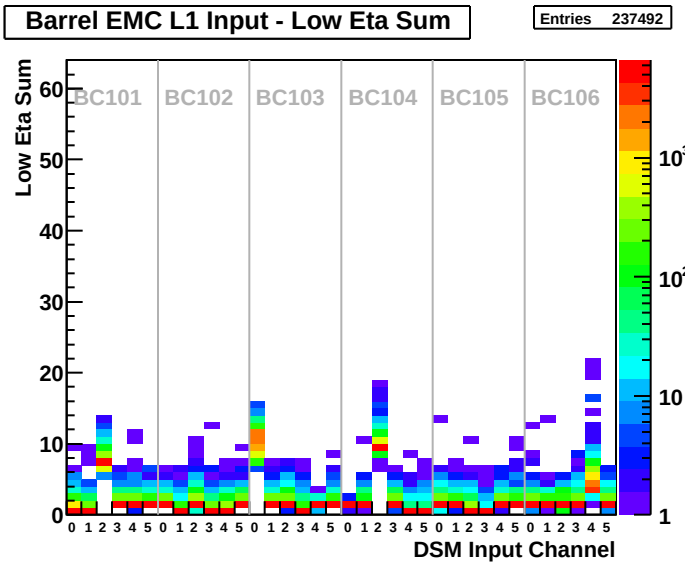
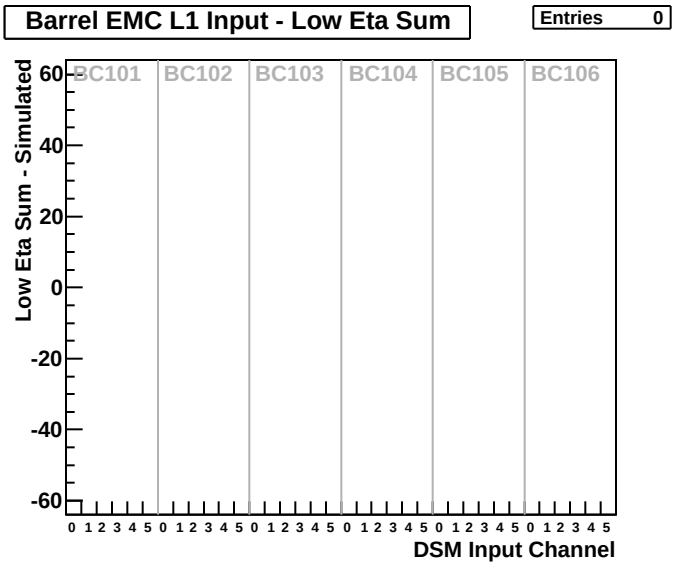
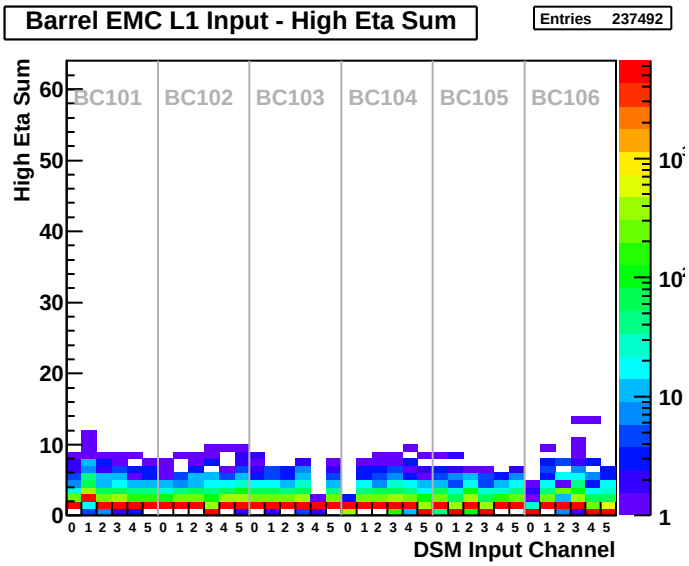
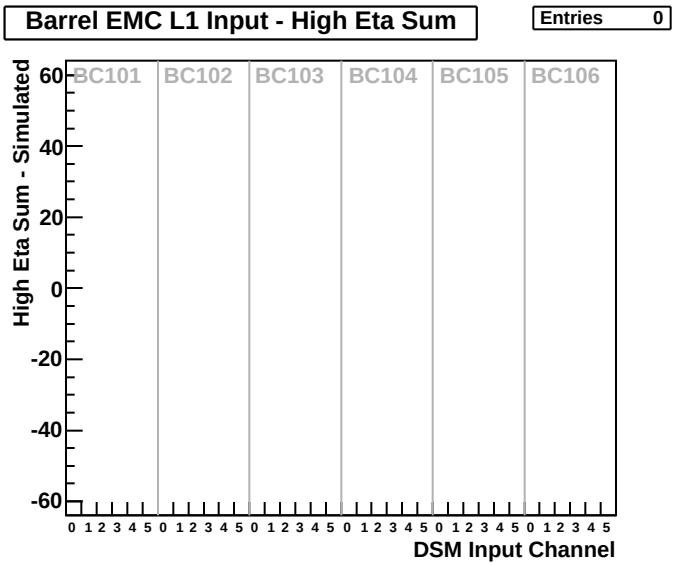
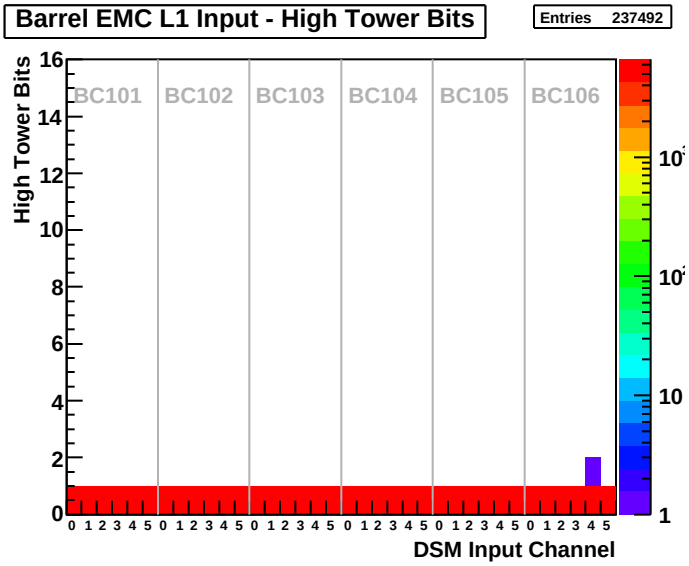
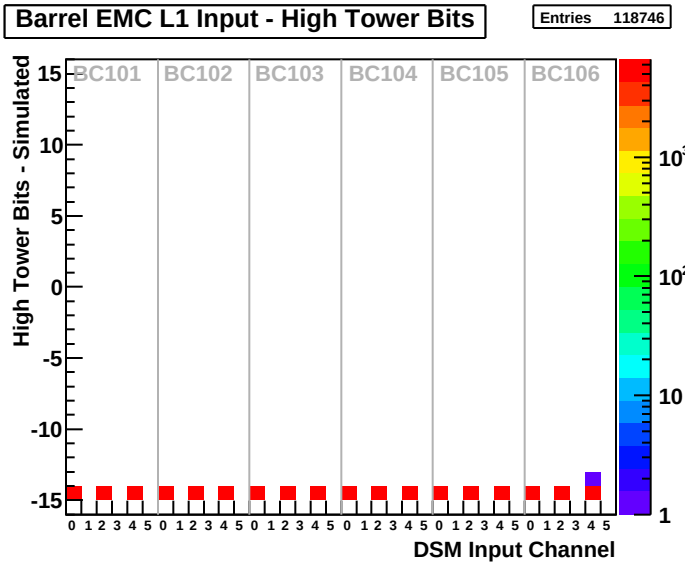

Barrel EMC L1 Input - Low Eta Sum
Entries 237492
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

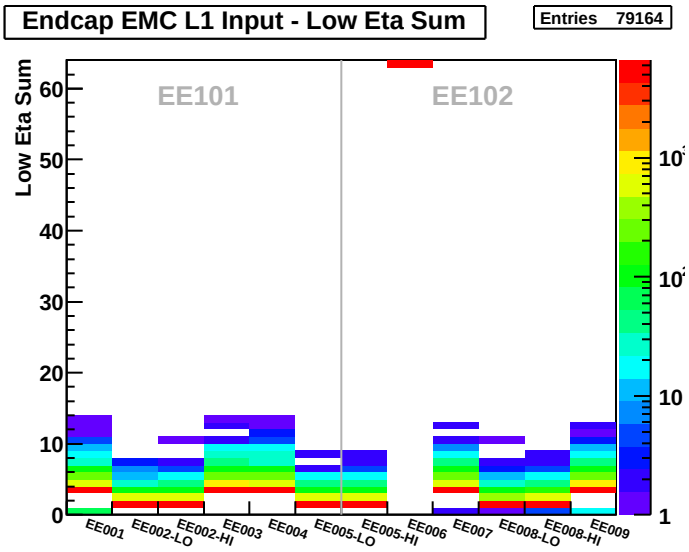

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

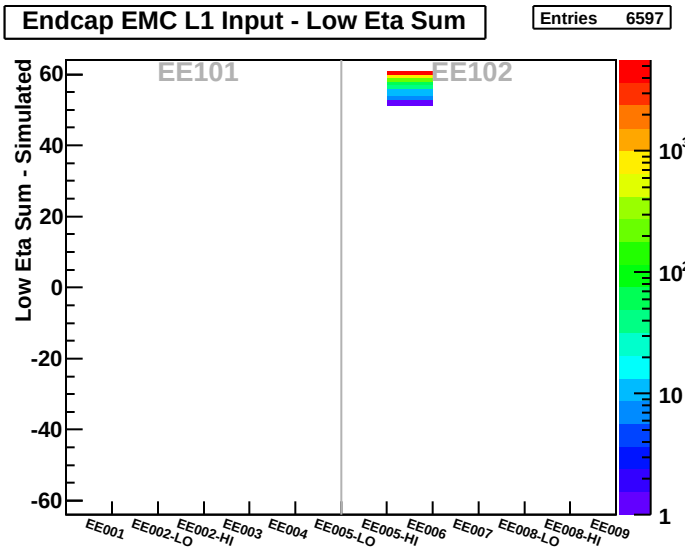

Barrel EMC L1 Input - High Eta Sum
Entries 237492
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

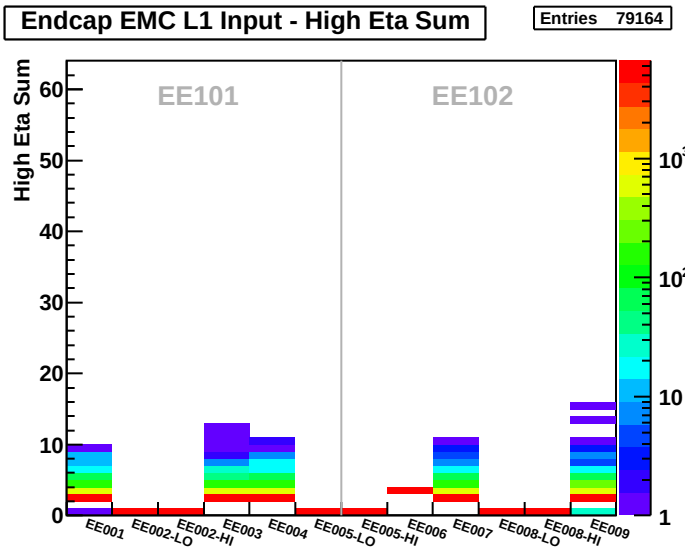

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

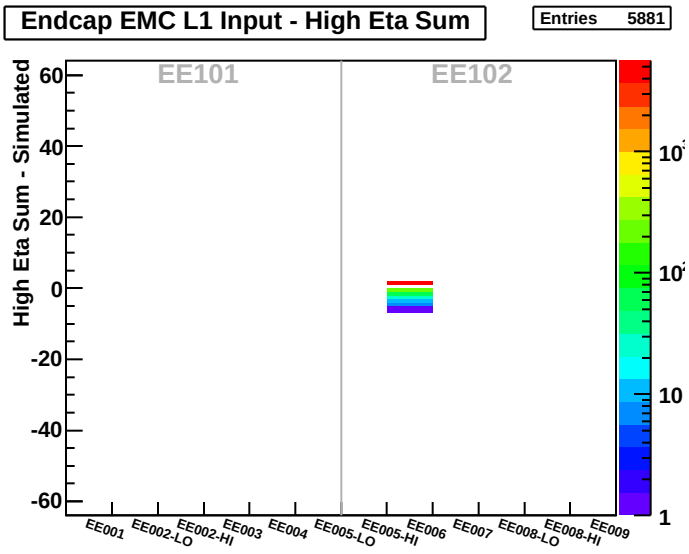

Barrel EMC L1 Input - High Tower Bits
Entries 237492
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

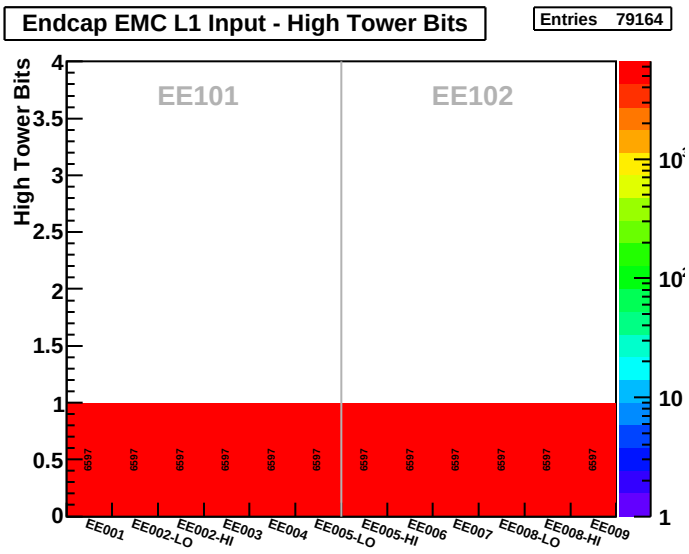

Barrel EMC L1 Input - High Tower Bits
Entries 118746
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

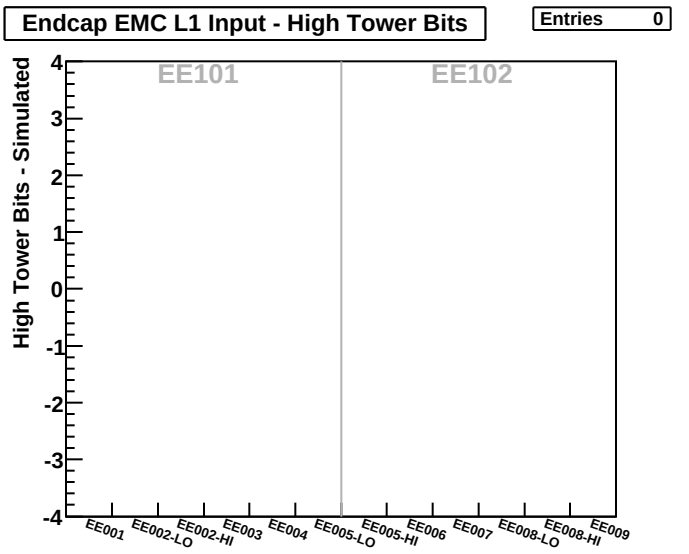

Endcap EMC L1 Input - Low Eta Sum
Entries 79164
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

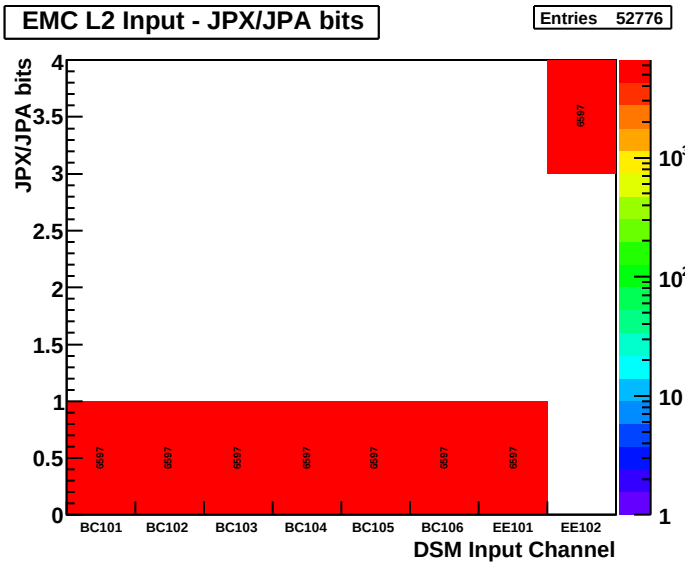

Endcap EMC L1 Input - Low Eta Sum
Entries 6597
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

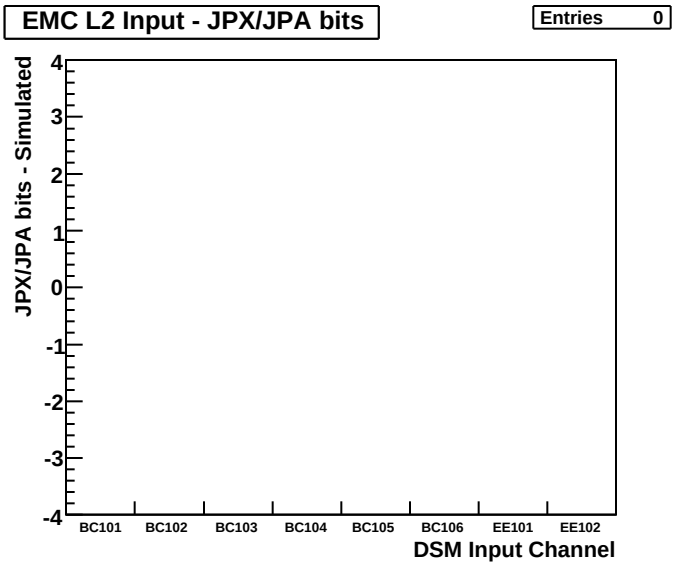

Endcap EMC L1 Input - High Eta Sum
Entries 79164
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

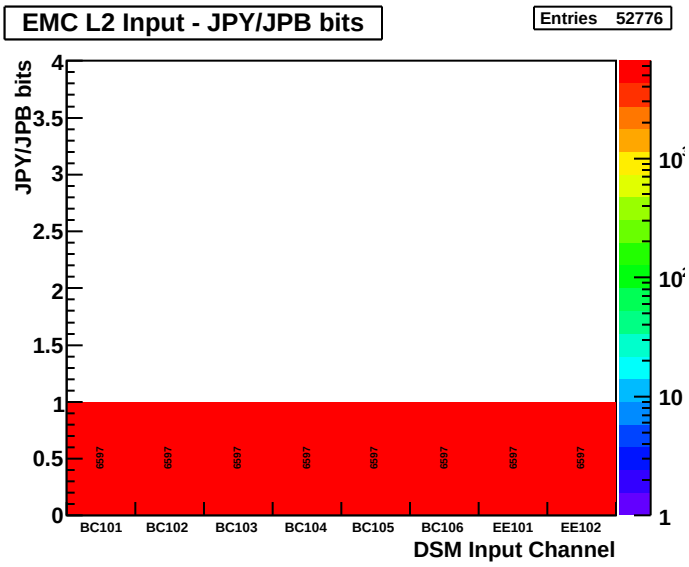

Endcap EMC L1 Input - High Eta Sum
Entries 5881
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

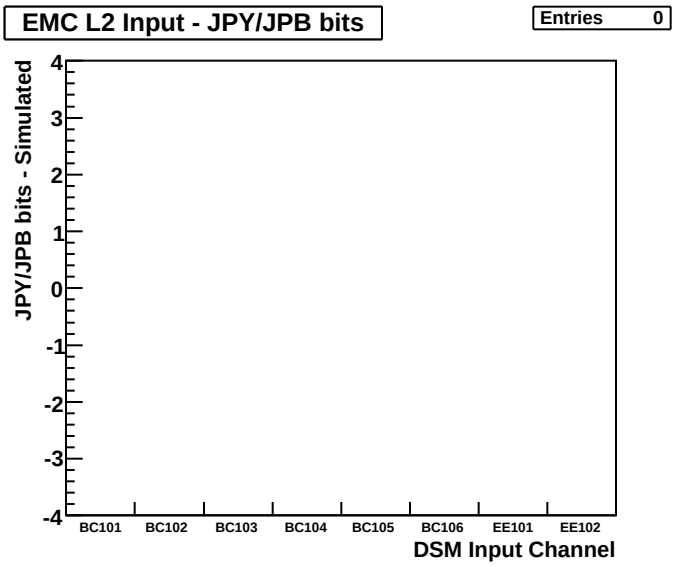

Endcap EMC L1 Input - High Tower Bits
Entries 79164
High Tower Bits
EE101
EE102
6597
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

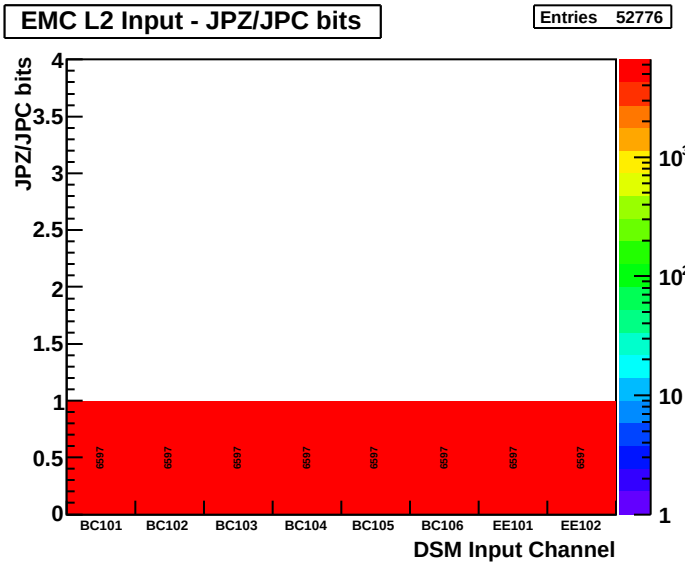

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

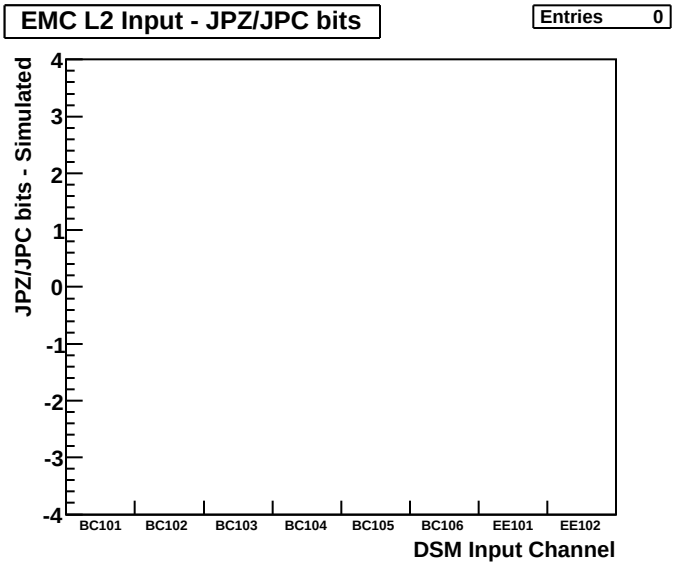

EMC L2 Input - JPX/JPA bits
Entries 52776
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
6597

