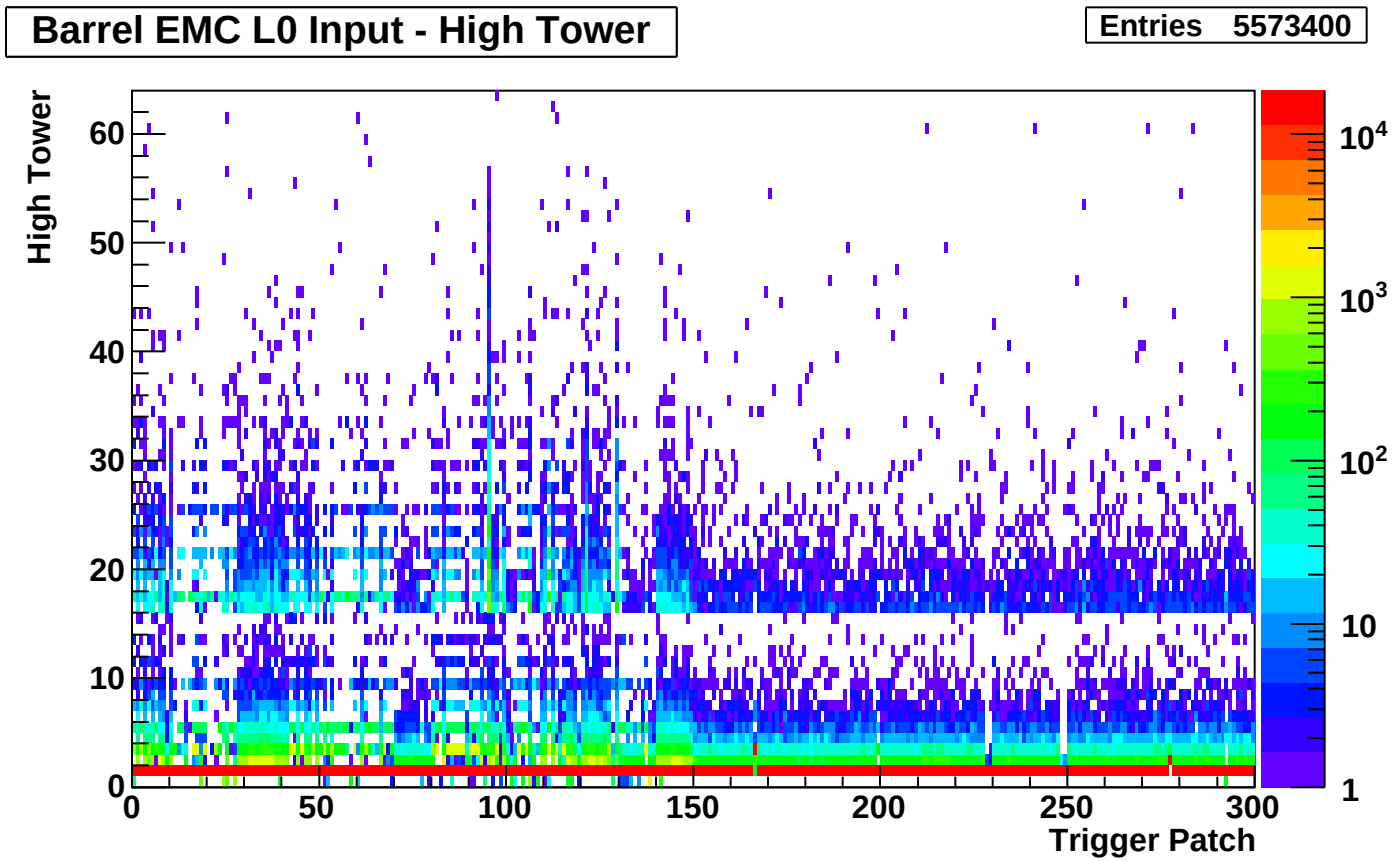
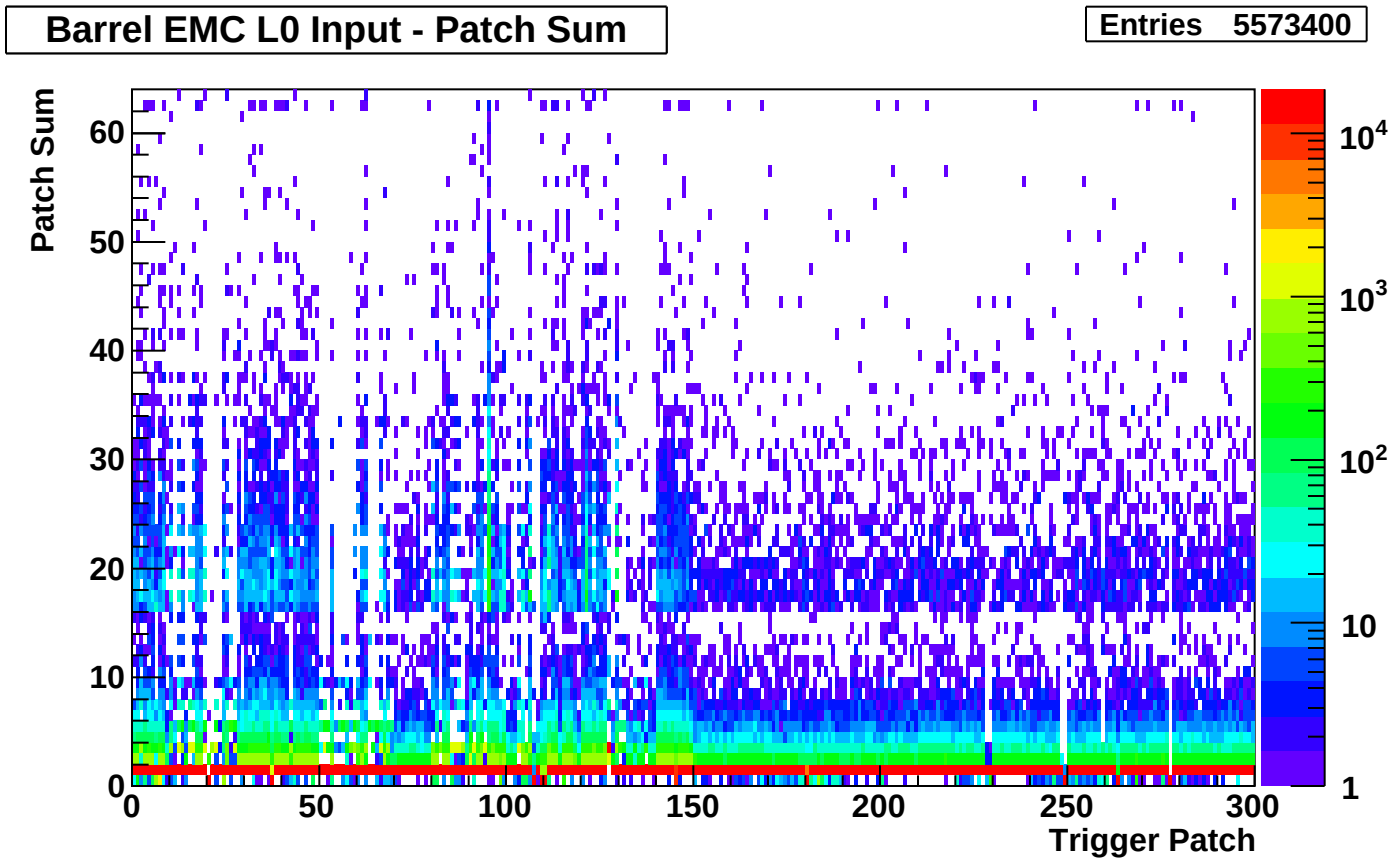
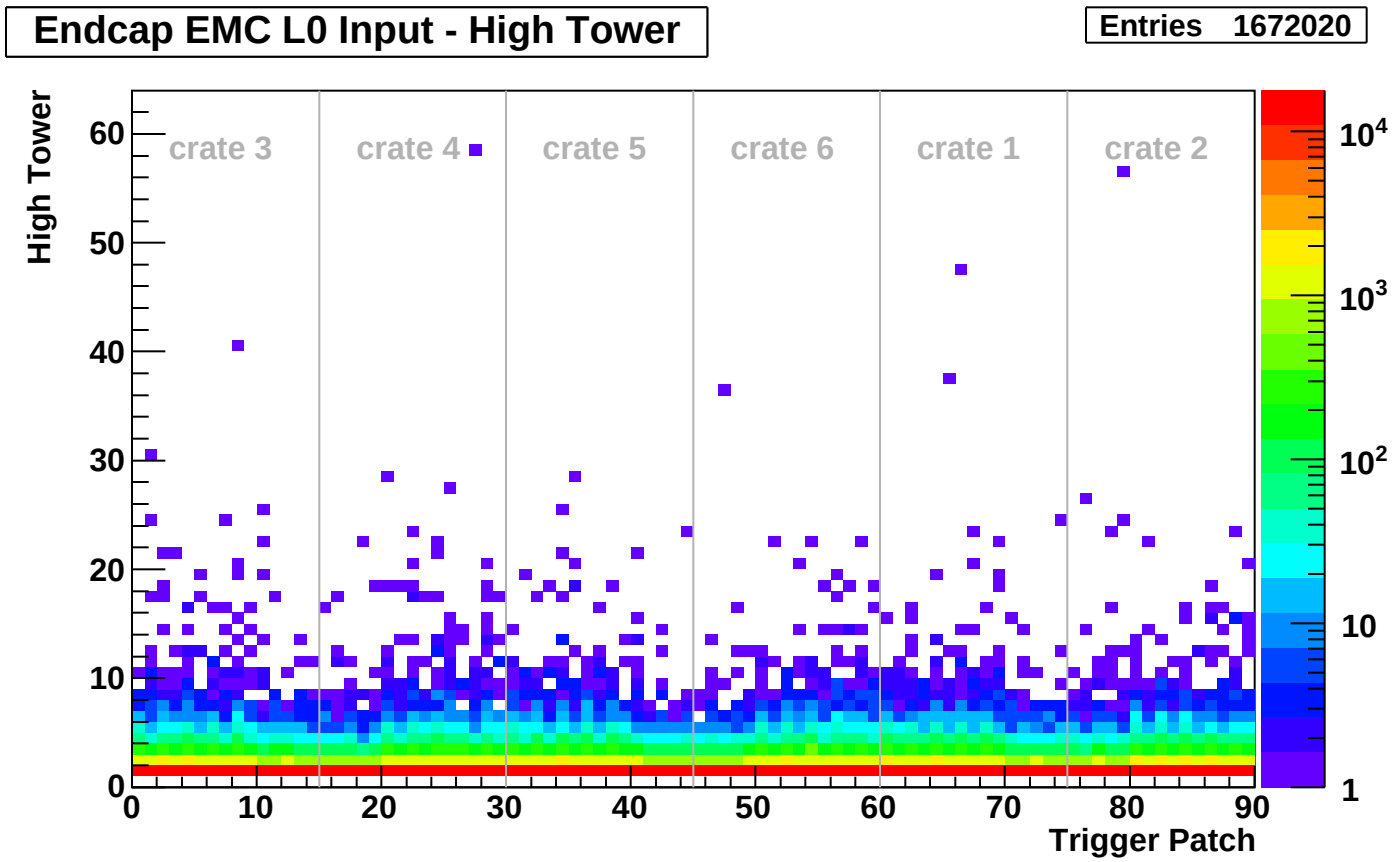
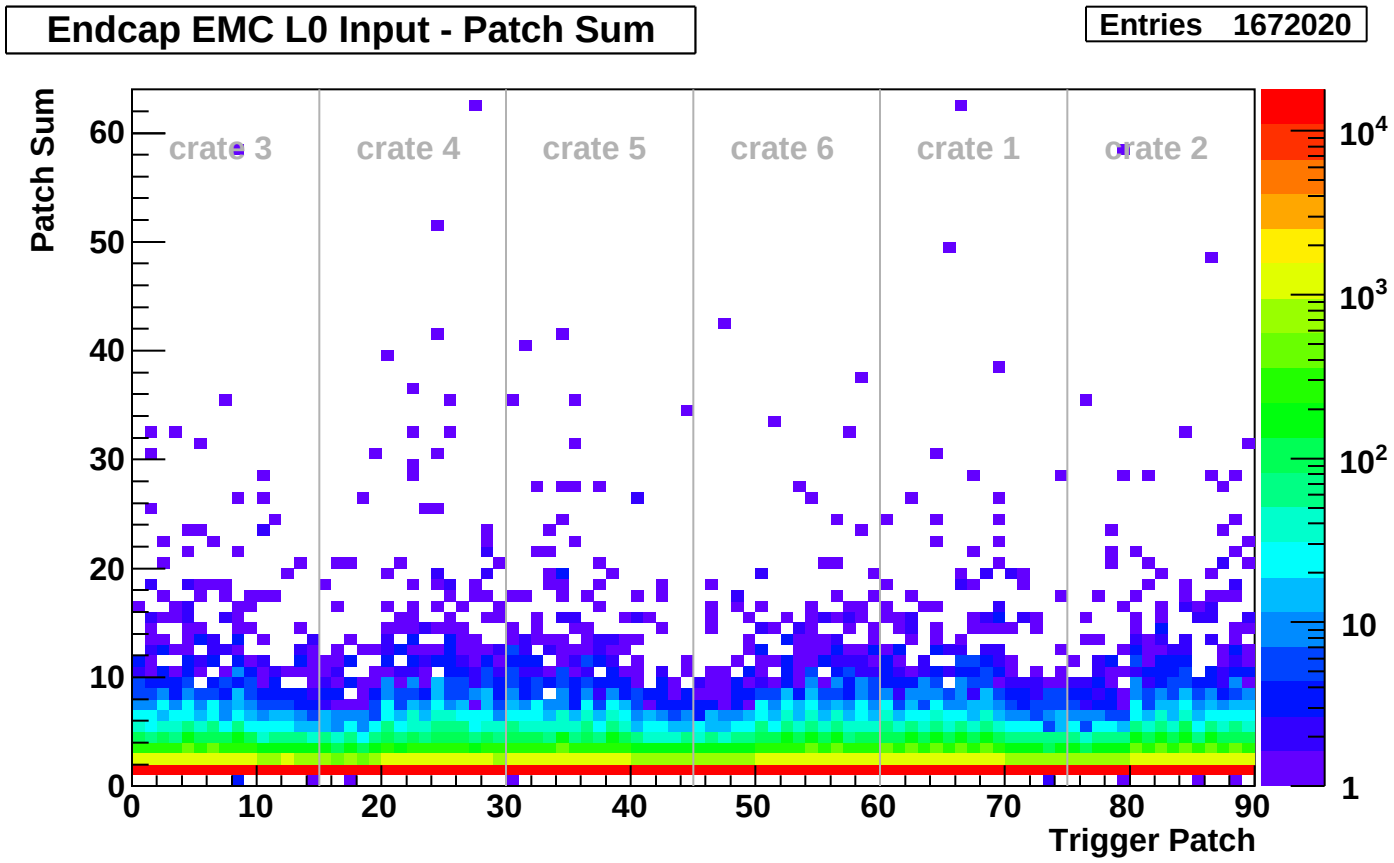
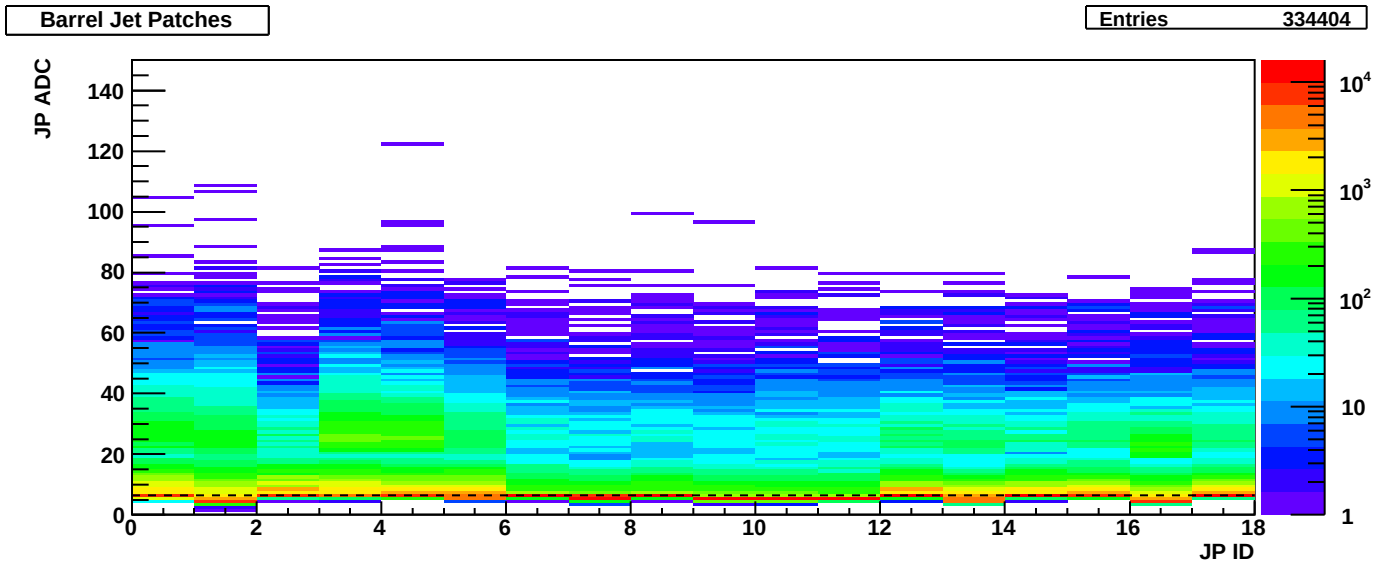
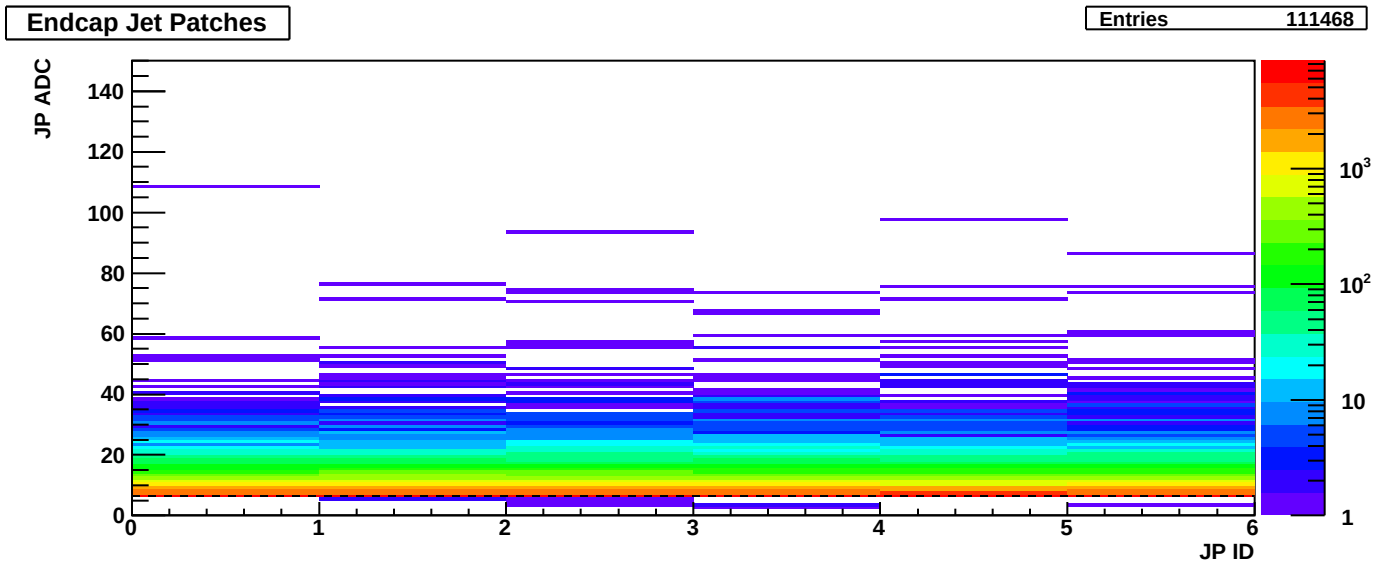

Barrel EMC L0 Input - High Tower
Entries 5573400
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

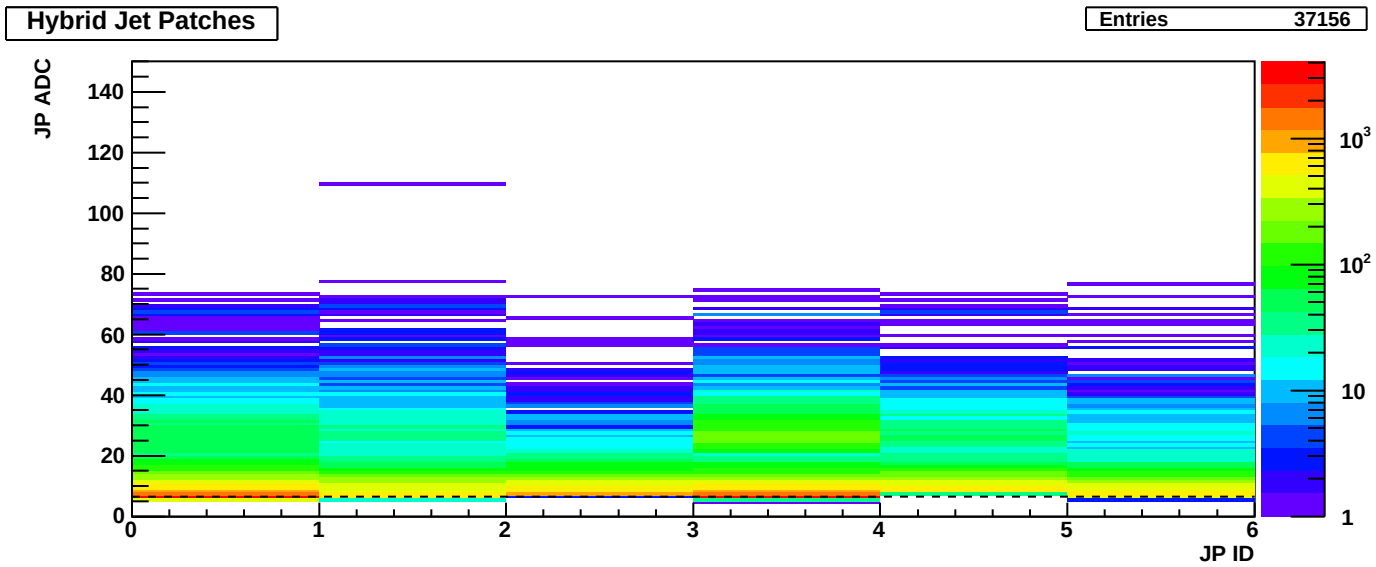

Barrel EMC L0 Input - Patch Sum
Entries 5573400
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

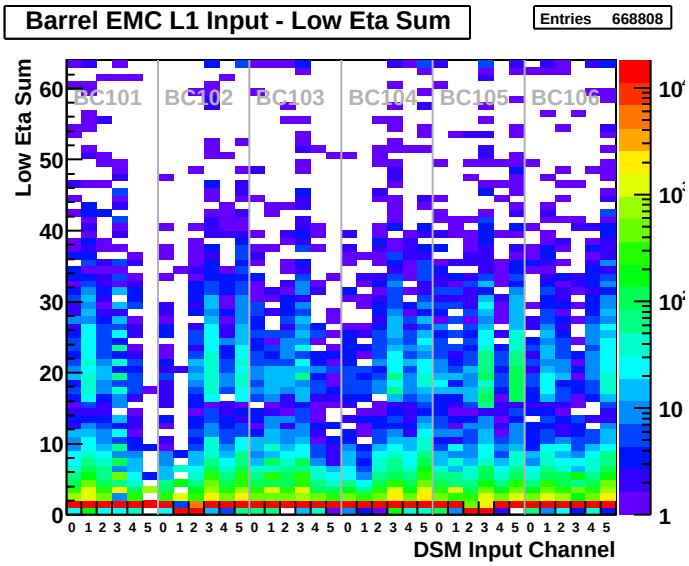

Endcap EMC L0 Input - High Tower
Entries 1672020
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

