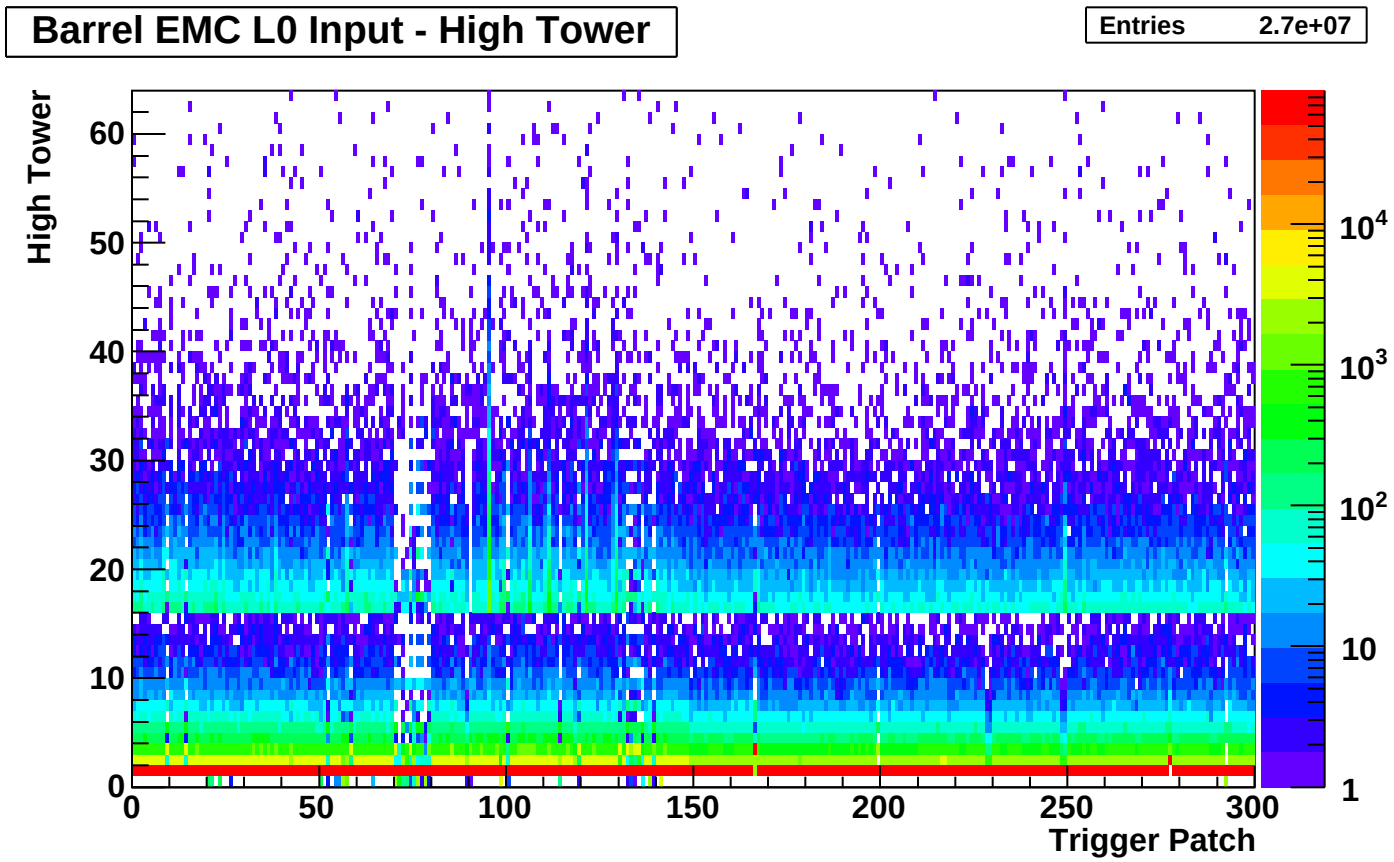
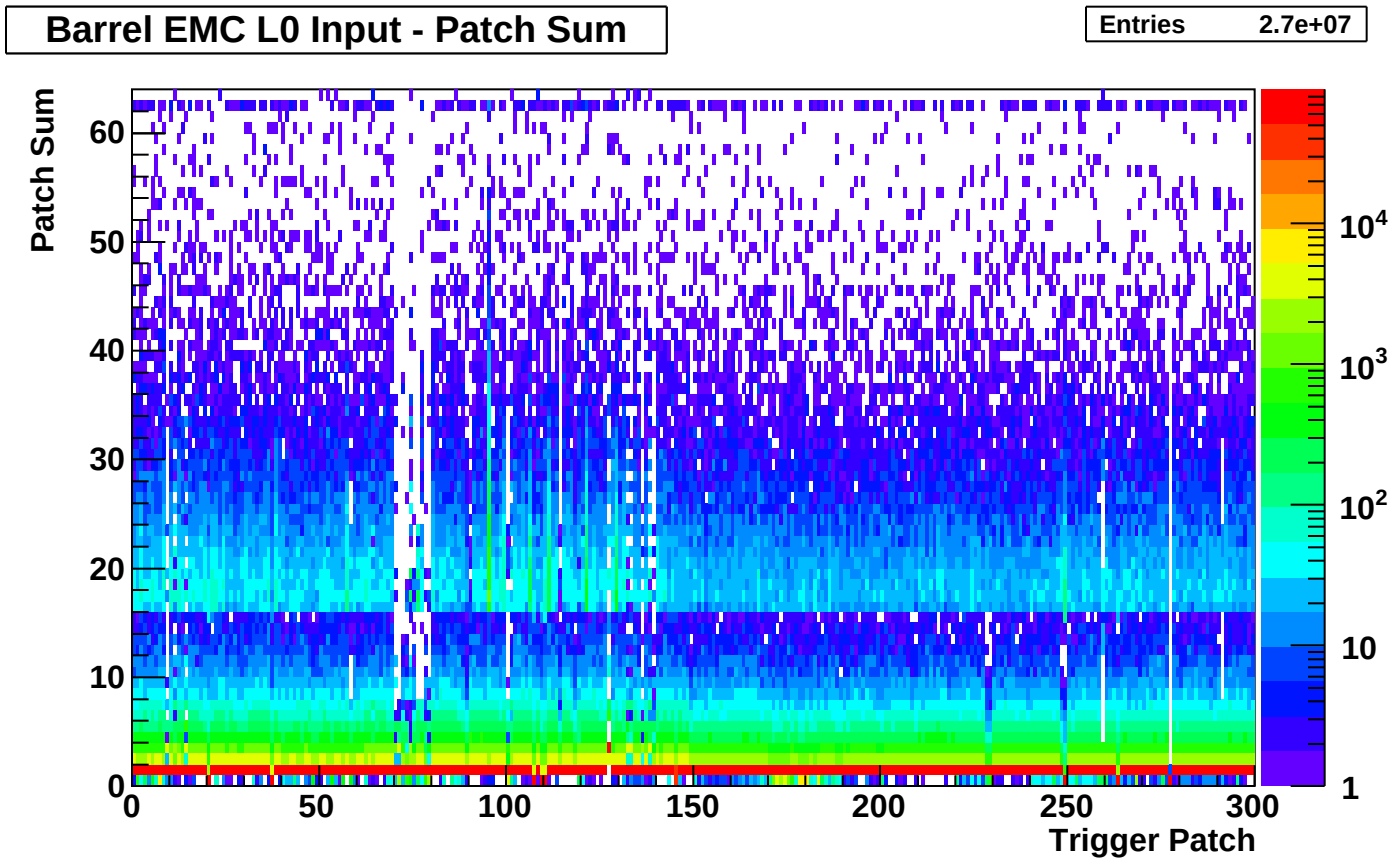
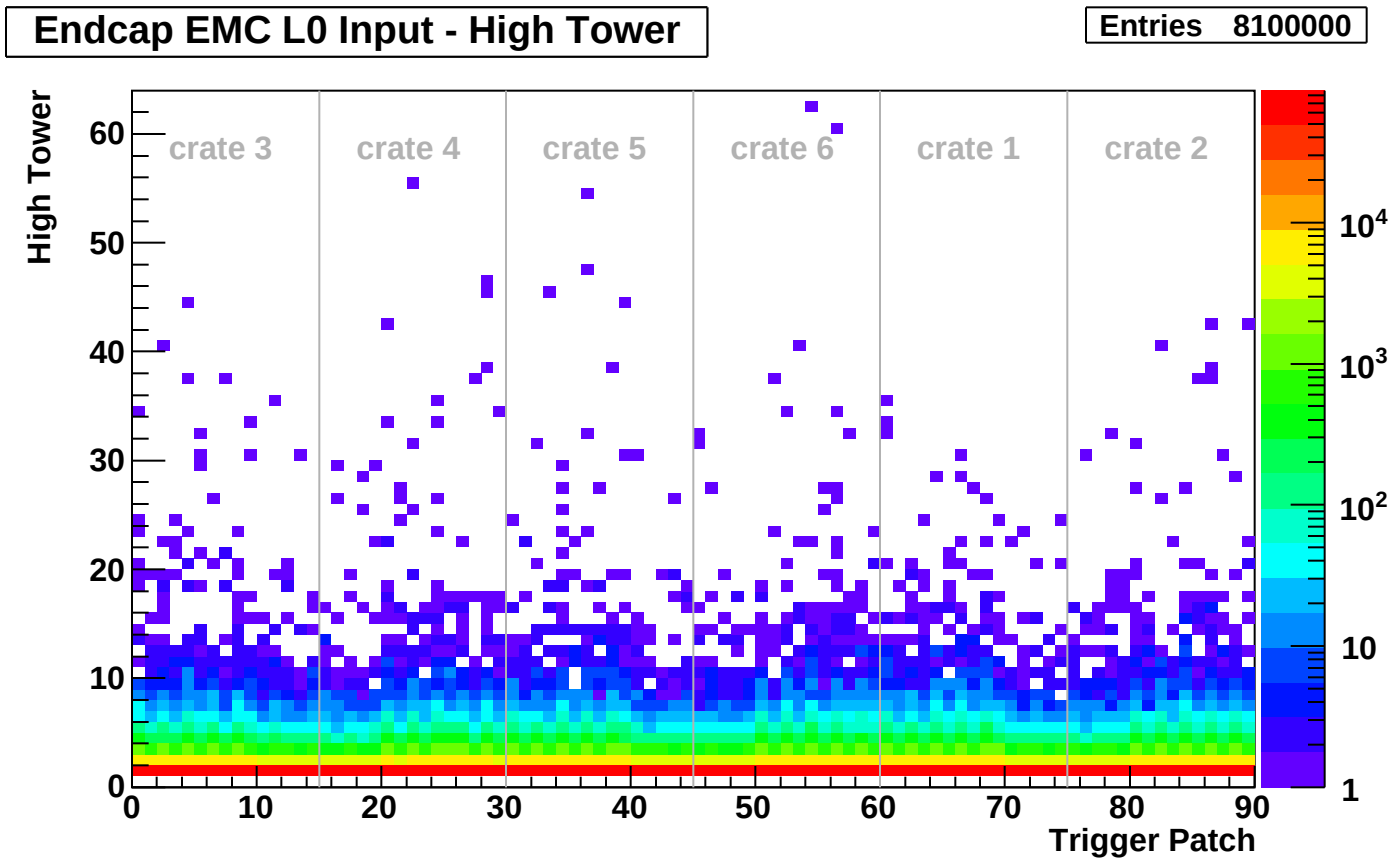
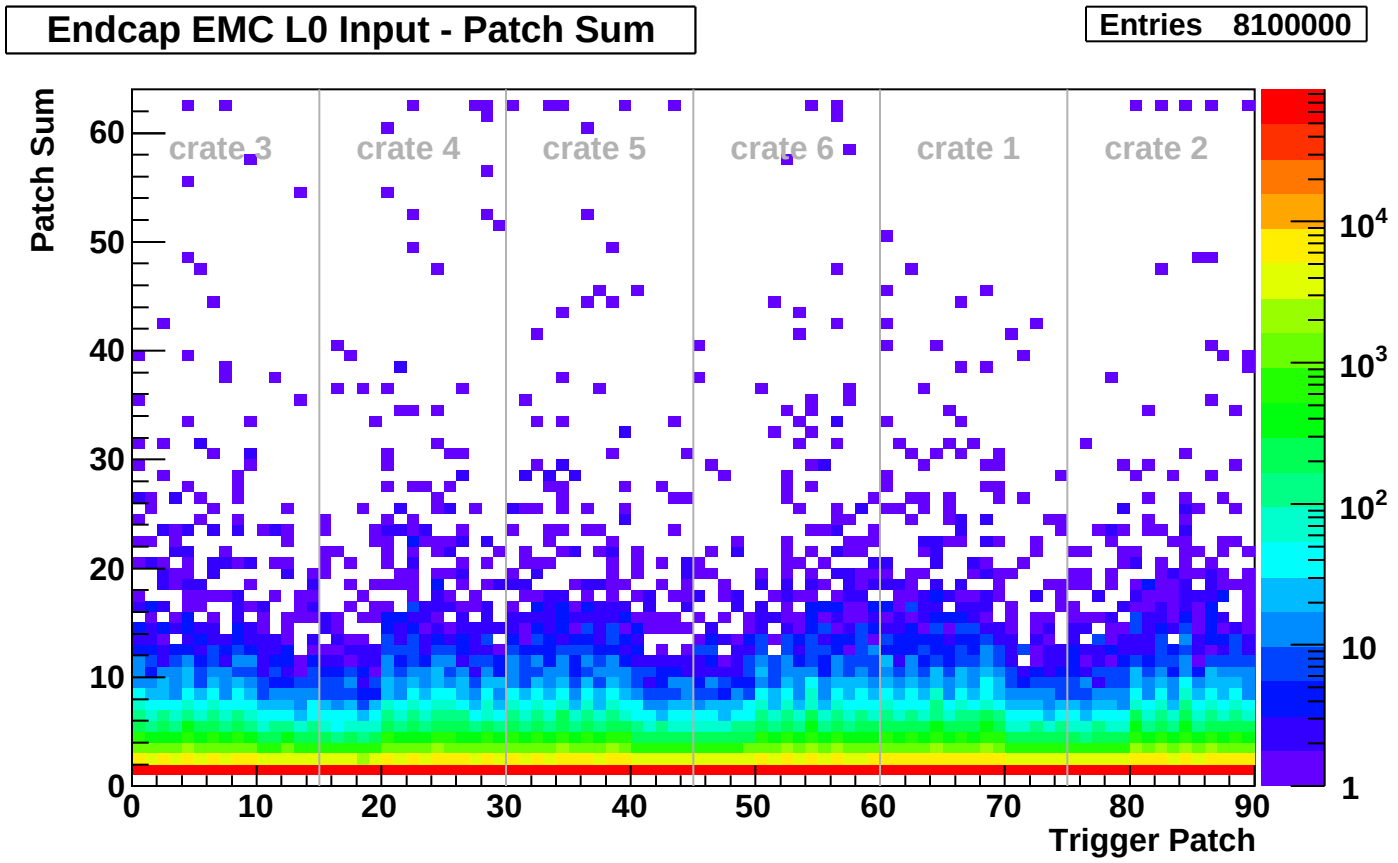
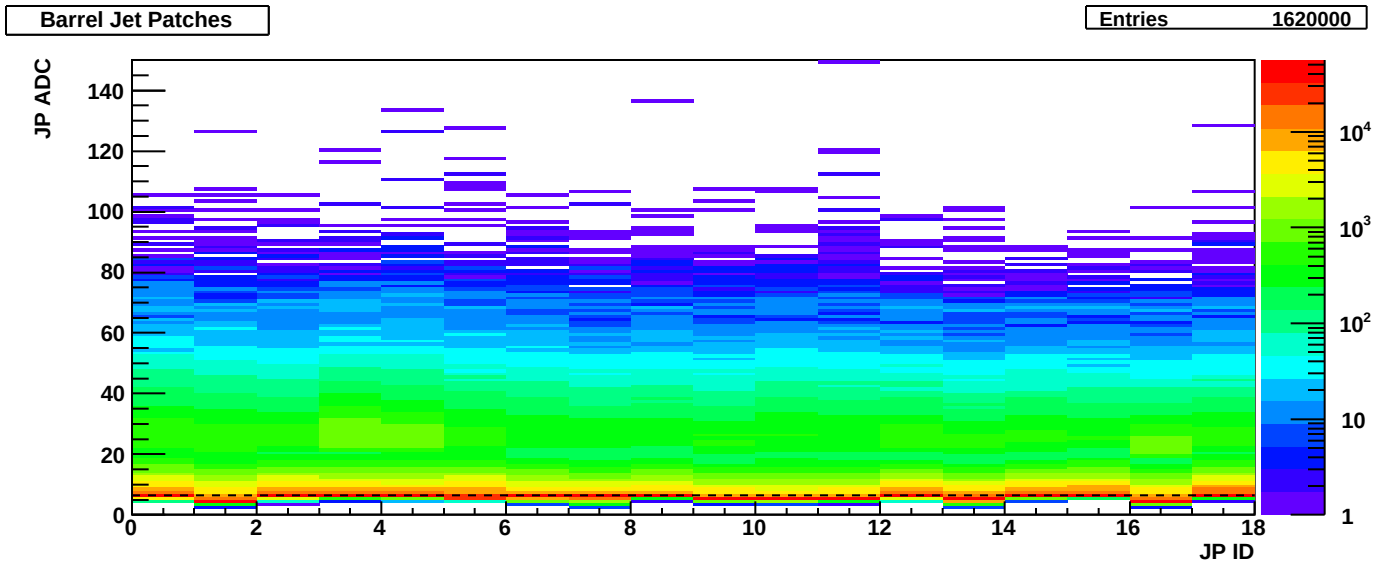
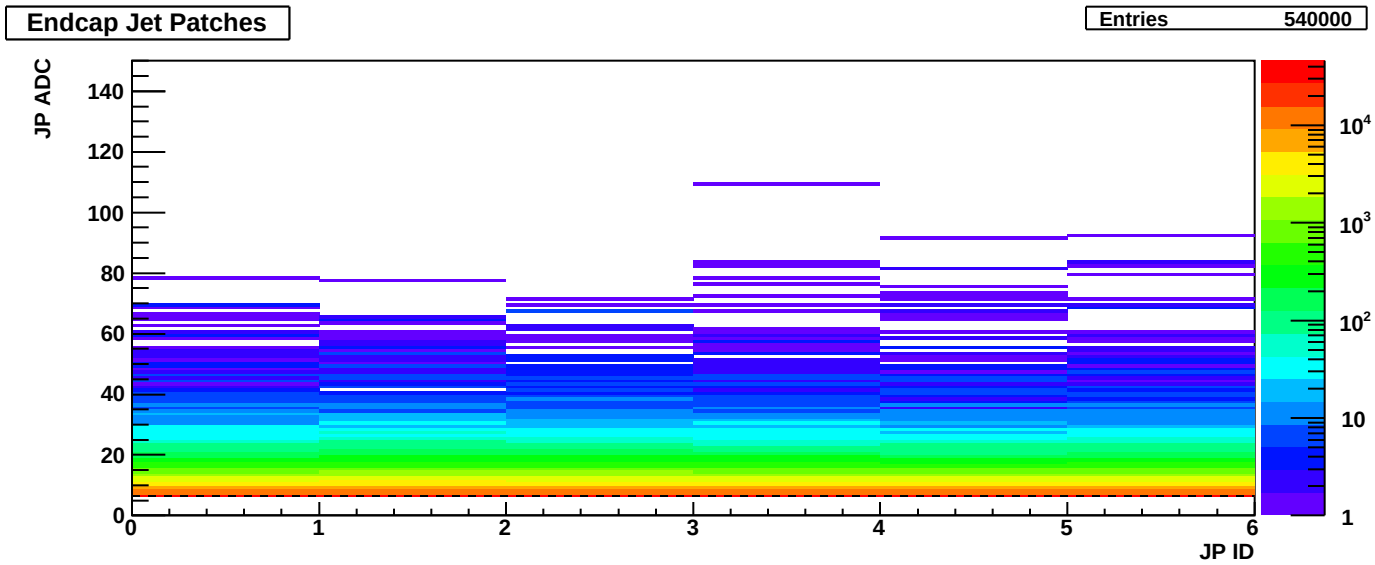

Barrel EMC L0 Input - High Tower
Entries 2.7e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

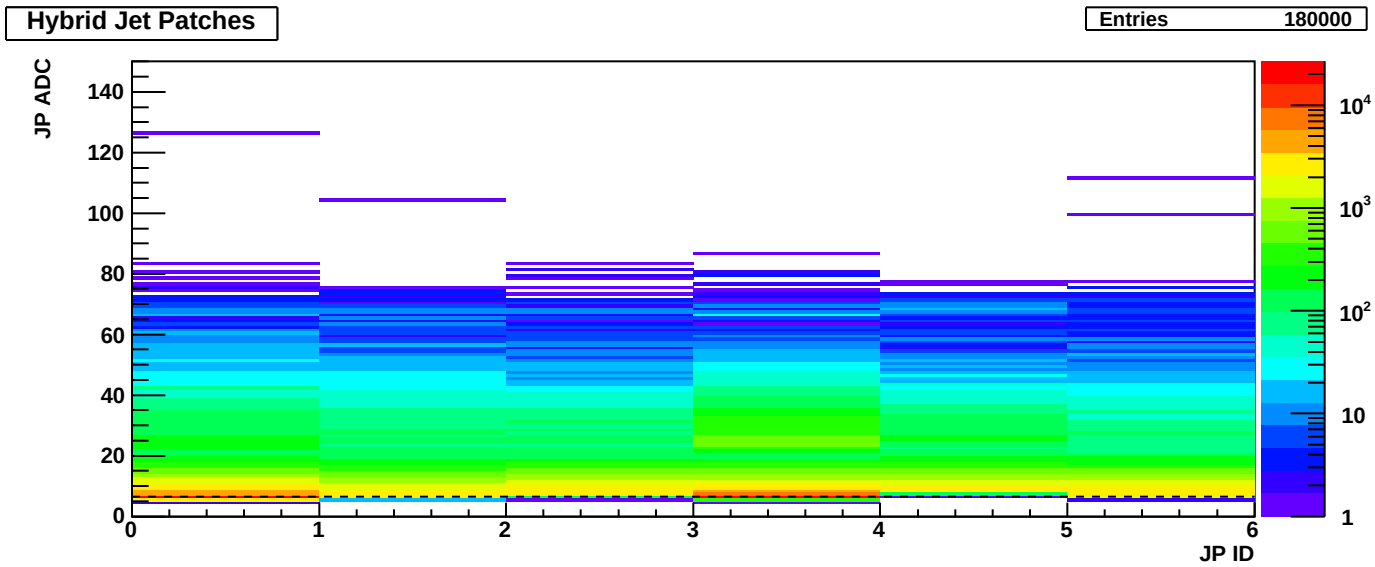

Barrel EMC L0 Input - Patch Sum
Entries 2.7e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

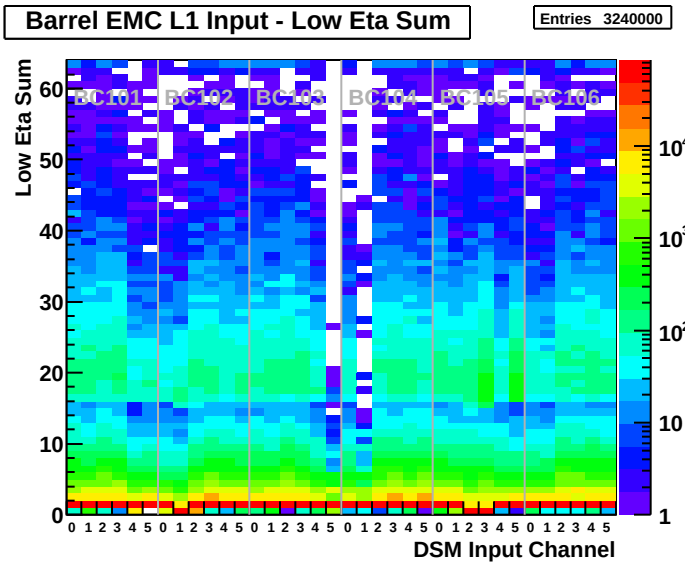

Endcap EMC L0 Input - High Tower
Entries 8100000
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

