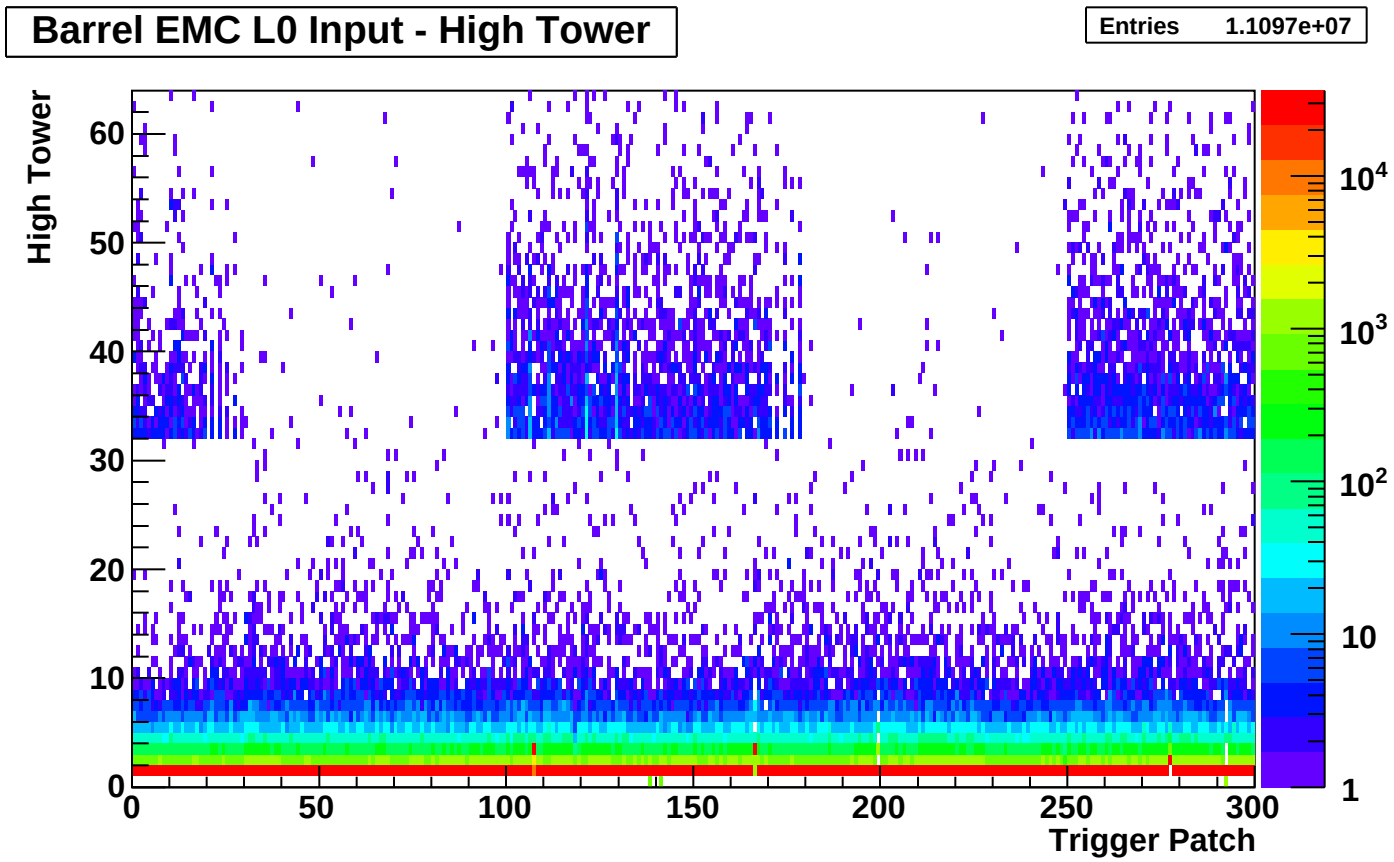
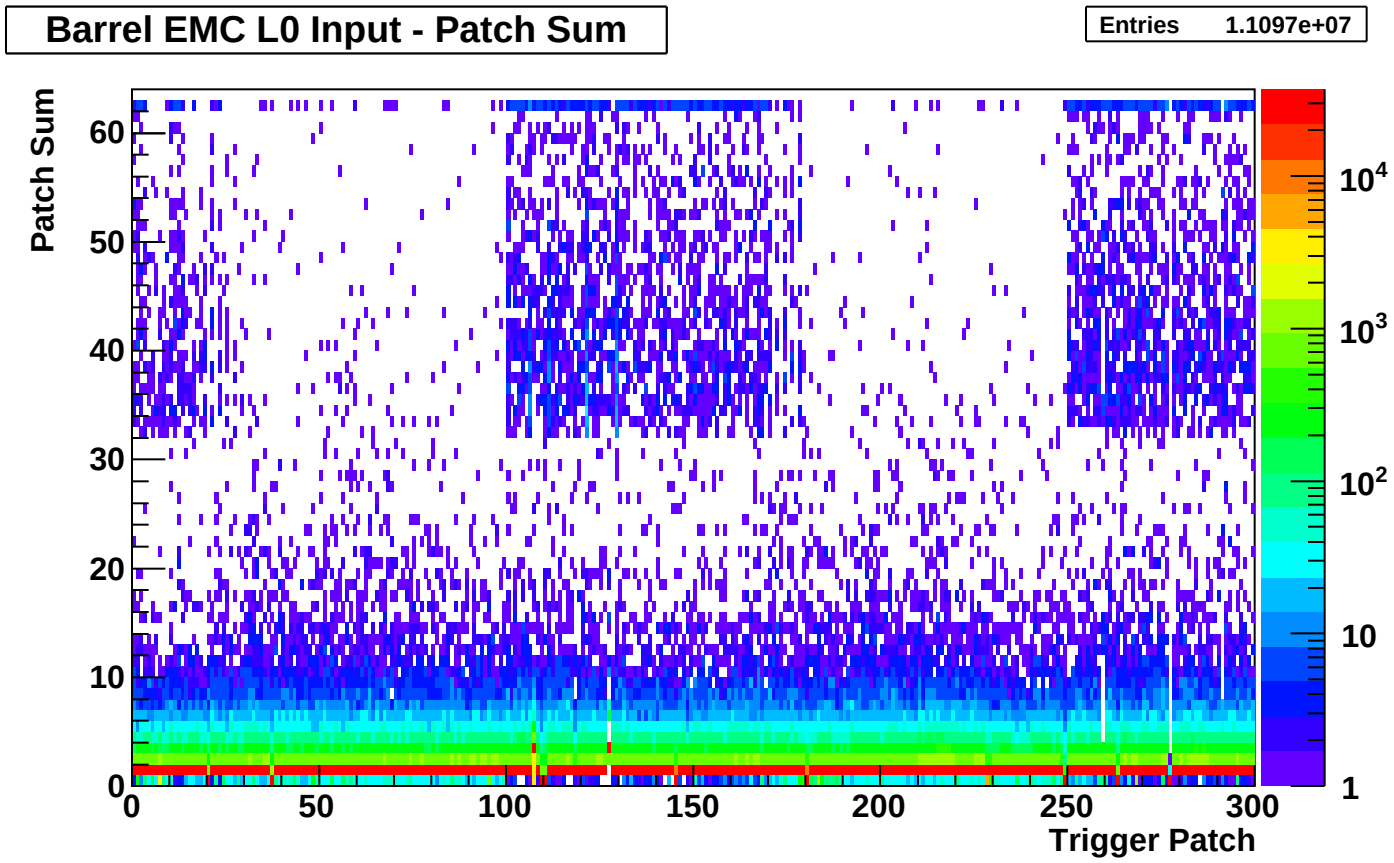
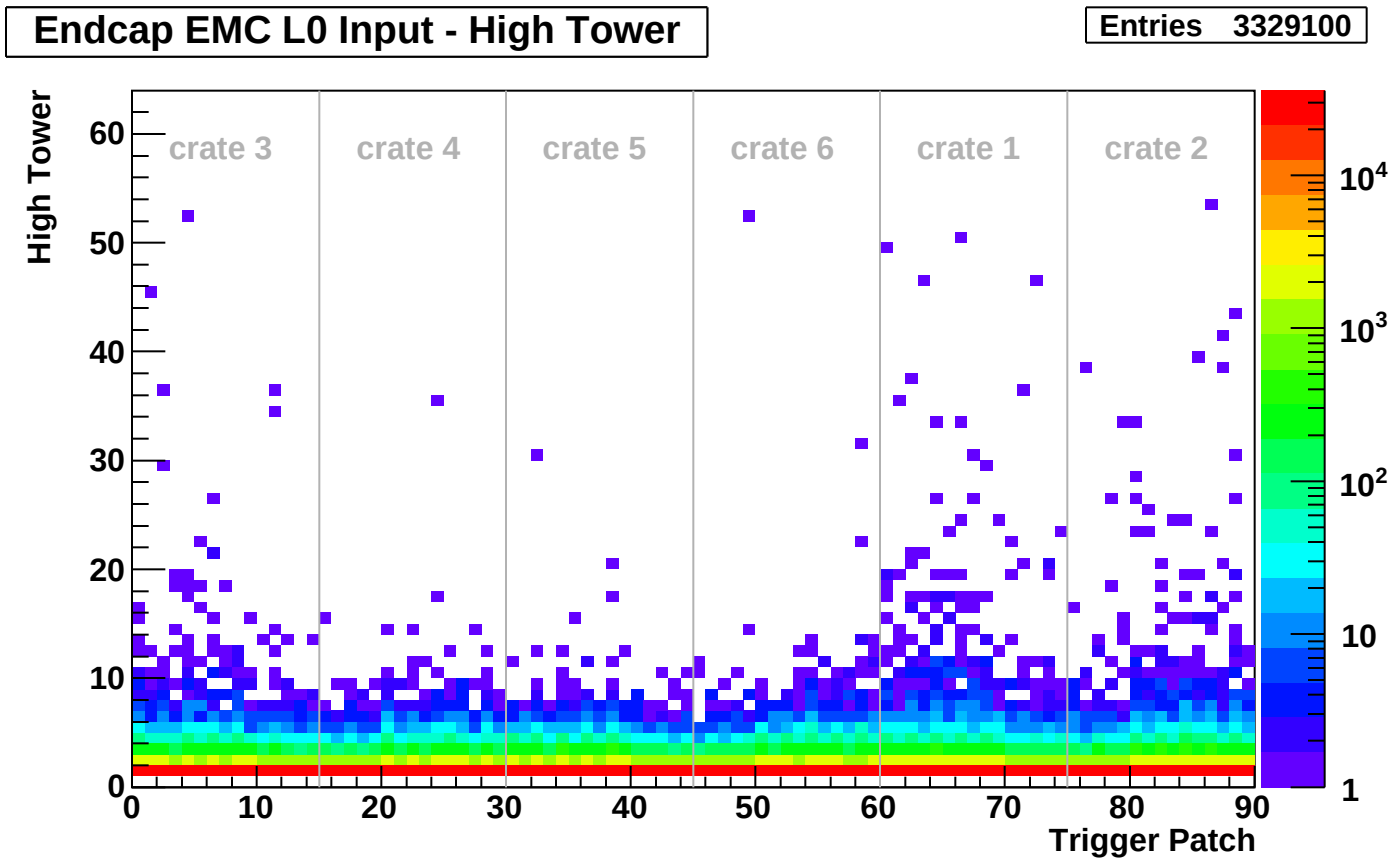
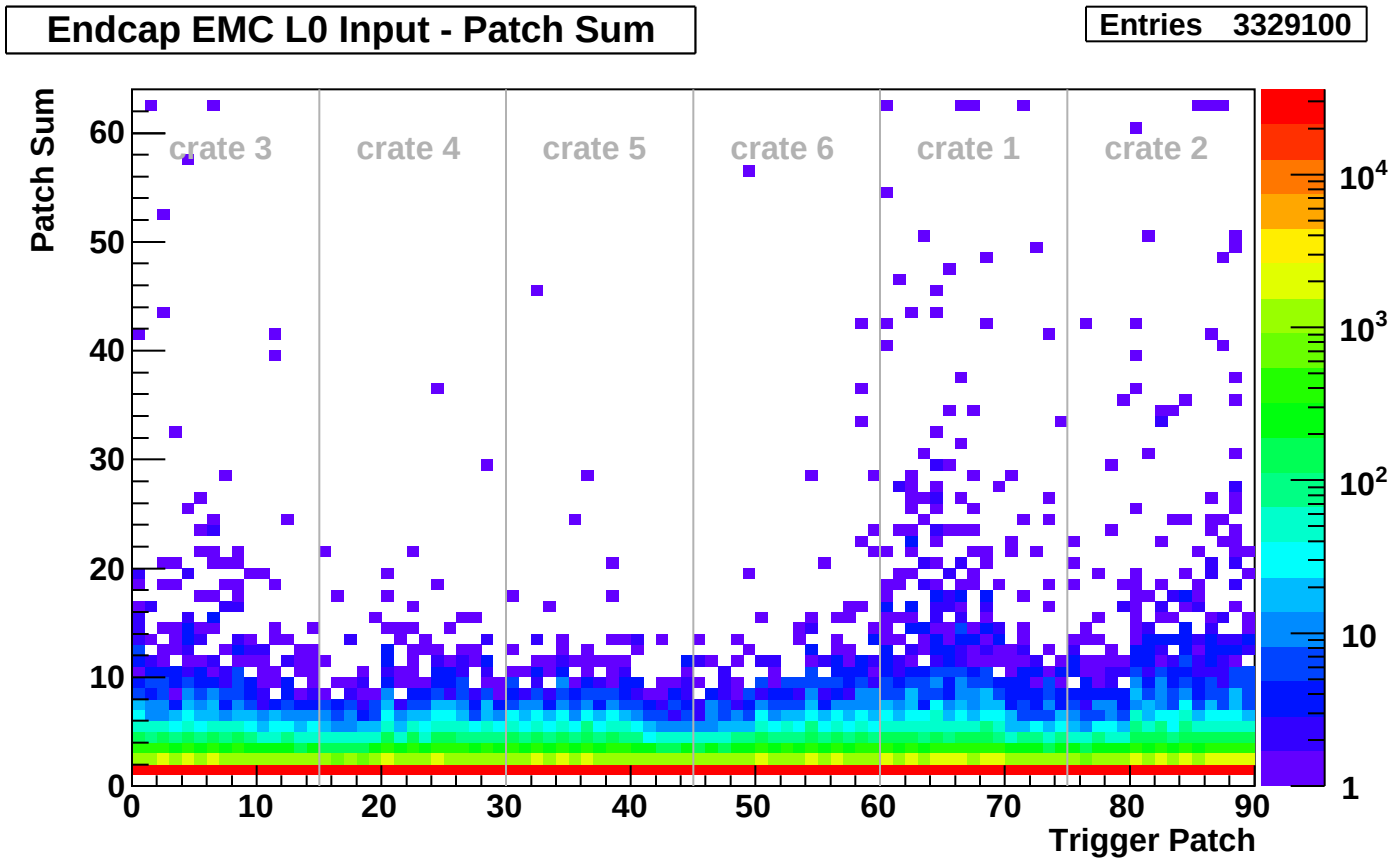
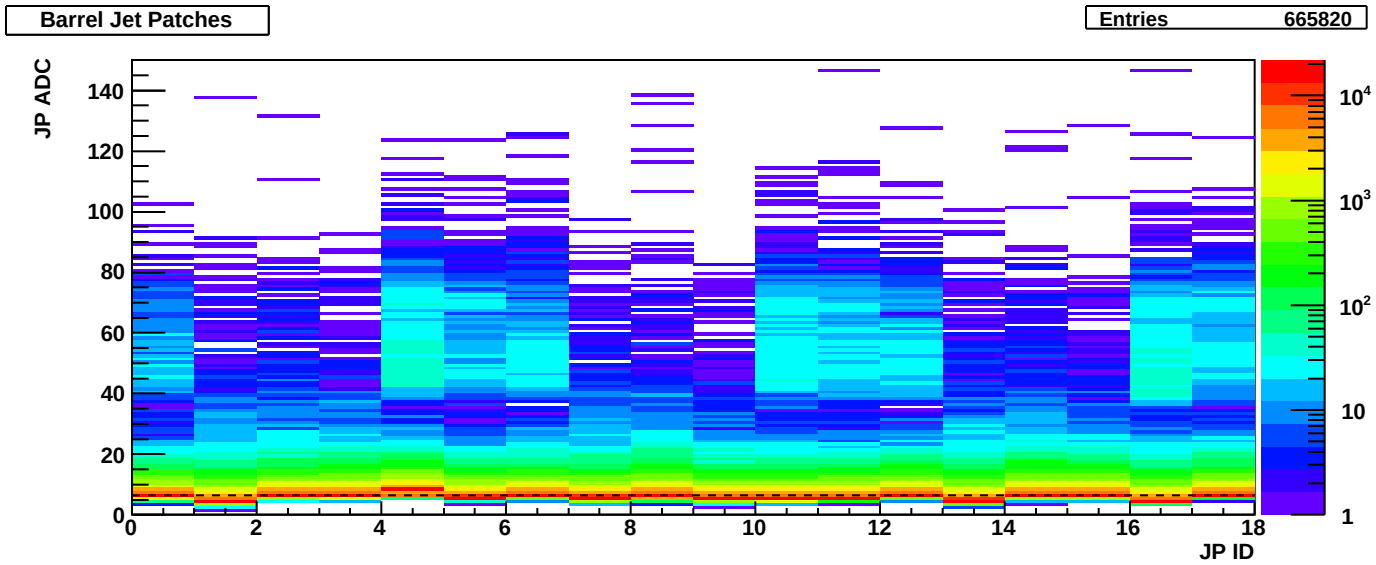
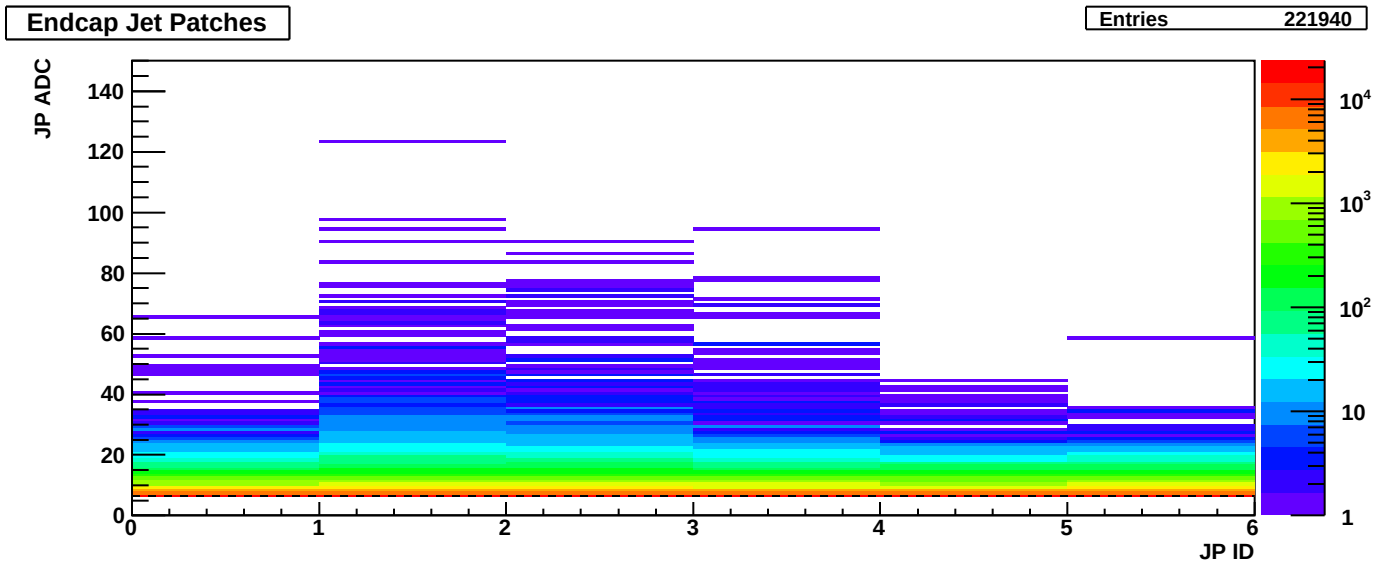

Barrel EMC L0 Input - High Tower
Entries 1.1097e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$

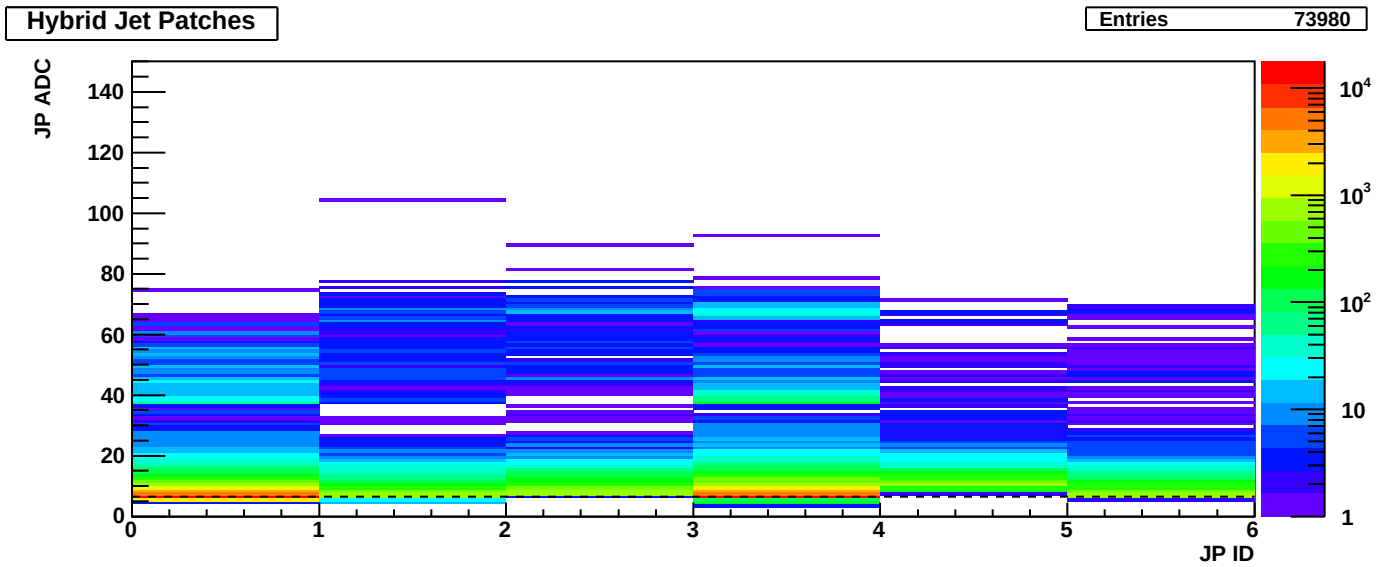

Barrel EMC L0 Input - Patch Sum
Entries 1.1097e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$

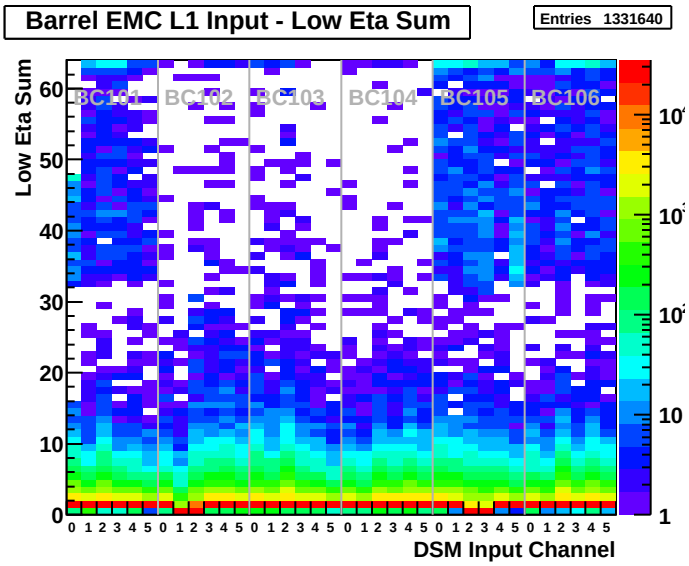

Endcap EMC L0 Input - High Tower
Entries 3329100
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

