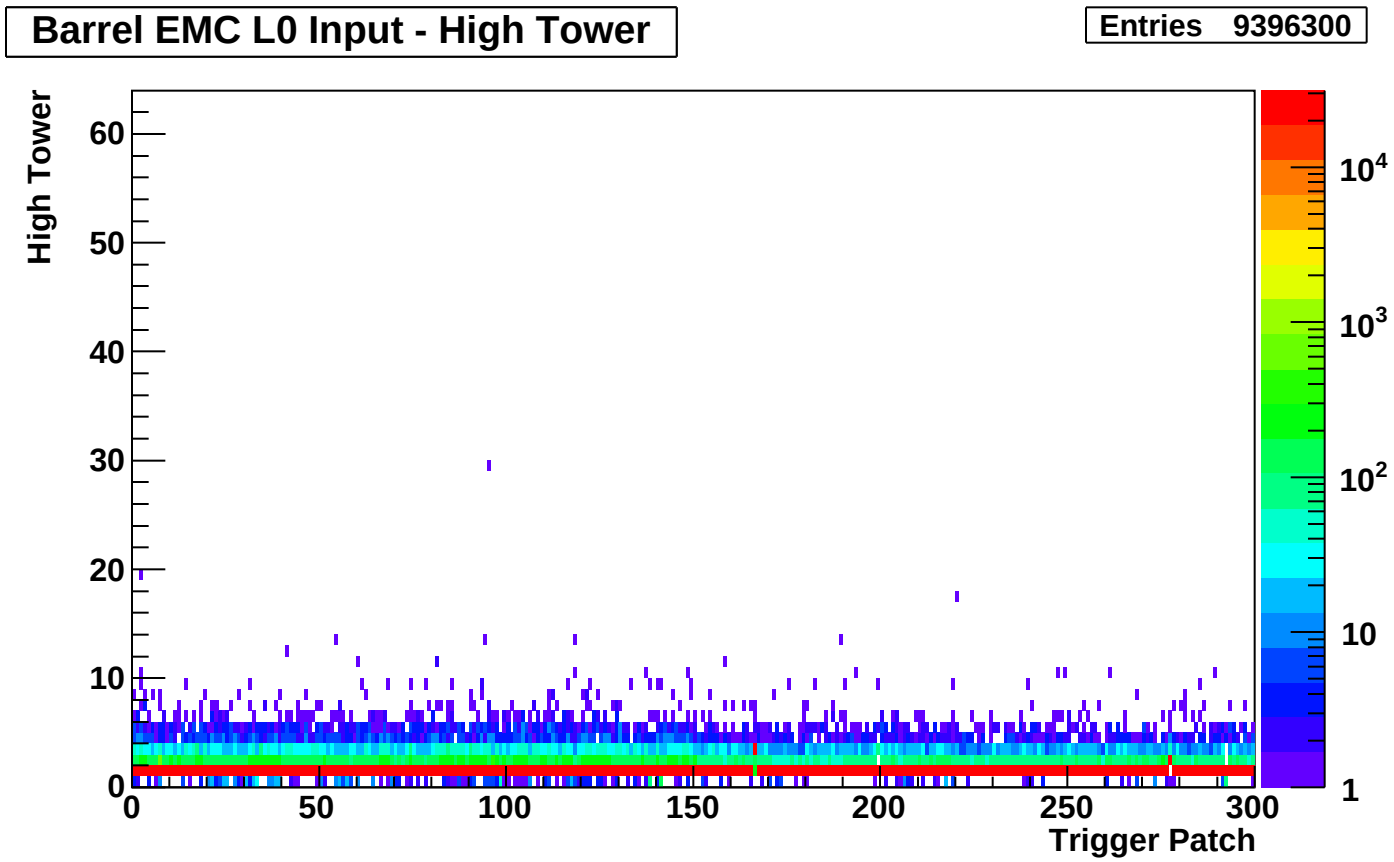
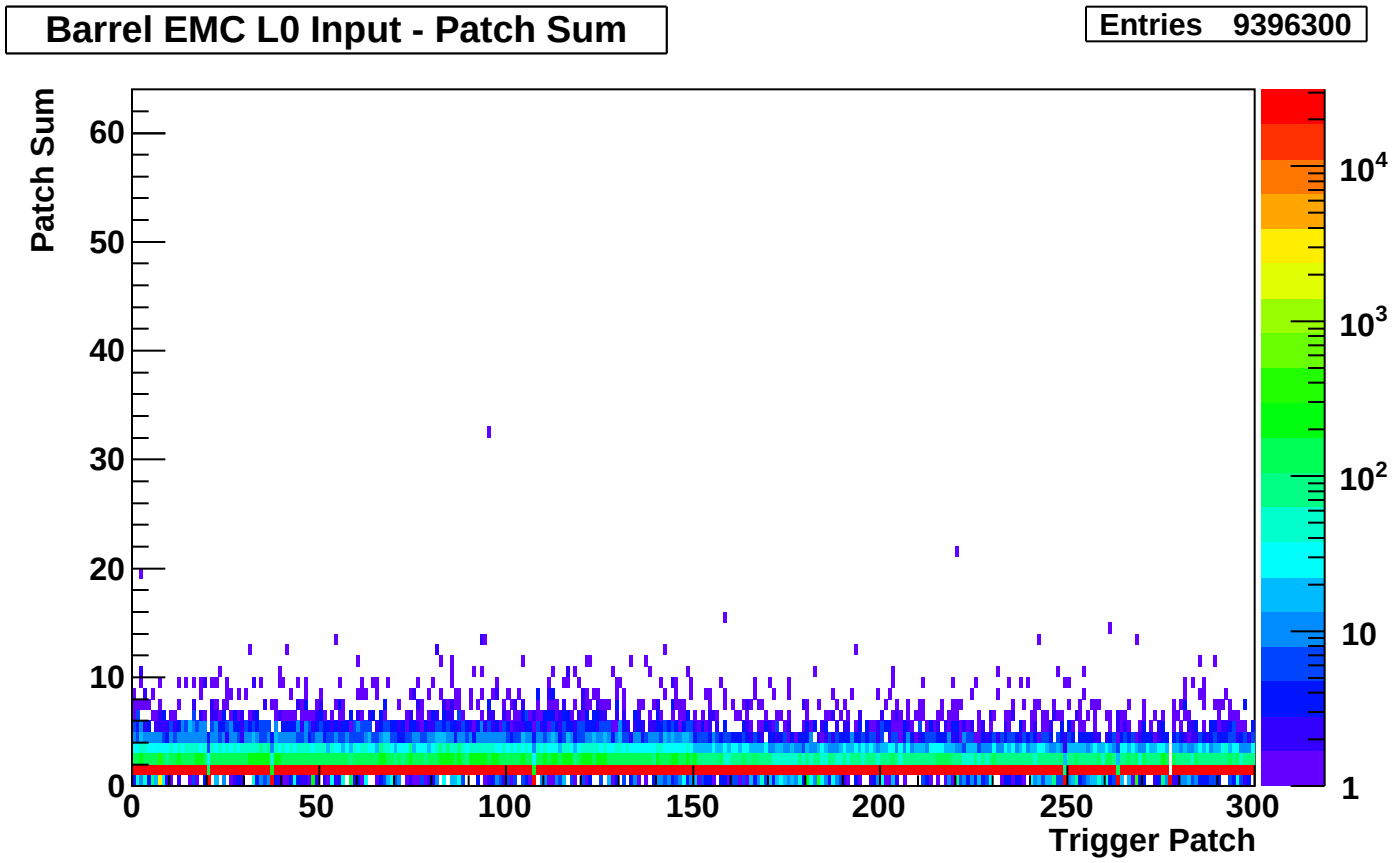
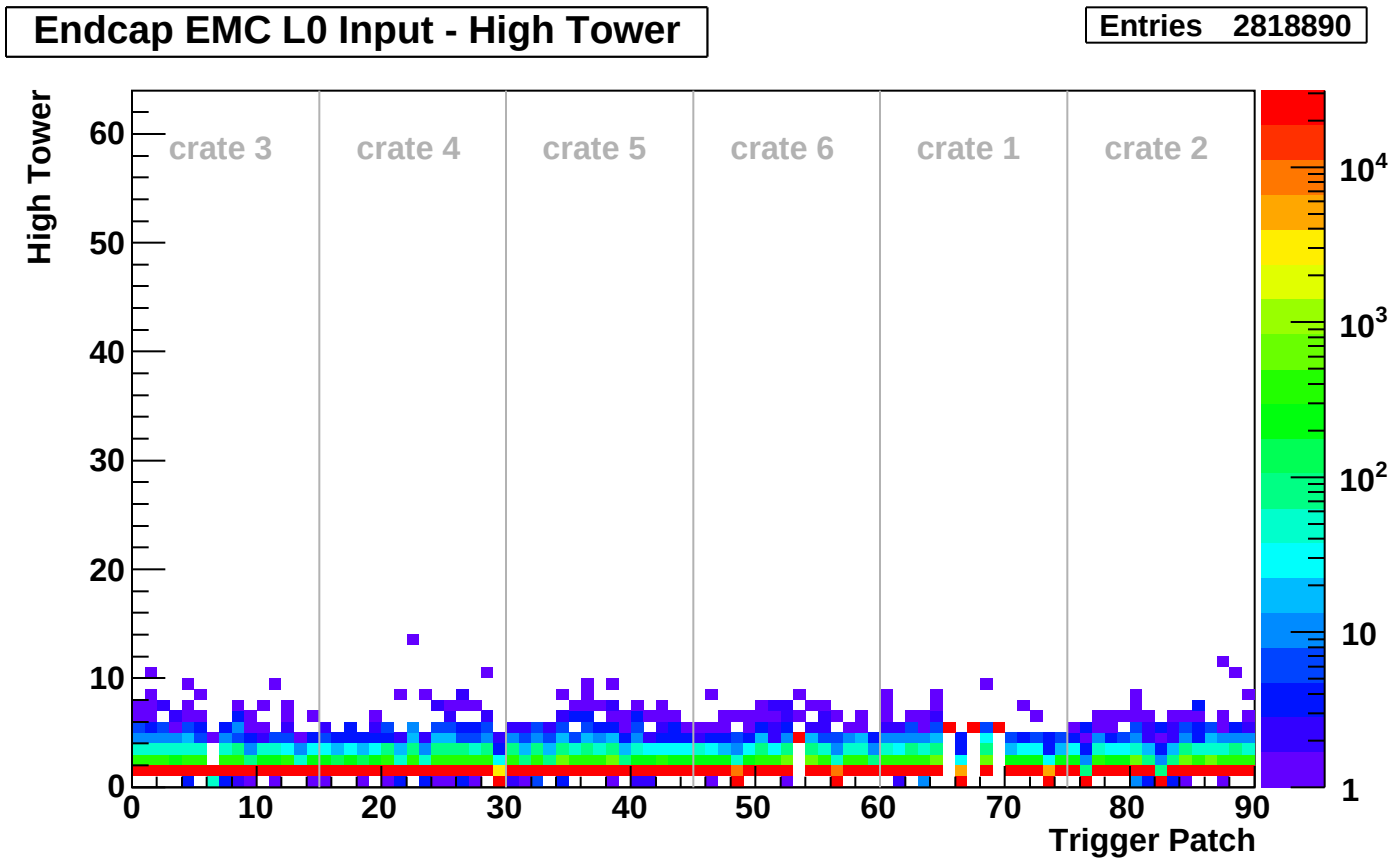
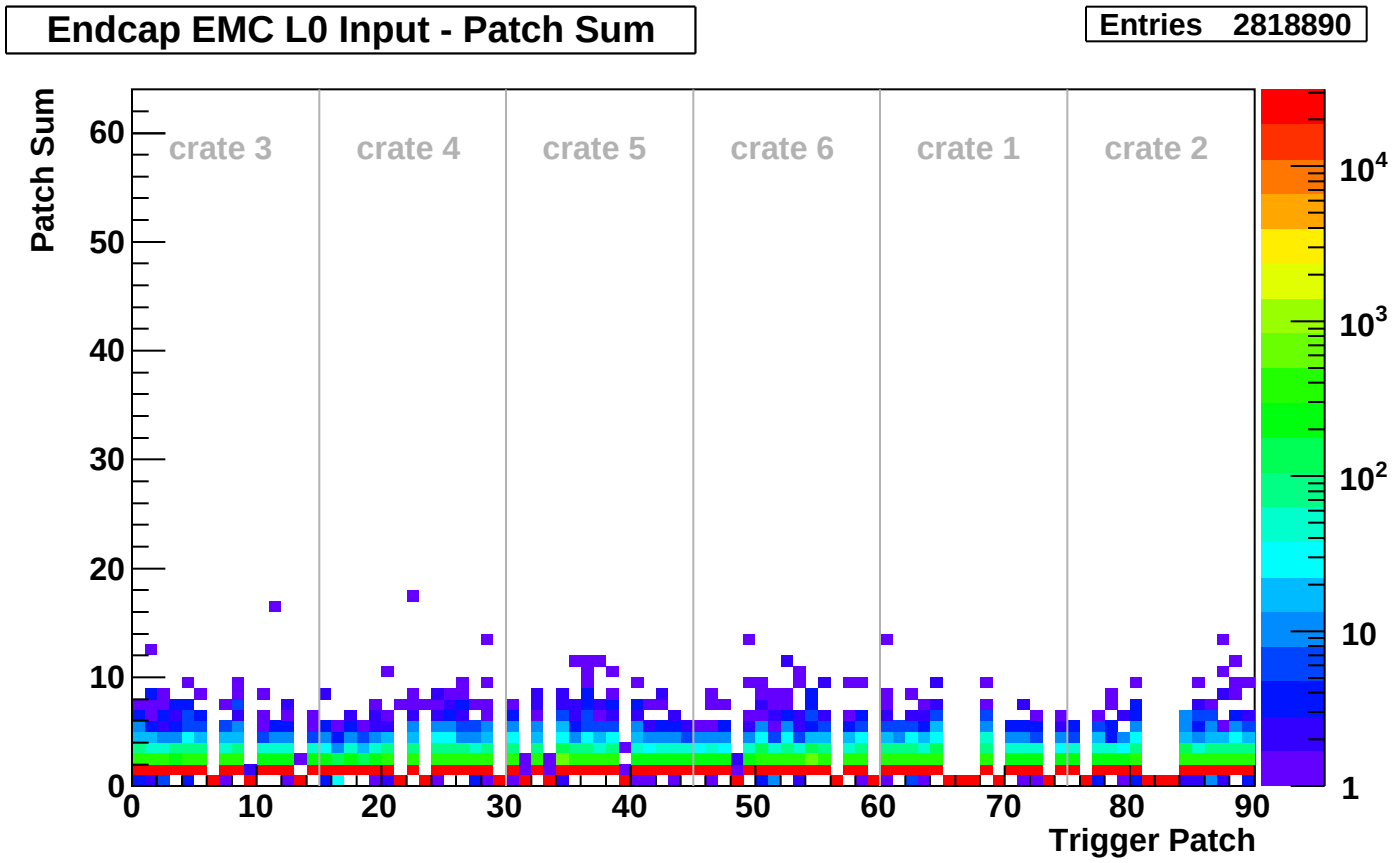
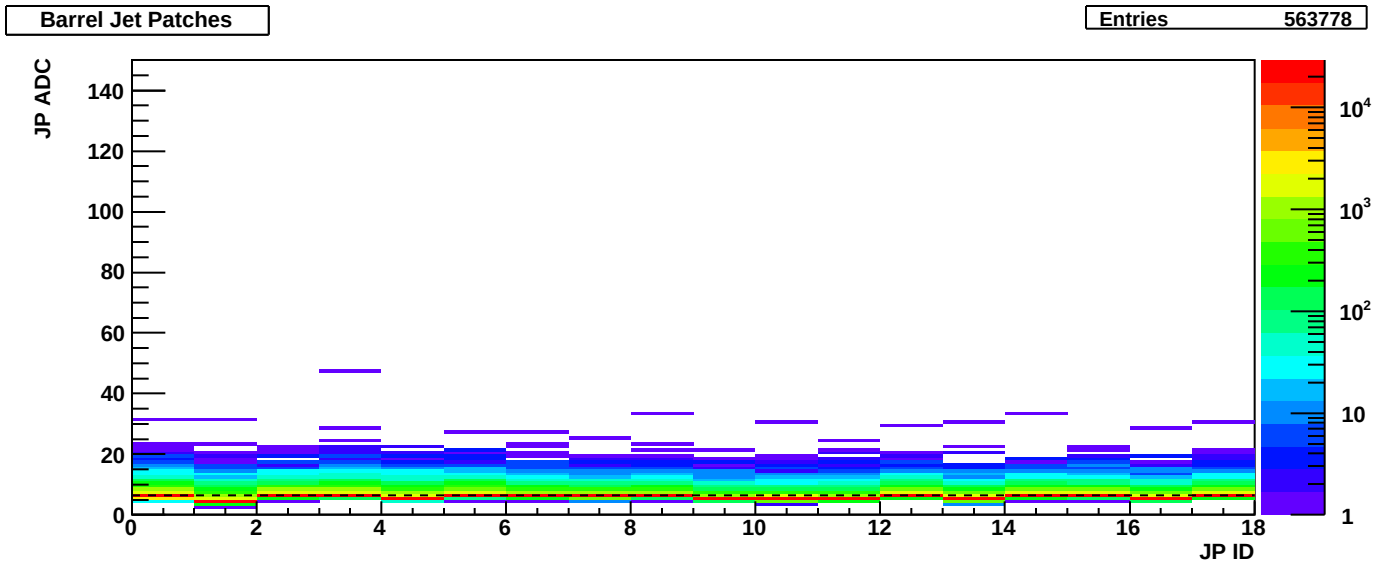
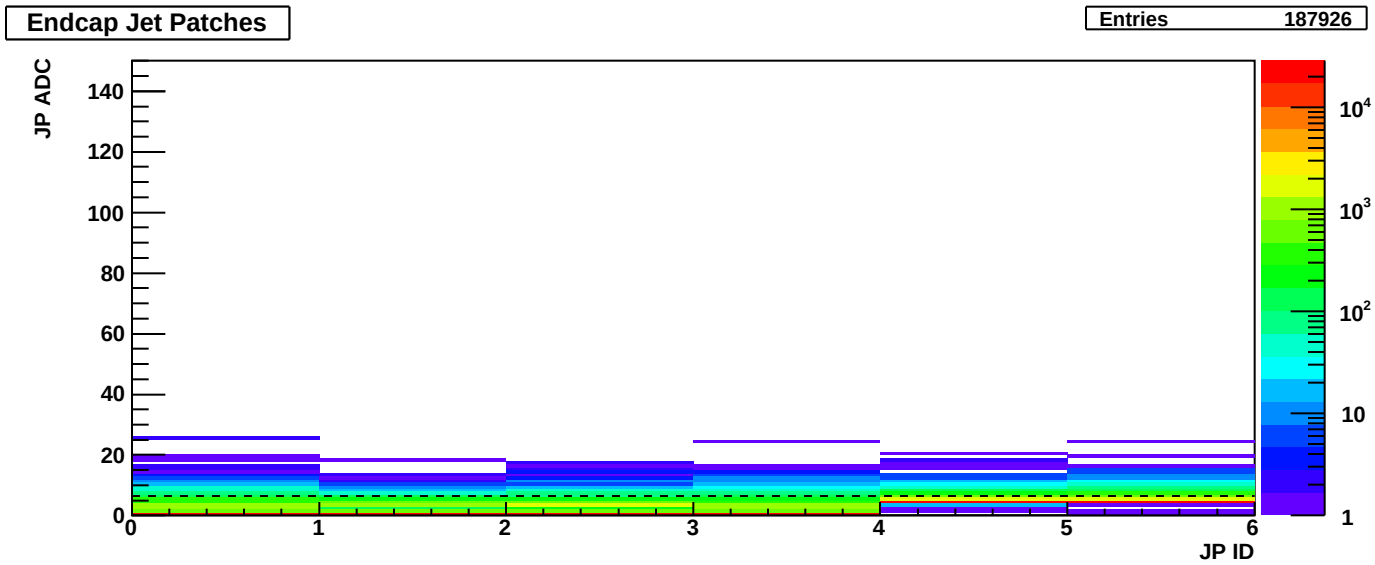

Barrel EMC L0 Input - High Tower
Entries 9396300
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$

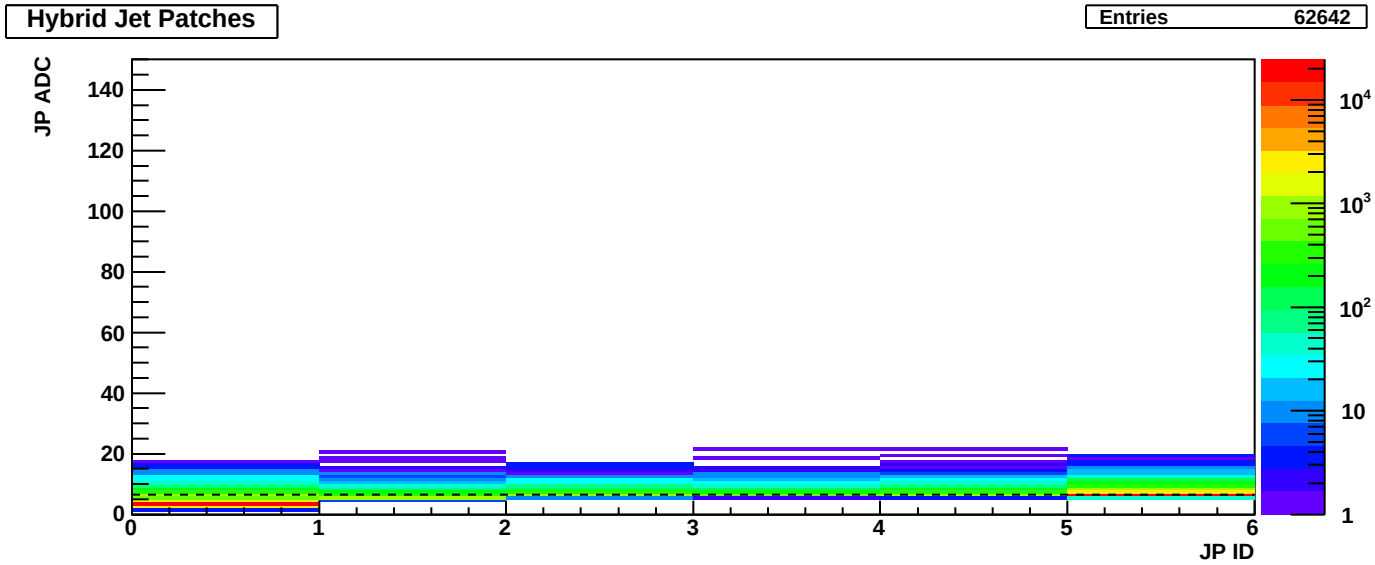

Barrel EMC L0 Input - Patch Sum
Entries 9396300
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$

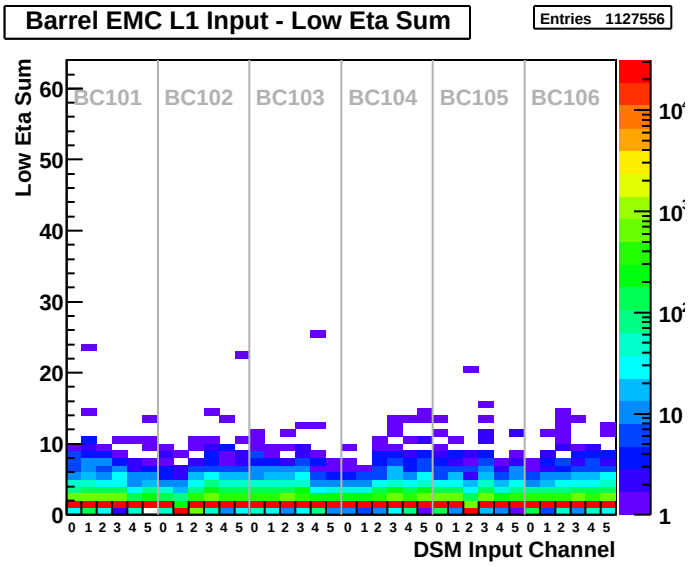

Endcap EMC L0 Input - High Tower
Entries 2818890
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

