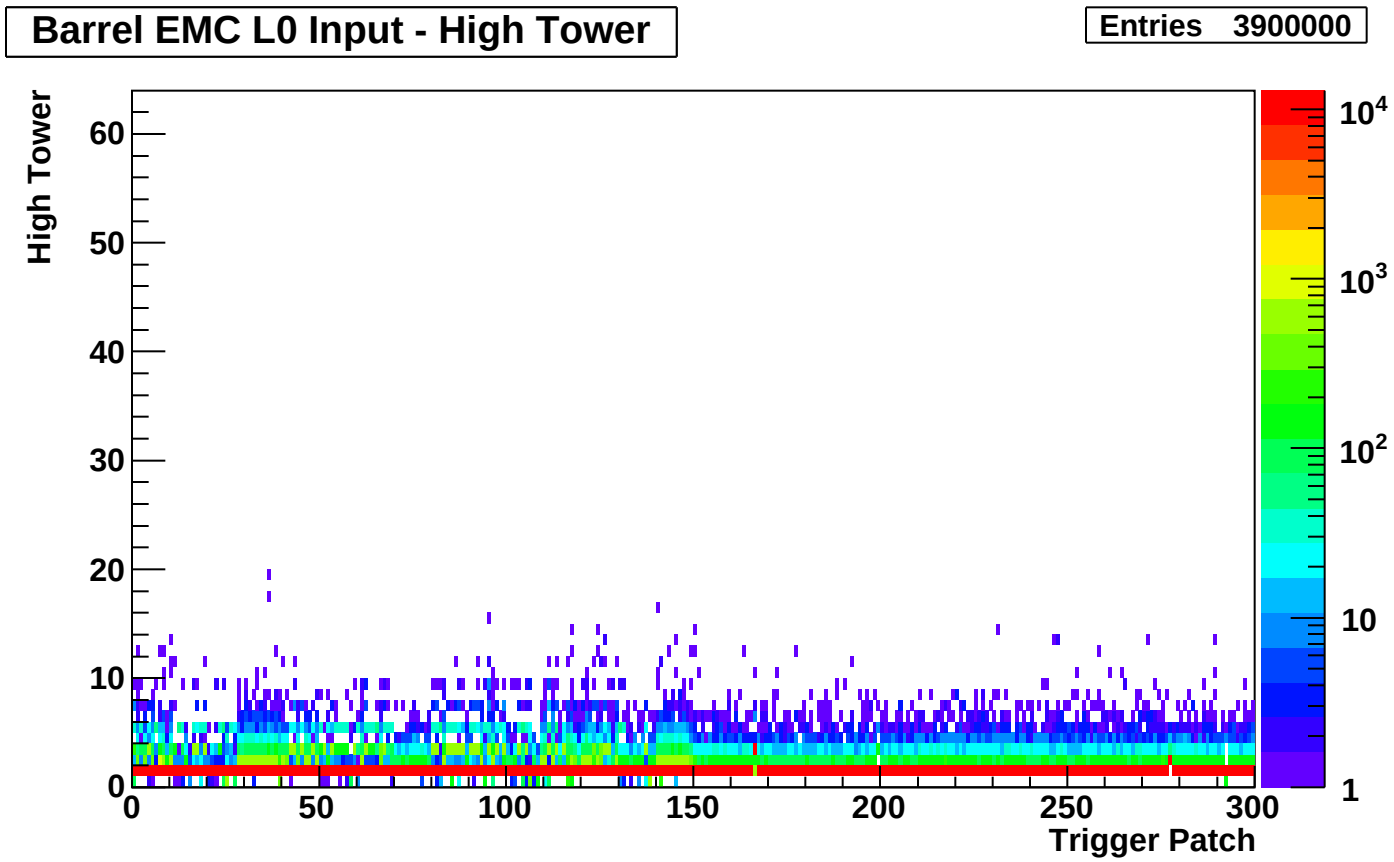
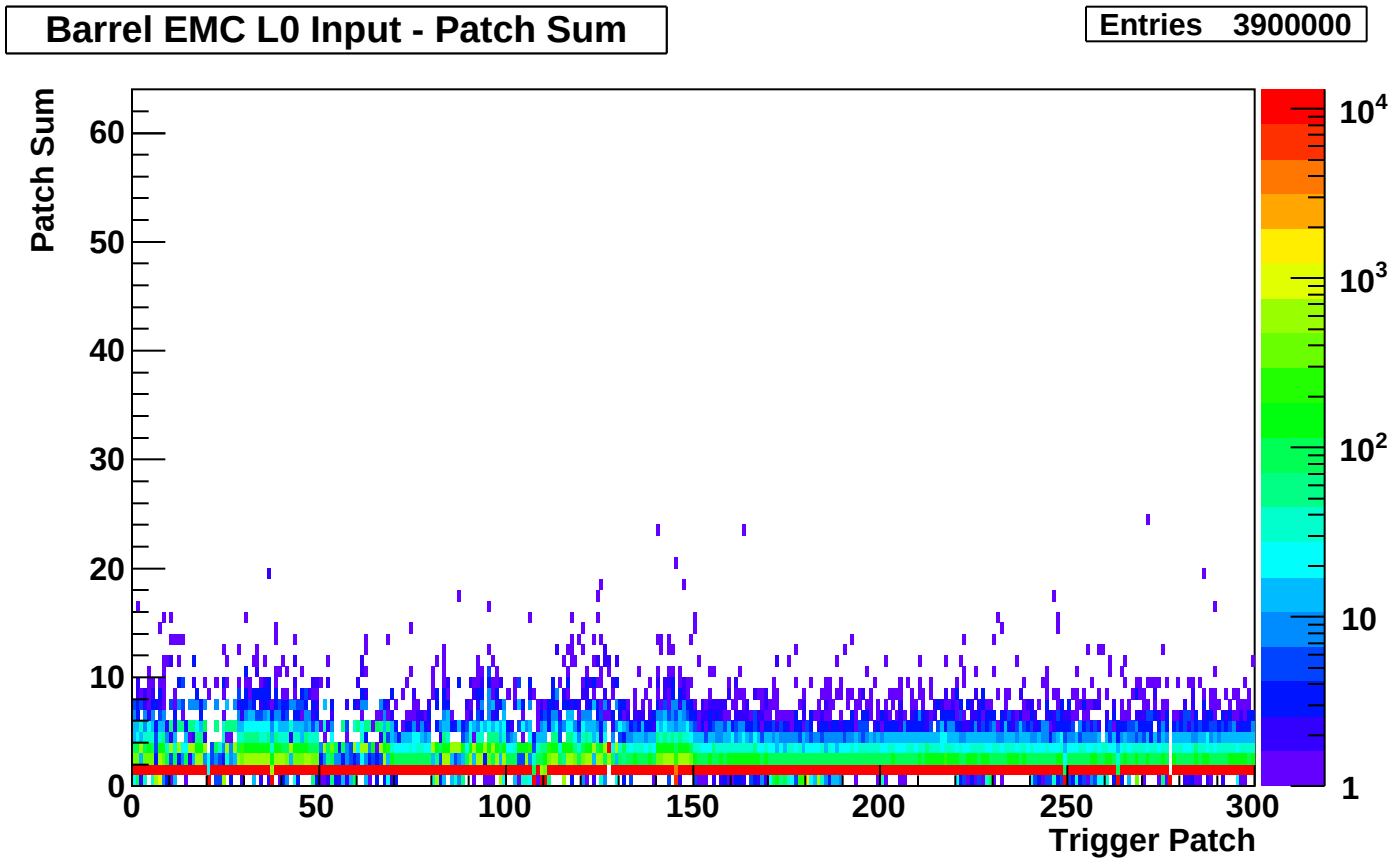
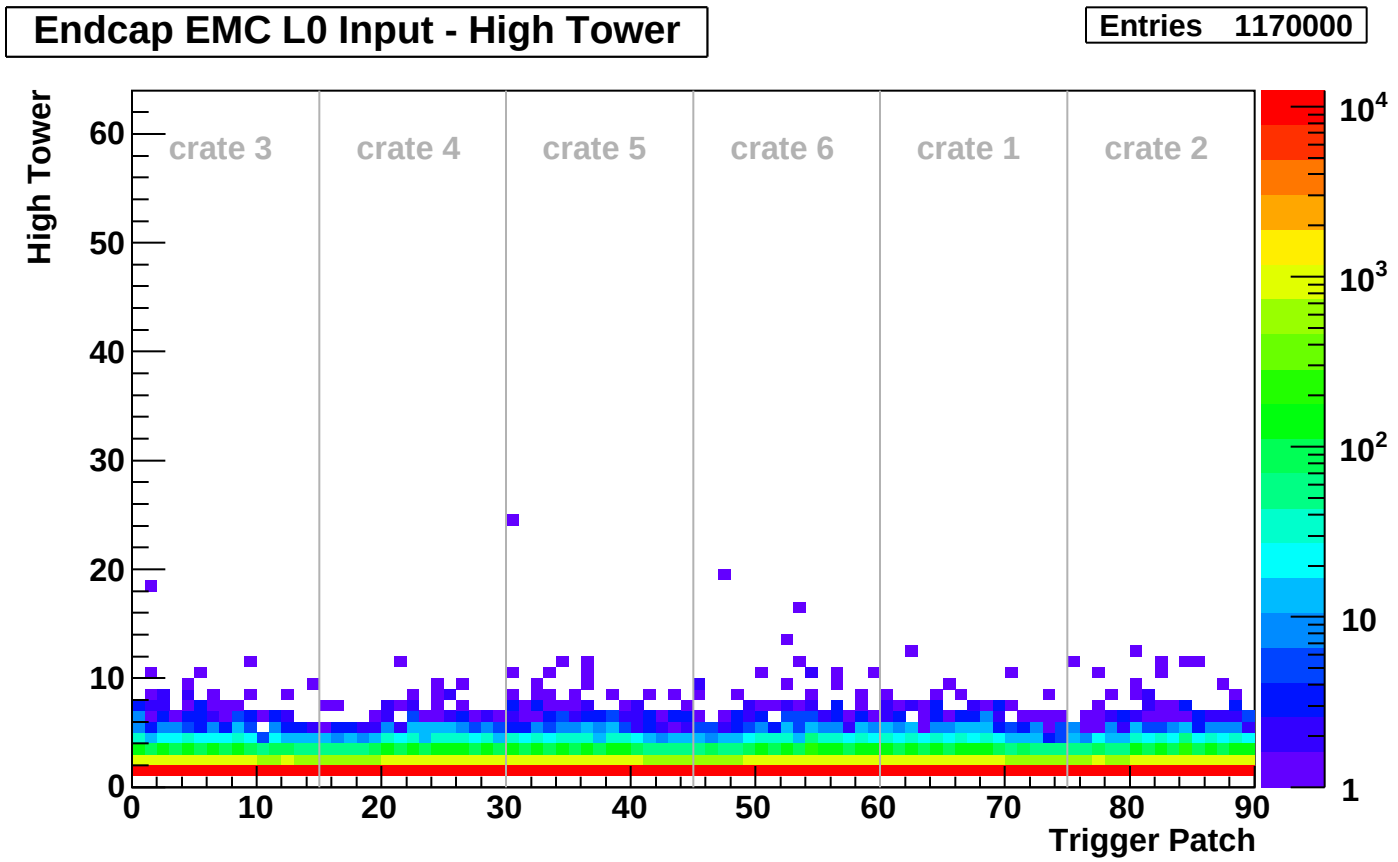
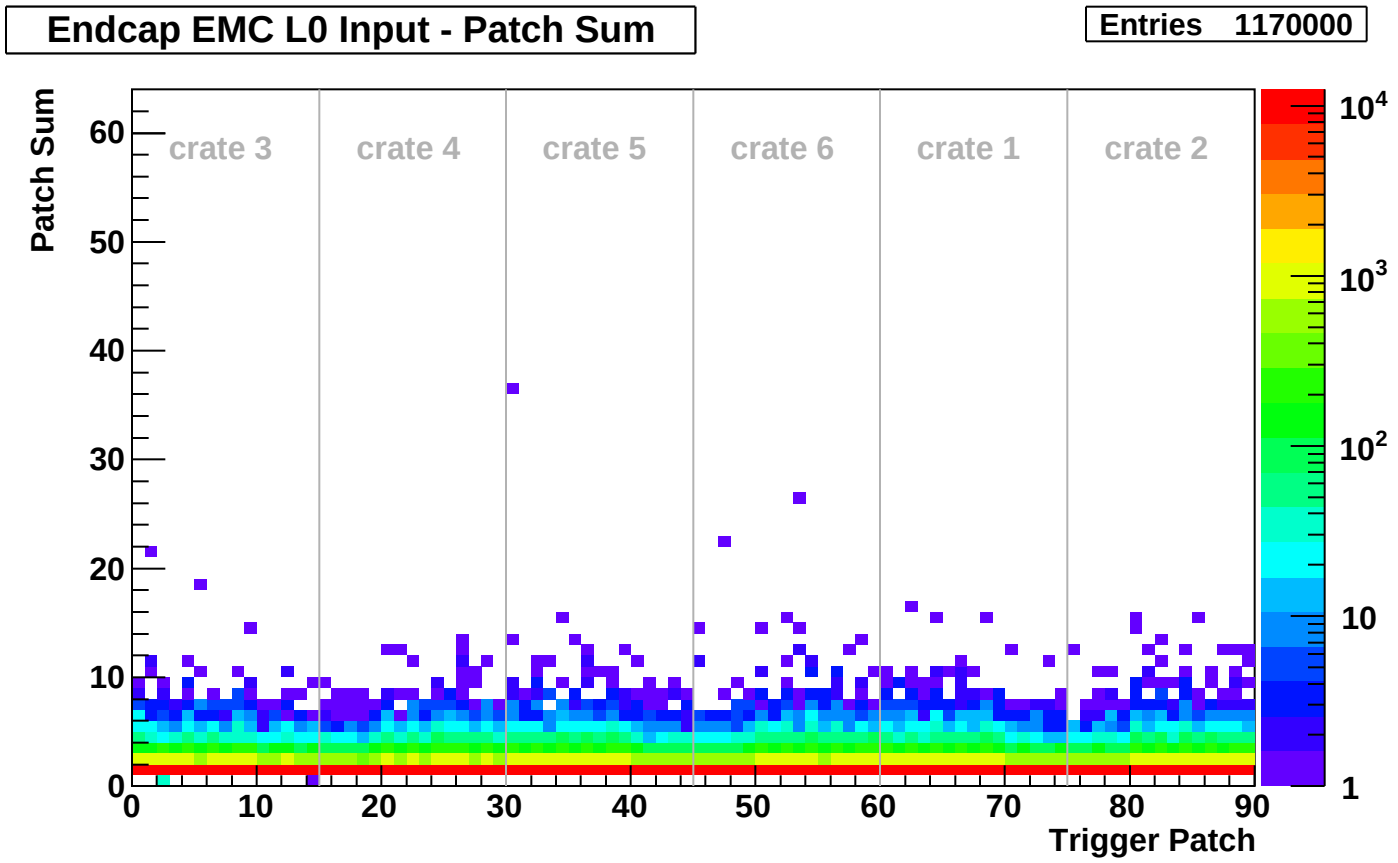
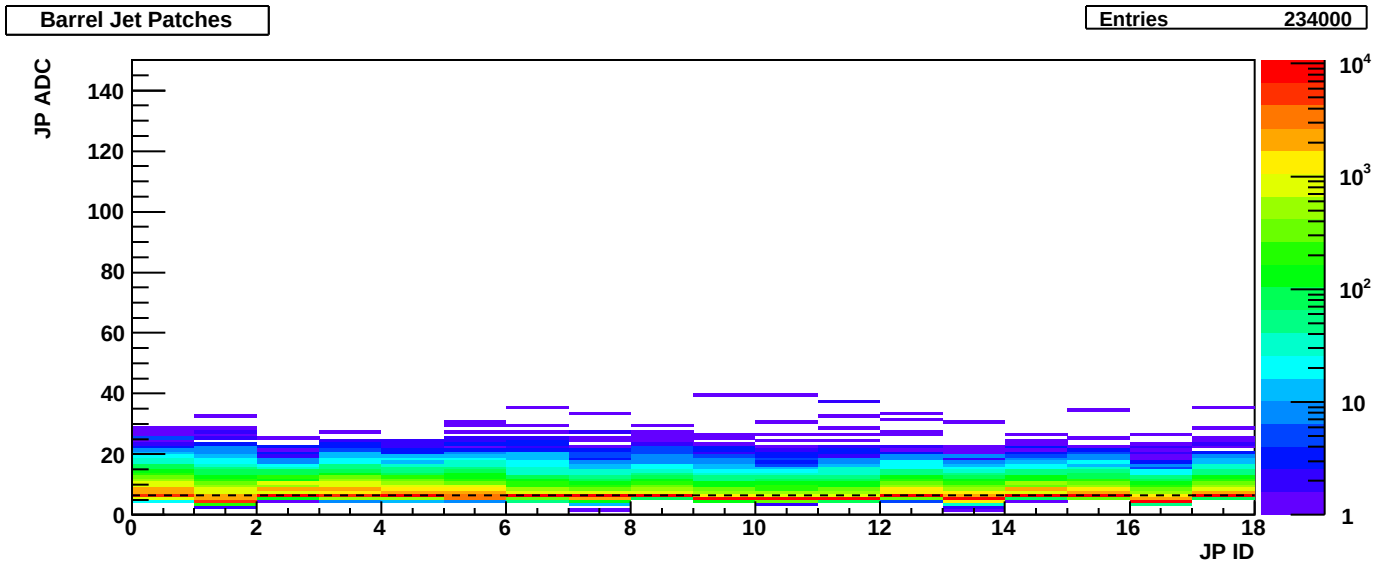
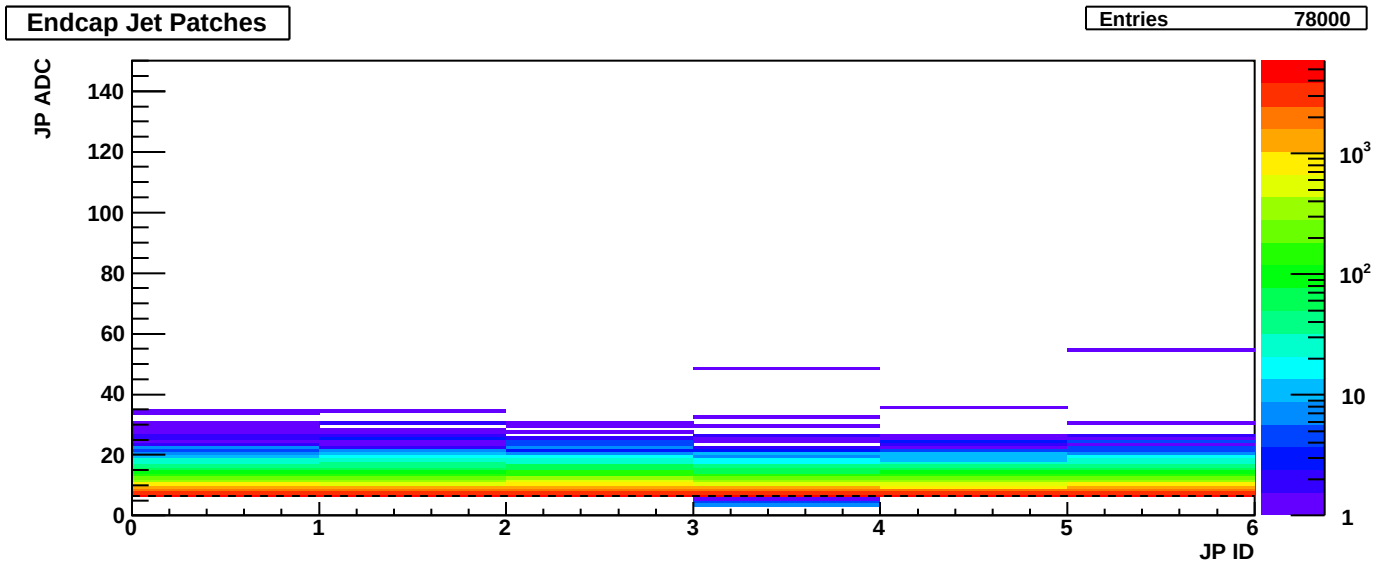

Barrel EMC L0 Input - High Tower
Entries 3900000
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

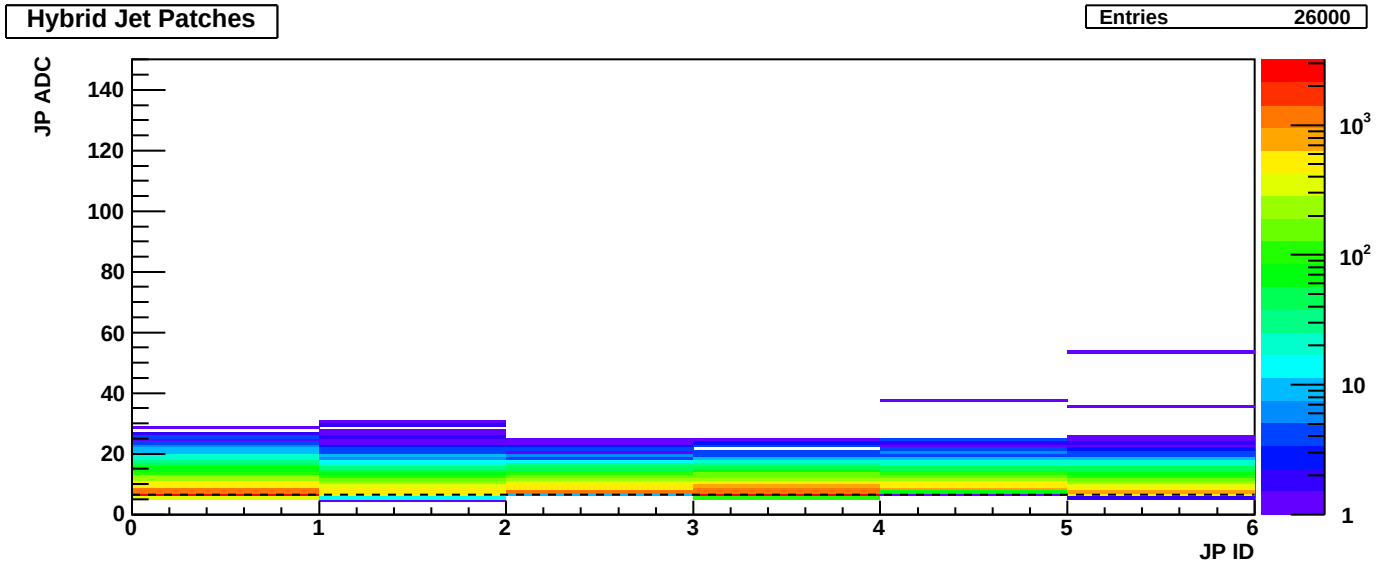

Barrel EMC L0 Input - Patch Sum
Entries 3900000
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

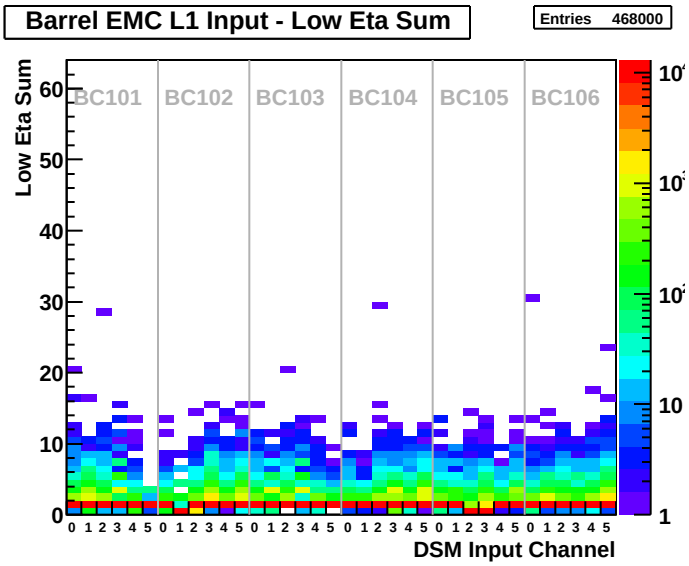

Endcap EMC L0 Input - High Tower
Entries 1170000
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

