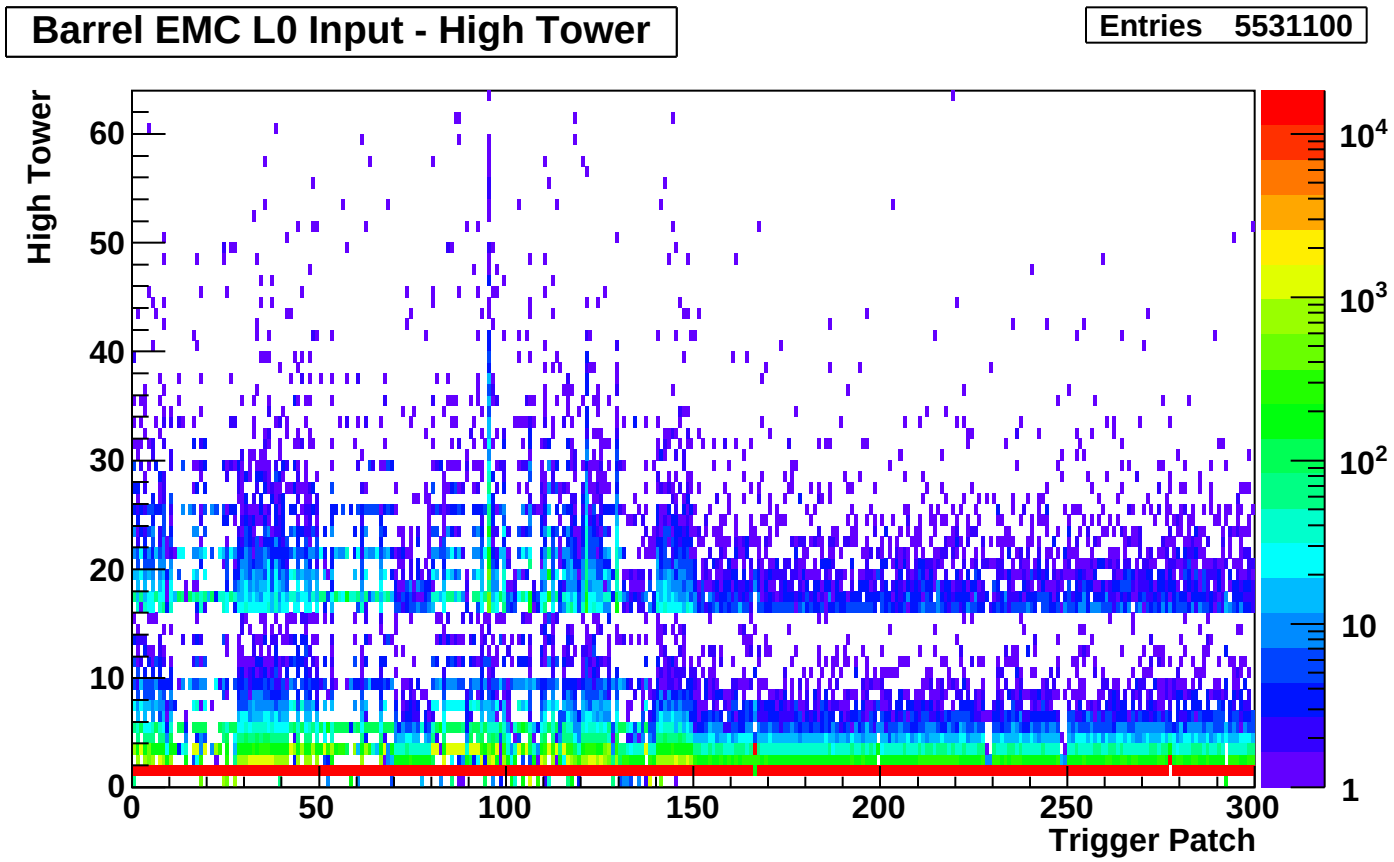
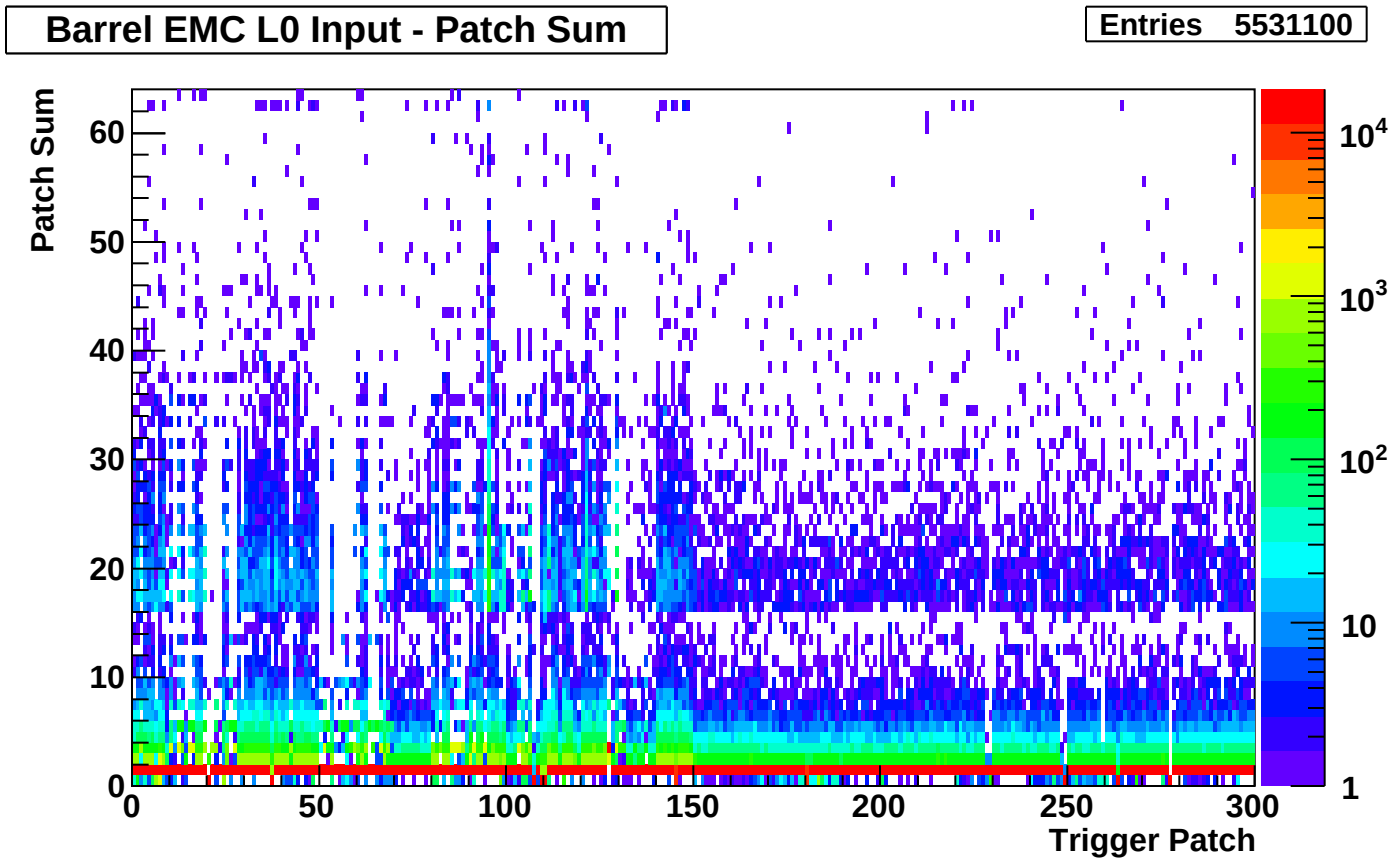
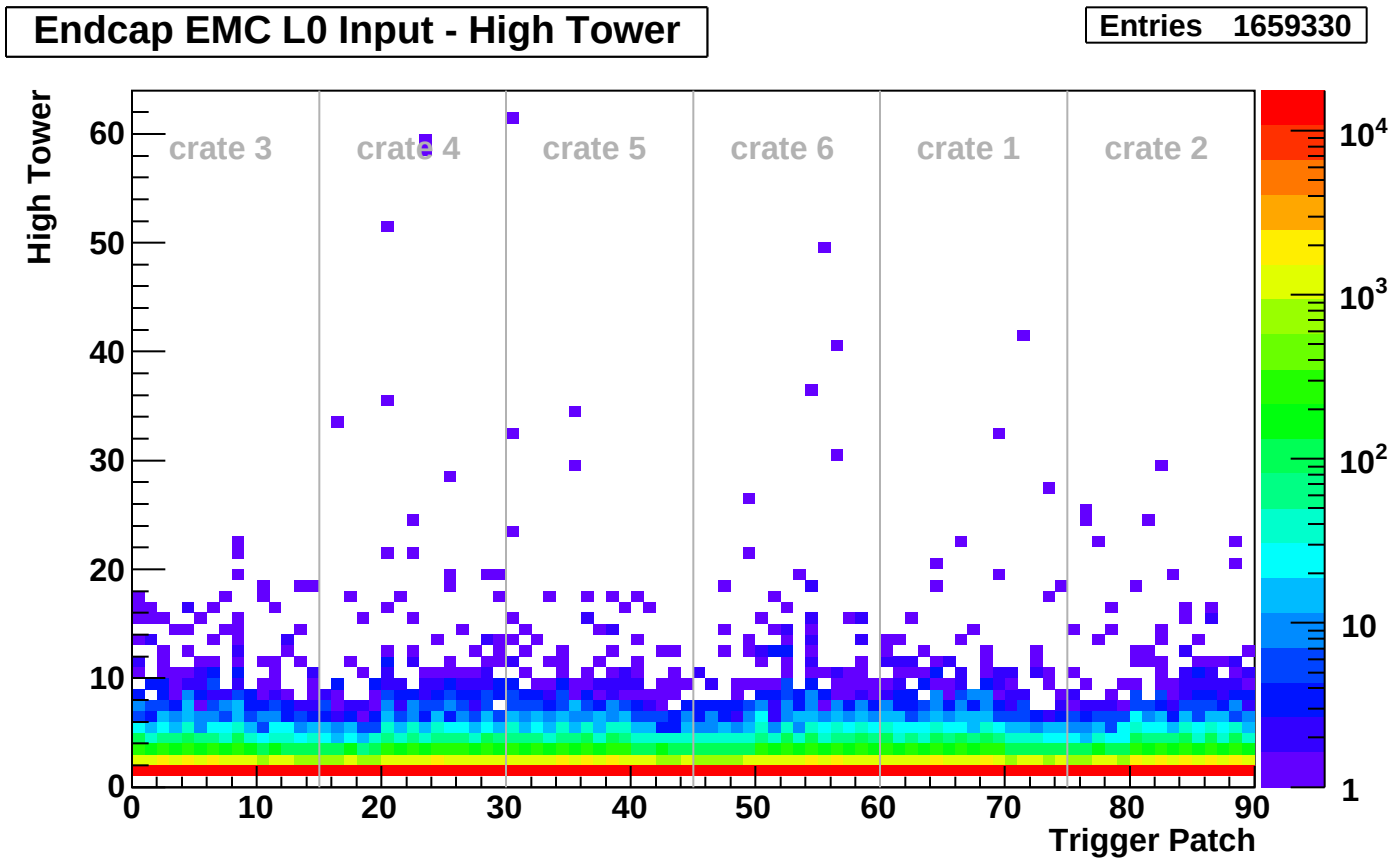
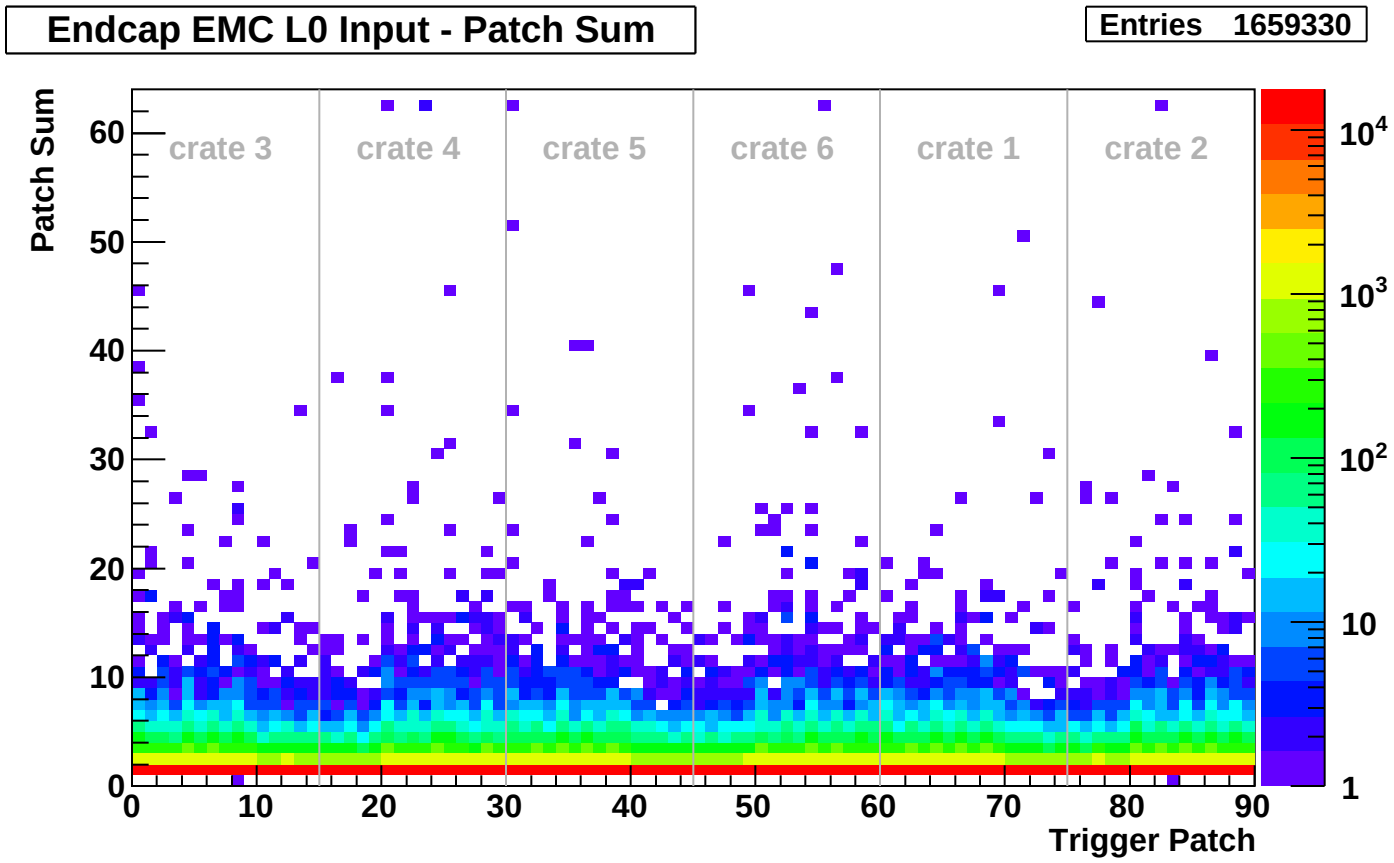
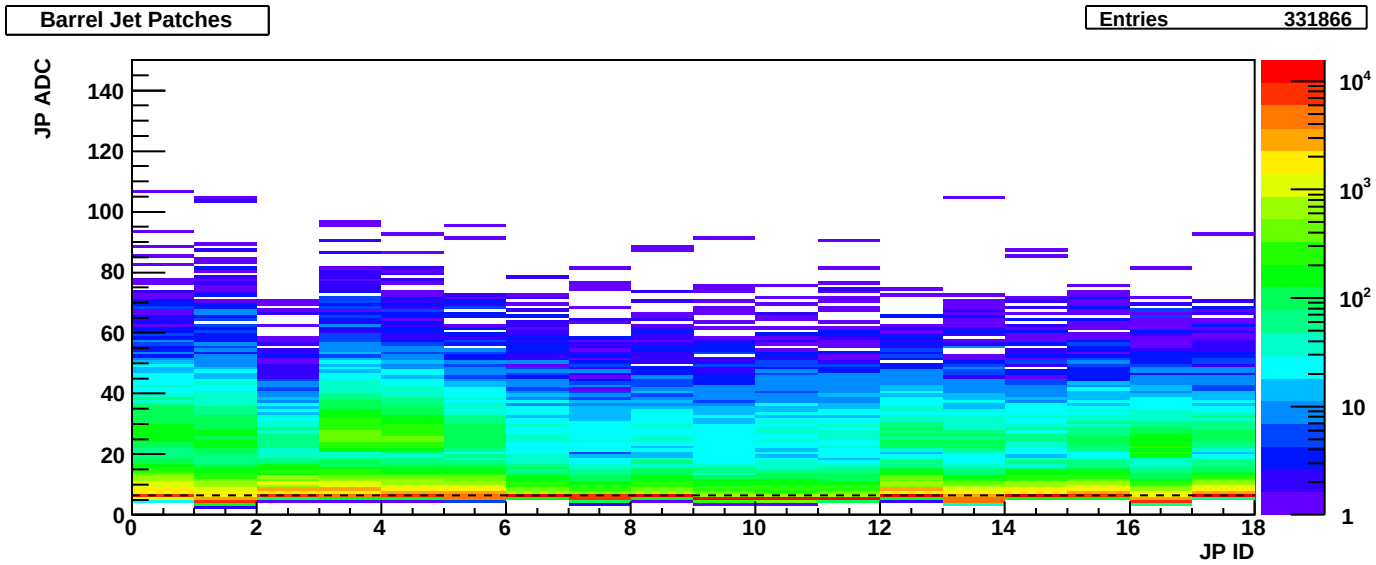
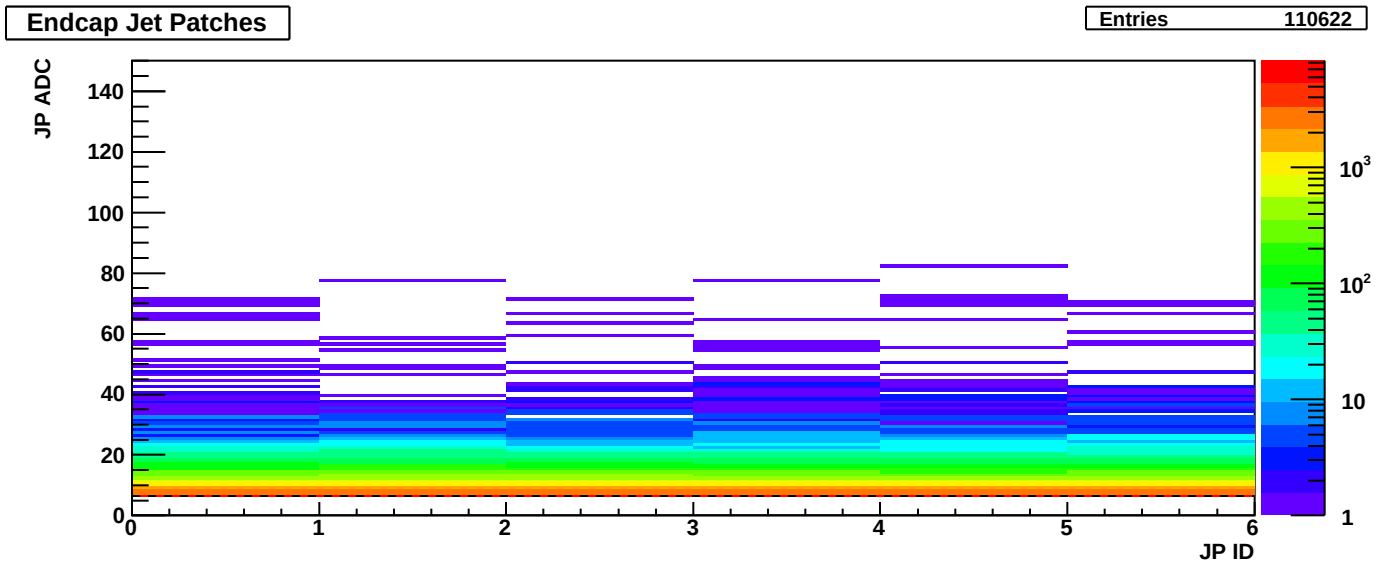

Barrel EMC L0 Input - High Tower
Entries 5531100
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

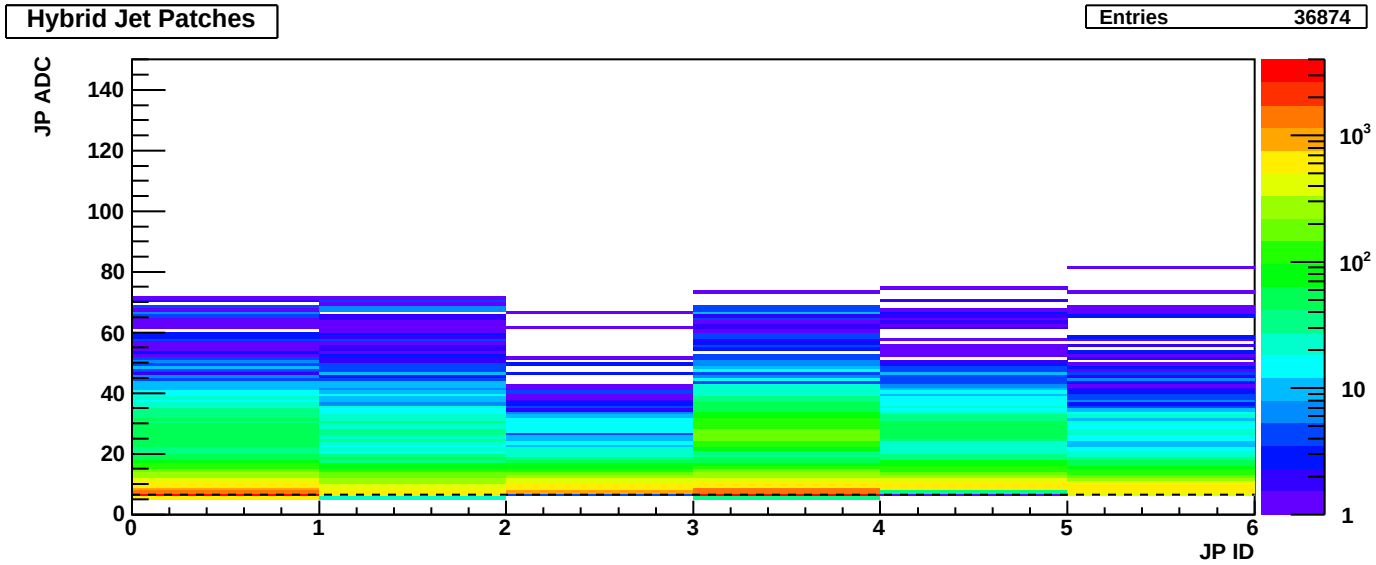

Barrel EMC L0 Input - Patch Sum
Entries 5531100
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

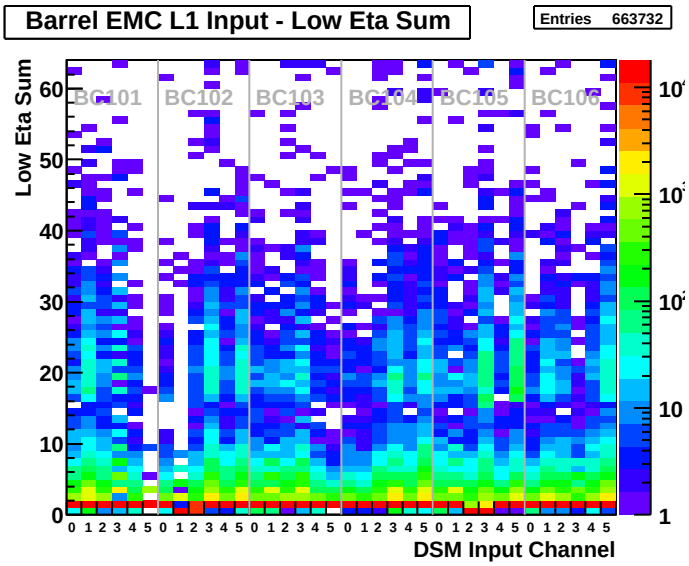

Endcap EMC L0 Input - High Tower
Entries 1659330
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

