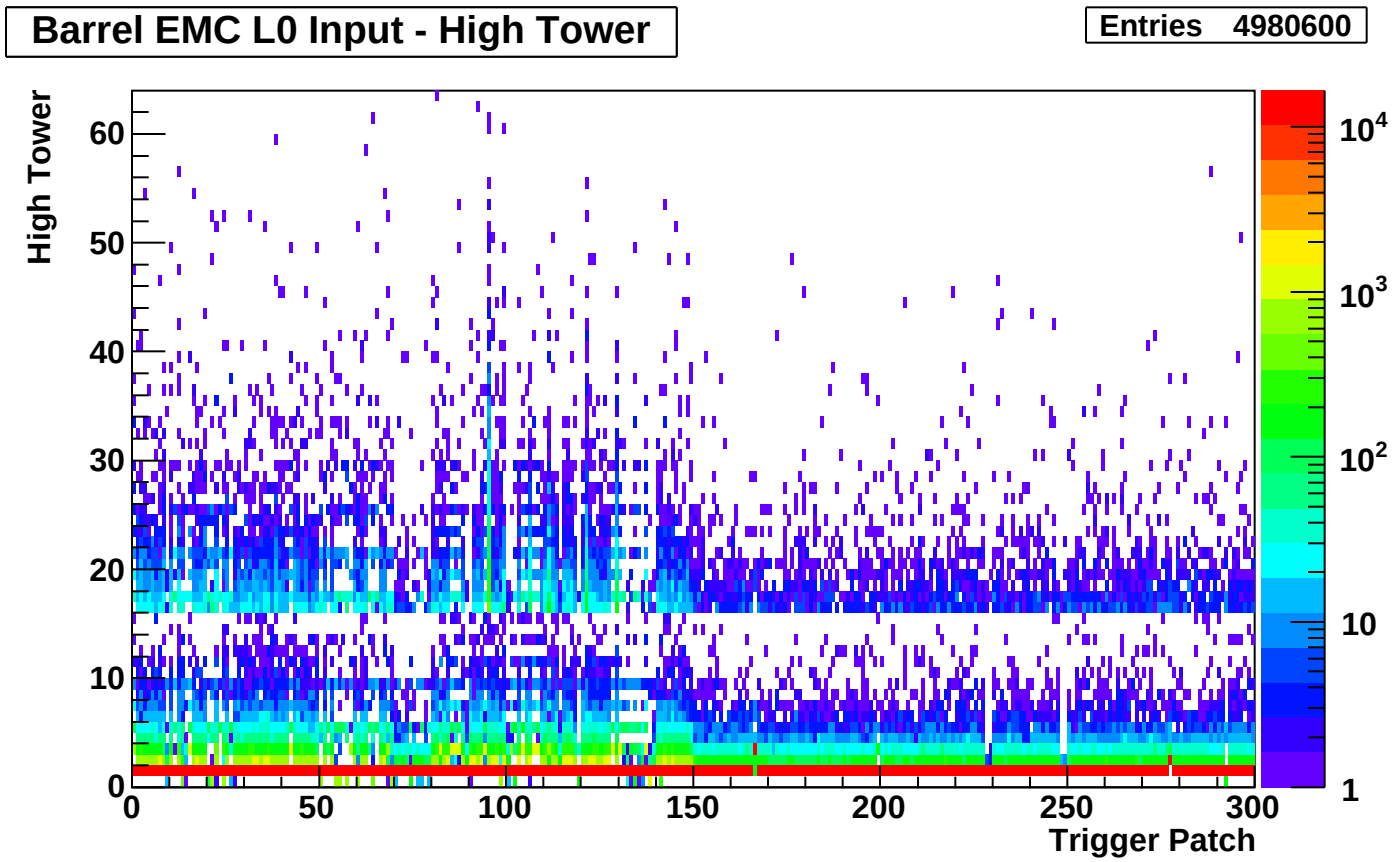
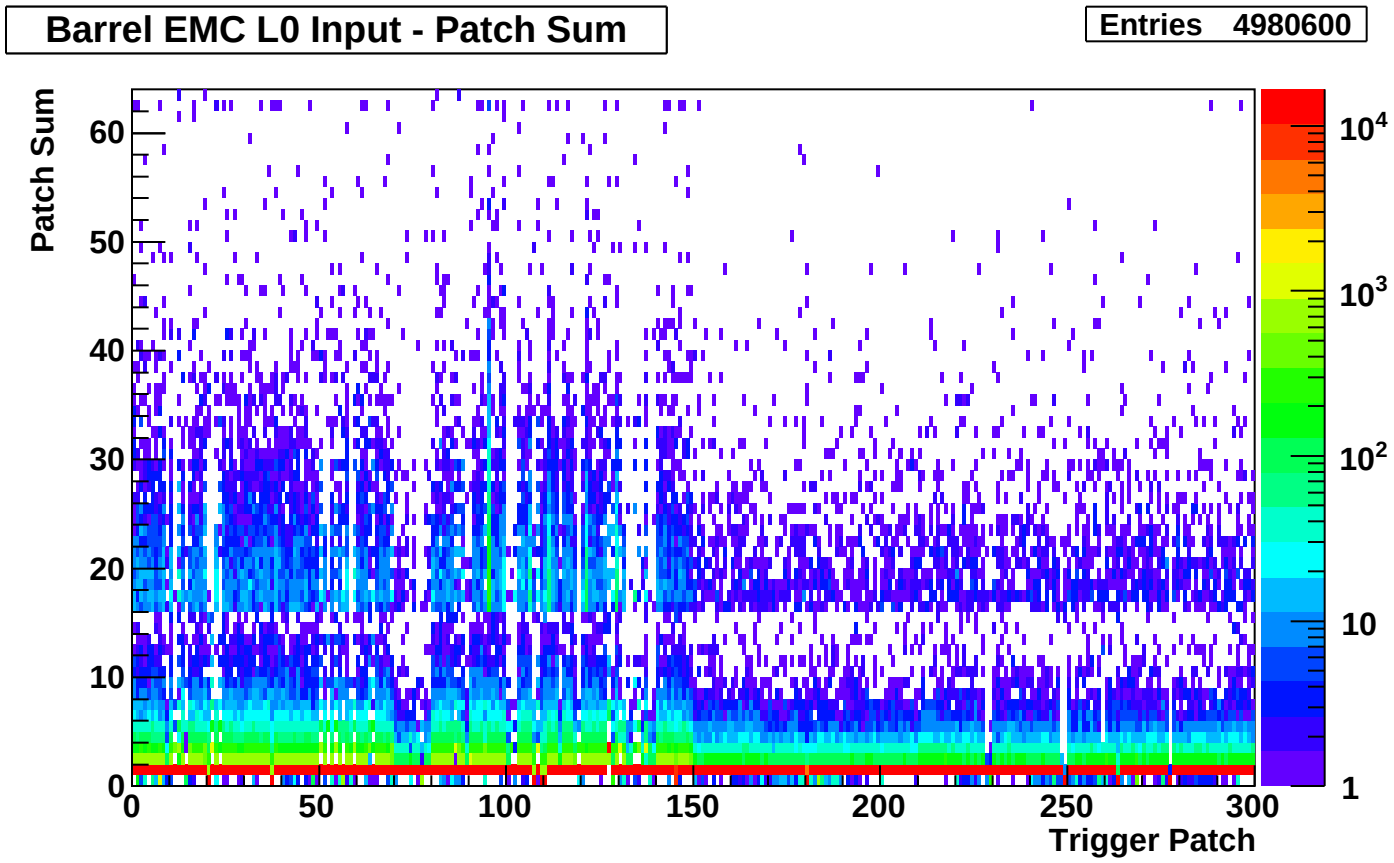
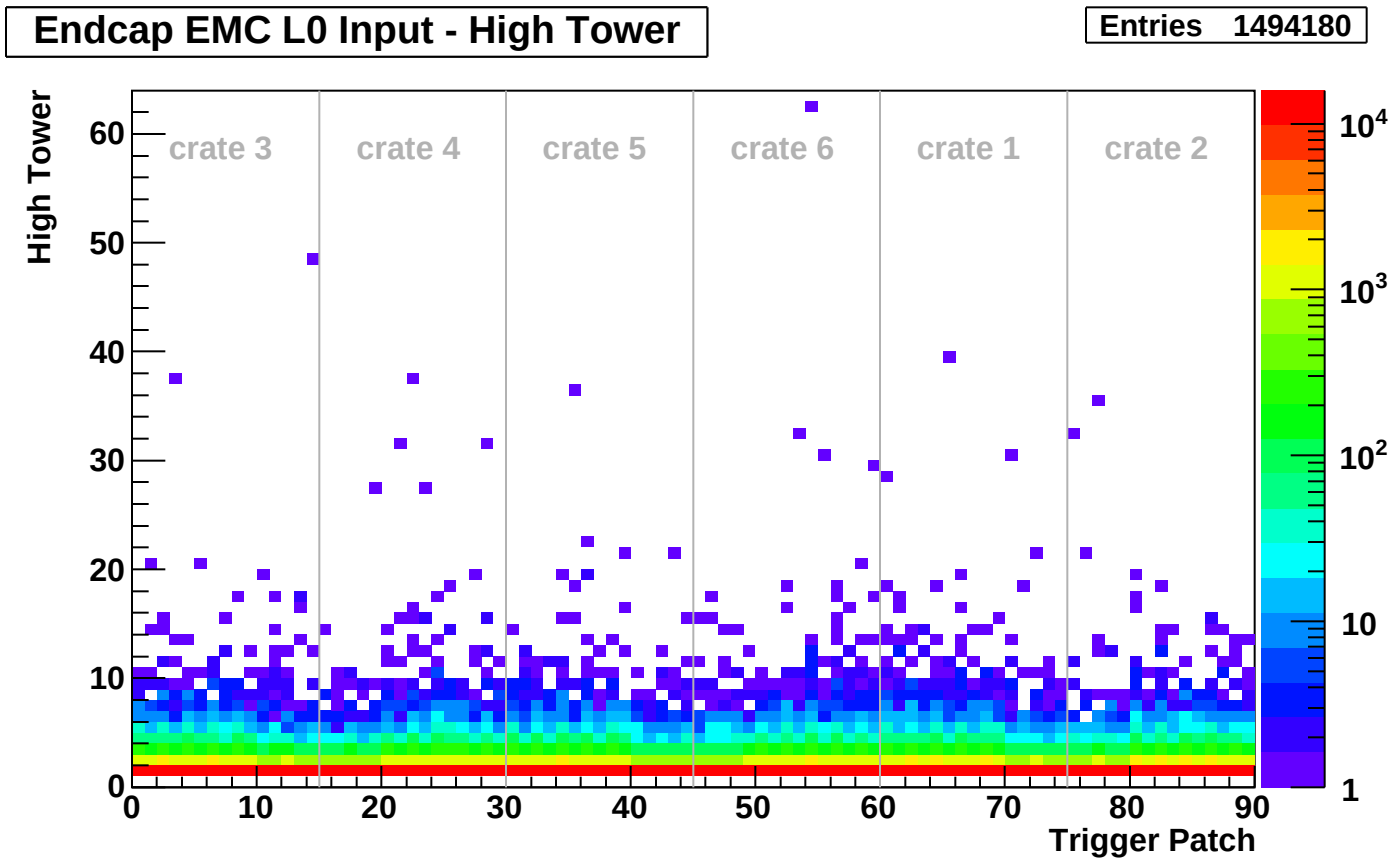
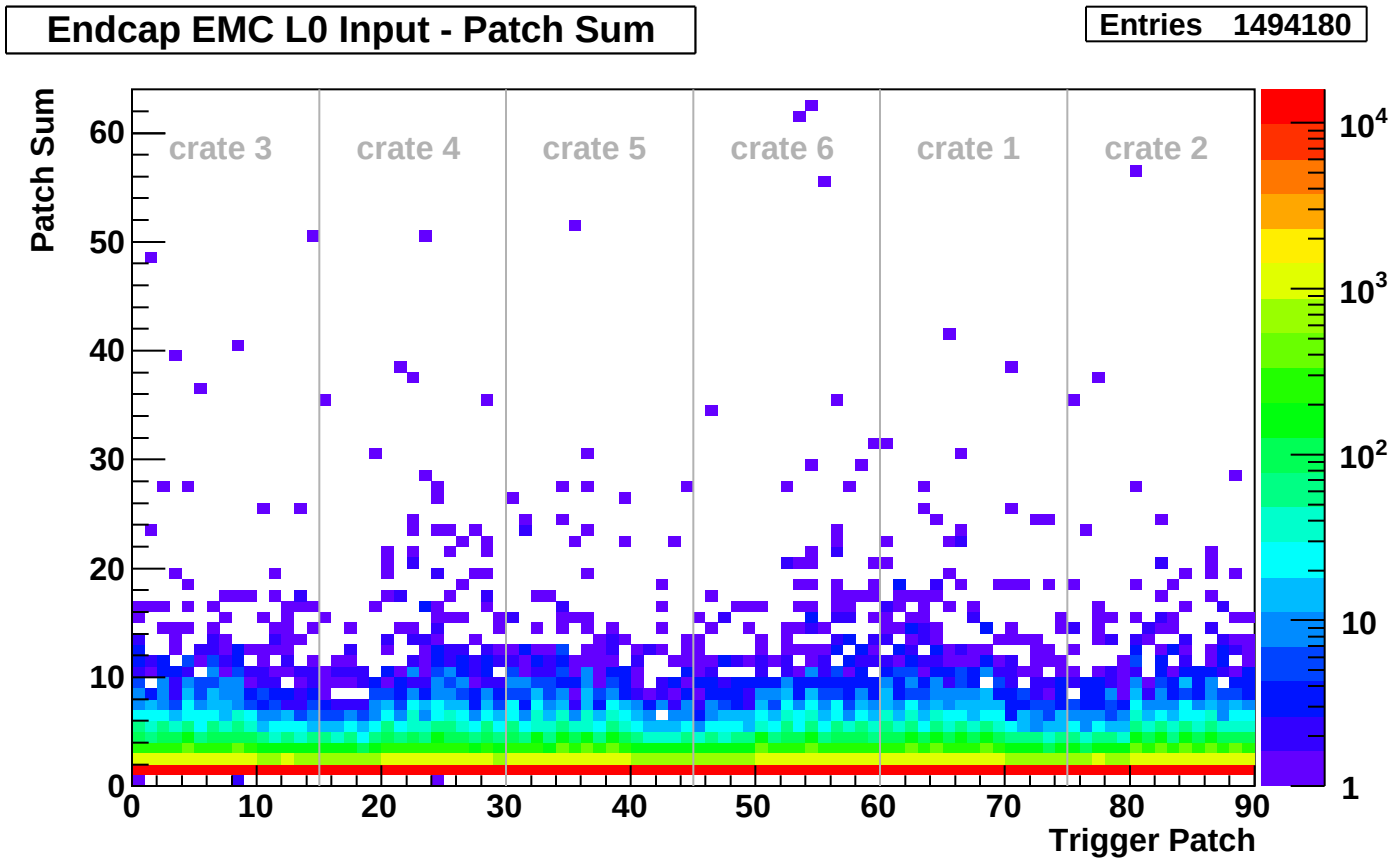
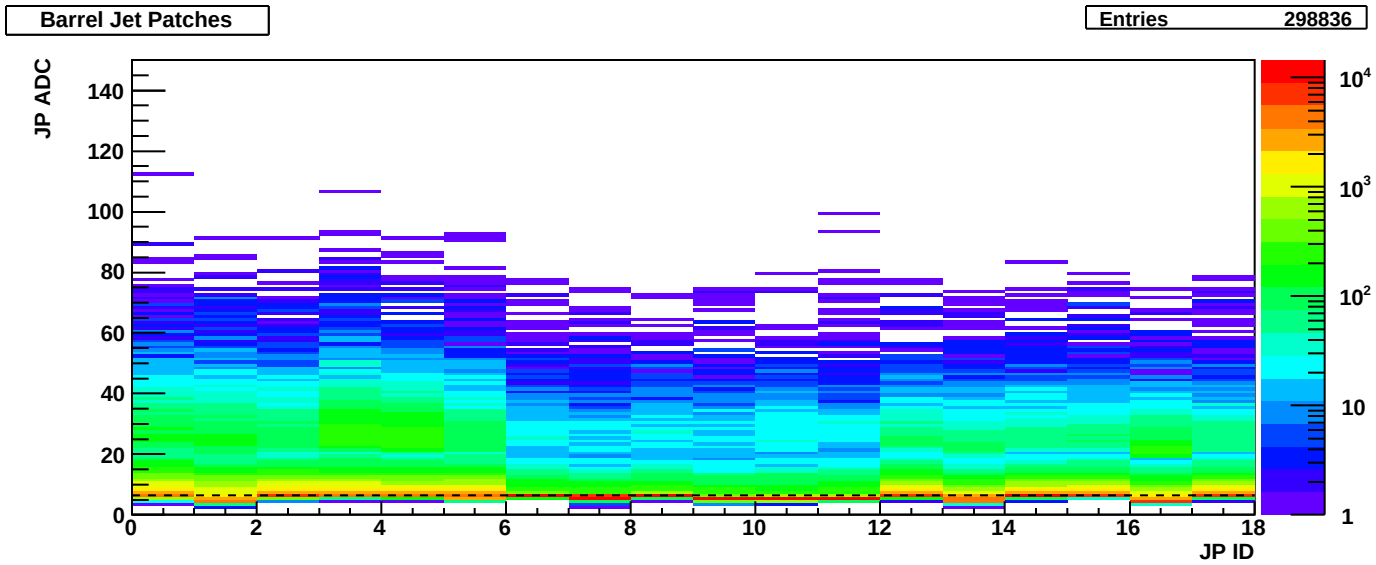
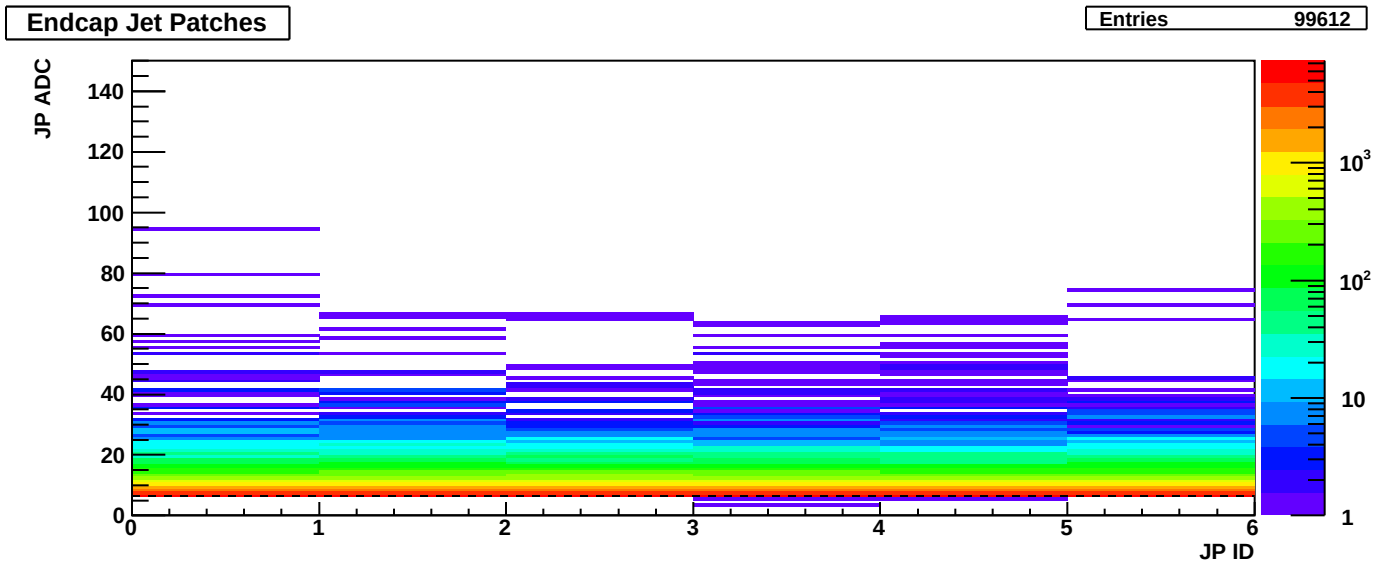

Barrel EMC L0 Input - High Tower
Entries 4980600
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

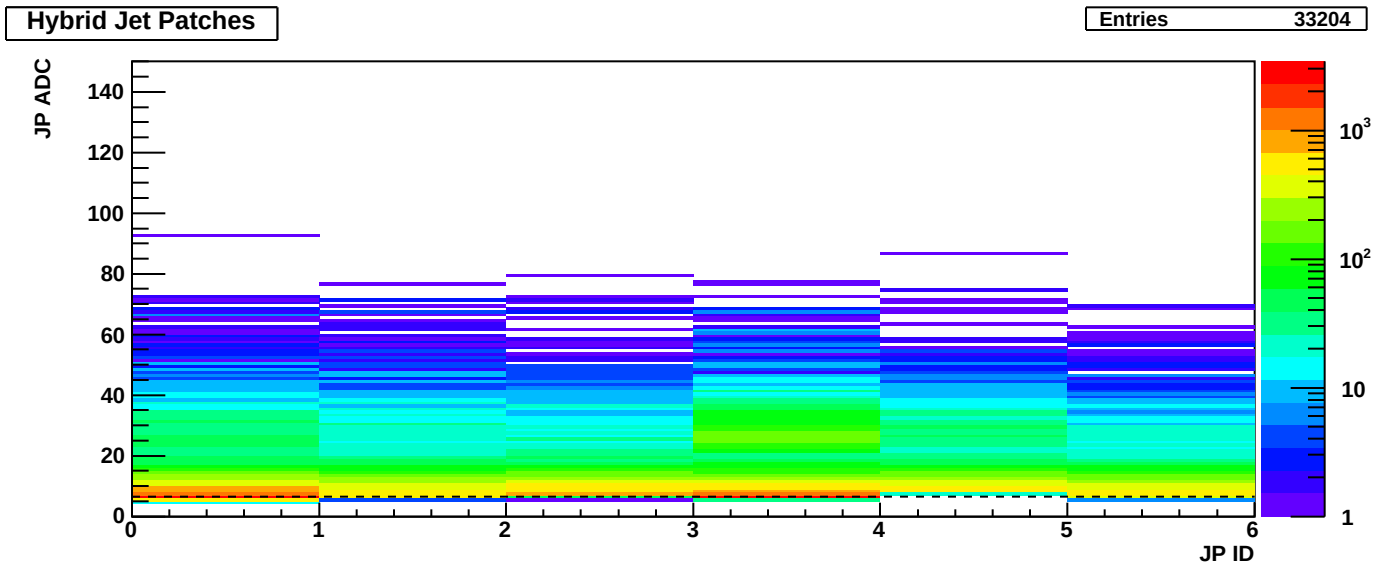

Barrel EMC L0 Input - Patch Sum
Entries 4980600
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

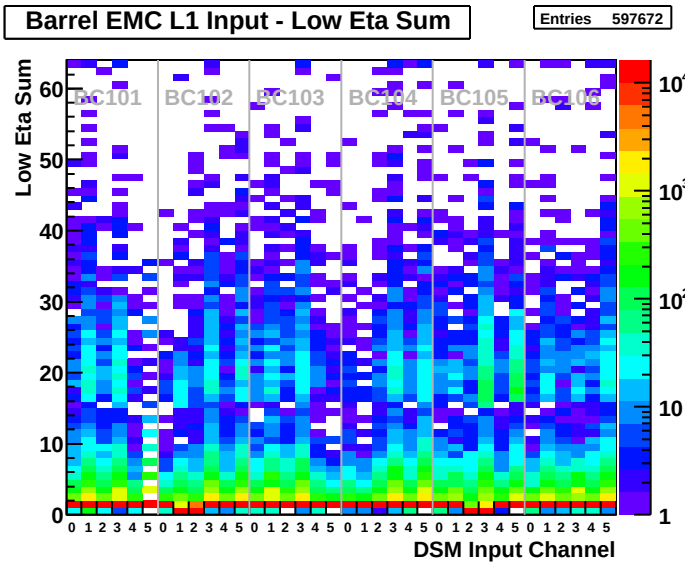

Endcap EMC L0 Input - High Tower
Entries 1494180
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