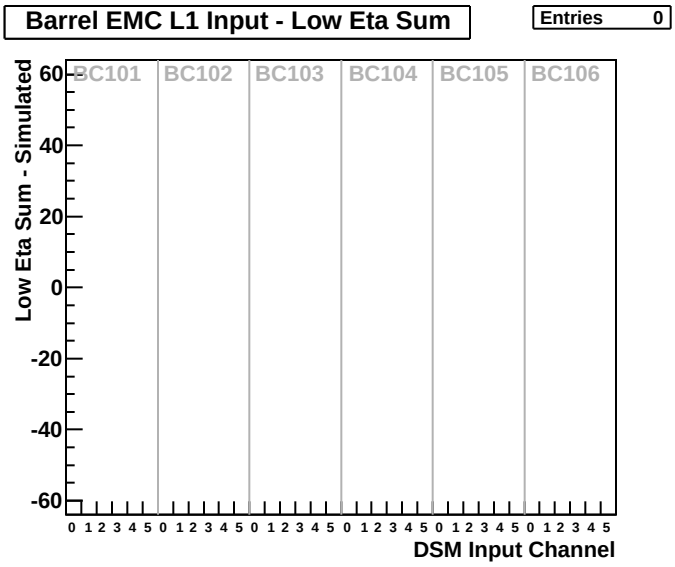

Endcap EMC L0 Input - Patch Sum
Entries 2818890
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

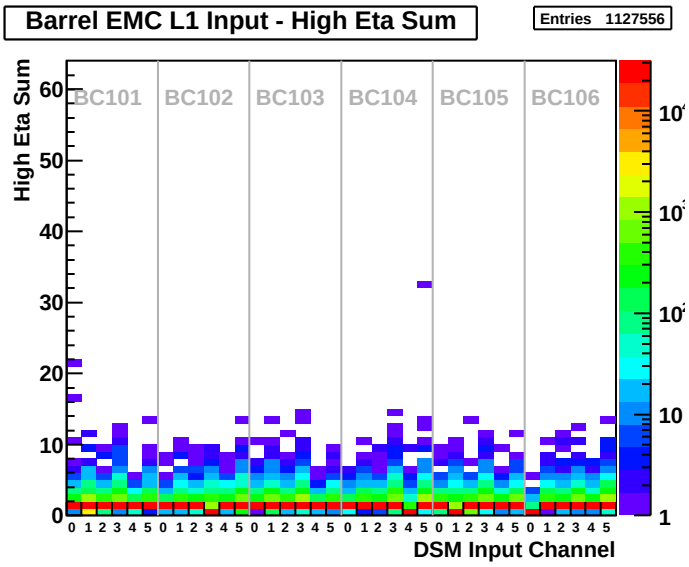

Barrel Jet Patches
Entries 563778
JP ADC
JP ID

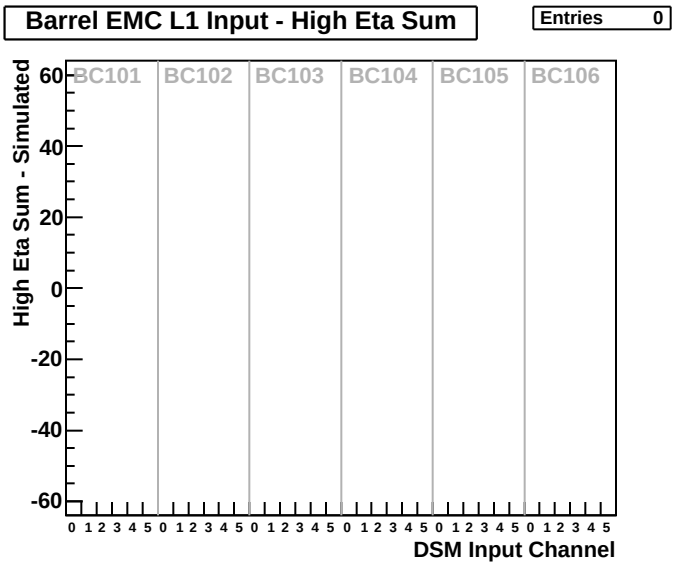

Endcap Jet Patches
Entries 187926
JP ADC
JP ID

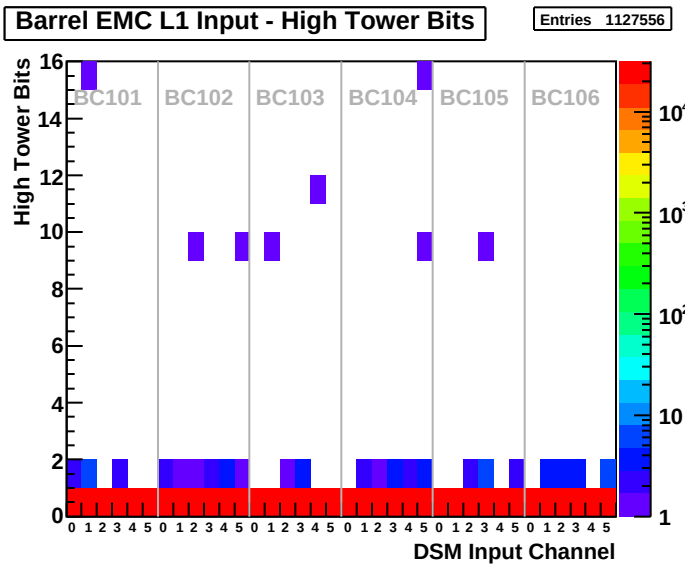

Hybrid Jet Patches
Entries 62642
JP ADC
JP ID

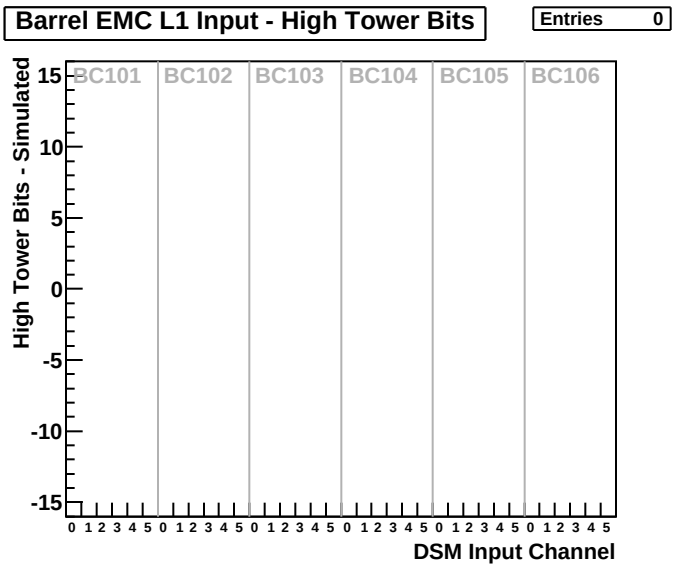

Barrel EMC L1 Input - Low Eta Sum
Entries 1127556
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

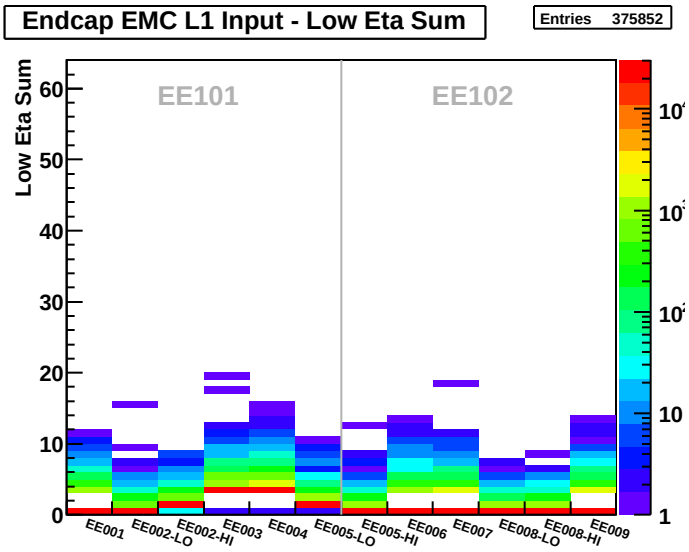

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

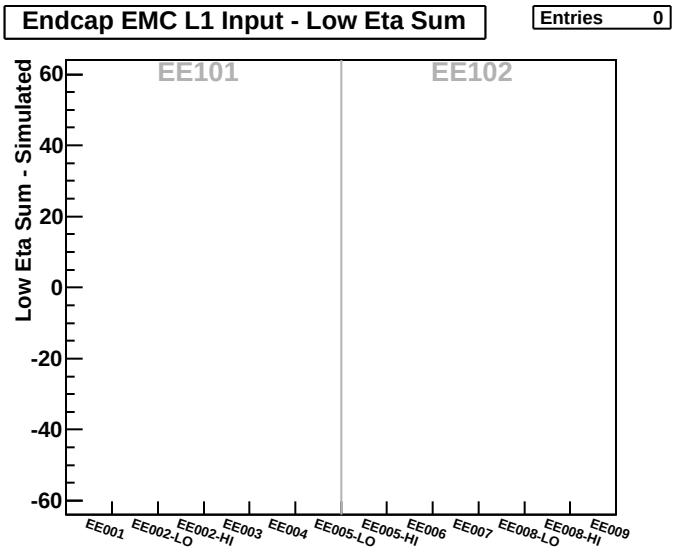

Barrel EMC L1 Input - High Eta Sum
Entries 1127556
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

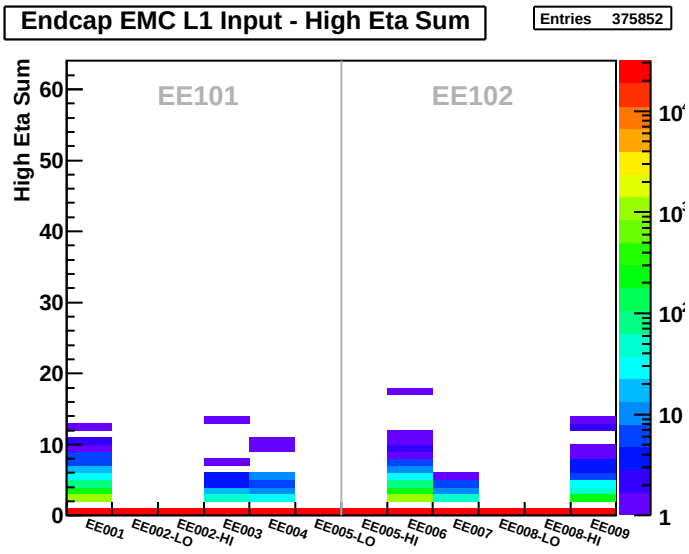

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

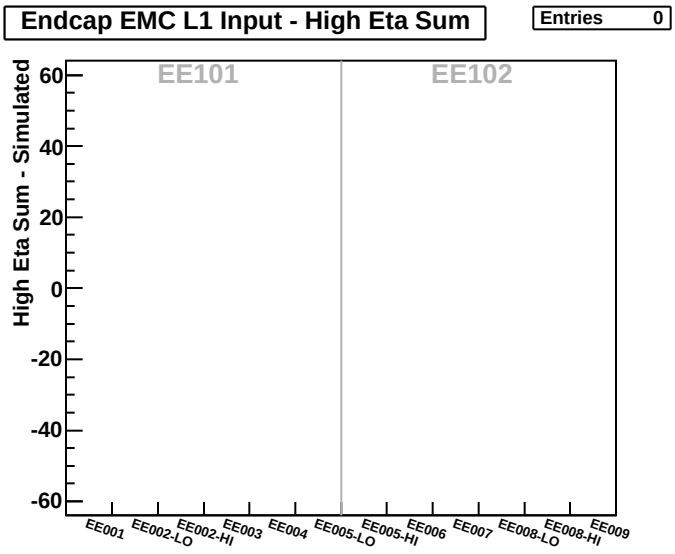

Barrel EMC L1 Input - High Tower Bits
Entries 1127556
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

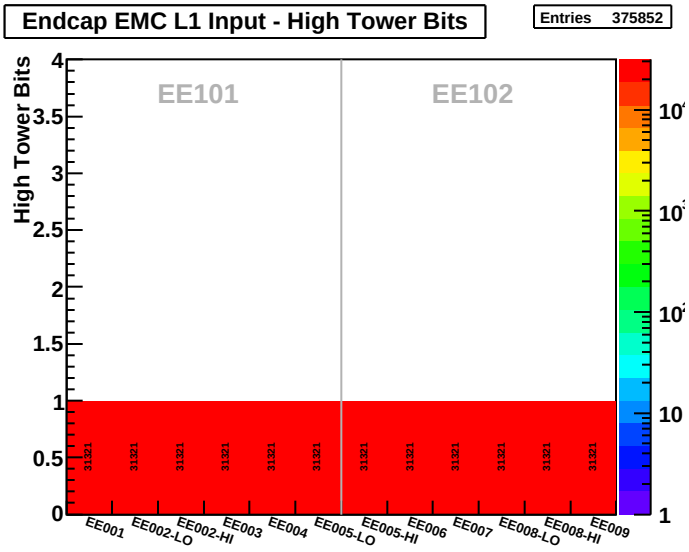

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

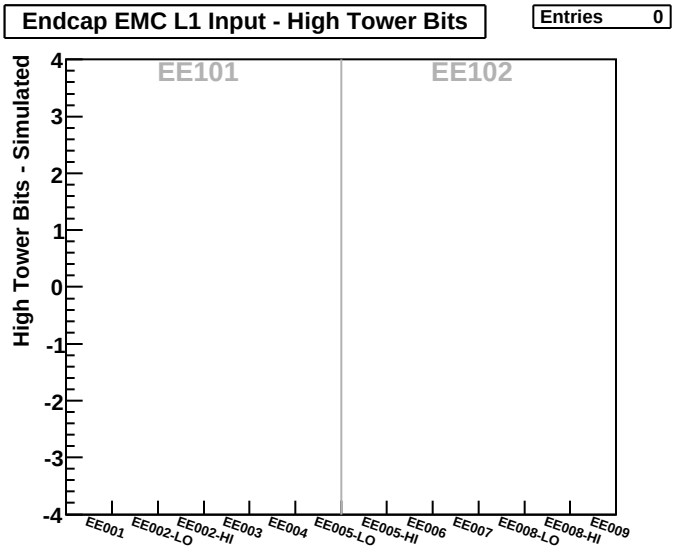

Endcap EMC L1 Input - Low Eta Sum
Entries 375852
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

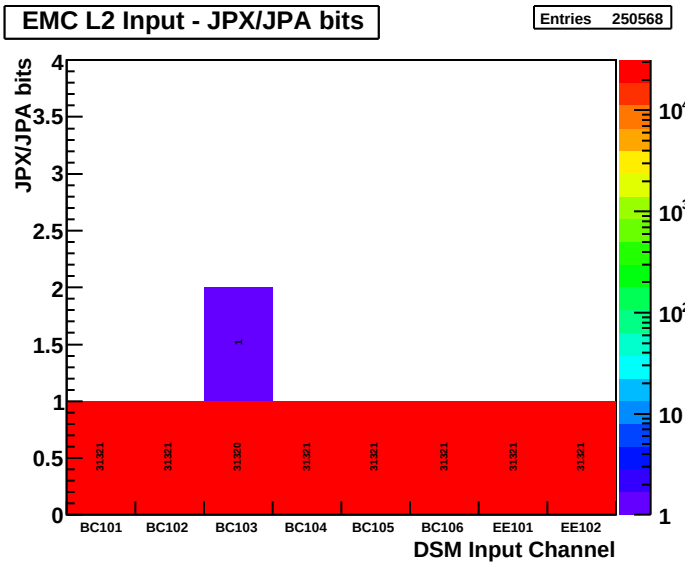

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

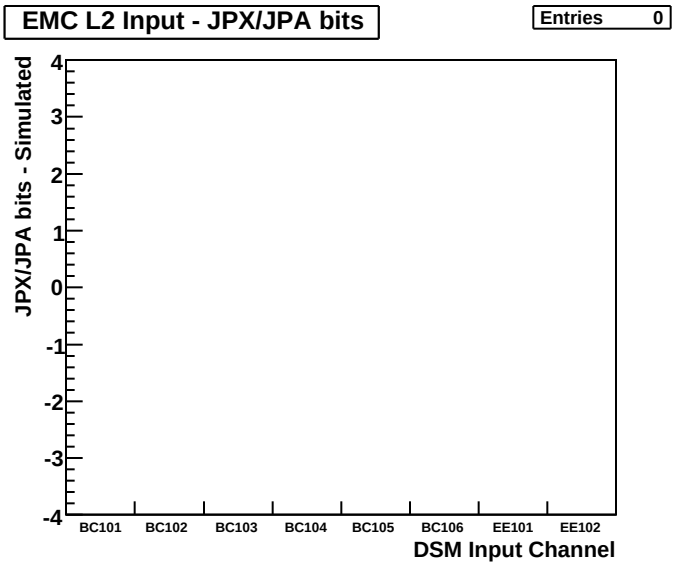

Endcap EMC L1 Input - High Eta Sum
Entries 375852
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

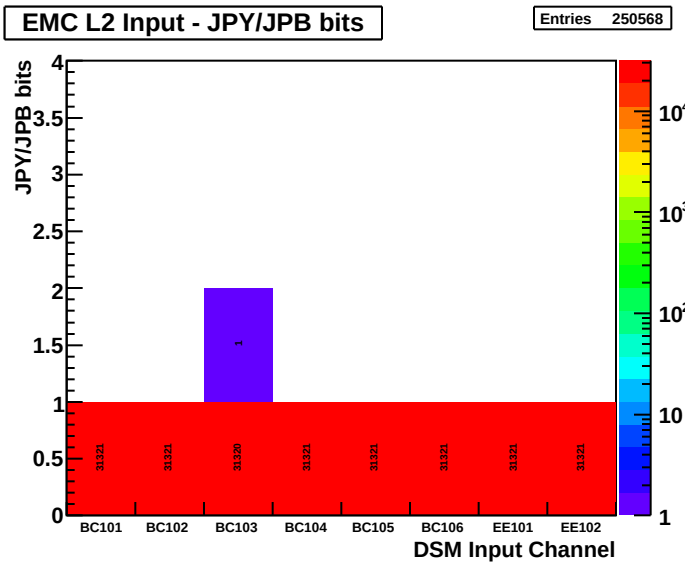

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

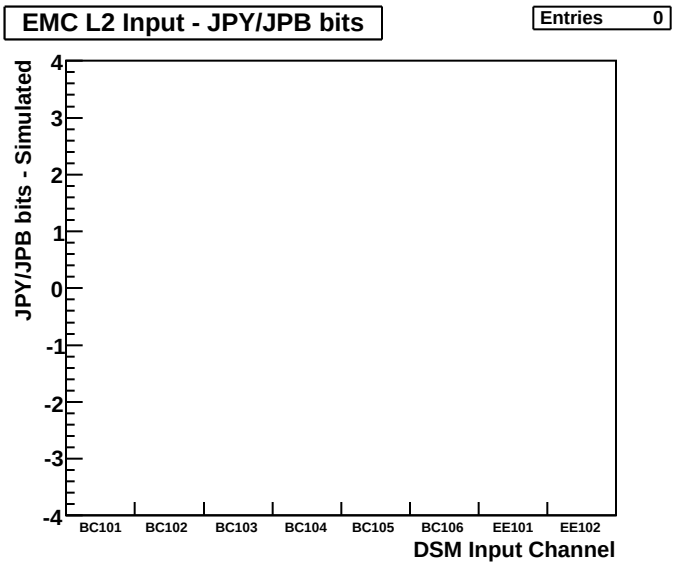

Endcap EMC L1 Input - High Tower Bits
Entries 375852
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

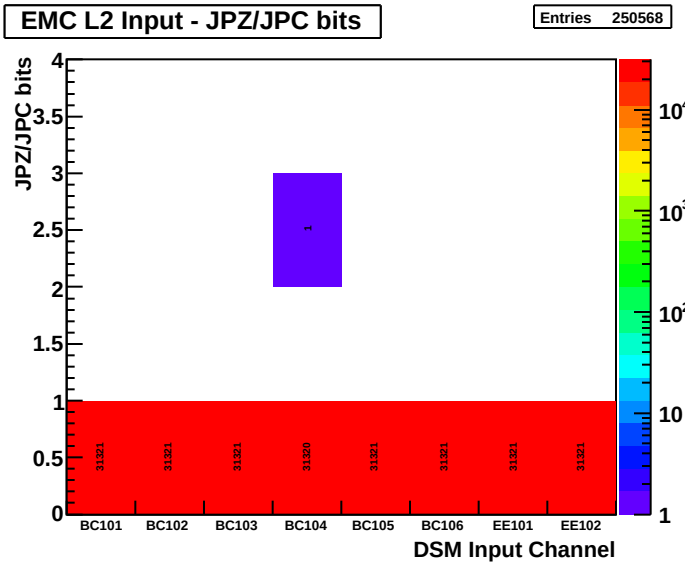

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

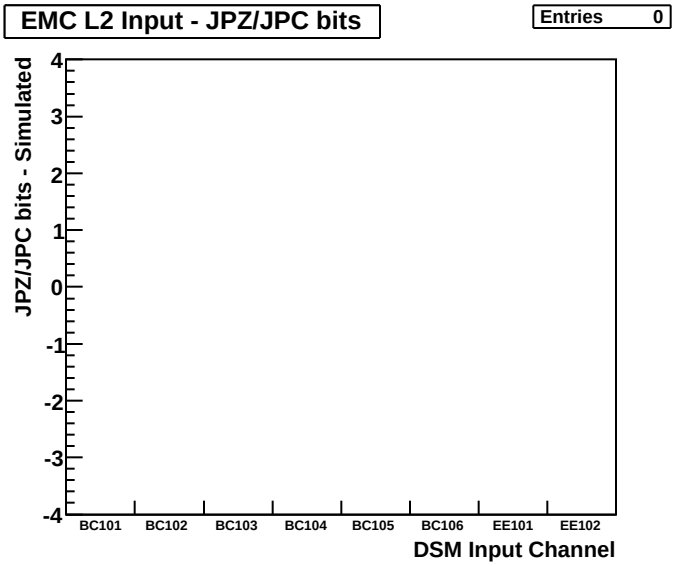

EMC L2 Input - JPX/JPA bits
Entries 250568
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

