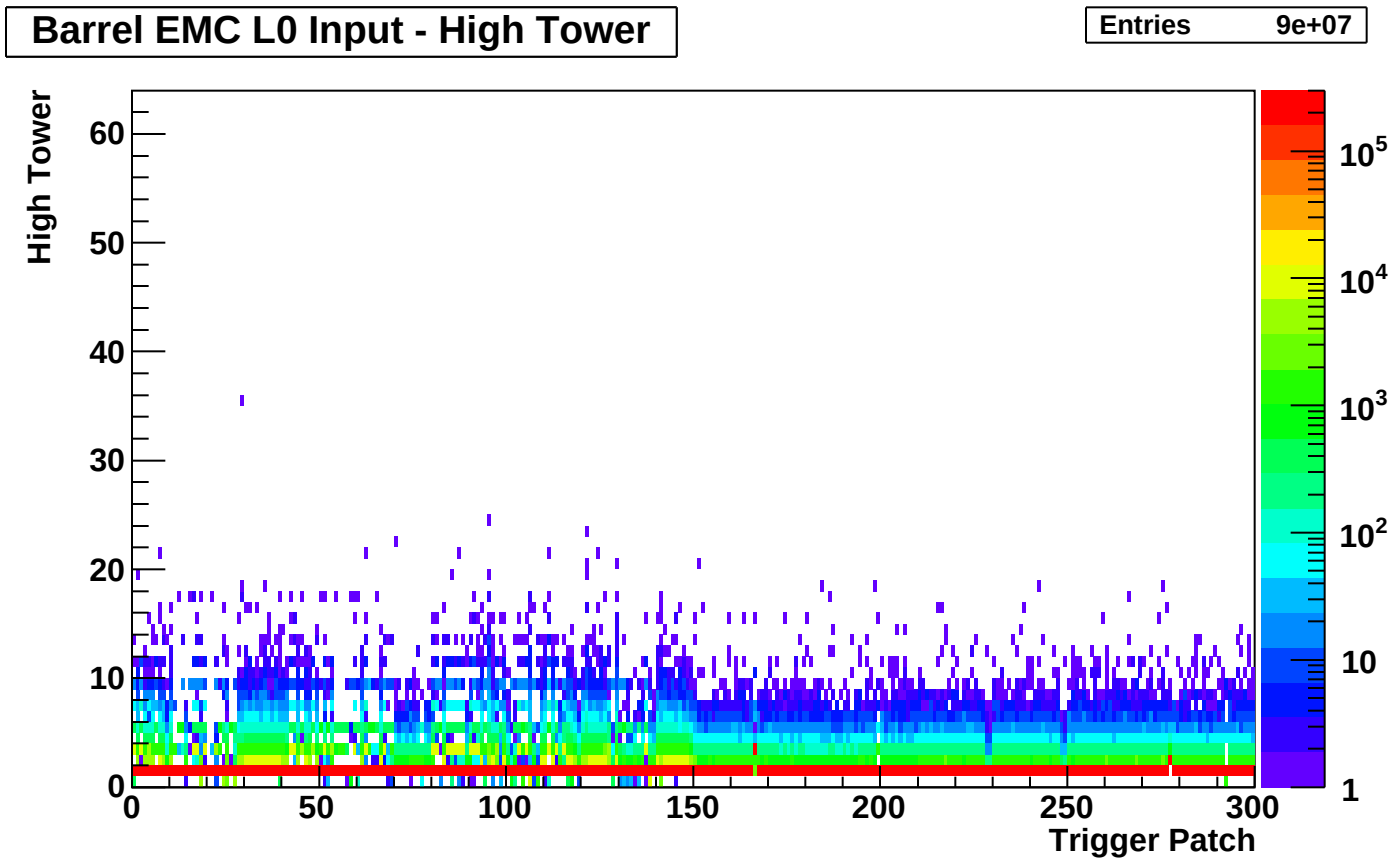
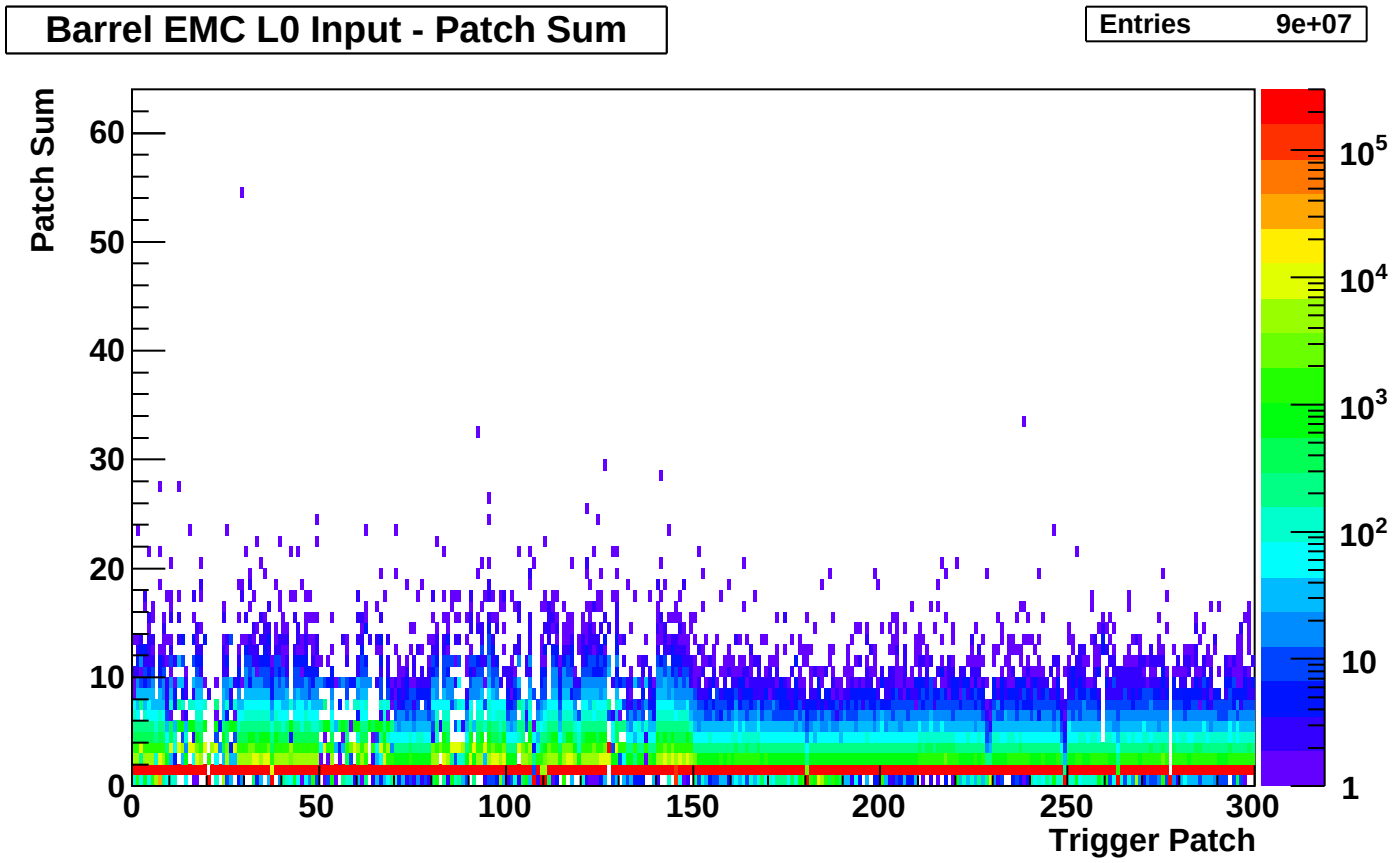
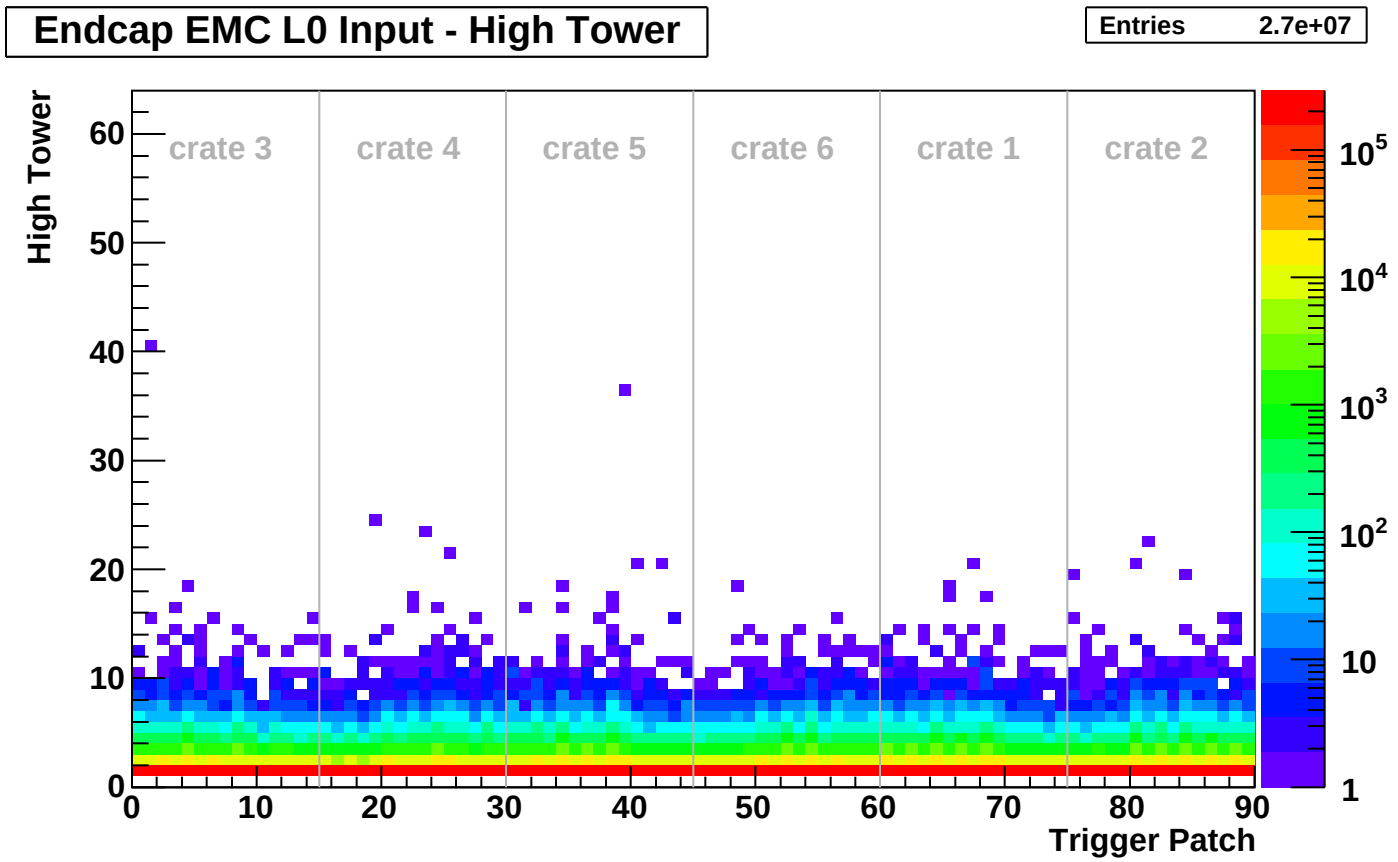
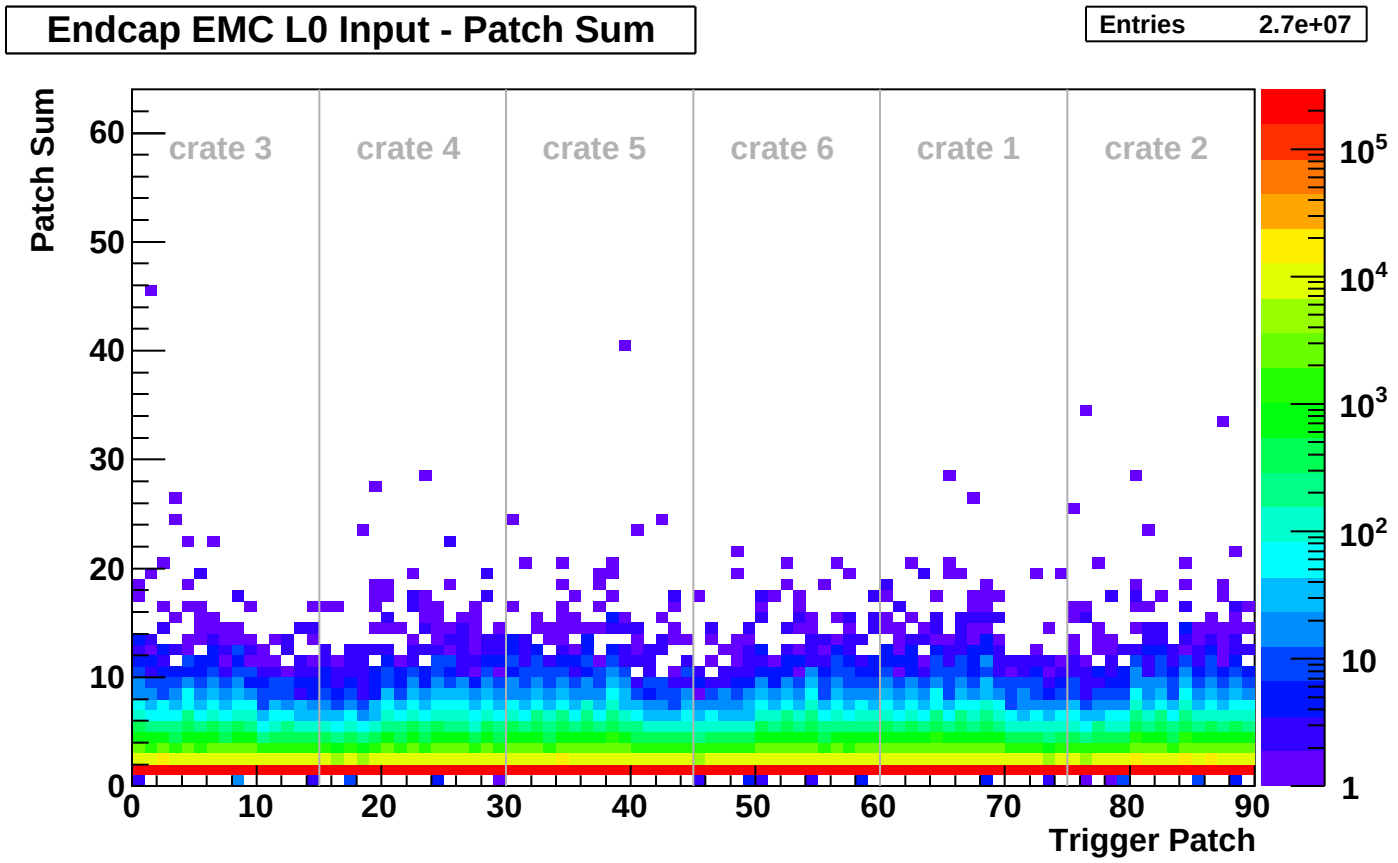
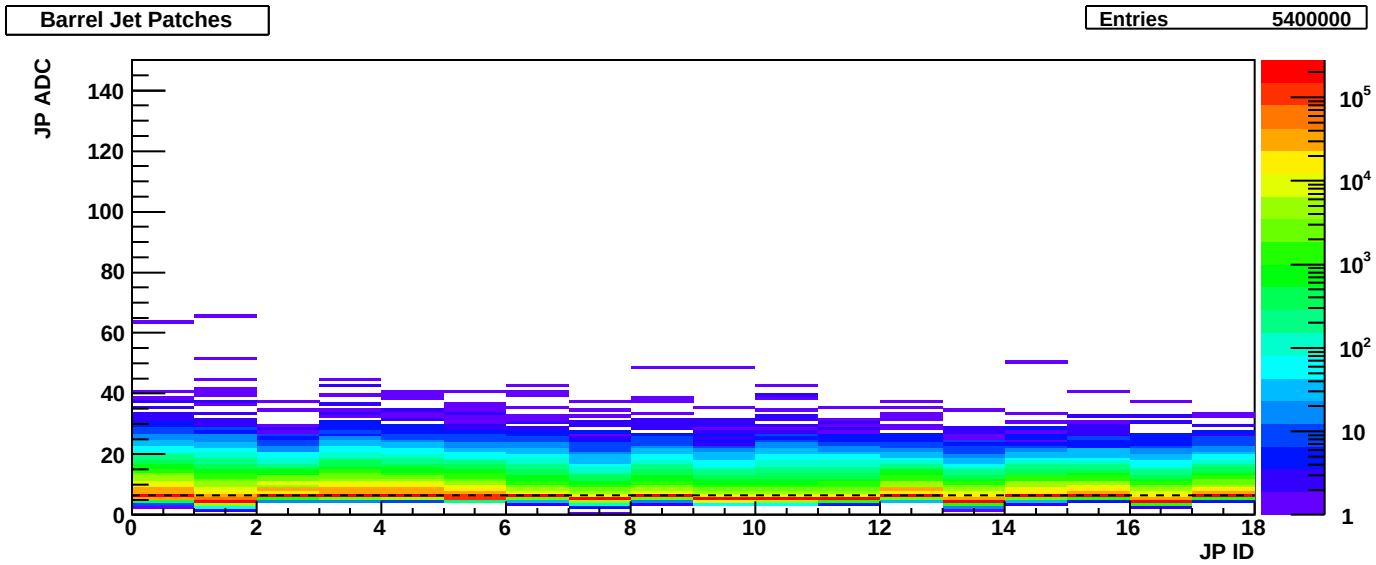
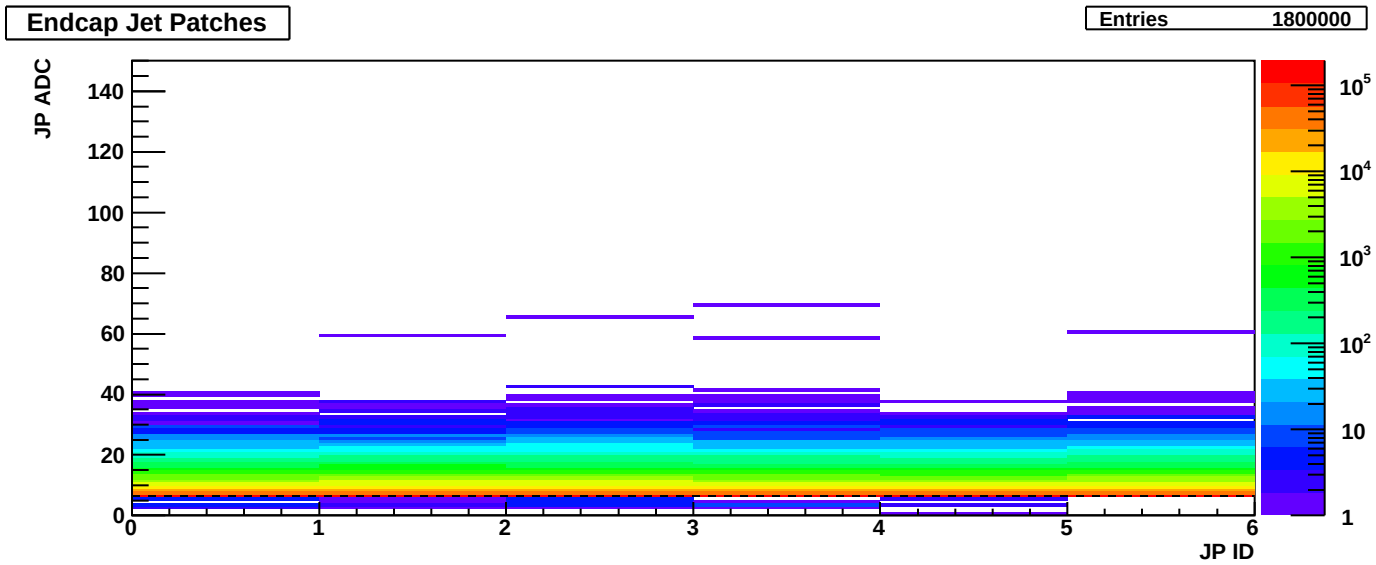

Barrel EMC L0 Input - High Tower
Entries 9e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

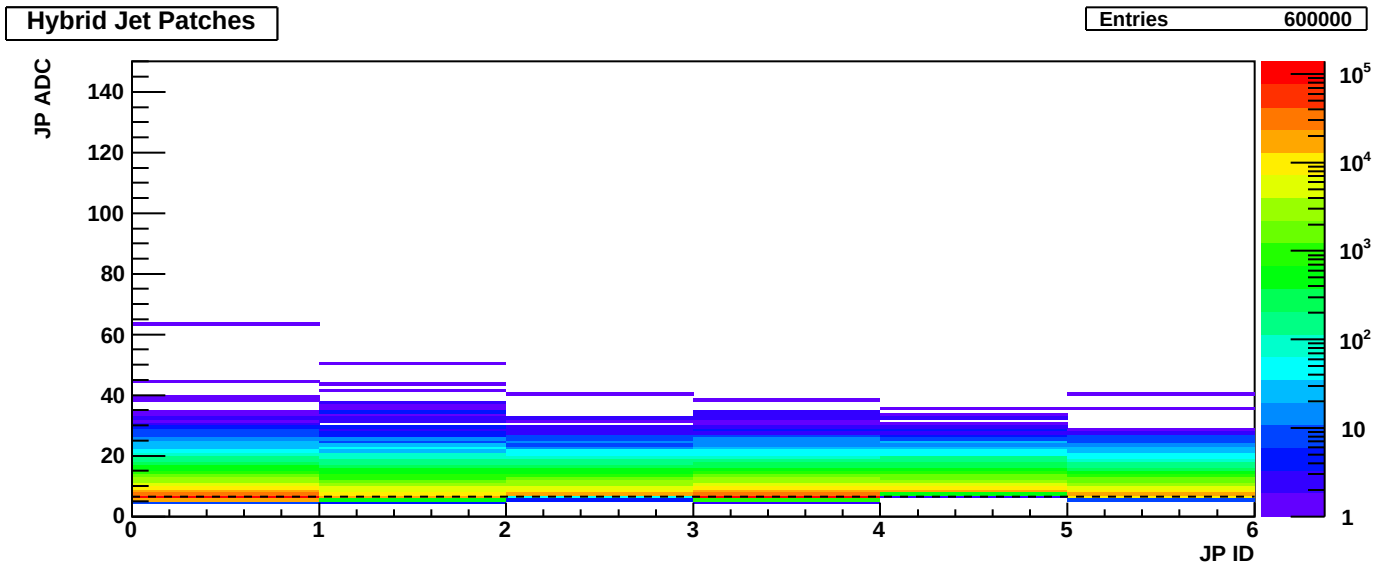

Barrel EMC L0 Input - Patch Sum
Entries 9e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

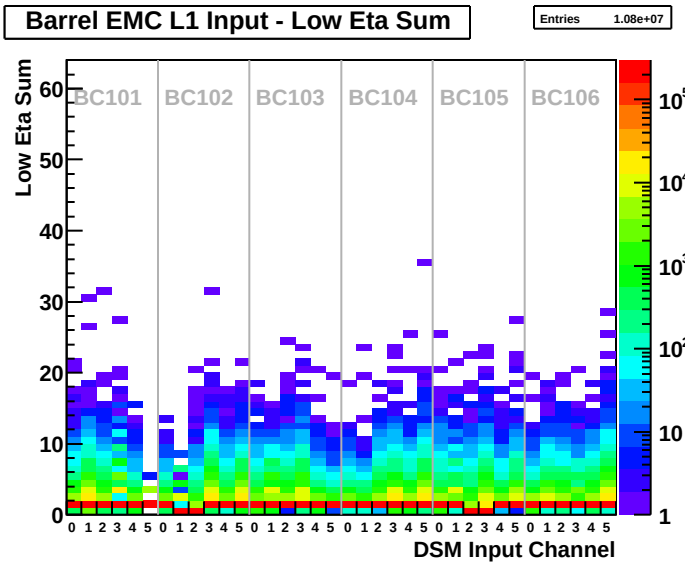

Endcap EMC L0 Input - High Tower
Entries 2.7e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

