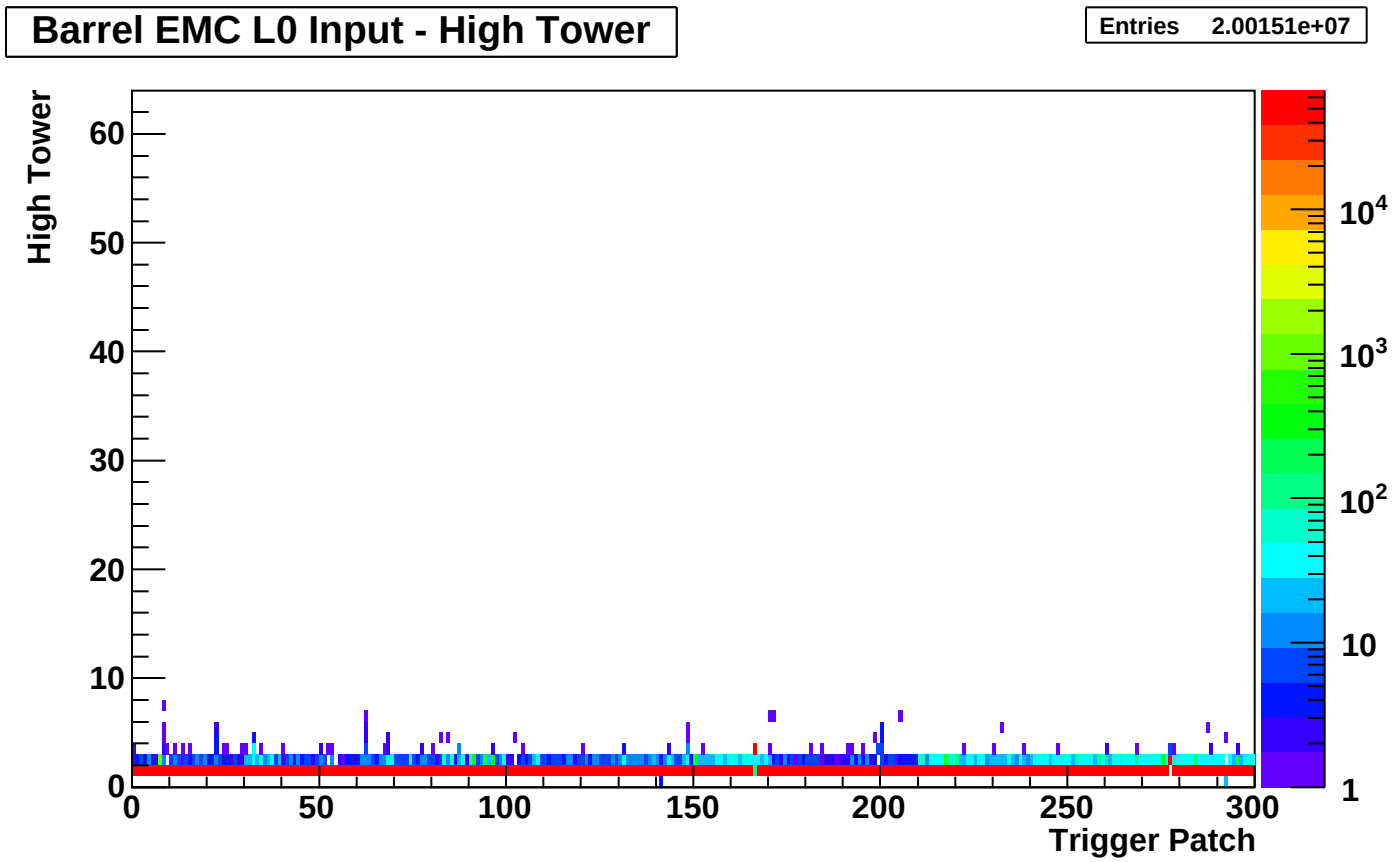
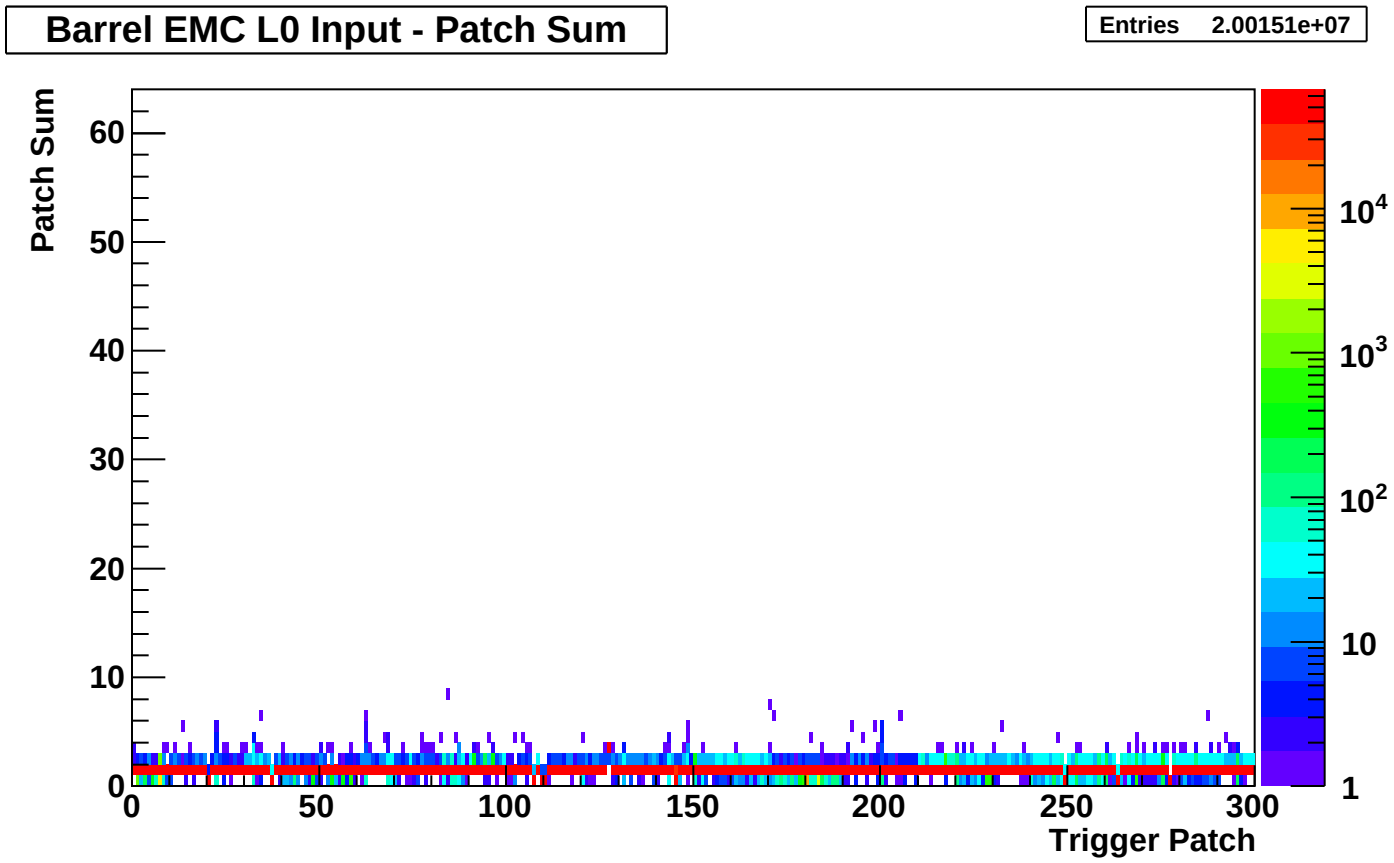
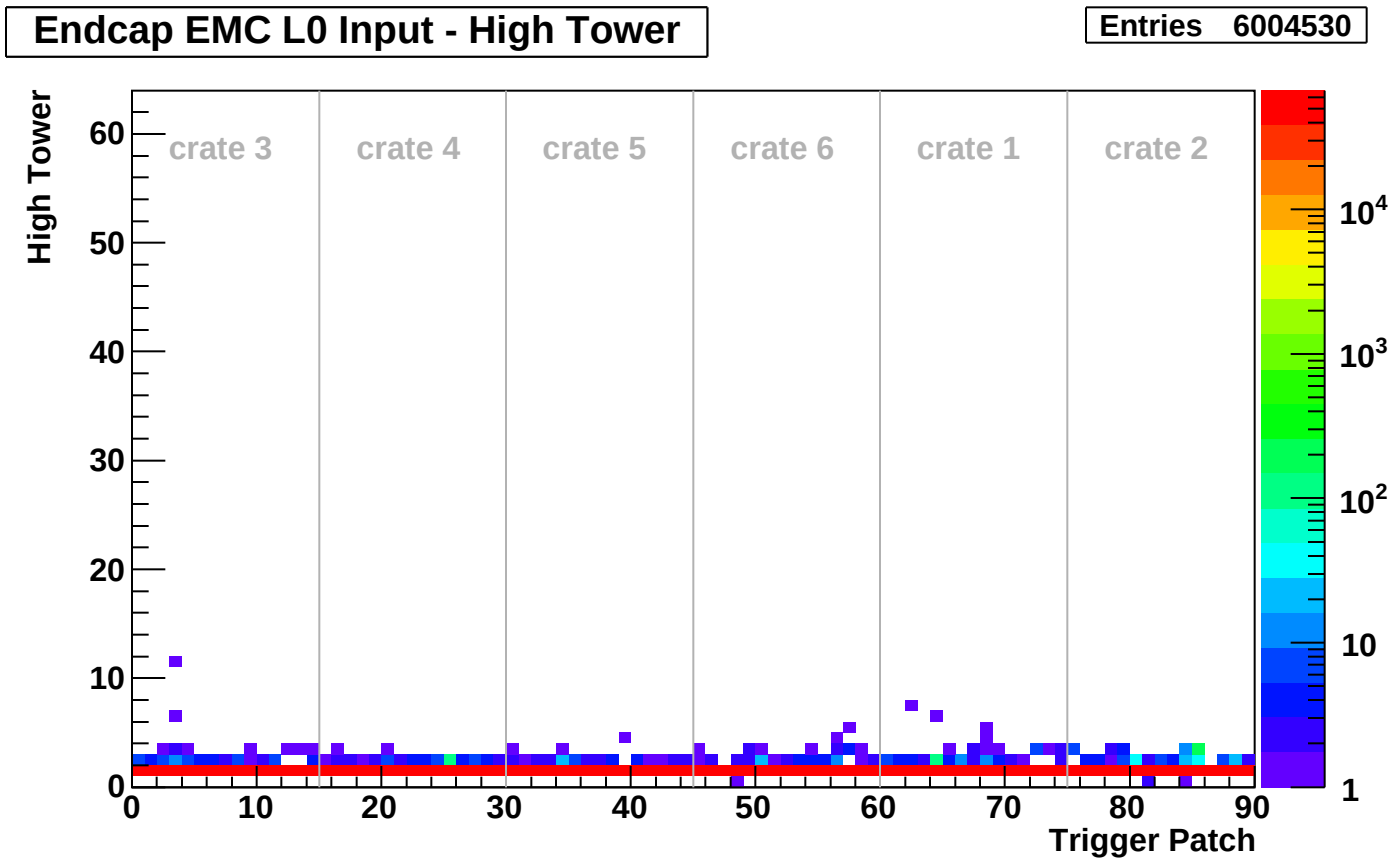
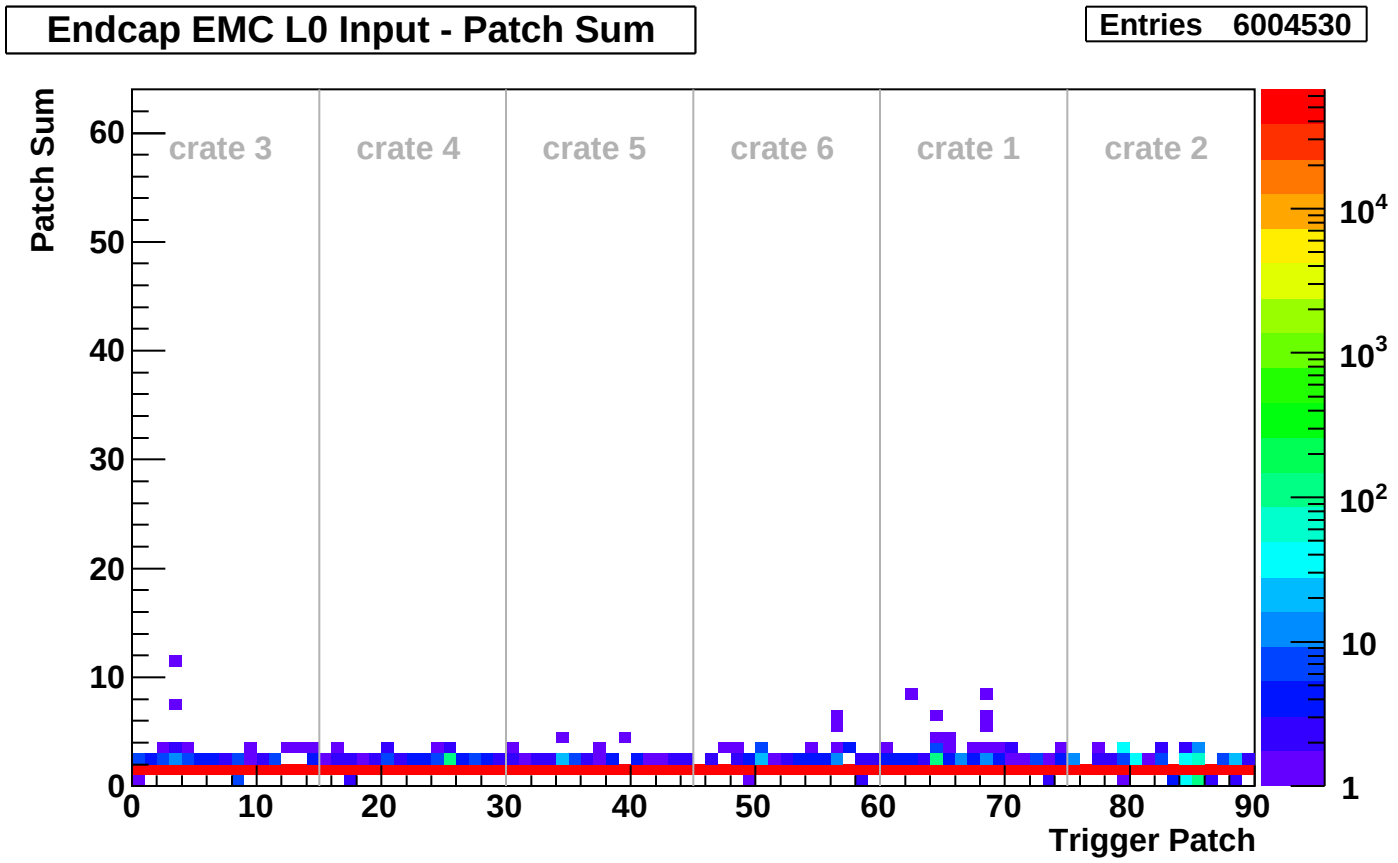
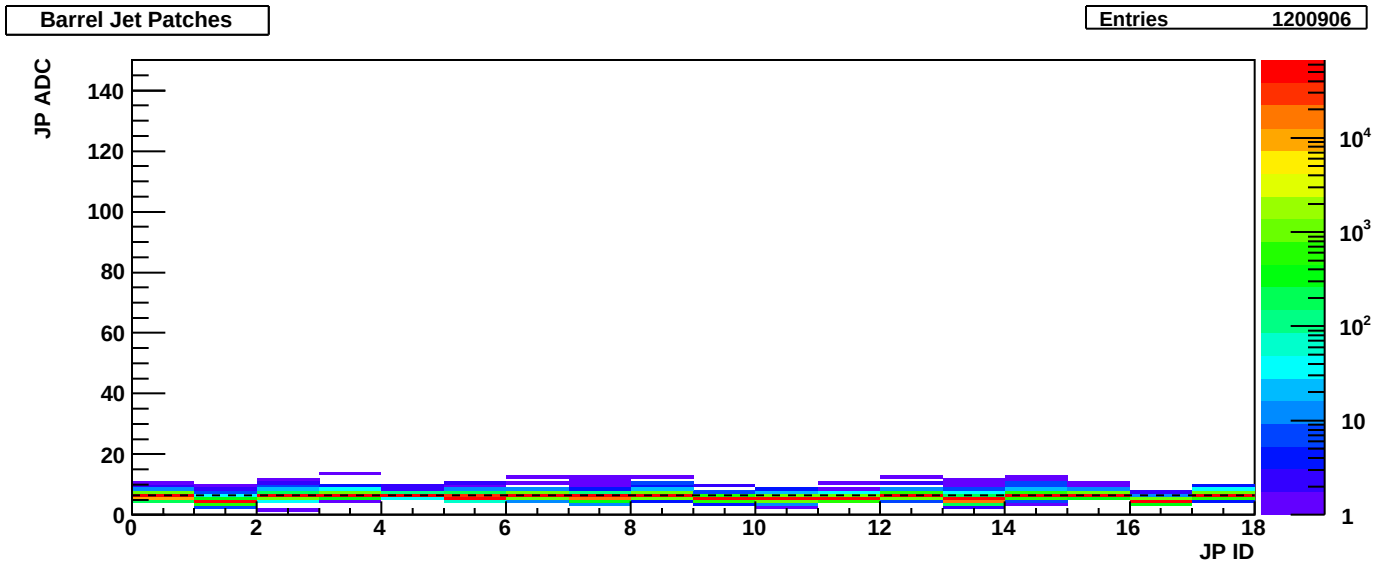
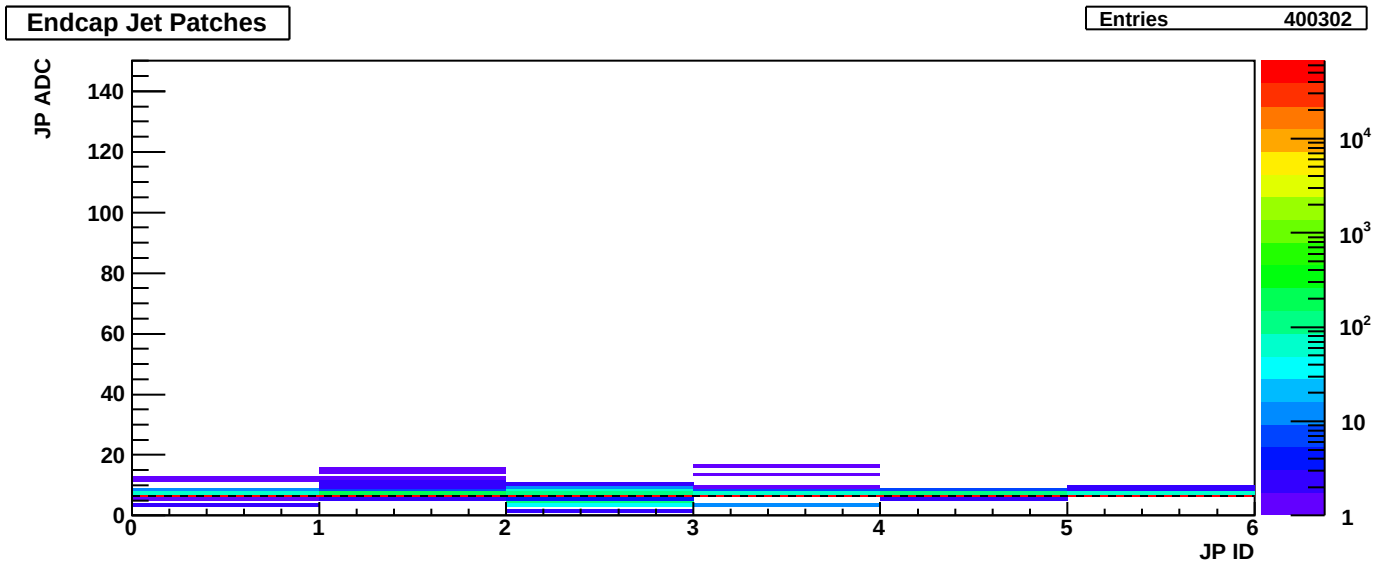

Barrel EMC L0 Input - High Tower
Entries 2.00151e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

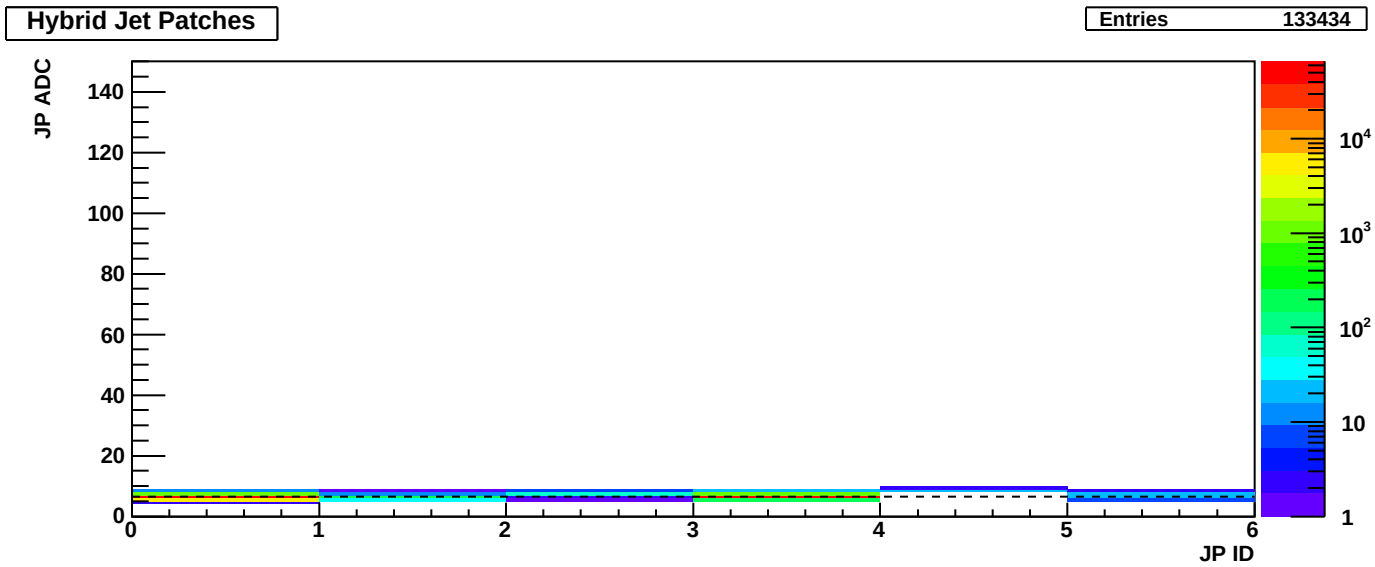

Barrel EMC L0 Input - Patch Sum
Entries 2.00151e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

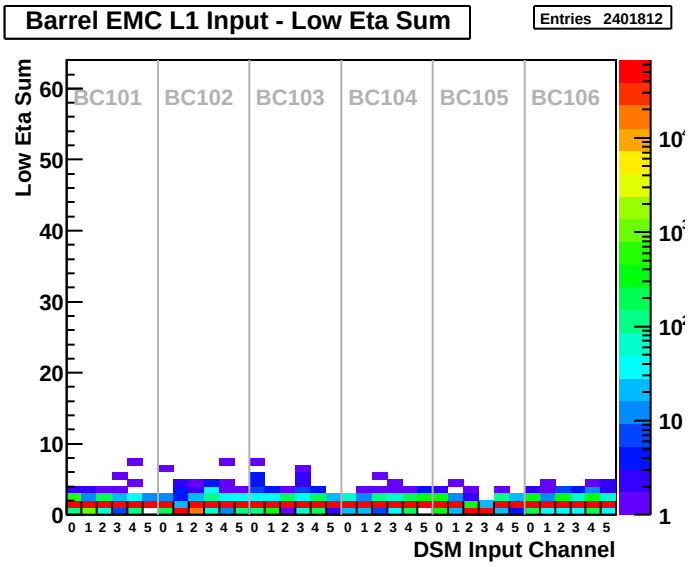

Endcap EMC L0 Input - High Tower
Entries 6004530
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