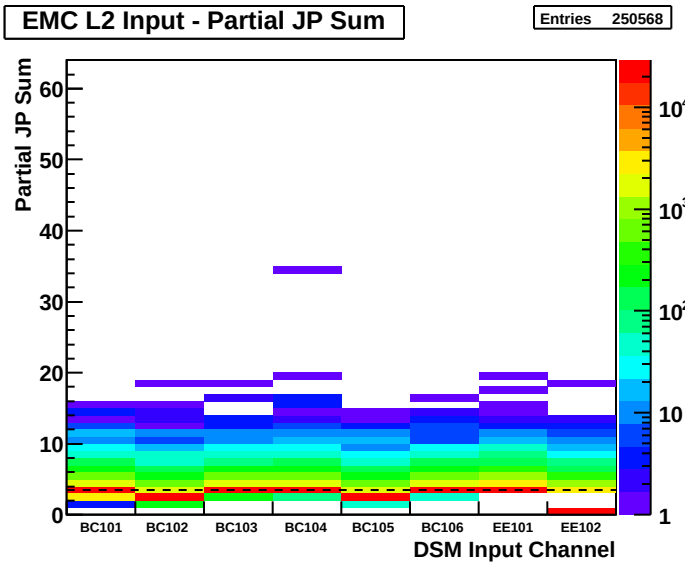

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

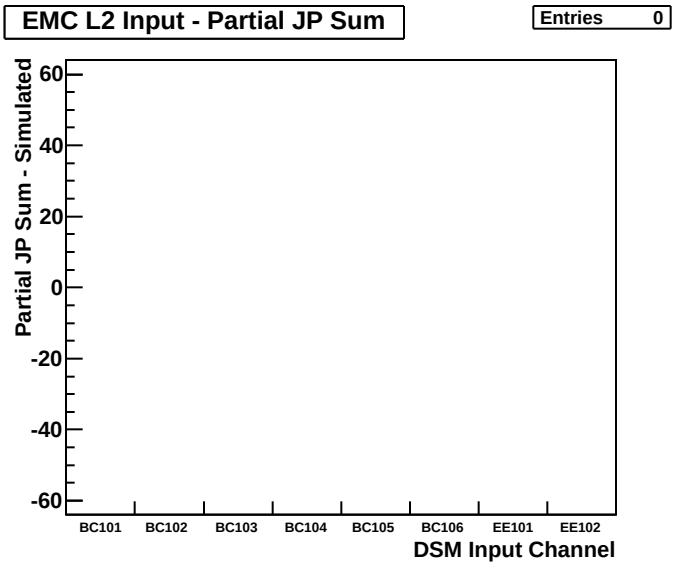

EMC L2 Input - JPY/JPB bits
Entries 250568
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

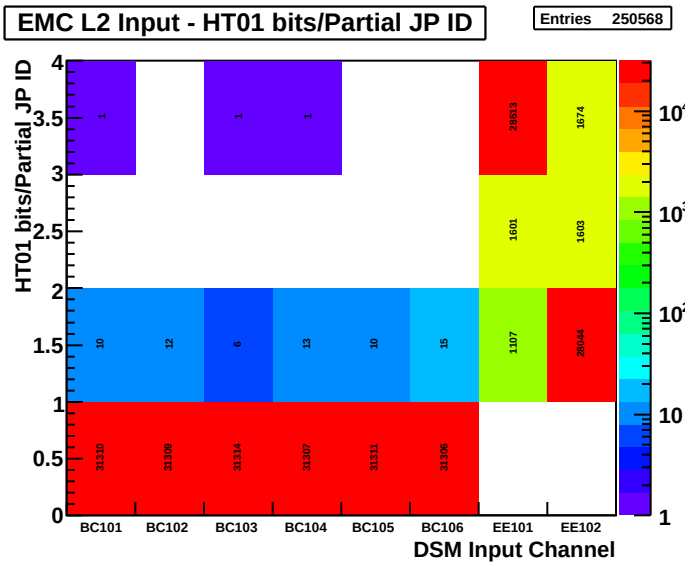

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

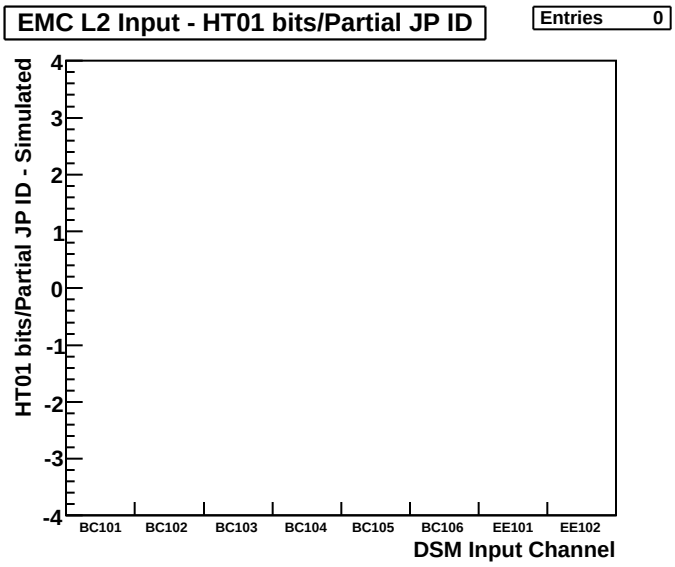

EMC L2 Input - JPZ/JPC bits
Entries 250568
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

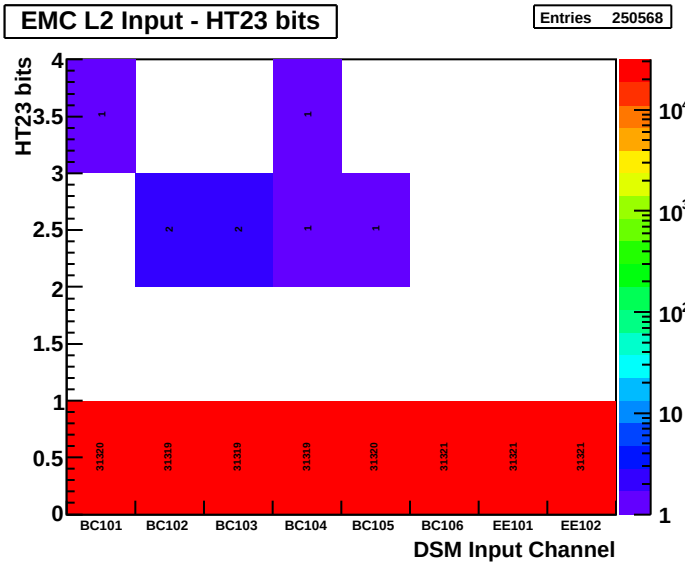

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

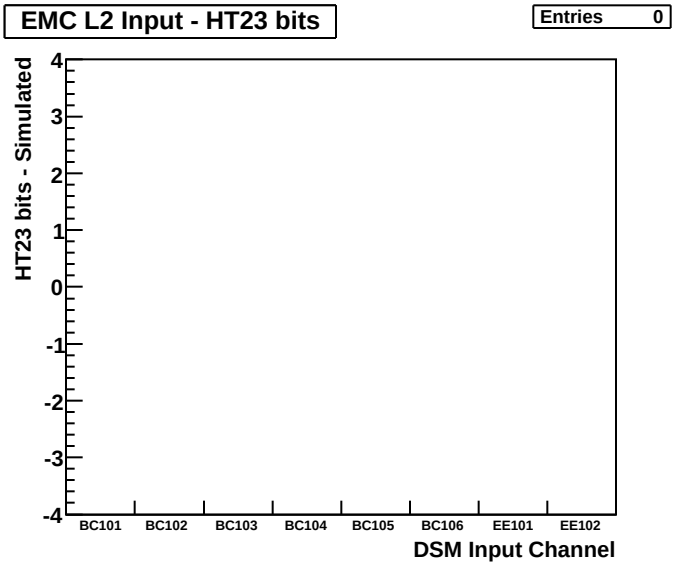

EMC L2 Input - Partial JP Sum
Entries 250568
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

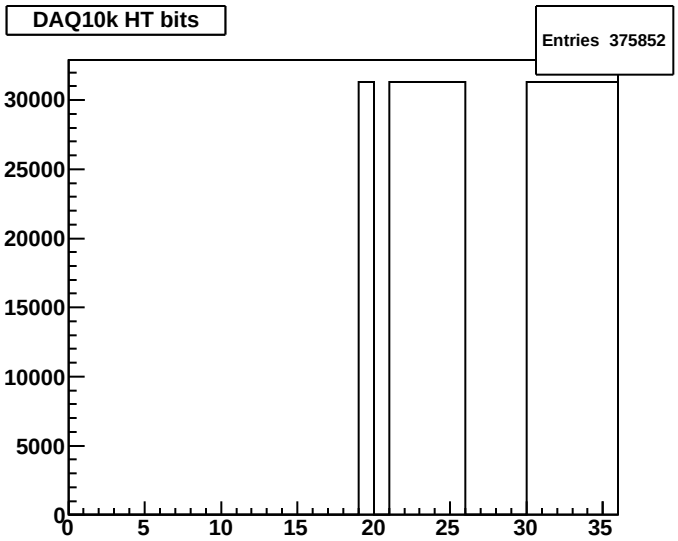

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

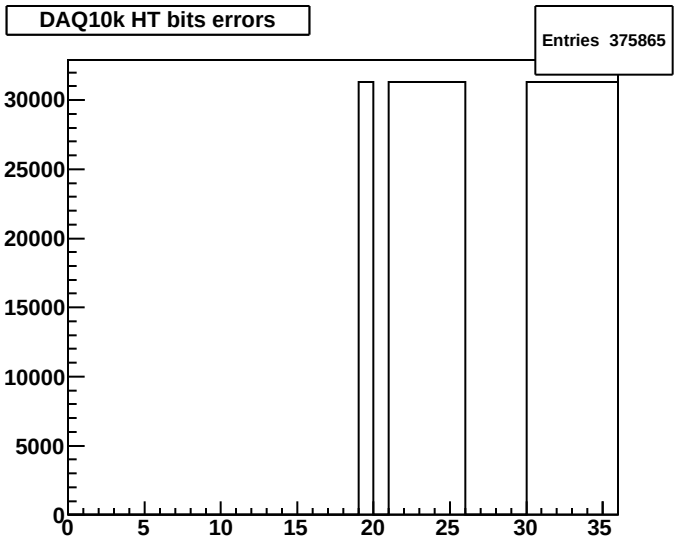

EMC L2 Input - HT01 bits/Partial JP ID
Entries 250568
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

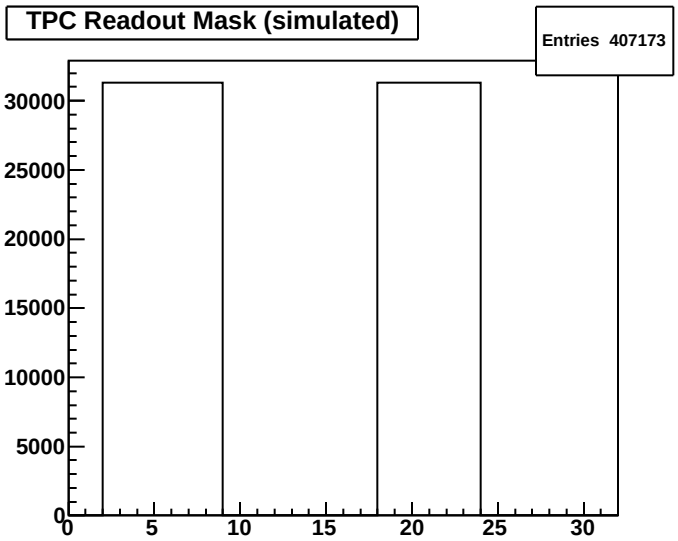

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

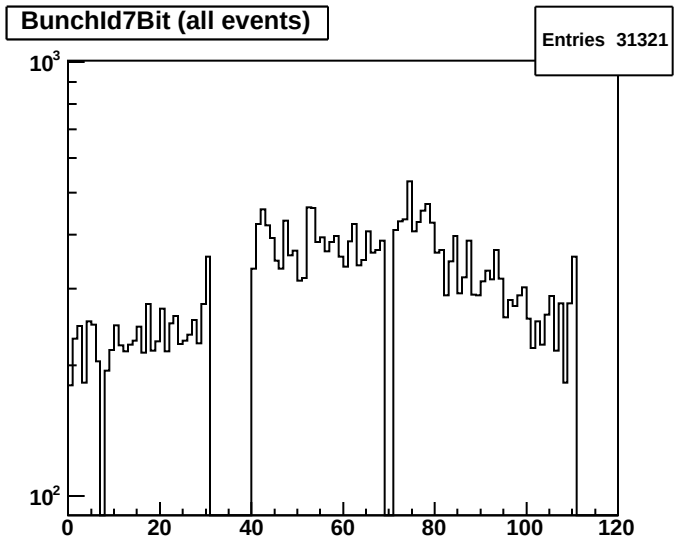

EMC L2 Input - HT23 bits
Entries 250568
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

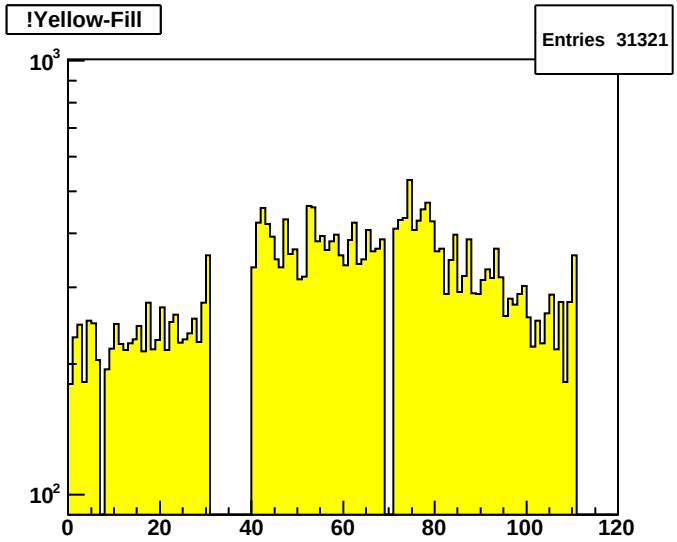

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

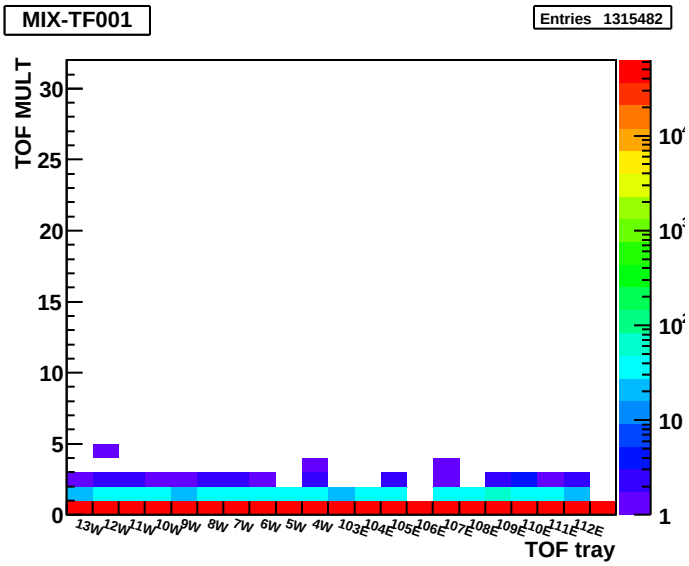

DAQ10k HT bits
Entries 375852
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

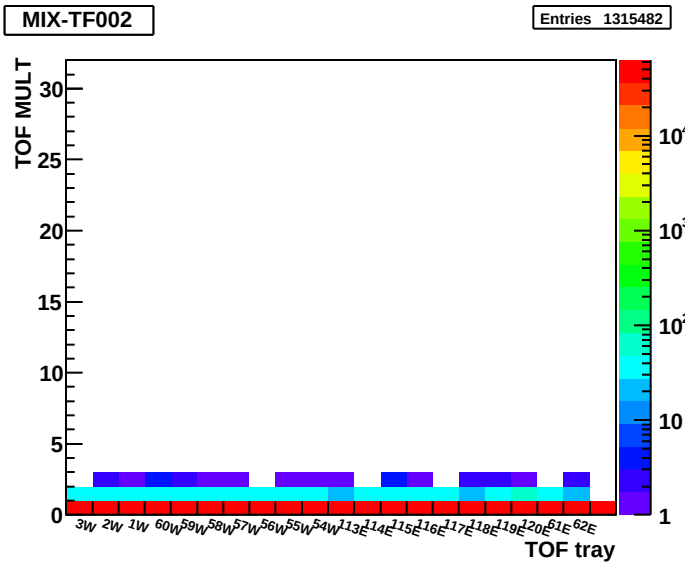

DAQ10k HT bits errors
Entries 375865
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

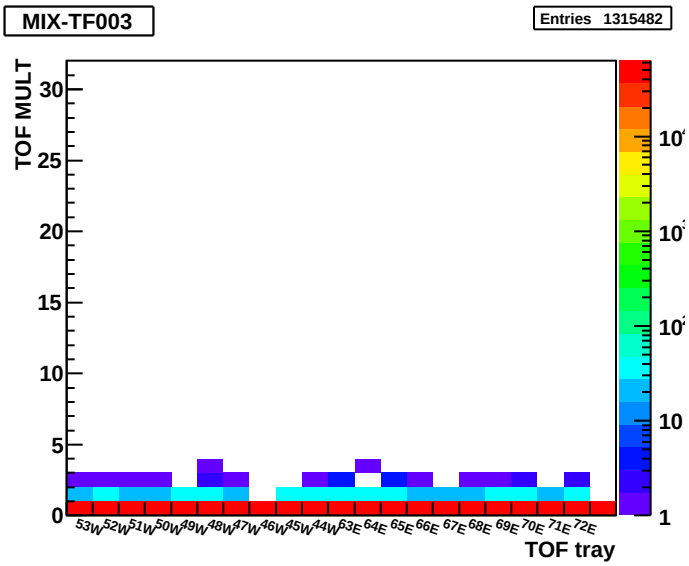

TPC Readout Mask (simulated)
Entries 407173
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30

