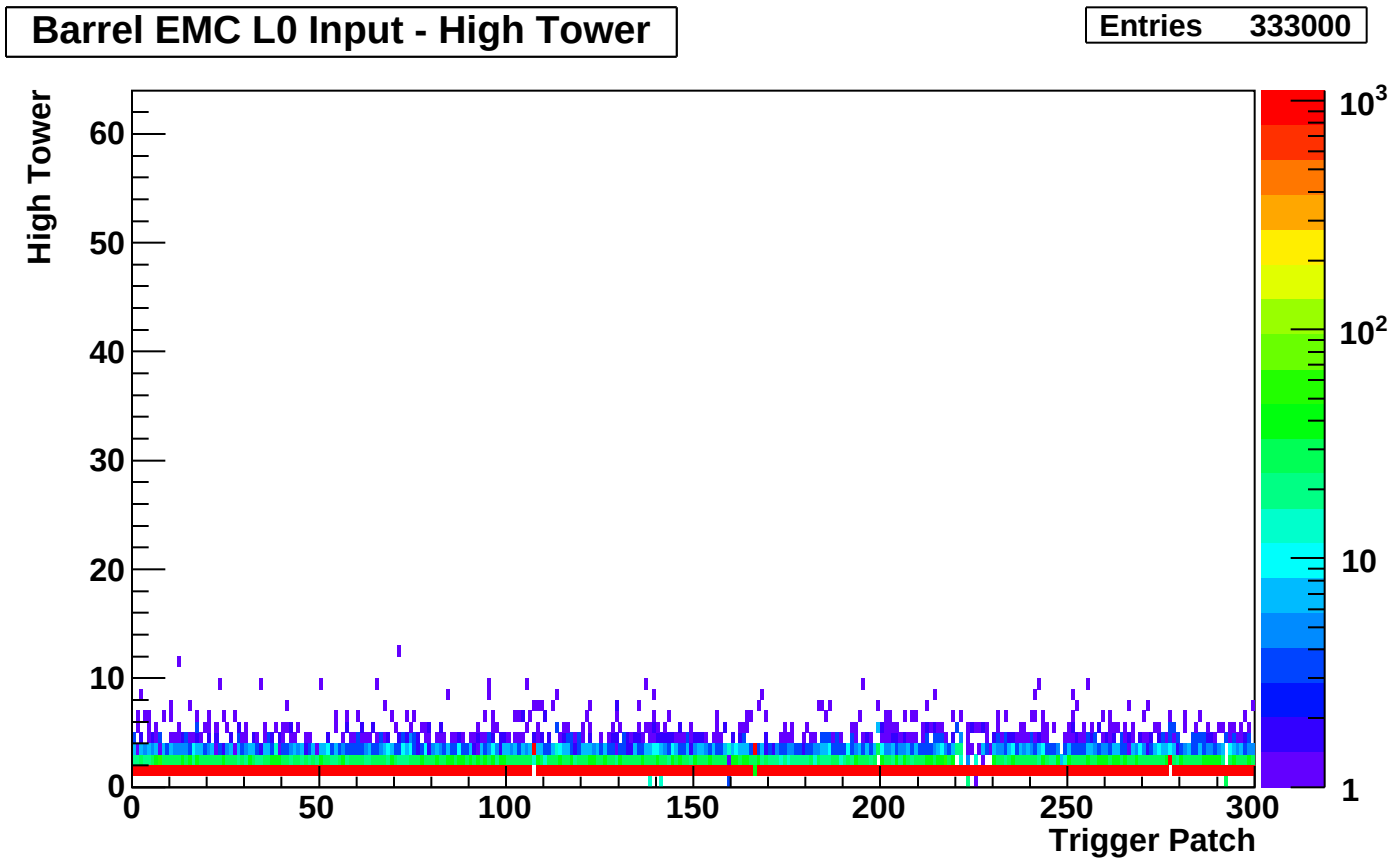
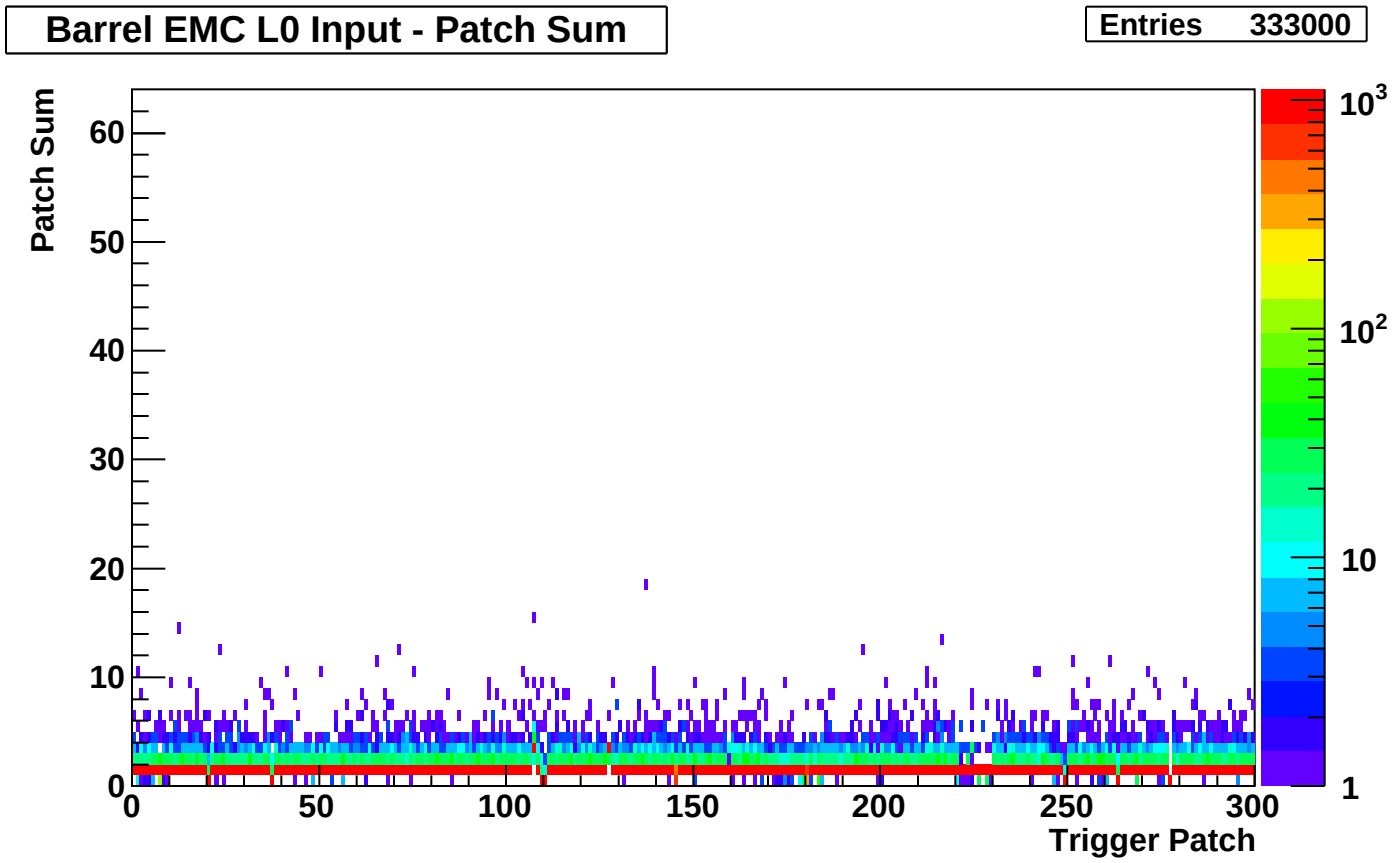
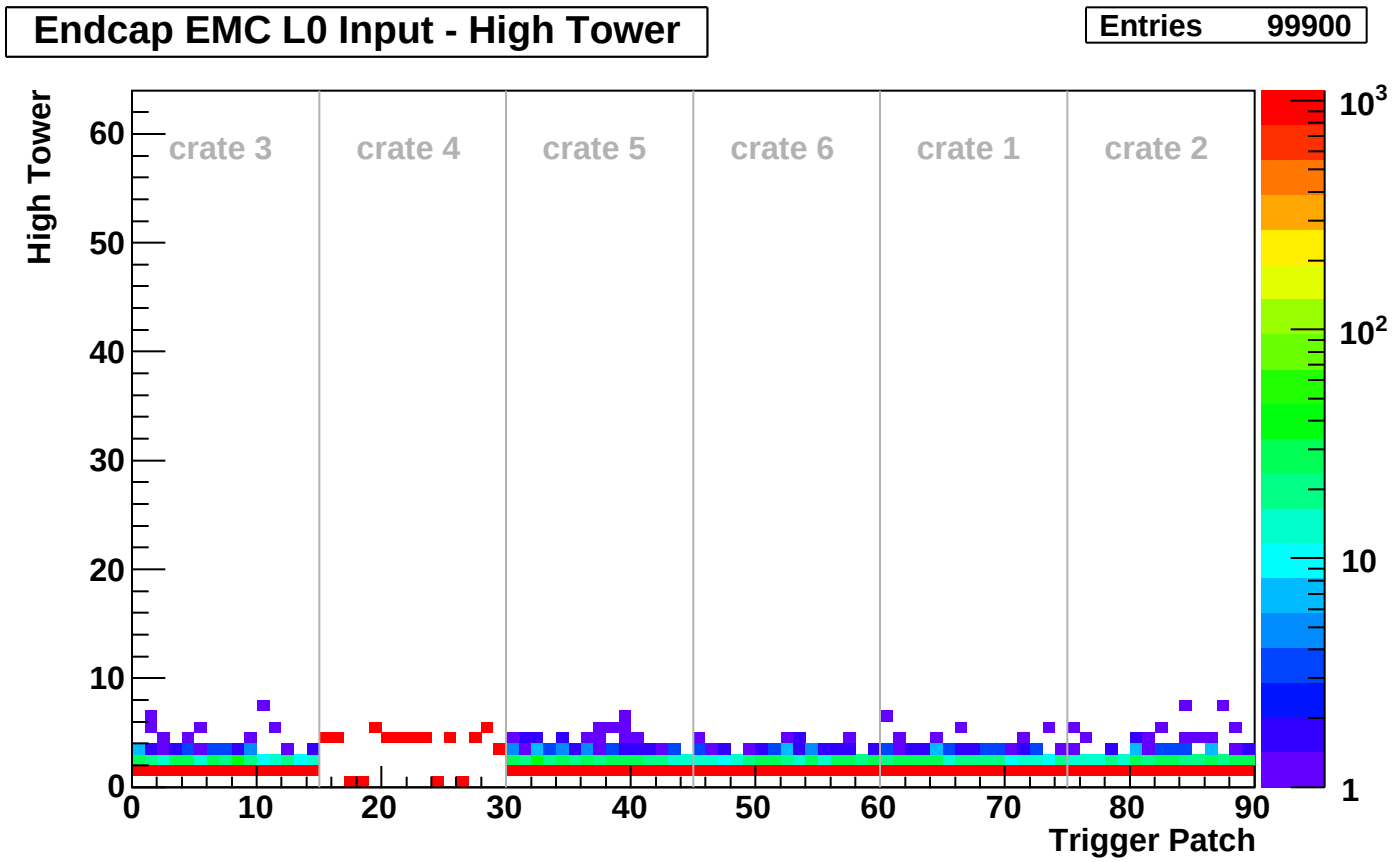
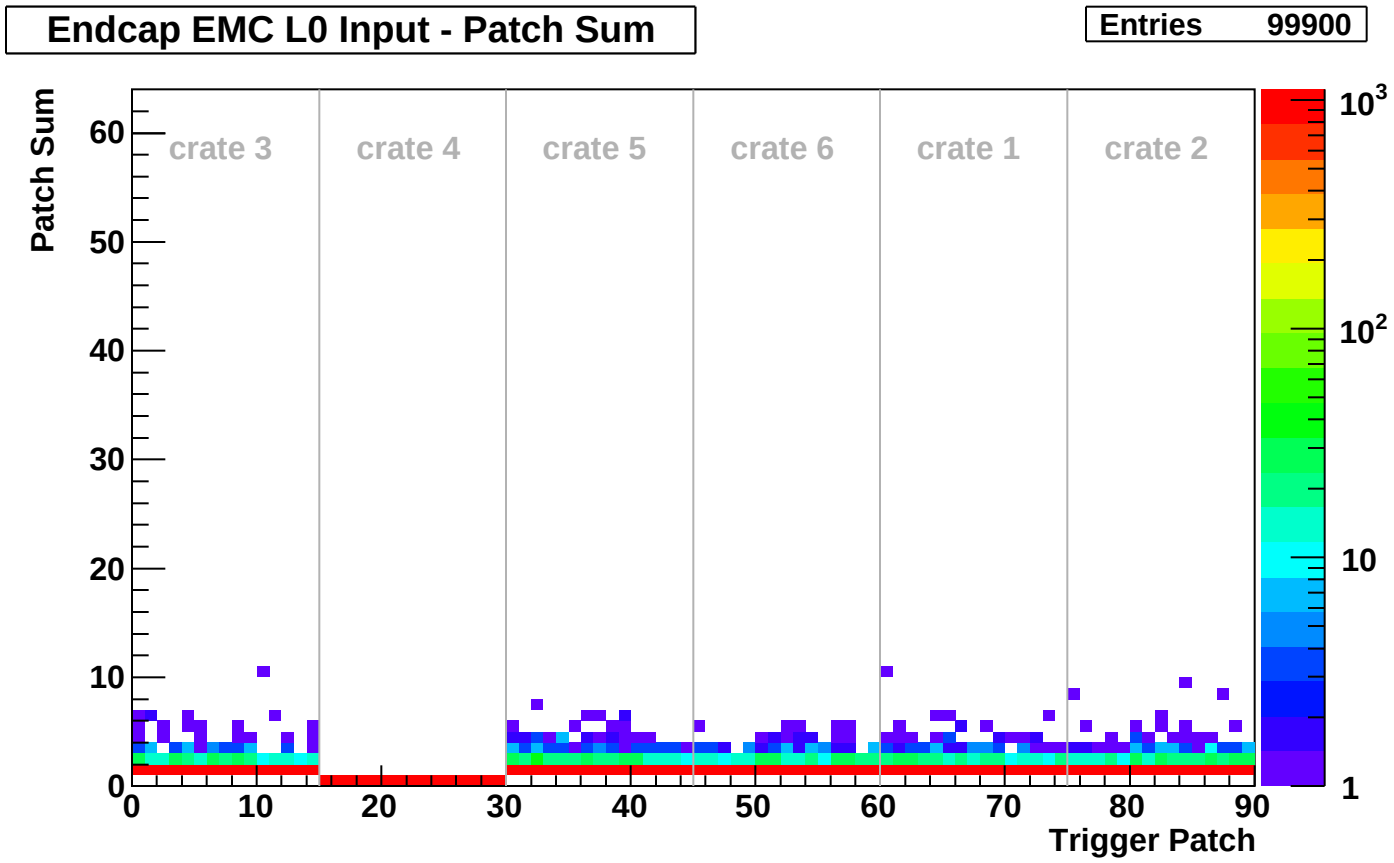
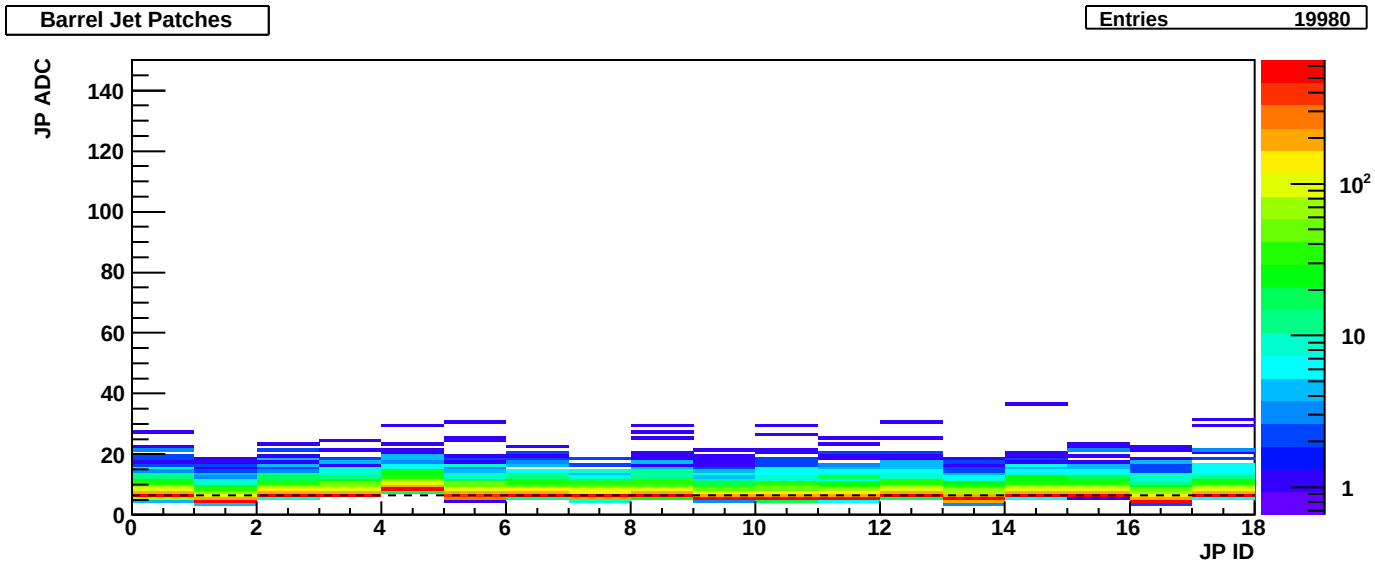
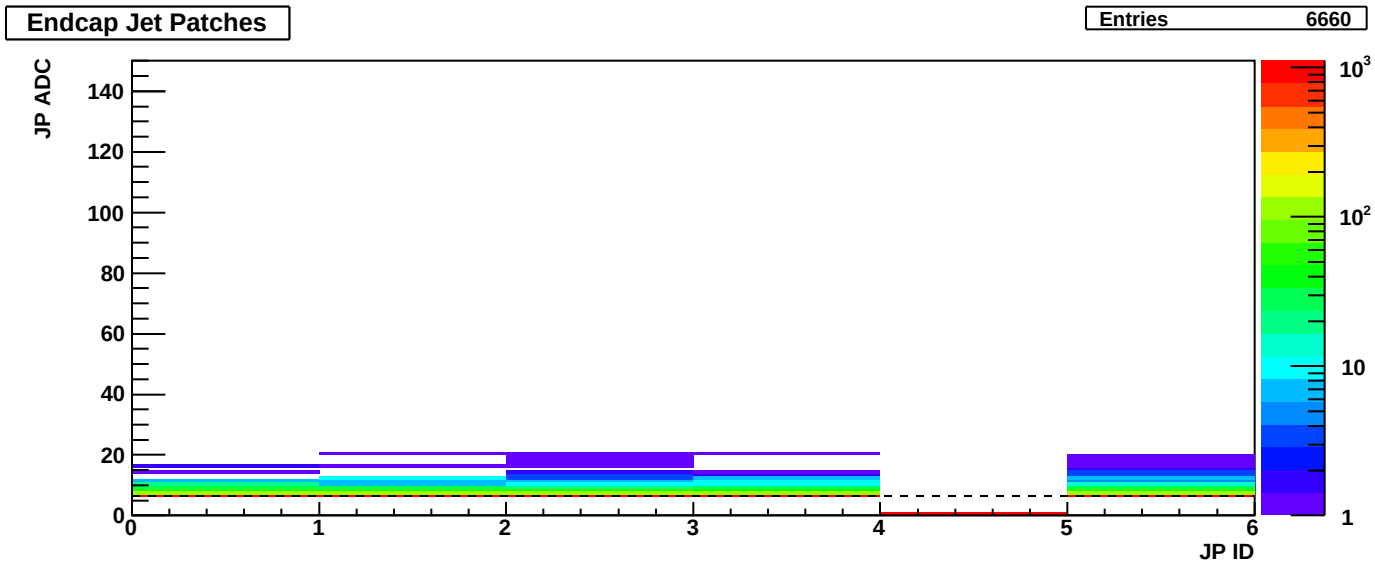

Barrel EMC L0 Input - High Tower
Entries 333000
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

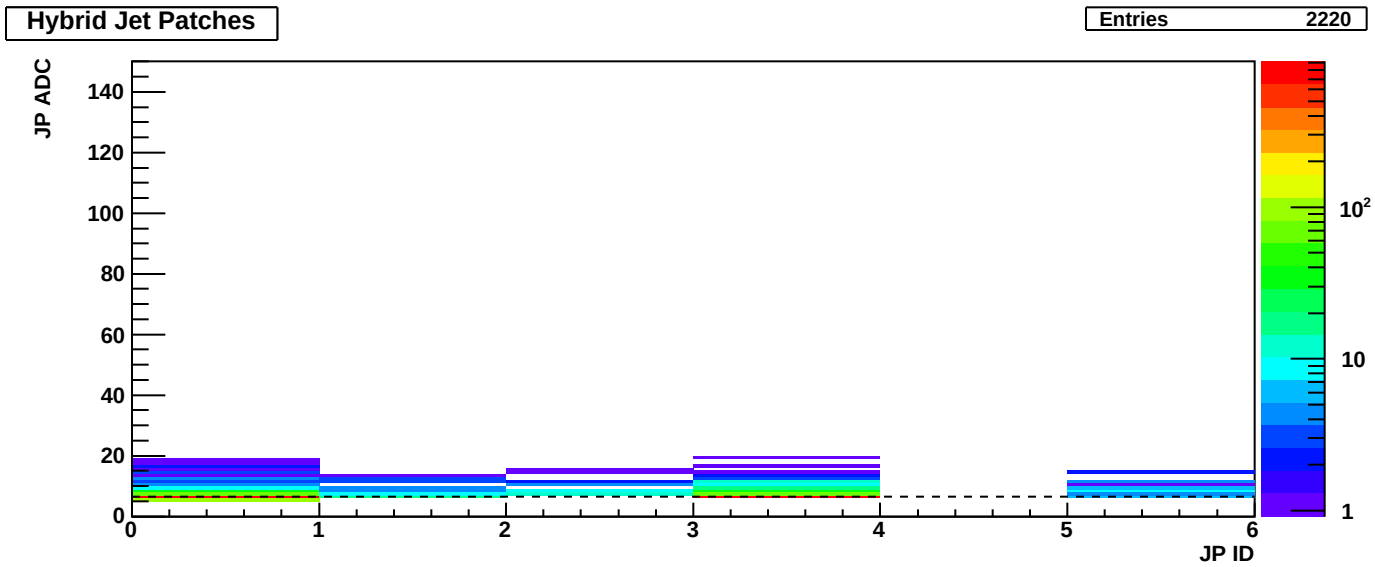

Barrel EMC L0 Input - Patch Sum
Entries 333000
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

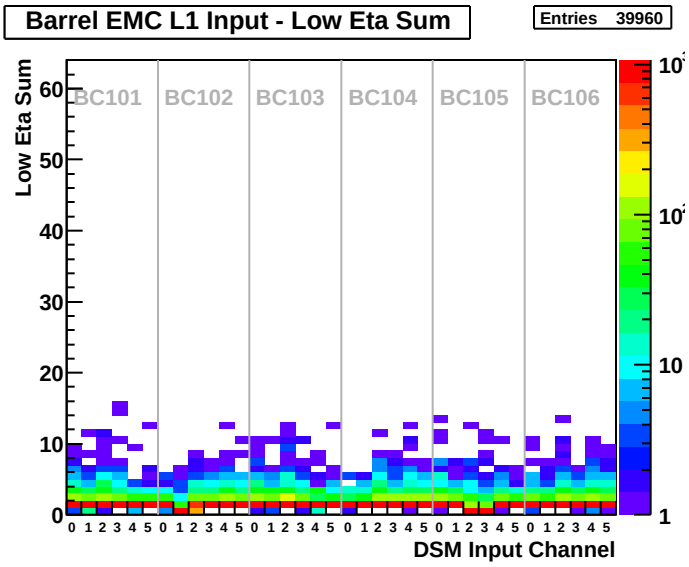

Endcap EMC L0 Input - High Tower
Entries 99900
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