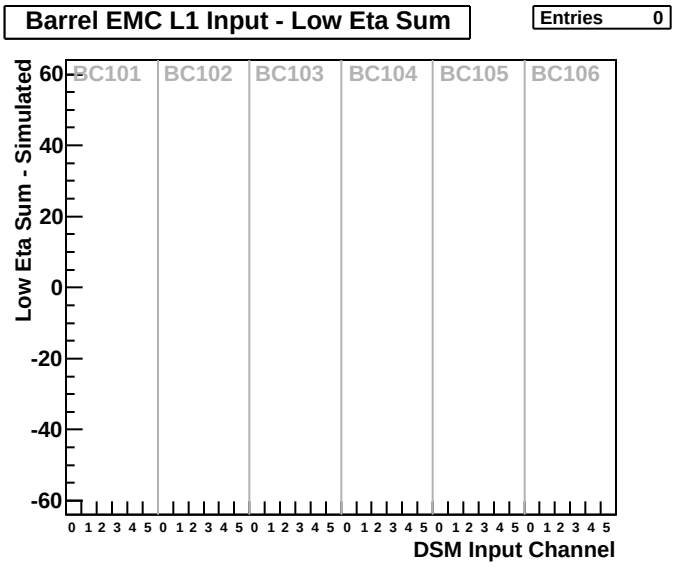

Endcap EMC L0 Input - Patch Sum
Entries 6004530
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

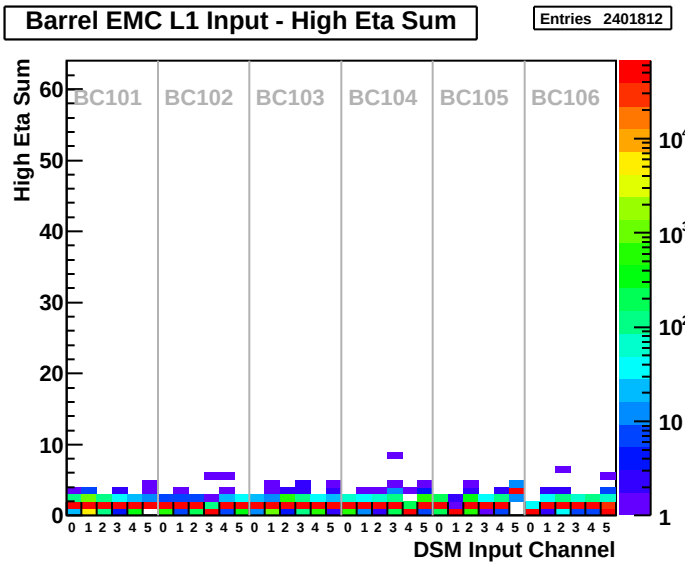

Barrel Jet Patches
Entries 1200906
JP ADC
JP ID

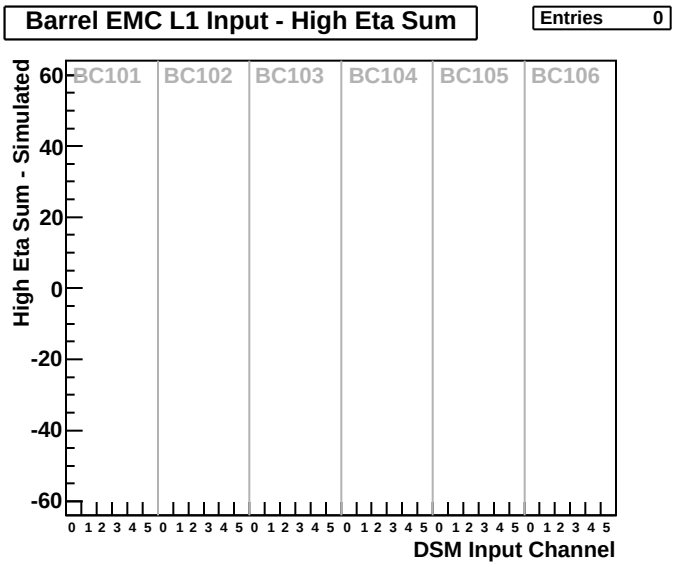

Endcap Jet Patches
Entries 400302
JP ADC
JP ID

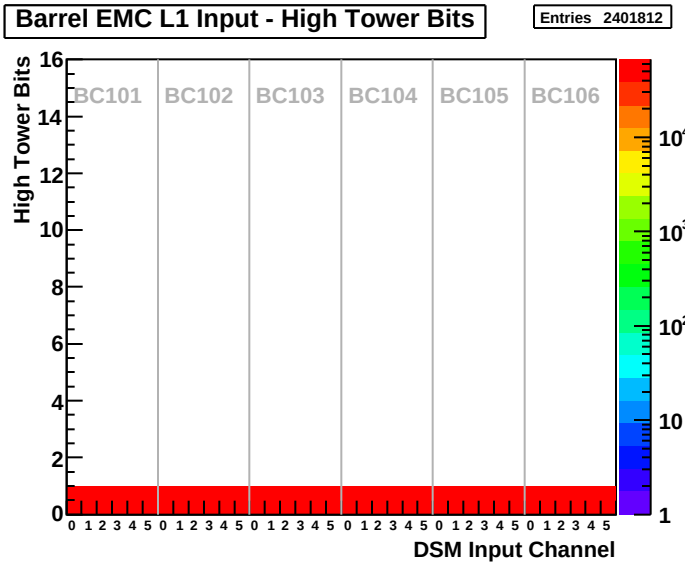

Hybrid Jet Patches
Entries 133434
JP ADC
JP ID

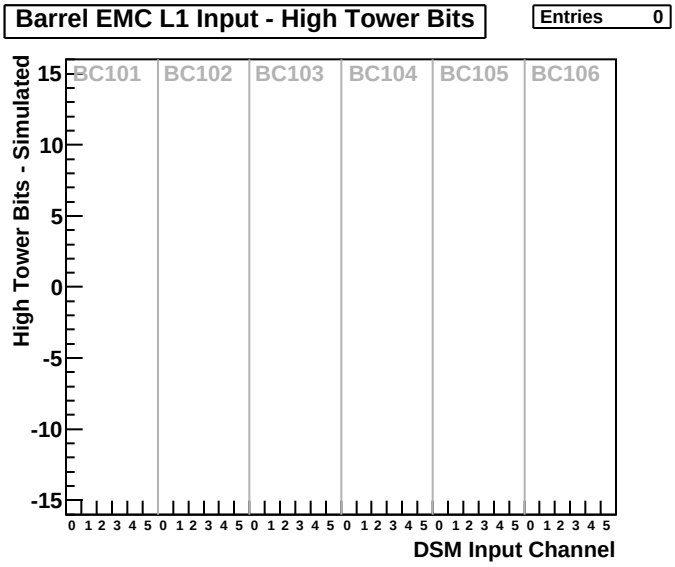

Barrel EMC L1 Input - Low Eta Sum
Entries 2401812
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

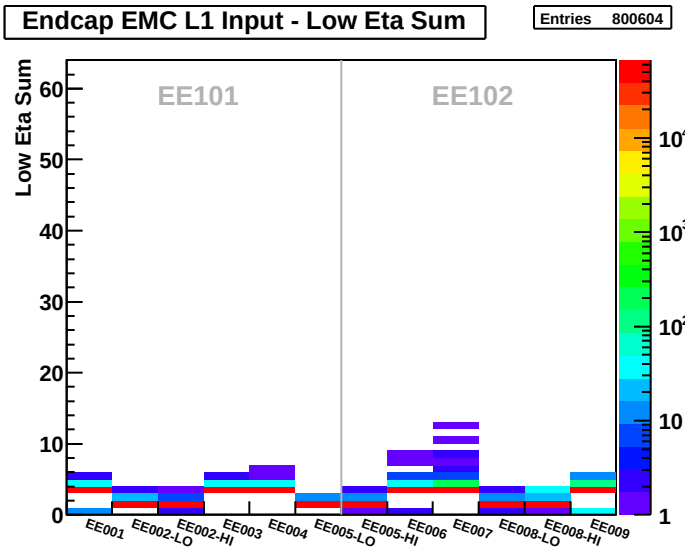

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

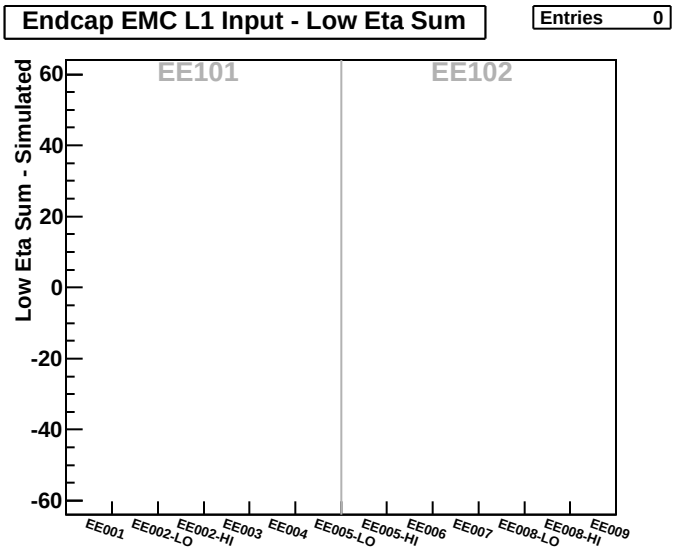

Barrel EMC L1 Input - High Eta Sum
Entries 2401812
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

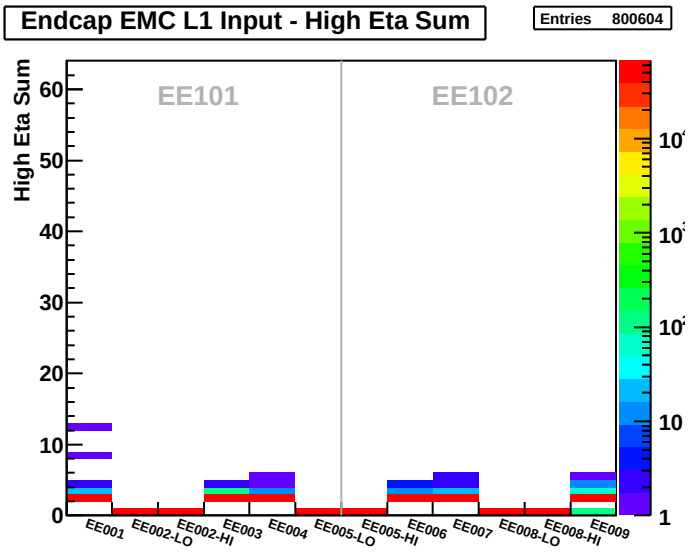

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

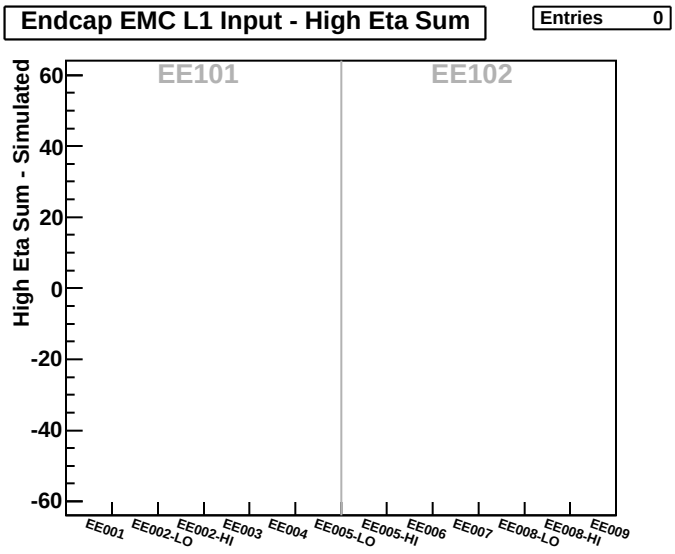

Barrel EMC L1 Input - High Tower Bits
Entries 2401812
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

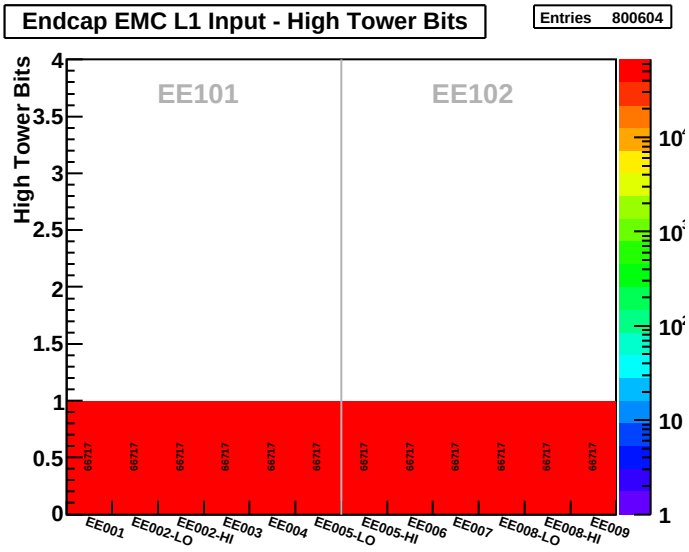

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

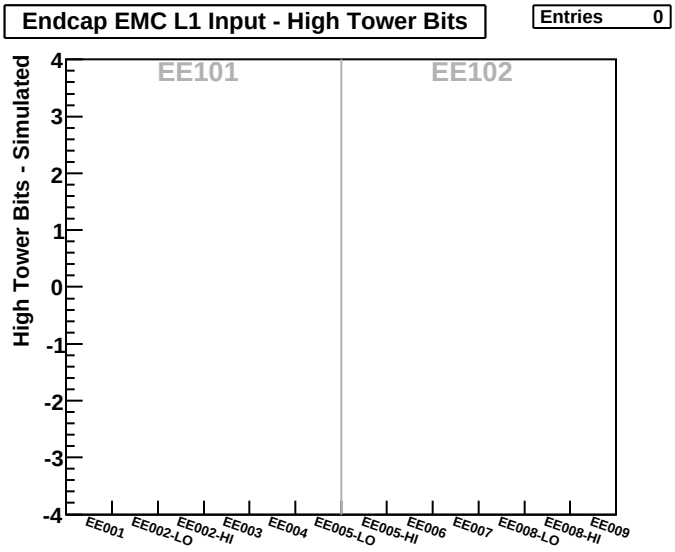

Endcap EMC L1 Input - Low Eta Sum
Entries 800604
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

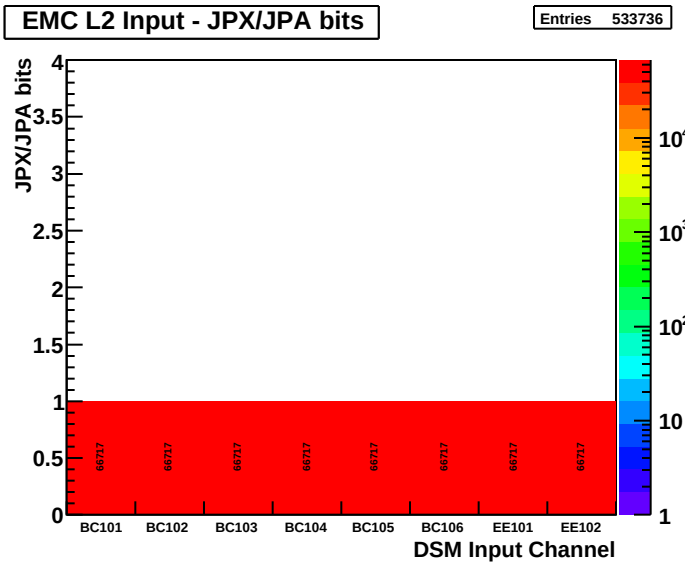

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

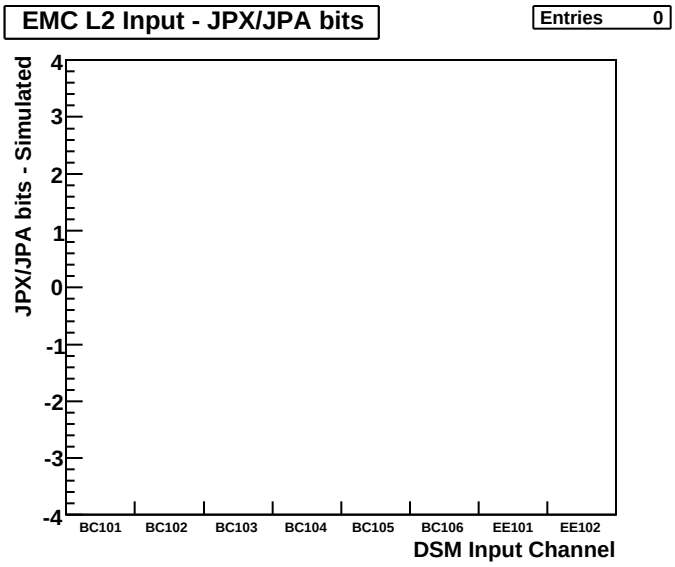

Endcap EMC L1 Input - High Eta Sum
Entries 800604
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

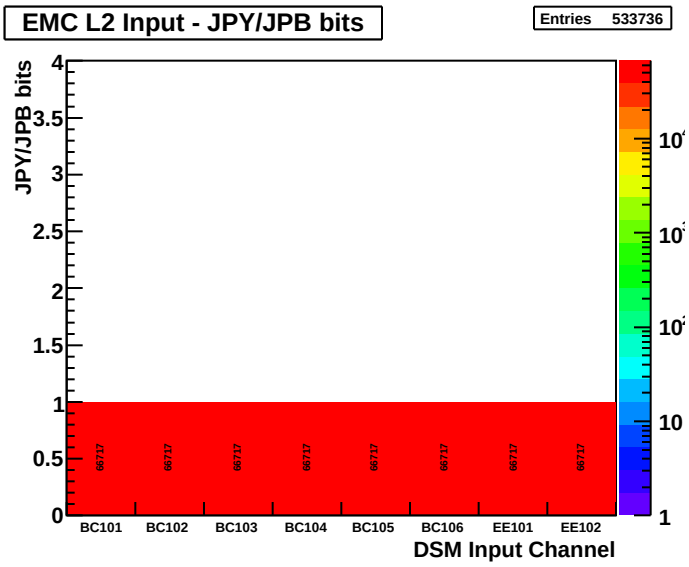

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

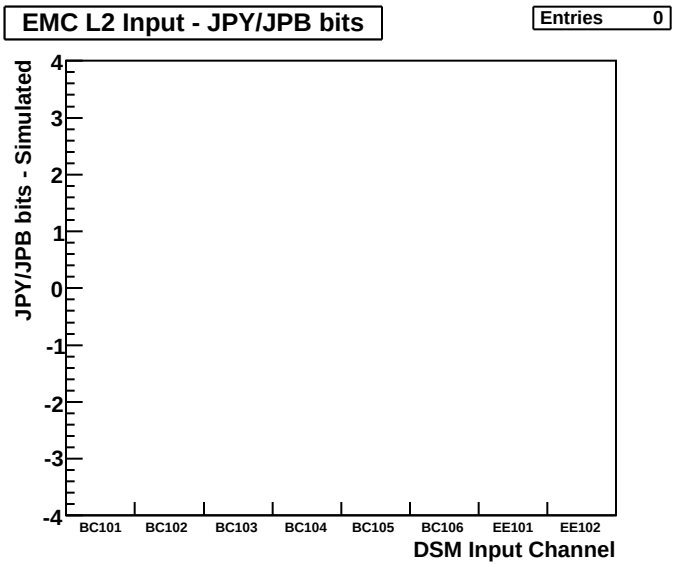

Endcap EMC L1 Input - High Tower Bits
Entries 800604
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

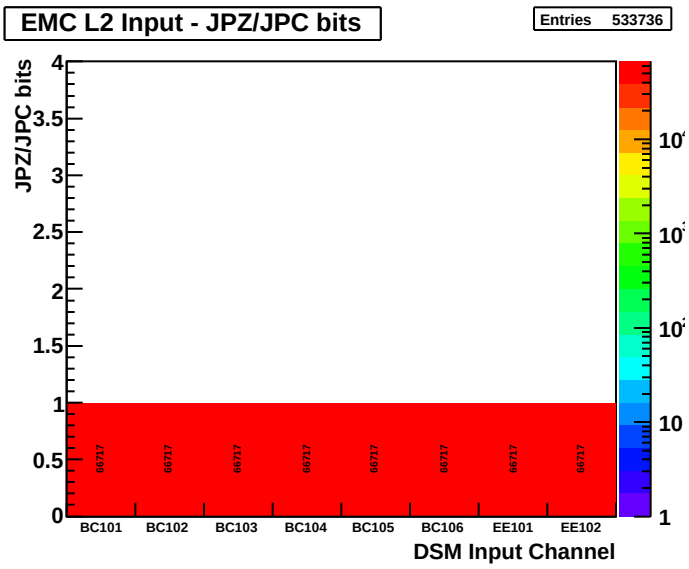

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

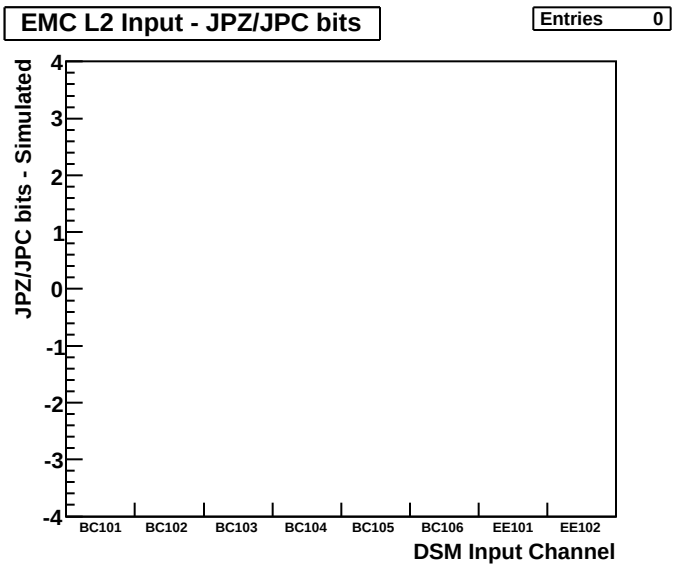

EMC L2 Input - JPX/JPA bits
Entries 533736
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
66717