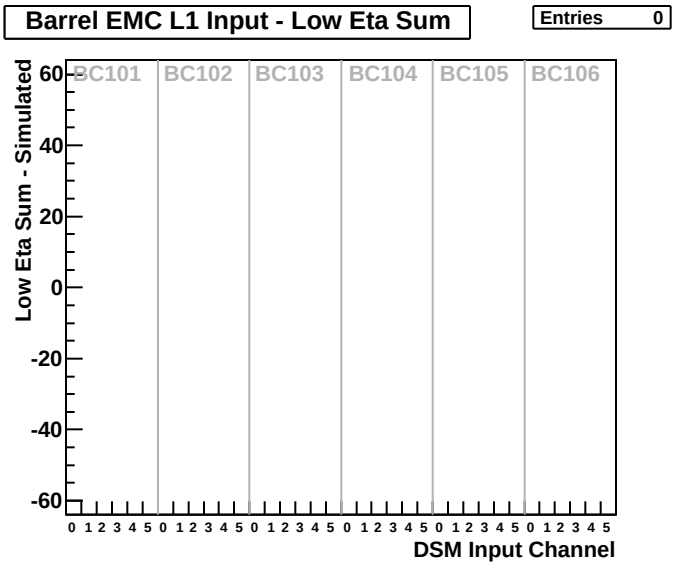

Endcap EMC L0 Input - Patch Sum
Entries 1494180
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

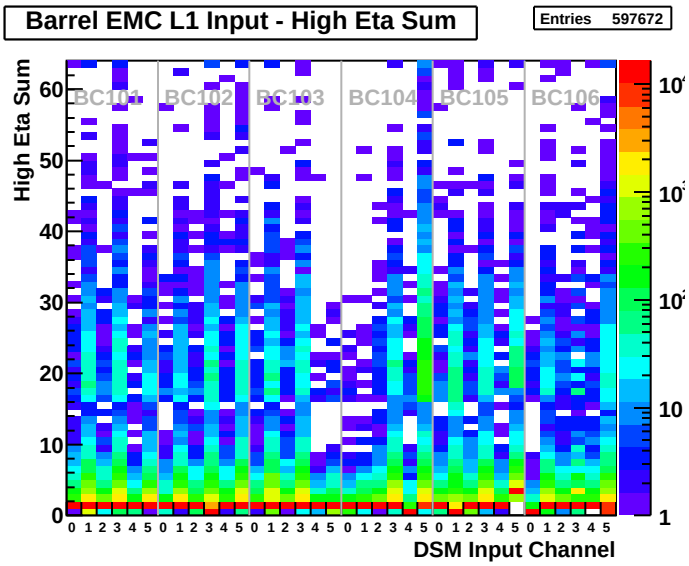

Barrel Jet Patches
Entries 298836
JP ADC
JP ID

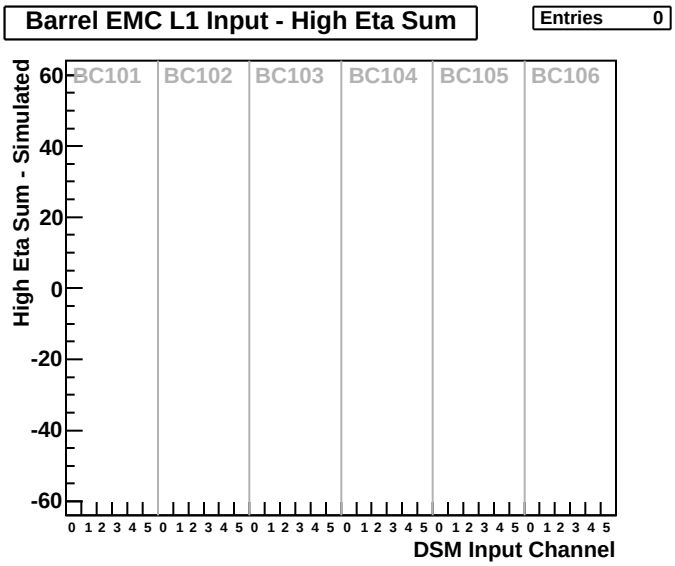

Endcap Jet Patches
Entries 99612
JP ADC
JP ID

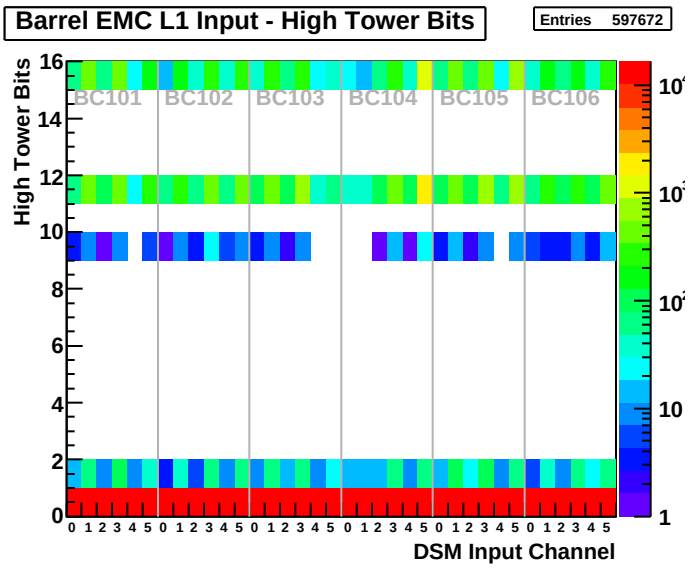

Hybrid Jet Patches
Entries 33204
JP ADC
JP ID

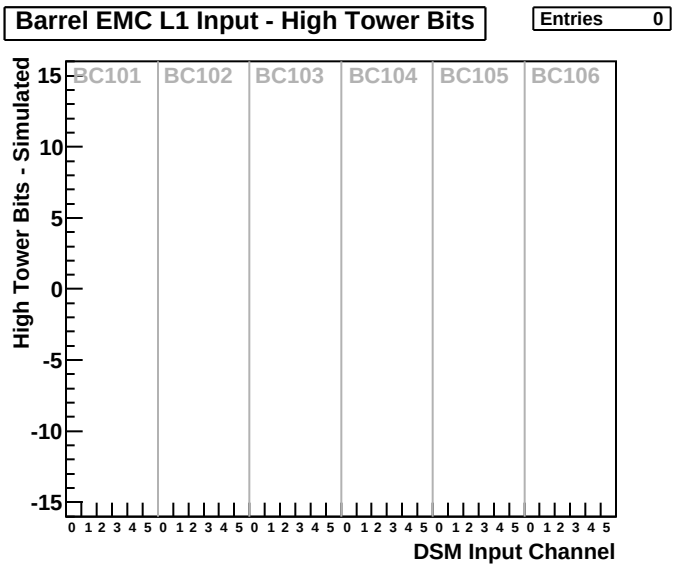

Barrel EMC L1 Input - Low Eta Sum
Entries 597672
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

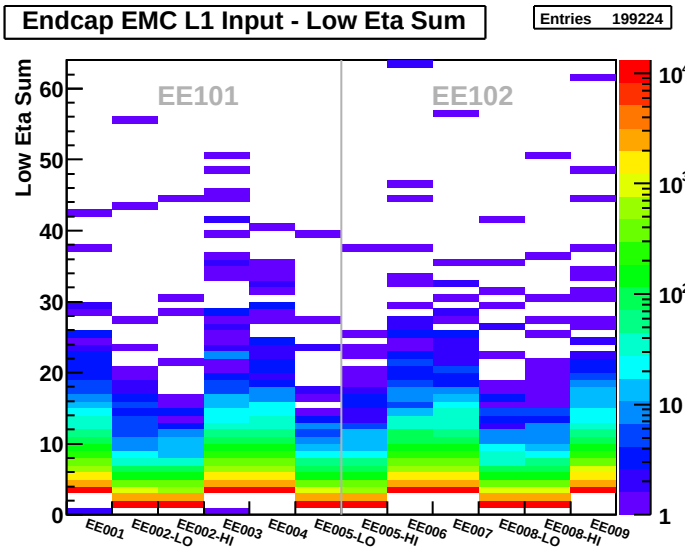

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

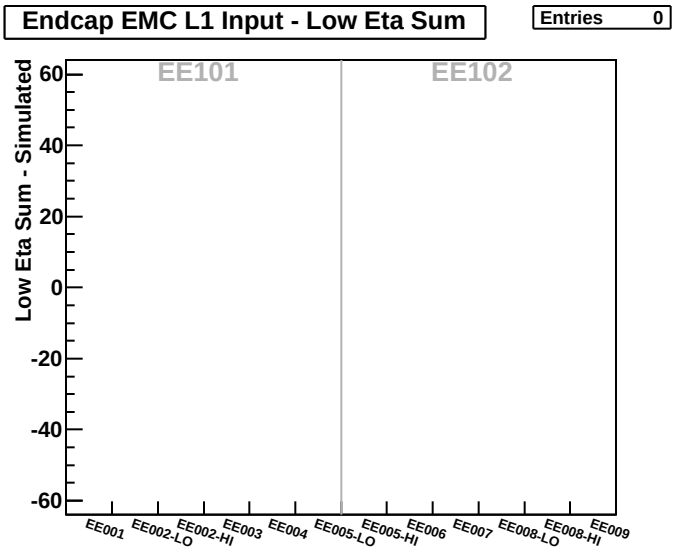

Barrel EMC L1 Input - High Eta Sum
Entries 597672
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

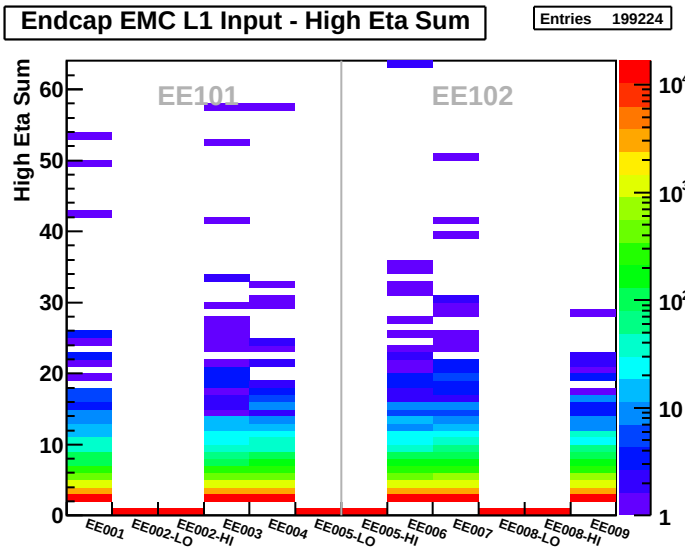

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

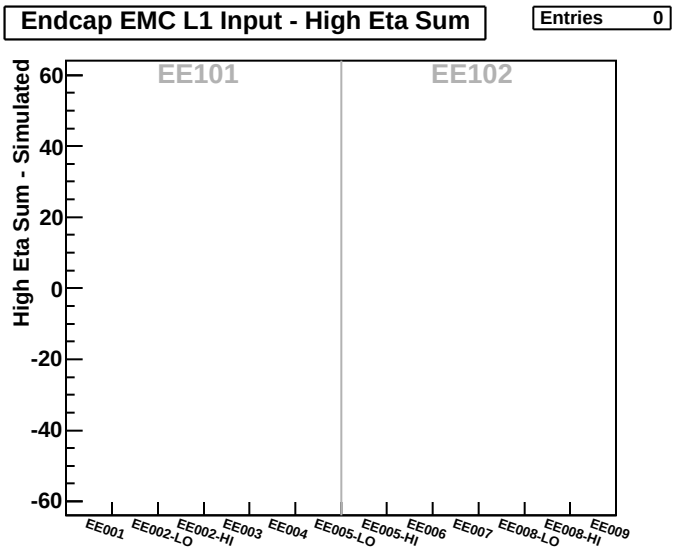

Barrel EMC L1 Input - High Tower Bits
Entries 597672
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

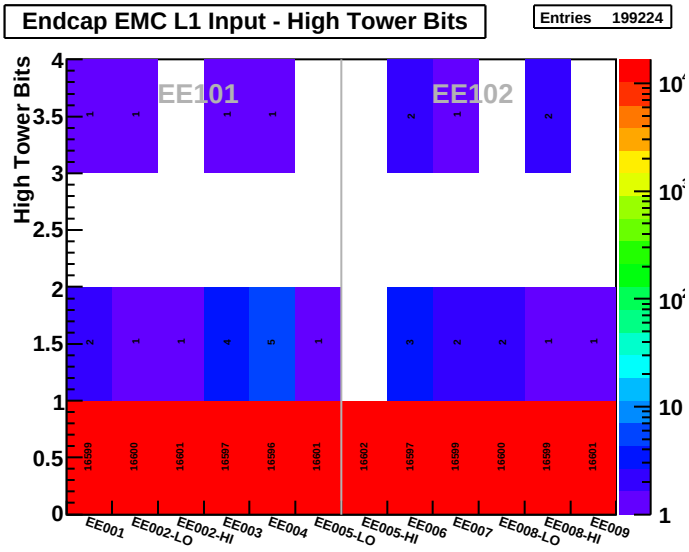

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

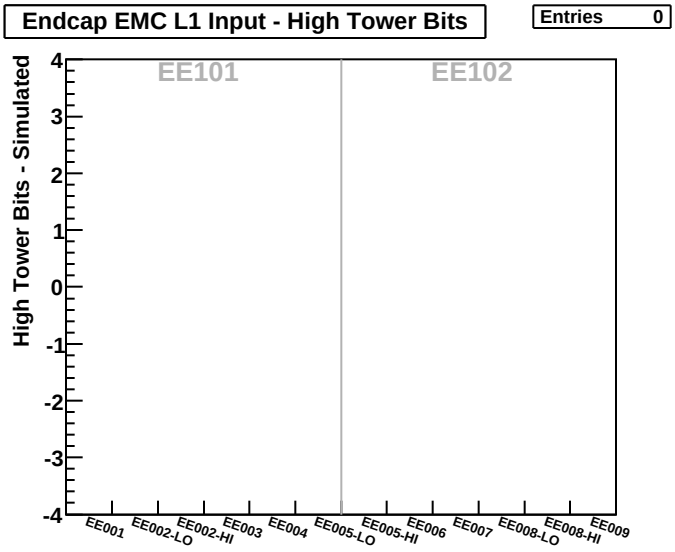

Endcap EMC L1 Input - Low Eta Sum
Entries 199224
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

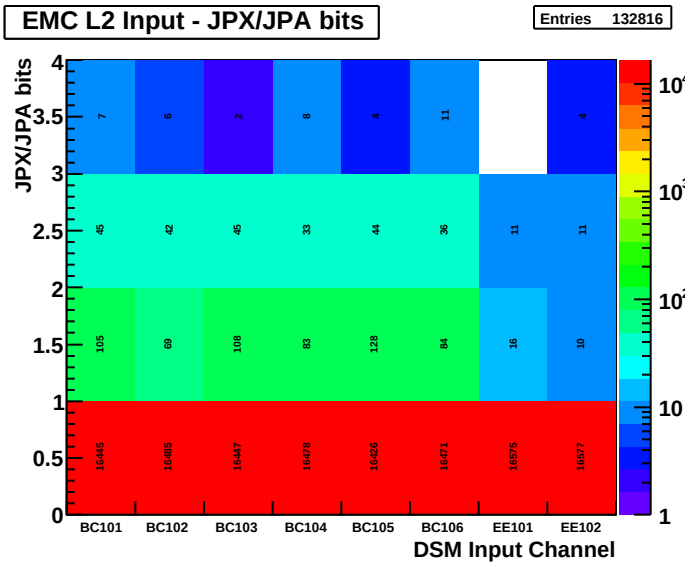

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

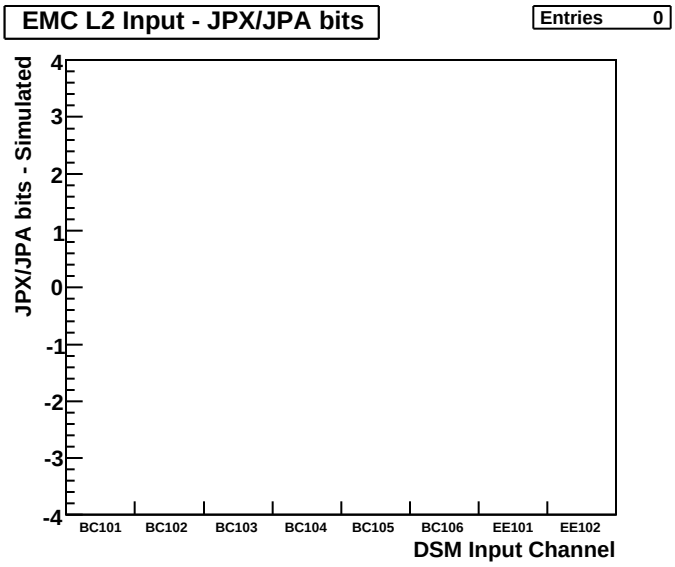

Endcap EMC L1 Input - High Eta Sum
Entries 199224
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

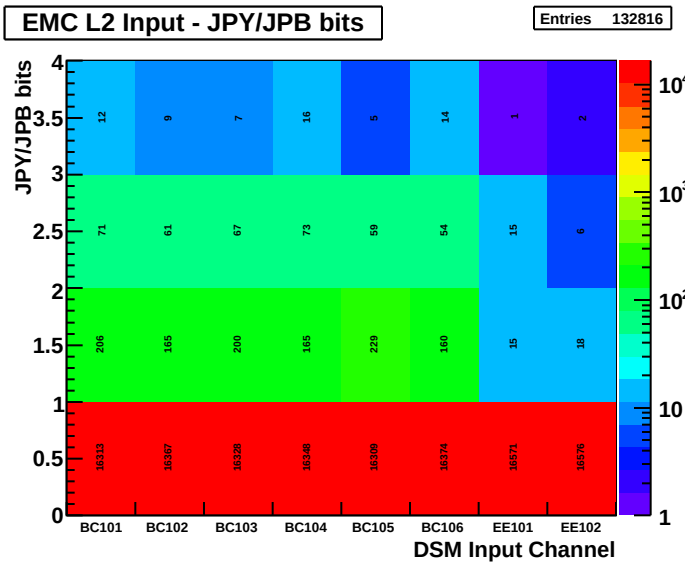

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

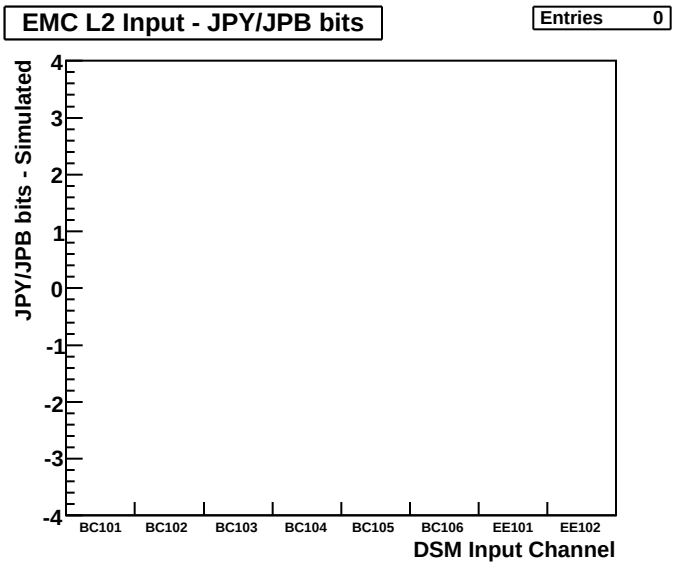

Endcap EMC L1 Input - High Tower Bits
Entries 199224
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

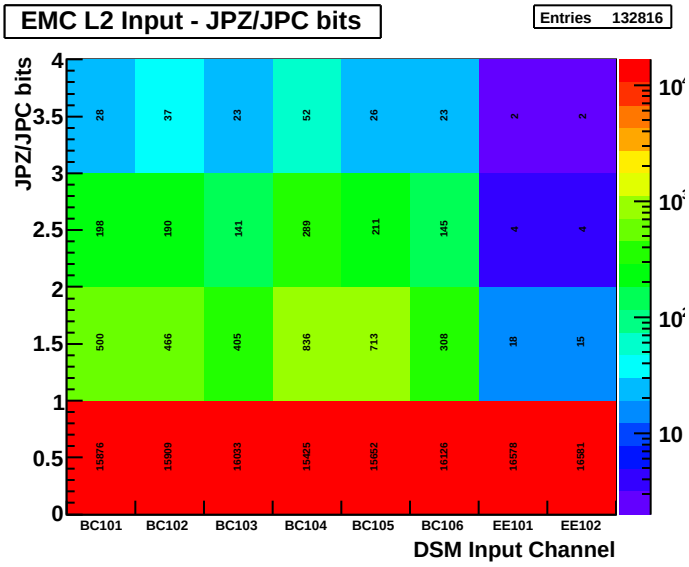

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

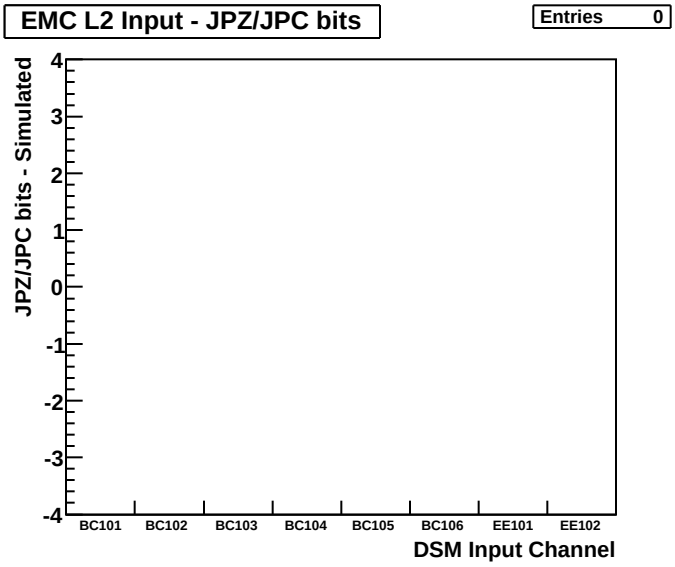

EMC L2 Input - JPX/JPA bits
Entries 132816
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
7 6 2 8 4 11 4
45 42 45 33 44 36 11 11
105 69 108 83 128 84 16 10
16445 16485 16447 16478 16426 16471 16575 16577

