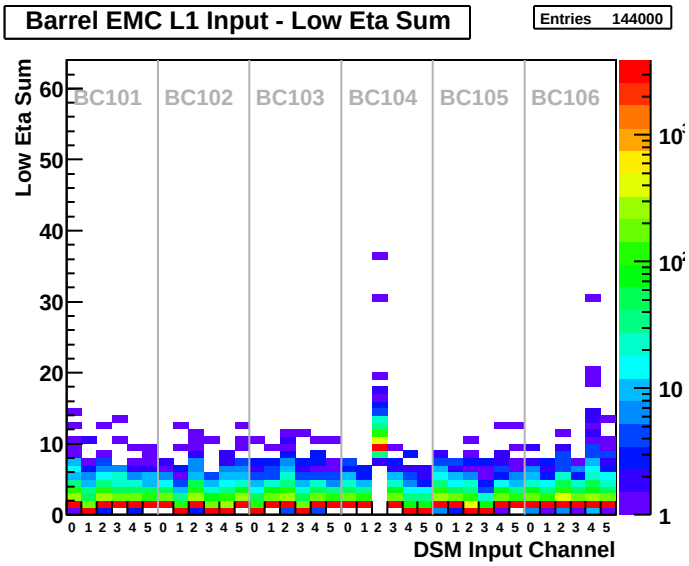
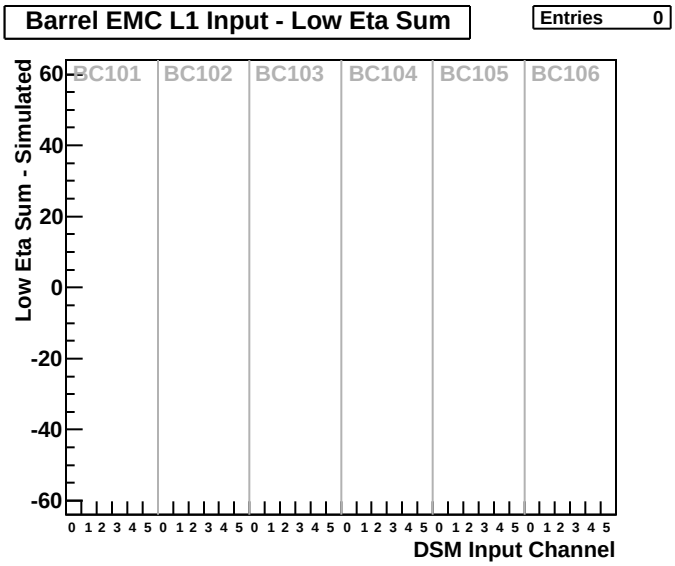
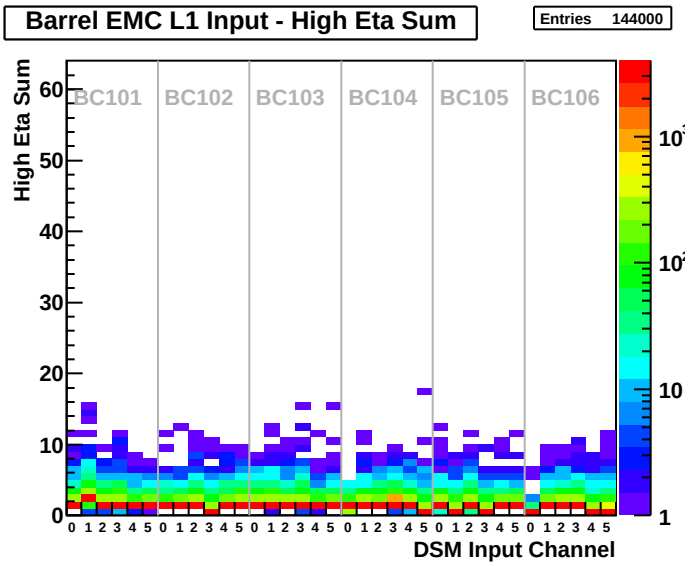
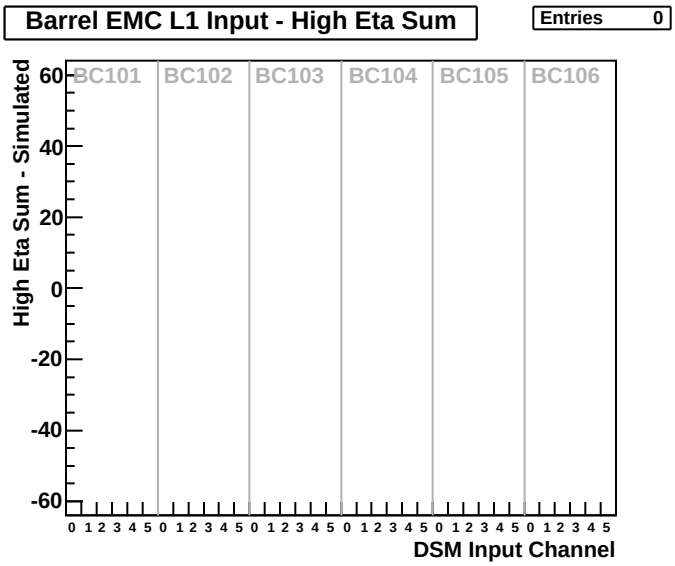
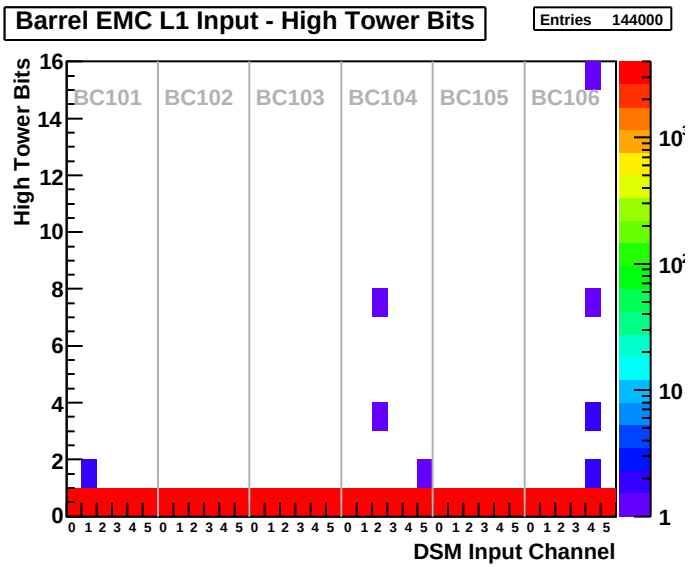
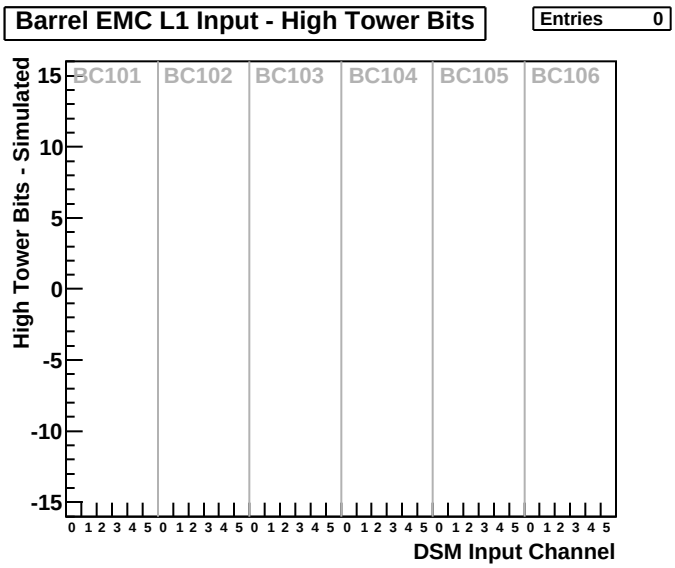

Barrel EMC L1 Input - Low Eta Sum
Entries 144000
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

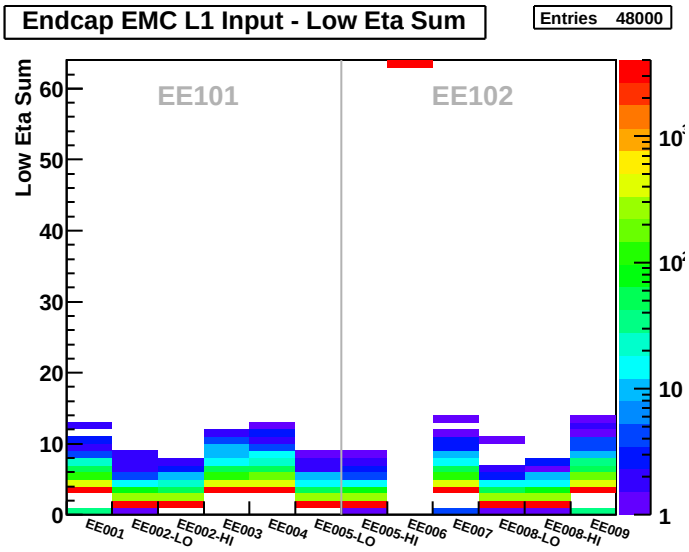

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

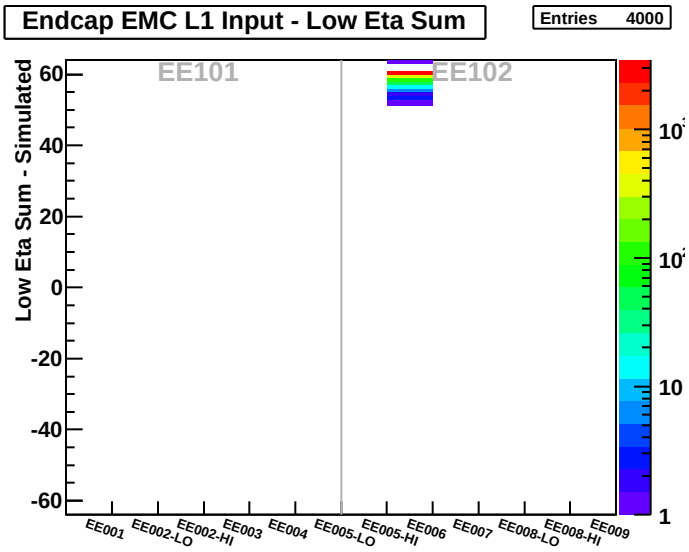

Barrel EMC L1 Input - High Eta Sum
Entries 144000
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

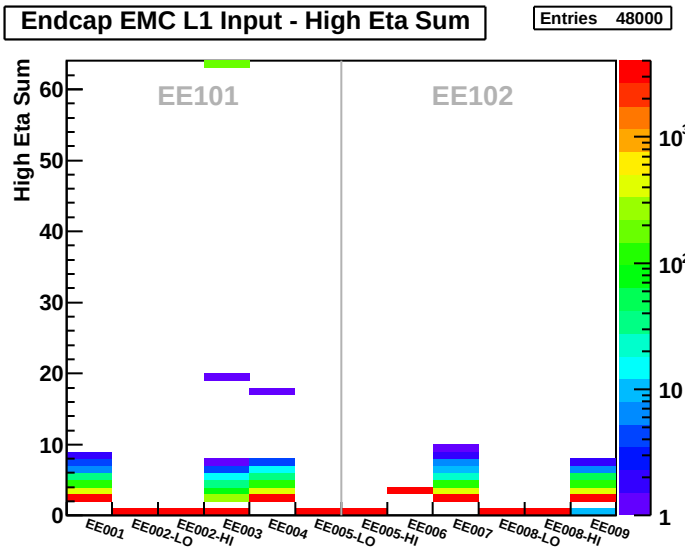

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

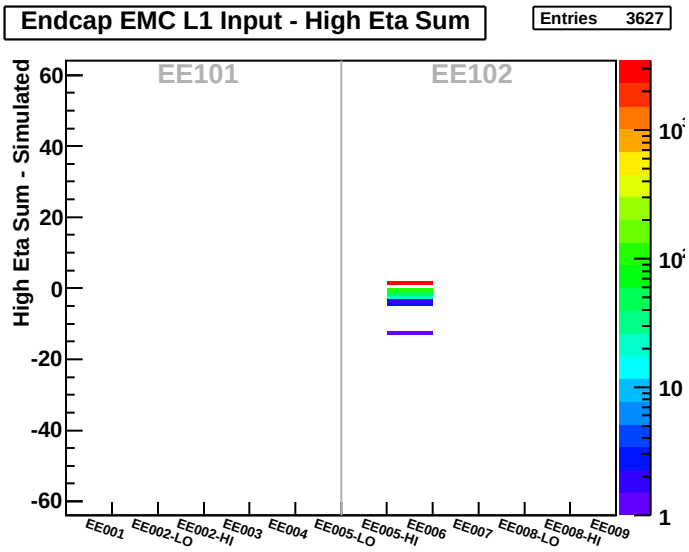

Barrel EMC L1 Input - High Tower Bits
Entries 144000
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

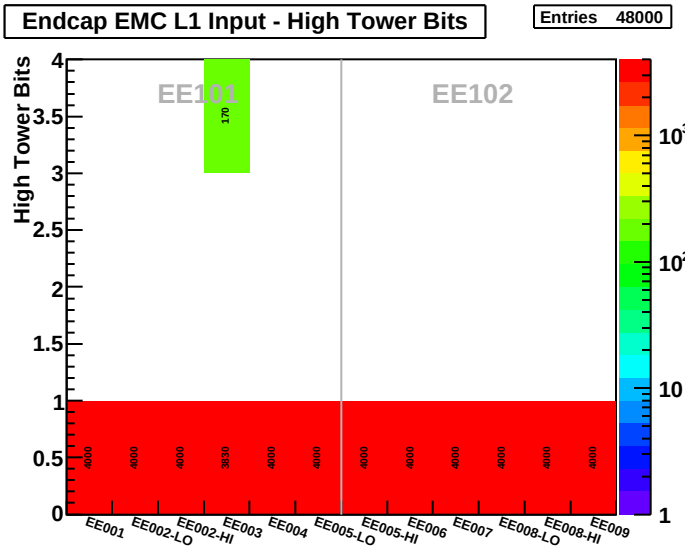

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

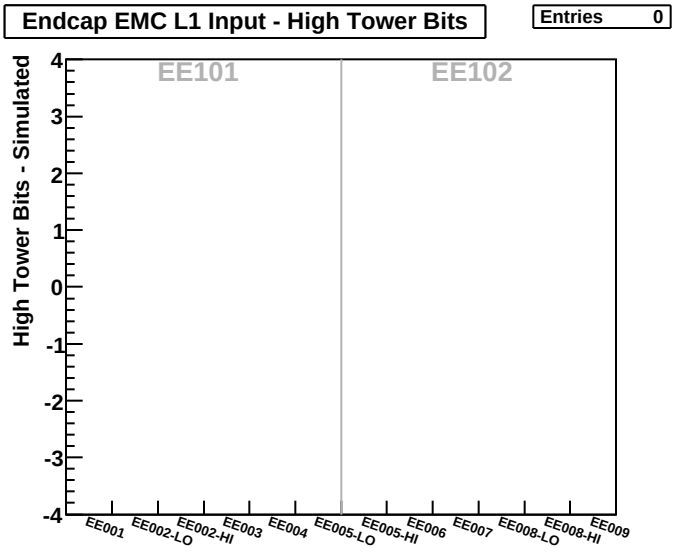

Endcap EMC L1 Input - Low Eta Sum
Entries 48000
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

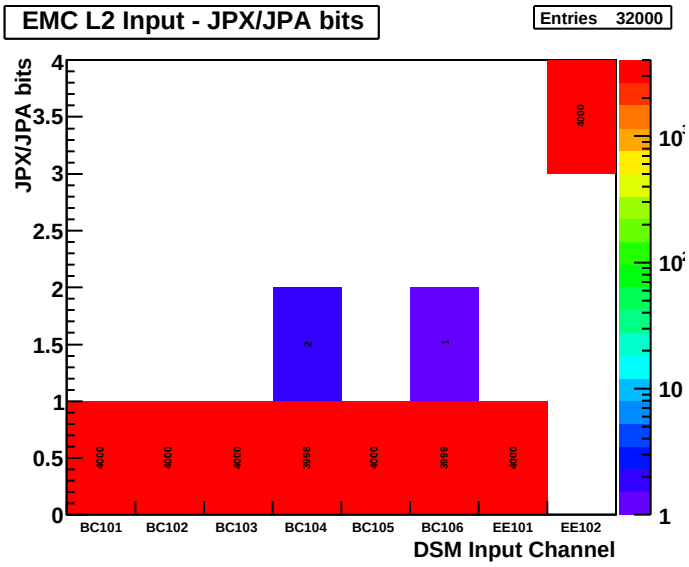

Endcap EMC L1 Input - Low Eta Sum
Entries 4000
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

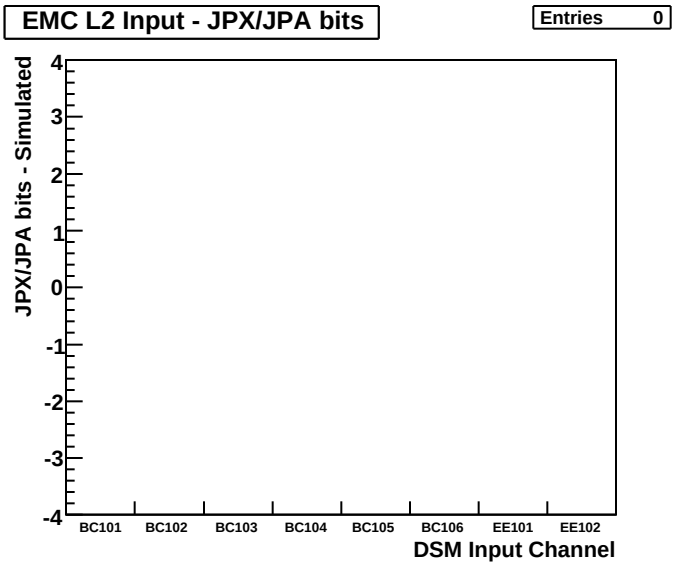

Endcap EMC L1 Input - High Eta Sum
Entries 48000
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

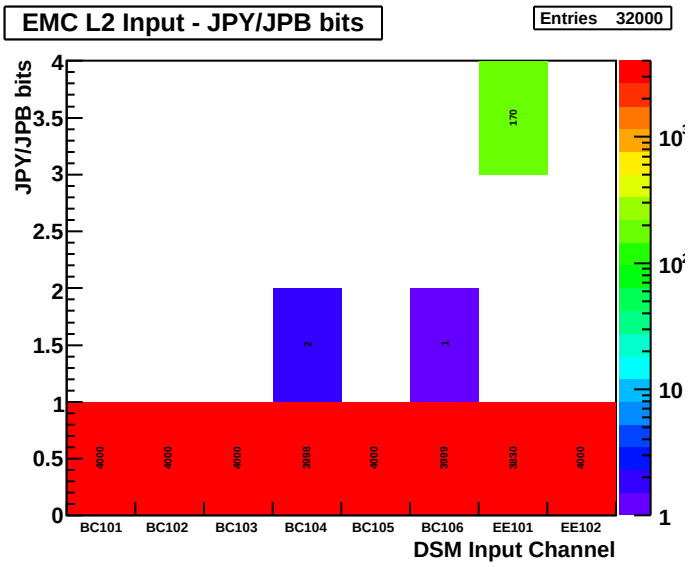

Endcap EMC L1 Input - High Eta Sum
Entries 3627
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

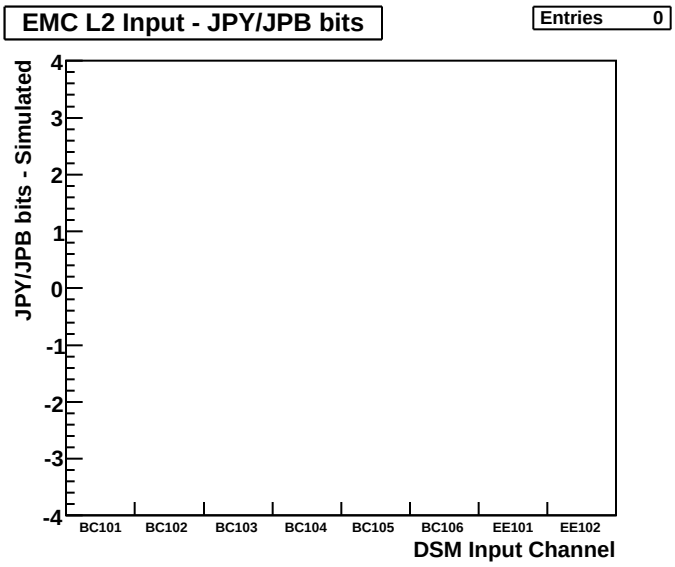

Endcap EMC L1 Input - High Tower Bits
Entries 48000
High Tower Bits
EE101
EE102
170
4000 4000 4000 3630 4000 4000 4000 4000 4000 4000 4000 4000
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

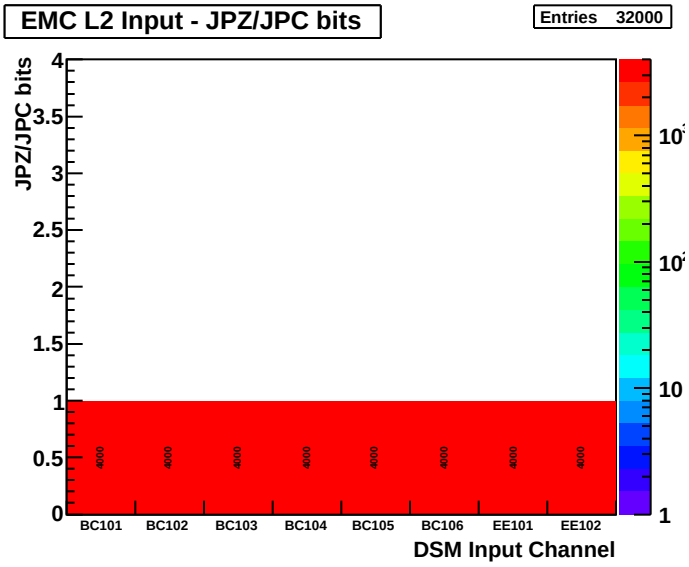

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

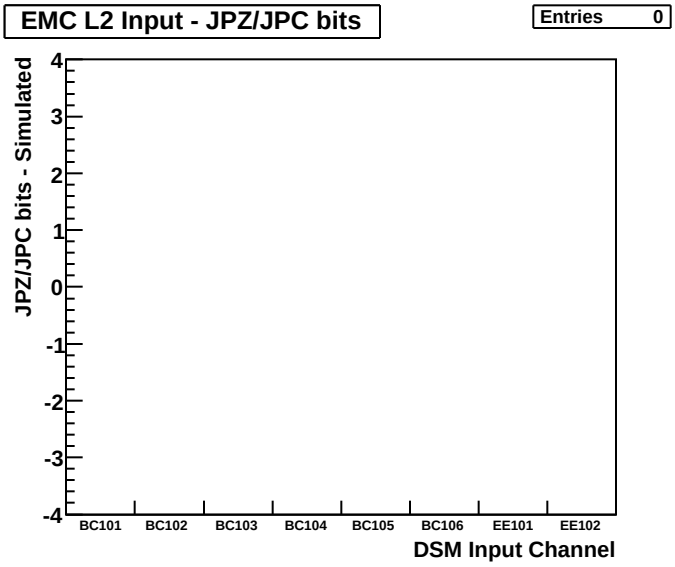

EMC L2 Input - JPX/JPA bits
Entries 32000
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
4000 4000 4000 3998 4000 3999 4000
2
1
4000