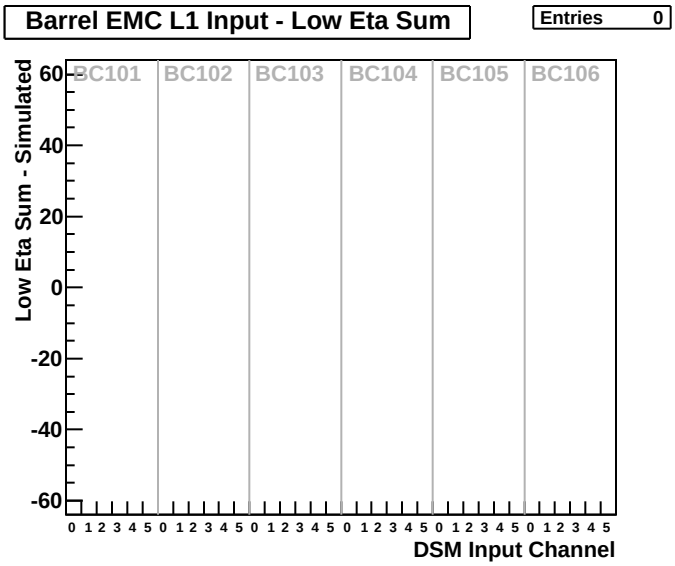

Endcap EMC L0 Input - Patch Sum
Entries 1659330
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

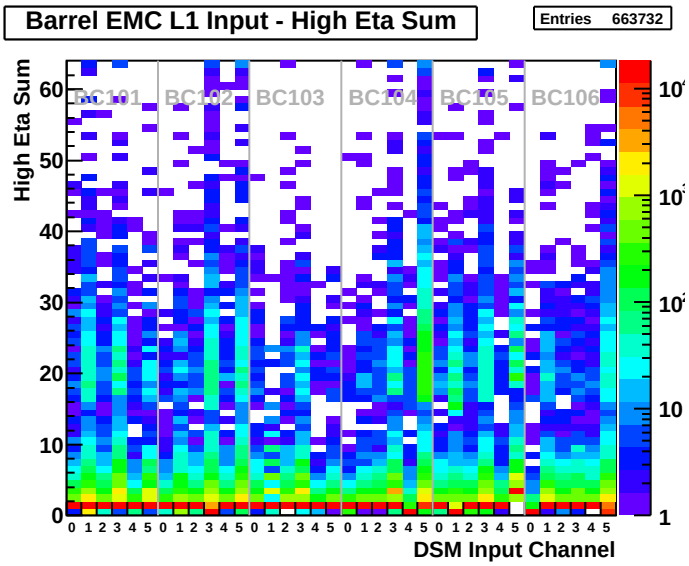

Barrel Jet Patches
Entries 331866
JP ADC
JP ID

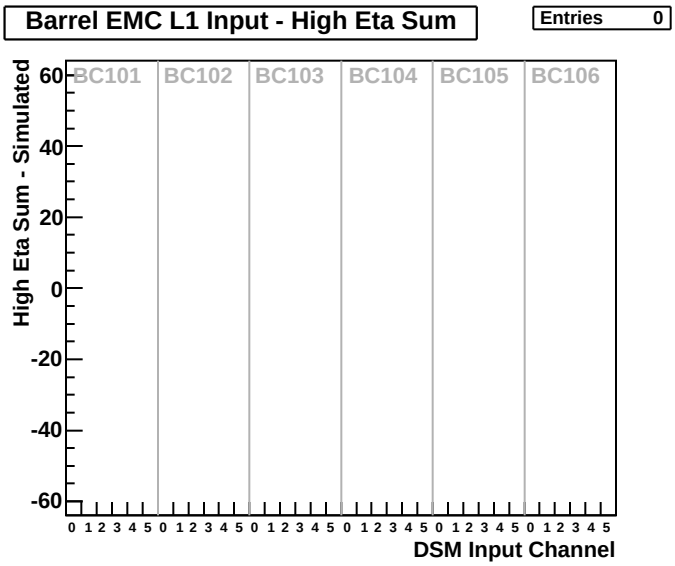

Endcap Jet Patches
Entries 110622
JP ADC
JP ID

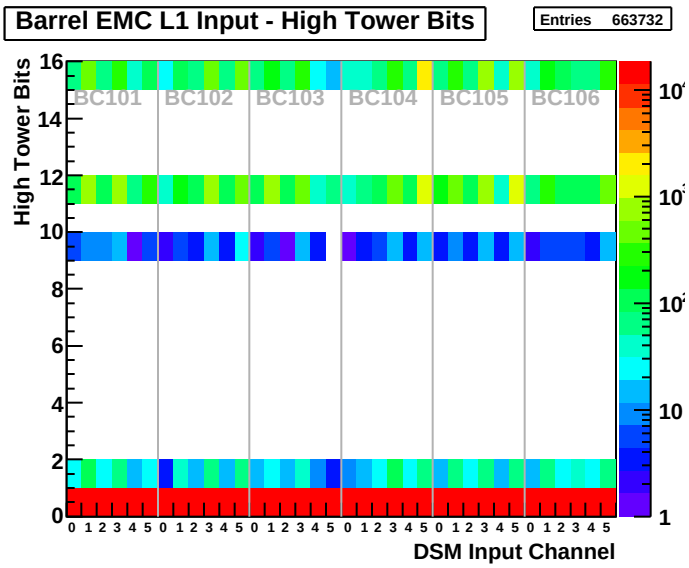

Hybrid Jet Patches
Entries 36874
JP ADC
JP ID

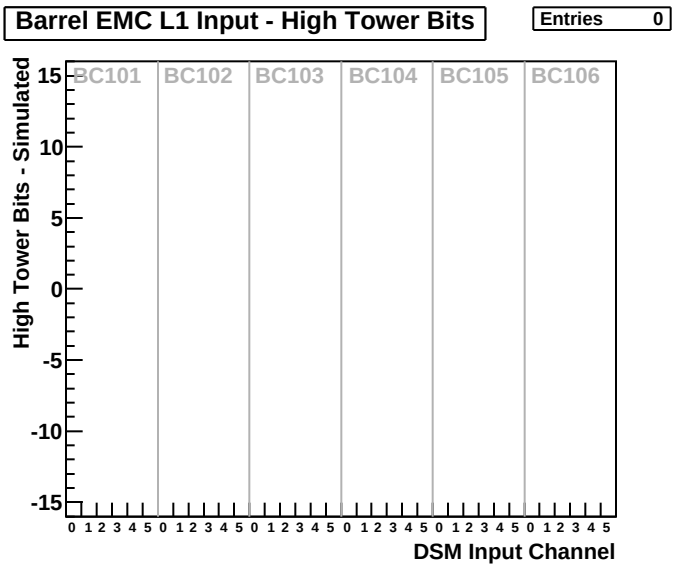

Barrel EMC L1 Input - Low Eta Sum
Entries 663732
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

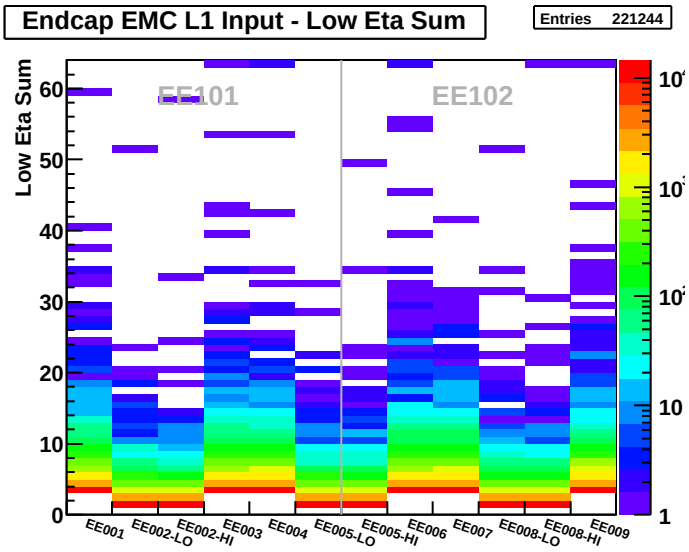

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

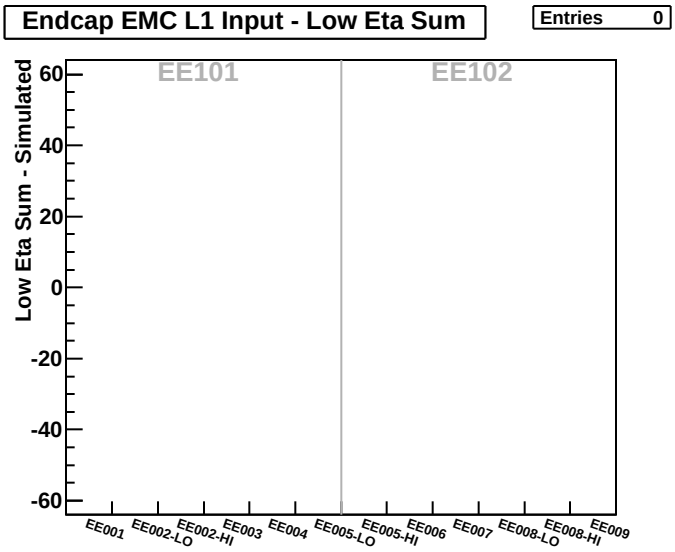

Barrel EMC L1 Input - High Eta Sum
Entries 663732
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

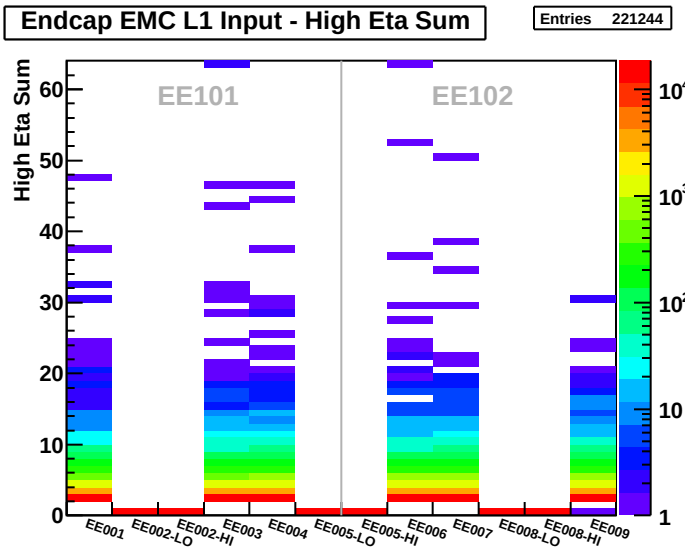

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

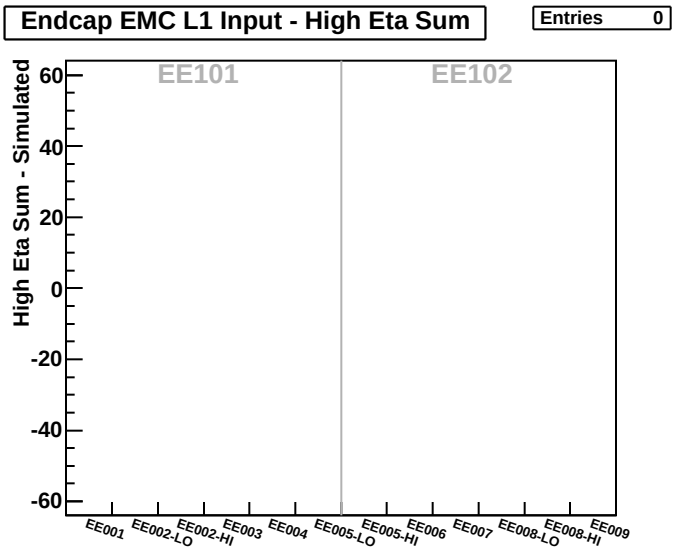

Barrel EMC L1 Input - High Tower Bits
Entries 663732
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

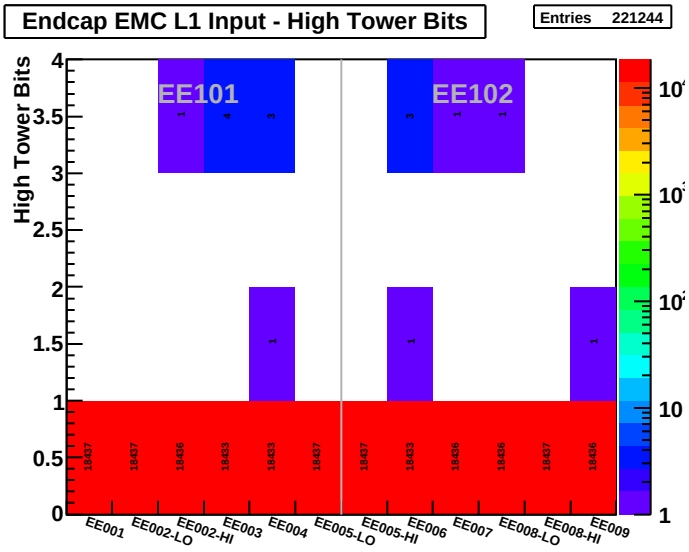

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

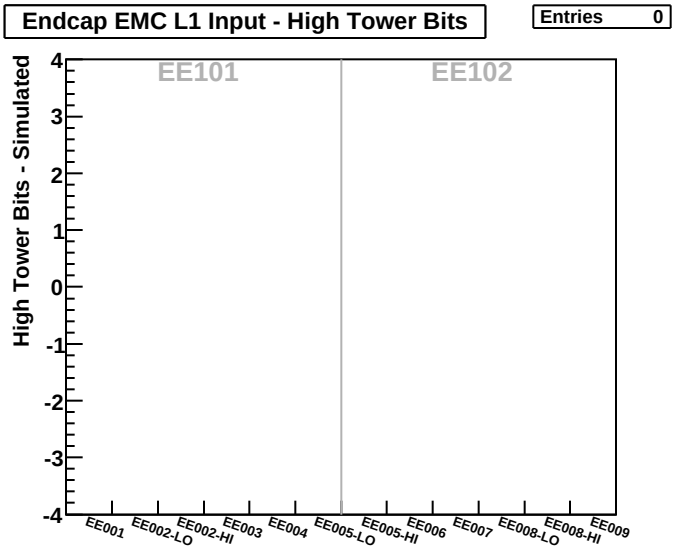

Endcap EMC L1 Input - Low Eta Sum
Entries 221244
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

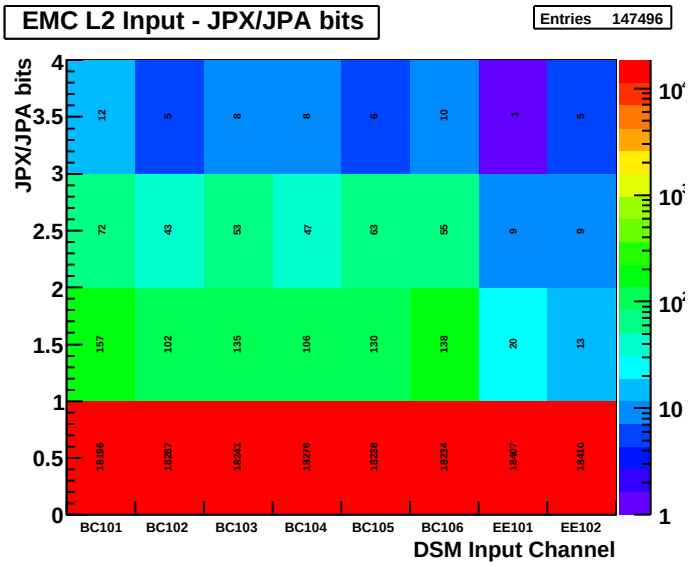

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

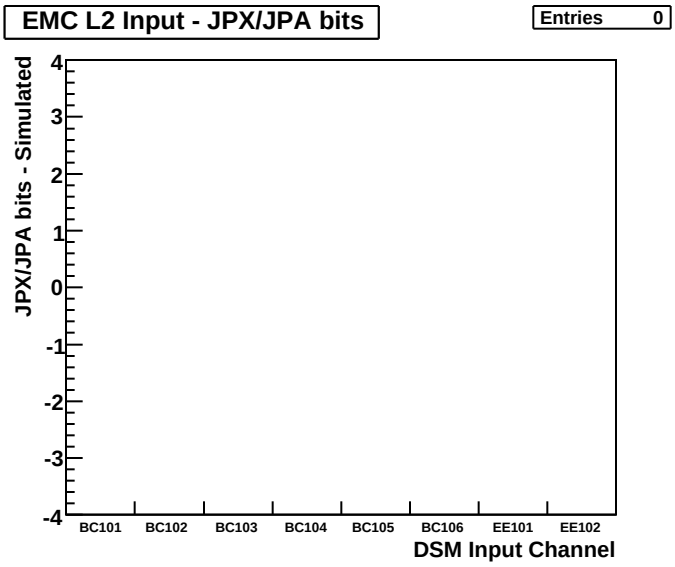

Endcap EMC L1 Input - High Eta Sum
Entries 221244
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

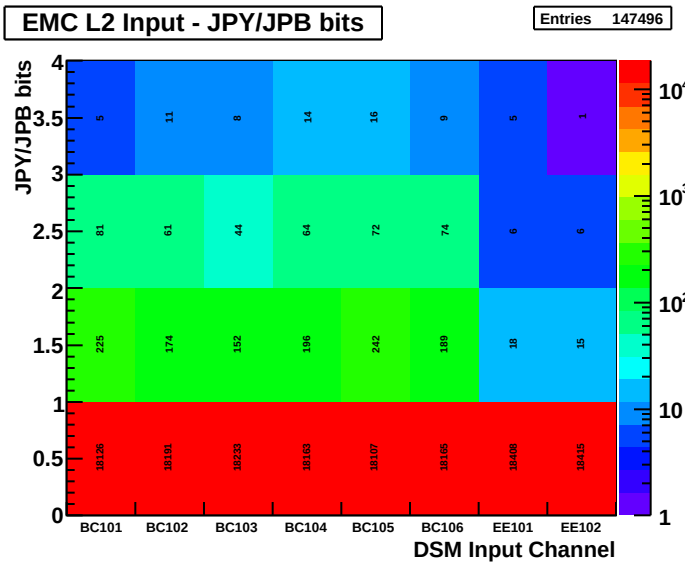

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

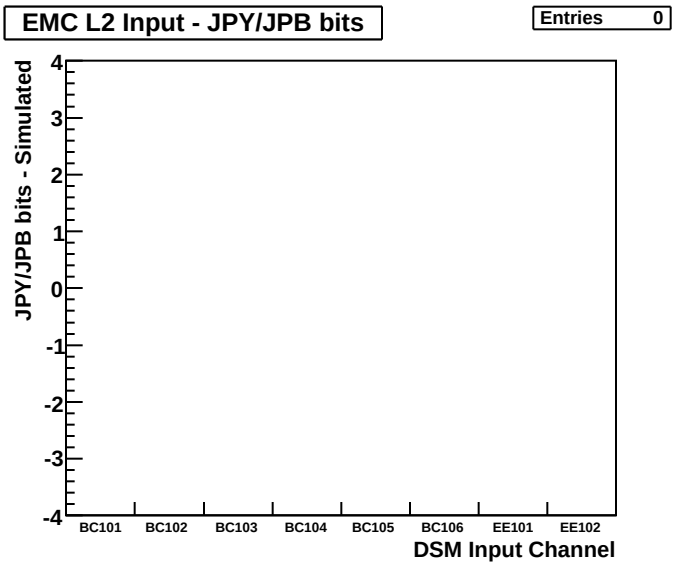

Endcap EMC L1 Input - High Tower Bits
Entries 221244
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

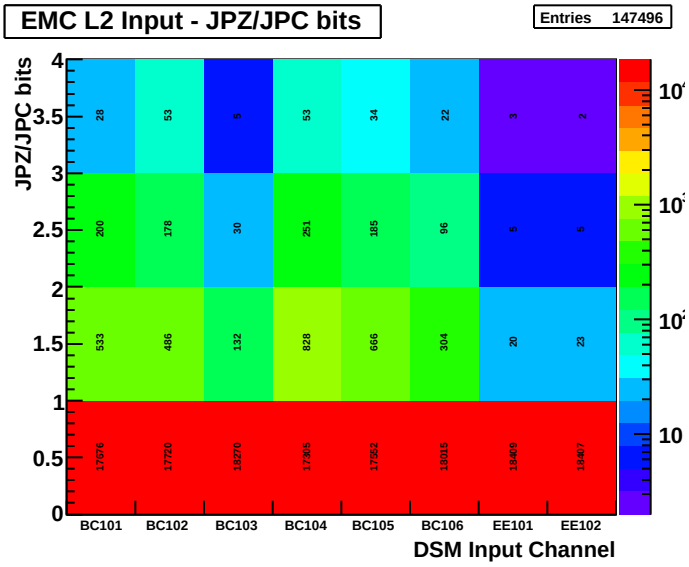

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

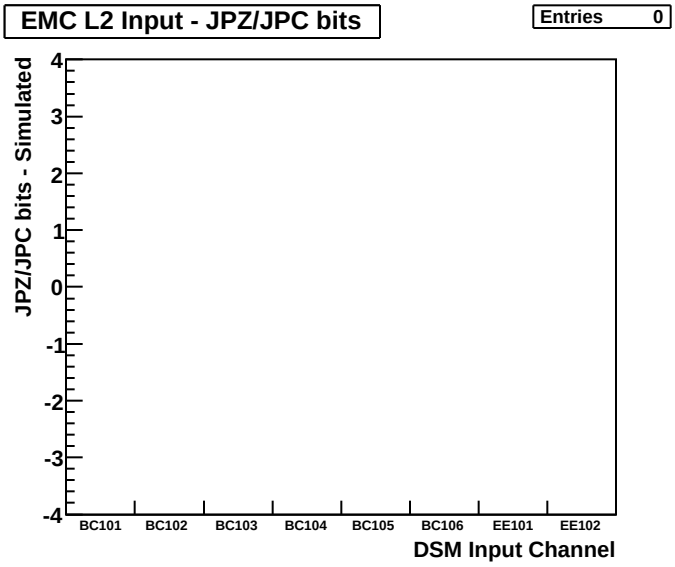

EMC L2 Input - JPX/JPA bits
Entries 147496
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
12 5 8 8 6 10 1 5
72 43 53 47 63 55 9 9
157 102 135 106 130 138 20 13
18196 18287 18241 18276 18238 18234 18407 18410

