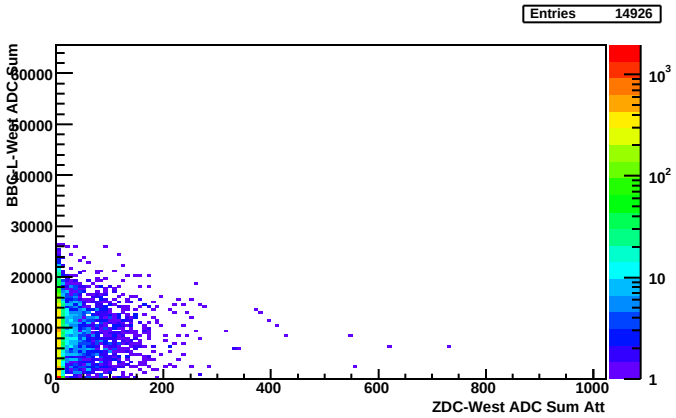

Entries 14926
BBC-L-East ADC Sum
BBC-S-East ADC Sum

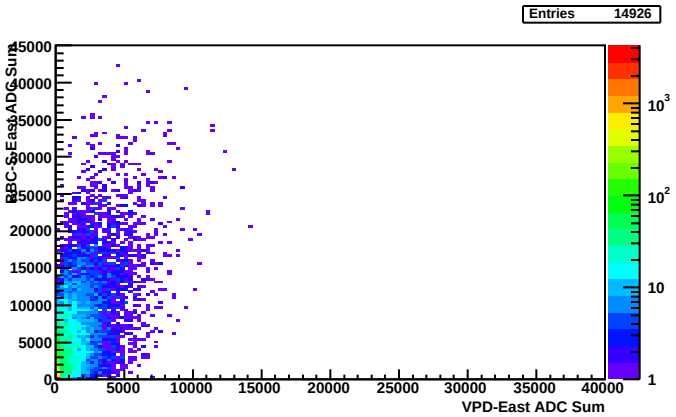

Entries 14926
BBC-L-West ADC Sum
BBC-S-West ADC Sum

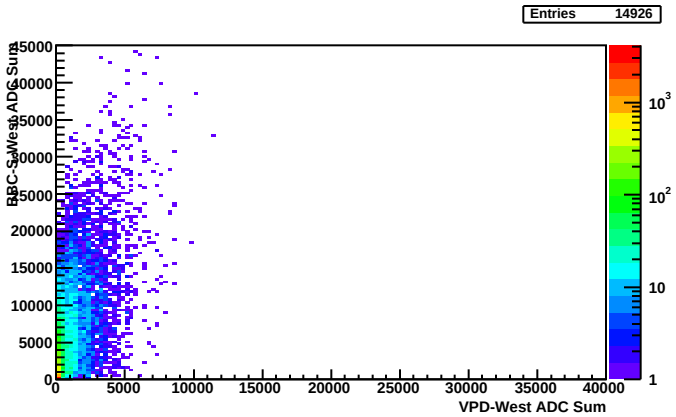

Entries 14926
BBC-L-East ADC Sum
VPD-East ADC Sum

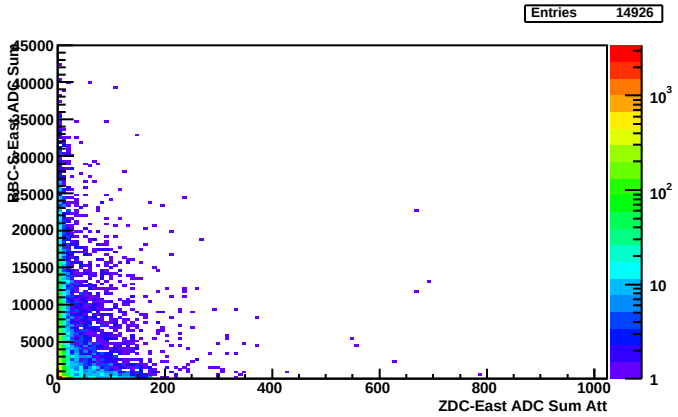

Entries 14926
BBC-L-West ADC Sum
VPD-West ADC Sum

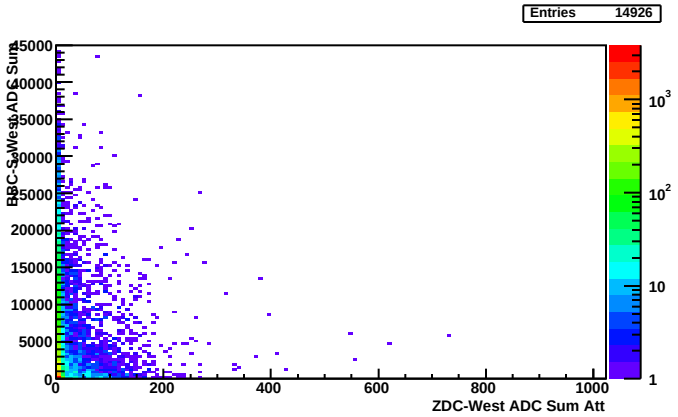

Entries 14926
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

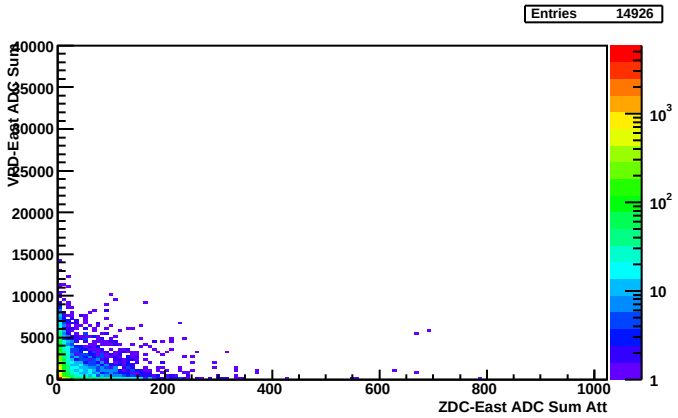

Entries 14926
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

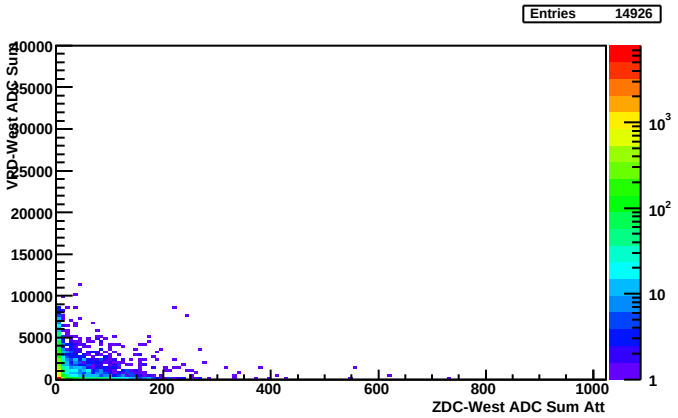

Entries 14926
BBC-S-East ADC Sum
VPD-East ADC Sum

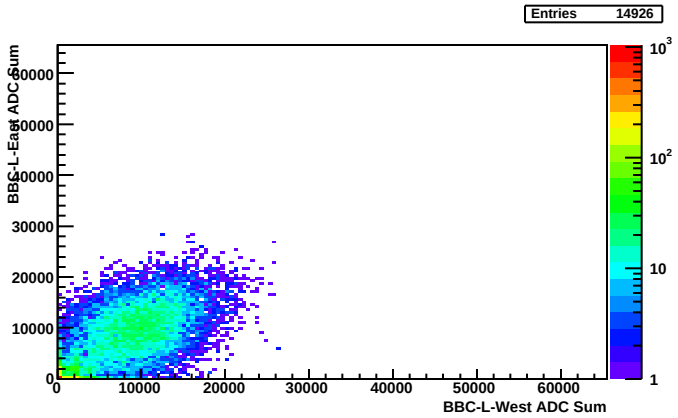

Entries 14926
BBC-S-West ADC Sum
VPD-West ADC Sum

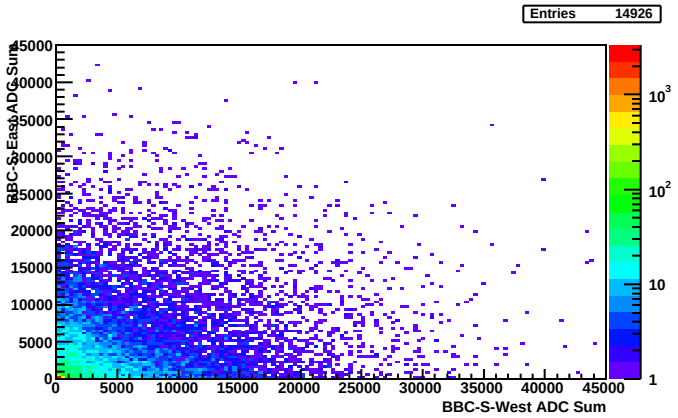

Entries 14926
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

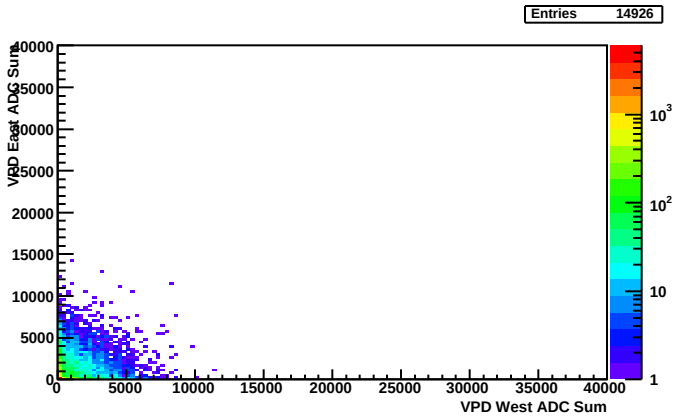

