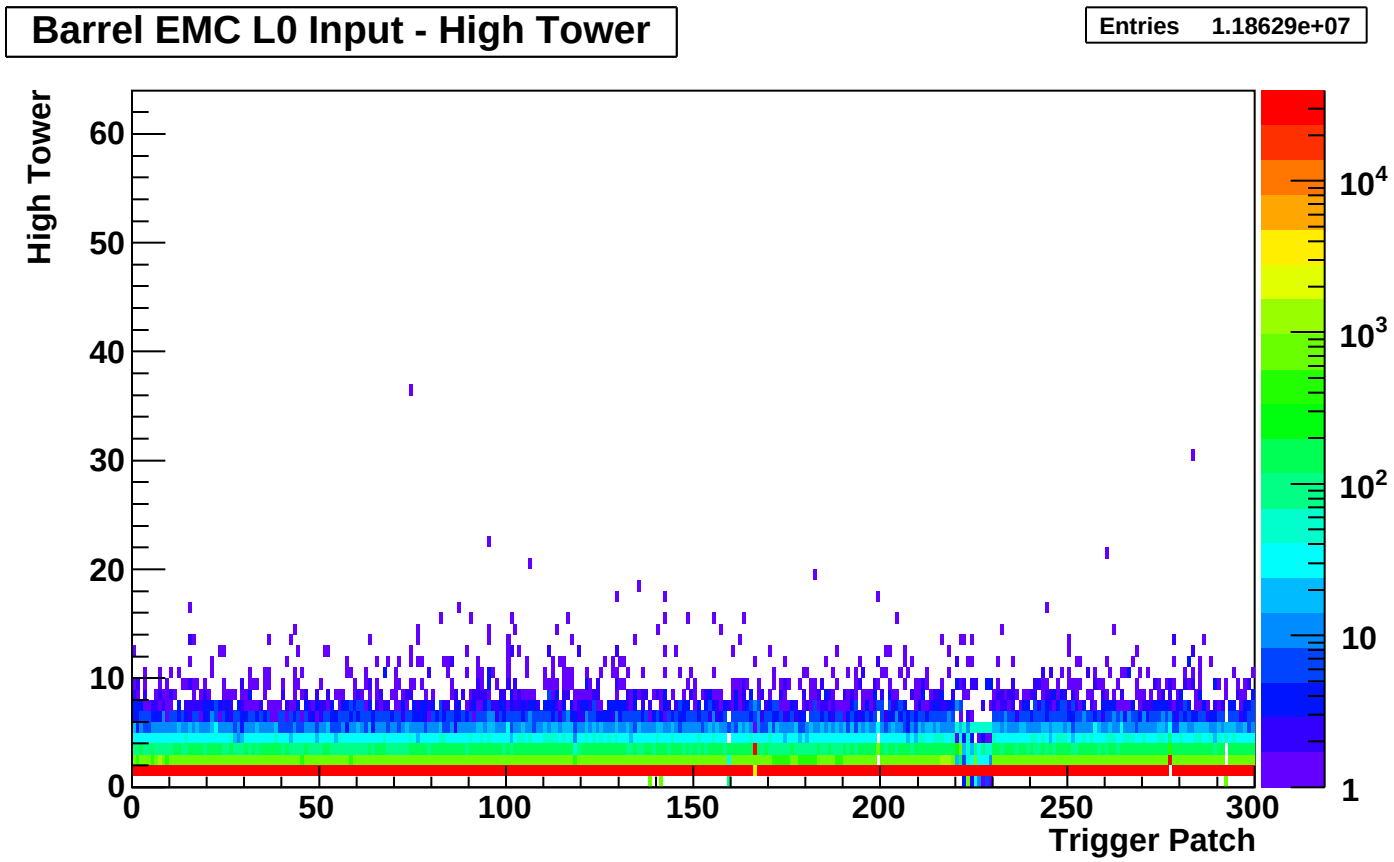
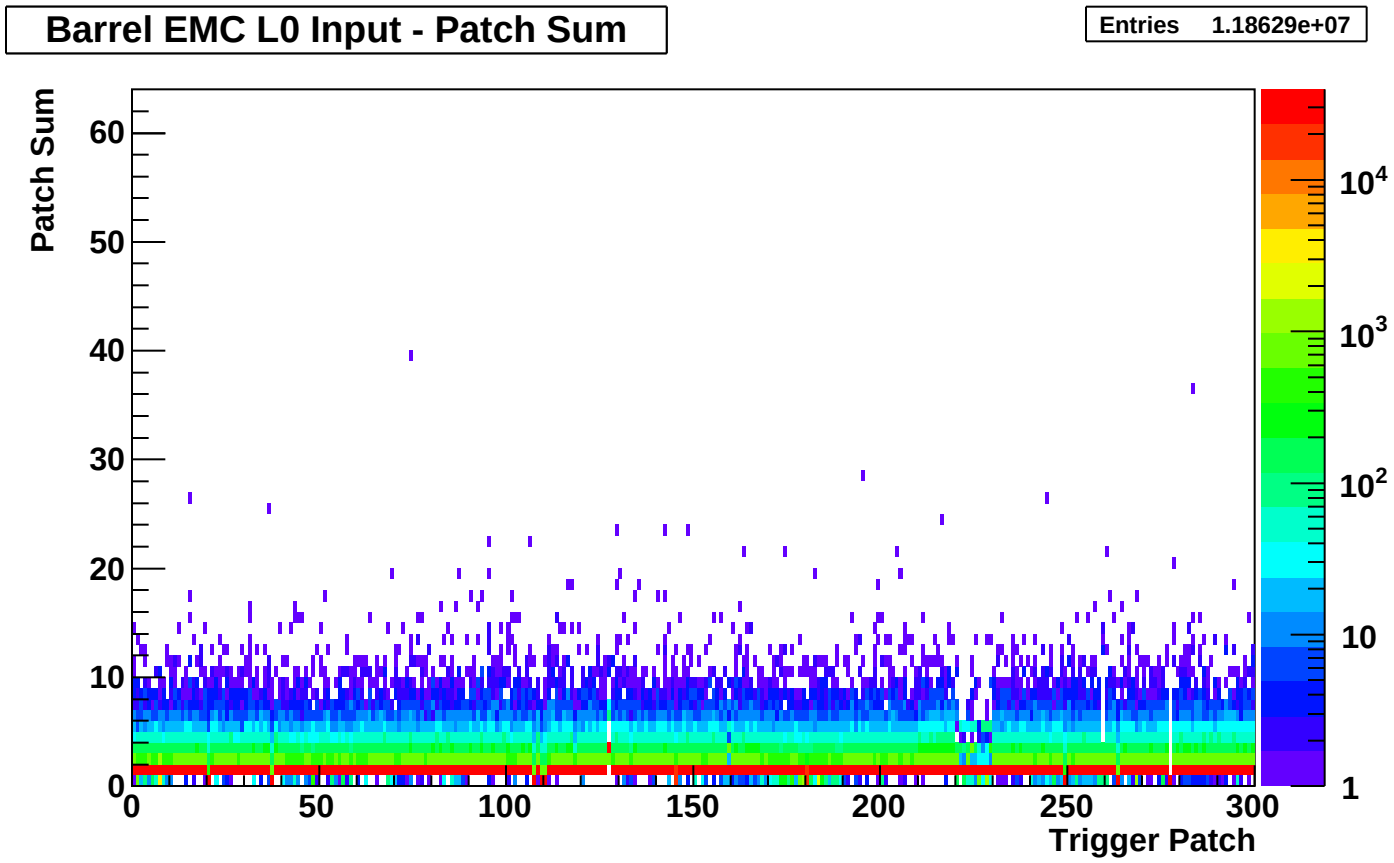
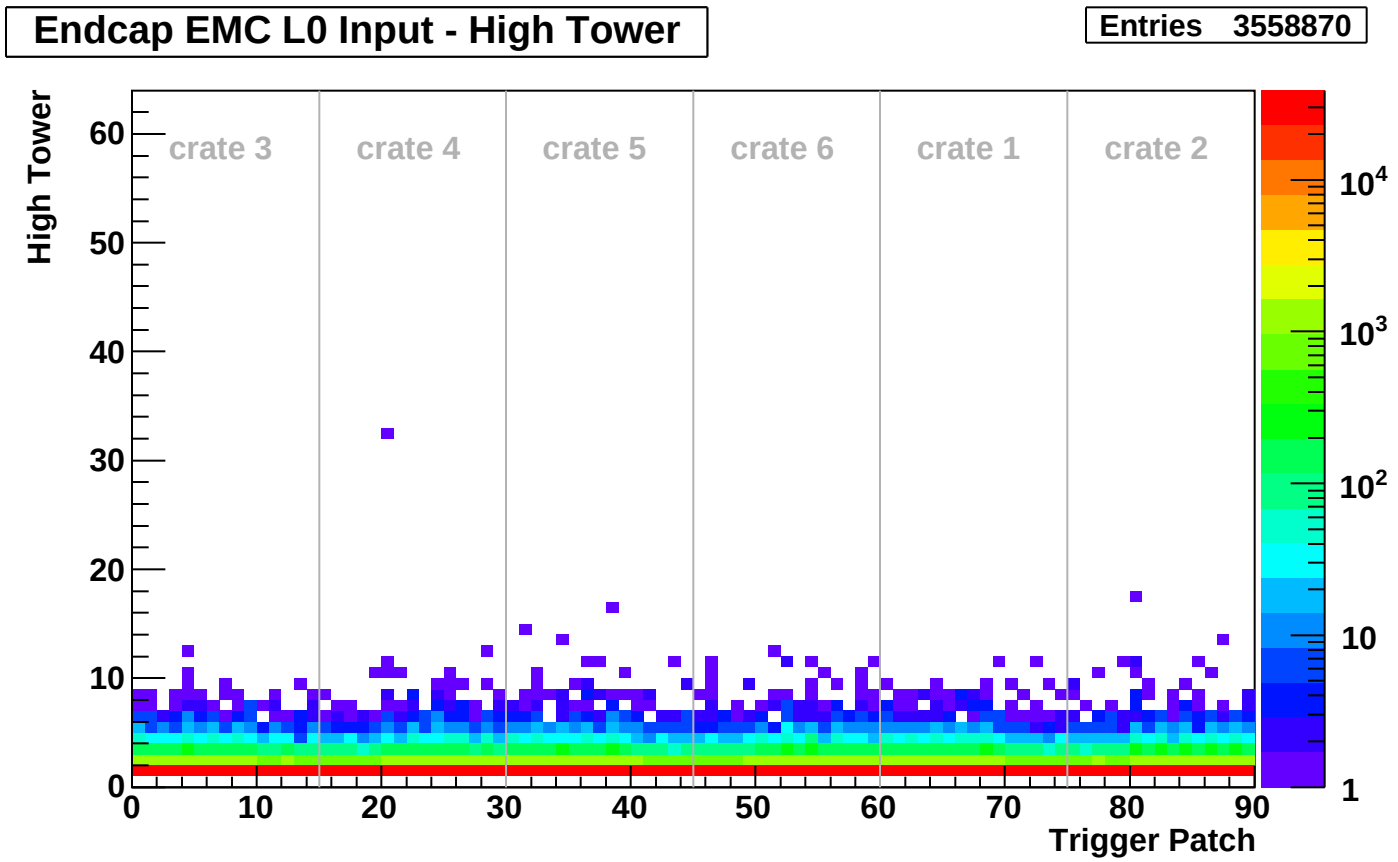
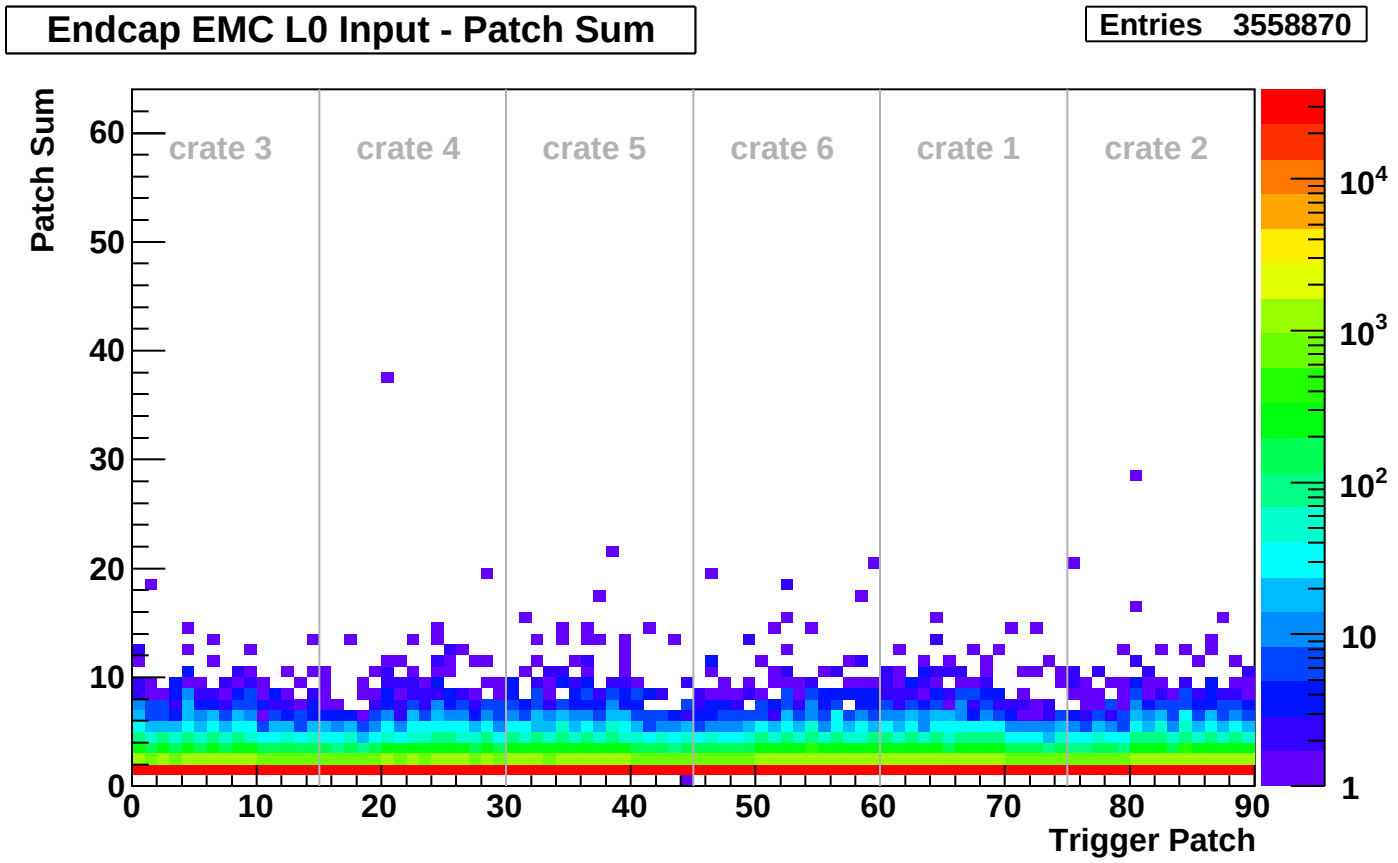
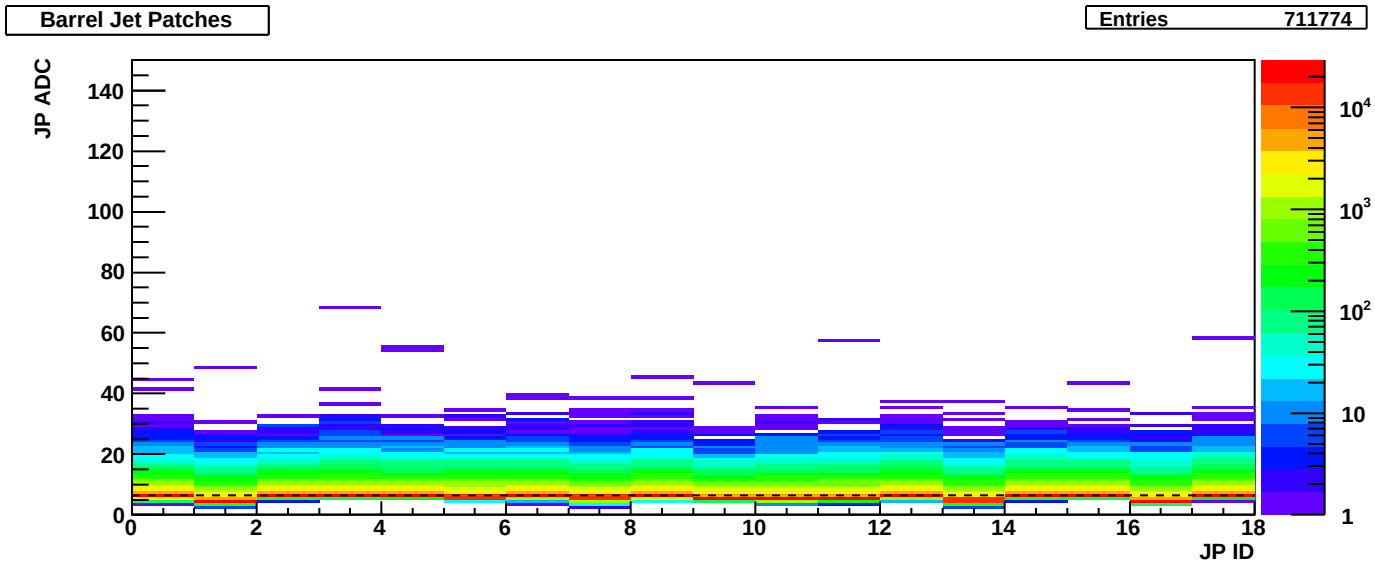
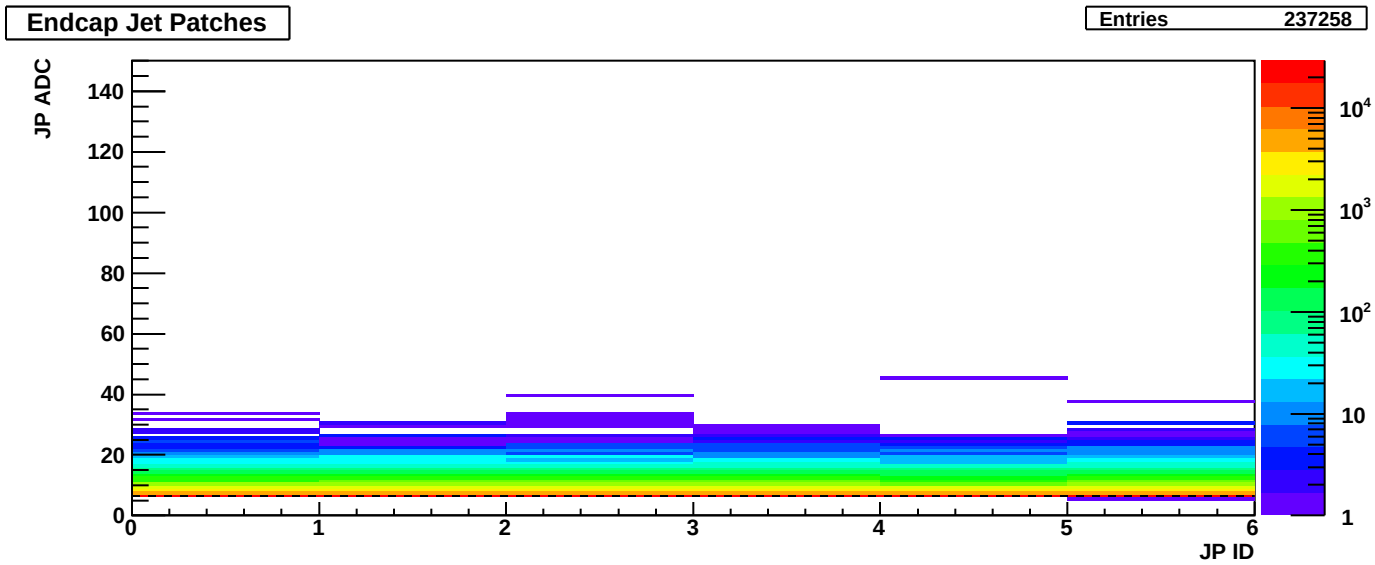

Barrel EMC L0 Input - High Tower
Entries 1.18629e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

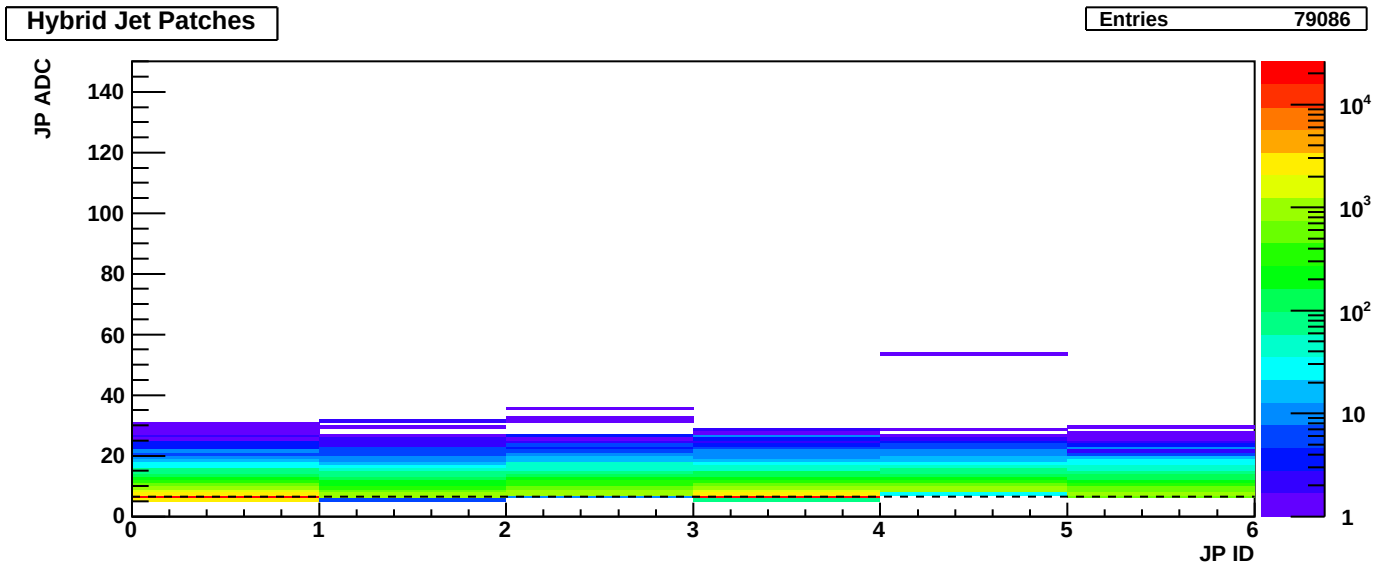

Barrel EMC L0 Input - Patch Sum
Entries 1.18629e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

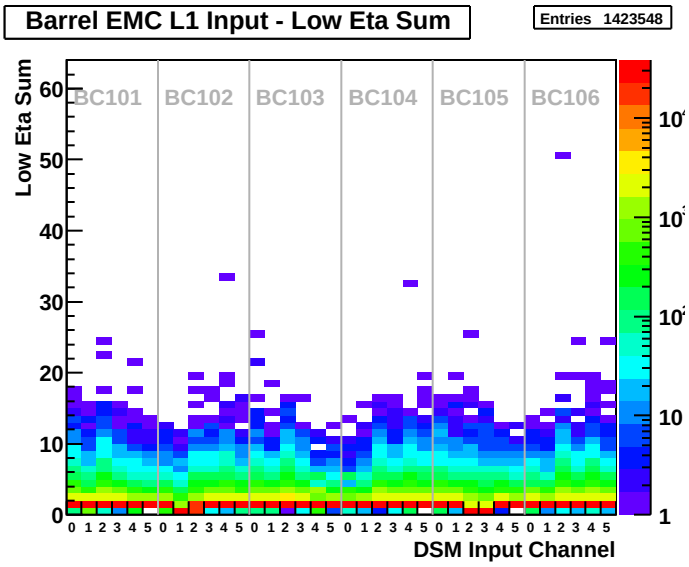

Endcap EMC L0 Input - High Tower
Entries 3558870
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