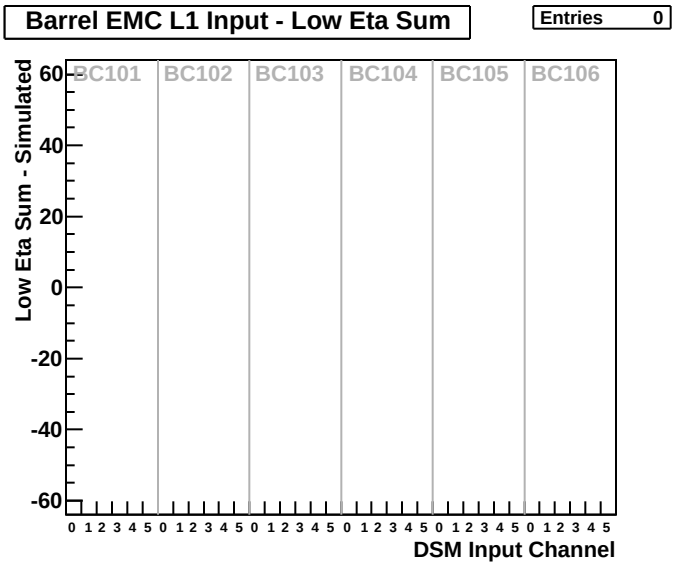

Endcap EMC L0 Input - Patch Sum
Entries 1170000
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

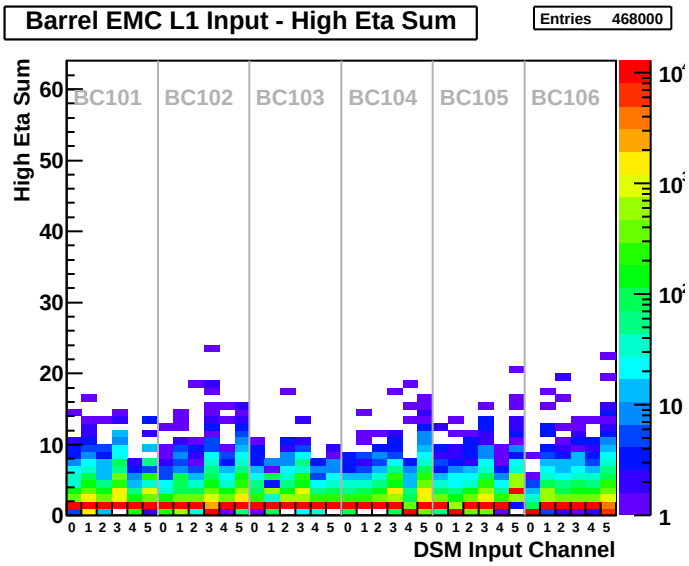

Barrel Jet Patches
Entries 234000
JP ADC
JP ID

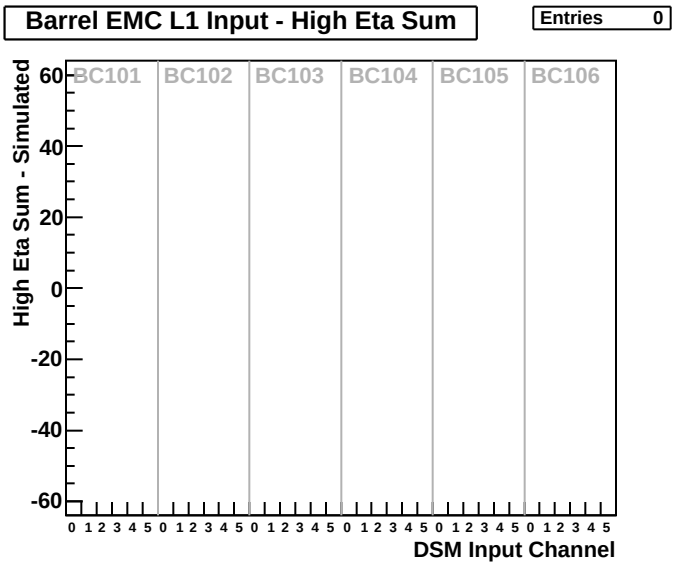

Endcap Jet Patches
Entries 78000
JP ADC
JP ID

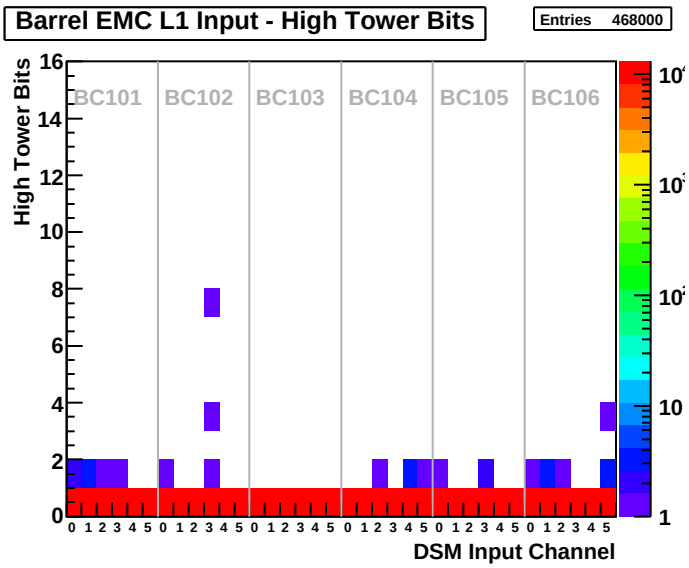

Hybrid Jet Patches
Entries 26000
JP ADC
JP ID

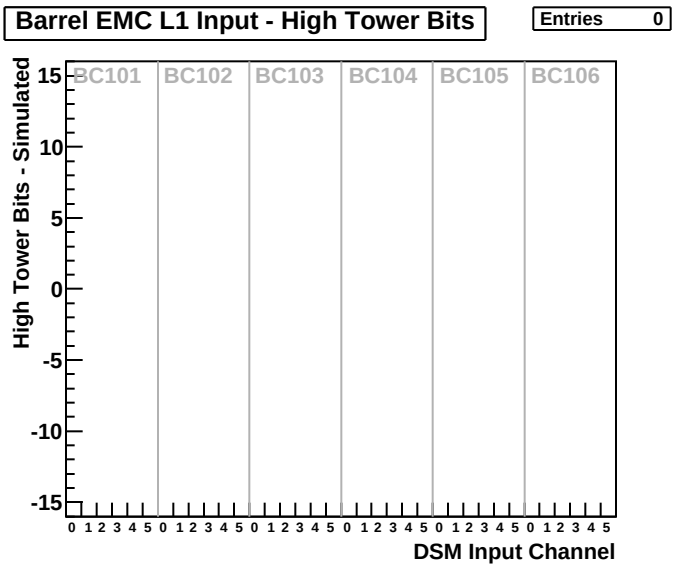

Barrel EMC L1 Input - Low Eta Sum
Entries 468000
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

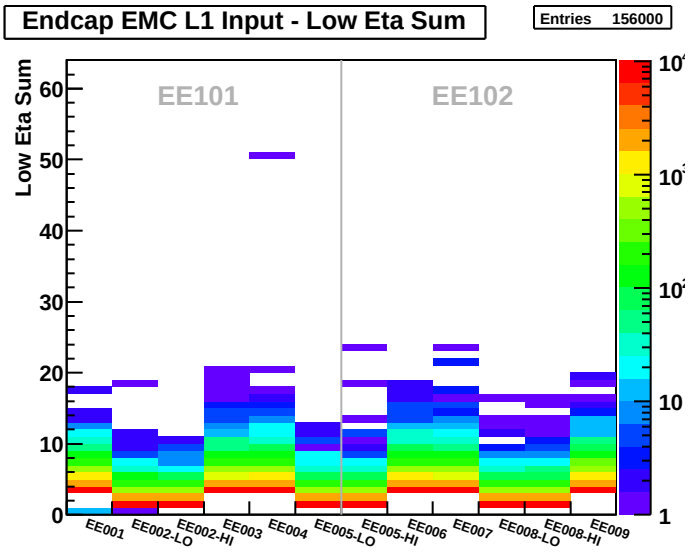

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

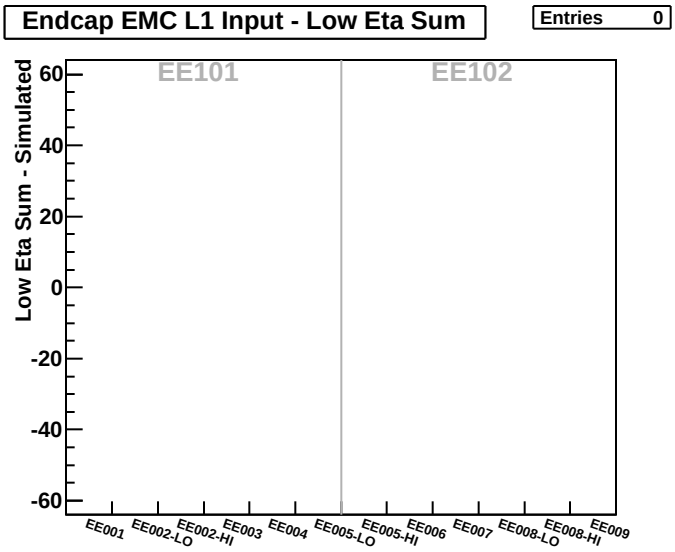

Barrel EMC L1 Input - High Eta Sum
Entries 468000
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

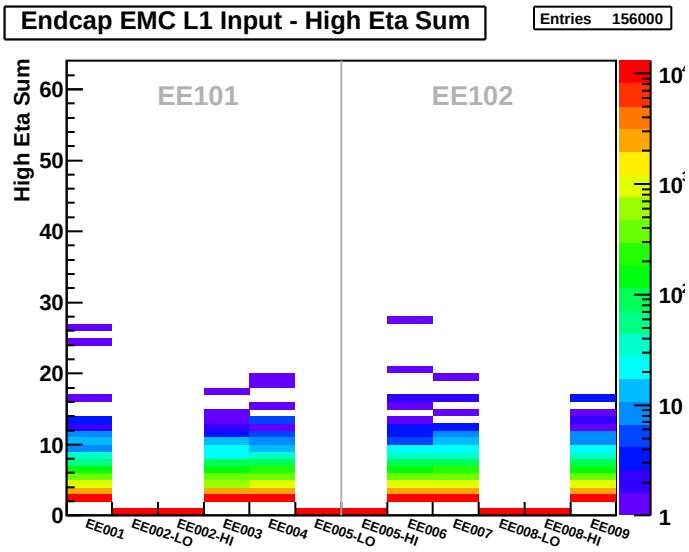

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

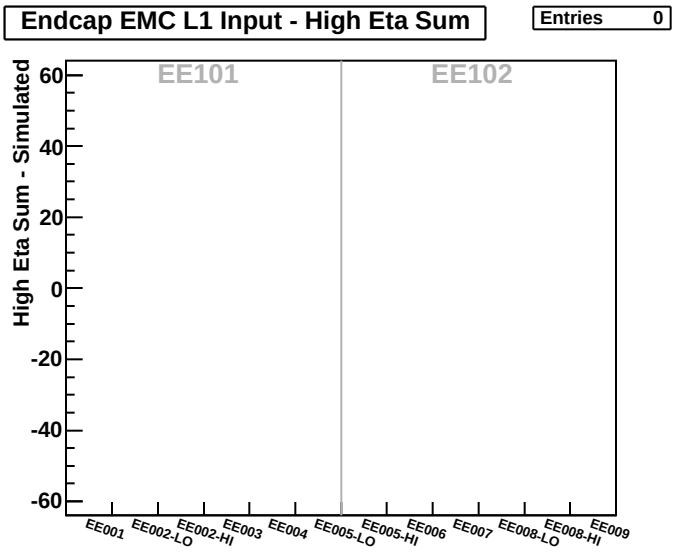

Barrel EMC L1 Input - High Tower Bits
Entries 468000
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

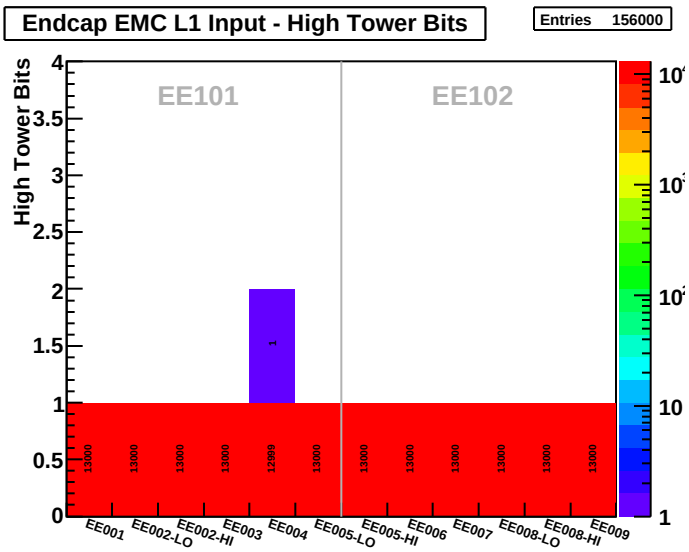

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

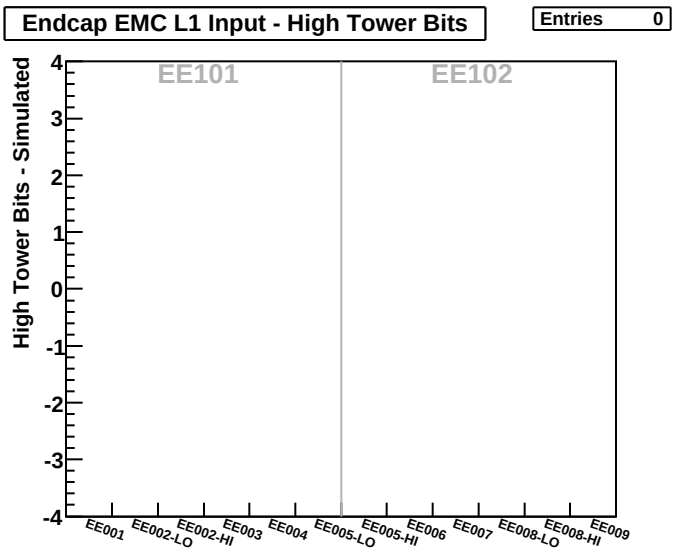

Endcap EMC L1 Input - Low Eta Sum
Entries 156000
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

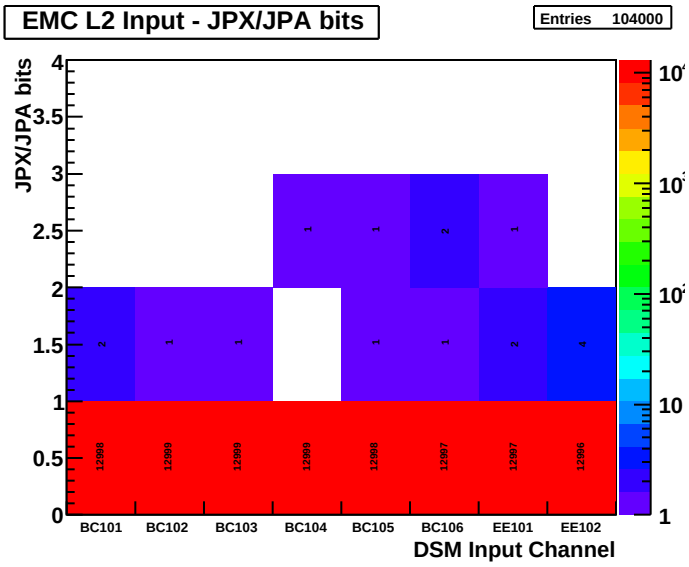

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

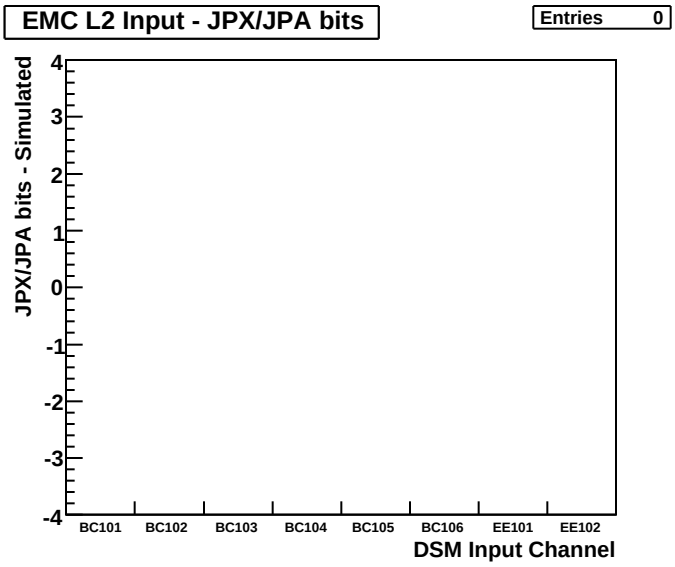

Endcap EMC L1 Input - High Eta Sum
Entries 156000
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

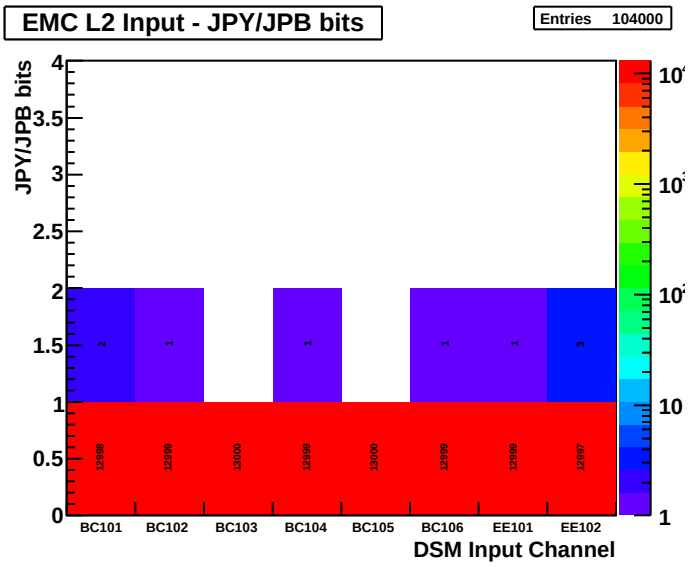

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

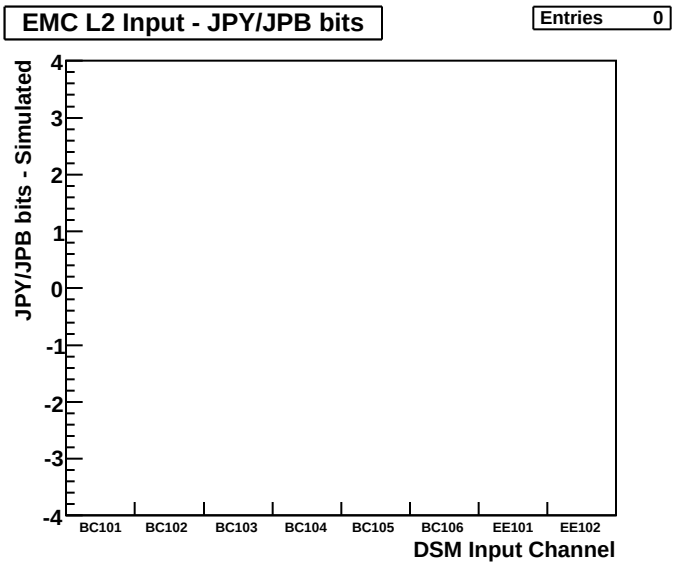

Endcap EMC L1 Input - High Tower Bits
Entries 156000
High Tower Bits
EE101
EE102
13000 13000 13000 13000 12999 13000 13000 13000 13000 13000 13000 13000
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

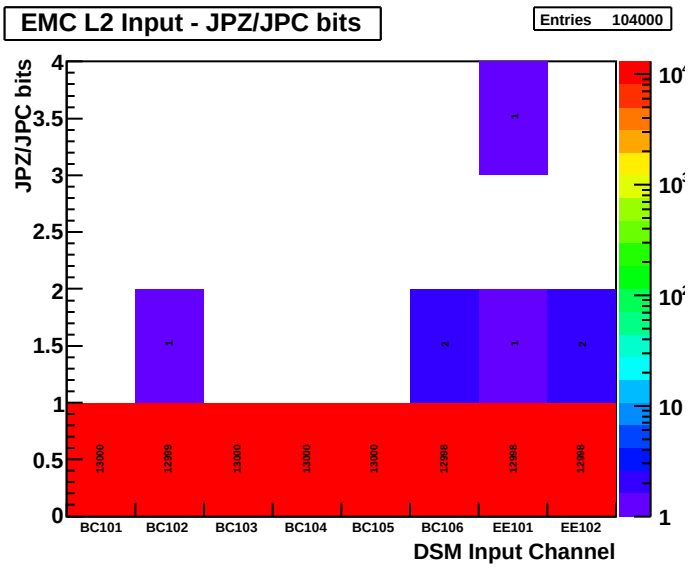

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

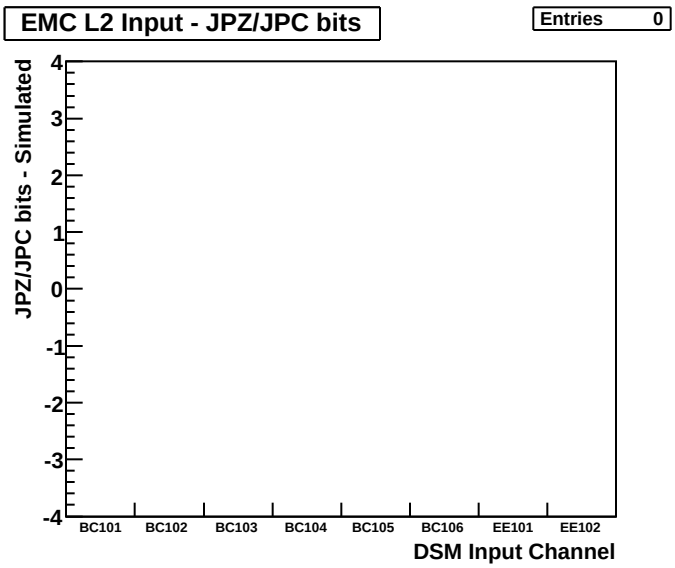

EMC L2 Input - JPX/JPA bits
Entries 104000
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

