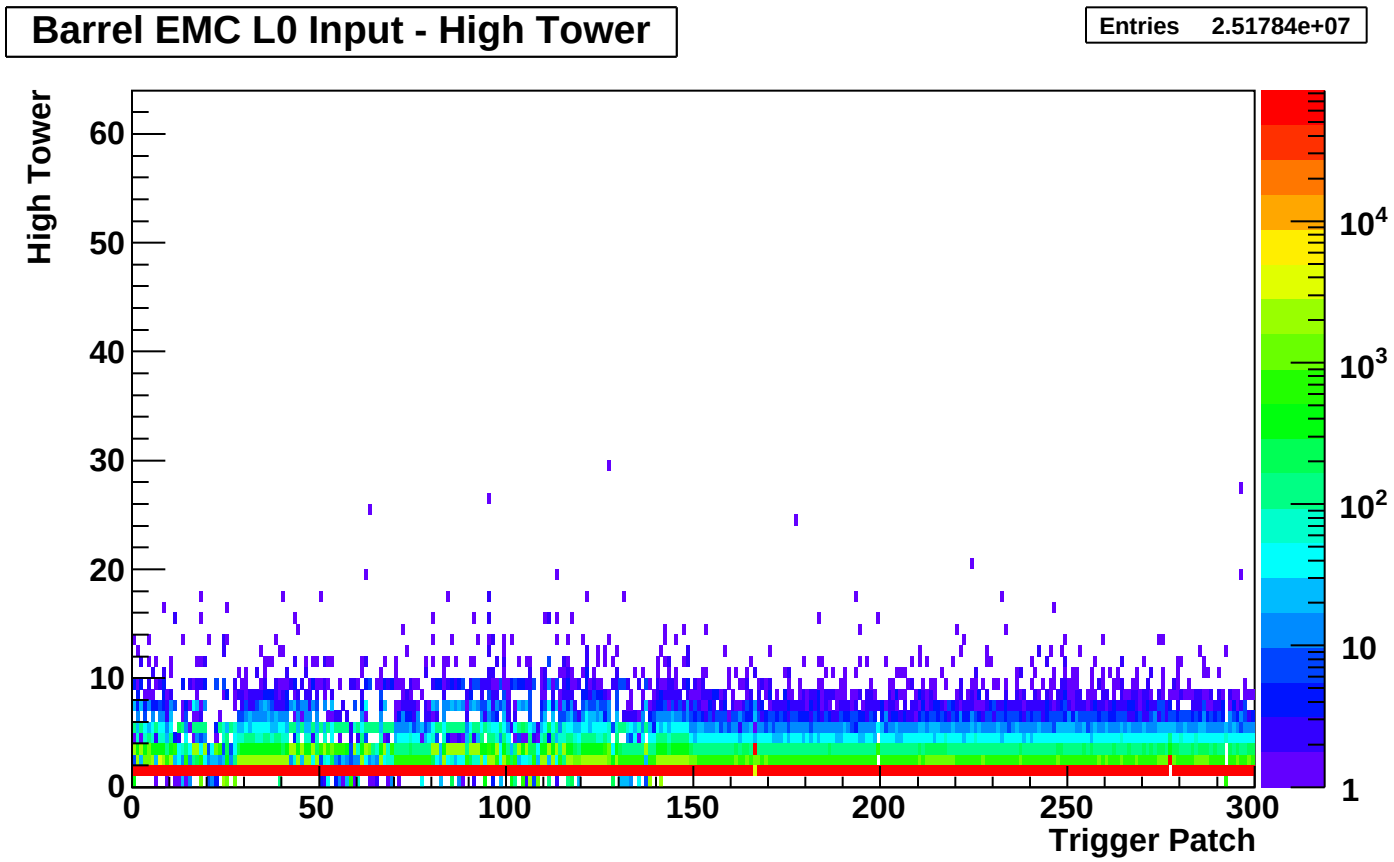
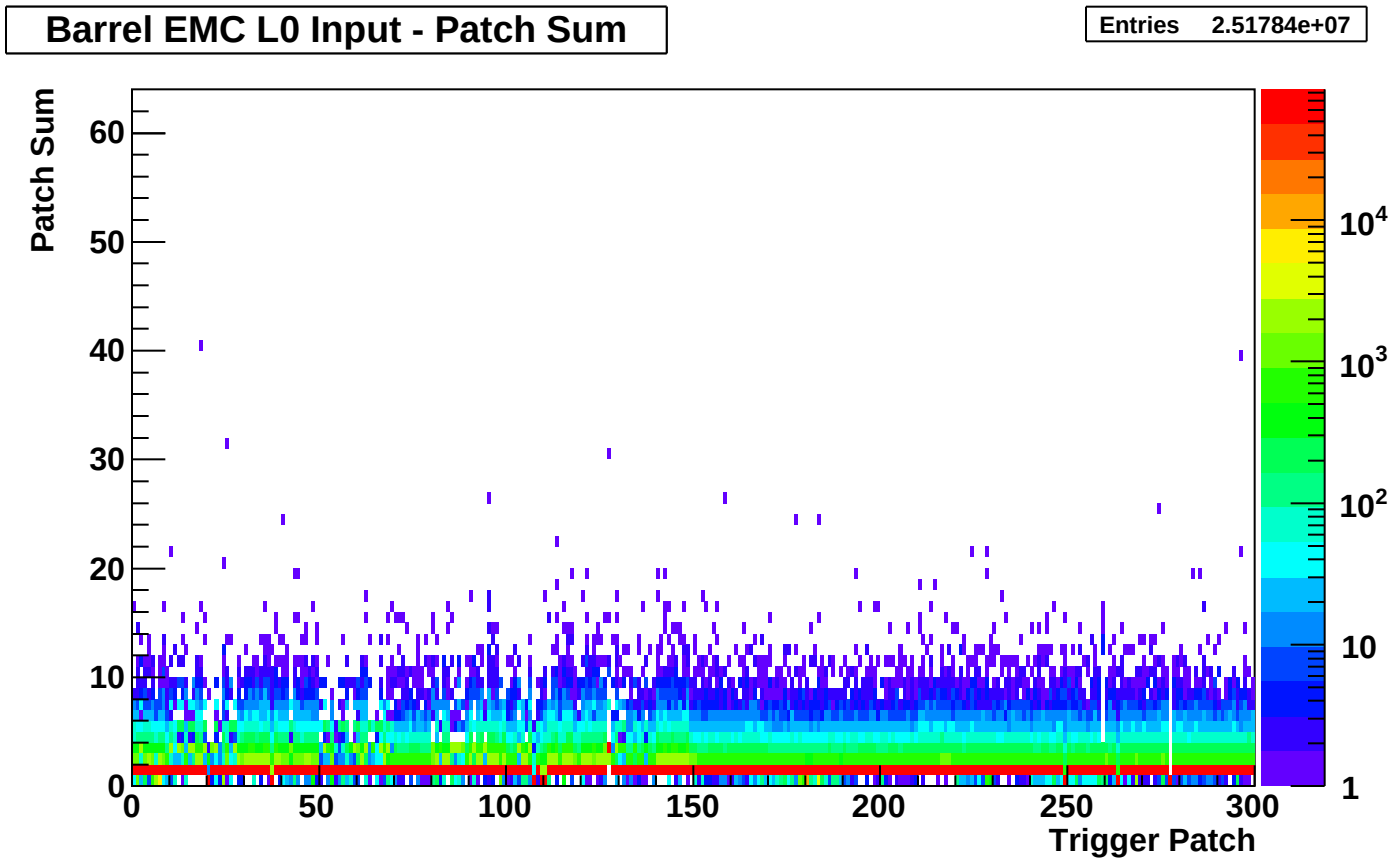
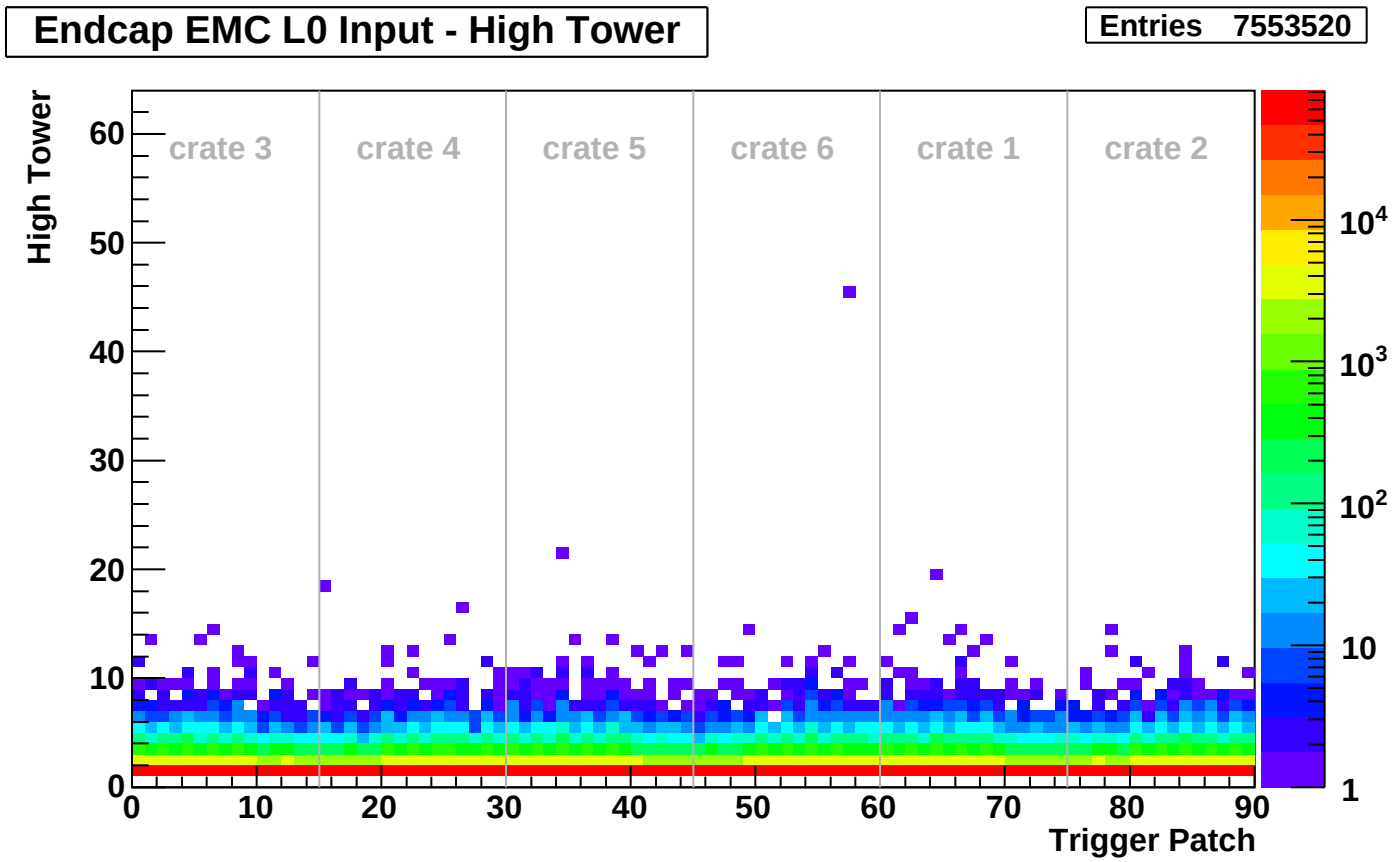
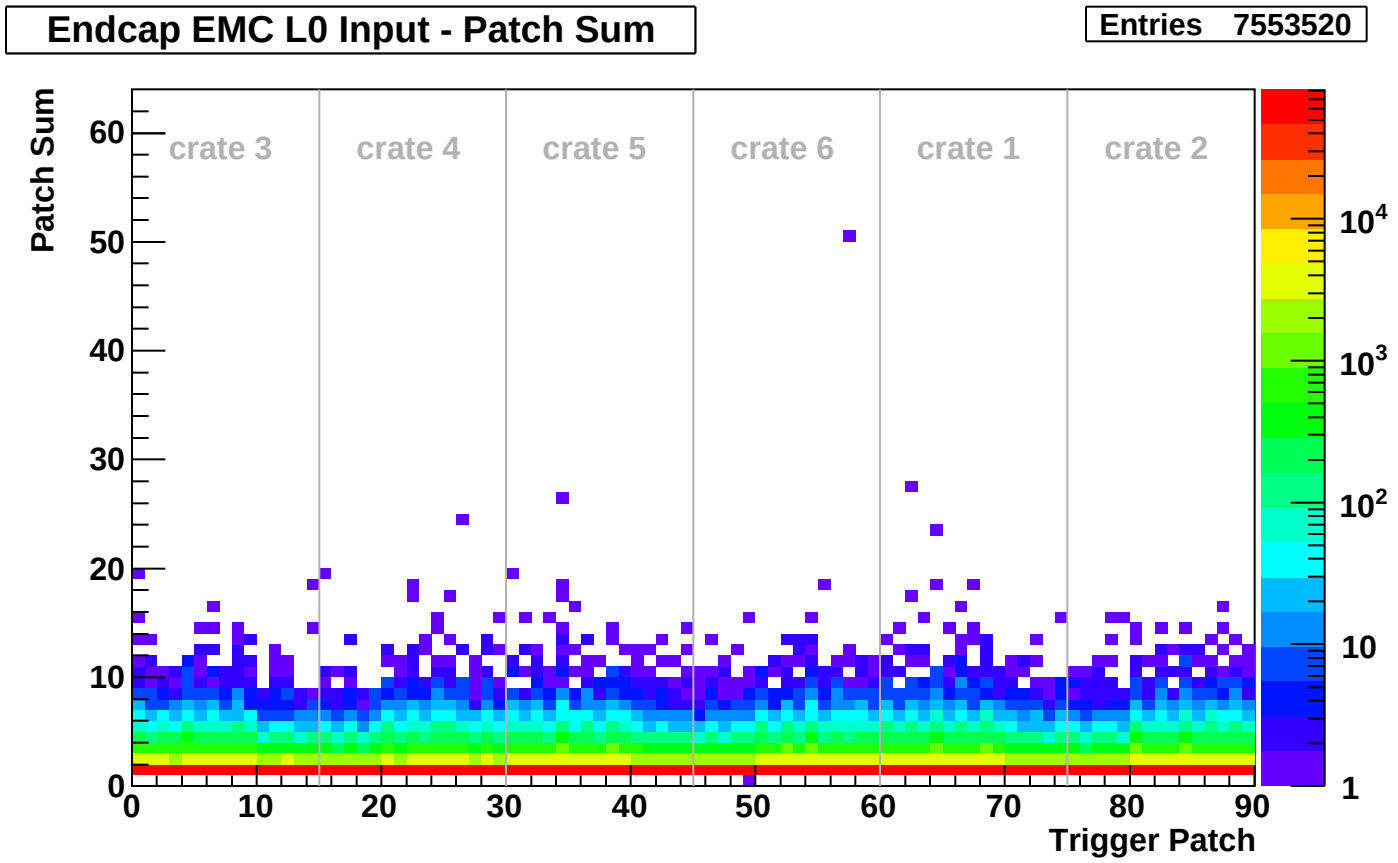
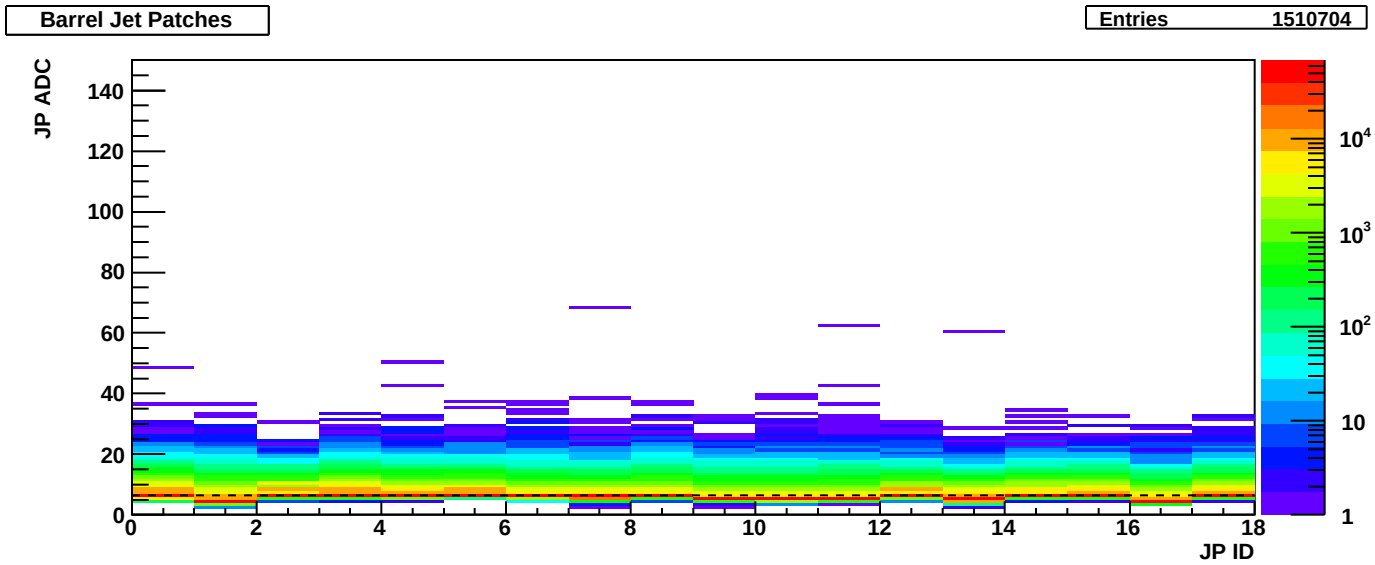
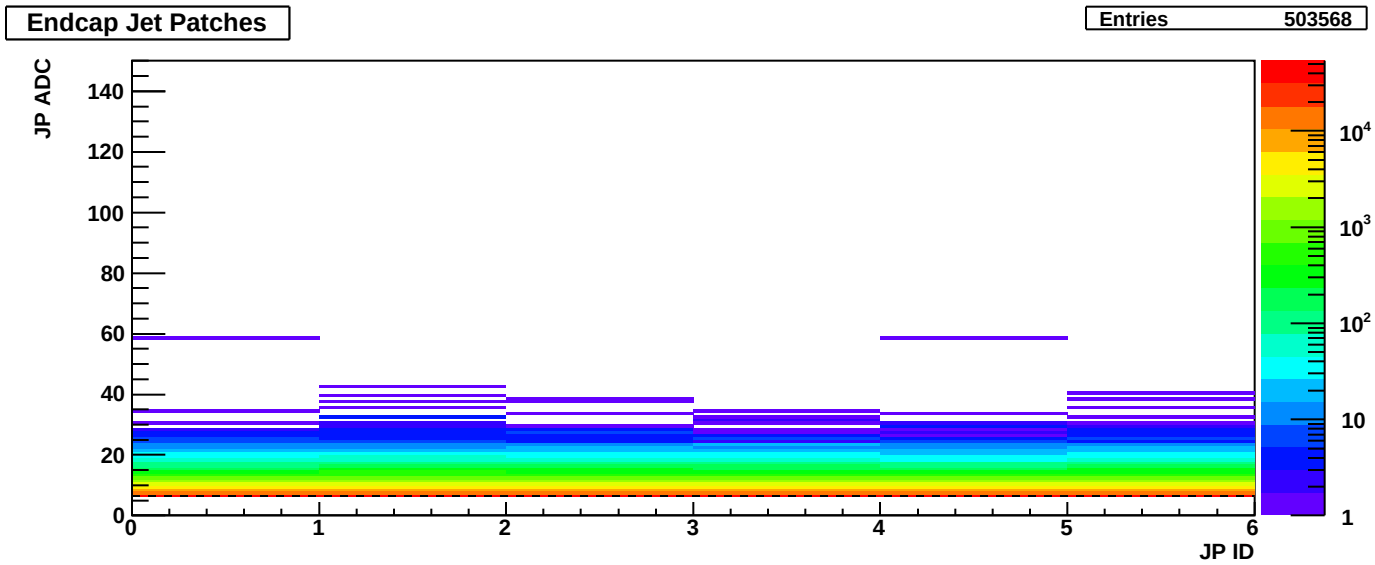

Barrel EMC L0 Input - High Tower
Entries 2.51784e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

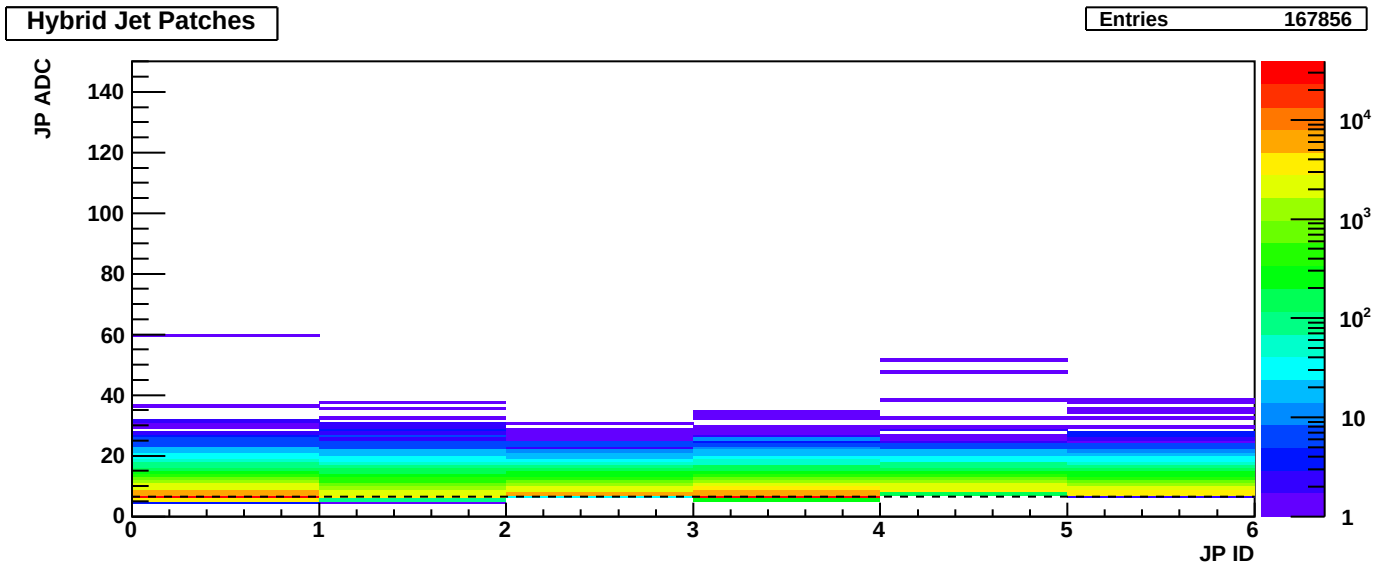

Barrel EMC L0 Input - Patch Sum
Entries 2.51784e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

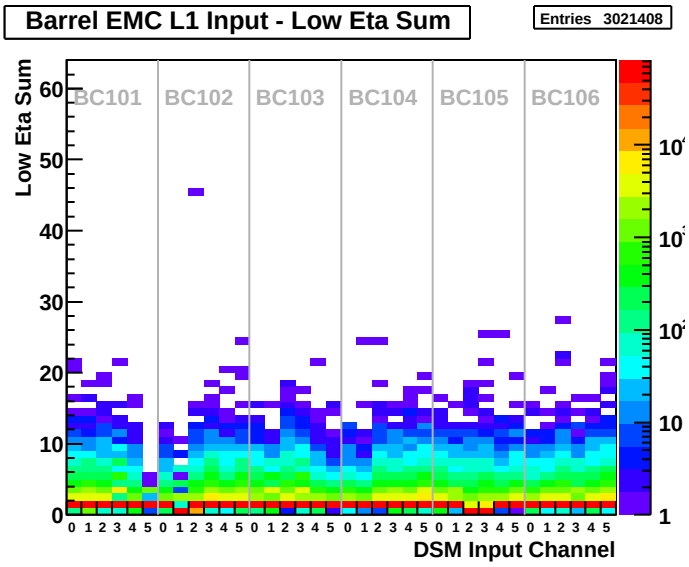

Endcap EMC L0 Input - High Tower
Entries 7553520
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