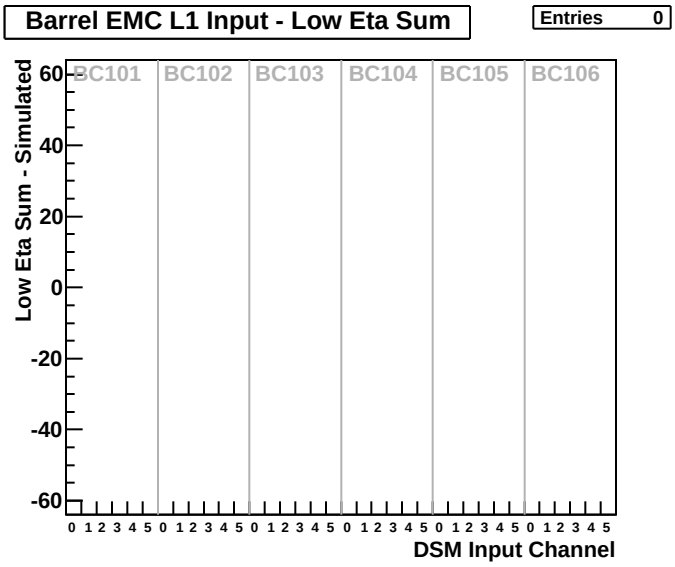

Endcap EMC L0 Input - Patch Sum
Entries 3558870
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

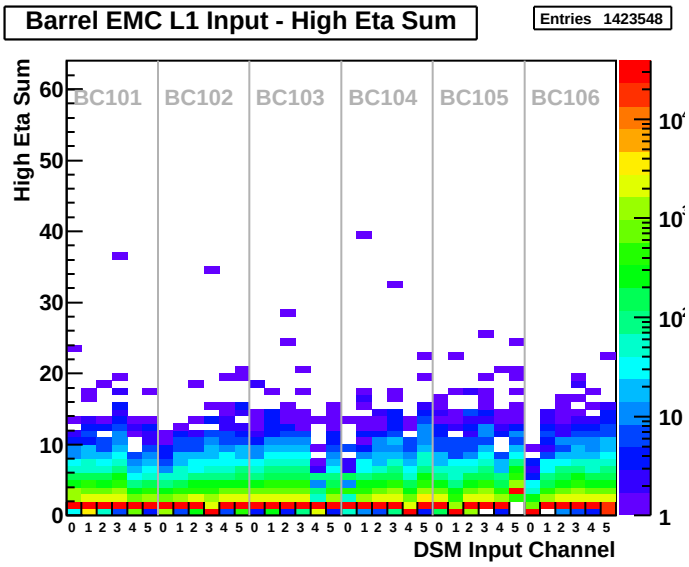

Barrel Jet Patches
Entries 711774
JP ADC
JP ID

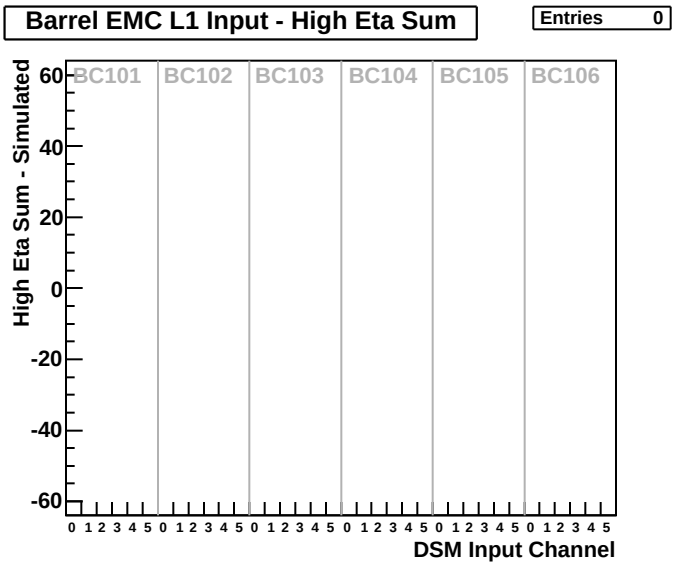

Endcap Jet Patches
Entries 237258
JP ADC
JP ID

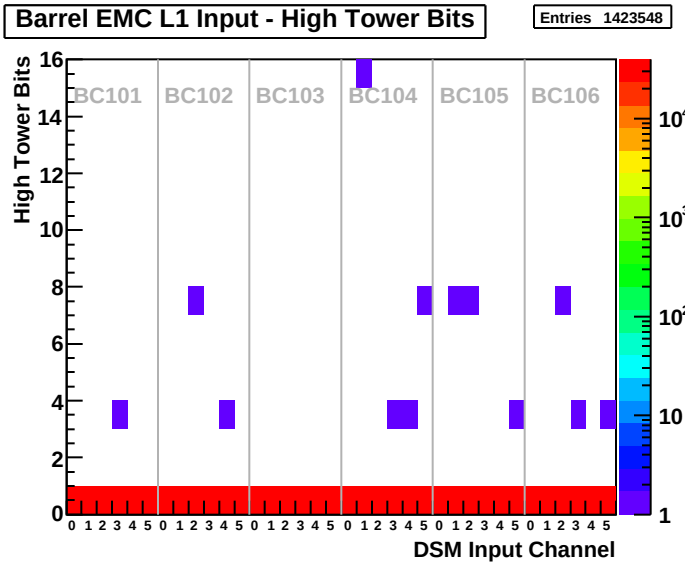

Hybrid Jet Patches
Entries 79086
JP ADC
JP ID

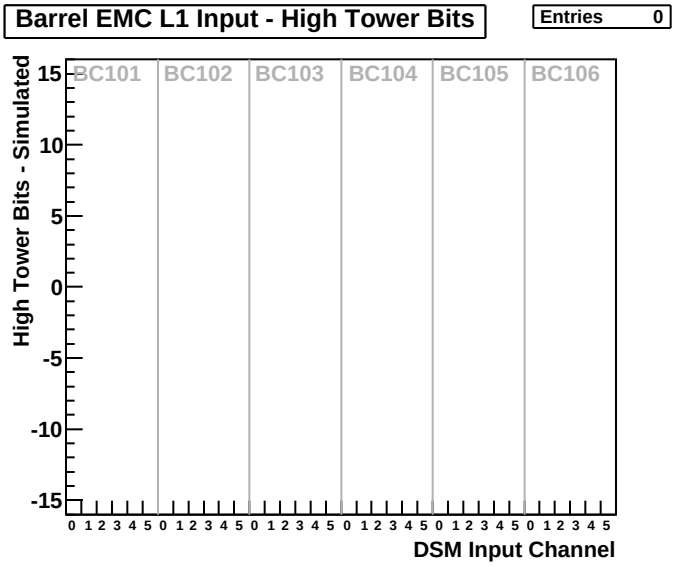

Barrel EMC L1 Input - Low Eta Sum
Entries 1423548
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

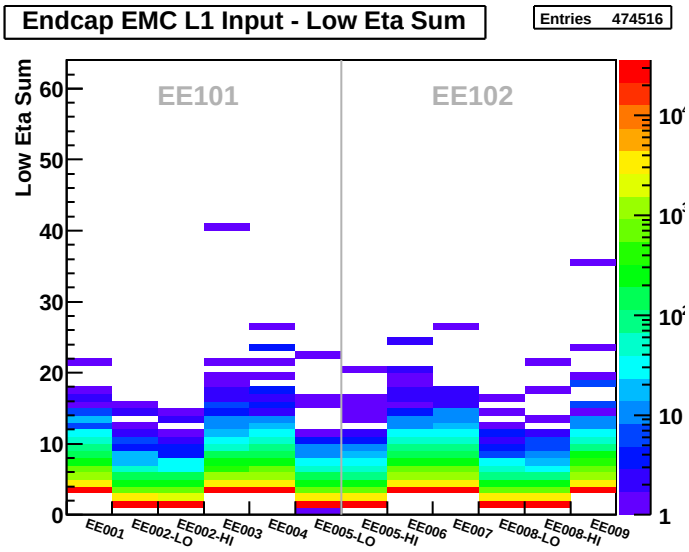

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

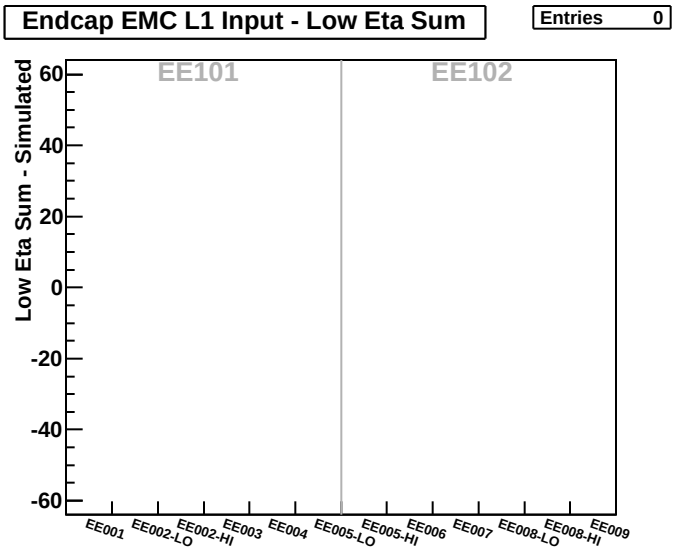

Barrel EMC L1 Input - High Eta Sum
Entries 1423548
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

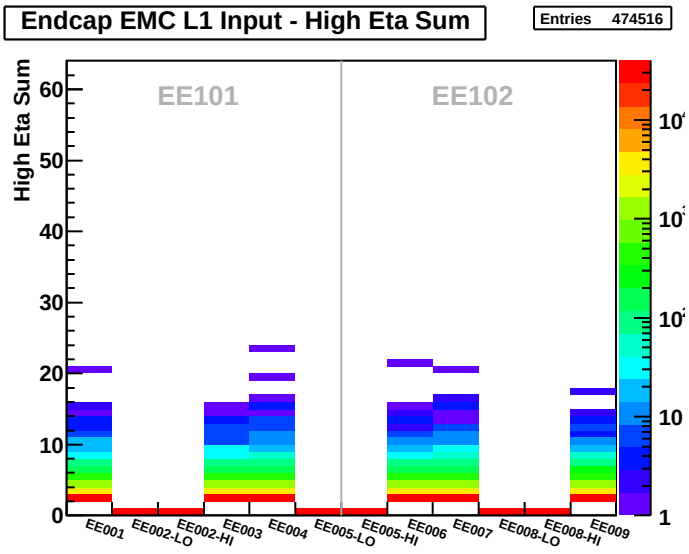

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

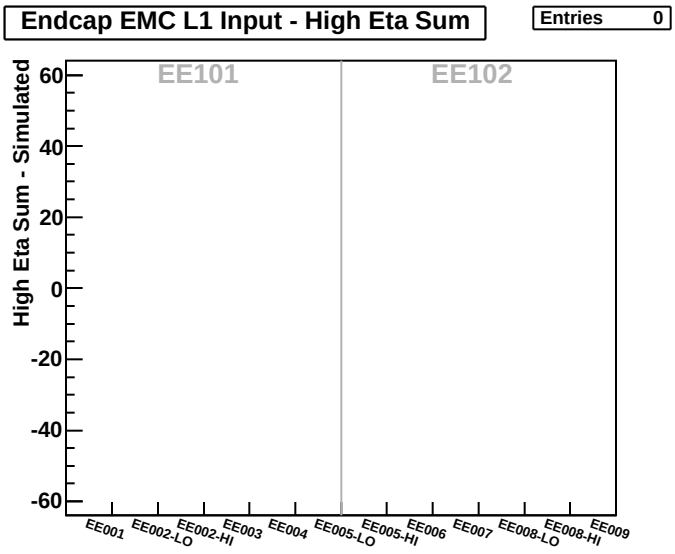

Barrel EMC L1 Input - High Tower Bits
Entries 1423548
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

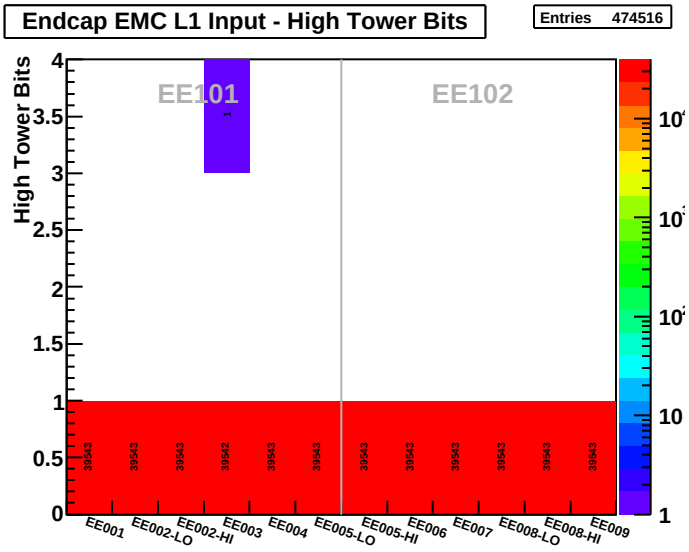

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

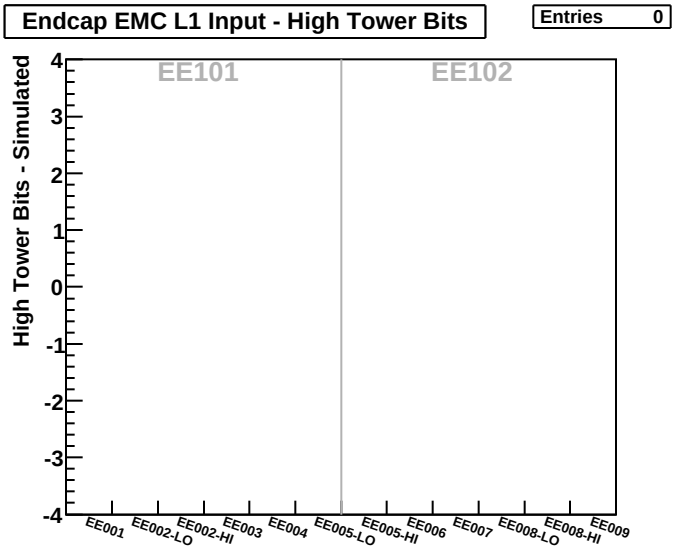

Endcap EMC L1 Input - Low Eta Sum
Entries 474516
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

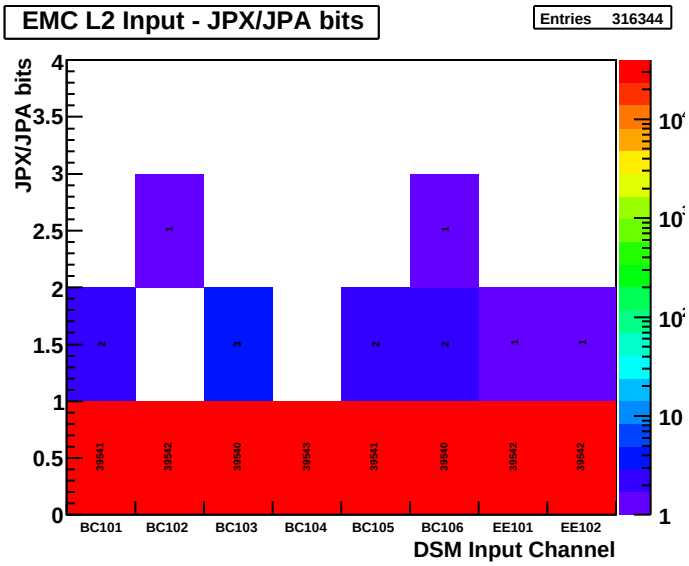

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

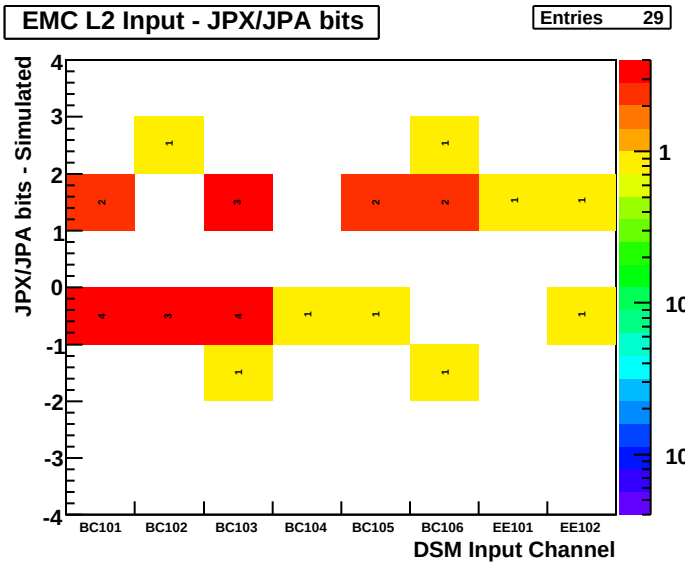

Endcap EMC L1 Input - High Eta Sum
Entries 474516
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

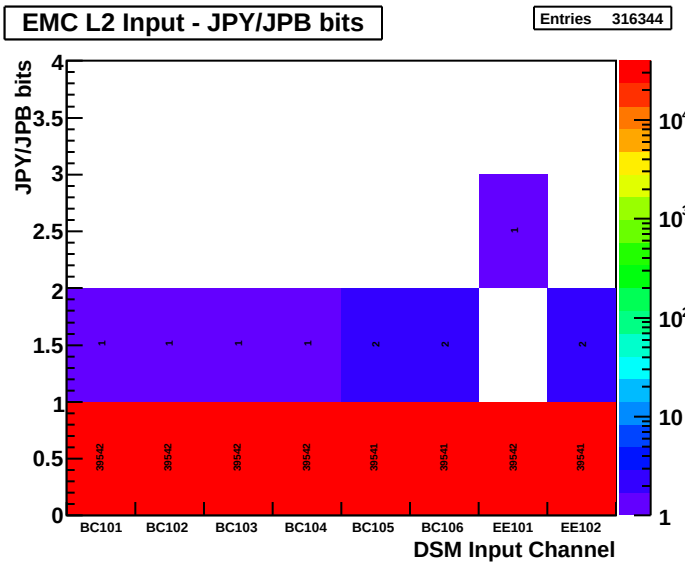

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

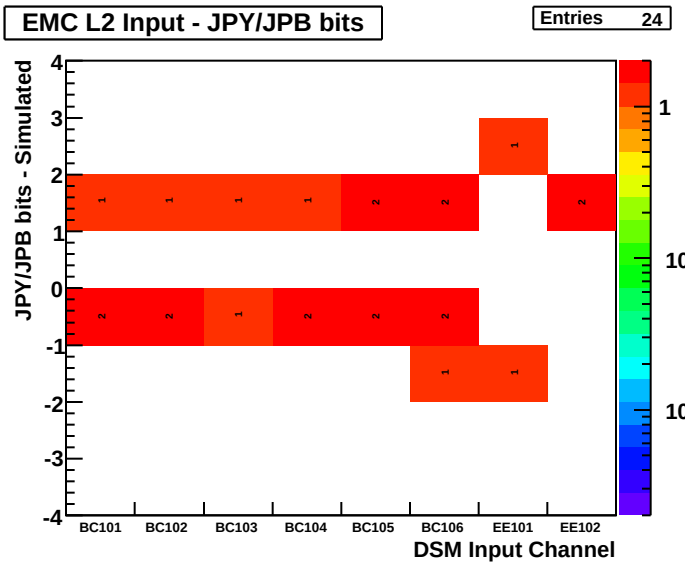

Endcap EMC L1 Input - High Tower Bits
Entries 474516
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

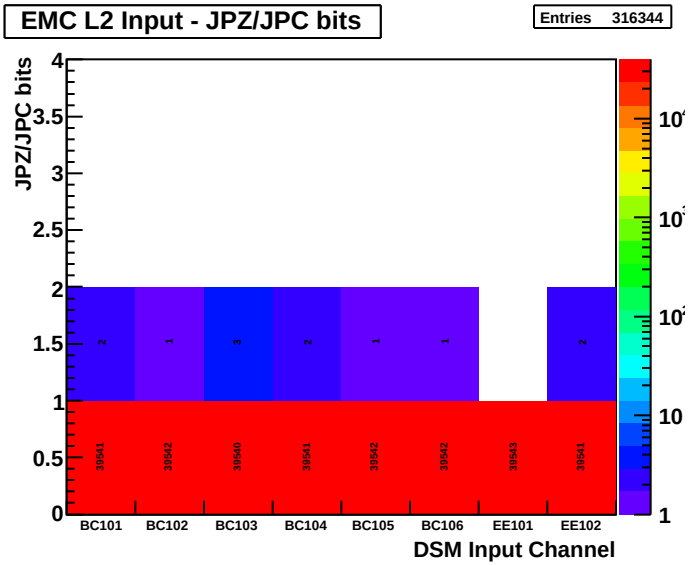

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

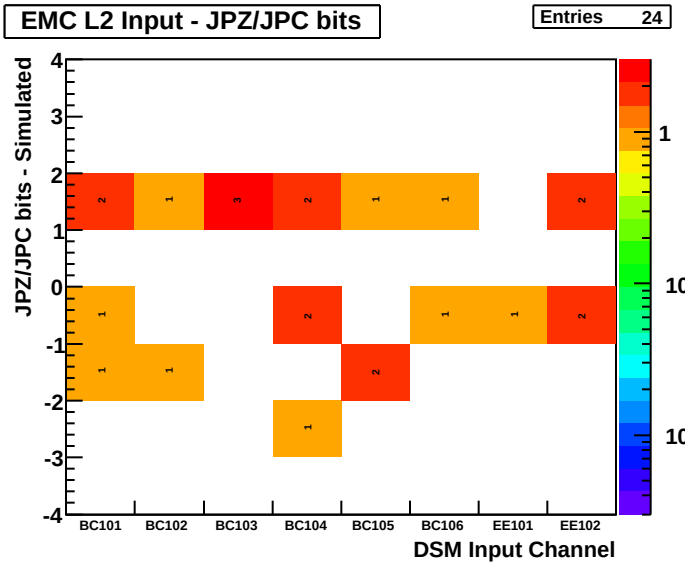

EMC L2 Input - JPX/JPA bits
Entries 316344
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

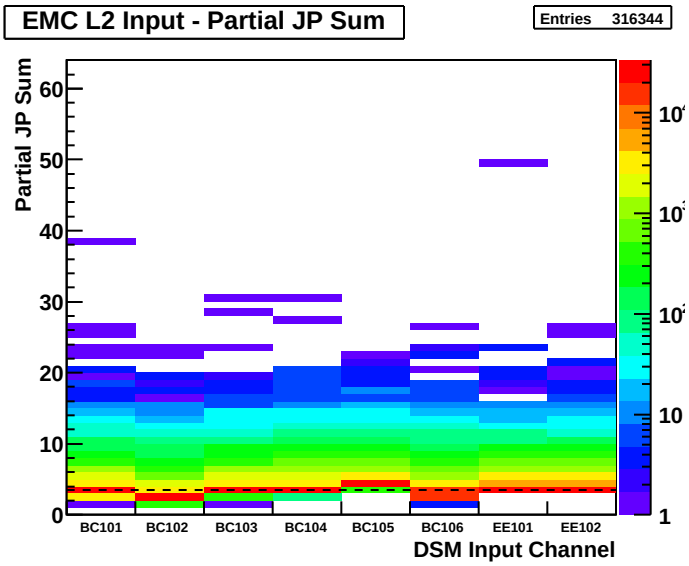

EMC L2 Input - JPX/JPA bits
Entries 29
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