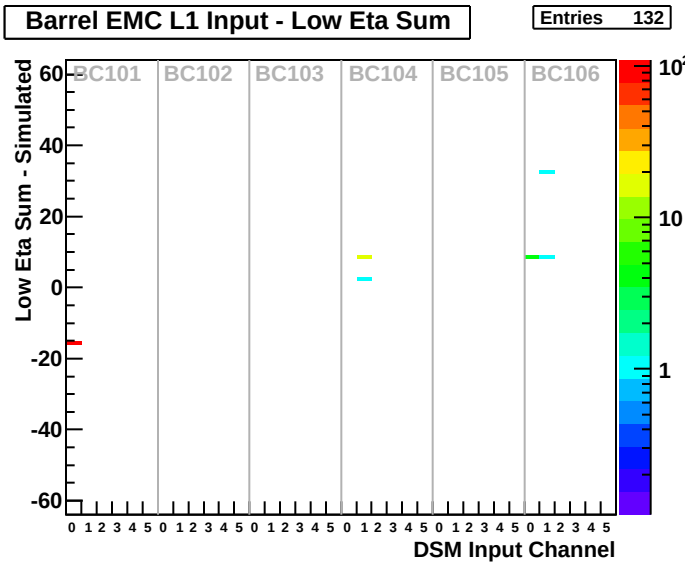

Endcap EMC L0 Input - Patch Sum
Entries 3329100
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

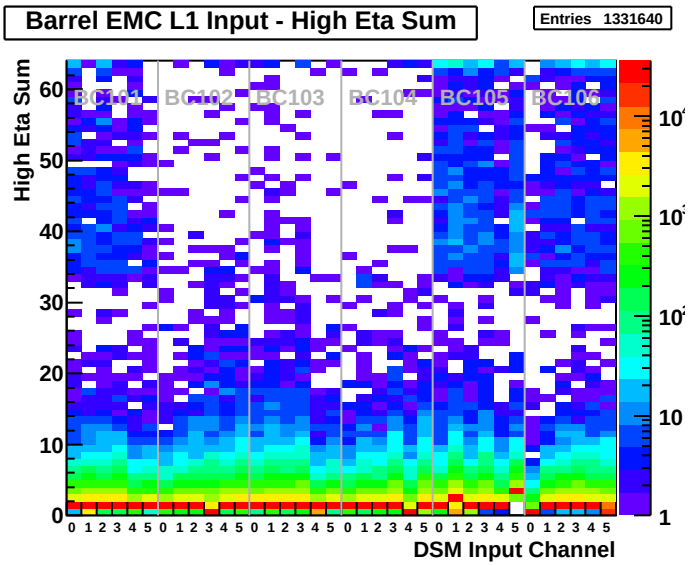

Barrel Jet Patches
Entries 665820
JP ADC
JP ID

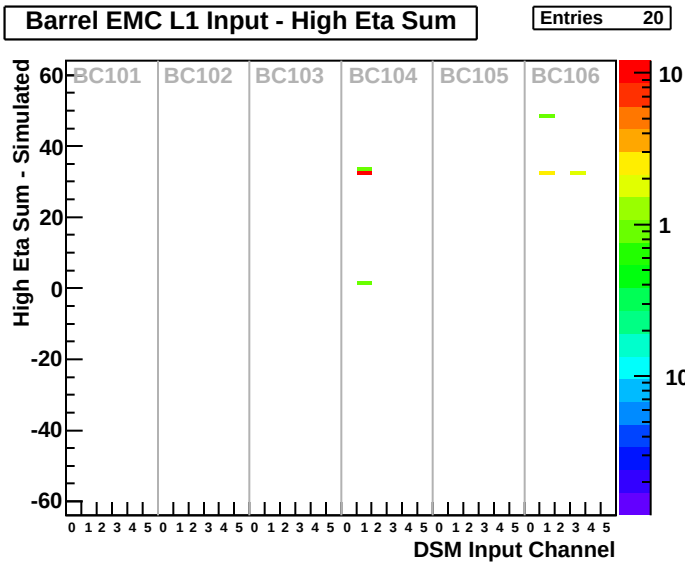

Endcap Jet Patches
Entries 221940
JP ADC
JP ID

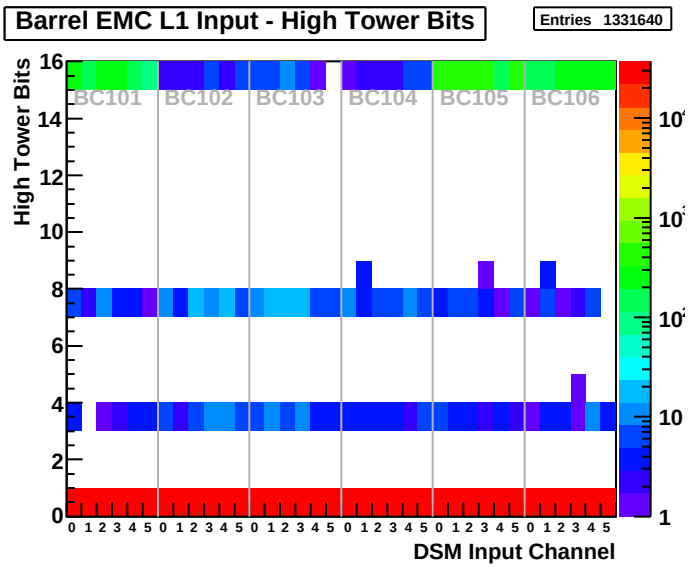

Hybrid Jet Patches
Entries 73980
JP ADC
JP ID

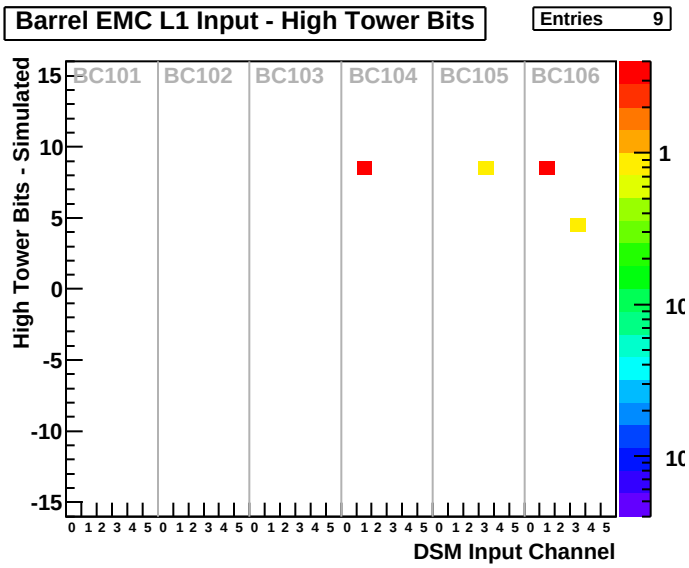

Barrel EMC L1 Input - Low Eta Sum
Entries 1331640
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

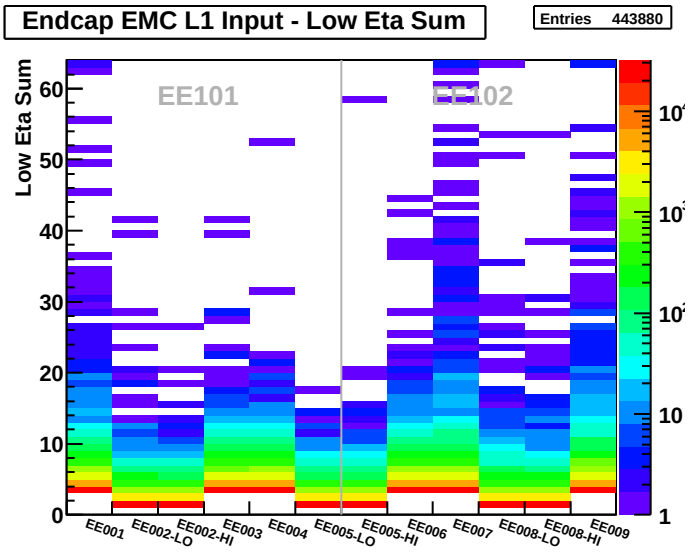

Barrel EMC L1 Input - Low Eta Sum
Entries 132
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

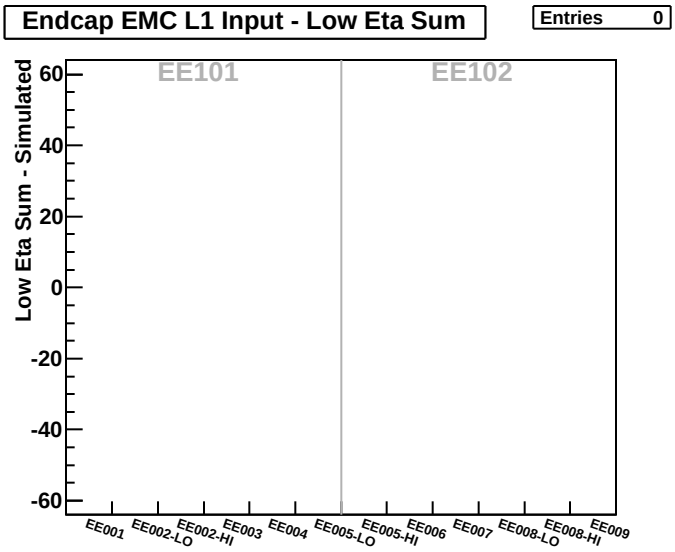

Barrel EMC L1 Input - High Eta Sum
Entries 1331640
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

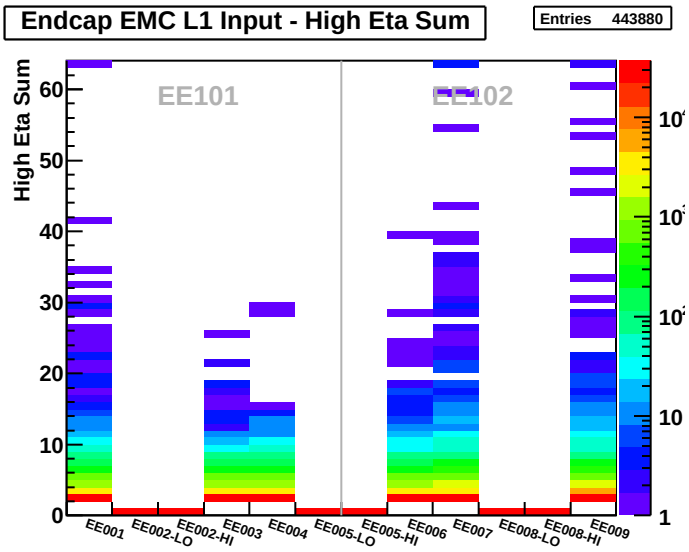

Barrel EMC L1 Input - High Eta Sum
Entries 20
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

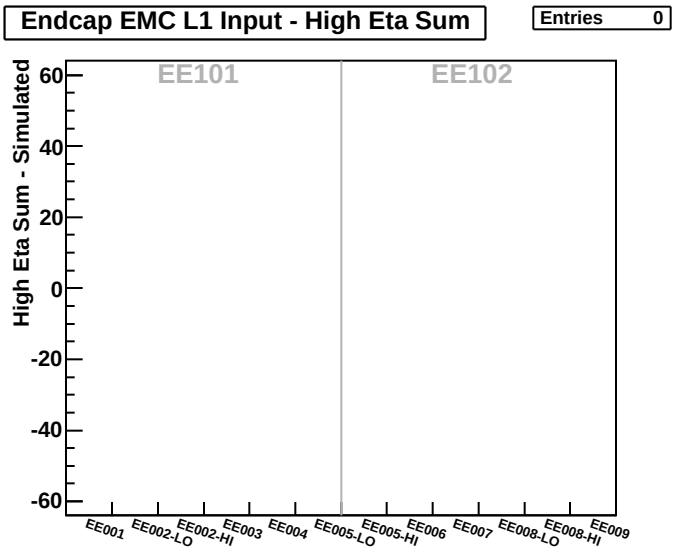

Barrel EMC L1 Input - High Tower Bits
Entries 1331640
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

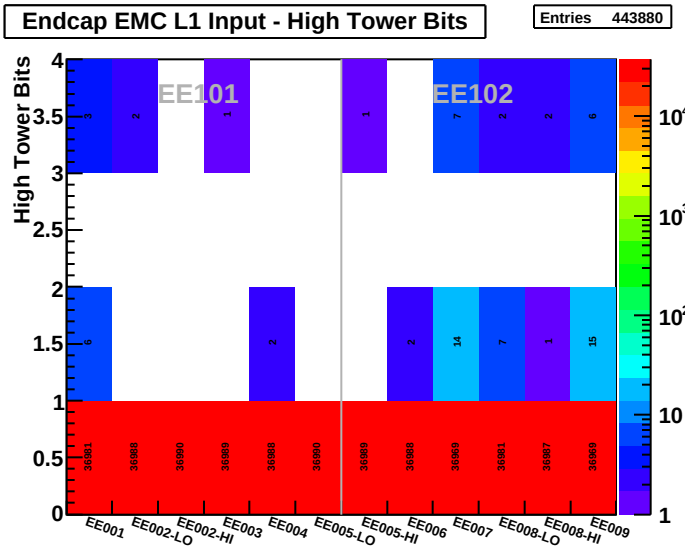

Barrel EMC L1 Input - High Tower Bits
Entries 9
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

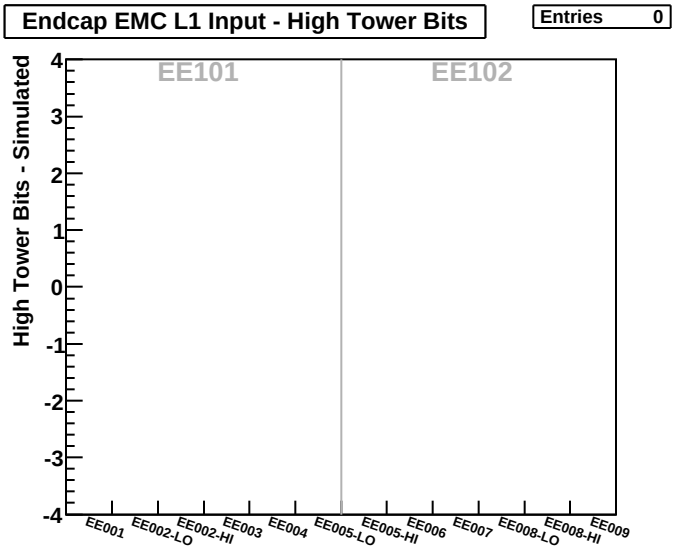

Endcap EMC L1 Input - Low Eta Sum
Entries 443880
Low Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

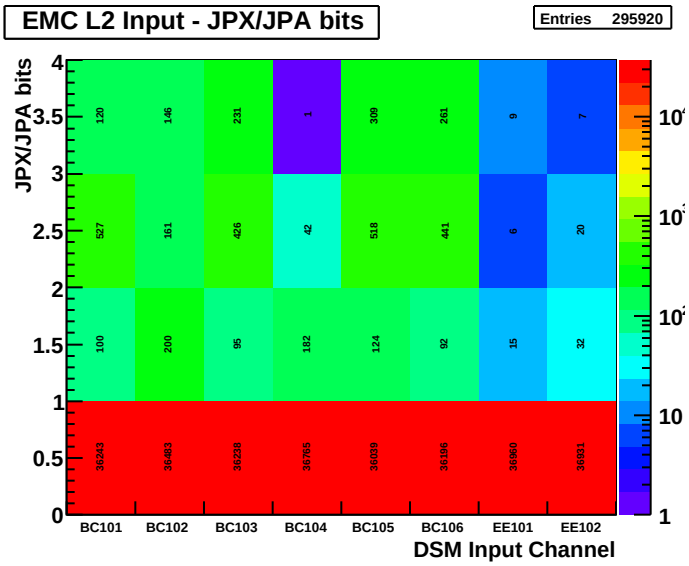

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

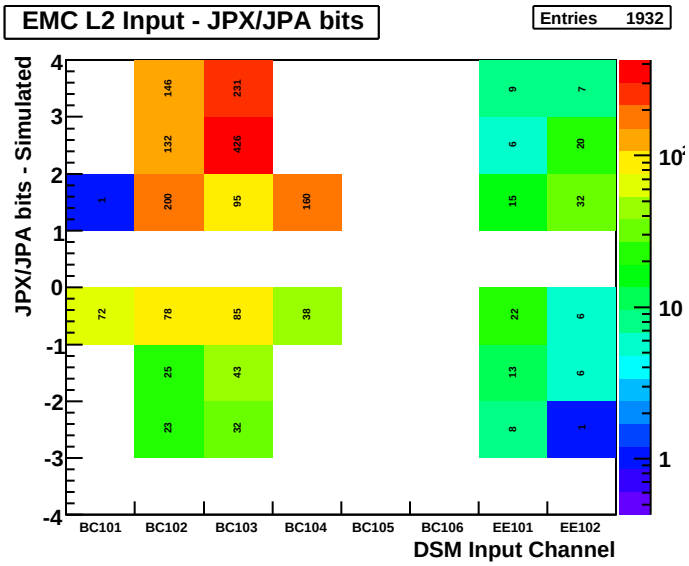

Endcap EMC L1 Input - High Eta Sum
Entries 443880
High Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

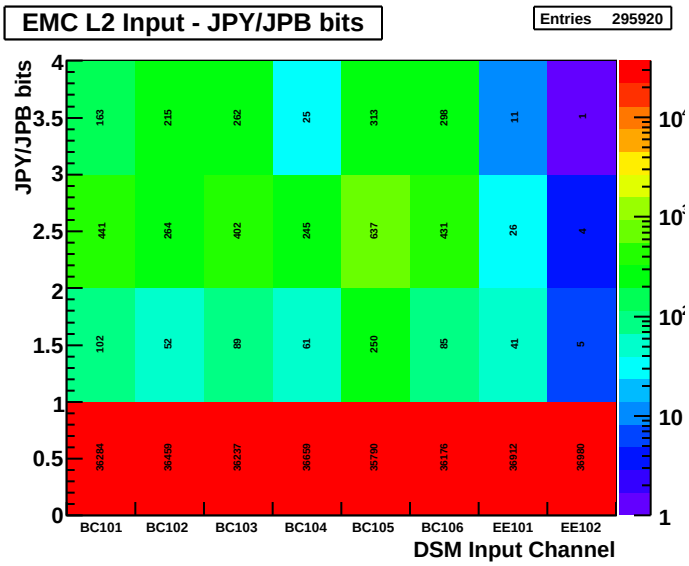

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

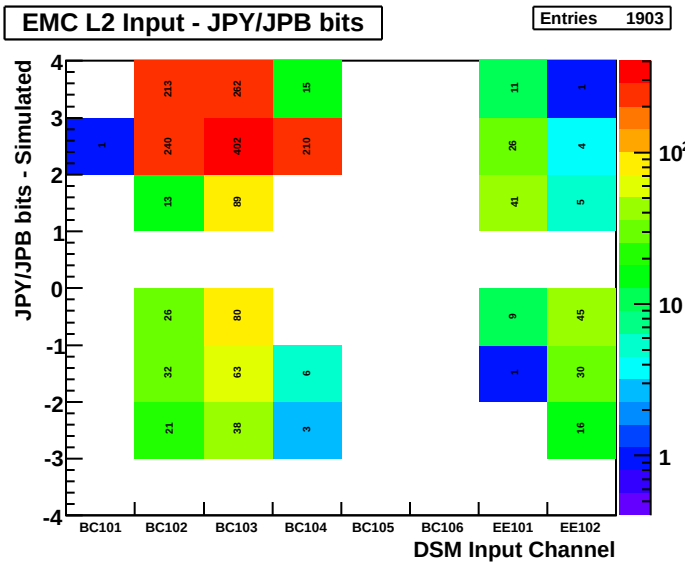

Endcap EMC L1 Input - High Tower Bits
Entries 443880
High Tower Bits
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

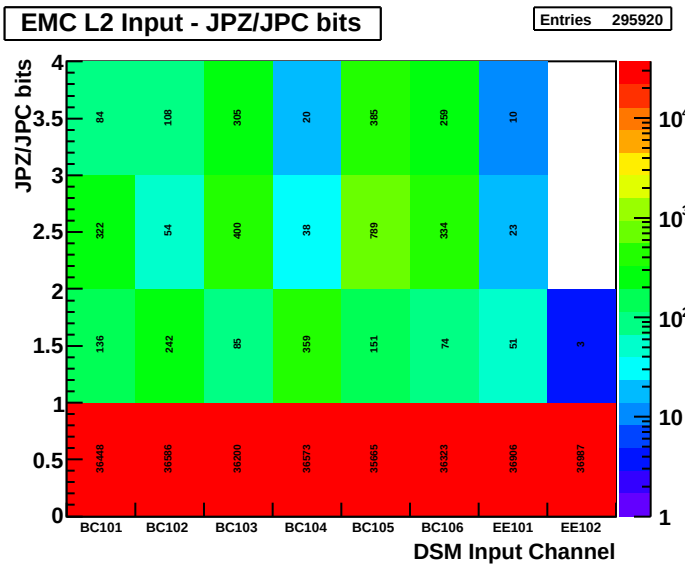

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

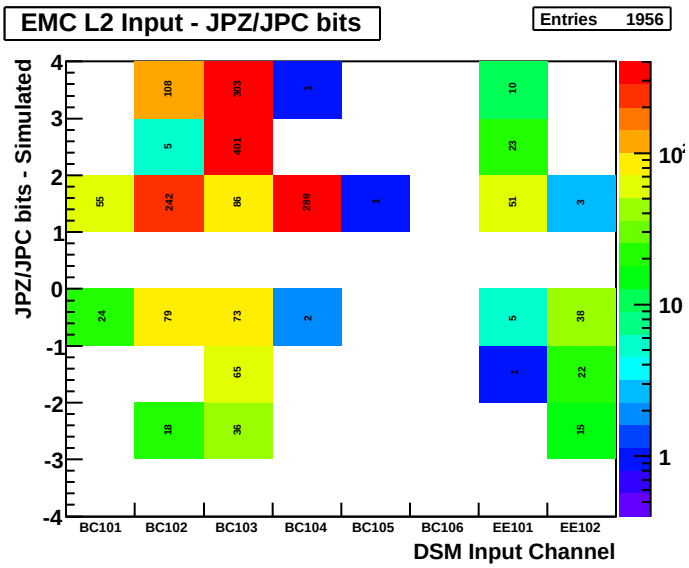

EMC L2 Input - JPX/JPA bits
Entries 295920
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

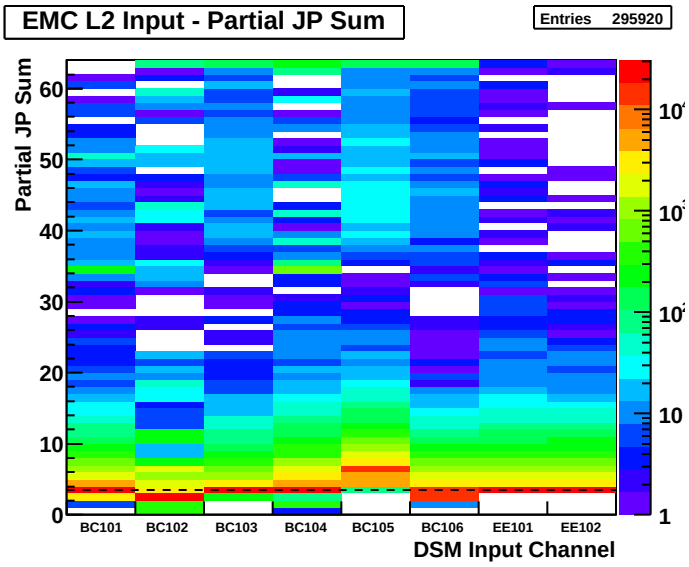

EMC L2 Input - JPX/JPA bits
Entries 1932
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