Entries 14926
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

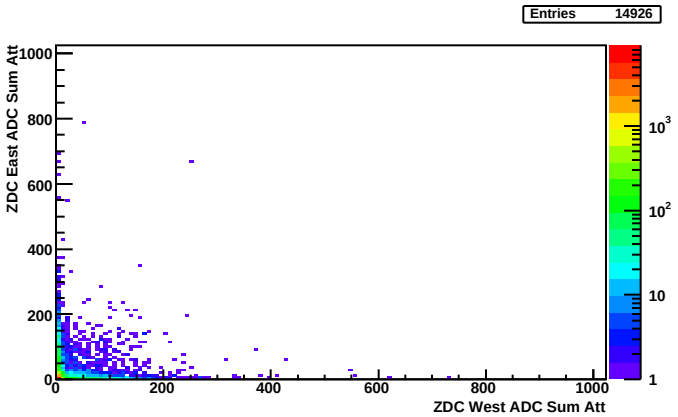

Entries 14926
VPD-East ADC Sum
ZDC-East ADC Sum Att

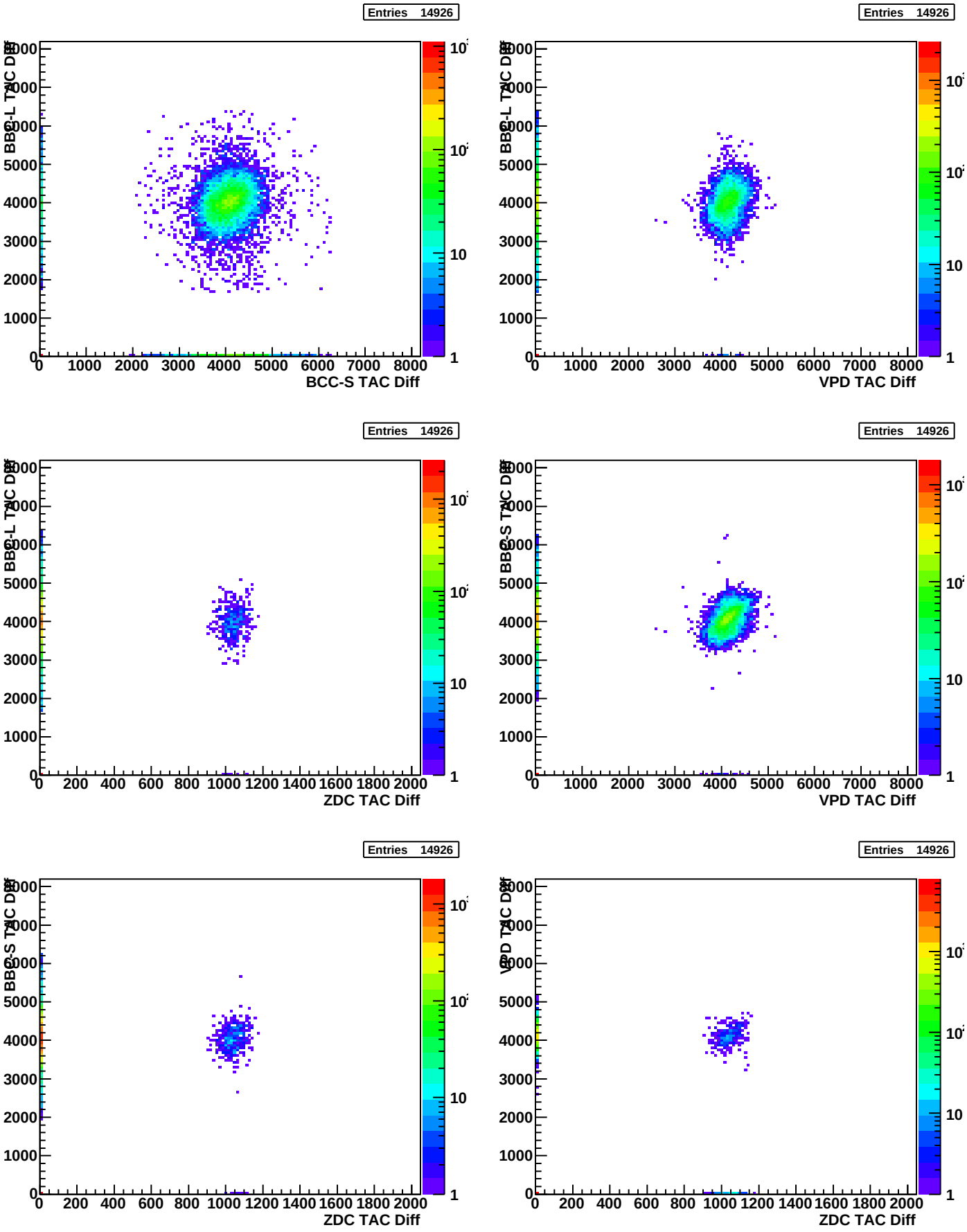

Entries 14926
VPD-West ADC Sum
ZDC-West ADC Sum Att

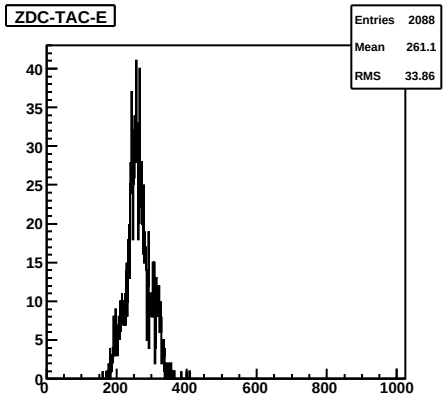

Entries 14926
BBC-L-East ADC Sum
BBC-L-West ADC Sum

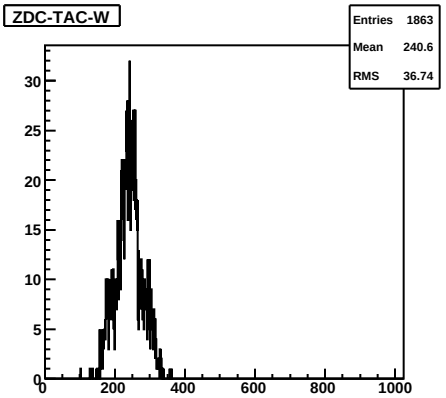

Entries 14926
BBC-S-East ADC Sum
BBC-S-West ADC Sum

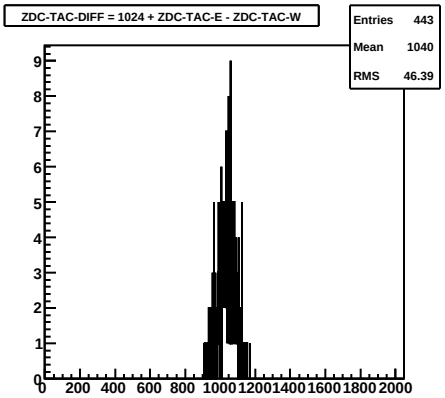

Entries 14926
VPD East ADC Sum
VPD West ADC Sum

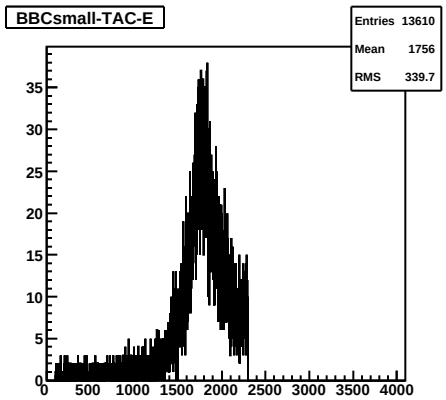

Entries 14926
ZDC East ADC Sum Att
ZDC West ADC Sum Att

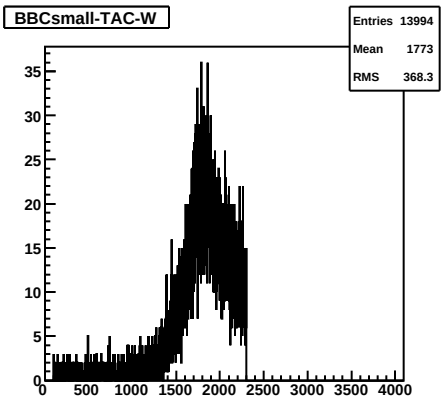

Entries 14926
BBC-L TAC Diff
BCC-S TAC Diff
Entries 14926
BBC-L TAC Diff
VPD TAC Diff
Entries 14926
BBC-L TAC Diff
ZDC TAC Diff
Entries 14926
BBC-S TAC Diff
VPD TAC Diff
Entries 14926
BBC-S TAC Diff
ZDC TAC Diff
Entries 14926
VPD TAC Diff
ZDC TAC Diff

