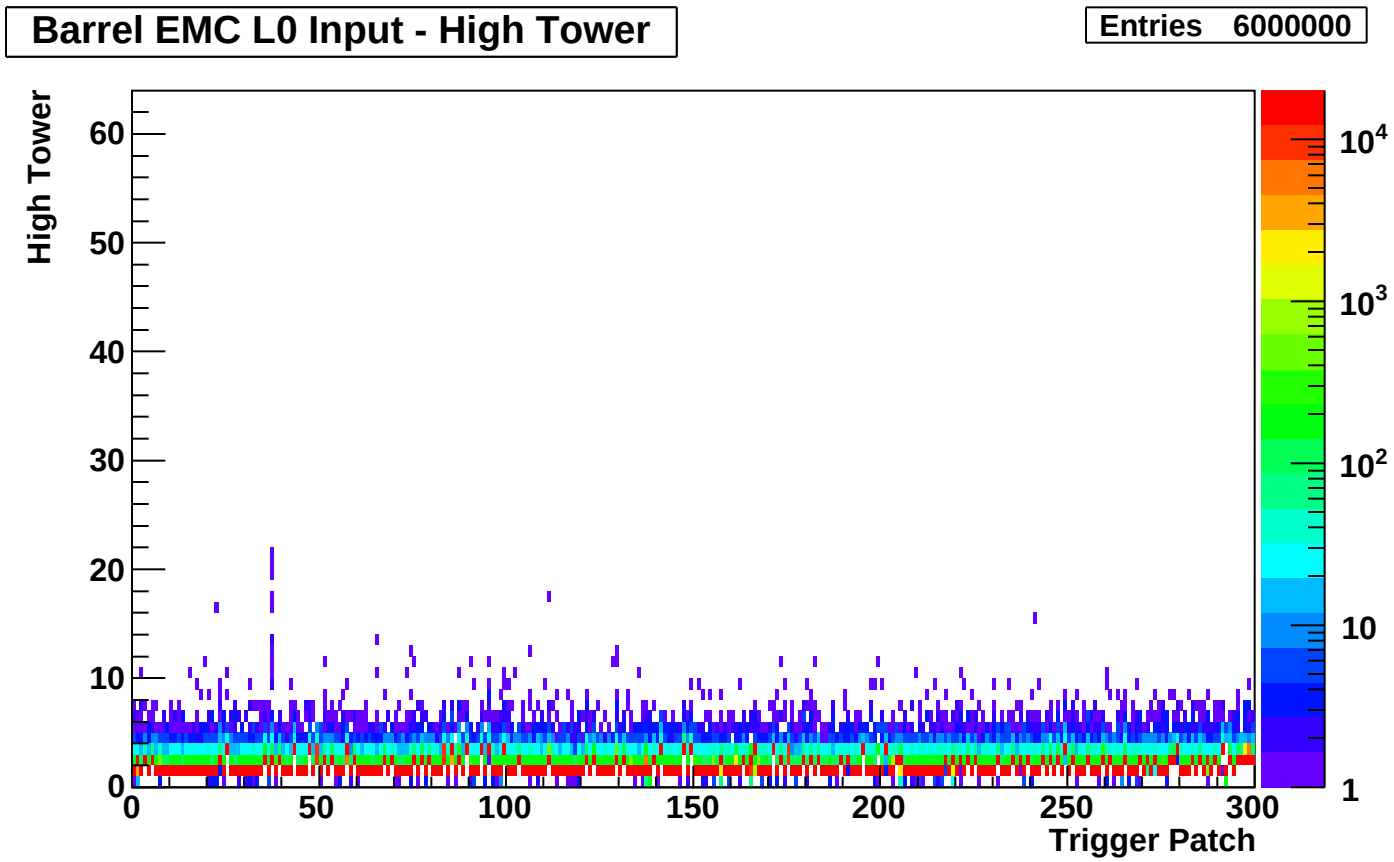
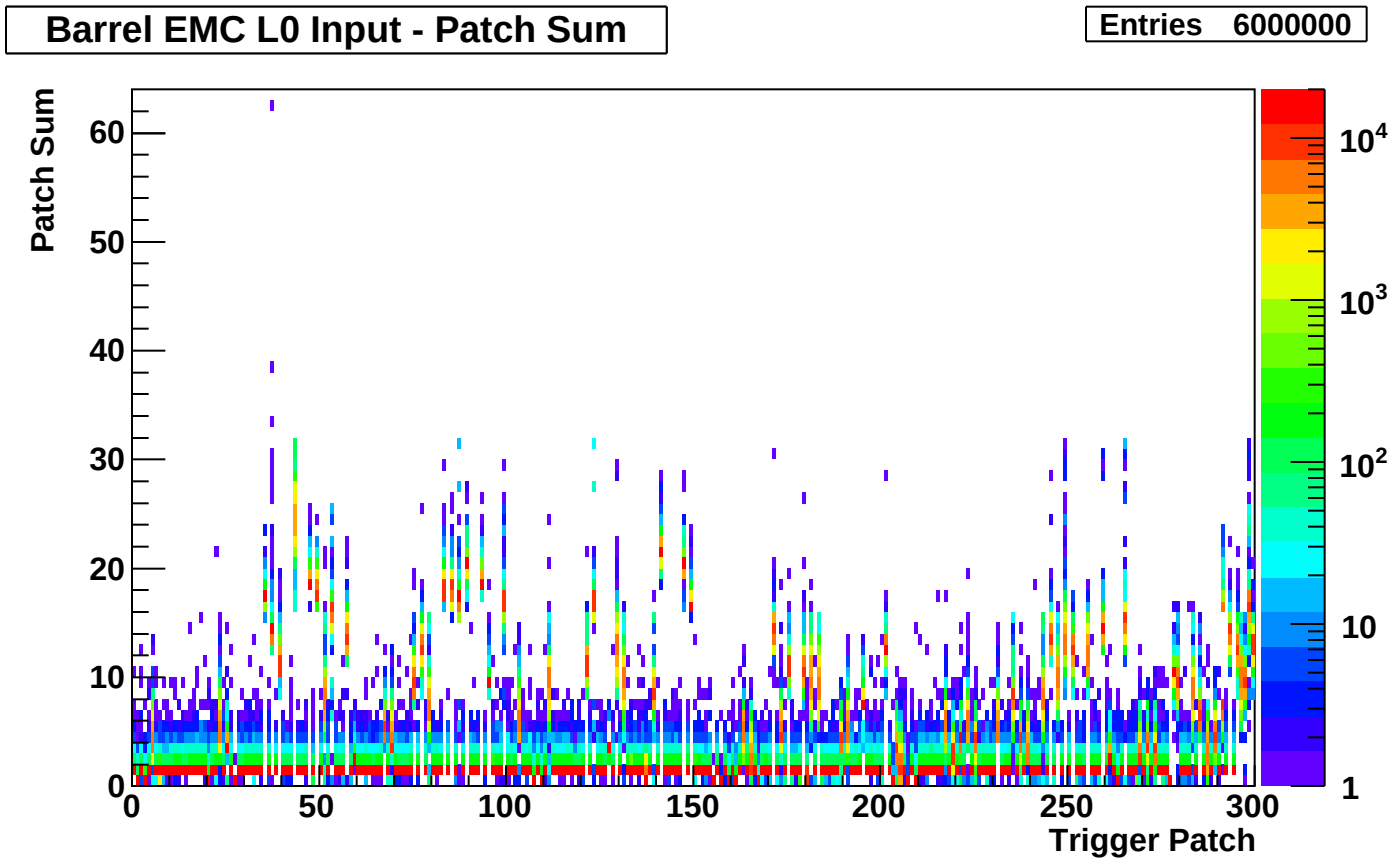