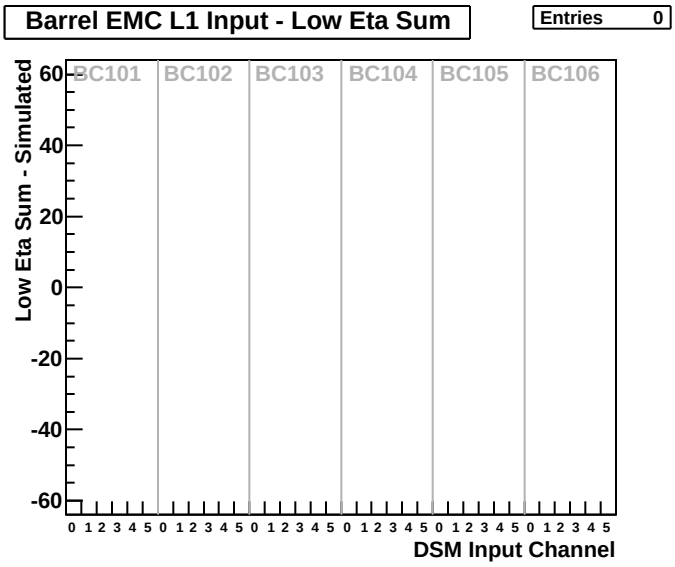

Endcap EMC L0 Input - Patch Sum
Entries 1672020
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

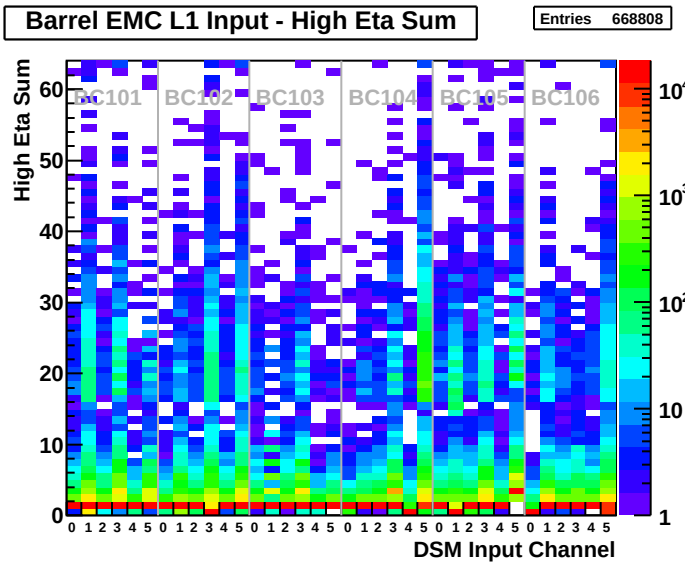

Barrel Jet Patches
Entries 334404
JP ADC
JP ID

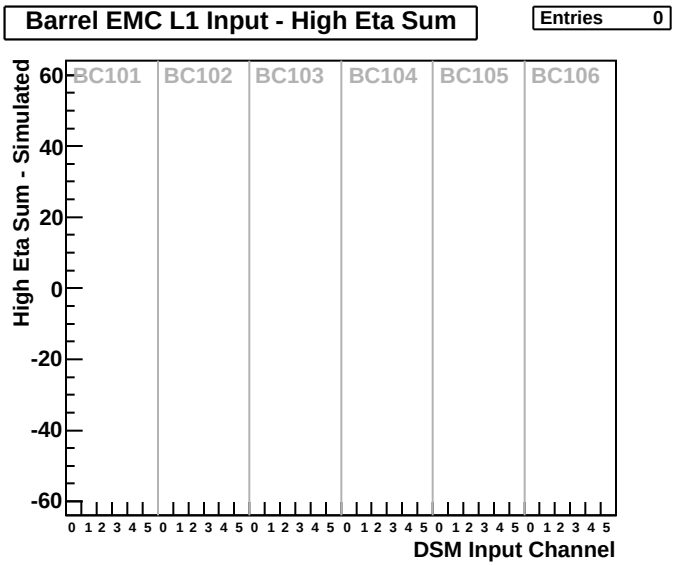

Endcap Jet Patches
Entries 111468
JP ADC
JP ID

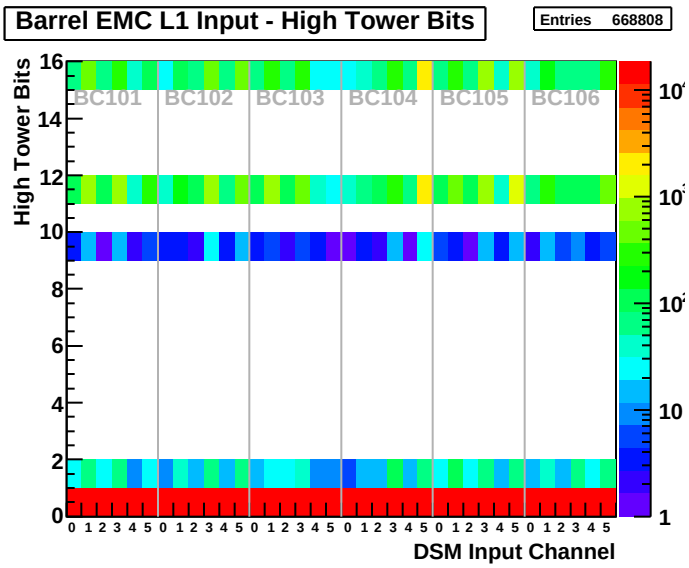

Hybrid Jet Patches
Entries 37156
JP ADC
JP ID

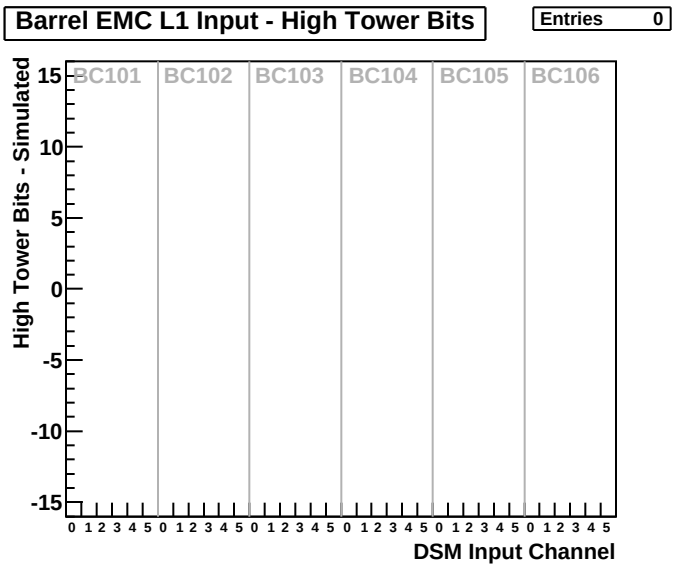

Barrel EMC L1 Input - Low Eta Sum
Entries 668808
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

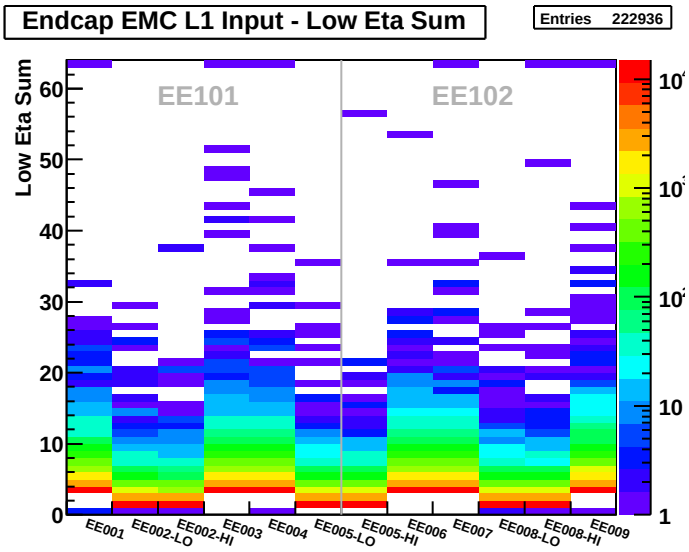

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

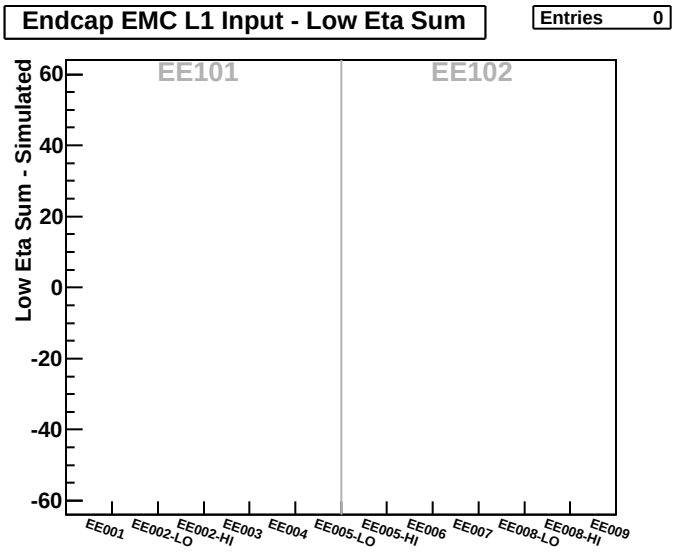

Barrel EMC L1 Input - High Eta Sum
Entries 668808
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

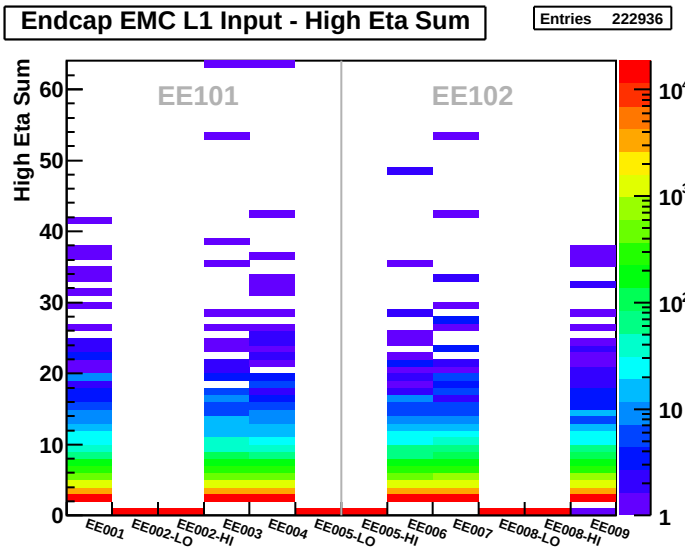

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

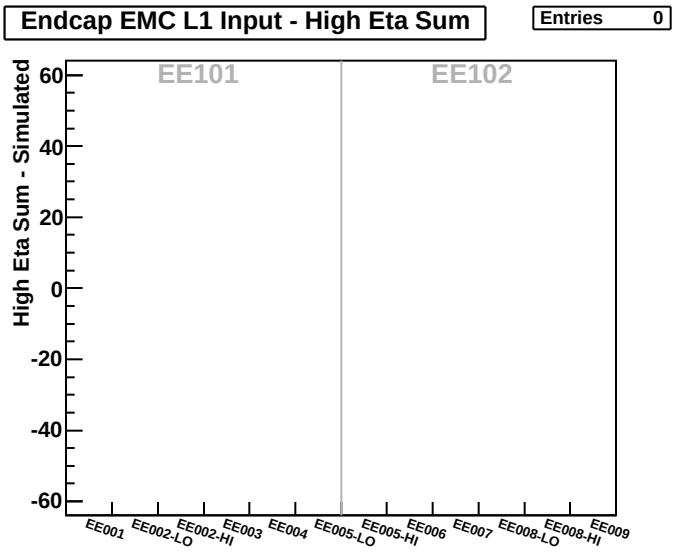

Barrel EMC L1 Input - High Tower Bits
Entries 668808
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

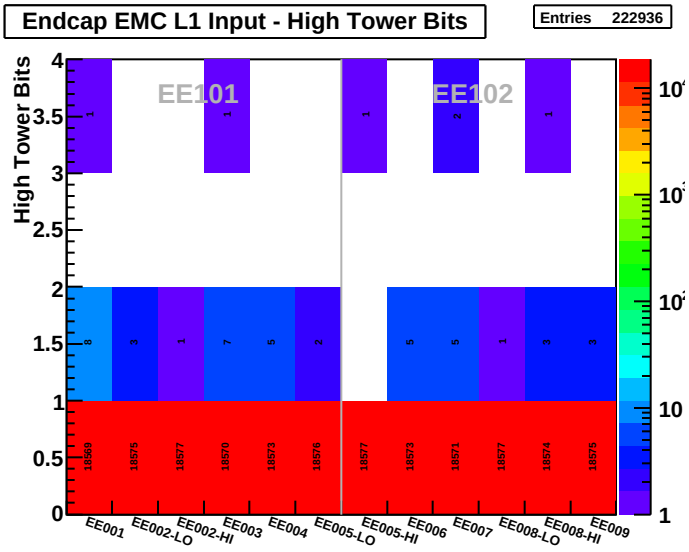

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

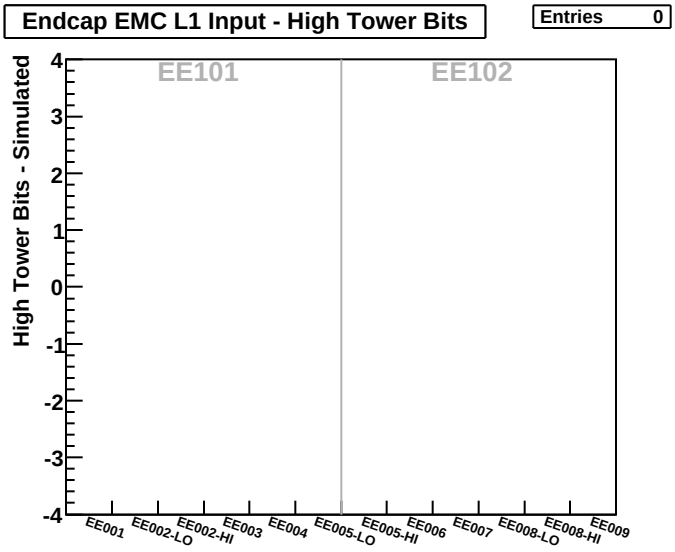

Endcap EMC L1 Input - Low Eta Sum
Entries 222936
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

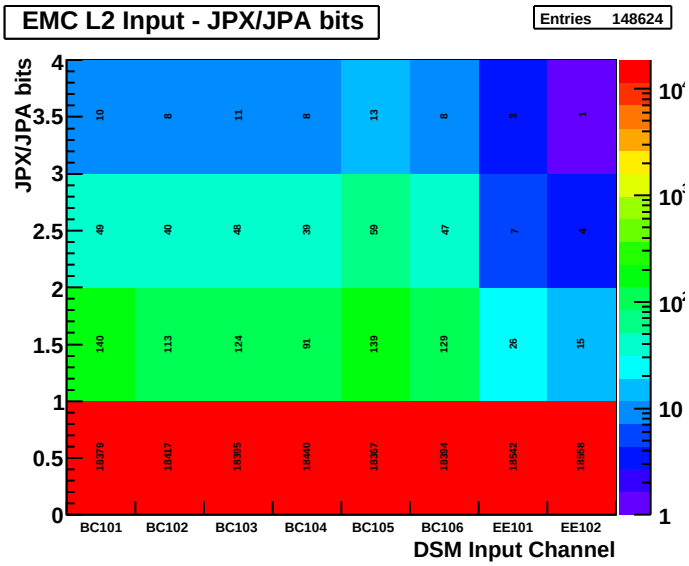

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

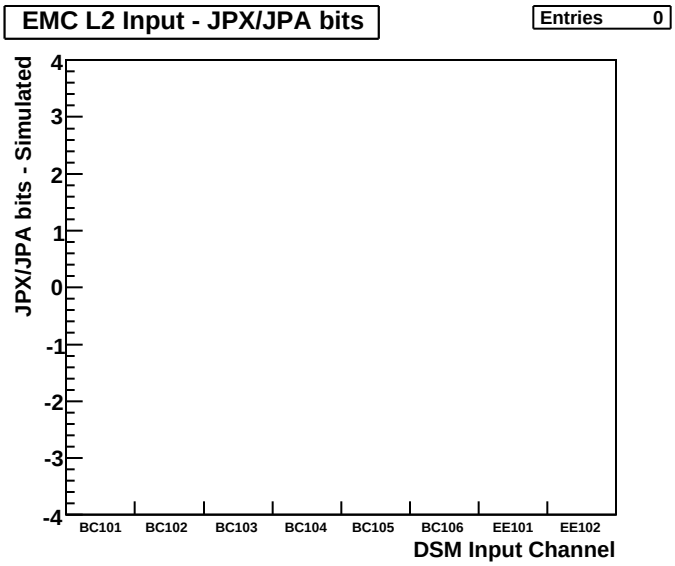

Endcap EMC L1 Input - High Eta Sum
Entries 222936
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

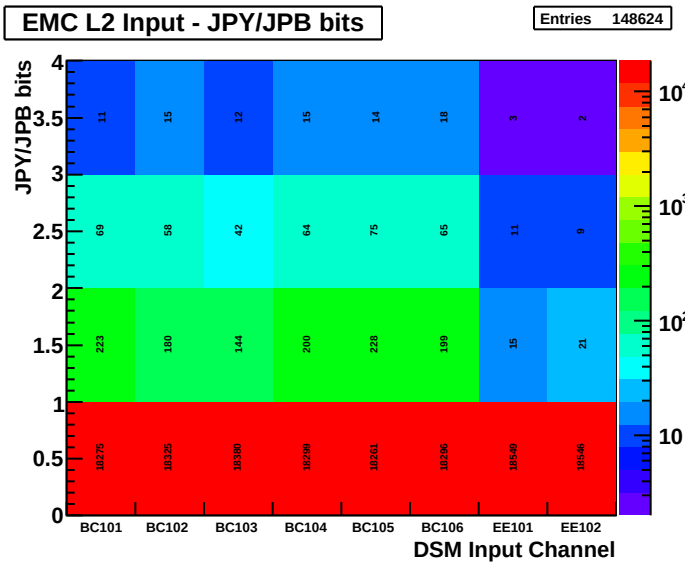

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

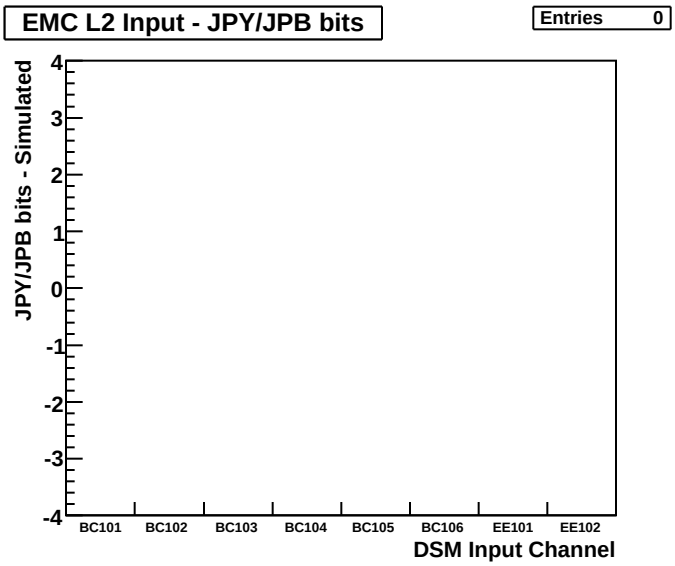

Endcap EMC L1 Input - High Tower Bits
Entries 222936
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

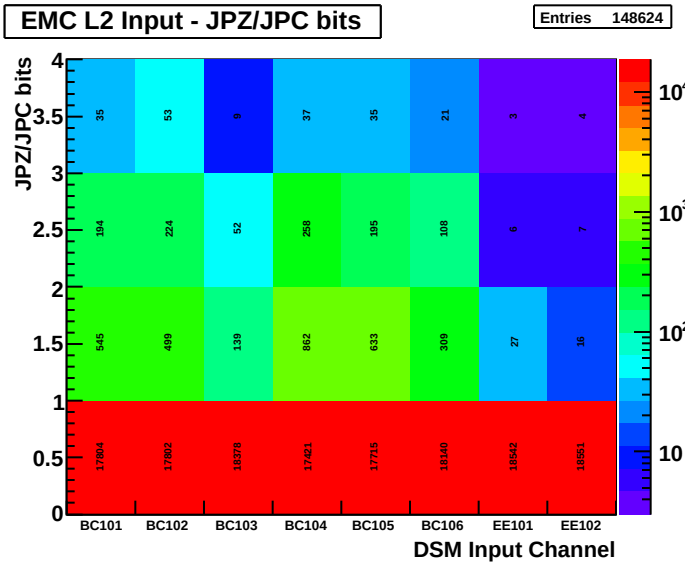

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

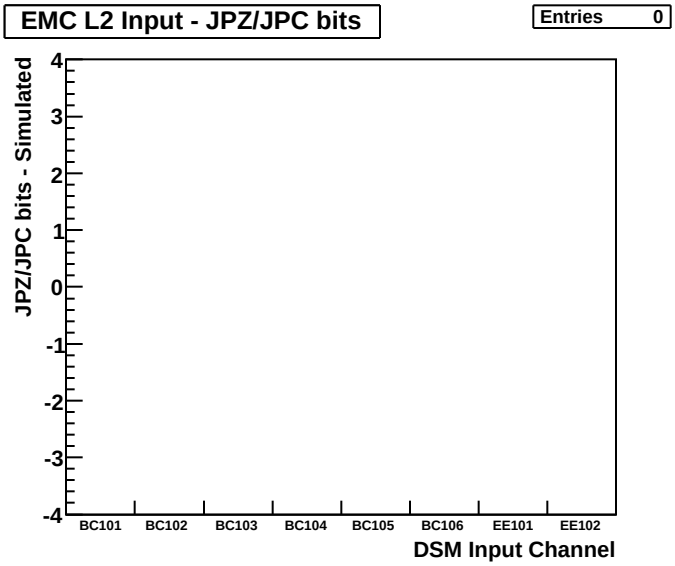

EMC L2 Input - JPX/JPA bits
Entries 148624
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
10 8 11 8 13 8 3 1
49 40 48 39 59 47 7 4
140 113 124 91 139 129 26 15
18379 18417 18395 18440 18367 18394 18542 18558