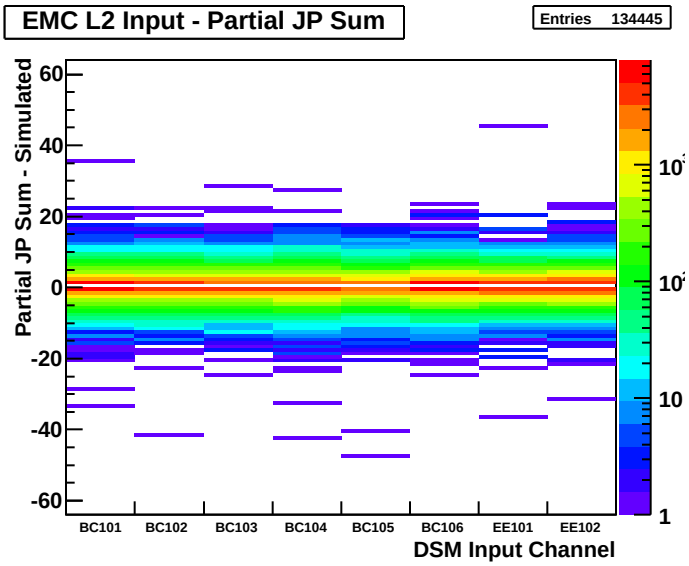

EMC L2 Input - JPY/JPB bits
Entries 316344
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

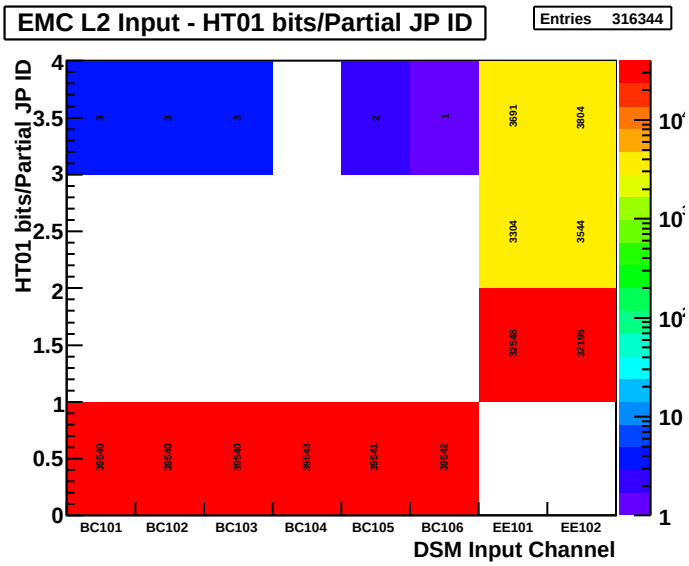

EMC L2 Input - JPY/JPB bits
Entries 24
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

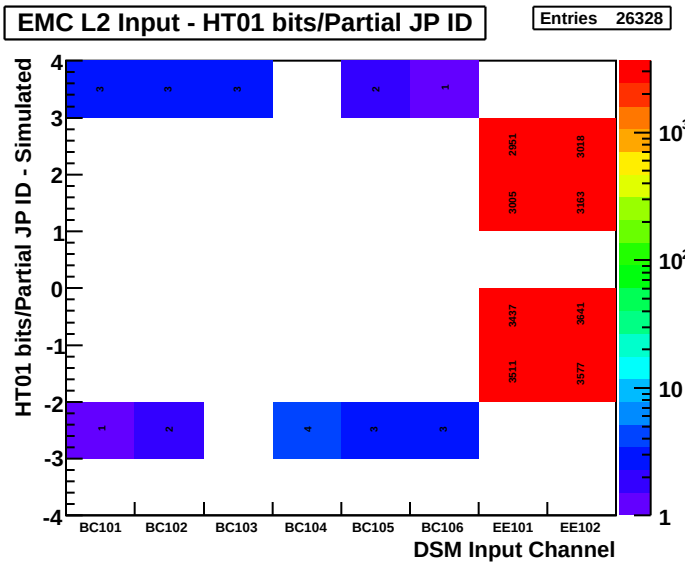

EMC L2 Input - JPZ/JPC bits
Entries 316344
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

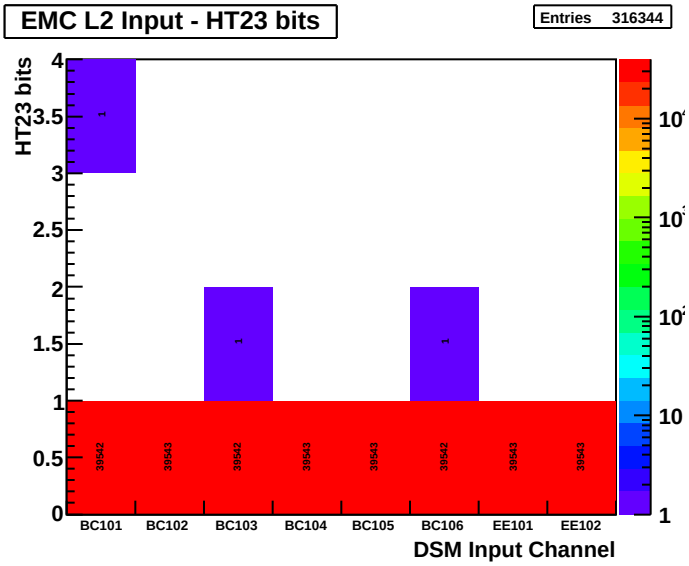

EMC L2 Input - JPZ/JPC bits
Entries 24
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

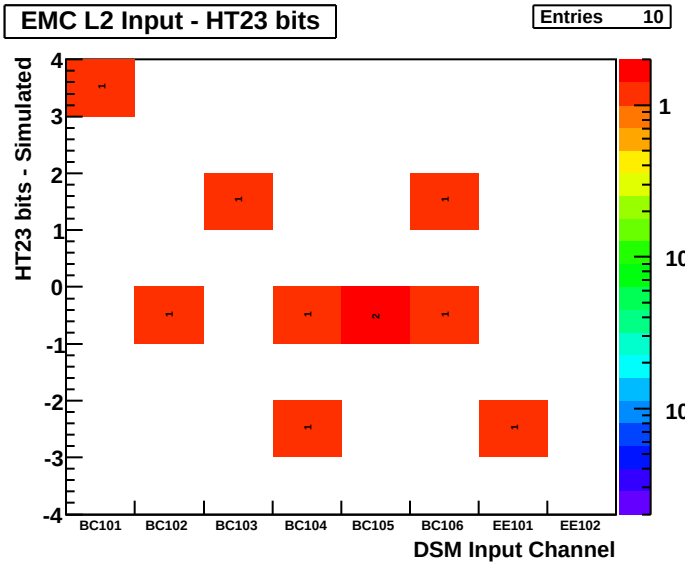

EMC L2 Input - Partial JP Sum
Entries 316344
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

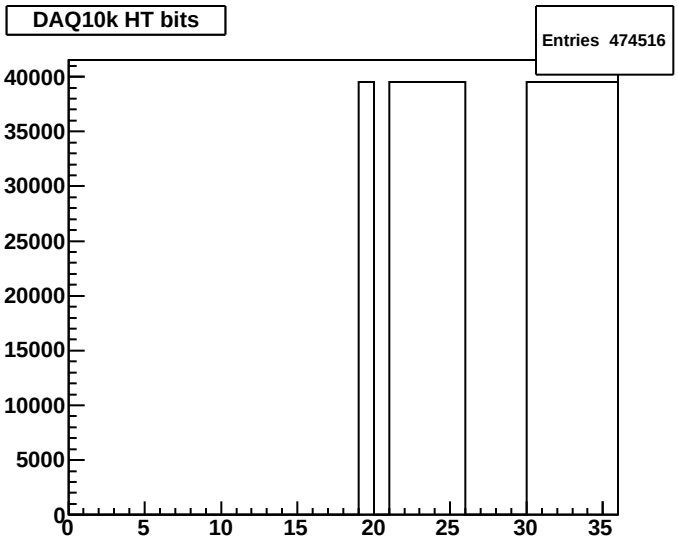

EMC L2 Input - Partial JP Sum
Entries 134445
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

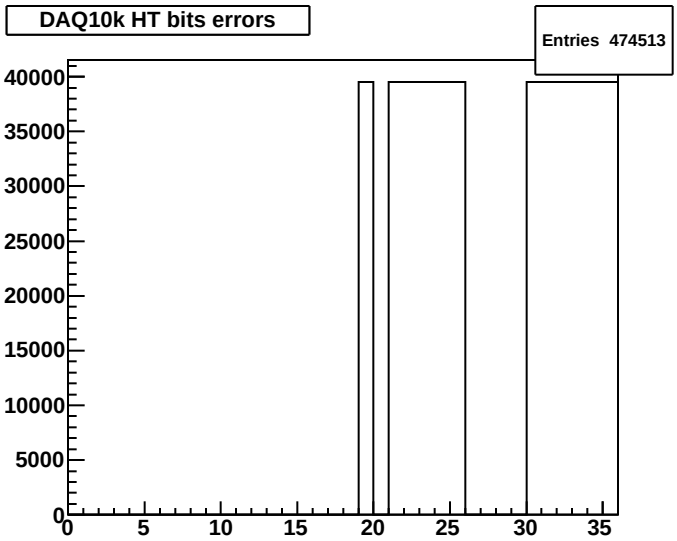

EMC L2 Input - HT01 bits/Partial JP ID
Entries 316344
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

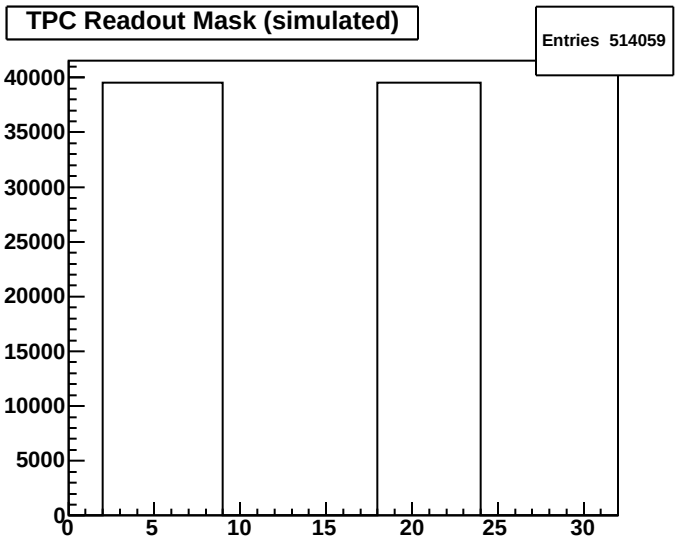

EMC L2 Input - HT01 bits/Partial JP ID
Entries 26328
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

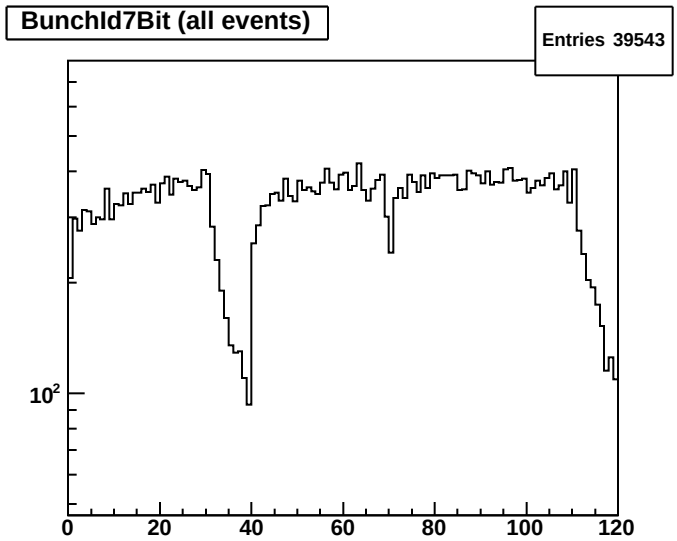

EMC L2 Input - HT23 bits
Entries 316344
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

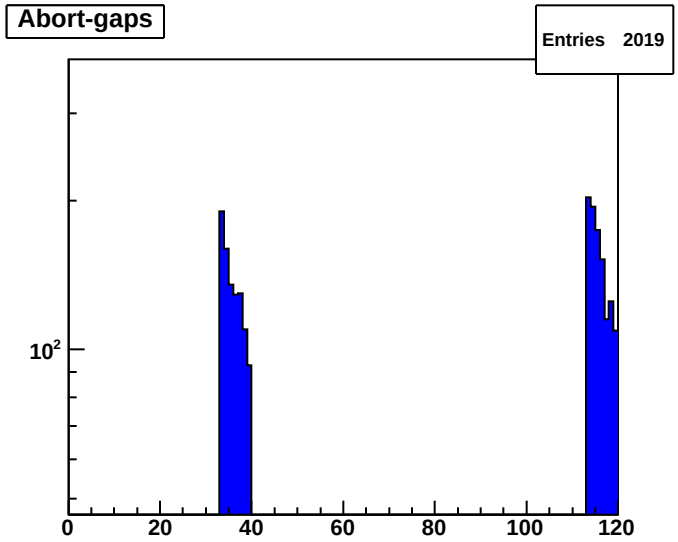

EMC L2 Input - HT23 bits
Entries 10
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

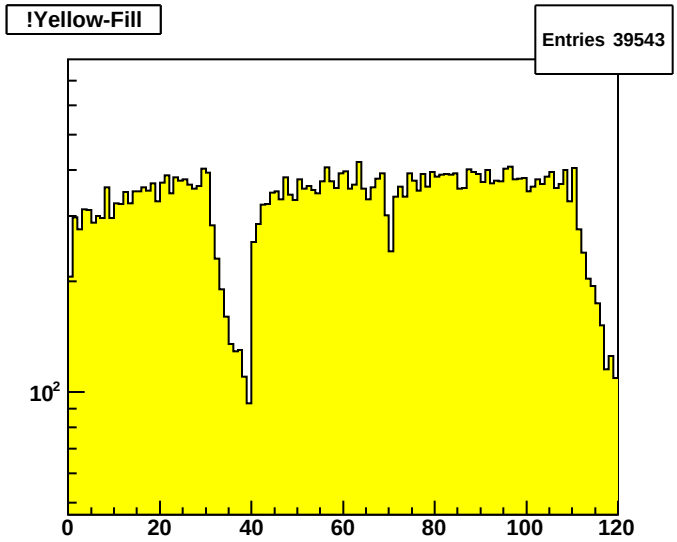

DAQ10k HT bits
Entries 474516
40000
35000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

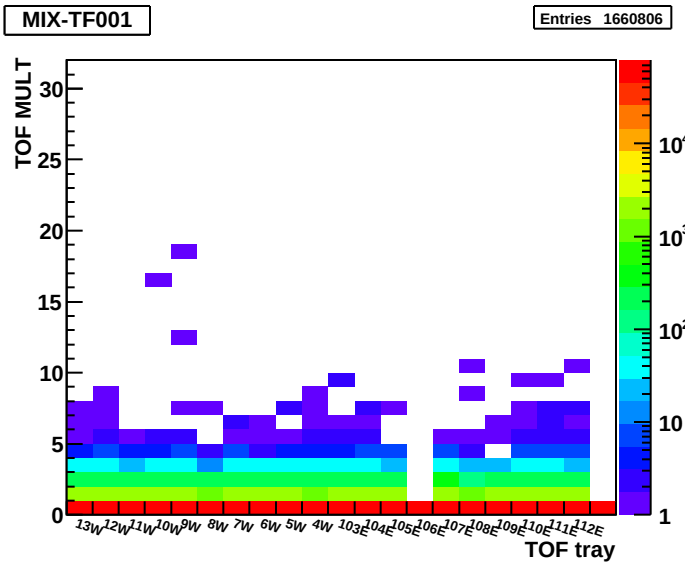

DAQ10k HT bits errors
Entries 474513
40000
35000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

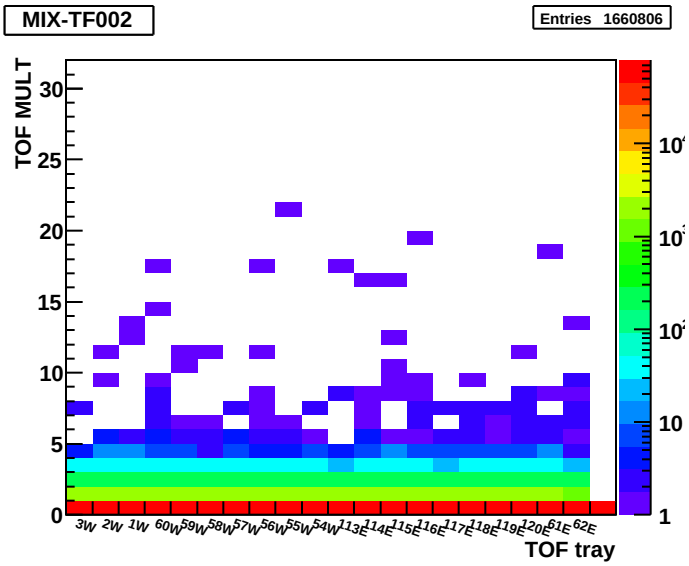

TPC Readout Mask (simulated)
Entries 514059
40000
35000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30