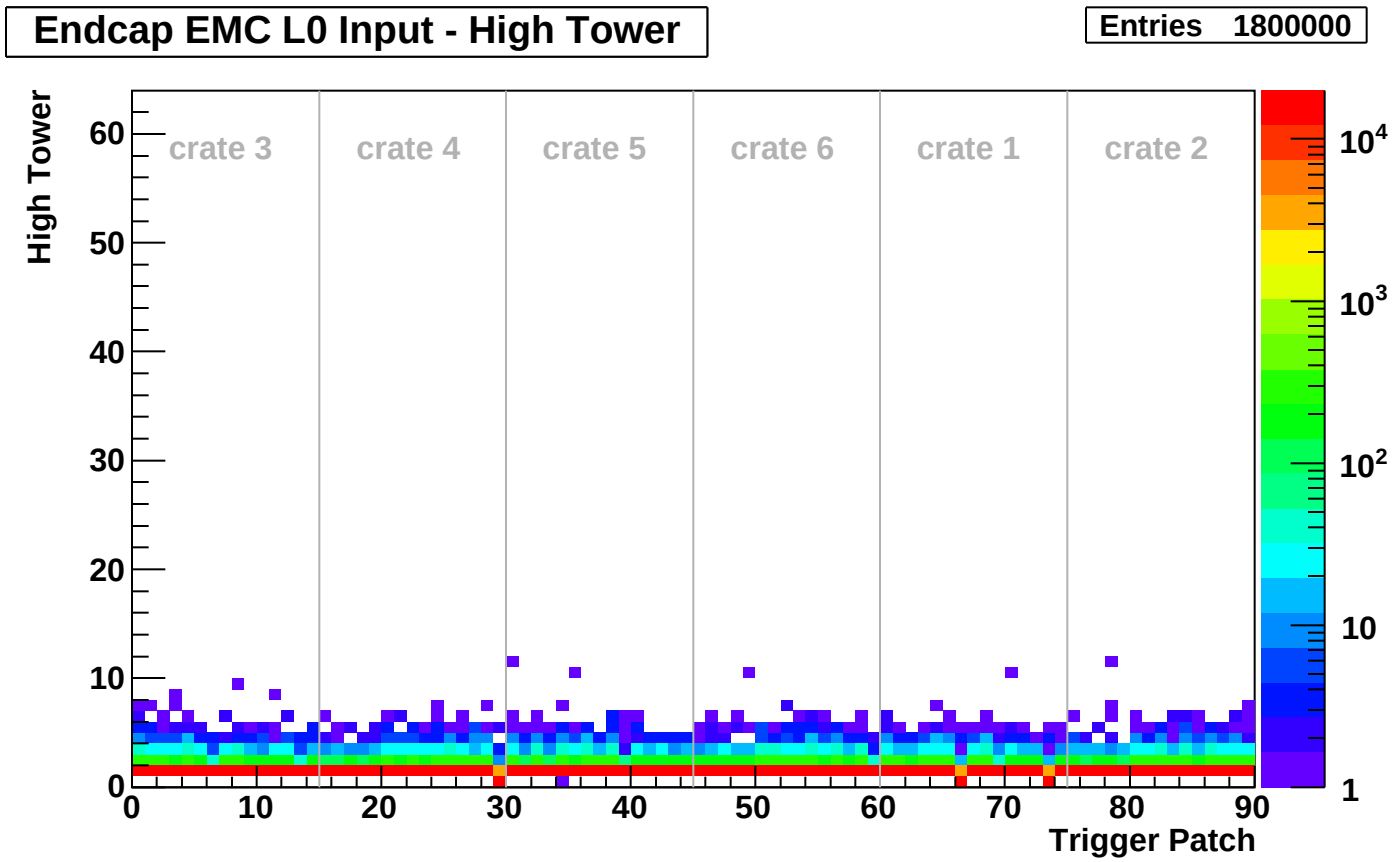
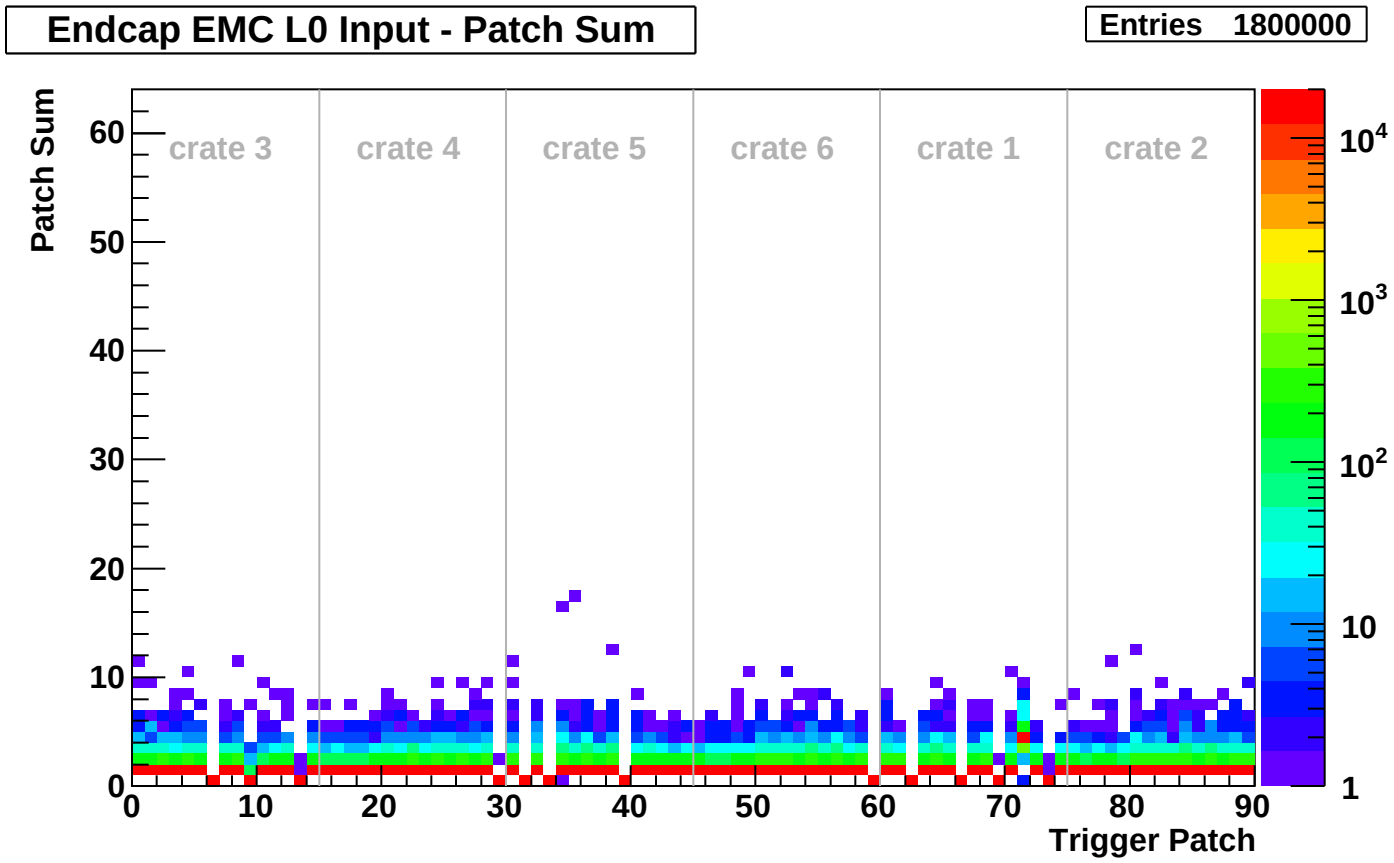