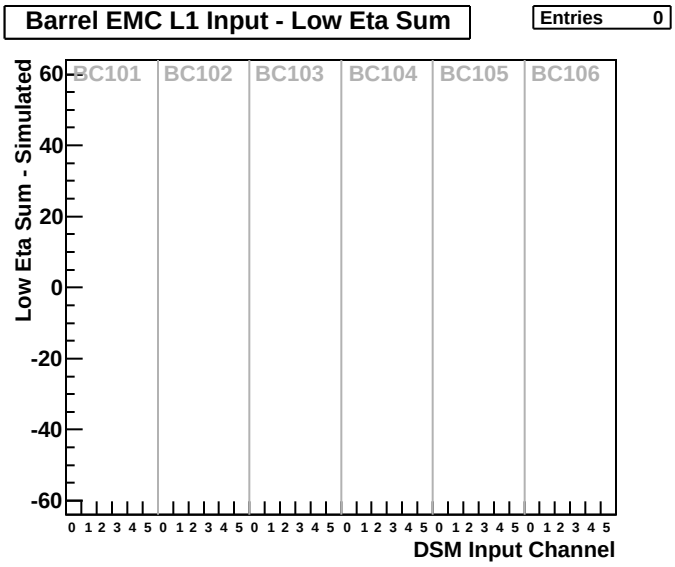

Endcap EMC L0 Input - Patch Sum
Entries 99900
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

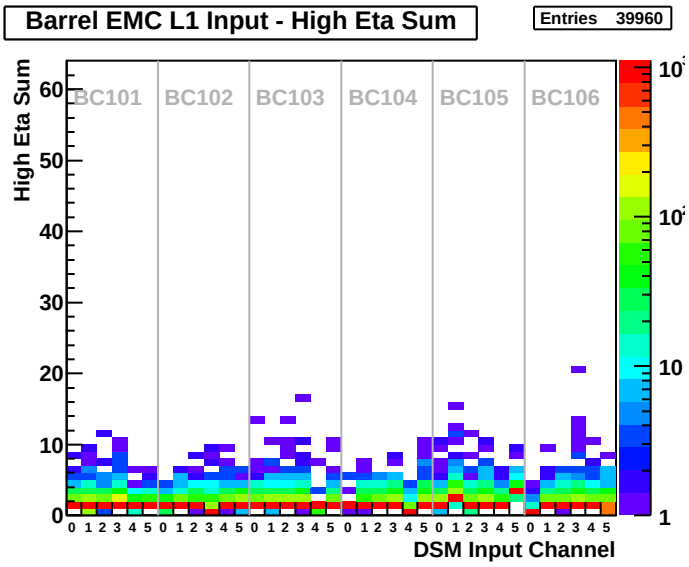

Barrel Jet Patches
Entries 19980
JP ADC
JP ID

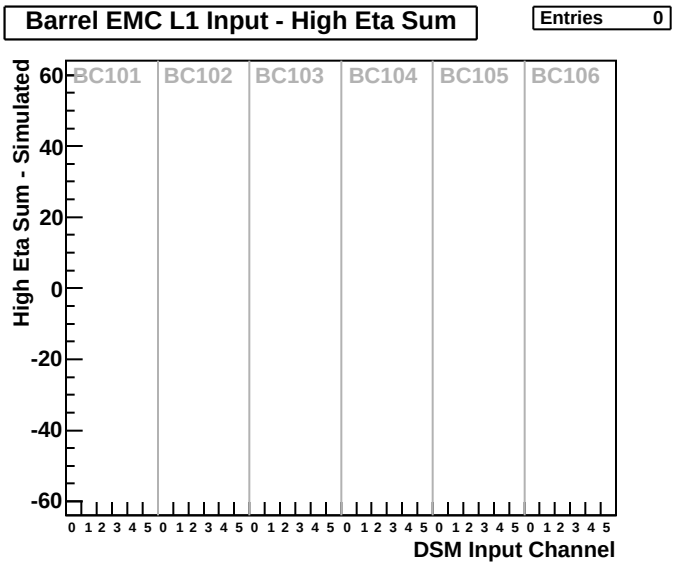

Endcap Jet Patches
Entries 6660
JP ADC
JP ID

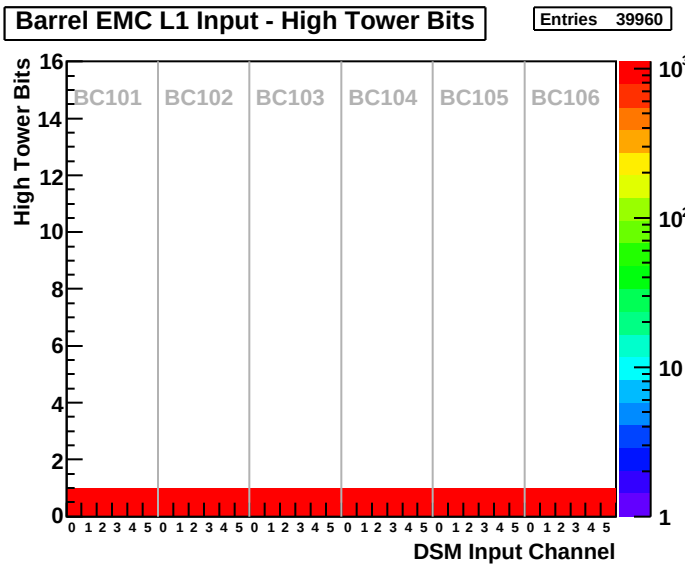

Hybrid Jet Patches
Entries 2220
JP ADC
JP ID

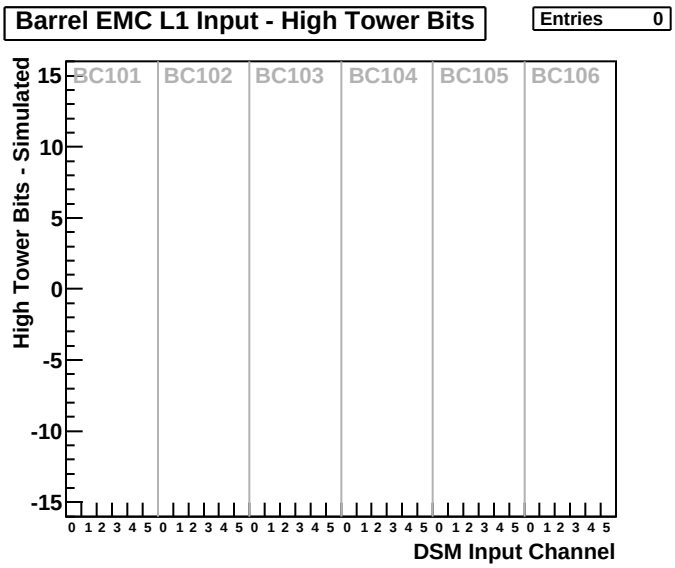

Barrel EMC L1 Input - Low Eta Sum
Entries 39960
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

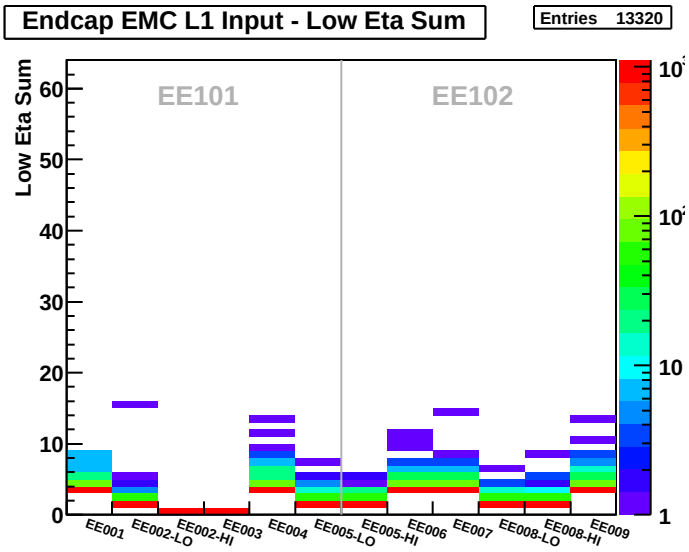

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

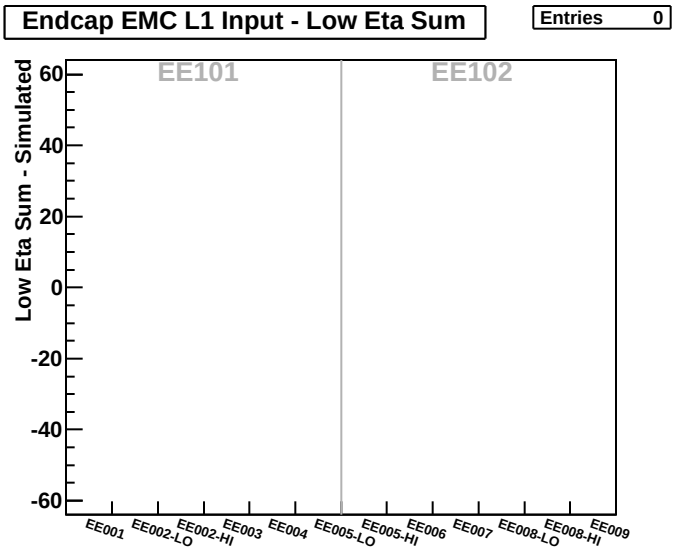

Barrel EMC L1 Input - High Eta Sum
Entries 39960
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

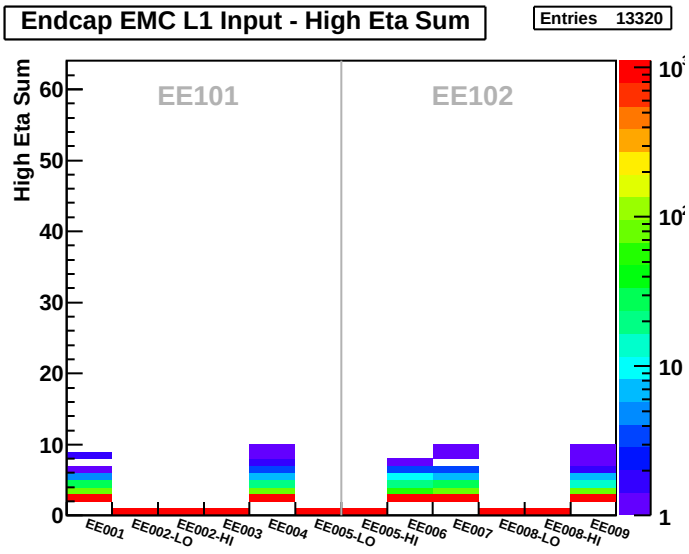

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

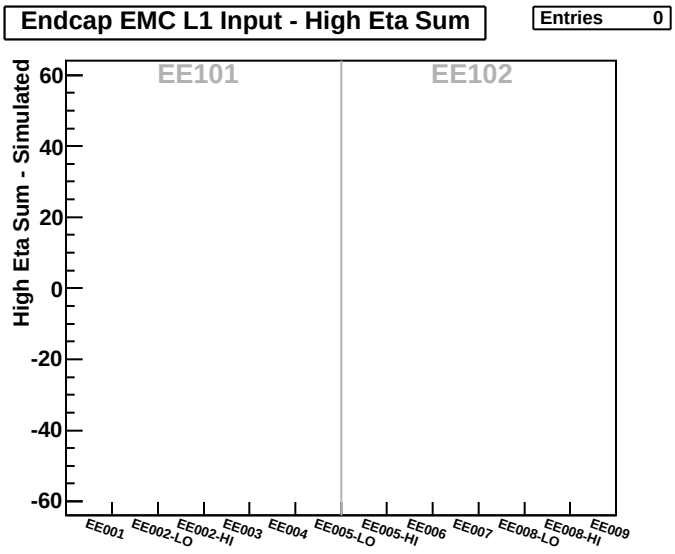

Barrel EMC L1 Input - High Tower Bits
Entries 39960
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

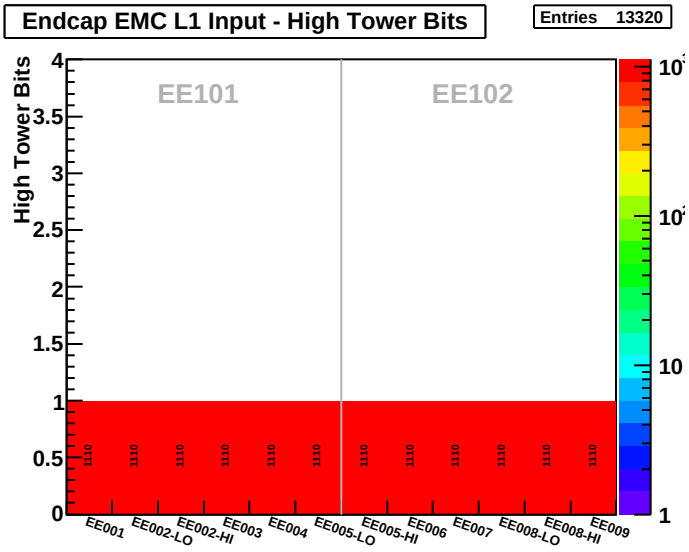

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

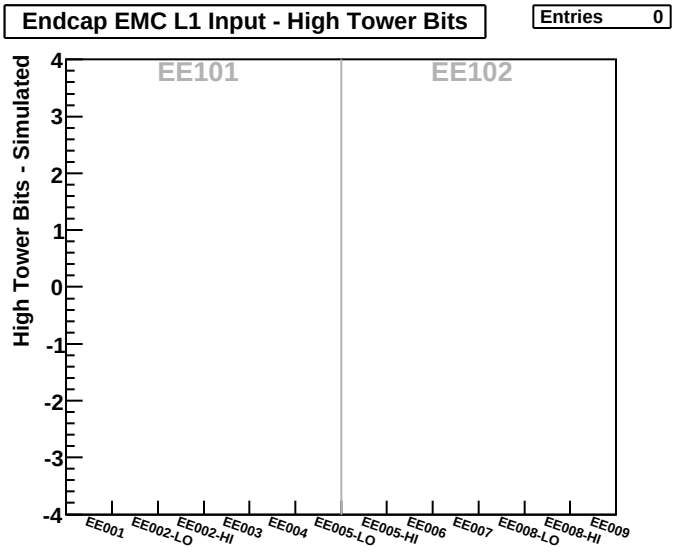

Endcap EMC L1 Input - Low Eta Sum
Entries 13320
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

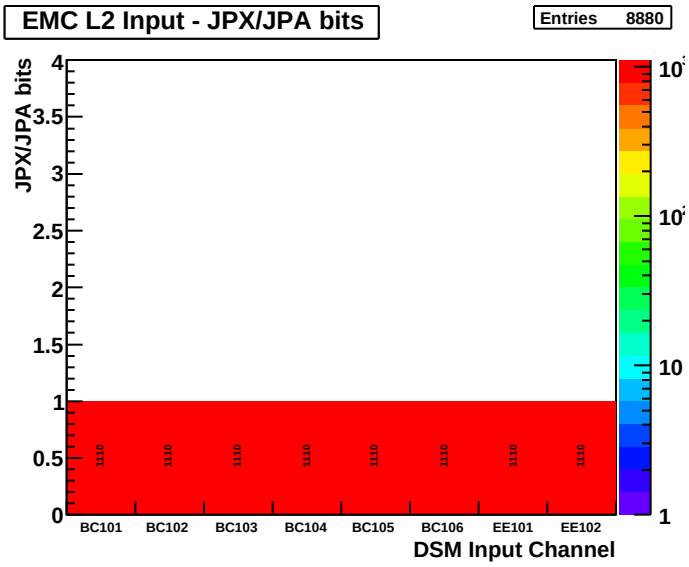

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

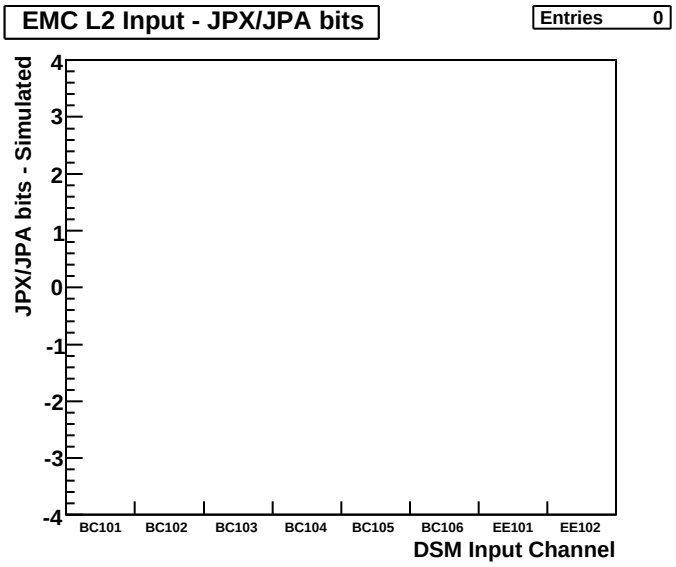

Endcap EMC L1 Input - High Eta Sum
Entries 13320
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

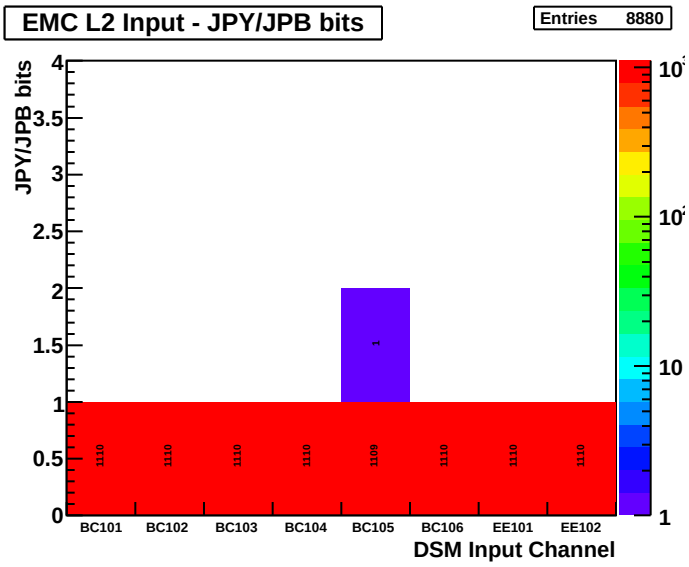

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

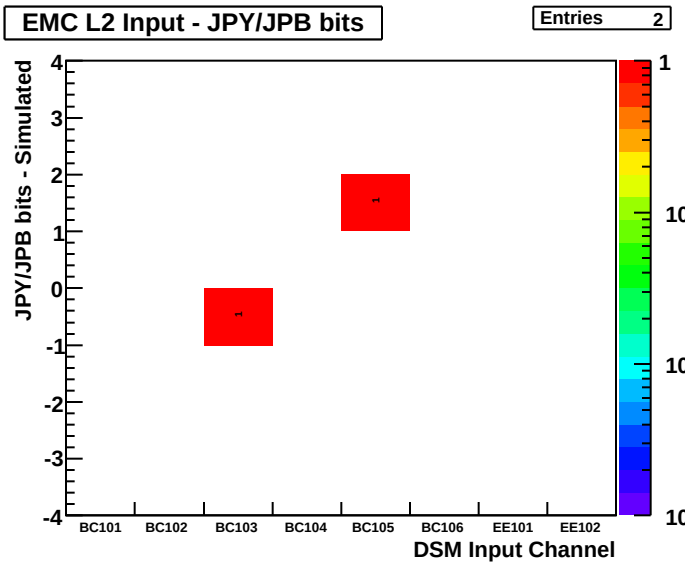

Endcap EMC L1 Input - High Tower Bits
Entries 13320
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

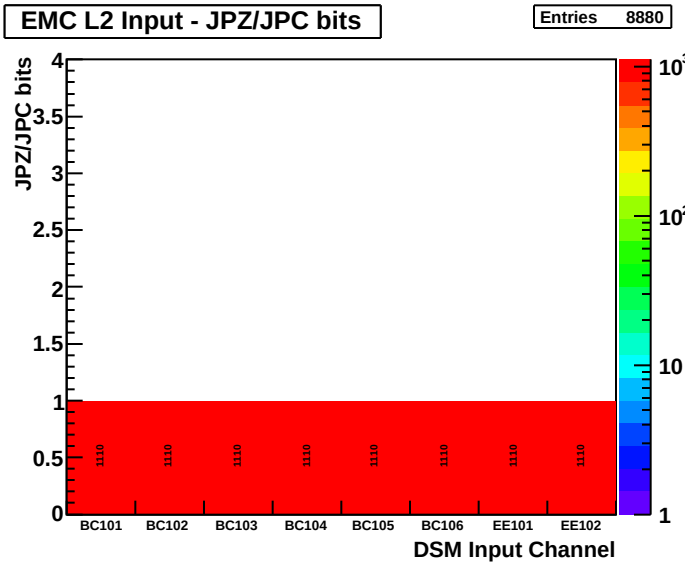

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

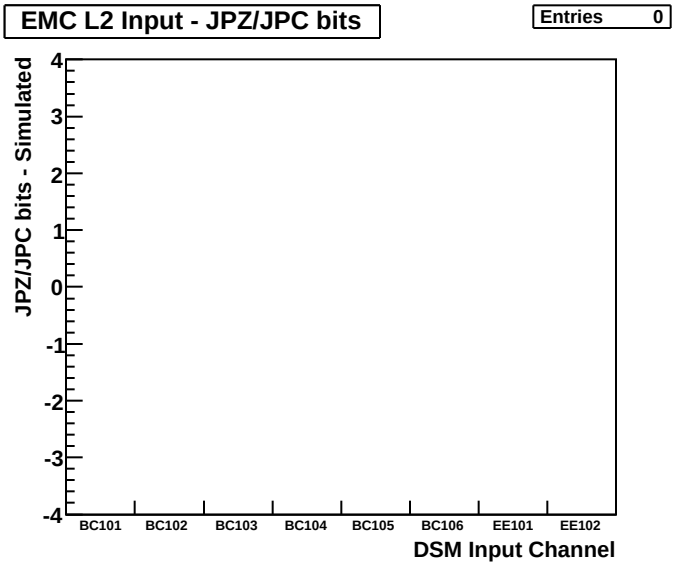

EMC L2 Input - JPX/JPA bits
Entries 8880
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