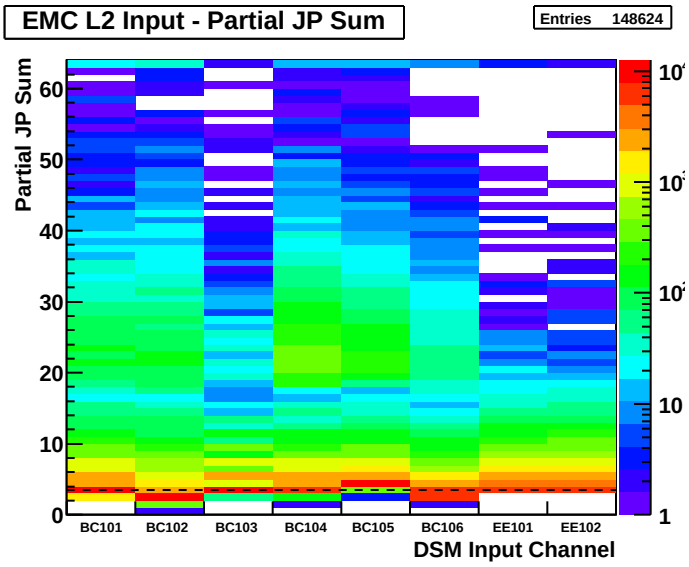

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

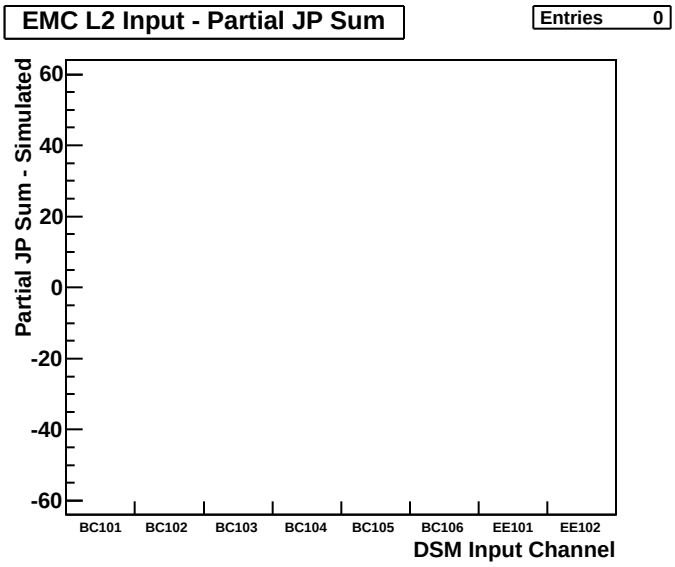

EMC L2 Input - JPY/JPB bits
Entries 148624
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
11 15 12 15 14 18 3 2
69 58 42 64 75 65 11 9
223 180 144 200 228 199 15 21
18275 18325 18380 18299 18261 18296 18549 18546

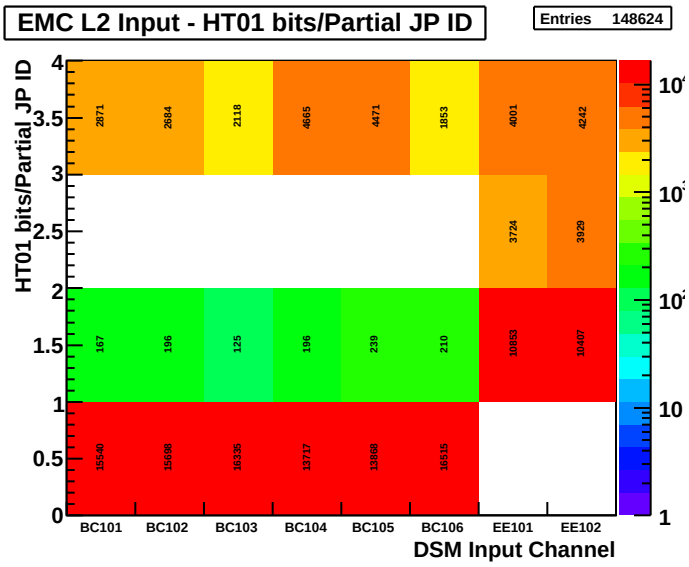

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

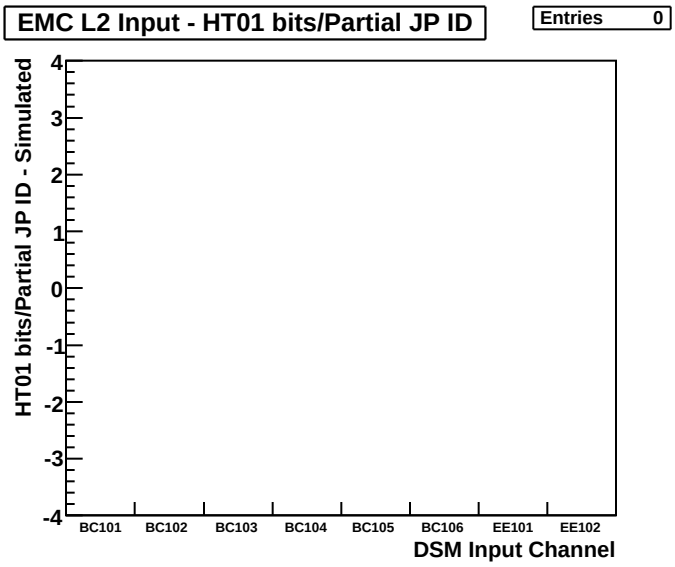

EMC L2 Input - JPZ/JPC bits
Entries 148624
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
35 53 9 37 35 21 3 4
194 224 52 258 195 108 6 7
545 499 139 862 633 309 27 16
17804 17802 18378 17421 17715 18140 18542 18551

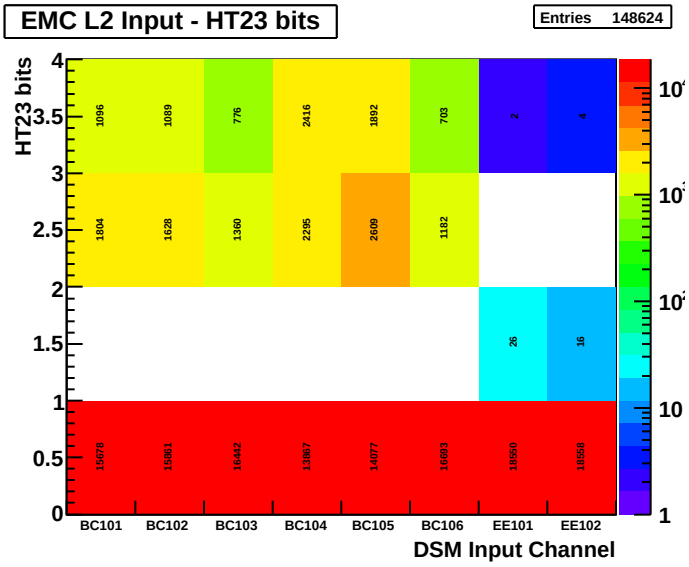

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

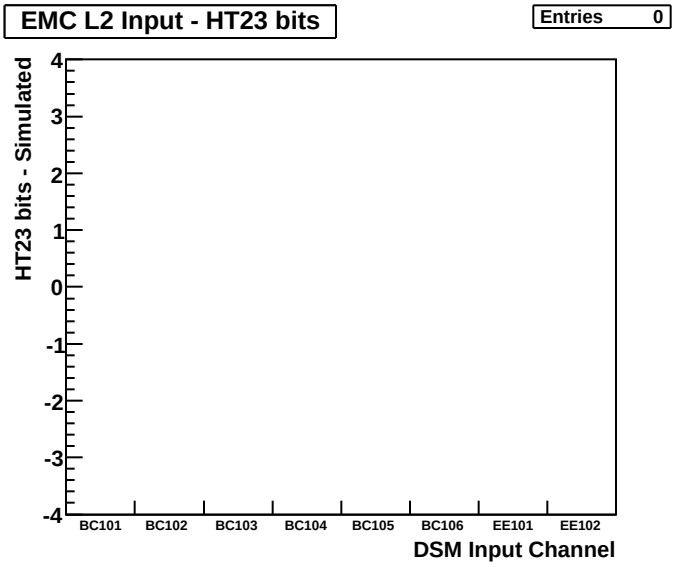

EMC L2 Input - Partial JP Sum
Entries 148624
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

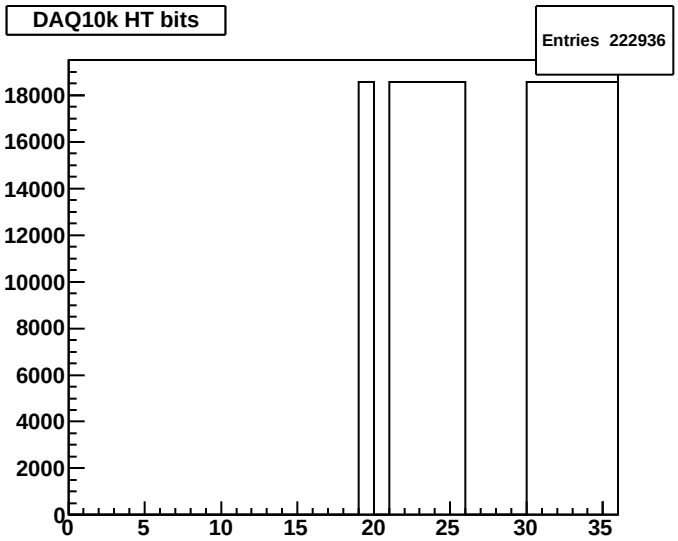

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

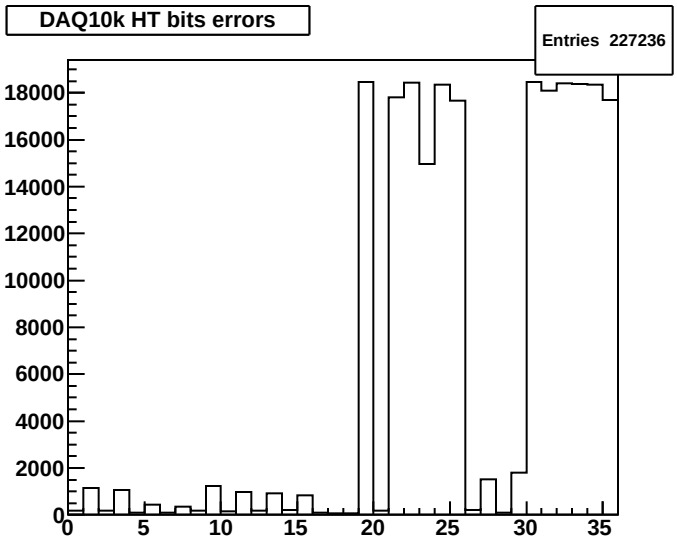

EMC L2 Input - HT01 bits/Partial JP ID
Entries 148624
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

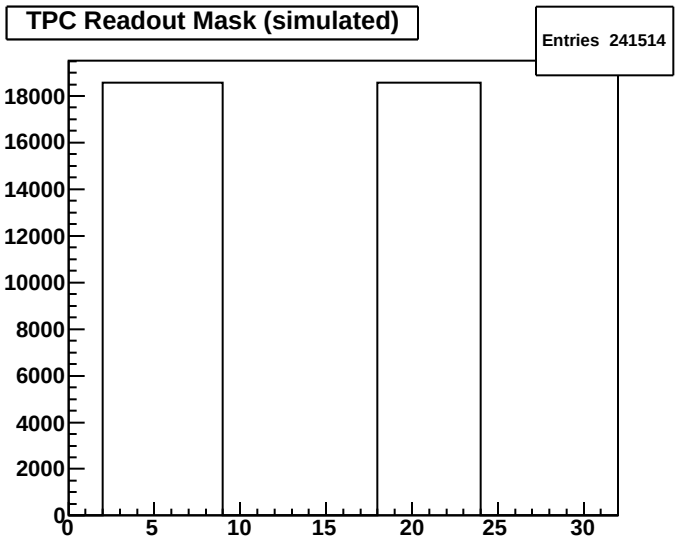

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

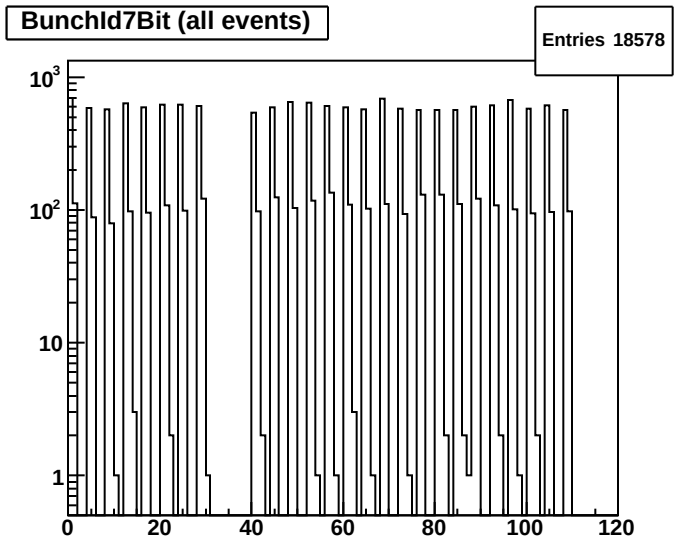

EMC L2 Input - HT23 bits
Entries 148624
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

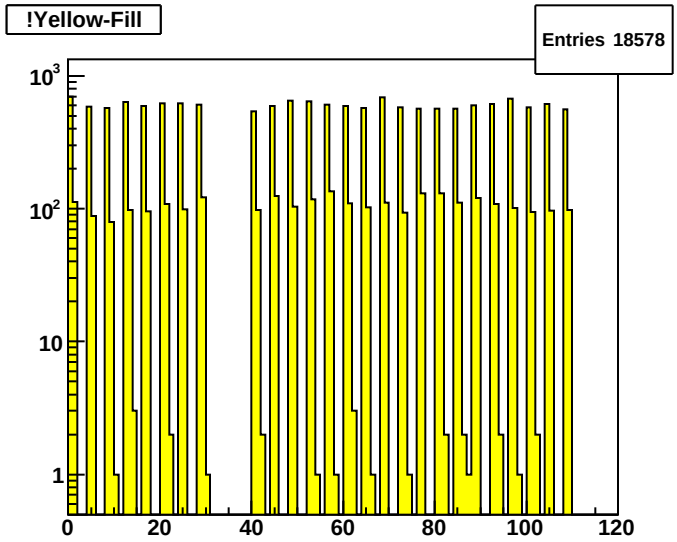

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

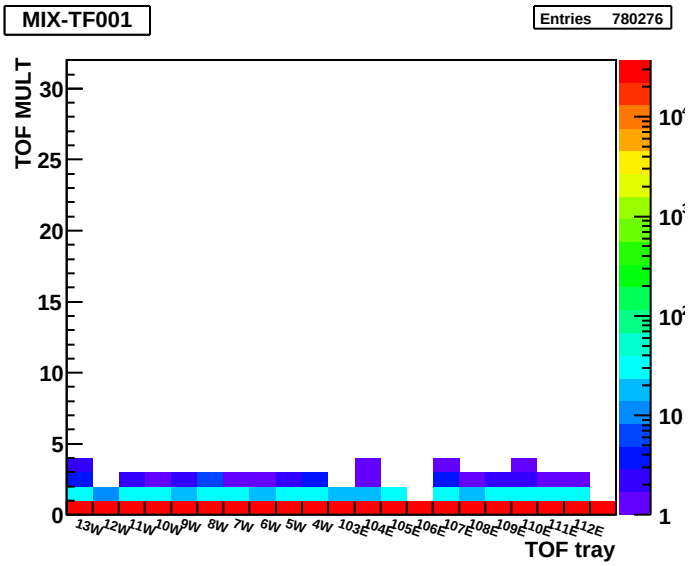

DAQ10k HT bits
Entries 222936
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

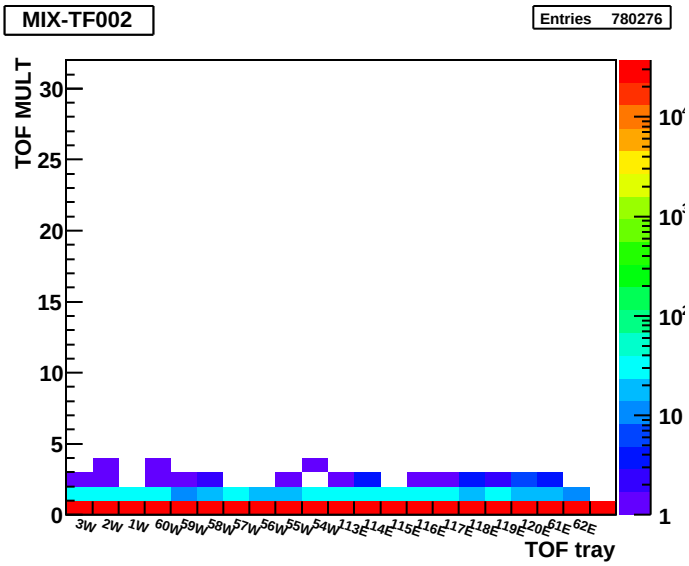

DAQ10k HT bits errors
Entries 227236
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

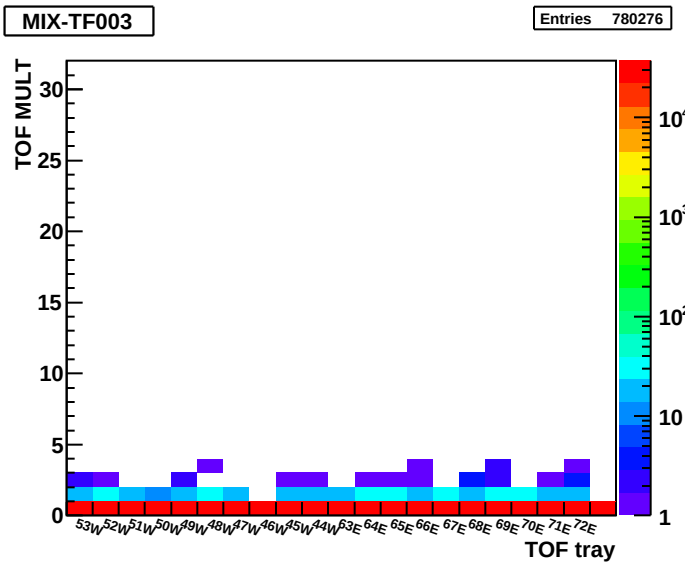

TPC Readout Mask (simulated)
Entries 241514
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30