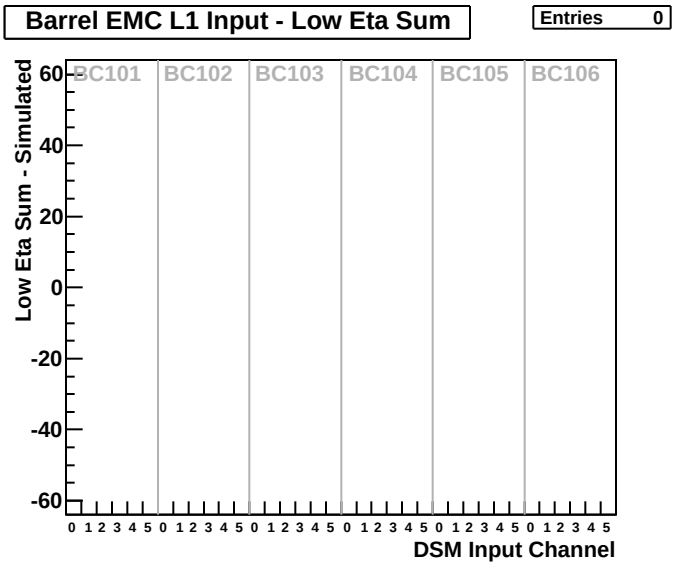

Endcap EMC L0 Input - Patch Sum
Entries 2.7e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

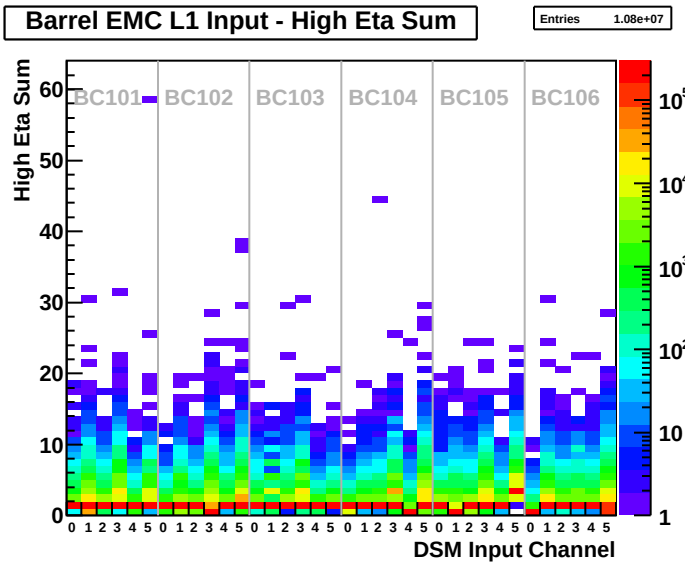

Barrel Jet Patches
Entries 5400000
JP ADC
JP ID

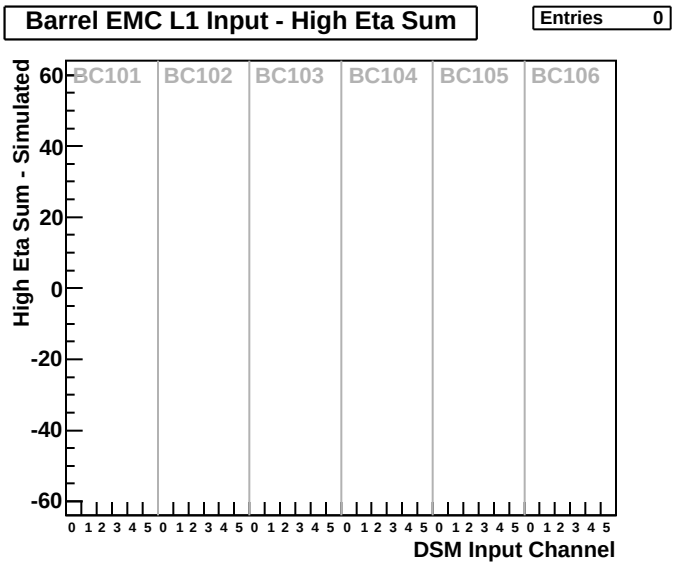

Endcap Jet Patches
Entries 1800000
JP ADC
JP ID

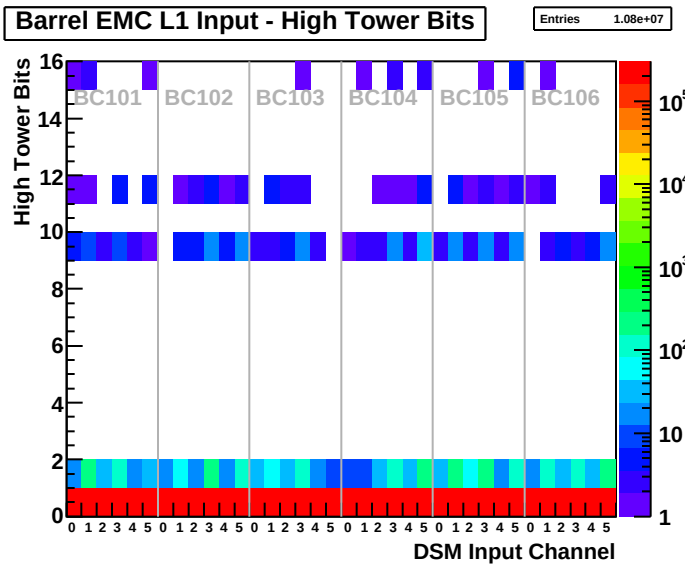

Hybrid Jet Patches
Entries 600000
JP ADC
JP ID

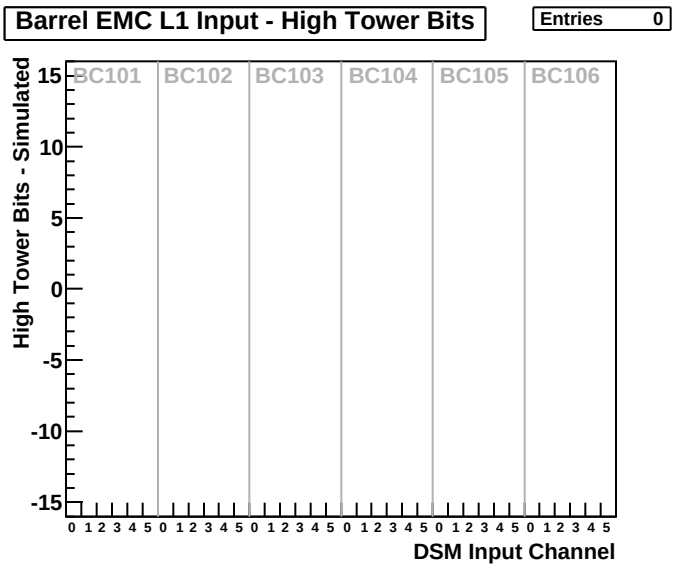

Barrel EMC L1 Input - Low Eta Sum
Entries 1.08e+07
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

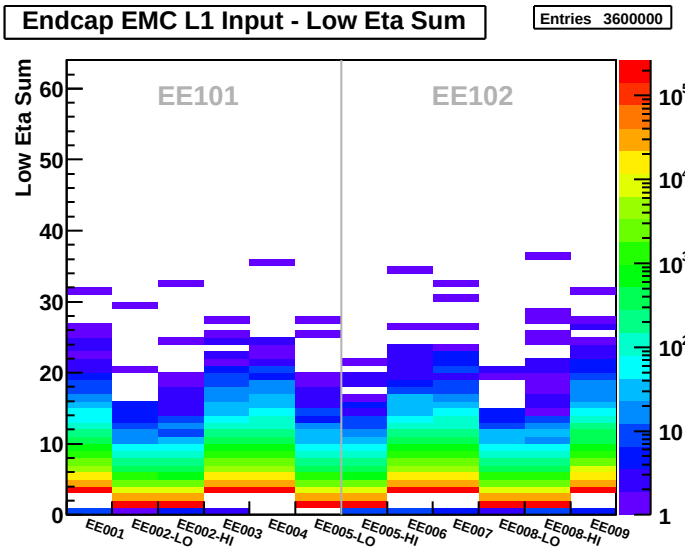

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

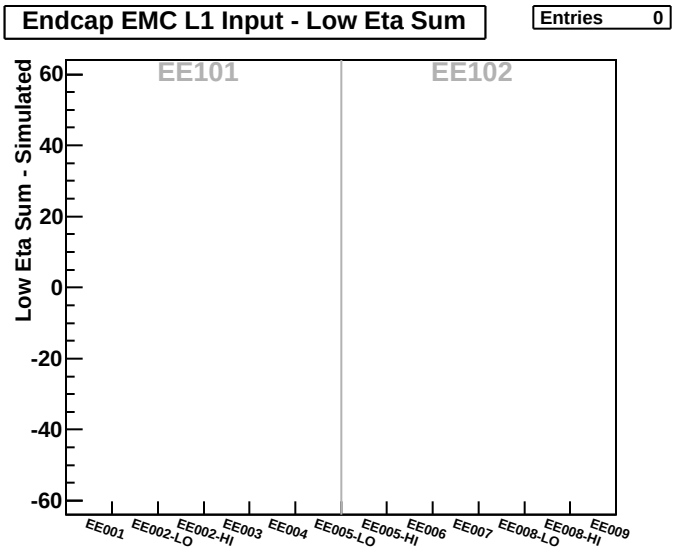

Barrel EMC L1 Input - High Eta Sum
Entries 1.08e+07
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

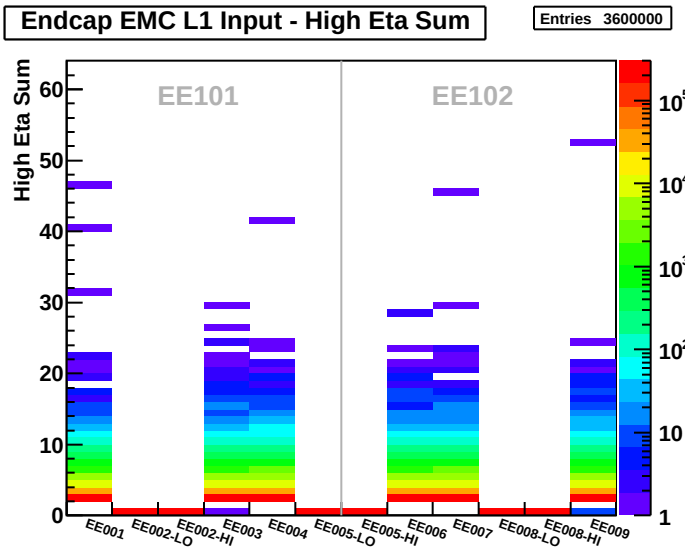

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

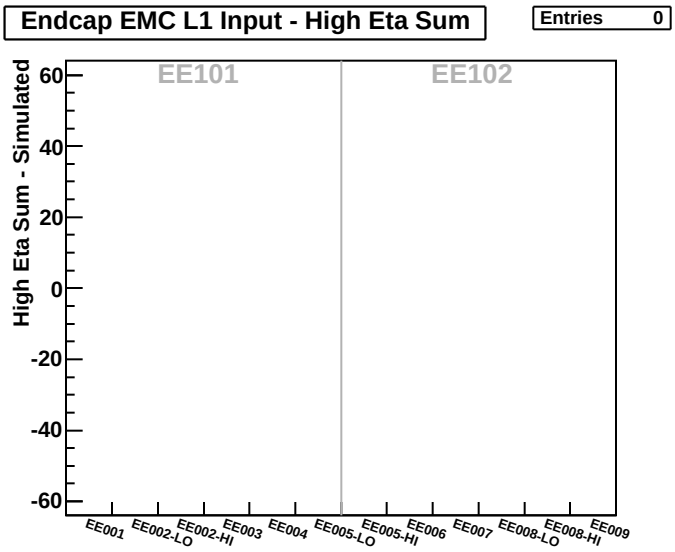

Barrel EMC L1 Input - High Tower Bits
Entries 1.08e+07
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

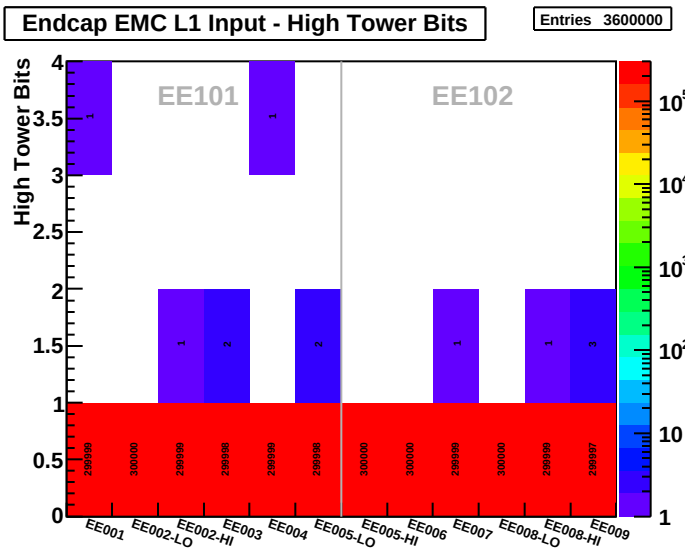

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

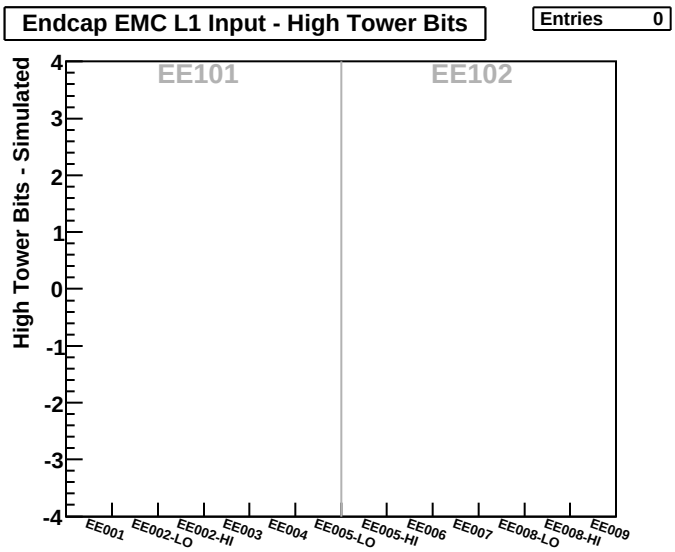

Endcap EMC L1 Input - Low Eta Sum
Entries 3600000
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

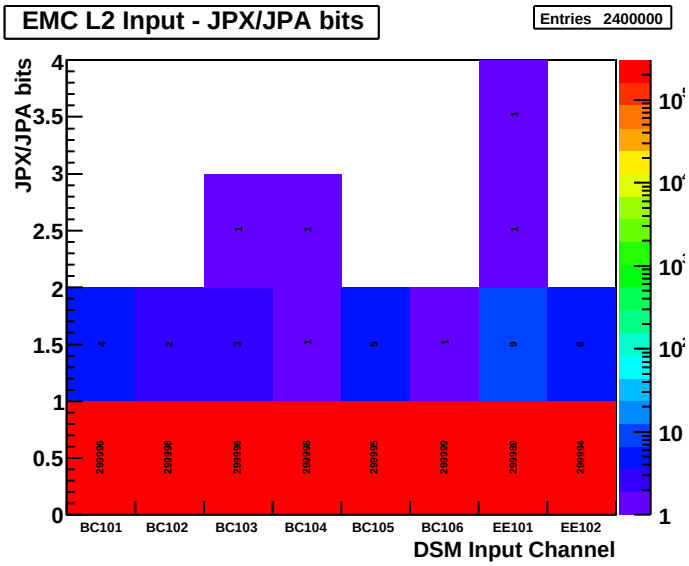

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

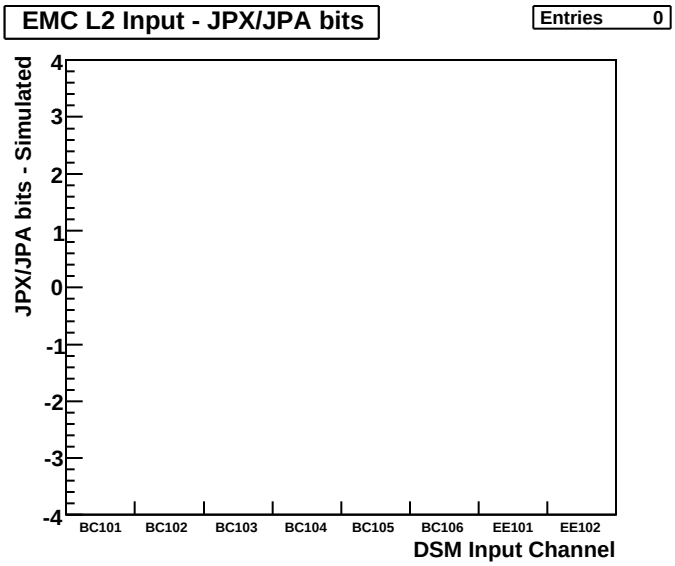

Endcap EMC L1 Input - High Eta Sum
Entries 3600000
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

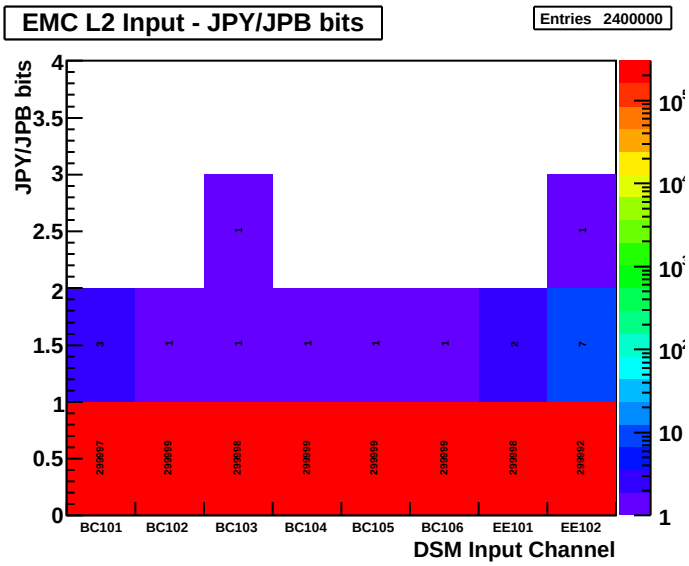

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

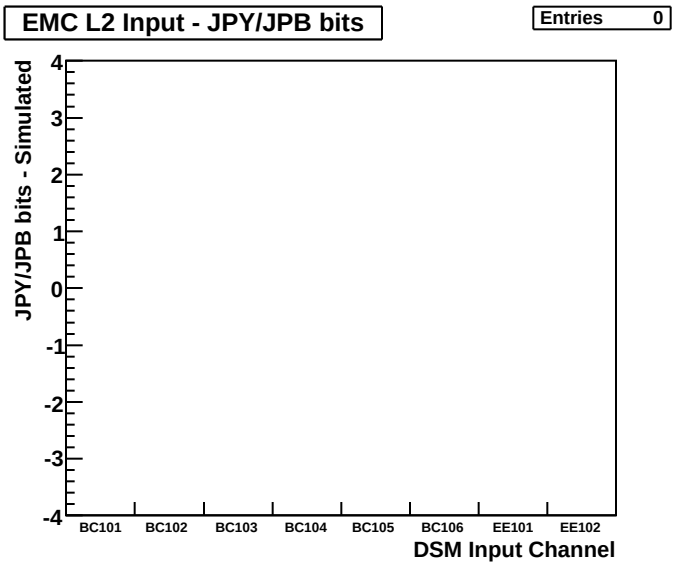

Endcap EMC L1 Input - High Tower Bits
Entries 3600000
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

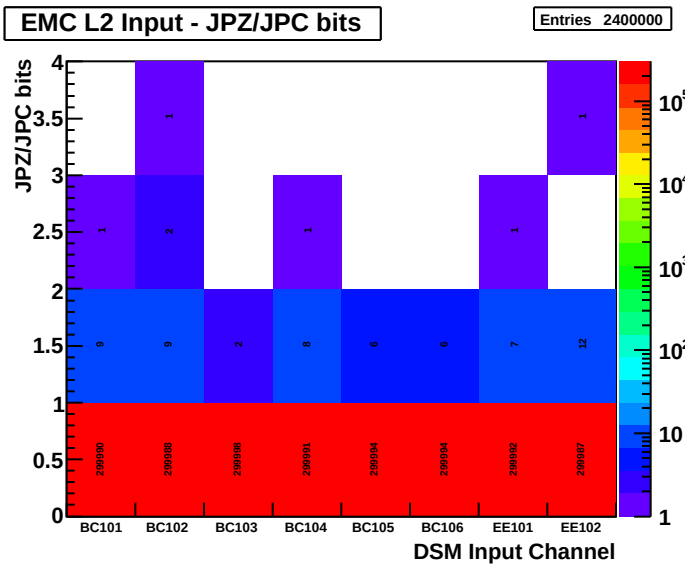

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

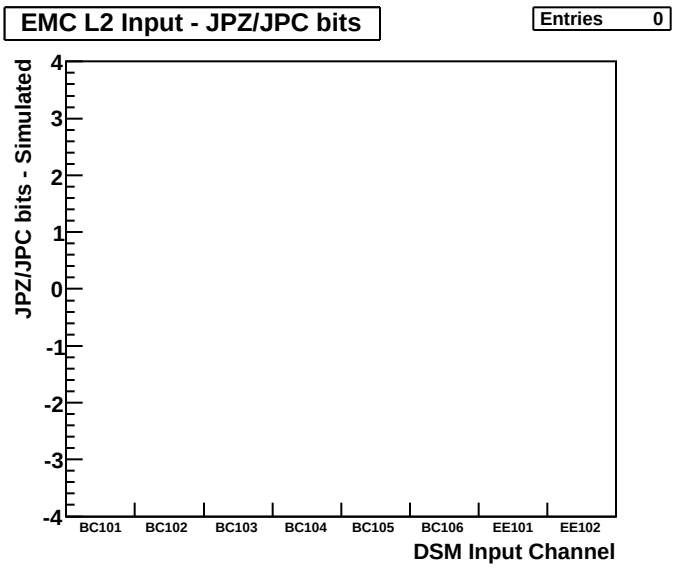

EMC L2 Input - JPX/JPA bits
Entries 2400000
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