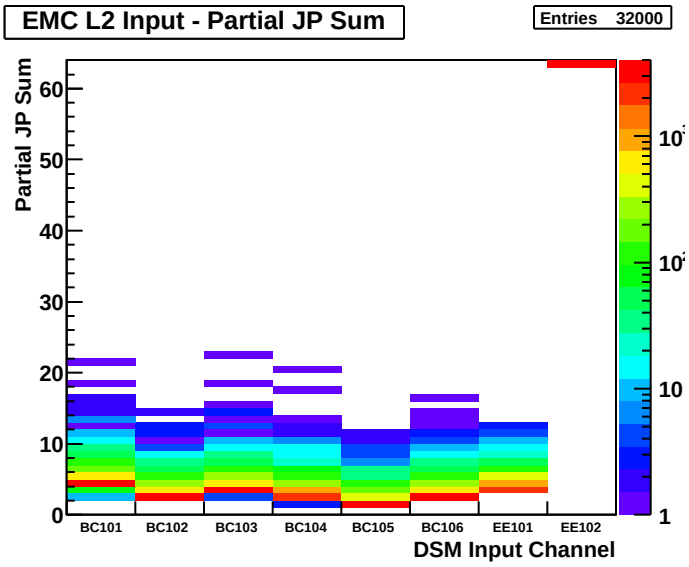

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

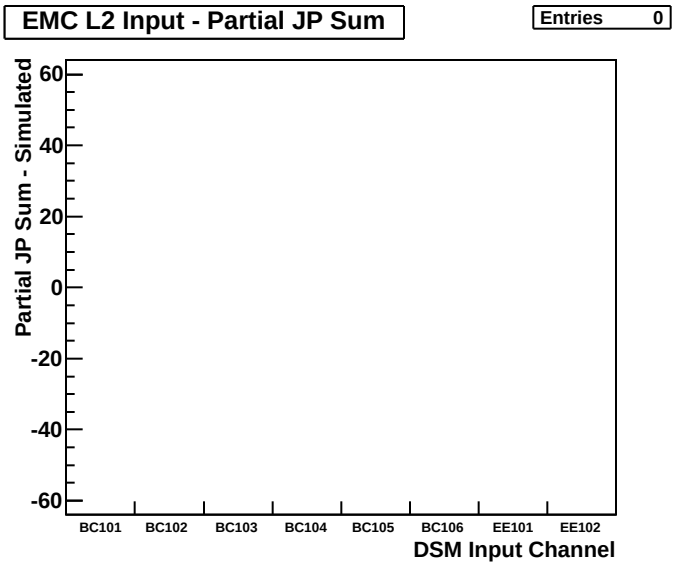

EMC L2 Input - JPY/JPB bits
Entries 32000
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
4000 4000 4000 3998 4000 3999 3830 4000
2
1
170

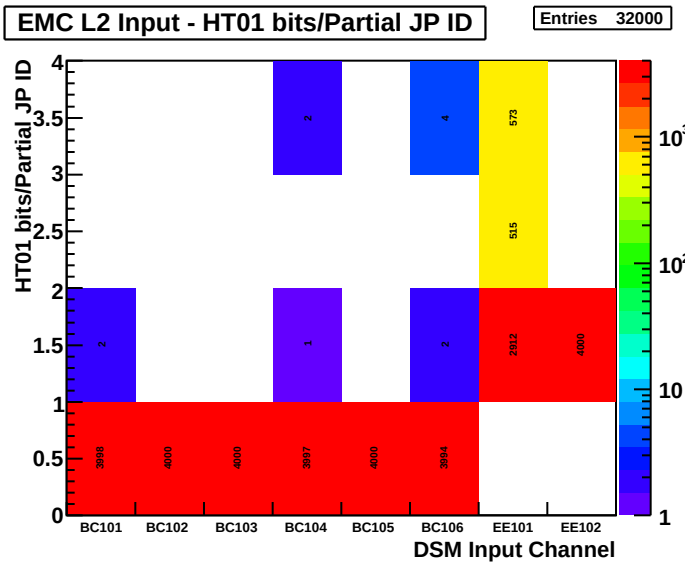

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

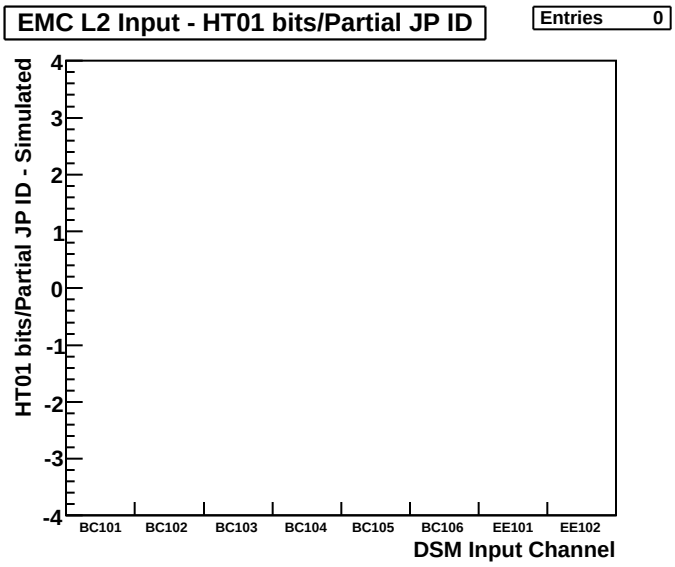

EMC L2 Input - JPZ/JPC bits
Entries 32000
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
4000 4000 4000 4000 4000 4000 4000 4000

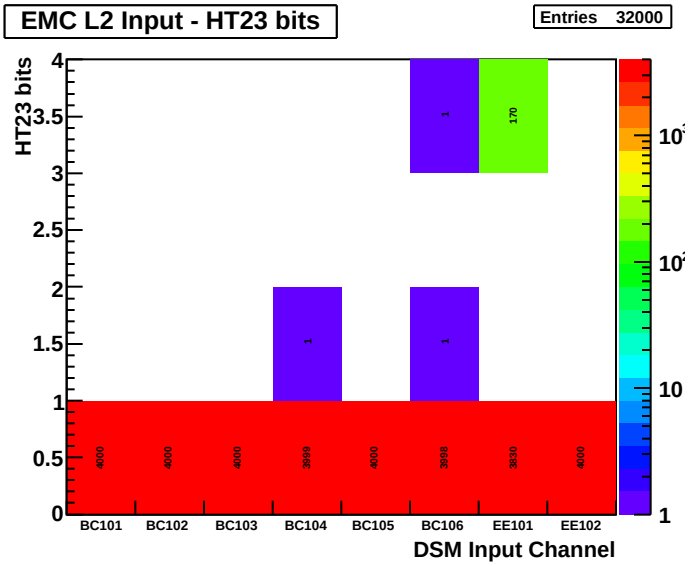

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

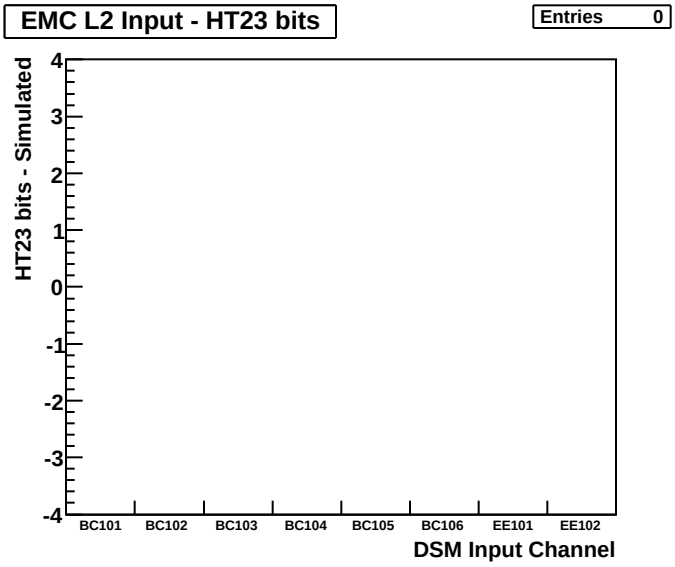

EMC L2 Input - Partial JP Sum
Entries 32000
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

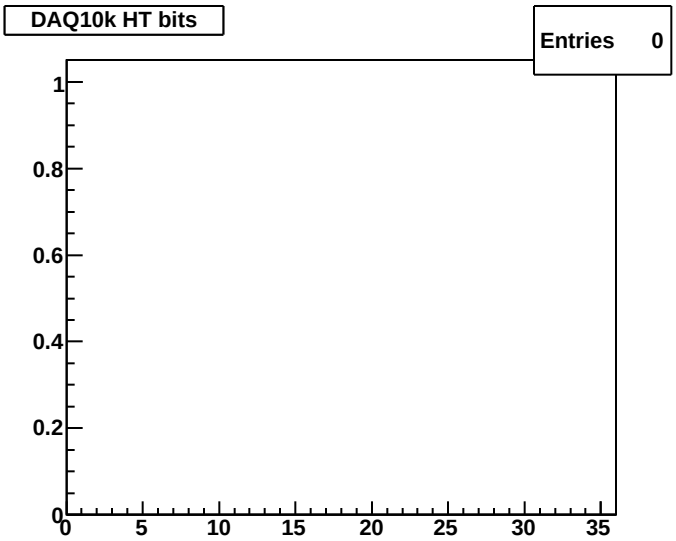

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

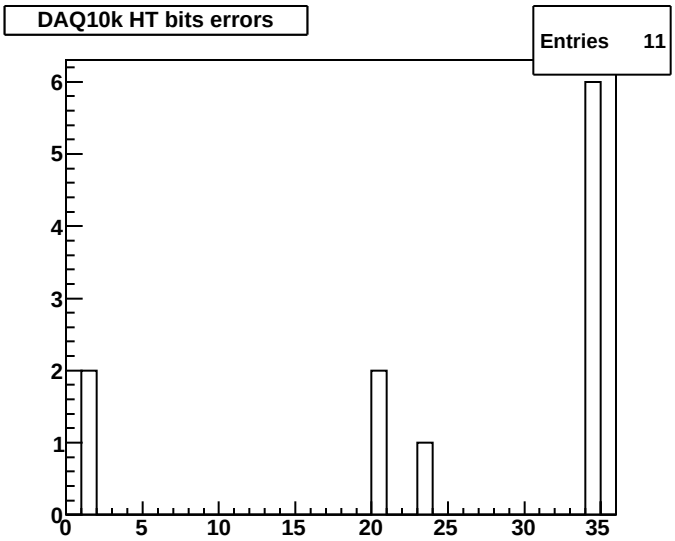

EMC L2 Input - HT01 bits/Partial JP ID
Entries 32000
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

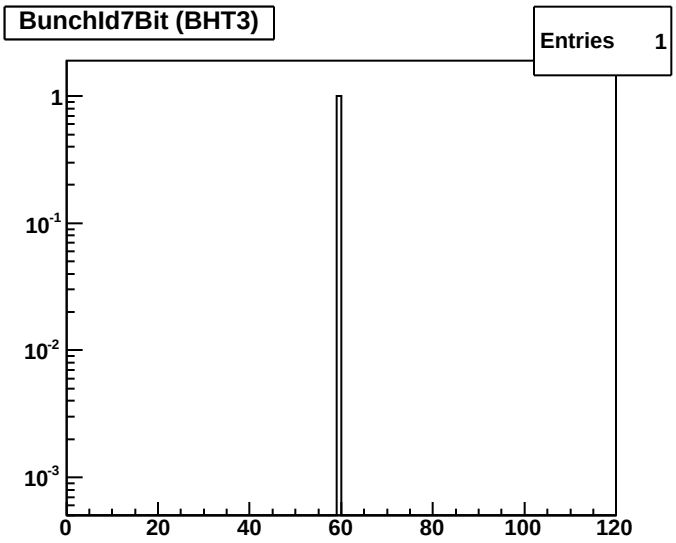

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

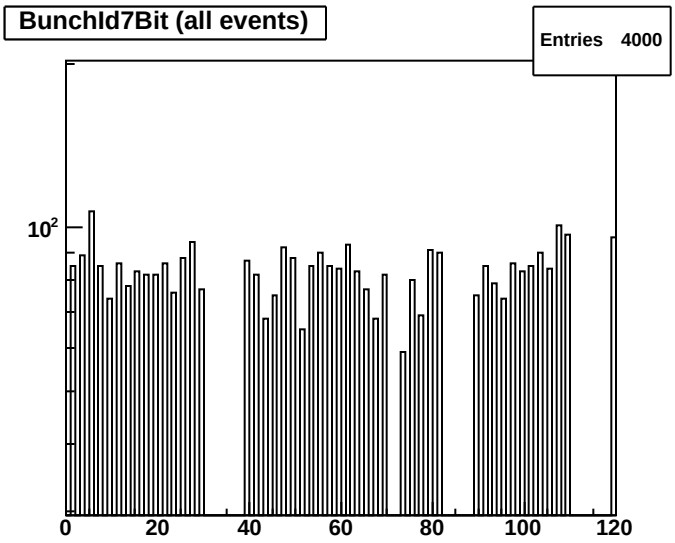

EMC L2 Input - HT23 bits
Entries 32000
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