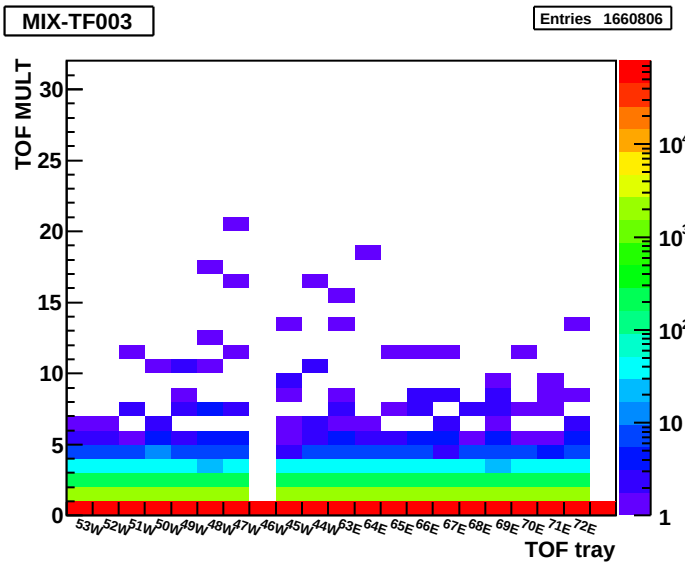

BunchId7Bit (all events)
Entries 39543
10^2
0 20 40 60 80 100 120

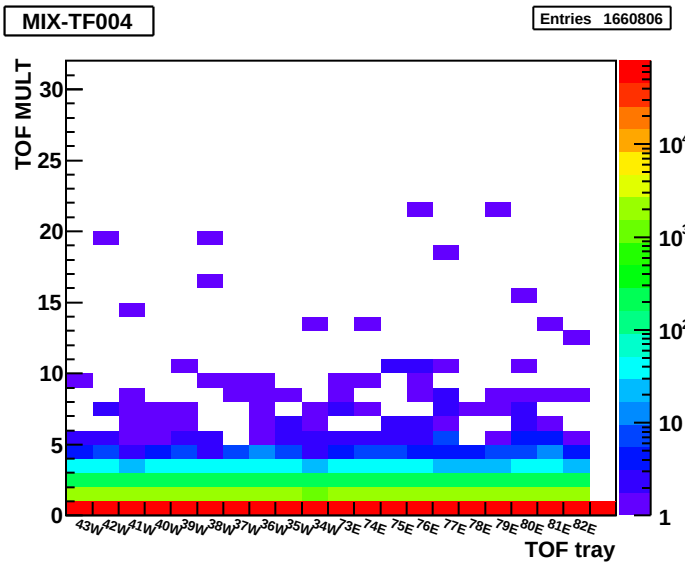

Abort-gaps
Entries 2019
10^2
0 20 40 60 80 100 120

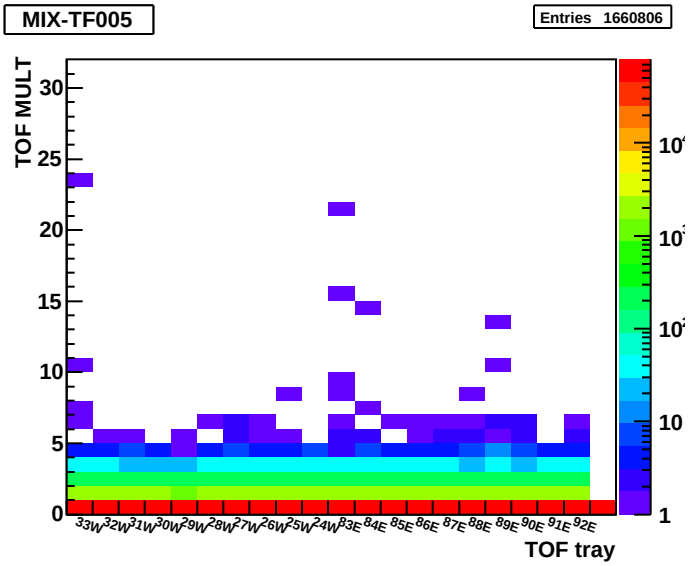

!Yellow-Fill
Entries 39543
10^2
0 20 40 60 80 100 120

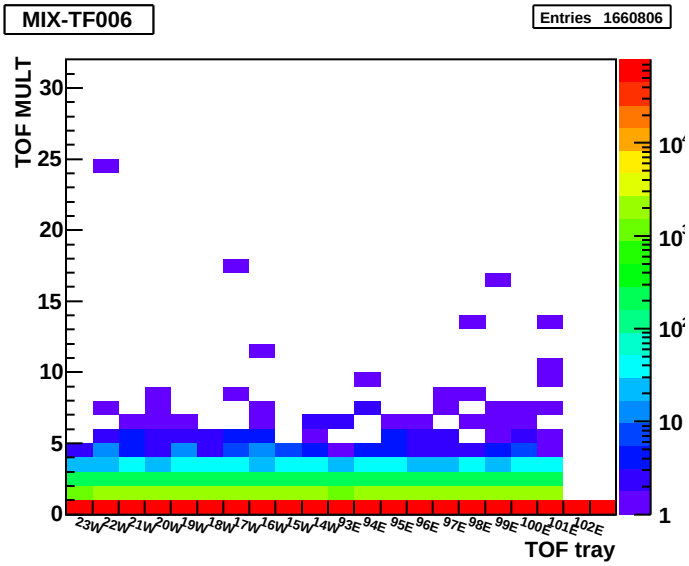

MIX-TF001
Entries 1660806
TOF MULT
TOF tray

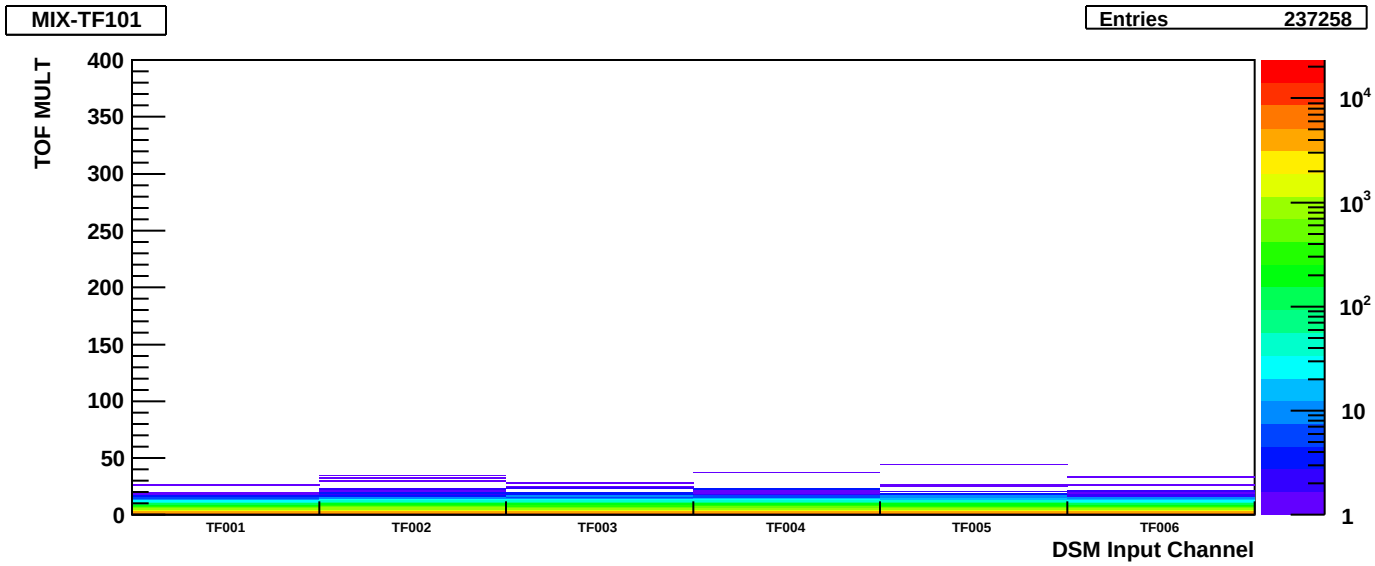

MIX-TF002
Entries 1660806
TOF MULT
TOF tray

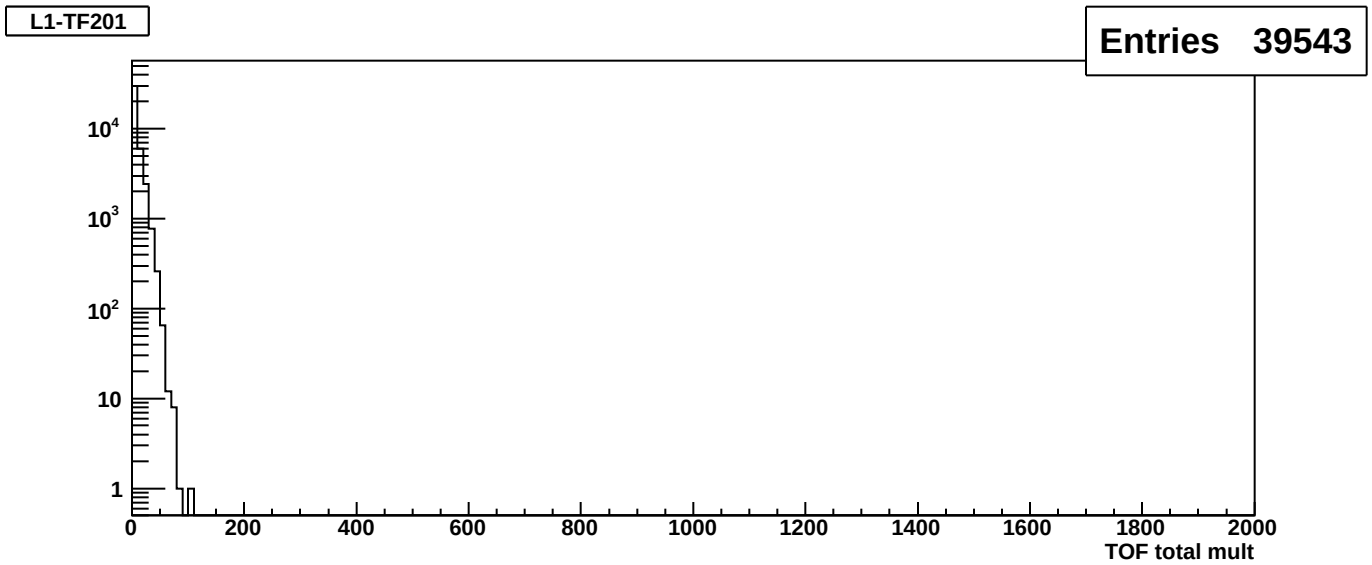

MIX-TF003
Entries 1660806
TOF MULT
TOF tray

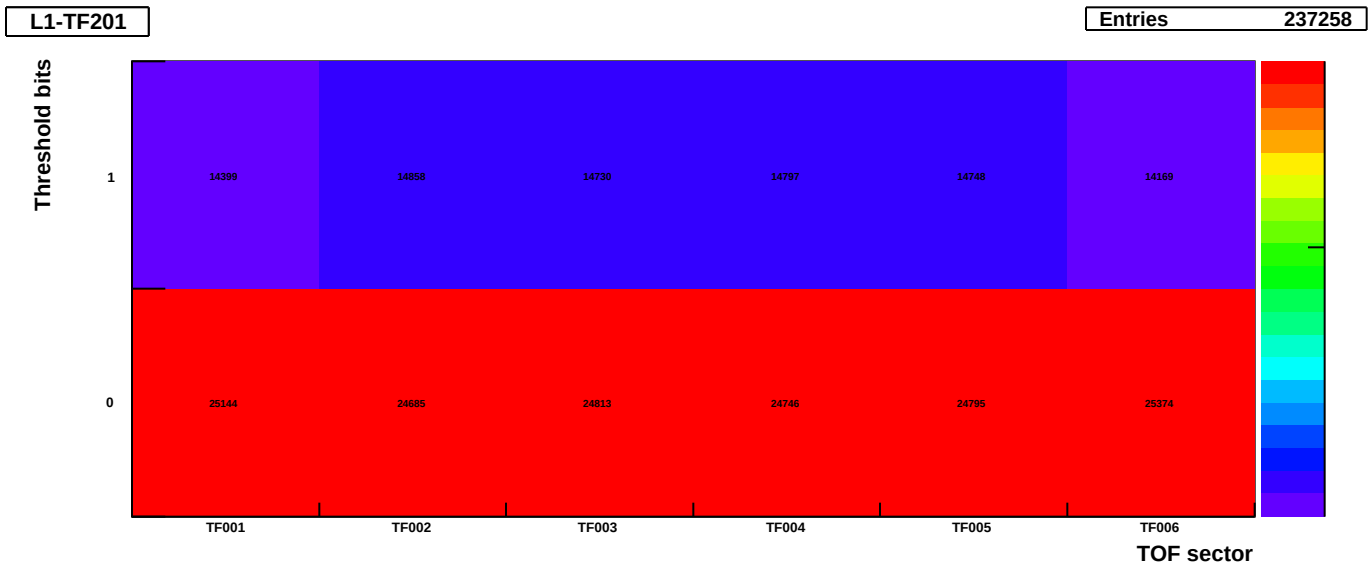

MIX-TF004
Entries 1660806
TOF MULT
TOF tray

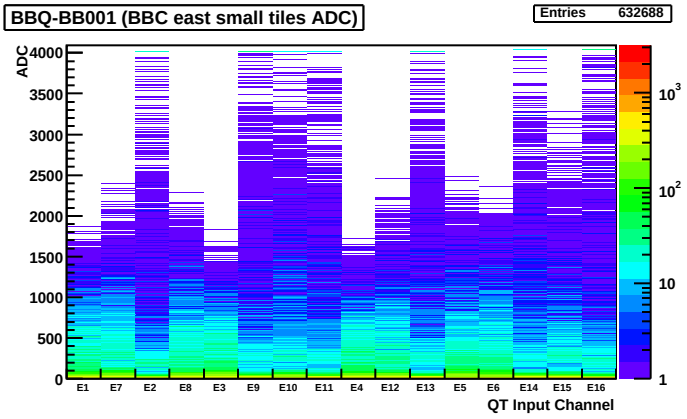

MIX-TF005
Entries 1660806
TOF MULT
TOF tray

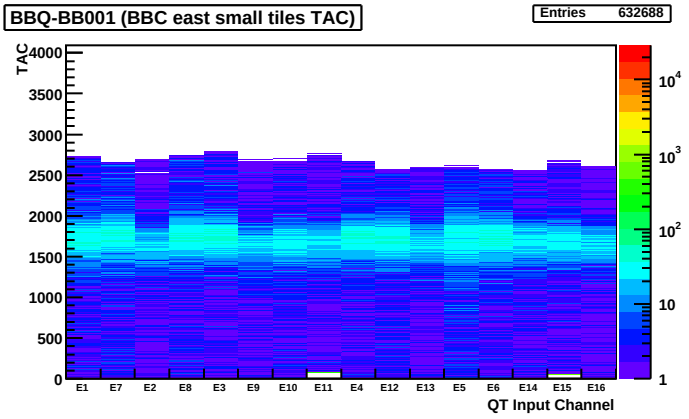

MIX-TF006
Entries 1660806
TOF MULT
TOF tray

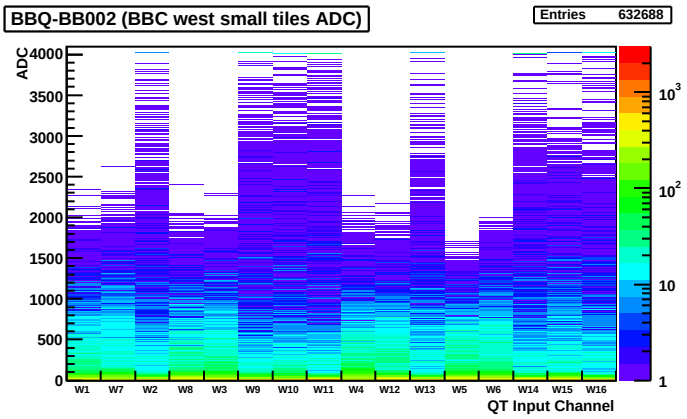

MIX-TF101
Entries 237258
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

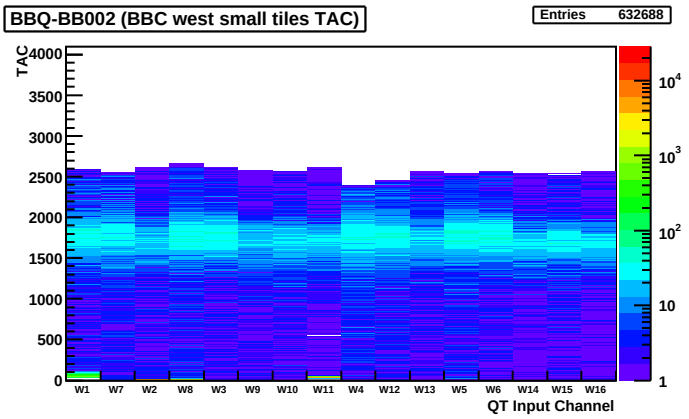

L1-TF201
Entries 39543
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

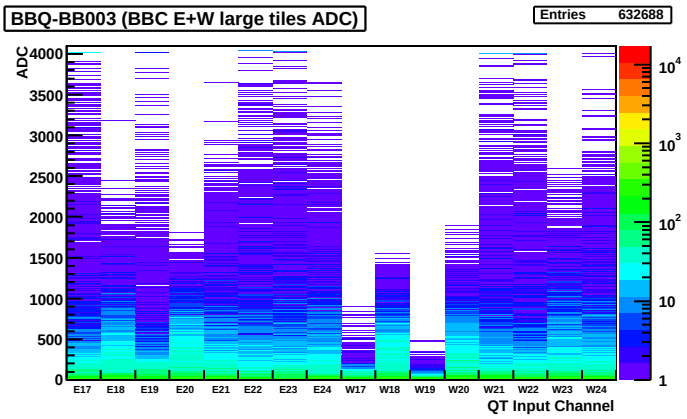

L1-TF201
Entries 237258
Threshold bits
1
0
14399
14858
14730
14797
14748
14169
25144
24685
24813
24746
24795
25374
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

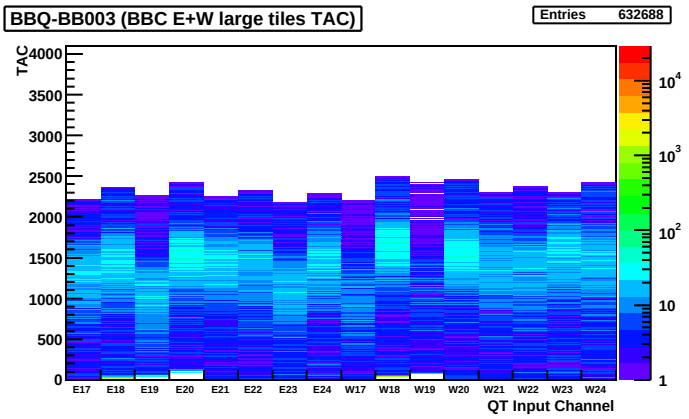

BBQ-BB001 (BBC east small tiles ADC)
Entries 632688
ADC
QT Input Channel

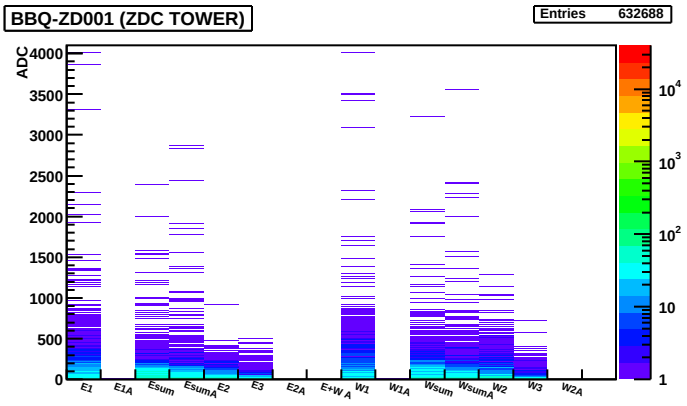

BBQ-BB001 (BBC east small tiles TAC)
Entries 632688
TAC
QT Input Channel

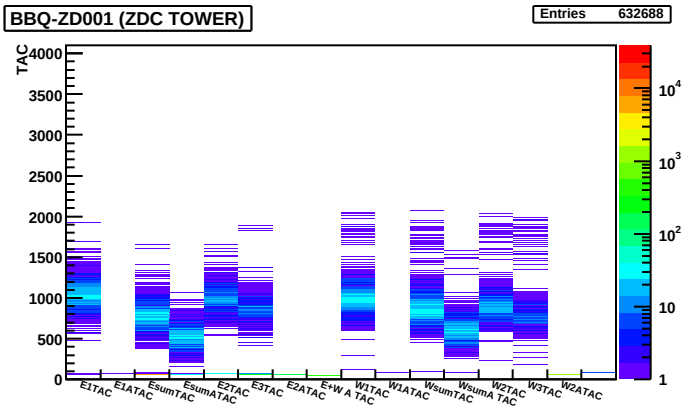

BBQ-BB002 (BBC west small tiles ADC)
Entries 632688
ADC
QT Input Channel

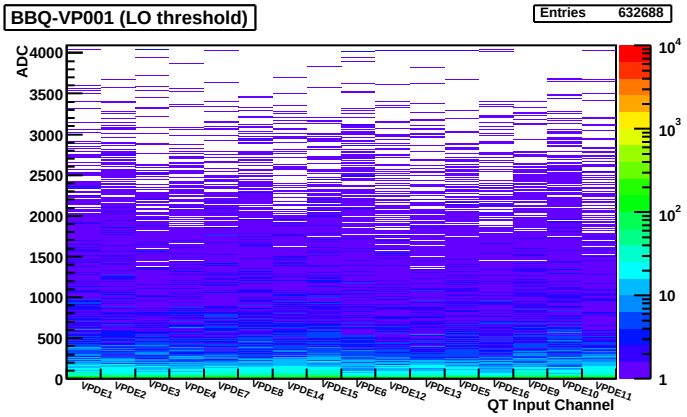

BBQ-BB002 (BBC west small tiles TAC)
Entries 632688
TAC
QT Input Channel

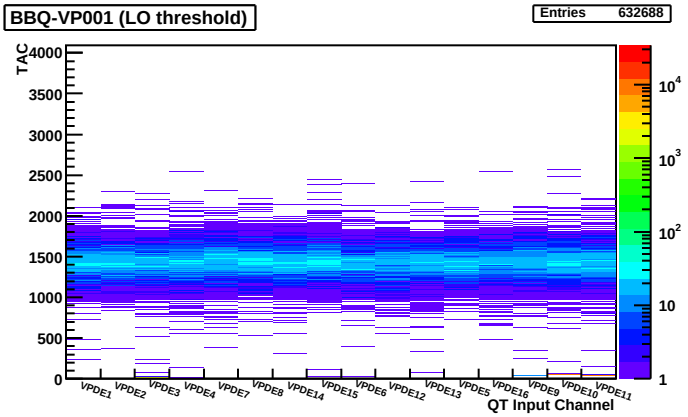

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 632688
ADC
QT Input Channel

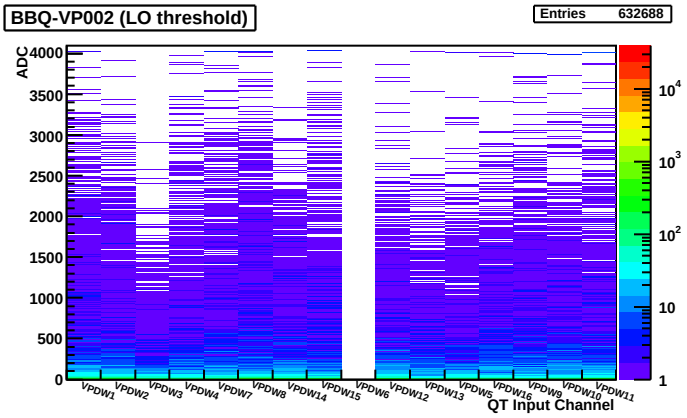

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 632688
TAC
QT Input Channel