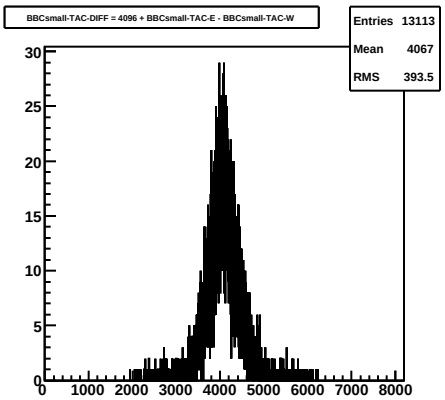

ZDC-TAC-E
Entries 2088
Mean 261.1
RMS 33.86

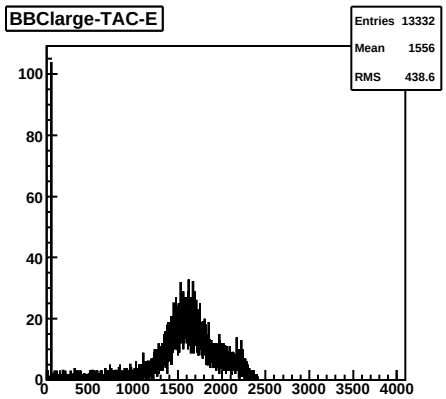

ZDC-TAC-W
Entries 1863
Mean 240.6
RMS 36.74

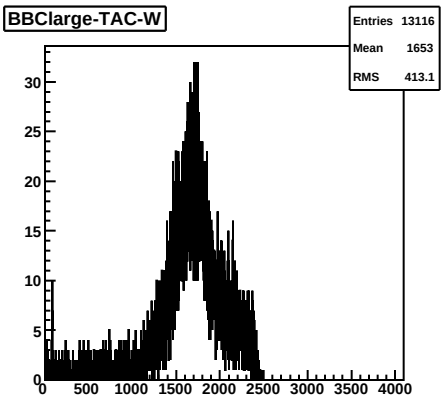

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 443
Mean 1040
RMS 46.39

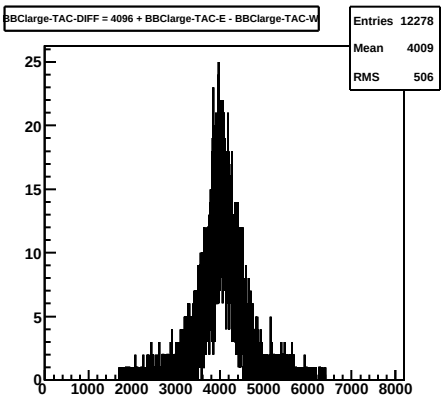

BBCsmall-TAC-E
Entries 13610
Mean 1756
RMS 339.7

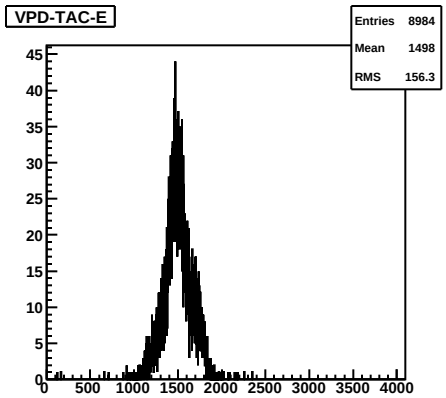

BBCsmall-TAC-W
Entries 13994
Mean 1773
RMS 368.3

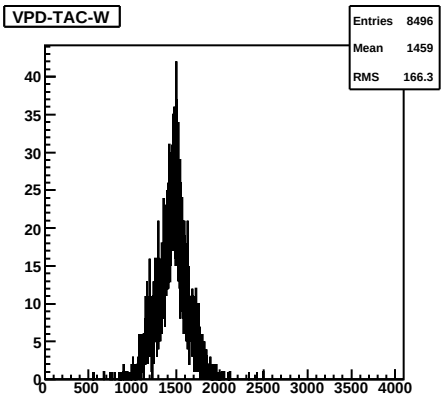

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 13113
Mean 4067
RMS 393.5

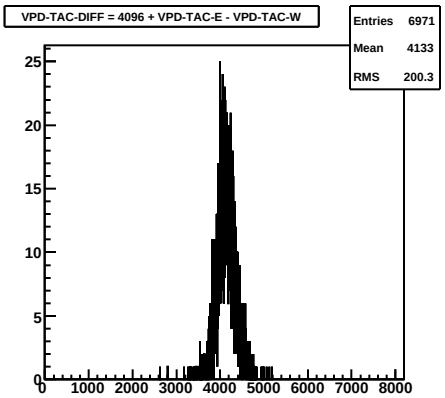

BBClarge-TAC-E
Entries 13332
Mean 1556
RMS 438.6

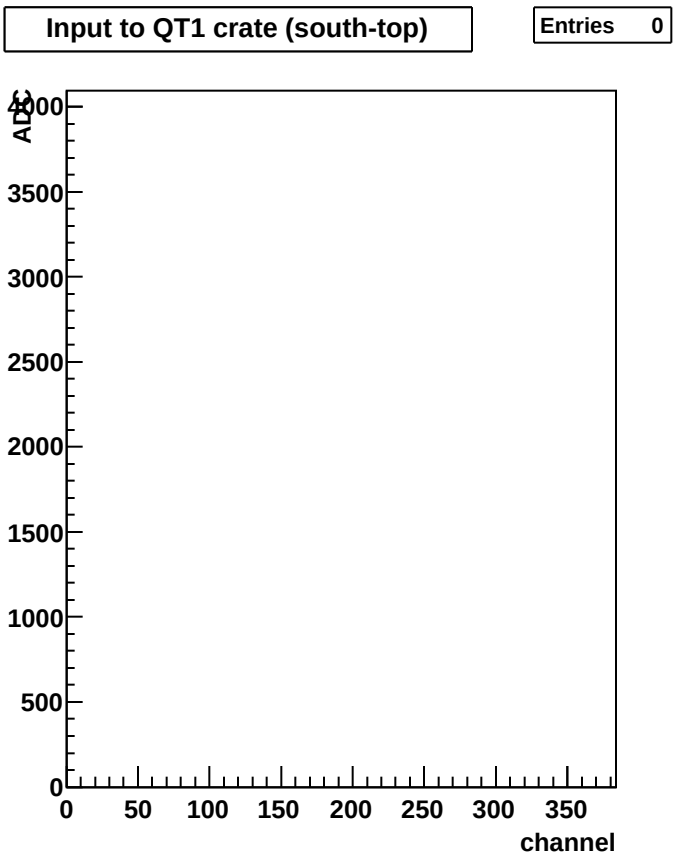

BBClarge-TAC-W
Entries 13116
Mean 1653
RMS 413.1

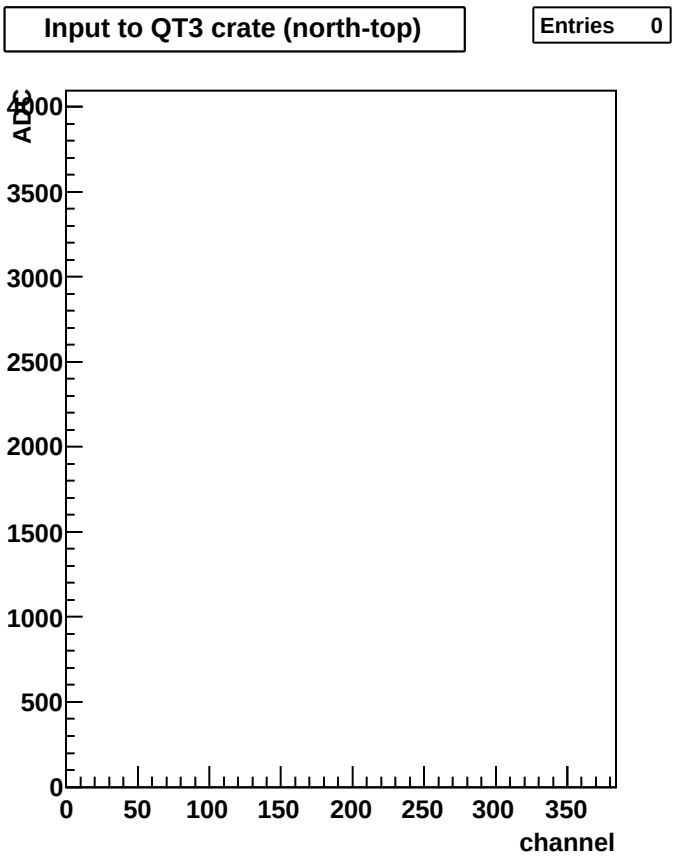

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 12278
Mean 4009
RMS 506

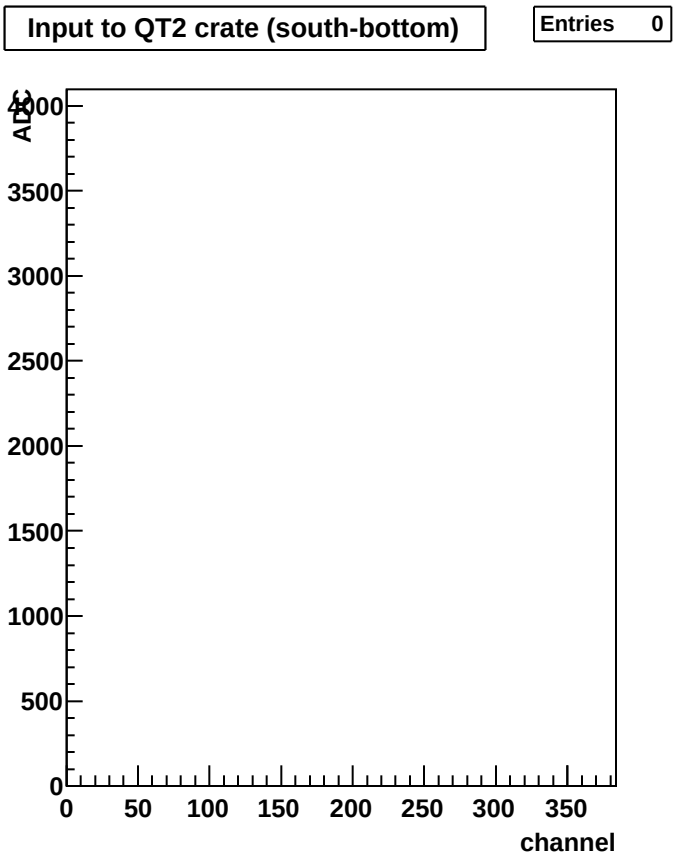

VPD-TAC-E
Entries 8984
Mean 1498
RMS 156.3

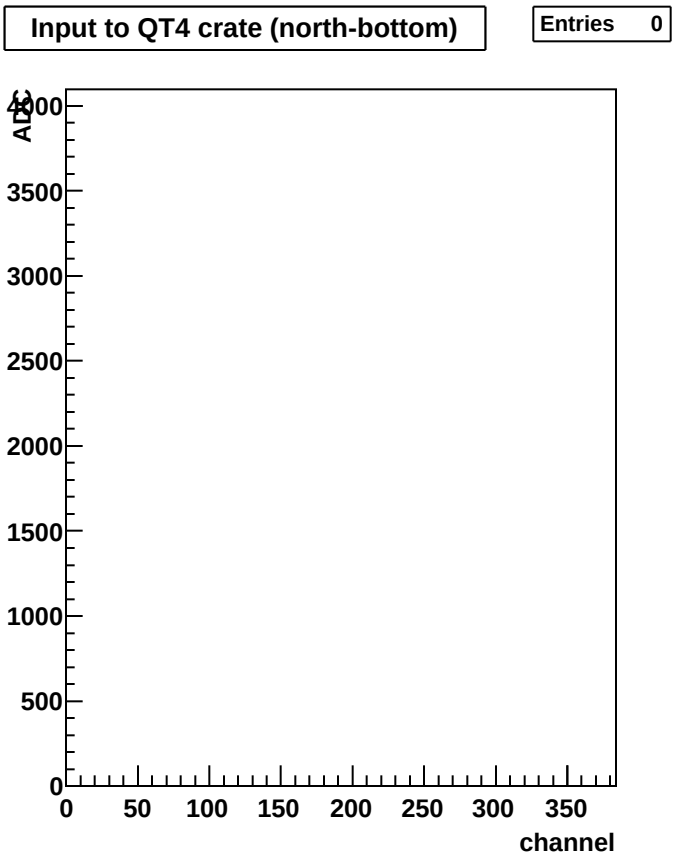

VPD-TAC-W
Entries 8496
Mean 1459
RMS 166.3

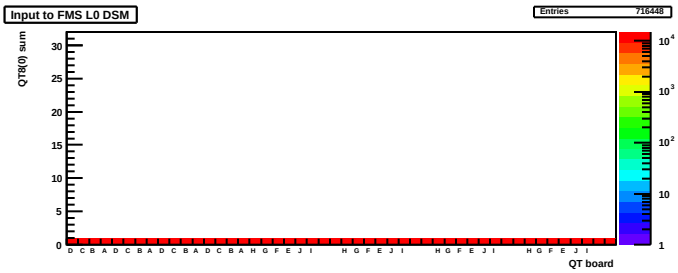

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 6971
Mean 4133
RMS 200.3

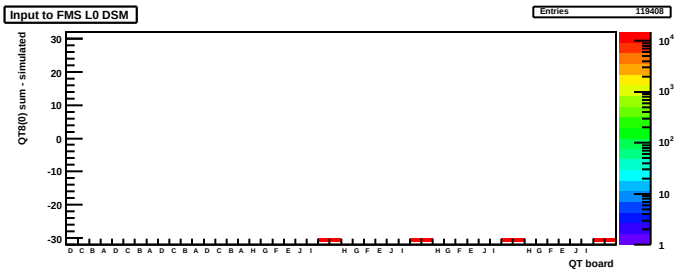

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

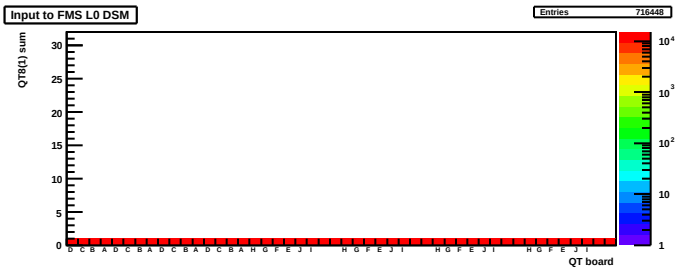

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

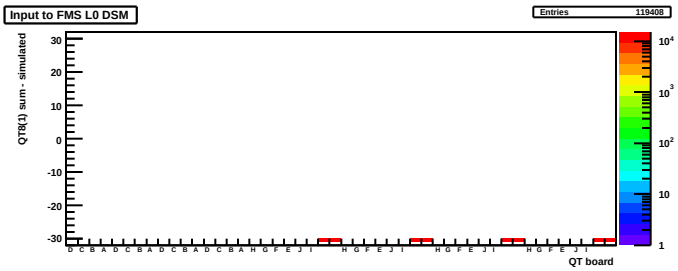