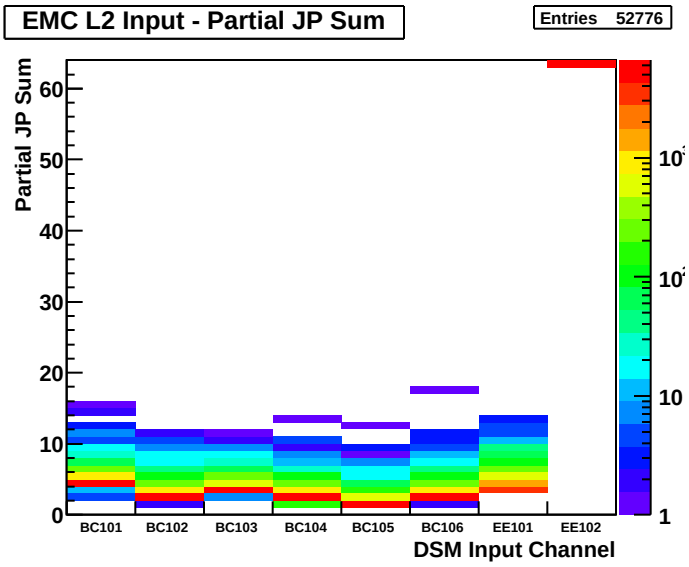

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

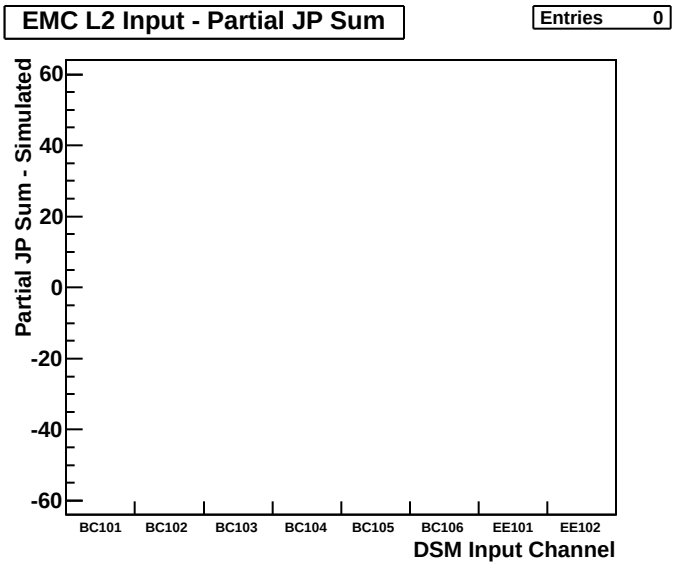

EMC L2 Input - JPY/JPB bits
Entries 52776
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
6597

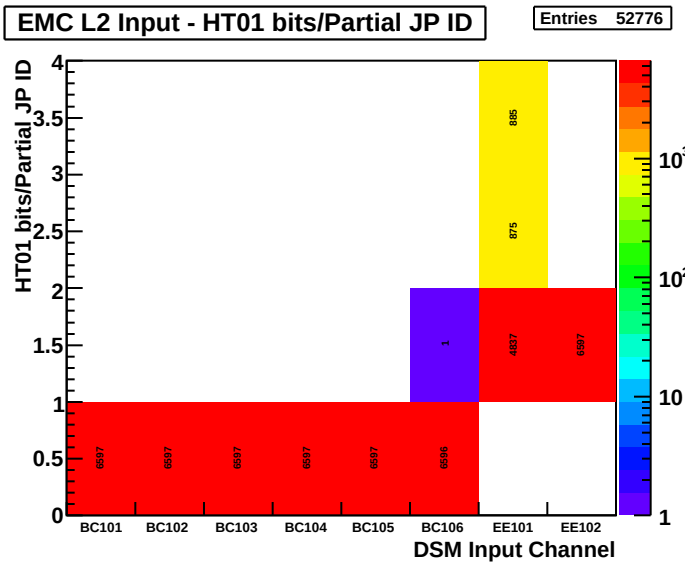

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

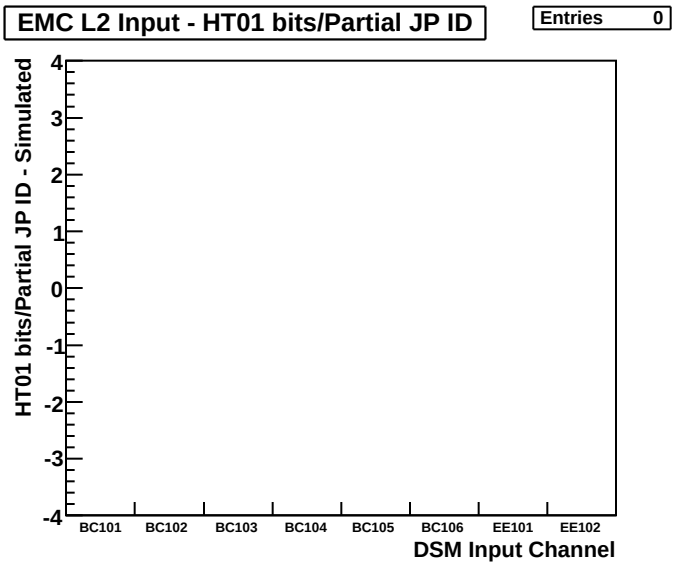

EMC L2 Input - JPZ/JPC bits
Entries 52776
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
6597

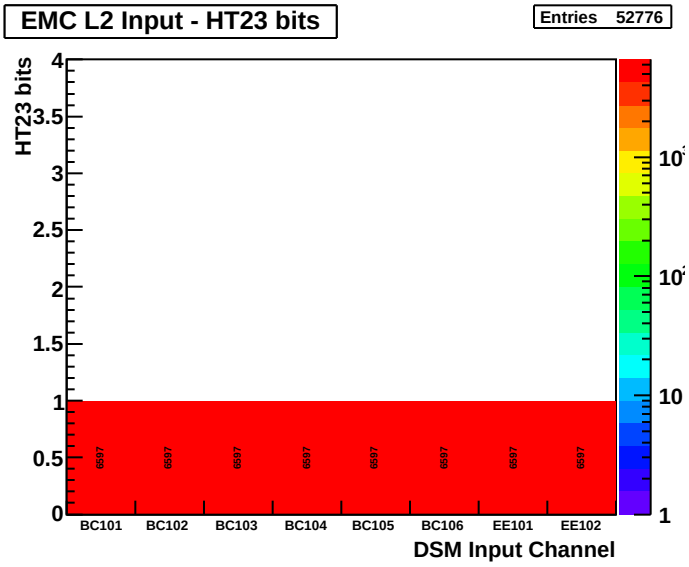

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

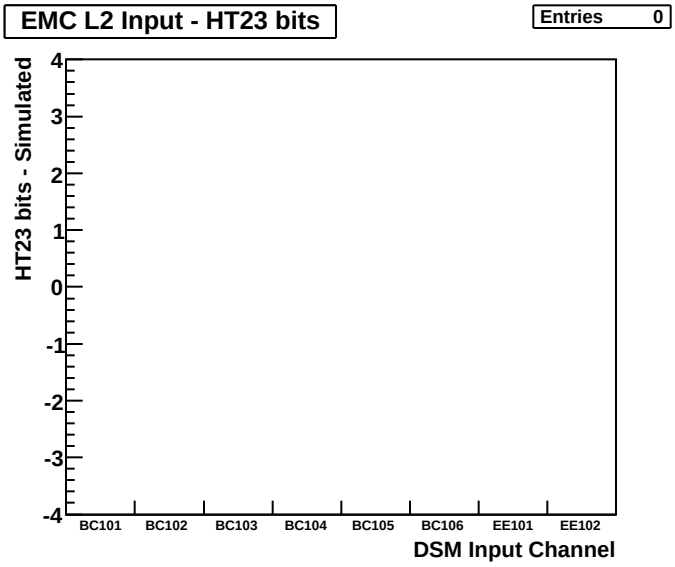

EMC L2 Input - Partial JP Sum
Entries 52776
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

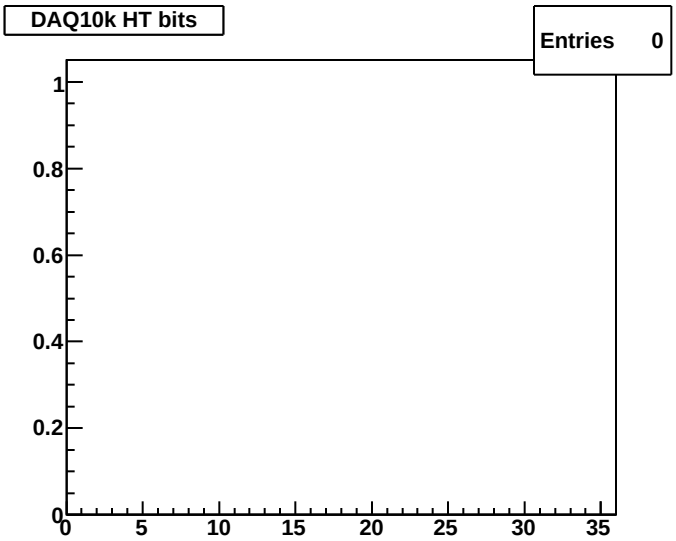

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

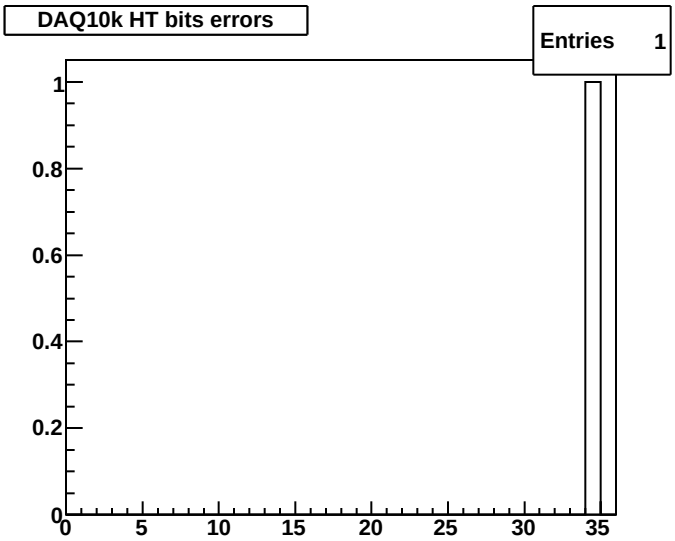

EMC L2 Input - HT01 bits/Partial JP ID
Entries 52776
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

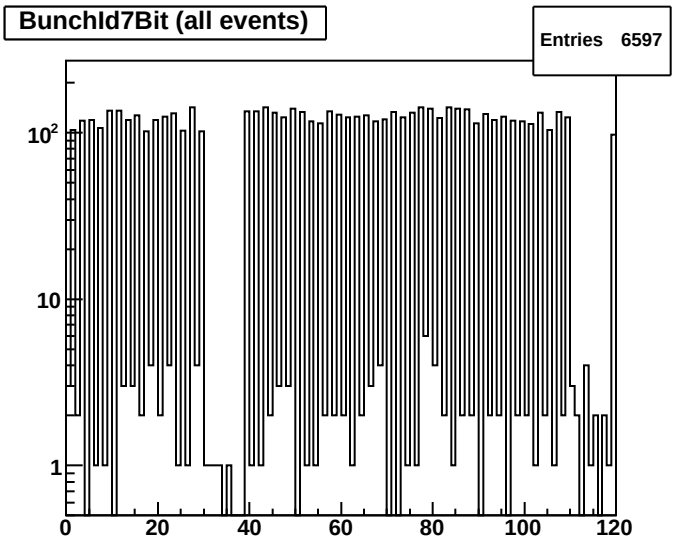

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

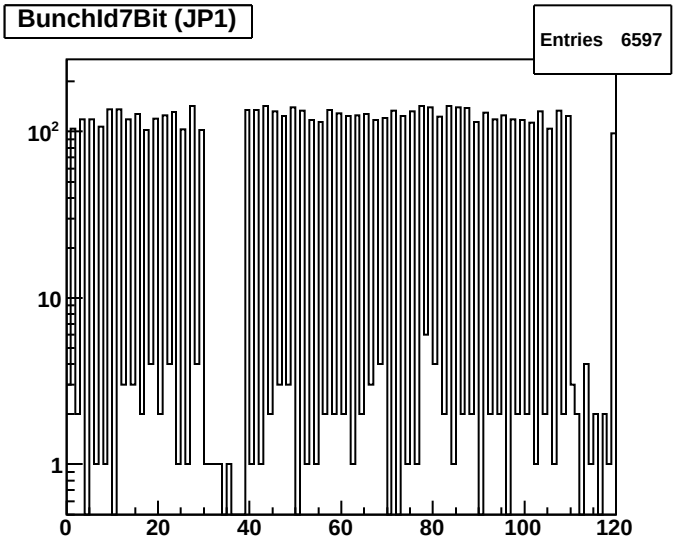

EMC L2 Input - HT23 bits
Entries 52776
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