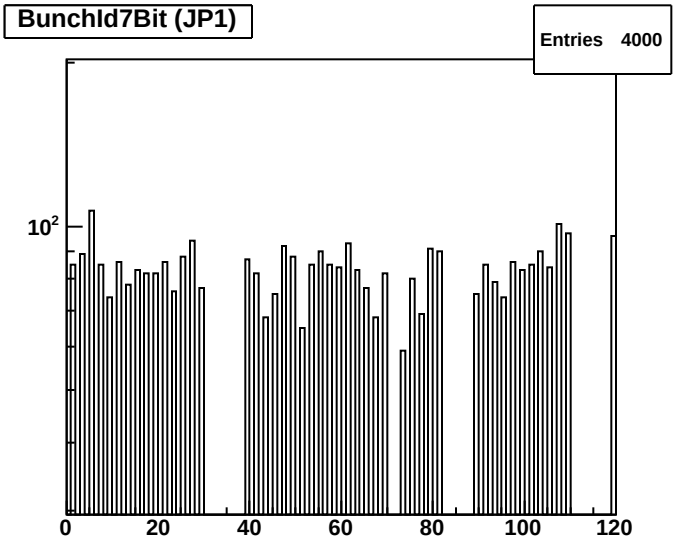

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

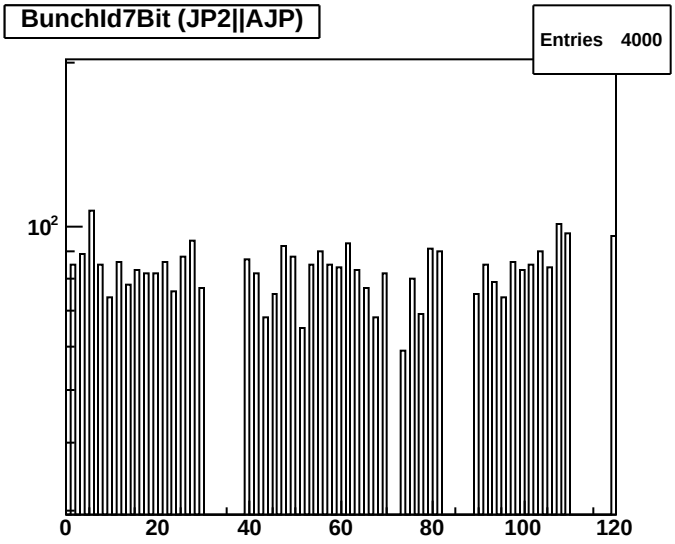

DAQ10k HT bits
Entries 0

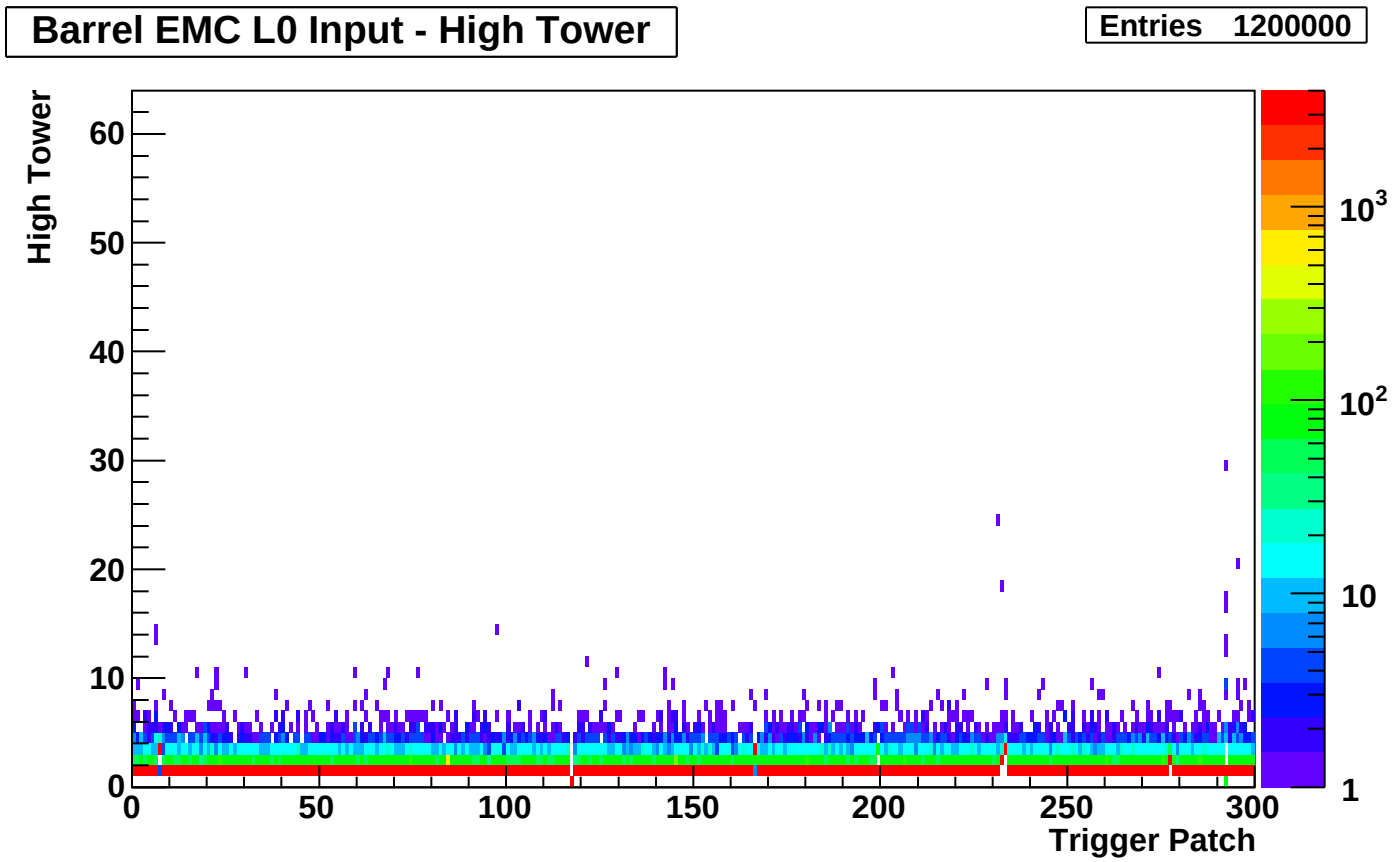

DAQ10k HT bits errors
Entries 11

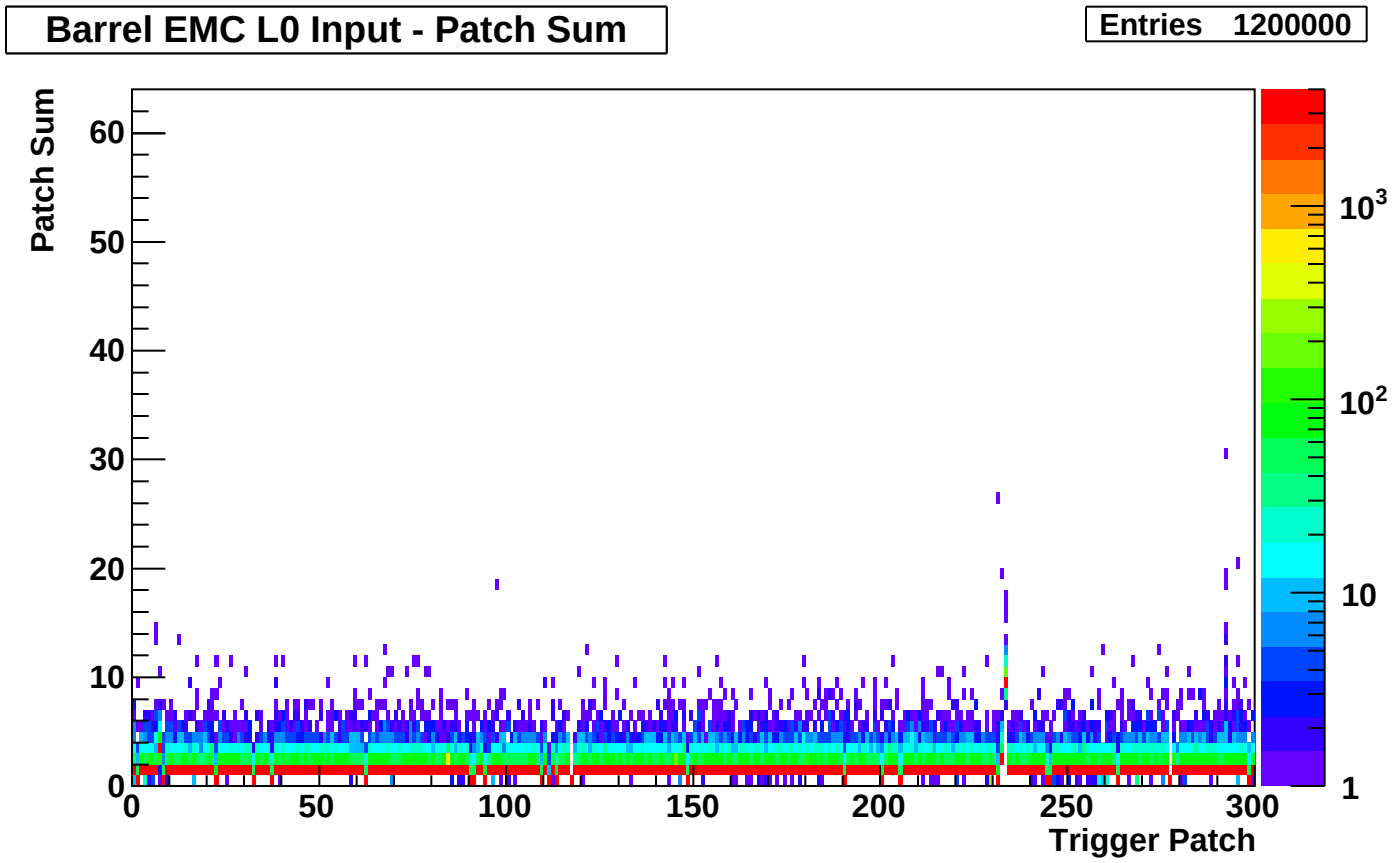

BunchId7Bit (BHT3)
Entries 1

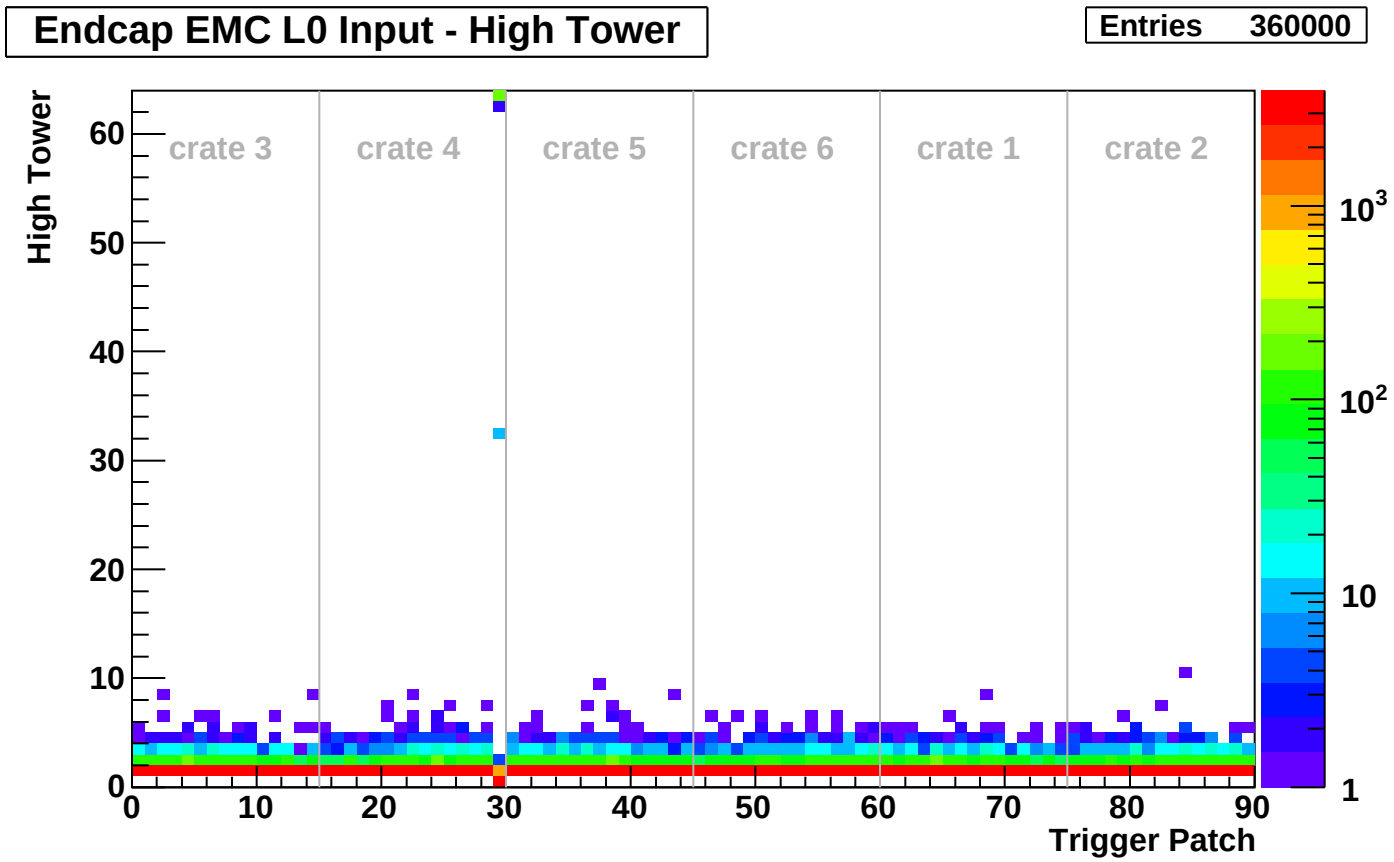

BunchId7Bit (all events)
Entries 4000

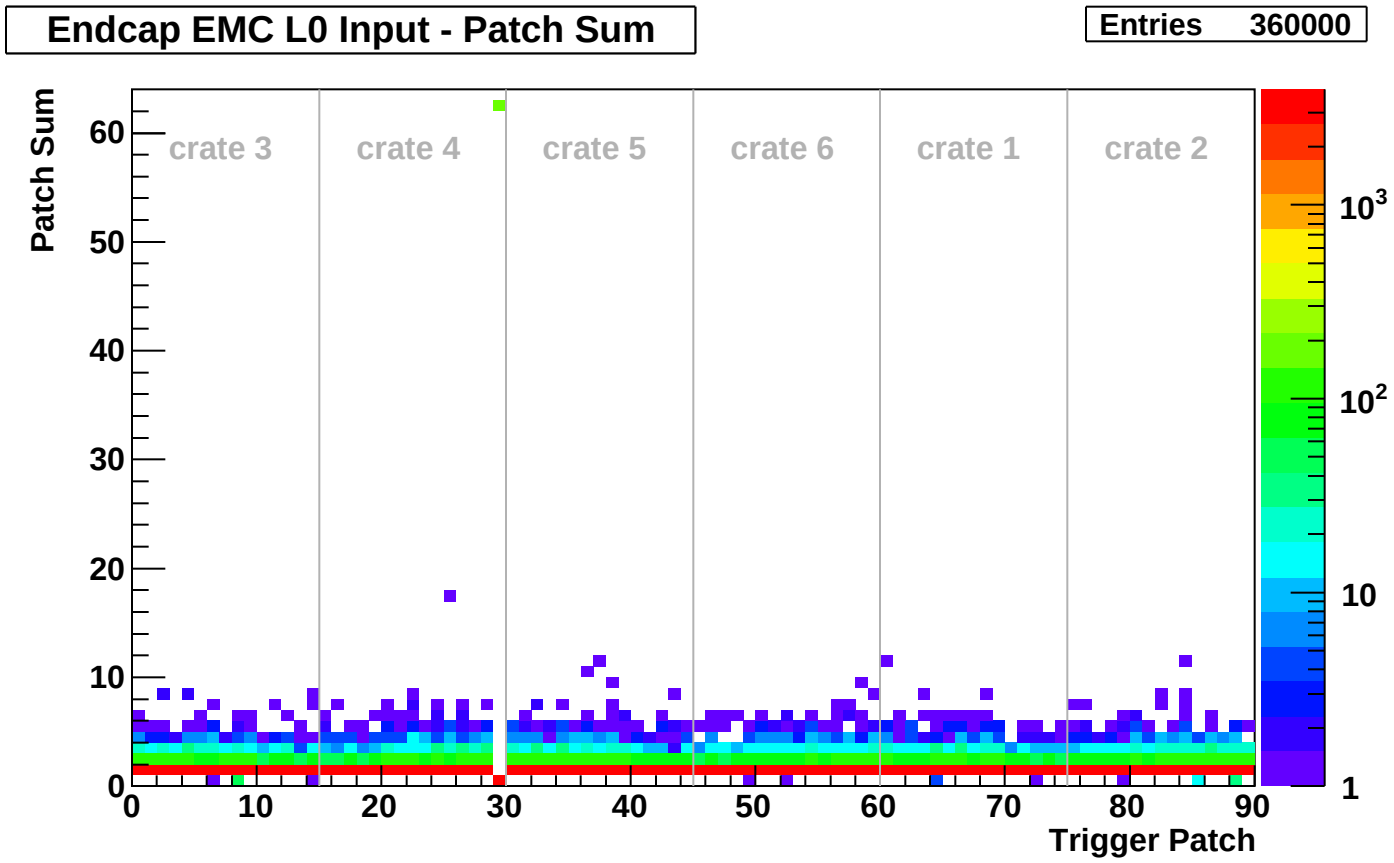

BunchId7Bit (JP1)
Entries 4000

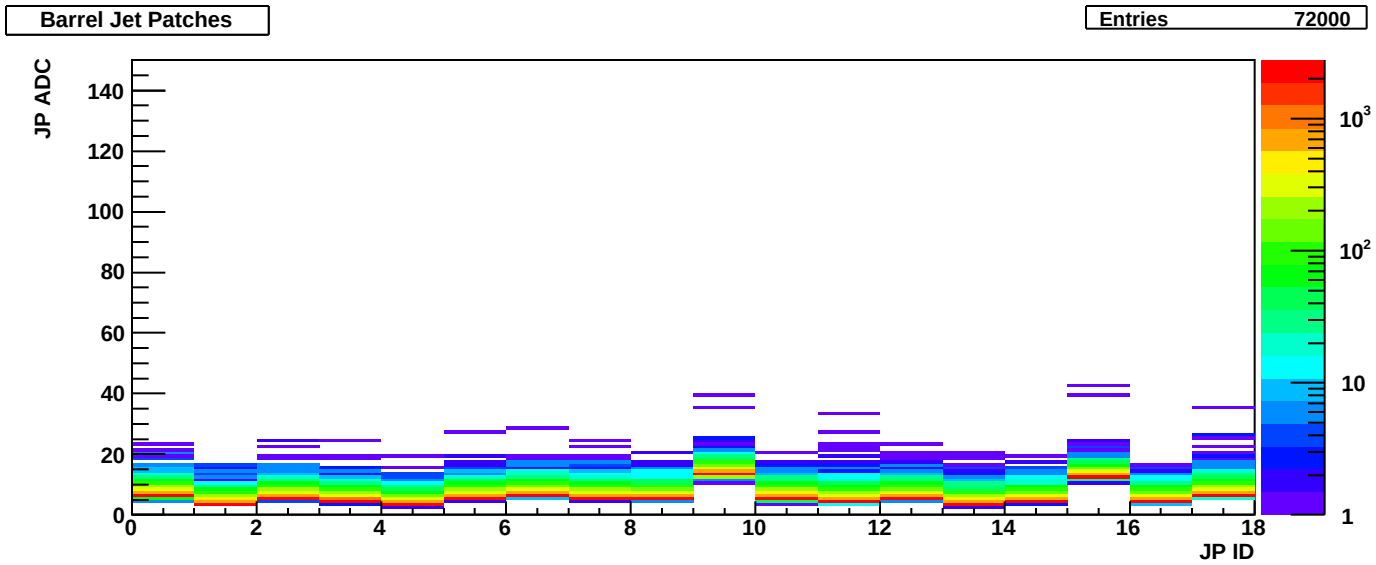

BunchId7Bit (JP2||AJP)
Entries 4000

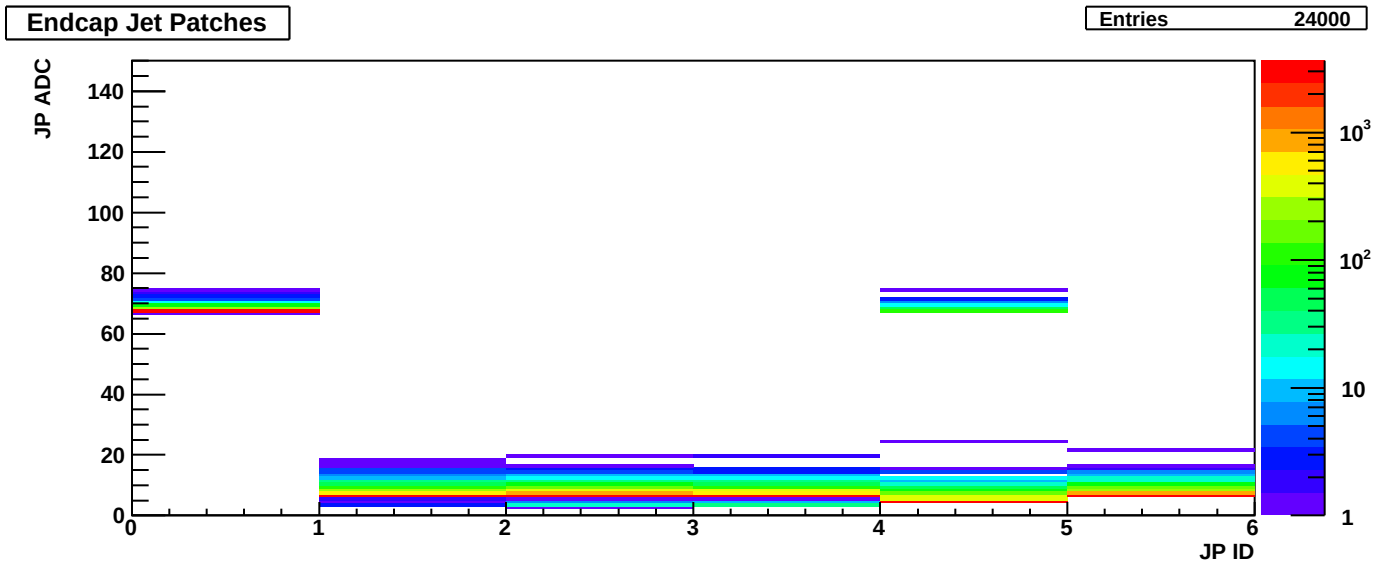

Barrel EMC L0 Input - High Tower
Entries 1200000
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

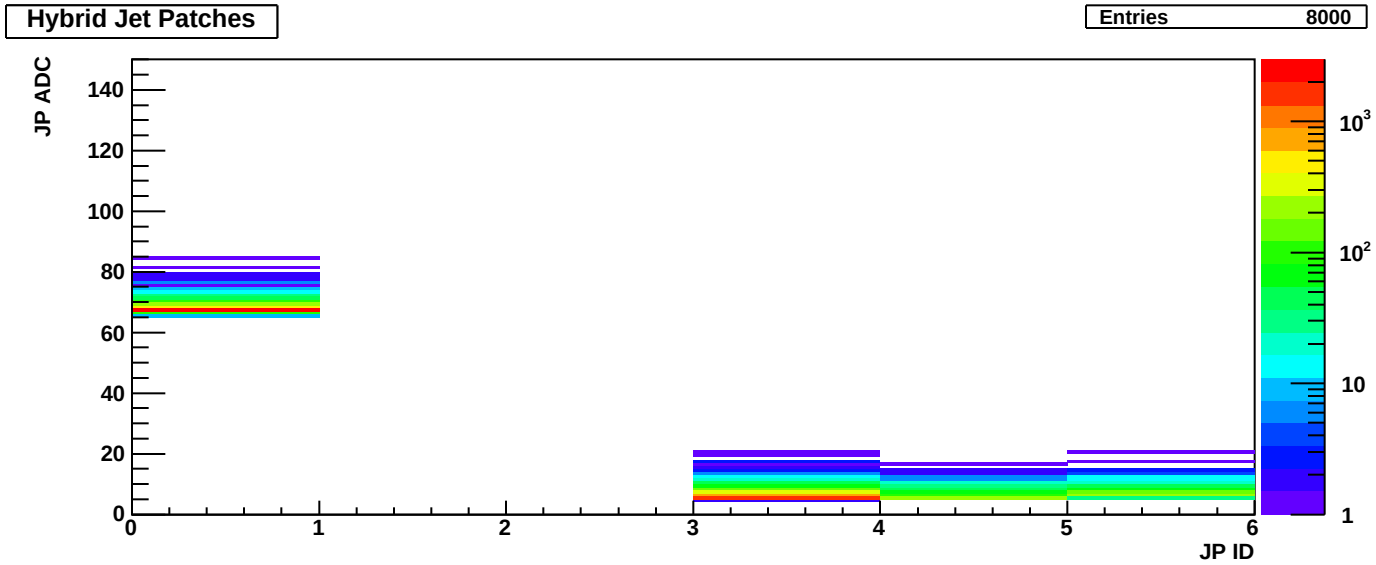

Barrel EMC L0 Input - Patch Sum
Entries 1200000
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

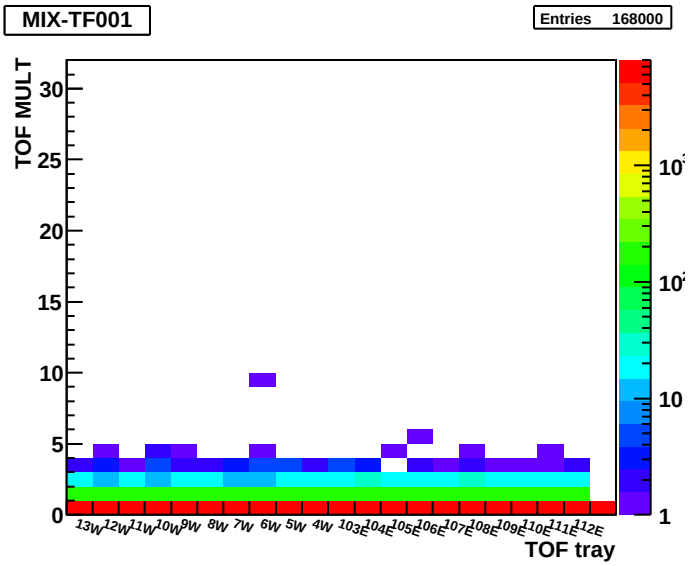

Endcap EMC L0 Input - High Tower
Entries 360000
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

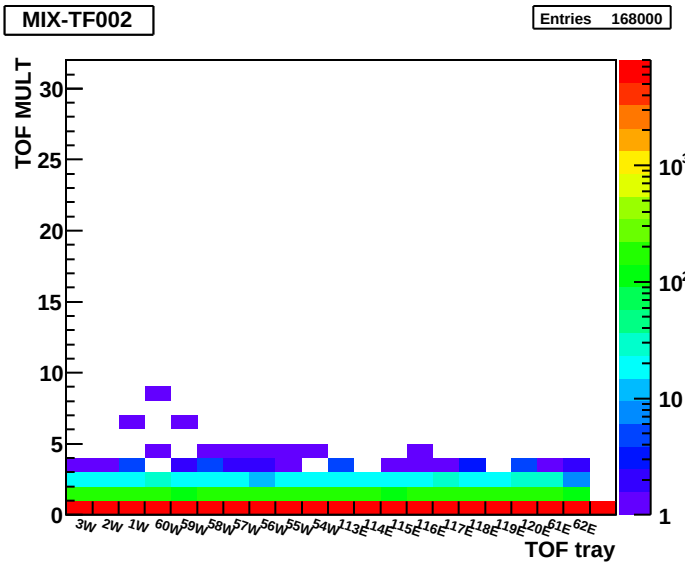

Endcap EMC L0 Input - Patch Sum
Entries 360000
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