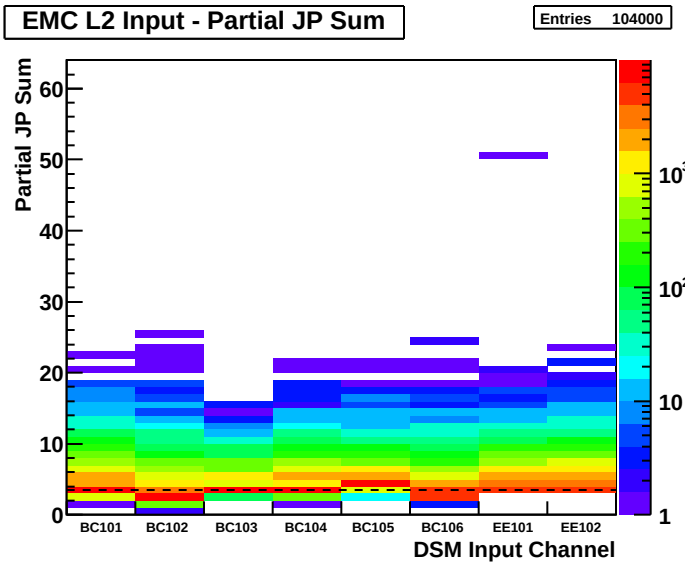

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

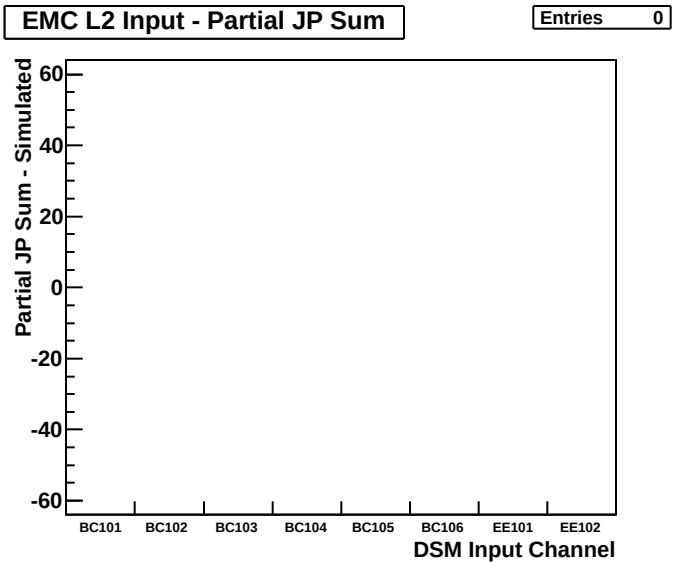

EMC L2 Input - JPY/JPB bits
Entries 104000
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

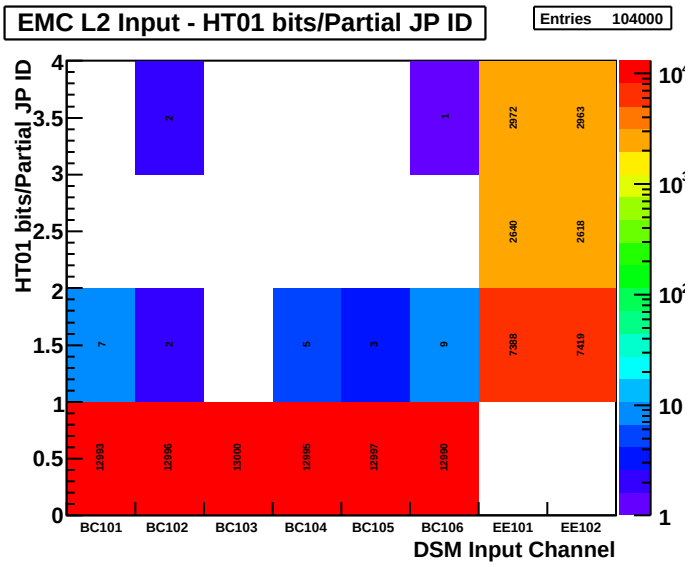

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

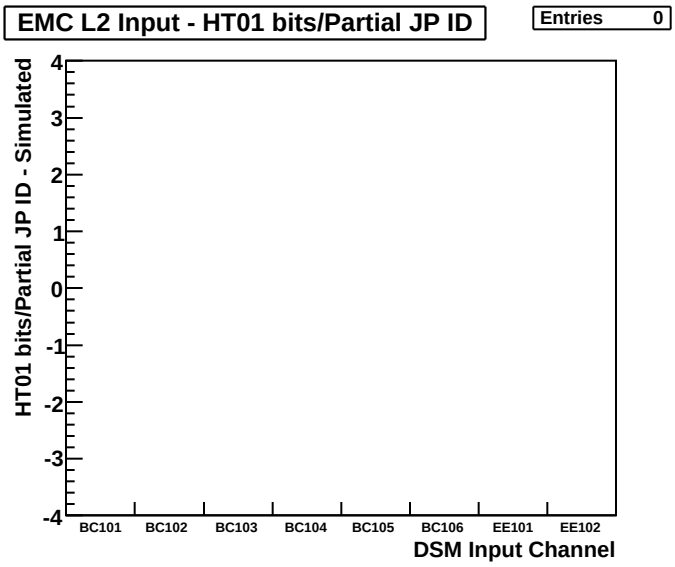

EMC L2 Input - JPZ/JPC bits
Entries 104000
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

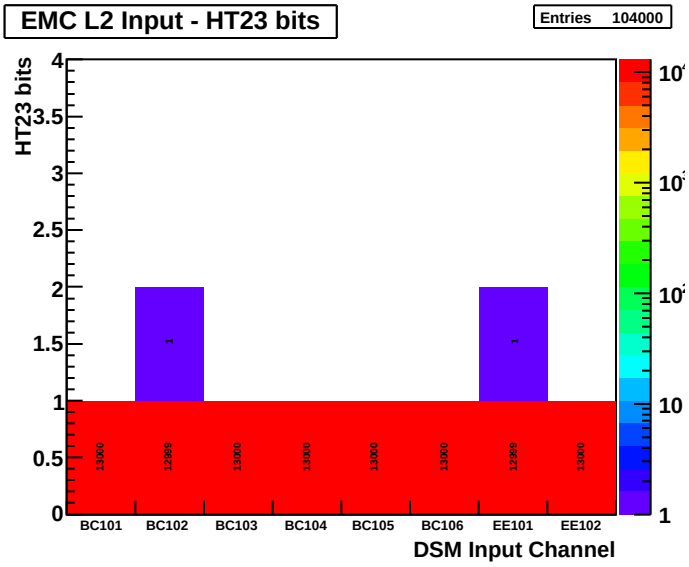

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

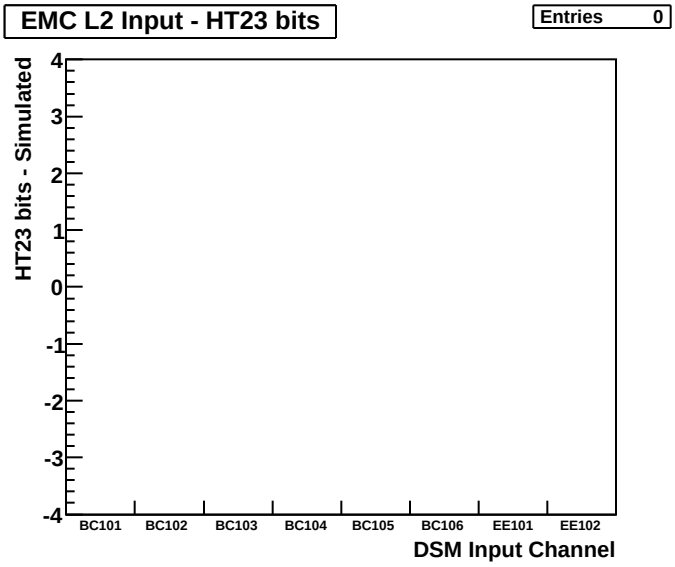

EMC L2 Input - Partial JP Sum
Entries 104000
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

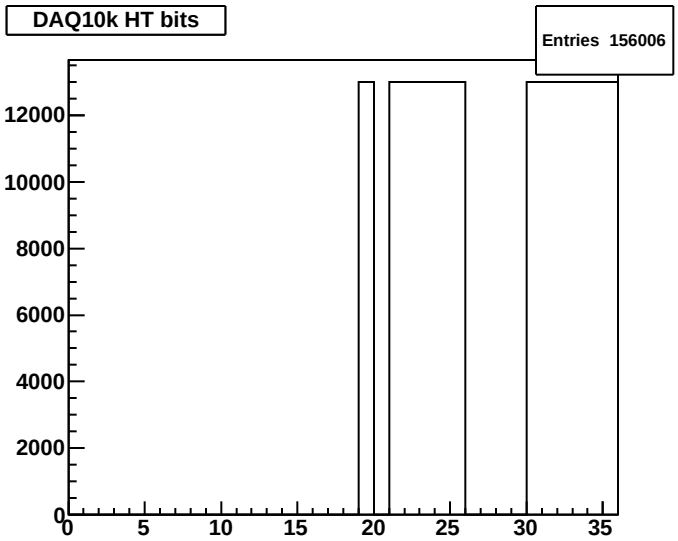

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

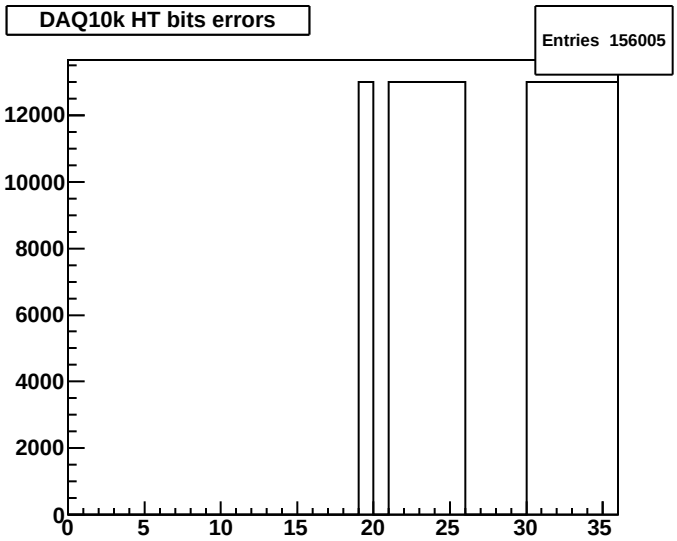

EMC L2 Input - HT01 bits/Partial JP ID
Entries 104000
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

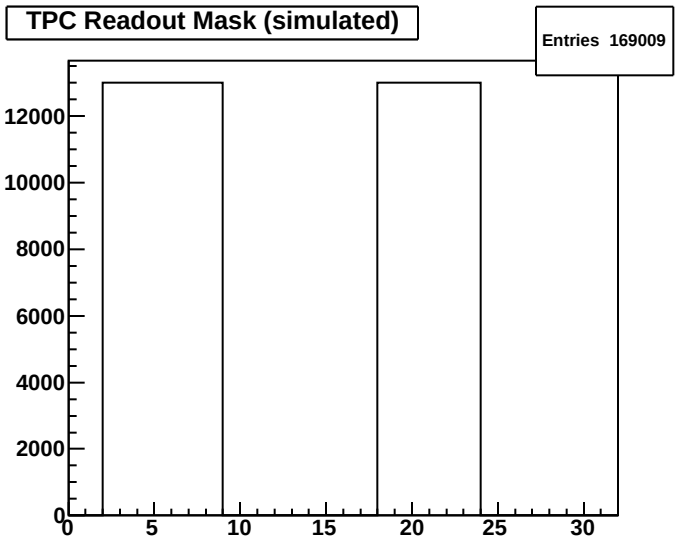

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

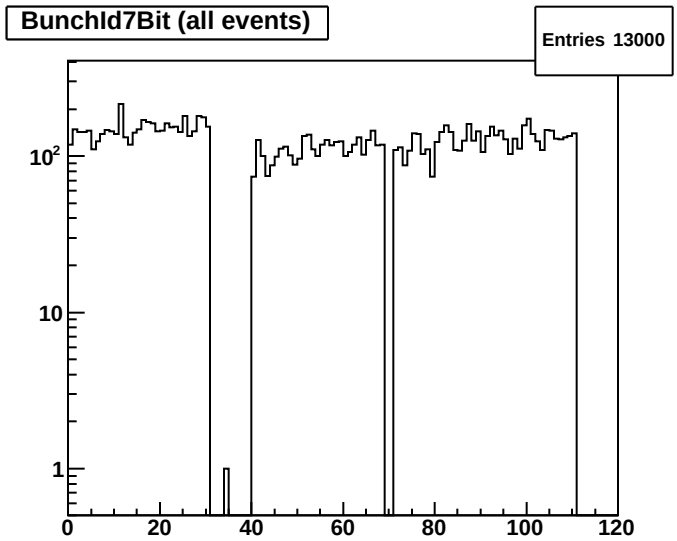

EMC L2 Input - HT23 bits
Entries 104000
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

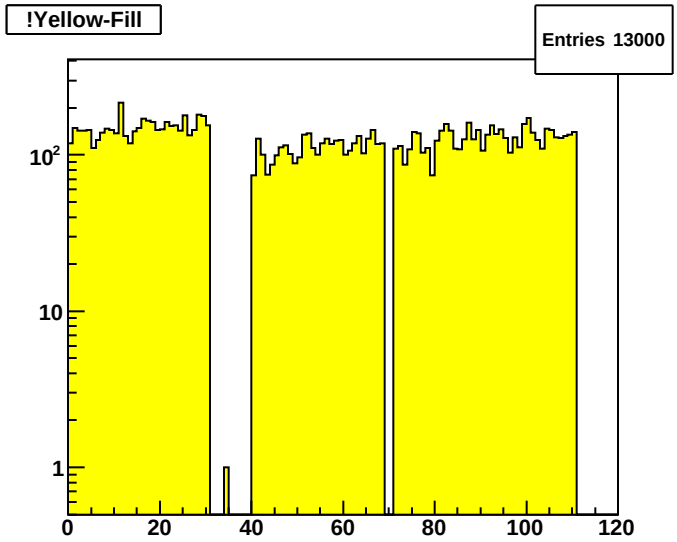

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

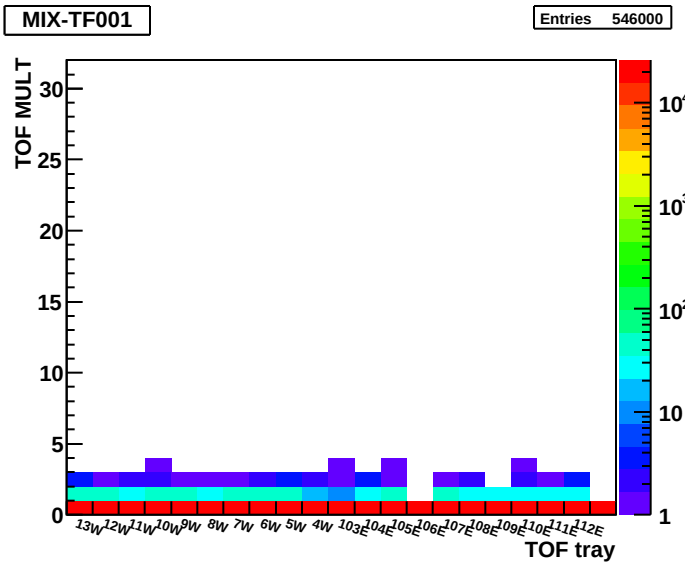

DAQ10k HT bits
Entries 156006
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

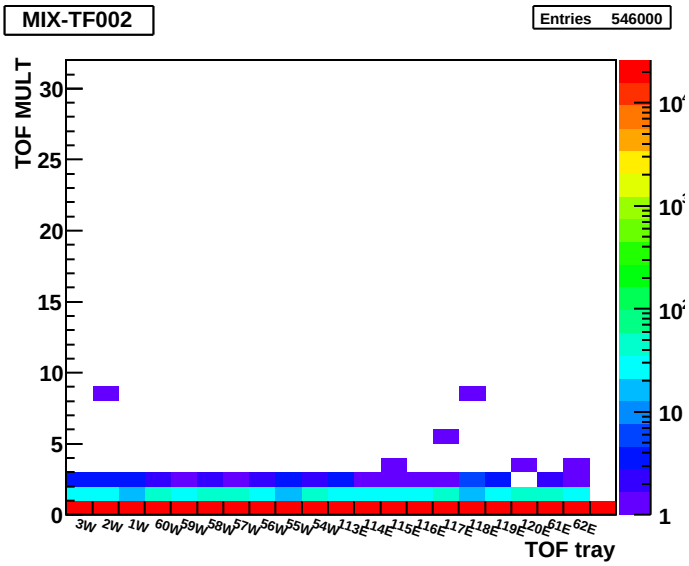

DAQ10k HT bits errors
Entries 156005
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

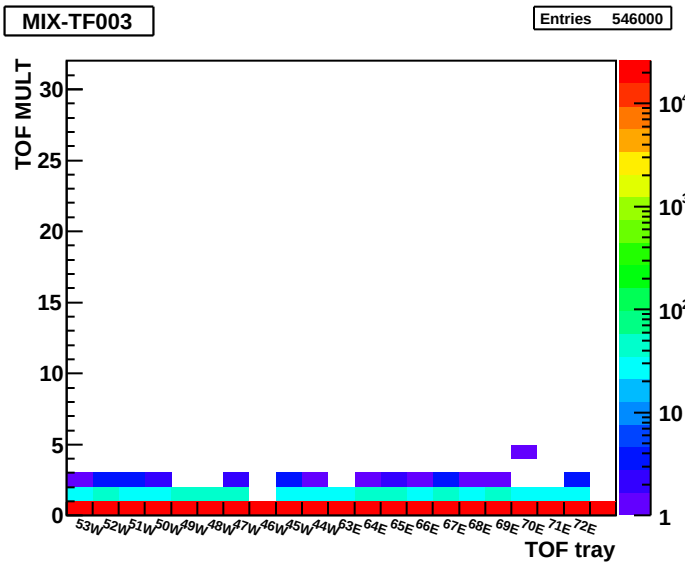

TPC Readout Mask (simulated)
Entries 169009
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30

