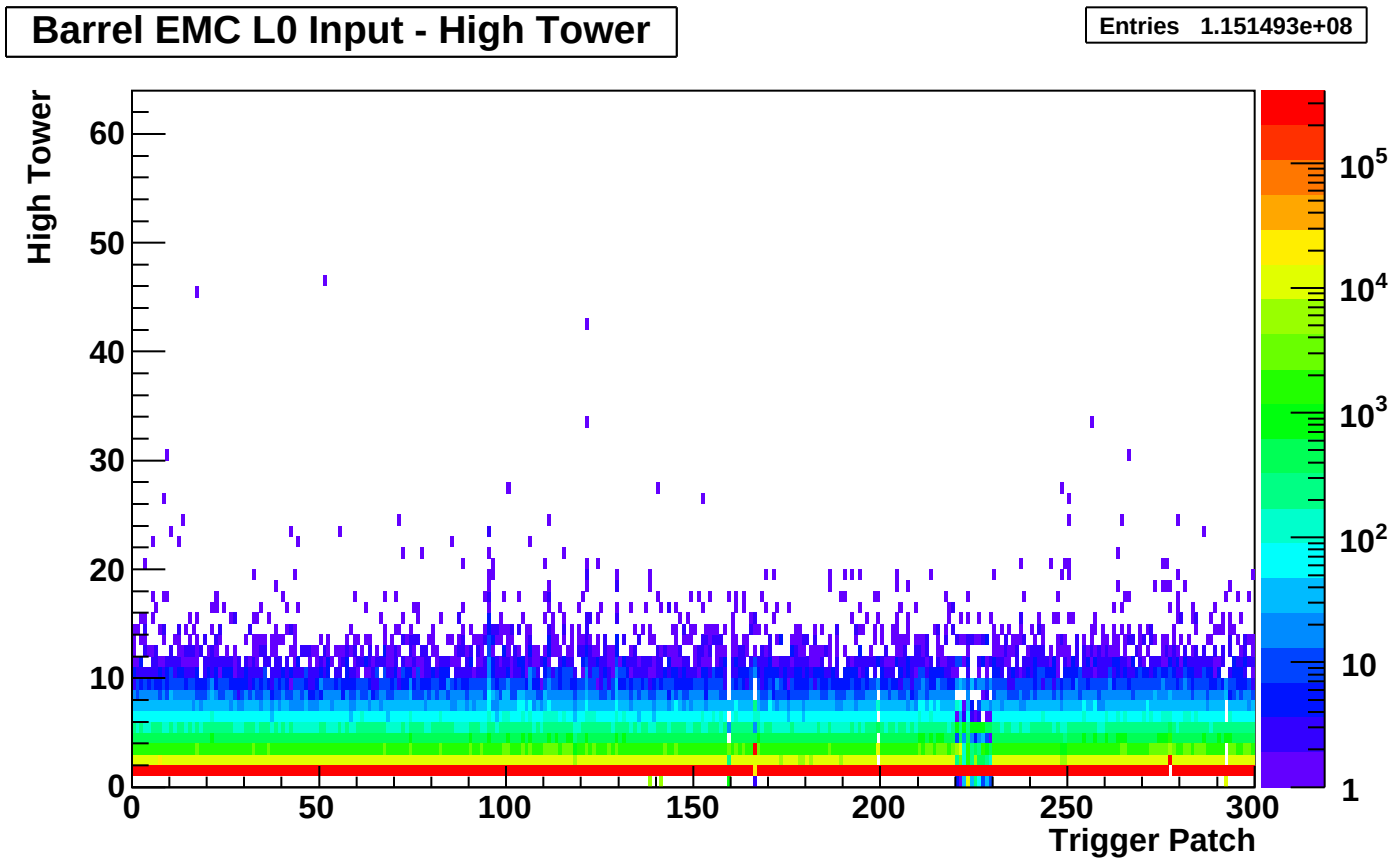
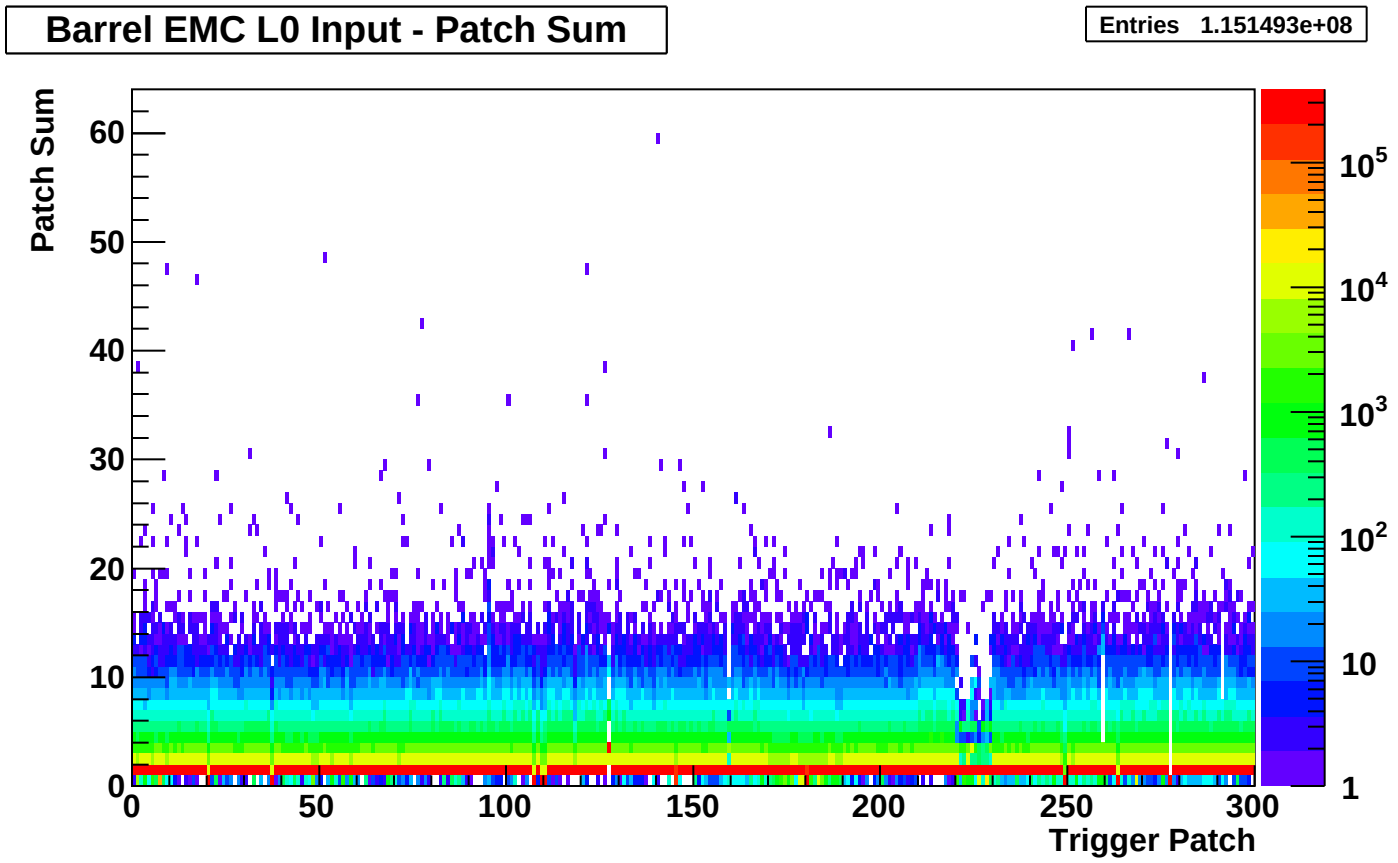
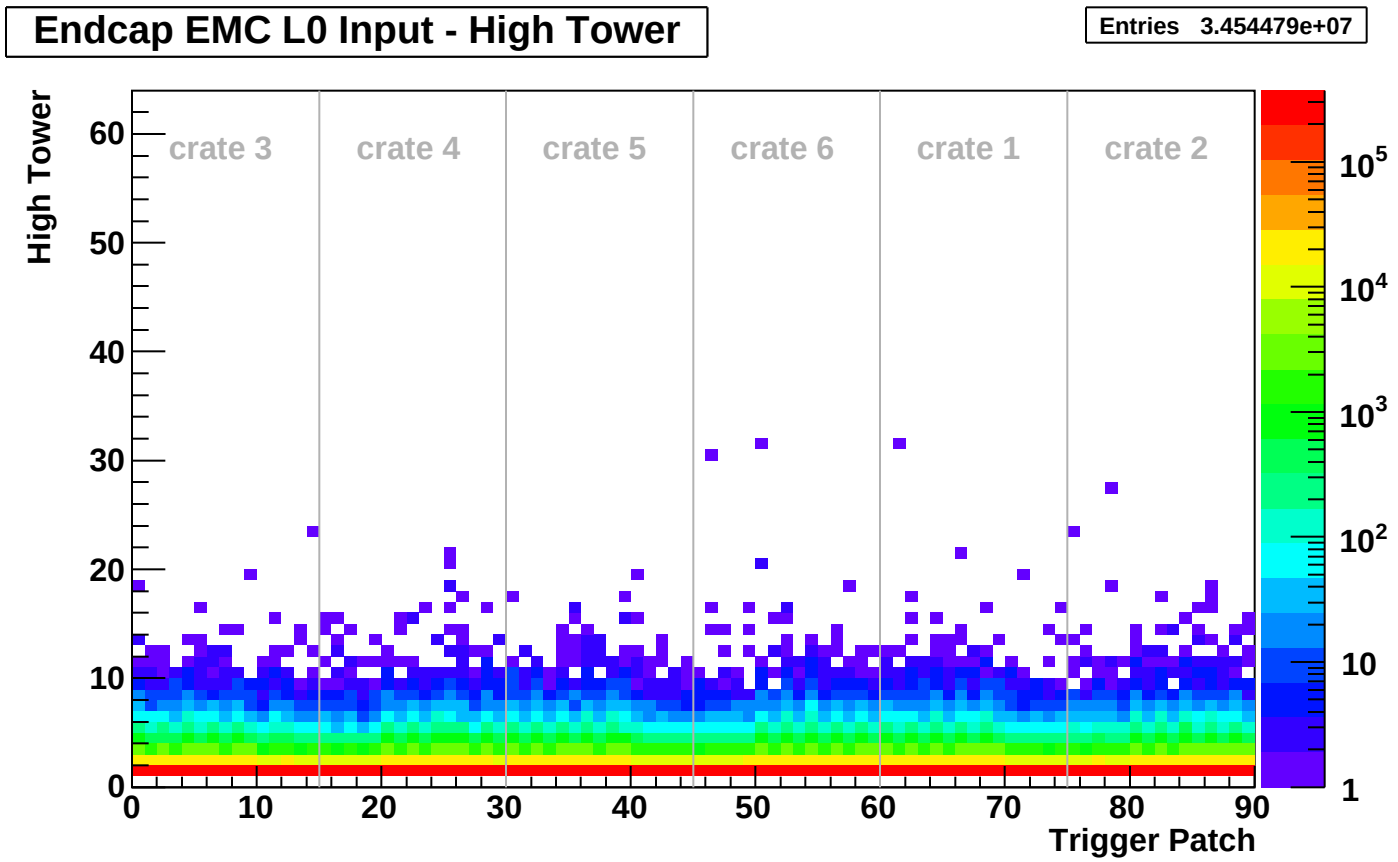
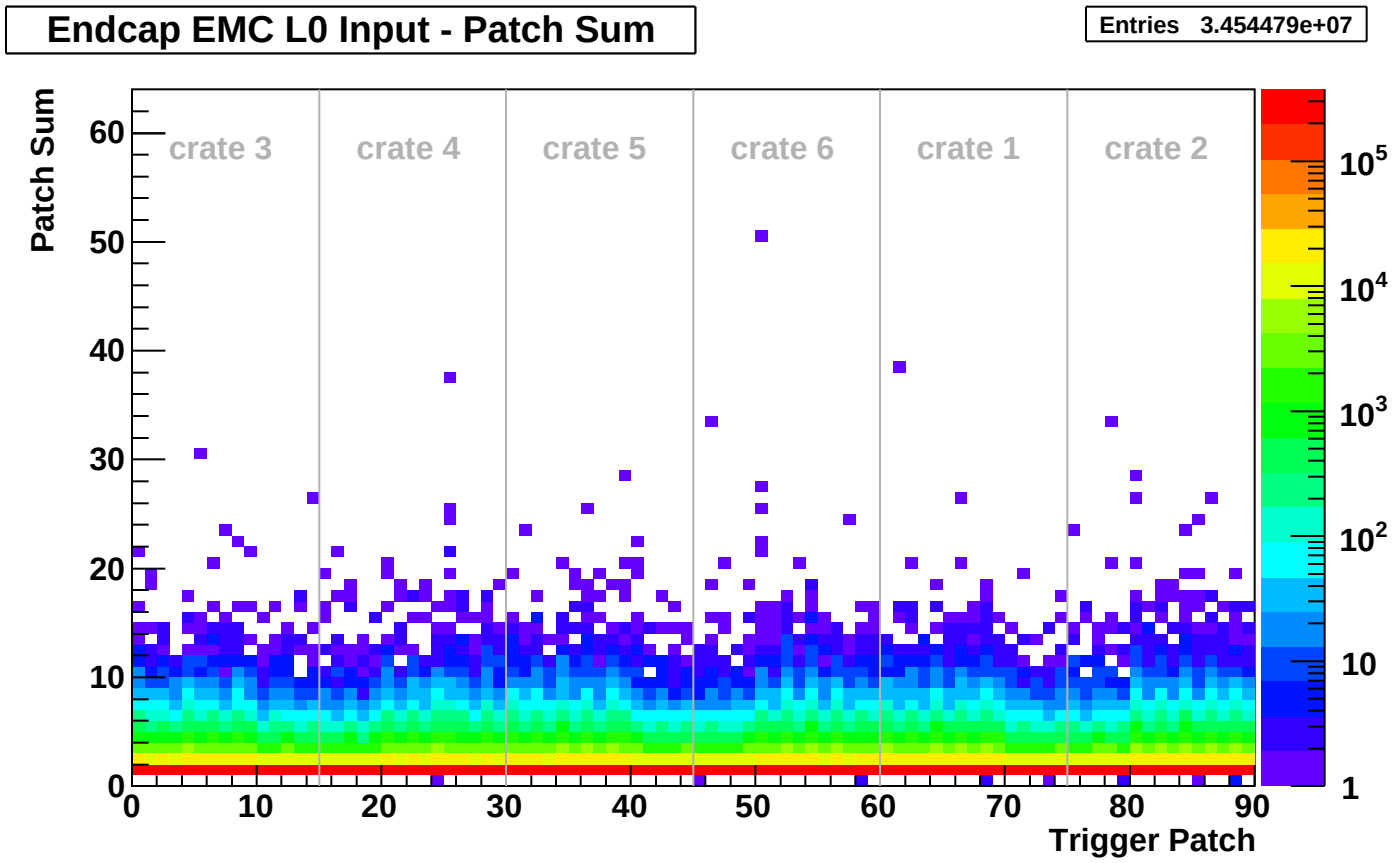
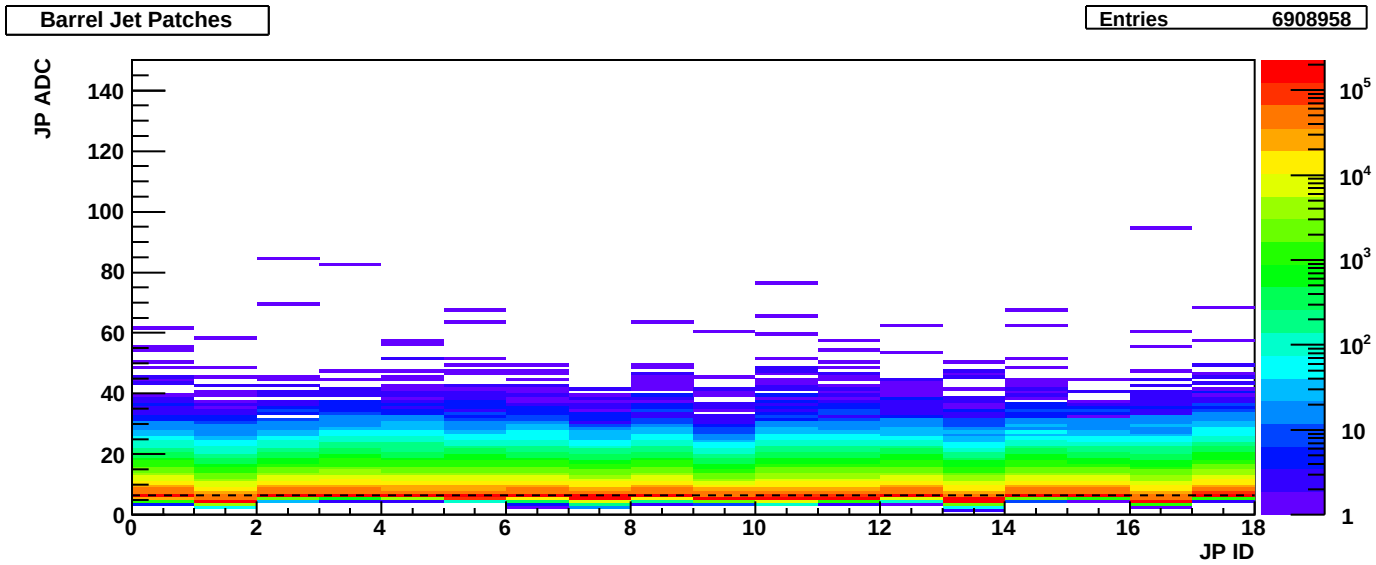
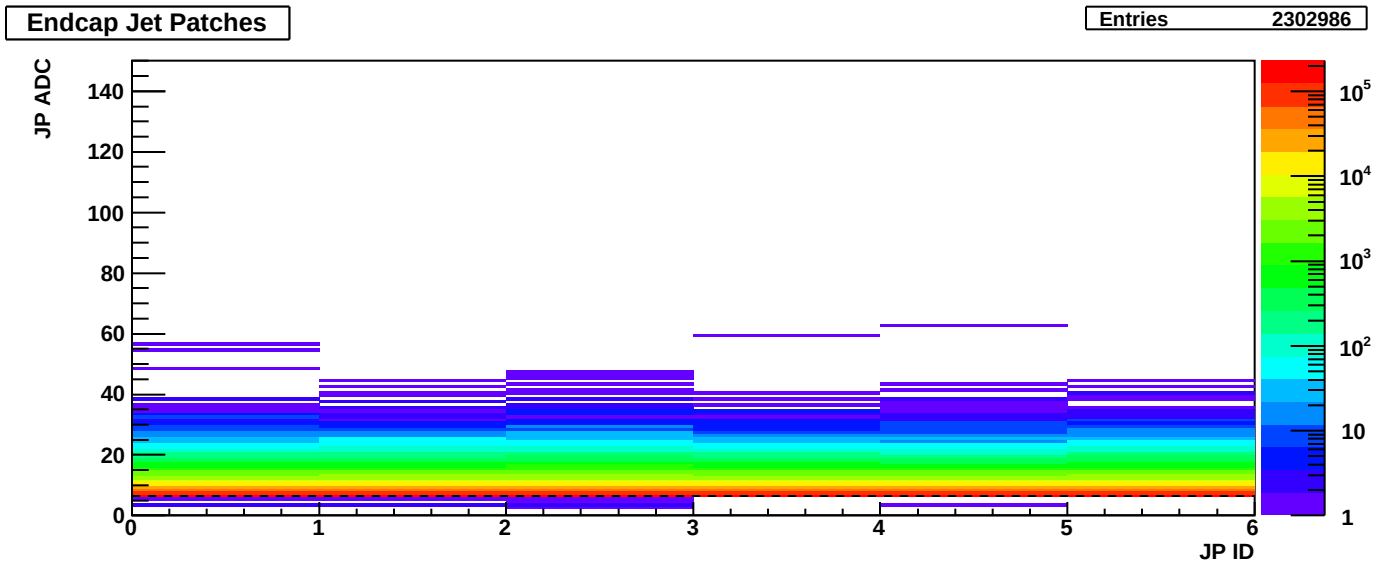

Barrel EMC L0 Input - High Tower
Entries 1.151493e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

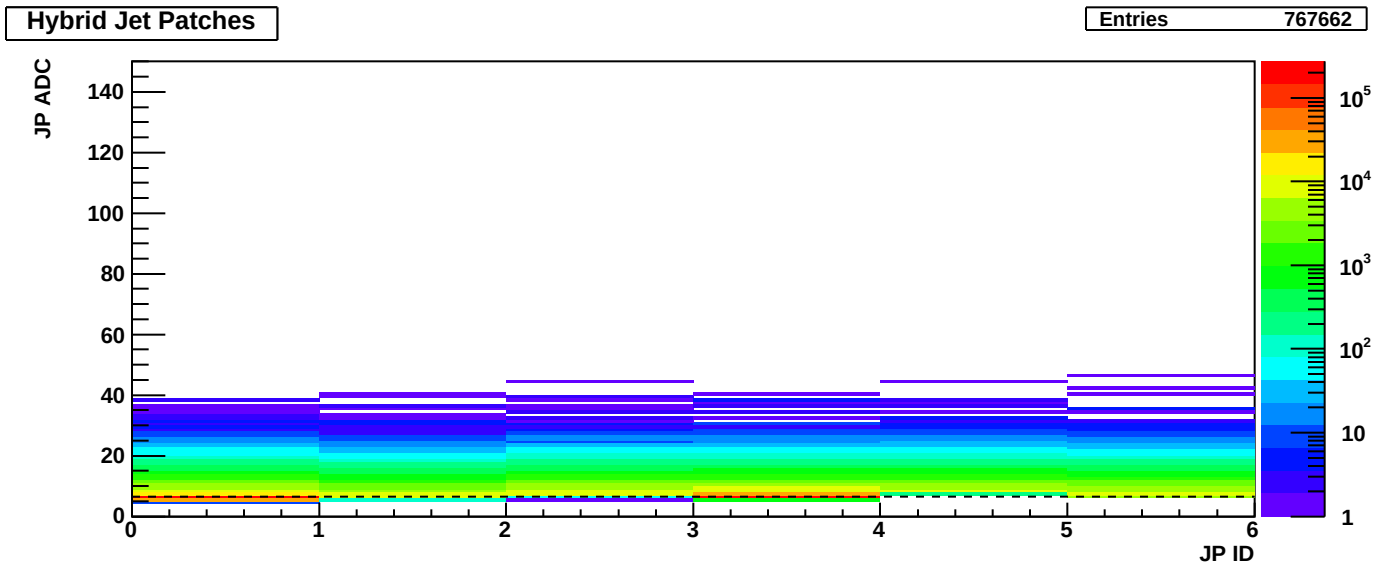

Barrel EMC L0 Input - Patch Sum
Entries 1.151493e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

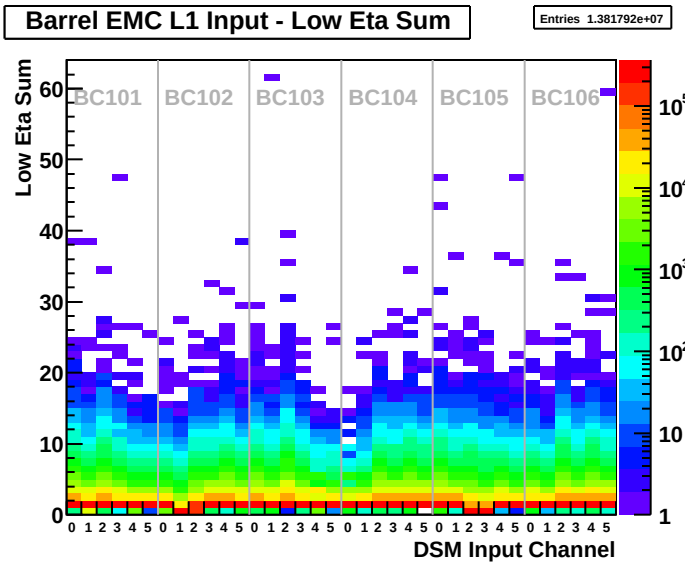

Endcap EMC L0 Input - High Tower
Entries 3.454479e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