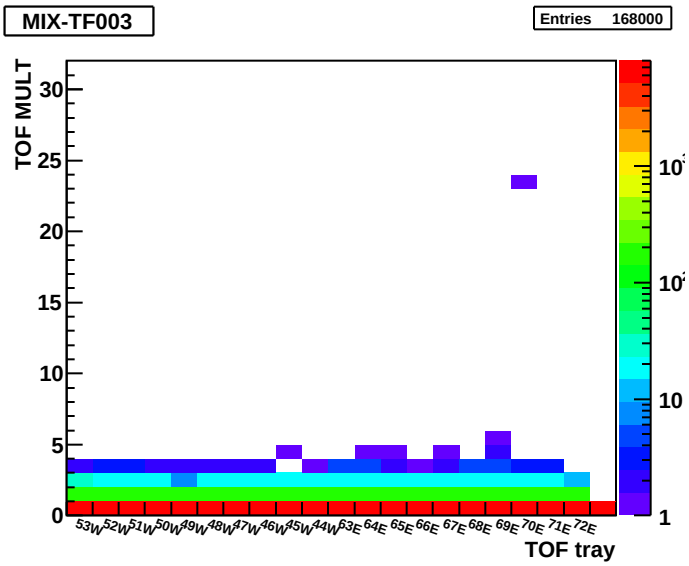

Barrel Jet Patches
Entries 72000
JP ADC
JP ID

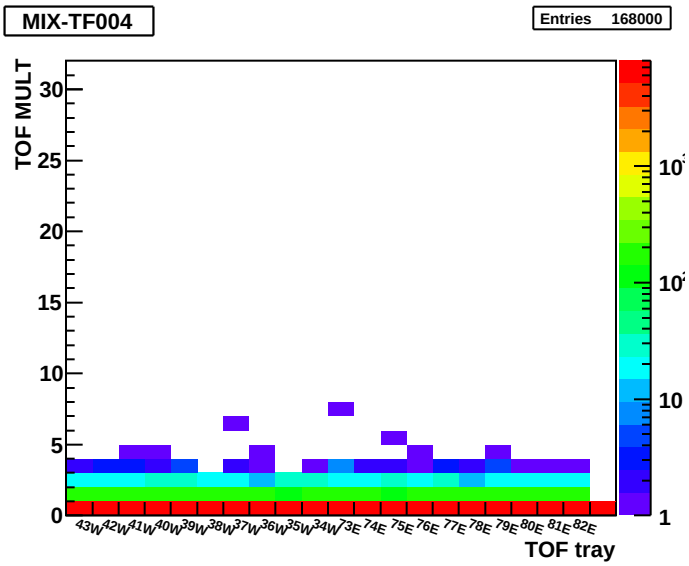

Endcap Jet Patches
Entries 24000
JP ADC
JP ID

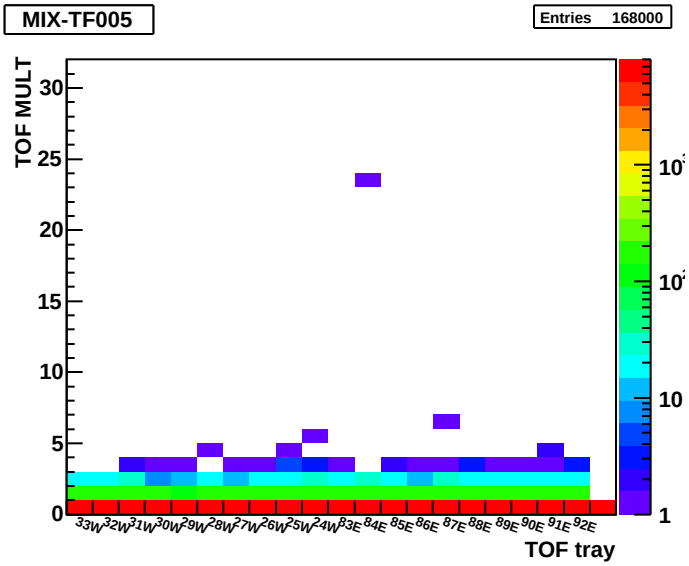

Hybrid Jet Patches
Entries 8000
JP ADC
JP ID

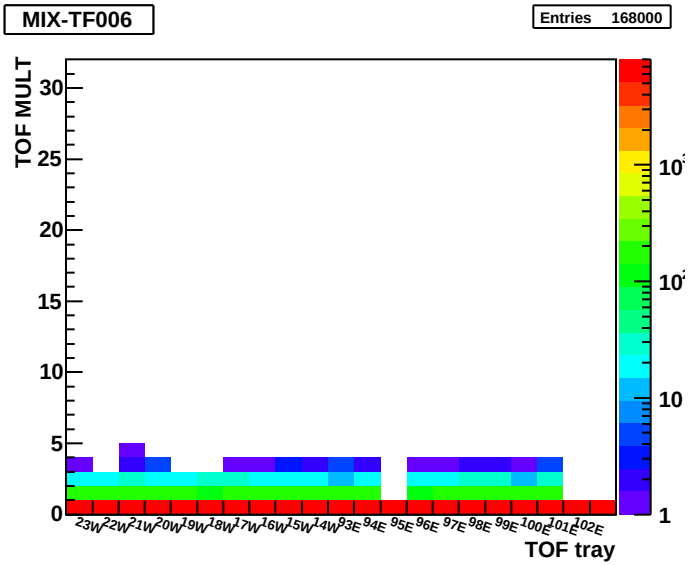

MIX-TF001
Entries 168000
TOF MULT
TOF tray

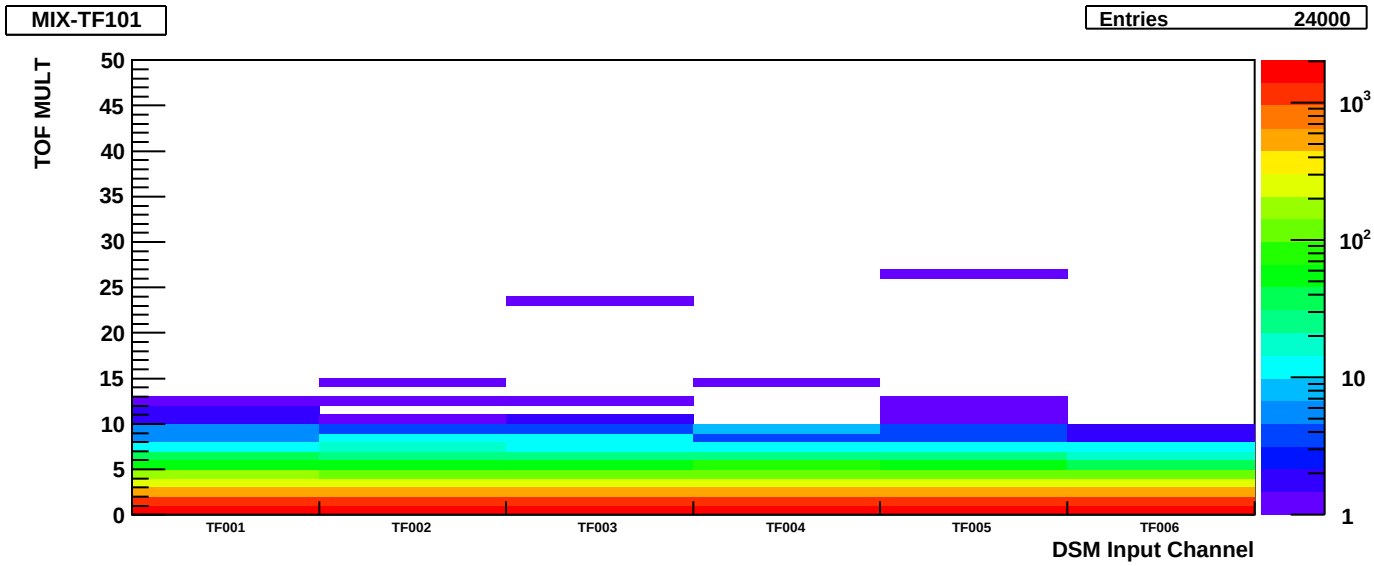

MIX-TF002
Entries 168000
TOF MULT
TOF tray

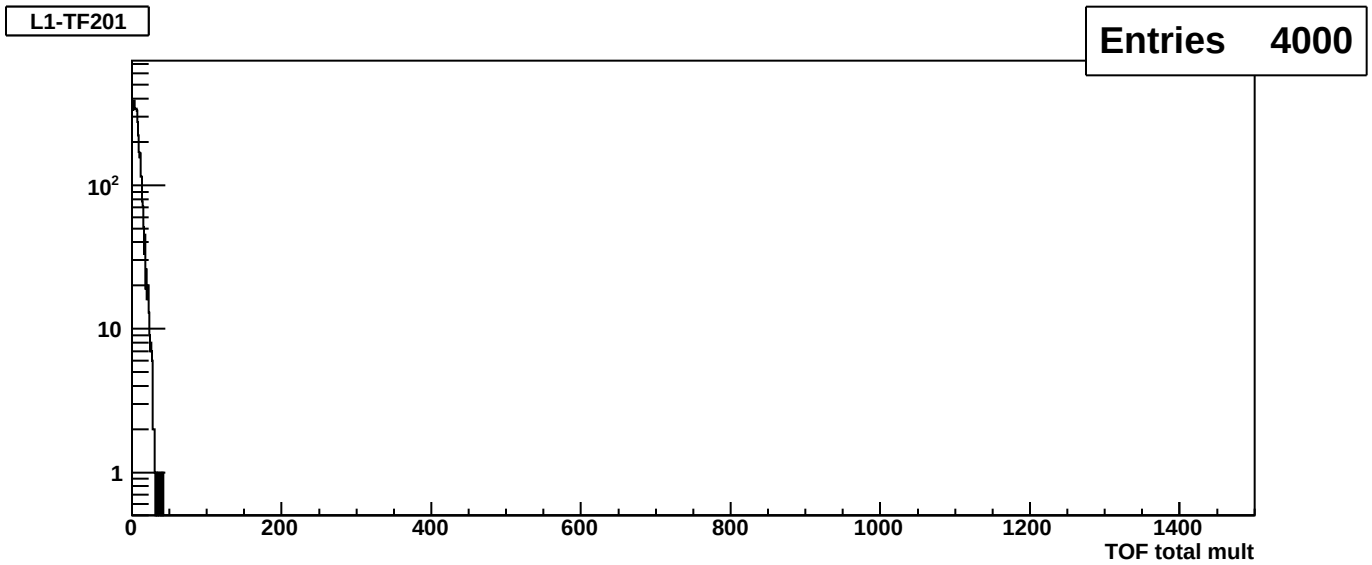

MIX-TF003
Entries 168000
TOF MULT
TOF tray

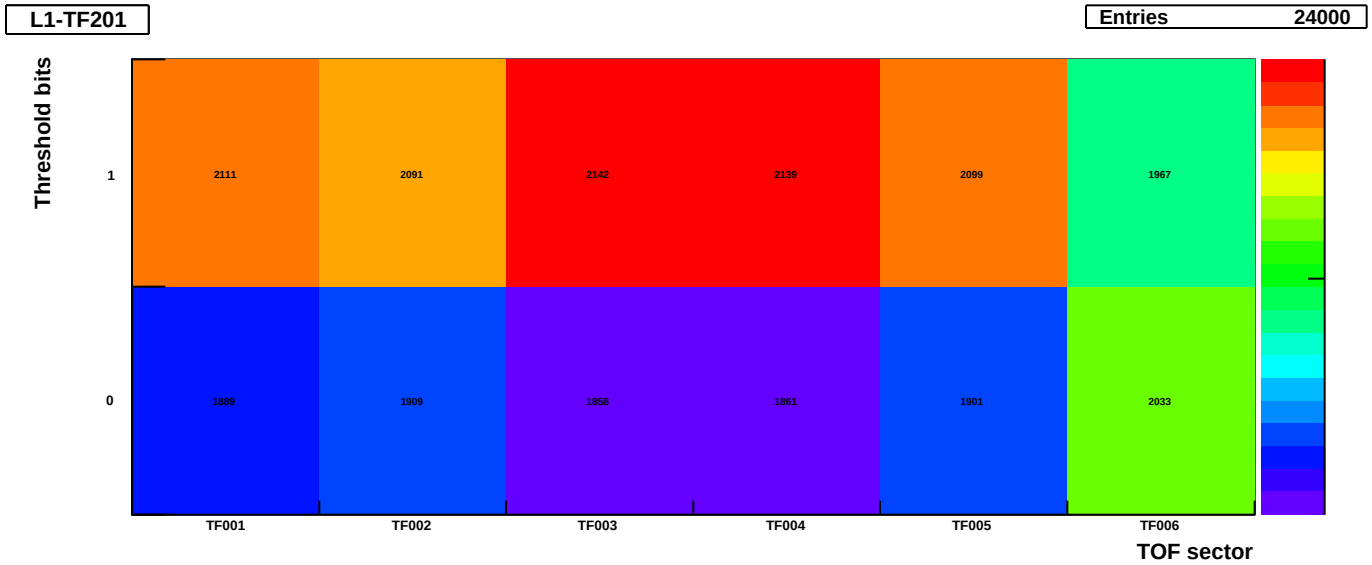

MIX-TF004
Entries 168000
TOF MULT
TOF tray

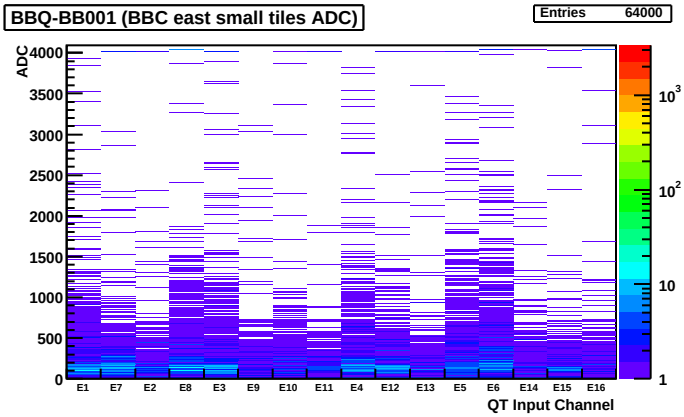

MIX-TF005
Entries 168000
TOF MULT
TOF tray

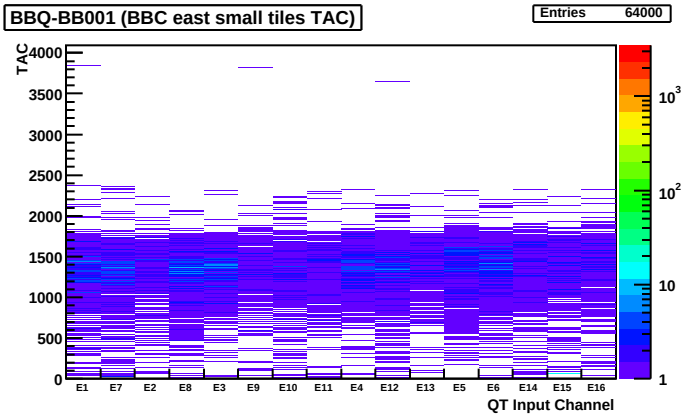

MIX-TF006
Entries 168000
TOF MULT
TOF tray

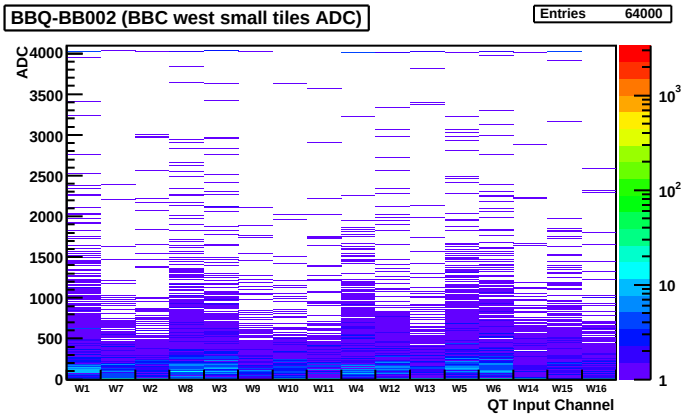

MIX-TF101
Entries 24000
TOF MULT
50
45
40
35
30
25
20
15
10
5
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^3
10^2
10
1

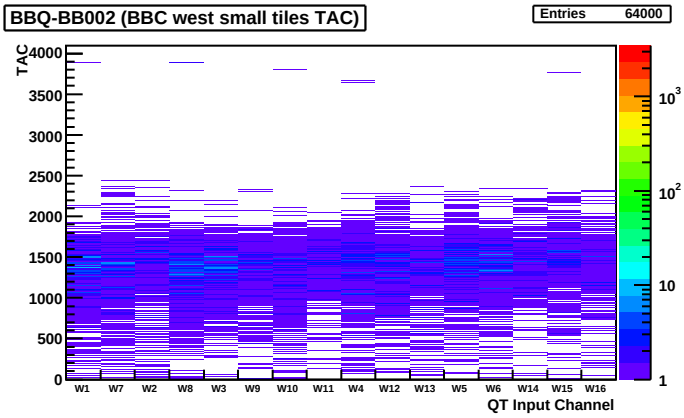

L1-TF201
Entries 4000
10^2
10
1
0
200
400
600
800
1000
1200
1400
TOF total mult

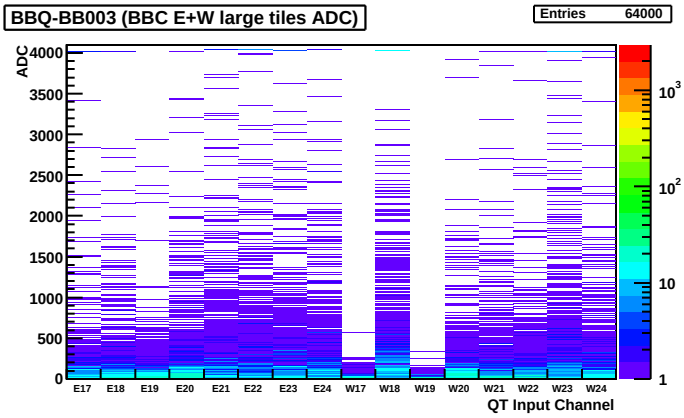

L1-TF201
Entries 24000
Threshold bits
1
0
2111
2091
2142
2139
2099
1967
1889
1909
1858
1861
1901
2033
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

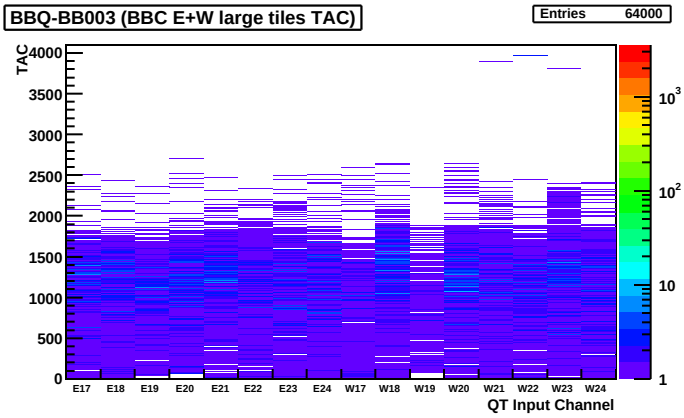

BBQ-BB001 (BBC east small tiles ADC)
Entries 64000
ADC
QT Input Channel
E1 E7 E2 E8 E3 E9 E10 E11 E4 E12 E13 E5 E6 E14 E15 E16

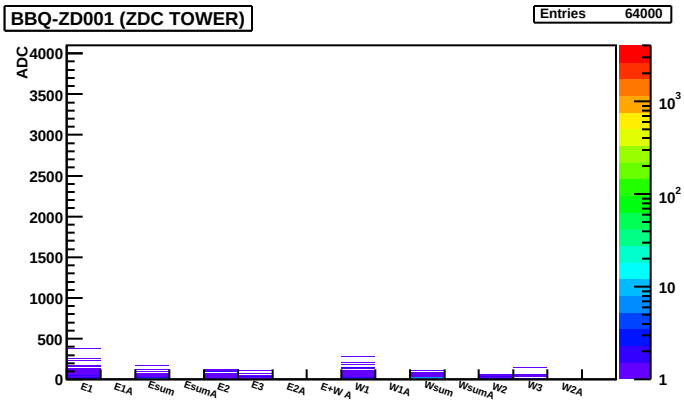

BBQ-BB001 (BBC east small tiles TAC)
Entries 64000
TAC
QT Input Channel
E1 E7 E2 E8 E3 E9 E10 E11 E4 E12 E13 E5 E6 E14 E15 E16

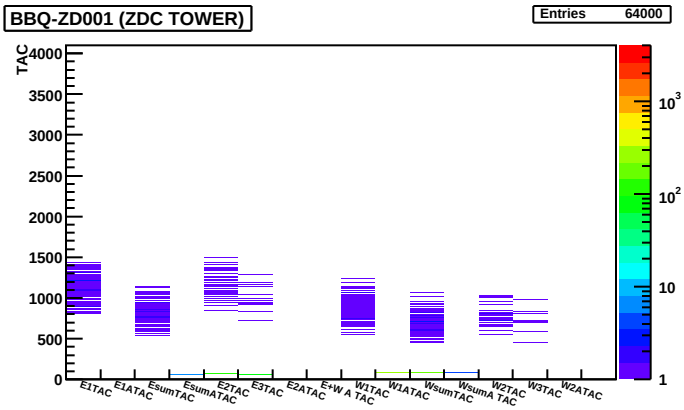

BBQ-BB002 (BBC west small tiles ADC)
Entries 64000
ADC
QT Input Channel
W1 W7 W2 W8 W3 W9 W10 W11 W4 W12 W13 W5 W6 W14 W15 W16

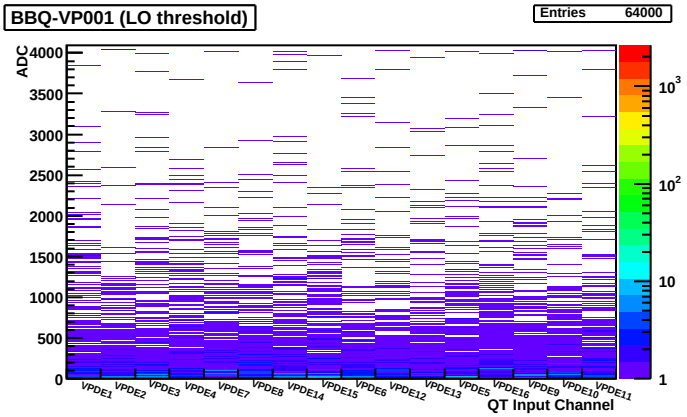

BBQ-BB002 (BBC west small tiles TAC)
Entries 64000
TAC
QT Input Channel
W1 W7 W2 W8 W3 W9 W10 W11 W4 W12 W13 W5 W6 W14 W15 W16

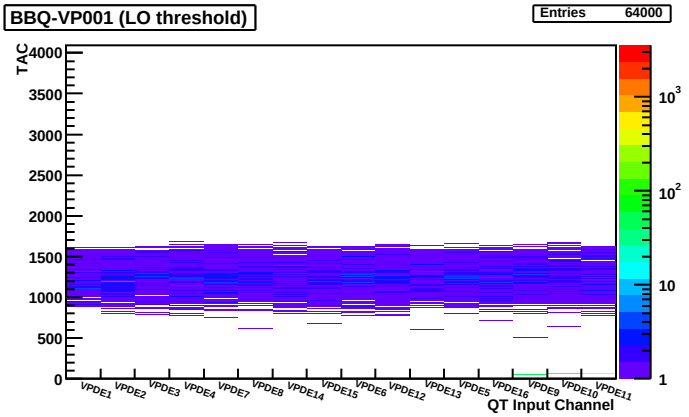

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 64000
ADC
QT Input Channel
E17 E18 E19 E20 E21 E22 E23 E24 W17 W18 W19 W20 W21 W22 W23 W24

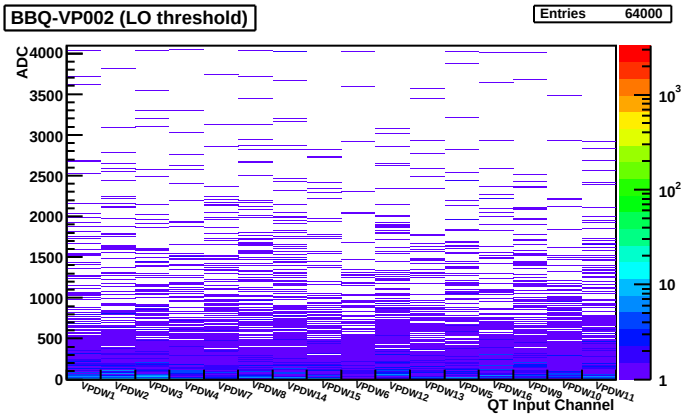

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 64000
TAC
QT Input Channel
E17 E18 E19 E20 E21 E22 E23 E24 W17 W18 W19 W20 W21 W22 W23 W24

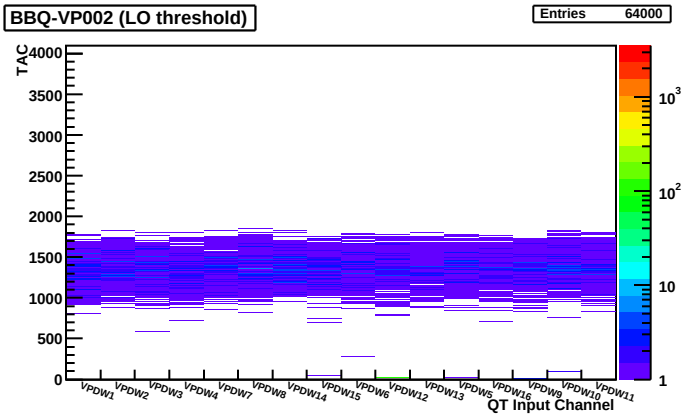

BBQ-ZD001 (ZDC TOWER)
Entries 64000
ADC
E1 E1A Esum EsumA E2 E3 E2A E+W A W1 W1A Wsum WsumA W2 W3 W2A

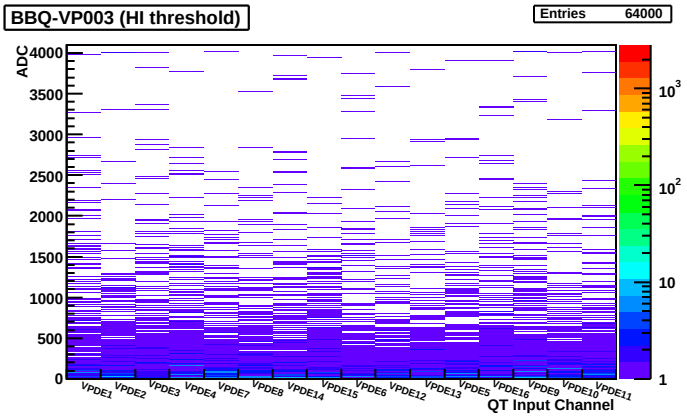

BBQ-ZD001 (ZDC TOWER)
Entries 64000
TAC
E1TAC E1ATAC EsumTAC EsumATAC E2TAC E3TAC E2ATAC E+W A TAC W1TAC W1ATAC WsumTAC WsumA TAC W2TAC W3TAC W2ATAC