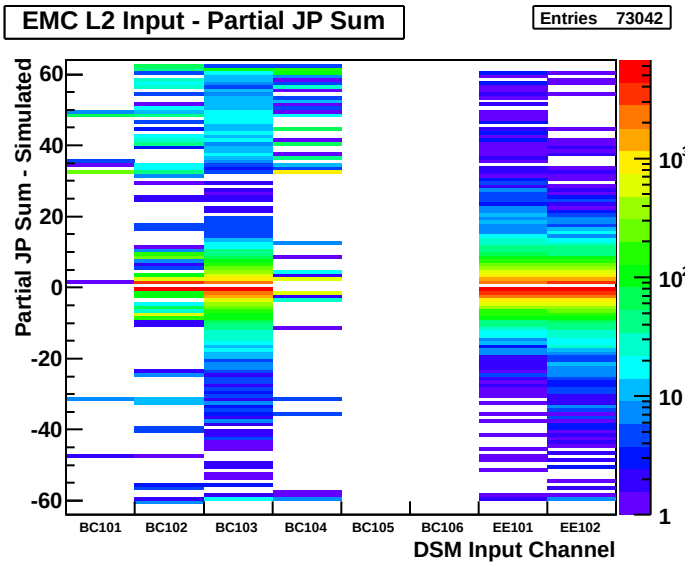

EMC L2 Input - JPY/JPB bits
Entries 295920
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

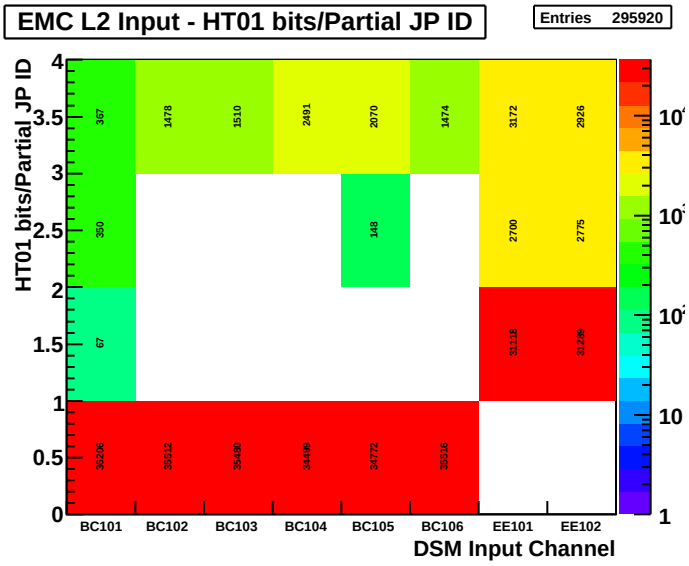

EMC L2 Input - JPY/JPB bits
Entries 1903
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

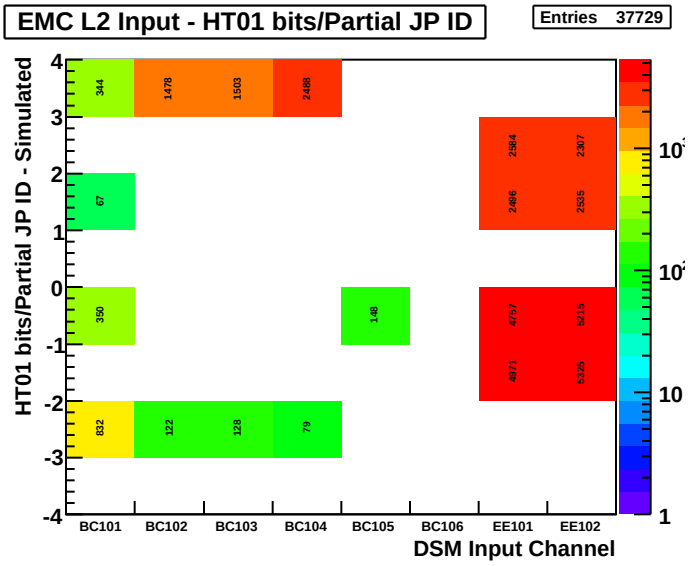

EMC L2 Input - JPZ/JPC bits
Entries 295920
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

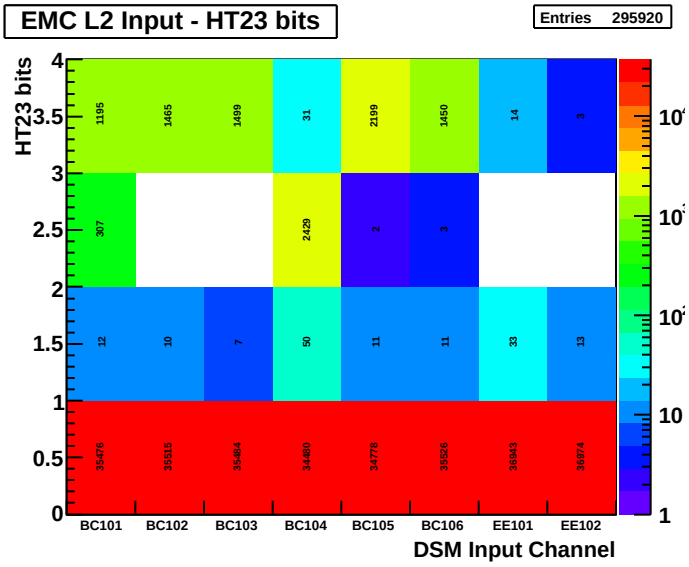

EMC L2 Input - JPZ/JPC bits
Entries 1956
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

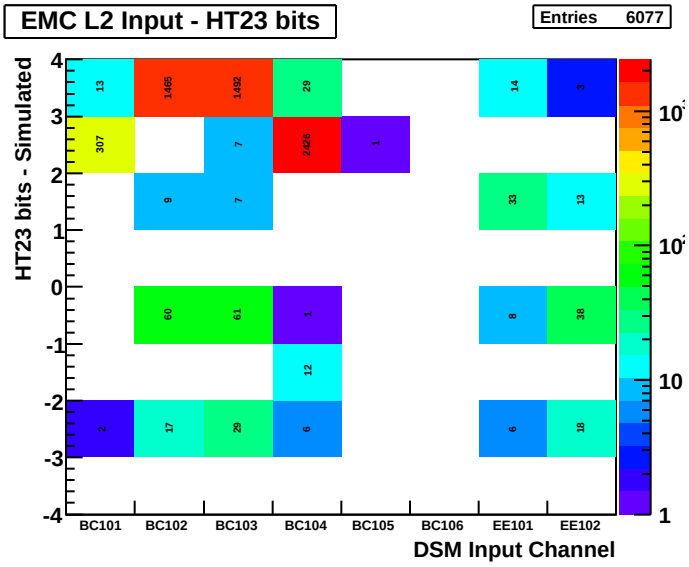

EMC L2 Input - Partial JP Sum
Entries 295920
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

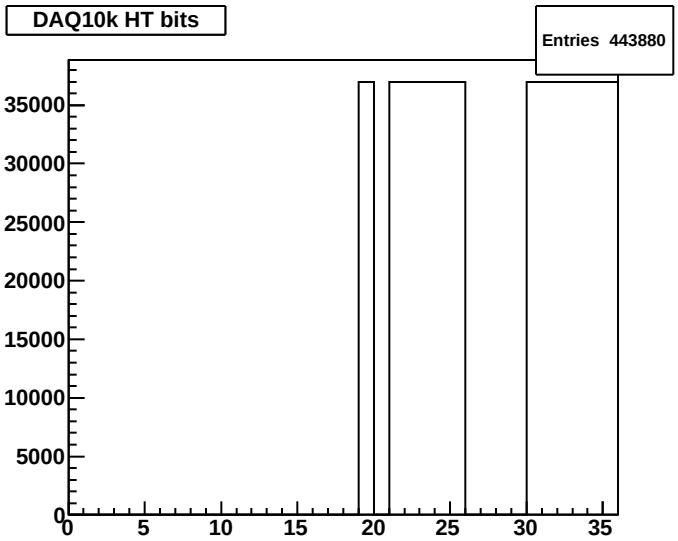

EMC L2 Input - Partial JP Sum
Entries 73042
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

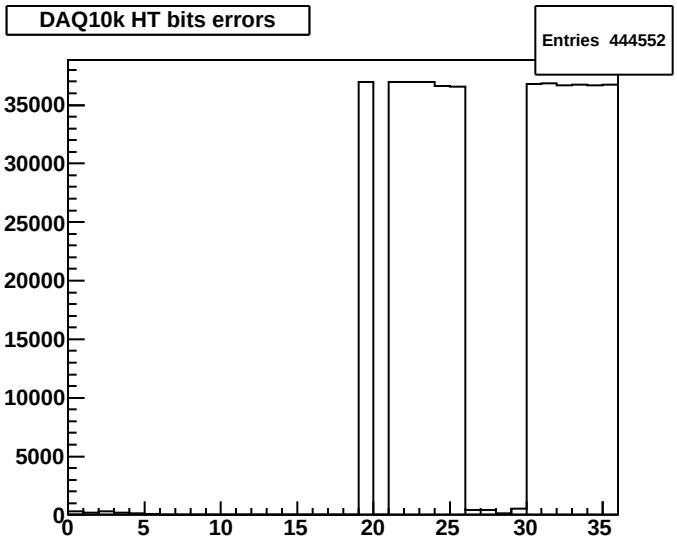

EMC L2 Input - HT01 bits/Partial JP ID
Entries 295920
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

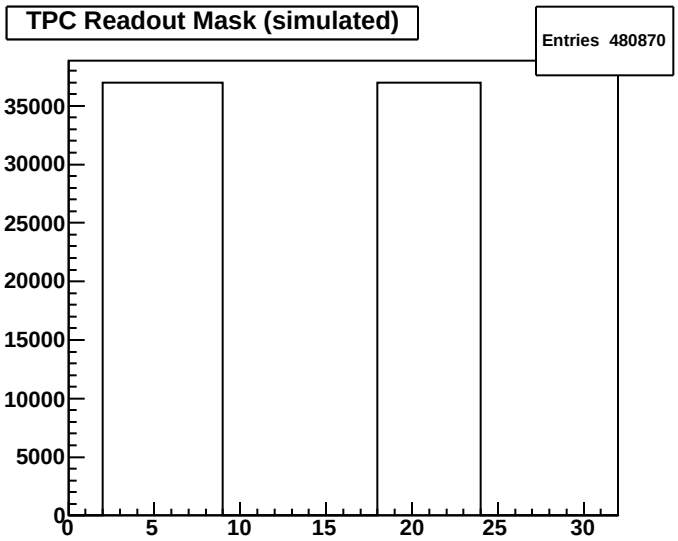

EMC L2 Input - HT01 bits/Partial JP ID
Entries 37729
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

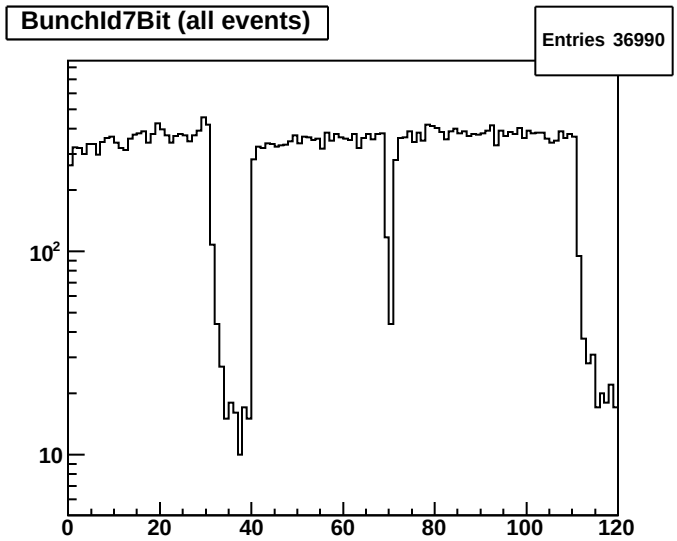

EMC L2 Input - HT23 bits
Entries 295920
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

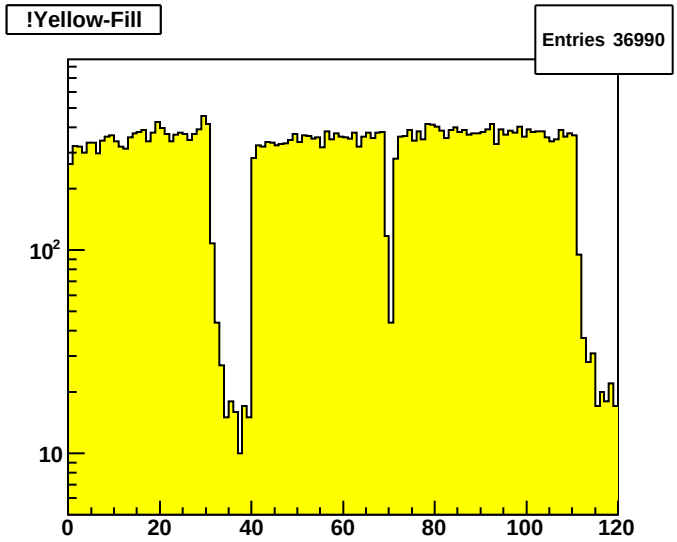

EMC L2 Input - HT23 bits
Entries 6077
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

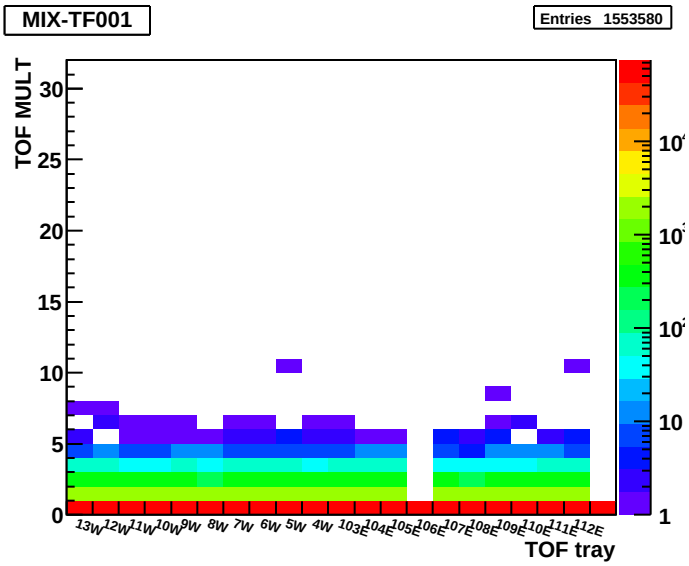

DAQ10k HT bits
Entries 443880
35000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

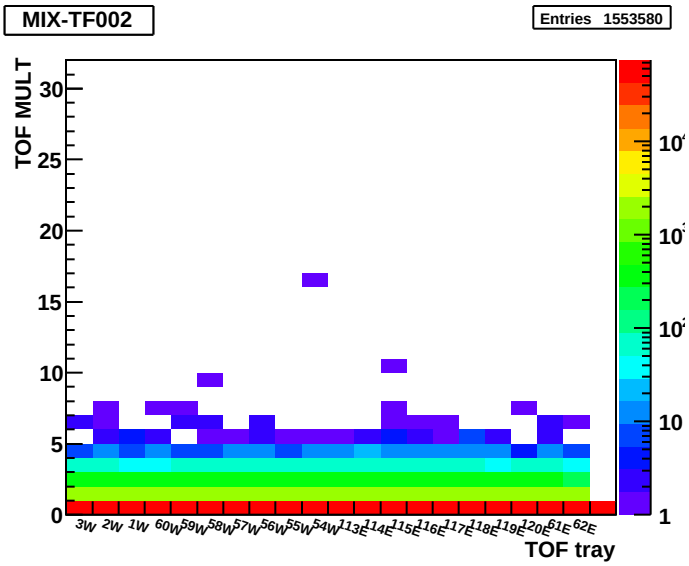

DAQ10k HT bits errors
Entries 444552
35000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

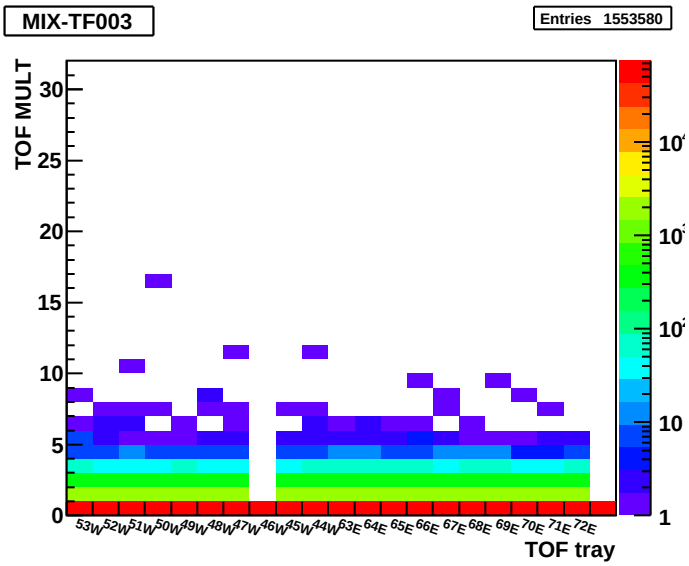

TPC Readout Mask (simulated)
Entries 480870
35000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30