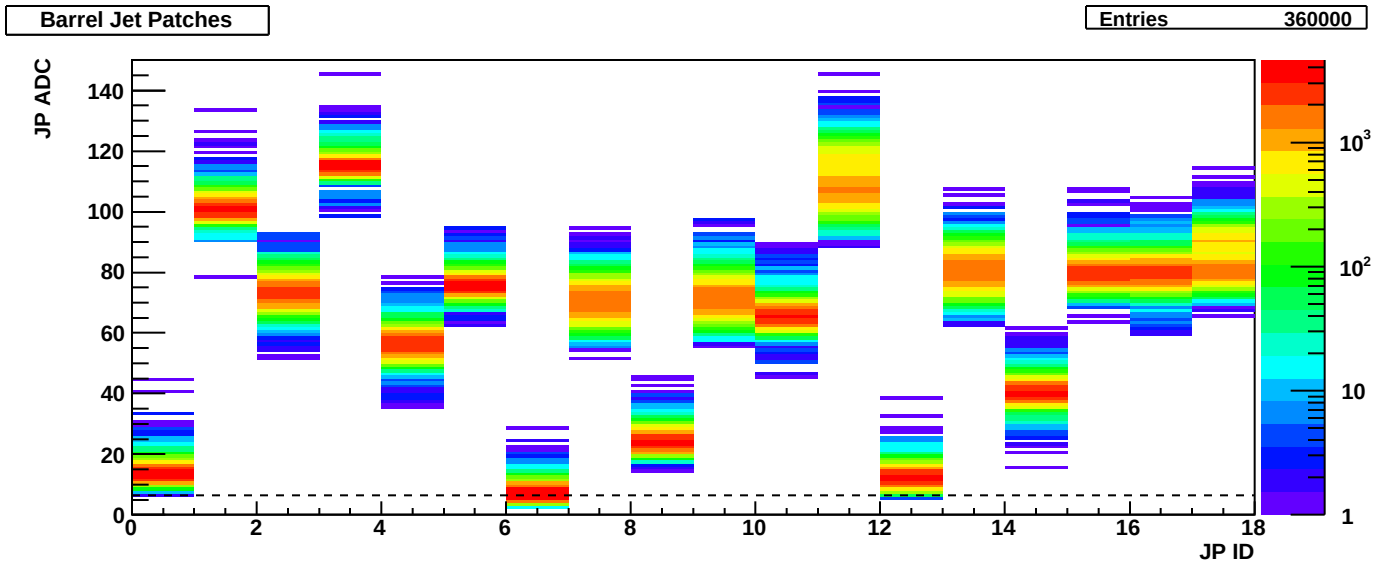
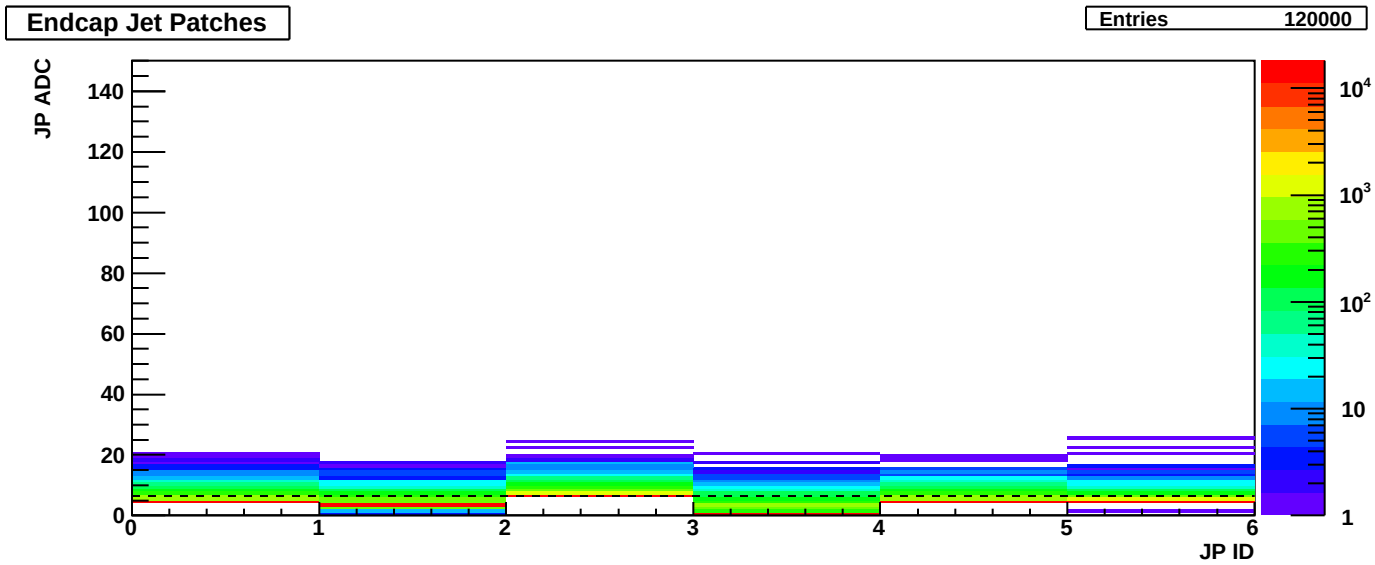