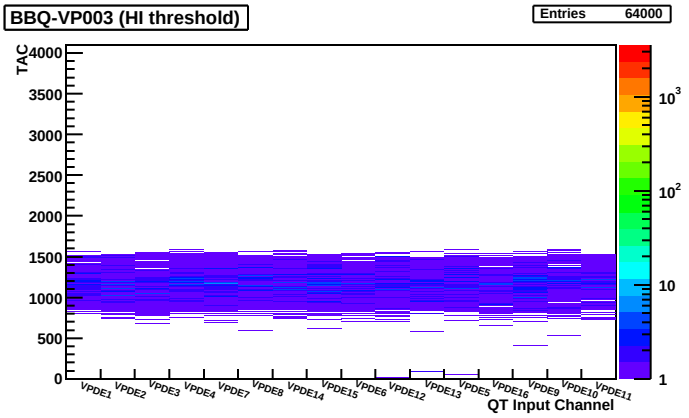

BBQ-VP001 (LO threshold)
Entries 64000
ADC
QT Input Channel

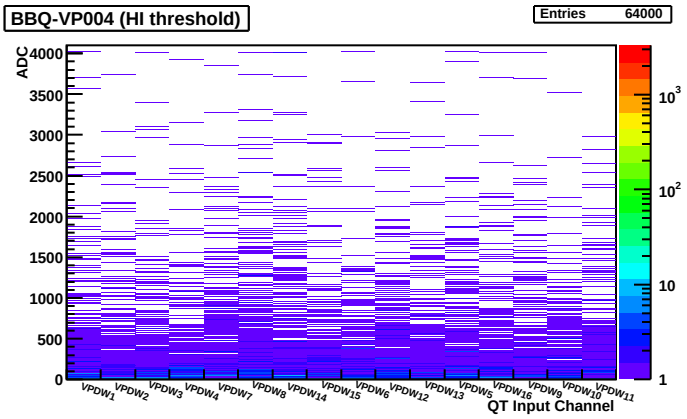

BBQ-VP001 (LO threshold)
Entries 64000
TAC
QT Input Channel

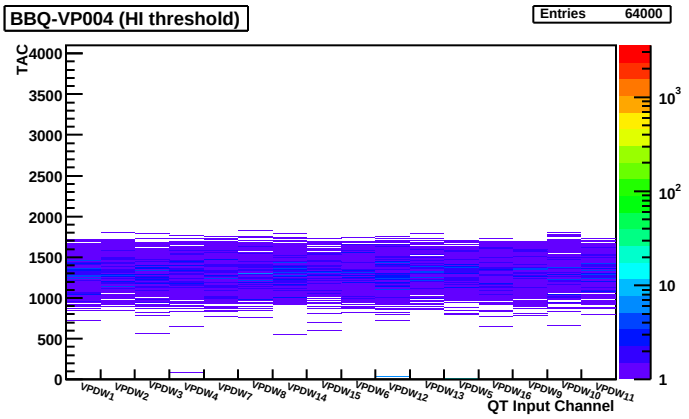

BBQ-VP002 (LO threshold)
Entries 64000
ADC
QT Input Channel

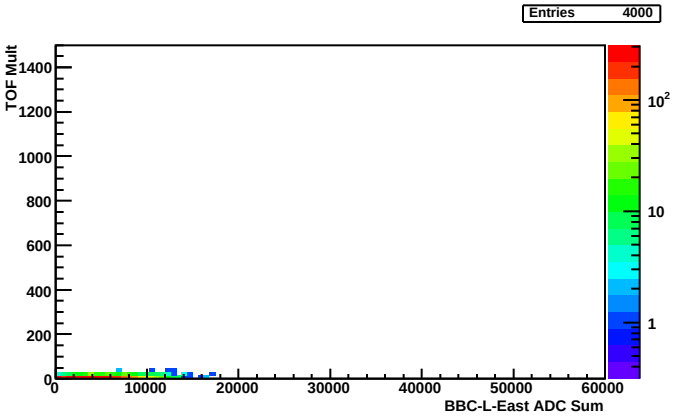

BBQ-VP002 (LO threshold)
Entries 64000
TAC
QT Input Channel

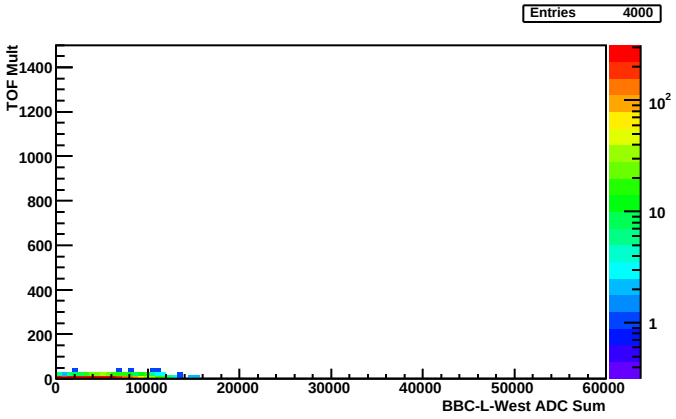

BBQ-VP003 (HI threshold)
Entries 64000
ADC
QT Input Channel

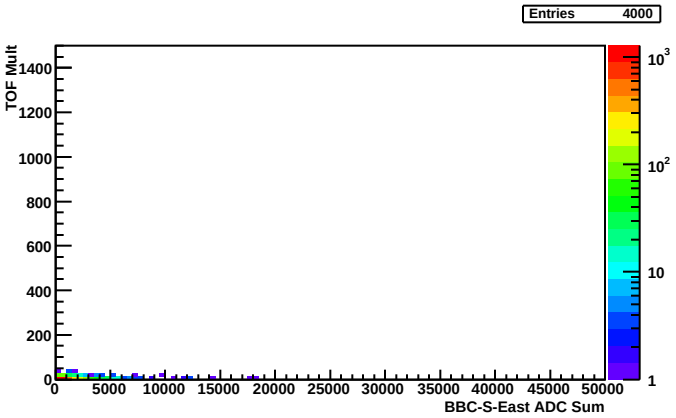

BBQ-VP003 (HI threshold)
Entries 64000
TAC
QT Input Channel

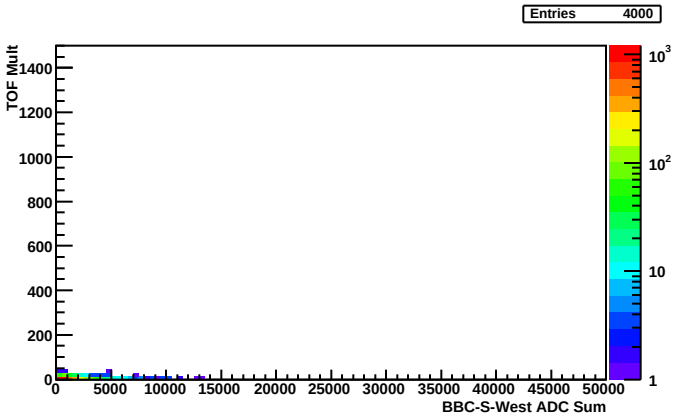

BBQ-VP004 (HI threshold)
Entries 64000
ADC
QT Input Channel

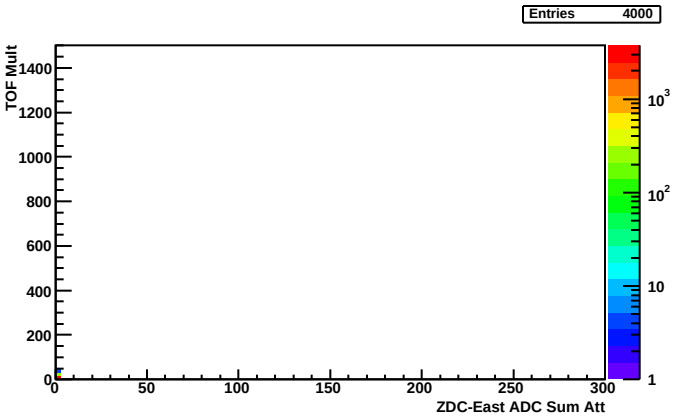

BBQ-VP004 (HI threshold)
Entries 64000
TAC
QT Input Channel

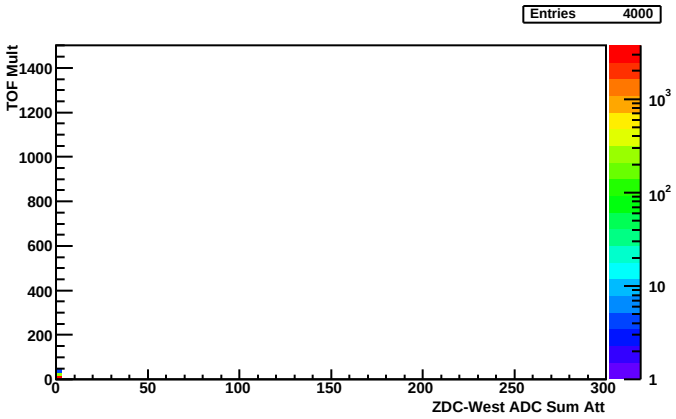

Entries 4000
TOF Mult
BBC-L-East ADC Sum

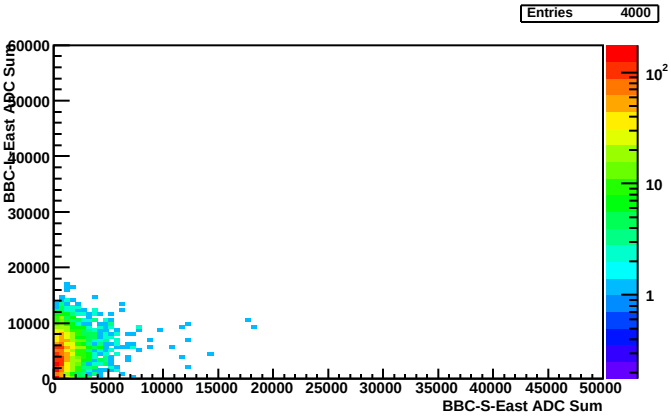

Entries 4000
TOF Mult
BBC-L-West ADC Sum

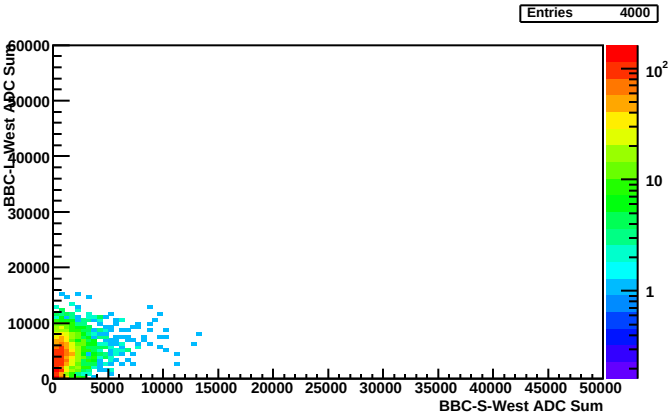

Entries 4000
TOF Mult
BBC-S-East ADC Sum

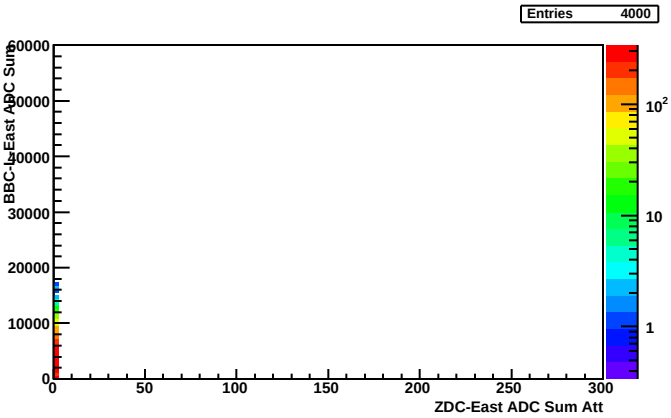

Entries 4000
TOF Mult
BBC-S-West ADC Sum

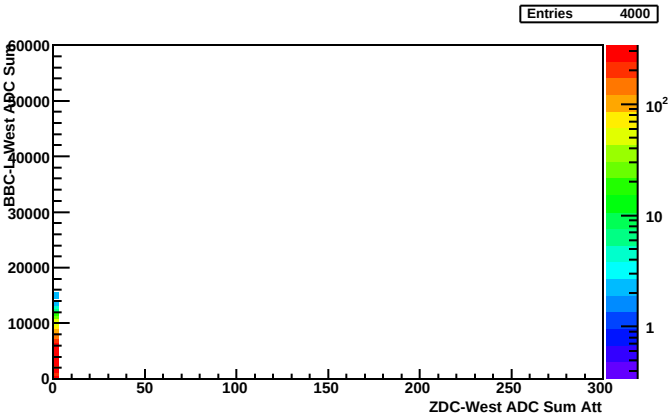

Entries 4000
TOF Mult
ZDC-East ADC Sum Att

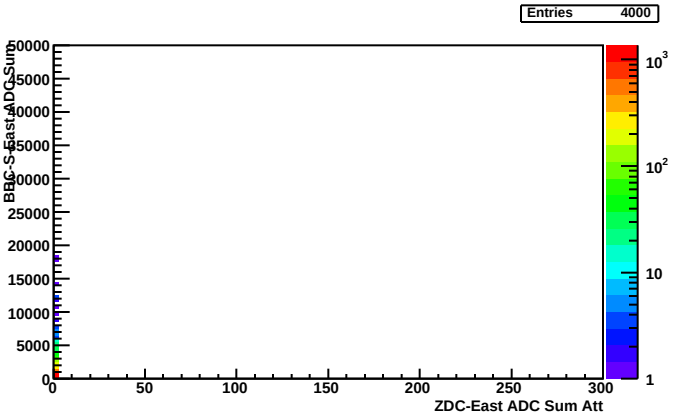

Entries 4000
TOF Mult
ZDC-West ADC Sum Att

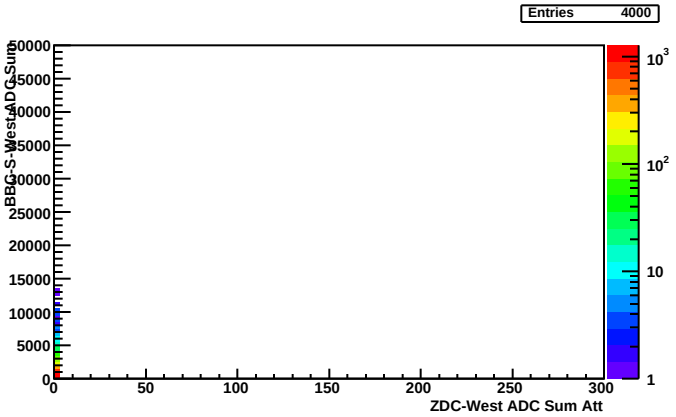

Entries 4000
BBC-L-East ADC Sum
BBC-S-East ADC Sum

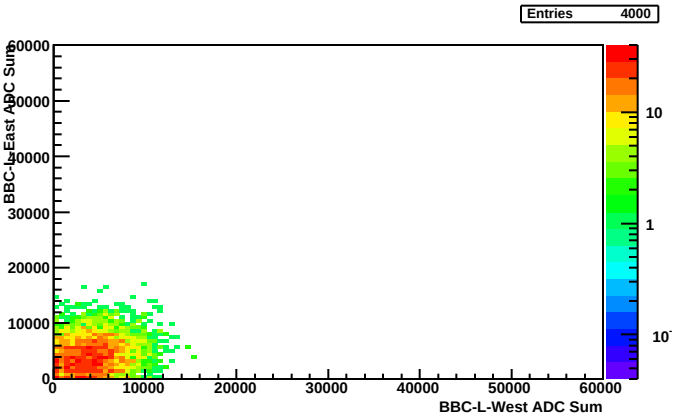

Entries 4000
BBC-L-West ADC Sum
BBC-S-West ADC Sum

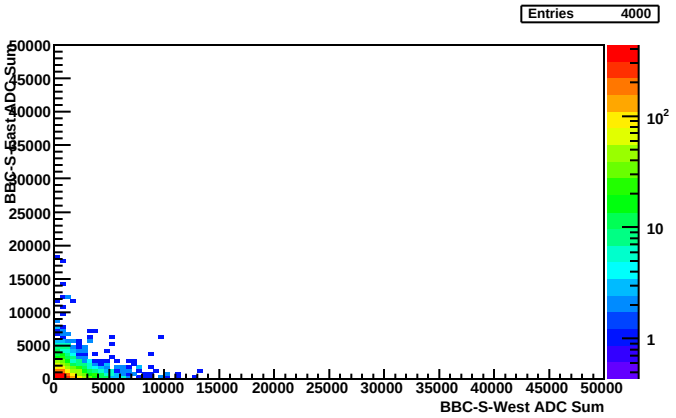

Entries 4000
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

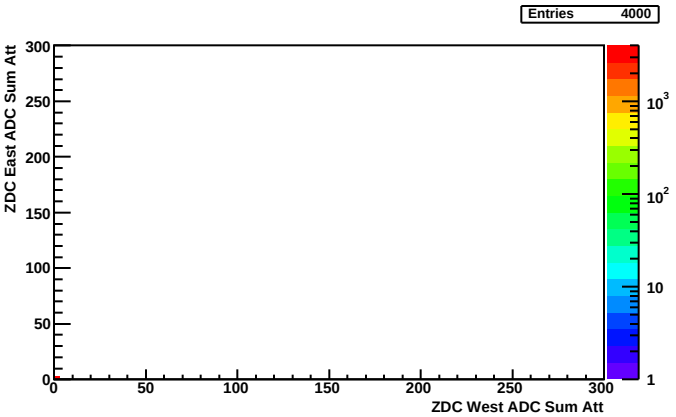

Entries 4000
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

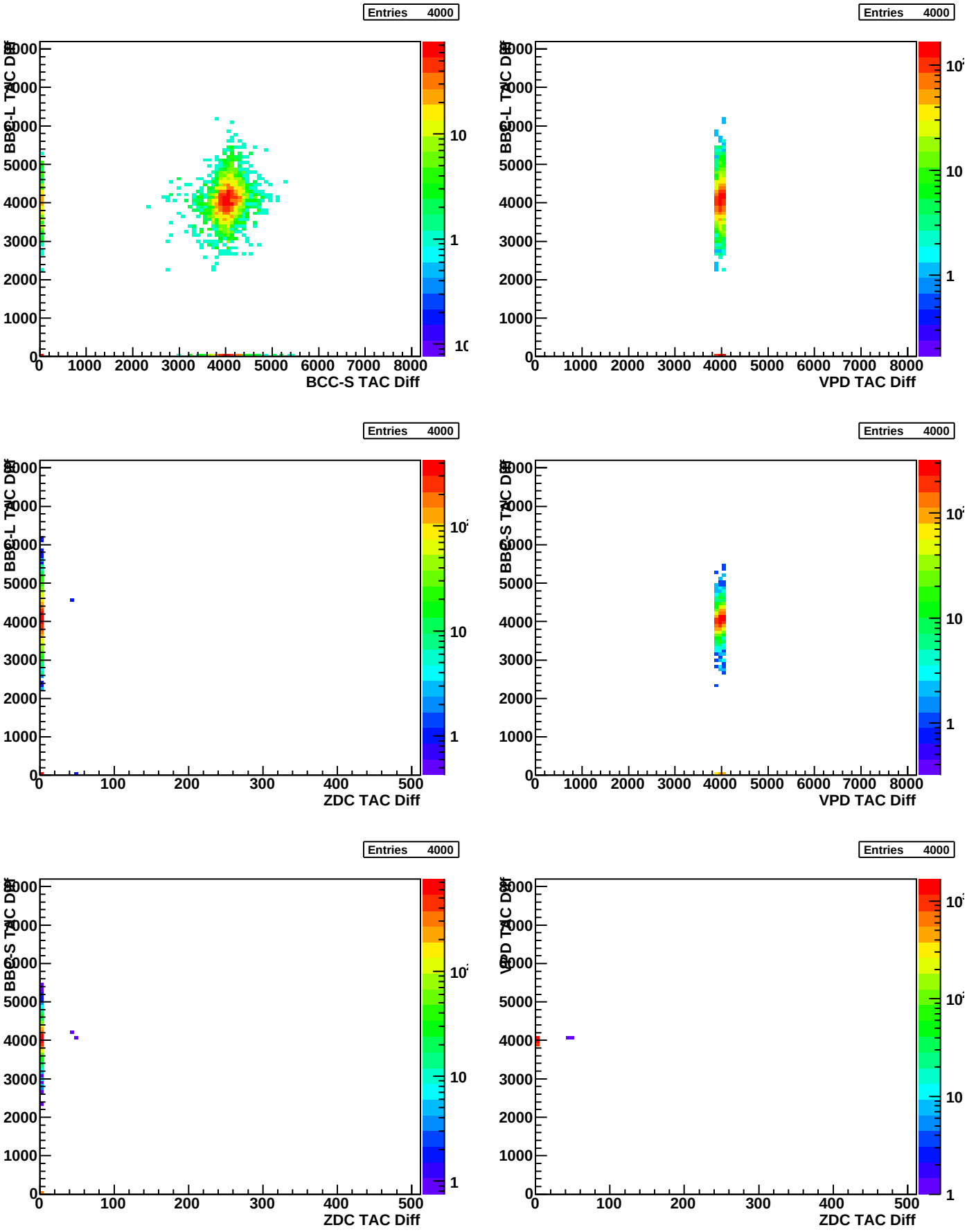

Entries 4000
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

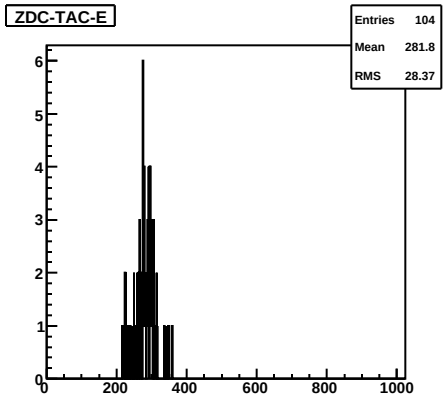

Entries 4000
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

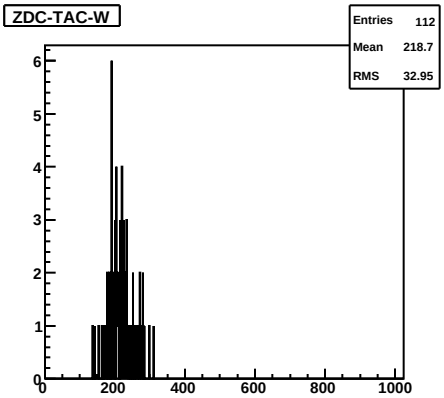

Entries 4000
BBC-L-East ADC Sum
BBC-L-West ADC Sum

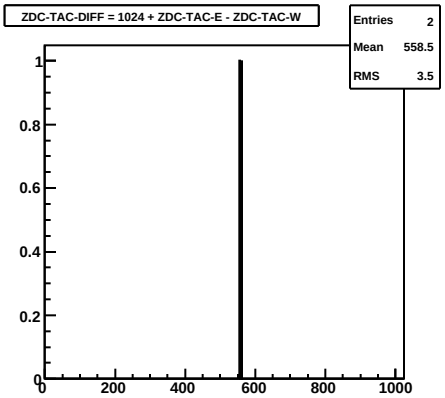

Entries 4000
BBC-S-East ADC Sum
BBC-S-West ADC Sum

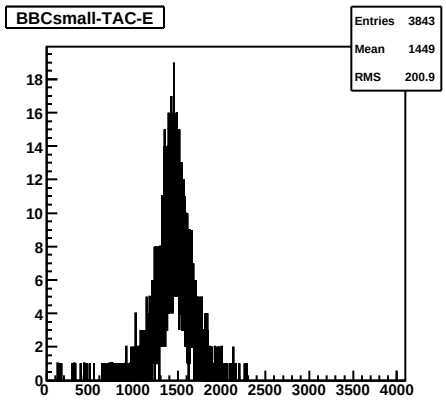

Entries 4000
ZDC East ADC Sum Att
ZDC West ADC Sum Att

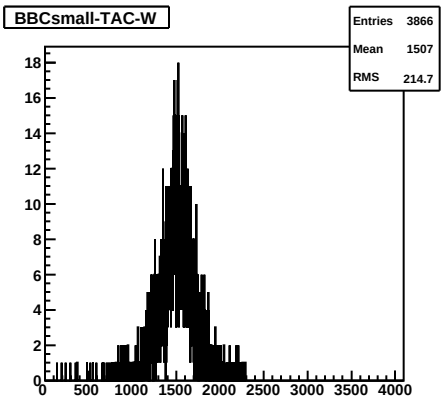

Entries 4000
BBC-L TAC Diff
BCC-S TAC Diff
Entries 4000
BBC-L TAC Diff
VPD TAC Diff
Entries 4000
BBC-L TAC Diff
ZDC TAC Diff
Entries 4000
BBC-S TAC Diff
VPD TAC Diff
Entries 4000
BBC-S TAC Diff
ZDC TAC Diff
Entries 4000
VPD TAC Diff
ZDC TAC Diff