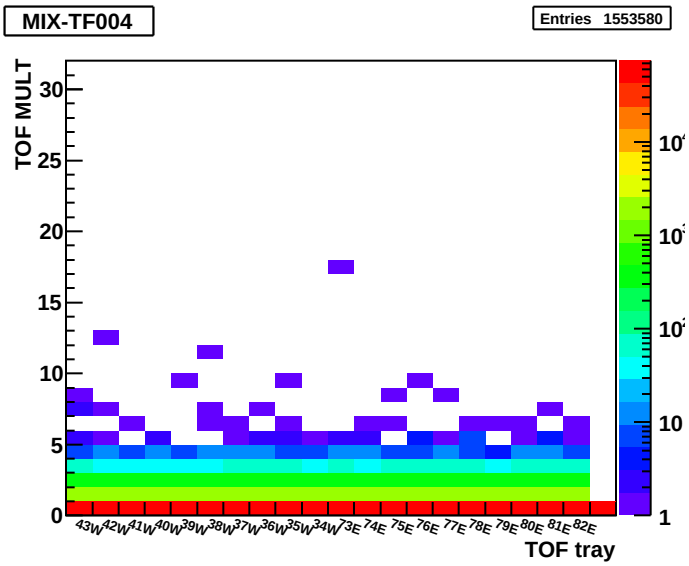

BunchId7Bit (all events)
Entries 36990
$10^2$
10
0 20 40 60 80 100 120

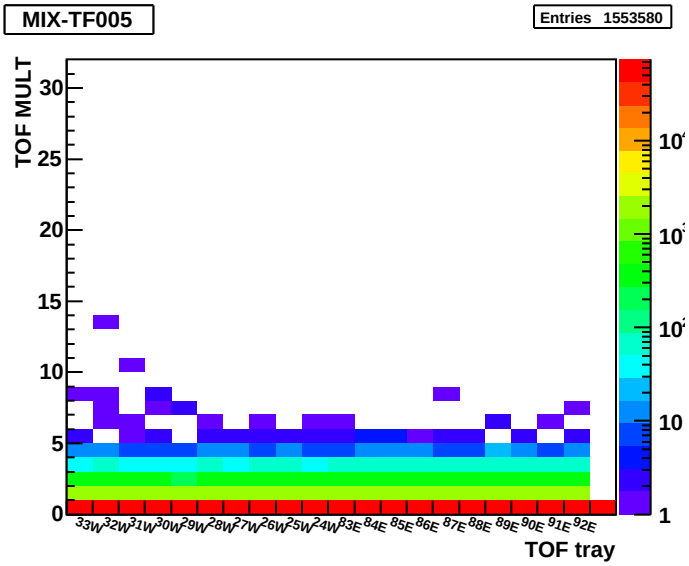

!Yellow-Fill
Entries 36990
$10^2$
10
0 20 40 60 80 100 120

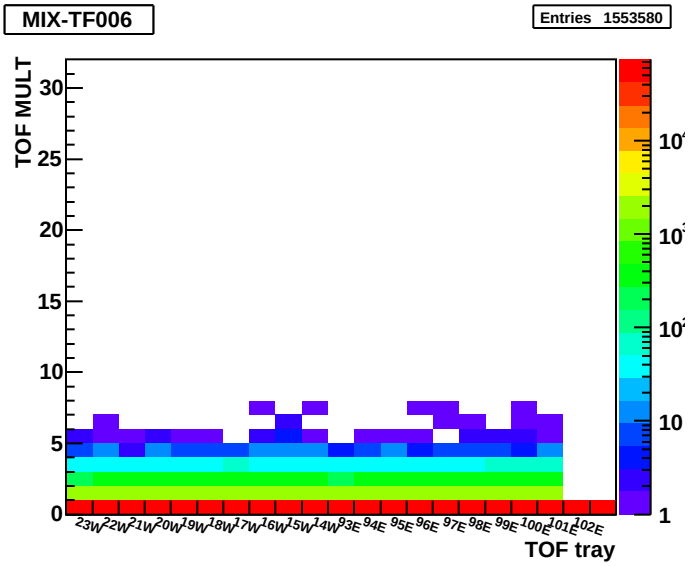

MIX-TF001
Entries 1553580
TOF MULT
TOF tray

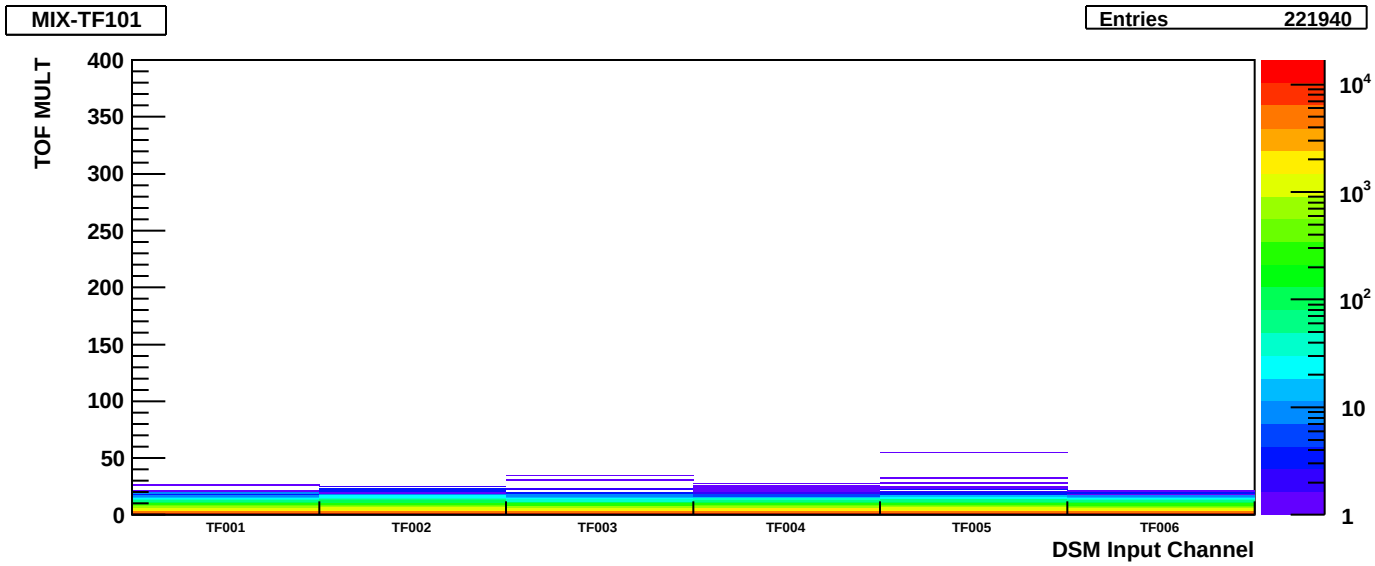

MIX-TF002
Entries 1553580
TOF MULT
TOF tray

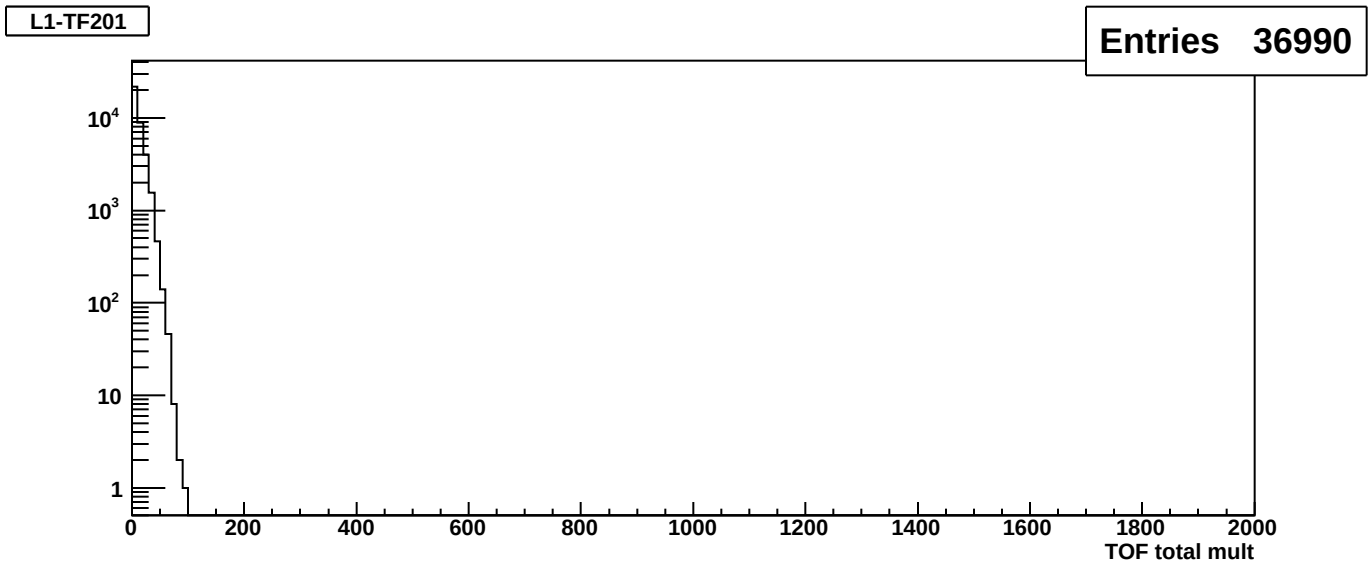

MIX-TF003
Entries 1553580
TOF MULT
TOF tray

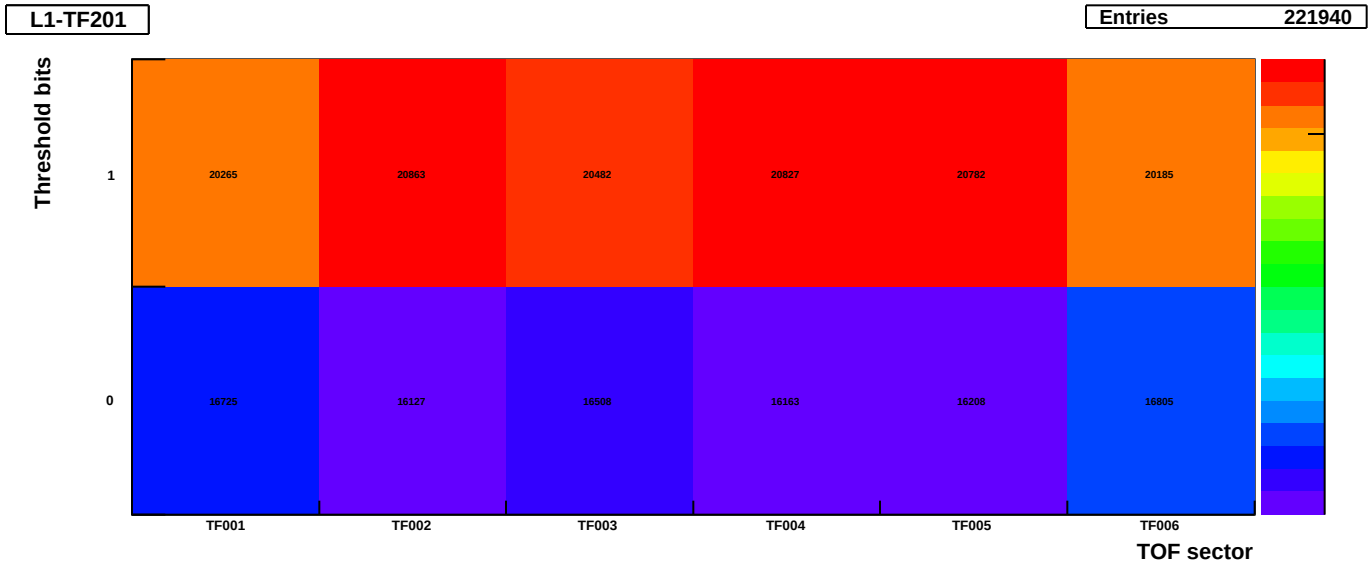

MIX-TF004
Entries 1553580
TOF MULT
TOF tray

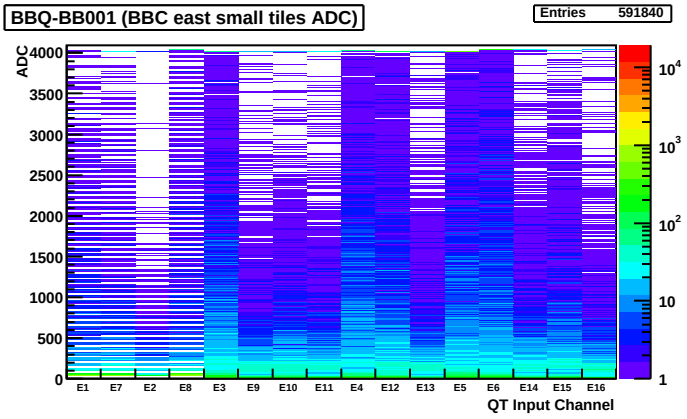

MIX-TF005
Entries 1553580
TOF MULT
TOF tray

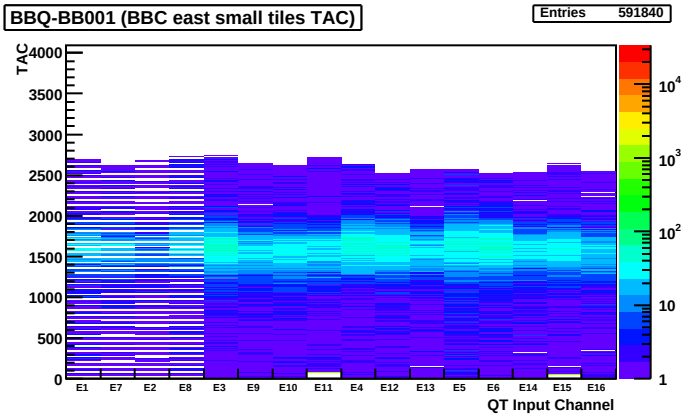

MIX-TF006
Entries 1553580
TOF MULT
TOF tray

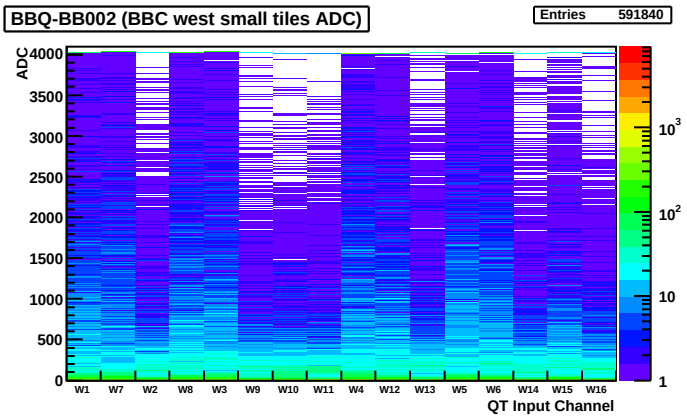

MIX-TF101
Entries 221940
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
$10^4$
$10^3$
$10^2$
10
1

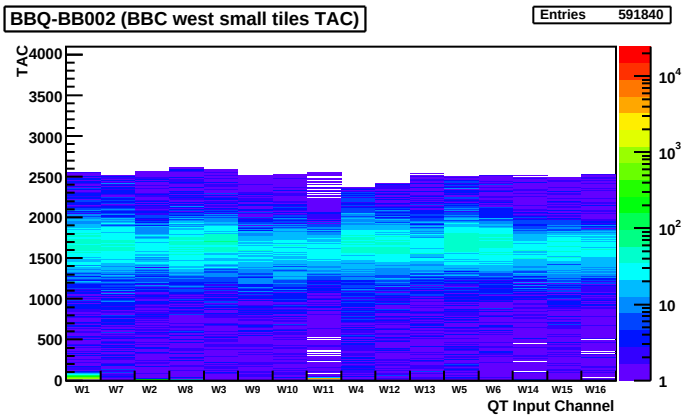

L1-TF201
Entries 36990
$10^4$
$10^3$
$10^2$
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

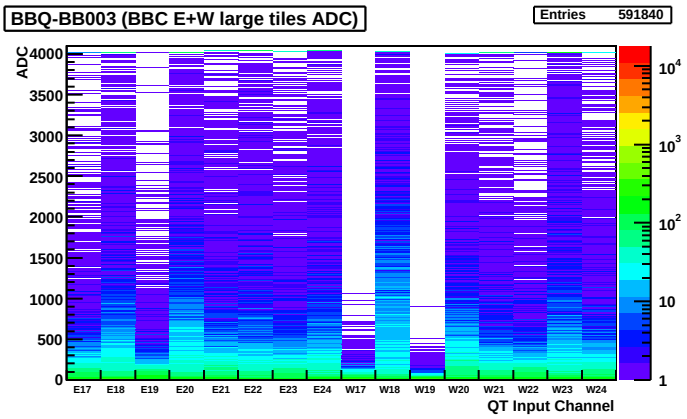

L1-TF201
Entries 221940
Threshold bits
1
0
20265
20863
20482
20827
20782
20185
16725
16127
16508
16163
16208
16805
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

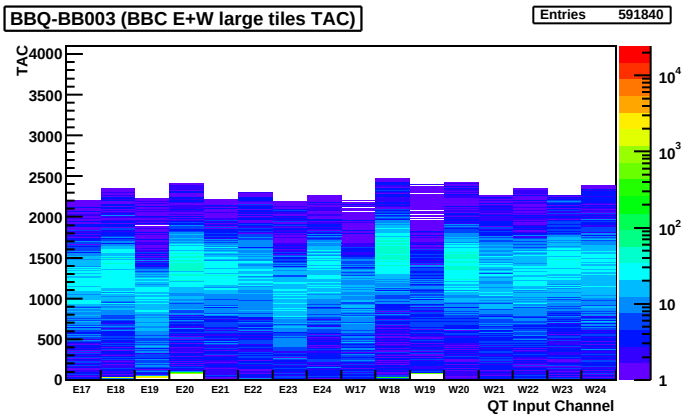

BBQ-BB001 (BBC east small tiles ADC)
Entries 591840
ADC
QT Input Channel

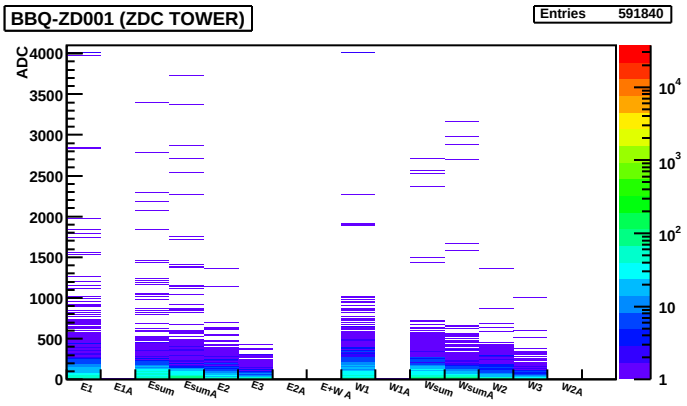

BBQ-BB001 (BBC east small tiles TAC)
Entries 591840
TAC
QT Input Channel

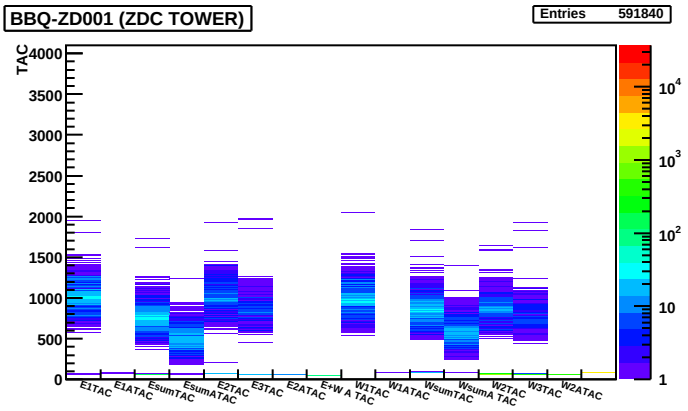

BBQ-BB002 (BBC west small tiles ADC)
Entries 591840
ADC
QT Input Channel

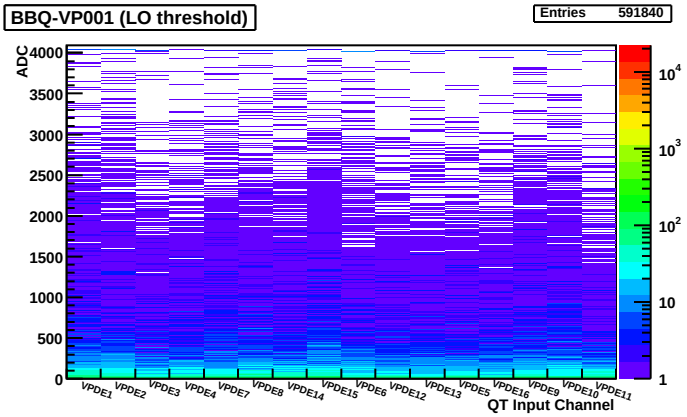

BBQ-BB002 (BBC west small tiles TAC)
Entries 591840
TAC
QT Input Channel

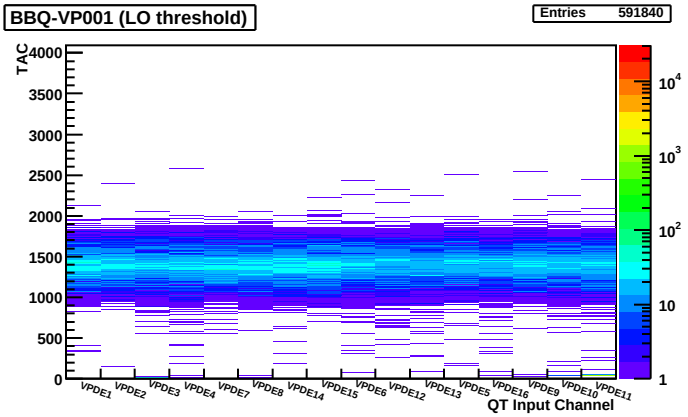

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 591840
ADC
QT Input Channel

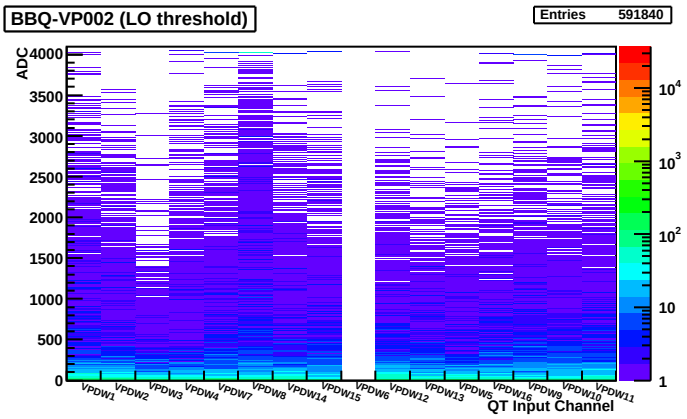

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 591840
TAC
QT Input Channel