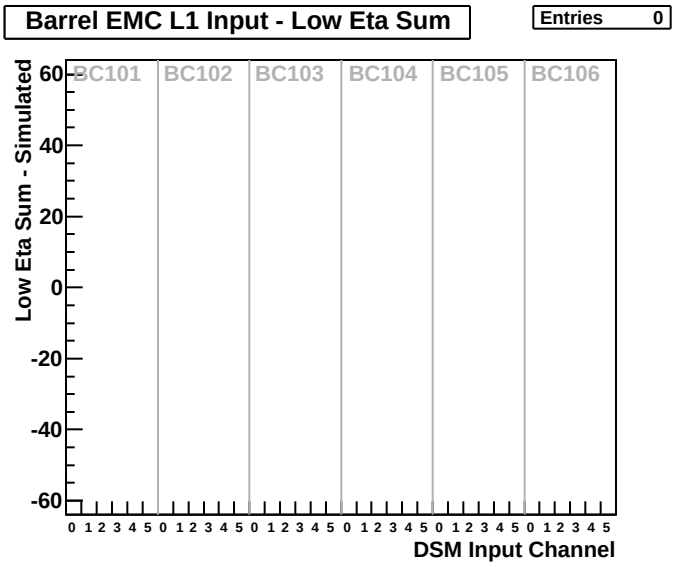

Endcap EMC L0 Input - Patch Sum
Entries 7553520
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

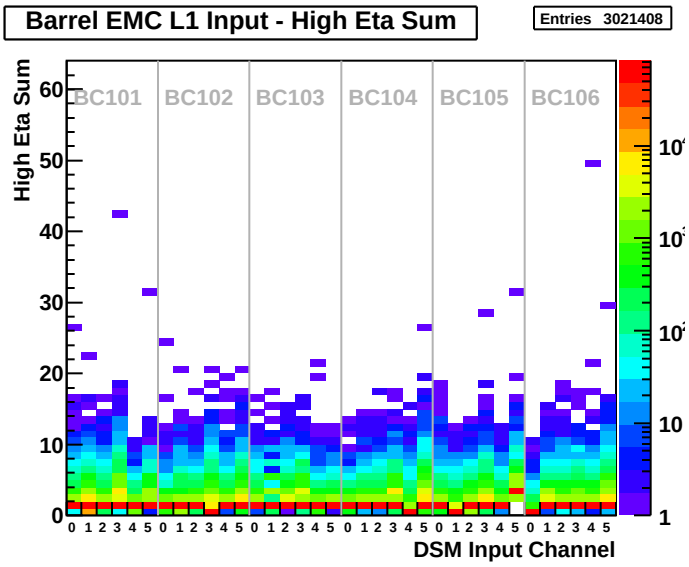

Barrel Jet Patches
Entries 1510704
JP ADC
JP ID

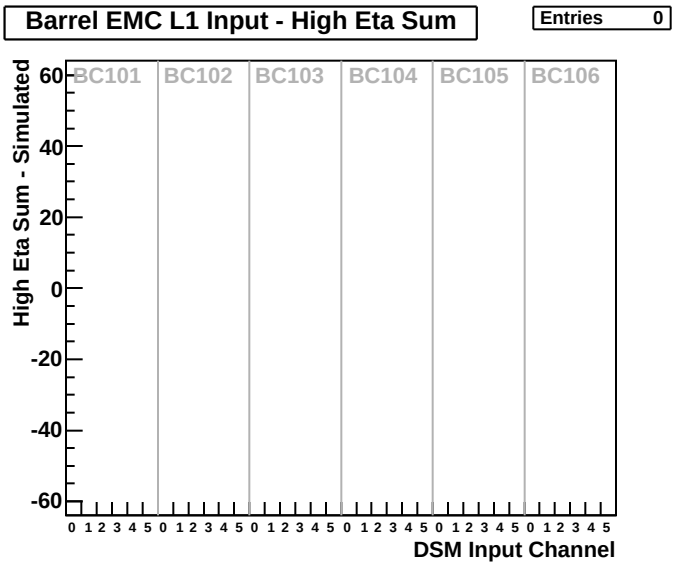

Endcap Jet Patches
Entries 503568
JP ADC
JP ID

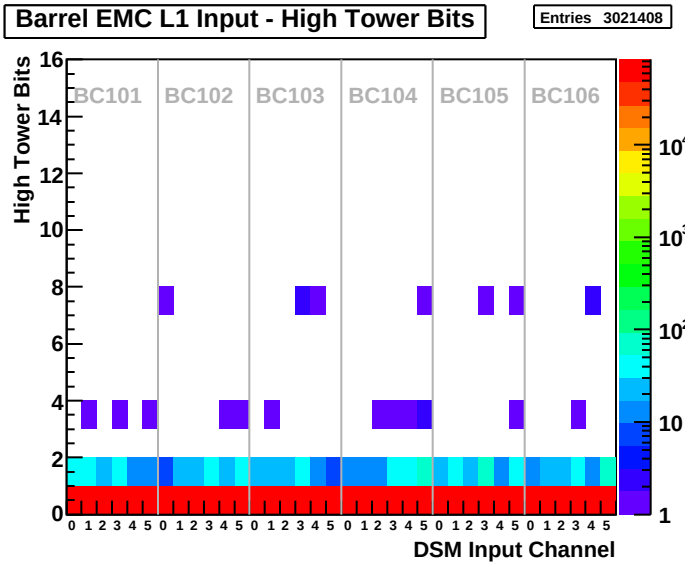

Hybrid Jet Patches
Entries 167856
JP ADC
JP ID

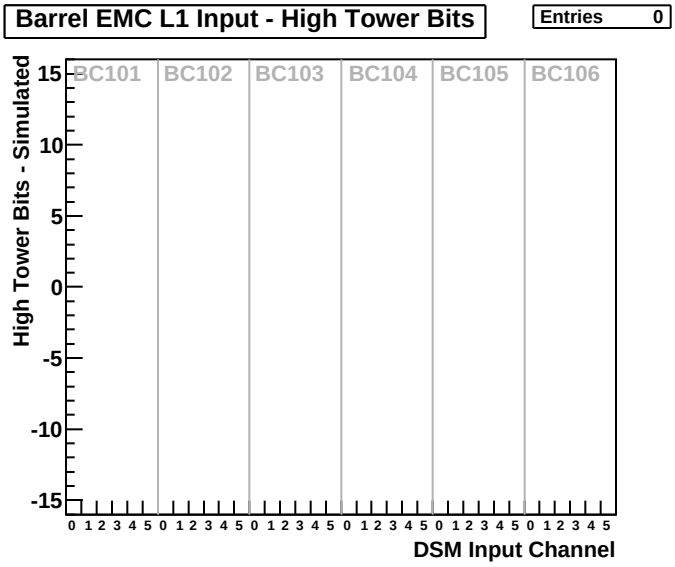

Barrel EMC L1 Input - Low Eta Sum
Entries 3021408
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

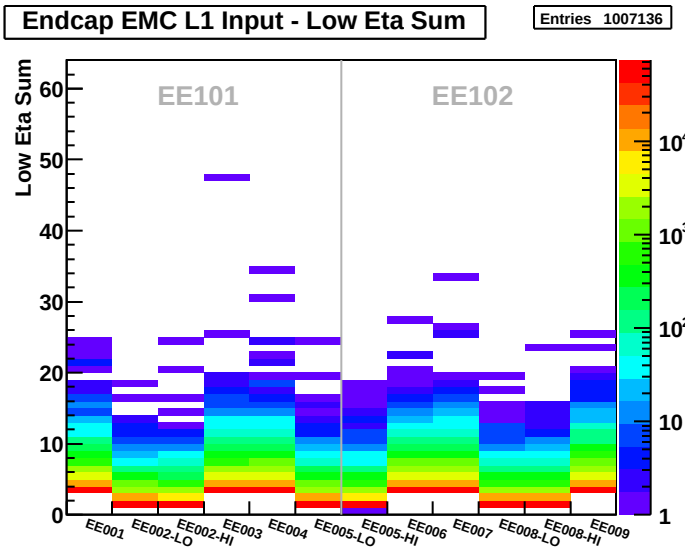

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

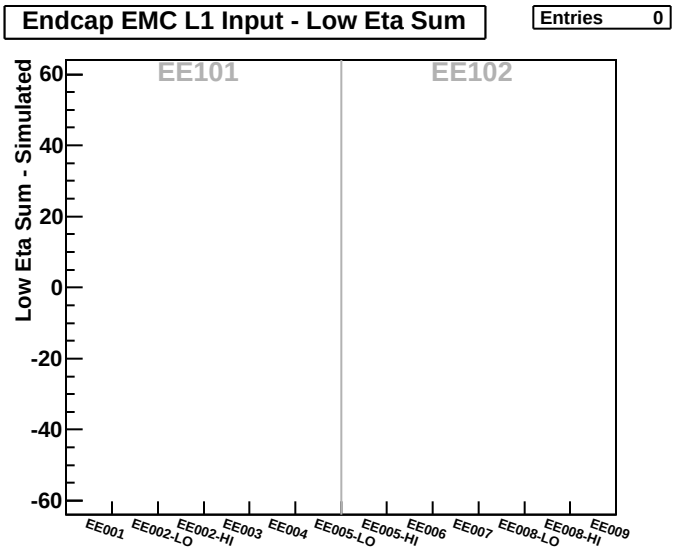

Barrel EMC L1 Input - High Eta Sum
Entries 3021408
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

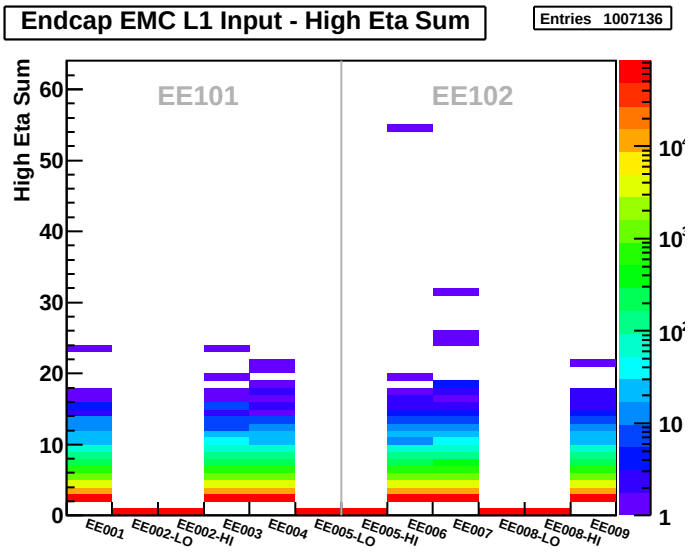

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

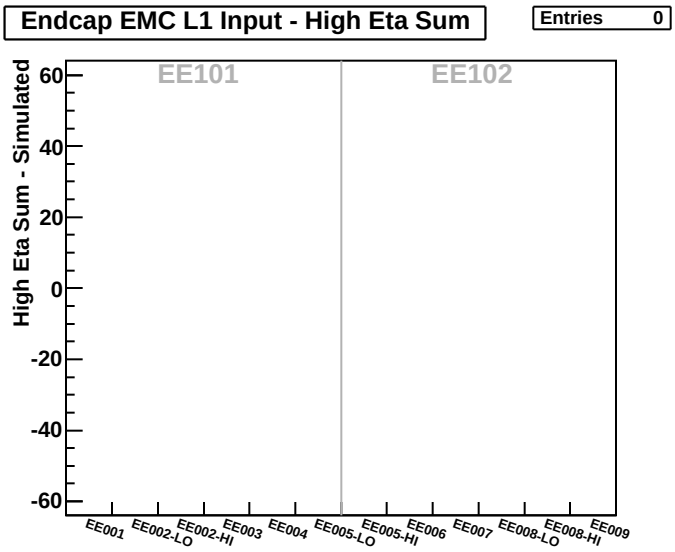

Barrel EMC L1 Input - High Tower Bits
Entries 3021408
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

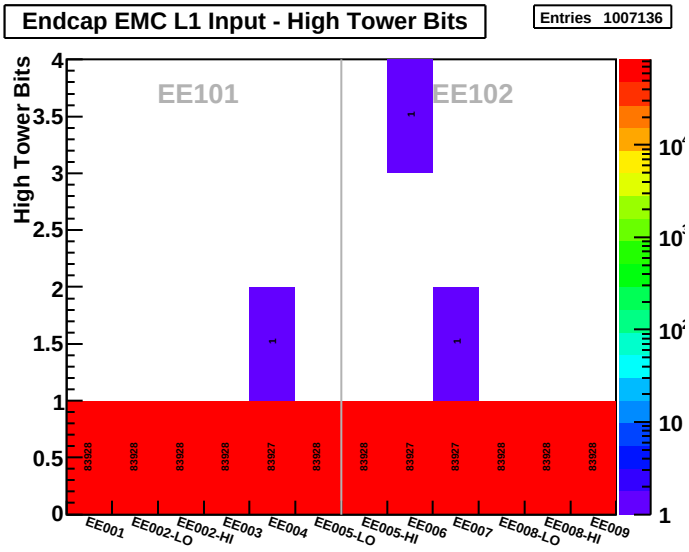

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

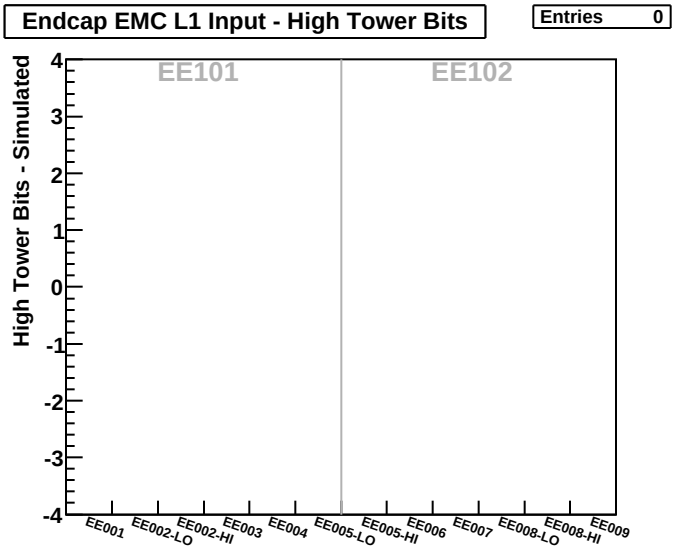

Endcap EMC L1 Input - Low Eta Sum
Entries 1007136
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

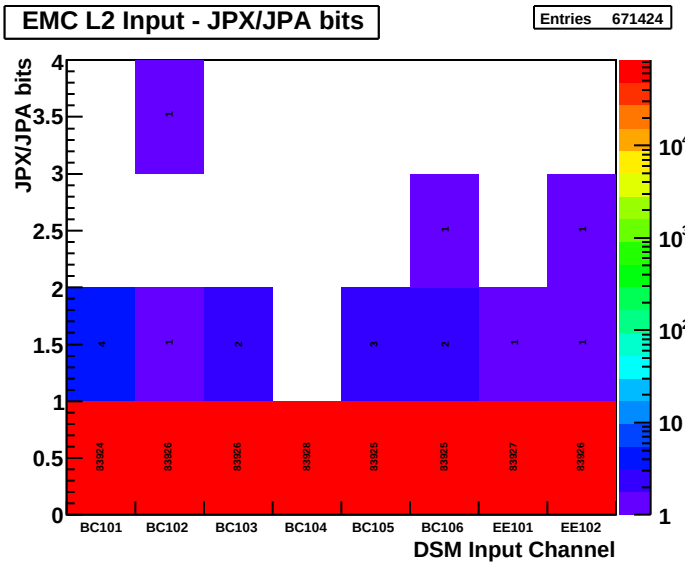

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

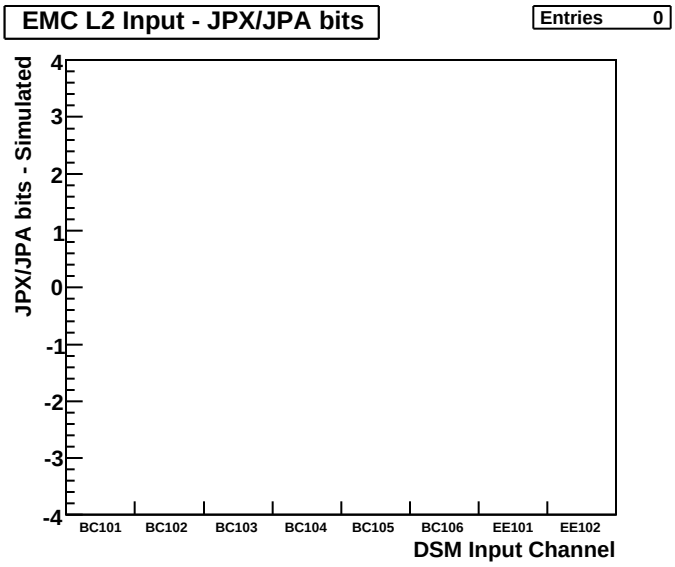

Endcap EMC L1 Input - High Eta Sum
Entries 1007136
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

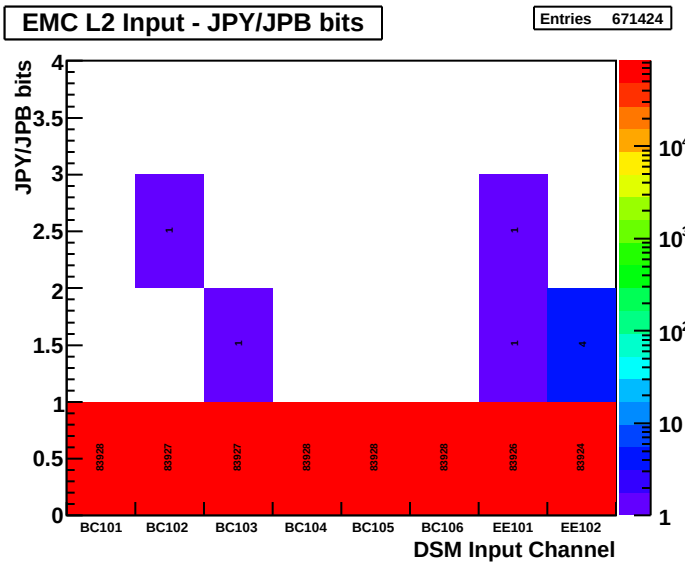

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

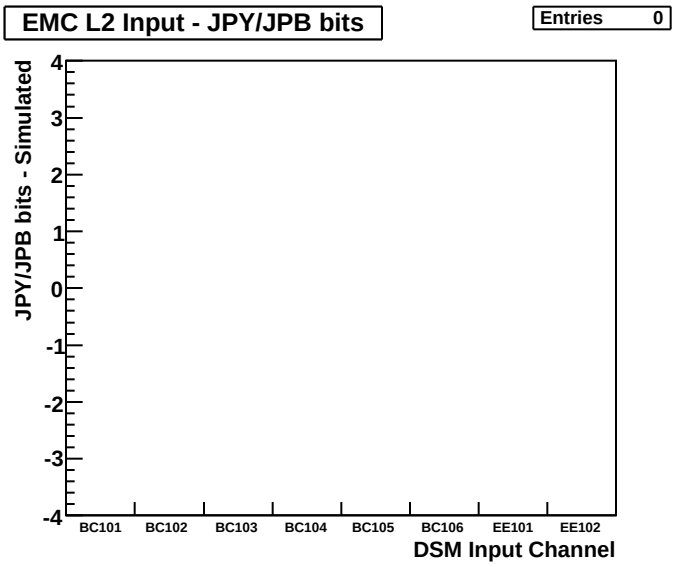

Endcap EMC L1 Input - High Tower Bits
Entries 1007136
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

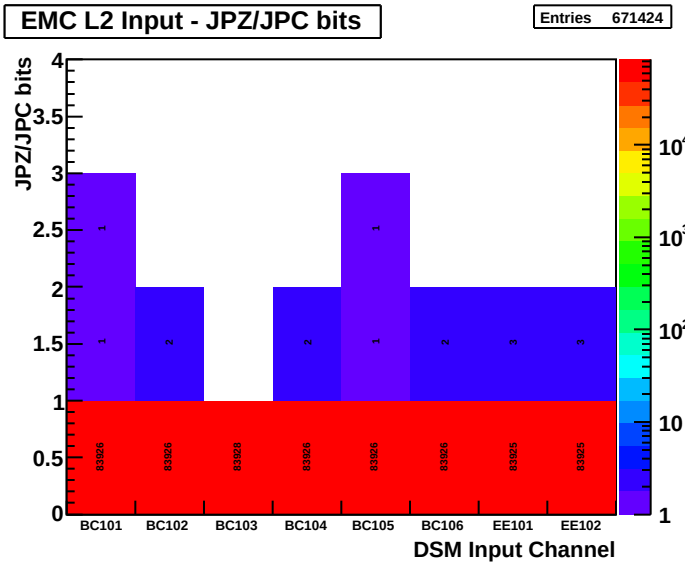

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

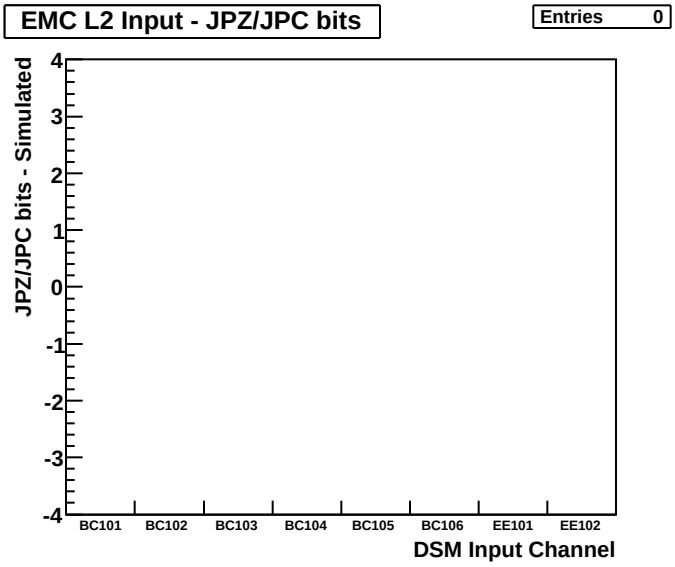

EMC L2 Input - JPX/JPA bits
Entries 671424
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