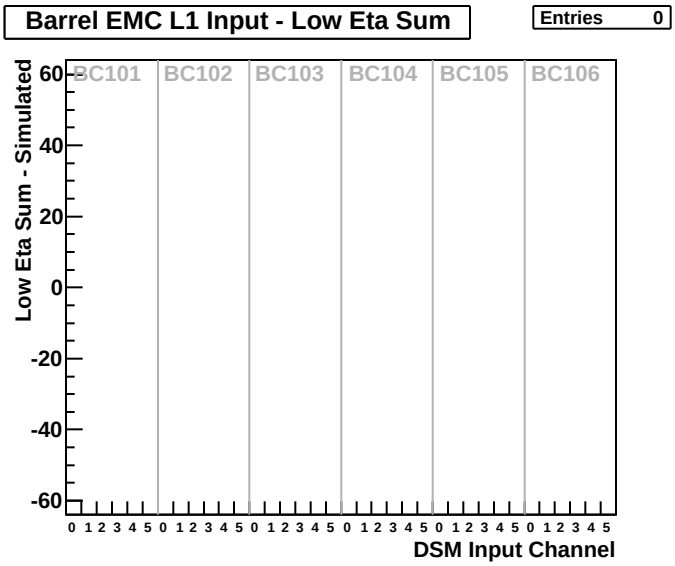

Endcap EMC L0 Input - Patch Sum
Entries 3.454479e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

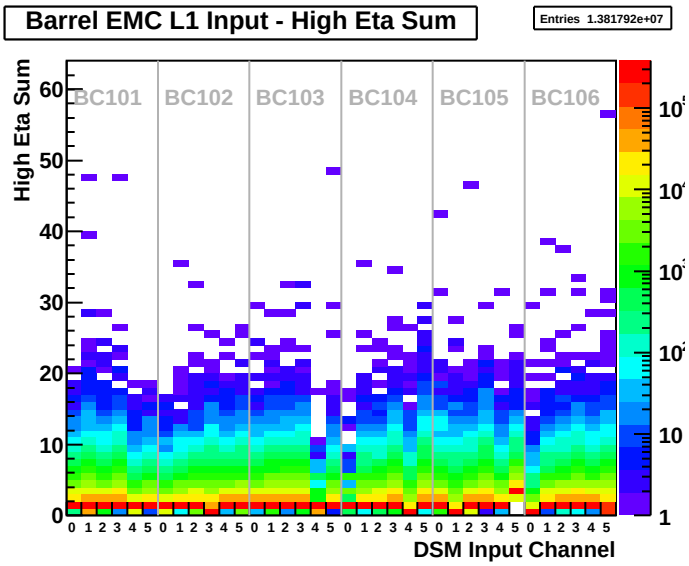

Barrel Jet Patches
Entries 6908958
JP ADC
JP ID

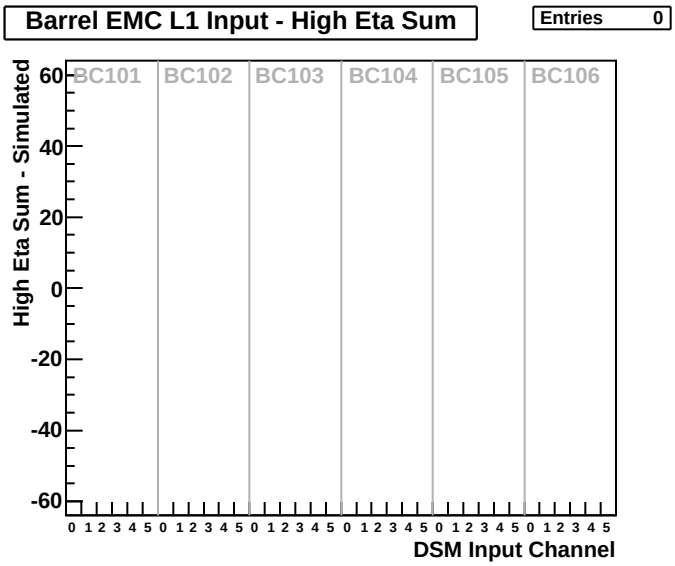

Endcap Jet Patches
Entries 2302986
JP ADC
JP ID

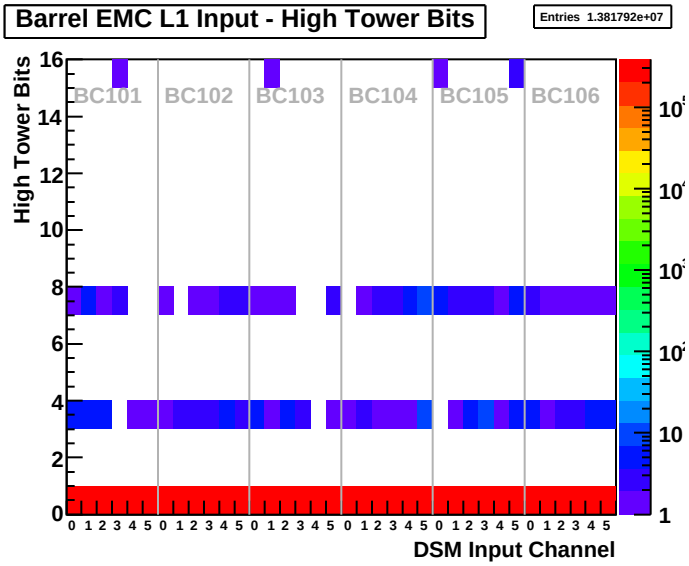

Hybrid Jet Patches
Entries 767662
JP ADC
JP ID

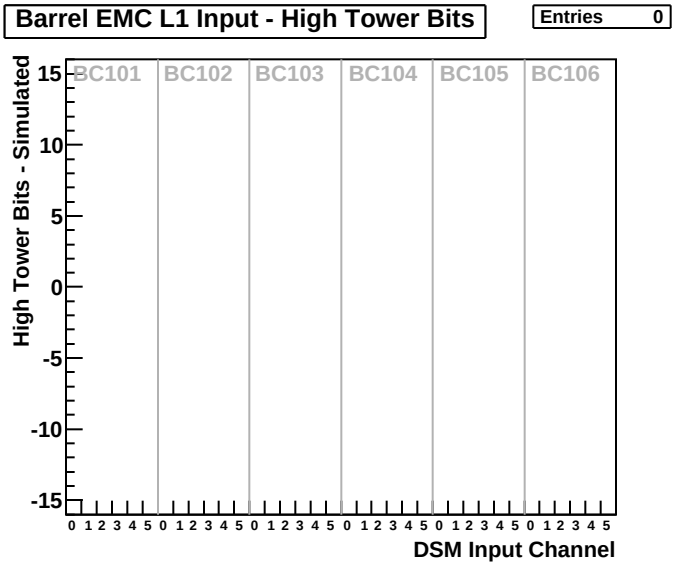

Barrel EMC L1 Input - Low Eta Sum
Entries 1.381792e+07
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

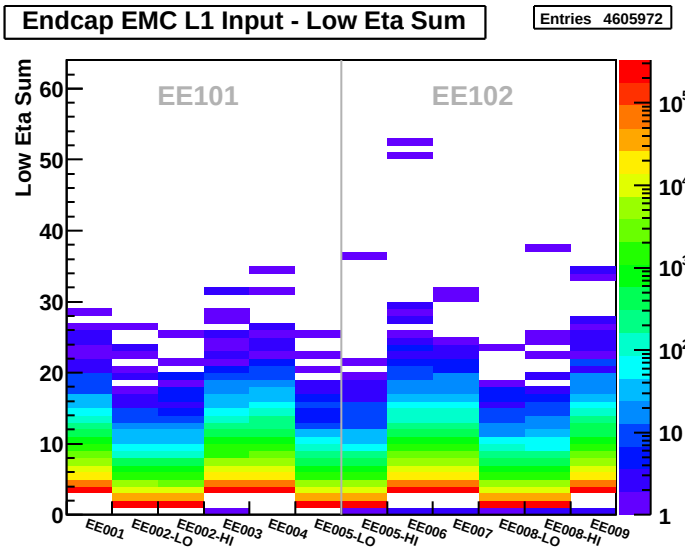

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

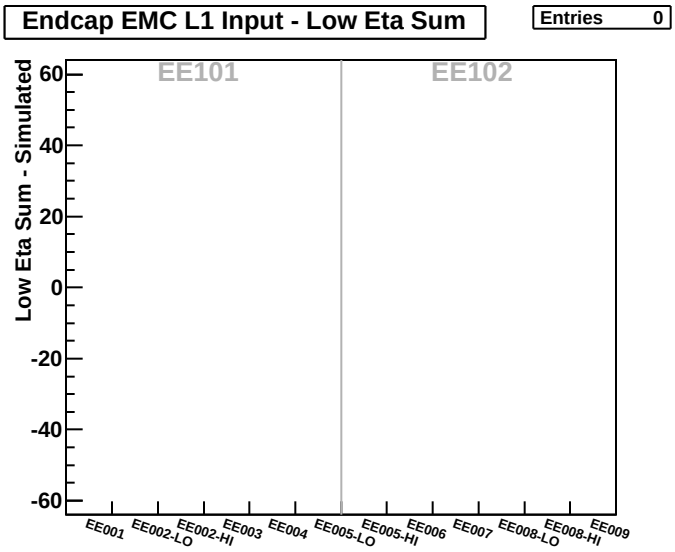

Barrel EMC L1 Input - High Eta Sum
Entries 1.381792e+07
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

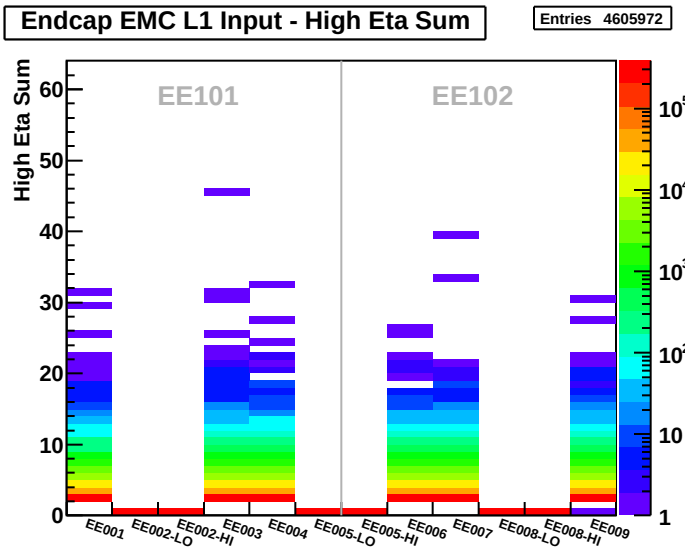

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

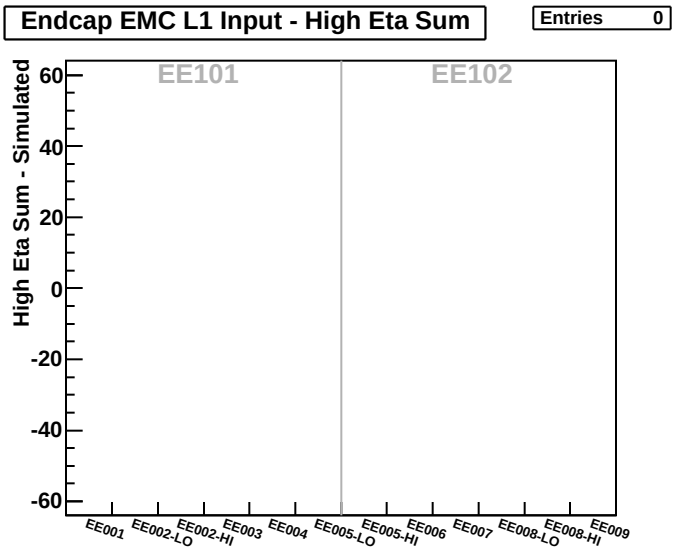

Barrel EMC L1 Input - High Tower Bits
Entries 1.381792e+07
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

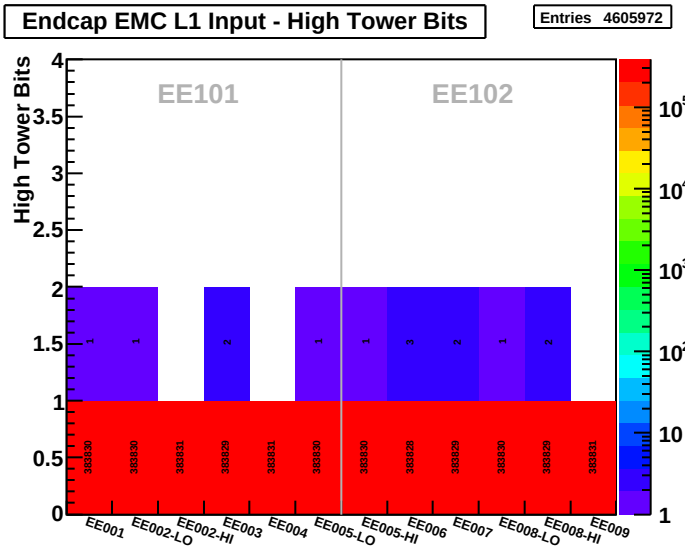

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

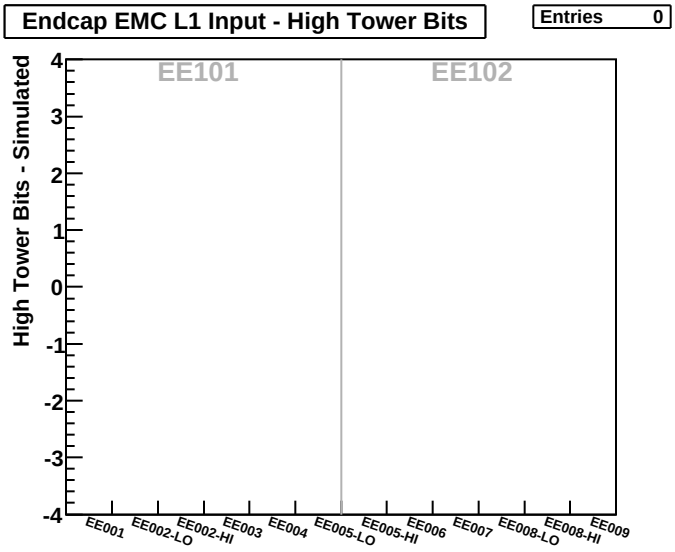

Endcap EMC L1 Input - Low Eta Sum
Entries 4605972
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

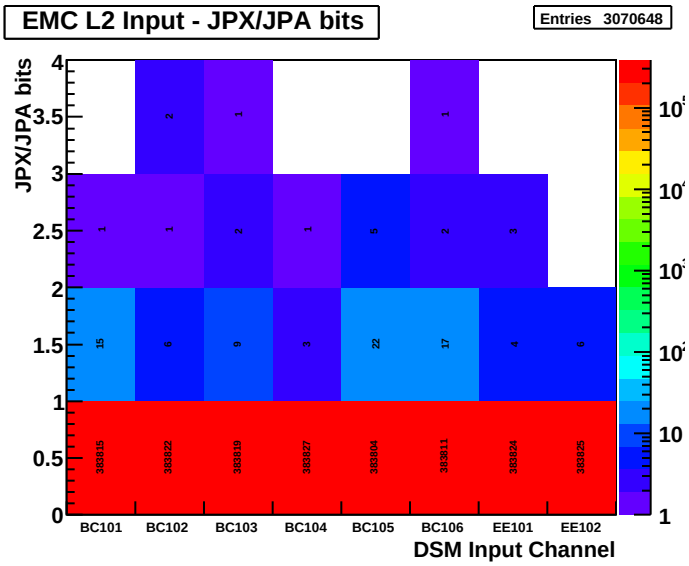

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

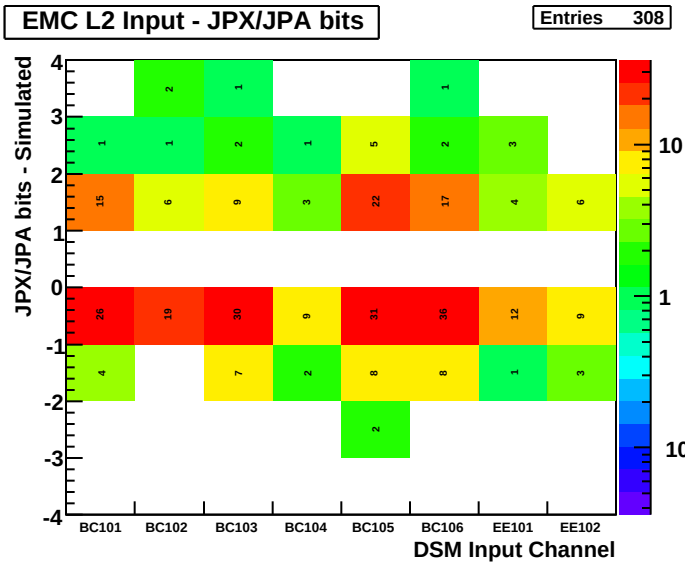

Endcap EMC L1 Input - High Eta Sum
Entries 4605972
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

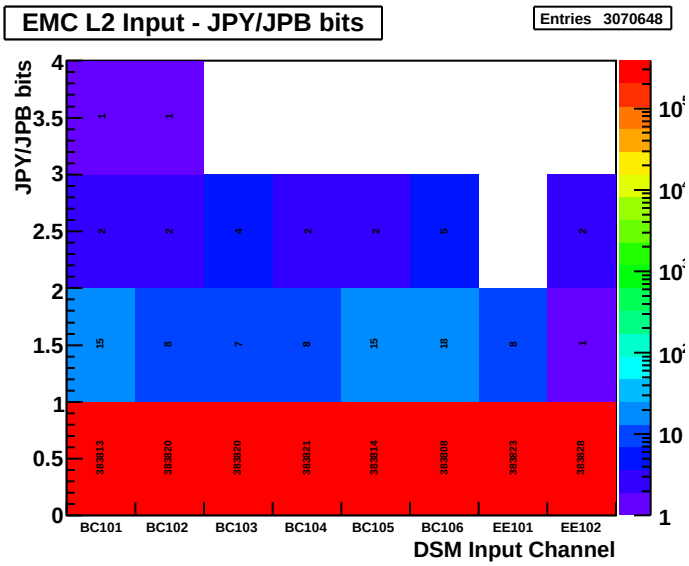

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

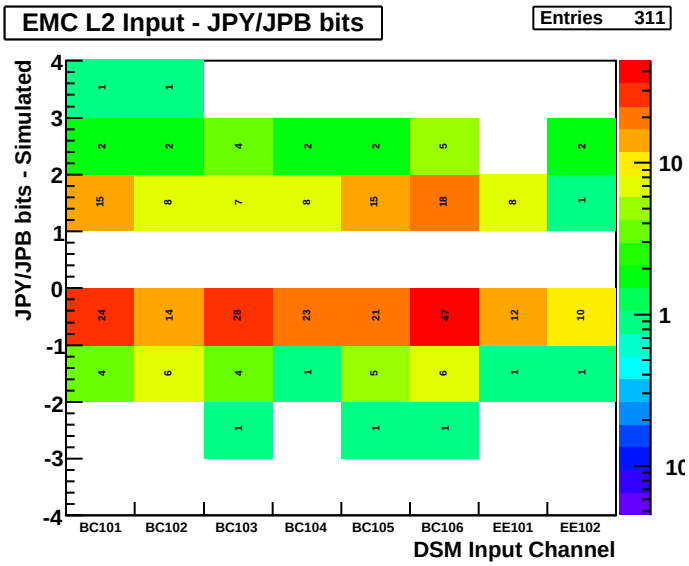

Endcap EMC L1 Input - High Tower Bits
Entries 4605972
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

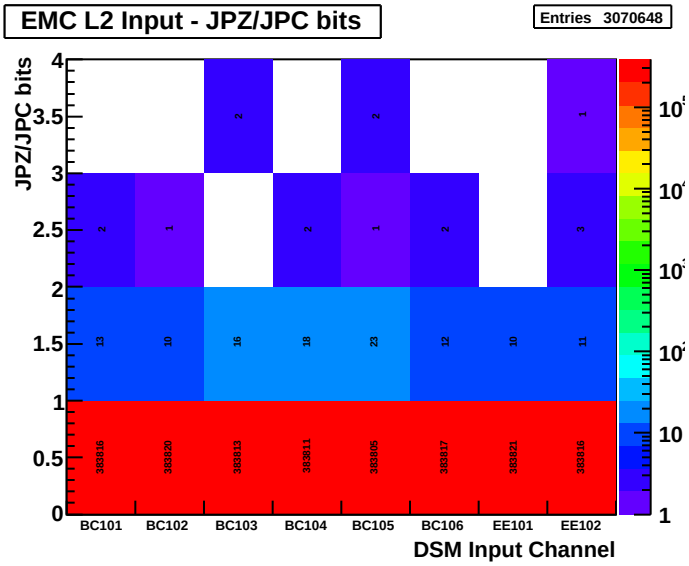

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

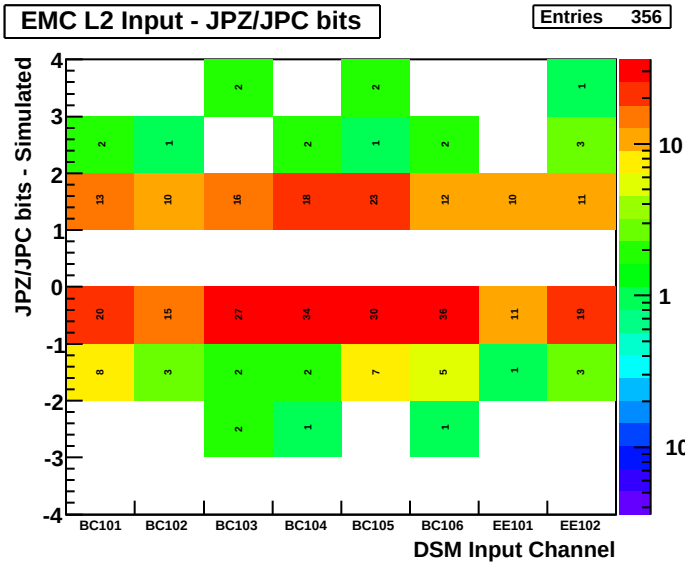

EMC L2 Input - JPX/JPA bits
Entries 3070648
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

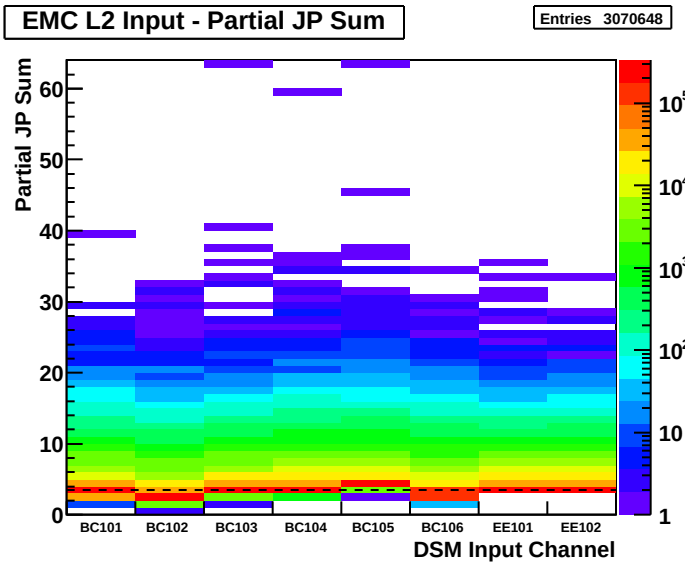

EMC L2 Input - JPX/JPA bits
Entries 308
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