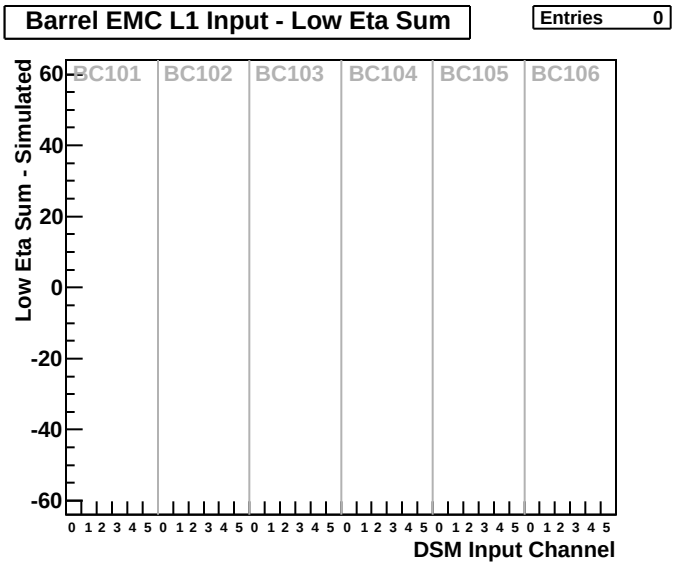

Endcap EMC L0 Input - Patch Sum
Entries 8100000
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

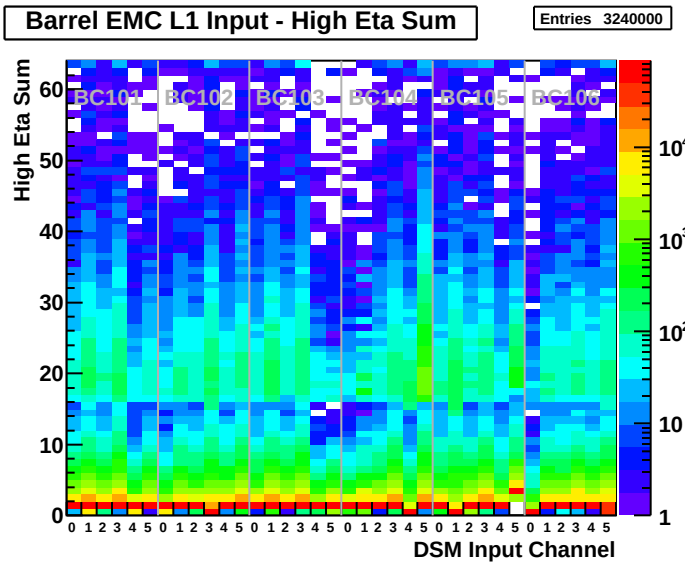

Barrel Jet Patches
Entries 1620000
JP ADC
JP ID

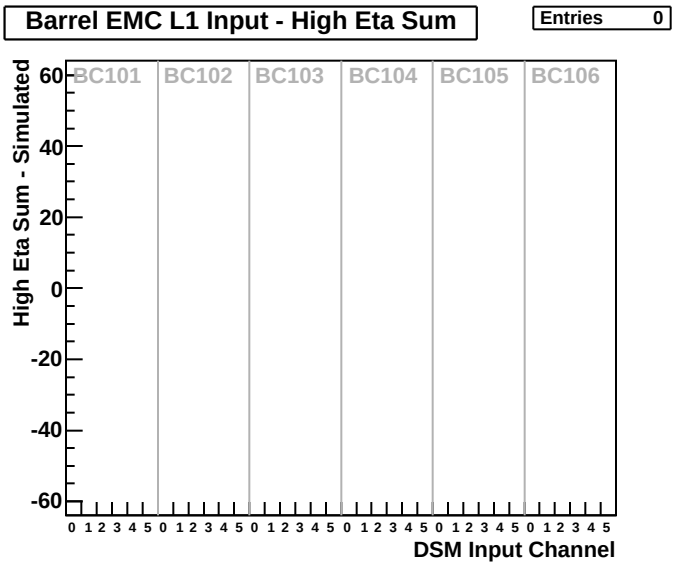

Endcap Jet Patches
Entries 540000
JP ADC
JP ID

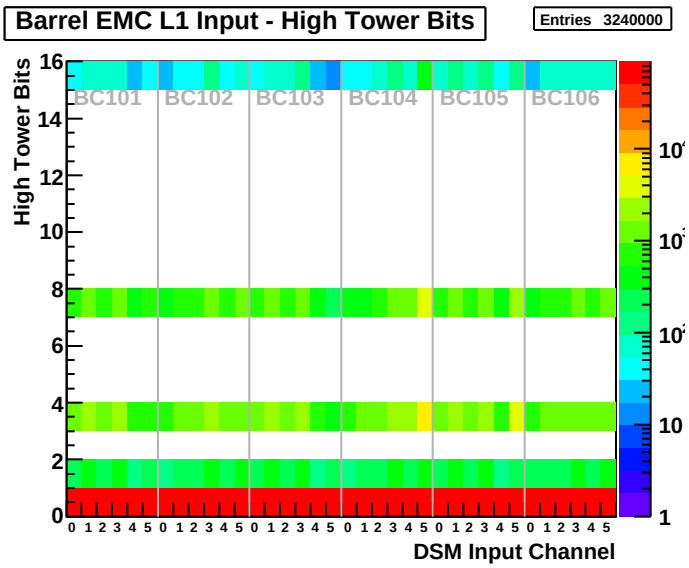

Hybrid Jet Patches
Entries 180000
JP ADC
JP ID

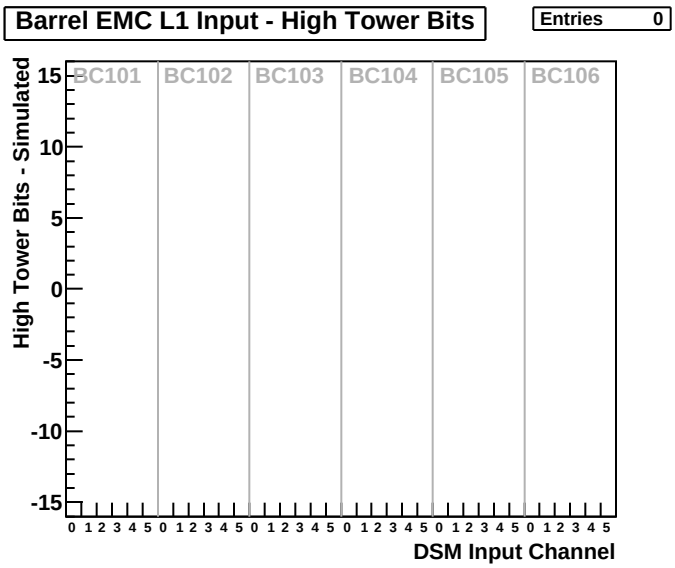

Barrel EMC L1 Input - Low Eta Sum
Entries 3240000
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

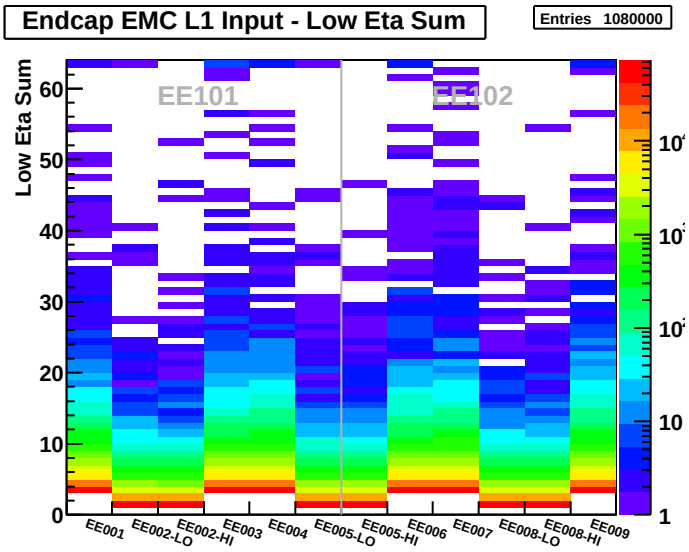

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

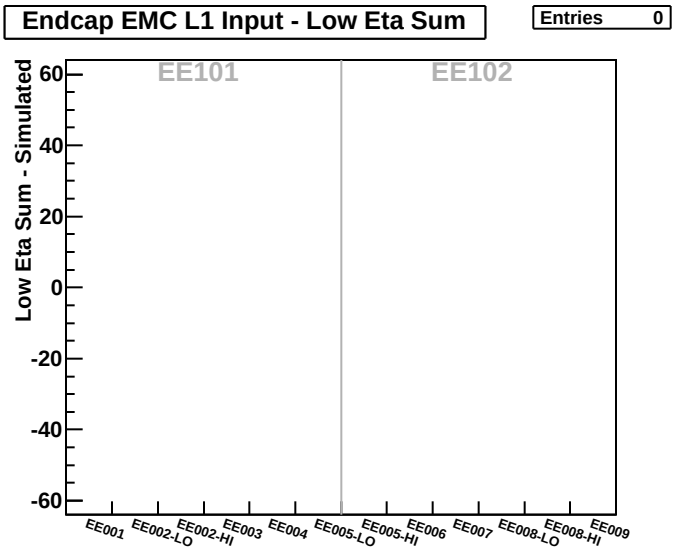

Barrel EMC L1 Input - High Eta Sum
Entries 3240000
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

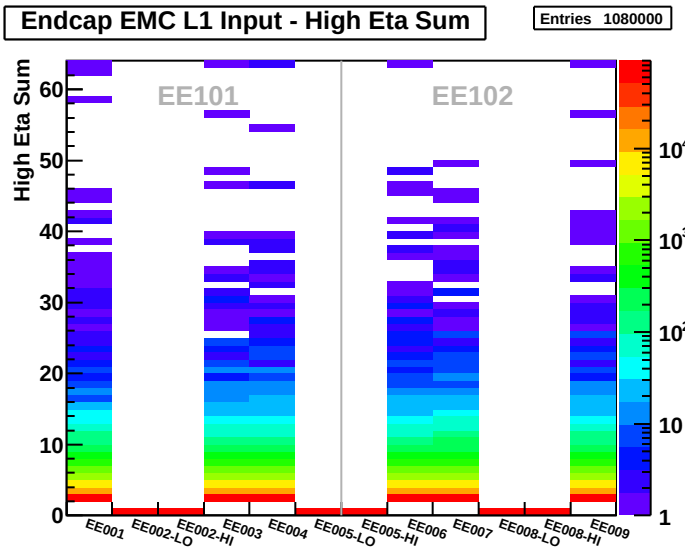

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

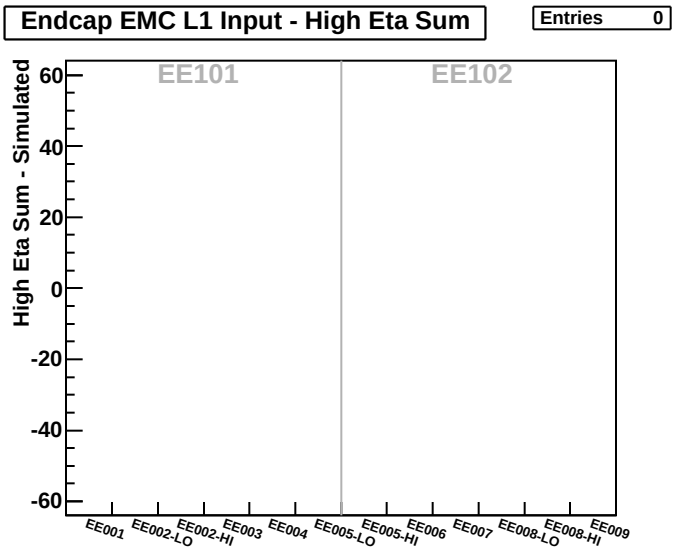

Barrel EMC L1 Input - High Tower Bits
Entries 3240000
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

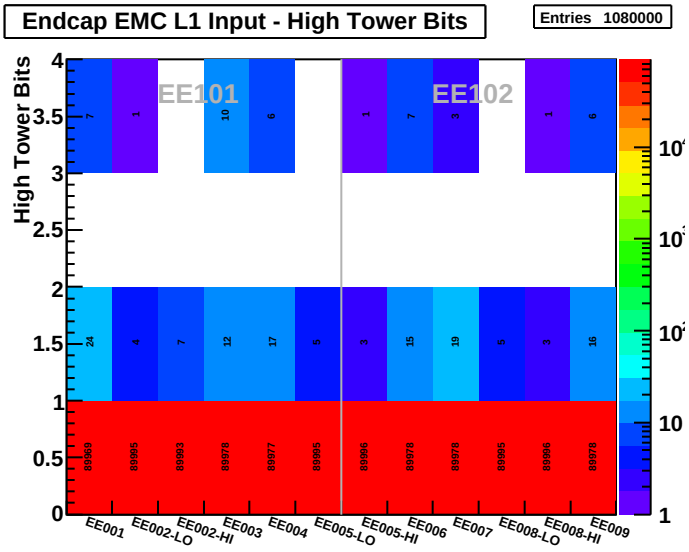

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

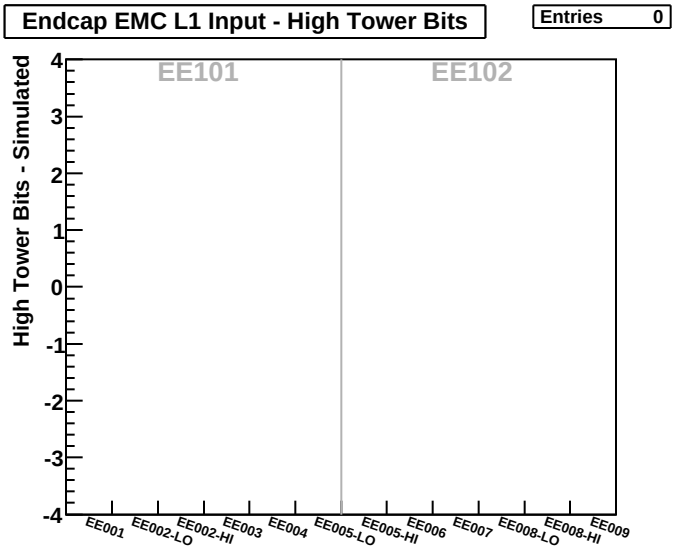

Endcap EMC L1 Input - Low Eta Sum
Entries 1080000
Low Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

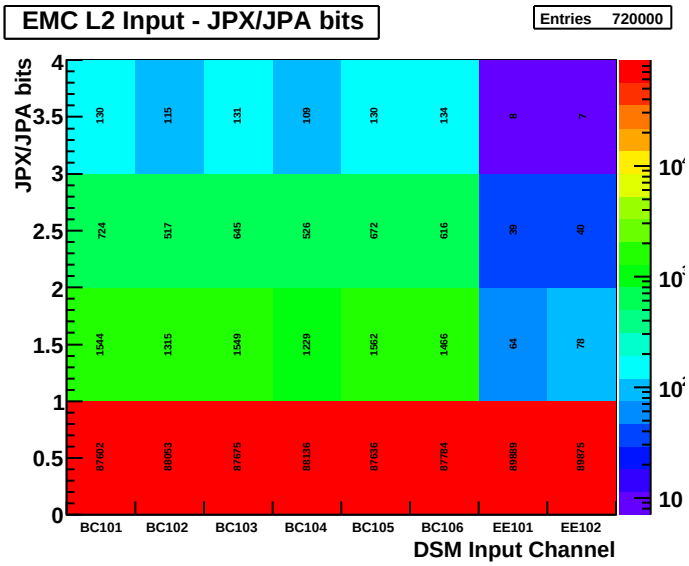

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

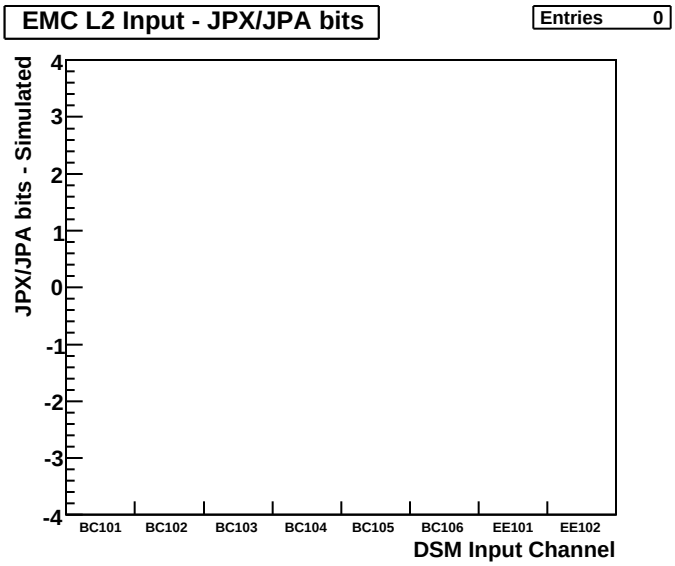

Endcap EMC L1 Input - High Eta Sum
Entries 1080000
High Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

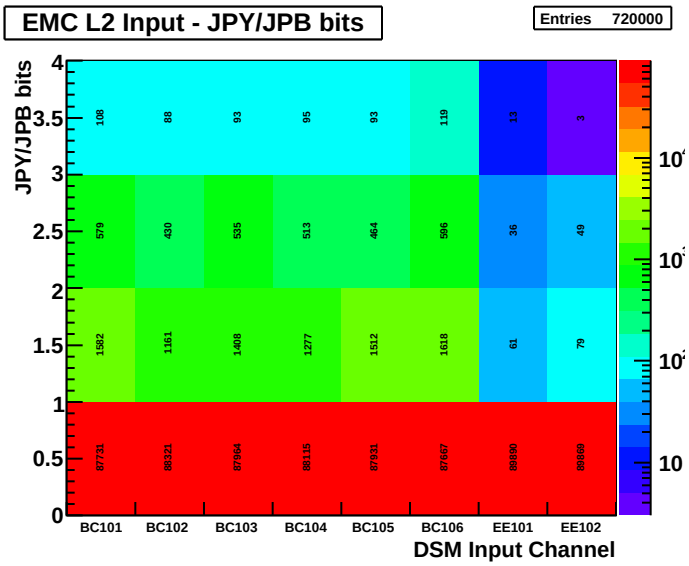

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

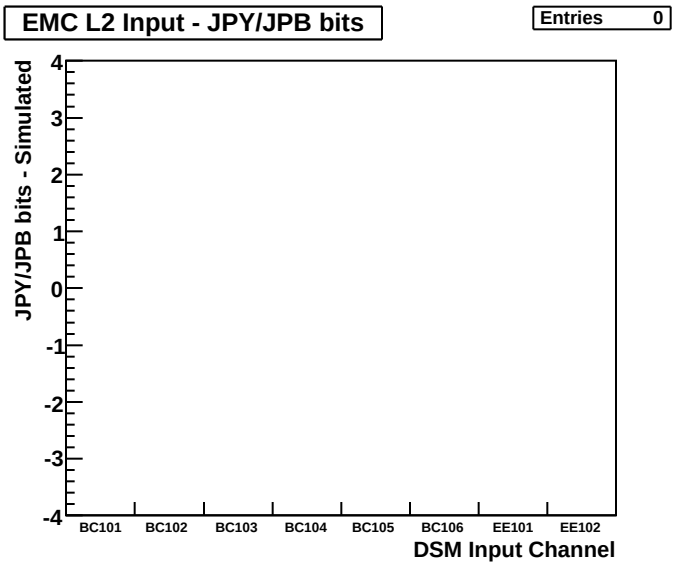

Endcap EMC L1 Input - High Tower Bits
Entries 1080000
High Tower Bits
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

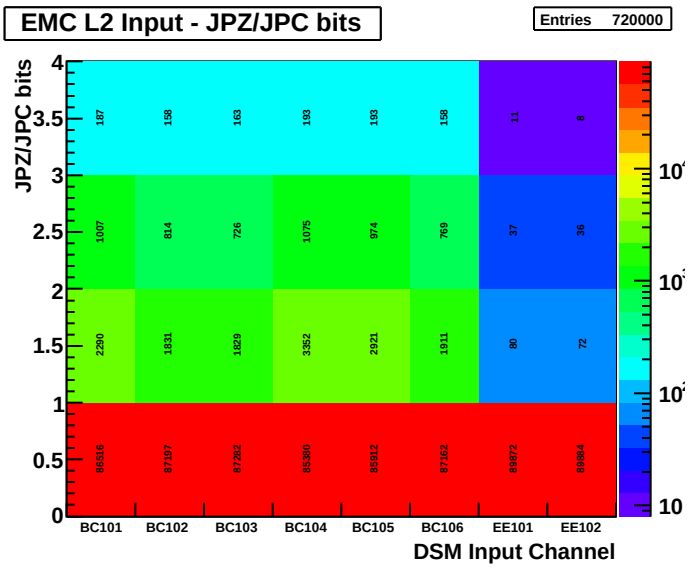

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

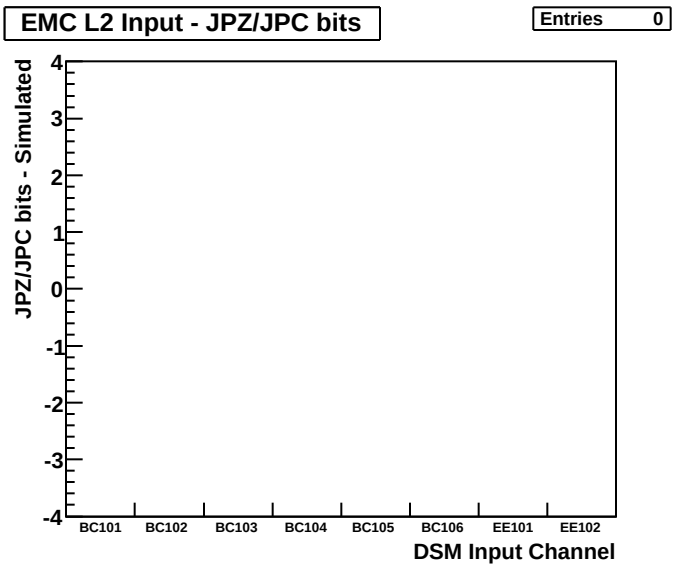

EMC L2 Input - JPX/JPA bits
Entries 720000
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
130 115 131 109 130 134 8 7
724 517 645 526 672 616 39 40
1544 1315 1549 1229 1562 1466 64 78
87602 88053 87675 88136 87636 87784 89889 89875