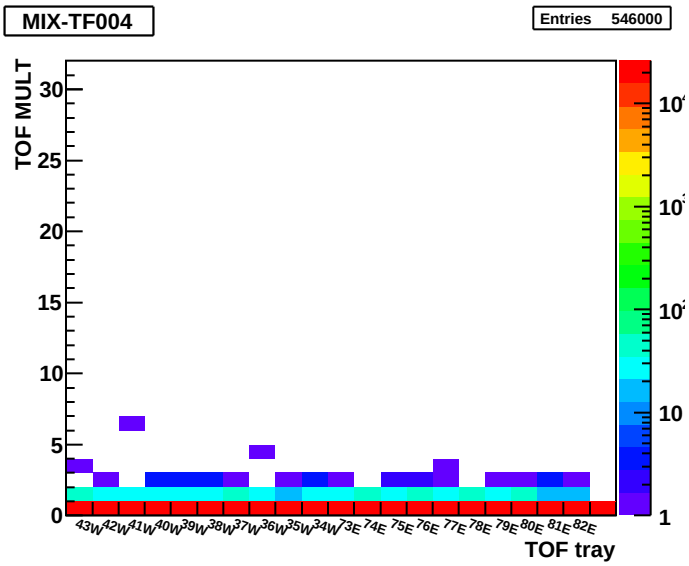

BunchId7Bit (all events)
Entries 13000
10^2
10
1
0 20 40 60 80 100 120

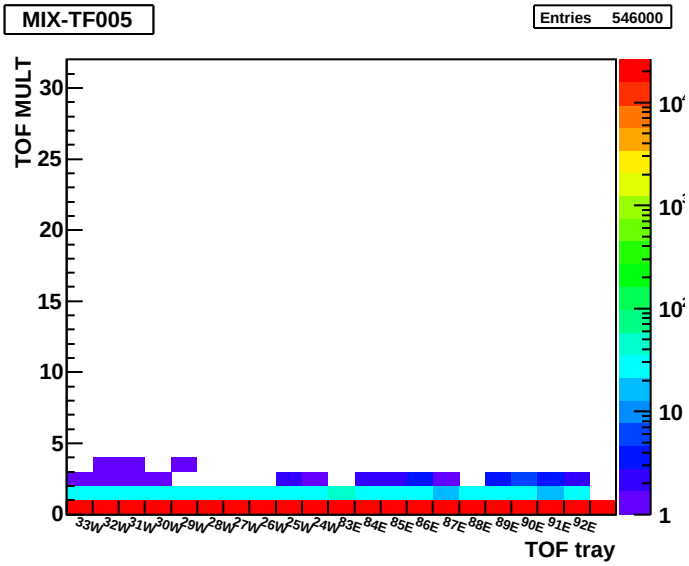

!Yellow-Fill
Entries 13000
10^2
10
1
0 20 40 60 80 100 120

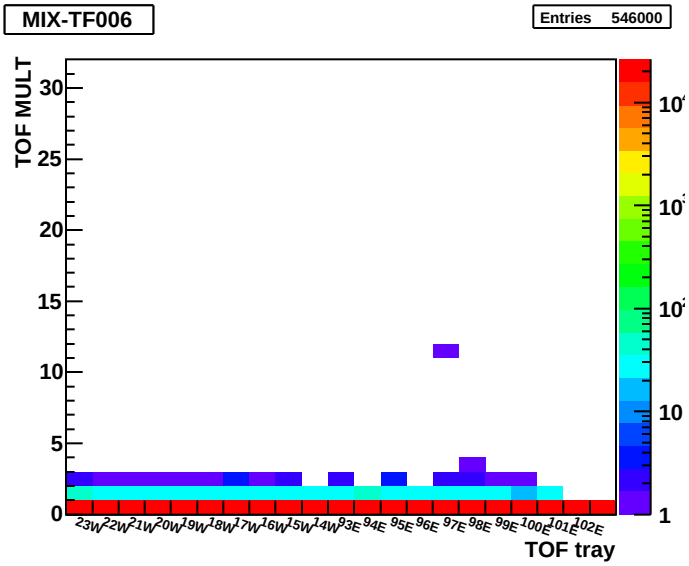

MIX-TF001
Entries 546000
TOF MULT
TOF tray

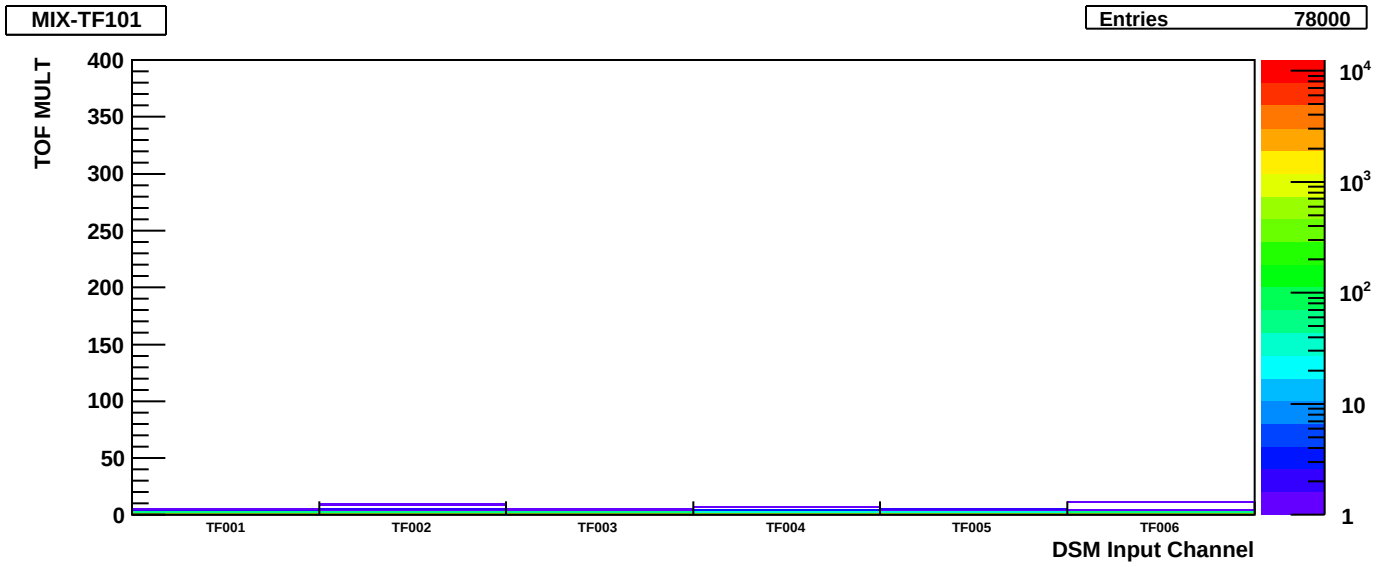

MIX-TF002
Entries 546000
TOF MULT
TOF tray

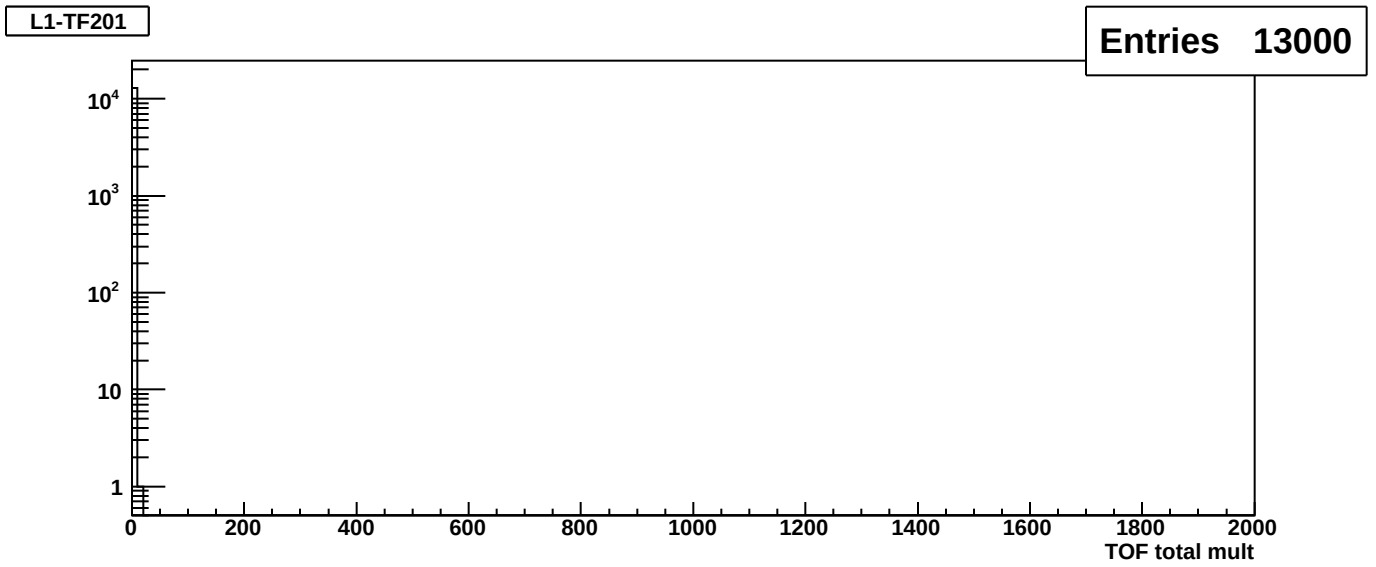

MIX-TF003
Entries 546000
TOF MULT
TOF tray

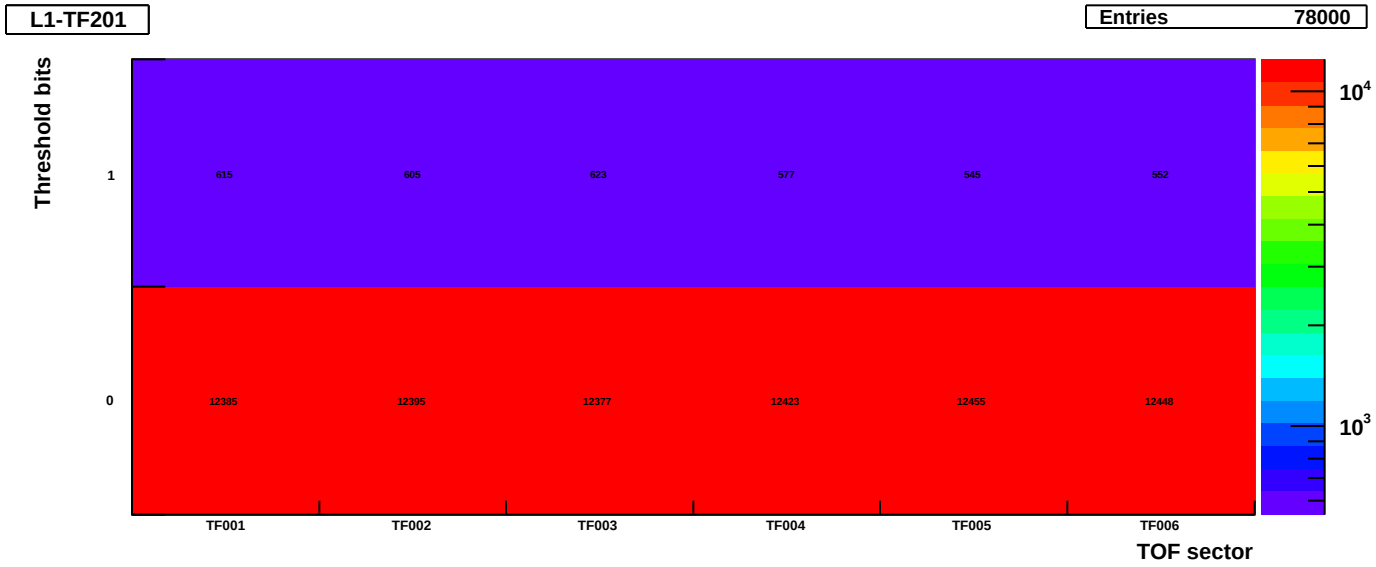

MIX-TF004
Entries 546000
TOF MULT
TOF tray

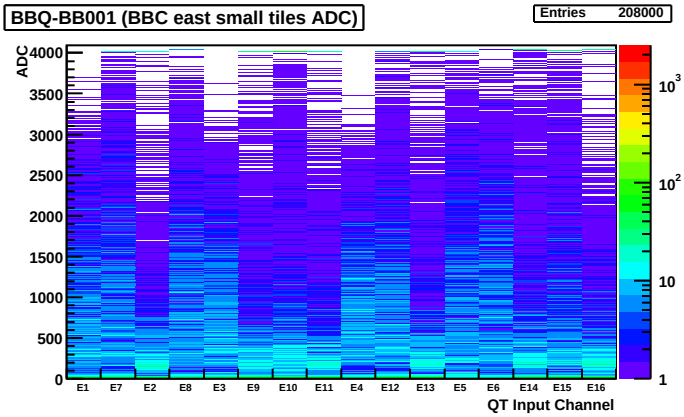

MIX-TF005
Entries 546000
TOF MULT
TOF tray

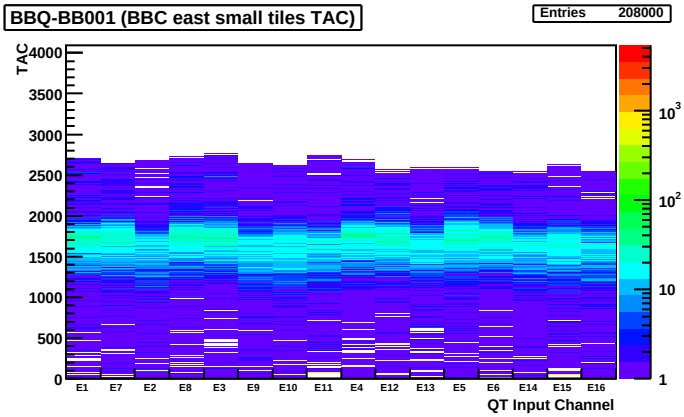

MIX-TF006
Entries 546000
TOF MULT
TOF tray

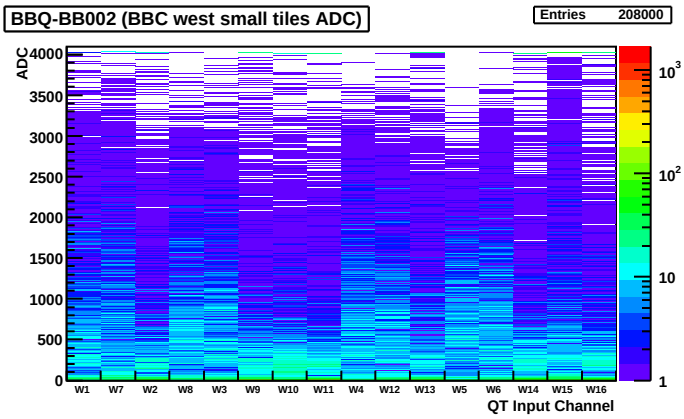

MIX-TF101
Entries 78000
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

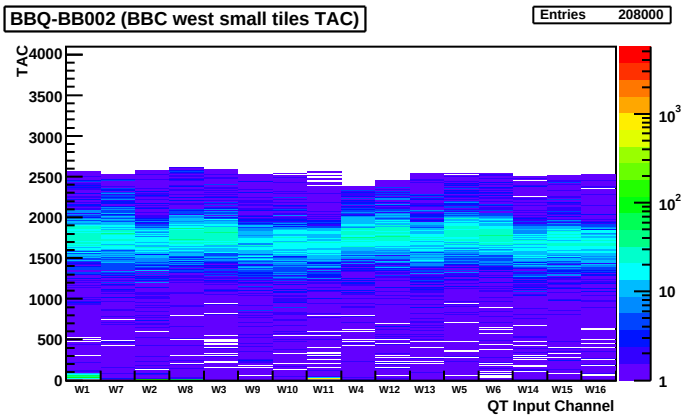

L1-TF201
Entries 13000
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

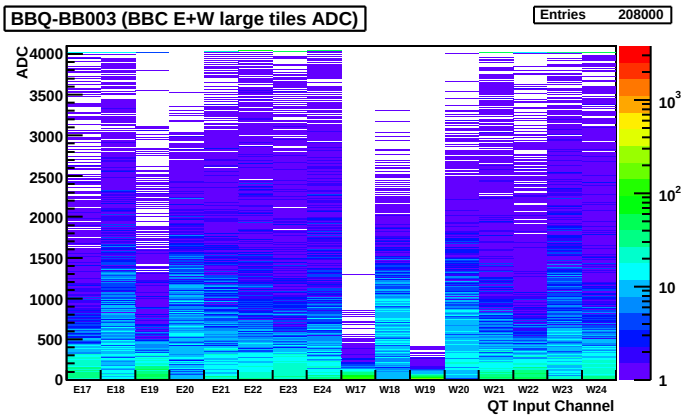

L1-TF201
Entries 78000
Threshold bits
1
0
615
605
623
577
545
552
12385
12395
12377
12423
12455
12448
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4
10^3

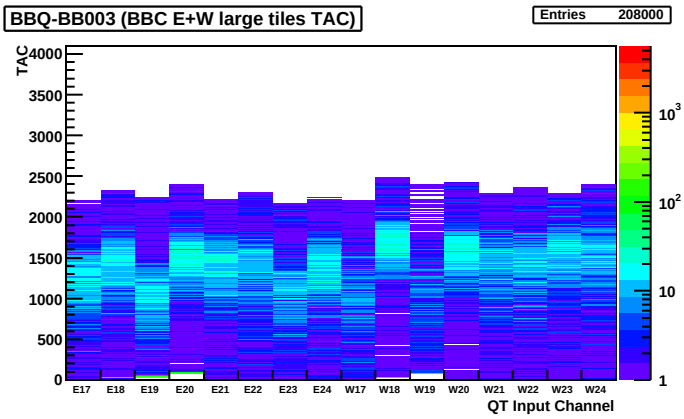

BBQ-BB001 (BBC east small tiles ADC)
Entries 208000
ADC
QT Input Channel

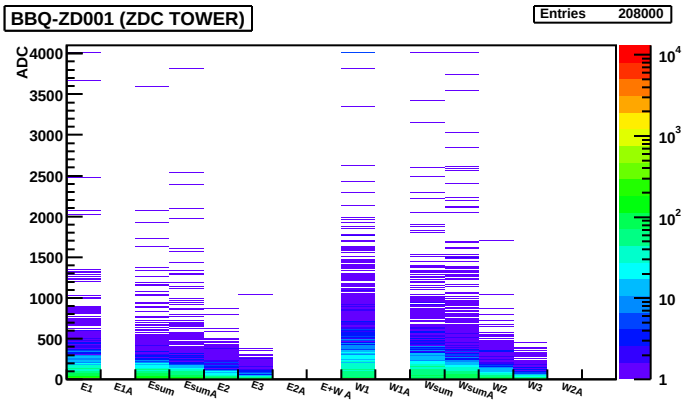

BBQ-BB001 (BBC east small tiles TAC)
Entries 208000
TAC
QT Input Channel

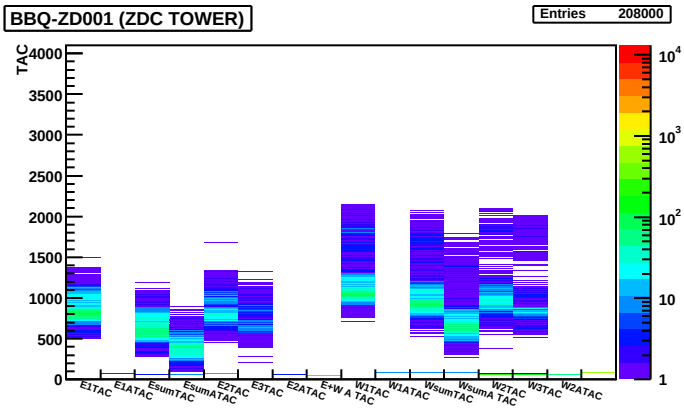

BBQ-BB002 (BBC west small tiles ADC)
Entries 208000
ADC
QT Input Channel

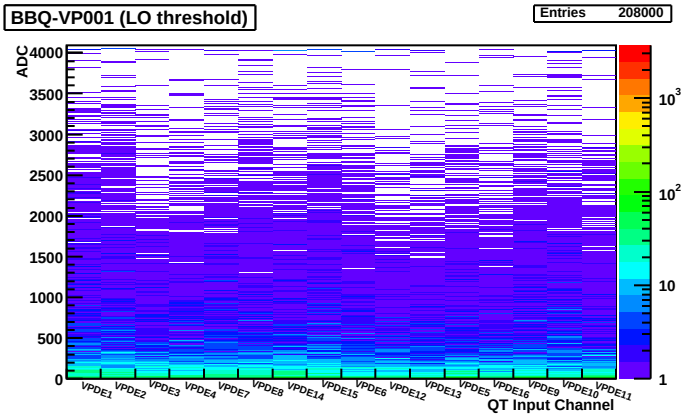

BBQ-BB002 (BBC west small tiles TAC)
Entries 208000
TAC
QT Input Channel

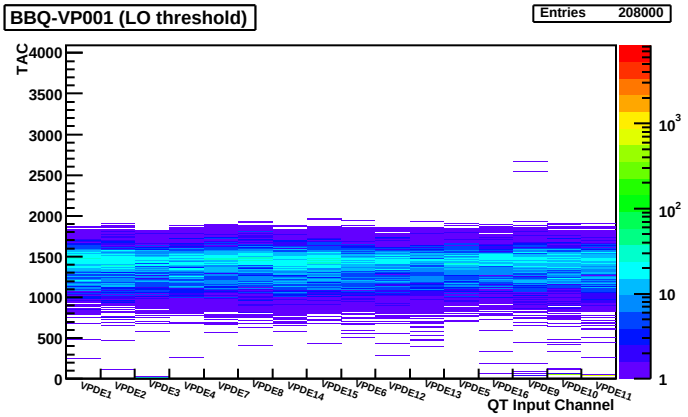

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 208000
ADC
QT Input Channel

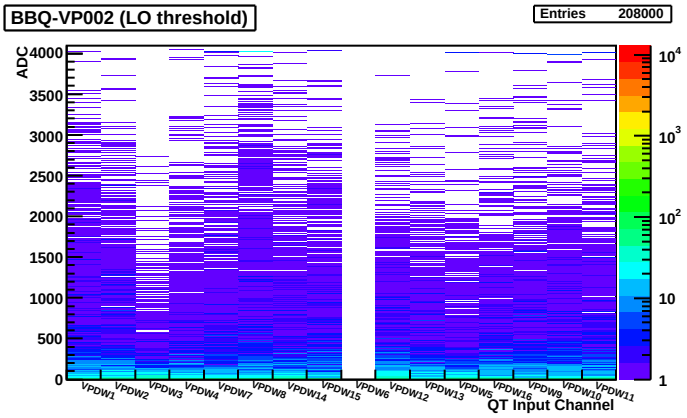

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 208000
TAC
QT Input Channel