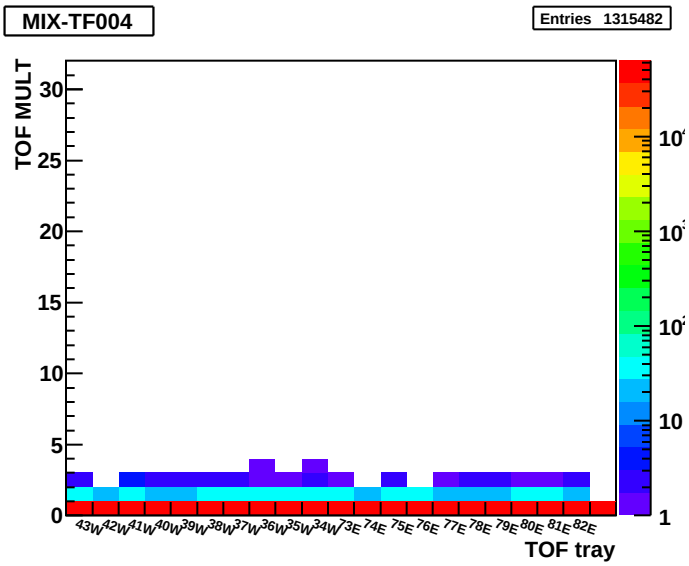

BunchId7Bit (all events)
Entries 31321
$10^3$
$10^2$
0 20 40 60 80 100 120

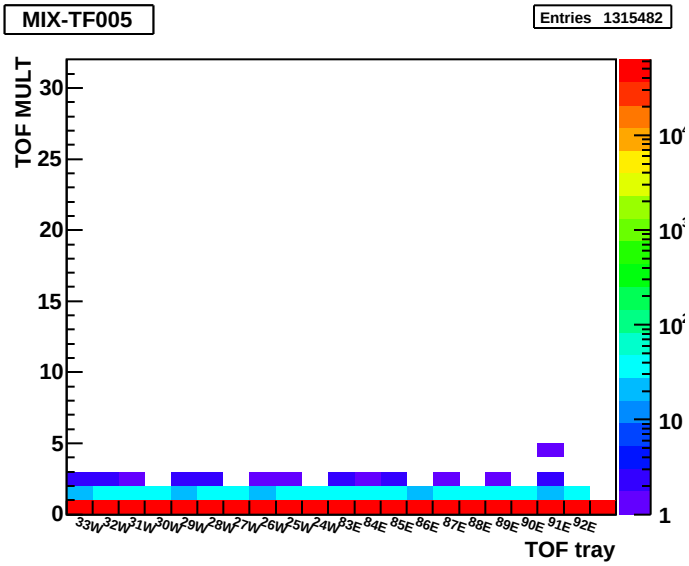

!Yellow-Fill
Entries 31321
$10^3$
$10^2$
0 20 40 60 80 100 120

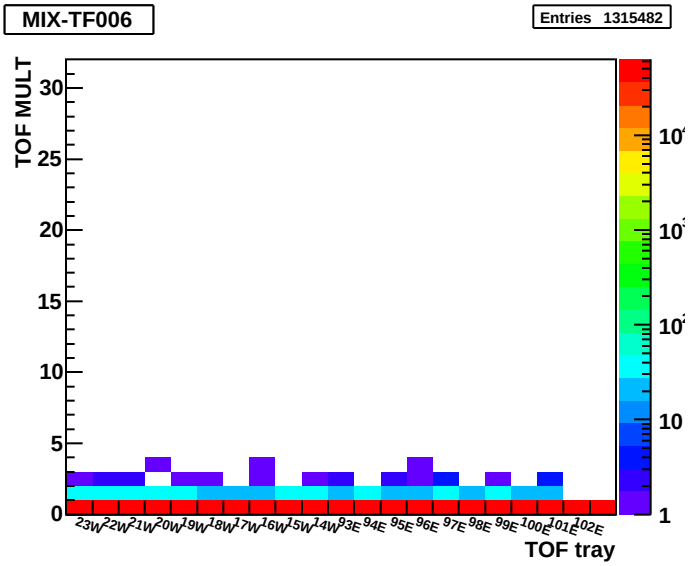

MIX-TF001
Entries 1315482
TOF MULT
TOF tray

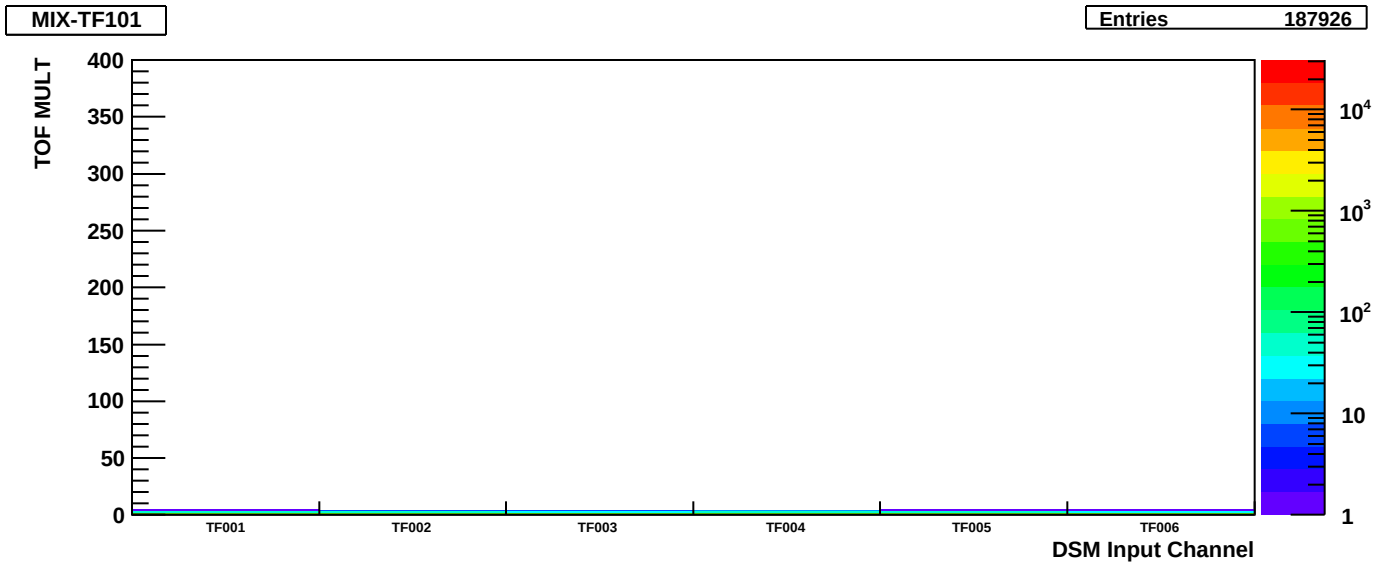

MIX-TF002
Entries 1315482
TOF MULT
TOF tray

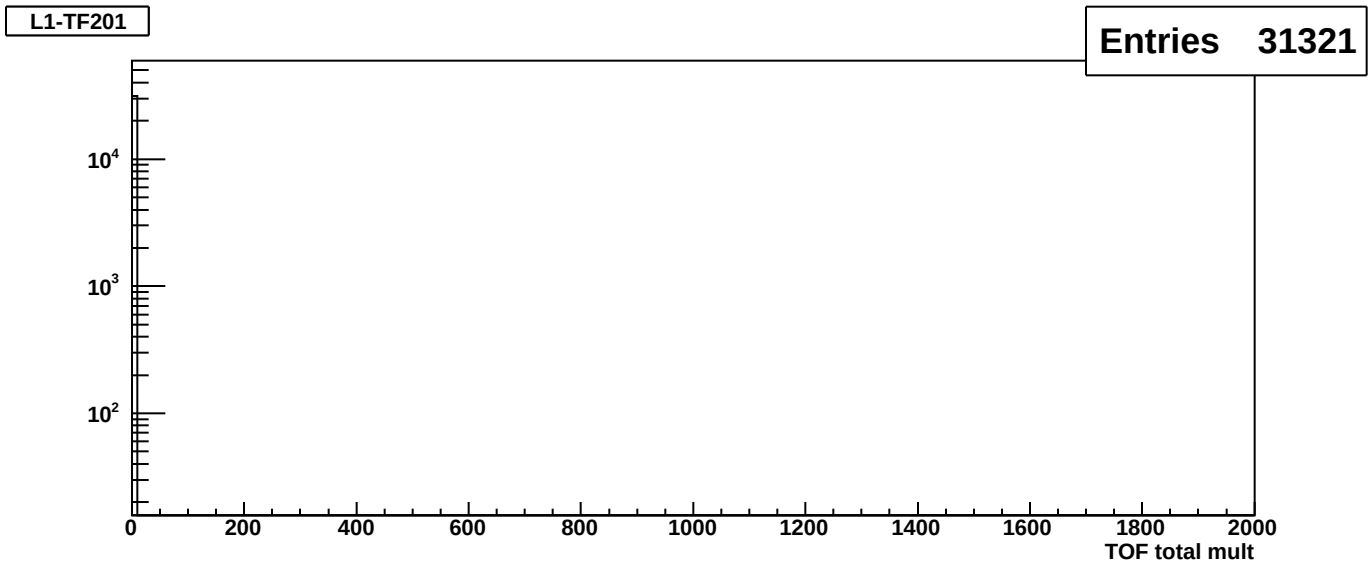

MIX-TF003
Entries 1315482
TOF MULT
TOF tray

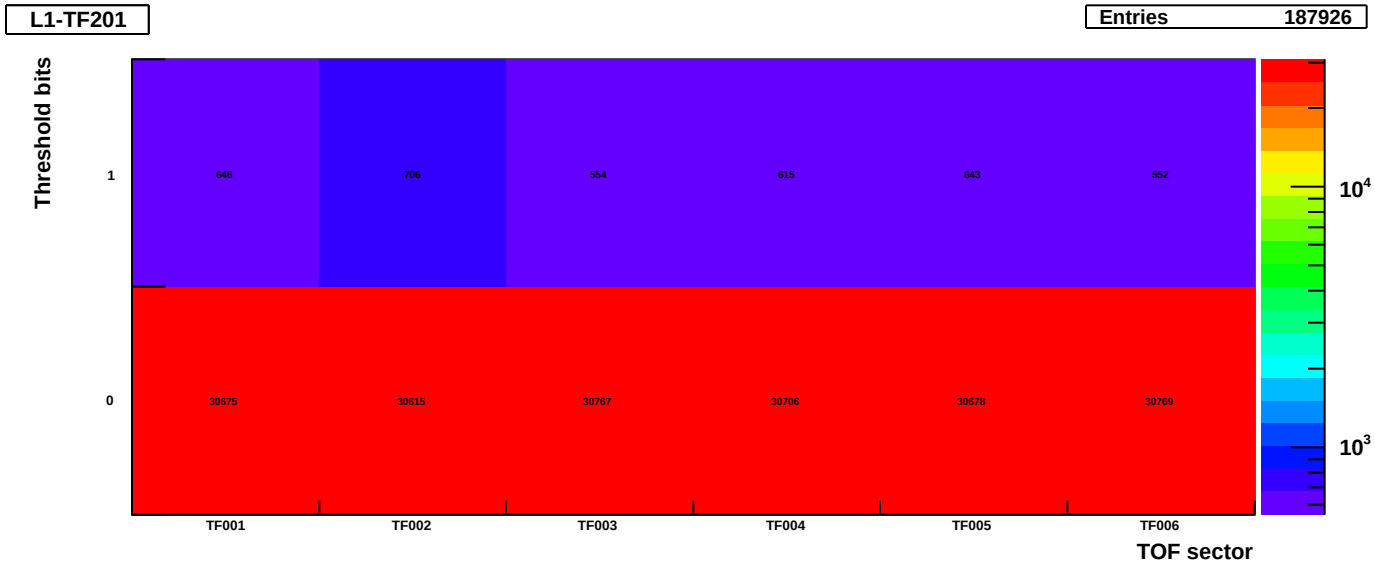

MIX-TF004
Entries 1315482
TOF MULT
TOF tray

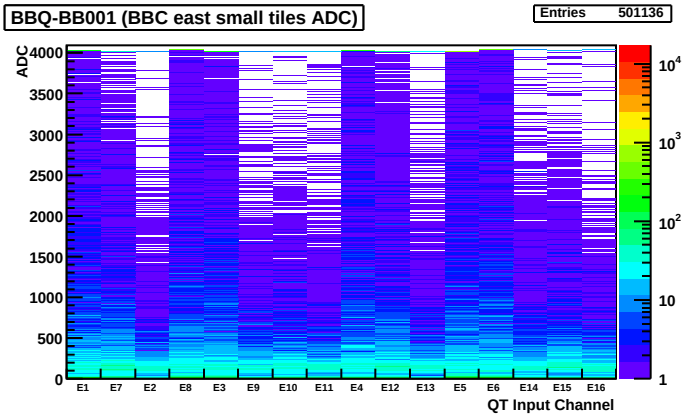

MIX-TF005
Entries 1315482
TOF MULT
TOF tray

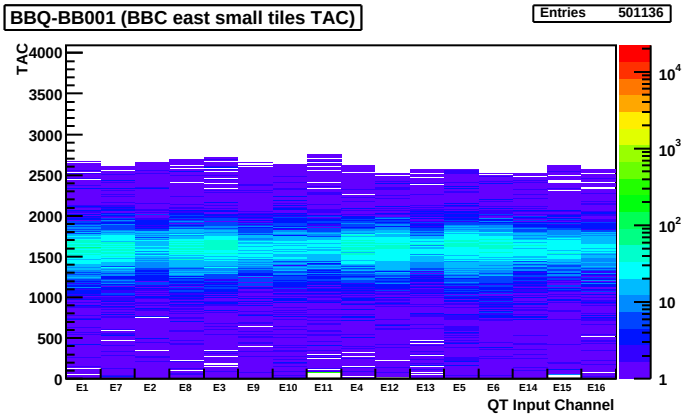

MIX-TF006
Entries 1315482
TOF MULT
TOF tray

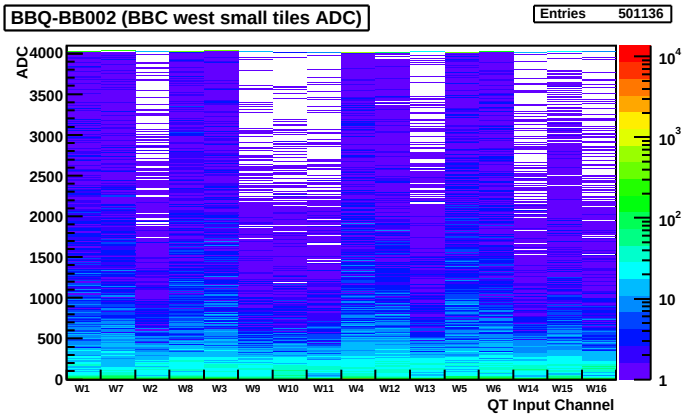

MIX-TF101
Entries 187926
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
$10^4$
$10^3$
$10^2$
10
1

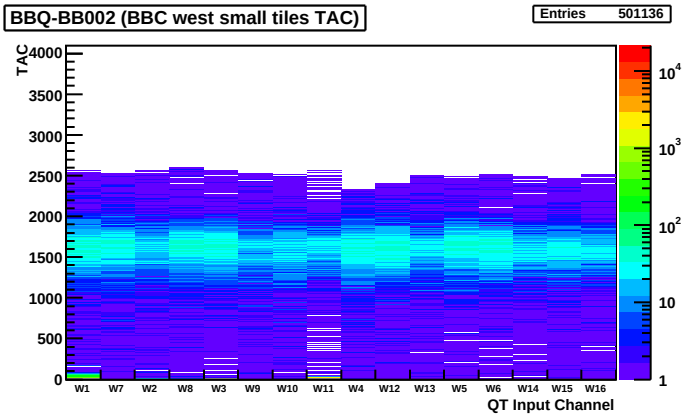

L1-TF201
Entries 31321
$10^4$
$10^3$
$10^2$
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

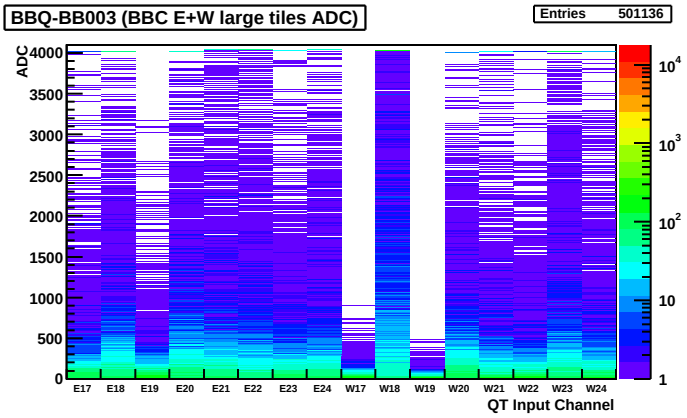

L1-TF201
Entries 187926
Threshold bits
1
0
646
706
554
615
643
552
30675
30615
30767
30706
30678
30769
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
$10^4$
$10^3$

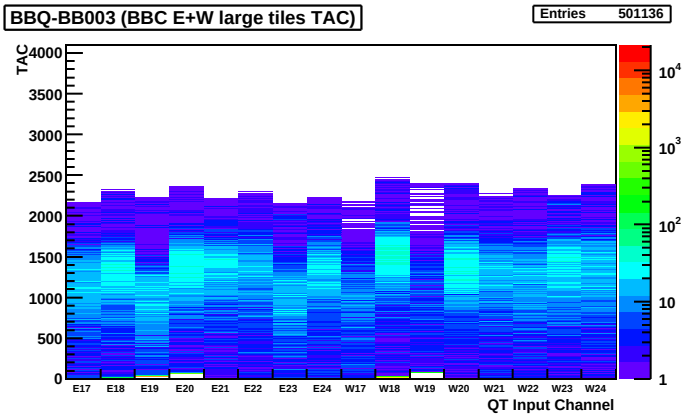

BBQ-BB001 (BBC east small tiles ADC)
Entries 501136
ADC
QT Input Channel

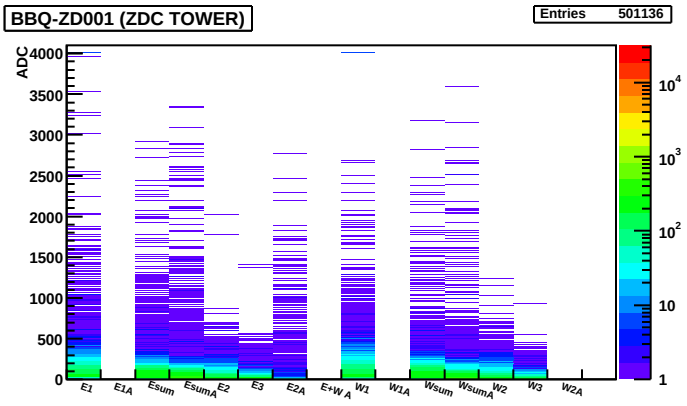

BBQ-BB001 (BBC east small tiles TAC)
Entries 501136
TAC
QT Input Channel

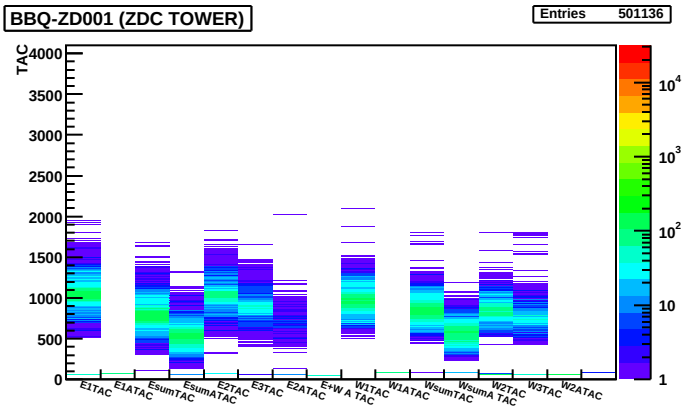

BBQ-BB002 (BBC west small tiles ADC)
Entries 501136
ADC
QT Input Channel

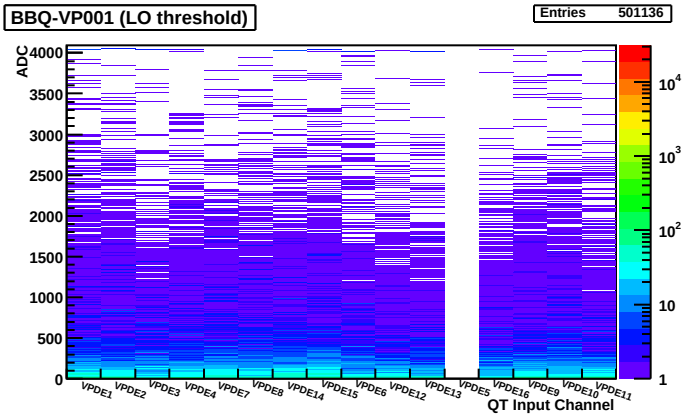

BBQ-BB002 (BBC west small tiles TAC)
Entries 501136
TAC
QT Input Channel

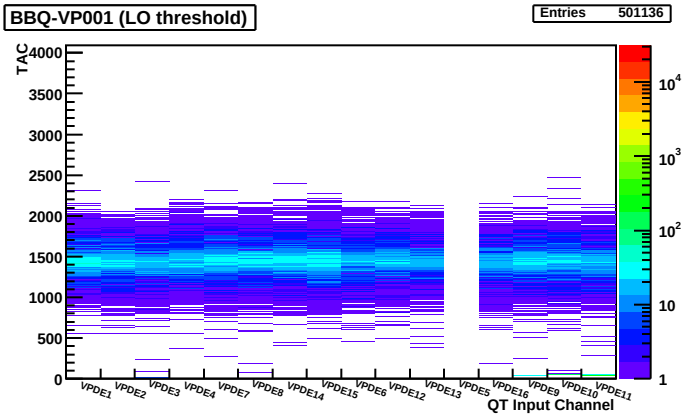

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 501136
ADC
QT Input Channel

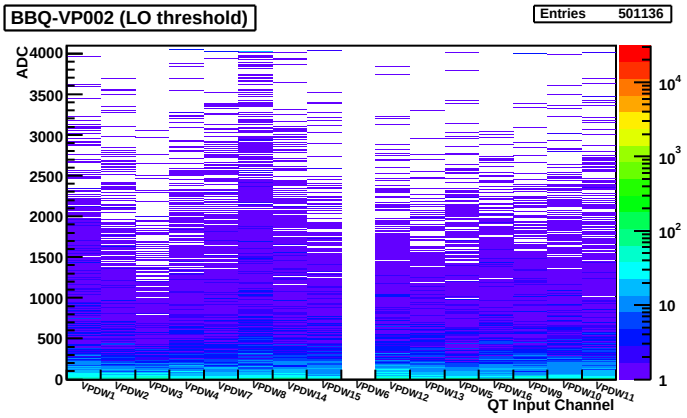

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 501136
TAC
QT Input Channel

