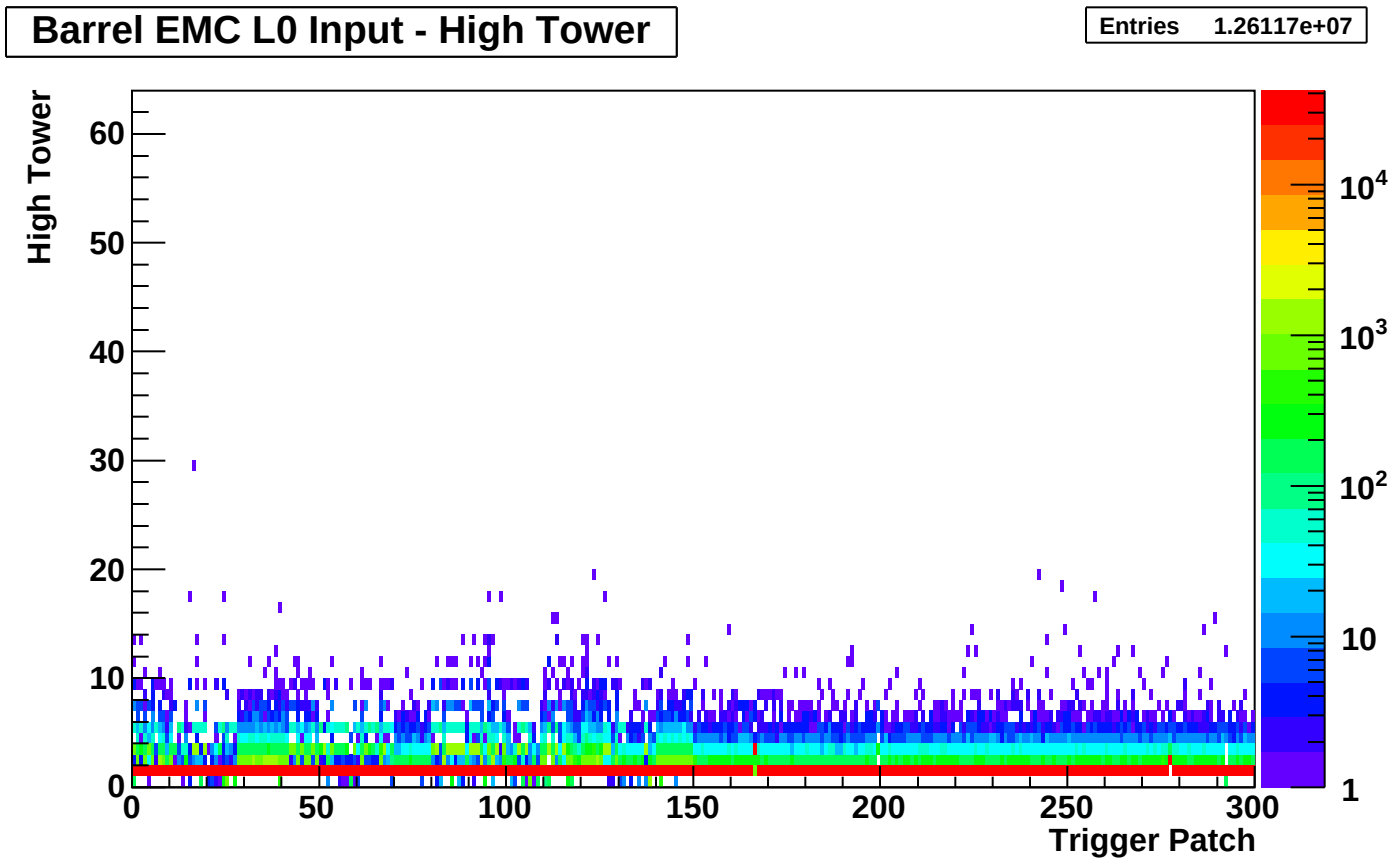
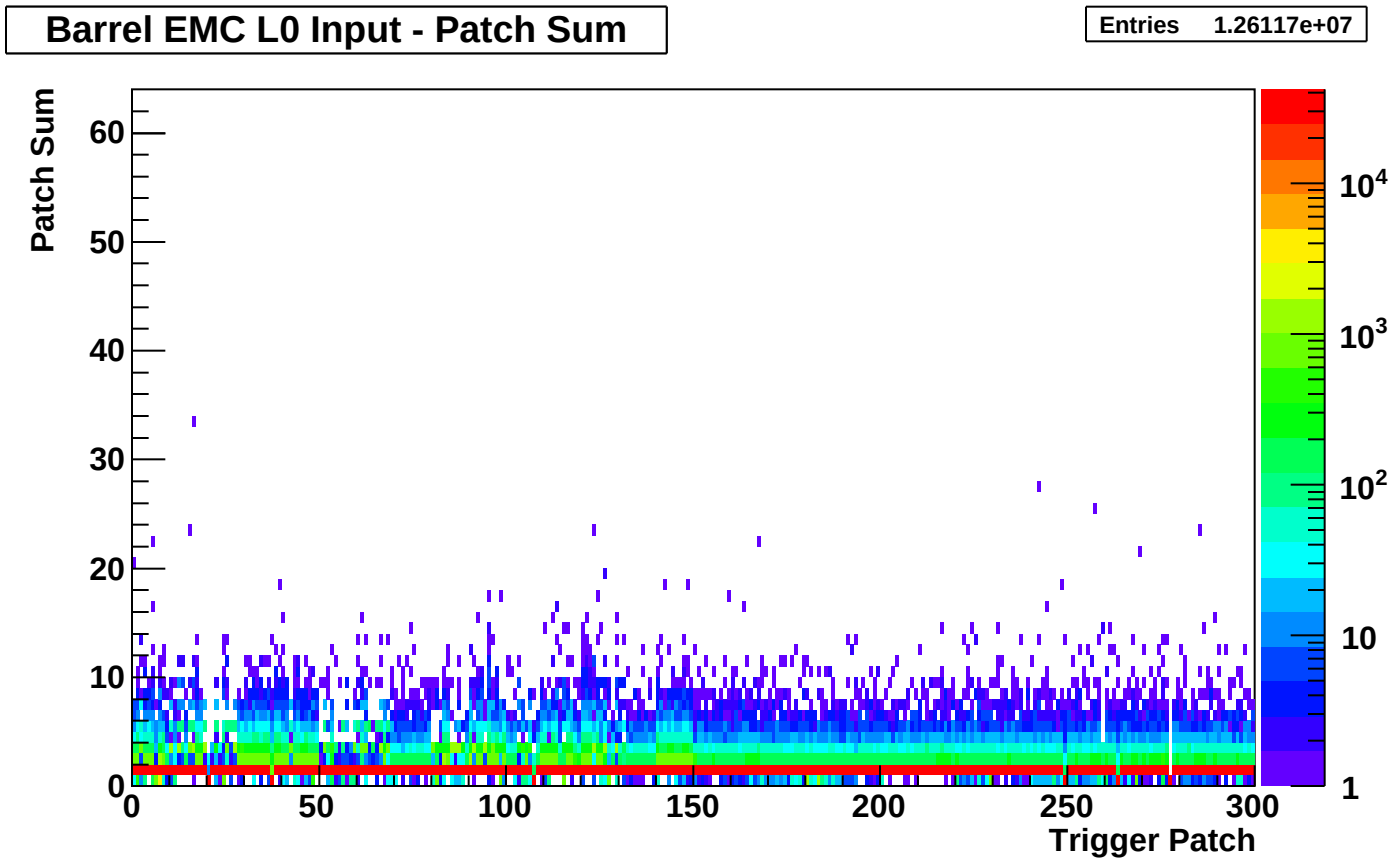
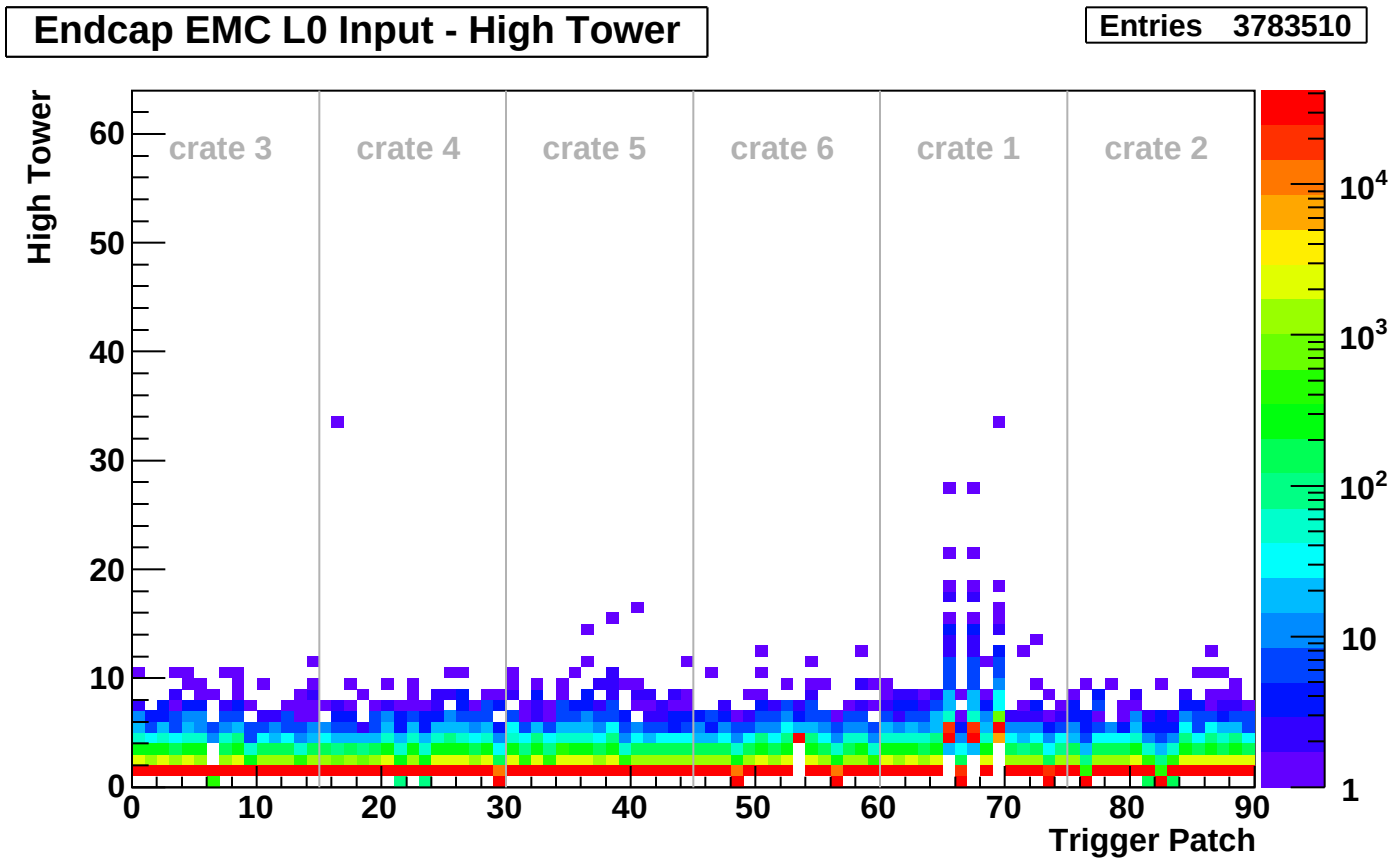
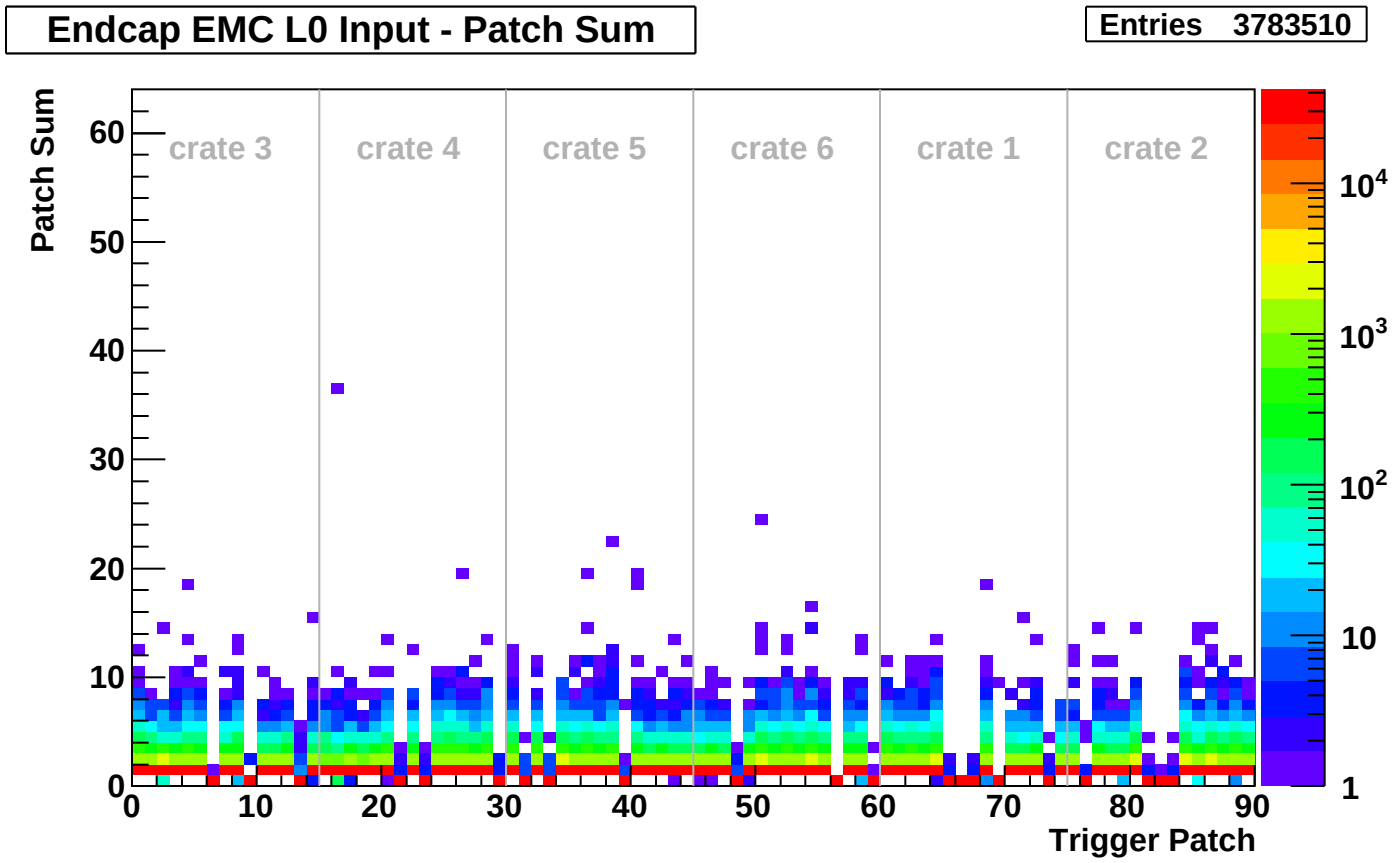
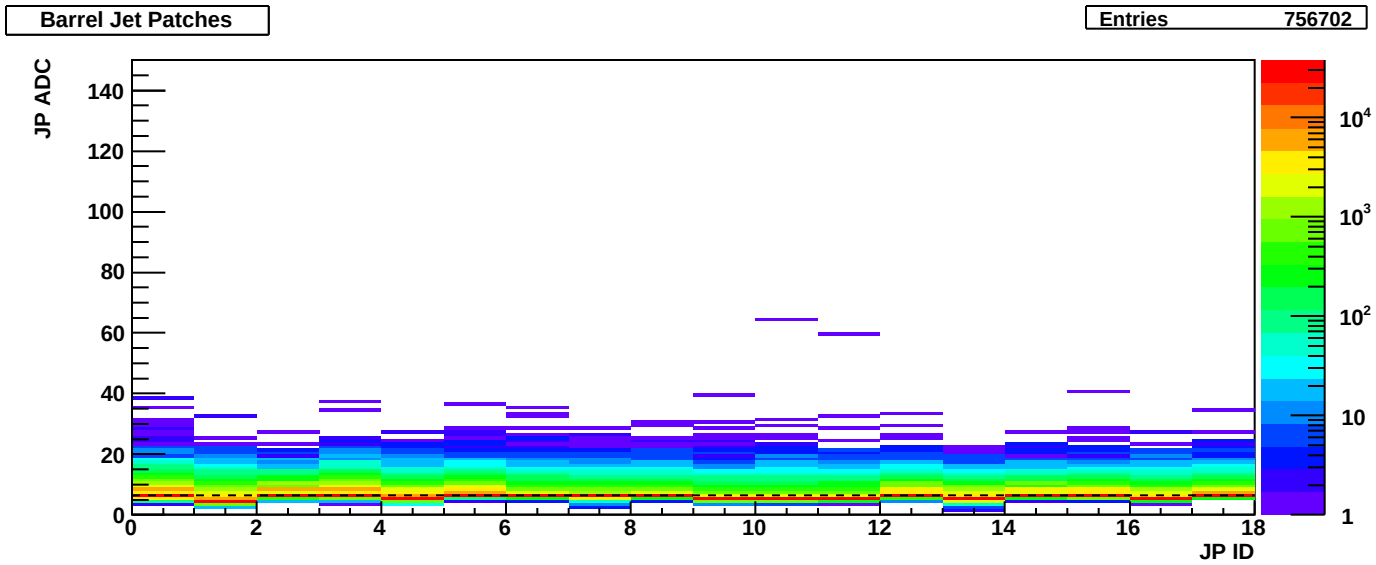
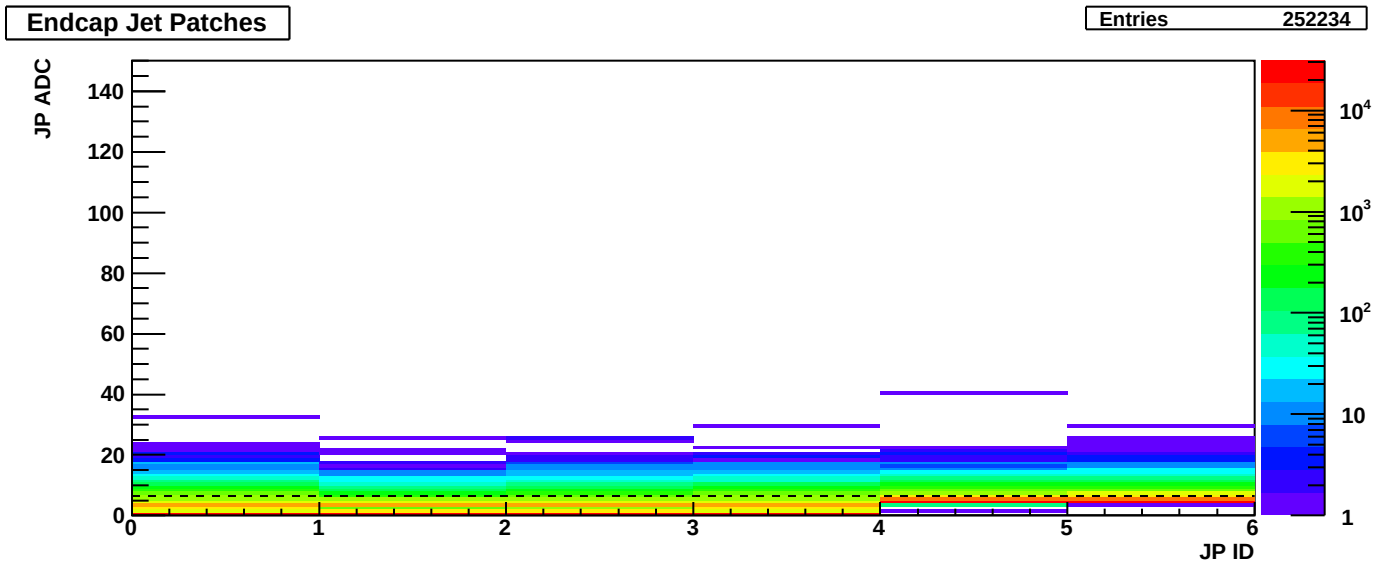

Barrel EMC L0 Input - High Tower
Entries 1.26117e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

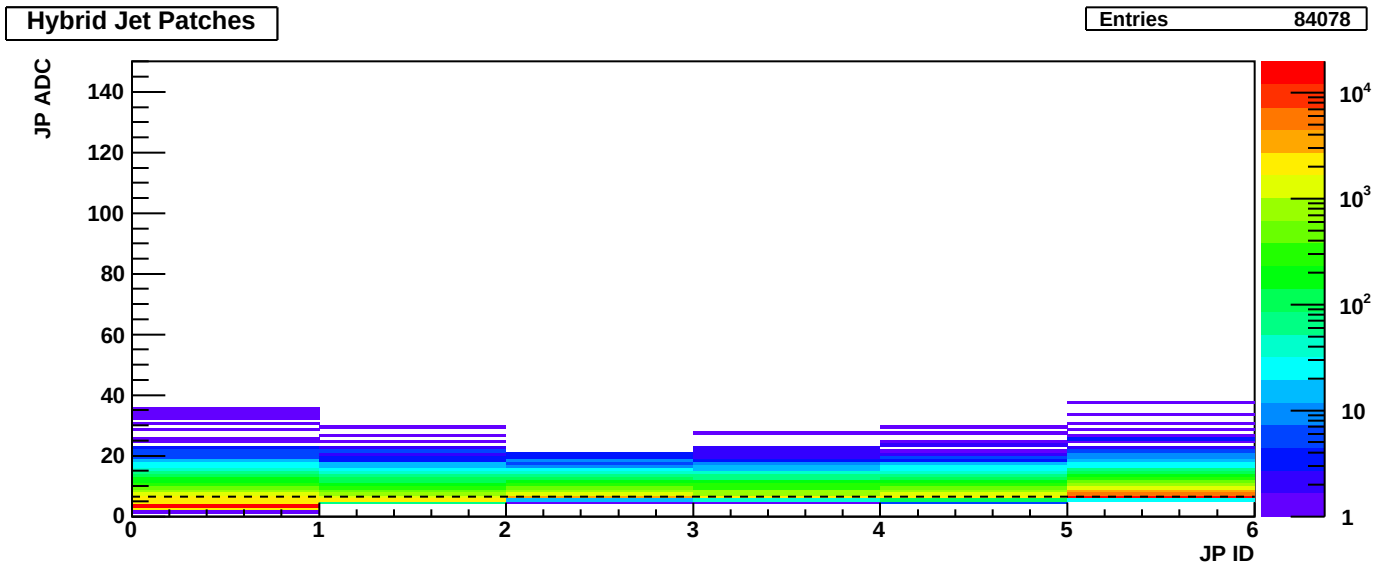

Barrel EMC L0 Input - Patch Sum
Entries 1.26117e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