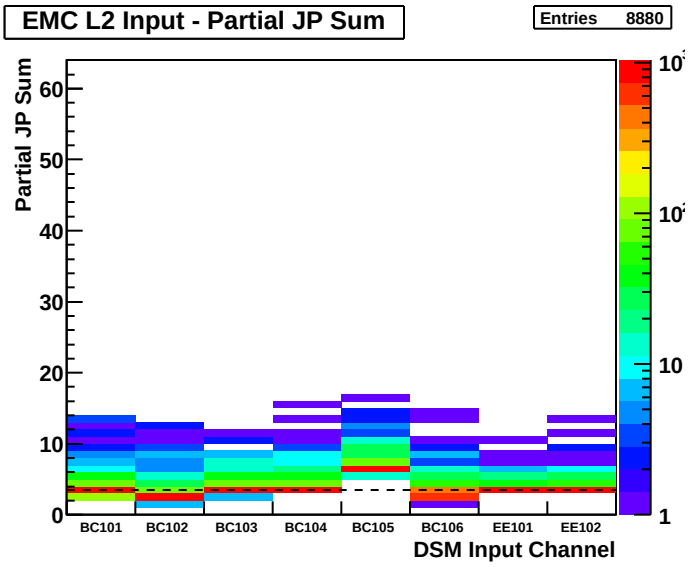

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

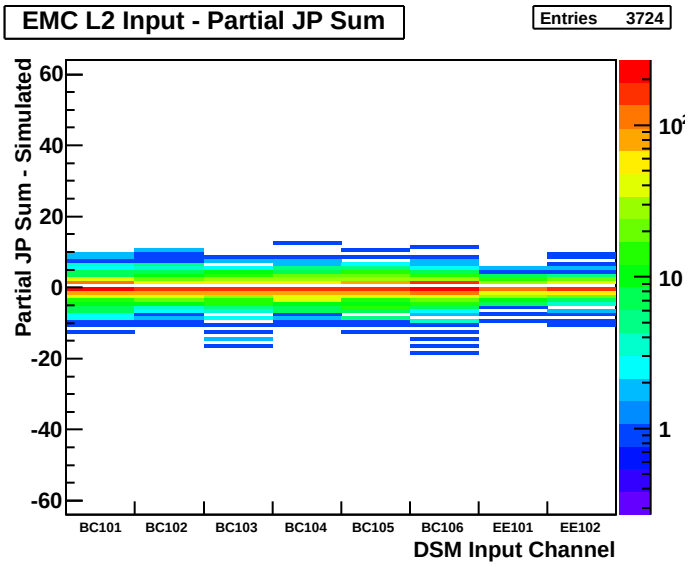

EMC L2 Input - JPY/JPB bits
Entries 8880
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

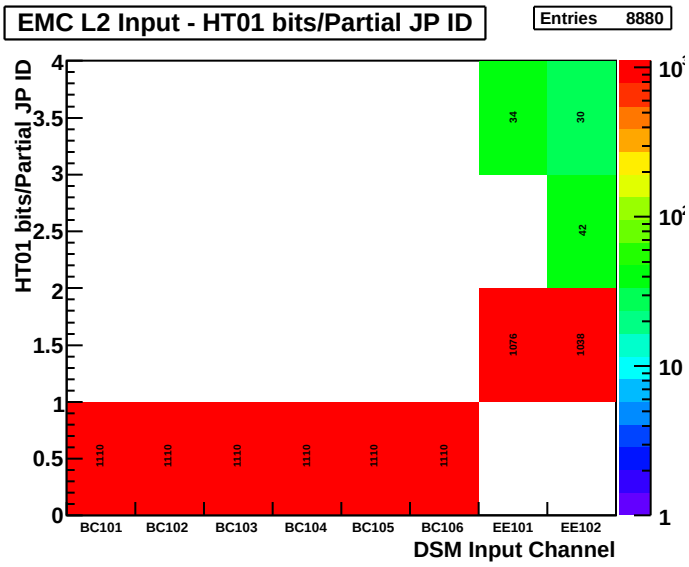

EMC L2 Input - JPY/JPB bits
Entries 2
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

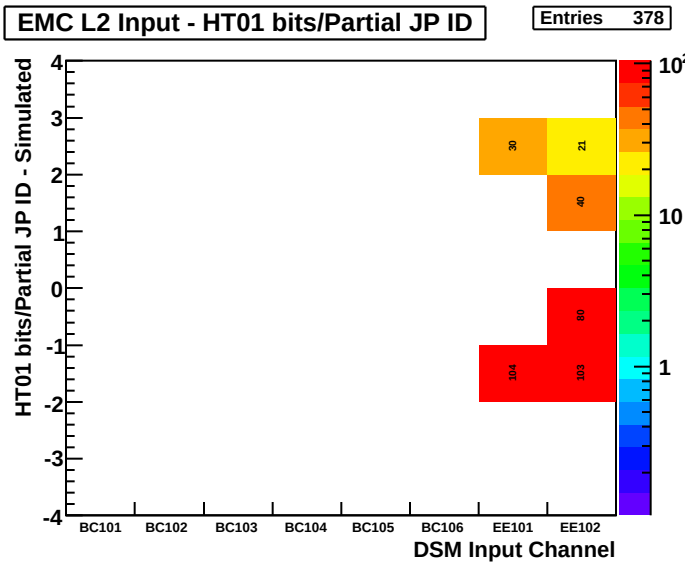

EMC L2 Input - JPZ/JPC bits
Entries 8880
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

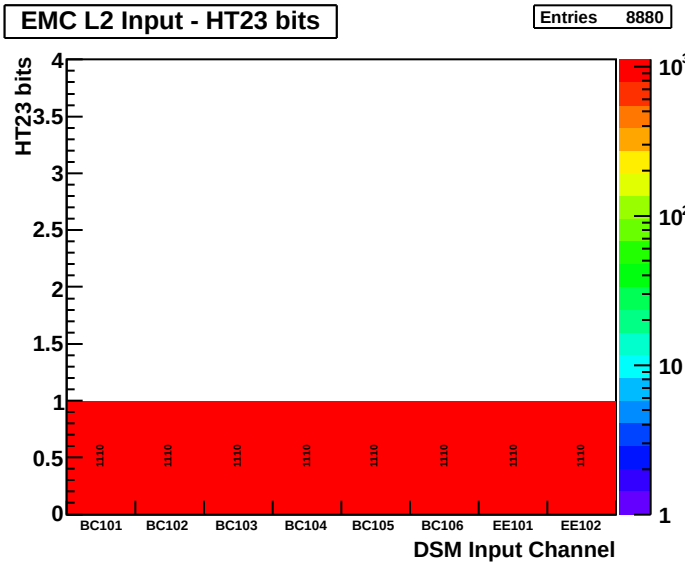

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

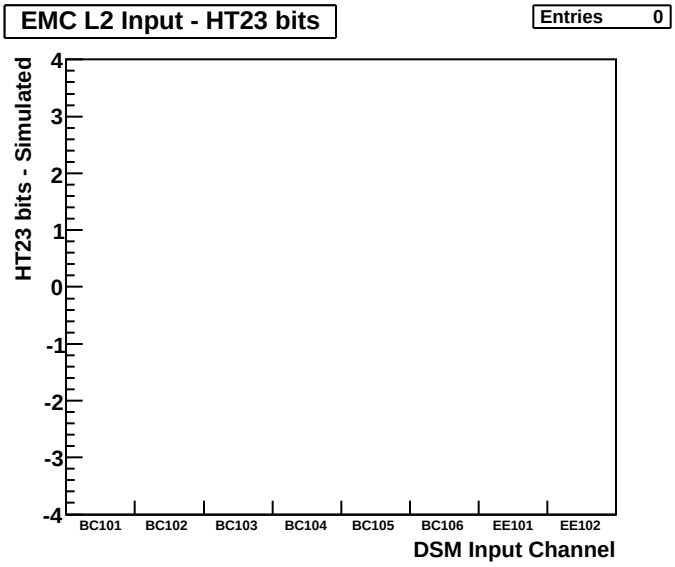

EMC L2 Input - Partial JP Sum
Entries 8880
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

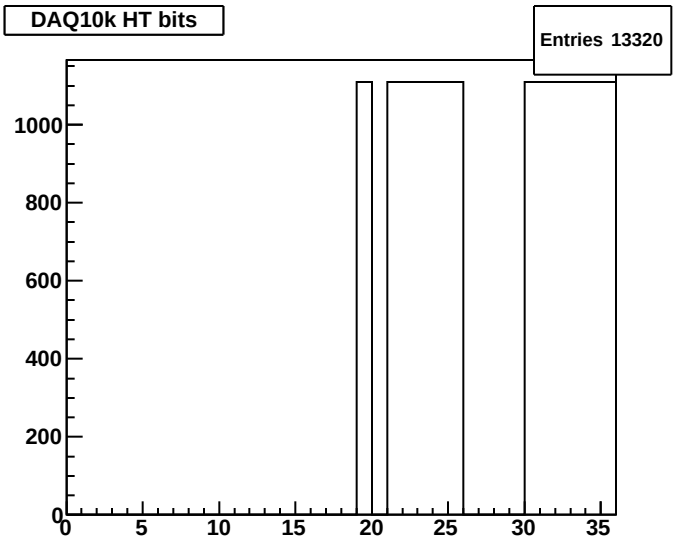

EMC L2 Input - Partial JP Sum
Entries 3724
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

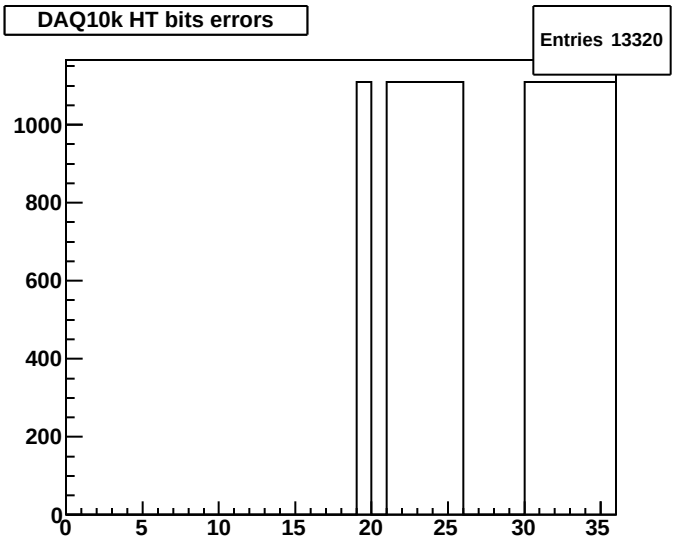

EMC L2 Input - HT01 bits/Partial JP ID
Entries 8880
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

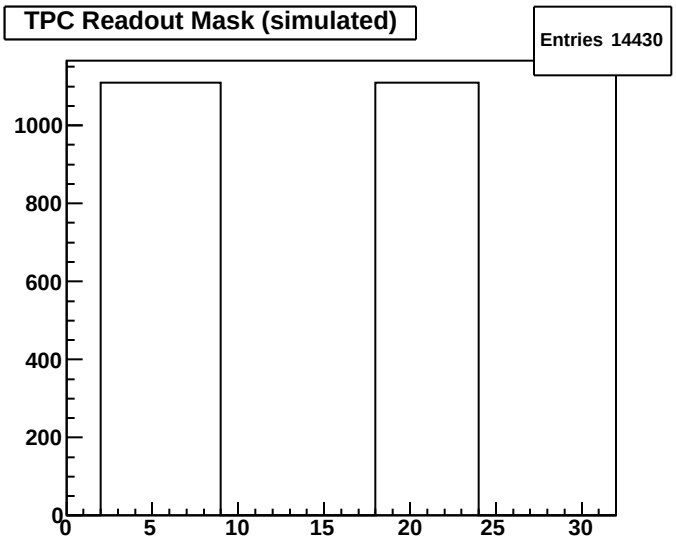

EMC L2 Input - HT01 bits/Partial JP ID
Entries 378
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

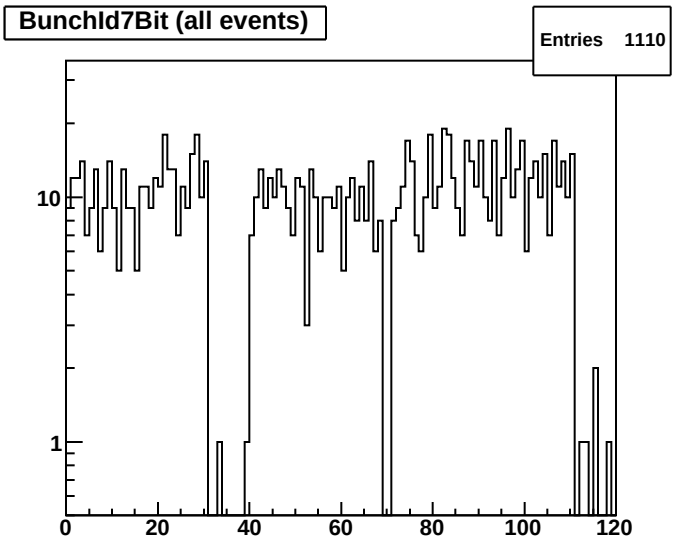

EMC L2 Input - HT23 bits
Entries 8880
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

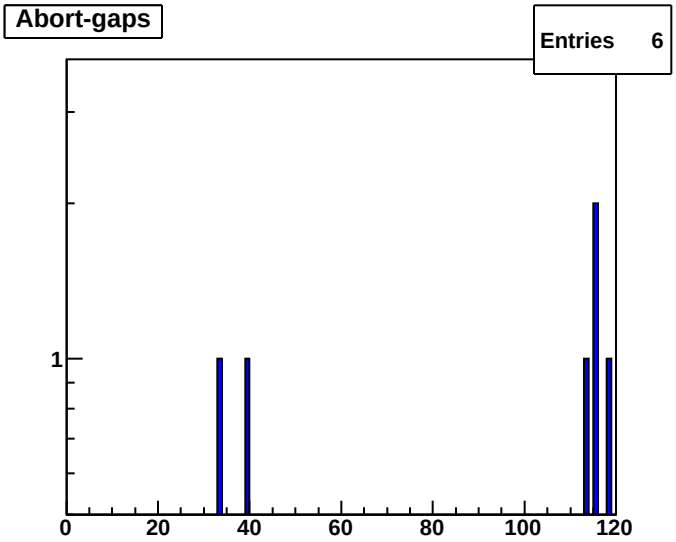

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

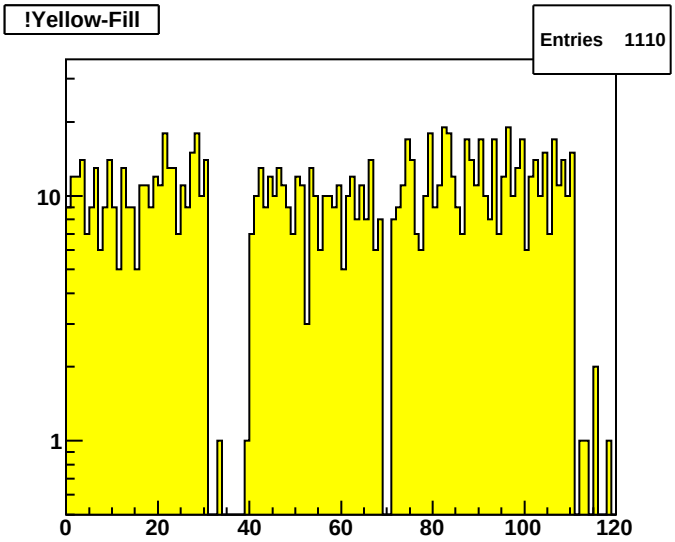

DAQ10k HT bits
Entries 13320
1000
800
600
400
200
0
0 5 10 15 20 25 30 35

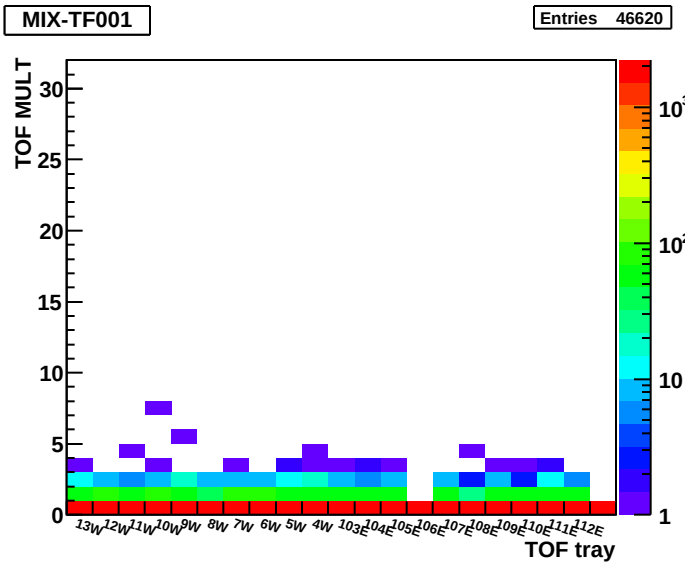

DAQ10k HT bits errors
Entries 13320
1000
800
600
400
200
0
0 5 10 15 20 25 30 35

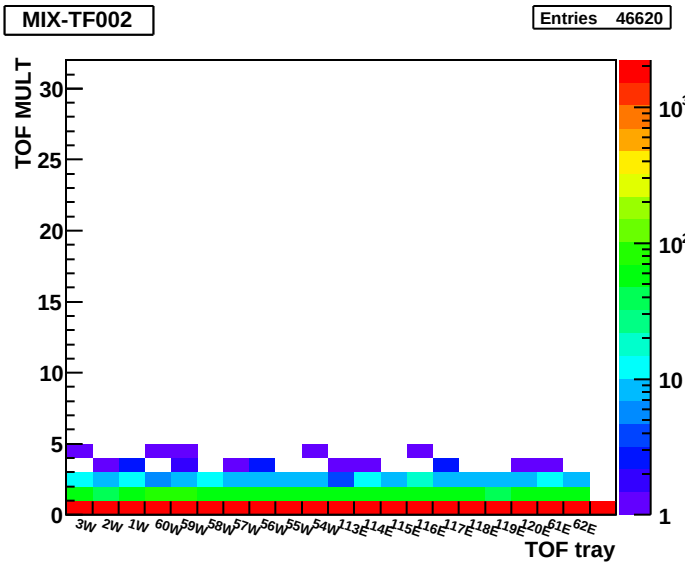

TPC Readout Mask (simulated)
Entries 14430
1000
800
600
400
200
0
0 5 10 15 20 25 30