Barrel EMC L0 Input - High Tower
Entries 6000000
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

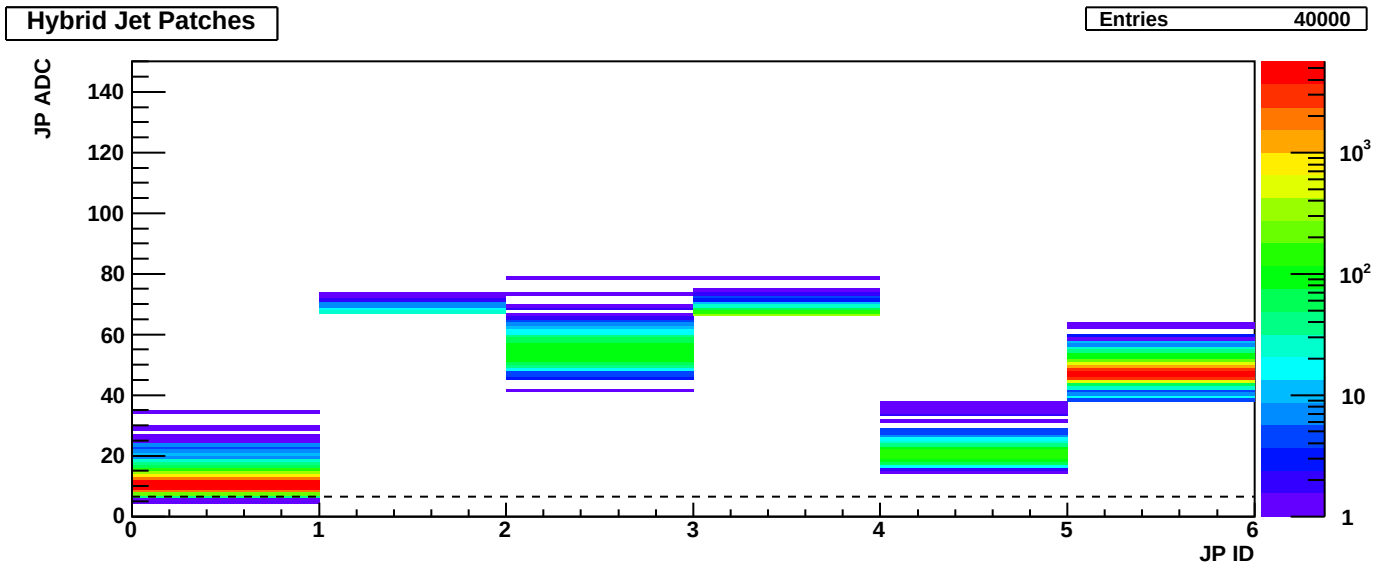

Barrel EMC L0 Input - Patch Sum
Entries 6000000
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

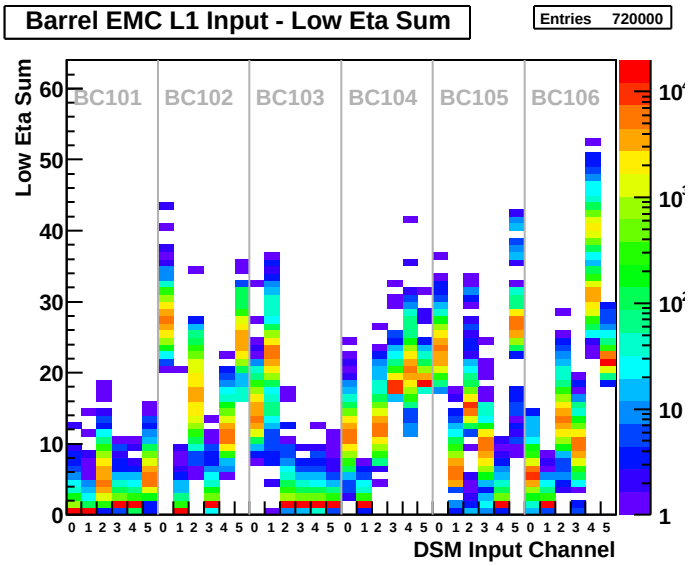

Endcap EMC L0 Input - High Tower
Entries 1800000
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