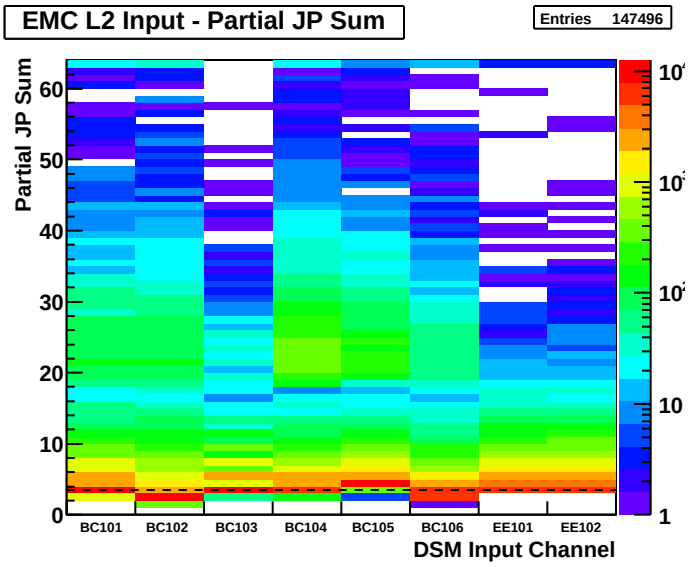

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

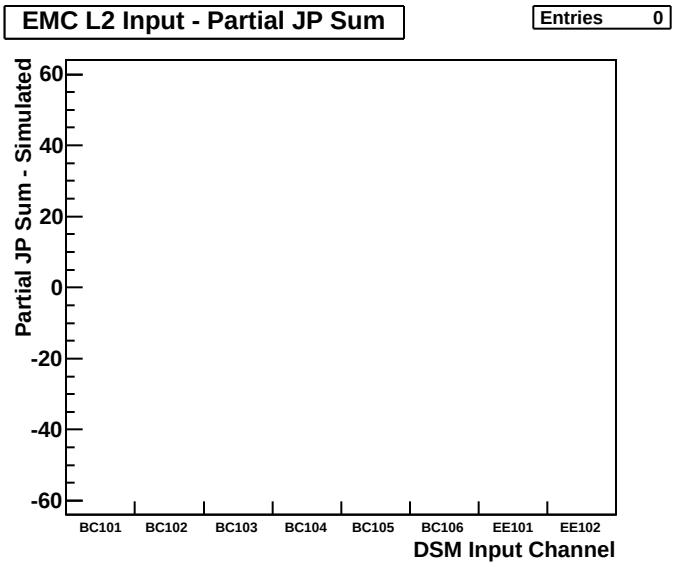

EMC L2 Input - JPY/JPB bits
Entries 147496
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
5 11 8 14 16 9 5 1
81 61 44 64 72 74 6 6
225 174 152 196 242 189 18 15
18126 18191 18233 18163 18107 18165 18408 18415

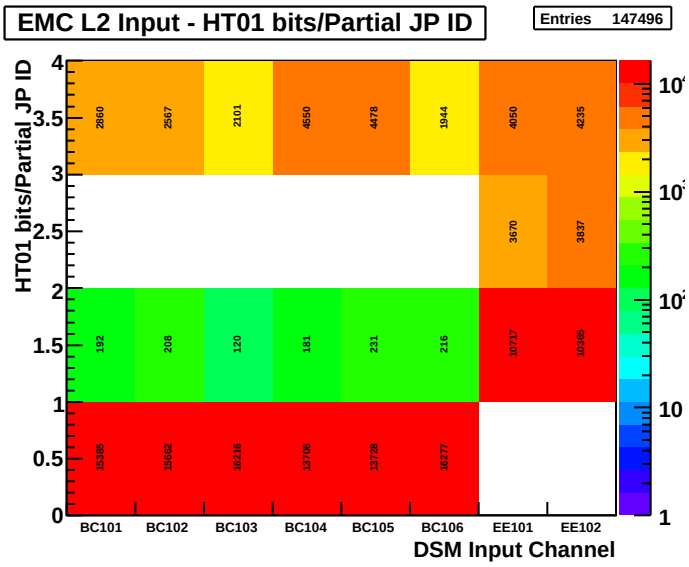

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

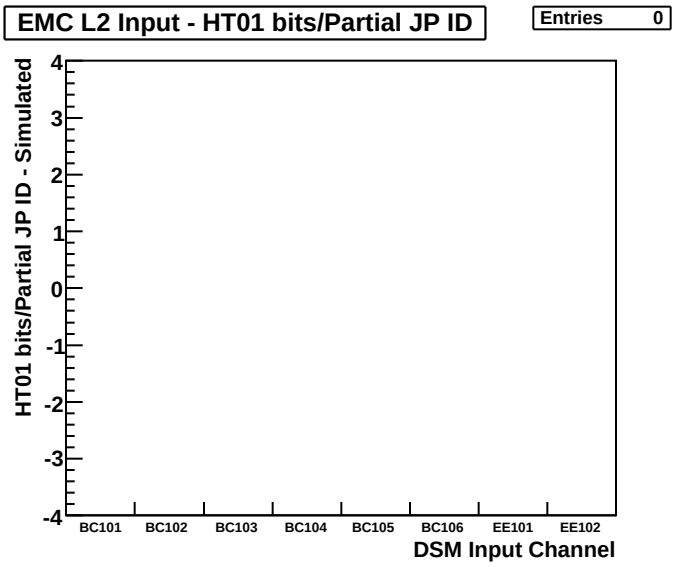

EMC L2 Input - JPZ/JPC bits
Entries 147496
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
28 53 5 53 34 22 3 2
200 178 30 251 185 96 5 5
533 486 132 828 666 304 20 23
17676 17720 18270 17305 17552 18015 18409 18407

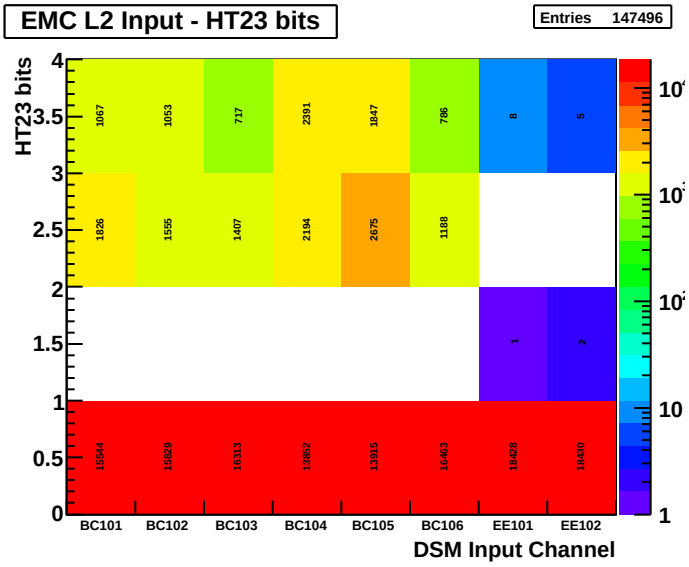

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

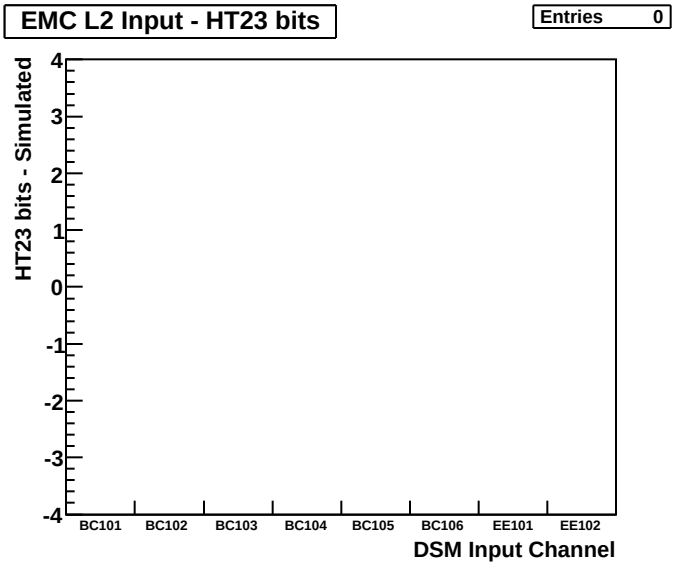

EMC L2 Input - Partial JP Sum
Entries 147496
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

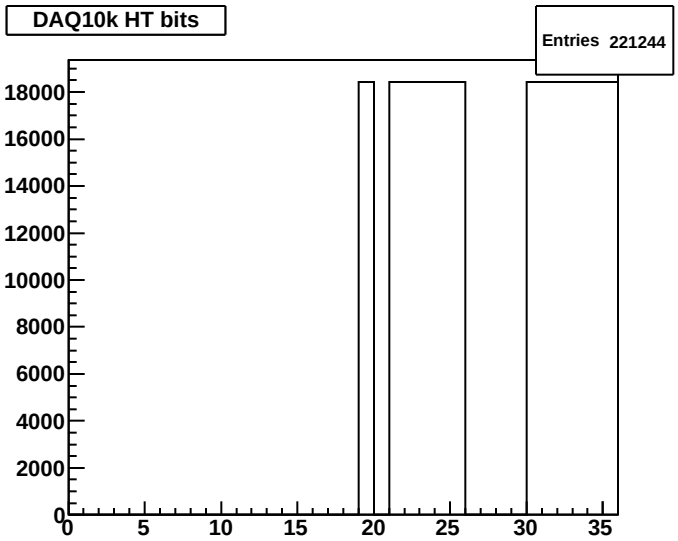

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

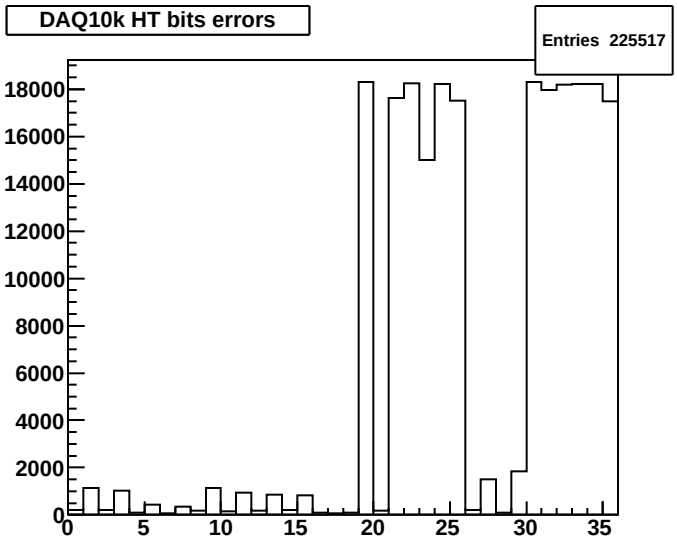

EMC L2 Input - HT01 bits/Partial JP ID
Entries 147496
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

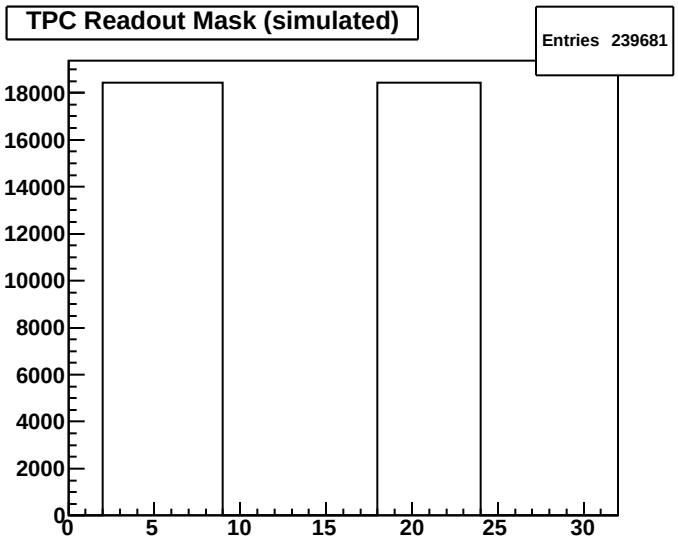

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

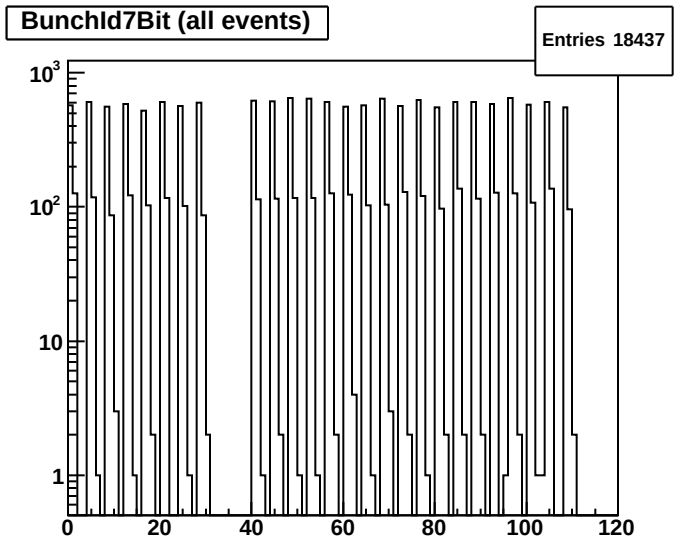

EMC L2 Input - HT23 bits
Entries 147496
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

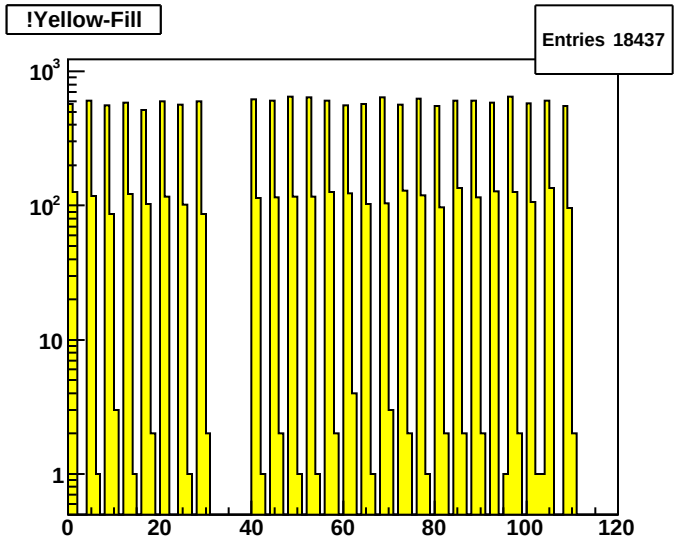

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

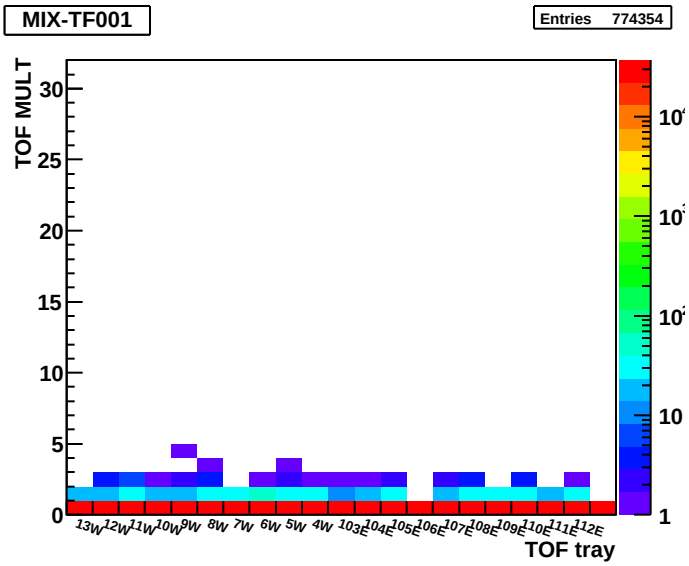

DAQ10k HT bits
Entries 221244
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

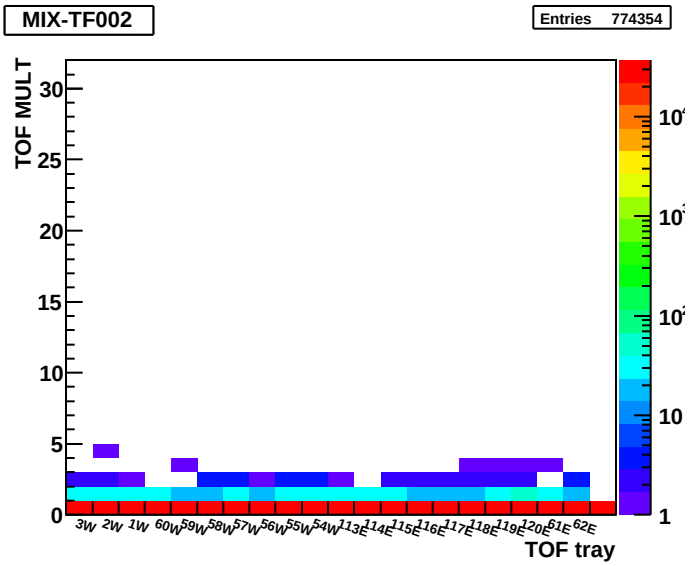

DAQ10k HT bits errors
Entries 225517
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

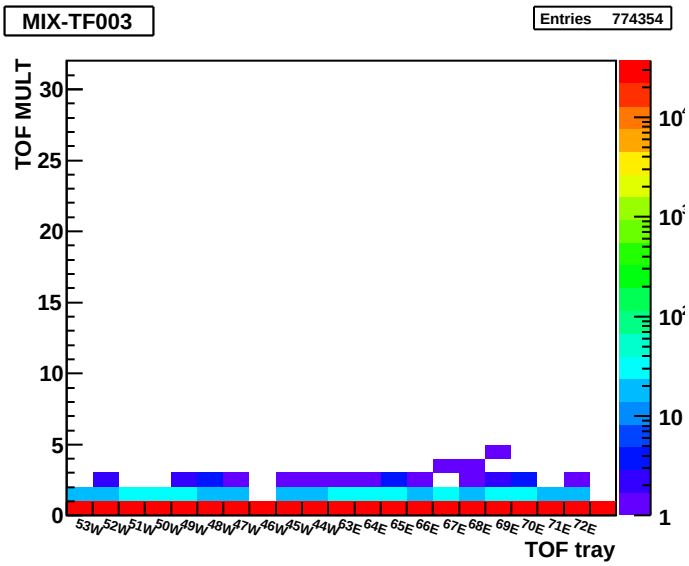

TPC Readout Mask (simulated)
Entries 239681
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30