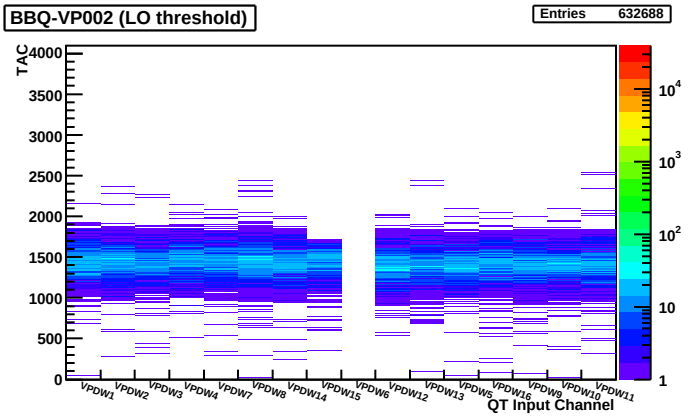

BBQ-ZD001 (ZDC TOWER)
Entries 632688
ADC

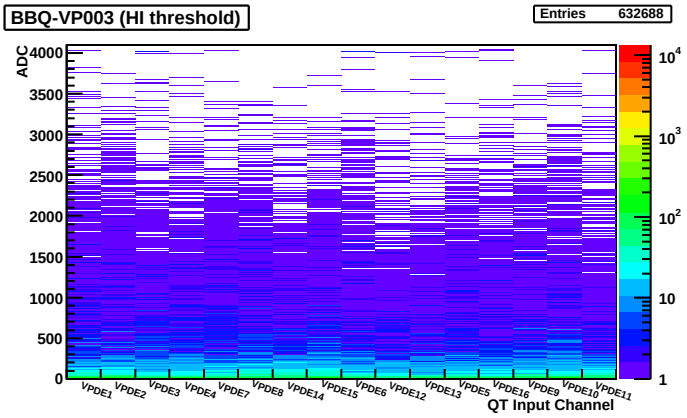

BBQ-ZD001 (ZDC TOWER)
Entries 632688
TAC

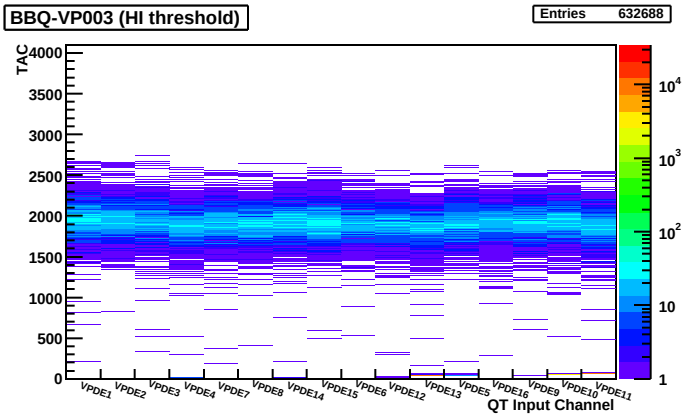

BBQ-VP001 (LO threshold)
Entries 632688
ADC
QT Input Channel

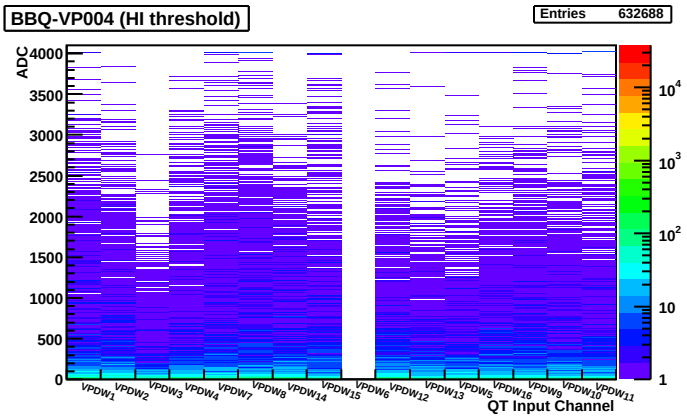

BBQ-VP001 (LO threshold)
Entries 632688
TAC
QT Input Channel

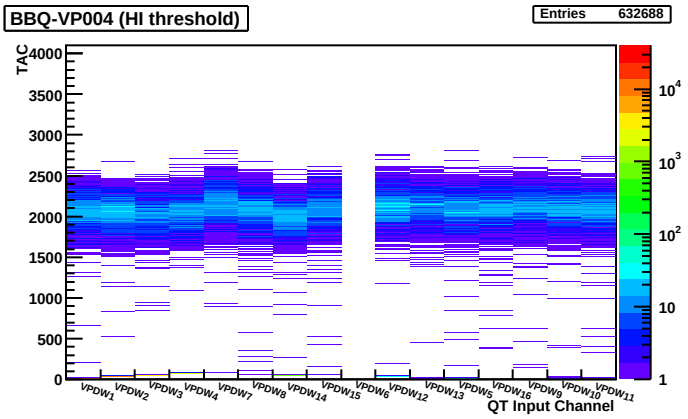

BBQ-VP002 (LO threshold)
Entries 632688
ADC
QT Input Channel

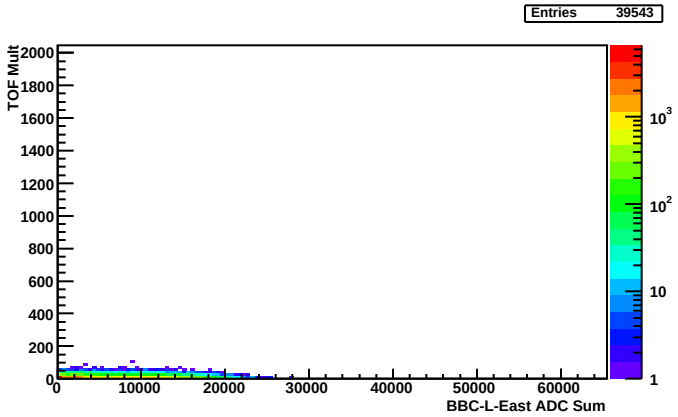

BBQ-VP002 (LO threshold)
Entries 632688
TAC
QT Input Channel

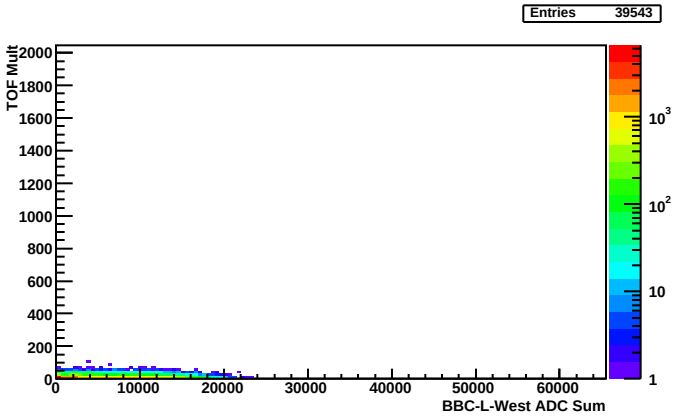

BBQ-VP003 (HI threshold)
Entries 632688
ADC
QT Input Channel

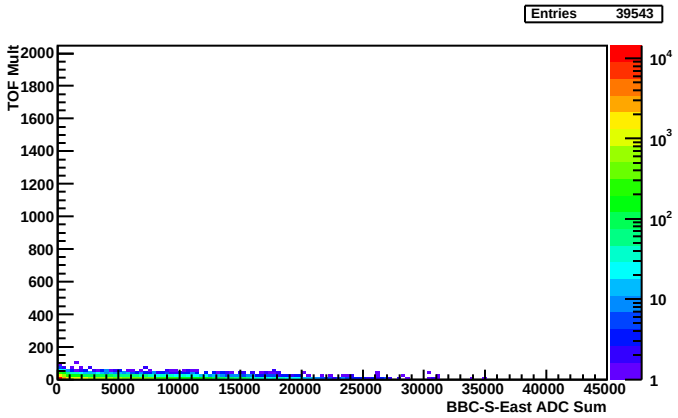

BBQ-VP003 (HI threshold)
Entries 632688
TAC
QT Input Channel

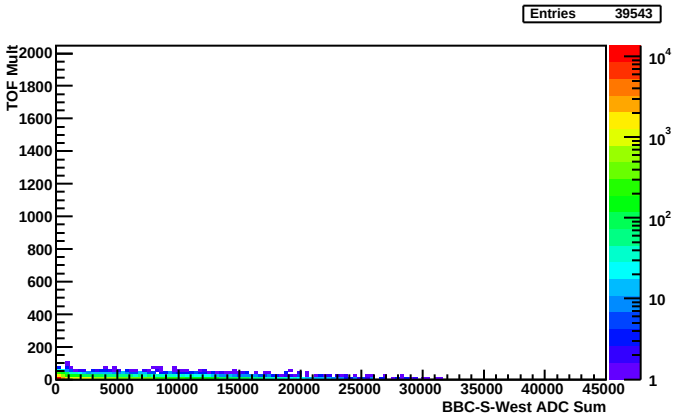

BBQ-VP004 (HI threshold)
Entries 632688
ADC
QT Input Channel

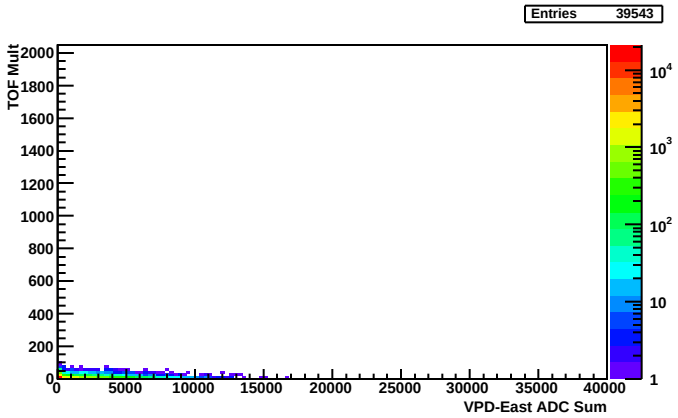

BBQ-VP004 (HI threshold)
Entries 632688
TAC
QT Input Channel

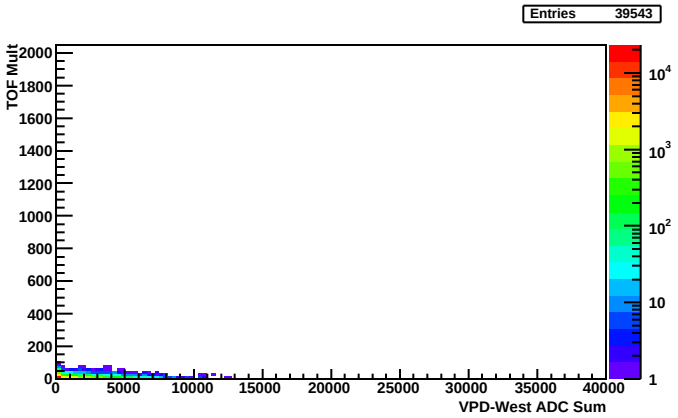

Entries 39543
TOF Mult
BBC-L-East ADC Sum

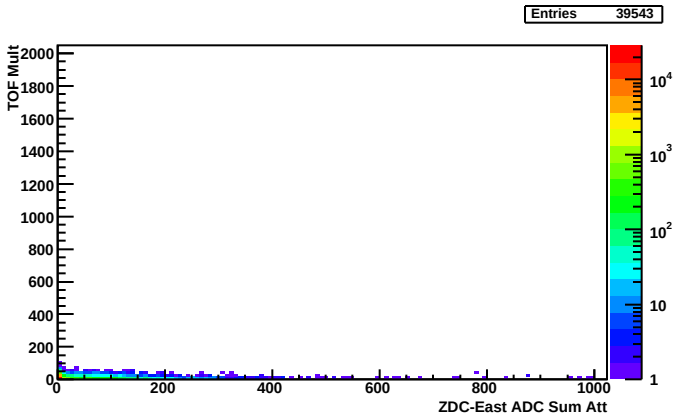

Entries 39543
TOF Mult
BBC-L-West ADC Sum

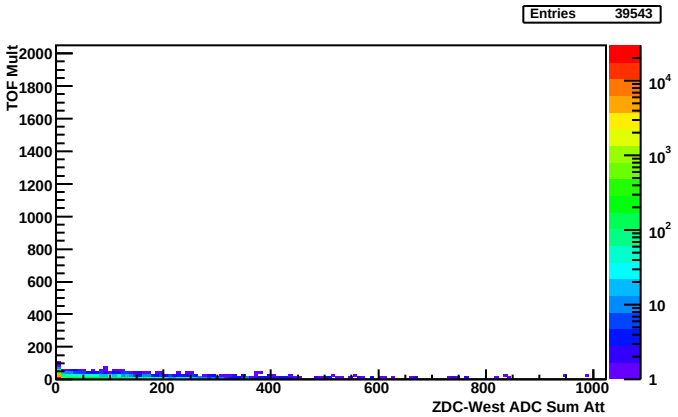

Entries 39543
TOF Mult
BBC-S-East ADC Sum

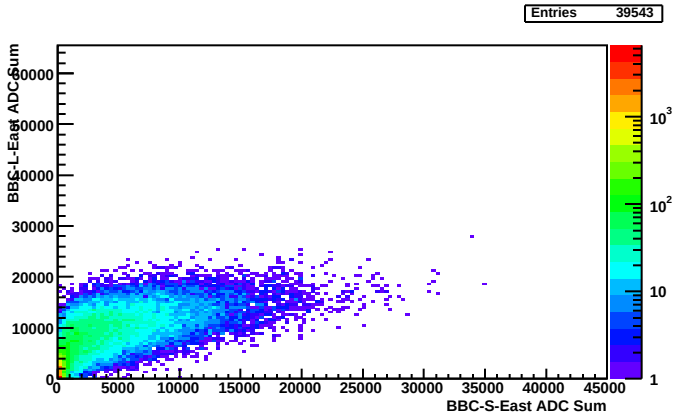

Entries 39543
TOF Mult
BBC-S-West ADC Sum

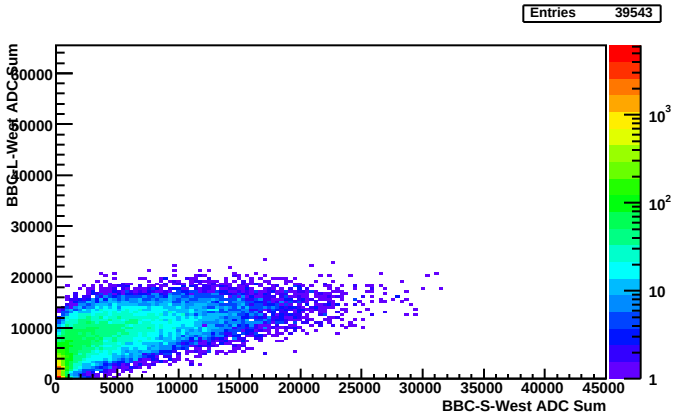

Entries 39543
TOF Mult
VPD-East ADC Sum

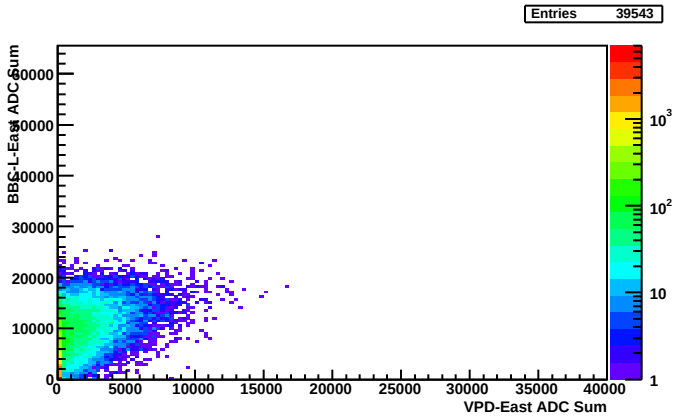

Entries 39543
TOF Mult
VPD-West ADC Sum

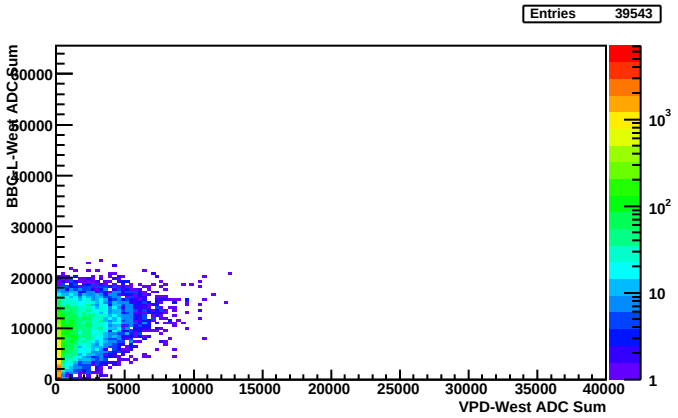

Entries 39543
TOF Mult
ZDC-East ADC Sum Att

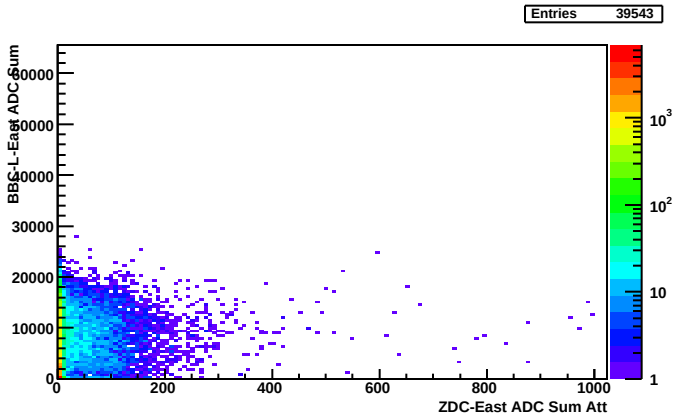

Entries 39543
TOF Mult
ZDC-West ADC Sum Att

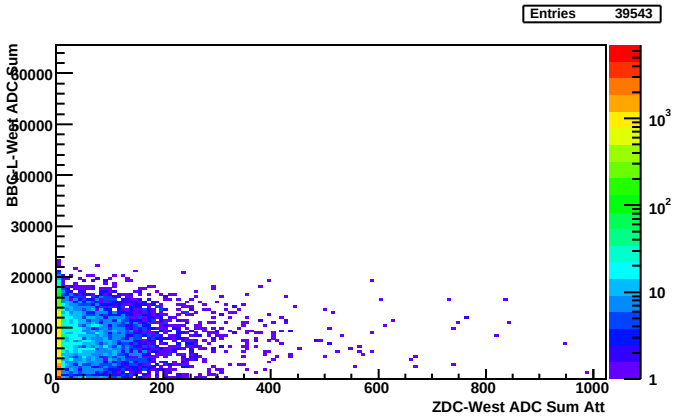

Entries 39543
BBC-L-East ADC Sum
BBC-S-East ADC Sum

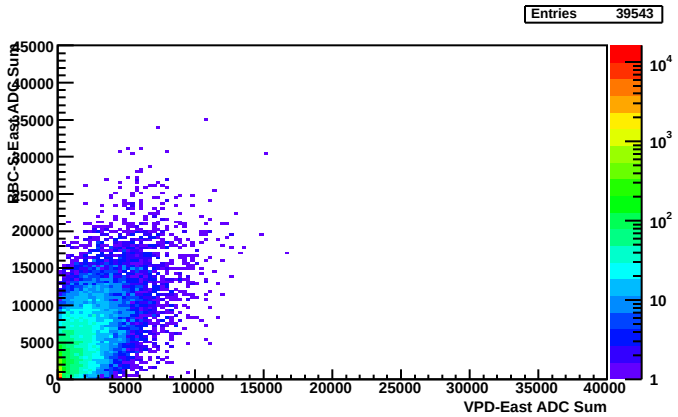

Entries 39543
BBC-L-West ADC Sum
BBC-S-West ADC Sum

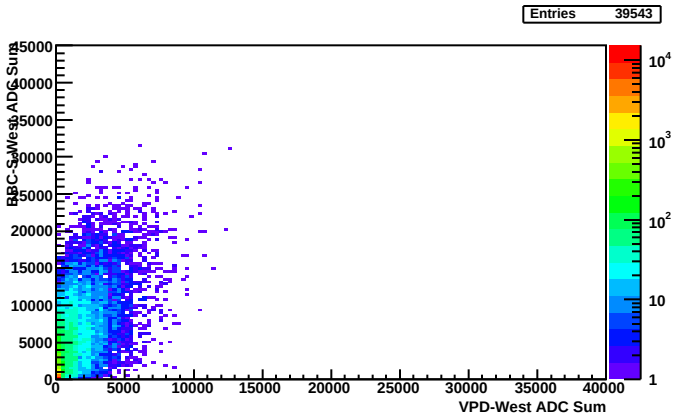

Entries 39543
BBC-L-East ADC Sum
VPD-East ADC Sum

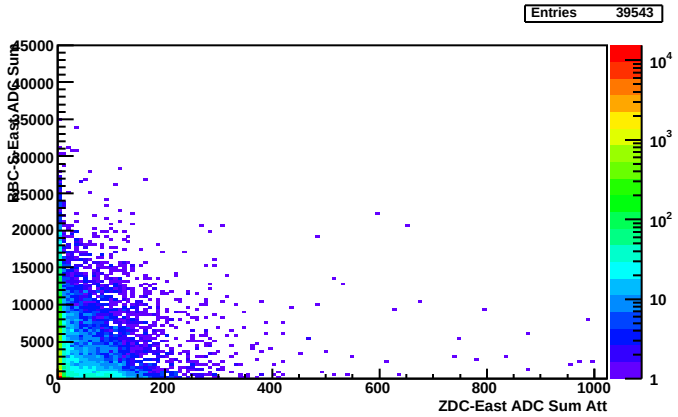

Entries 39543
BBC-L-West ADC Sum
VPD-West ADC Sum

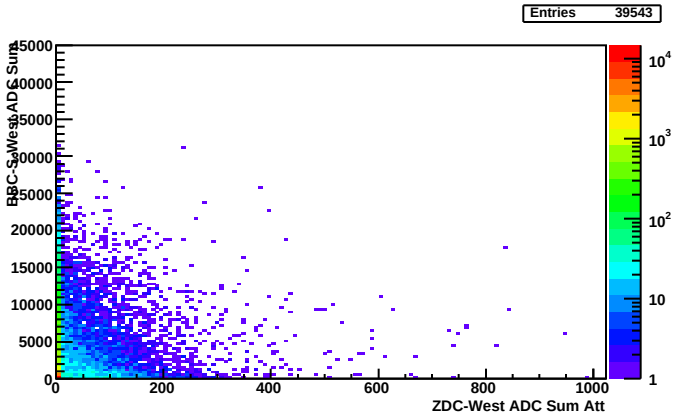

Entries 39543
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

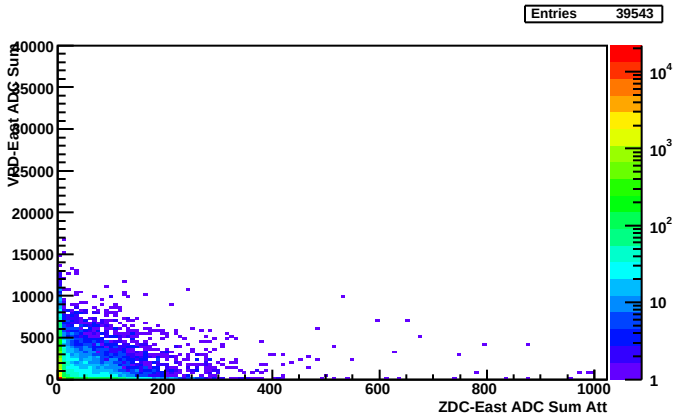

Entries 39543
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

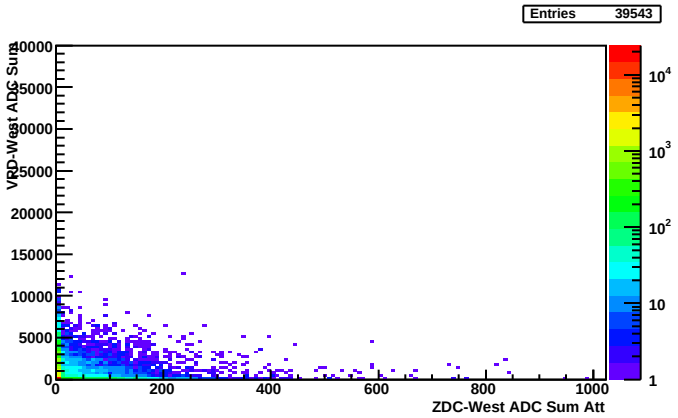

Entries 39543
BBC-S-East ADC Sum
VPD-East ADC Sum

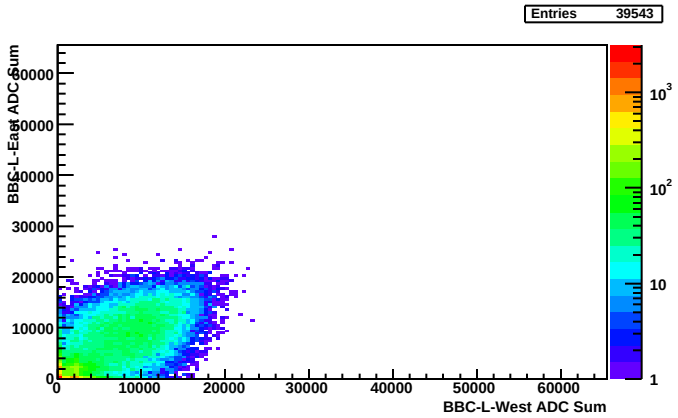

Entries 39543
BBC-S-West ADC Sum
VPD-West ADC Sum

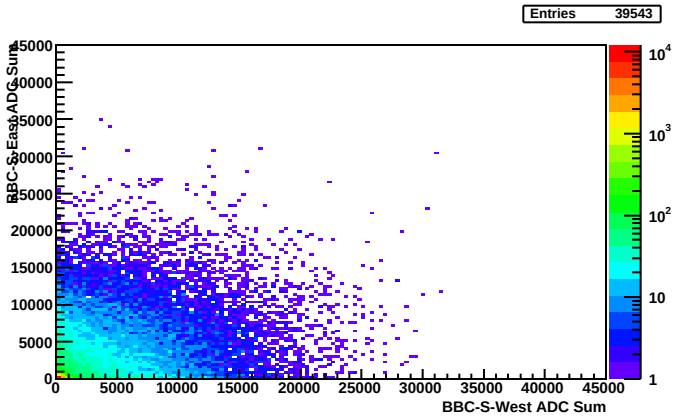

Entries 39543
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

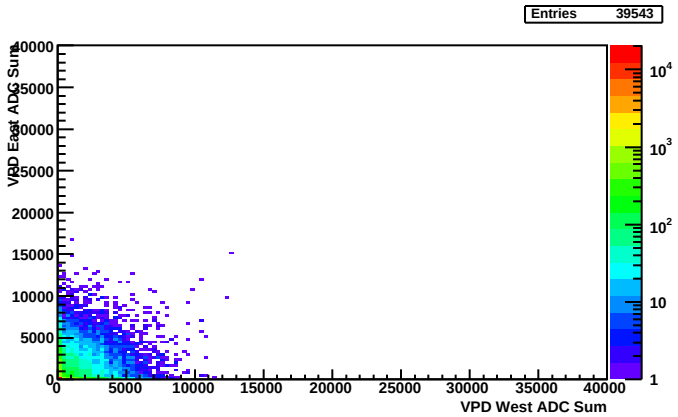

Entries 39543
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

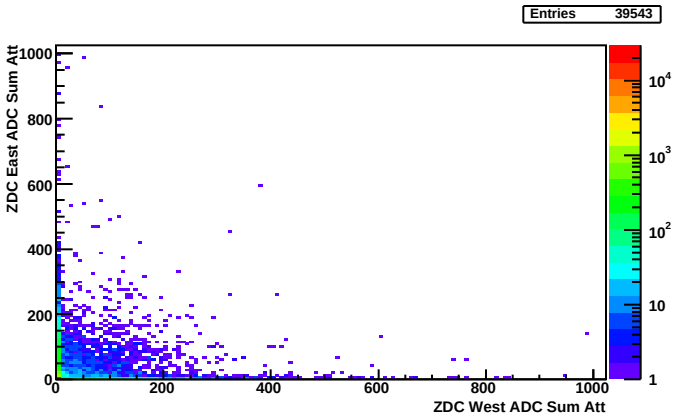

Entries 39543
VPD-East ADC Sum
ZDC-East ADC Sum Att

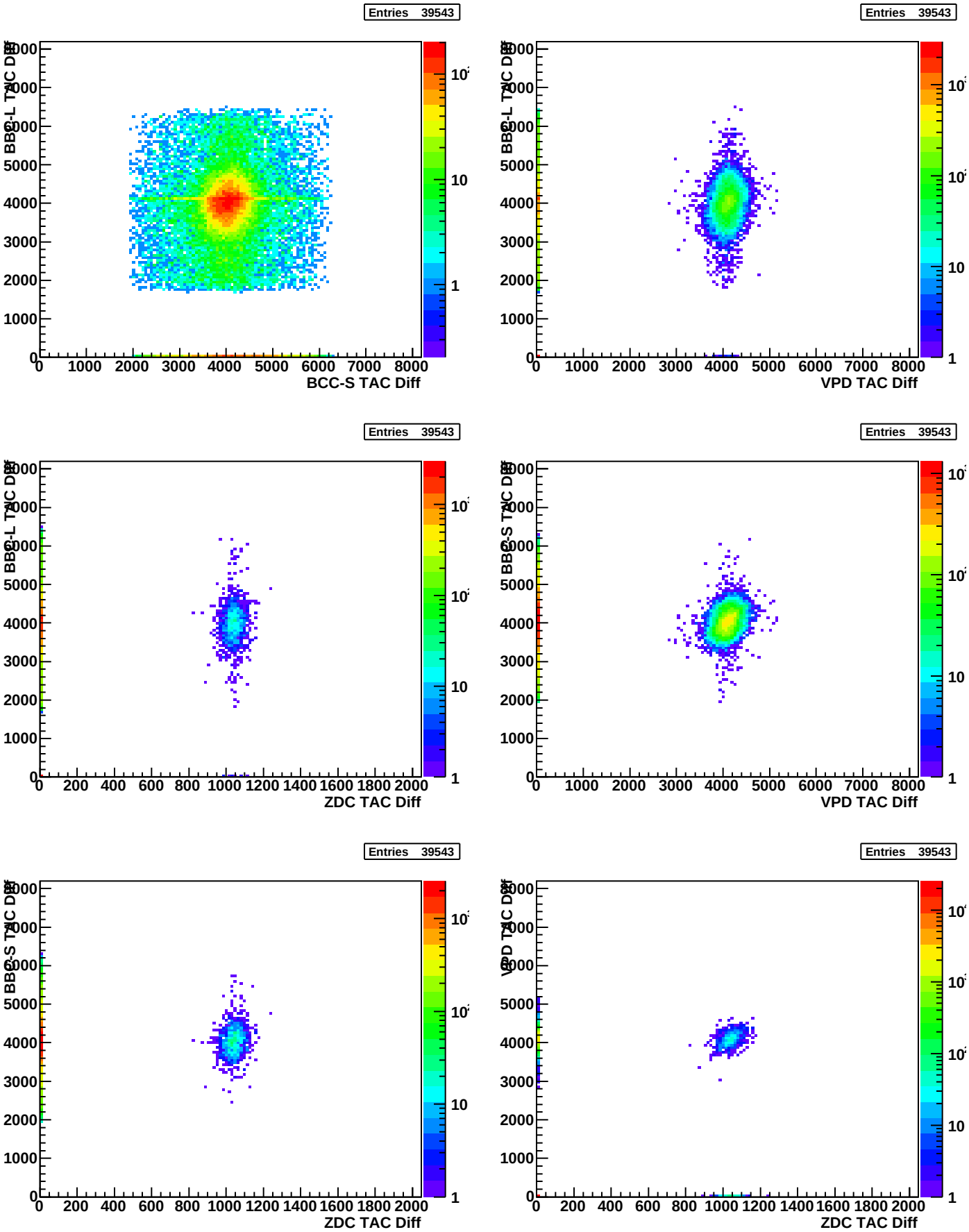

Entries 39543
VPD-West ADC Sum
ZDC-West ADC Sum Att

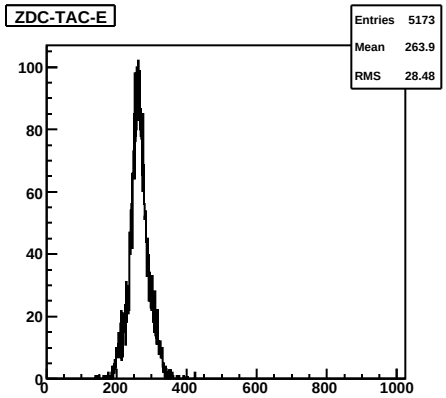

Entries 39543
BBC-L-East ADC Sum
BBC-L-West ADC Sum

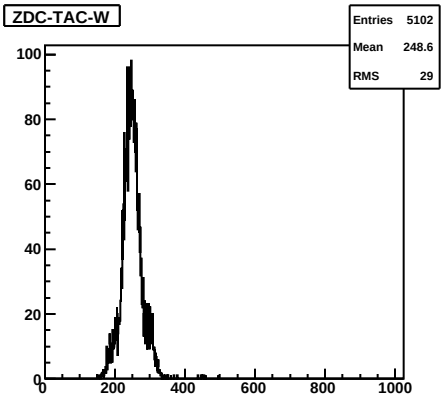

Entries 39543
BBC-S-East ADC Sum
BBC-S-West ADC Sum

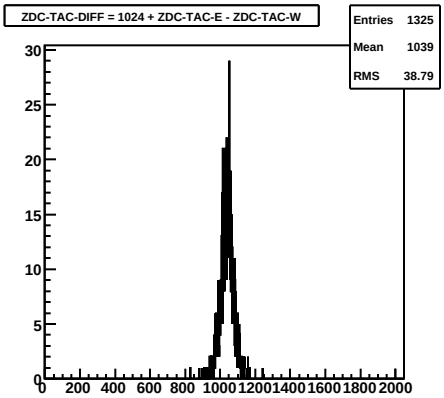

Entries 39543
VPD East ADC Sum
VPD West ADC Sum

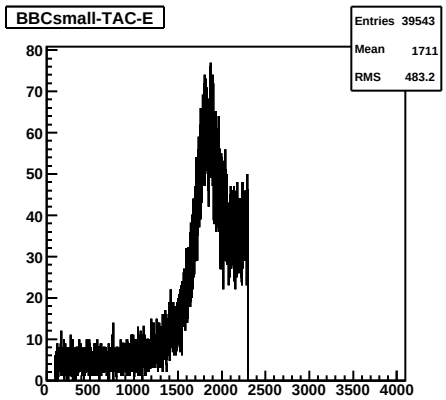

Entries 39543
ZDC East ADC Sum Att
ZDC West ADC Sum Att

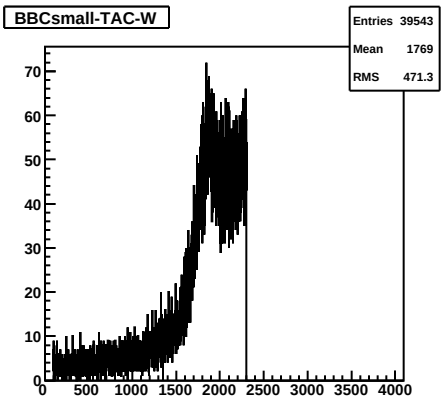

Entries 39543
BBC-L TAC Diff
BCC-S TAC Diff
Entries 39543
BBC-L TAC Diff
VPD TAC Diff
Entries 39543
BBC-L TAC Diff
ZDC TAC Diff
Entries 39543
BBC-S TAC Diff
VPD TAC Diff
Entries 39543
BBC-S TAC Diff
ZDC TAC Diff
Entries 39543
VPD TAC Diff
ZDC TAC Diff