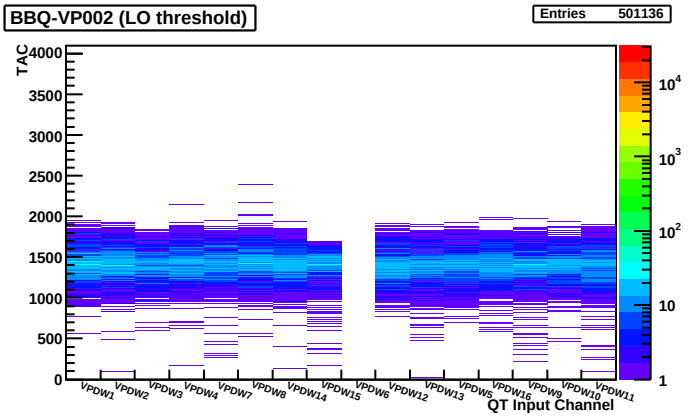

BBQ-ZD001 (ZDC TOWER)
Entries 501136
ADC

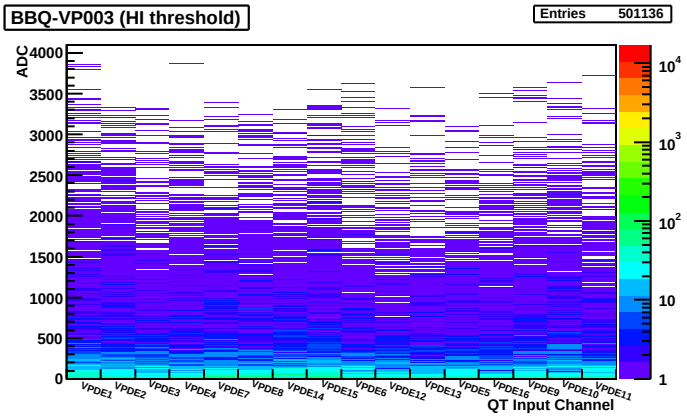

BBQ-ZD001 (ZDC TOWER)
Entries 501136
TAC

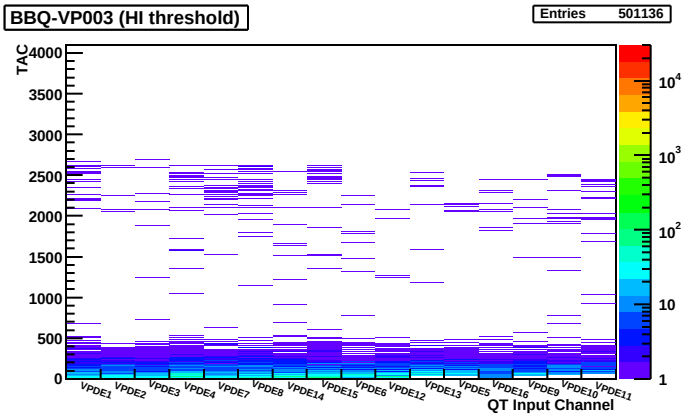

BBQ-VP001 (LO threshold)
Entries 501136
ADC
QT Input Channel

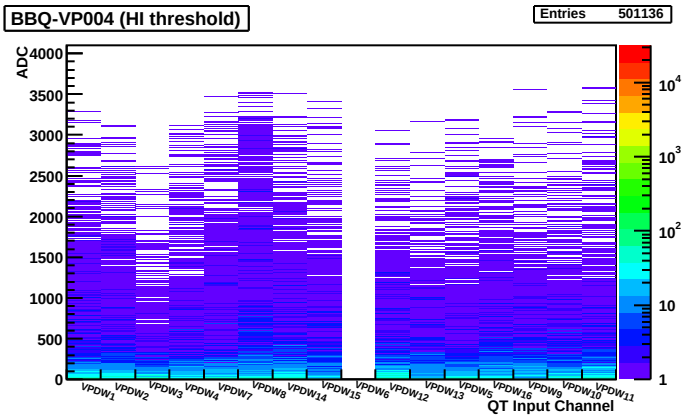

BBQ-VP001 (LO threshold)
Entries 501136
TAC
QT Input Channel

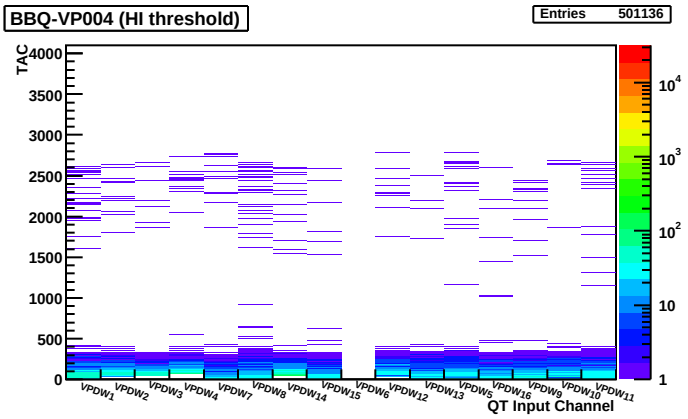

BBQ-VP002 (LO threshold)
Entries 501136
ADC
QT Input Channel

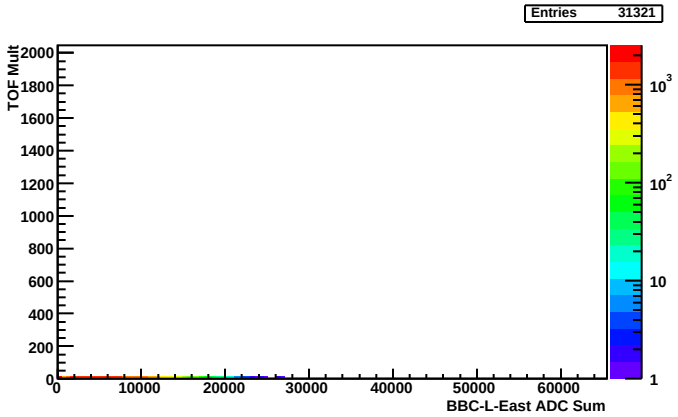

BBQ-VP002 (LO threshold)
Entries 501136
TAC
QT Input Channel

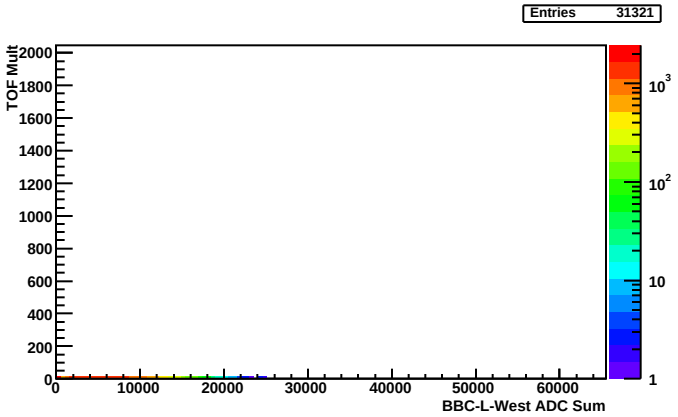

BBQ-VP003 (HI threshold)
Entries 501136
ADC
QT Input Channel

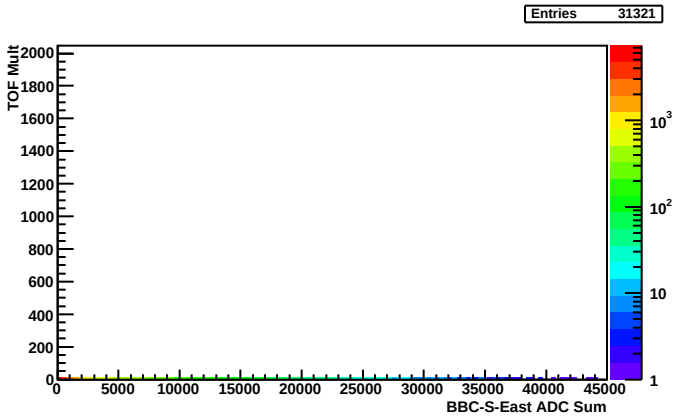

BBQ-VP003 (HI threshold)
Entries 501136
TAC
QT Input Channel

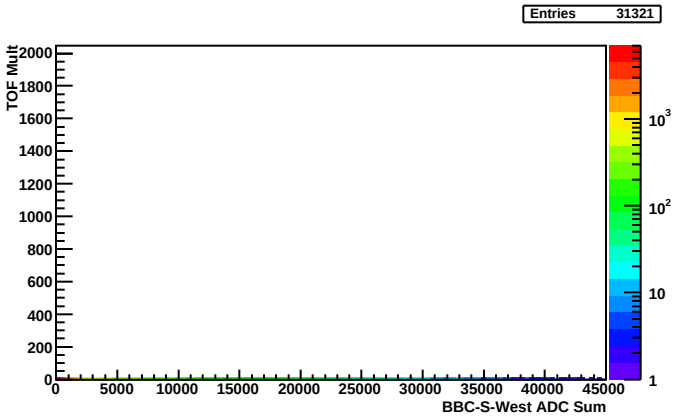

BBQ-VP004 (HI threshold)
Entries 501136
ADC
QT Input Channel

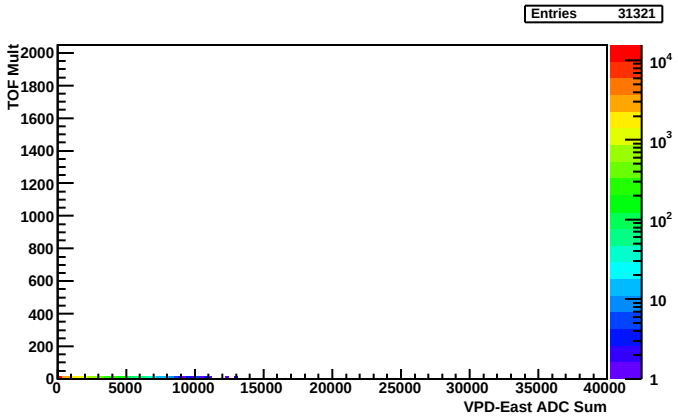

BBQ-VP004 (HI threshold)
Entries 501136
TAC
QT Input Channel

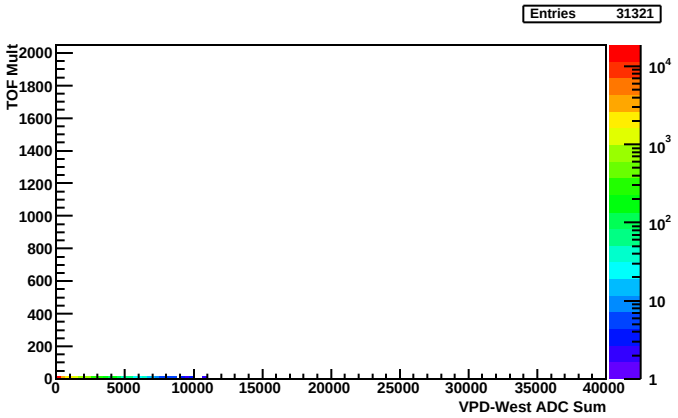

Entries 31321
TOF Mult
BBC-L-East ADC Sum

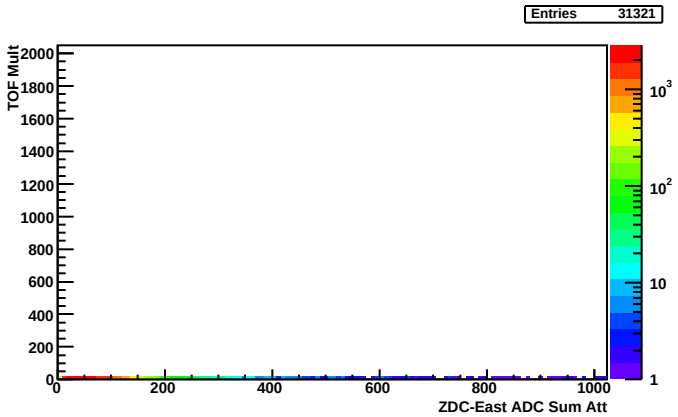

Entries 31321
TOF Mult
BBC-L-West ADC Sum

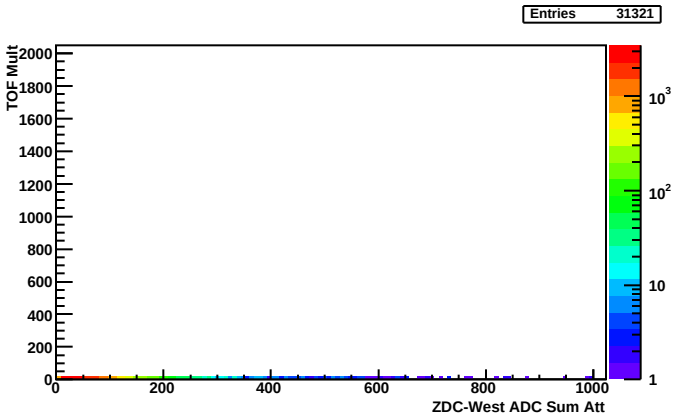

Entries 31321
TOF Mult
BBC-S-East ADC Sum

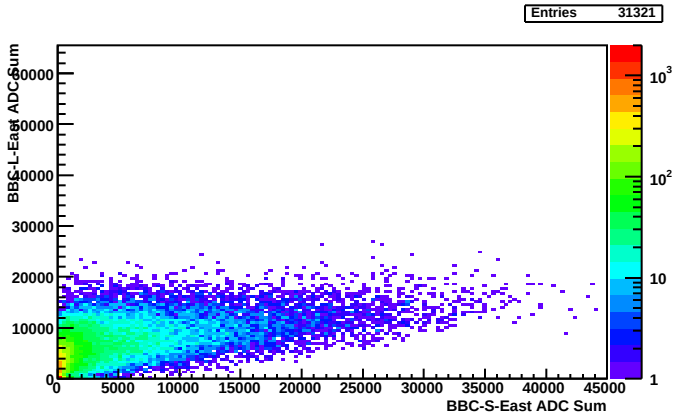

Entries 31321
TOF Mult
BBC-S-West ADC Sum

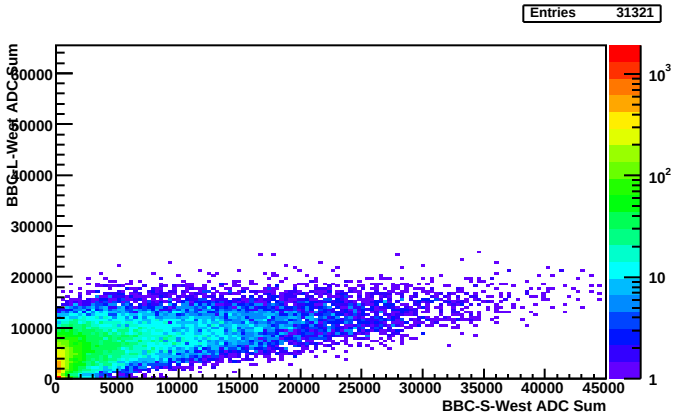

Entries 31321
TOF Mult
VPD-East ADC Sum

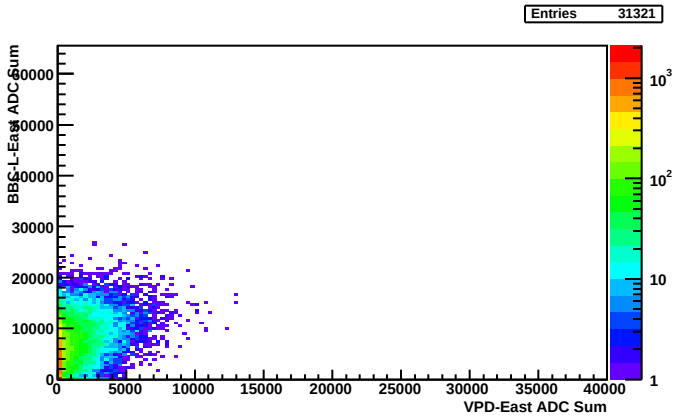

Entries 31321
TOF Mult
VPD-West ADC Sum

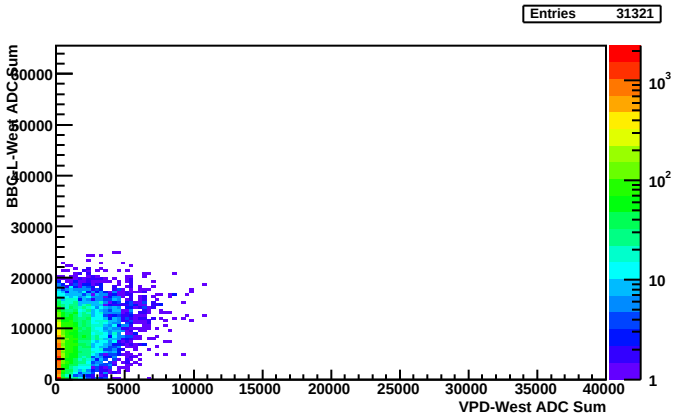

Entries 31321
TOF Mult
ZDC-East ADC Sum Att

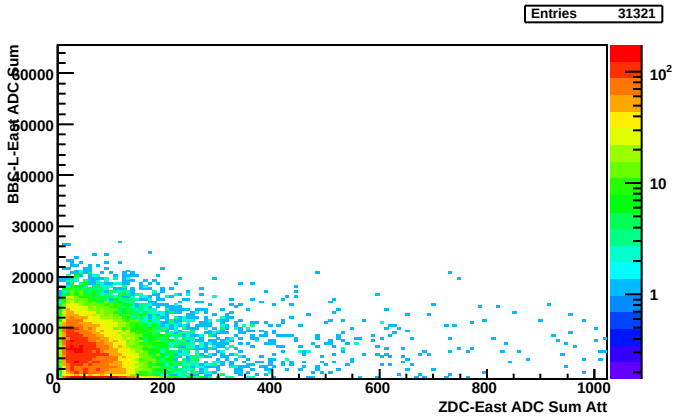

Entries 31321
TOF Mult
ZDC-West ADC Sum Att

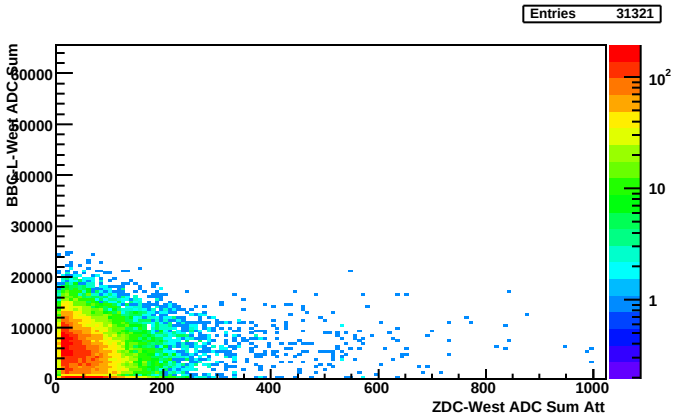

Entries 31321
BBC-L-East ADC Sum
BBC-S-East ADC Sum

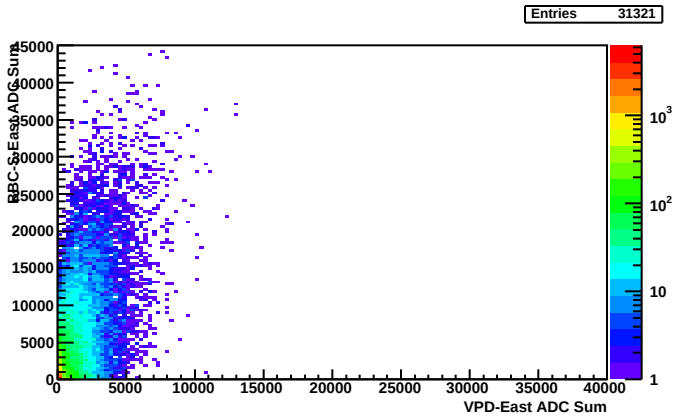

Entries 31321
BBC-L-West ADC Sum
BBC-S-West ADC Sum

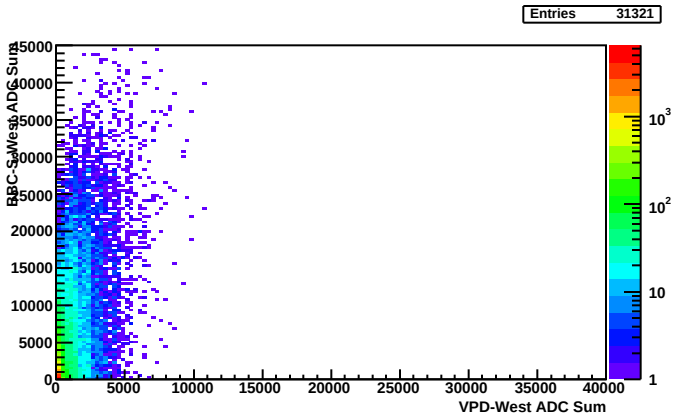

Entries 31321
BBC-L-East ADC Sum
VPD-East ADC Sum

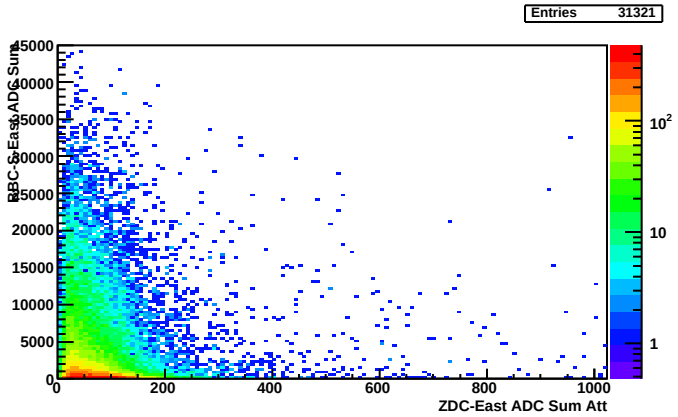

Entries 31321
BBC-L-West ADC Sum
VPD-West ADC Sum

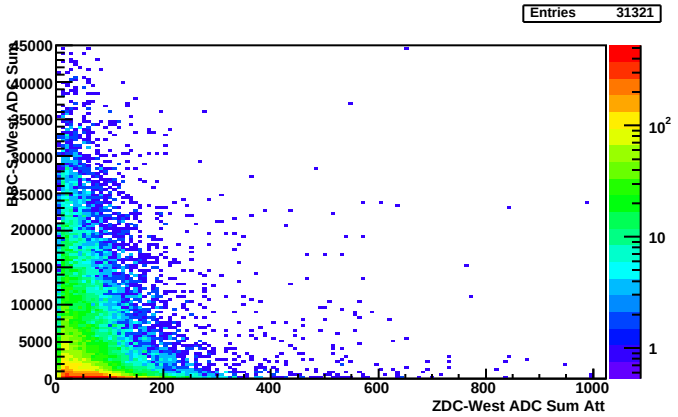

Entries 31321
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

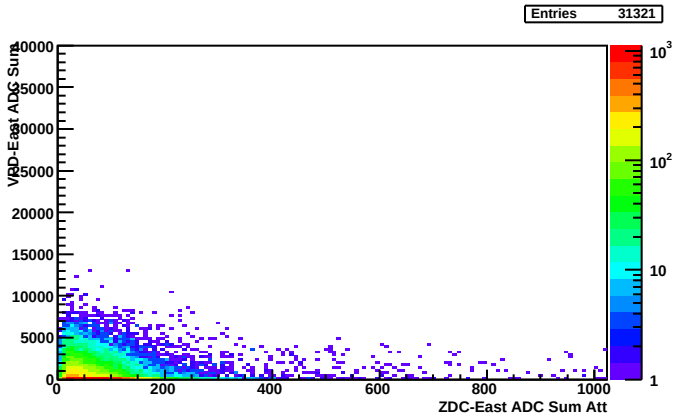

Entries 31321
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

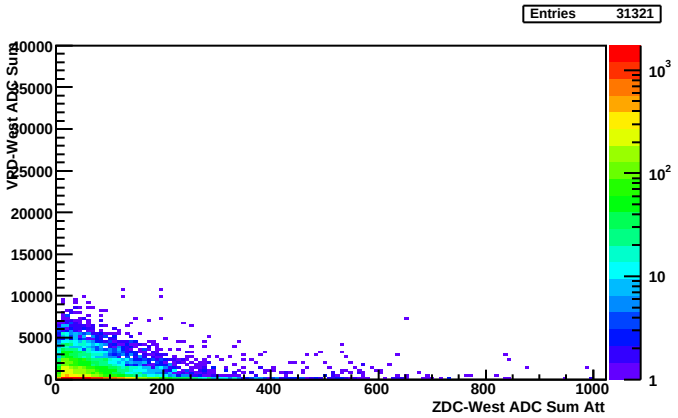

Entries 31321
BBC-S-East ADC Sum
VPD-East ADC Sum

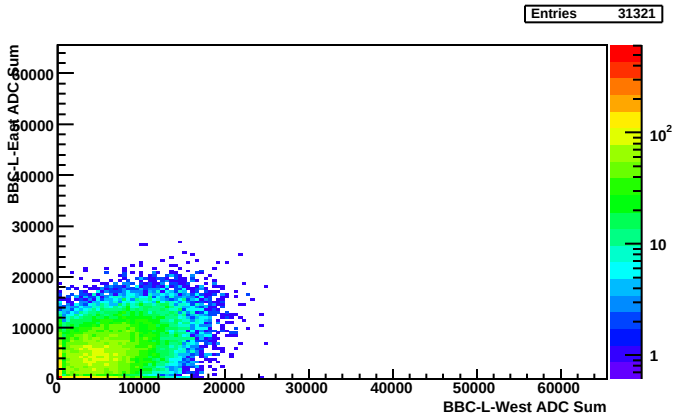

Entries 31321
BBC-S-West ADC Sum
VPD-West ADC Sum

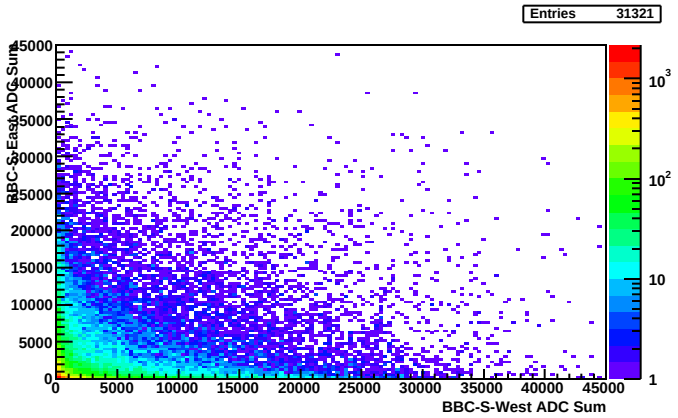

Entries 31321
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

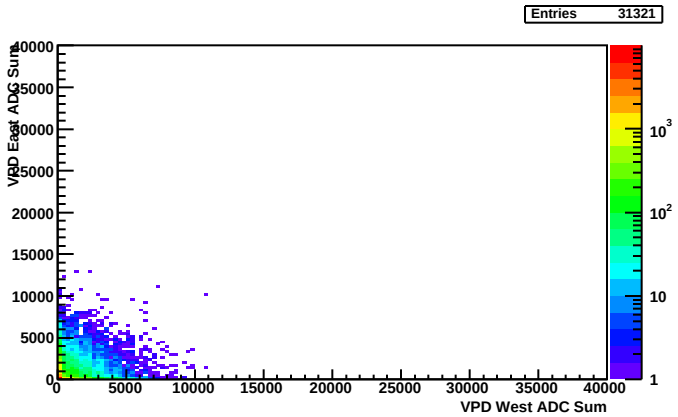

Entries 31321
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

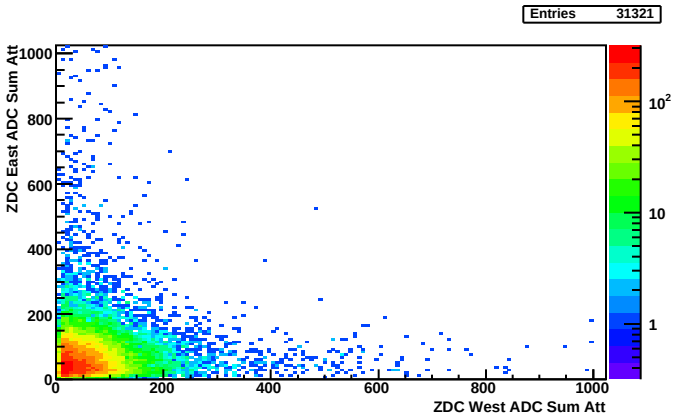

Entries 31321
VPD-East ADC Sum
ZDC-East ADC Sum Att

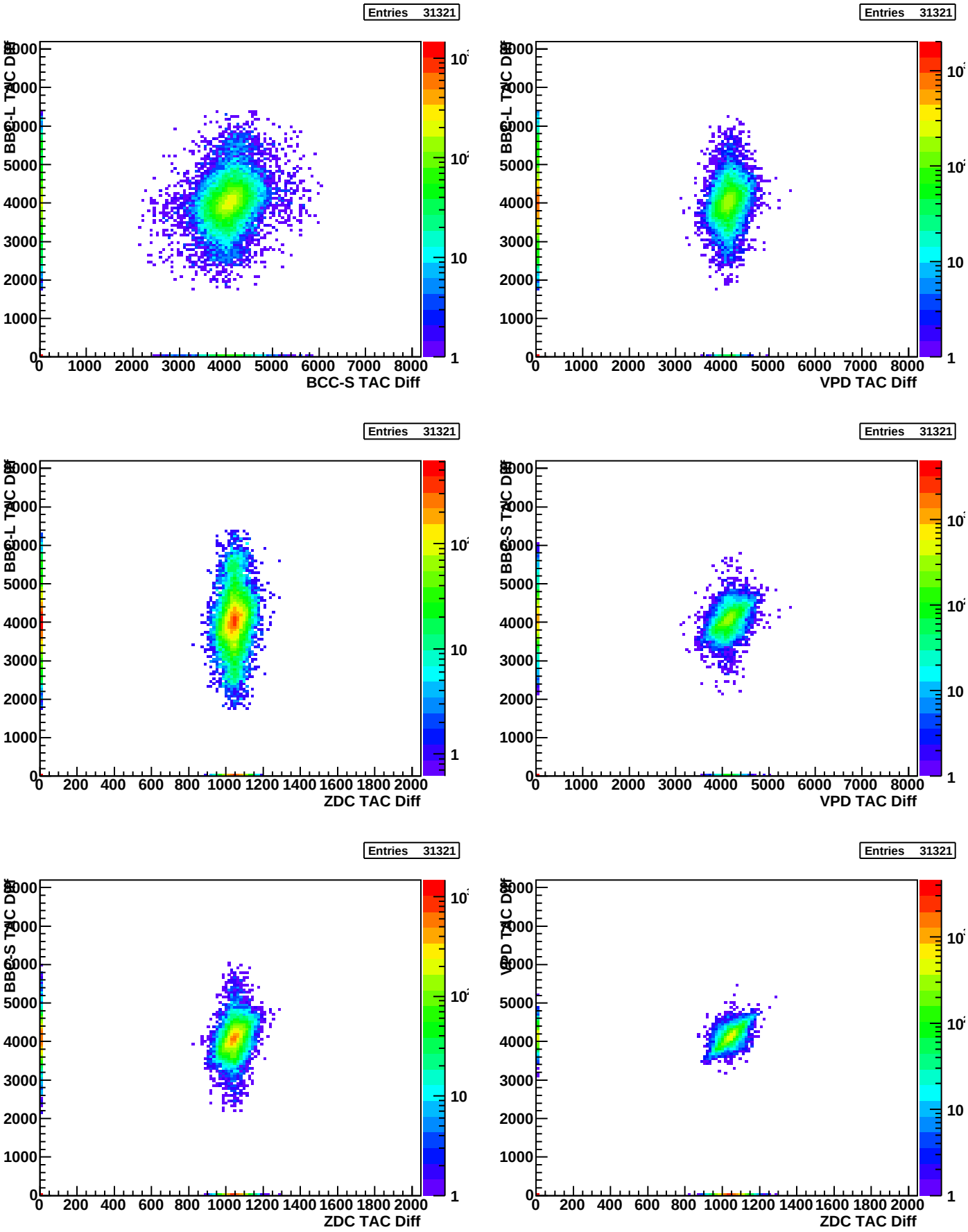

Entries 31321
VPD-West ADC Sum
ZDC-West ADC Sum Att

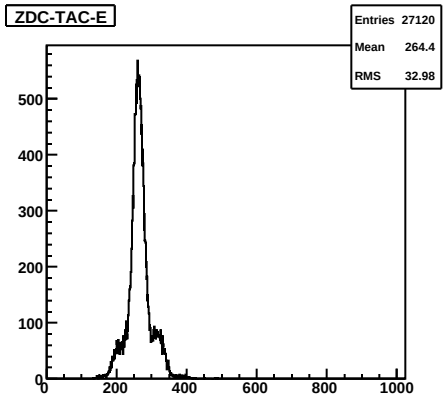

Entries 31321
BBC-L-East ADC Sum
BBC-L-West ADC Sum

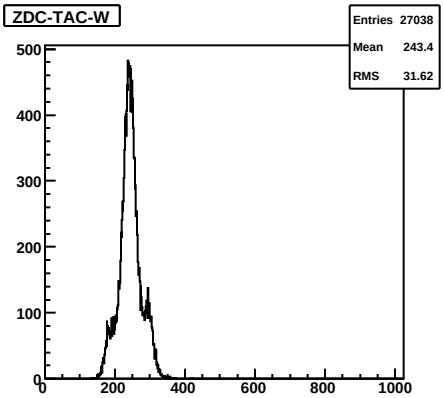

Entries 31321
BBC-S-East ADC Sum
BBC-S-West ADC Sum

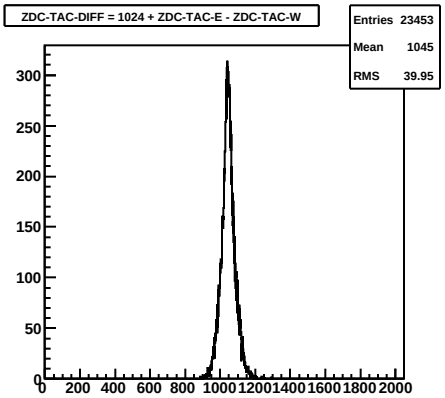

Entries 31321
VPD East ADC Sum
VPD West ADC Sum

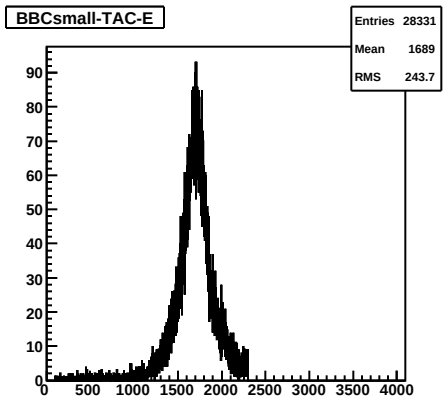

Entries 31321
ZDC East ADC Sum Att
ZDC West ADC Sum Att

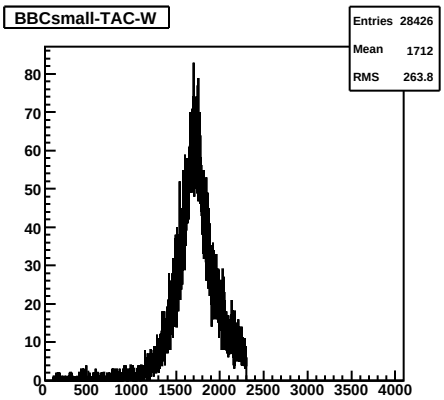

Entries 31321
BBC-L TAC Diff
BCC-S TAC Diff
Entries 31321
BBC-L TAC Diff
VPD TAC Diff
Entries 31321
BBC-L TAC Diff
ZDC TAC Diff
Entries 31321
BBC-S TAC Diff
VPD TAC Diff
Entries 31321
BBC-S TAC Diff
ZDC TAC Diff
Entries 31321
VPD TAC Diff
ZDC TAC Diff