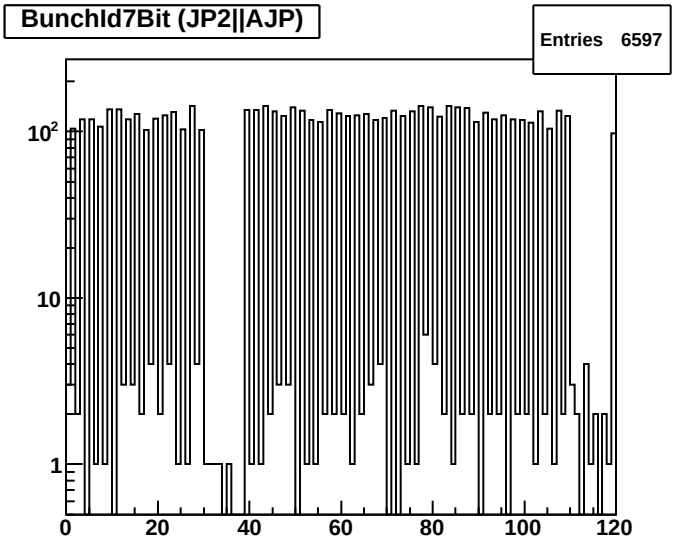

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

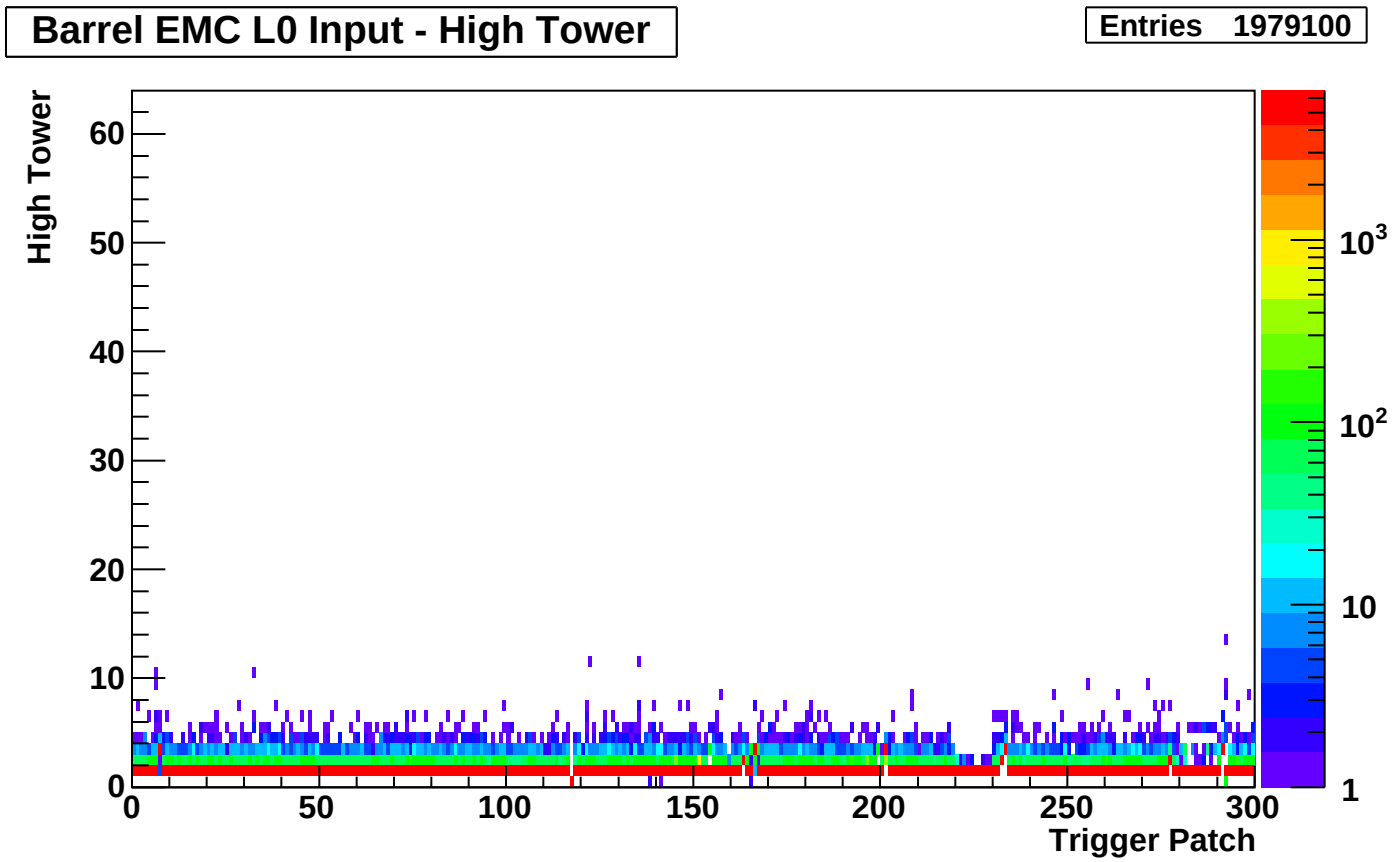

DAQ10k HT bits
Entries 0
1
0.8
0.6
0.4
0.2
0
0 5 10 15 20 25 30 35

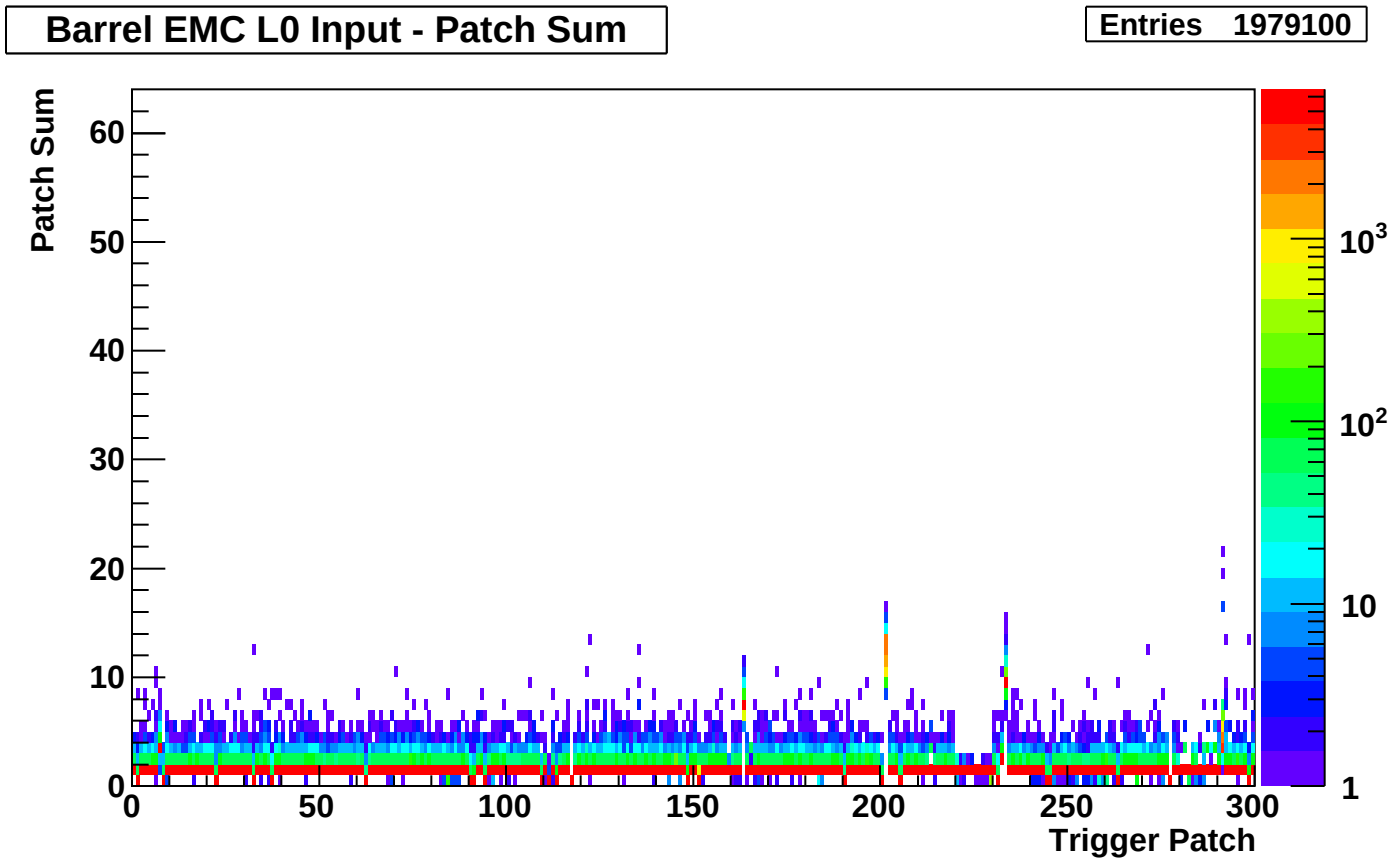

DAQ10k HT bits errors
Entries 1
1
0.8
0.6
0.4
0.2
0
0 5 10 15 20 25 30 35

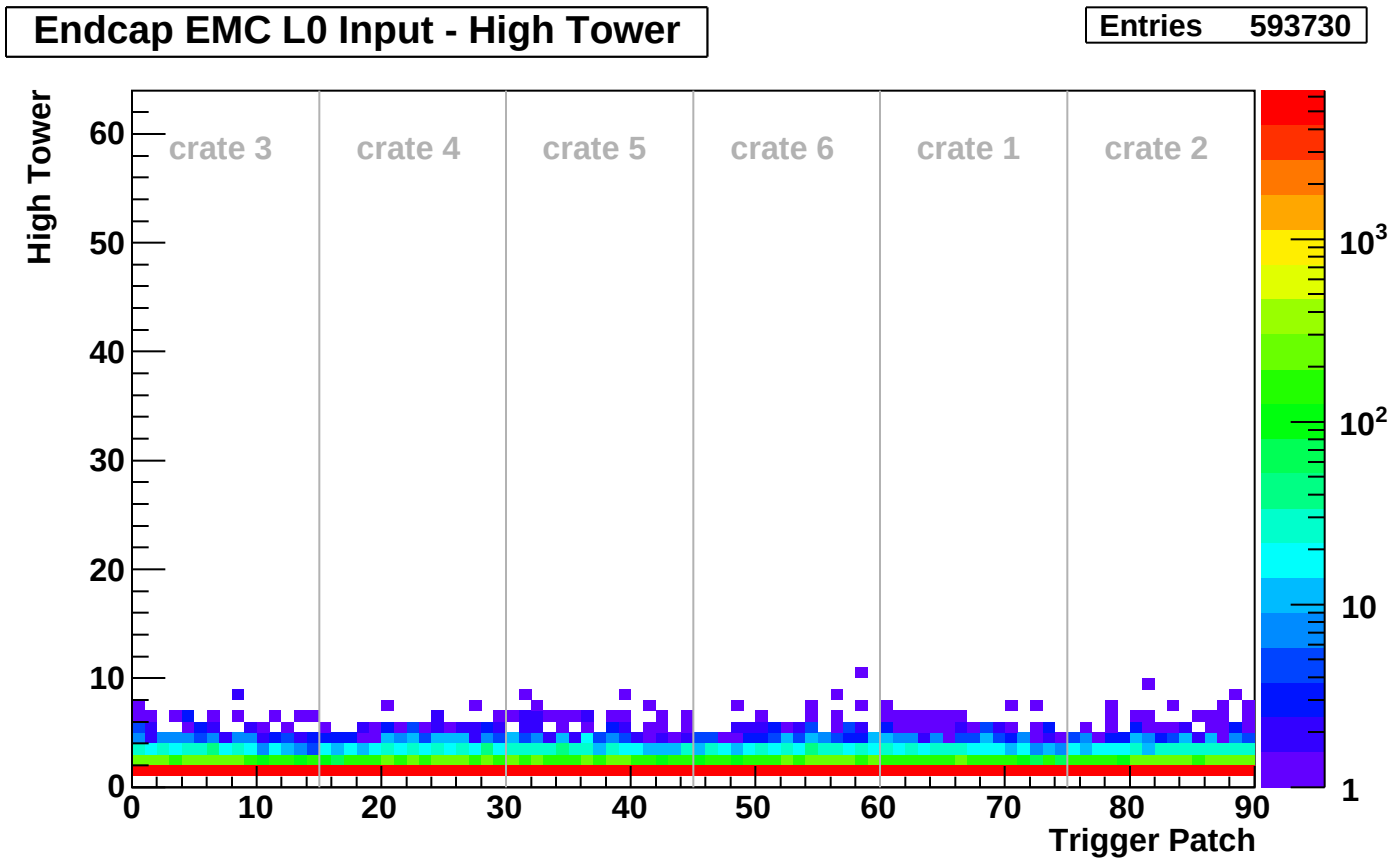

BunchId7Bit (all events)
Entries 6597
10²
10
1
0 20 40 60 80 100 120

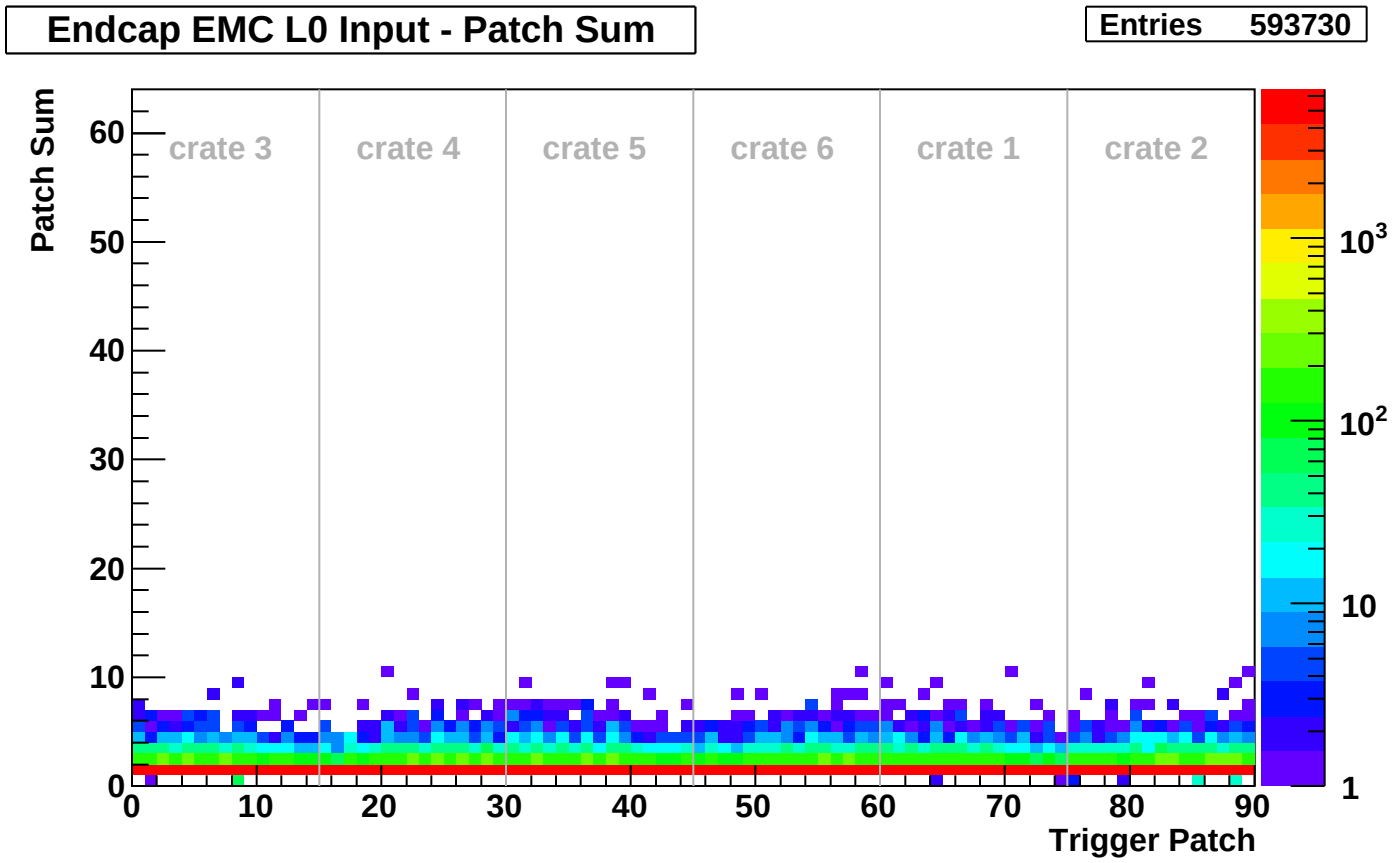

BunchId7Bit (JP1)
Entries 6597
10²
10
1
0 20 40 60 80 100 120

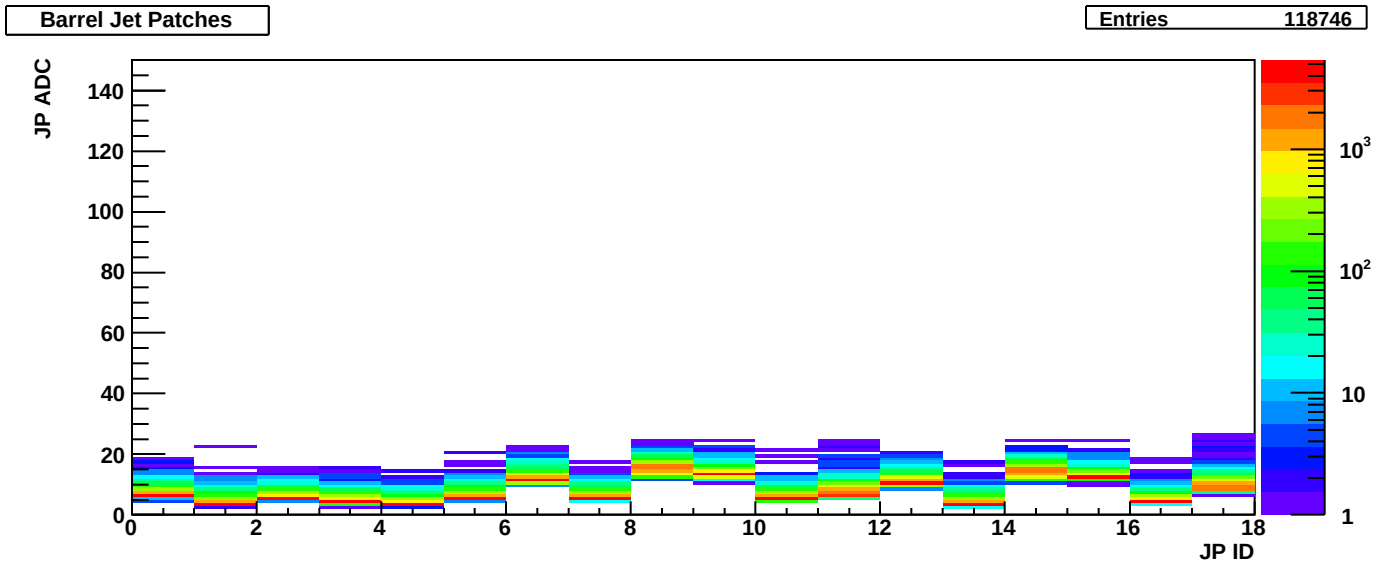

BunchId7Bit (JP2||AJP)
Entries 6597
10²
10
1
0 20 40 60 80 100 120

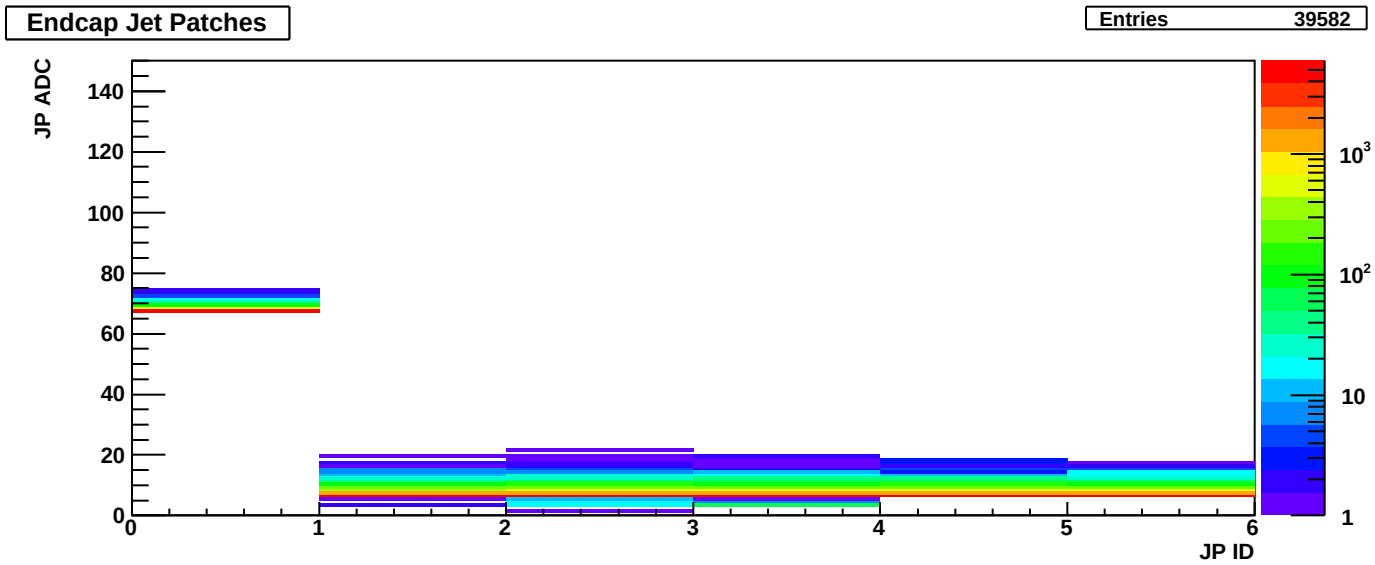

Barrel EMC L0 Input - High Tower
Entries 1979100
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

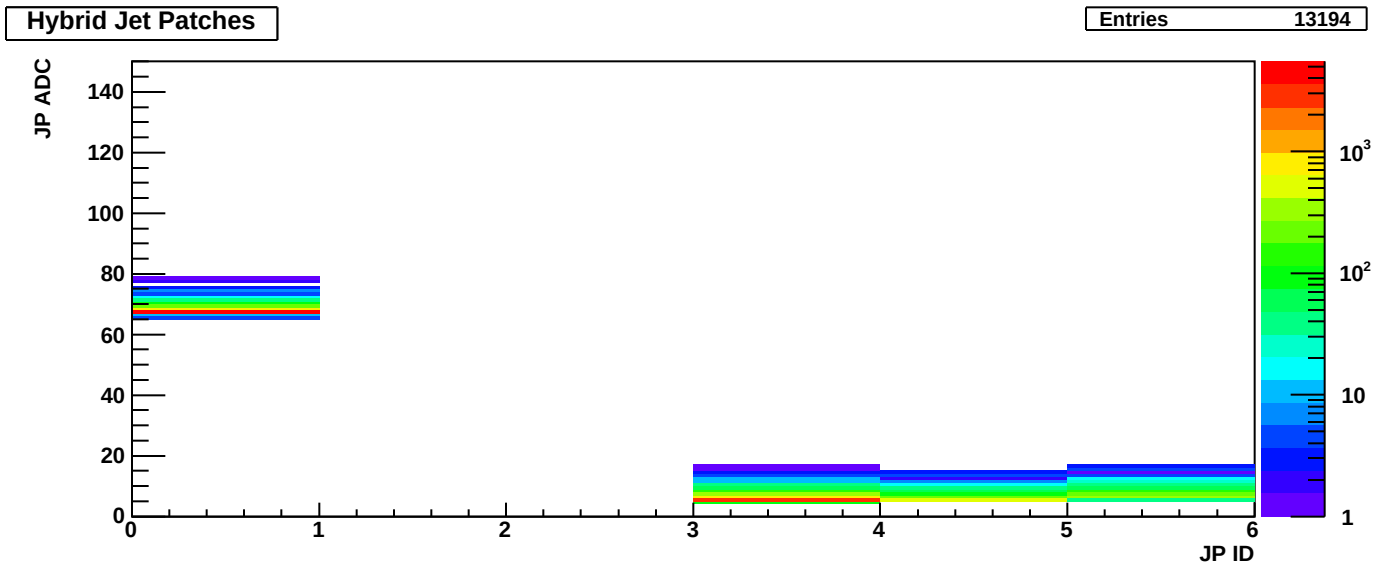

Barrel EMC L0 Input - Patch Sum
Entries 1979100
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

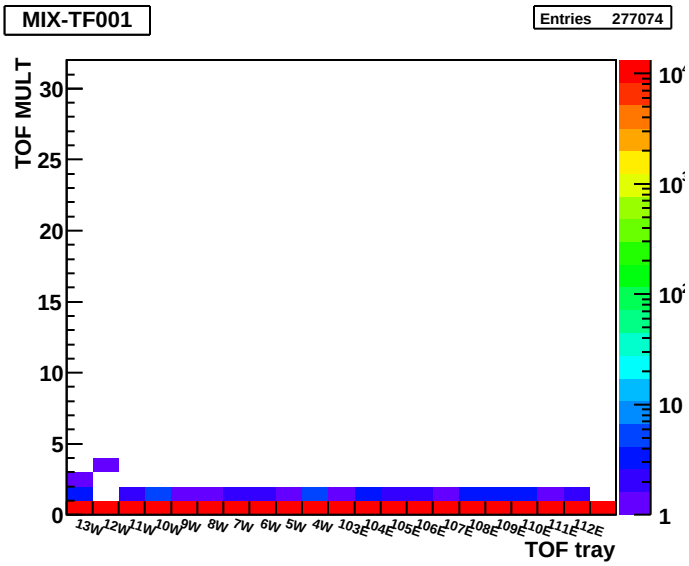

Endcap EMC L0 Input - High Tower
Entries 593730
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

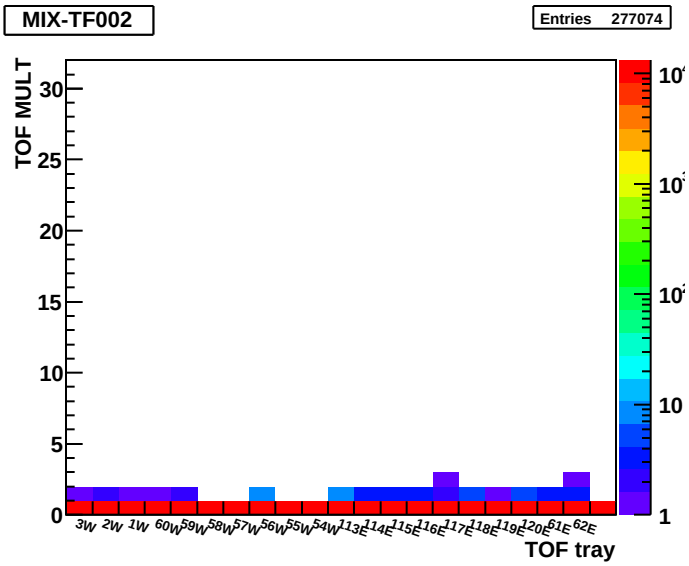

Endcap EMC L0 Input - Patch Sum
Entries 593730
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

