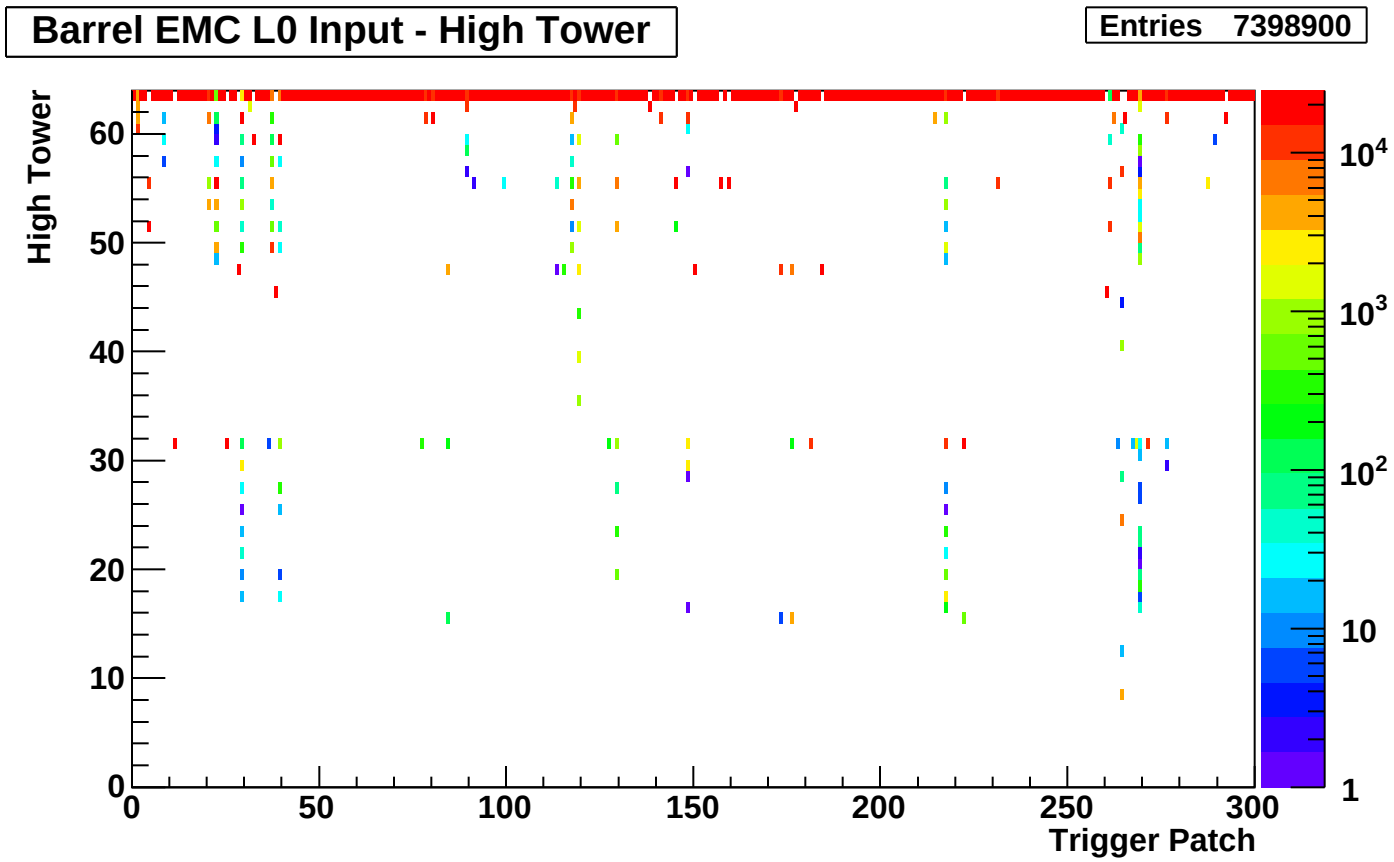
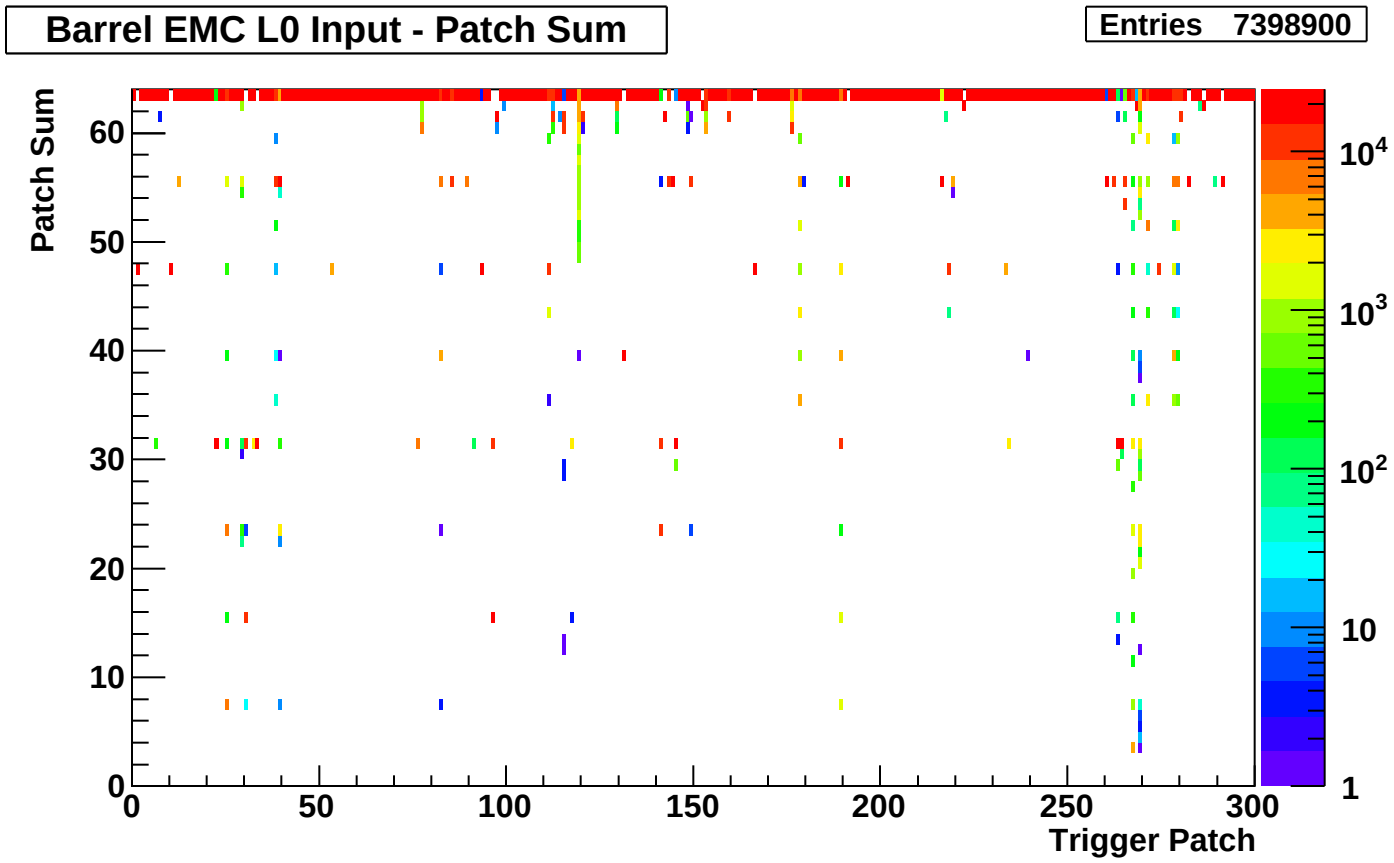
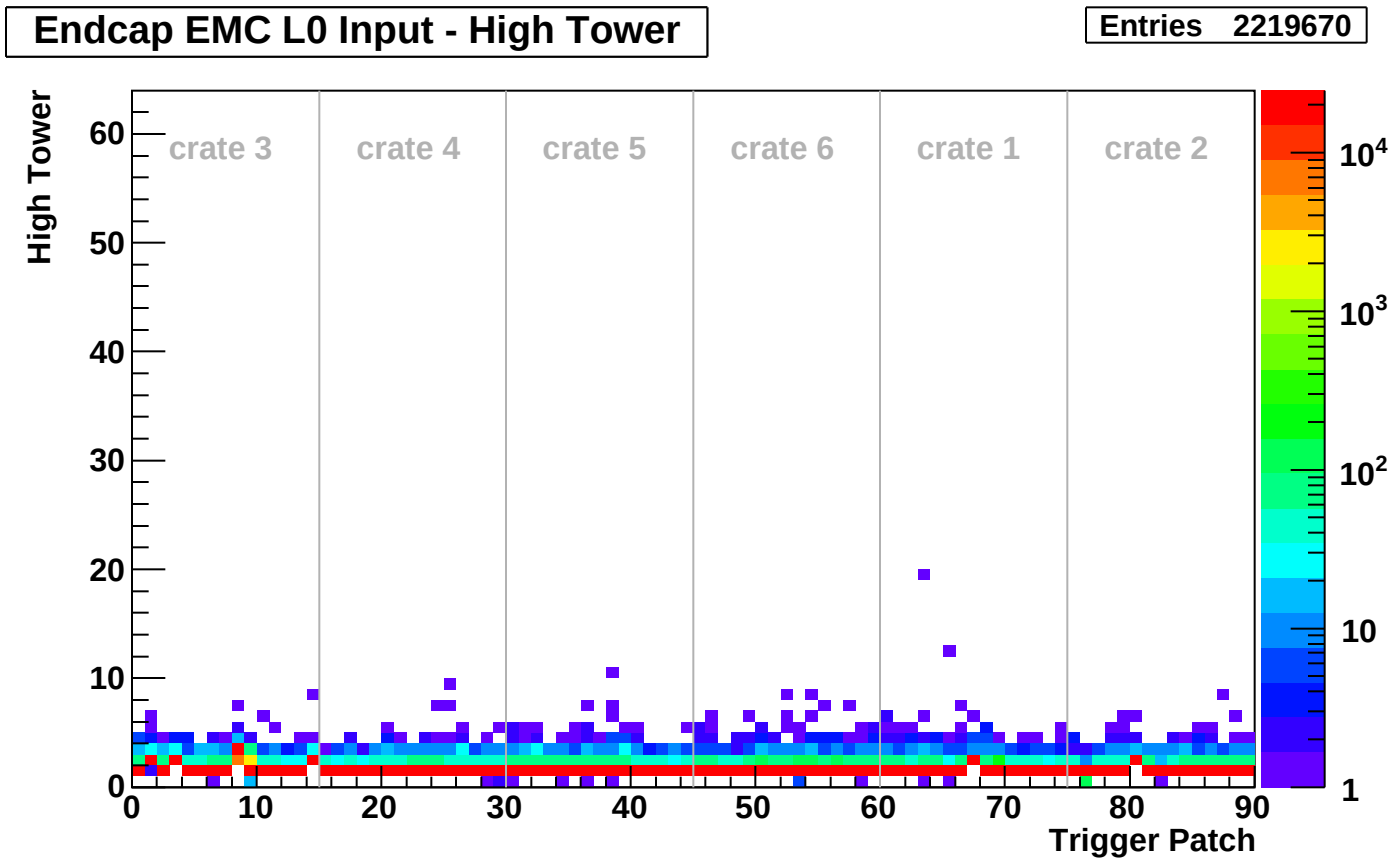
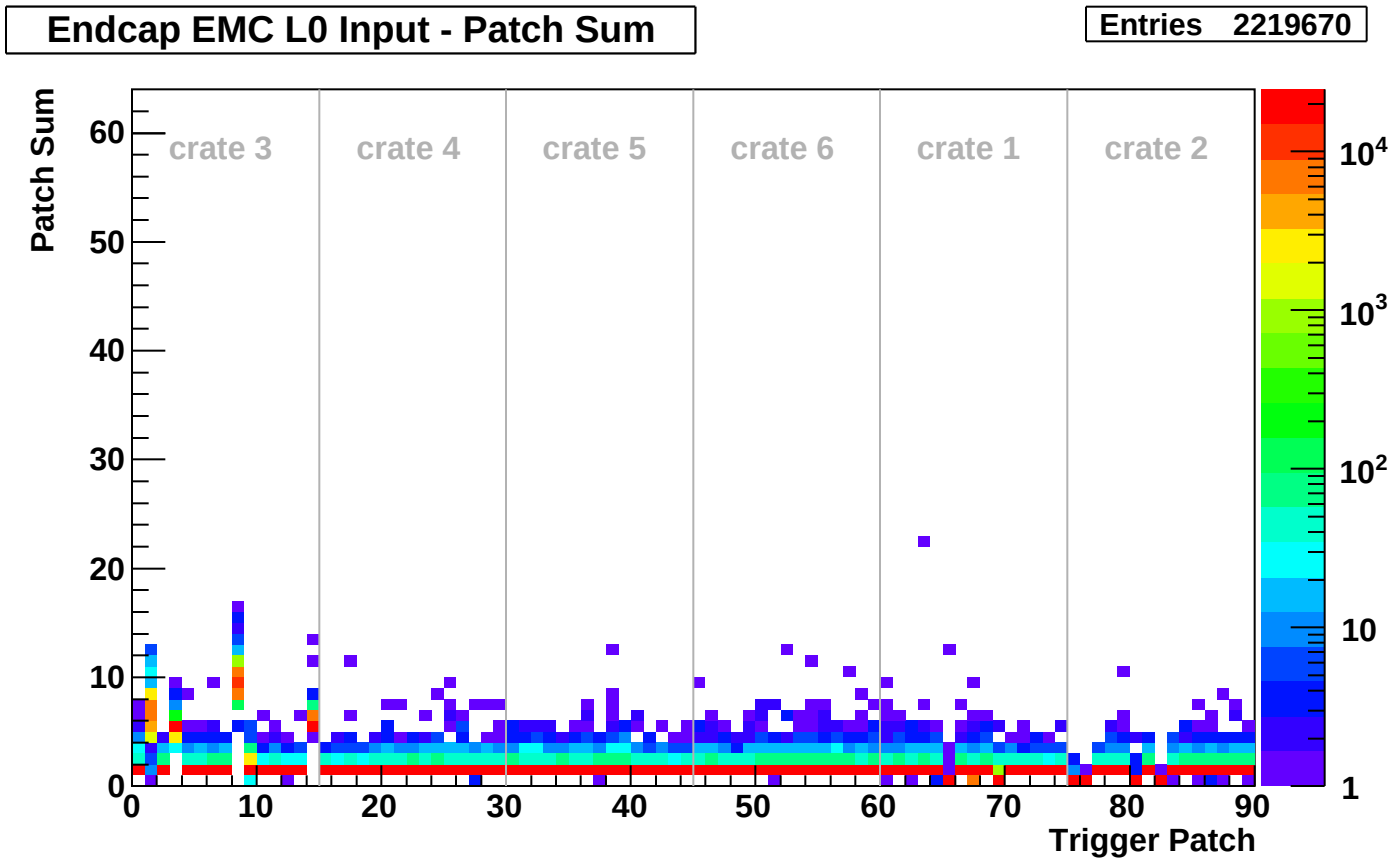
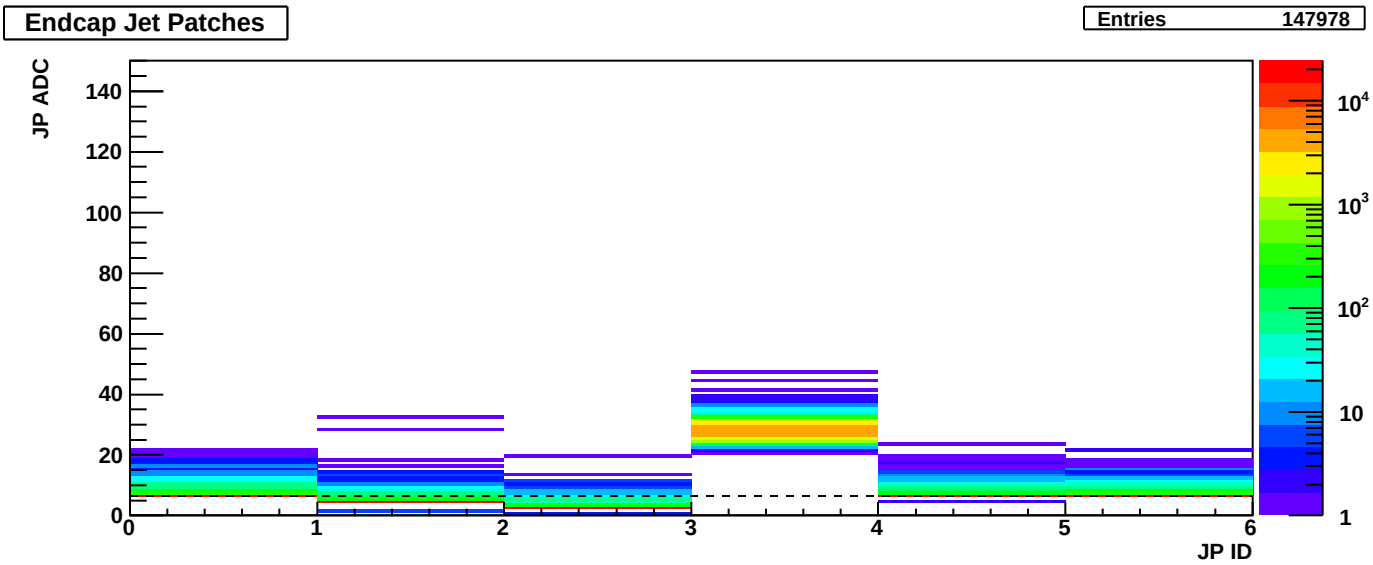
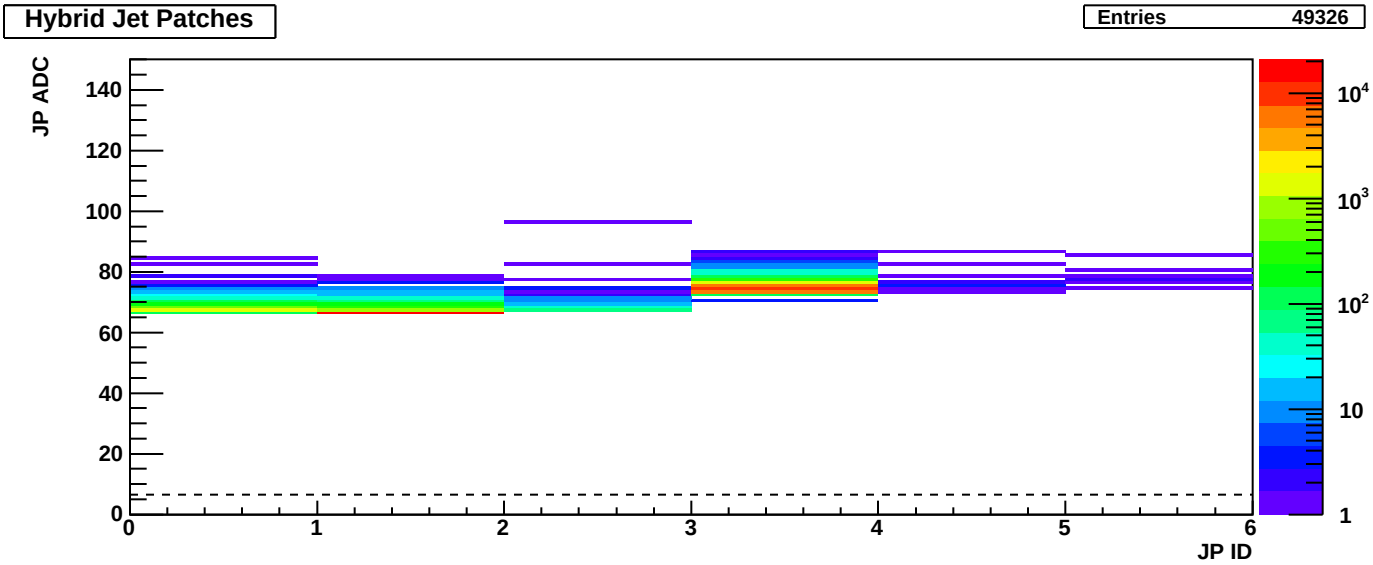

Barrel EMC L0 Input - High Tower
Entries 7398900
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

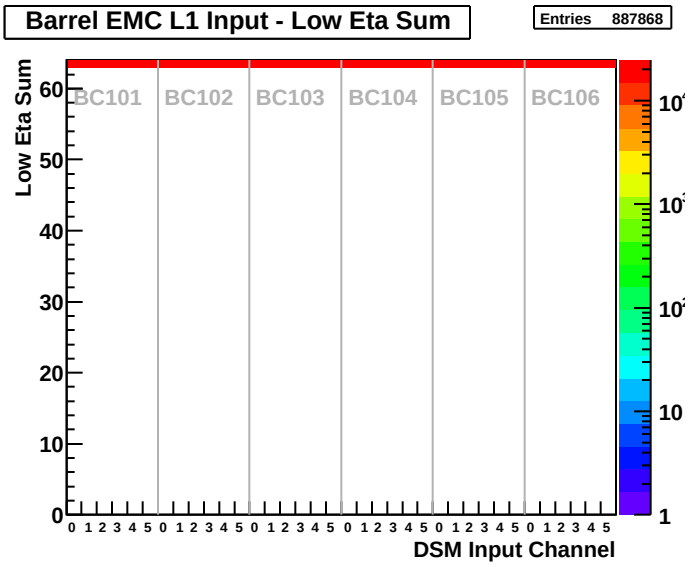

Barrel EMC L0 Input - Patch Sum
Entries 7398900
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

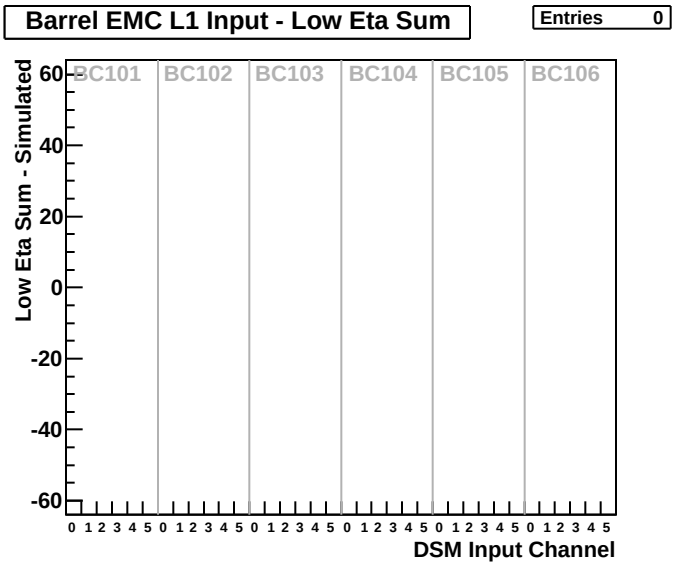

Endcap EMC L0 Input - High Tower
Entries 2219670
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch
0
10
20
30
40
50
60
70
80
90
1
10
10^2
10^3
10^4