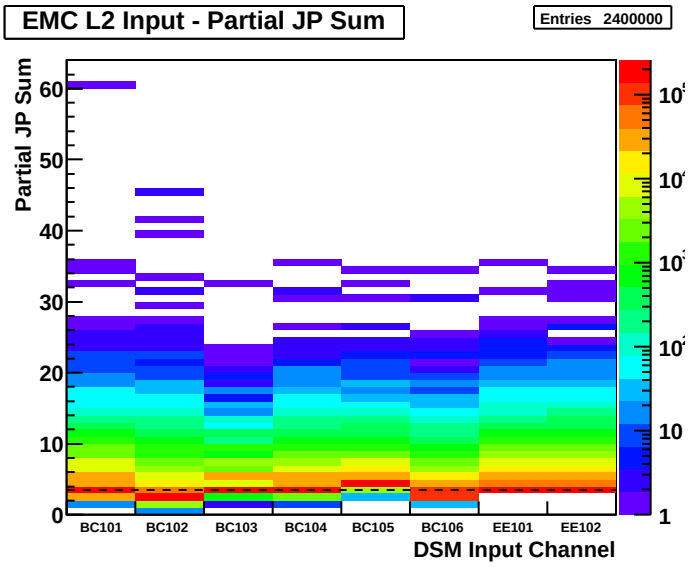

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

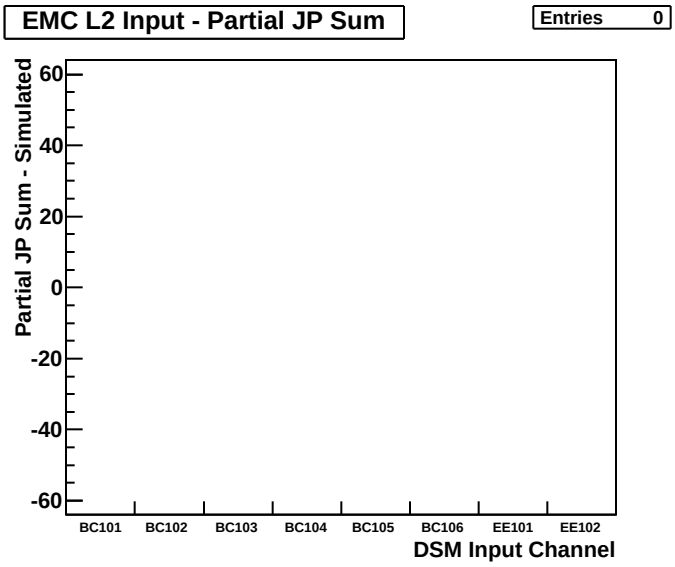

EMC L2 Input - JPY/JPB bits
Entries 2400000
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

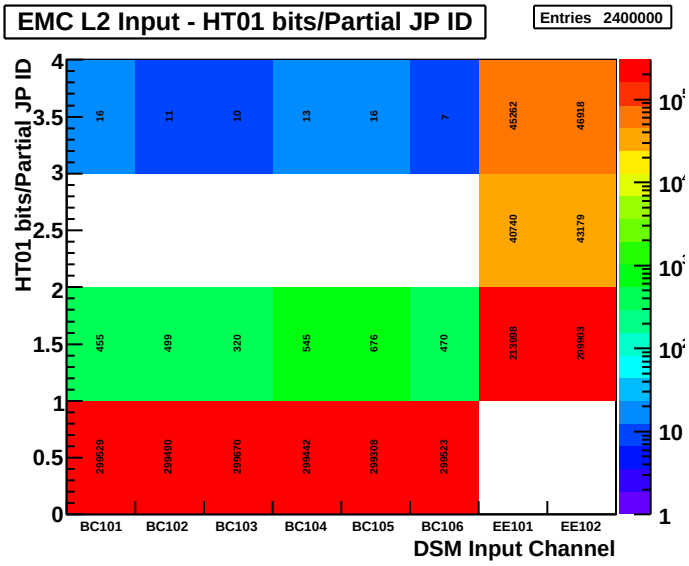

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

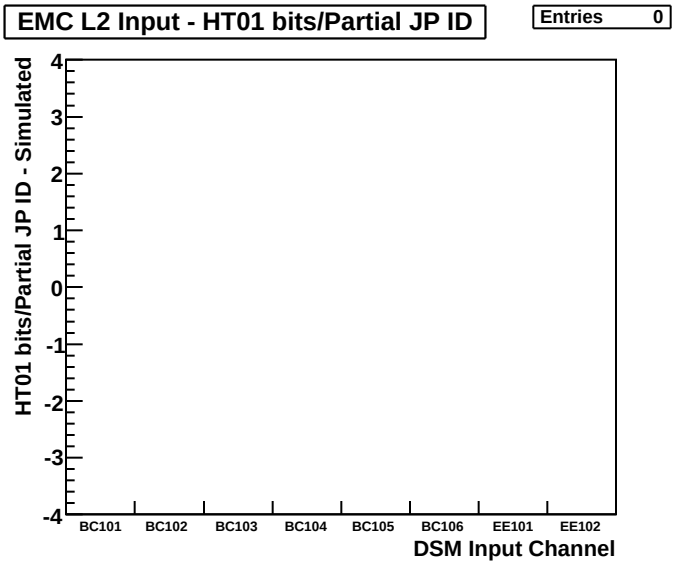

EMC L2 Input - JPZ/JPC bits
Entries 2400000
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

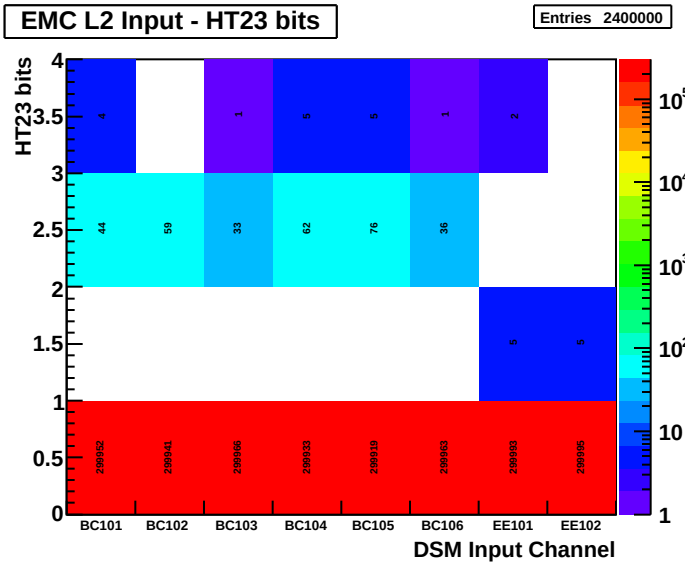

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

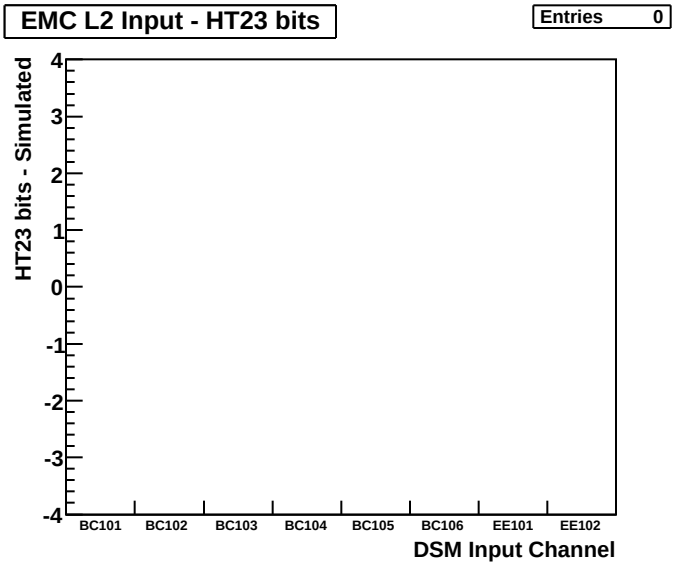

EMC L2 Input - Partial JP Sum
Entries 2400000
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

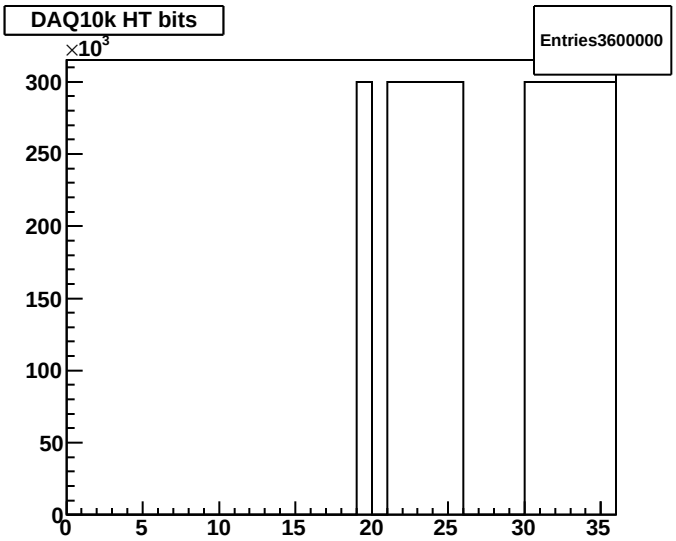

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

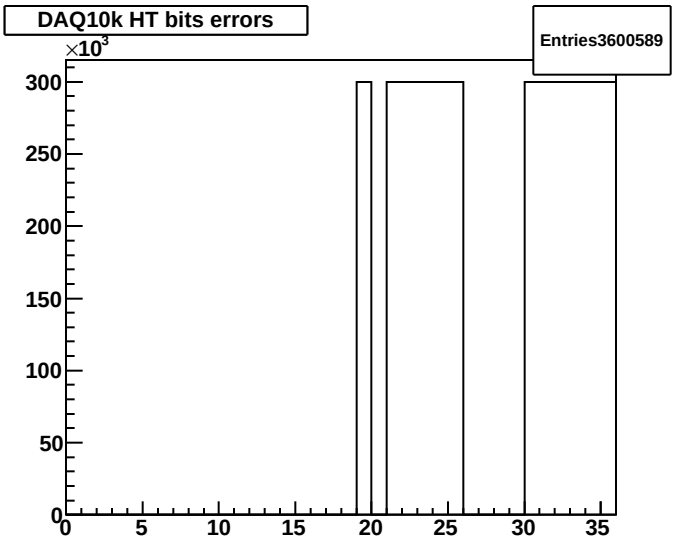

EMC L2 Input - HT01 bits/Partial JP ID
Entries 2400000
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

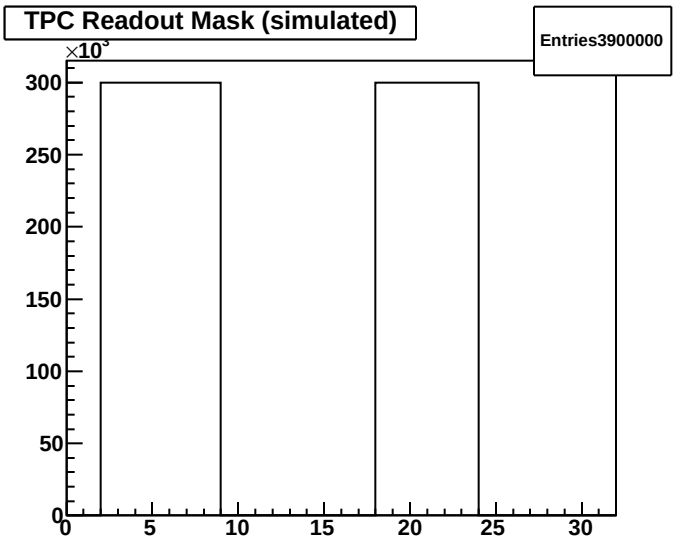

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

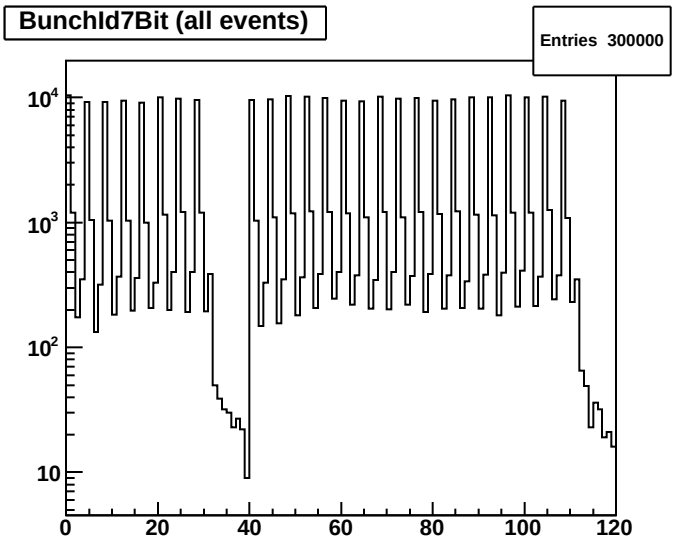

EMC L2 Input - HT23 bits
Entries 2400000
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

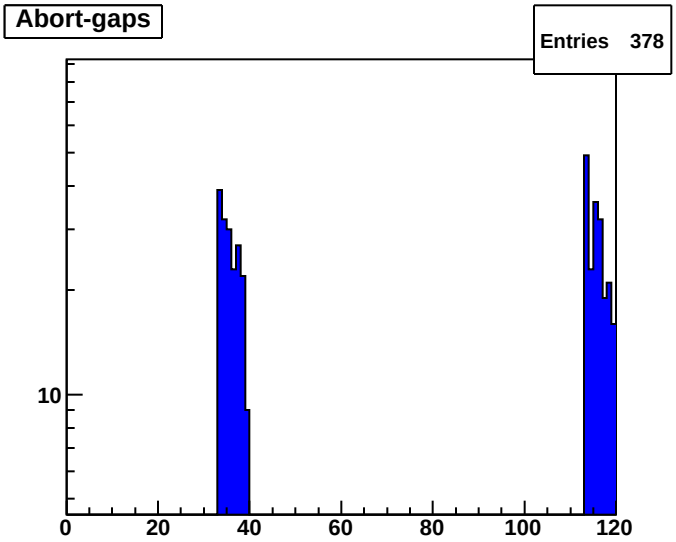

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

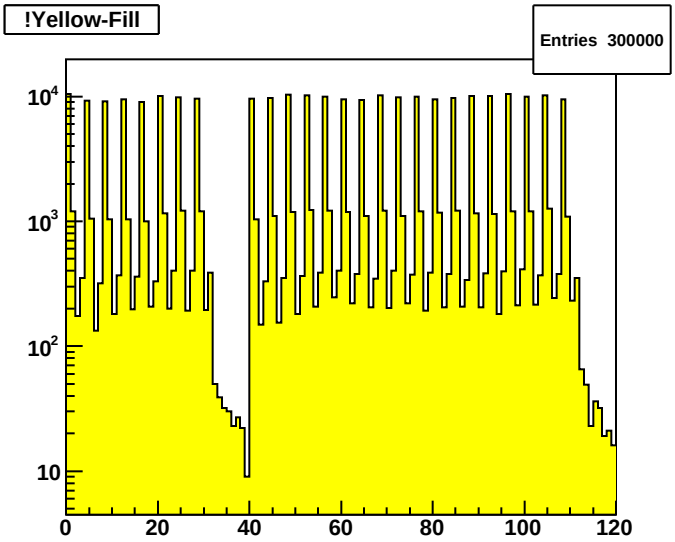

DAQ10k HT bits
Entries3600000
×10^3
300
250
200
150
100
50
0
0 5 10 15 20 25 30 35

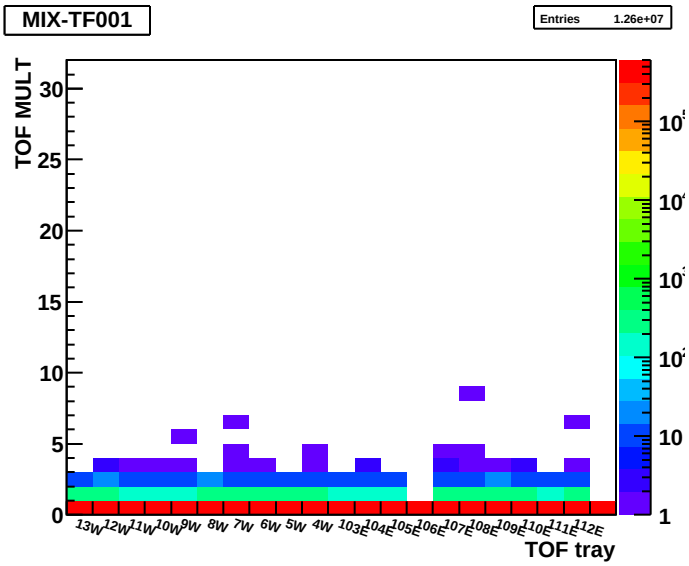

DAQ10k HT bits errors
Entries3600589
×10^3
300
250
200
150
100
50
0
0 5 10 15 20 25 30 35

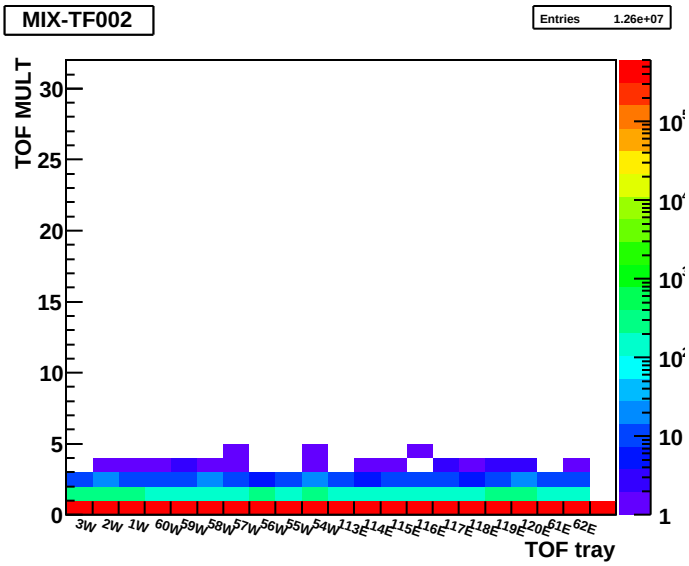

TPC Readout Mask (simulated)
Entries3900000
×10^3
300
250
200
150
100
50
0
0 5 10 15 20 25 30