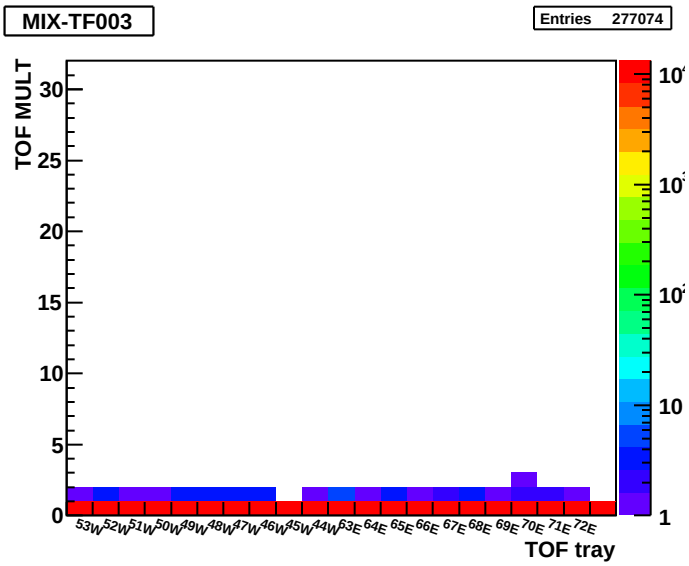

Barrel Jet Patches
Entries 118746
JP ADC
JP ID

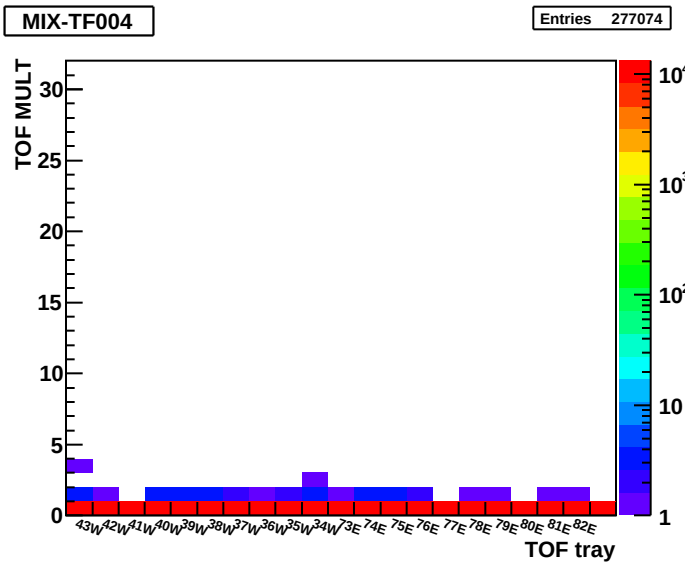

Endcap Jet Patches
Entries 39582
JP ADC
JP ID

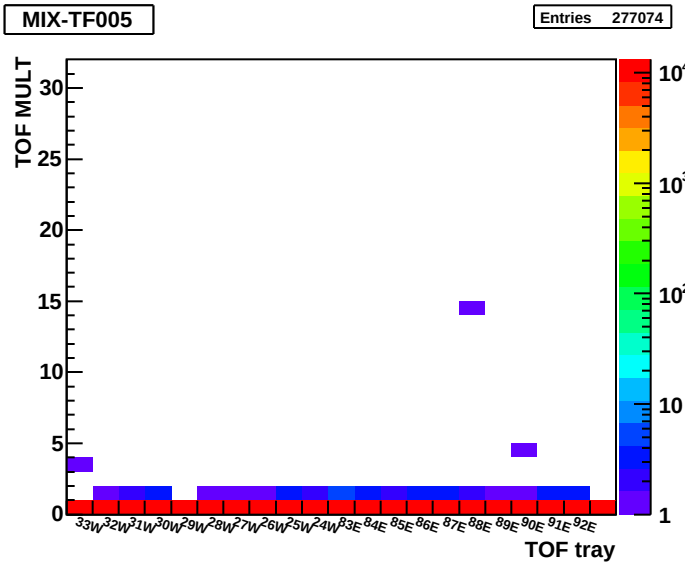

Hybrid Jet Patches
Entries 13194
JP ADC
JP ID

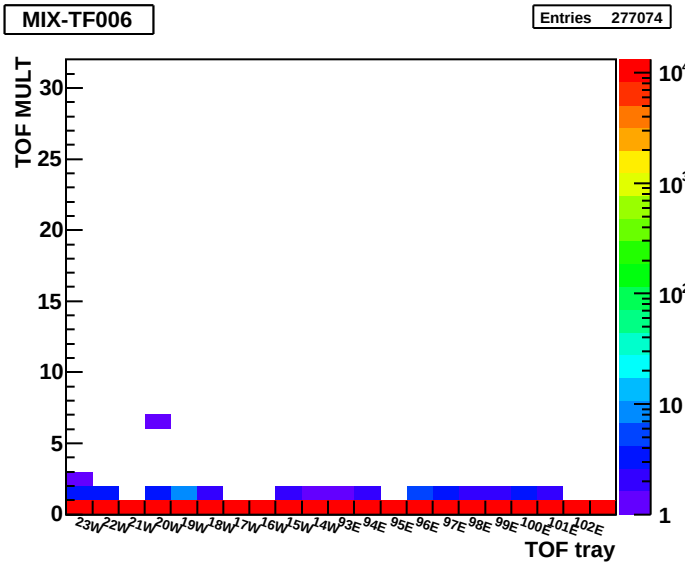

MIX-TF001
Entries 277074
TOF MULT
TOF tray

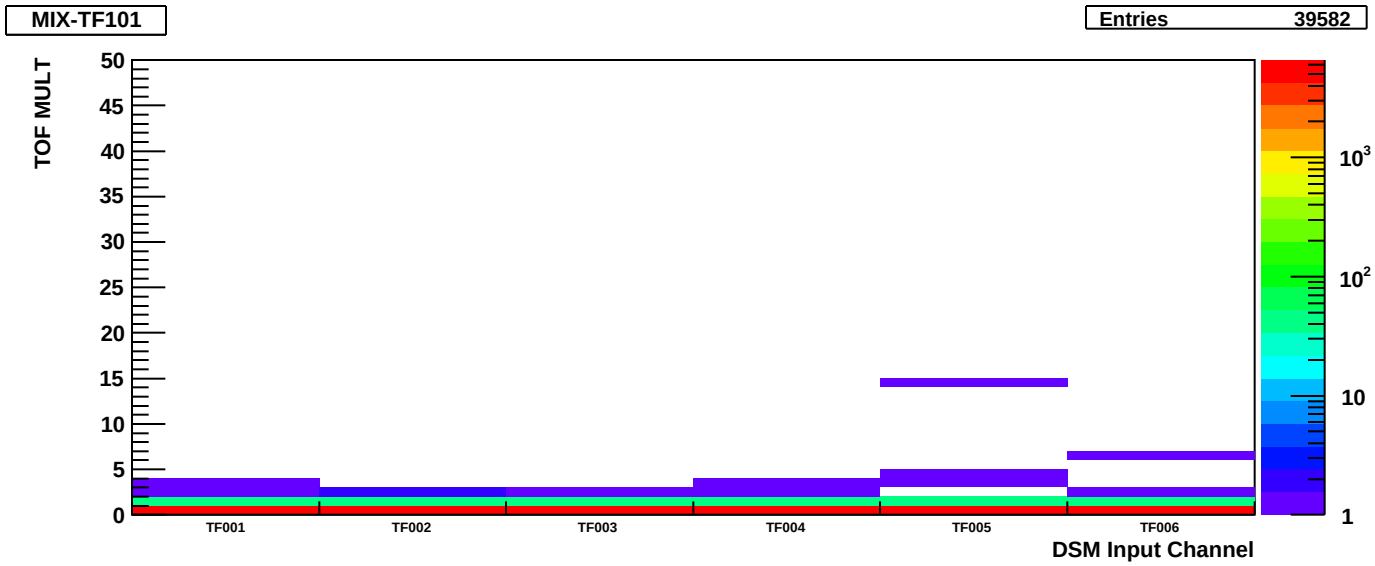

MIX-TF002
Entries 277074
TOF MULT
TOF tray

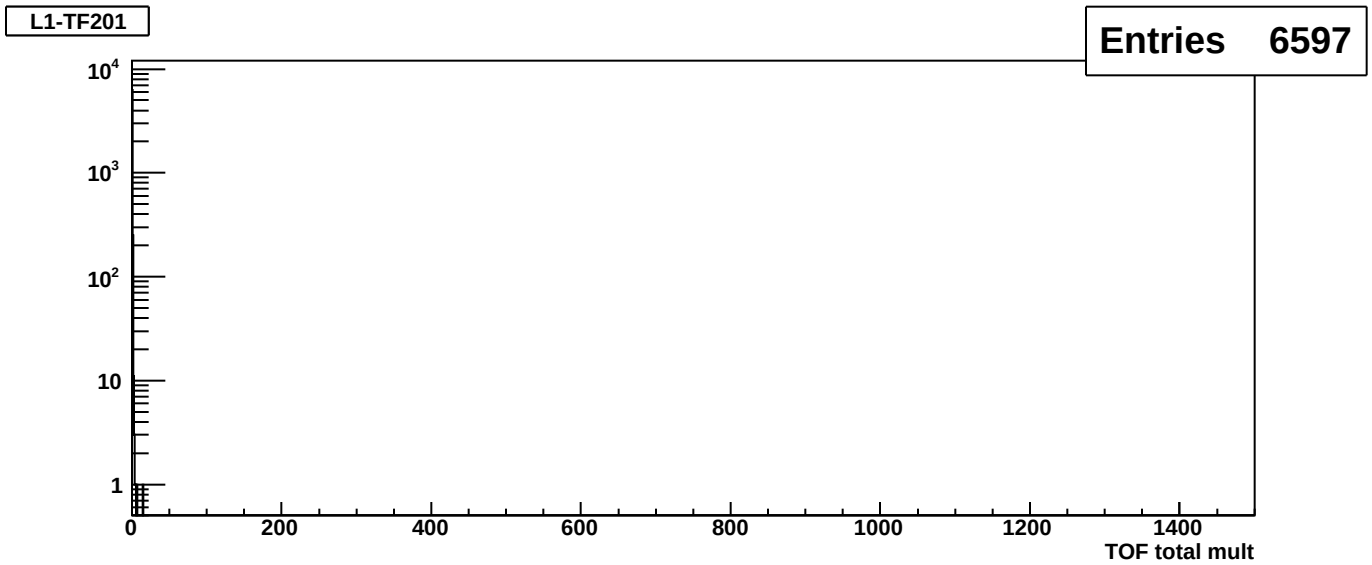

MIX-TF003
Entries 277074
TOF MULT
TOF tray

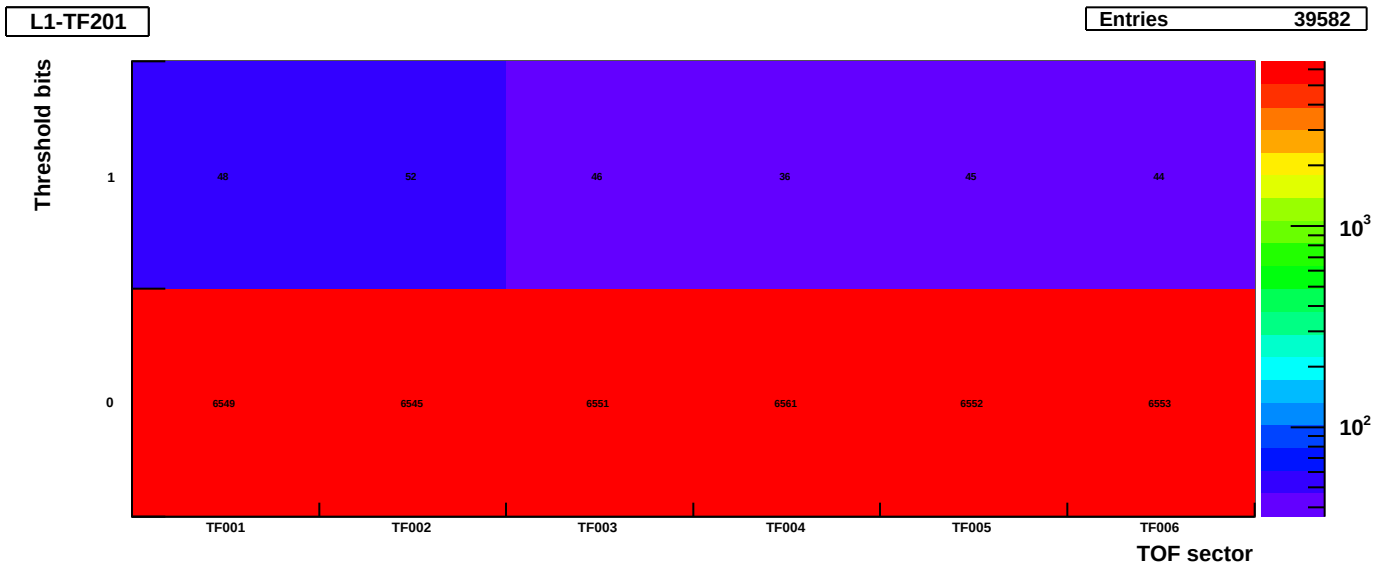

MIX-TF004
Entries 277074
TOF MULT
TOF tray

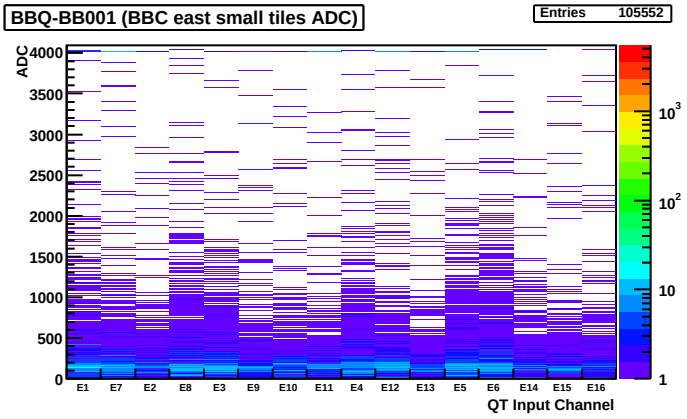

MIX-TF005
Entries 277074
TOF MULT
TOF tray

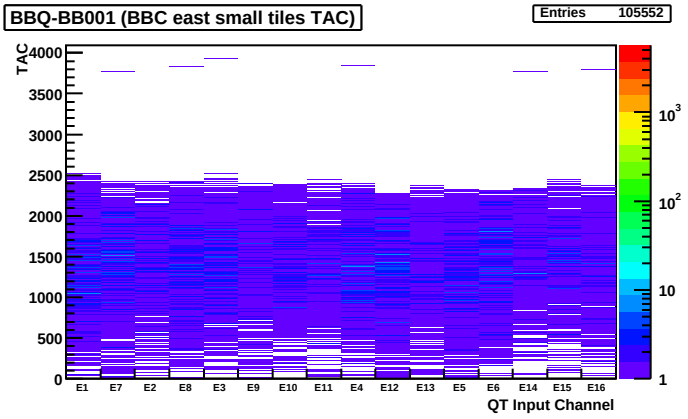

MIX-TF006
Entries 277074
TOF MULT
TOF tray

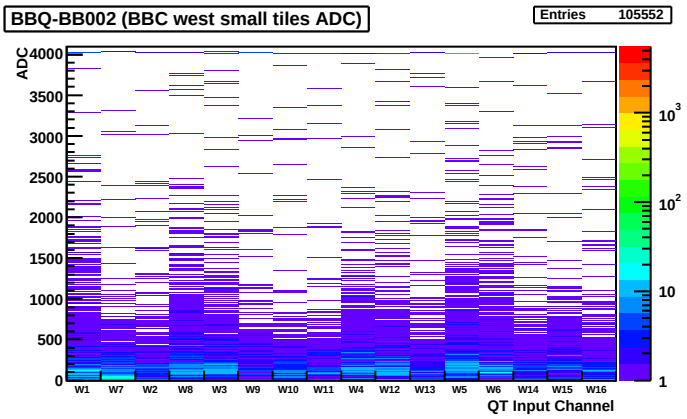

MIX-TF101
Entries 39582
TOF MULT
50
45
40
35
30
25
20
15
10
5
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^3
10^2
10
1

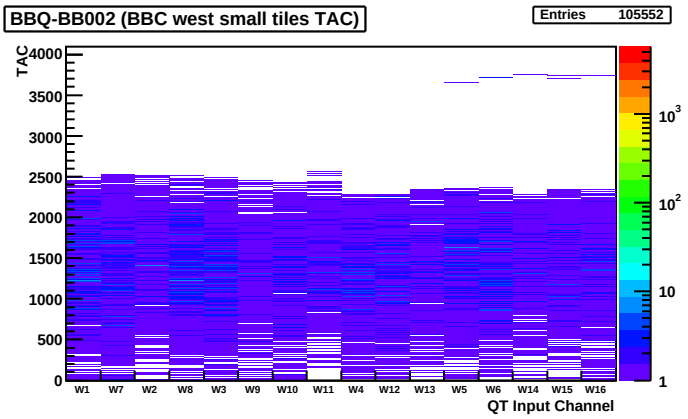

L1-TF201
Entries 6597
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
TOF total mult

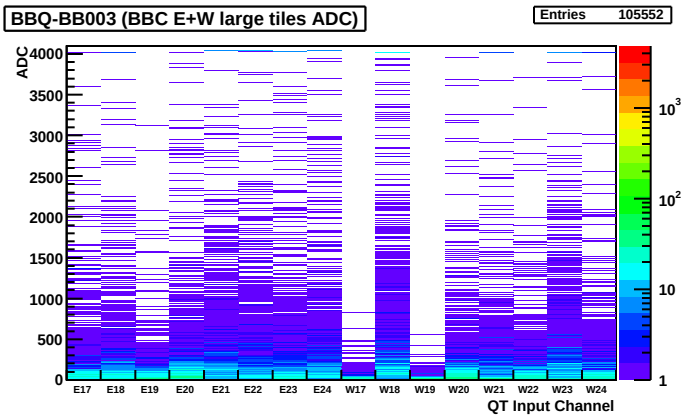

L1-TF201
Entries 39582
Threshold bits
1
0
48
52
46
36
45
44
6549
6545
6551
6561
6552
6553
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^3
10^2

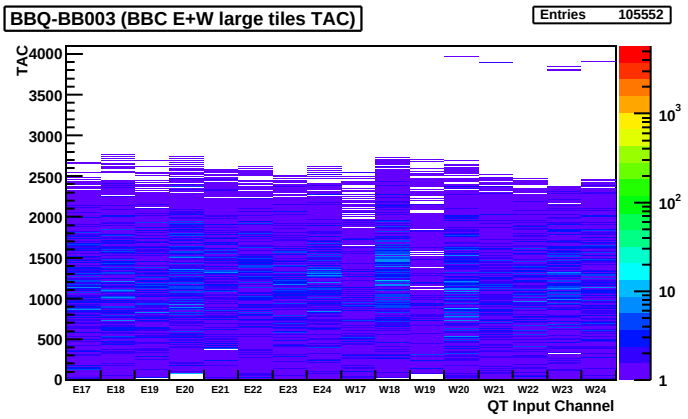

BBQ-BB001 (BBC east small tiles ADC)
Entries 105552
ADC
QT Input Channel

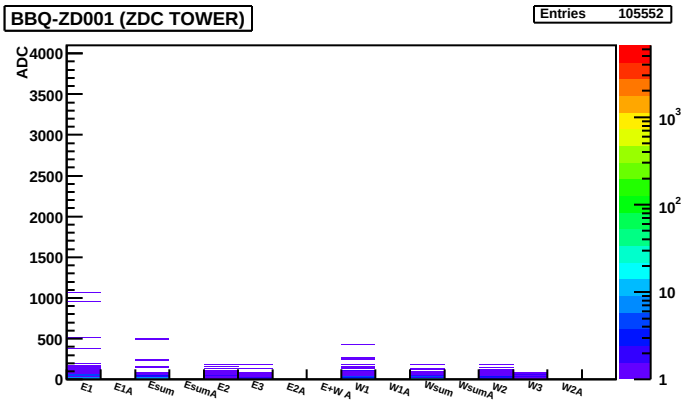

BBQ-BB001 (BBC east small tiles TAC)
Entries 105552
TAC
QT Input Channel

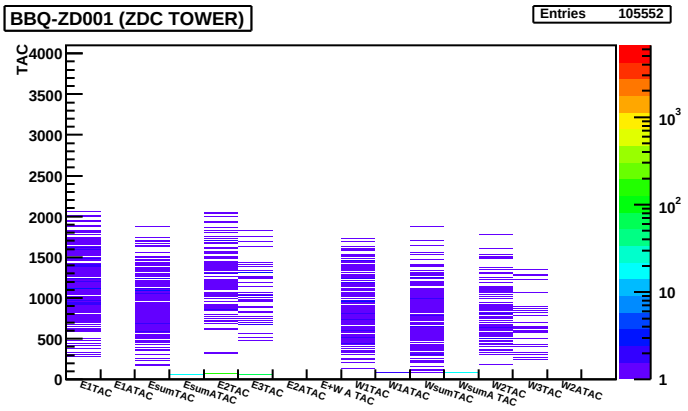

BBQ-BB002 (BBC west small tiles ADC)
Entries 105552
ADC
QT Input Channel

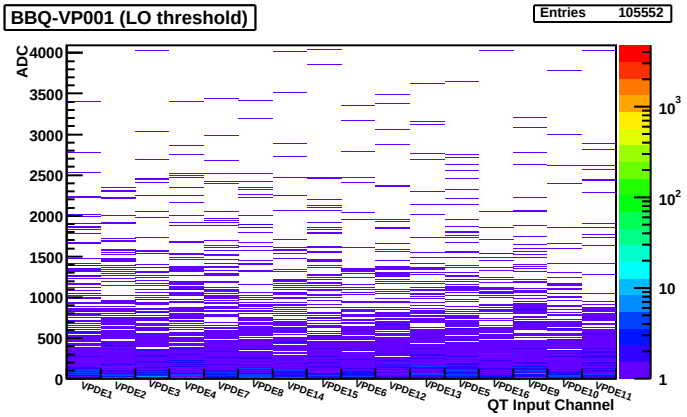

BBQ-BB002 (BBC west small tiles TAC)
Entries 105552
TAC
QT Input Channel

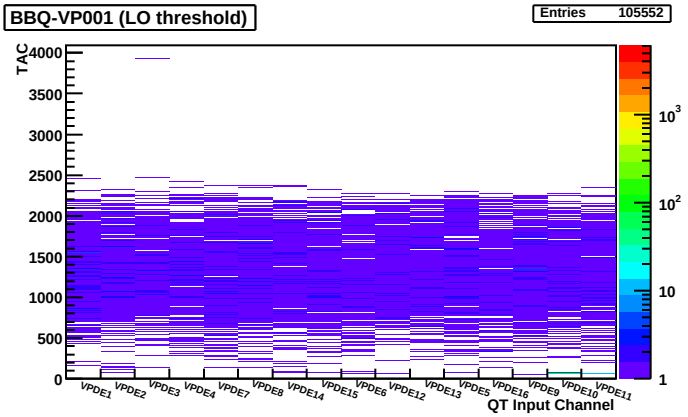

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 105552
ADC
QT Input Channel

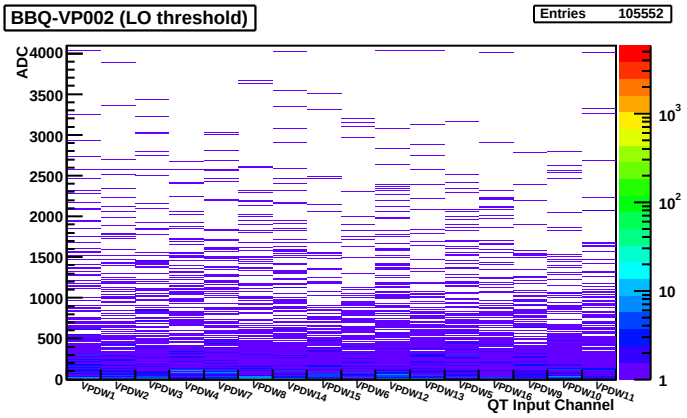

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 105552
TAC
QT Input Channel