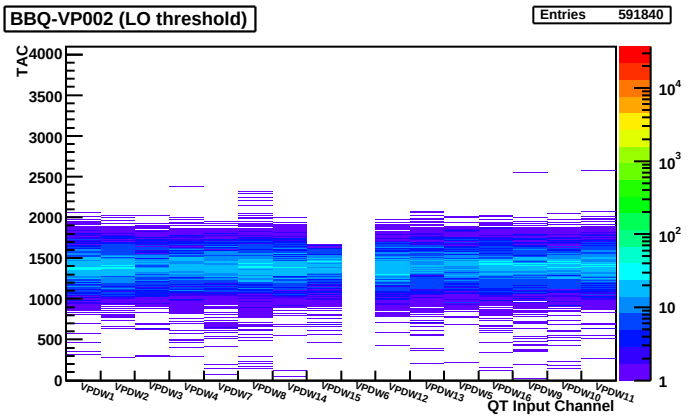

BBQ-ZD001 (ZDC TOWER)
Entries 591840
ADC

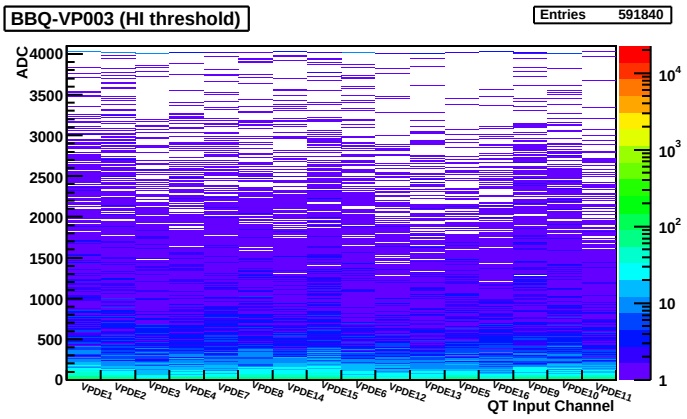

BBQ-ZD001 (ZDC TOWER)
Entries 591840
TAC

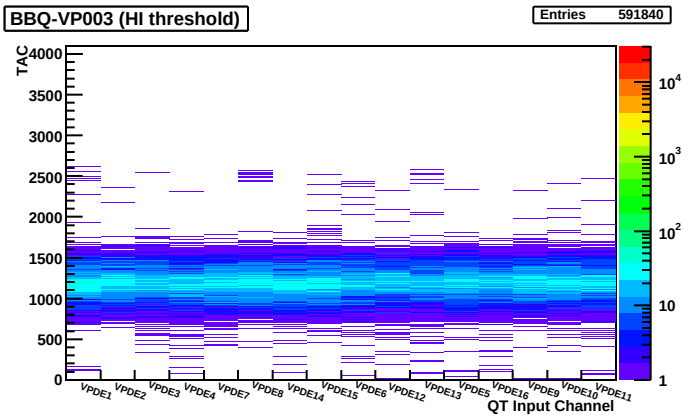

BBQ-VP001 (LO threshold)
Entries 591840
ADC
QT Input Channel

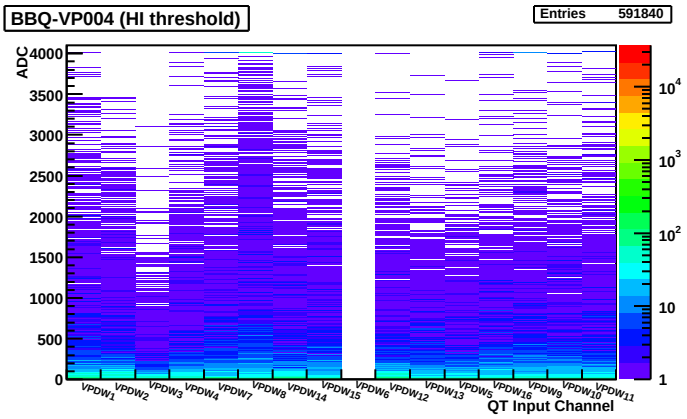

BBQ-VP001 (LO threshold)
Entries 591840
TAC
QT Input Channel

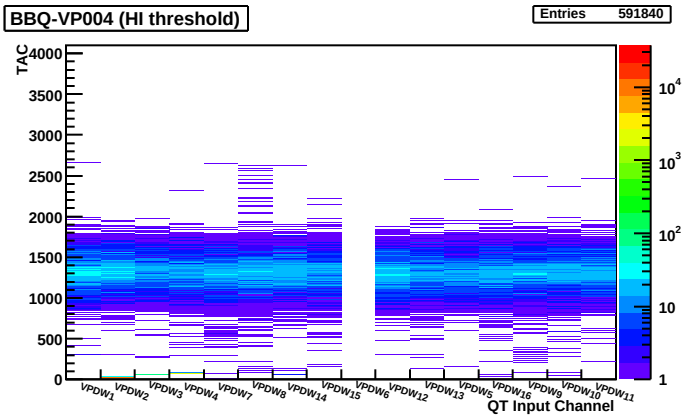

BBQ-VP002 (LO threshold)
Entries 591840
ADC
QT Input Channel

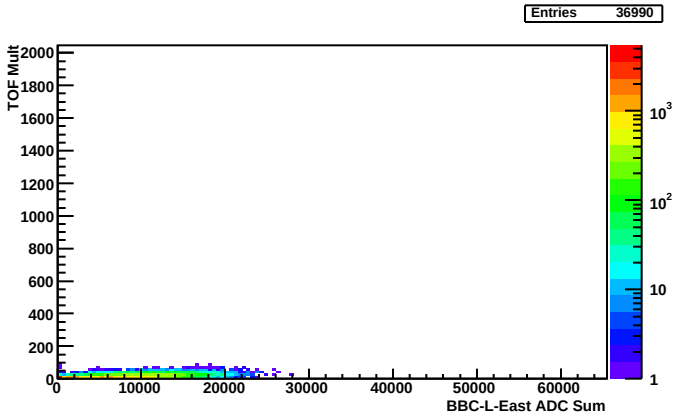

BBQ-VP002 (LO threshold)
Entries 591840
TAC
QT Input Channel

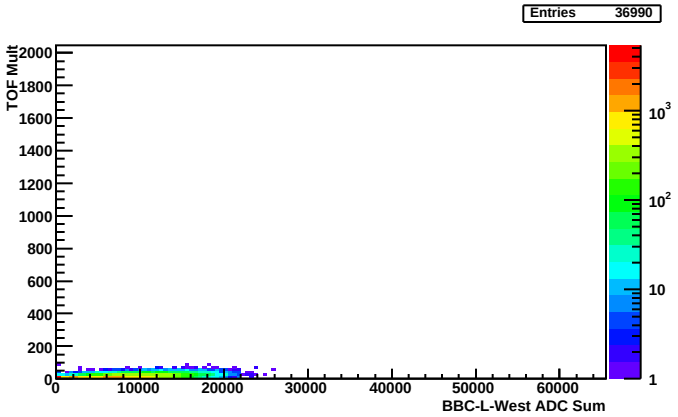

BBQ-VP003 (HI threshold)
Entries 591840
ADC
QT Input Channel

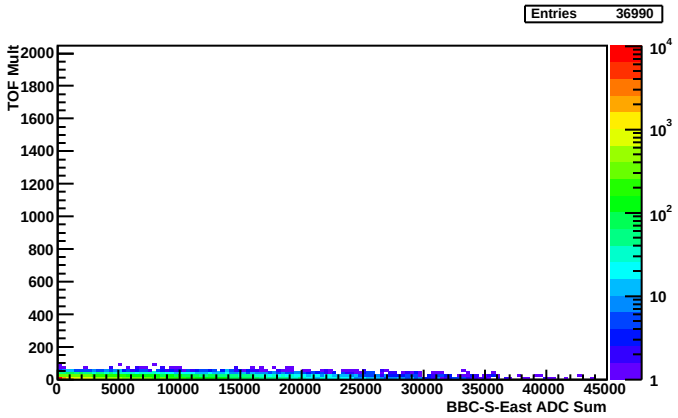

BBQ-VP003 (HI threshold)
Entries 591840
TAC
QT Input Channel

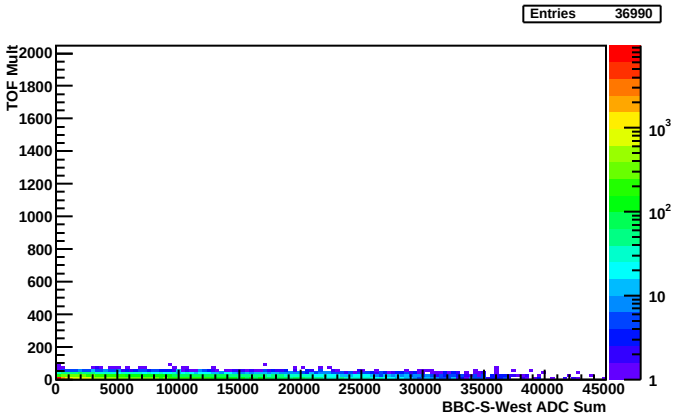

BBQ-VP004 (HI threshold)
Entries 591840
ADC
QT Input Channel

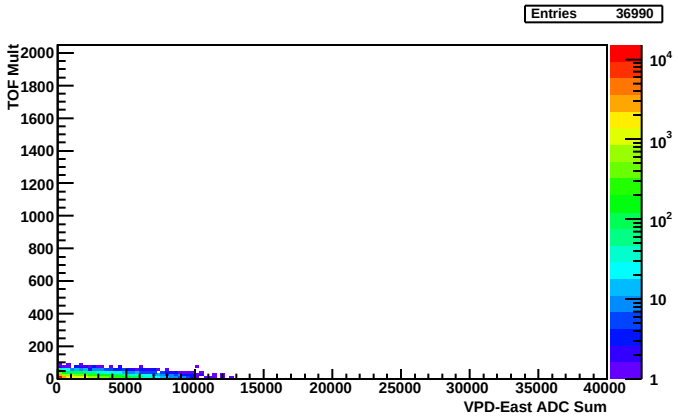

BBQ-VP004 (HI threshold)
Entries 591840
TAC
QT Input Channel

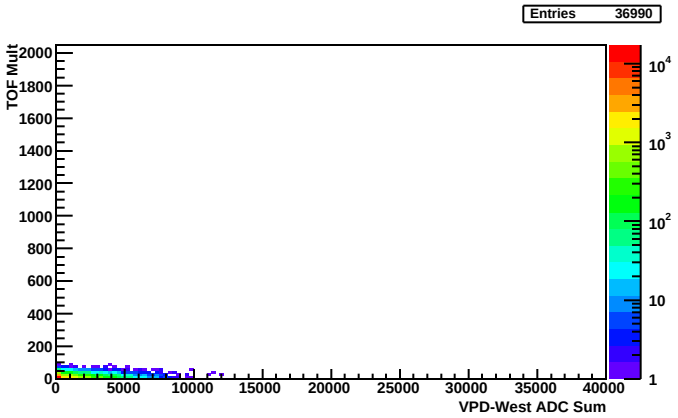

Entries 36990
TOF Mult
BBC-L-East ADC Sum

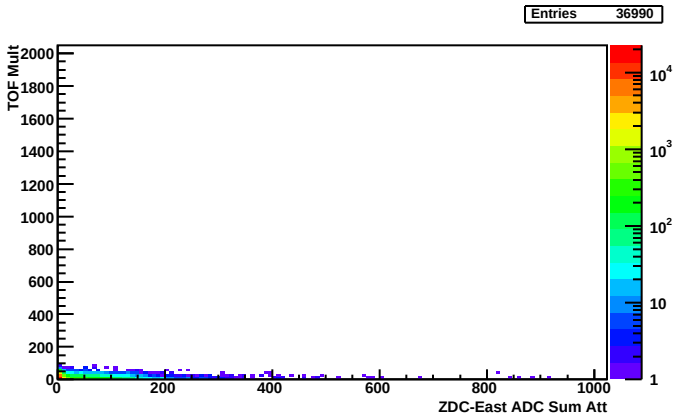

Entries 36990
TOF Mult
BBC-L-West ADC Sum

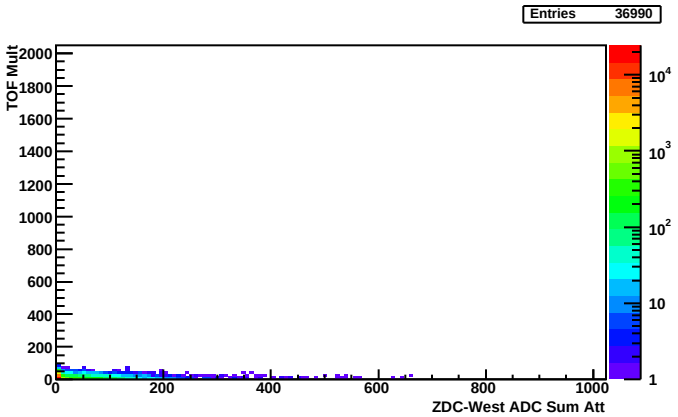

Entries 36990
TOF Mult
BBC-S-East ADC Sum

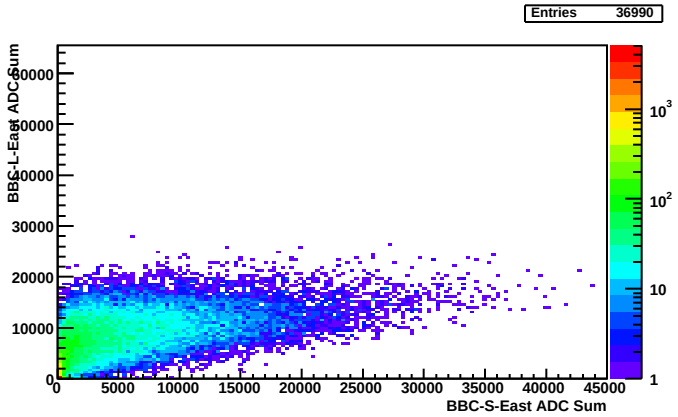

Entries 36990
TOF Mult
BBC-S-West ADC Sum

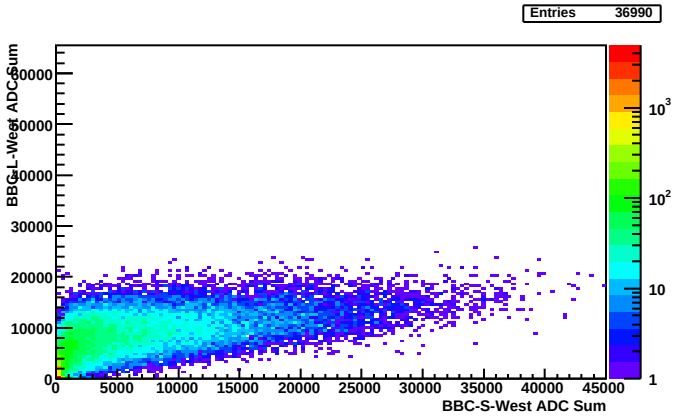

Entries 36990
TOF Mult
VPD-East ADC Sum

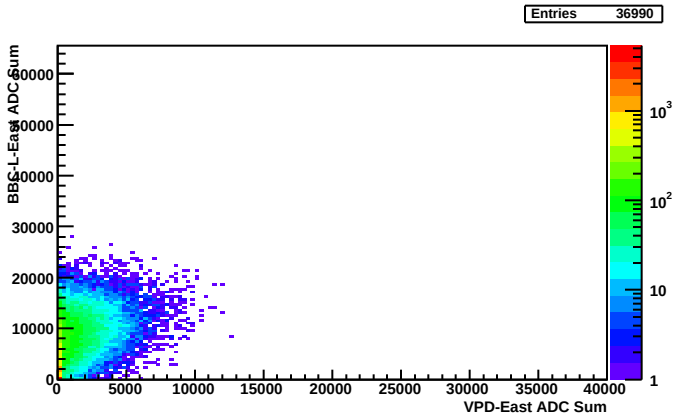

Entries 36990
TOF Mult
VPD-West ADC Sum

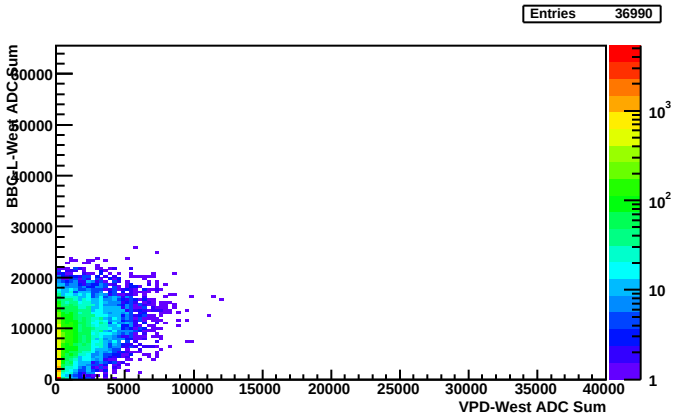

Entries 36990
TOF Mult
ZDC-East ADC Sum Att

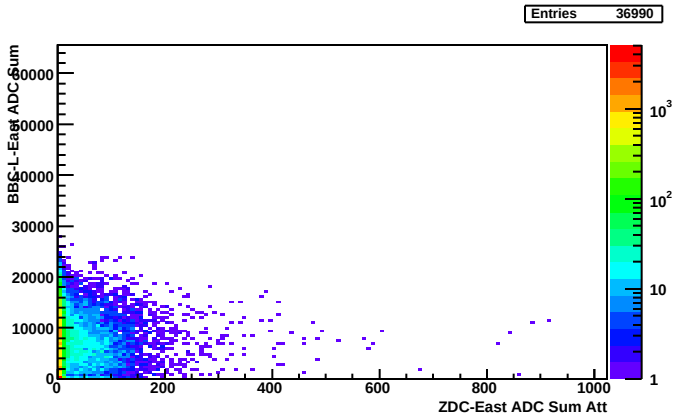

Entries 36990
TOF Mult
ZDC-West ADC Sum Att

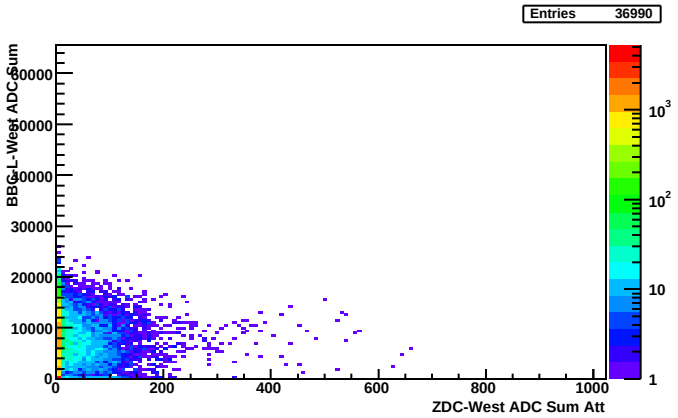

Entries 36990
BBC-L-East ADC Sum
BBC-S-East ADC Sum

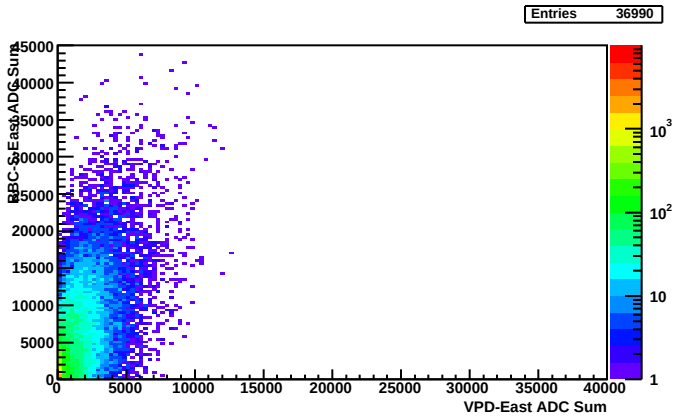

Entries 36990
BBC-L-West ADC Sum
BBC-S-West ADC Sum

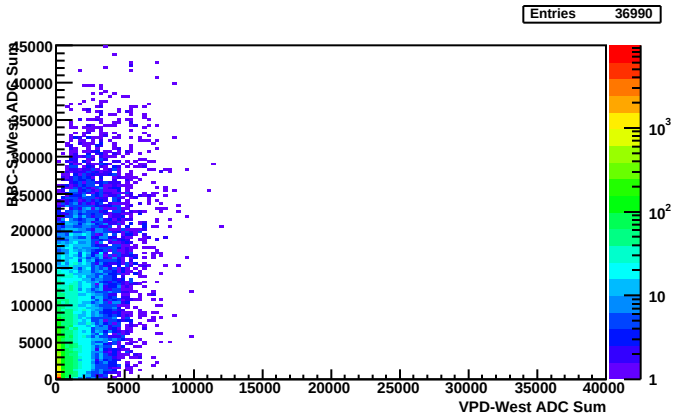

Entries 36990
BBC-L-East ADC Sum
VPD-East ADC Sum

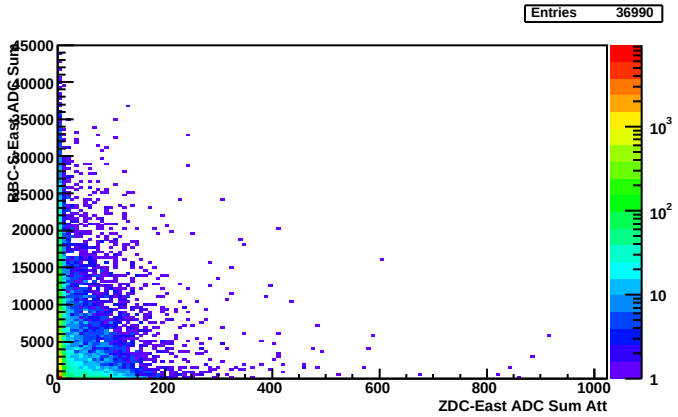

Entries 36990
BBC-L-West ADC Sum
VPD-West ADC Sum

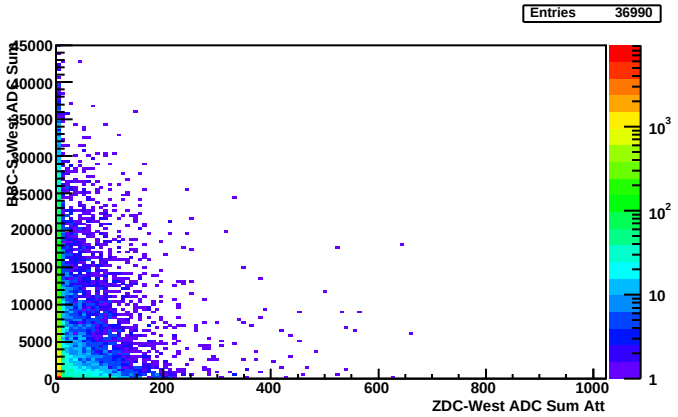

Entries 36990
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

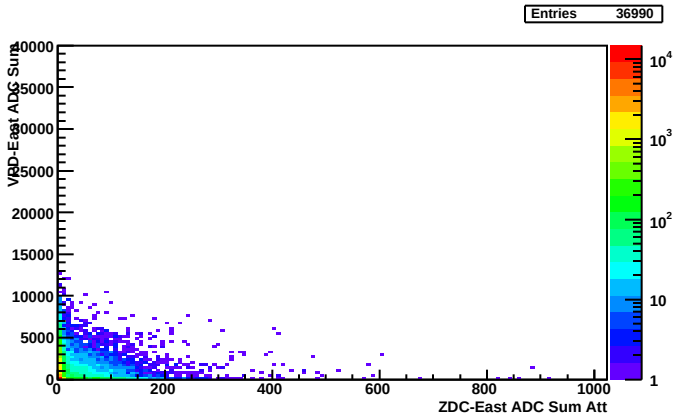

Entries 36990
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

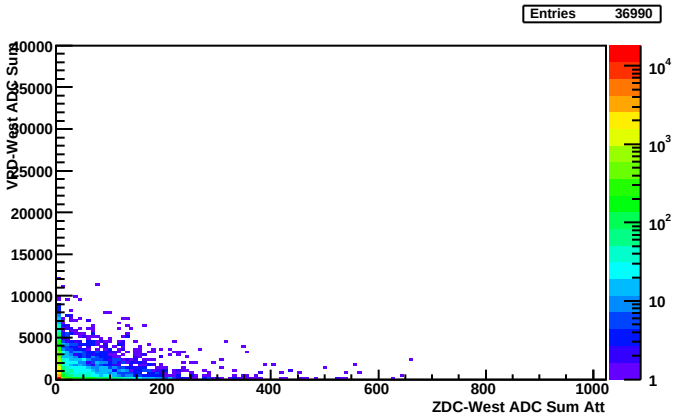

Entries 36990
BBC-S-East ADC Sum
VPD-East ADC Sum


Entries 36990
BBC-S-West ADC Sum
VPD-West ADC Sum


Entries 36990
BBC-S-East ADC Sum
ZDC-East ADC Sum Att


Entries 36990
BBC-S-West ADC Sum
ZDC-West ADC Sum Att


Entries 36990
VPD-East ADC Sum
ZDC-East ADC Sum Att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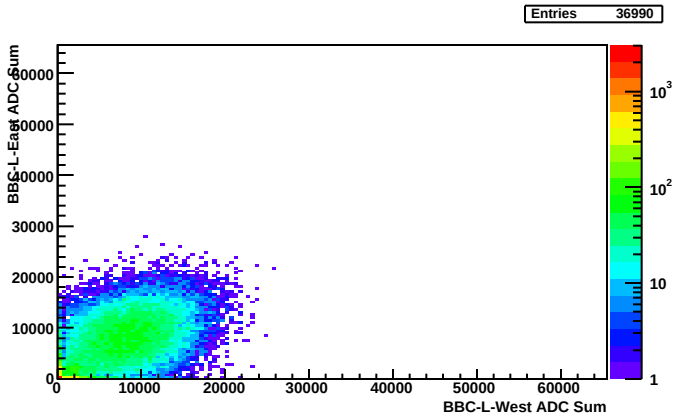
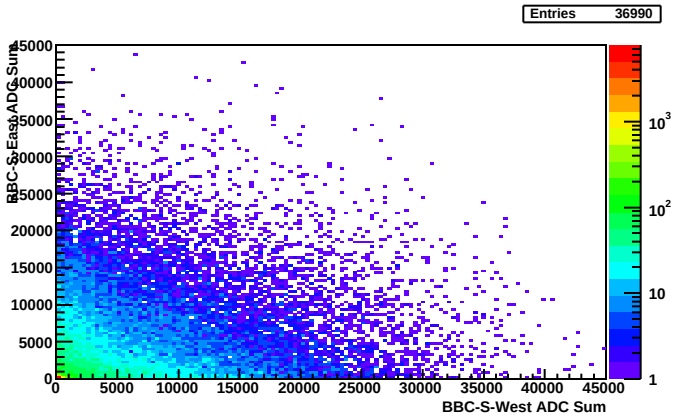
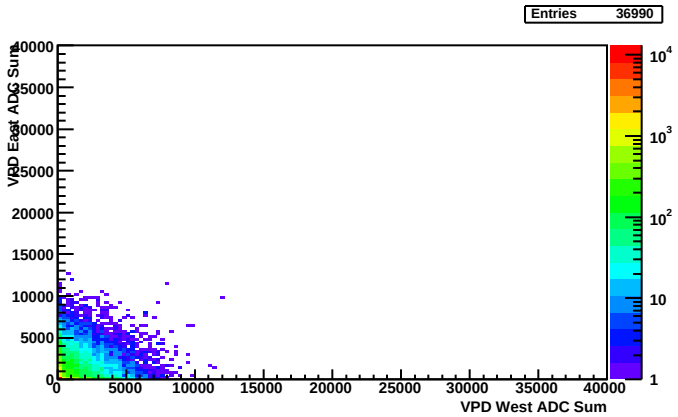
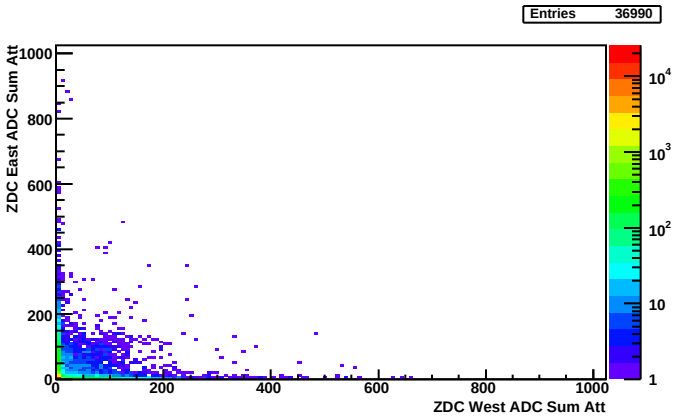
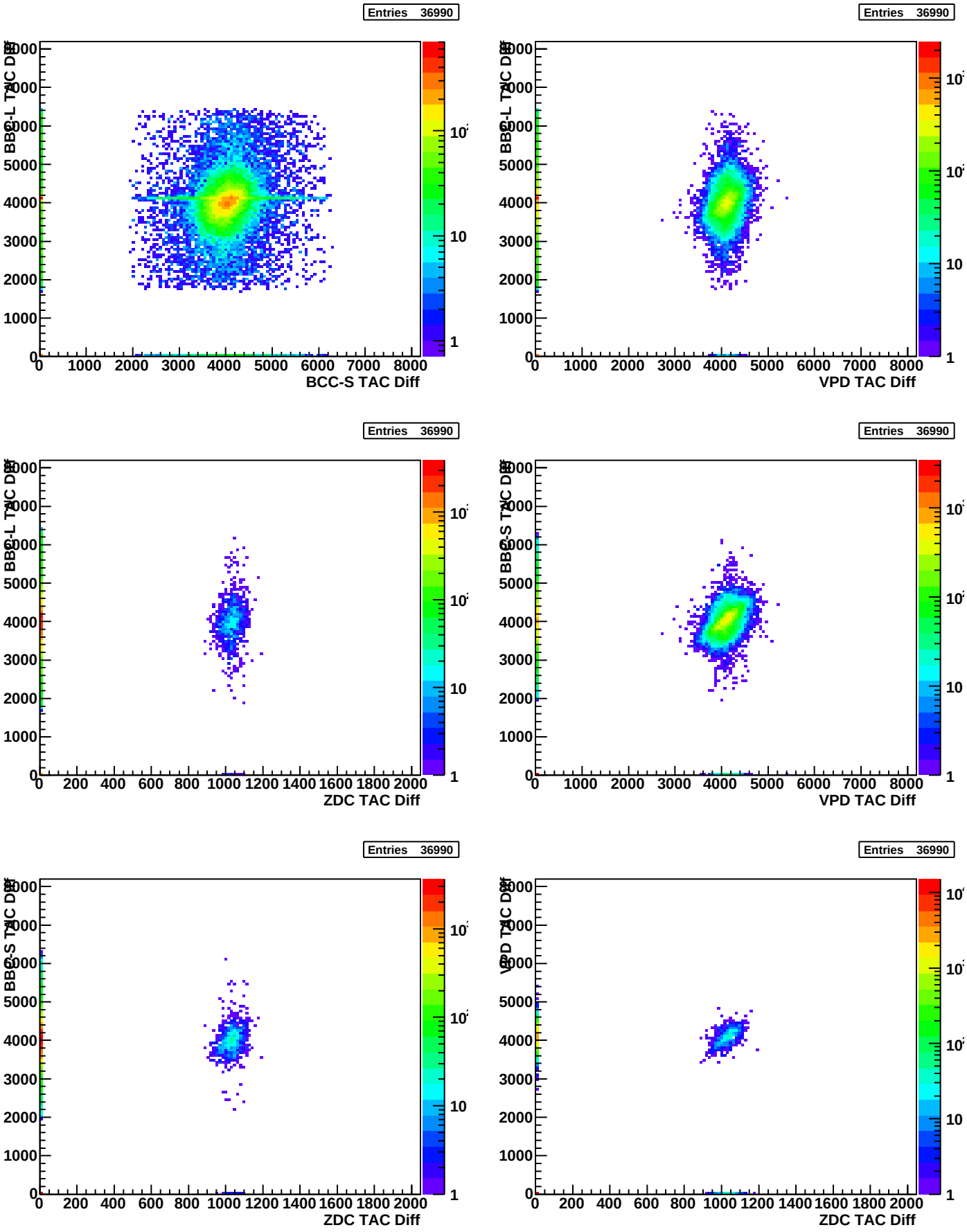
VPD-West ADC Sum
ZDC-West ADC Sum Att