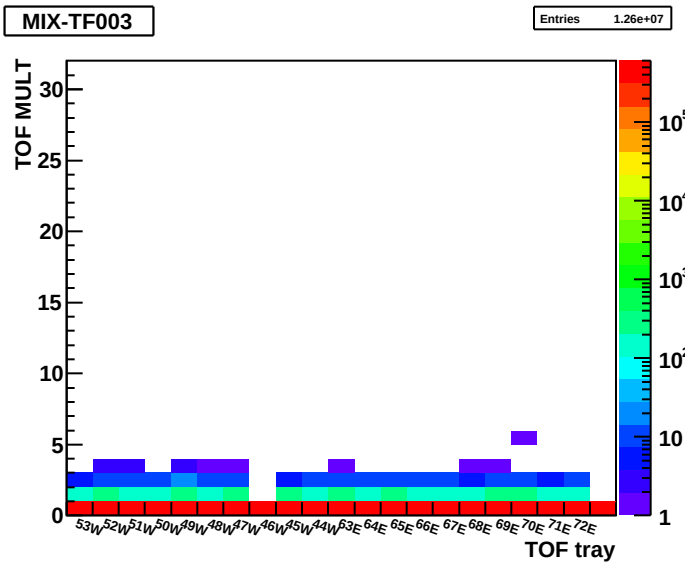

BunchId7Bit (all events)
Entries 300000
10^4
10^3
10^2
10
0 20 40 60 80 100 120

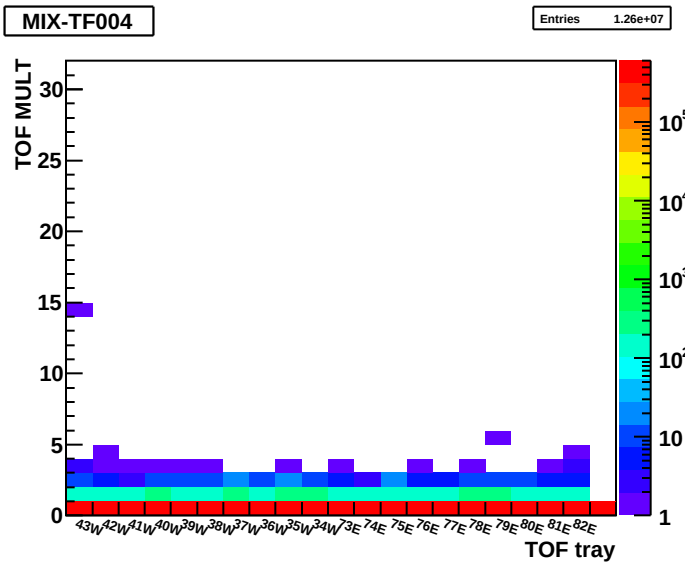

Abort-gaps
Entries 378
10
0 20 40 60 80 100 120

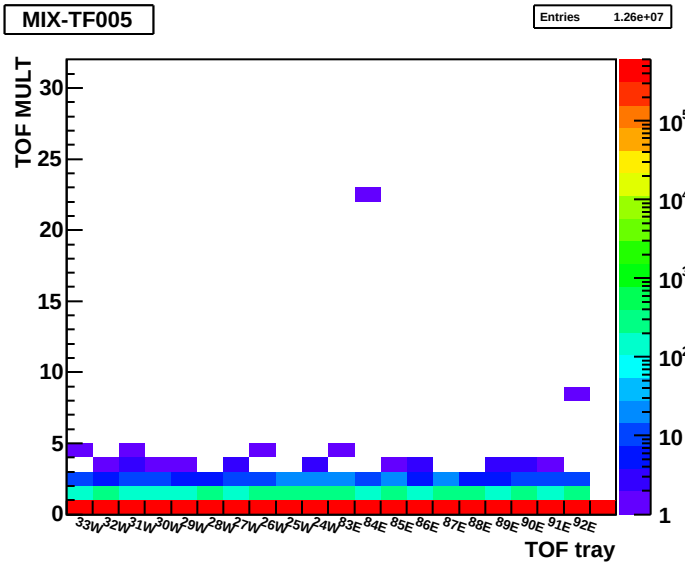

!Yellow-Fill
Entries 300000
10^4
10^3
10^2
10
0 20 40 60 80 100 120

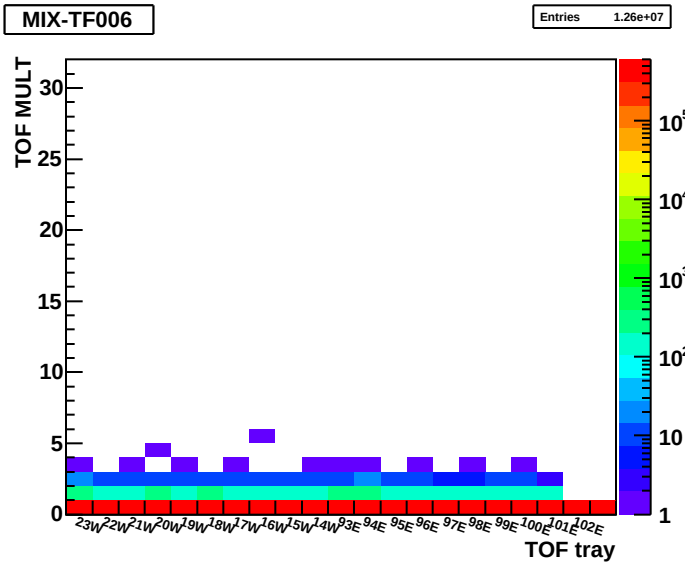

MIX-TF001
Entries 1.26e+07
TOF MULT
TOF tray

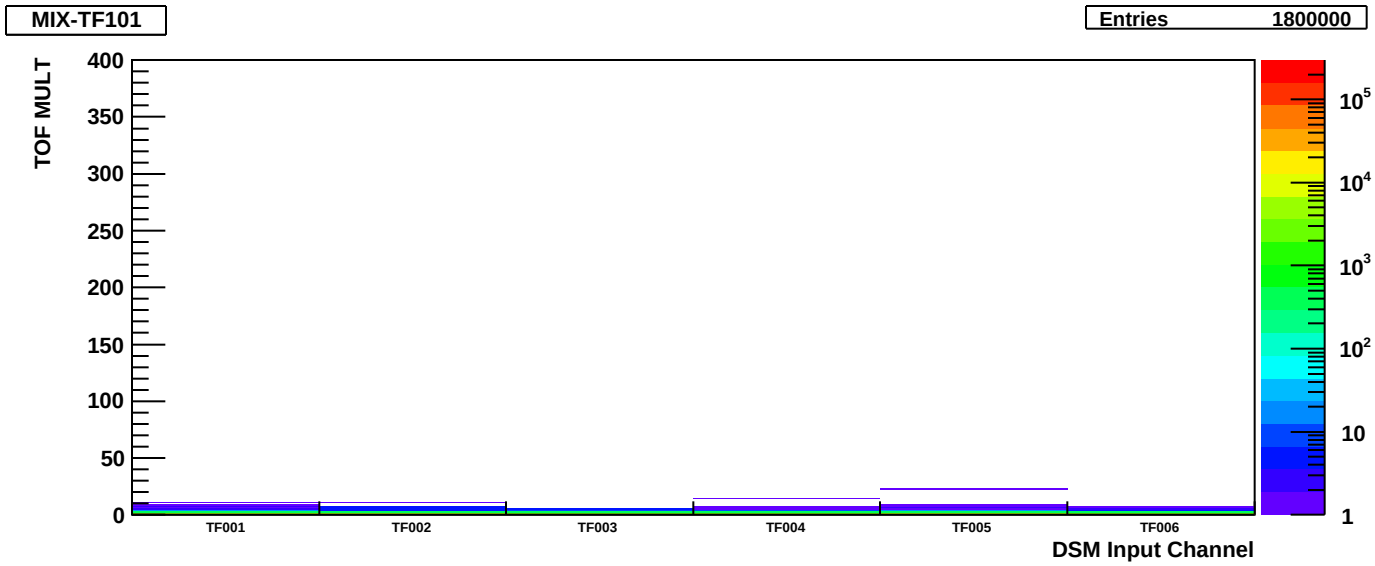

MIX-TF002
Entries 1.26e+07
TOF MULT
TOF tray

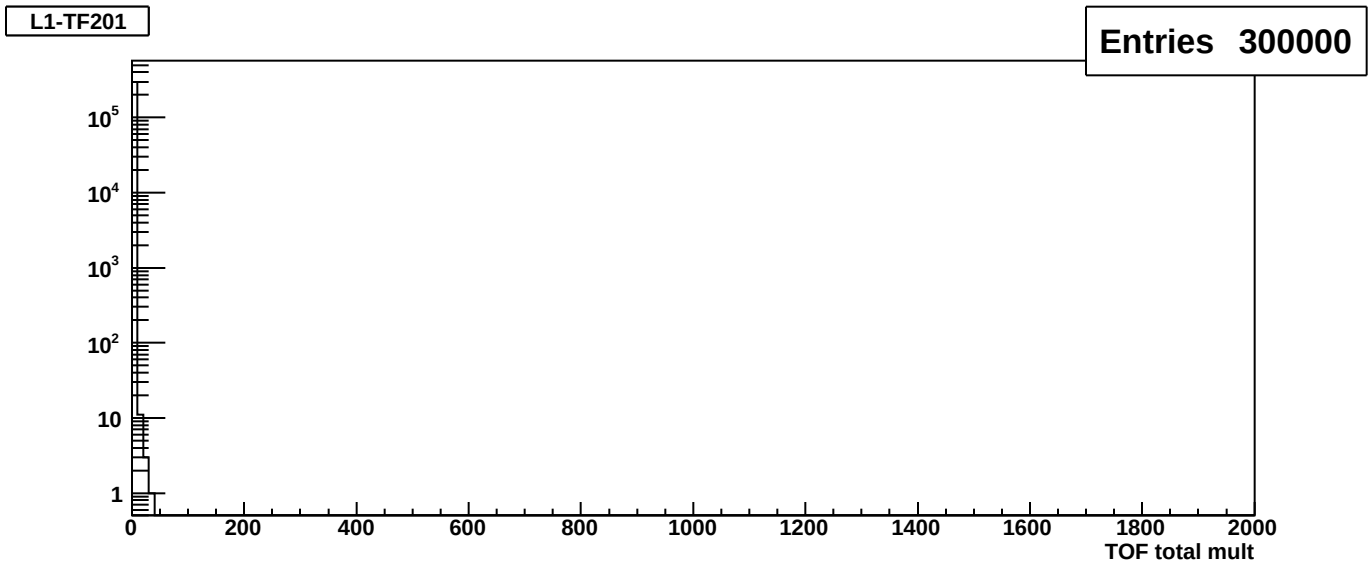

MIX-TF003
Entries 1.26e+07
TOF MULT
TOF tray

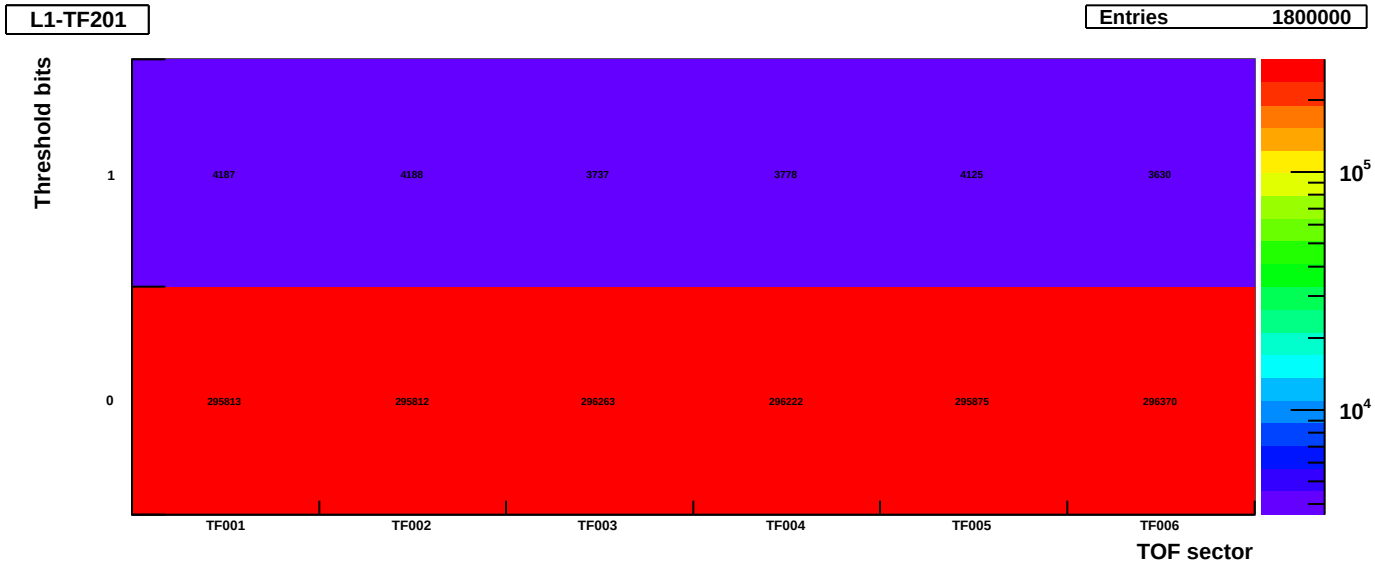

MIX-TF004
Entries 1.26e+07
TOF MULT
TOF tray

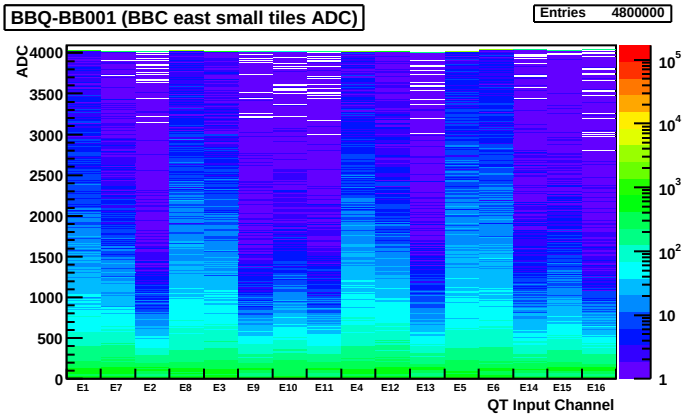

MIX-TF005
Entries 1.26e+07
TOF MULT
TOF tray

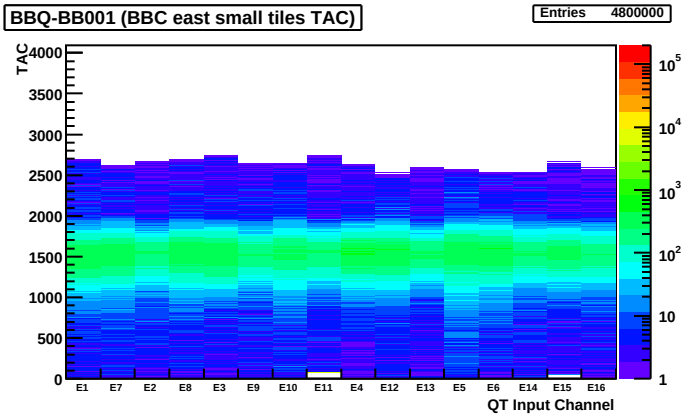

MIX-TF006
Entries 1.26e+07
TOF MULT
TOF tray

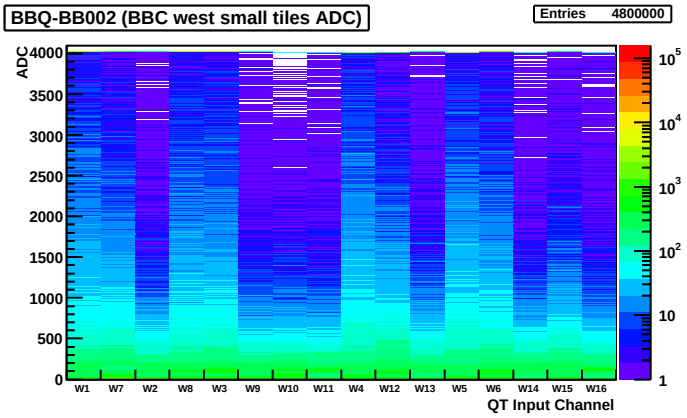

MIX-TF101
Entries 1800000
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

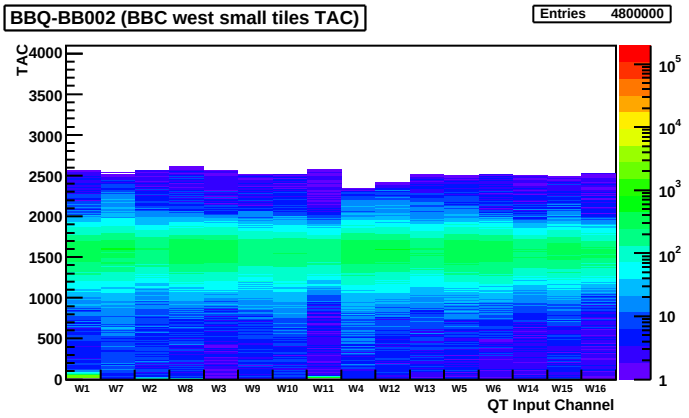

L1-TF201
Entries 300000
10^5
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

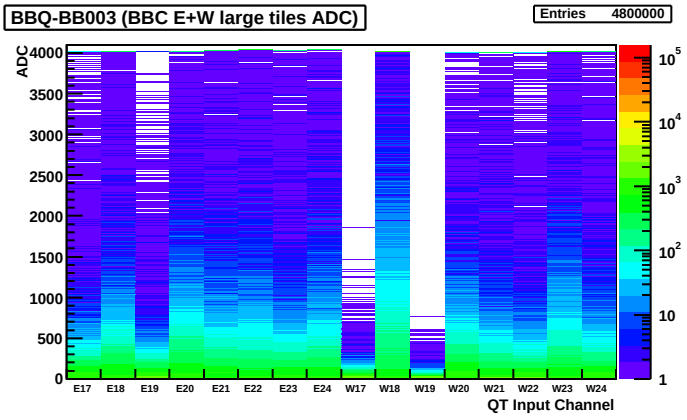

L1-TF201
Entries 1800000
Threshold bits
1
0
4187
4188
3737
3778
4125
3630
295813
295812
296263
296222
295875
296370
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^5
10^4

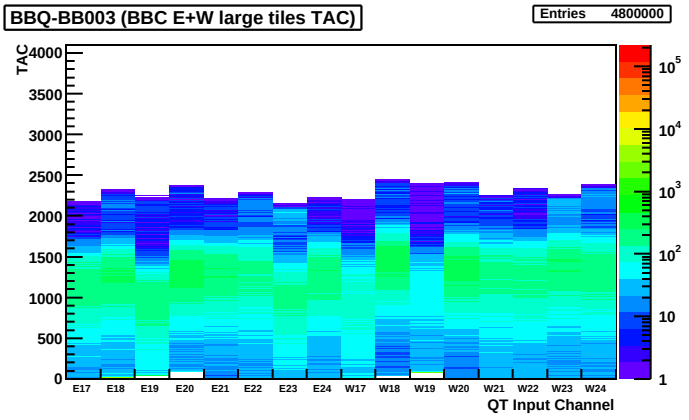

BBQ-BB001 (BBC east small tiles ADC)
Entries 4800000
ADC
QT Input Channel

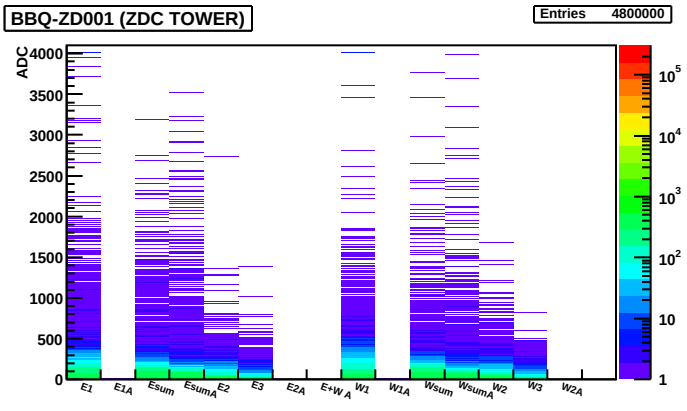

BBQ-BB001 (BBC east small tiles TAC)
Entries 4800000
TAC
QT Input Channel

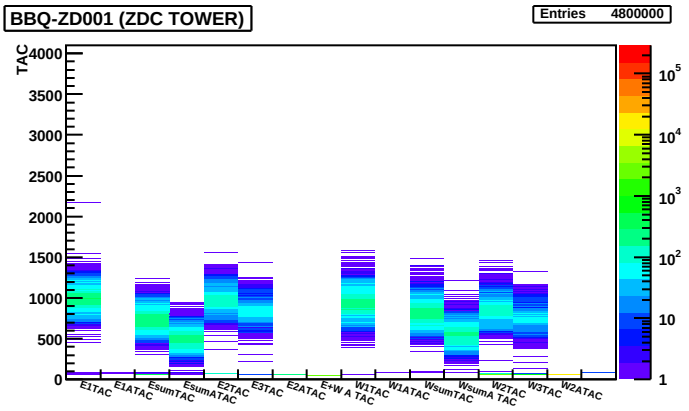

BBQ-BB002 (BBC west small tiles ADC)
Entries 4800000
ADC
QT Input Channel

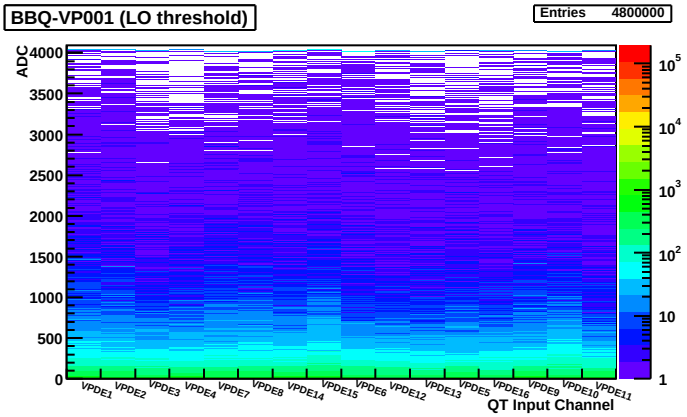

BBQ-BB002 (BBC west small tiles TAC)
Entries 4800000
TAC
QT Input Channel

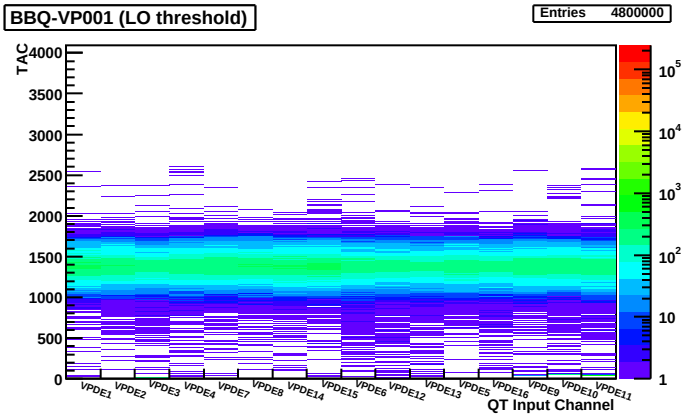

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 4800000
ADC
QT Input Channel

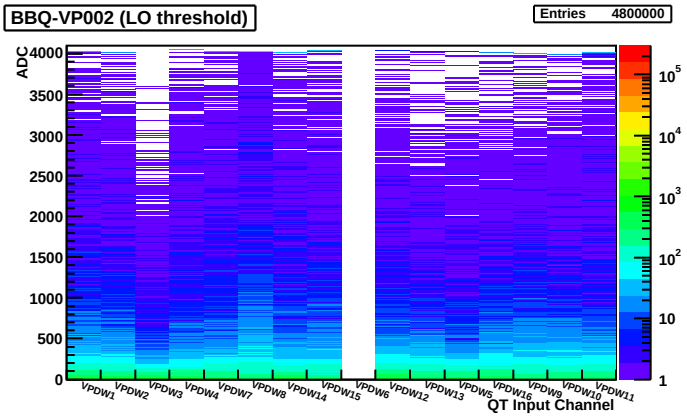

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 4800000
TAC
QT Input Channel