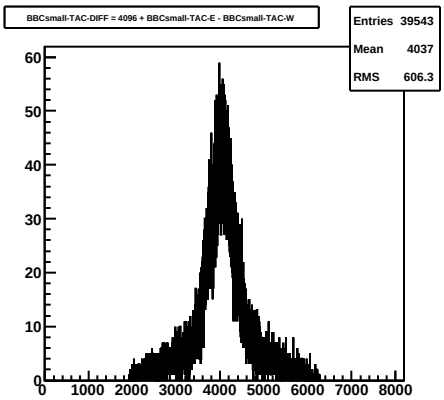

ZDC-TAC-E
Entries 5173
Mean 263.9
RMS 28.48

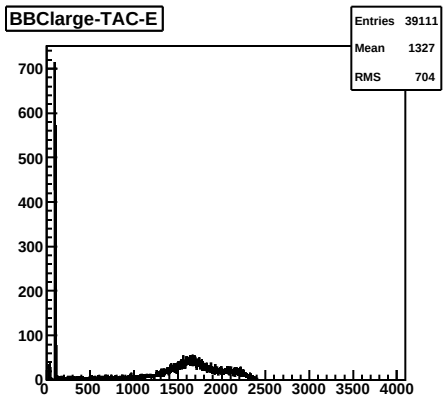

ZDC-TAC-W
Entries 5102
Mean 248.6
RMS 29

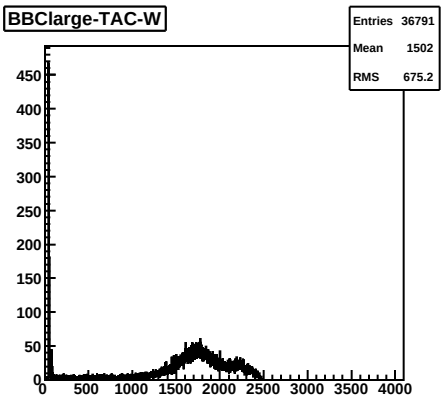

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 1325
Mean 1039
RMS 38.79

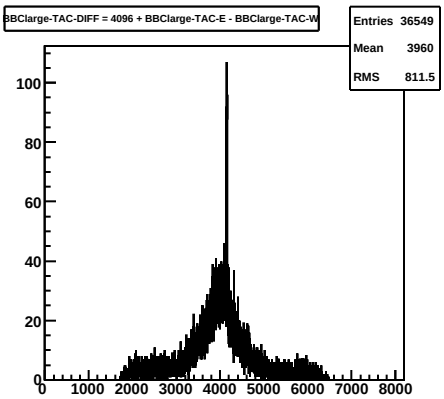

BBCsmall-TAC-E
Entries 39543
Mean 1711
RMS 483.2

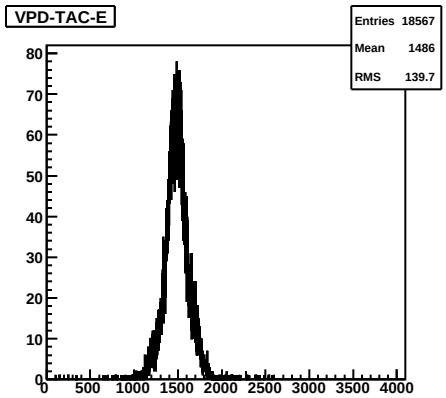

BBCsmall-TAC-W
Entries 39543
Mean 1769
RMS 471.3

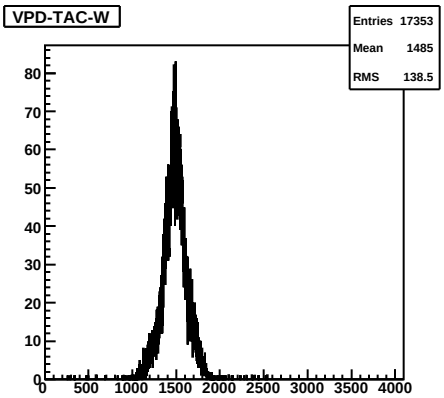

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 39543
Mean 4037
RMS 606.3

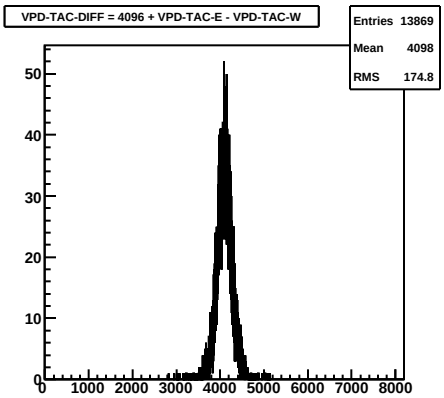

BBClarge-TAC-E
Entries 39111
Mean 1327
RMS 704

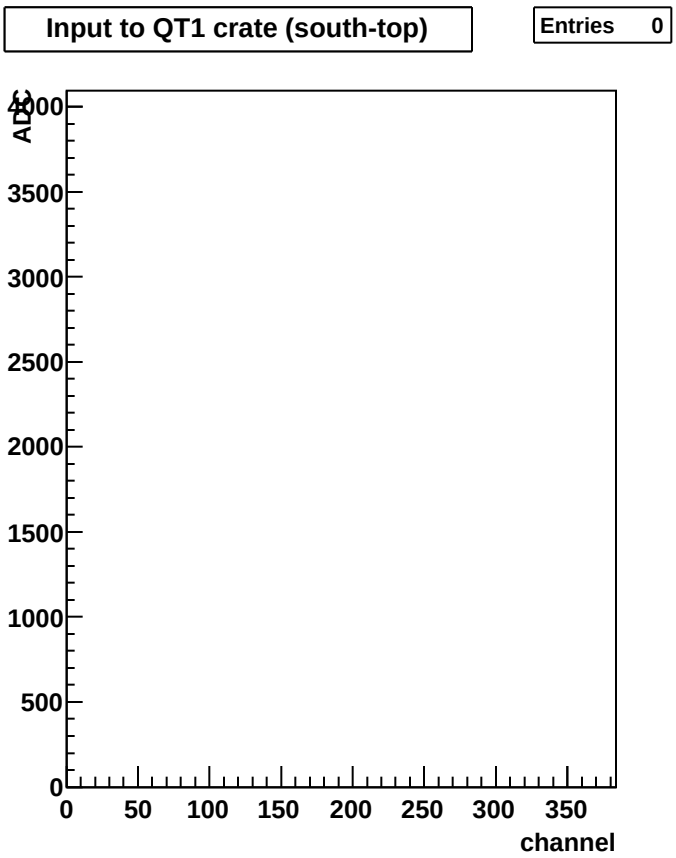

BBClarge-TAC-W
Entries 36791
Mean 1502
RMS 675.2

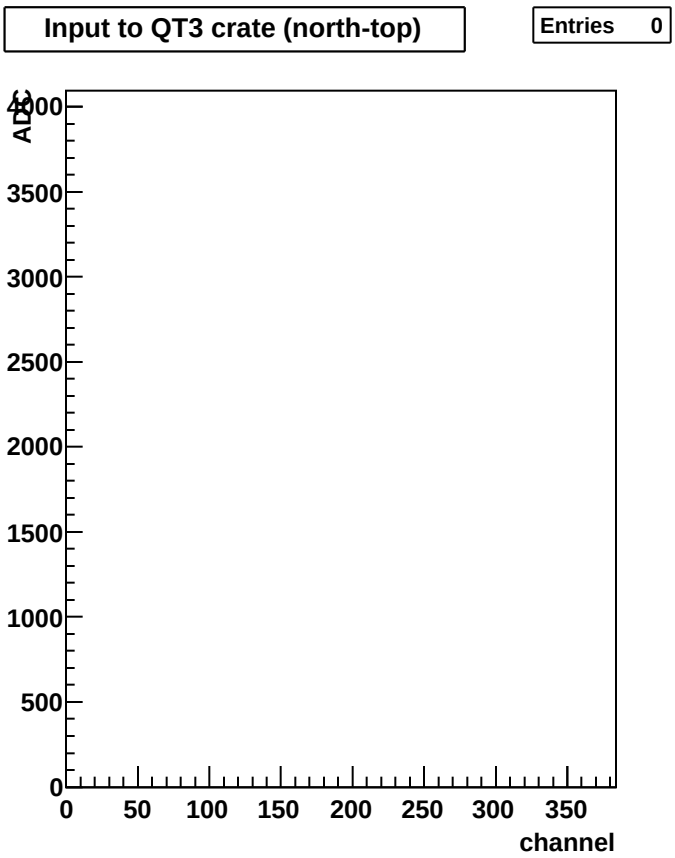

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 36549
Mean 3960
RMS 811.5

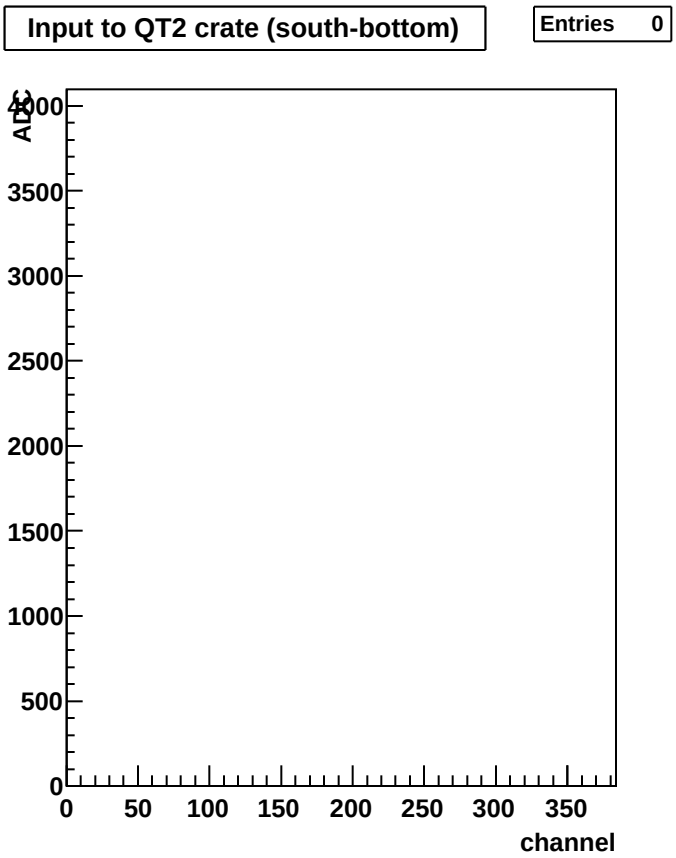

VPD-TAC-E
Entries 18567
Mean 1486
RMS 139.7

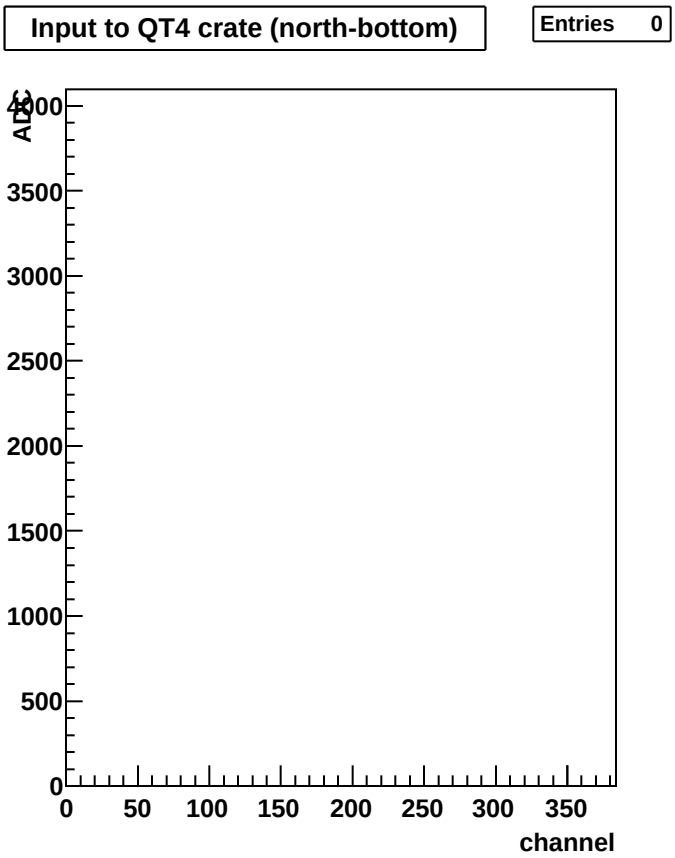

VPD-TAC-W
Entries 17353
Mean 1485
RMS 138.5

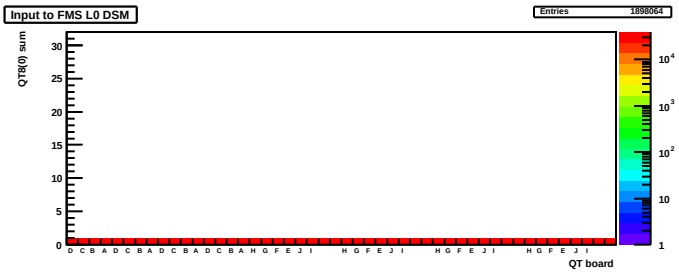

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 13869
Mean 4098
RMS 174.8

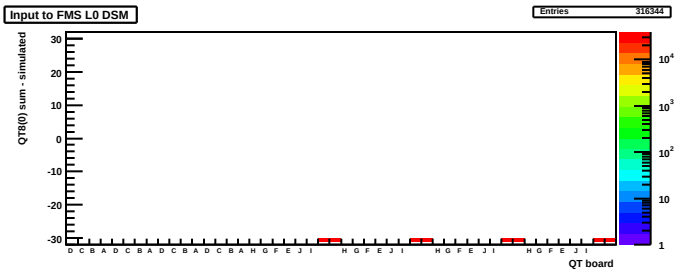

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

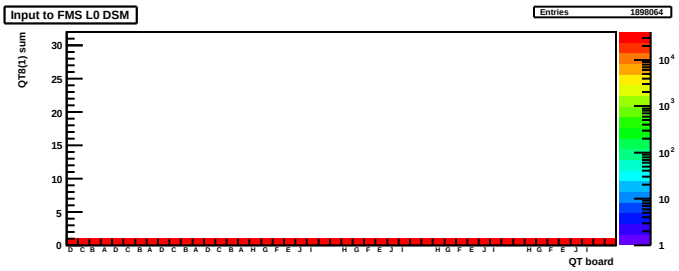

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

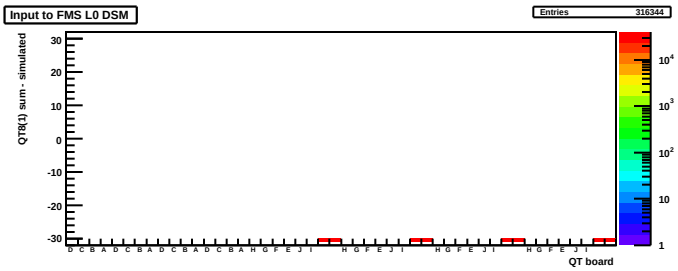

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

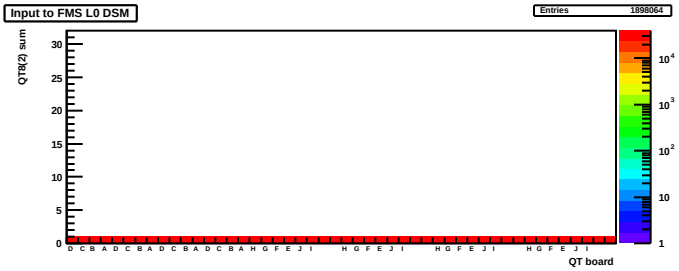

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

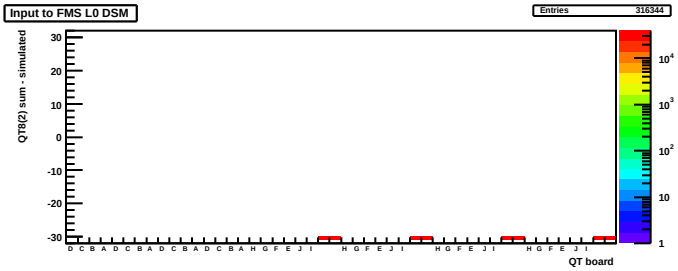

Input to FMS L0 DSM
Entries 1898064
QT8(0) sum
QT board

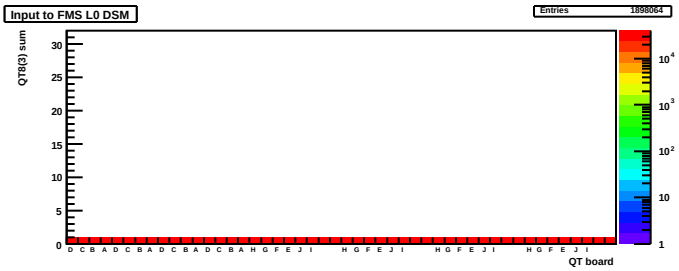

Input to FMS L0 DSM
Entries 316344
QT8(0) sum - simulated
QT board

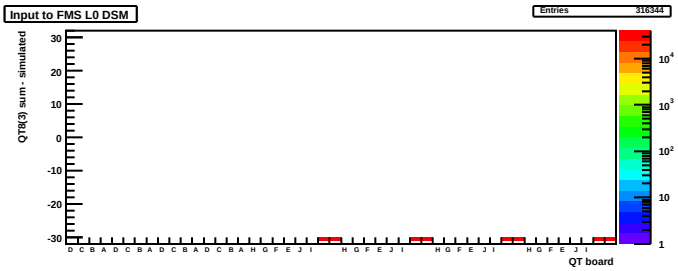

Input to FMS L0 DSM
Entries 1898064
QT8(1) sum
QT board

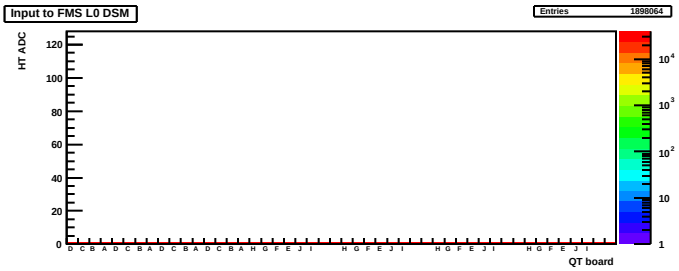

Input to FMS L0 DSM
Entries 316344
QT8(1) sum - simulated
QT board

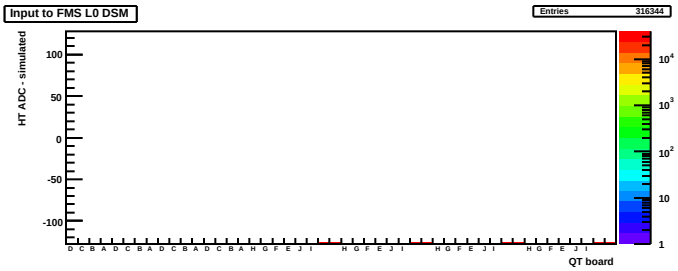

Input to FMS L0 DSM
Entries 1898064
QT8(2) sum
QT board

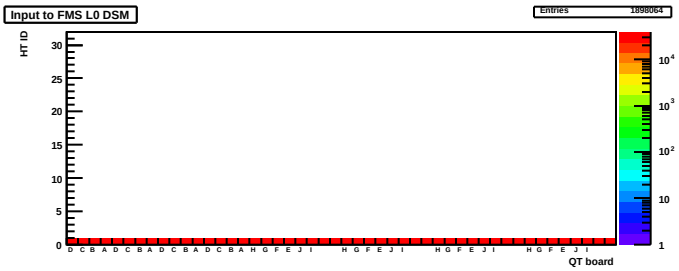

Input to FMS L0 DSM
Entries 316344
QT8(2) sum - simulated
QT board

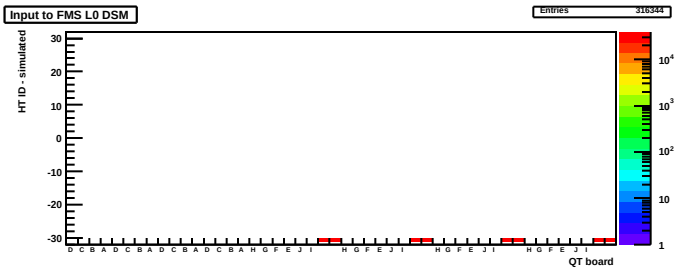

Input to FMS L0 DSM