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

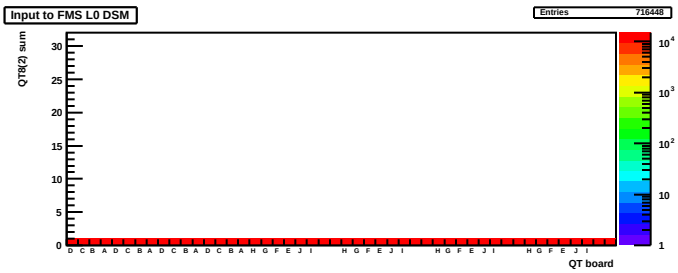

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

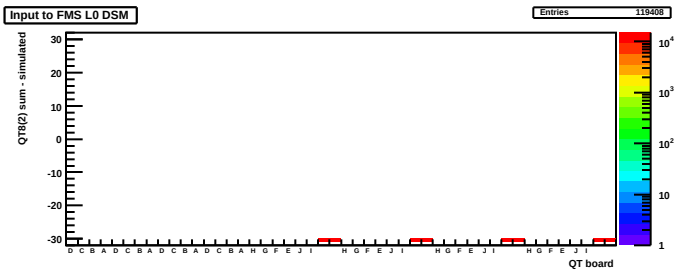

Input to FMS L0 DSM
Entries 716448
QT8(0) sum
QT board

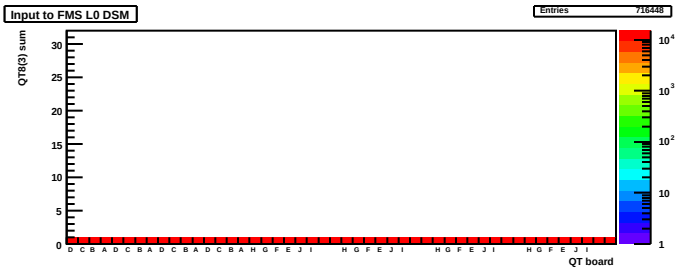

Input to FMS L0 DSM
Entries 119408
QT8(0) sum - simulated
QT board

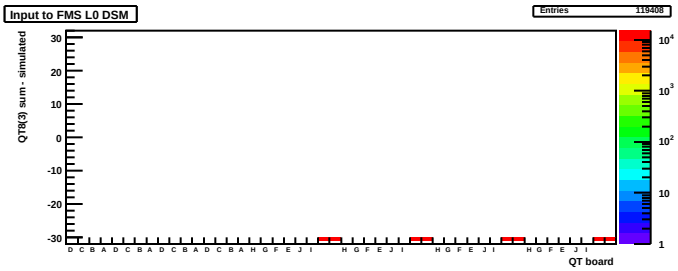

Input to FMS L0 DSM
Entries 716448
QT8(1) sum
QT board

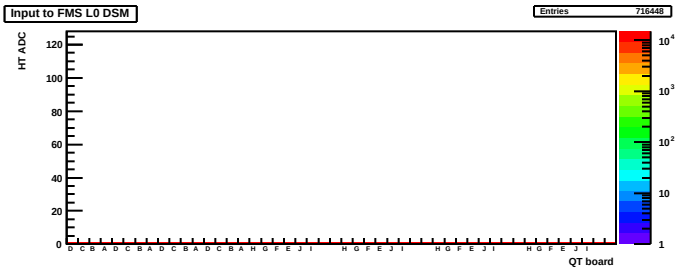

Input to FMS L0 DSM
Entries 119408
QT8(1) sum - simulated
QT board

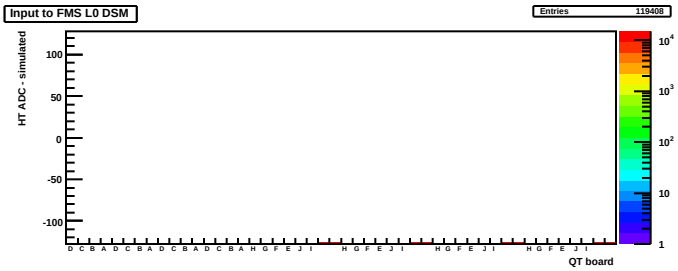

Input to FMS L0 DSM
Entries 716448
QT8(2) sum
QT board

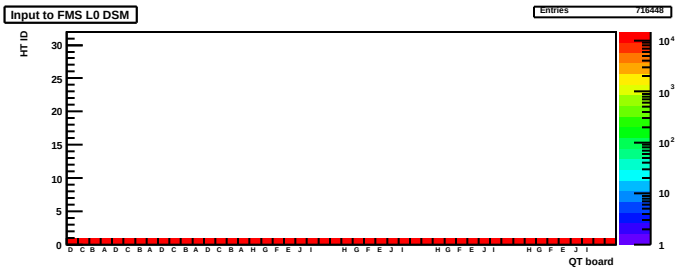

Input to FMS L0 DSM
Entries 119408
QT8(2) sum - simulated
QT board

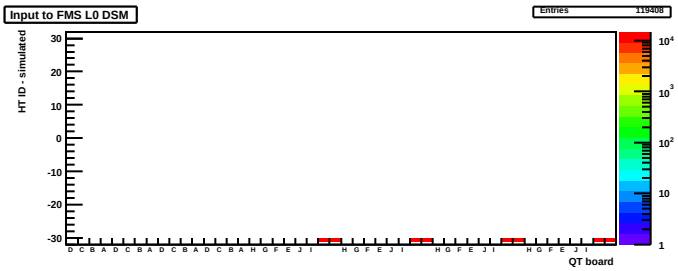

Input to FMS L0 DSM
Entries 716448
QT8(3) sum
QT board

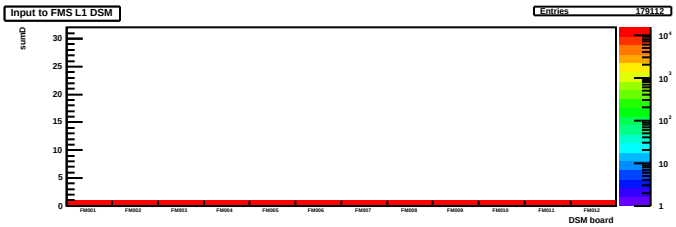

Input to FMS L0 DSM
Entries 119408
QT8(3) sum - simulated
QT board

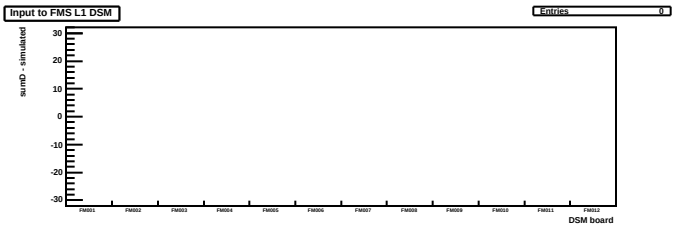

Input to FMS L0 DSM
Entries 716448
HT ADC
QT board

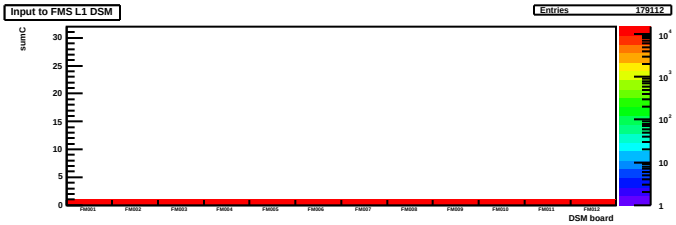

Input to FMS L0 DSM
Entries 119408
HT ADC - simulated
QT board

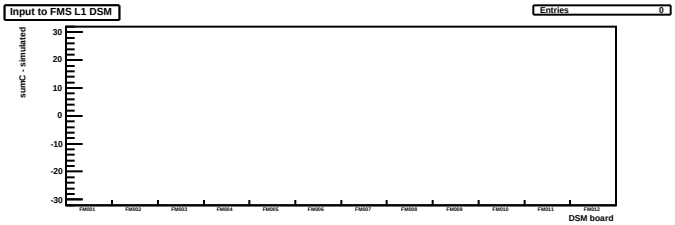

Input to FMS L0 DSM
Entries 716448
HT ID
QT board

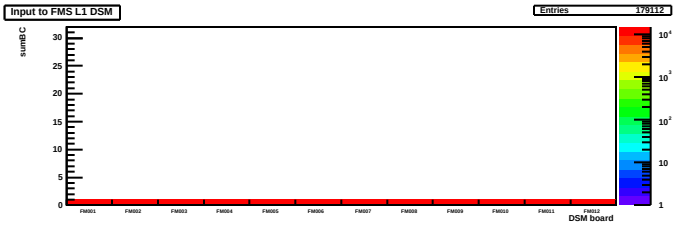

Input to FMS L0 DSM
Entries 119408
HT ID - simulated
QT board

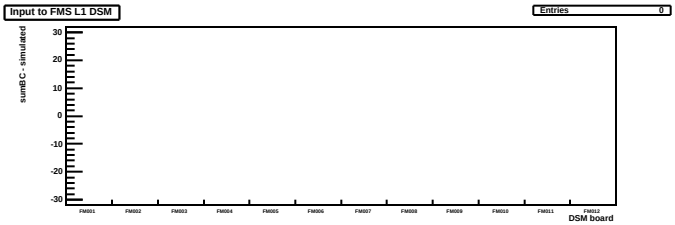