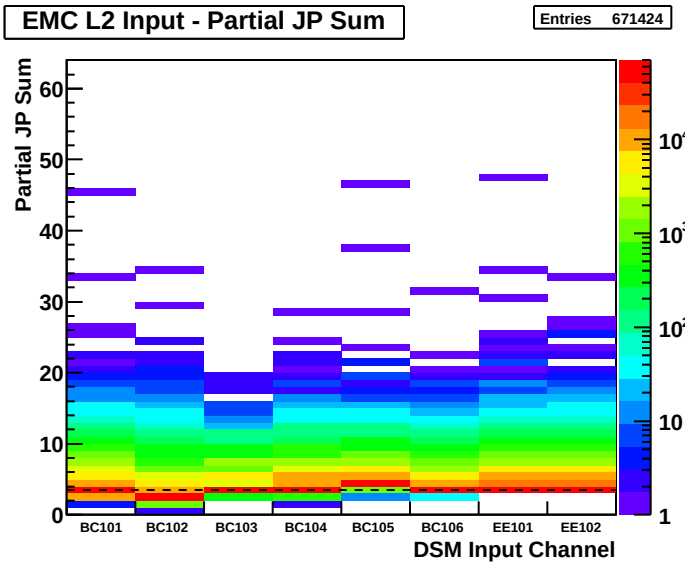

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

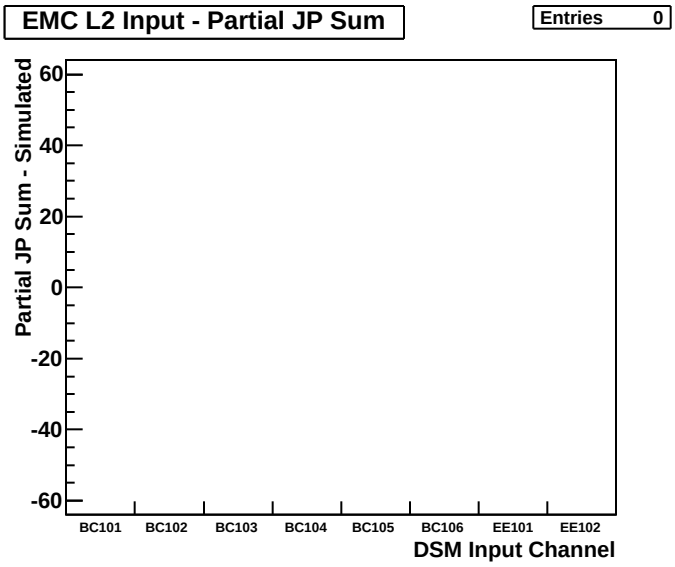

EMC L2 Input - JPY/JPB bits
Entries 671424
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

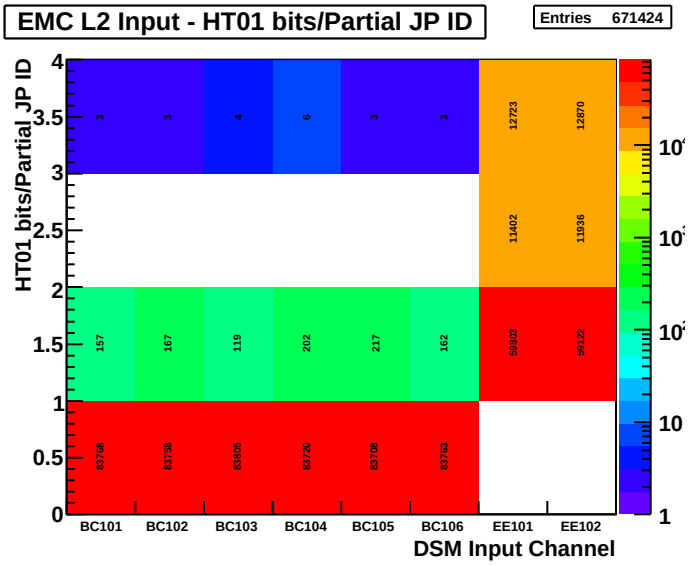

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

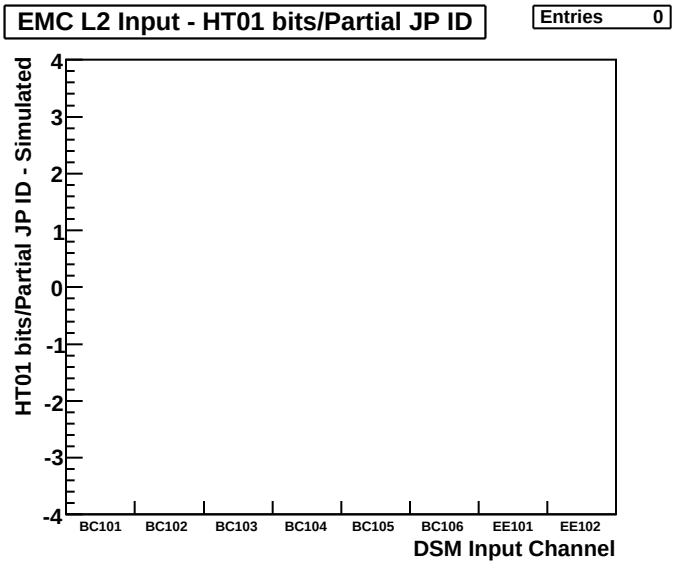

EMC L2 Input - JPZ/JPC bits
Entries 671424
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

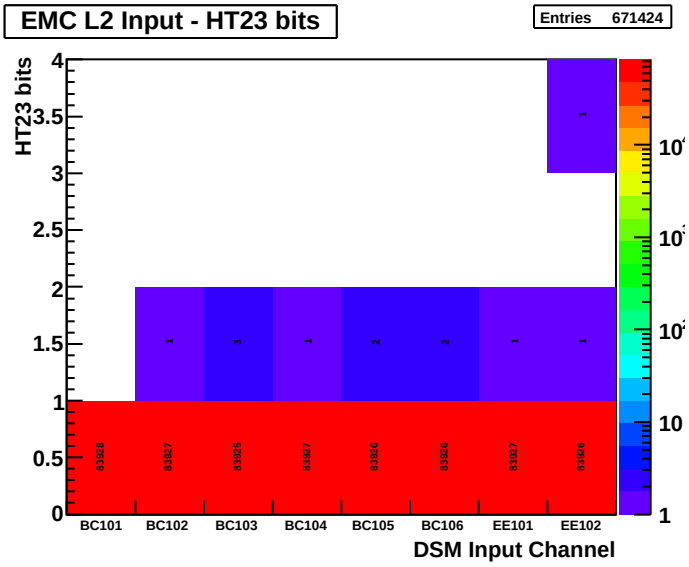

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

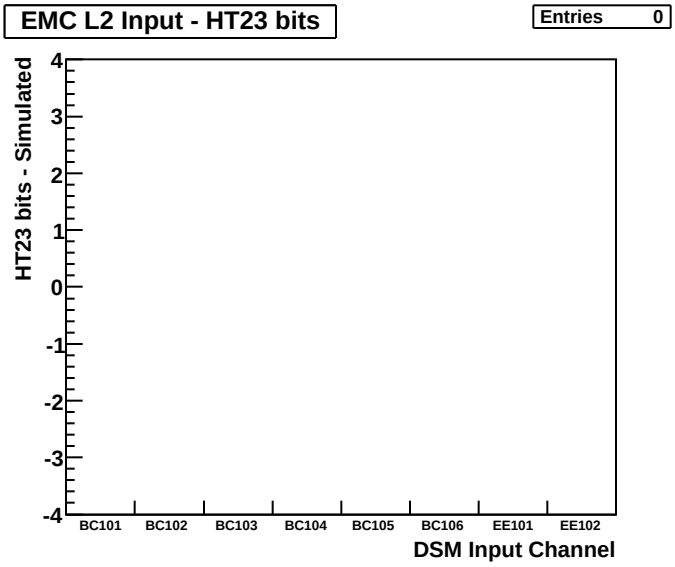

EMC L2 Input - Partial JP Sum
Entries 671424
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

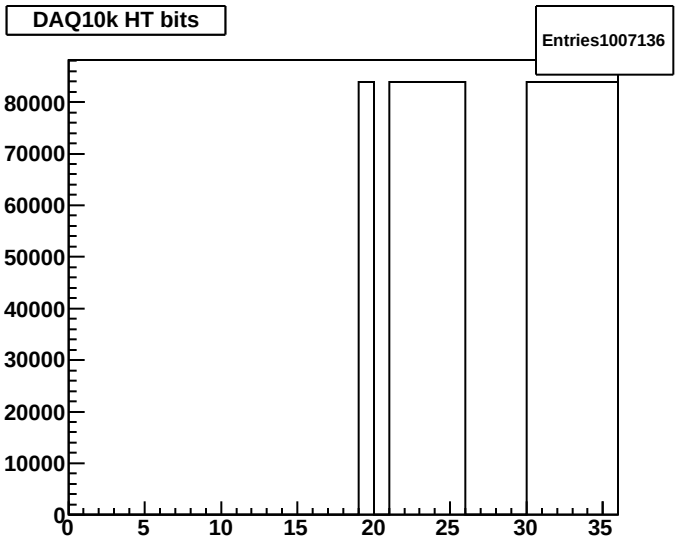

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

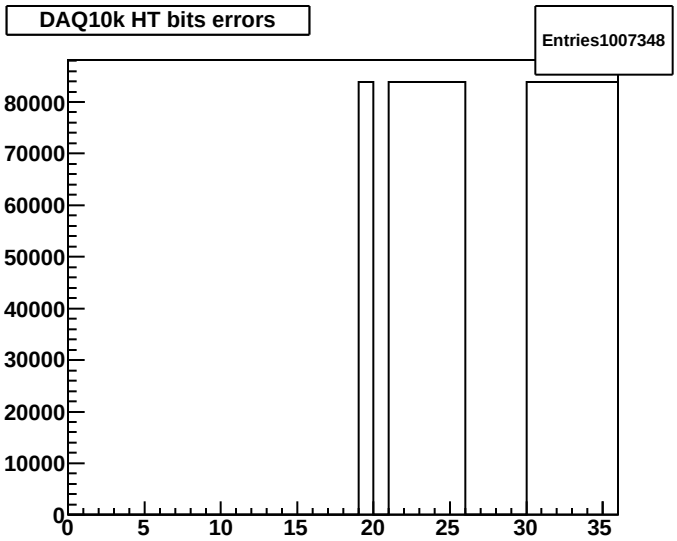

EMC L2 Input - HT01 bits/Partial JP ID
Entries 671424
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

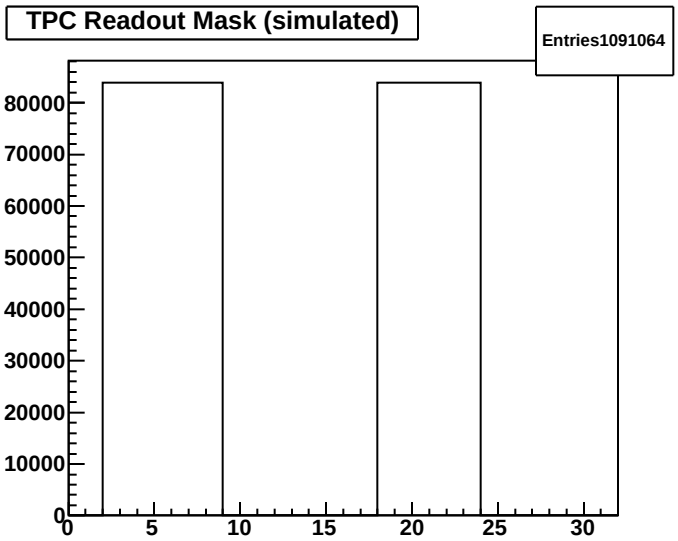

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

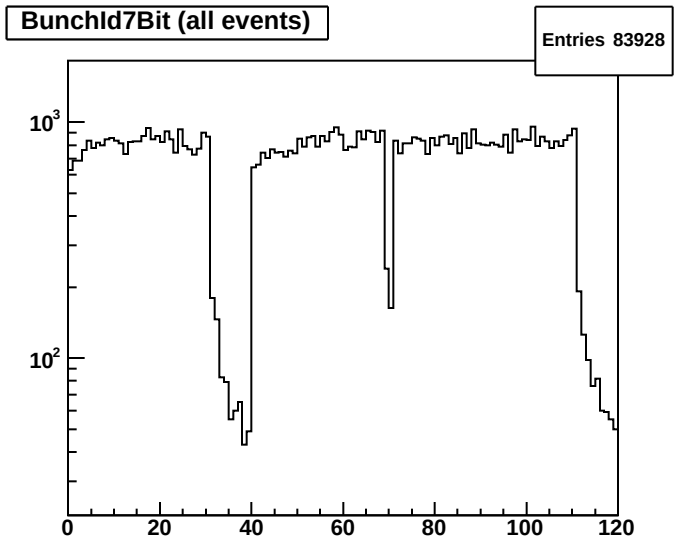

EMC L2 Input - HT23 bits
Entries 671424
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

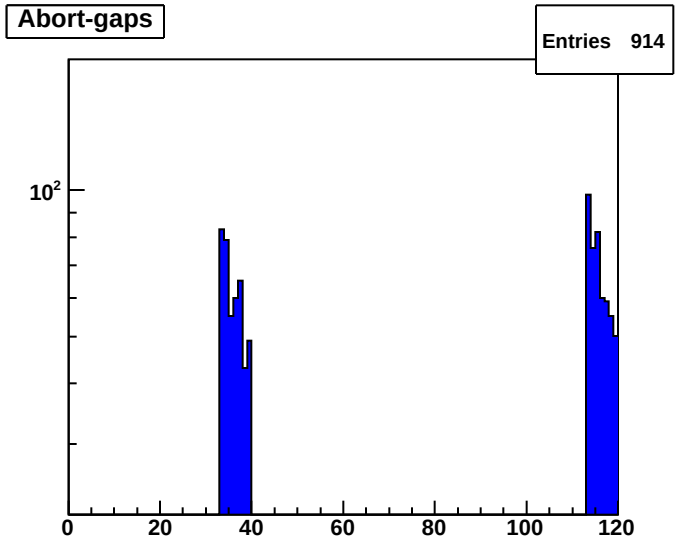

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

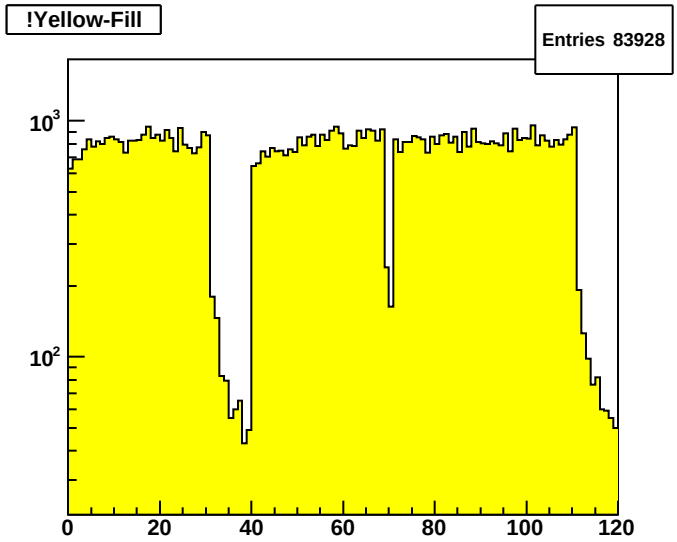

DAQ10k HT bits
Entries1007136
80000
70000
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

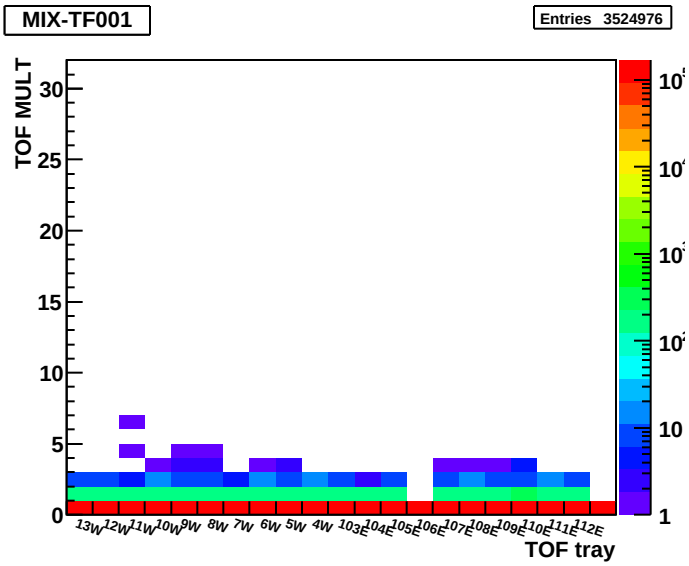

DAQ10k HT bits errors
Entries1007348
80000
70000
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30 35

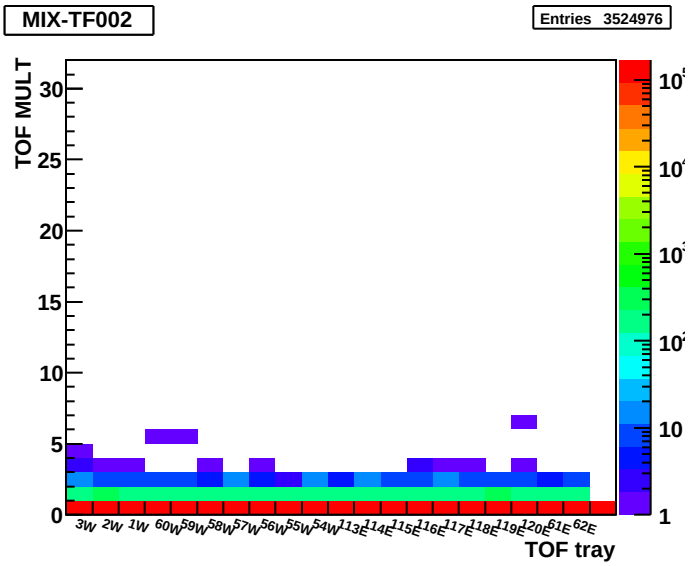

TPC Readout Mask (simulated)
Entries1091064
80000
70000
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30