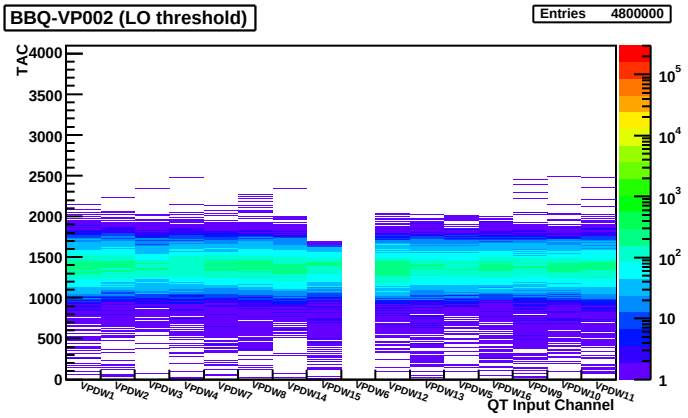

BBQ-ZD001 (ZDC TOWER)
Entries 4800000
ADC

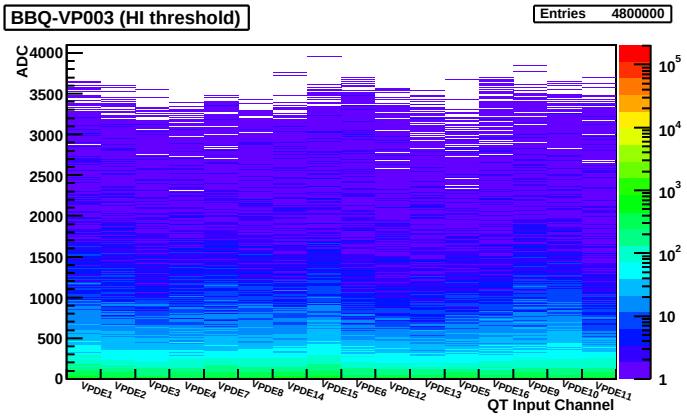

BBQ-ZD001 (ZDC TOWER)
Entries 4800000
TAC

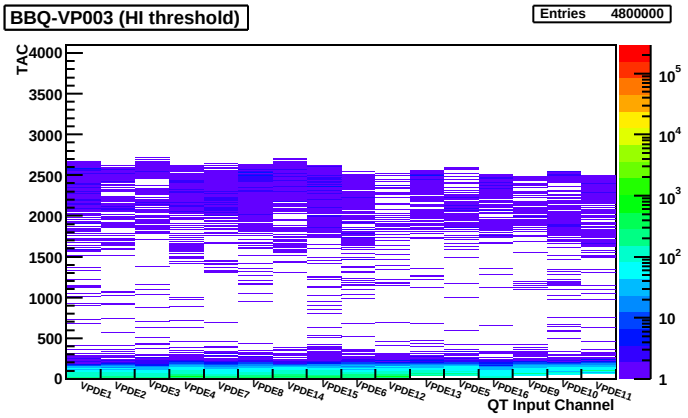

BBQ-VP001 (LO threshold)
Entries 4800000
ADC
QT Input Channel

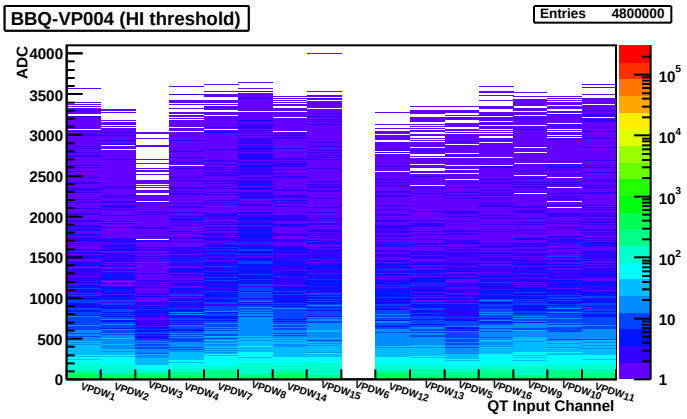

BBQ-VP001 (LO threshold)
Entries 4800000
TAC
QT Input Channel

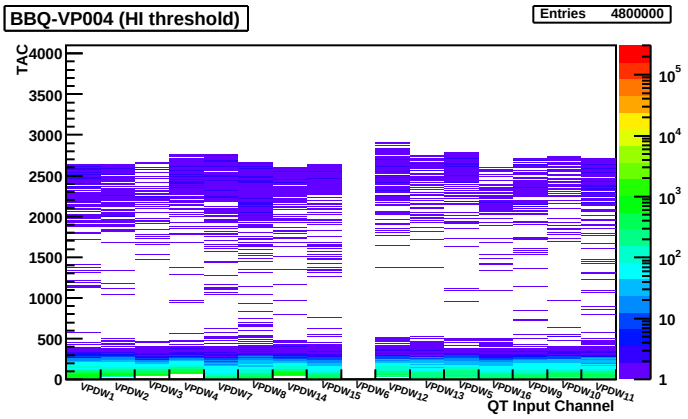

BBQ-VP002 (LO threshold)
Entries 4800000
ADC
QT Input Channel

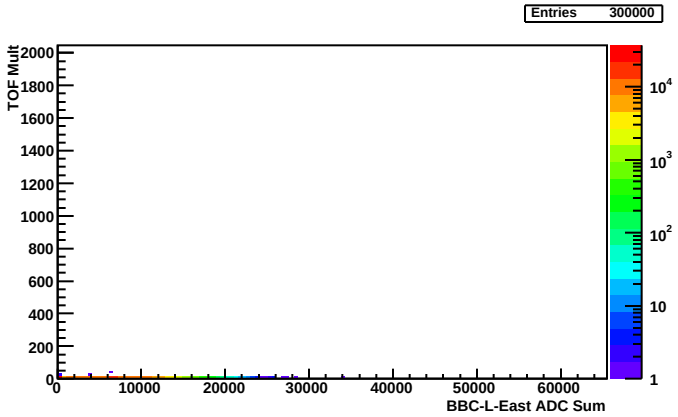

BBQ-VP002 (LO threshold)
Entries 4800000
TAC
QT Input Channel

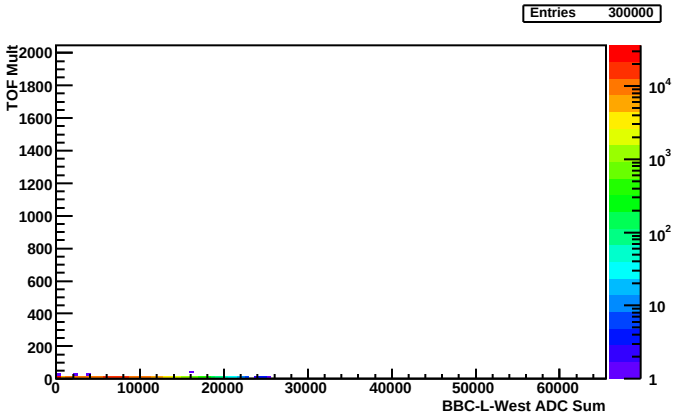

BBQ-VP003 (HI threshold)
Entries 4800000
ADC
QT Input Channel

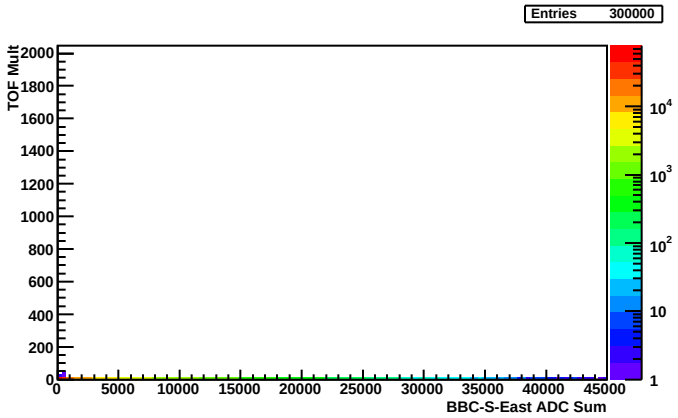

BBQ-VP003 (HI threshold)
Entries 4800000
TAC
QT Input Channel

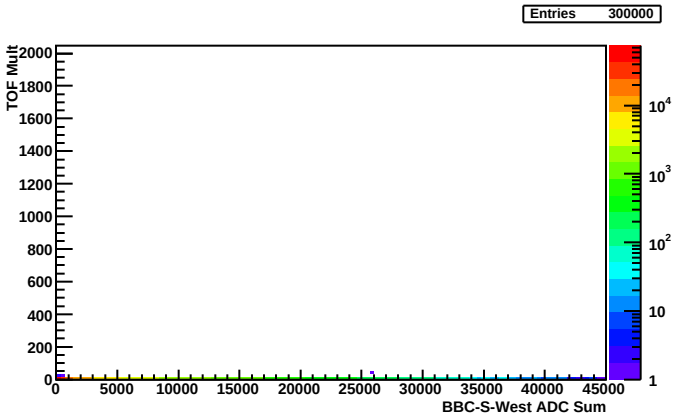

BBQ-VP004 (HI threshold)
Entries 4800000
ADC
QT Input Channel

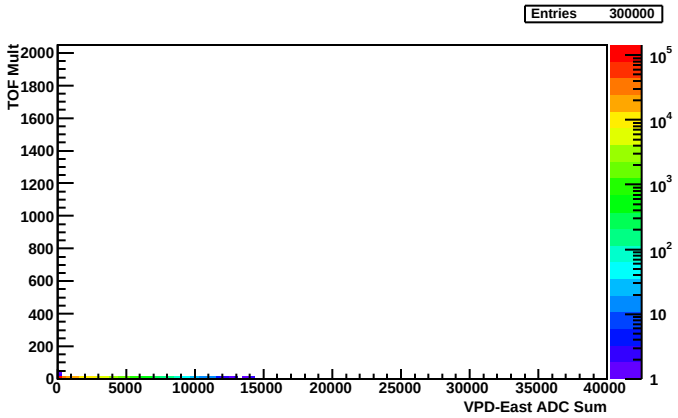

BBQ-VP004 (HI threshold)
Entries 4800000
TAC
QT Input Channel

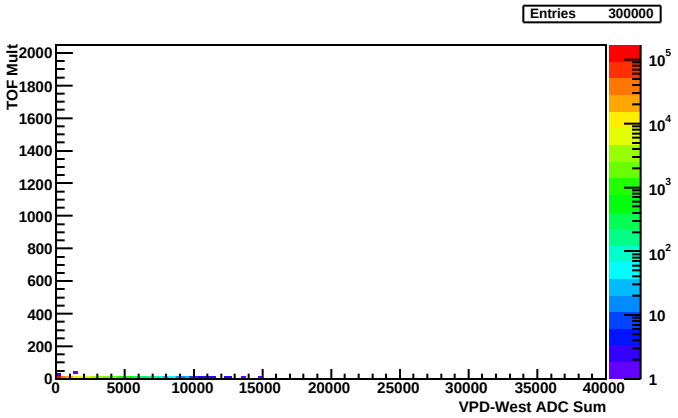

Entries 300000
TOF Mult
BBC-L-East ADC Sum

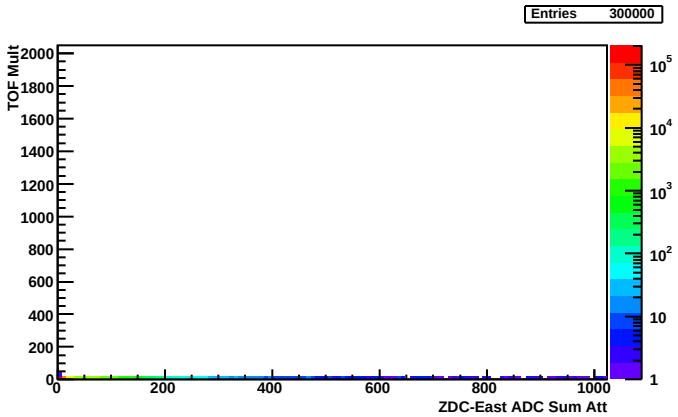

Entries 300000
TOF Mult
BBC-L-West ADC Sum

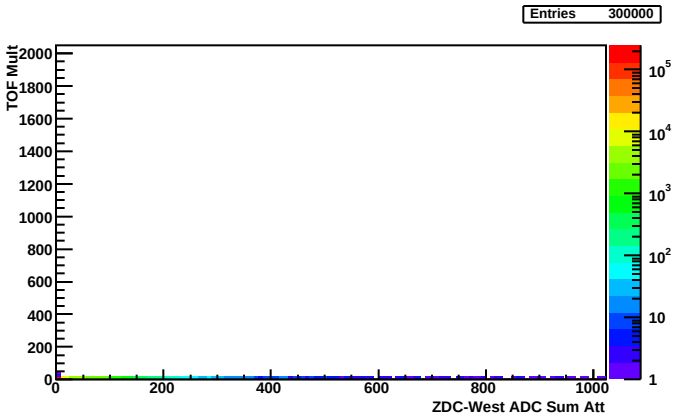

Entries 300000
TOF Mult
BBC-S-East ADC Sum

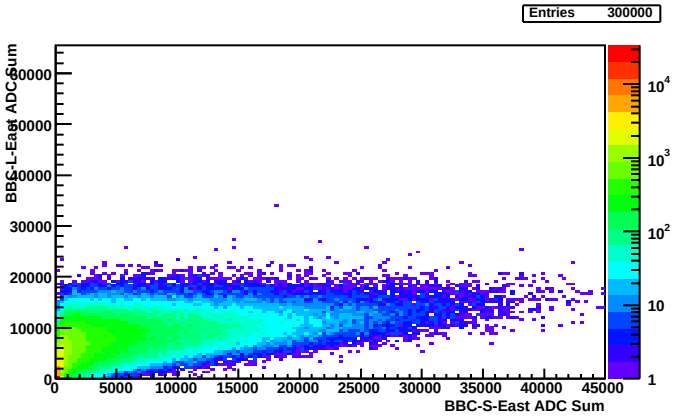

Entries 300000
TOF Mult
BBC-S-West ADC Sum

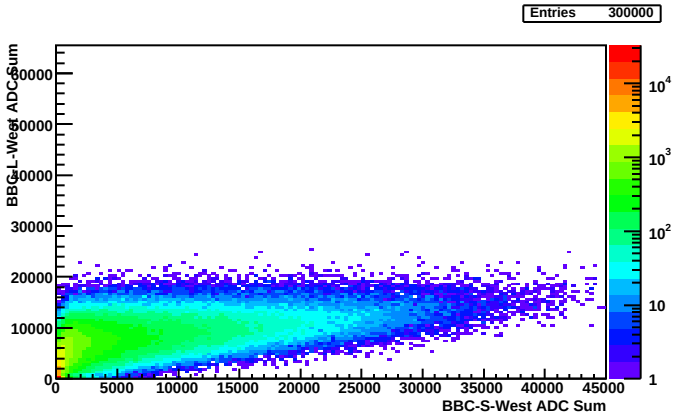

Entries 300000
TOF Mult
VPD-East ADC Sum

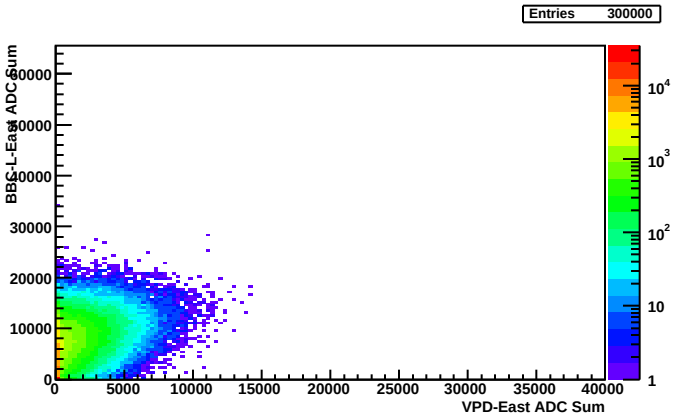

Entries 300000
TOF Mult
VPD-West ADC Sum

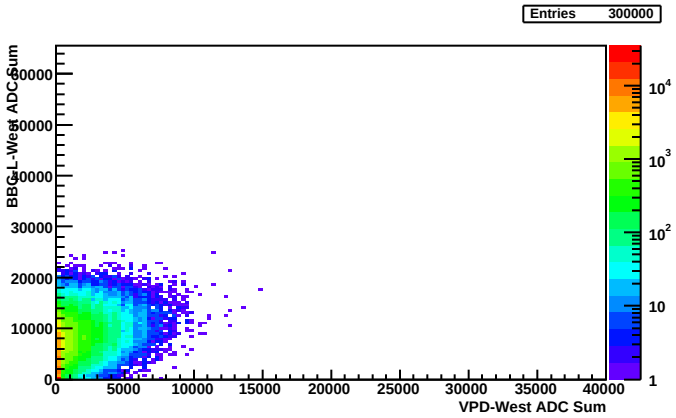

Entries 300000
TOF Mult
ZDC-East ADC Sum Att

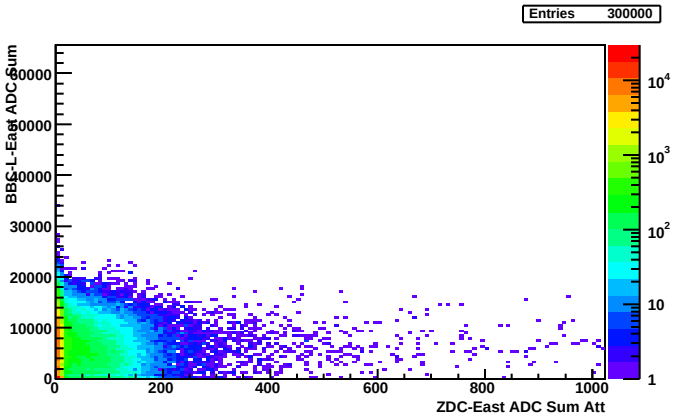

Entries 300000
TOF Mult
ZDC-West ADC Sum Att

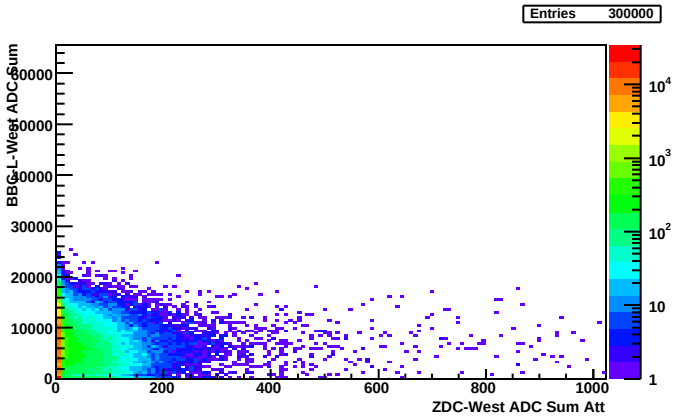

Entries 300000
BBC-L-East ADC Sum
BBC-S-East ADC Sum

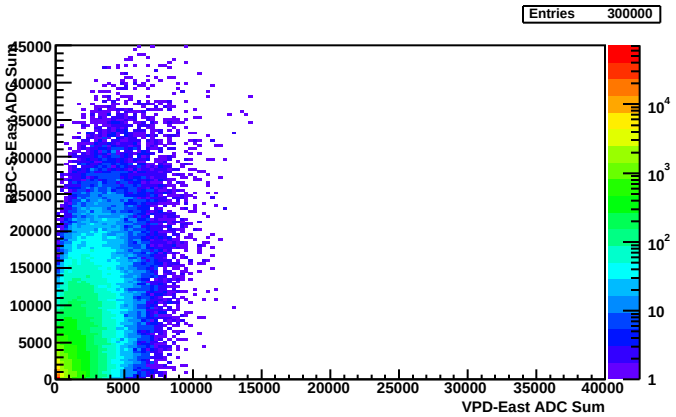

Entries 300000
BBC-L-West ADC Sum
BBC-S-West ADC Sum

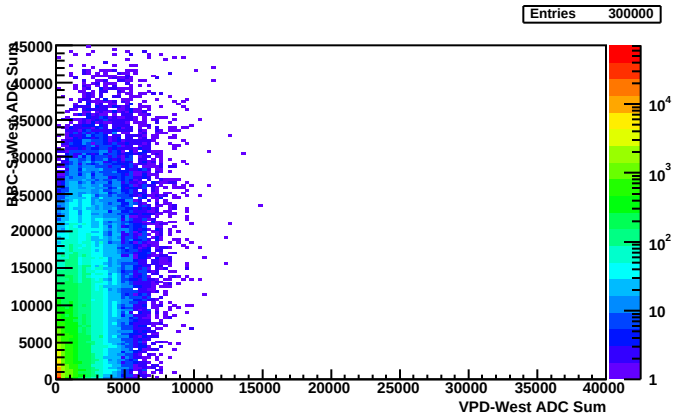

Entries 300000
BBC-L-East ADC Sum
VPD-East ADC Sum

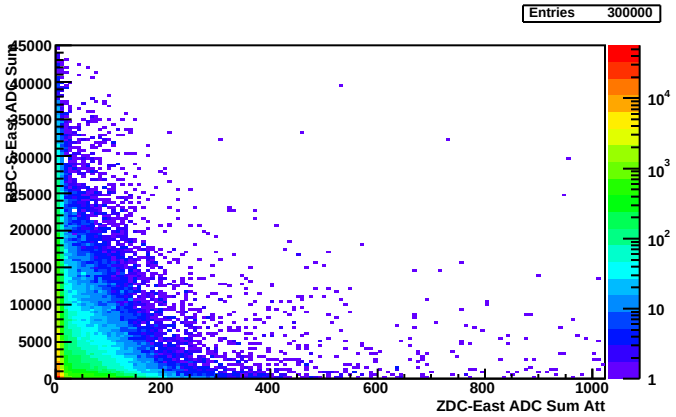

Entries 300000
BBC-L-West ADC Sum
VPD-West ADC Sum

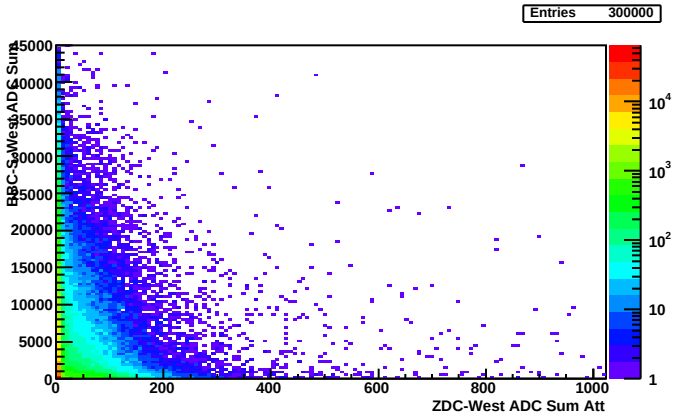

Entries 300000
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

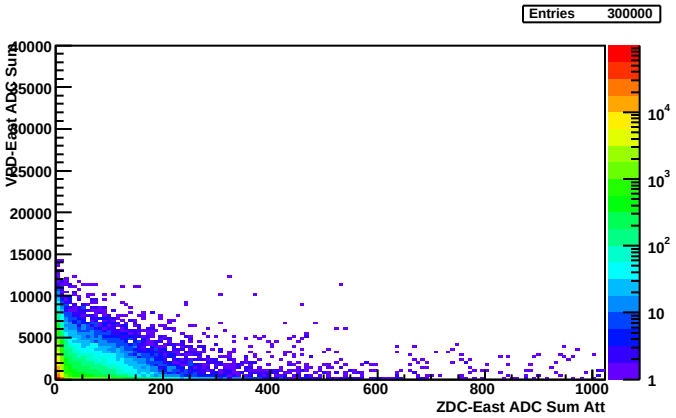

Entries 300000
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

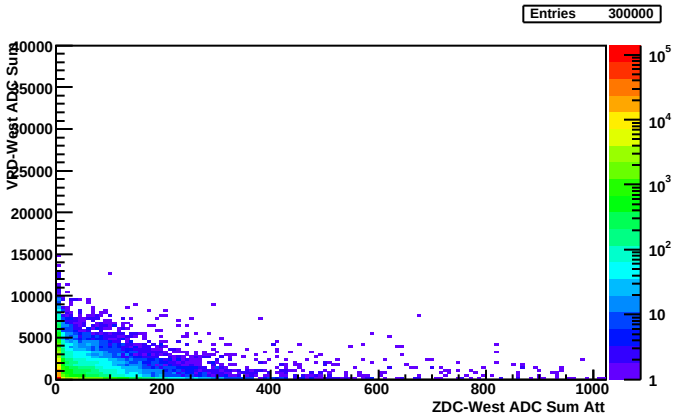

Entries 300000
BBC-S-East ADC Sum
VPD-East ADC Sum

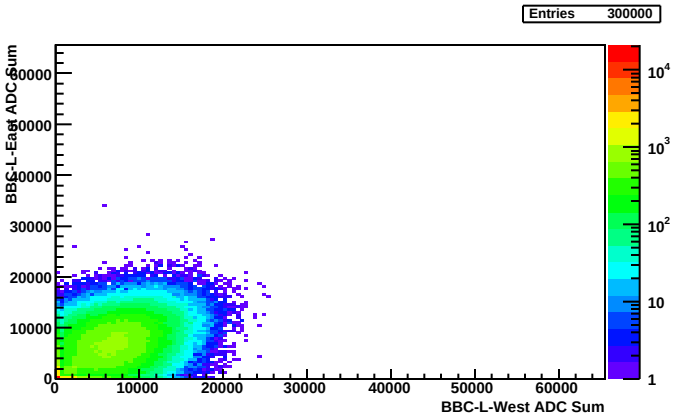

Entries 300000
BBC-S-West ADC Sum
VPD-West ADC Sum

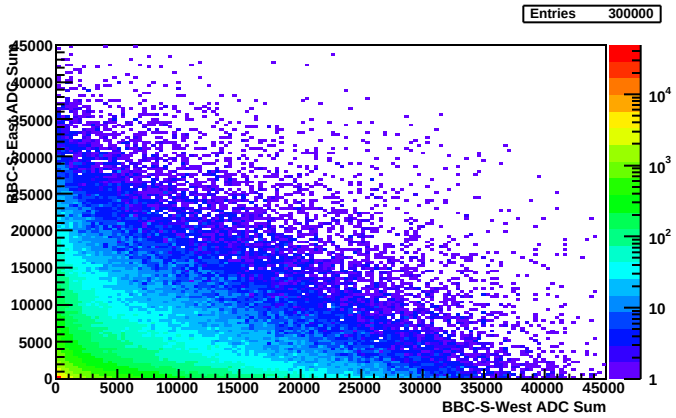

Entries 300000
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

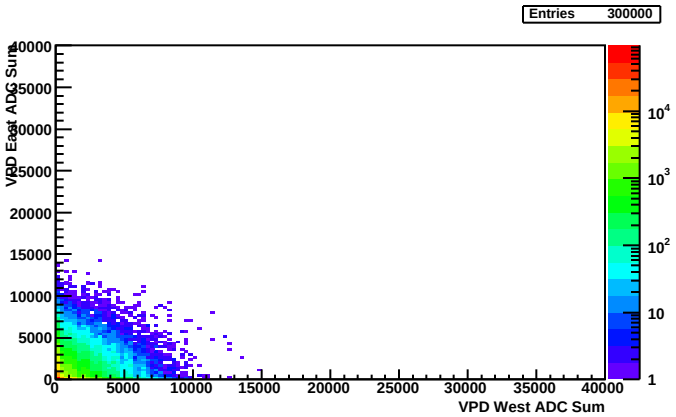

Entries 300000
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

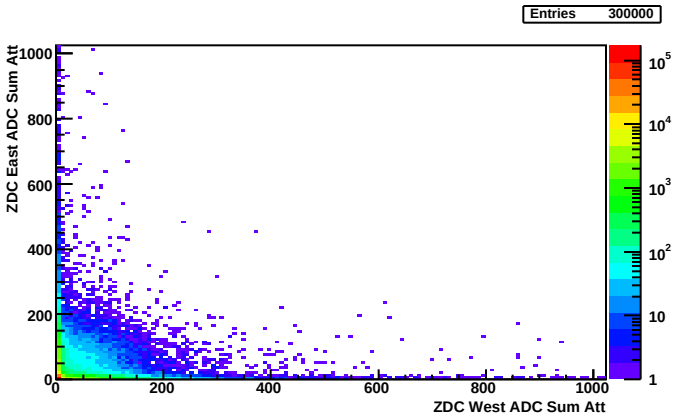

Entries 300000
VPD-East ADC Sum
ZDC-East ADC Sum Att

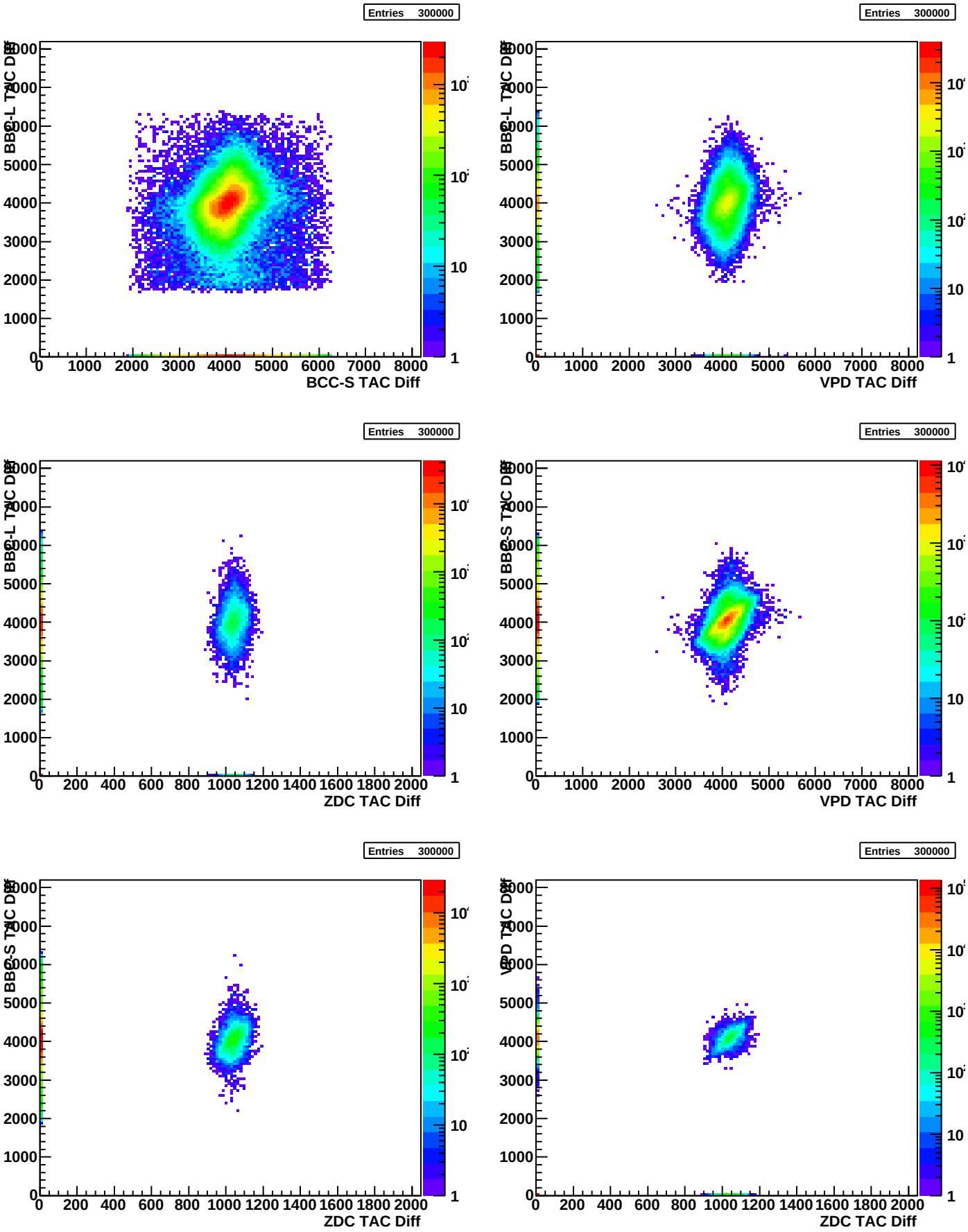

Entries 300000
VPD-West ADC Sum
ZDC-West ADC Sum Att

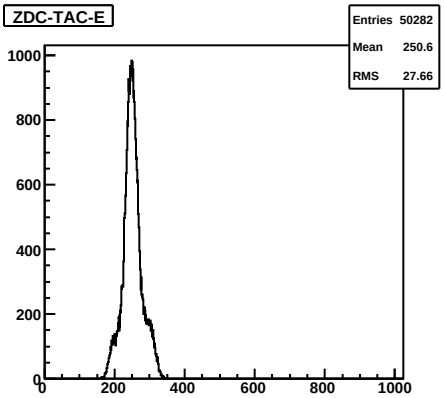

Entries 300000
BBC-L-East ADC Sum
BBC-L-West ADC Sum

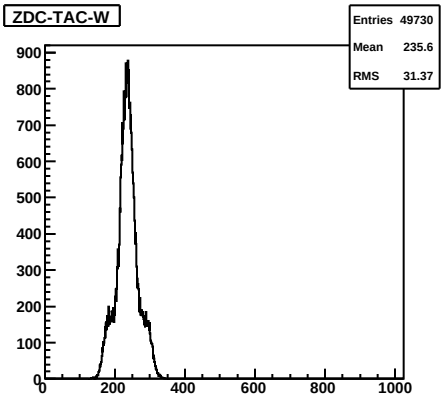

Entries 300000
BBC-S-East ADC Sum
BBC-S-West ADC Sum

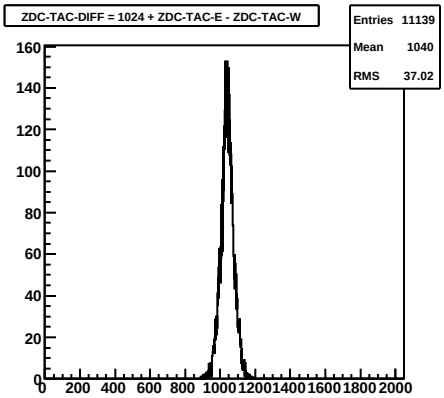

Entries 300000
VPD East ADC Sum
VPD West ADC Sum

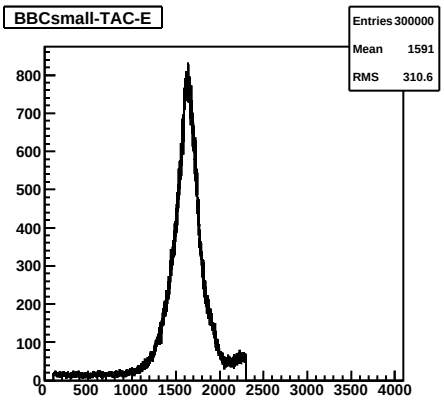

Entries 300000
ZDC East ADC Sum Att
ZDC West ADC Sum Att

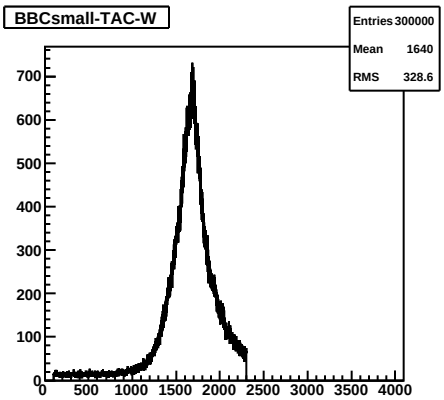

Entries 300000
BBC-L TAC Diff
BCC-S TAC Diff
Entries 300000
BBC-L TAC Diff
VPD TAC Diff
Entries 300000
BBC-L TAC Diff
ZDC TAC Diff
Entries 300000
BBC-S TAC Diff
VPD TAC Diff
Entries 300000
BBC-S TAC Diff
ZDC TAC Diff
Entries 300000
VPD TAC Diff
ZDC TAC Diff