Input to FMS L1 DSM
Entries 179112
sumD
DSM board

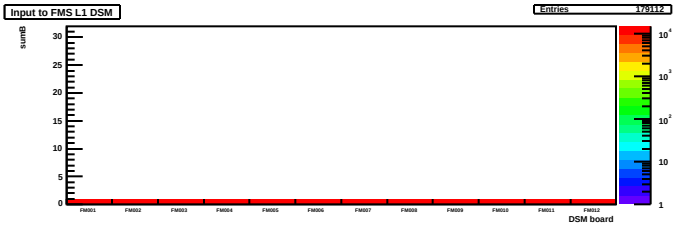

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

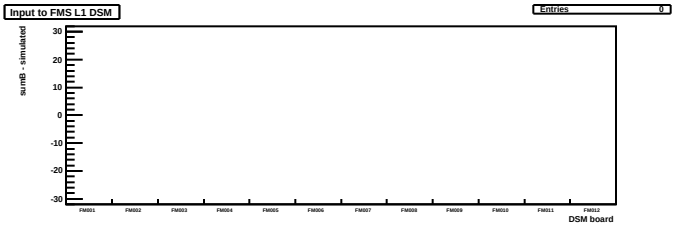

Input to FMS L1 DSM
Entries 179112
sumC
DSM board

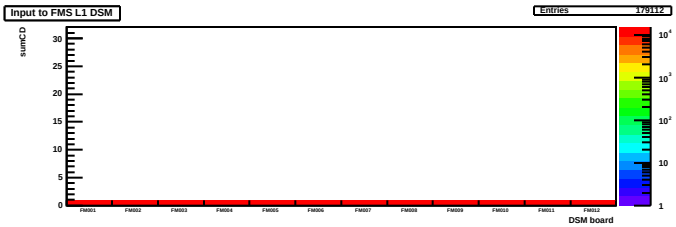

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

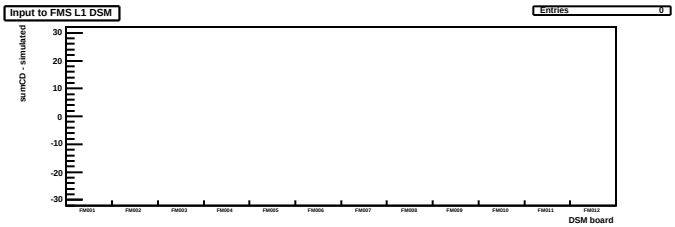

Input to FMS L1 DSM
Entries 179112
sumBC
DSM board

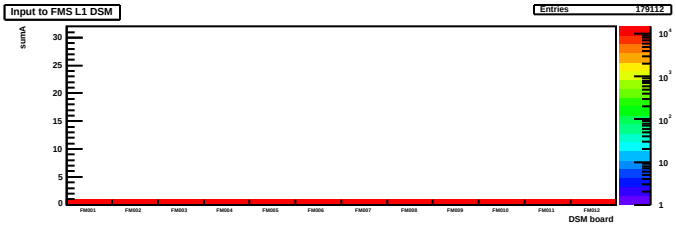

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

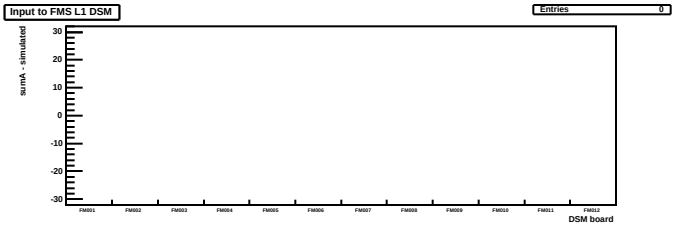

Input to FMS L1 DSM
Entries 179112
sumB
DSM board

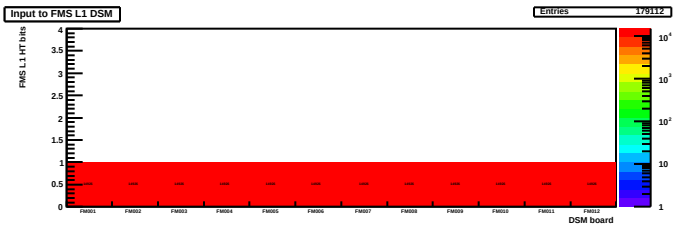

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

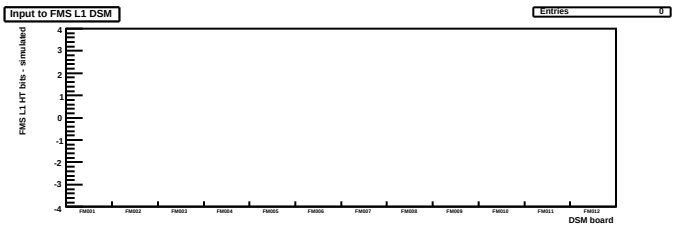

Input to FMS L1 DSM
Entries 179112
sumCD
DSM board

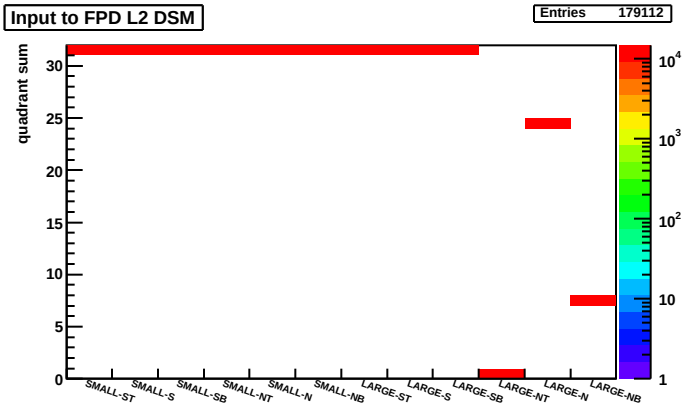

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

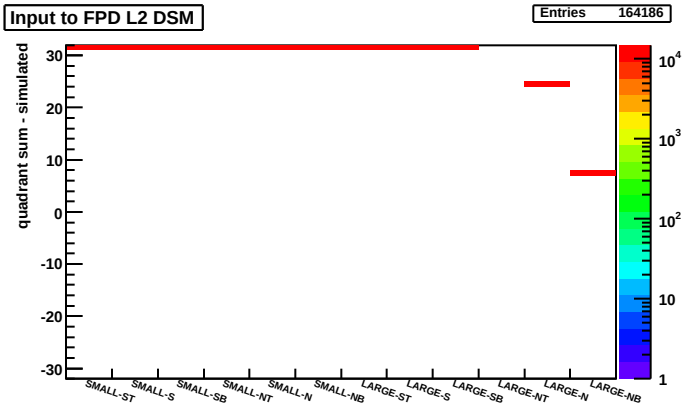

Input to FMS L1 DSM
Entries 179112
sumA
DSM board

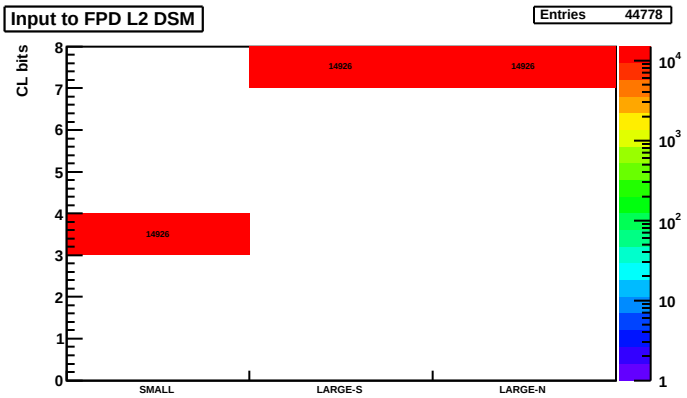

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

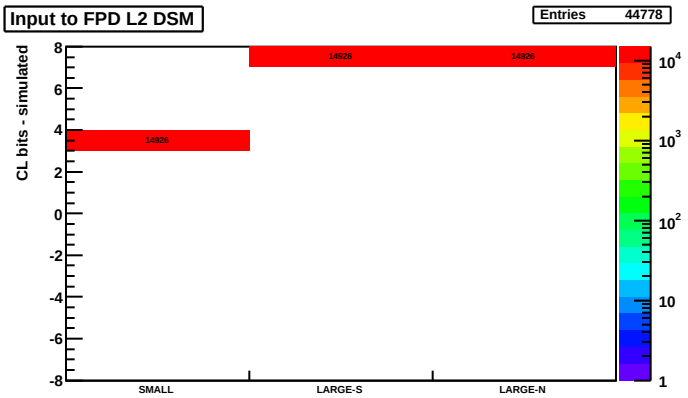

Input to FMS L1 DSM
Entries 179112
FMS L1 HT bits
DSM board

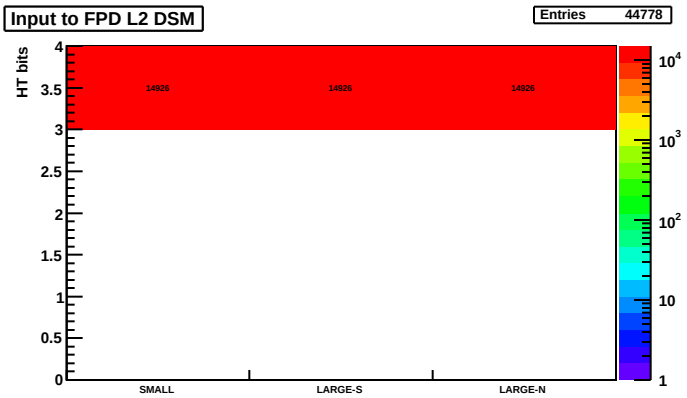

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

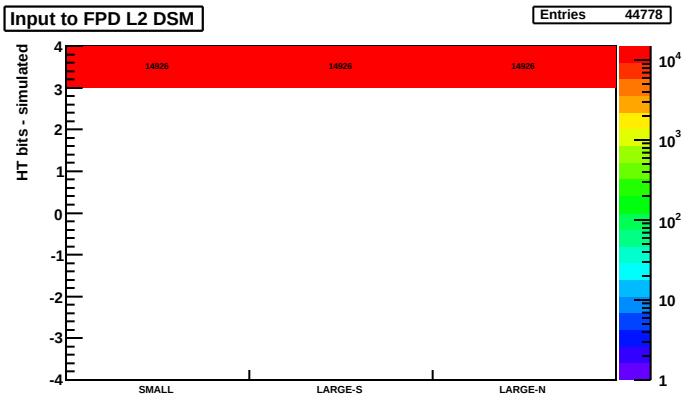

Input to FPD L2 DSM
Entries 179112
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