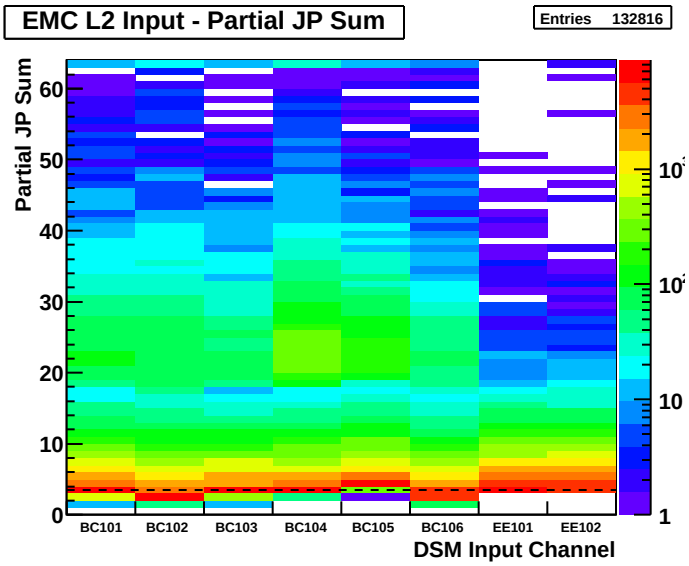

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

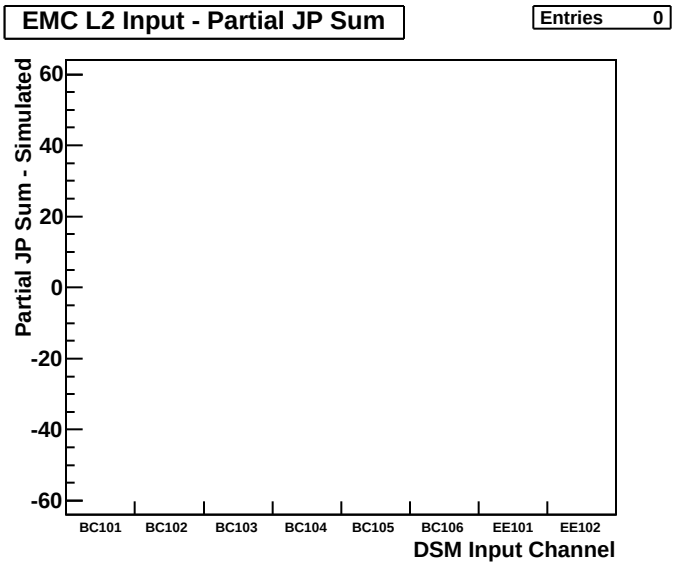

EMC L2 Input - JPY/JPB bits
Entries 132816
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
12 9 7 16 5 14 1 2
71 61 67 73 59 54 15 6
206 165 200 165 229 160 15 18
16313 16367 16328 16348 16309 16374 16571 16576

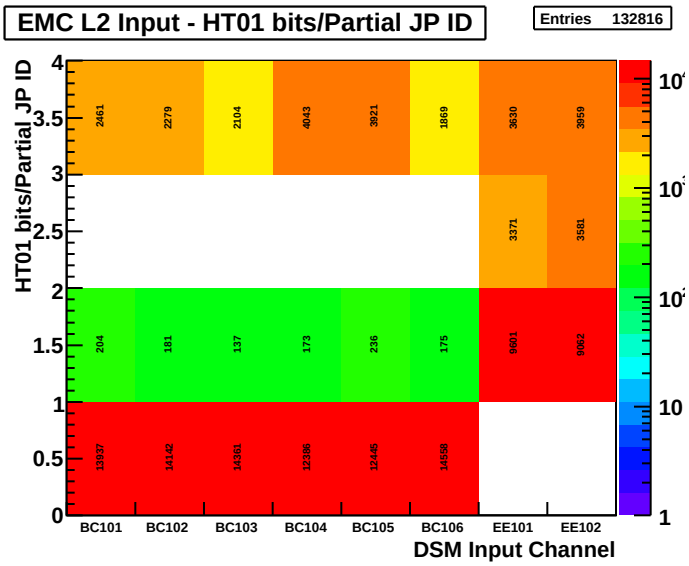

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

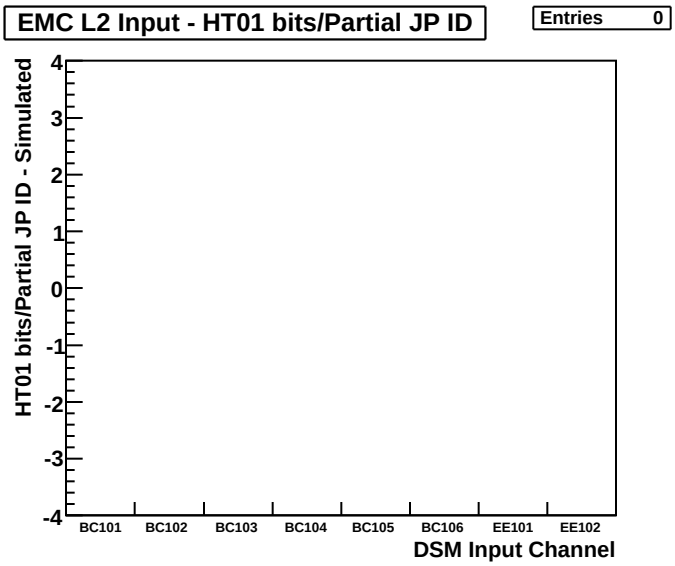

EMC L2 Input - JPZ/JPC bits
Entries 132816
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
28 37 23 52 26 23 2 2
198 190 141 289 211 145 4 4
500 466 405 836 713 308 18 15
15876 15909 16033 15425 15652 16126 16578 16581

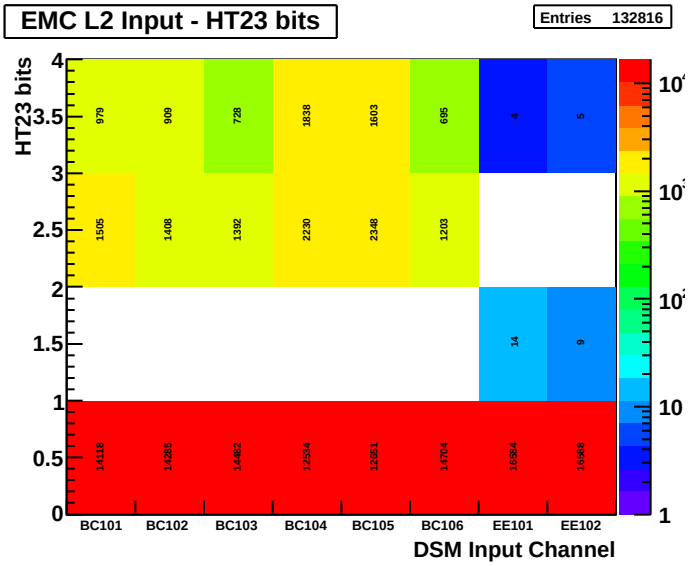

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

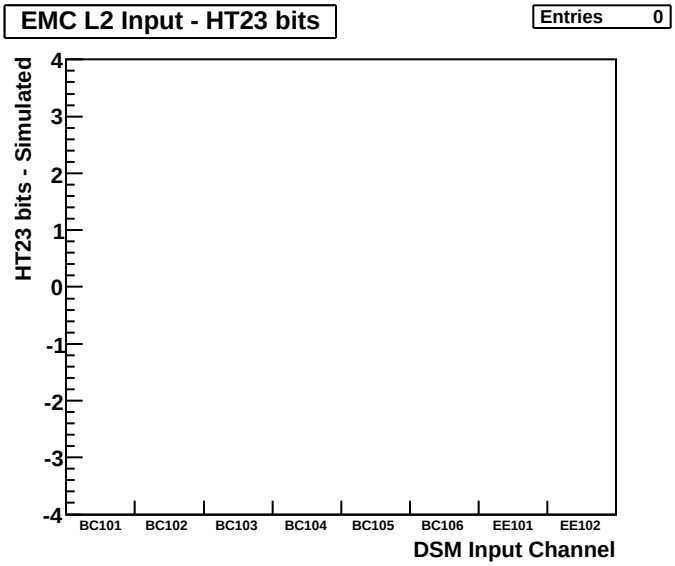

EMC L2 Input - Partial JP Sum
Entries 132816
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

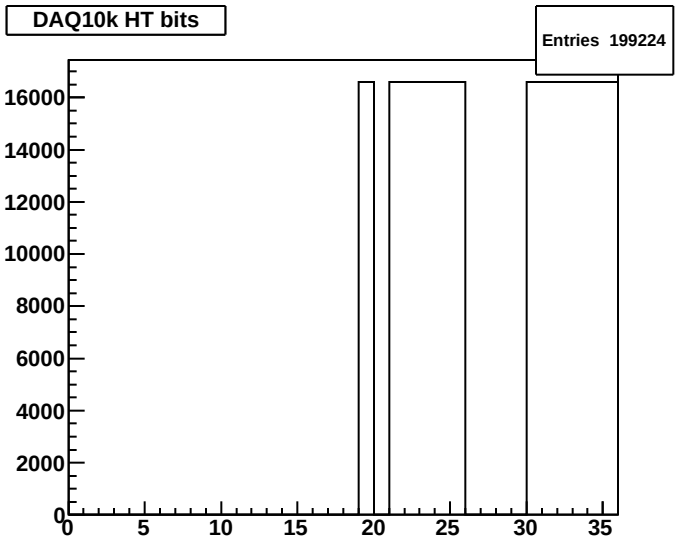

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

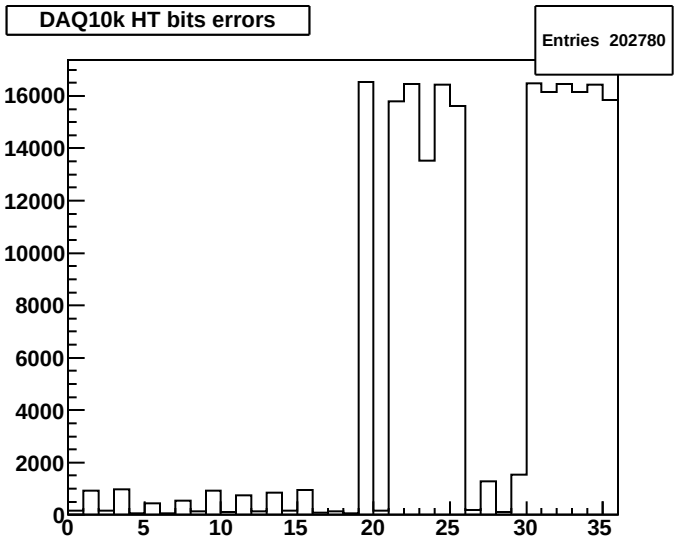

EMC L2 Input - HT01 bits/Partial JP ID
Entries 132816
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

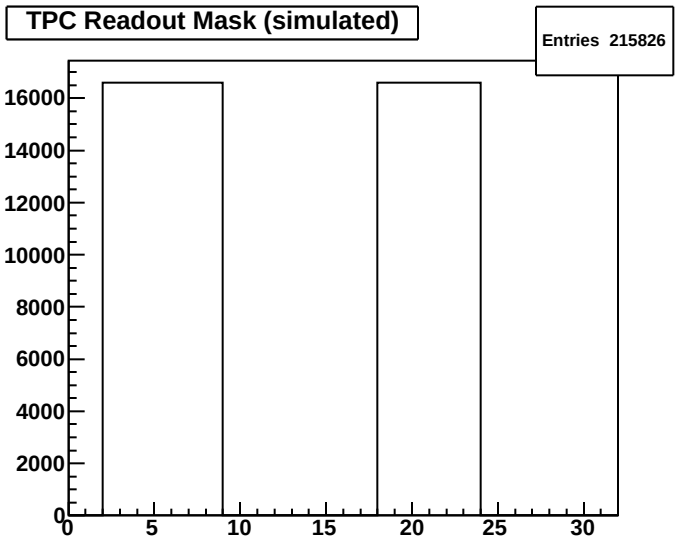

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

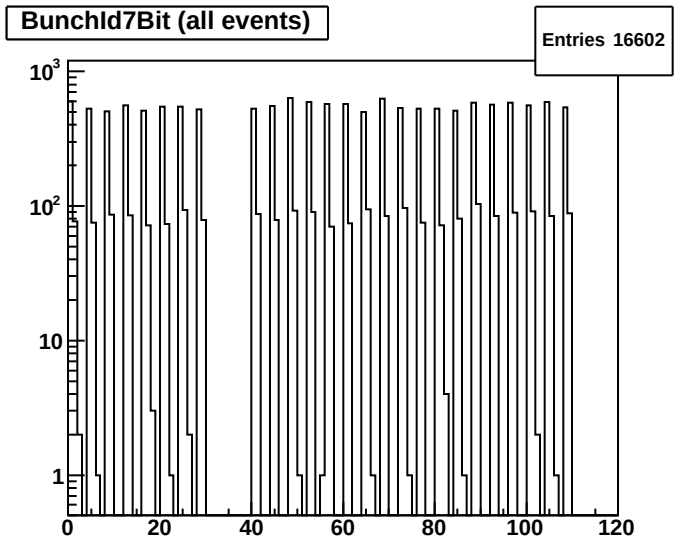

EMC L2 Input - HT23 bits
Entries 132816
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

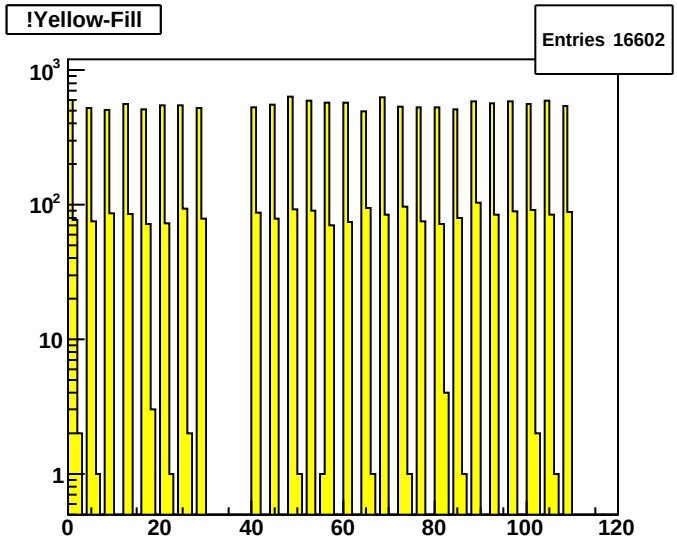

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

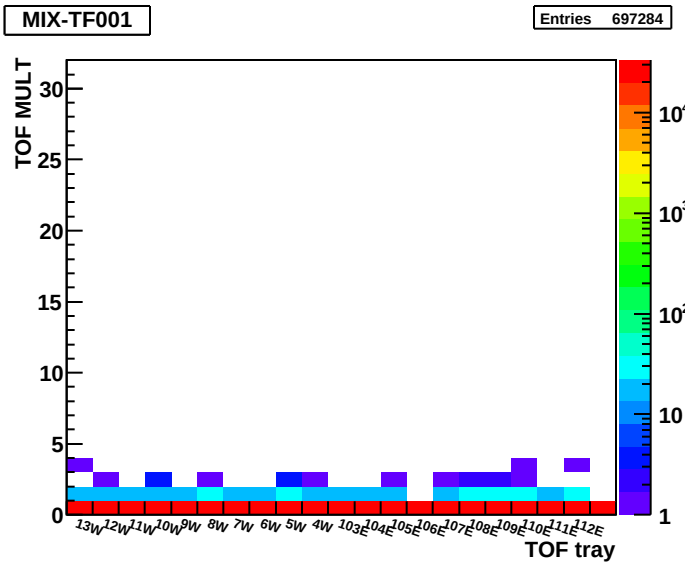

DAQ10k HT bits
Entries 199224
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

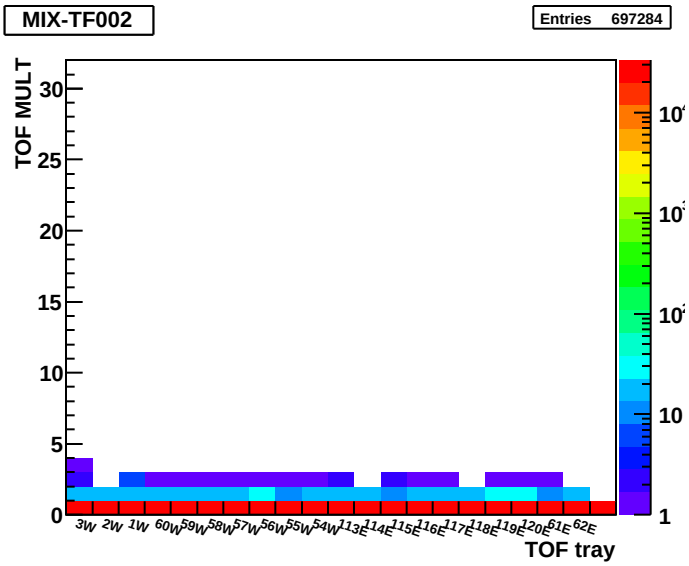

DAQ10k HT bits errors
Entries 202780
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

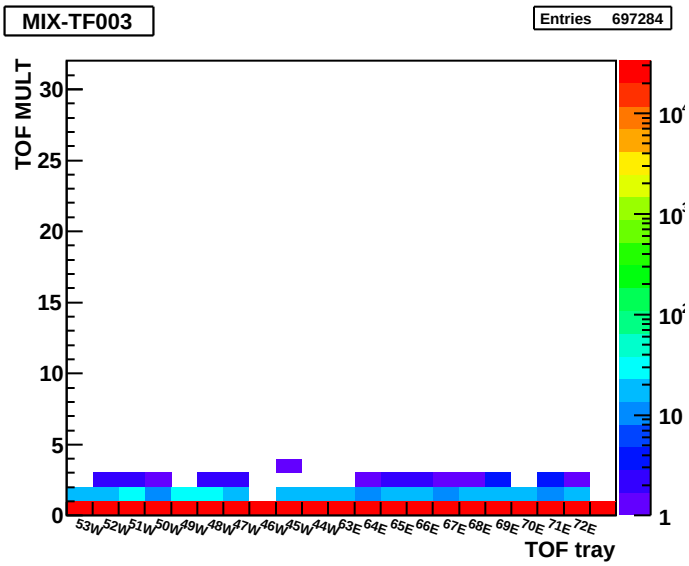

TPC Readout Mask (simulated)
Entries 215826
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30