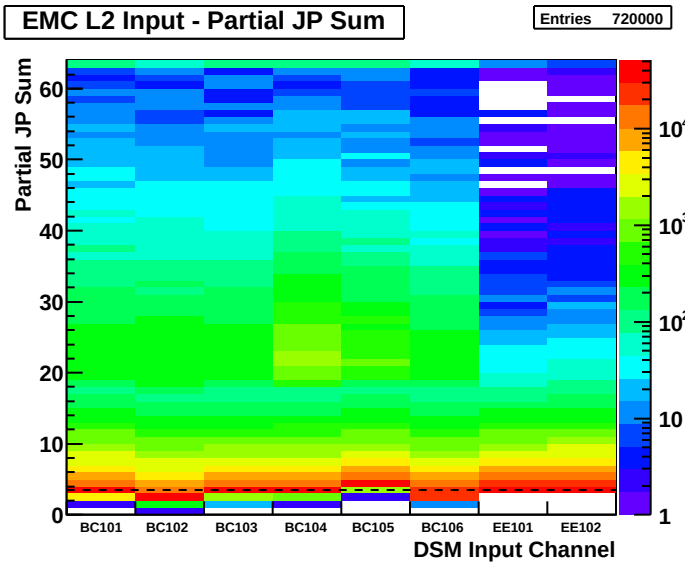

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

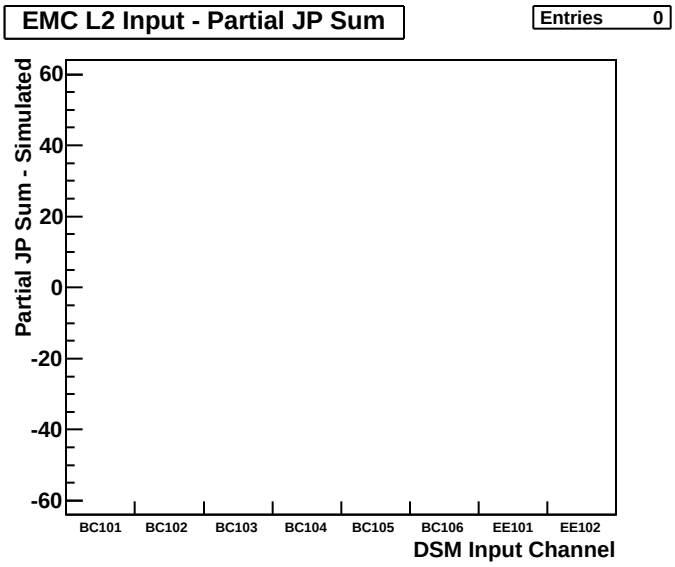

EMC L2 Input - JPY/JPB bits
Entries 720000
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
108 88 93 95 93 119 13 3
579 430 535 513 464 596 36 49
1382 1161 1408 1277 1512 1618 61 79
87731 88321 87964 88115 87931 87667 89890 89660

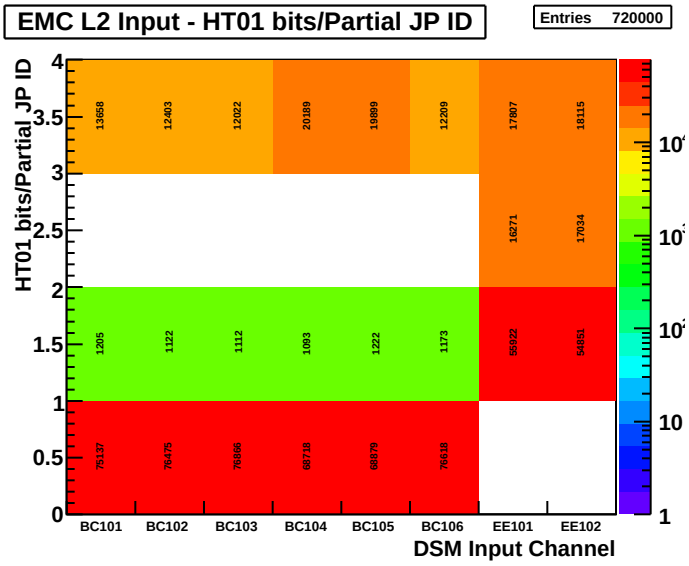

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

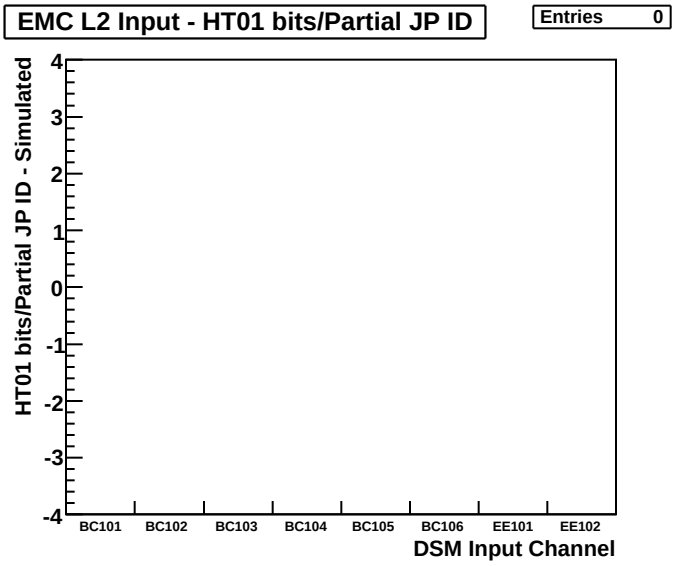

EMC L2 Input - JPZ/JPC bits
Entries 720000
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
187 158 163 193 193 158 11 8
1007 814 726 1075 974 769 37 36
2290 1831 1829 3352 2921 1911 80 72
86516 87197 87282 85380 85912 87152 89872 89884

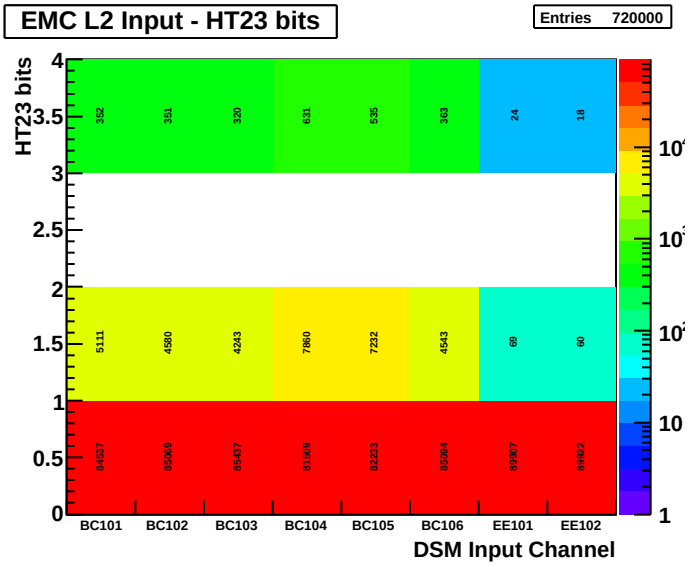

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

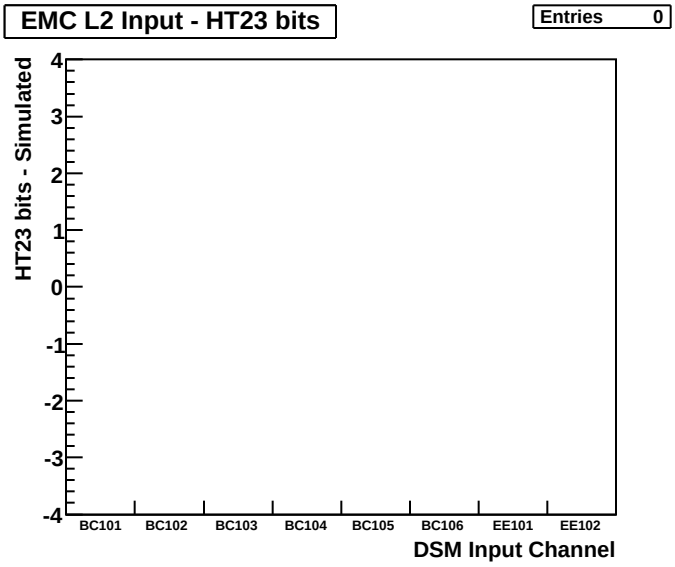

EMC L2 Input - Partial JP Sum
Entries 720000
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

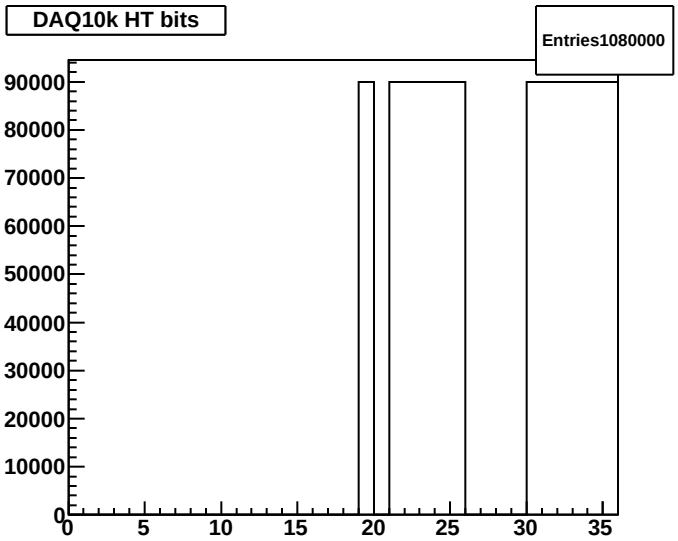

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

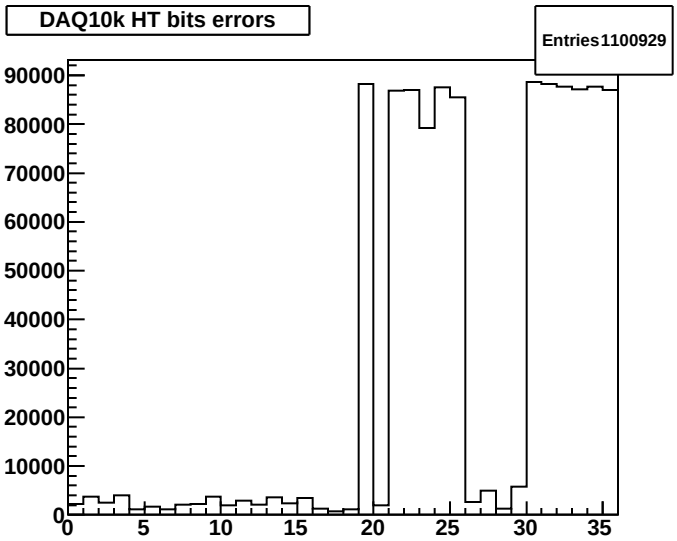

EMC L2 Input - HT01 bits/Partial JP ID
Entries 720000
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

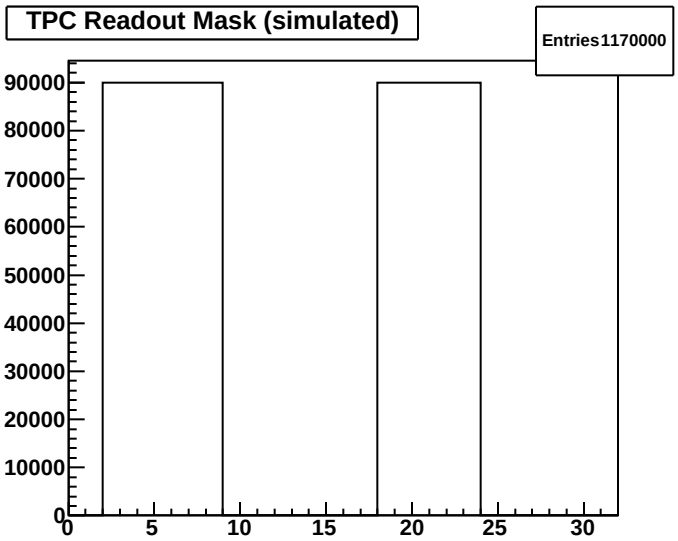

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

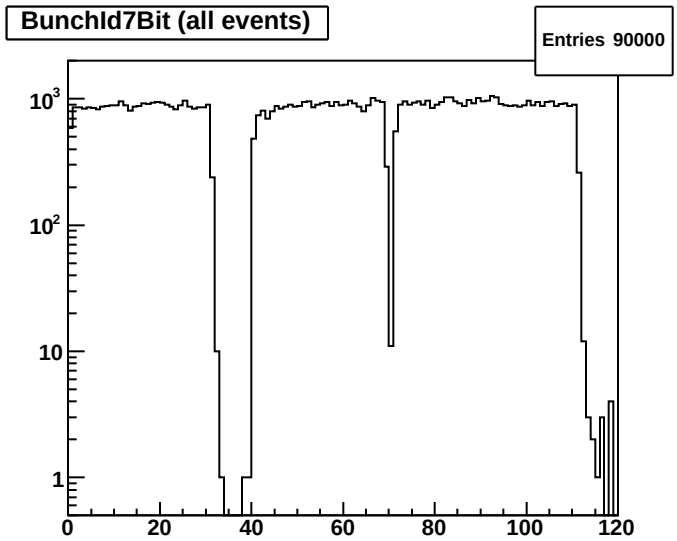

EMC L2 Input - HT23 bits
Entries 720000
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

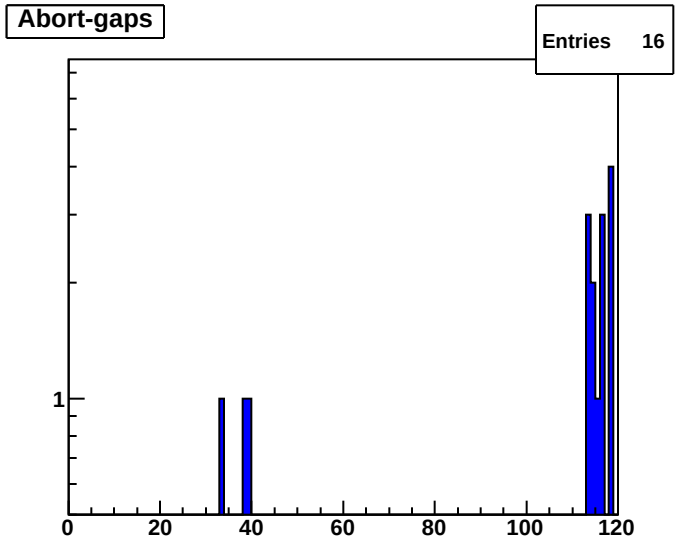

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

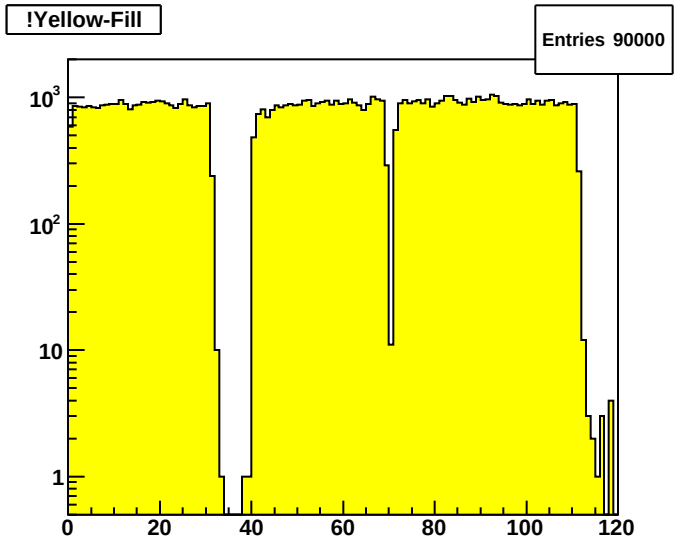

DAQ10k HT bits
Entries1080000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

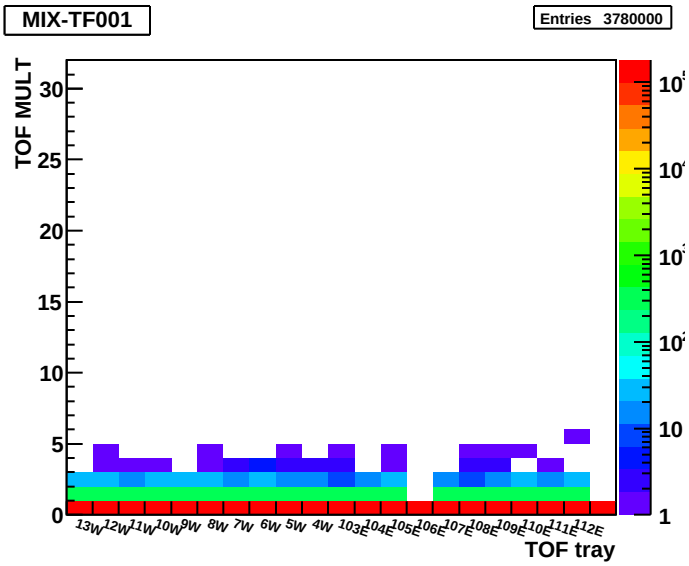

DAQ10k HT bits errors
Entries1100929
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

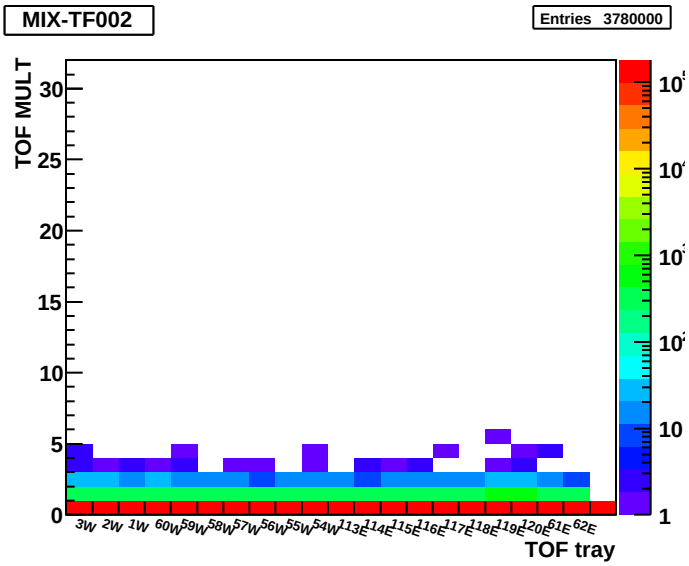

TPC Readout Mask (simulated)
Entries1170000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30