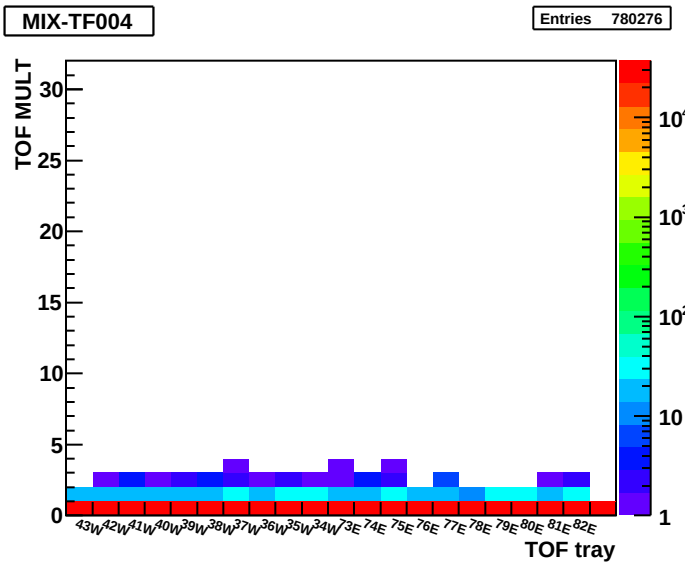

BunchId7Bit (all events)
Entries 18578
10^3
10^2
10
1
0 20 40 60 80 100 120

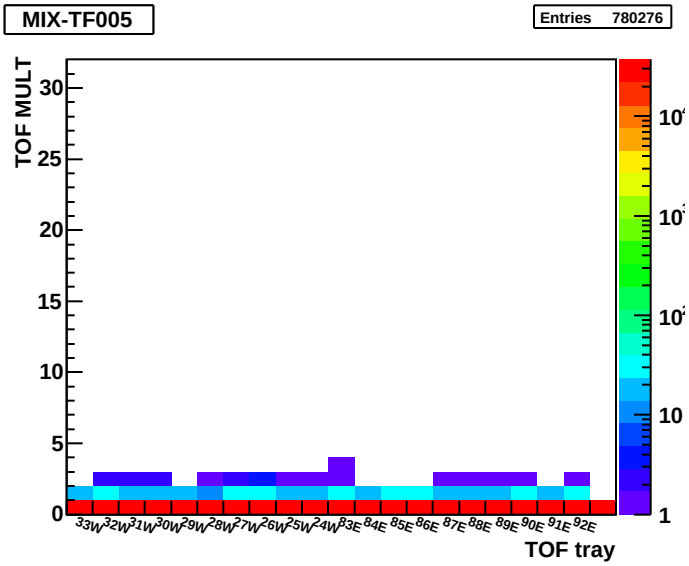

!Yellow-Fill
Entries 18578
10^3
10^2
10
1
0 20 40 60 80 100 120

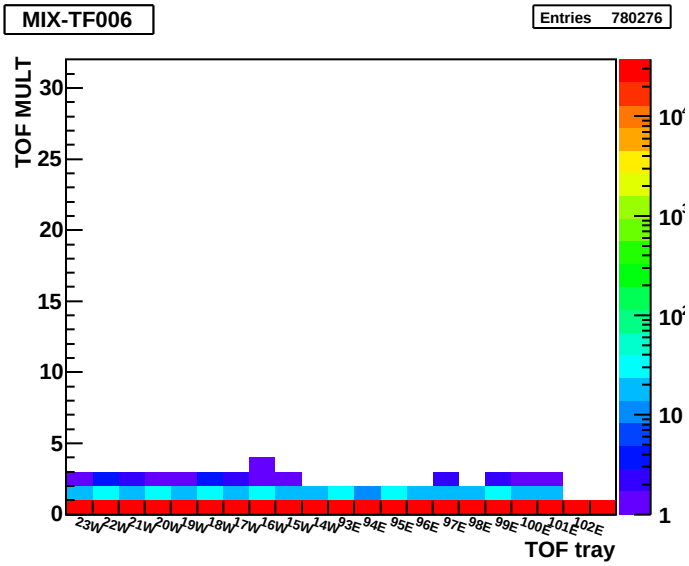

MIX-TF001
Entries 780276
TOF MULT
TOF tray

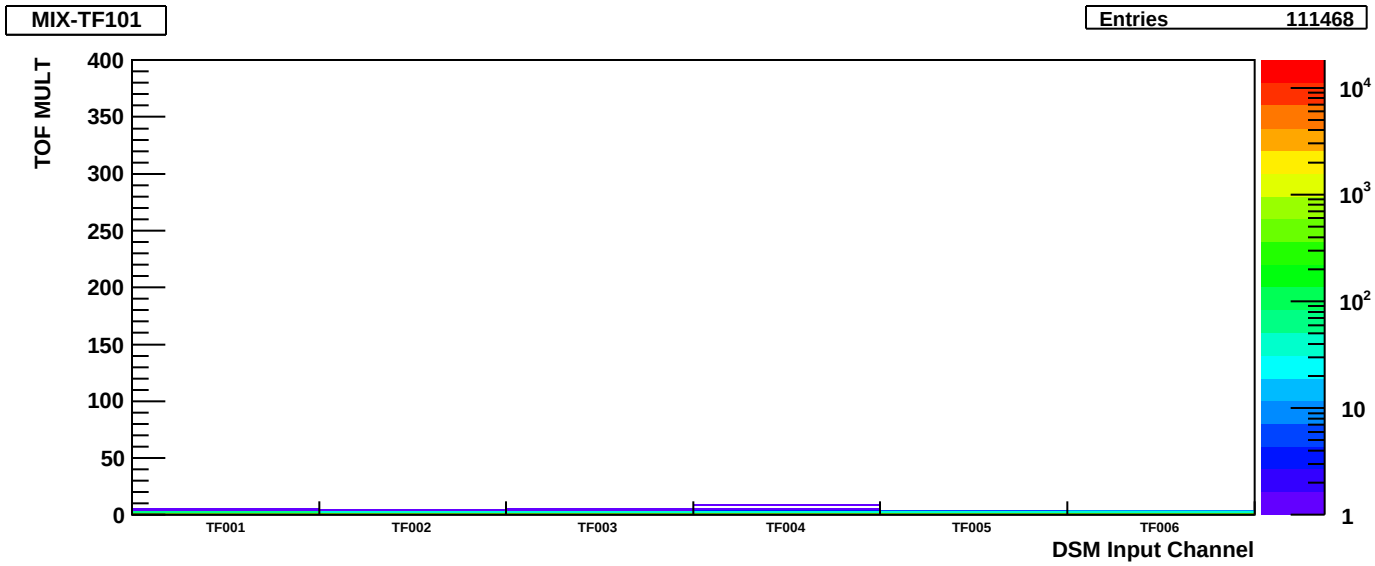

MIX-TF002
Entries 780276
TOF MULT
TOF tray

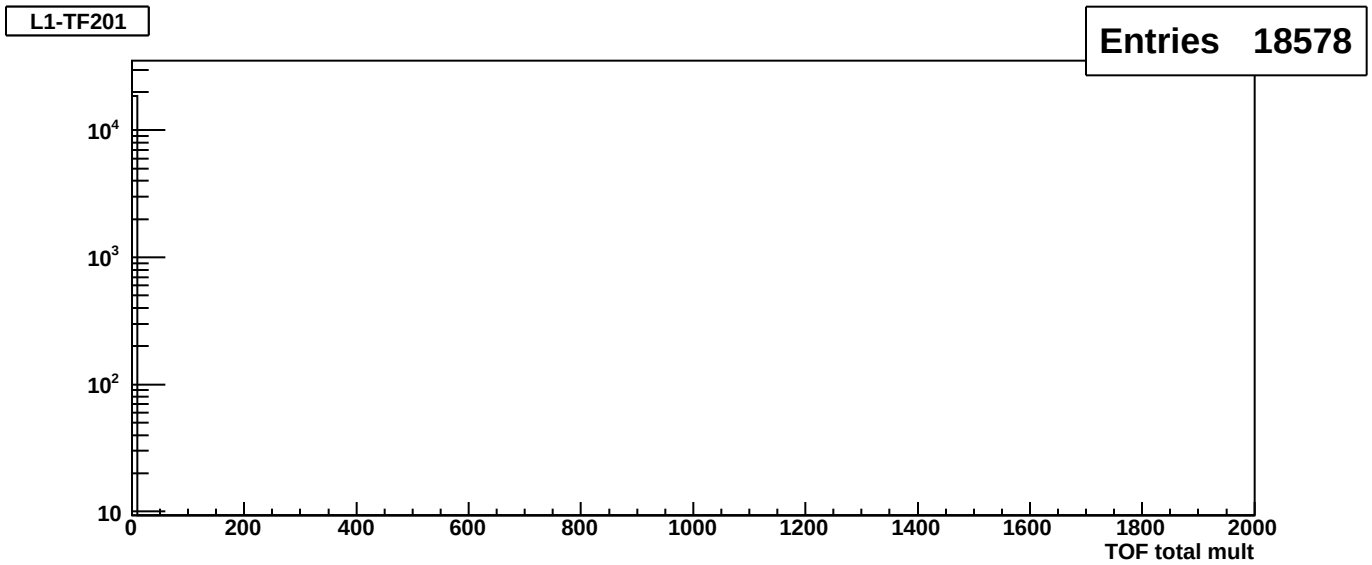

MIX-TF003
Entries 780276
TOF MULT
TOF tray

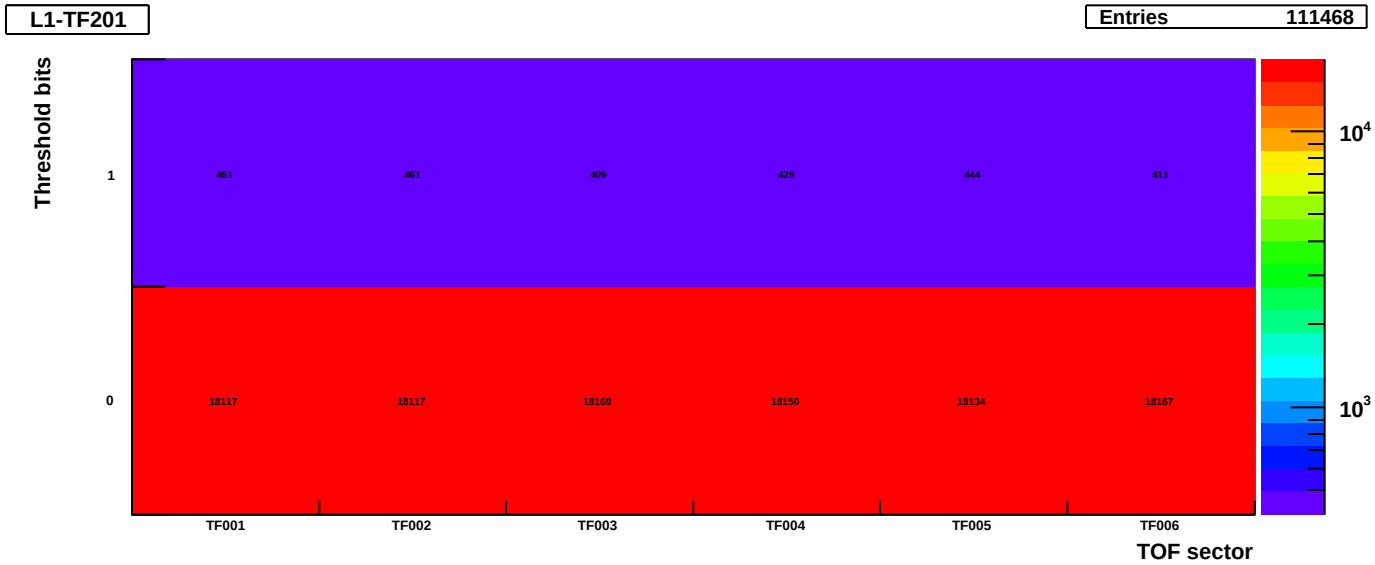

MIX-TF004
Entries 780276
TOF MULT
TOF tray

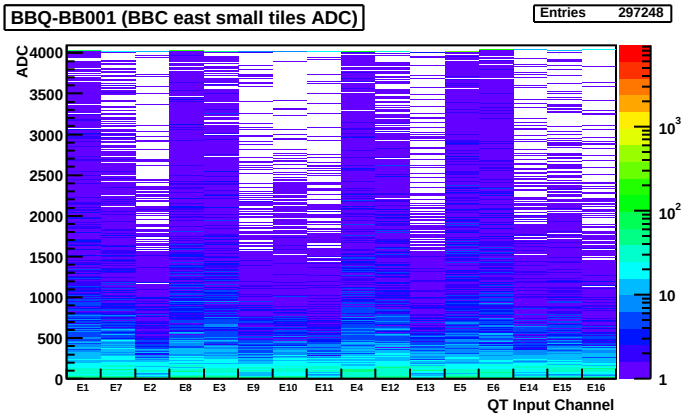

MIX-TF005
Entries 780276
TOF MULT
TOF tray

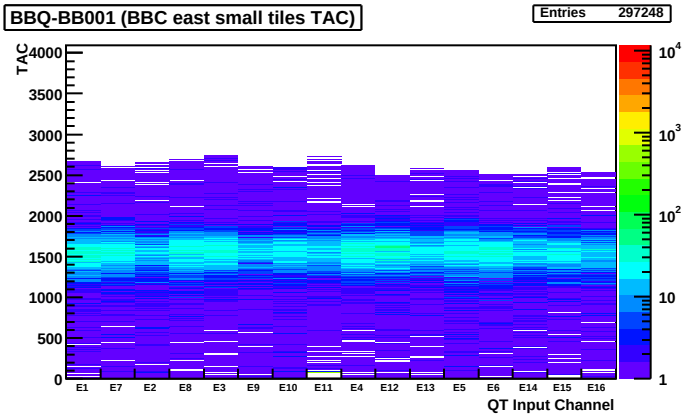

MIX-TF006
Entries 780276
TOF MULT
TOF tray

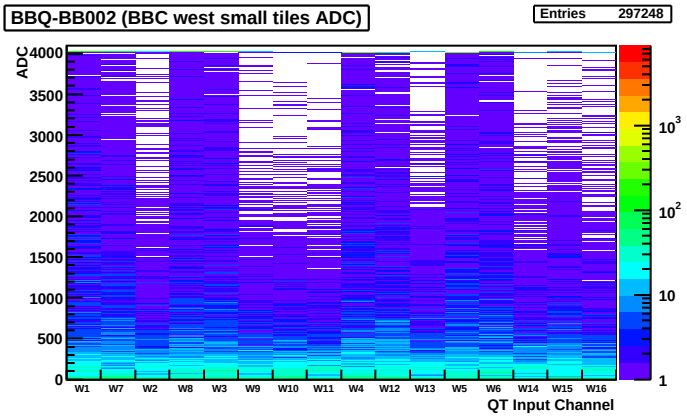

MIX-TF101
Entries 111468
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

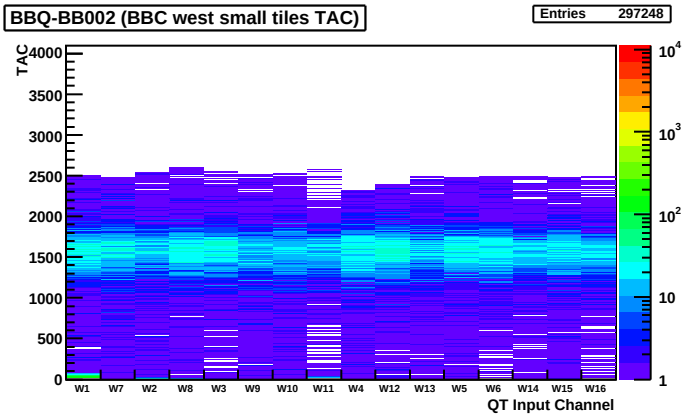

L1-TF201
Entries 18578
10^4
10^3
10^2
10
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

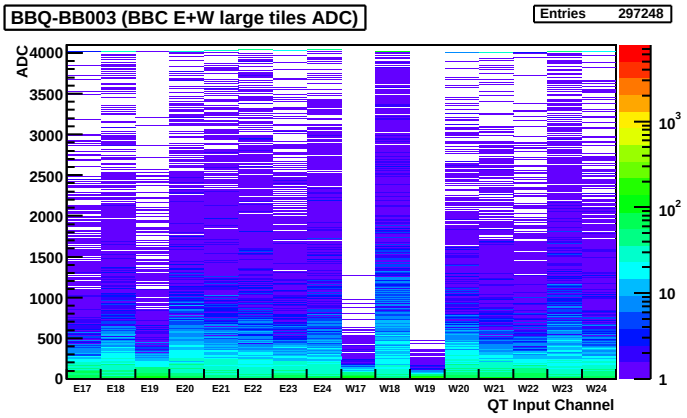

L1-TF201
Entries 111468
Threshold bits
1
0
461
461
409
428
444
411
18117
18117
18169
18150
18134
18167
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4
10^3

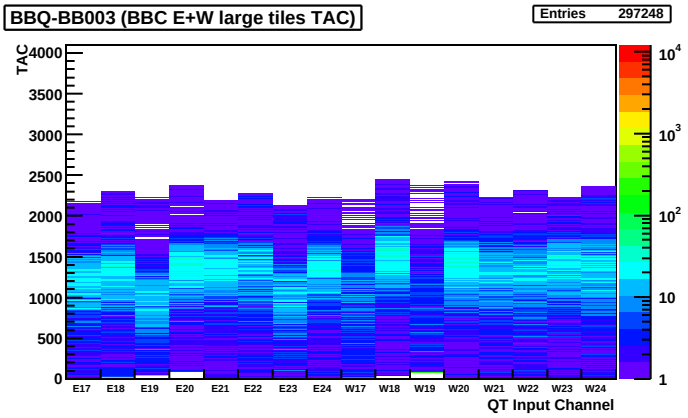

BBQ-BB001 (BBC east small tiles ADC)
Entries 297248
ADC
QT Input Channel

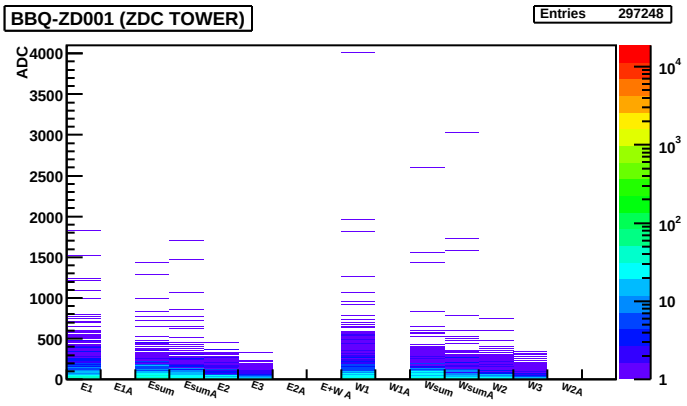

BBQ-BB001 (BBC east small tiles TAC)
Entries 297248
TAC
QT Input Channel

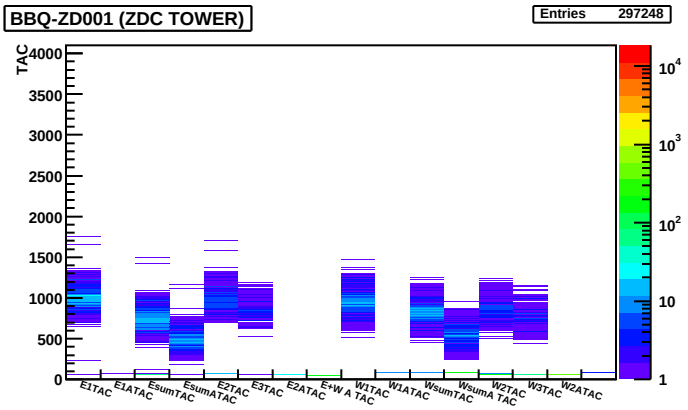

BBQ-BB002 (BBC west small tiles ADC)
Entries 297248
ADC
QT Input Channel

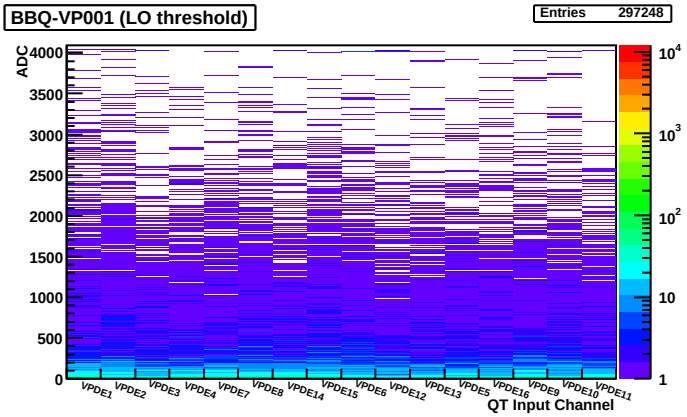

BBQ-BB002 (BBC west small tiles TAC)
Entries 297248
TAC
QT Input Channel

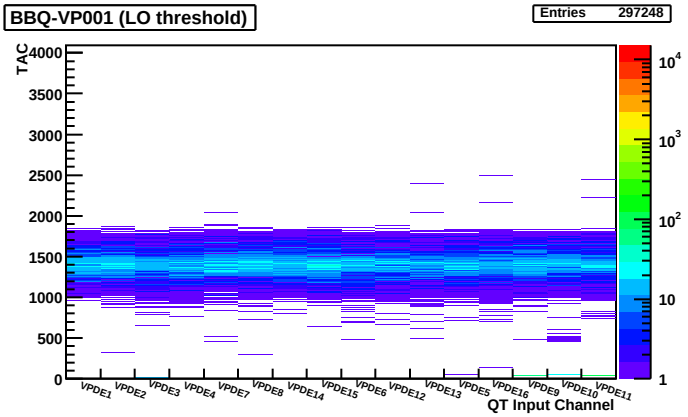

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 297248
ADC
QT Input Channel

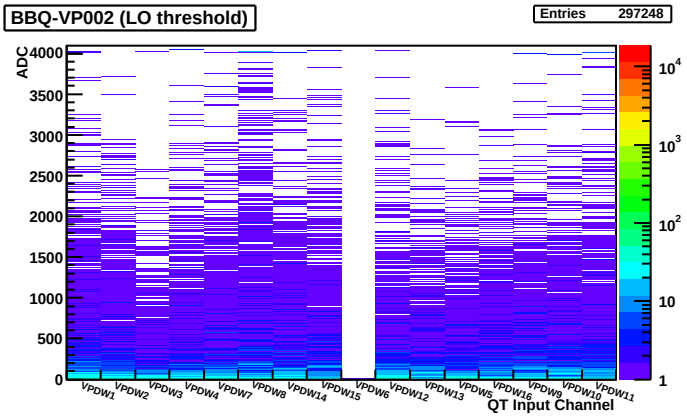

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 297248
TAC
QT Input Channel