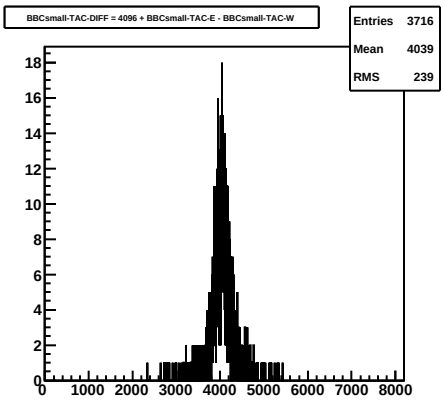

ZDC-TAC-E
Entries 104
Mean 281.8
RMS 28.37

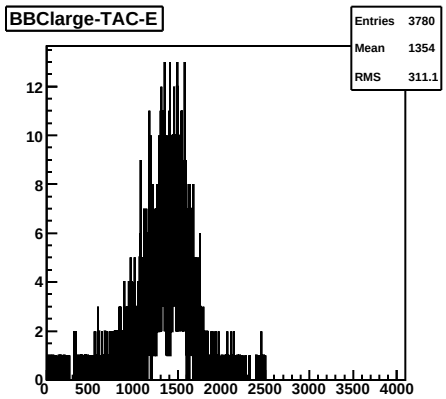

ZDC-TAC-W
Entries 112
Mean 218.7
RMS 32.95

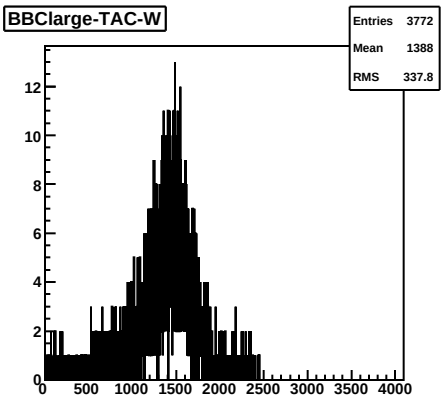

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 2
Mean 558.5
RMS 3.5

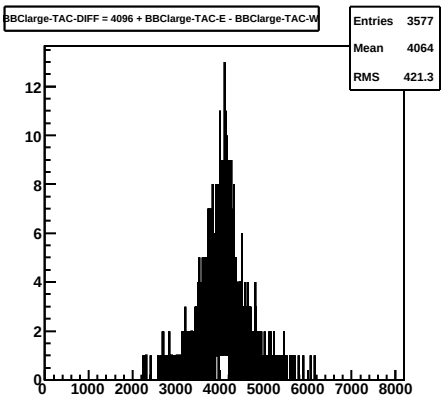

BBCsmall-TAC-E
Entries 3843
Mean 1449
RMS 200.9

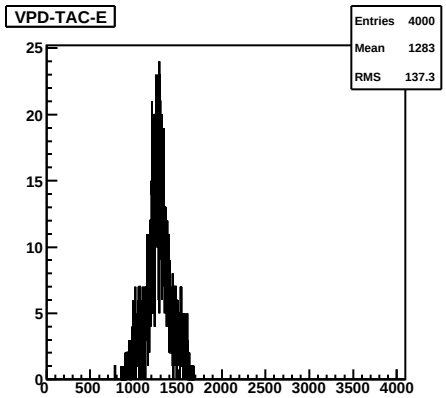

BBCsmall-TAC-W
Entries 3866
Mean 1507
RMS 214.7

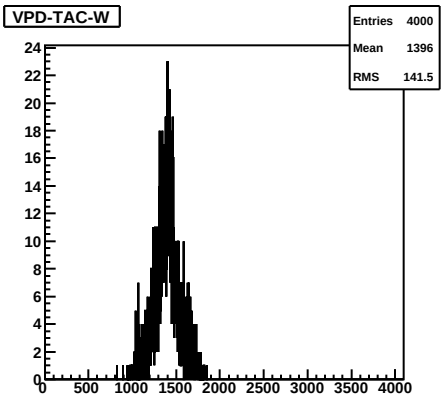

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 3716
Mean 4039
RMS 239

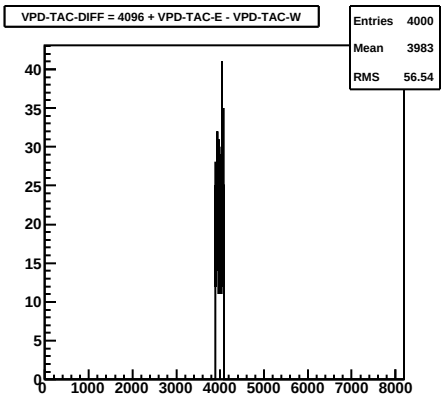

BBClarge-TAC-E
Entries 3780
Mean 1354
RMS 311.1

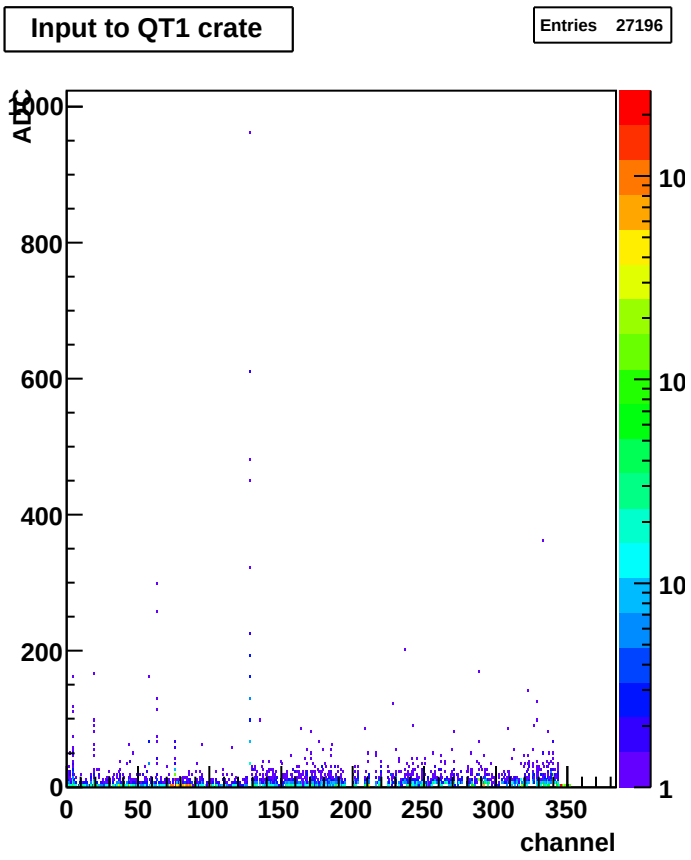

BBClarge-TAC-W
Entries 3772
Mean 1388
RMS 337.8

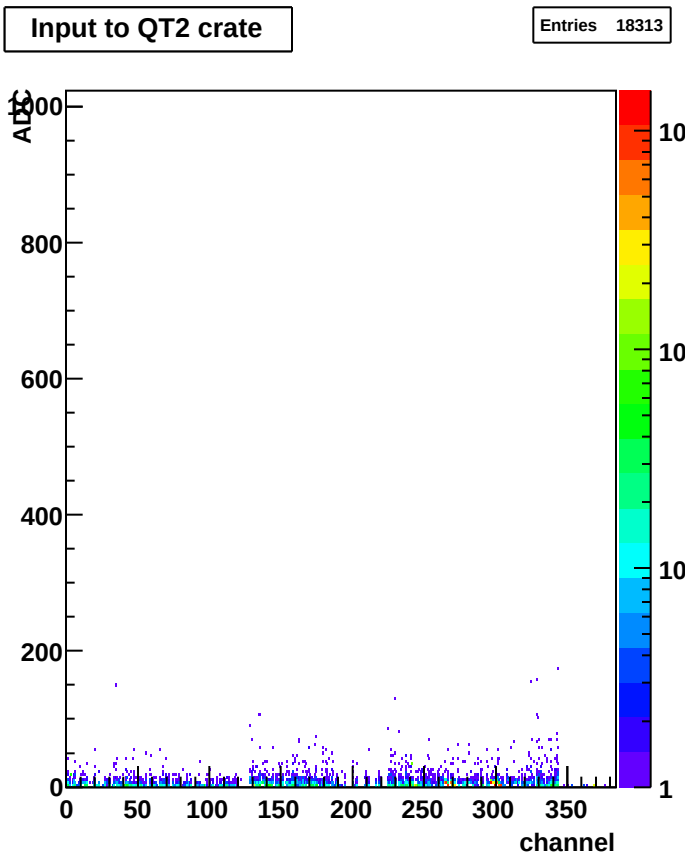

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 3577
Mean 4064
RMS 421.3

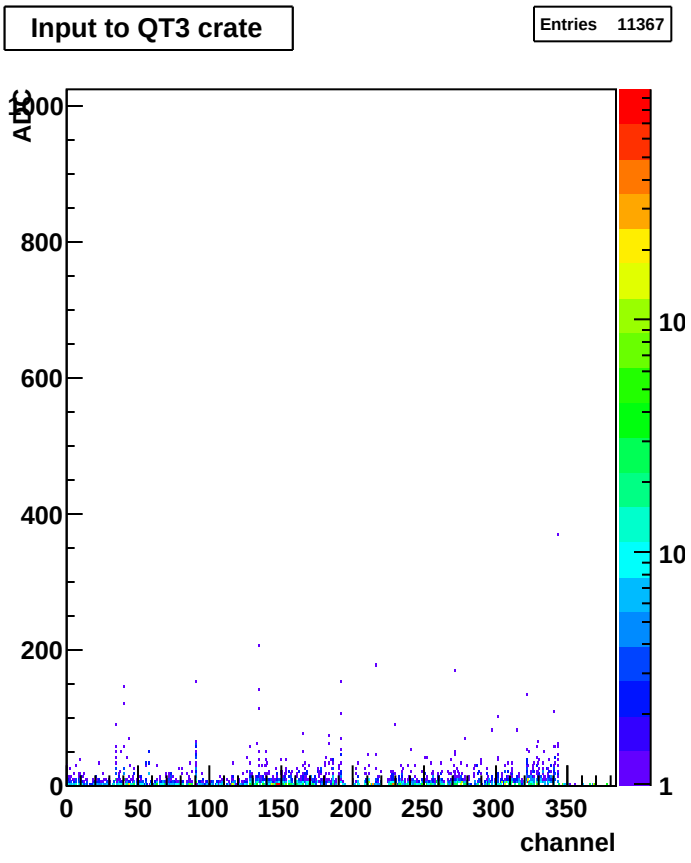

VPD-TAC-E
Entries 4000
Mean 1283
RMS 137.3

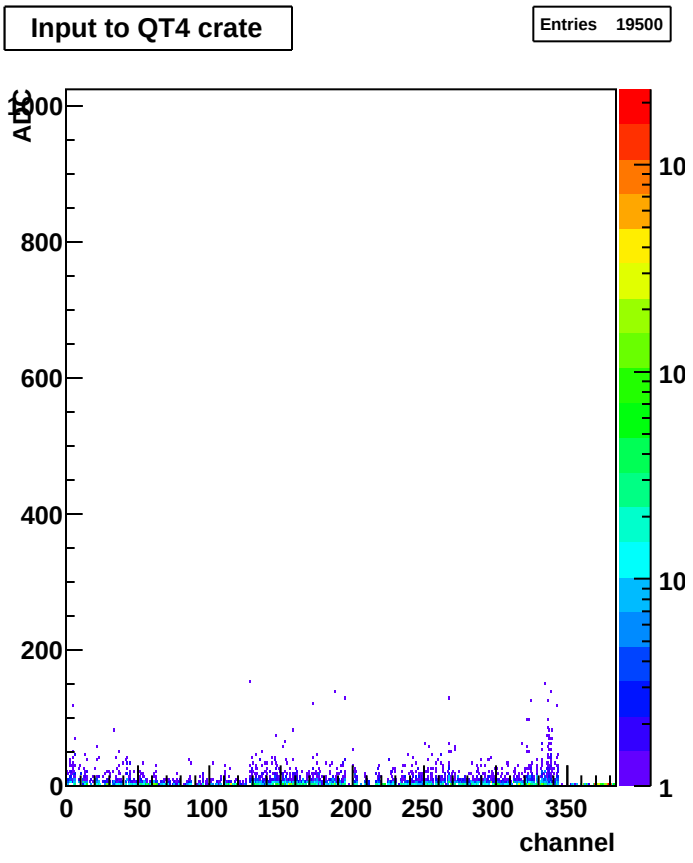

VPD-TAC-W
Entries 4000
Mean 1396
RMS 141.5

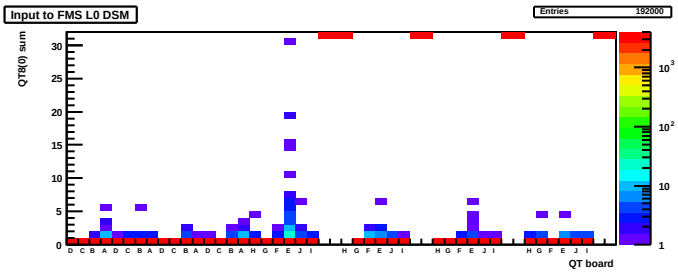

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 4000
Mean 3983
RMS 56.54

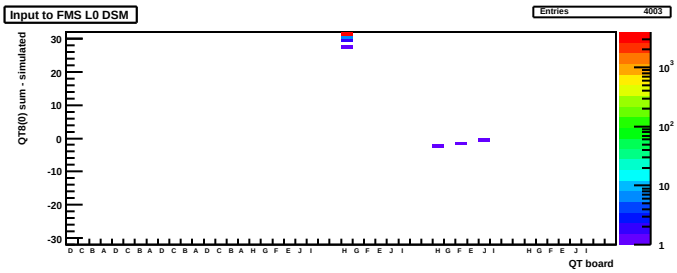

Input to QT1 crate
Entries 27196
ADC
channel

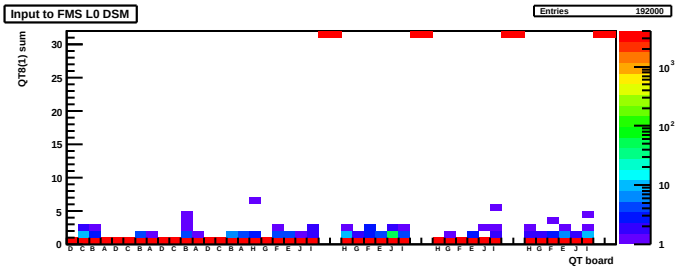

Input to QT2 crate
Entries 18313
ADC
channel

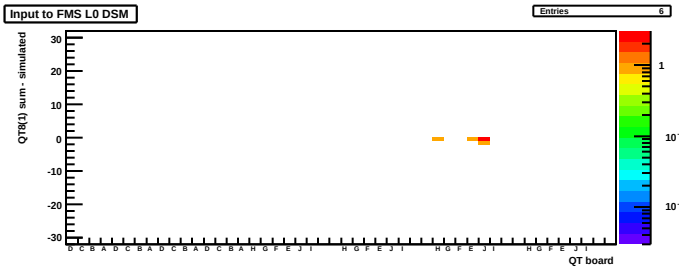

Input to QT3 crate
Entries 11367
ADC
channel

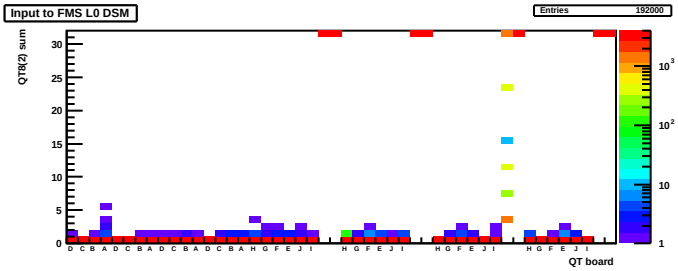

Input to QT4 crate
Entries 19500
ADC
channel

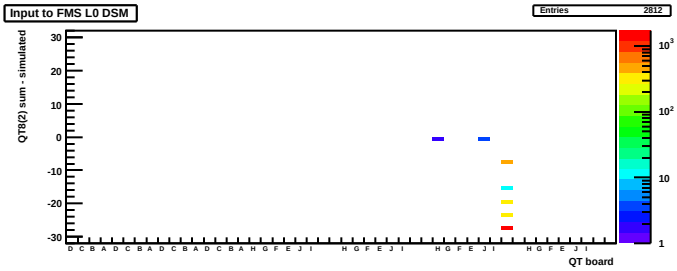

Input to FMS L0 DSM
Entries 192000
QT8(0) sum
QT board

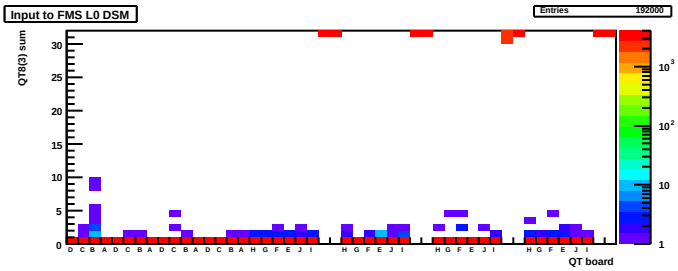

Input to FMS L0 DSM
Entries 4003
QT8(0) sum - simulated
QT board

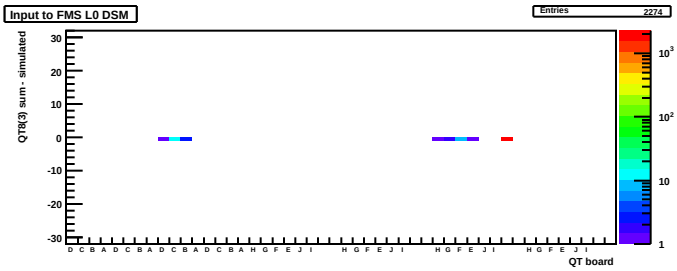

Input to FMS L0 DSM
Entries 192000
QT8(1) sum
QT board

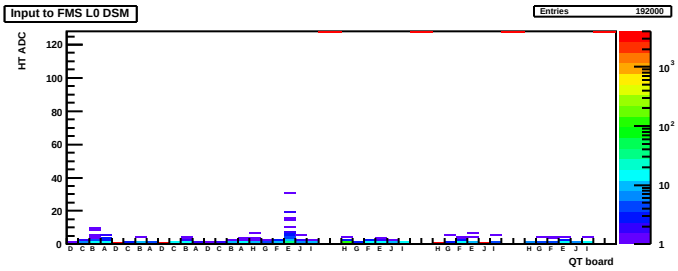

Input to FMS L0 DSM
Entries 6
QT8(1) sum - simulated
QT board

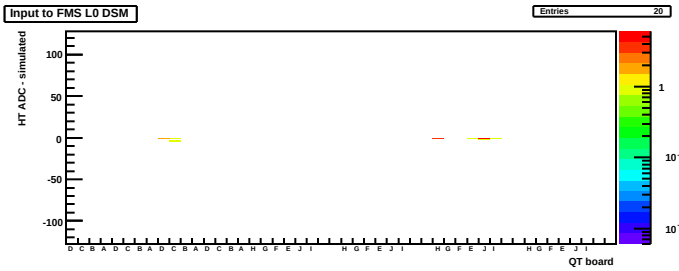

Input to FMS L0 DSM
Entries 192000
QT8(2) sum
QT board

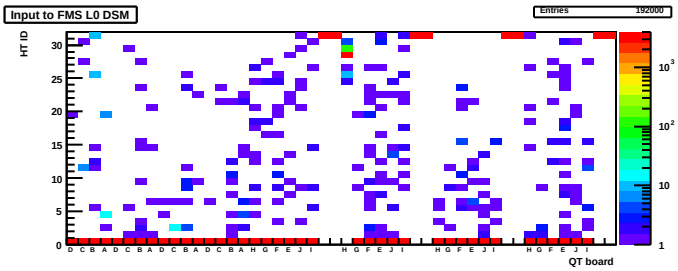

Input to FMS L0 DSM
Entries 2812
QT8(2) sum - simulated
QT board

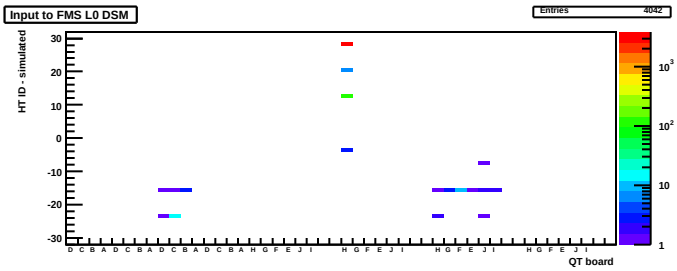

Input to FMS L0 DSM
Entries 192000
QT8(3) sum
QT board

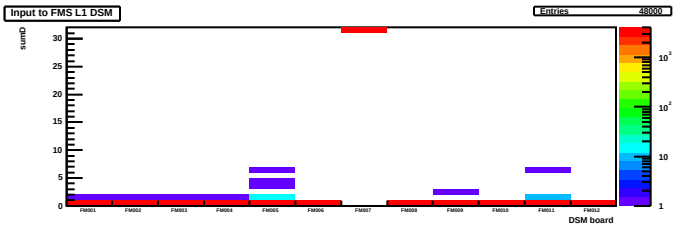

Input to FMS L0 DSM
Entries 2274
QT8(3) sum - simulated