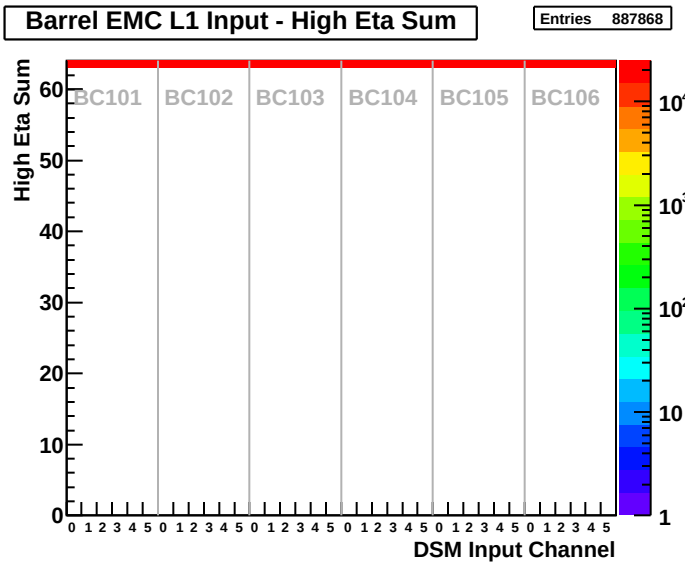

Endcap EMC L0 Input - Patch Sum
Entries 2219670
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch
0
10
20
30
40
50
60
70
80
90
1
10
10^2
10^3
10^4

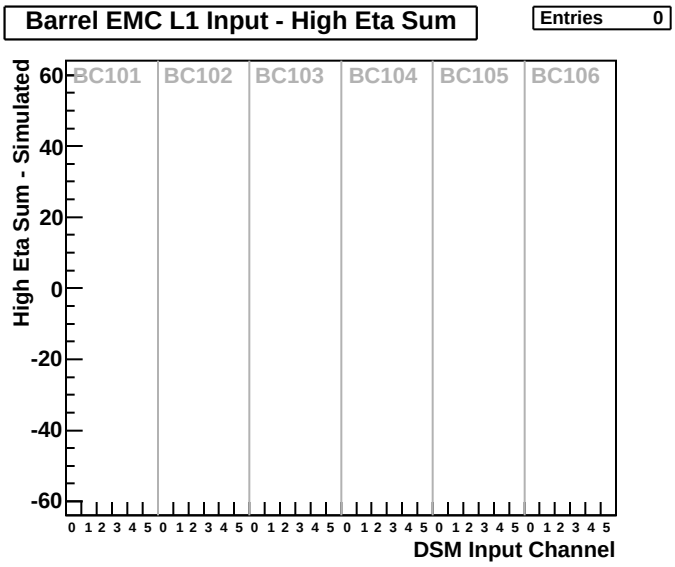

Endcap Jet Patches
Entries 147978
JP ADC
JP ID

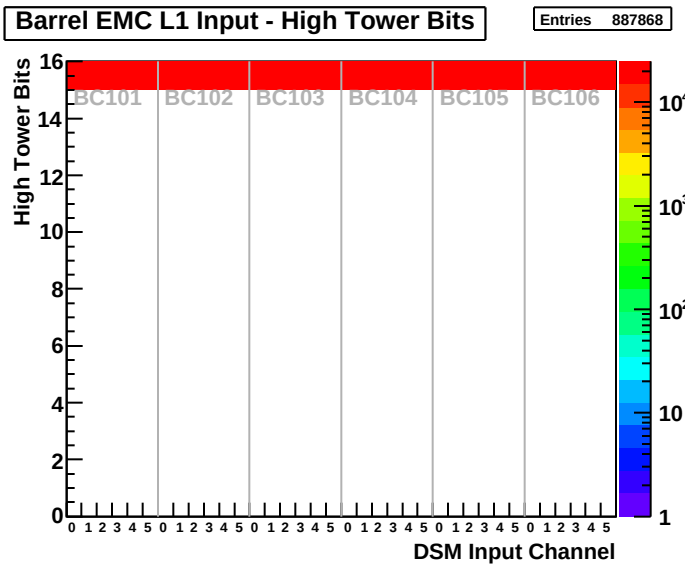

Hybrid Jet Patches
Entries 49326
JP ADC
JP ID

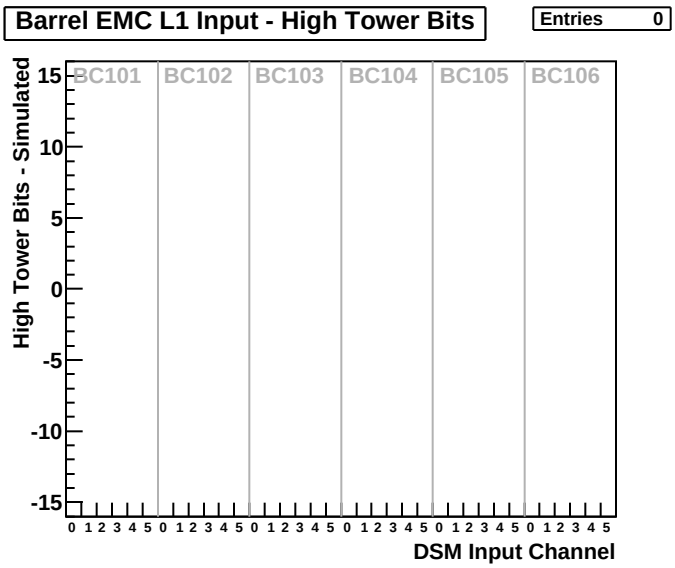

Barrel EMC L1 Input - Low Eta Sum
Entries 887868
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

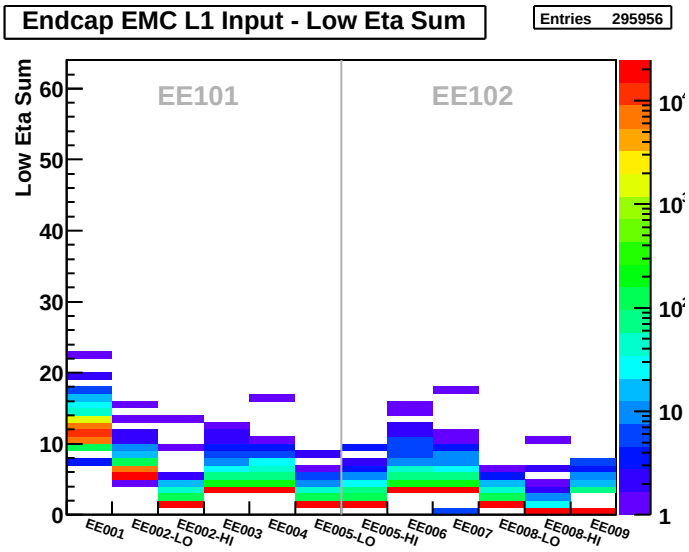

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

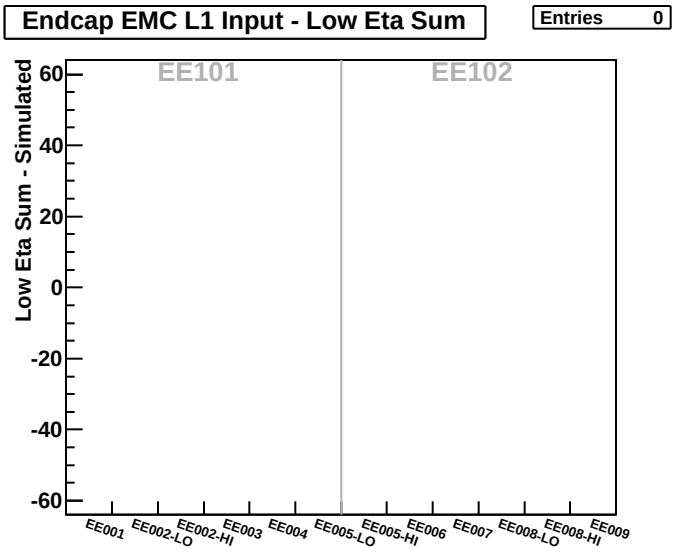

Barrel EMC L1 Input - High Eta Sum
Entries 887868
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

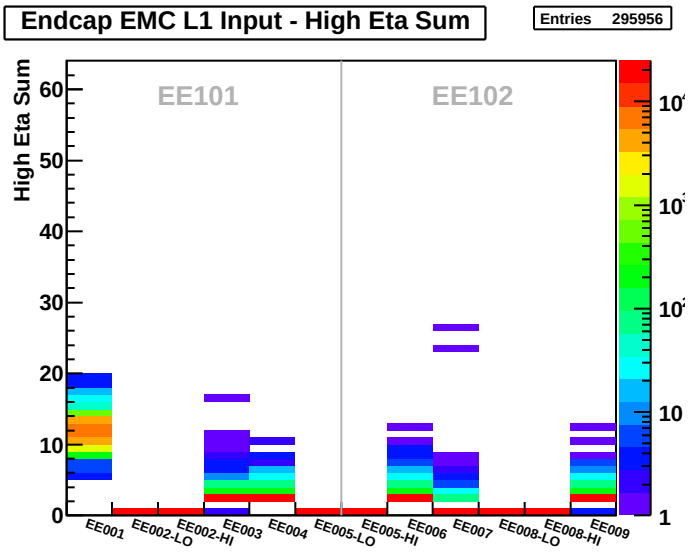

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

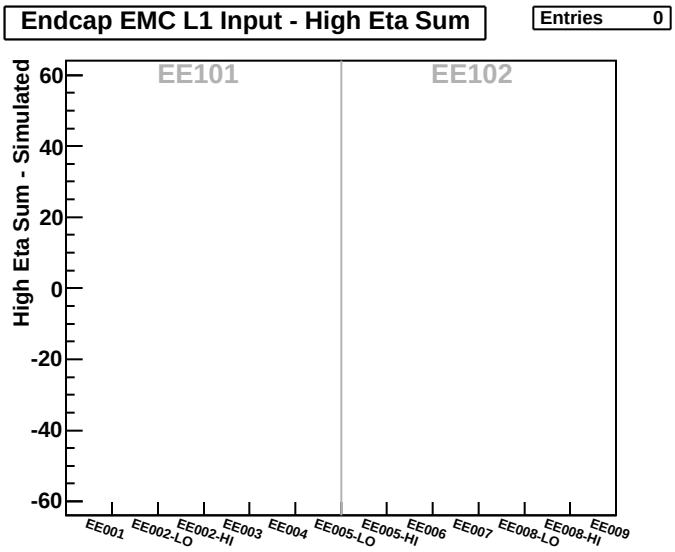

Barrel EMC L1 Input - High Tower Bits
Entries 887868
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

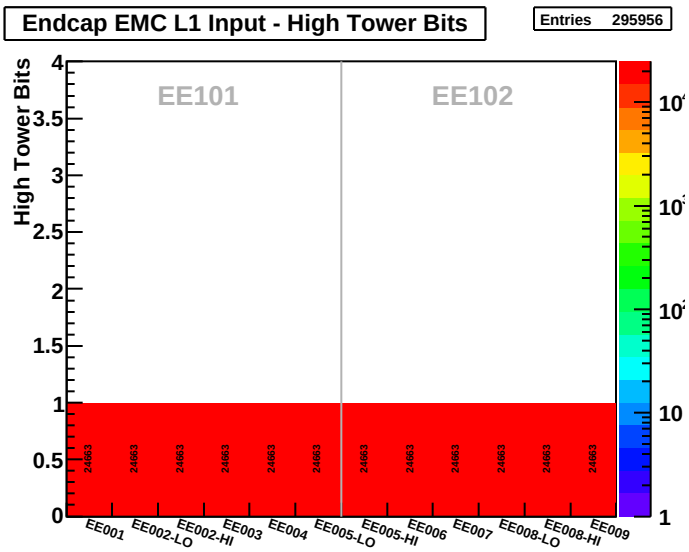

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

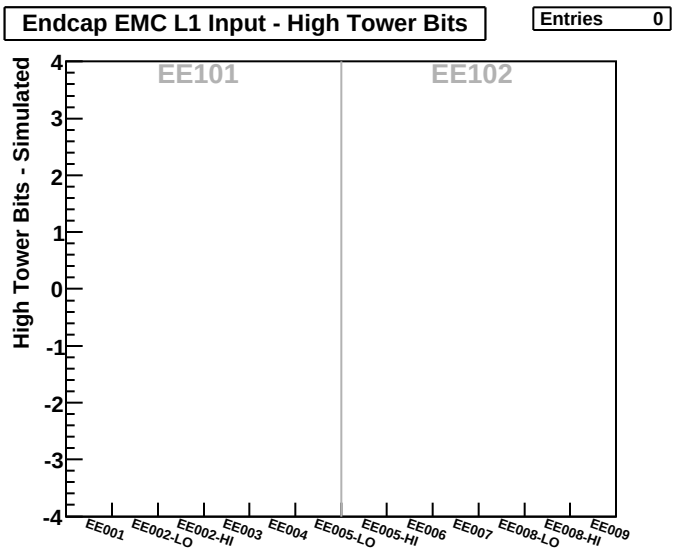

Endcap EMC L1 Input - Low Eta Sum
Entries 295956
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

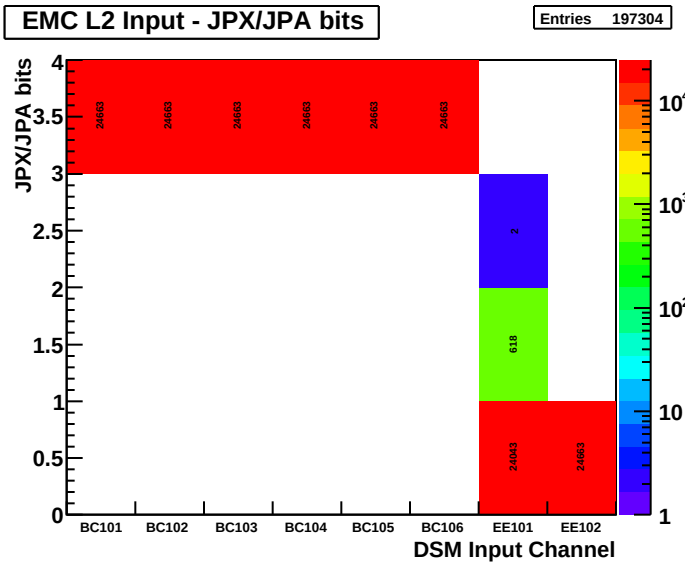

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

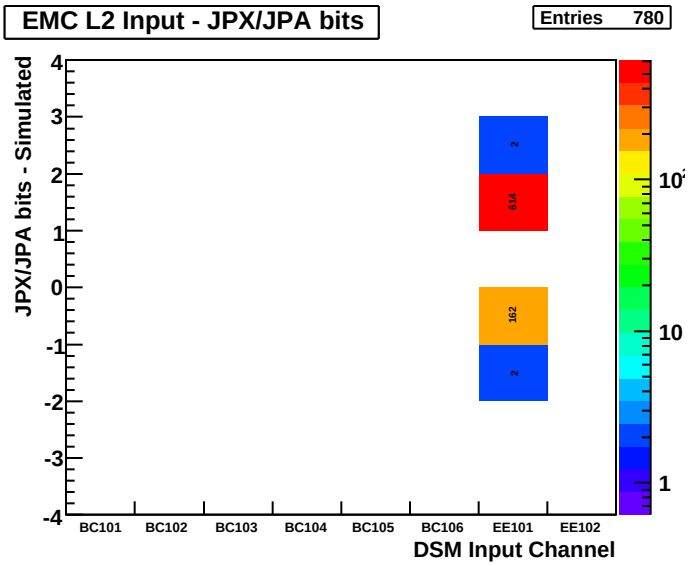

Endcap EMC L1 Input - High Eta Sum
Entries 295956
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

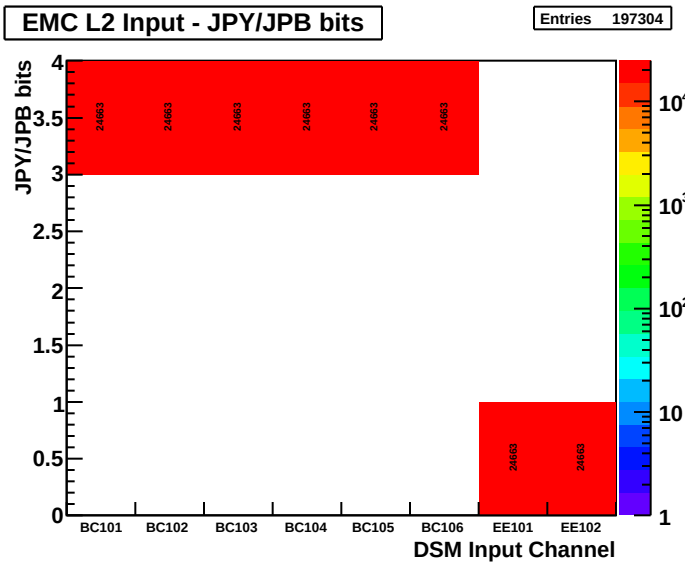

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

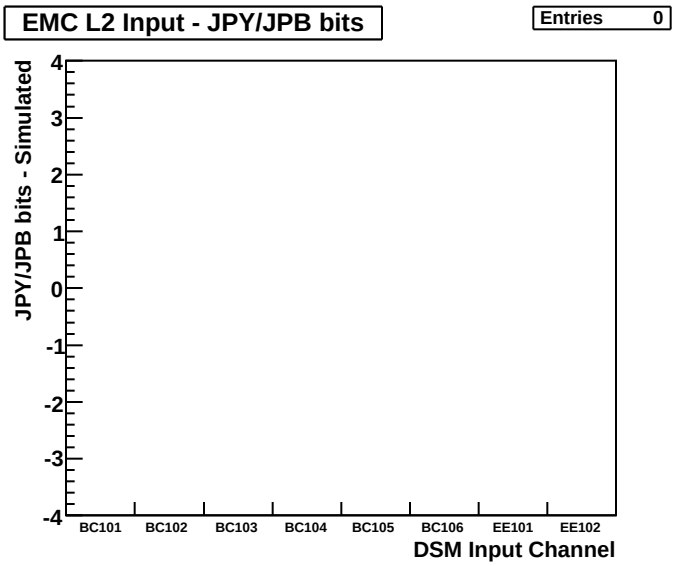

Endcap EMC L1 Input - High Tower Bits
Entries 295956
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

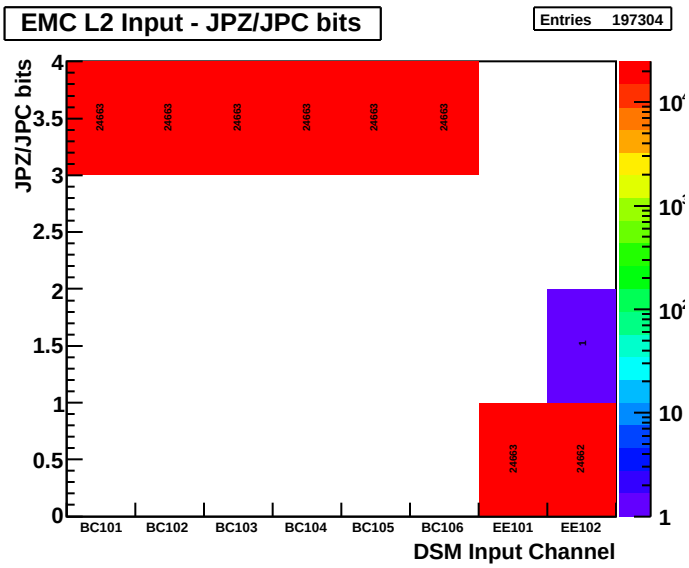

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

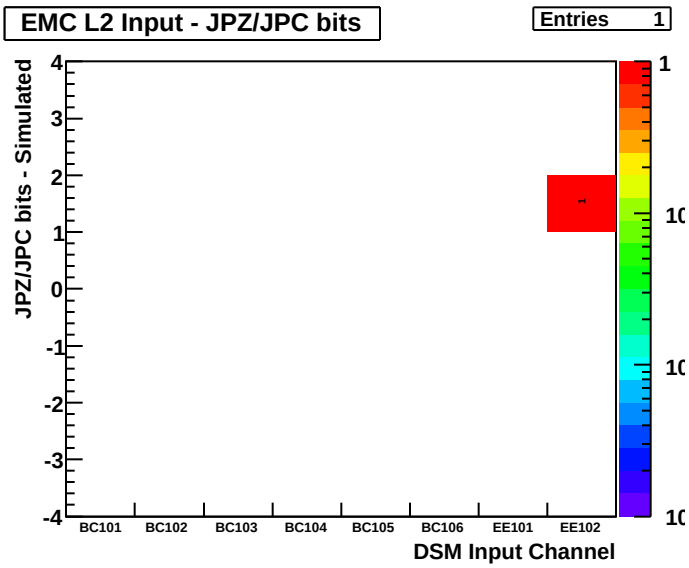

EMC L2 Input - JPX/JPA bits
Entries 197304
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
24663
2
618
24043

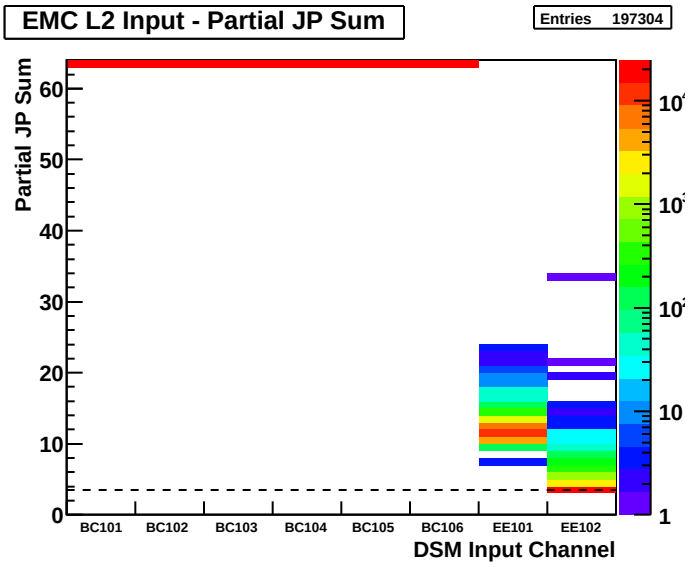

EMC L2 Input - JPX/JPA bits
Entries 780
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
2
614
162
2