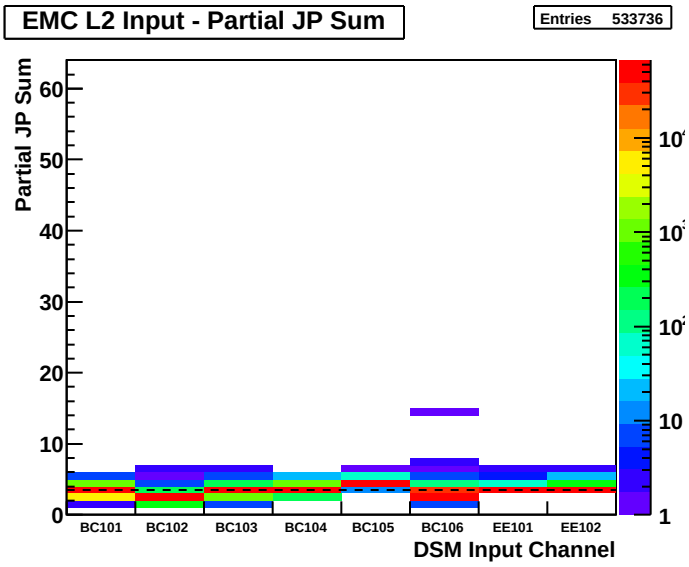

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

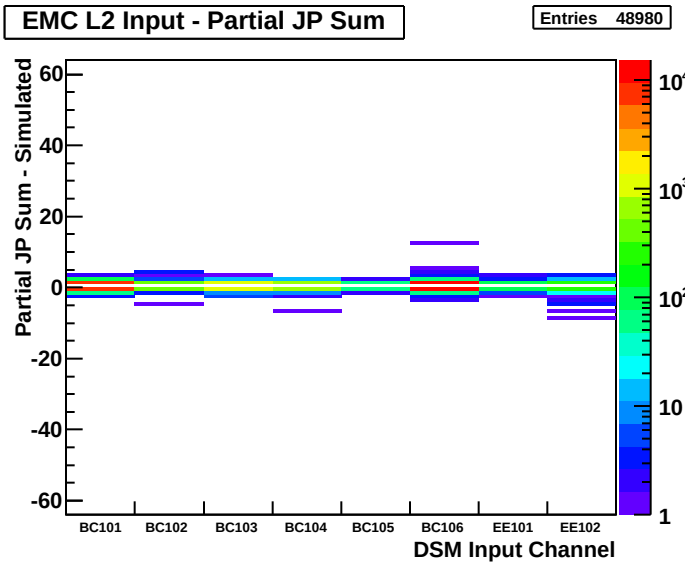

EMC L2 Input - JPY/JPB bits
Entries 533736
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
66717

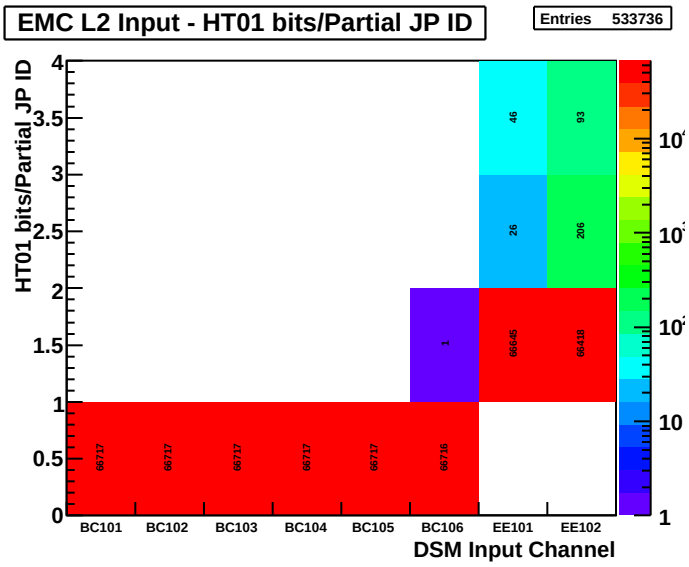

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

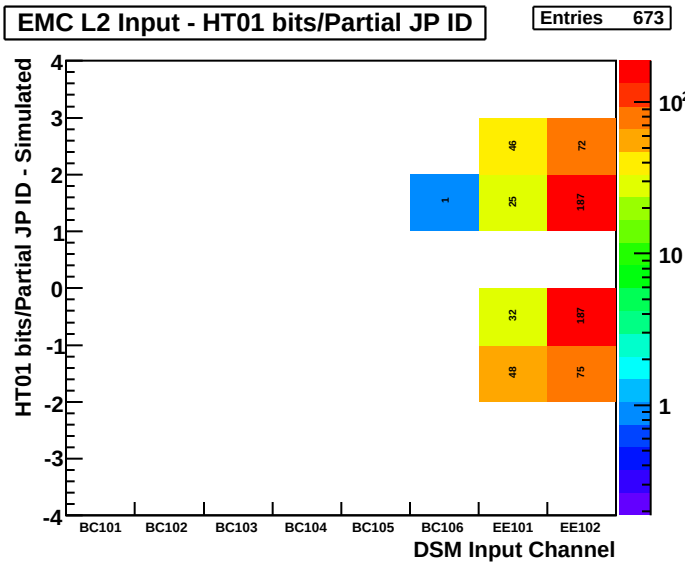

EMC L2 Input - JPZ/JPC bits
Entries 533736
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
66717

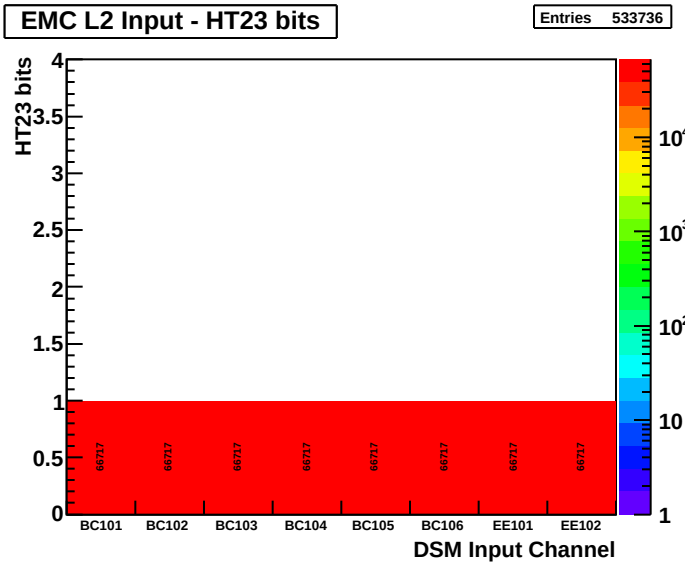

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

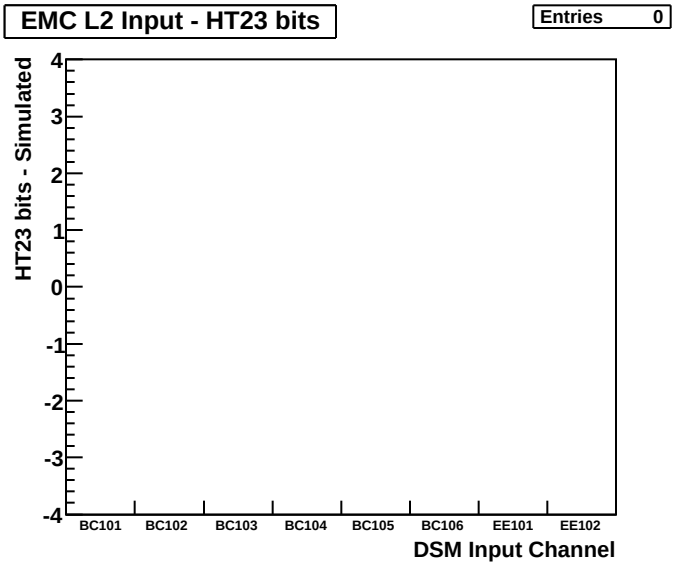

EMC L2 Input - Partial JP Sum
Entries 533736
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

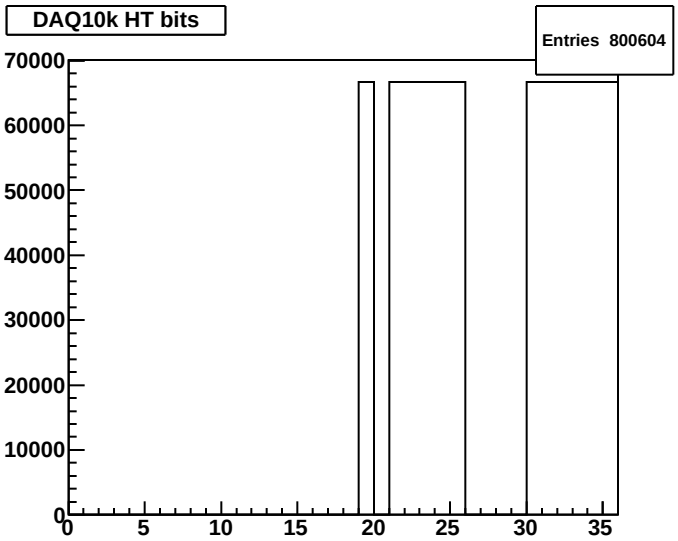

EMC L2 Input - Partial JP Sum
Entries 48980
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

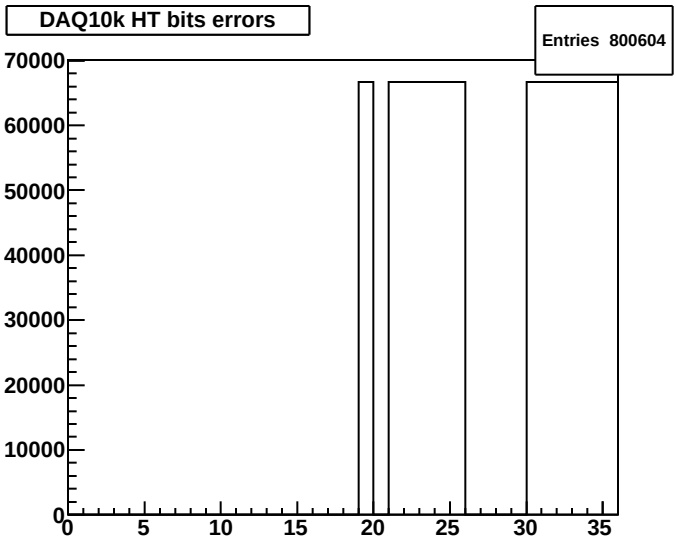

EMC L2 Input - HT01 bits/Partial JP ID
Entries 533736
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

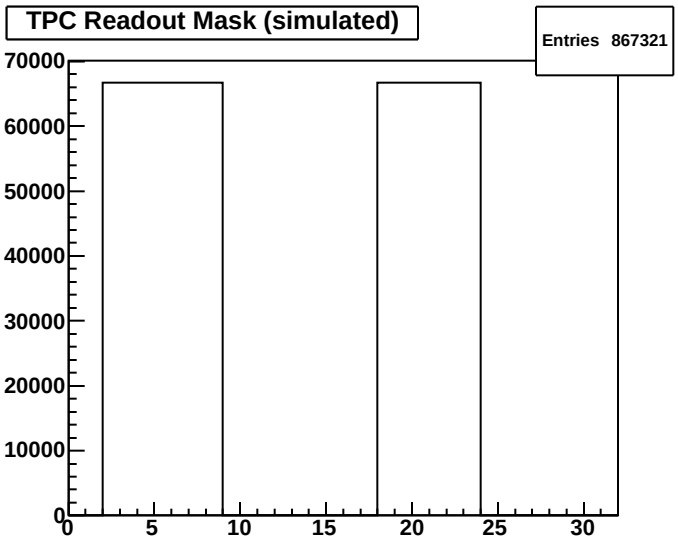

EMC L2 Input - HT01 bits/Partial JP ID
Entries 673
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

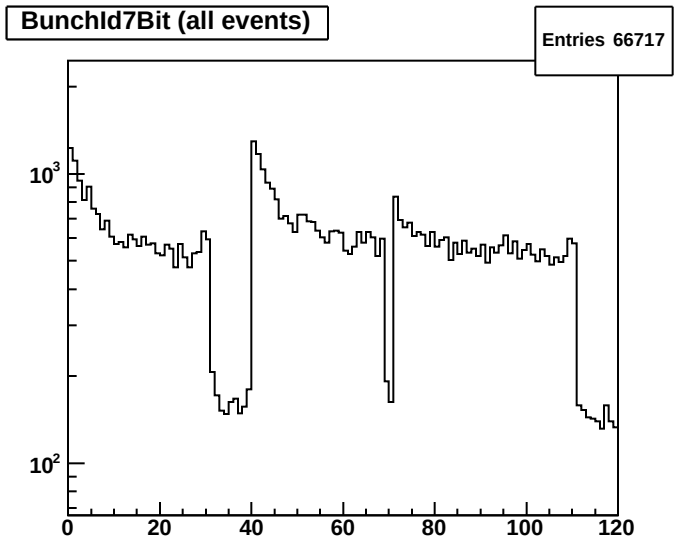

EMC L2 Input - HT23 bits
Entries 533736
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

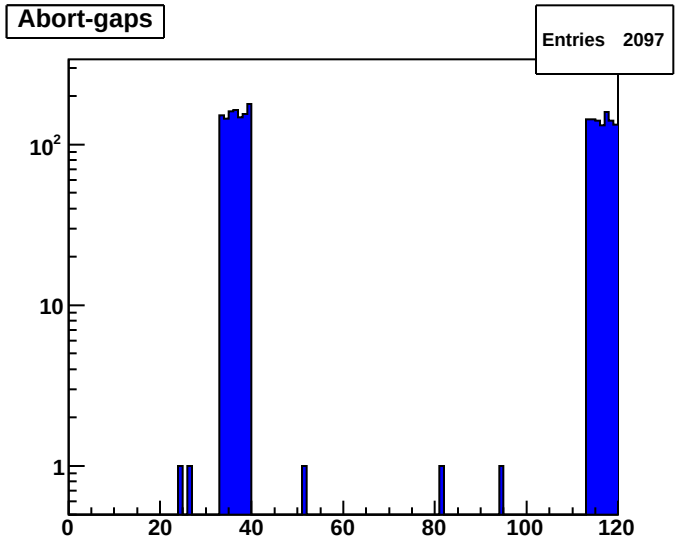

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

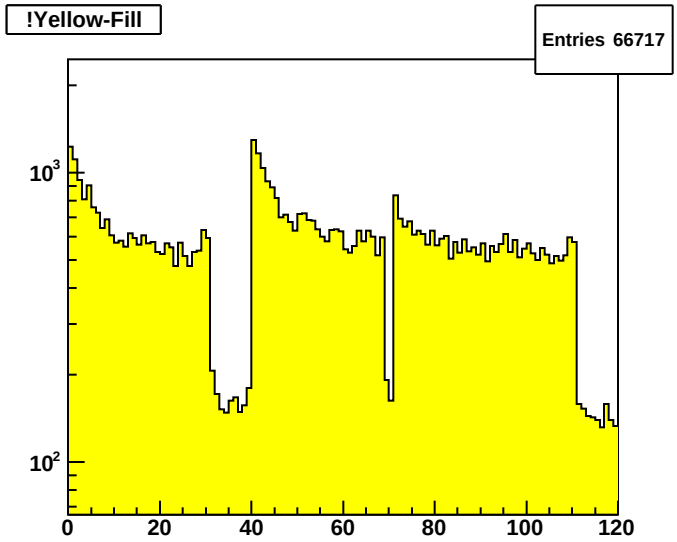

DAQ10k HT bits
Entries 800604
70000
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

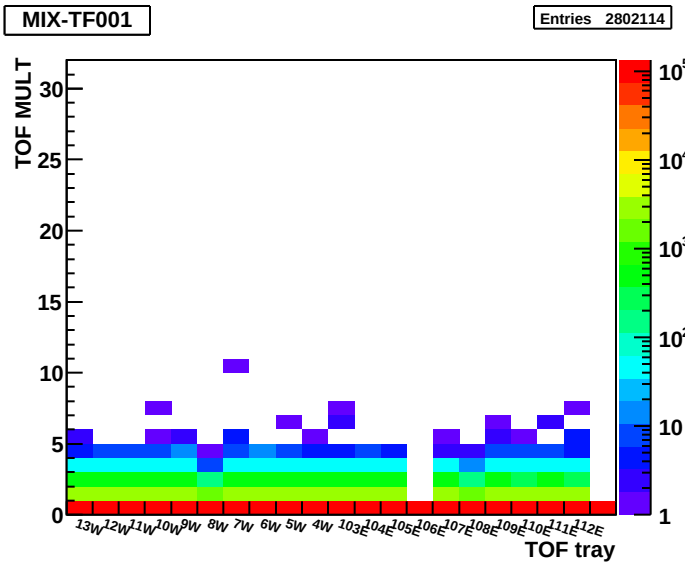

DAQ10k HT bits errors
Entries 800604
70000
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

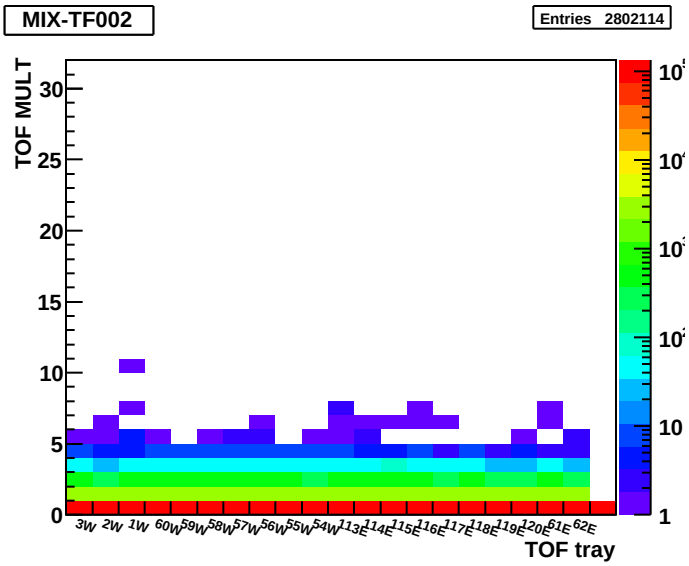

TPC Readout Mask (simulated)
Entries 867321
70000
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30