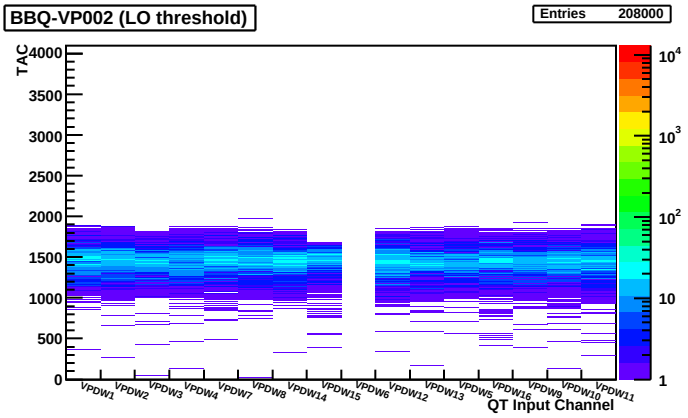

BBQ-ZD001 (ZDC TOWER)
Entries 208000
ADC

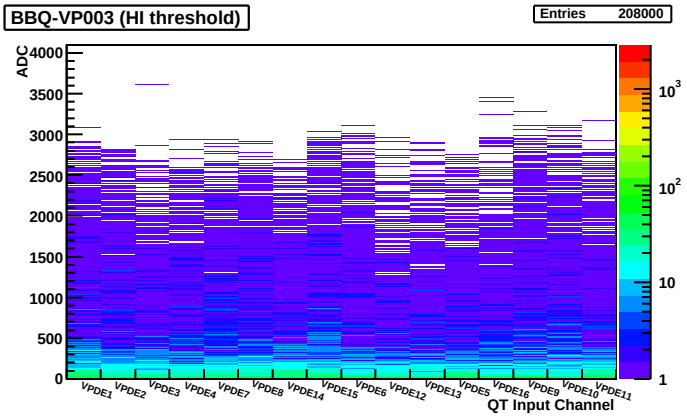

BBQ-ZD001 (ZDC TOWER)
Entries 208000
TAC

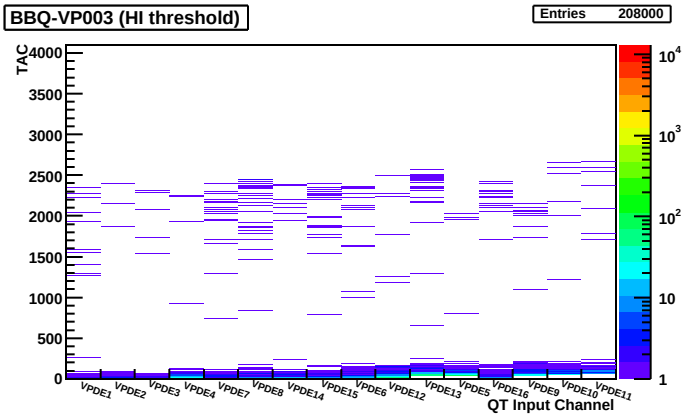

BBQ-VP001 (LO threshold)
Entries 208000
ADC
QT Input Channel

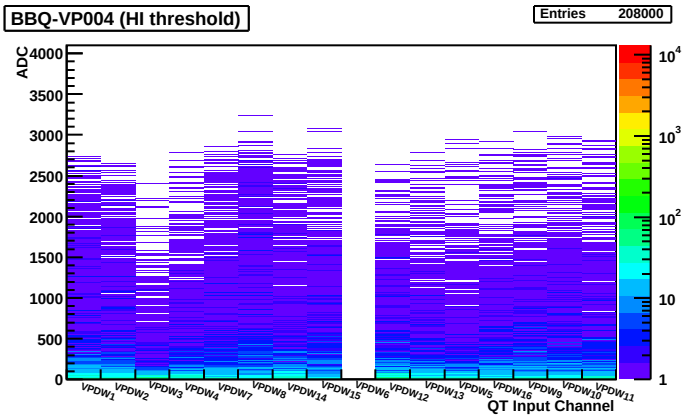

BBQ-VP001 (LO threshold)
Entries 208000
TAC
QT Input Channel

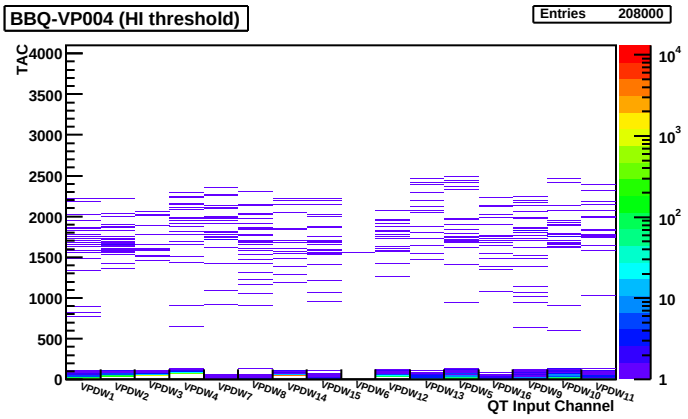

BBQ-VP002 (LO threshold)
Entries 208000
ADC
QT Input Channel

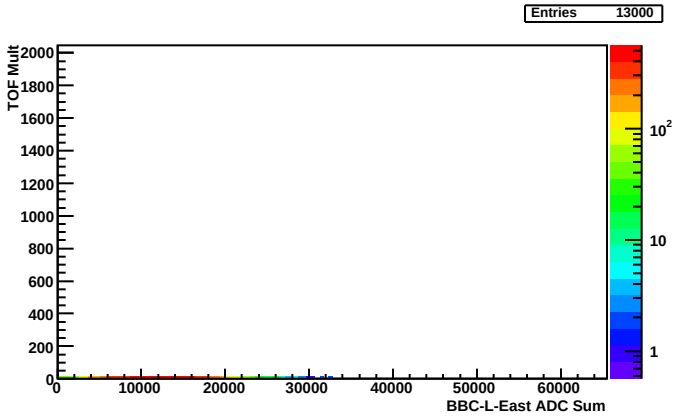

BBQ-VP002 (LO threshold)
Entries 208000
TAC
QT Input Channel

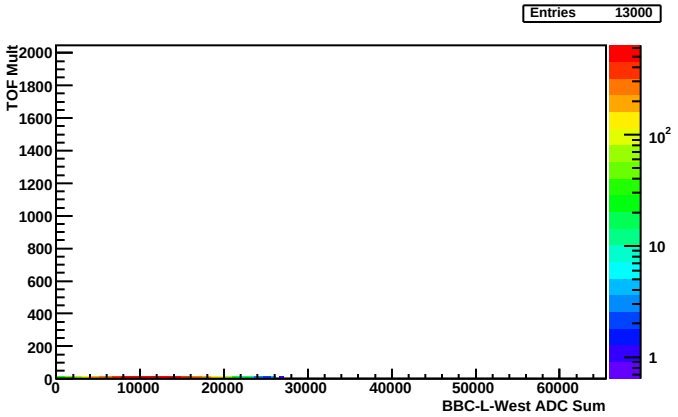

BBQ-VP003 (HI threshold)
Entries 208000
ADC
QT Input Channel

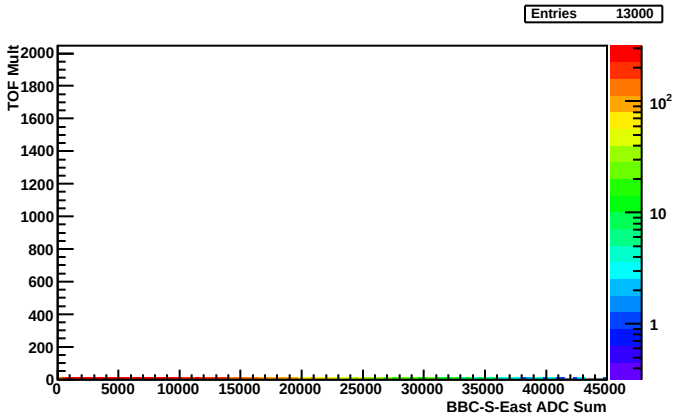

BBQ-VP003 (HI threshold)
Entries 208000
TAC
QT Input Channel

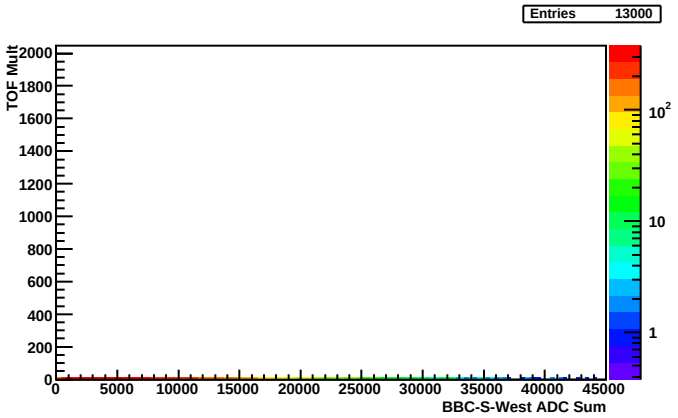

BBQ-VP004 (HI threshold)
Entries 208000
ADC
QT Input Channel

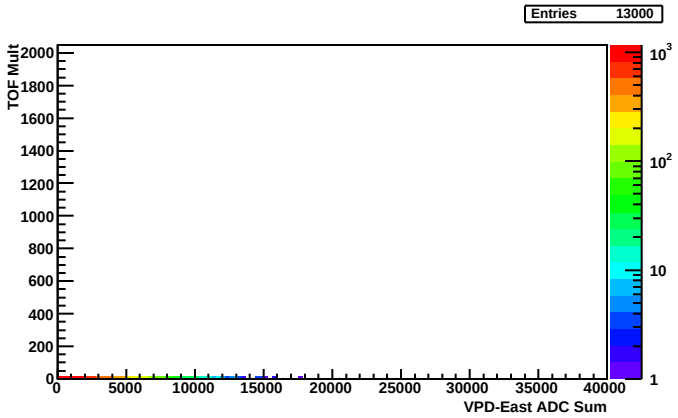

BBQ-VP004 (HI threshold)
Entries 208000
TAC
QT Input Channel

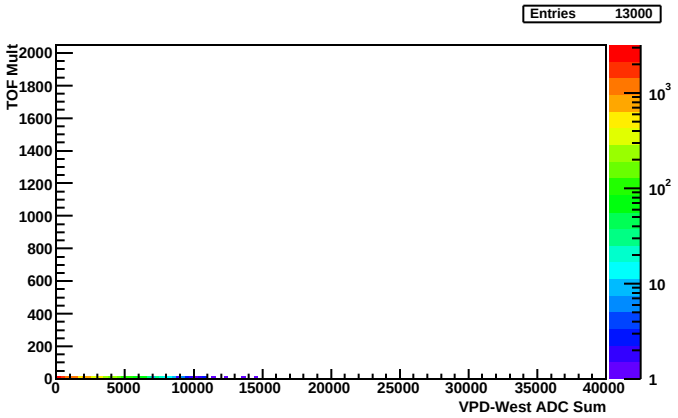

Entries 13000
TOF Mult
BBC-L-East ADC Sum

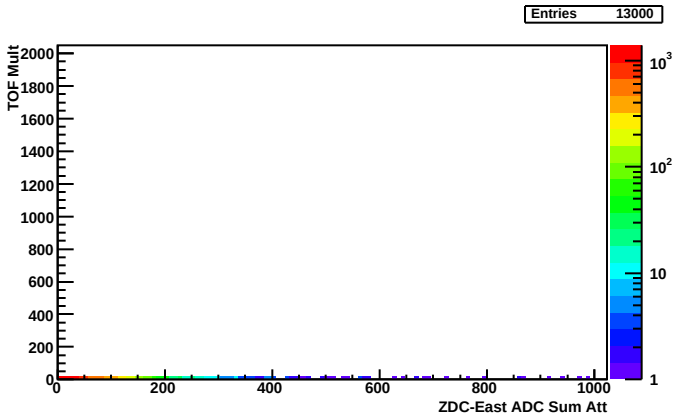

Entries 13000
TOF Mult
BBC-L-West ADC Sum

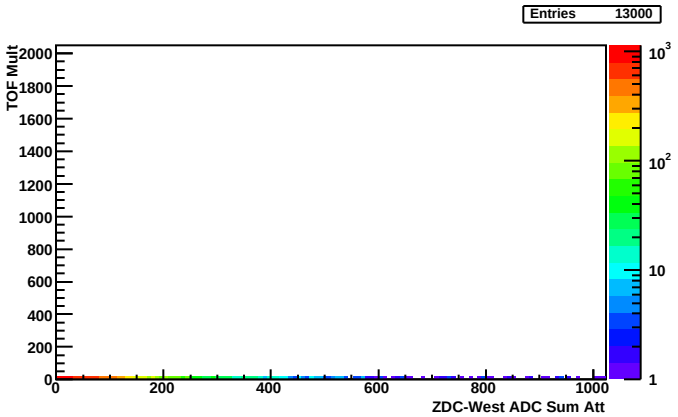

Entries 13000
TOF Mult
BBC-S-East ADC Sum

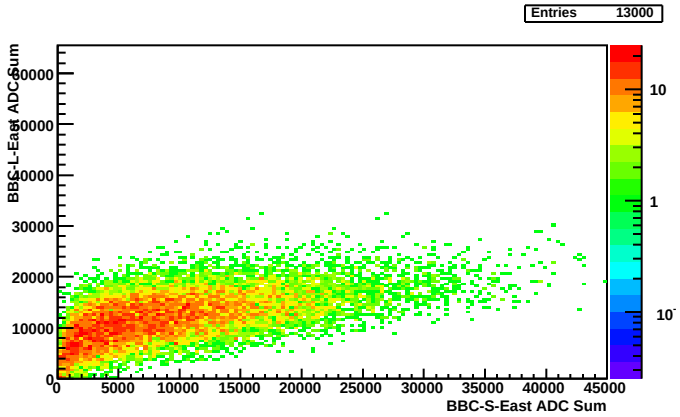

Entries 13000
TOF Mult
BBC-S-West ADC Sum

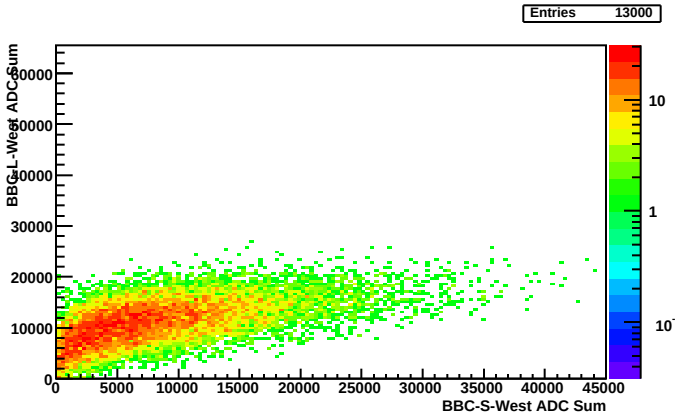

Entries 13000
TOF Mult
VPD-East ADC Sum

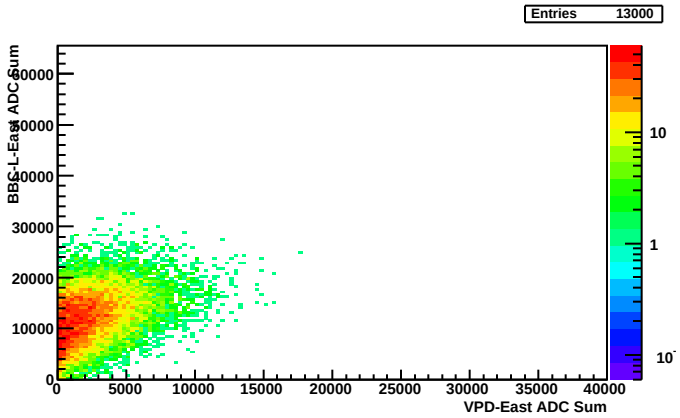

Entries 13000
TOF Mult
VPD-West ADC Sum

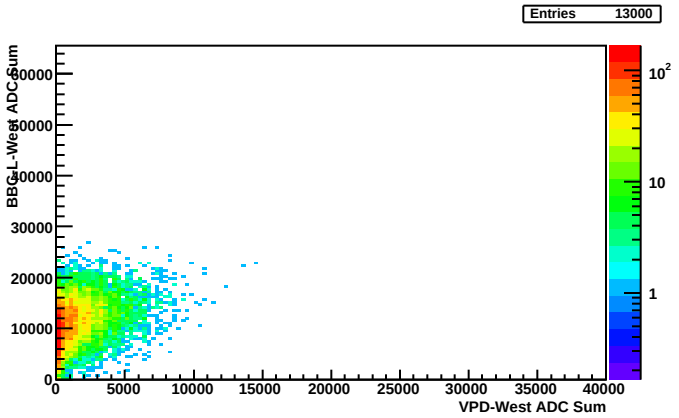

Entries 13000
TOF Mult
ZDC-East ADC Sum Att

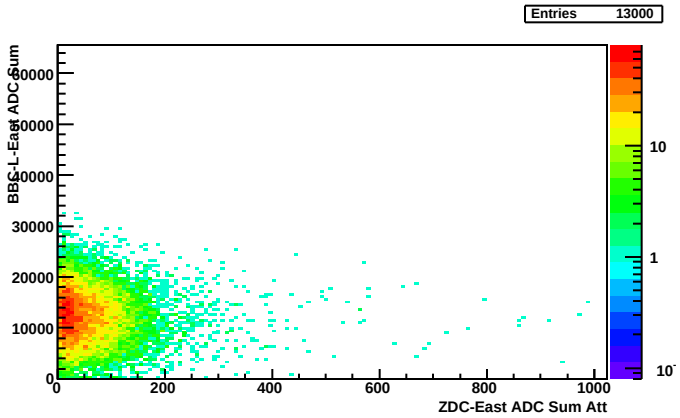

Entries 13000
TOF Mult
ZDC-West ADC Sum Att

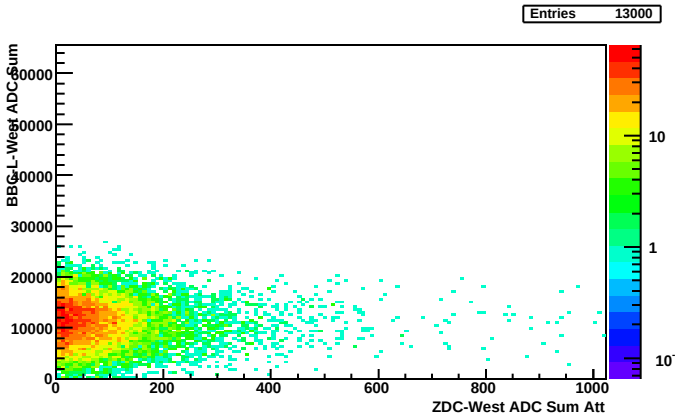

Entries 13000
BBC-L-East ADC Sum
BBC-S-East ADC Sum

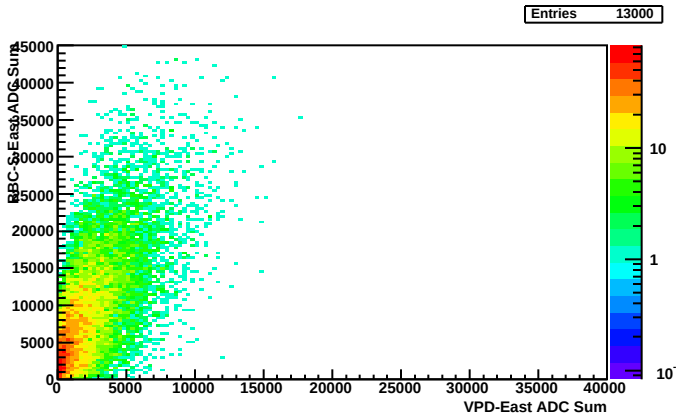

Entries 13000
BBC-L-West ADC Sum
BBC-S-West ADC Sum

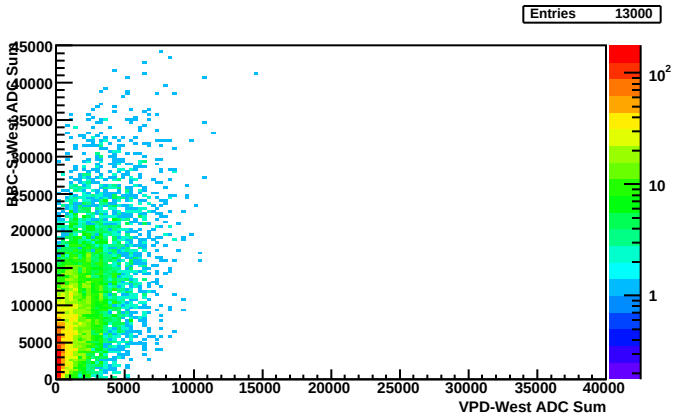

Entries 13000
BBC-L-East ADC Sum
VPD-East ADC Sum

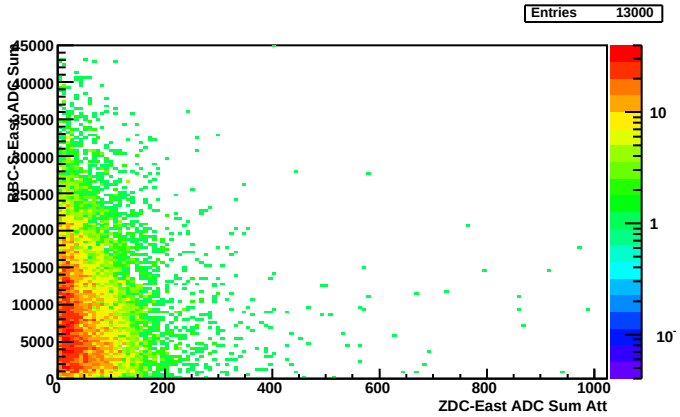

Entries 13000
BBC-L-West ADC Sum
VPD-West ADC Sum

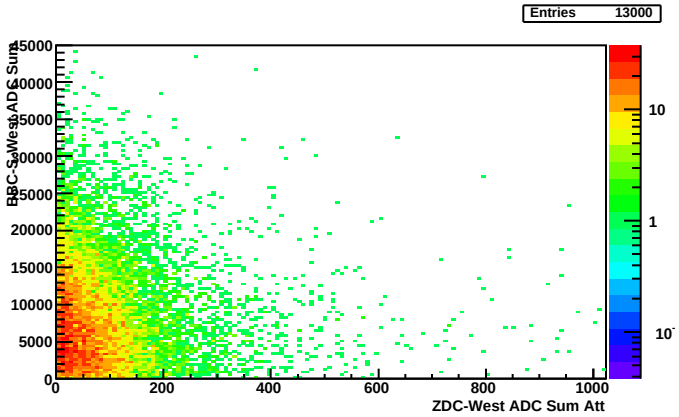

Entries 13000
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

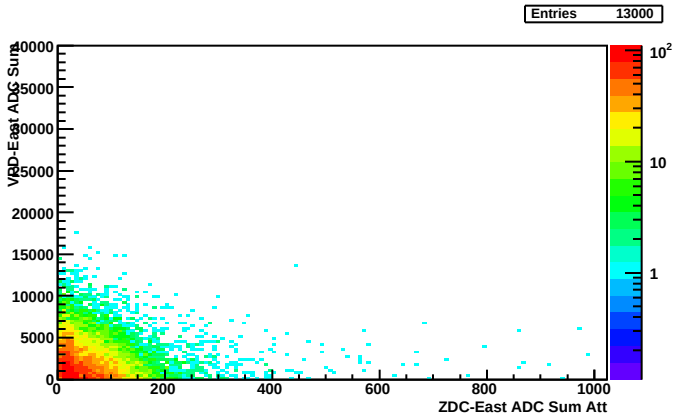

Entries 13000
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

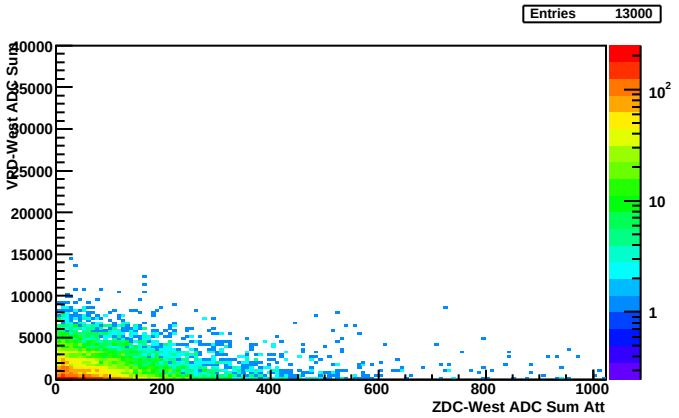

Entries 13000
BBC-S-East ADC Sum
VPD-East ADC Sum

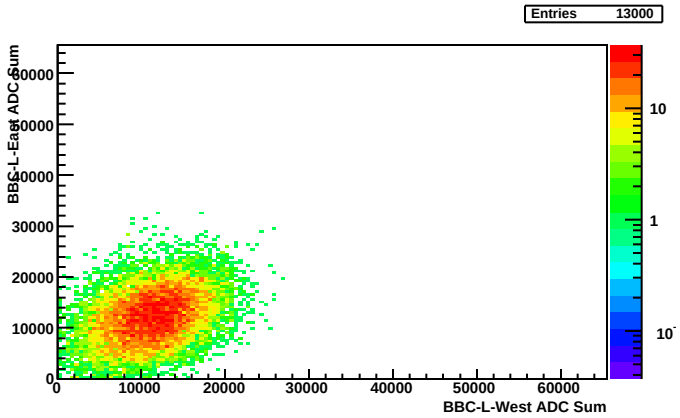

Entries 13000
BBC-S-West ADC Sum
VPD-West ADC Sum

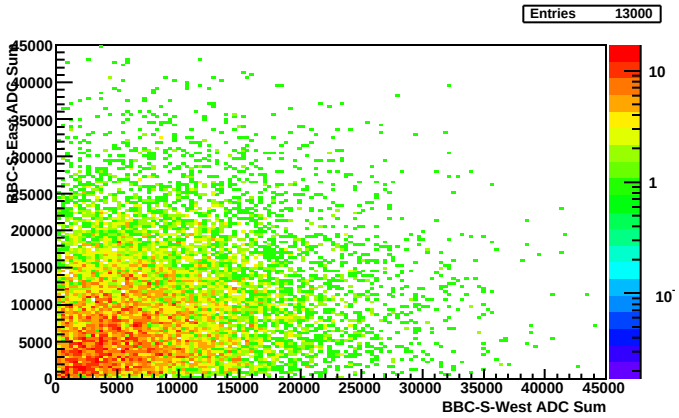

Entries 13000
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

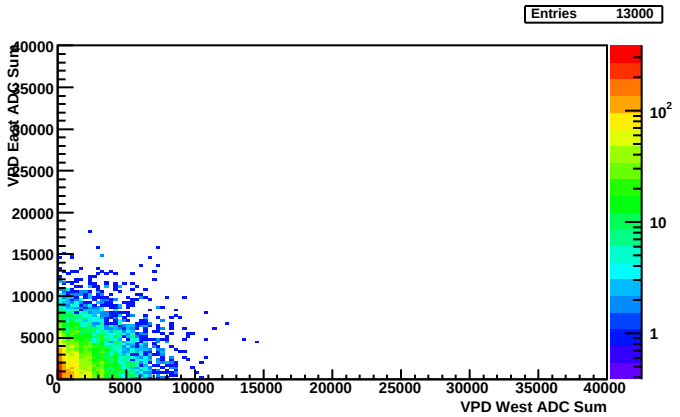

Entries 13000
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

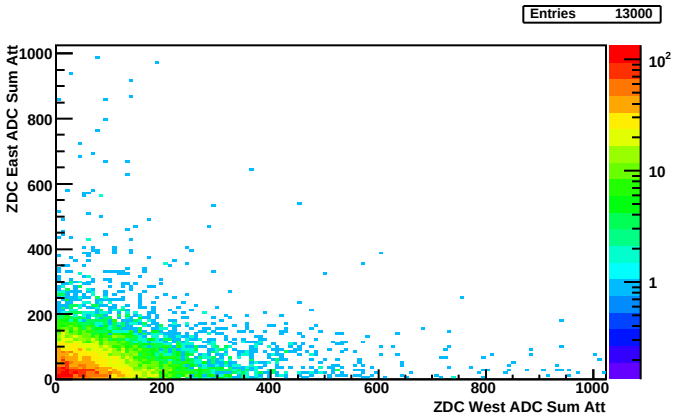

Entries 13000
VPD-East ADC Sum
ZDC-East ADC Sum Att

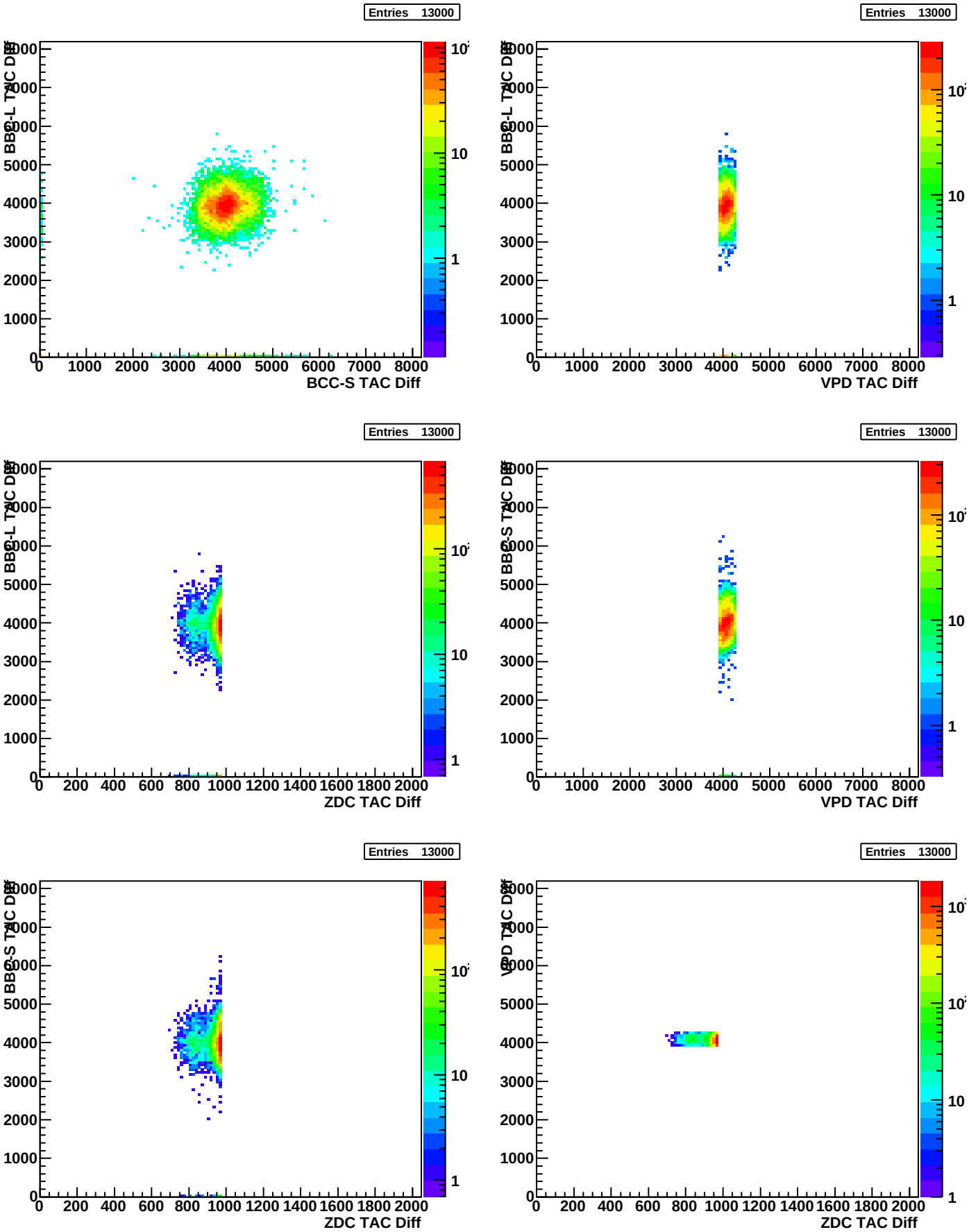

Entries 13000
VPD-West ADC Sum
ZDC-West ADC Sum Att

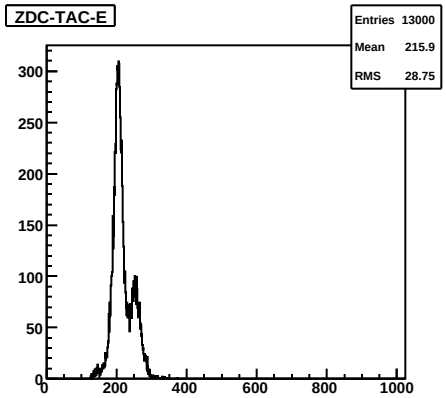

Entries 13000
BBC-L-East ADC Sum
BBC-L-West ADC Sum

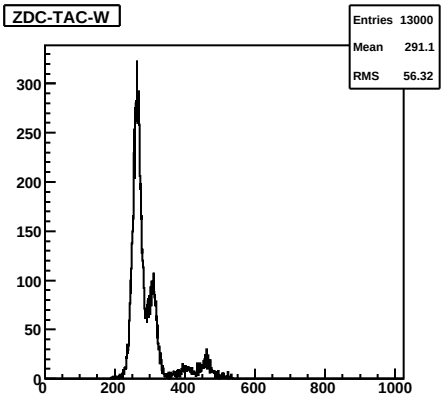

Entries 13000
BBC-S-East ADC Sum
BBC-S-West ADC Sum

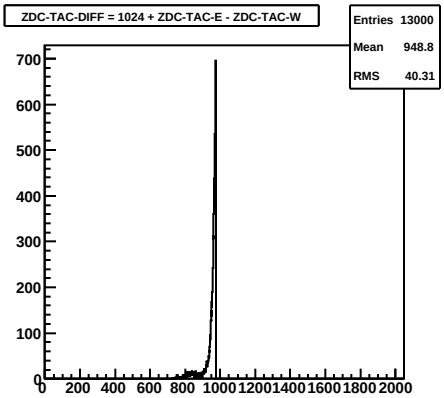

Entries 13000
VPD East ADC Sum
VPD West ADC Sum

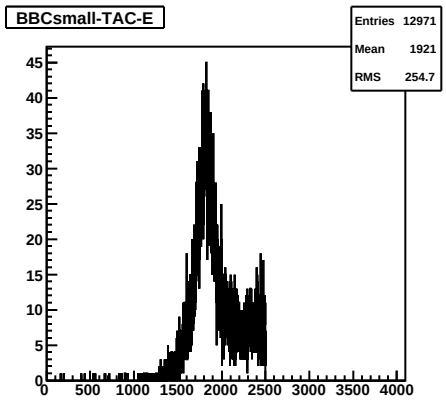

Entries 13000
ZDC East ADC Sum Att
ZDC West ADC Sum Att

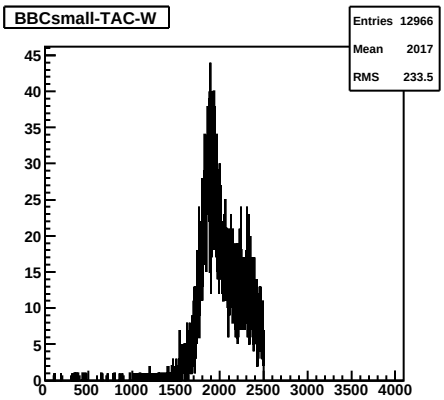

Entries 13000
BBC-L TAC Diff
BCC-S TAC Diff
Entries 13000
BBC-L TAC Diff
VPD TAC Diff
Entries 13000
BBC-L TAC Diff
ZDC TAC Diff
Entries 13000
BBC-S TAC Diff
VPD TAC Diff
Entries 13000
BBC-S TAC Diff
ZDC TAC Diff
Entries 13000
VPD TAC Diff
ZDC TAC Diff