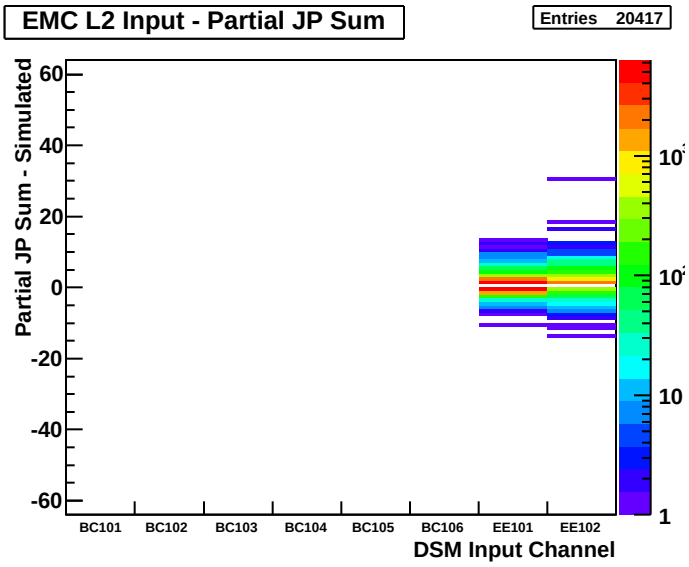

EMC L2 Input - JPY/JPB bits
Entries 197304
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
24663

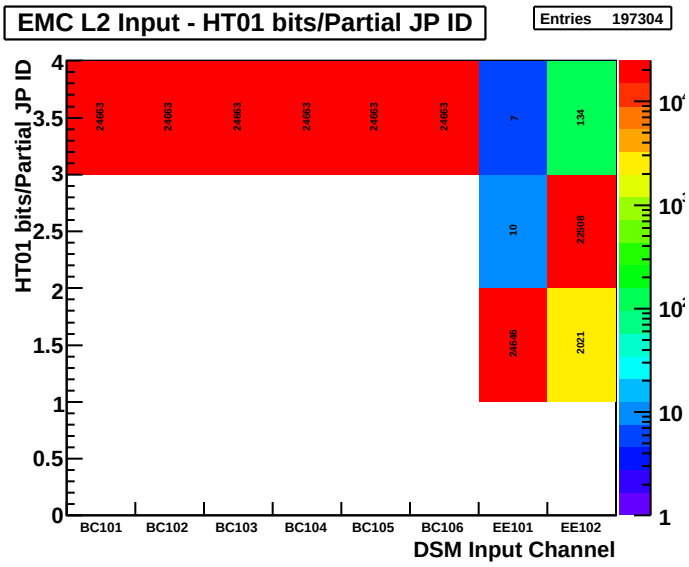

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

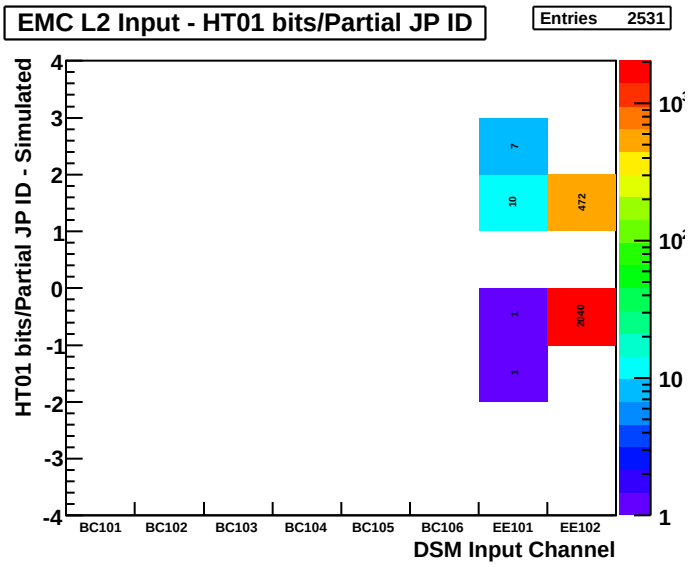

EMC L2 Input - JPZ/JPC bits
Entries 197304
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
24663
1
24662

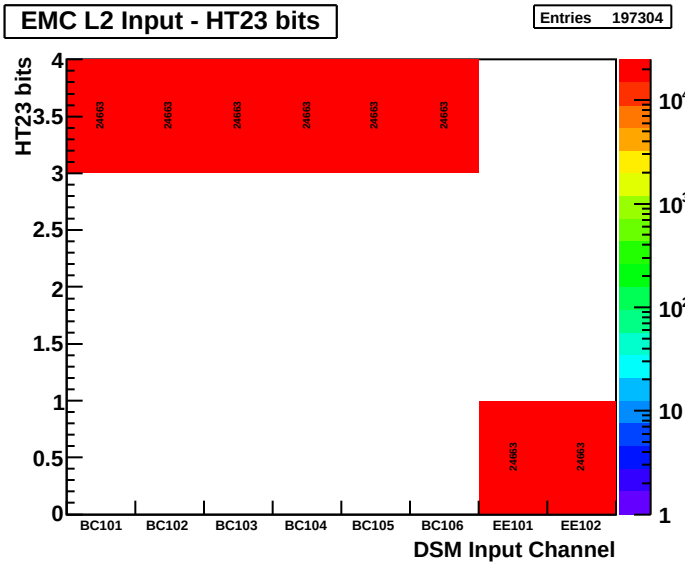

EMC L2 Input - JPZ/JPC bits
Entries 1
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1

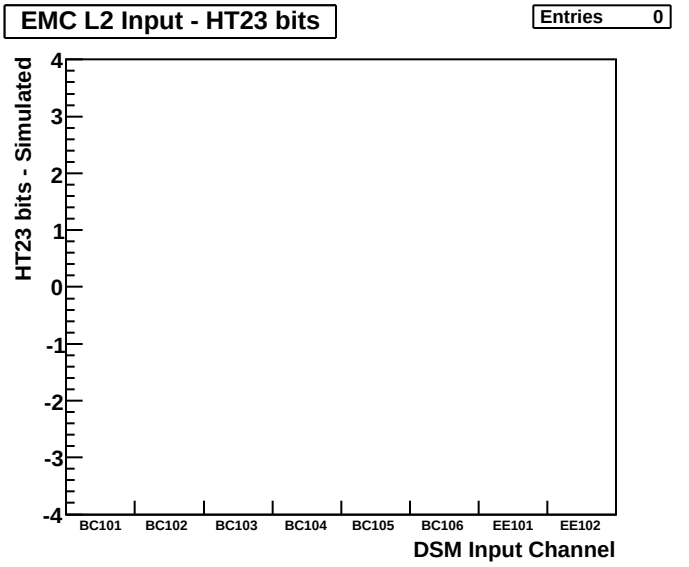

EMC L2 Input - Partial JP Sum
Entries 197304
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

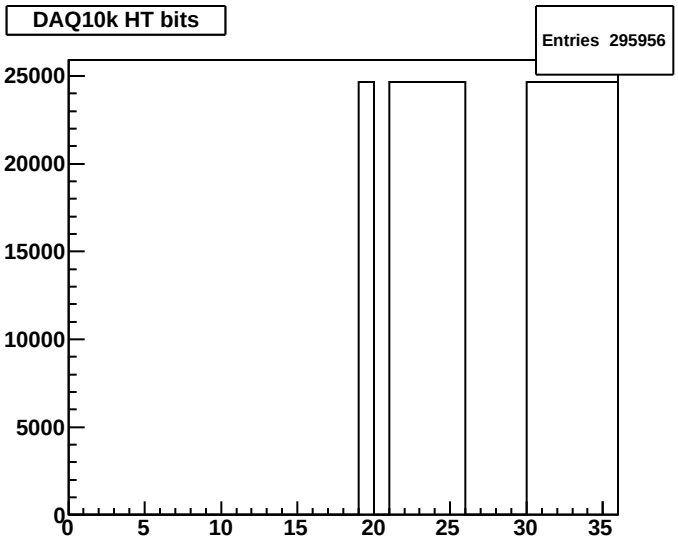

EMC L2 Input - Partial JP Sum
Entries 20417
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

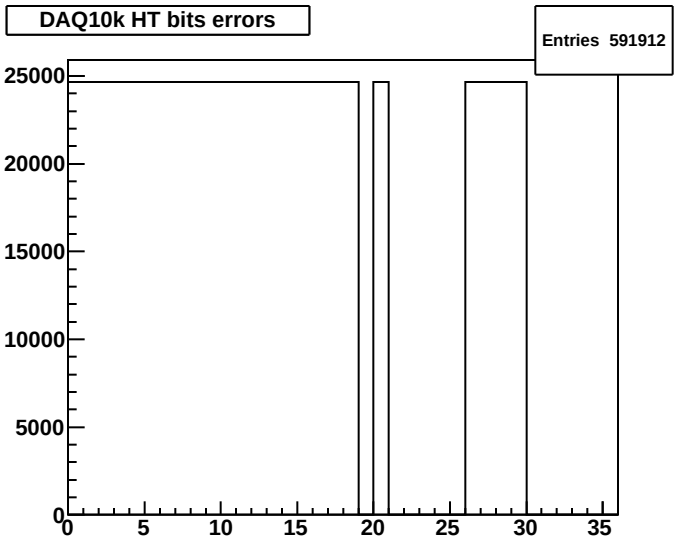

EMC L2 Input - HT01 bits/Partial JP ID
Entries 197304
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

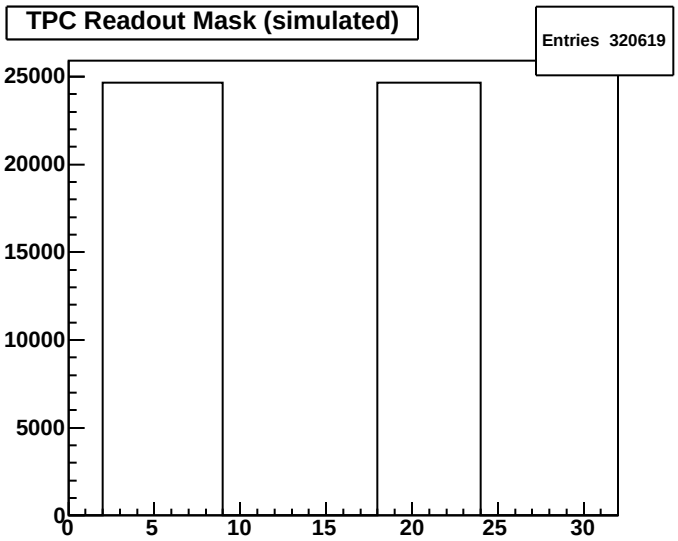

EMC L2 Input - HT01 bits/Partial JP ID
Entries 2531
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

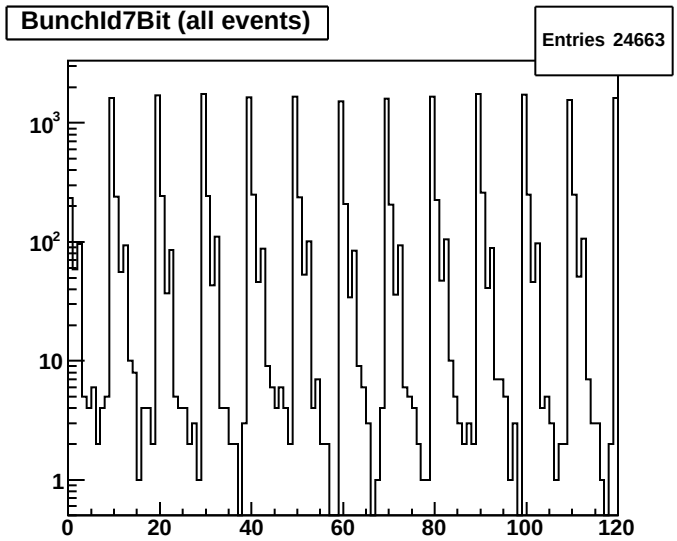

EMC L2 Input - HT23 bits
Entries 197304
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

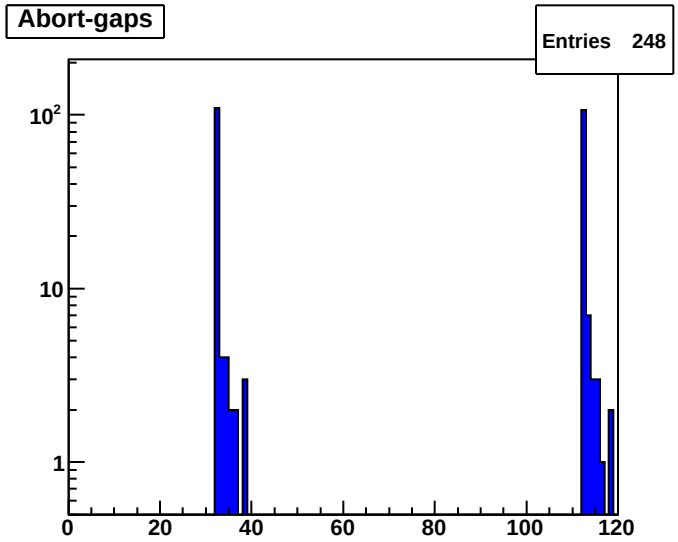

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

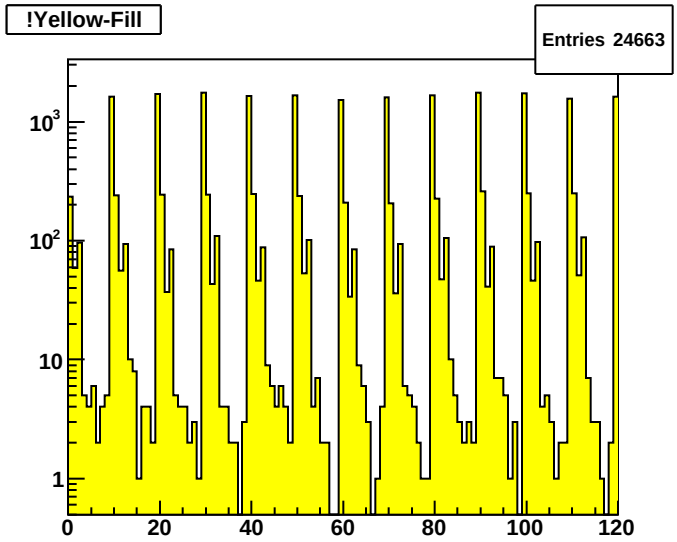

DAQ10k HT bits
Entries 295956
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

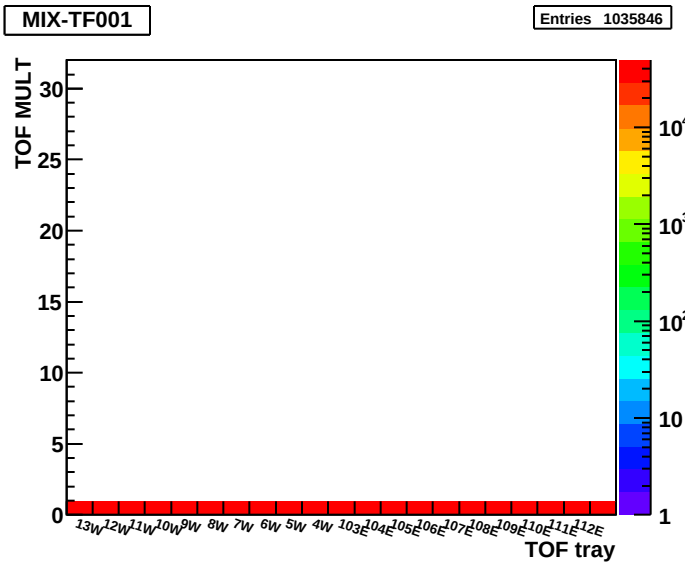

DAQ10k HT bits errors
Entries 591912
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

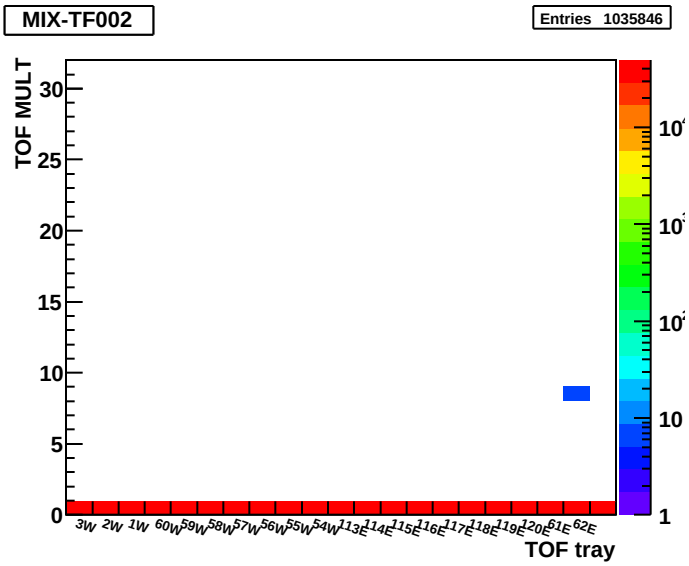

TPC Readout Mask (simulated)
Entries 320619
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30