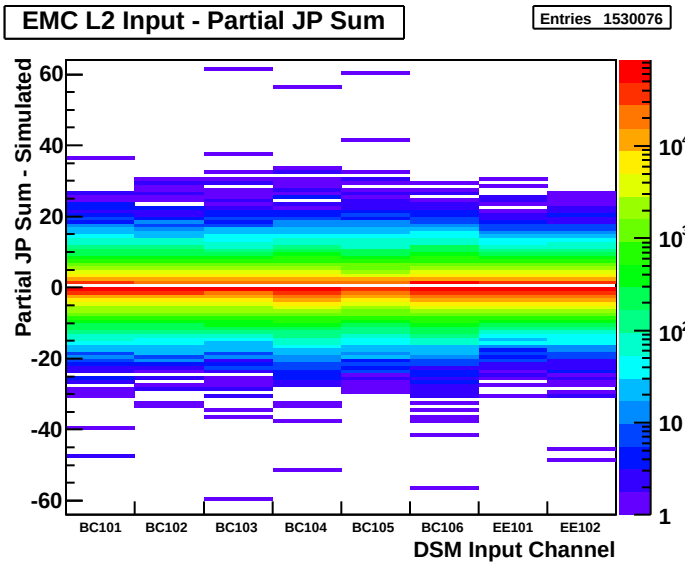

EMC L2 Input - JPY/JPB bits
Entries 3070648
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

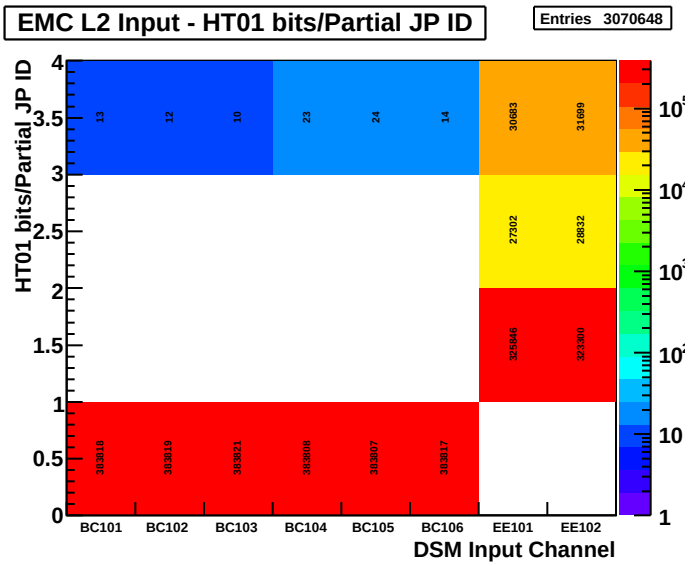

EMC L2 Input - JPY/JPB bits
Entries 311
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

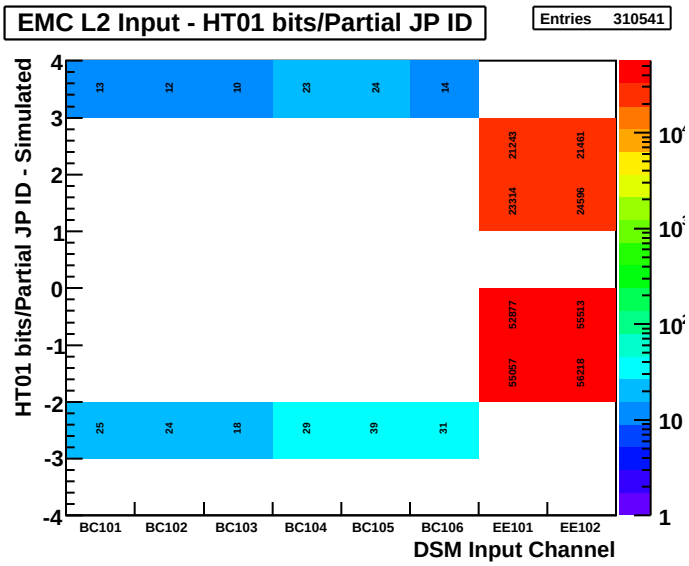

EMC L2 Input - JPZ/JPC bits
Entries 3070648
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

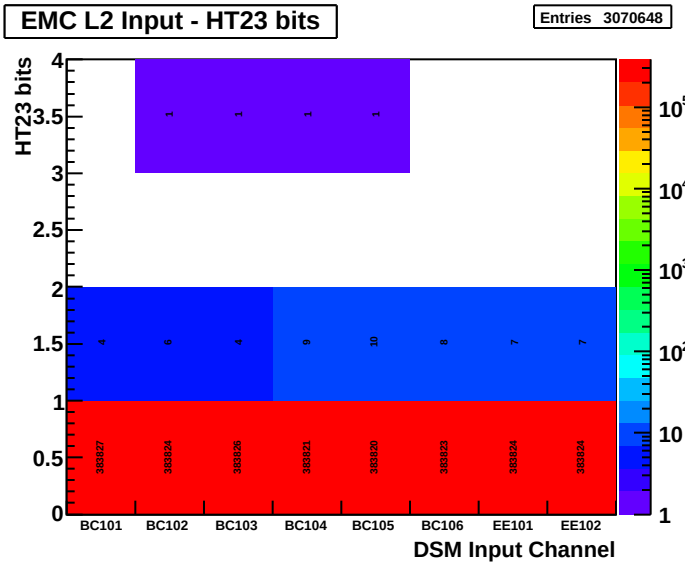

EMC L2 Input - JPZ/JPC bits
Entries 356
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

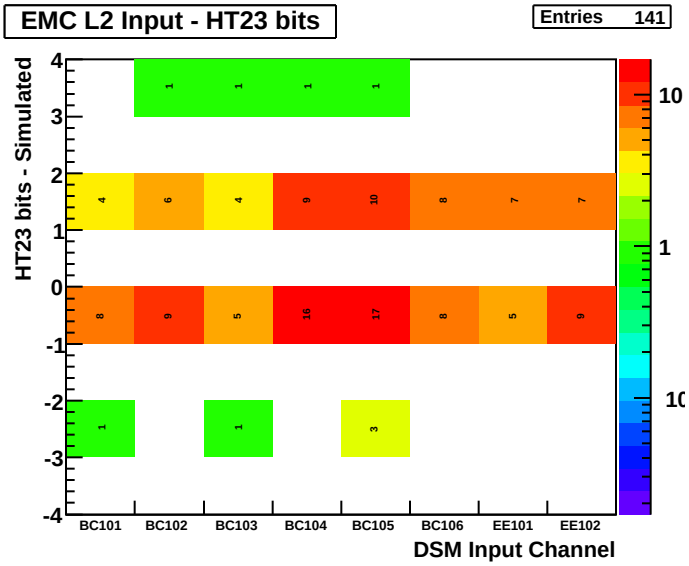

EMC L2 Input - Partial JP Sum
Entries 3070648
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

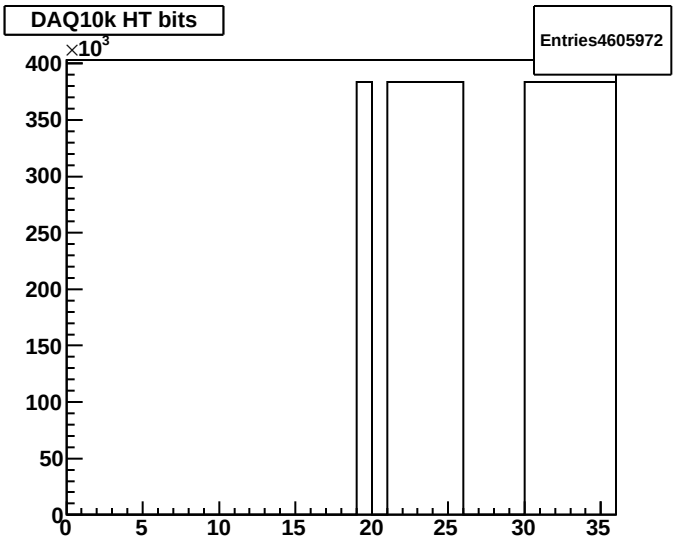

EMC L2 Input - Partial JP Sum
Entries 1530076
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

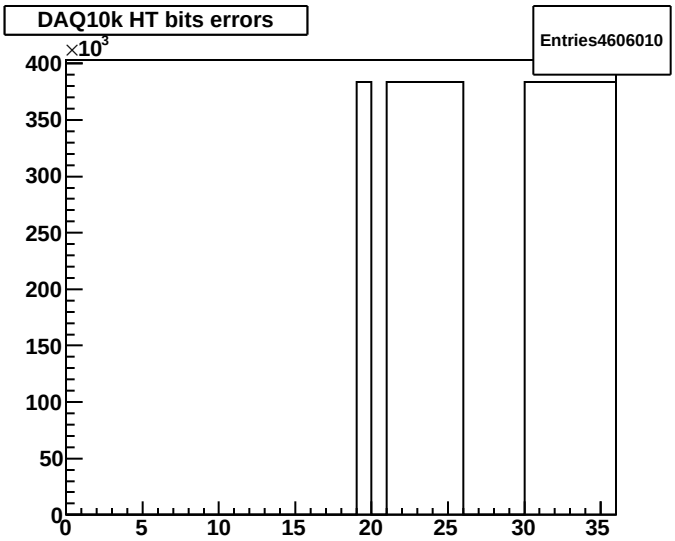

EMC L2 Input - HT01 bits/Partial JP ID
Entries 3070648
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

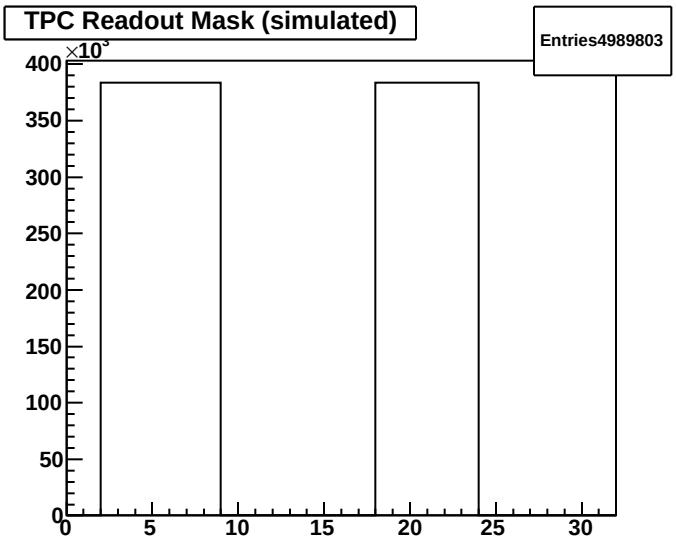

EMC L2 Input - HT01 bits/Partial JP ID
Entries 310541
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

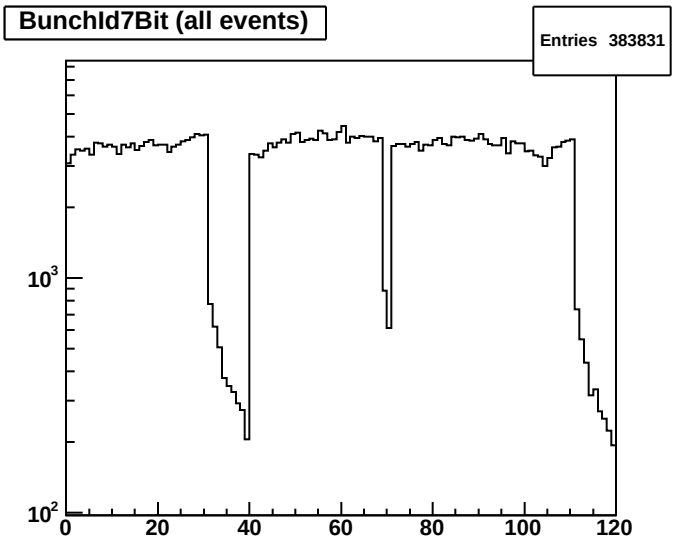

EMC L2 Input - HT23 bits
Entries 3070648
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

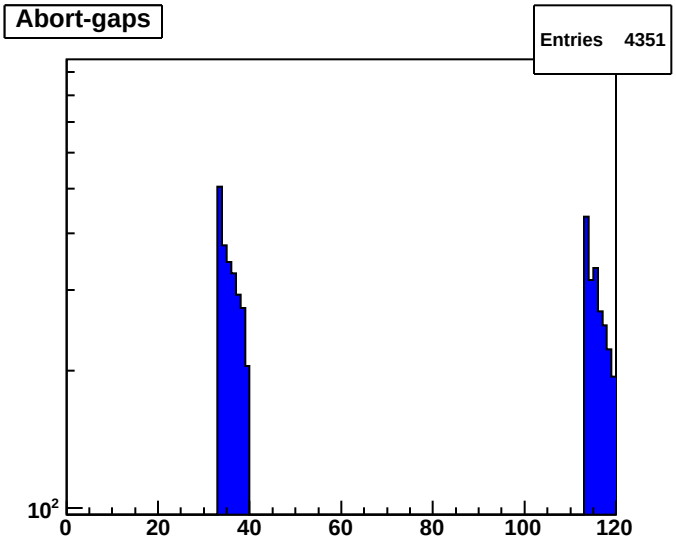

EMC L2 Input - HT23 bits
Entries 141
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

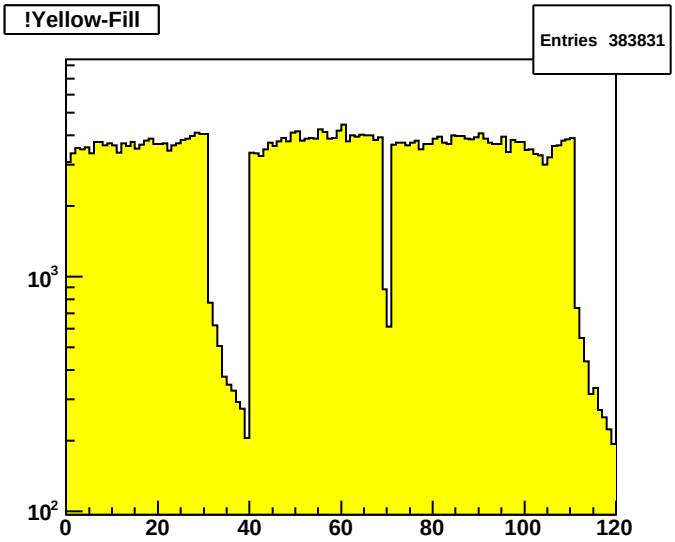

DAQ10k HT bits
Entries4605972
×10^3
400
350
300
250
200
150
100
50
0
0 5 10 15 20 25 30 35

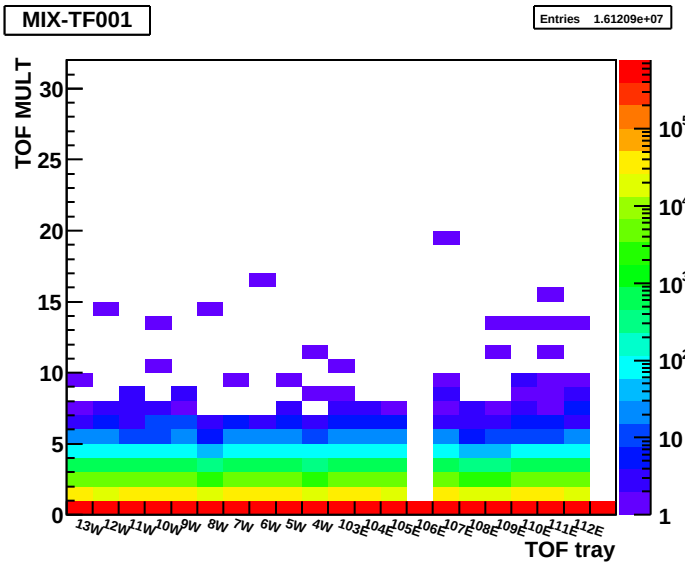

DAQ10k HT bits errors
Entries4606010
×10^3
400
350
300
250
200
150
100
50
0
0 5 10 15 20 25 30 35

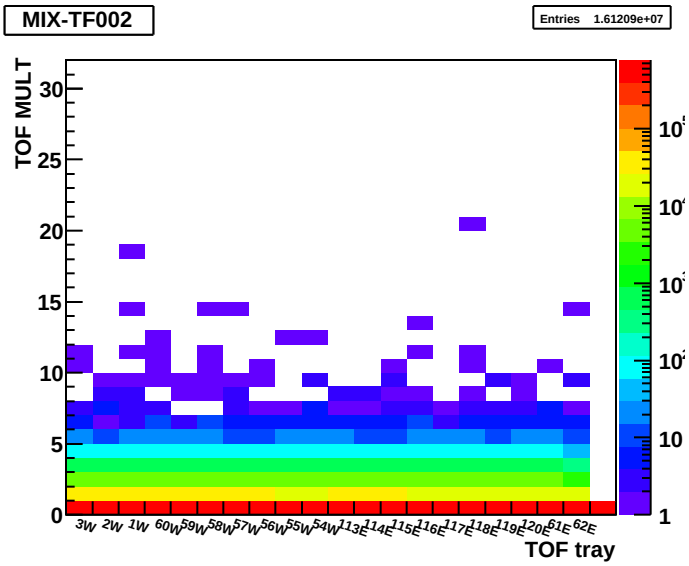

TPC Readout Mask (simulated)
Entries4989803
×10^3
400
350
300
250
200
150
100
50
0
0 5 10 15 20 25 30

