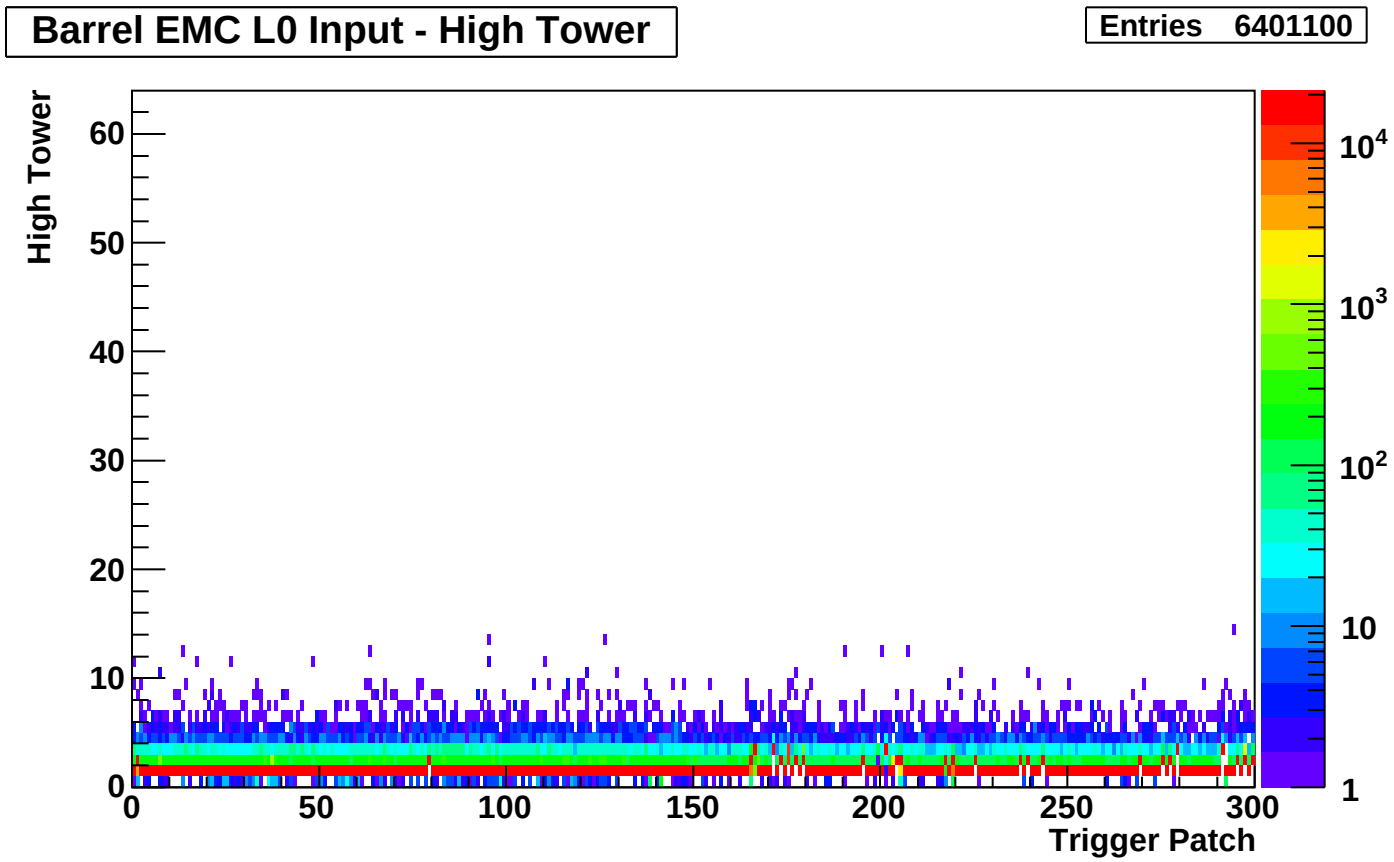
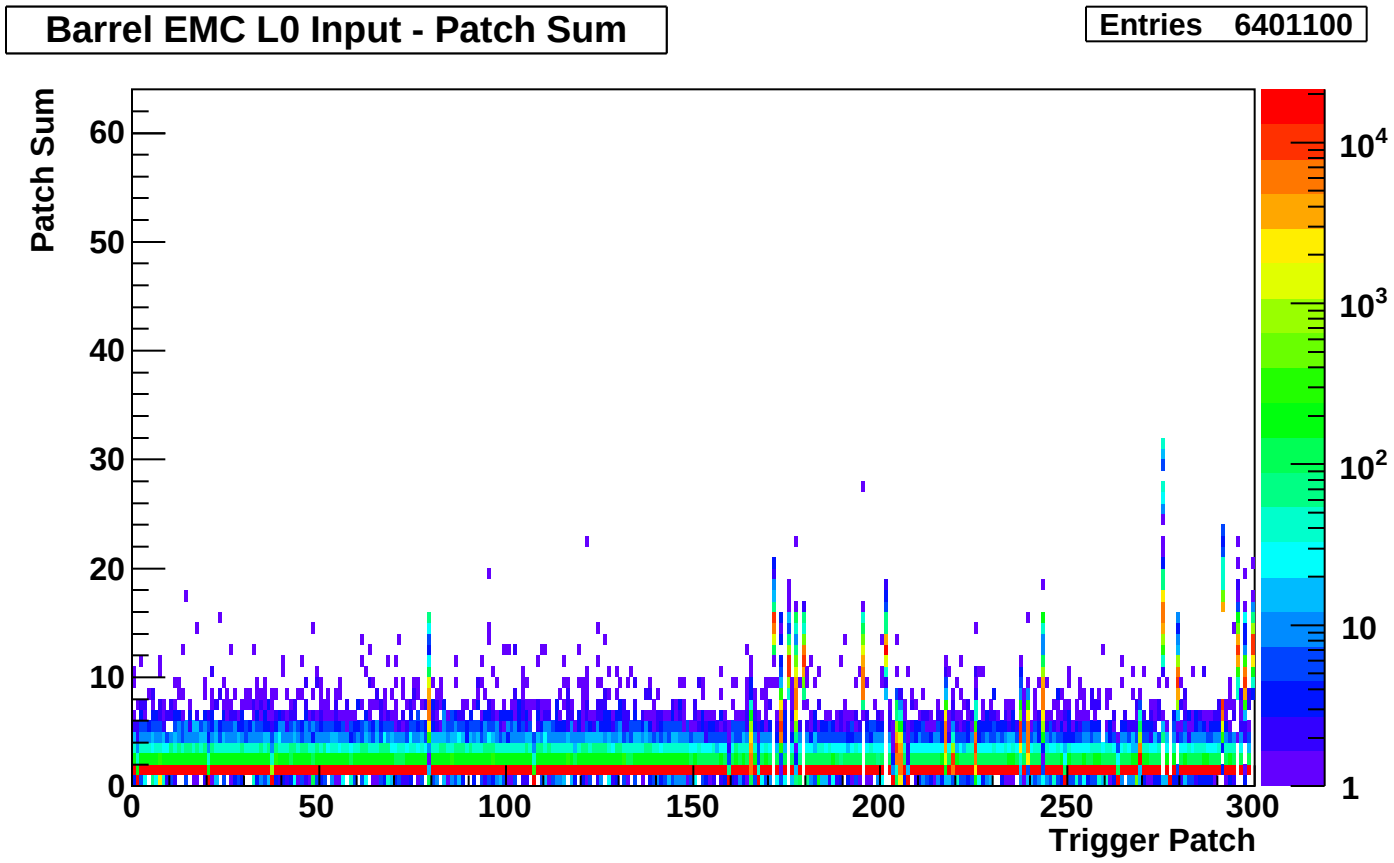
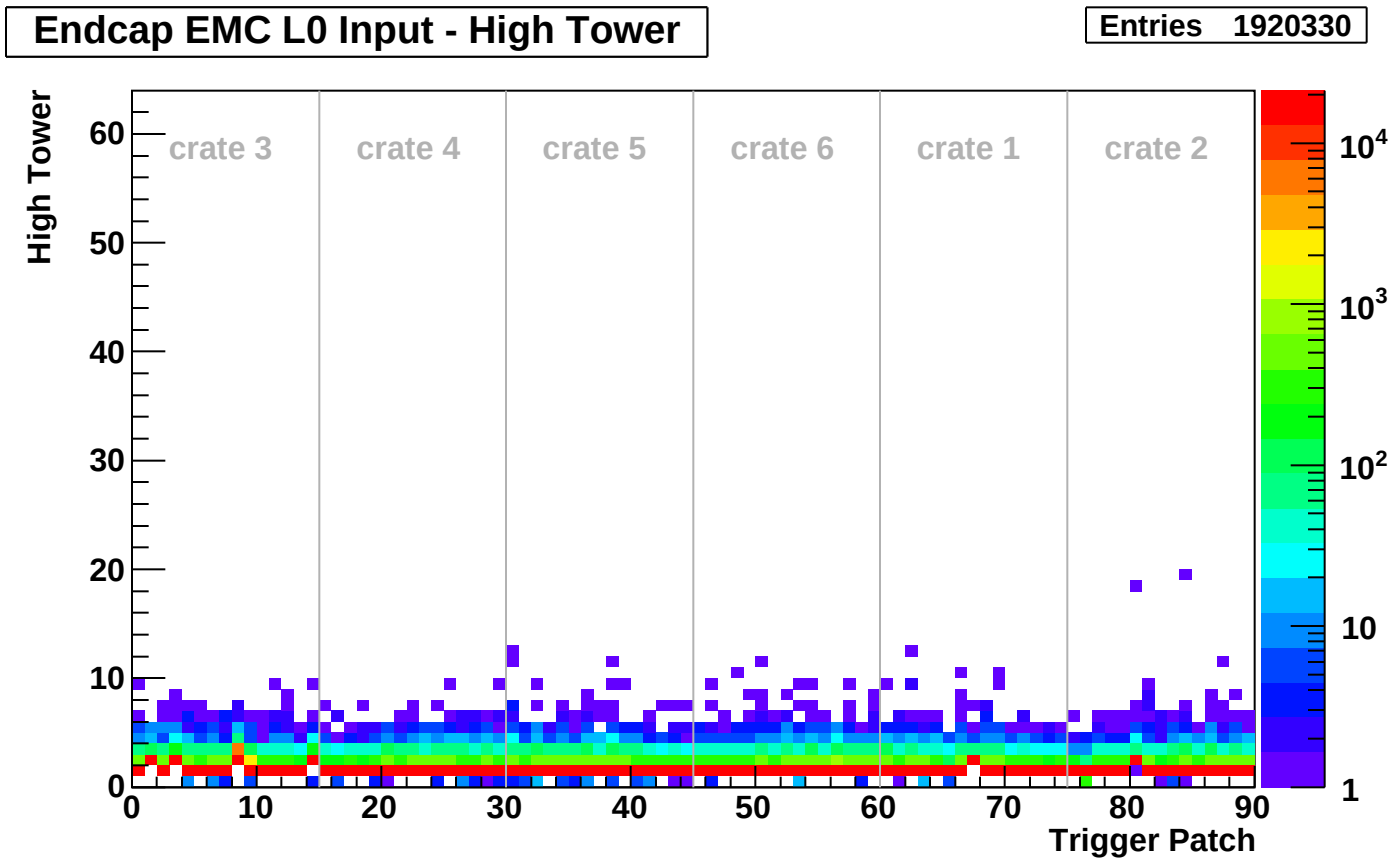
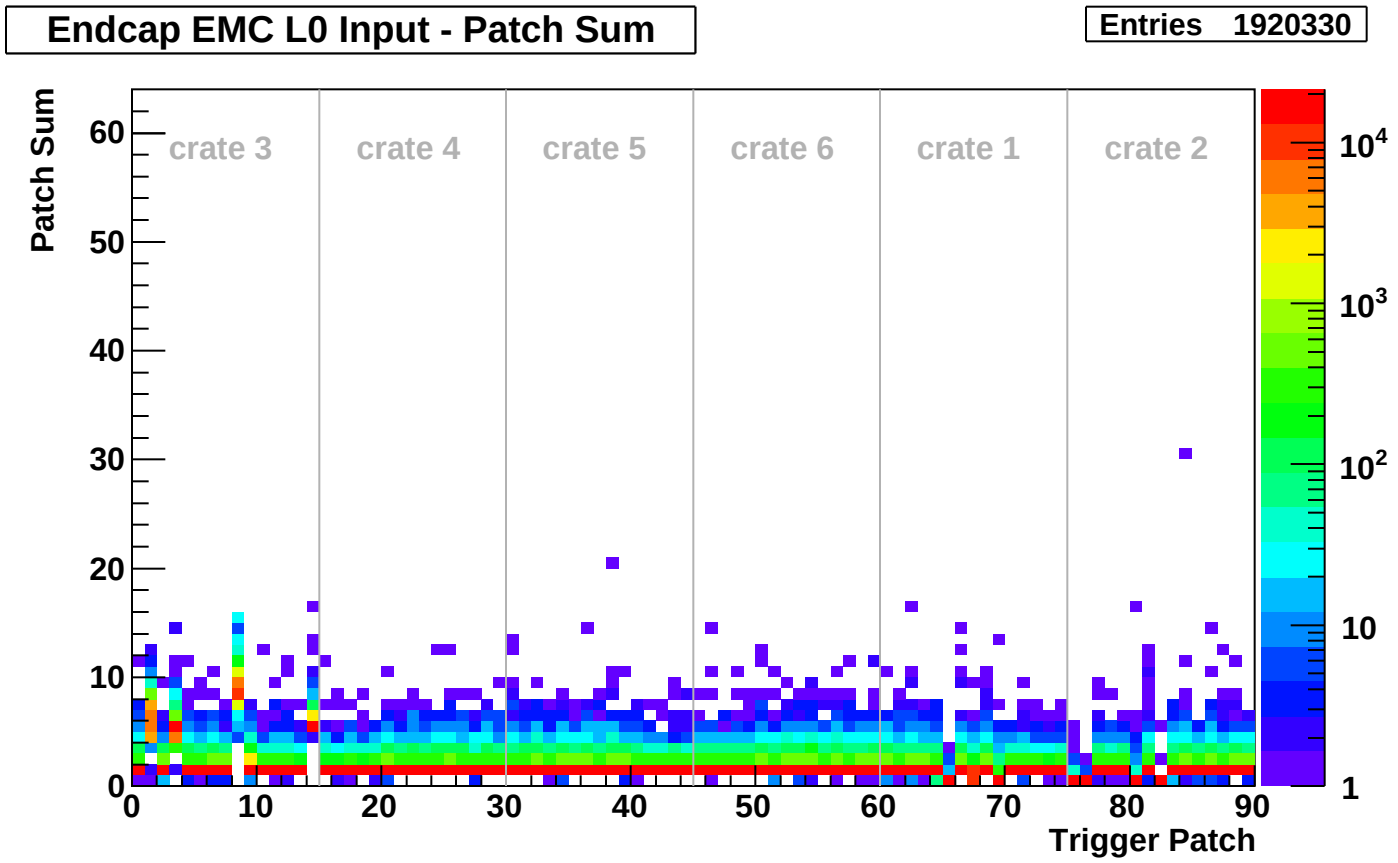
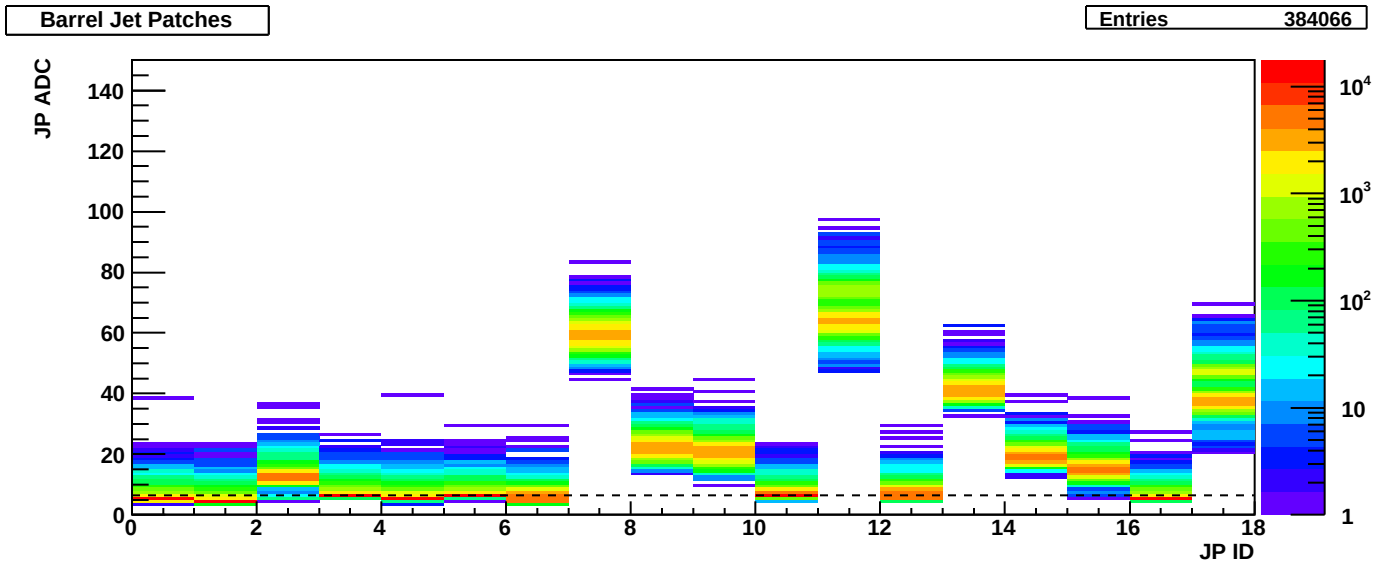
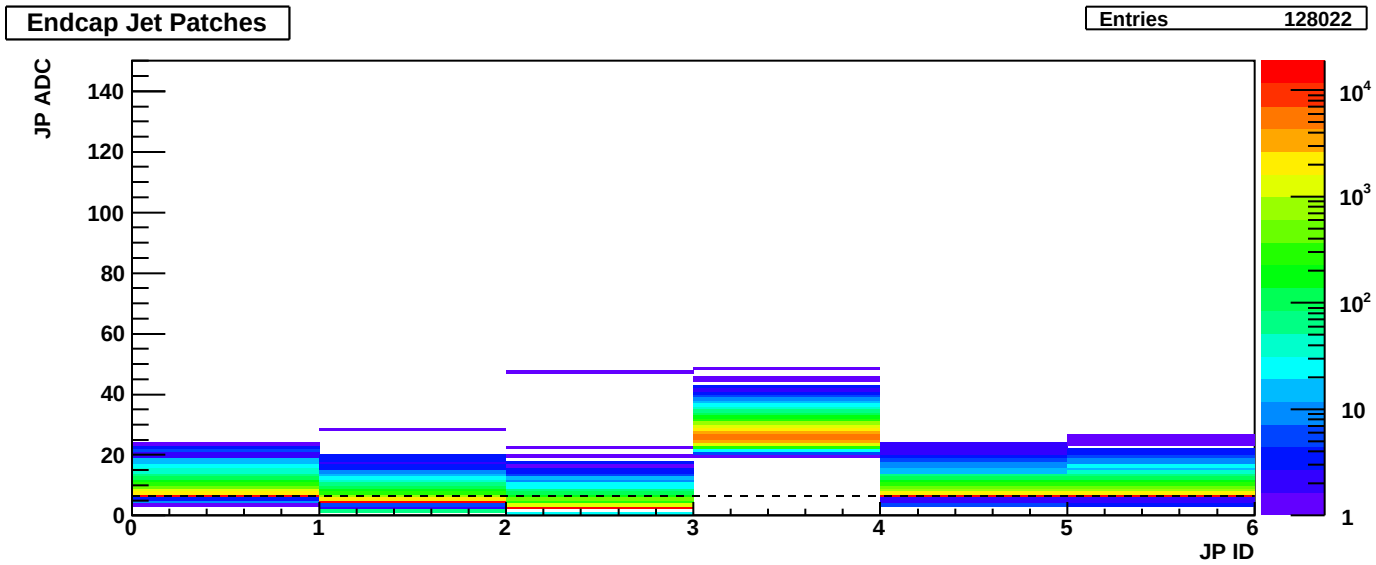

Barrel EMC L0 Input - High Tower
Entries 6401100
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

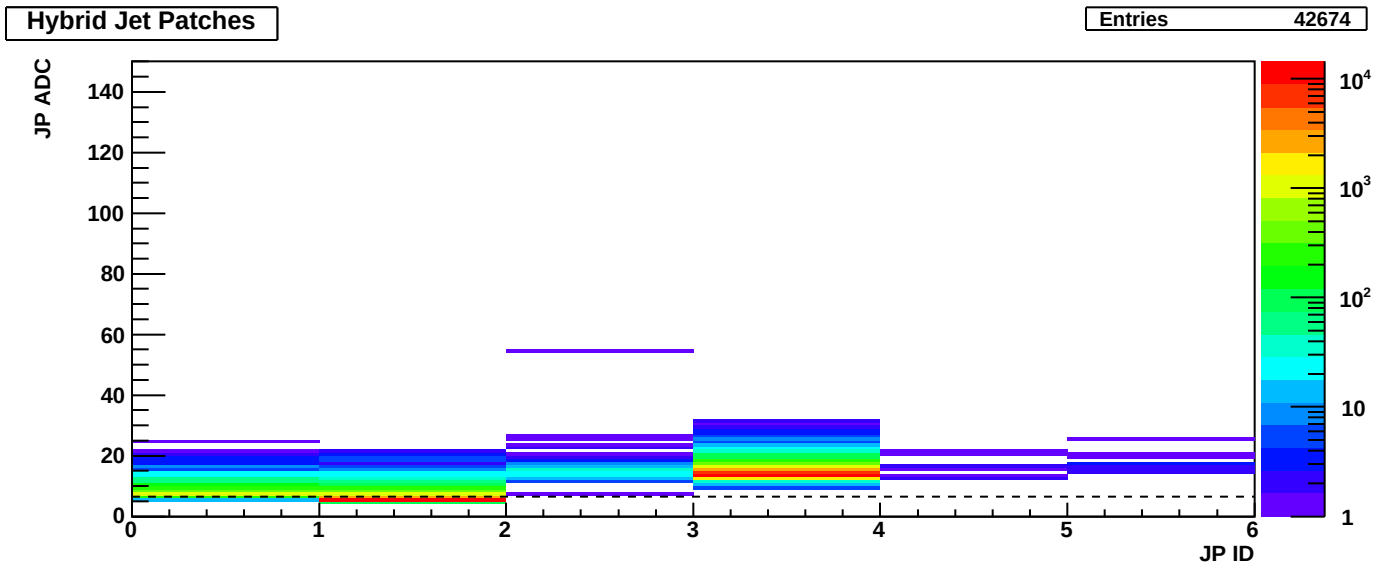

Barrel EMC L0 Input - Patch Sum
Entries 6401100
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