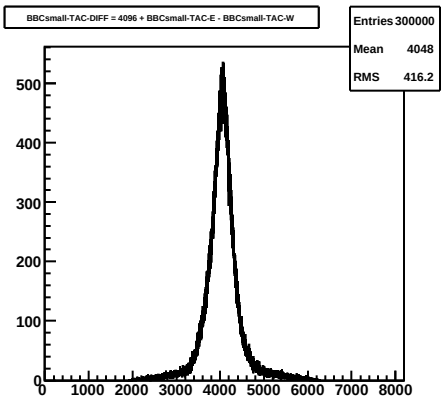

ZDC-TAC-E
Entries 50282
Mean 250.6
RMS 27.66

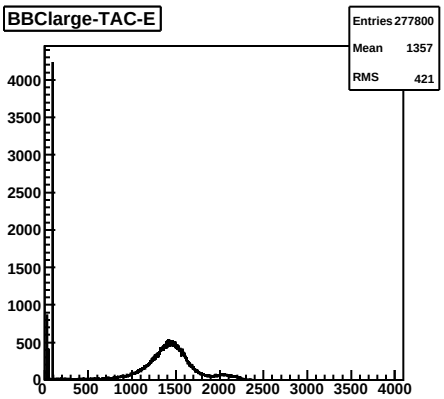

ZDC-TAC-W
Entries 49730
Mean 235.6
RMS 31.37

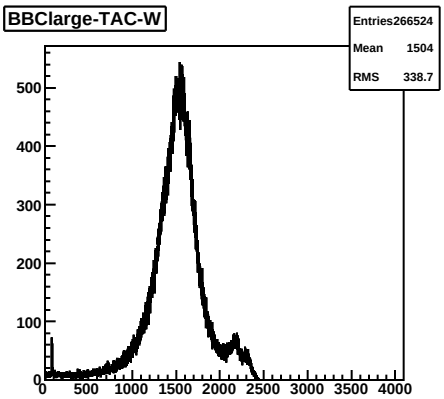

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 11139
Mean 1040
RMS 37.02

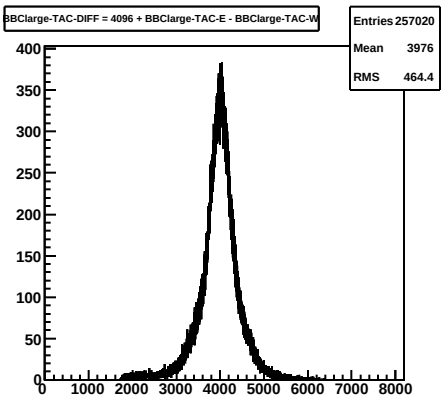

BBCsmall-TAC-E
Entries 300000
Mean 1591
RMS 310.6

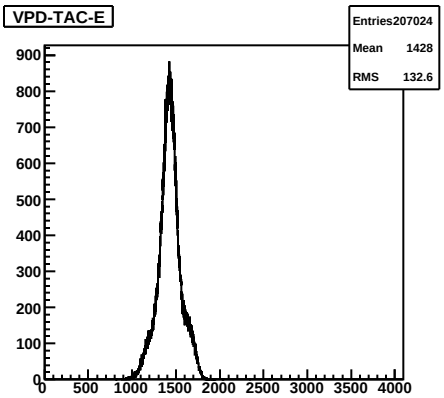

BBCsmall-TAC-W
Entries 300000
Mean 1640
RMS 328.6

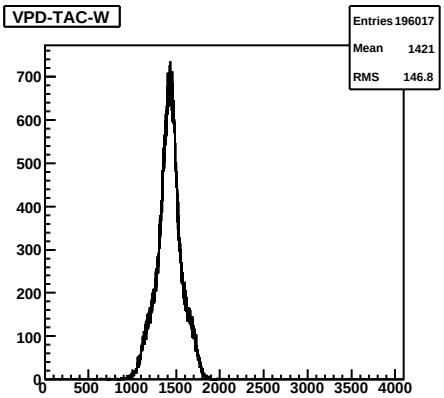

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 300000
Mean 4048
RMS 416.2

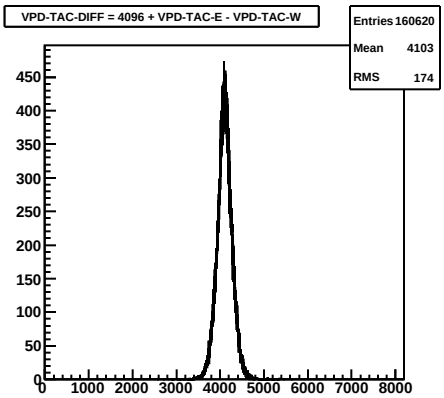

BBClarge-TAC-E
Entries 277800
Mean 1357
RMS 421

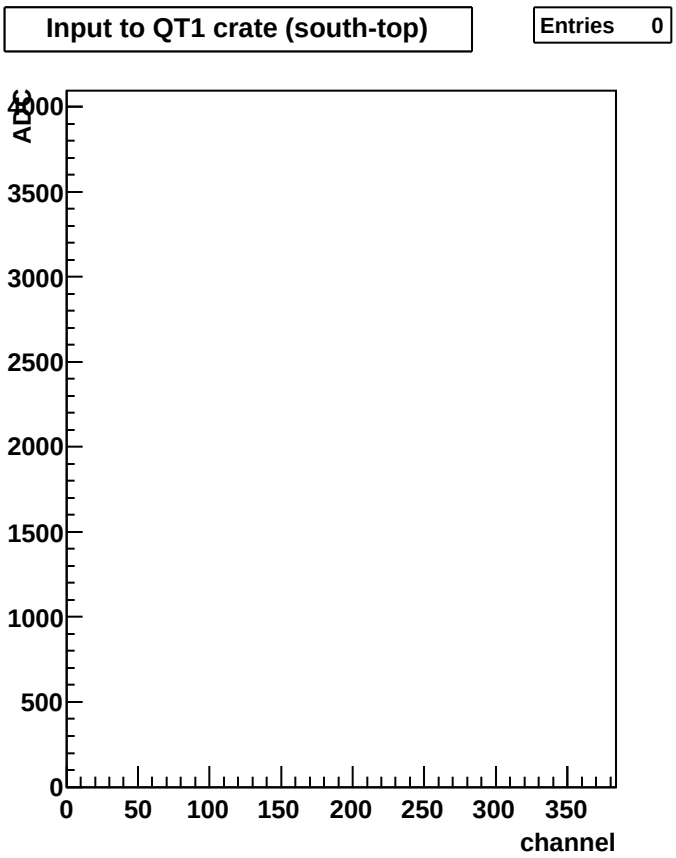

BBClarge-TAC-W
Entries 266524
Mean 1504
RMS 338.7

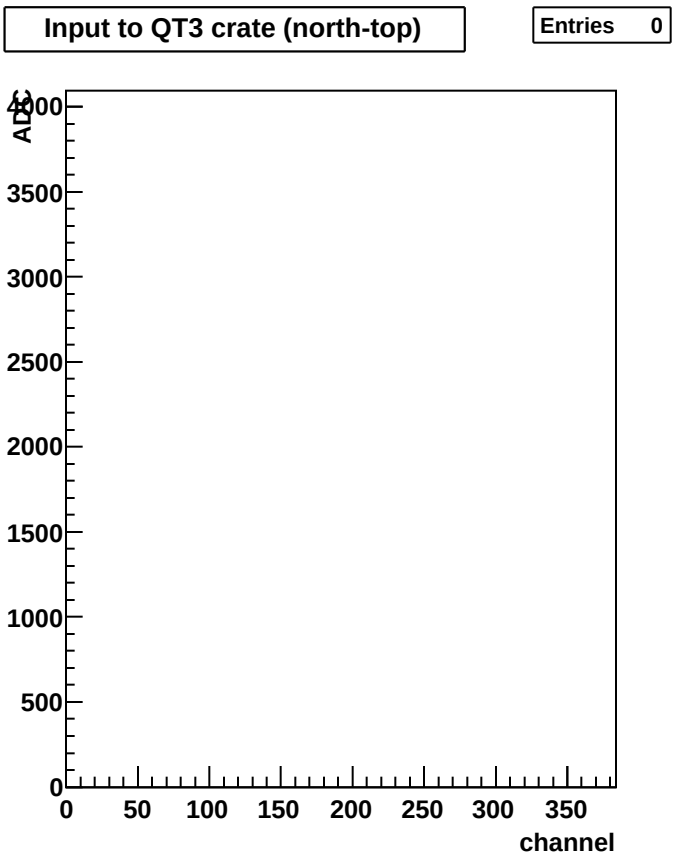

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 257020
Mean 3976
RMS 464.4

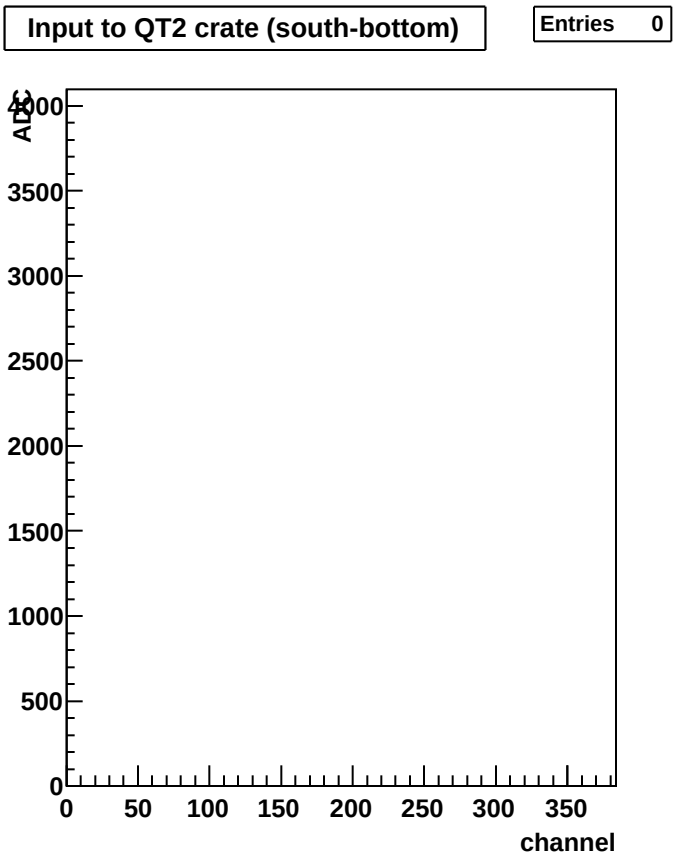

VPD-TAC-E
Entries 207024
Mean 1428
RMS 132.6

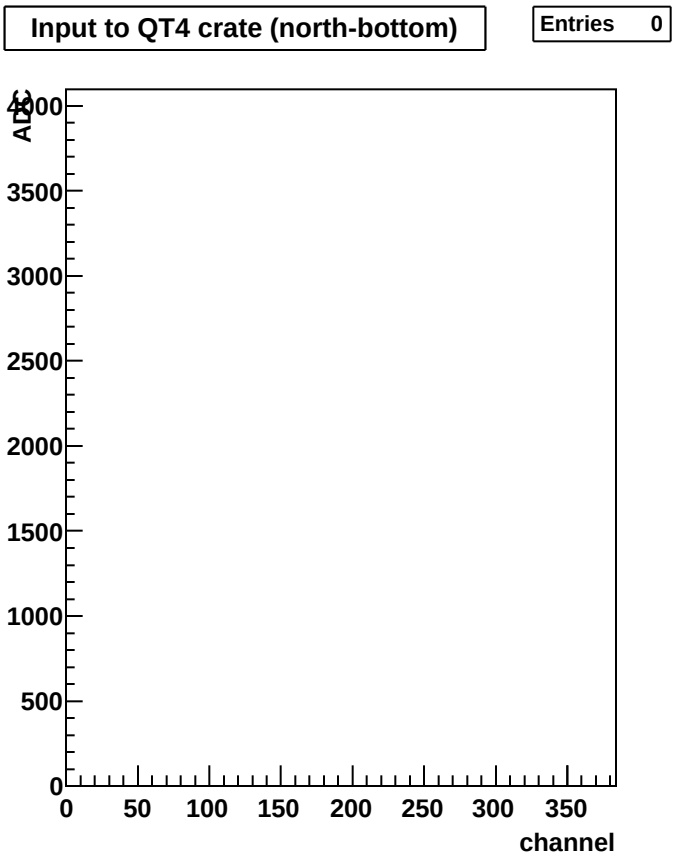

VPD-TAC-W
Entries 196017
Mean 1421
RMS 146.8

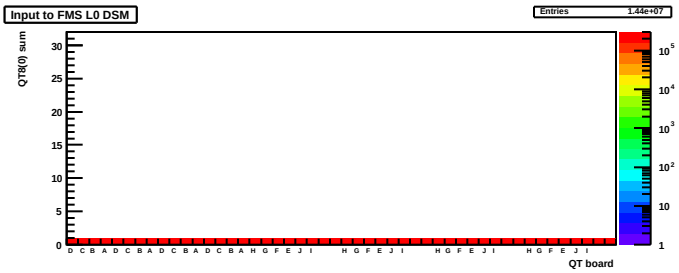

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 160620
Mean 4103
RMS 174

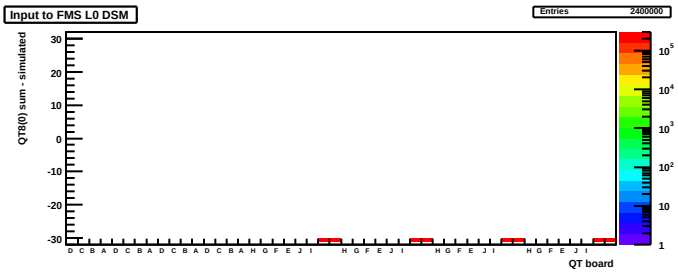

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

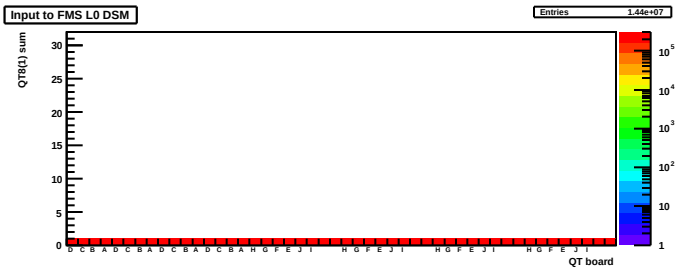

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

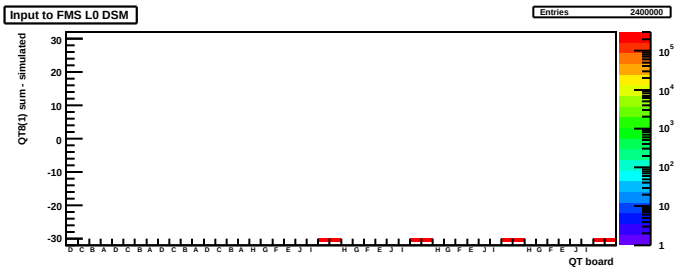

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

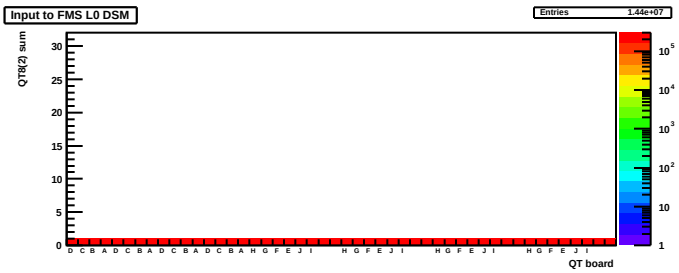

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

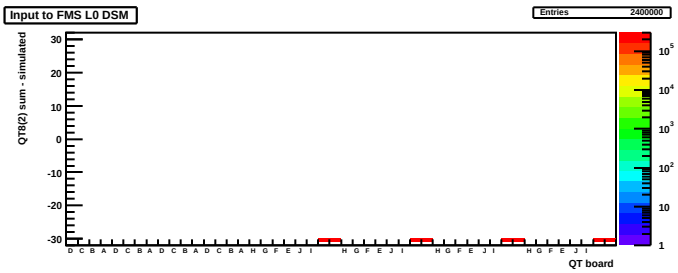

Input to FMS L0 DSM
Entries 1.44e+07
QT8(0) sum
QT board

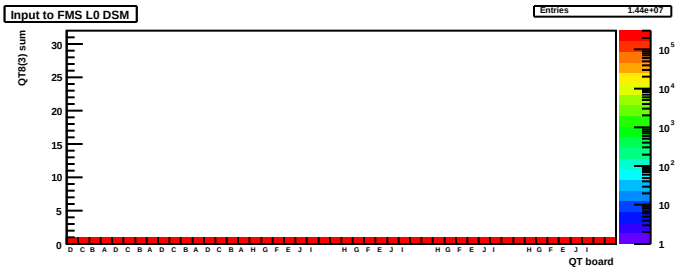

Input to FMS L0 DSM
Entries 2400000
QT8(0) sum - simulated
QT board

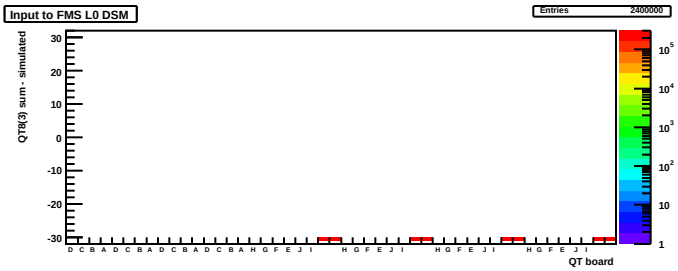

Input to FMS L0 DSM
Entries 1.44e+07
QT8(1) sum
QT board

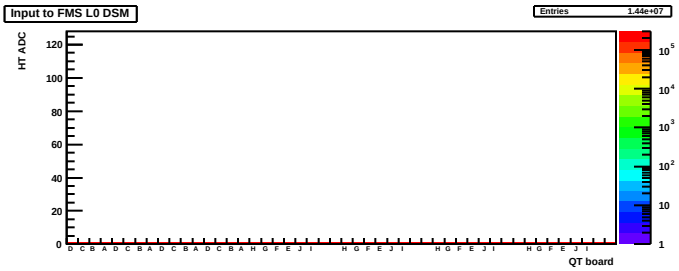

Input to FMS L0 DSM
Entries 2400000
QT8(1) sum - simulated
QT board

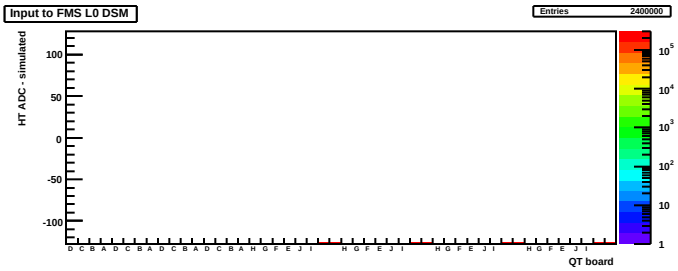

Input to FMS L0 DSM
Entries 1.44e+07
QT8(2) sum
QT board

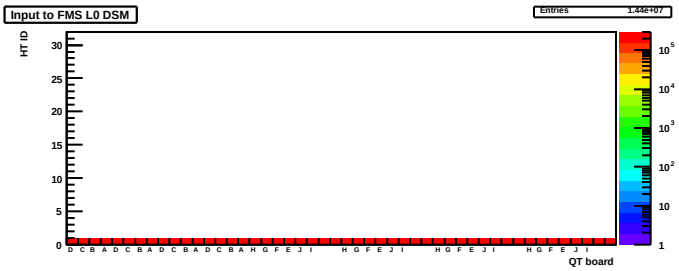

Input to FMS L0 DSM
Entries 2400000
QT8(2) sum - simulated
QT board

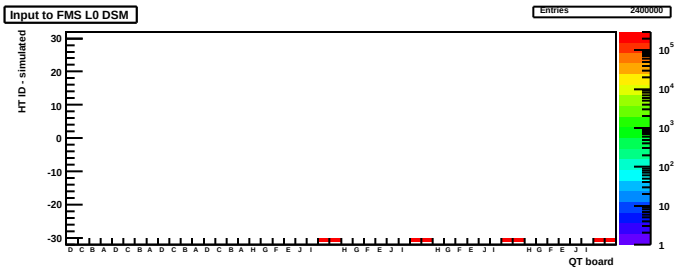

Input to FMS L0 DSM
Entries 1.44e+07
QT8(3) sum
QT board

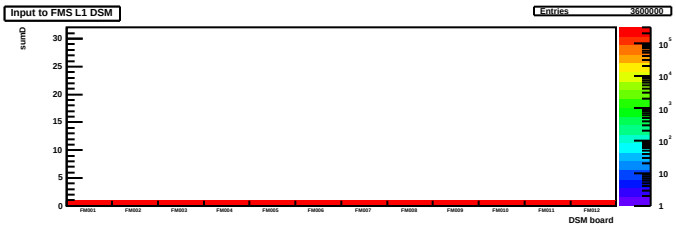