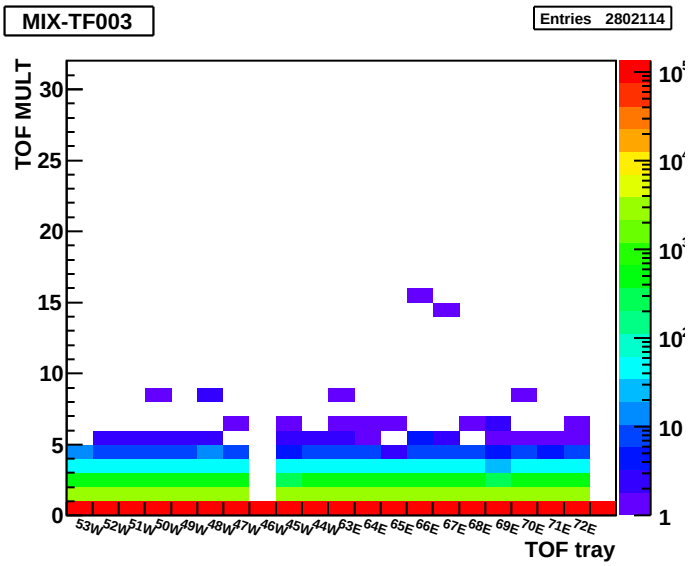

BunchId7Bit (all events)
Entries 66717
10^3
10^2
0 20 40 60 80 100 120

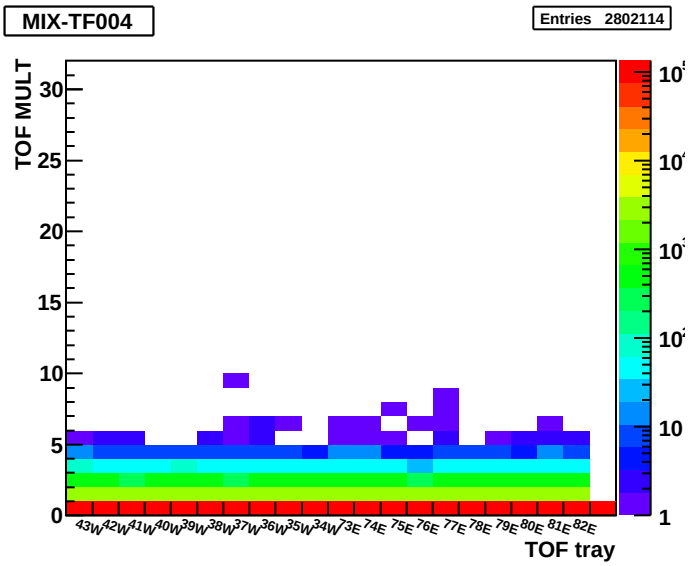

Abort-gaps
Entries 2097
10^2
10
1
0 20 40 60 80 100 120

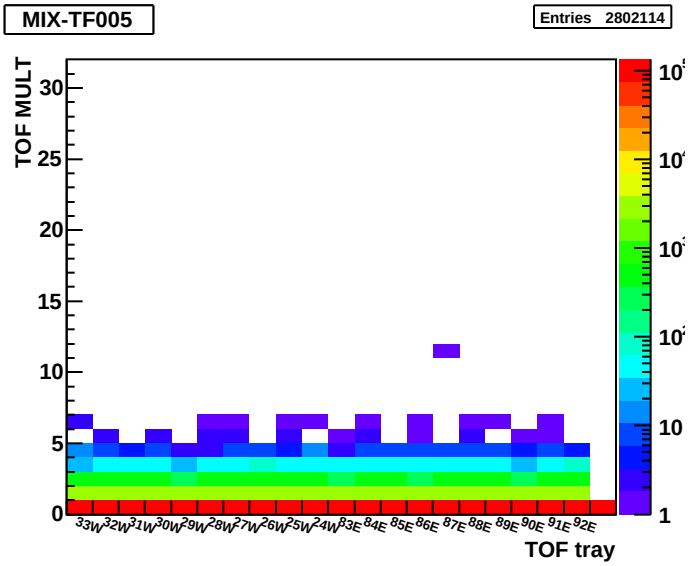

!Yellow-Fill
Entries 66717
10^3
10^2
0 20 40 60 80 100 120

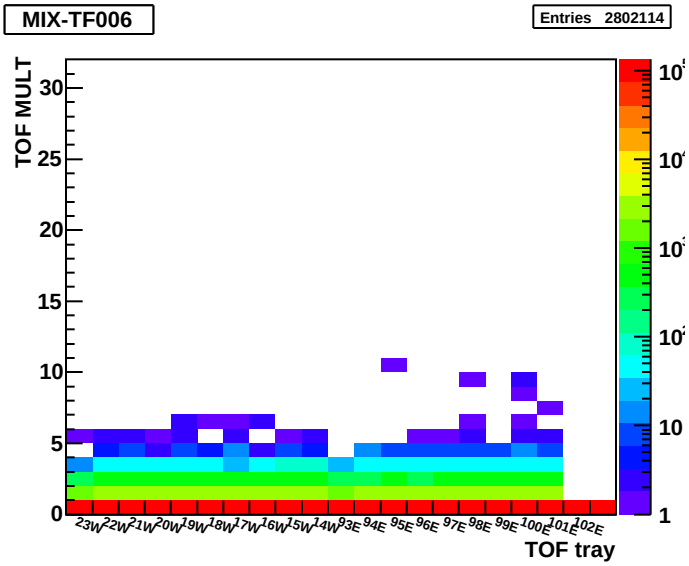

MIX-TF001
Entries 2802114
TOF MULT
TOF tray

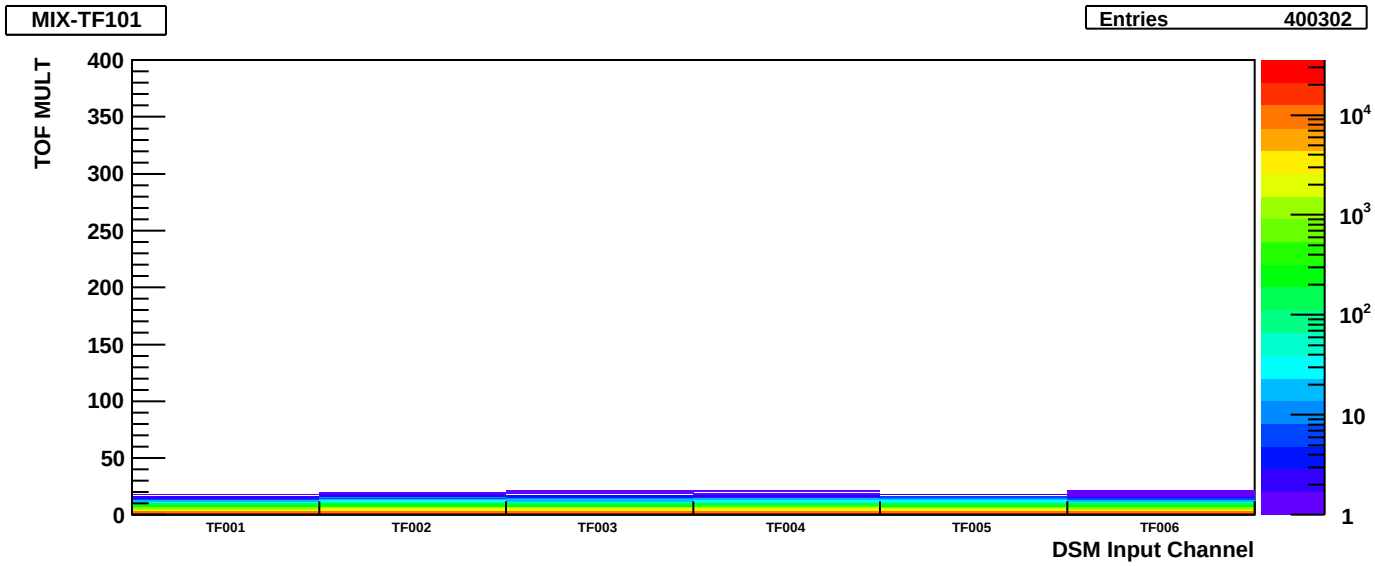

MIX-TF002
Entries 2802114
TOF MULT
TOF tray

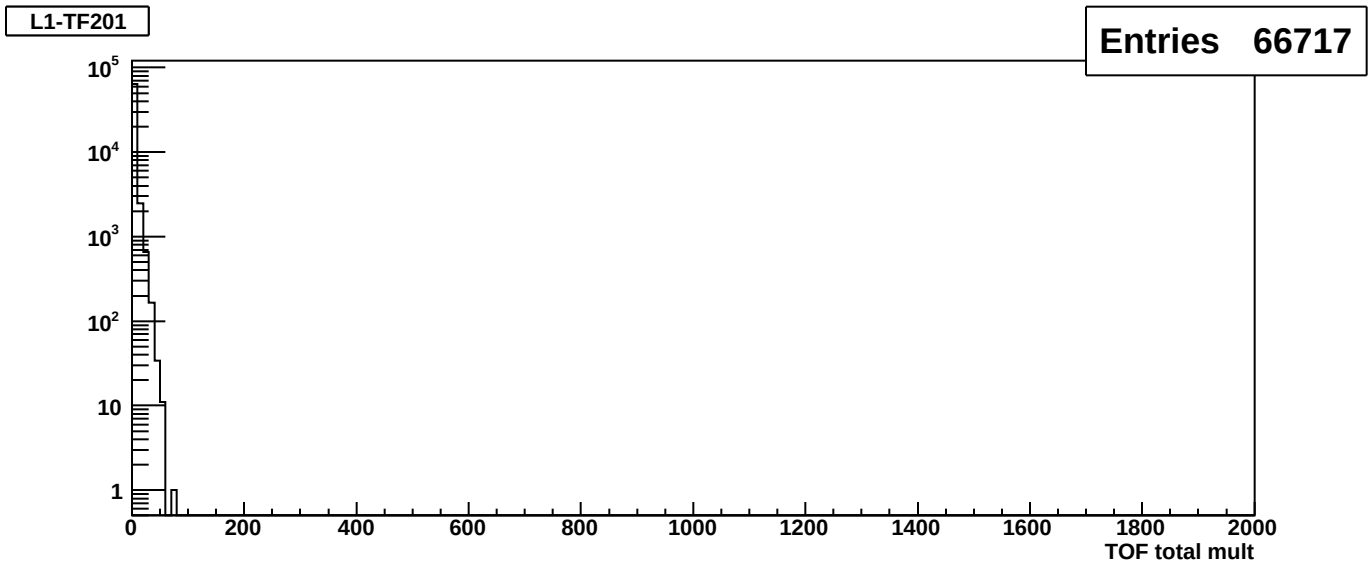

MIX-TF003
Entries 2802114
TOF MULT
TOF tray

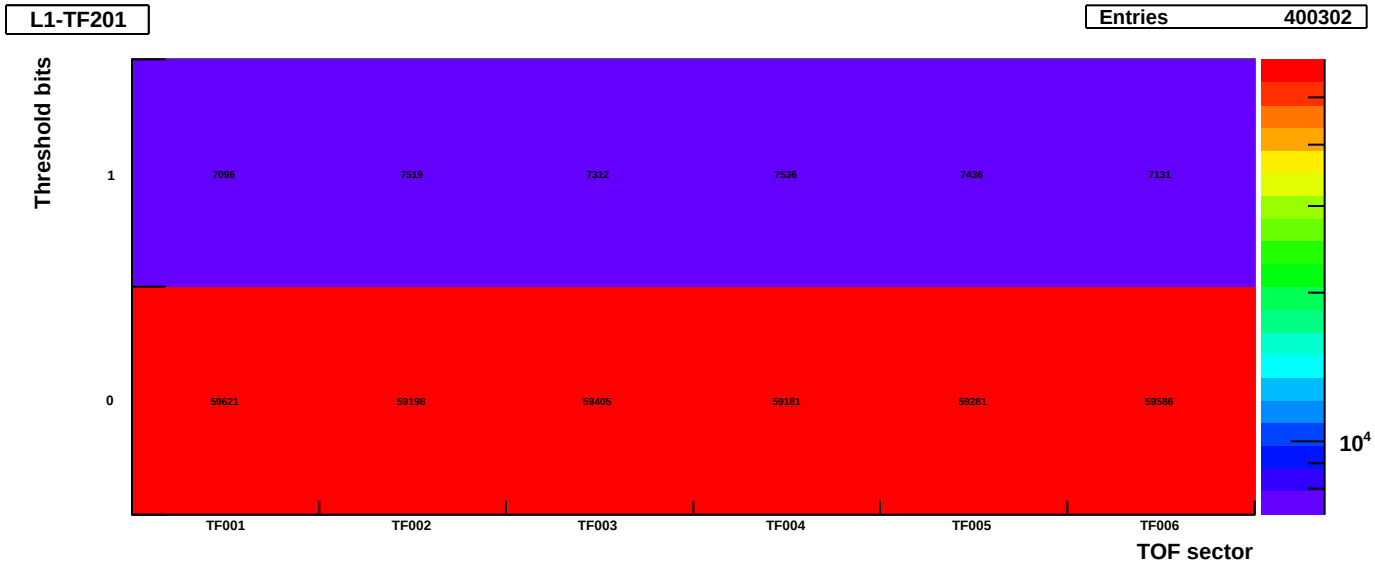

MIX-TF004
Entries 2802114
TOF MULT
TOF tray

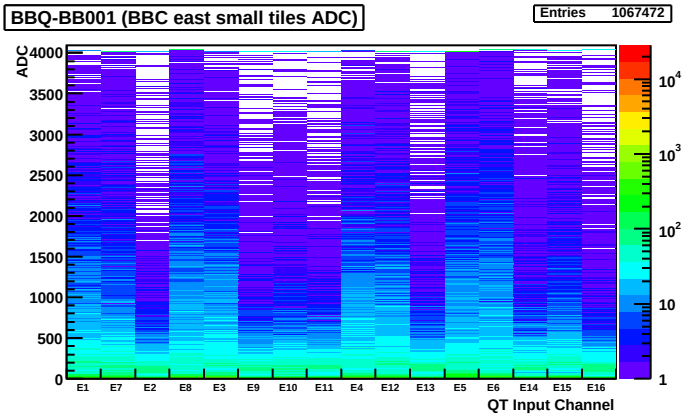

MIX-TF005
Entries 2802114
TOF MULT
TOF tray

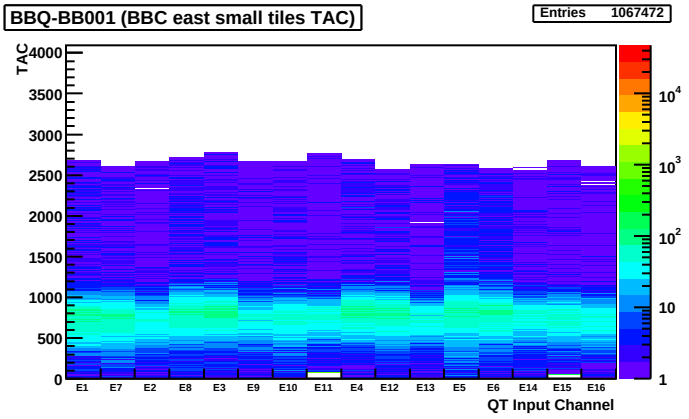

MIX-TF006
Entries 2802114
TOF MULT
TOF tray

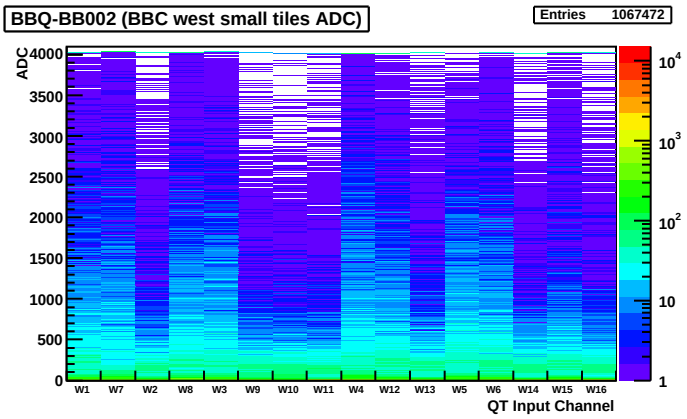

MIX-TF101
Entries 400302
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

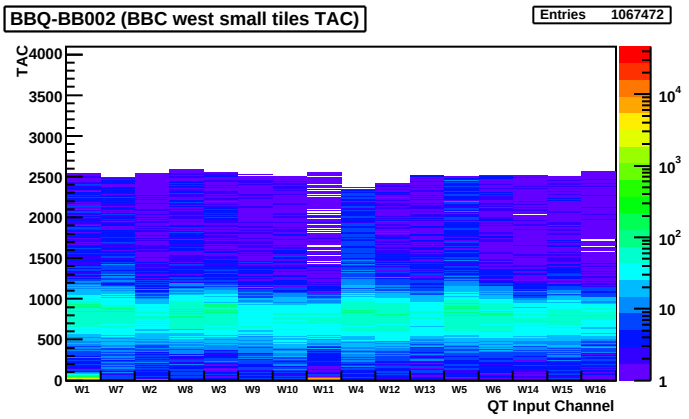

L1-TF201
Entries 66717
10^5
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

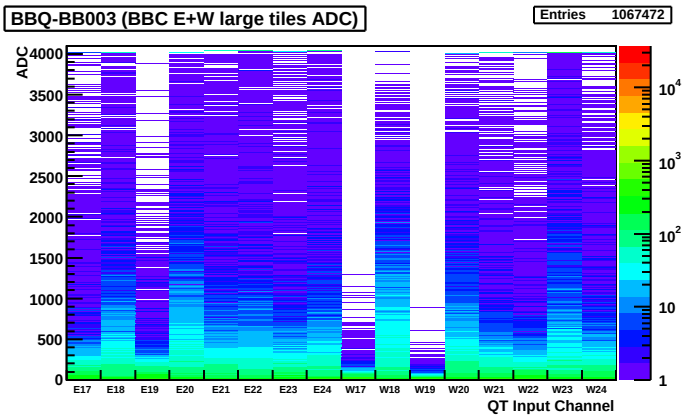

L1-TF201
Entries 400302
Threshold bits
1
0
7096
7519
7312
7536
7436
7131
59621
59198
59405
59181
59281
59586
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4

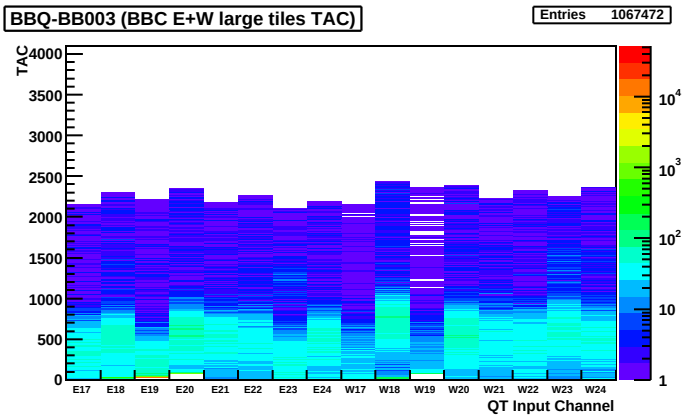

BBQ-BB001 (BBC east small tiles ADC)
Entries 1067472
ADC
QT Input Channel

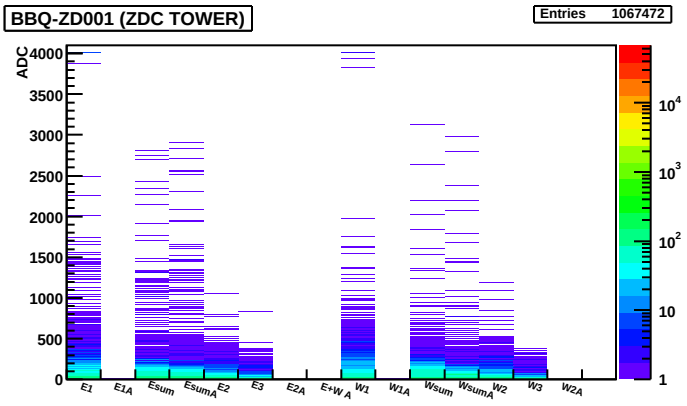

BBQ-BB001 (BBC east small tiles TAC)
Entries 1067472
TAC
QT Input Channel

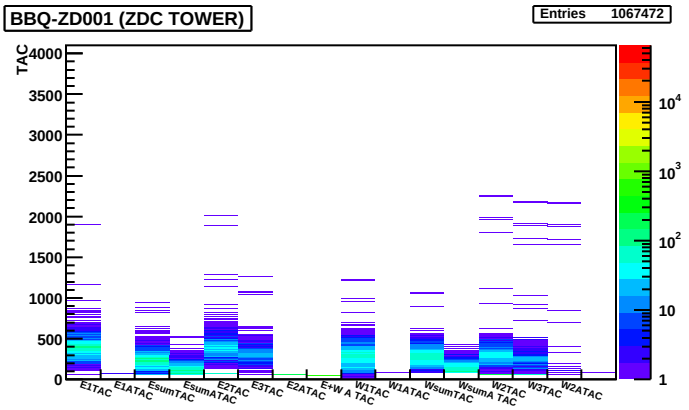

BBQ-BB002 (BBC west small tiles ADC)
Entries 1067472
ADC
QT Input Channel

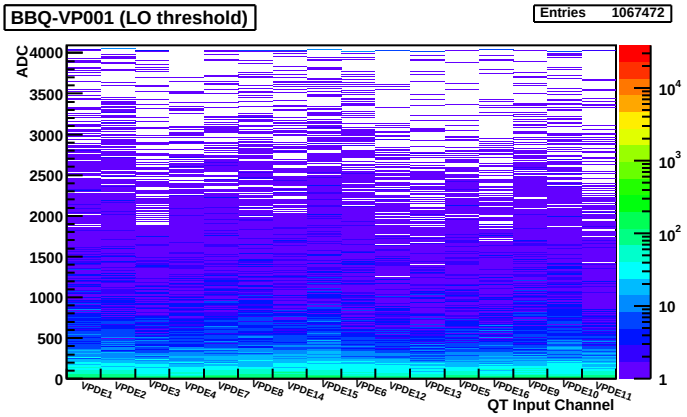

BBQ-BB002 (BBC west small tiles TAC)
Entries 1067472
TAC
QT Input Channel

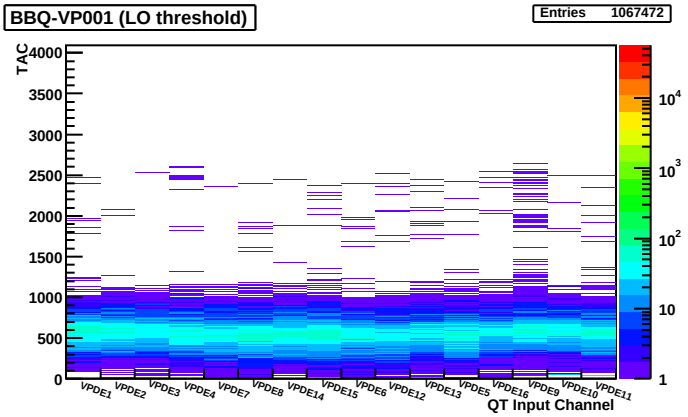

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 1067472
ADC
QT Input Channel

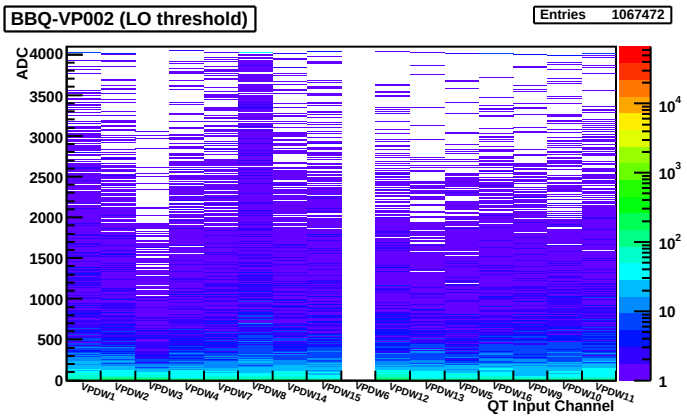

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 1067472
TAC
QT Input Channel