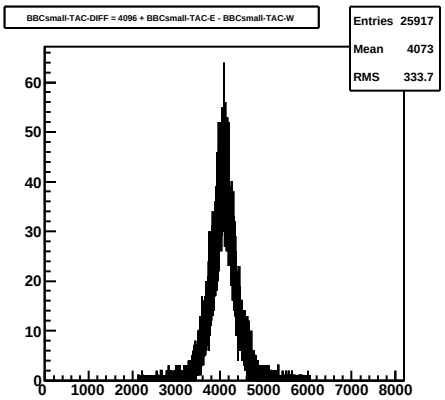

ZDC-TAC-E
Entries 27120
Mean 264.4
RMS 32.98

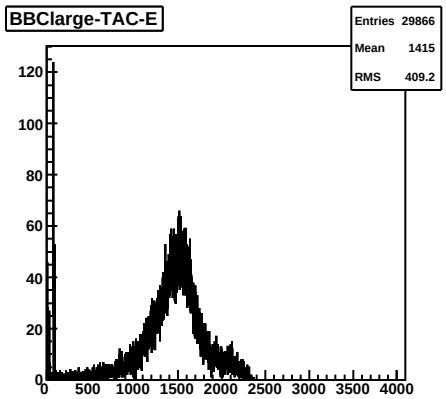

ZDC-TAC-W
Entries 27038
Mean 243.4
RMS 31.62

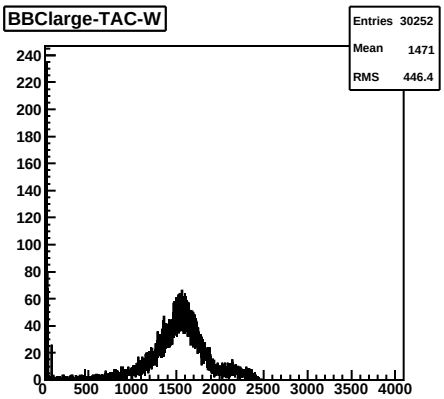

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 23453
Mean 1045
RMS 39.95

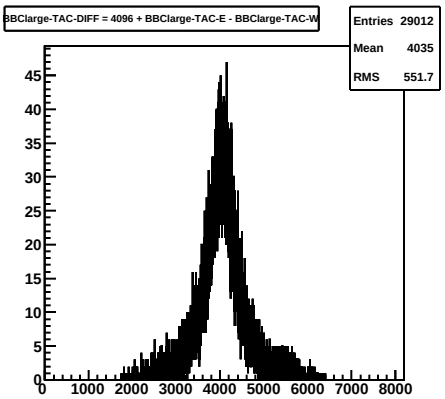

BBCsmall-TAC-E
Entries 28331
Mean 1689
RMS 243.7

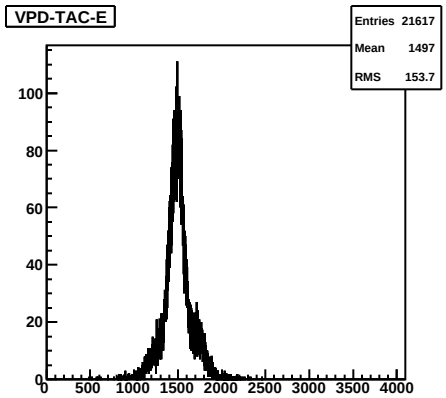

BBCsmall-TAC-W
Entries 28426
Mean 1712
RMS 263.8

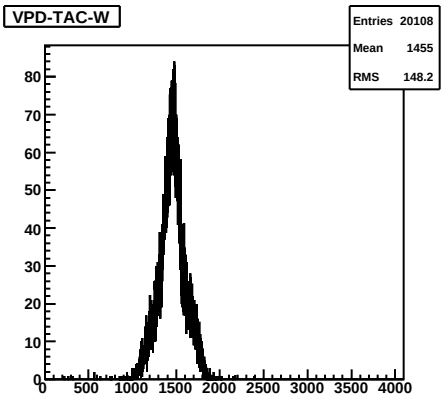

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 25917
Mean 4073
RMS 333.7

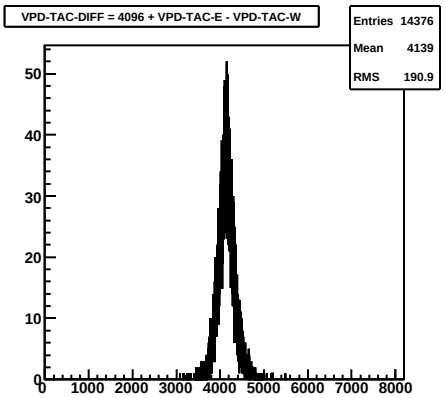

BBClarge-TAC-E
Entries 29866
Mean 1415
RMS 409.2

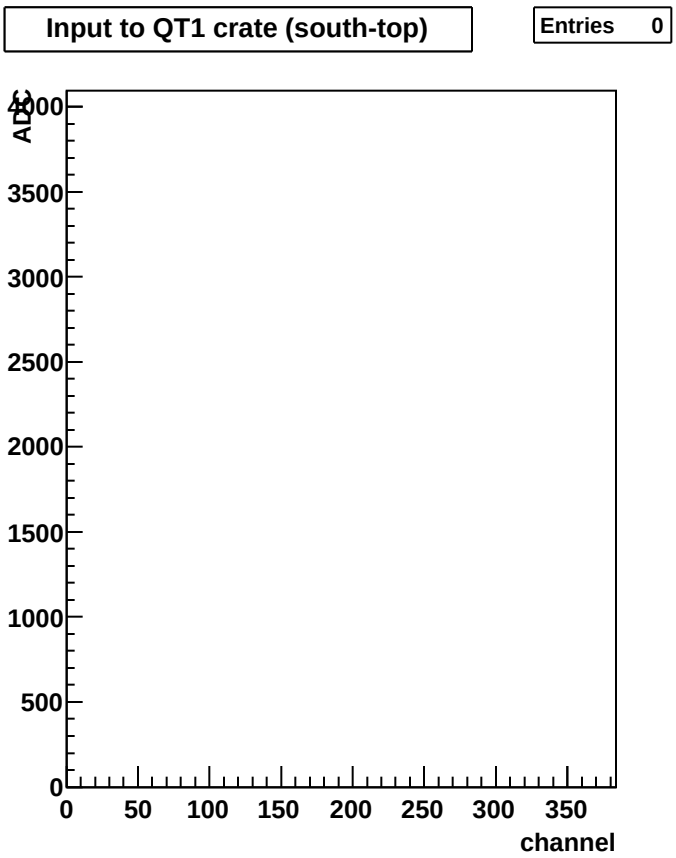

BBClarge-TAC-W
Entries 30252
Mean 1471
RMS 446.4

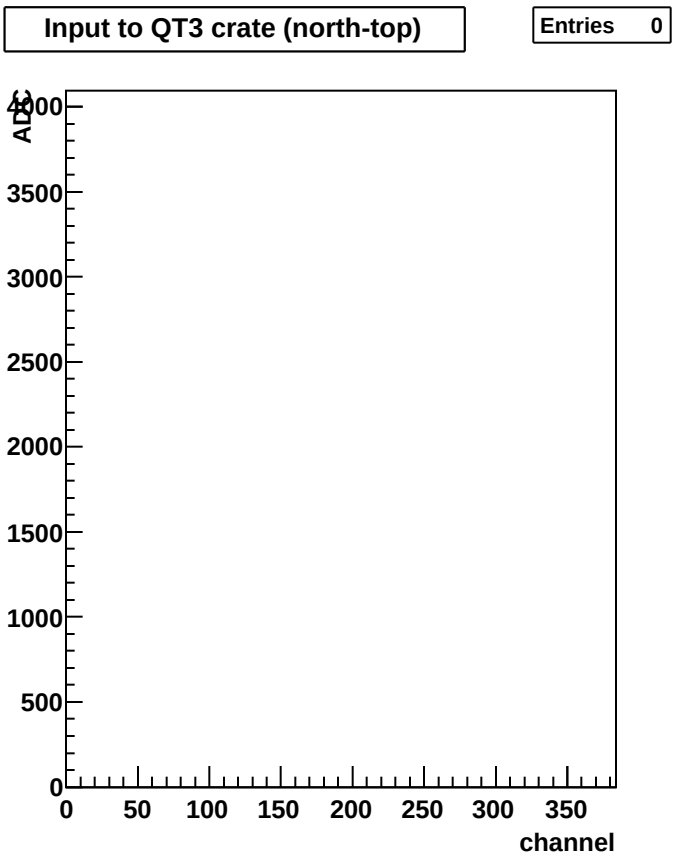

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 29012
Mean 4035
RMS 551.7

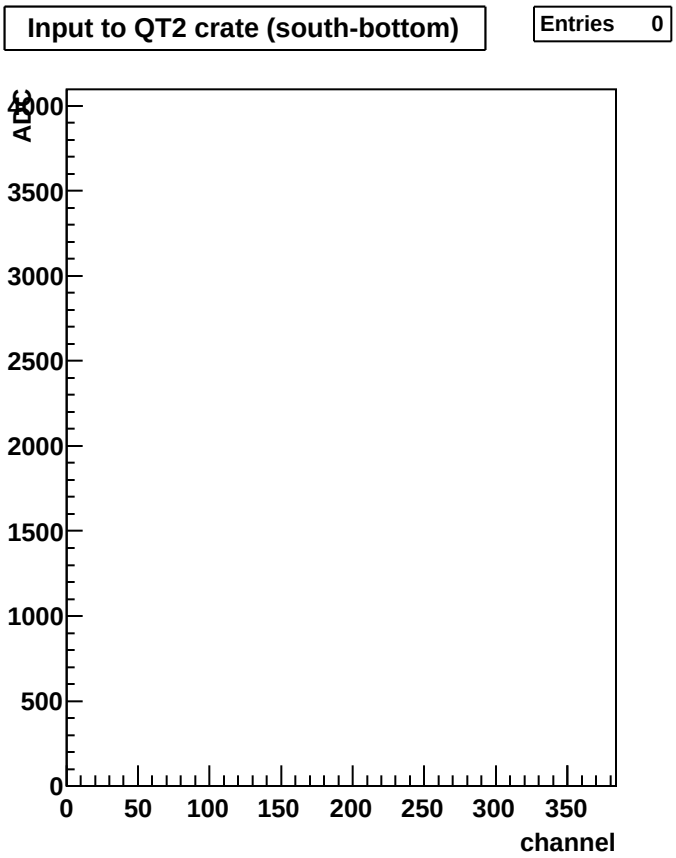

VPD-TAC-E
Entries 21617
Mean 1497
RMS 153.7

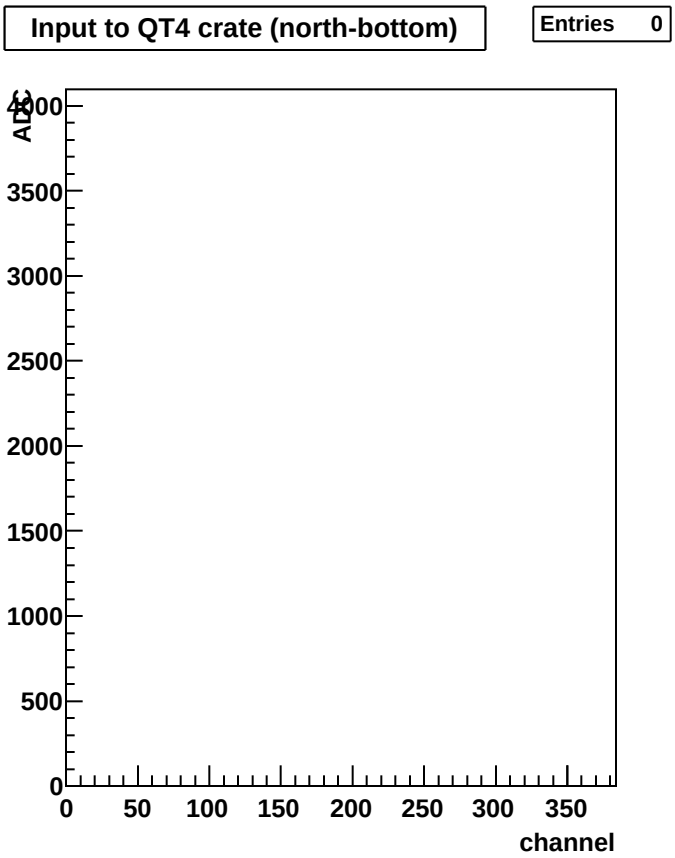

VPD-TAC-W
Entries 20108
Mean 1455
RMS 148.2

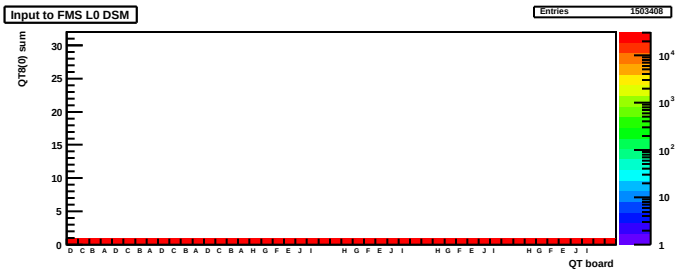

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 14376
Mean 4139
RMS 190.9

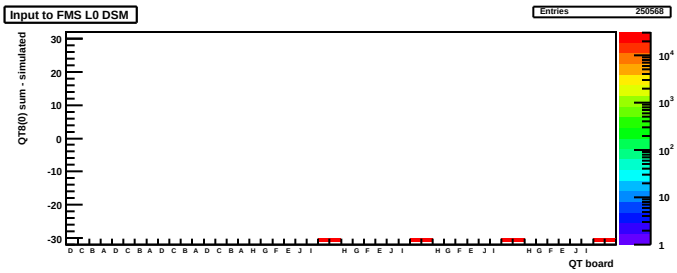

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

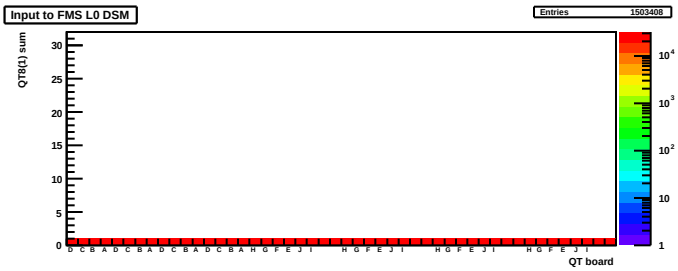

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

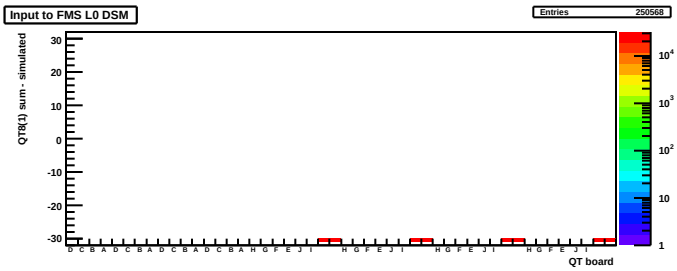

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

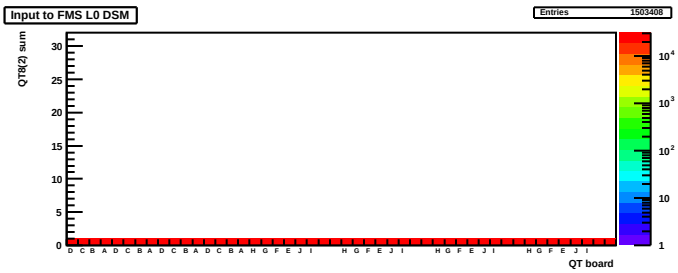

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

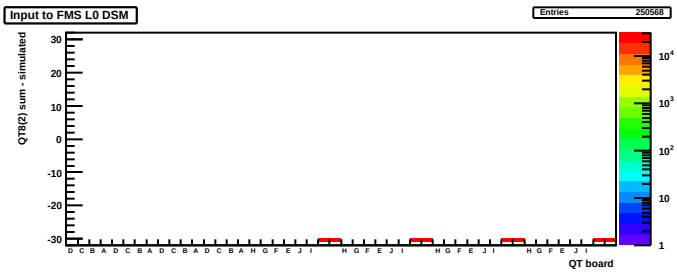

Input to FMS L0 DSM
Entries 1503408
QT8(0) sum
QT board

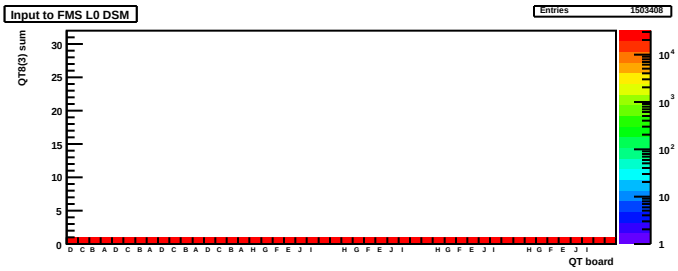

Input to FMS L0 DSM
Entries 250568
QT8(0) sum - simulated
QT board

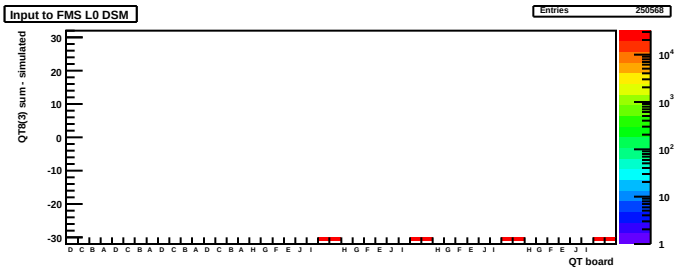

Input to FMS L0 DSM
Entries 1503408
QT8(1) sum
QT board

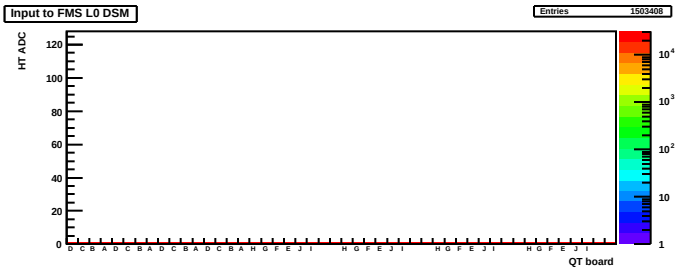

Input to FMS L0 DSM
Entries 250568
QT8(1) sum - simulated
QT board

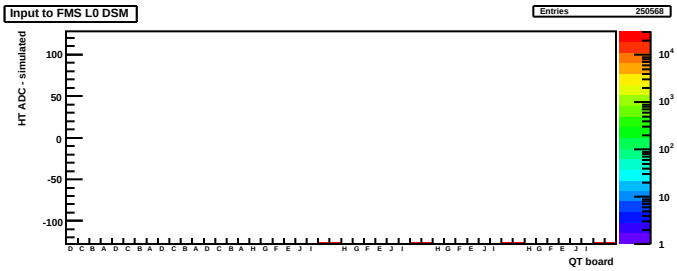

Input to FMS L0 DSM
Entries 1503408
QT8(2) sum
QT board

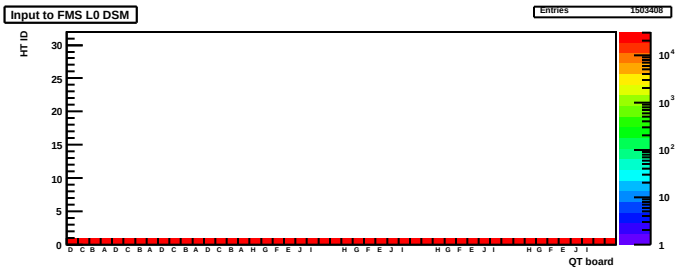

Input to FMS L0 DSM
Entries 250568
QT8(2) sum - simulated
QT board

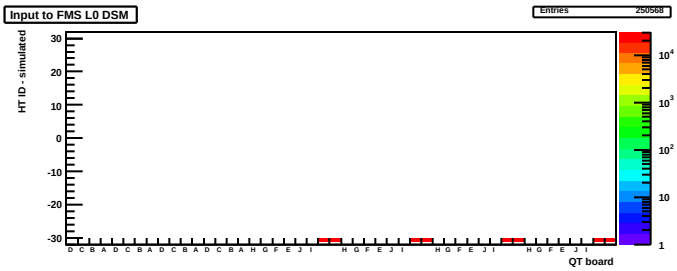

Input to FMS L0 DSM
Entries 1503408
QT8(3) sum
QT board

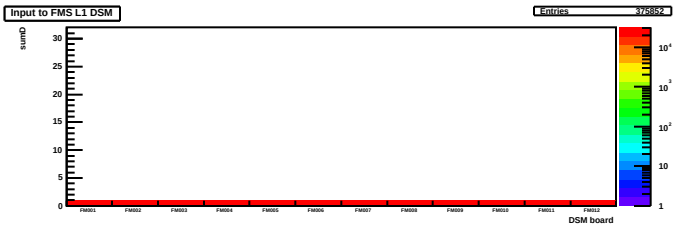