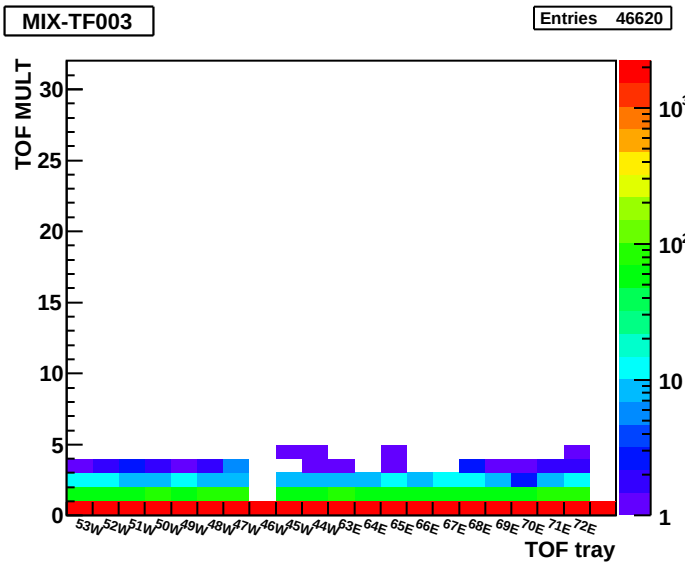

BunchId7Bit (all events)
Entries 1110
10
1
0 20 40 60 80 100 120

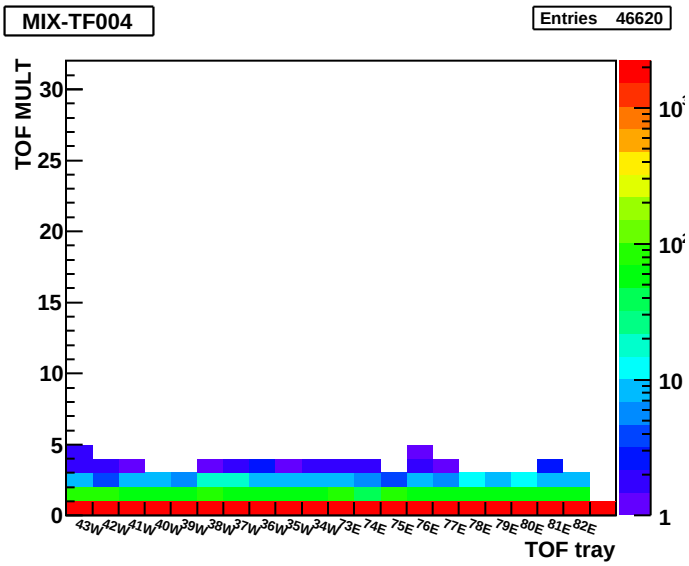

Abort-gaps
Entries 6
1
0 20 40 60 80 100 120

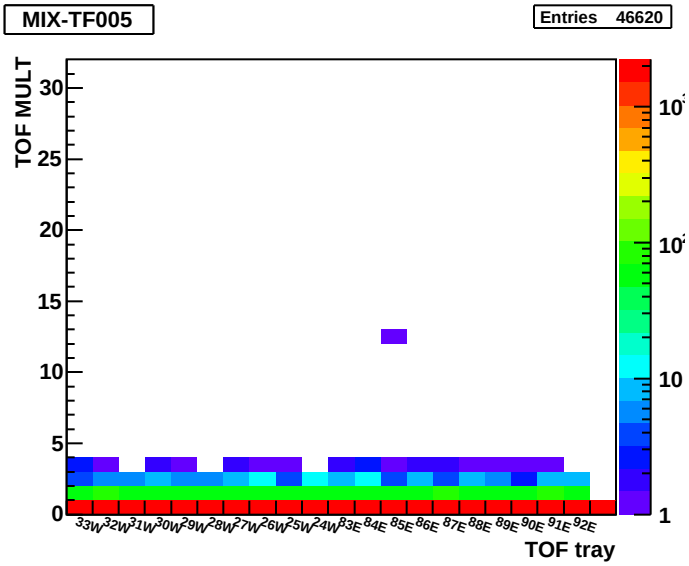

!Yellow-Fill
Entries 1110
10
1
0 20 40 60 80 100 120

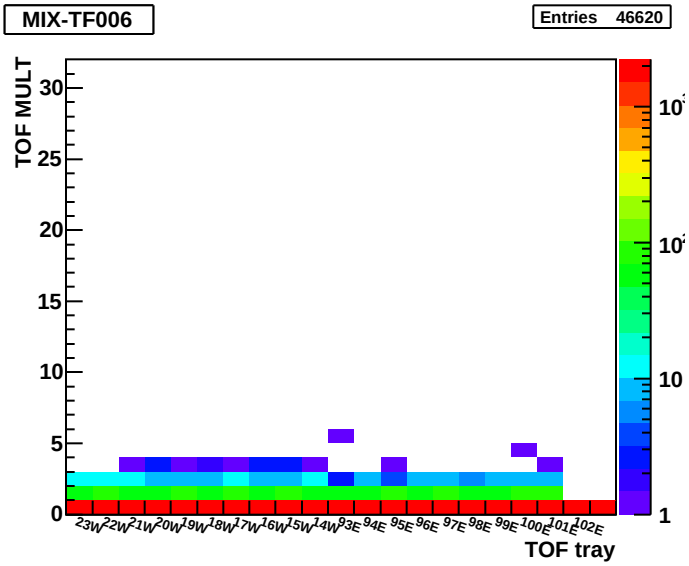

MIX-TF001
Entries 46620
TOF MULT
TOF tray

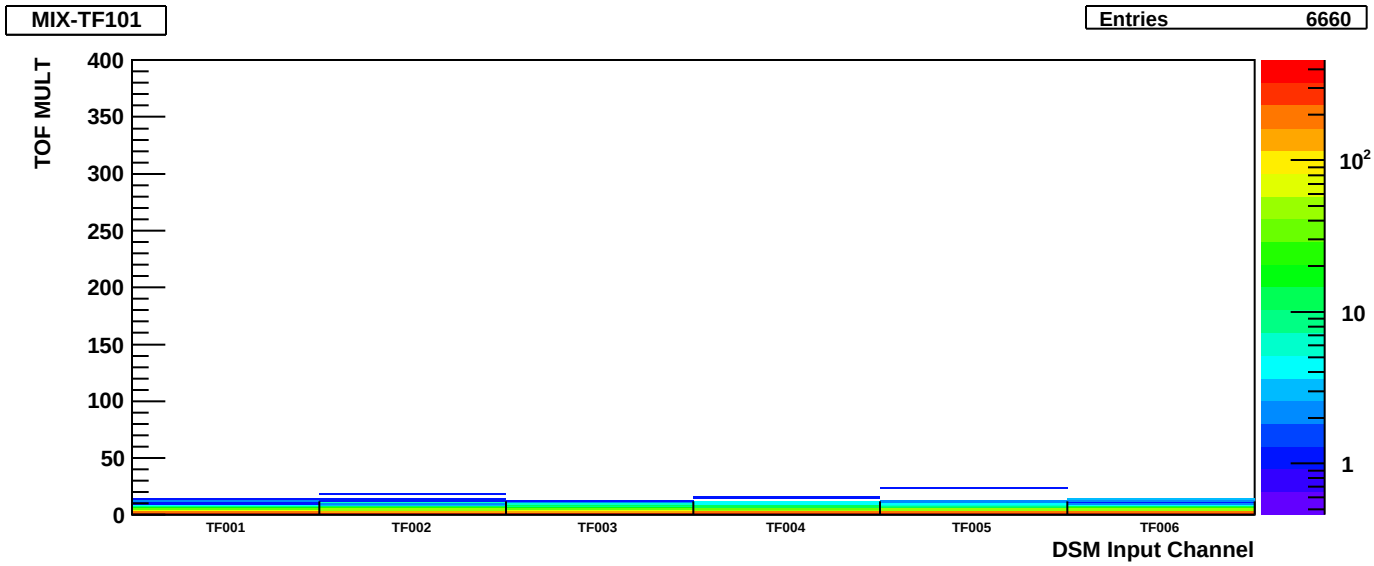

MIX-TF002
Entries 46620
TOF MULT
TOF tray

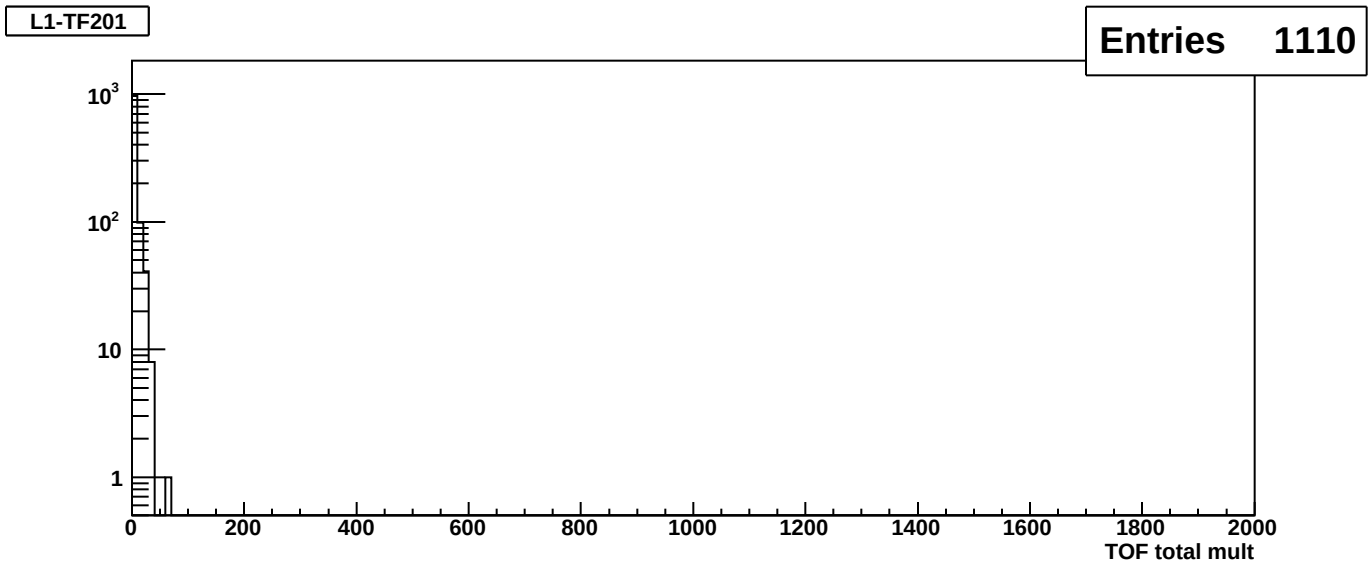

MIX-TF003
Entries 46620
TOF MULT
TOF tray

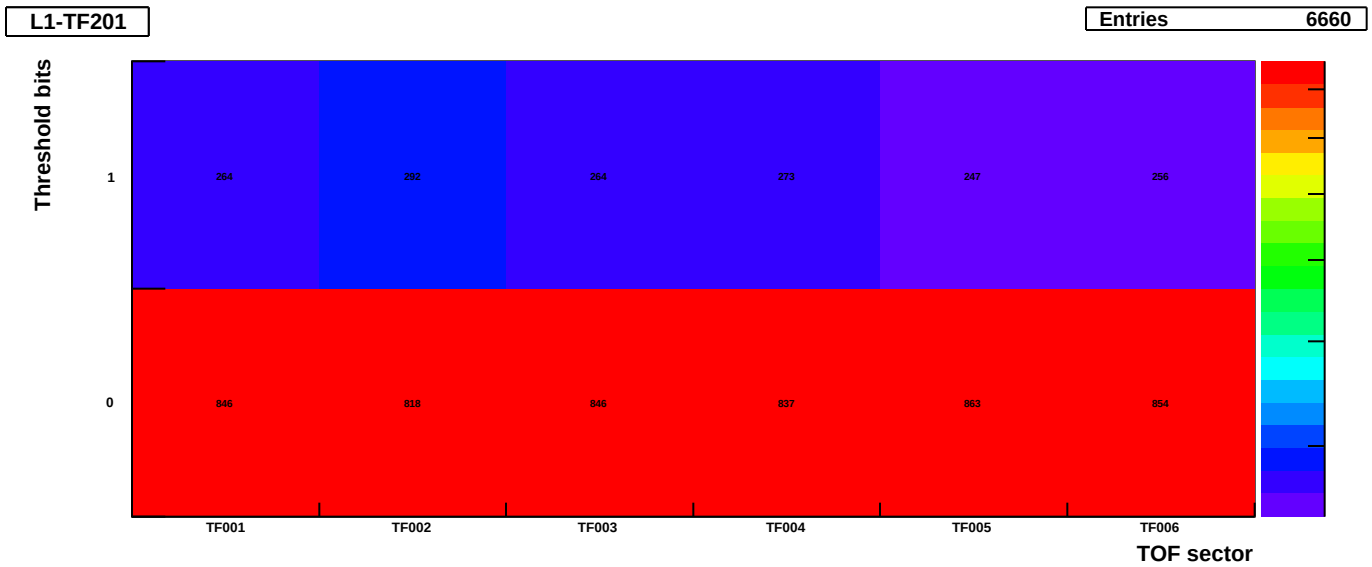

MIX-TF004
Entries 46620
TOF MULT
TOF tray

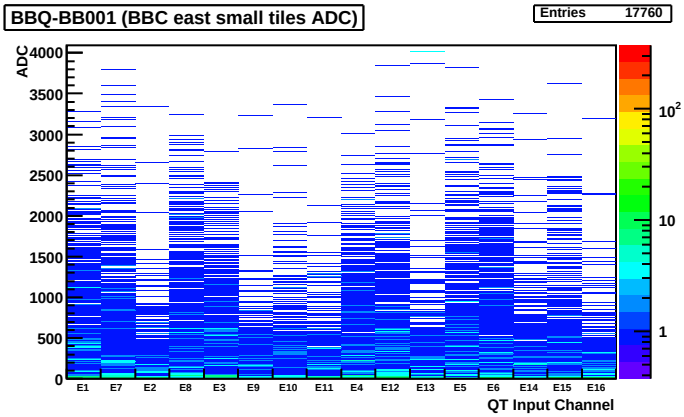

MIX-TF005
Entries 46620
TOF MULT
TOF tray

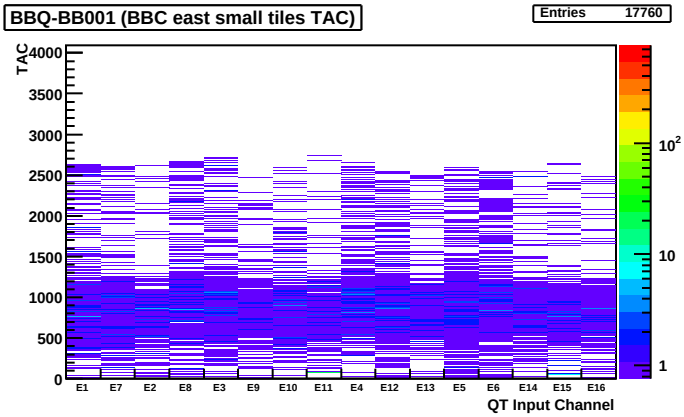

MIX-TF006
Entries 46620
TOF MULT
TOF tray

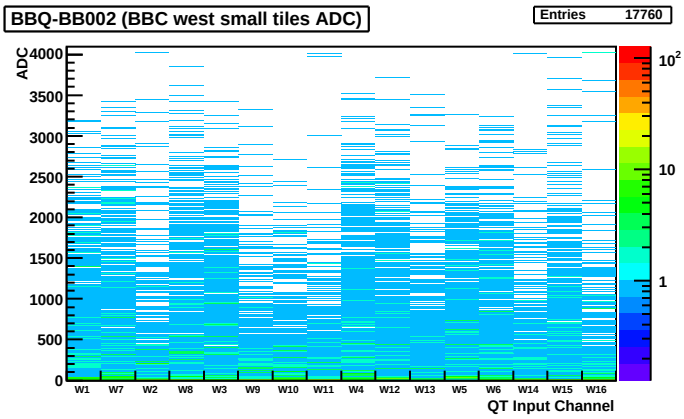

MIX-TF101
Entries 6660
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^2
10
1

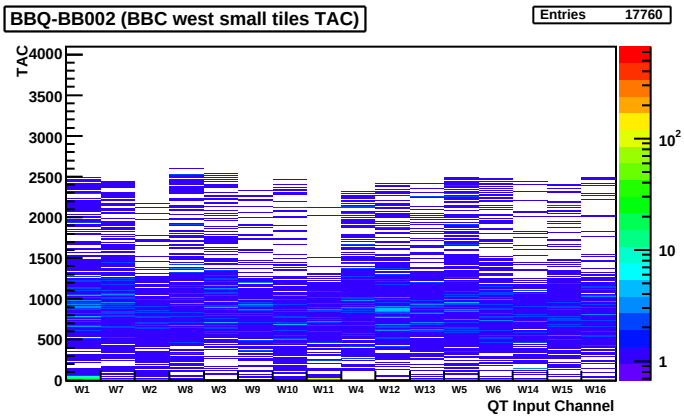

L1-TF201
Entries 1110
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

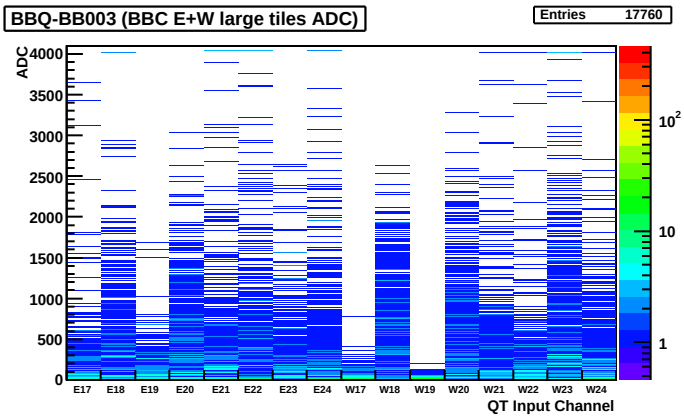

L1-TF201
Entries 6660
Threshold bits
1
0
264
292
264
273
247
256
846
818
846
837
863
854
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