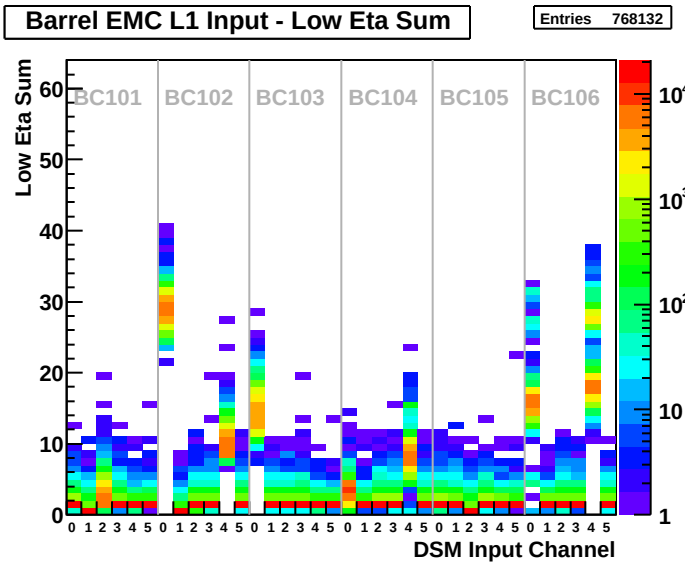

Endcap EMC L0 Input - High Tower
Entries 1920330
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

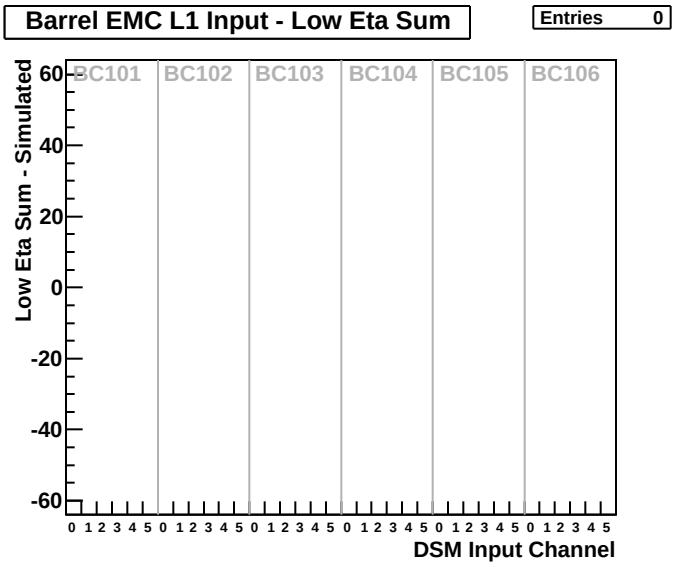

Endcap EMC L0 Input - Patch Sum
Entries 1920330
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

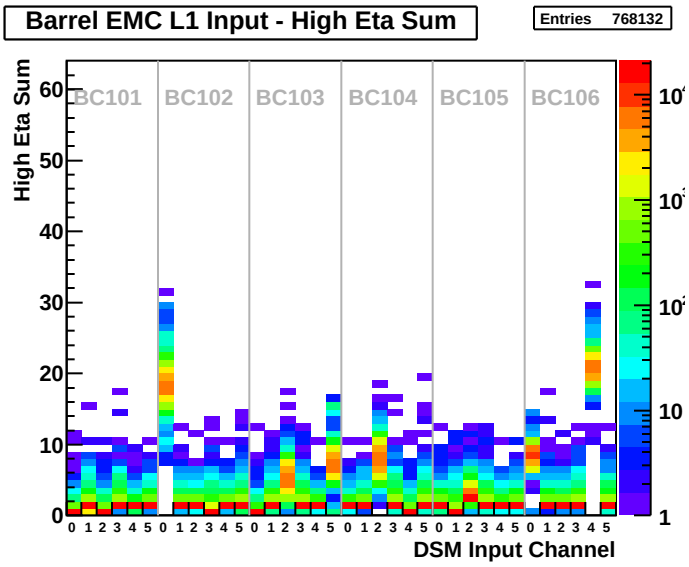

Barrel Jet Patches
Entries 384066
JP ADC
JP ID

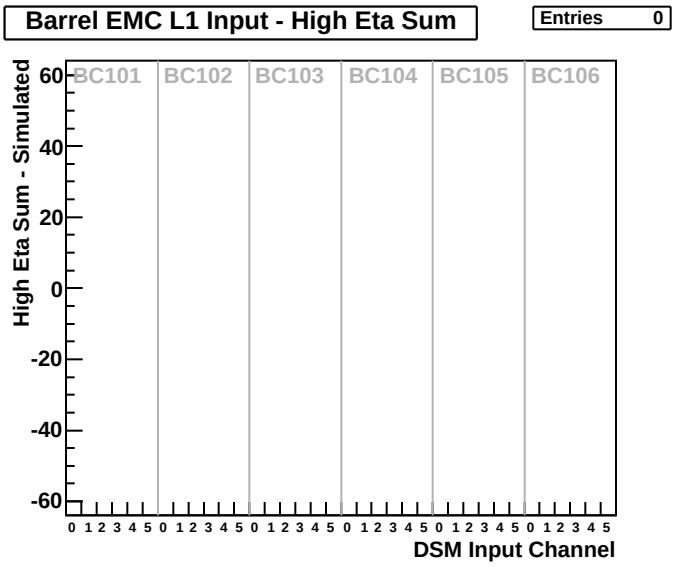

Endcap Jet Patches
Entries 128022
JP ADC
JP ID

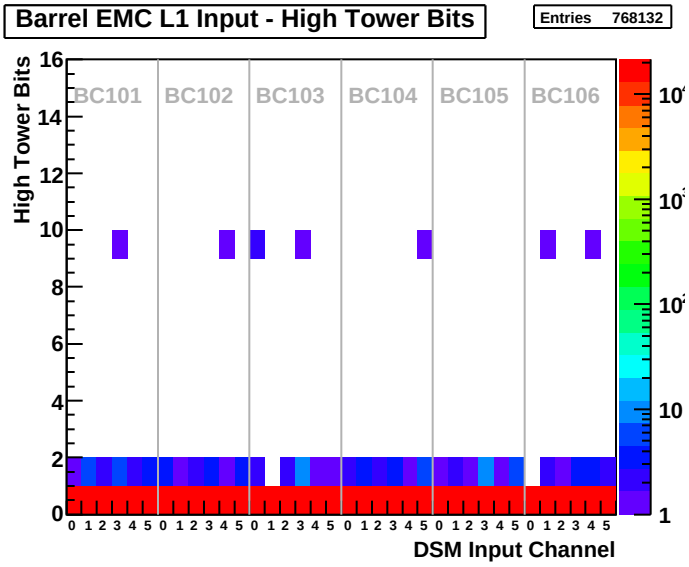

Hybrid Jet Patches
Entries 42674
JP ADC
JP ID

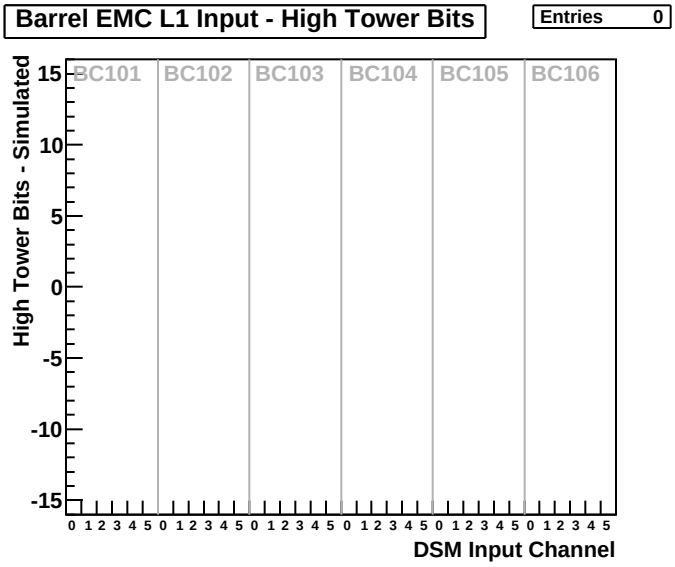

Barrel EMC L1 Input - Low Eta Sum
Entries 768132
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

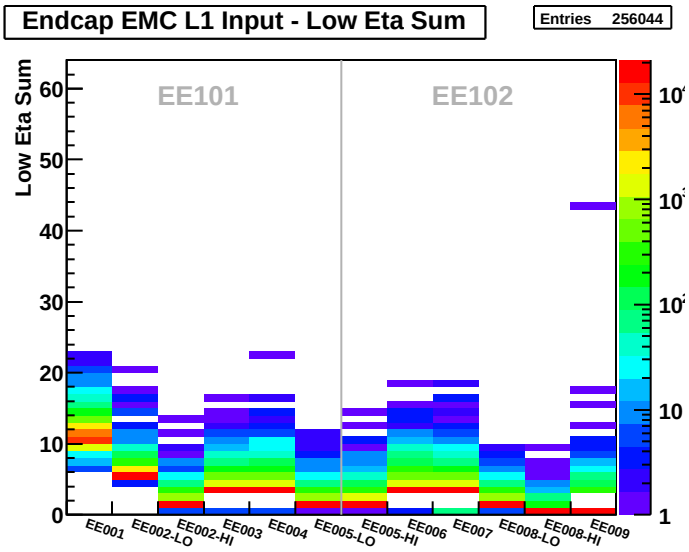

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

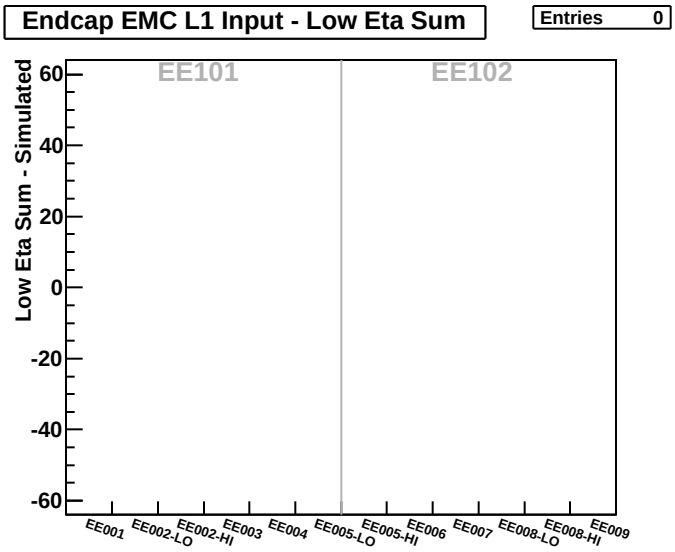

Barrel EMC L1 Input - High Eta Sum
Entries 768132
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

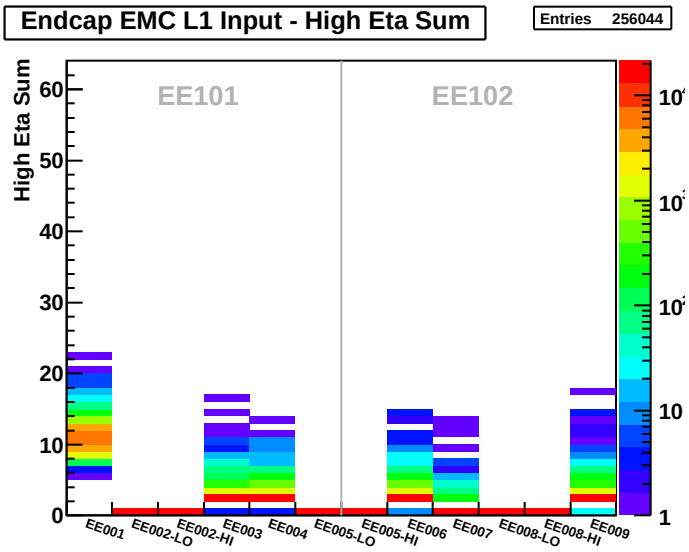

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

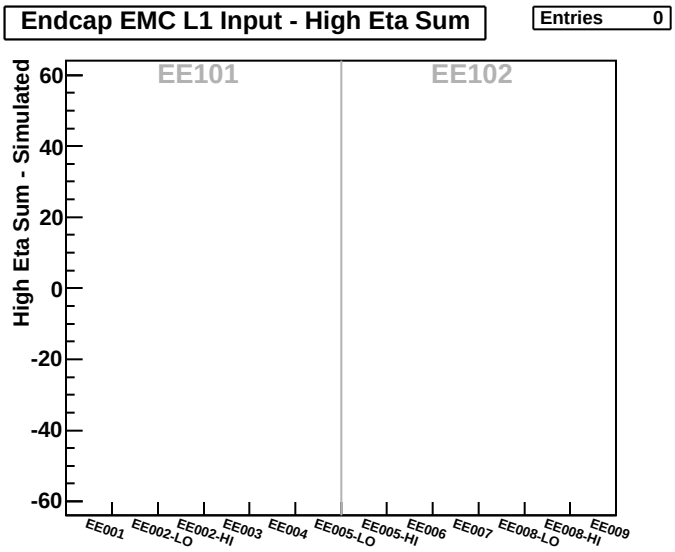

Barrel EMC L1 Input - High Tower Bits
Entries 768132
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

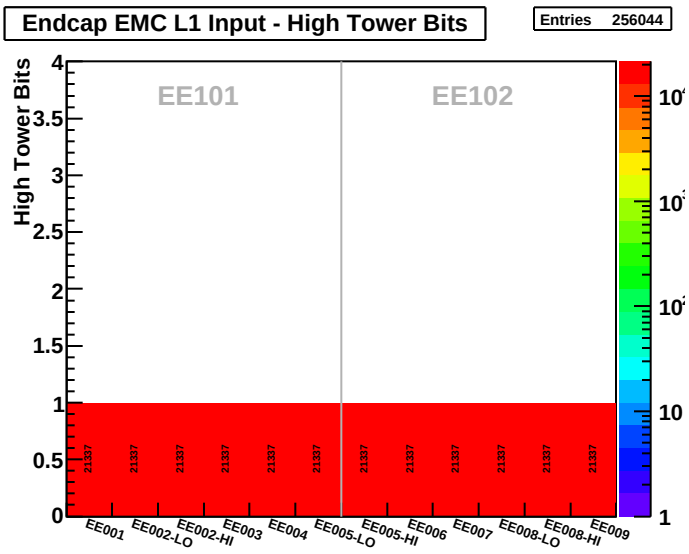

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

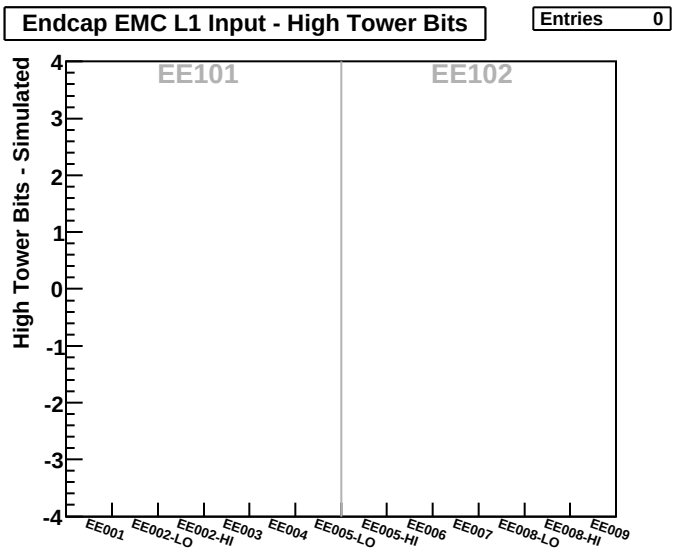

Endcap EMC L1 Input - Low Eta Sum
Entries 256044
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

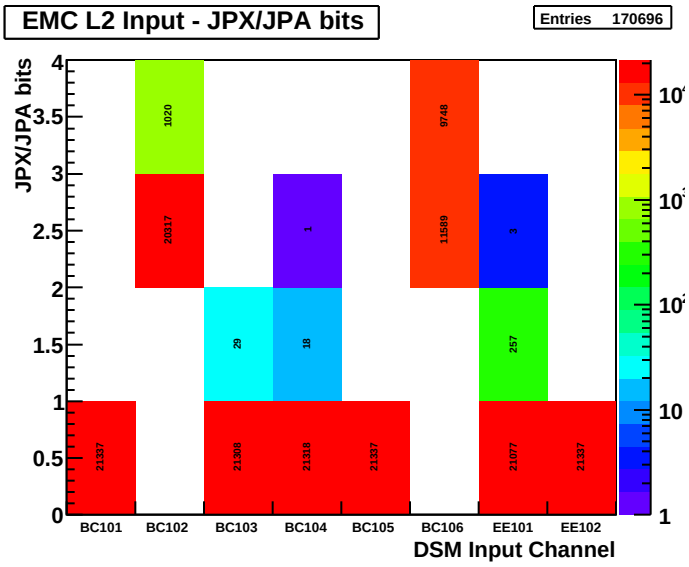

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

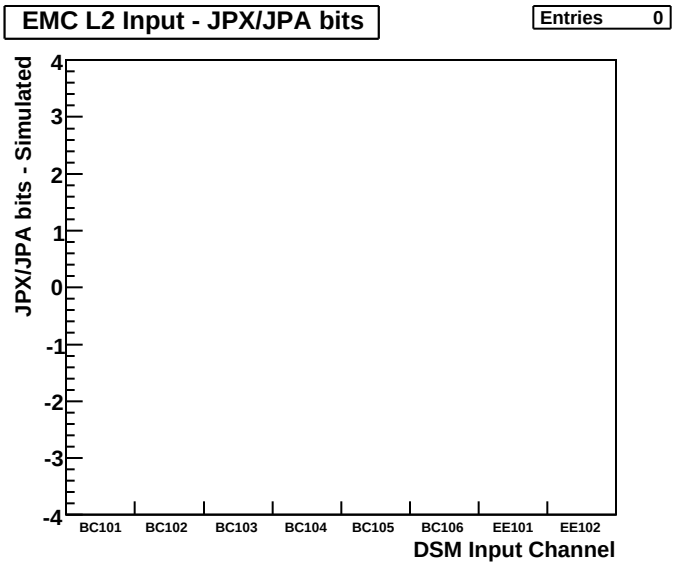

Endcap EMC L1 Input - High Eta Sum
Entries 256044
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

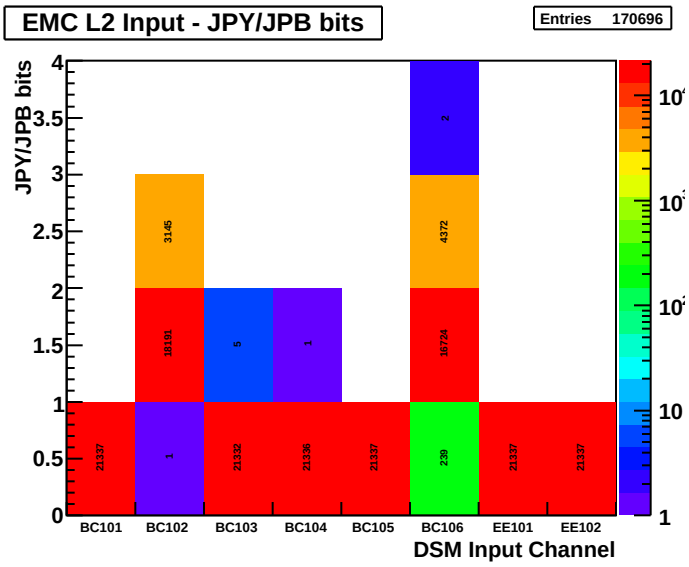

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

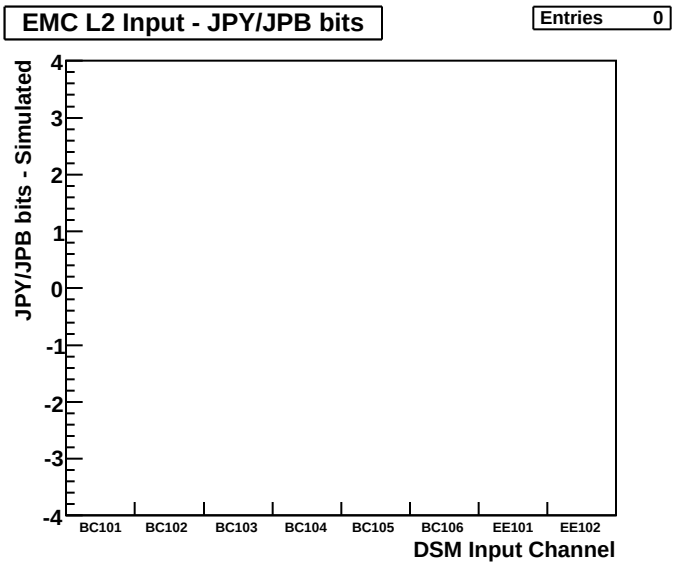

Endcap EMC L1 Input - High Tower Bits
Entries 256044
High Tower Bits
EE101
EE102
21337
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

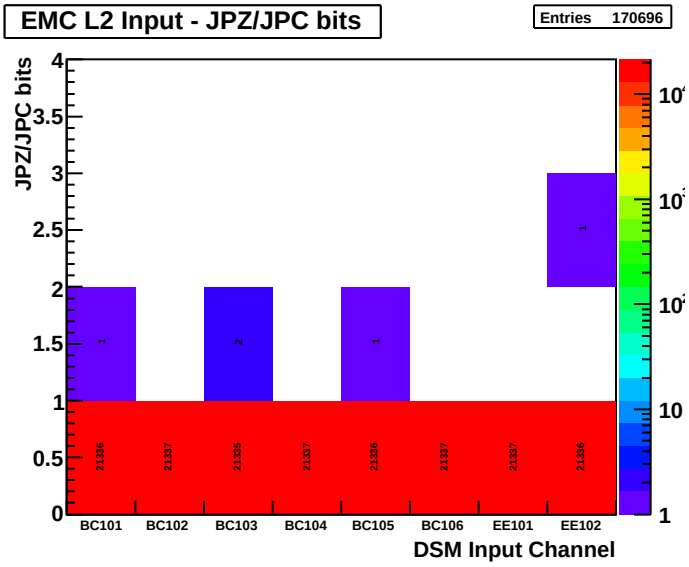

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

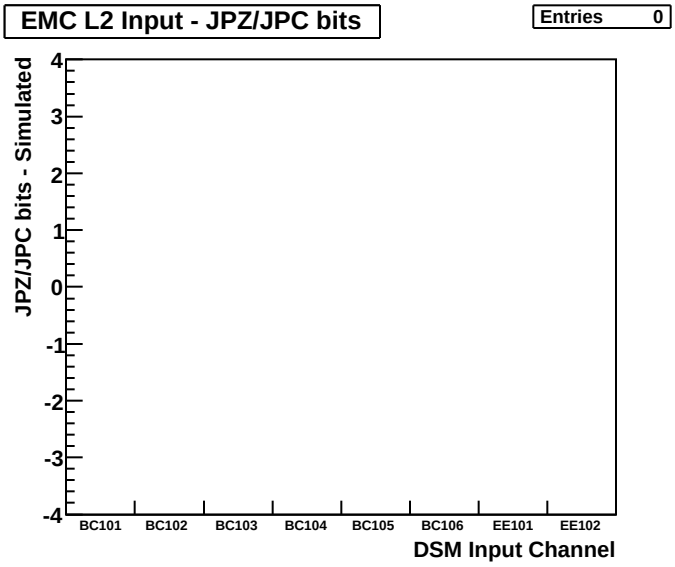

EMC L2 Input - JPX/JPA bits
Entries 170696
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
21337 20317 1020 21308 29 21318 18 1 21337 9748 11589 21077 3 257 21337