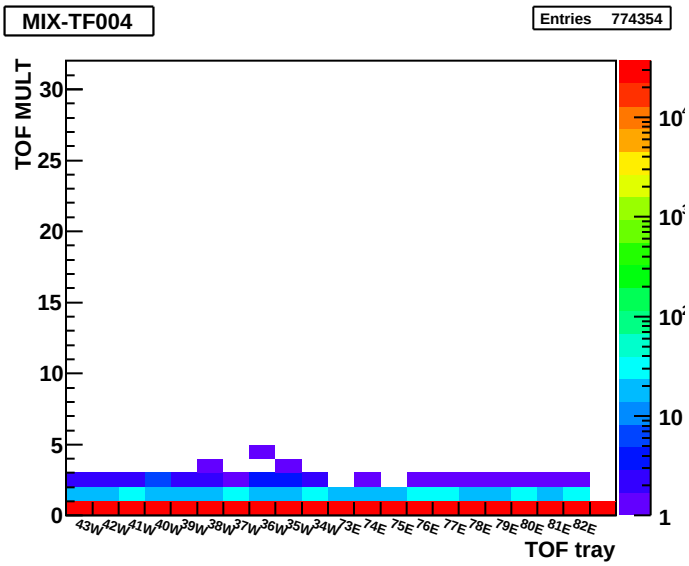

BunchId7Bit (all events)
Entries 18437
10^3
10^2
10
1
0 20 40 60 80 100 120

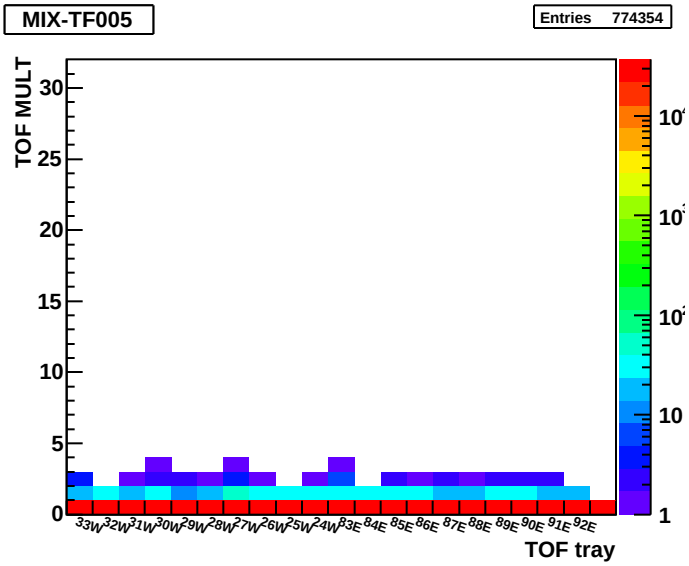

!Yellow-Fill
Entries 18437
10^3
10^2
10
1
0 20 40 60 80 100 120

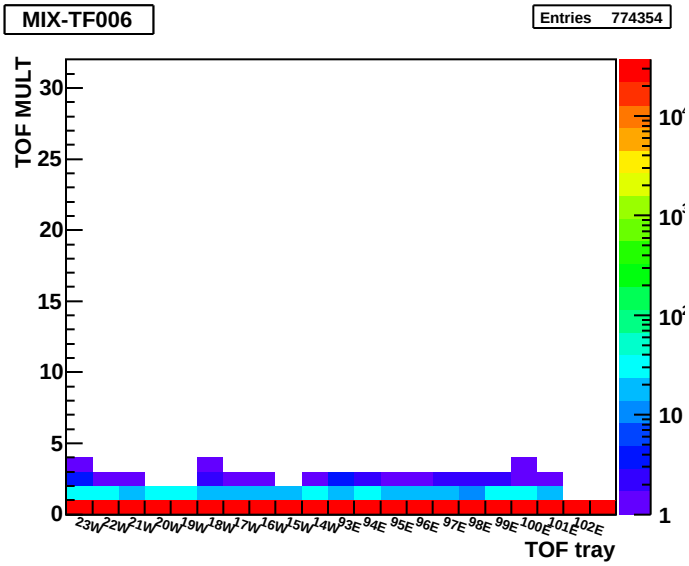

MIX-TF001
Entries 774354
TOF MULT
TOF tray

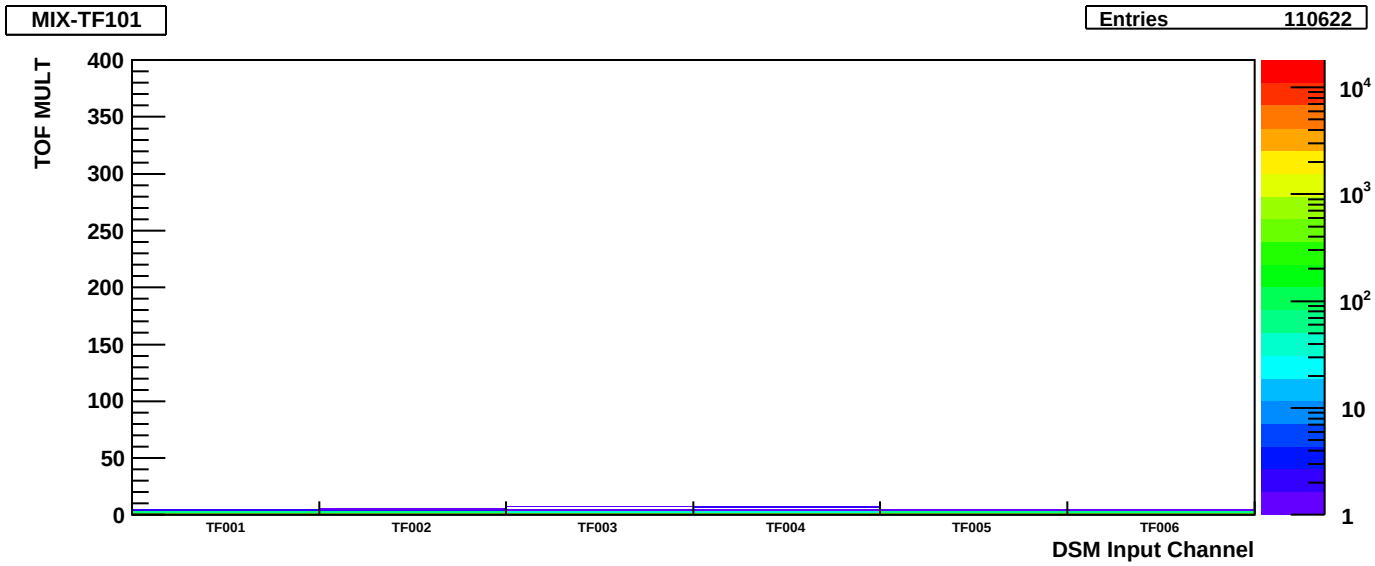

MIX-TF002
Entries 774354
TOF MULT
TOF tray

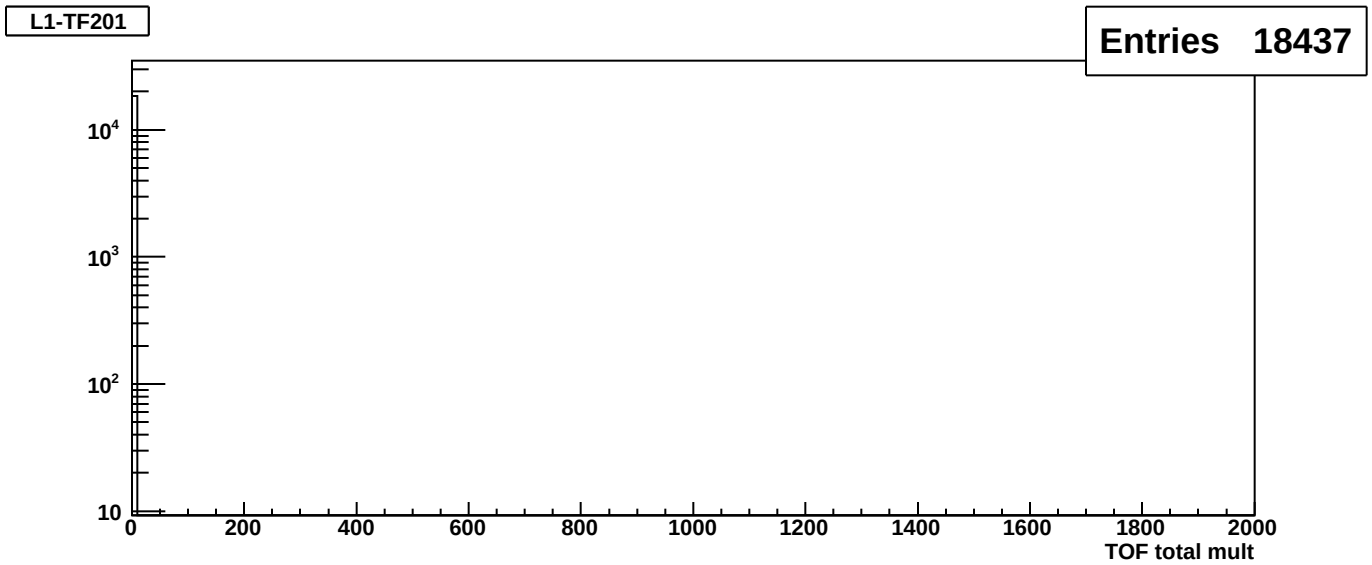

MIX-TF003
Entries 774354
TOF MULT
TOF tray

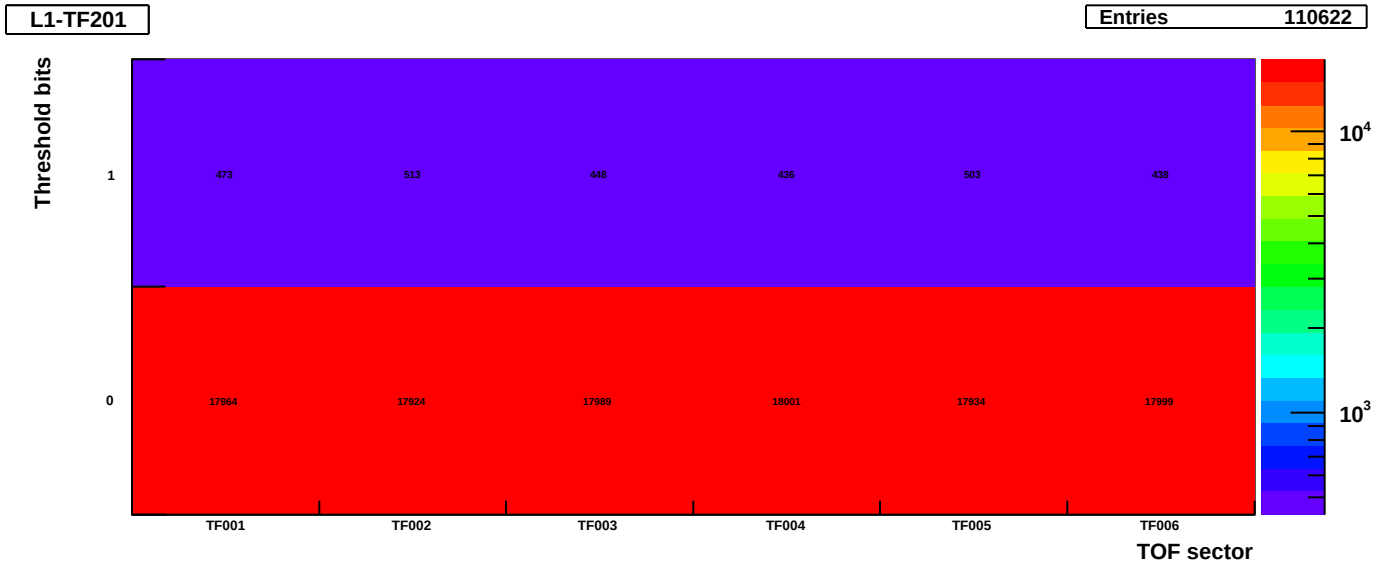

MIX-TF004
Entries 774354
TOF MULT
TOF tray

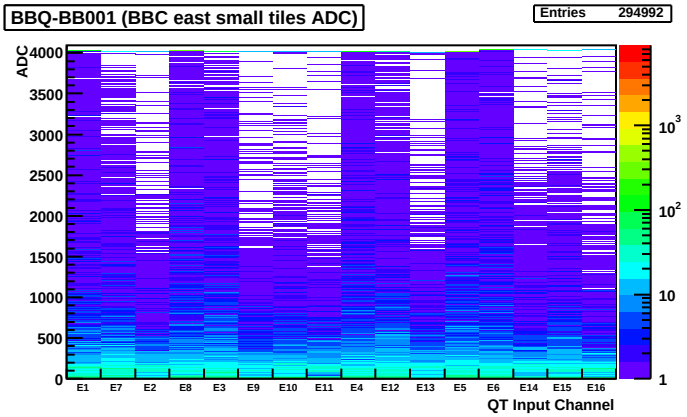

MIX-TF005
Entries 774354
TOF MULT
TOF tray

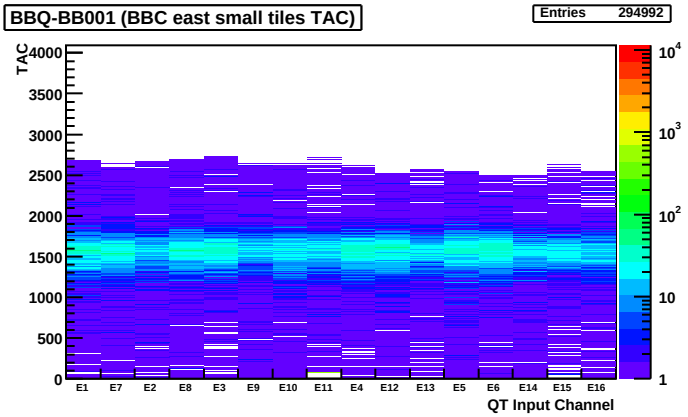

MIX-TF006
Entries 774354
TOF MULT
TOF tray

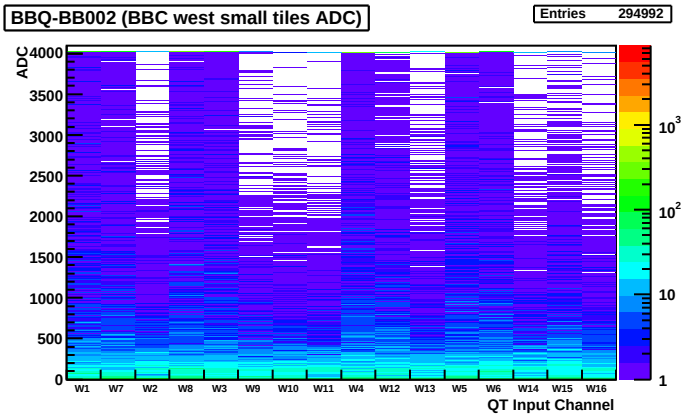

MIX-TF101
Entries 110622
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

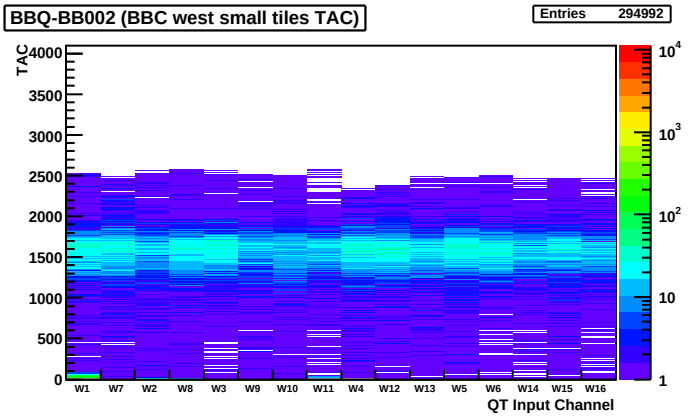

L1-TF201
Entries 18437
10^4
10^3
10^2
10
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

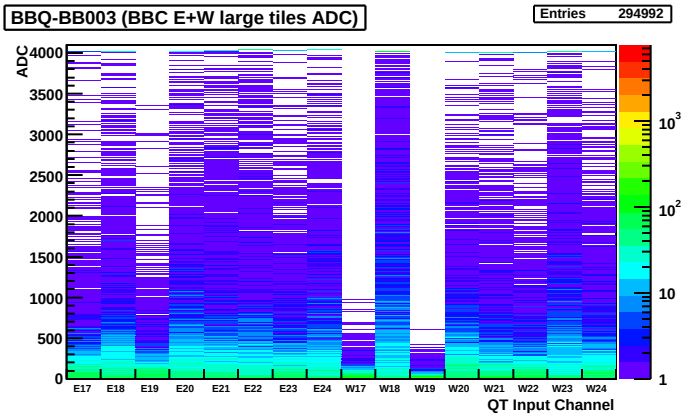

L1-TF201
Entries 110622
Threshold bits
1
0
473
513
448
436
503
438
17964
17924
17989
18001
17934
17999
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4
10^3

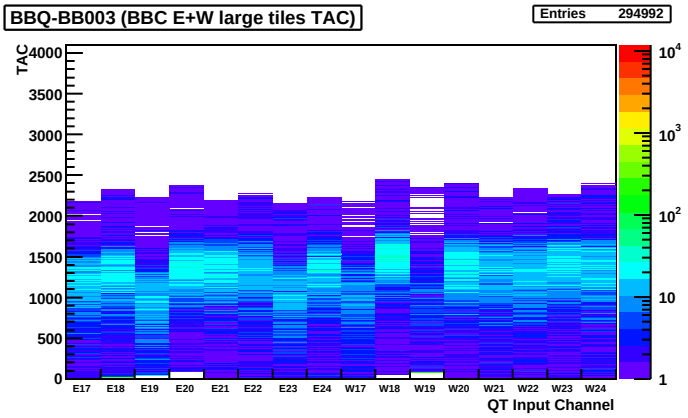

BBQ-BB001 (BBC east small tiles ADC)
Entries 294992
ADC
QT Input Channel
E1 E7 E2 E8 E3 E9 E10 E11 E4 E12 E13 E5 E6 E14 E15 E16

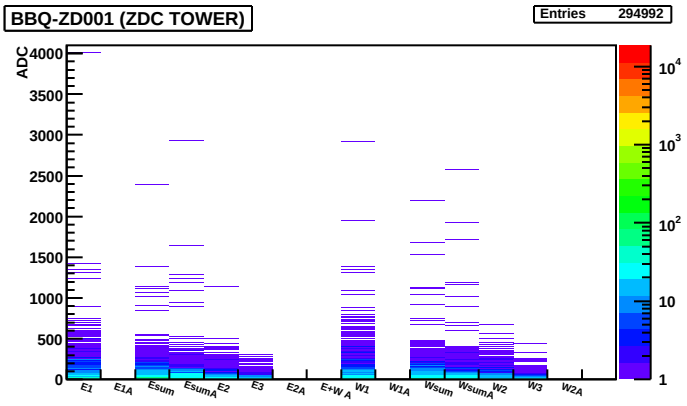

BBQ-BB001 (BBC east small tiles TAC)
Entries 294992
TAC
QT Input Channel
E1 E7 E2 E8 E3 E9 E10 E11 E4 E12 E13 E5 E6 E14 E15 E16

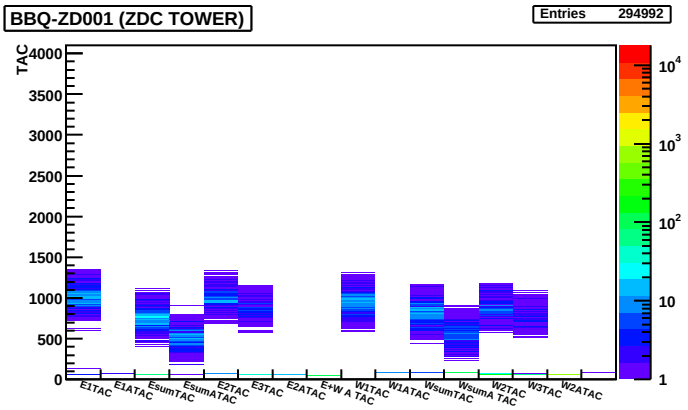

BBQ-BB002 (BBC west small tiles ADC)
Entries 294992
ADC
QT Input Channel
W1 W7 W2 W8 W3 W9 W10 W11 W4 W12 W13 W5 W6 W14 W15 W16

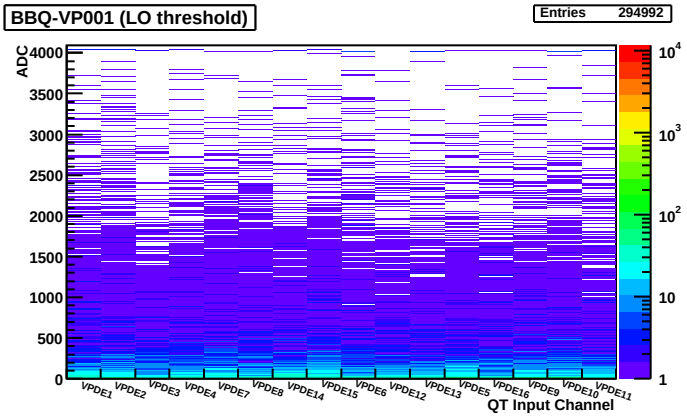

BBQ-BB002 (BBC west small tiles TAC)
Entries 294992
TAC
QT Input Channel
W1 W7 W2 W8 W3 W9 W10 W11 W4 W12 W13 W5 W6 W14 W15 W16

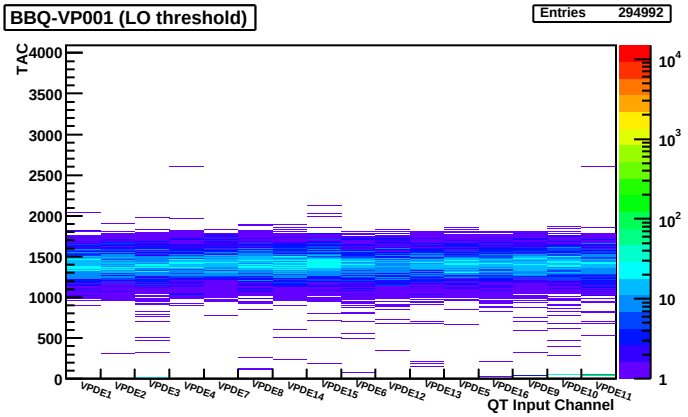

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 294992
ADC
QT Input Channel
E17 E18 E19 E20 E21 E22 E23 E24 W17 W18 W19 W20 W21 W22 W23 W24

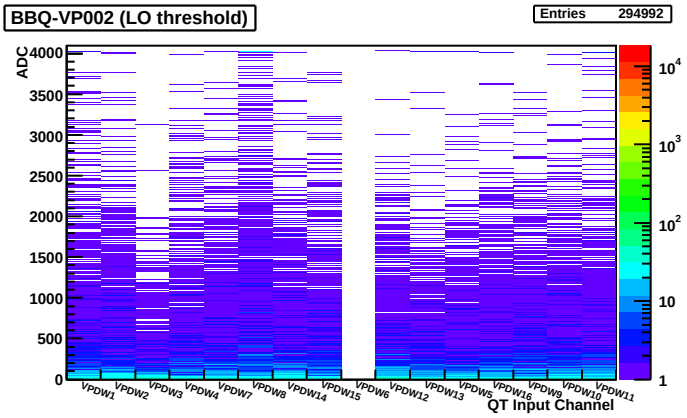

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 294992
TAC
QT Input Channel
E17 E18 E19 E20 E21 E22 E23 E24 W17 W18 W19 W20 W21 W22 W23 W24

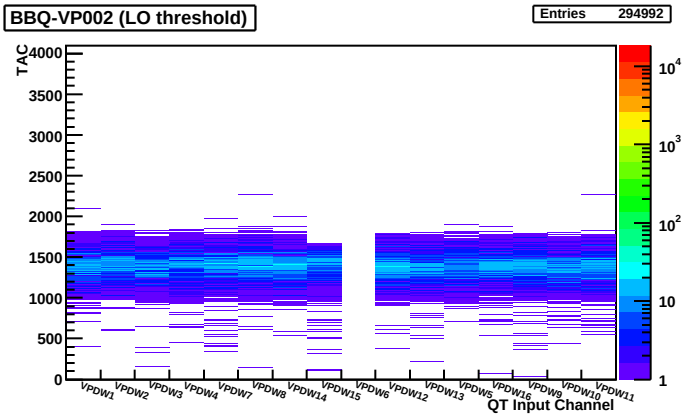

BBQ-ZD001 (ZDC TOWER)
Entries 294992
ADC
E1 E1A Esum EsumA E2 E3 E2A E+W A W1 W1A Wsum WsumA W2 W3 W2A

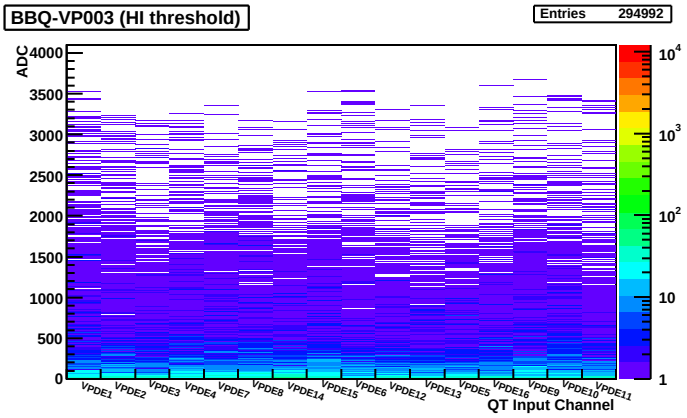

BBQ-ZD001 (ZDC TOWER)
Entries 294992
TAC
E1TAC E1ATAC EsumTAC EsumATAC E2TAC E3TAC E2ATAC E+W A TAC W1TAC W1ATAC WsumTAC WsumA TAC W2TAC W3TAC W2ATAC