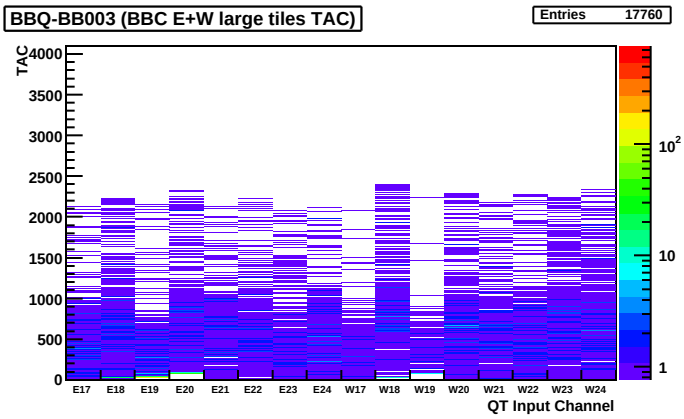

BBQ-BB001 (BBC east small tiles ADC)
Entries 17760
ADC
QT Input Channel

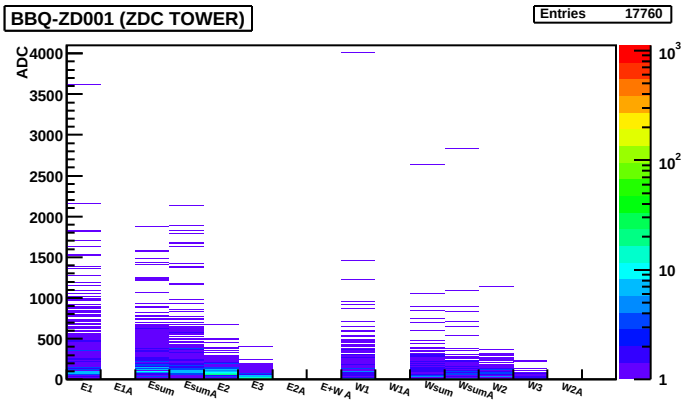

BBQ-BB001 (BBC east small tiles TAC)
Entries 17760
TAC
QT Input Channel

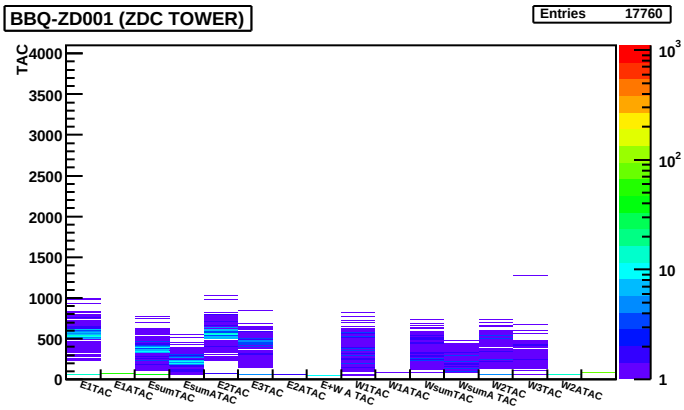

BBQ-BB002 (BBC west small tiles ADC)
Entries 17760
ADC
QT Input Channel

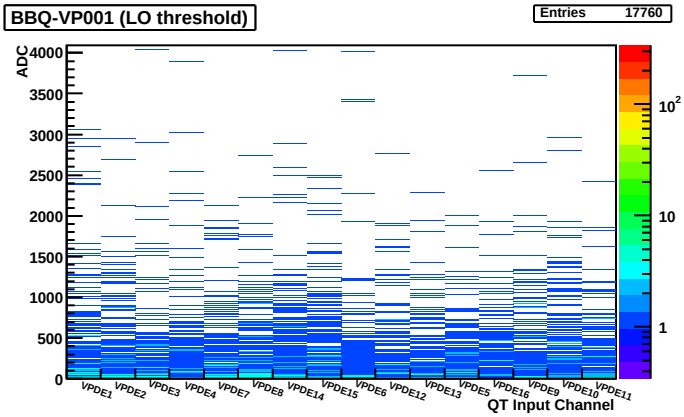

BBQ-BB002 (BBC west small tiles TAC)
Entries 17760
TAC
QT Input Channel

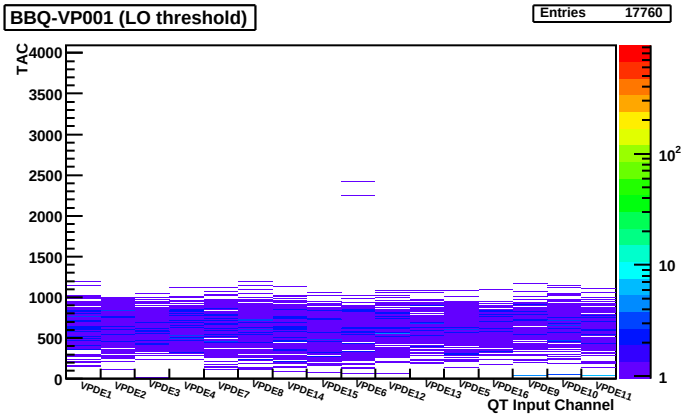

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 17760
ADC
QT Input Channel

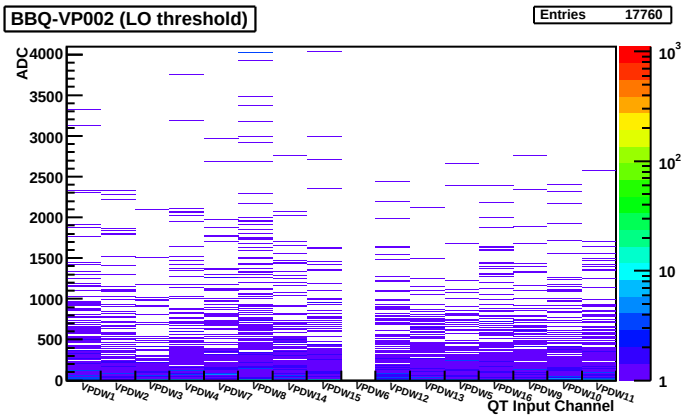

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 17760
TAC
QT Input Channel

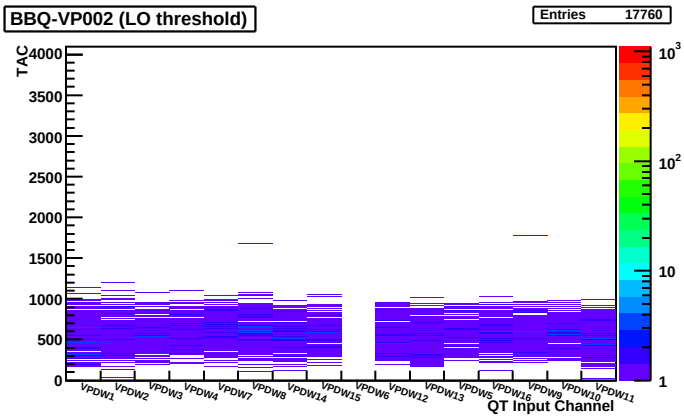

BBQ-ZD001 (ZDC TOWER)
Entries 17760
ADC

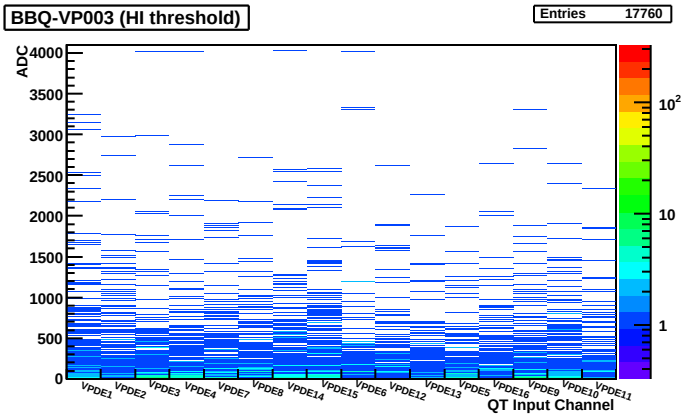

BBQ-ZD001 (ZDC TOWER)
Entries 17760
TAC

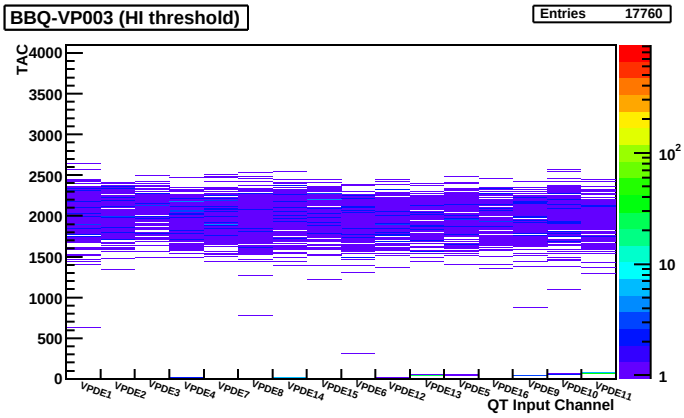

BBQ-VP001 (LO threshold)
Entries 17760
ADC
QT Input Channel

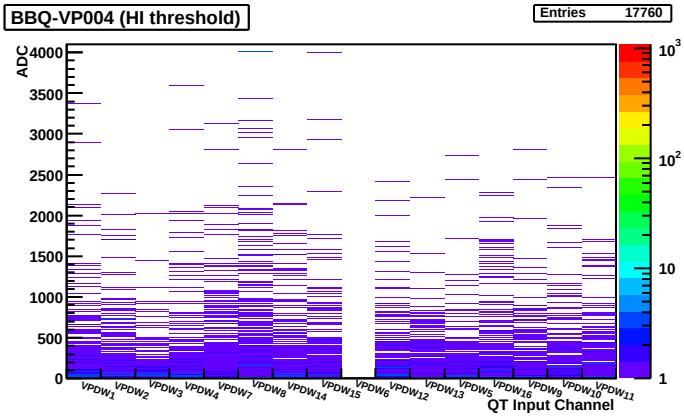

BBQ-VP001 (LO threshold)
Entries 17760
TAC
QT Input Channel

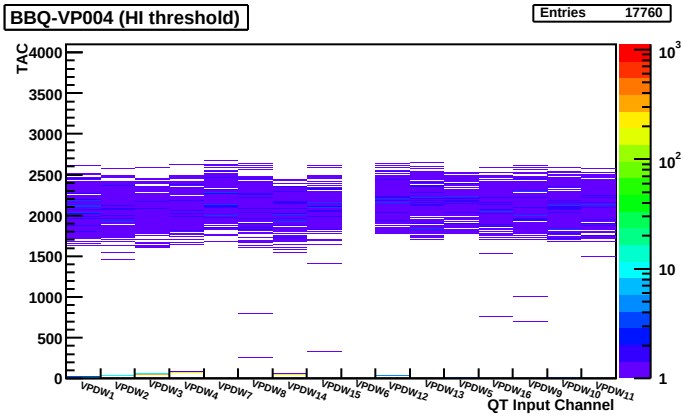

BBQ-VP002 (LO threshold)
Entries 17760
ADC
QT Input Channel

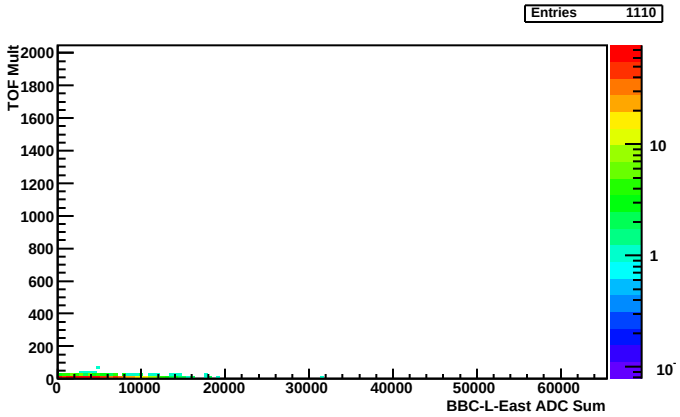

BBQ-VP002 (LO threshold)
Entries 17760
TAC
QT Input Channel

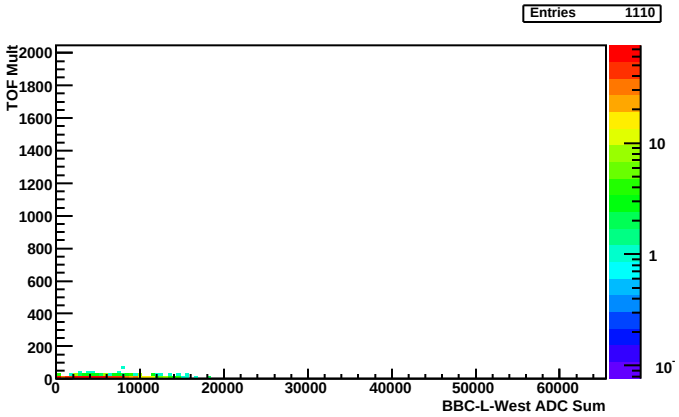

BBQ-VP003 (HI threshold)
Entries 17760
ADC
QT Input Channel

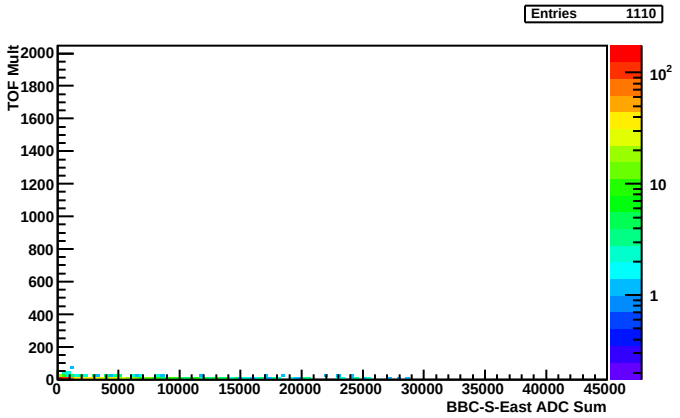

BBQ-VP003 (HI threshold)
Entries 17760
TAC
QT Input Channel

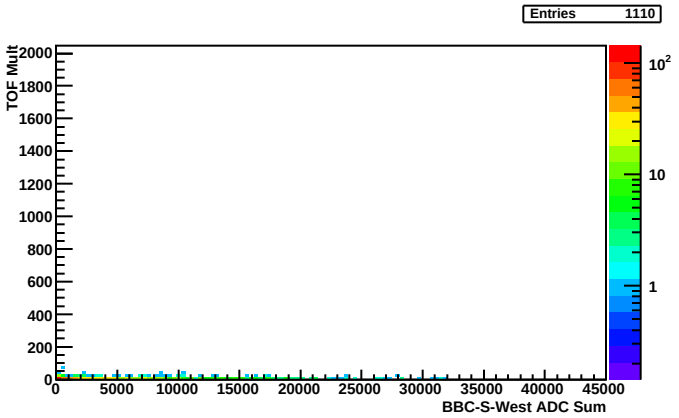

BBQ-VP004 (HI threshold)
Entries 17760
ADC
QT Input Channel

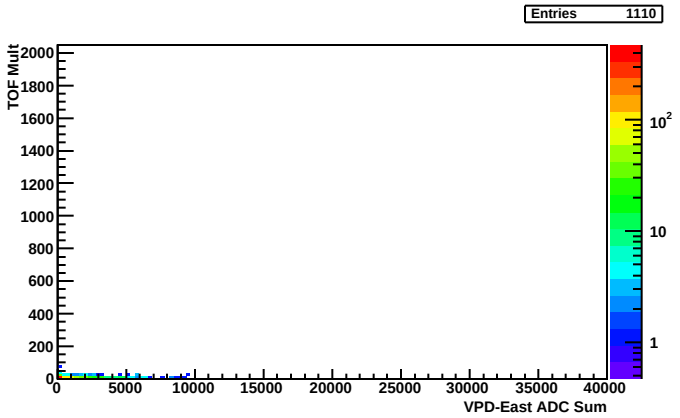

BBQ-VP004 (HI threshold)
Entries 17760
TAC
QT Input Channel

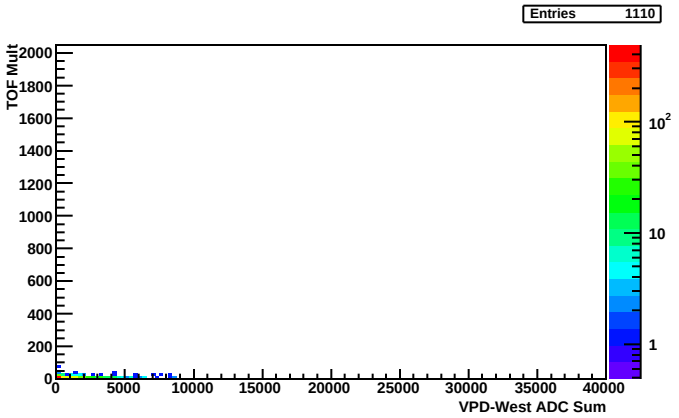

Entries 1110
TOF Mult
BBC-L-East ADC Sum

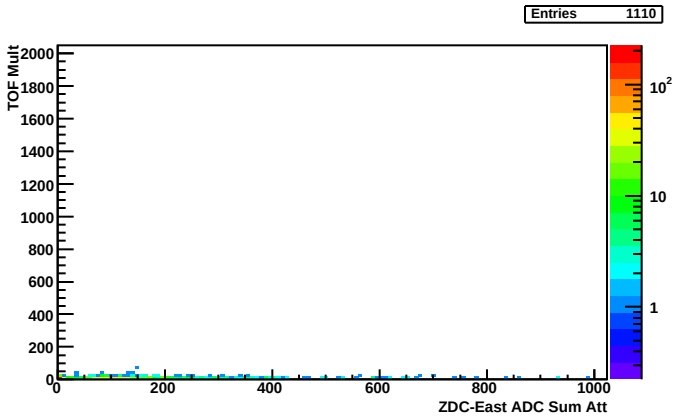

Entries 1110
TOF Mult
BBC-L-West ADC Sum

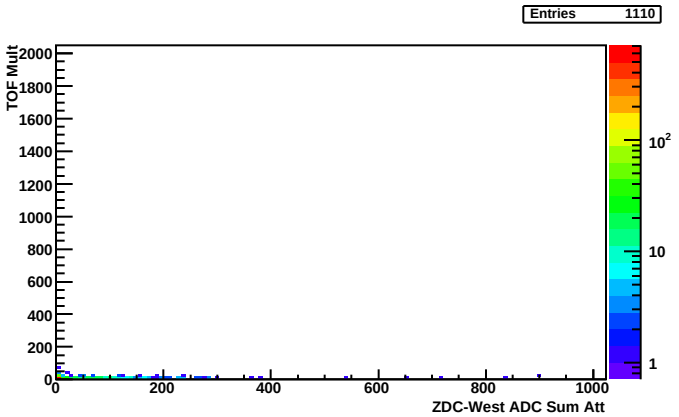

Entries 1110
TOF Mult
BBC-S-East ADC Sum

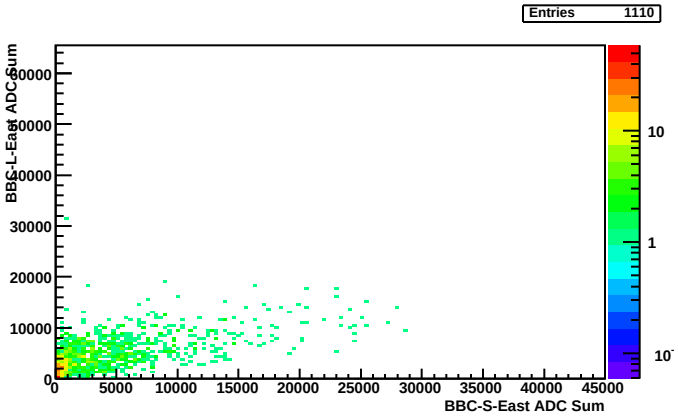

Entries 1110
TOF Mult
BBC-S-West ADC Sum

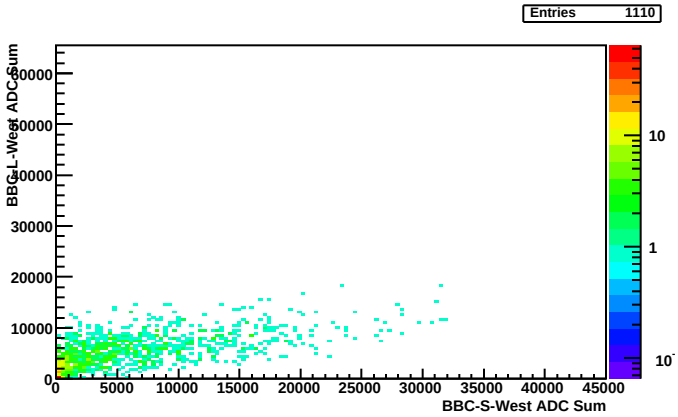

Entries 1110
TOF Mult
VPD-East ADC Sum

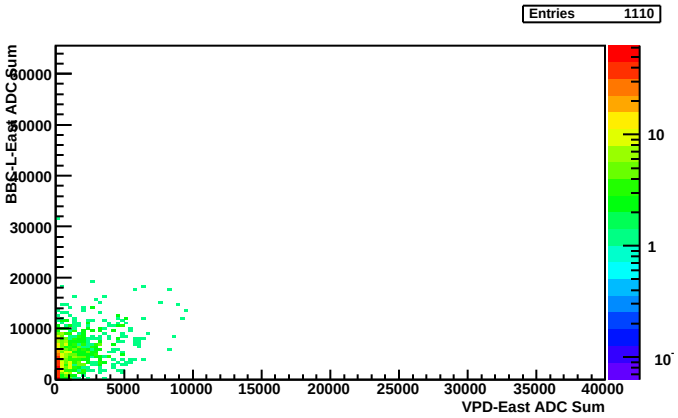

Entries 1110
TOF Mult
VPD-West ADC Sum

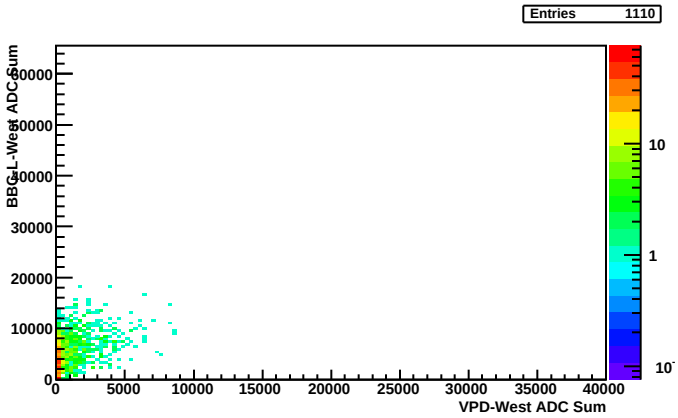

Entries 1110
TOF Mult
ZDC-East ADC Sum Att

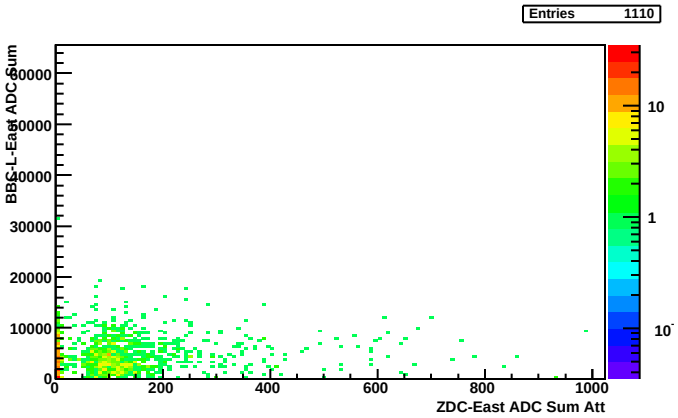

Entries 1110
TOF Mult
ZDC-West ADC Sum Att

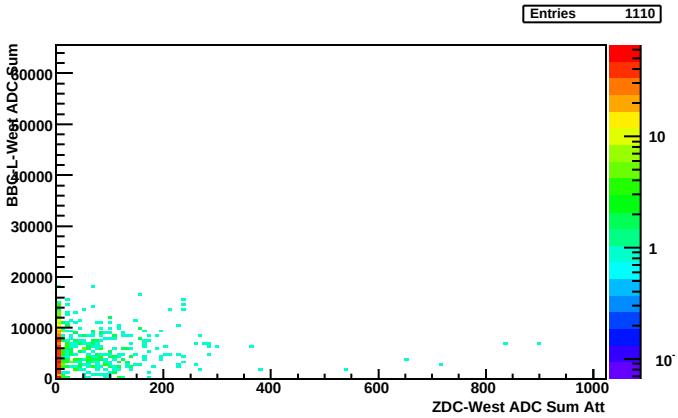

Entries 1110
BBC-L-East ADC Sum
BBC-S-East ADC Sum

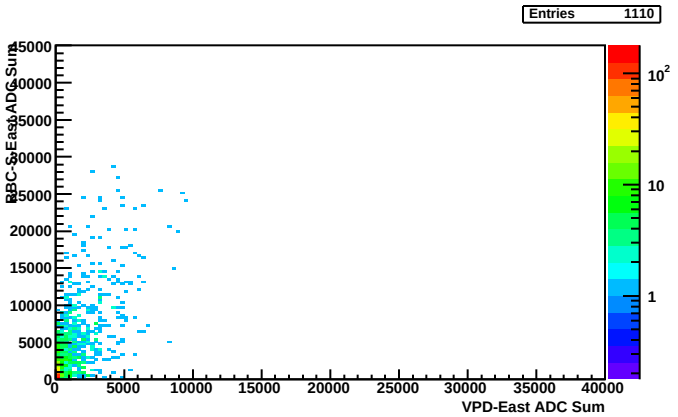

Entries 1110
BBC-L-West ADC Sum
BBC-S-West ADC Sum

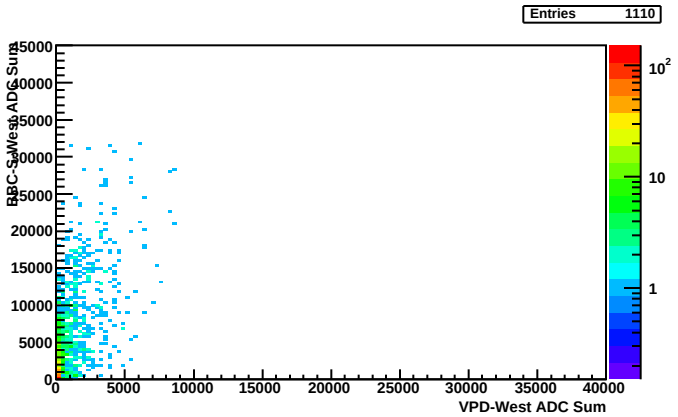

Entries 1110
BBC-L-East ADC Sum
VPD-East ADC Sum

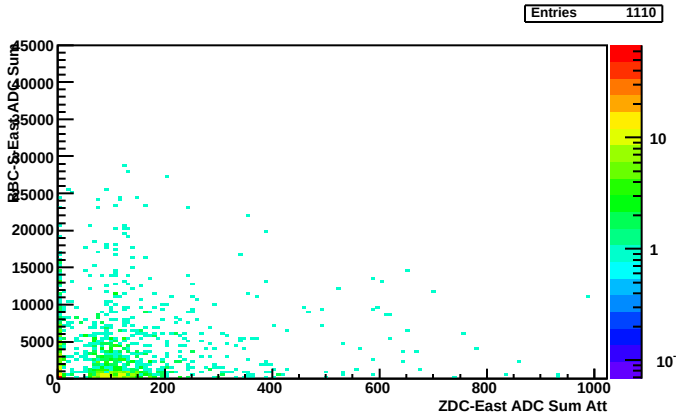

Entries 1110
BBC-L-West ADC Sum
VPD-West ADC Sum

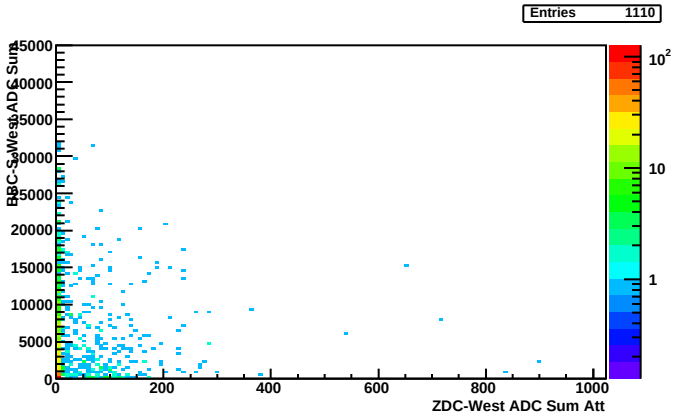

Entries 1110
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

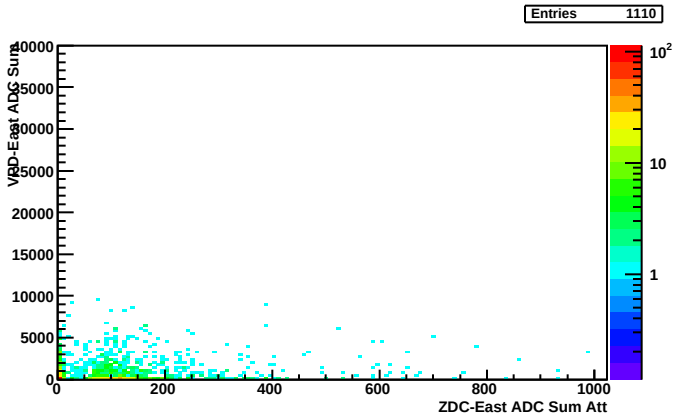

Entries 1110
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

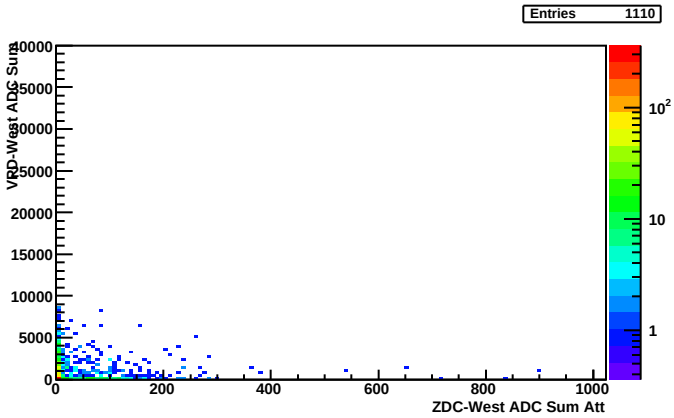

Entries 1110
BBC-S-East ADC Sum
VPD-East ADC Sum


Entries 1110
BBC-S-West ADC Sum
VPD-West ADC Sum


Entries 1110
BBC-S-East ADC Sum
ZDC-East ADC Sum Att


Entries 1110
BBC-S-West ADC Sum
ZDC-West ADC Sum Att


Entries 1110
VPD-East ADC Sum
ZDC-East ADC Sum Att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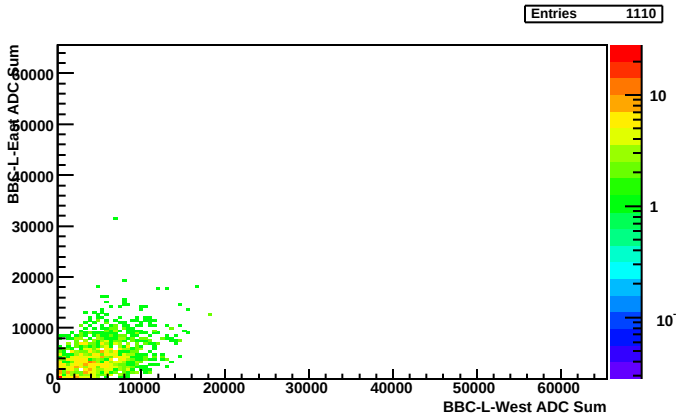
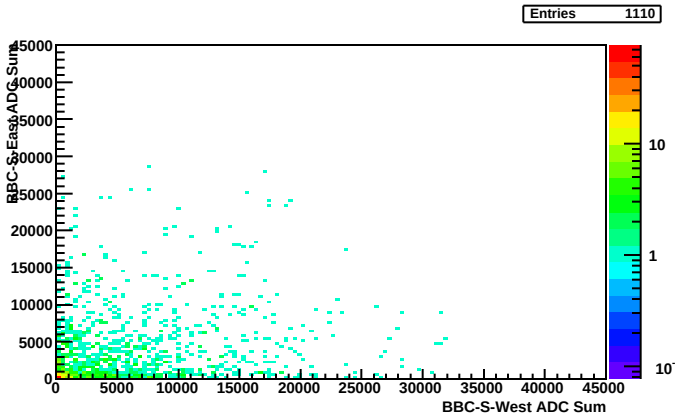
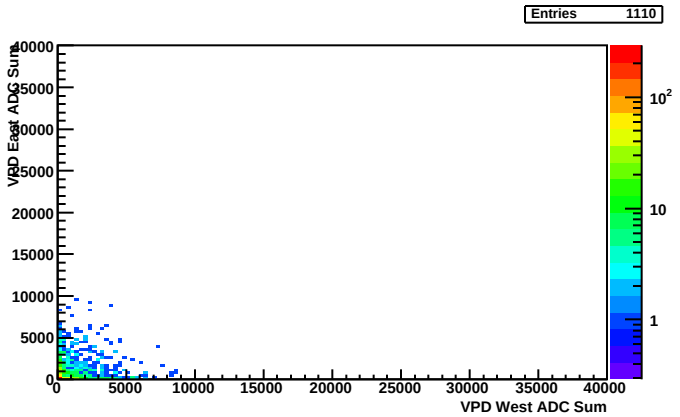
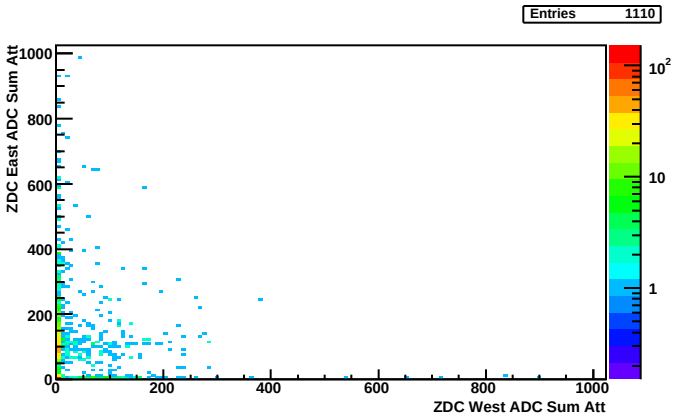
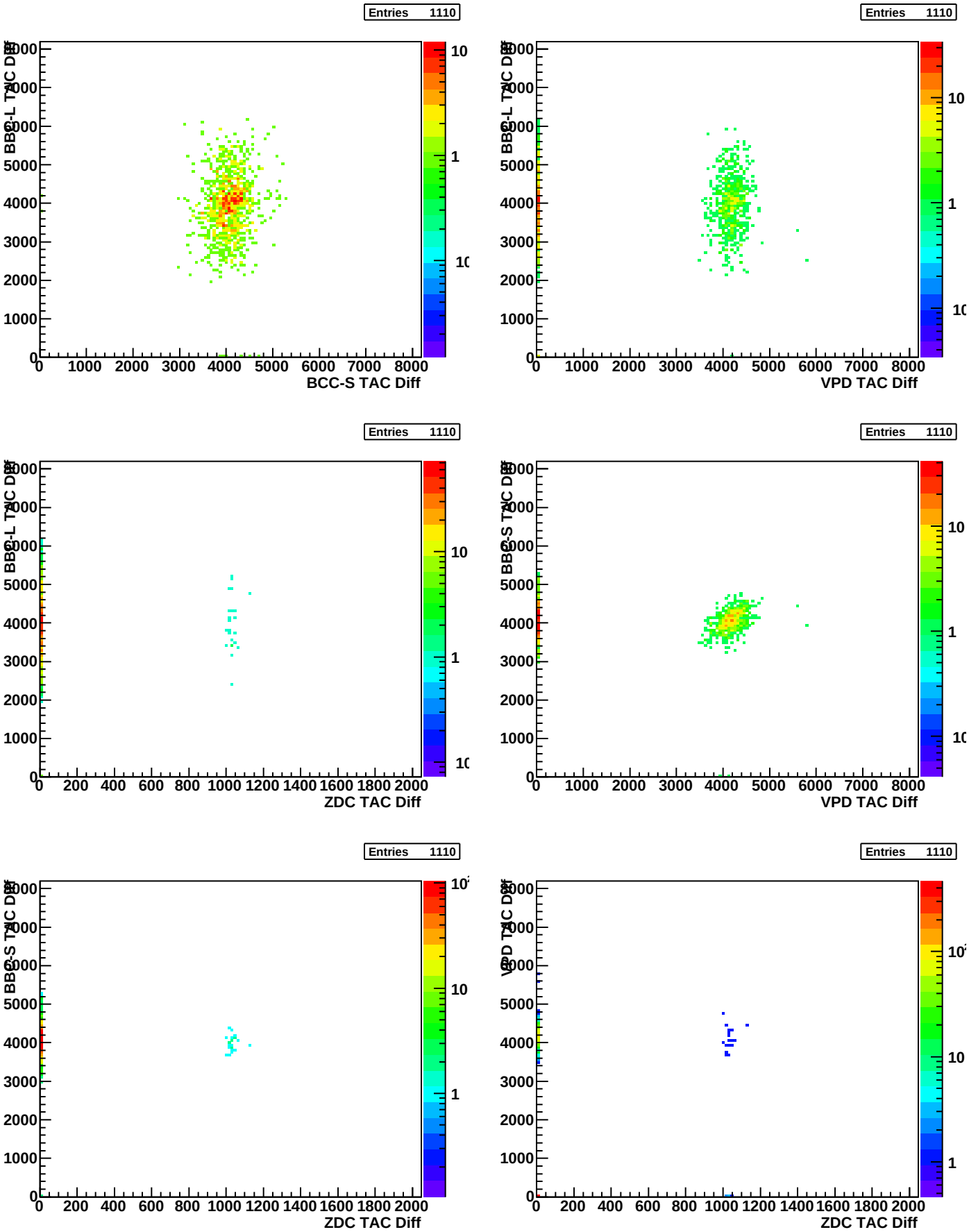
VPD-West ADC Sum
ZDC-West ADC Sum Att