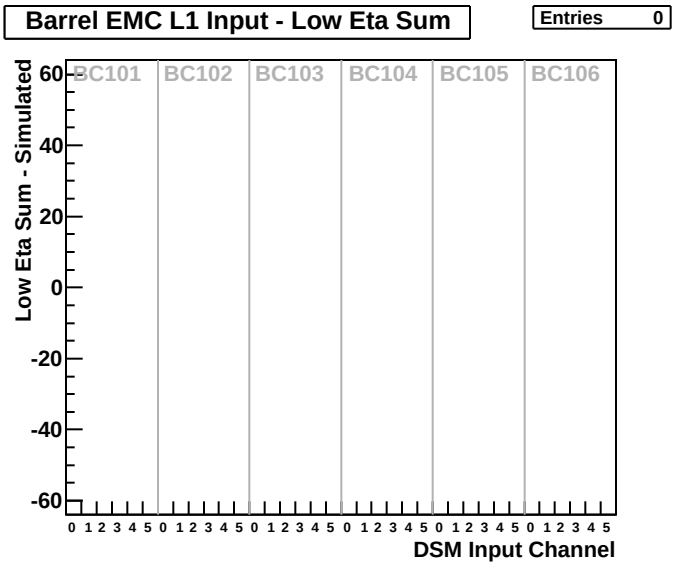

Endcap EMC L0 Input - Patch Sum
Entries 1800000
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