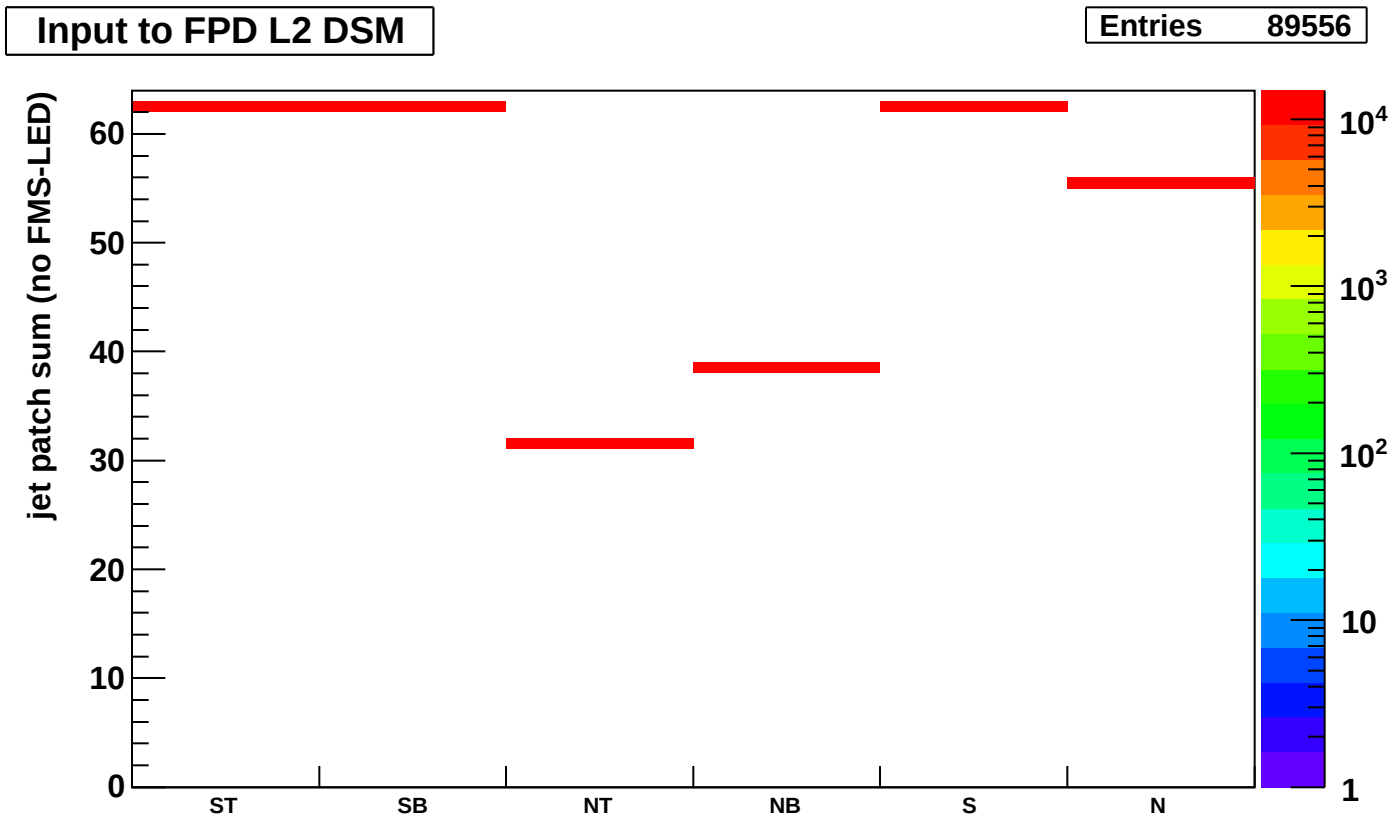

Input to FPD L2 DSM
Entries 164186
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

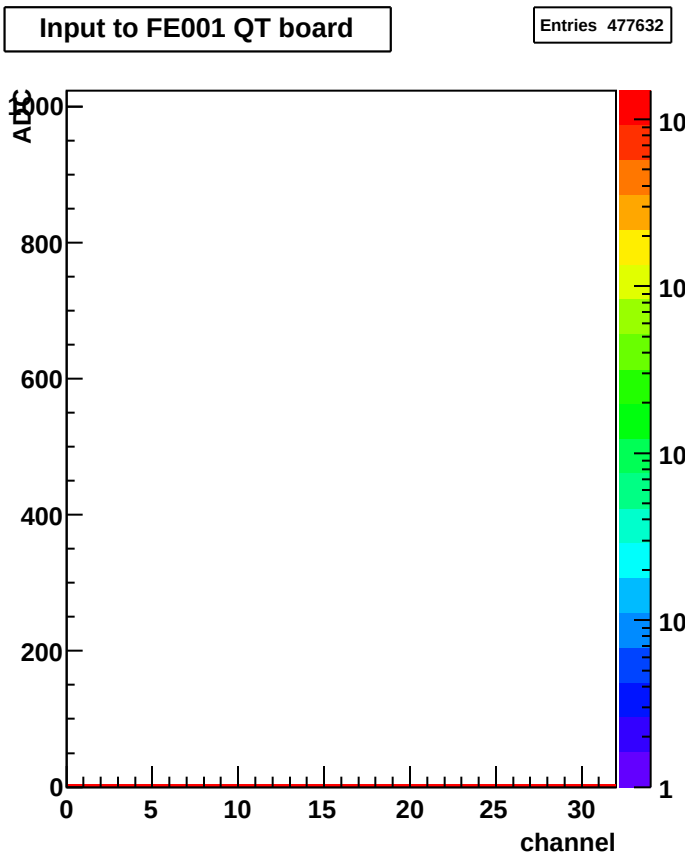

Input to FPD L2 DSM
Entries 44778
CL bits
14926
14926
14926
SMALL
LARGE-S
LARGE-N

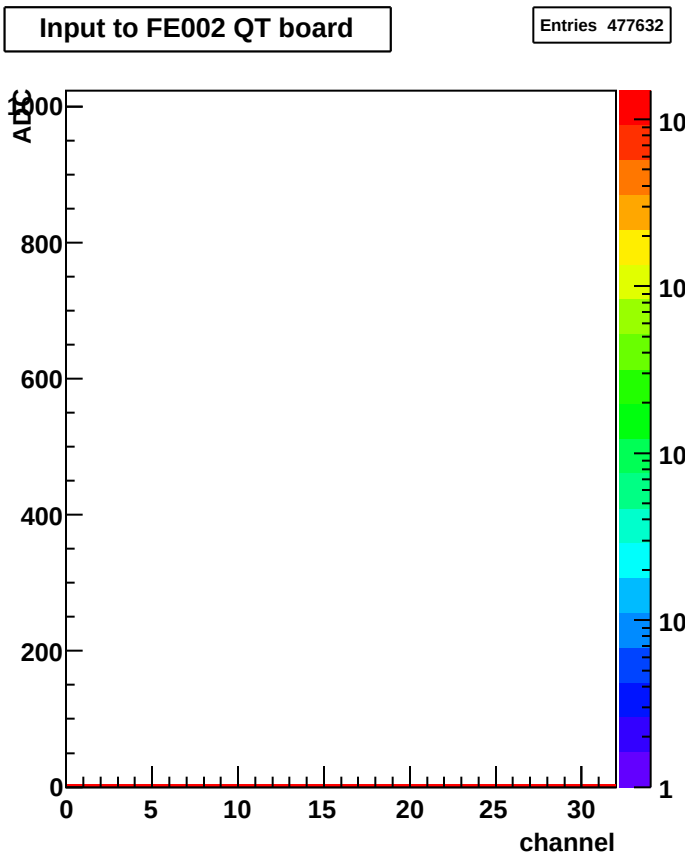

Input to FPD L2 DSM
Entries 44778
CL bits - simulated
14926
14926
14926
SMALL
LARGE-S
LARGE-N

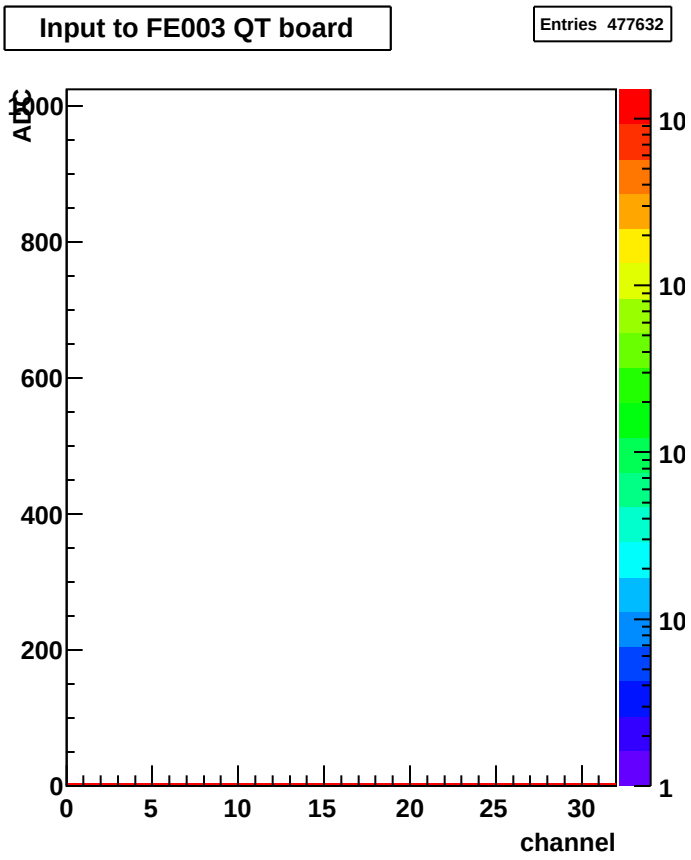

Input to FPD L2 DSM
Entries 44778
HT bits
14926
14926
14926
SMALL
LARGE-S
LARGE-N