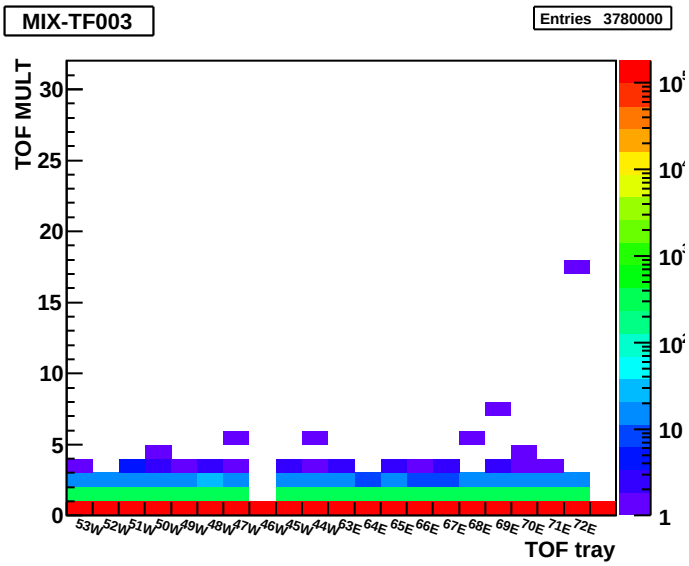

BunchId7Bit (all events)
Entries 90000
10^3
10^2
10
1
0 20 40 60 80 100 120

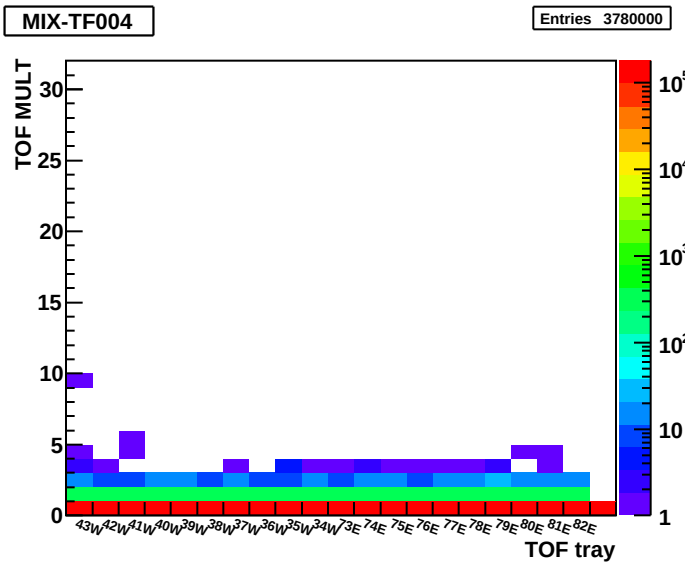

Abort-gaps
Entries 16
1
0 20 40 60 80 100 120

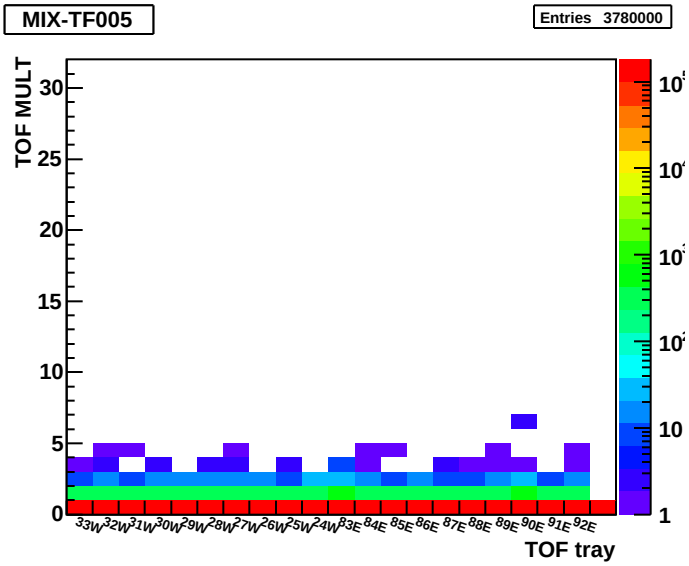

!Yellow-Fill
Entries 90000
10^3
10^2
10
1
0 20 40 60 80 100 120

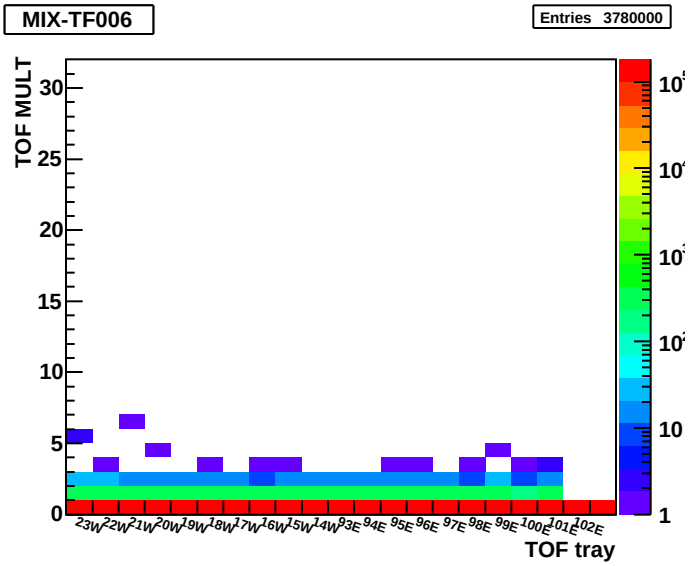

MIX-TF001
Entries 3780000
TOF MULT
TOF tray

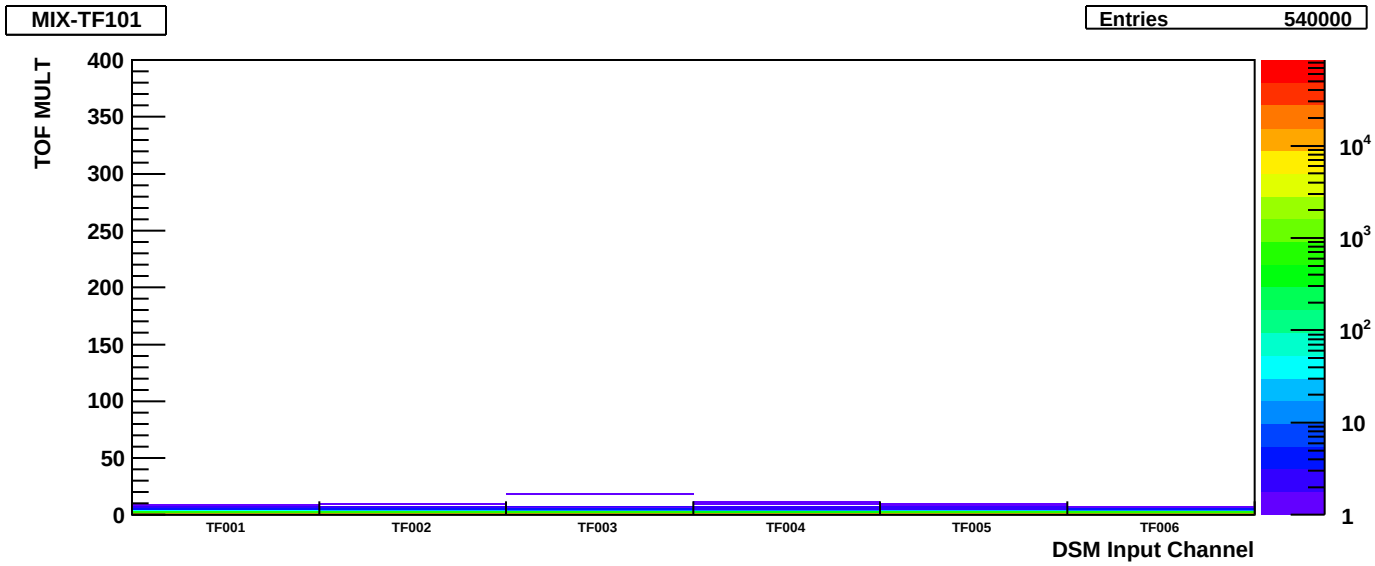

MIX-TF002
Entries 3780000
TOF MULT
TOF tray

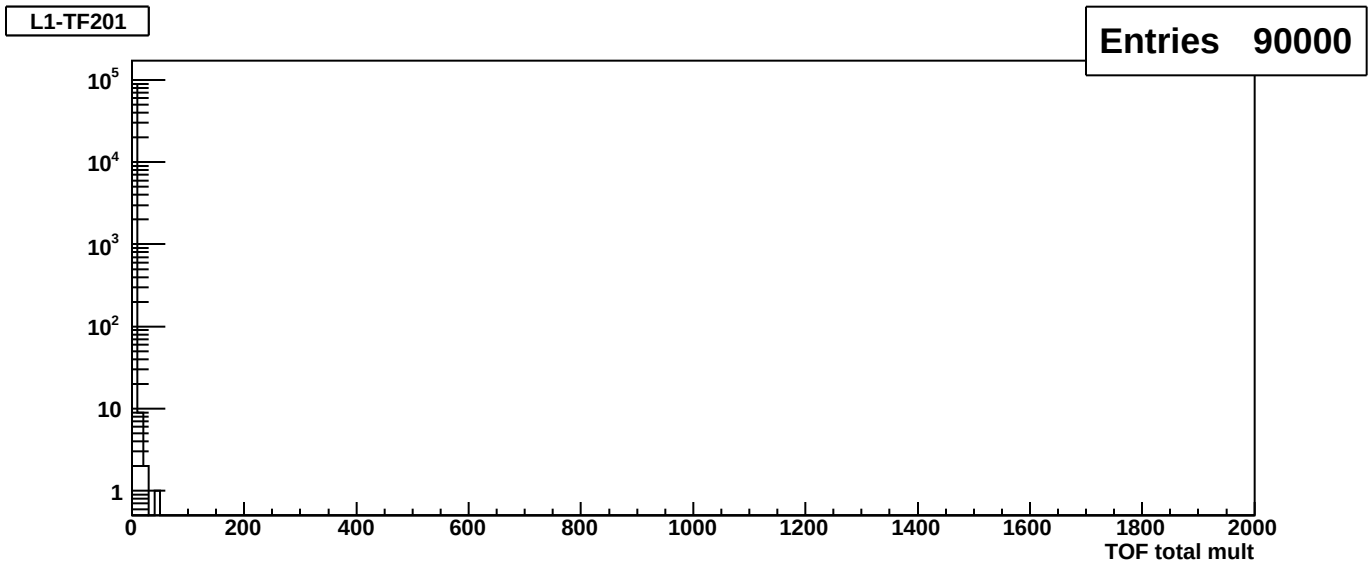

MIX-TF003
Entries 3780000
TOF MULT
TOF tray

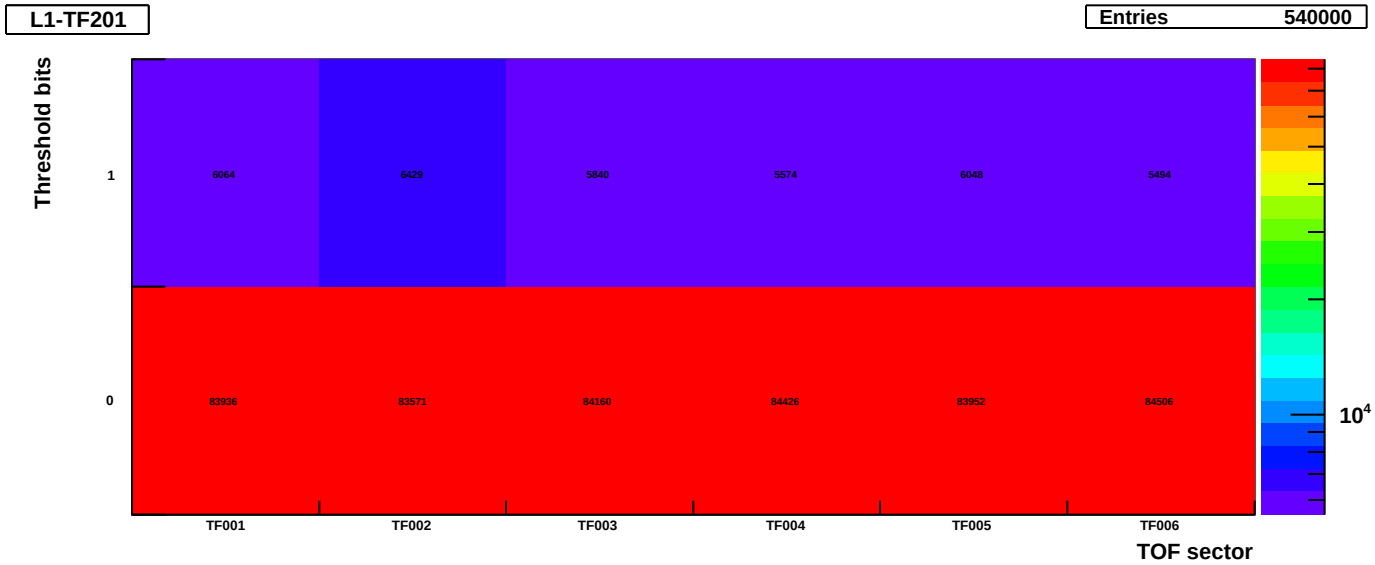

MIX-TF004
Entries 3780000
TOF MULT
TOF tray

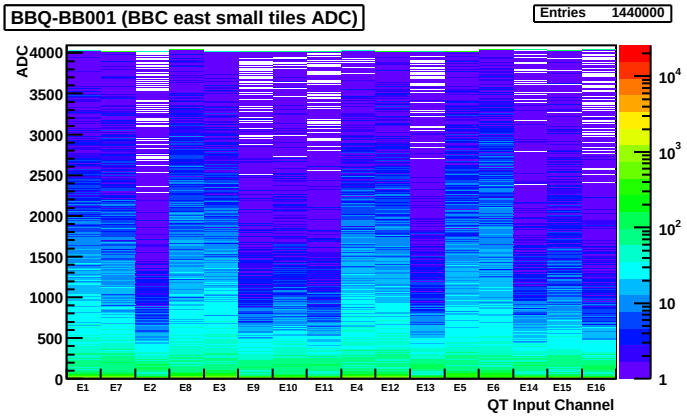

MIX-TF005
Entries 3780000
TOF MULT
TOF tray

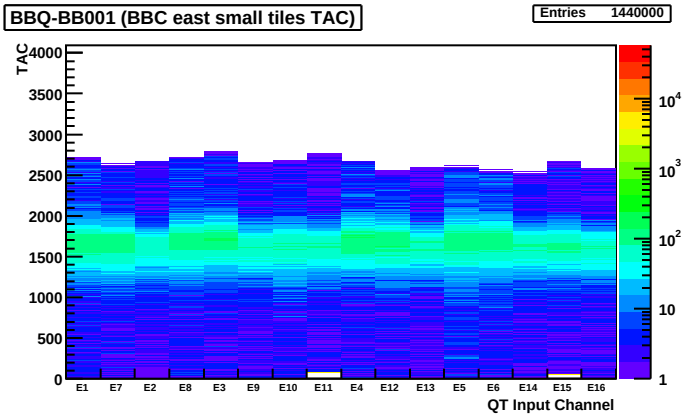

MIX-TF006
Entries 3780000
TOF MULT
TOF tray

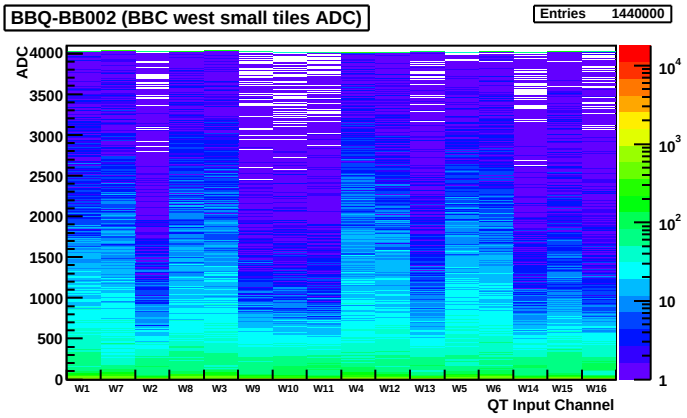

MIX-TF101
Entries 540000
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

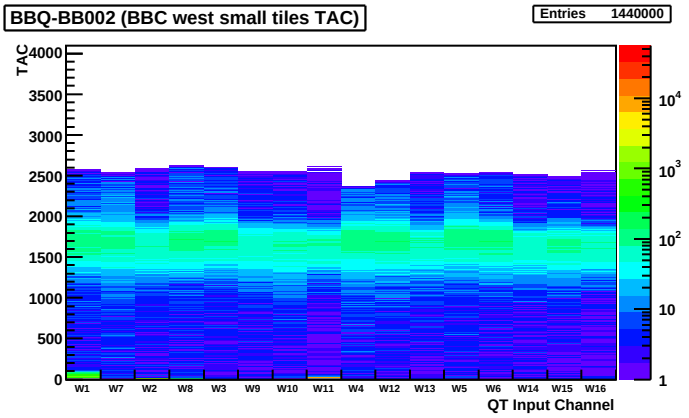

L1-TF201
Entries 90000
10^5
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

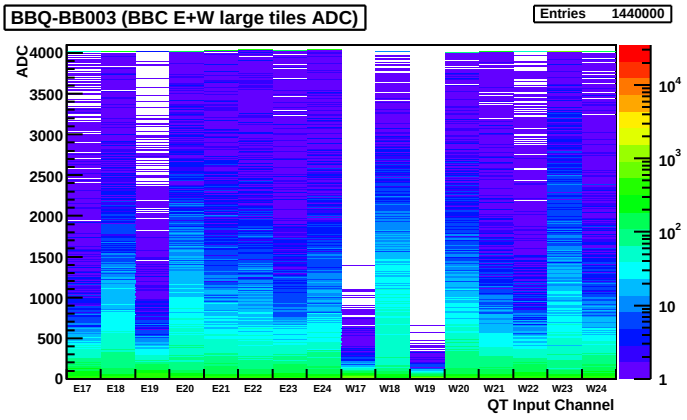

L1-TF201
Entries 540000
Threshold bits
1
0
6064
6429
5840
5574
6048
5494
83936
83571
84160
84426
83952
84506
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4

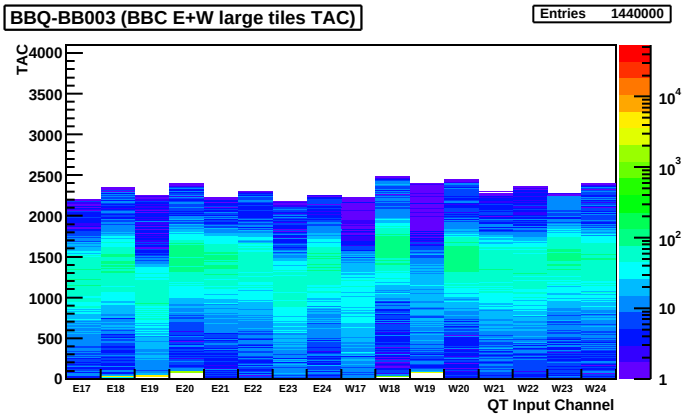

BBQ-BB001 (BBC east small tiles ADC)
Entries 1440000
ADC
QT Input Channel

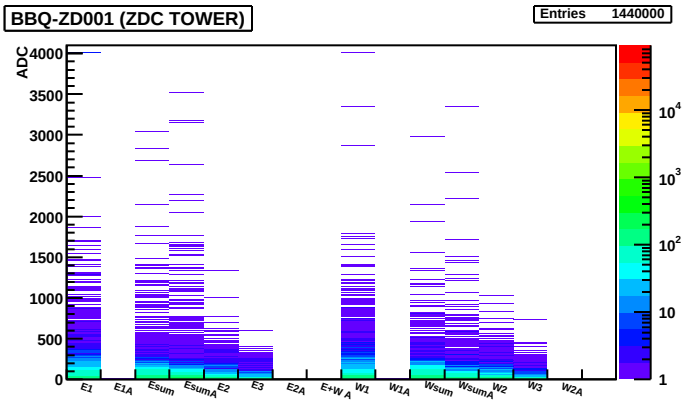

BBQ-BB001 (BBC east small tiles TAC)
Entries 1440000
TAC
QT Input Channel

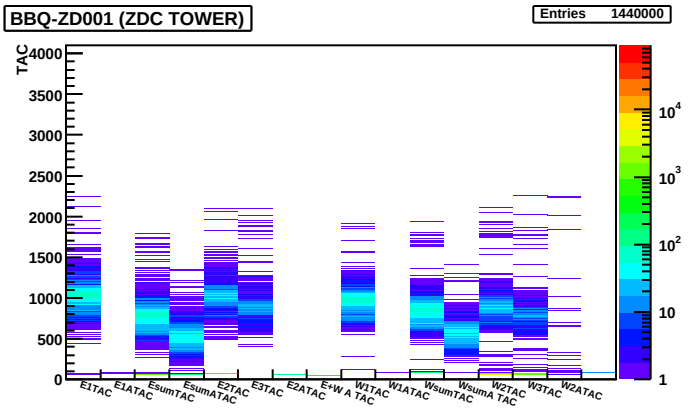

BBQ-BB002 (BBC west small tiles ADC)
Entries 1440000
ADC
QT Input Channel

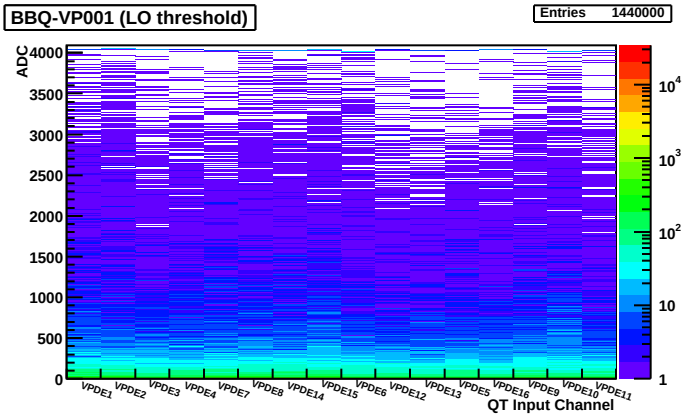

BBQ-BB002 (BBC west small tiles TAC)
Entries 1440000
TAC
QT Input Channel

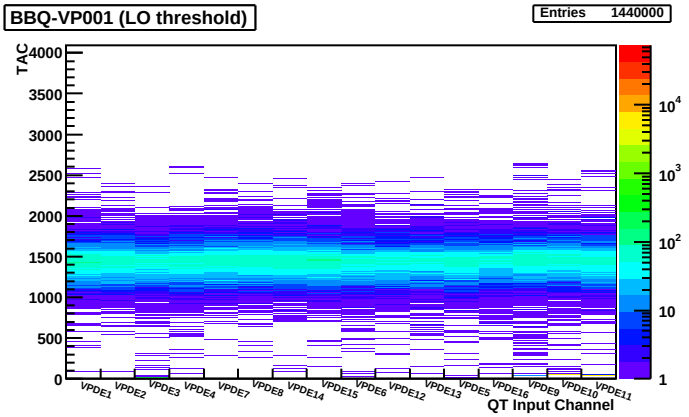

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 1440000
ADC
QT Input Channel

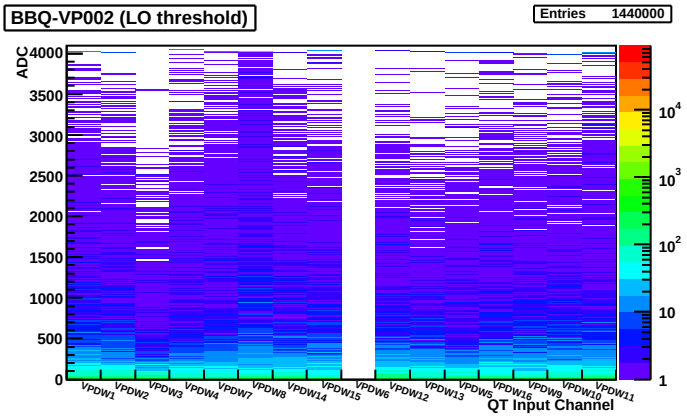

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 1440000
TAC
QT Input Channel