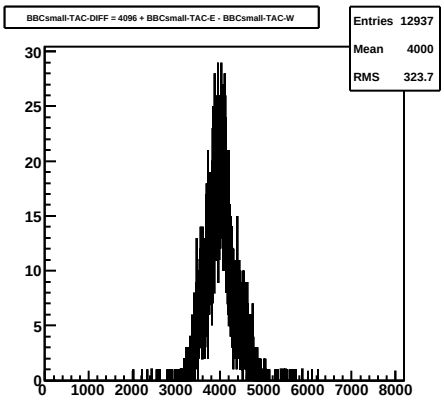

ZDC-TAC-E
Entries 13000
Mean 215.9
RMS 28.75

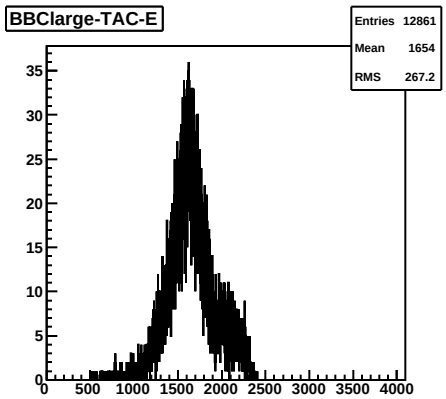

ZDC-TAC-W
Entries 13000
Mean 291.1
RMS 56.32

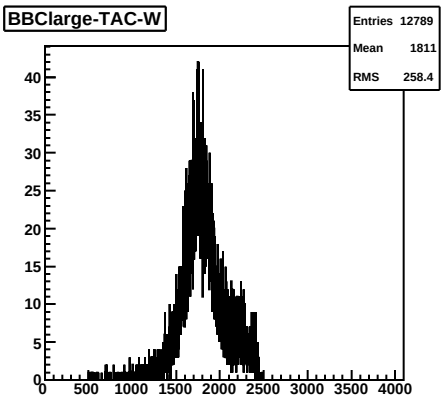

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 13000
Mean 948.8
RMS 40.31

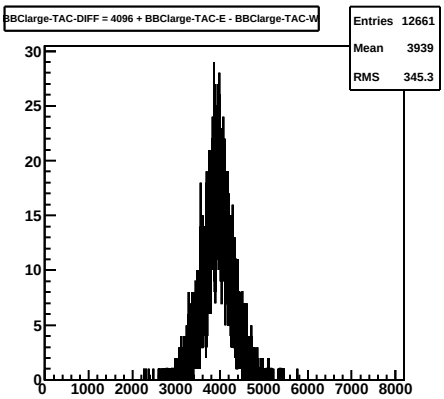

BBCsmall-TAC-E
Entries 12971
Mean 1921
RMS 254.7

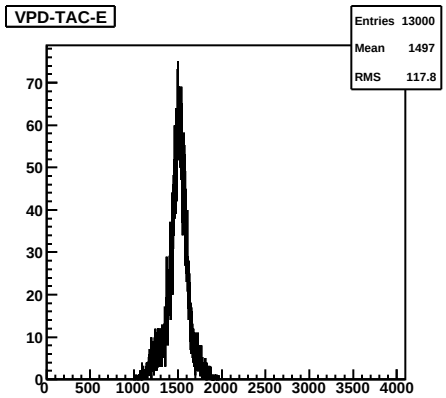

BBCsmall-TAC-W
Entries 12966
Mean 2017
RMS 233.5

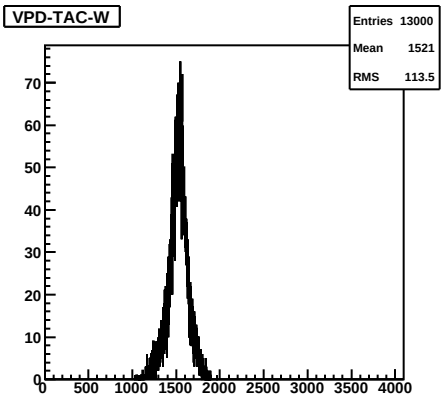

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 12937
Mean 4000
RMS 323.7

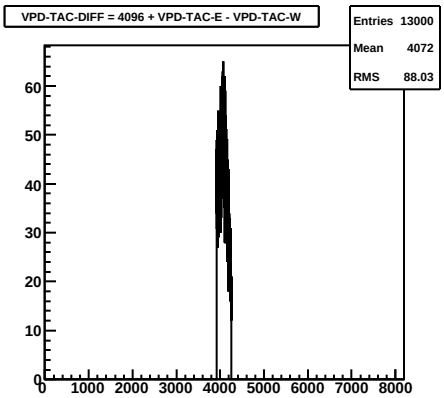

BBClarge-TAC-E
Entries 12861
Mean 1654
RMS 267.2

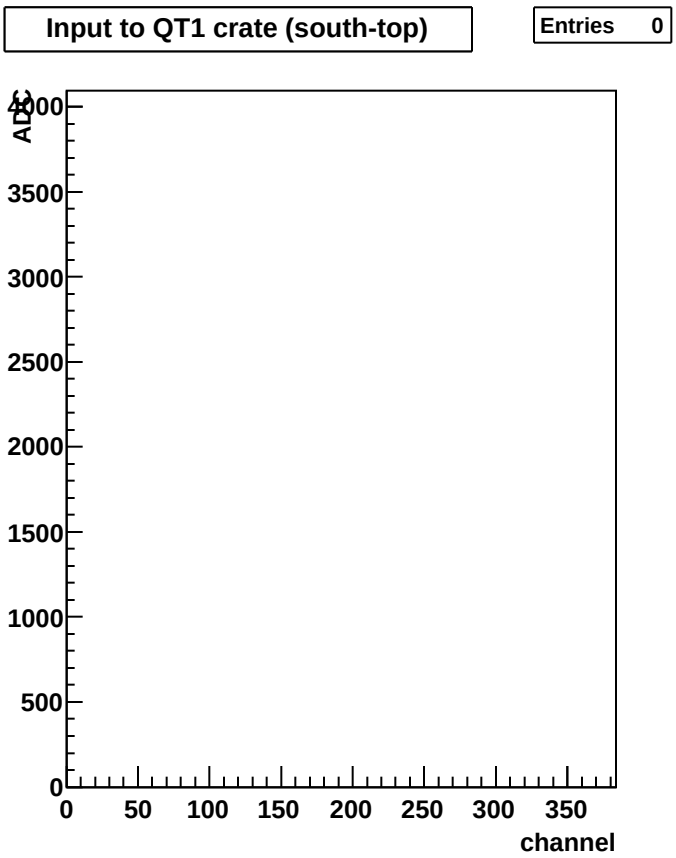

BBClarge-TAC-W
Entries 12789
Mean 1811
RMS 258.4

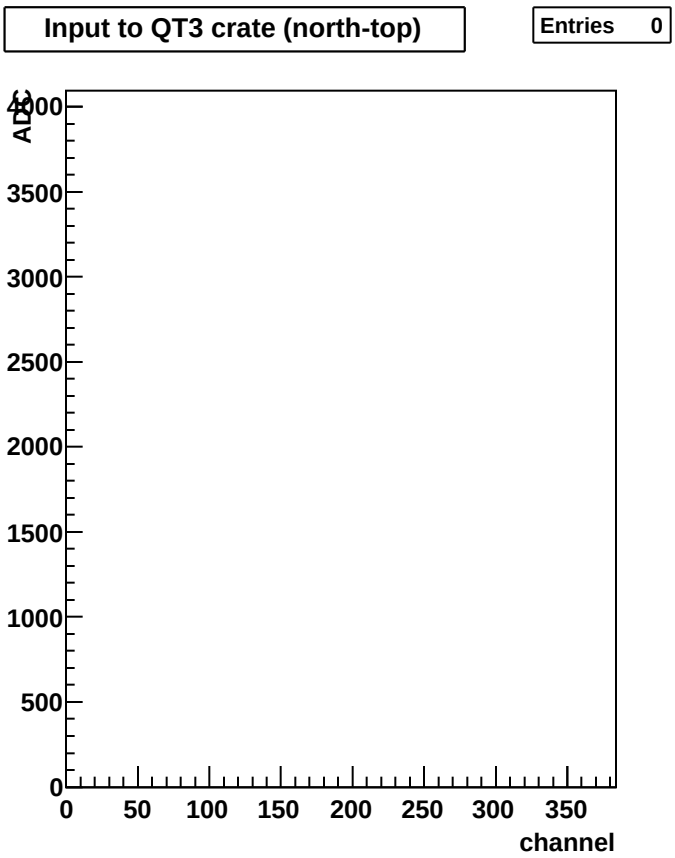

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 12661
Mean 3939
RMS 345.3

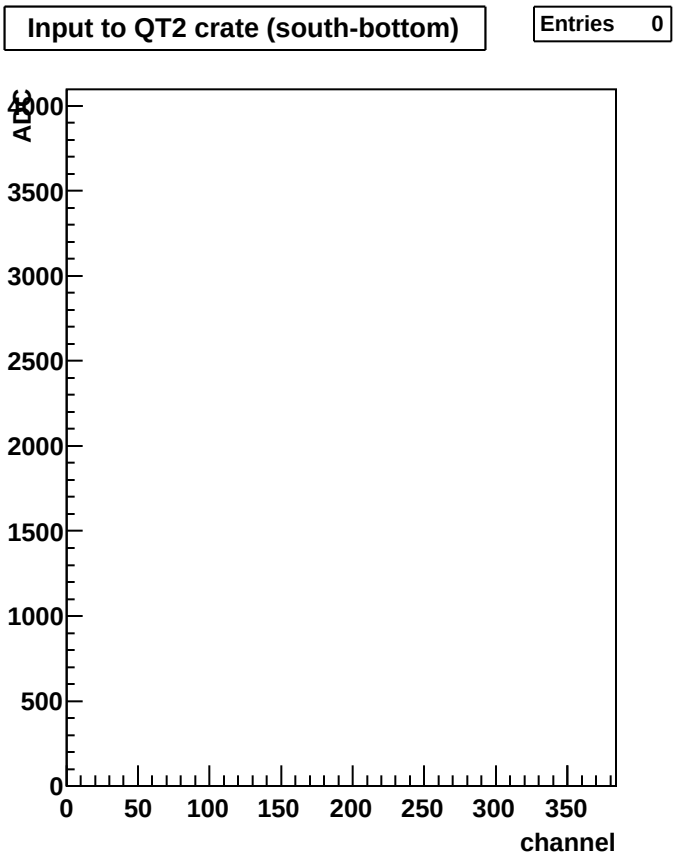

VPD-TAC-E
Entries 13000
Mean 1497
RMS 117.8

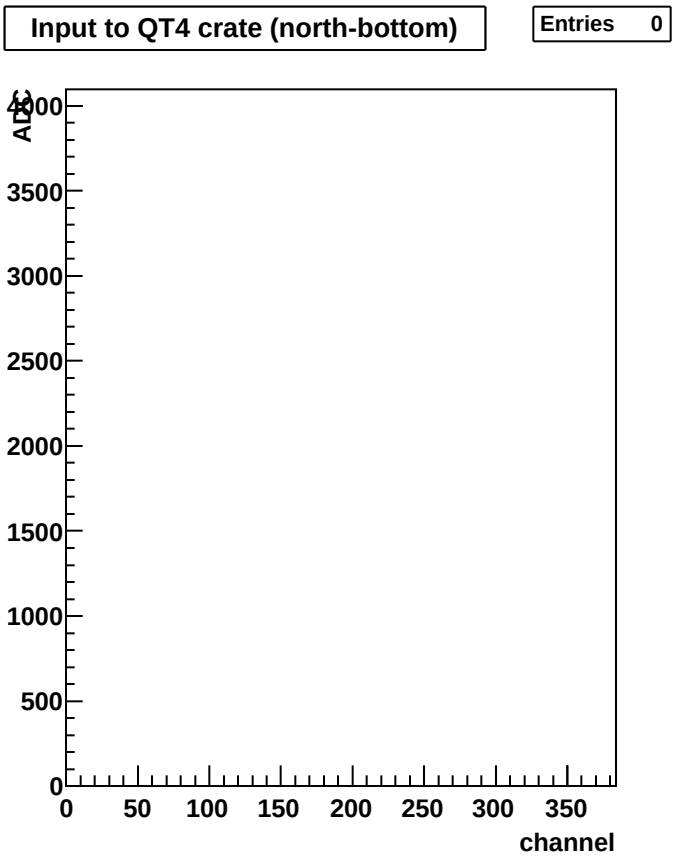

VPD-TAC-W
Entries 13000
Mean 1521
RMS 113.5

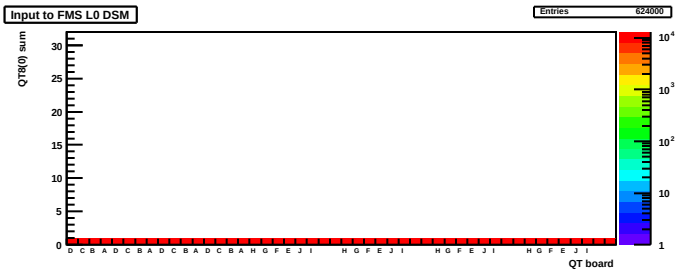

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 13000
Mean 4072
RMS 88.03

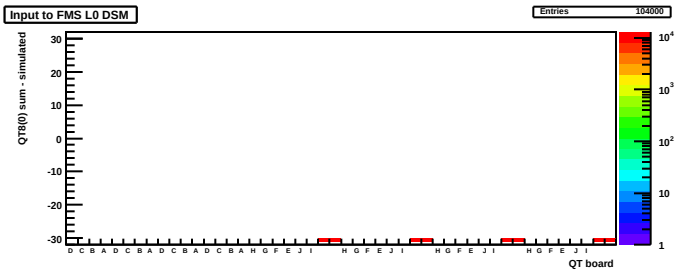

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

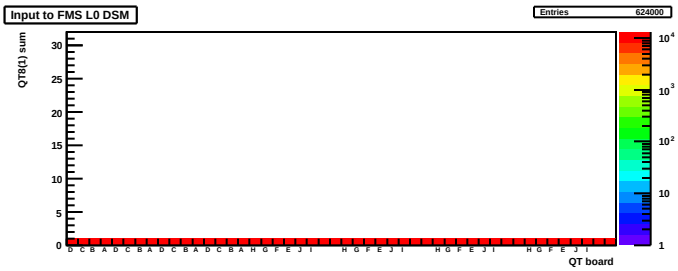

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

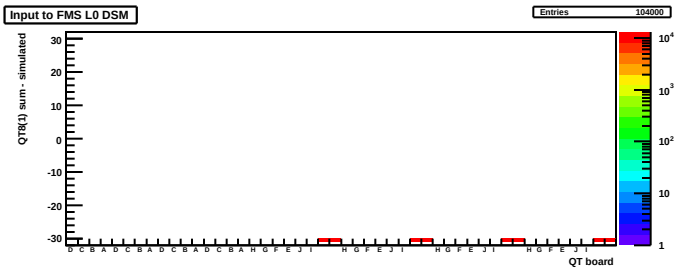

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

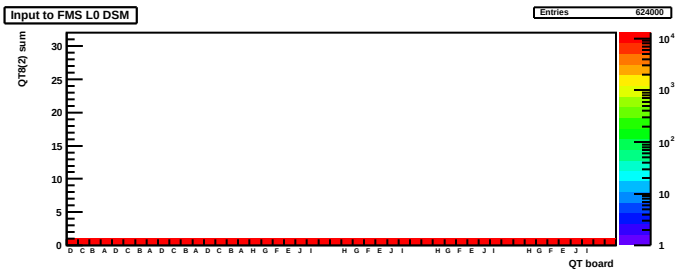

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

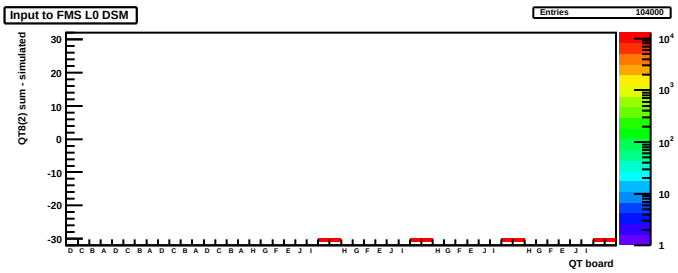

Input to FMS L0 DSM
Entries 624000
QT8(0) sum
QT board

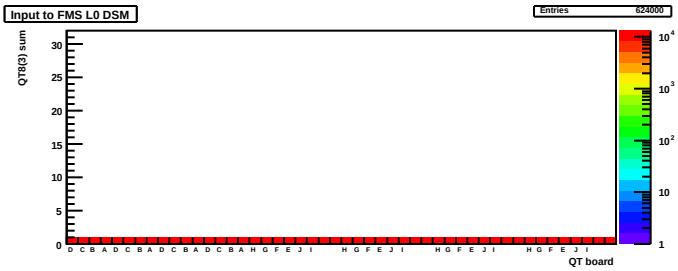

Input to FMS L0 DSM
Entries 104000
QT8(0) sum - simulated
QT board

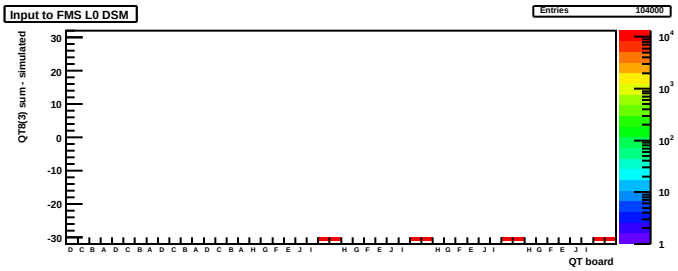

Input to FMS L0 DSM
Entries 624000
QT8(1) sum
QT board

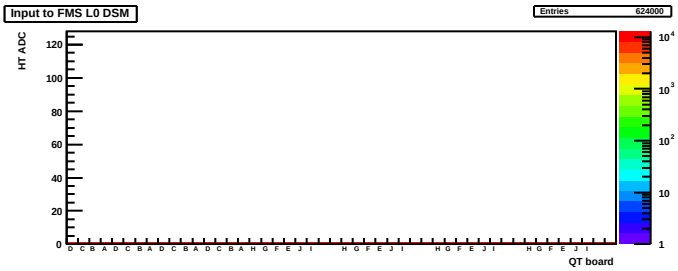

Input to FMS L0 DSM
Entries 104000
QT8(1) sum - simulated
QT board

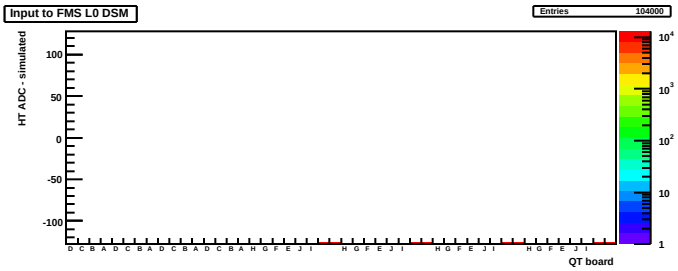

Input to FMS L0 DSM
Entries 624000
QT8(2) sum
QT board

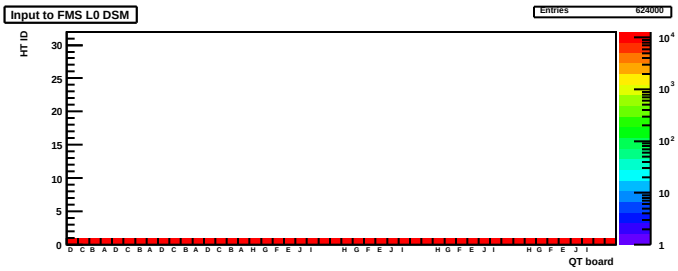

Input to FMS L0 DSM
Entries 104000
QT8(2) sum - simulated
QT board

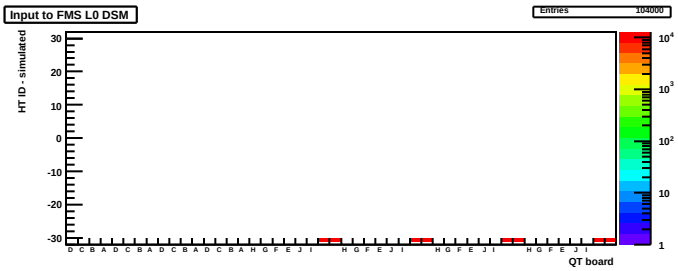

Input to FMS L0 DSM