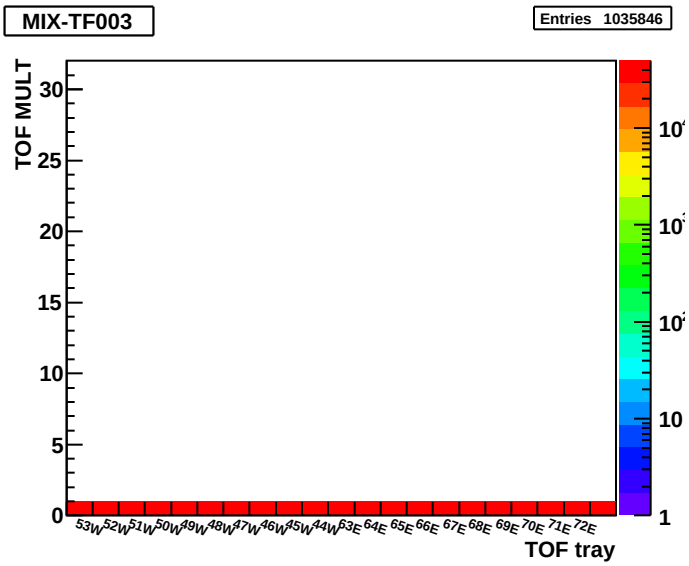

BunchId7Bit (all events)
Entries 24663
10^3
10^2
10
1
0 20 40 60 80 100 120

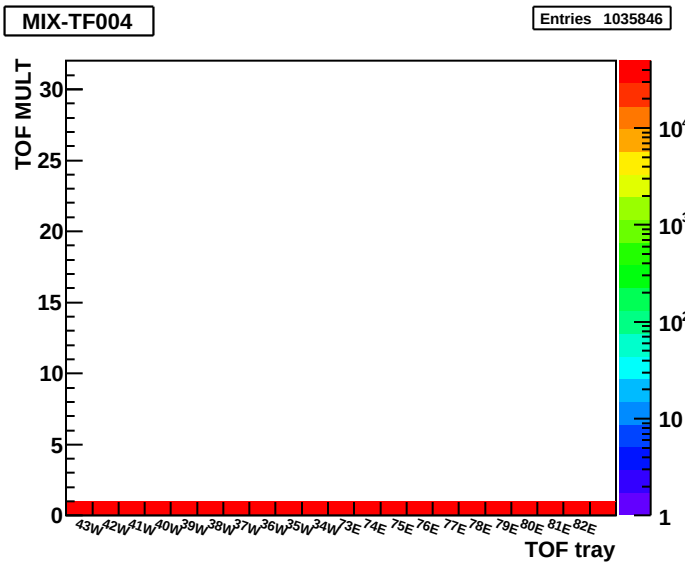

Abort-gaps
Entries 248
10^2
10
1
0 20 40 60 80 100 120

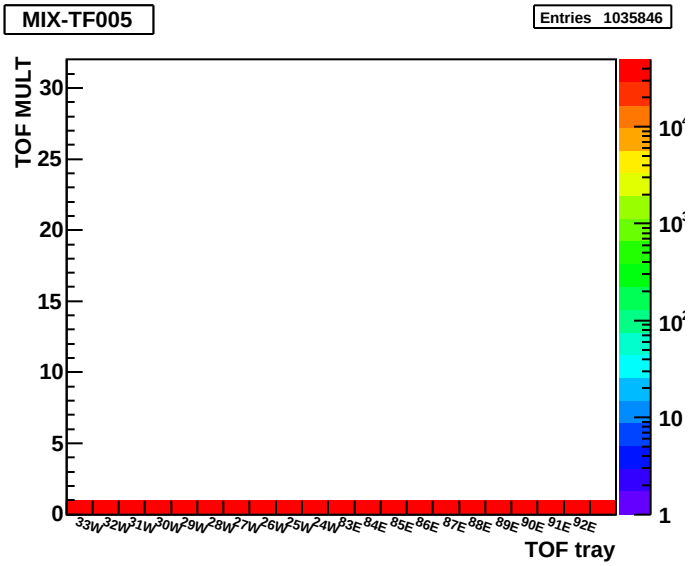

!Yellow-Fill
Entries 24663
10^3
10^2
10
1
0 20 40 60 80 100 120

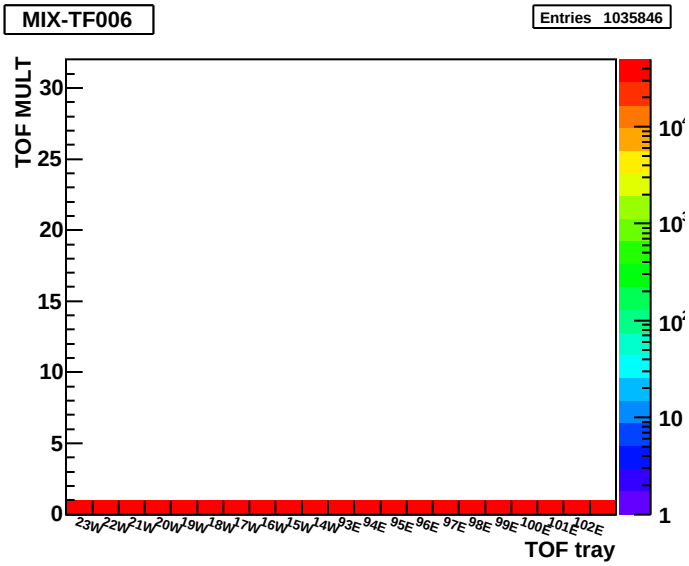

MIX-TF001
Entries 1035846
TOF MULT
TOF tray

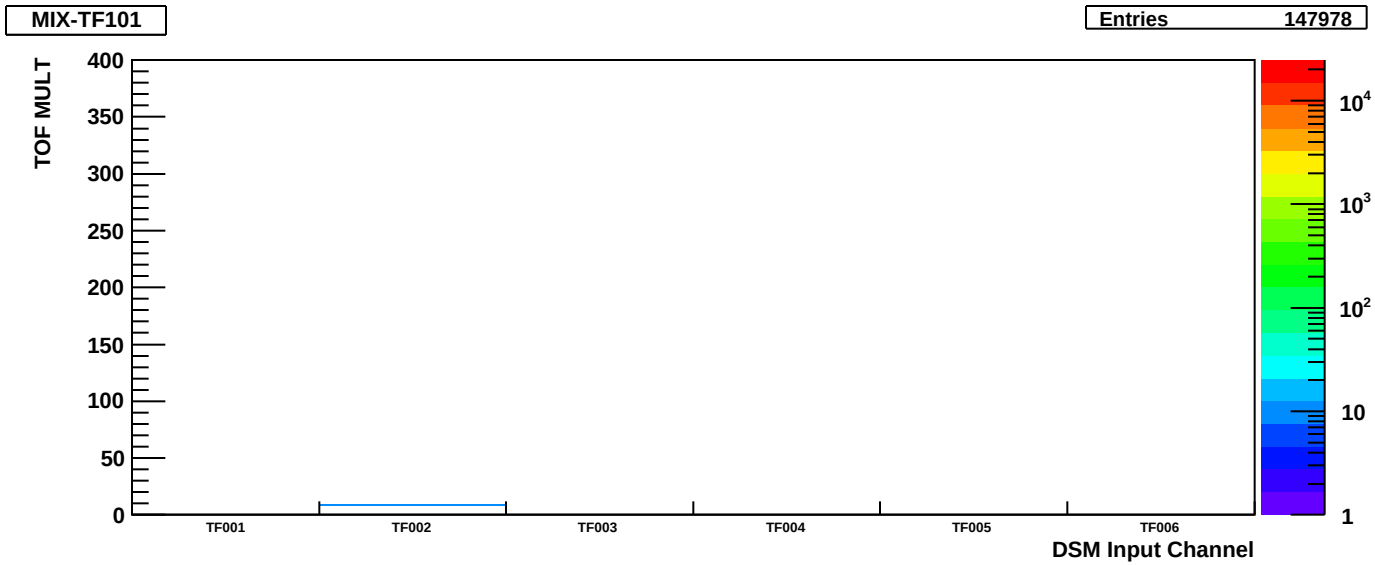

MIX-TF002
Entries 1035846
TOF MULT
TOF tray

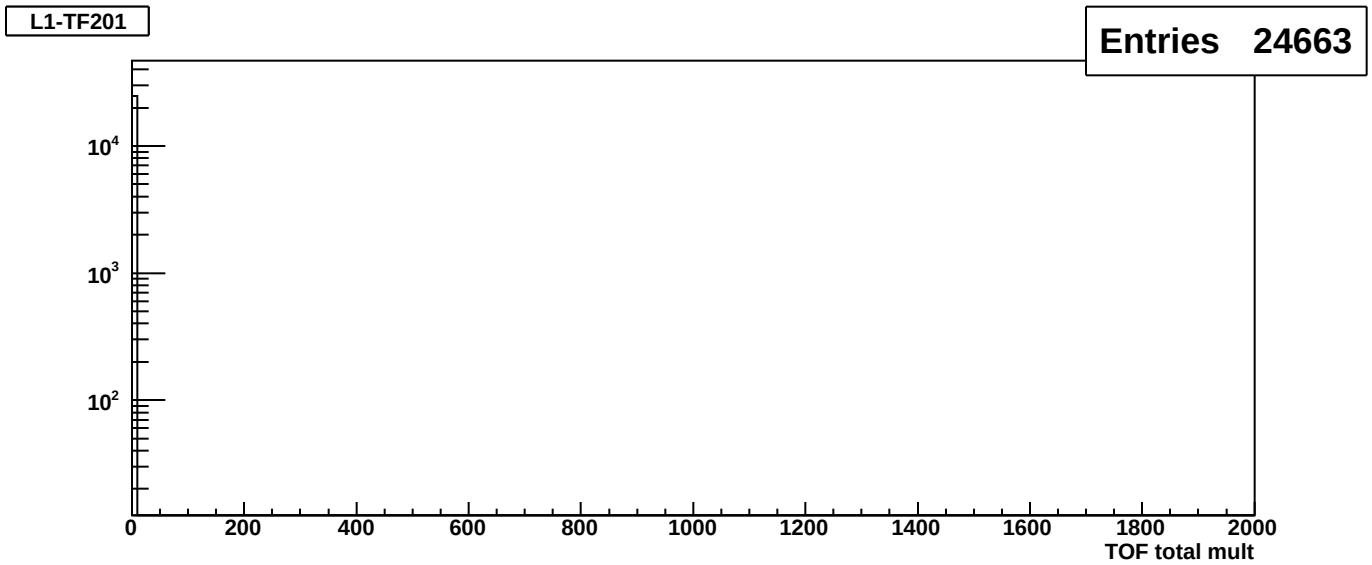

MIX-TF003
Entries 1035846
TOF MULT
TOF tray

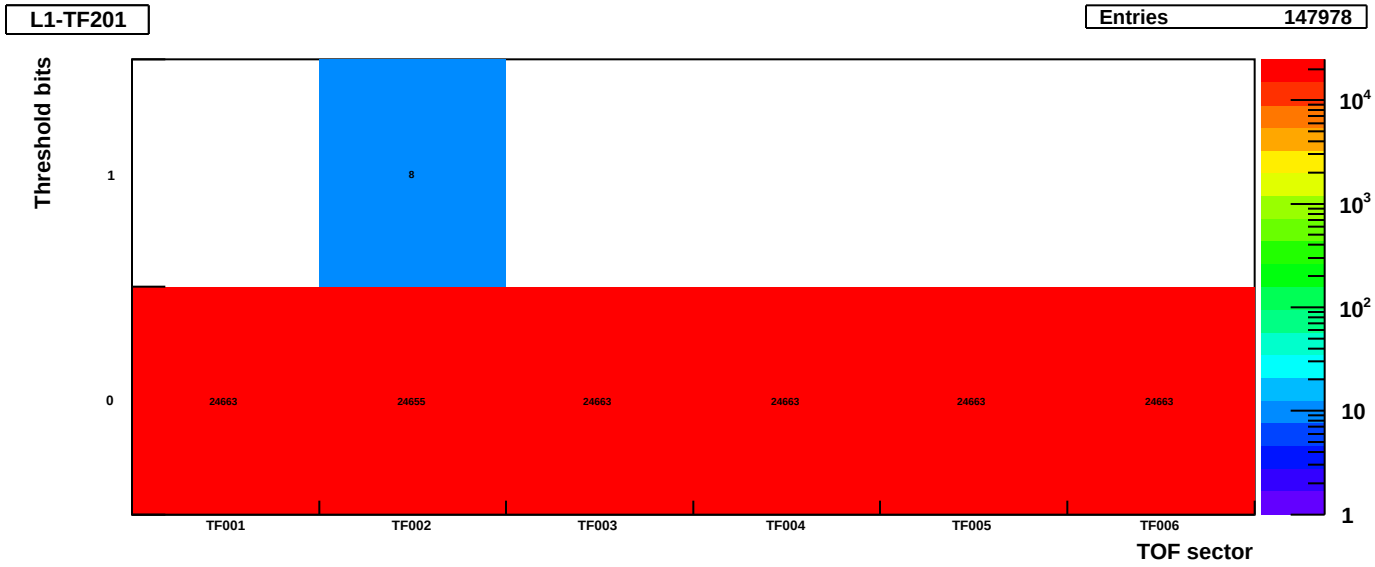

MIX-TF004
Entries 1035846
TOF MULT
TOF tray


MIX-TF005
Entries 1035846
TOF MULT
TOF tray


MIX-TF006
Entries 1035846
TOF MULT
TOF tray


MIX-TF101
Entries 147978
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 24663
10^4
10^3
10^2
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult


L1-TF201
Entries 147978
Threshold bits
1
0
8
24663
24655
24663
24663
24663
24663
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4
10^3
10^2
10
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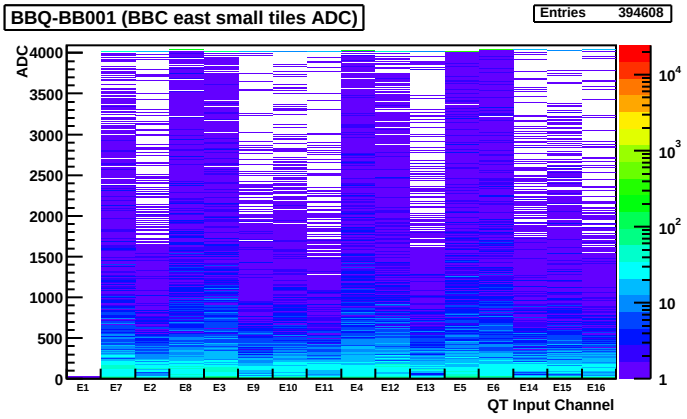
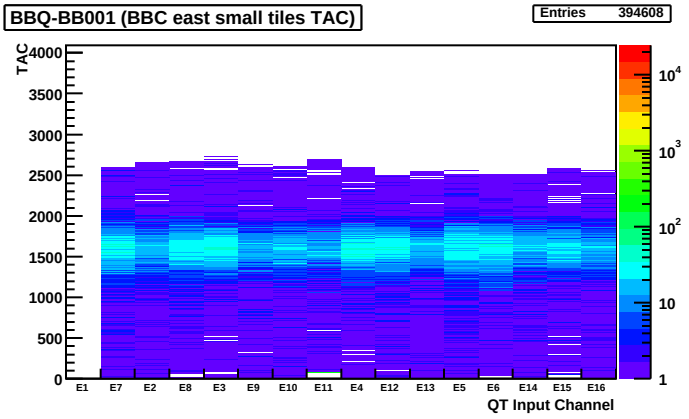
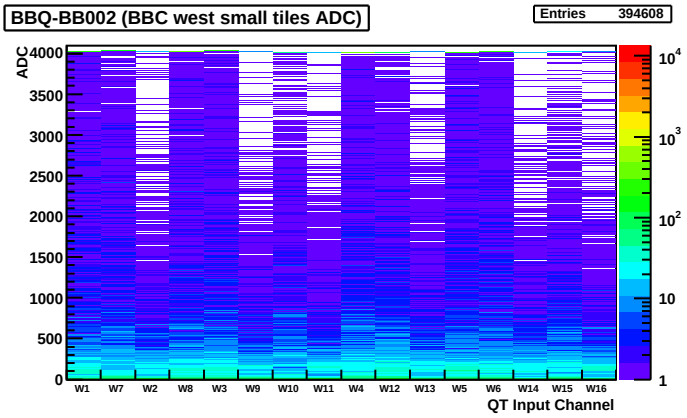
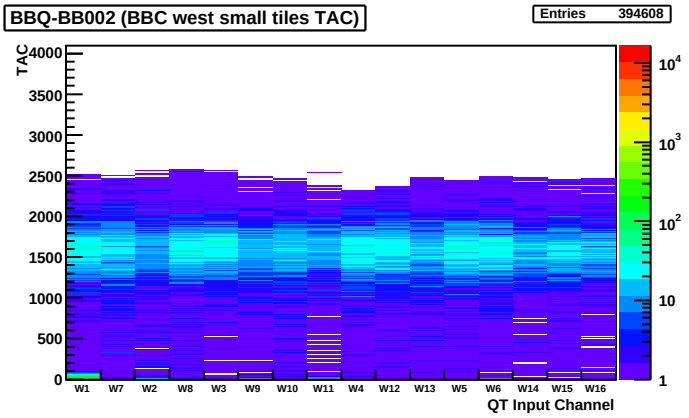
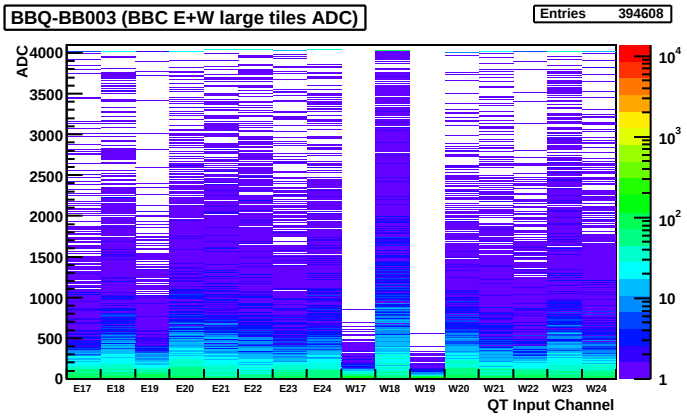
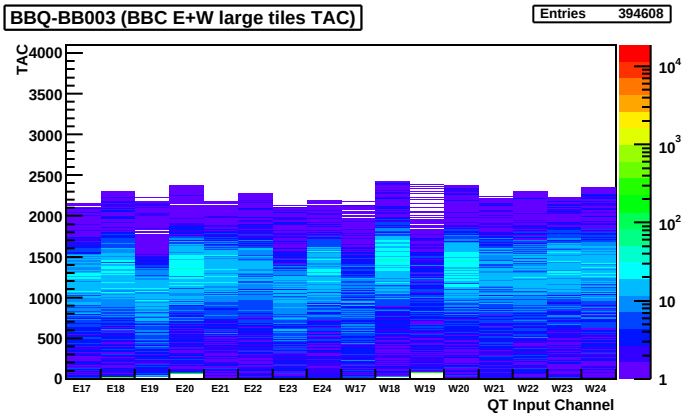

BBQ-BB001 (BBC east small tiles ADC)
Entries 394608
ADC
QT Input Channel

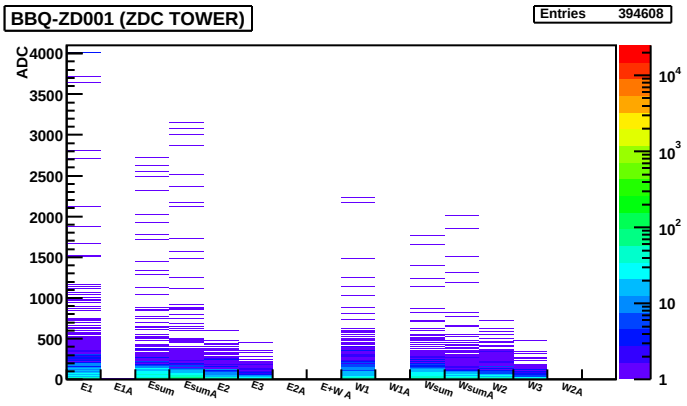

BBQ-BB001 (BBC east small tiles TAC)
Entries 394608
TAC
QT Input Channel

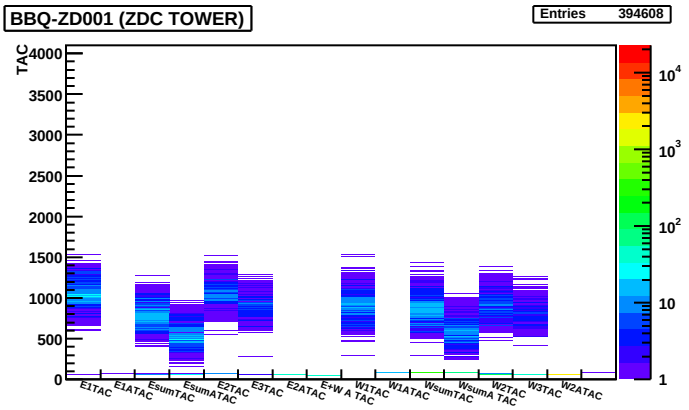

BBQ-BB002 (BBC west small tiles ADC)
Entries 394608
ADC
QT Input Channel

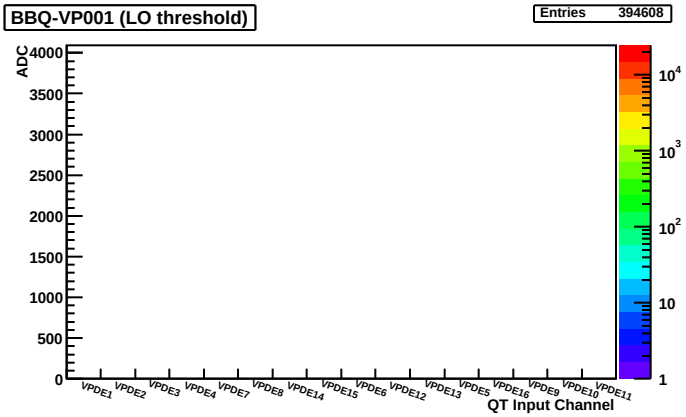

BBQ-BB002 (BBC west small tiles TAC)
Entries 394608
TAC
QT Input Channel

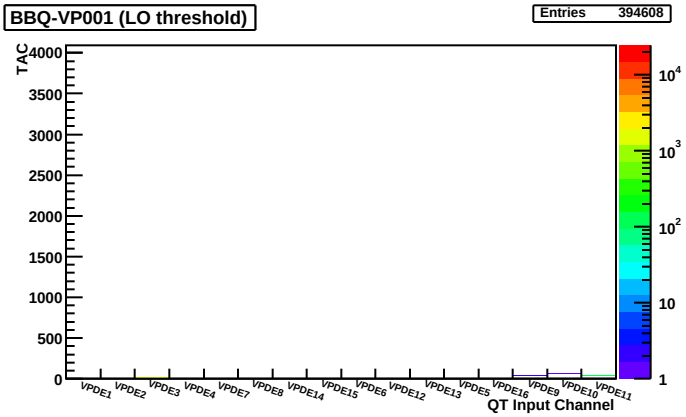

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 394608
ADC
QT Input Channel

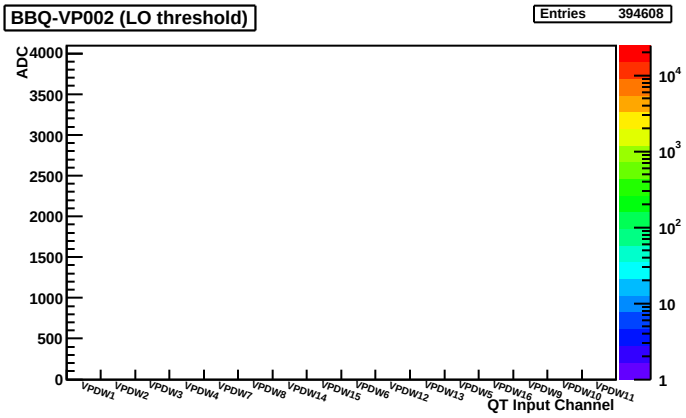

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 394608
TAC
QT Input Channel