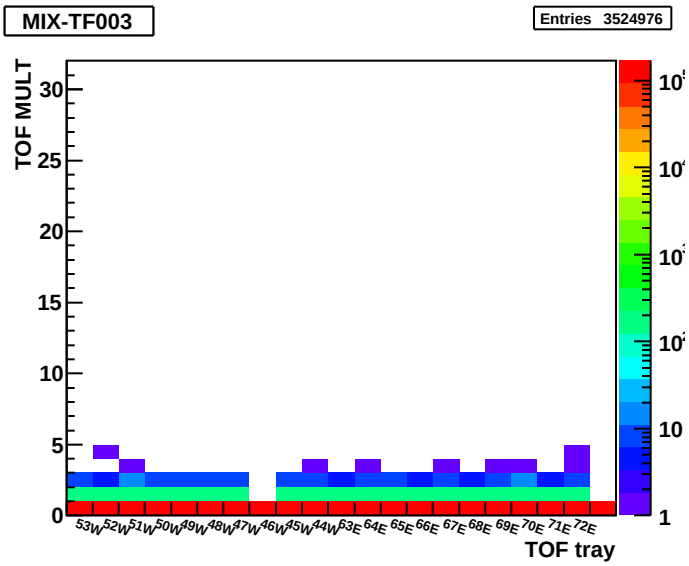

BunchId7Bit (all events)
Entries 83928
10^3
10^2
0 20 40 60 80 100 120

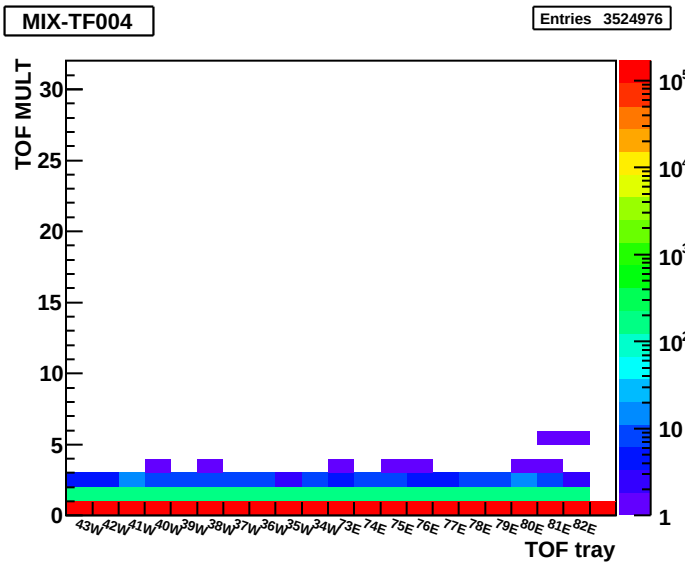

Abort-gaps
Entries 914
10^2
0 20 40 60 80 100 120

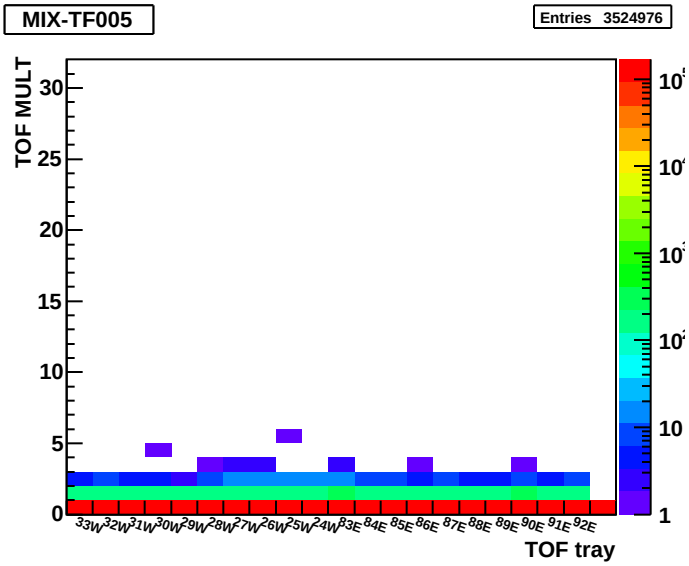

!Yellow-Fill
Entries 83928
10^3
10^2
0 20 40 60 80 100 120

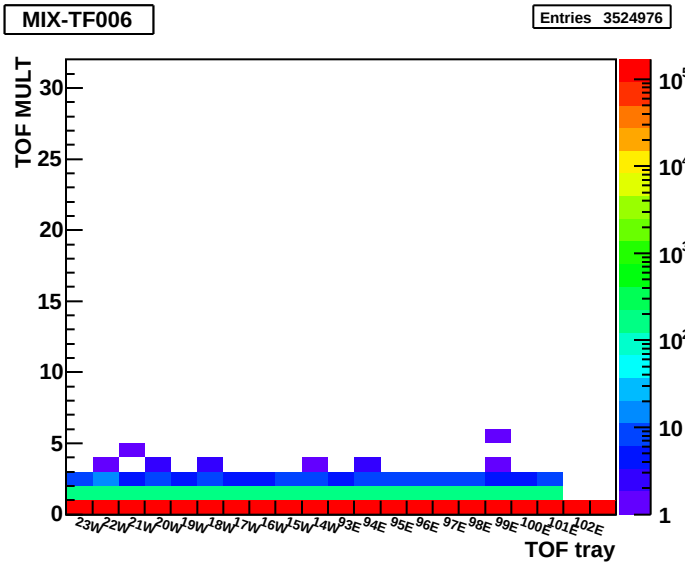

MIX-TF001
Entries 3524976
TOF MULT
TOF tray

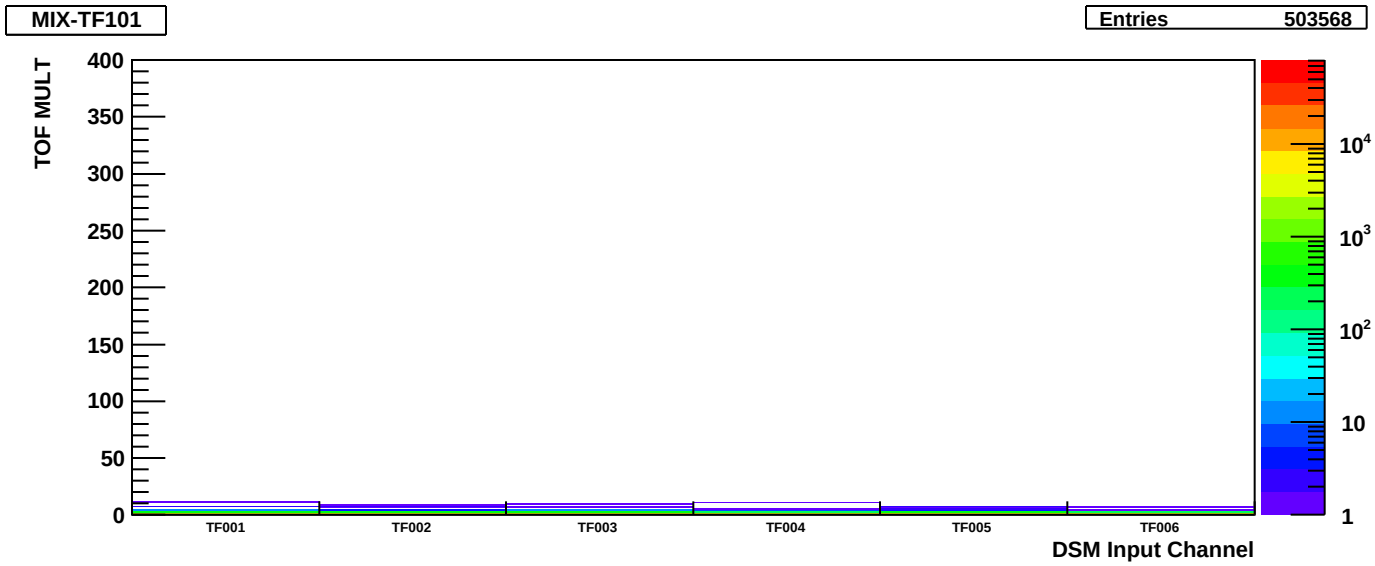

MIX-TF002
Entries 3524976
TOF MULT
TOF tray

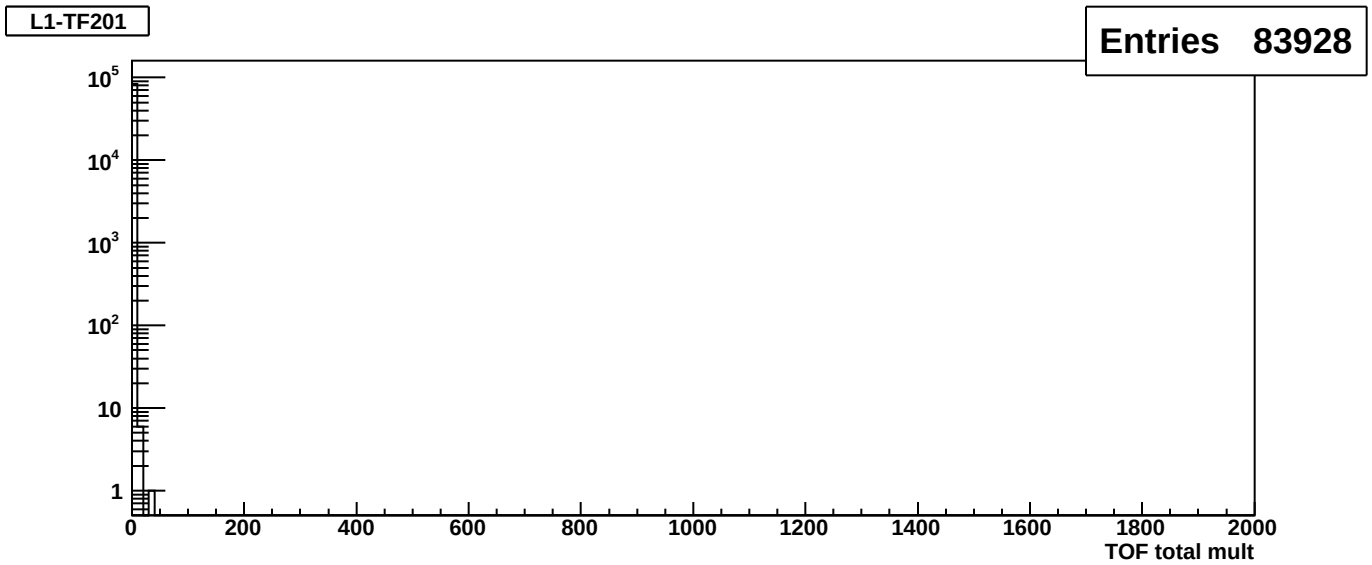

MIX-TF003
Entries 3524976
TOF MULT
TOF tray

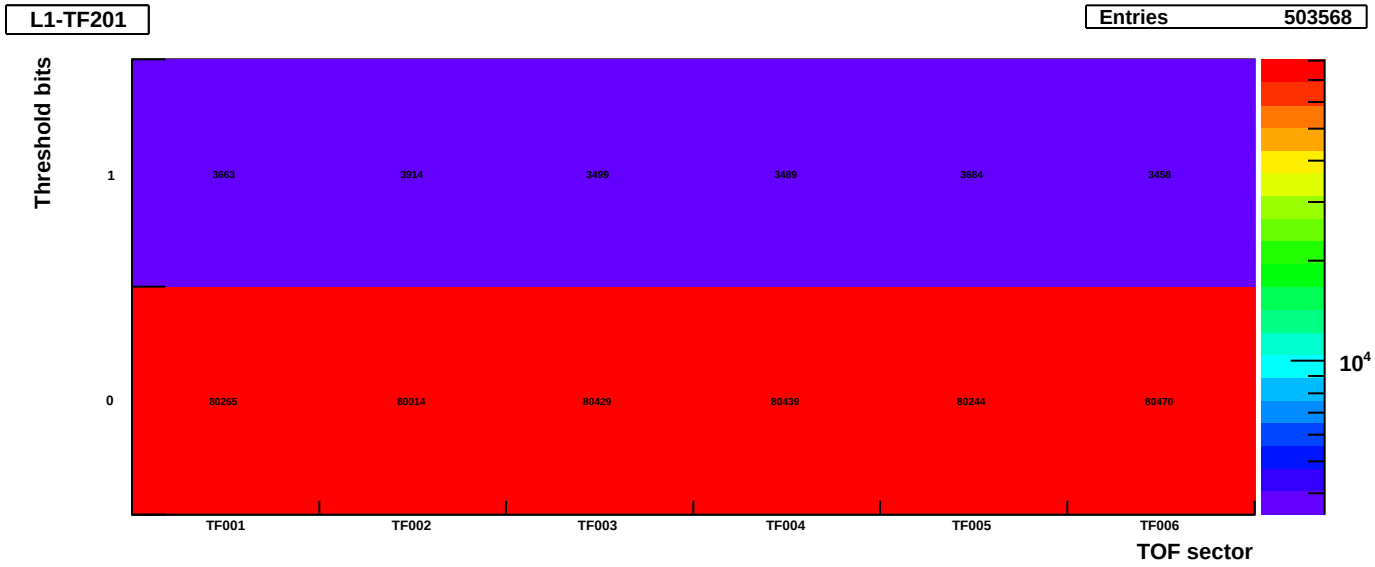

MIX-TF004
Entries 3524976
TOF MULT
TOF tray

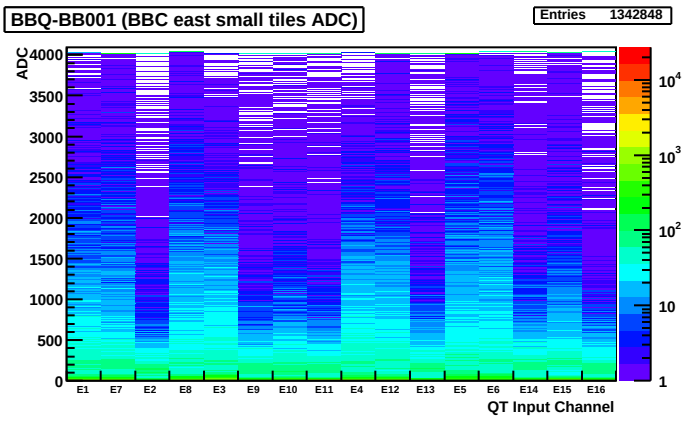

MIX-TF005
Entries 3524976
TOF MULT
TOF tray

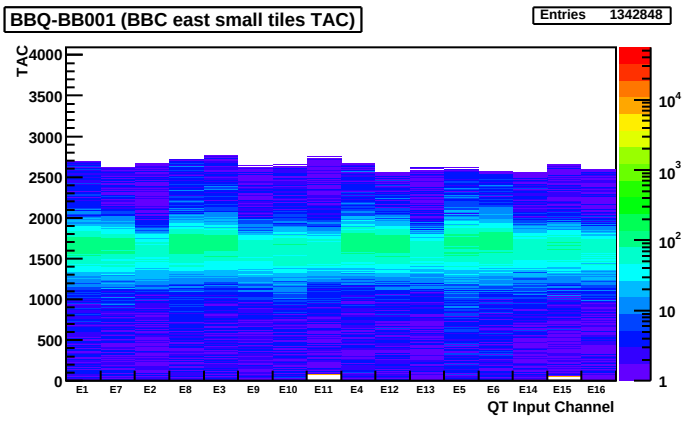

MIX-TF006
Entries 3524976
TOF MULT
TOF tray

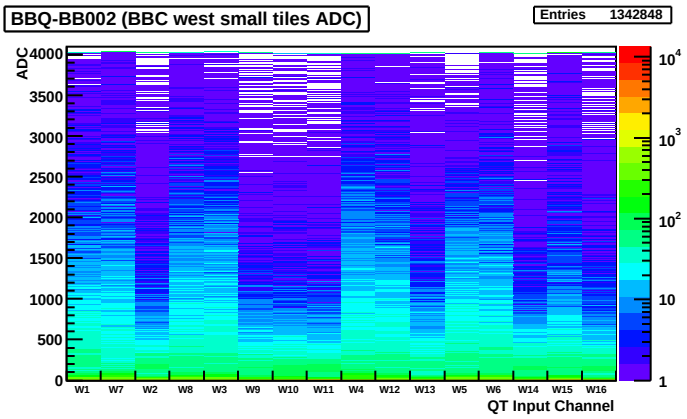

MIX-TF101
Entries 503568
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

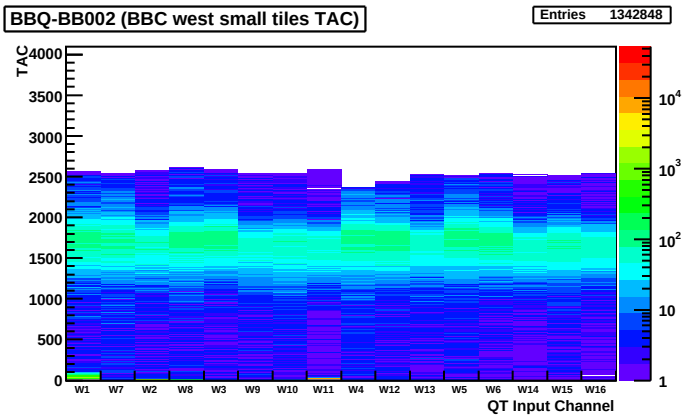

L1-TF201
Entries 83928
10^5
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

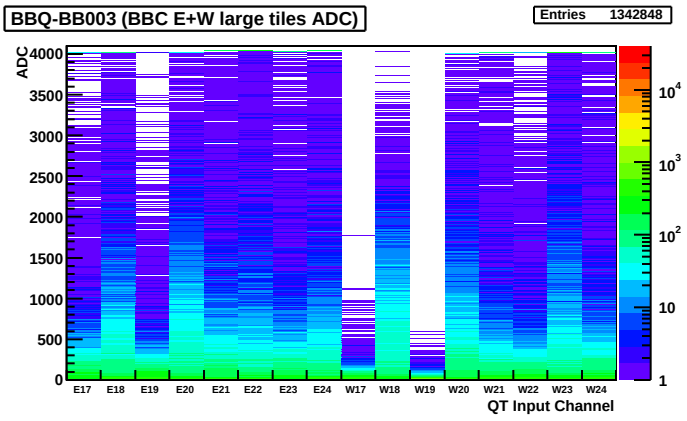

L1-TF201
Entries 503568
Threshold bits
1
0
3663
3914
3499
3489
3684
3458
80265
80014
80429
80439
80244
80470
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4

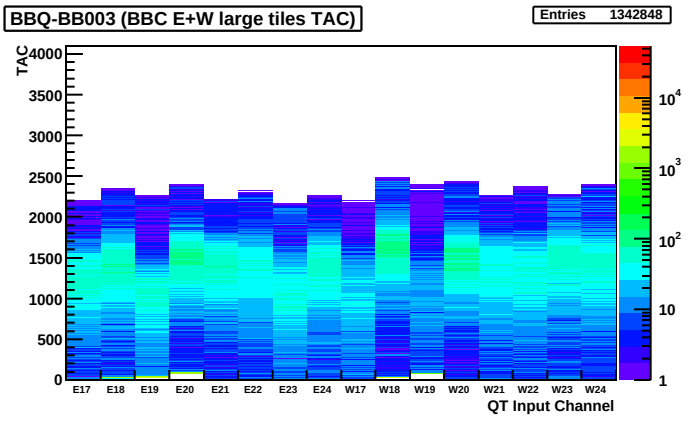

BBQ-BB001 (BBC east small tiles ADC)
Entries 1342848
ADC
QT Input Channel

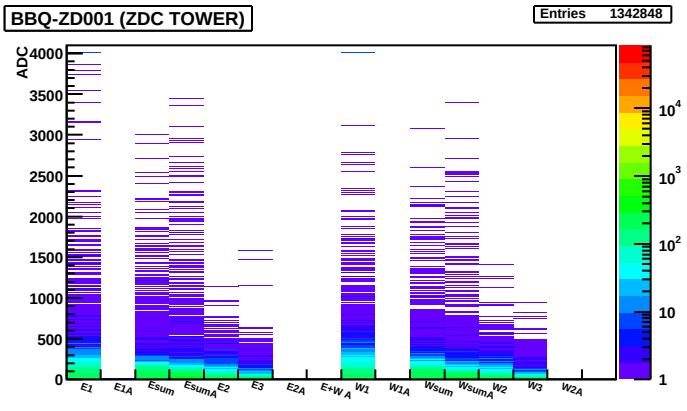

BBQ-BB001 (BBC east small tiles TAC)
Entries 1342848
TAC
QT Input Channel

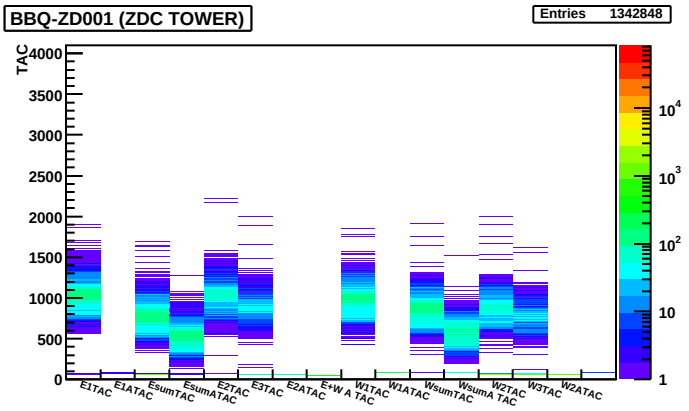

BBQ-BB002 (BBC west small tiles ADC)
Entries 1342848
ADC
QT Input Channel

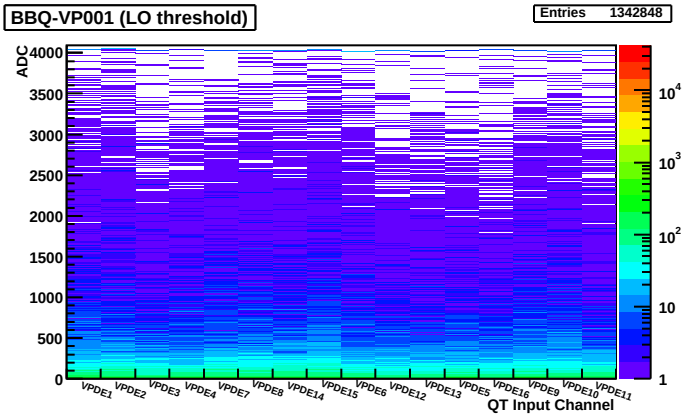

BBQ-BB002 (BBC west small tiles TAC)
Entries 1342848
TAC
QT Input Channel

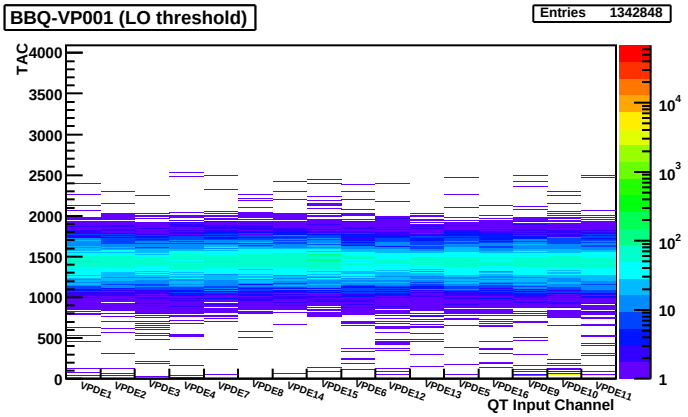

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 1342848
ADC
QT Input Channel

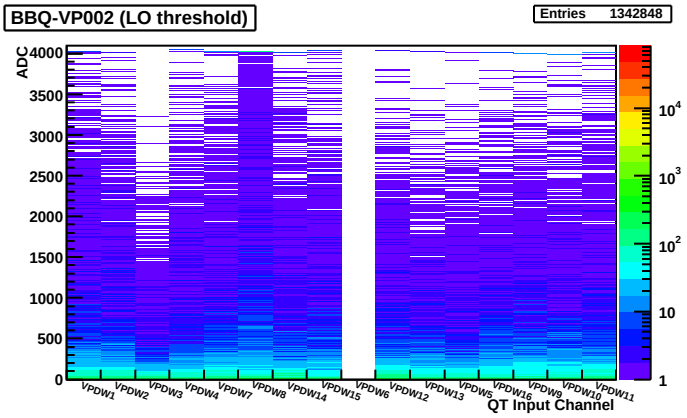

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 1342848
TAC
QT Input Channel