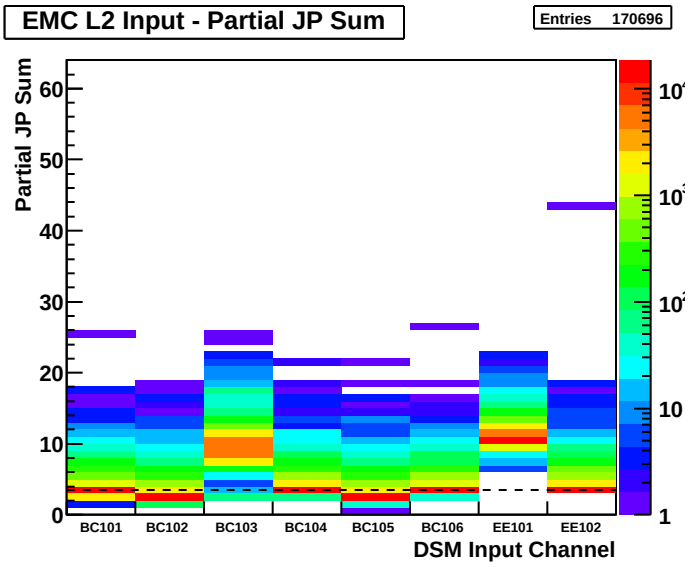

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

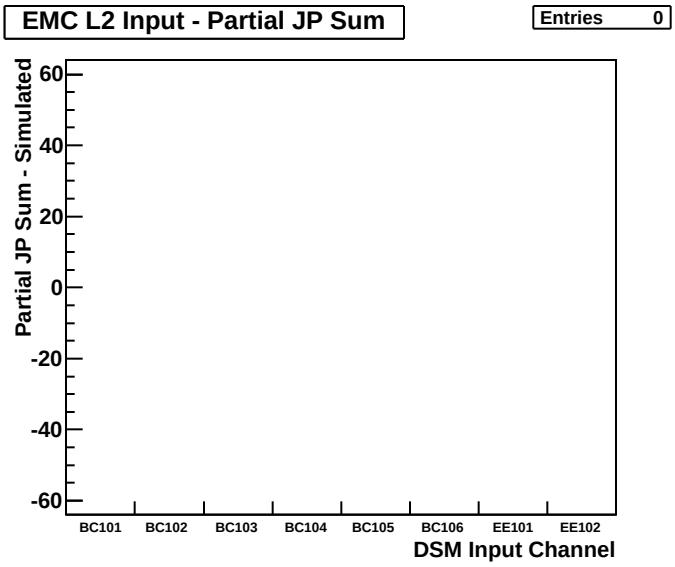

EMC L2 Input - JPY/JPB bits
Entries 170696
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
21337 1 18191 3145 21332 5 21336 1 21337 239 16724 4372 2 21337 21337

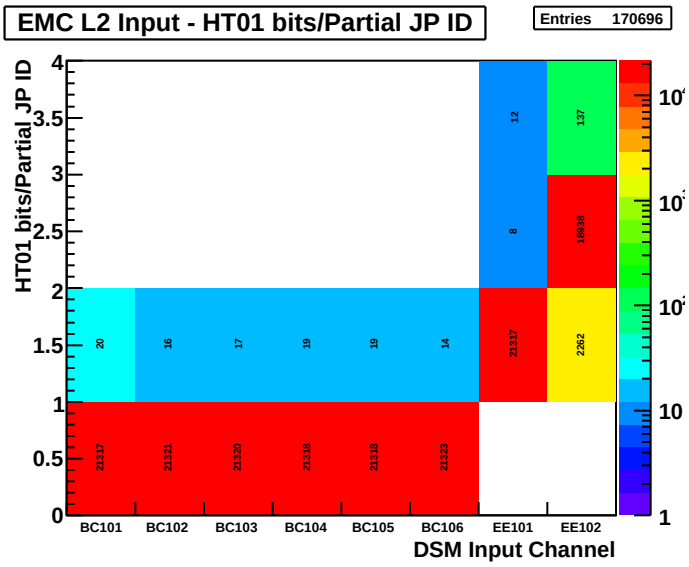

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

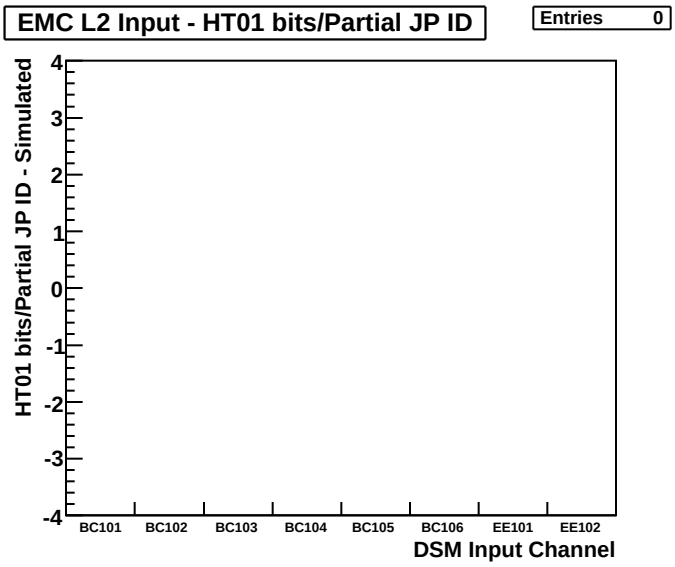

EMC L2 Input - JPZ/JPC bits
Entries 170696
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
21336 1 21337 2 21335 21337 21336 1 21337 21337 1 21336

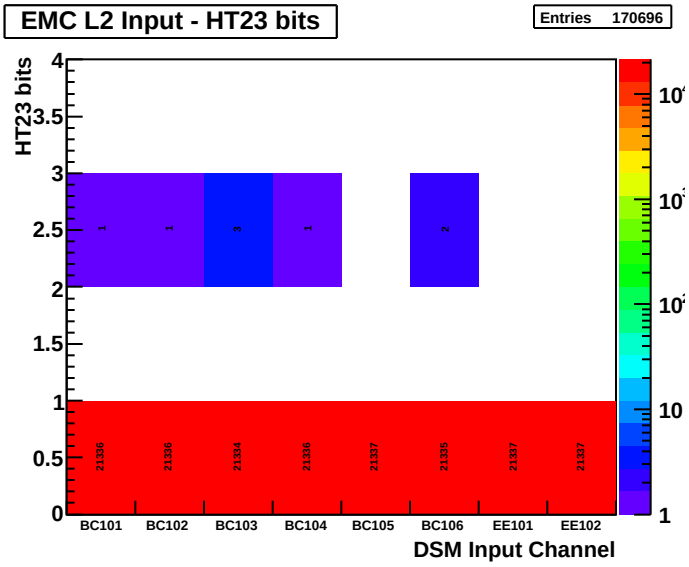

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

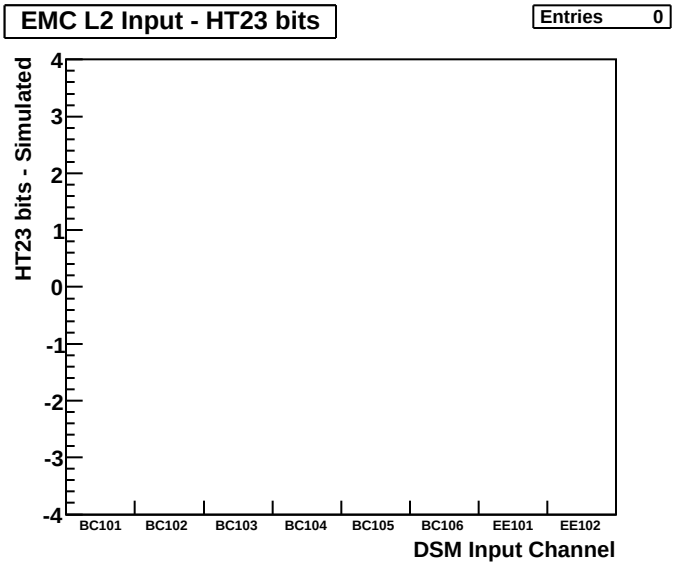

EMC L2 Input - Partial JP Sum
Entries 170696
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

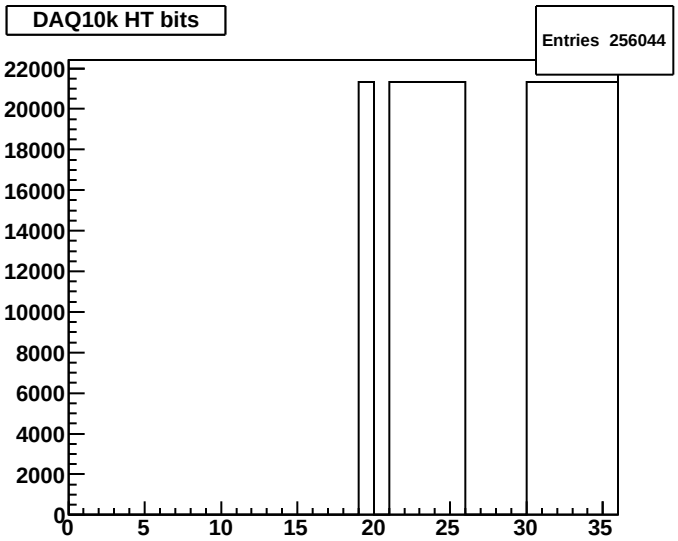

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

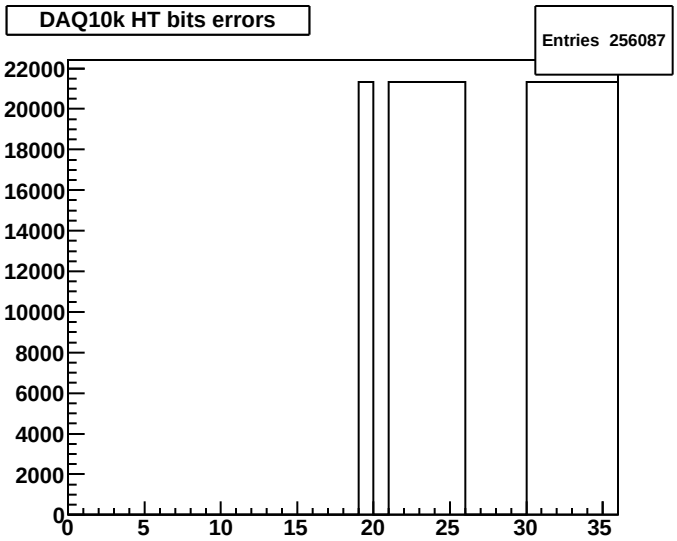

EMC L2 Input - HT01 bits/Partial JP ID
Entries 170696
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

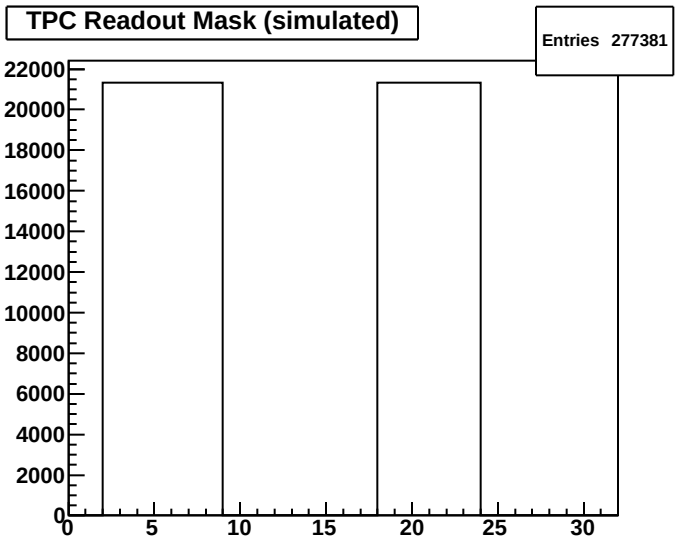

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

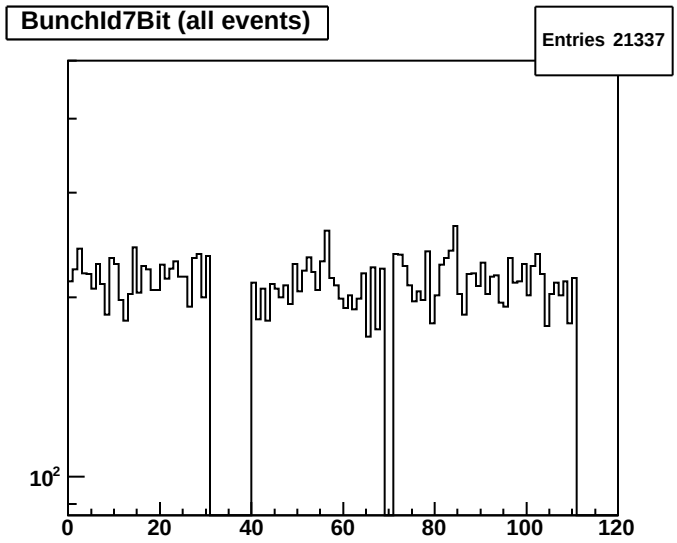

EMC L2 Input - HT23 bits
Entries 170696
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

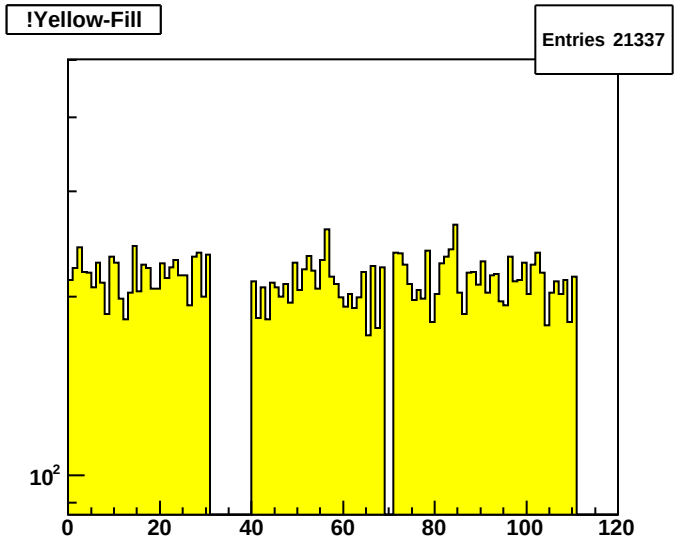

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

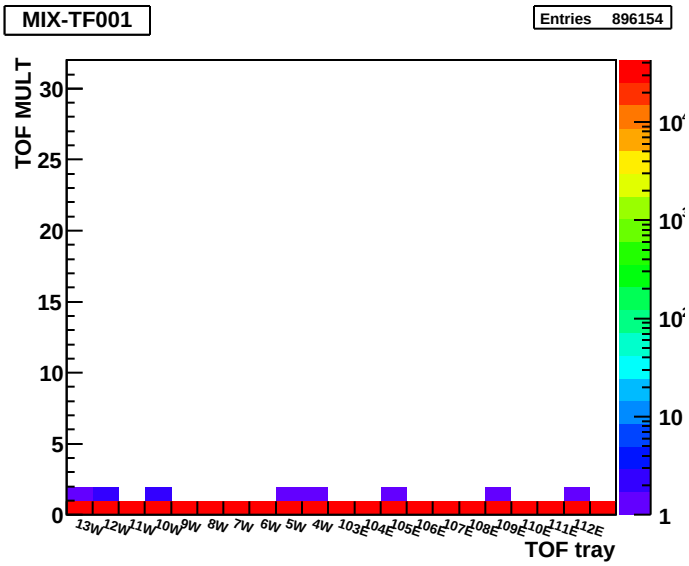

DAQ10k HT bits
Entries 256044
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

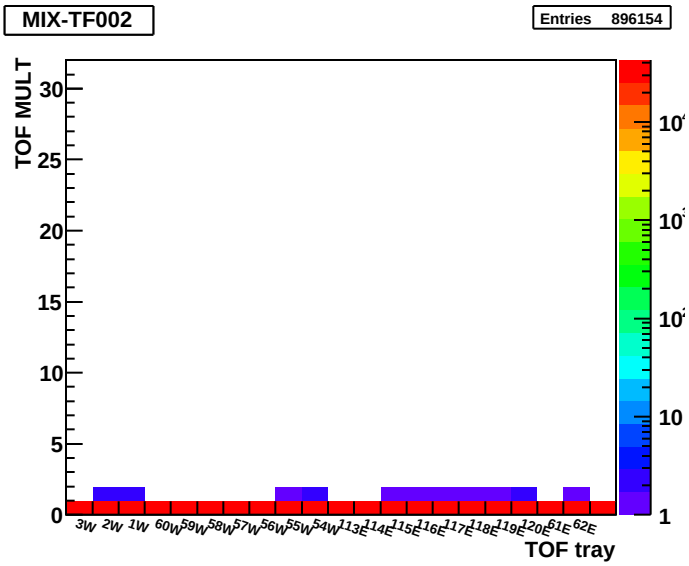

DAQ10k HT bits errors
Entries 256087
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

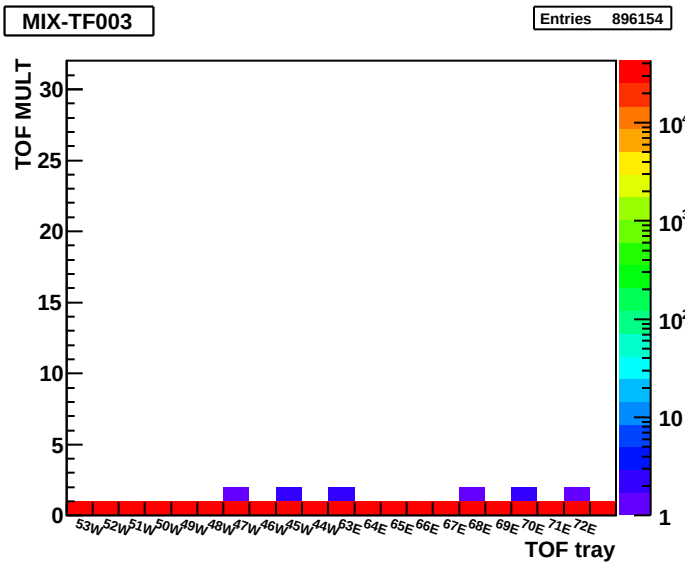

TPC Readout Mask (simulated)
Entries 277381
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30