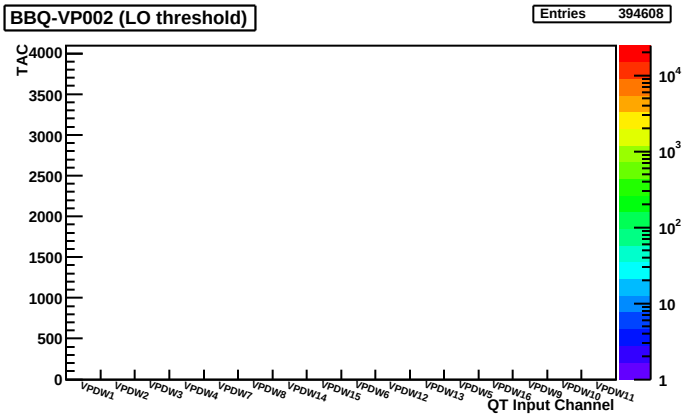

BBQ-ZD001 (ZDC TOWER)
Entries 394608
ADC

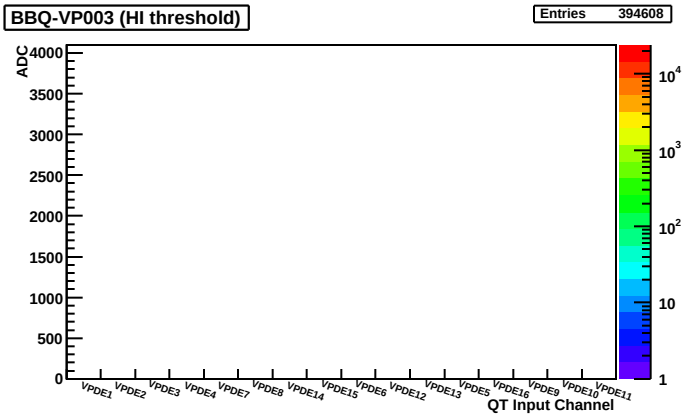

BBQ-ZD001 (ZDC TOWER)
Entries 394608
TAC

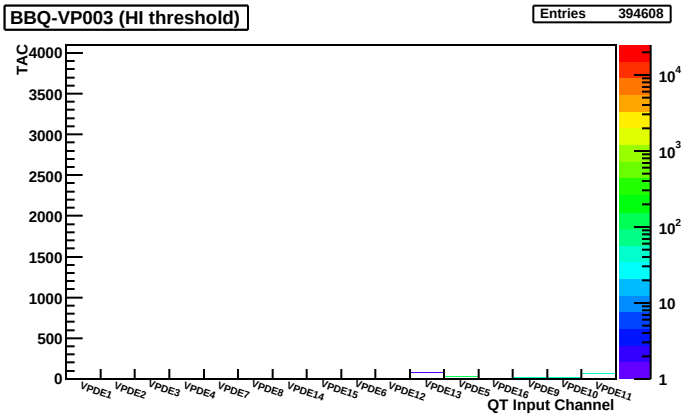

BBQ-VP001 (LO threshold)
Entries 394608
ADC
QT Input Channel

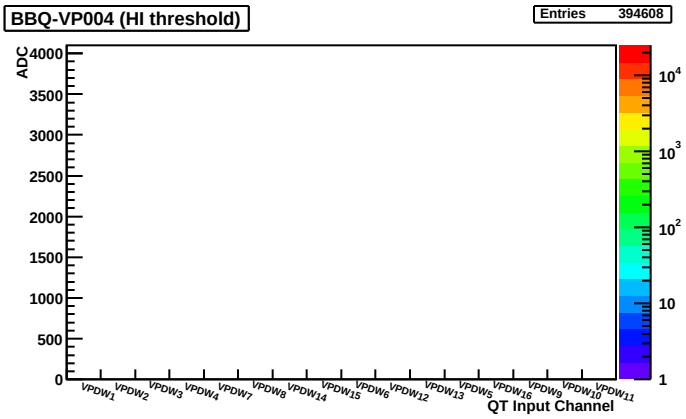

BBQ-VP001 (LO threshold)
Entries 394608
TAC
QT Input Channel

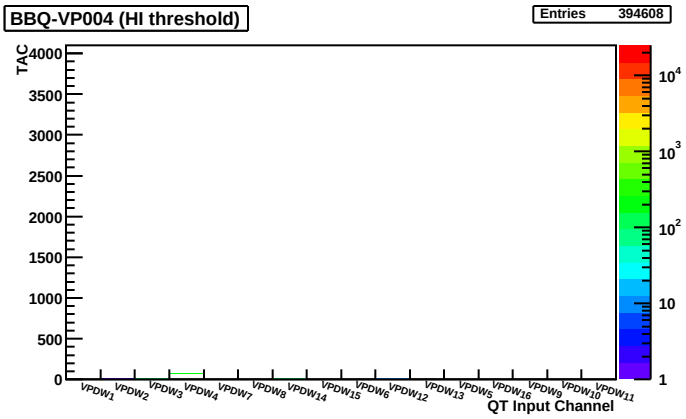

BBQ-VP002 (LO threshold)
Entries 394608
ADC
QT Input Channel

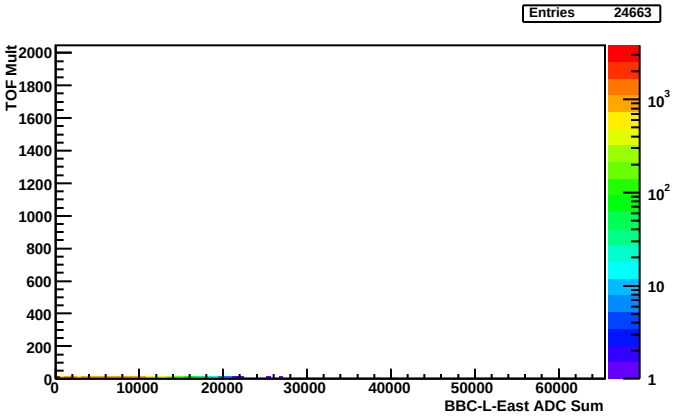

BBQ-VP002 (LO threshold)
Entries 394608
TAC
QT Input Channel

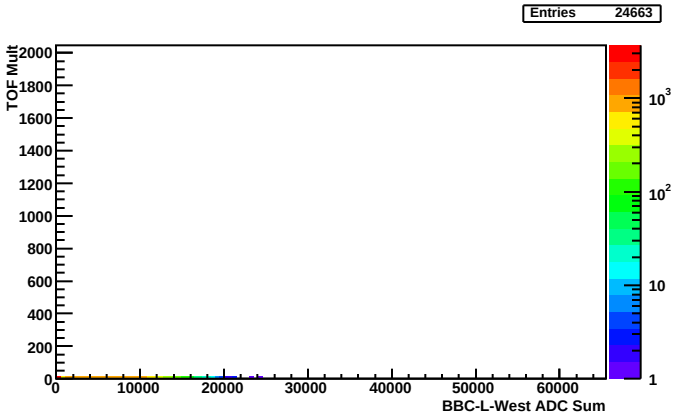

BBQ-VP003 (HI threshold)
Entries 394608
ADC
QT Input Channel

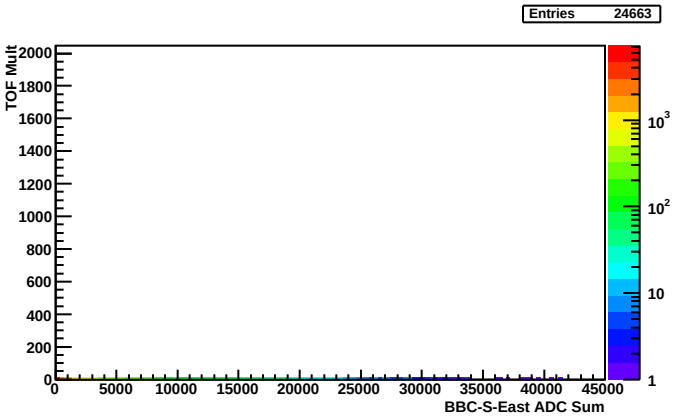

BBQ-VP003 (HI threshold)
Entries 394608
TAC
QT Input Channel

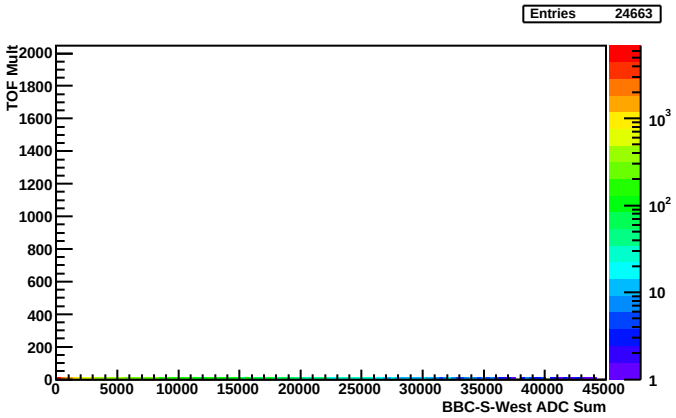

BBQ-VP004 (HI threshold)
Entries 394608
ADC
QT Input Channel

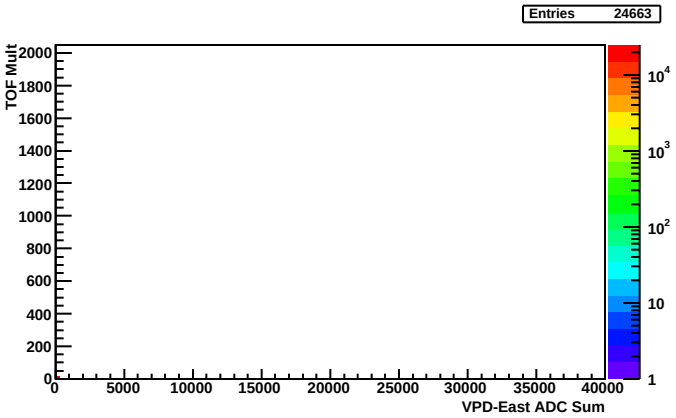

BBQ-VP004 (HI threshold)
Entries 394608
TAC
QT Input Channel

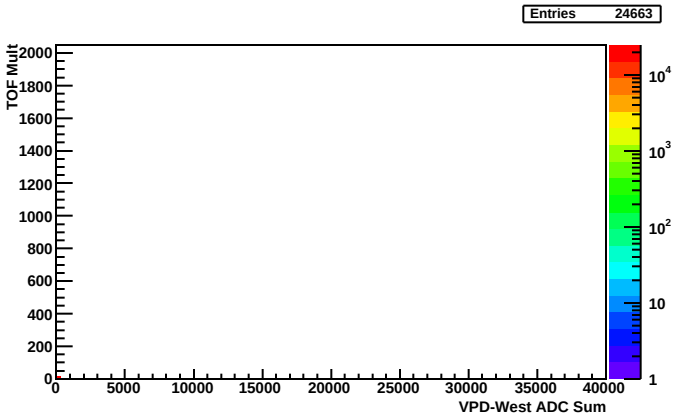

Entries 24663
TOF Mult
BBC-L-East ADC Sum

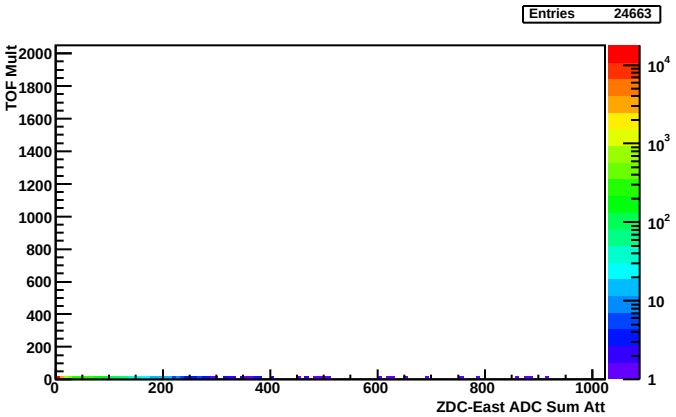

Entries 24663
TOF Mult
BBC-L-West ADC Sum

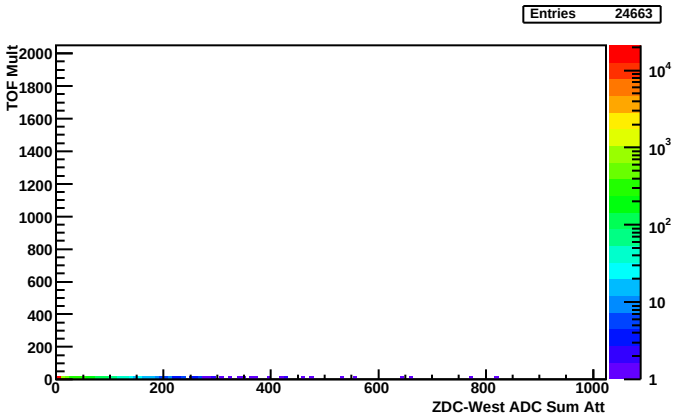

Entries 24663
TOF Mult
BBC-S-East ADC Sum

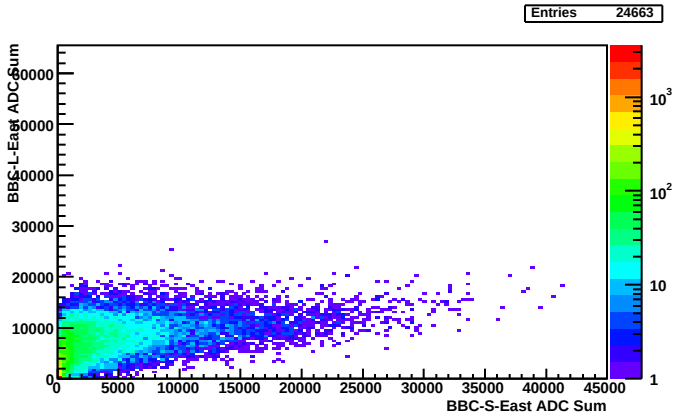

Entries 24663
TOF Mult
BBC-S-West ADC Sum

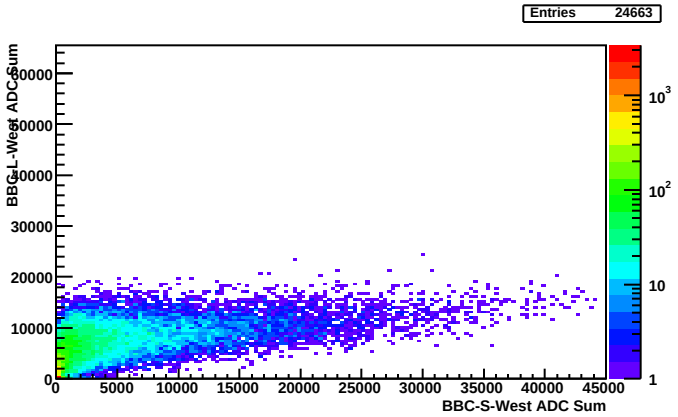

Entries 24663
TOF Mult
VPD-East ADC Sum

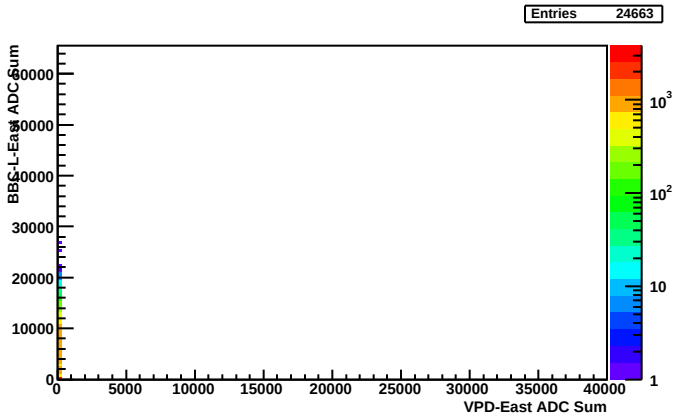

Entries 24663
TOF Mult
VPD-West ADC Sum

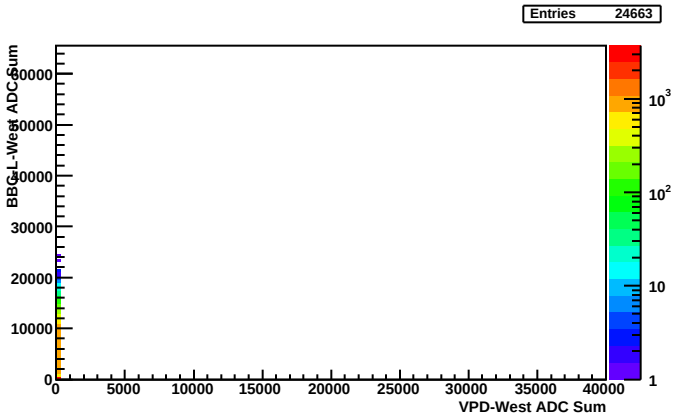

Entries 24663
TOF Mult
ZDC-East ADC Sum Att

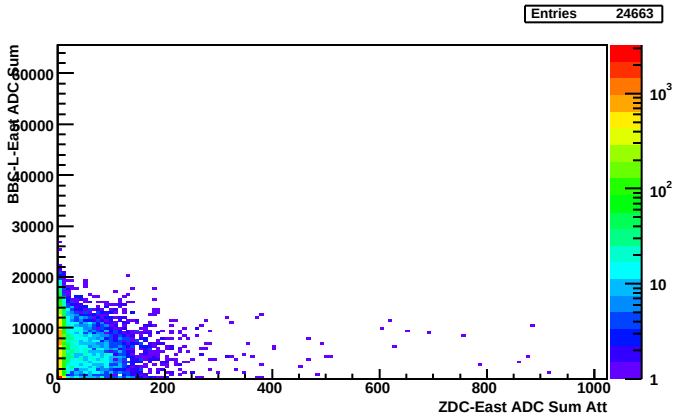

Entries 24663
TOF Mult
ZDC-West ADC Sum Att

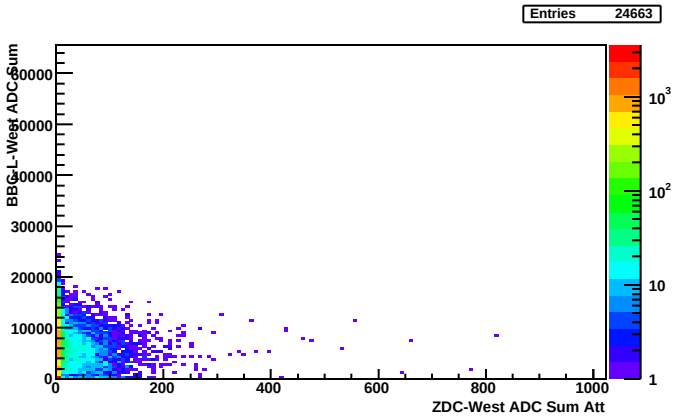

Entries 24663
BBC-L-East ADC Sum
BBC-S-East ADC Sum

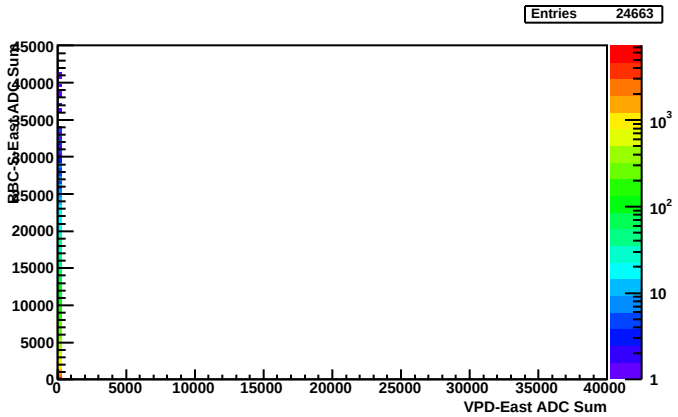

Entries 24663
BBC-L-West ADC Sum
BBC-S-West ADC Sum

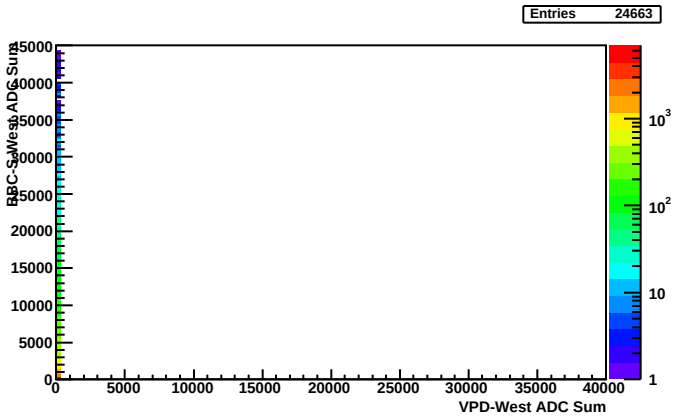

Entries 24663
BBC-L-East ADC Sum
VPD-East ADC Sum

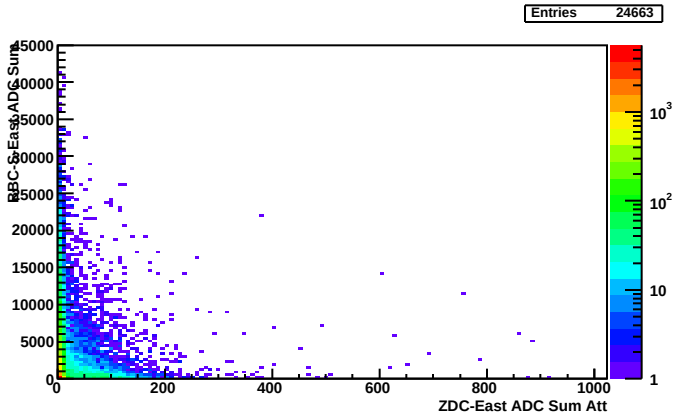

Entries 24663
BBC-L-West ADC Sum
VPD-West ADC Sum

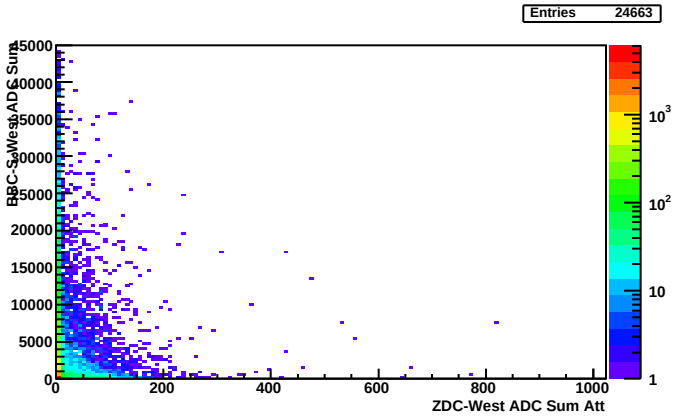

Entries 24663
BBC-L-East ADC Sum
ZDC-East ADC Sum Att


Entries 24663
BBC-L-West ADC Sum
ZDC-West ADC Sum Att


Entries 24663
BBC-S-East ADC Sum
VPD-East ADC Sum


Entries 24663
BBC-S-West ADC Sum
VPD-West ADC Sum


Entries 24663
BBC-S-East ADC Sum
ZDC-East ADC Sum Att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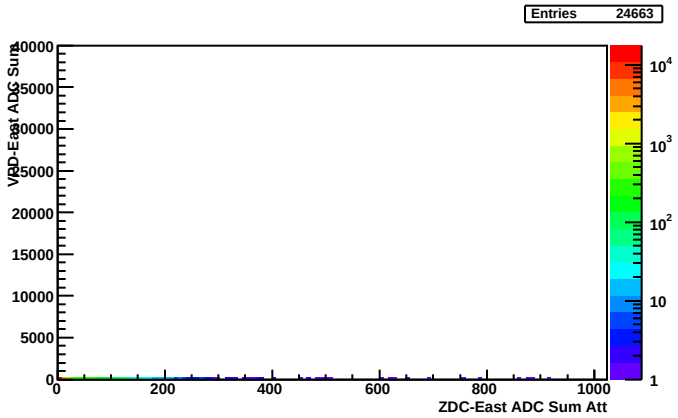
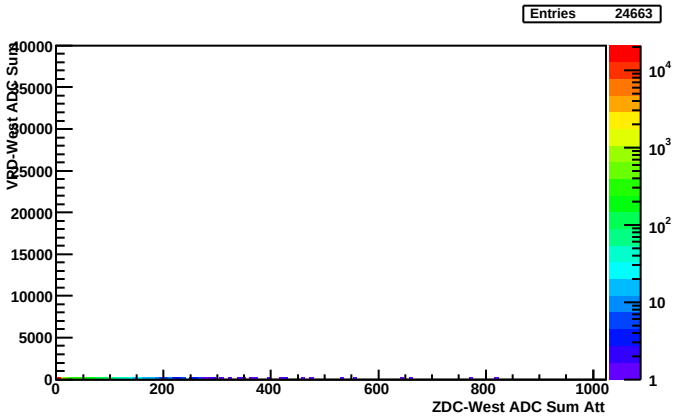
BBC-S-West ADC Sum
ZDC-West ADC Sum Att