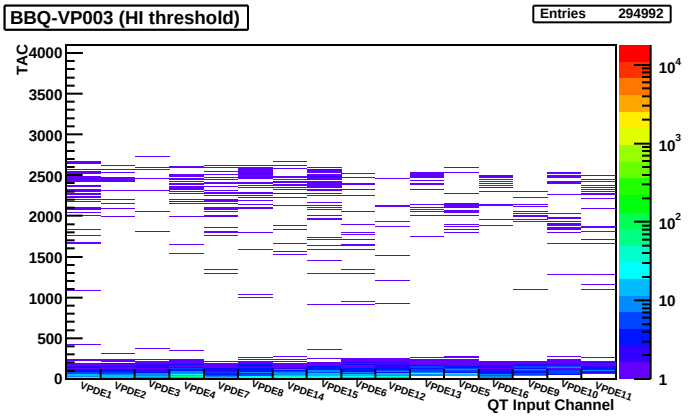

BBQ-VP001 (LO threshold)
Entries 294992
ADC
QT Input Channel

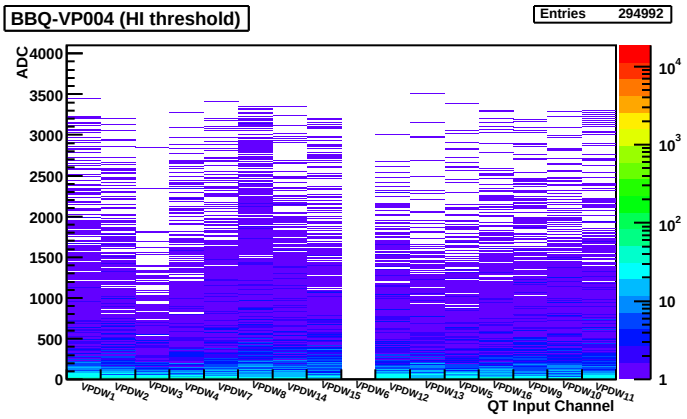

BBQ-VP001 (LO threshold)
Entries 294992
TAC
QT Input Channel

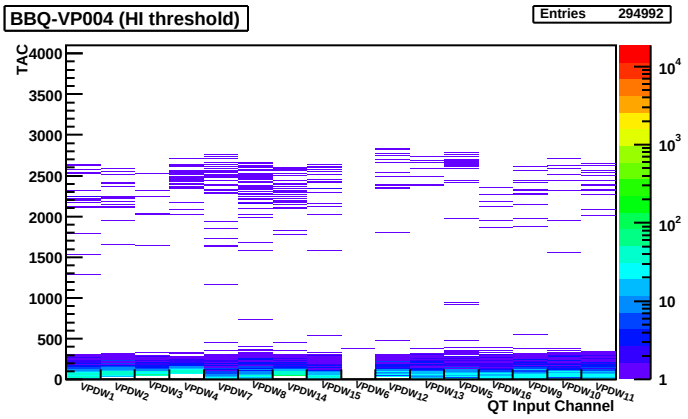

BBQ-VP002 (LO threshold)
Entries 294992
ADC
QT Input Channel

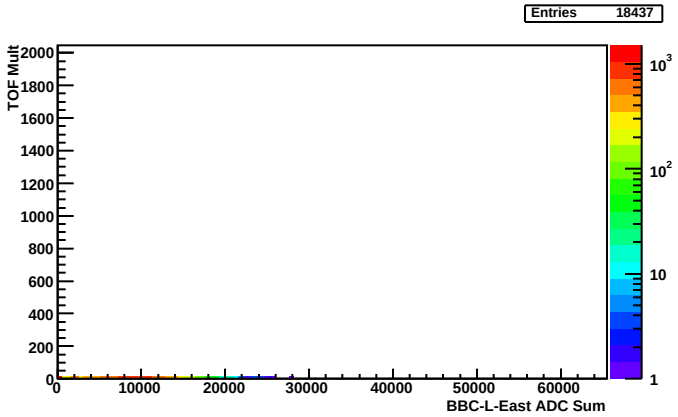

BBQ-VP002 (LO threshold)
Entries 294992
TAC
QT Input Channel

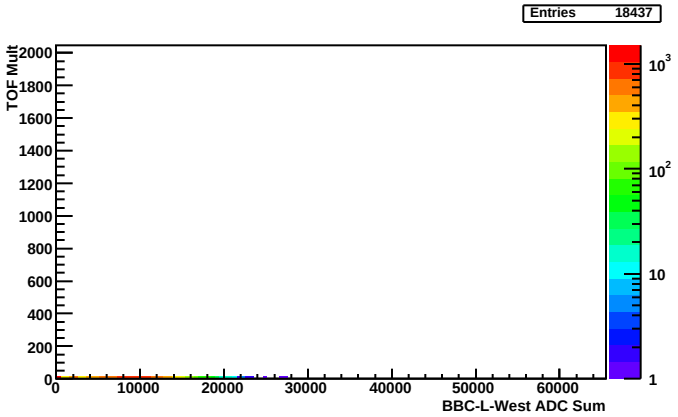

BBQ-VP003 (HI threshold)
Entries 294992
ADC
QT Input Channel

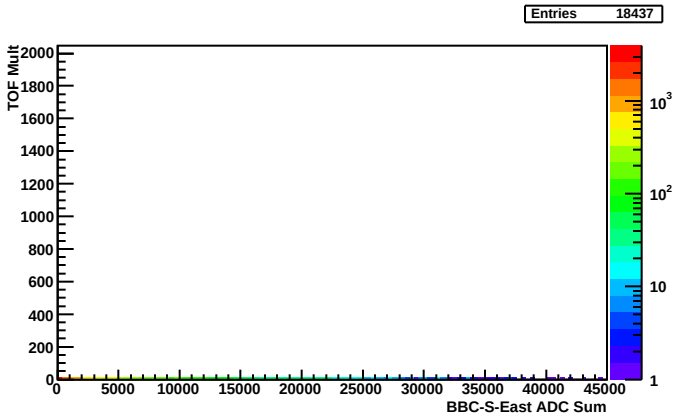

BBQ-VP003 (HI threshold)
Entries 294992
TAC
QT Input Channel

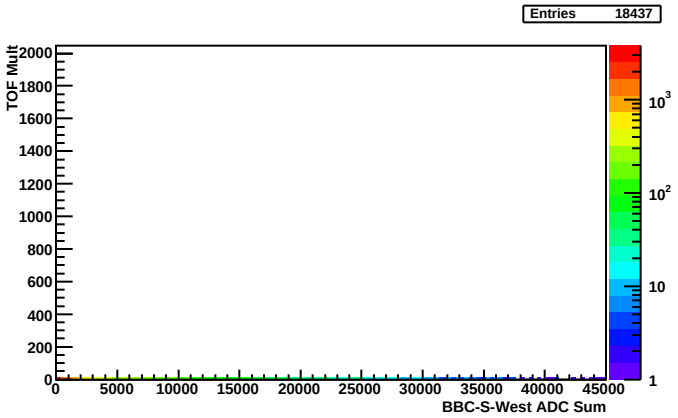

BBQ-VP004 (HI threshold)
Entries 294992
ADC
QT Input Channel

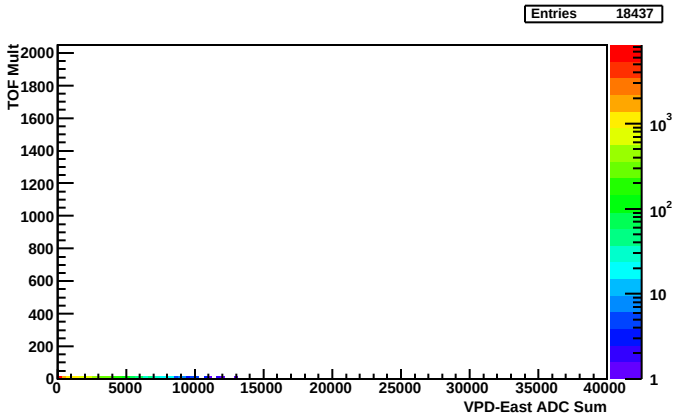

BBQ-VP004 (HI threshold)
Entries 294992
TAC
QT Input Channel

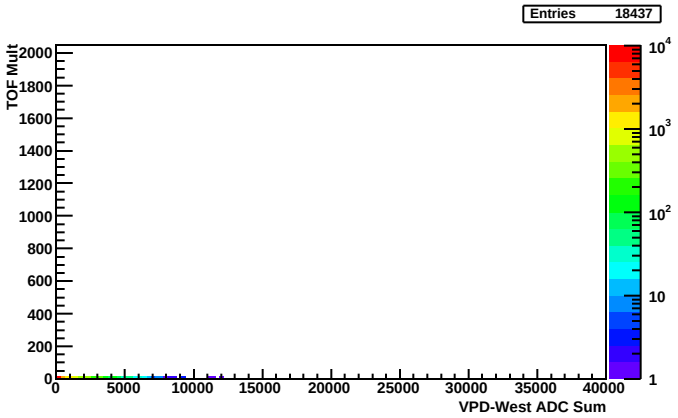

Entries 18437
TOF Mult
BBC-L-East ADC Sum

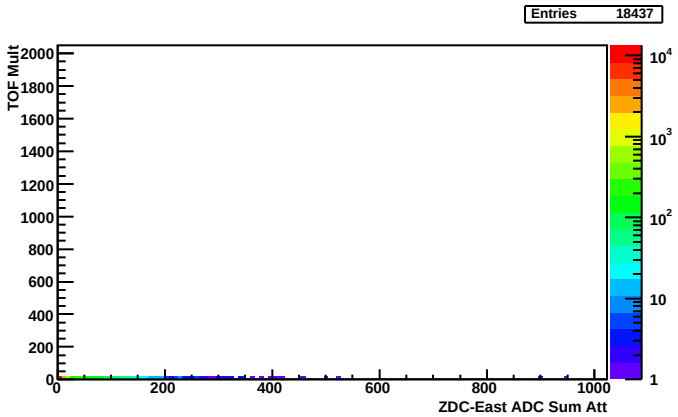

Entries 18437
TOF Mult
BBC-L-West ADC Sum

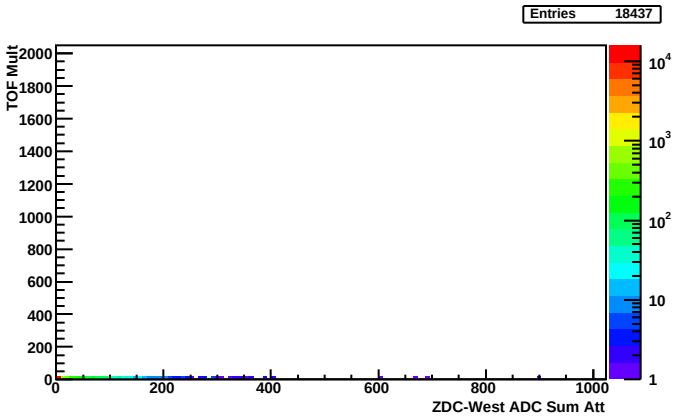

Entries 18437
TOF Mult
BBC-S-East ADC Sum

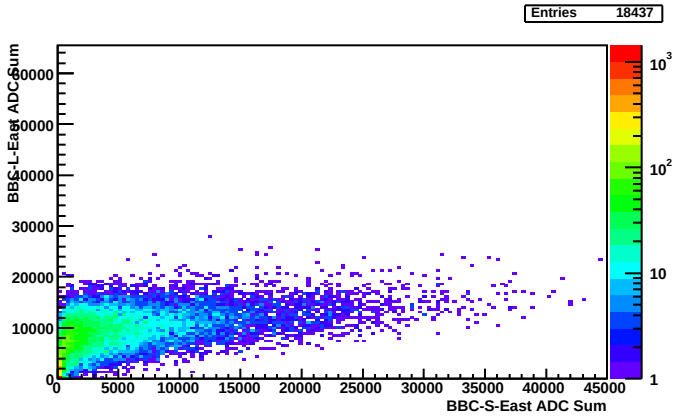

Entries 18437
TOF Mult
BBC-S-West ADC Sum

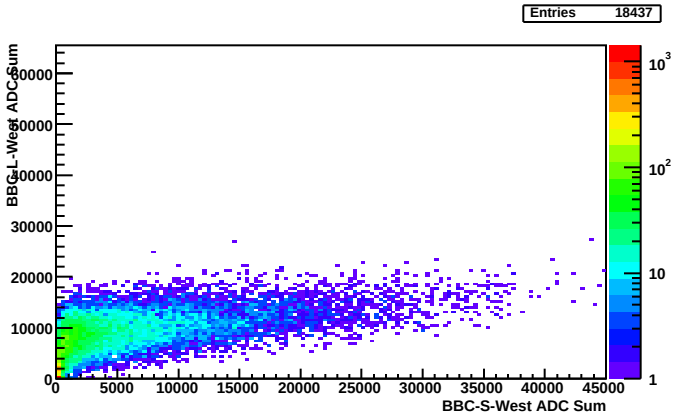

Entries 18437
TOF Mult
VPD-East ADC Sum

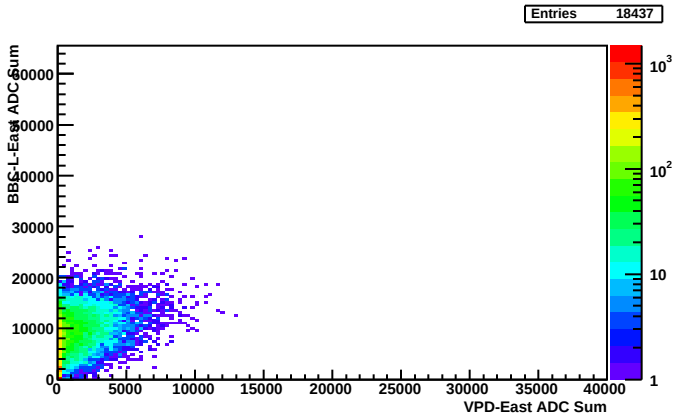

Entries 18437
TOF Mult
VPD-West ADC Sum

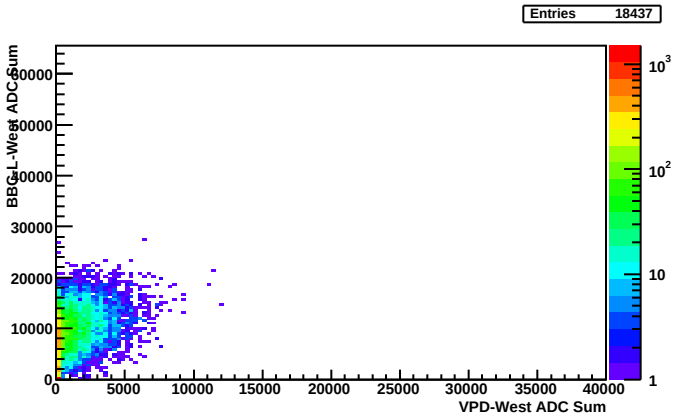

Entries 18437
TOF Mult
ZDC-East ADC Sum Att

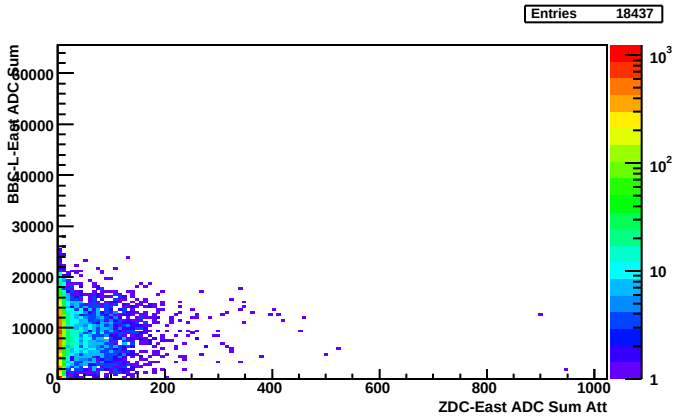

Entries 18437
TOF Mult
ZDC-West ADC Sum Att

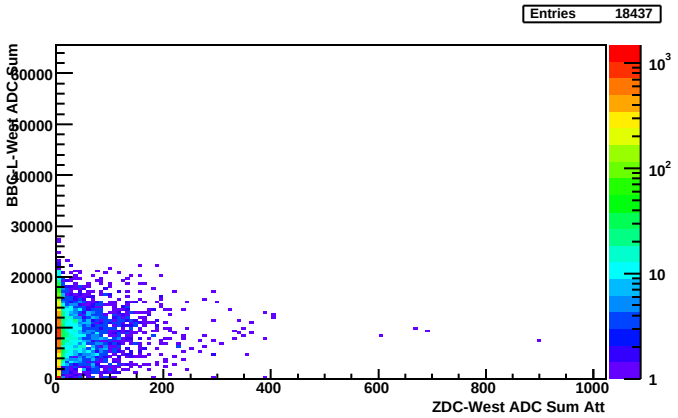

Entries 18437
BBC-L-East ADC Sum
BBC-S-East ADC Sum

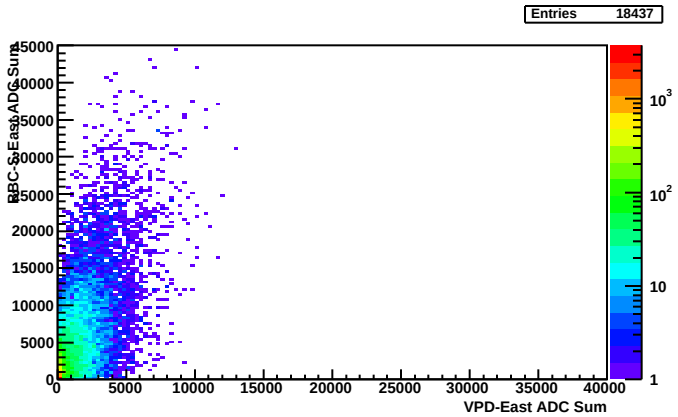

Entries 18437
BBC-L-West ADC Sum
BBC-S-West ADC Sum

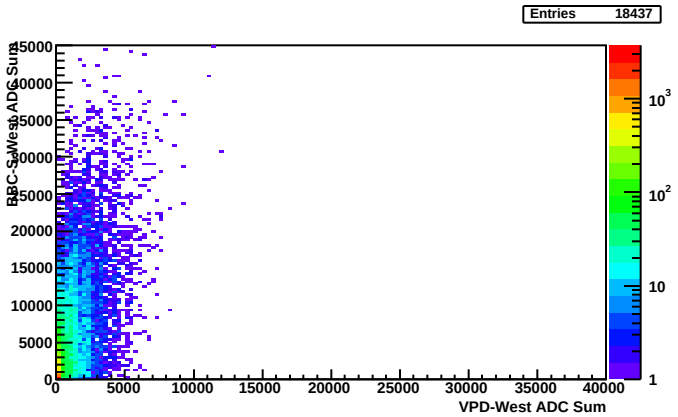

Entries 18437
BBC-L-East ADC Sum
VPD-East ADC Sum

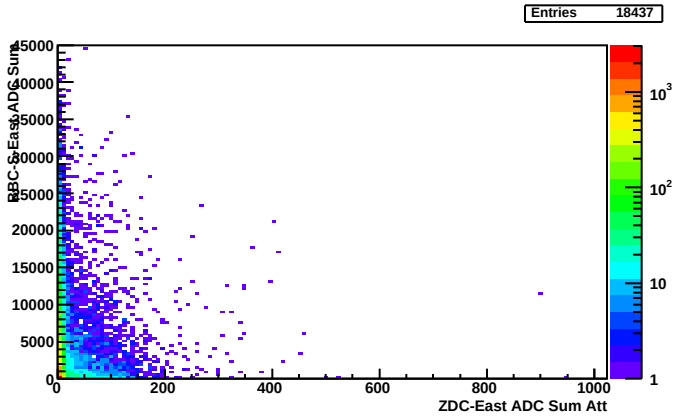

Entries 18437
BBC-L-West ADC Sum
VPD-West ADC Sum

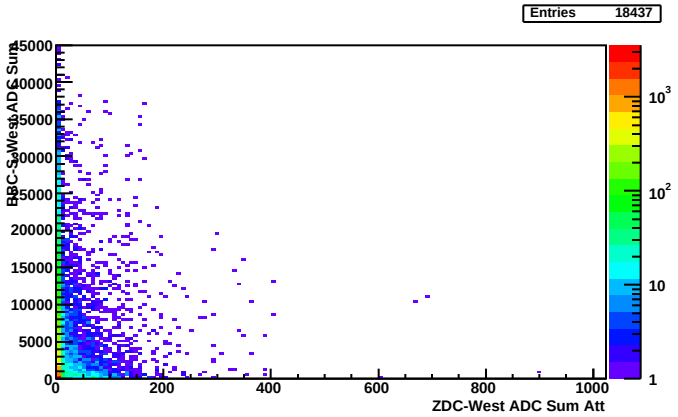

Entries 18437
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

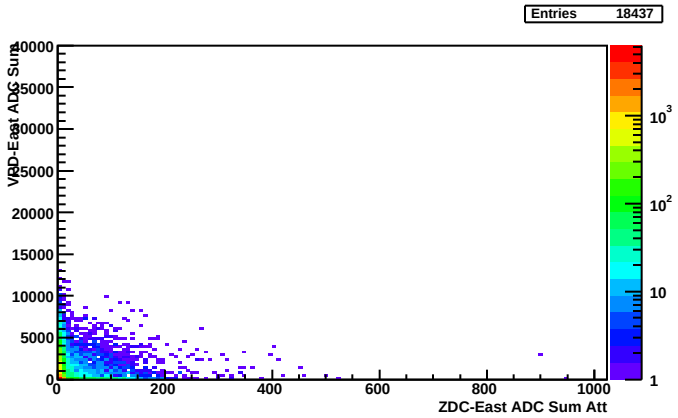

Entries 18437
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

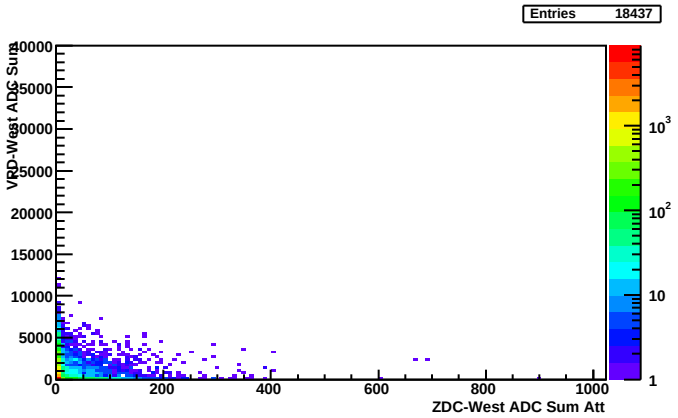

Entries 18437
BBC-S-East ADC Sum
VPD-East ADC Sum

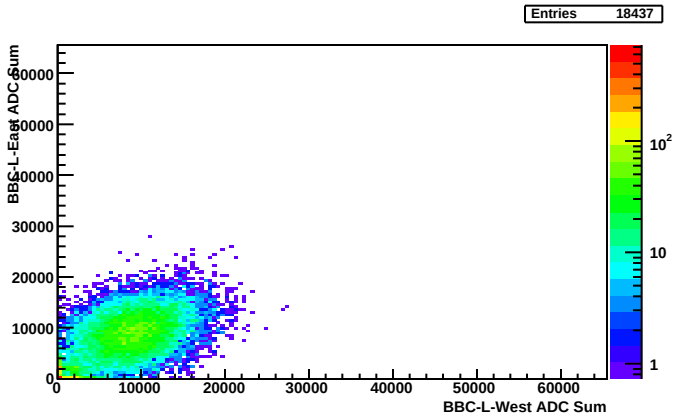

Entries 18437
BBC-S-West ADC Sum
VPD-West ADC Sum

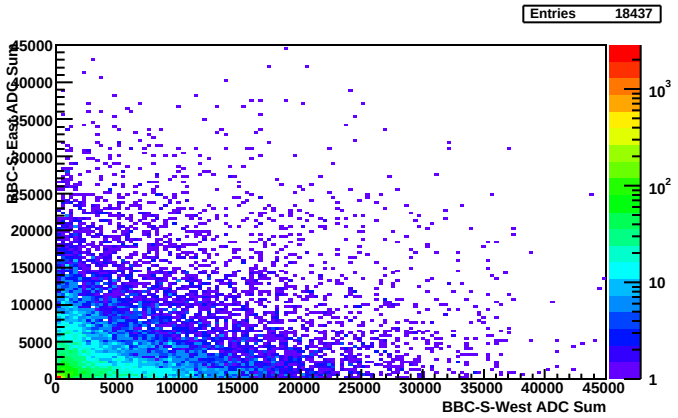

Entries 18437
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

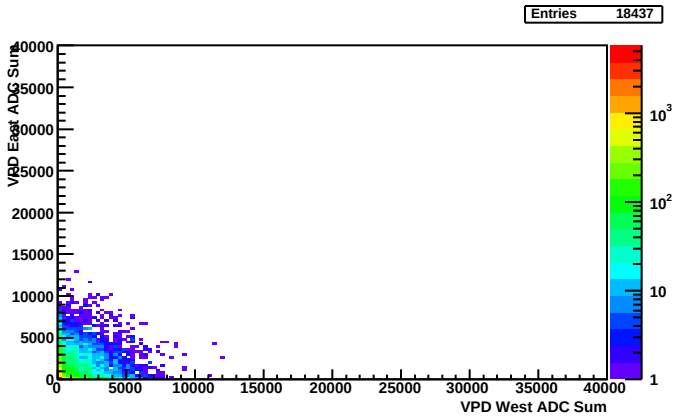

Entries 18437
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

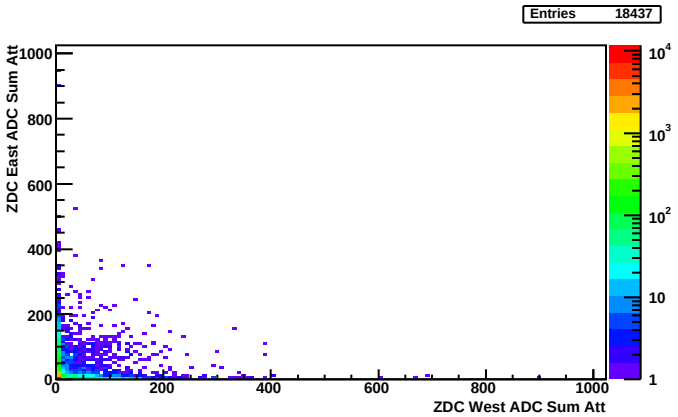

Entries 18437
VPD-East ADC Sum
ZDC-East ADC Sum Att

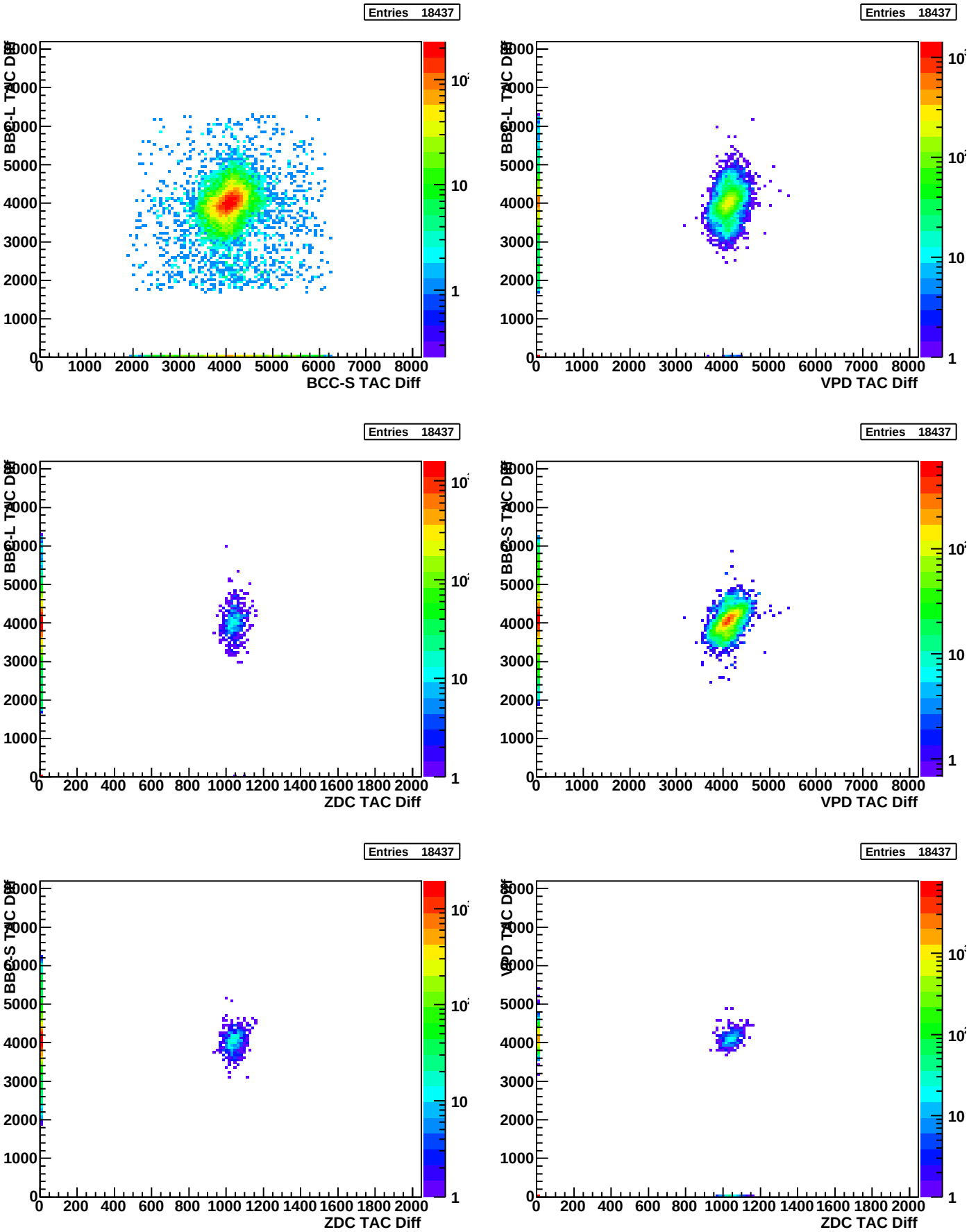

Entries 18437
VPD-West ADC Sum
ZDC-West ADC Sum Att

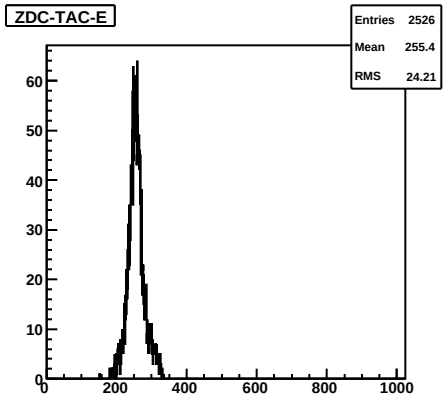

Entries 18437
BBC-L-East ADC Sum
BBC-L-West ADC Sum

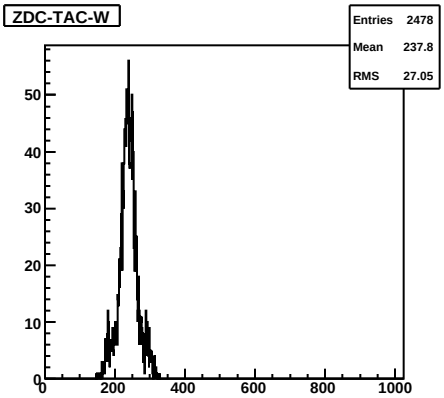

Entries 18437
BBC-S-East ADC Sum
BBC-S-West ADC Sum

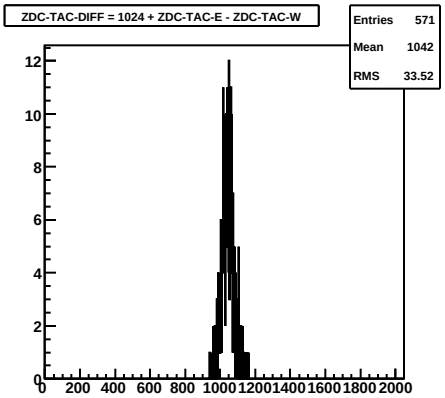

Entries 18437
VPD East ADC Sum
VPD West ADC Sum

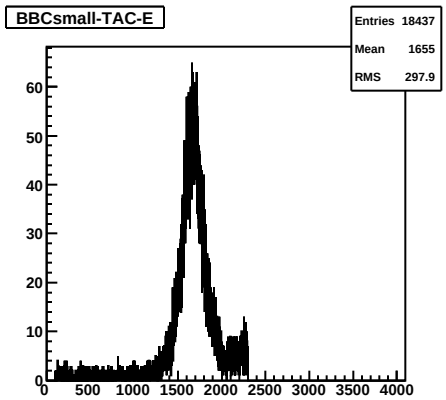

Entries 18437
ZDC East ADC Sum Att
ZDC West ADC Sum Att

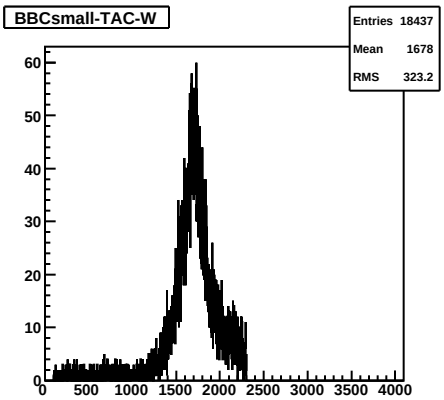

Entries 18437
BBC-L TAC Diff
BCC-S TAC Diff
Entries 18437
BBC-L TAC Diff
VPD TAC Diff
Entries 18437
BBC-L TAC Diff
ZDC TAC Diff
Entries 18437
BBC-S TAC Diff
VPD TAC Diff
Entries 18437
BBC-S TAC Diff
ZDC TAC Diff
Entries 18437
VPD TAC Diff
ZDC TAC Diff