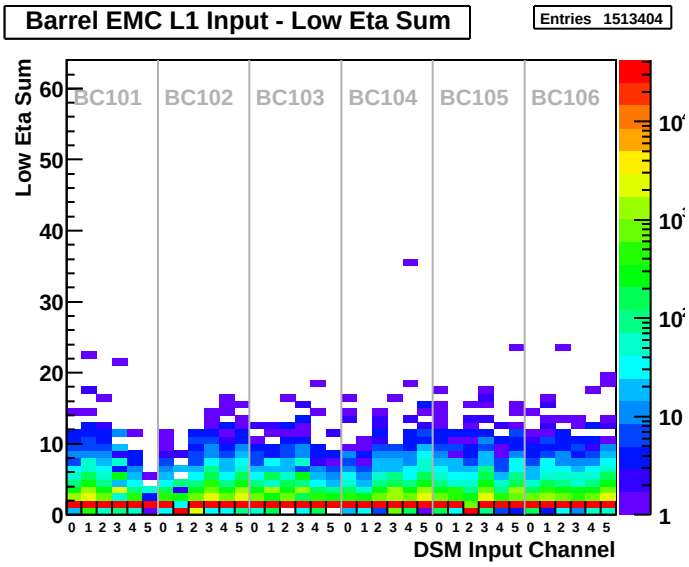

Endcap EMC L0 Input - High Tower
Entries 3783510
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch
0
10
20
30
40
50
60
70
80
90
1
10
10^2
10^3
10^4

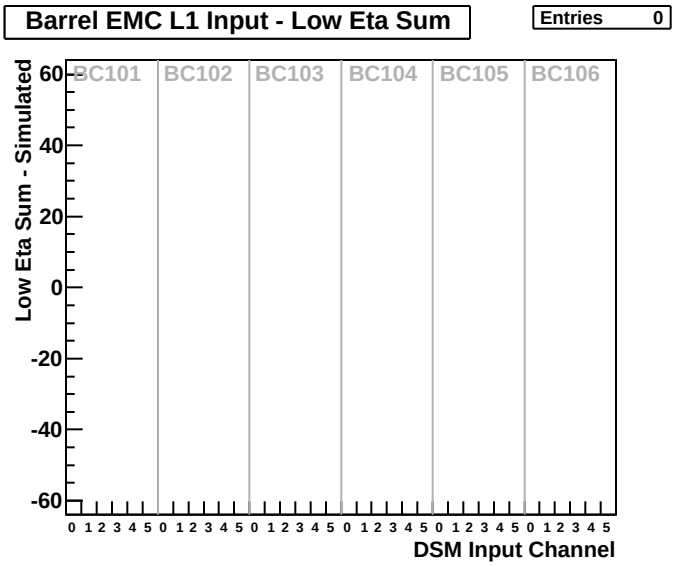

Endcap EMC L0 Input - Patch Sum
Entries 3783510
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch
0
10
20
30
40
50
60
70
80
90
1
10
10^2
10^3
10^4

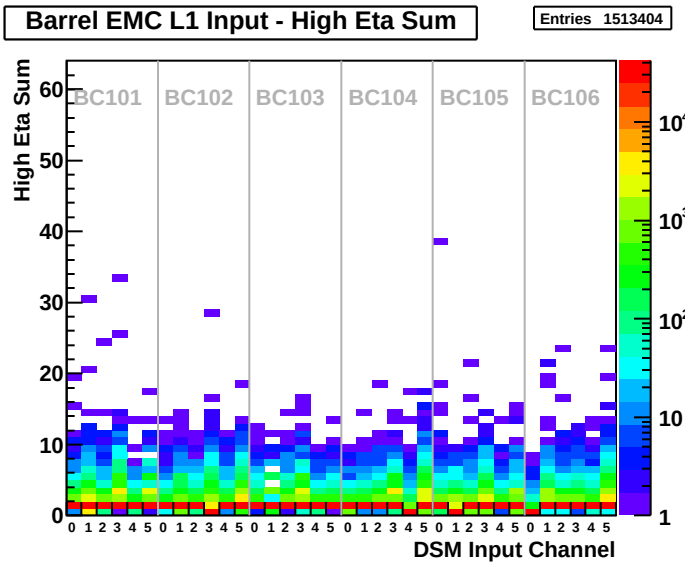

Barrel Jet Patches
Entries 756702
JP ADC
JP ID

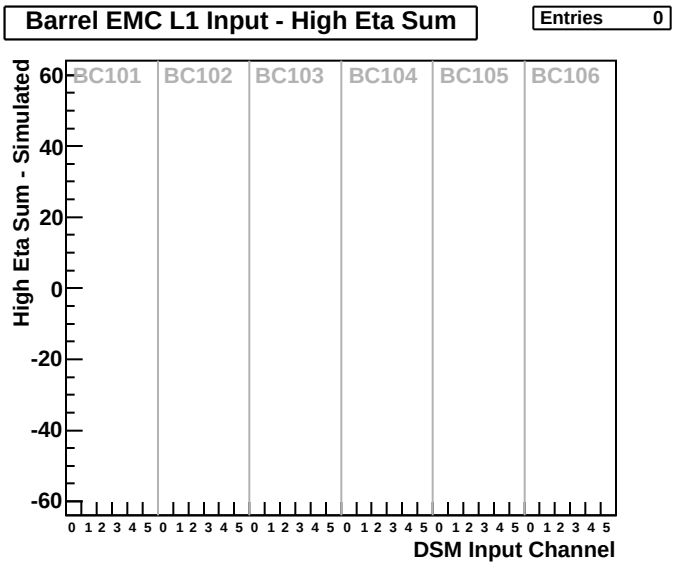

Endcap Jet Patches
Entries 252234
JP ADC
JP ID

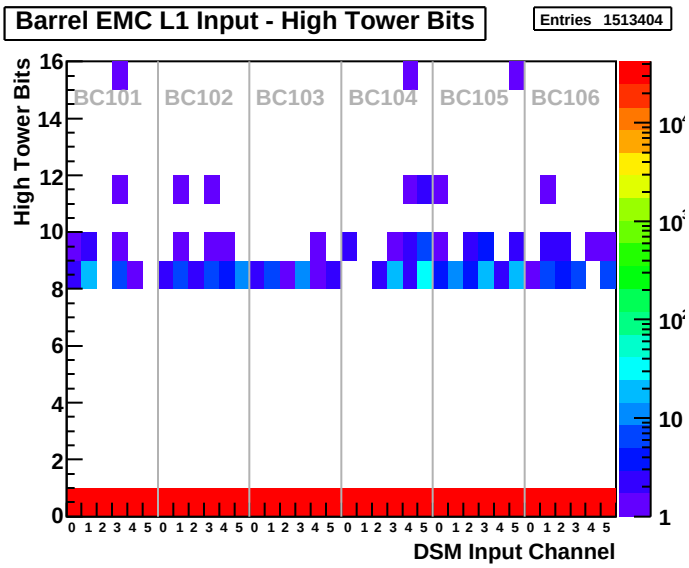

Hybrid Jet Patches
Entries 84078
JP ADC
JP ID

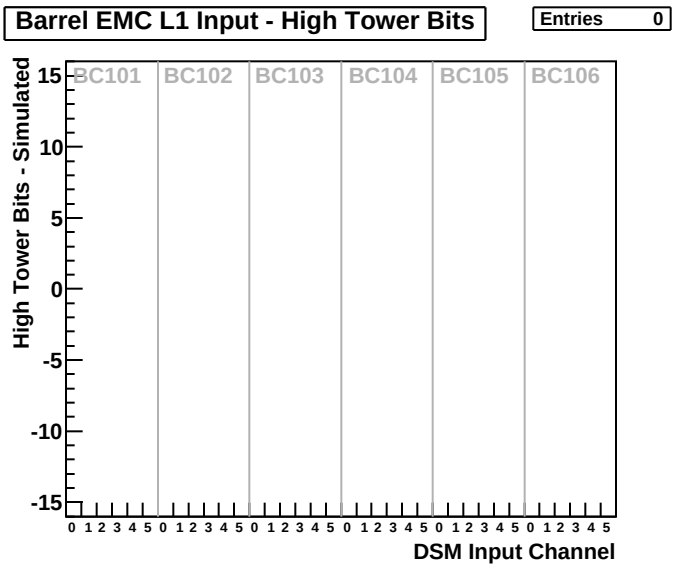

Barrel EMC L1 Input - Low Eta Sum
Entries 1513404
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

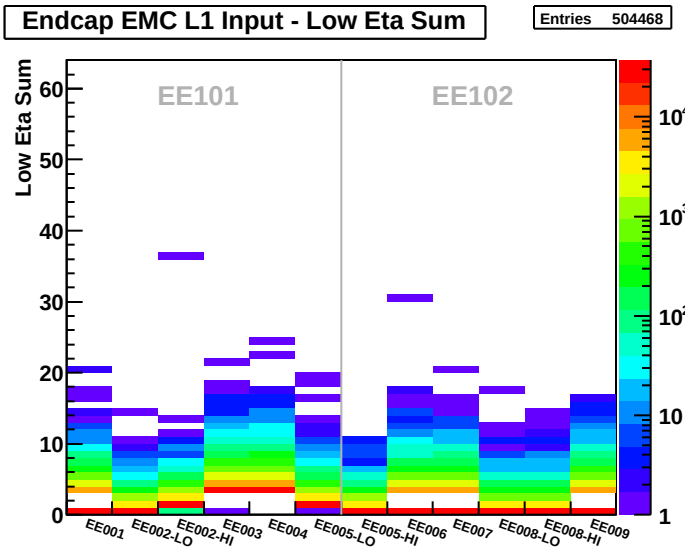

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

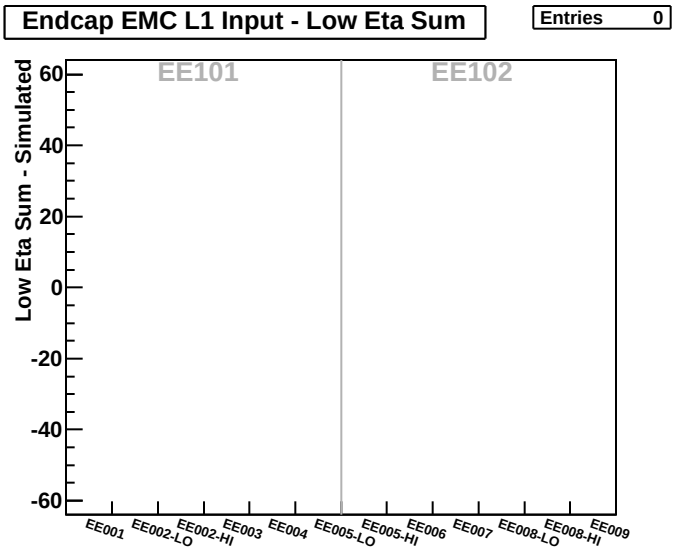

Barrel EMC L1 Input - High Eta Sum
Entries 1513404
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

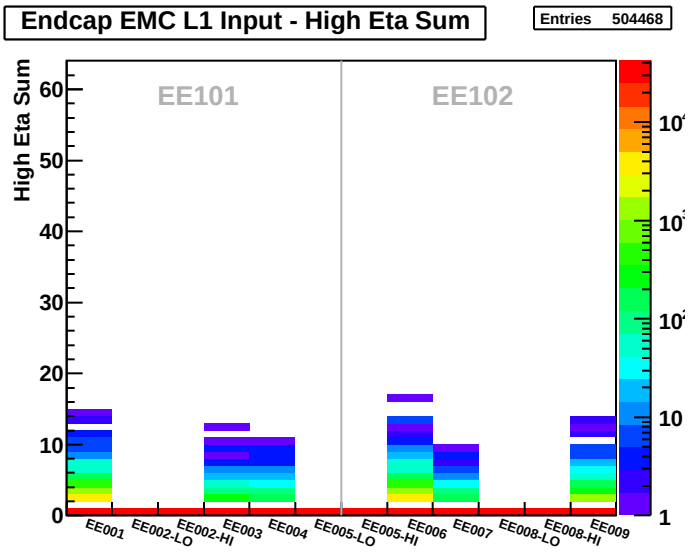

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

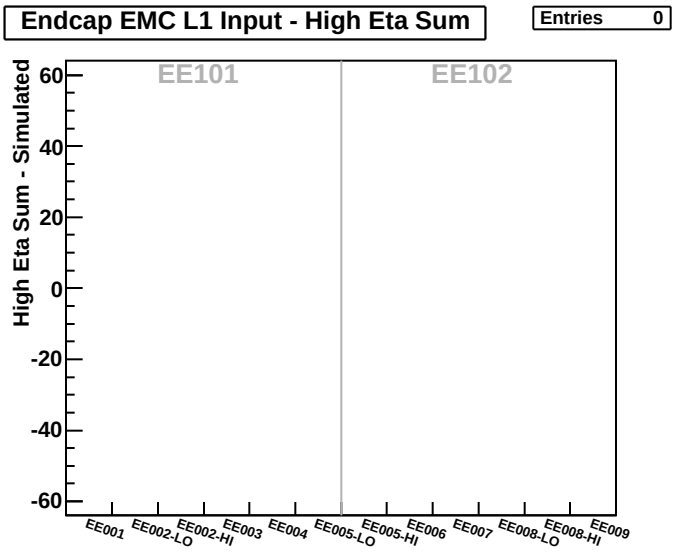

Barrel EMC L1 Input - High Tower Bits
Entries 1513404
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

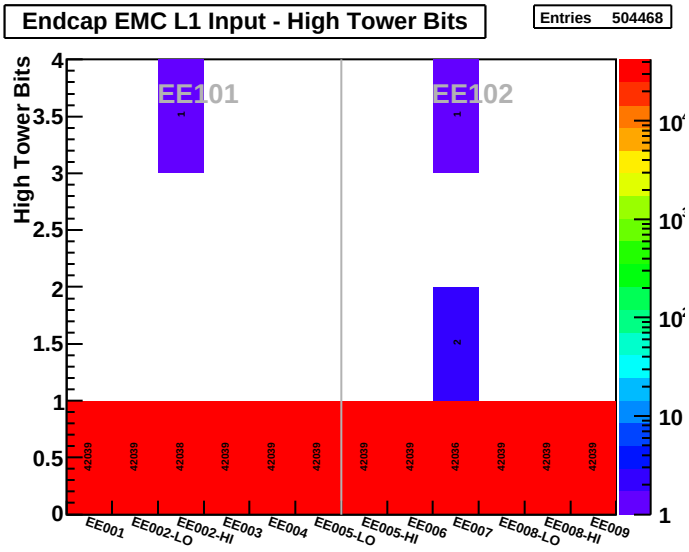

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

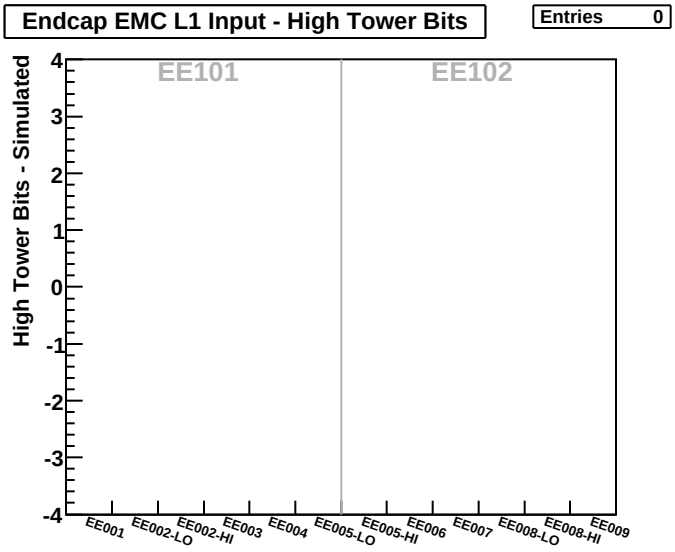

Endcap EMC L1 Input - Low Eta Sum
Entries 504468
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

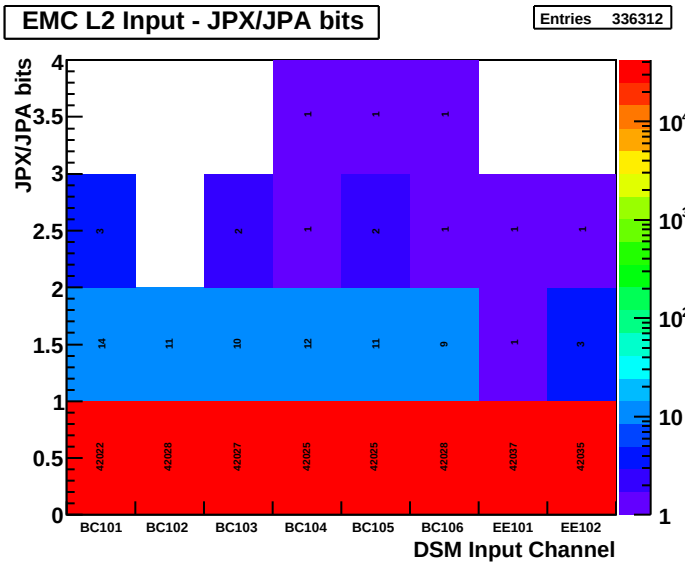

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

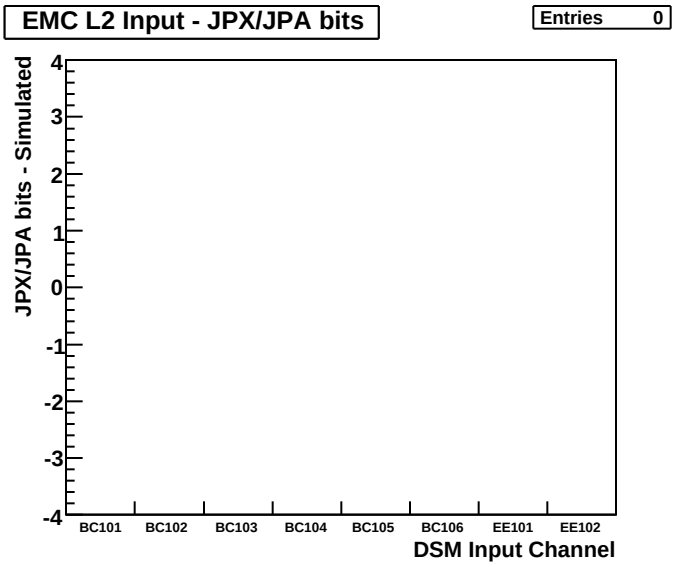

Endcap EMC L1 Input - High Eta Sum
Entries 504468
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

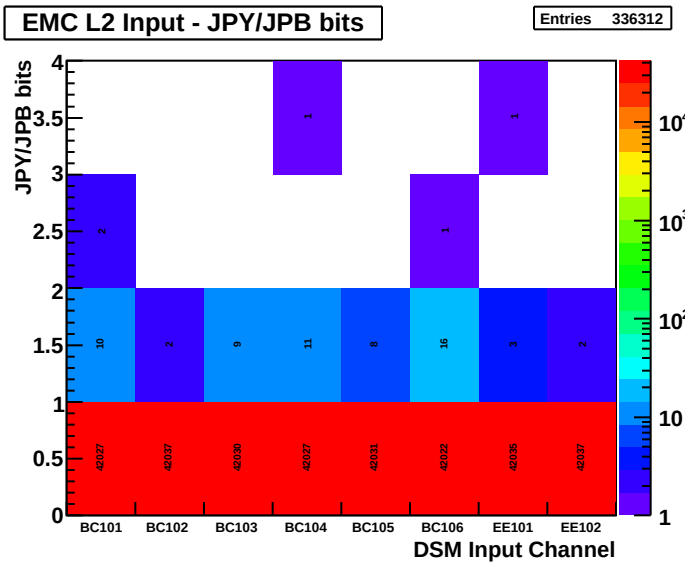

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

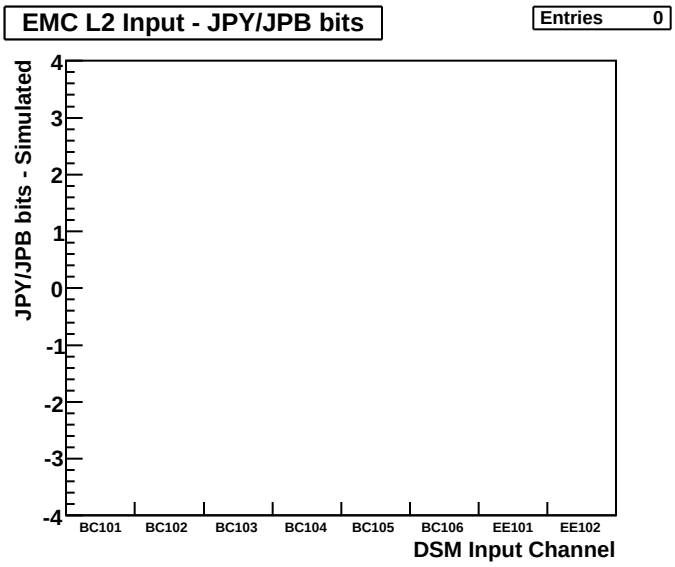

Endcap EMC L1 Input - High Tower Bits
Entries 504468
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

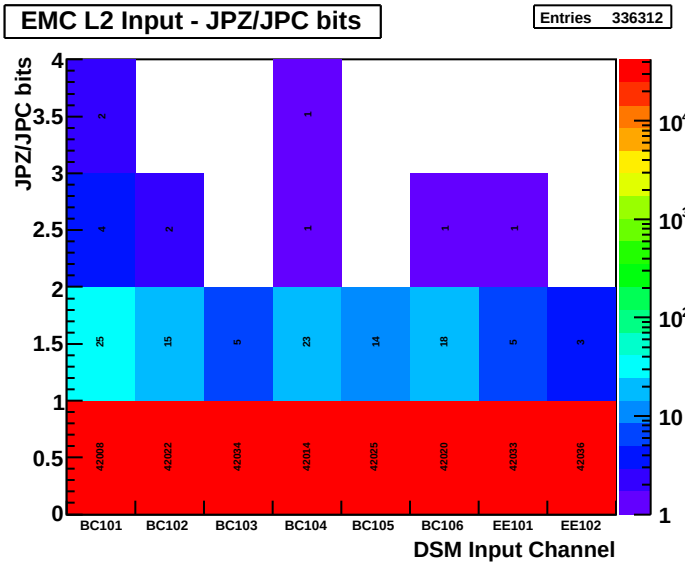

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

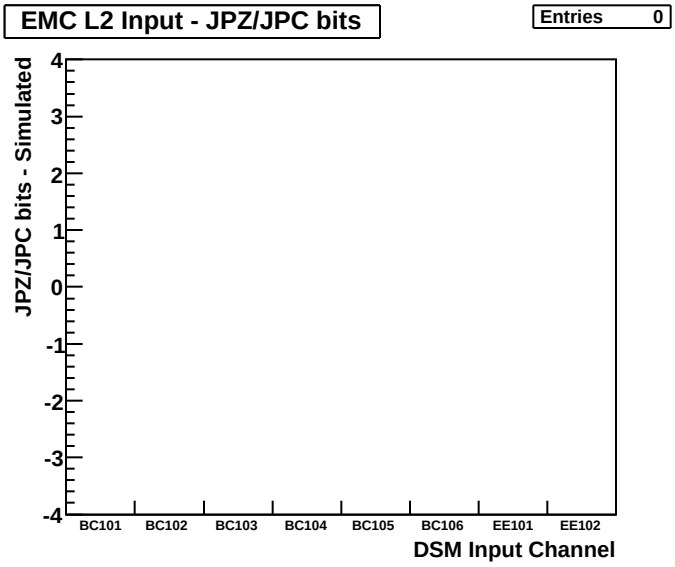

EMC L2 Input - JPX/JPA bits
Entries 336312
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