QT board

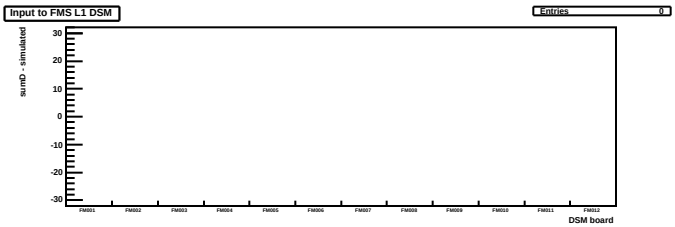

Input to FMS L0 DSM
Entries 192000
HT ADC
QT board

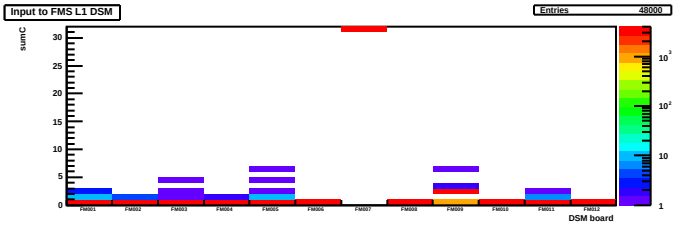

Input to FMS L0 DSM
Entries 20
HT ADC - simulated
QT board

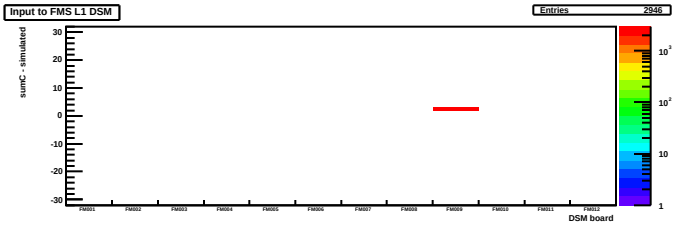

Input to FMS L0 DSM
Entries 192000
HT ID
QT board

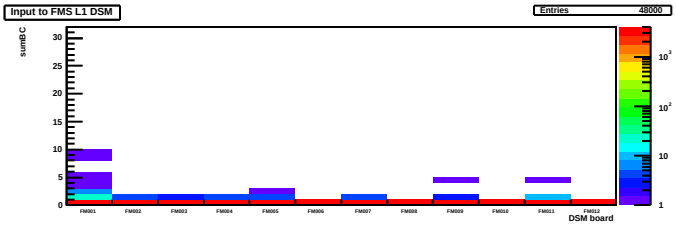

Input to FMS L0 DSM
Entries 4042
HT ID - simulated
QT board

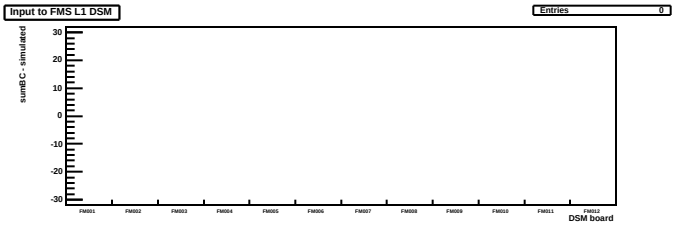

Input to FMS L1 DSM
Entries 48000
sumD
DSM board

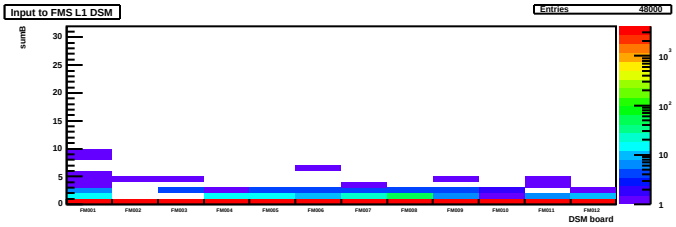

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

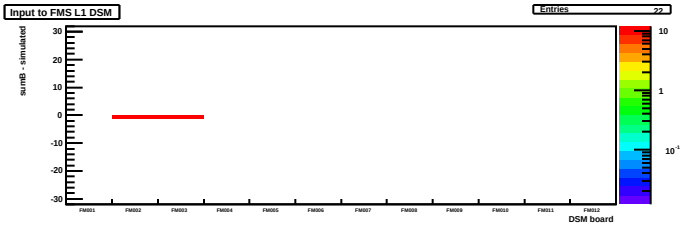

Input to FMS L1 DSM
Entries 48000
sumC
DSM board

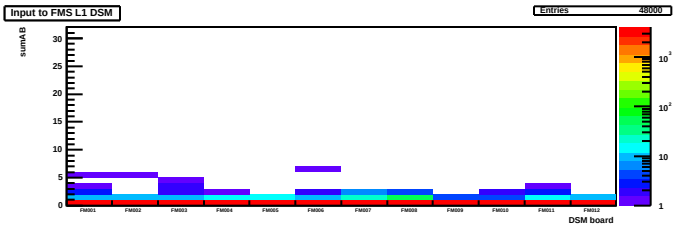

Input to FMS L1 DSM
Entries 2946
sumC - simulated
DSM board

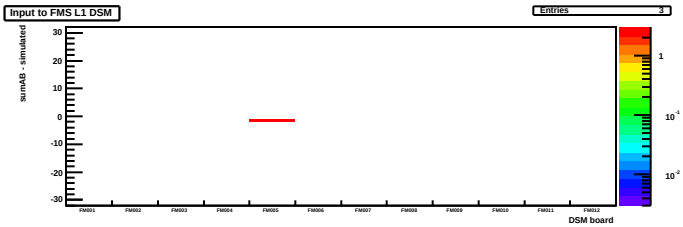

Input to FMS L1 DSM
Entries 48000
sumBC
DSM board

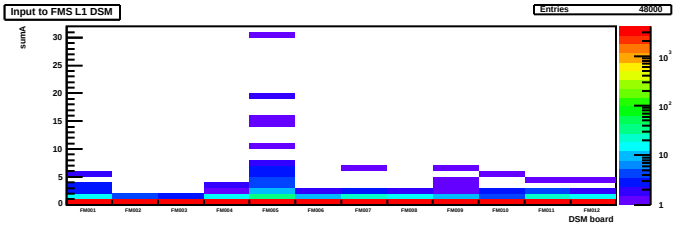

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

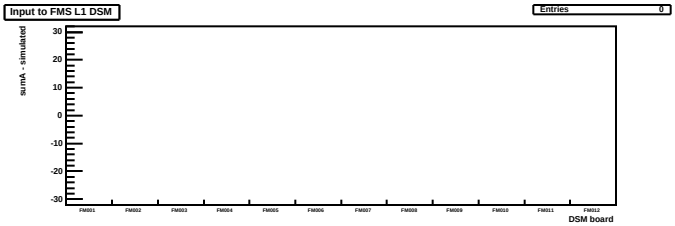

Input to FMS L1 DSM
Entries 48000
sumB
DSM board

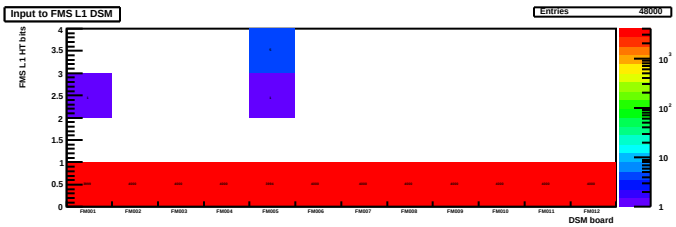

Input to FMS L1 DSM
Entries 22
sumB - simulated
DSM board

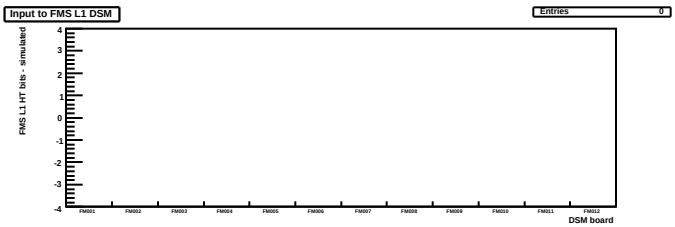

Input to FMS L1 DSM
Entries 48000
sumAB
DSM board

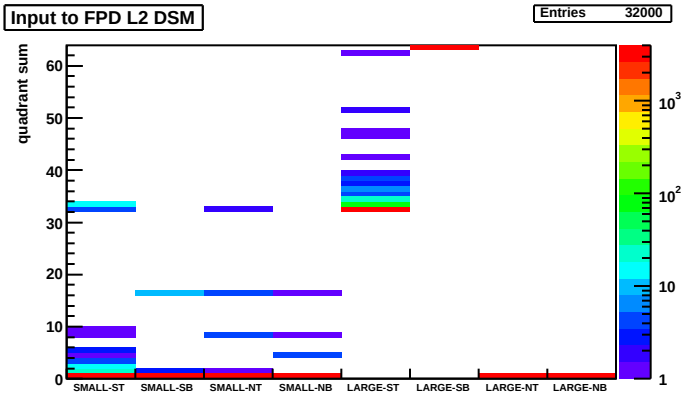

Input to FMS L1 DSM
Entries 3
sumAB - simulated
DSM board

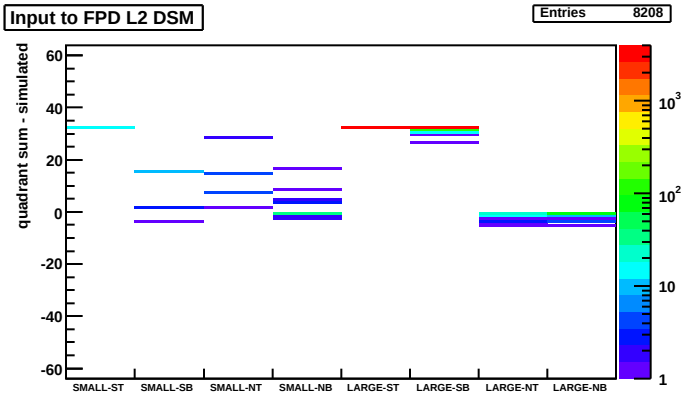

Input to FMS L1 DSM
Entries 48000
sumA
DSM board

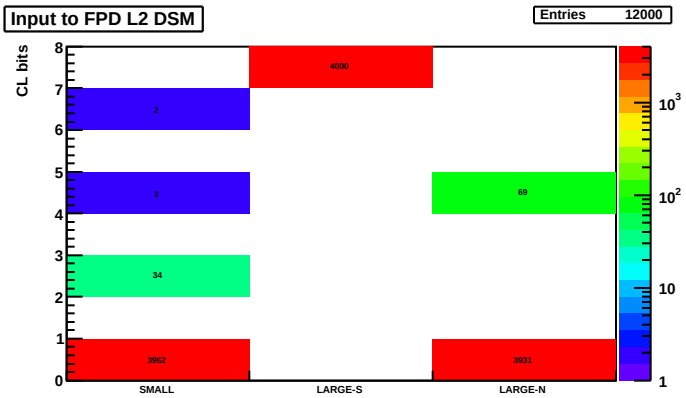

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

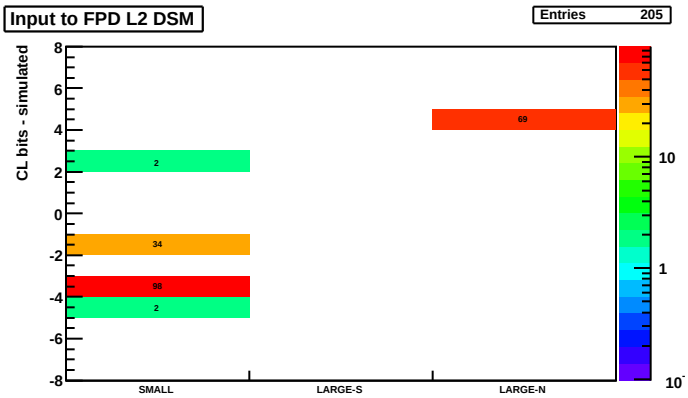

Input to FMS L1 DSM
Entries 48000
FMS L1 HT bits
DSM board

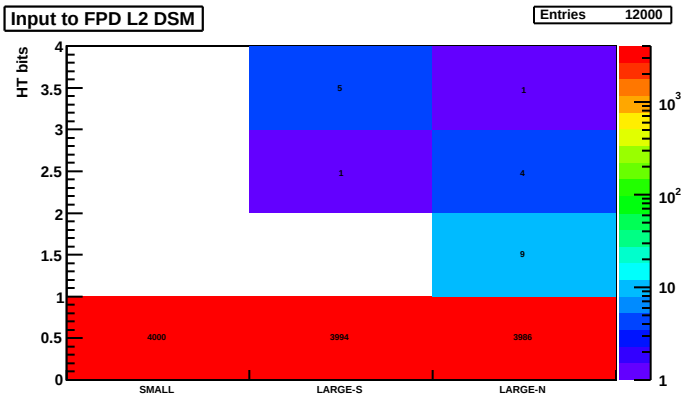

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

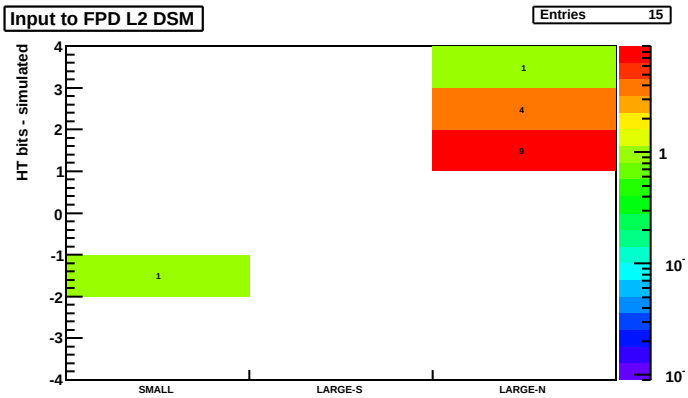

Input to FPD L2 DSM
Entries 32000
quadrant sum
SMALL-ST
SMALL-SB
SMALL-NT
SMALL-NB
LARGE-ST
LARGE-SB
LARGE-NT
LARGE-NB

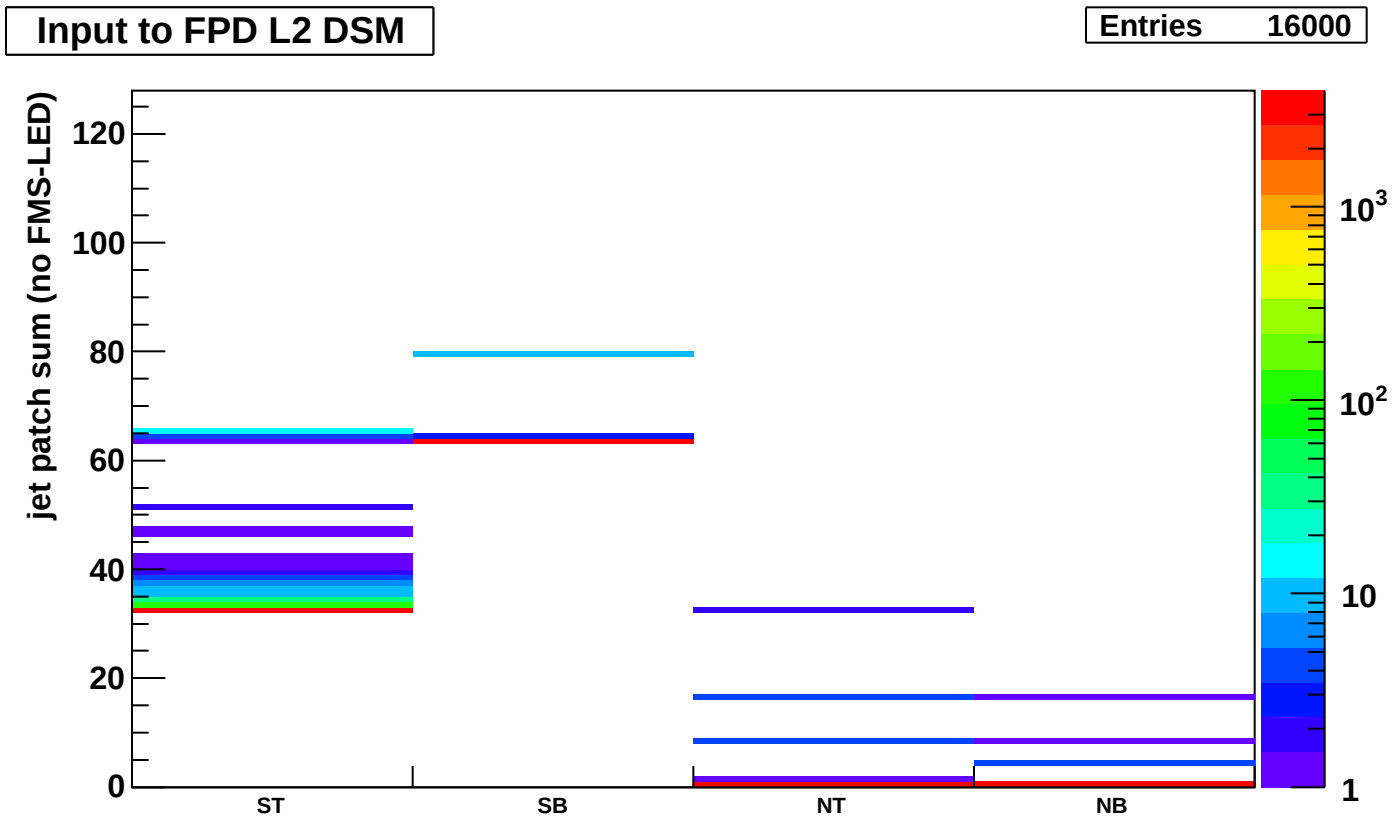

Input to FPD L2 DSM
Entries 8208
quadrant sum - simulated
SMALL-ST
SMALL-SB
SMALL-NT
SMALL-NB
LARGE-ST
LARGE-SB
LARGE-NT
LARGE-NB

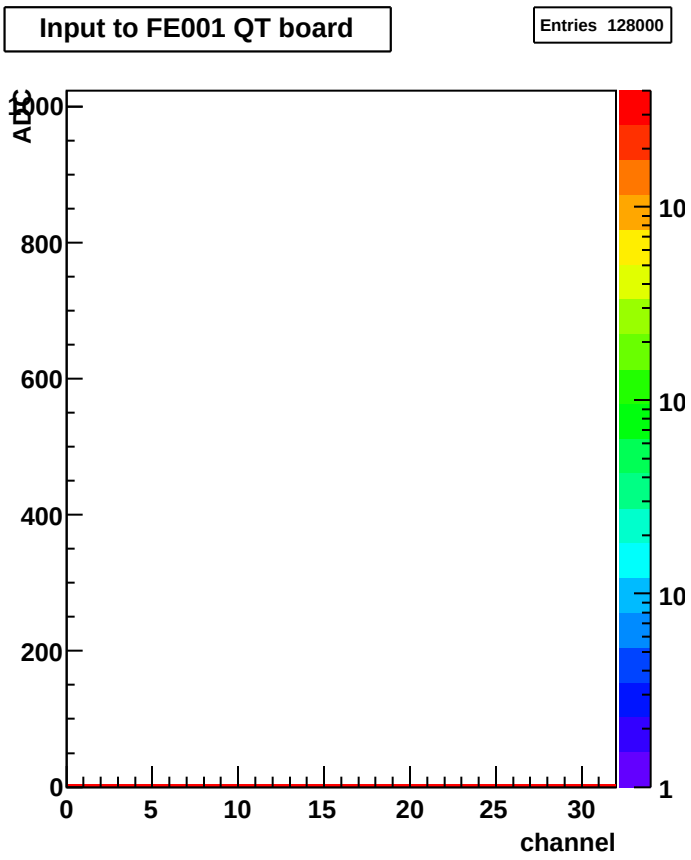

Input to FPD L2 DSM
Entries 12000
CL bits
4000
2
2
69
34
3962
3931
SMALL
LARGE-S
LARGE-N

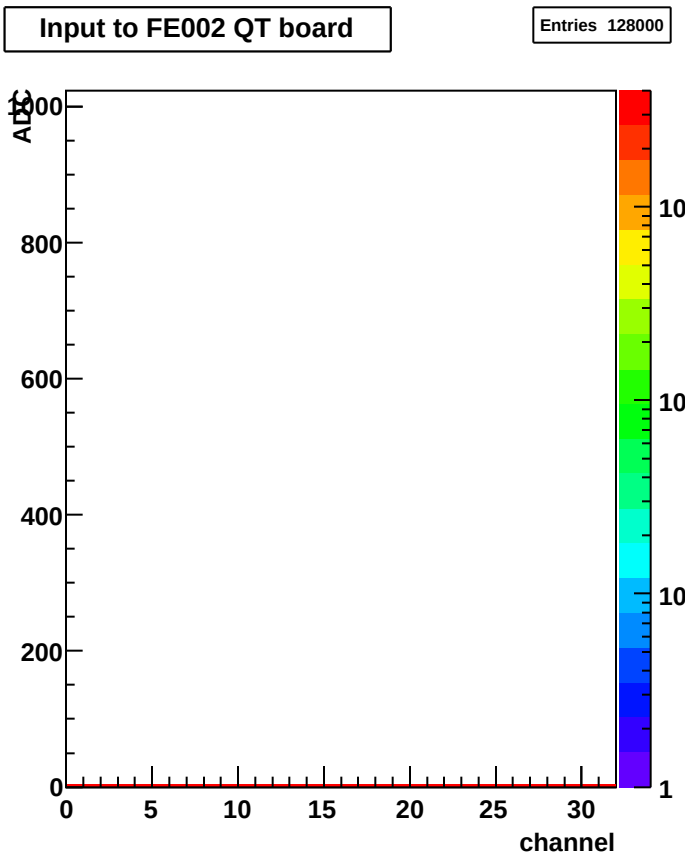

Input to FPD L2 DSM
Entries 205
CL bits - simulated
69
2
34
98
2
SMALL
LARGE-S
LARGE-N