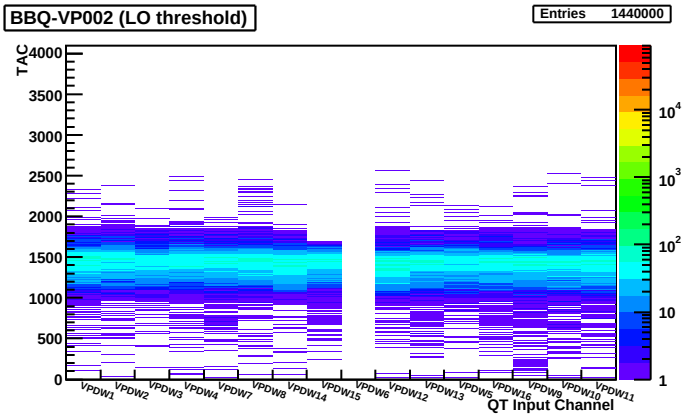

BBQ-ZD001 (ZDC TOWER)
Entries 1440000
ADC

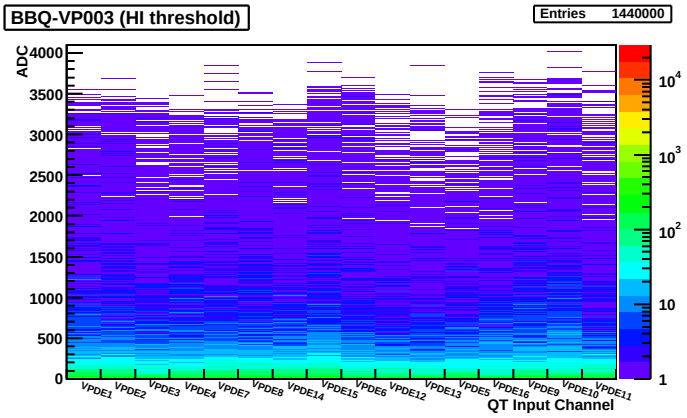

BBQ-ZD001 (ZDC TOWER)
Entries 1440000
TAC

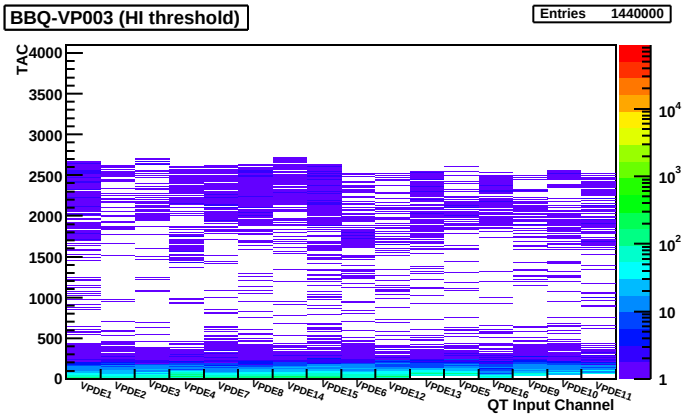

BBQ-VP001 (LO threshold)
Entries 1440000
ADC
QT Input Channel

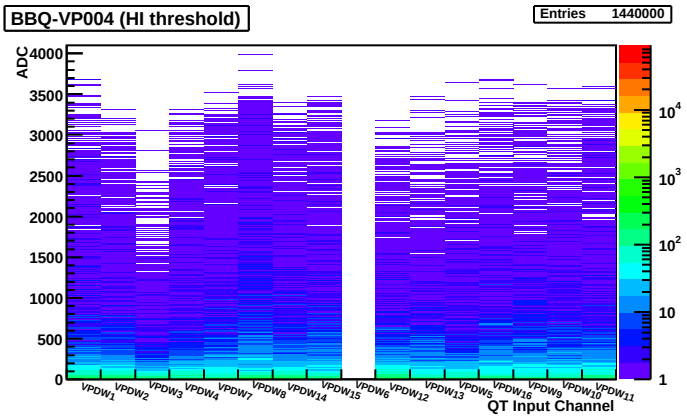

BBQ-VP001 (LO threshold)
Entries 1440000
TAC
QT Input Channel

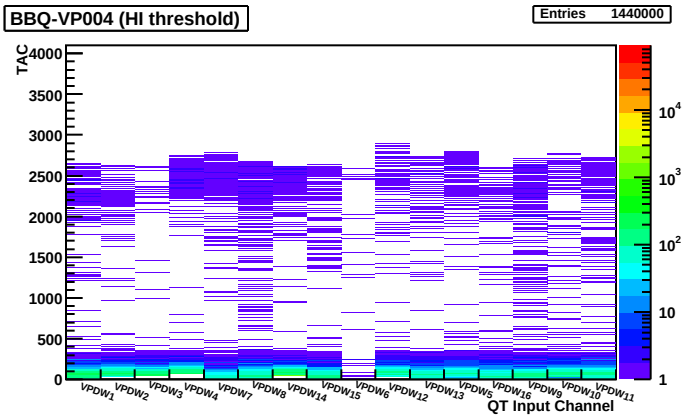

BBQ-VP002 (LO threshold)
Entries 1440000
ADC
QT Input Channel

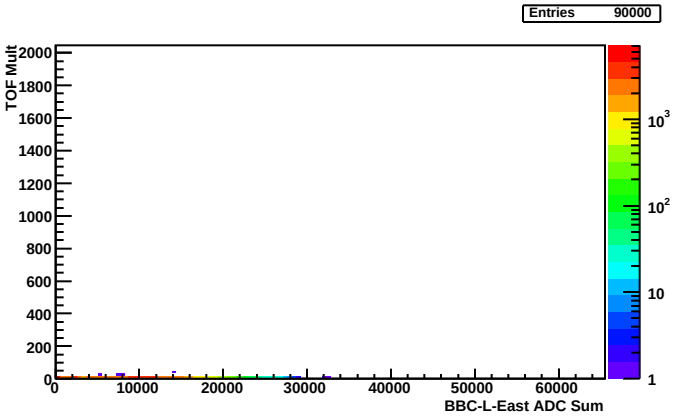

BBQ-VP002 (LO threshold)
Entries 1440000
TAC
QT Input Channel

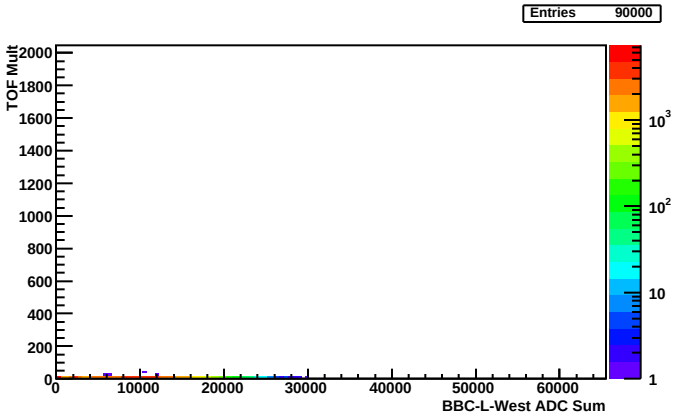

BBQ-VP003 (HI threshold)
Entries 1440000
ADC
QT Input Channel

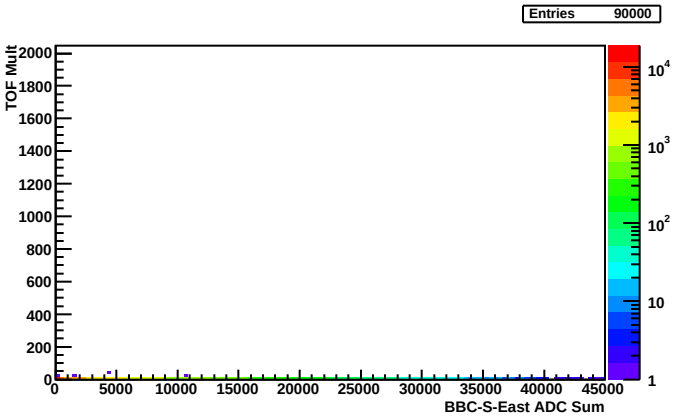

BBQ-VP003 (HI threshold)
Entries 1440000
TAC
QT Input Channel

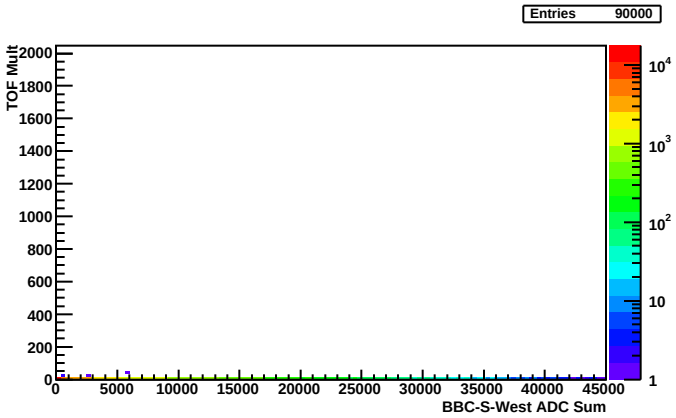

BBQ-VP004 (HI threshold)
Entries 1440000
ADC
QT Input Channel

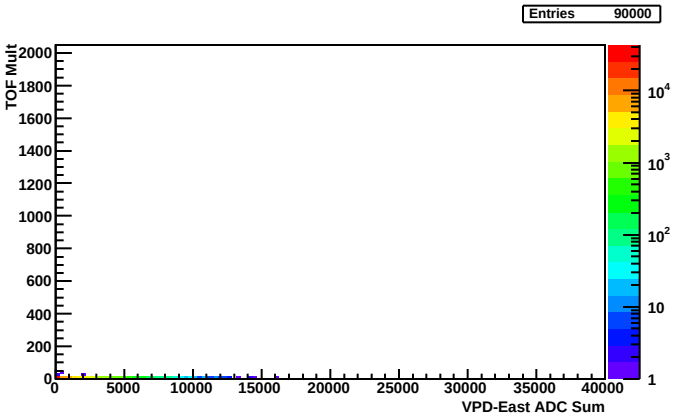

BBQ-VP004 (HI threshold)
Entries 1440000
TAC
QT Input Channel

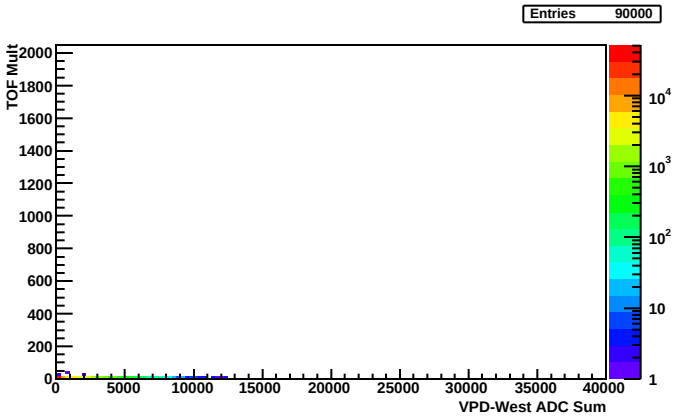

Entries 90000
TOF Mult
BBC-L-East ADC Sum

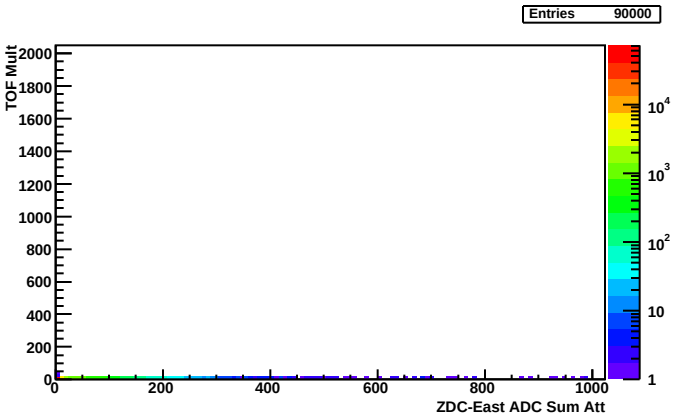

Entries 90000
TOF Mult
BBC-L-West ADC Sum

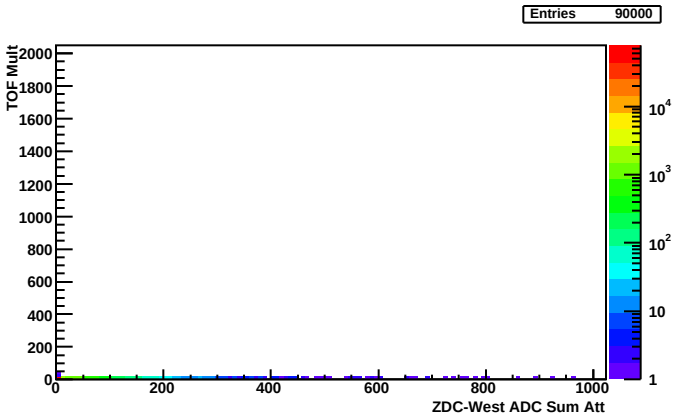

Entries 90000
TOF Mult
BBC-S-East ADC Sum

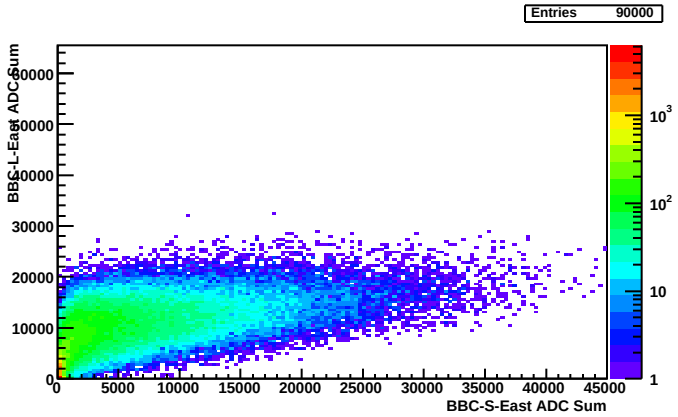

Entries 90000
TOF Mult
BBC-S-West ADC Sum

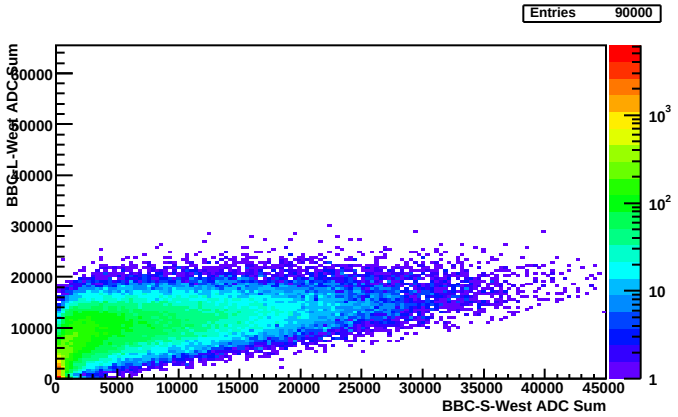

Entries 90000
TOF Mult
VPD-East ADC Sum

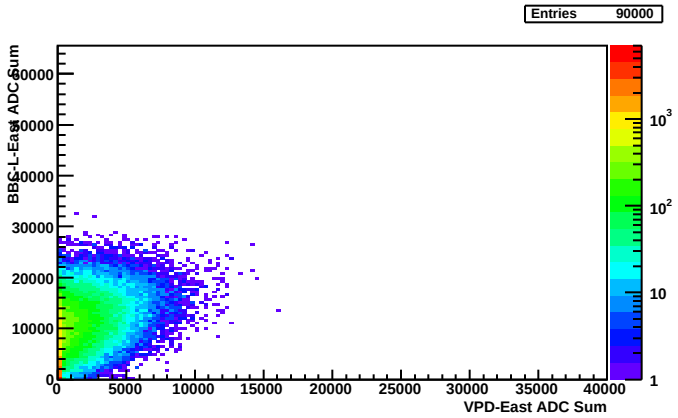

Entries 90000
TOF Mult
VPD-West ADC Sum

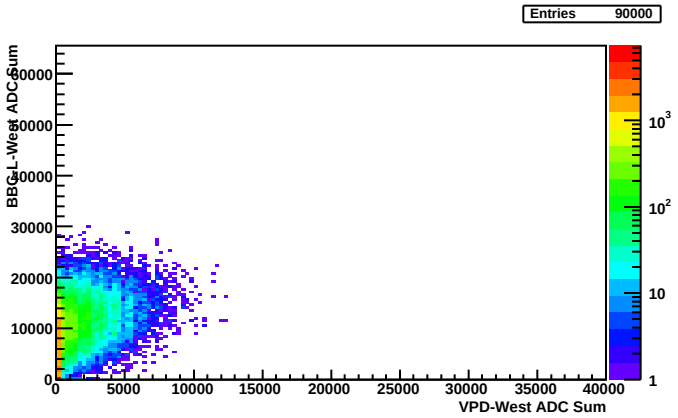

Entries 90000
TOF Mult
ZDC-East ADC Sum Att

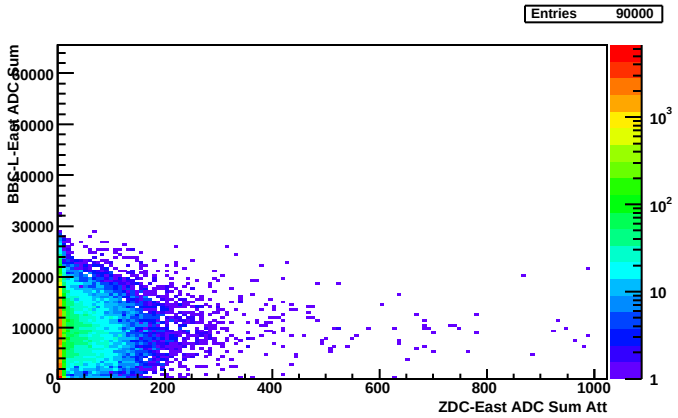

Entries 90000
TOF Mult
ZDC-West ADC Sum Att

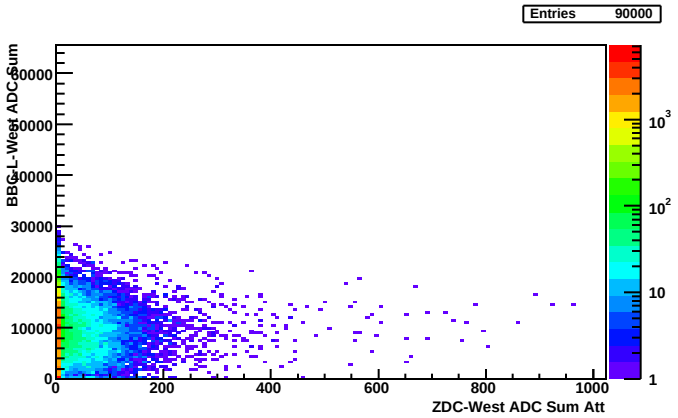

Entries 90000
BBC-L-East ADC Sum
BBC-S-East ADC Sum

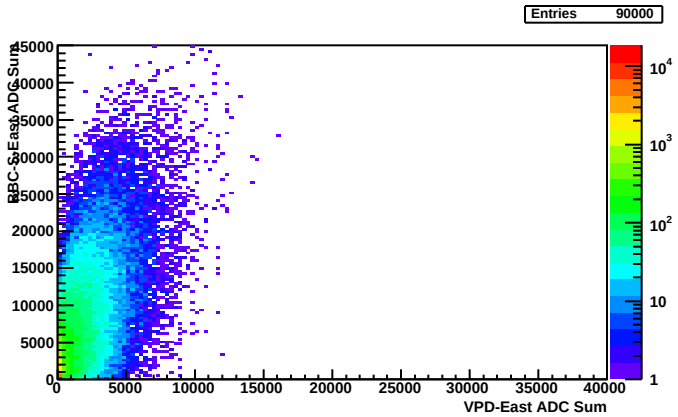

Entries 90000
BBC-L-West ADC Sum
BBC-S-West ADC Sum

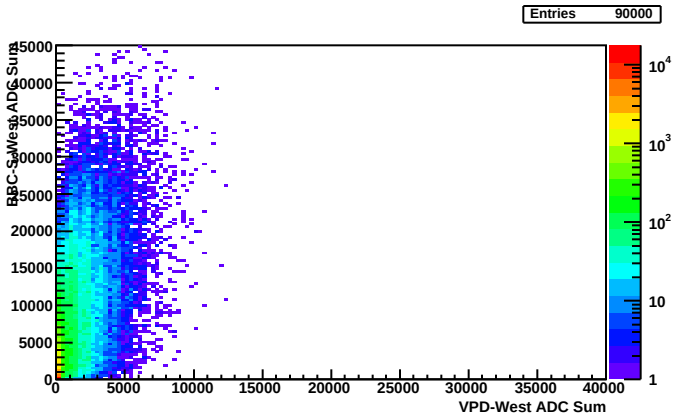

Entries 90000
BBC-L-East ADC Sum
VPD-East ADC Sum

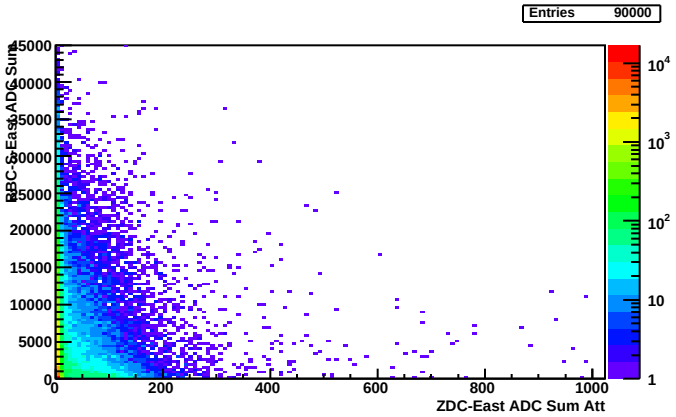

Entries 90000
BBC-L-West ADC Sum
VPD-West ADC Sum

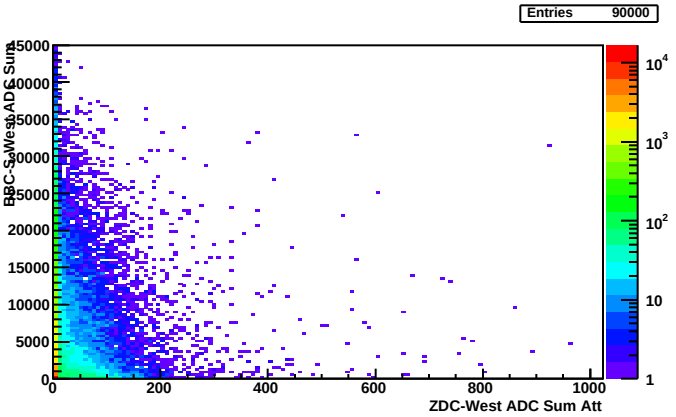

Entries 90000
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

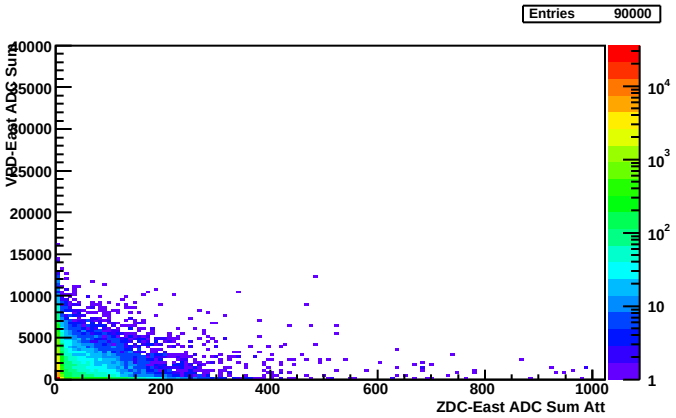

Entries 90000
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

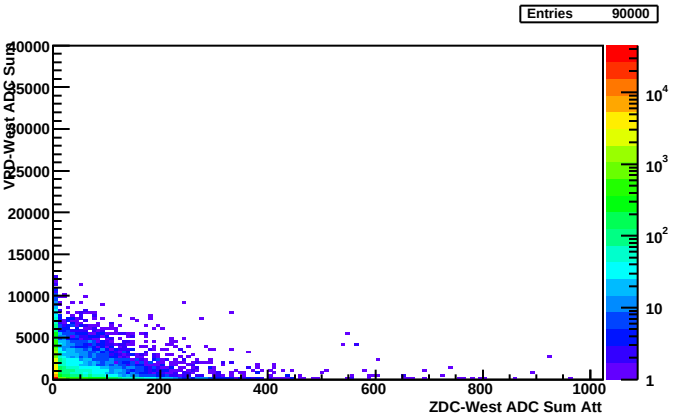

Entries 90000
BBC-S-East ADC Sum
VPD-East ADC Sum

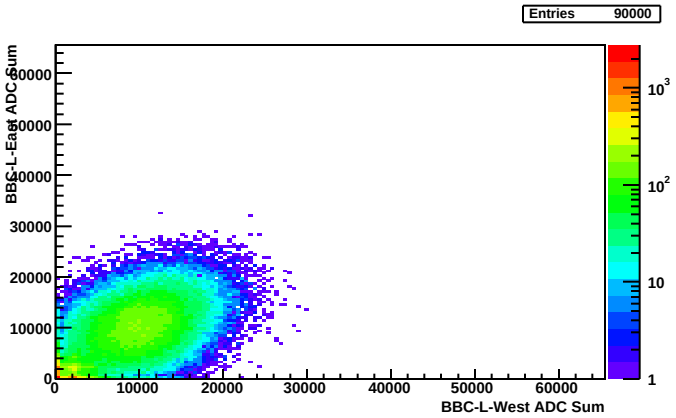

Entries 90000
BBC-S-West ADC Sum
VPD-West ADC Sum

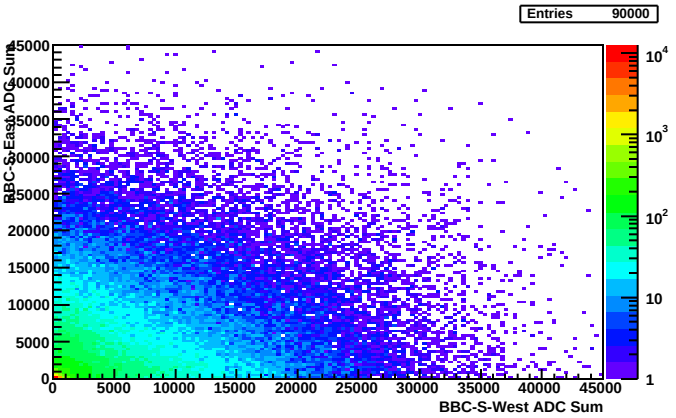

Entries 90000
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

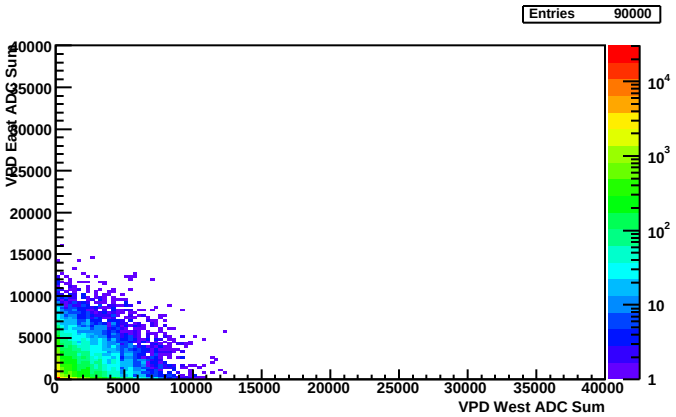

Entries 90000
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

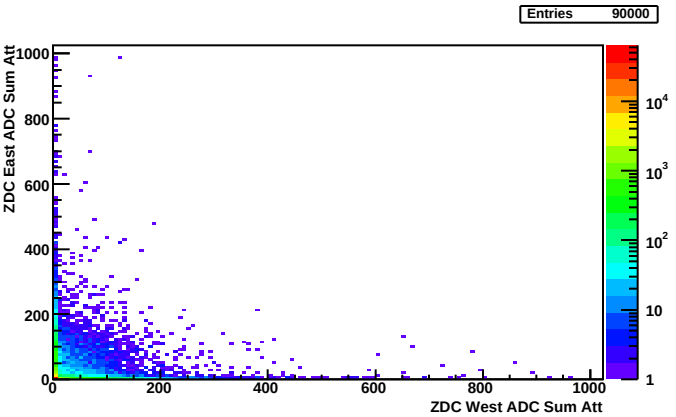

Entries 90000
VPD-East ADC Sum
ZDC-East ADC Sum Att

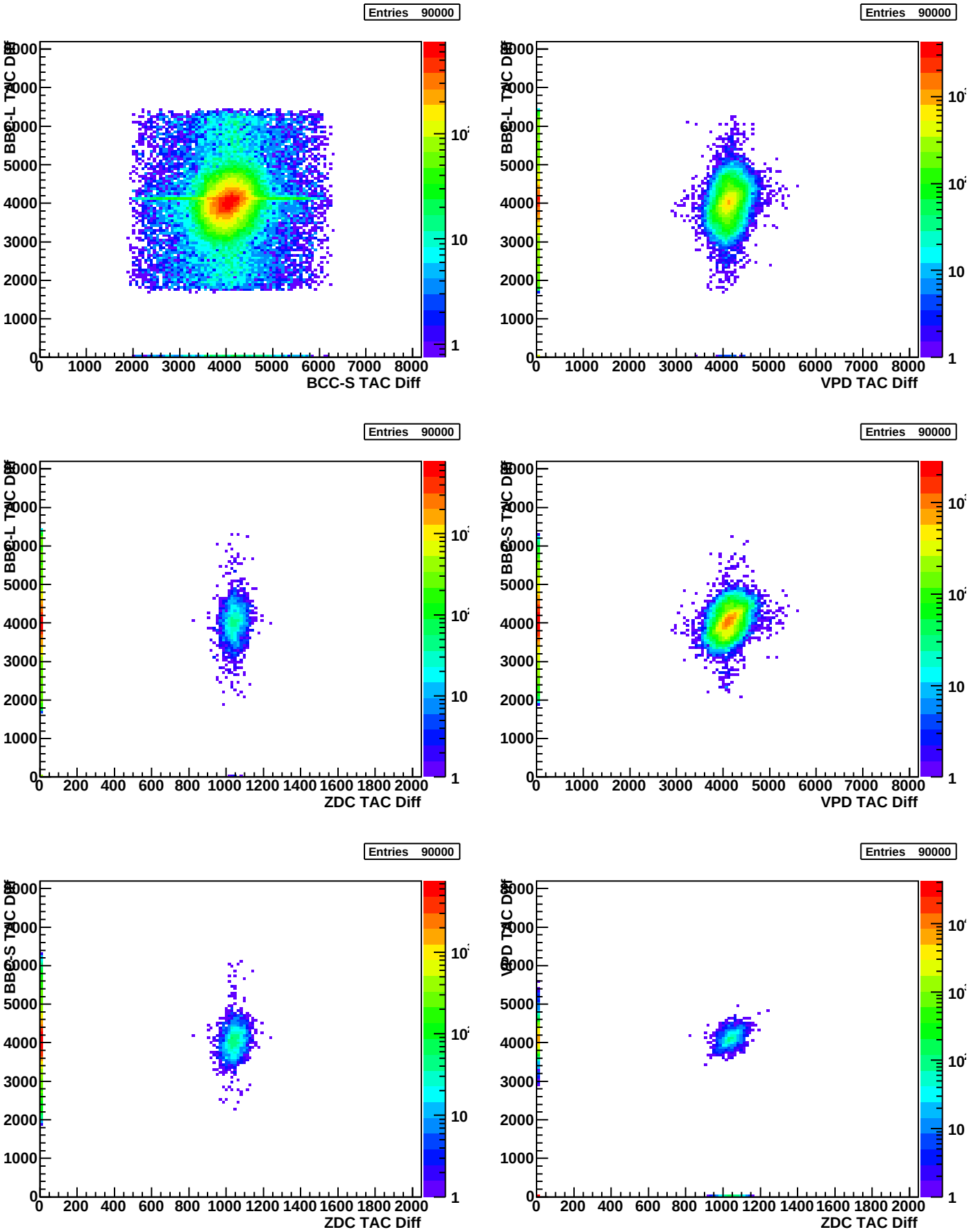

Entries 90000
VPD-West ADC Sum
ZDC-West ADC Sum Att

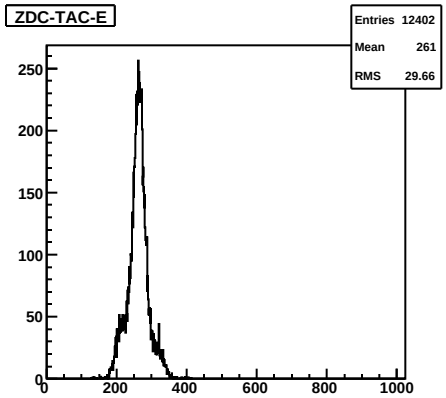

Entries 90000
BBC-L-East ADC Sum
BBC-L-West ADC Sum

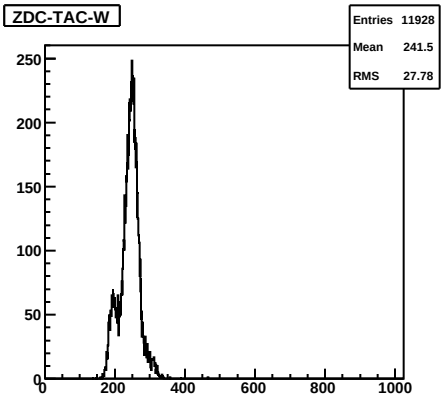

Entries 90000
BBC-S-East ADC Sum
BBC-S-West ADC Sum

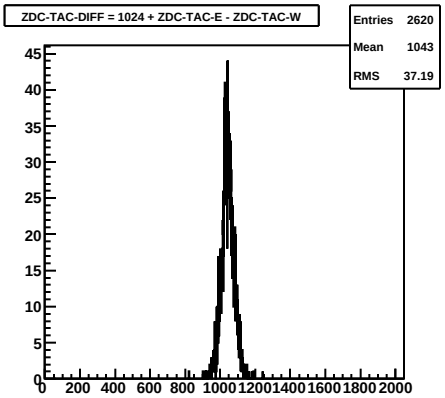

Entries 90000
VPD East ADC Sum
VPD West ADC Sum

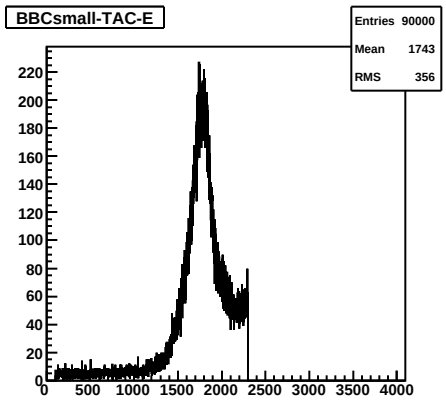

Entries 90000
ZDC East ADC Sum Att
ZDC West ADC Sum Att

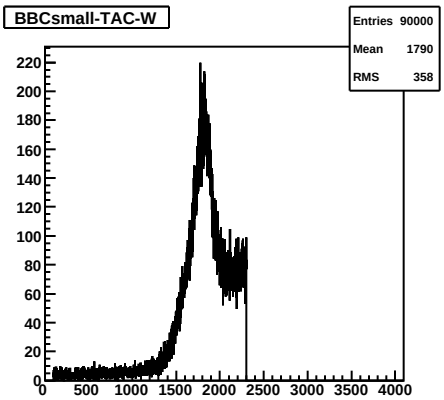

Entries 90000
BBC-L TAC Diff
BCC-S TAC Diff
Entries 90000
BBC-L TAC Diff
VPD TAC Diff
Entries 90000
BBC-L TAC Diff
ZDC TAC Diff
Entries 90000
BBC-S TAC Diff
VPD TAC Diff
Entries 90000
BBC-S TAC Diff
ZDC TAC Diff
Entries 90000
VPD TAC Diff
ZDC TAC Diff