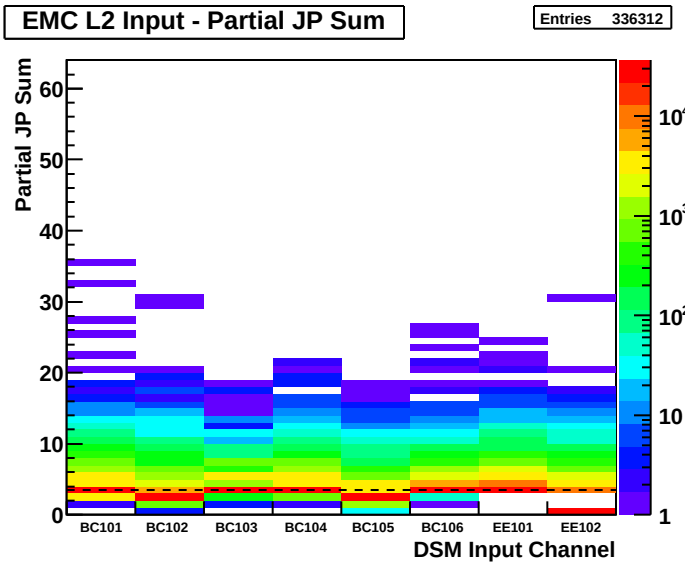

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

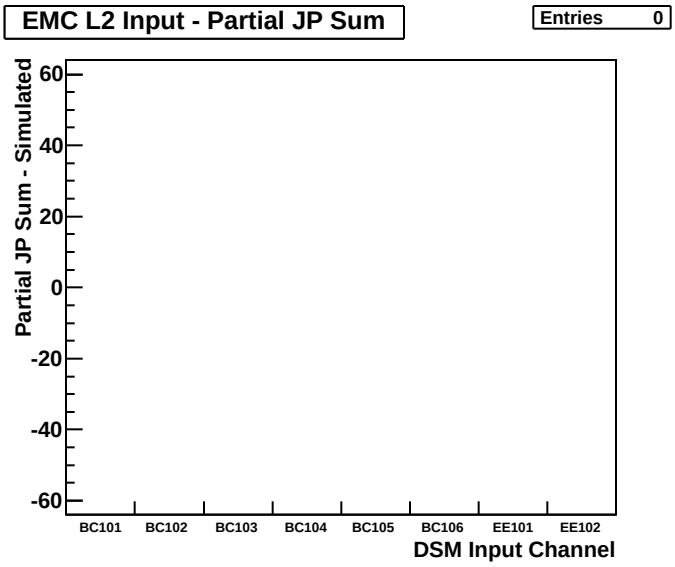

EMC L2 Input - JPY/JPB bits
Entries 336312
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

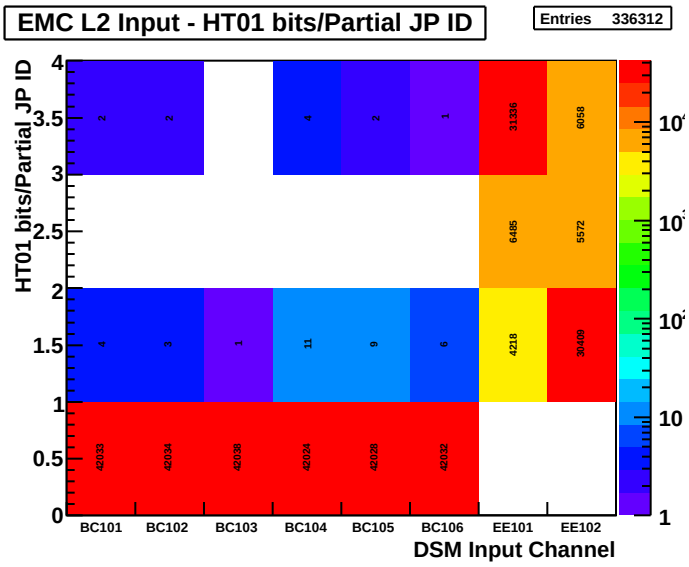

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

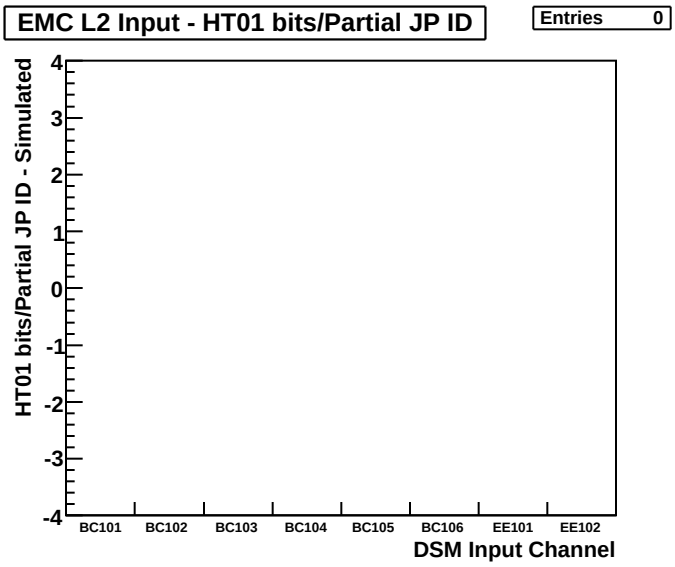

EMC L2 Input - JPZ/JPC bits
Entries 336312
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

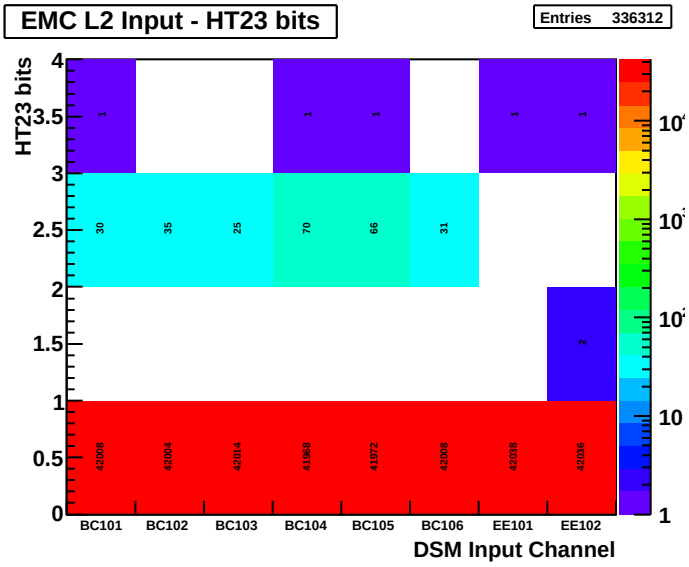

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

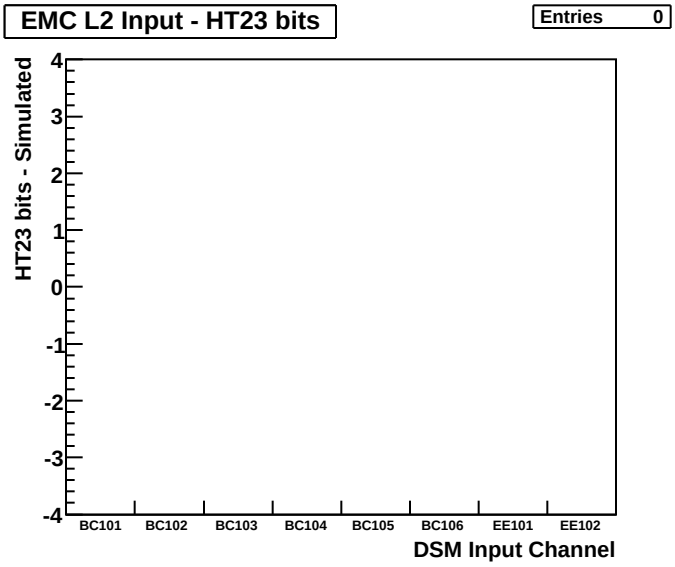

EMC L2 Input - Partial JP Sum
Entries 336312
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

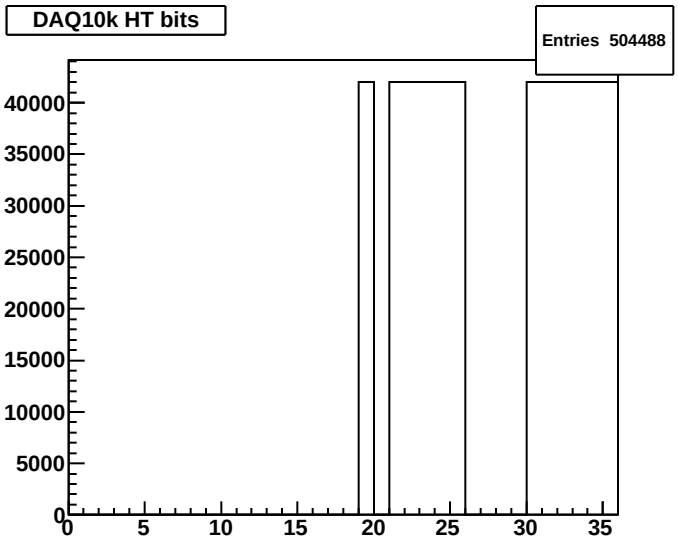

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

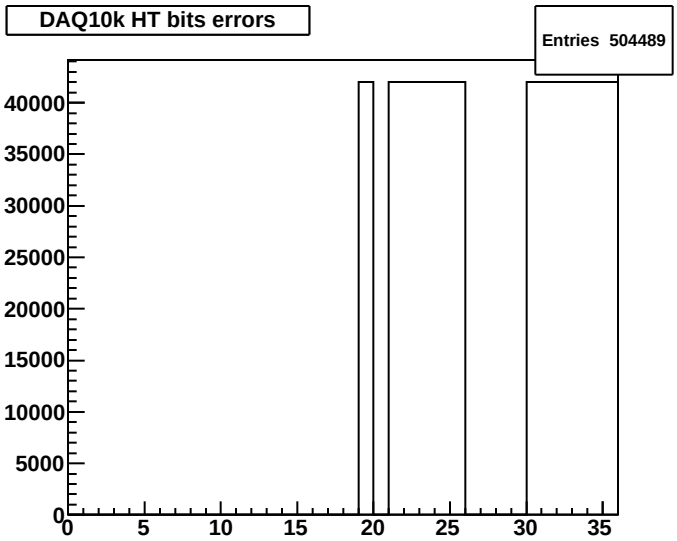

EMC L2 Input - HT01 bits/Partial JP ID
Entries 336312
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

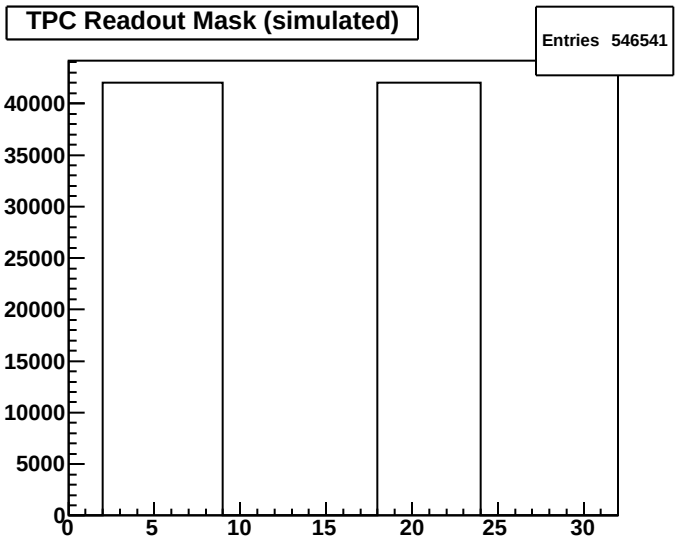

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

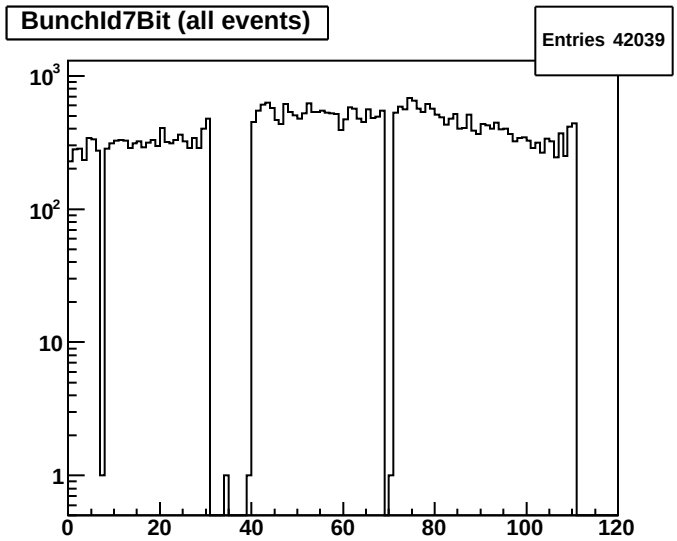

EMC L2 Input - HT23 bits
Entries 336312
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

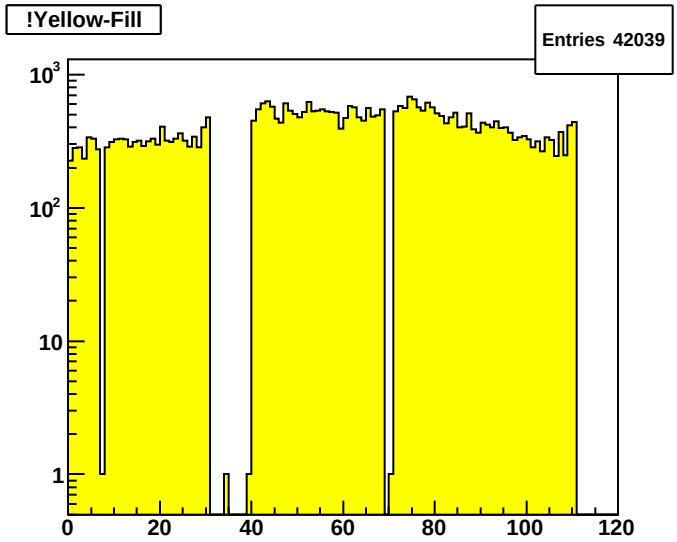

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

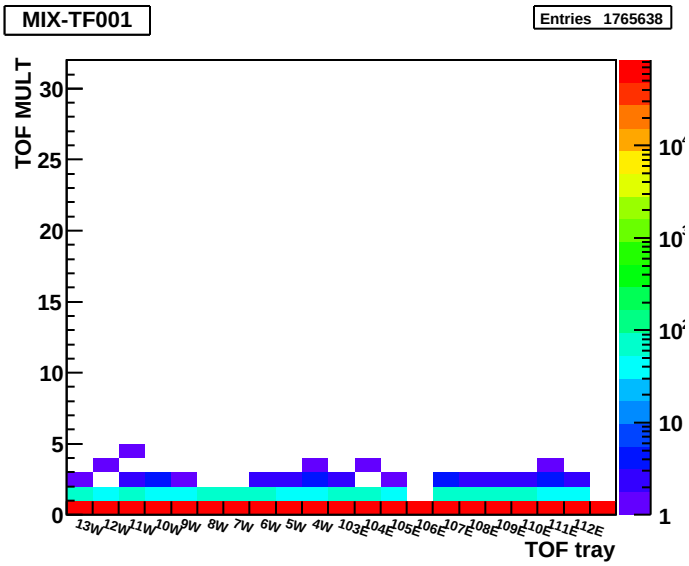

DAQ10k HT bits
Entries 504488
40000
35000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

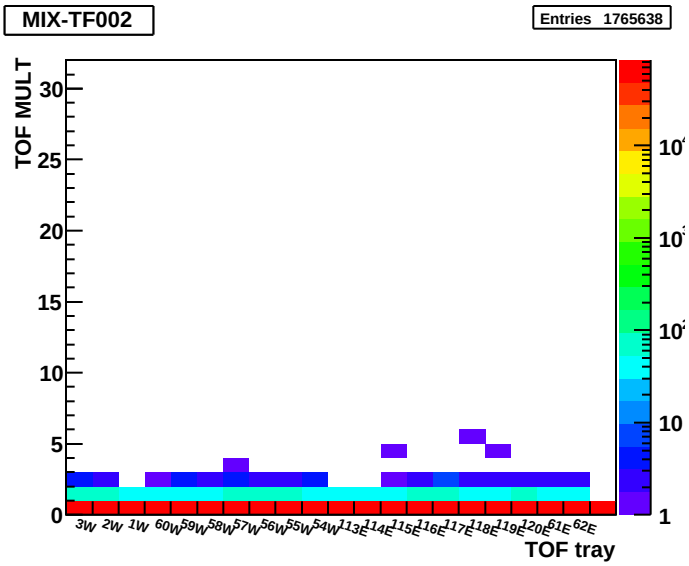

DAQ10k HT bits errors
Entries 504489
40000
35000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

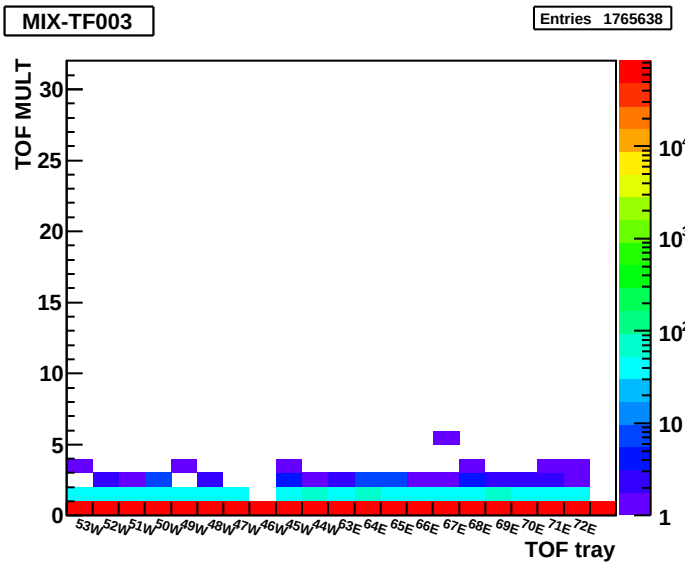

TPC Readout Mask (simulated)
Entries 546541
40000
35000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30