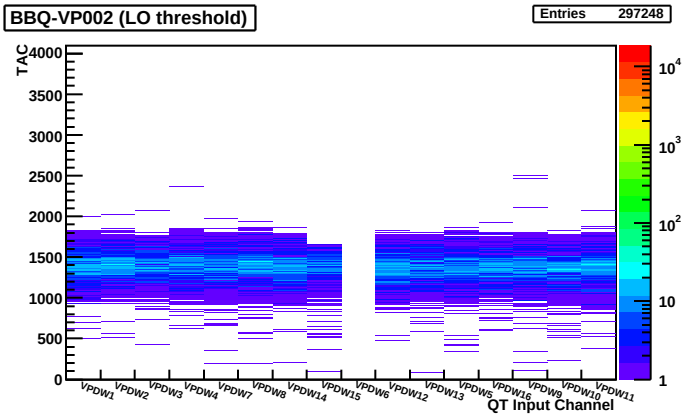

BBQ-ZD001 (ZDC TOWER)
Entries 297248
ADC

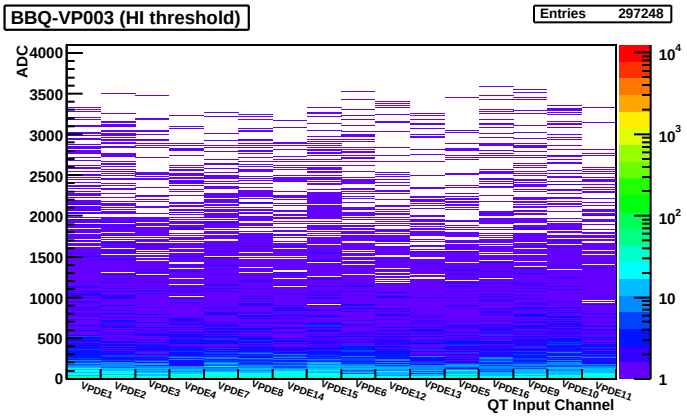

BBQ-ZD001 (ZDC TOWER)
Entries 297248
TAC

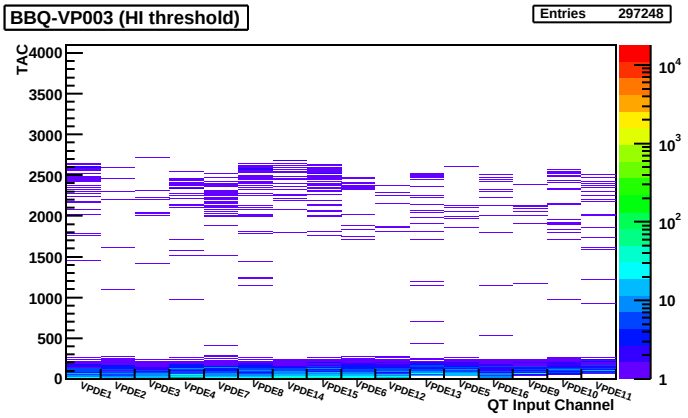

BBQ-VP001 (LO threshold)
Entries 297248
ADC
QT Input Channel

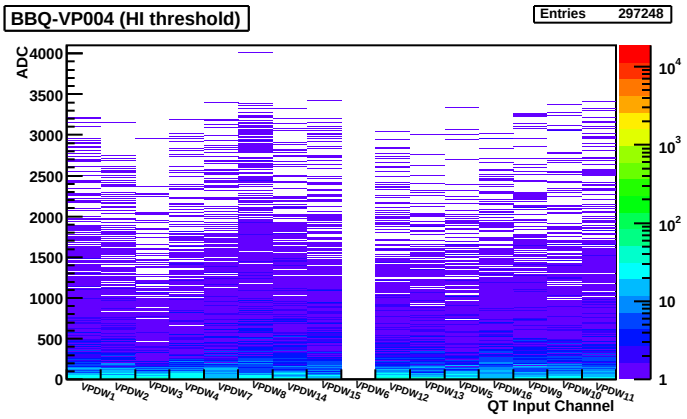

BBQ-VP001 (LO threshold)
Entries 297248
TAC
QT Input Channel

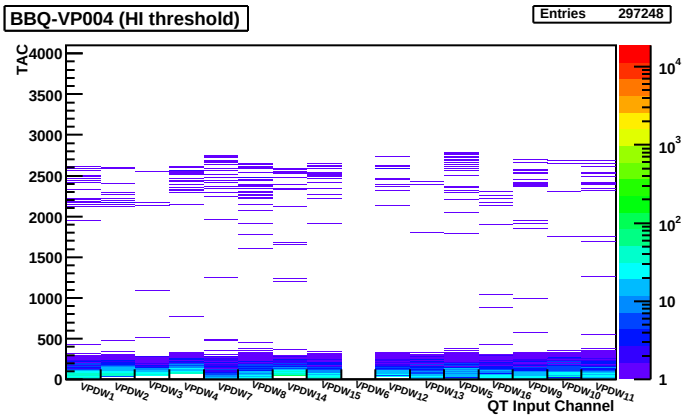

BBQ-VP002 (LO threshold)
Entries 297248
ADC
QT Input Channel

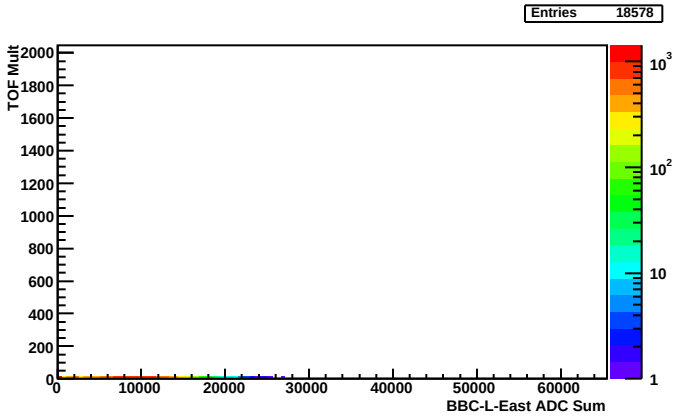

BBQ-VP002 (LO threshold)
Entries 297248
TAC
QT Input Channel

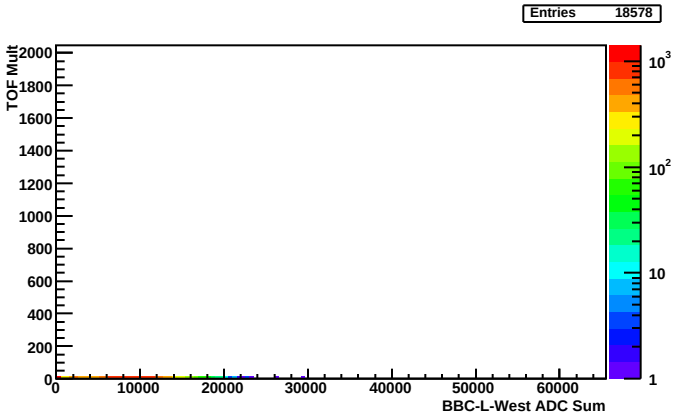

BBQ-VP003 (HI threshold)
Entries 297248
ADC
QT Input Channel

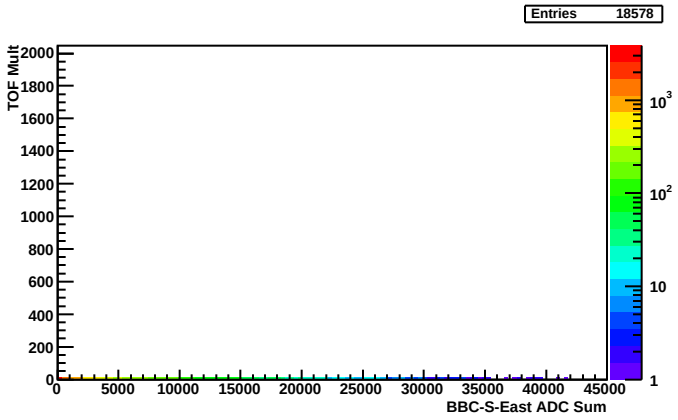

BBQ-VP003 (HI threshold)
Entries 297248
TAC
QT Input Channel

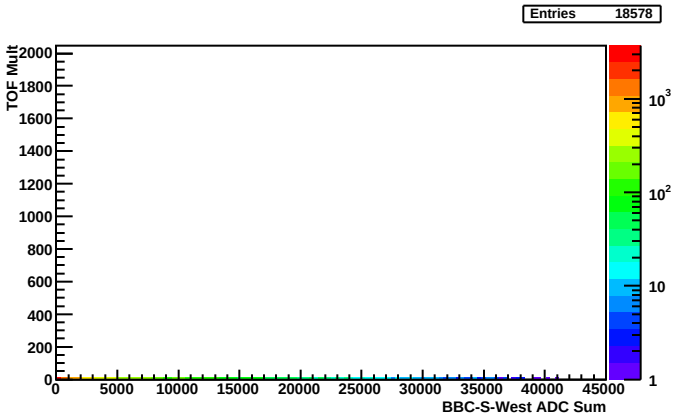

BBQ-VP004 (HI threshold)
Entries 297248
ADC
QT Input Channel

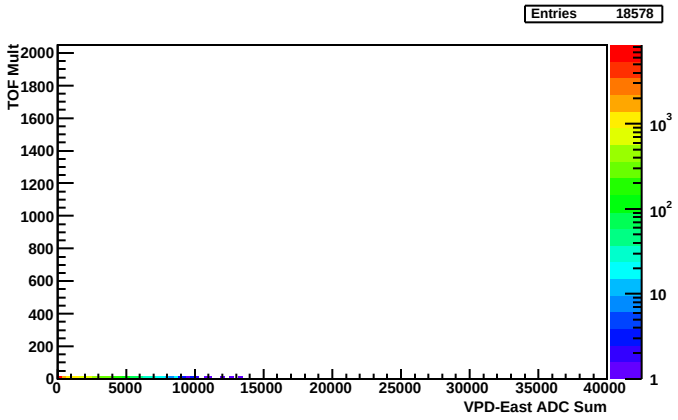

BBQ-VP004 (HI threshold)
Entries 297248
TAC
QT Input Channel

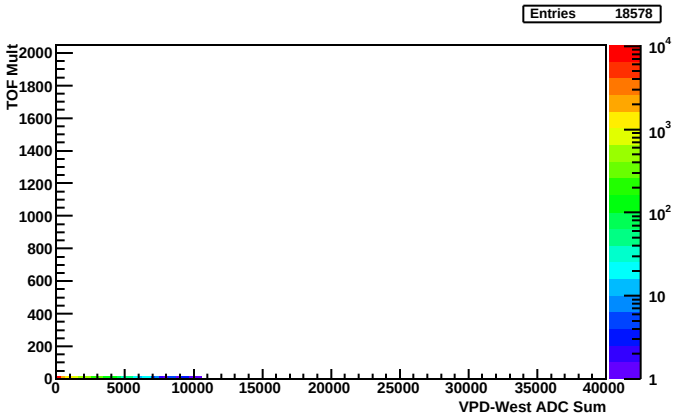

Entries 18578
TOF Mult
BBC-L-East ADC Sum

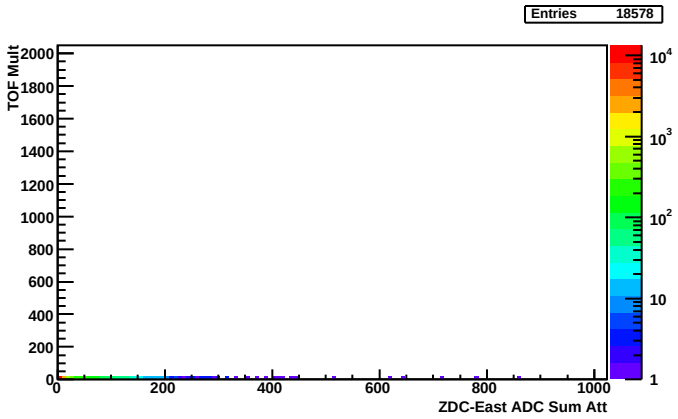

Entries 18578
TOF Mult
BBC-L-West ADC Sum

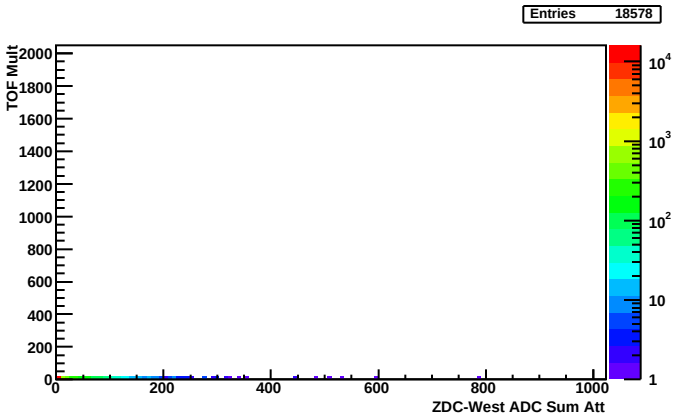

Entries 18578
TOF Mult
BBC-S-East ADC Sum

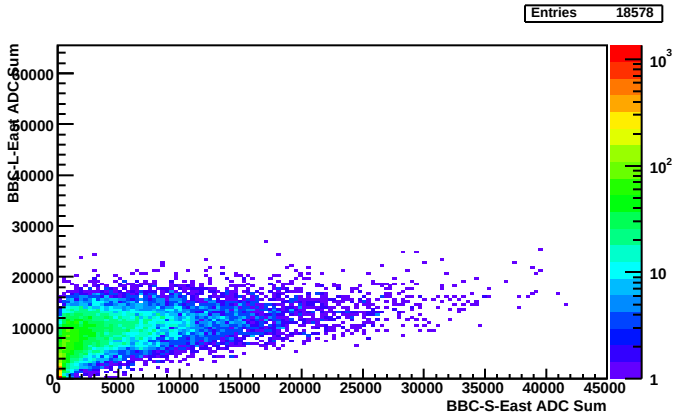

Entries 18578
TOF Mult
BBC-S-West ADC Sum

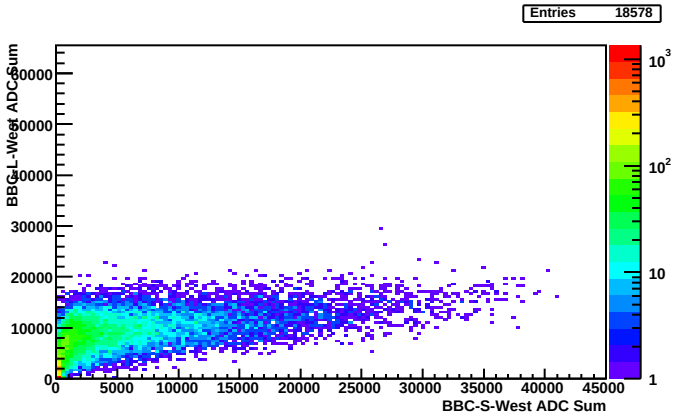

Entries 18578
TOF Mult
VPD-East ADC Sum

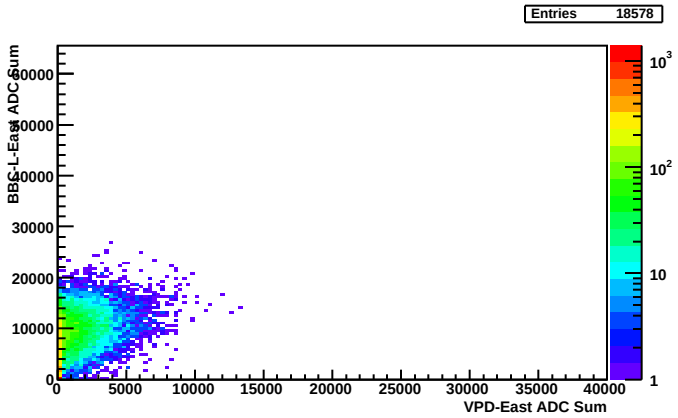

Entries 18578
TOF Mult
VPD-West ADC Sum

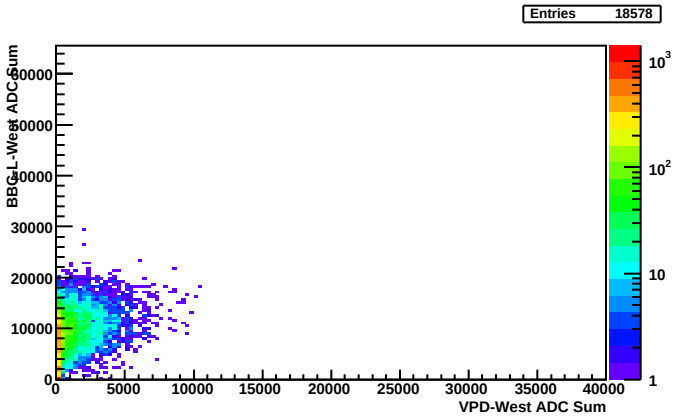

Entries 18578
TOF Mult
ZDC-East ADC Sum Att

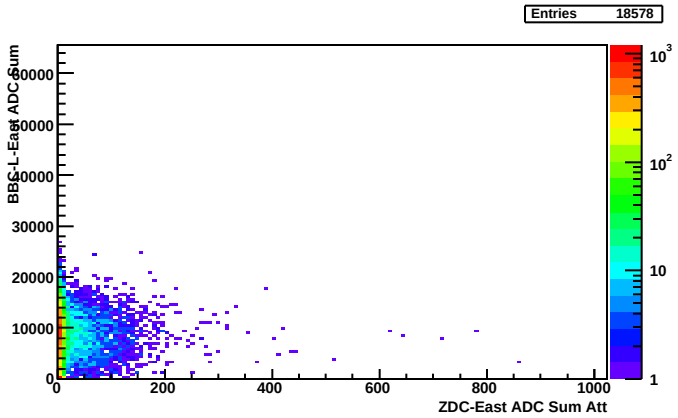

Entries 18578
TOF Mult
ZDC-West ADC Sum Att

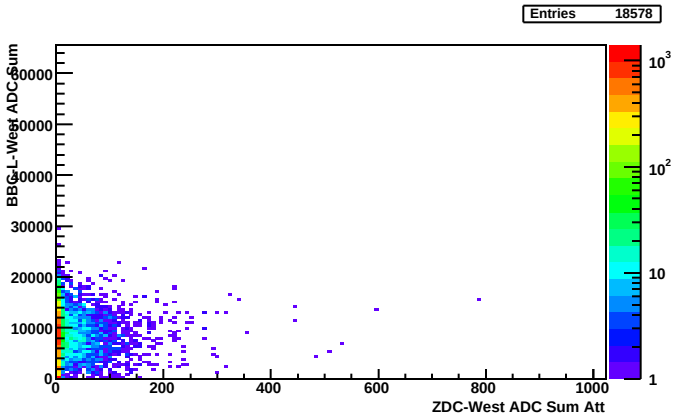

Entries 18578
BBC-L-East ADC Sum
BBC-S-East ADC Sum

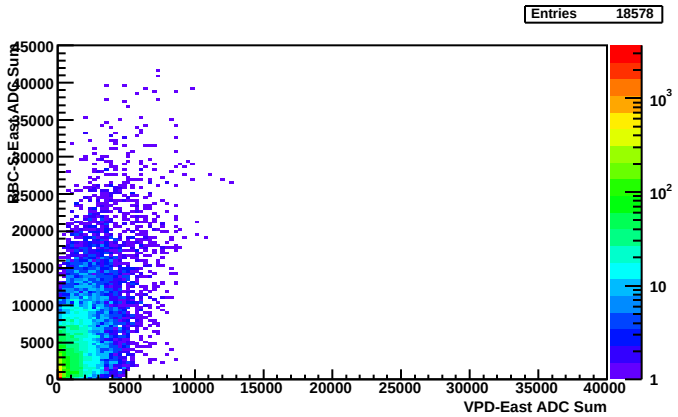

Entries 18578
BBC-L-West ADC Sum
BBC-S-West ADC Sum

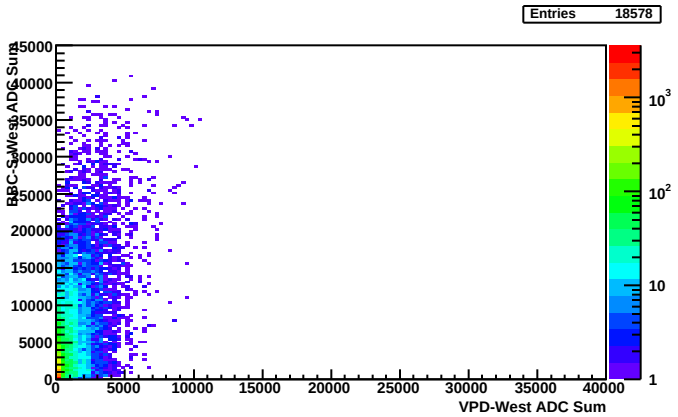

Entries 18578
BBC-L-East ADC Sum
VPD-East ADC Sum

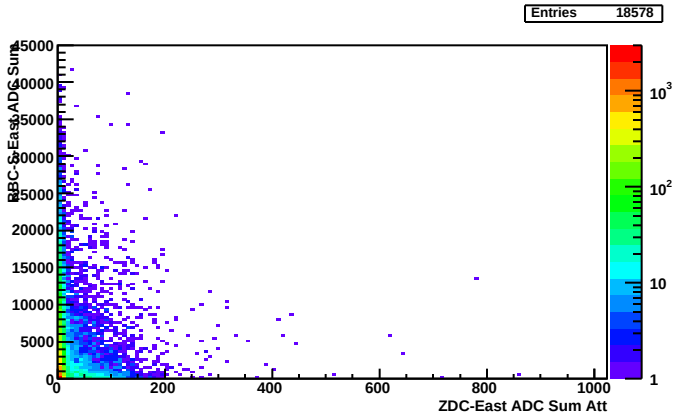

Entries 18578
BBC-L-West ADC Sum
VPD-West ADC Sum

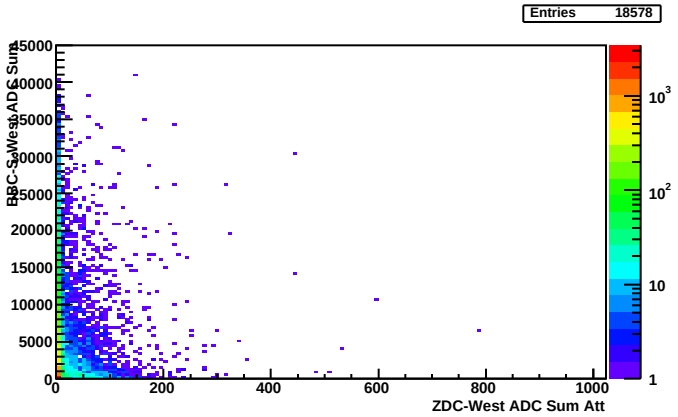

Entries 18578
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

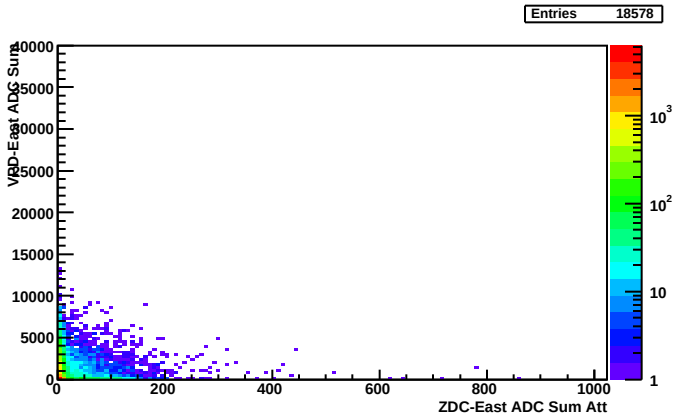

Entries 18578
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

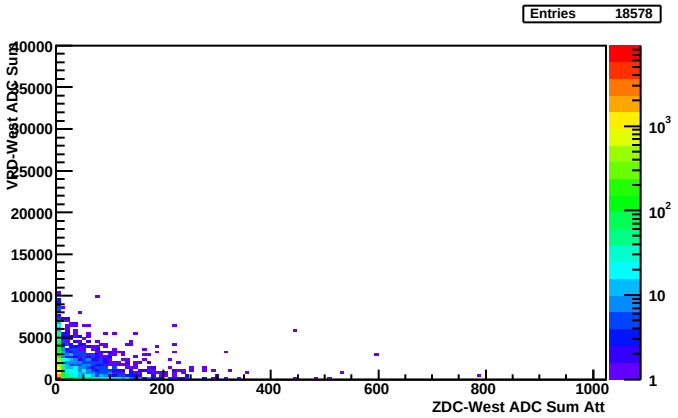

Entries 18578
BBC-S-East ADC Sum
VPD-East ADC Sum


Entries 18578
BBC-S-West ADC Sum
VPD-West ADC Sum


Entries 18578
BBC-S-East ADC Sum
ZDC-East ADC Sum Att


Entries 18578
BBC-S-West ADC Sum
ZDC-West ADC Sum Att


Entries 18578
VPD-East ADC Sum
ZDC-East ADC Sum Att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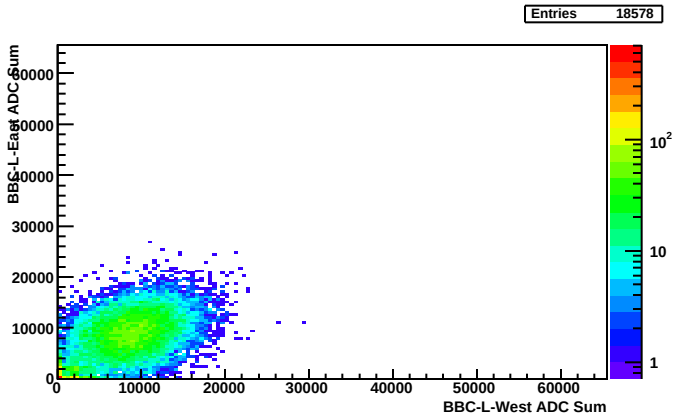
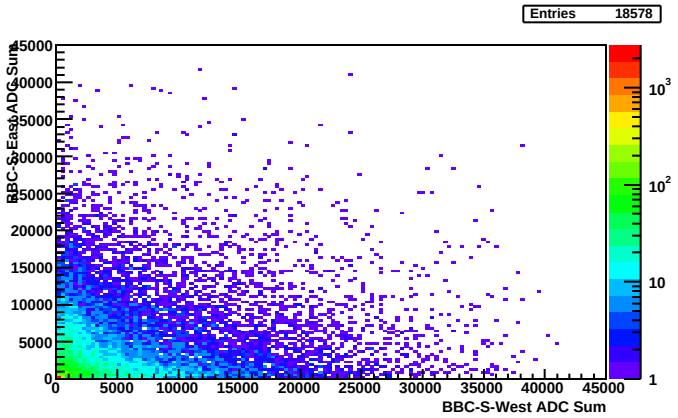
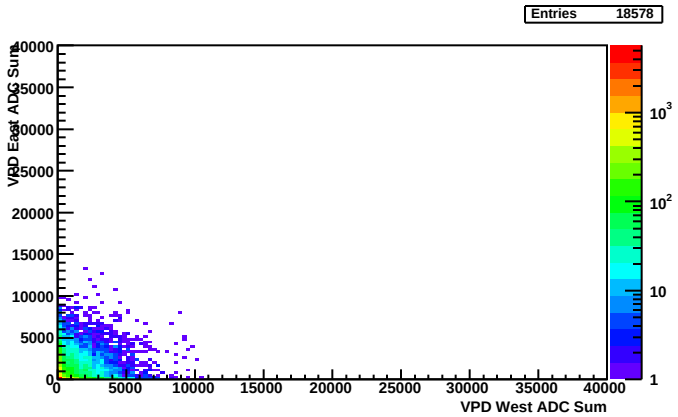
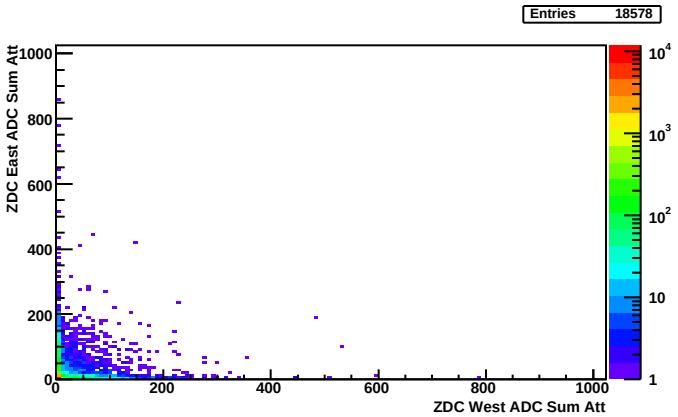
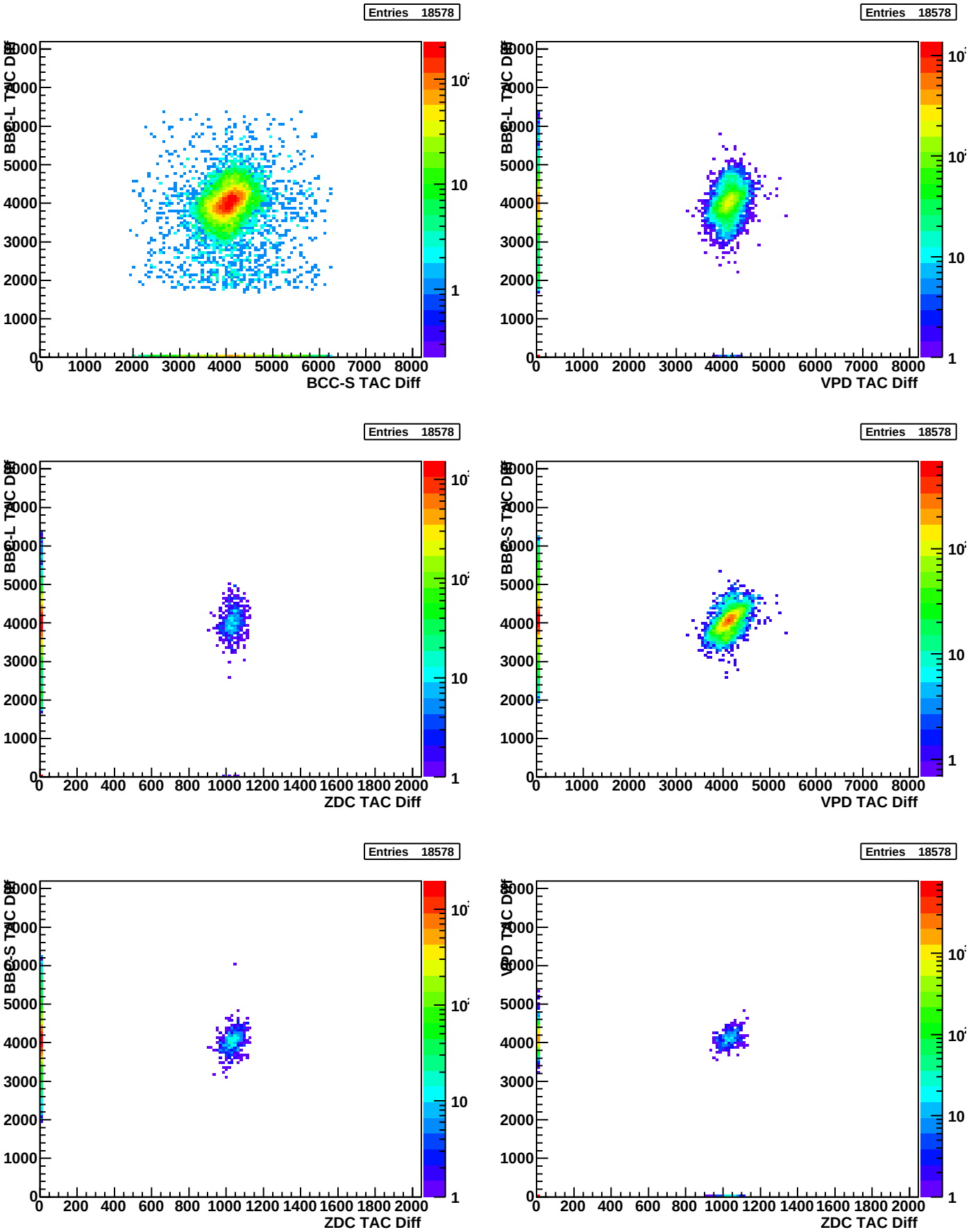
VPD-West ADC Sum
ZDC-West ADC Sum Att