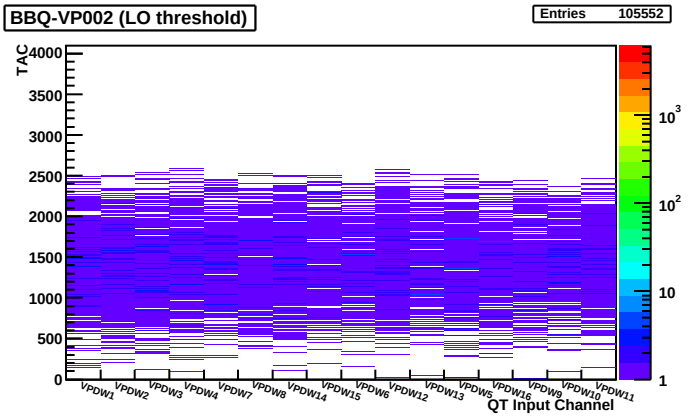

BBQ-ZD001 (ZDC TOWER)
Entries 105552
ADC

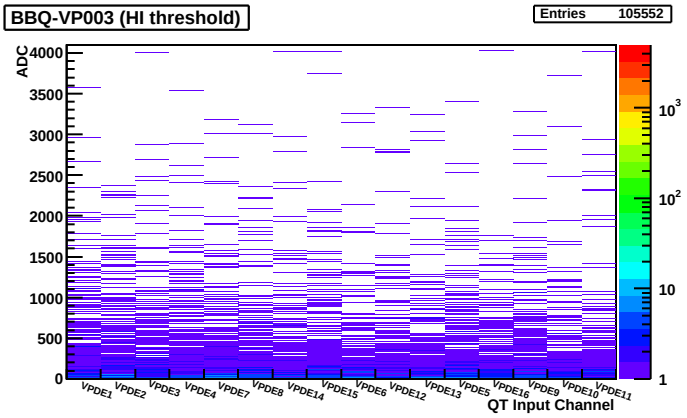

BBQ-ZD001 (ZDC TOWER)
Entries 105552
TAC

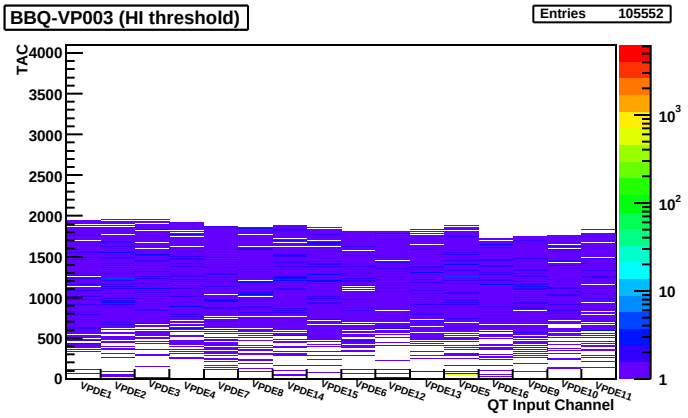

BBQ-VP001 (LO threshold)
Entries 105552
ADC
QT Input Channel

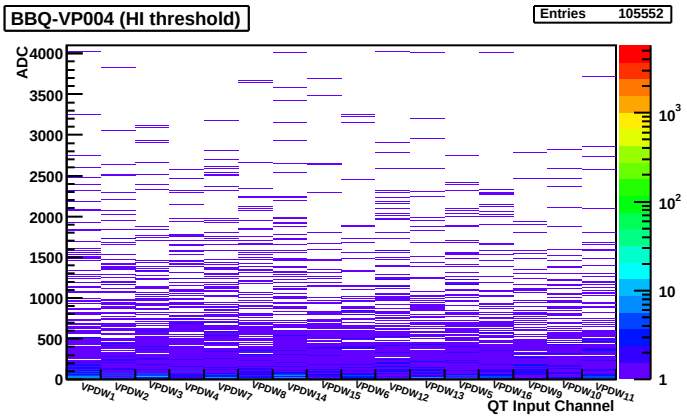

BBQ-VP001 (LO threshold)
Entries 105552
TAC
QT Input Channel

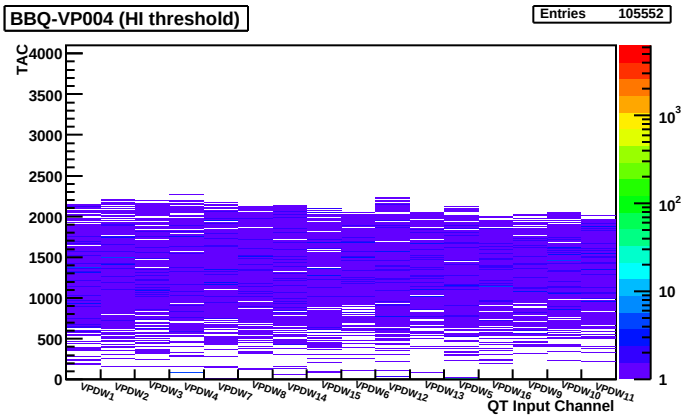

BBQ-VP002 (LO threshold)
Entries 105552
ADC
QT Input Channel

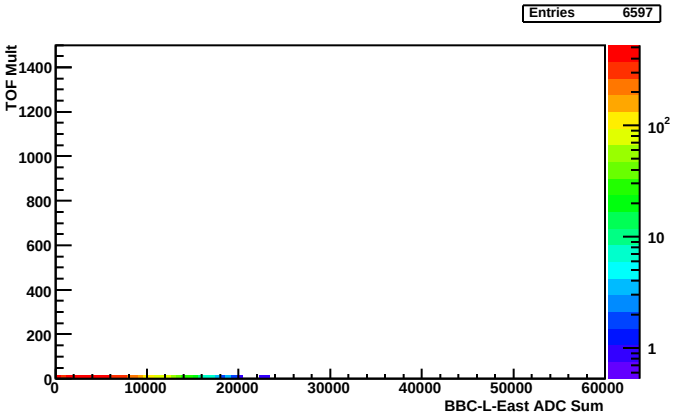

BBQ-VP002 (LO threshold)
Entries 105552
TAC
QT Input Channel

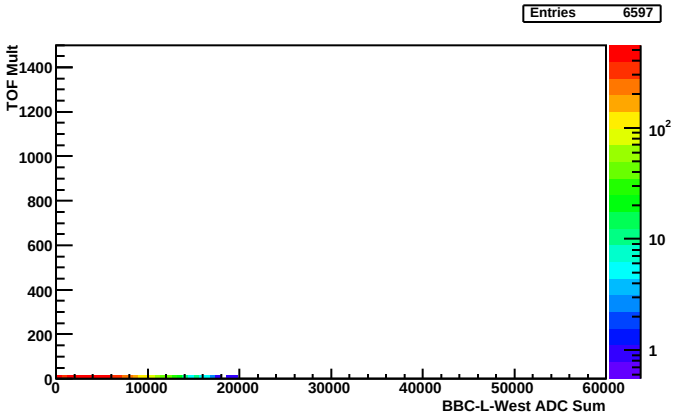

BBQ-VP003 (HI threshold)
Entries 105552
ADC
QT Input Channel

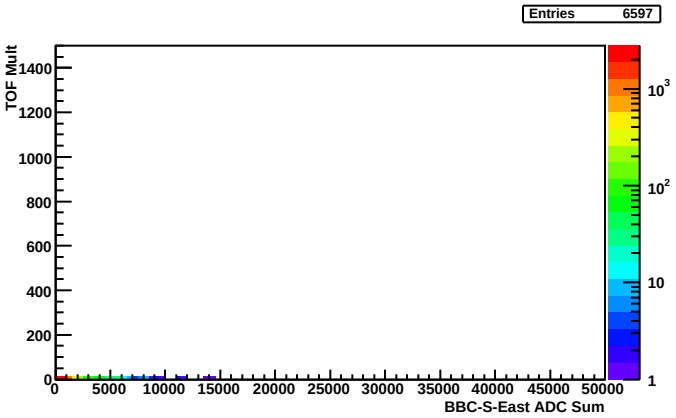

BBQ-VP003 (HI threshold)
Entries 105552
TAC
QT Input Channel

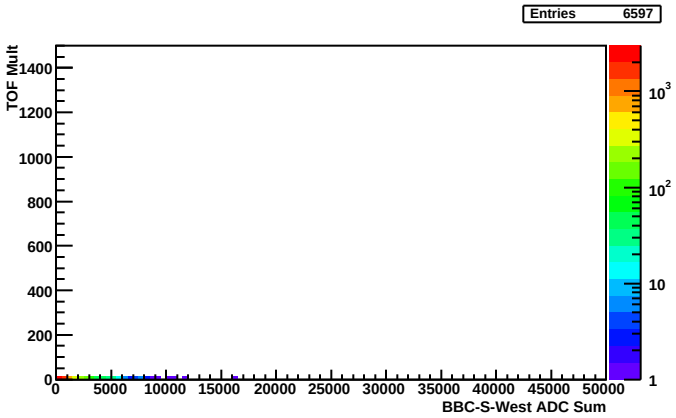

BBQ-VP004 (HI threshold)
Entries 105552
ADC
QT Input Channel

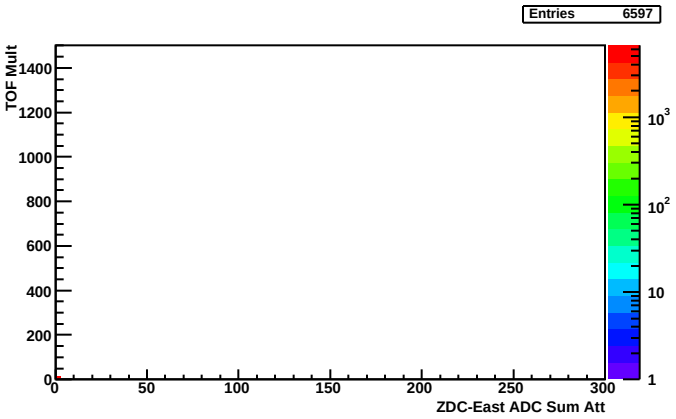

BBQ-VP004 (HI threshold)
Entries 105552
TAC
QT Input Channel

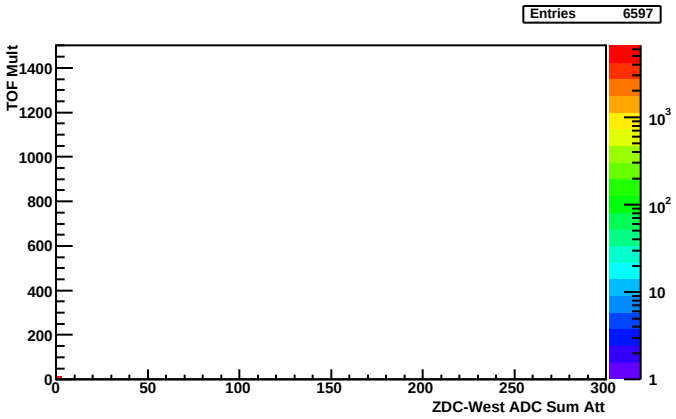

Entries 6597
TOF Mult
BBC-L-East ADC Sum

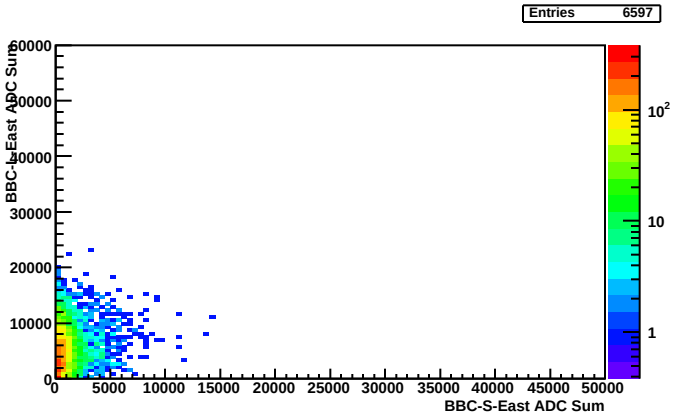

Entries 6597
TOF Mult
BBC-L-West ADC Sum

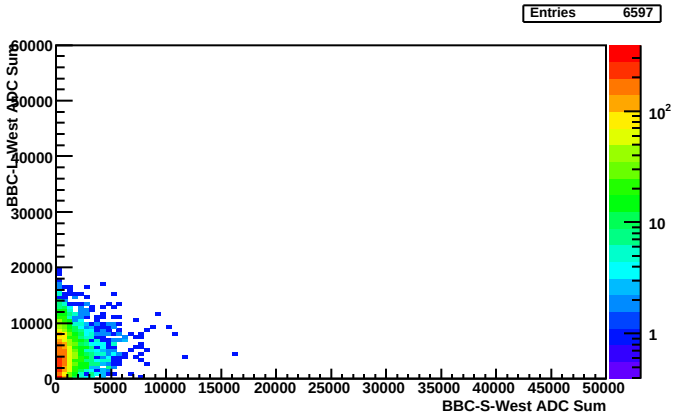

Entries 6597
TOF Mult
BBC-S-East ADC Sum

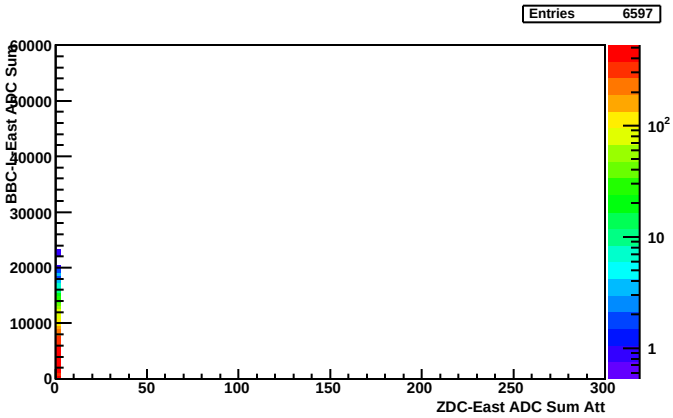

Entries 6597
TOF Mult
BBC-S-West ADC Sum

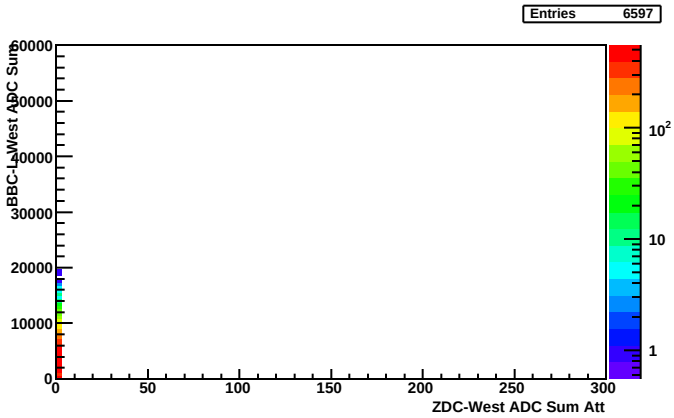

Entries 6597
TOF Mult
ZDC-East ADC Sum Att

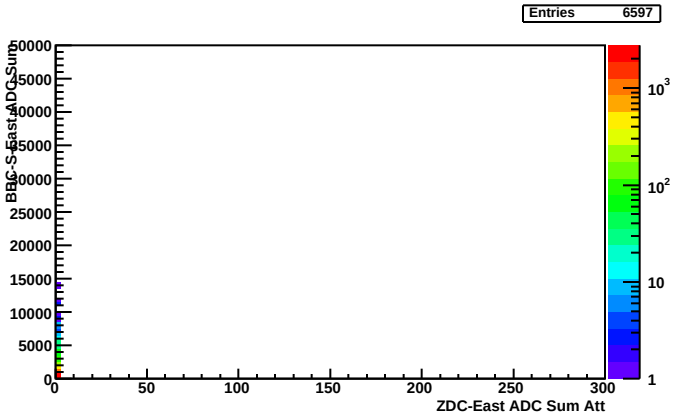

Entries 6597
TOF Mult
ZDC-West ADC Sum Att

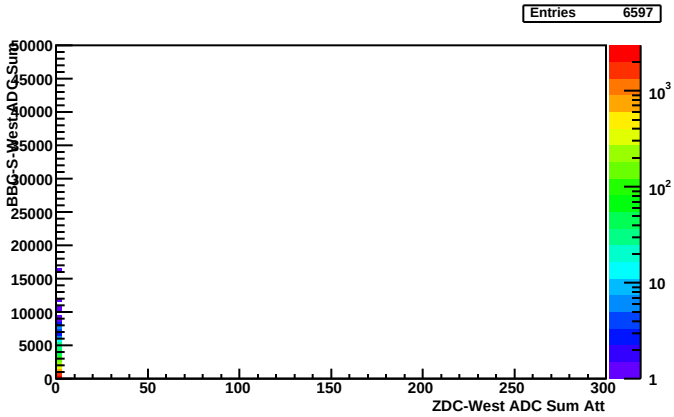

Entries 6597
BBC-L-East ADC Sum
BBC-S-East ADC Sum

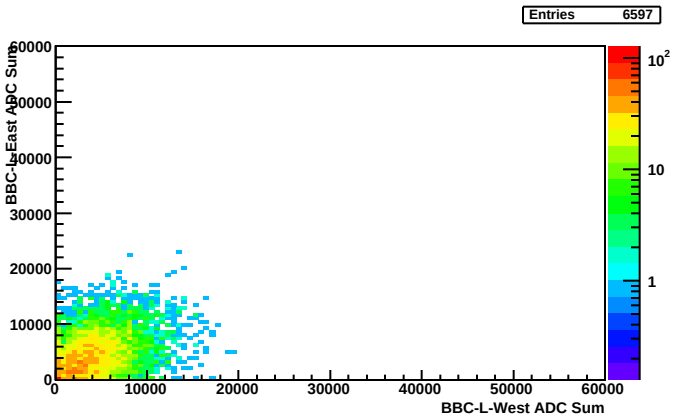

Entries 6597
BBC-L-West ADC Sum
BBC-S-West ADC Sum

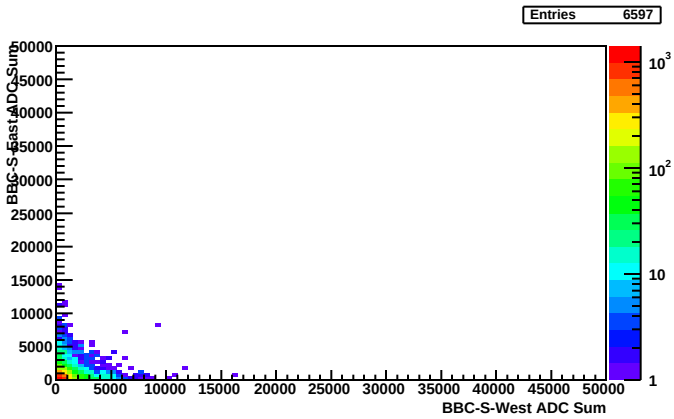

Entries 6597
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

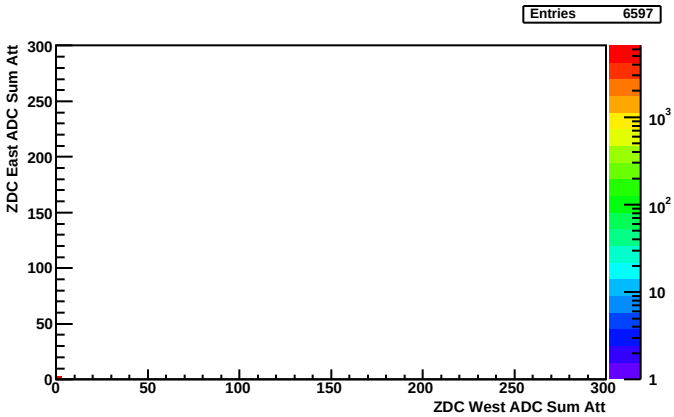

Entries 6597
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

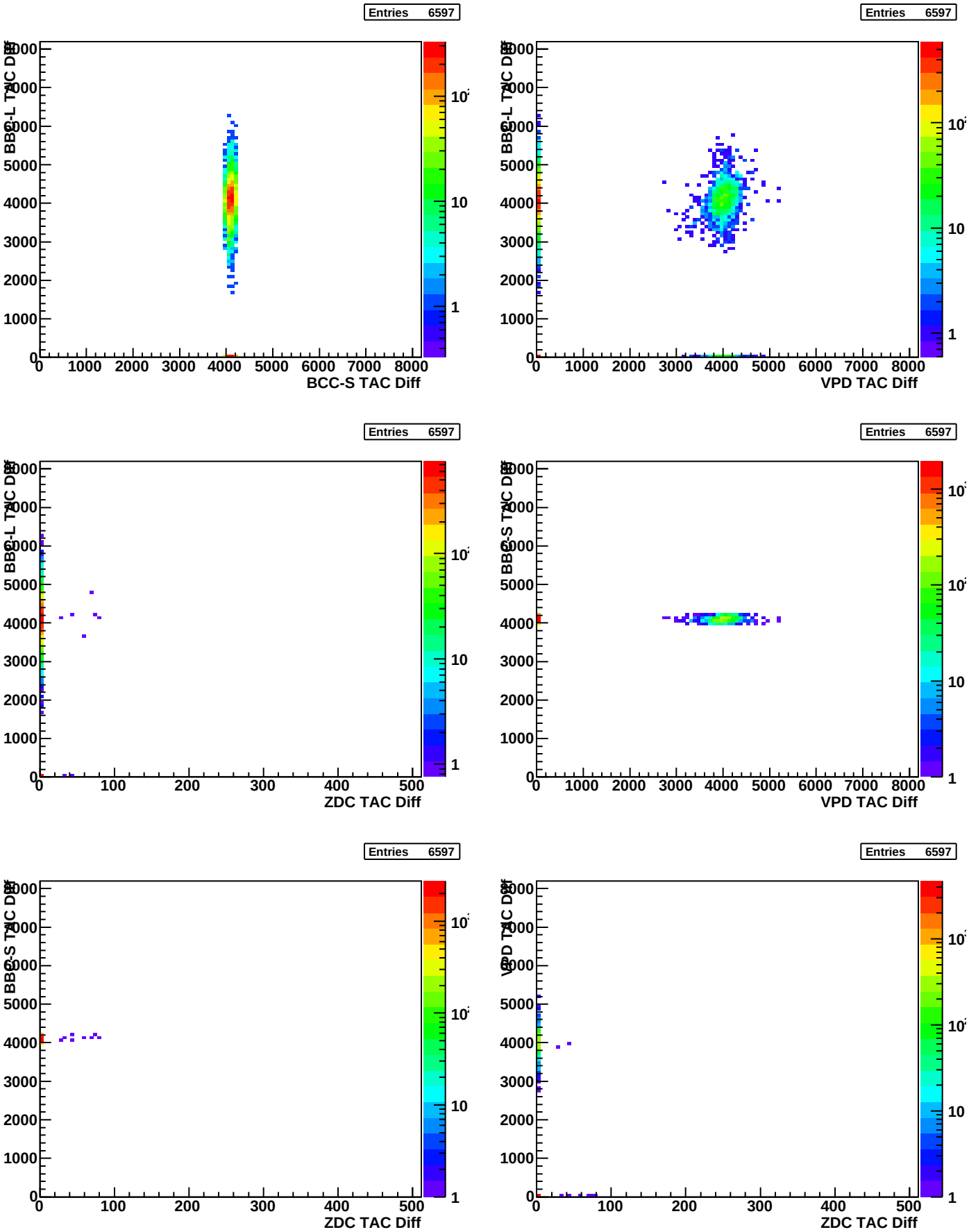

Entries 6597
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

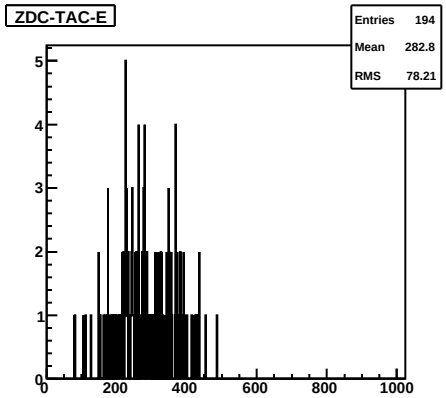

Entries 6597
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

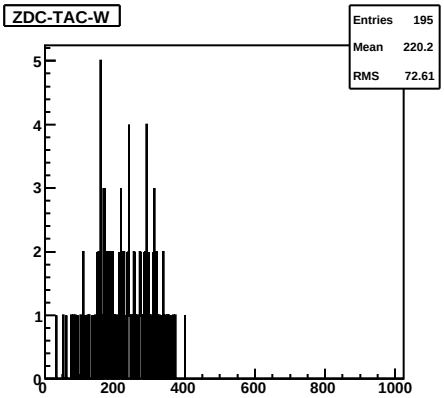

Entries 6597
BBC-L-East ADC Sum
BBC-L-West ADC Sum

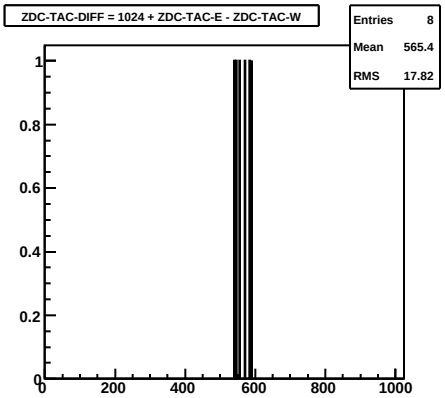

Entries 6597
BBC-S-East ADC Sum
BBC-S-West ADC Sum

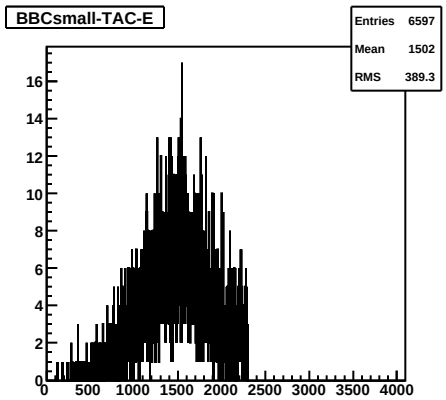

Entries 6597
ZDC East ADC Sum Att
ZDC West ADC Sum Att

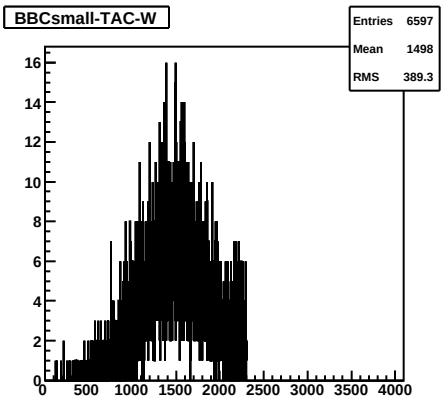

Entries 6597
BBC-L TAC Diff
BCC-S TAC Diff
Entries 6597
BBC-L TAC Diff
VPD TAC Diff
Entries 6597
BBC-L TAC Diff
ZDC TAC Diff
Entries 6597
BBC-S TAC Diff
VPD TAC Diff
Entries 6597
BBC-S TAC Diff
ZDC TAC Diff
Entries 6597
VPD TAC Diff
ZDC TAC Diff