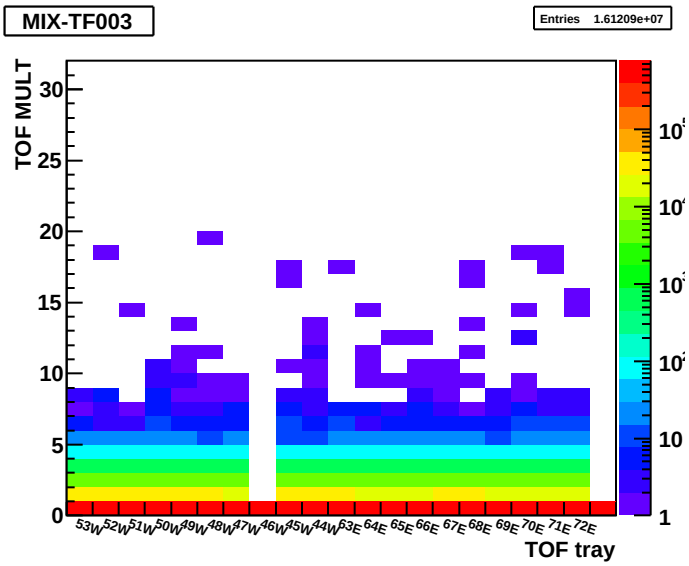

BunchId7Bit (all events)
Entries 383831
10^3
10^2
0 20 40 60 80 100 120

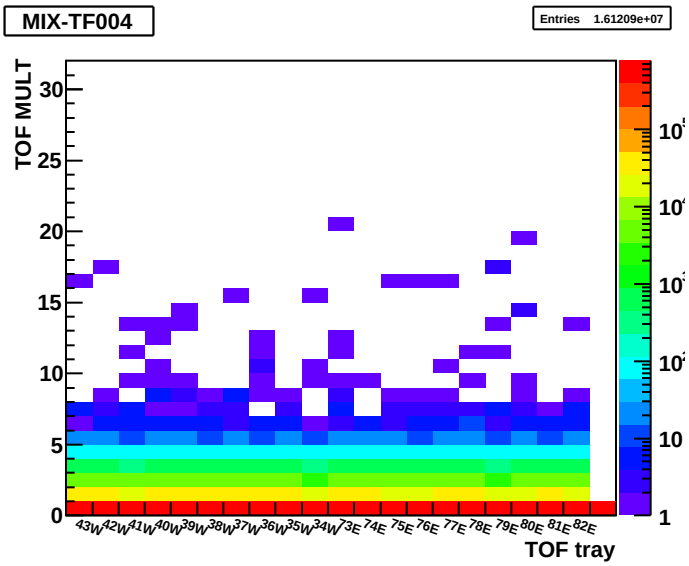

Abort-gaps
Entries 4351
10^2
0 20 40 60 80 100 120

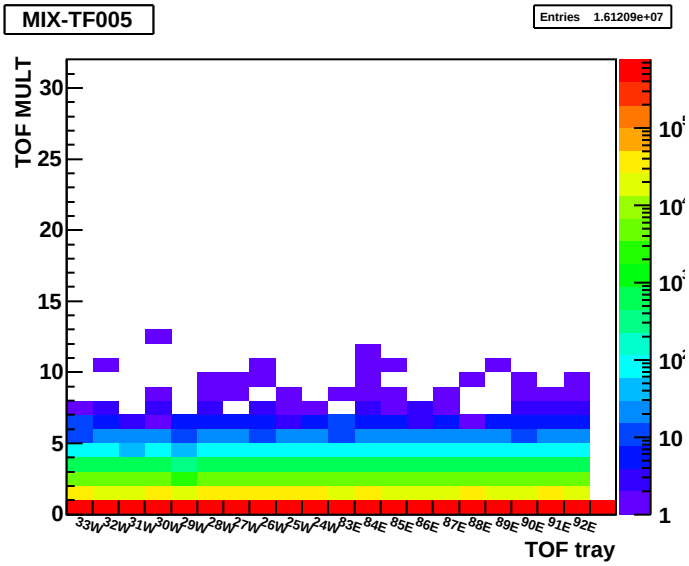

!Yellow-Fill
Entries 383831
10^3
10^2
0 20 40 60 80 100 120

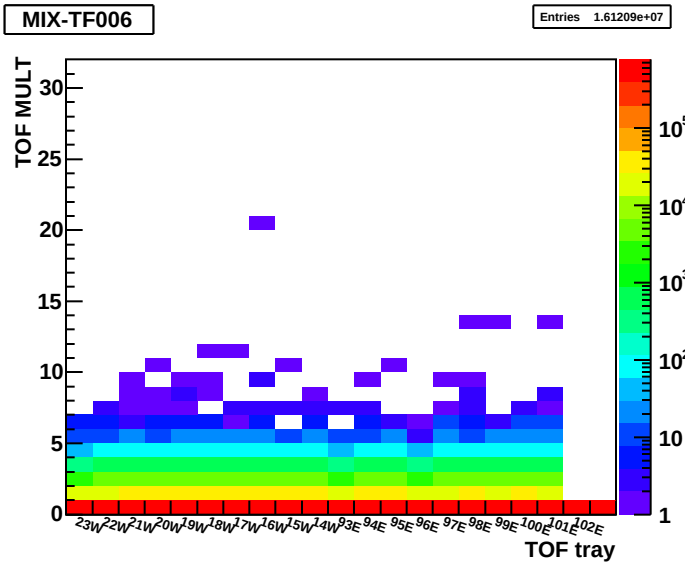

MIX-TF001
Entries 1.61209e+07
TOF MULT
TOF tray

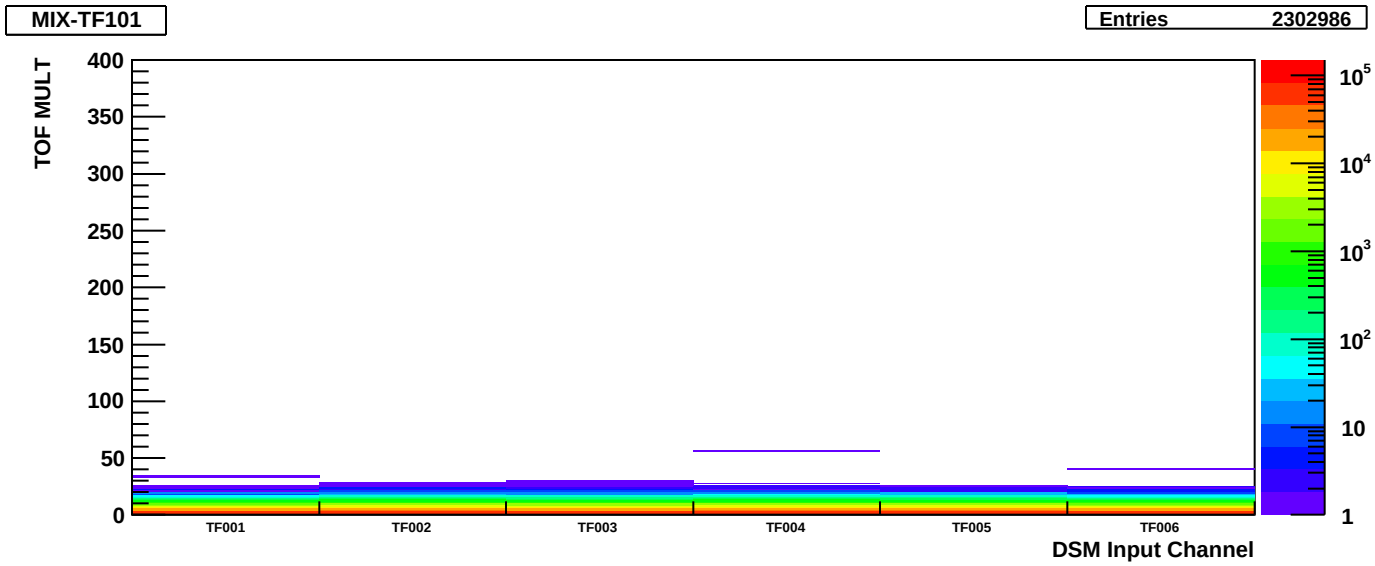

MIX-TF002
Entries 1.61209e+07
TOF MULT
TOF tray

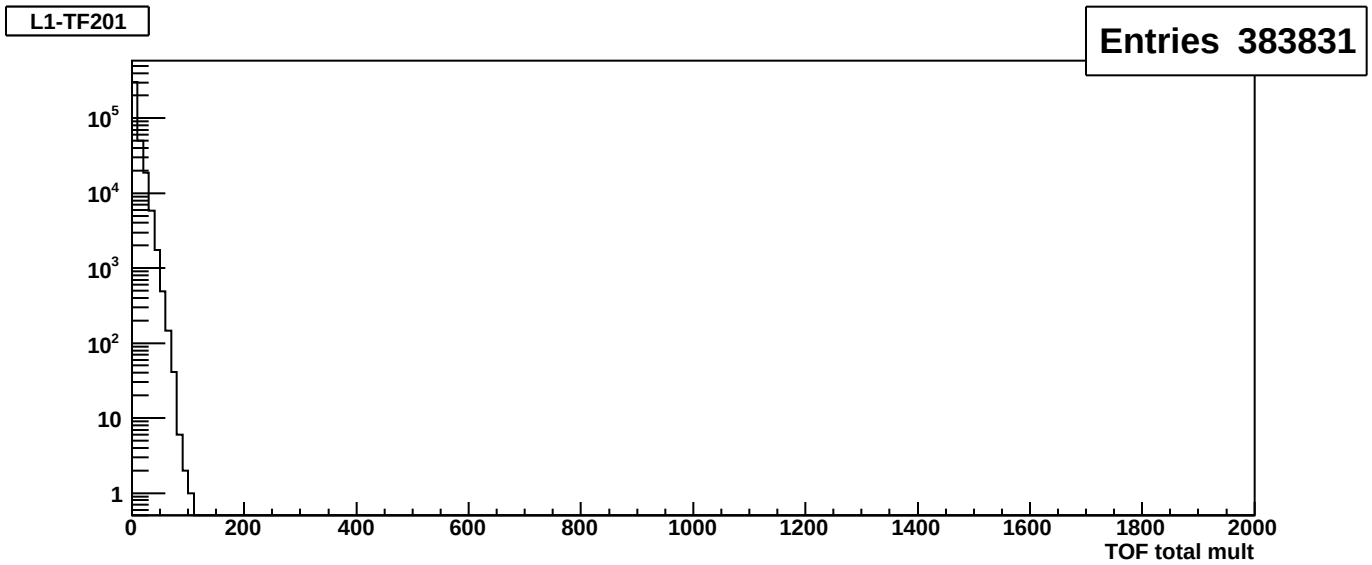

MIX-TF003
Entries 1.61209e+07
TOF MULT
TOF tray

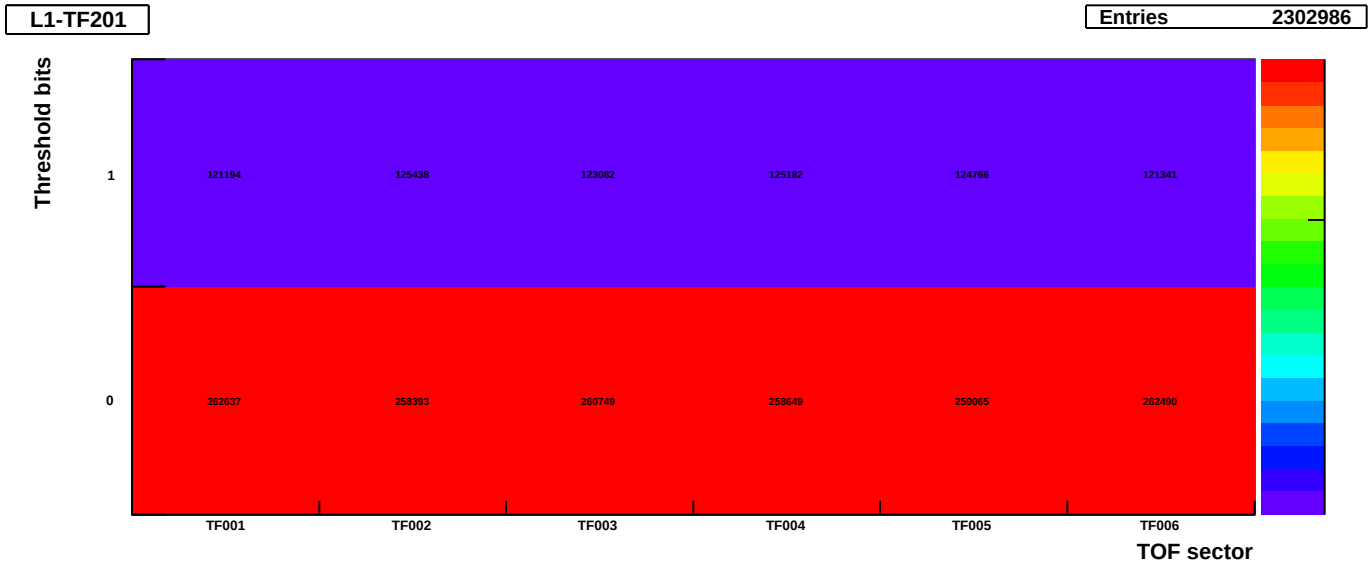

MIX-TF004
Entries 1.61209e+07
TOF MULT
TOF tray

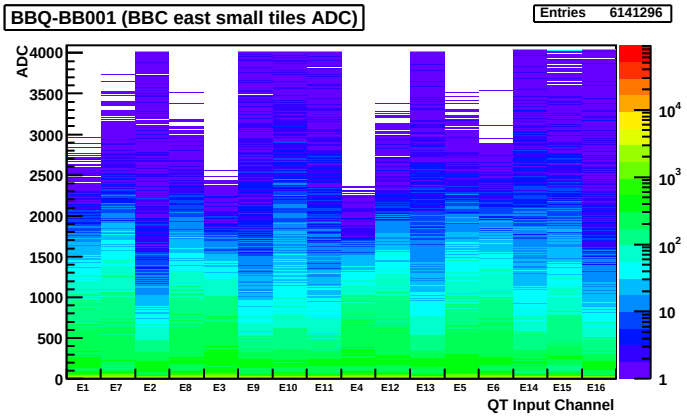

MIX-TF005
Entries 1.61209e+07
TOF MULT
TOF tray

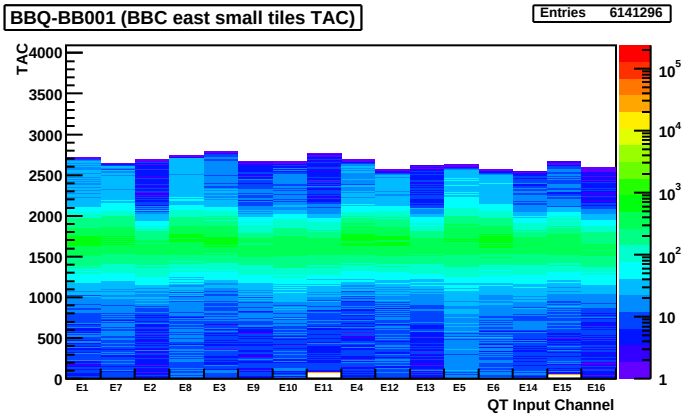

MIX-TF006
Entries 1.61209e+07
TOF MULT
TOF tray

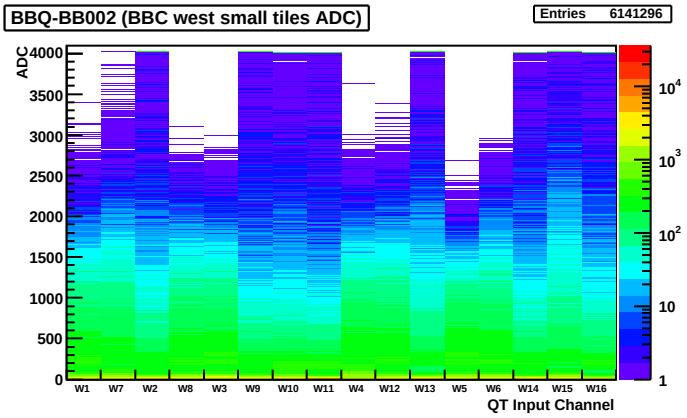

MIX-TF101
Entries 2302986
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

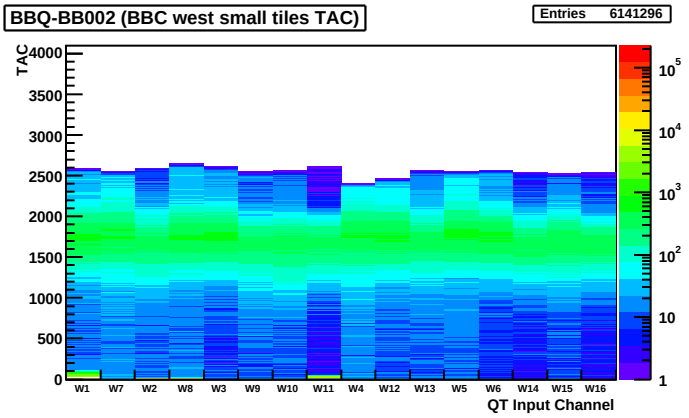

L1-TF201
Entries 383831
10^5
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

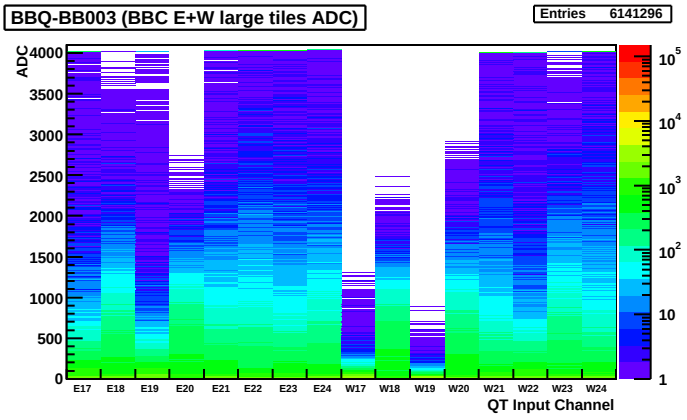

L1-TF201
Entries 2302986
Threshold bits
1
0
121194
125438
123082
125182
124766
121341
262637
258393
260749
258649
259065
262490
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

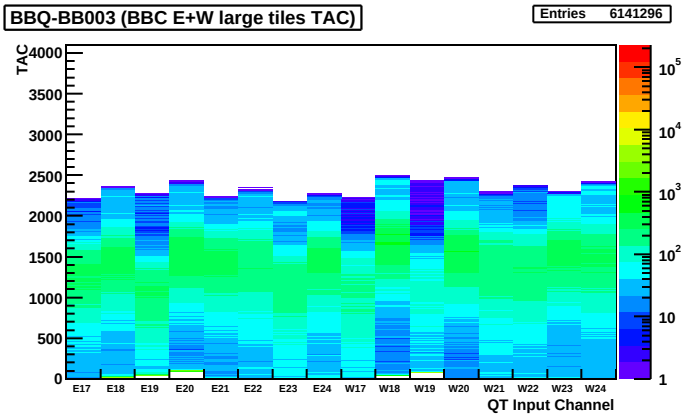

BBQ-BB001 (BBC east small tiles ADC)
Entries 6141296
ADC
QT Input Channel

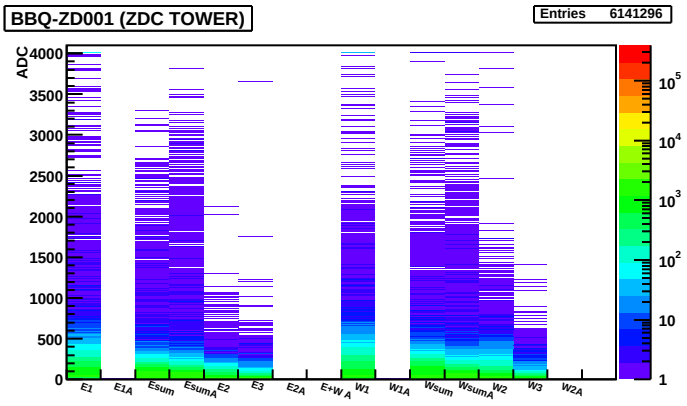

BBQ-BB001 (BBC east small tiles TAC)
Entries 6141296
TAC
QT Input Channel

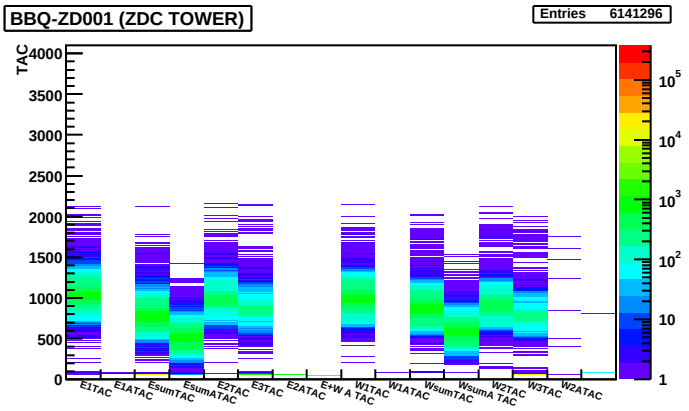

BBQ-BB002 (BBC west small tiles ADC)
Entries 6141296
ADC
QT Input Channel

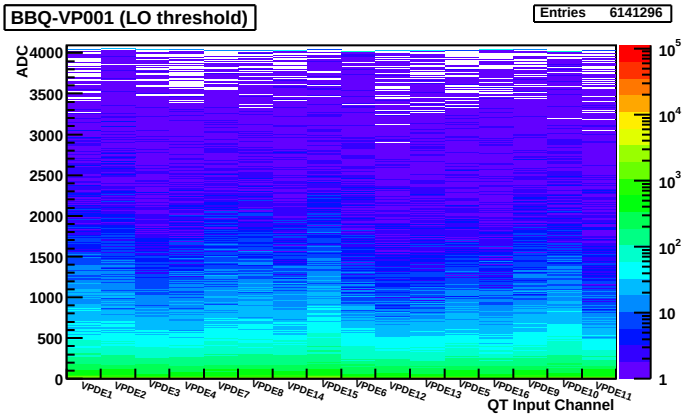

BBQ-BB002 (BBC west small tiles TAC)
Entries 6141296
TAC
QT Input Channel

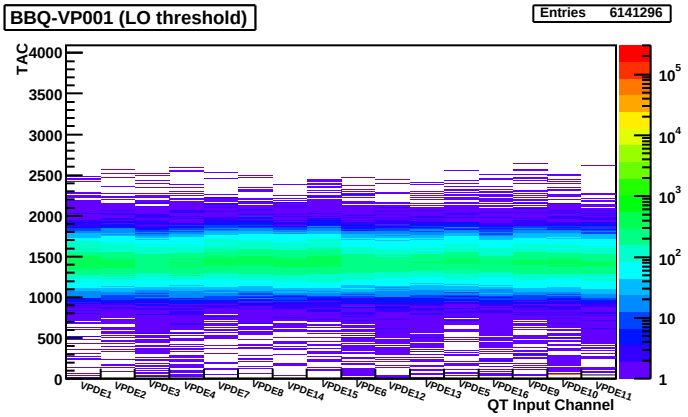

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 6141296
ADC
QT Input Channel

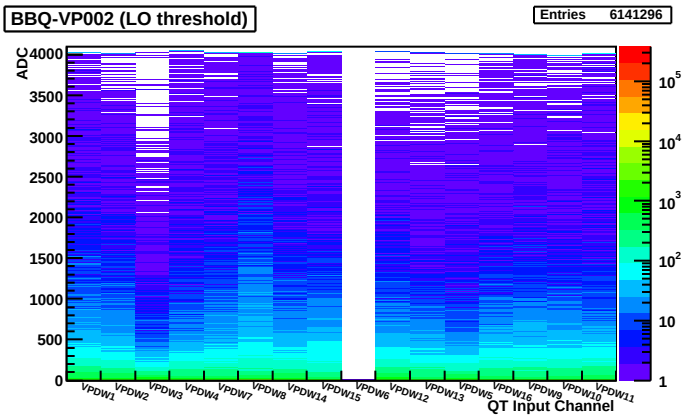

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 6141296
TAC
QT Input Channel