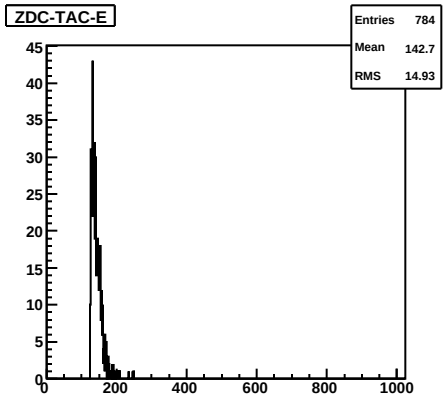

Entries 1110
BBC-L-East ADC Sum
BBC-L-West ADC Sum

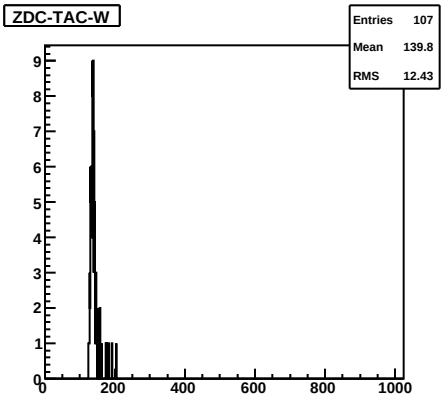

Entries 1110
BBC-S-East ADC Sum
BBC-S-West ADC Sum

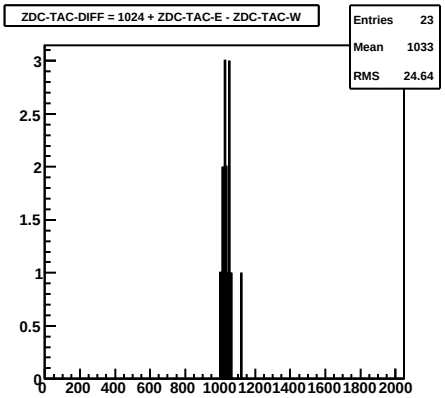

Entries 1110
VPD East ADC Sum
VPD West ADC Sum

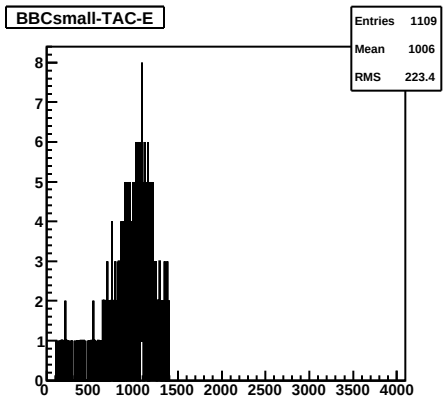

Entries 1110
ZDC East ADC Sum Att
ZDC West ADC Sum Att

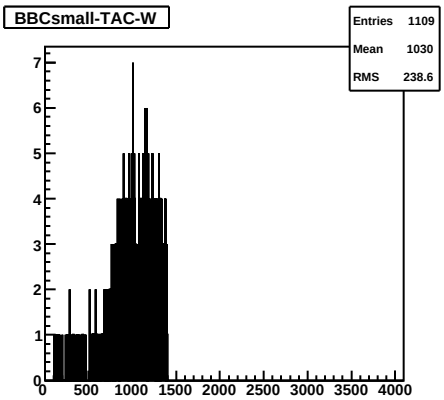

Entries 1110
BBC-L TAC Diff
BCC-S TAC Diff
Entries 1110
BBC-L TAC Diff
VPD TAC Diff
Entries 1110
BBC-L TAC Diff
ZDC TAC Diff
Entries 1110
BBC-S TAC Diff
VPD TAC Diff
Entries 1110
BBC-S TAC Diff
ZDC TAC Diff
Entries 1110
VPD TAC Diff
ZDC TAC Diff