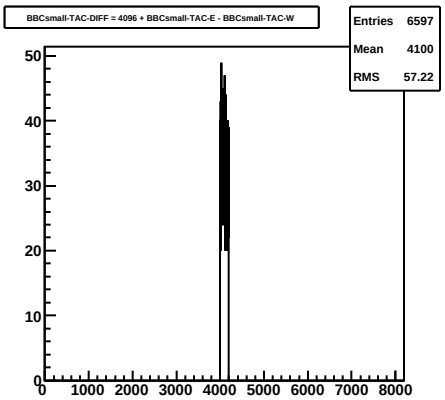

ZDC-TAC-E
Entries 194
Mean 282.8
RMS 78.21

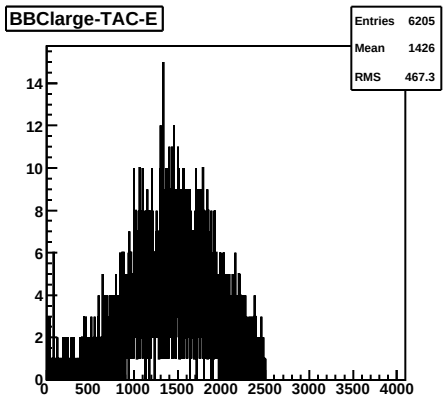

ZDC-TAC-W
Entries 195
Mean 220.2
RMS 72.61

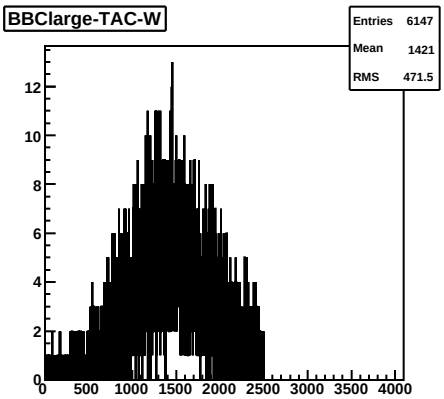

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 8
Mean 565.4
RMS 17.82

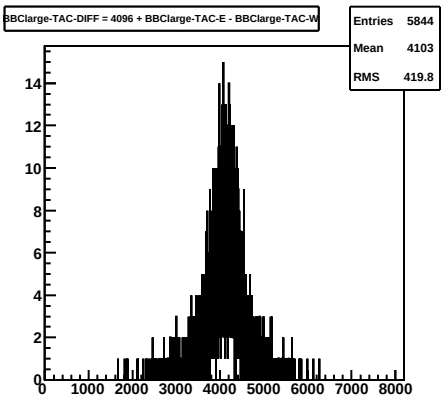

BBCsmall-TAC-E
Entries 6597
Mean 1502
RMS 389.3

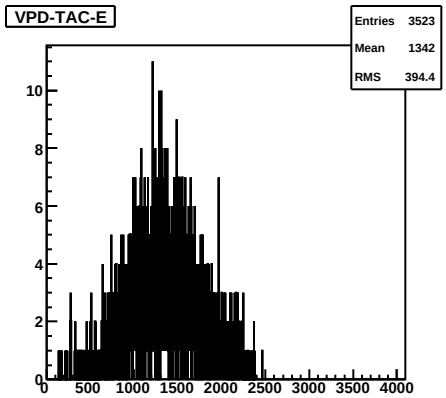

BBCsmall-TAC-W
Entries 6597
Mean 1498
RMS 389.3

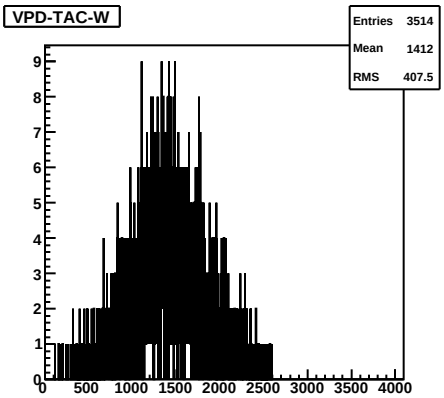

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 6597
Mean 4100
RMS 57.22

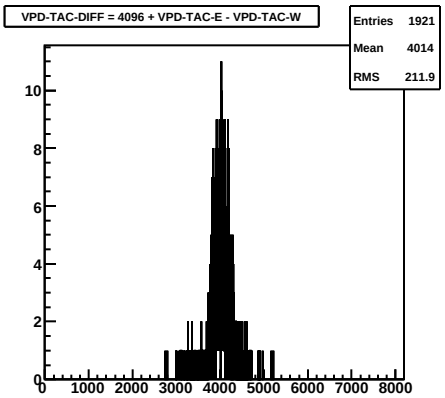

BBClarge-TAC-E
Entries 6205
Mean 1426
RMS 467.3

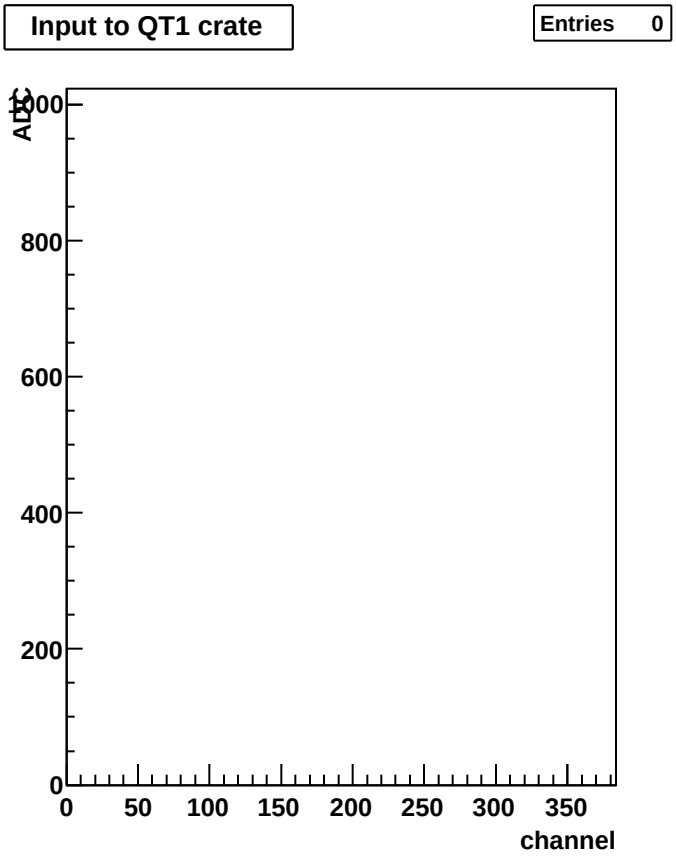

BBClarge-TAC-W
Entries 6147
Mean 1421
RMS 471.5

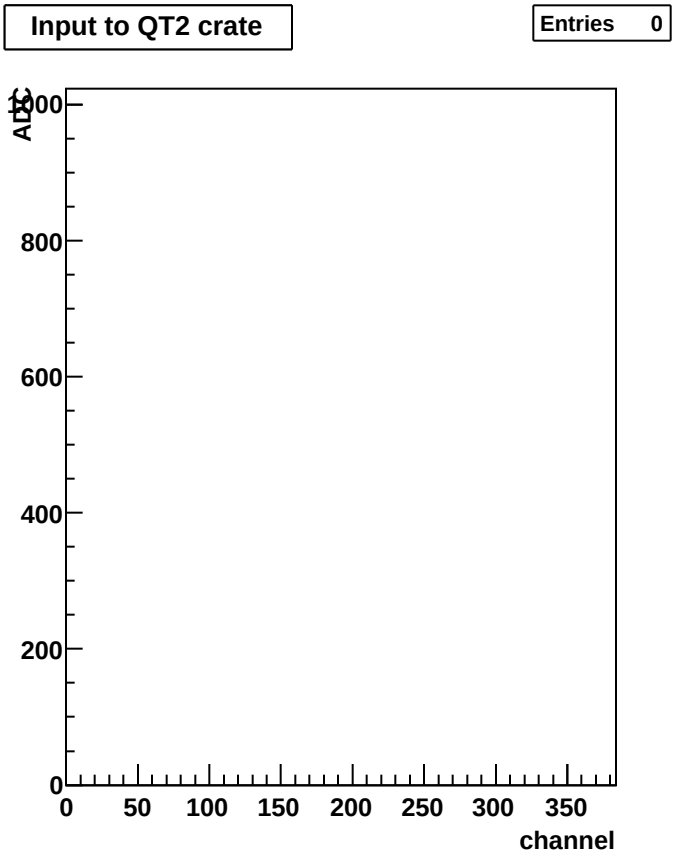

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 5844
Mean 4103
RMS 419.8

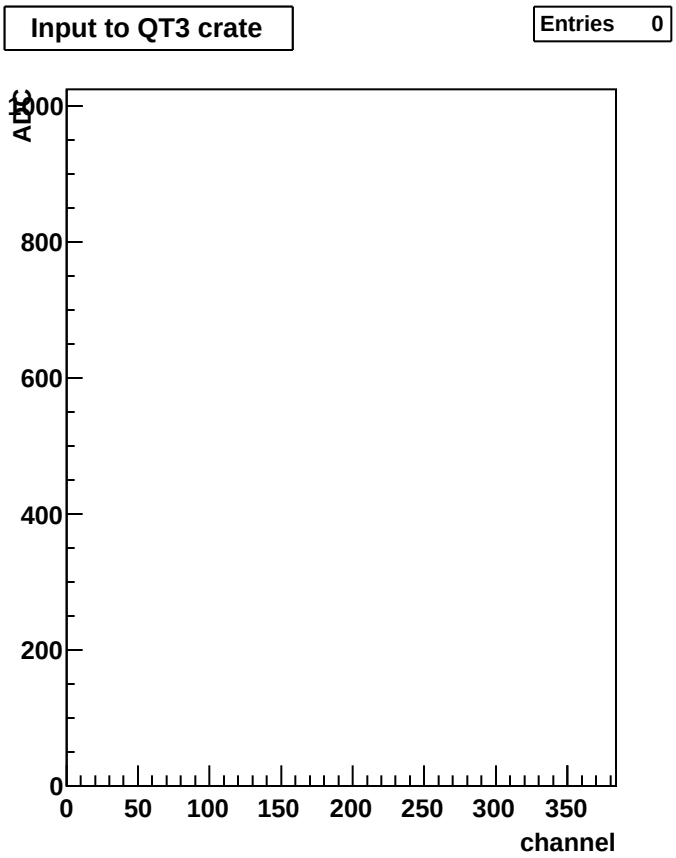

VPD-TAC-E
Entries 3523
Mean 1342
RMS 394.4

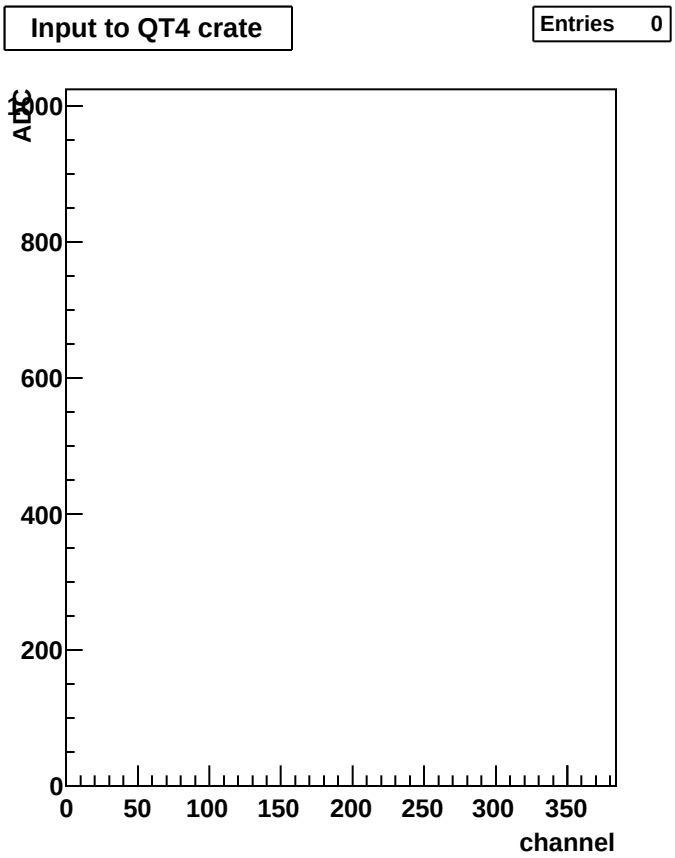

VPD-TAC-W
Entries 3514
Mean 1412
RMS 407.5

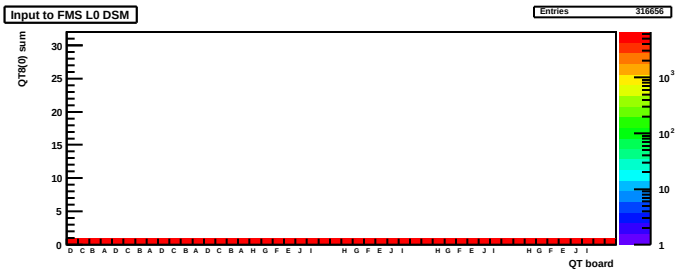

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 1921
Mean 4014
RMS 211.9

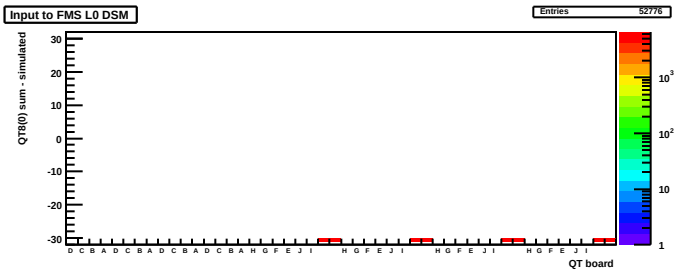

Input to QT1 crate
Entries 0
ADC
1000
800
600
400
200
0
0 50 100 150 200 250 300 350
channel

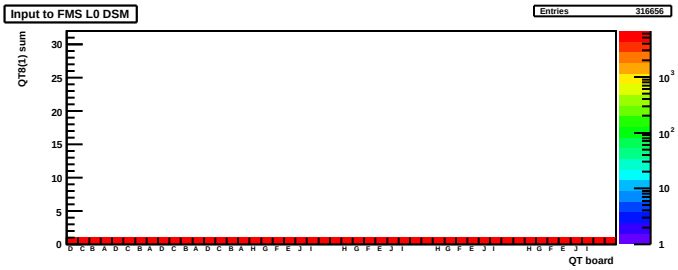

Input to QT2 crate
Entries 0
ADC
1000
800
600
400
200
0
0 50 100 150 200 250 300 350
channel

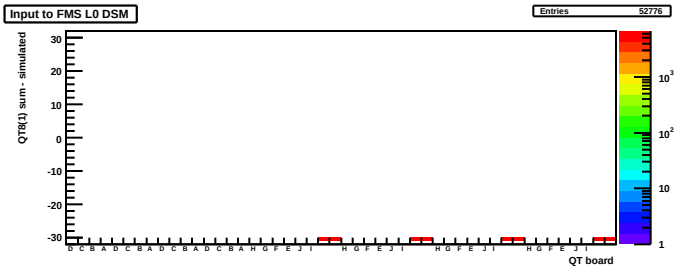

Input to QT3 crate
Entries 0
ADC
1000
800
600
400
200
0
0 50 100 150 200 250 300 350
channel

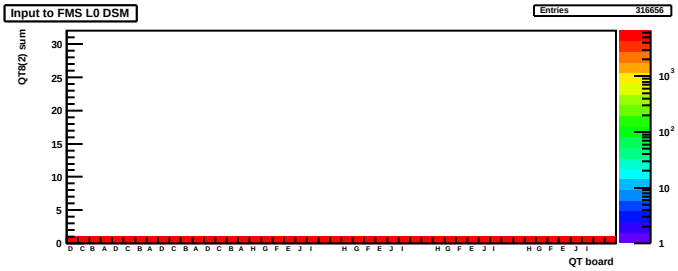

Input to QT4 crate
Entries 0
ADC
1000
800
600
400
200
0
0 50 100 150 200 250 300 350
channel