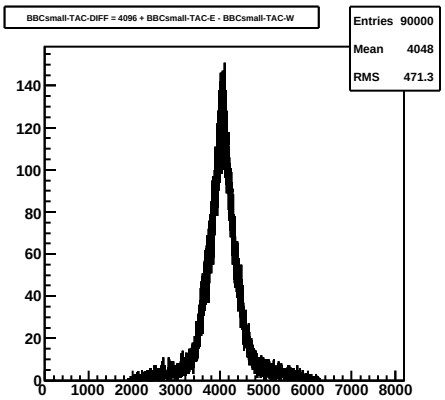

ZDC-TAC-E
Entries 12402
Mean 261
RMS 29.66

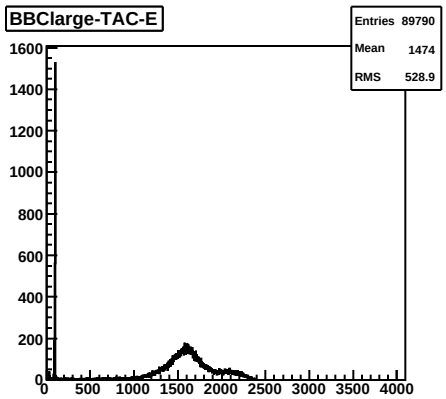

ZDC-TAC-W
Entries 11928
Mean 241.5
RMS 27.78

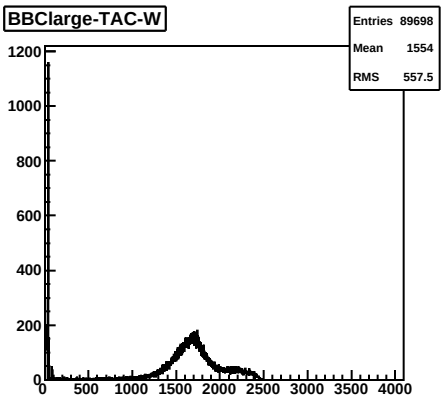

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 2620
Mean 1043
RMS 37.19

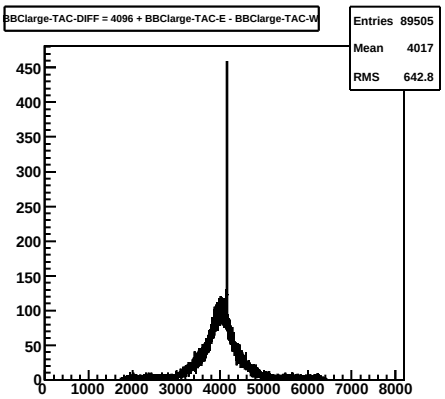

BBCsmall-TAC-E
Entries 90000
Mean 1743
RMS 356

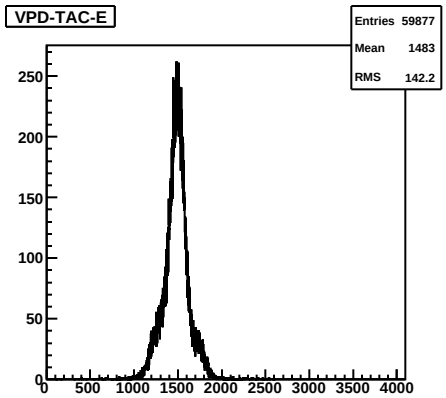

BBCsmall-TAC-W
Entries 90000
Mean 1790
RMS 358

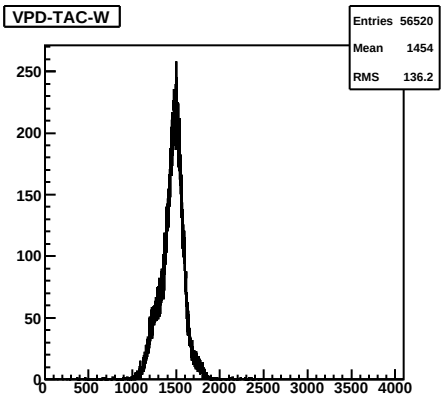

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 90000
Mean 4048
RMS 471.3

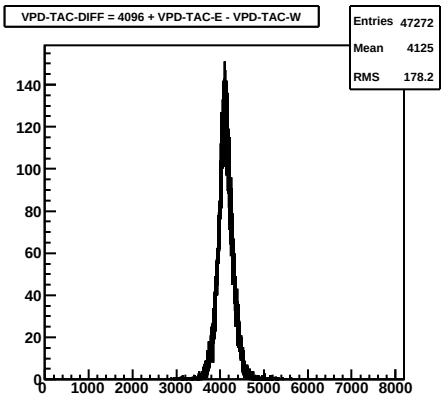

BBClarge-TAC-E
Entries 89790
Mean 1474
RMS 528.9

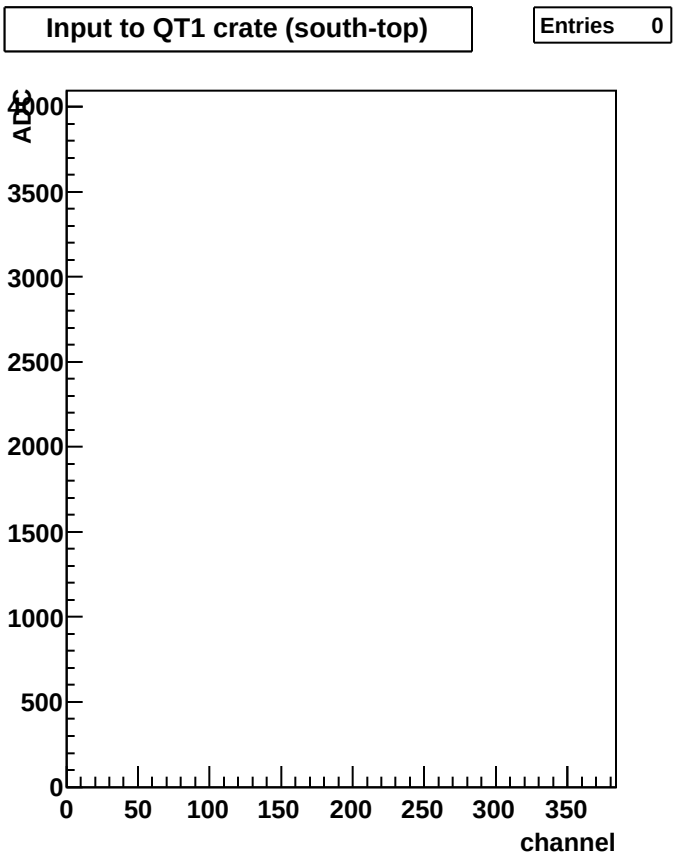

BBClarge-TAC-W
Entries 89698
Mean 1554
RMS 557.5

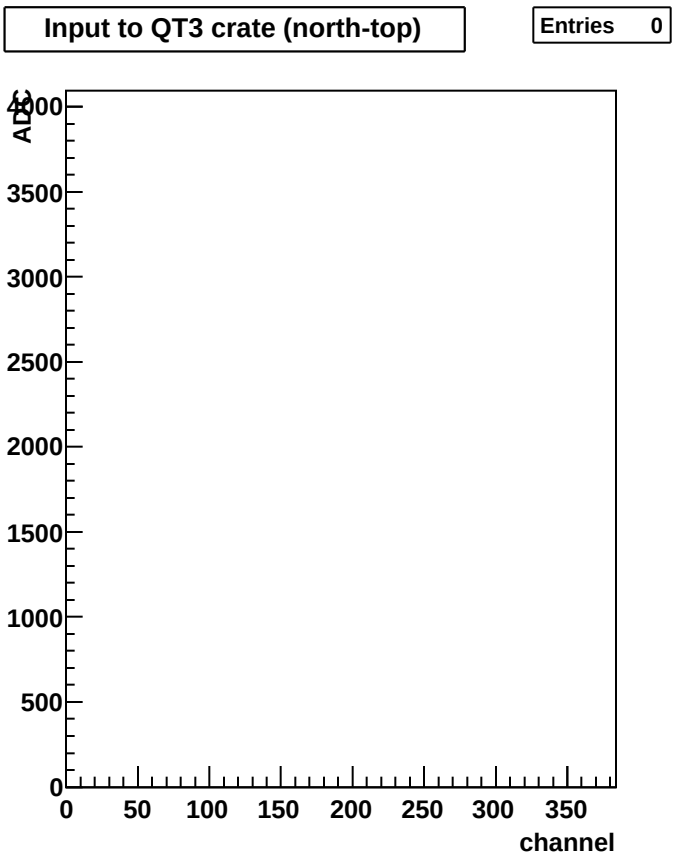

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 89505
Mean 4017
RMS 642.8

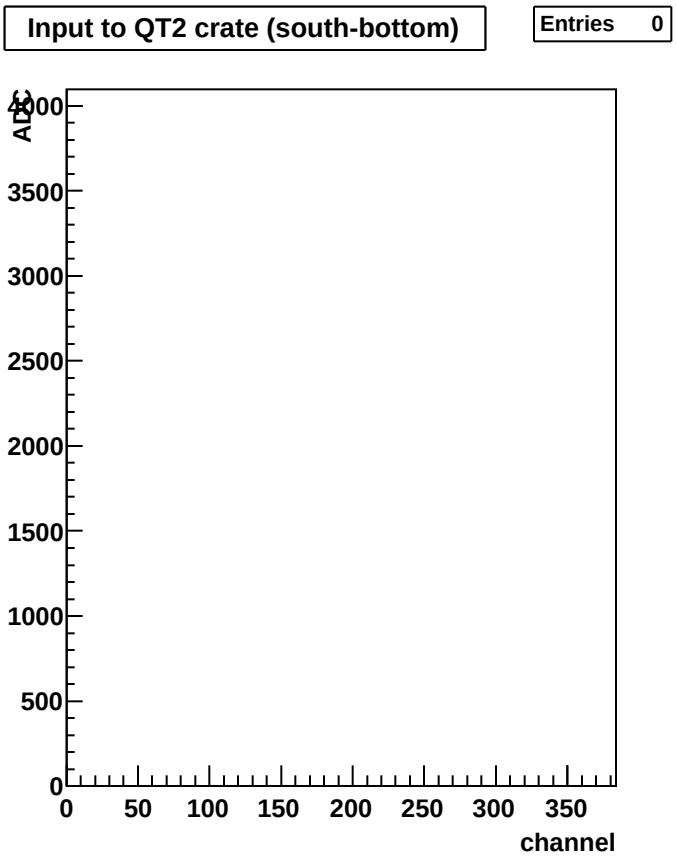

VPD-TAC-E
Entries 59877
Mean 1483
RMS 142.2

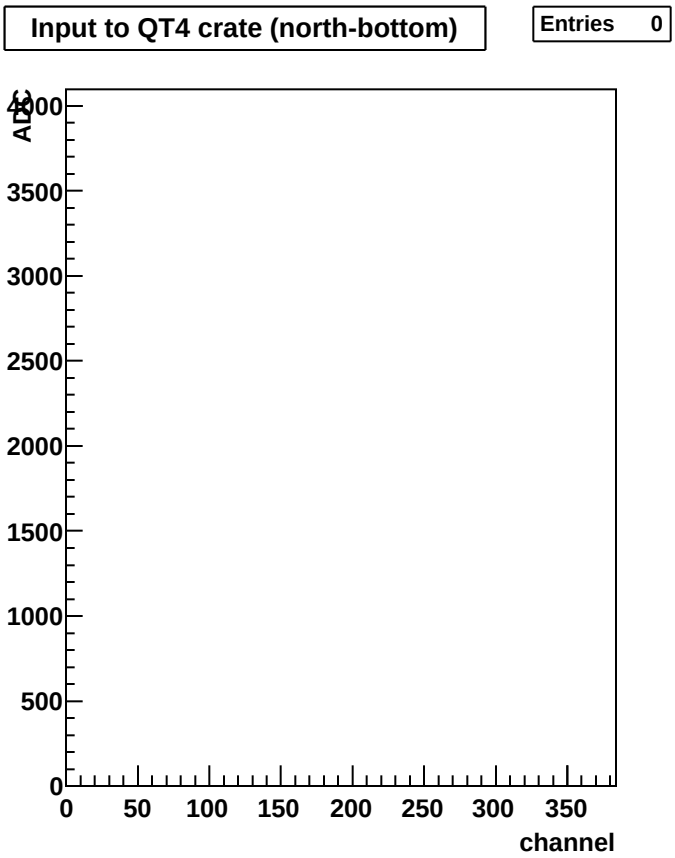

VPD-TAC-W
Entries 56520
Mean 1454
RMS 136.2

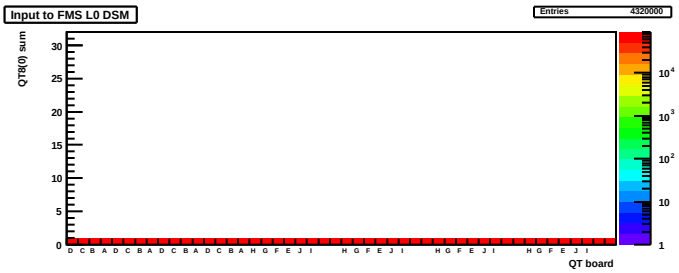

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 47272
Mean 4125
RMS 178.2

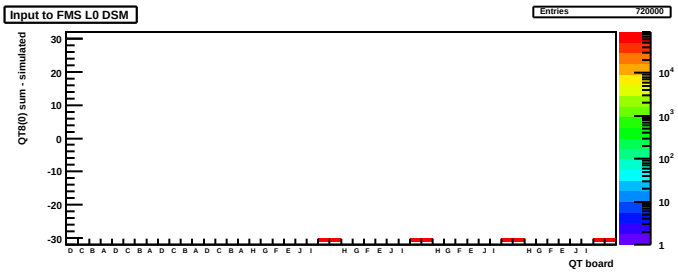

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

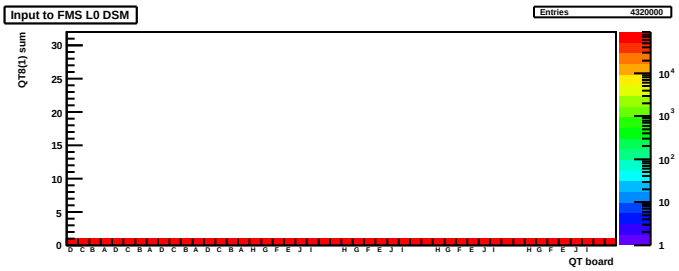

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

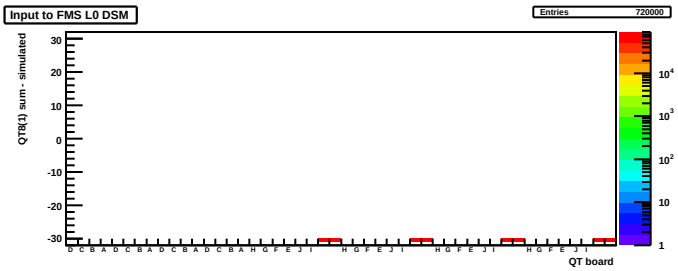

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

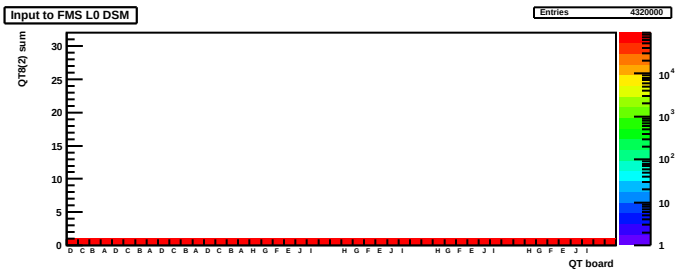

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

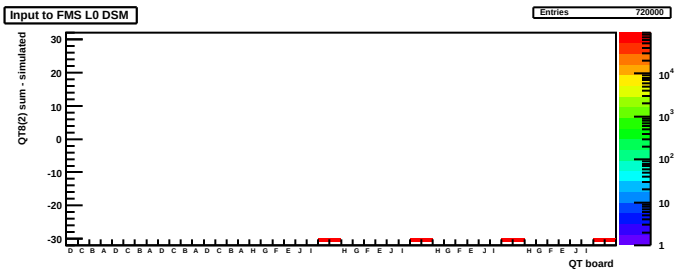

Input to FMS L0 DSM
Entries 4320000
QT8(0) sum
QT board

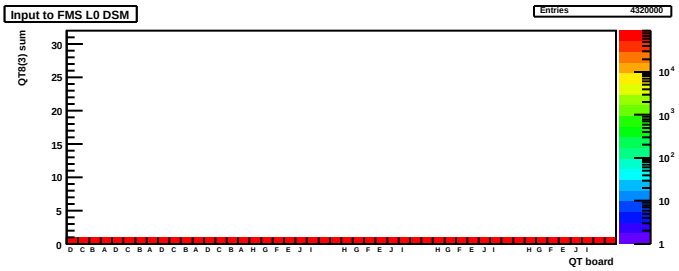

Input to FMS L0 DSM
Entries 720000
QT8(0) sum - simulated
QT board

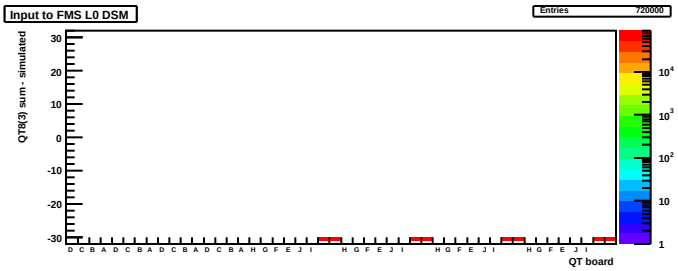

Input to FMS L0 DSM
Entries 4320000
QT8(1) sum
QT board

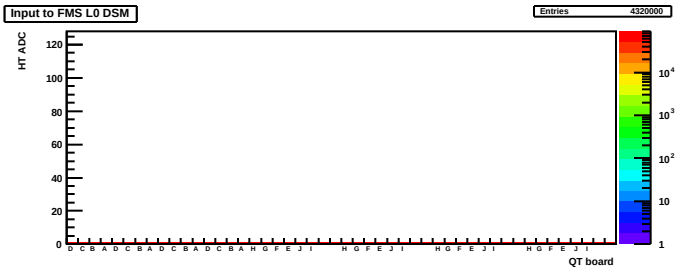

Input to FMS L0 DSM
Entries 720000
QT8(1) sum - simulated
QT board

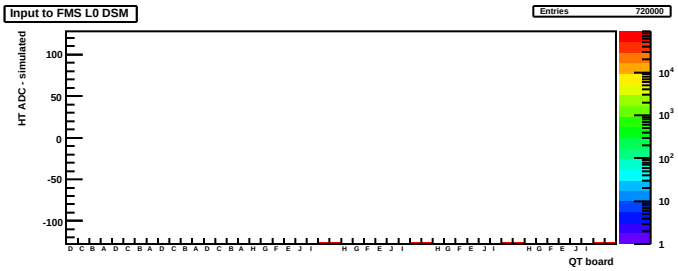

Input to FMS L0 DSM
Entries 4320000
QT8(2) sum
QT board

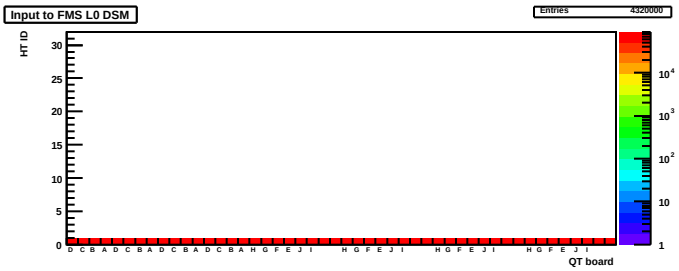

Input to FMS L0 DSM
Entries 720000
QT8(2) sum - simulated
QT board

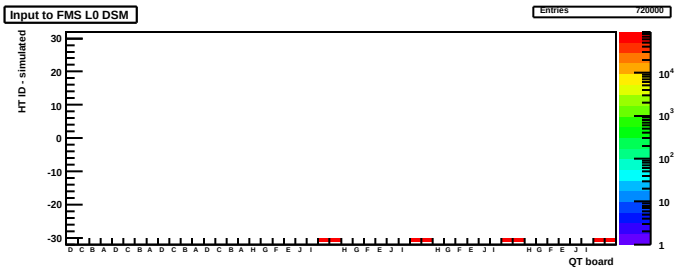

Input to FMS L0 DSM