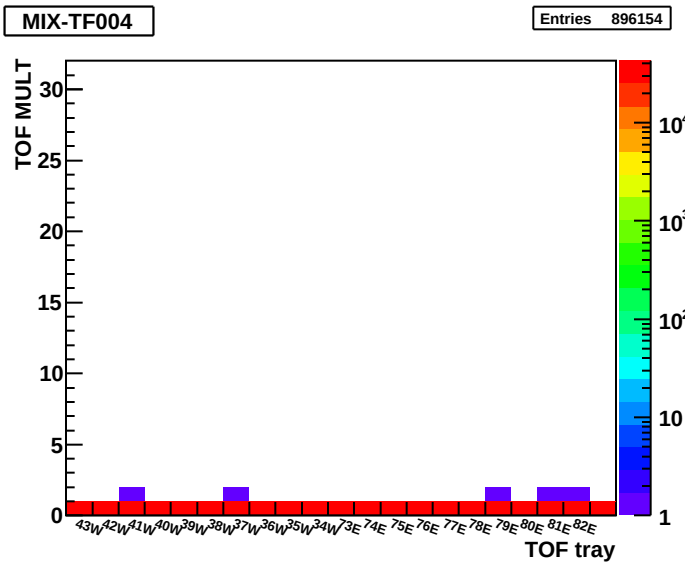

BunchId7Bit (all events)
Entries 21337
10^2
0 20 40 60 80 100 120

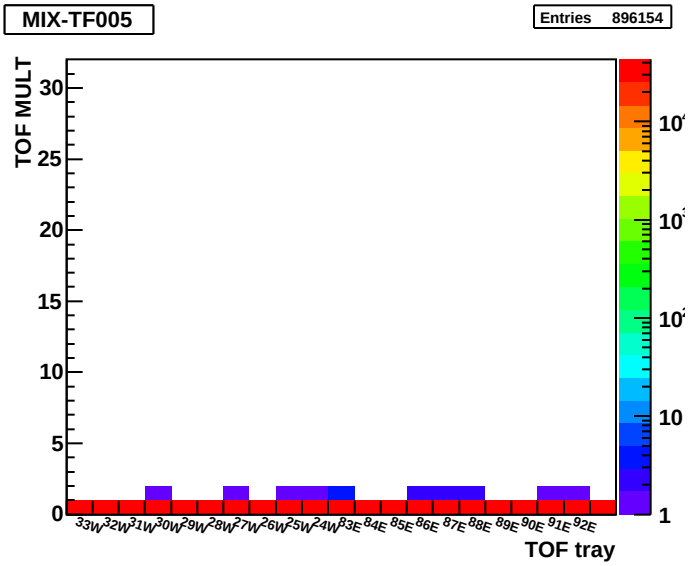

!Yellow-Fill
Entries 21337
10^2
0 20 40 60 80 100 120

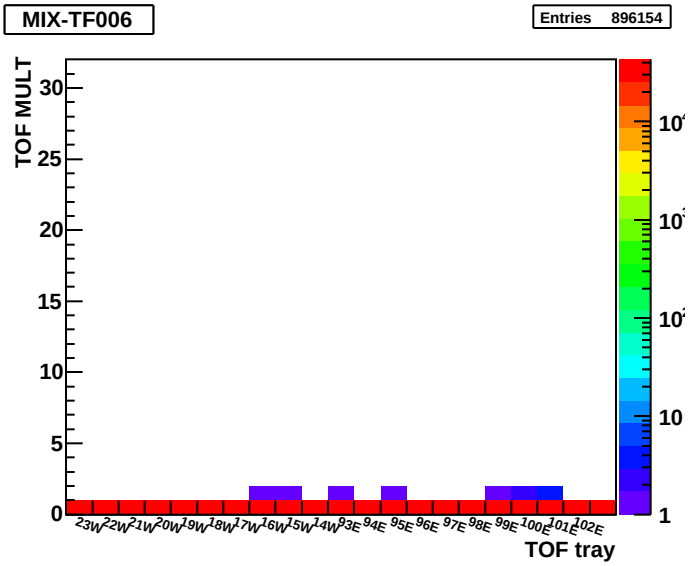

MIX-TF001
Entries 896154
TOF MULT
TOF tray

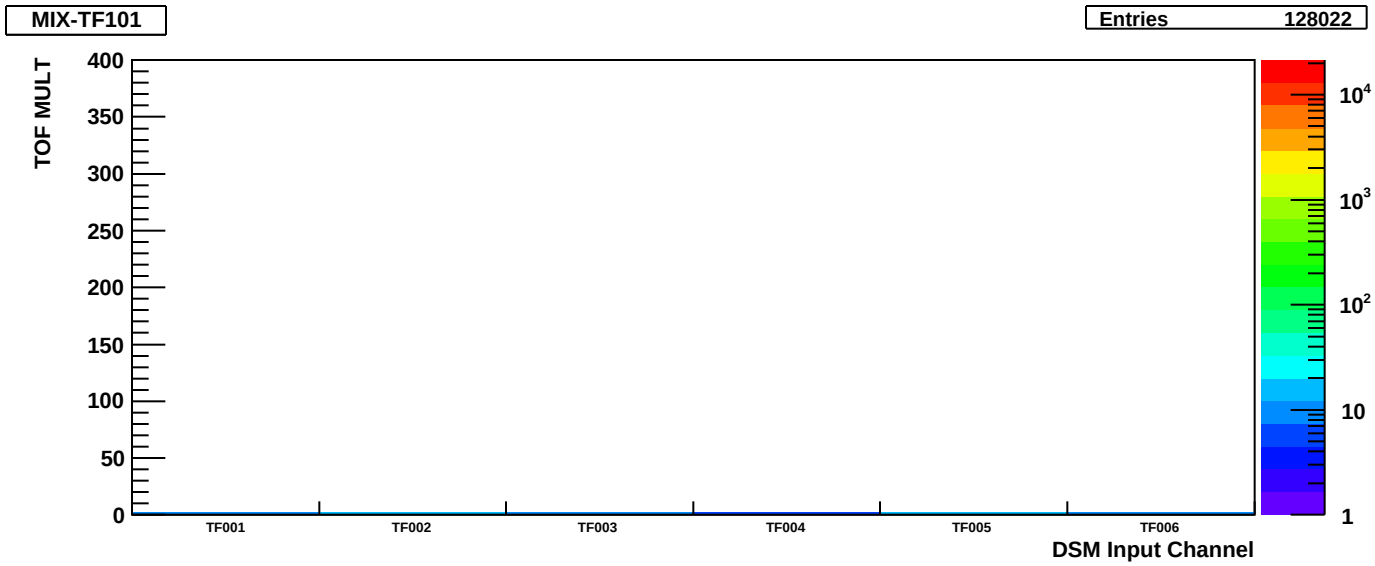

MIX-TF002
Entries 896154
TOF MULT
TOF tray

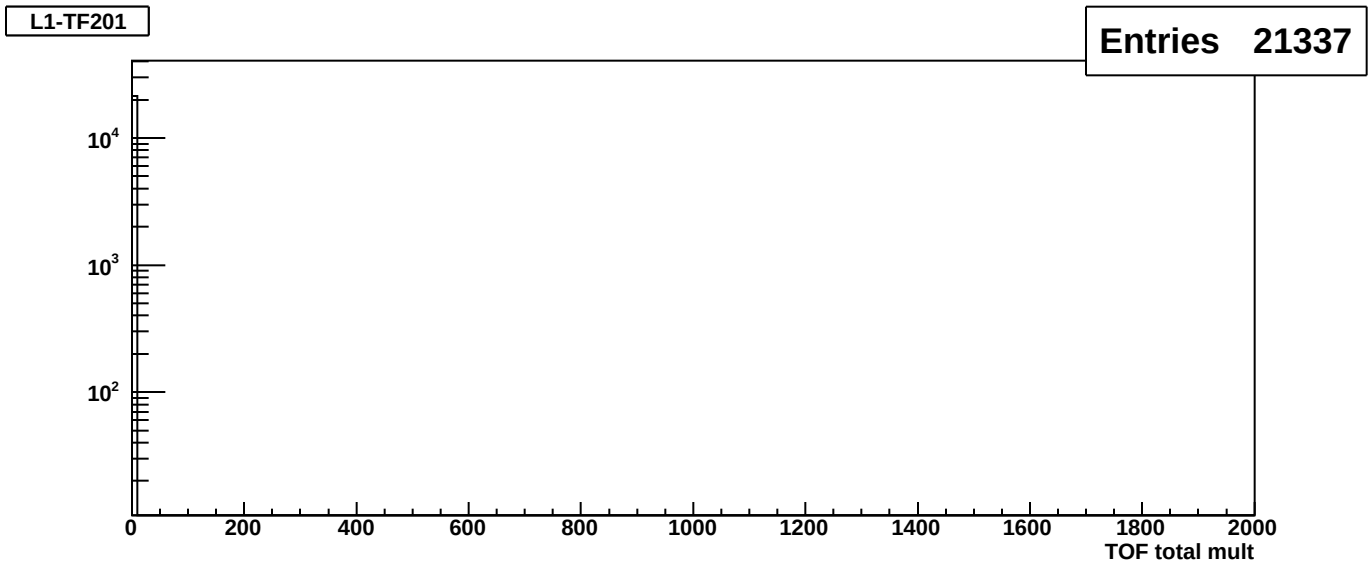

MIX-TF003
Entries 896154
TOF MULT
TOF tray

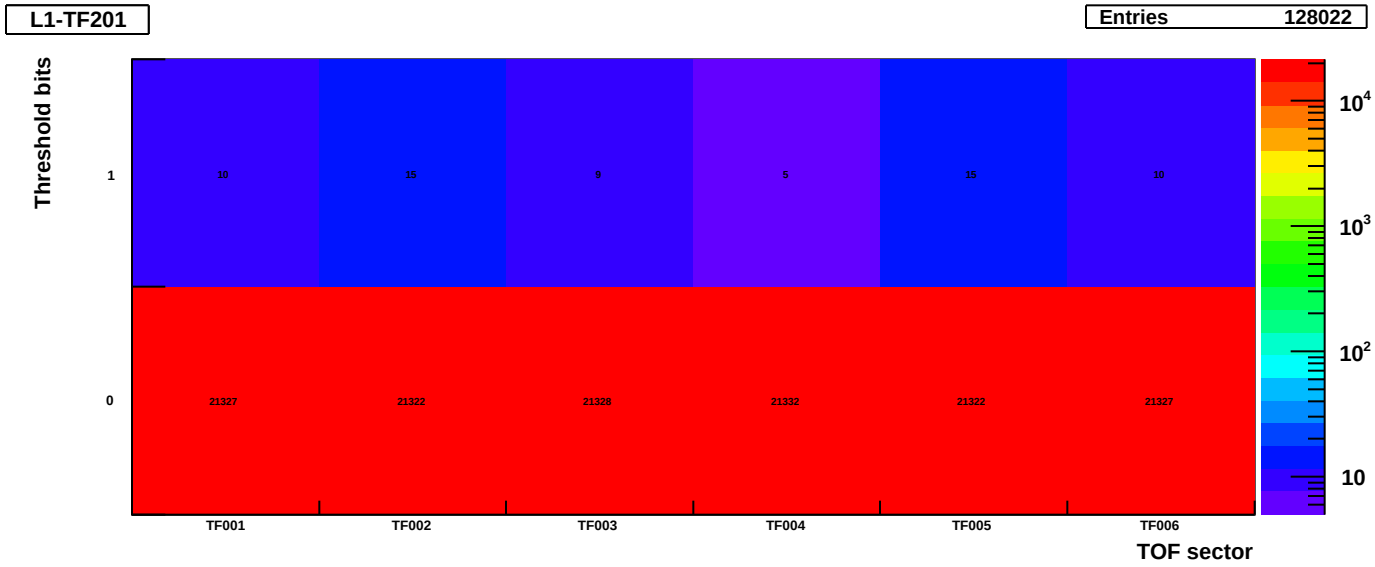

MIX-TF004
Entries 896154
TOF MULT
TOF tray

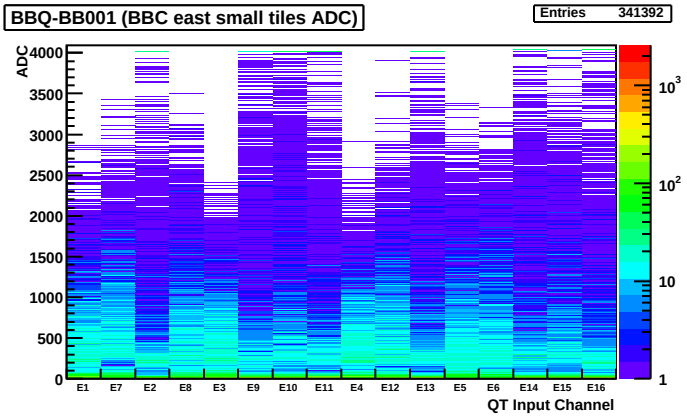

MIX-TF005
Entries 896154
TOF MULT
TOF tray

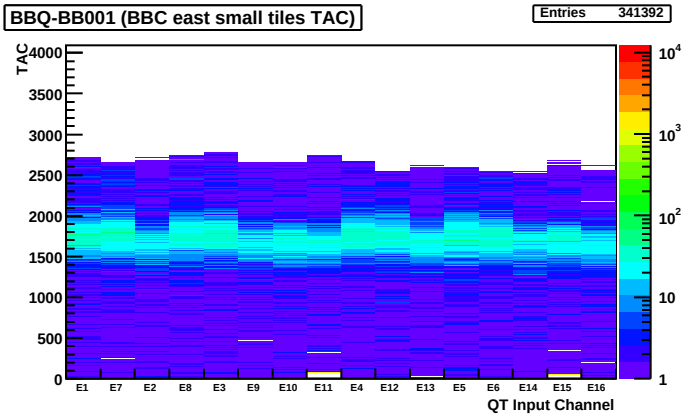

MIX-TF006
Entries 896154
TOF MULT
TOF tray

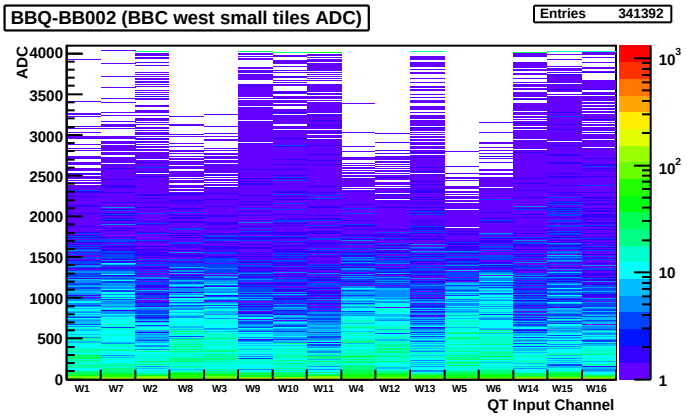

MIX-TF101
Entries 128022
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

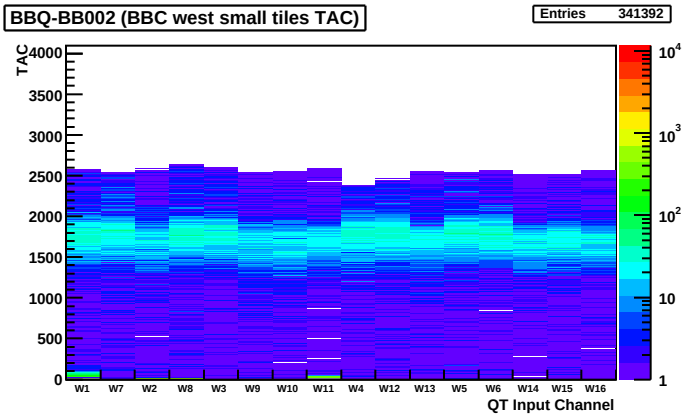

L1-TF201
Entries 21337
10^4
10^3
10^2
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

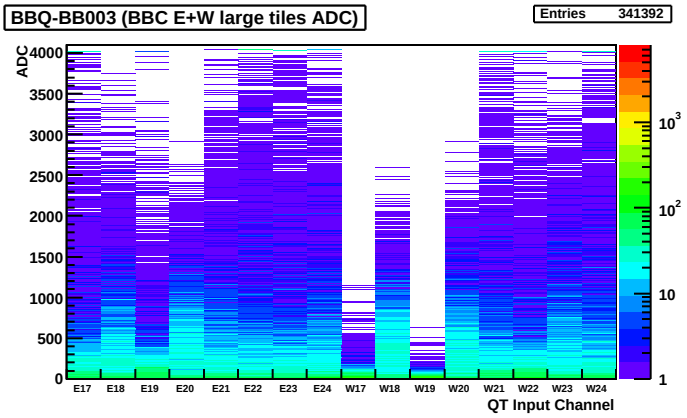

L1-TF201
Entries 128022
Threshold bits
1
0
10
15
9
5
15
10
21327
21322
21328
21332
21322
21327
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4
10^3
10^2
10

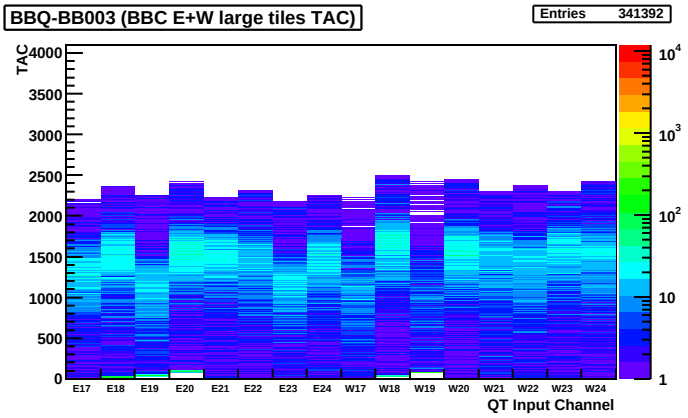

BBQ-BB001 (BBC east small tiles ADC)
Entries 341392
ADC
QT Input Channel

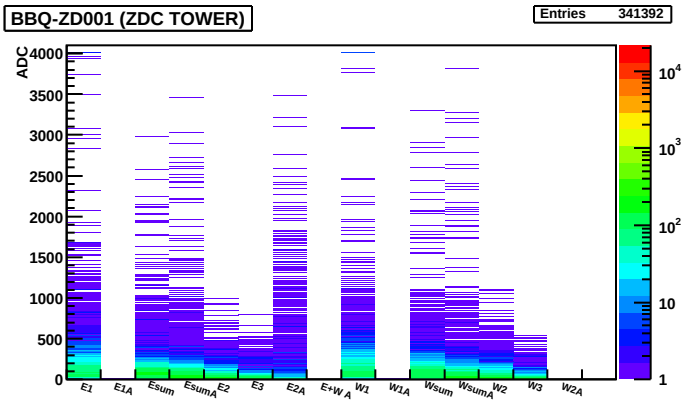

BBQ-BB001 (BBC east small tiles TAC)
Entries 341392
TAC
QT Input Channel

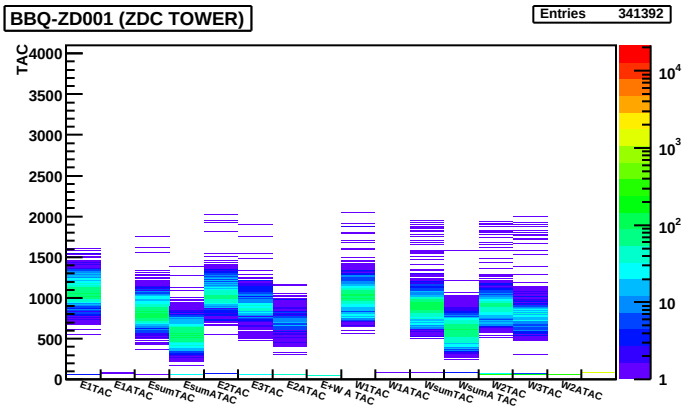

BBQ-BB002 (BBC west small tiles ADC)
Entries 341392
ADC
QT Input Channel

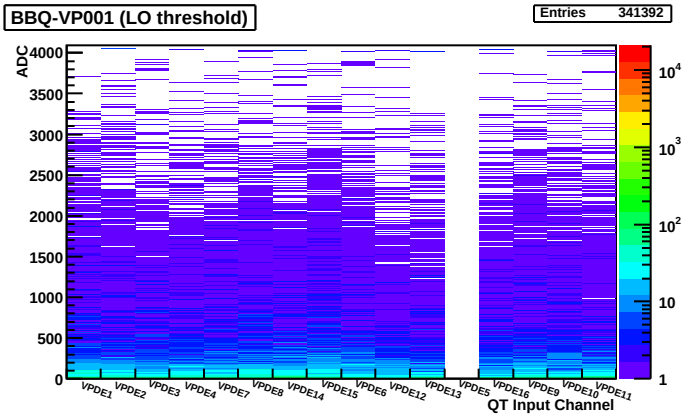

BBQ-BB002 (BBC west small tiles TAC)
Entries 341392
TAC
QT Input Channel

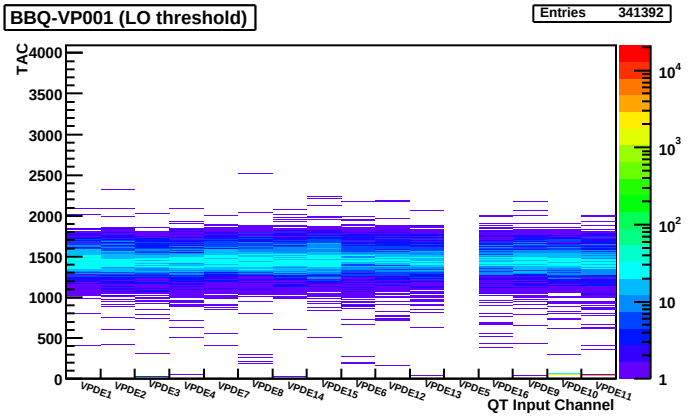

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 341392
ADC
QT Input Channel

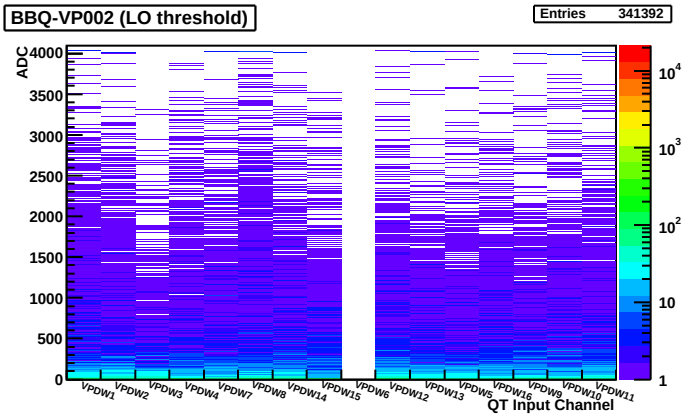

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 341392
TAC
QT Input Channel