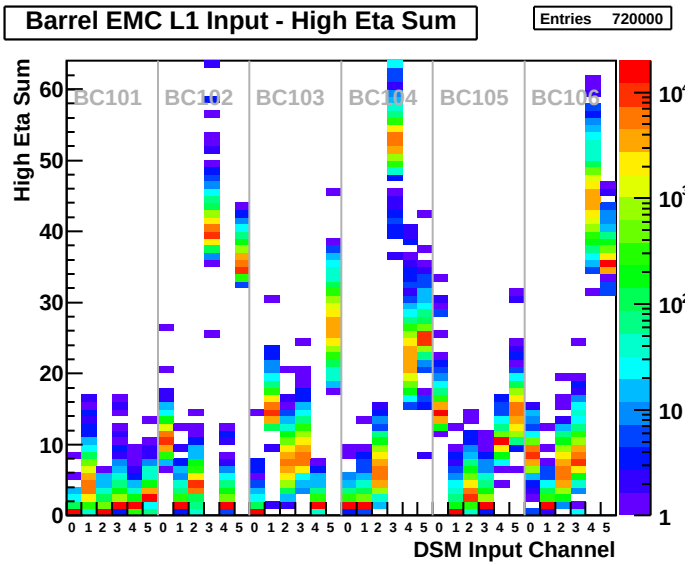

Barrel Jet Patches
Entries 360000
JP ADC
JP ID

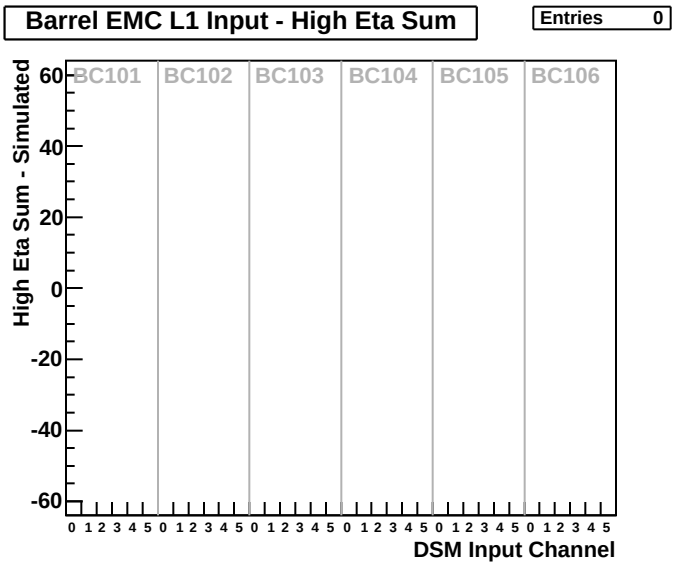

Endcap Jet Patches
Entries 120000
JP ADC
JP ID

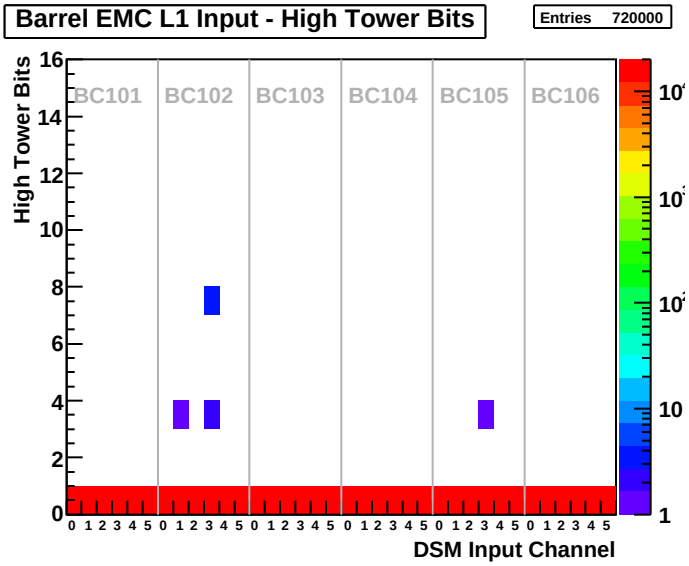

Hybrid Jet Patches
Entries 40000
JP ADC
JP ID

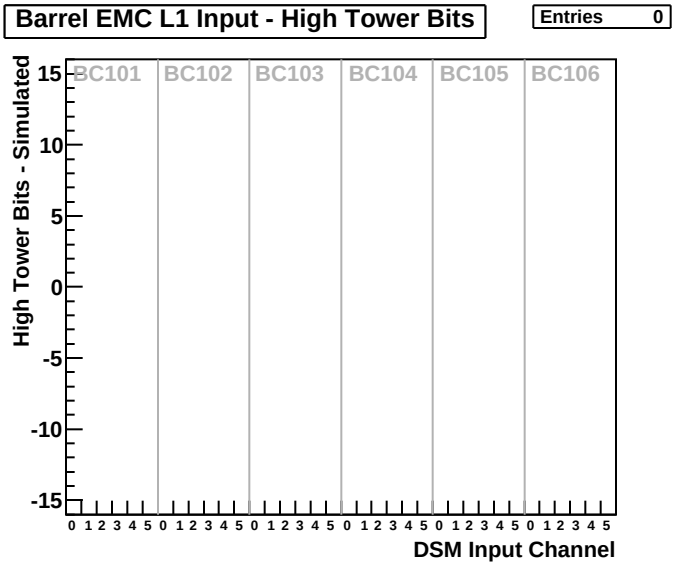

Barrel EMC L1 Input - Low Eta Sum
Entries 720000
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

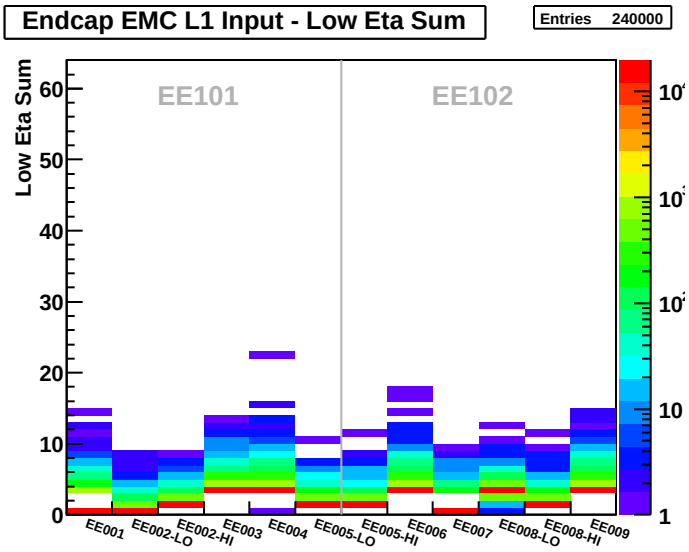

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

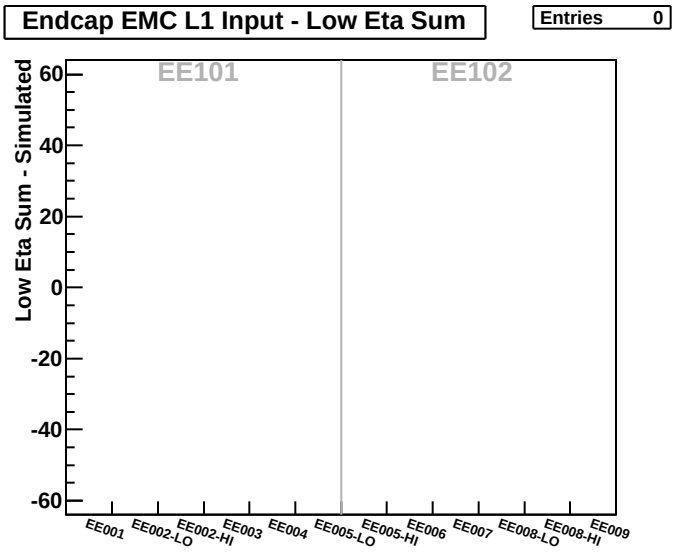

Barrel EMC L1 Input - High Eta Sum
Entries 720000
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

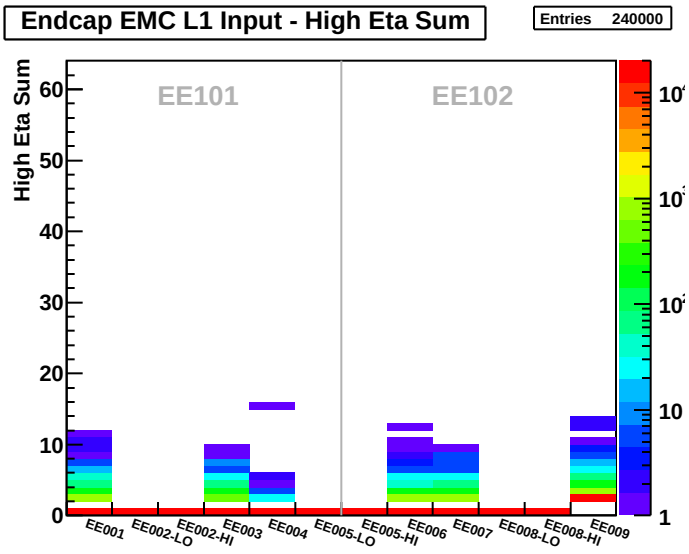

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

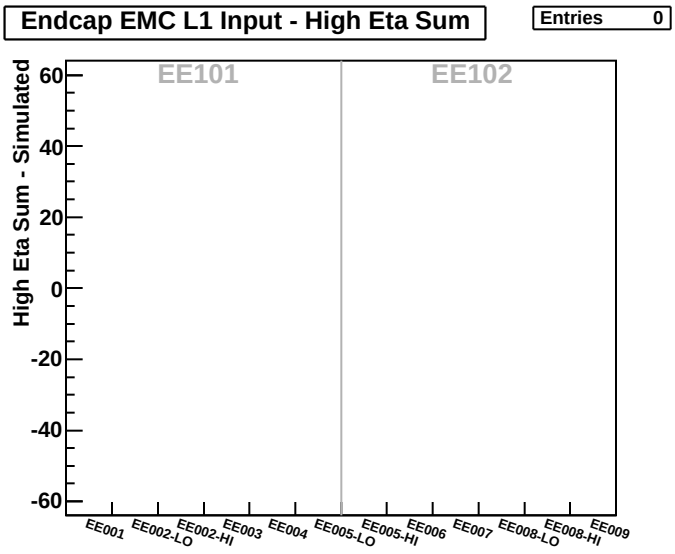

Barrel EMC L1 Input - High Tower Bits
Entries 720000
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