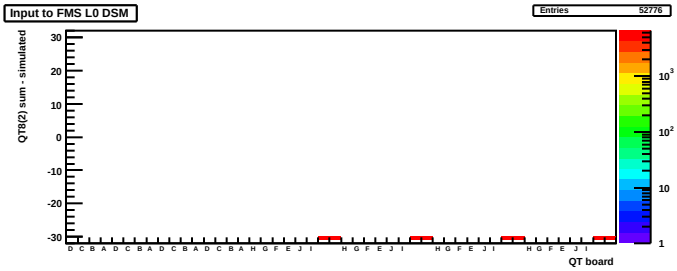

Input to FMS L0 DSM
Entries 316656
QT8(0) sum
QT board

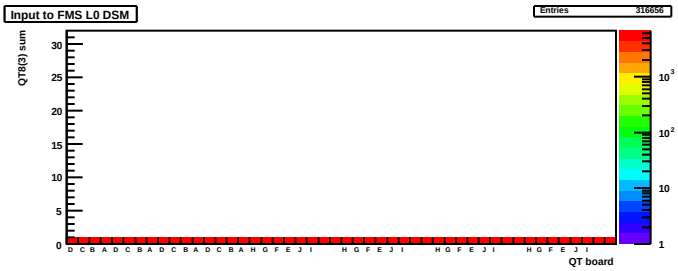

Input to FMS L0 DSM
Entries 52776
QT8(0) sum - simulated
QT board

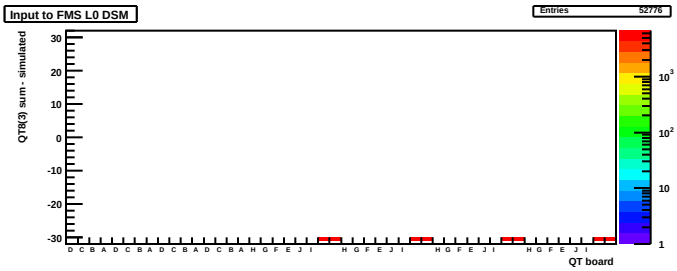

Input to FMS L0 DSM
Entries 316656
QT8(1) sum
QT board

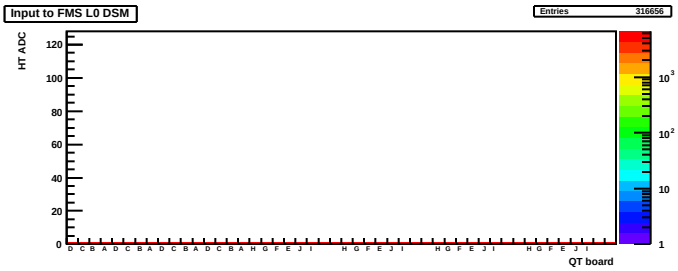

Input to FMS L0 DSM
Entries 52776
QT8(1) sum - simulated
QT board

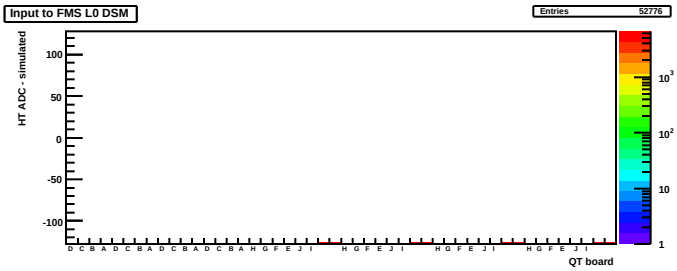

Input to FMS L0 DSM
Entries 316656
QT8(2) sum
QT board

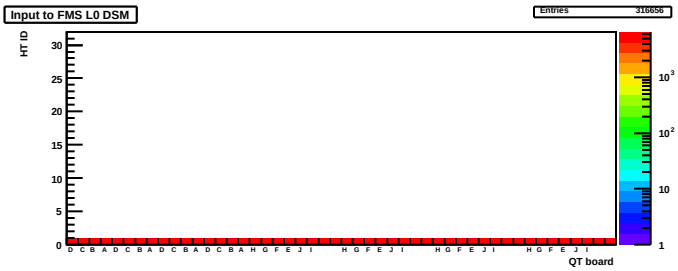

Input to FMS L0 DSM
Entries 52776
QT8(2) sum - simulated
QT board

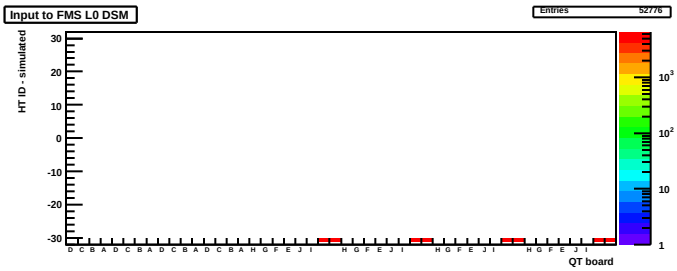

Input to FMS L0 DSM
Entries 316656
QT8(3) sum
QT board

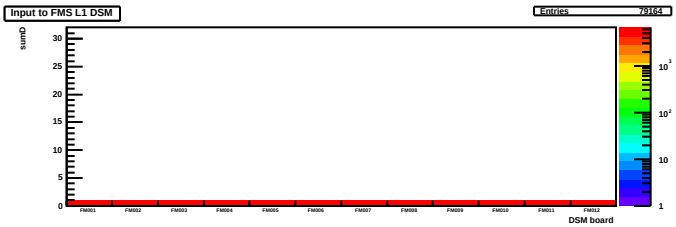

Input to FMS L0 DSM
Entries 52776
QT8(3) sum - simulated
QT board

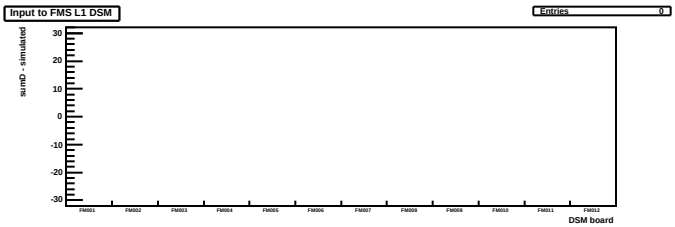

Input to FMS L0 DSM
Entries 316656
HT ADC
QT board

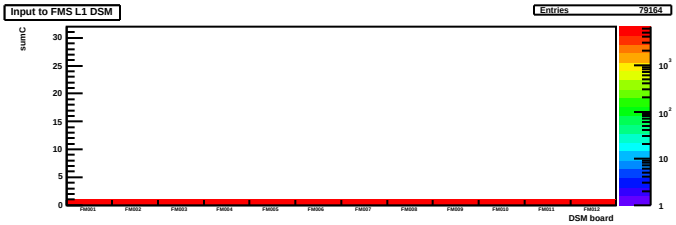

Input to FMS L0 DSM
Entries 52776
HT ADC - simulated
QT board

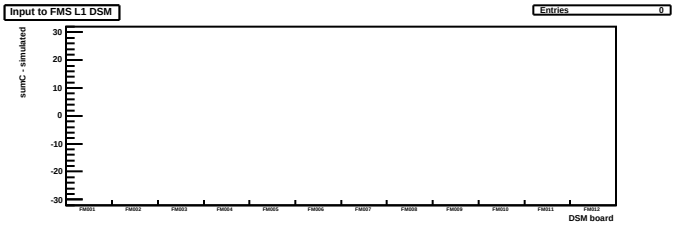

Input to FMS L0 DSM
Entries 316656
HT ID
QT board

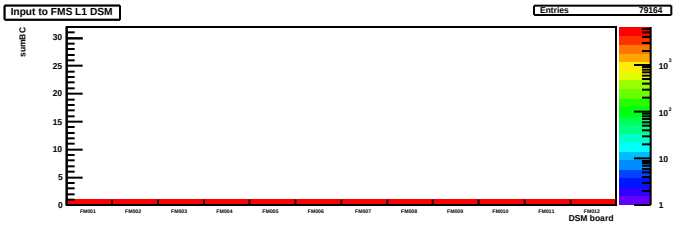

Input to FMS L0 DSM
Entries 52776
HT ID - simulated
QT board

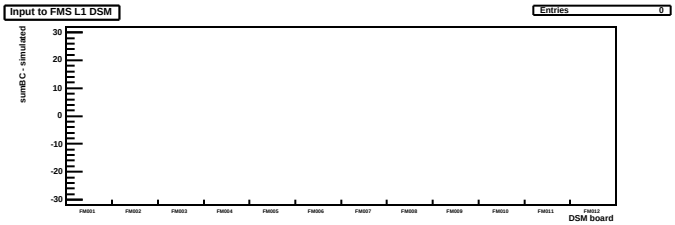

Input to FMS L1 DSM
Entries 79164
sumD
DSM board

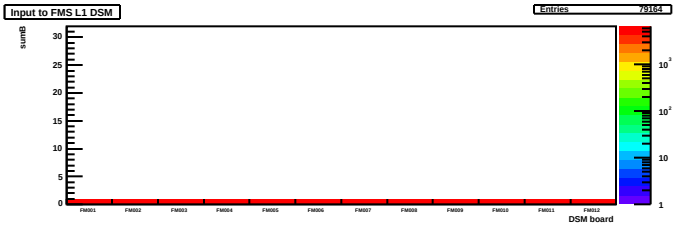

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

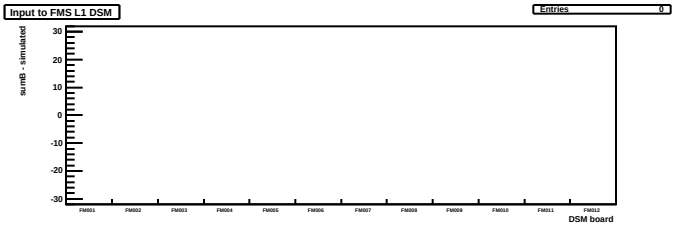

Input to FMS L1 DSM
Entries 79164
sumC
DSM board

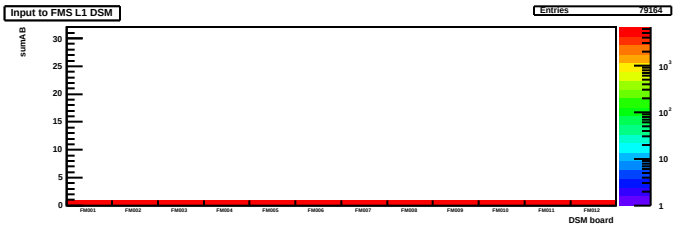

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

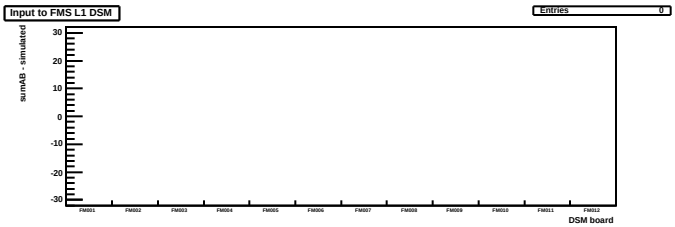

Input to FMS L1 DSM
Entries 79164
sumBC
DSM board

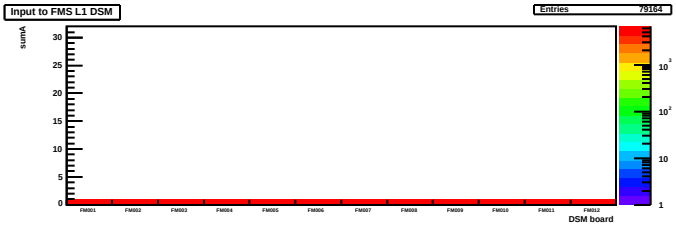

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

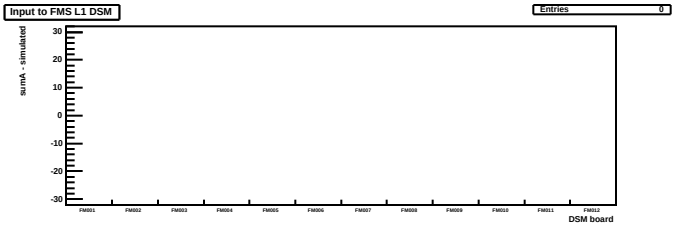

Input to FMS L1 DSM
Entries 79164
sumB
DSM board

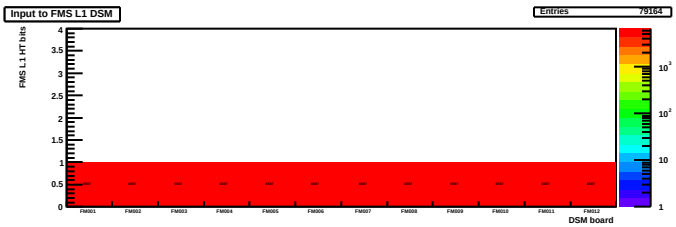

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

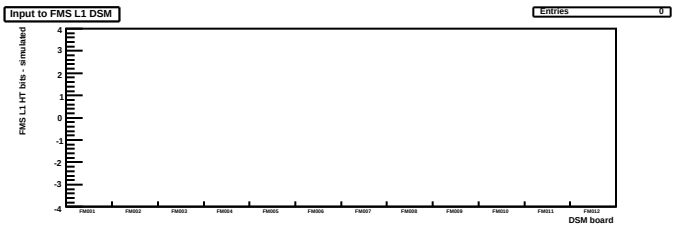

Input to FMS L1 DSM
Entries 79164
sumAB
DSM board

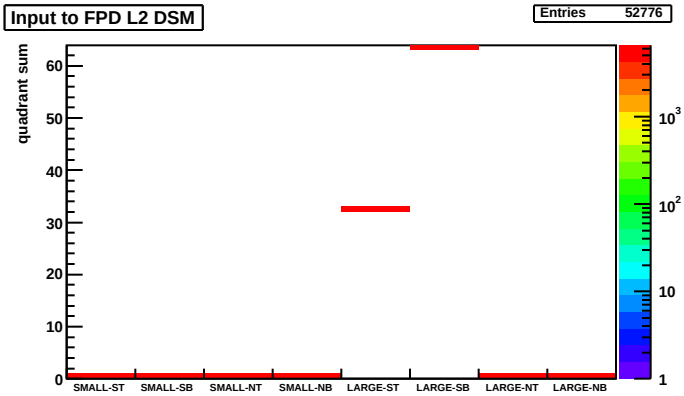

Input to FMS L1 DSM
Entries 0
sumAB - simulated
DSM board

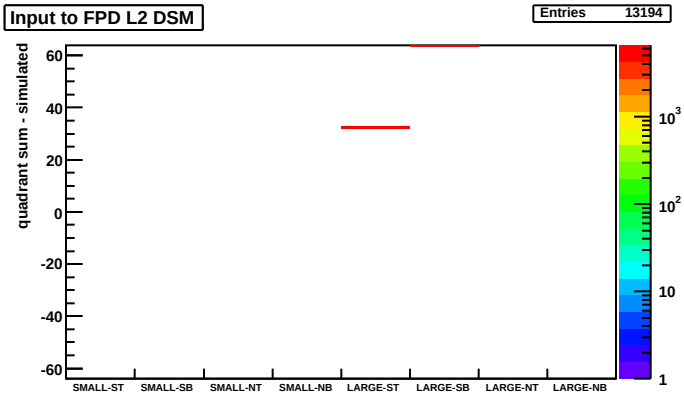

Input to FMS L1 DSM
Entries 79164
sumA
DSM board

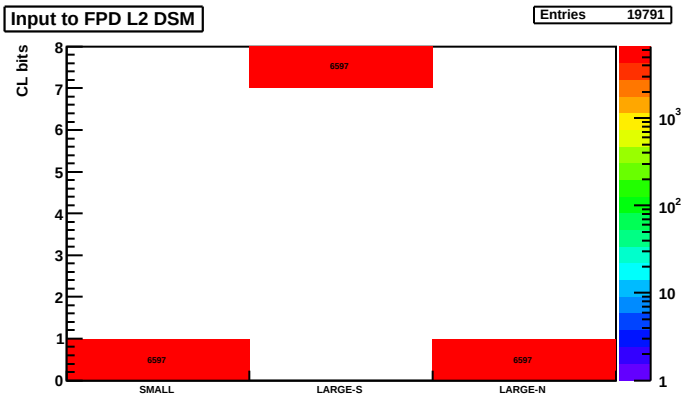

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

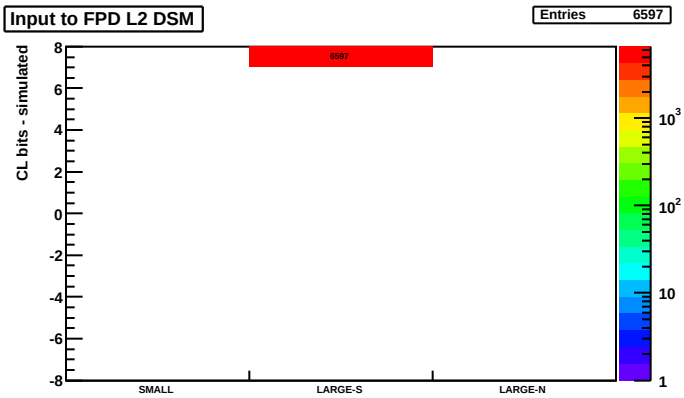

Input to FMS L1 DSM
Entries 79164
FMS L1 HT bits
DSM board

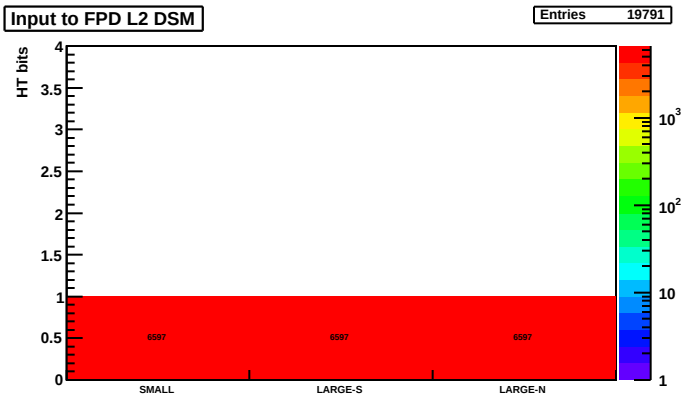

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

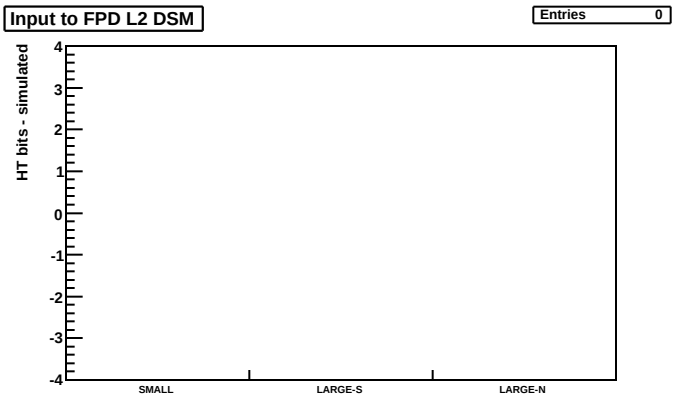

Input to FPD L2 DSM
Entries 52776
quadrant sum
SMALL-ST
SMALL-SB
SMALL-NT
SMALL-NB
LARGE-ST
LARGE-SB
LARGE-NT
LARGE-NB

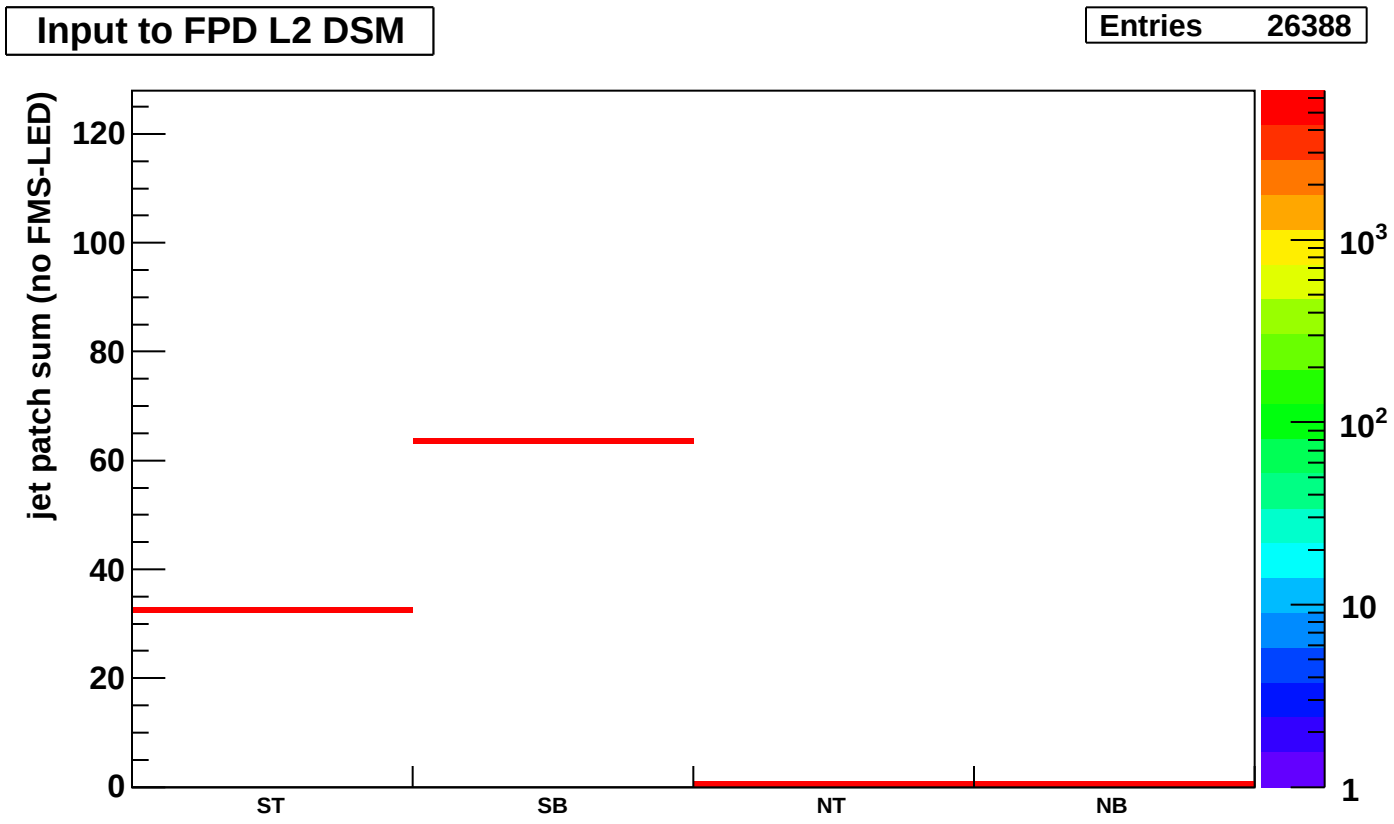

Input to FPD L2 DSM
Entries 13194
quadrant sum - simulated
SMALL-ST
SMALL-SB
SMALL-NT
SMALL-NB
LARGE-ST
LARGE-SB
LARGE-NT
LARGE-NB