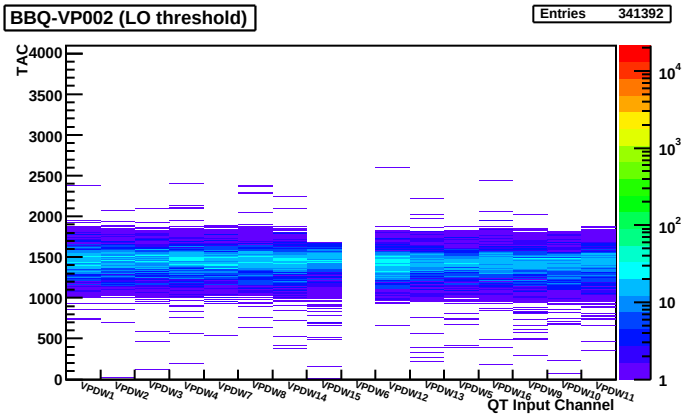

BBQ-ZD001 (ZDC TOWER)
Entries 341392
ADC

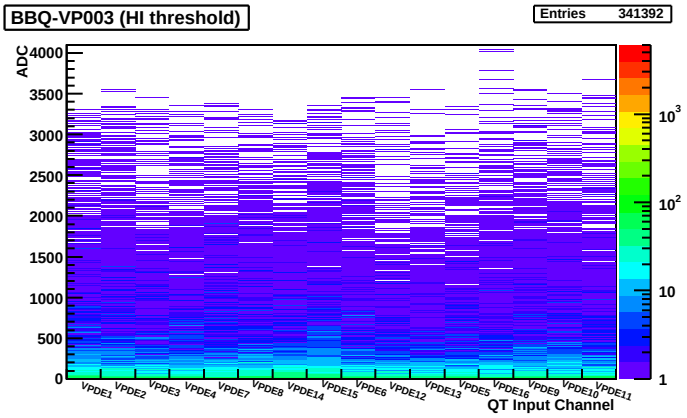

BBQ-ZD001 (ZDC TOWER)
Entries 341392
TAC

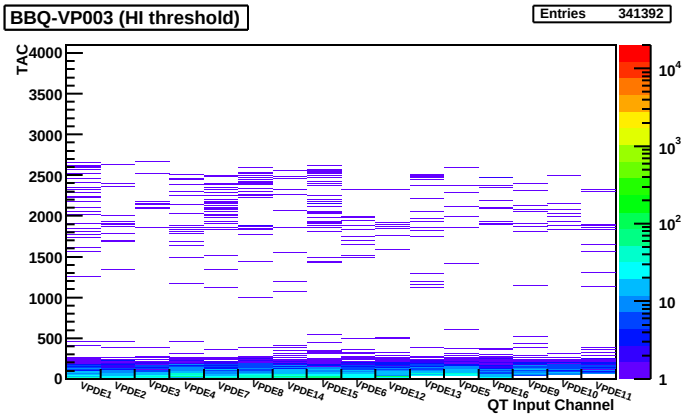

BBQ-VP001 (LO threshold)
Entries 341392
ADC
QT Input Channel

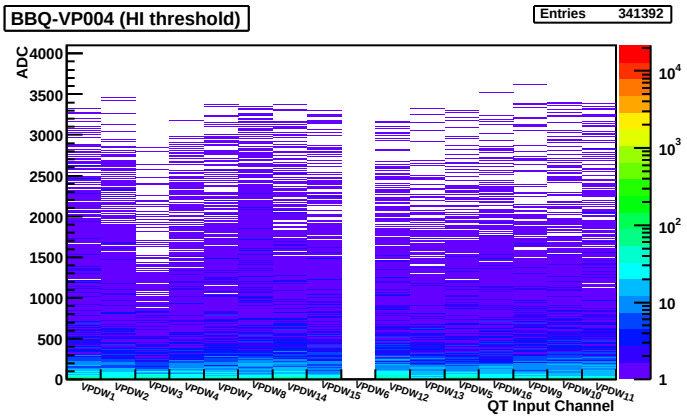

BBQ-VP001 (LO threshold)
Entries 341392
TAC
QT Input Channel

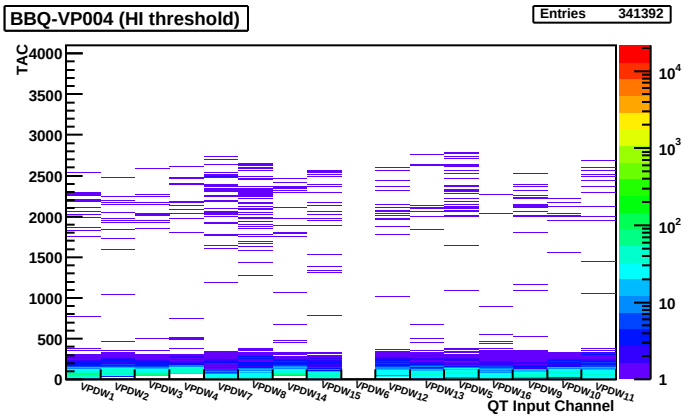

BBQ-VP002 (LO threshold)
Entries 341392
ADC
QT Input Channel

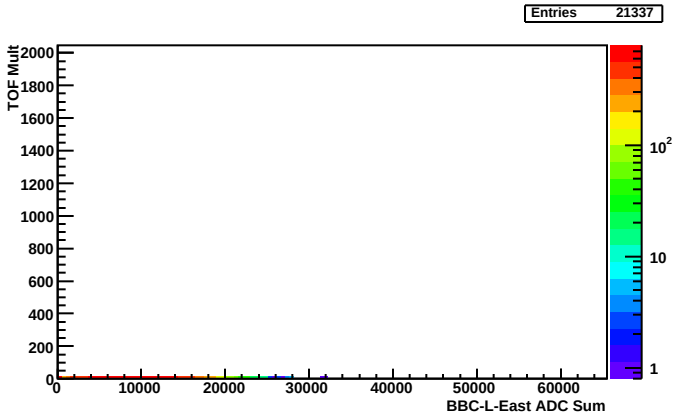

BBQ-VP002 (LO threshold)
Entries 341392
TAC
QT Input Channel

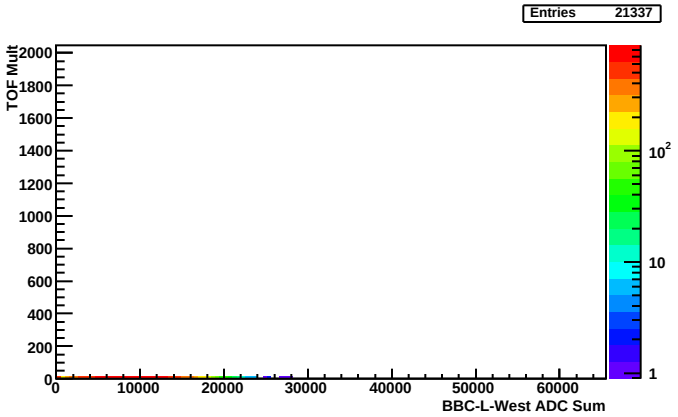

BBQ-VP003 (HI threshold)
Entries 341392
ADC
QT Input Channel

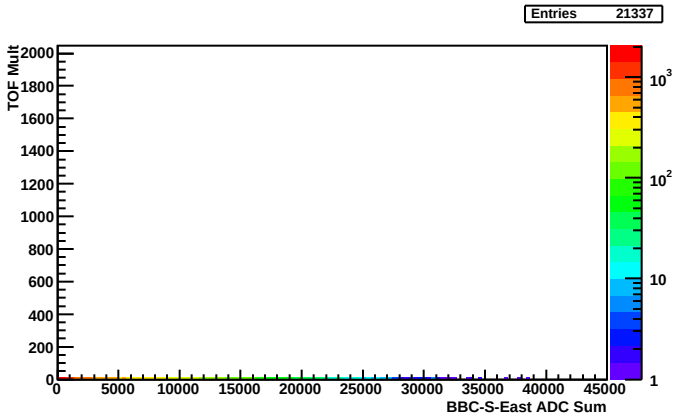

BBQ-VP003 (HI threshold)
Entries 341392
TAC
QT Input Channel

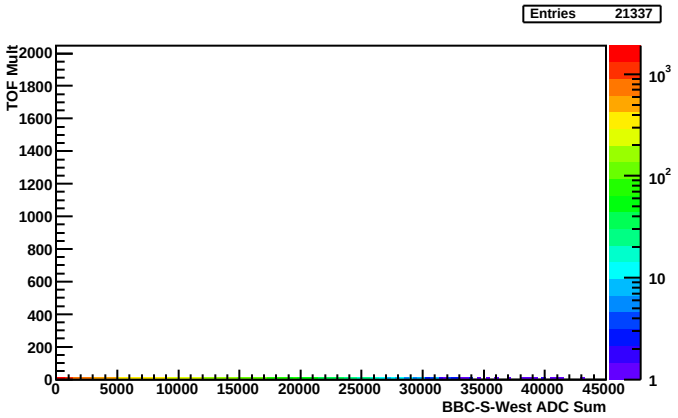

BBQ-VP004 (HI threshold)
Entries 341392
ADC
QT Input Channel

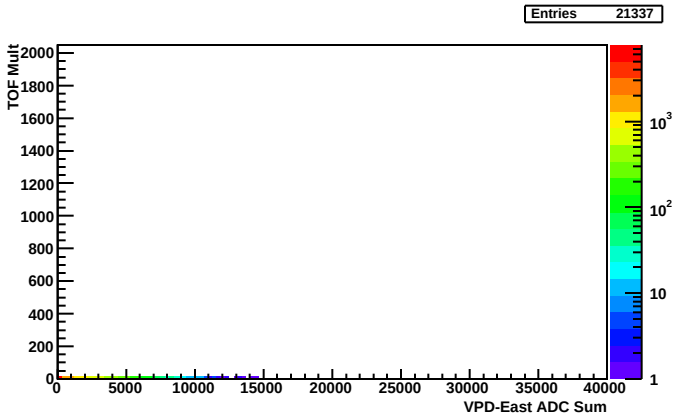

BBQ-VP004 (HI threshold)
Entries 341392
TAC
QT Input Channel

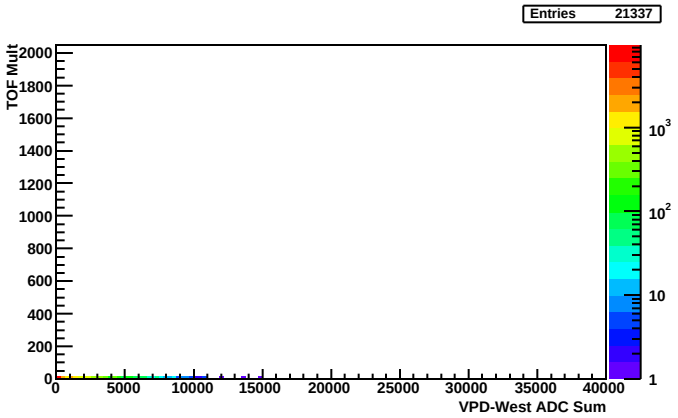

Entries 21337
TOF Mult
BBC-L-East ADC Sum

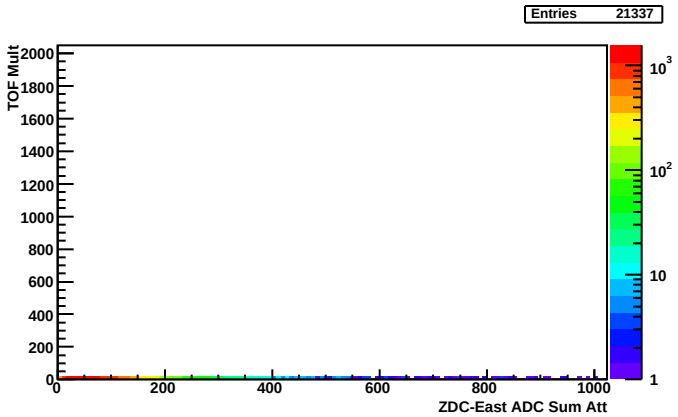

Entries 21337
TOF Mult
BBC-L-West ADC Sum

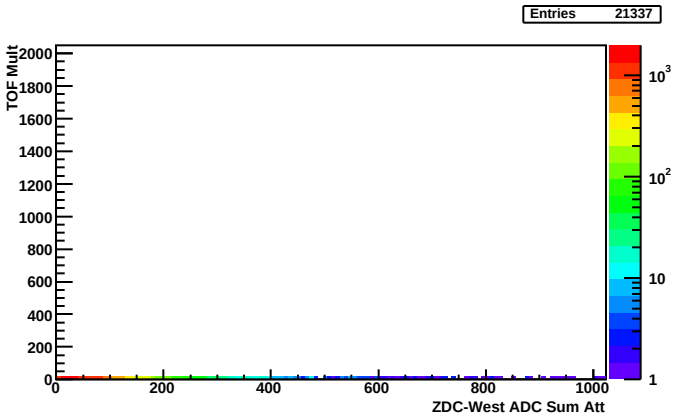

Entries 21337
TOF Mult
BBC-S-East ADC Sum

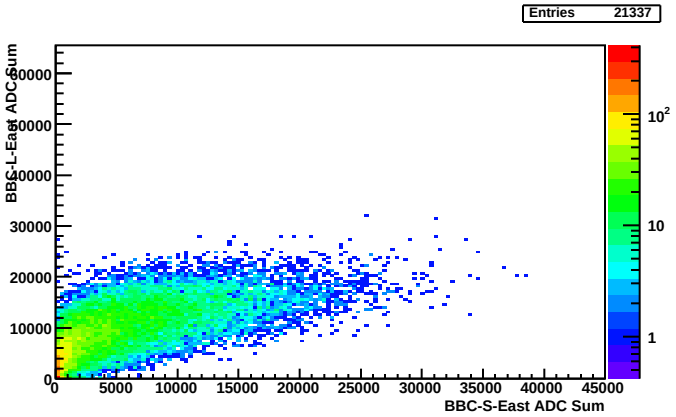

Entries 21337
TOF Mult
BBC-S-West ADC Sum

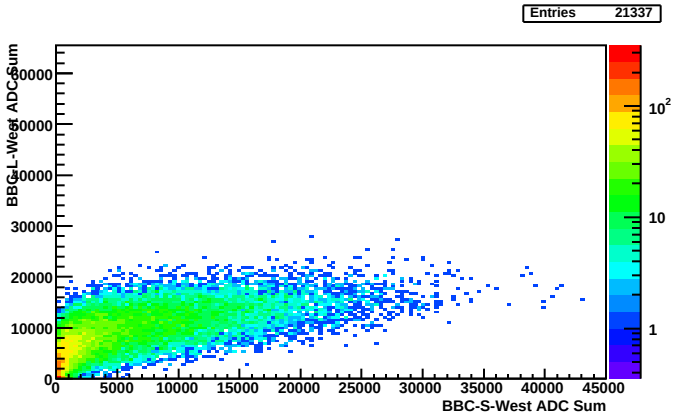

Entries 21337
TOF Mult
VPD-East ADC Sum

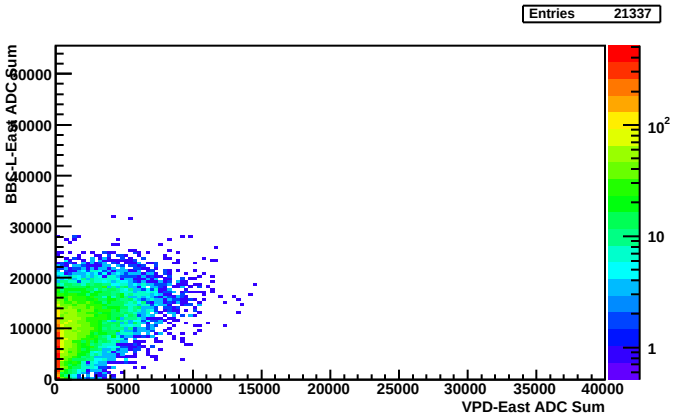

Entries 21337
TOF Mult
VPD-West ADC Sum

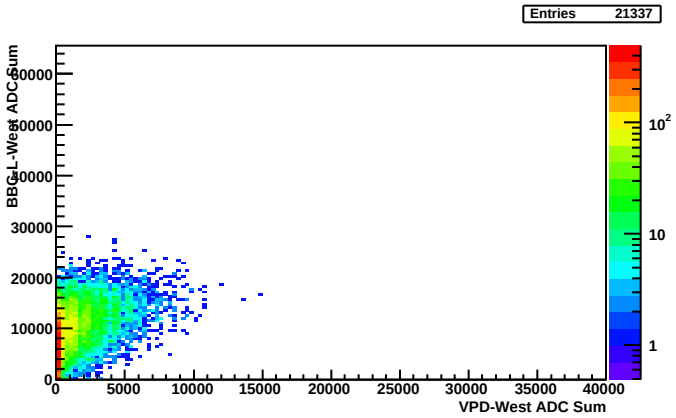

Entries 21337
TOF Mult
ZDC-East ADC Sum Att

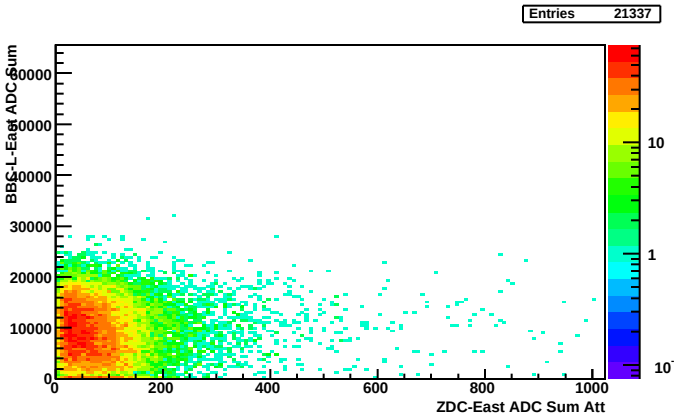

Entries 21337
TOF Mult
ZDC-West ADC Sum Att

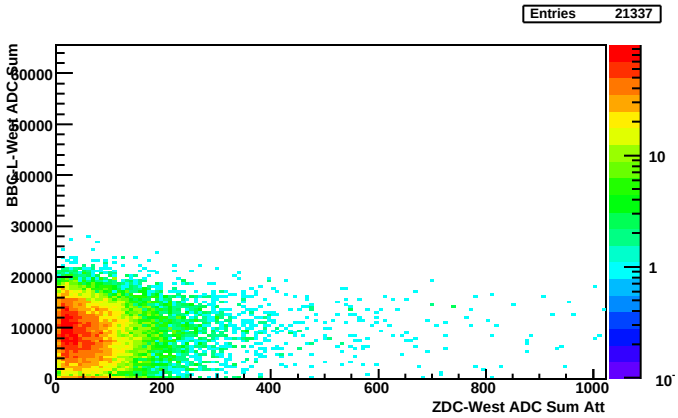

Entries 21337
BBC-L-East ADC Sum
BBC-S-East ADC Sum

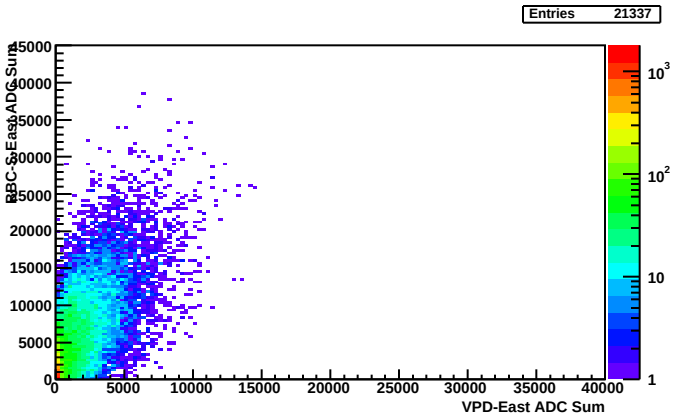

Entries 21337
BBC-L-West ADC Sum
BBC-S-West ADC Sum

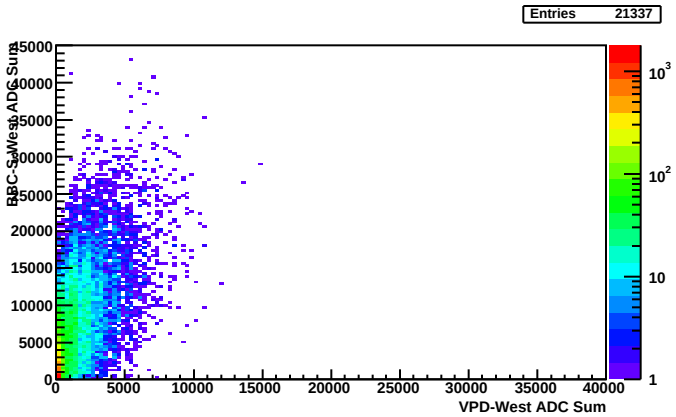

Entries 21337
BBC-L-East ADC Sum
VPD-East ADC Sum

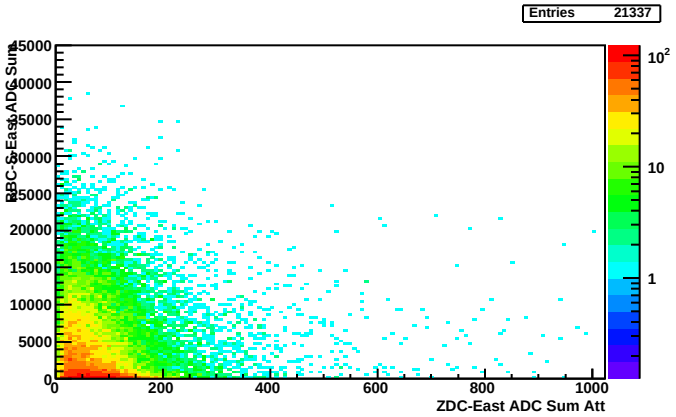

Entries 21337
BBC-L-West ADC Sum
VPD-West ADC Sum

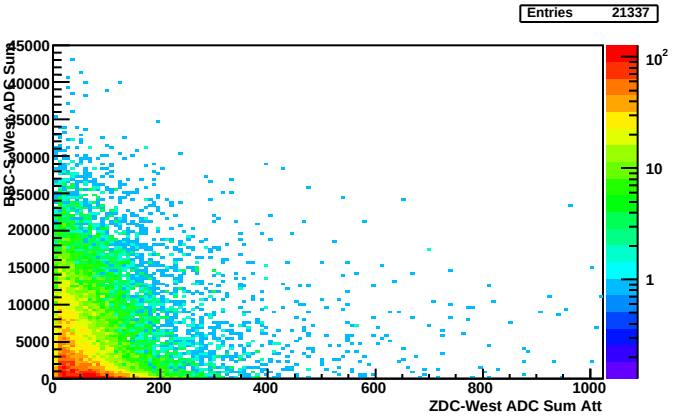

Entries 21337
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

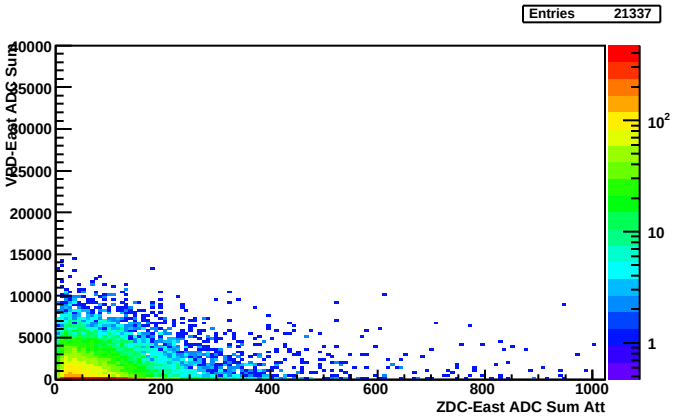

Entries 21337
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

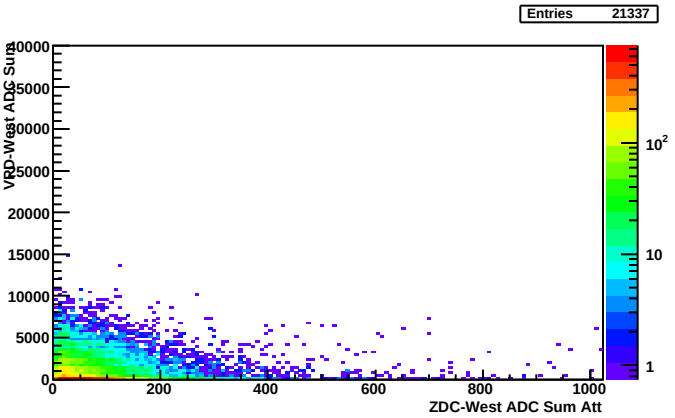

Entries 21337
BBC-S-East ADC Sum
VPD-East ADC Sum

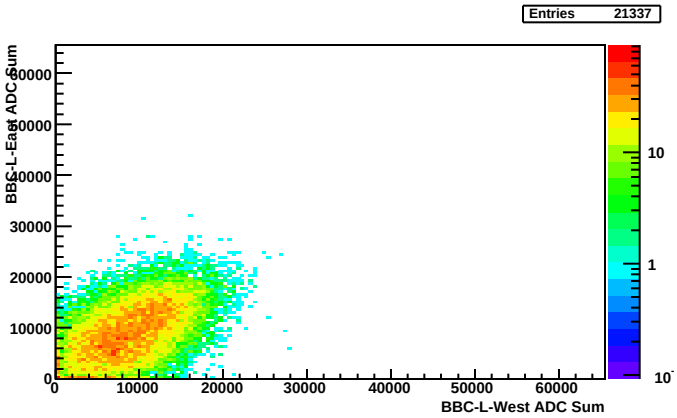

Entries 21337
BBC-S-West ADC Sum
VPD-West ADC Sum

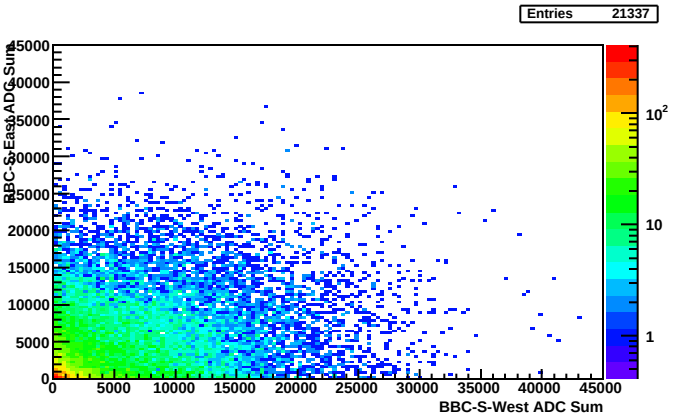

Entries 21337
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

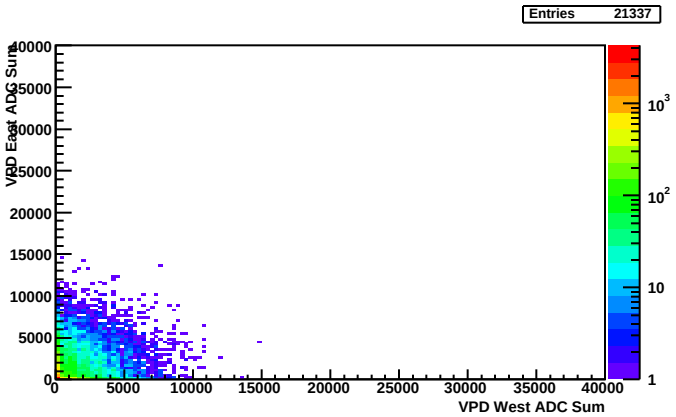

Entries 21337
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

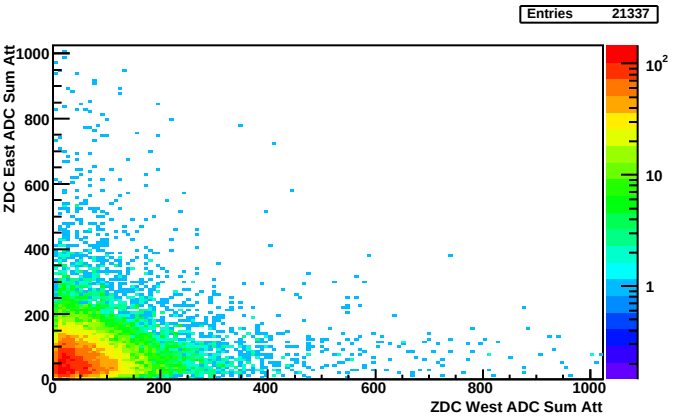

Entries 21337
VPD-East ADC Sum
ZDC-East ADC Sum Att

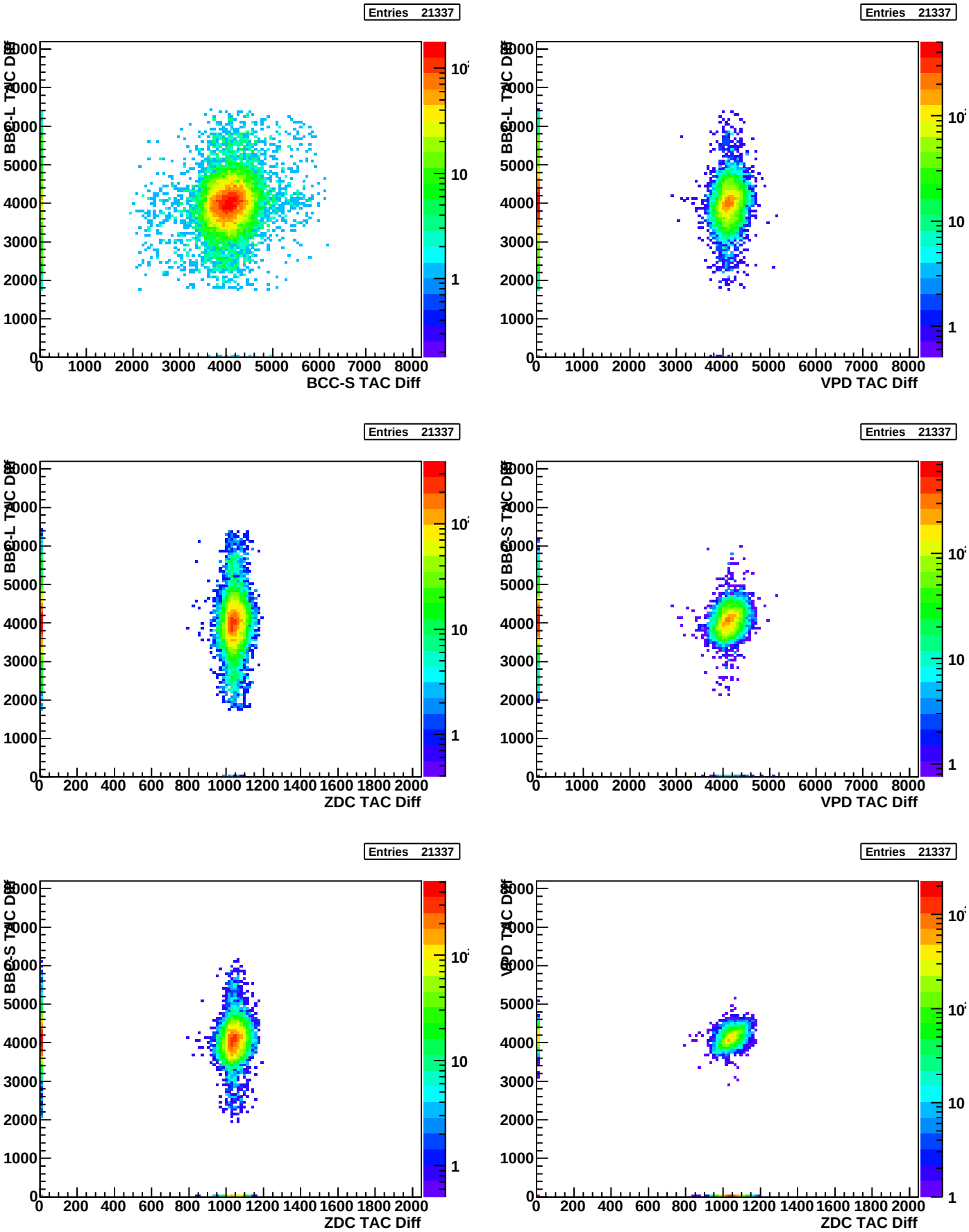

Entries 21337
VPD-West ADC Sum
ZDC-West ADC Sum Att

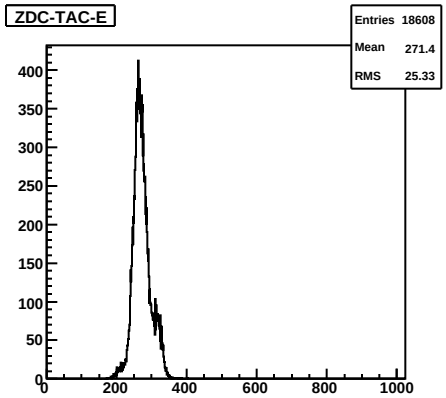

Entries 21337
BBC-L-East ADC Sum
BBC-L-West ADC Sum

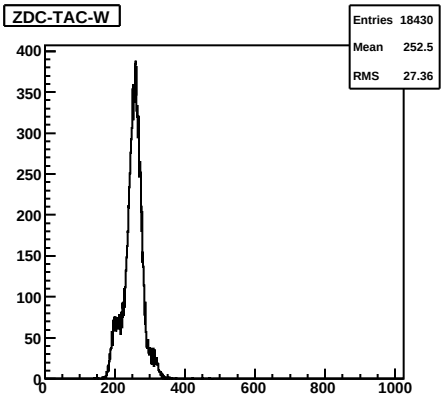

Entries 21337
BBC-S-East ADC Sum
BBC-S-West ADC Sum

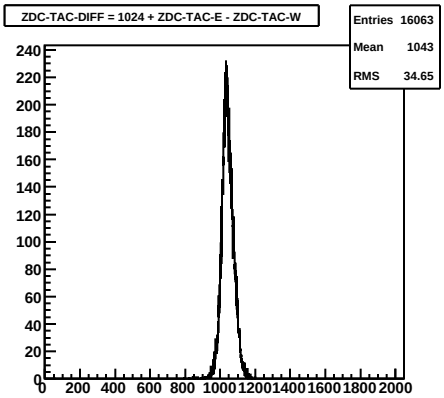

Entries 21337
VPD East ADC Sum
VPD West ADC Sum

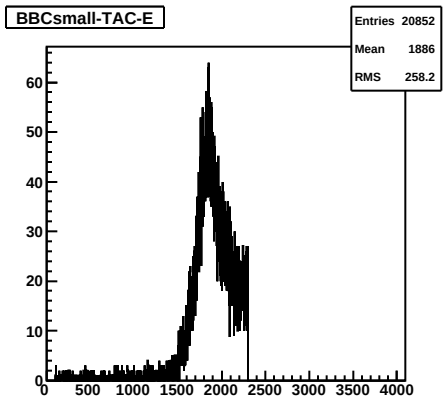

Entries 21337
ZDC East ADC Sum Att
ZDC West ADC Sum Att

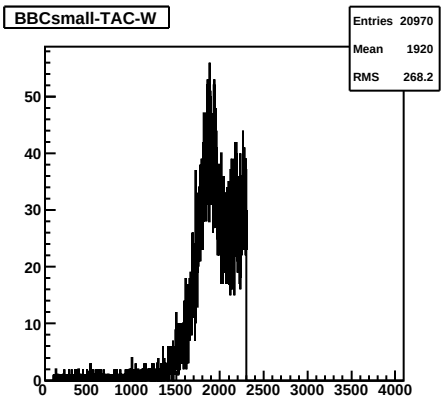

Entries 21337
BBC-L TAC Diff
BCC-S TAC Diff
Entries 21337
BBC-L TAC Diff
VPD TAC Diff
Entries 21337
BBC-L TAC Diff
ZDC TAC Diff
Entries 21337
BBC-S TAC Diff
VPD TAC Diff
Entries 21337
BBC-S TAC Diff
ZDC TAC Diff
Entries 21337
VPD TAC Diff
ZDC TAC Diff