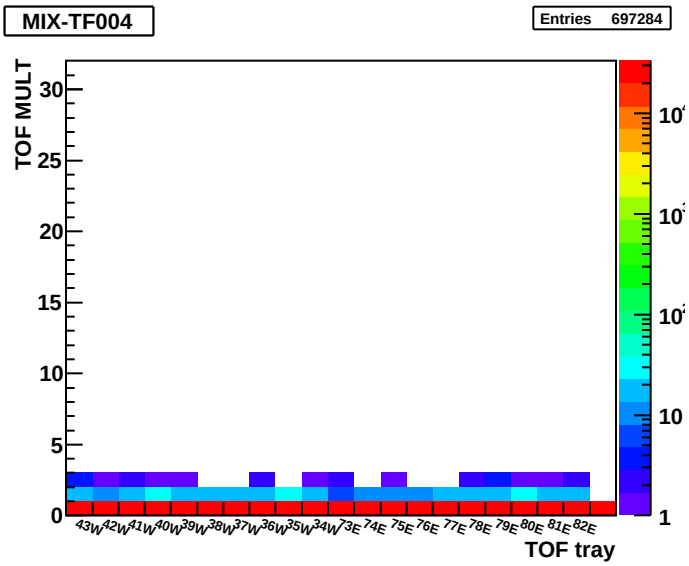

BunchId7Bit (all events)
Entries 16602
10^3
10^2
10
1
0 20 40 60 80 100 120

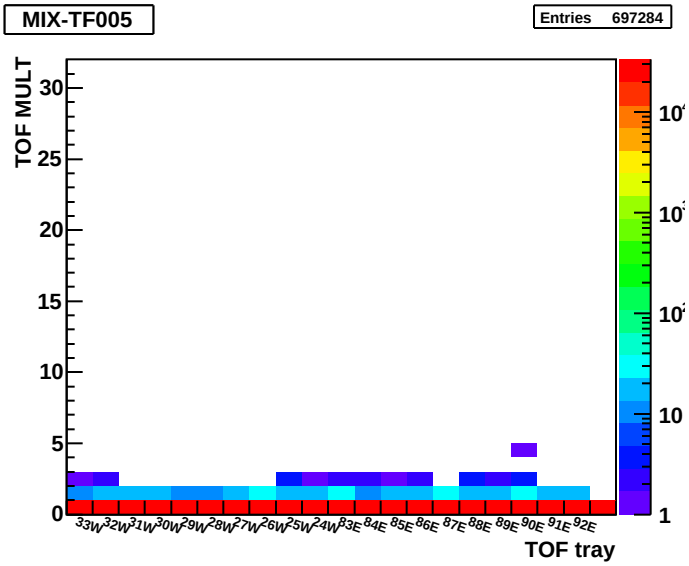

!Yellow-Fill
Entries 16602
10^3
10^2
10
1
0 20 40 60 80 100 120

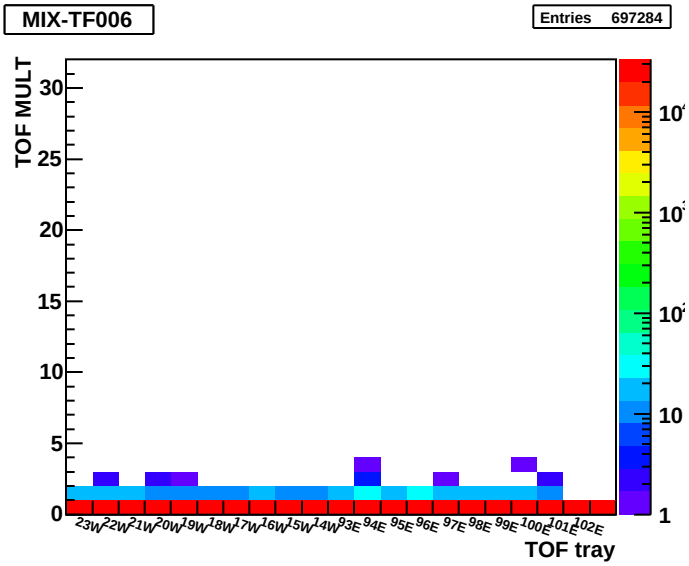

MIX-TF001
Entries 697284
TOF MULT
TOF tray

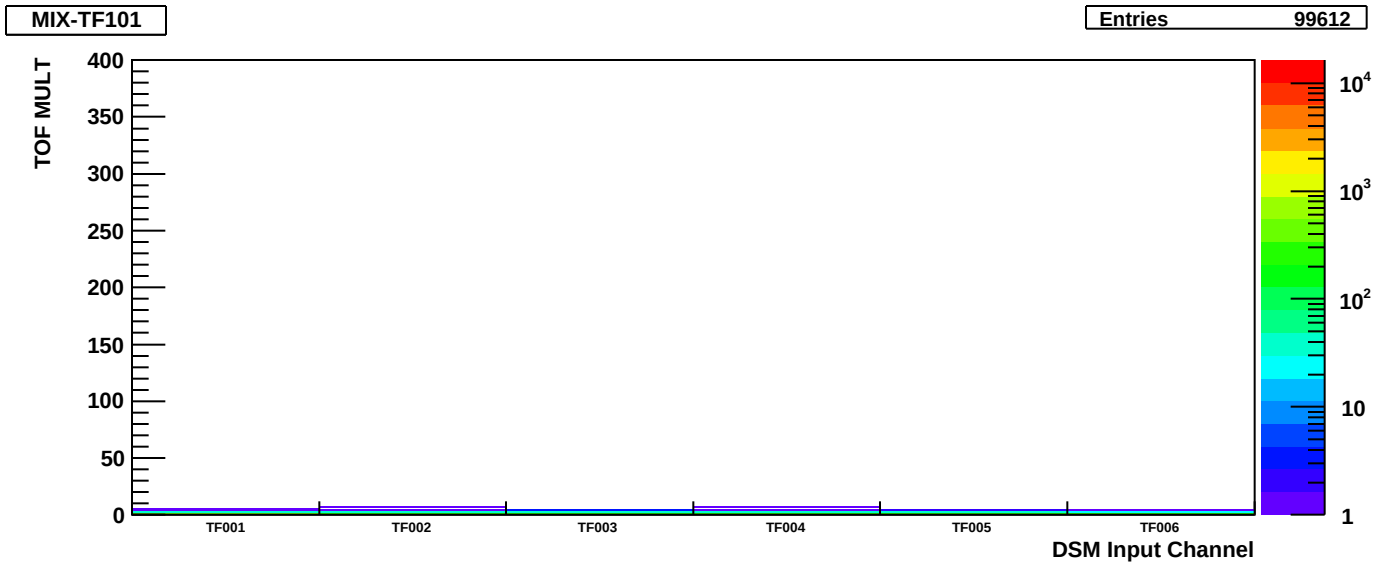

MIX-TF002
Entries 697284
TOF MULT
TOF tray

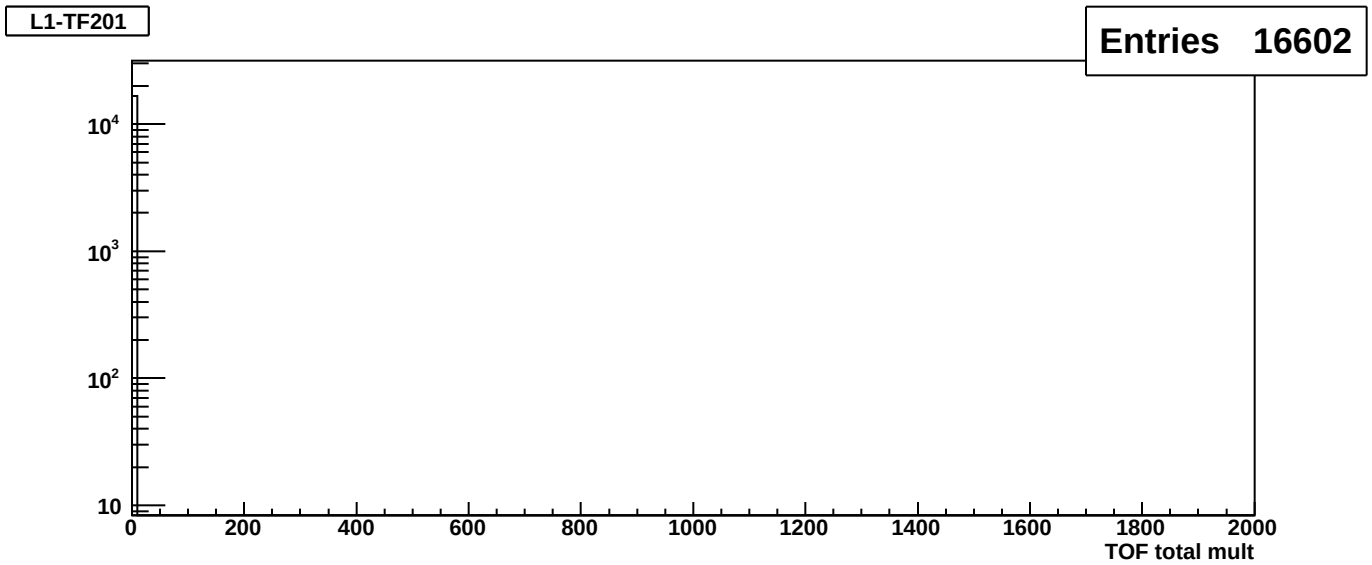

MIX-TF003
Entries 697284
TOF MULT
TOF tray

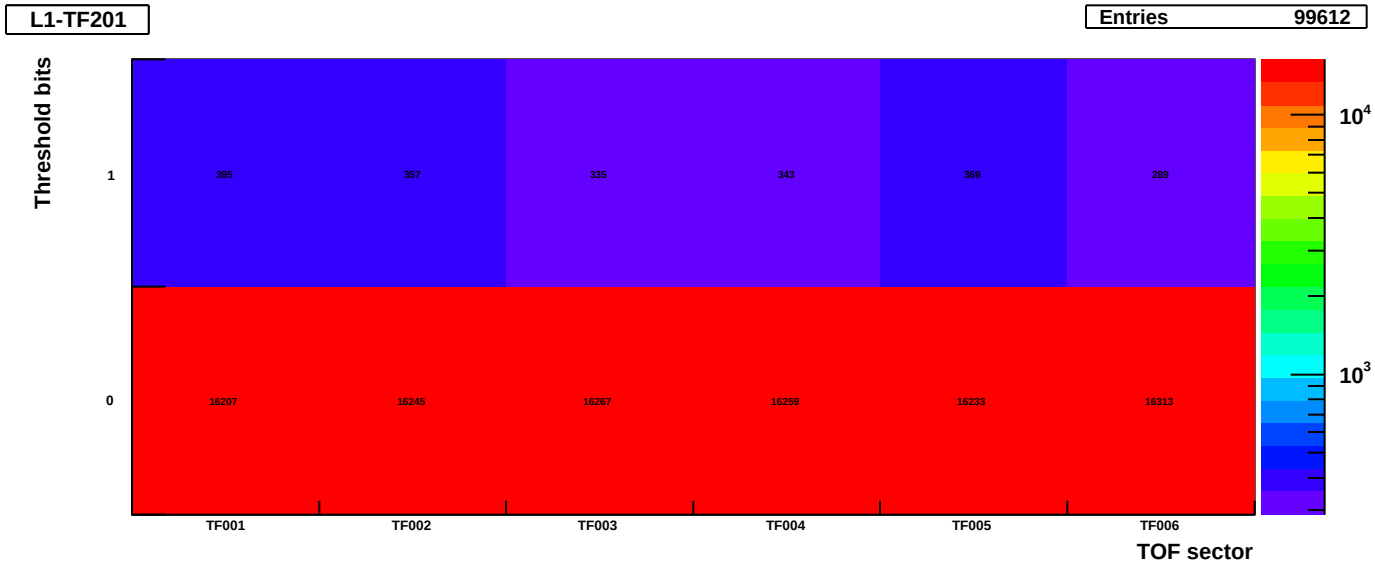

MIX-TF004
Entries 697284
TOF MULT
TOF tray

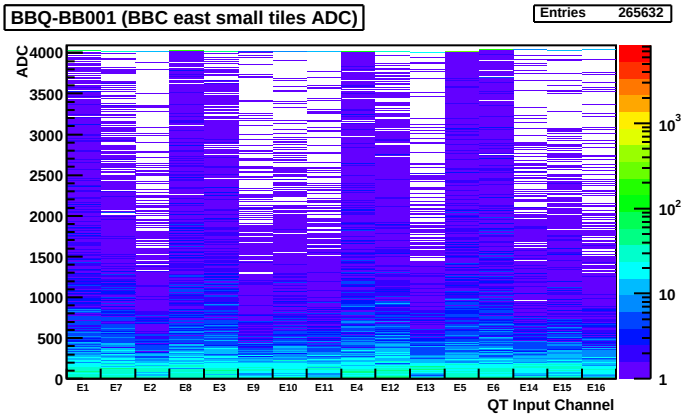

MIX-TF005
Entries 697284
TOF MULT
TOF tray

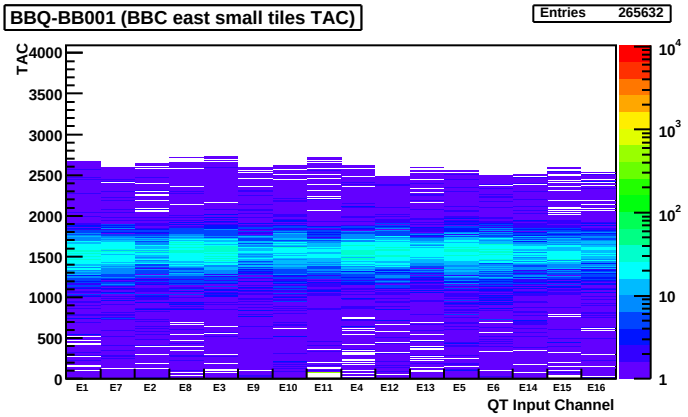

MIX-TF006
Entries 697284
TOF MULT
TOF tray

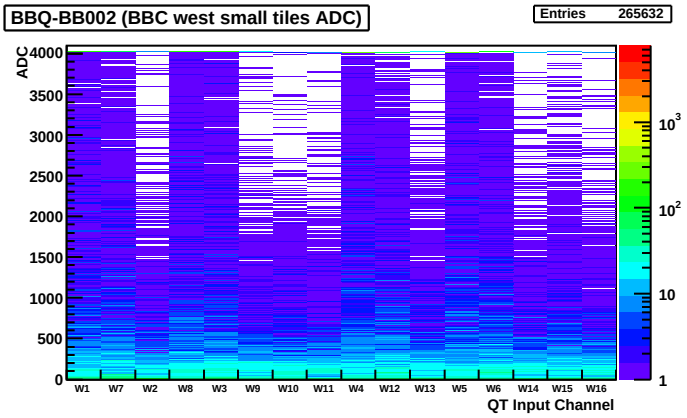

MIX-TF101
Entries 99612
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

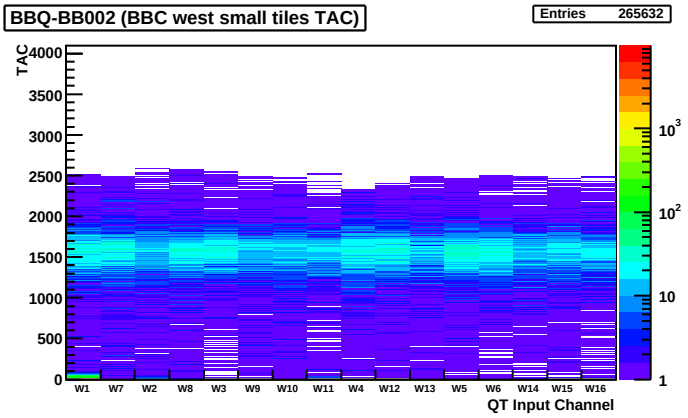

L1-TF201
Entries 16602
10^4
10^3
10^2
10
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

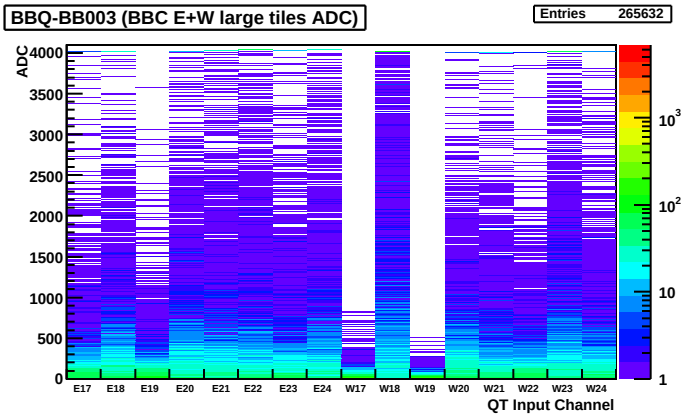

L1-TF201
Entries 99612
Threshold bits
1
0
395
357
335
343
369
289
16207
16245
16267
16259
16233
16313
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4
10^3

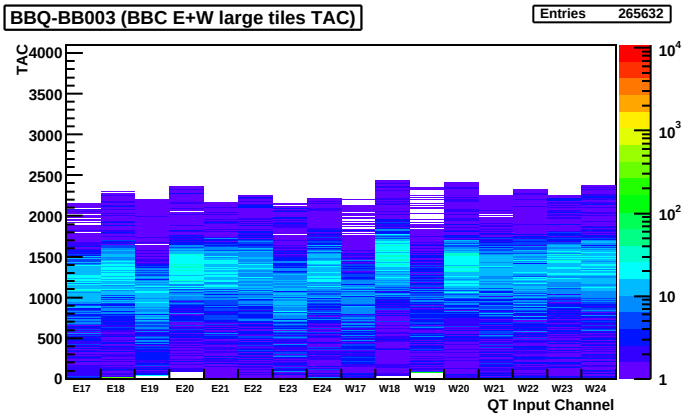

BBQ-BB001 (BBC east small tiles ADC)
Entries 265632
ADC
QT Input Channel

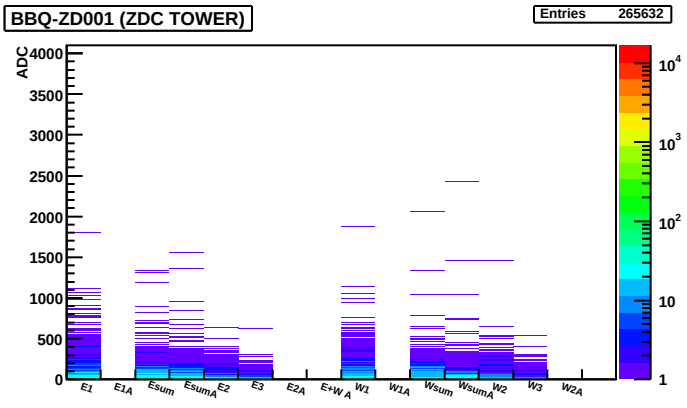

BBQ-BB001 (BBC east small tiles TAC)
Entries 265632
TAC
QT Input Channel

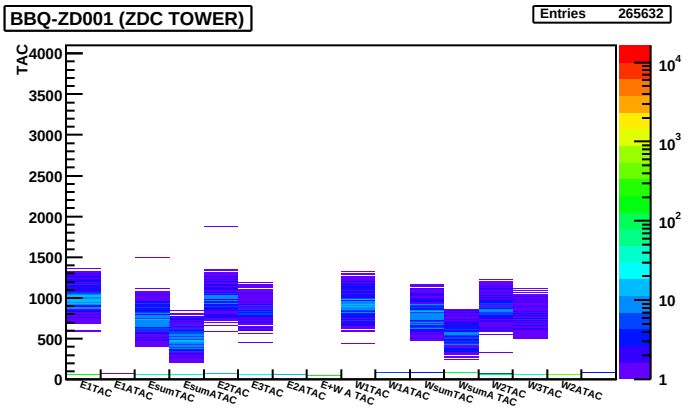

BBQ-BB002 (BBC west small tiles ADC)
Entries 265632
ADC
QT Input Channel

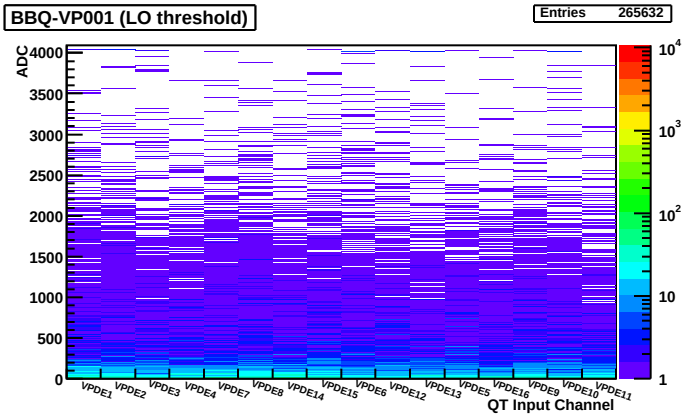

BBQ-BB002 (BBC west small tiles TAC)
Entries 265632
TAC
QT Input Channel

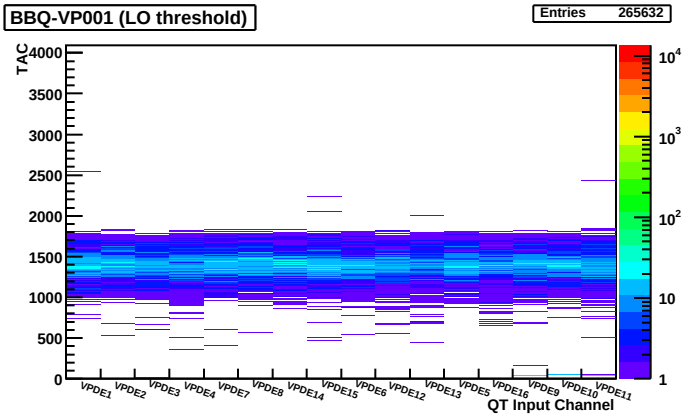

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 265632
ADC
QT Input Channel

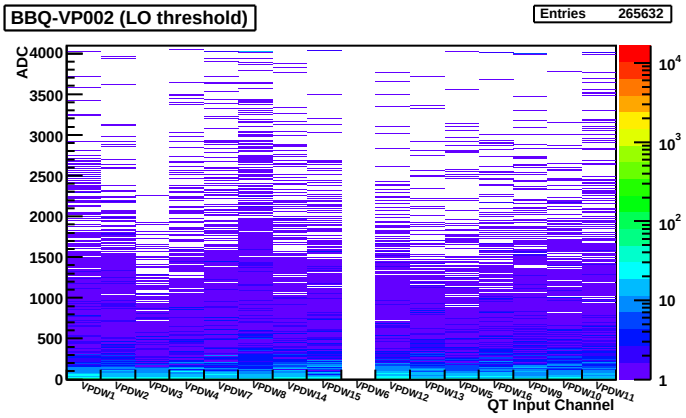

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 265632
TAC
QT Input Channel