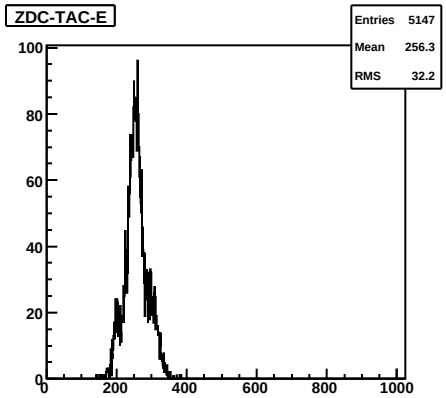

Entries 36990
BBC-L-East ADC Sum
BBC-L-West ADC Sum

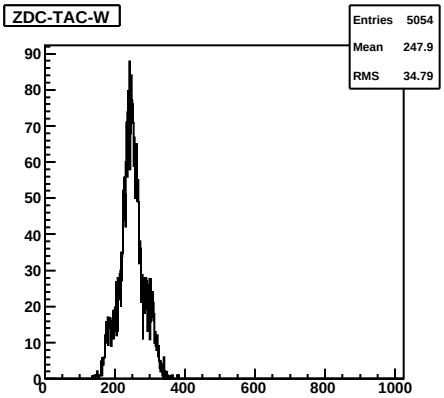

Entries 36990
BBC-S-East ADC Sum
BBC-S-West ADC Sum

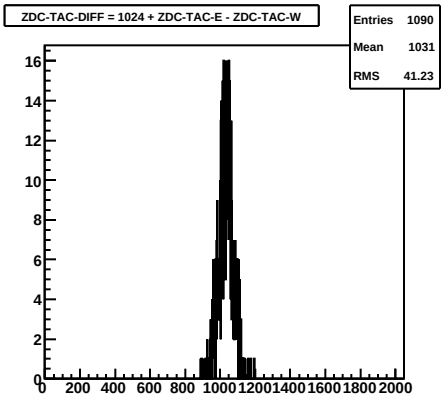

Entries 36990
VPD East ADC Sum
VPD West ADC Sum

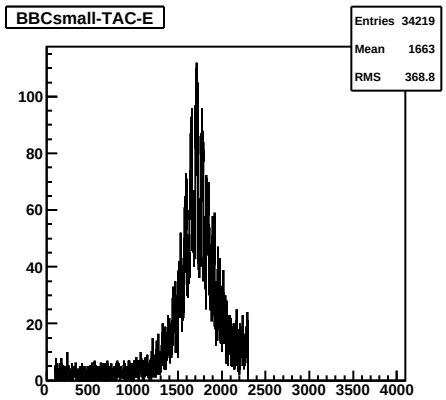

Entries 36990
ZDC East ADC Sum Att
ZDC West ADC Sum Att

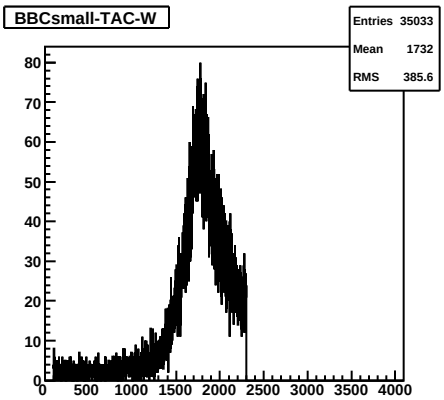

Entries 36990
BBC-L TAC Diff
BCC-S TAC Diff
Entries 36990
BBC-L TAC Diff
VPD TAC Diff
Entries 36990
BBC-L TAC Diff
ZDC TAC Diff
Entries 36990
BBC-S TAC Diff
VPD TAC Diff
Entries 36990
BBC-S TAC Diff
ZDC TAC Diff
Entries 36990
VPD TAC Diff
ZDC TAC Diff