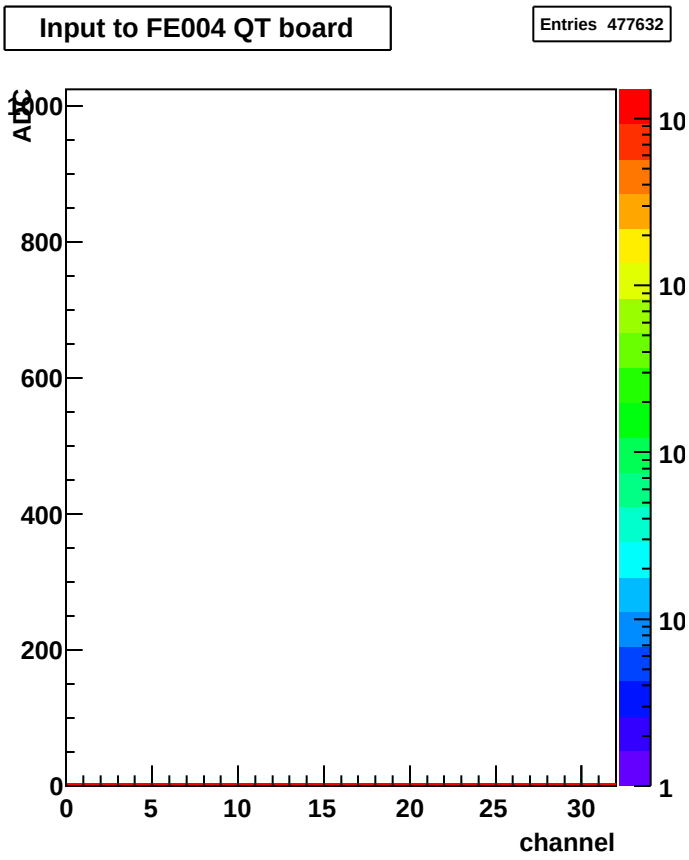

Input to FPD L2 DSM
Entries 44778
HT bits - simulated
14926
14926
14926
SMALL
LARGE-S
LARGE-N

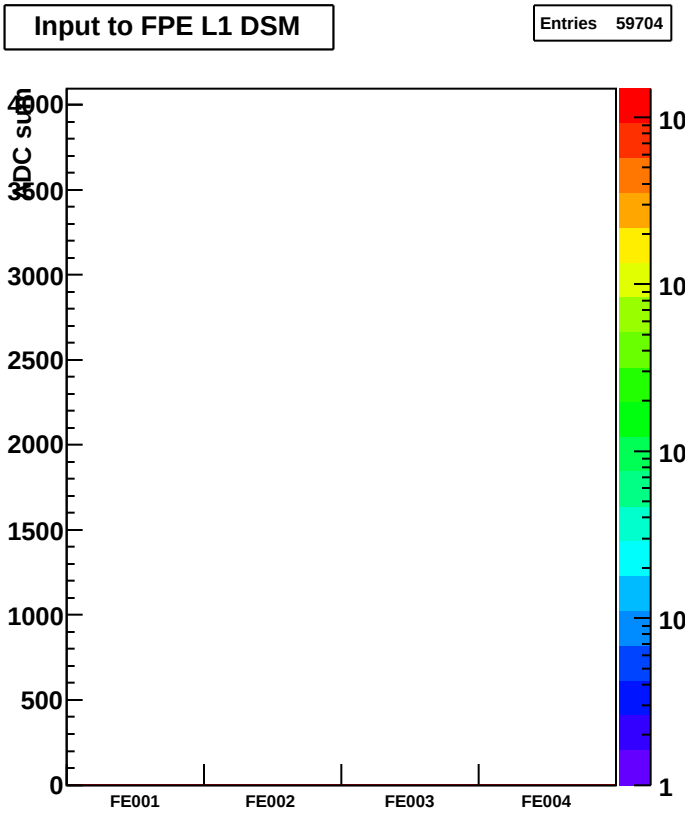

Input to FPD L2 DSM
Entries 89556
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
$10^2$
$10^3$
$10^4$

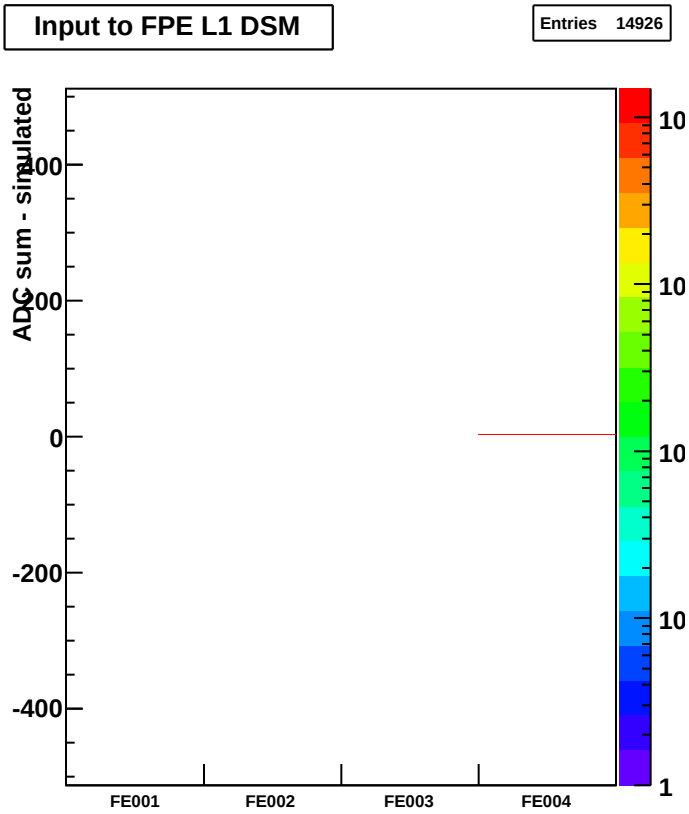

Input to FE001 QT board
Entries 477632
ADC
channel

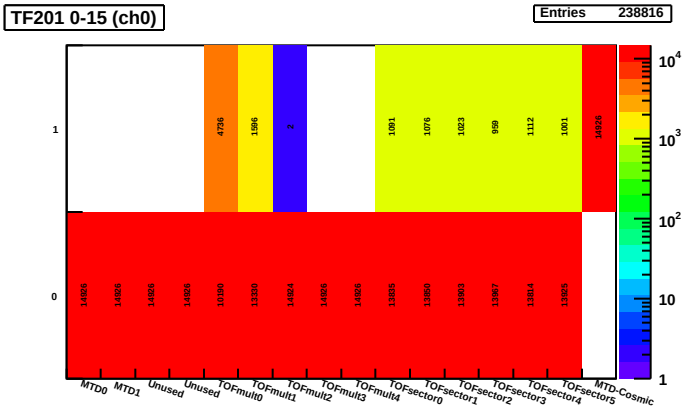

Input to FE002 QT board
Entries 477632
ADC
channel

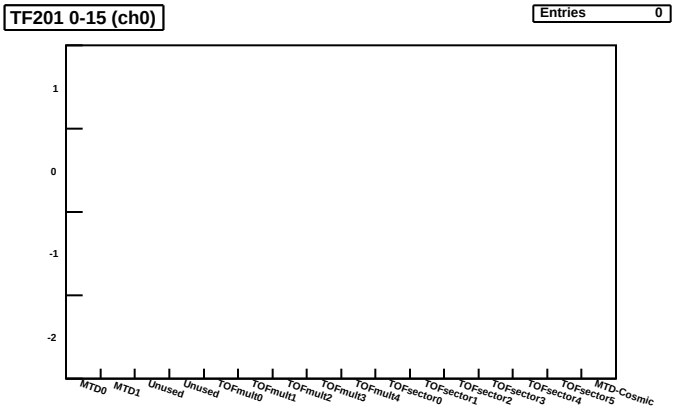

Input to FE003 QT board
Entries 477632
ADC
channel

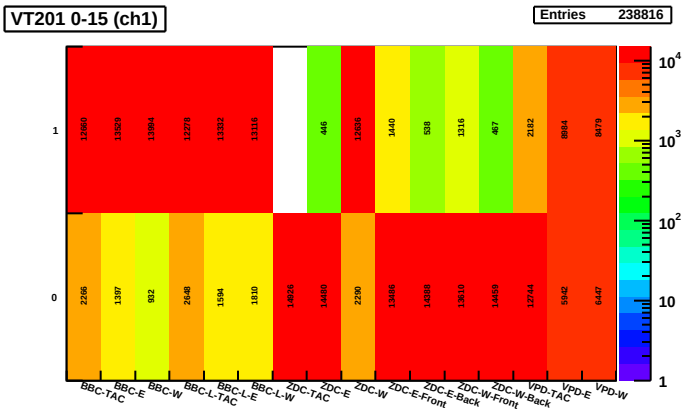

Input to FE004 QT board
Entries 477632
ADC
channel

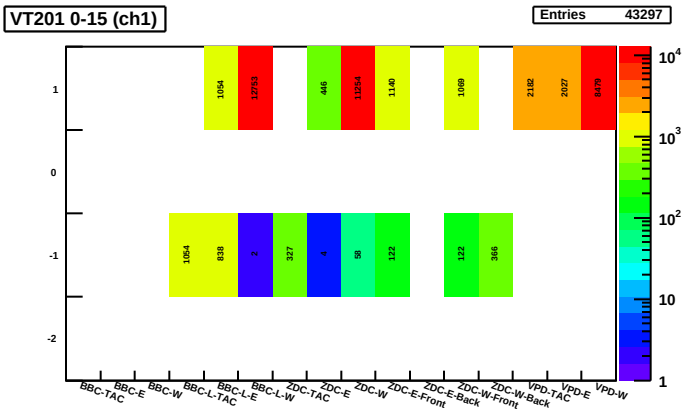

Input to FPE L1 DSM
Entries 59704
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


Input to FPE L1 DSM
Entries 14926
ADC sum - simulated
200
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1


TF201 0-15 (ch0)
Entries 238816
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