Entries 4320000
QT8(3) sum
QT board

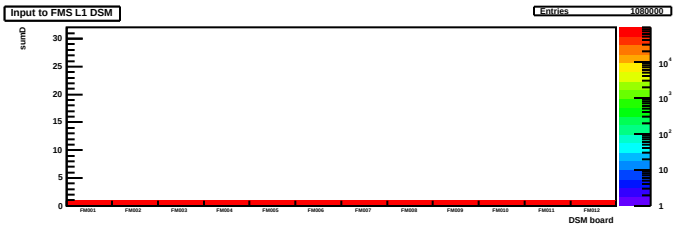

Input to FMS L0 DSM
Entries 720000
QT8(3) sum - simulated
QT board

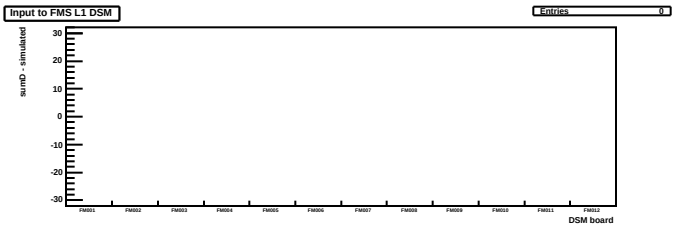

Input to FMS L0 DSM
Entries 4320000
HT ADC
QT board

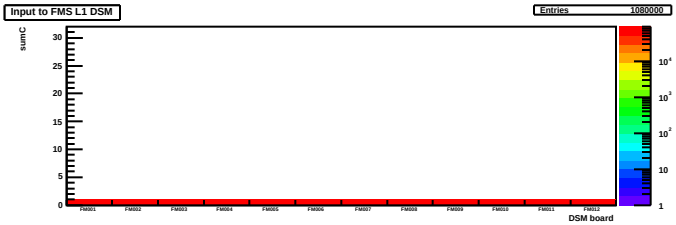

Input to FMS L0 DSM
Entries 720000
HT ADC - simulated
QT board

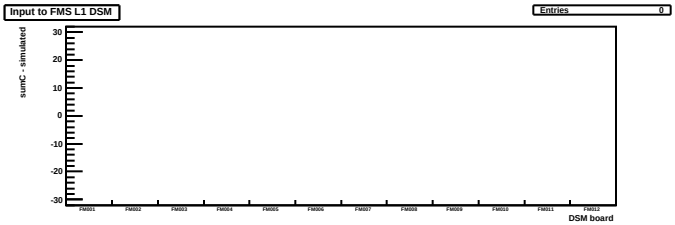

Input to FMS L0 DSM
Entries 4320000
HT ID
QT board

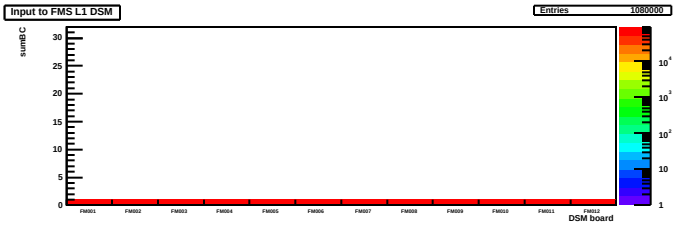

Input to FMS L0 DSM
Entries 720000
HT ID - simulated
QT board

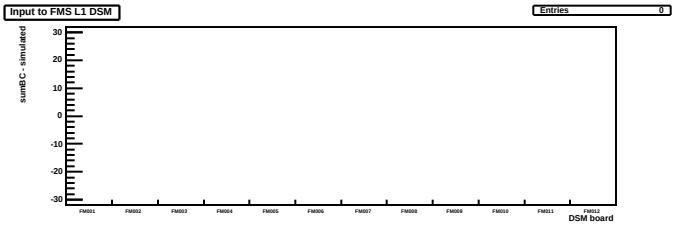

Input to FMS L1 DSM
Entries 1080000
sumD
DSM board

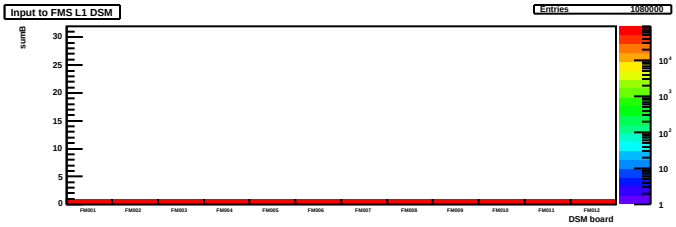

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

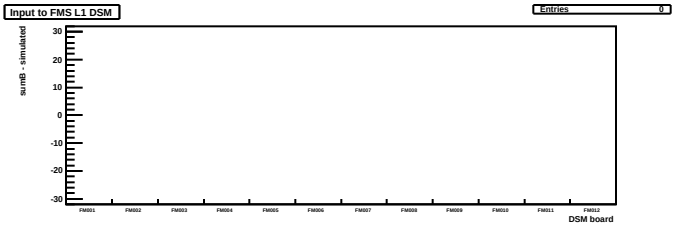

Input to FMS L1 DSM
Entries 1080000
sumC
DSM board

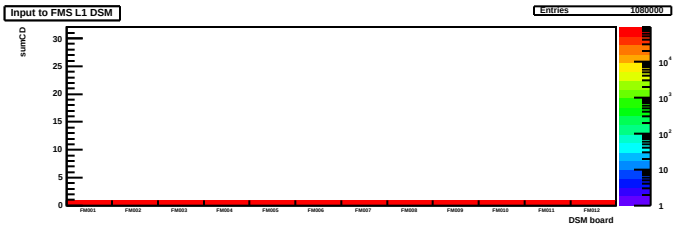

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

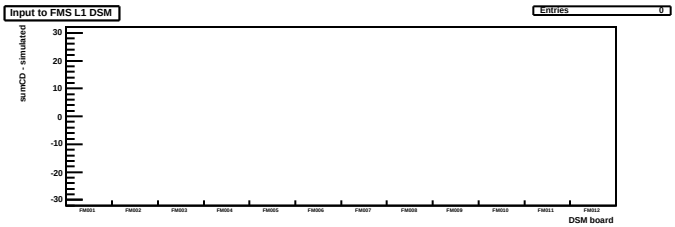

Input to FMS L1 DSM
Entries 1080000
sumBC
DSM board

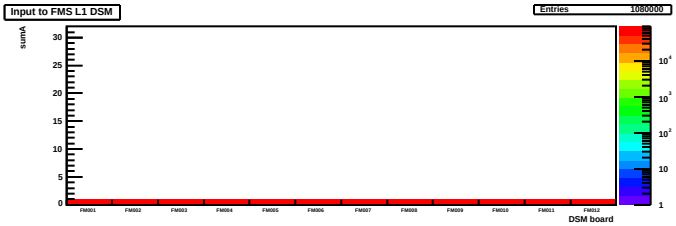

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

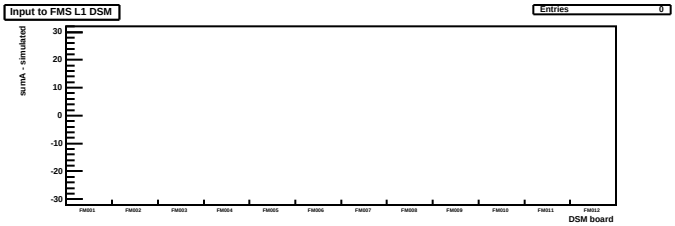

Input to FMS L1 DSM
Entries 1080000
sumB
DSM board

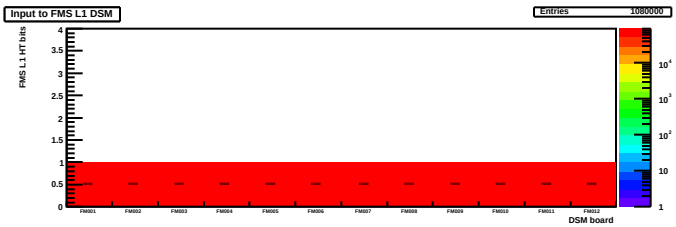

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

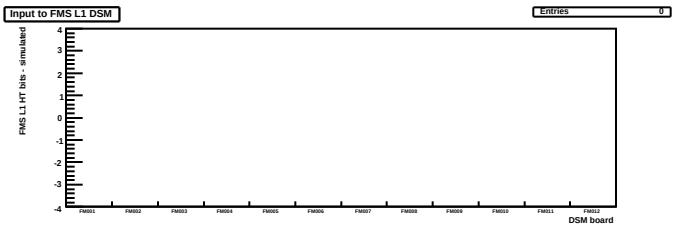

Input to FMS L1 DSM
Entries 1080000
sumCD
DSM board

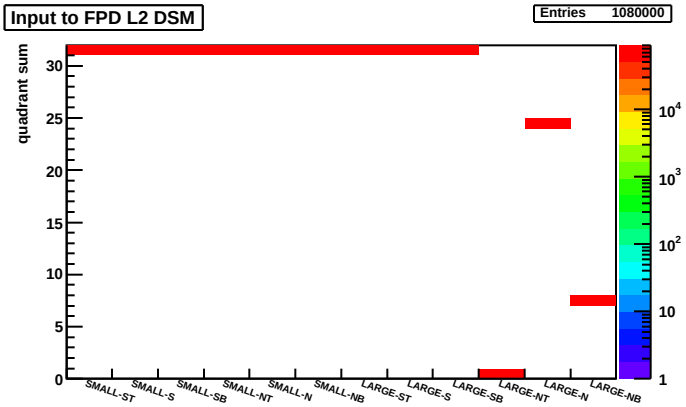

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

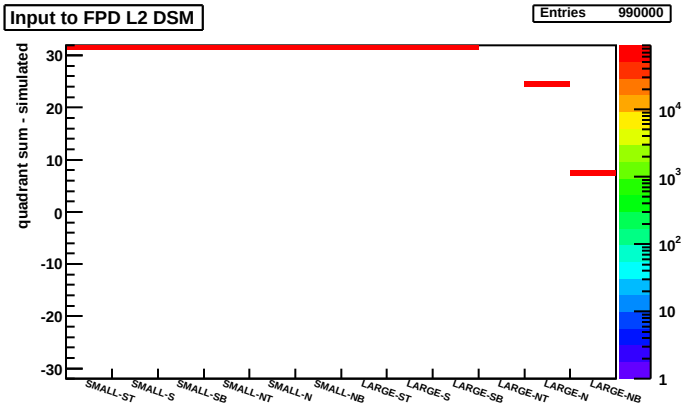

Input to FMS L1 DSM
Entries 1080000
sumA
DSM board

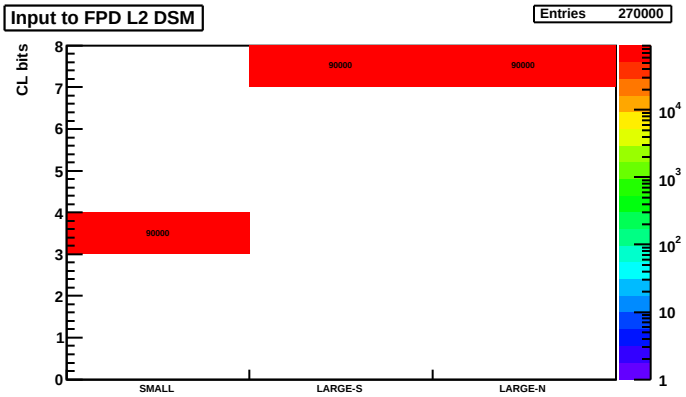

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

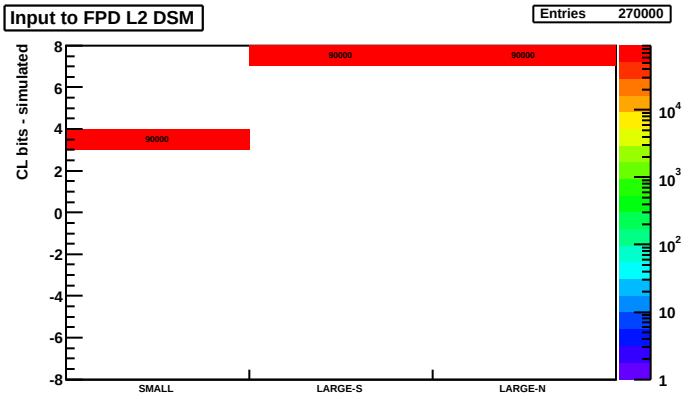

Input to FMS L1 DSM
Entries 1080000
FMS L1 HT bits
DSM board

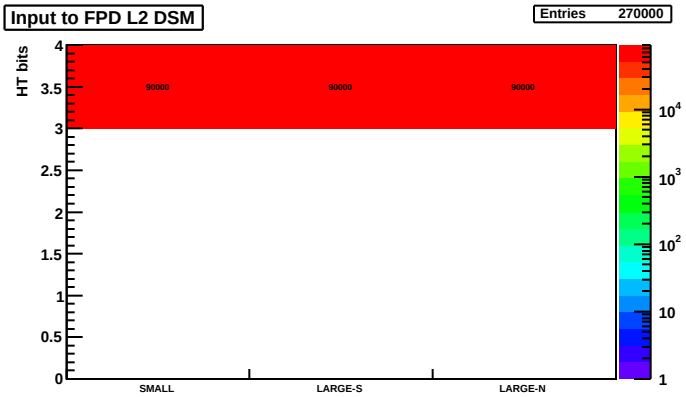

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

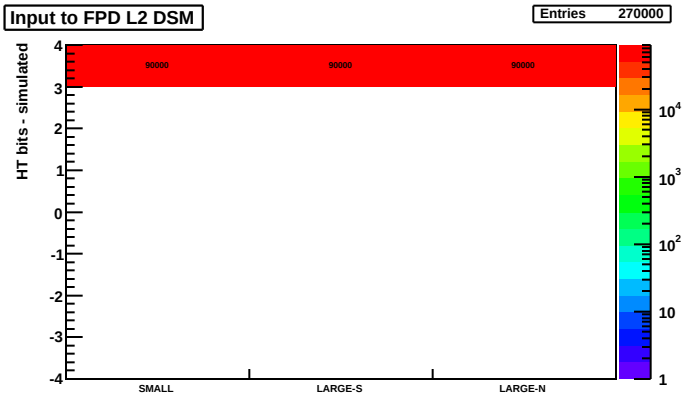

Input to FPD L2 DSM
Entries 1080000
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

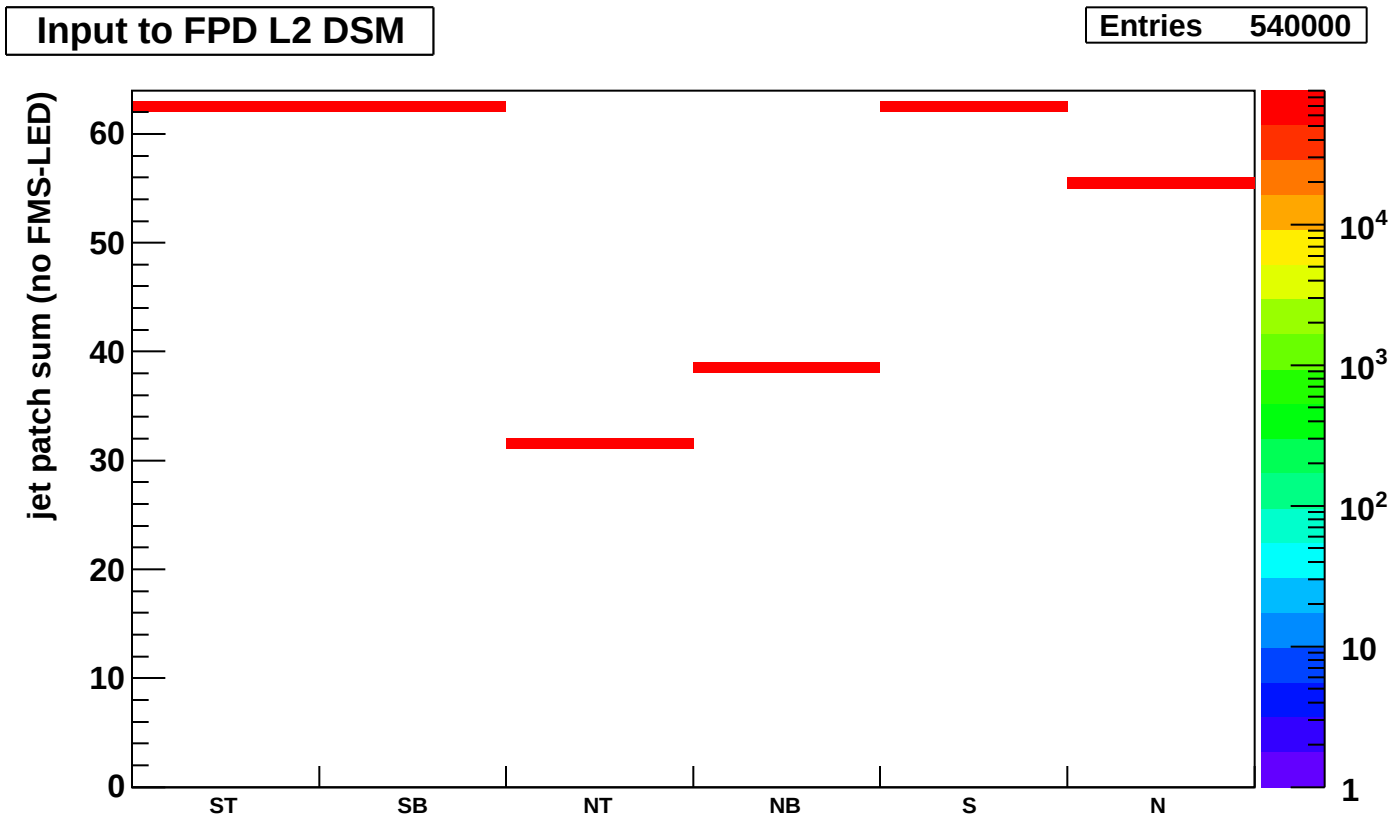

Input to FPD L2 DSM
Entries 990000
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

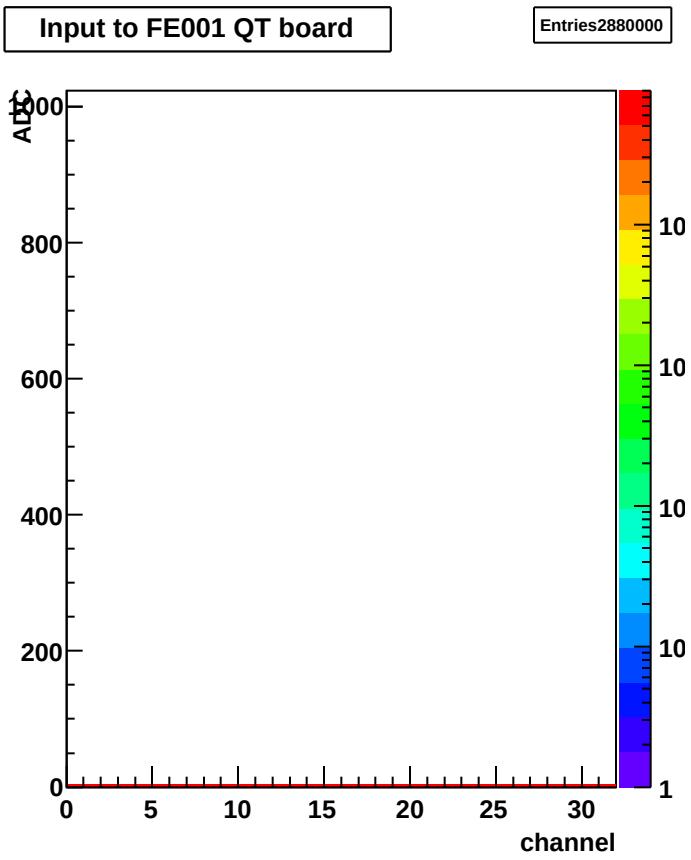

Input to FPD L2 DSM
Entries 270000
CL bits
90000
90000
90000
SMALL
LARGE-S
LARGE-N