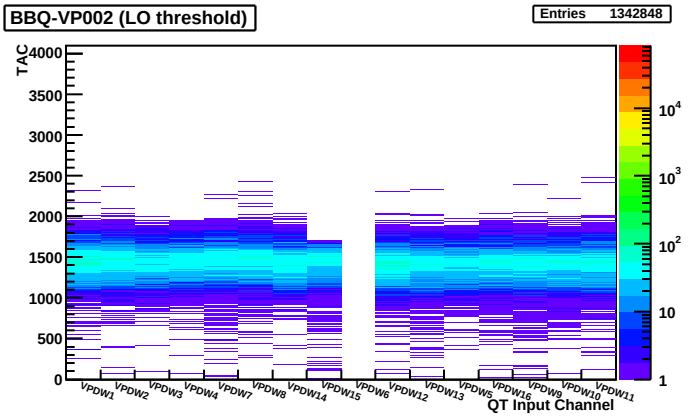

BBQ-ZD001 (ZDC TOWER)
Entries 1342848
ADC

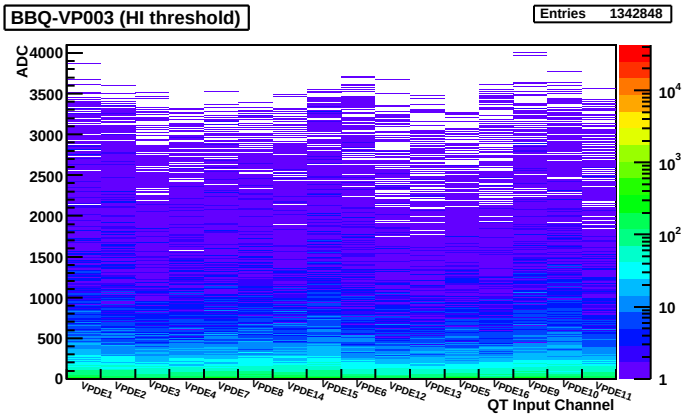

BBQ-ZD001 (ZDC TOWER)
Entries 1342848
TAC

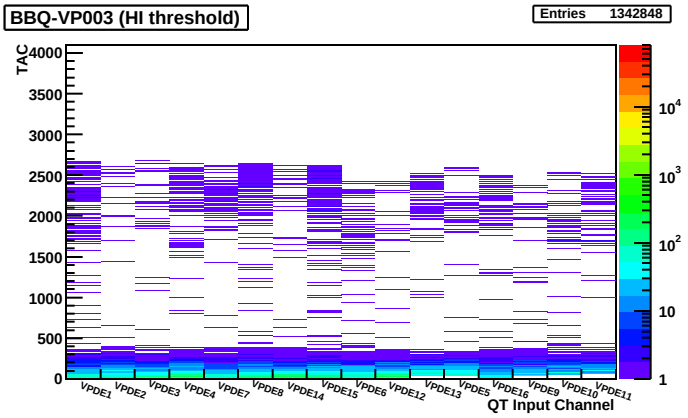

BBQ-VP001 (LO threshold)
Entries 1342848
ADC
QT Input Channel

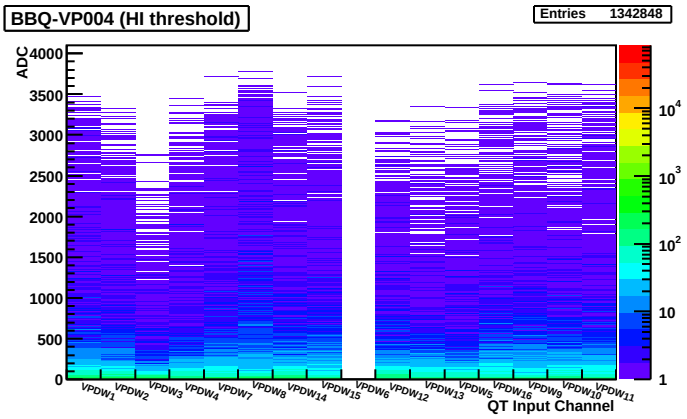

BBQ-VP001 (LO threshold)
Entries 1342848
TAC
QT Input Channel

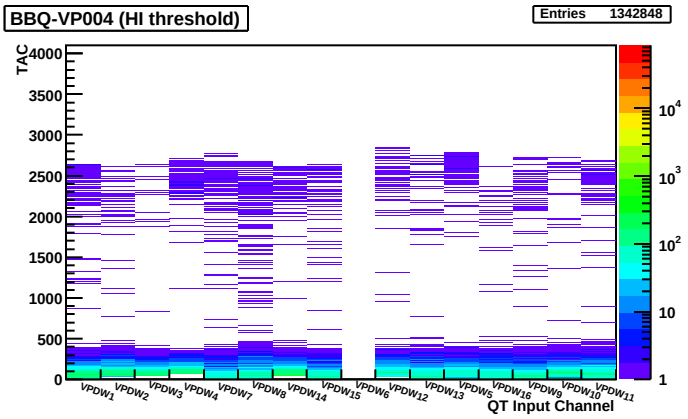

BBQ-VP002 (LO threshold)
Entries 1342848
ADC
QT Input Channel

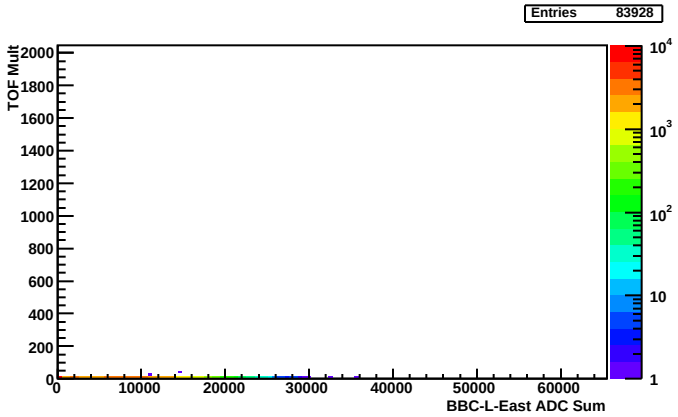

BBQ-VP002 (LO threshold)
Entries 1342848
TAC
QT Input Channel

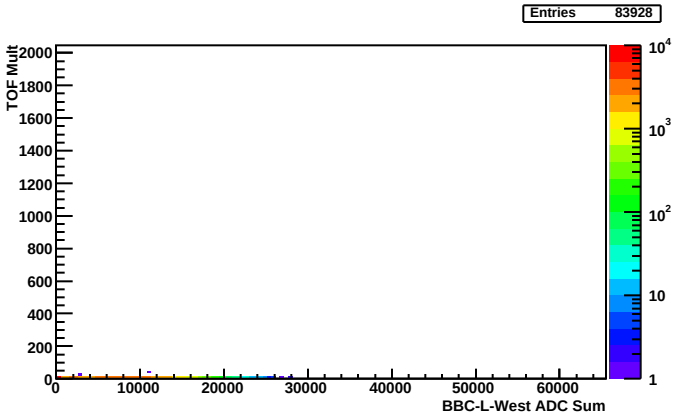

BBQ-VP003 (HI threshold)
Entries 1342848
ADC
QT Input Channel

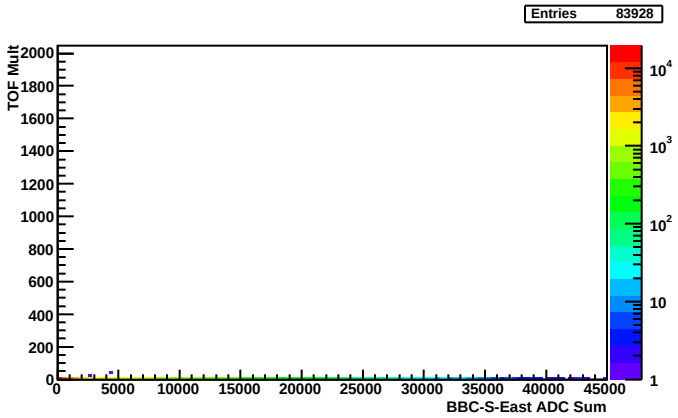

BBQ-VP003 (HI threshold)
Entries 1342848
TAC
QT Input Channel

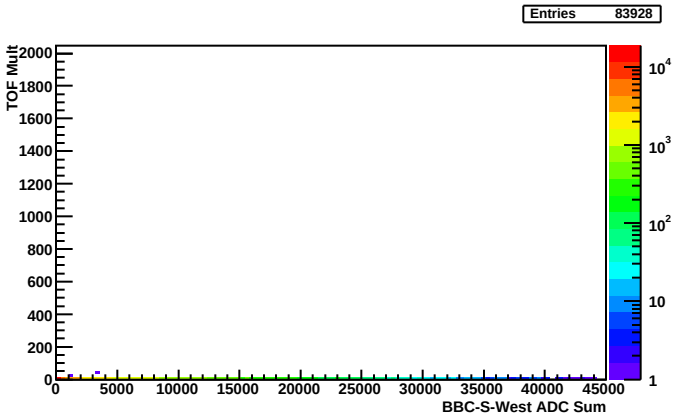

BBQ-VP004 (HI threshold)
Entries 1342848
ADC
QT Input Channel

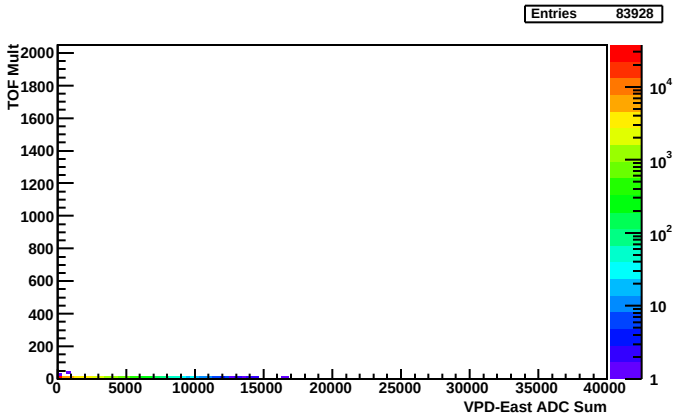

BBQ-VP004 (HI threshold)
Entries 1342848
TAC
QT Input Channel

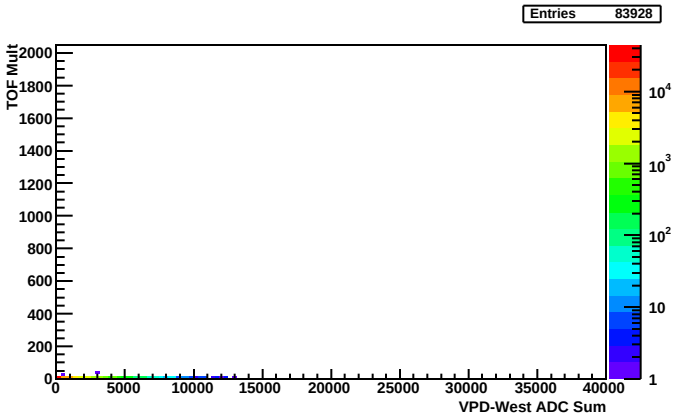

Entries 83928
TOF Mult
BBC-L-East ADC Sum

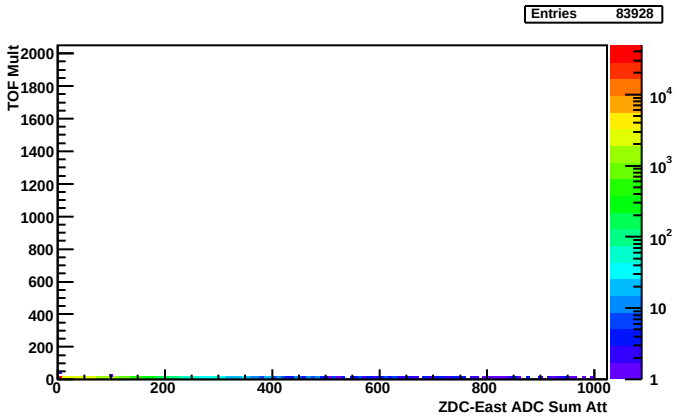

Entries 83928
TOF Mult
BBC-L-West ADC Sum

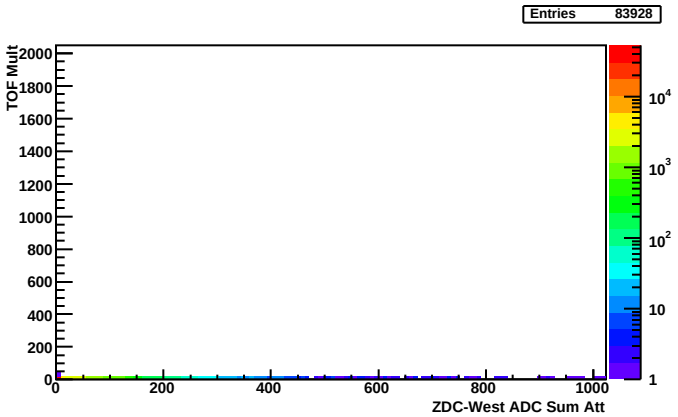

Entries 83928
TOF Mult
BBC-S-East ADC Sum

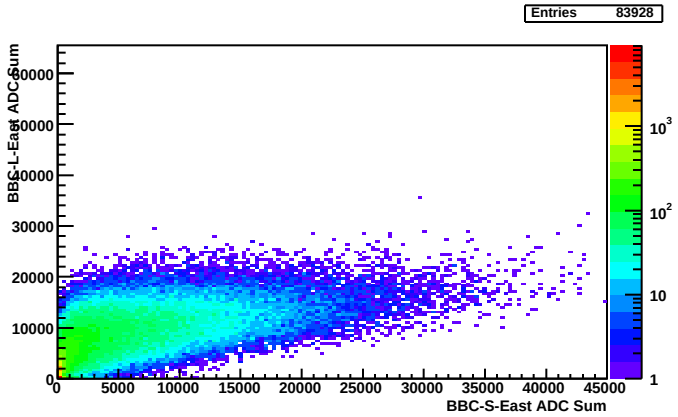

Entries 83928
TOF Mult
BBC-S-West ADC Sum

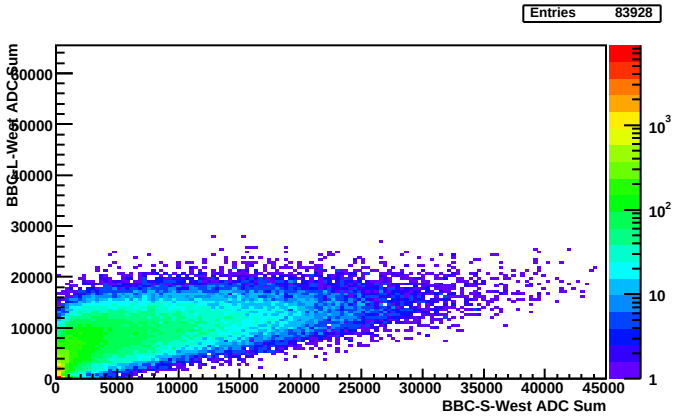

Entries 83928
TOF Mult
VPD-East ADC Sum

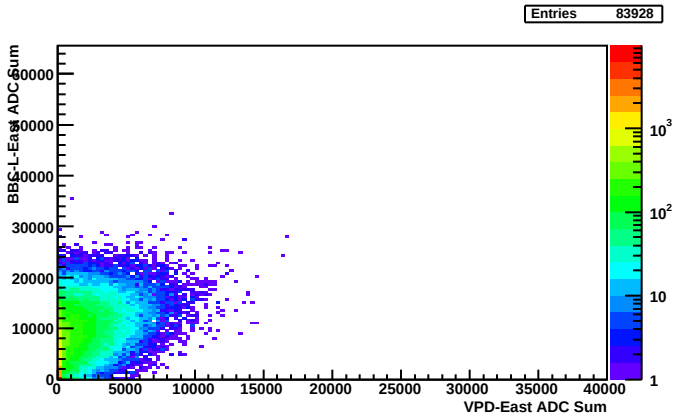

Entries 83928
TOF Mult
VPD-West ADC Sum

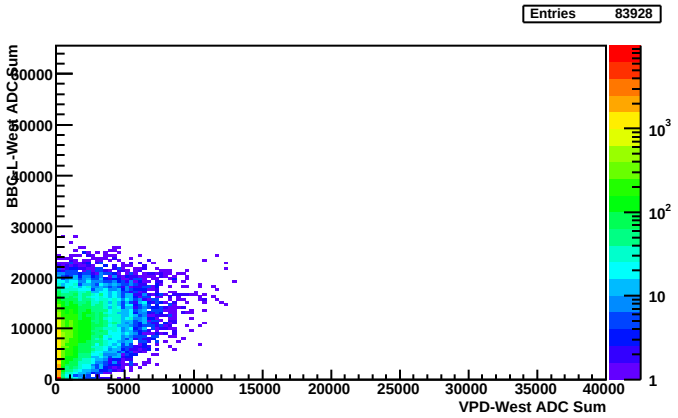

Entries 83928
TOF Mult
ZDC-East ADC Sum Att

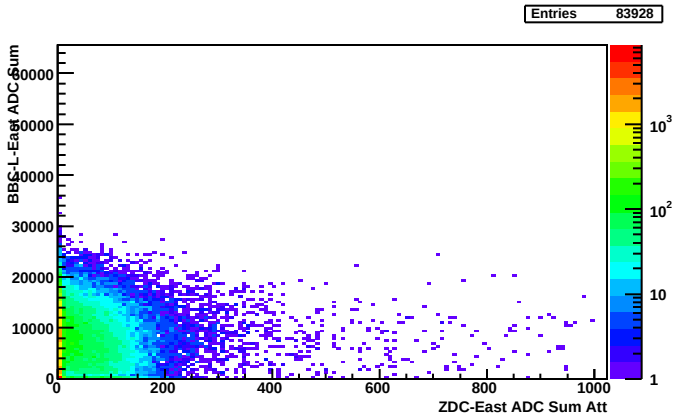

Entries 83928
TOF Mult
ZDC-West ADC Sum Att

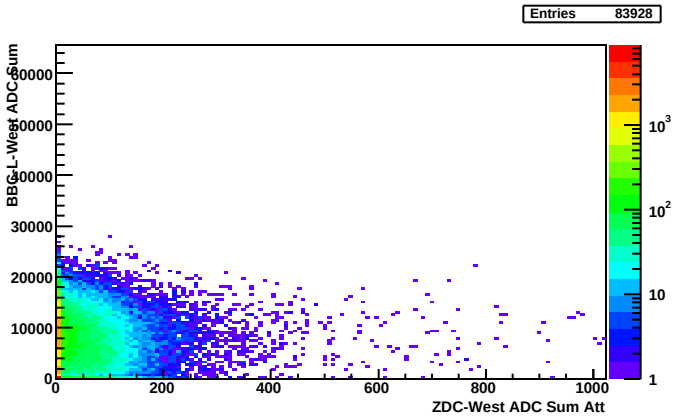

Entries 83928
BBC-L-East ADC Sum
BBC-S-East ADC Sum

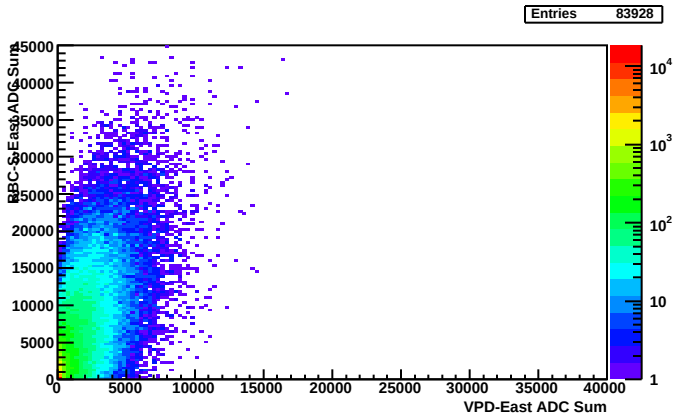

Entries 83928
BBC-L-West ADC Sum
BBC-S-West ADC Sum

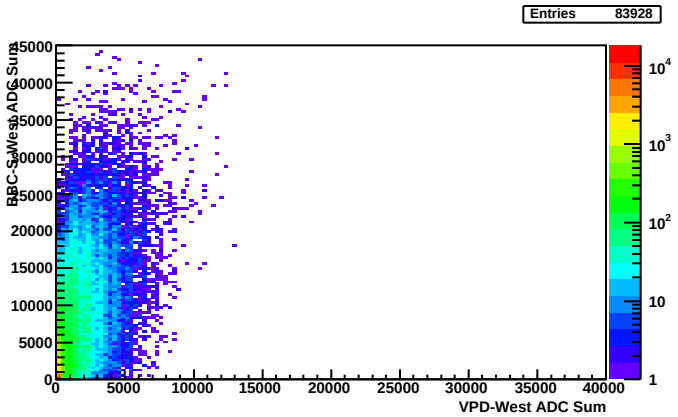

Entries 83928
BBC-L-East ADC Sum
VPD-East ADC Sum

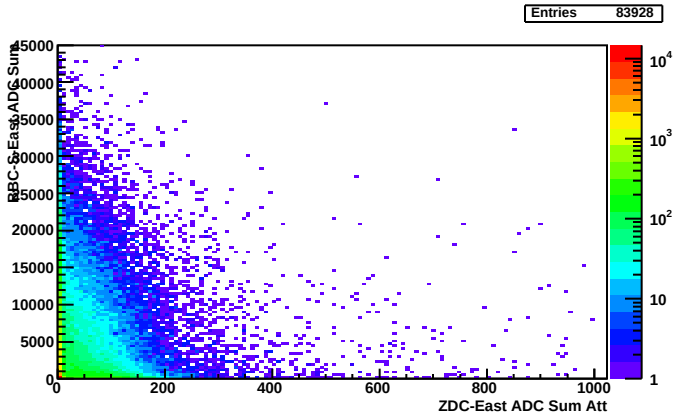

Entries 83928
BBC-L-West ADC Sum
VPD-West ADC Sum

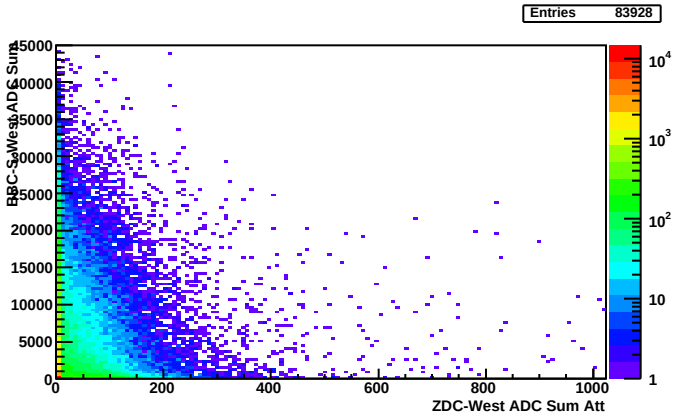

Entries 83928
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

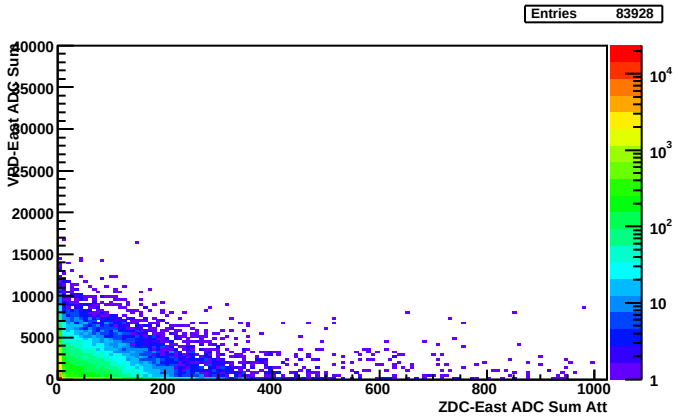

Entries 83928
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

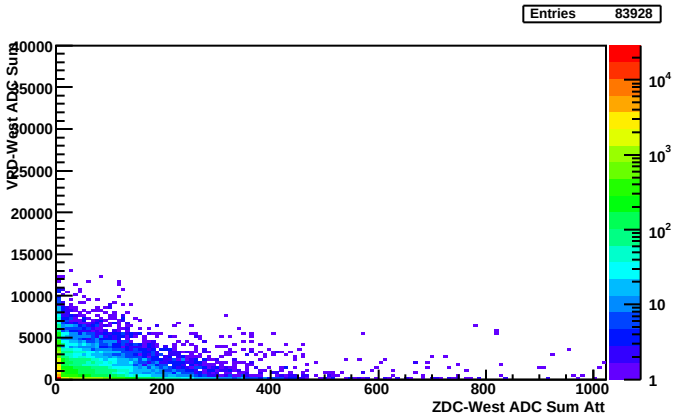

Entries 83928
BBC-S-East ADC Sum
VPD-East ADC Sum

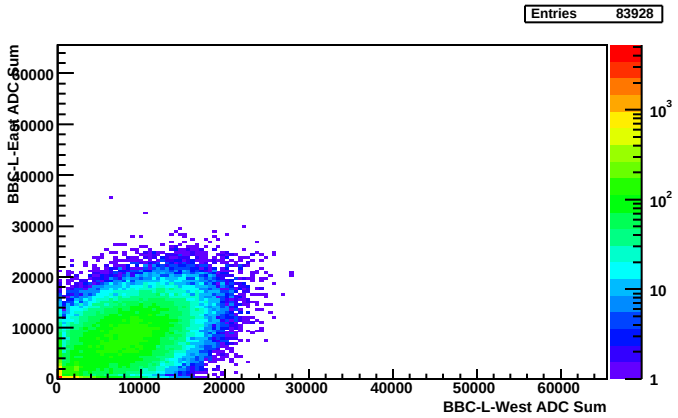

Entries 83928
BBC-S-West ADC Sum
VPD-West ADC Sum

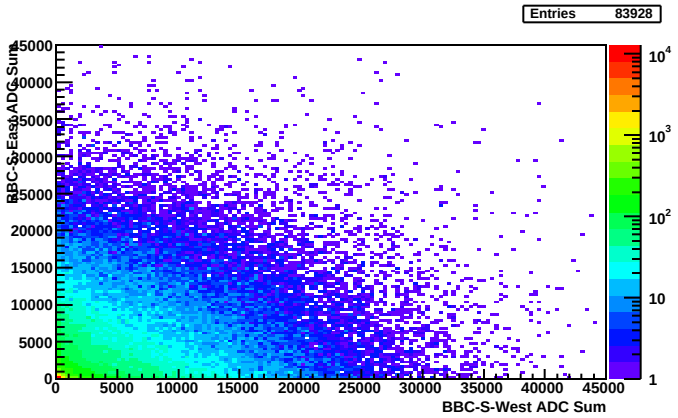

Entries 83928
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

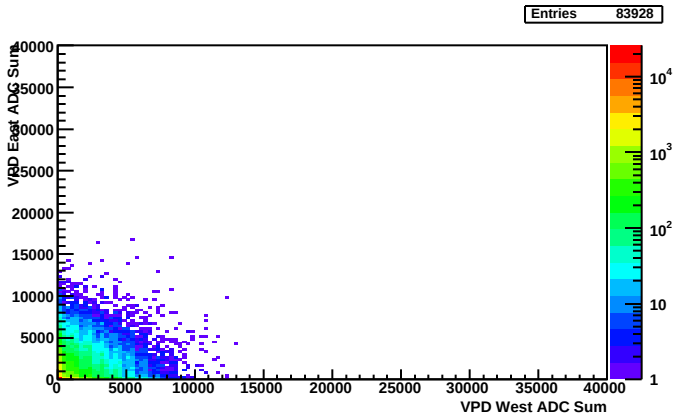

Entries 83928
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

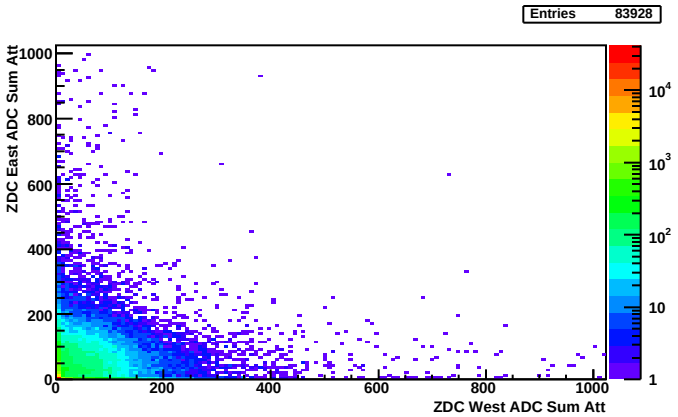

Entries 83928
VPD-East ADC Sum
ZDC-East ADC Sum Att

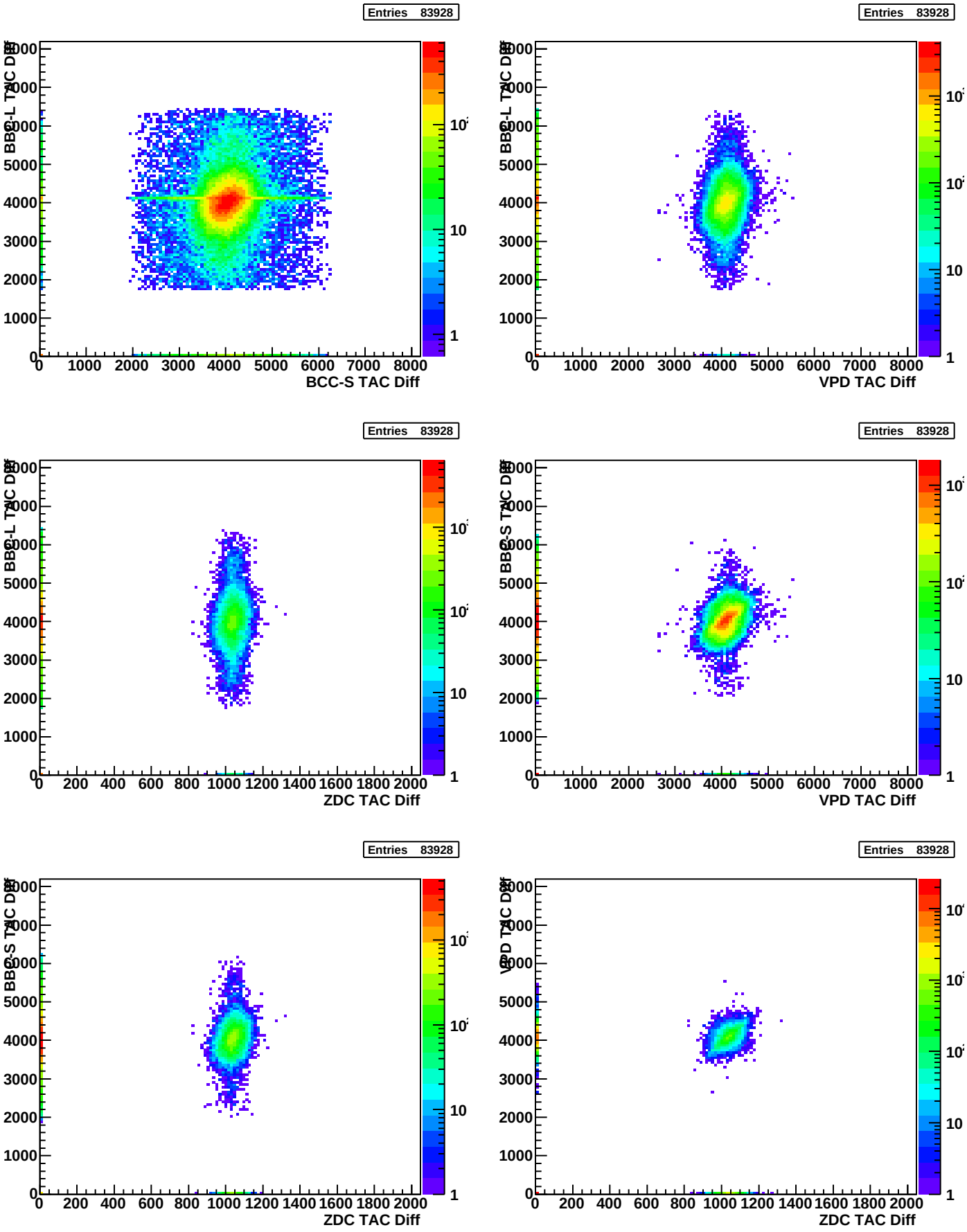

Entries 83928
VPD-West ADC Sum
ZDC-West ADC Sum Att

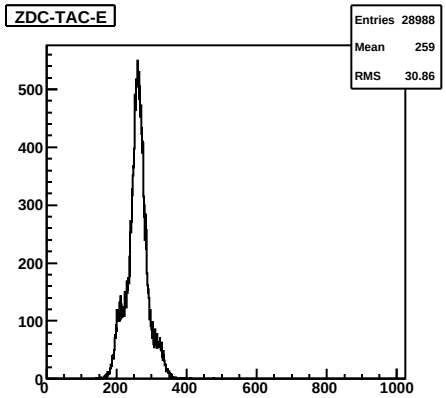

Entries 83928
BBC-L-East ADC Sum
BBC-L-West ADC Sum

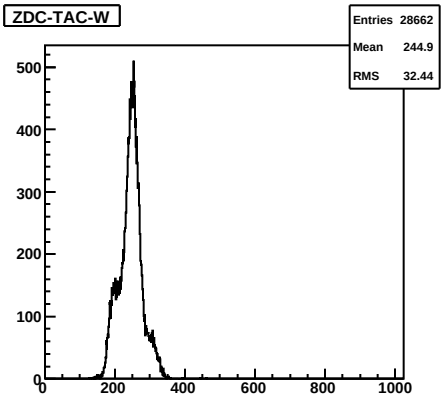

Entries 83928
BBC-S-East ADC Sum
BBC-S-West ADC Sum

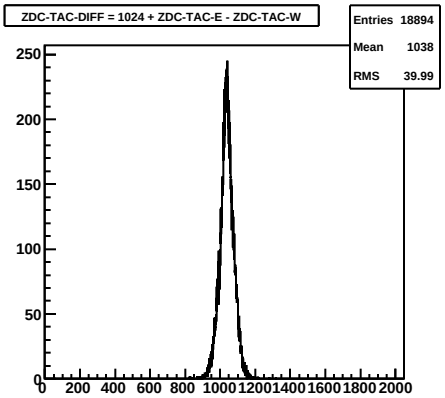

Entries 83928
VPD East ADC Sum
VPD West ADC Sum

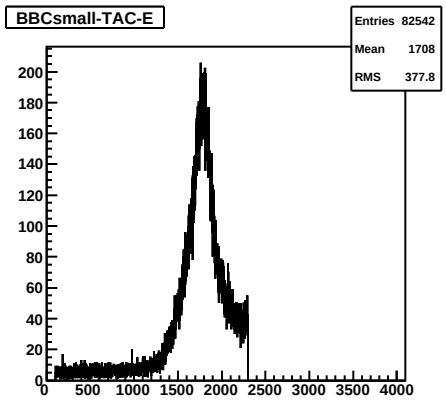

Entries 83928
ZDC East ADC Sum Att
ZDC West ADC Sum Att

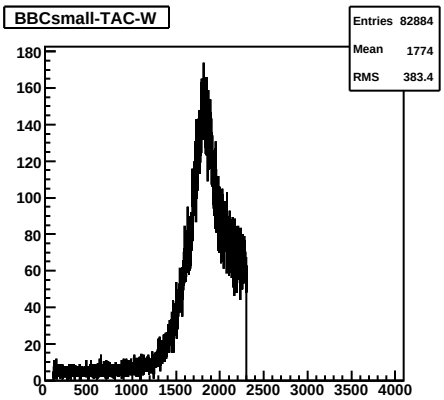

Entries 83928
BBC-L TAC Diff
BCC-S TAC Diff
Entries 83928
BBC-L TAC Diff
VPD TAC Diff
Entries 83928
BBC-L TAC Diff
ZDC TAC Diff
Entries 83928
BBC-S TAC Diff
VPD TAC Diff
Entries 83928
BBC-S TAC Diff
ZDC TAC Diff
Entries 83928
VPD TAC Diff
ZDC TAC Diff