Entries 24663
VPD-East ADC Sum
ZDC-East ADC Sum Att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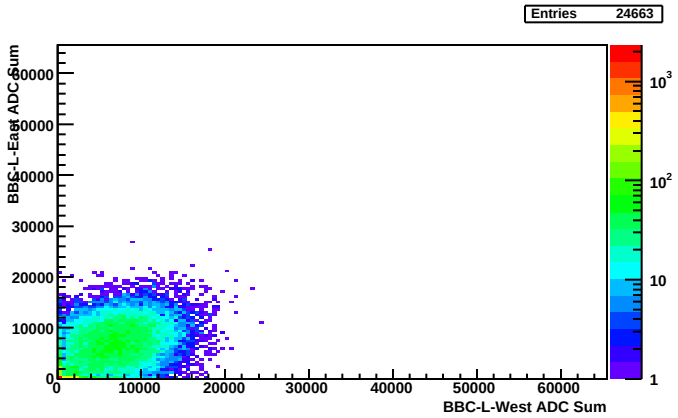
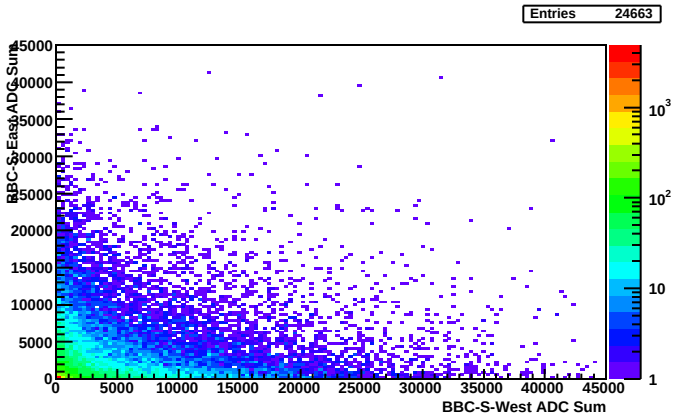
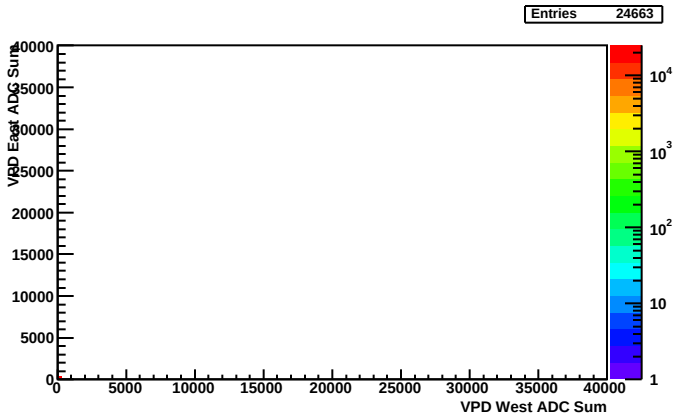
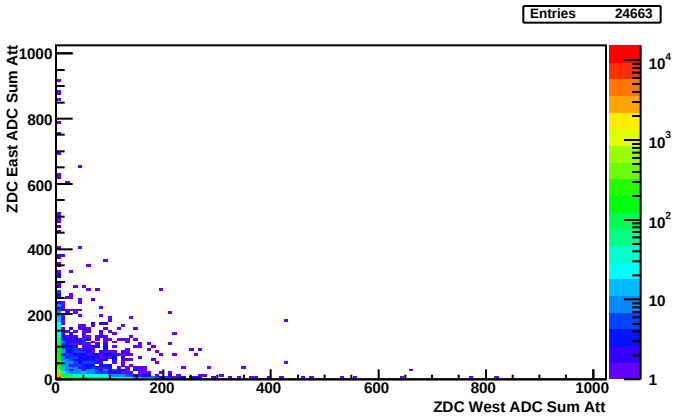
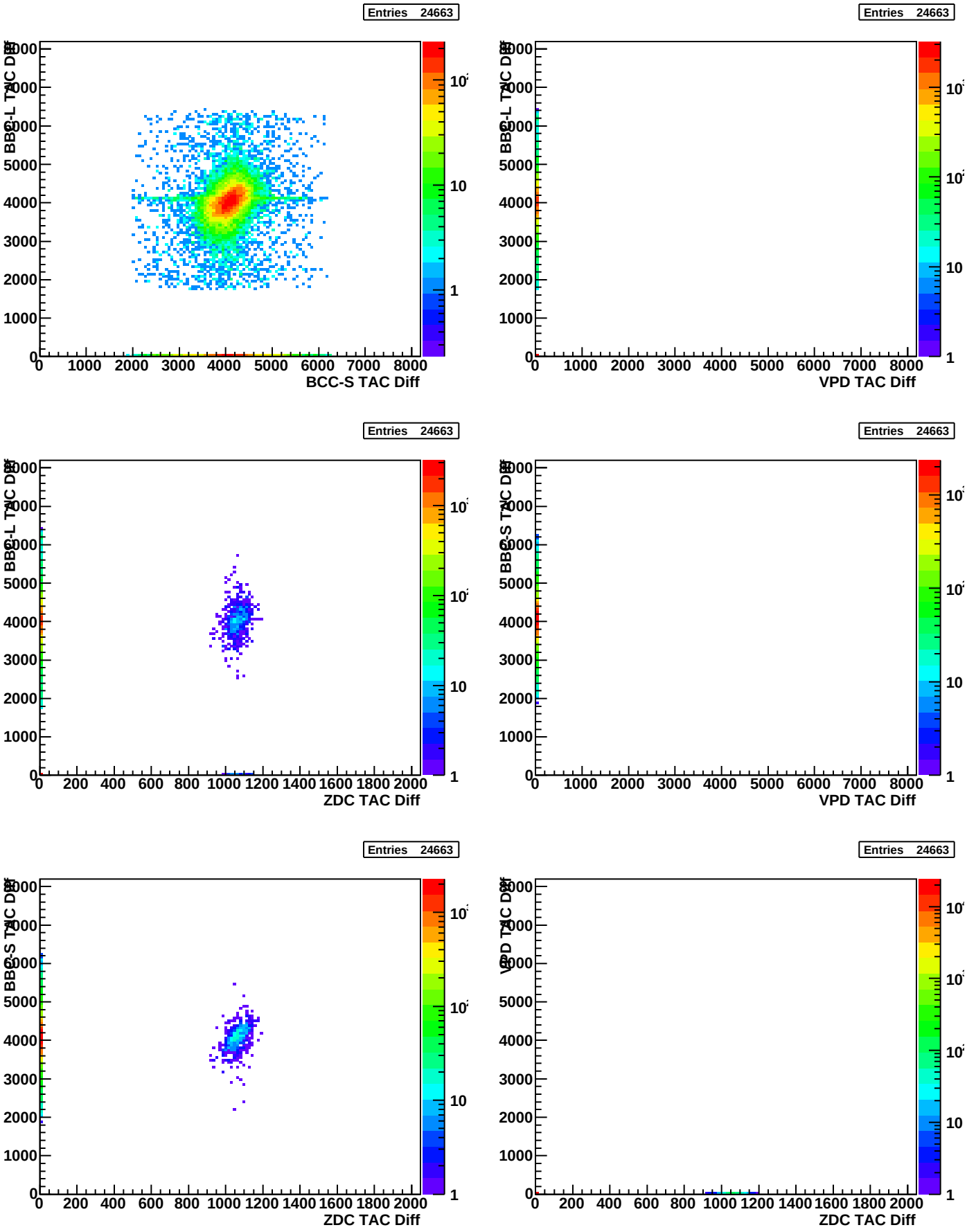
VPD-West ADC Sum
ZDC-West ADC Sum Att

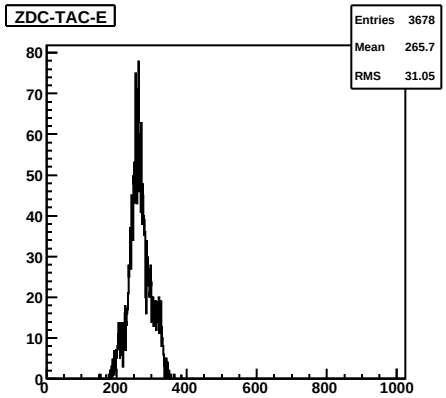

Entries 24663
BBC-L-East ADC Sum
BBC-L-West ADC Sum

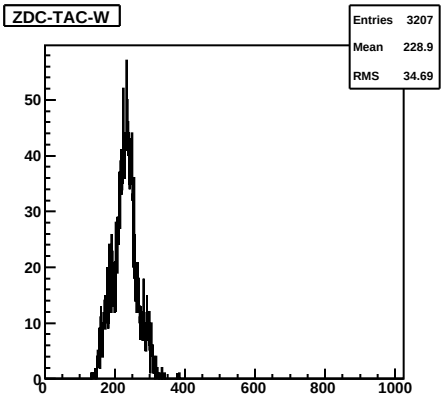

Entries 24663
BBC-S-East ADC Sum
BBC-S-West ADC Sum

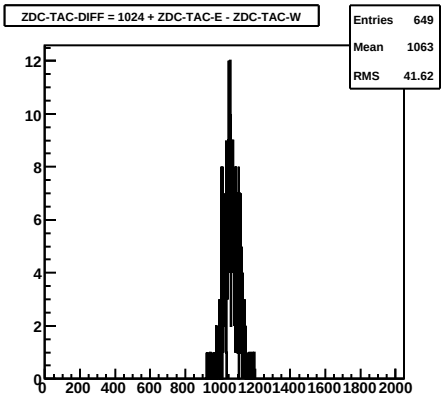

Entries 24663
VPD East ADC Sum
VPD West ADC Sum

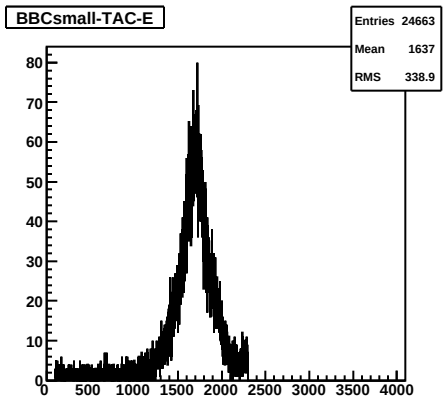

Entries 24663
ZDC East ADC Sum Att
ZDC West ADC Sum Att

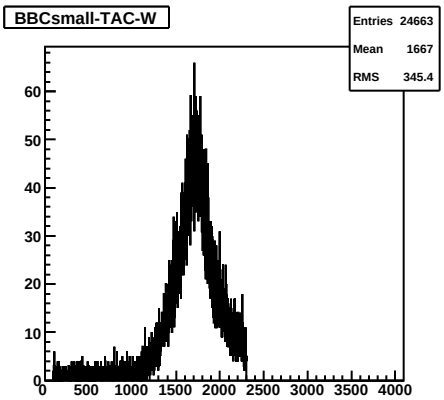

Entries 24663
BBC-L TAC Diff
BCC-S TAC Diff
Entries 24663
BBC-L TAC Diff
VPD TAC Diff
Entries 24663
BBC-L TAC Diff
ZDC TAC Diff
Entries 24663
BBC-S TAC Diff
VPD TAC Diff
Entries 24663
BBC-S TAC Diff
ZDC TAC Diff
Entries 24663
VPD TAC Diff
ZDC TAC Diff