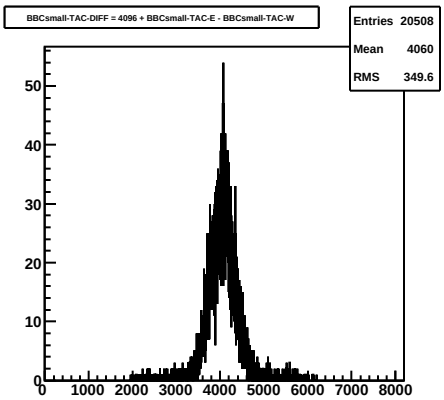

ZDC-TAC-E
Entries 18608
Mean 271.4
RMS 25.33

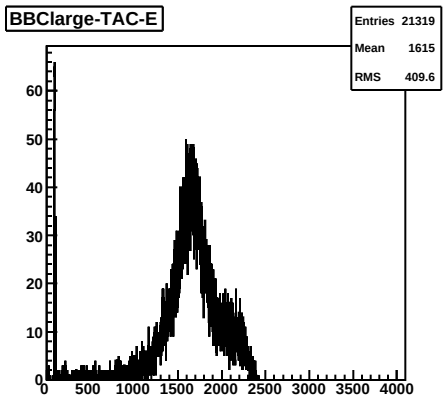

ZDC-TAC-W
Entries 18430
Mean 252.5
RMS 27.36

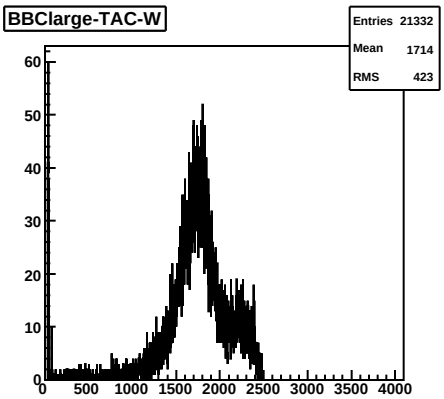

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 16063
Mean 1043
RMS 34.65

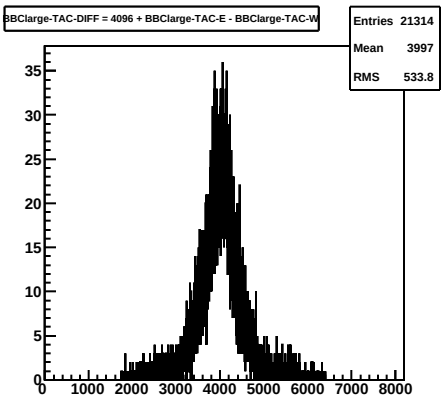

BBCsmall-TAC-E
Entries 20852
Mean 1886
RMS 258.2

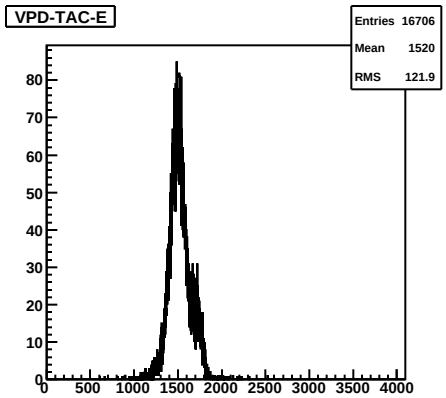

BBCsmall-TAC-W
Entries 20970
Mean 1920
RMS 268.2

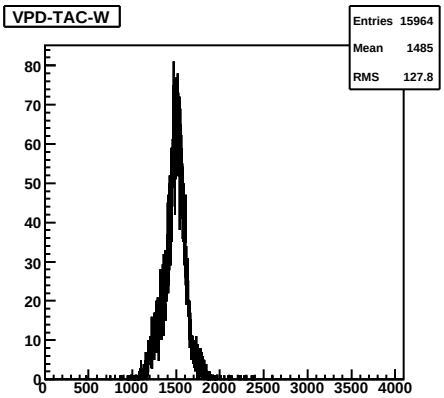

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 20508
Mean 4060
RMS 349.6

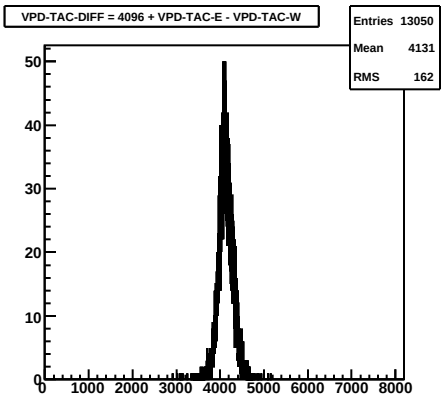

BBClarge-TAC-E
Entries 21319
Mean 1615
RMS 409.6

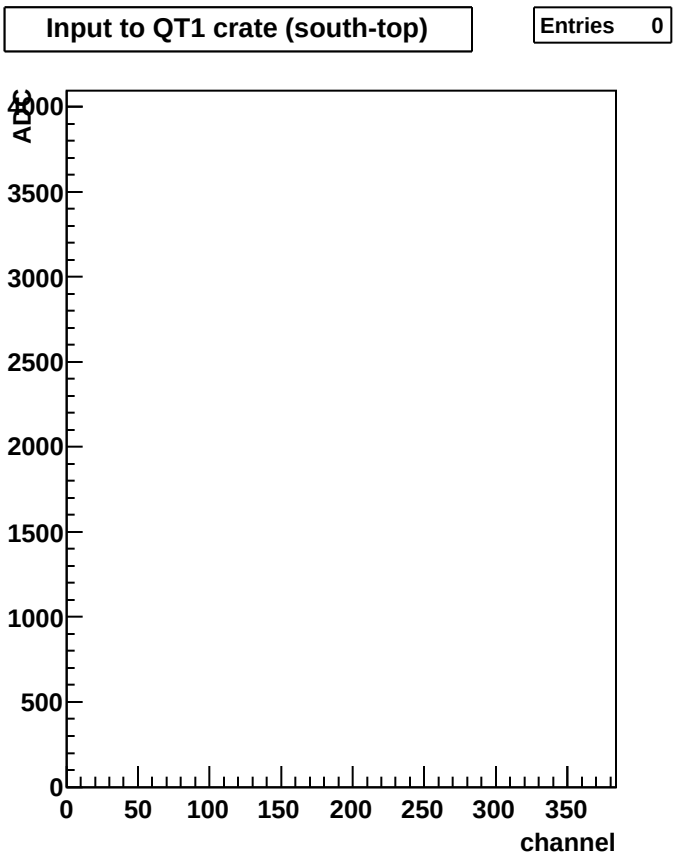

BBClarge-TAC-W
Entries 21332
Mean 1714
RMS 423

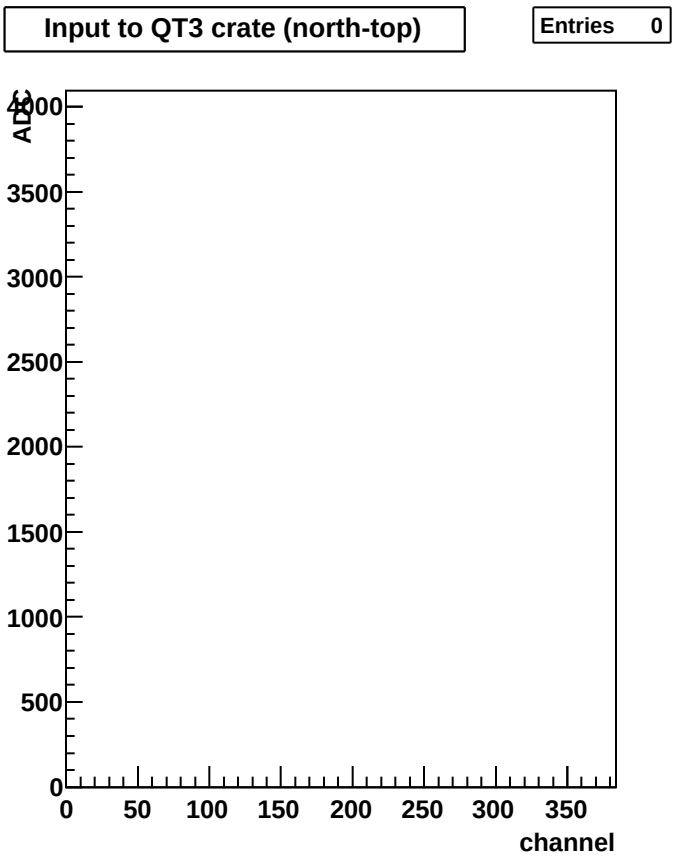

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 21314
Mean 3997
RMS 533.8

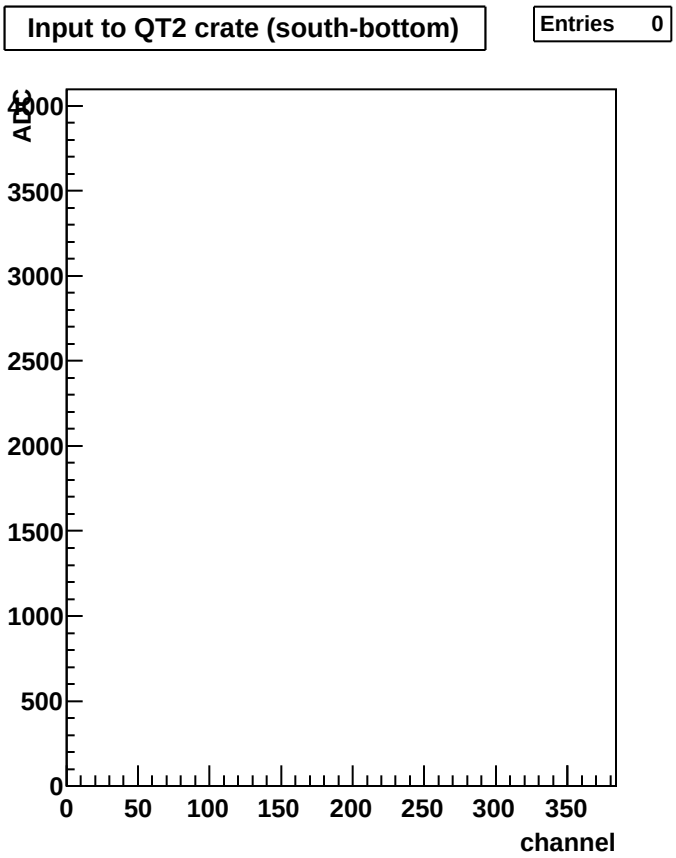

VPD-TAC-E
Entries 16706
Mean 1520
RMS 121.9

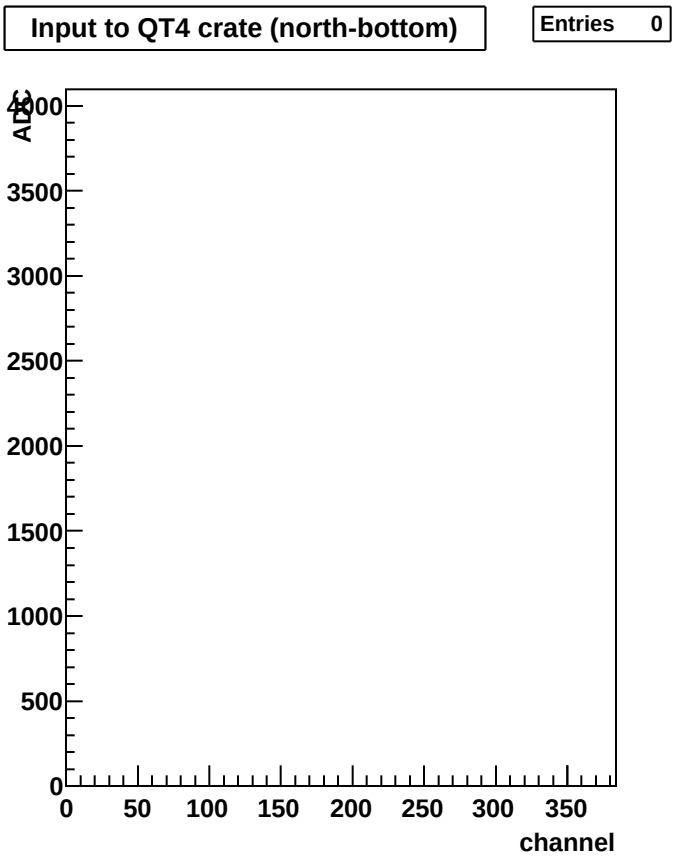

VPD-TAC-W
Entries 15964
Mean 1485
RMS 127.8

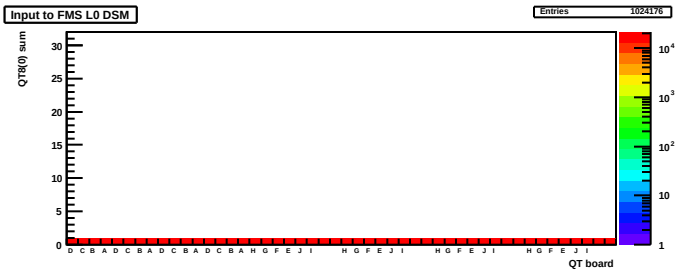

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 13050
Mean 4131
RMS 162

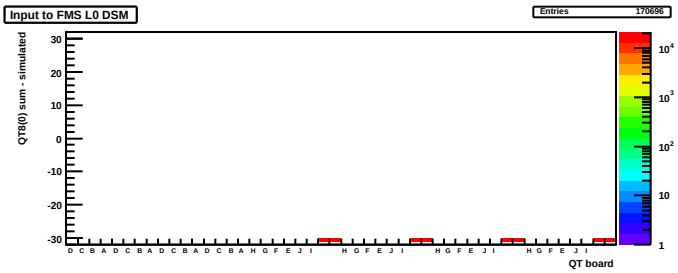

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

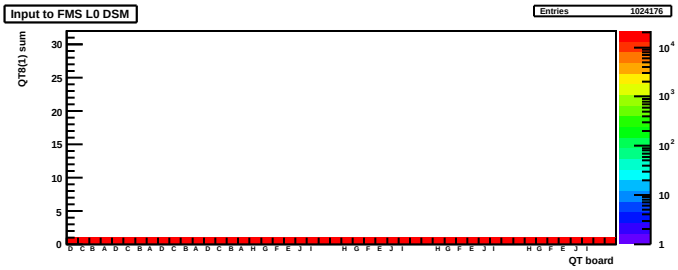

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

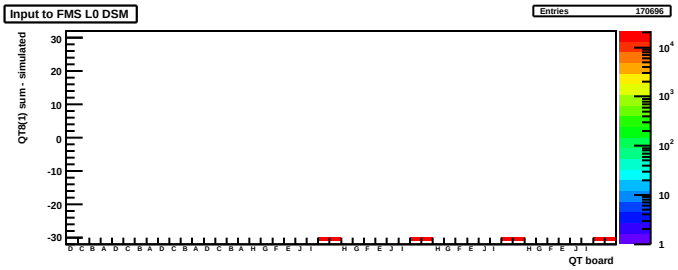

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

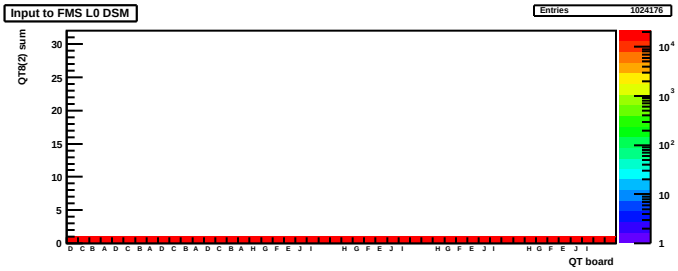

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

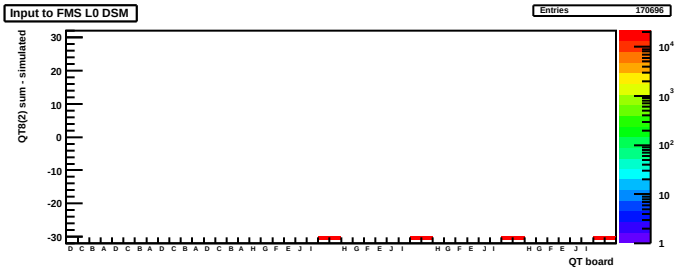

Input to FMS L0 DSM
Entries 1024176
QT8(0) sum
QT board

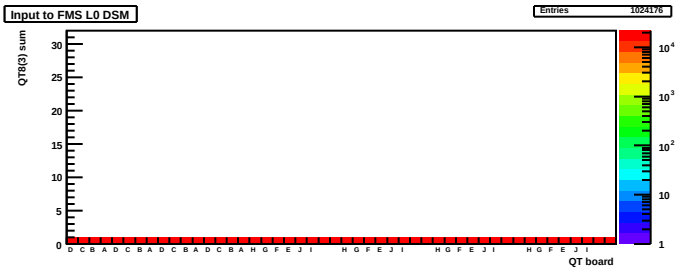

Input to FMS L0 DSM
Entries 170696
QT8(0) sum - simulated
QT board

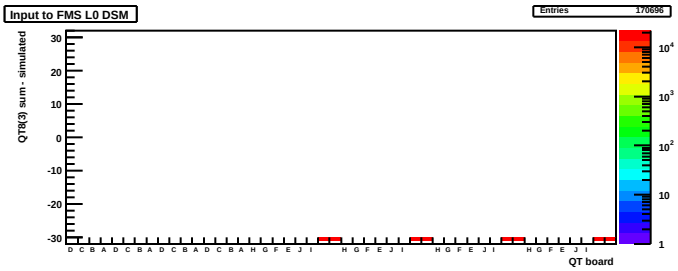

Input to FMS L0 DSM
Entries 1024176
QT8(1) sum
QT board

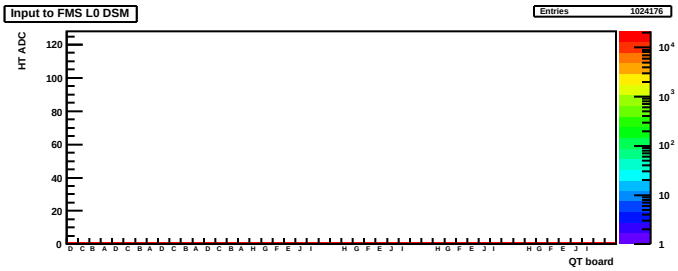

Input to FMS L0 DSM
Entries 170696
QT8(1) sum - simulated
QT board

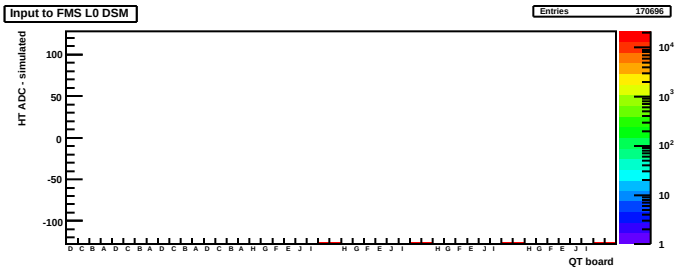

Input to FMS L0 DSM
Entries 1024176
QT8(2) sum
QT board

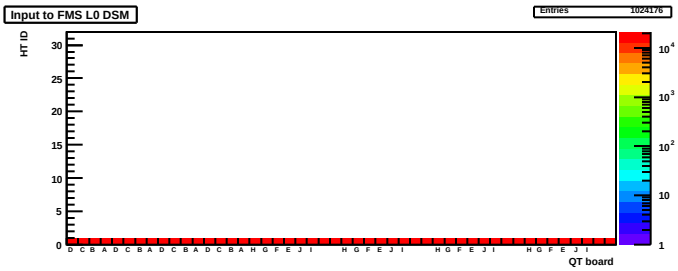

Input to FMS L0 DSM
Entries 170696
QT8(2) sum - simulated
QT board