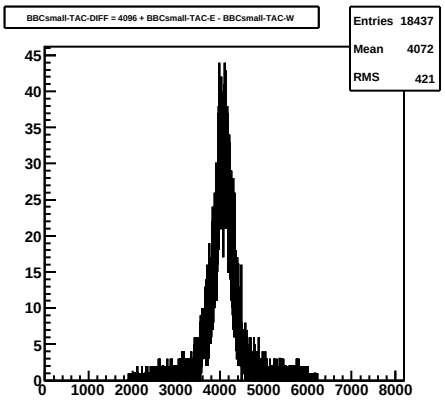

ZDC-TAC-E
Entries 2526
Mean 255.4
RMS 24.21

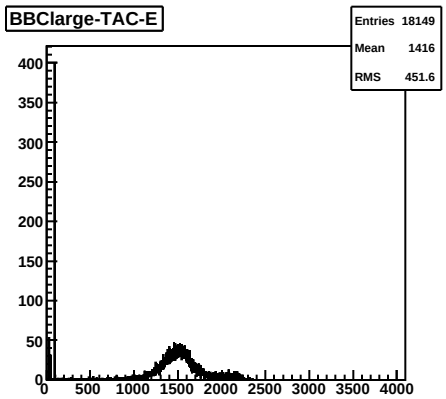

ZDC-TAC-W
Entries 2478
Mean 237.8
RMS 27.05

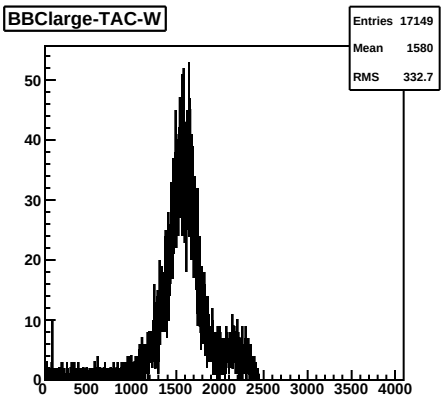

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 571
Mean 1042
RMS 33.52

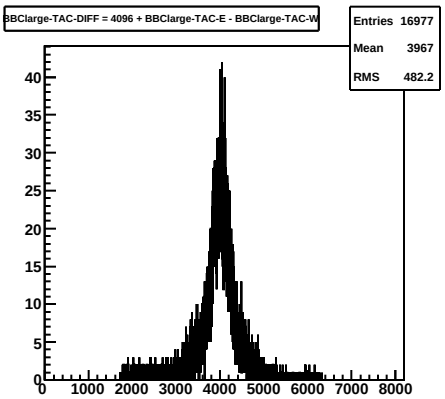

BBCsmall-TAC-E
Entries 18437
Mean 1655
RMS 297.9

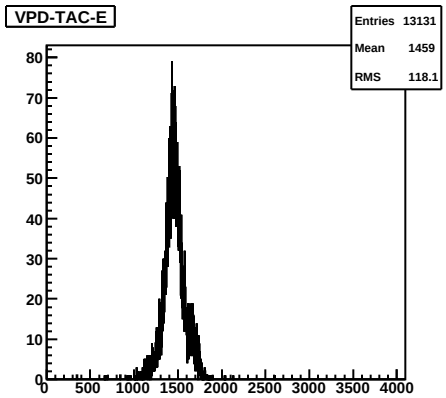

BBCsmall-TAC-W
Entries 18437
Mean 1678
RMS 323.2

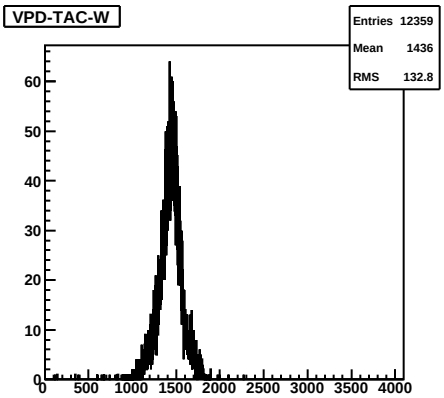

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 18437
Mean 4072
RMS 421

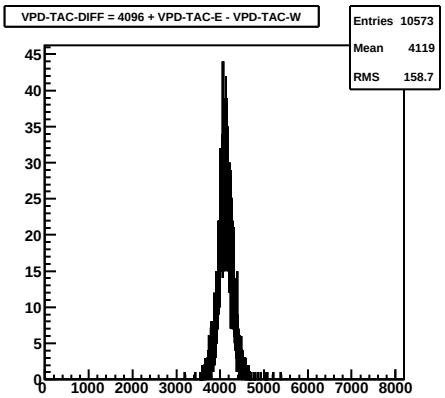

BBClarge-TAC-E
Entries 18149
Mean 1416
RMS 451.6

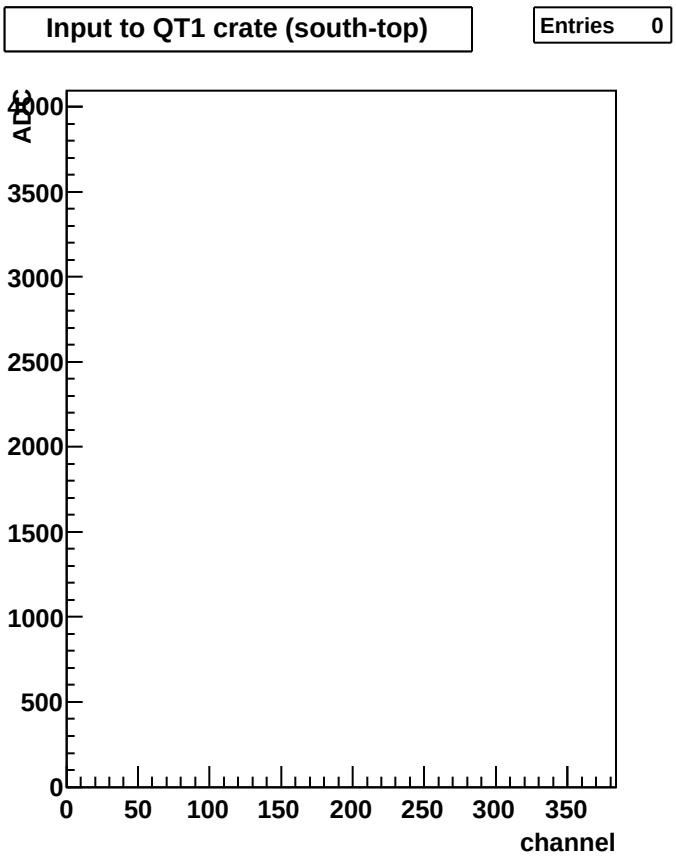

BBClarge-TAC-W
Entries 17149
Mean 1580
RMS 332.7

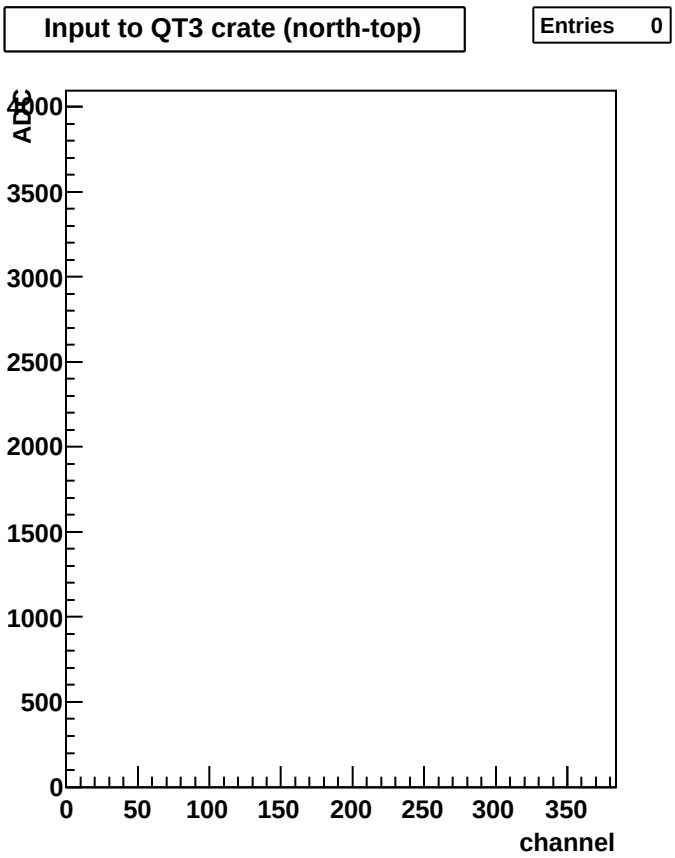

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 16977
Mean 3967
RMS 482.2

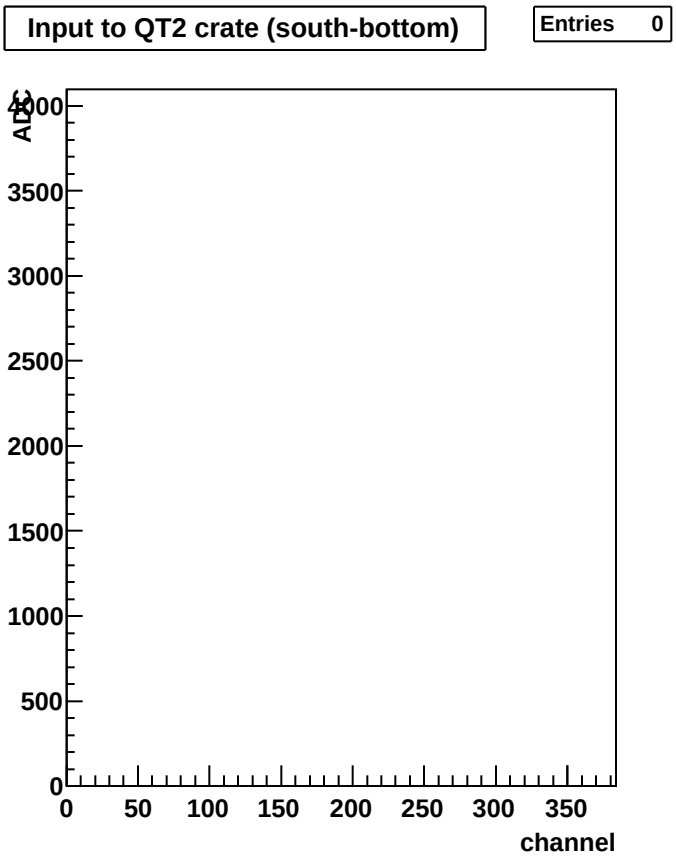

VPD-TAC-E
Entries 13131
Mean 1459
RMS 118.1

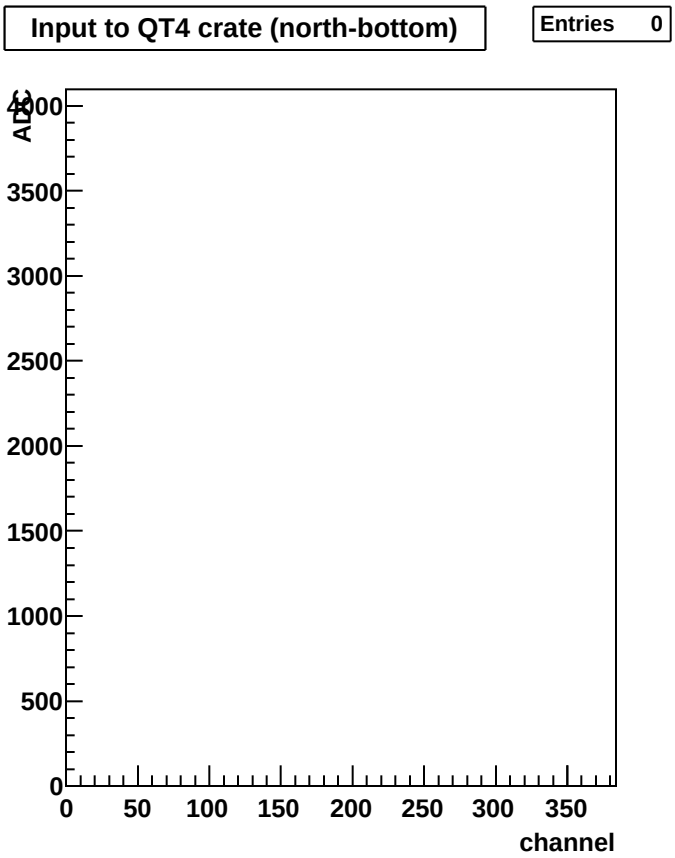

VPD-TAC-W
Entries 12359
Mean 1436
RMS 132.8

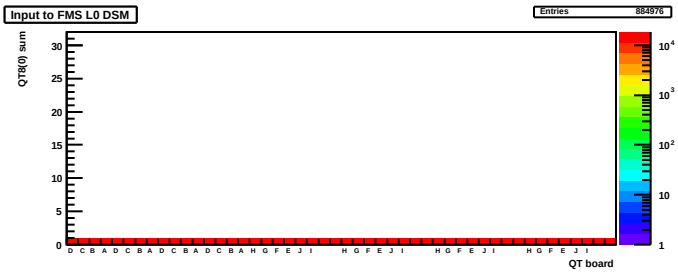

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 10573
Mean 4119
RMS 158.7

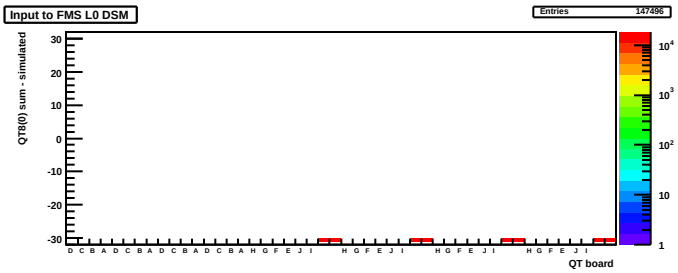

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

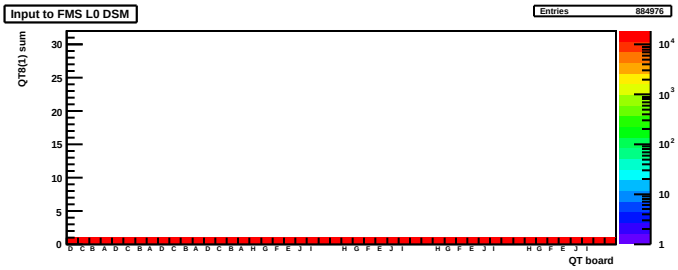

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

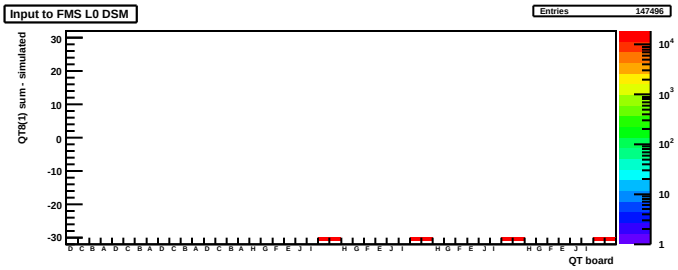

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

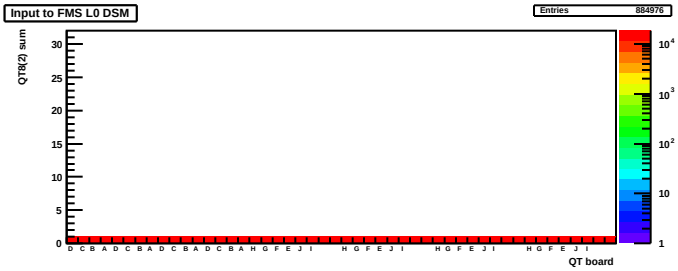

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

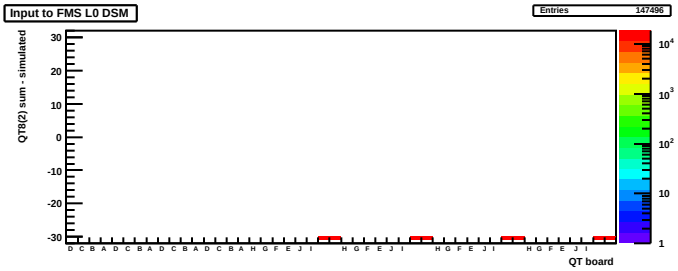

Input to FMS L0 DSM
Entries 884976
QT8(0) sum
QT board

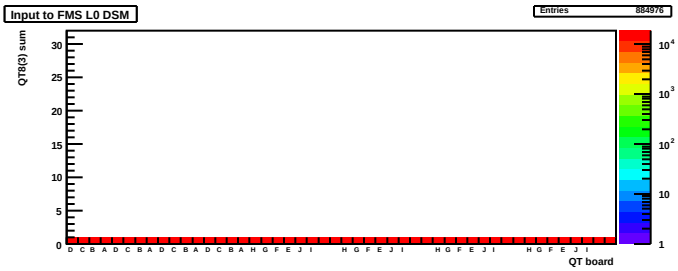

Input to FMS L0 DSM
Entries 147496
QT8(0) sum - simulated
QT board

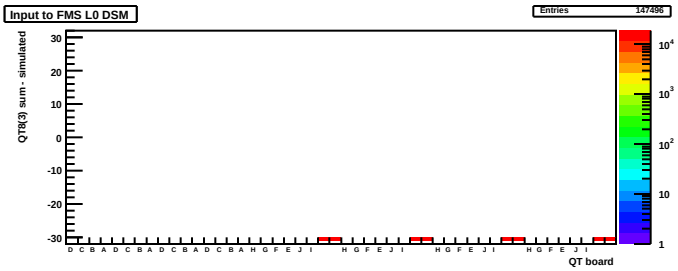

Input to FMS L0 DSM
Entries 884976
QT8(1) sum
QT board

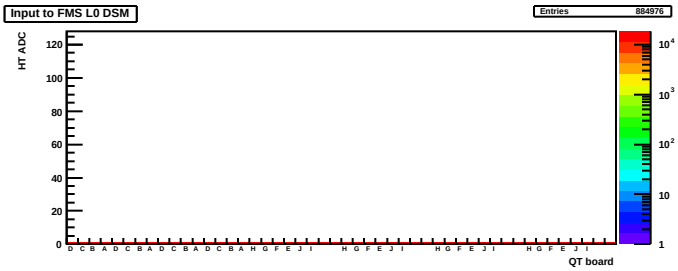

Input to FMS L0 DSM
Entries 147496
QT8(1) sum - simulated
QT board

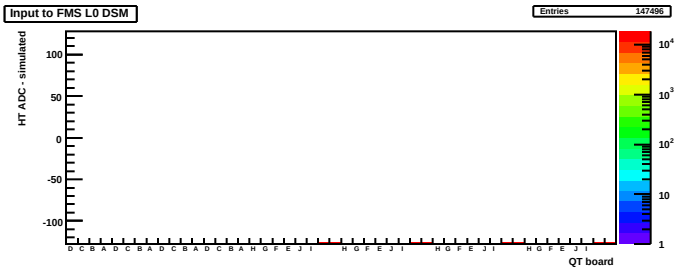

Input to FMS L0 DSM
Entries 884976
QT8(2) sum
QT board

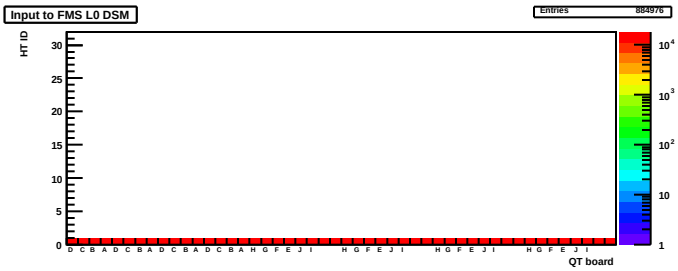

Input to FMS L0 DSM
Entries 147496
QT8(2) sum - simulated
QT board

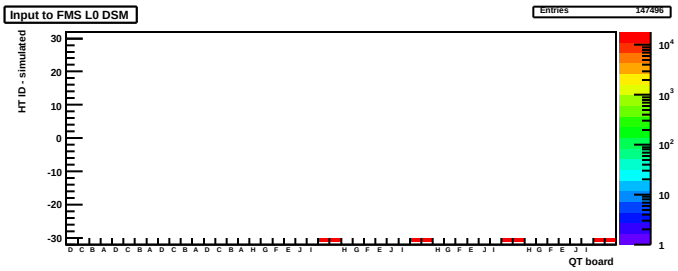

Input to FMS L0 DSM