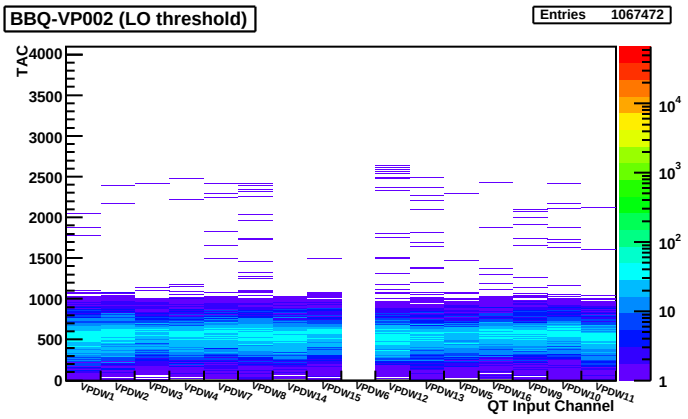

BBQ-ZD001 (ZDC TOWER)
Entries 1067472
ADC

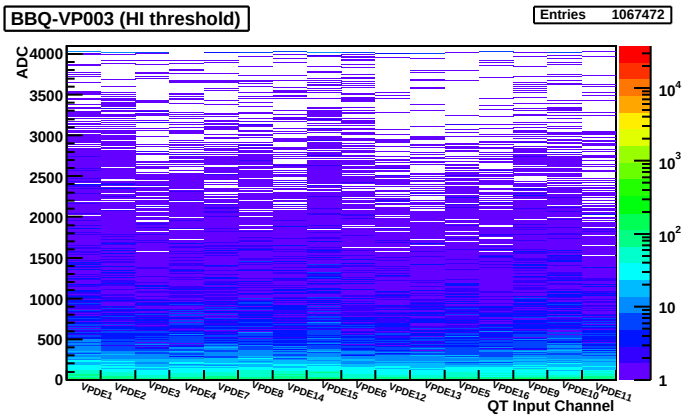

BBQ-ZD001 (ZDC TOWER)
Entries 1067472
TAC

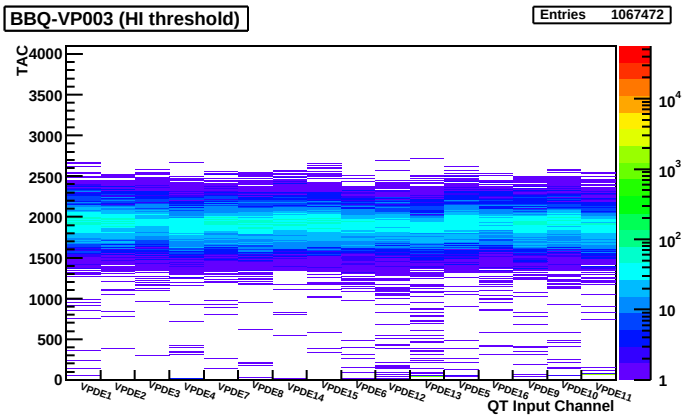

BBQ-VP001 (LO threshold)
Entries 1067472
ADC
QT Input Channel

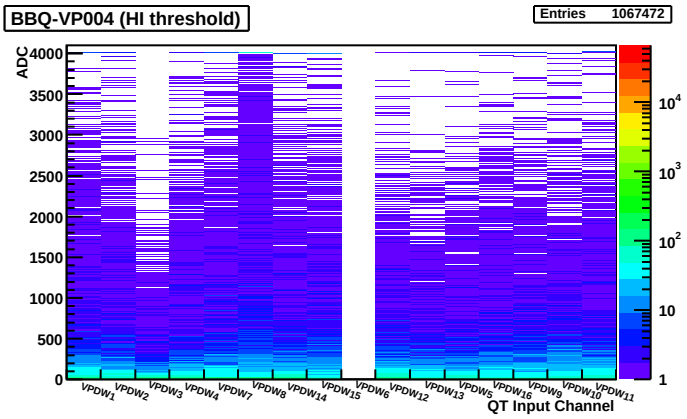

BBQ-VP001 (LO threshold)
Entries 1067472
TAC
QT Input Channel

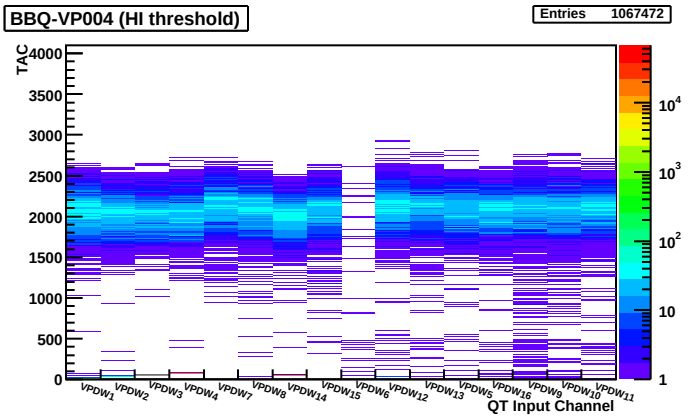

BBQ-VP002 (LO threshold)
Entries 1067472
ADC
QT Input Channel

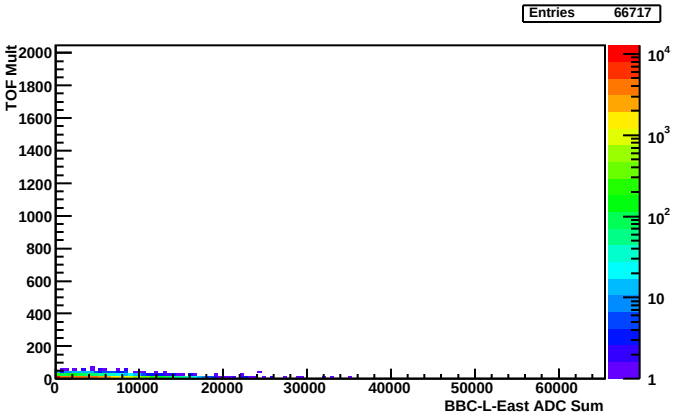

BBQ-VP002 (LO threshold)
Entries 1067472
TAC
QT Input Channel

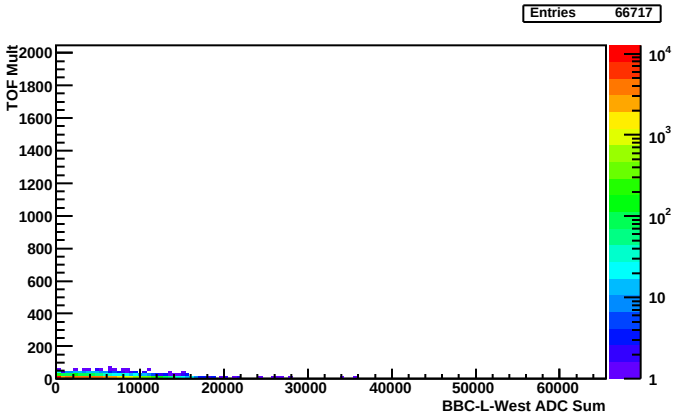

BBQ-VP003 (HI threshold)
Entries 1067472
ADC
QT Input Channel

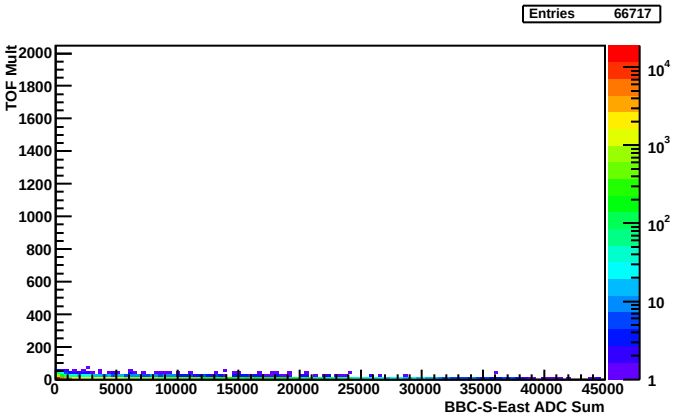

BBQ-VP003 (HI threshold)
Entries 1067472
TAC
QT Input Channel

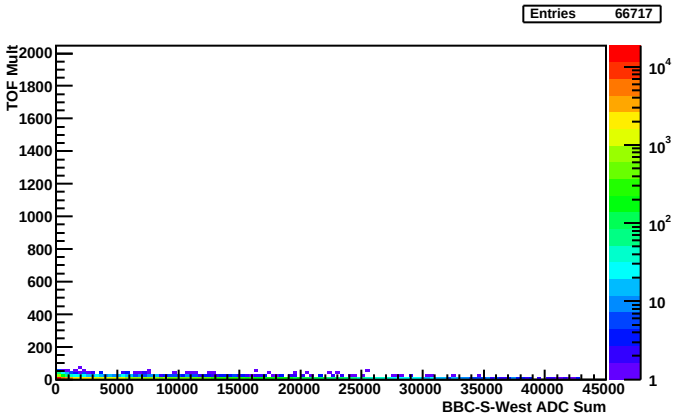

BBQ-VP004 (HI threshold)
Entries 1067472
ADC
QT Input Channel

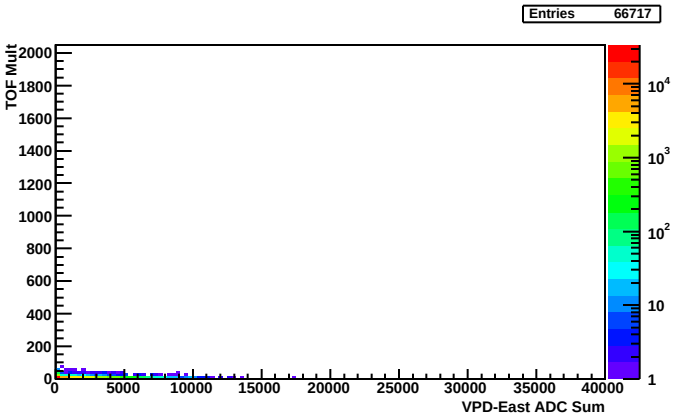

BBQ-VP004 (HI threshold)
Entries 1067472
TAC
QT Input Channel

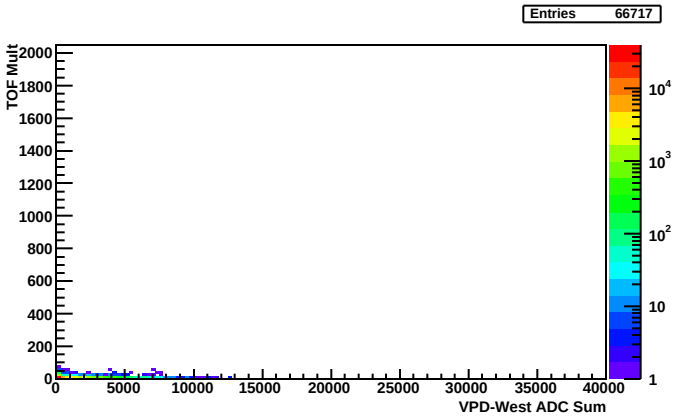

Entries 66717
TOF Mult
BBC-L-East ADC Sum

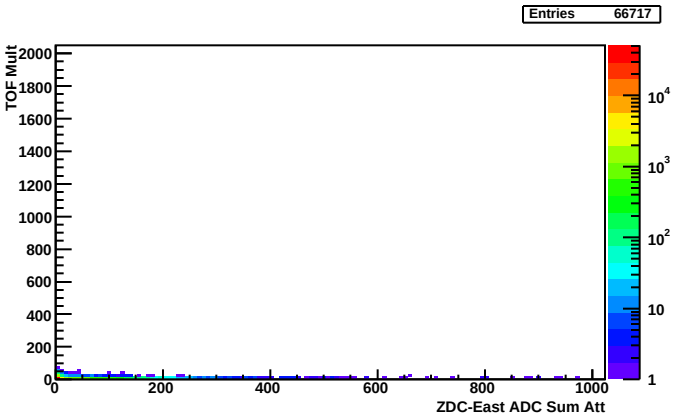

Entries 66717
TOF Mult
BBC-L-West ADC Sum

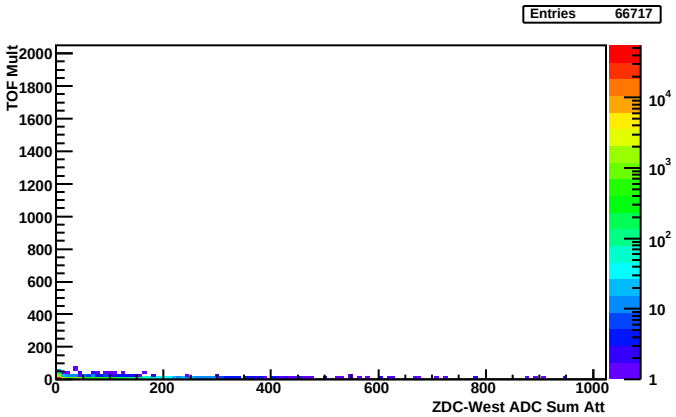

Entries 66717
TOF Mult
BBC-S-East ADC Sum

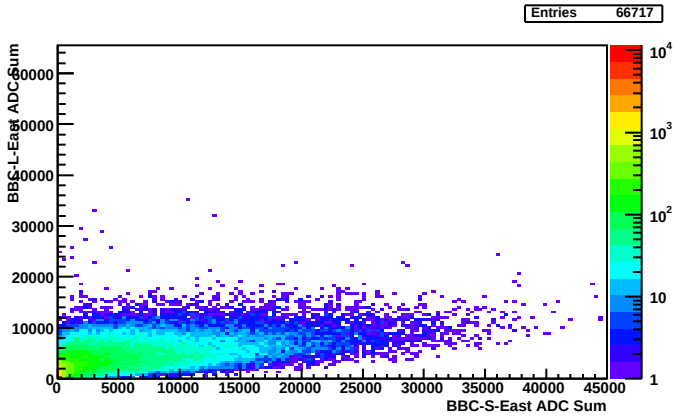

Entries 66717
TOF Mult
BBC-S-West ADC Sum

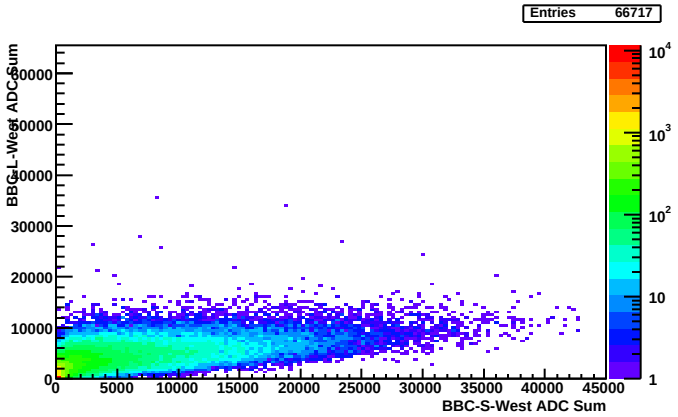

Entries 66717
TOF Mult
VPD-East ADC Sum

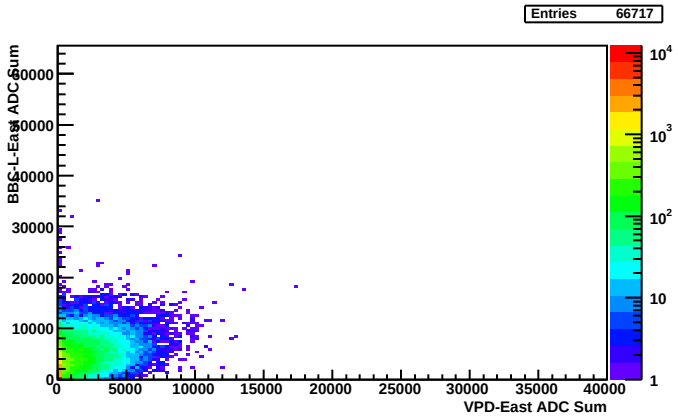

Entries 66717
TOF Mult
VPD-West ADC Sum

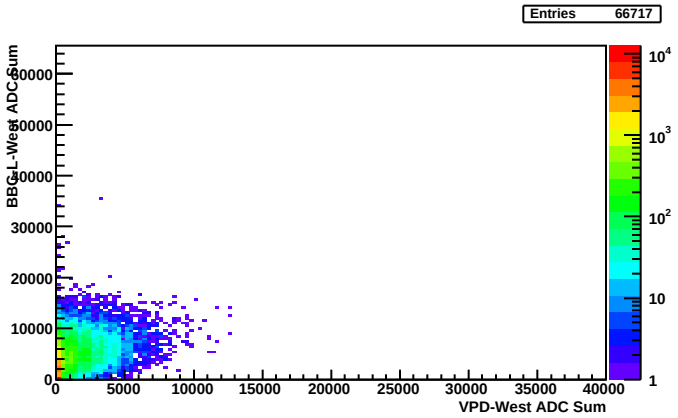

Entries 66717
TOF Mult
ZDC-East ADC Sum Att

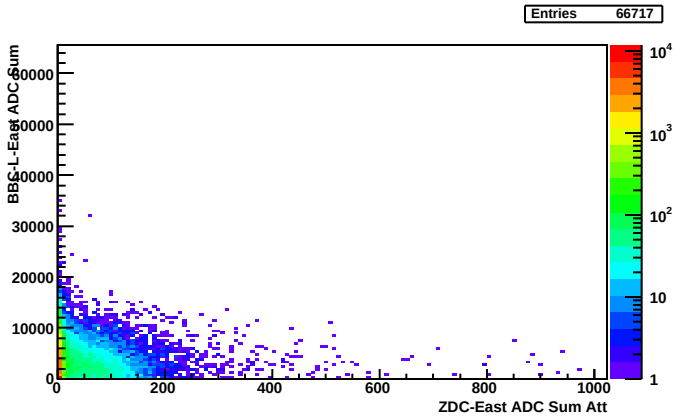

Entries 66717
TOF Mult
ZDC-West ADC Sum Att

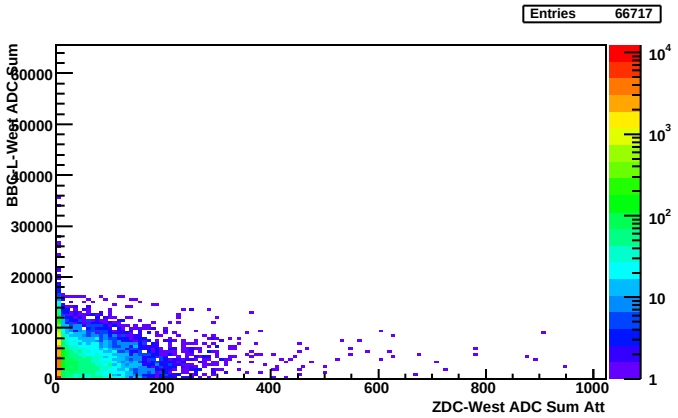

Entries 66717
BBC-L-East ADC Sum
BBC-S-East ADC Sum

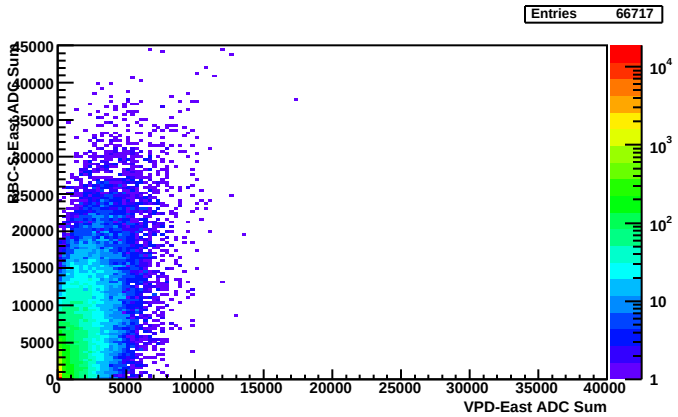

Entries 66717
BBC-L-West ADC Sum
BBC-S-West ADC Sum

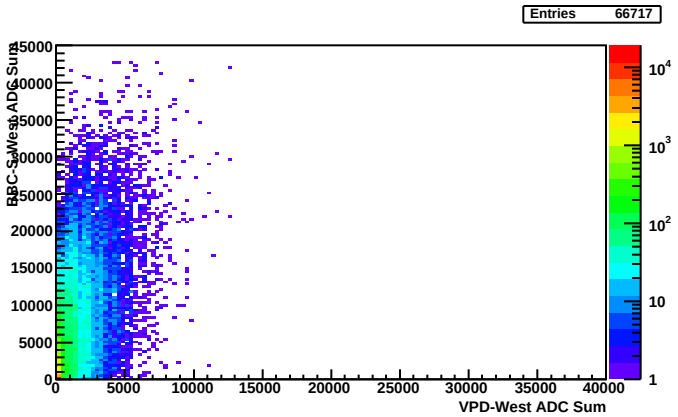

Entries 66717
BBC-L-East ADC Sum
VPD-East ADC Sum

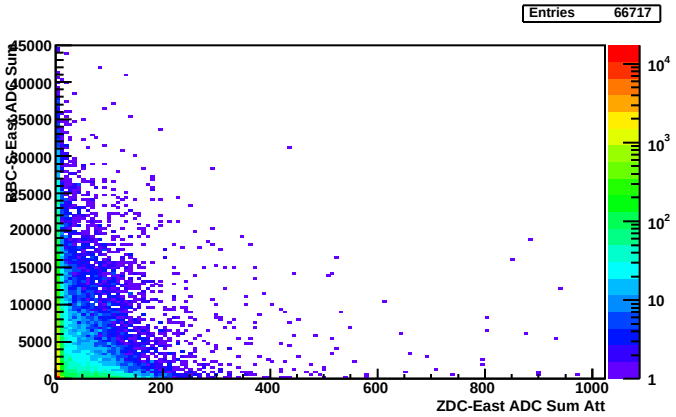

Entries 66717
BBC-L-West ADC Sum
VPD-West ADC Sum

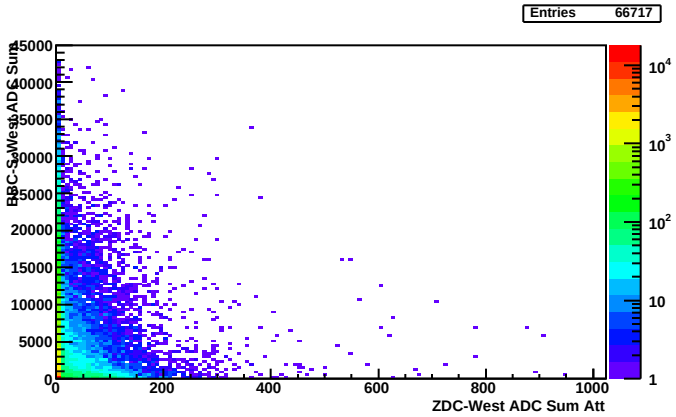

Entries 66717
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

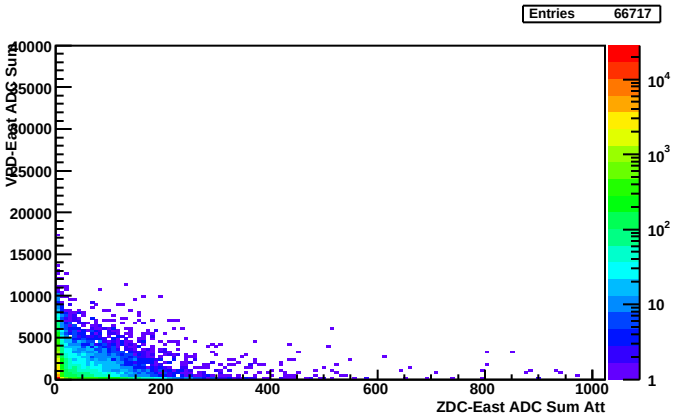

Entries 66717
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

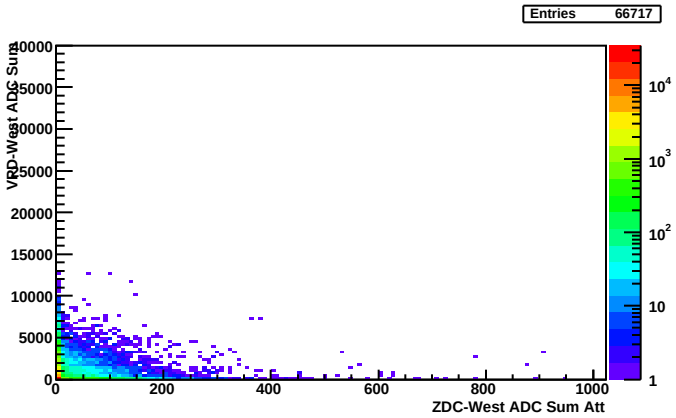

Entries 66717
BBC-S-East ADC Sum
VPD-East ADC Sum

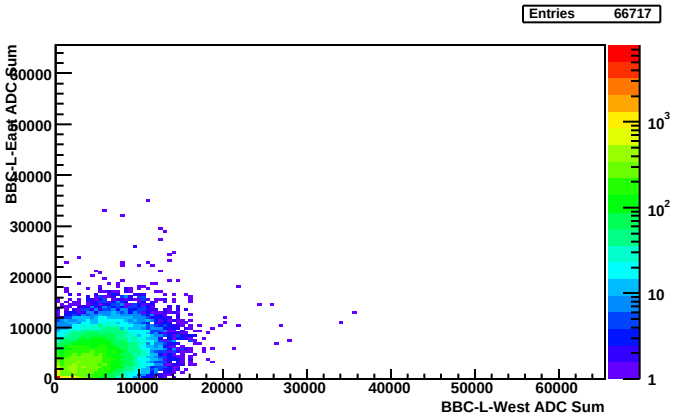

Entries 66717
BBC-S-West ADC Sum
VPD-West ADC Sum

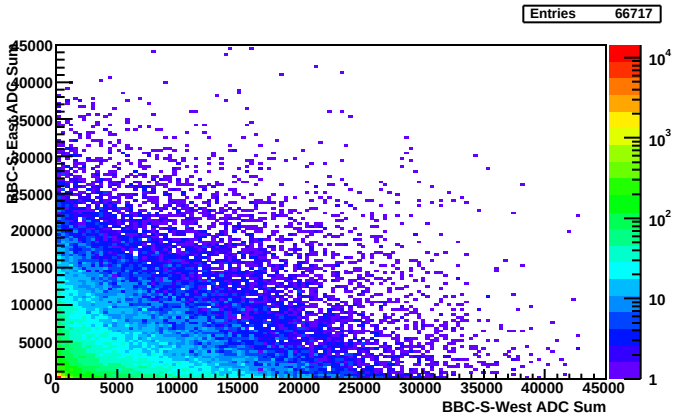

Entries 66717
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

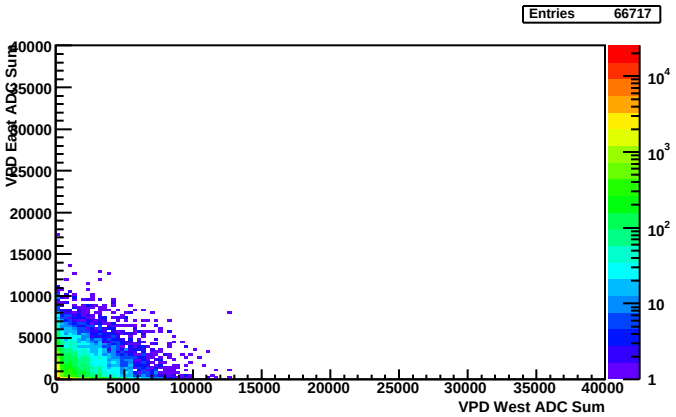

Entries 66717
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

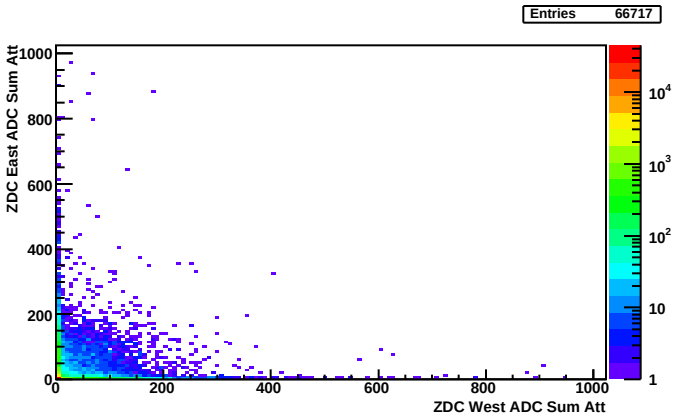

Entries 66717
VPD-East ADC Sum
ZDC-East ADC Sum Att

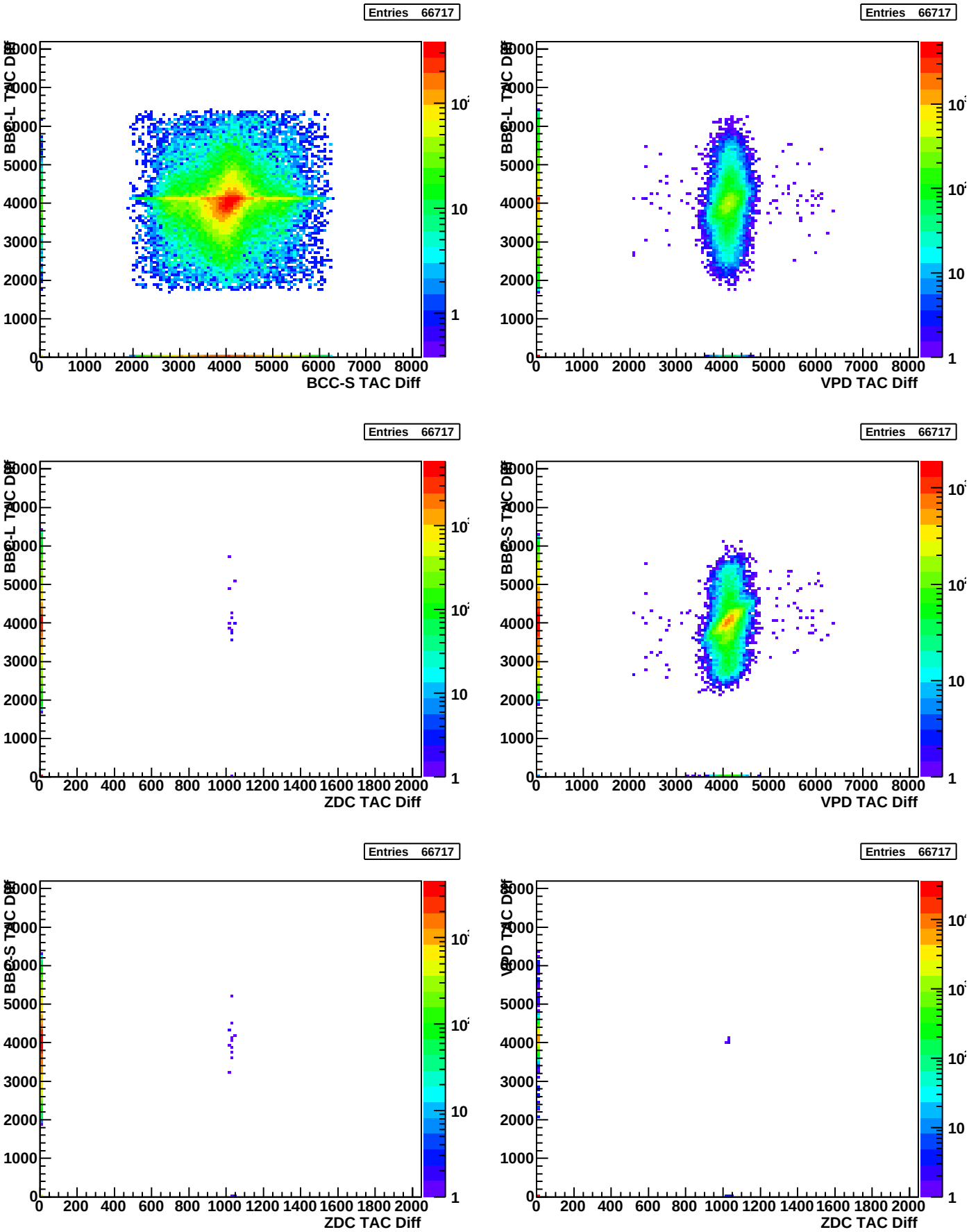

Entries 66717
VPD-West ADC Sum
ZDC-West ADC Sum Att

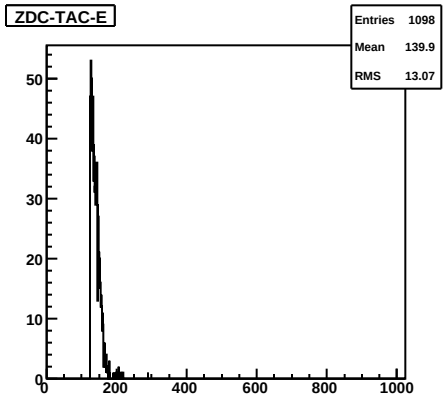

Entries 66717
BBC-L-East ADC Sum
BBC-L-West ADC Sum

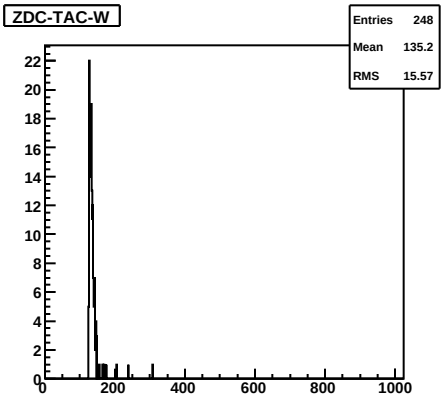

Entries 66717
BBC-S-East ADC Sum
BBC-S-West ADC Sum

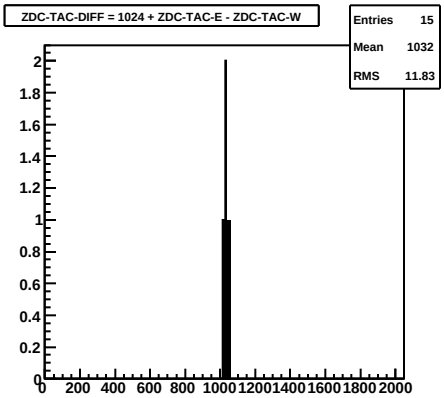

Entries 66717
VPD East ADC Sum
VPD West ADC Sum

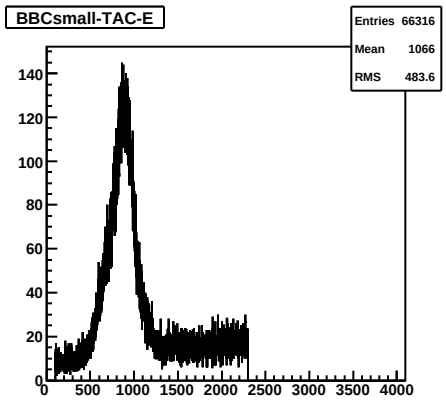

Entries 66717
ZDC East ADC Sum Att
ZDC West ADC Sum Att

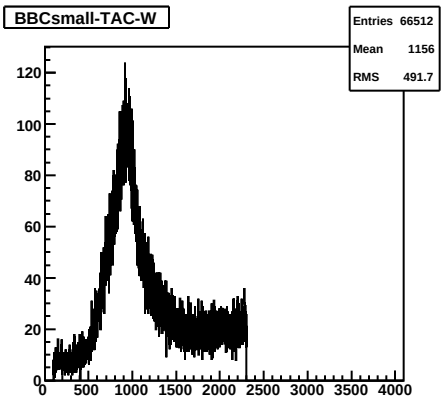

Entries 66717
BBC-L TAC Diff
BCC-S TAC Diff
Entries 66717
BBC-L TAC Diff
VPD TAC Diff
Entries 66717
BBC-L TAC Diff
ZDC TAC Diff
Entries 66717
BBC-S TAC Diff
VPD TAC Diff
Entries 66717
BBC-S TAC Diff
ZDC TAC Diff
Entries 66717
VPD TAC Diff
ZDC TAC Diff