Input to FMS L0 DSM
Entries 2400000
QT8(3) sum - simulated
QT board

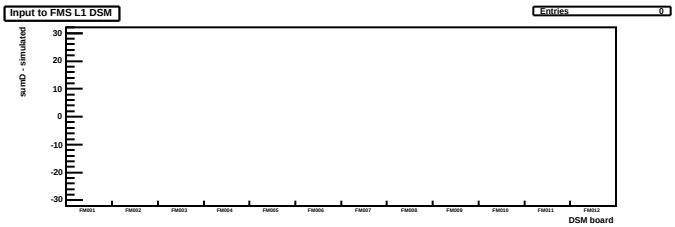

Input to FMS L0 DSM
Entries 1.44e+07
HT ADC
QT board

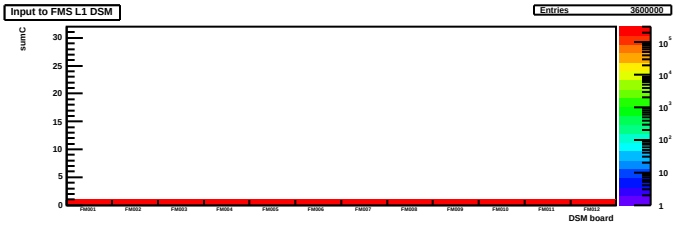

Input to FMS L0 DSM
Entries 2400000
HT ADC - simulated
QT board

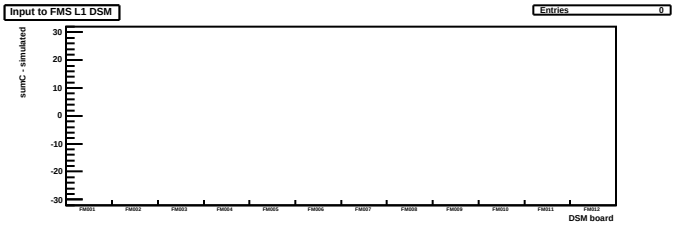

Input to FMS L0 DSM
Entries 1.44e+07
HT ID
QT board

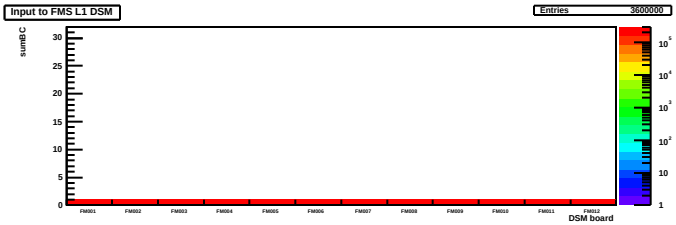

Input to FMS L0 DSM
Entries 2400000
HT ID - simulated
QT board

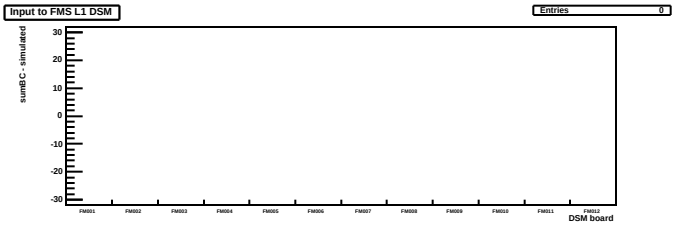

Input to FMS L1 DSM
Entries 3600000
sumD
DSM board

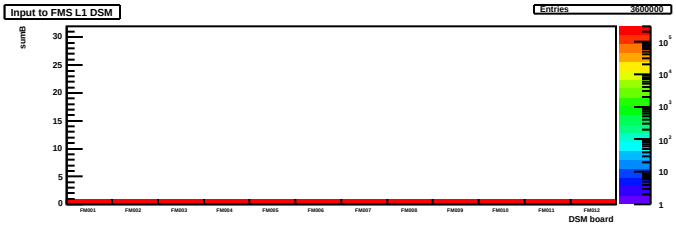

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

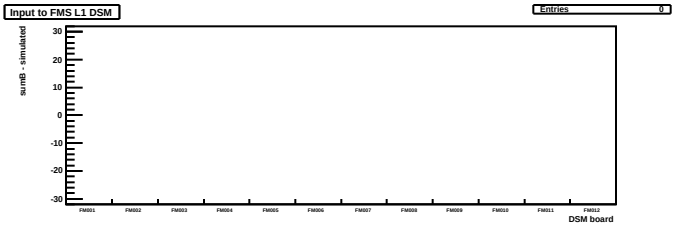

Input to FMS L1 DSM
Entries 3600000
sumC
DSM board

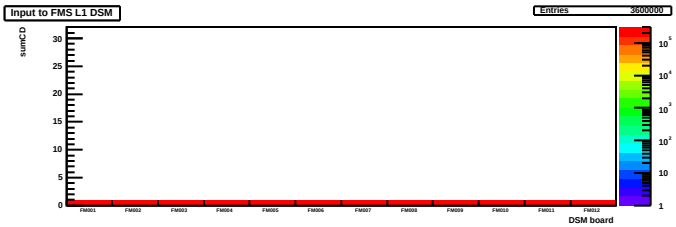

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

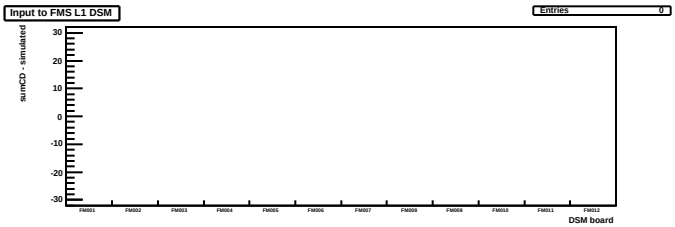

Input to FMS L1 DSM
Entries 3600000
sumBC
DSM board

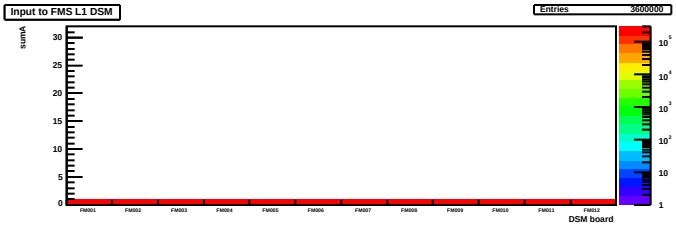

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

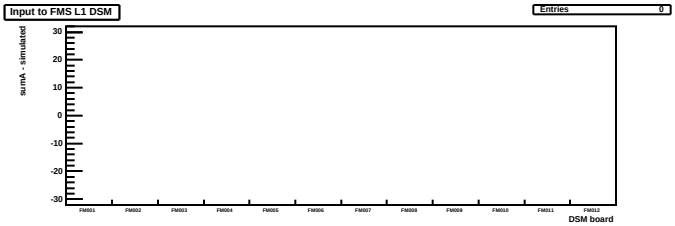

Input to FMS L1 DSM
Entries 3600000
sumB
DSM board

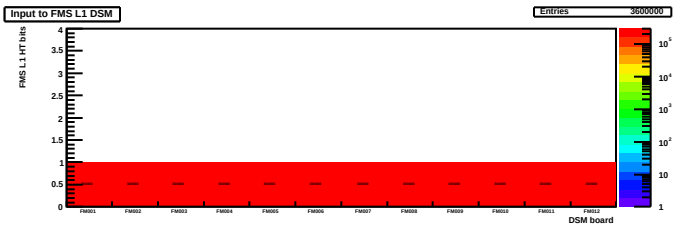

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

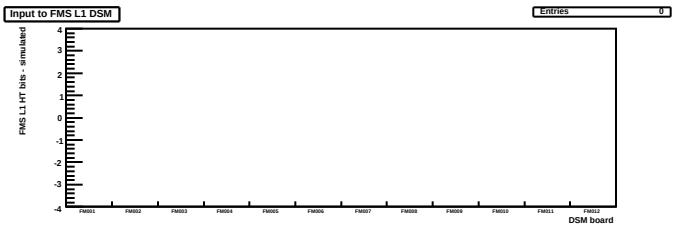

Input to FMS L1 DSM
Entries 3600000
sumCD
DSM board

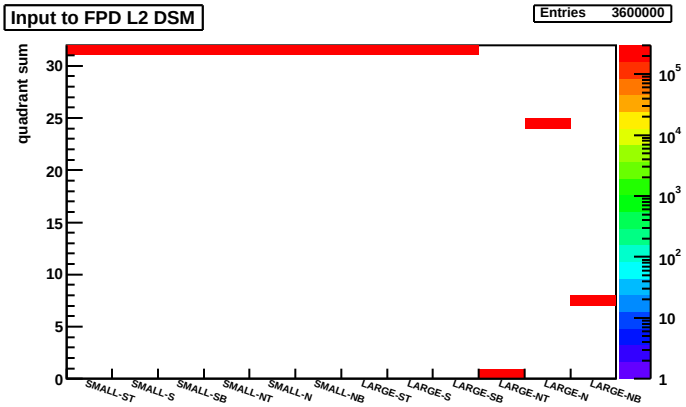

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

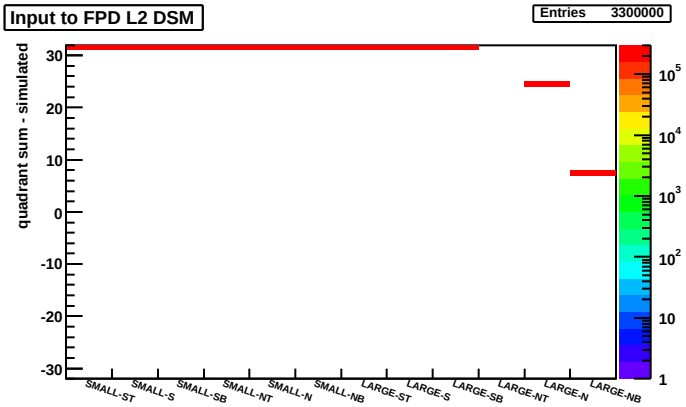

Input to FMS L1 DSM
Entries 3600000
sumA
DSM board

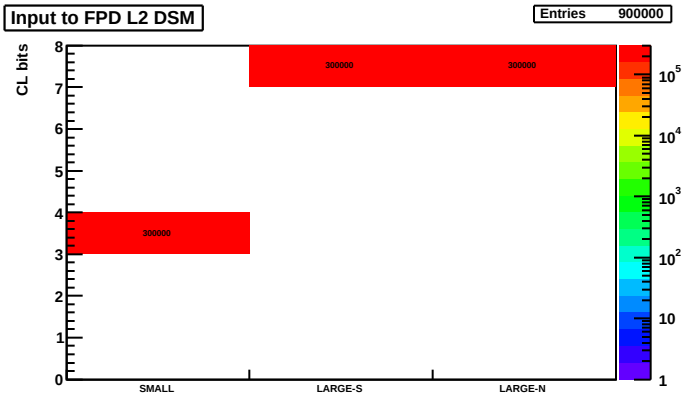

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

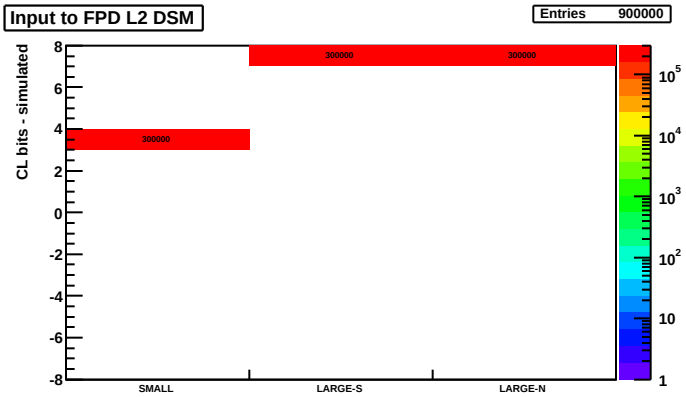

Input to FMS L1 DSM
Entries 3600000
FMS L1 HT bits
DSM board

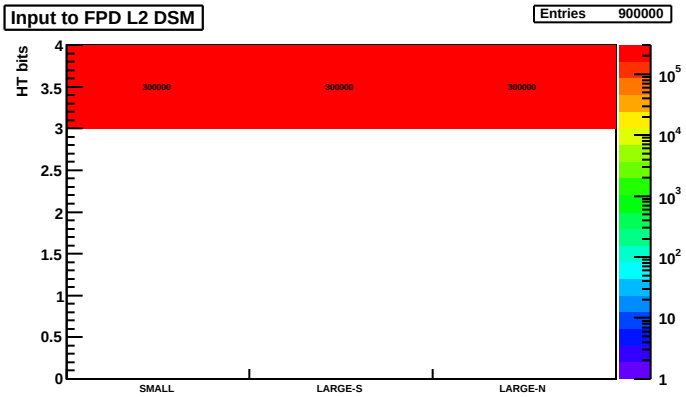

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

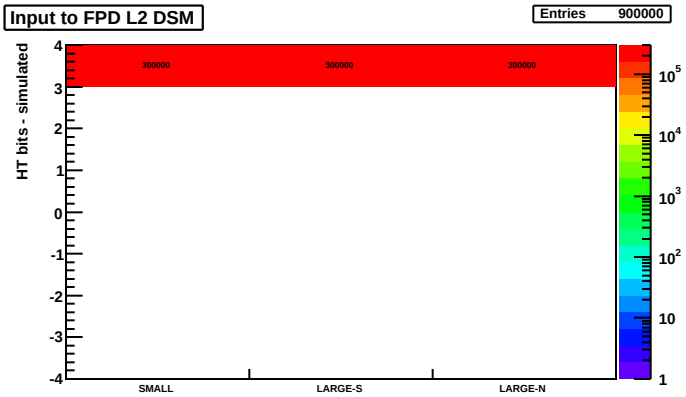

Input to FPD L2 DSM
Entries 3600000
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

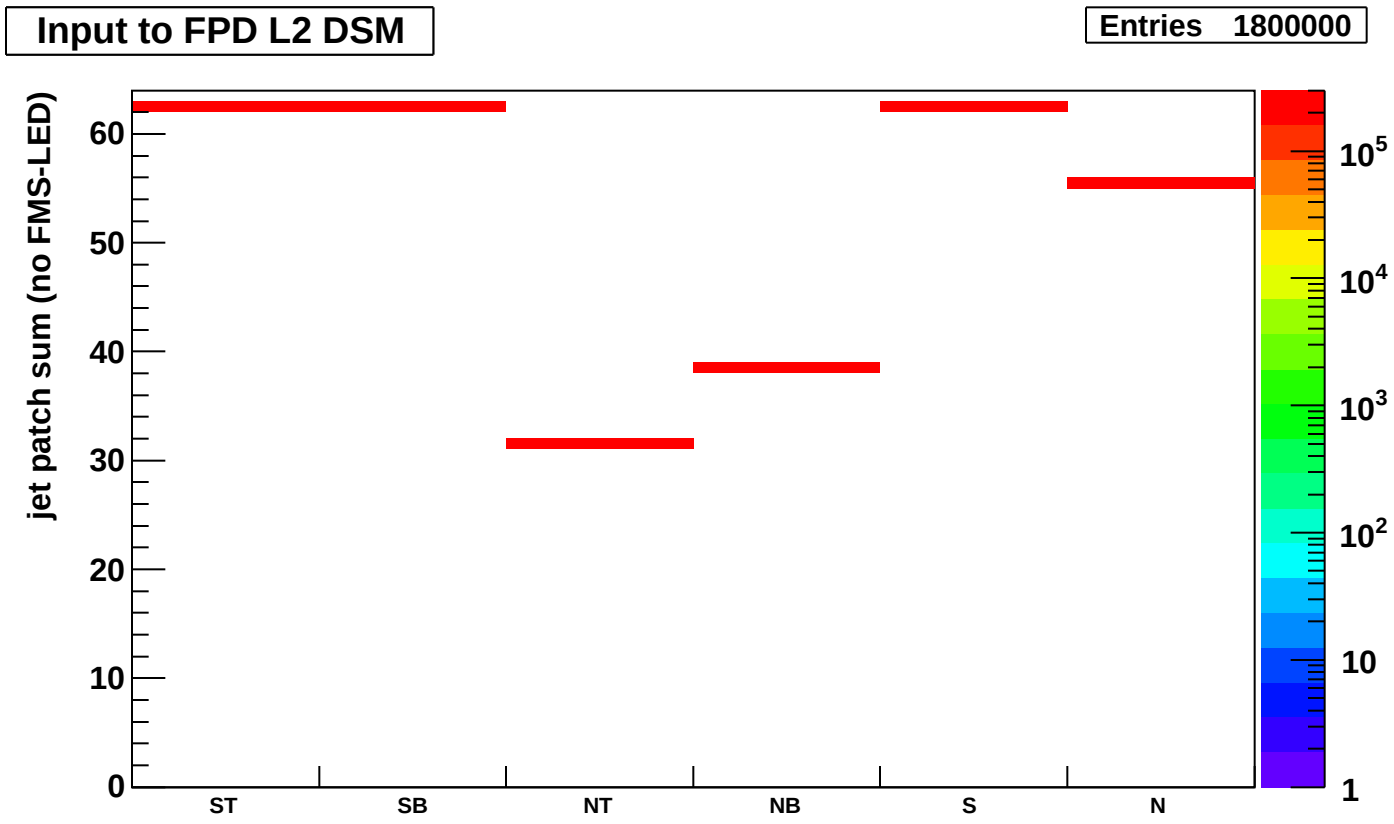

Input to FPD L2 DSM
Entries 3300000
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

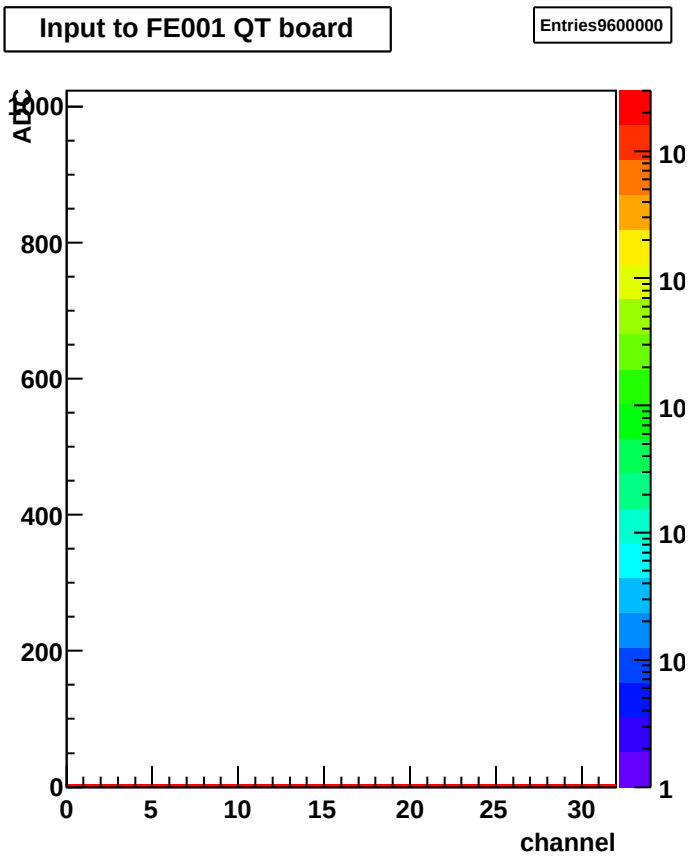

Input to FPD L2 DSM
Entries 900000
CL bits
300000
300000
300000
SMALL
LARGE-S
LARGE-N

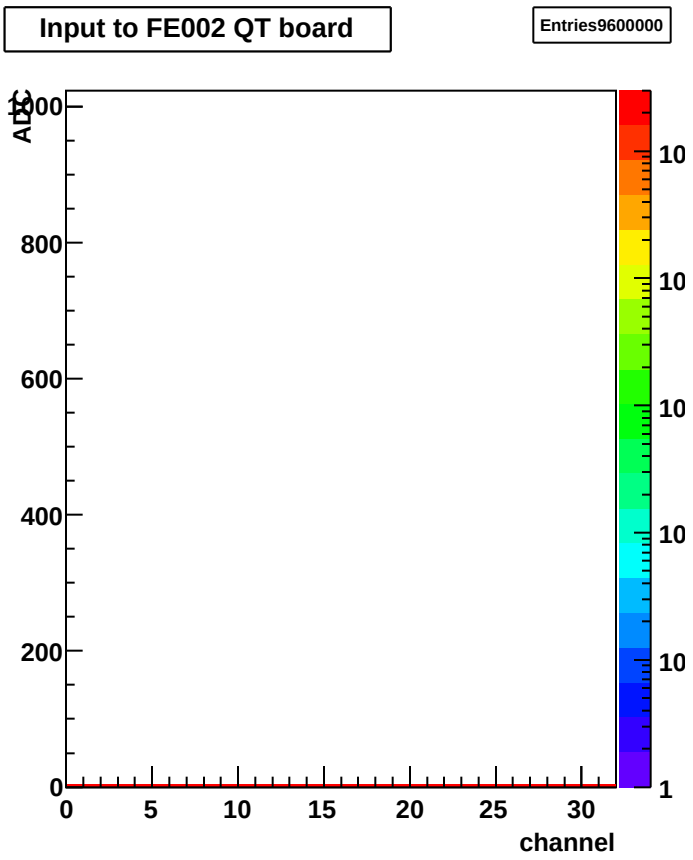

Input to FPD L2 DSM
Entries 900000
CL bits - simulated
300000
300000
300000
SMALL
LARGE-S
LARGE-N