Entries 624000
QT8(3) sum
QT board

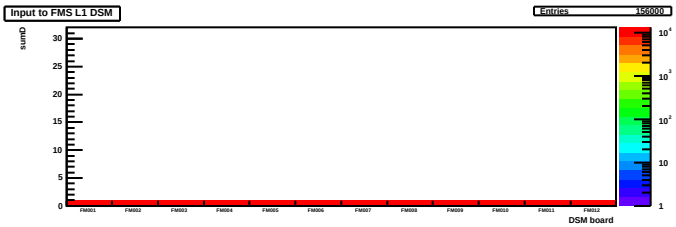

Input to FMS L0 DSM
Entries 104000
QT8(3) sum - simulated
QT board

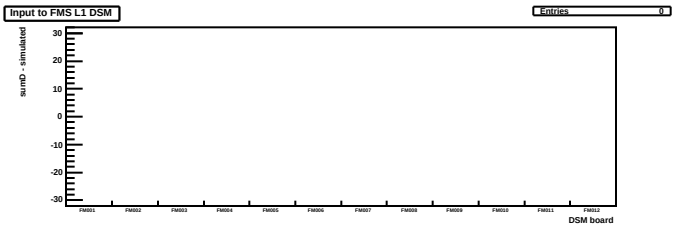

Input to FMS L0 DSM
Entries 624000
HT ADC
QT board

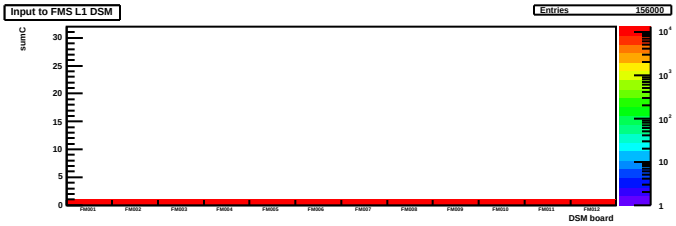

Input to FMS L0 DSM
Entries 104000
HT ADC - simulated
QT board

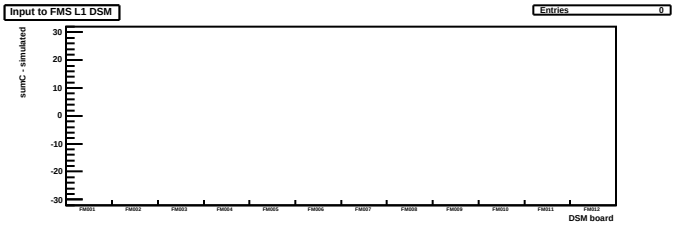

Input to FMS L0 DSM
Entries 624000
HT ID
QT board

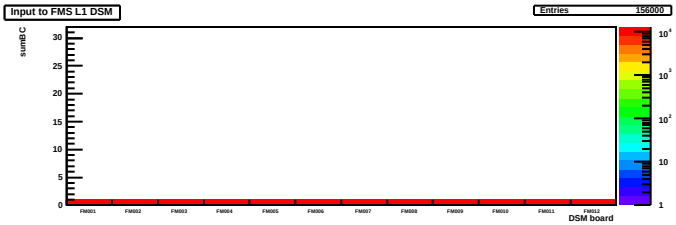

Input to FMS L0 DSM
Entries 104000
HT ID - simulated
QT board

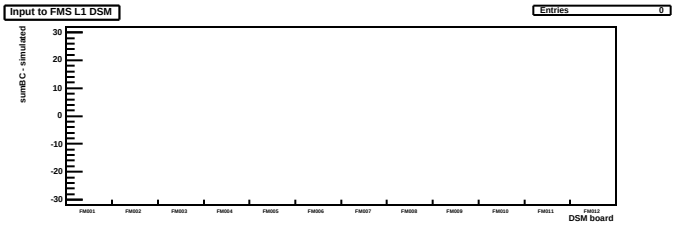

Input to FMS L1 DSM
Entries 156000
sumD
DSM board

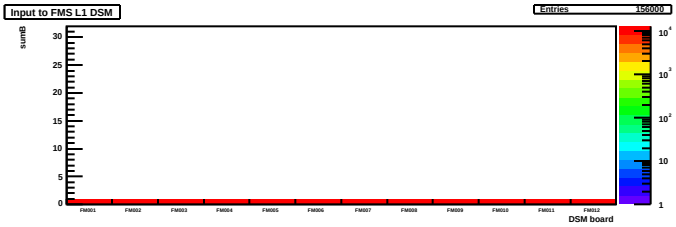

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

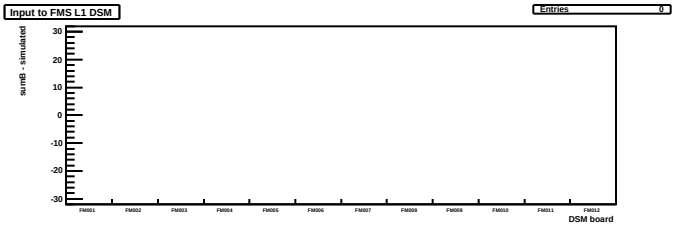

Input to FMS L1 DSM
Entries 156000
sumC
DSM board

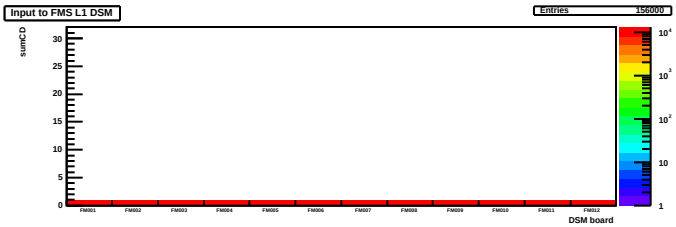

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

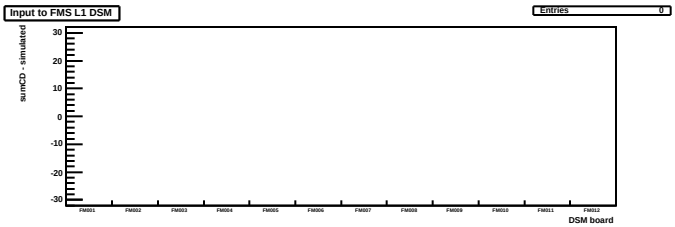

Input to FMS L1 DSM
Entries 156000
sumBC
DSM board

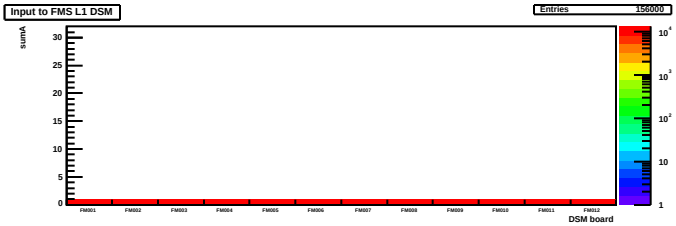

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

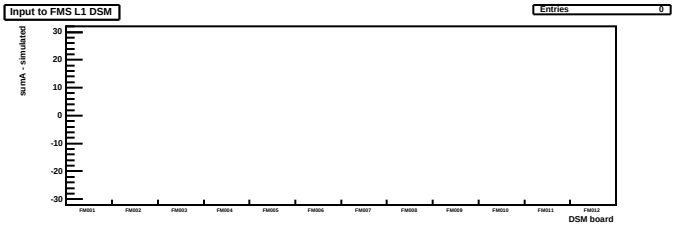

Input to FMS L1 DSM
Entries 156000
sumB
DSM board

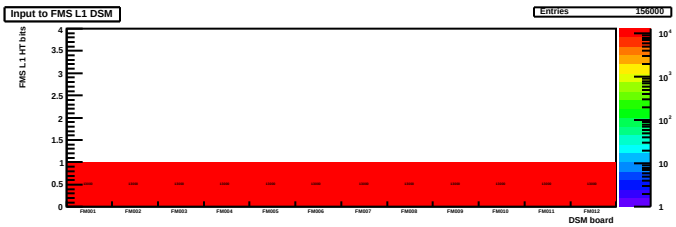

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

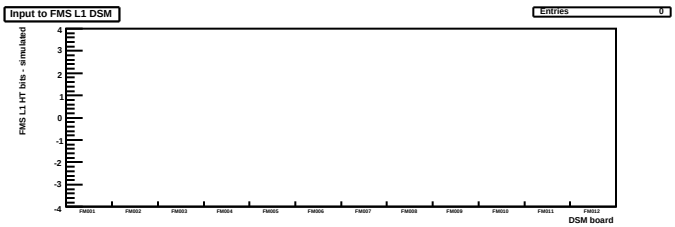

Input to FMS L1 DSM
Entries 156000
sumCD
DSM board

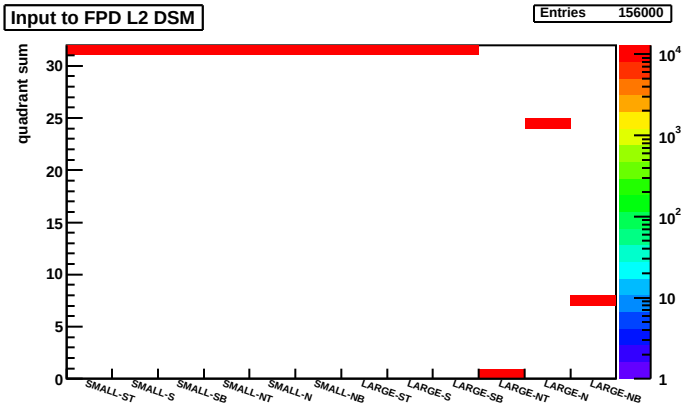

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

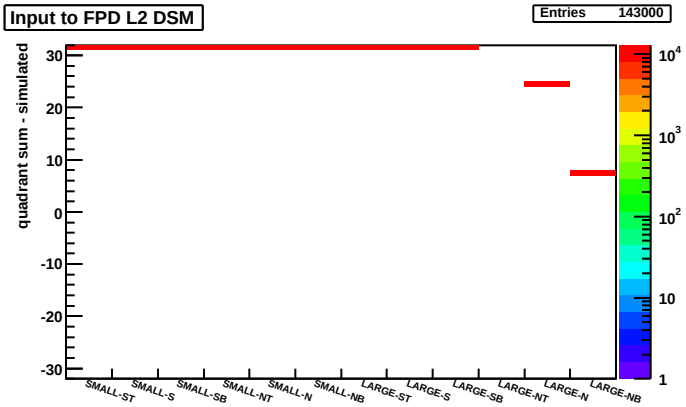

Input to FMS L1 DSM
Entries 156000
sumA
DSM board

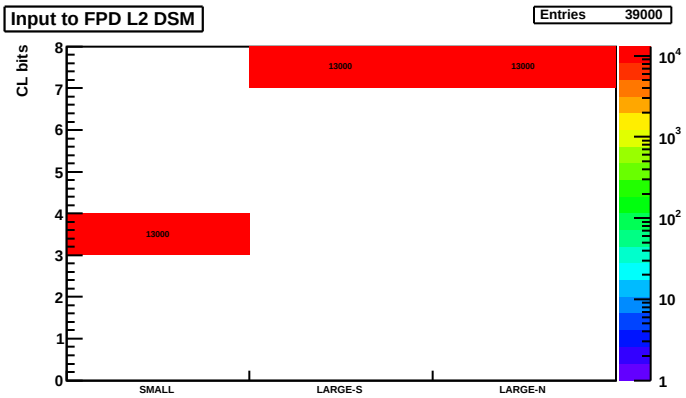

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

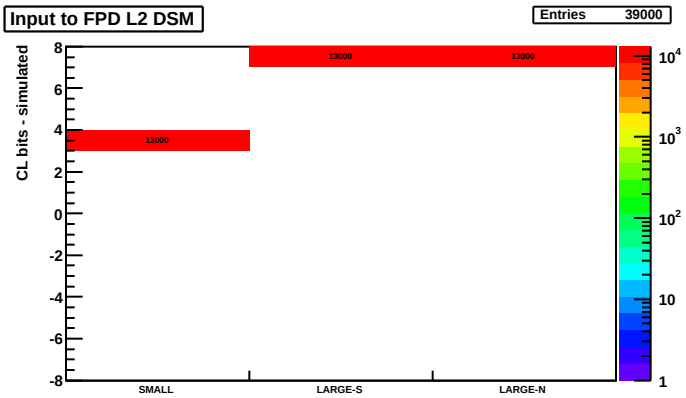

Input to FMS L1 DSM
Entries 156000
FMS L1 HT bits
DSM board

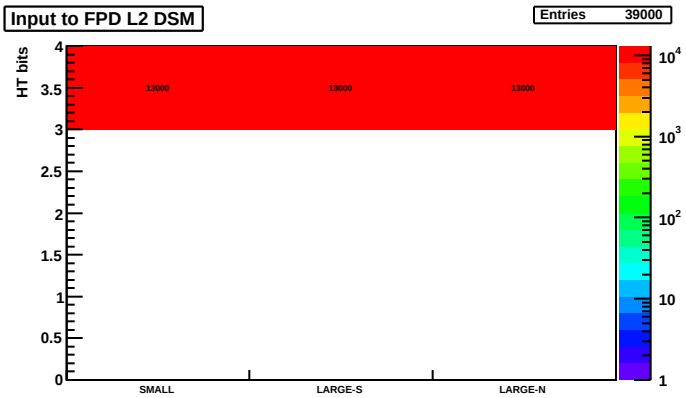

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

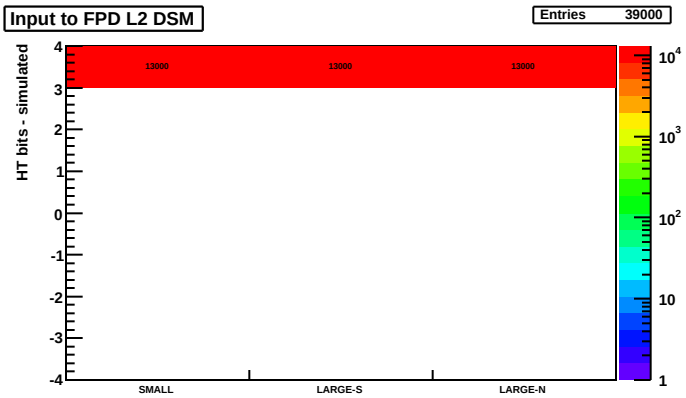

Input to FPD L2 DSM
Entries 156000
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

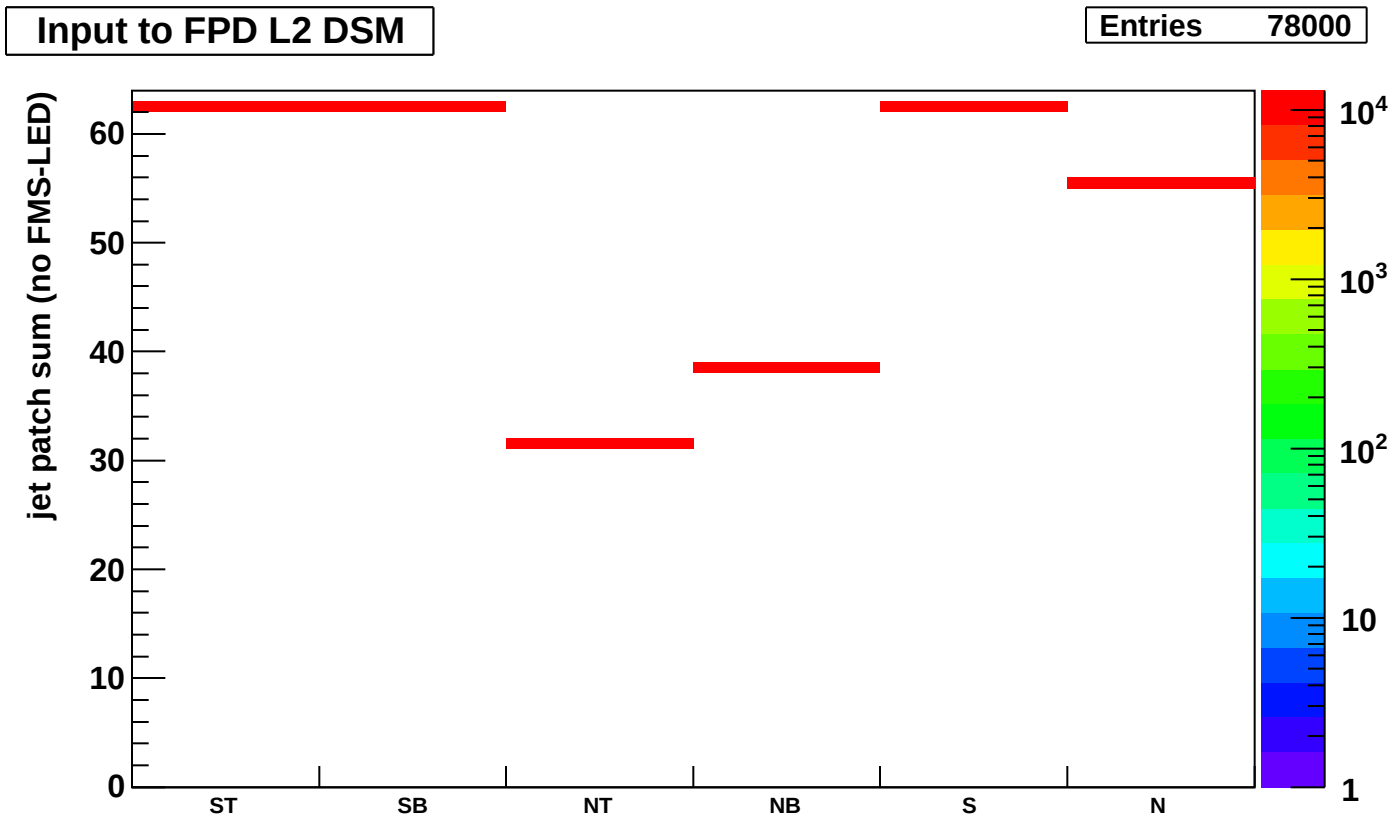

Input to FPD L2 DSM
Entries 143000
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

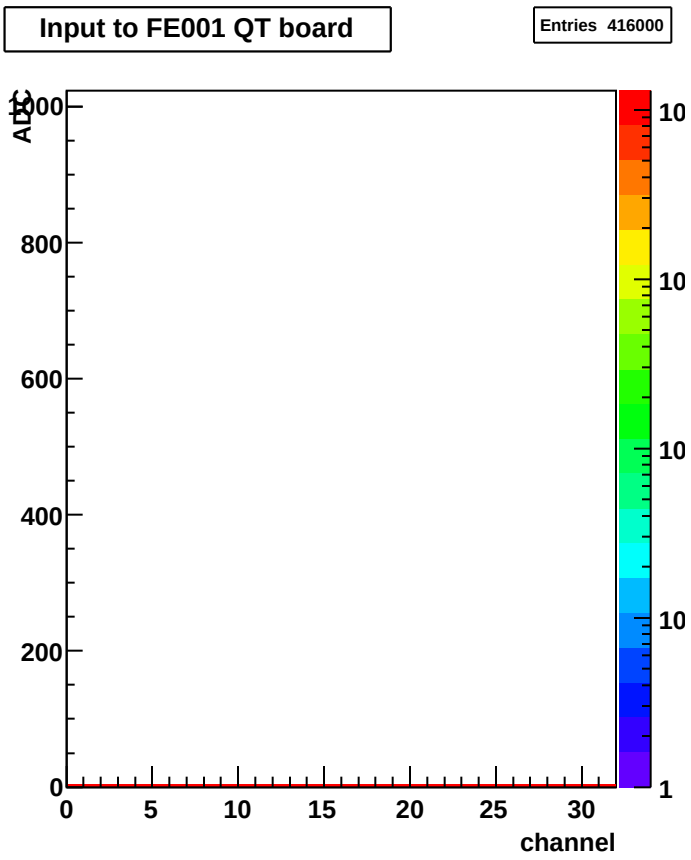

Input to FPD L2 DSM
Entries 39000
CL bits
13000
13000
13000
SMALL
LARGE-S
LARGE-N