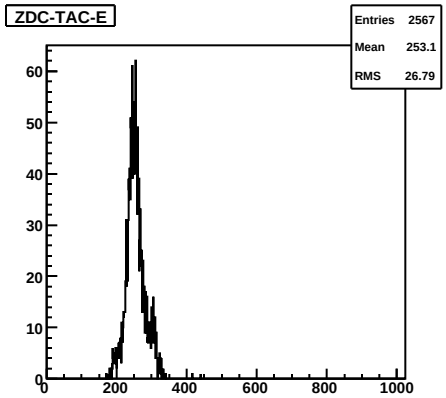

Entries 18578
BBC-L-East ADC Sum
BBC-L-West ADC Sum

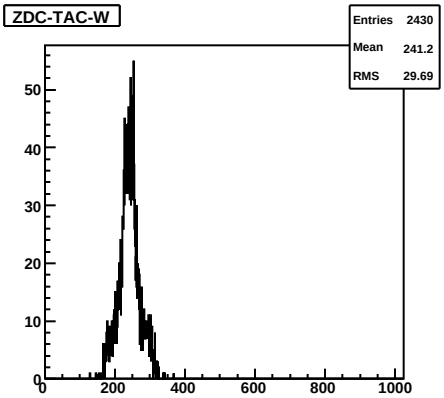

Entries 18578
BBC-S-East ADC Sum
BBC-S-West ADC Sum

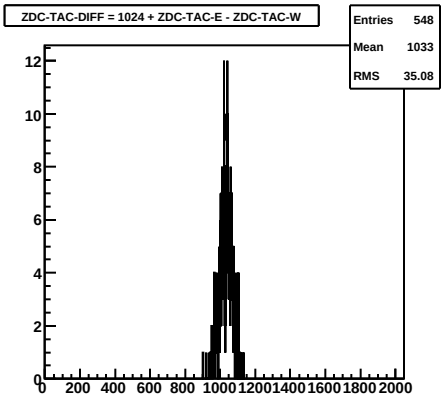

Entries 18578
VPD East ADC Sum
VPD West ADC Sum

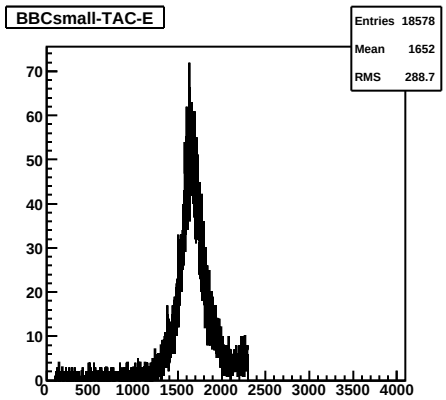

Entries 18578
ZDC East ADC Sum Att
ZDC West ADC Sum Att

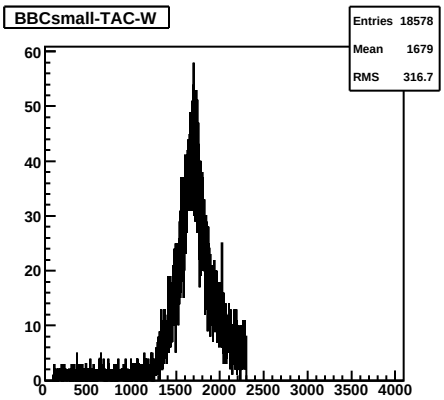

Entries 18578
BBC-L TAC Diff
BCC-S TAC Diff
Entries 18578
BBC-L TAC Diff
VPD TAC Diff
Entries 18578
BBC-L TAC Diff
ZDC TAC Diff
Entries 18578
BBC-S TAC Diff
VPD TAC Diff
Entries 18578
BBC-S TAC Diff
ZDC TAC Diff
Entries 18578
VPD TAC Diff
ZDC TAC Diff