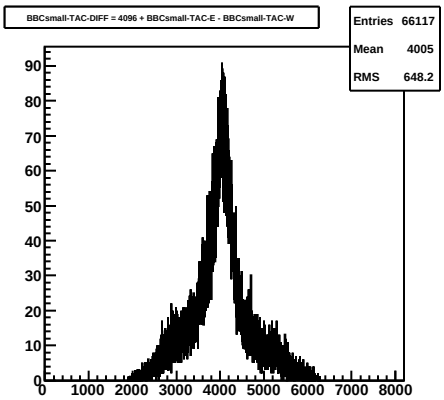

ZDC-TAC-E
Entries 1098
Mean 139.9
RMS 13.07

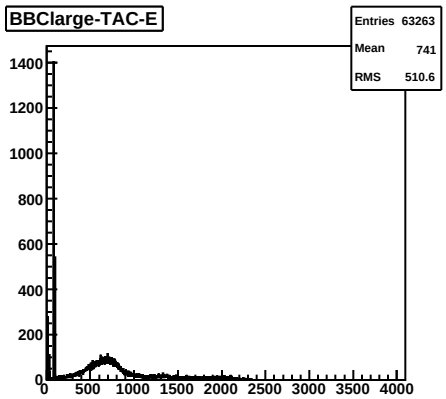

ZDC-TAC-W
Entries 248
Mean 135.2
RMS 15.57

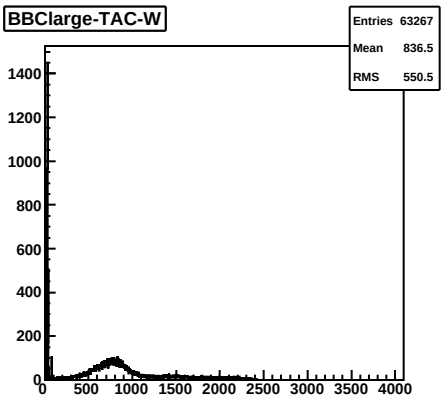

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 15
Mean 1032
RMS 11.83

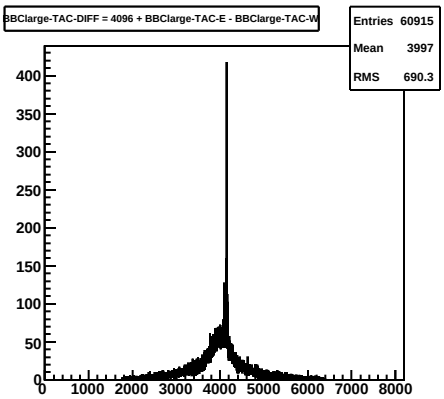

BBCsmall-TAC-E
Entries 66316
Mean 1066
RMS 483.6

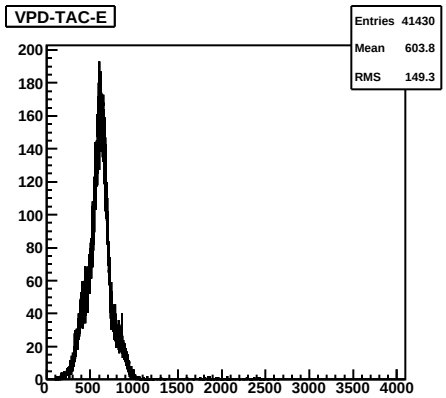

BBCsmall-TAC-W
Entries 66512
Mean 1156
RMS 491.7

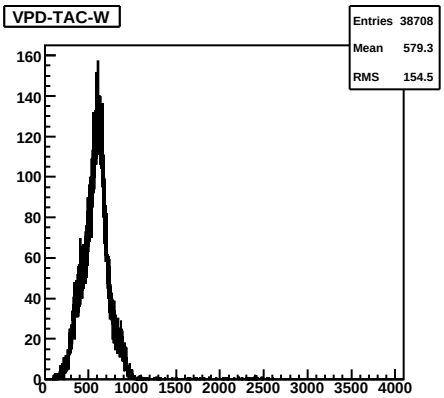

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 66117
Mean 4005
RMS 648.2

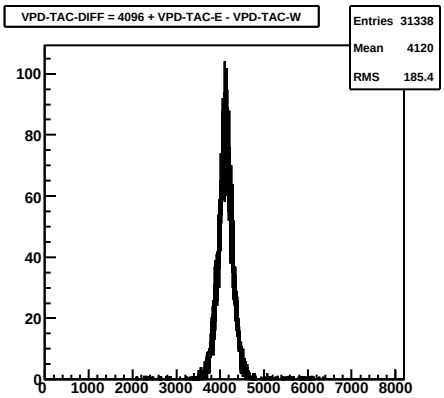

BBClarge-TAC-E
Entries 63263
Mean 741
RMS 510.6

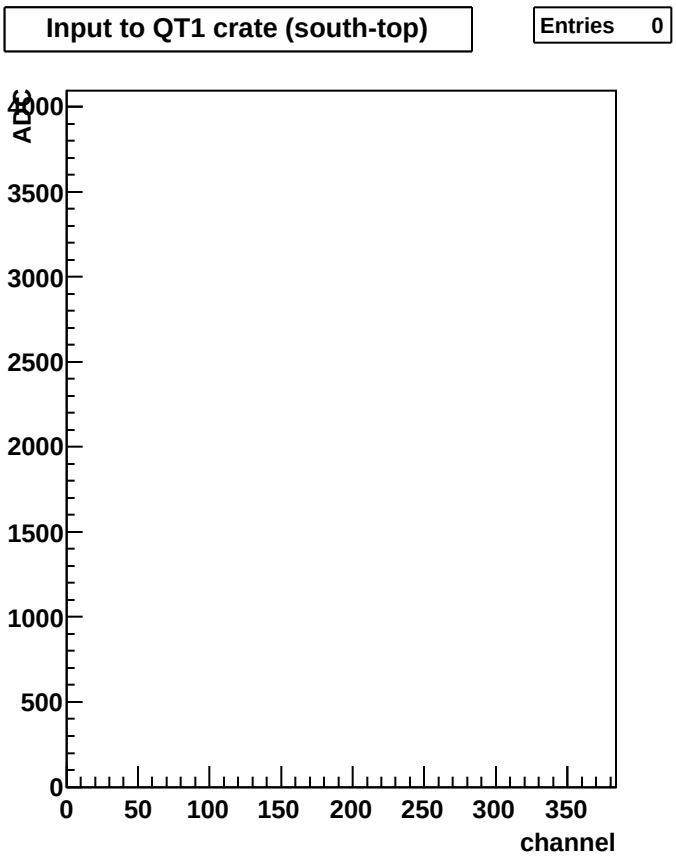

BBClarge-TAC-W
Entries 63267
Mean 836.5
RMS 550.5

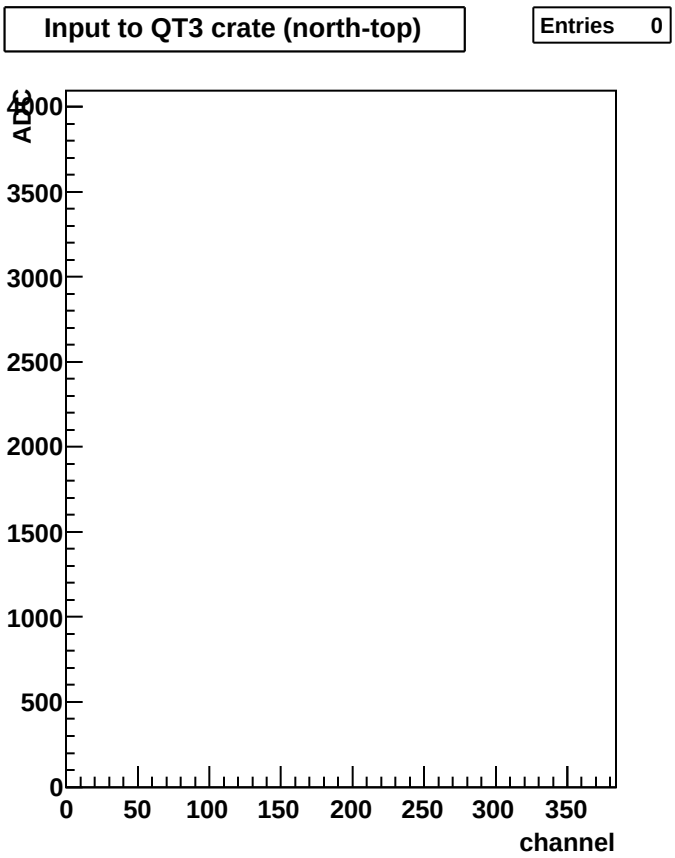

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 60915
Mean 3997
RMS 690.3

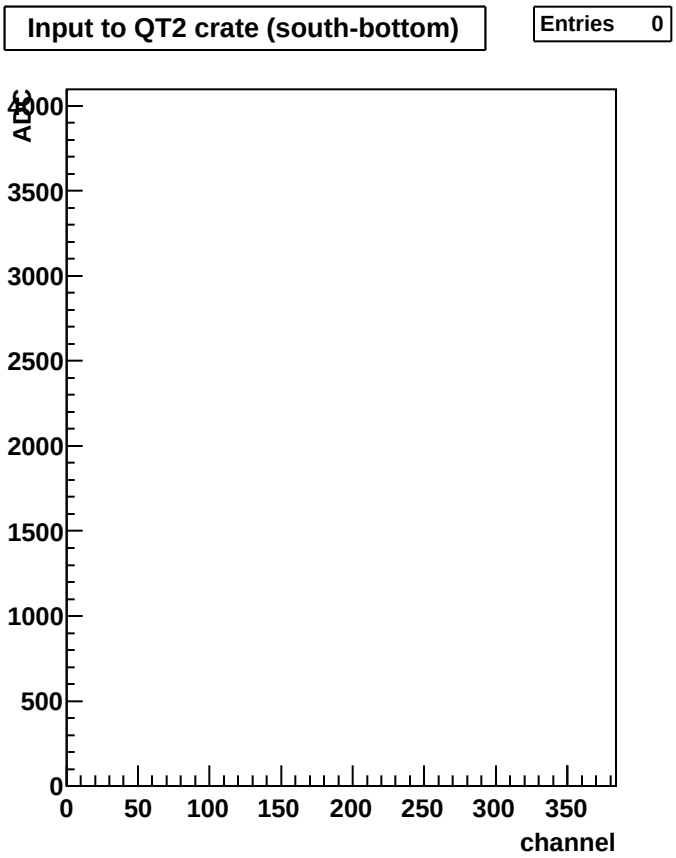

VPD-TAC-E
Entries 41430
Mean 603.8
RMS 149.3

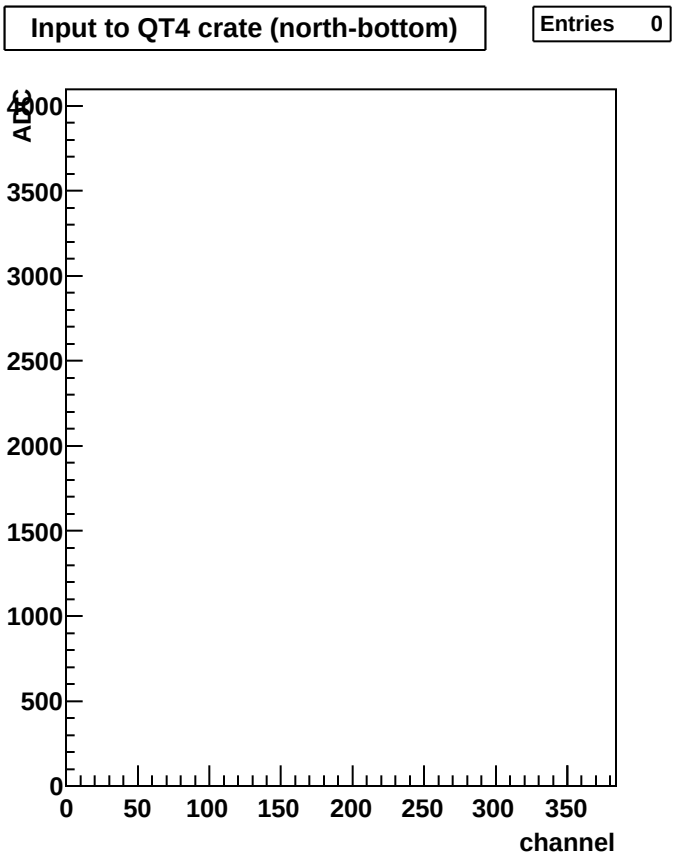

VPD-TAC-W
Entries 38708
Mean 579.3
RMS 154.5

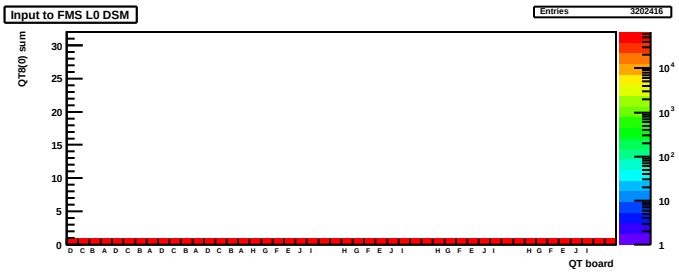

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 31338
Mean 4120
RMS 185.4

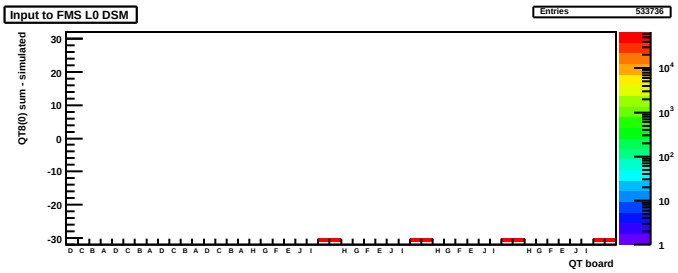

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

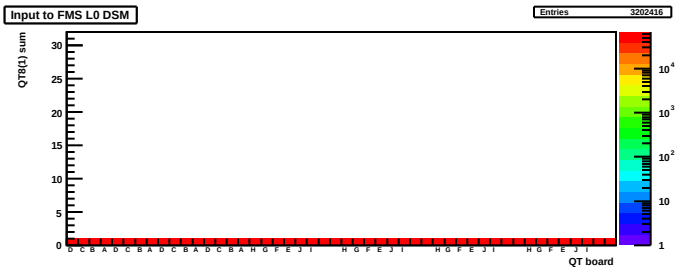

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

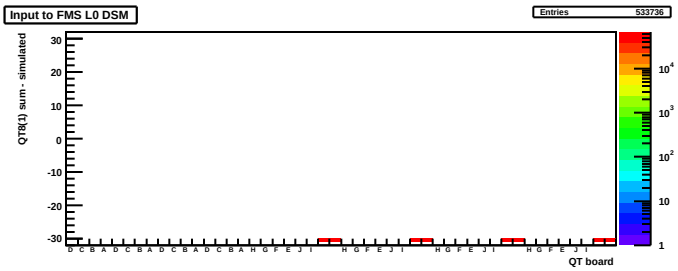

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

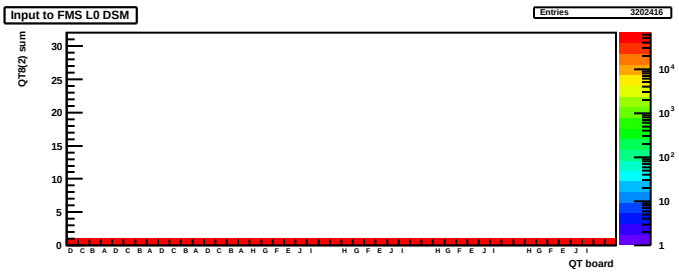

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

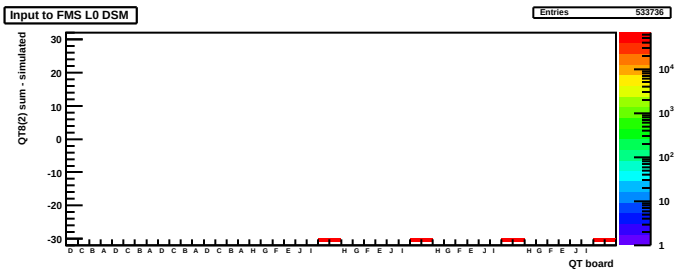

Input to FMS L0 DSM
Entries 3202416
QT8(0) sum
QT board

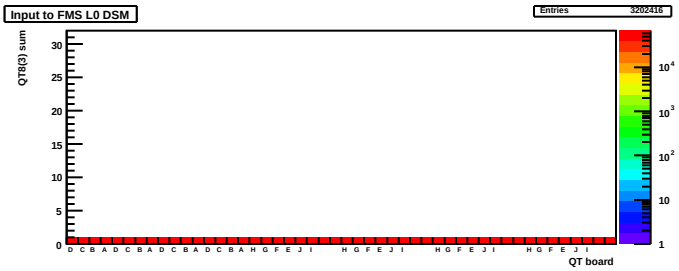

Input to FMS L0 DSM
Entries 533736
QT8(0) sum - simulated
QT board

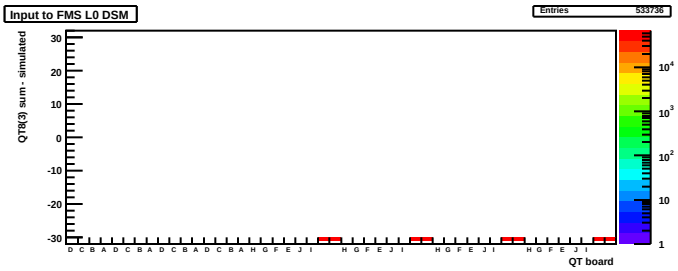

Input to FMS L0 DSM
Entries 3202416
QT8(1) sum
QT board

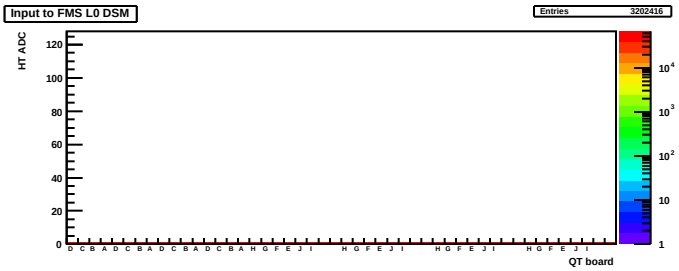

Input to FMS L0 DSM
Entries 533736
QT8(1) sum - simulated
QT board

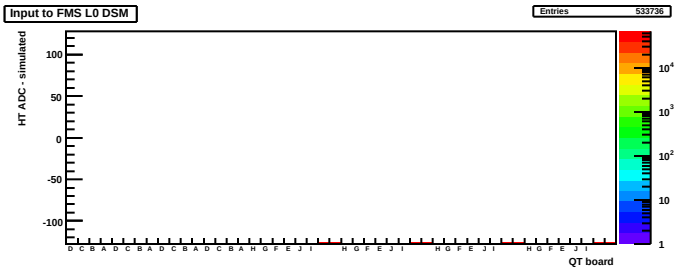

Input to FMS L0 DSM
Entries 3202416
QT8(2) sum
QT board

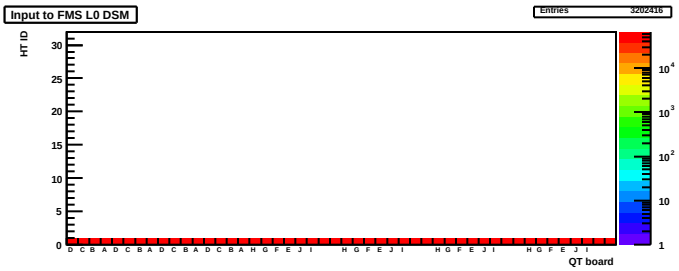

Input to FMS L0 DSM
Entries 533736
QT8(2) sum - simulated
QT board

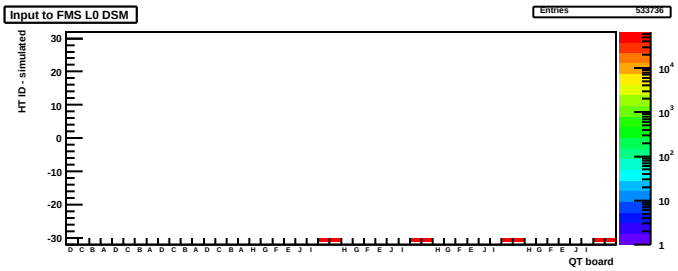

Input to FMS L0 DSM