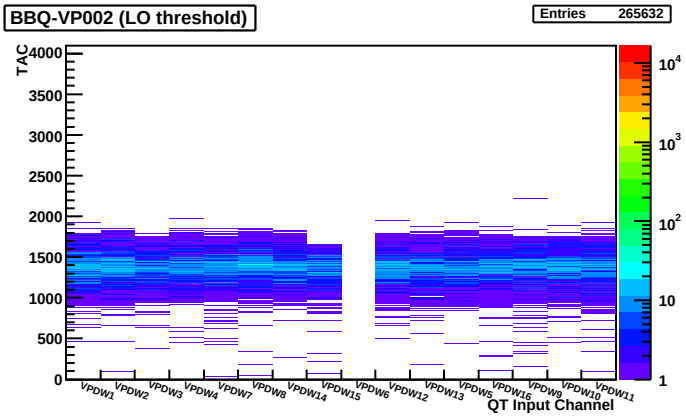

BBQ-ZD001 (ZDC TOWER)
Entries 265632
ADC

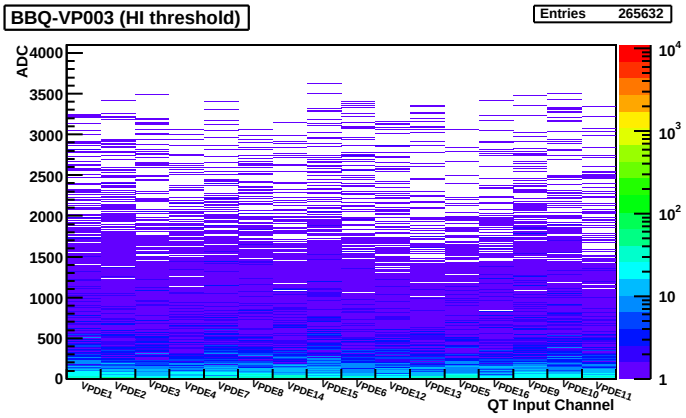

BBQ-ZD001 (ZDC TOWER)
Entries 265632
TAC

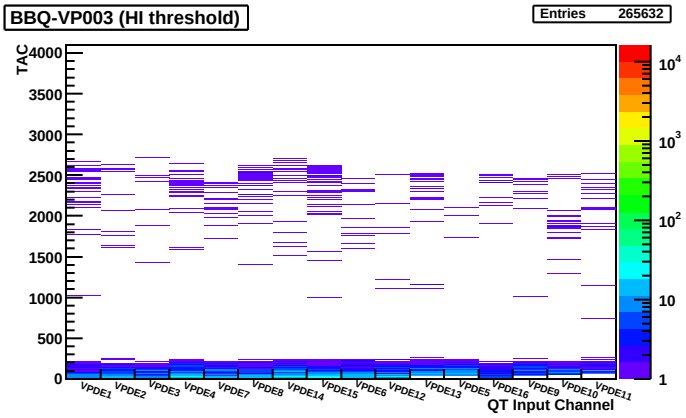

BBQ-VP001 (LO threshold)
Entries 265632
ADC
QT Input Channel

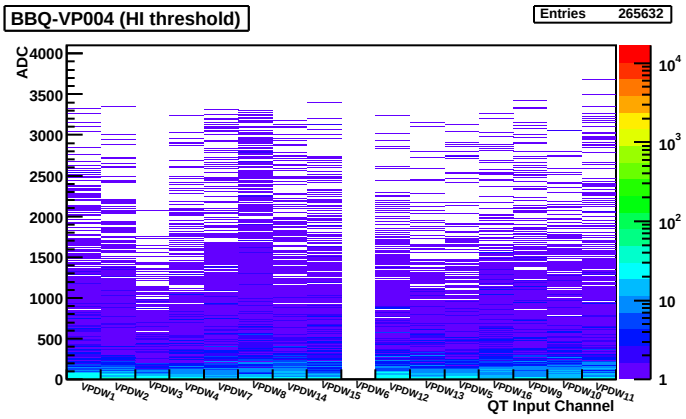

BBQ-VP001 (LO threshold)
Entries 265632
TAC
QT Input Channel

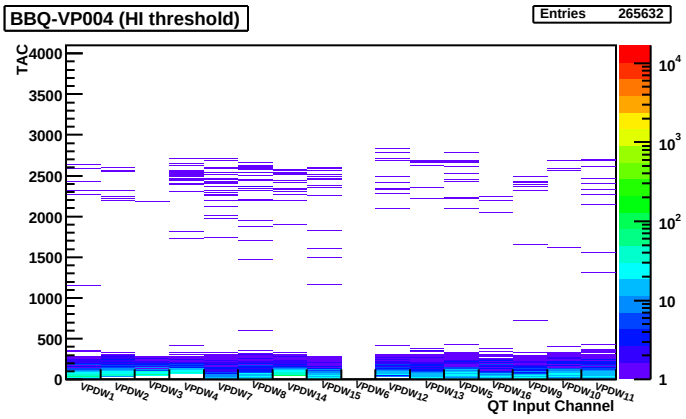

BBQ-VP002 (LO threshold)
Entries 265632
ADC
QT Input Channel

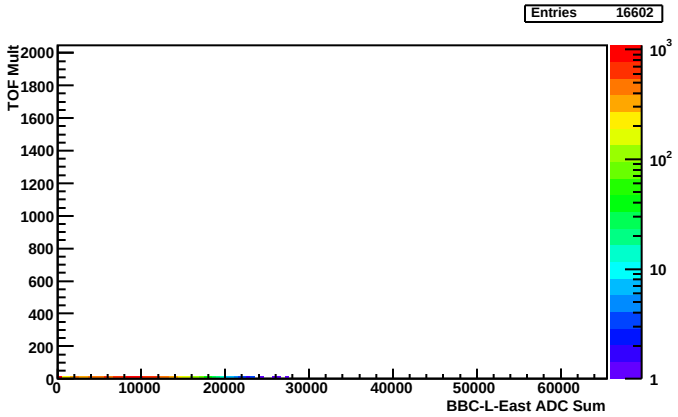

BBQ-VP002 (LO threshold)
Entries 265632
TAC
QT Input Channel

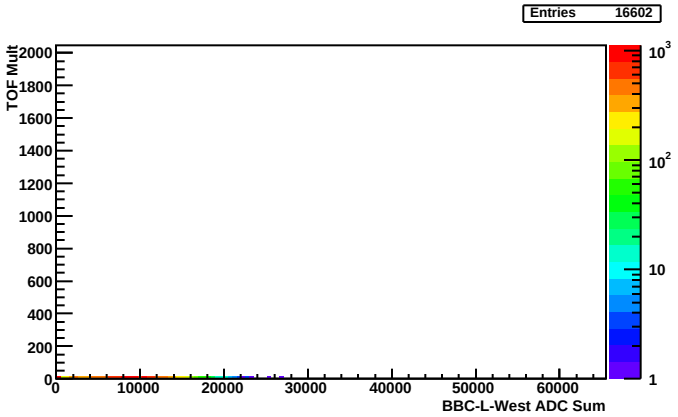

BBQ-VP003 (HI threshold)
Entries 265632
ADC
QT Input Channel

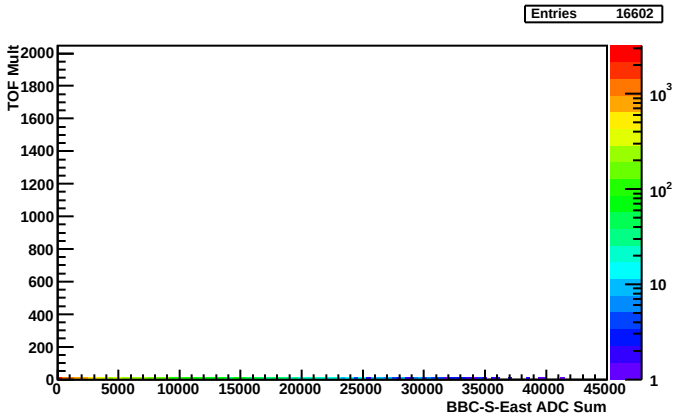

BBQ-VP003 (HI threshold)
Entries 265632
TAC
QT Input Channel

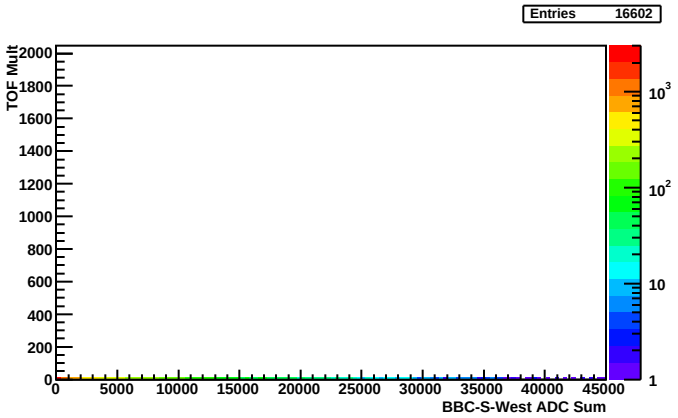

BBQ-VP004 (HI threshold)
Entries 265632
ADC
QT Input Channel

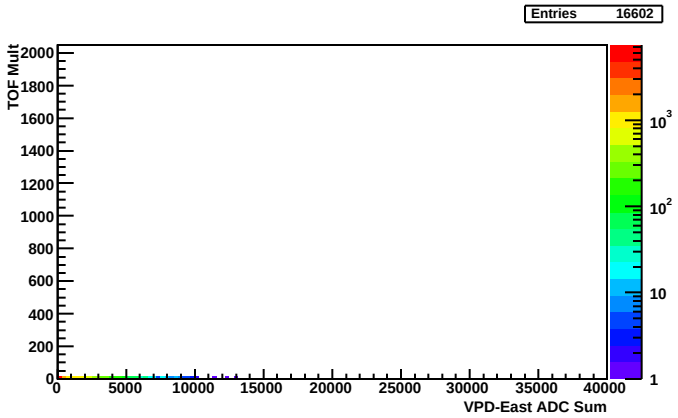

BBQ-VP004 (HI threshold)
Entries 265632
TAC
QT Input Channel

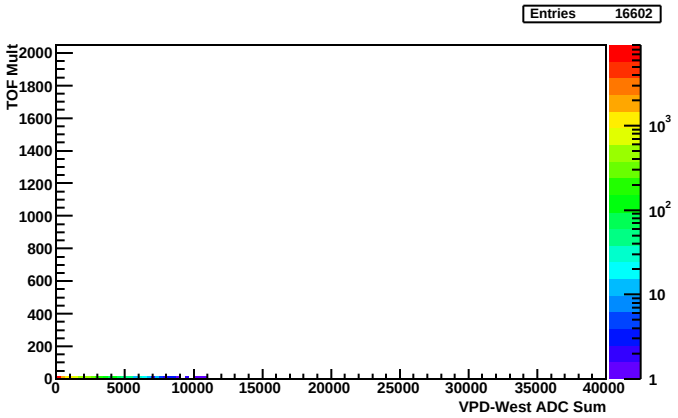

Entries 16602
TOF Mult
BBC-L-East ADC Sum

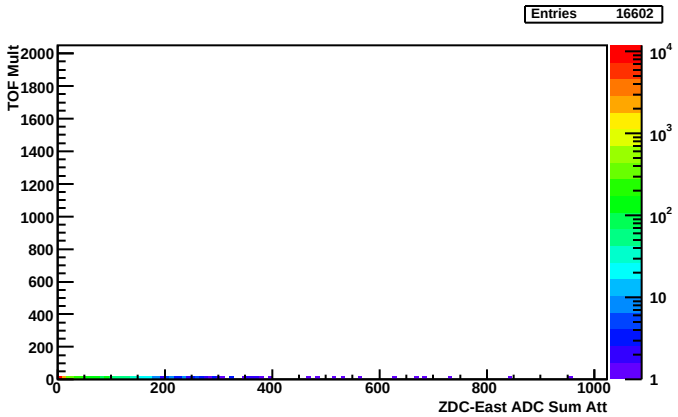

Entries 16602
TOF Mult
BBC-L-West ADC Sum

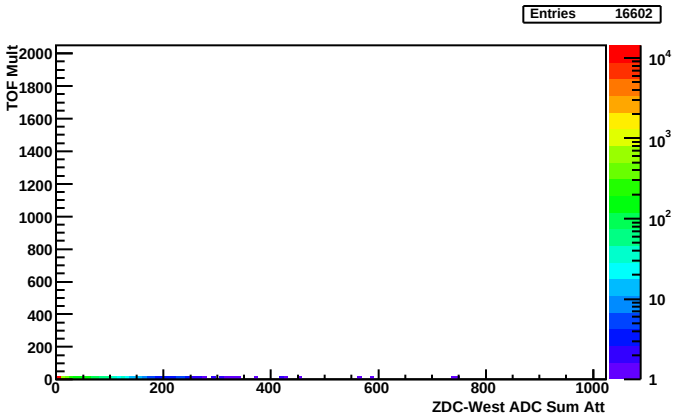

Entries 16602
TOF Mult
BBC-S-East ADC Sum

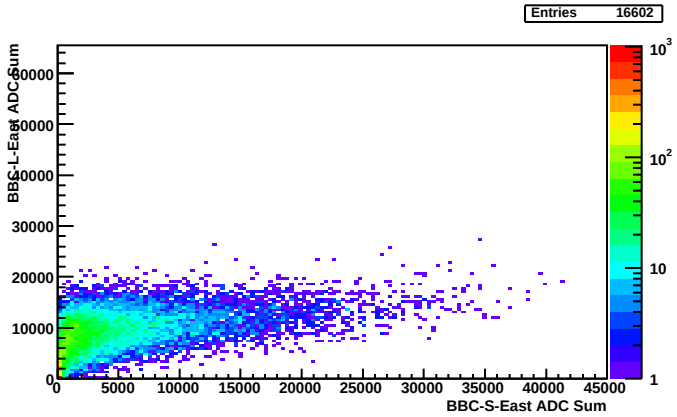

Entries 16602
TOF Mult
BBC-S-West ADC Sum

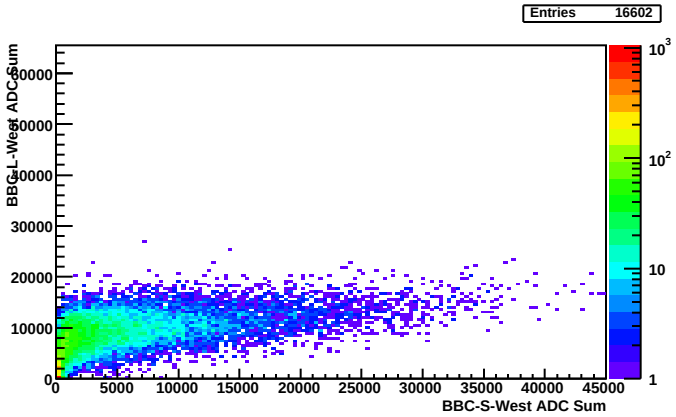

Entries 16602
TOF Mult
VPD-East ADC Sum

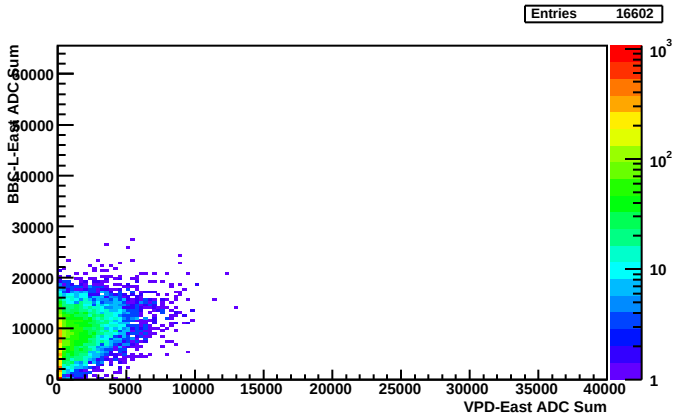

Entries 16602
TOF Mult
VPD-West ADC Sum

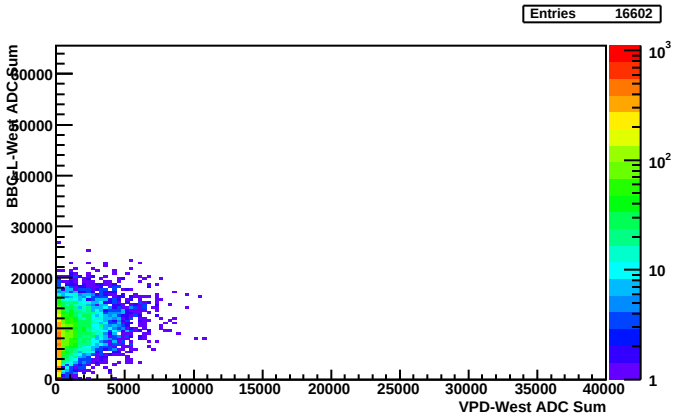

Entries 16602
TOF Mult
ZDC-East ADC Sum Att

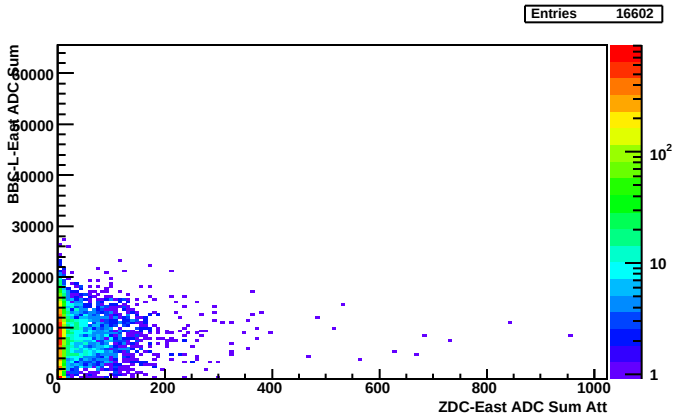

Entries 16602
TOF Mult
ZDC-West ADC Sum Att

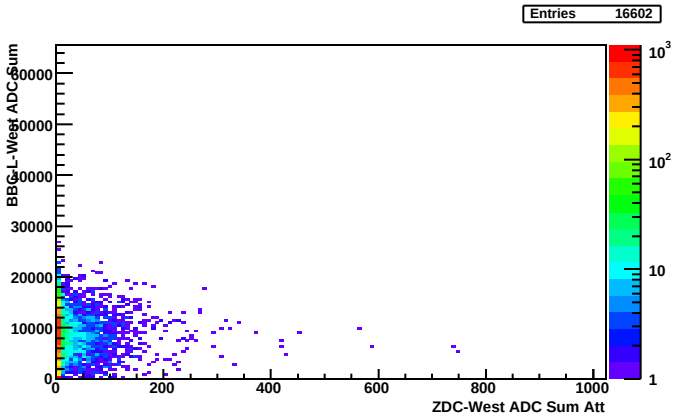

Entries 16602
BBC-L-East ADC Sum
BBC-S-East ADC Sum

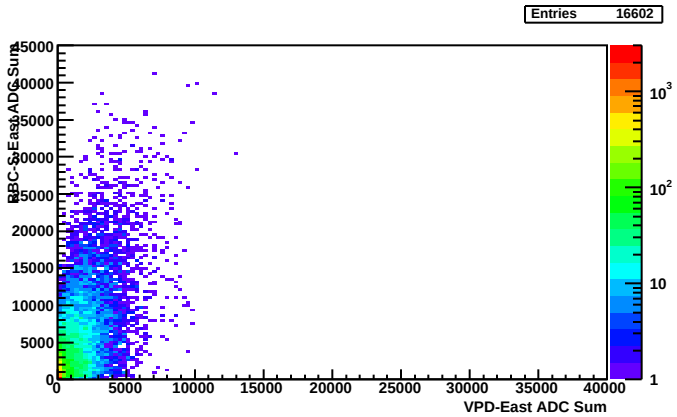

Entries 16602
BBC-L-West ADC Sum
BBC-S-West ADC Sum

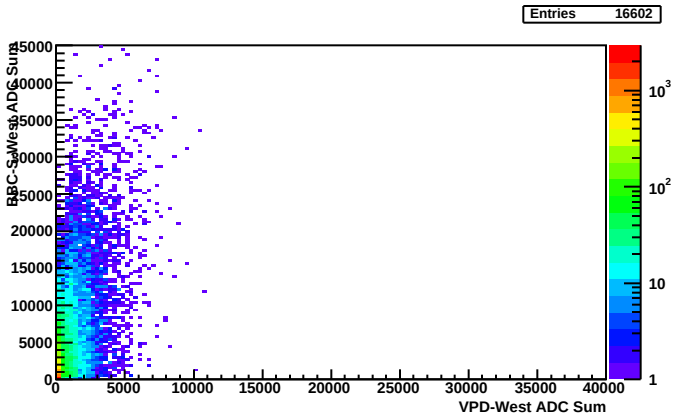

Entries 16602
BBC-L-East ADC Sum
VPD-East ADC Sum

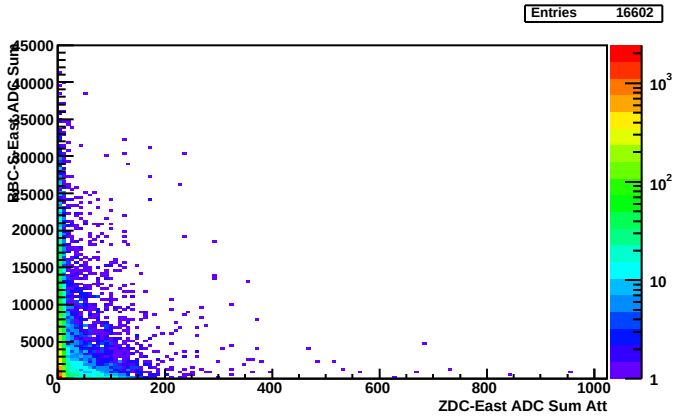

Entries 16602
BBC-L-West ADC Sum
VPD-West ADC Sum

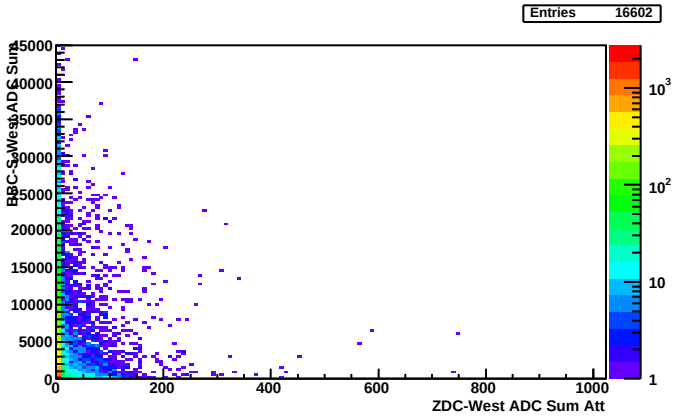

Entries 16602
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

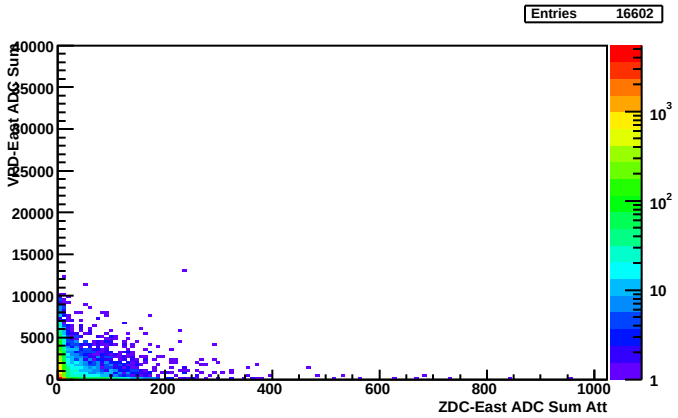

Entries 16602
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

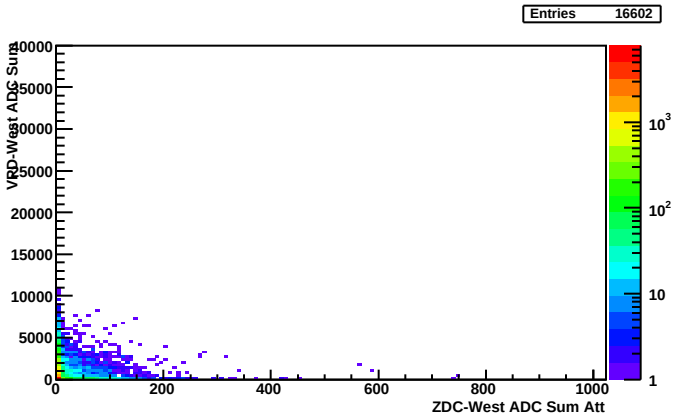

Entries 16602
BBC-S-East ADC Sum
VPD-East ADC Sum

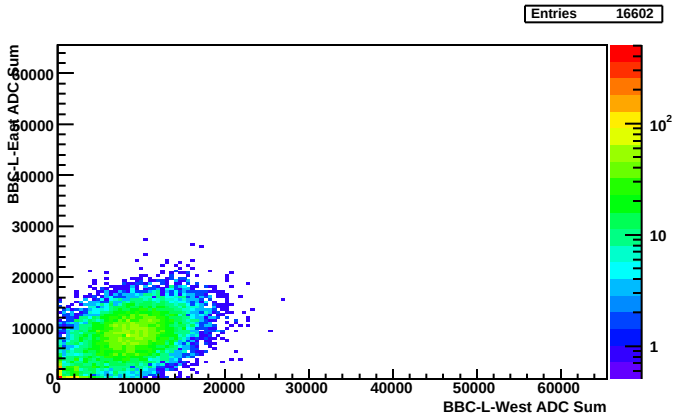

Entries 16602
BBC-S-West ADC Sum
VPD-West ADC Sum

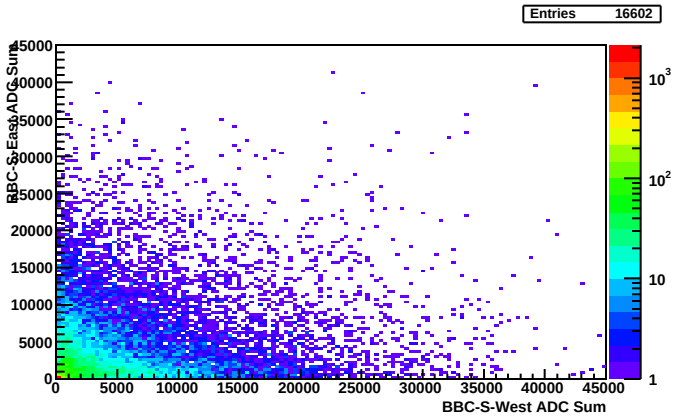

Entries 16602
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

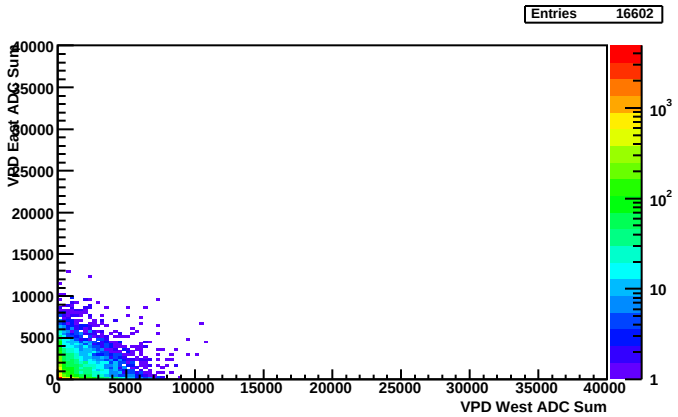

Entries 16602
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

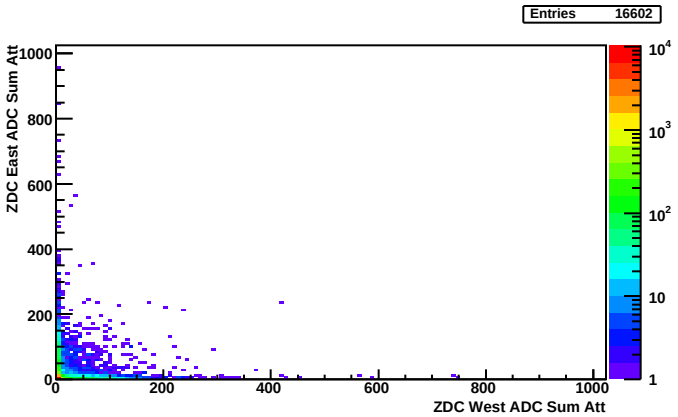

Entries 16602
VPD-East ADC Sum
ZDC-East ADC Sum Att

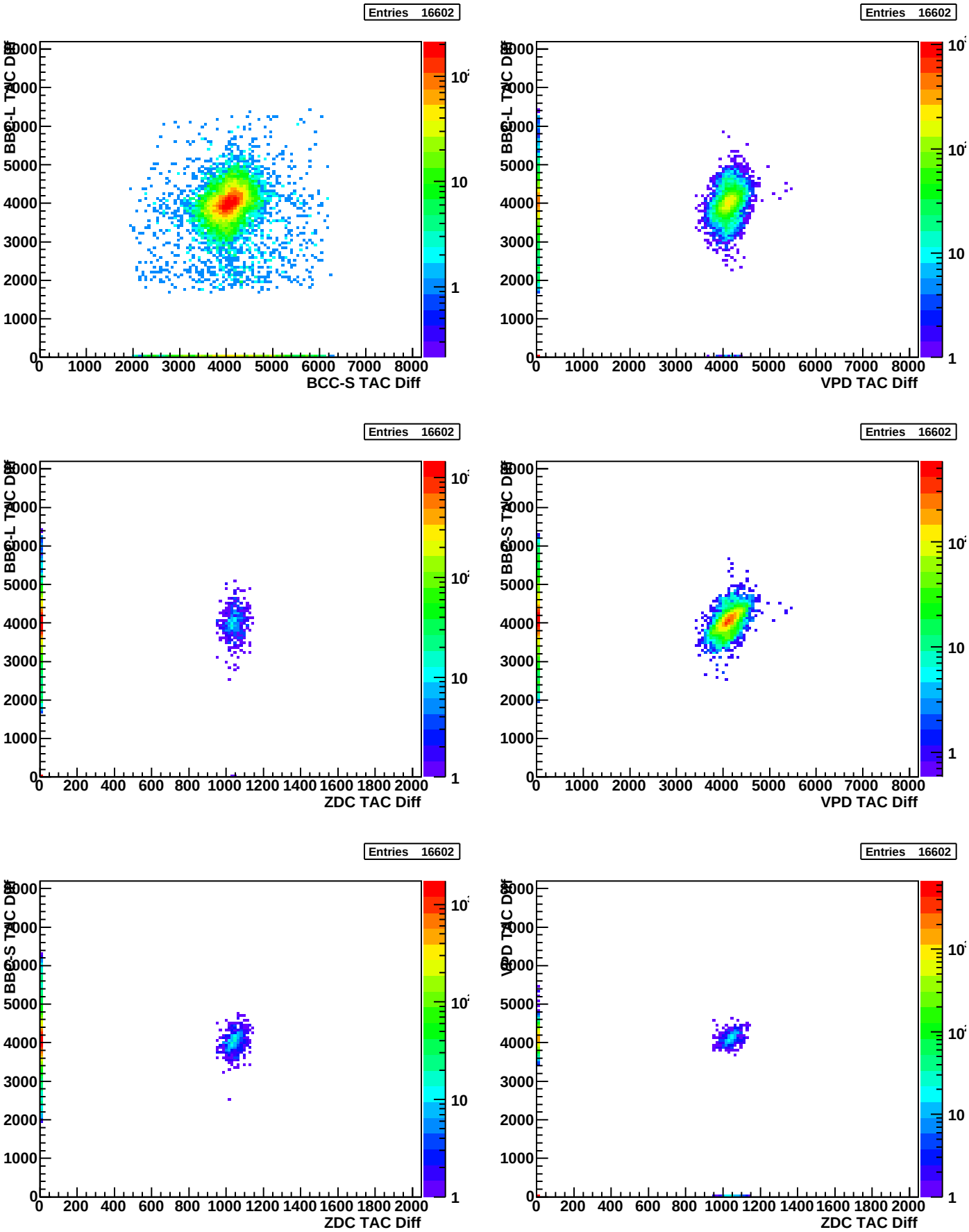

Entries 16602
VPD-West ADC Sum
ZDC-West ADC Sum Att

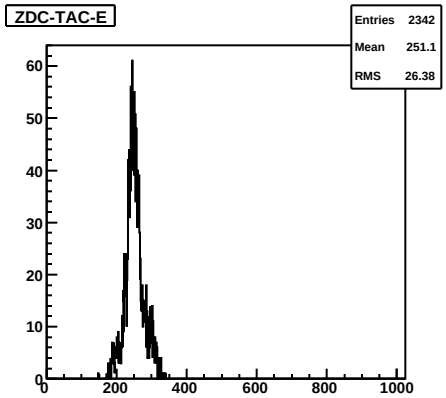

Entries 16602
BBC-L-East ADC Sum
BBC-L-West ADC Sum

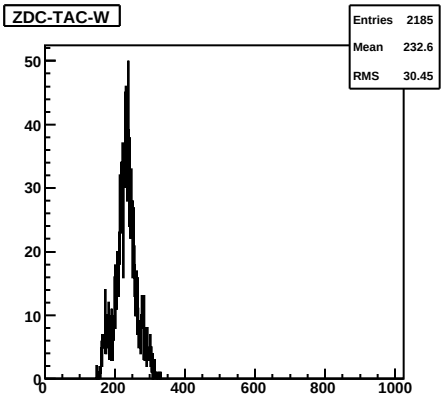

Entries 16602
BBC-S-East ADC Sum
BBC-S-West ADC Sum

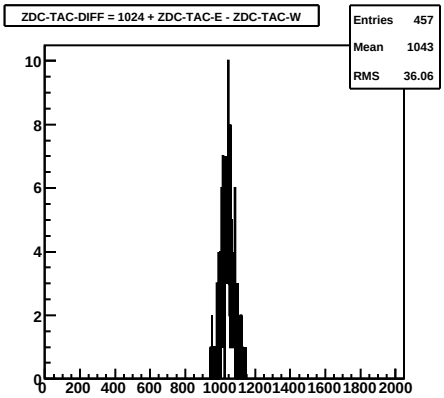

Entries 16602
VPD East ADC Sum
VPD West ADC Sum

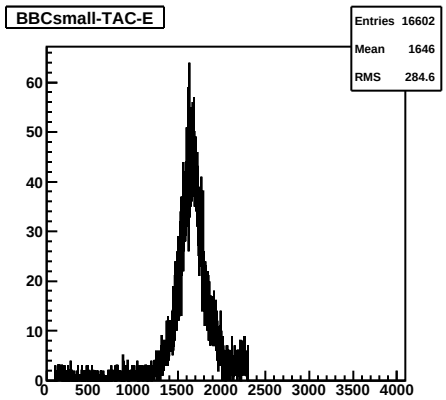

Entries 16602
ZDC East ADC Sum Att
ZDC West ADC Sum Att

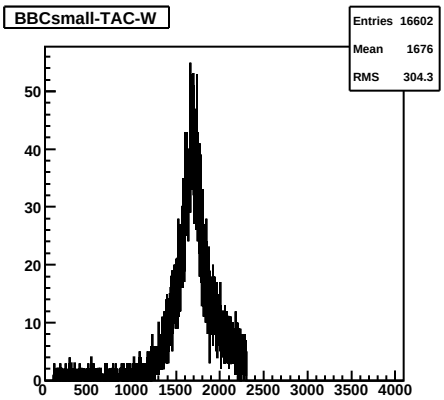

Entries 16602
BBC-L TAC Diff
BCC-S TAC Diff
Entries 16602
BBC-L TAC Diff
VPD TAC Diff
Entries 16602
BBC-L TAC Diff
ZDC TAC Diff
Entries 16602
BBC-S TAC Diff
VPD TAC Diff
Entries 16602
BBC-S TAC Diff
ZDC TAC Diff
Entries 16602
VPD TAC Diff
ZDC TAC Diff