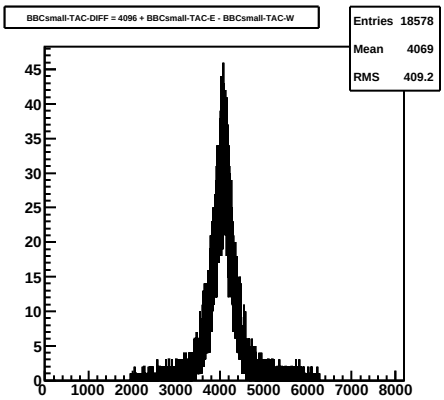

ZDC-TAC-E
Entries 2567
Mean 253.1
RMS 26.79

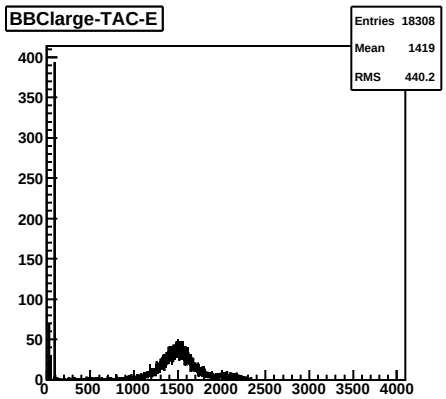

ZDC-TAC-W
Entries 2430
Mean 241.2
RMS 29.69

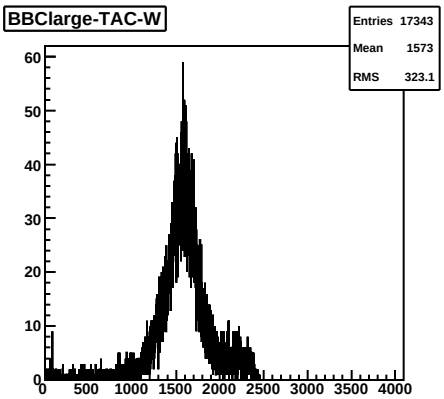

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 548
Mean 1033
RMS 35.08

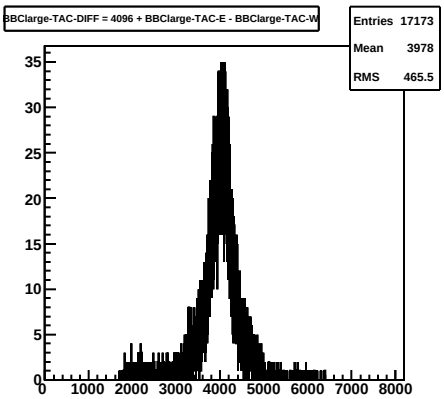

BBCsmall-TAC-E
Entries 18578
Mean 1652
RMS 288.7

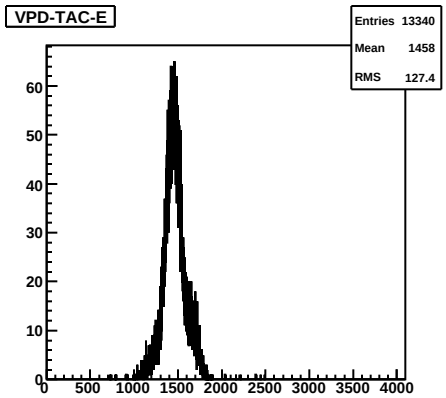

BBCsmall-TAC-W
Entries 18578
Mean 1679
RMS 316.7

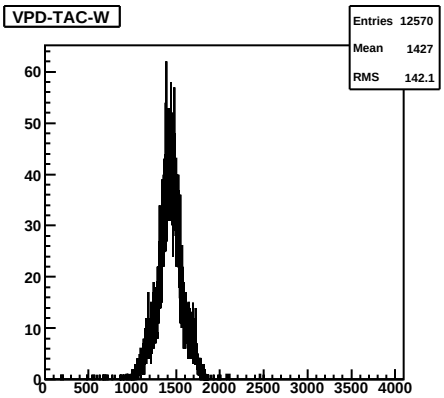

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 18578
Mean 4069
RMS 409.2

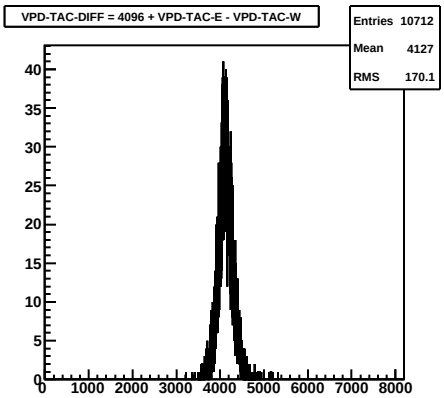

BBClarge-TAC-E
Entries 18308
Mean 1419
RMS 440.2

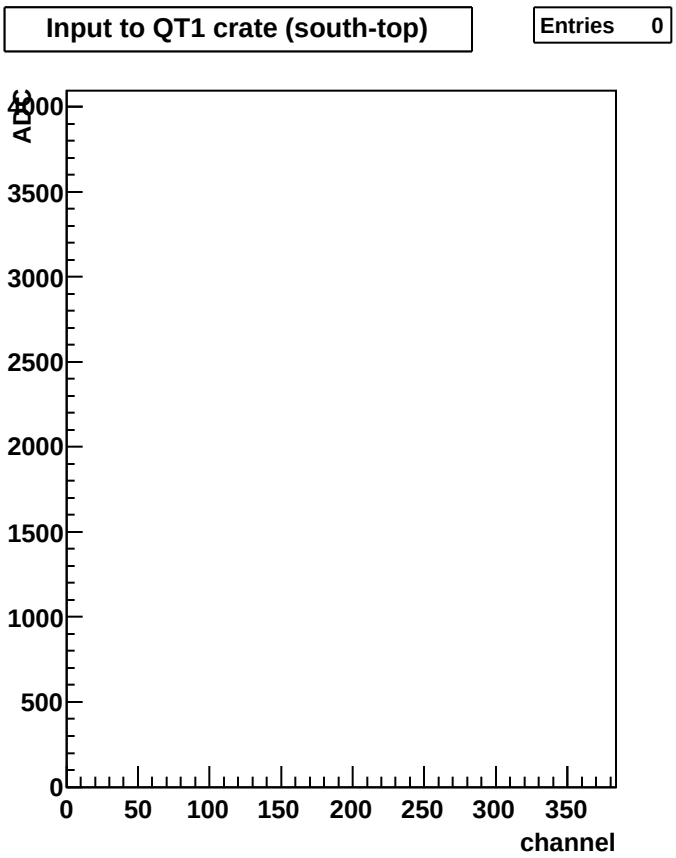

BBClarge-TAC-W
Entries 17343
Mean 1573
RMS 323.1

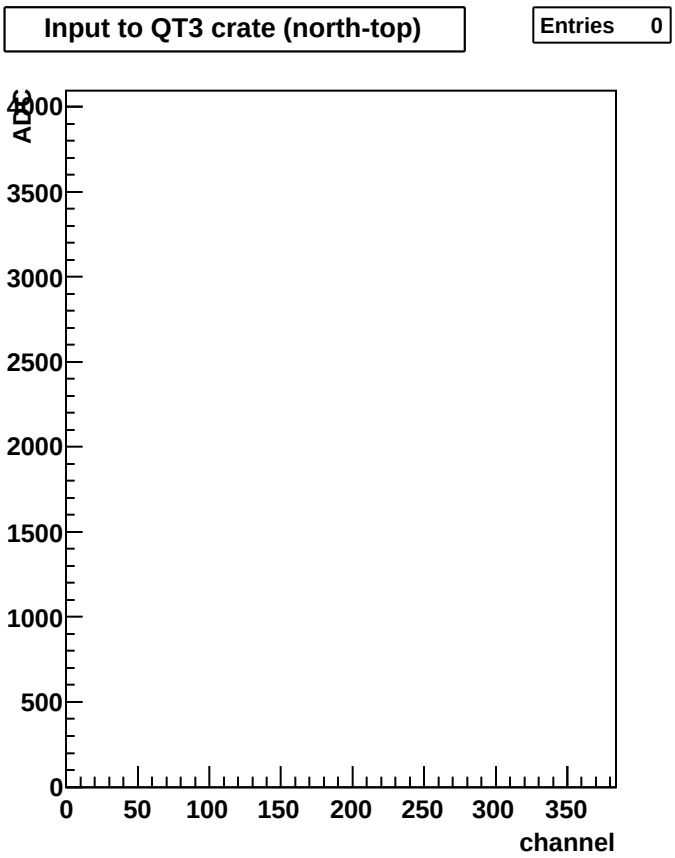

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 17173
Mean 3978
RMS 465.5

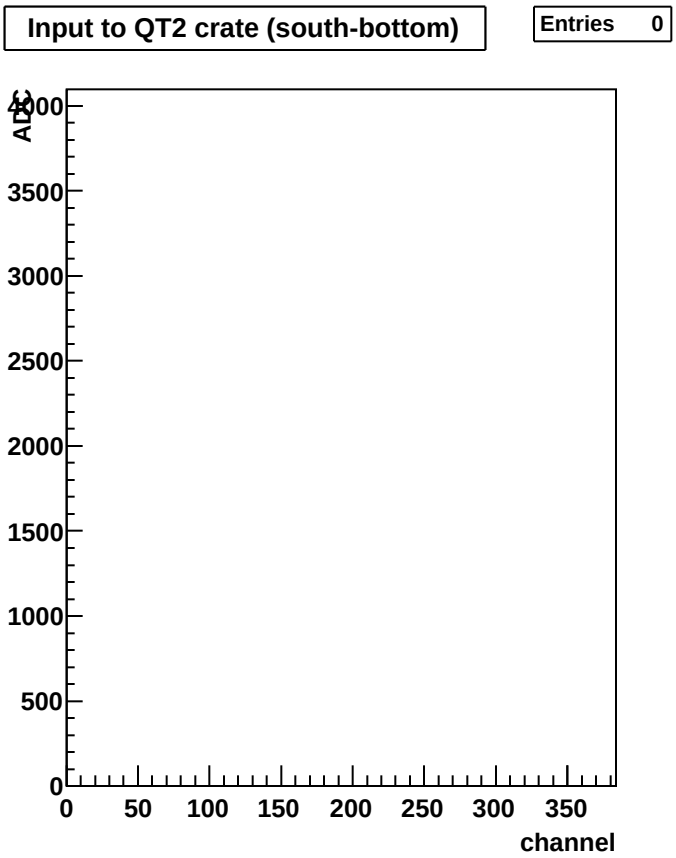

VPD-TAC-E
Entries 13340
Mean 1458
RMS 127.4

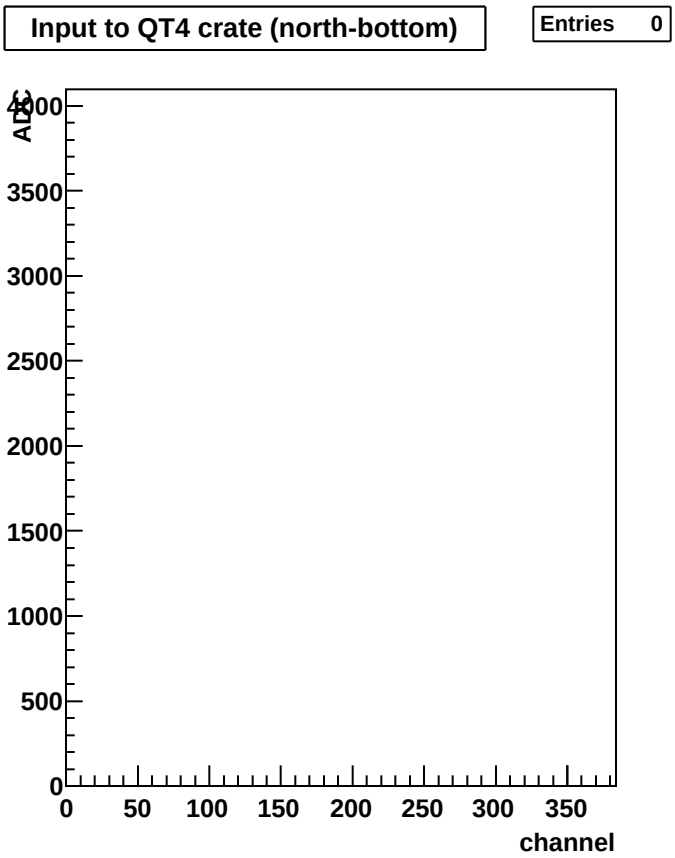

VPD-TAC-W
Entries 12570
Mean 1427
RMS 142.1

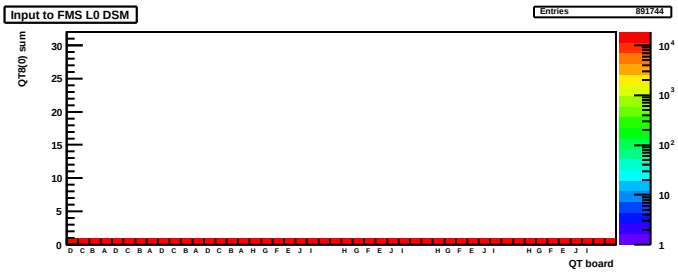

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 10712
Mean 4127
RMS 170.1

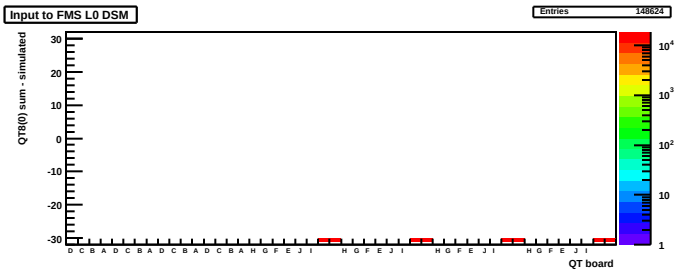

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

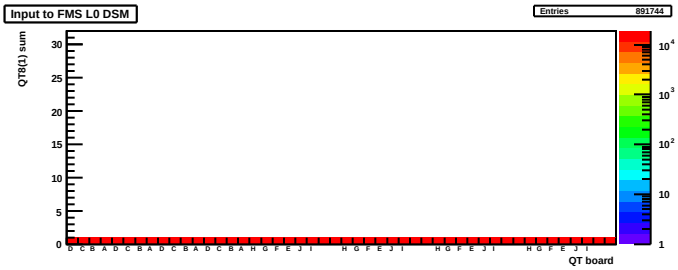

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

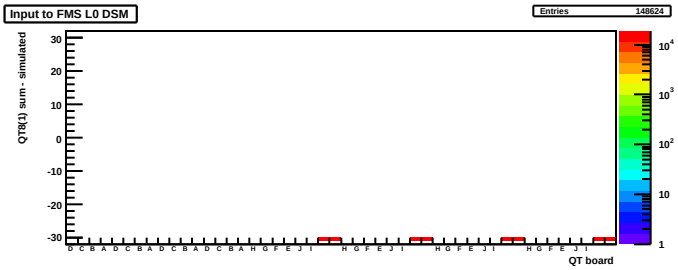

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

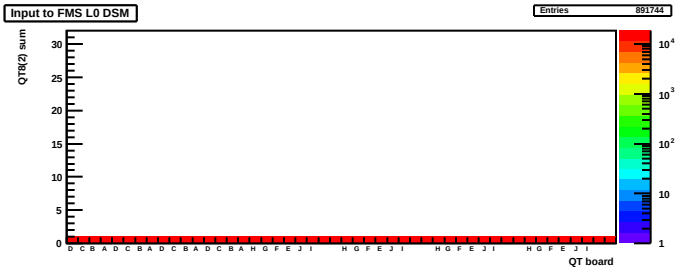

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

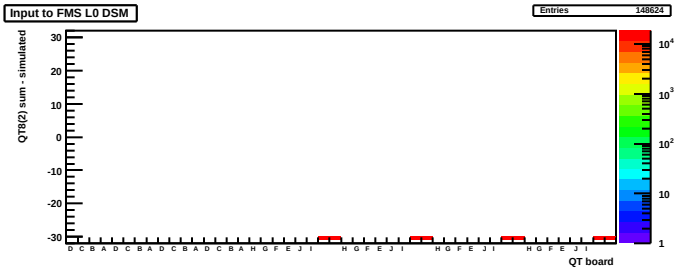

Input to FMS L0 DSM
Entries 891744
QT8(0) sum
QT board

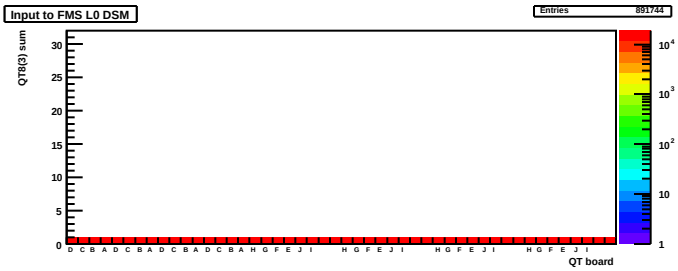

Input to FMS L0 DSM
Entries 148624
QT8(0) sum - simulated
QT board

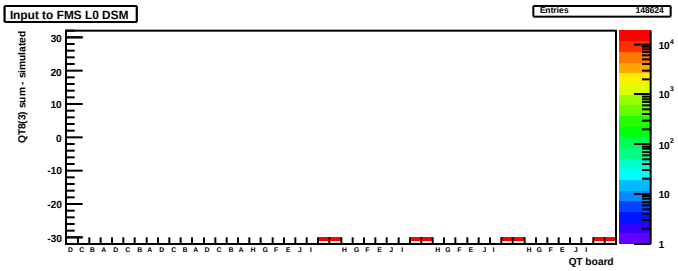

Input to FMS L0 DSM
Entries 891744
QT8(1) sum
QT board

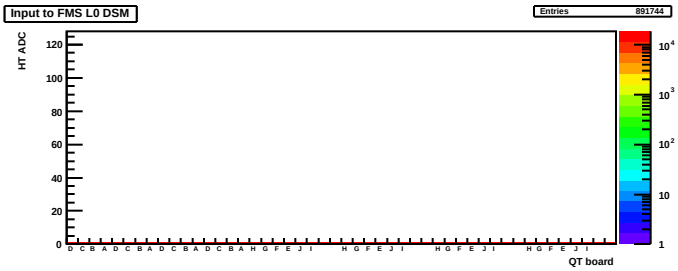

Input to FMS L0 DSM
Entries 148624
QT8(1) sum - simulated
QT board

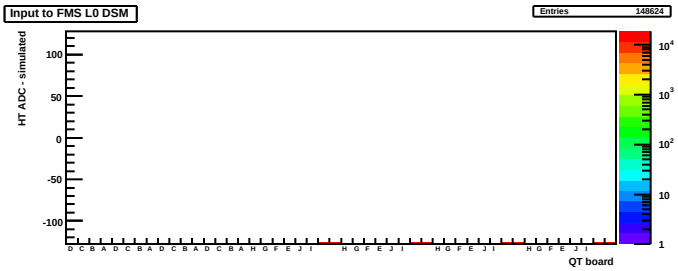

Input to FMS L0 DSM
Entries 891744
QT8(2) sum
QT board

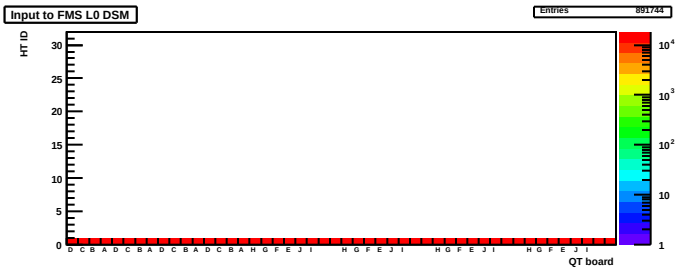

Input to FMS L0 DSM
Entries 148624
QT8(2) sum - simulated
QT board

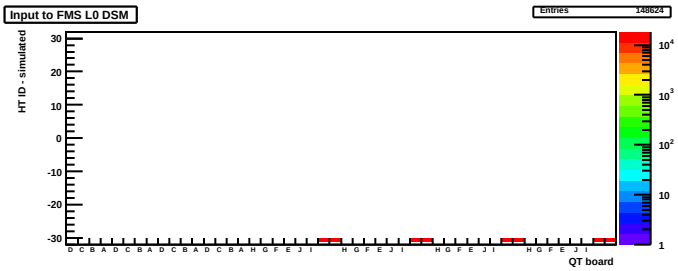

Input to FMS L0 DSM
Entries 891744
QT8(3) sum
QT board

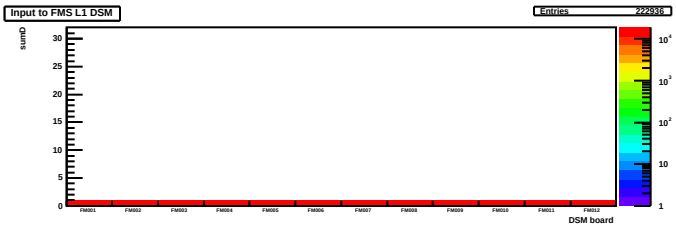

Input to FMS L0 DSM
Entries 148624
QT8(3) sum - simulated
QT board

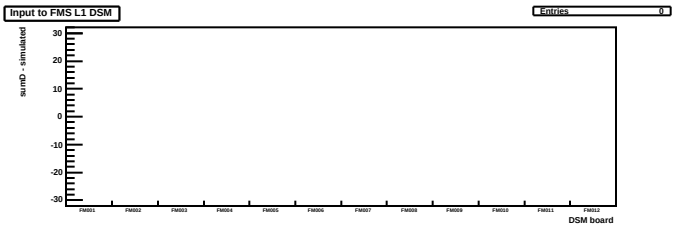

Input to FMS L0 DSM
Entries 891744
HT ADC
QT board

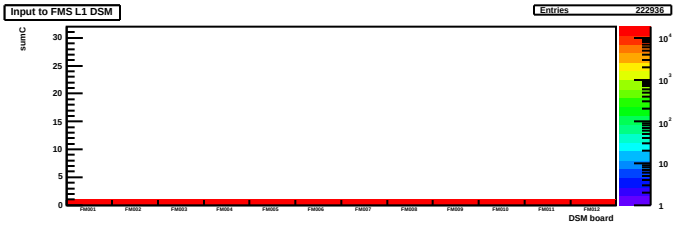

Input to FMS L0 DSM
Entries 148624
HT ADC - simulated
QT board

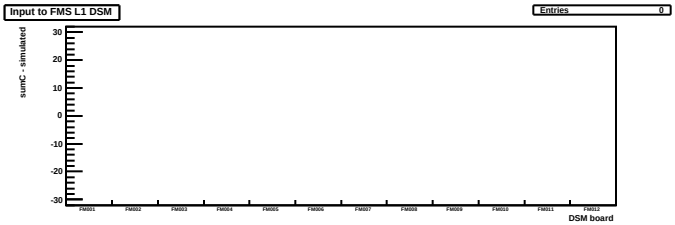

Input to FMS L0 DSM
Entries 891744
HT ID
QT board

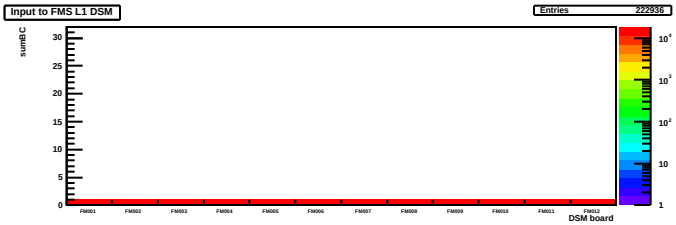

Input to FMS L0 DSM
Entries 148624
HT ID - simulated
QT board

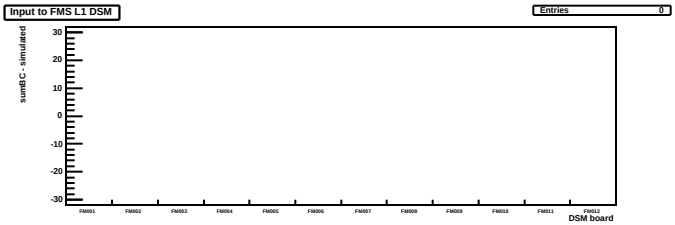

Input to FMS L1 DSM
Entries 222936
sumD
DSM board

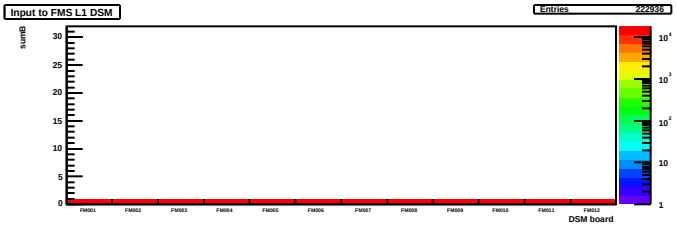

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

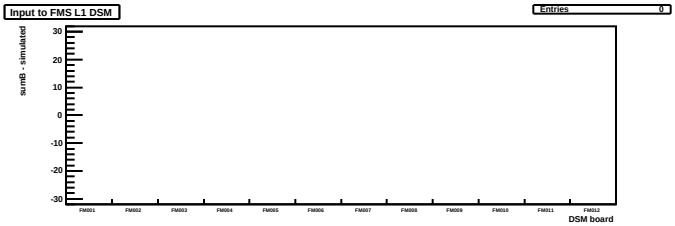

Input to FMS L1 DSM
Entries 222936
sumC
DSM board

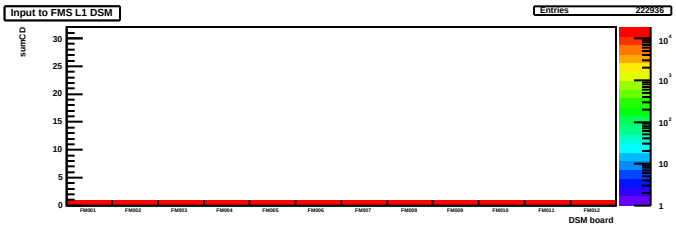

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

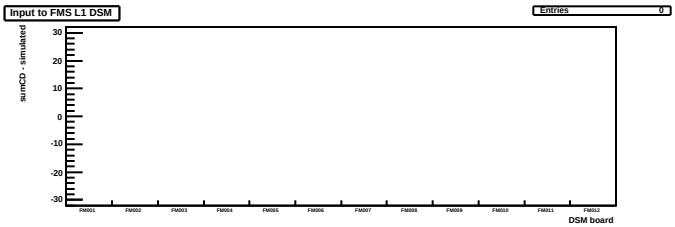

Input to FMS L1 DSM
Entries 222936
sumBC
DSM board

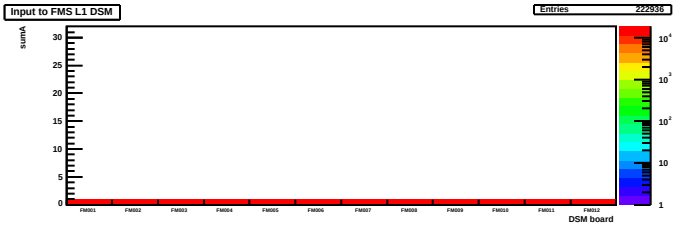

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

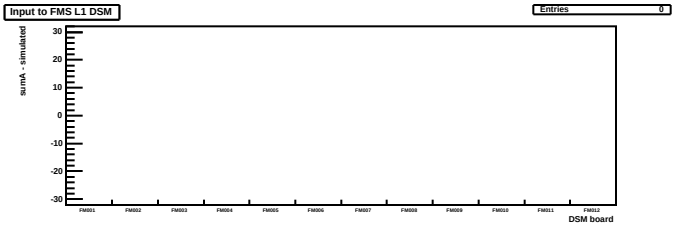

Input to FMS L1 DSM
Entries 222936
sumB
DSM board

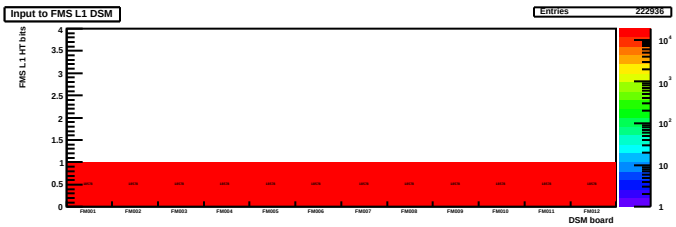

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

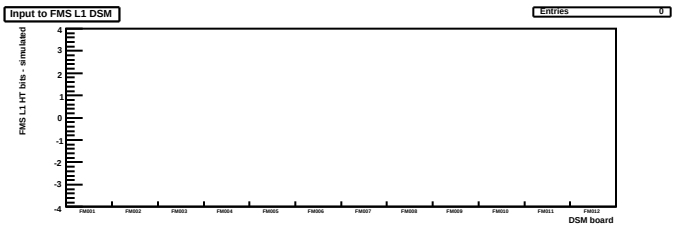

Input to FMS L1 DSM
Entries 222936
sumCD
DSM board

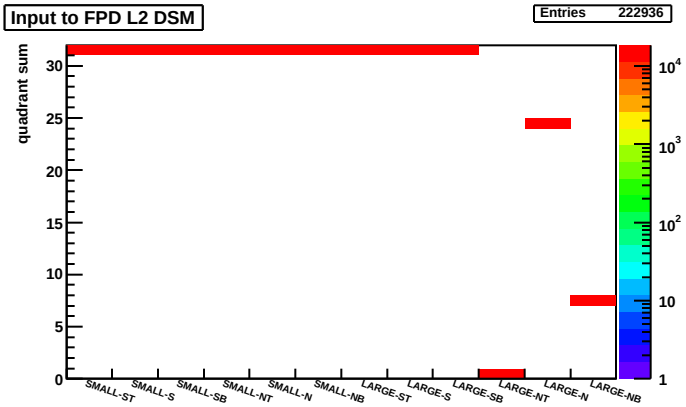

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

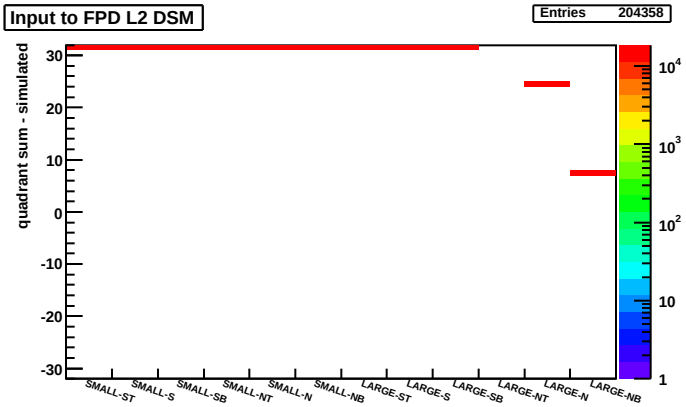

Input to FMS L1 DSM
Entries 222936
sumA
DSM board

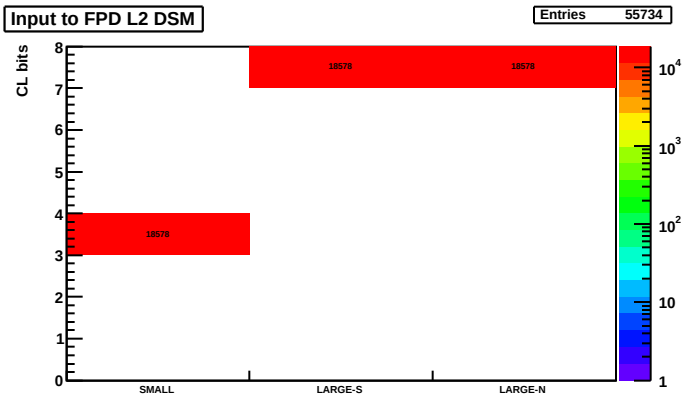

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

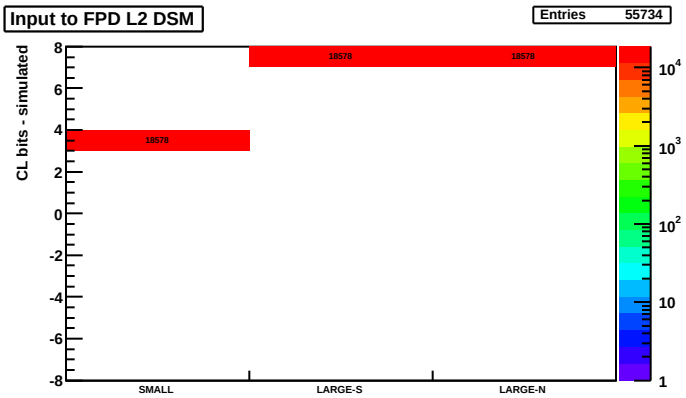

Input to FMS L1 DSM
Entries 222936
FMS L1 HT bits
DSM board

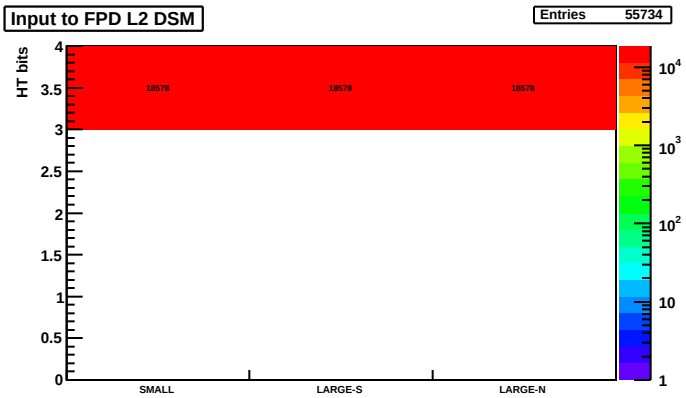

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

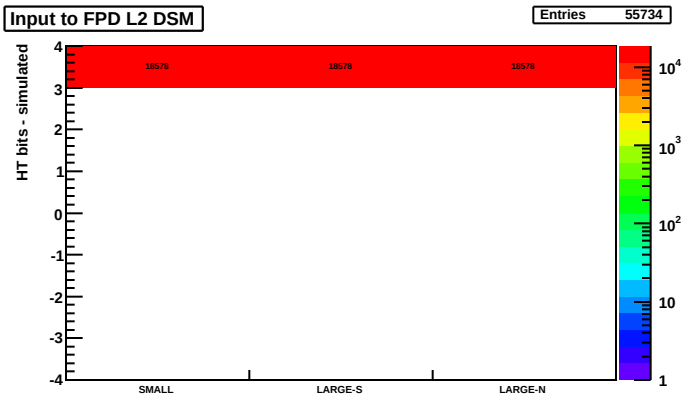

Input to FPD L2 DSM
Entries 222936
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

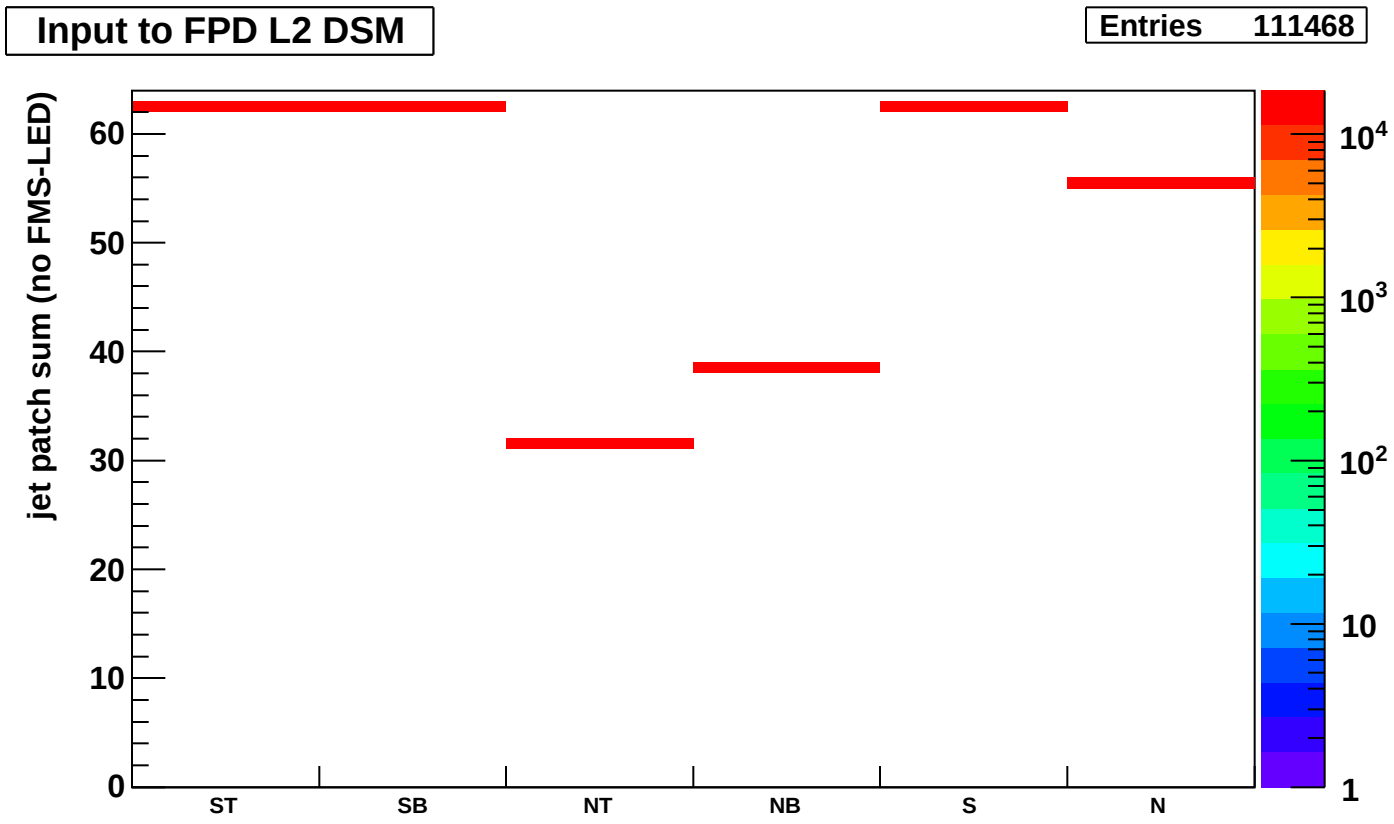

Input to FPD L2 DSM
Entries 204358
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

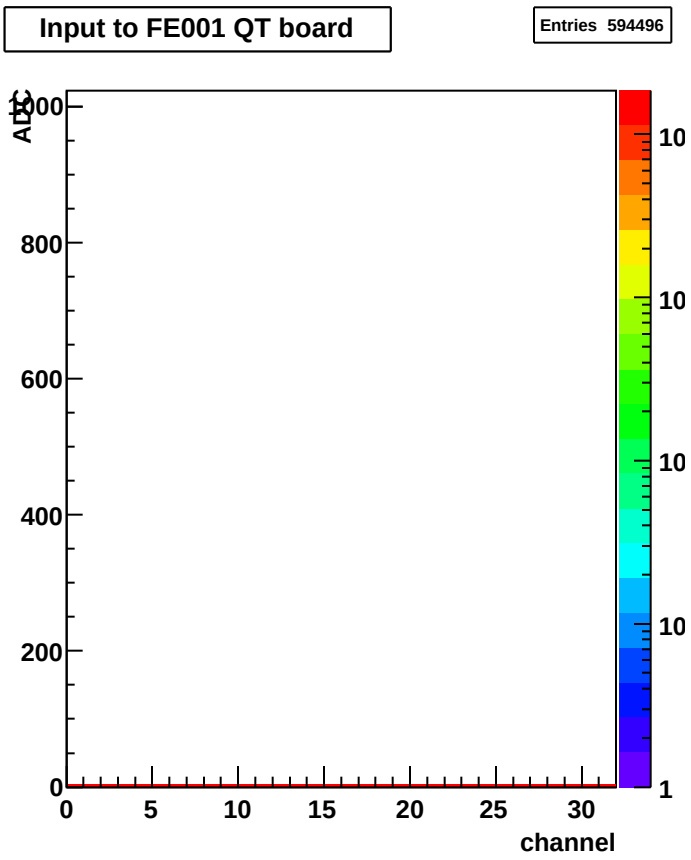

Input to FPD L2 DSM
Entries 55734
CL bits
18578
18578
18578
SMALL
LARGE-S
LARGE-N