Entries 884976
QT8(3) sum
QT board

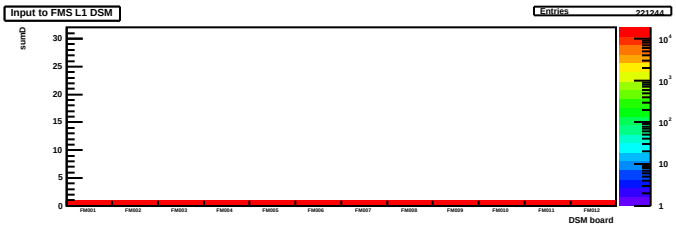

Input to FMS L0 DSM
Entries 147496
QT8(3) sum - simulated
QT board

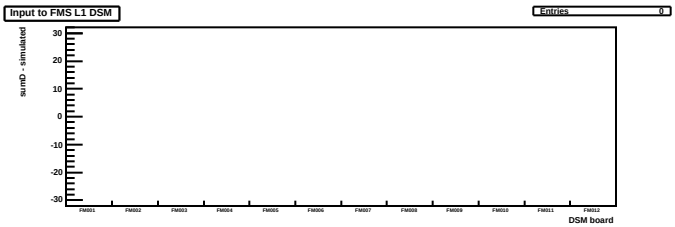

Input to FMS L0 DSM
Entries 884976
HT ADC
QT board

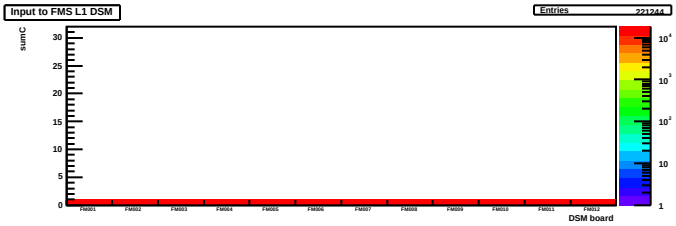

Input to FMS L0 DSM
Entries 147496
HT ADC - simulated
QT board

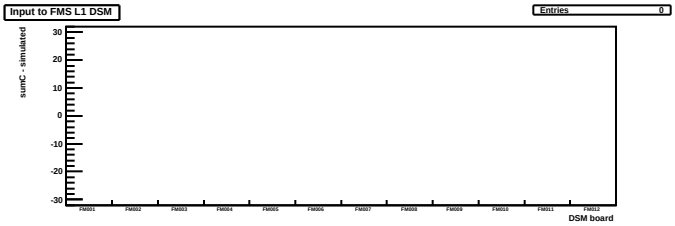

Input to FMS L0 DSM
Entries 884976
HT ID
QT board

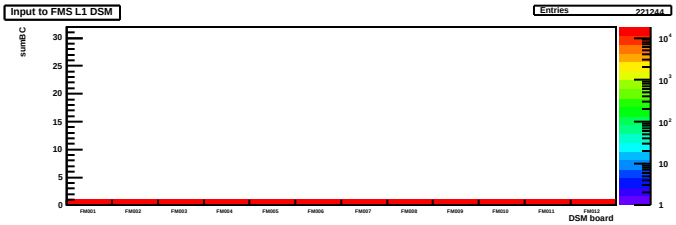

Input to FMS L0 DSM
Entries 147496
HT ID - simulated
QT board

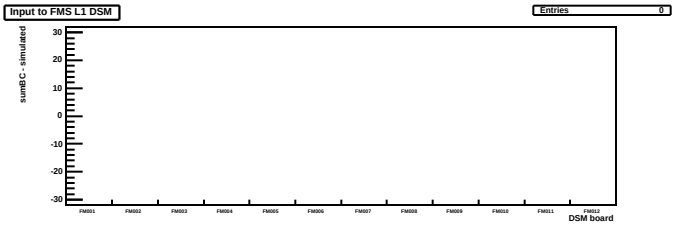

Input to FMS L1 DSM
Entries 221244
sumD
DSM board

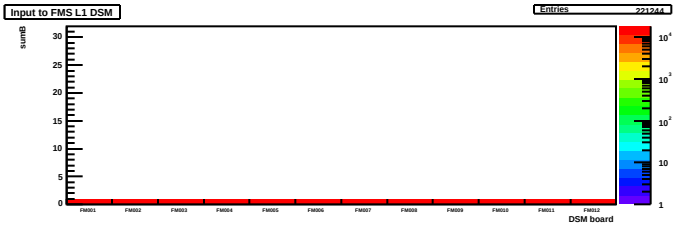

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

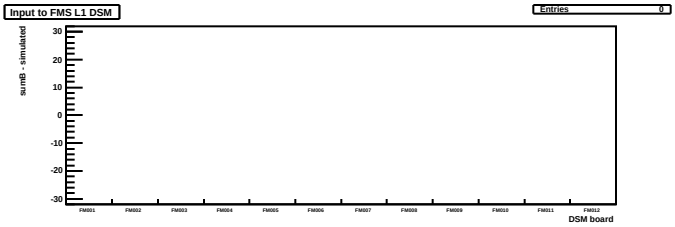

Input to FMS L1 DSM
Entries 221244
sumC
DSM board

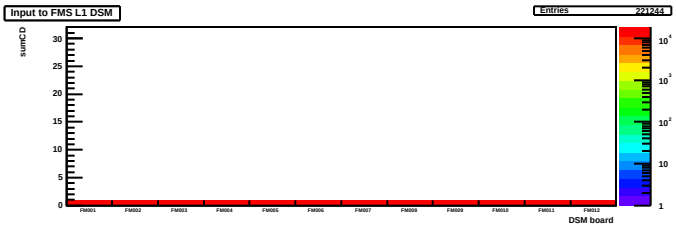

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

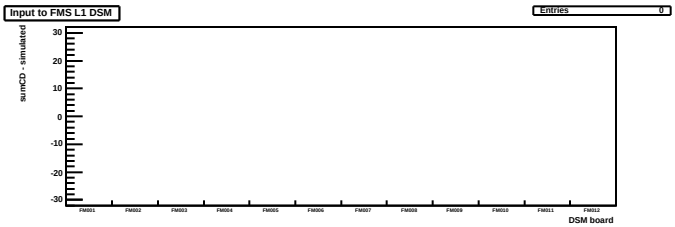

Input to FMS L1 DSM
Entries 221244
sumBC
DSM board

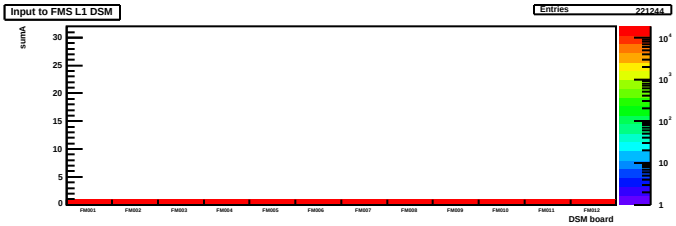

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

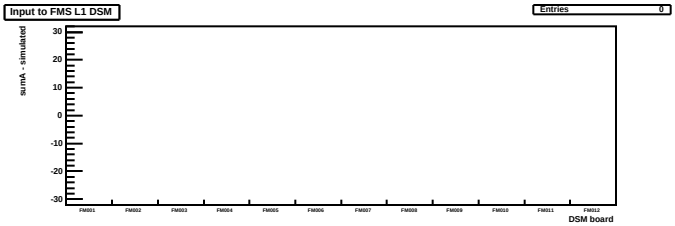

Input to FMS L1 DSM
Entries 221244
sumB
DSM board

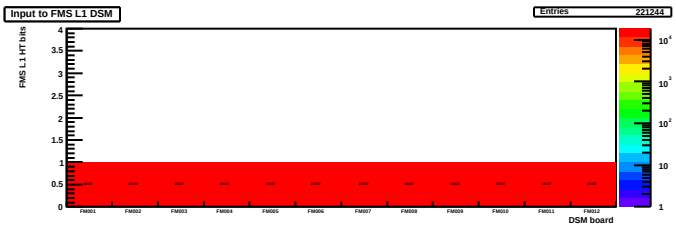

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

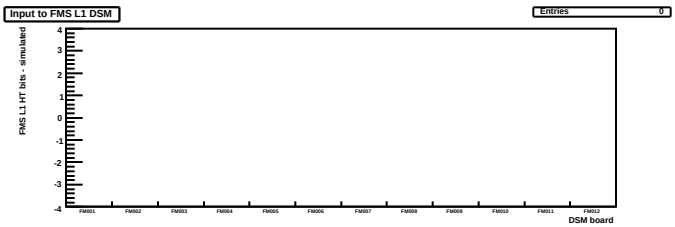

Input to FMS L1 DSM
Entries 221244
sumCD
DSM board

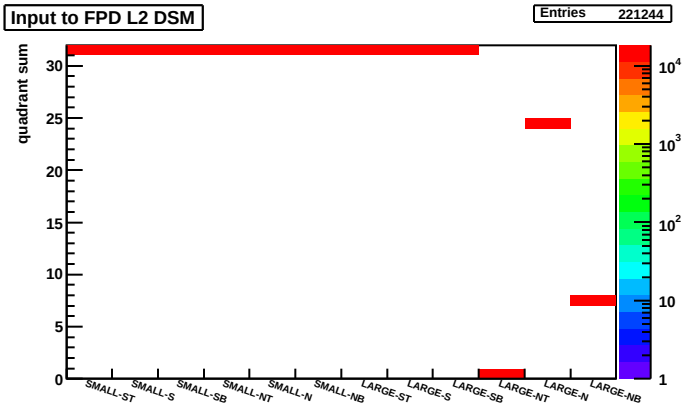

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

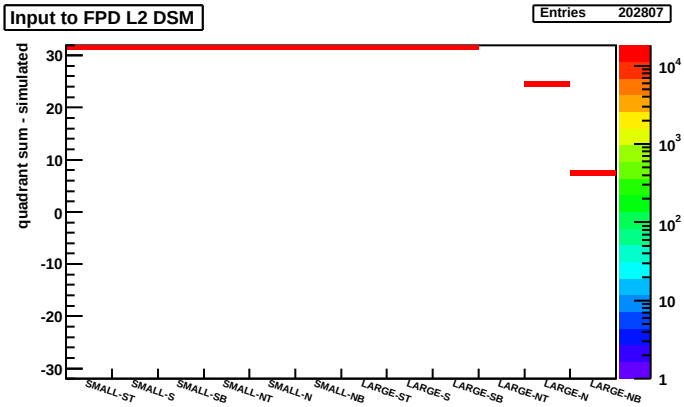

Input to FMS L1 DSM
Entries 221244
sumA
DSM board

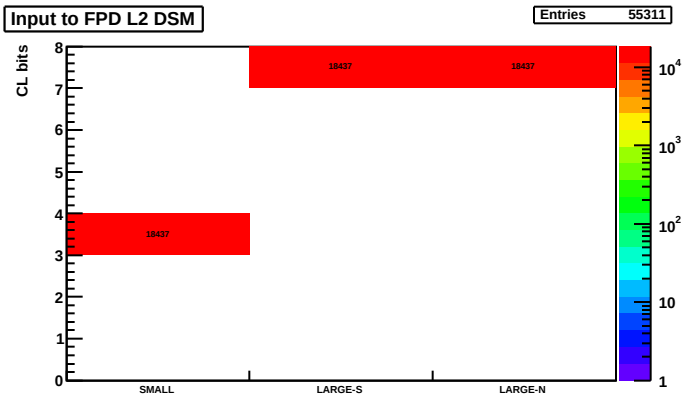

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

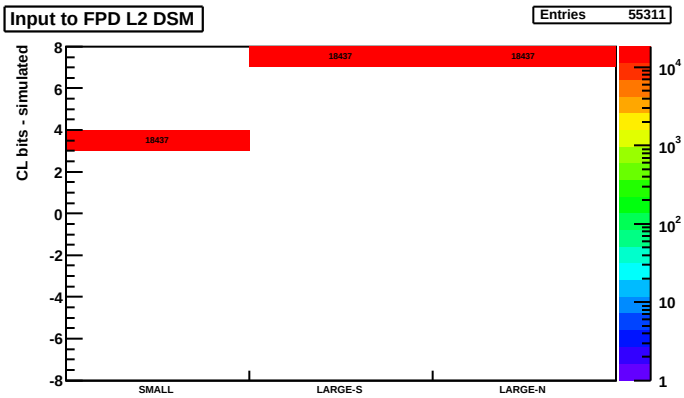

Input to FMS L1 DSM
Entries 221244
FMS L1 HT bits
DSM board

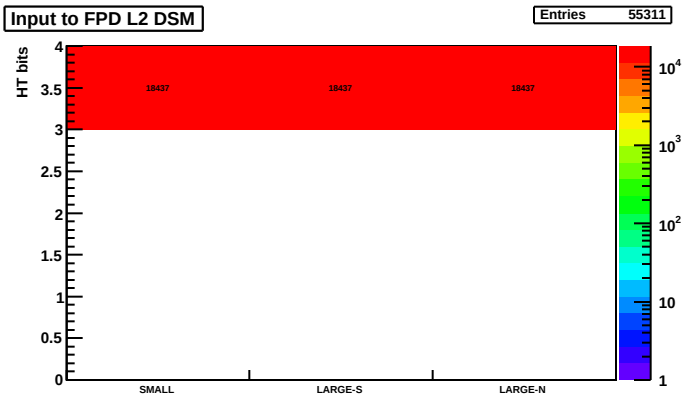

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

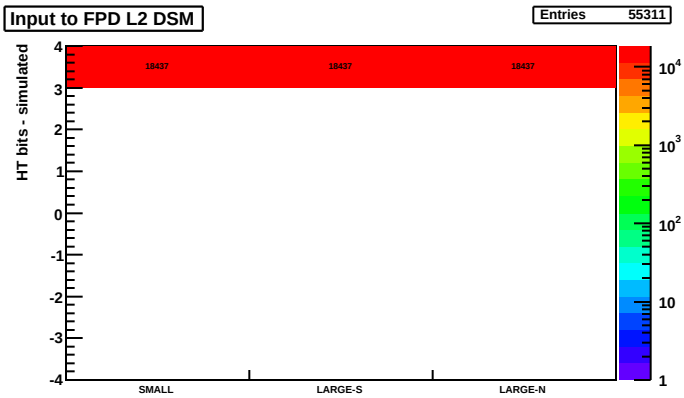

Input to FPD L2 DSM
Entries 221244
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

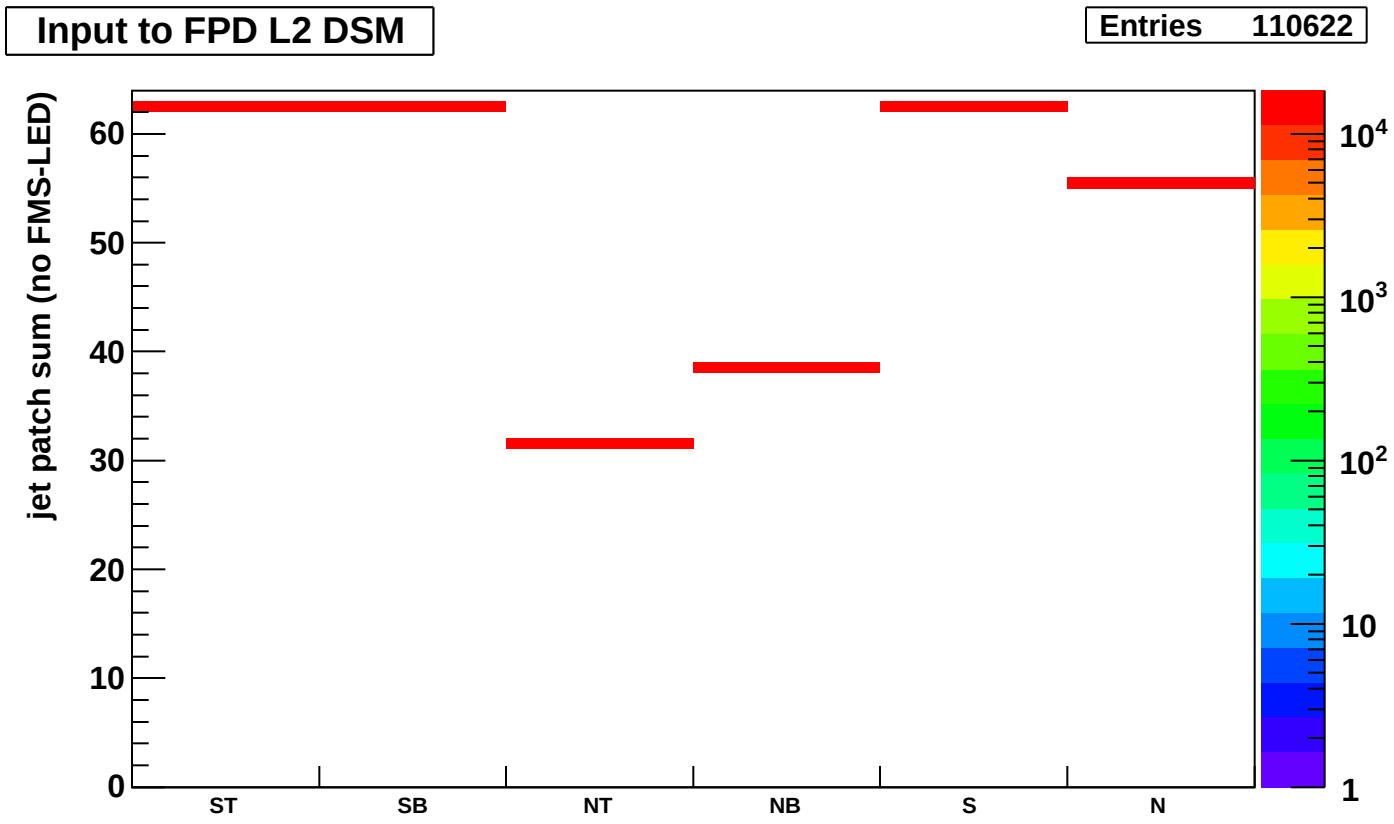

Input to FPD L2 DSM
Entries 202807
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

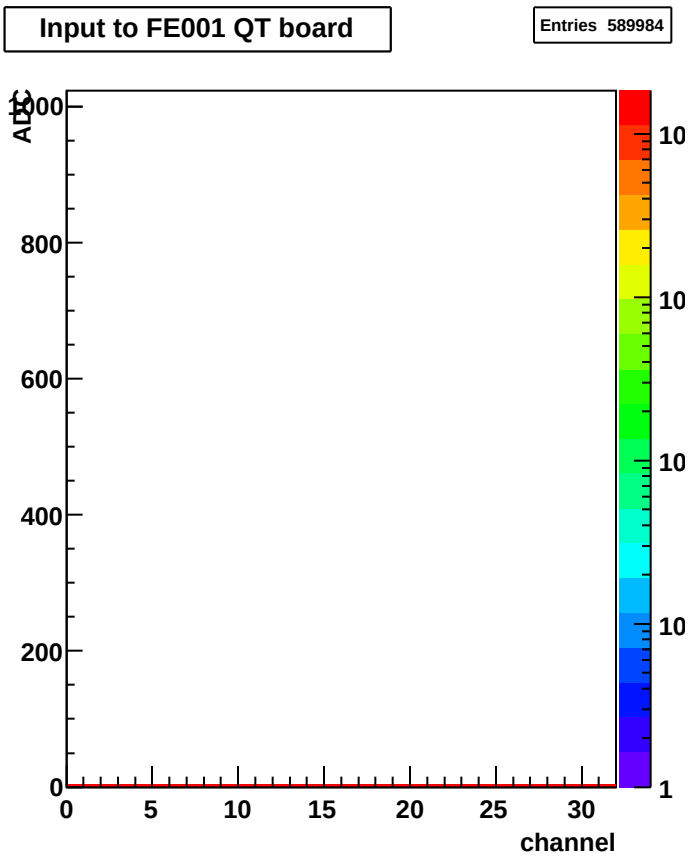

Input to FPD L2 DSM
Entries 55311
CL bits
18437
18437
18437
SMALL
LARGE-S
LARGE-N