Input to FMS L0 DSM
Entries 250568
QT8(3) sum - simulated
QT board

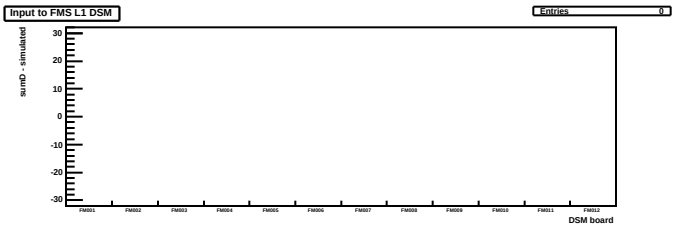

Input to FMS L0 DSM
Entries 1503408
HT ADC
QT board

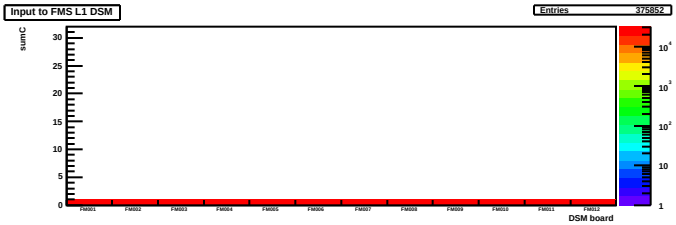

Input to FMS L0 DSM
Entries 250568
HT ADC - simulated
QT board

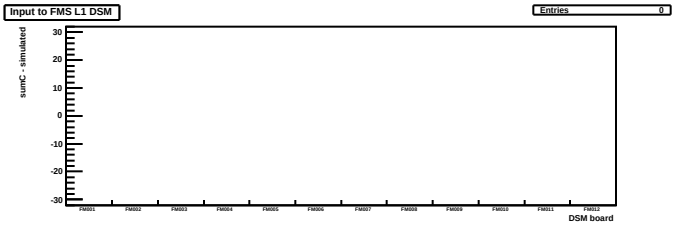

Input to FMS L0 DSM
Entries 1503408
HT ID
QT board

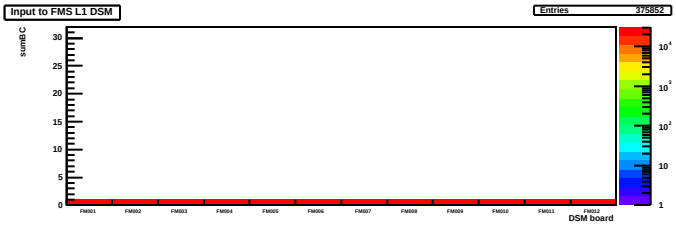

Input to FMS L0 DSM
Entries 250568
HT ID - simulated
QT board

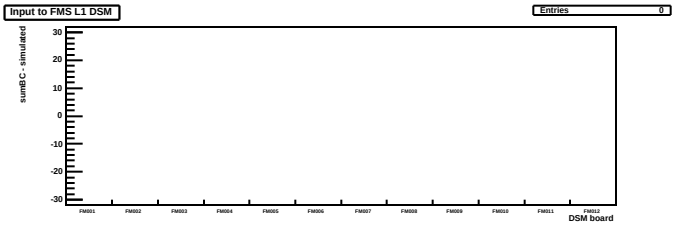

Input to FMS L1 DSM
Entries 375852
sumD
DSM board

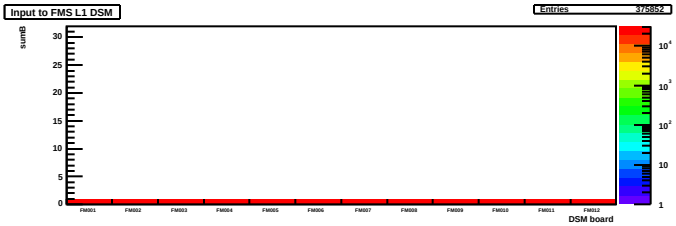

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

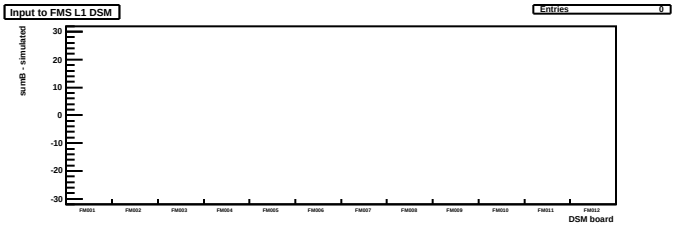

Input to FMS L1 DSM
Entries 375852
sumC
DSM board

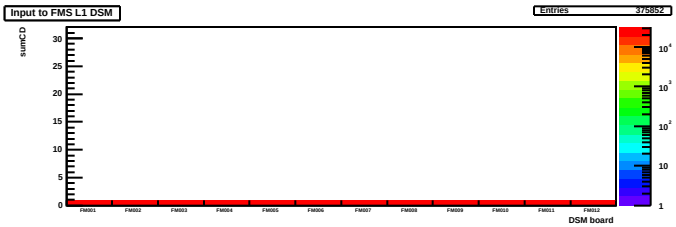

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

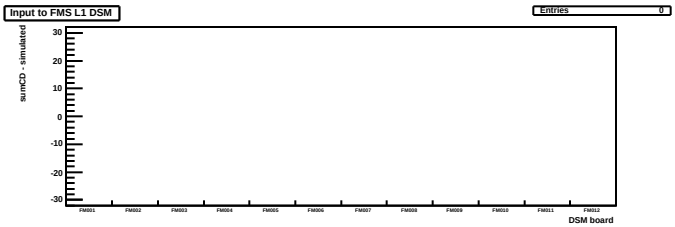

Input to FMS L1 DSM
Entries 375852
sumBC
DSM board

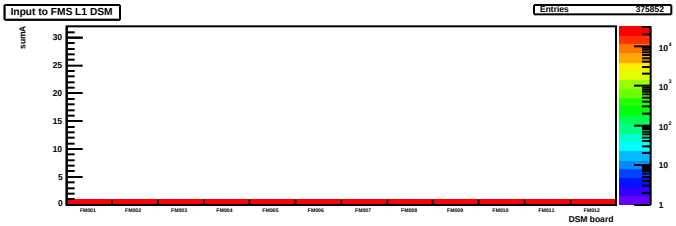

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

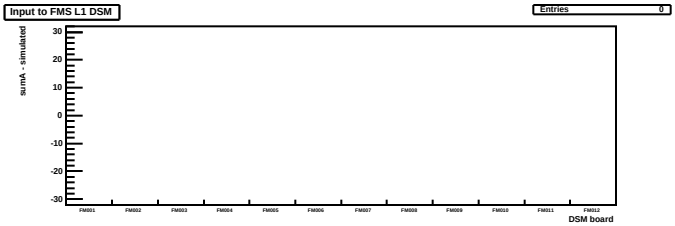

Input to FMS L1 DSM
Entries 375852
sumB
DSM board

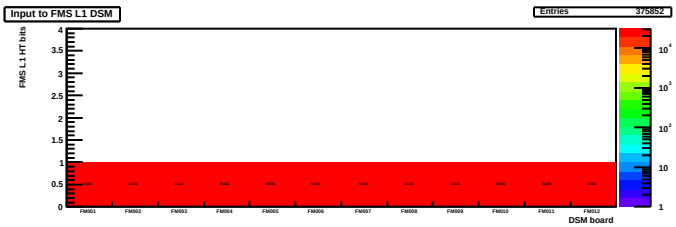

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

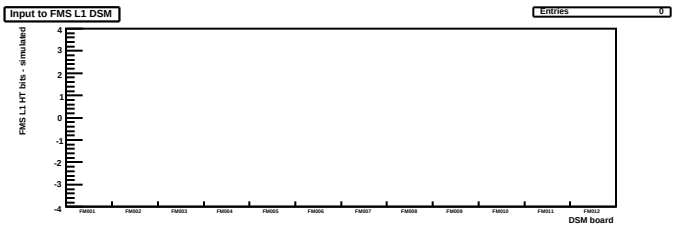

Input to FMS L1 DSM
Entries 375852
sumCD
DSM board

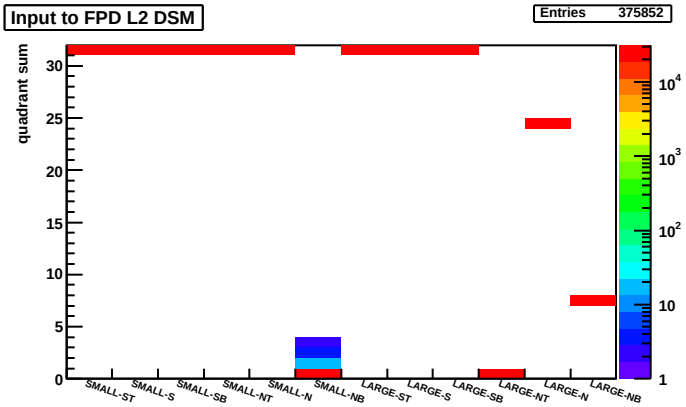

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

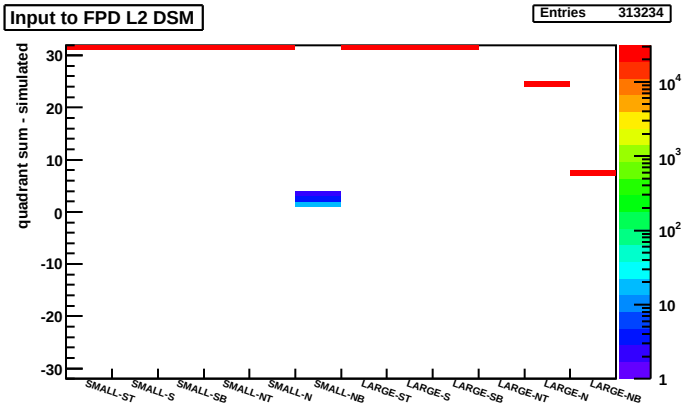

Input to FMS L1 DSM
Entries 375852
sumA
DSM board

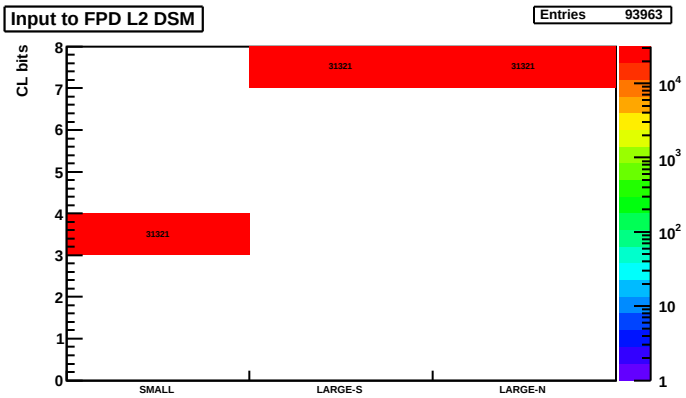

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

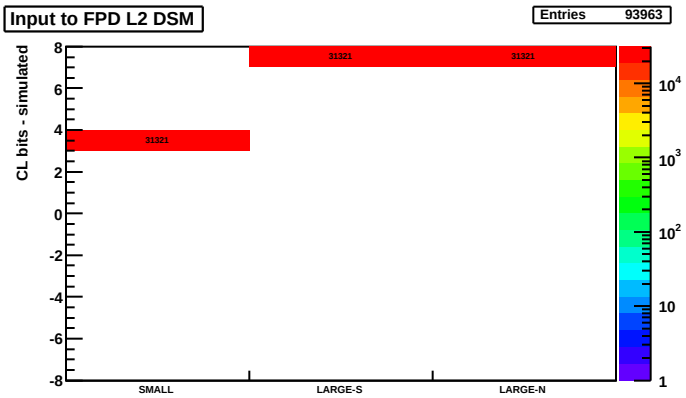

Input to FMS L1 DSM
Entries 375852
FMS L1 HT bits
DSM board

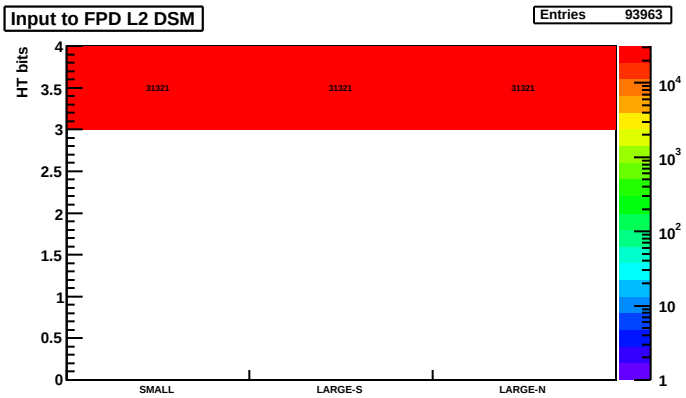

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

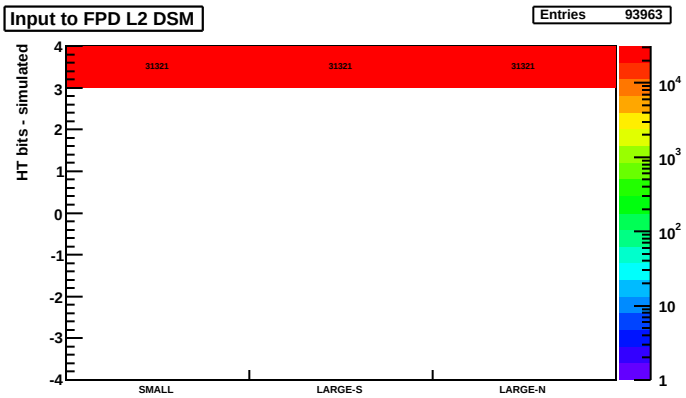

Input to FPD L2 DSM
Entries 375852
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

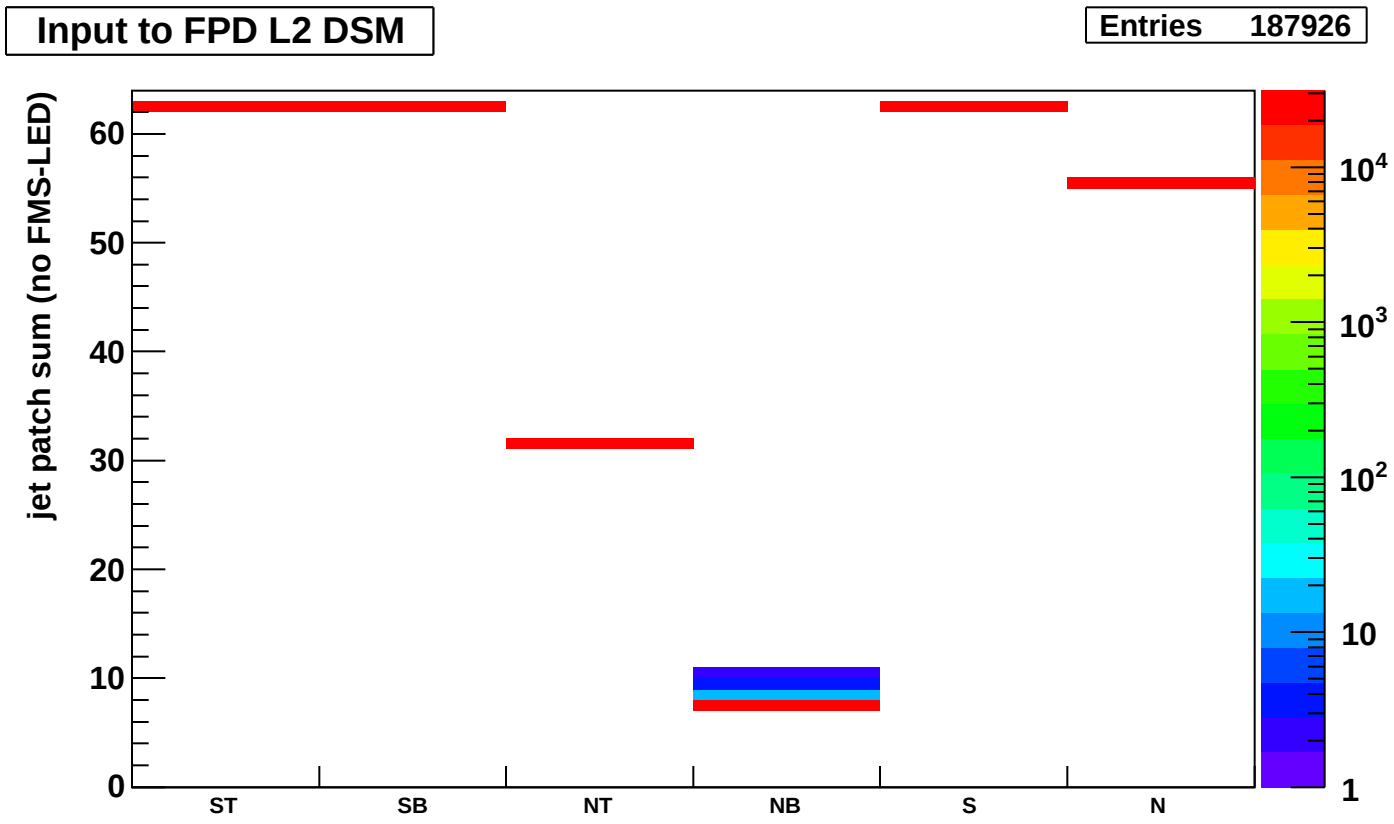

Input to FPD L2 DSM
Entries 313234
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

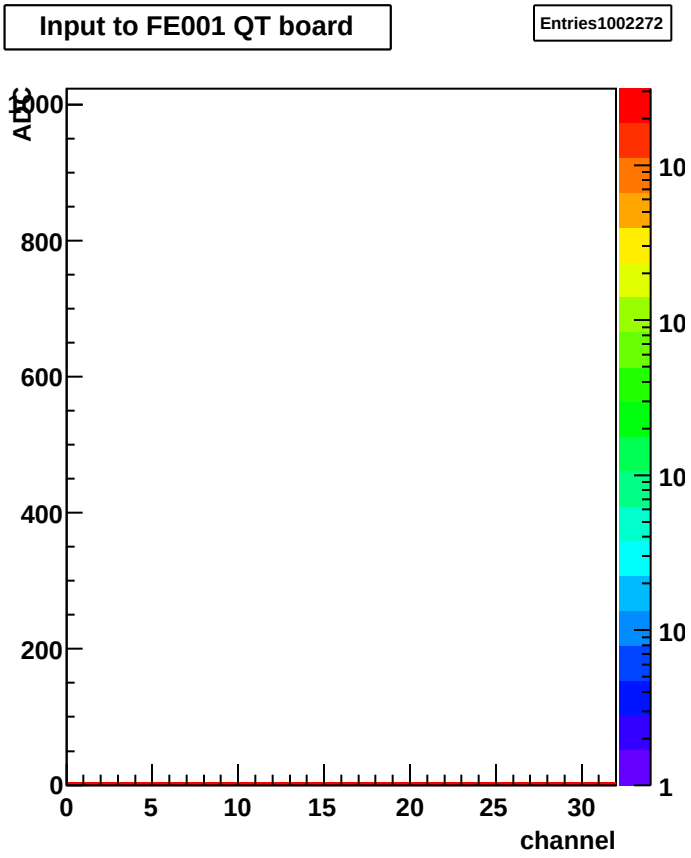

Input to FPD L2 DSM
Entries 93963
CL bits
31321
31321
31321
SMALL
LARGE-S
LARGE-N

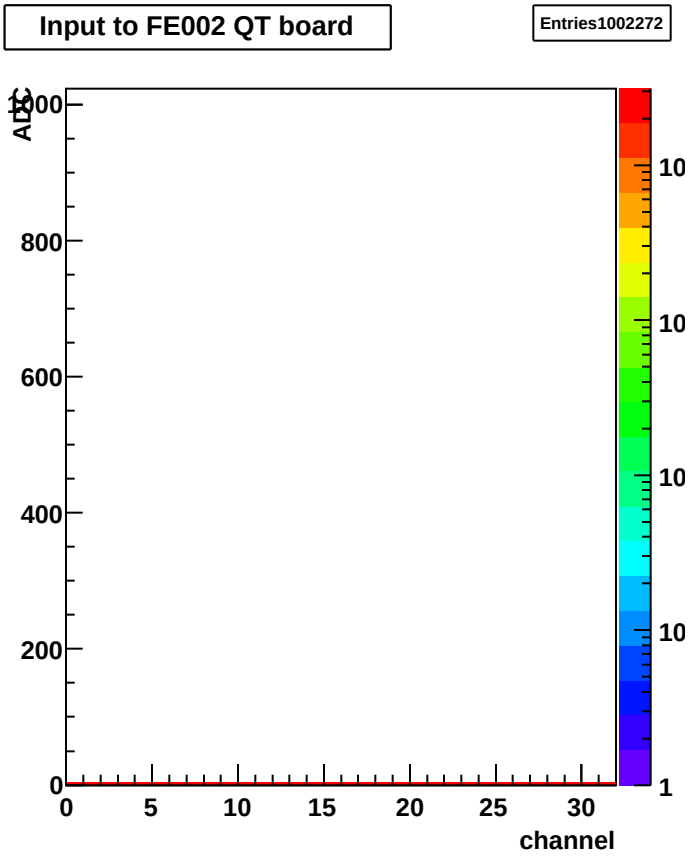

Input to FPD L2 DSM
Entries 93963
CL bits - simulated
31321
31321
31321
SMALL
LARGE-S
LARGE-N