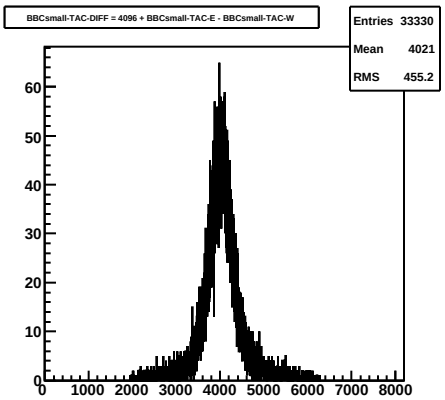

ZDC-TAC-E
Entries 5147
Mean 256.3
RMS 32.2

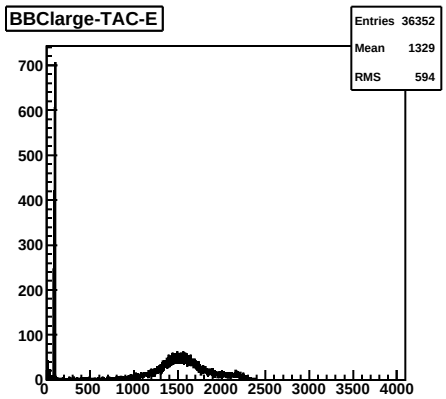

ZDC-TAC-W
Entries 5054
Mean 247.9
RMS 34.79

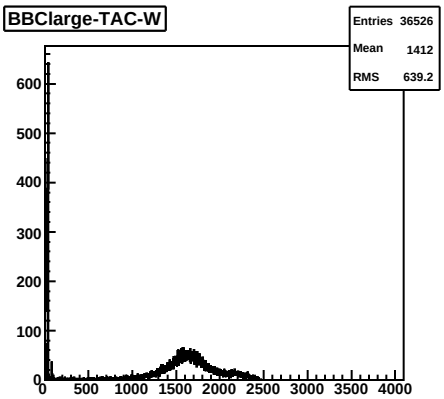

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 1090
Mean 1031
RMS 41.23

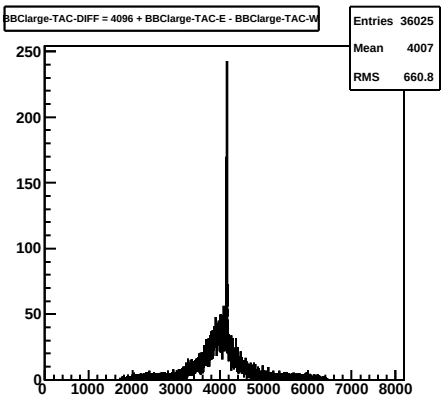

BBCsmall-TAC-E
Entries 34219
Mean 1663
RMS 368.8

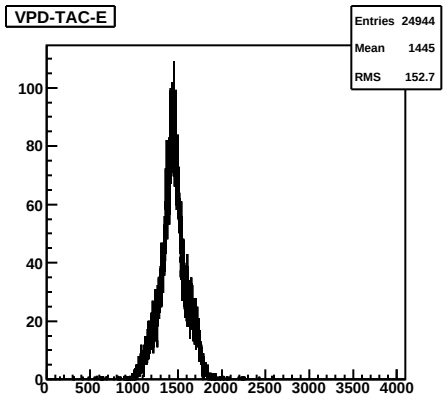

BBCsmall-TAC-W
Entries 35033
Mean 1732
RMS 385.6

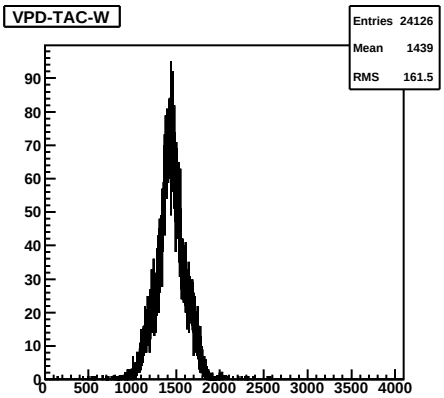

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 33330
Mean 4021
RMS 455.2

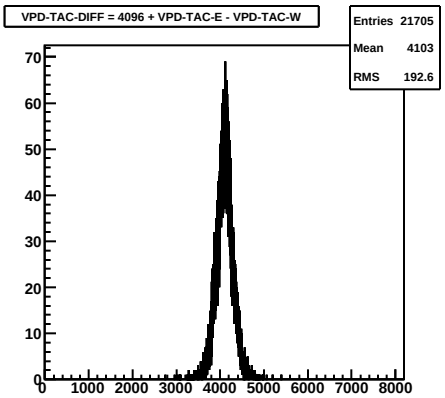

BBClarge-TAC-E
Entries 36352
Mean 1329
RMS 594

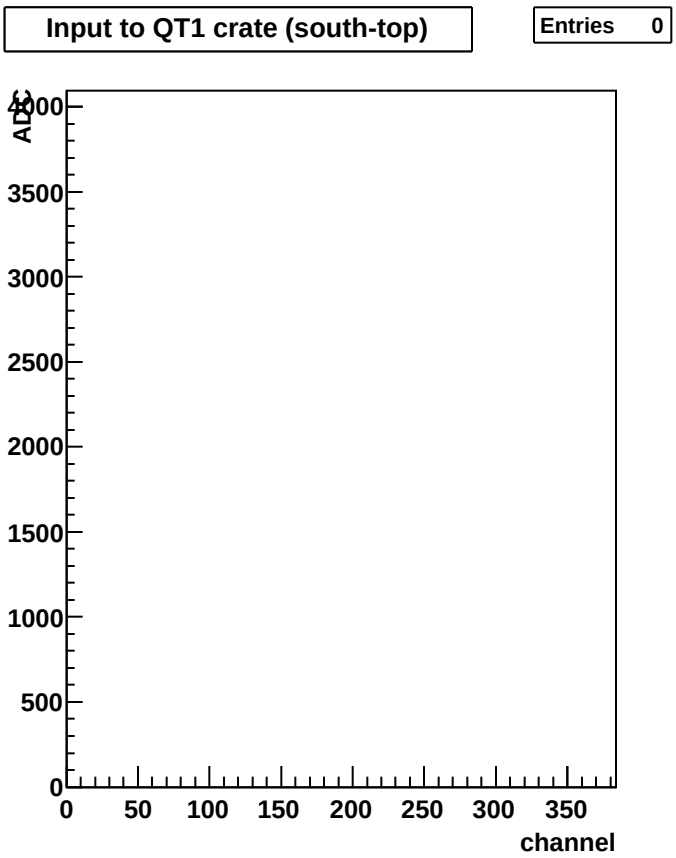

BBClarge-TAC-W
Entries 36526
Mean 1412
RMS 639.2

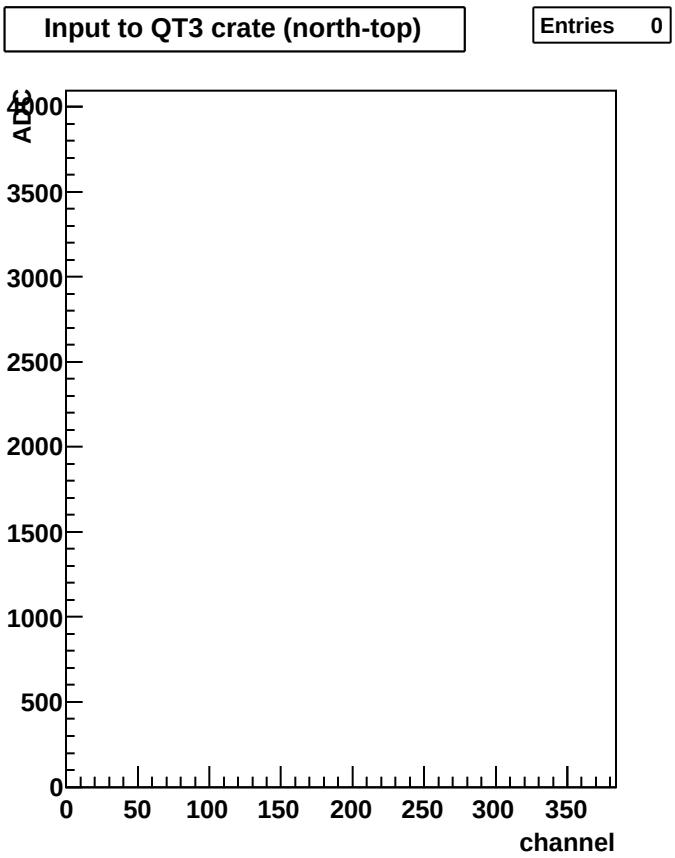

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 36025
Mean 4007
RMS 660.8

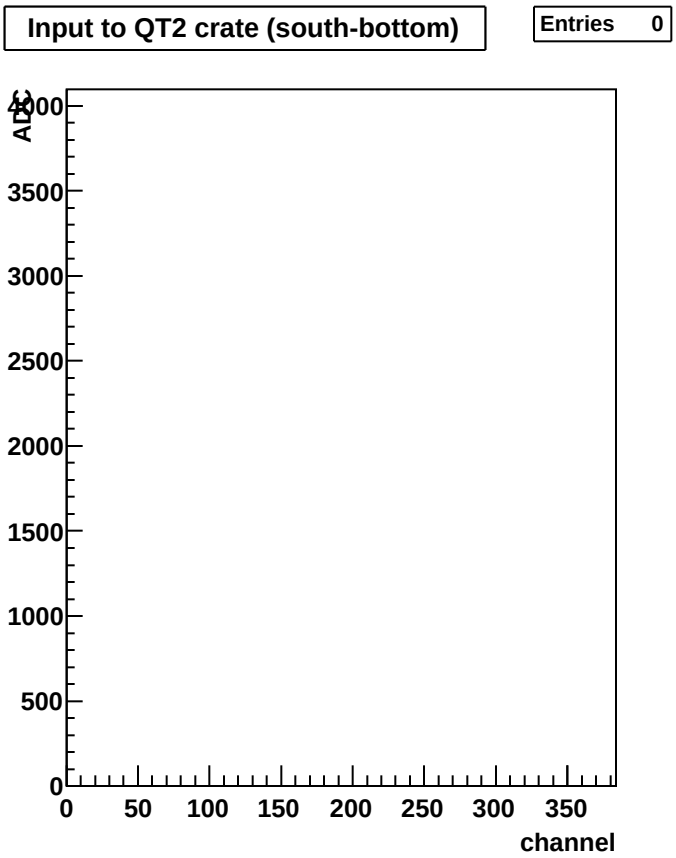

VPD-TAC-E
Entries 24944
Mean 1445
RMS 152.7

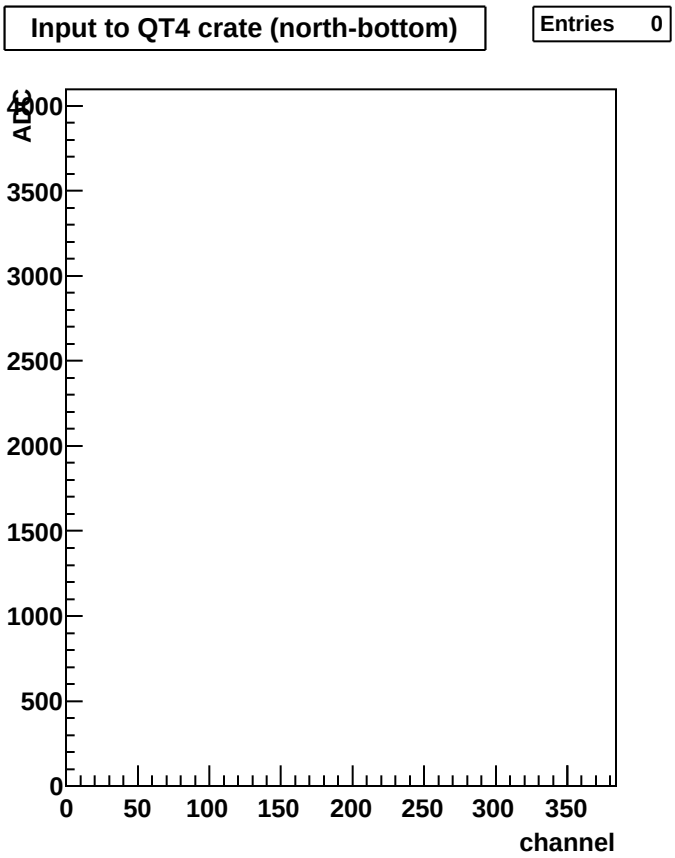

VPD-TAC-W
Entries 24126
Mean 1439
RMS 161.5

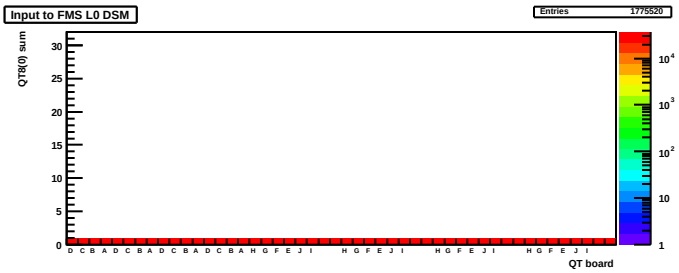

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 21705
Mean 4103
RMS 192.6

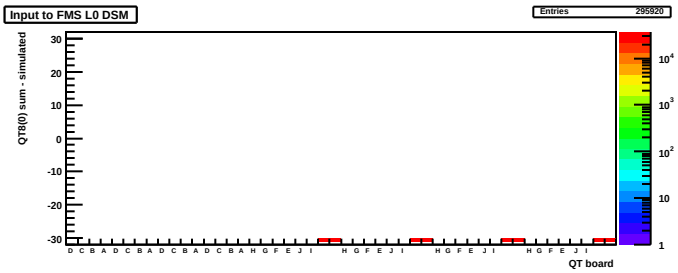

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

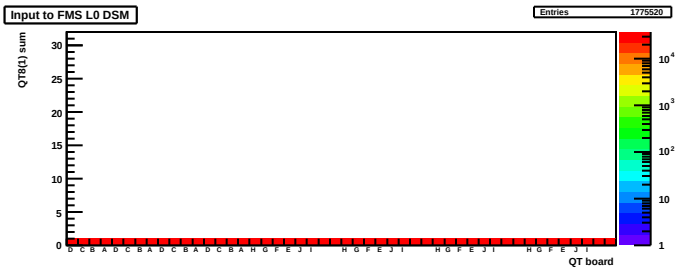

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

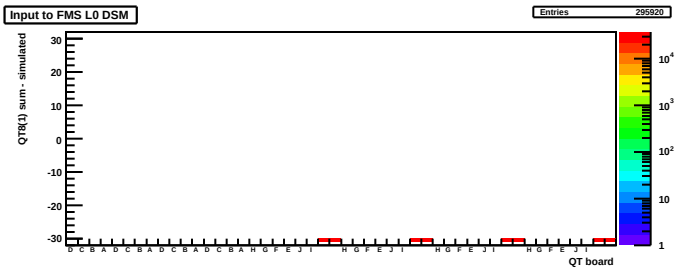

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

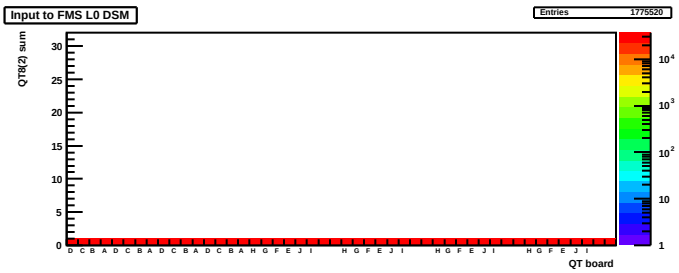

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

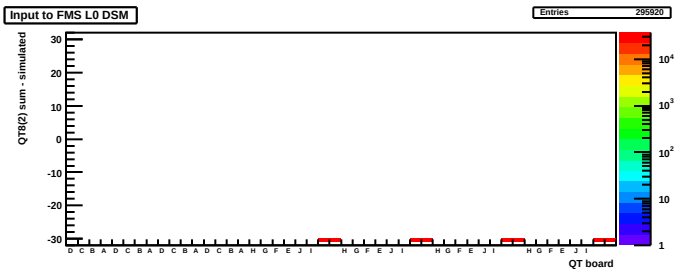

Input to FMS L0 DSM
Entries 1775520
QT8(0) sum
QT board

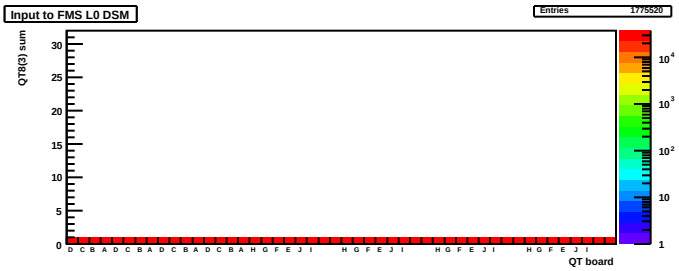

Input to FMS L0 DSM
Entries 295920
QT8(0) sum - simulated
QT board

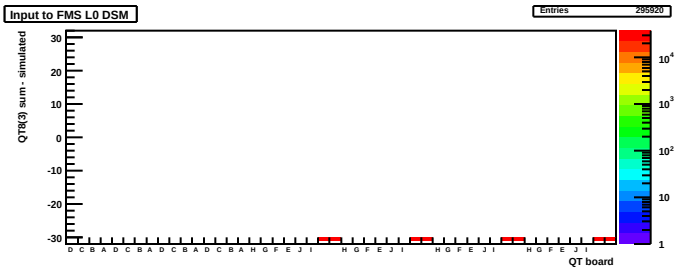

Input to FMS L0 DSM
Entries 1775520
QT8(1) sum
QT board

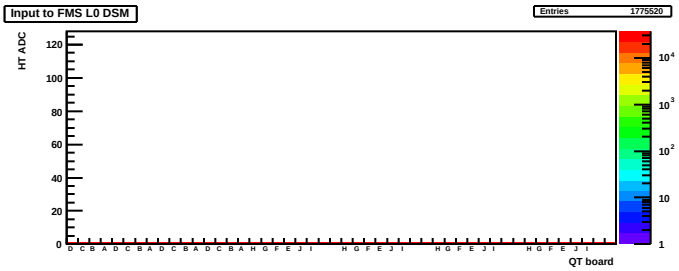

Input to FMS L0 DSM
Entries 295920
QT8(1) sum - simulated
QT board

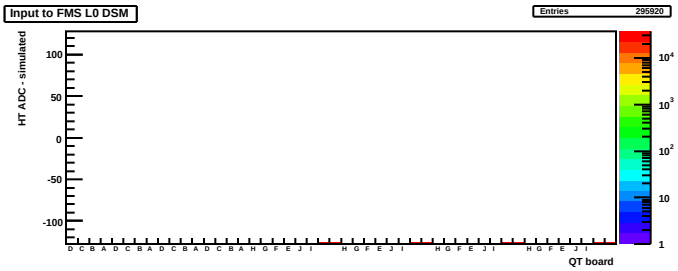

Input to FMS L0 DSM
Entries 1775520
QT8(2) sum
QT board

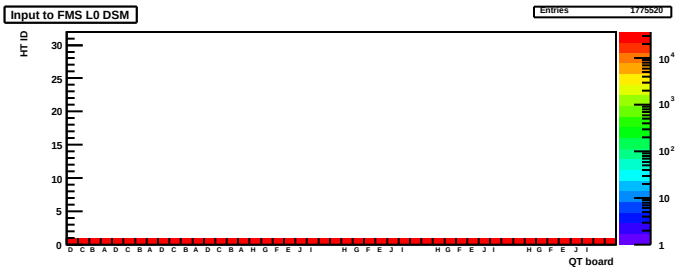

Input to FMS L0 DSM
Entries 295920
QT8(2) sum - simulated
QT board

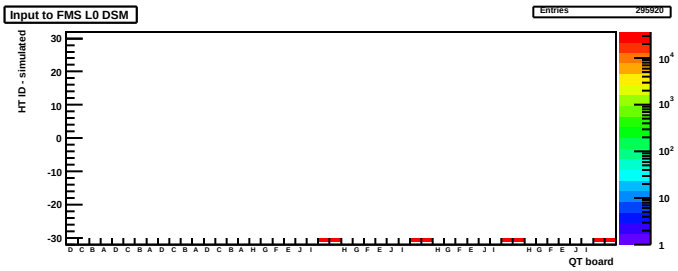

Input to FMS L0 DSM
Entries 1775520
QT8(3) sum
QT board

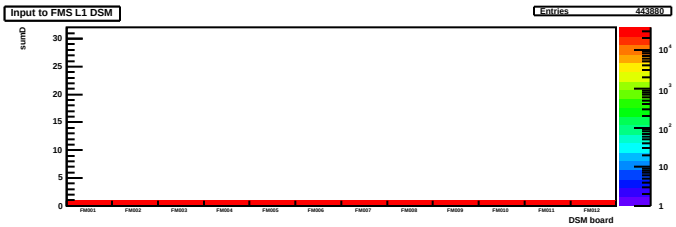

Input to FMS L0 DSM
Entries 295920
QT8(3) sum - simulated
QT board

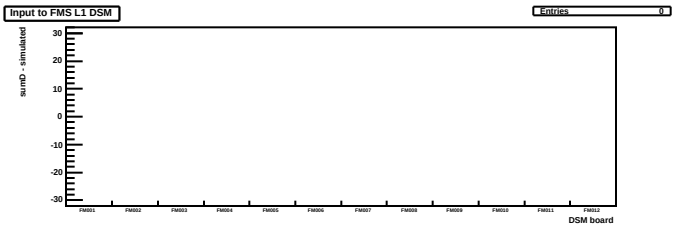

Input to FMS L0 DSM
Entries 1775520
HT ADC
QT board

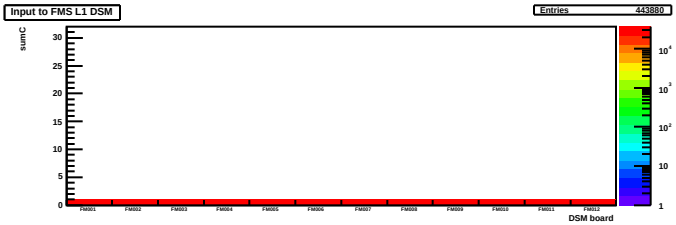

Input to FMS L0 DSM
Entries 295920
HT ADC - simulated
QT board

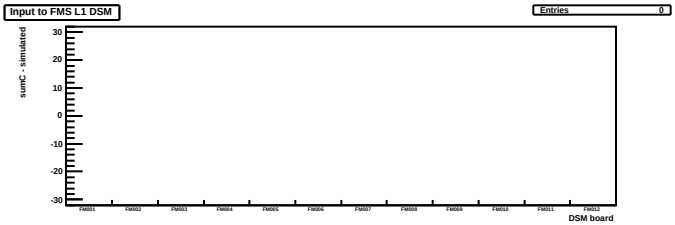

Input to FMS L0 DSM
Entries 1775520
HT ID
QT board

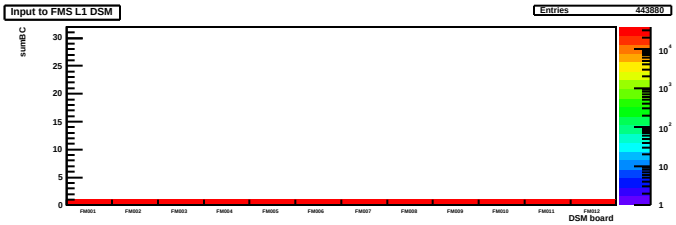

Input to FMS L0 DSM
Entries 295920
HT ID - simulated
QT board

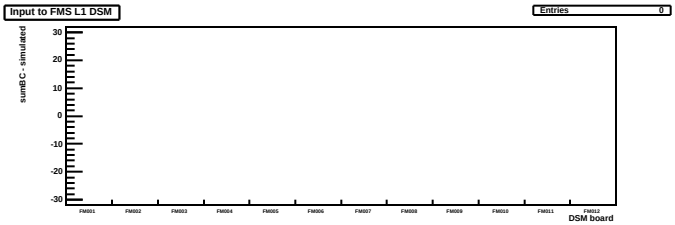

Input to FMS L1 DSM
Entries 443880
sumD
DSM board

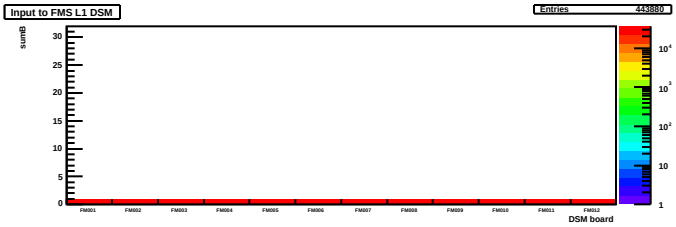

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

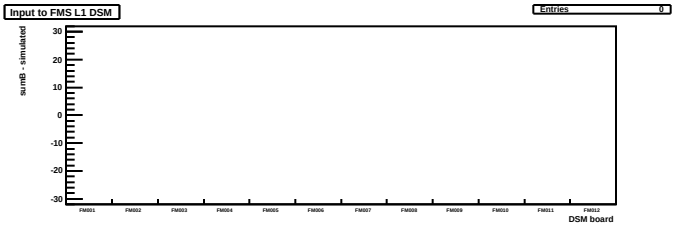

Input to FMS L1 DSM
Entries 443880
sumC
DSM board

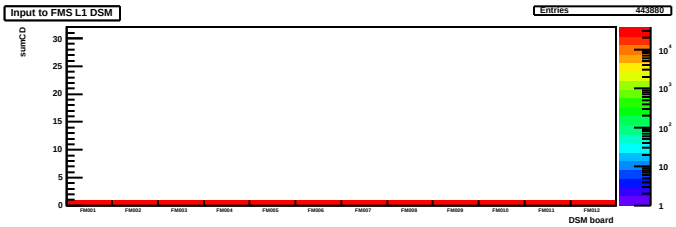

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

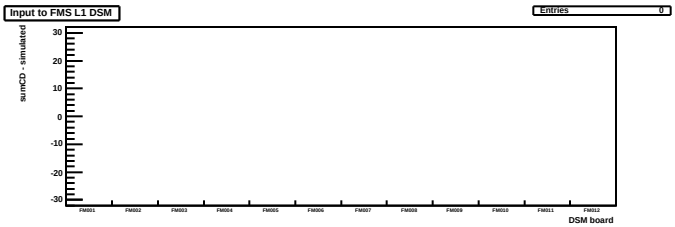

Input to FMS L1 DSM
Entries 443880
sumBC
DSM board

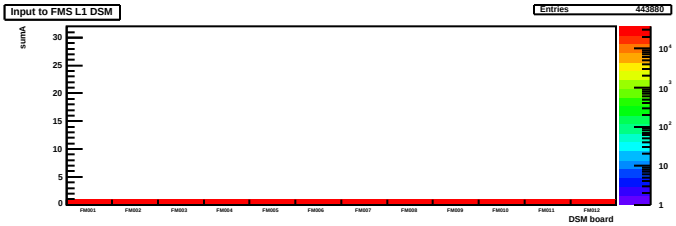

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

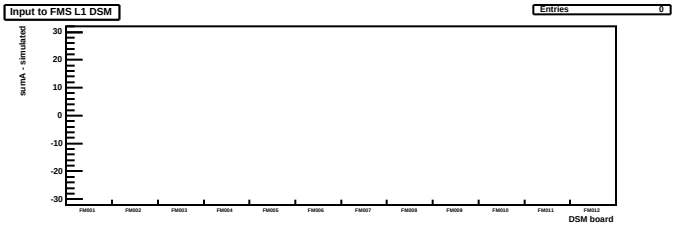

Input to FMS L1 DSM
Entries 443880
sumB
DSM board

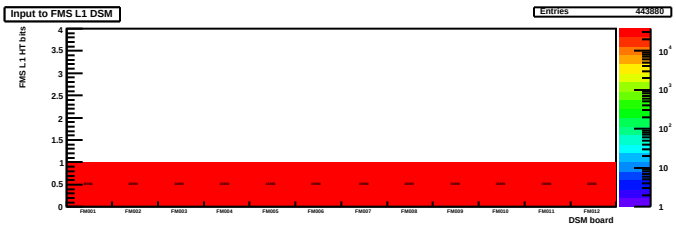

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

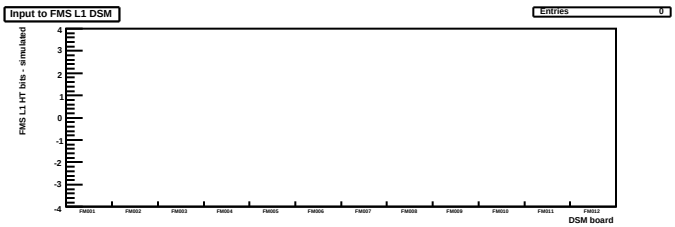

Input to FMS L1 DSM
Entries 443880
sumCD
DSM board

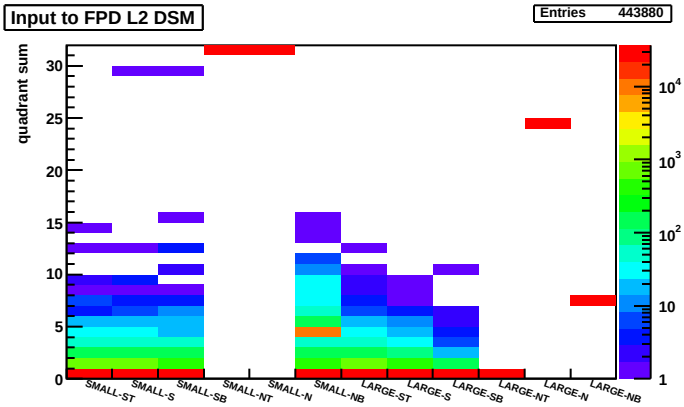

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

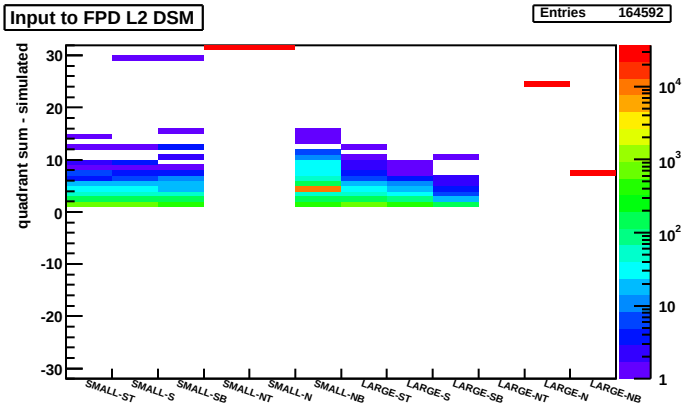

Input to FMS L1 DSM
Entries 443880
sumA
DSM board

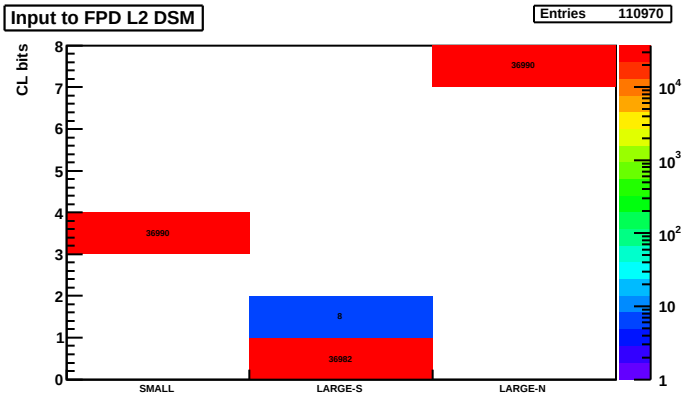

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

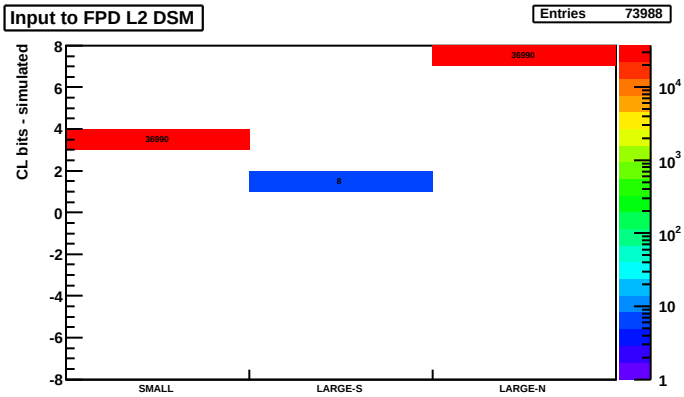

Input to FMS L1 DSM
Entries 443880
FMS L1 HT bits
DSM board

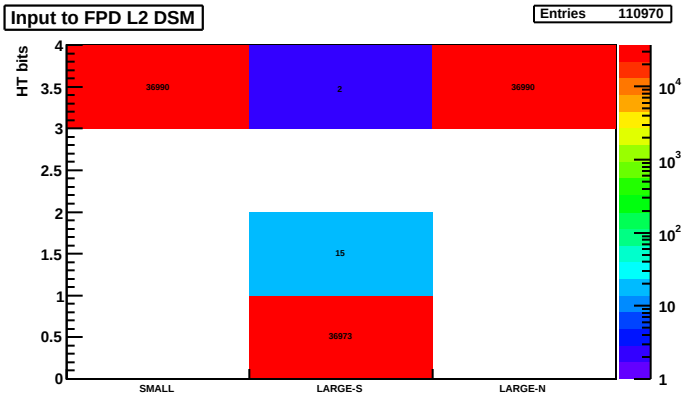

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

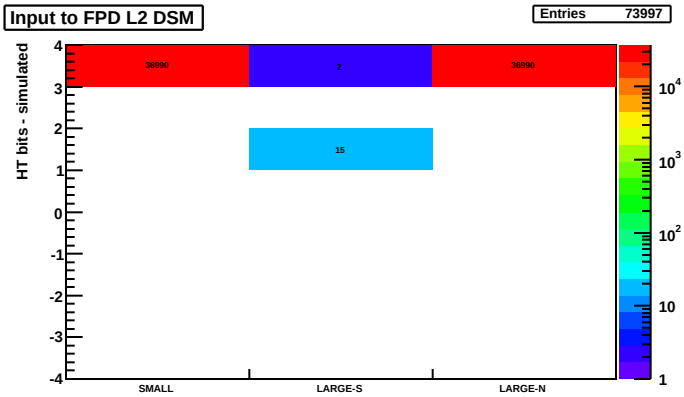

Input to FPD L2 DSM
Entries 443880
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

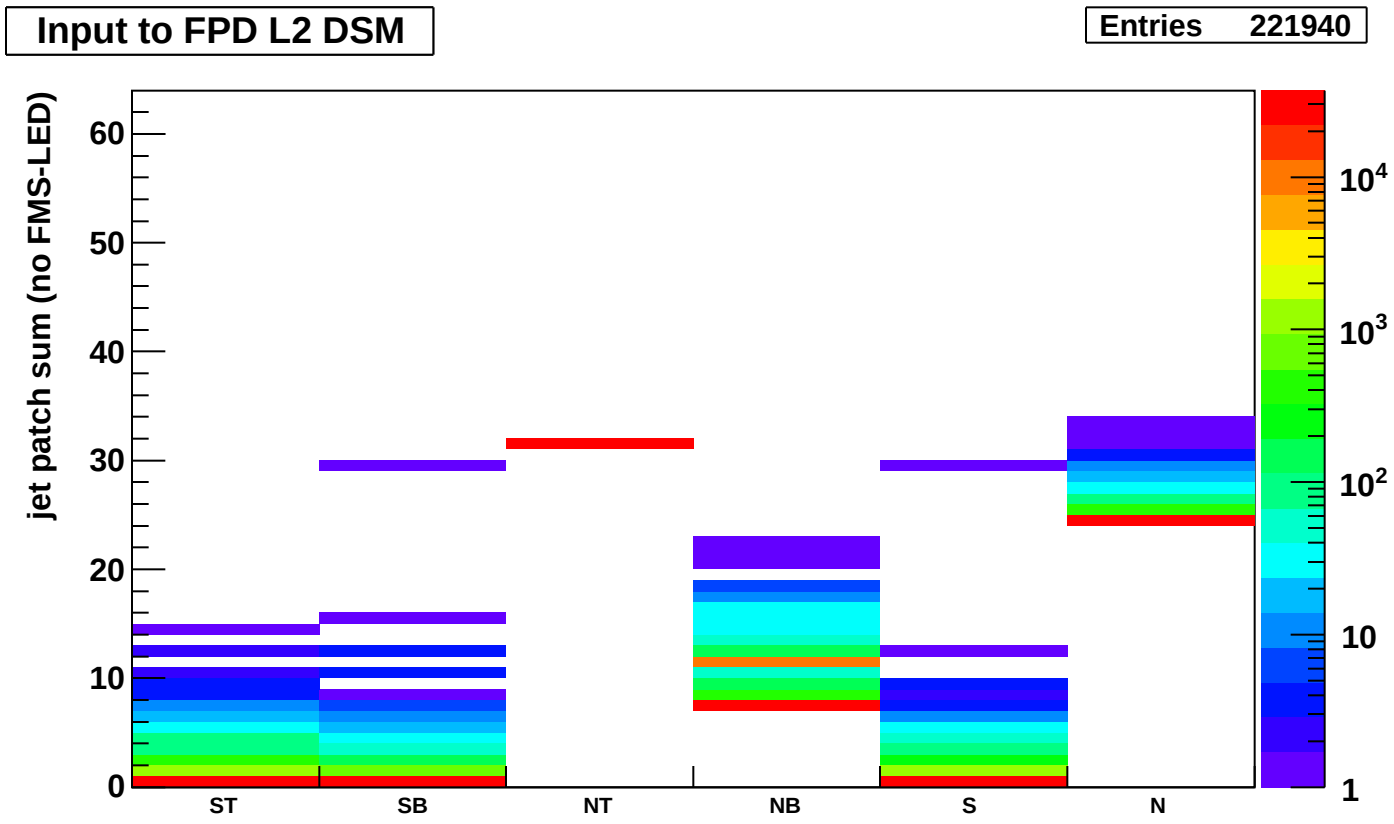

Input to FPD L2 DSM
Entries 164592
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

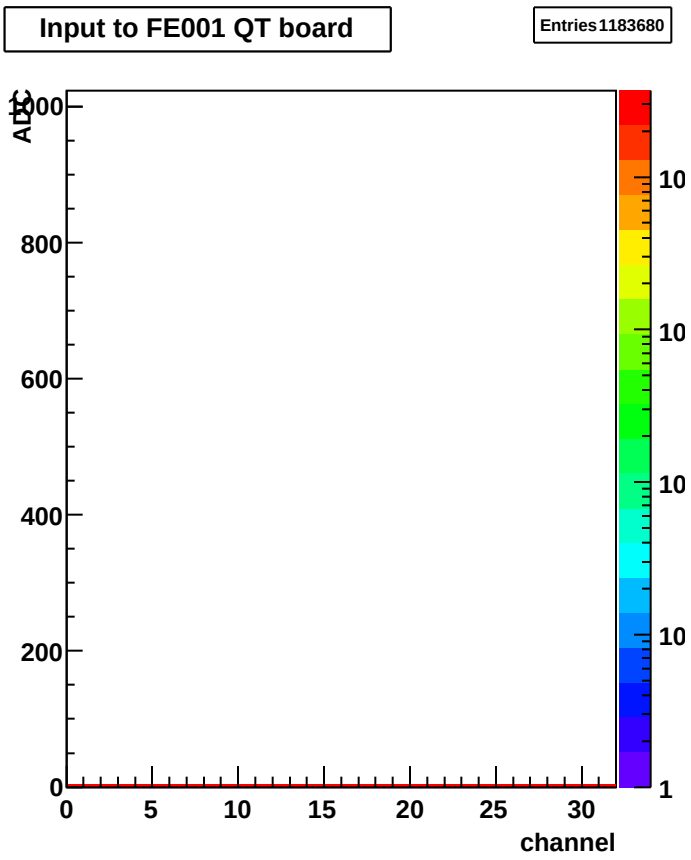

Input to FPD L2 DSM
Entries 110970
CL bits
36990
8
36982
SMALL
LARGE-S
LARGE-N

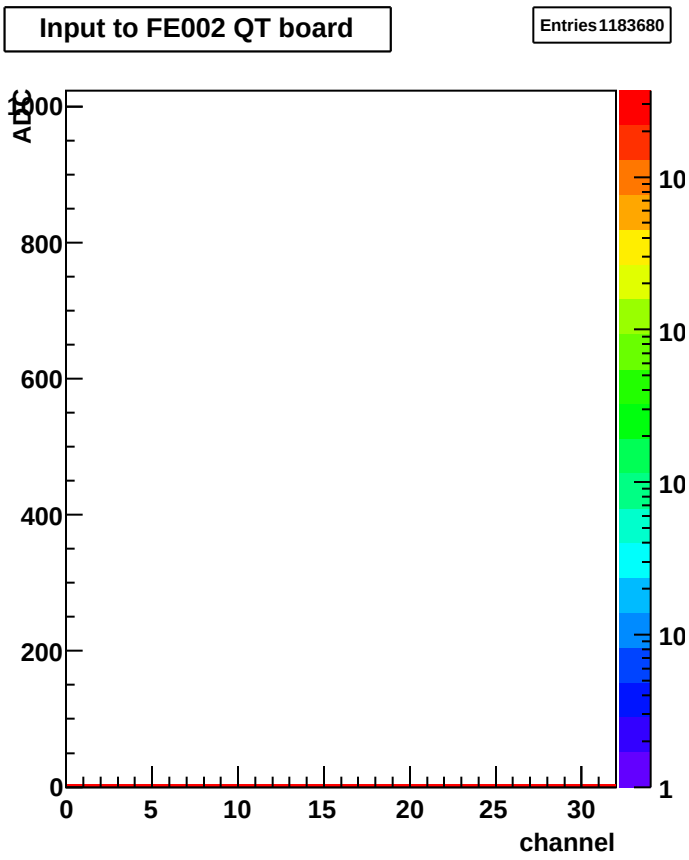

Input to FPD L2 DSM
Entries 73988
CL bits - simulated
36990
8
36990
SMALL
LARGE-S
LARGE-N