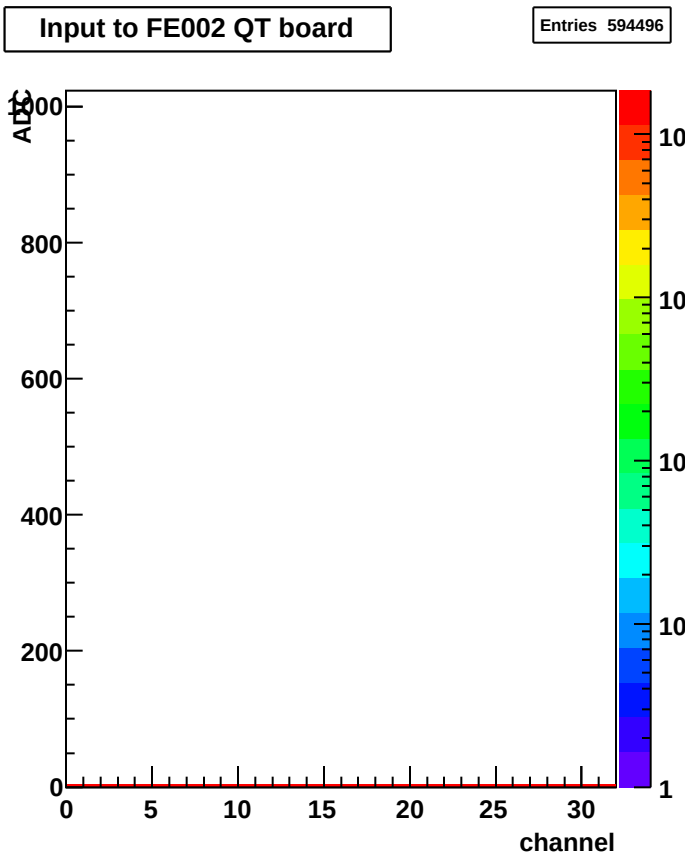

Input to FPD L2 DSM
Entries 55734
CL bits - simulated
18578
18578
18578
SMALL
LARGE-S
LARGE-N

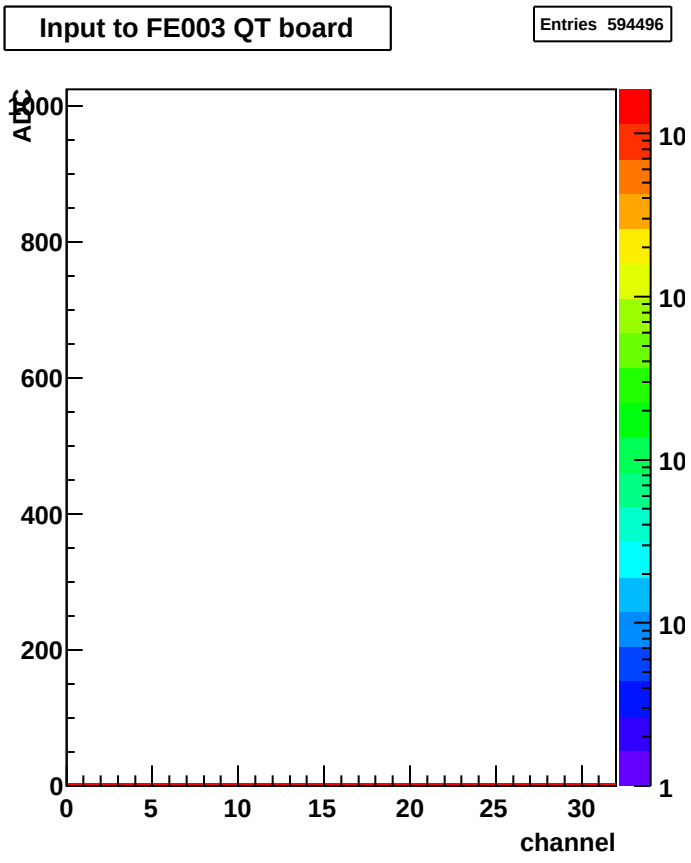

Input to FPD L2 DSM
Entries 55734
HT bits
18578
18578
18578
SMALL
LARGE-S
LARGE-N

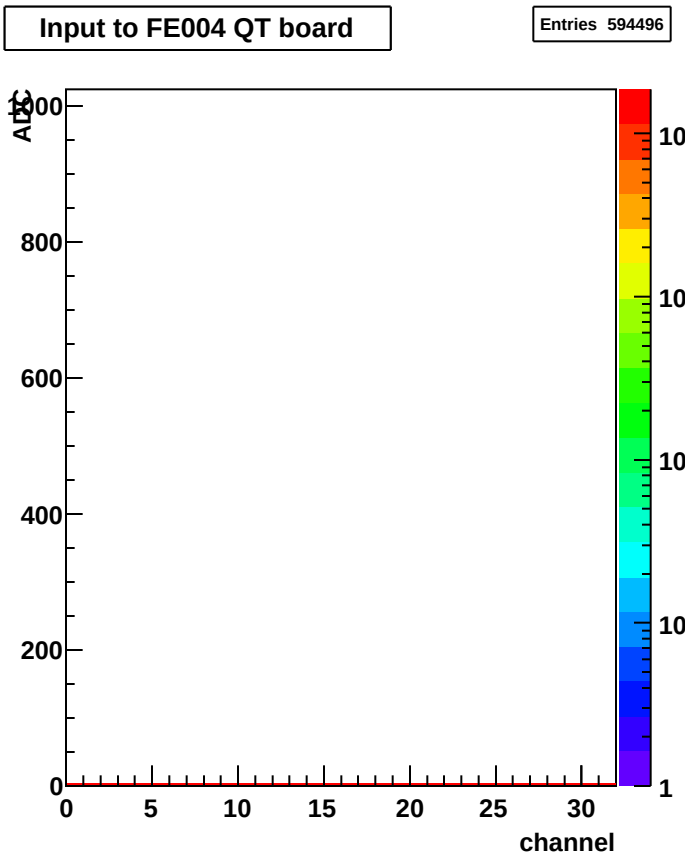

Input to FPD L2 DSM
Entries 55734
HT bits - simulated
18578
18578
18578
SMALL
LARGE-S
LARGE-N

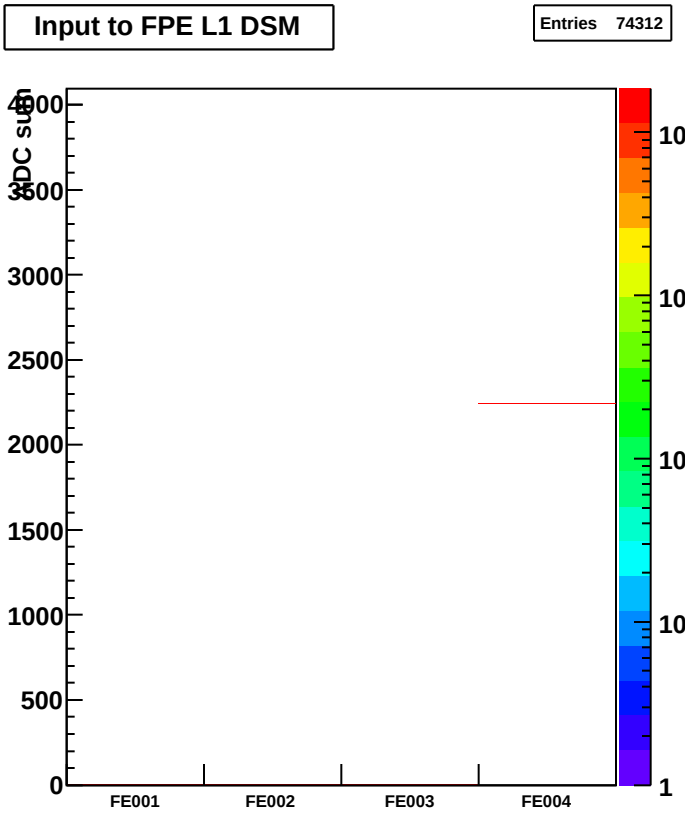

Input to FPD L2 DSM
Entries 111468
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

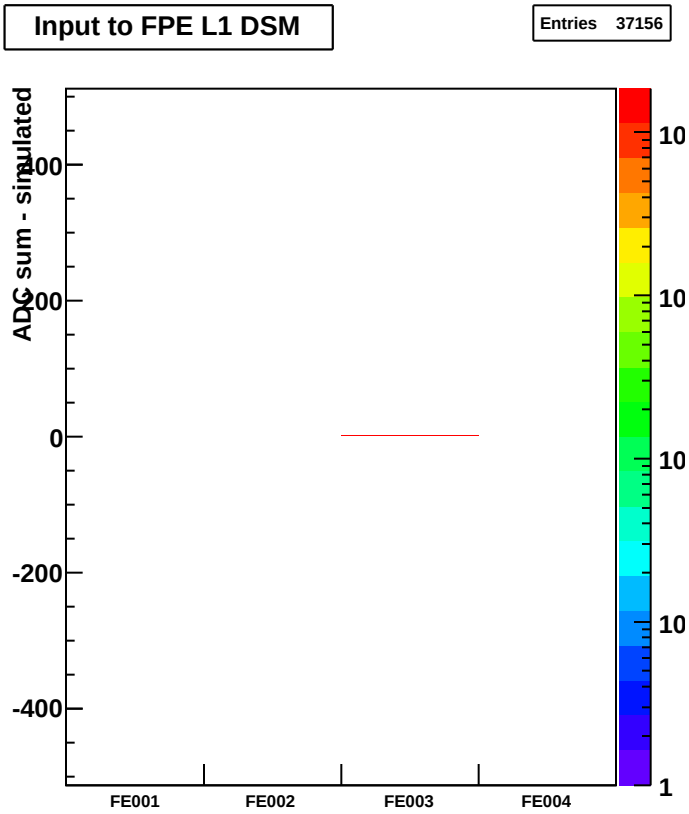

Input to FE001 QT board
Entries 594496
ADC
channel

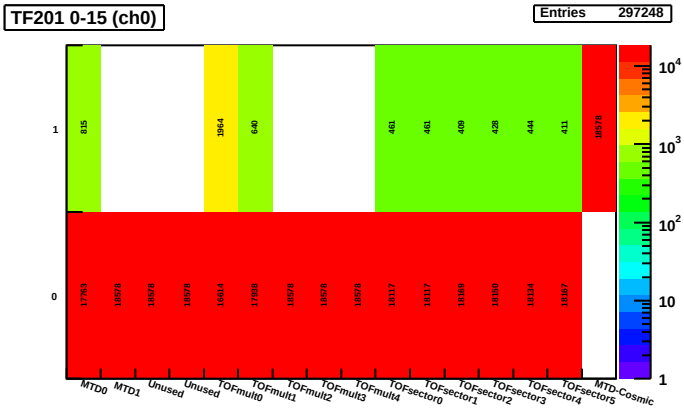

Input to FE002 QT board
Entries 594496
ADC
channel

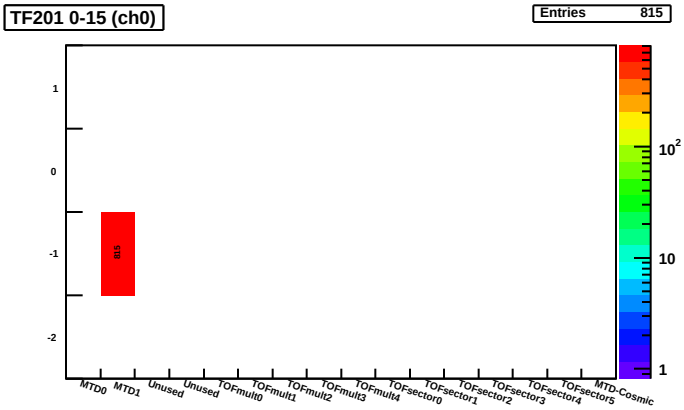

Input to FE003 QT board
Entries 594496
ADC
channel

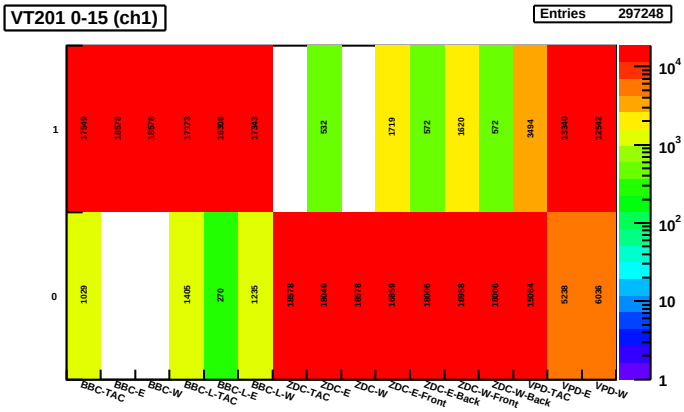

Input to FE004 QT board
Entries 594496
ADC
channel

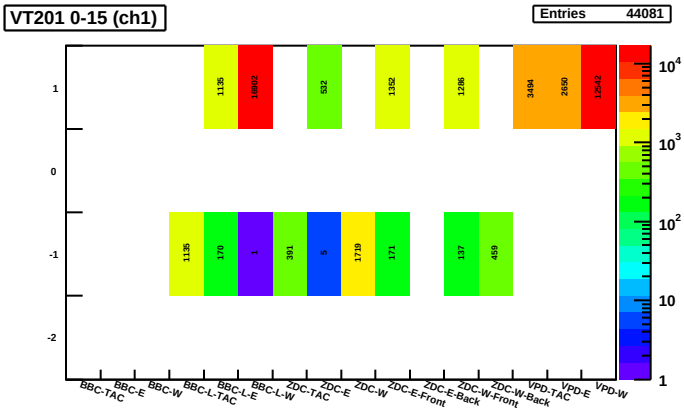

Input to FPE L1 DSM
Entries 74312
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1

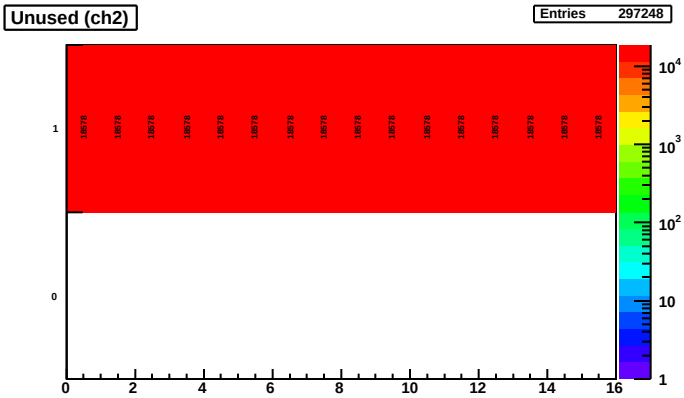

Input to FPE L1 DSM
Entries 37156
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1

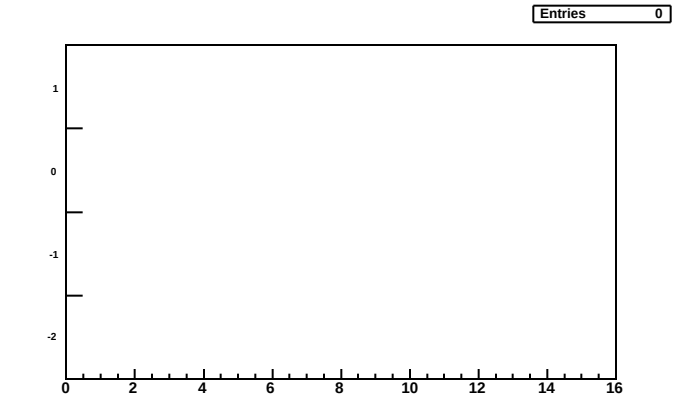

TF201 0-15 (ch0)
Entries 297248
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

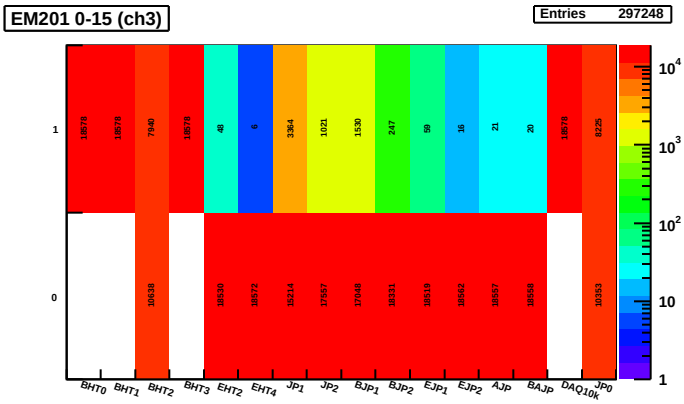

TF201 0-15 (ch0)
Entries 815
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

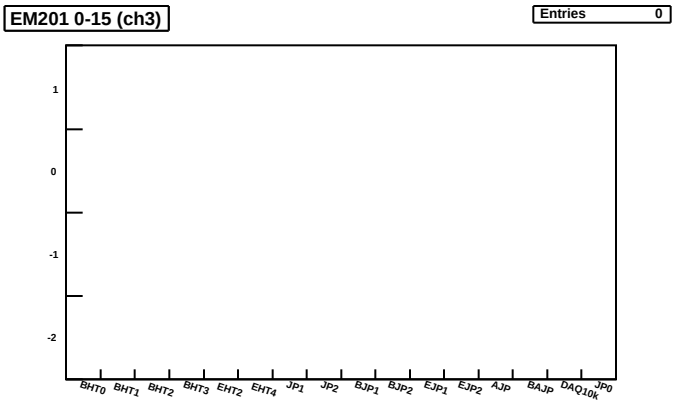

VT201 0-15 (ch1)
Entries 297248
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 44081
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

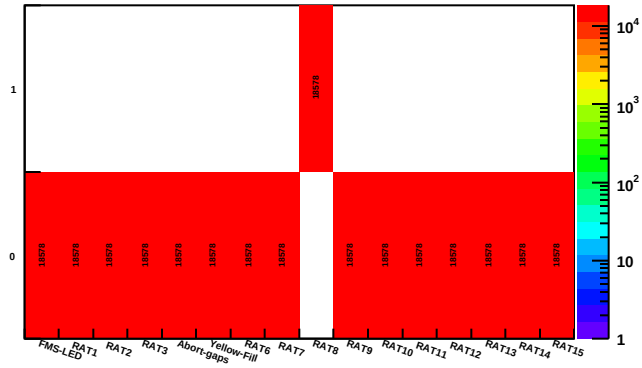

Unused (ch2)
Entries 297248

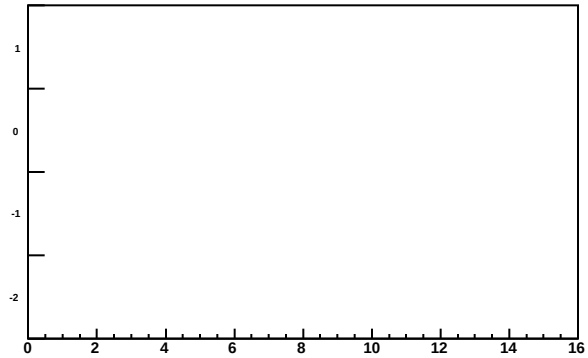

Entries 0


EM201 0-15 (ch3)
Entries 297248
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

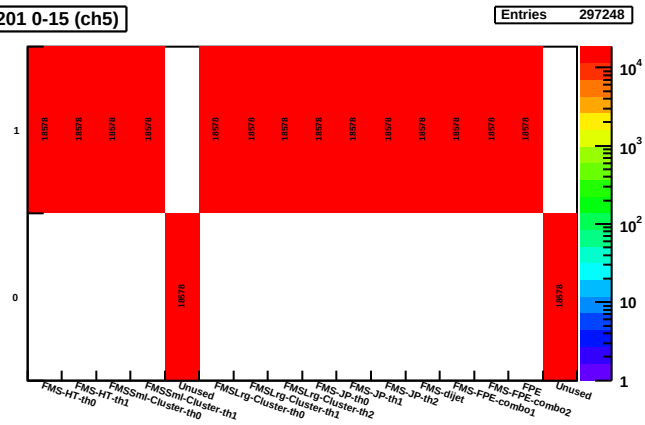

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

RAT board (ch4)

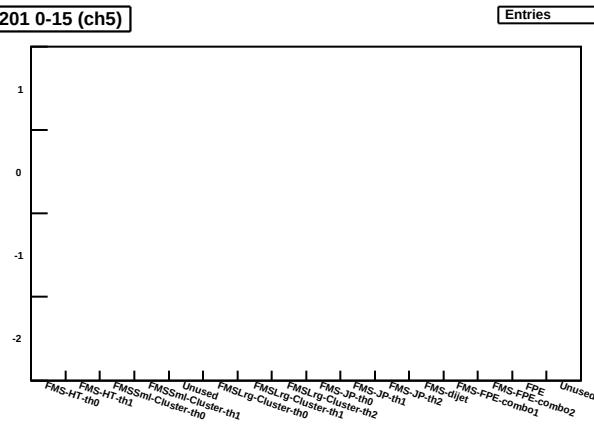




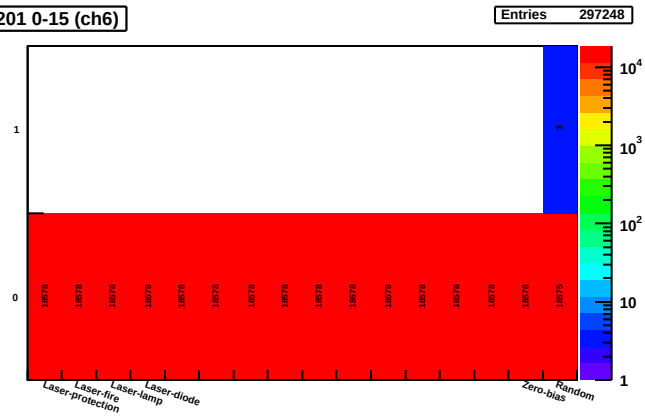
FP201 0-15 (ch5)

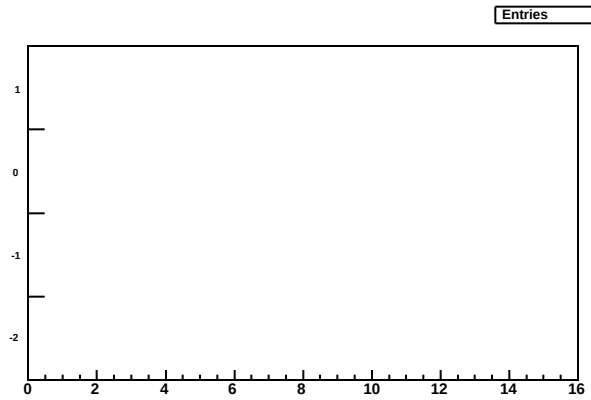
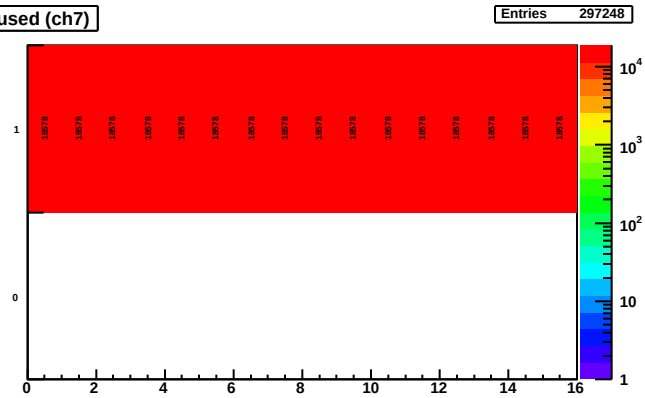
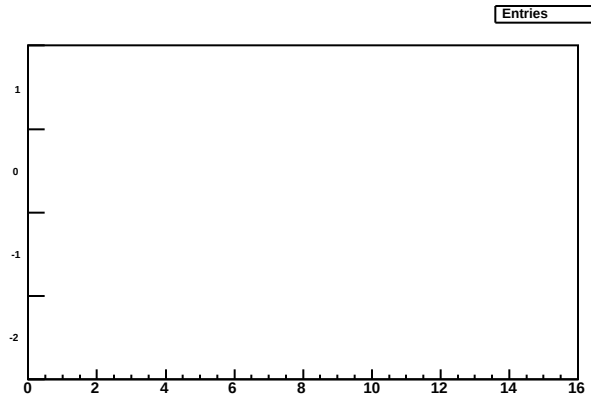


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)