Entries 1898064
QT8(3) sum
QT board

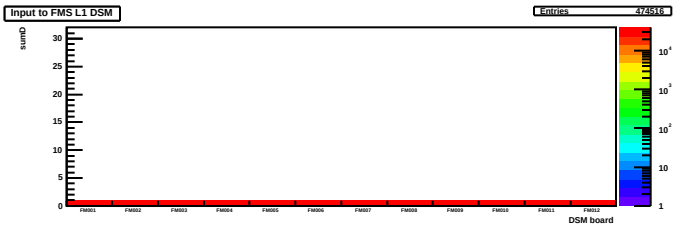

Input to FMS L0 DSM
Entries 316344
QT8(3) sum - simulated
QT board

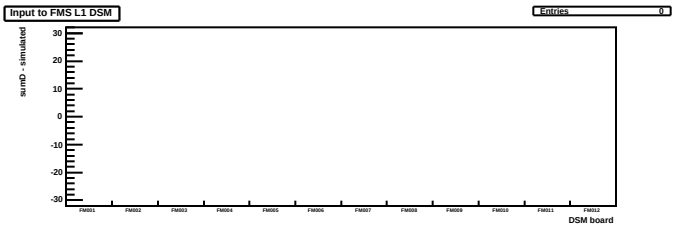

Input to FMS L0 DSM
Entries 1898064
HT ADC
QT board

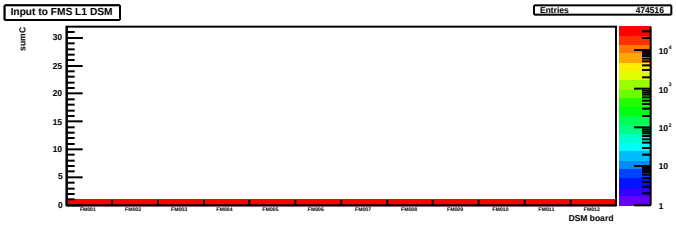

Input to FMS L0 DSM
Entries 316344
HT ADC - simulated
QT board

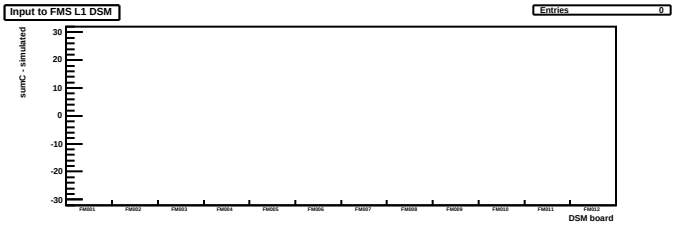

Input to FMS L0 DSM
Entries 1898064
HT ID
QT board

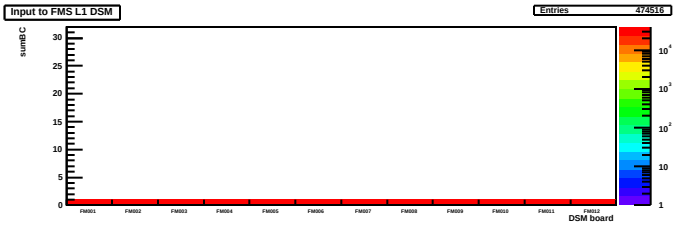

Input to FMS L0 DSM
Entries 316344
HT ID - simulated
QT board

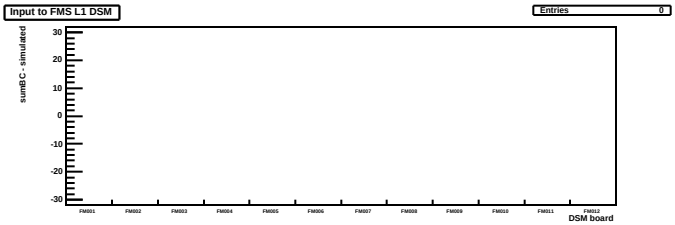

Input to FMS L1 DSM
Entries 474516
sumD
DSM board

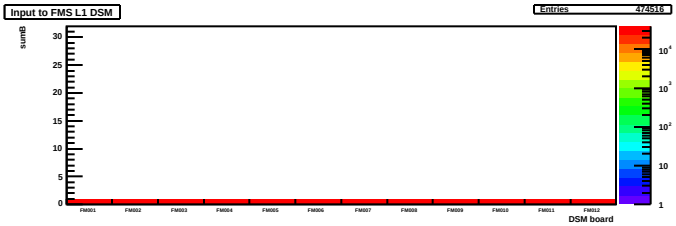

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

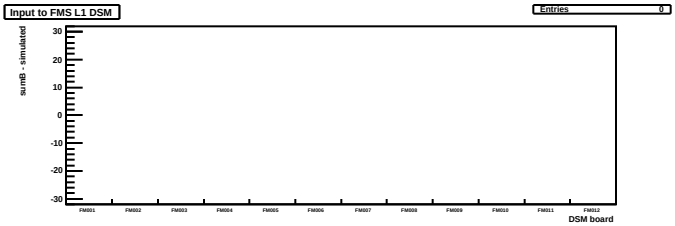

Input to FMS L1 DSM
Entries 474516
sumC
DSM board

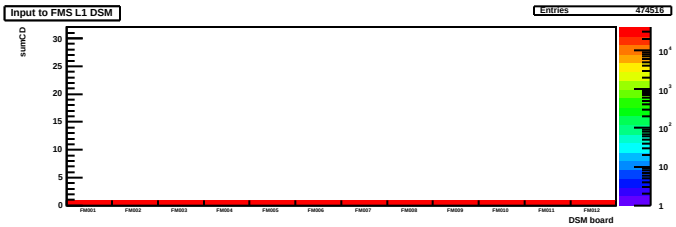

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

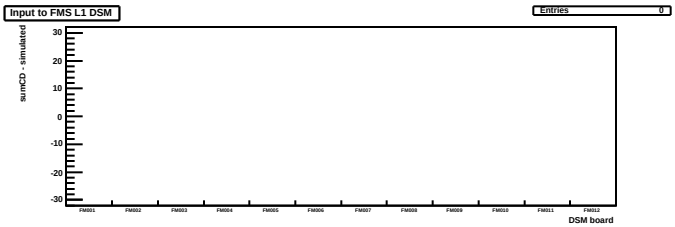

Input to FMS L1 DSM
Entries 474516
sumBC
DSM board

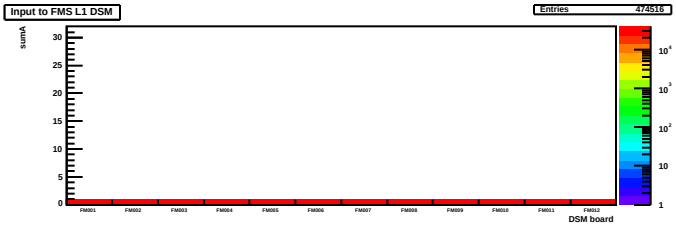

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

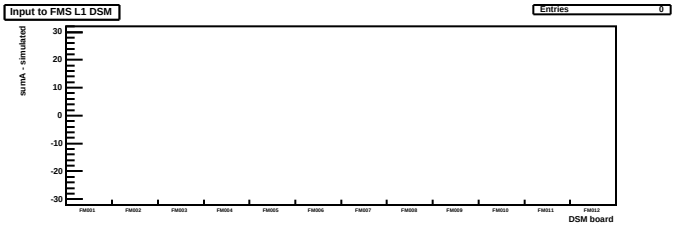

Input to FMS L1 DSM
Entries 474516
sumB
DSM board

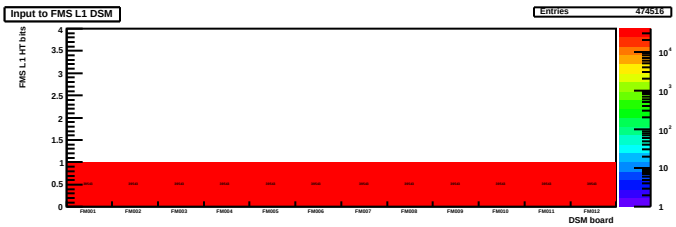

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

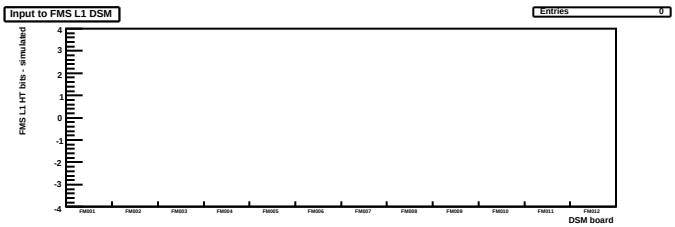

Input to FMS L1 DSM
Entries 474516
sumCD
DSM board

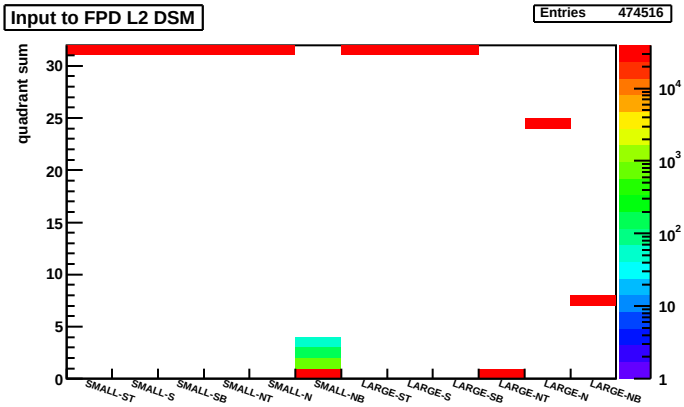

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

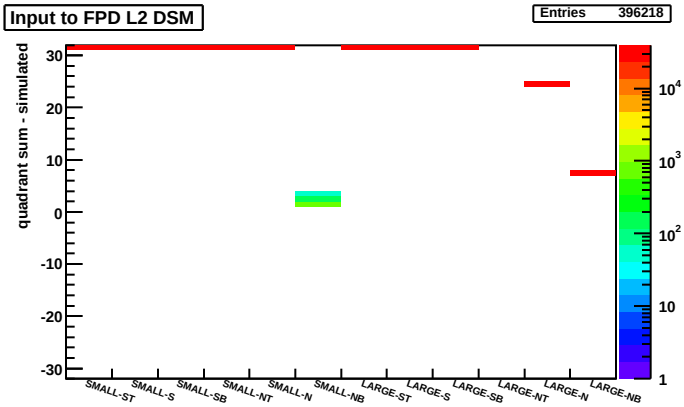

Input to FMS L1 DSM
Entries 474516
sumA
DSM board

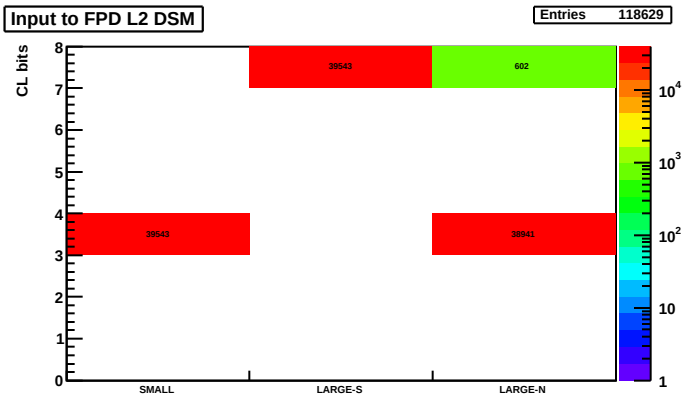

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

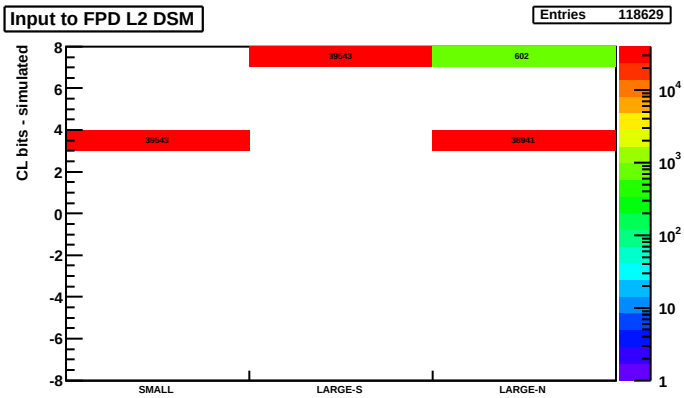

Input to FMS L1 DSM
Entries 474516
FMS L1 HT bits
DSM board

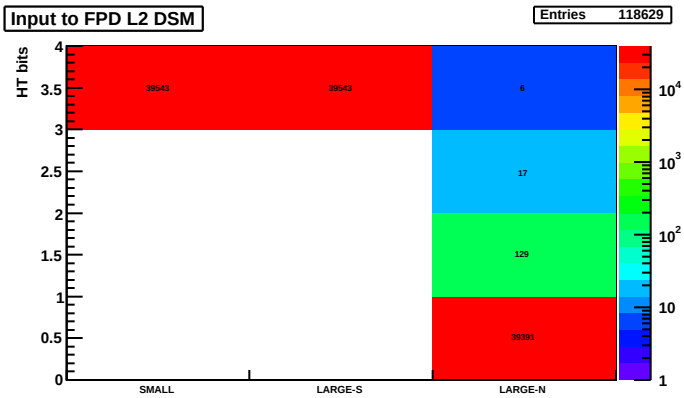

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

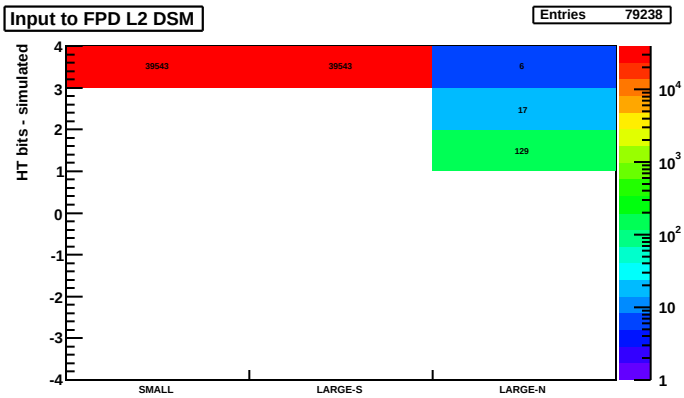

Input to FPD L2 DSM
Entries 474516
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

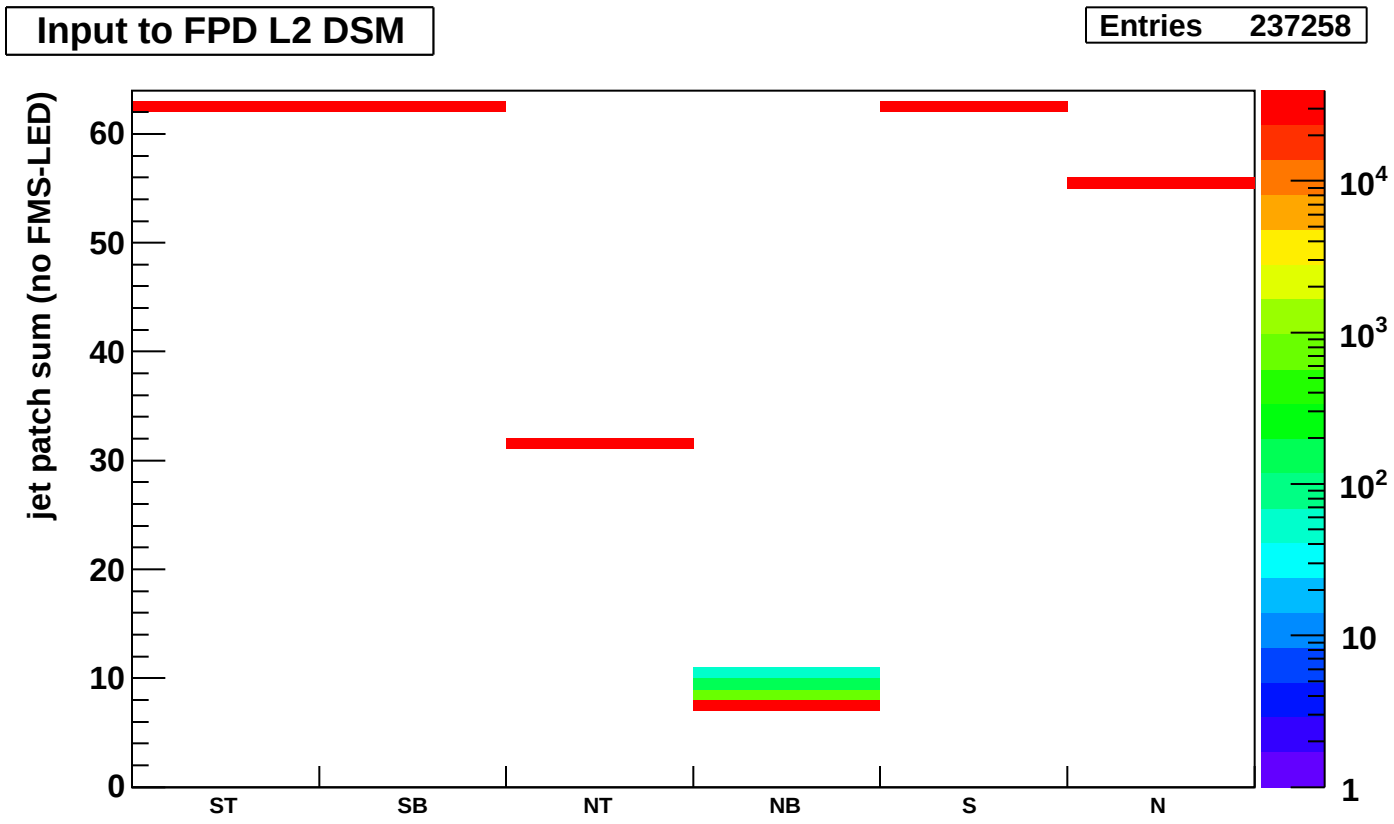

Input to FPD L2 DSM
Entries 396218
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

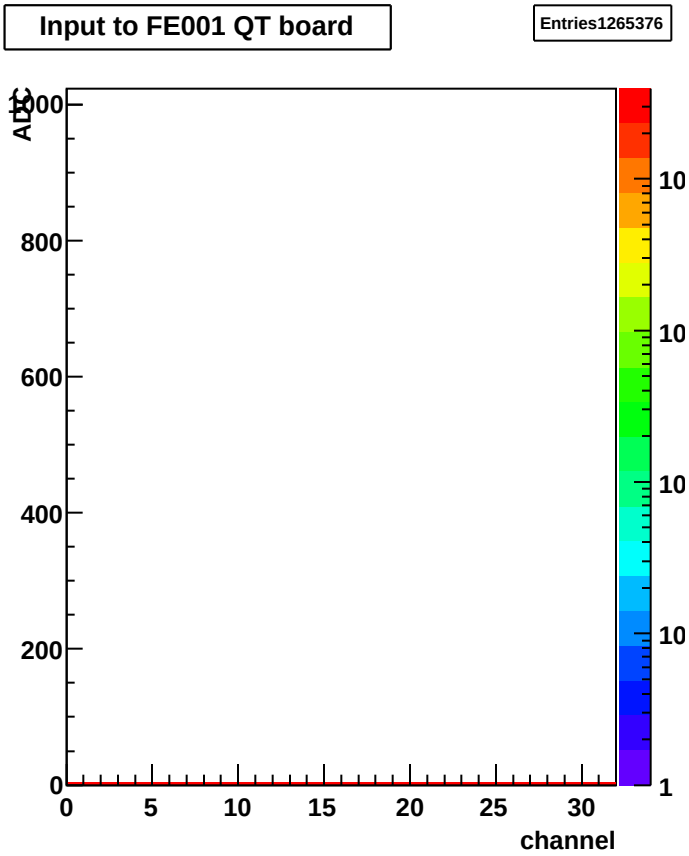

Input to FPD L2 DSM
Entries 118629
CL bits
39543
602
39543
38941
SMALL
LARGE-S
LARGE-N