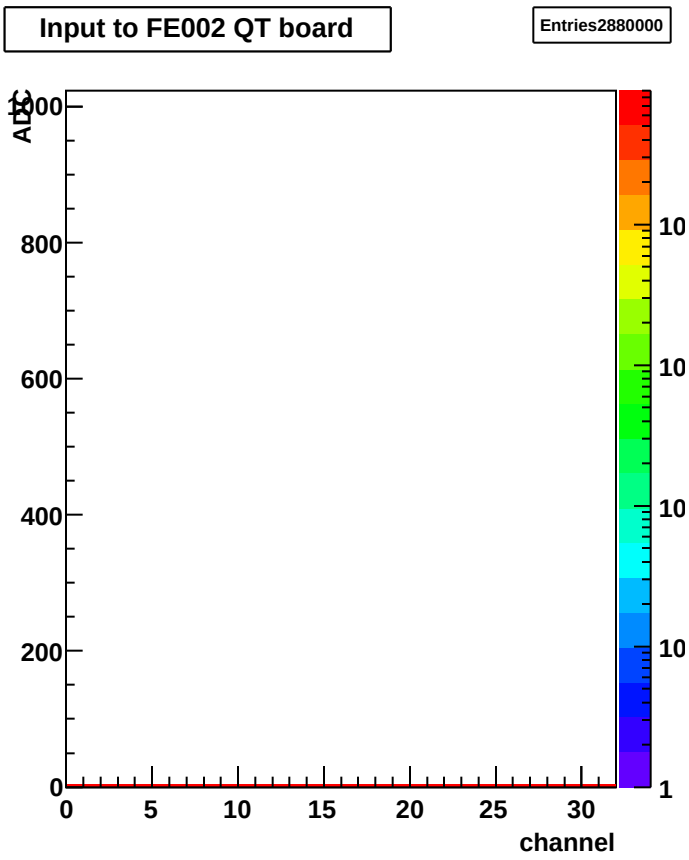

Input to FPD L2 DSM
Entries 270000
CL bits - simulated
90000
90000
90000
SMALL
LARGE-S
LARGE-N

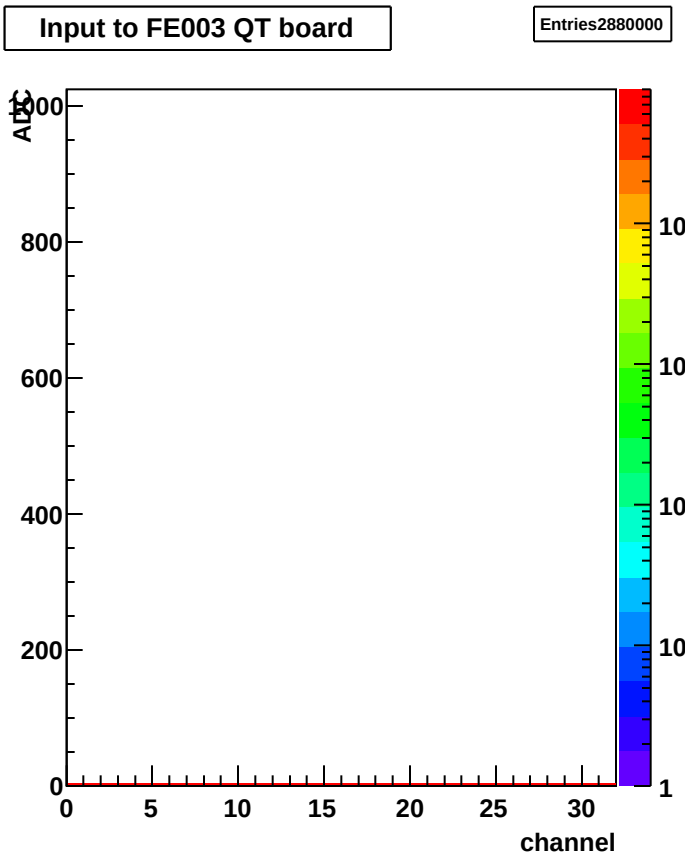

Input to FPD L2 DSM
Entries 270000
HT bits
90000
90000
90000
SMALL
LARGE-S
LARGE-N

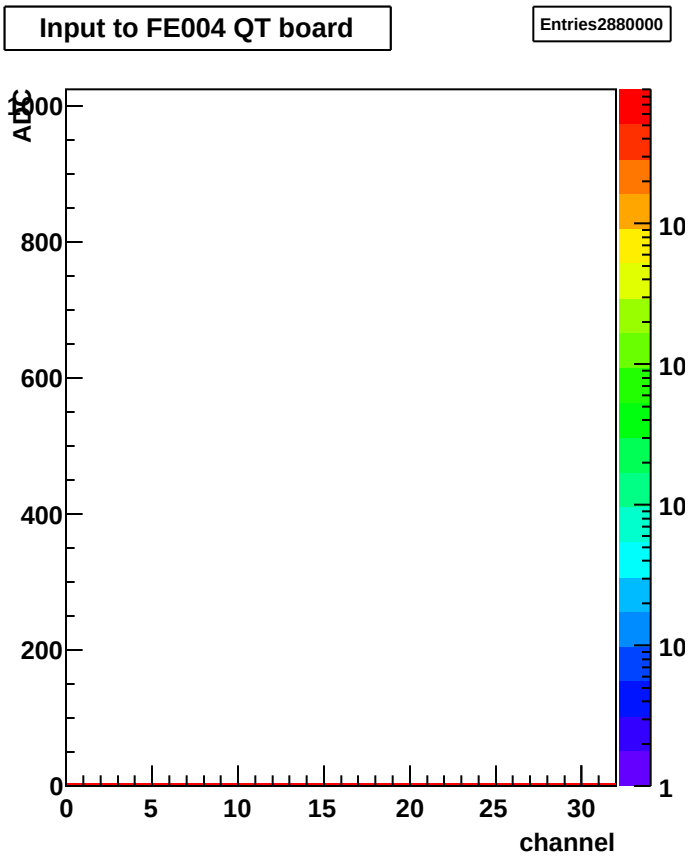

Input to FPD L2 DSM
Entries 270000
HT bits - simulated
90000
90000
90000
SMALL
LARGE-S
LARGE-N

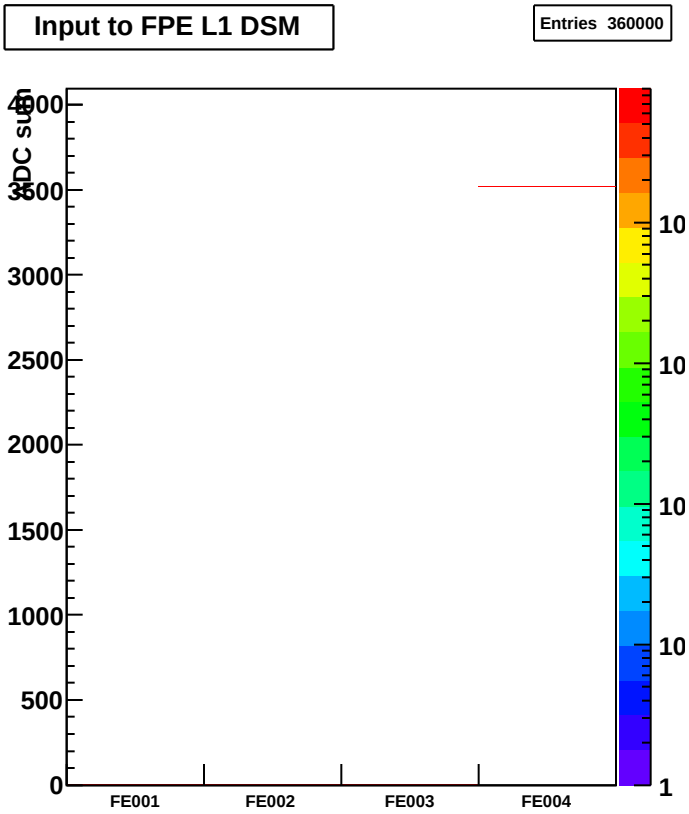

Input to FPD L2 DSM
Entries 540000
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

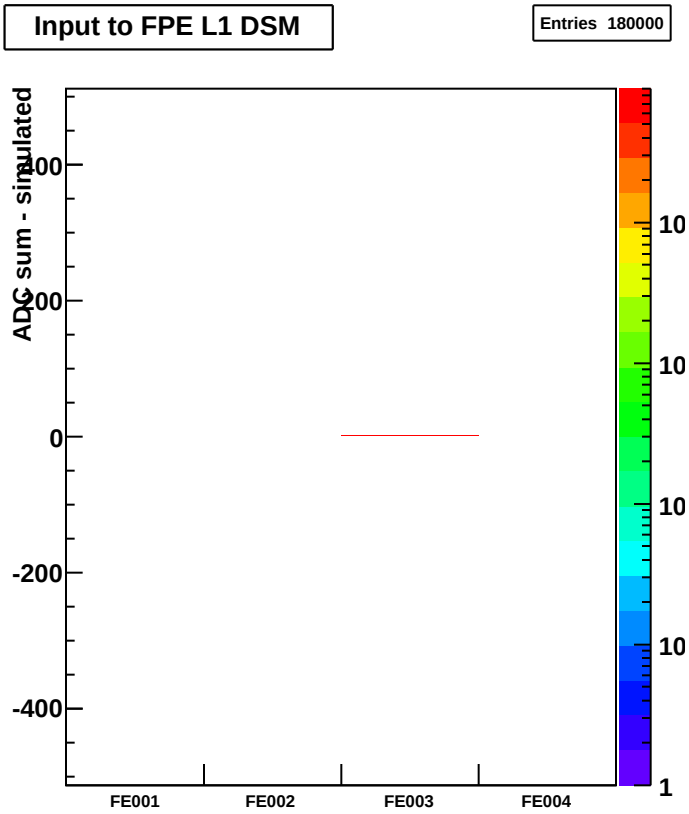

Input to FE001 QT board
Entries2880000
ADC
channel


Input to FE002 QT board
Entries2880000
ADC
channel

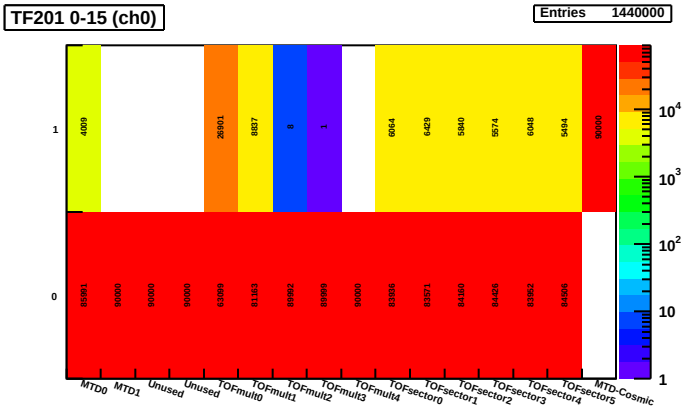

Input to FE003 QT board
Entries2880000
ADC
channel


Input to FE004 QT board
Entries2880000
ADC
channel

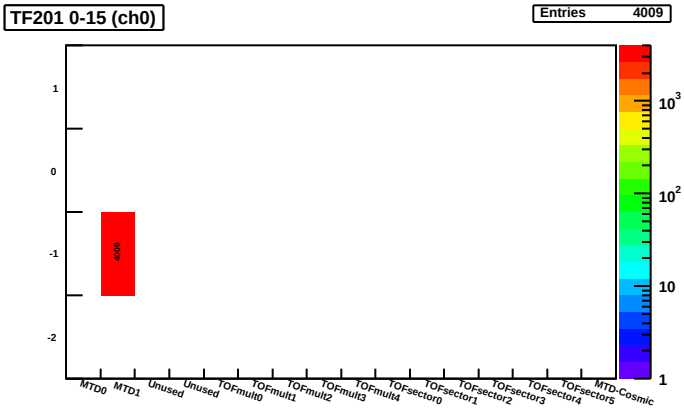

Input to FPE L1 DSM
Entries 360000
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


Input to FPE L1 DSM
Entries 180000
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1

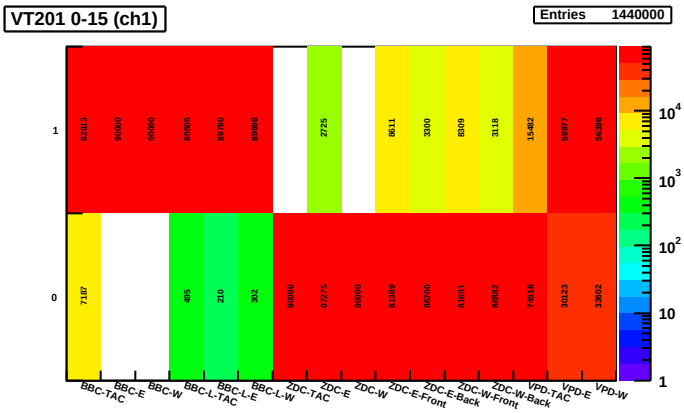
TF201 0-15 (ch0)



TF201 0-15 (ch0)



VT201 0-15 (ch1)



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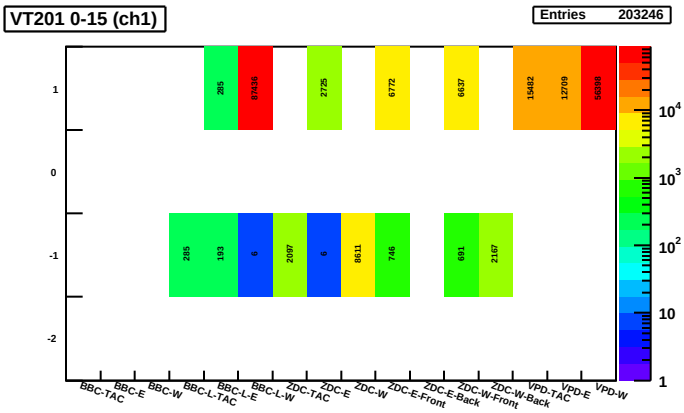

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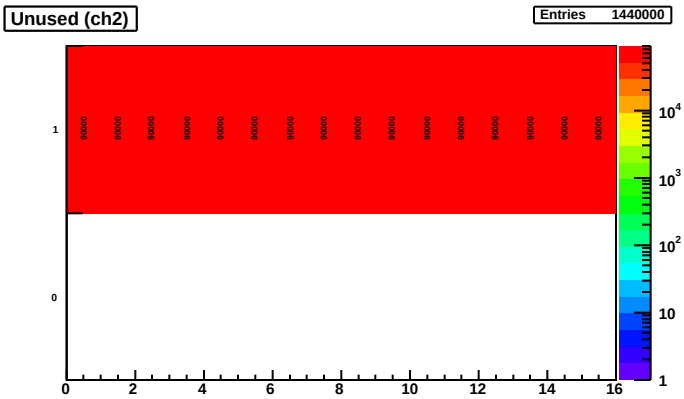

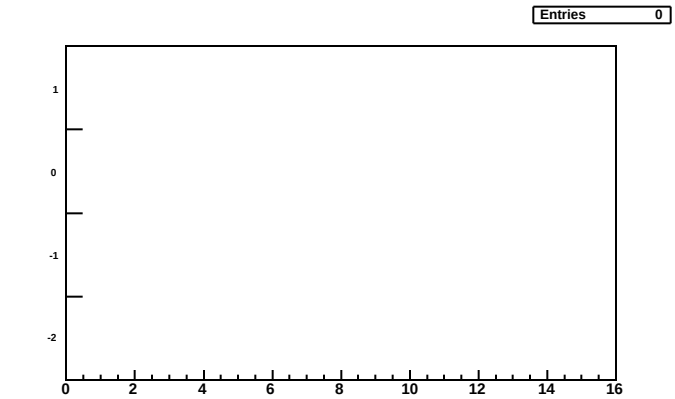

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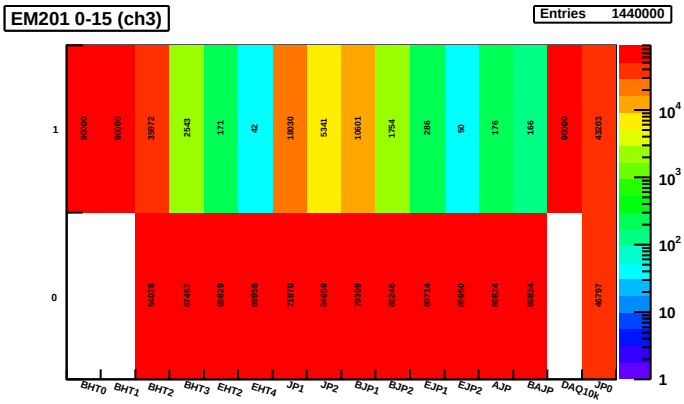

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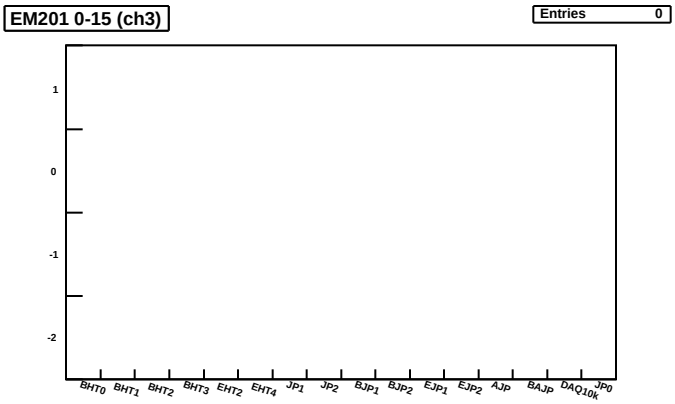
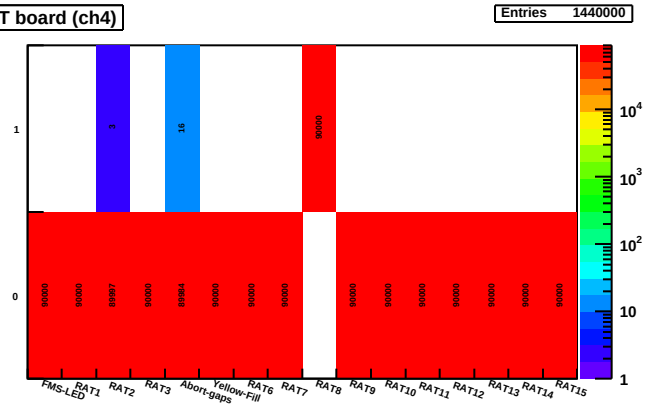
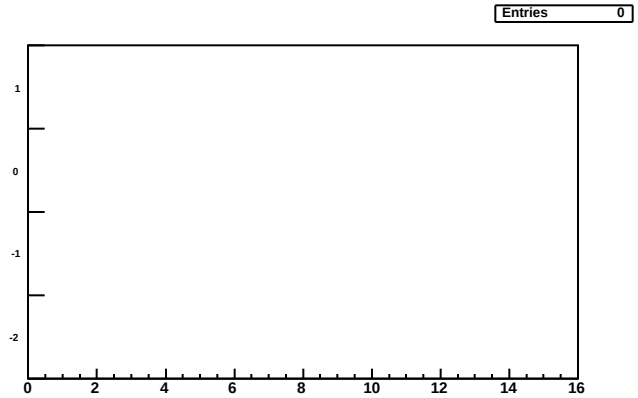
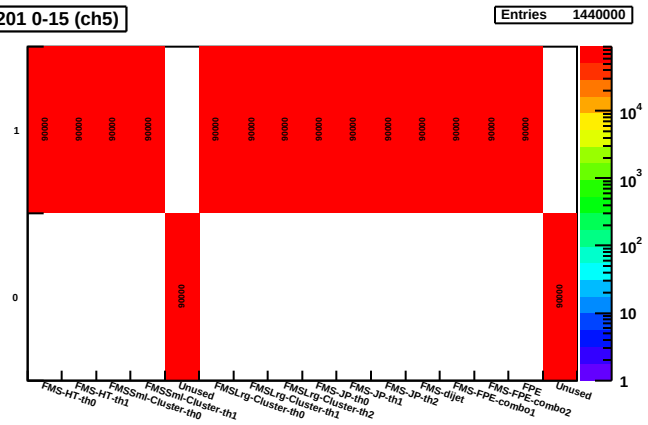


RAT board (ch4)





FP201 0-15 (ch5)



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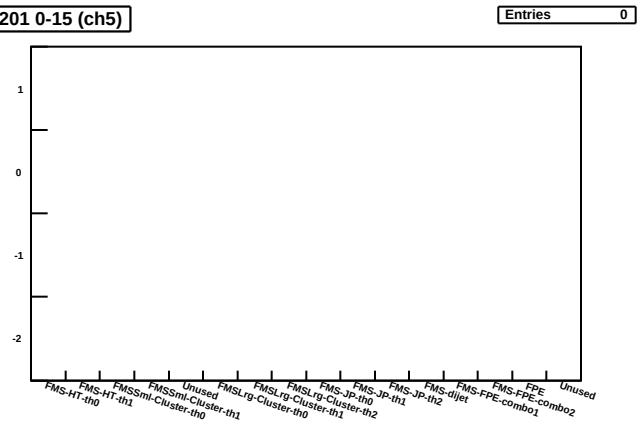
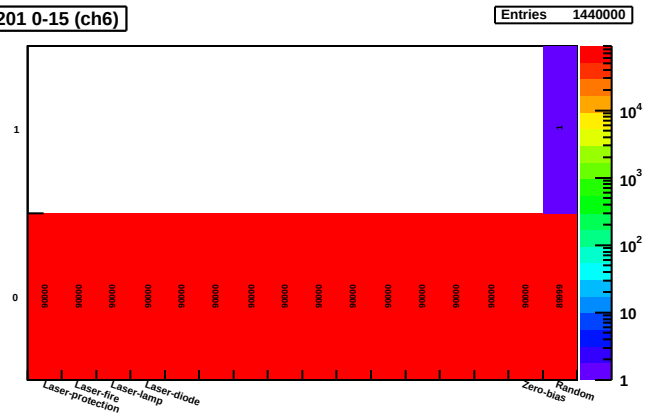
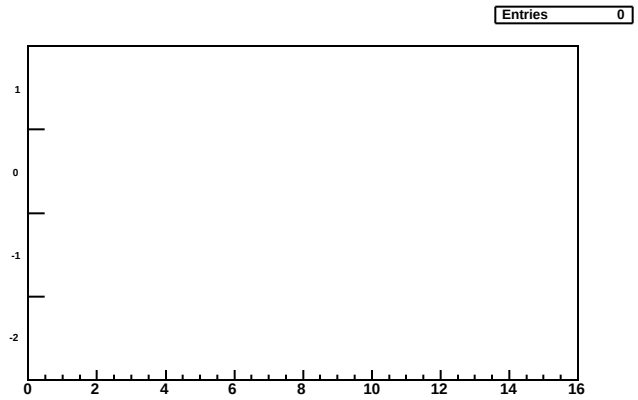
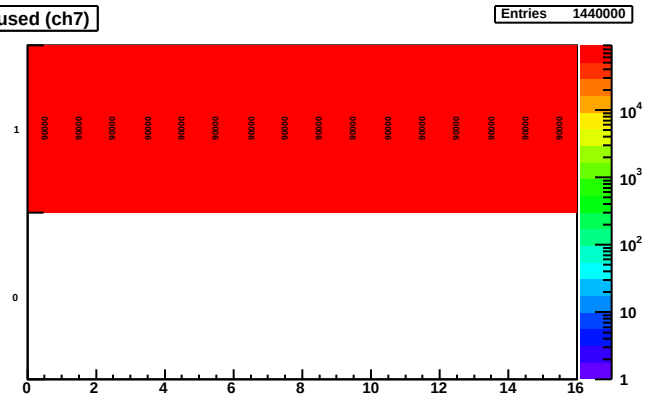
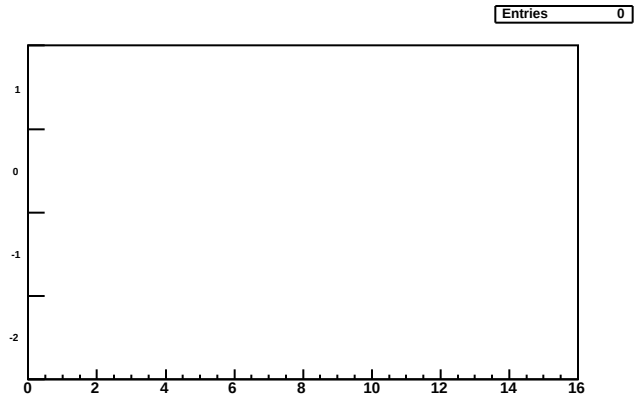


ST201 0-15 (ch6)





Unused (ch7)