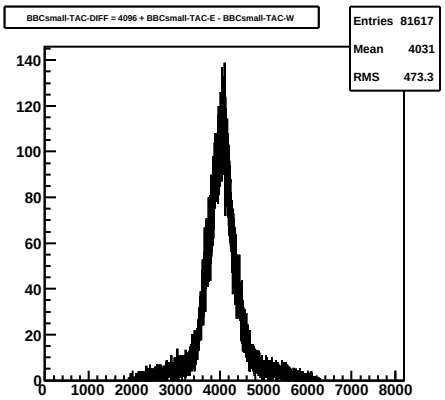

ZDC-TAC-E
Entries 28988
Mean 259
RMS 30.86

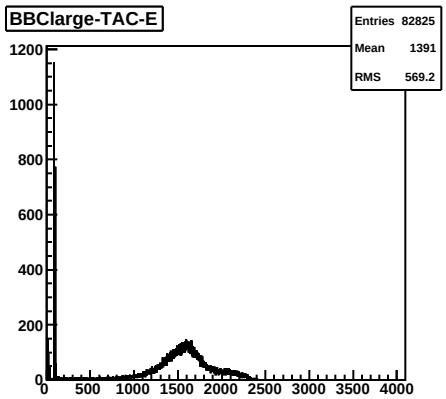

ZDC-TAC-W
Entries 28662
Mean 244.9
RMS 32.44

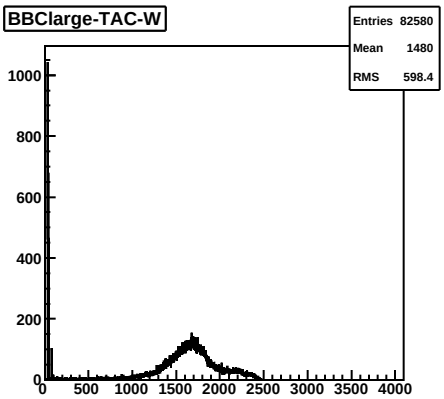

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 18894
Mean 1038
RMS 39.99

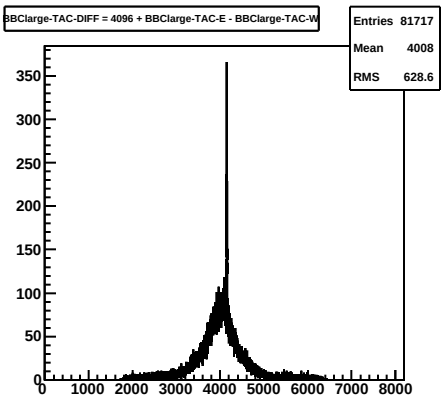

BBCsmall-TAC-E
Entries 82542
Mean 1708
RMS 377.8

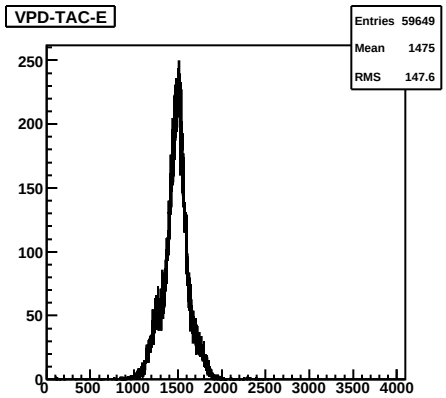

BBCsmall-TAC-W
Entries 82884
Mean 1774
RMS 383.4

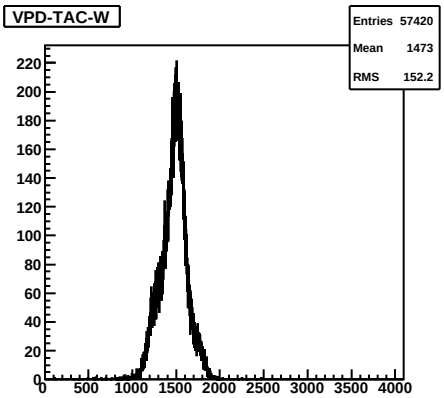

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 81617
Mean 4031
RMS 473.3

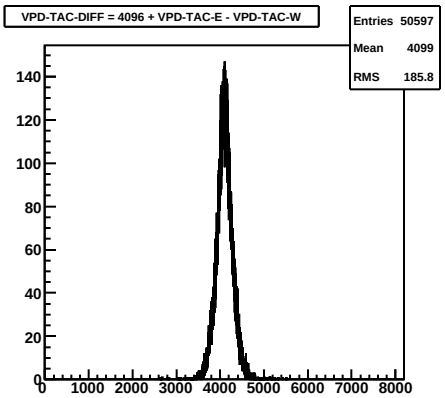

BBClarge-TAC-E
Entries 82825
Mean 1391
RMS 569.2

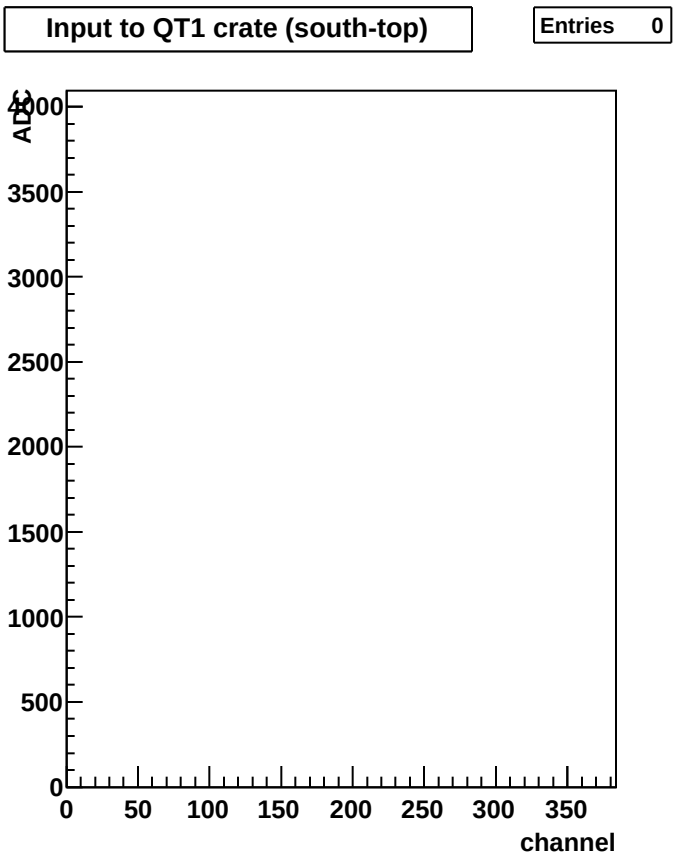

BBClarge-TAC-W
Entries 82580
Mean 1480
RMS 598.4

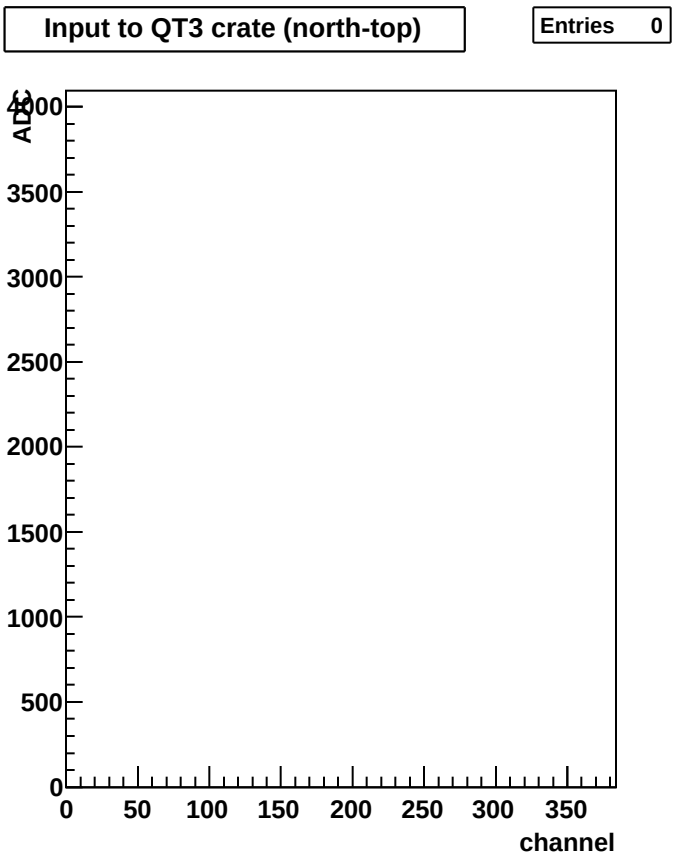

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 81717
Mean 4008
RMS 628.6

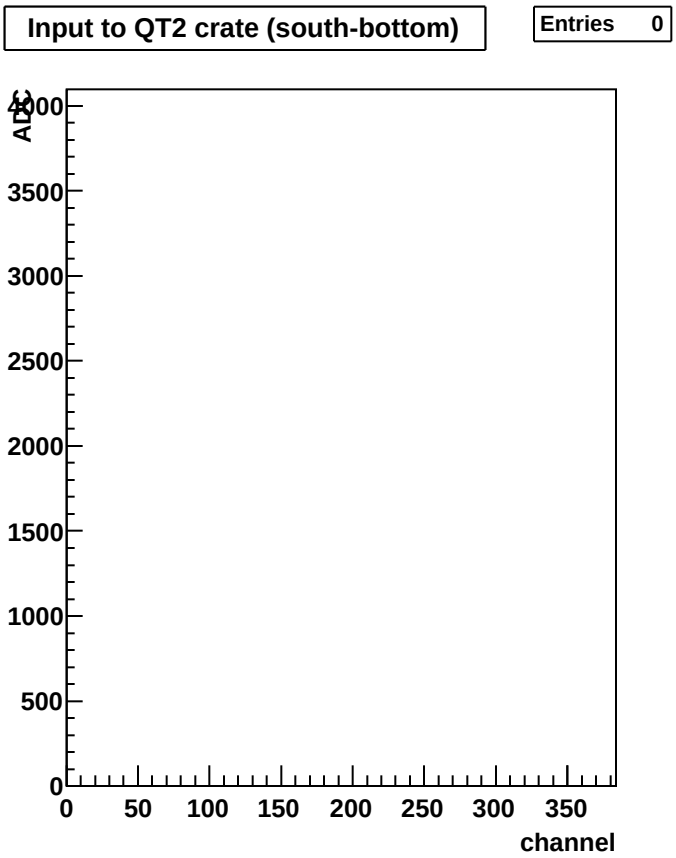

VPD-TAC-E
Entries 59649
Mean 1475
RMS 147.6

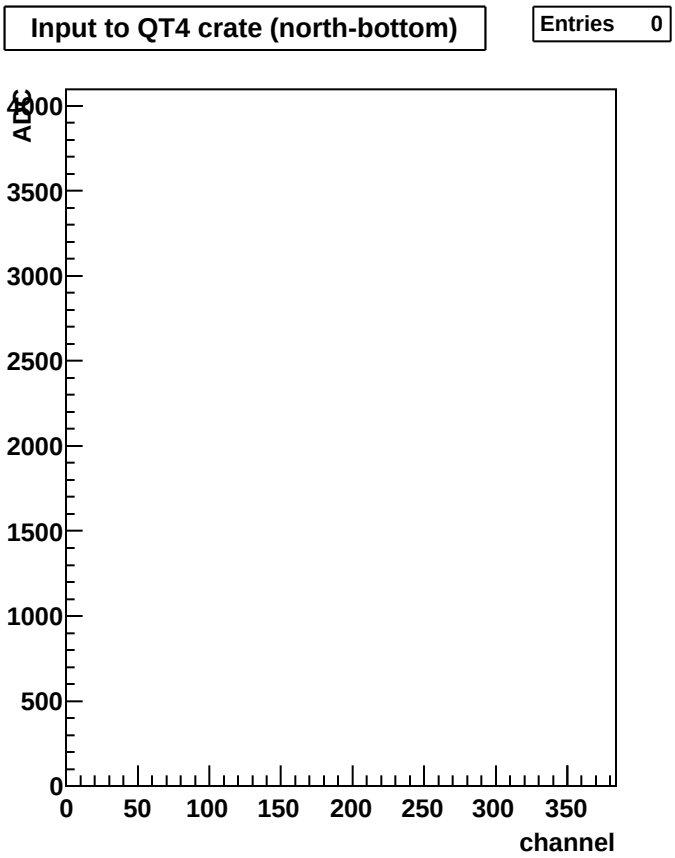

VPD-TAC-W
Entries 57420
Mean 1473
RMS 152.2

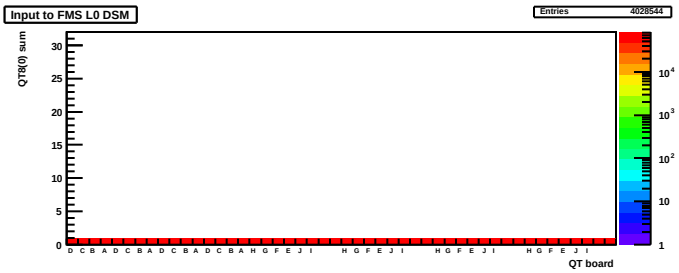

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 50597
Mean 4099
RMS 185.8

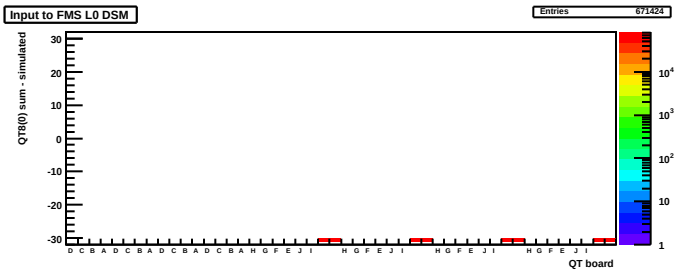

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

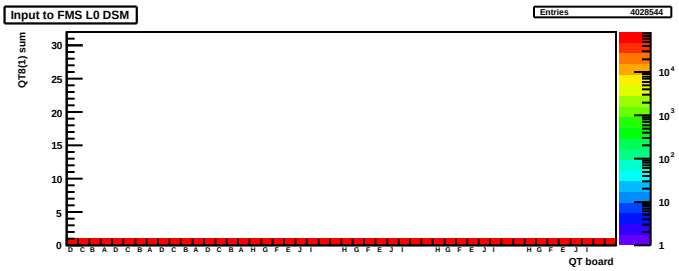

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

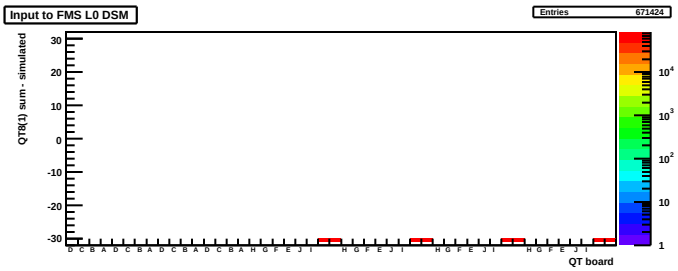

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

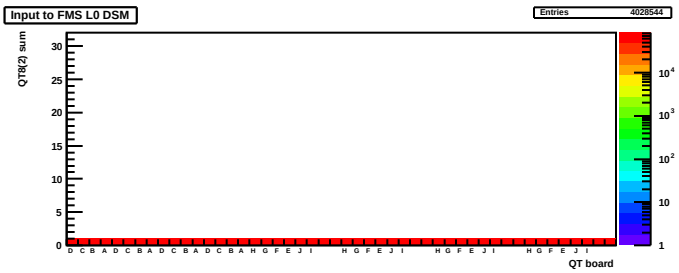

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

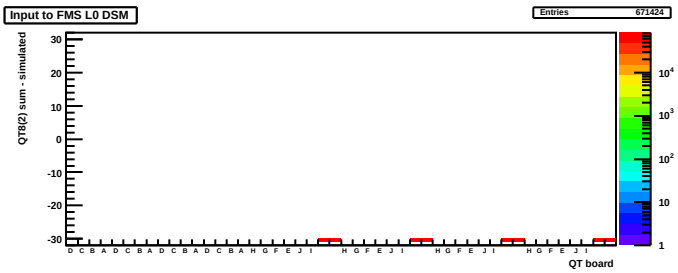

Input to FMS L0 DSM
Entries 4028544
QT8(0) sum
QT board

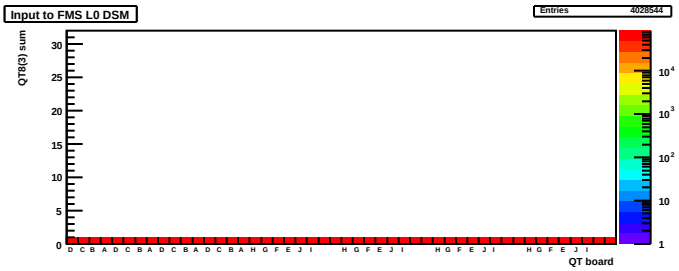

Input to FMS L0 DSM
Entries 671424
QT8(0) sum - simulated
QT board

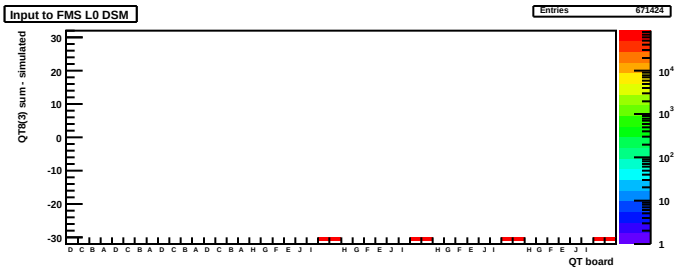

Input to FMS L0 DSM
Entries 4028544
QT8(1) sum
QT board

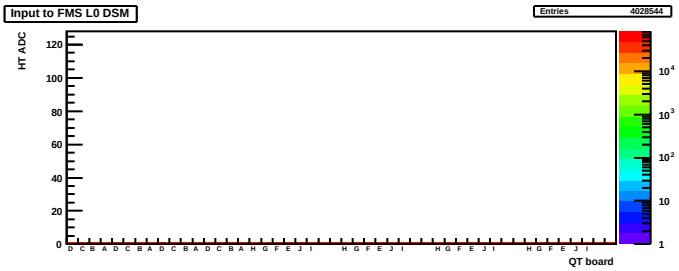

Input to FMS L0 DSM
Entries 671424
QT8(1) sum - simulated
QT board

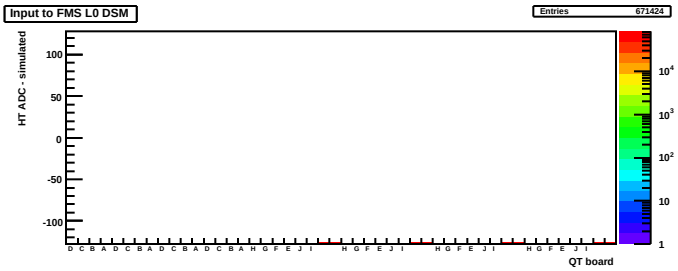

Input to FMS L0 DSM
Entries 4028544
QT8(2) sum
QT board

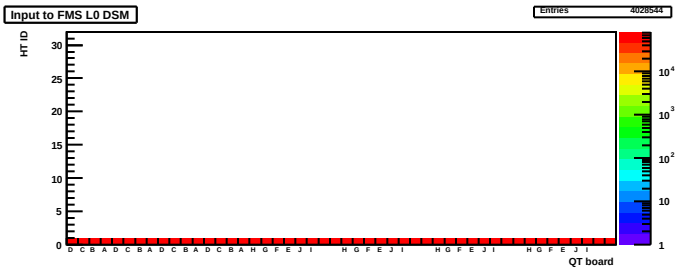

Input to FMS L0 DSM
Entries 671424
QT8(2) sum - simulated
QT board

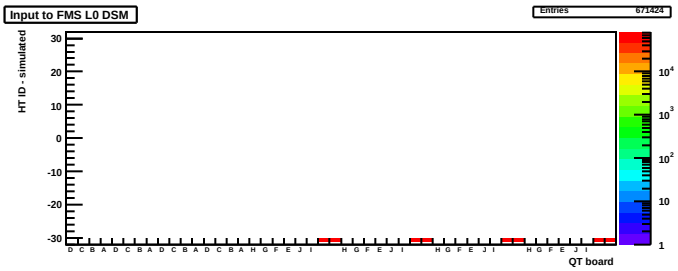

Input to FMS L0 DSM
Entries 4028544
QT8(3) sum
QT board