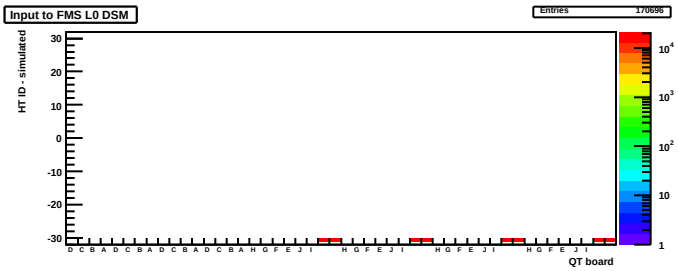

Input to FMS L0 DSM
Entries 1024176
QT8(3) sum
QT board

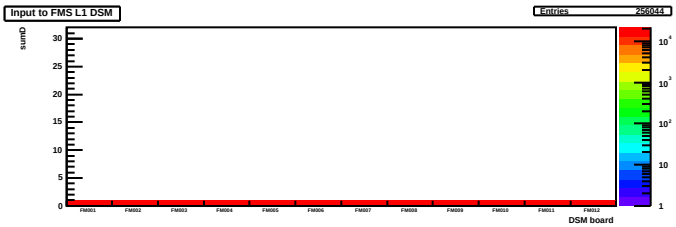

Input to FMS L0 DSM
Entries 170696
QT8(3) sum - simulated
QT board

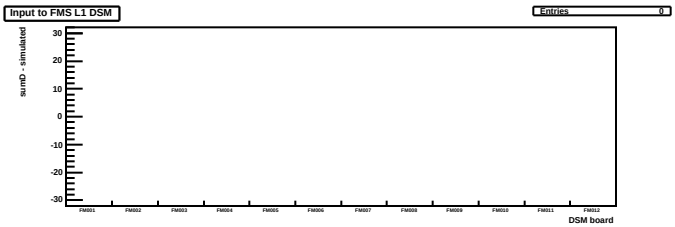

Input to FMS L0 DSM
Entries 1024176
HT ADC
QT board

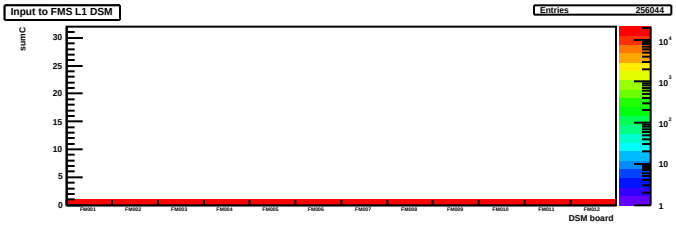

Input to FMS L0 DSM
Entries 170696
HT ADC - simulated
QT board

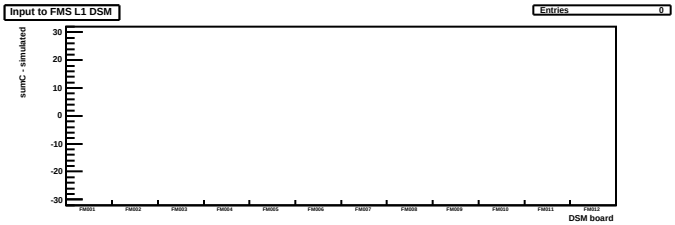

Input to FMS L0 DSM
Entries 1024176
HT ID
QT board

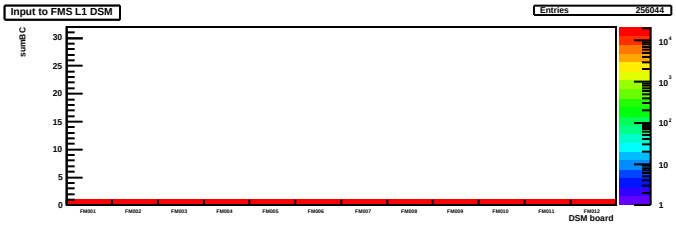

Input to FMS L0 DSM
Entries 170696
HT ID - simulated
QT board

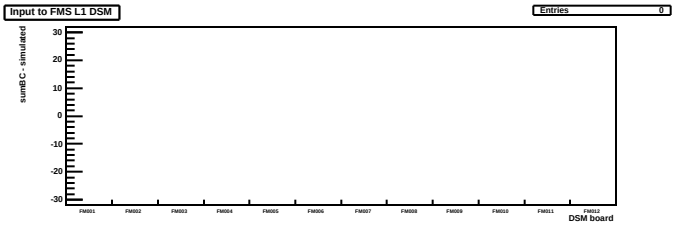

Input to FMS L1 DSM
Entries 256044
sumD
DSM board

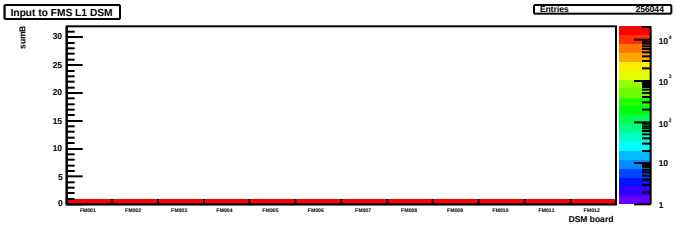

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

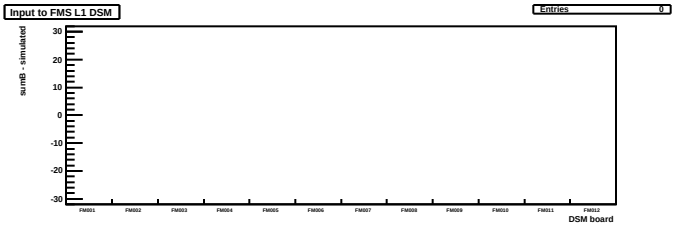

Input to FMS L1 DSM
Entries 256044
sumC
DSM board

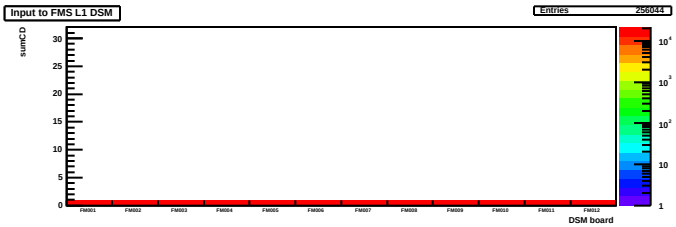

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

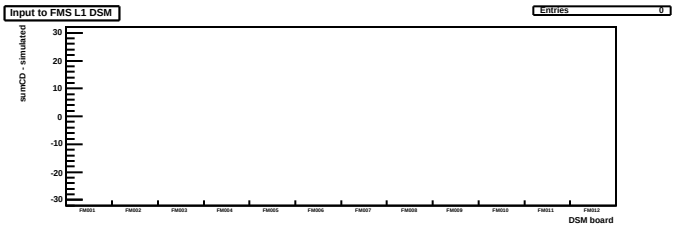

Input to FMS L1 DSM
Entries 256044
sumBC
DSM board

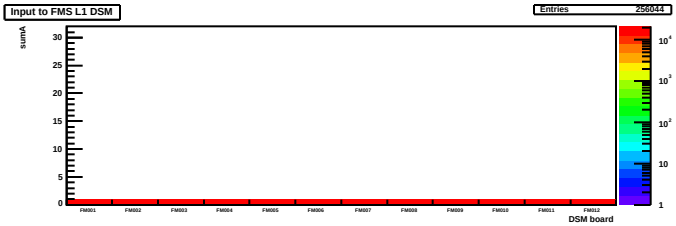

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

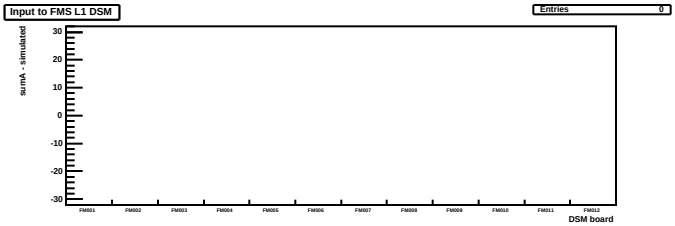

Input to FMS L1 DSM
Entries 256044
sumB
DSM board

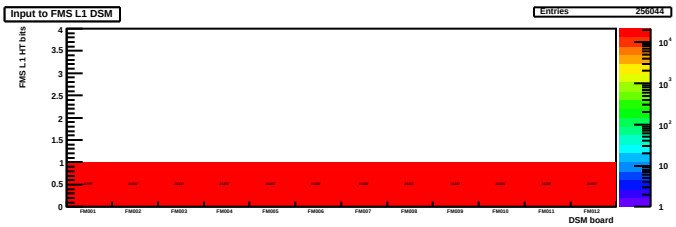

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

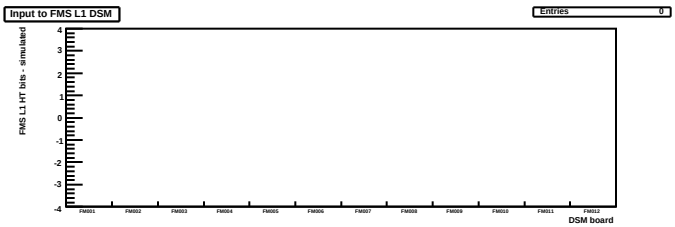

Input to FMS L1 DSM
Entries 256044
sumCD
DSM board

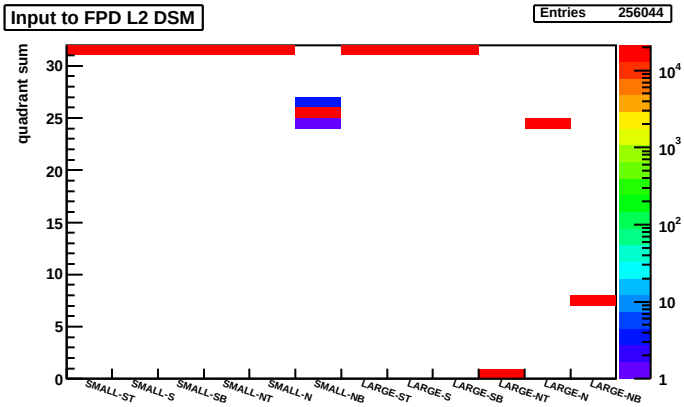

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

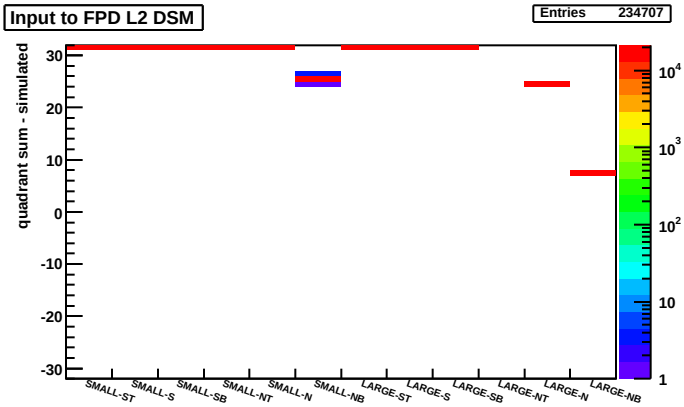

Input to FMS L1 DSM
Entries 256044
sumA
DSM board

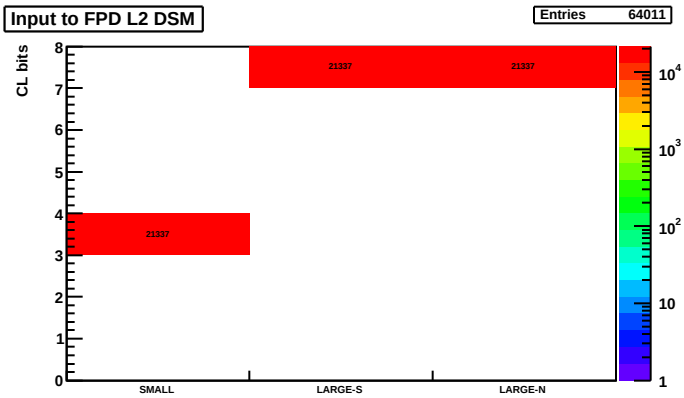

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

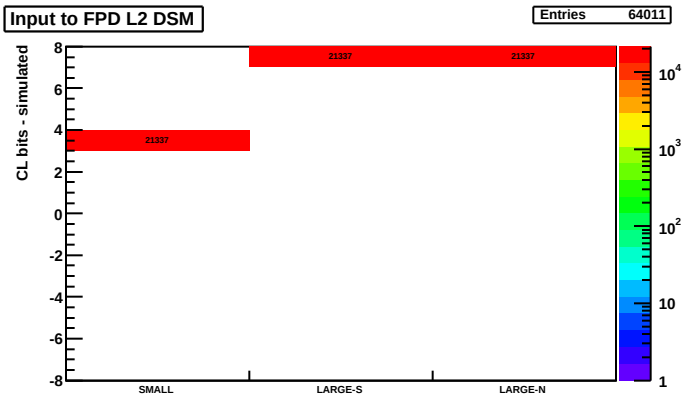

Input to FMS L1 DSM
Entries 256044
FMS L1 HT bits
DSM board

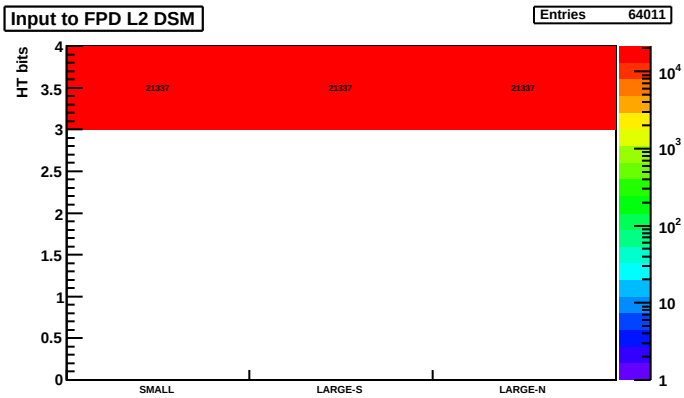

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

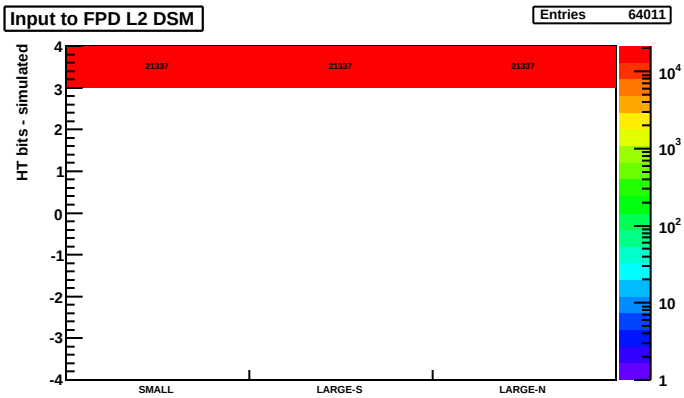

Input to FPD L2 DSM
Entries 256044
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

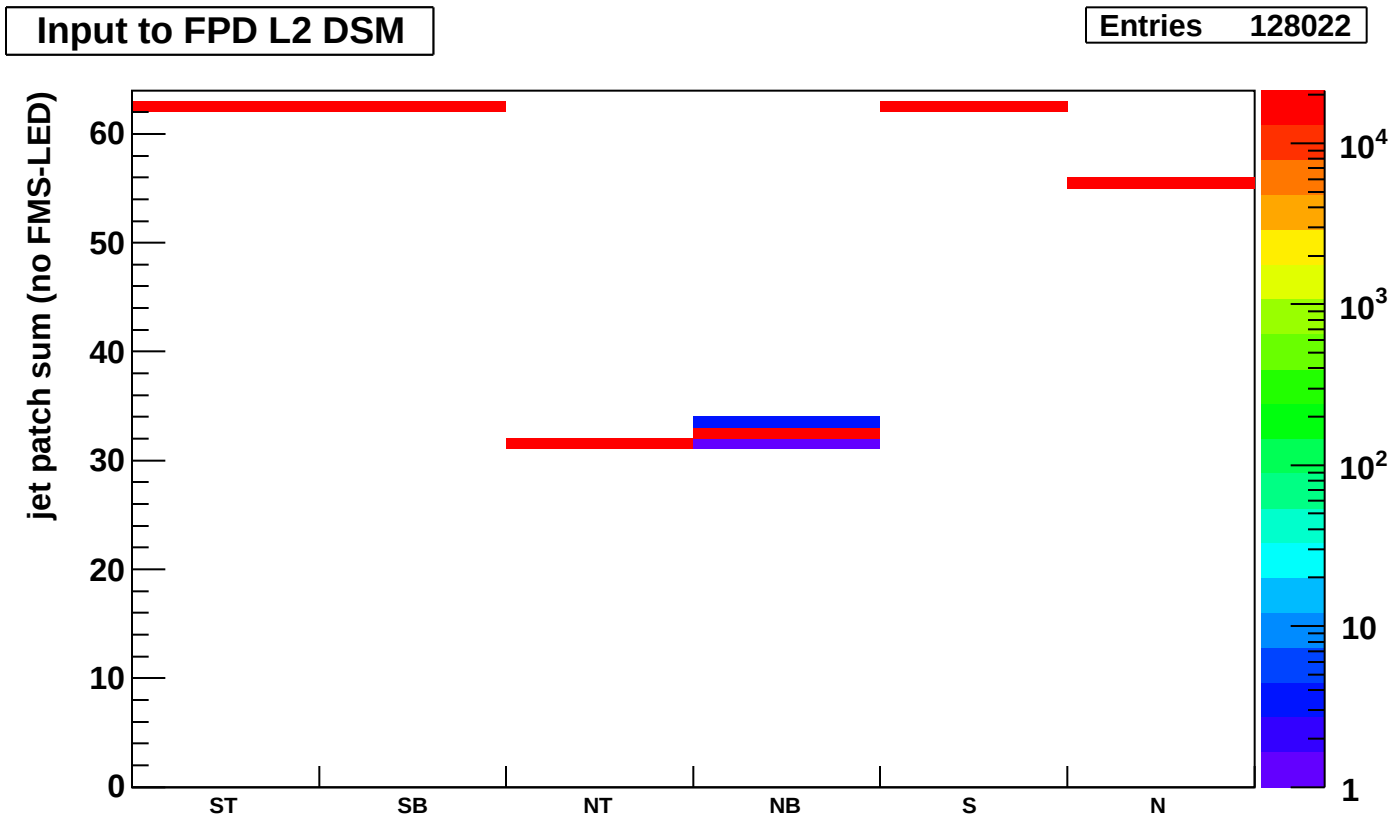

Input to FPD L2 DSM
Entries 234707
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