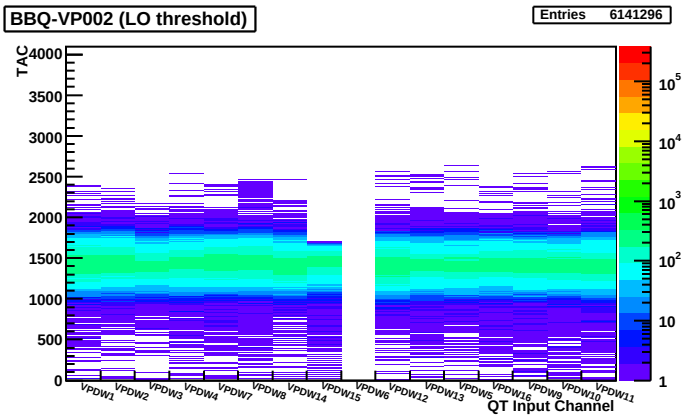

BBQ-ZD001 (ZDC TOWER)
Entries 6141296
ADC

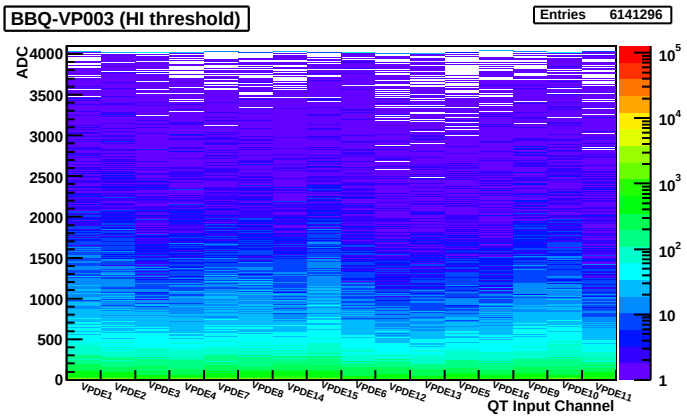

BBQ-ZD001 (ZDC TOWER)
Entries 6141296
TAC

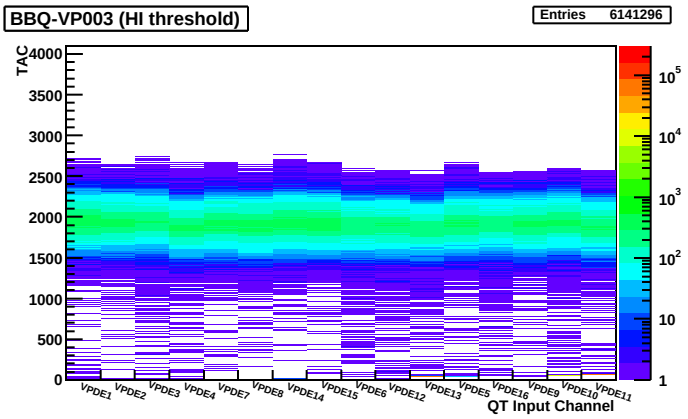

BBQ-VP001 (LO threshold)
Entries 6141296
ADC
QT Input Channel

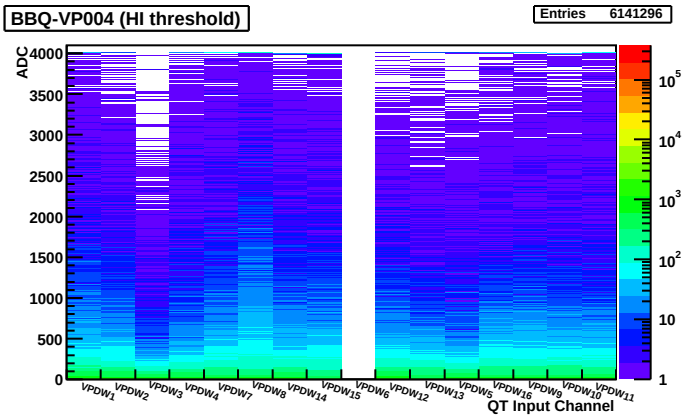

BBQ-VP001 (LO threshold)
Entries 6141296
TAC
QT Input Channel

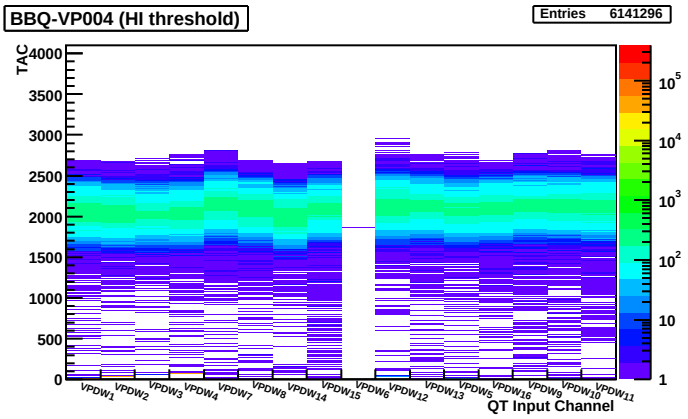

BBQ-VP002 (LO threshold)
Entries 6141296
ADC
QT Input Channel

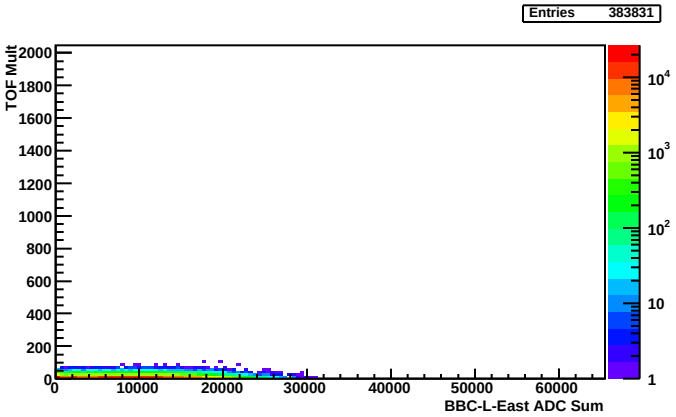

BBQ-VP002 (LO threshold)
Entries 6141296
TAC
QT Input Channel

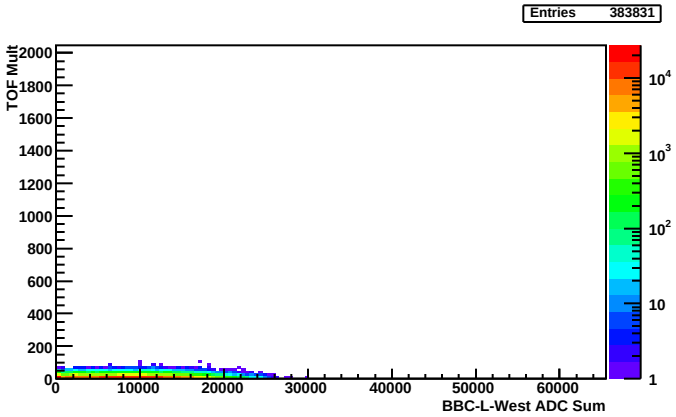

BBQ-VP003 (HI threshold)
Entries 6141296
ADC
QT Input Channel

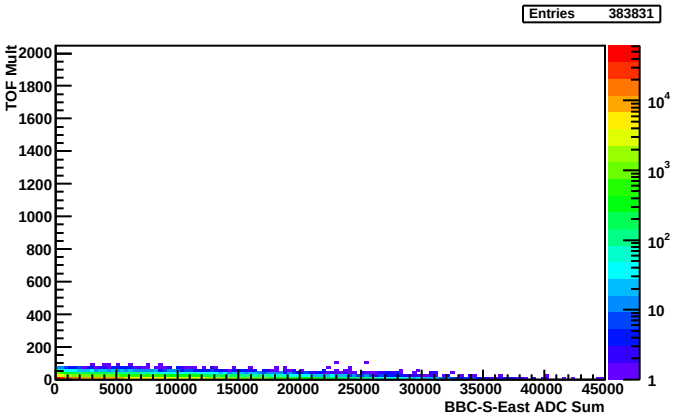

BBQ-VP003 (HI threshold)
Entries 6141296
TAC
QT Input Channel

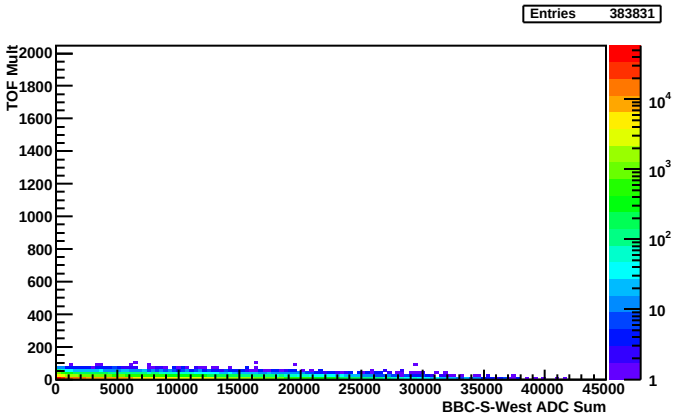

BBQ-VP004 (HI threshold)
Entries 6141296
ADC
QT Input Channel

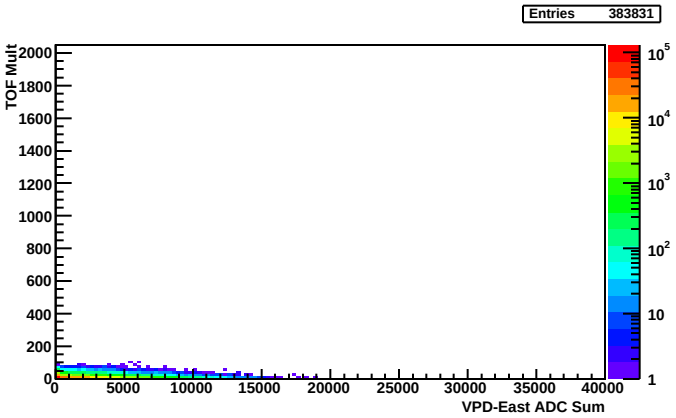

BBQ-VP004 (HI threshold)
Entries 6141296
TAC
QT Input Channel

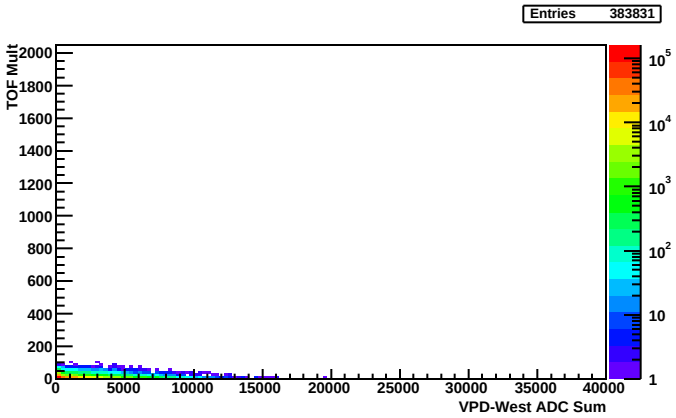

Entries 383831
TOF Mult
BBC-L-East ADC Sum

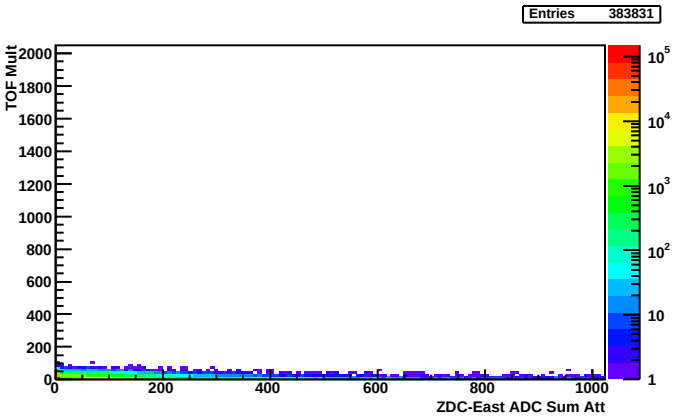

Entries 383831
TOF Mult
BBC-L-West ADC Sum

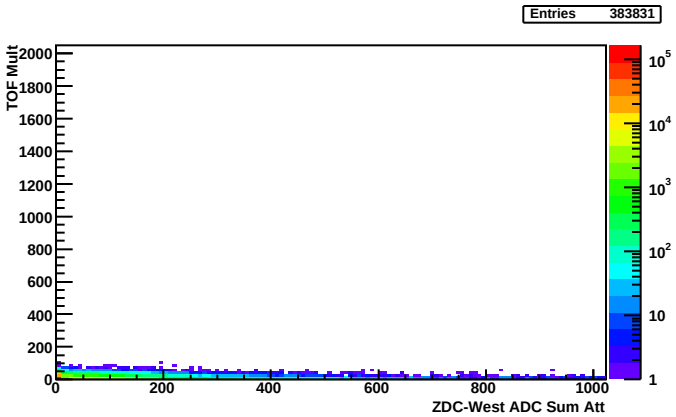

Entries 383831
TOF Mult
BBC-S-East ADC Sum

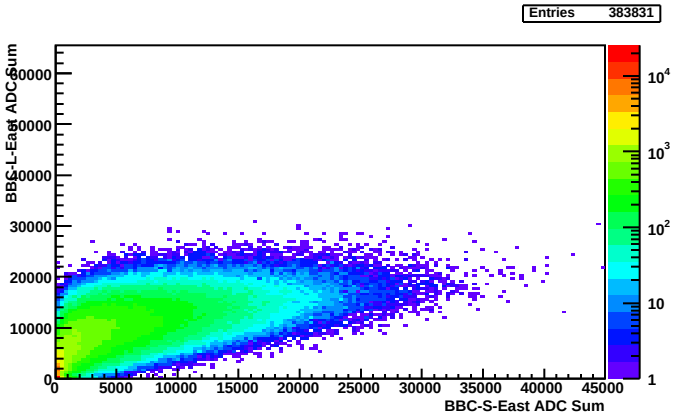

Entries 383831
TOF Mult
BBC-S-West ADC Sum

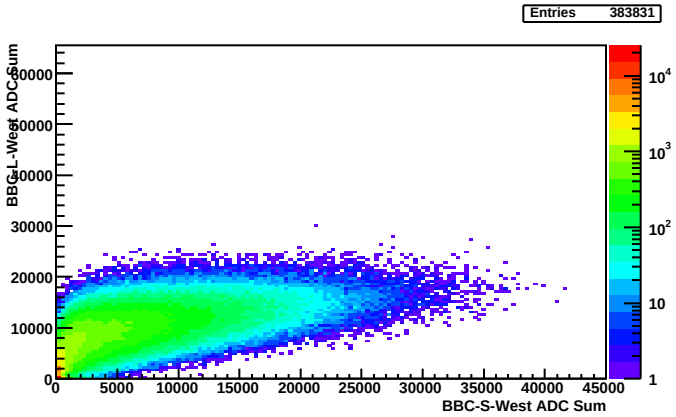

Entries 383831
TOF Mult
VPD-East ADC Sum

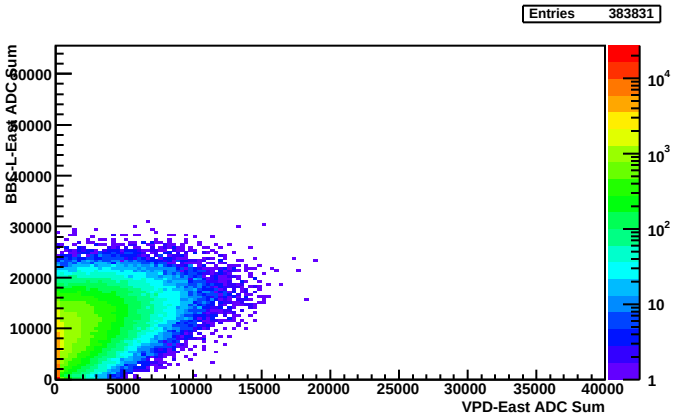

Entries 383831
TOF Mult
VPD-West ADC Sum

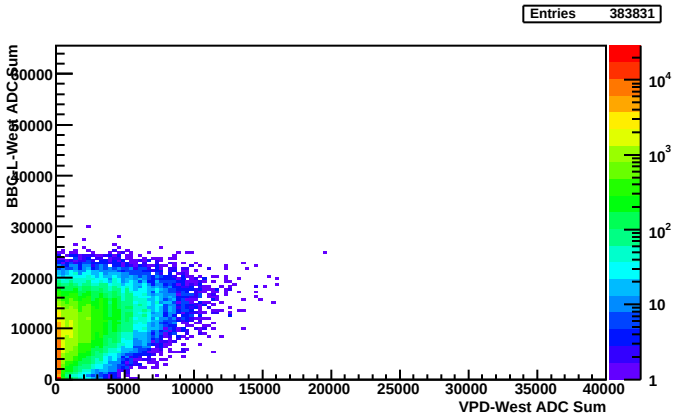

Entries 383831
TOF Mult
ZDC-East ADC Sum Att

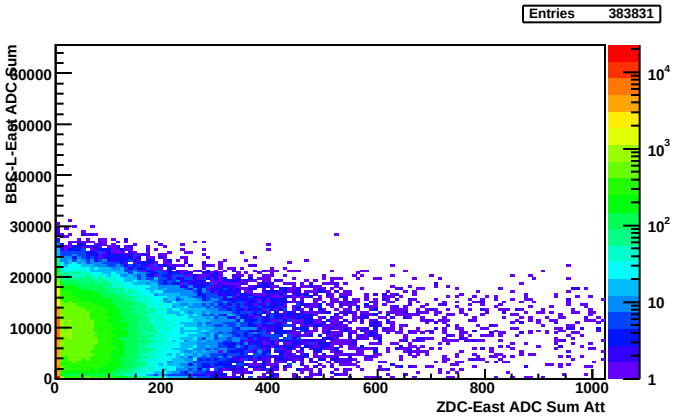

Entries 383831
TOF Mult
ZDC-West ADC Sum Att

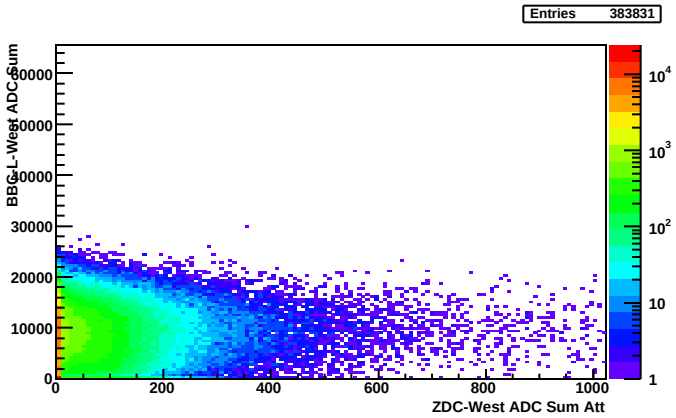

Entries 383831
BBC-L-East ADC Sum
BBC-S-East ADC Sum


Entries 383831
BBC-L-West ADC Sum
BBC-S-West ADC Sum


Entries 383831
BBC-L-East ADC Sum
VPD-East ADC Sum


Entries 383831
BBC-L-West ADC Sum
VPD-West ADC Sum


Entries 383831
BBC-L-East ADC Sum
ZDC-East ADC Sum Att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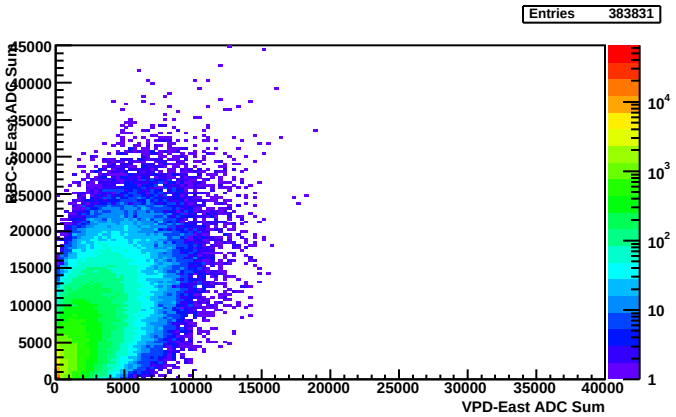
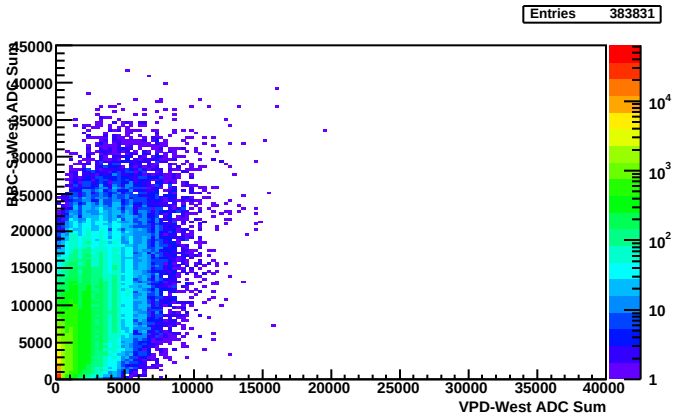
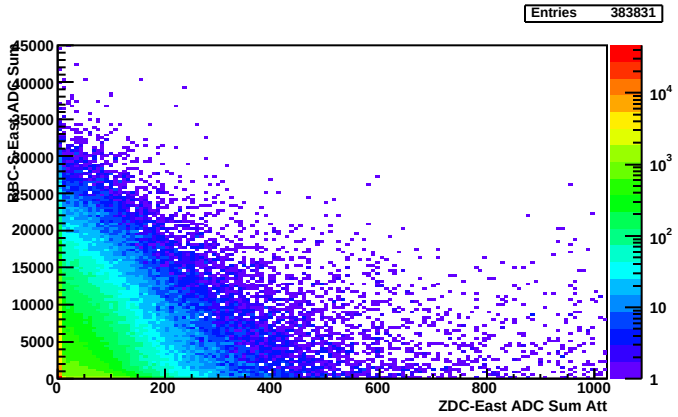
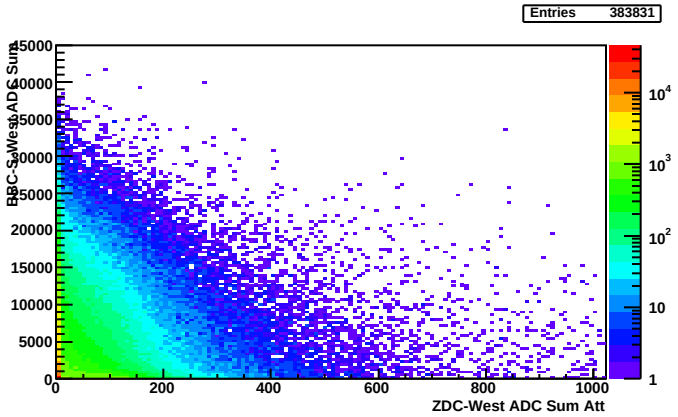
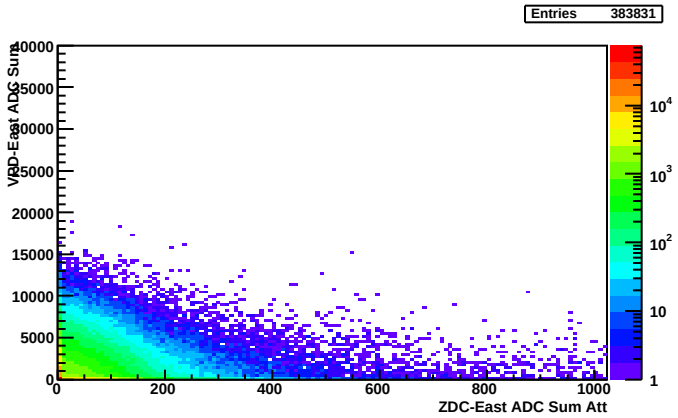
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