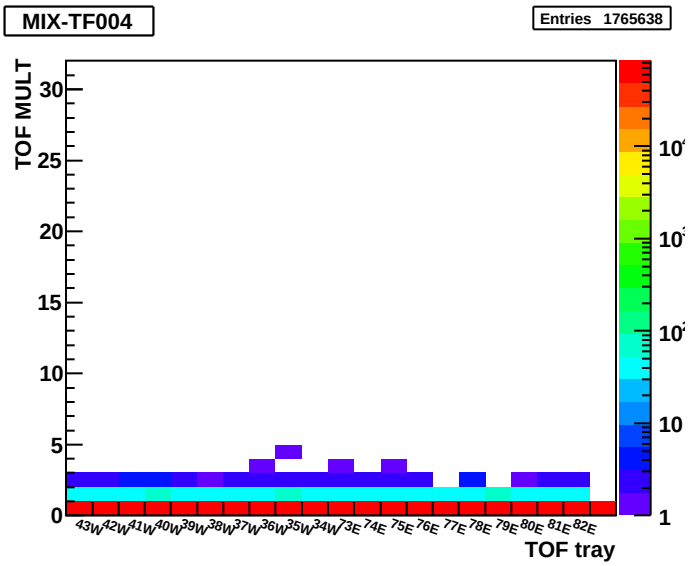

BunchId7Bit (all events)
Entries 42039
10^3
10^2
10
1
0 20 40 60 80 100 120

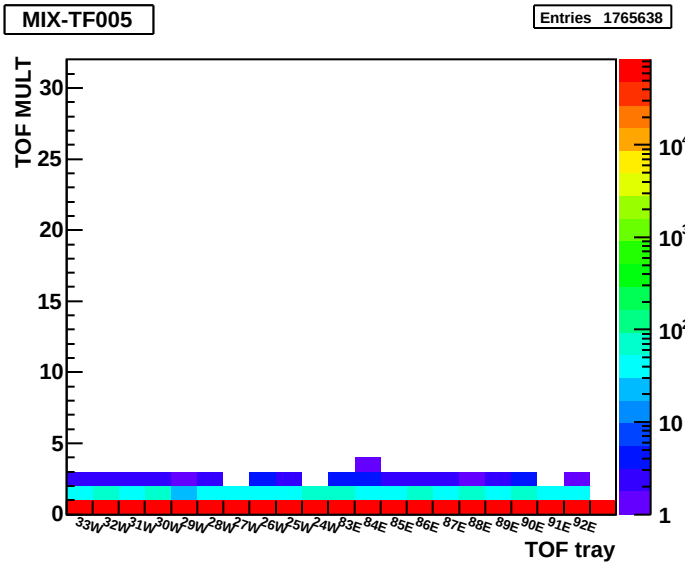

!Yellow-Fill
Entries 42039
10^3
10^2
10
1
0 20 40 60 80 100 120

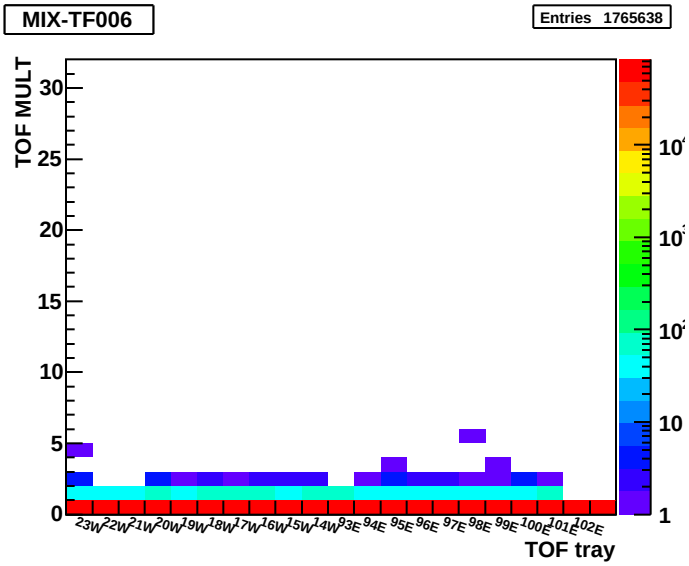

MIX-TF001
Entries 1765638
TOF MULT
TOF tray

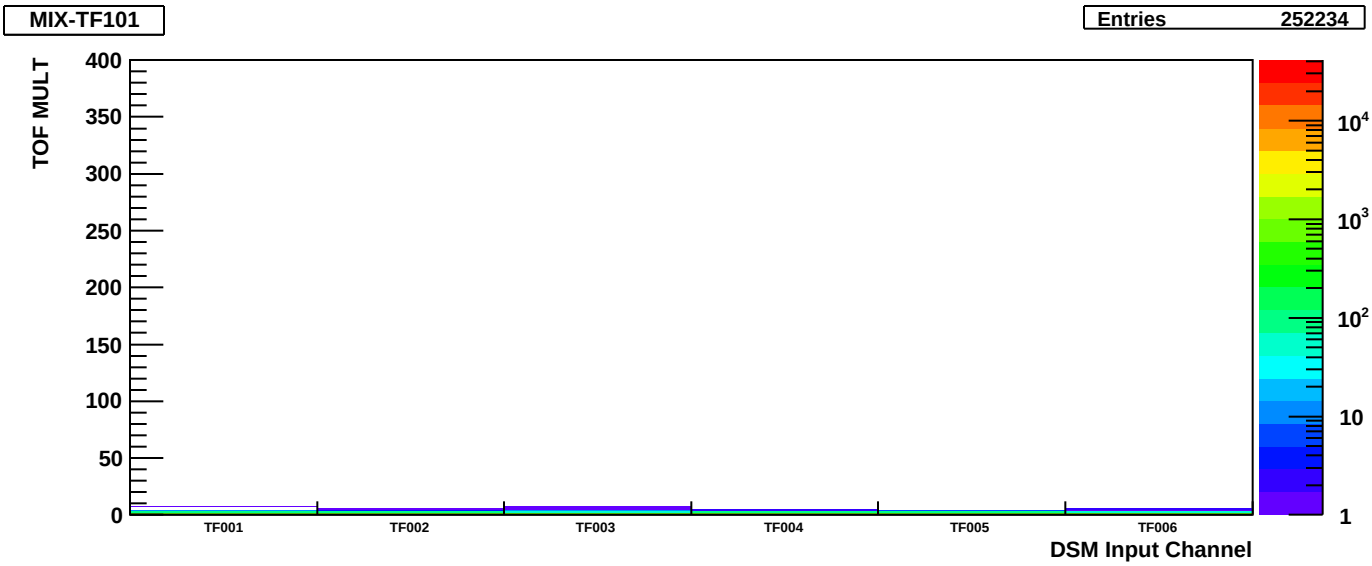

MIX-TF002
Entries 1765638
TOF MULT
TOF tray

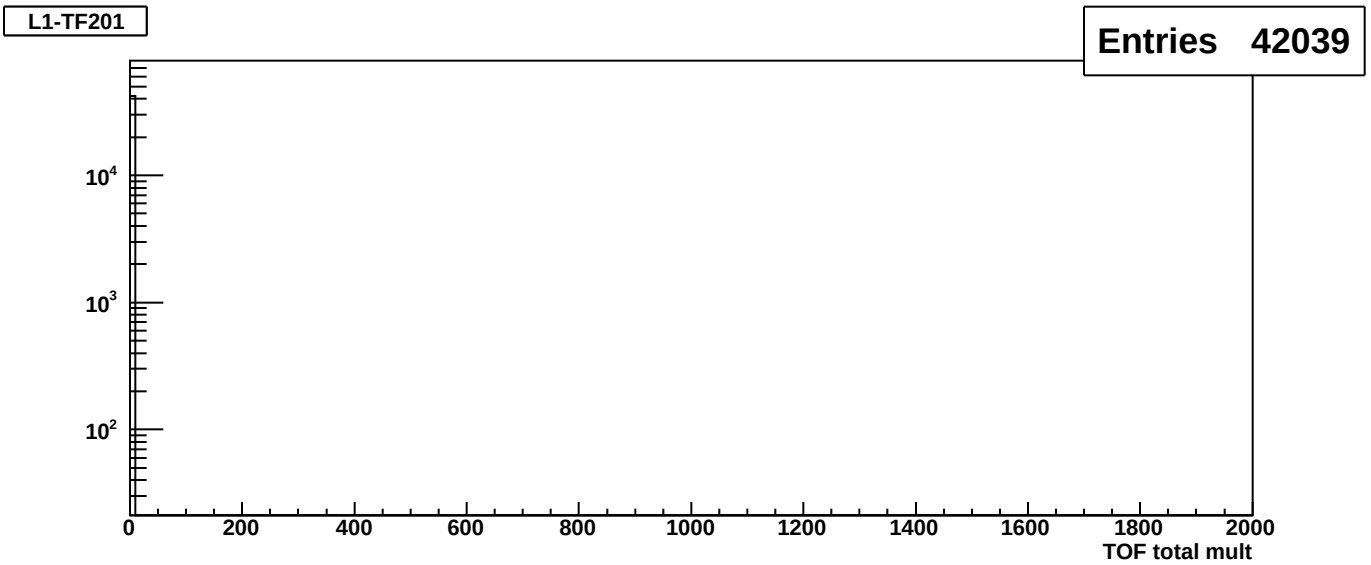

MIX-TF003
Entries 1765638
TOF MULT
TOF tray

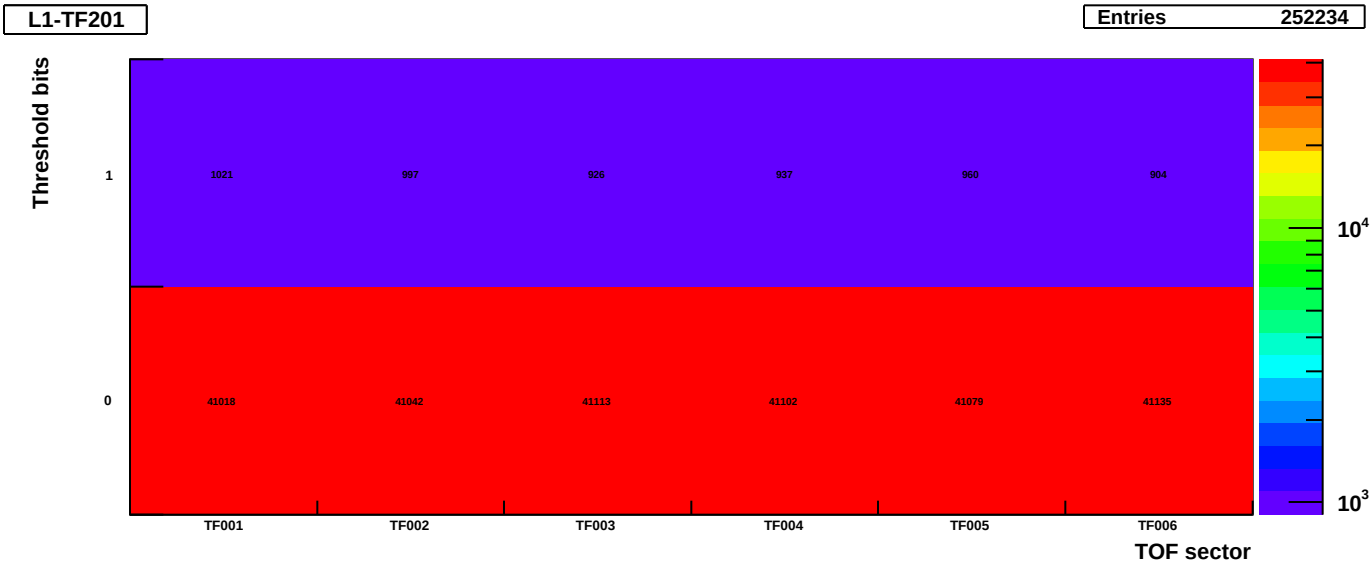

MIX-TF004
Entries 1765638
TOF MULT
TOF tray

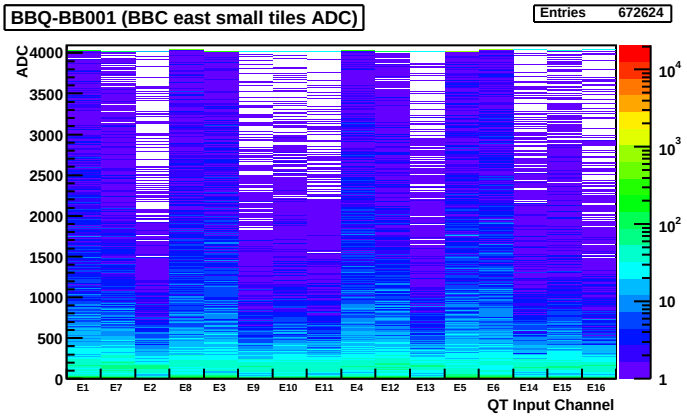

MIX-TF005
Entries 1765638
TOF MULT
TOF tray

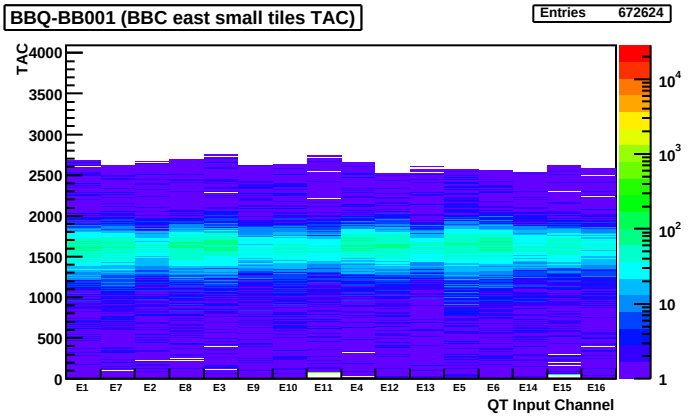

MIX-TF006
Entries 1765638
TOF MULT
TOF tray

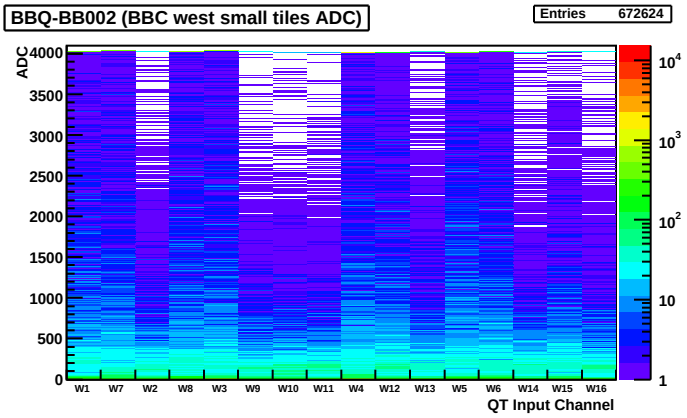

MIX-TF101
Entries 252234
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

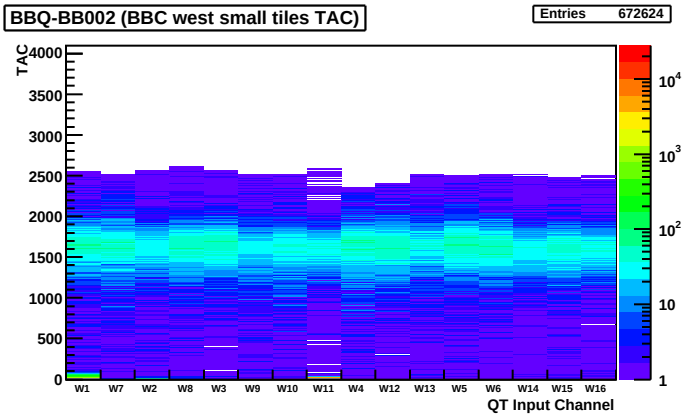

L1-TF201
Entries 42039
10^4
10^3
10^2
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

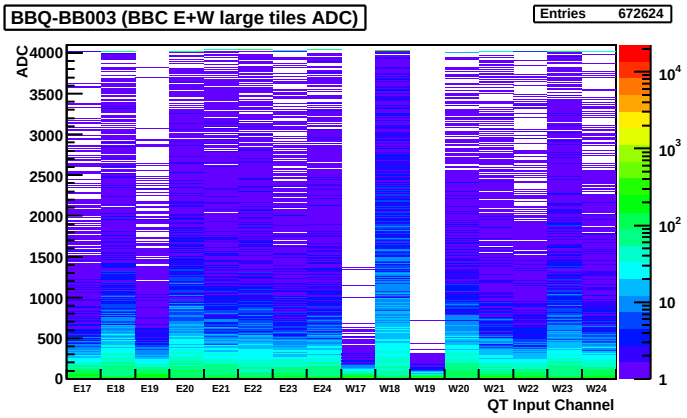

L1-TF201
Entries 252234
Threshold bits
1
0
1021
997
926
937
960
904
41018
41042
41113
41102
41079
41135
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4
10^3

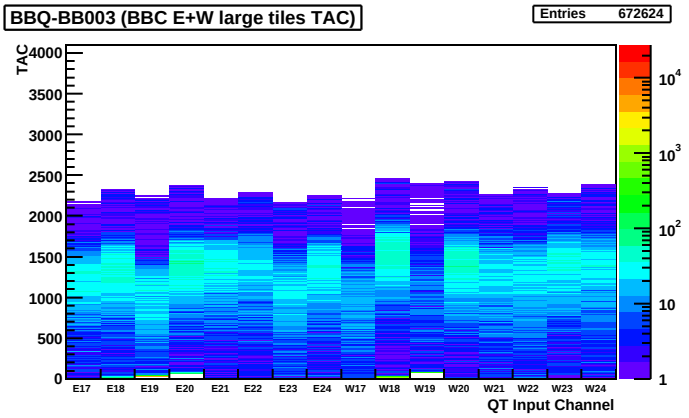

BBQ-BB001 (BBC east small tiles ADC)
Entries 672624
ADC
QT Input Channel

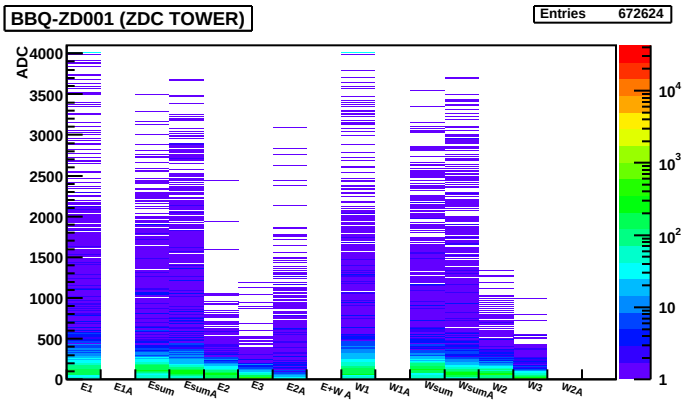

BBQ-BB001 (BBC east small tiles TAC)
Entries 672624
TAC
QT Input Channel

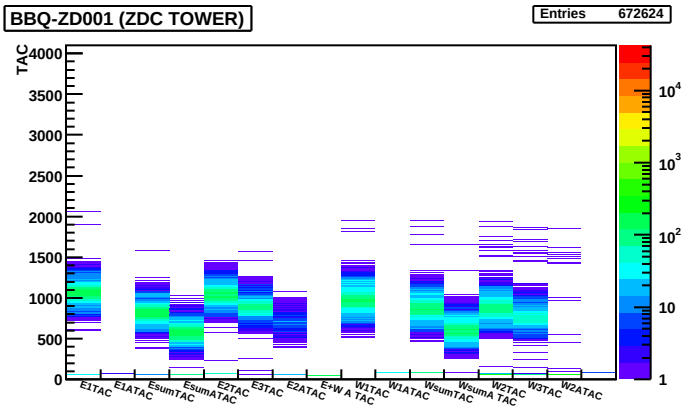

BBQ-BB002 (BBC west small tiles ADC)
Entries 672624
ADC
QT Input Channel

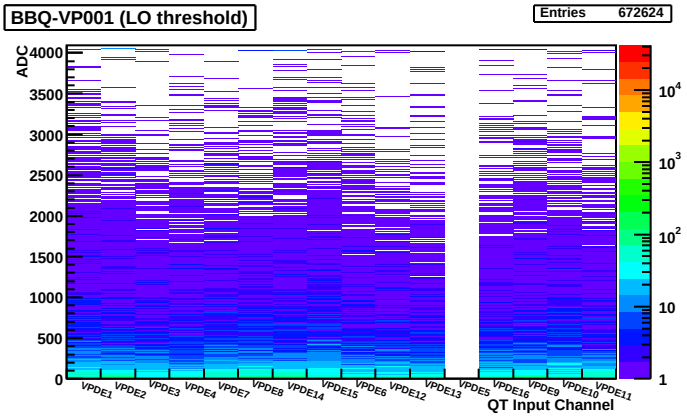

BBQ-BB002 (BBC west small tiles TAC)
Entries 672624
TAC
QT Input Channel

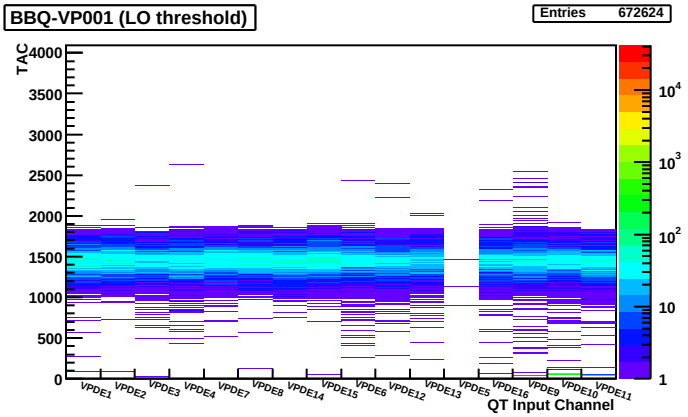

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 672624
ADC
QT Input Channel

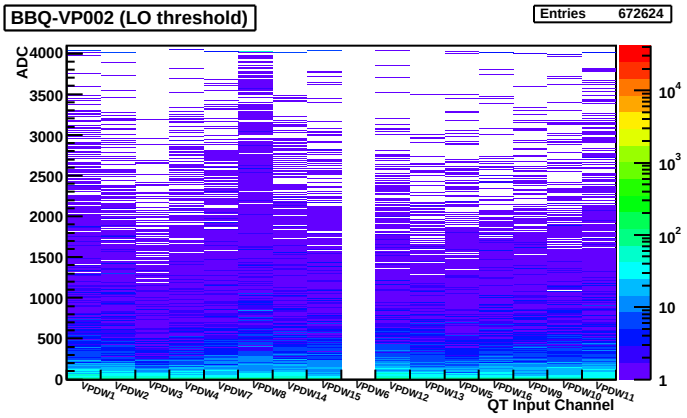

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 672624
TAC
QT Input Channel