Entries 3202416
QT8(3) sum
QT board

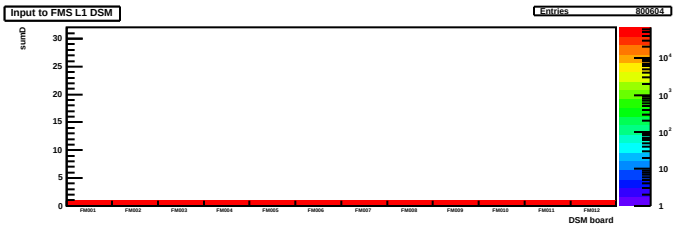

Input to FMS L0 DSM
Entries 533736
QT8(3) sum - simulated
QT board

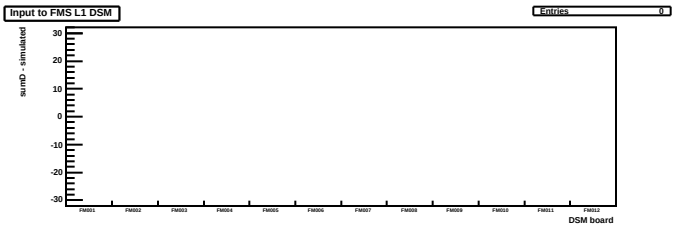

Input to FMS L0 DSM
Entries 3202416
HT ADC
QT board

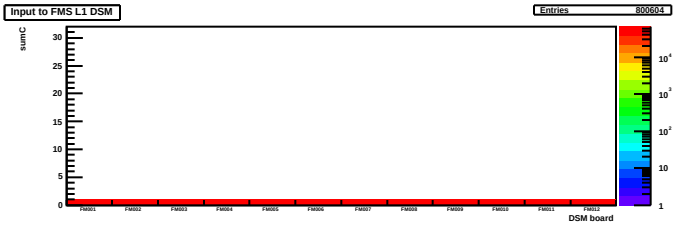

Input to FMS L0 DSM
Entries 533736
HT ADC - simulated
QT board

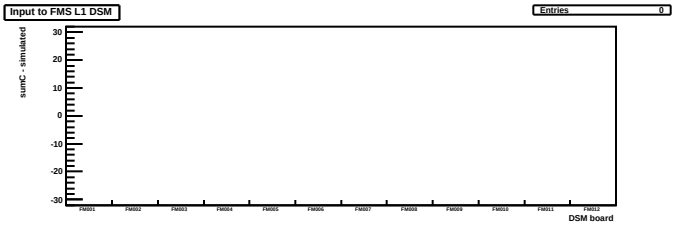

Input to FMS L0 DSM
Entries 3202416
HT ID
QT board

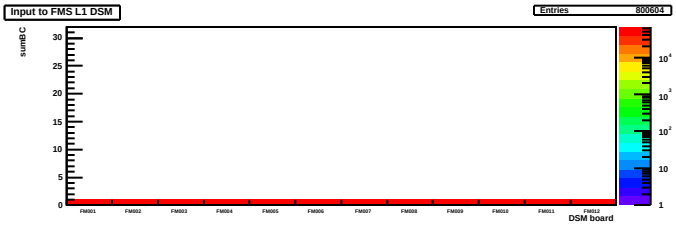

Input to FMS L0 DSM
Entries 533736
HT ID - simulated
QT board

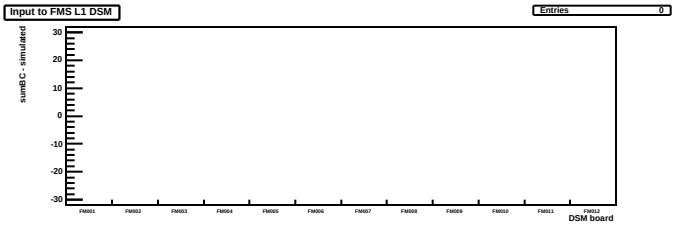

Input to FMS L1 DSM
Entries 800604
sumD
DSM board

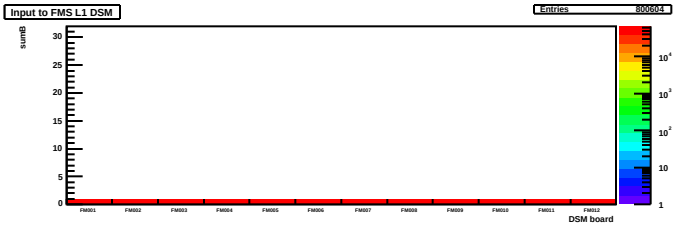

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

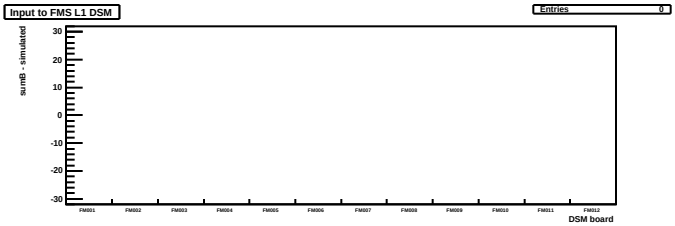

Input to FMS L1 DSM
Entries 800604
sumC
DSM board

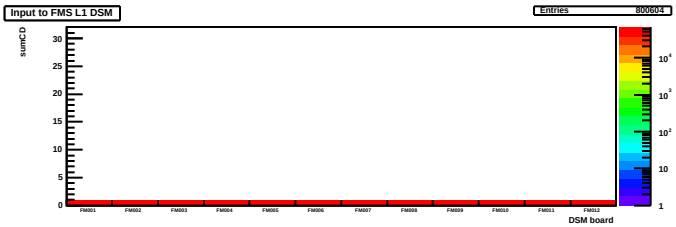

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

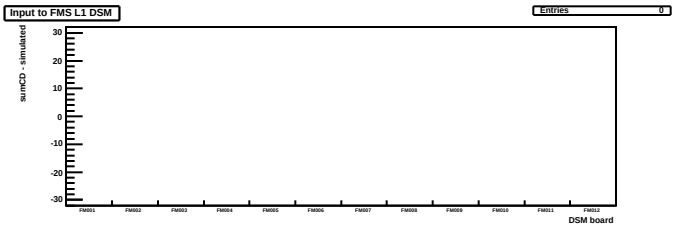

Input to FMS L1 DSM
Entries 800604
sumBC
DSM board

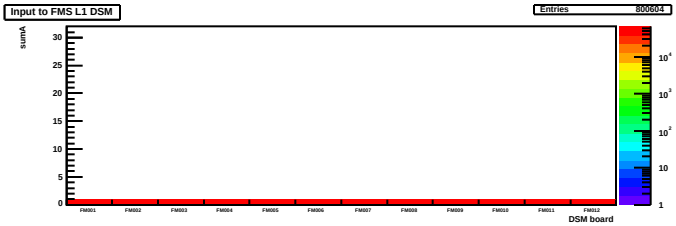

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

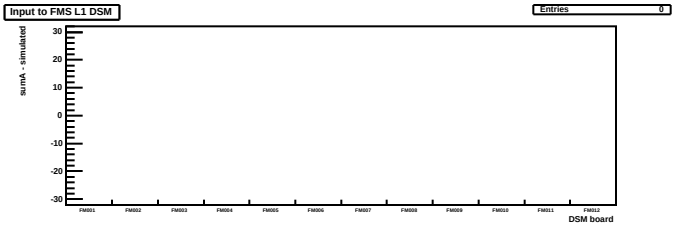

Input to FMS L1 DSM
Entries 800604
sumB
DSM board

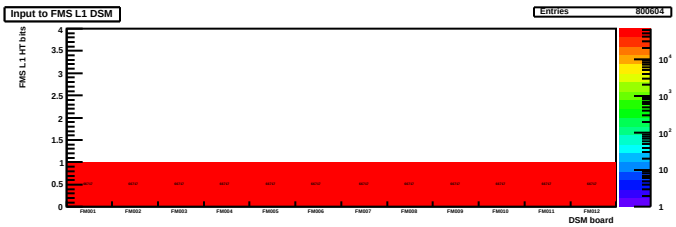

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

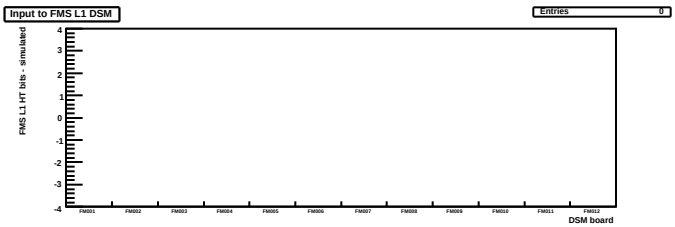

Input to FMS L1 DSM
Entries 800604
sumCD
DSM board

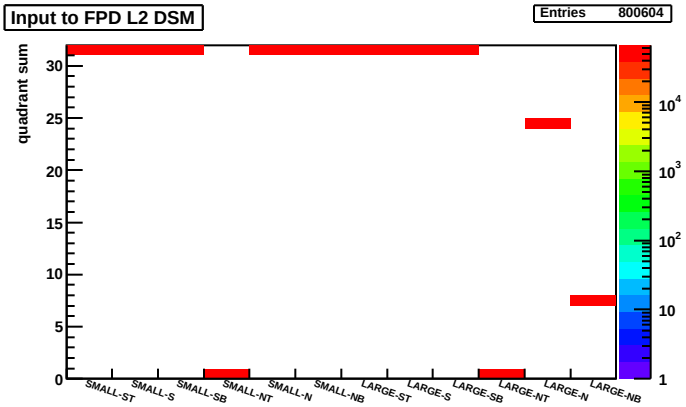

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

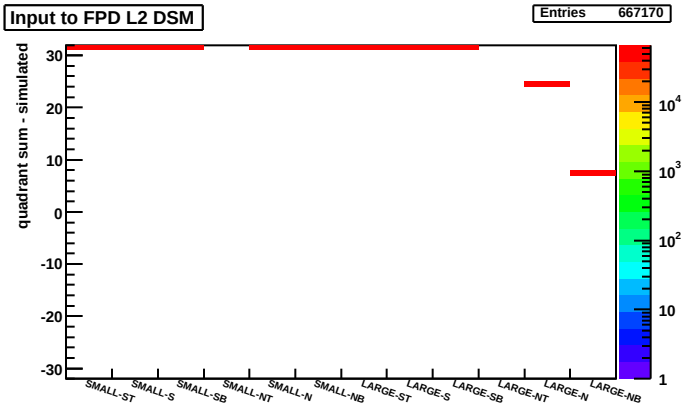

Input to FMS L1 DSM
Entries 800604
sumA
DSM board

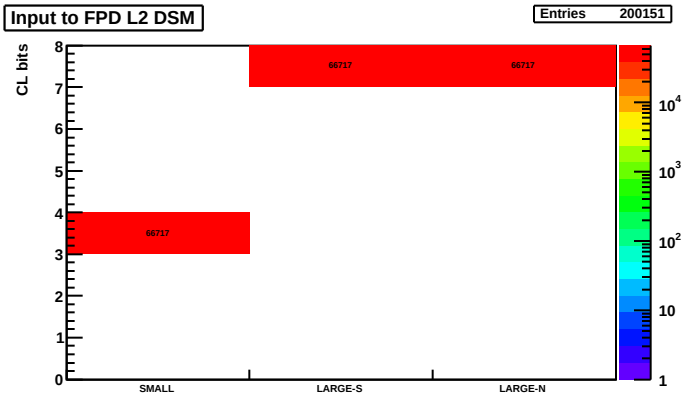

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

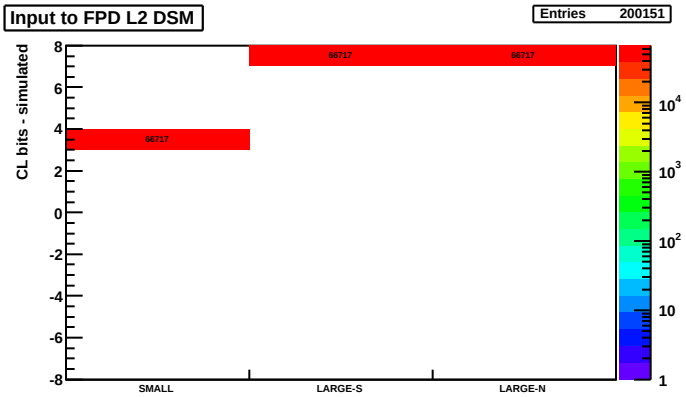

Input to FMS L1 DSM
Entries 800604
FMS L1 HT bits
DSM board

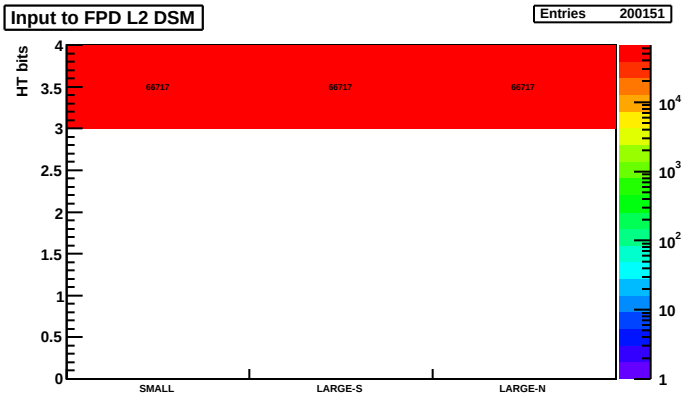

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

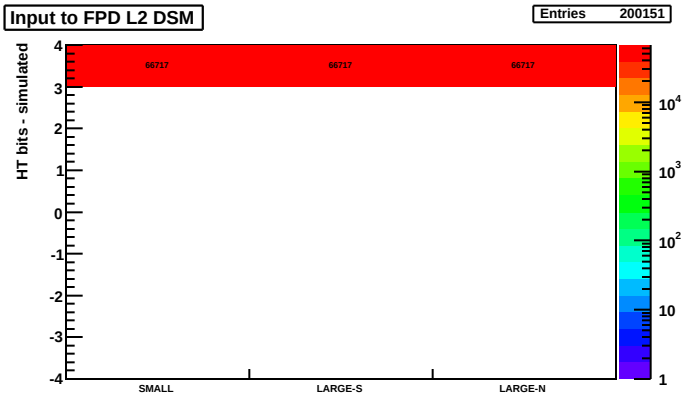

Input to FPD L2 DSM
Entries 800604
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

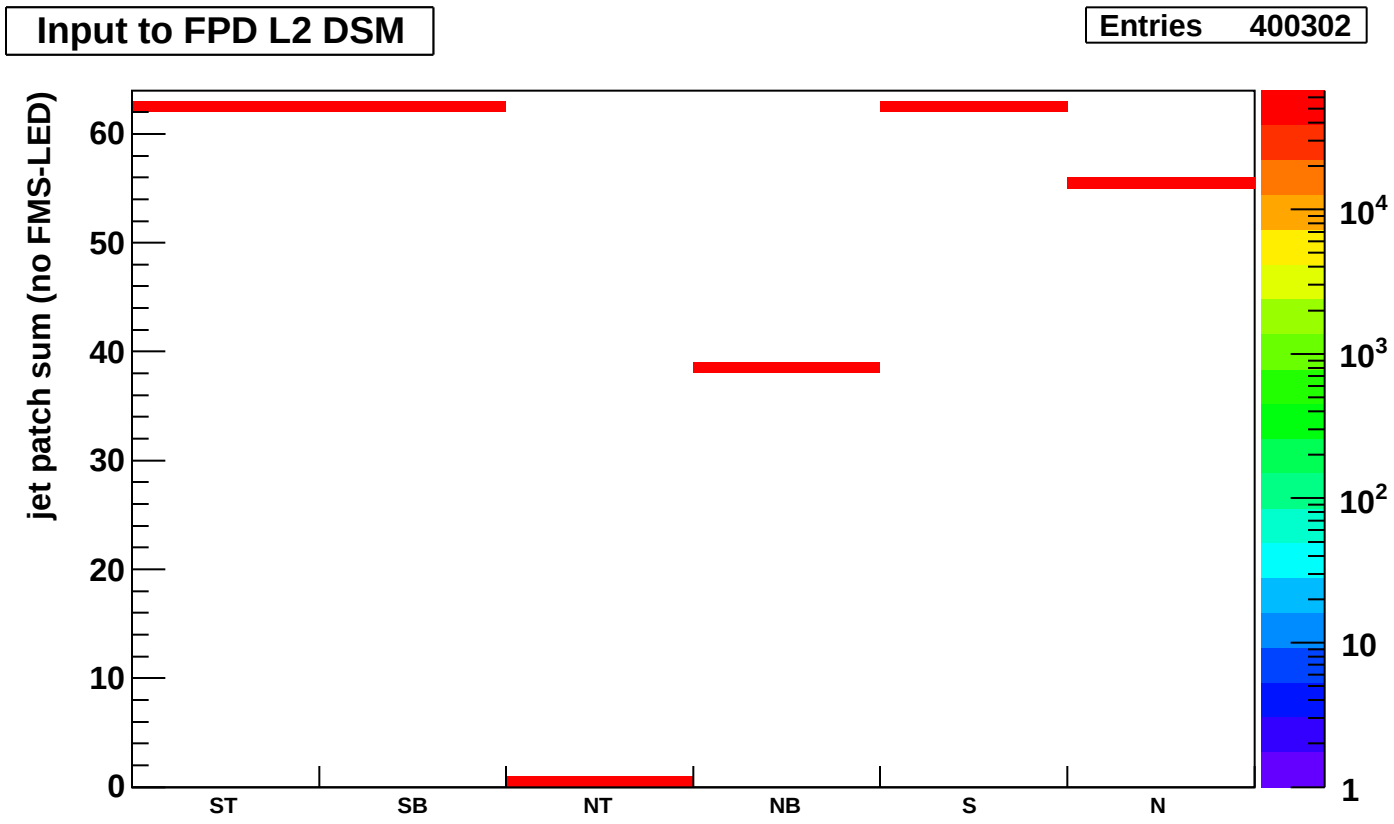

Input to FPD L2 DSM
Entries 667170
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

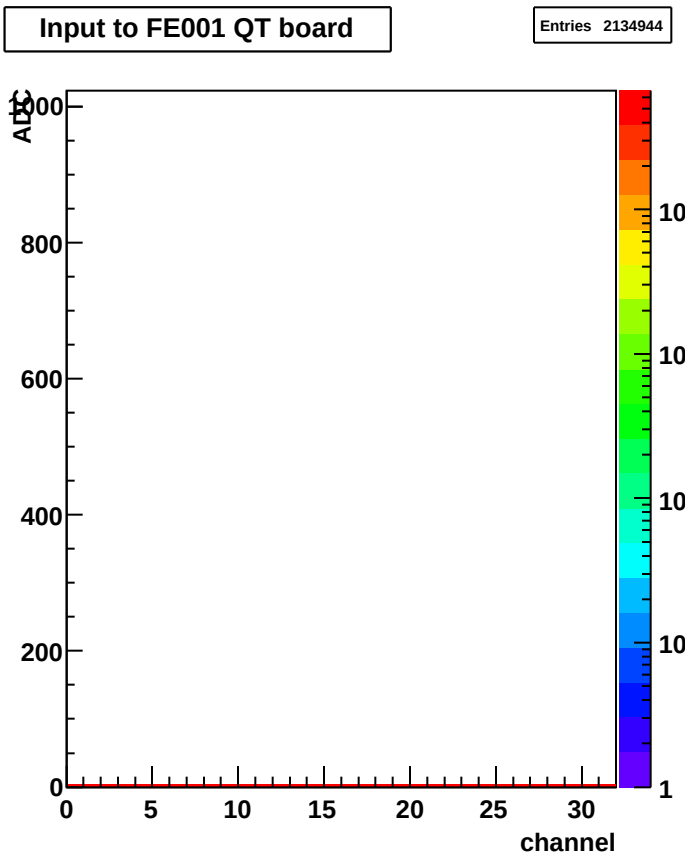

Input to FPD L2 DSM
Entries 200151
CL bits
66717
66717
66717
SMALL
LARGE-S
LARGE-N