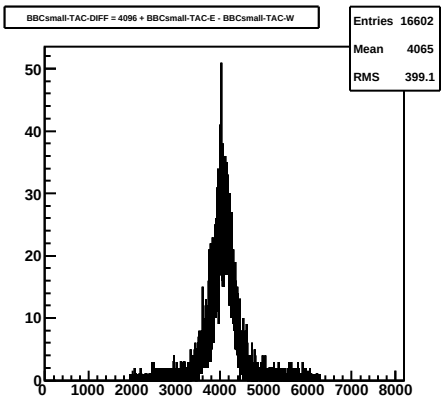

ZDC-TAC-E
Entries 2342
Mean 251.1
RMS 26.38

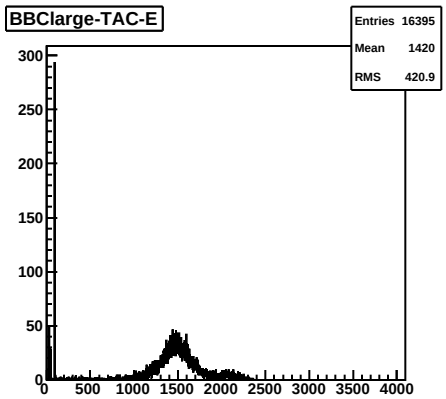

ZDC-TAC-W
Entries 2185
Mean 232.6
RMS 30.45

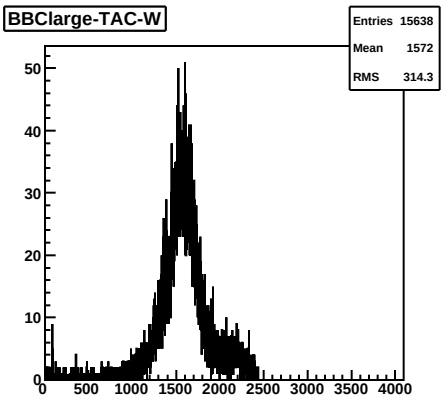

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 457
Mean 1043
RMS 36.06

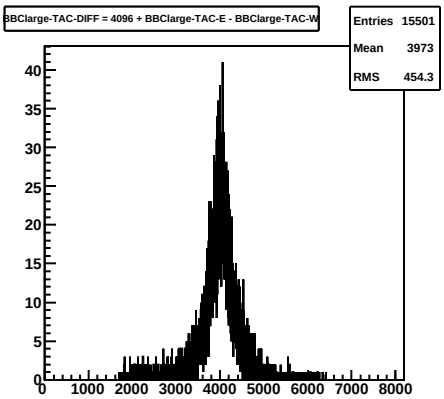

BBCsmall-TAC-E
Entries 16602
Mean 1646
RMS 284.6

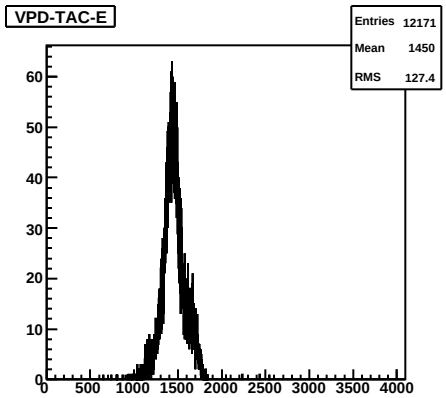

BBCsmall-TAC-W
Entries 16602
Mean 1676
RMS 304.3

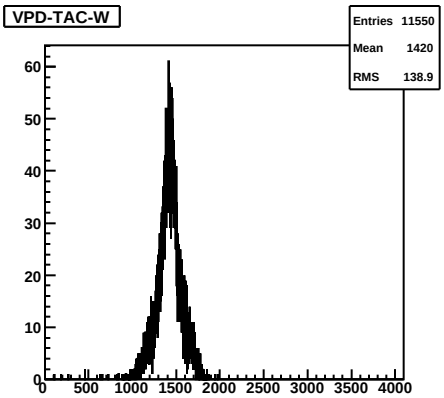

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 16602
Mean 4065
RMS 399.1

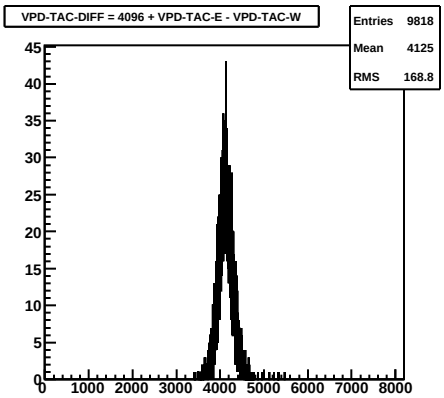

BBClarge-TAC-E
Entries 16395
Mean 1420
RMS 420.9

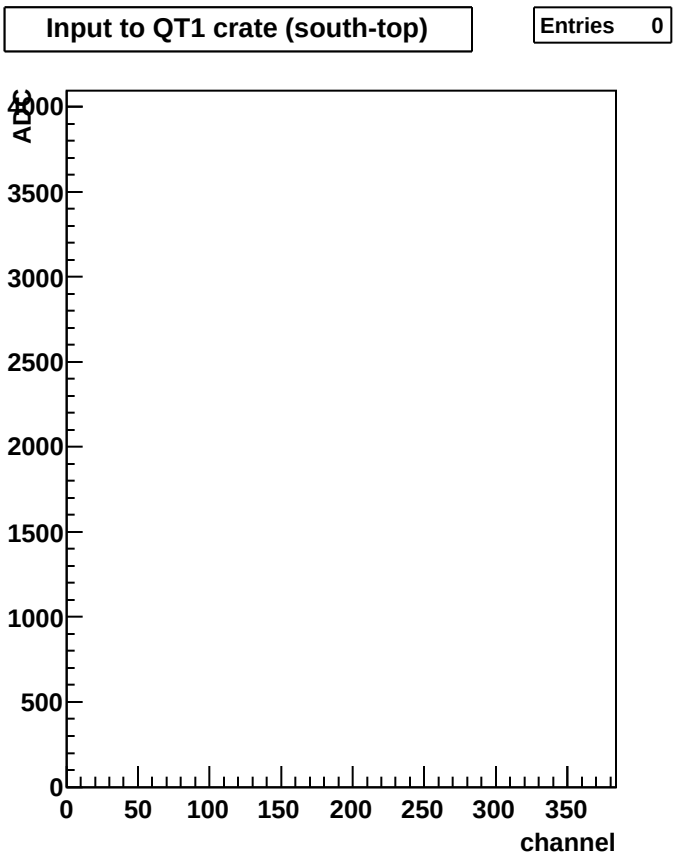

BBClarge-TAC-W
Entries 15638
Mean 1572
RMS 314.3

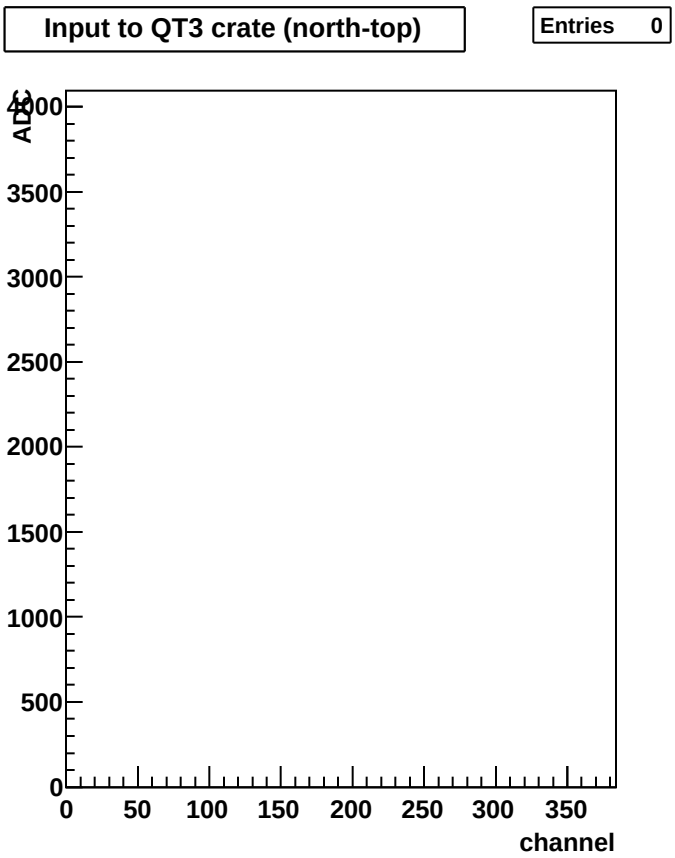

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 15501
Mean 3973
RMS 454.3

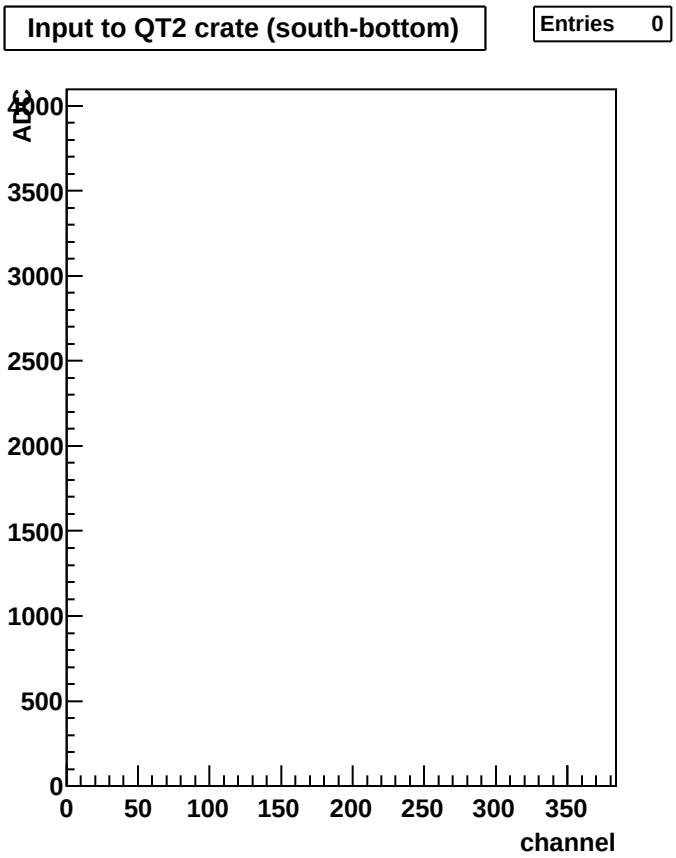

VPD-TAC-E
Entries 12171
Mean 1450
RMS 127.4

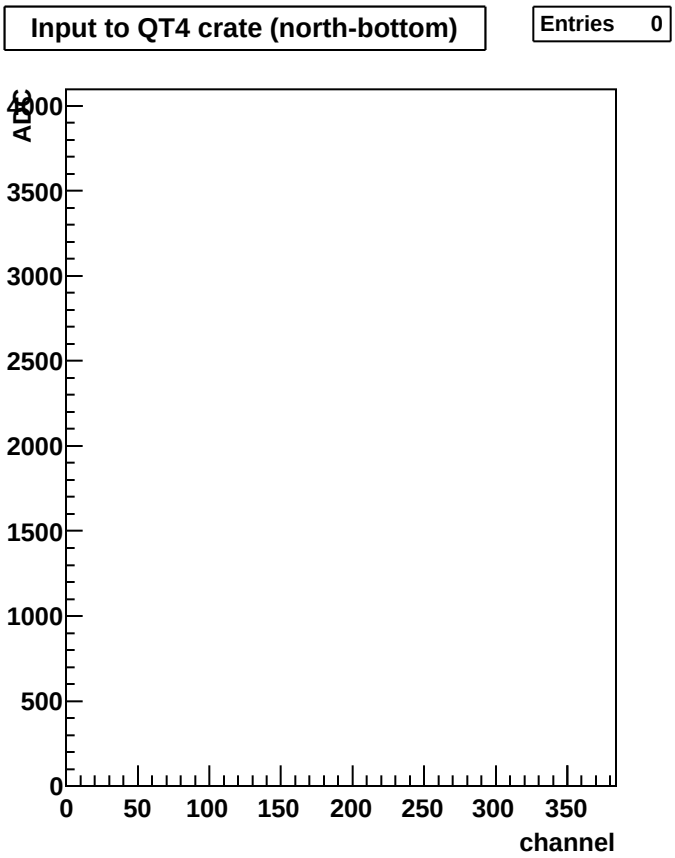

VPD-TAC-W
Entries 11550
Mean 1420
RMS 138.9

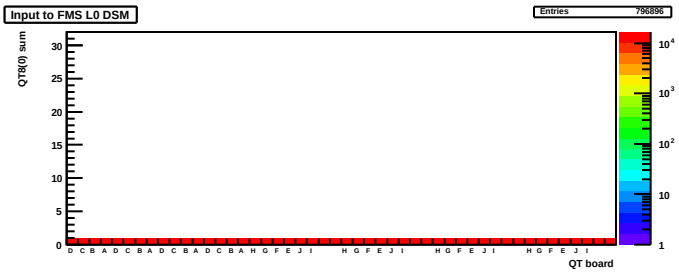

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 9818
Mean 4125
RMS 168.8

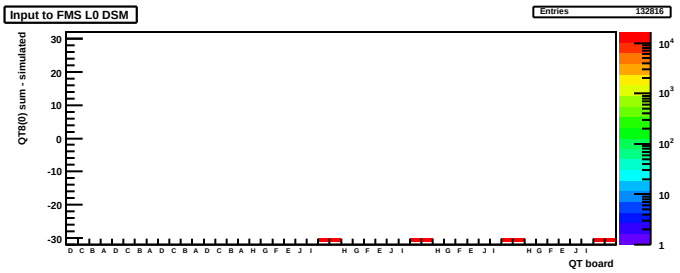

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

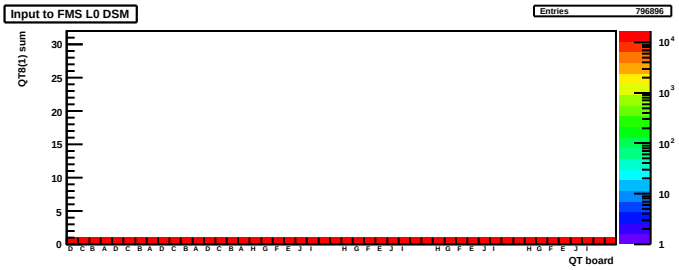

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

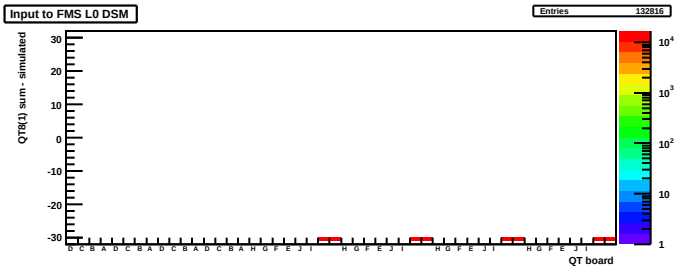

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

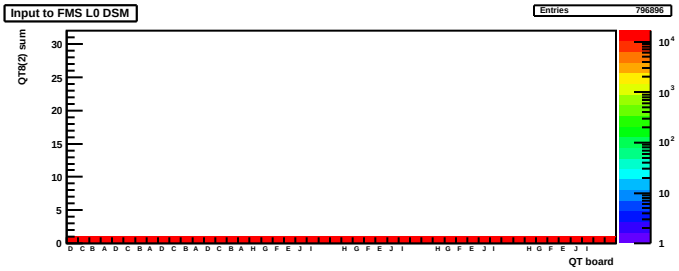

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

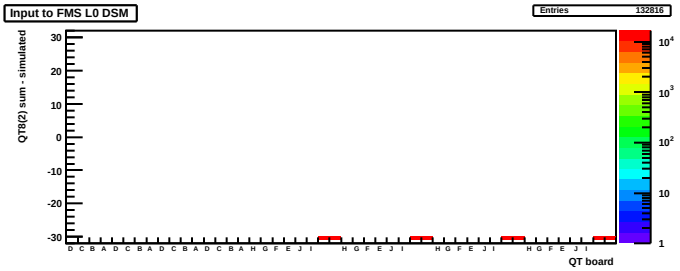

Input to FMS L0 DSM
Entries 796896
QT8(0) sum
QT board

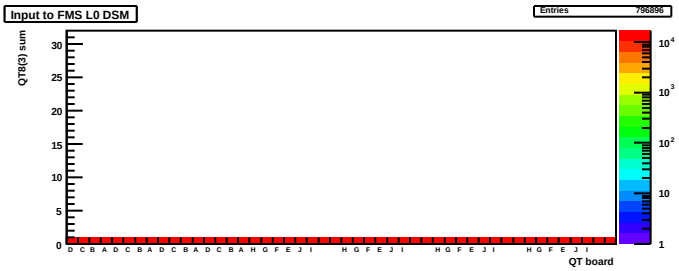

Input to FMS L0 DSM
Entries 132816
QT8(0) sum - simulated
QT board

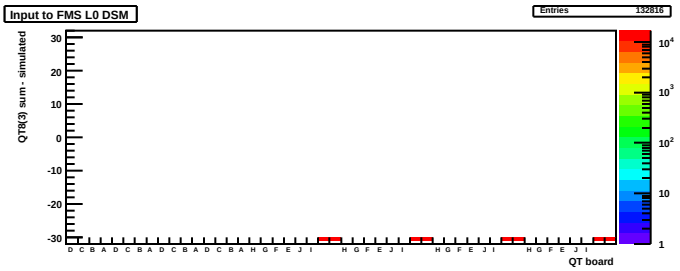

Input to FMS L0 DSM
Entries 796896
QT8(1) sum
QT board

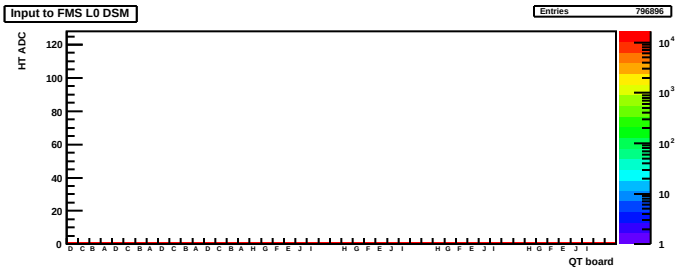

Input to FMS L0 DSM
Entries 132816
QT8(1) sum - simulated
QT board

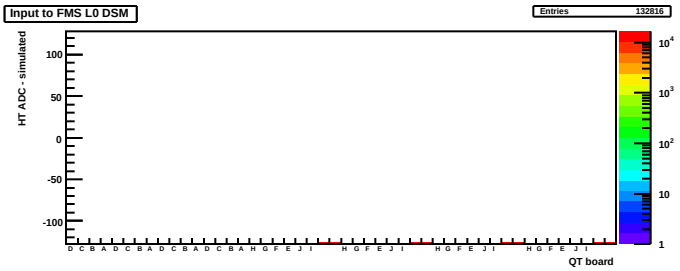

Input to FMS L0 DSM
Entries 796896
QT8(2) sum
QT board

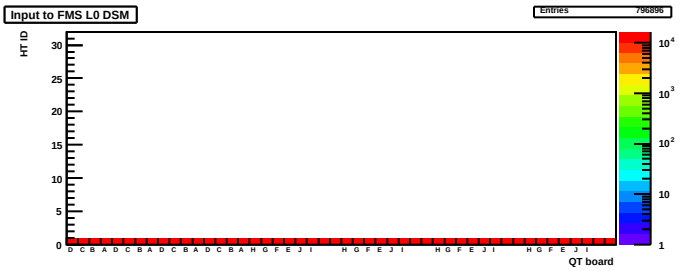

Input to FMS L0 DSM
Entries 132816
QT8(2) sum - simulated
QT board

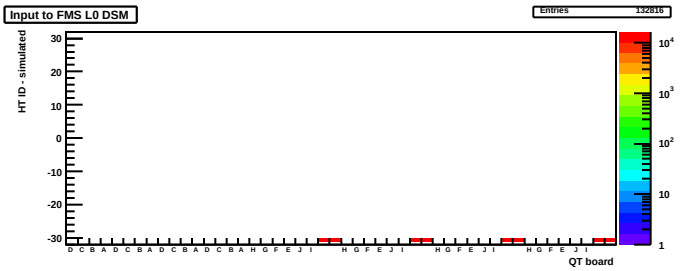

Input to FMS L0 DSM