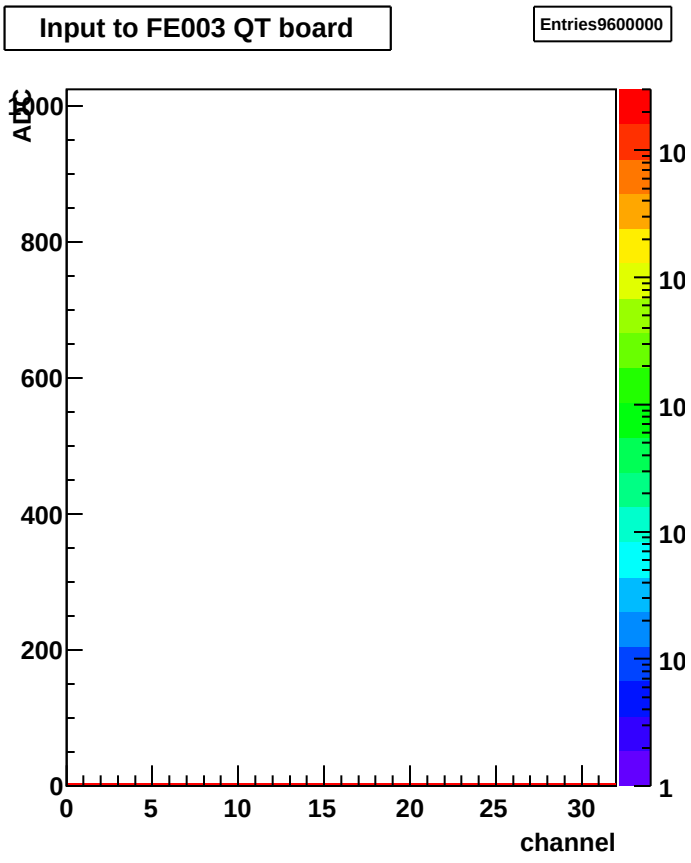

Input to FPD L2 DSM
Entries 900000
HT bits
300000
300000
300000
SMALL
LARGE-S
LARGE-N

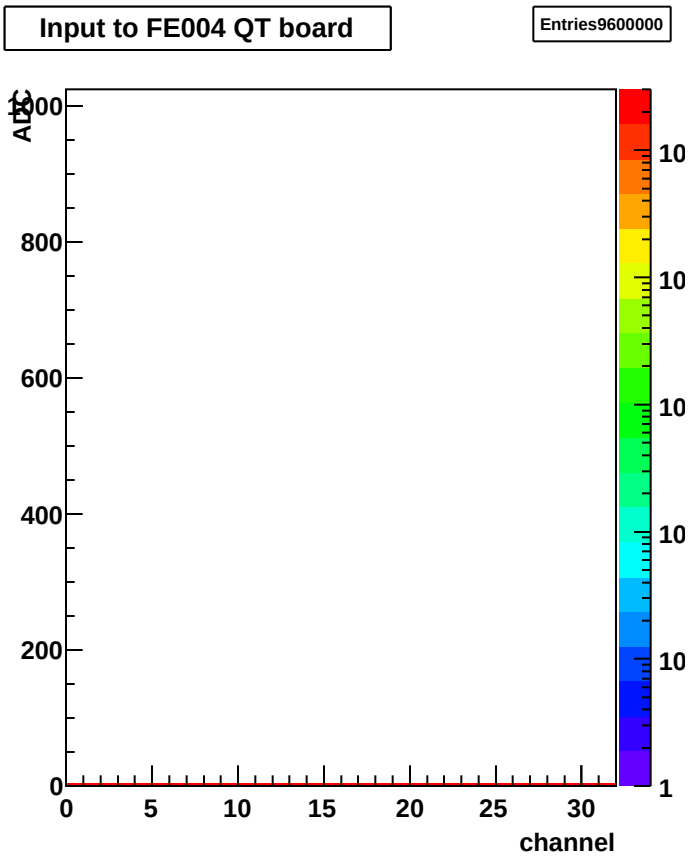

Input to FPD L2 DSM
Entries 900000
HT bits - simulated
300000
300000
300000
SMALL
LARGE-S
LARGE-N

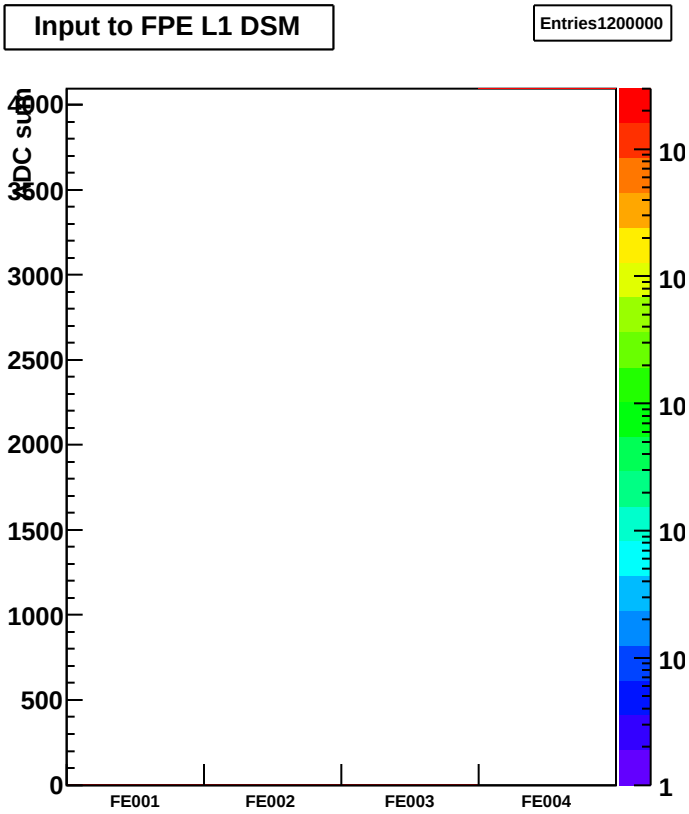

Input to FPD L2 DSM
Entries 1800000
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

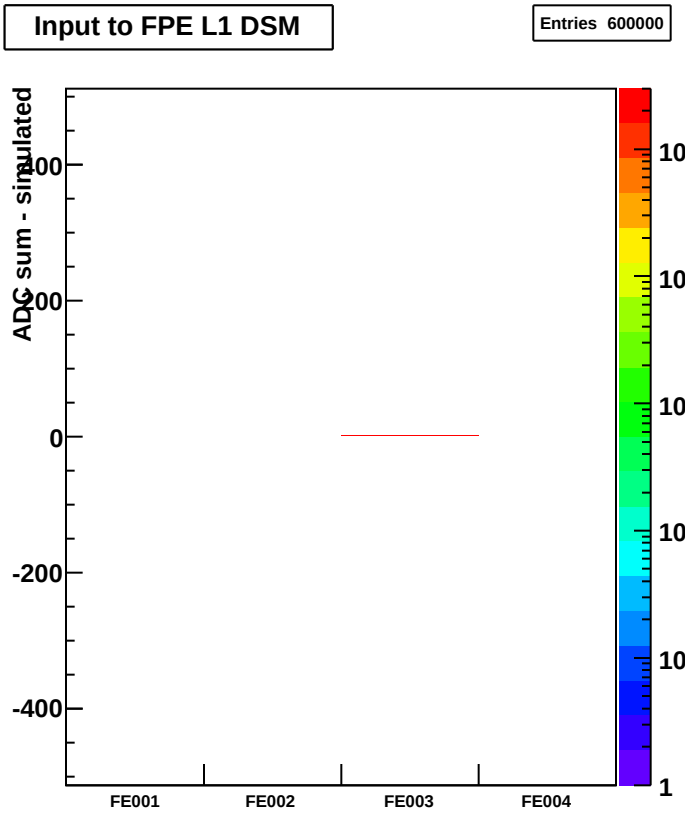

Input to FE001 QT board
Entries9600000
ADC
channel

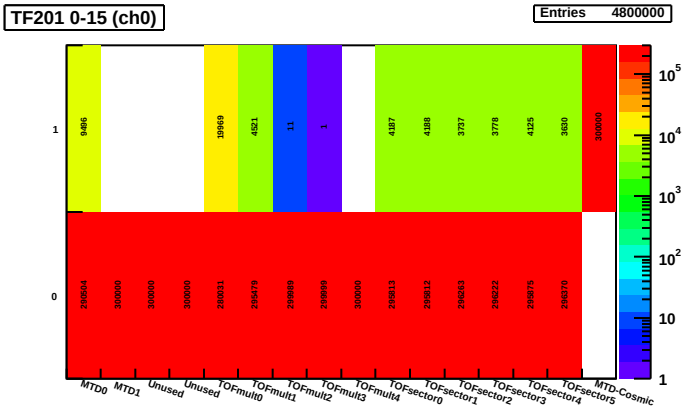

Input to FE002 QT board
Entries9600000
ADC
channel

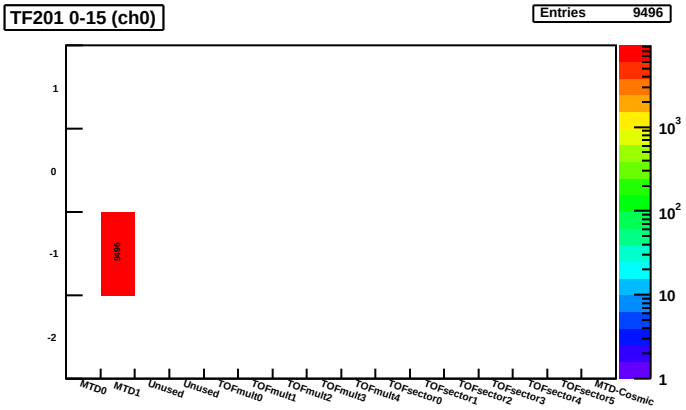

Input to FE003 QT board
Entries9600000
ADC
channel

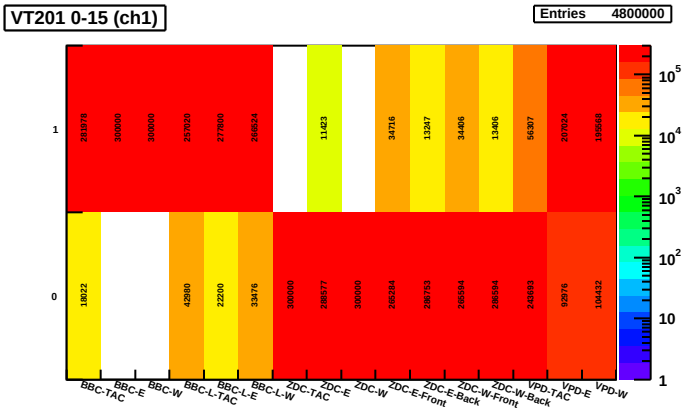

Input to FE004 QT board
Entries9600000
ADC
channel

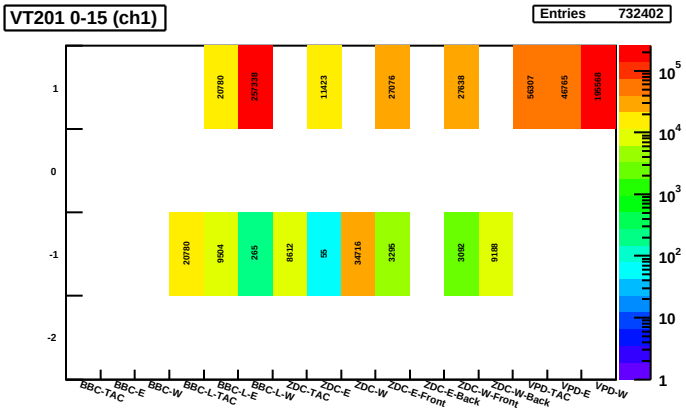

Input to FPE L1 DSM
Entries1200000
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1

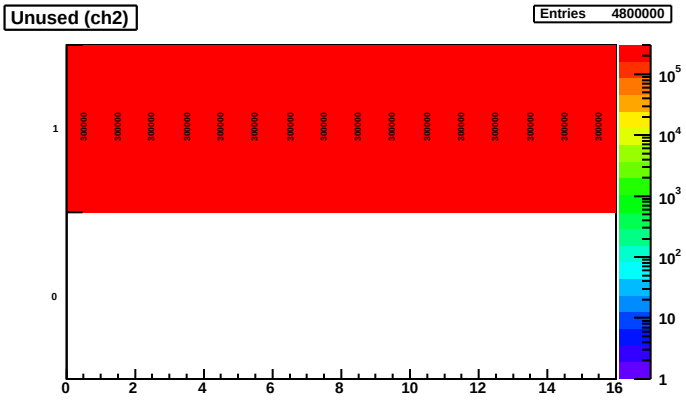

Input to FPE L1 DSM
Entries 600000
ADC sum - simulated
200
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
10
1

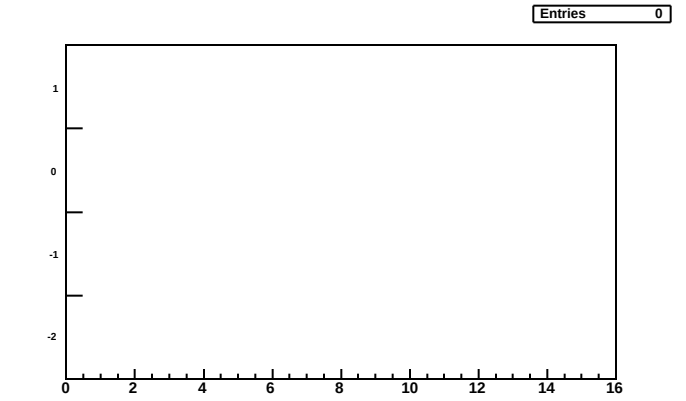

TF201 0-15 (ch0)
Entries 4800000
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

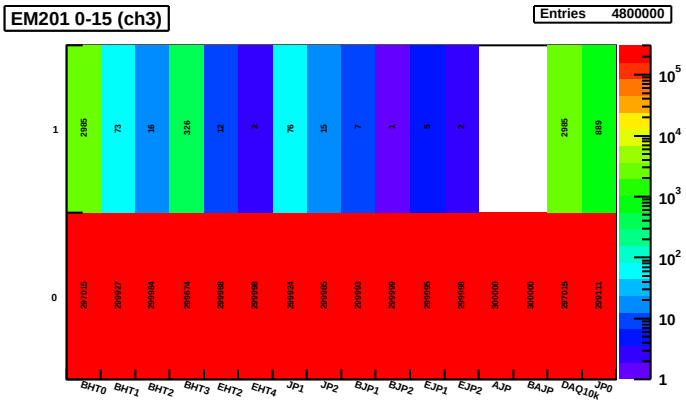

TF201 0-15 (ch0)
Entries 9496
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

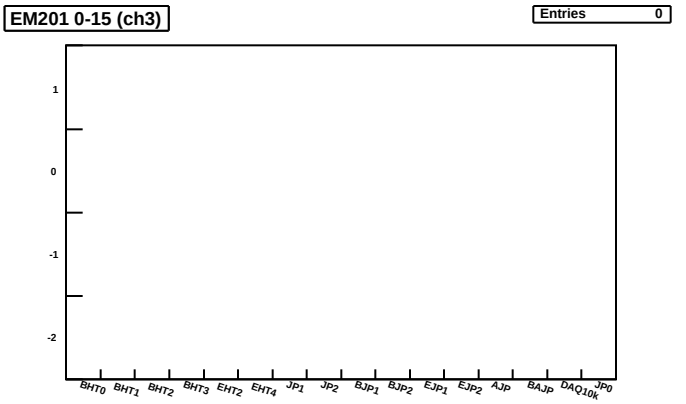

VT201 0-15 (ch1)
Entries 4800000
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 732402
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

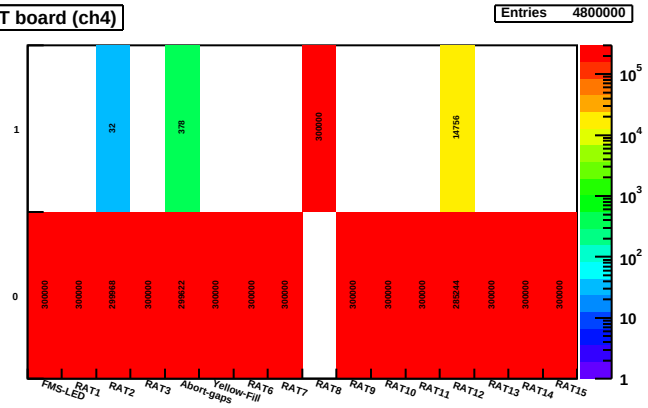

Unused (ch2)
Entries 4800000

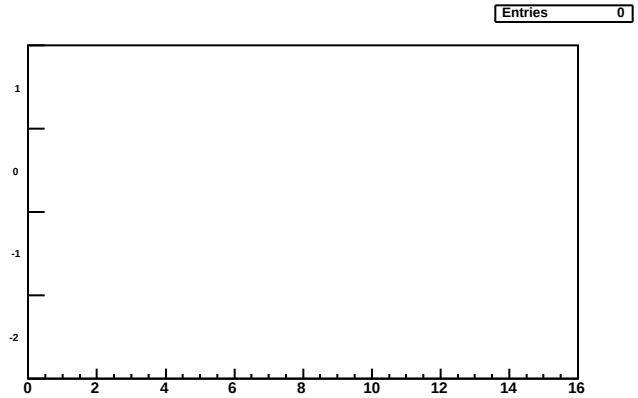

Entries 0


EM201 0-15 (ch3)
Entries 4800000
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

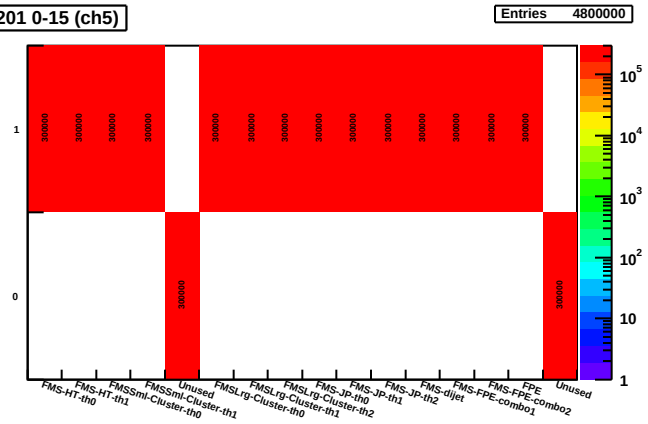

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

RAT board (ch4)

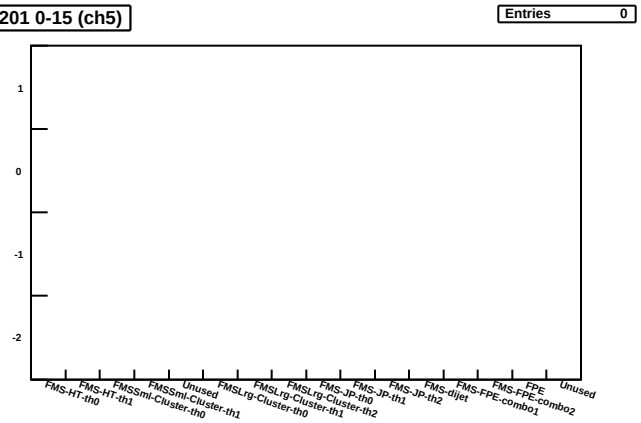




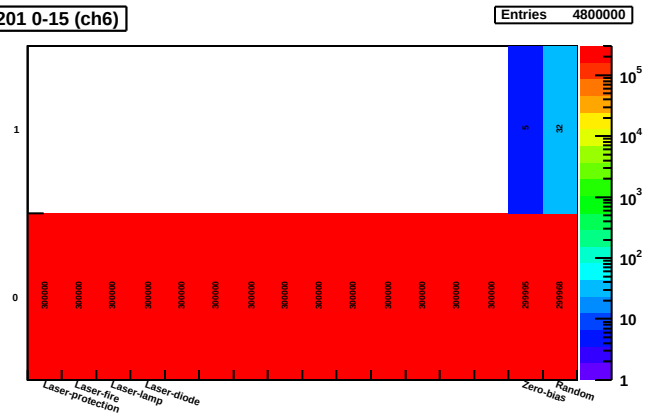
FP201 0-15 (ch5)

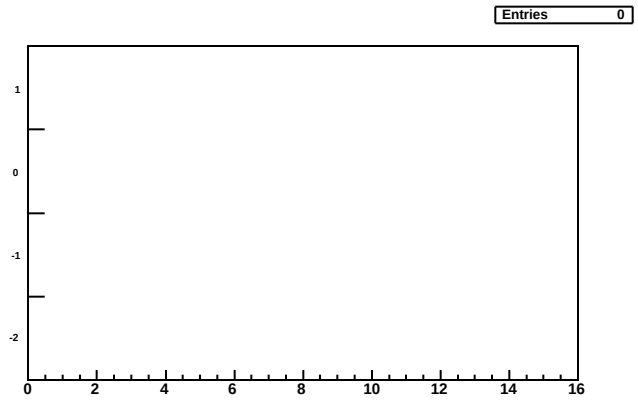
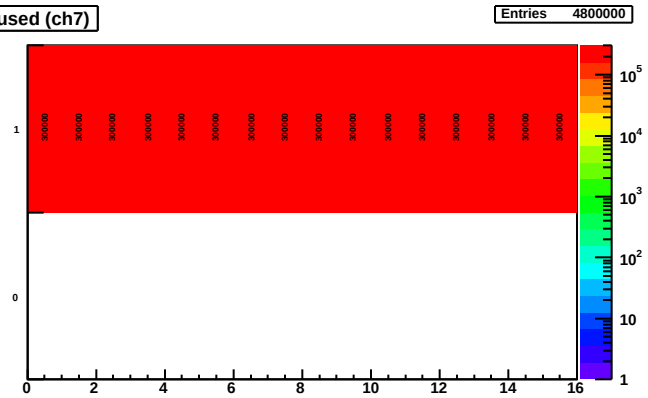
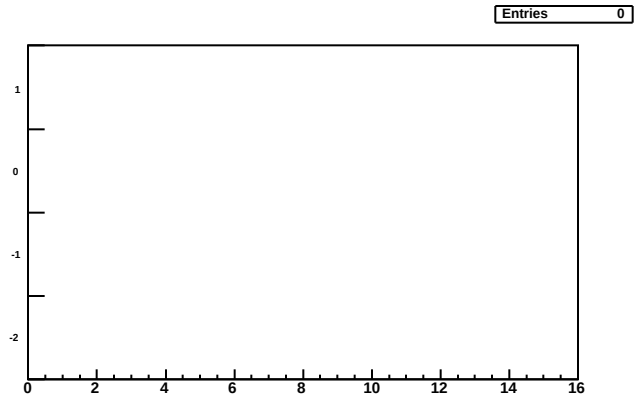


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)