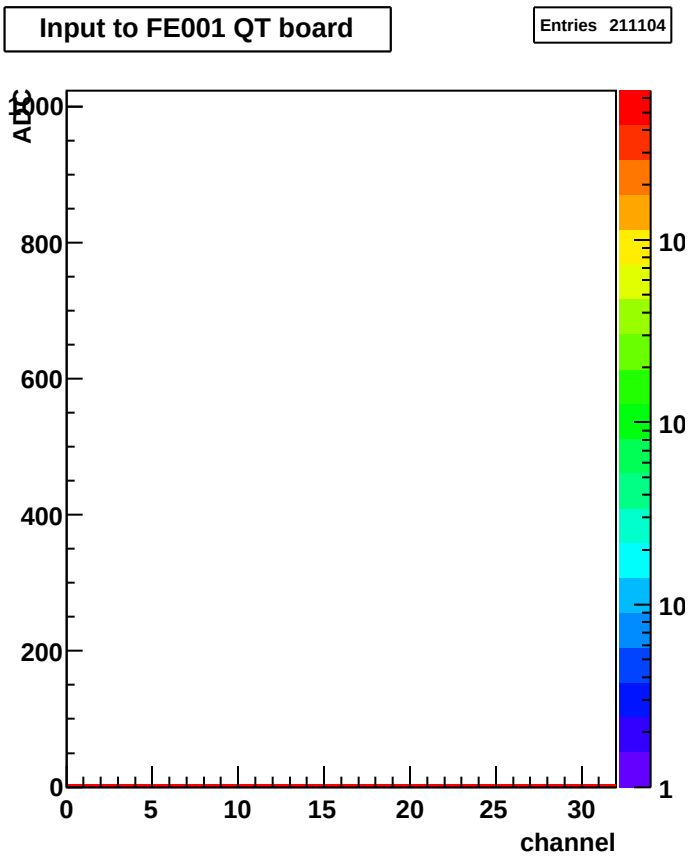

Input to FPD L2 DSM
Entries 19791
CL bits
6597
6597
6597
SMALL
LARGE-S
LARGE-N

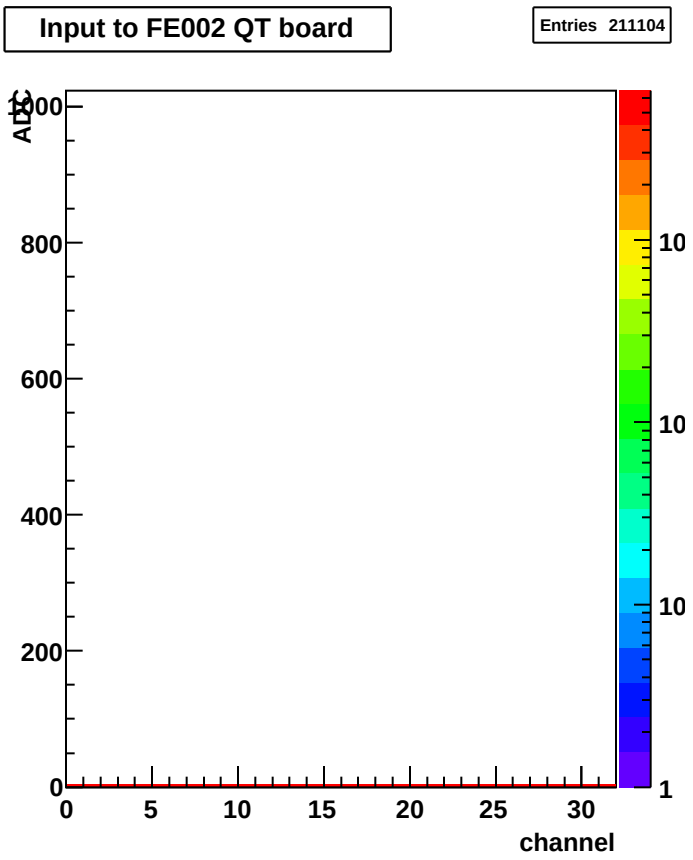

Input to FPD L2 DSM
Entries 6597
CL bits - simulated
6597
SMALL
LARGE-S
LARGE-N

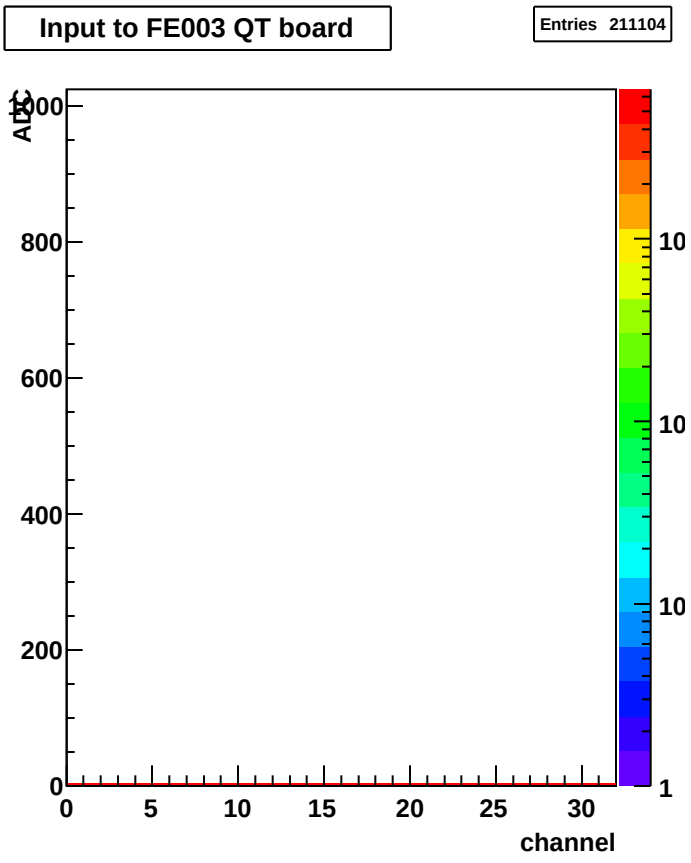

Input to FPD L2 DSM
Entries 19791
HT bits
6597
6597
6597
SMALL
LARGE-S
LARGE-N

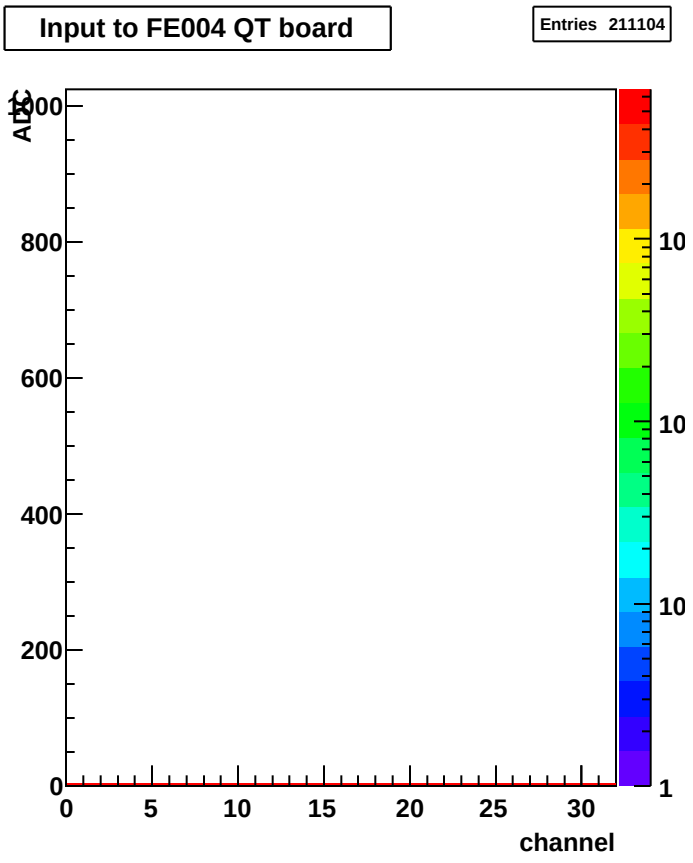

Input to FPD L2 DSM
Entries 0
HT bits - simulated
SMALL
LARGE-S
LARGE-N

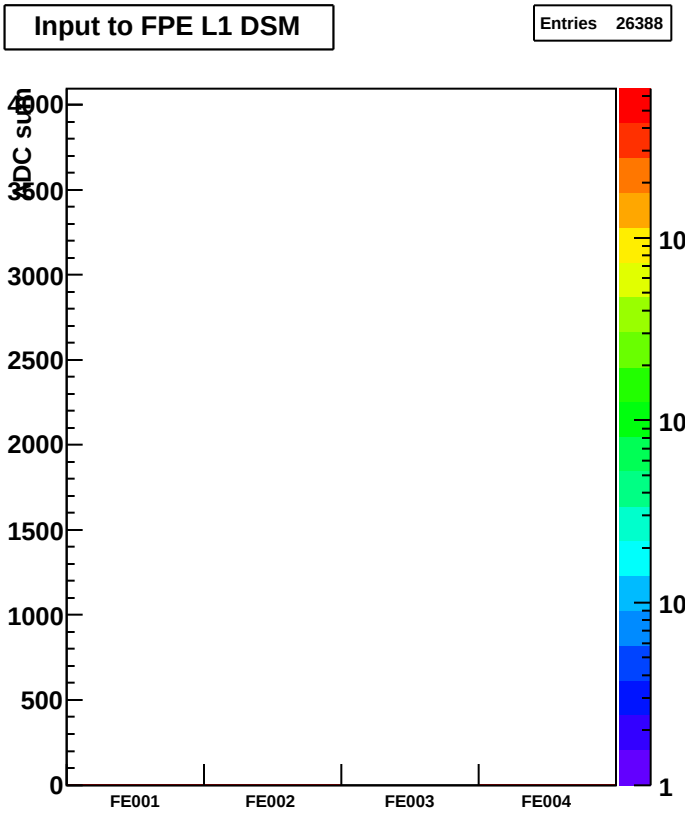

Input to FPD L2 DSM
Entries 26388
jet patch sum (no FMS-LED)
0
20
40
60
80
100
120
ST
SB
NT
NB
1
10
10^2
10^3

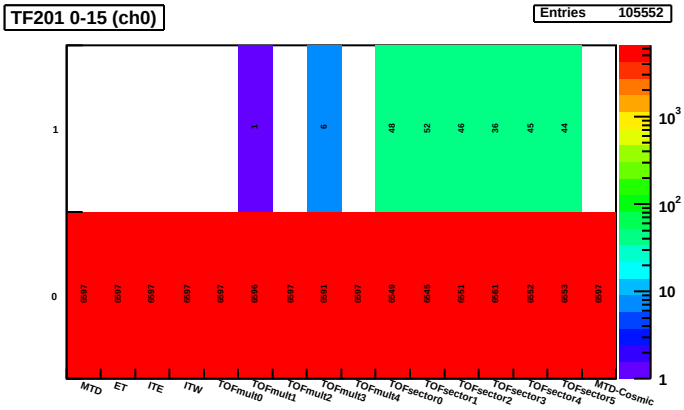

Input to FE001 QT board
Entries 211104
ADC
channel

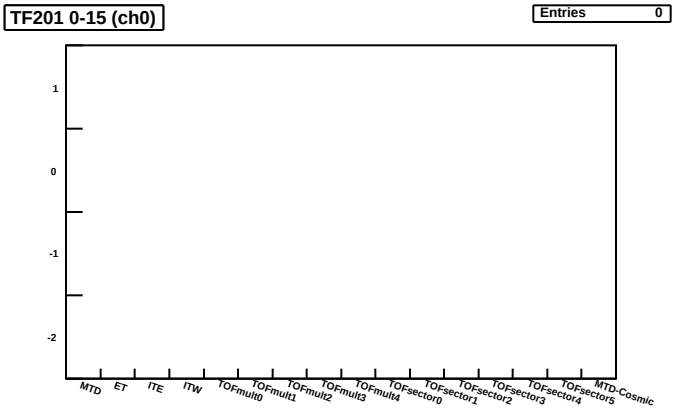

Input to FE002 QT board
Entries 211104
ADC
channel

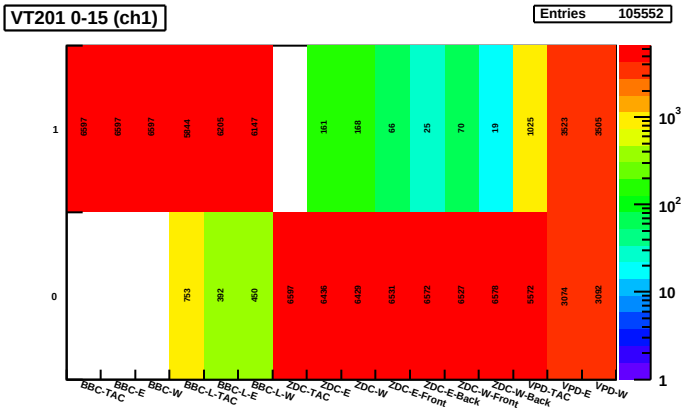

Input to FE003 QT board
Entries 211104
ADC
channel

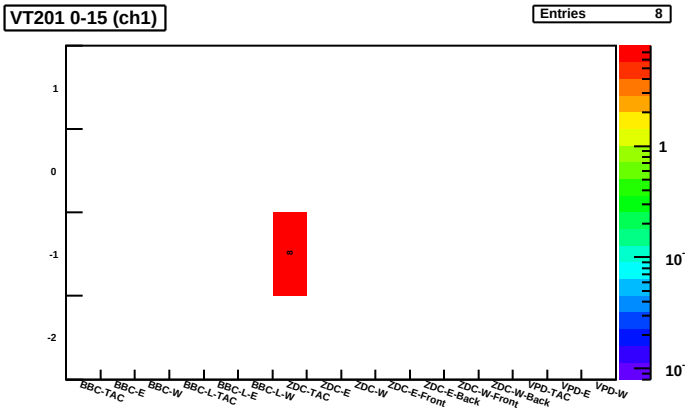

Input to FE004 QT board
Entries 211104
ADC
channel

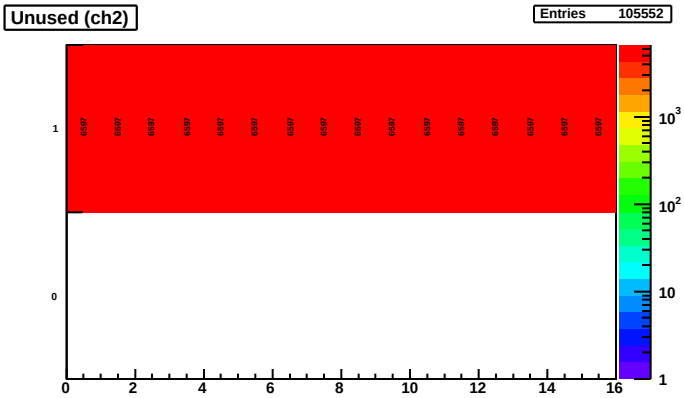

Input to FPE L1 DSM
Entries 26388
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
1

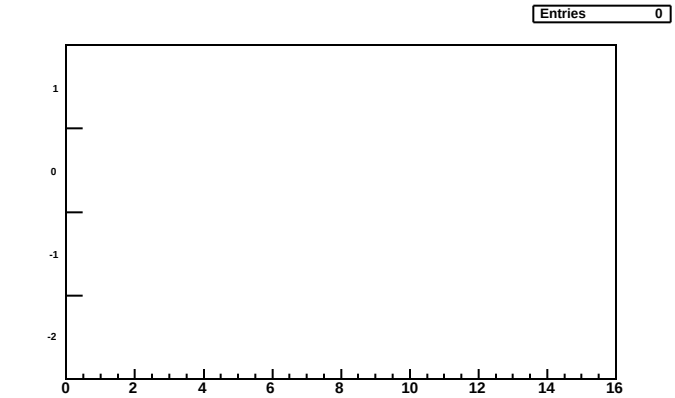

TF201 0-15 (ch0)
Entries 105552
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

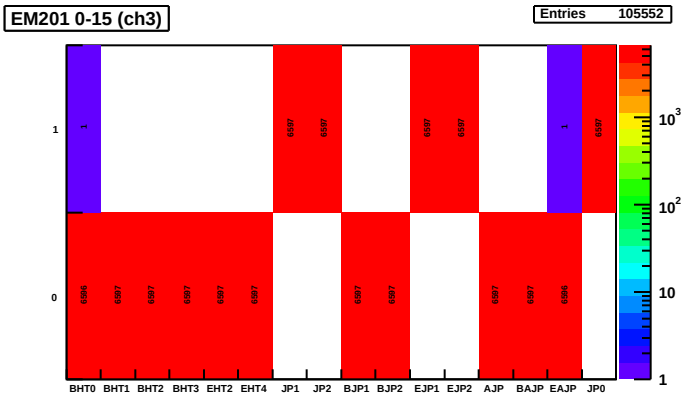

TF201 0-15 (ch0)
Entries 0
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

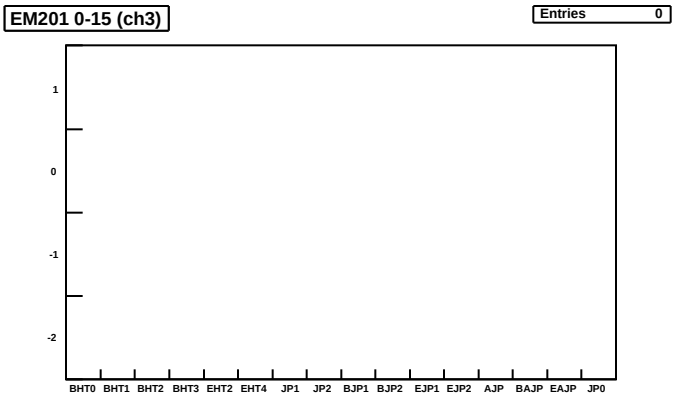

VT201 0-15 (ch1)
Entries 105552
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 8
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

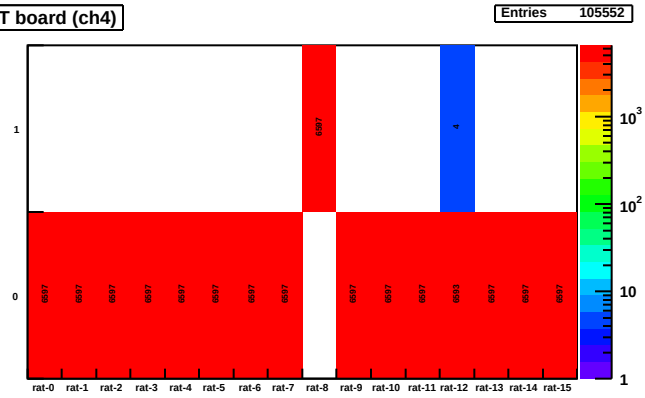

Unused (ch2)
Entries 105552

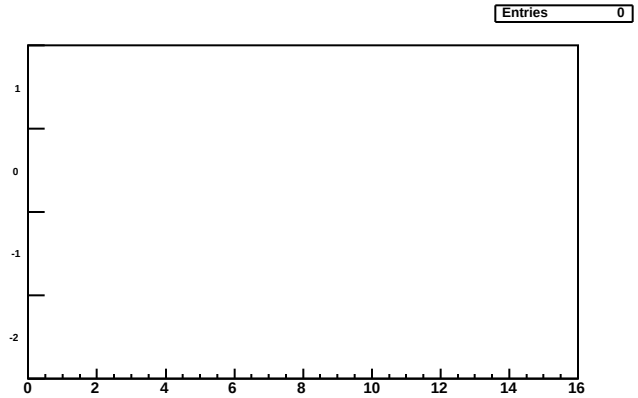

Entries 0


EM201 0-15 (ch3)
Entries 105552
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

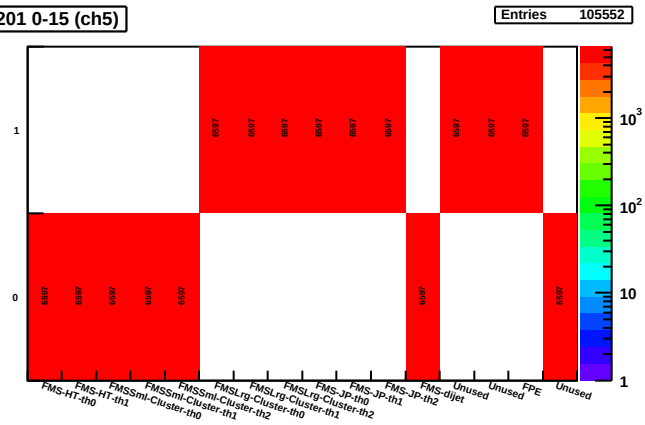

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

RAT board (ch4)

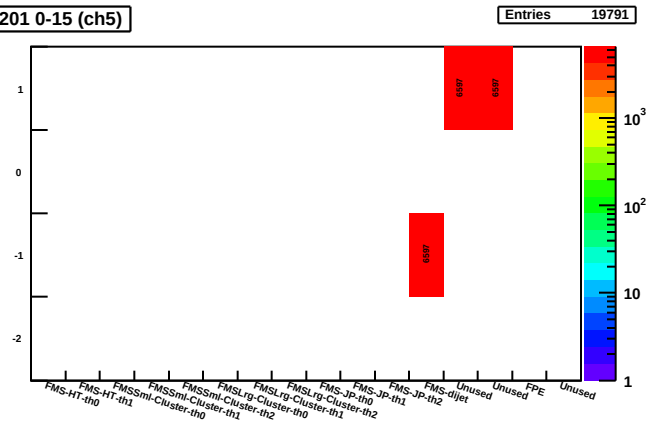




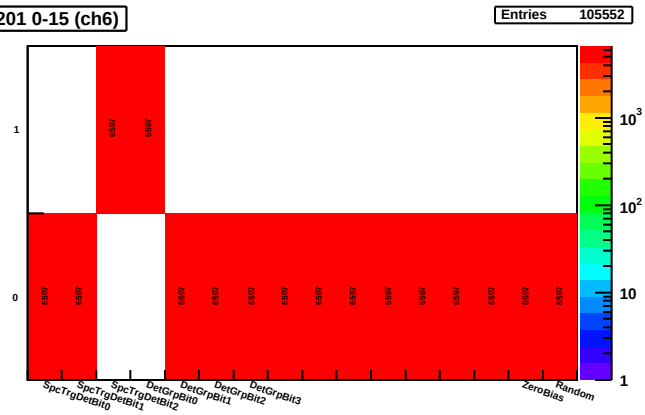
FP201 0-15 (ch5)

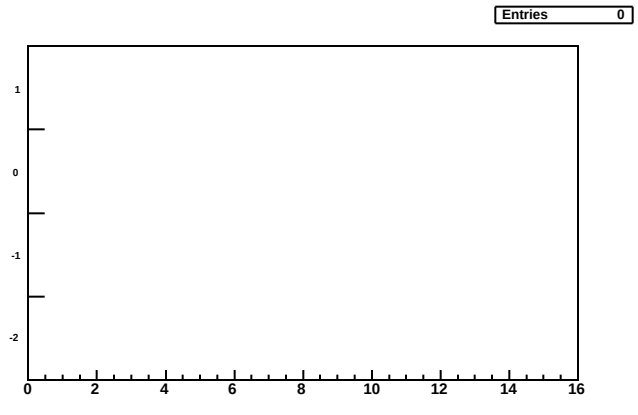
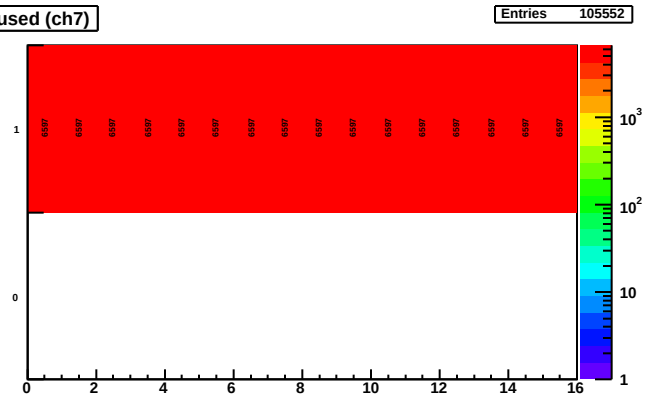
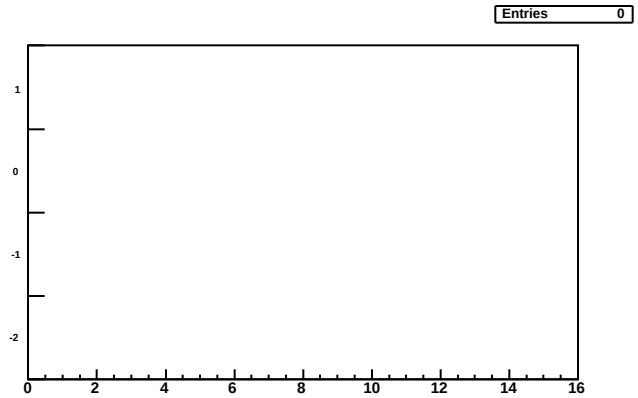


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)