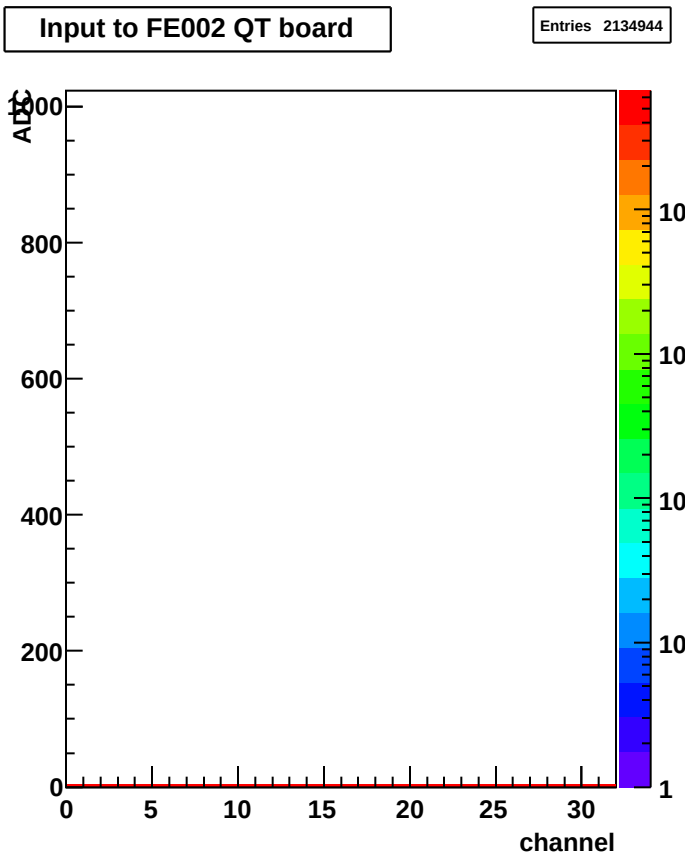

Input to FPD L2 DSM
Entries 200151
CL bits - simulated
66717
66717
66717
SMALL
LARGE-S
LARGE-N

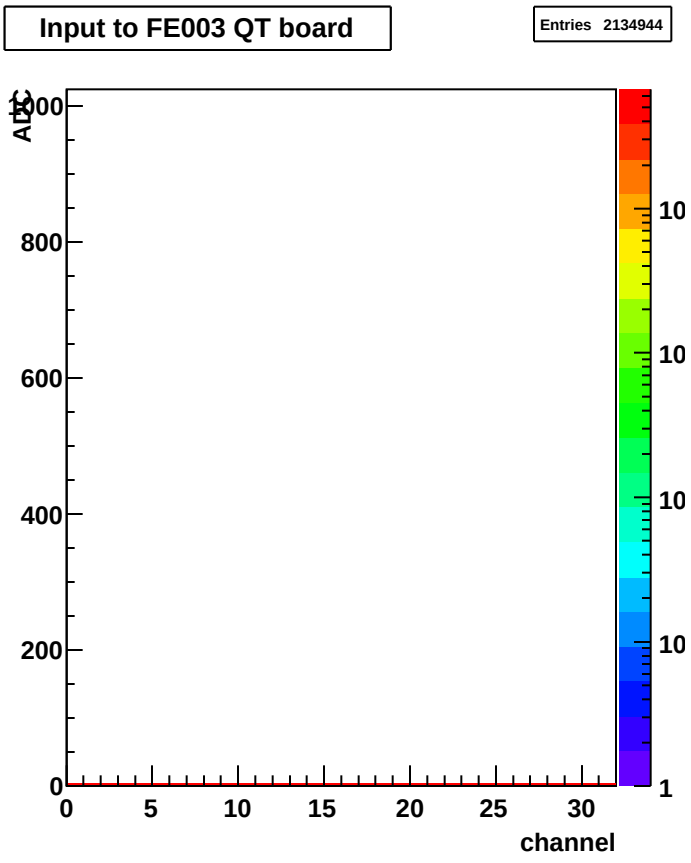

Input to FPD L2 DSM
Entries 200151
HT bits
66717
66717
66717
SMALL
LARGE-S
LARGE-N

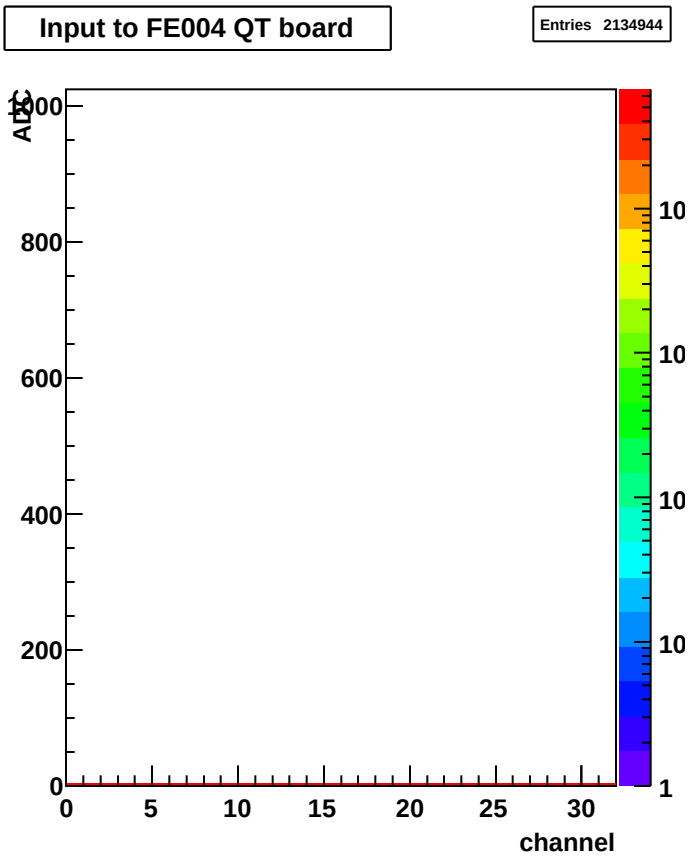

Input to FPD L2 DSM
Entries 200151
HT bits - simulated
66717
66717
66717
SMALL
LARGE-S
LARGE-N

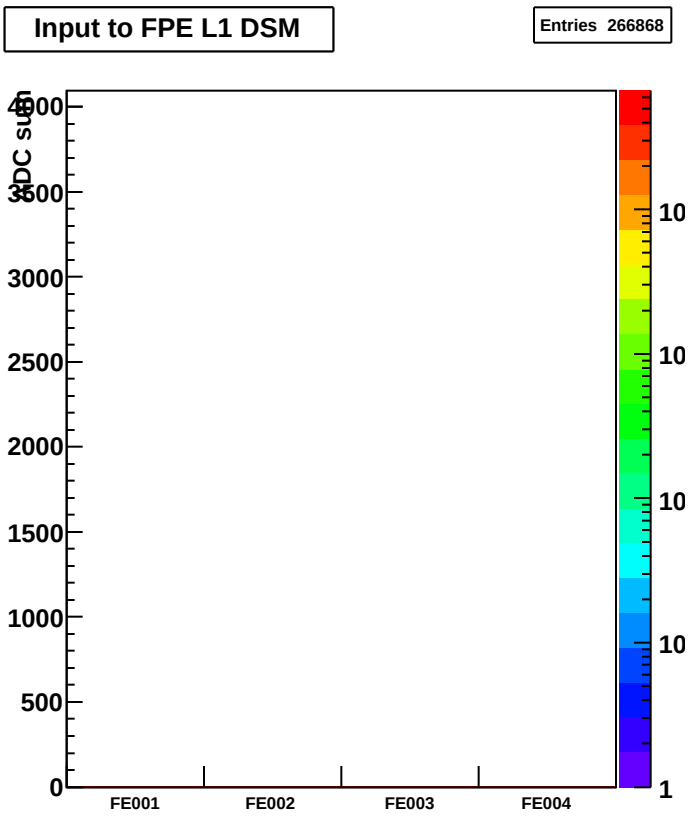

Input to FPD L2 DSM
Entries 400302
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

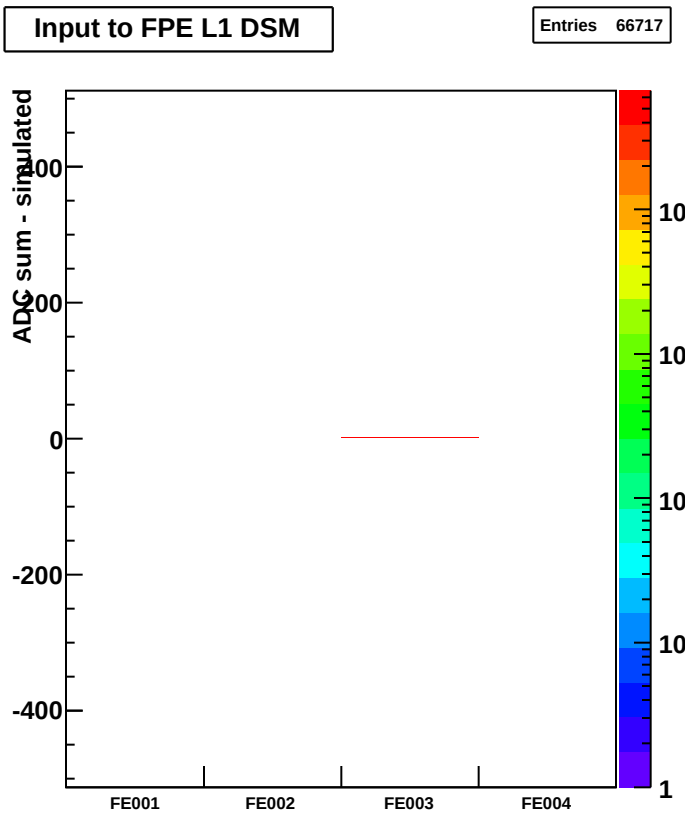

Input to FE001 QT board
Entries 2134944
ADC
channel

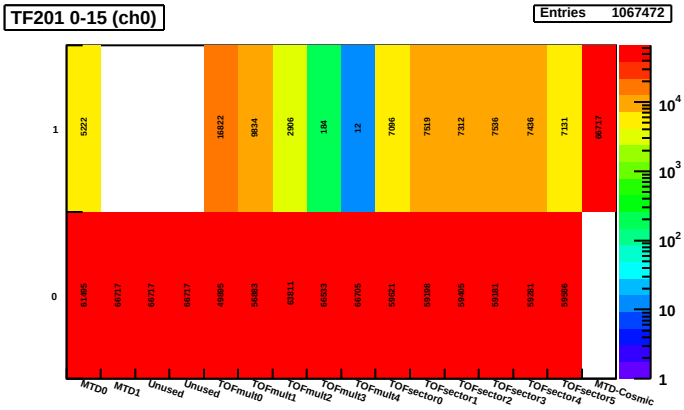

Input to FE002 QT board
Entries 2134944
ADC
channel

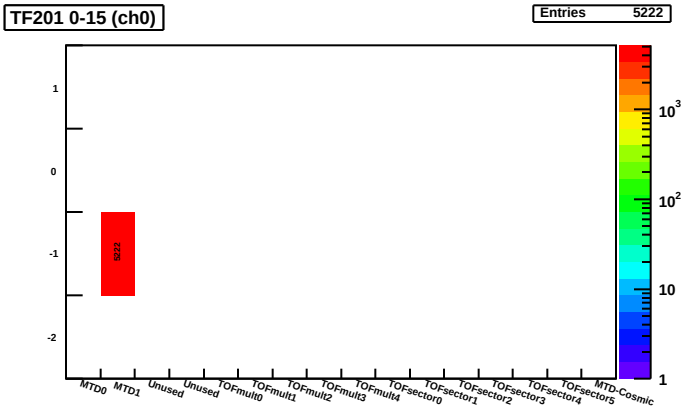

Input to FE003 QT board
Entries 2134944
ADC
channel

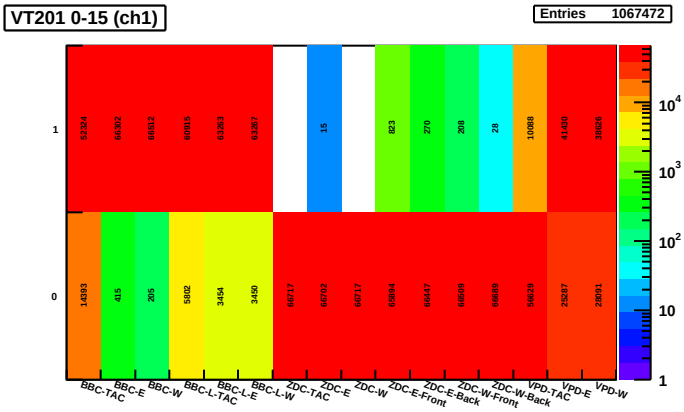

Input to FE004 QT board
Entries 2134944
ADC
channel

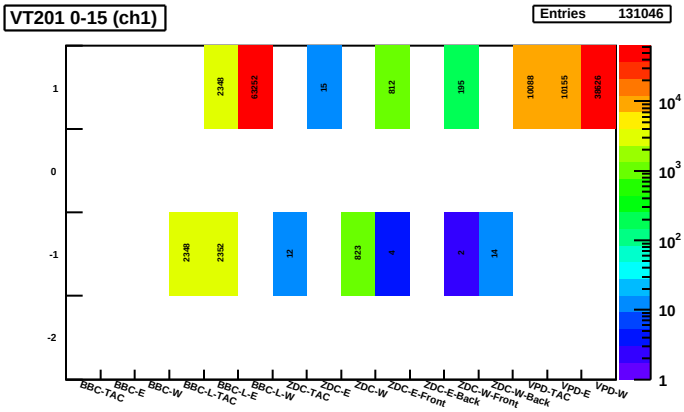

Input to FPE L1 DSM
Entries 266868
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


Input to FPE L1 DSM
Entries 66717
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1


TF201 0-15 (ch0)
Entries 1067472
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 5222
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 1067472
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)
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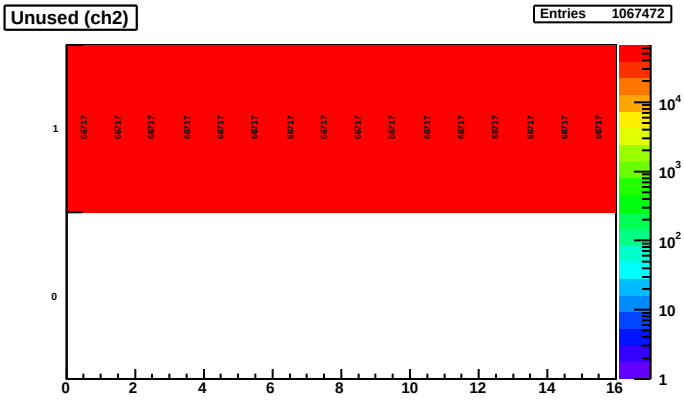
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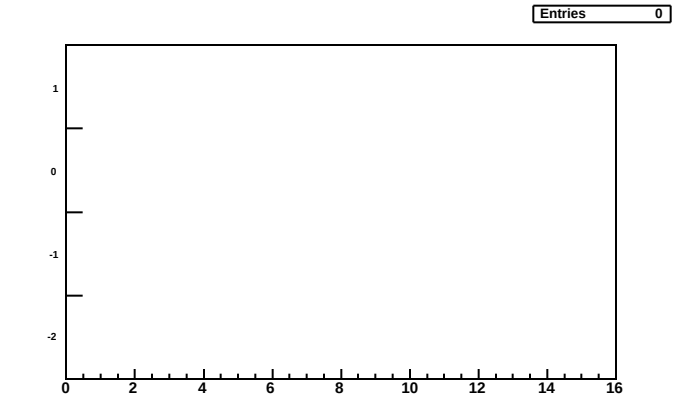
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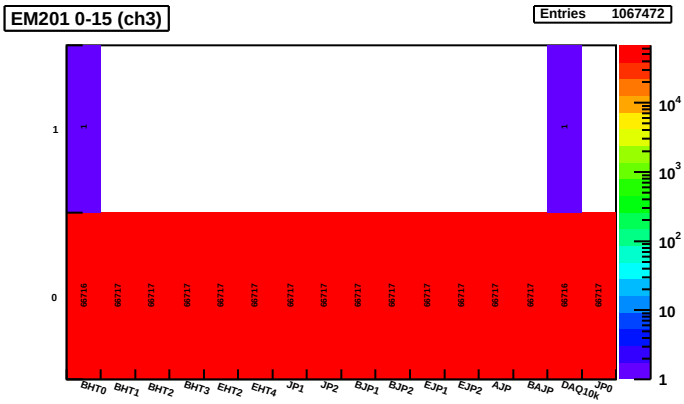
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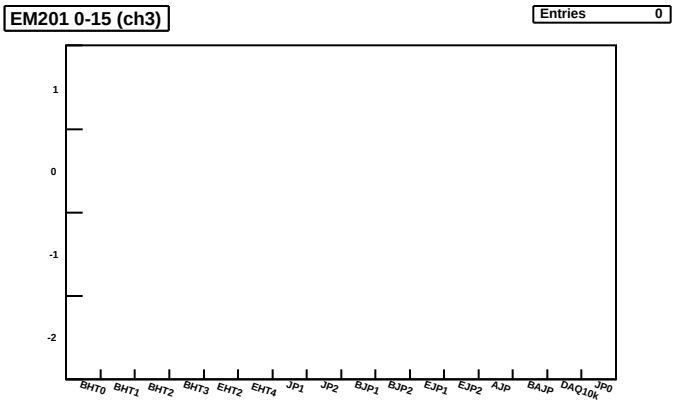
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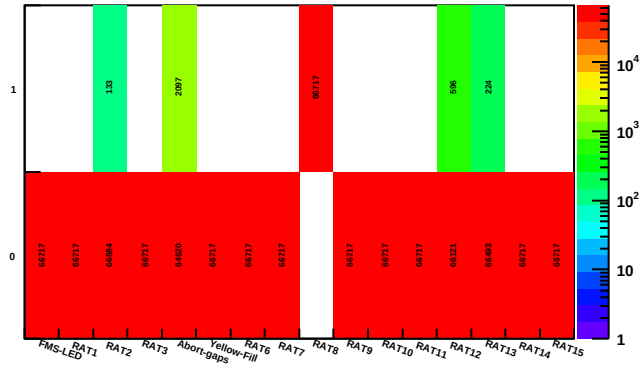
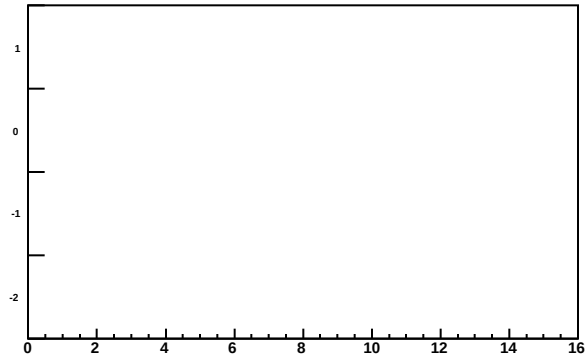
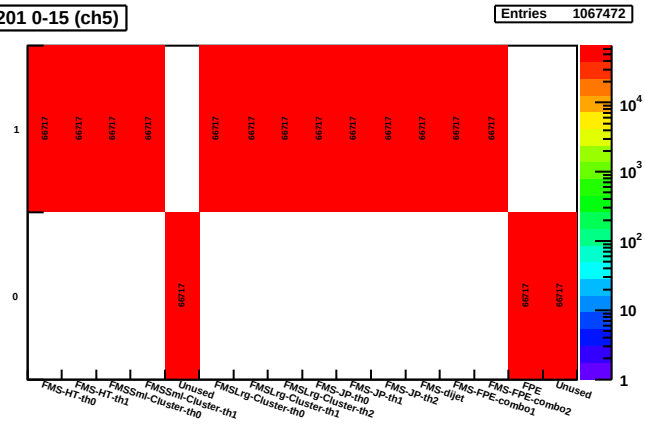
RAT board (ch4)

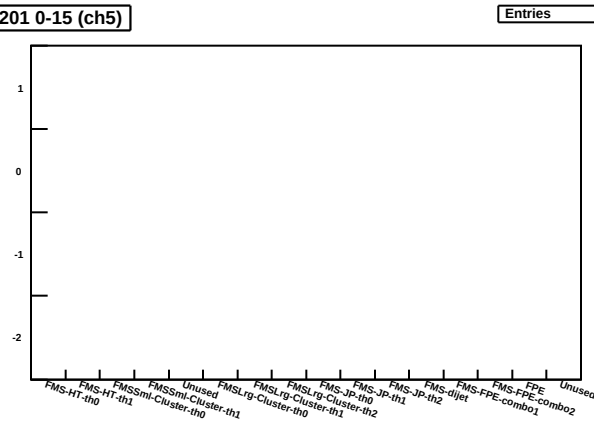




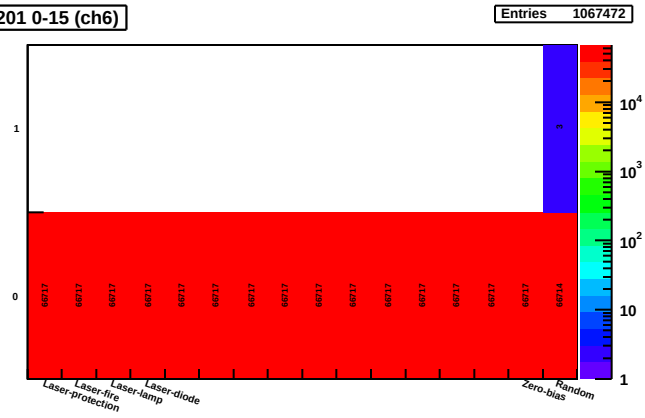
FP201 0-15 (ch5)

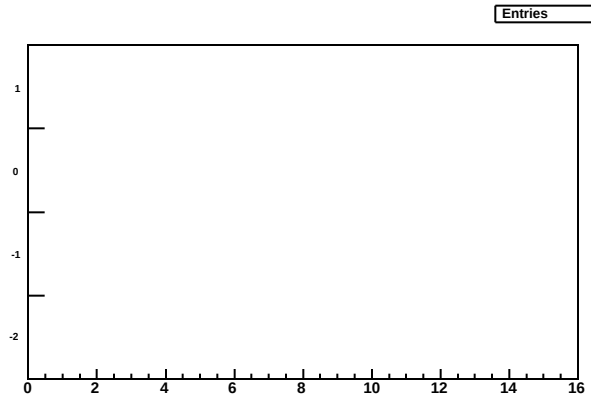
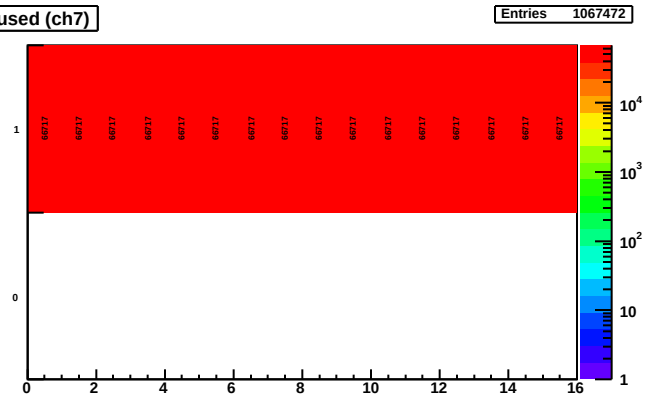
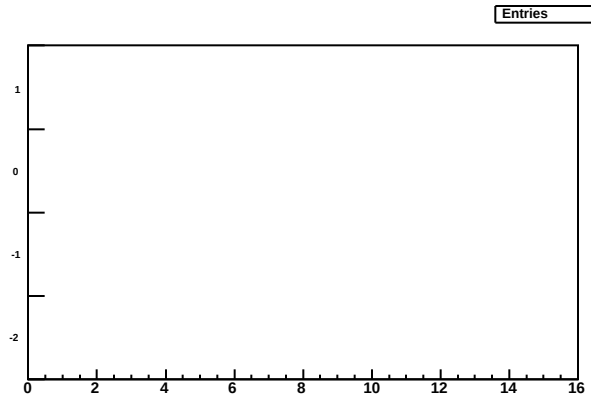


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)