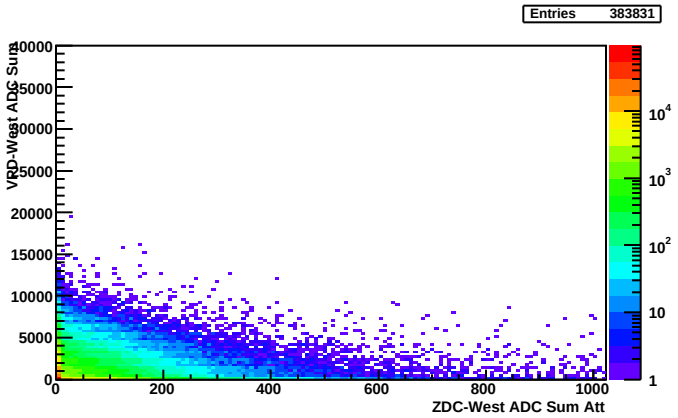

Entries 383831
BBC-S-East ADC Sum
VPD-East ADC Sum

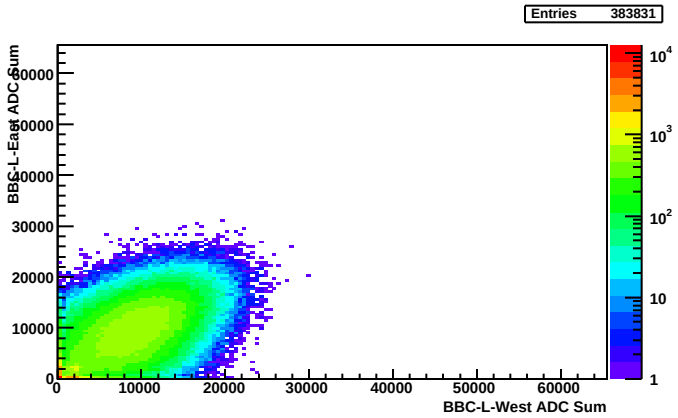

Entries 383831
BBC-S-West ADC Sum
VPD-West ADC Sum

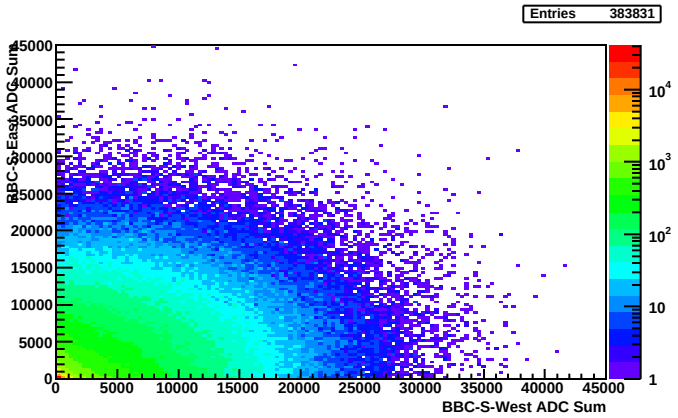

Entries 383831
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

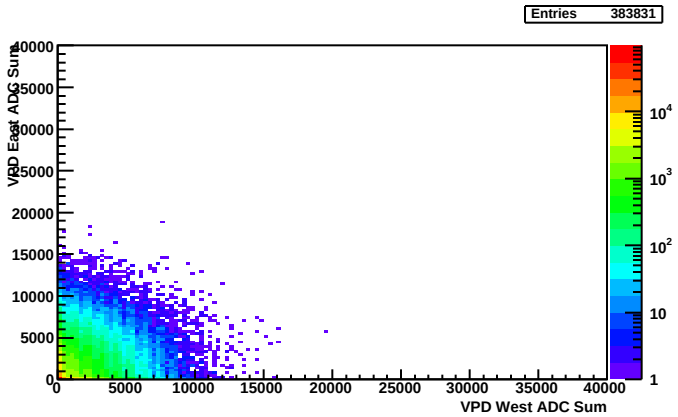

Entries 383831
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

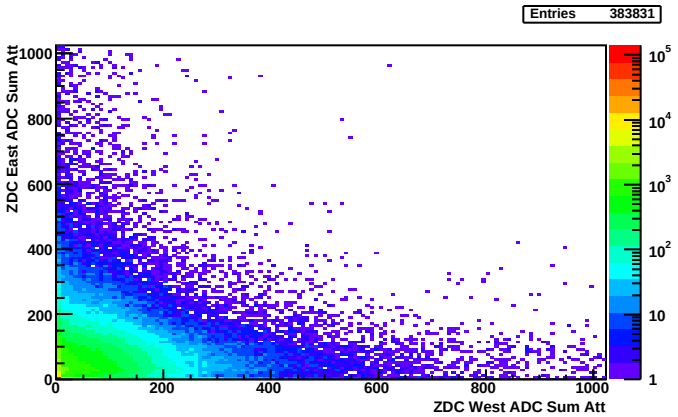

Entries 383831
VPD-East ADC Sum
ZDC-East ADC Sum Att

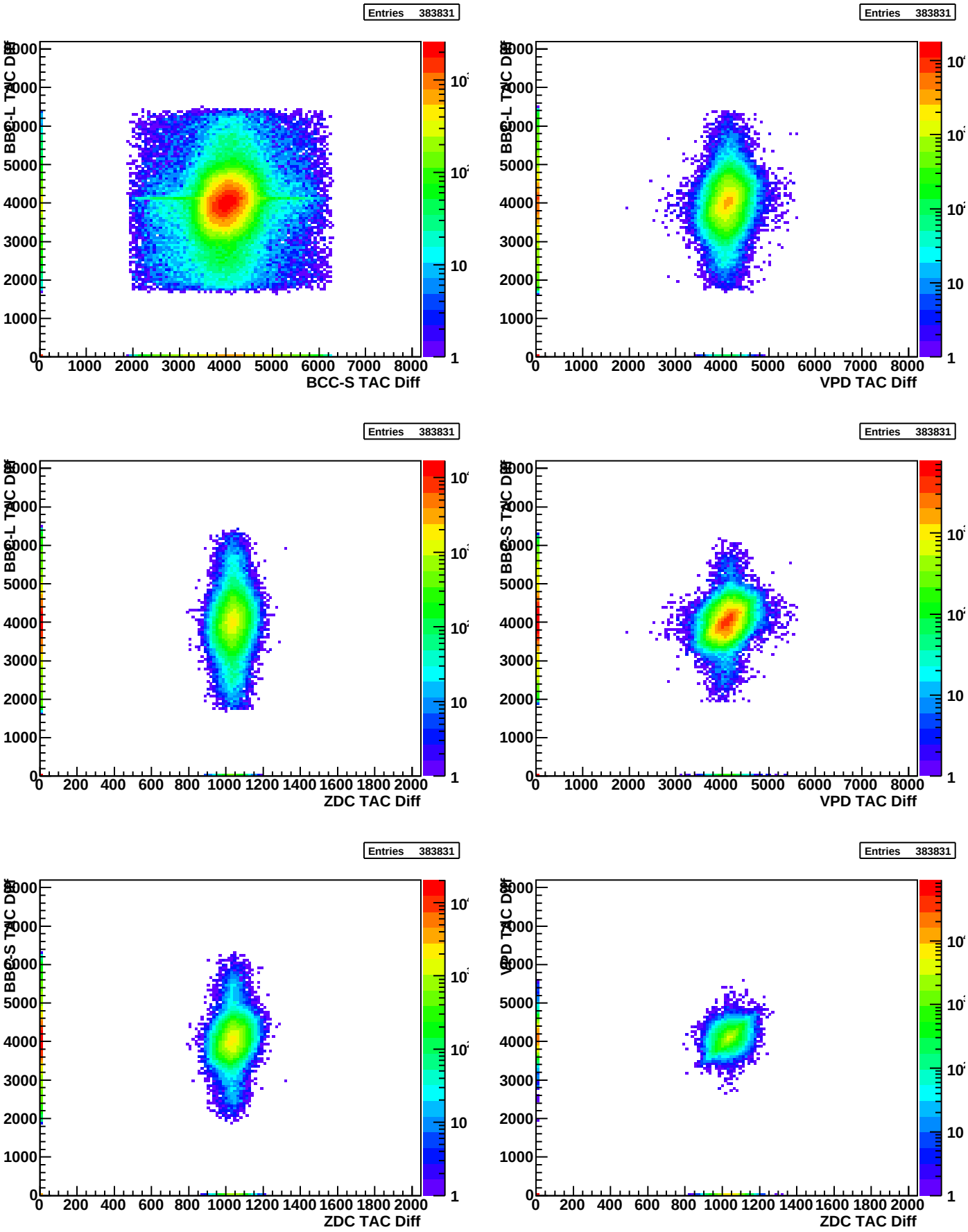

Entries 383831
VPD-West ADC Sum
ZDC-West ADC Sum Att

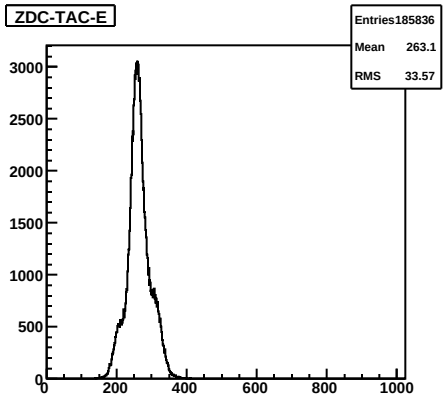

Entries 383831
BBC-L-East ADC Sum
BBC-L-West ADC Sum

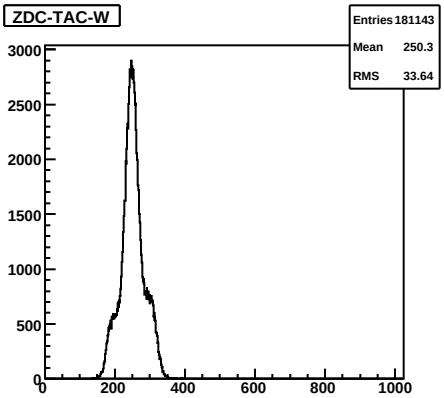

Entries 383831
BBC-S-East ADC Sum
BBC-S-West ADC Sum

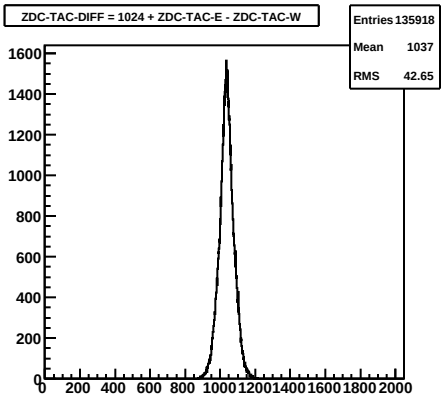

Entries 383831
VPD East ADC Sum
VPD West ADC Sum

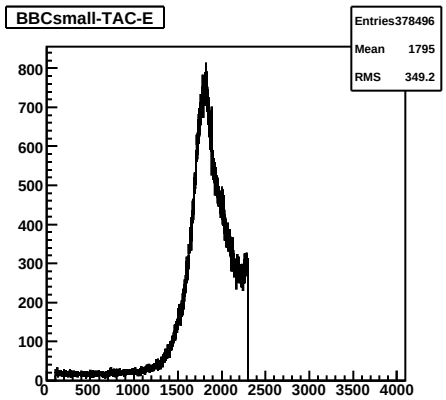

Entries 383831
ZDC East ADC Sum Att
ZDC West ADC Sum Att

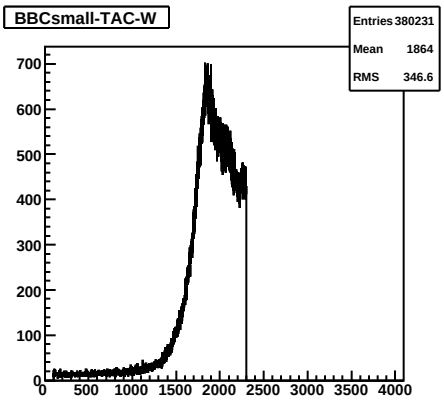

Entries 383831
BBC-L TAC Diff
BCC-S TAC Diff
Entries 383831
BBC-L TAC Diff
VPD TAC Diff
Entries 383831
BBC-L TAC Diff
ZDC TAC Diff
Entries 383831
BBC-S TAC Diff
VPD TAC Diff
Entries 383831
BBC-S TAC Diff
ZDC TAC Diff
Entries 383831
VPD TAC Diff
ZDC TAC Diff