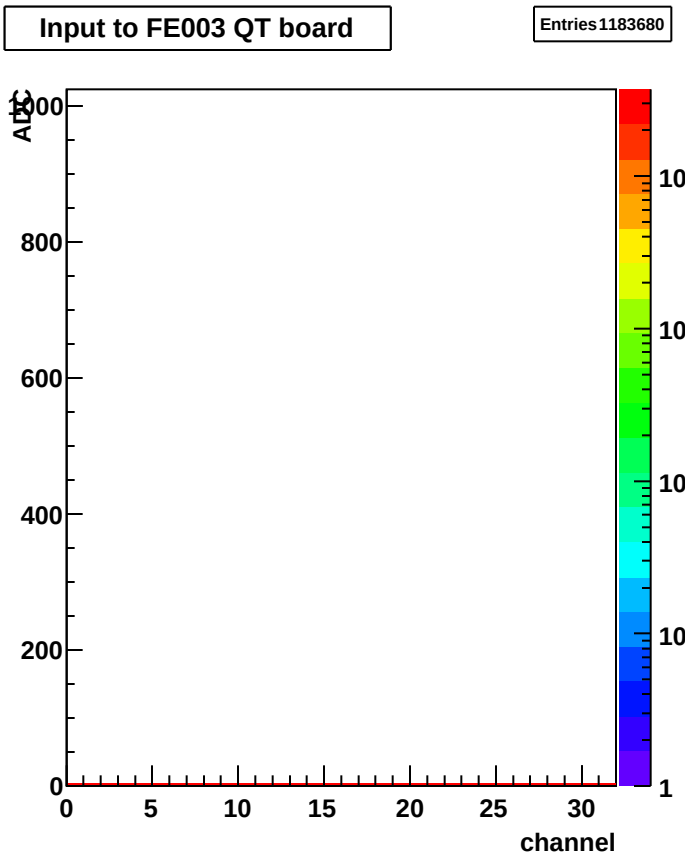

Input to FPD L2 DSM
Entries 110970
HT bits
36990
2
36990
15
36973
SMALL
LARGE-S
LARGE-N

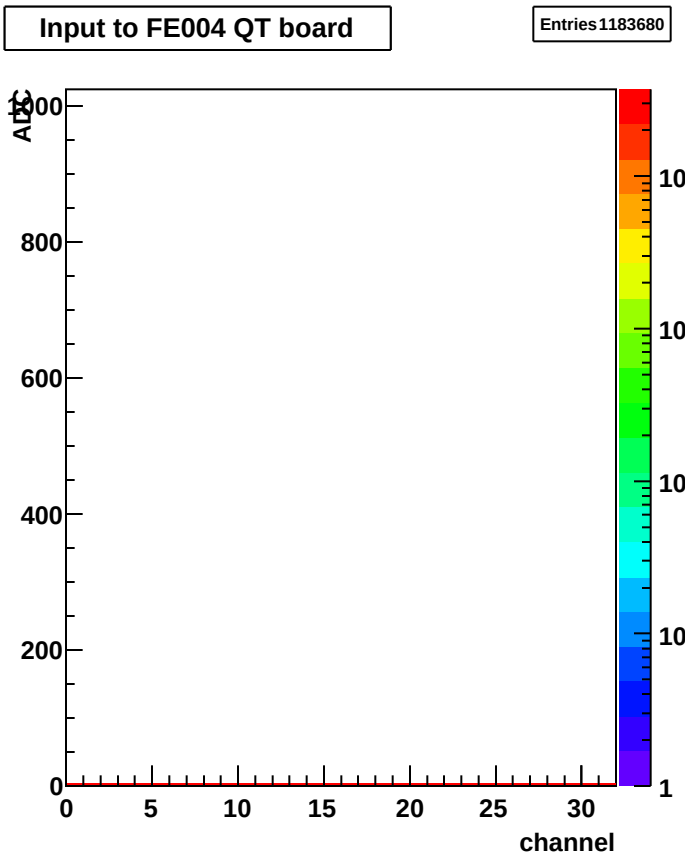

Input to FPD L2 DSM
Entries 73997
HT bits - simulated
36990
2
36990
15
SMALL
LARGE-S
LARGE-N

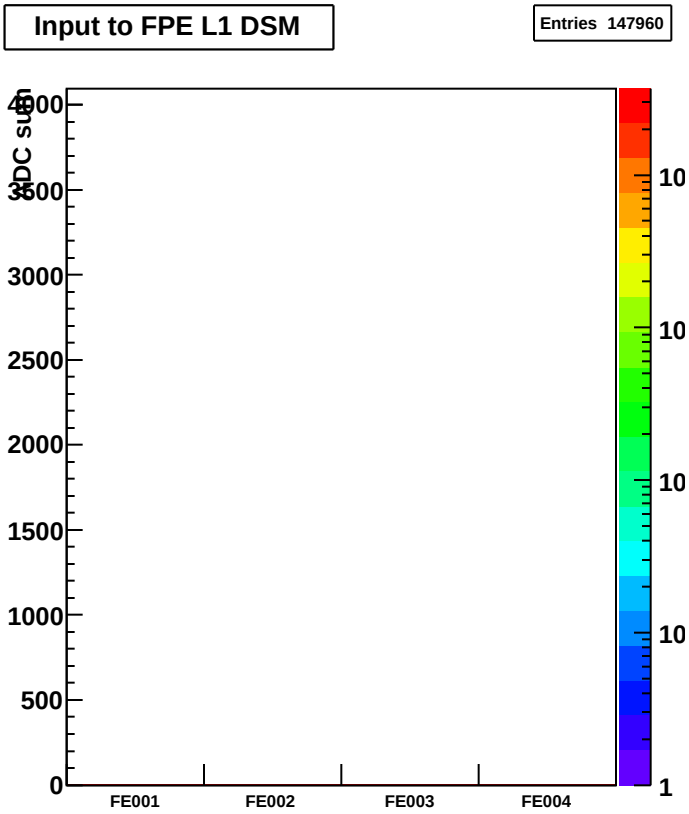

Input to FPD L2 DSM
Entries 221940
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
$10^2$
$10^3$
$10^4$

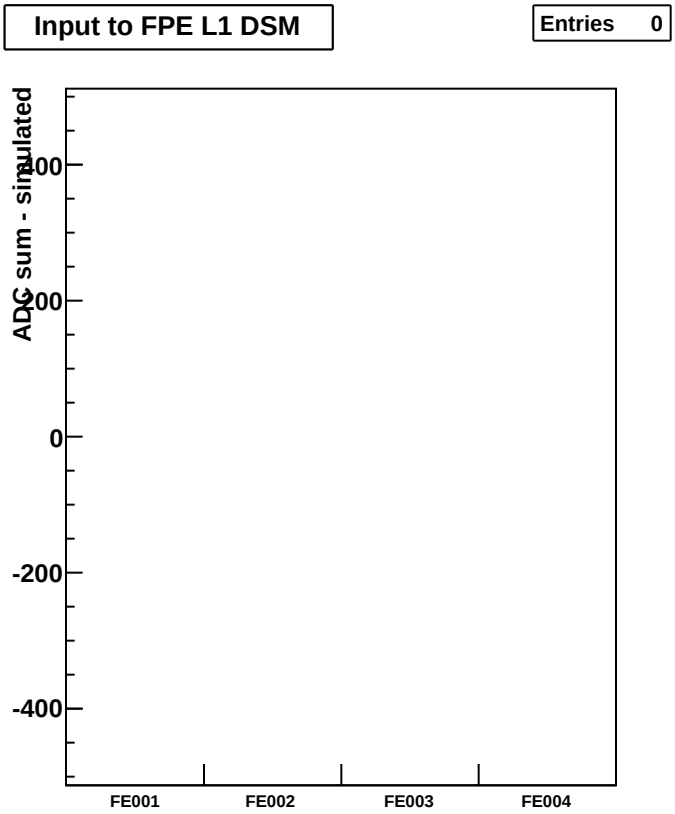

Input to FE001 QT board
Entries 1183680
ADC
channel

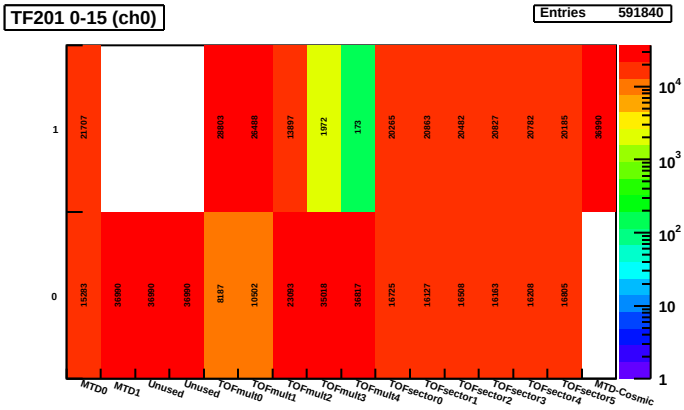

Input to FE002 QT board
Entries 1183680
ADC
channel

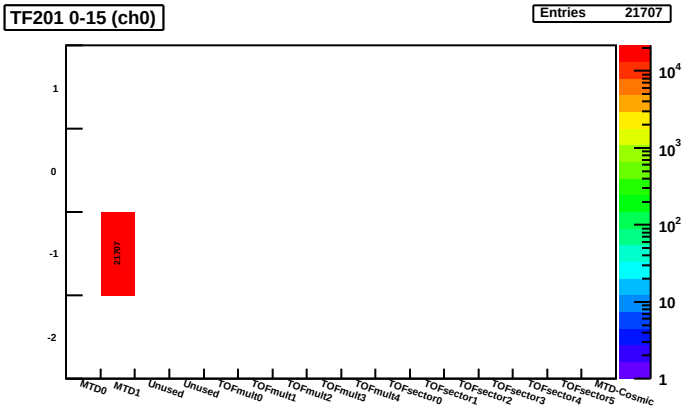

Input to FE003 QT board
Entries 1183680
ADC
channel

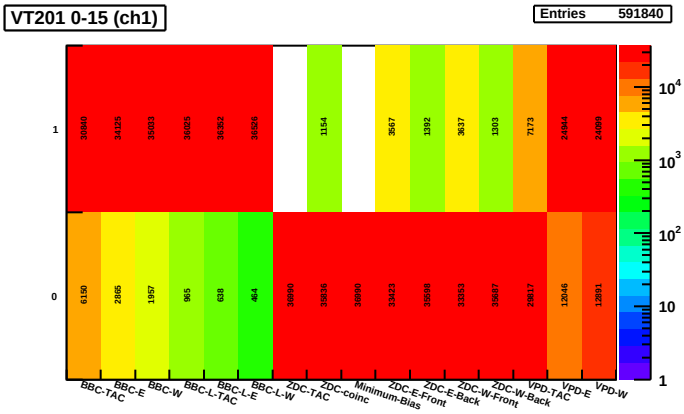

Input to FE004 QT board
Entries 1183680
ADC
channel

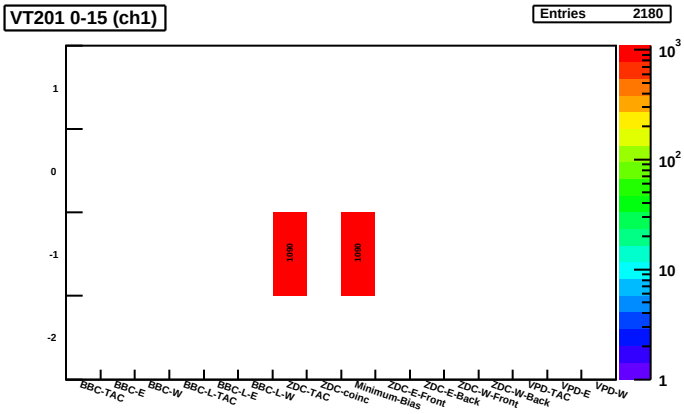

Input to FPE L1 DSM
Entries 147960
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1

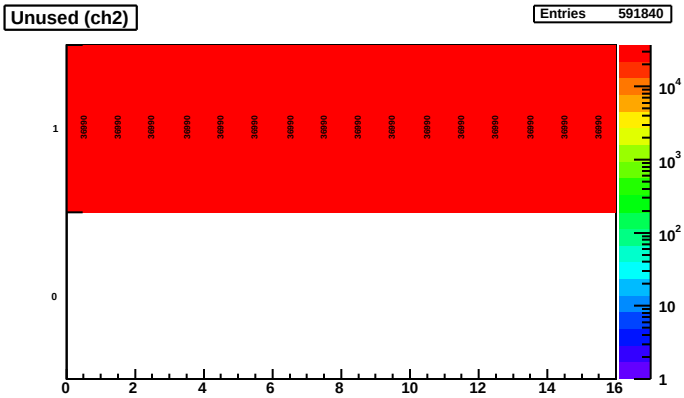

Input to FPE L1 DSM
Entries 0
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004

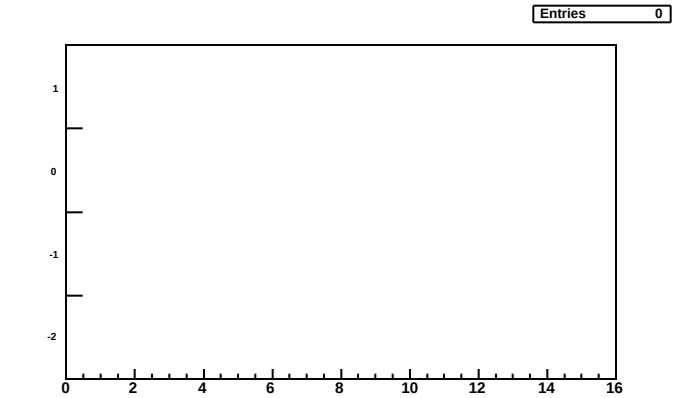

TF201 0-15 (ch0)
Entries 591840
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

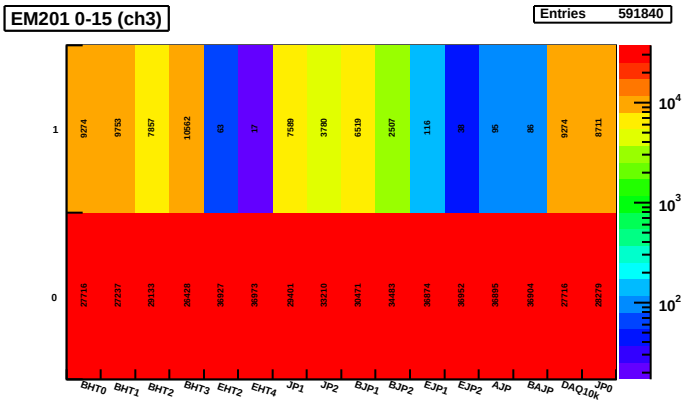

TF201 0-15 (ch0)
Entries 21707
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

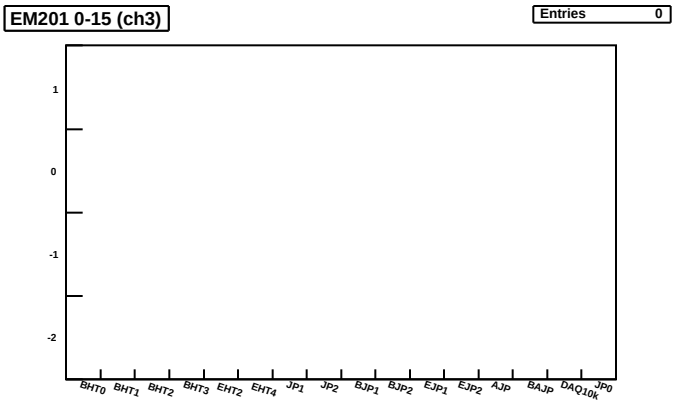

VT201 0-15 (ch1)
Entries 591840
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-coinc Minimum-Bias ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 2180
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-coinc Minimum-Bias ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W

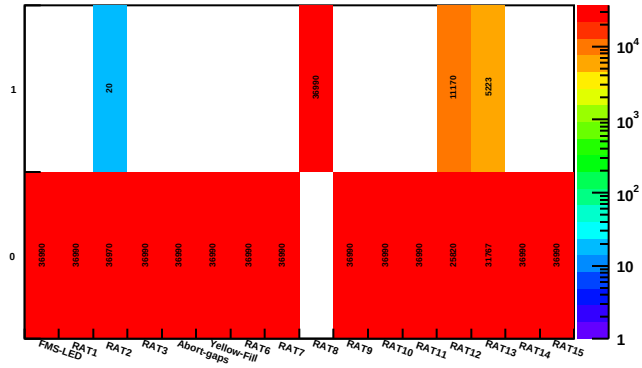

Unused (ch2)
Entries 591840

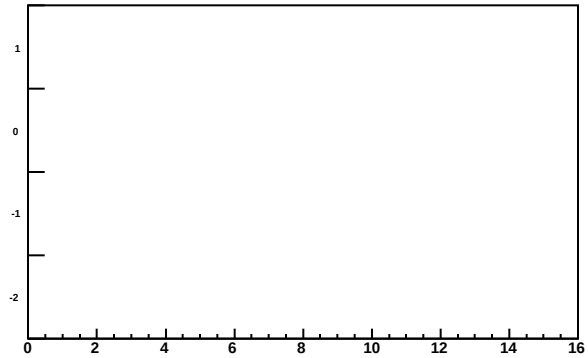

Entries 0


EM201 0-15 (ch3)
Entries 591840
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

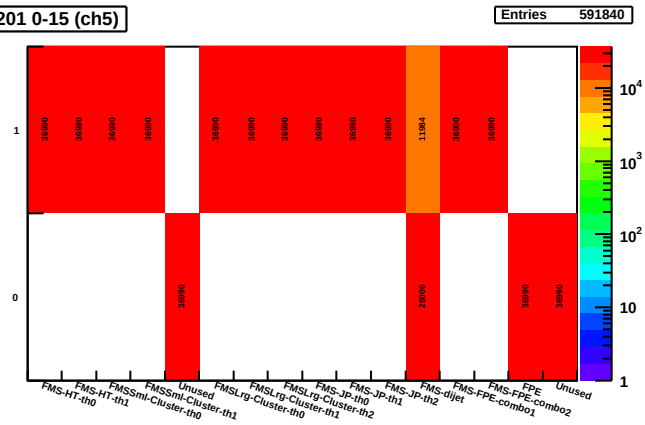

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

**RAT board (ch4)**

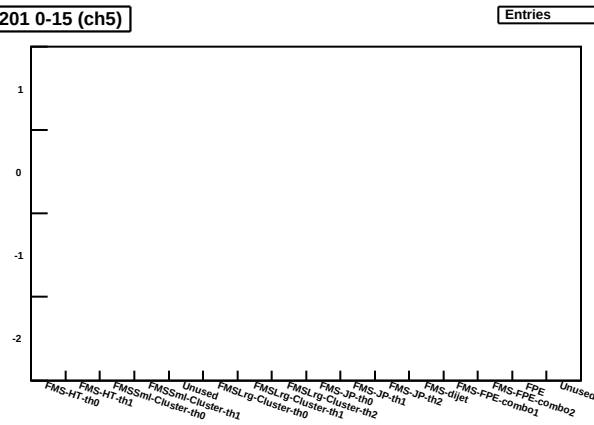


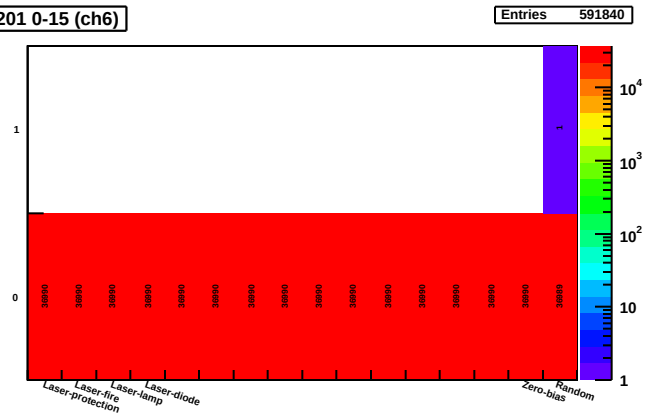

**FP201 0-15 (ch5)**

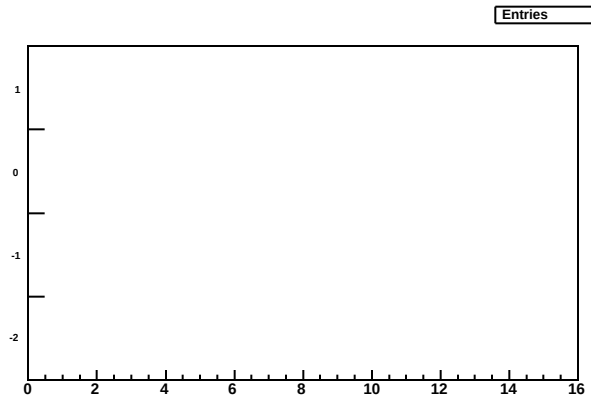


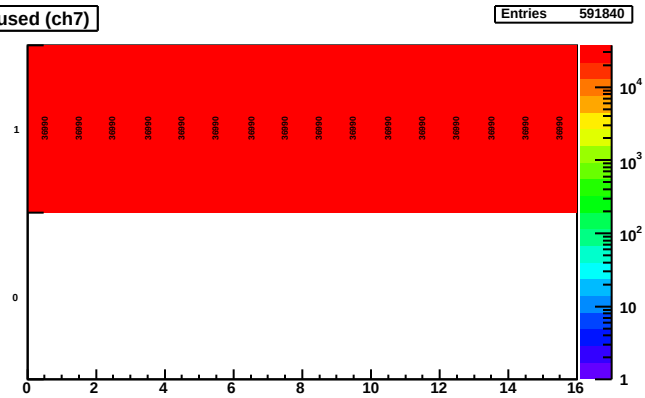
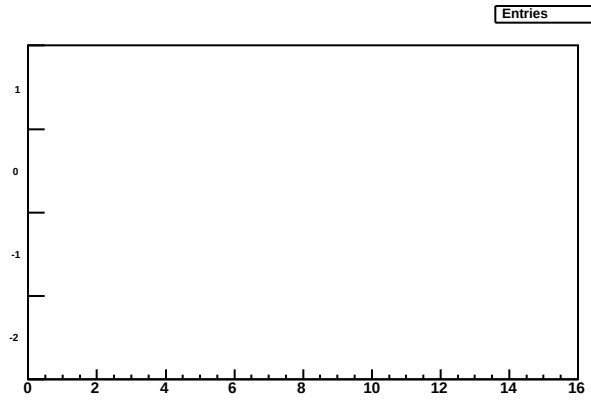

**FP201 0-15 (ch5)**




**ST201 0-15 (ch6)**




**Unused (ch7)**