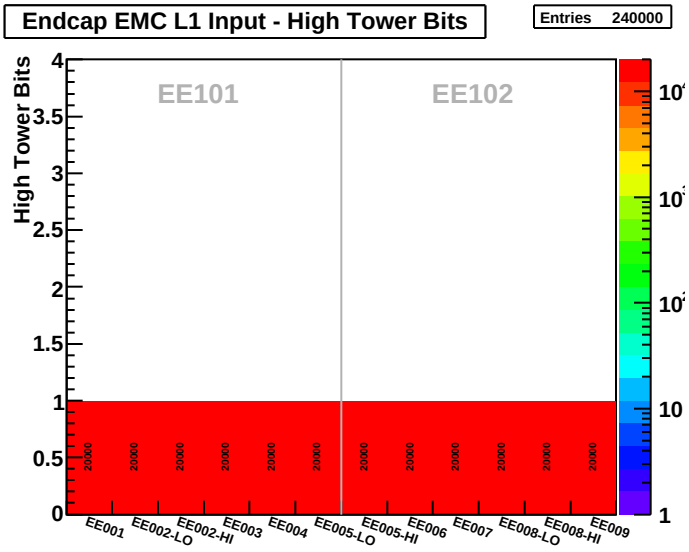

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

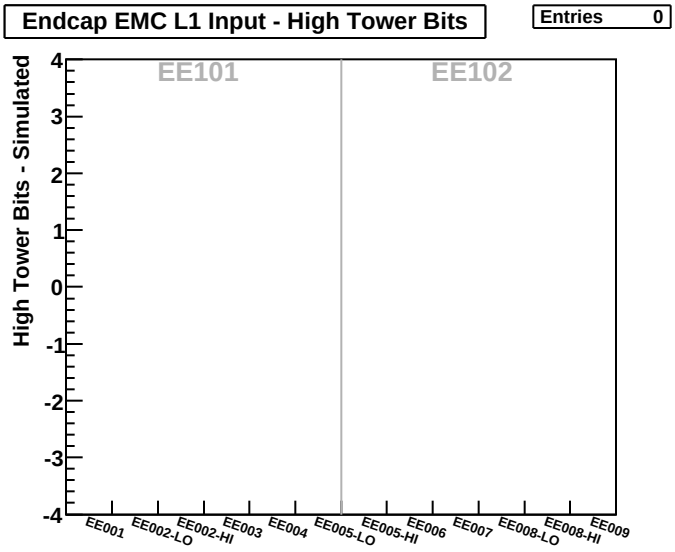

Endcap EMC L1 Input - Low Eta Sum
Entries 240000
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

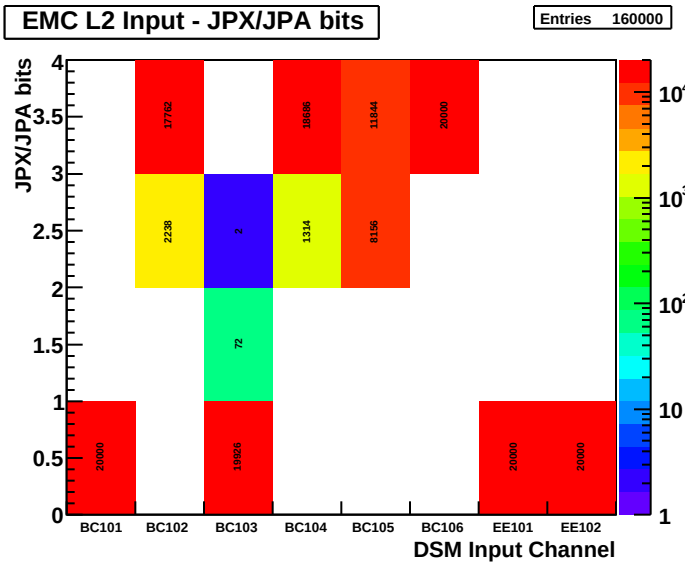

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

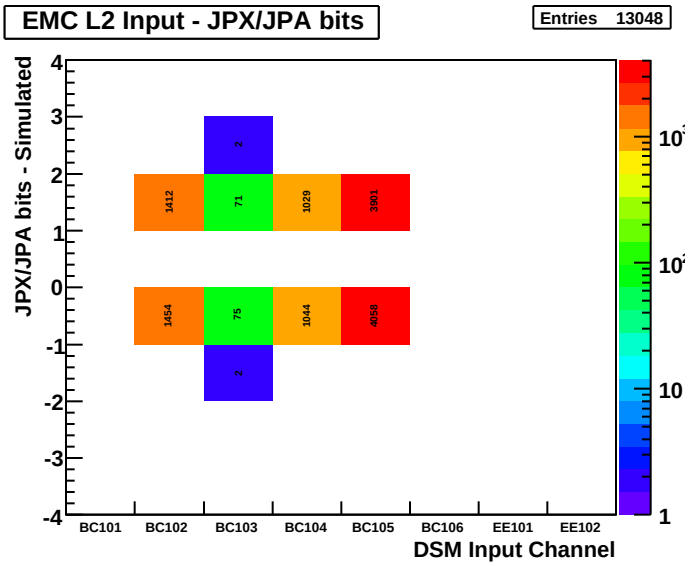

Endcap EMC L1 Input - High Eta Sum
Entries 240000
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