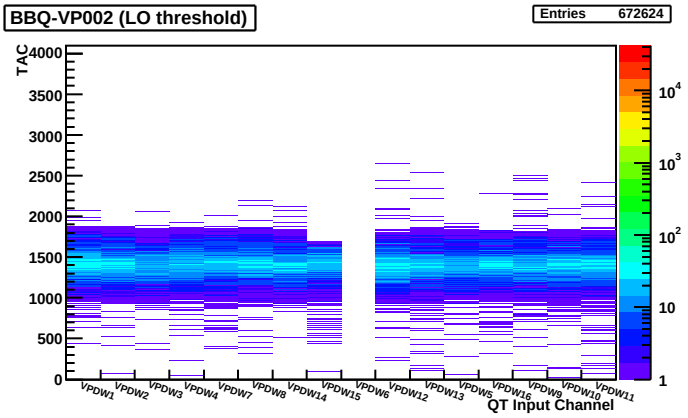

BBQ-ZD001 (ZDC TOWER)
Entries 672624
ADC

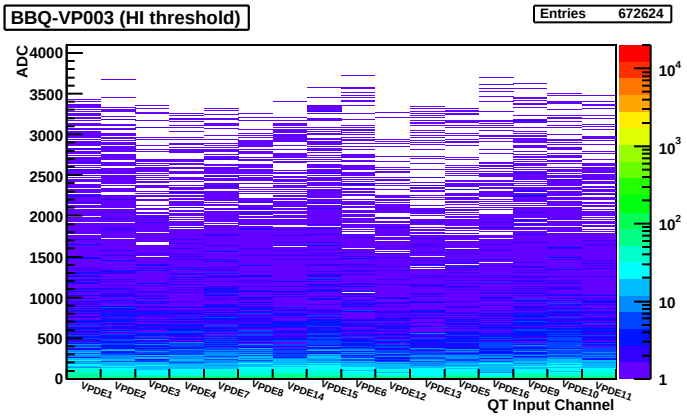

BBQ-ZD001 (ZDC TOWER)
Entries 672624
TAC

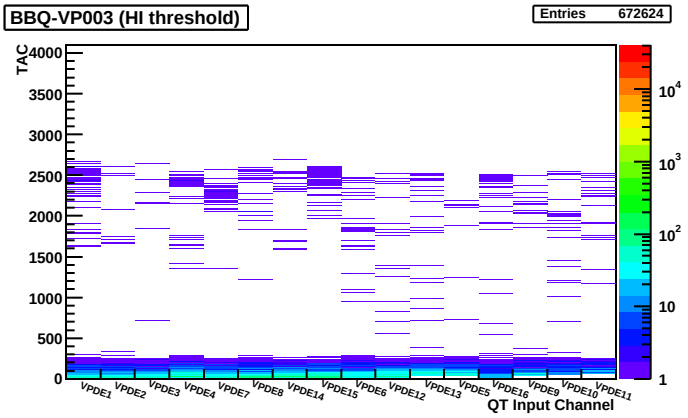

BBQ-VP001 (LO threshold)
Entries 672624
ADC
QT Input Channel

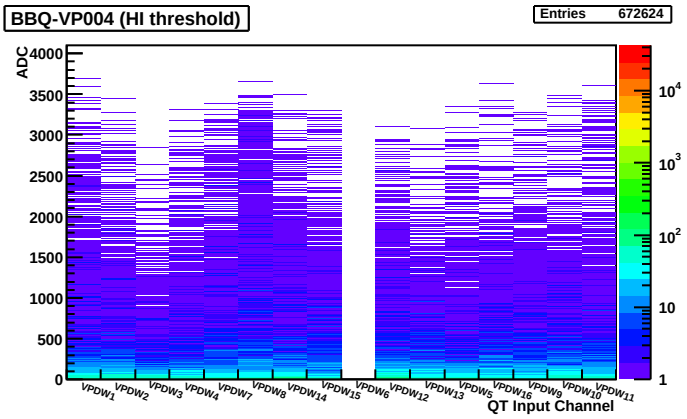

BBQ-VP001 (LO threshold)
Entries 672624
TAC
QT Input Channel

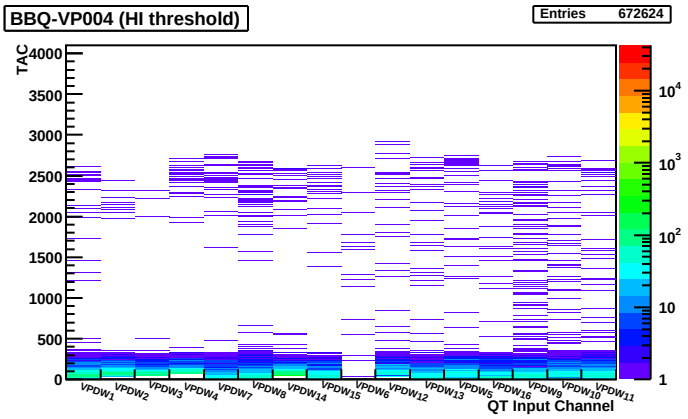

BBQ-VP002 (LO threshold)
Entries 672624
ADC
QT Input Channel

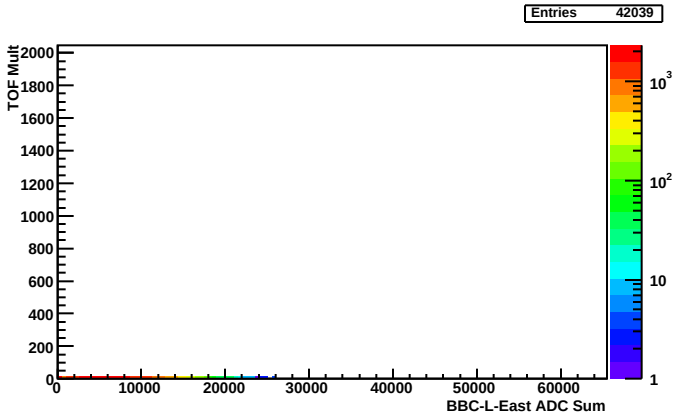

BBQ-VP002 (LO threshold)
Entries 672624
TAC
QT Input Channel

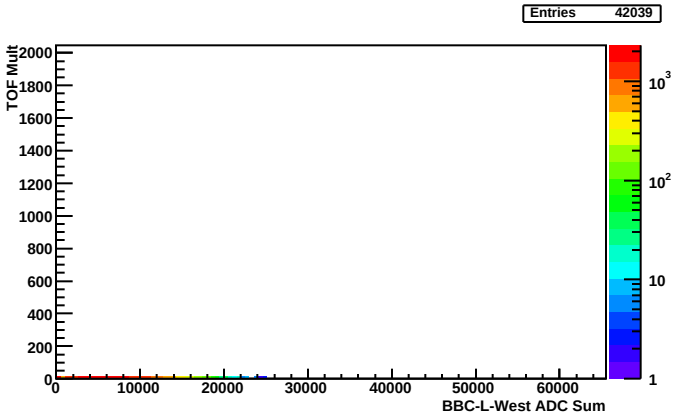

BBQ-VP003 (HI threshold)
Entries 672624
ADC
QT Input Channel

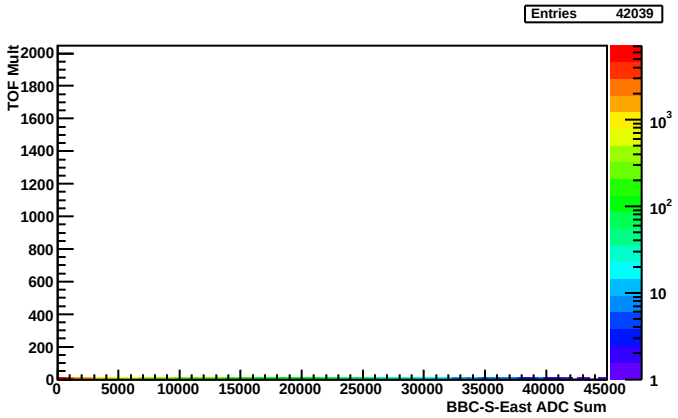

BBQ-VP003 (HI threshold)
Entries 672624
TAC
QT Input Channel

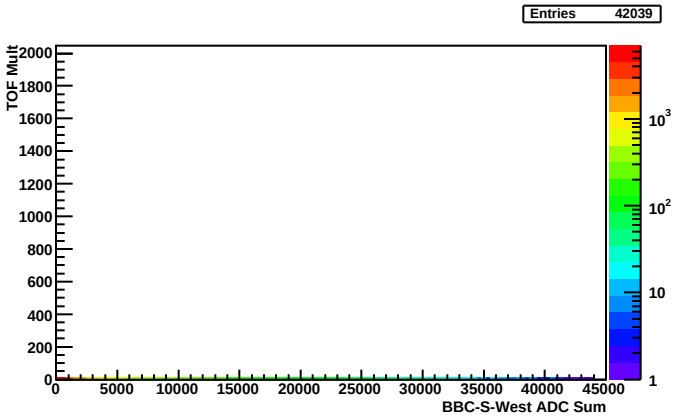

BBQ-VP004 (HI threshold)
Entries 672624
ADC
QT Input Channel

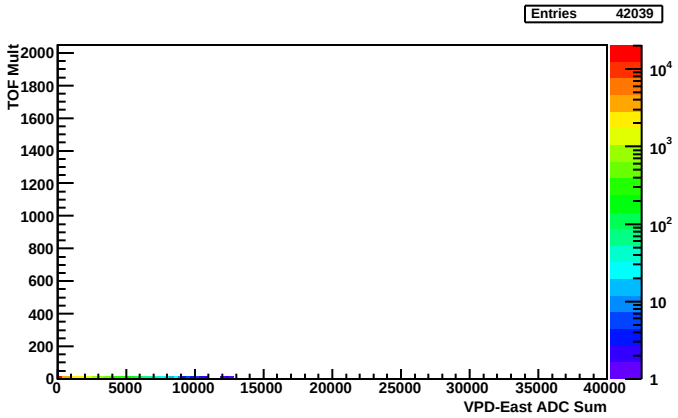

BBQ-VP004 (HI threshold)
Entries 672624
TAC
QT Input Channel

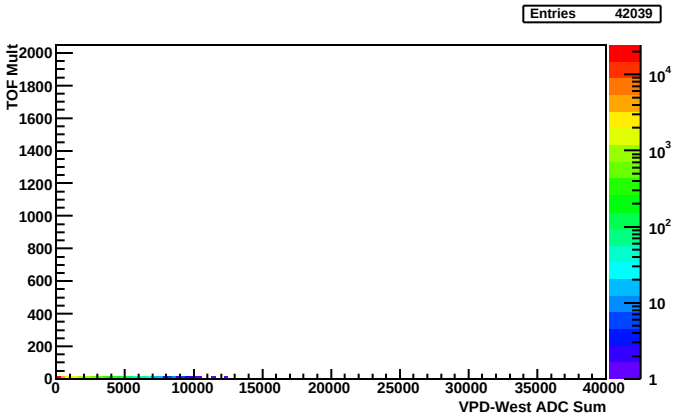

Entries 42039
TOF Mult
BBC-L-East ADC Sum

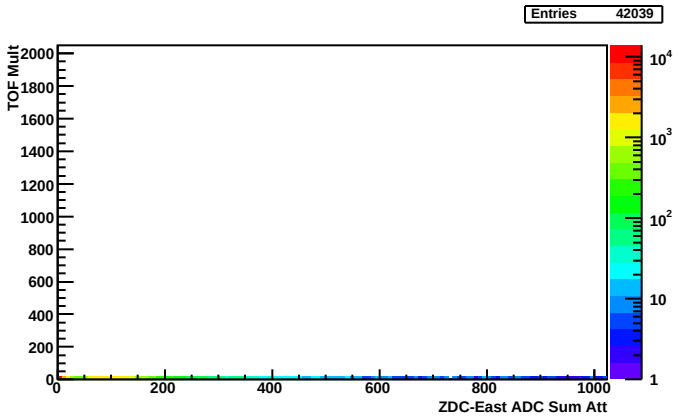

Entries 42039
TOF Mult
BBC-L-West ADC Sum

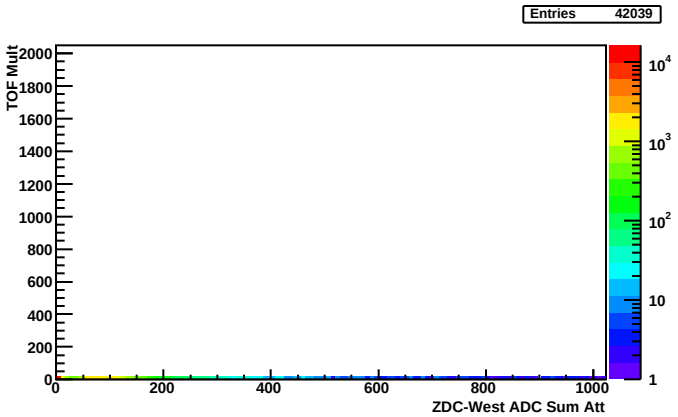

Entries 42039
TOF Mult
BBC-S-East ADC Sum

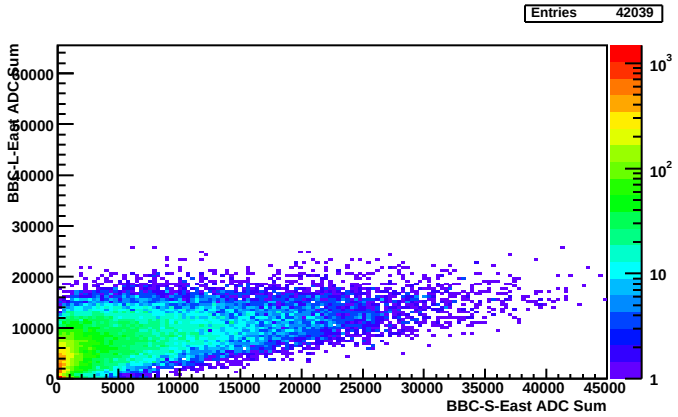

Entries 42039
TOF Mult
BBC-S-West ADC Sum

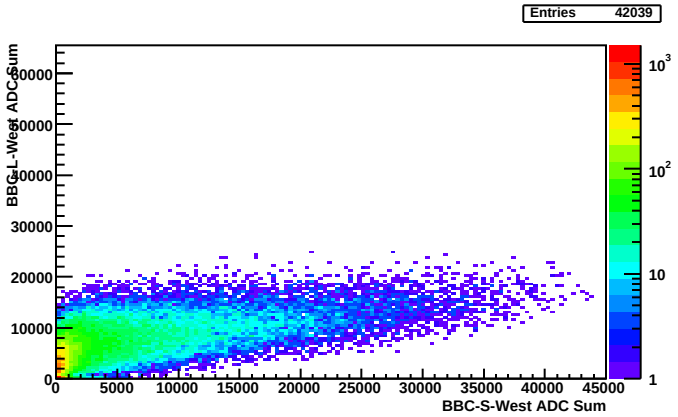

Entries 42039
TOF Mult
VPD-East ADC Sum

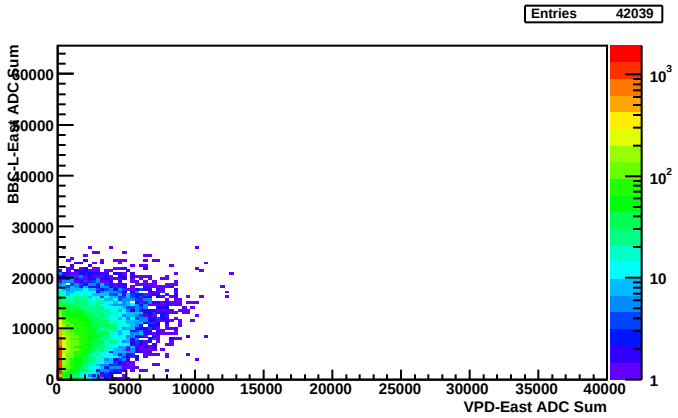

Entries 42039
TOF Mult
VPD-West ADC Sum

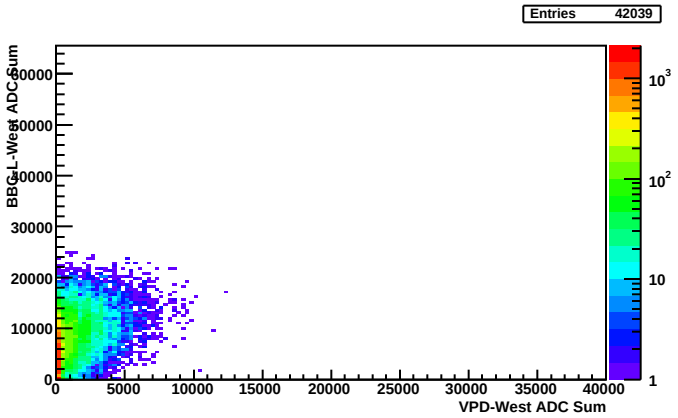

Entries 42039
TOF Mult
ZDC-East ADC Sum Att

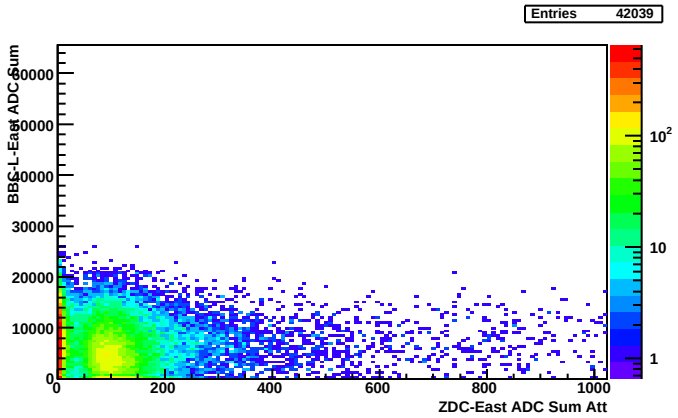

Entries 42039
TOF Mult
ZDC-West ADC Sum Att

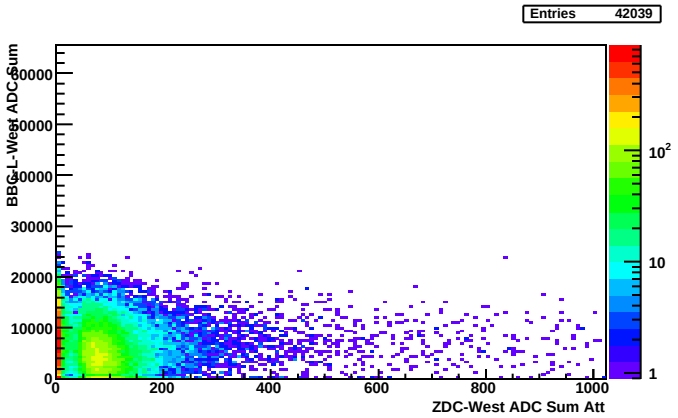

Entries 42039
BBC-L-East ADC Sum
BBC-S-East ADC Sum

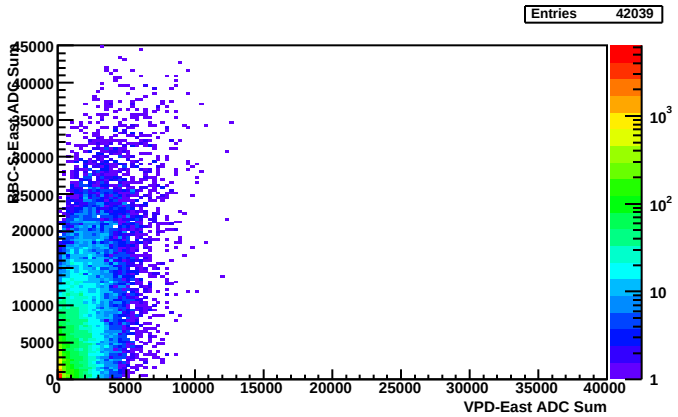

Entries 42039
BBC-L-West ADC Sum
BBC-S-West ADC Sum

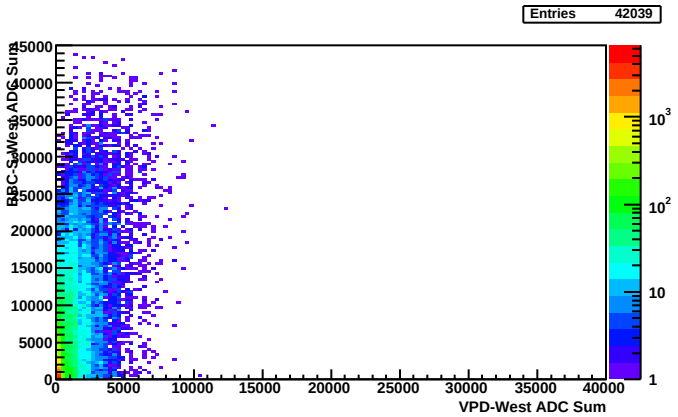

Entries 42039
BBC-L-East ADC Sum
VPD-East ADC Sum

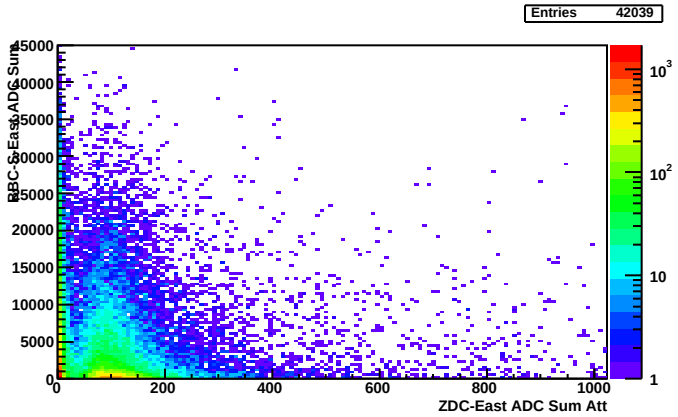

Entries 42039
BBC-L-West ADC Sum
VPD-West ADC Sum

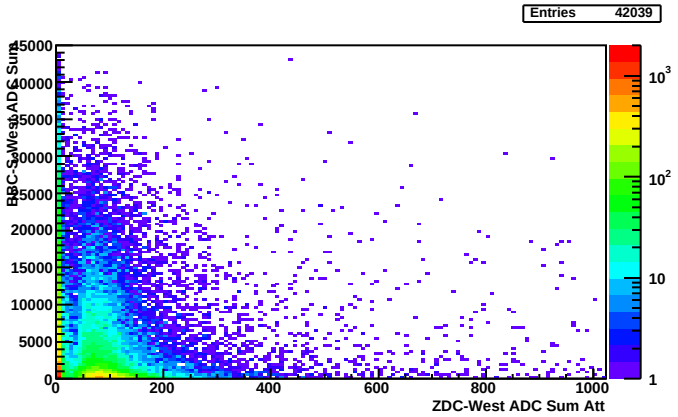

Entries 42039
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

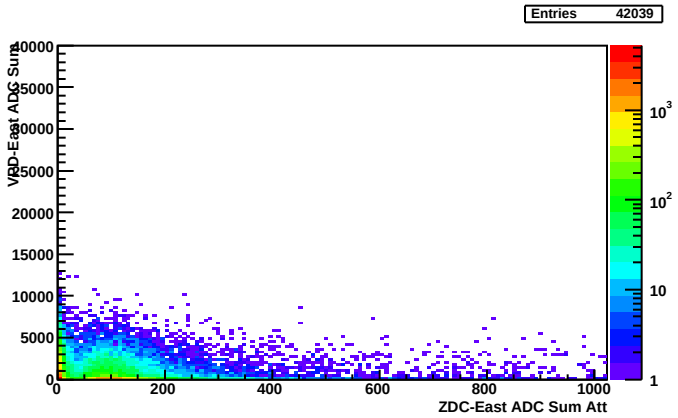

Entries 42039
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

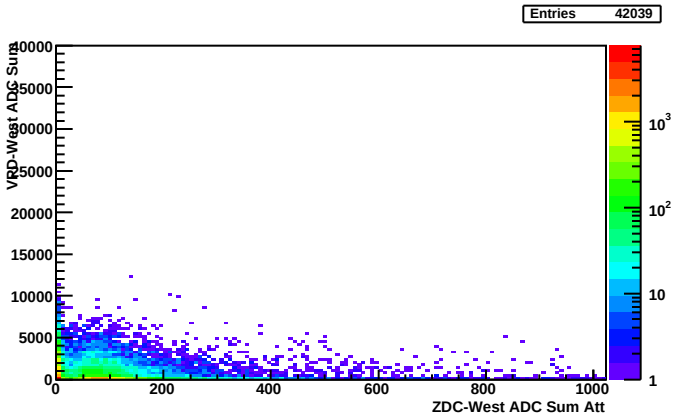

Entries 42039
BBC-S-East ADC Sum
VPD-East ADC Sum

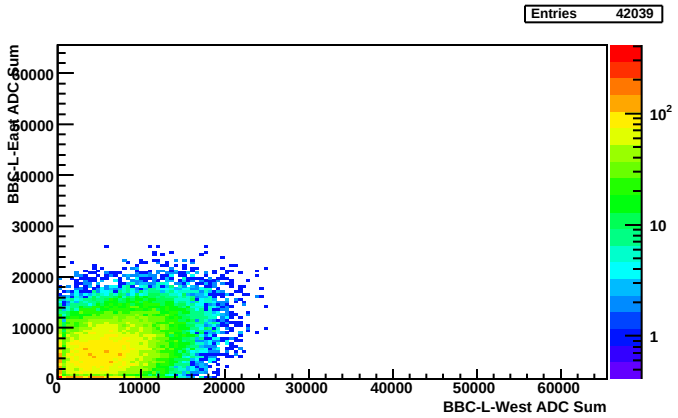

Entries 42039
BBC-S-West ADC Sum
VPD-West ADC Sum

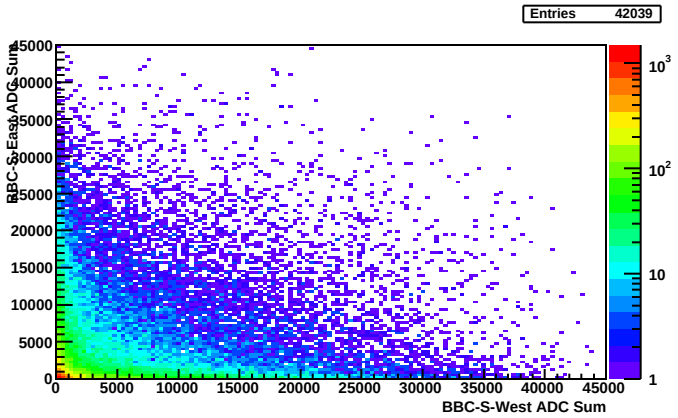

Entries 42039
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

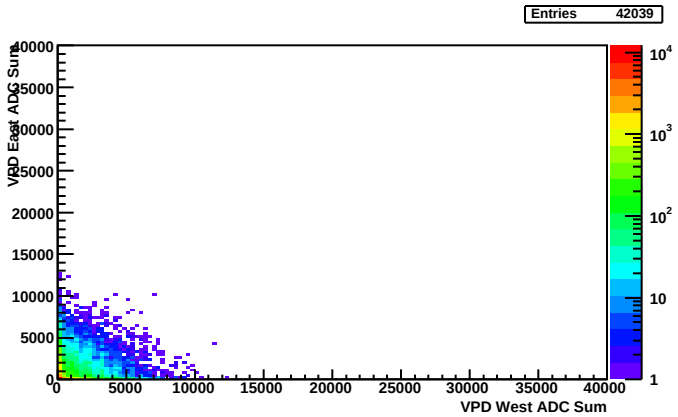

Entries 42039
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

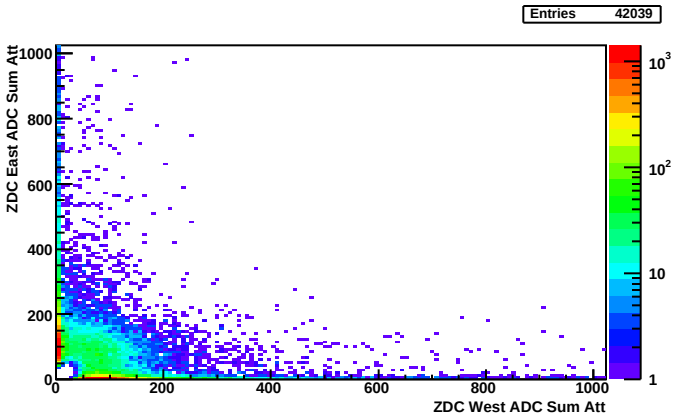

Entries 42039
VPD-East ADC Sum
ZDC-East ADC Sum Att

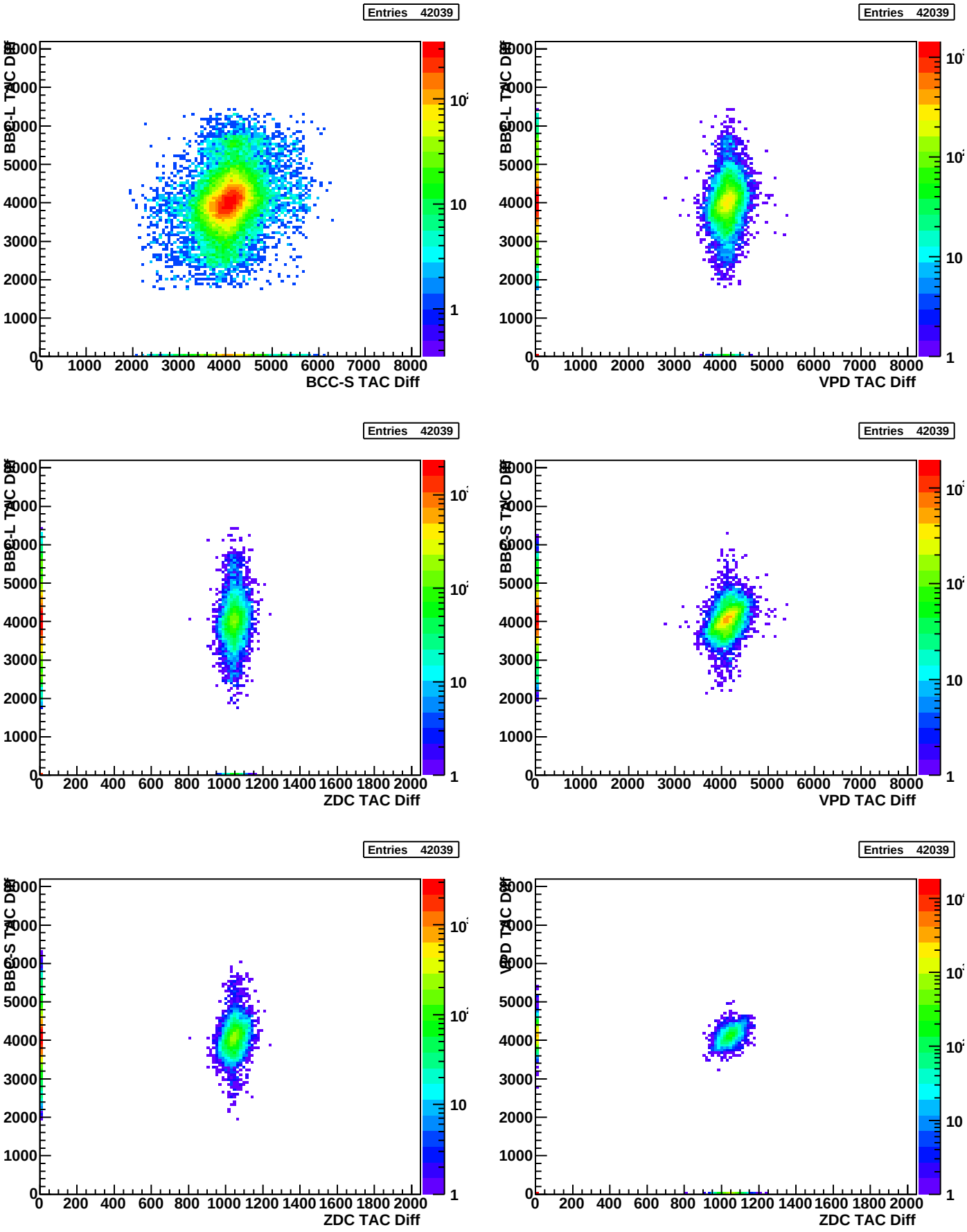

Entries 42039
VPD-West ADC Sum
ZDC-West ADC Sum Att

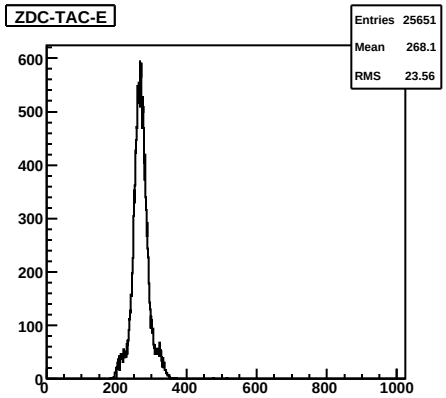

Entries 42039
BBC-L-East ADC Sum
BBC-L-West ADC Sum

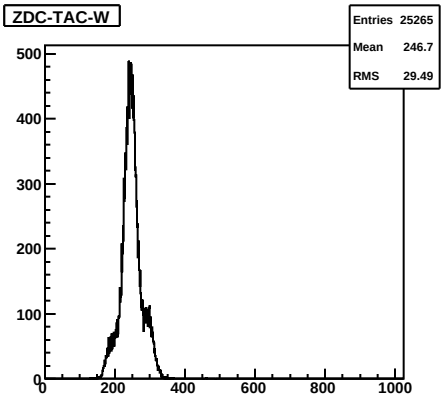

Entries 42039
BBC-S-East ADC Sum
BBC-S-West ADC Sum

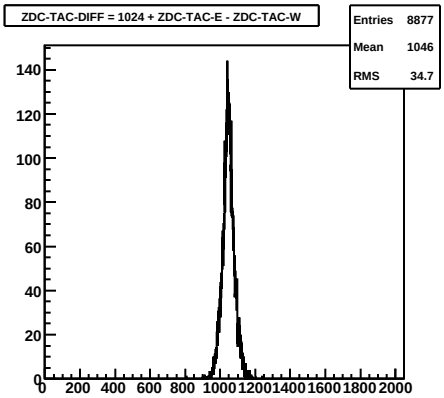

Entries 42039
VPD East ADC Sum
VPD West ADC Sum

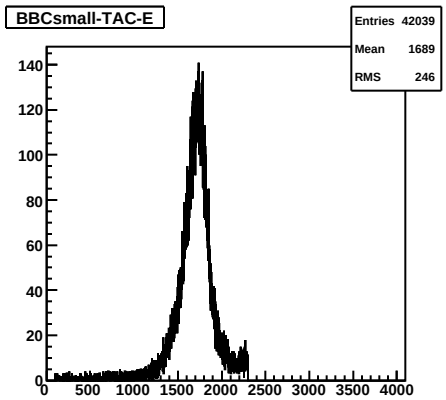

Entries 42039
ZDC East ADC Sum Att
ZDC West ADC Sum Att

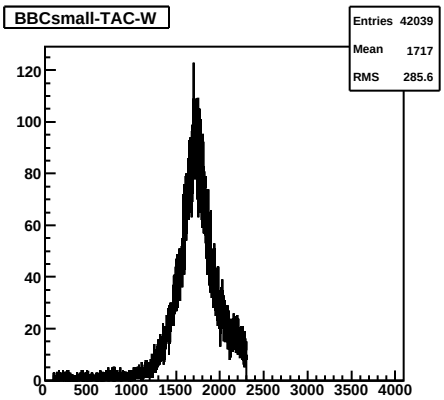

Entries 42039
BBC-L TAC Diff
BCC-S TAC Diff
Entries 42039
BBC-L TAC Diff
VPD TAC Diff
Entries 42039
BBC-L TAC Diff
ZDC TAC Diff
Entries 42039
BBC-S TAC Diff
VPD TAC Diff
Entries 42039
BBC-S TAC Diff
ZDC TAC Diff
Entries 42039
VPD TAC Diff
ZDC TAC Diff