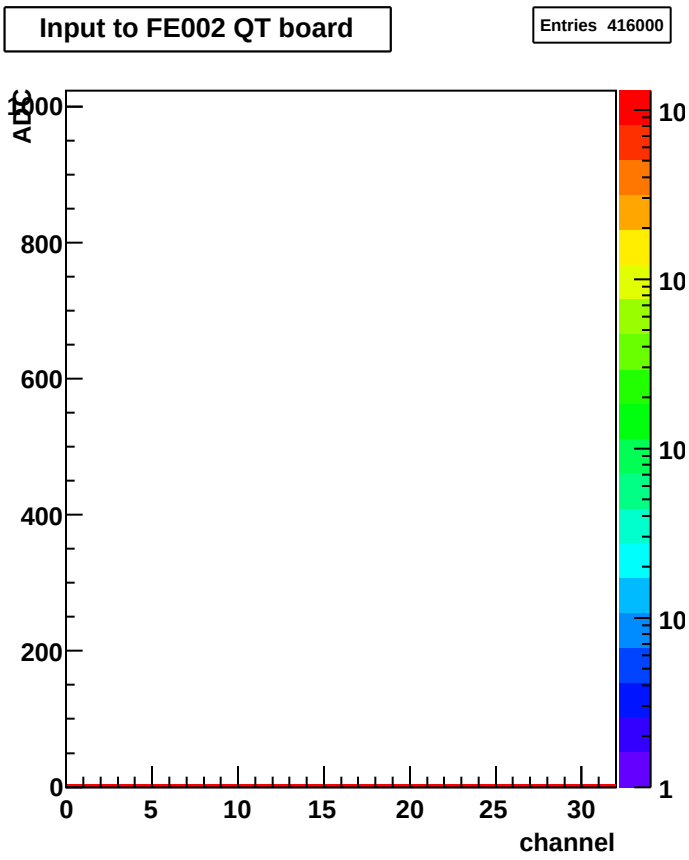

Input to FPD L2 DSM
Entries 39000
CL bits - simulated
13000
13000
13000
SMALL
LARGE-S
LARGE-N

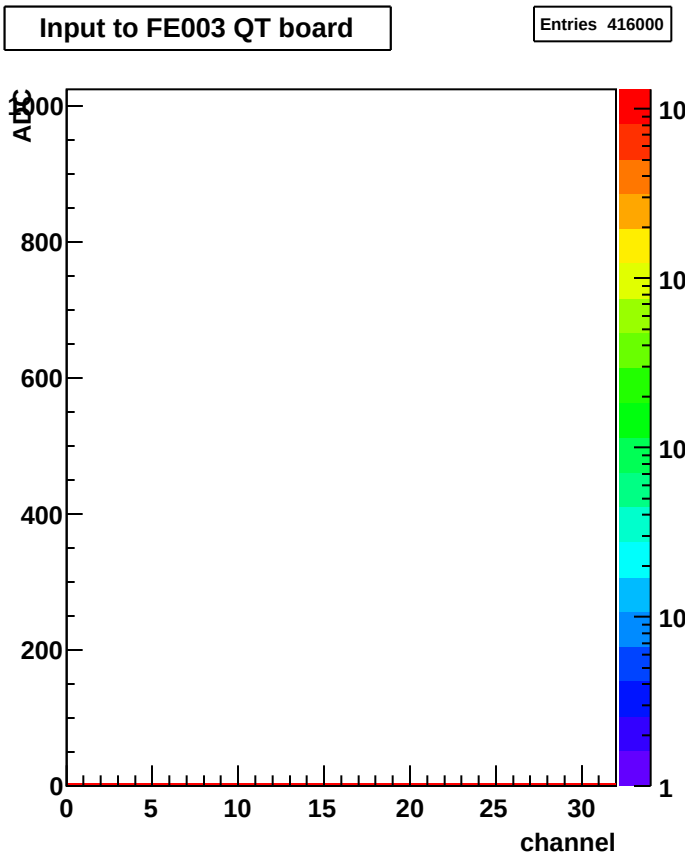

Input to FPD L2 DSM
Entries 39000
HT bits
13000
13000
13000
SMALL
LARGE-S
LARGE-N

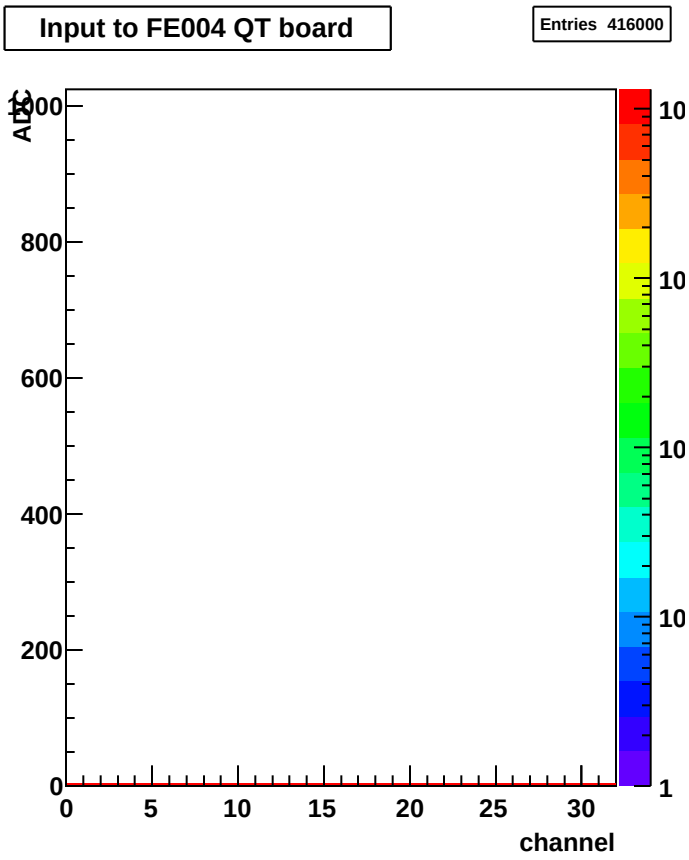

Input to FPD L2 DSM
Entries 39000
HT bits - simulated
13000
13000
13000
SMALL
LARGE-S
LARGE-N

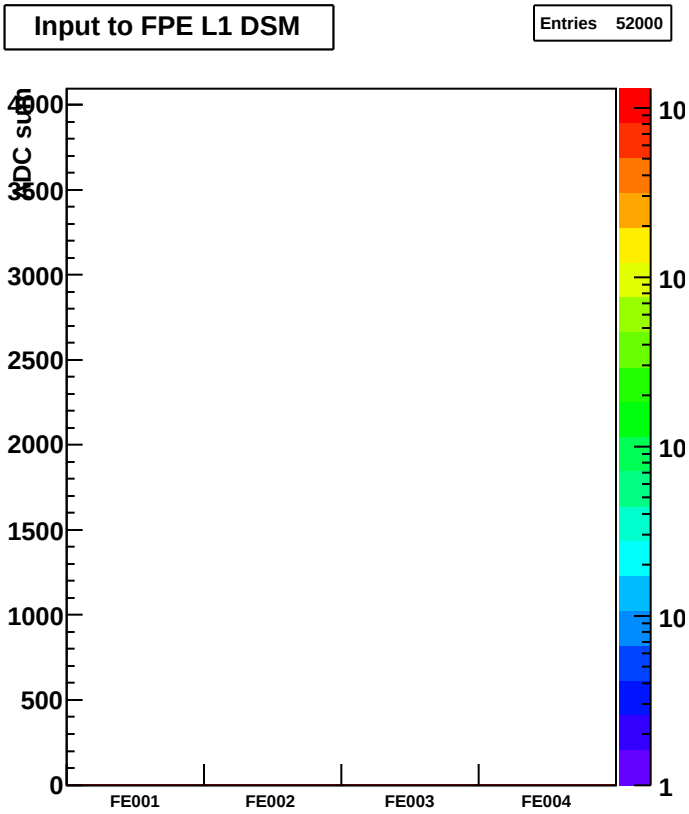

Input to FPD L2 DSM
Entries 78000
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

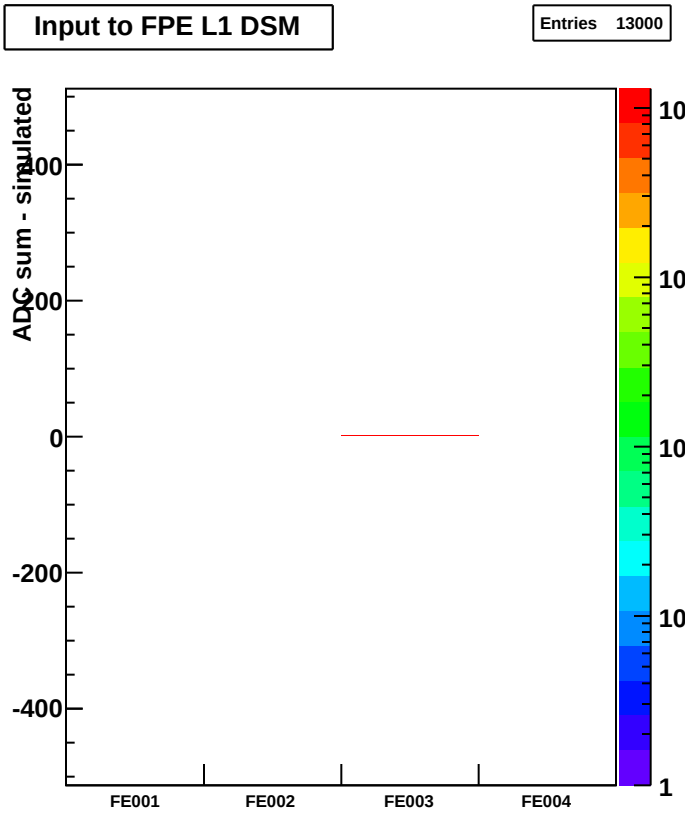

Input to FE001 QT board
Entries 416000
ADC
channel

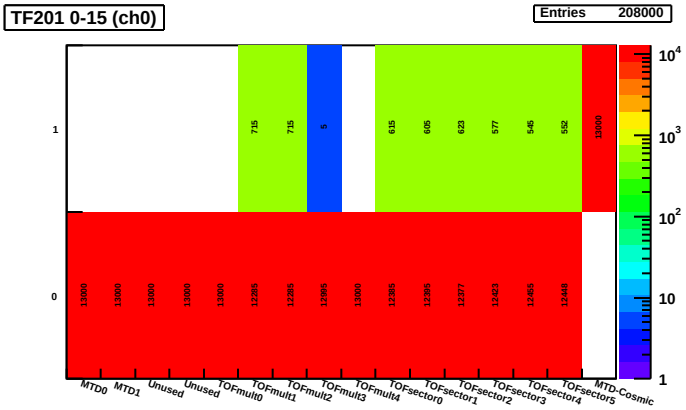

Input to FE002 QT board
Entries 416000
ADC
channel

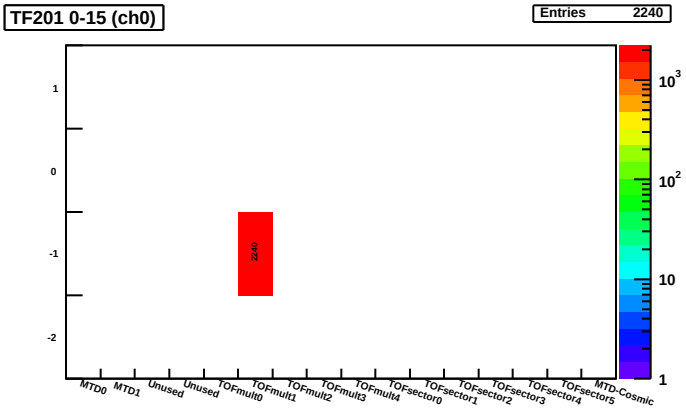

Input to FE003 QT board
Entries 416000
ADC
channel

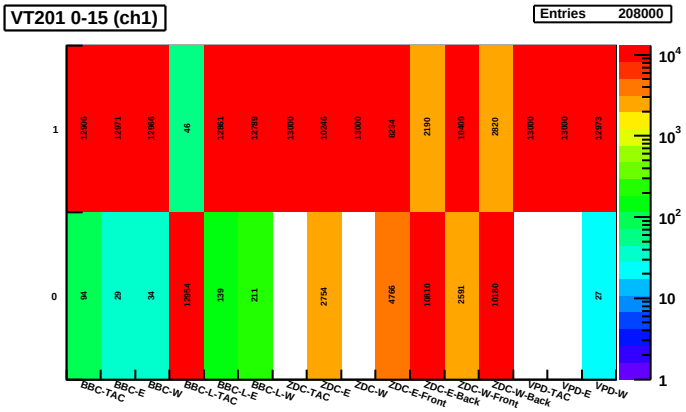

Input to FE004 QT board
Entries 416000
ADC
channel

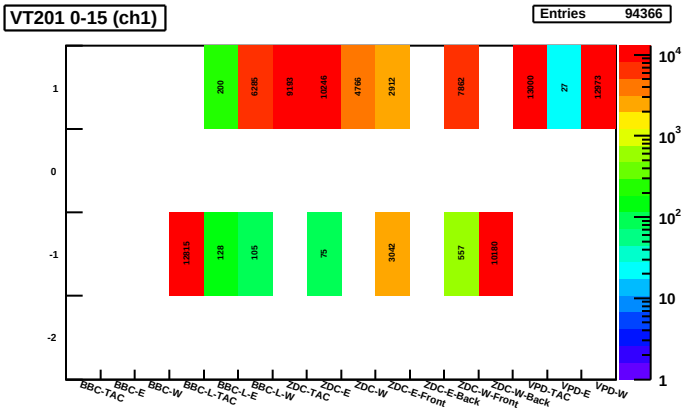

Input to FPE L1 DSM
Entries 52000
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1

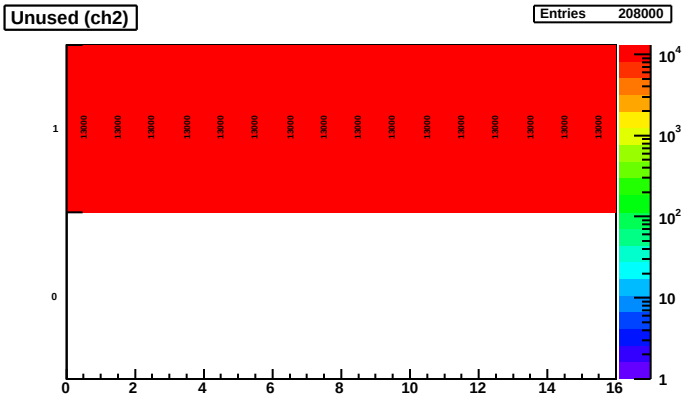

Input to FPE L1 DSM
Entries 13000
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1

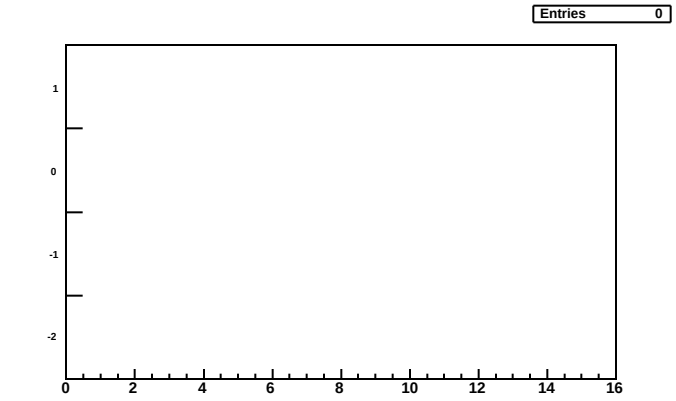

TF201 0-15 (ch0)
Entries 208000
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

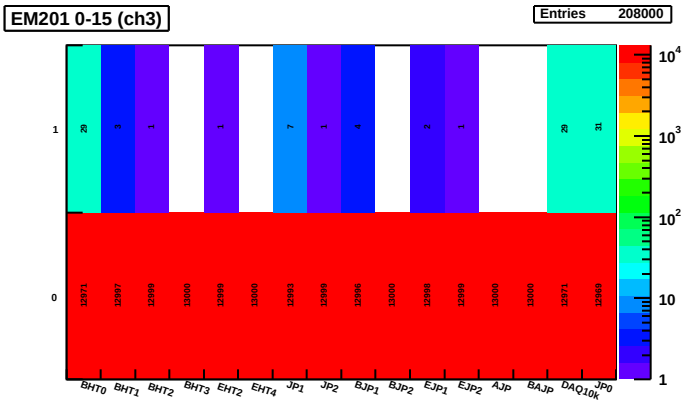

TF201 0-15 (ch0)
Entries 2240
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 208000
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 94366
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 208000


Entries 0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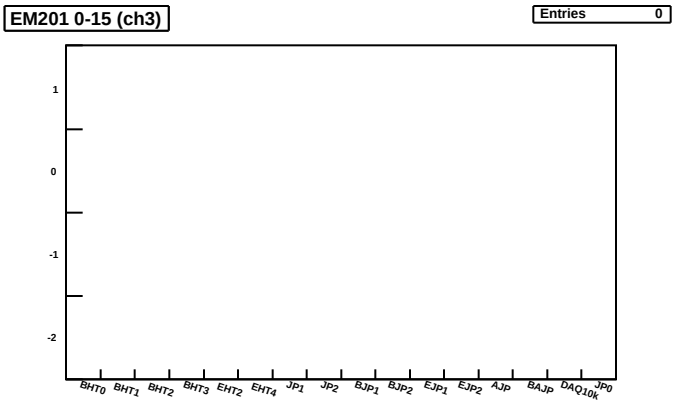
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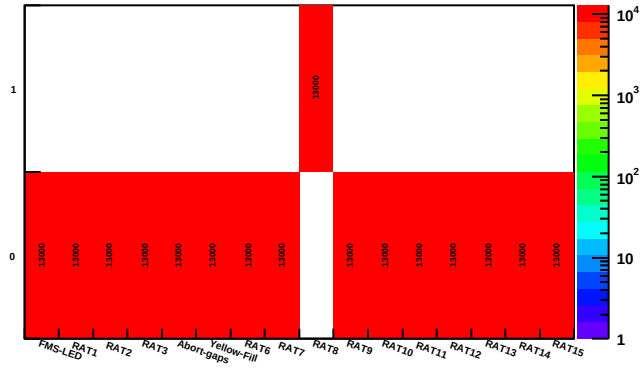
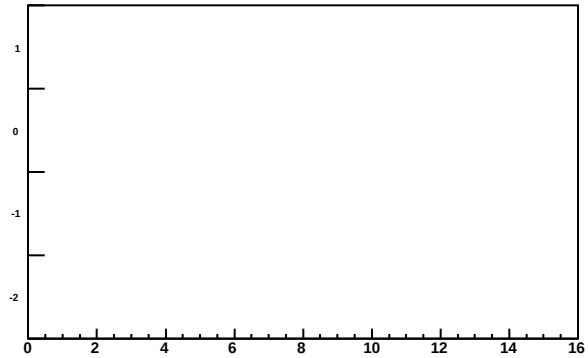
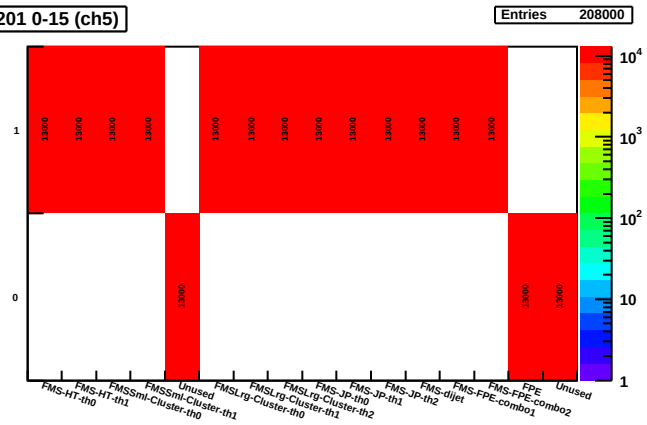
RAT board (ch4)





FP201 0-15 (ch5)



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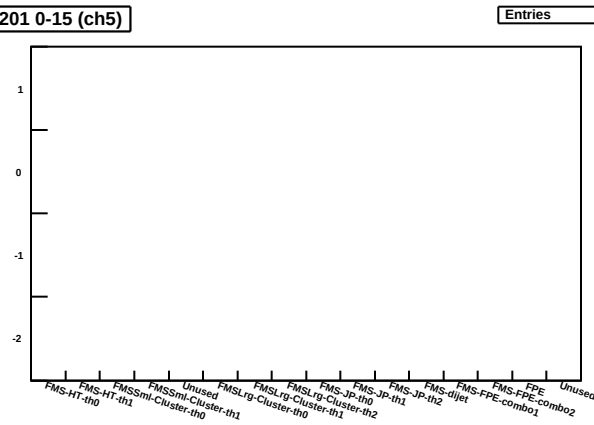
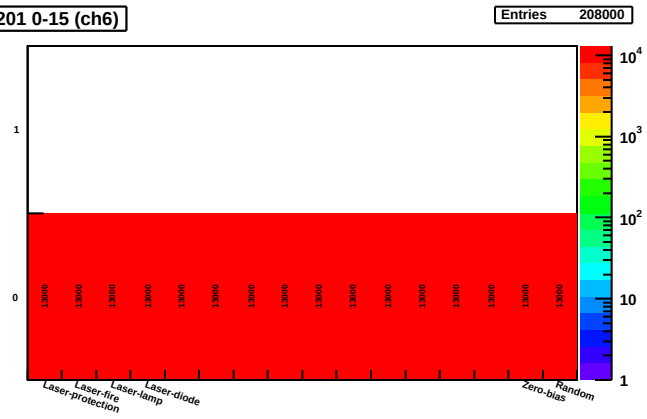
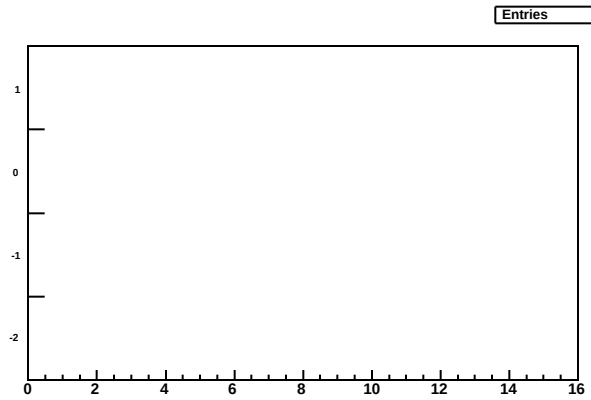
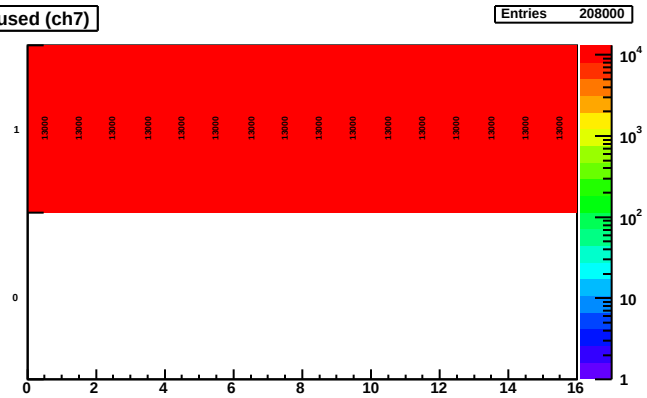
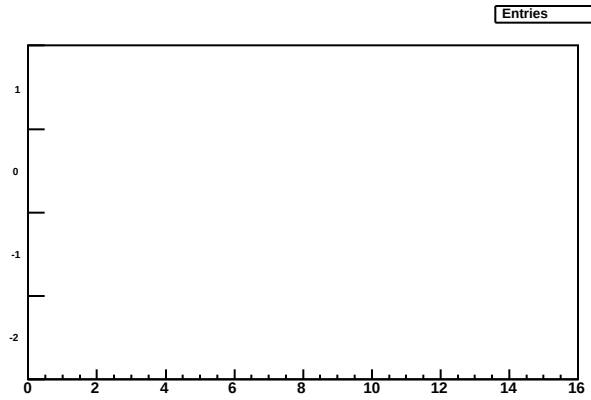


ST201 0-15 (ch6)





Unused (ch7)