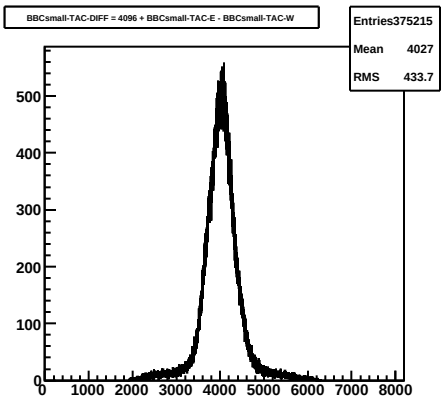

ZDC-TAC-E
Entries 185836
Mean 263.1
RMS 33.57

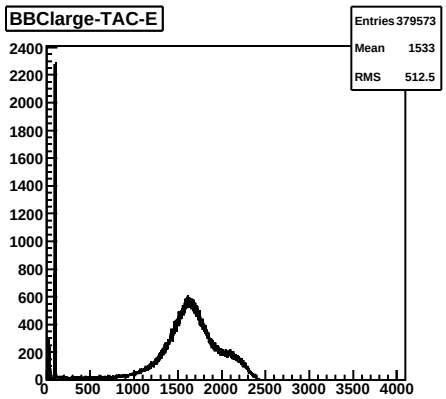

ZDC-TAC-W
Entries 181143
Mean 250.3
RMS 33.64

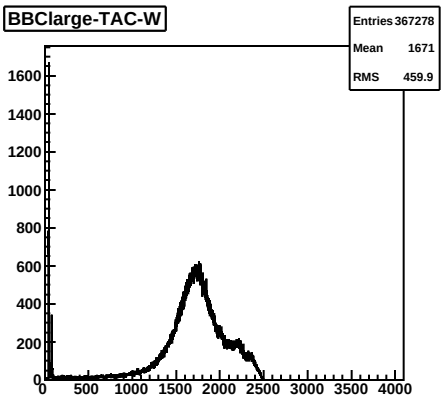

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 135918
Mean 1037
RMS 42.65

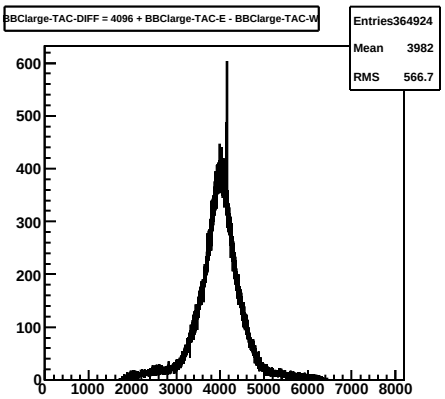

BBCsmall-TAC-E
Entries 378496
Mean 1795
RMS 349.2

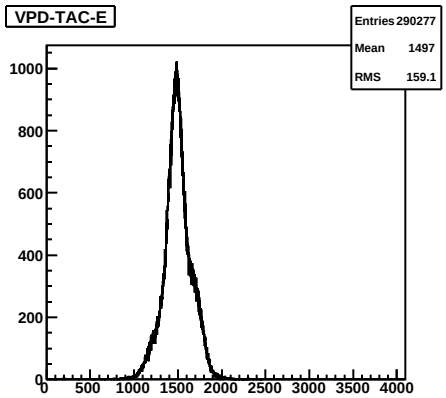

BBCsmall-TAC-W
Entries 380231
Mean 1864
RMS 346.6

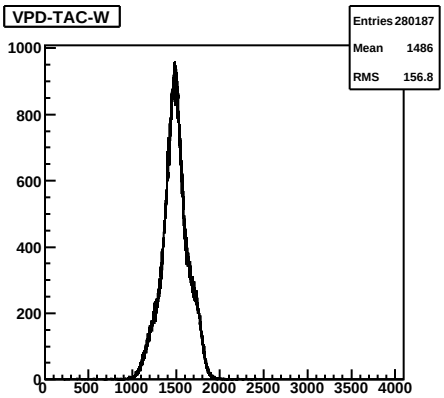

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 375215
Mean 4027
RMS 433.7

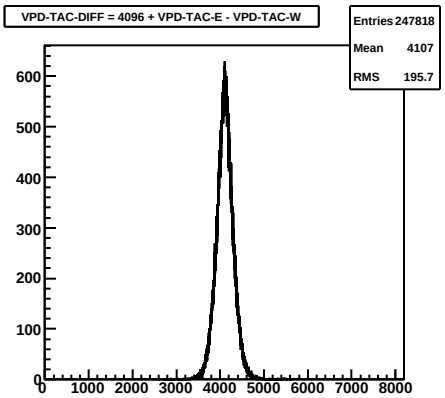

BBClarge-TAC-E
Entries 379573
Mean 1533
RMS 512.5

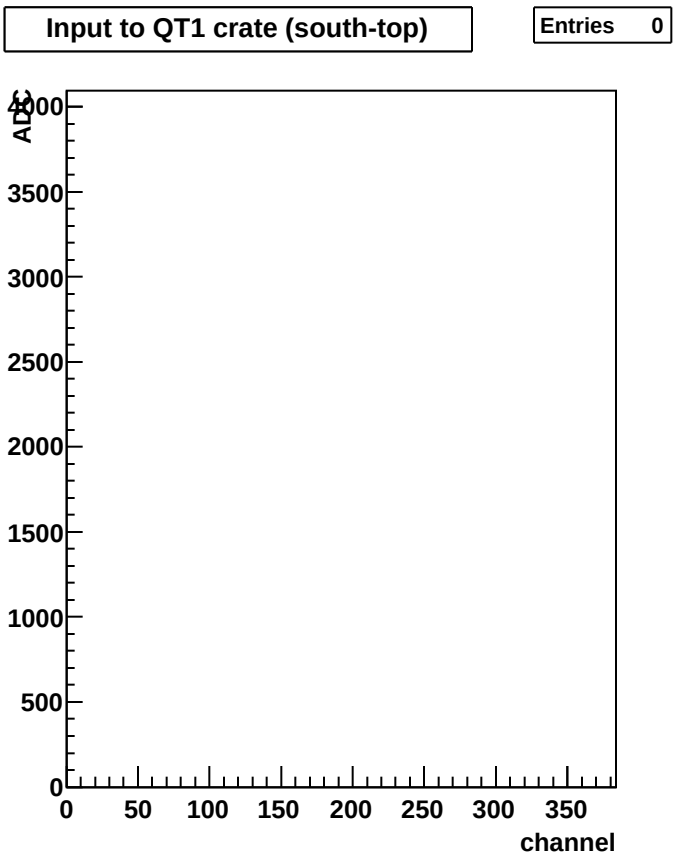

BBClarge-TAC-W
Entries 367278
Mean 1671
RMS 459.9

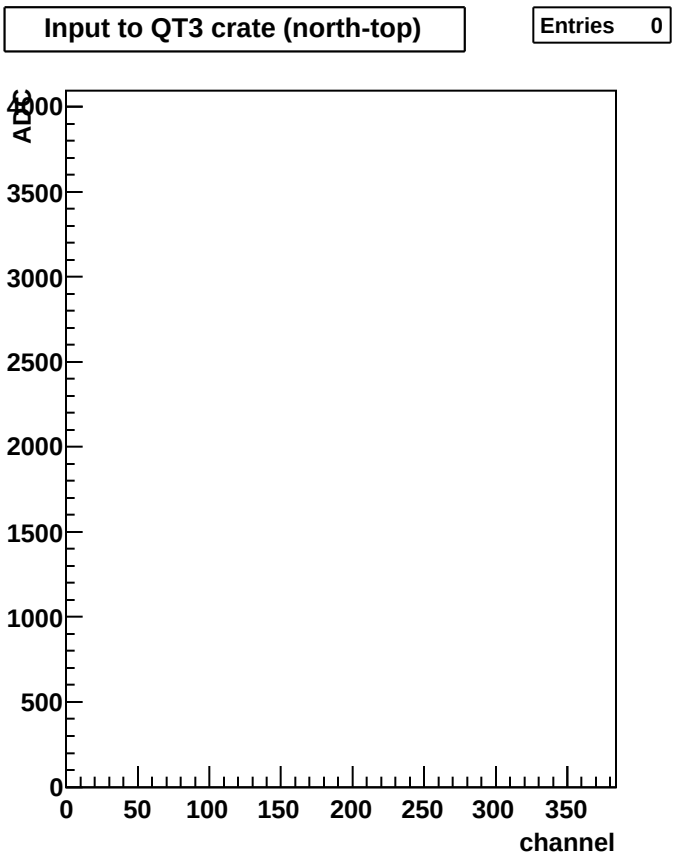

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 364924
Mean 3982
RMS 566.7

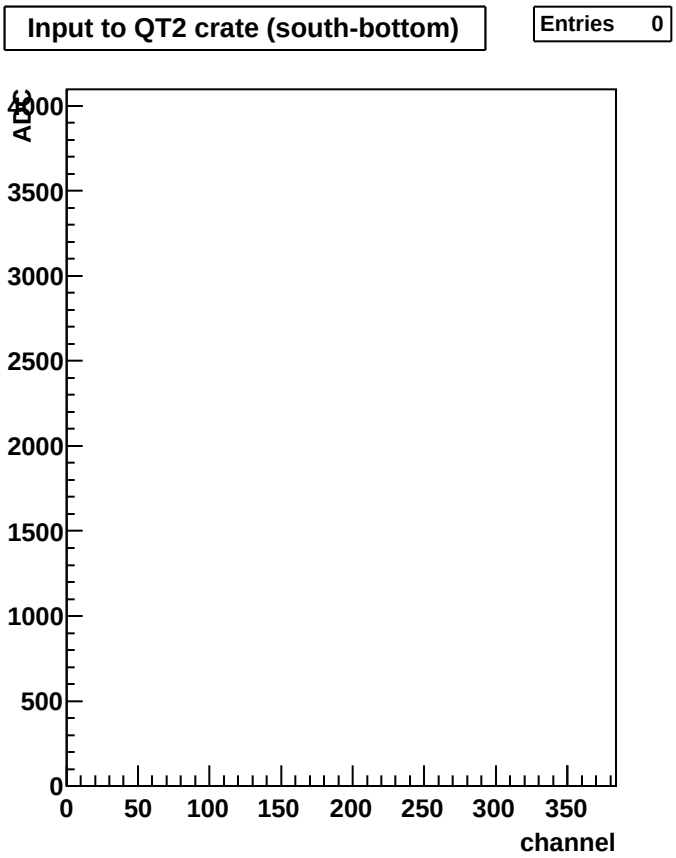

VPD-TAC-E
Entries 290277
Mean 1497
RMS 159.1

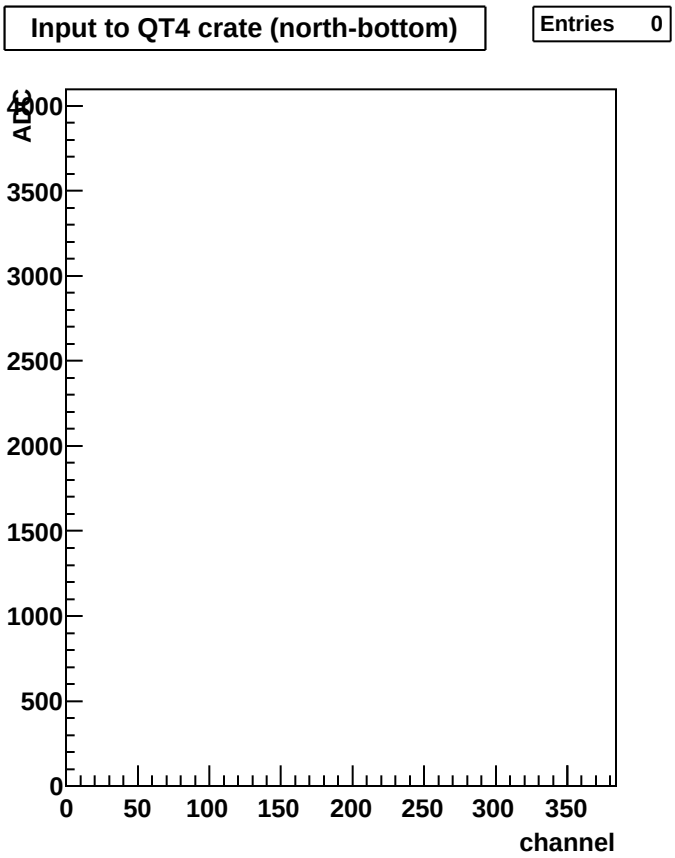

VPD-TAC-W
Entries 280187
Mean 1486
RMS 156.8

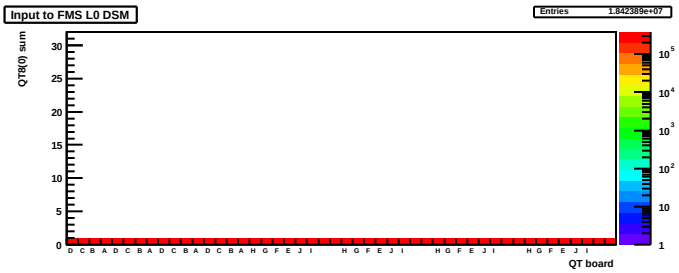

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 247818
Mean 4107
RMS 195.7

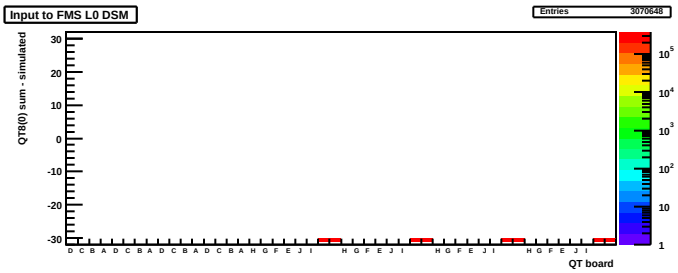

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

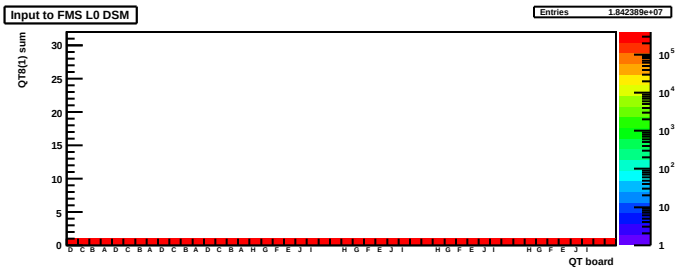

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

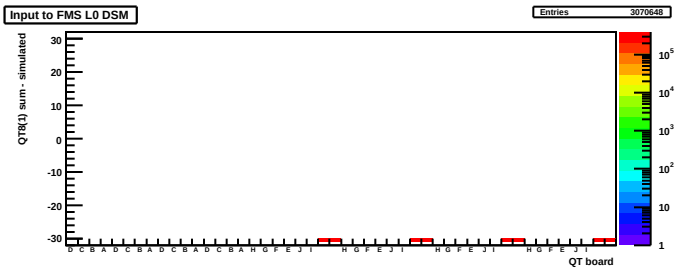

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

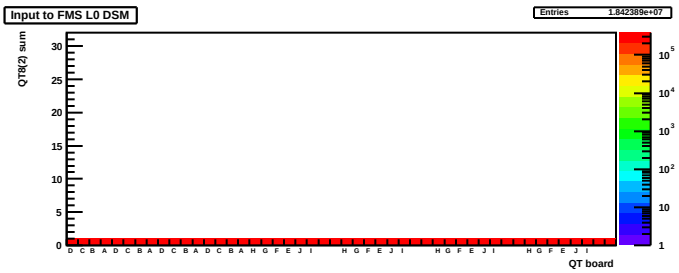

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

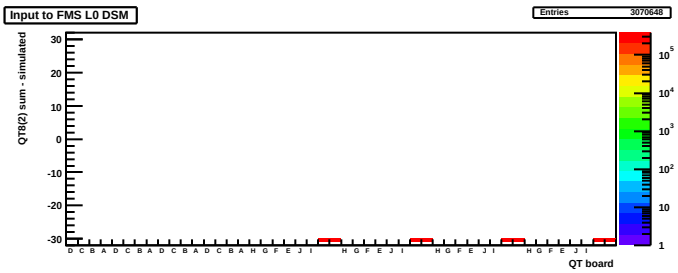

Input to FMS L0 DSM
Entries 1.842389e+07
QT8(0) sum
QT board

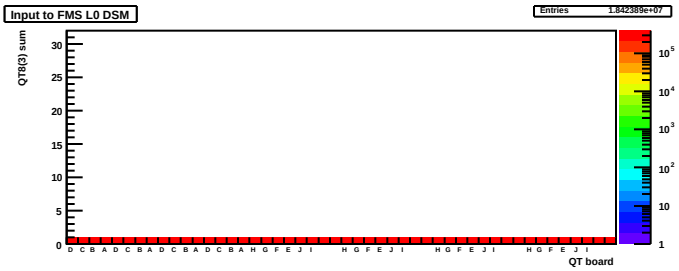

Input to FMS L0 DSM
Entries 3070648
QT8(0) sum - simulated
QT board

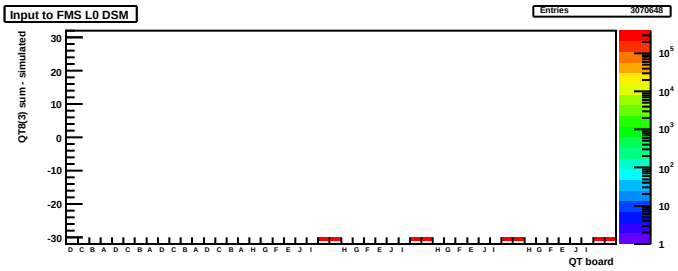

Input to FMS L0 DSM
Entries 1.842389e+07
QT8(1) sum
QT board

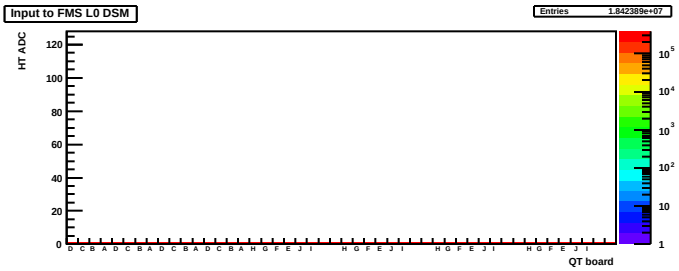

Input to FMS L0 DSM
Entries 3070648
QT8(1) sum - simulated
QT board

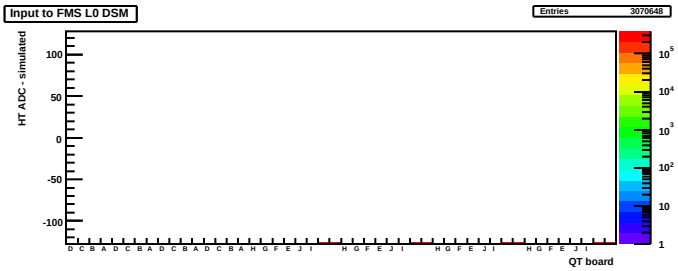

Input to FMS L0 DSM
Entries 1.842389e+07
QT8(2) sum
QT board

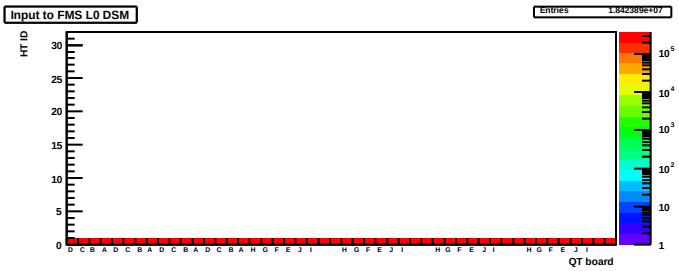

Input to FMS L0 DSM
Entries 3070648
QT8(2) sum - simulated
QT board

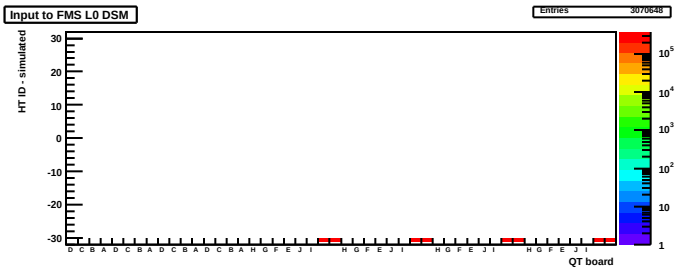

Input to FMS L0 DSM
Entries 1.842389e+07
QT8(3) sum
QT board

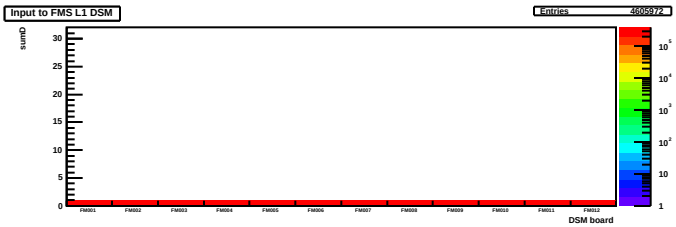

Input to FMS L0 DSM
Entries 3070648
QT8(3) sum - simulated
QT board

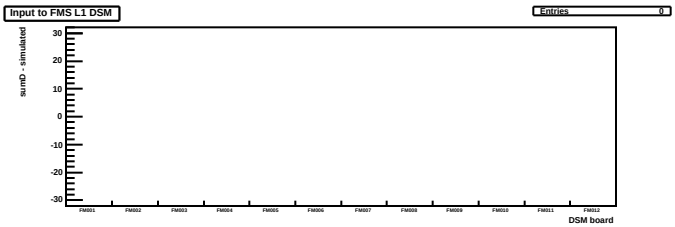

Input to FMS L0 DSM
Entries 1.842389e+07
HT ADC
QT board

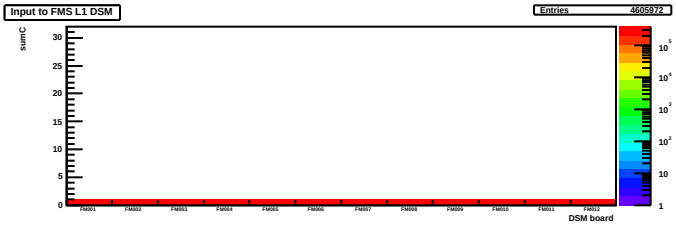

Input to FMS L0 DSM
Entries 3070648
HT ADC - simulated
QT board

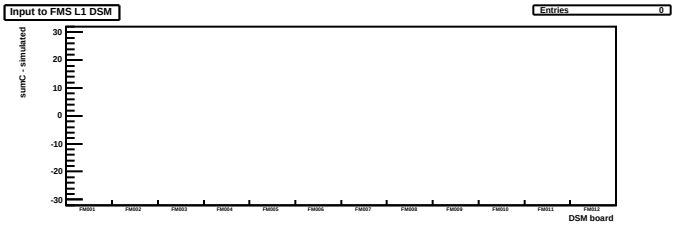

Input to FMS L0 DSM
Entries 1.842389e+07
HT ID
QT board

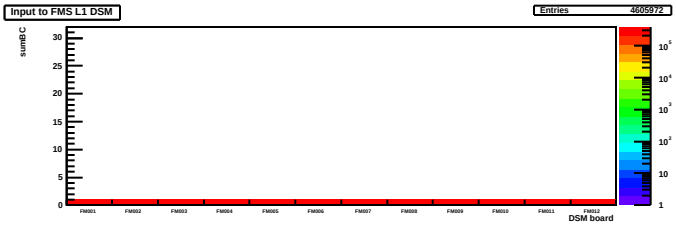

Input to FMS L0 DSM
Entries 3070648
HT ID - simulated
QT board

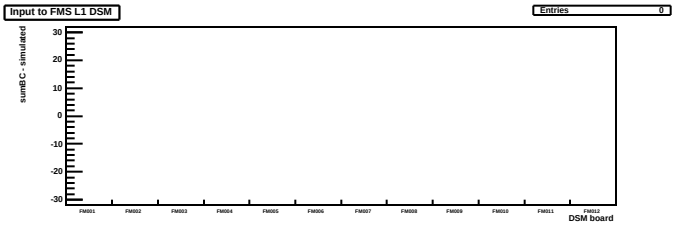

Input to FMS L1 DSM
Entries 4605972
sumD
DSM board

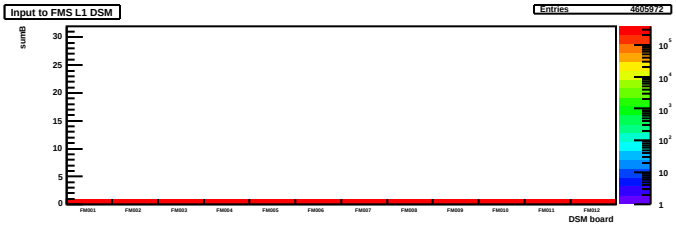

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

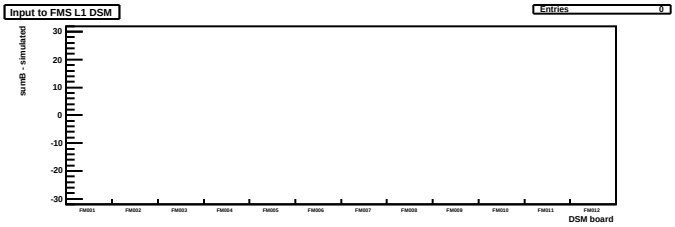

Input to FMS L1 DSM
Entries 4605972
sumC
DSM board

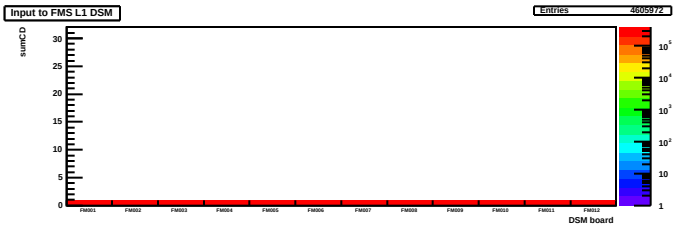

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

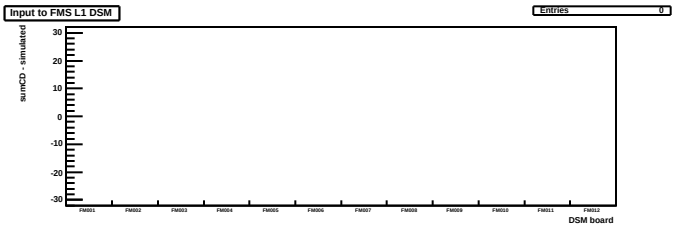

Input to FMS L1 DSM
Entries 4605972
sumBC
DSM board

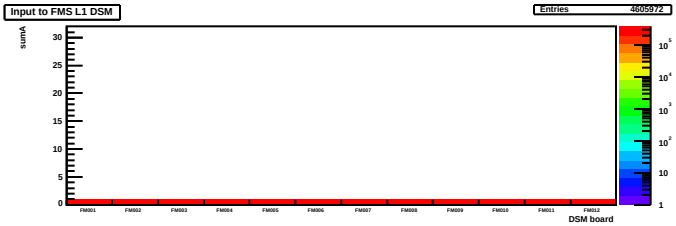

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

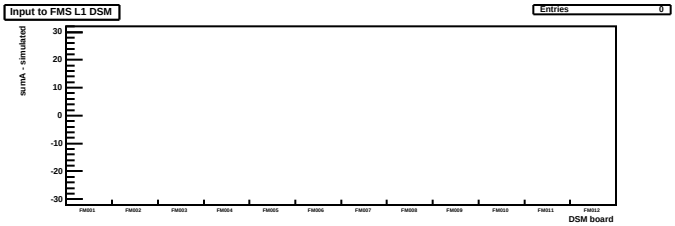

Input to FMS L1 DSM
Entries 4605972
sumB
DSM board

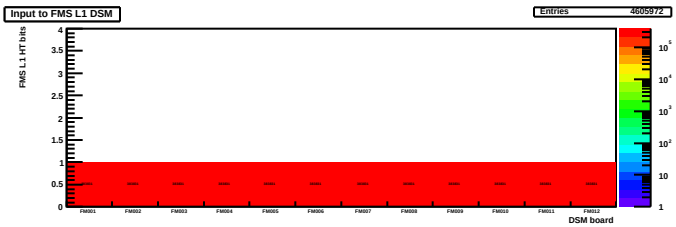

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

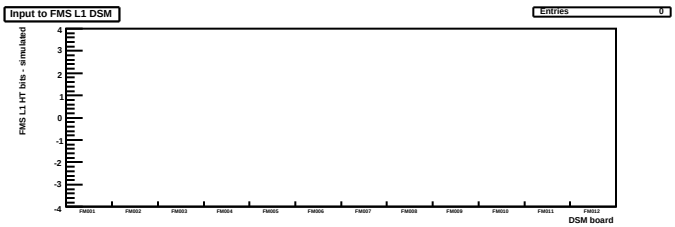

Input to FMS L1 DSM
Entries 4605972
sumCD
DSM board

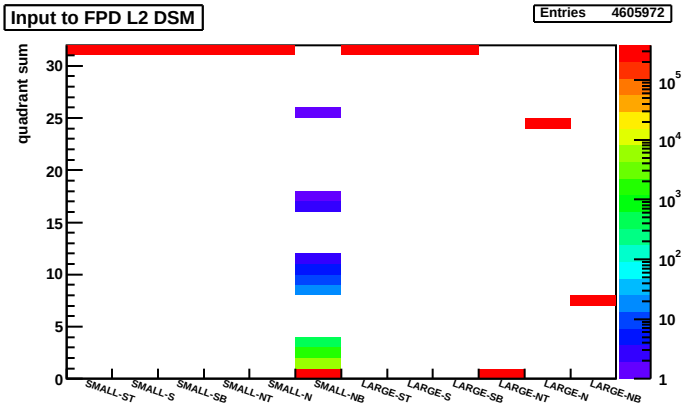

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

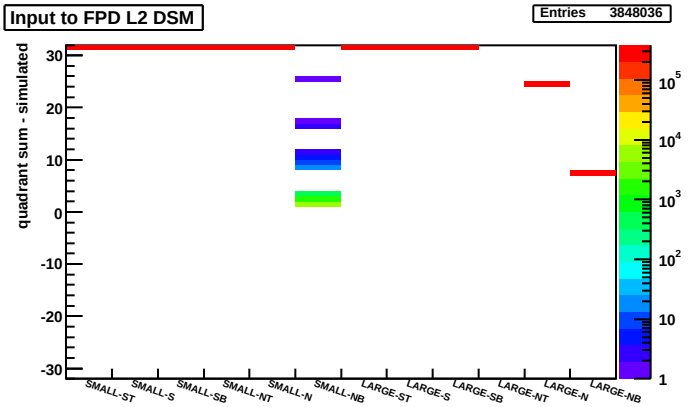

Input to FMS L1 DSM
Entries 4605972
sumA
DSM board

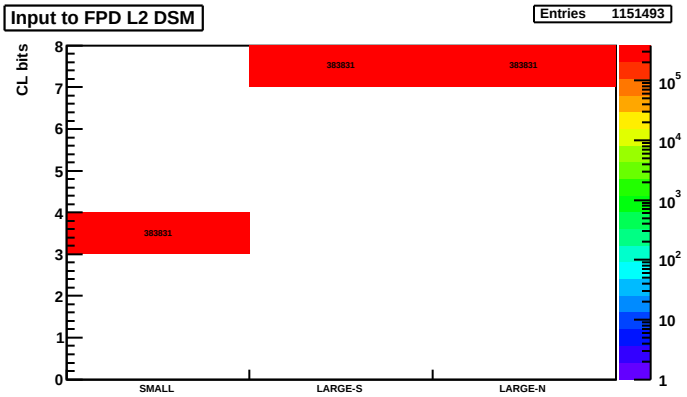

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

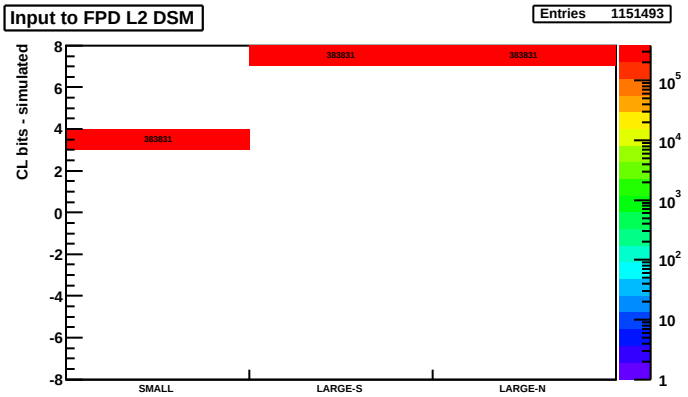

Input to FMS L1 DSM
Entries 4605972
FMS L1 HT bits
DSM board

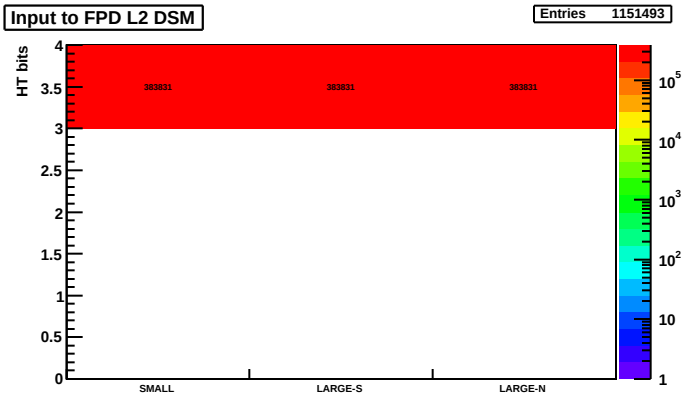

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

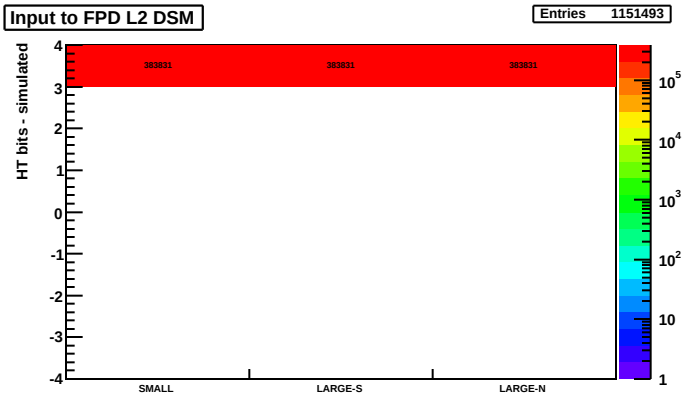

Input to FPD L2 DSM
Entries 4605972
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

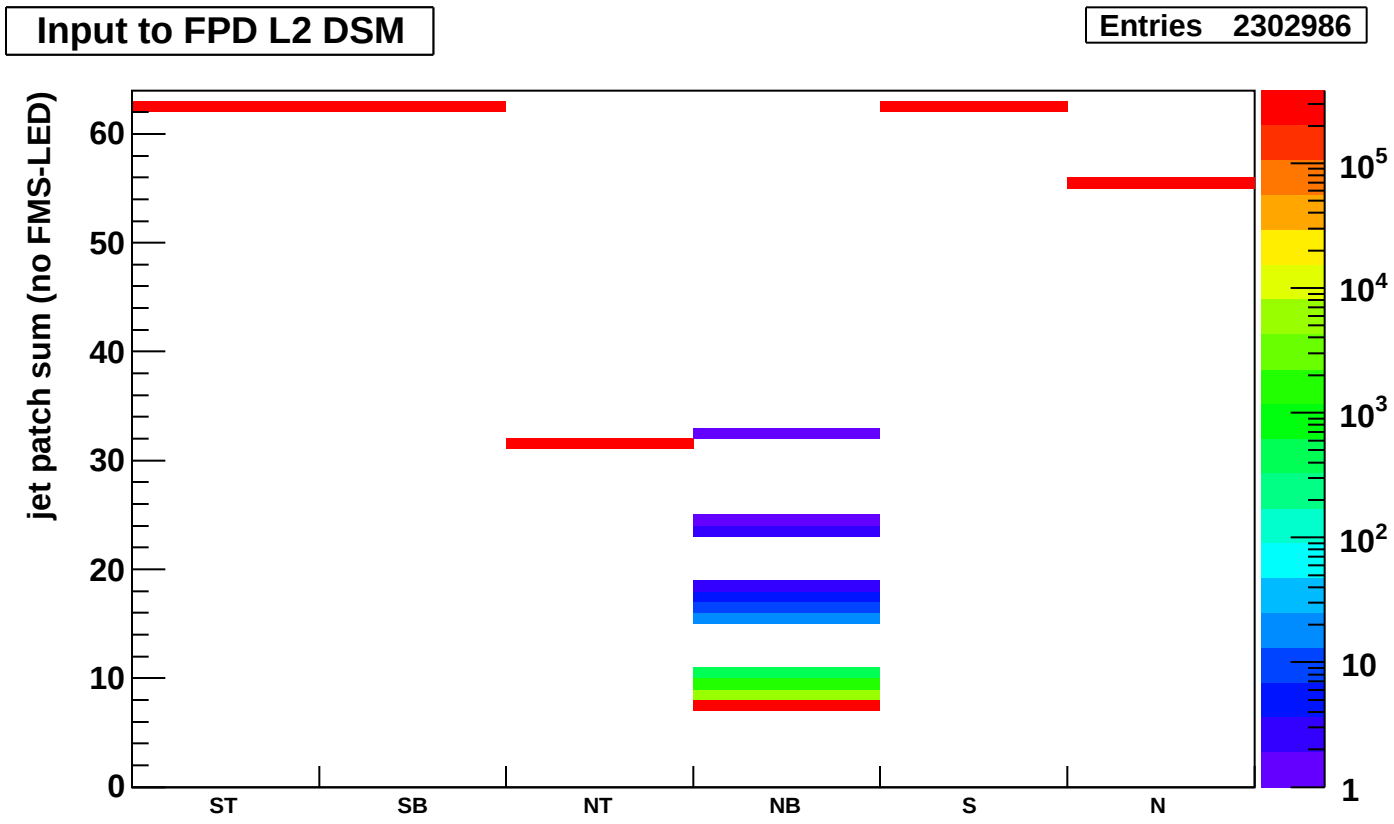

Input to FPD L2 DSM
Entries 3848036
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

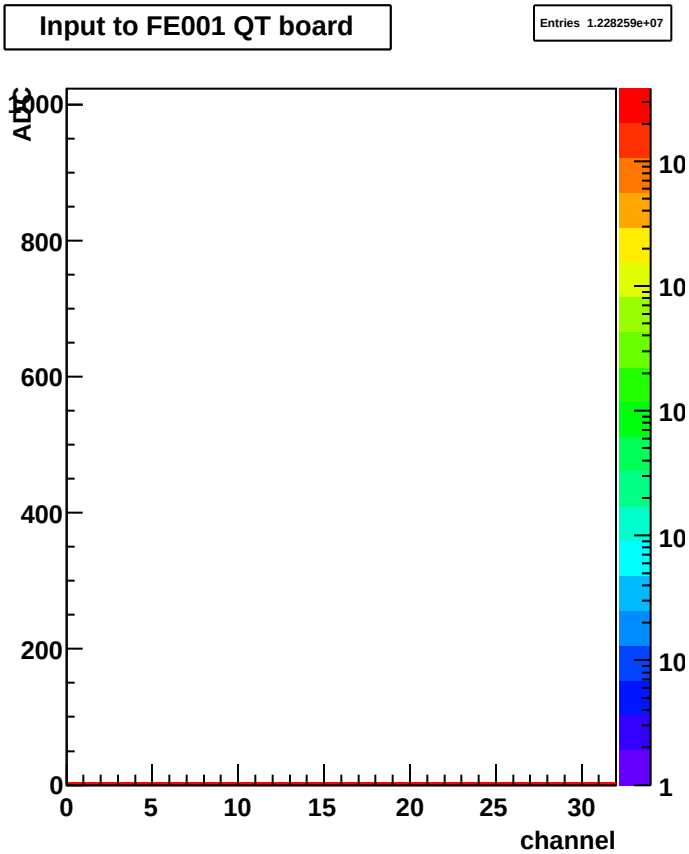

Input to FPD L2 DSM
Entries 1151493
CL bits
383831
383831
383831
SMALL
LARGE-S
LARGE-N