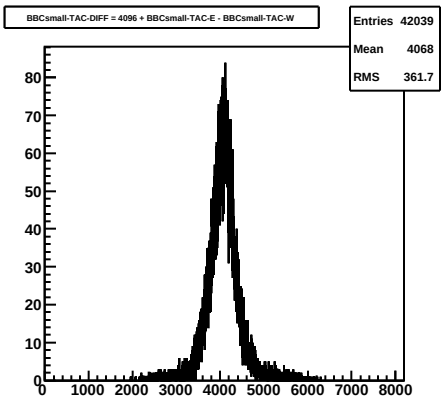

ZDC-TAC-E
Entries 25651
Mean 268.1
RMS 23.56

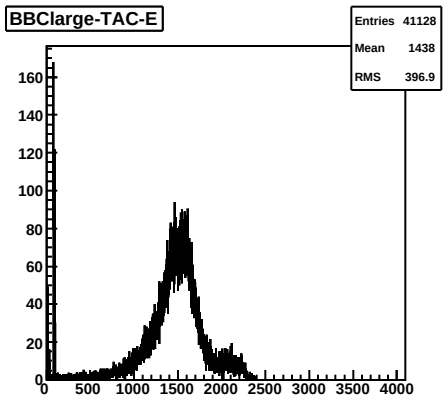

ZDC-TAC-W
Entries 25265
Mean 246.7
RMS 29.49

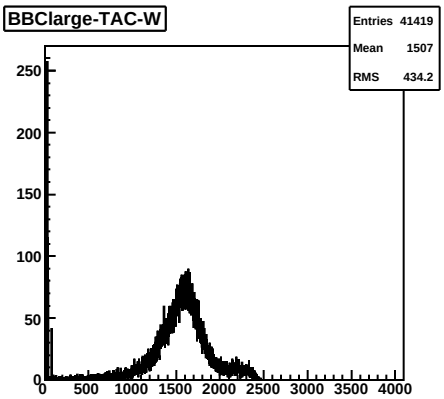

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 8877
Mean 1046
RMS 34.7

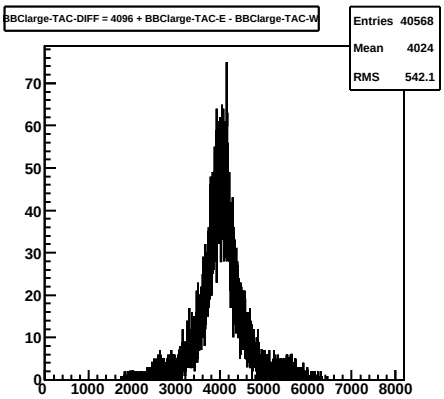

BBCsmall-TAC-E
Entries 42039
Mean 1689
RMS 246

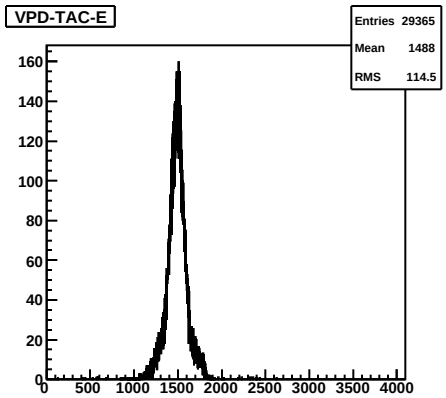

BBCsmall-TAC-W
Entries 42039
Mean 1717
RMS 285.6

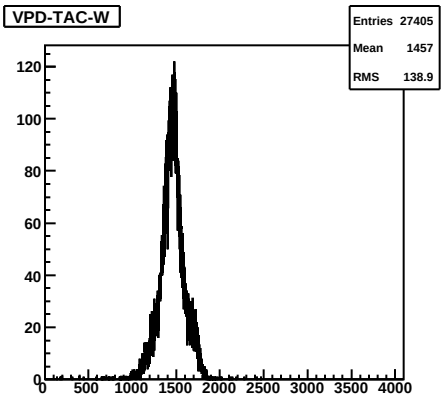

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 42039
Mean 4068
RMS 361.7

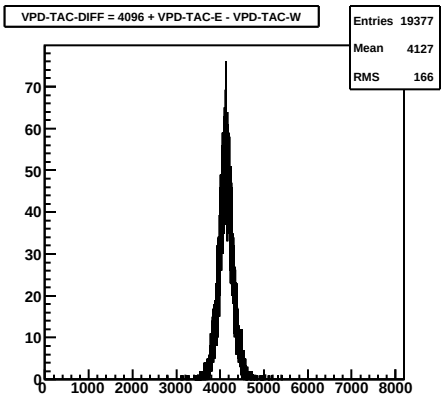

BBClarge-TAC-E
Entries 41128
Mean 1438
RMS 396.9

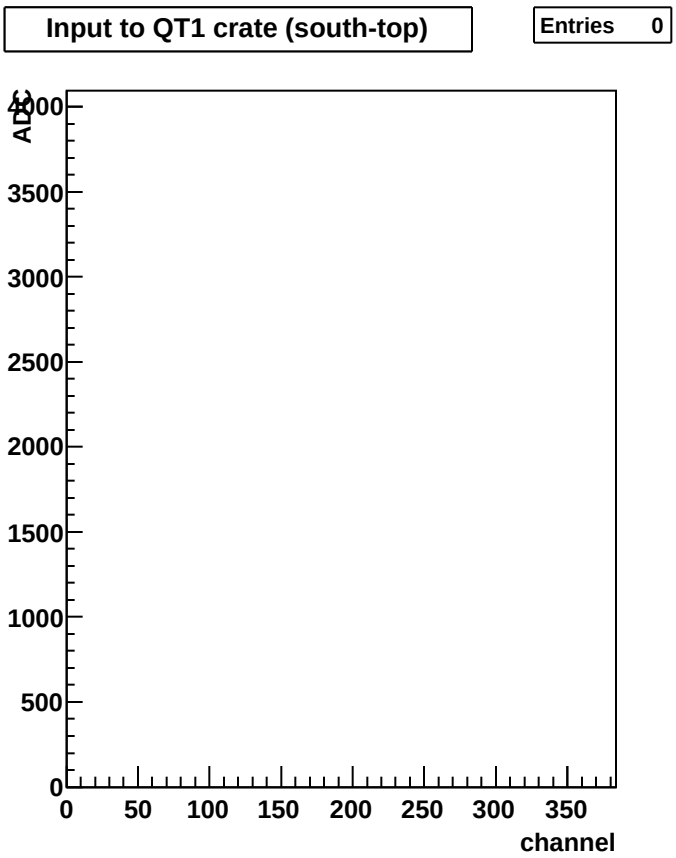

BBClarge-TAC-W
Entries 41419
Mean 1507
RMS 434.2

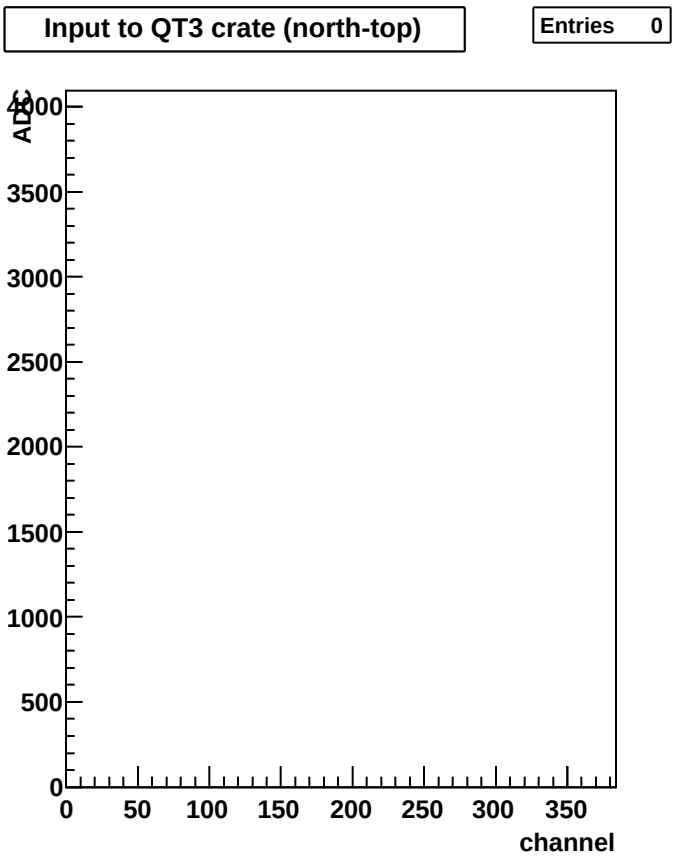

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 40568
Mean 4024
RMS 542.1

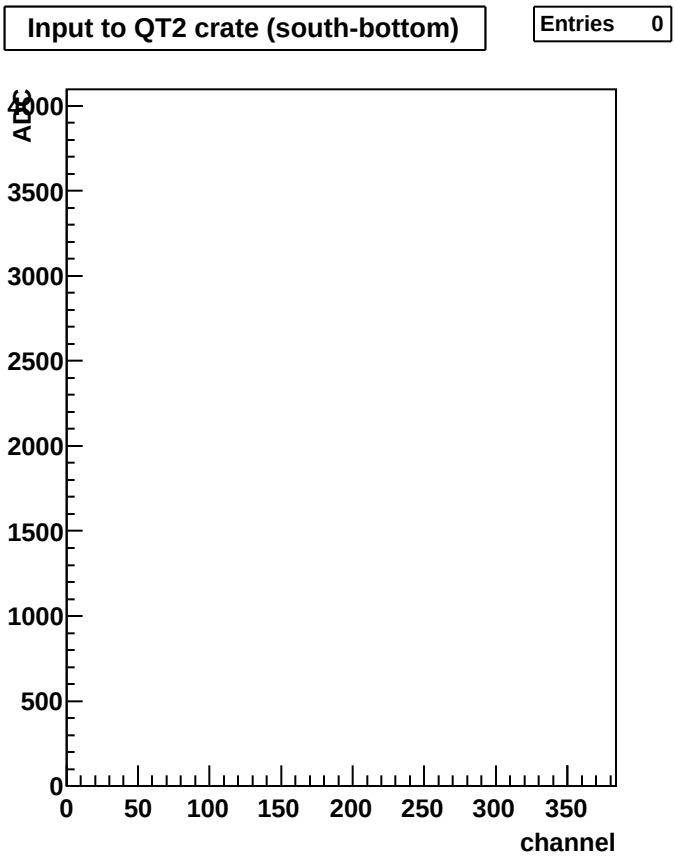

VPD-TAC-E
Entries 29365
Mean 1488
RMS 114.5

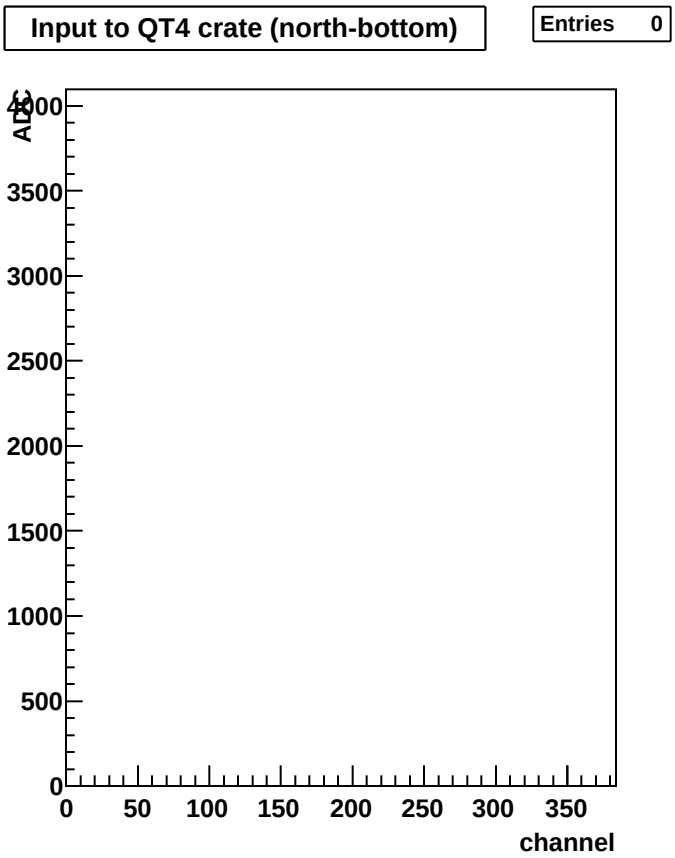

VPD-TAC-W
Entries 27405
Mean 1457
RMS 138.9

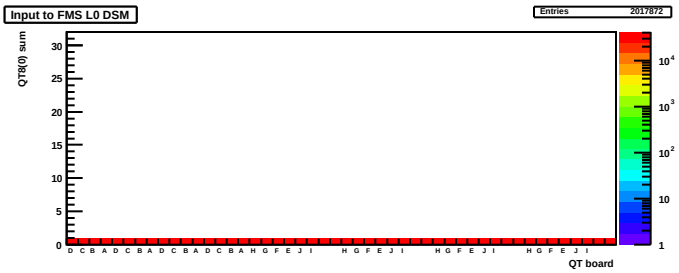

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 19377
Mean 4127
RMS 166

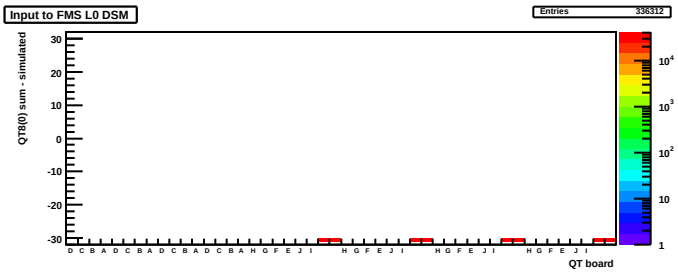

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

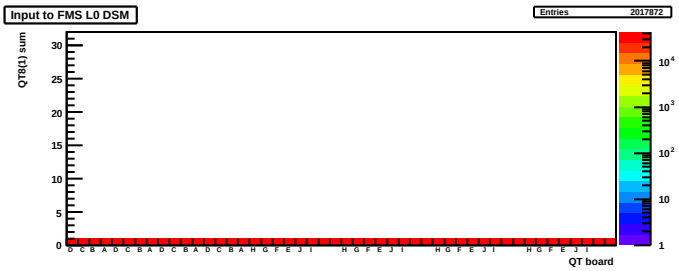

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

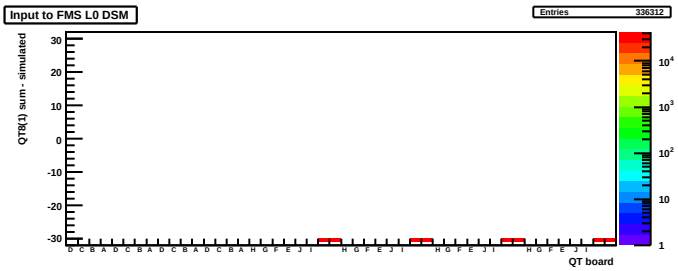

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

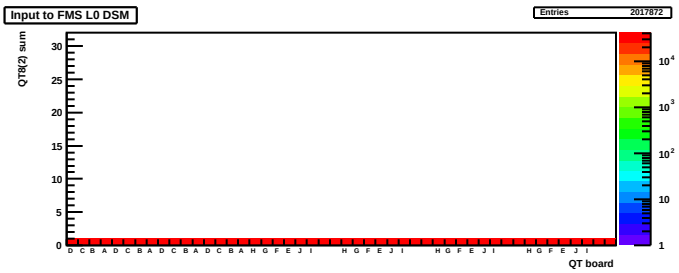

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

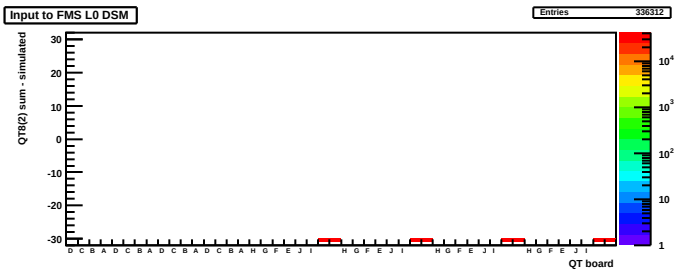

Input to FMS L0 DSM
Entries 2017872
QT8(0) sum
QT board

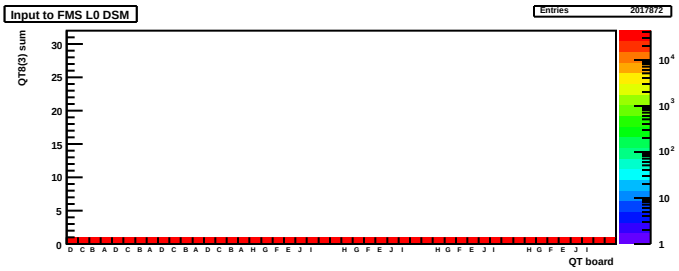

Input to FMS L0 DSM
Entries 336312
QT8(0) sum - simulated
QT board

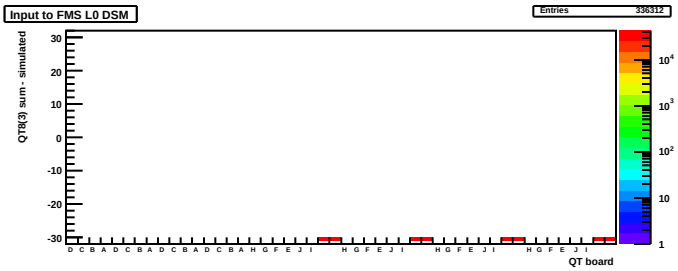

Input to FMS L0 DSM
Entries 2017872
QT8(1) sum
QT board

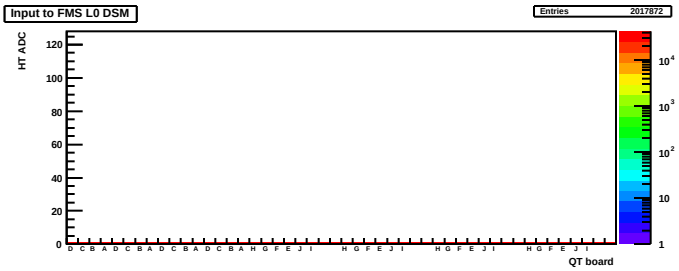

Input to FMS L0 DSM
Entries 336312
QT8(1) sum - simulated
QT board

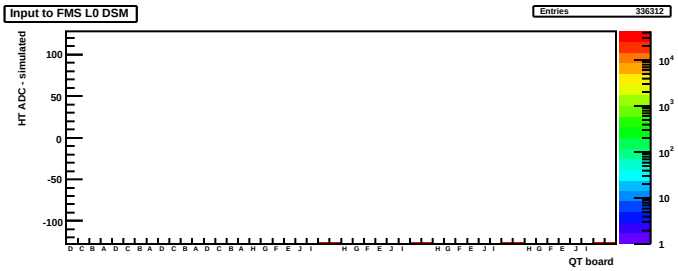

Input to FMS L0 DSM
Entries 2017872
QT8(2) sum
QT board

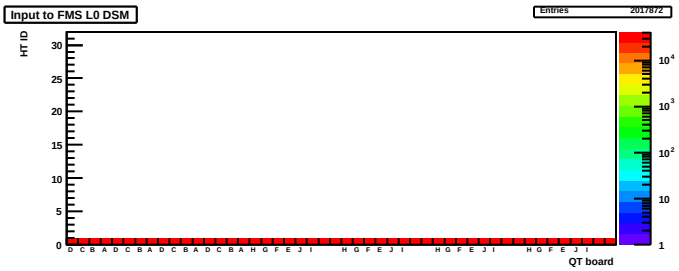

Input to FMS L0 DSM
Entries 336312
QT8(2) sum - simulated
QT board

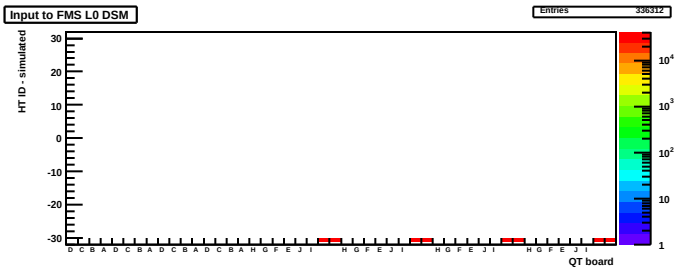

Input to FMS L0 DSM