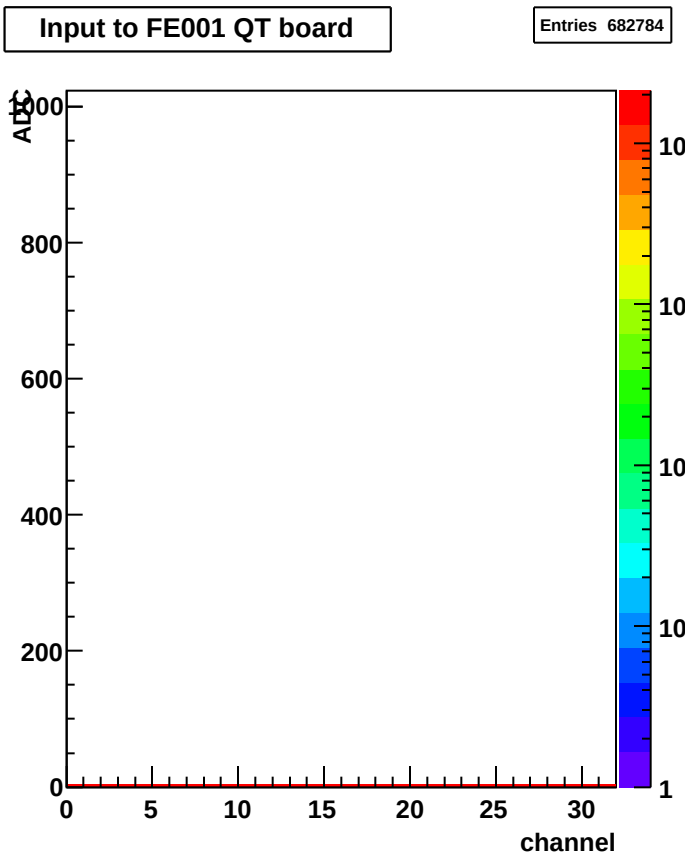

Input to FPD L2 DSM
Entries 64011
CL bits
21337
21337
21337
SMALL
LARGE-S
LARGE-N

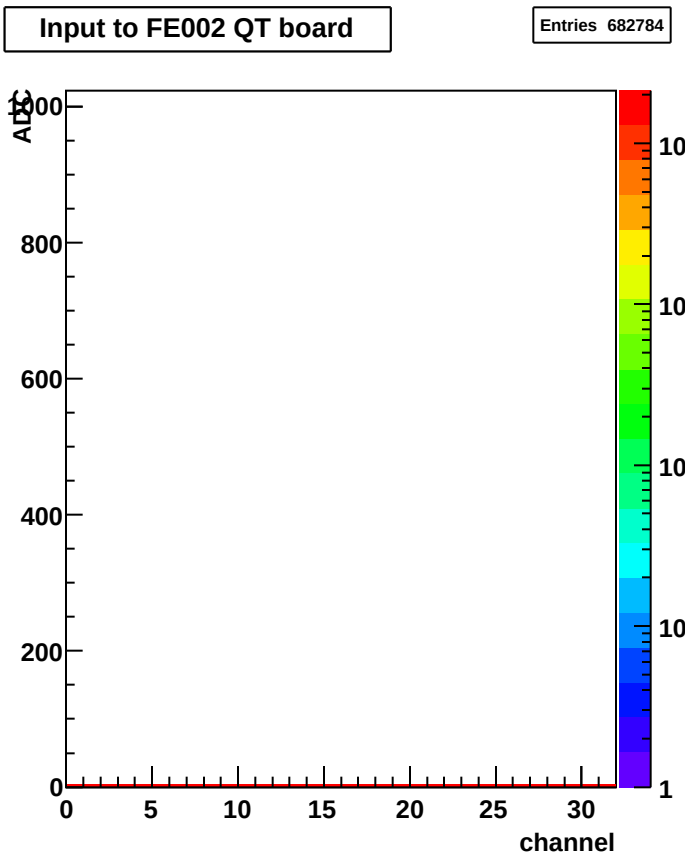

Input to FPD L2 DSM
Entries 64011
CL bits - simulated
21337
21337
21337
SMALL
LARGE-S
LARGE-N

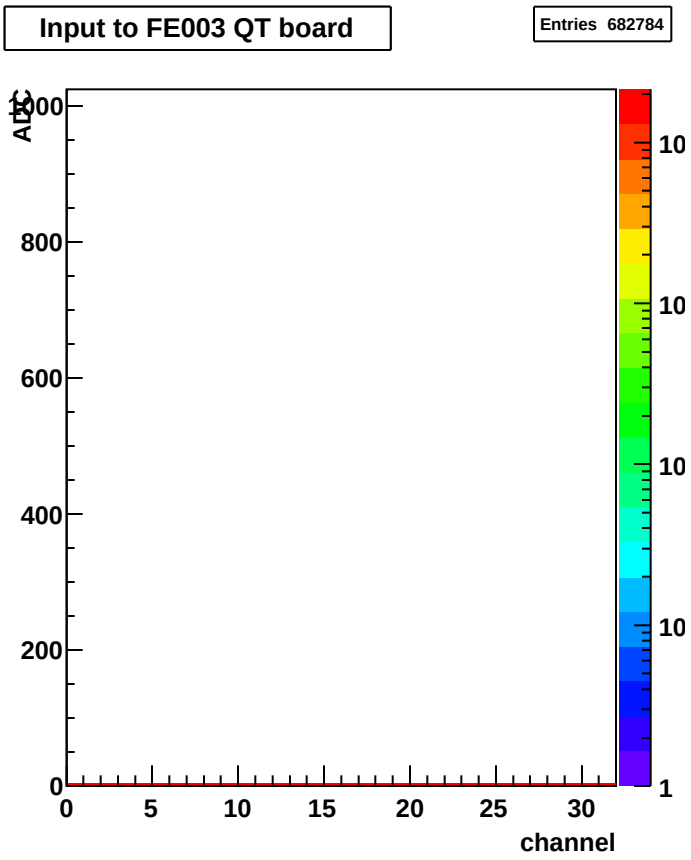

Input to FPD L2 DSM
Entries 64011
HT bits
21337
21337
21337
SMALL
LARGE-S
LARGE-N

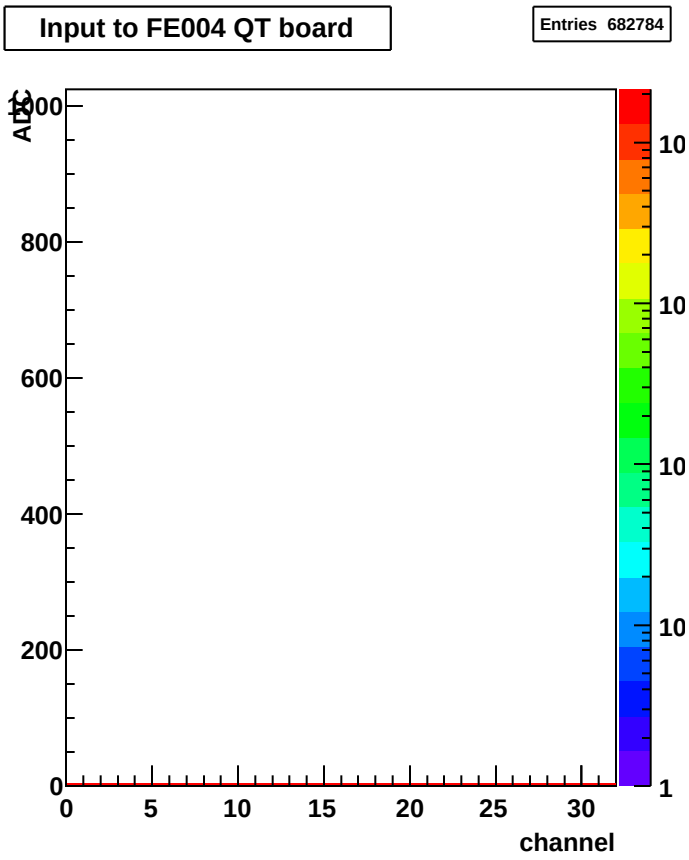

Input to FPD L2 DSM
Entries 64011
HT bits - simulated
21337
21337
21337
SMALL
LARGE-S
LARGE-N

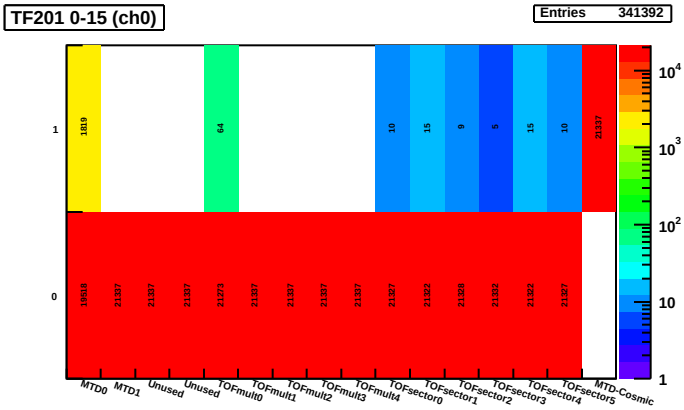

Input to FPD L2 DSM
Entries 128022
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

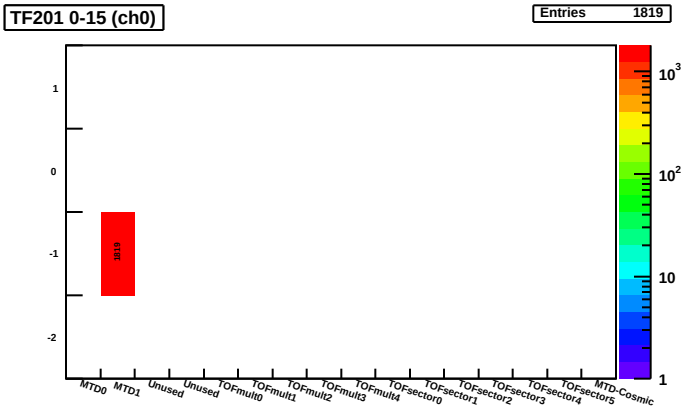

Input to FE001 QT board
Entries 682784
ADC
channel

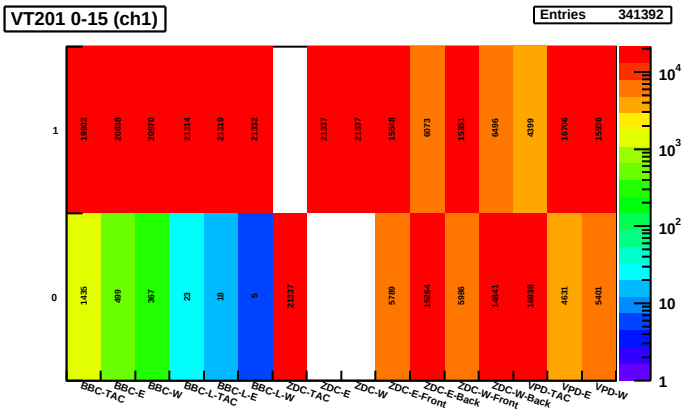

Input to FE002 QT board
Entries 682784
ADC
channel

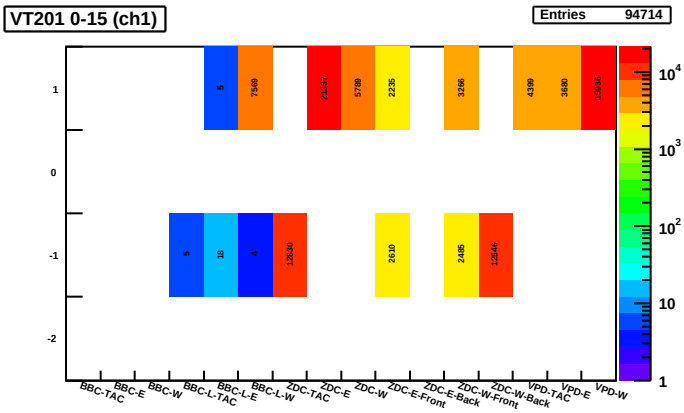

Input to FE003 QT board
Entries 682784
ADC
channel

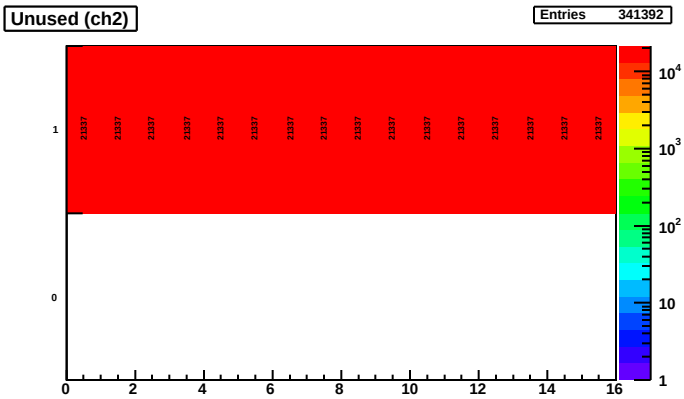

Input to FE004 QT board
Entries 682784
ADC
channel

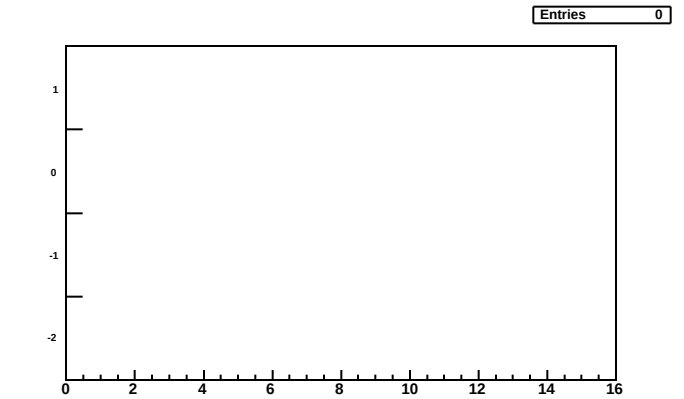

TF201 0-15 (ch0)
Entries 341392
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

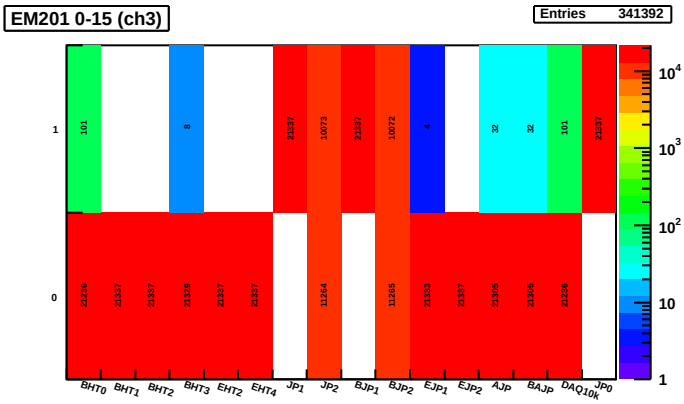

TF201 0-15 (ch0)
Entries 1819
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 341392
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 94714
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


Unused (ch2)
Entries 341392


Entries 0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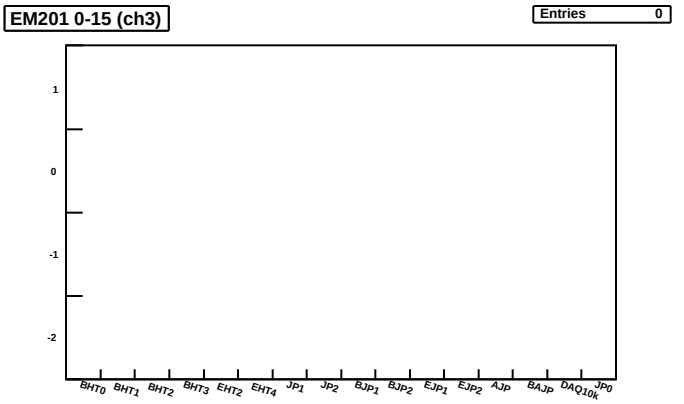
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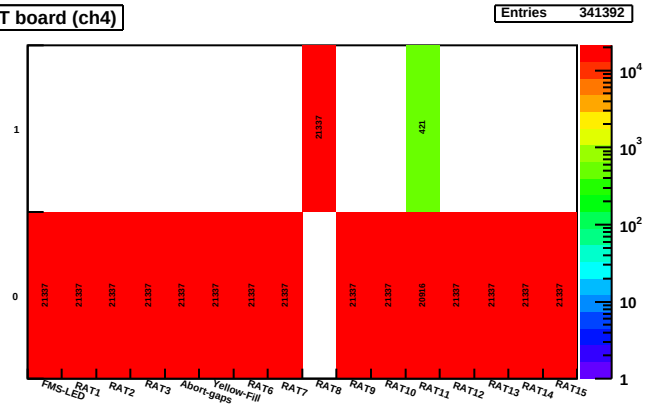
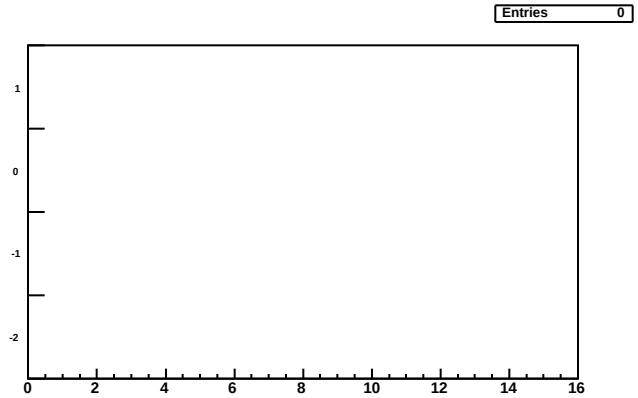
RAT board (ch4)





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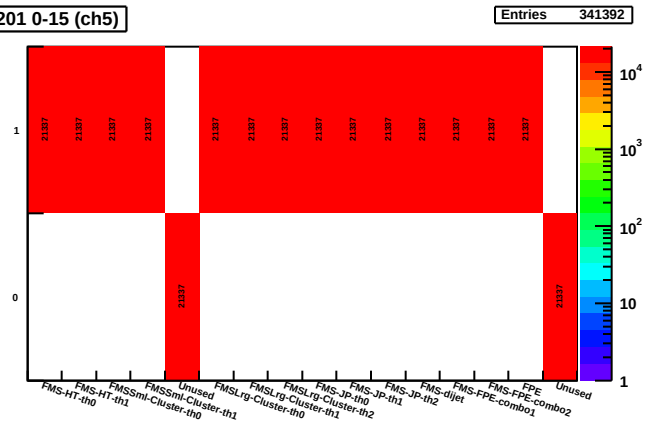

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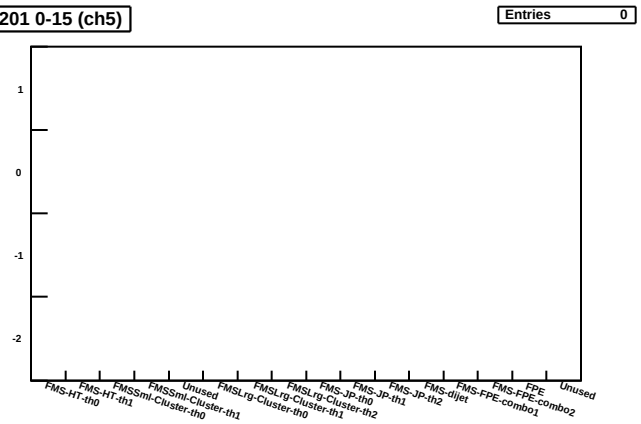

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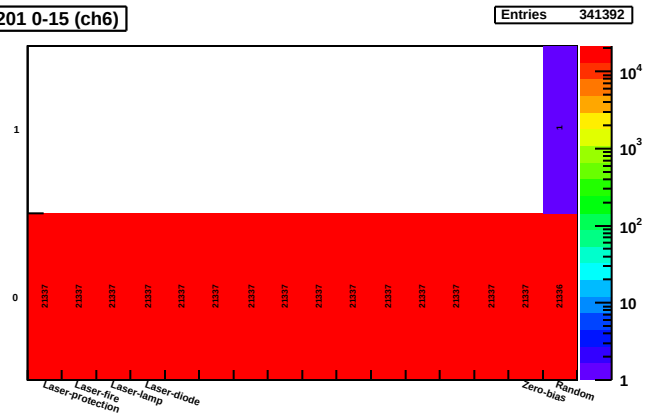

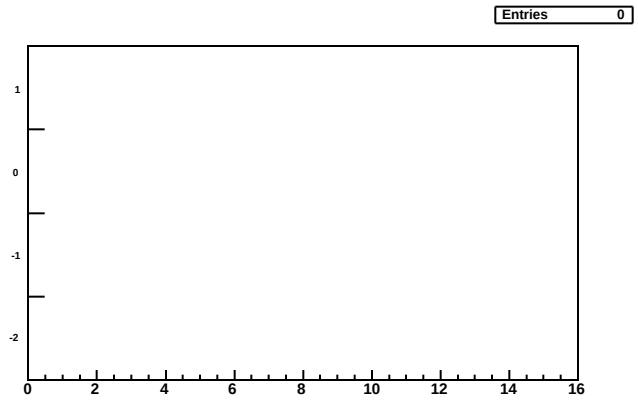
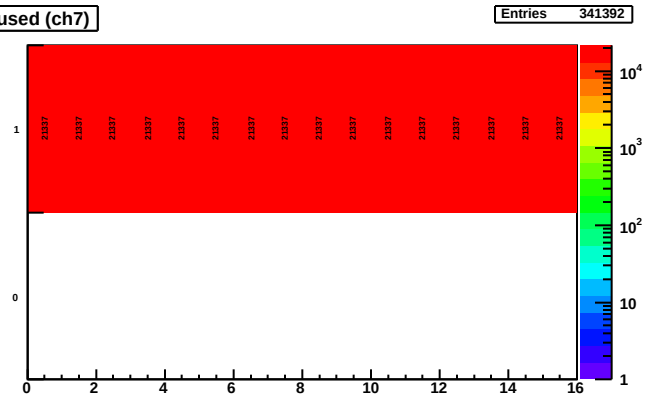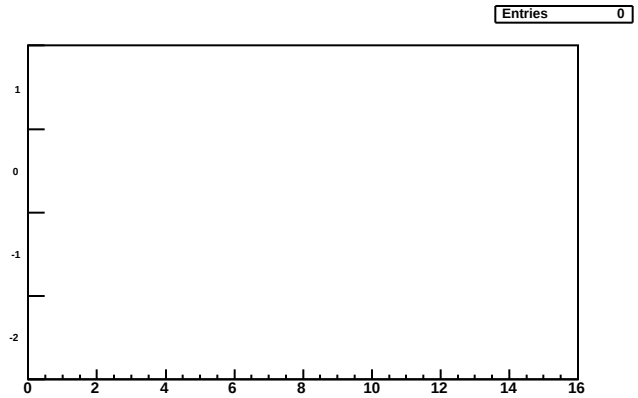
Unused (ch7)