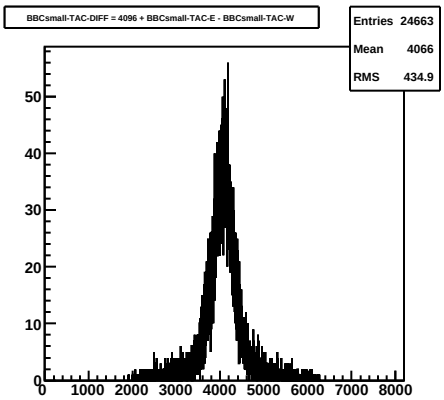

ZDC-TAC-E
Entries 3678
Mean 265.7
RMS 31.05

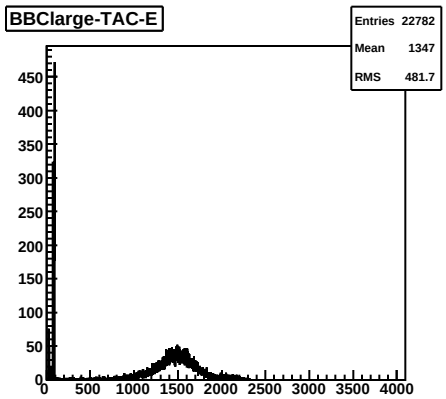

ZDC-TAC-W
Entries 3207
Mean 228.9
RMS 34.69

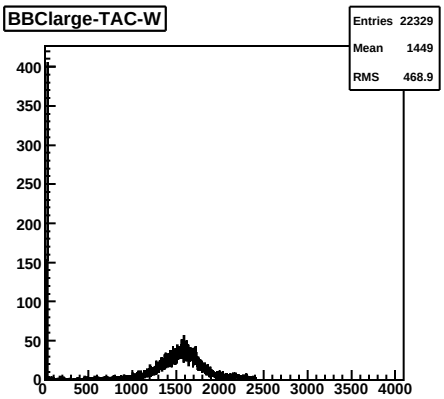

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 649
Mean 1063
RMS 41.62

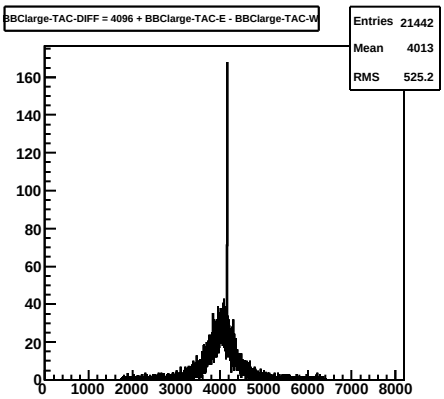

BBCsmall-TAC-E
Entries 24663
Mean 1637
RMS 338.9

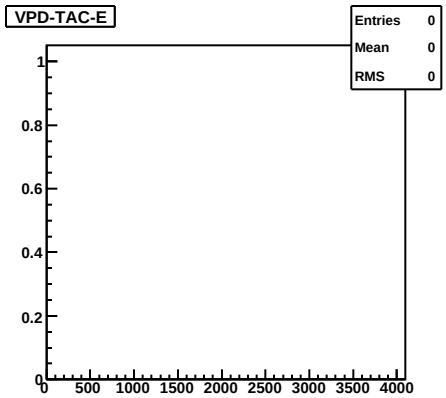

BBCsmall-TAC-W
Entries 24663
Mean 1667
RMS 345.4

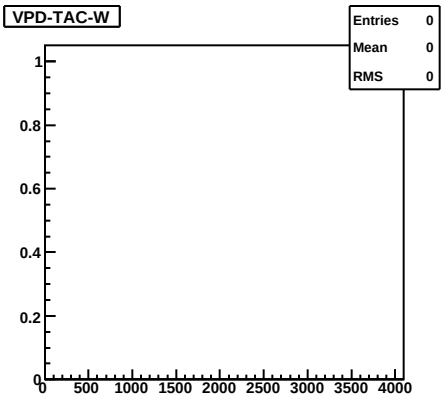

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 24663
Mean 4066
RMS 434.9

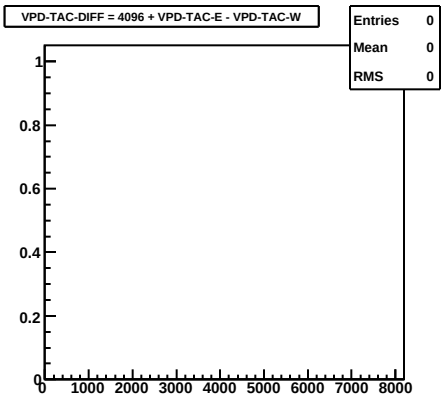

BBClarge-TAC-E
Entries 22782
Mean 1347
RMS 481.7

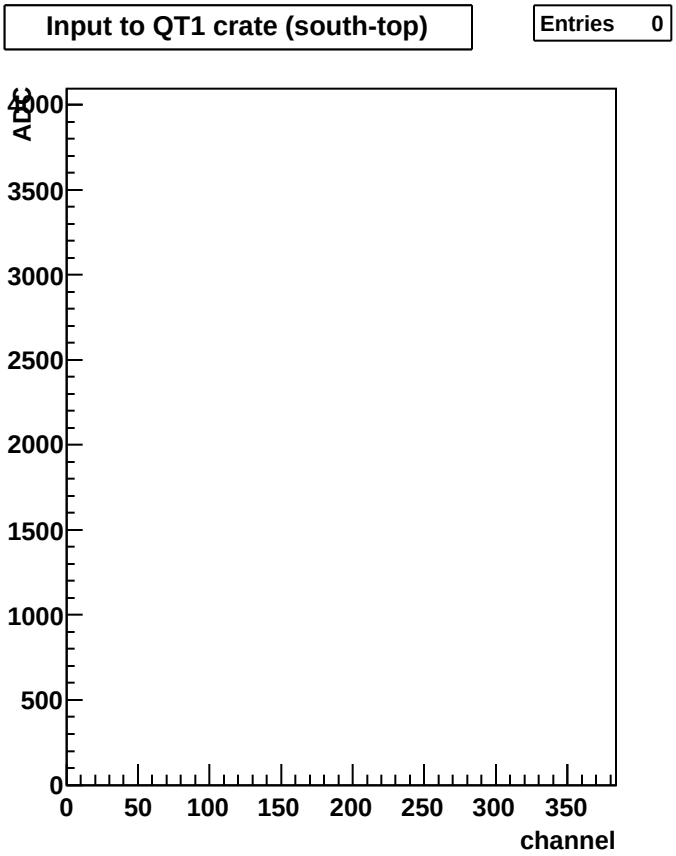

BBClarge-TAC-W
Entries 22329
Mean 1449
RMS 468.9

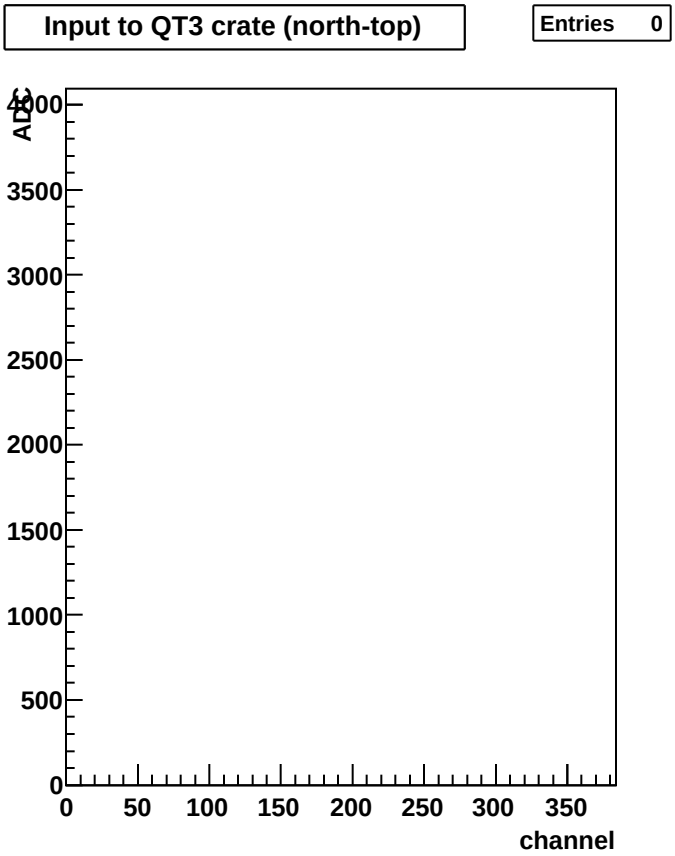

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 21442
Mean 4013
RMS 525.2

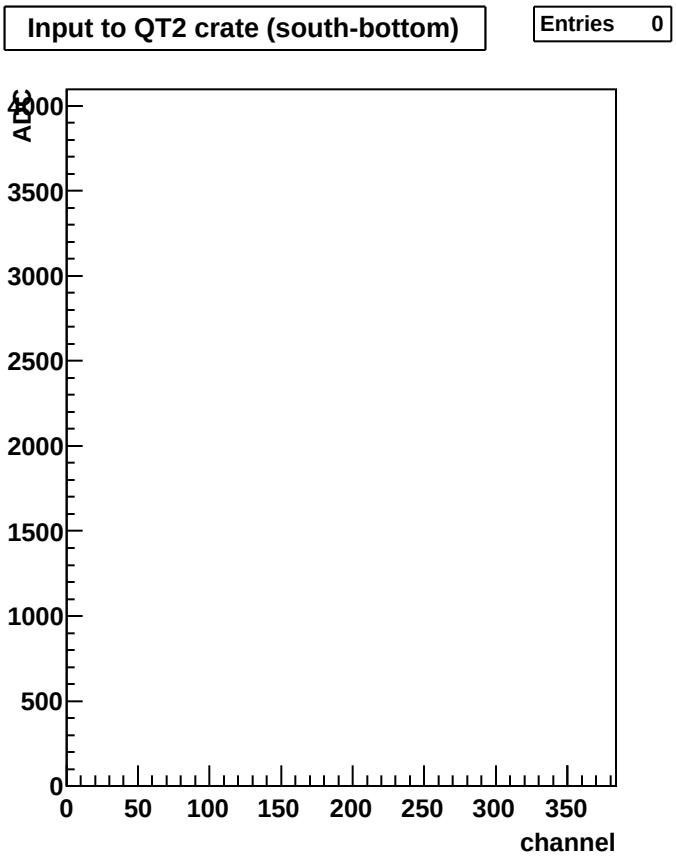

VPD-TAC-E
Entries 0
Mean 0
RMS 0

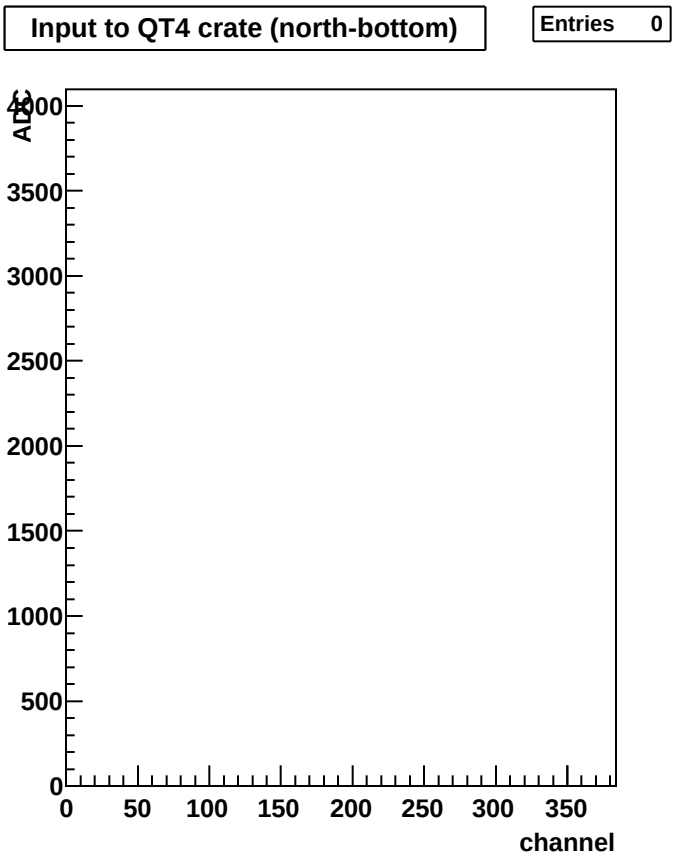

VPD-TAC-W
Entries 0
Mean 0
RMS 0

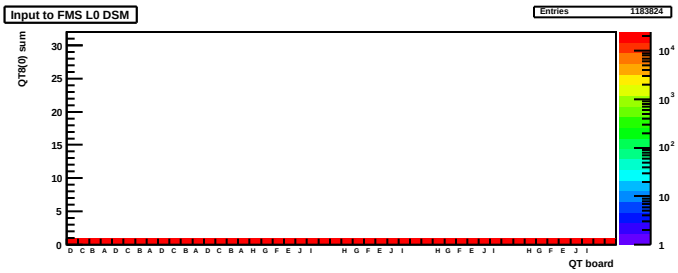

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 0
Mean 0
RMS 0

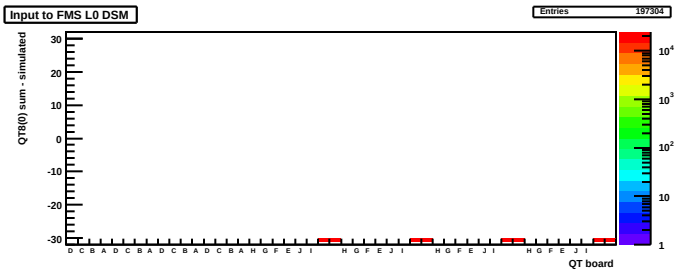

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

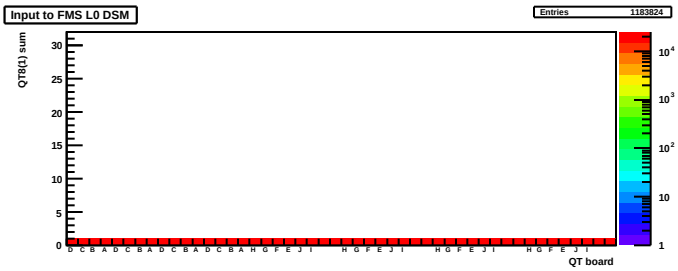

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

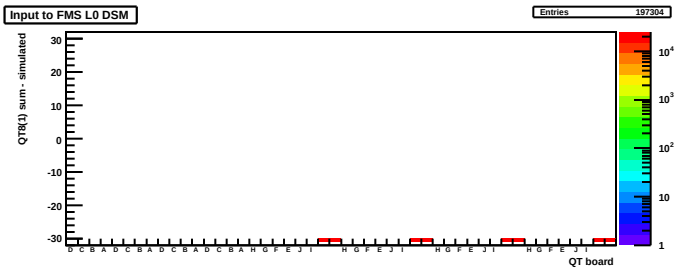

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

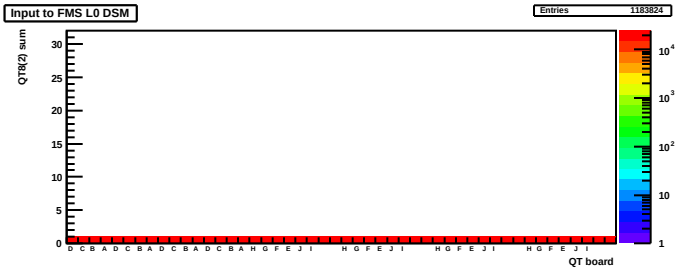

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

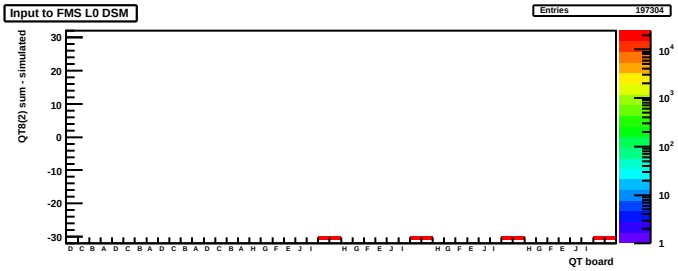

Input to FMS L0 DSM
Entries 1183824
QT8(0) sum
QT board

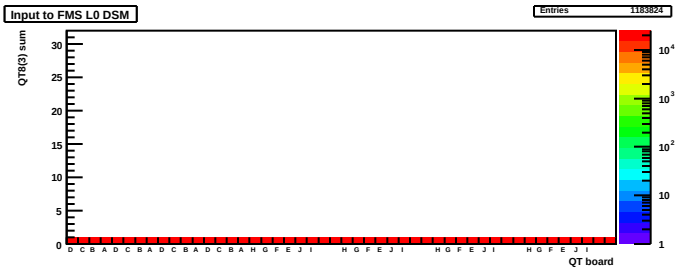

Input to FMS L0 DSM
Entries 197304
QT8(0) sum - simulated
QT board

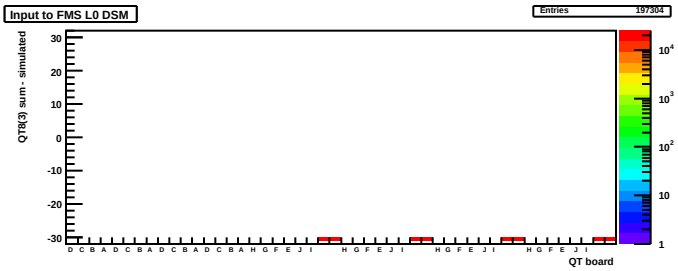

Input to FMS L0 DSM
Entries 1183824
QT8(1) sum
QT board

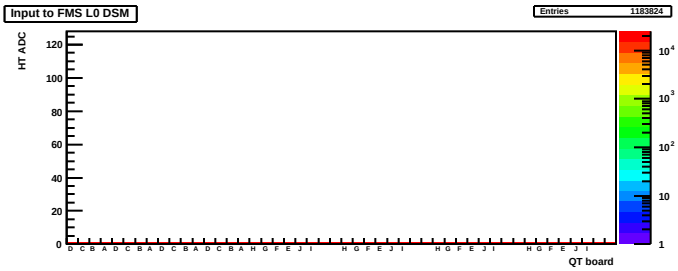

Input to FMS L0 DSM
Entries 197304
QT8(1) sum - simulated
QT board

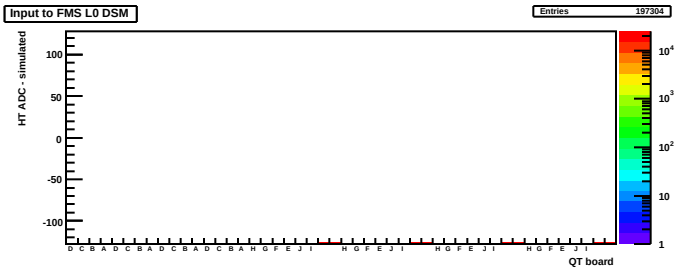

Input to FMS L0 DSM
Entries 1183824
QT8(2) sum
QT board

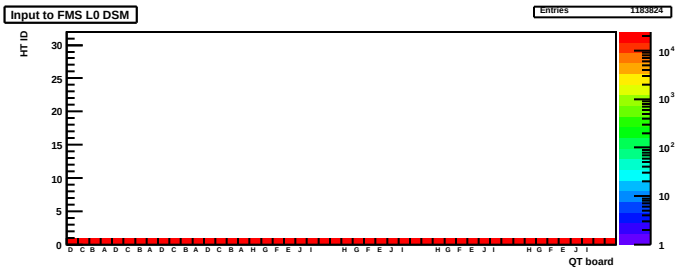

Input to FMS L0 DSM
Entries 197304
QT8(2) sum - simulated
QT board

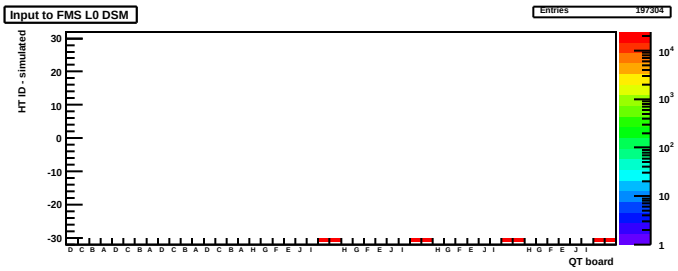

Input to FMS L0 DSM
Entries 1183824
QT8(3) sum
QT board

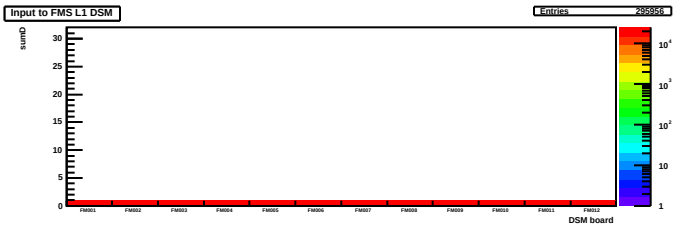

Input to FMS L0 DSM
Entries 197304
QT8(3) sum - simulated
QT board

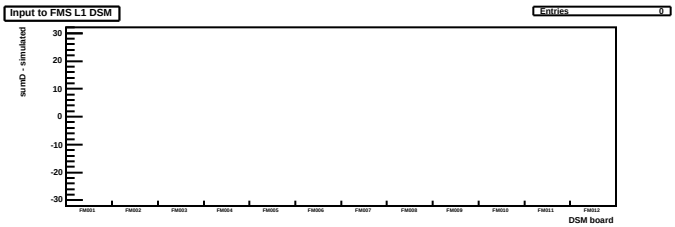

Input to FMS L0 DSM
Entries 1183824
HT ADC
QT board

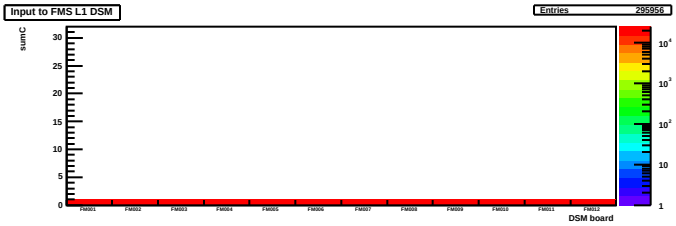

Input to FMS L0 DSM
Entries 197304
HT ADC - simulated
QT board

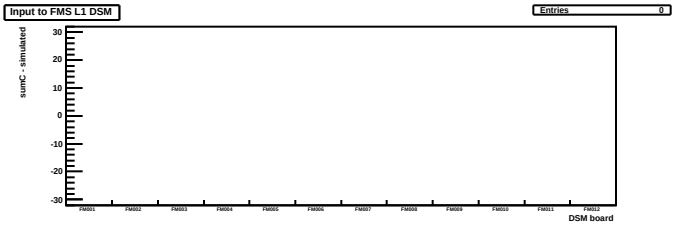

Input to FMS L0 DSM
Entries 1183824
HT ID
QT board

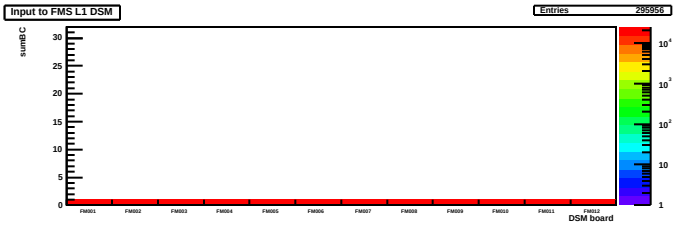

Input to FMS L0 DSM
Entries 197304
HT ID - simulated
QT board

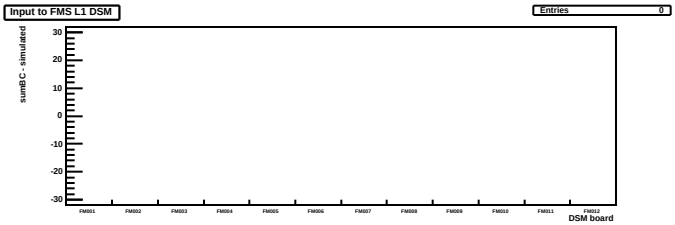

Input to FMS L1 DSM
Entries 295956
sumD
DSM board

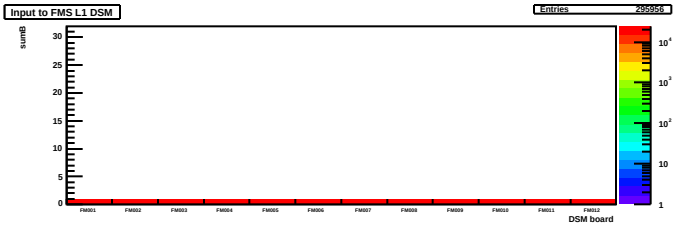

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

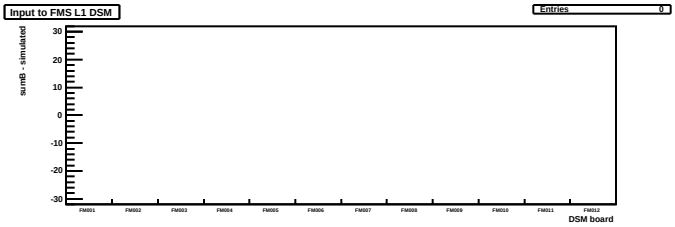

Input to FMS L1 DSM
Entries 295956
sumC
DSM board

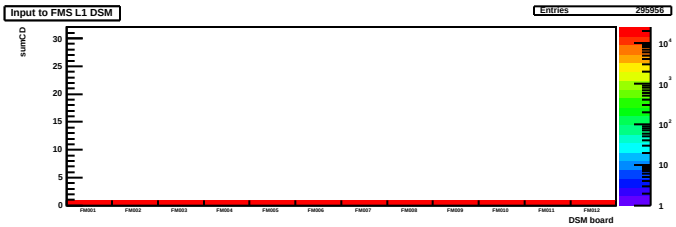

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

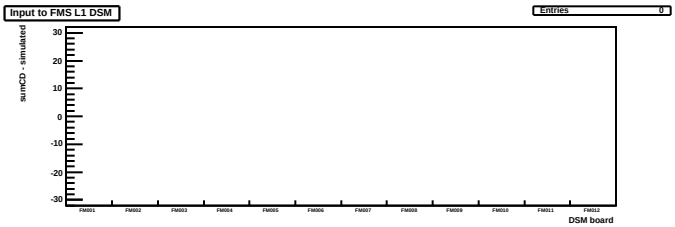

Input to FMS L1 DSM
Entries 295956
sumBC
DSM board

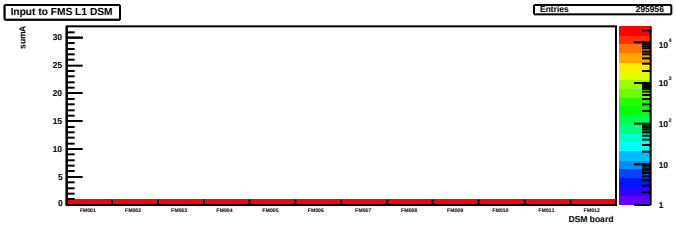

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

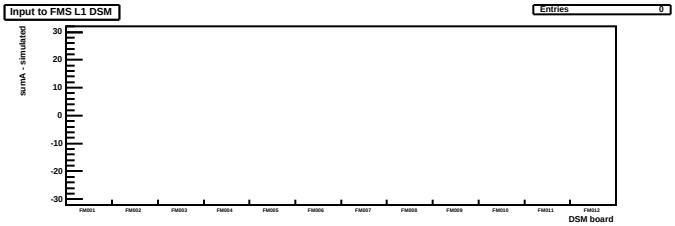

Input to FMS L1 DSM
Entries 295956
sumB
DSM board

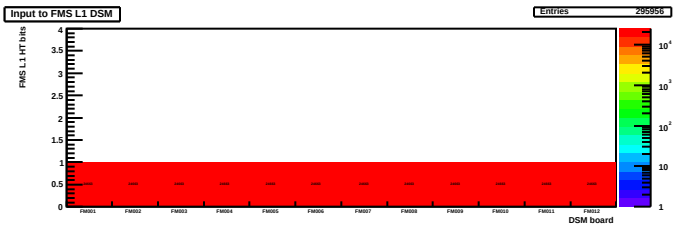

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

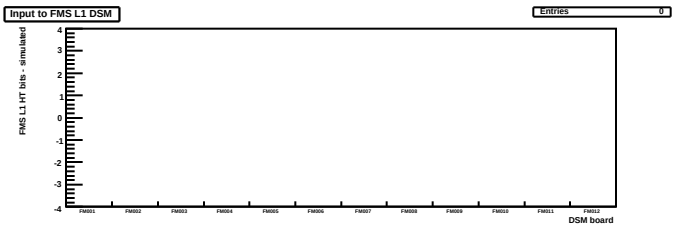

Input to FMS L1 DSM
Entries 295956
sumCD
DSM board

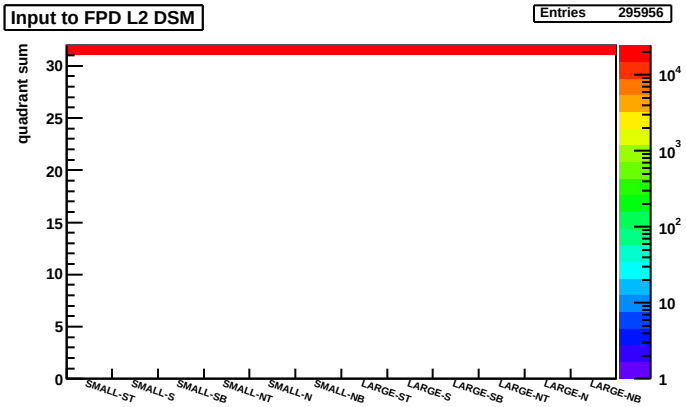

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

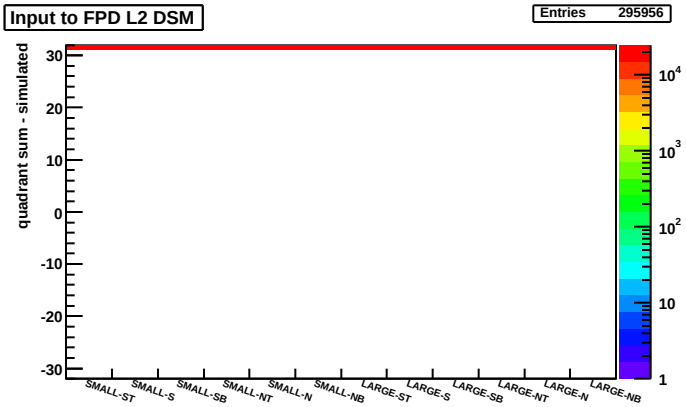

Input to FMS L1 DSM
Entries 295956
sumA
DSM board

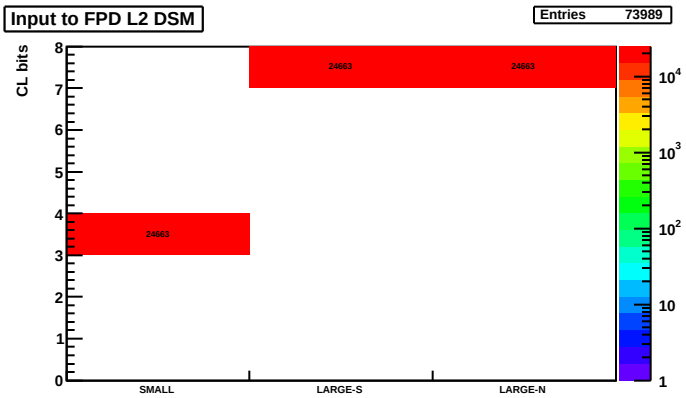

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

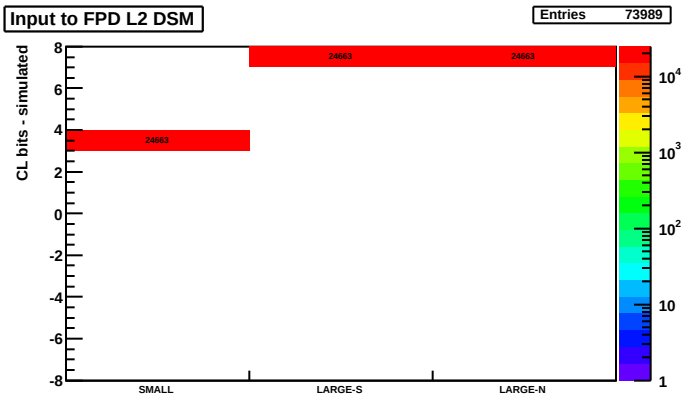

Input to FMS L1 DSM
Entries 295956
FMS L1 HT bits
DSM board

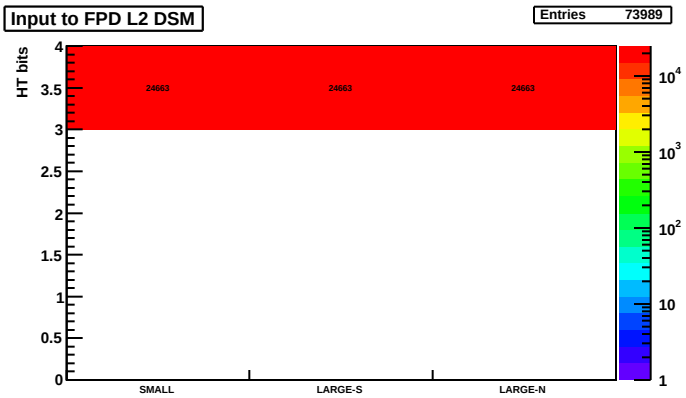

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

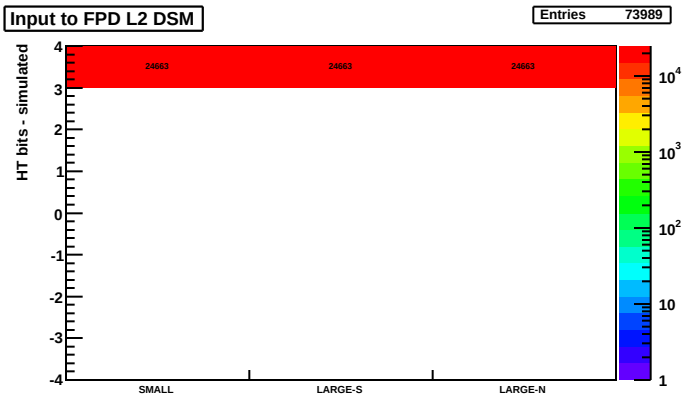

Input to FPD L2 DSM
Entries 295956
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

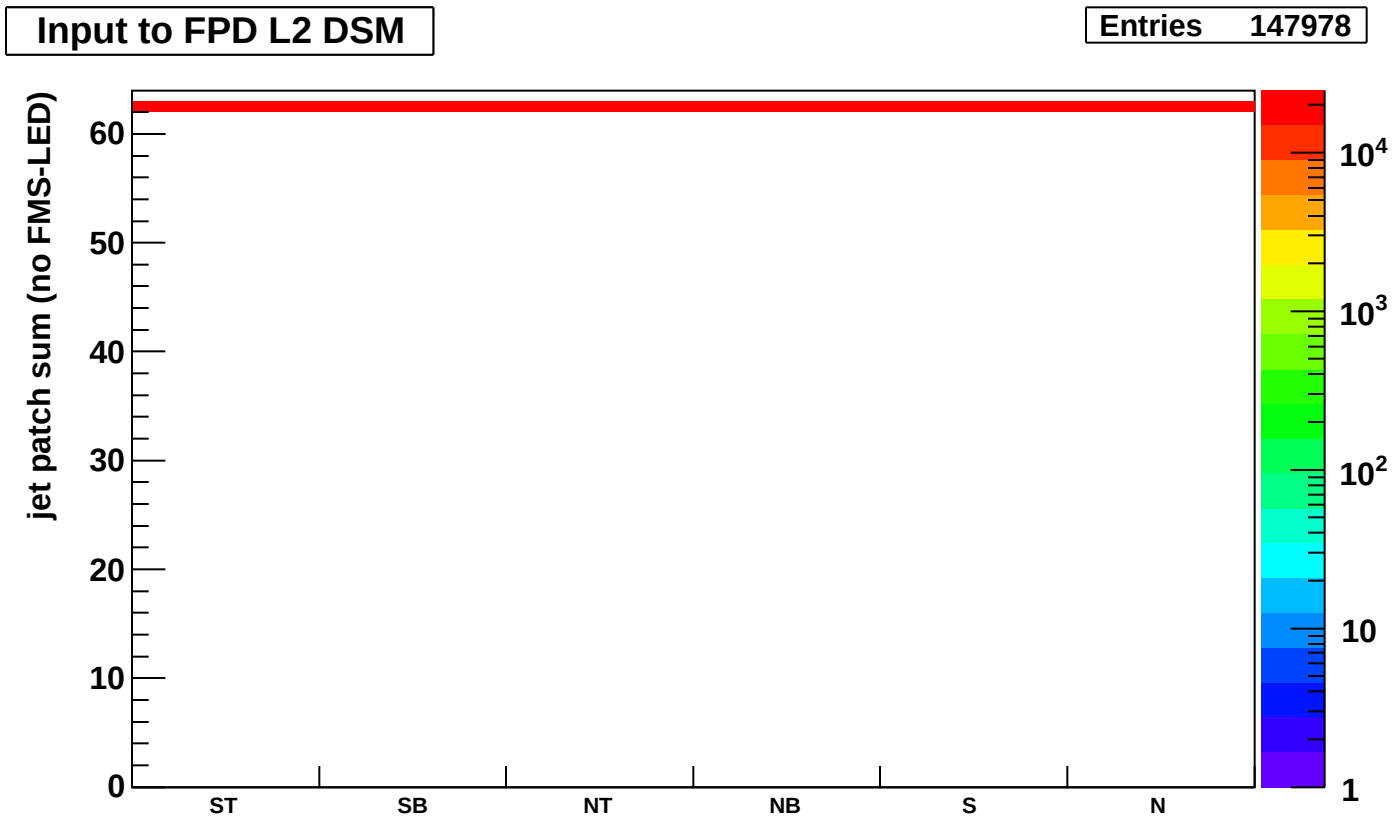

Input to FPD L2 DSM
Entries 295956
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