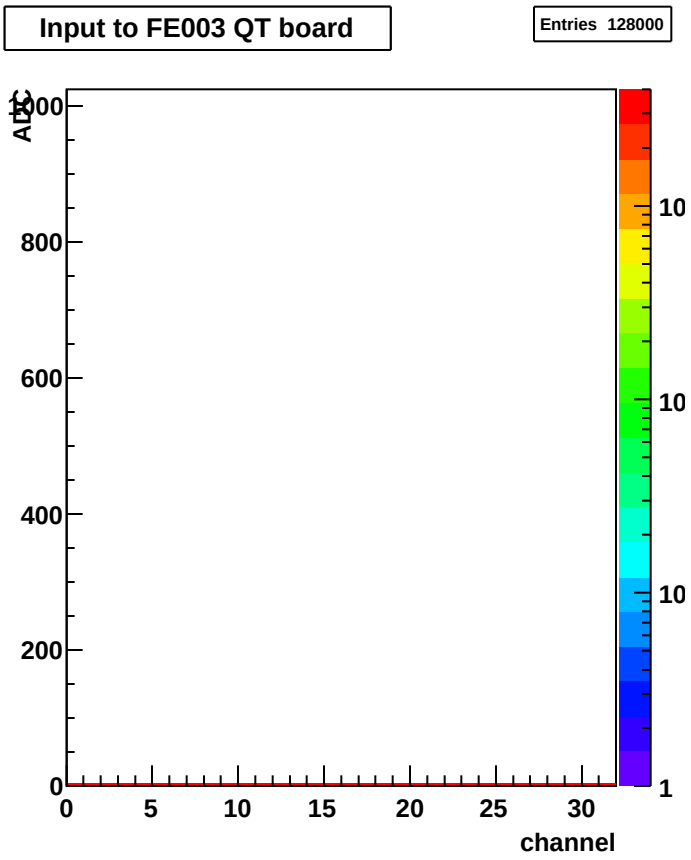

Input to FPD L2 DSM
Entries 12000
HT bits
5
1
1
4
9
4000
3994
3986
SMALL
LARGE-S
LARGE-N

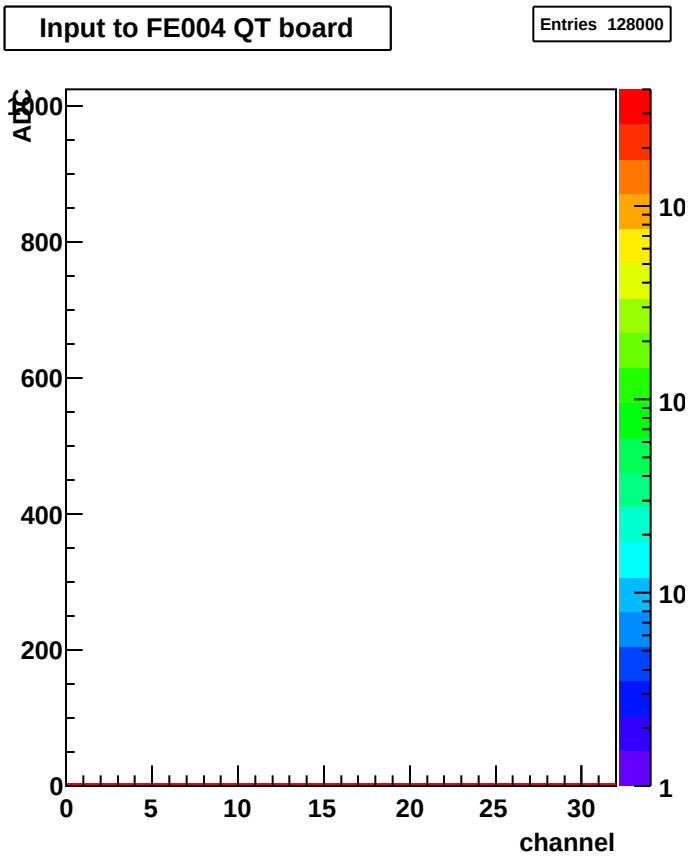

Input to FPD L2 DSM
Entries 15
HT bits - simulated
1
4
9
1
SMALL
LARGE-S
LARGE-N

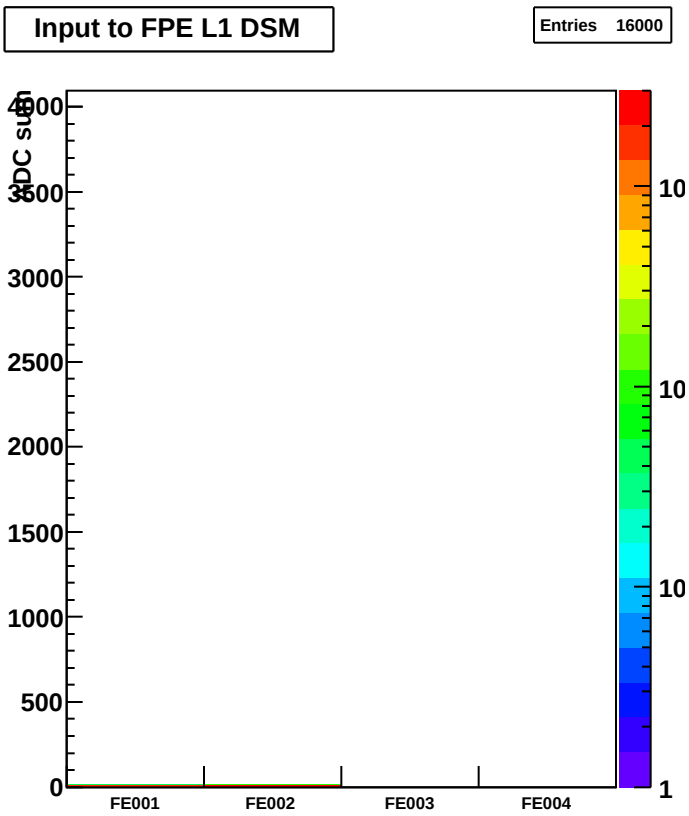

Input to FPD L2 DSM
Entries 16000
jet patch sum (no FMS-LED)
120
100
80
60
40
20
0
ST
SB
NT
NB
10^3
10^2
10
1

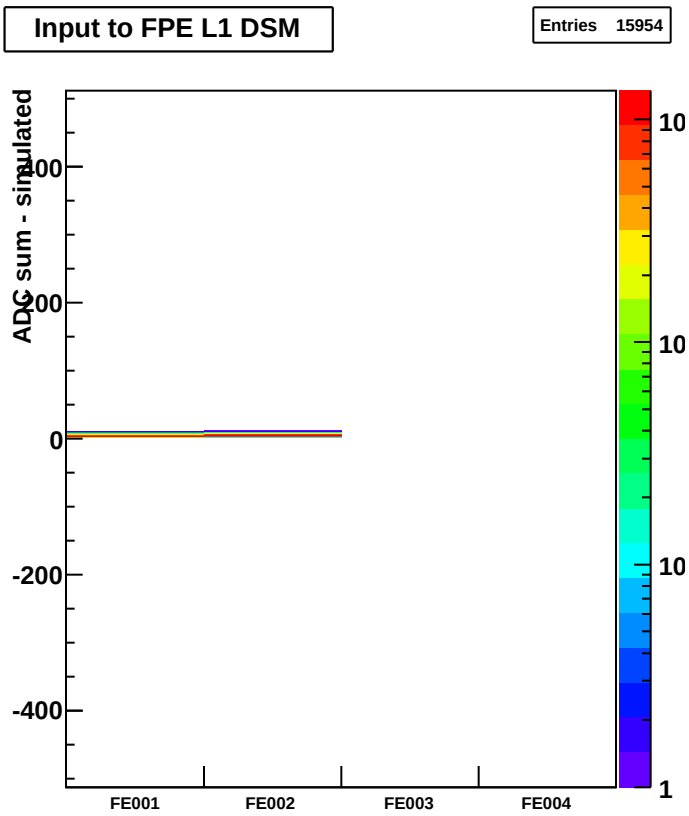

Input to FE001 QT board
Entries 128000
ADC
channel

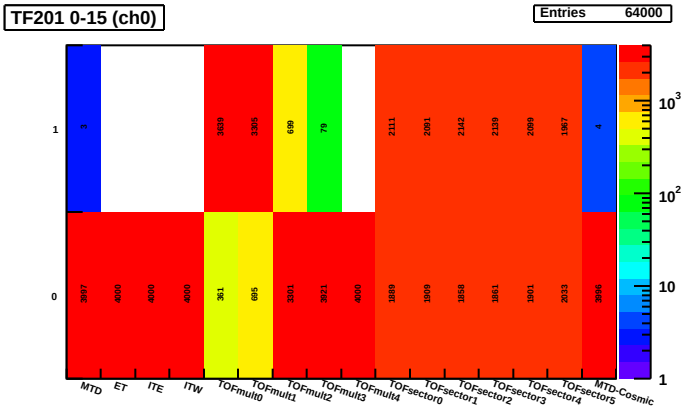

Input to FE002 QT board
Entries 128000
ADC
channel

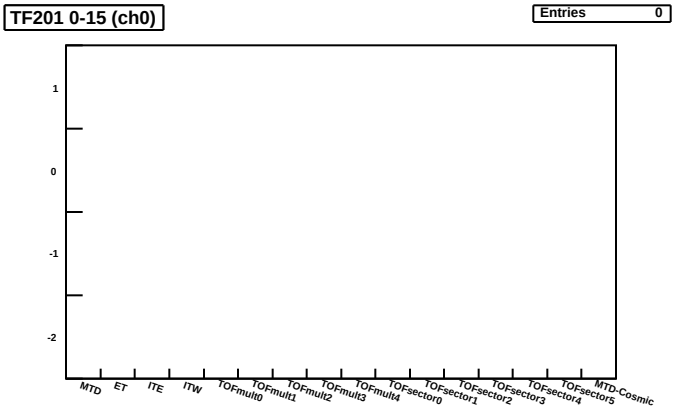

Input to FE003 QT board
Entries 128000
ADC
channel

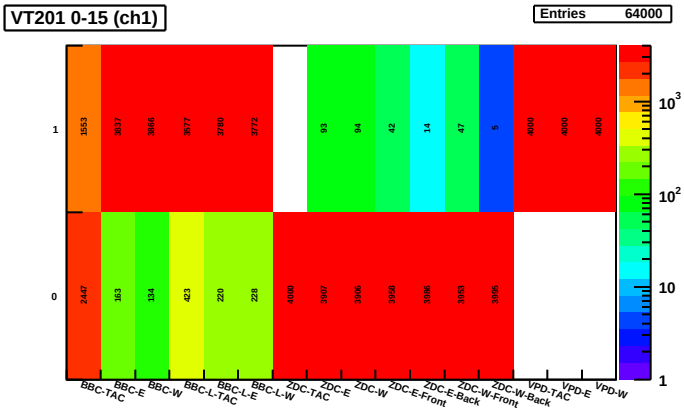

Input to FE004 QT board
Entries 128000
ADC
channel

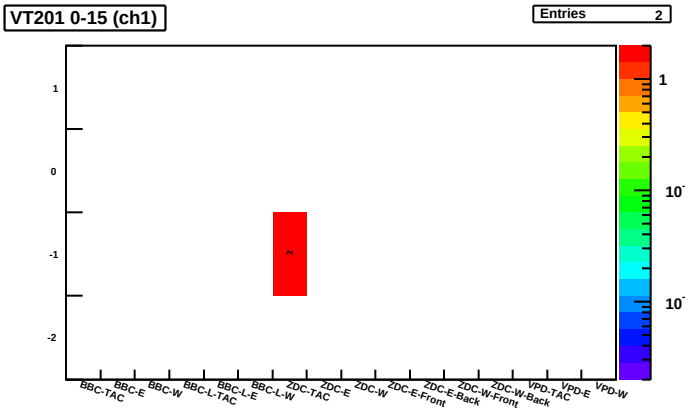

Input to FPE L1 DSM
Entries 16000
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
1

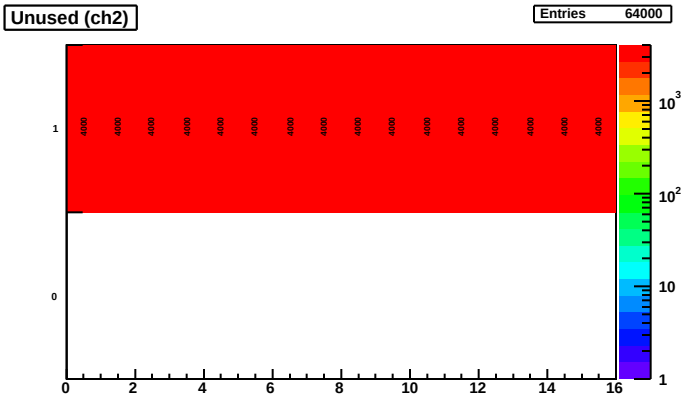

Input to FPE L1 DSM
Entries 15954
ADC sum - simulated
200
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
1

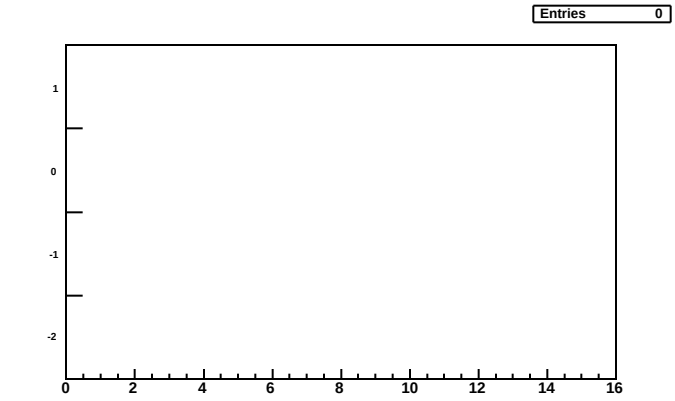

TF201 0-15 (ch0)
Entries 64000
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

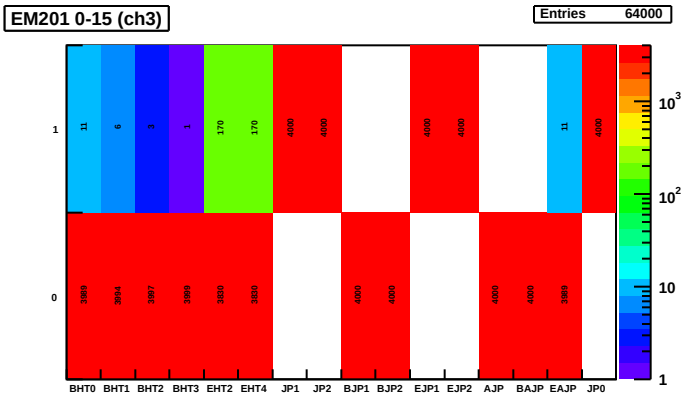

TF201 0-15 (ch0)
Entries 0
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

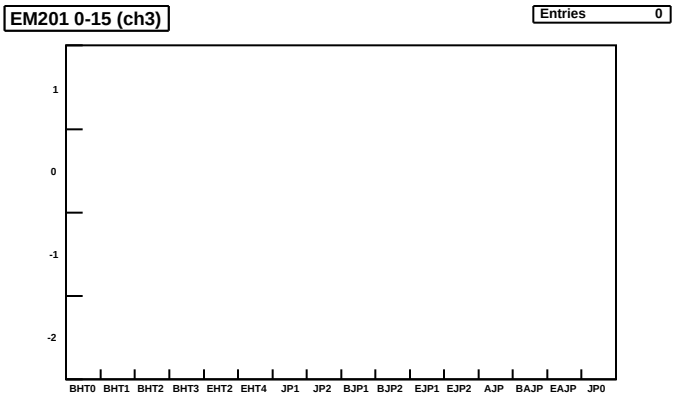

VT201 0-15 (ch1)
Entries 64000
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 2
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

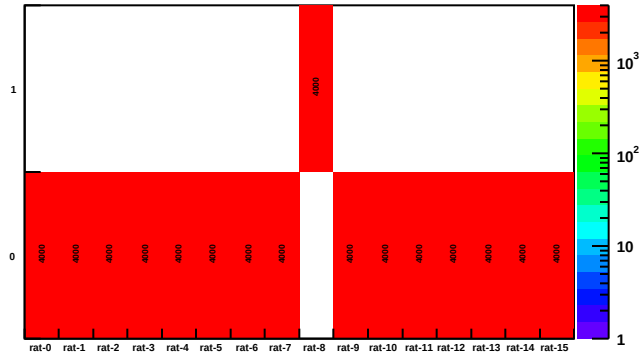

Unused (ch2)
Entries 64000

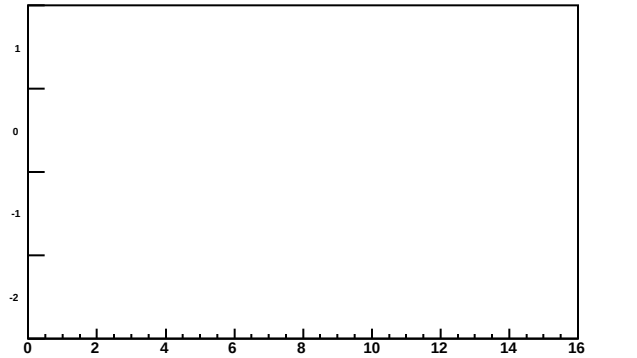

Entries 0


EM201 0-15 (ch3)
Entries 64000
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

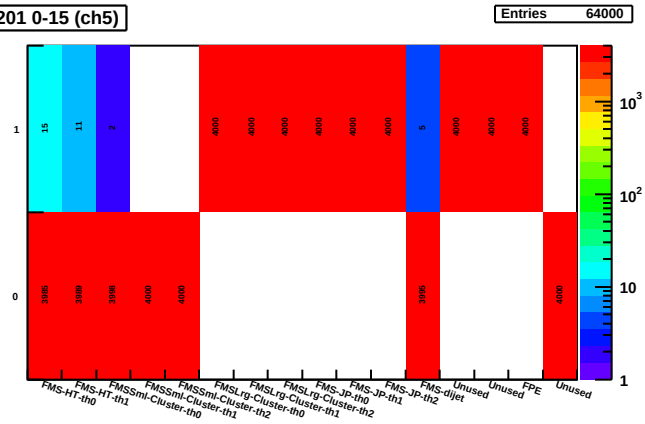

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP EAJP JP0

RAT board (ch4)

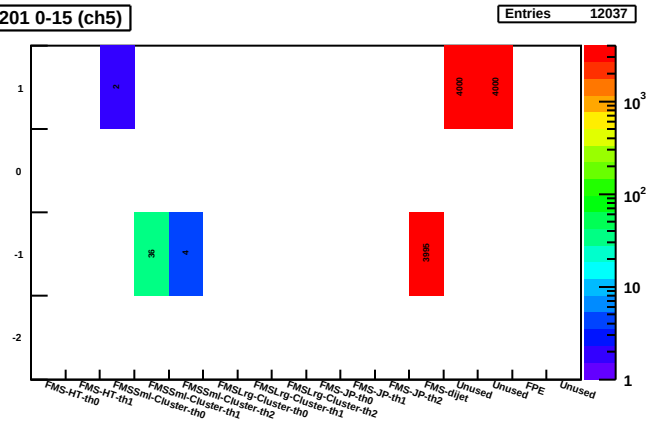




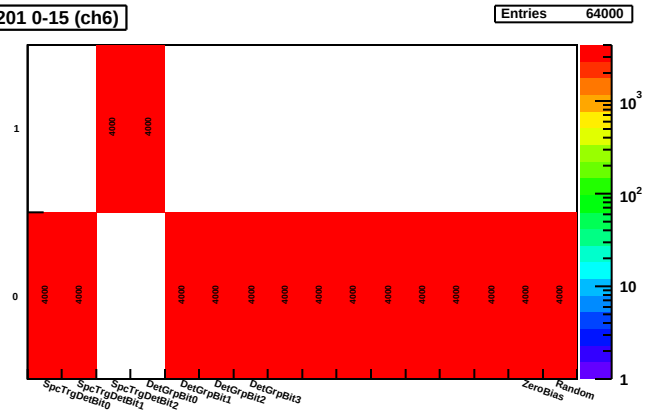
FP201 0-15 (ch5)

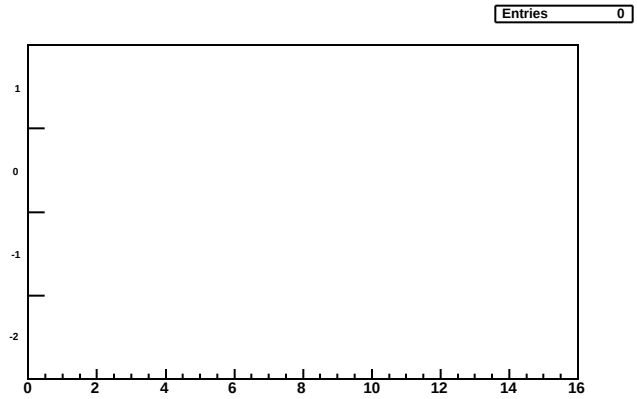
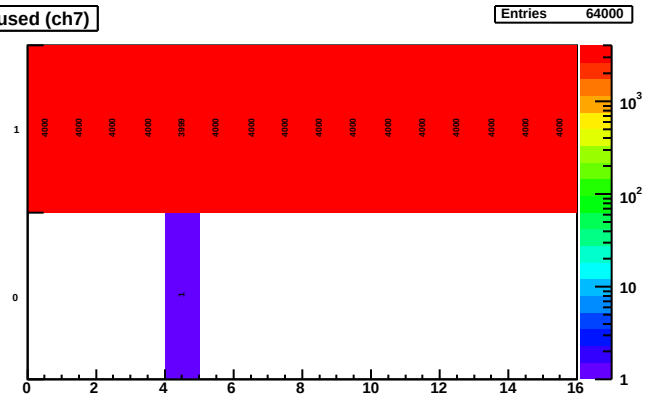
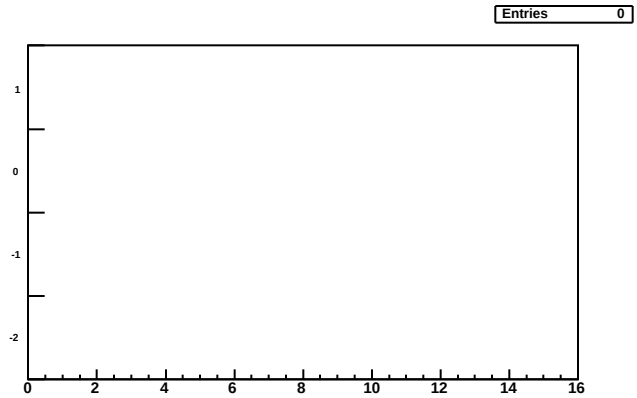


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)