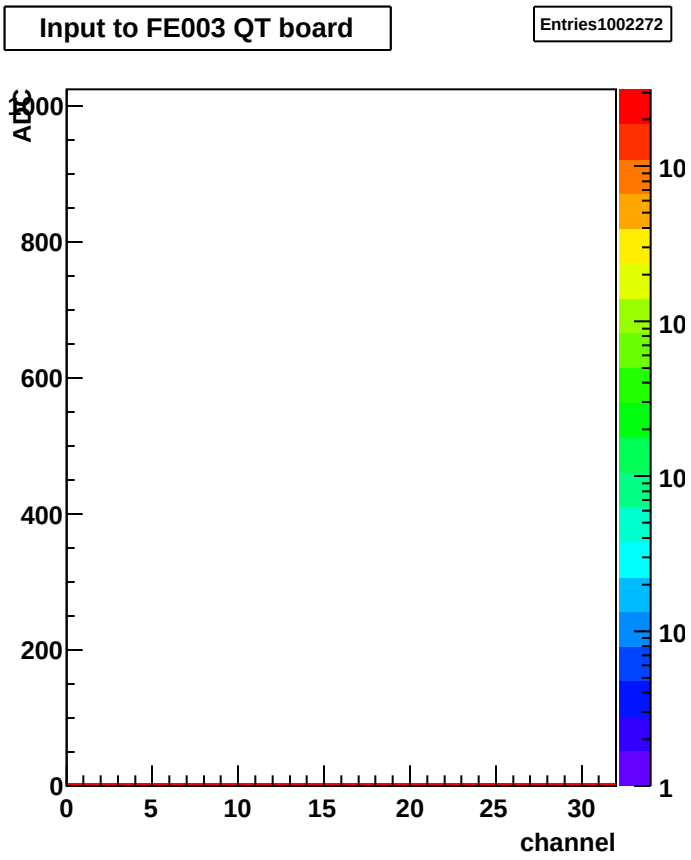

Input to FPD L2 DSM
Entries 93963
HT bits
31321
31321
31321
SMALL
LARGE-S
LARGE-N

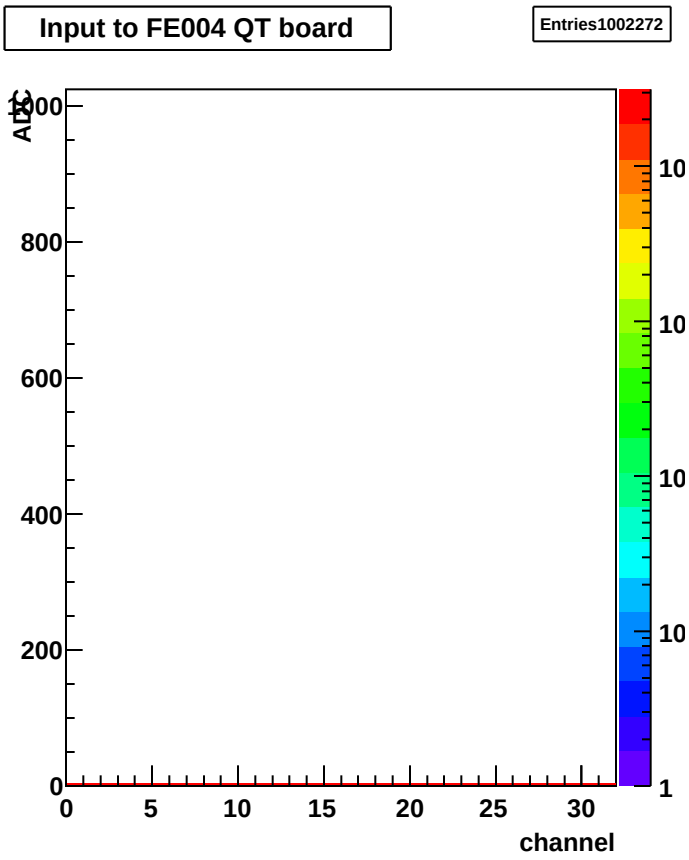

Input to FPD L2 DSM
Entries 93963
HT bits - simulated
31321
31321
31321
SMALL
LARGE-S
LARGE-N

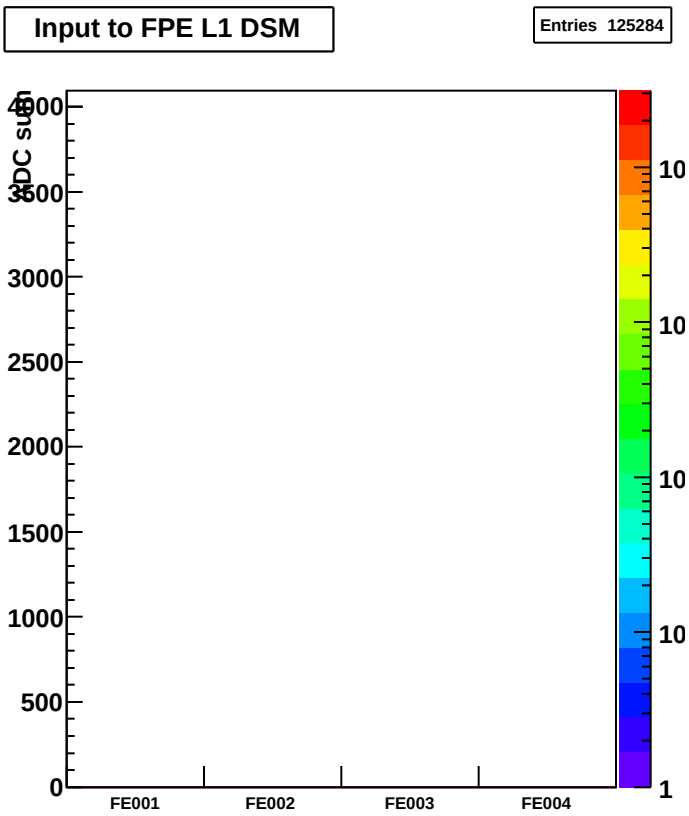

Input to FPD L2 DSM
Entries 187926
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
$10^2$
$10^3$
$10^4$

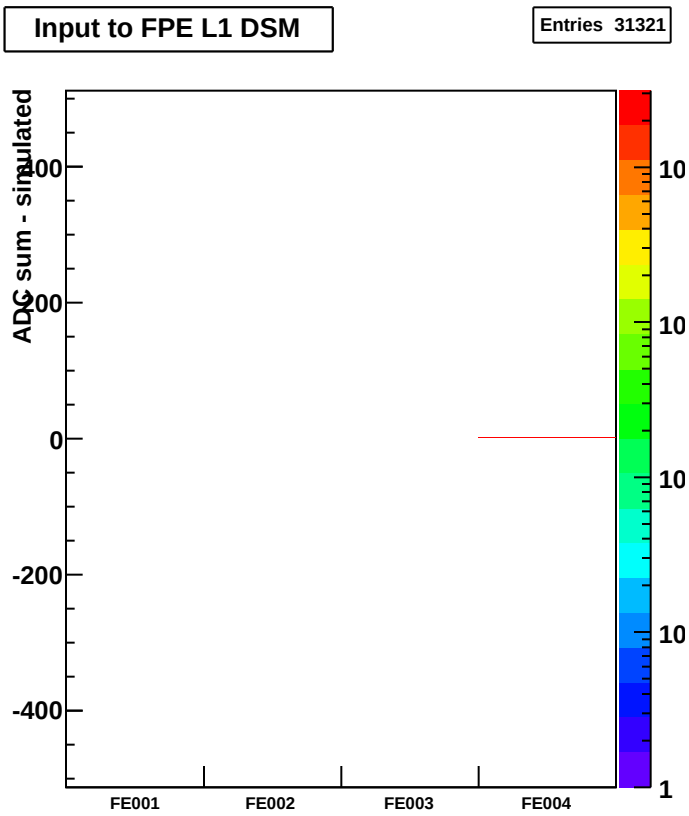

Input to FE001 QT board
Entries1002272
ADC
channel

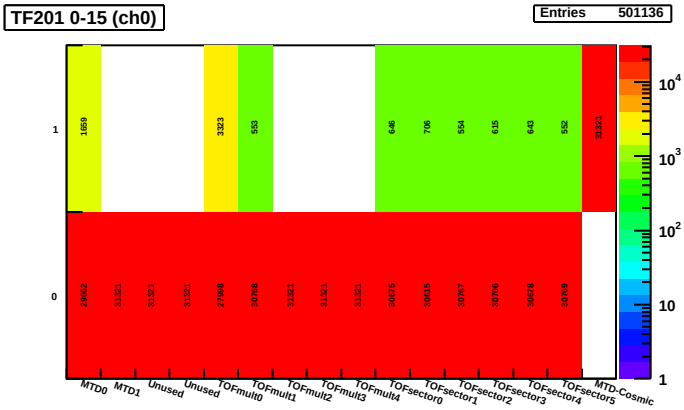

Input to FE002 QT board
Entries1002272
ADC
channel

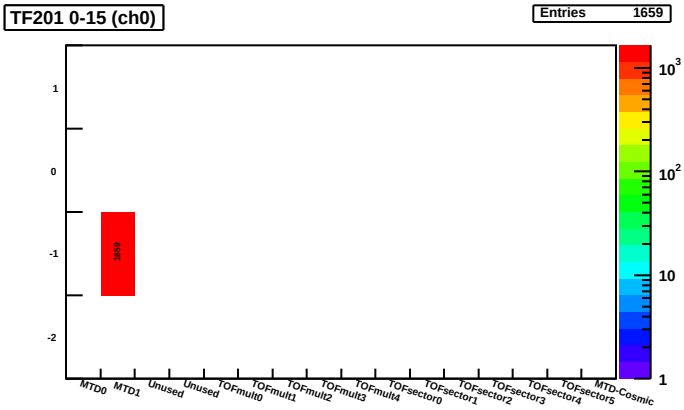

Input to FE003 QT board
Entries1002272
ADC
channel

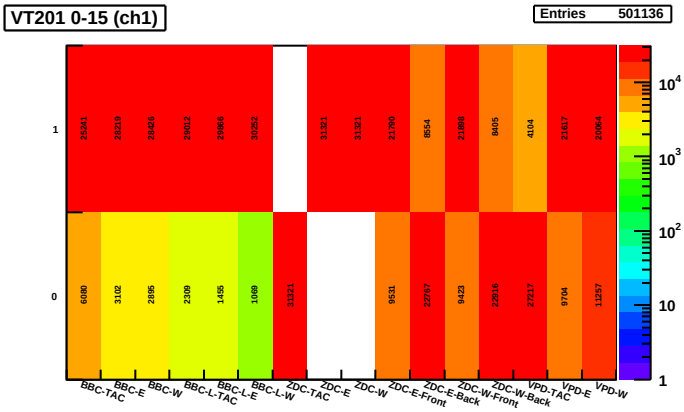

Input to FE004 QT board
Entries1002272
ADC
channel

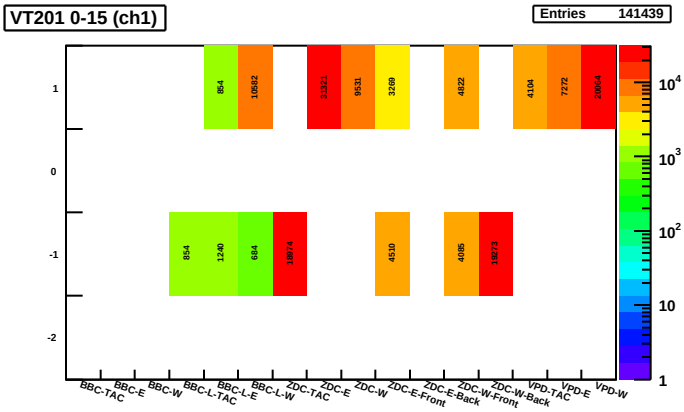

Input to FPE L1 DSM
Entries 125284
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1

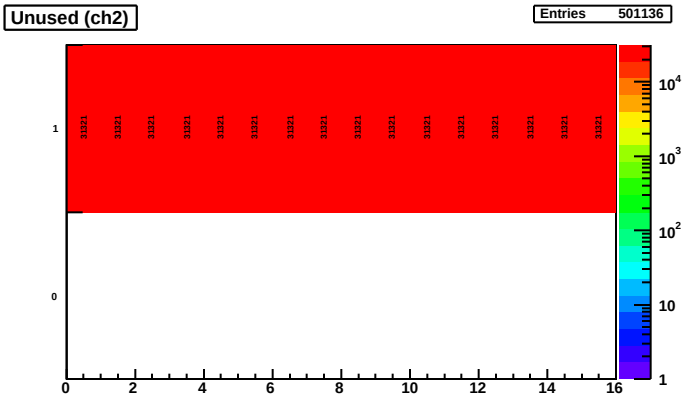

Input to FPE L1 DSM
Entries 31321
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1

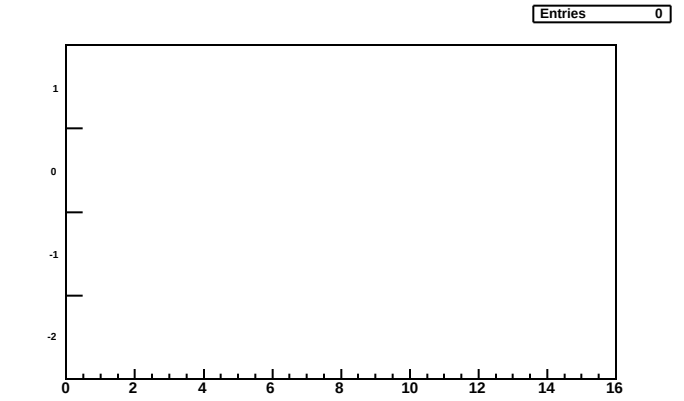

TF201 0-15 (ch0)
Entries 501136
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

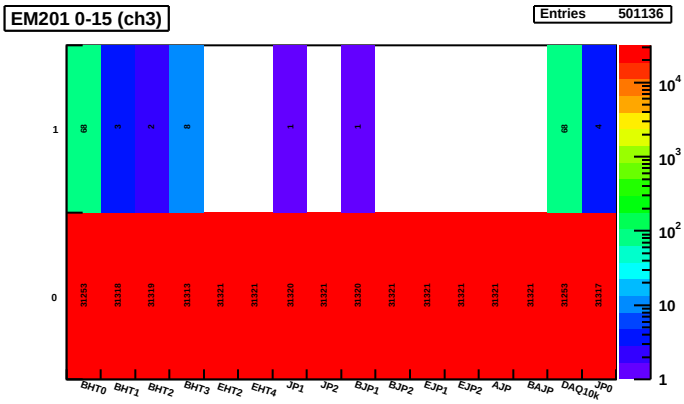

TF201 0-15 (ch0)
Entries 1659
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 501136
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 141439
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 501136


Entries 0


EM201 0-15 (ch3)
Entries 501136
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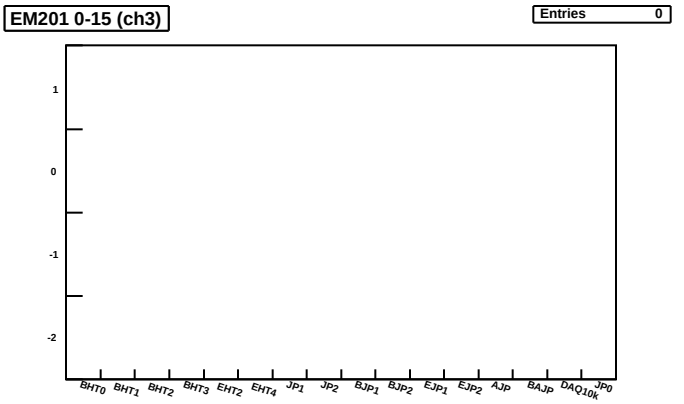
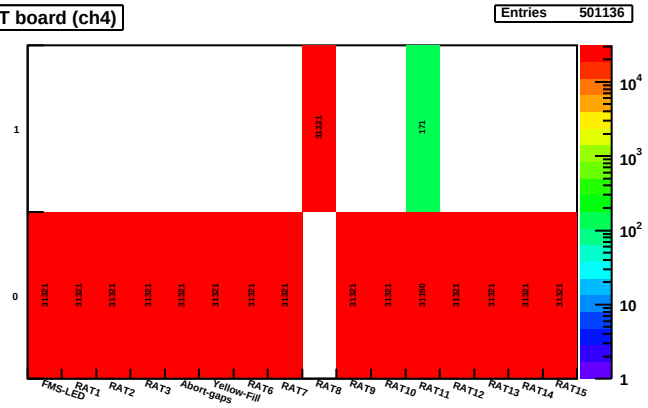
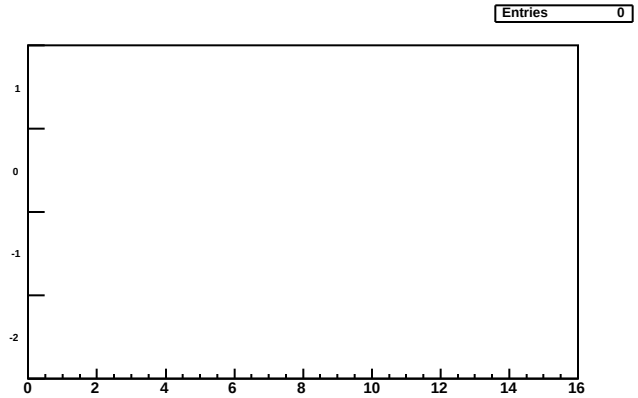
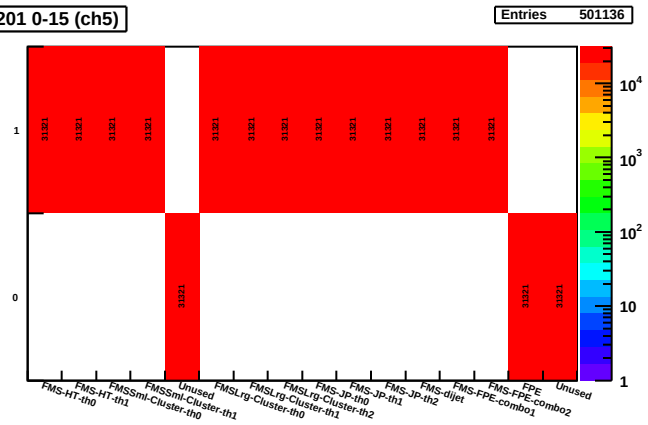

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

**RAT board (ch4)**

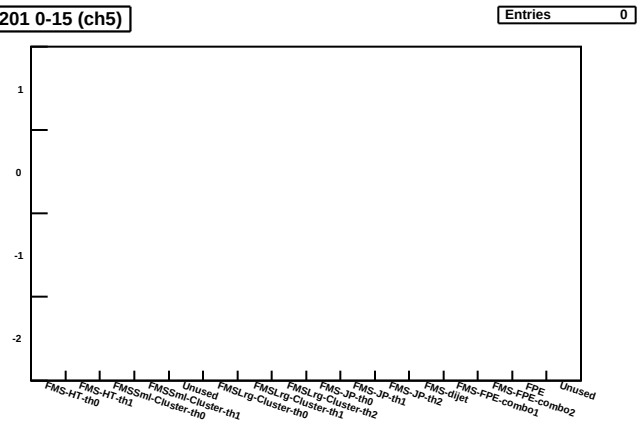


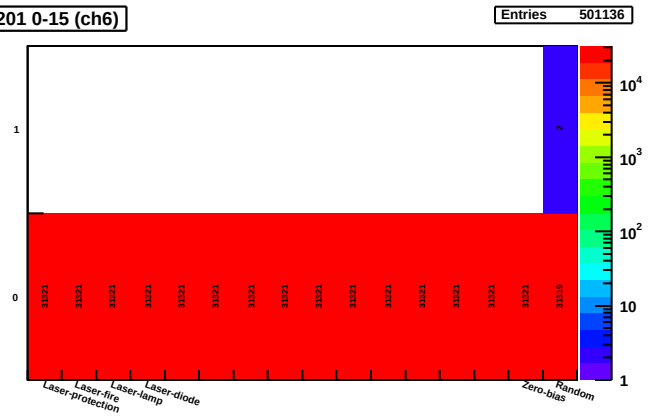

**FP201 0-15 (ch5)**

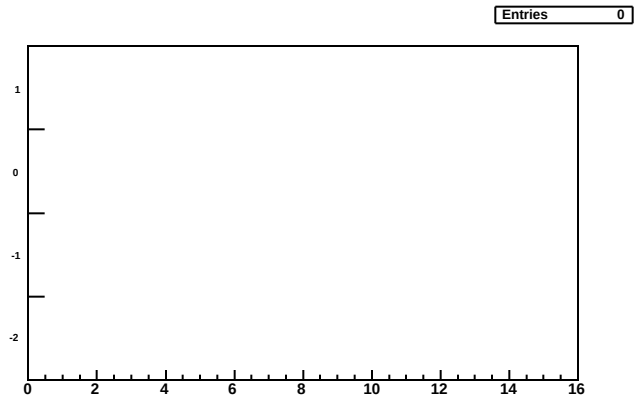


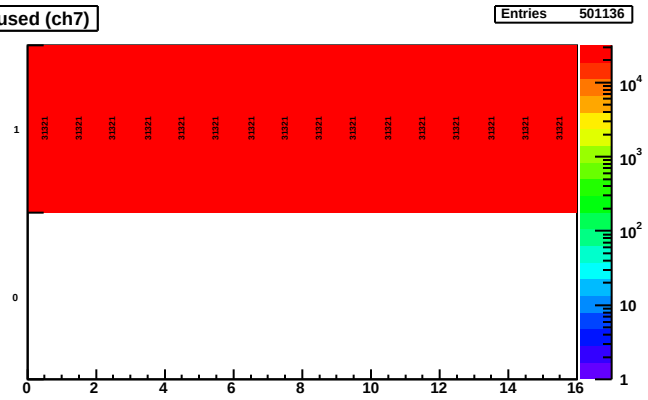
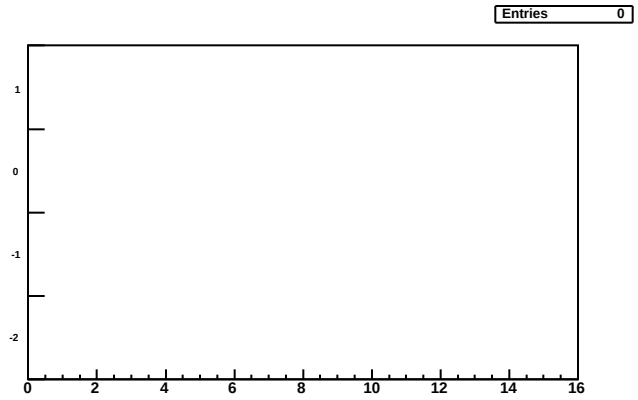

**FP201 0-15 (ch5)**




**ST201 0-15 (ch6)**




**Unused (ch7)**