Entries 796896
QT8(3) sum
QT board

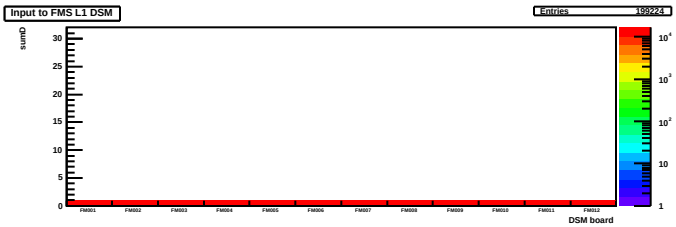

Input to FMS L0 DSM
Entries 132816
QT8(3) sum - simulated
QT board

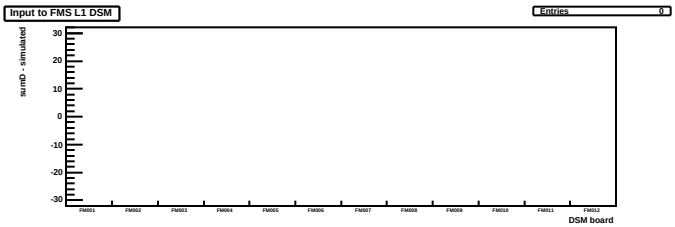

Input to FMS L0 DSM
Entries 796896
HT ADC
QT board

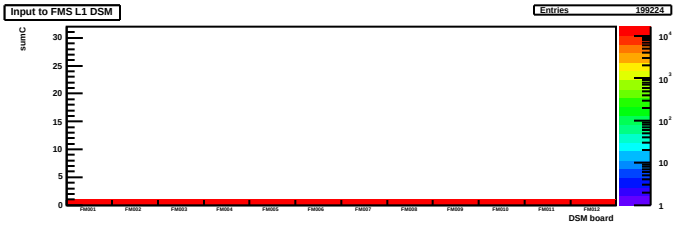

Input to FMS L0 DSM
Entries 132816
HT ADC - simulated
QT board

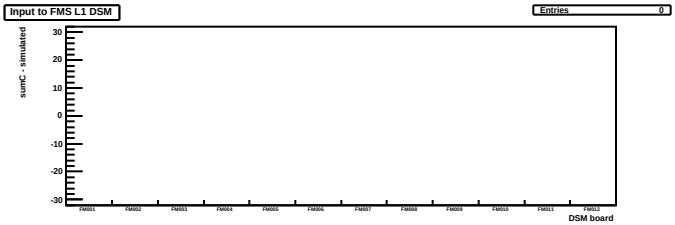

Input to FMS L0 DSM
Entries 796896
HT ID
QT board

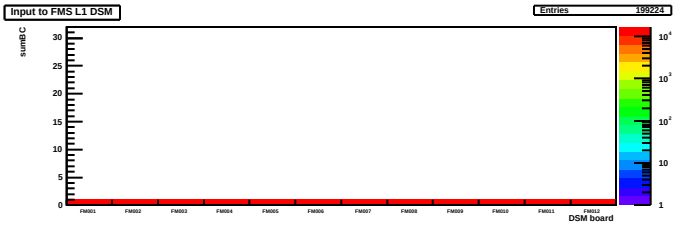

Input to FMS L0 DSM
Entries 132816
HT ID - simulated
QT board

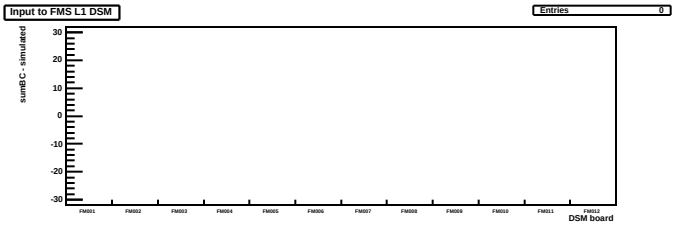

Input to FMS L1 DSM
Entries 199224
sumD
DSM board

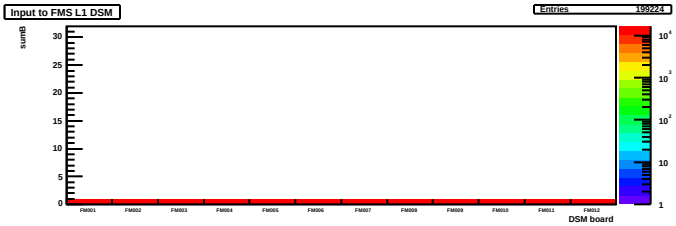

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

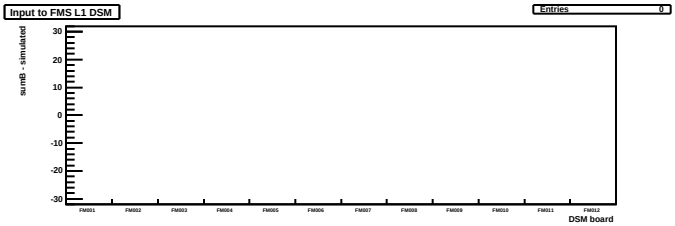

Input to FMS L1 DSM
Entries 199224
sumC
DSM board

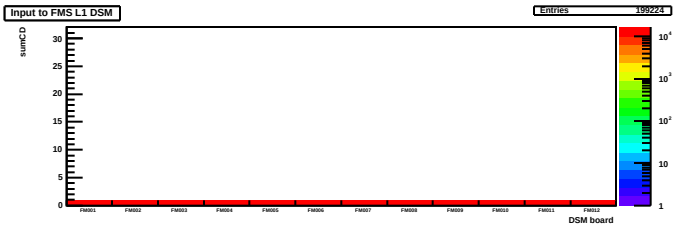

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

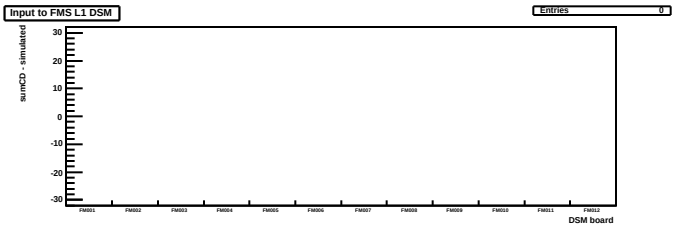

Input to FMS L1 DSM
Entries 199224
sumBC
DSM board

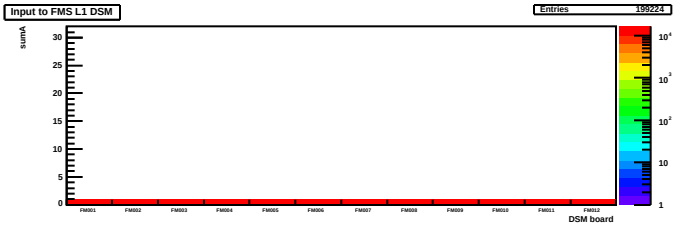

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

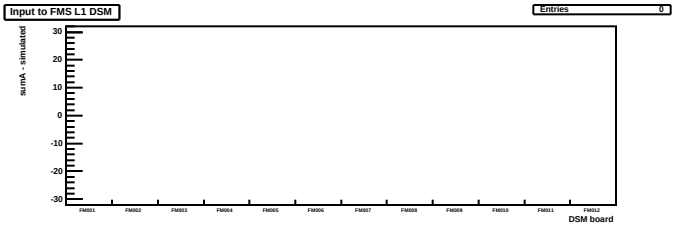

Input to FMS L1 DSM
Entries 199224
sumB
DSM board

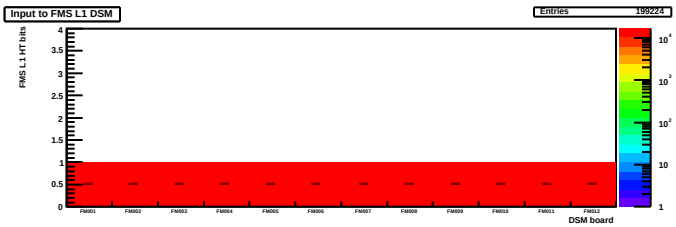

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

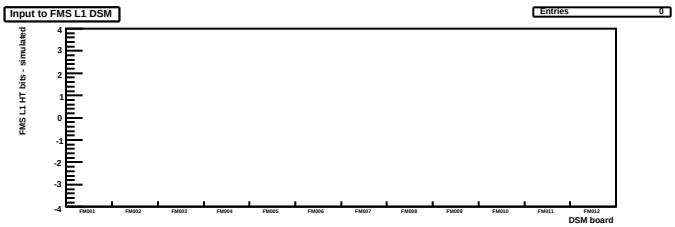

Input to FMS L1 DSM
Entries 199224
sumCD
DSM board

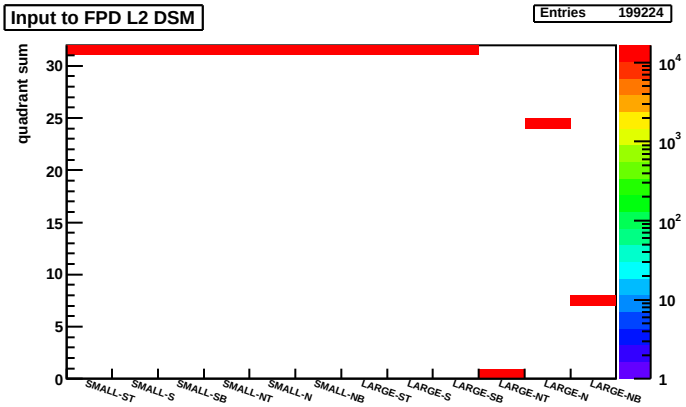

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

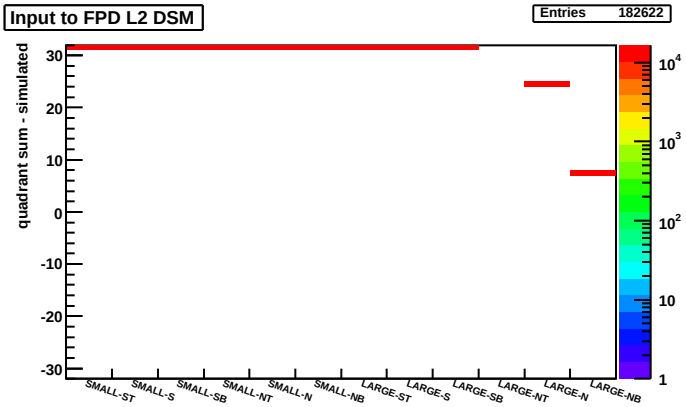

Input to FMS L1 DSM
Entries 199224
sumA
DSM board

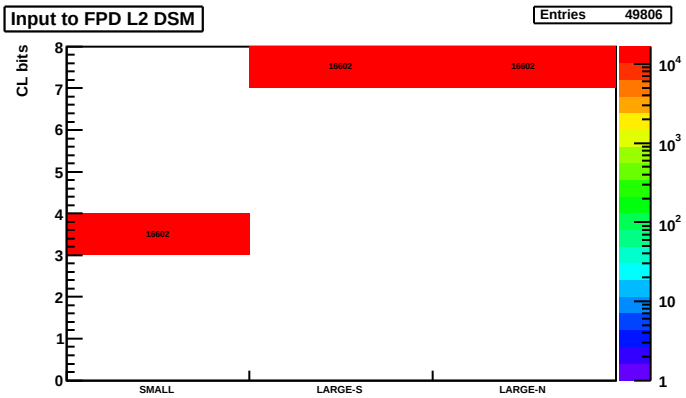

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

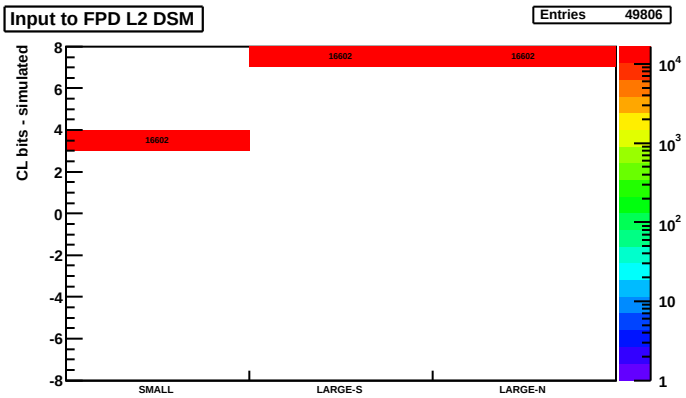

Input to FMS L1 DSM
Entries 199224
FMS L1 HT bits
DSM board

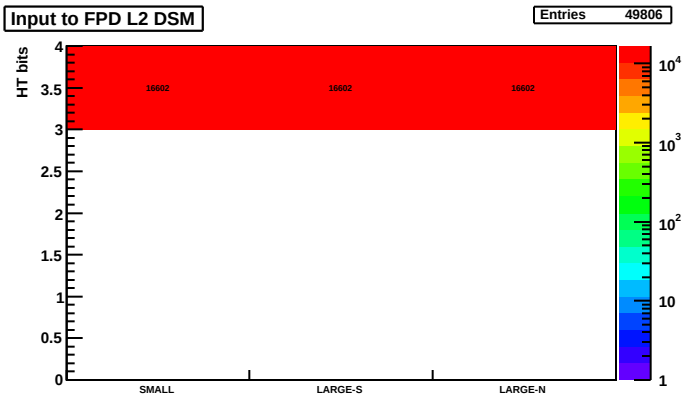

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

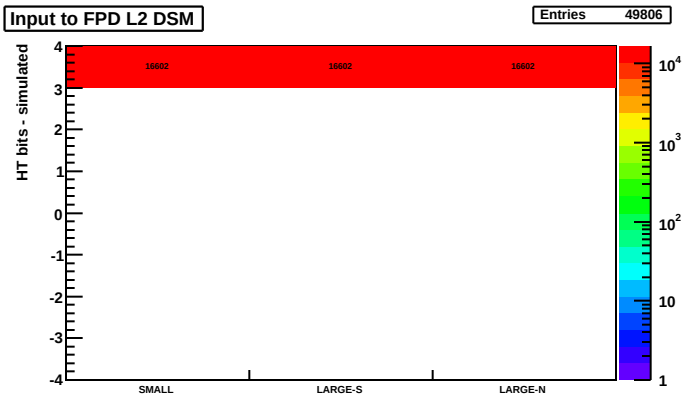

Input to FPD L2 DSM
Entries 199224
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

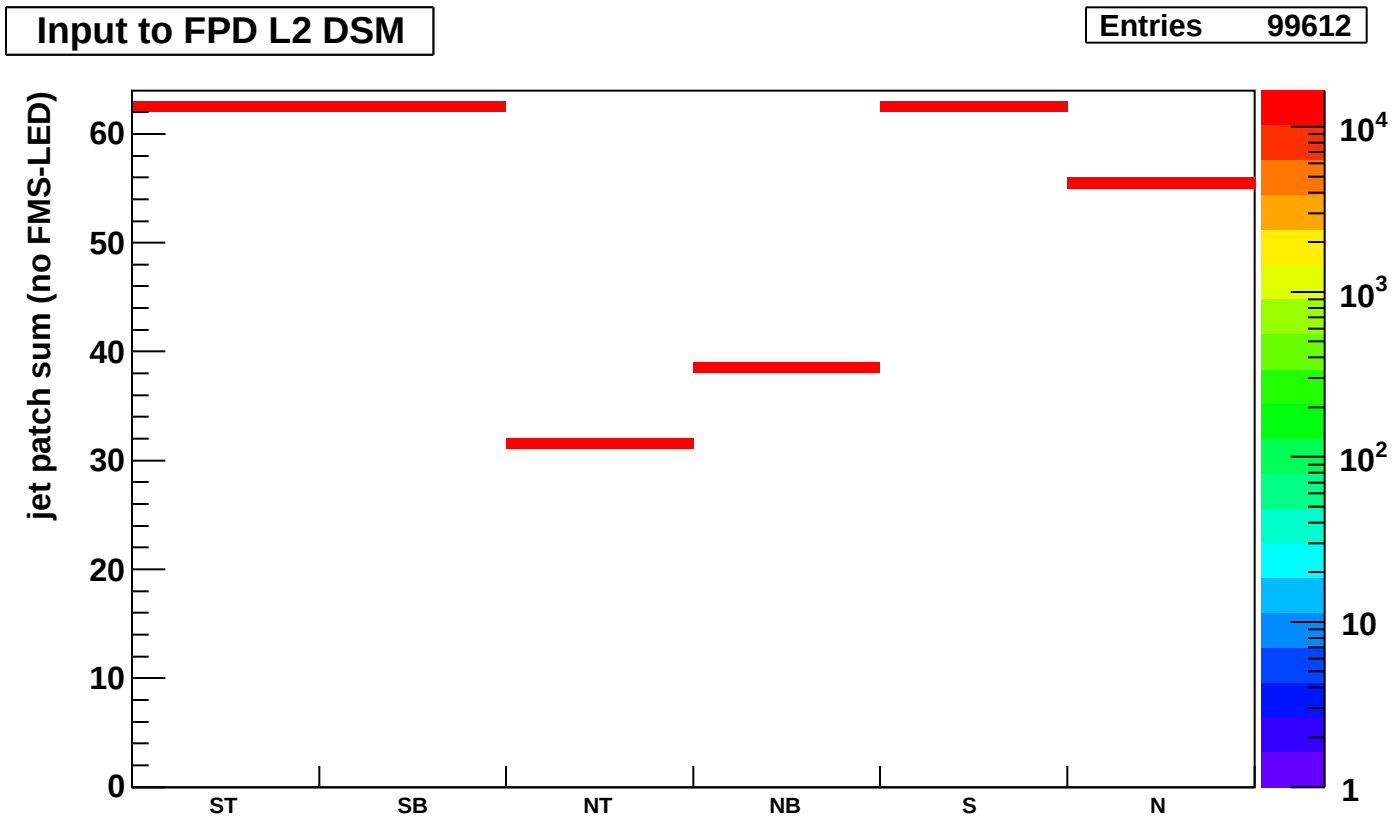

Input to FPD L2 DSM
Entries 182622
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

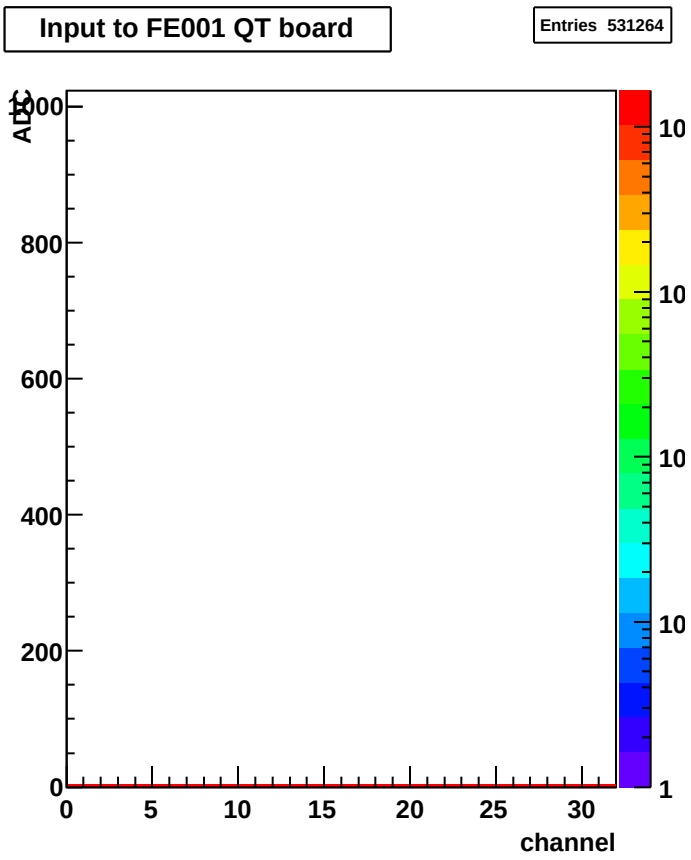

Input to FPD L2 DSM
Entries 49806
CL bits
16602
16602
16602
SMALL
LARGE-S
LARGE-N