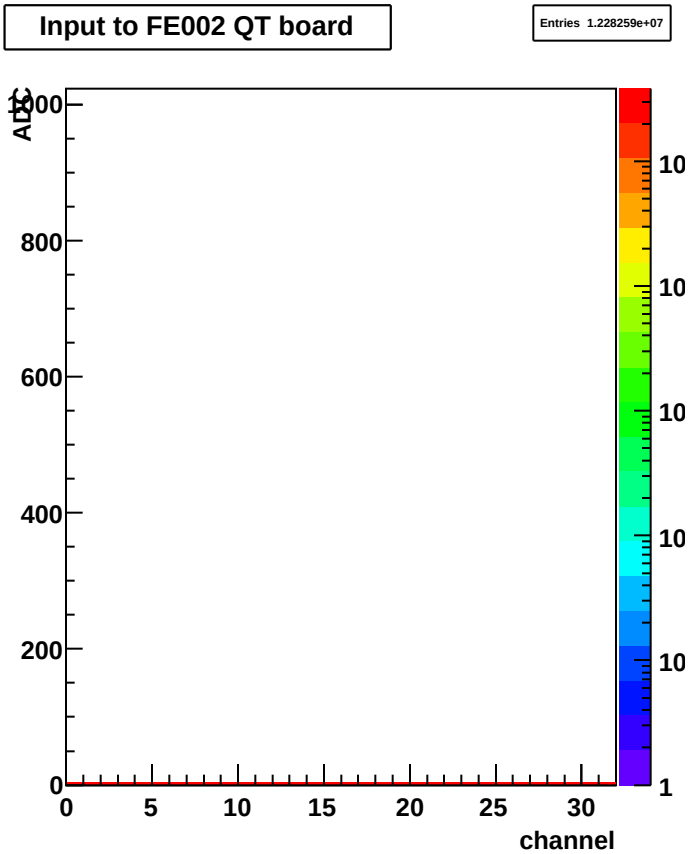

Input to FPD L2 DSM
Entries 1151493
CL bits - simulated
383831
383831
383831
SMALL
LARGE-S
LARGE-N

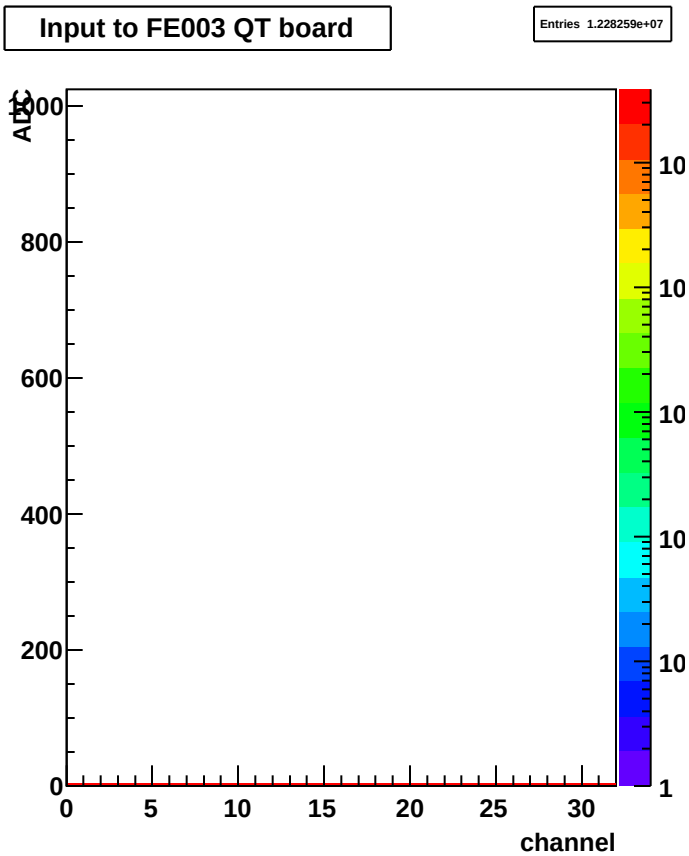

Input to FPD L2 DSM
Entries 1151493
HT bits
383831
383831
383831
SMALL
LARGE-S
LARGE-N

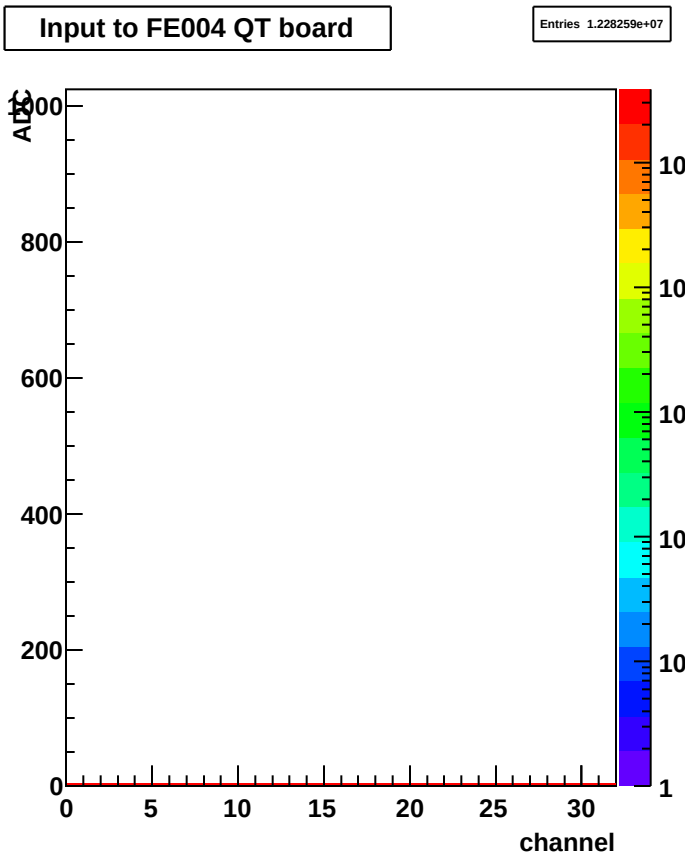

Input to FPD L2 DSM
Entries 1151493
HT bits - simulated
383831
383831
383831
SMALL
LARGE-S
LARGE-N

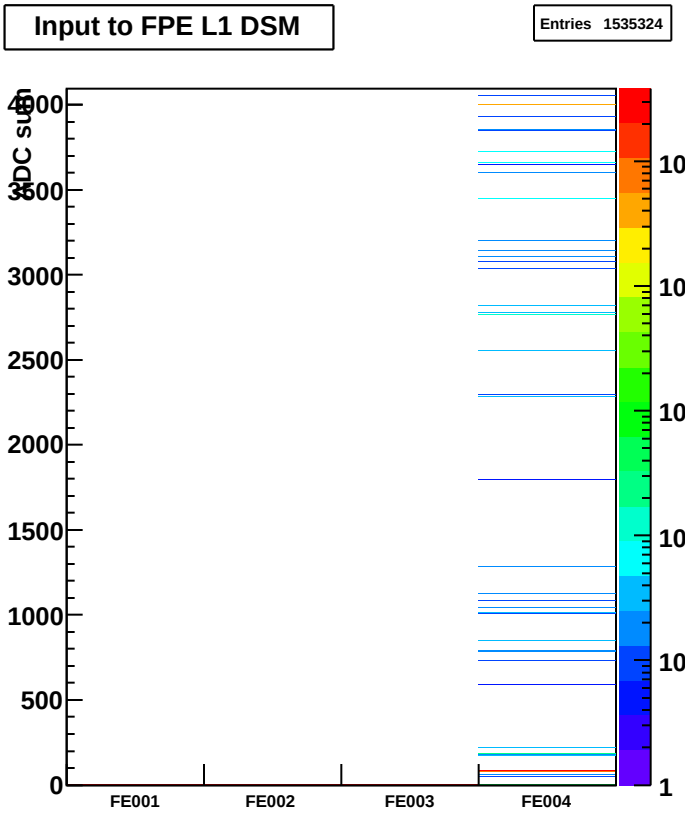

Input to FPD L2 DSM
Entries 2302986
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

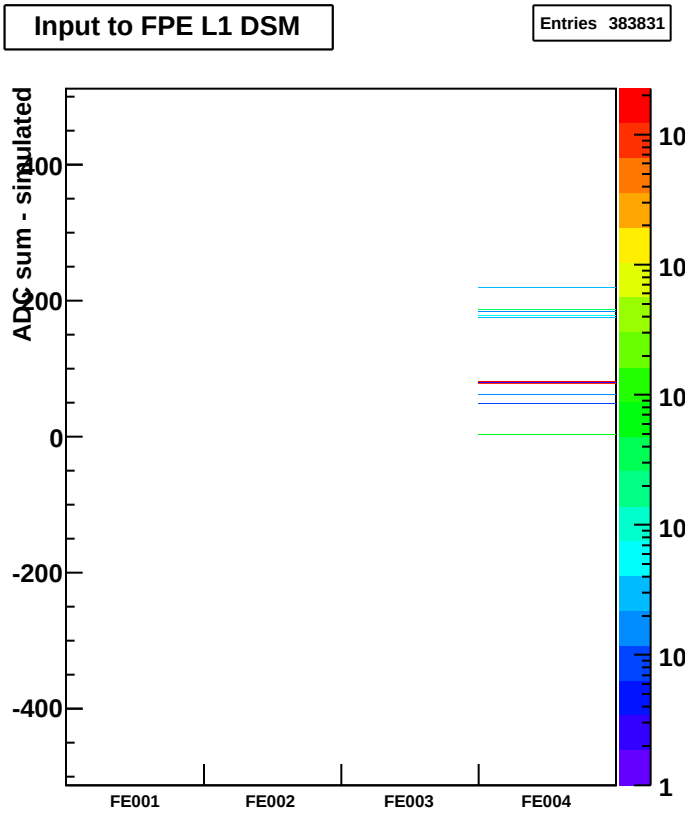

Input to FE001 QT board
Entries 1.228259e+07
ADC
channel

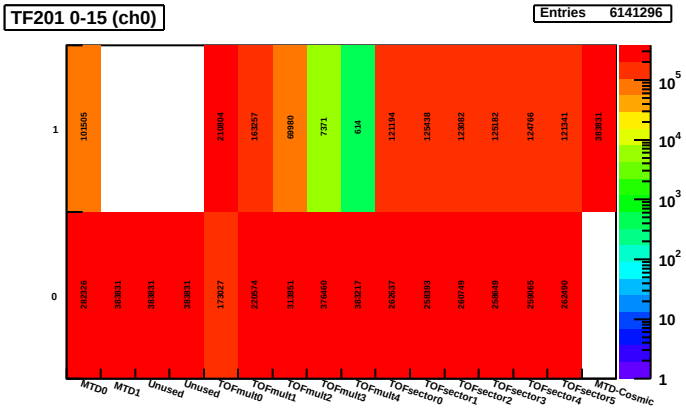

Input to FE002 QT board
Entries 1.228259e+07
ADC
channel

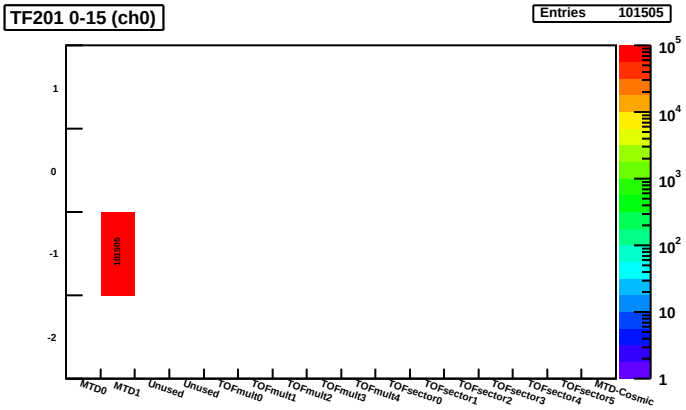

Input to FE003 QT board
Entries 1.228259e+07
ADC
channel

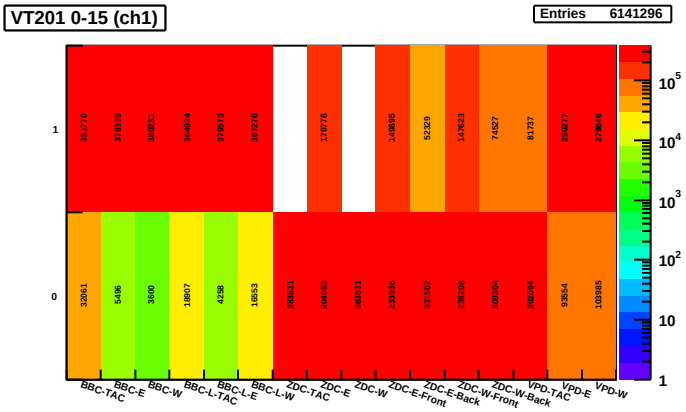

Input to FE004 QT board
Entries 1.228259e+07
ADC
channel

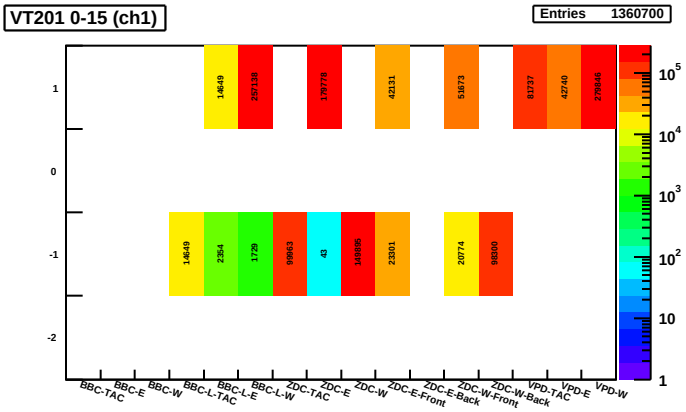

Input to FPE L1 DSM
Entries 1535324
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1


Input to FPE L1 DSM
Entries 383831
ADC sum - simulated
200
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
10
1


TF201 0-15 (ch0)
Entries 6141296
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 101505
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 6141296
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 1360700
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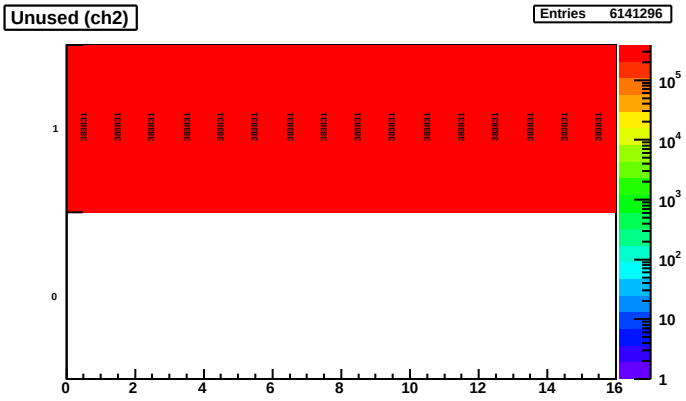
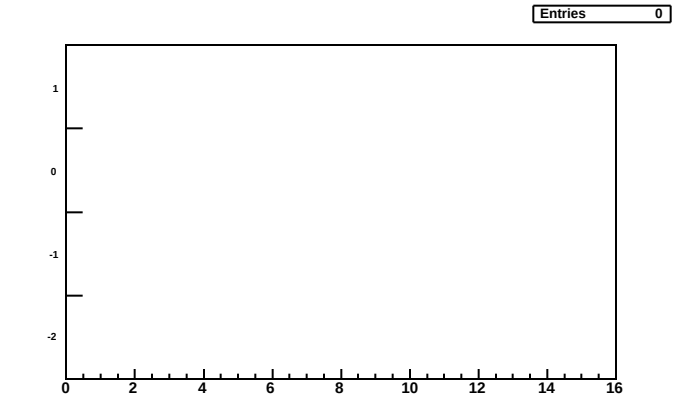
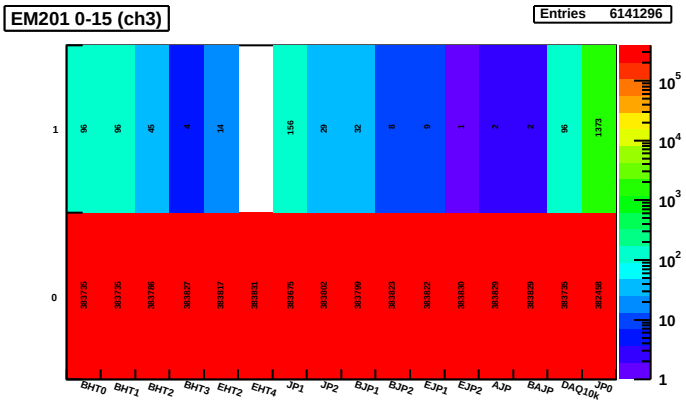

Unused (ch2)
Entries 6141296


Entries 0


EM201 0-15 (ch3)
Entries 6141296
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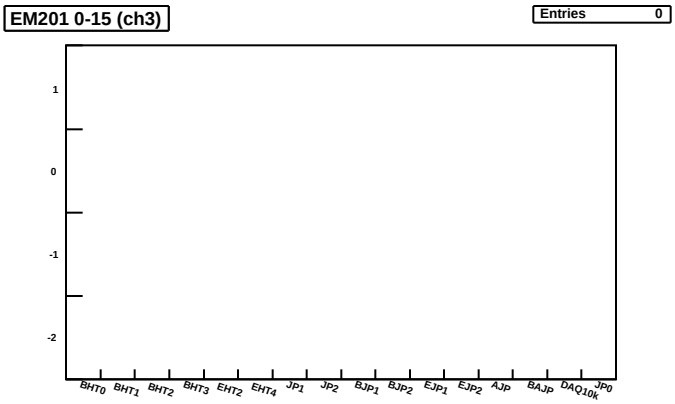
EM201 0-15 (ch3)
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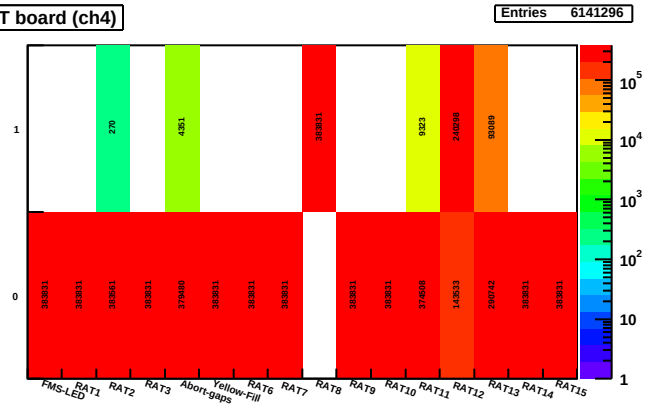
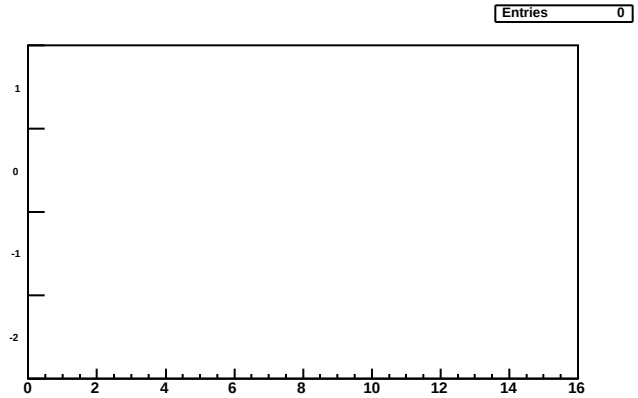
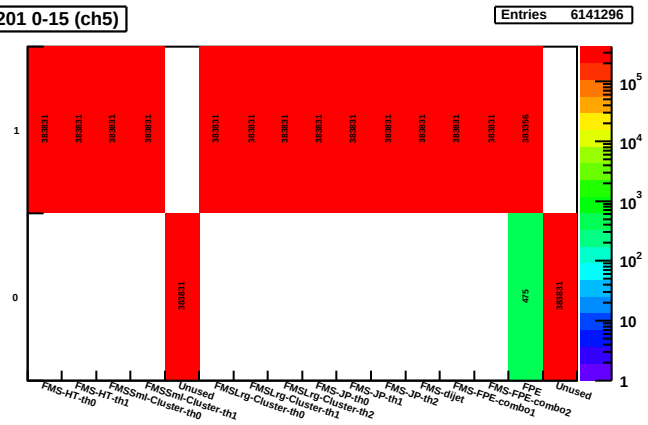
RAT board (ch4)





FP201 0-15 (ch5)



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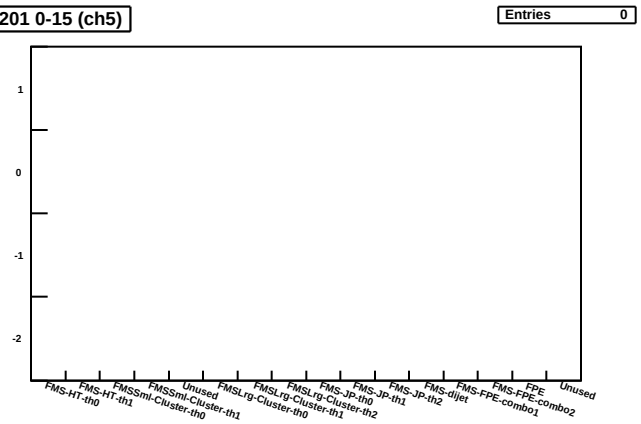
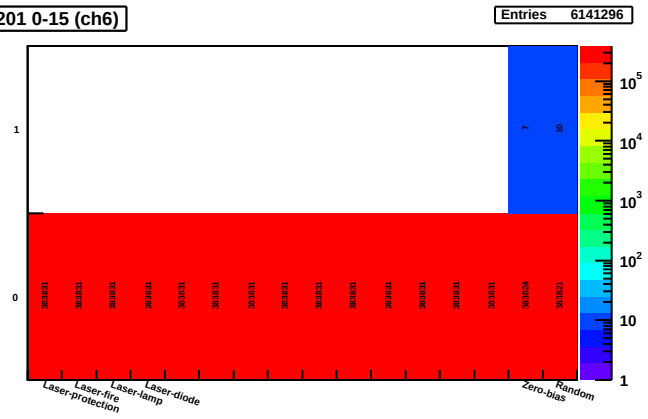
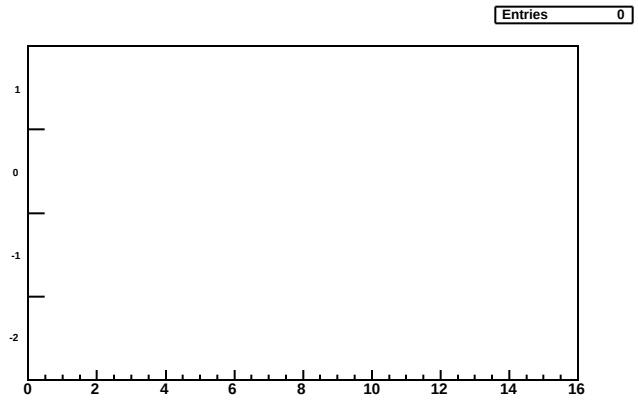
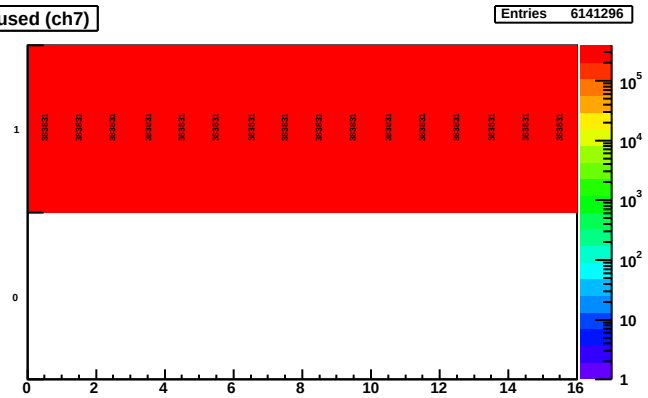
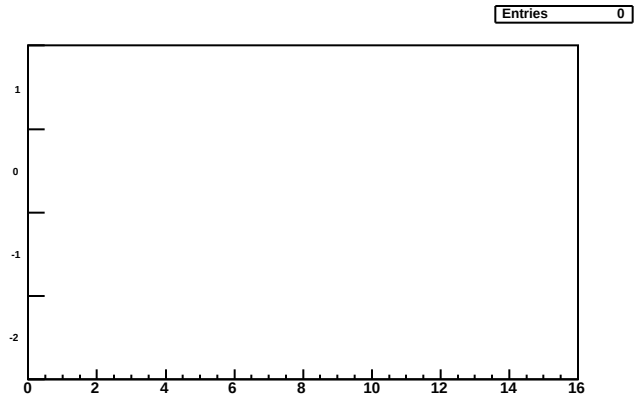


ST201 0-15 (ch6)





Unused (ch7)