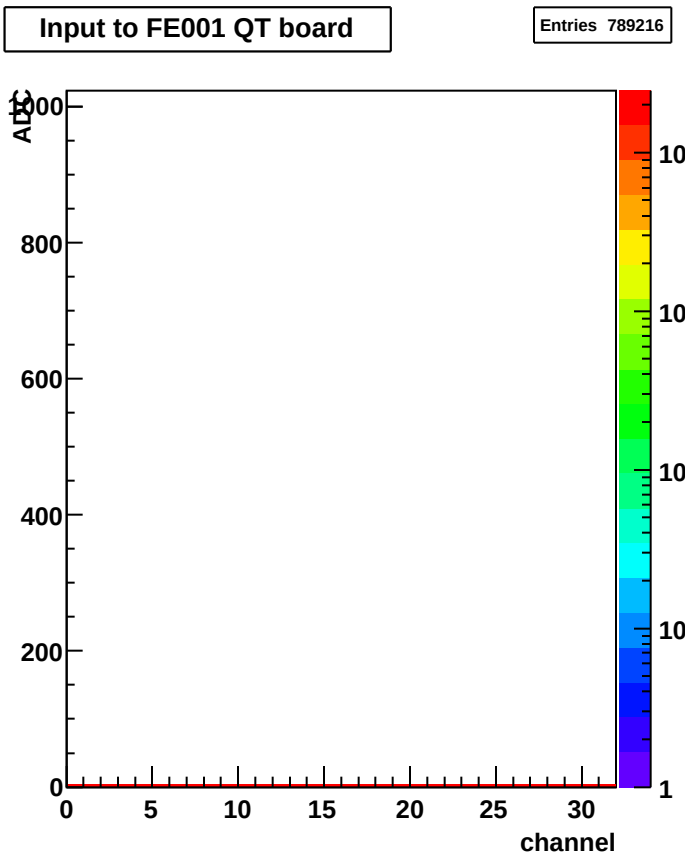

Input to FPD L2 DSM
Entries 73989
CL bits
24663
24663
24663
SMALL
LARGE-S
LARGE-N

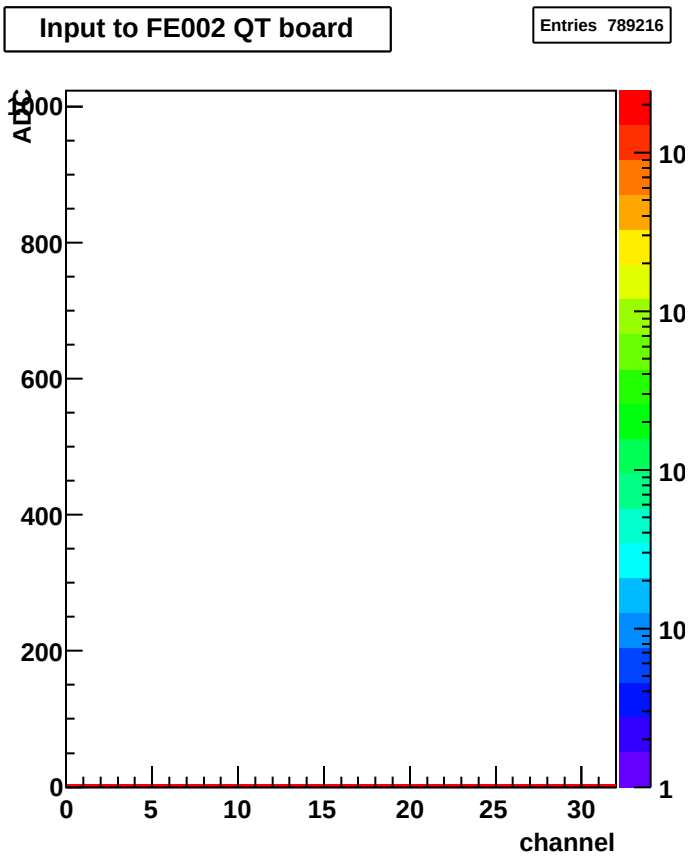

Input to FPD L2 DSM
Entries 73989
CL bits - simulated
24663
24663
24663
SMALL
LARGE-S
LARGE-N

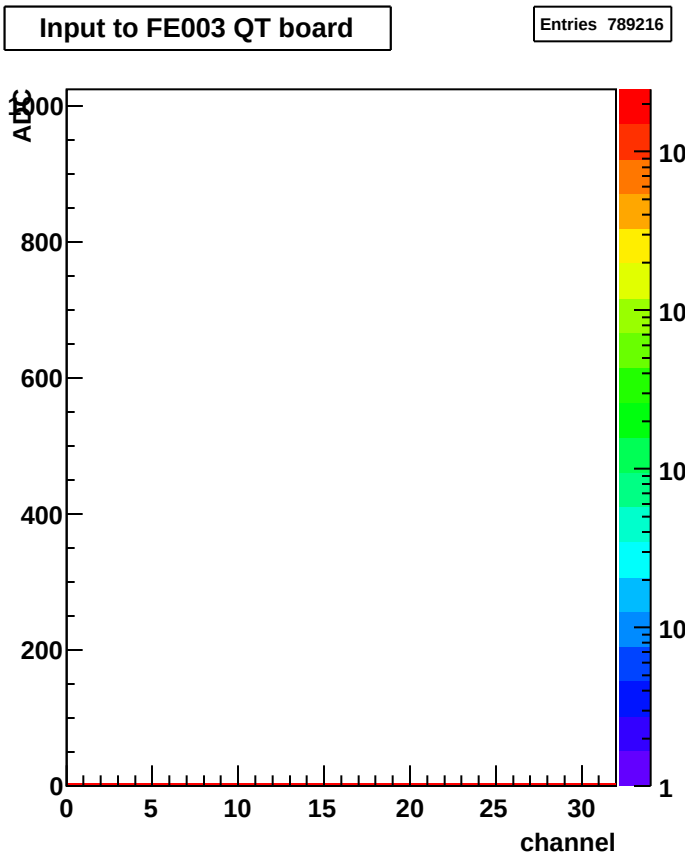

Input to FPD L2 DSM
Entries 73989
HT bits
24663
24663
24663
SMALL
LARGE-S
LARGE-N

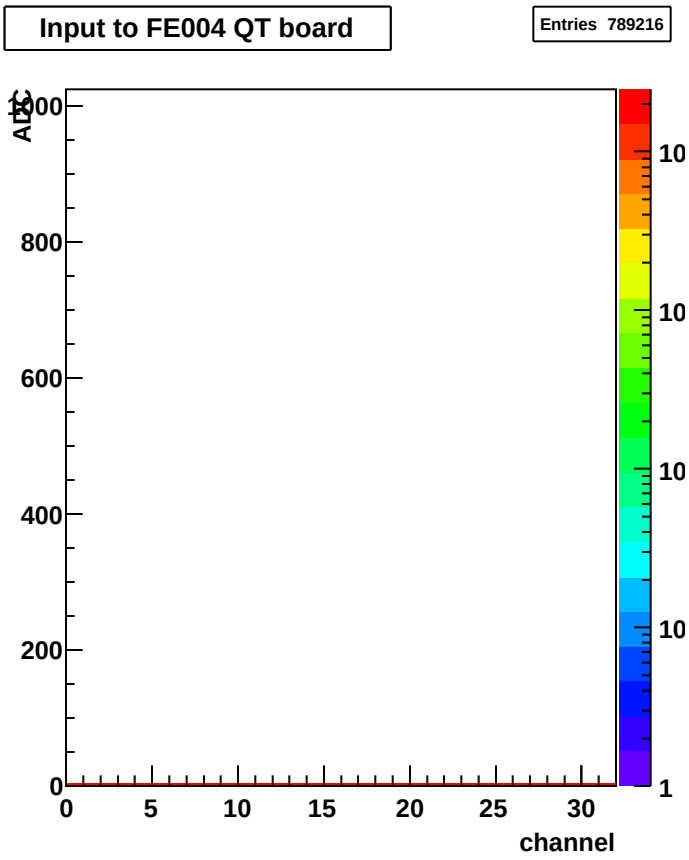

Input to FPD L2 DSM
Entries 73989
HT bits - simulated
24663
24663
24663
SMALL
LARGE-S
LARGE-N

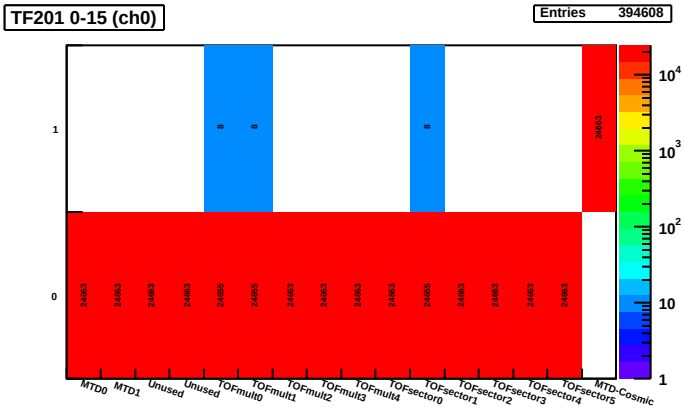

Input to FPD L2 DSM
Entries 147978
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

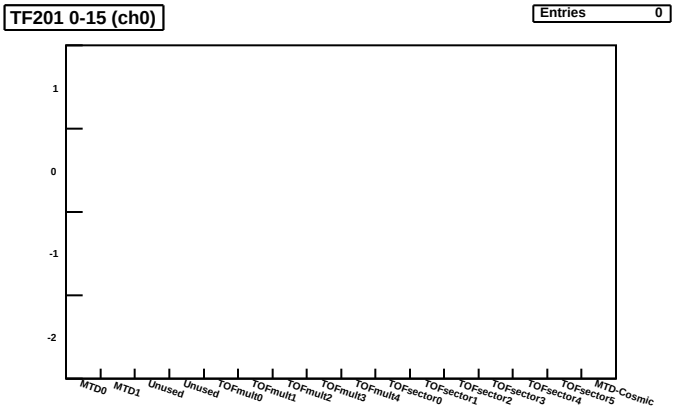

Input to FE001 QT board
Entries 789216
ADC
channel

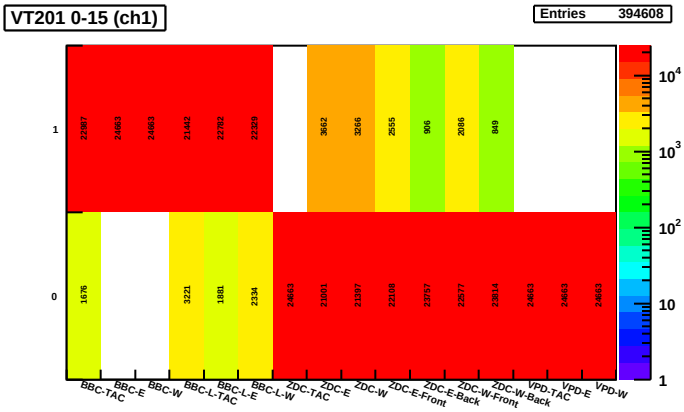

Input to FE002 QT board
Entries 789216
ADC
channel

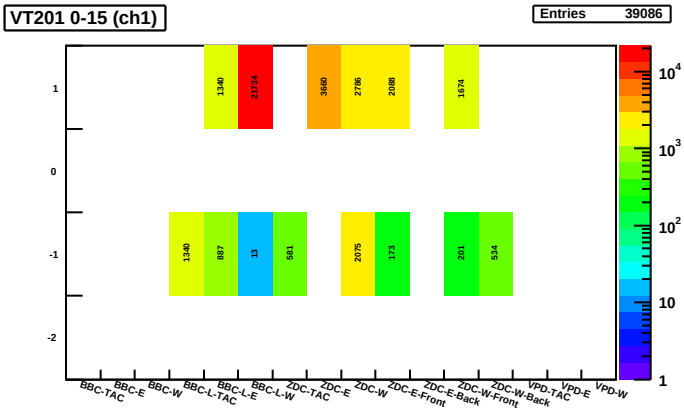

Input to FE003 QT board
Entries 789216
ADC
channel

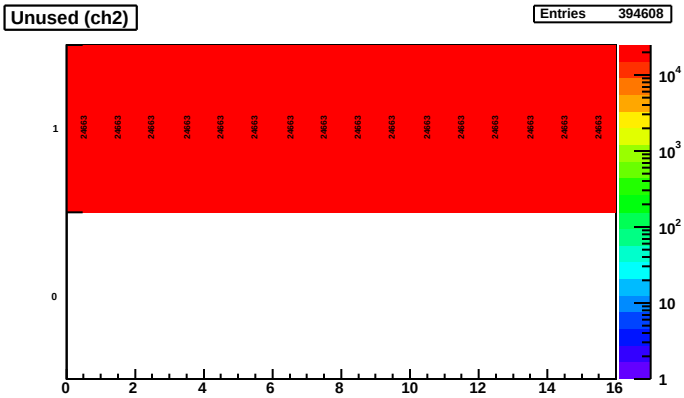

Input to FE004 QT board
Entries 789216
ADC
channel

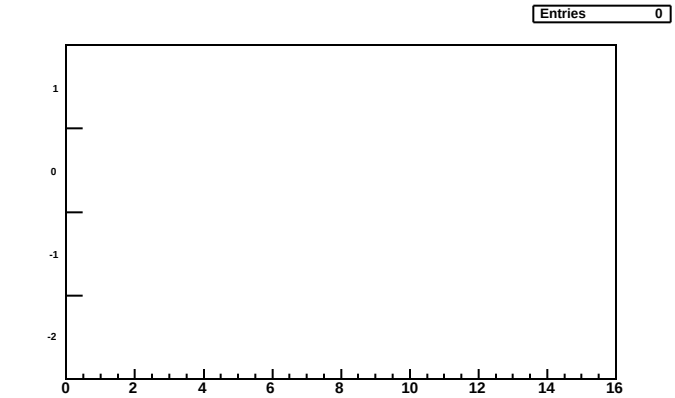

TF201 0-15 (ch0)
Entries 394608
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

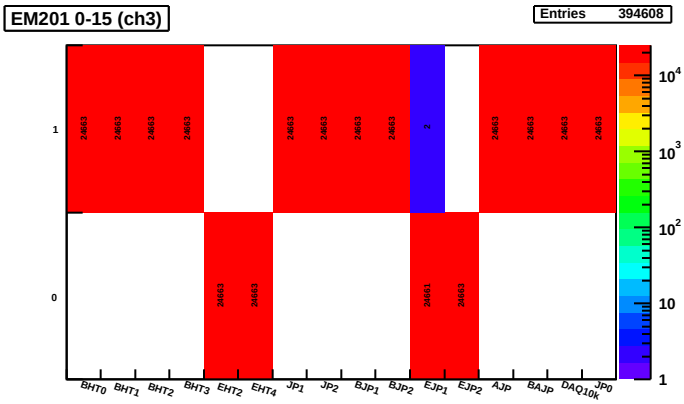

TF201 0-15 (ch0)
Entries 0
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 394608
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 39086
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 394608


Entries 0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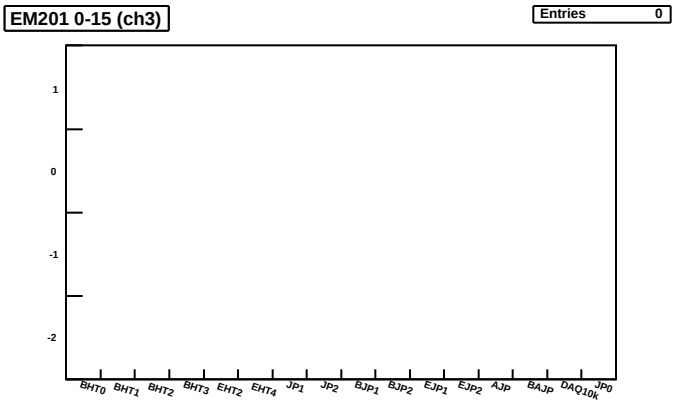
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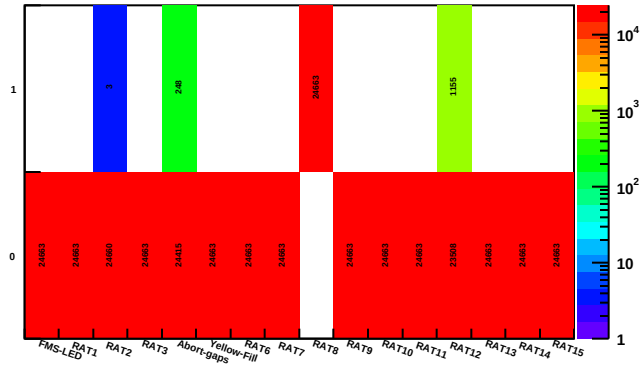
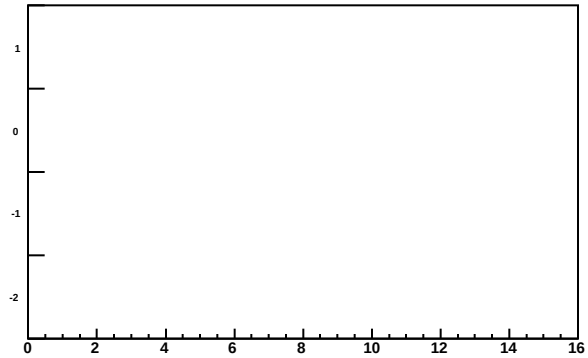
RAT board (ch4)





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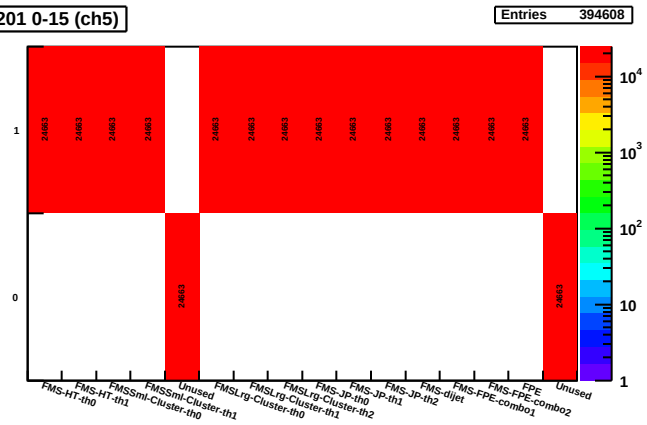

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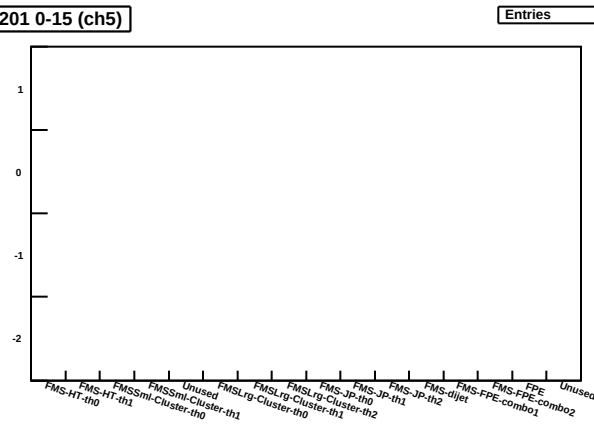

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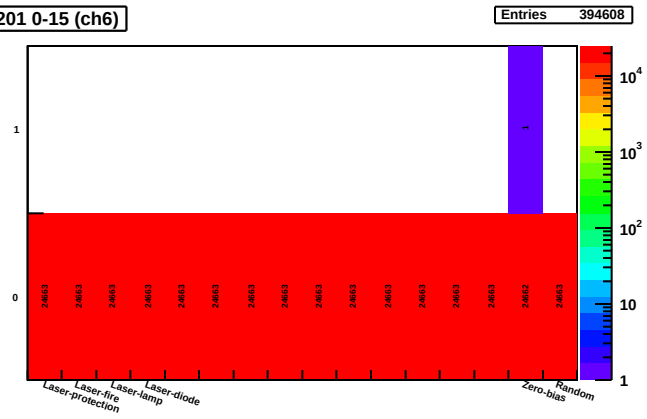

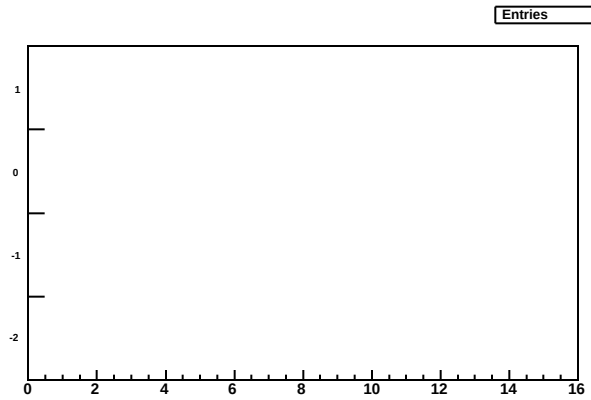
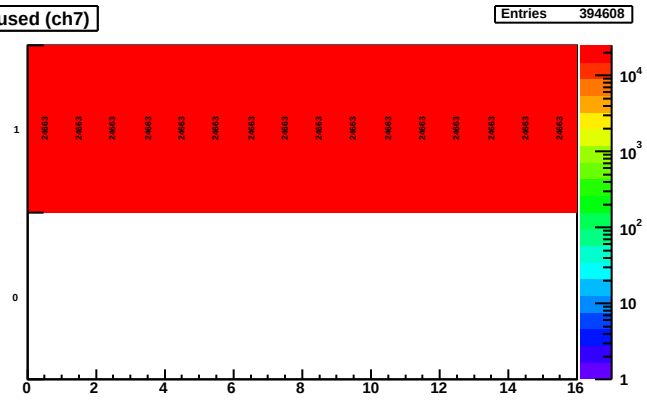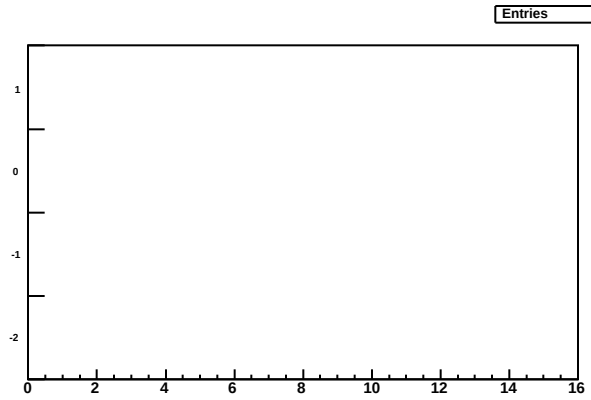
Unused (ch7)