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


VT201 0-15 (ch1)
Entries 238816
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 43297
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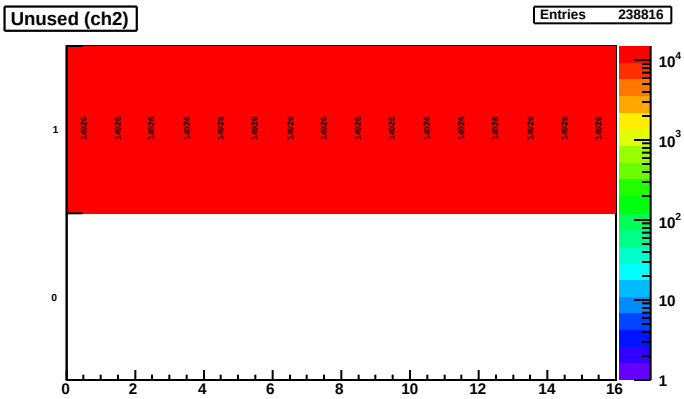
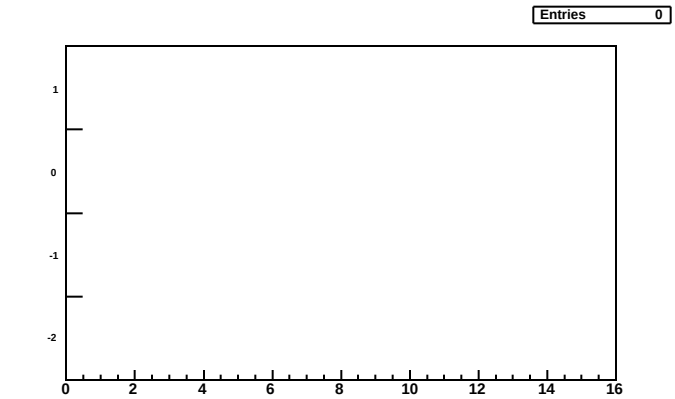
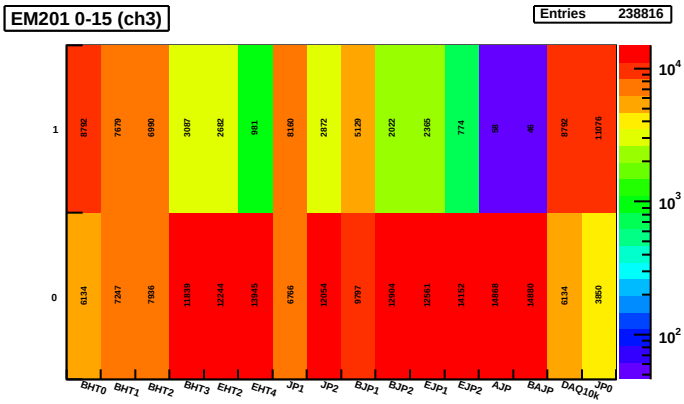
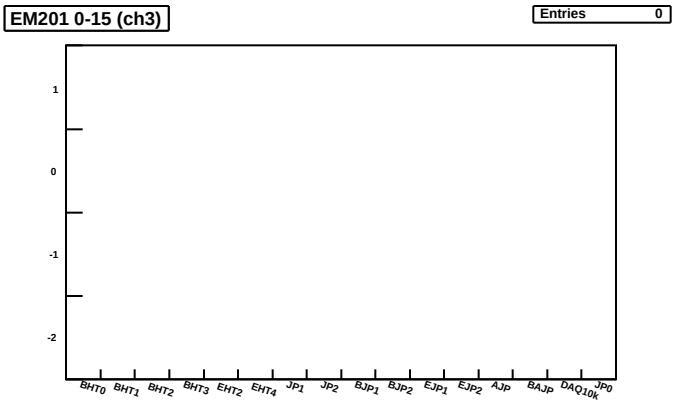

Unused (ch2)
Entries 238816


Entries 0


EM201 0-15 (ch3)
Entries 238816
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0


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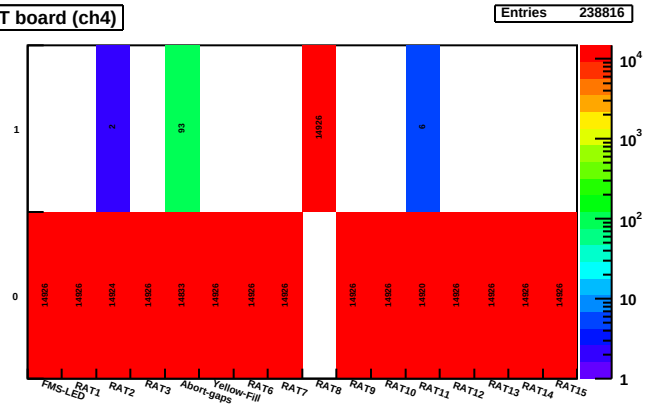
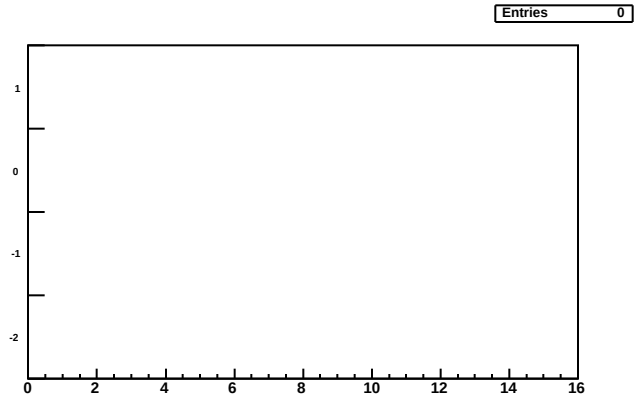
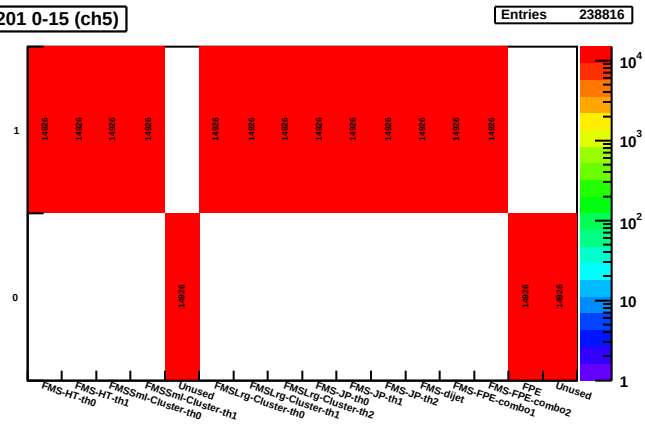
RAT board (ch4)




FP201 0-15 (ch5)

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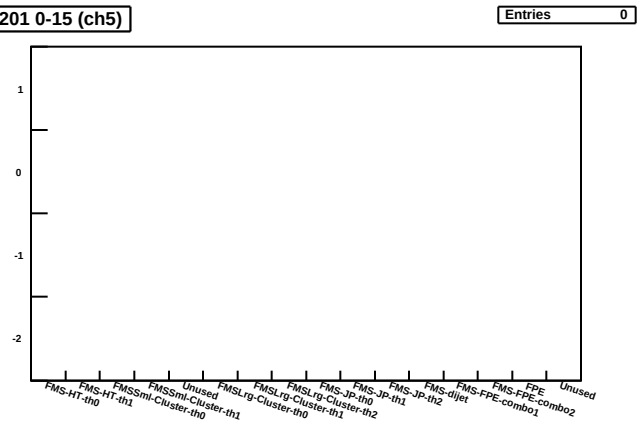
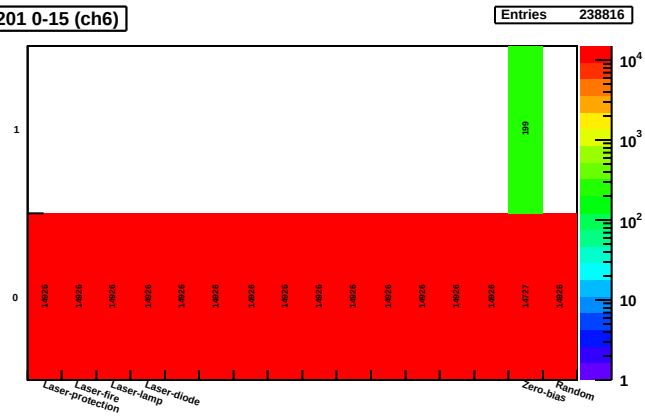
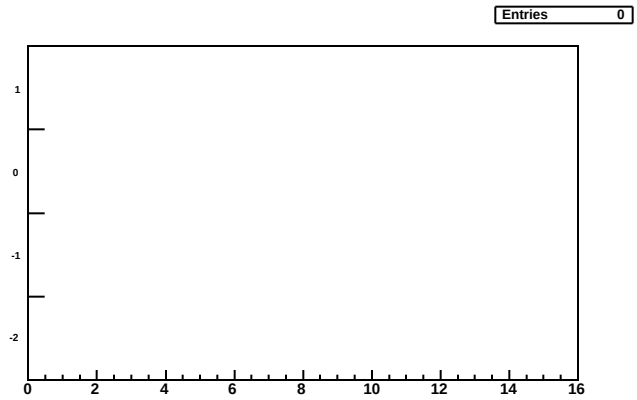
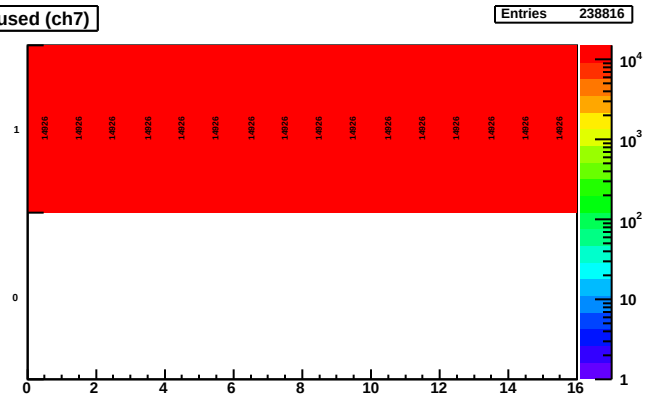
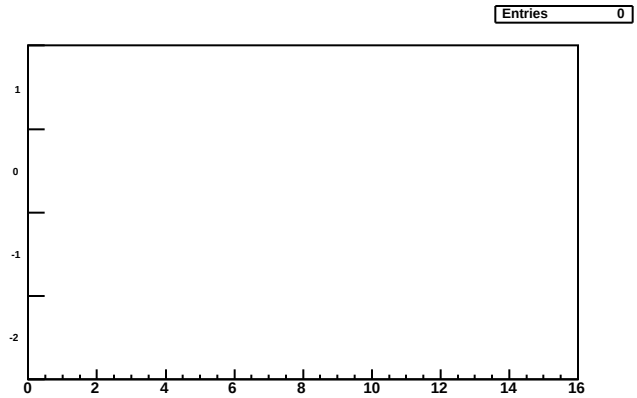



ST201 0-15 (ch6)




Unused (ch7)