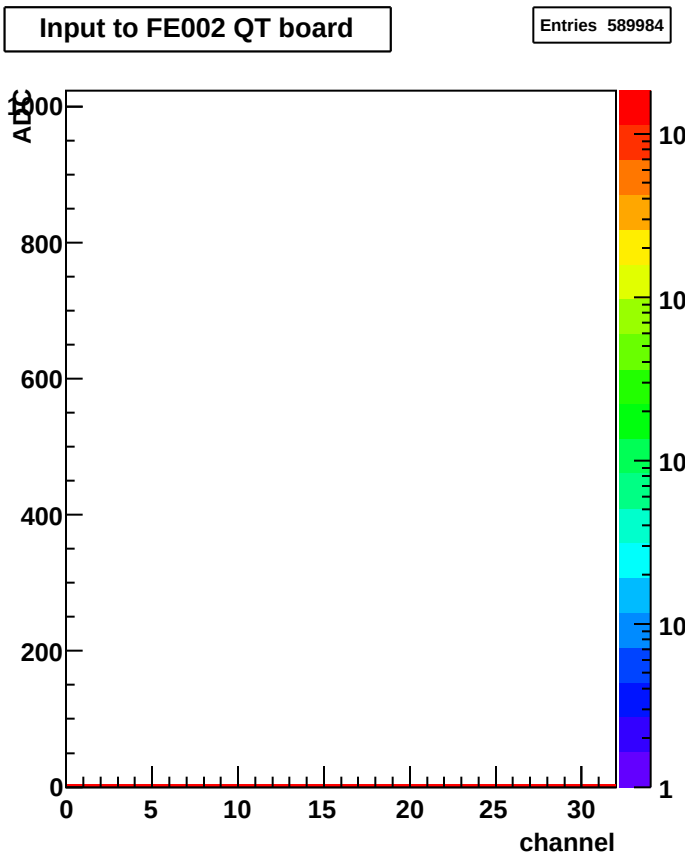

Input to FPD L2 DSM
Entries 55311
CL bits - simulated
18437
18437
18437
SMALL
LARGE-S
LARGE-N

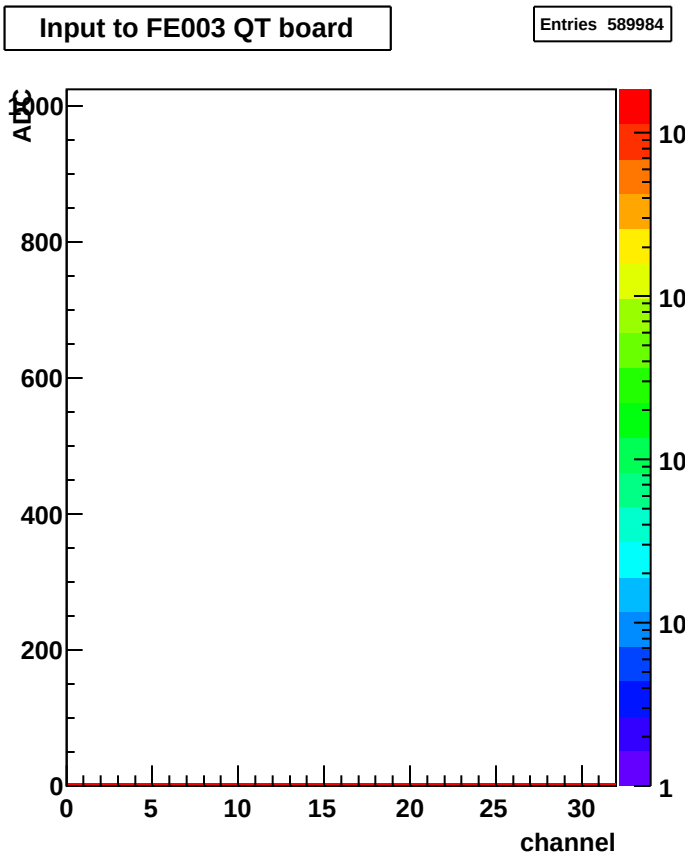

Input to FPD L2 DSM
Entries 55311
HT bits
18437
18437
18437
SMALL
LARGE-S
LARGE-N

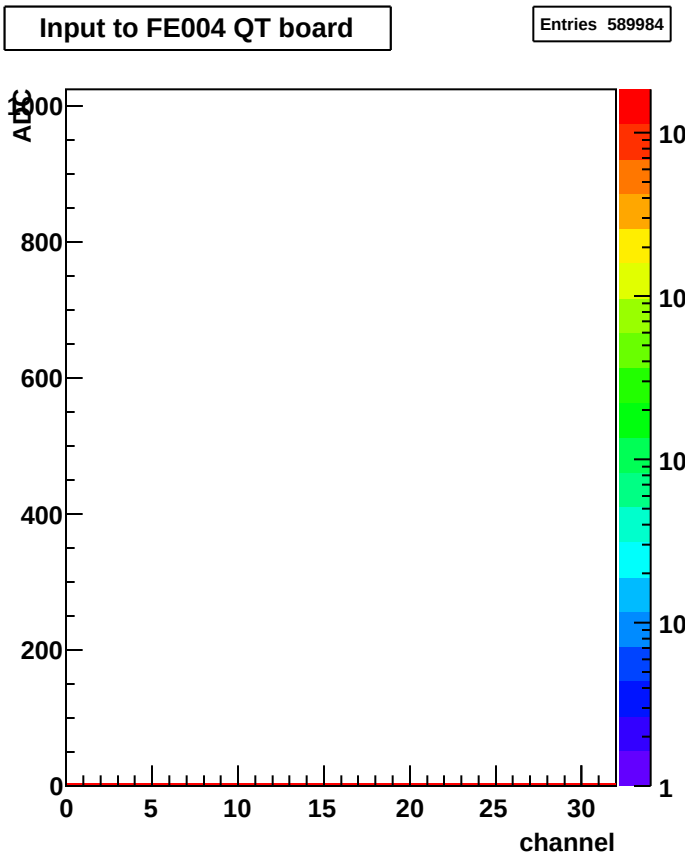

Input to FPD L2 DSM
Entries 55311
HT bits - simulated
18437
18437
18437
SMALL
LARGE-S
LARGE-N

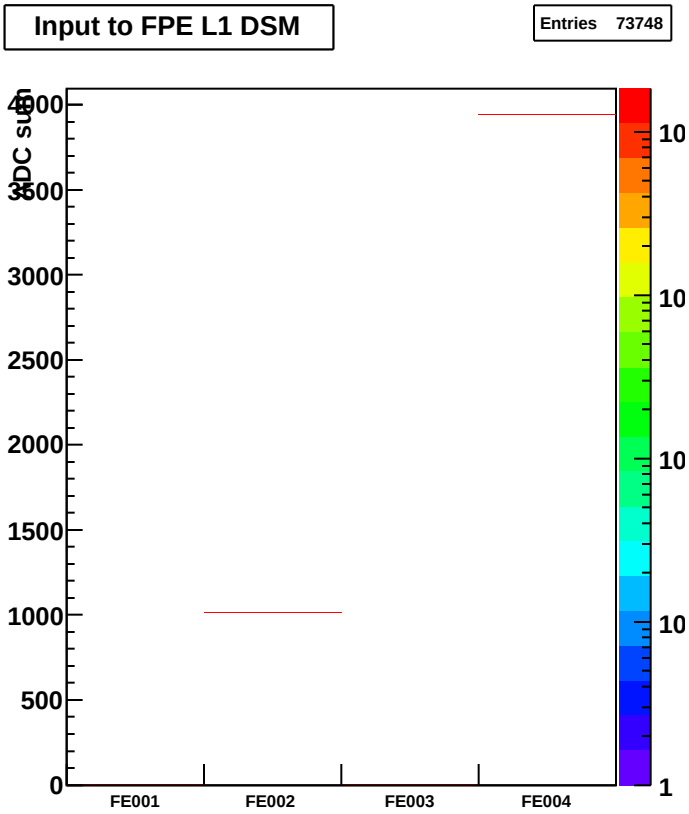

Input to FPD L2 DSM
Entries 110622
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

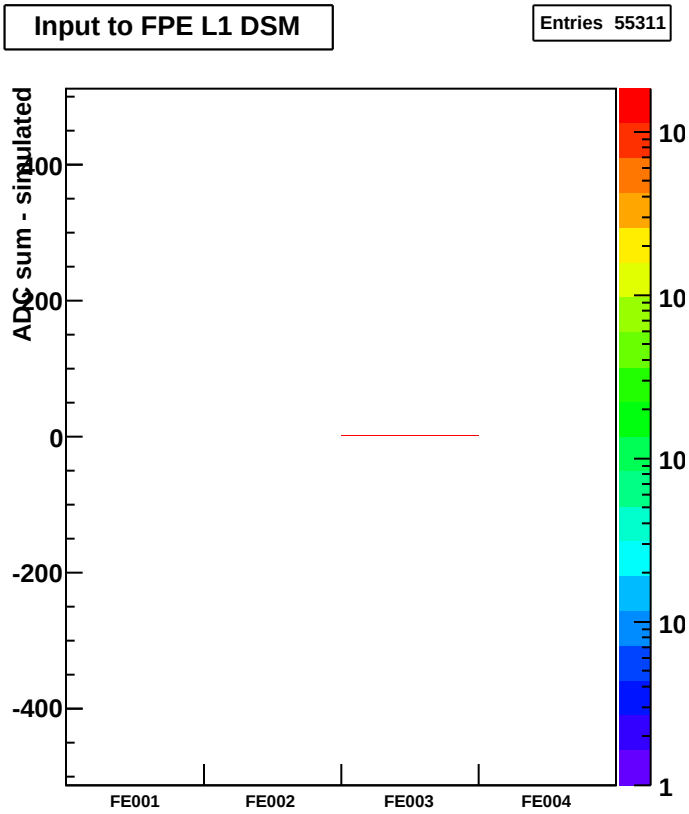

Input to FE001 QT board
Entries 589984
ADC
channel

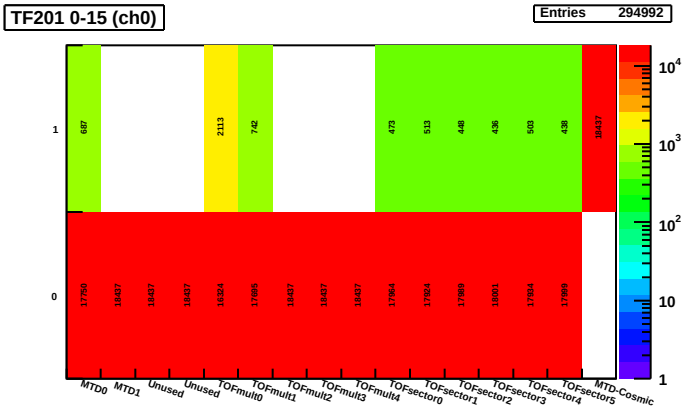

Input to FE002 QT board
Entries 589984
ADC
channel

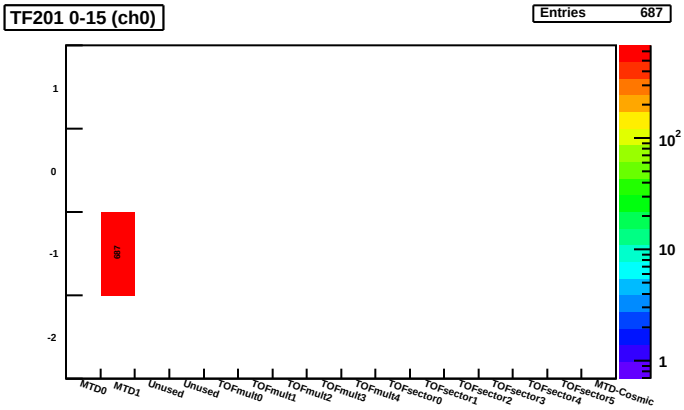

Input to FE003 QT board
Entries 589984
ADC
channel

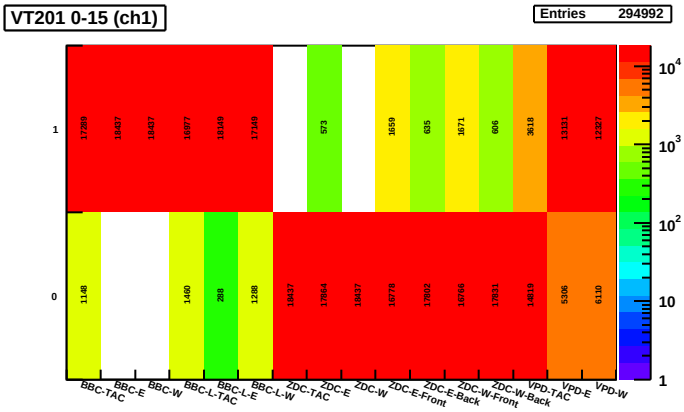

Input to FE004 QT board
Entries 589984
ADC
channel

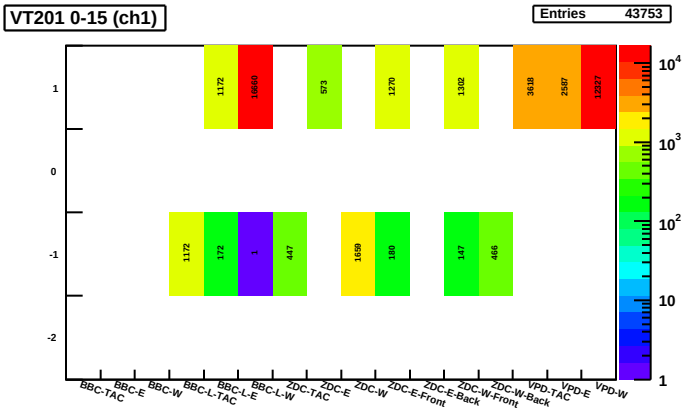

Input to FPE L1 DSM
Entries 73748
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1

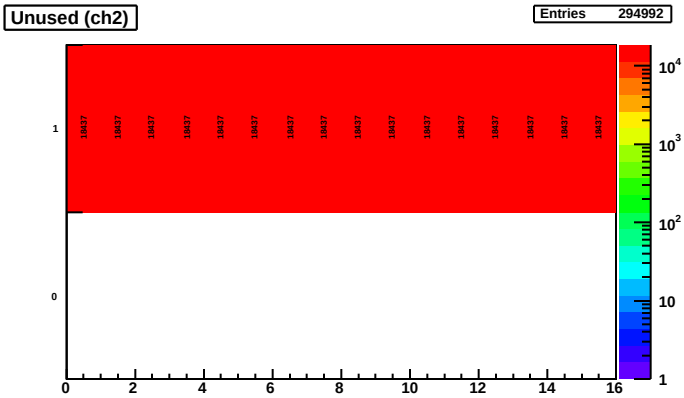

Input to FPE L1 DSM
Entries 55311
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1

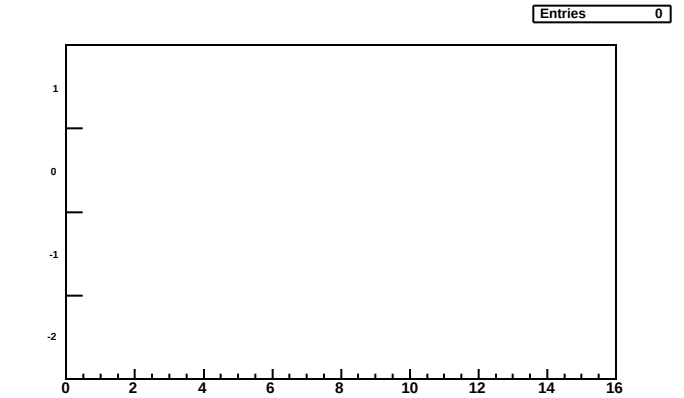

TF201 0-15 (ch0)
Entries 294992
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

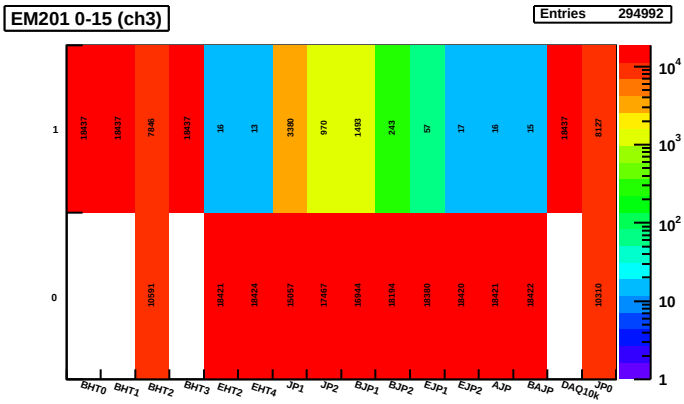

TF201 0-15 (ch0)
Entries 687
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

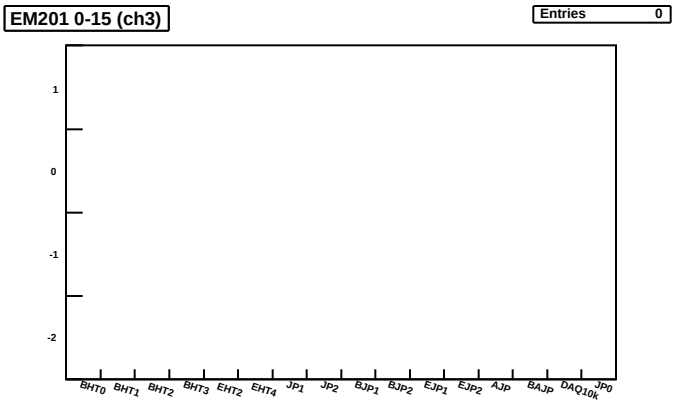

VT201 0-15 (ch1)
Entries 294992
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 43753
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

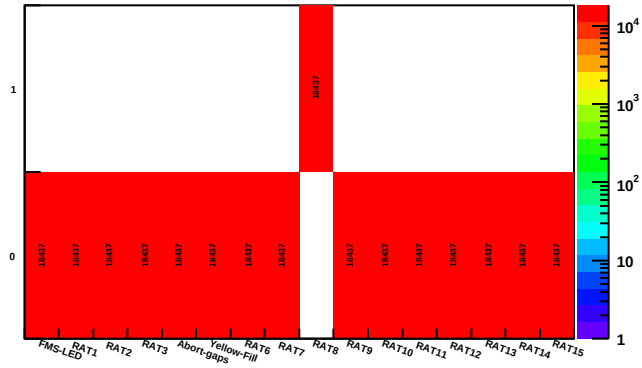

Unused (ch2)
Entries 294992

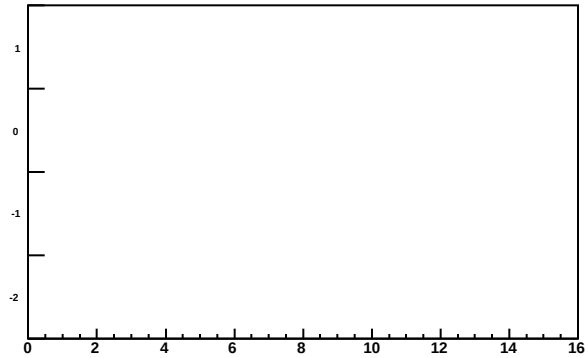

Entries 0


EM201 0-15 (ch3)
Entries 294992
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

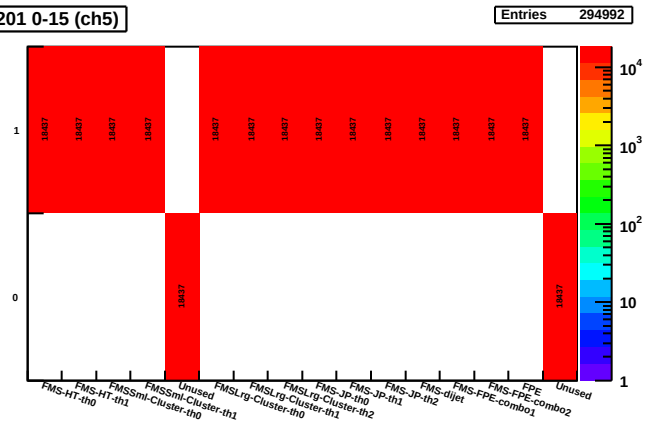

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

RAT board (ch4)





FP201 0-15 (ch5)



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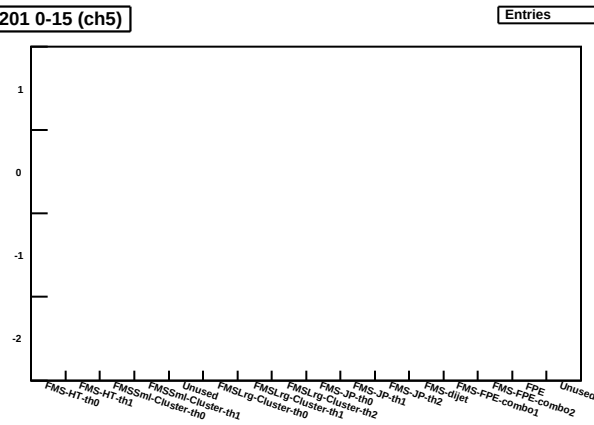
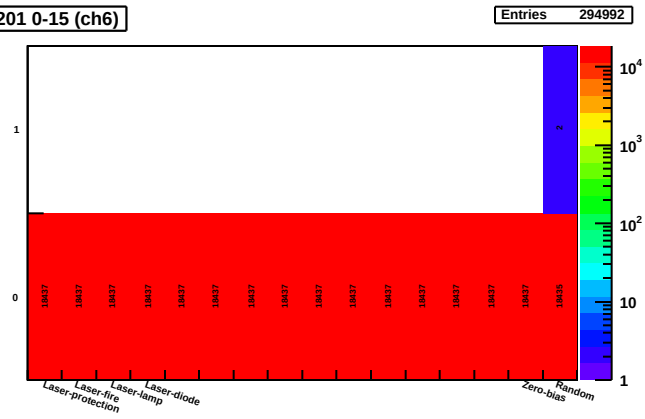
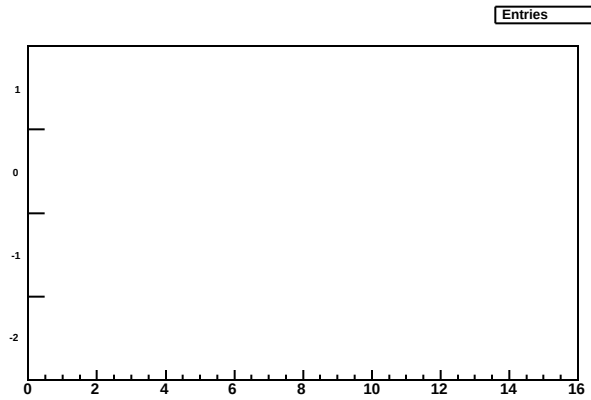
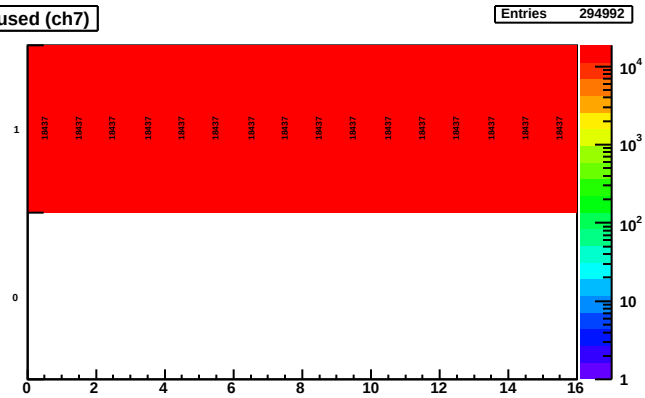
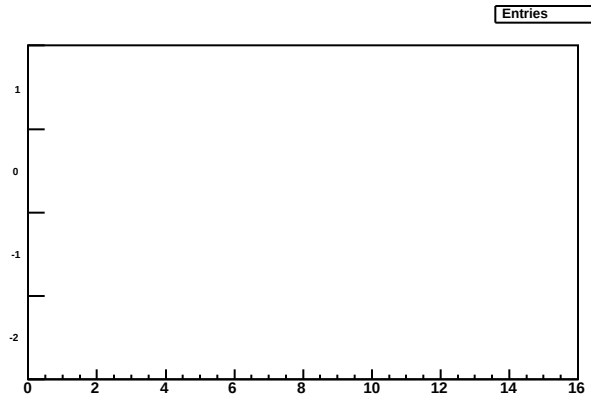


ST201 0-15 (ch6)





Unused (ch7)