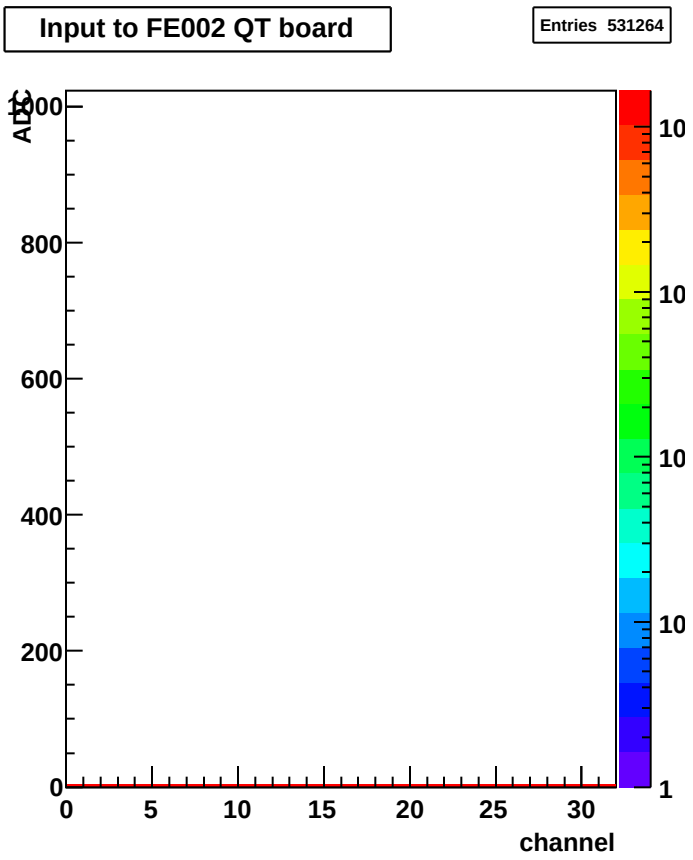

Input to FPD L2 DSM
Entries 49806
CL bits - simulated
16602
16602
16602
SMALL
LARGE-S
LARGE-N

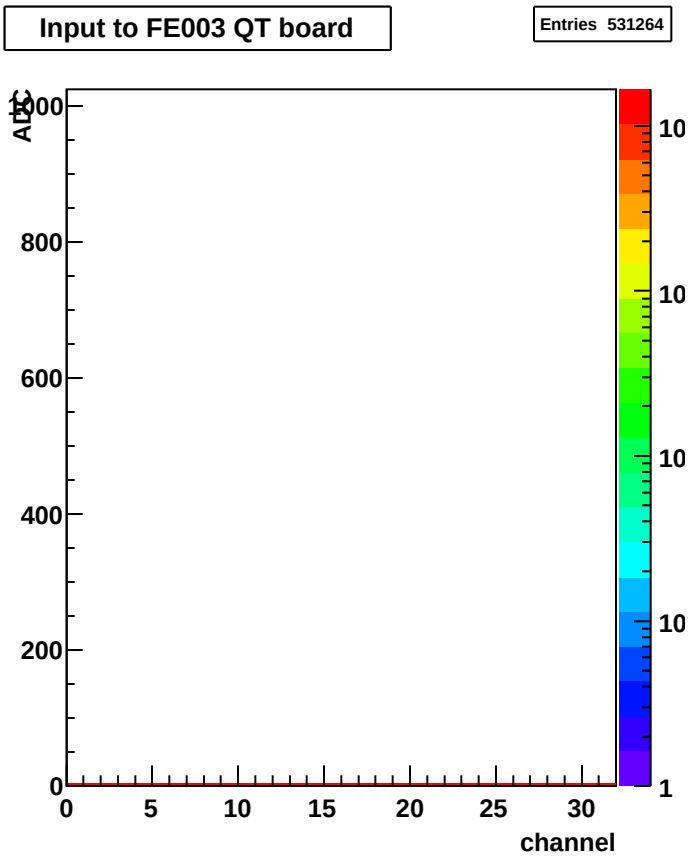

Input to FPD L2 DSM
Entries 49806
HT bits
16602
16602
16602
SMALL
LARGE-S
LARGE-N

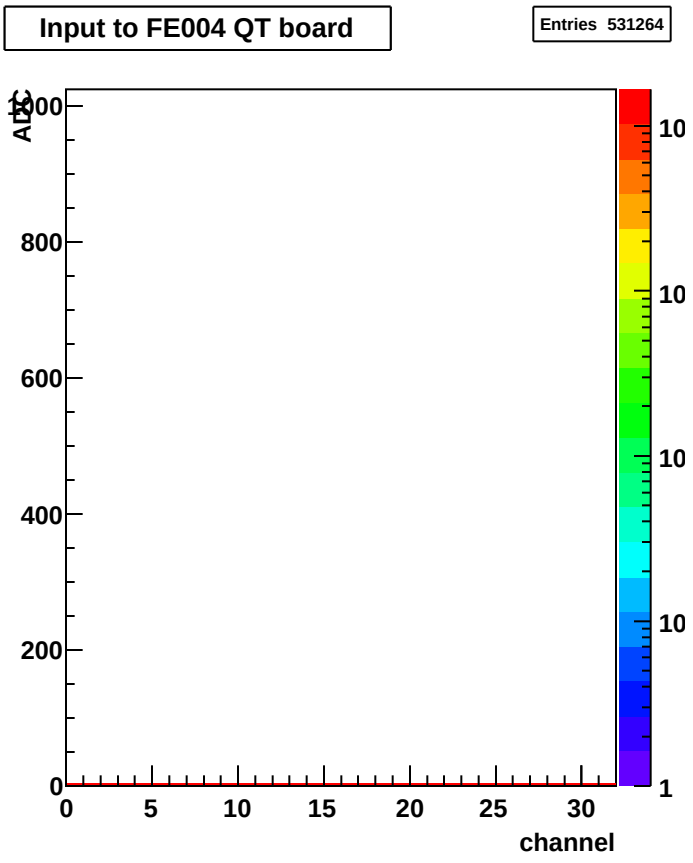

Input to FPD L2 DSM
Entries 49806
HT bits - simulated
16602
16602
16602
SMALL
LARGE-S
LARGE-N

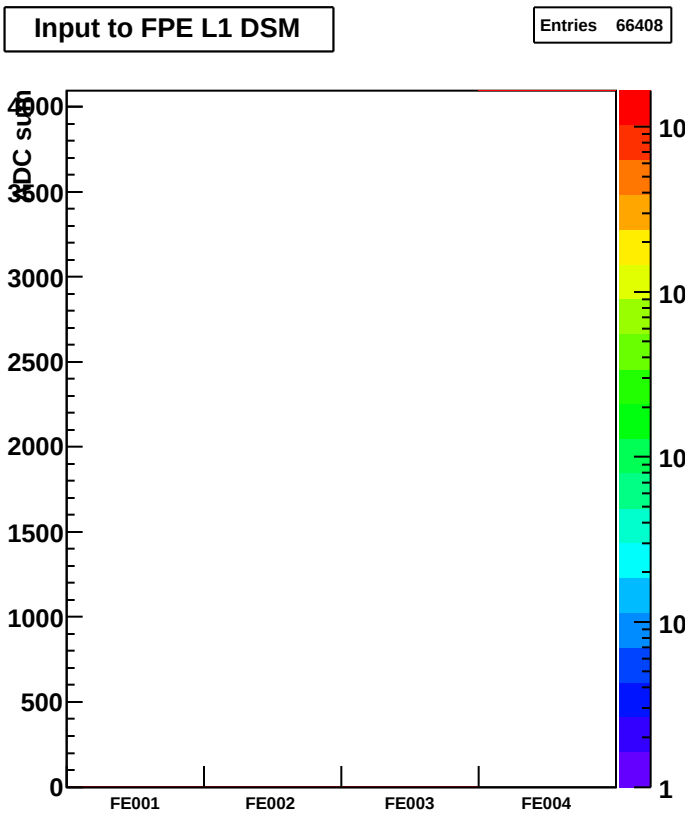

Input to FPD L2 DSM
Entries 99612
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

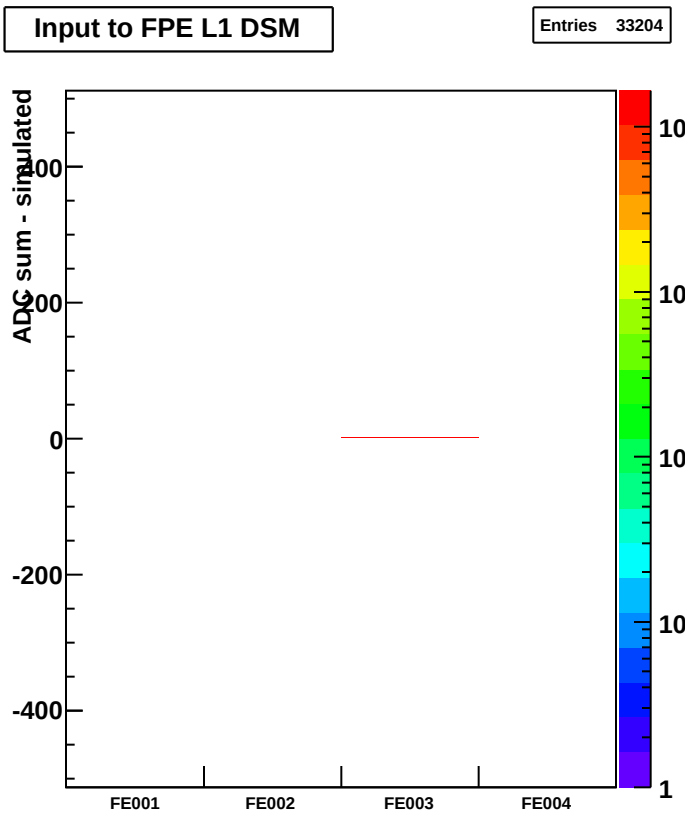

Input to FE001 QT board
Entries 531264
ADC
channel

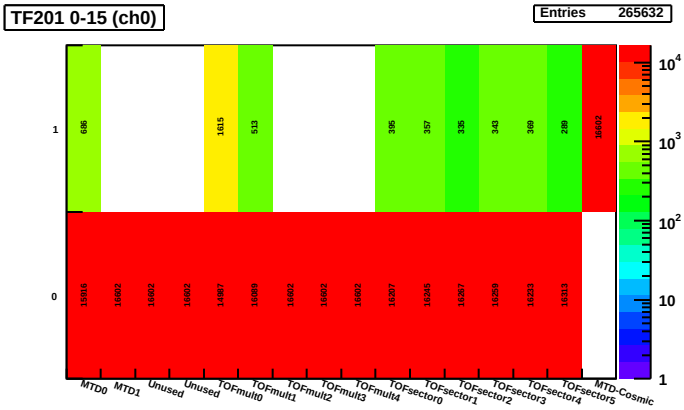

Input to FE002 QT board
Entries 531264
ADC
channel

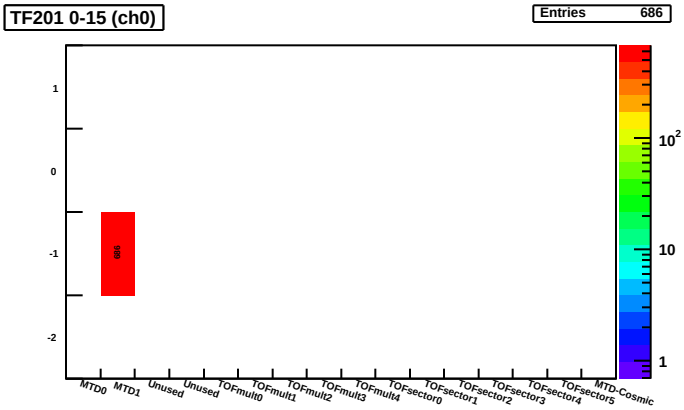

Input to FE003 QT board
Entries 531264
ADC
channel

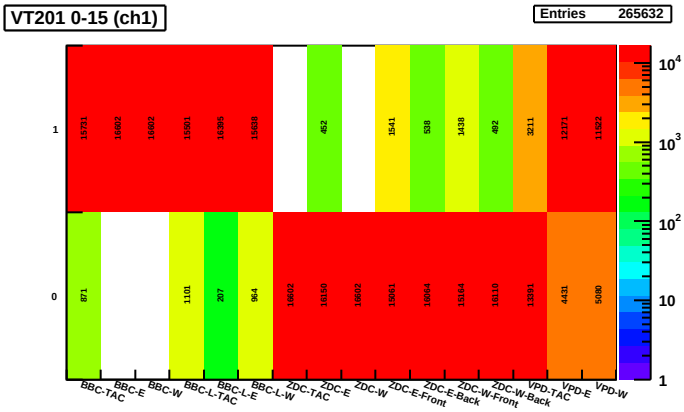

Input to FE004 QT board
Entries 531264
ADC
channel

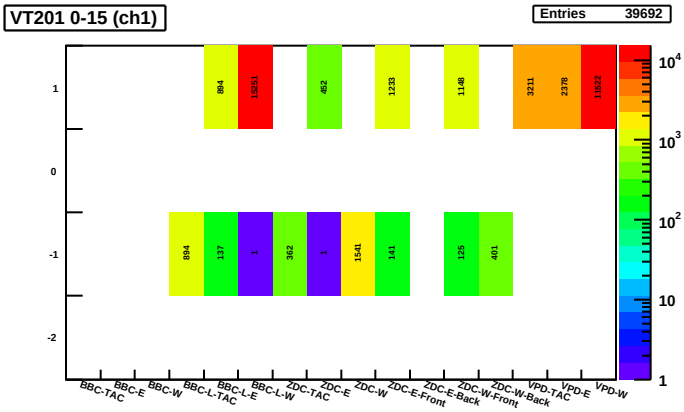

Input to FPE L1 DSM
Entries 66408
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1

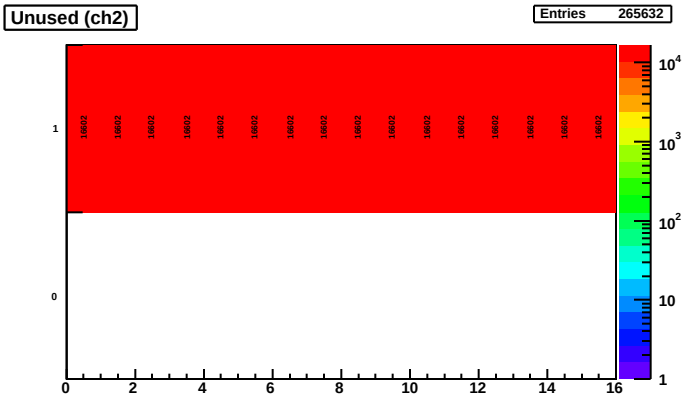

Input to FPE L1 DSM
Entries 33204
ADC sum - simulated
200
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1

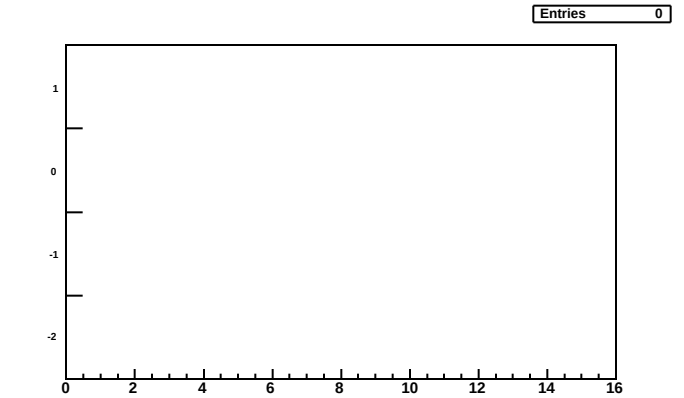

TF201 0-15 (ch0)
Entries 265632
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

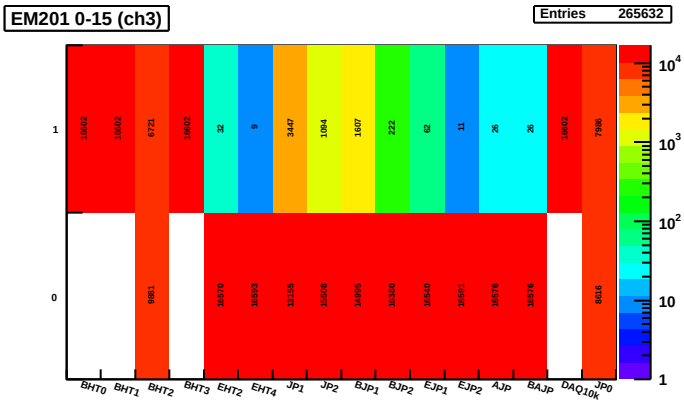

TF201 0-15 (ch0)
Entries 686
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

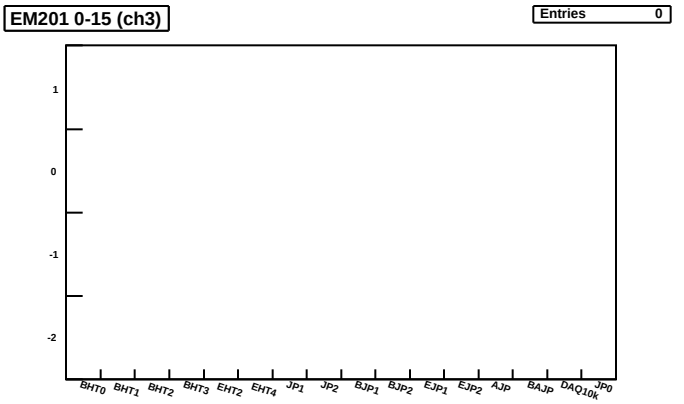

VT201 0-15 (ch1)
Entries 265632
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 39692
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

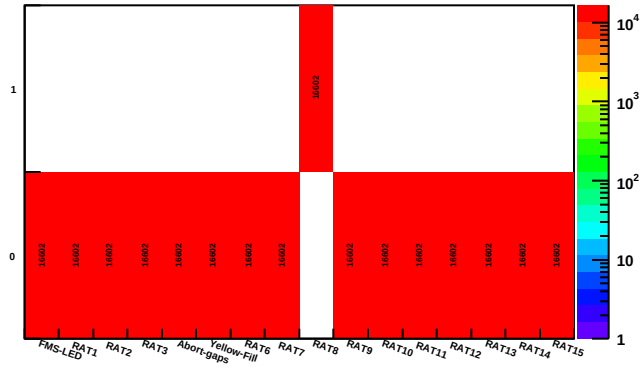

Unused (ch2)
Entries 265632

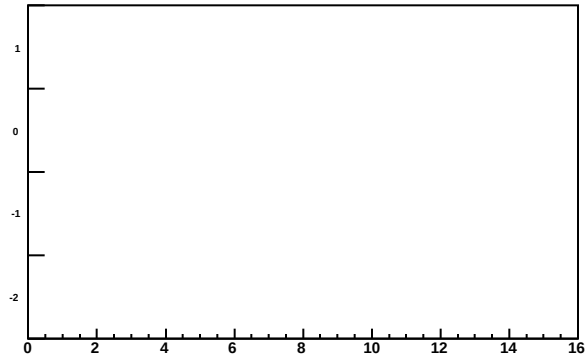

Entries 0


EM201 0-15 (ch3)
Entries 265632
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

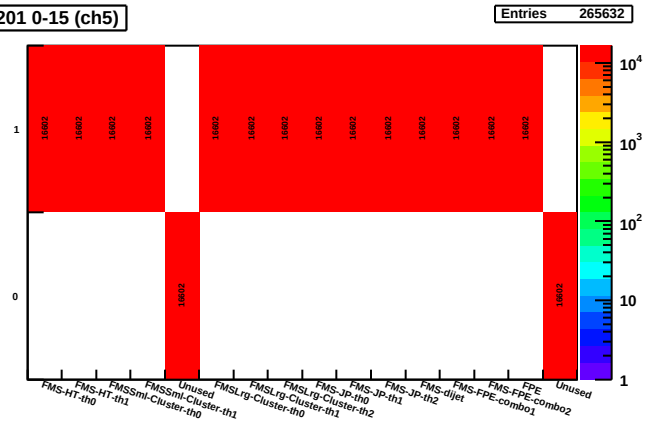

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

RAT board (ch4)

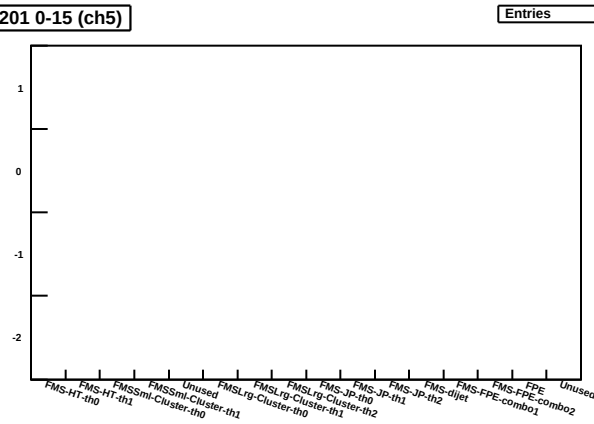




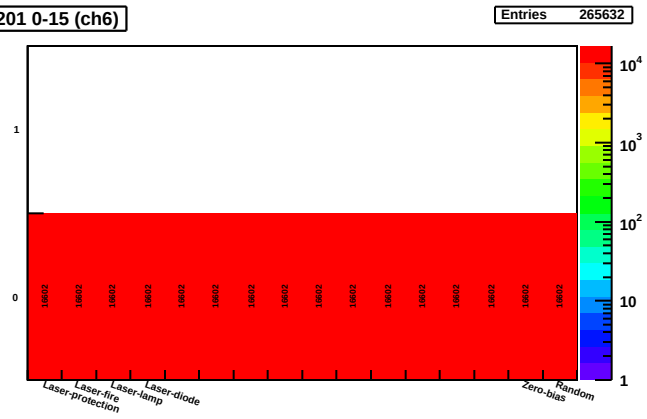
FP201 0-15 (ch5)

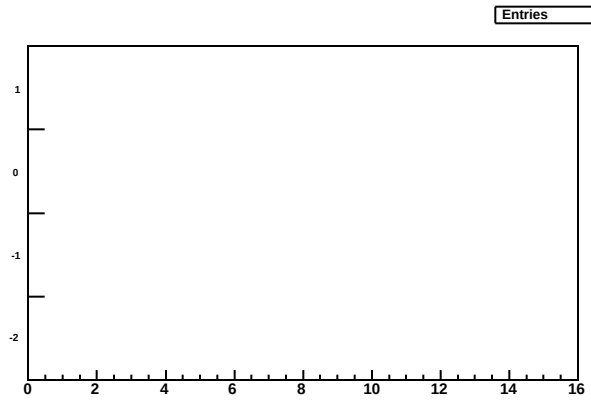
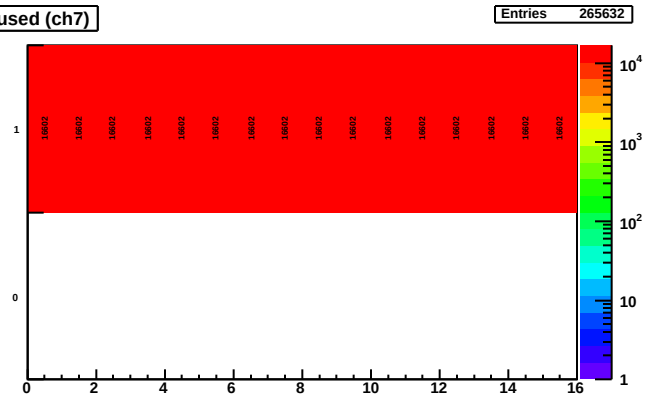
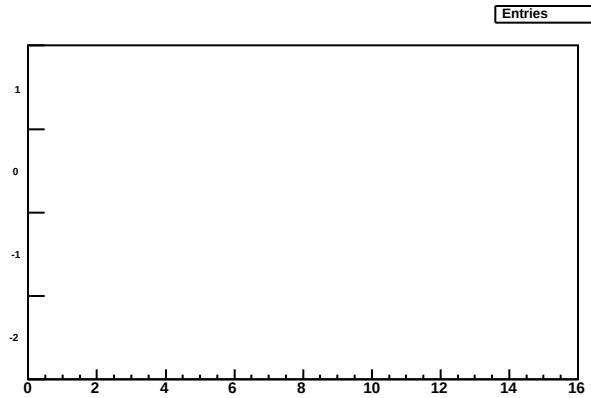


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)