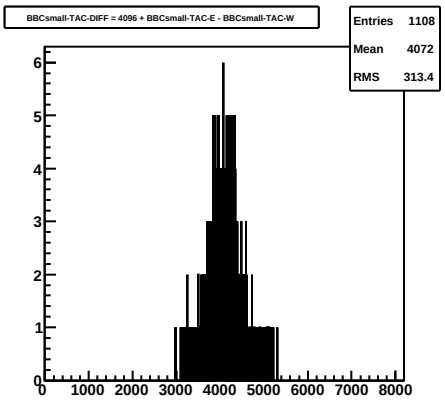

ZDC-TAC-E
Entries 784
Mean 142.7
RMS 14.93

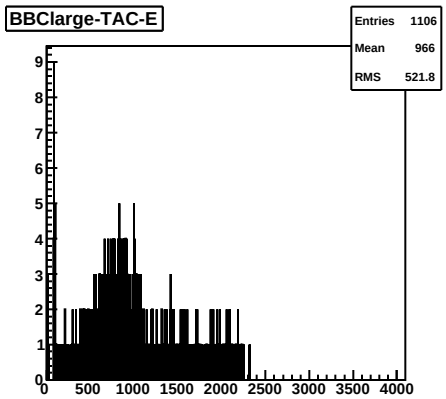

ZDC-TAC-W
Entries 107
Mean 139.8
RMS 12.43

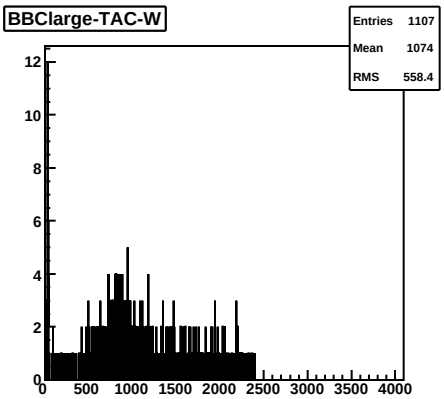

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 23
Mean 1033
RMS 24.64

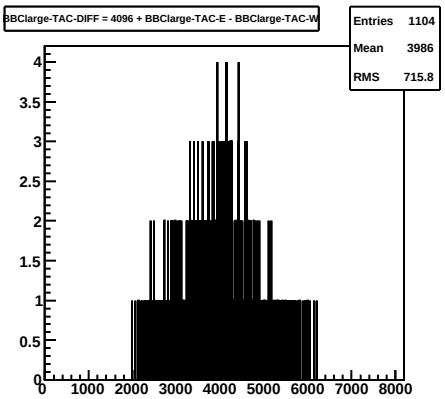

BBCsmall-TAC-E
Entries 1109
Mean 1006
RMS 223.4

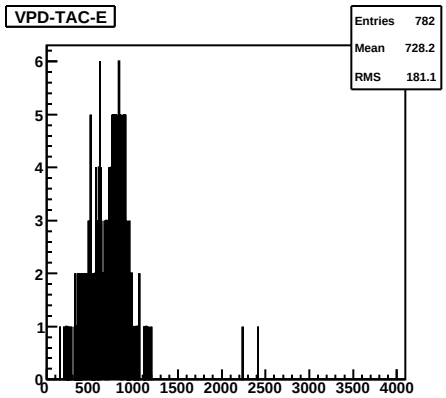

BBCsmall-TAC-W
Entries 1109
Mean 1030
RMS 238.6

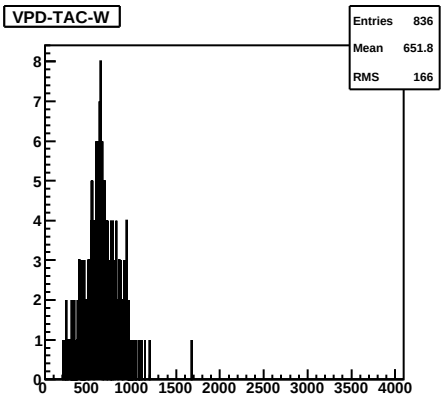

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 1108
Mean 4072
RMS 313.4

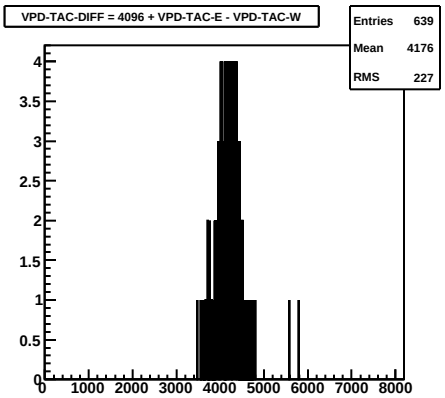

BBClarge-TAC-E
Entries 1106
Mean 966
RMS 521.8

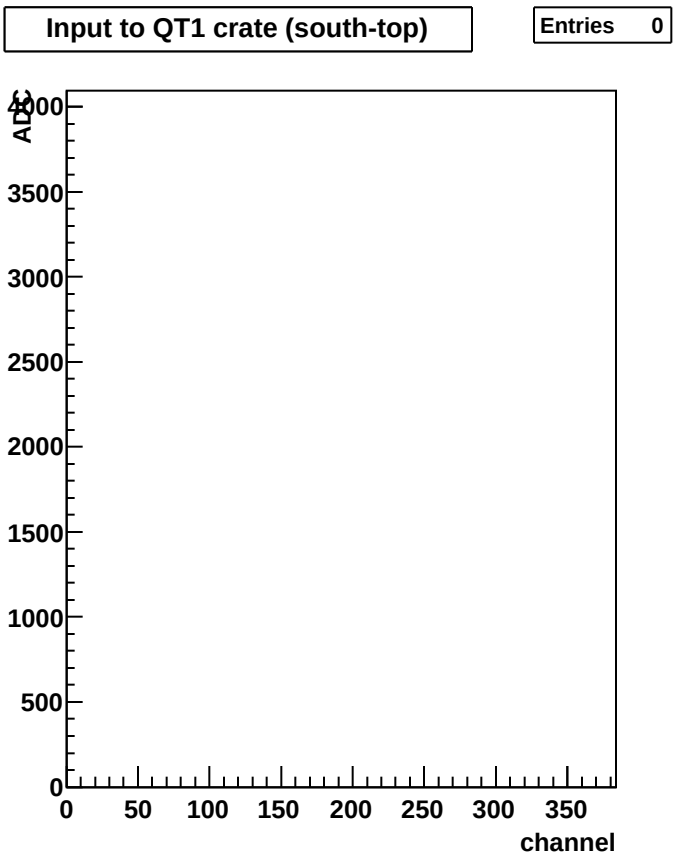

BBClarge-TAC-W
Entries 1107
Mean 1074
RMS 558.4

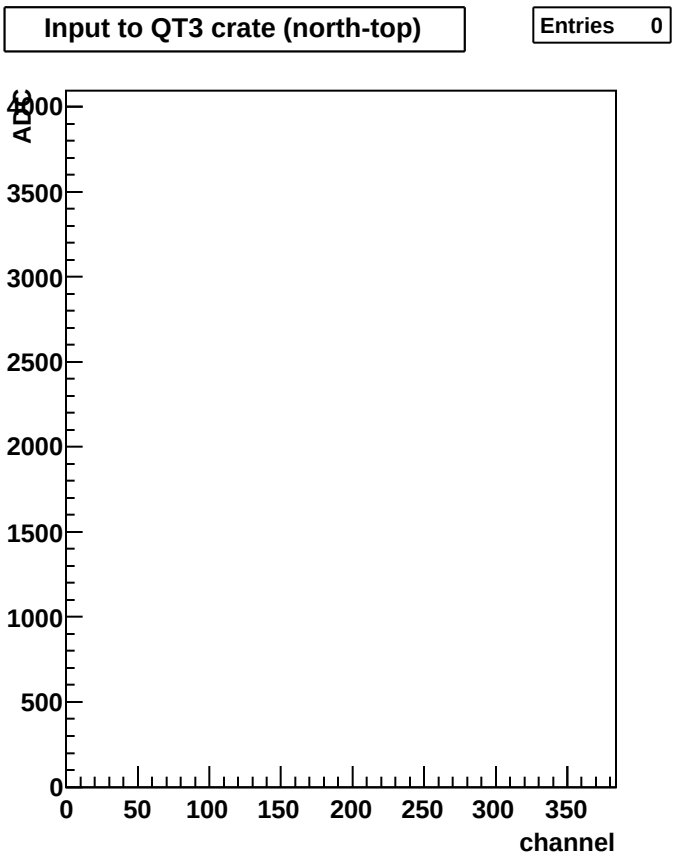

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 1104
Mean 3986
RMS 715.8

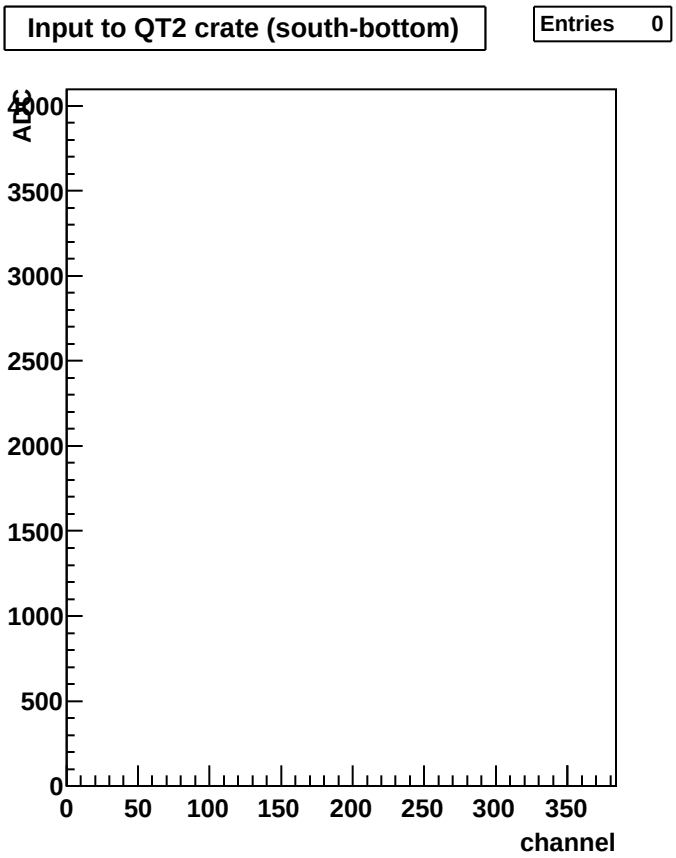

VPD-TAC-E
Entries 782
Mean 728.2
RMS 181.1

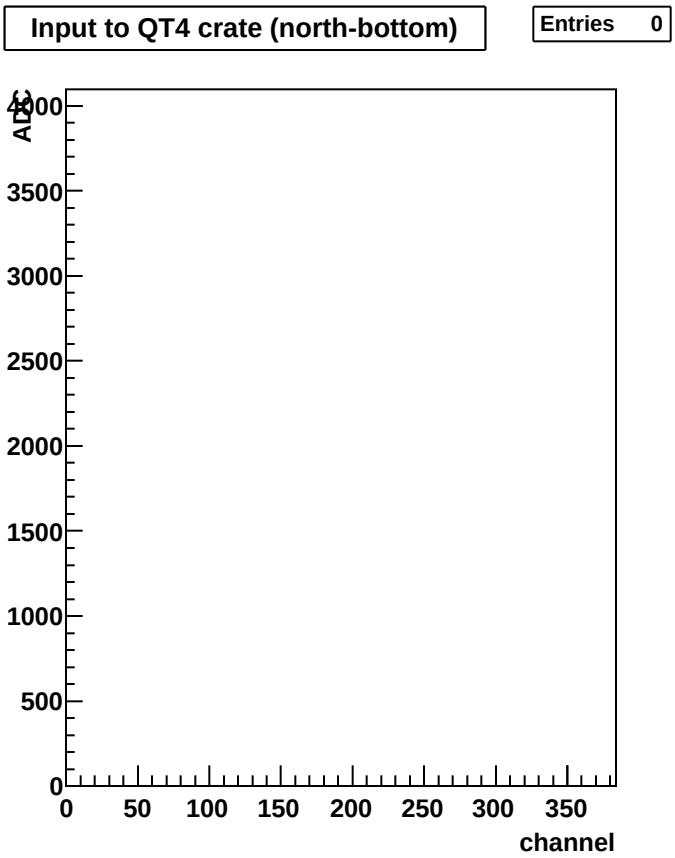

VPD-TAC-W
Entries 836
Mean 651.8
RMS 166

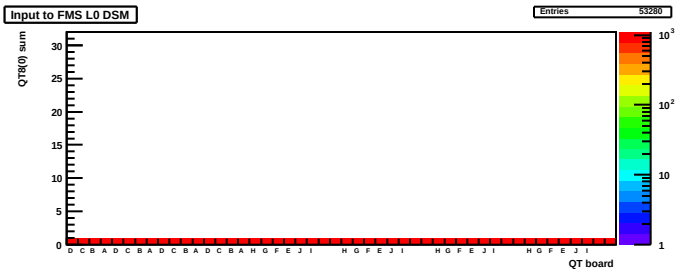

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 639
Mean 4176
RMS 227

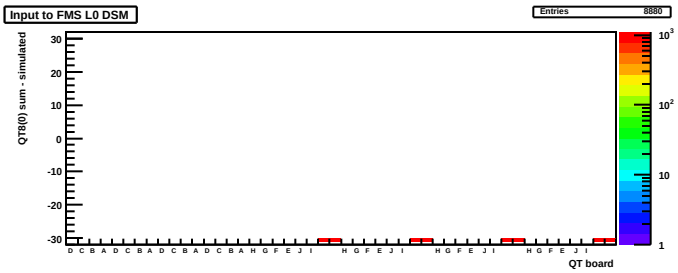

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

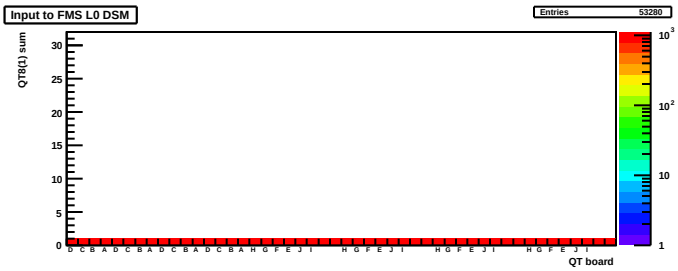

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

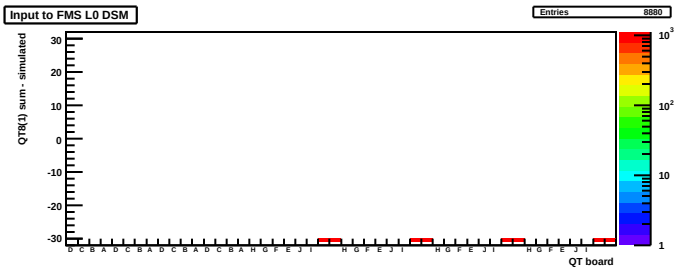

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

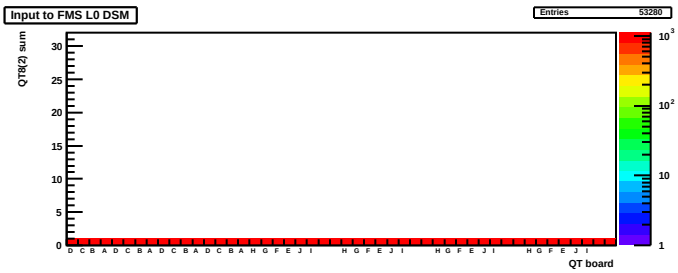

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

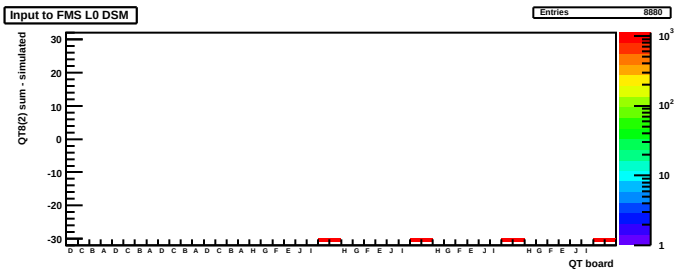

Input to FMS L0 DSM
Entries 53280
QT8(0) sum
QT board

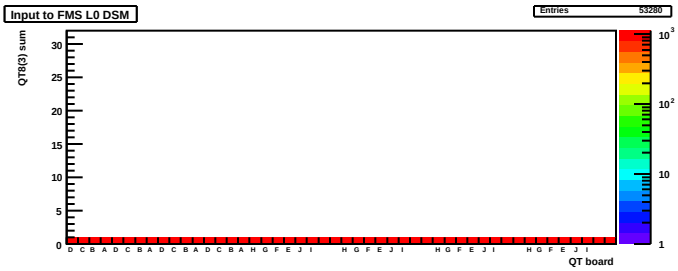

Input to FMS L0 DSM
Entries 8880
QT8(0) sum - simulated
QT board

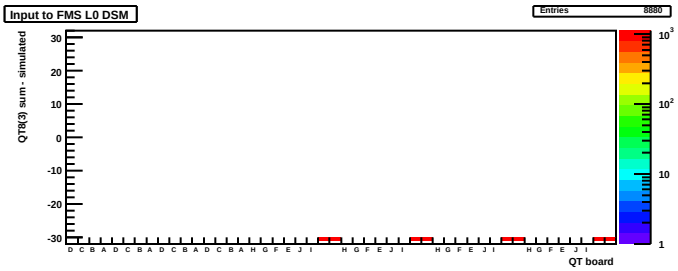

Input to FMS L0 DSM
Entries 53280
QT8(1) sum
QT board

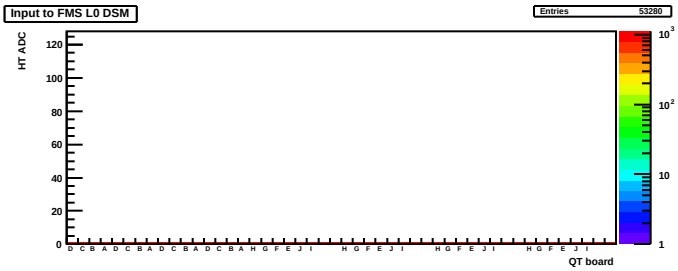

Input to FMS L0 DSM
Entries 8880
QT8(1) sum - simulated
QT board

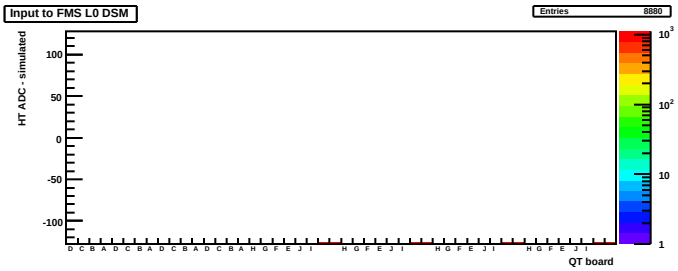

Input to FMS L0 DSM
Entries 53280
QT8(2) sum
QT board

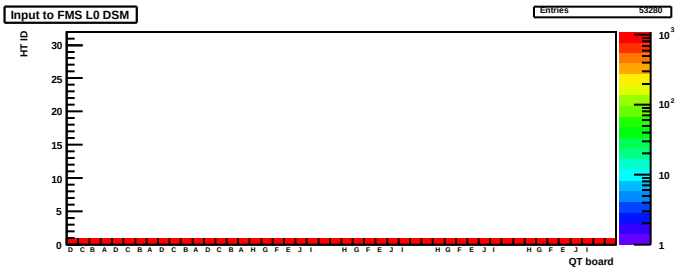

Input to FMS L0 DSM
Entries 8880
QT8(2) sum - simulated
QT board

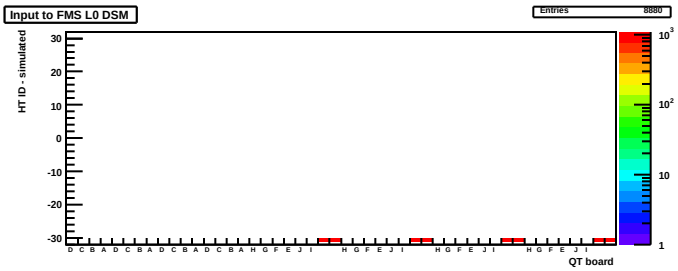

Input to FMS L0 DSM
Entries 53280
QT8(3) sum
QT board

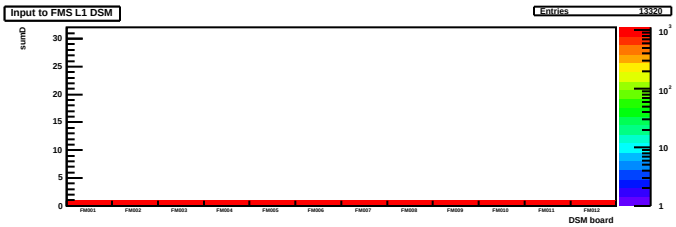

Input to FMS L0 DSM
Entries 8880
QT8(3) sum - simulated
QT board

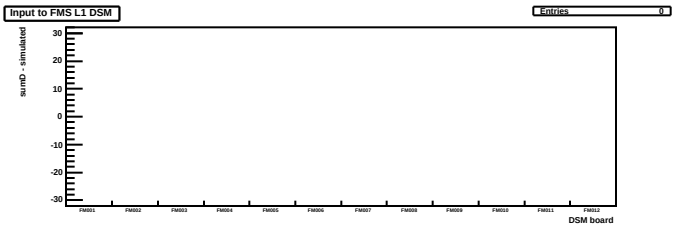

Input to FMS L0 DSM
Entries 53280
HT ADC
QT board

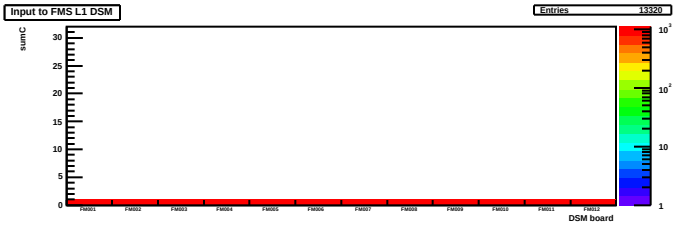

Input to FMS L0 DSM
Entries 8880
HT ADC - simulated
QT board

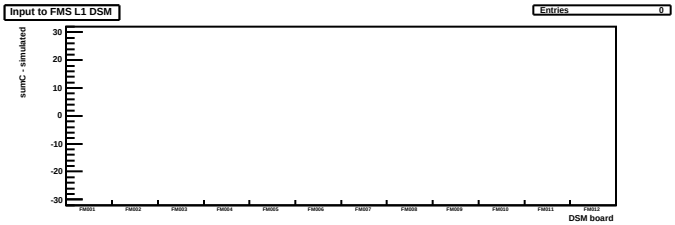

Input to FMS L0 DSM
Entries 53280
HT ID
QT board

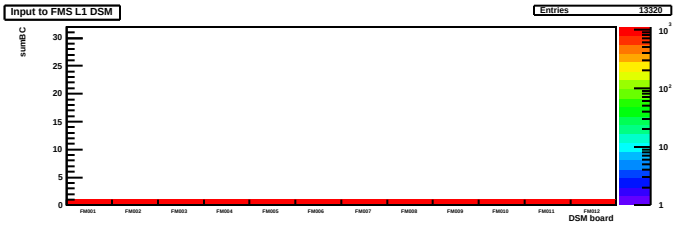

Input to FMS L0 DSM
Entries 8880
HT ID - simulated
QT board

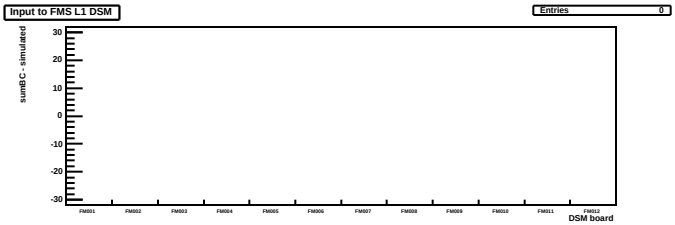

Input to FMS L1 DSM
Entries 13320
sumD
DSM board

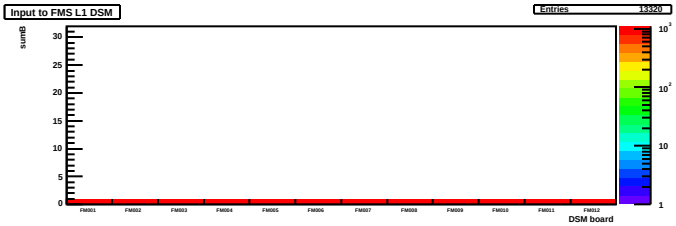

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

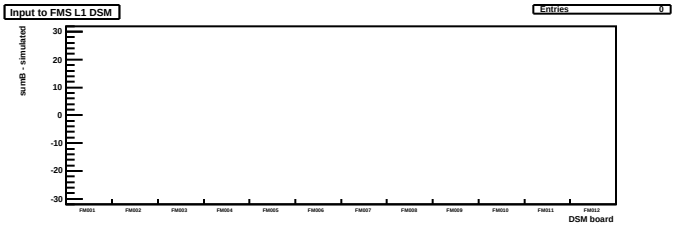

Input to FMS L1 DSM
Entries 13320
sumC
DSM board

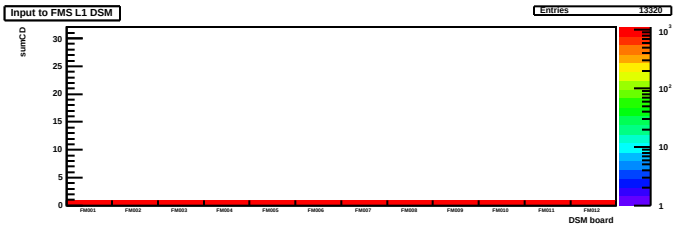

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

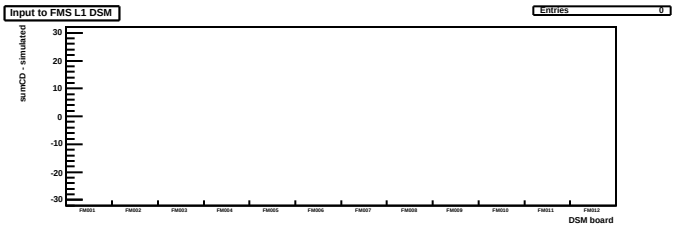

Input to FMS L1 DSM
Entries 13320
sumBC
DSM board

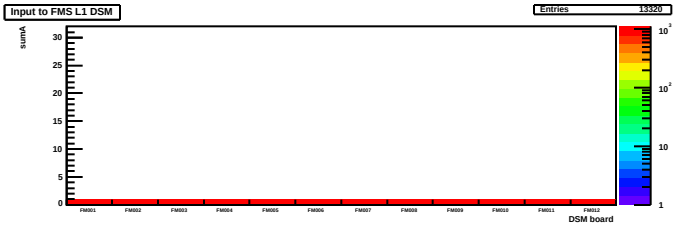

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

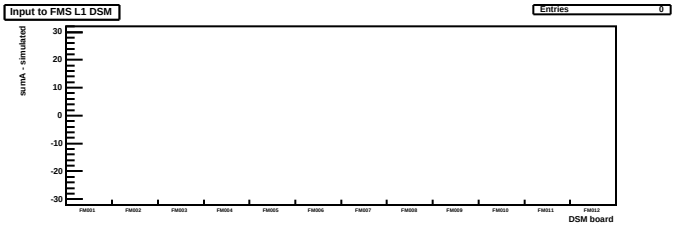

Input to FMS L1 DSM
Entries 13320
sumB
DSM board

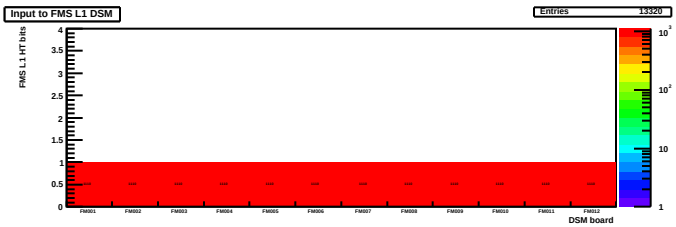

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

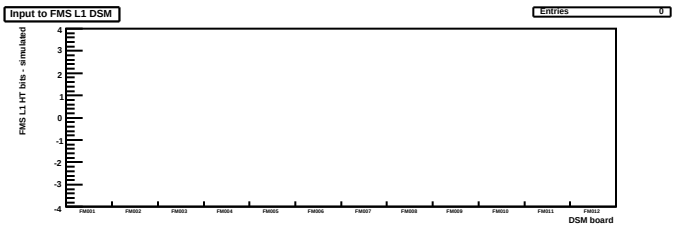

Input to FMS L1 DSM
Entries 13320
sumCD
DSM board

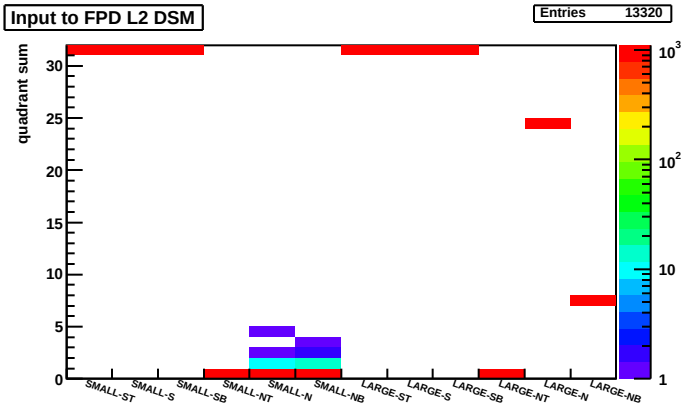

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

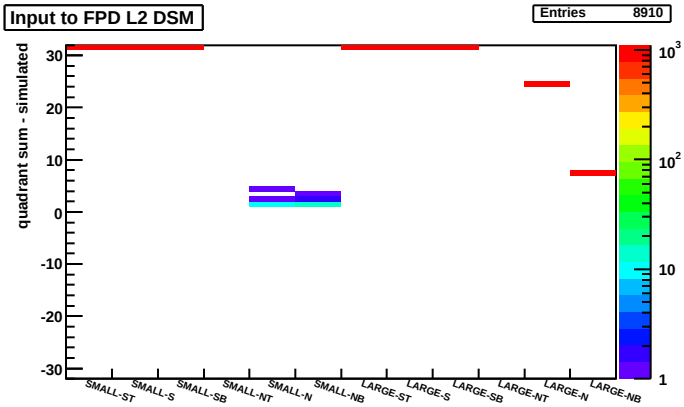

Input to FMS L1 DSM
Entries 13320
sumA
DSM board

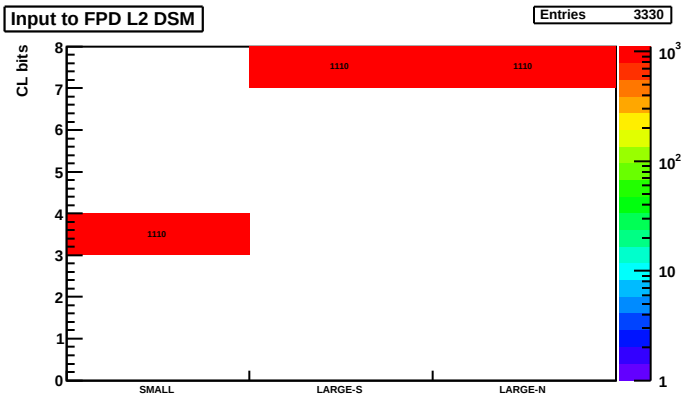

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

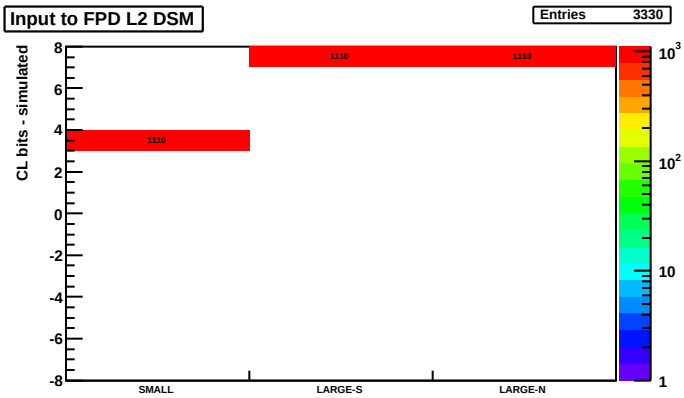

Input to FMS L1 DSM
Entries 13320
FMS L1 HT bits
DSM board

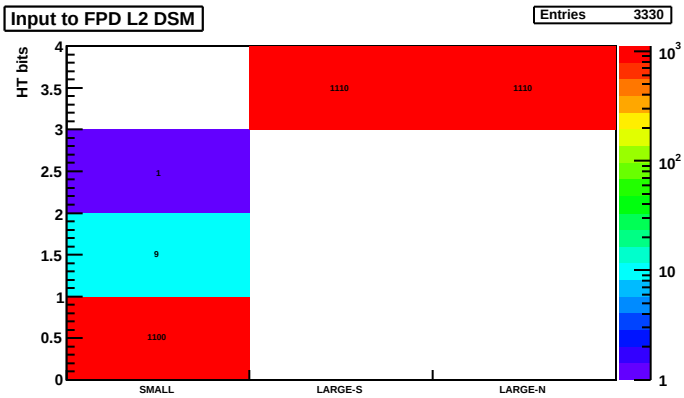

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

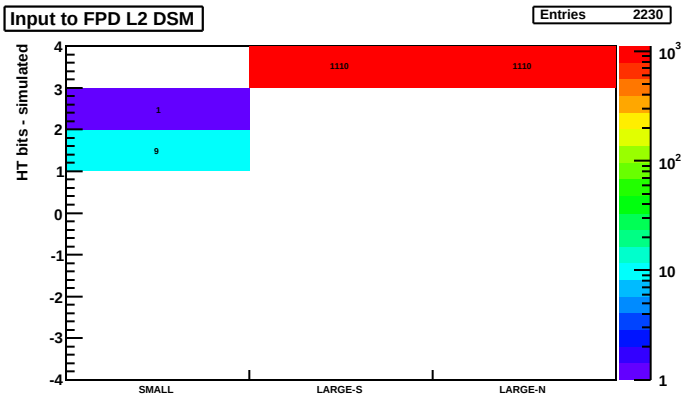

Input to FPD L2 DSM
Entries 13320
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

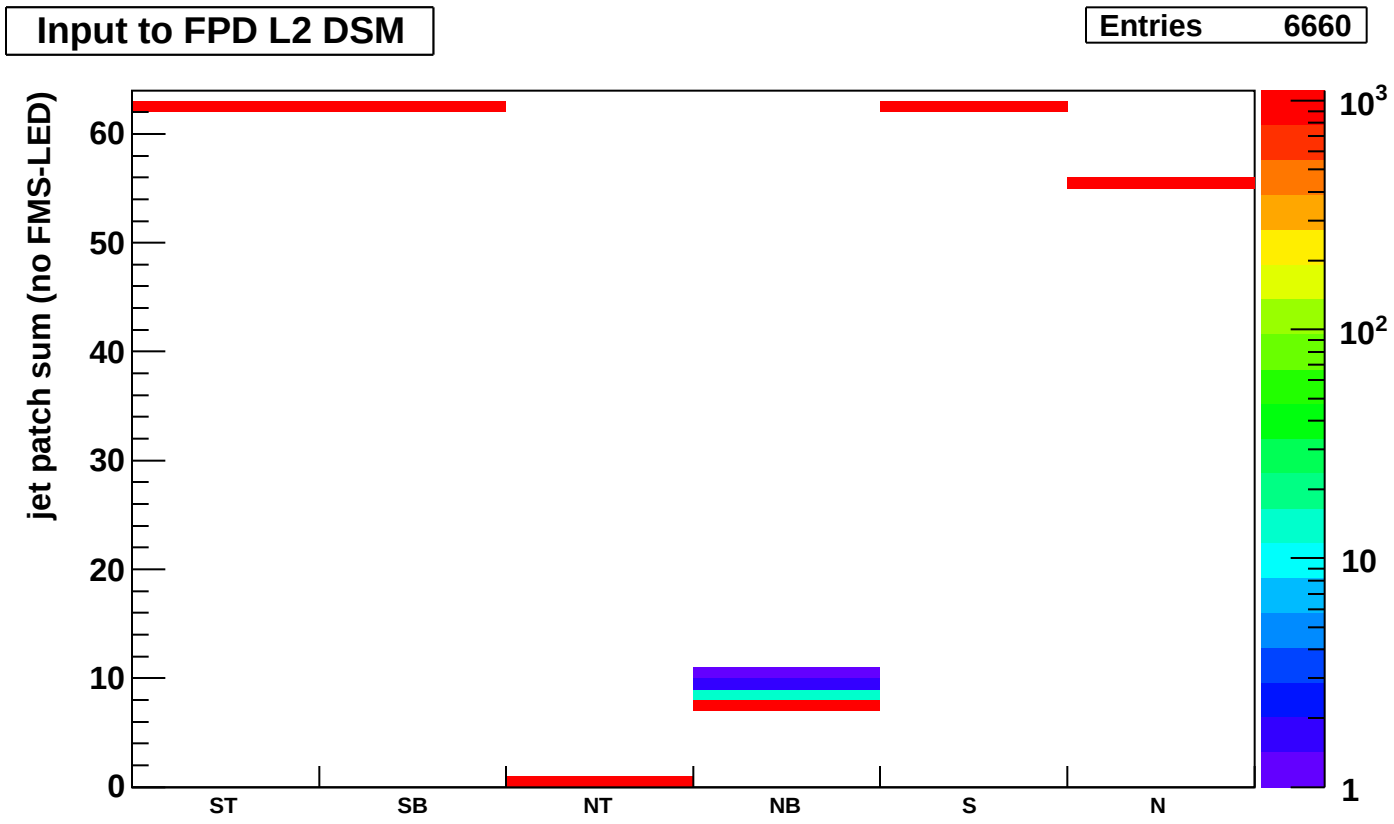

Input to FPD L2 DSM
Entries 8910
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

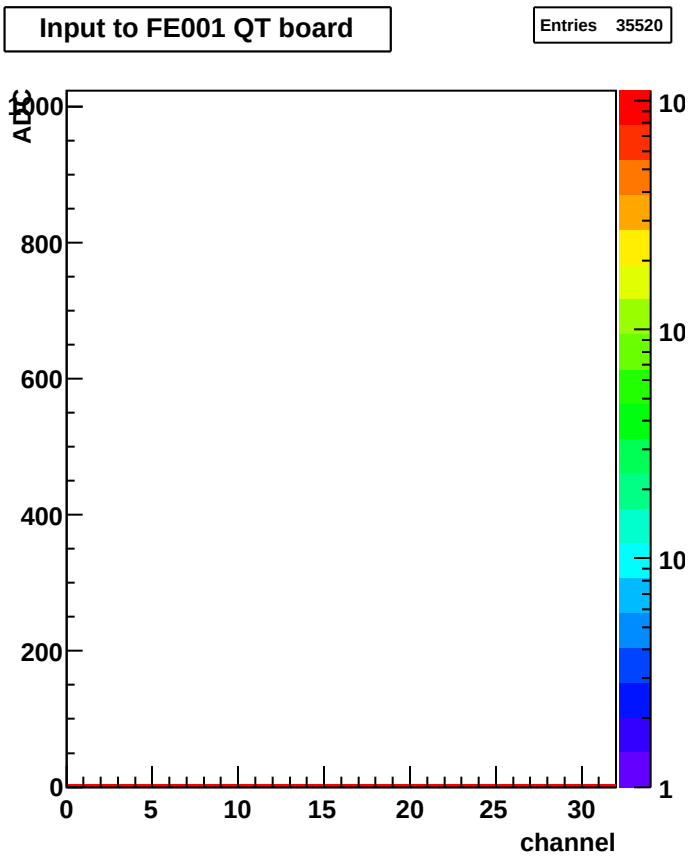

Input to FPD L2 DSM
Entries 3330
CL bits
1110
1110
1110
SMALL
LARGE-S
LARGE-N

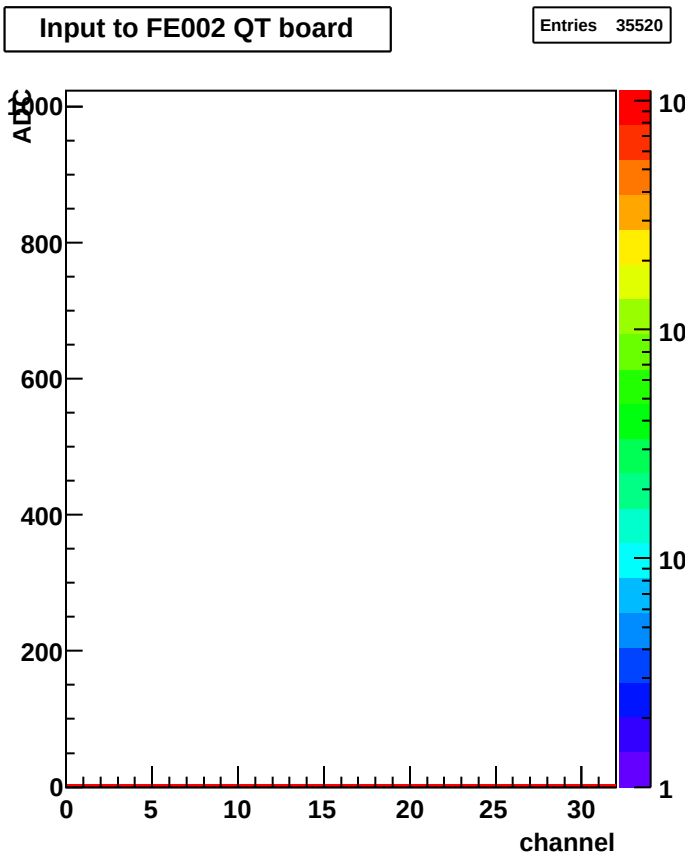

Input to FPD L2 DSM
Entries 3330
CL bits - simulated
1110
1110
1110
SMALL
LARGE-S
LARGE-N