Entries 2017872
QT8(3) sum
QT board

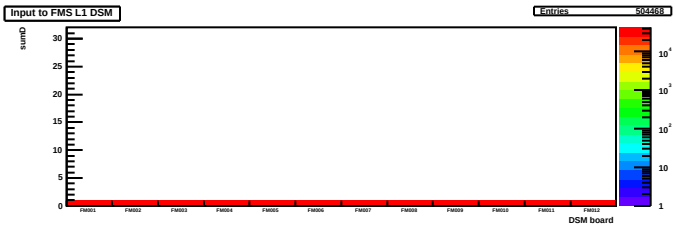

Input to FMS L0 DSM
Entries 336312
QT8(3) sum - simulated
QT board

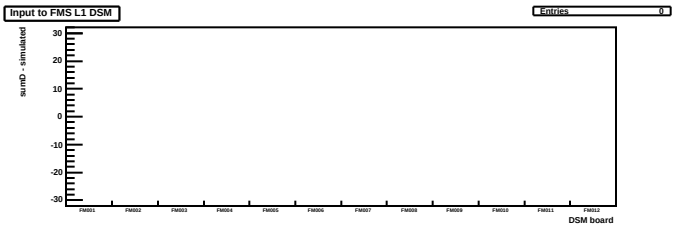

Input to FMS L0 DSM
Entries 2017872
HT ADC
QT board

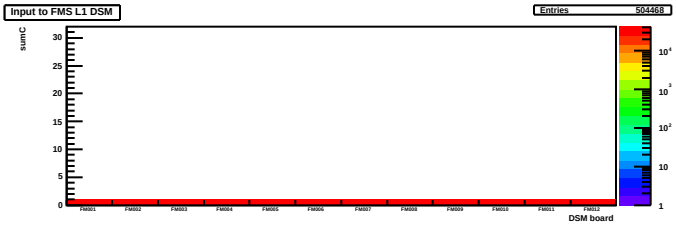

Input to FMS L0 DSM
Entries 336312
HT ADC - simulated
QT board

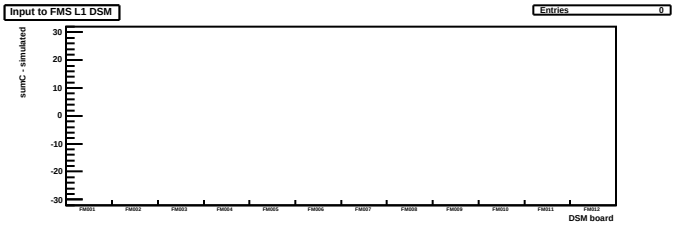

Input to FMS L0 DSM
Entries 2017872
HT ID
QT board

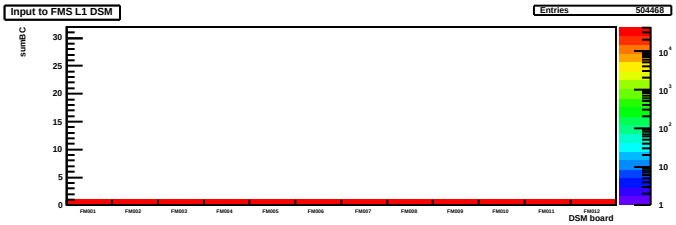

Input to FMS L0 DSM
Entries 336312
HT ID - simulated
QT board

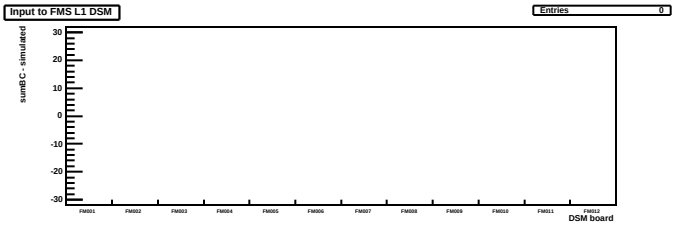

Input to FMS L1 DSM
Entries 504468
sumD
DSM board

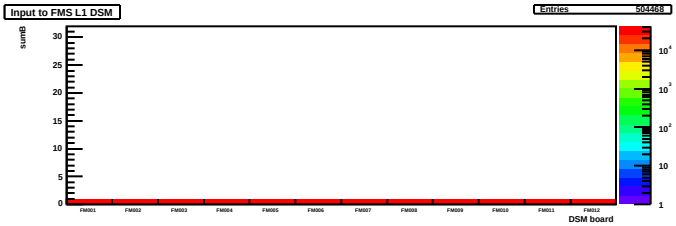

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

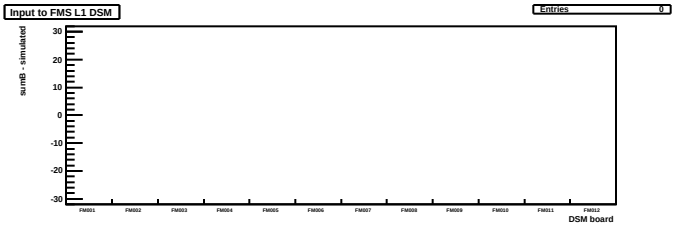

Input to FMS L1 DSM
Entries 504468
sumC
DSM board

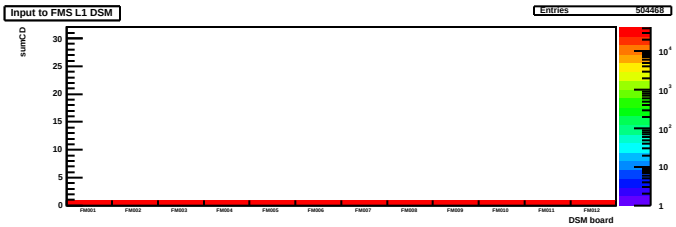

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

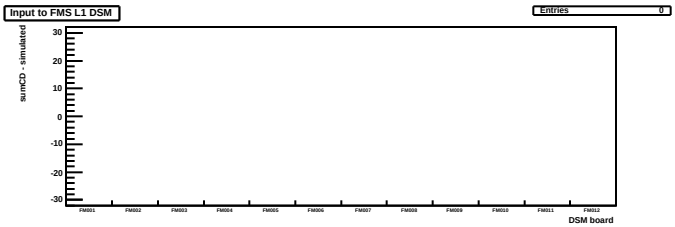

Input to FMS L1 DSM
Entries 504468
sumBC
DSM board

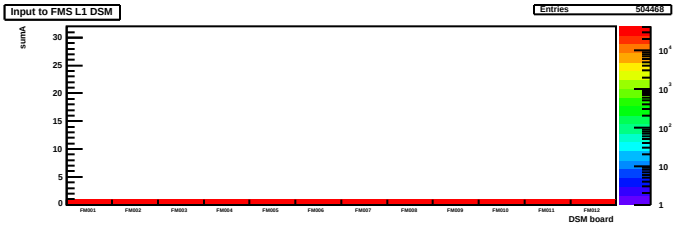

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

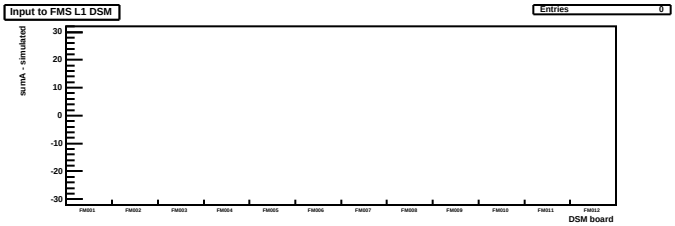

Input to FMS L1 DSM
Entries 504468
sumB
DSM board

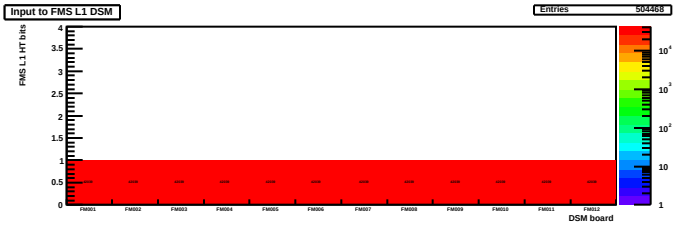

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

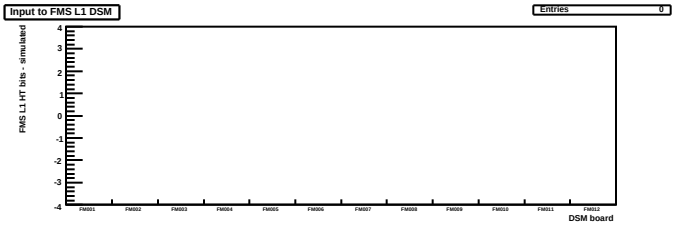

Input to FMS L1 DSM
Entries 504468
sumCD
DSM board

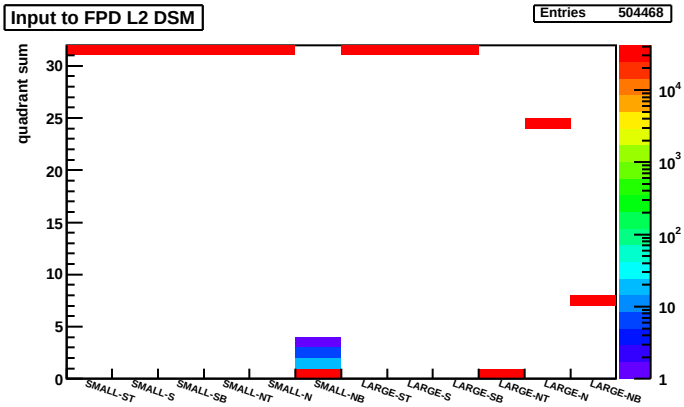

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

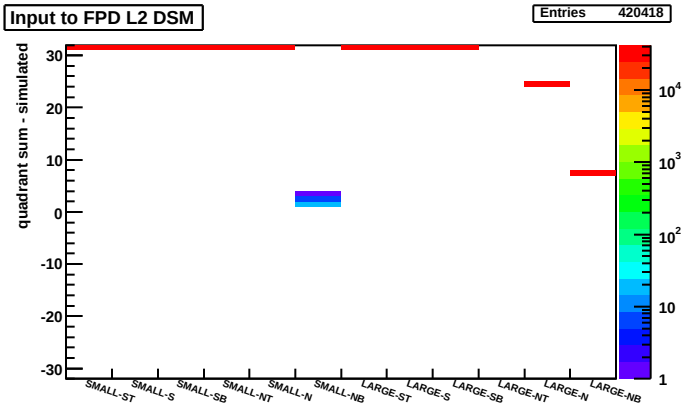

Input to FMS L1 DSM
Entries 504468
sumA
DSM board

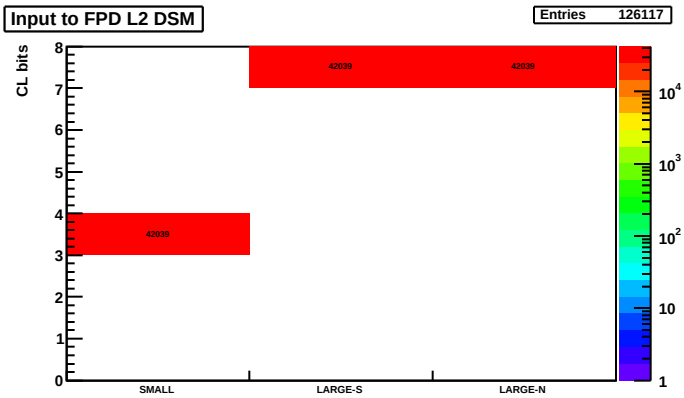

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

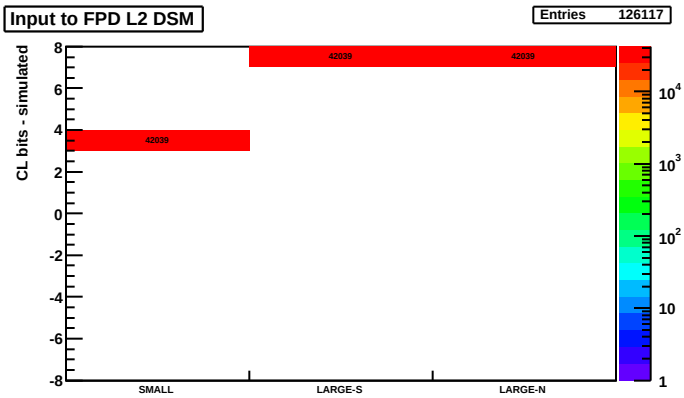

Input to FMS L1 DSM
Entries 504468
FMS L1 HT bits
DSM board

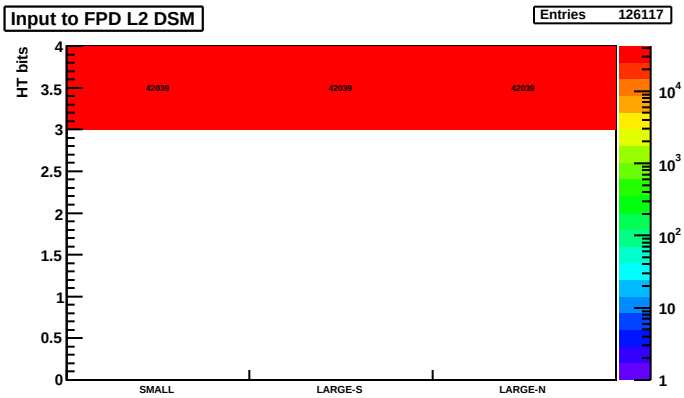

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

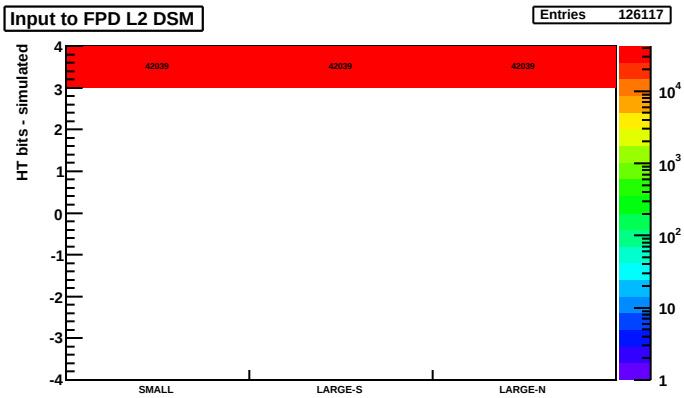

Input to FPD L2 DSM
Entries 504468
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

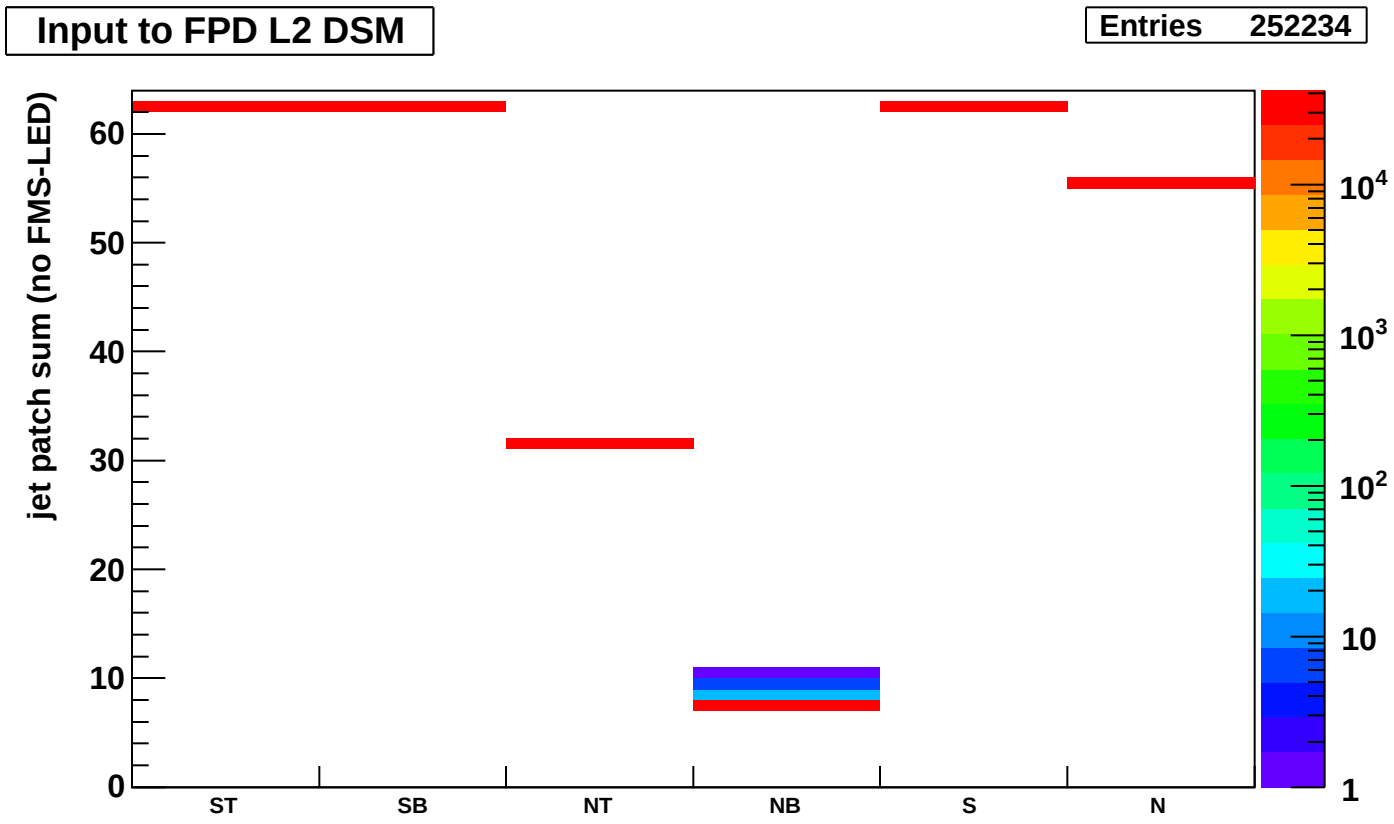

Input to FPD L2 DSM
Entries 420418
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

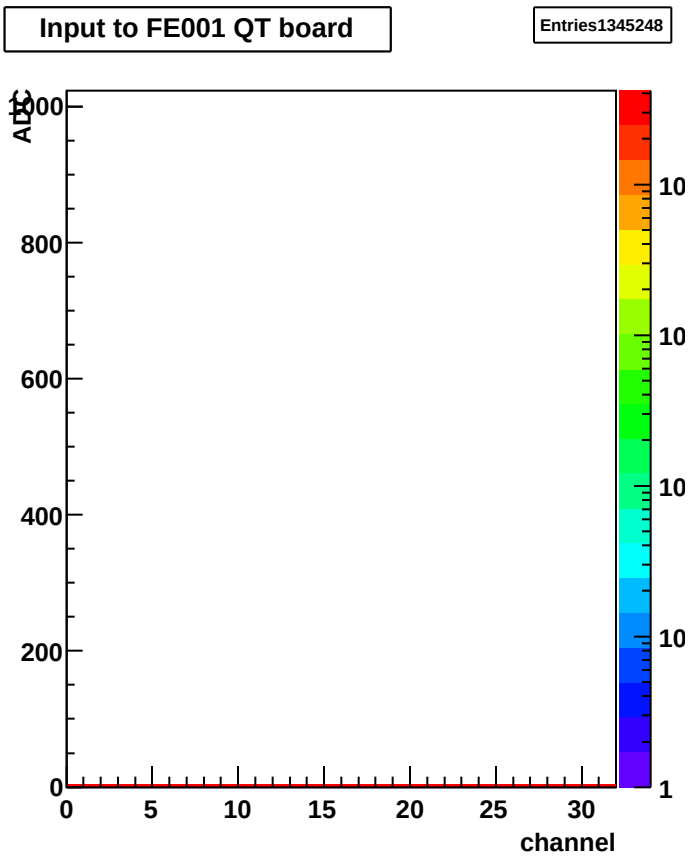

Input to FPD L2 DSM
Entries 126117
CL bits
42039
42039
42039
SMALL
LARGE-S
LARGE-N