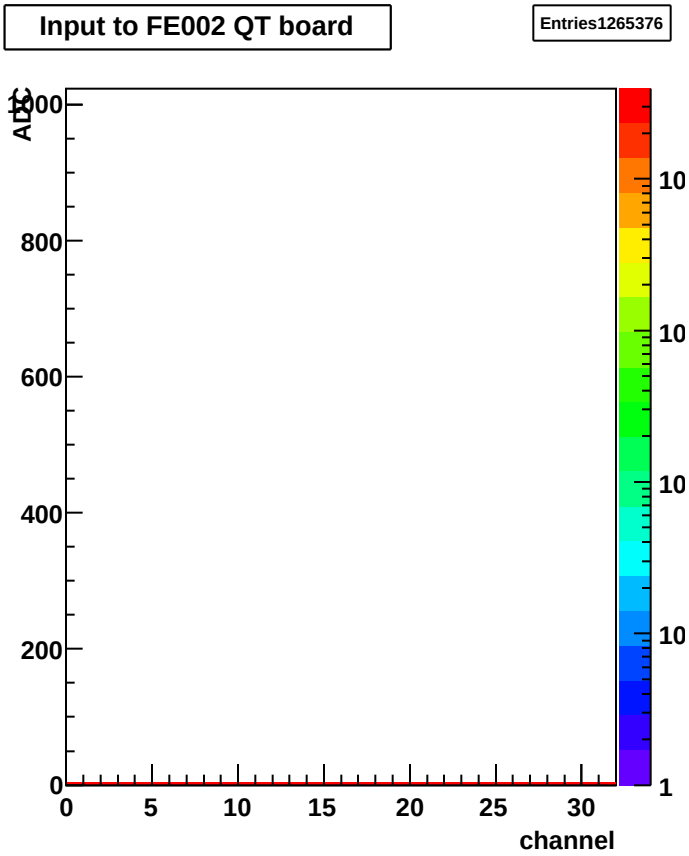

Input to FPD L2 DSM
Entries 118629
CL bits - simulated
39543
602
39543
38941
SMALL
LARGE-S
LARGE-N

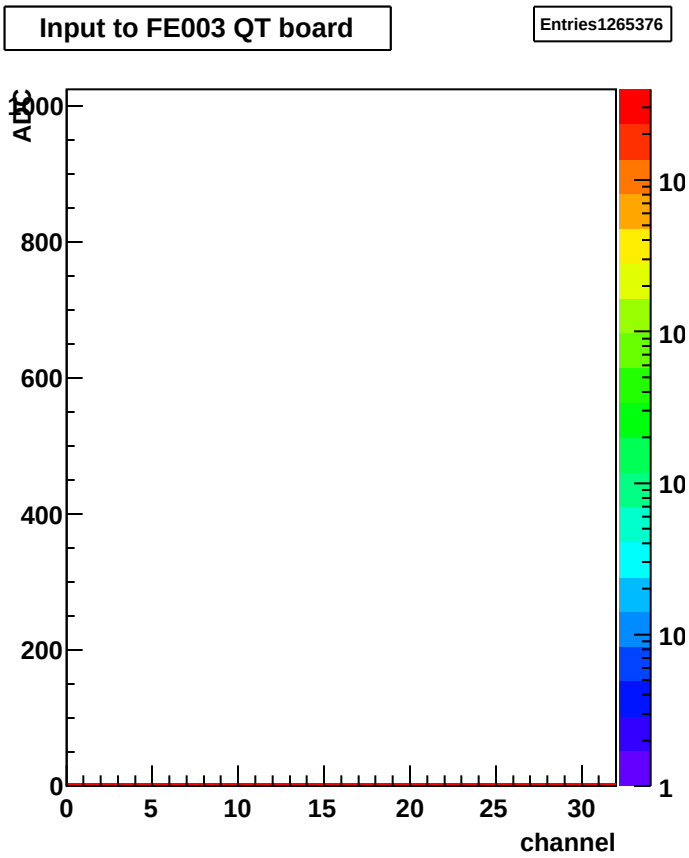

Input to FPD L2 DSM
Entries 118629
HT bits
39543
39543
6
17
129
39391
SMALL
LARGE-S
LARGE-N

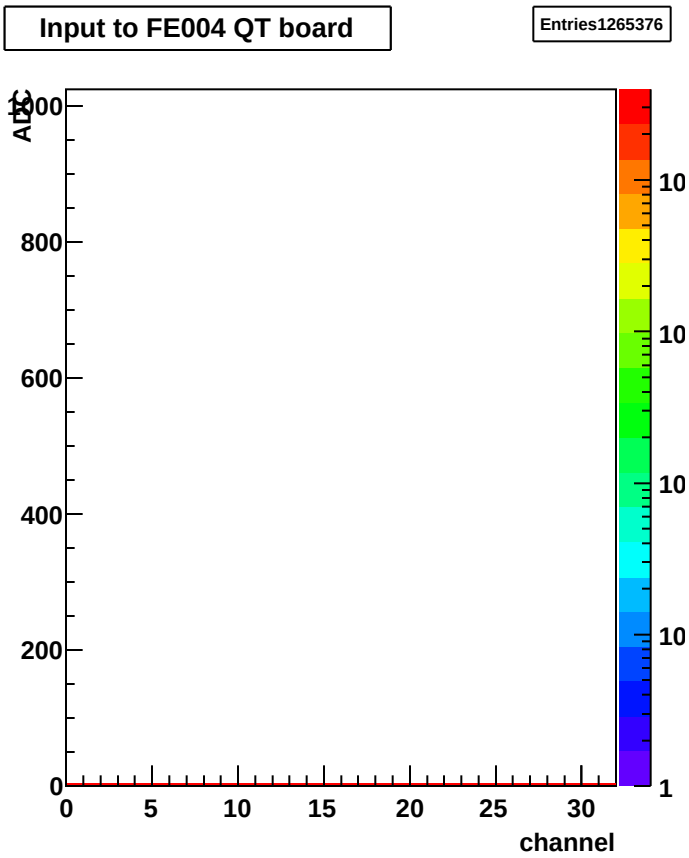

Input to FPD L2 DSM
Entries 79238
HT bits - simulated
39543
39543
6
17
129
SMALL
LARGE-S
LARGE-N

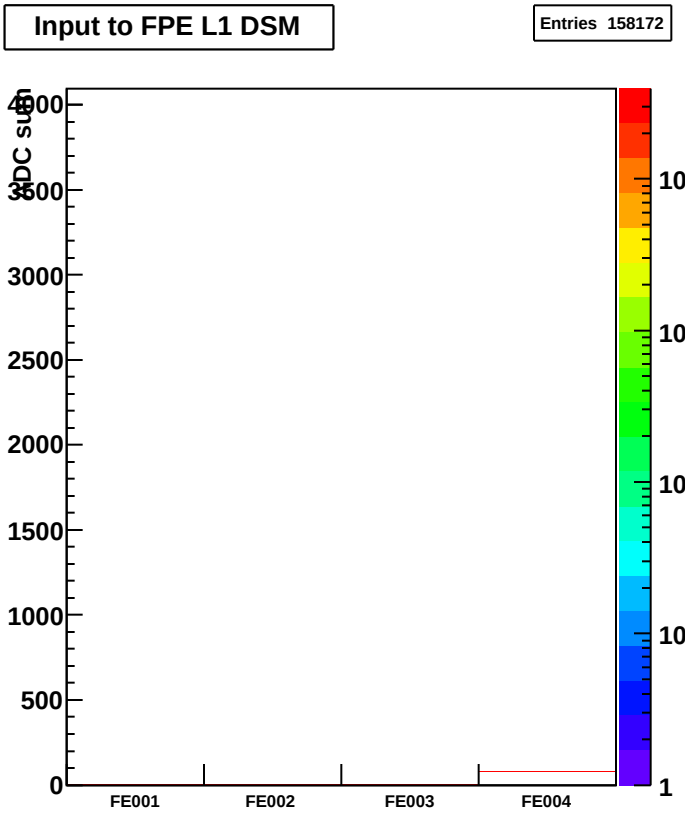

Input to FPD L2 DSM
Entries 237258
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

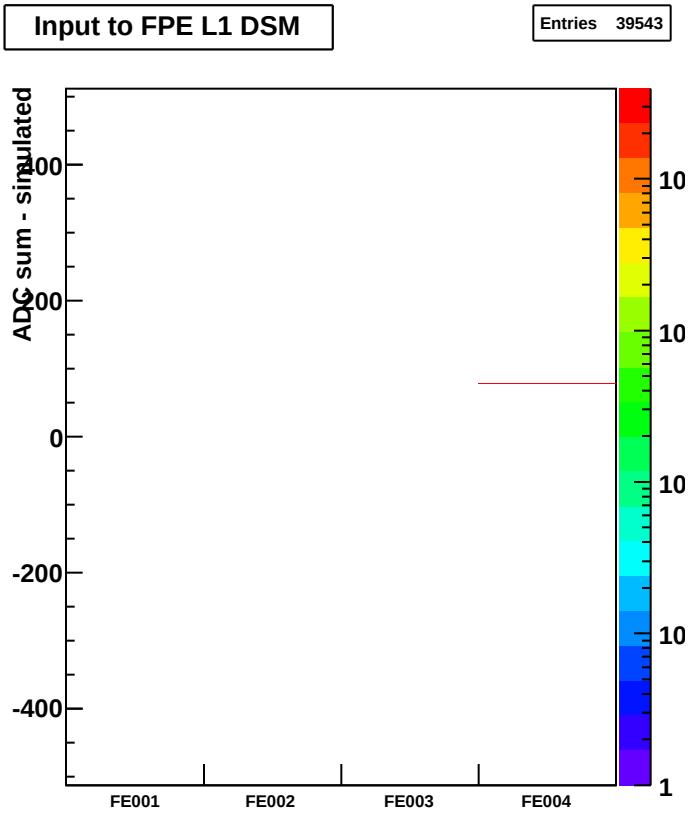

Input to FE001 QT board
Entries1265376
ADC
channel

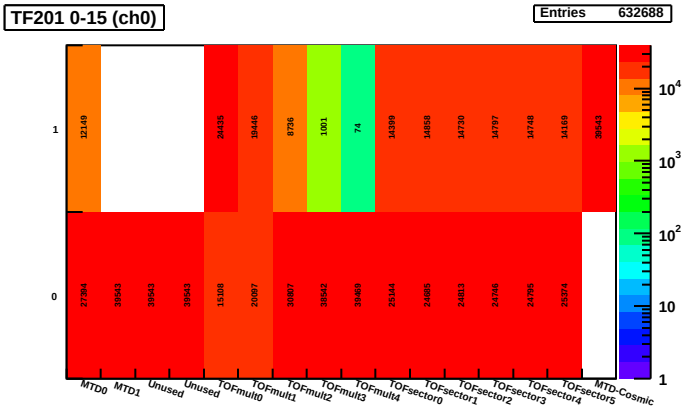

Input to FE002 QT board
Entries1265376
ADC
channel

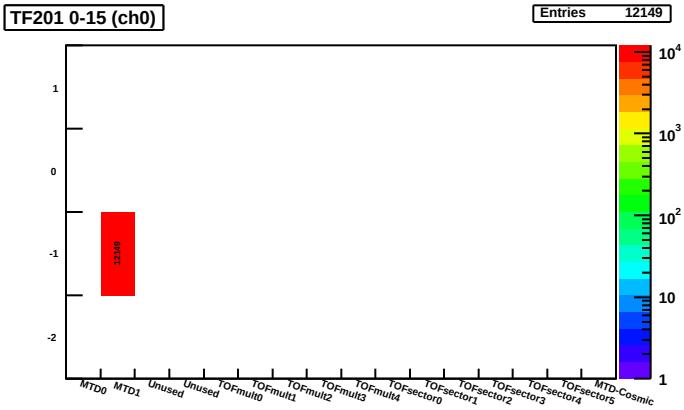

Input to FE003 QT board
Entries1265376
ADC
channel

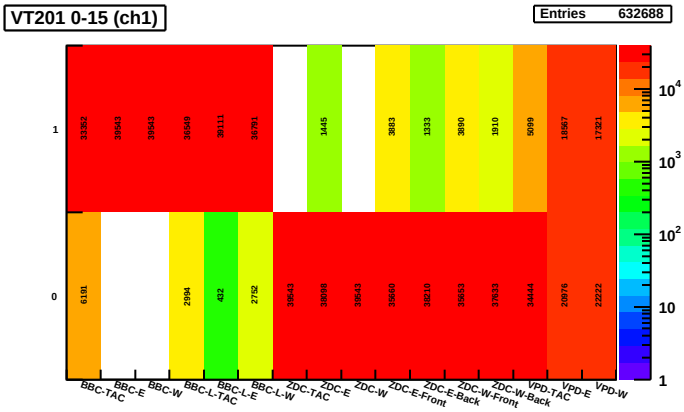

Input to FE004 QT board
Entries1265376
ADC
channel

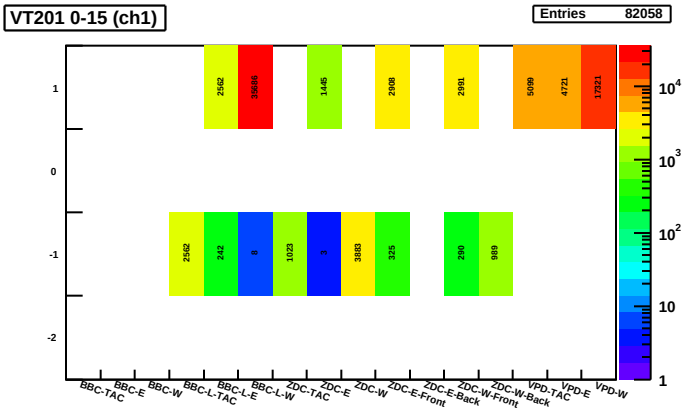

Input to FPE L1 DSM
Entries 158172
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


Input to FPE L1 DSM
Entries 39543
ADC sum - simulated
200
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1


TF201 0-15 (ch0)
Entries 632688
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 12149
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 632688
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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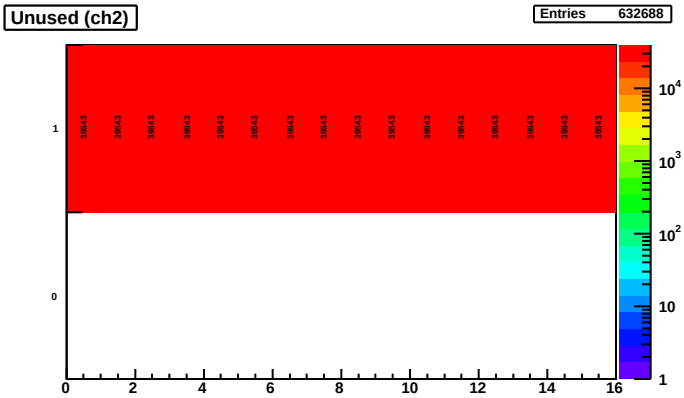
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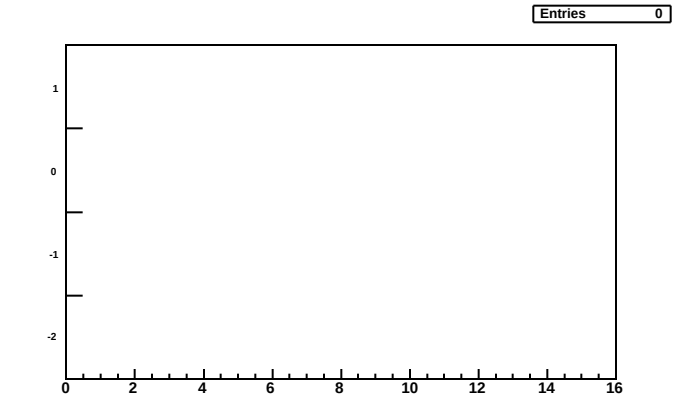
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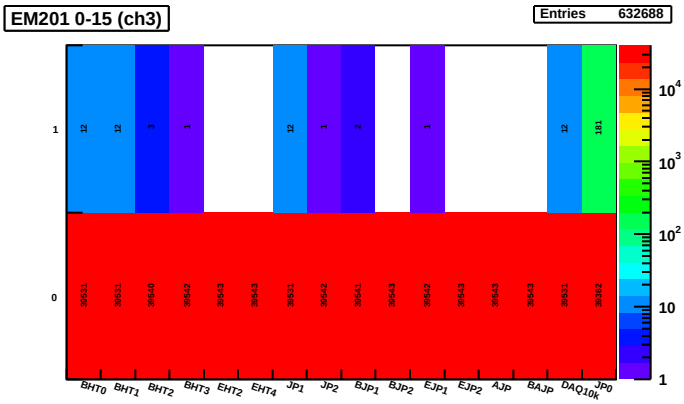
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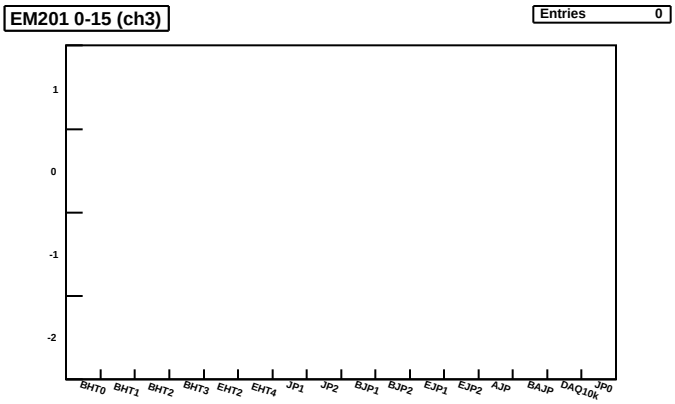
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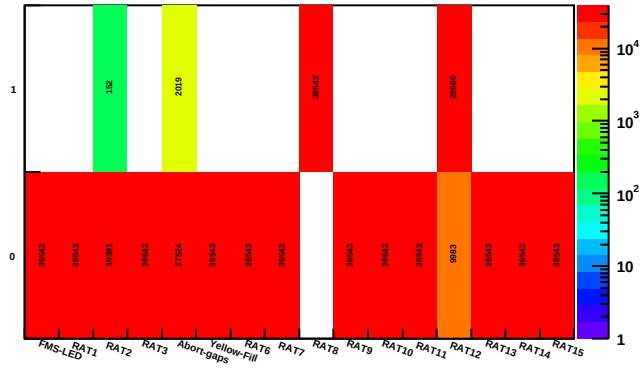
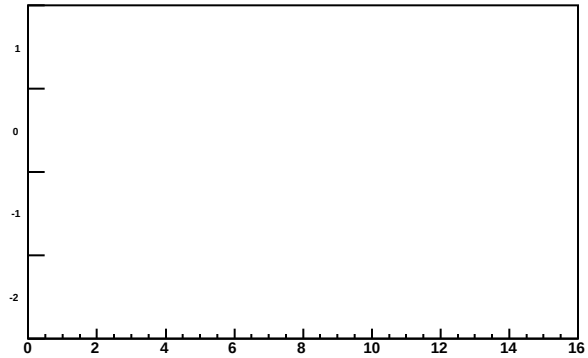
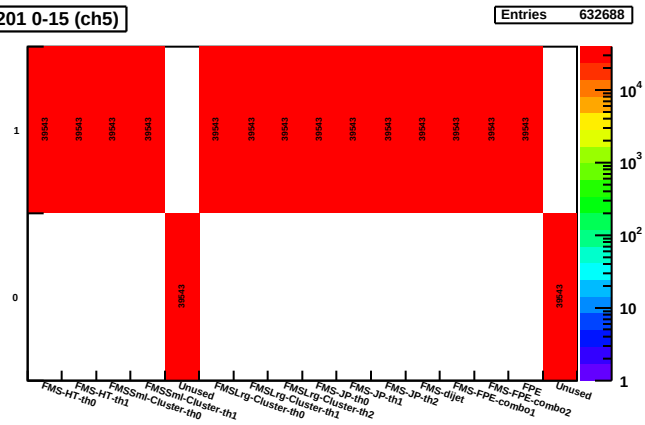
RAT board (ch4)

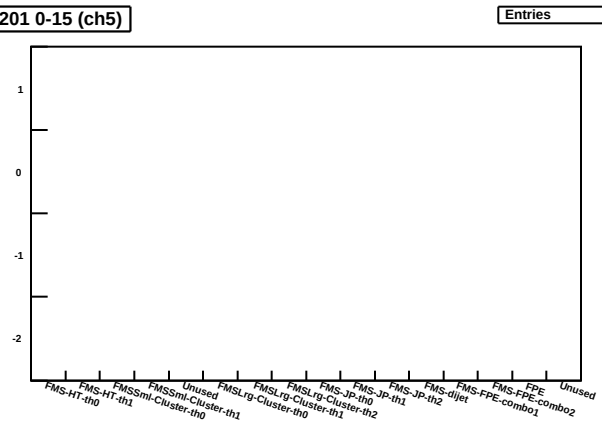




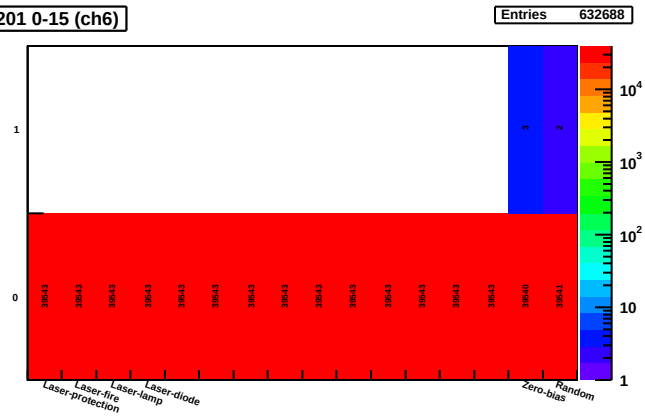
FP201 0-15 (ch5)

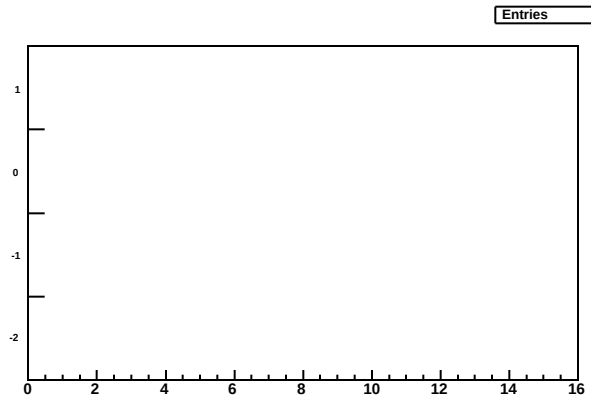
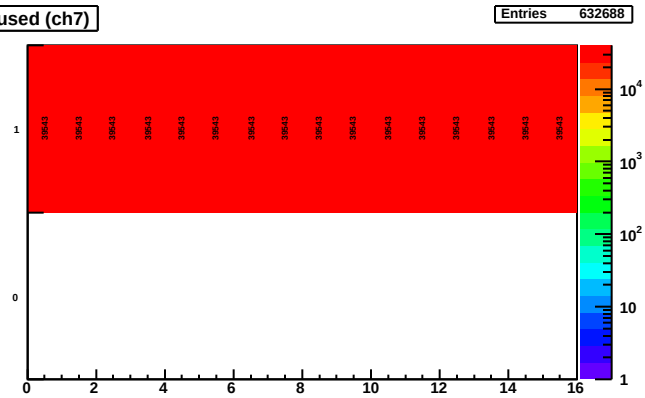
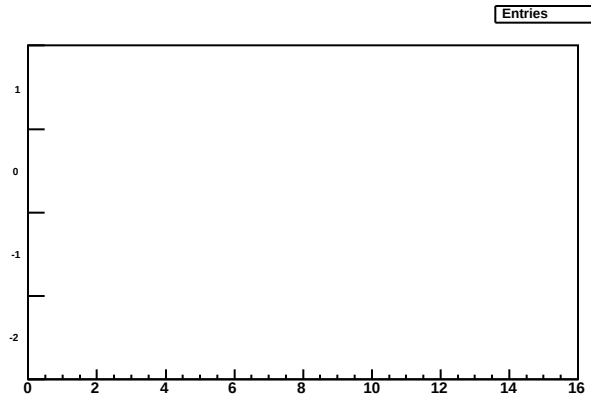


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)