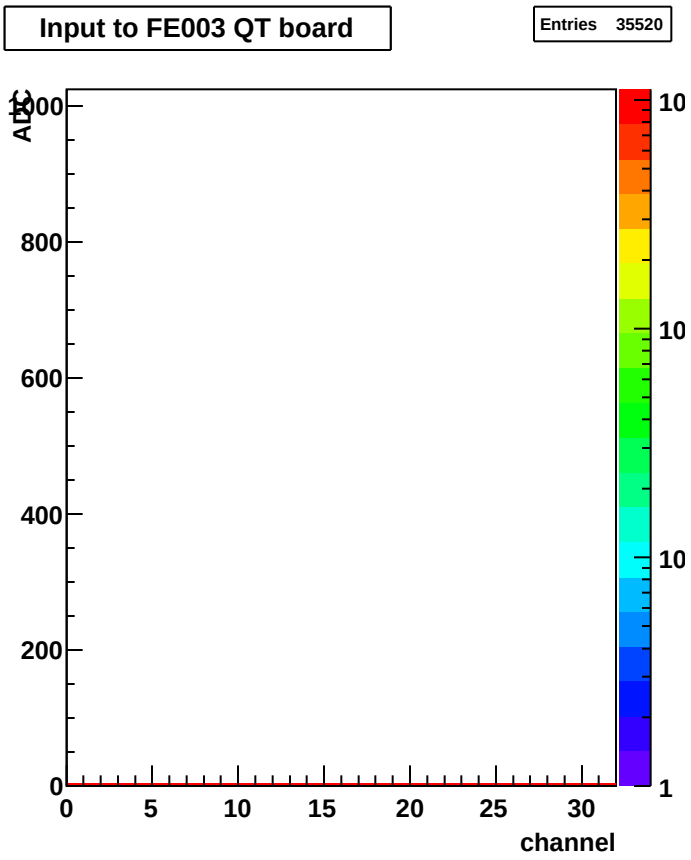

Input to FPD L2 DSM
Entries 3330
HT bits
1
9
1100
1110
1110
SMALL
LARGE-S
LARGE-N

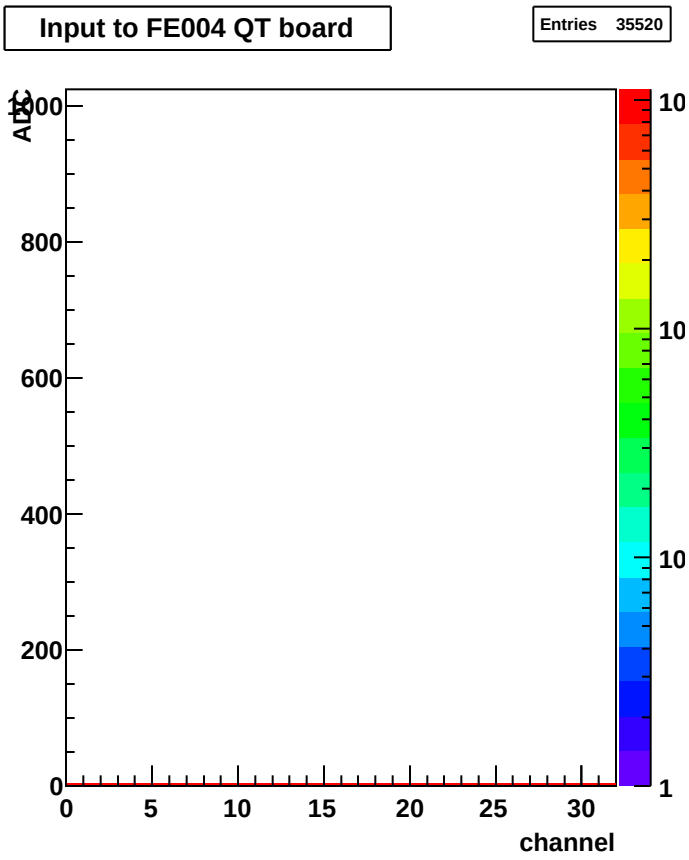

Input to FPD L2 DSM
Entries 2230
HT bits - simulated
1
9
1110
1110
SMALL
LARGE-S
LARGE-N

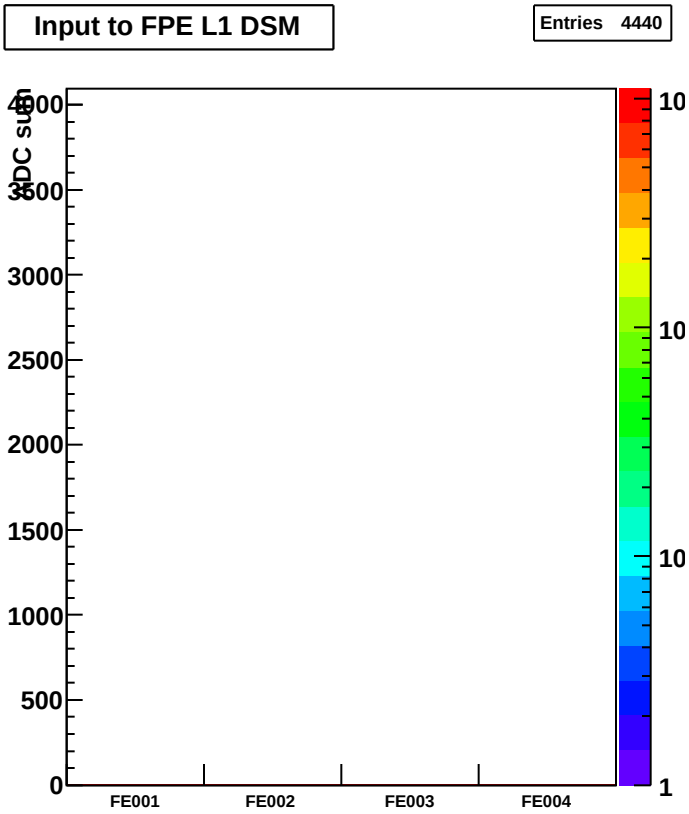

Input to FPD L2 DSM
Entries 6660
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3

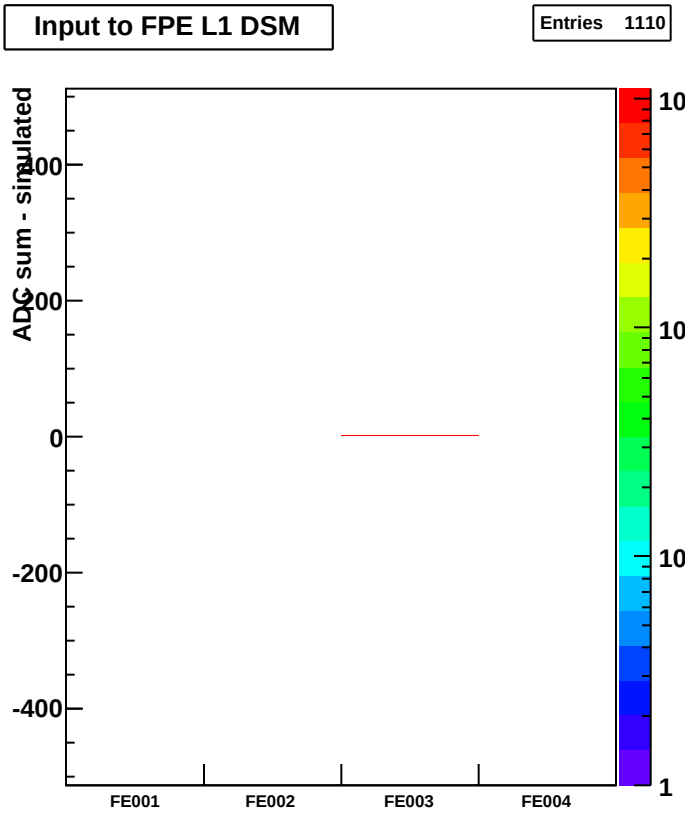

Input to FE001 QT board
Entries 35520
ADC
channel

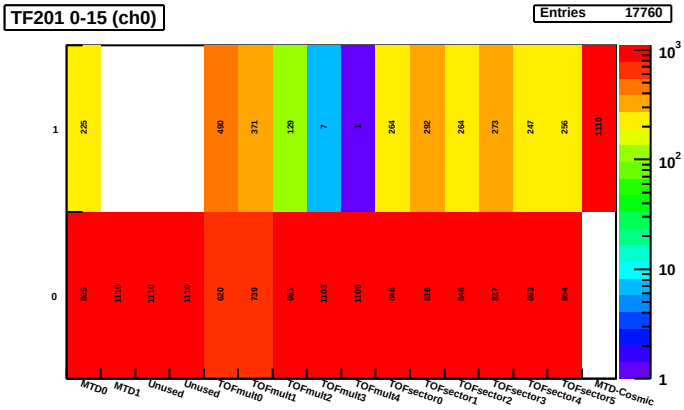

Input to FE002 QT board
Entries 35520
ADC
channel

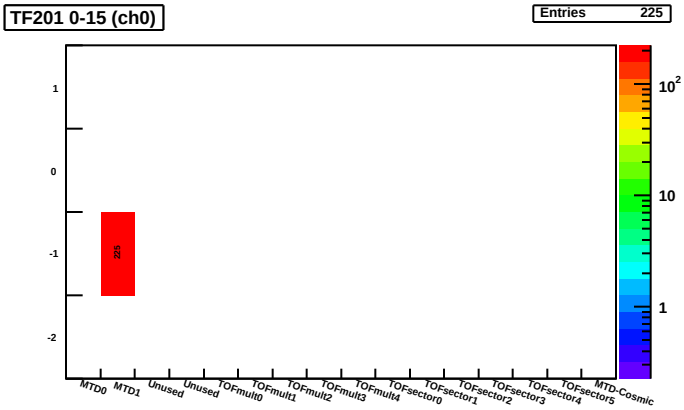

Input to FE003 QT board
Entries 35520
ADC
channel

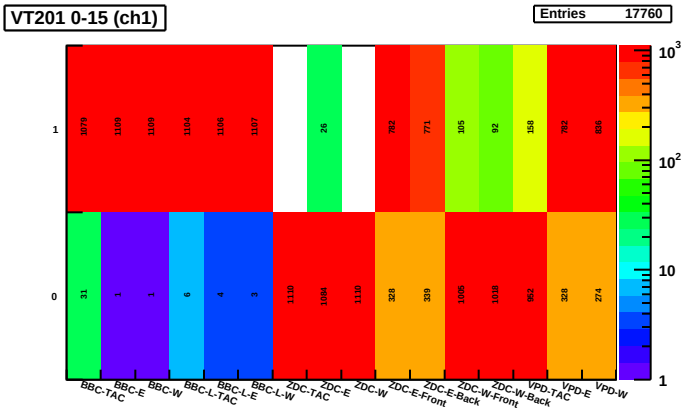

Input to FE004 QT board
Entries 35520
ADC
channel

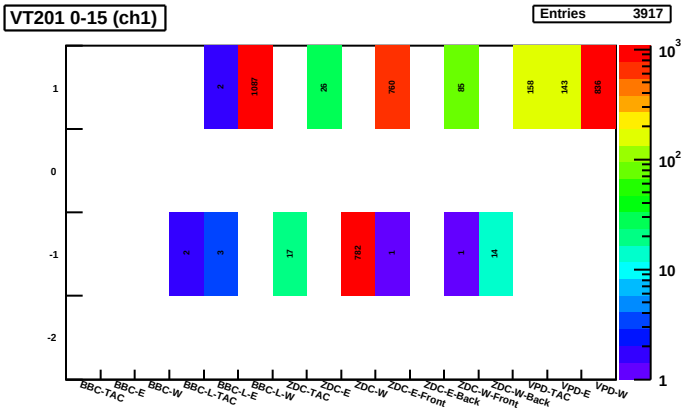

Input to FPE L1 DSM
Entries 4440
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
1

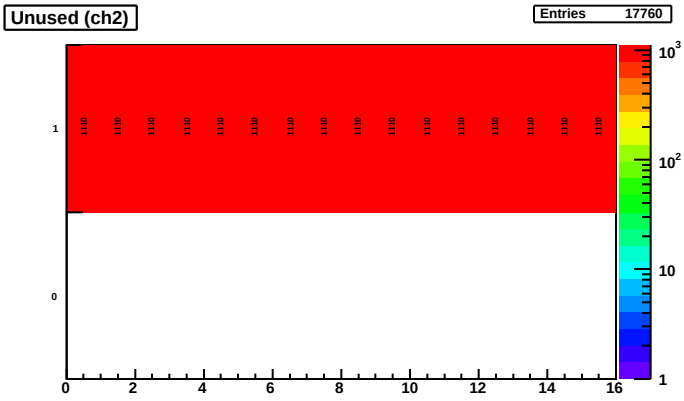

Input to FPE L1 DSM
Entries 1110
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
1

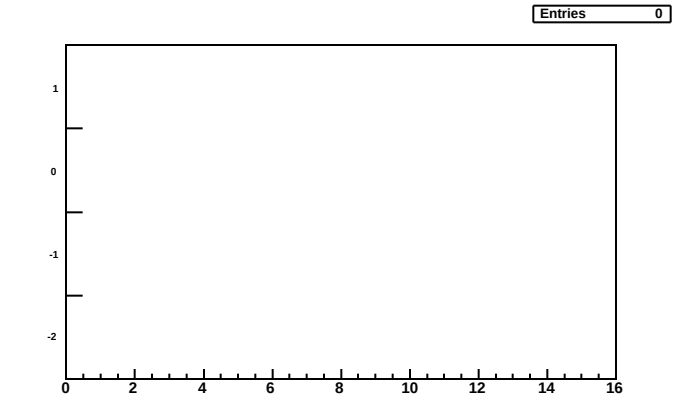

TF201 0-15 (ch0)
Entries 17760
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

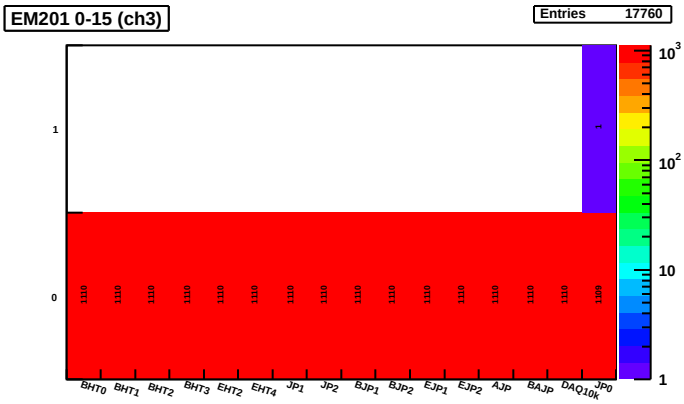

TF201 0-15 (ch0)
Entries 225
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 17760
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 3917
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 17760


Entries 0


EM201 0-15 (ch3)
Entries 17760
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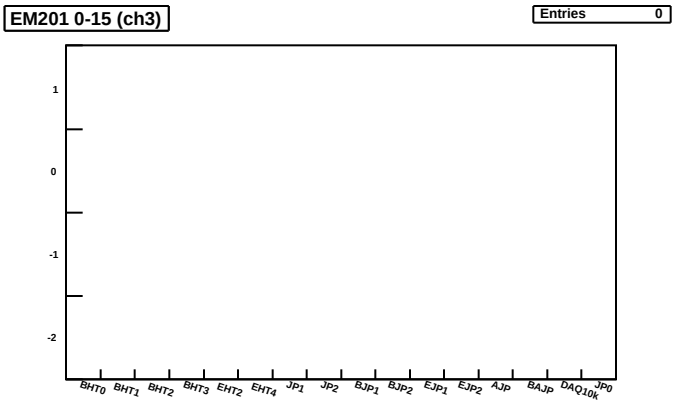
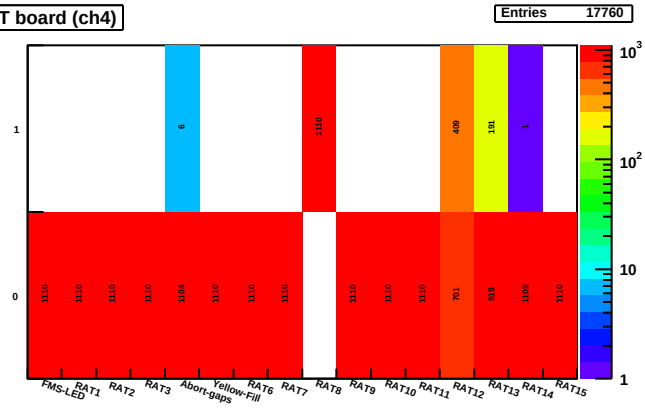
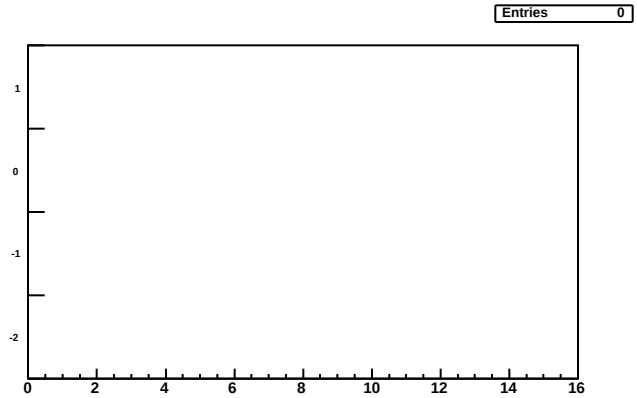
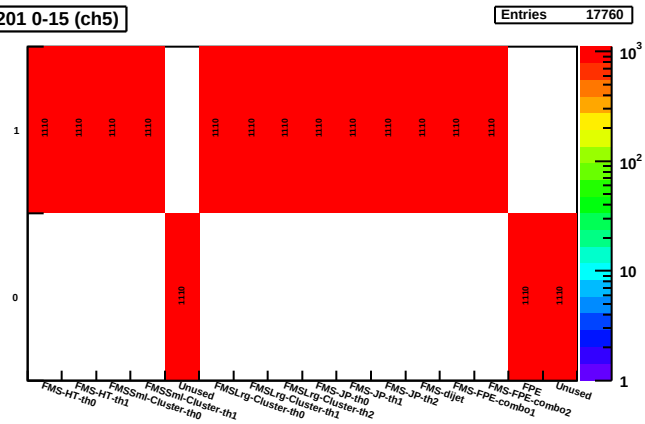

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

RAT board (ch4)

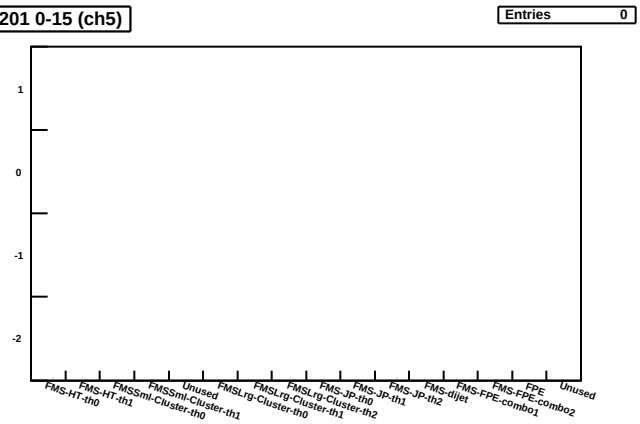




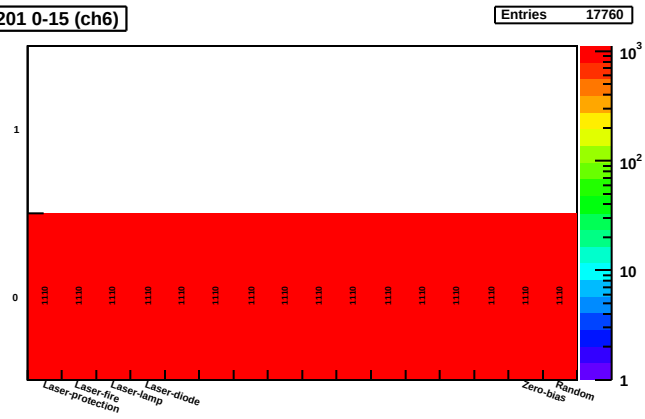
FP201 0-15 (ch5)

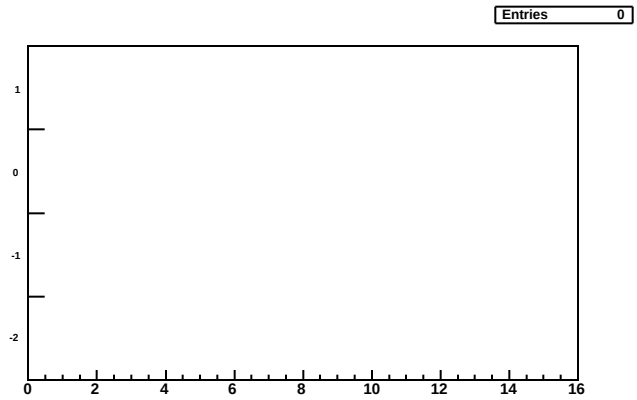
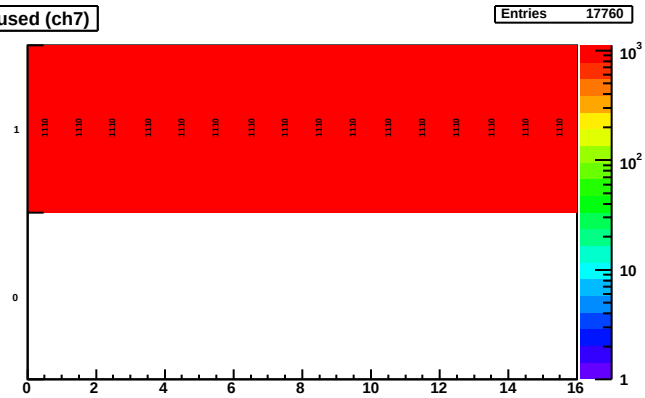
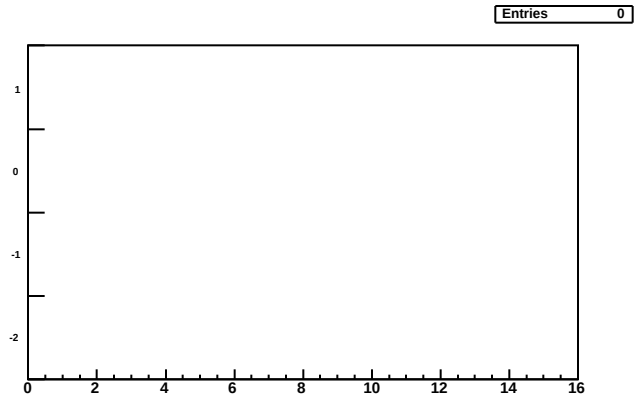


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)