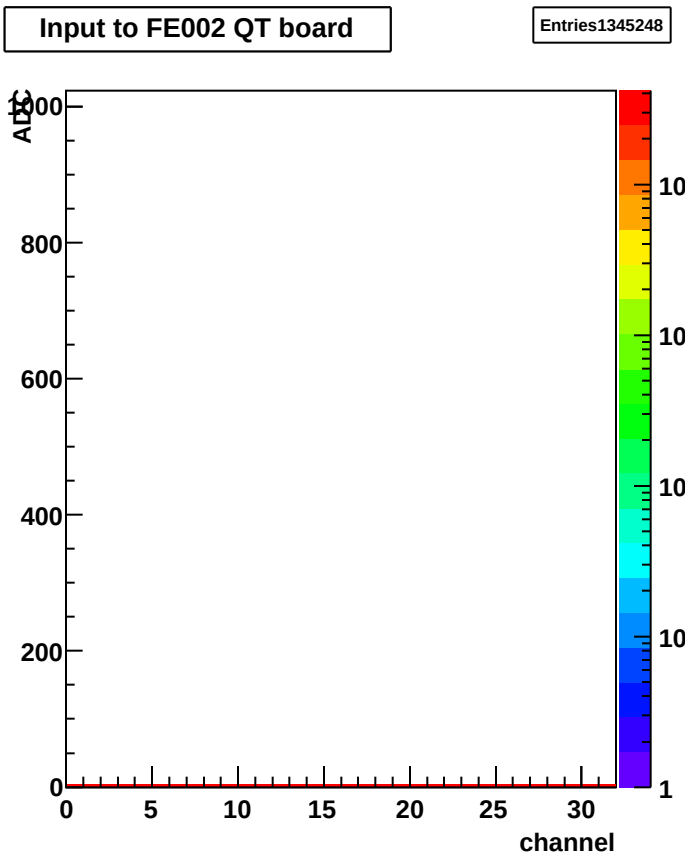

Input to FPD L2 DSM
Entries 126117
CL bits - simulated
42039
42039
42039
SMALL
LARGE-S
LARGE-N

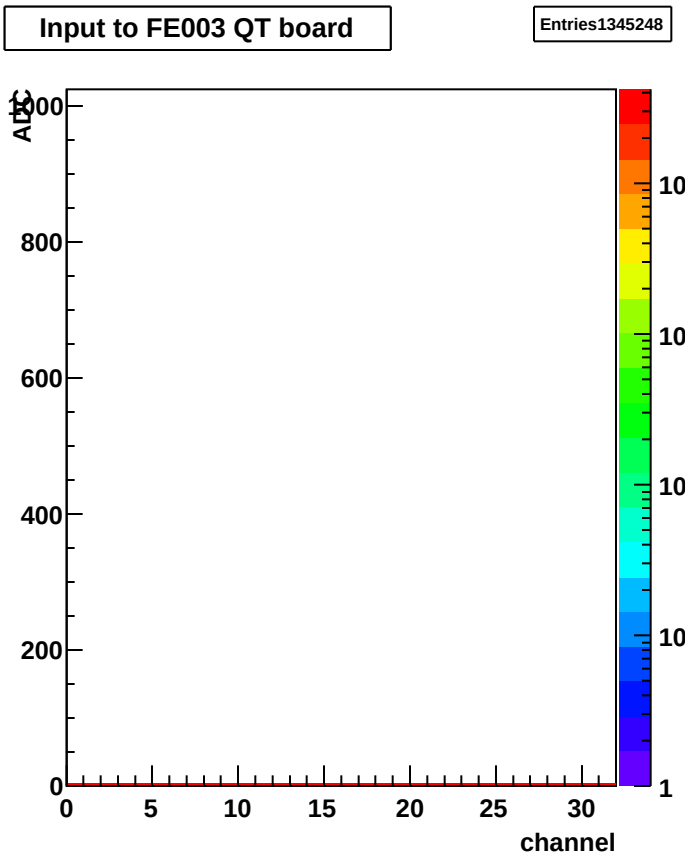

Input to FPD L2 DSM
Entries 126117
HT bits
42039
42039
42039
SMALL
LARGE-S
LARGE-N

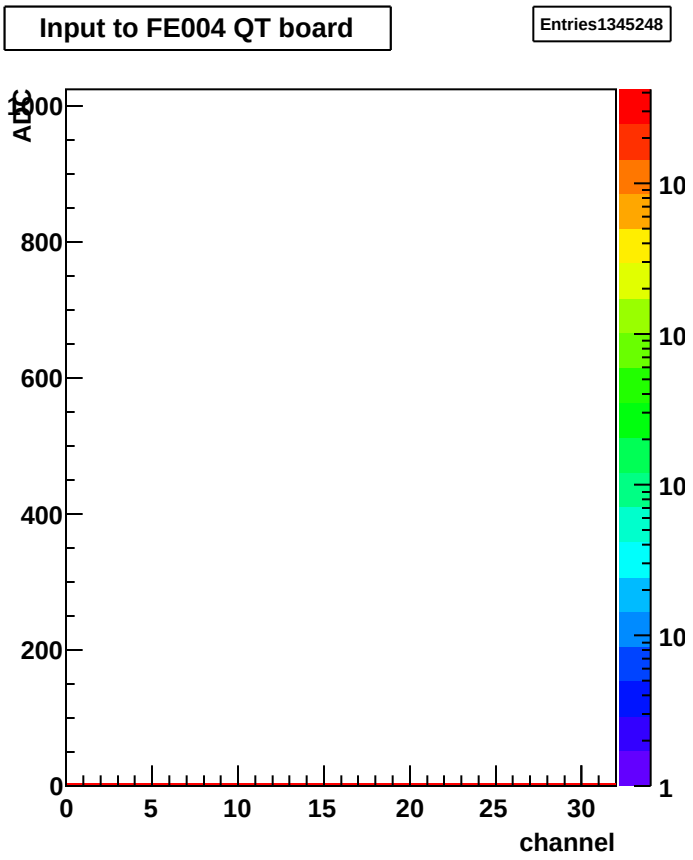

Input to FPD L2 DSM
Entries 126117
HT bits - simulated
42039
42039
42039
SMALL
LARGE-S
LARGE-N

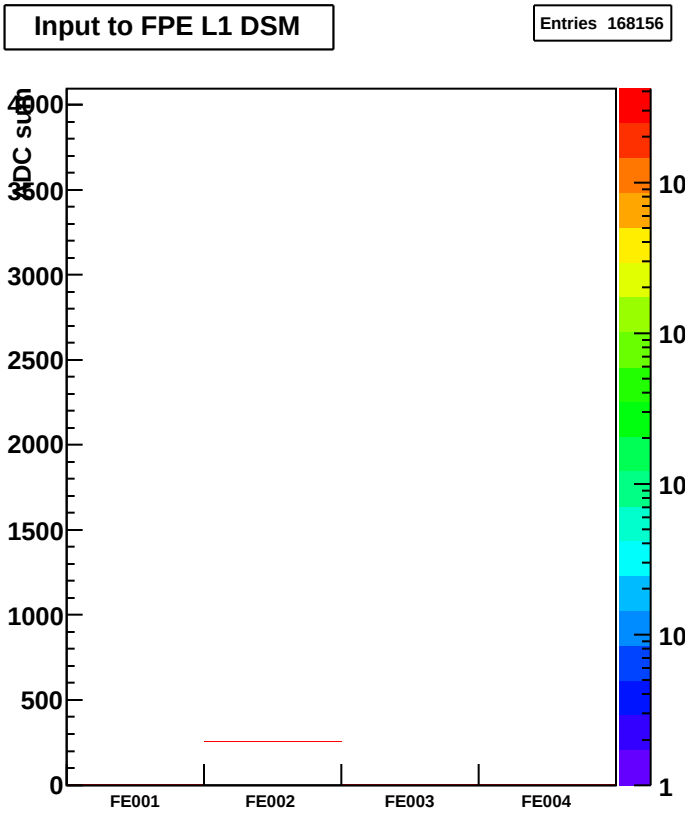

Input to FPD L2 DSM
Entries 252234
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

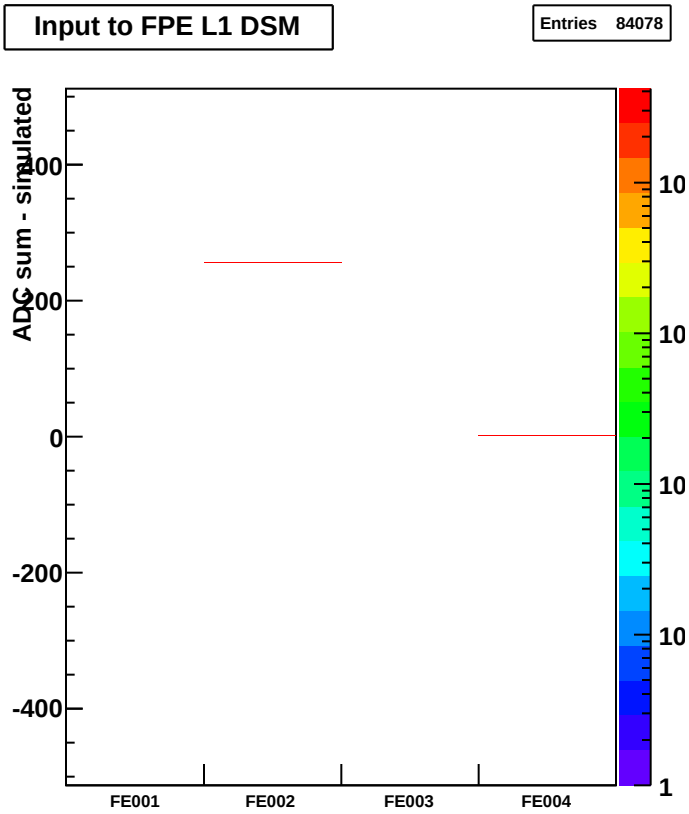

Input to FE001 QT board
Entries1345248
ADC
channel

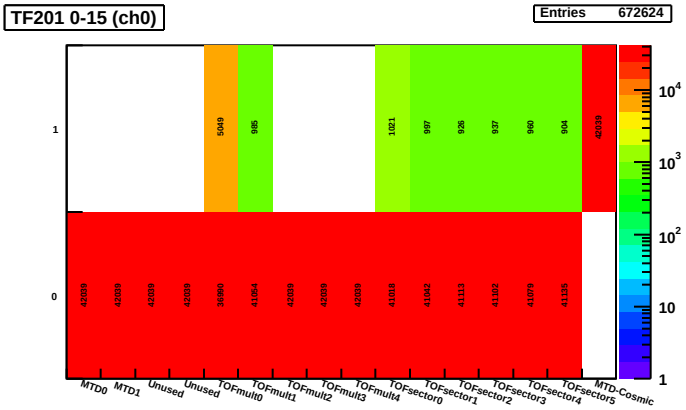

Input to FE002 QT board
Entries1345248
ADC
channel

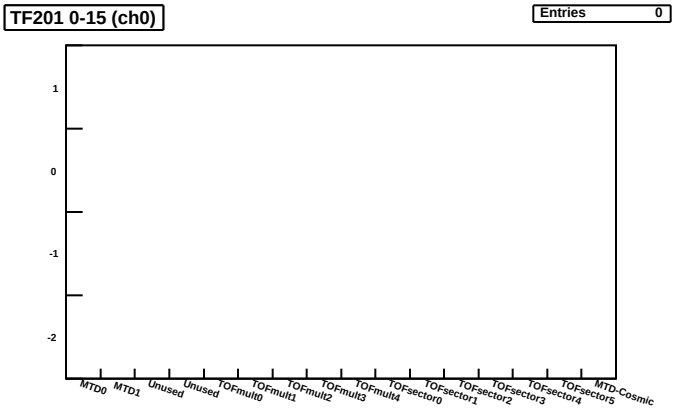

Input to FE003 QT board
Entries1345248
ADC
channel

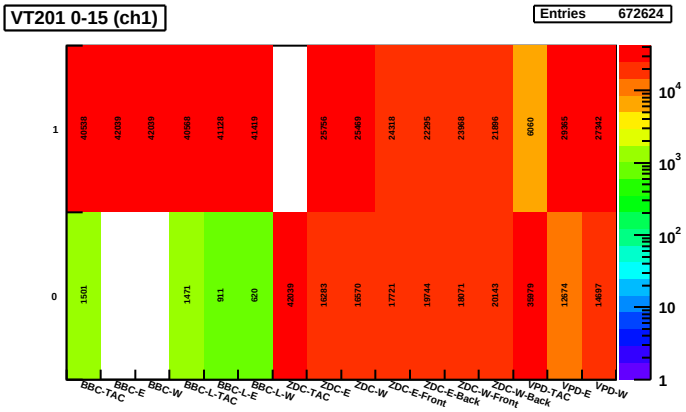

Input to FE004 QT board
Entries1345248
ADC
channel

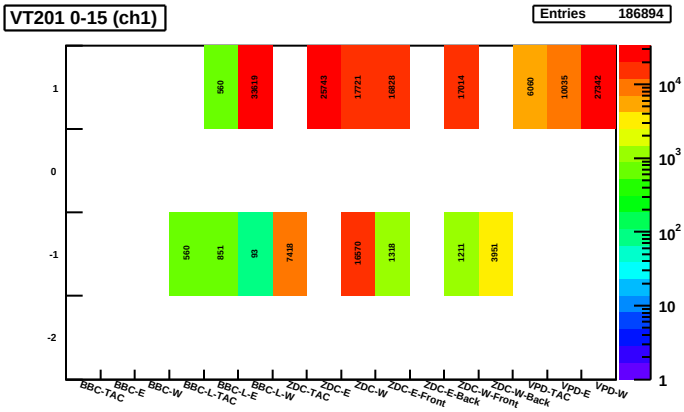

Input to FPE L1 DSM
Entries 168156
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


Input to FPE L1 DSM
Entries 84078
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1


TF201 0-15 (ch0)
Entries 672624
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 672624
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 186894
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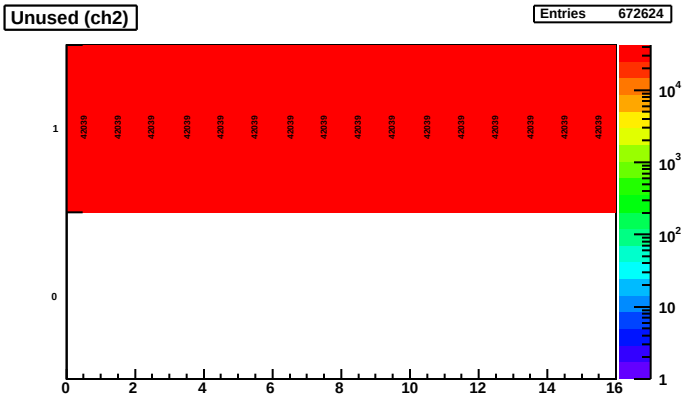
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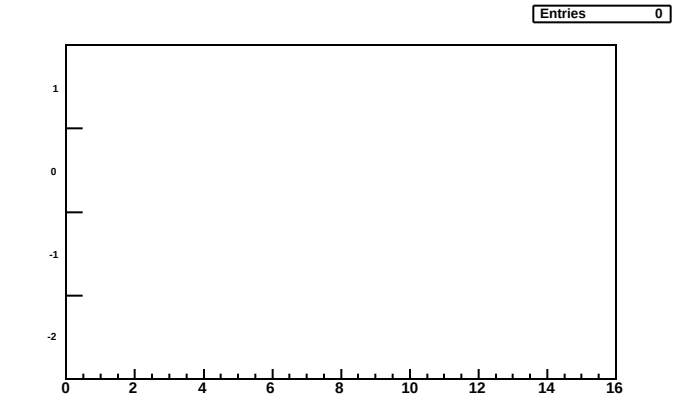
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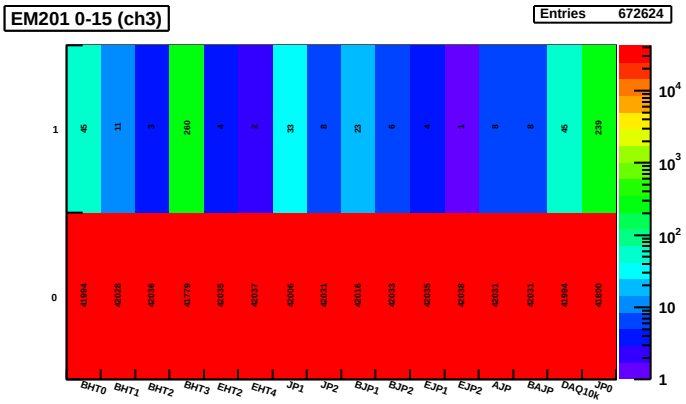
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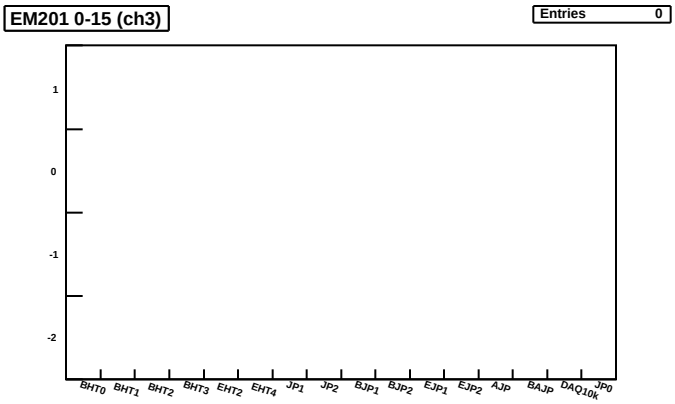
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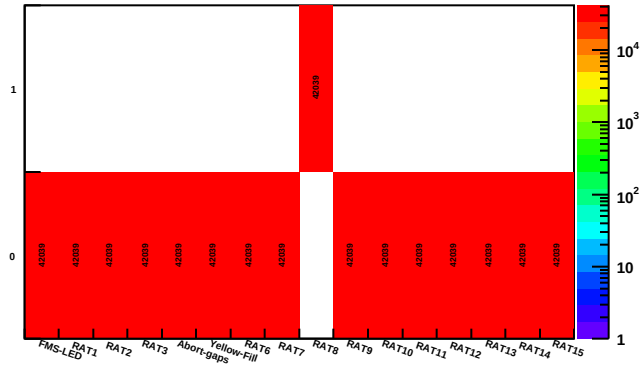
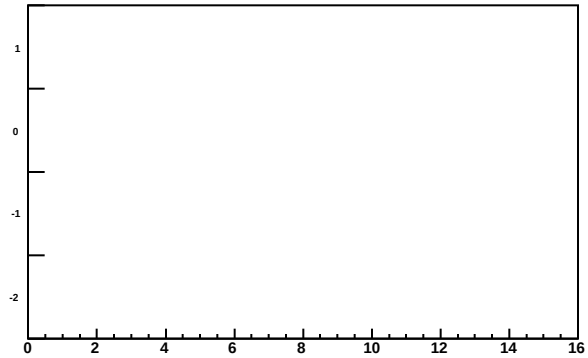
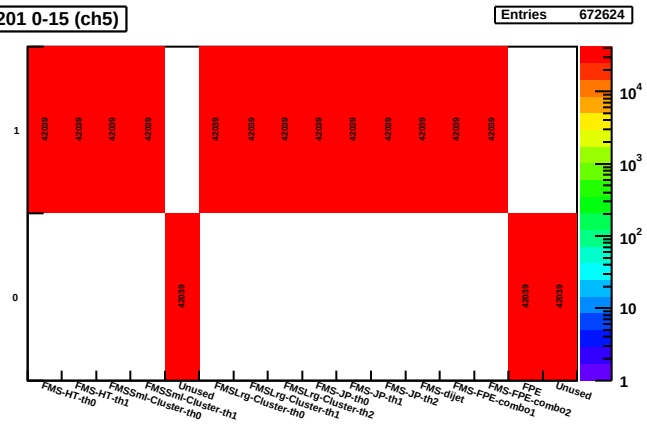
RAT board (ch4)

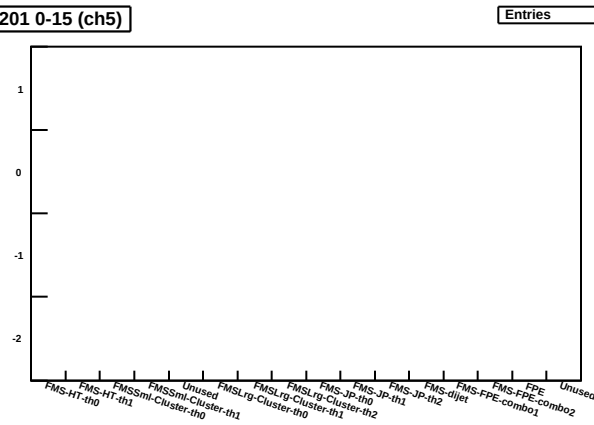




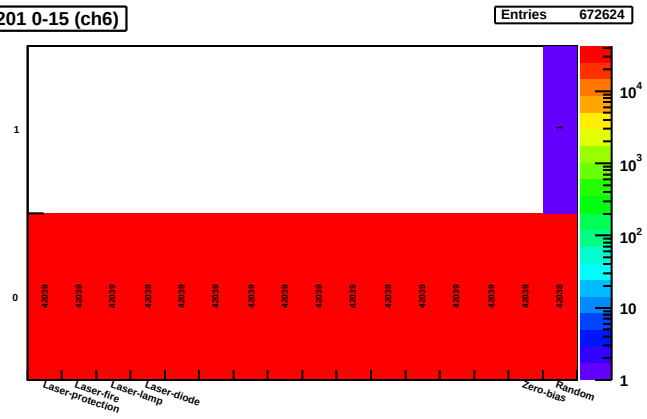
FP201 0-15 (ch5)

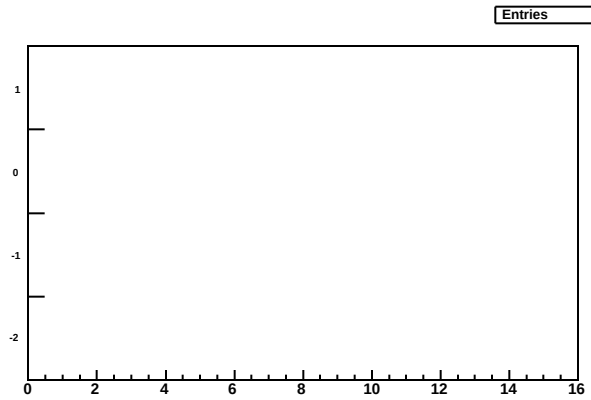
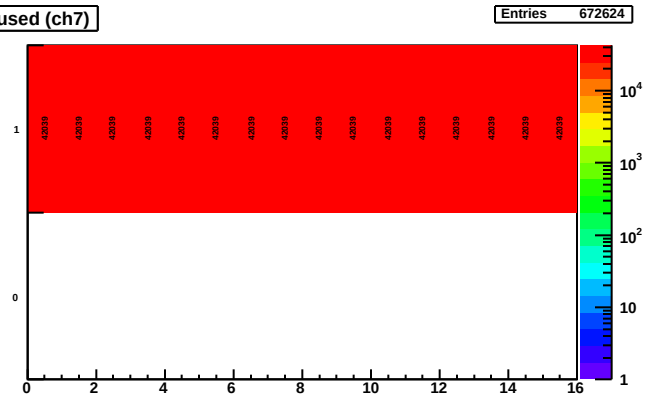
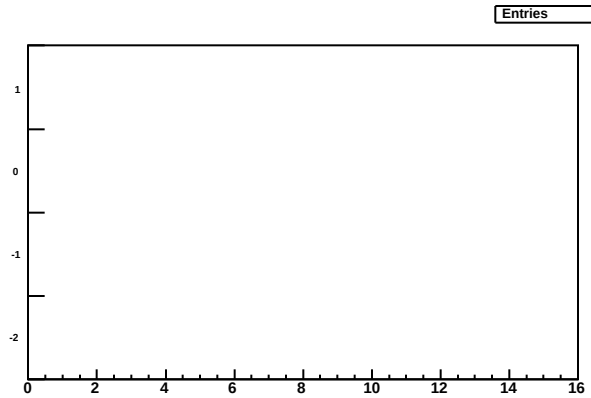


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)