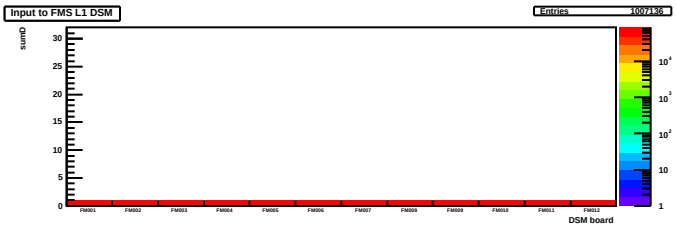

Input to FMS L0 DSM
Entries 671424
QT8(3) sum - simulated
QT board

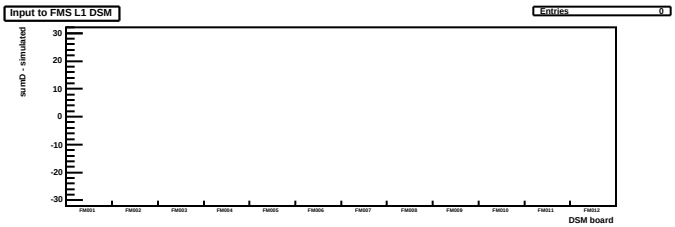

Input to FMS L0 DSM
Entries 4028544
HT ADC
QT board

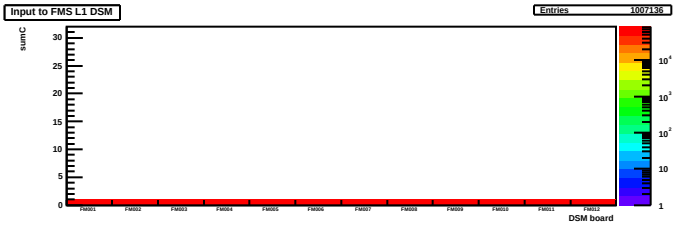

Input to FMS L0 DSM
Entries 671424
HT ADC - simulated
QT board

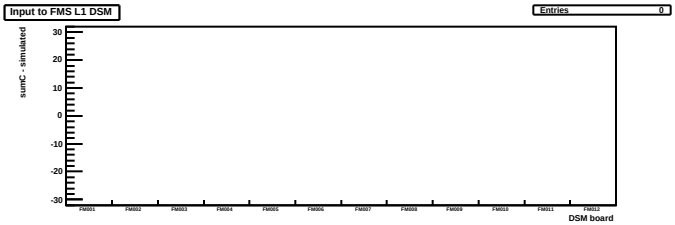

Input to FMS L0 DSM
Entries 4028544
HT ID
QT board

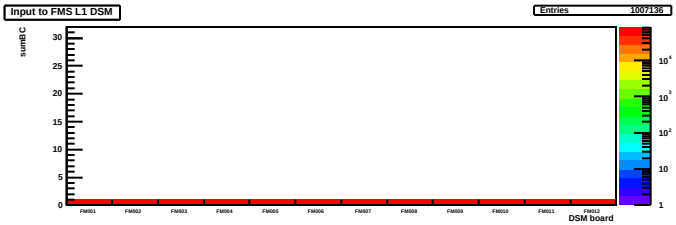

Input to FMS L0 DSM
Entries 671424
HT ID - simulated
QT board

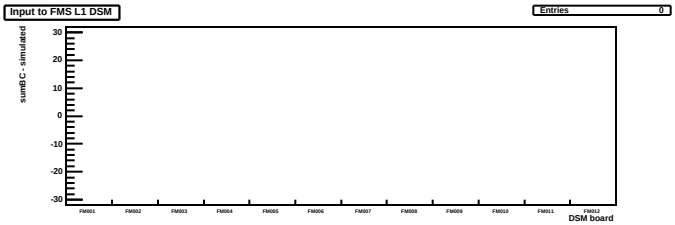

Input to FMS L1 DSM
Entries 1007136
sumD
DSM board

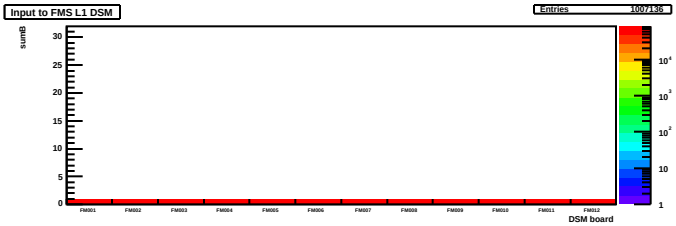

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

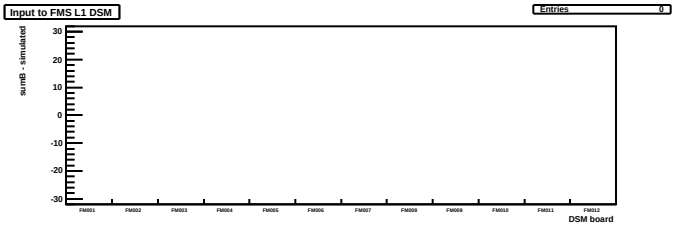

Input to FMS L1 DSM
Entries 1007136
sumC
DSM board

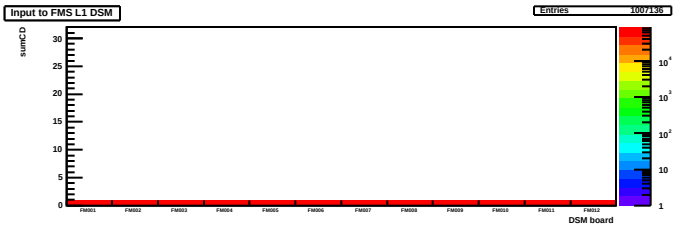

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

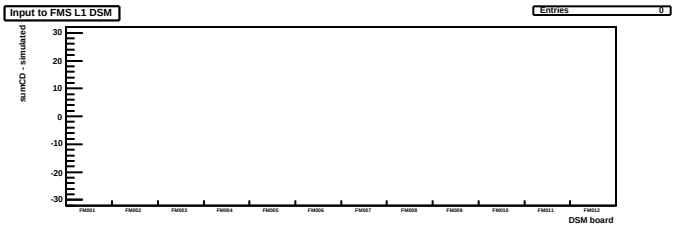

Input to FMS L1 DSM
Entries 1007136
sumBC
DSM board

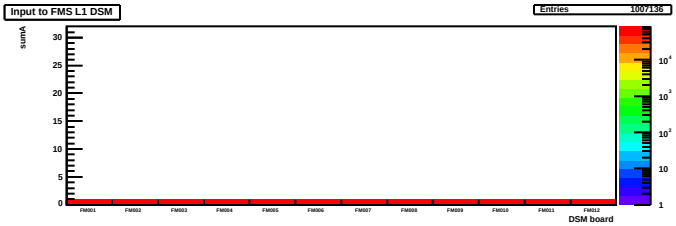

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

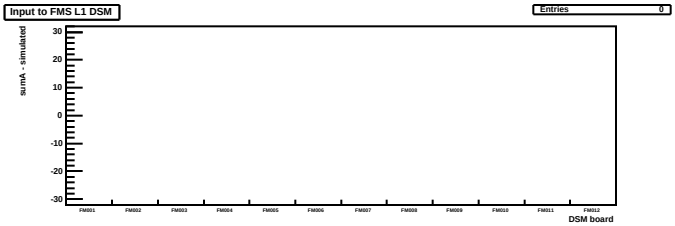

Input to FMS L1 DSM
Entries 1007136
sumB
DSM board

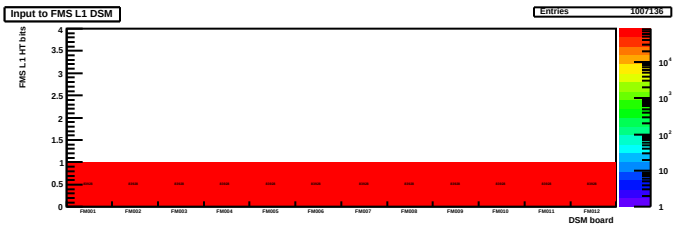

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

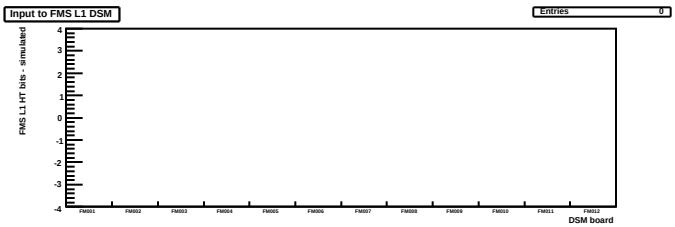

Input to FMS L1 DSM
Entries 1007136
sumCD
DSM board

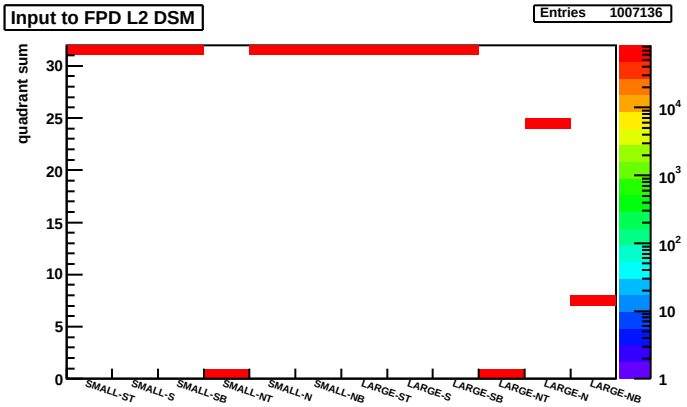

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

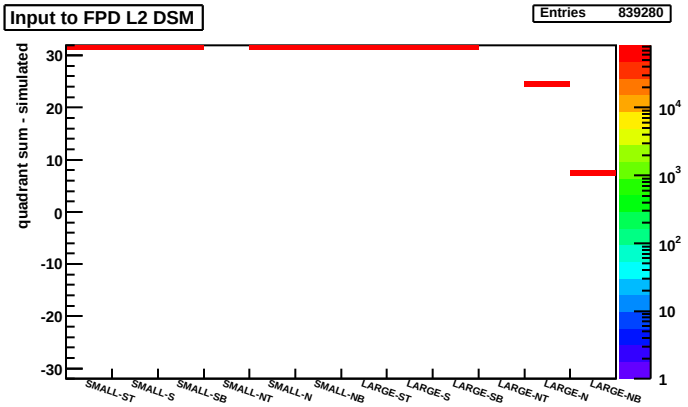

Input to FMS L1 DSM
Entries 1007136
sumA
DSM board

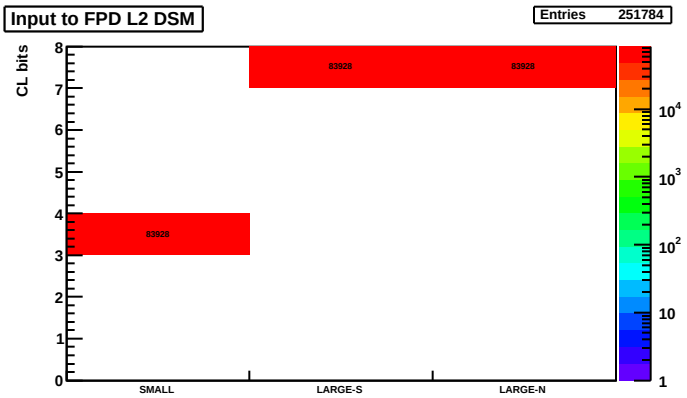

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

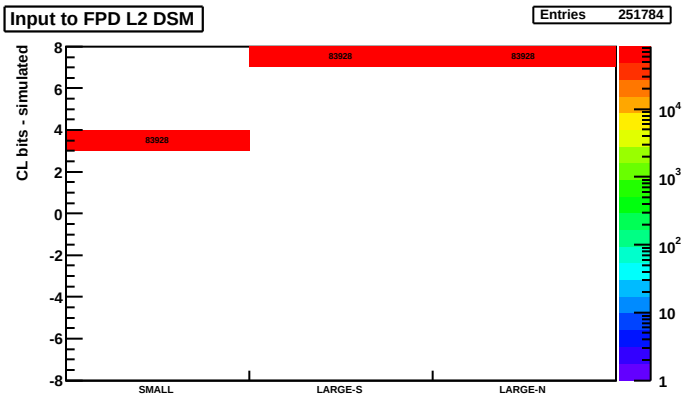

Input to FMS L1 DSM
Entries 1007136
FMS L1 HT bits
DSM board

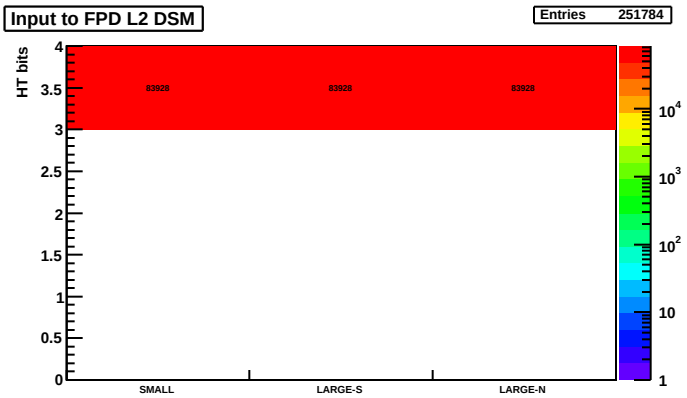

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

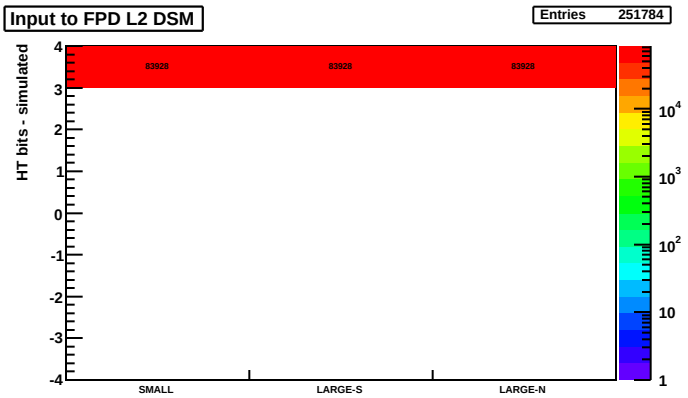

Input to FPD L2 DSM
Entries 1007136
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

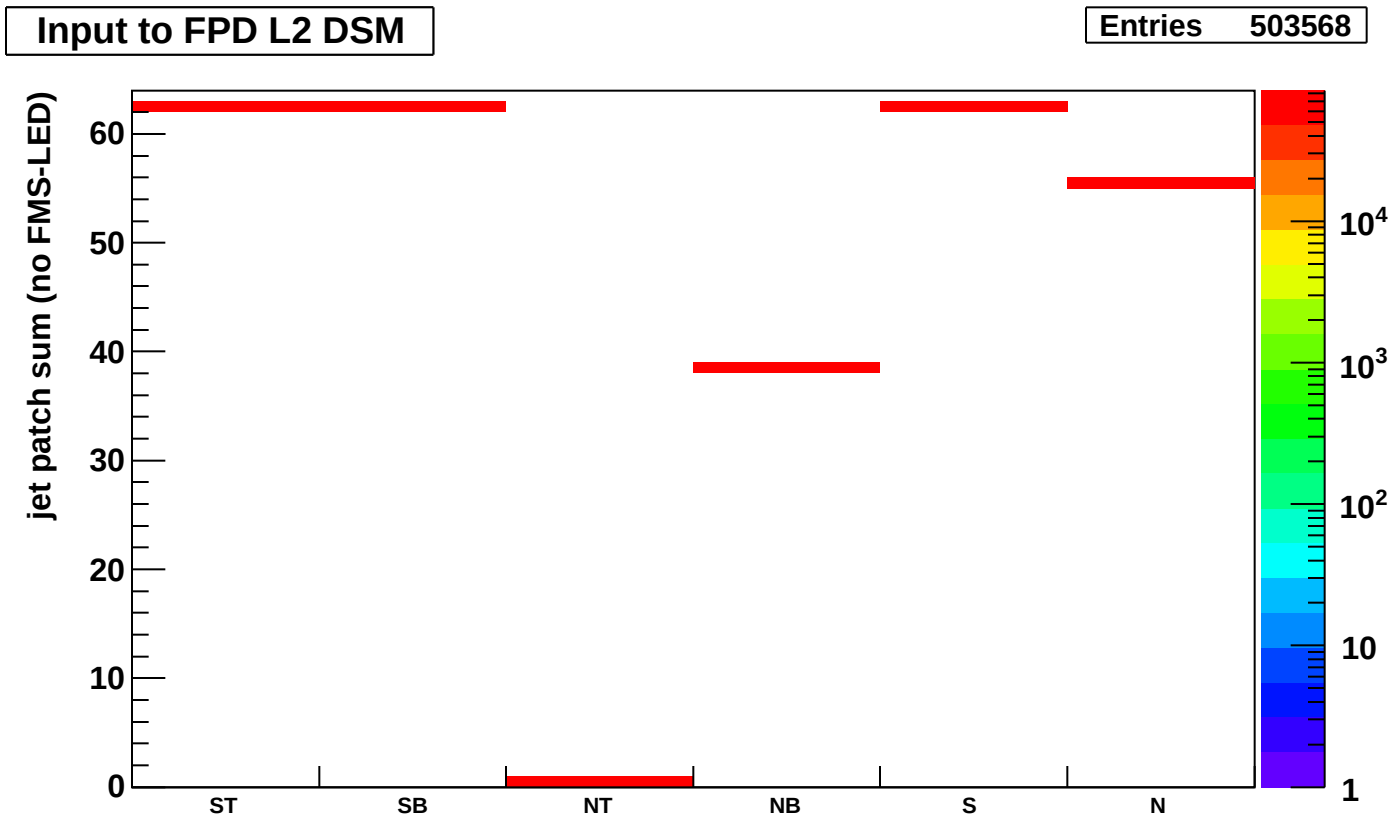

Input to FPD L2 DSM
Entries 839280
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

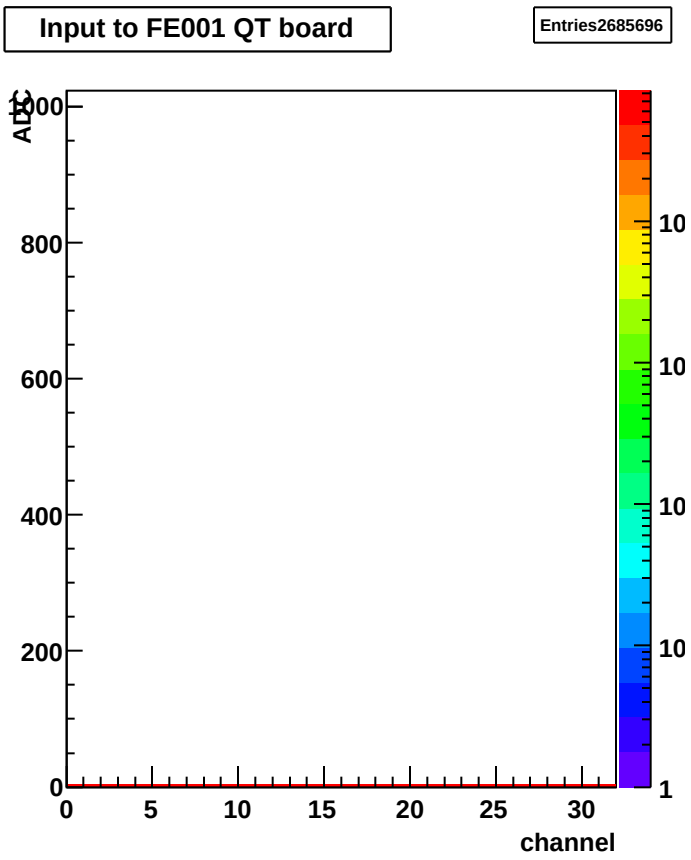

Input to FPD L2 DSM
Entries 251784
CL bits
83928
SMALL
LARGE-S
LARGE-N

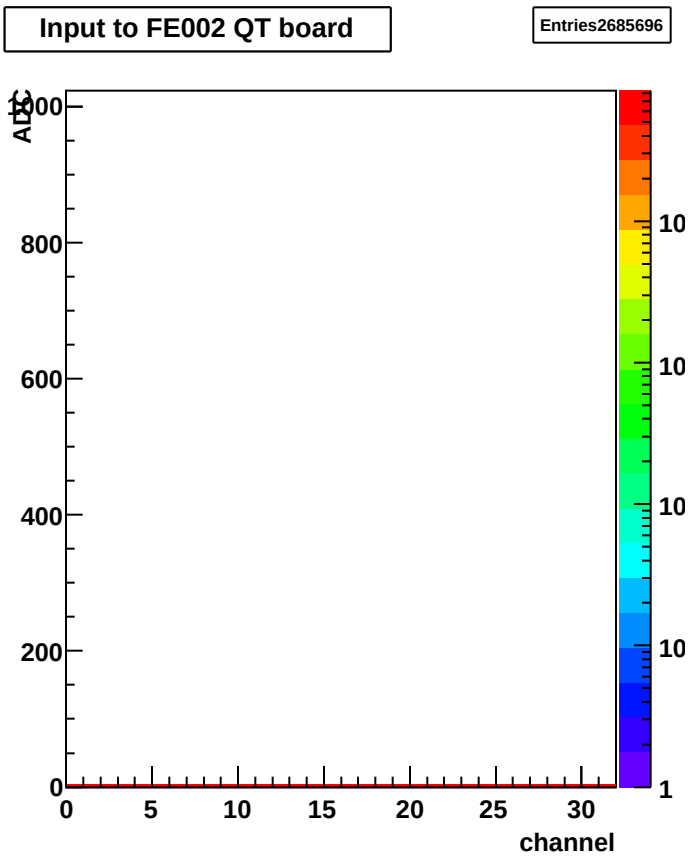

Input to FPD L2 DSM
Entries 251784
CL bits - simulated
83928
SMALL
LARGE-S
LARGE-N

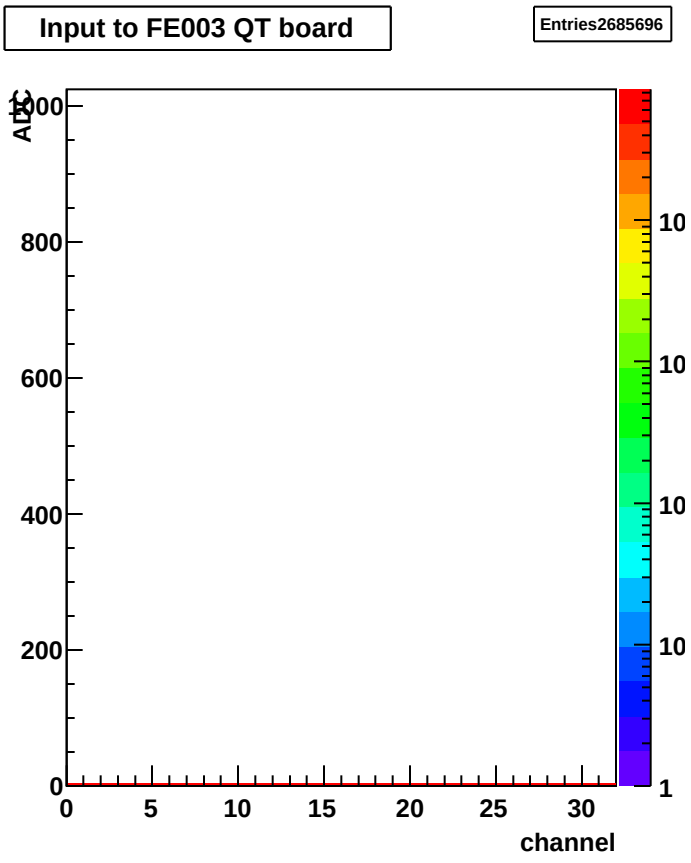

Input to FPD L2 DSM
Entries 251784
HT bits
83928
SMALL
LARGE-S
LARGE-N

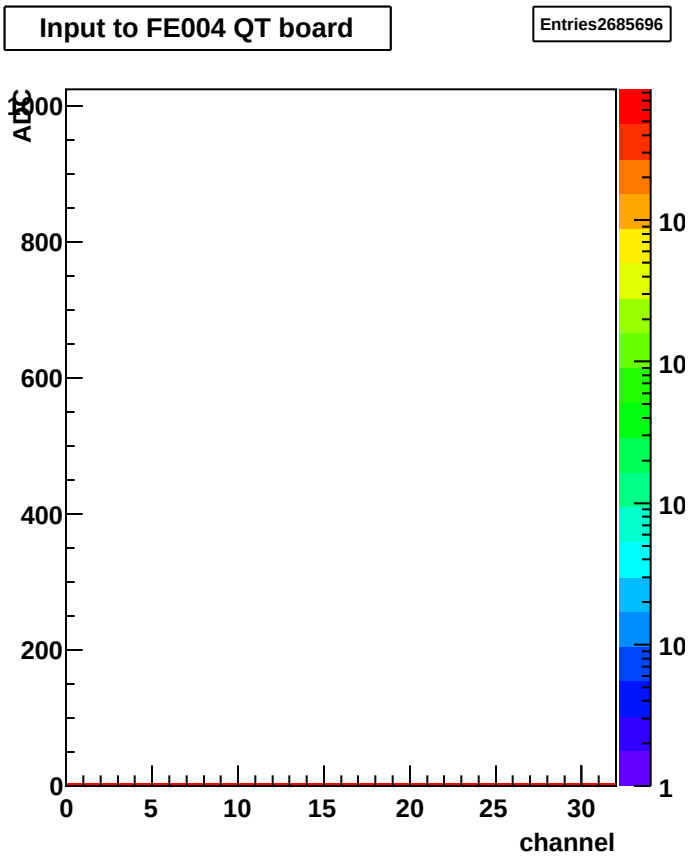

Input to FPD L2 DSM
Entries 251784
HT bits - simulated
83928
SMALL
LARGE-S
LARGE-N

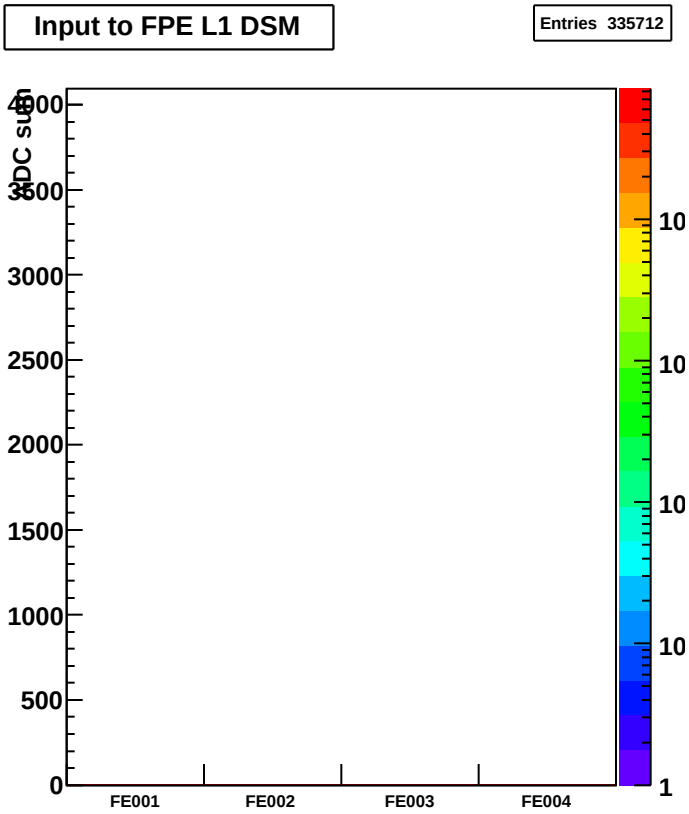

Input to FPD L2 DSM
Entries 503568
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

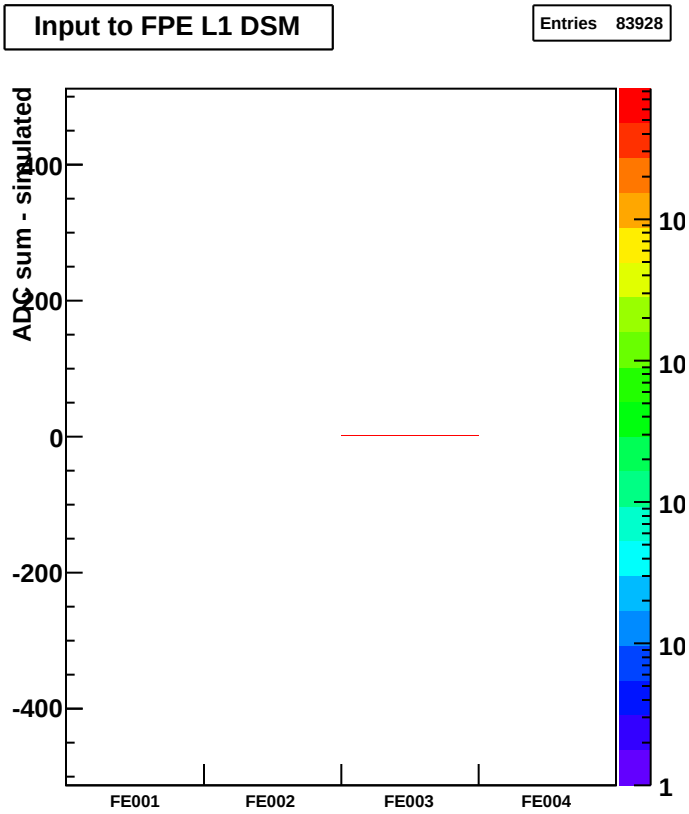

Input to FE001 QT board
Entries2685696
ADC
channel

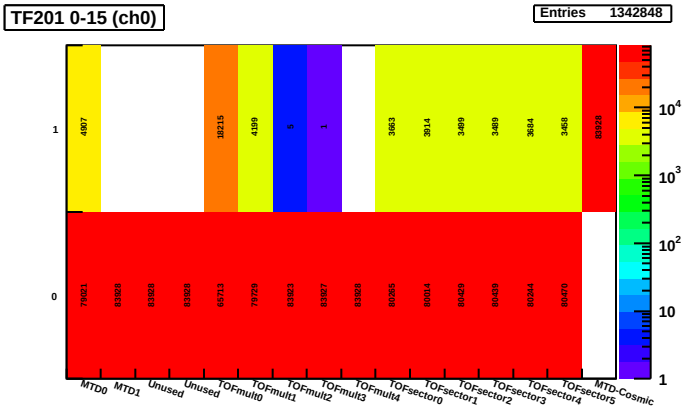

Input to FE002 QT board
Entries2685696
ADC
channel

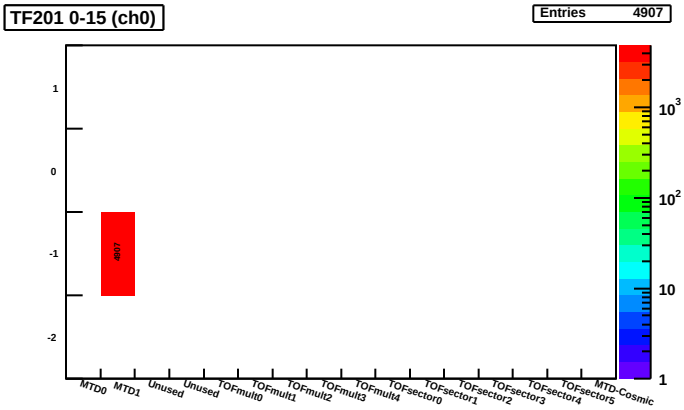

Input to FE003 QT board
Entries2685696
ADC
channel

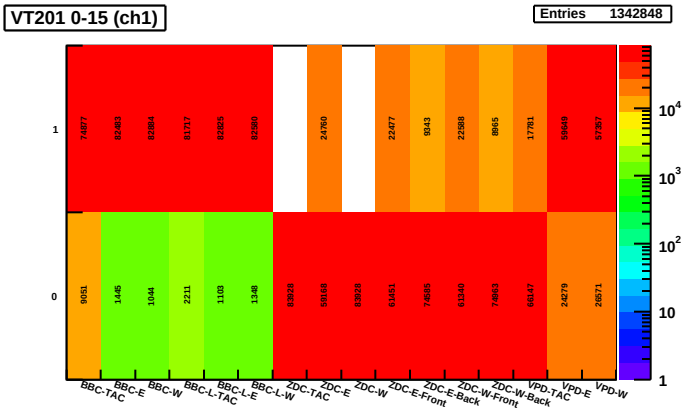

Input to FE004 QT board
Entries2685696
ADC
channel

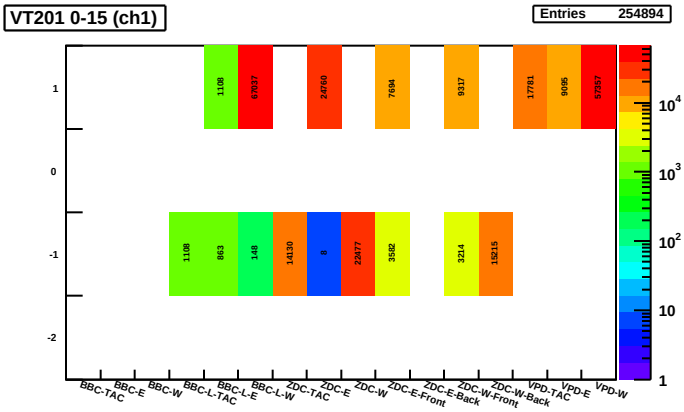

Input to FPE L1 DSM
Entries 335712
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


Input to FPE L1 DSM
Entries 83928
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1


TF201 0-15 (ch0)
Entries 1342848
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 4907
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 1342848
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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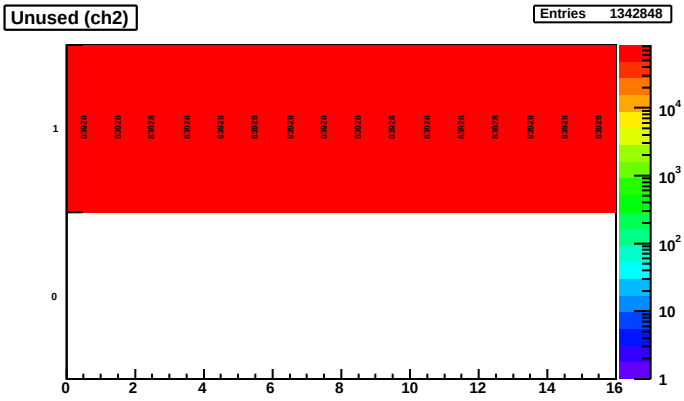
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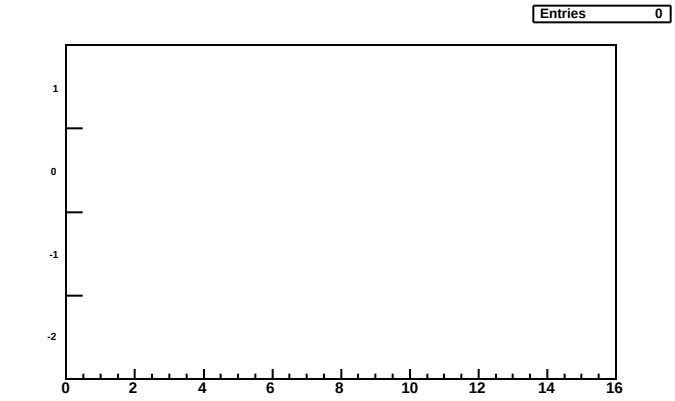
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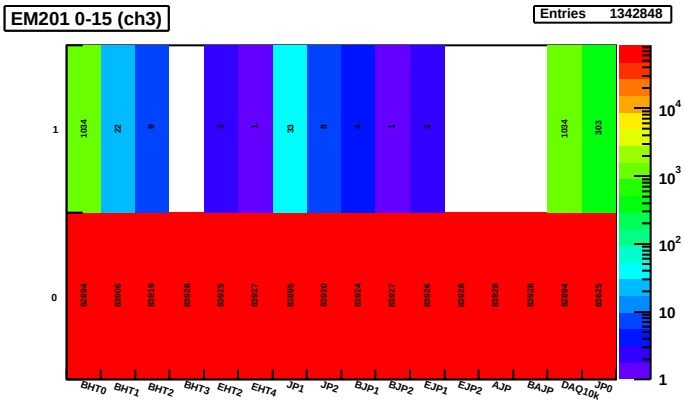
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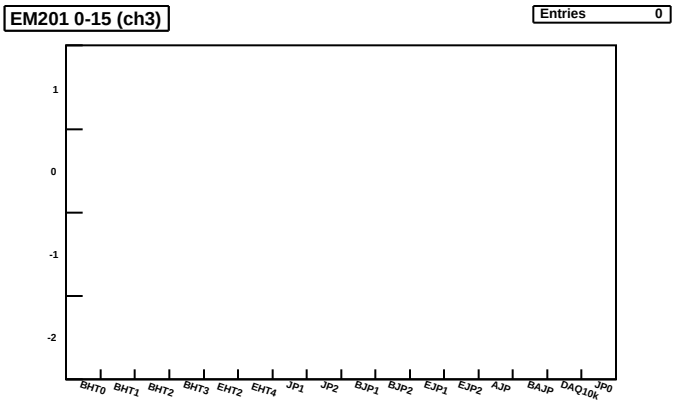
EM201 0-15 (ch3)
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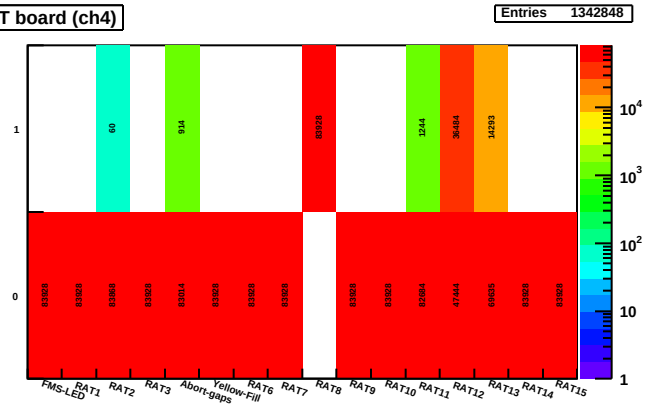
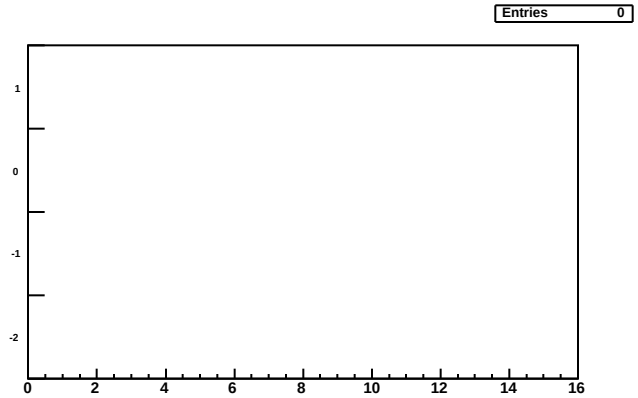
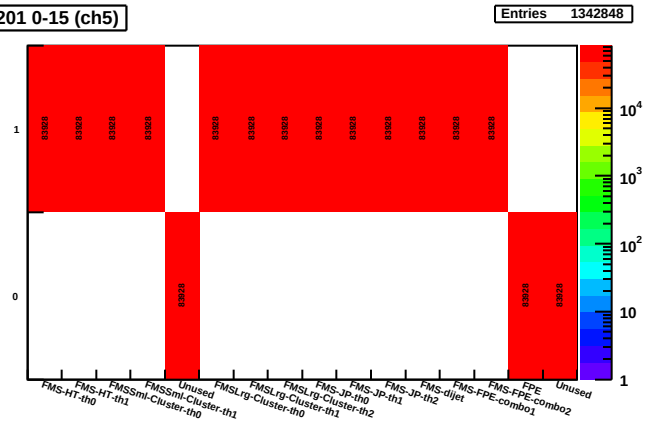
RAT board (ch4)





FP201 0-15 (ch5)



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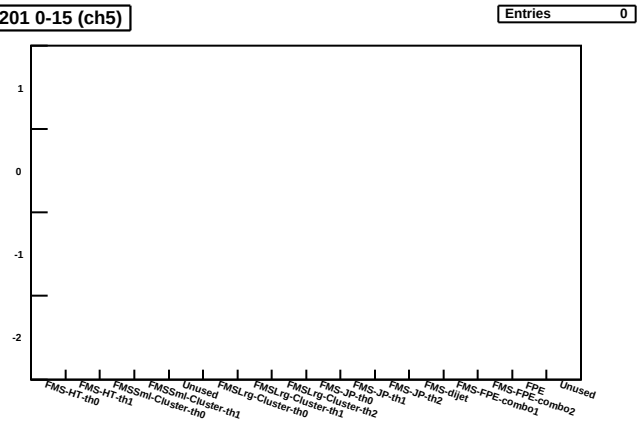
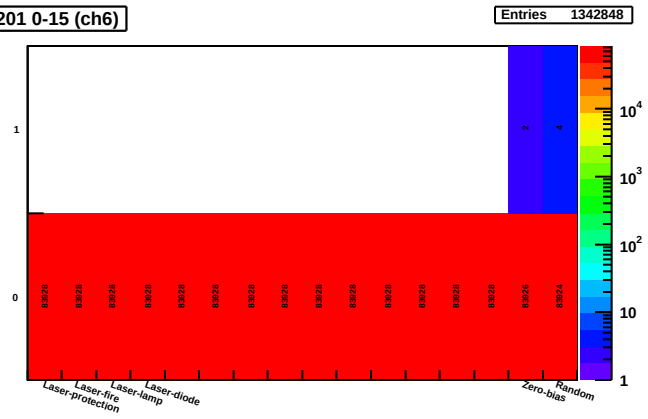
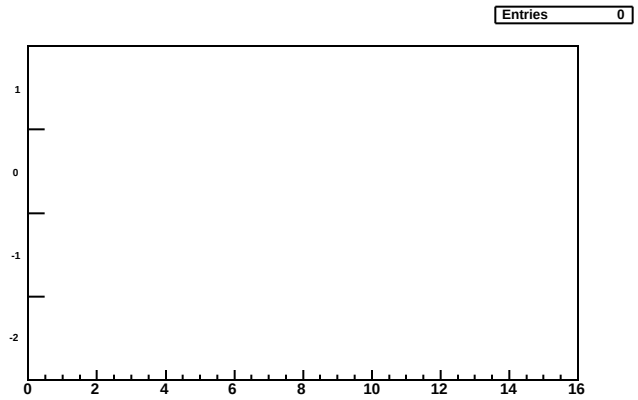
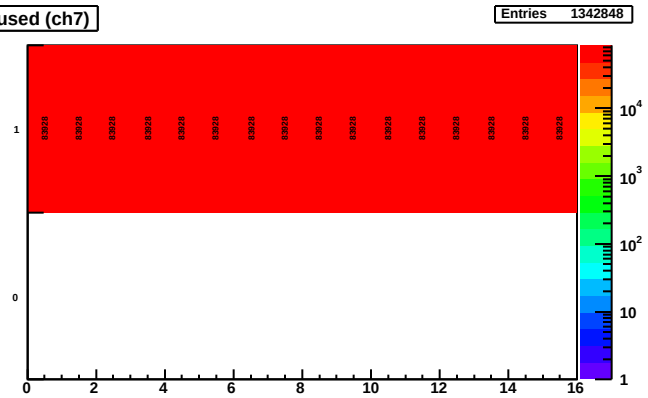
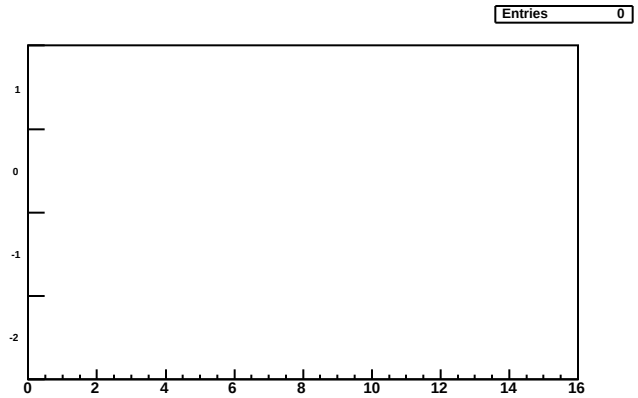


ST201 0-15 (ch6)





Unused (ch7)