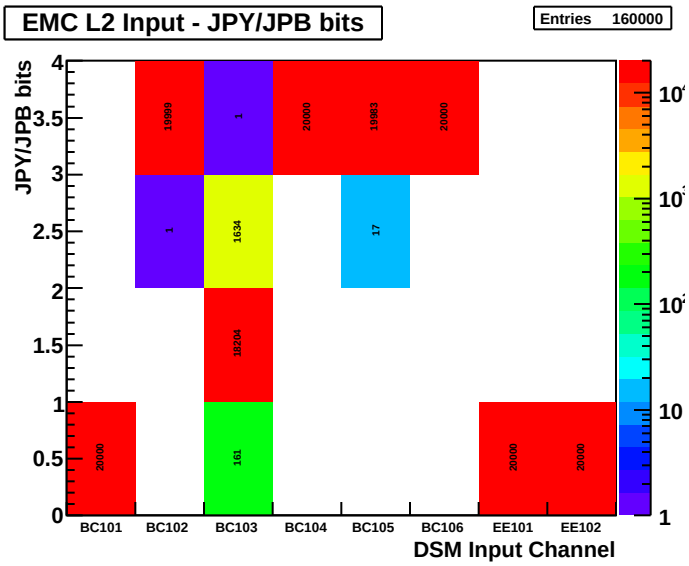

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

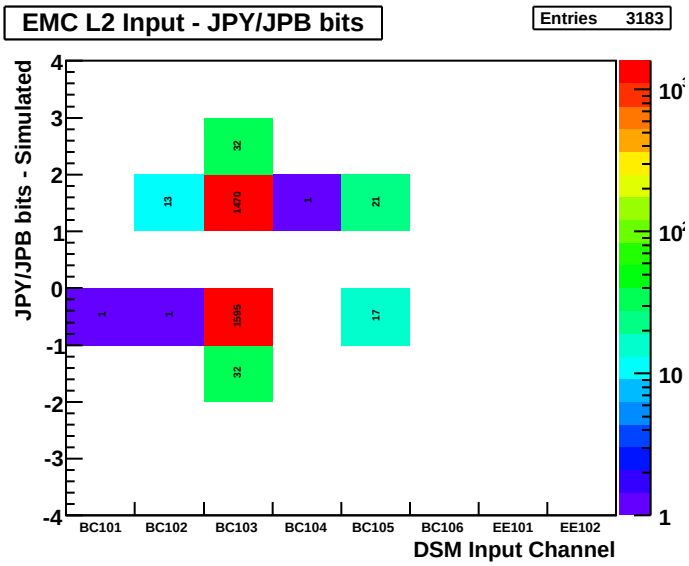

Endcap EMC L1 Input - High Tower Bits
Entries 240000
High Tower Bits
EE101
EE102
20000
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

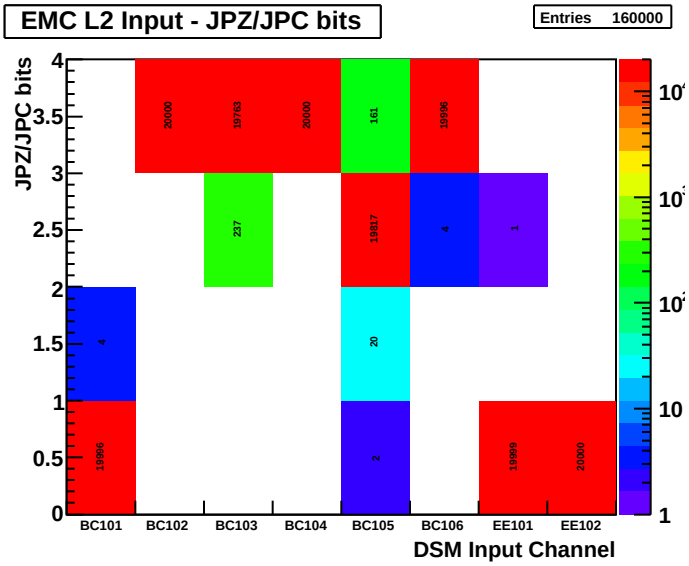

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

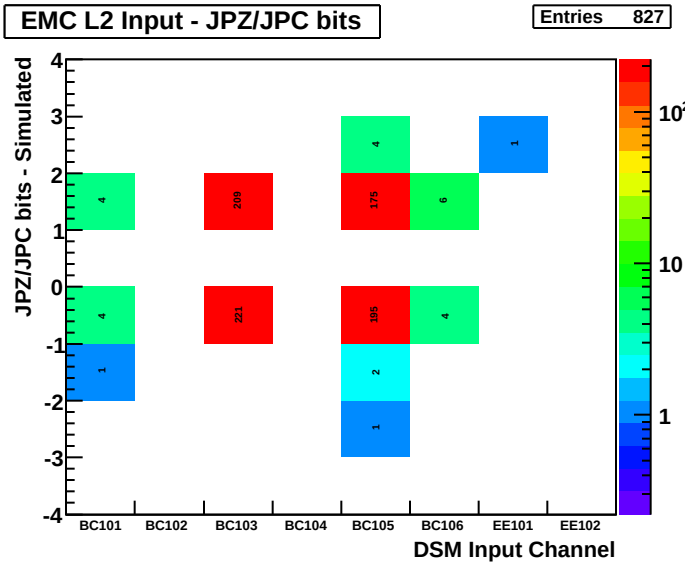

EMC L2 Input - JPX/JPA bits
Entries 160000
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

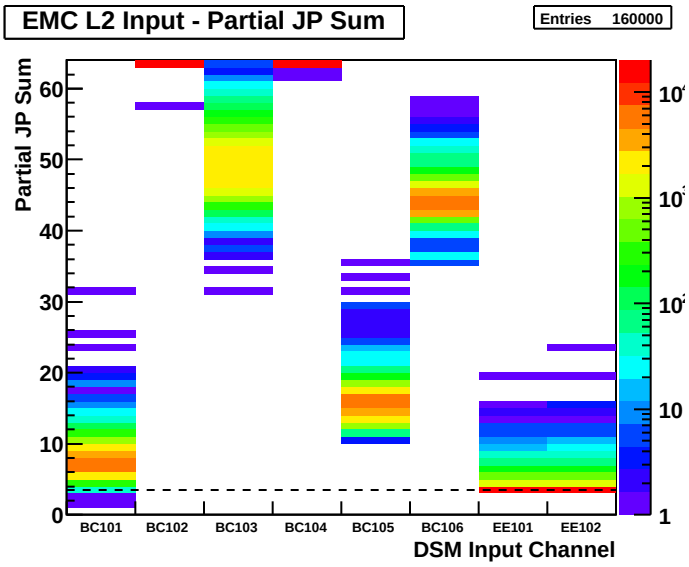

EMC L2 Input - JPX/JPA bits
Entries 13048
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

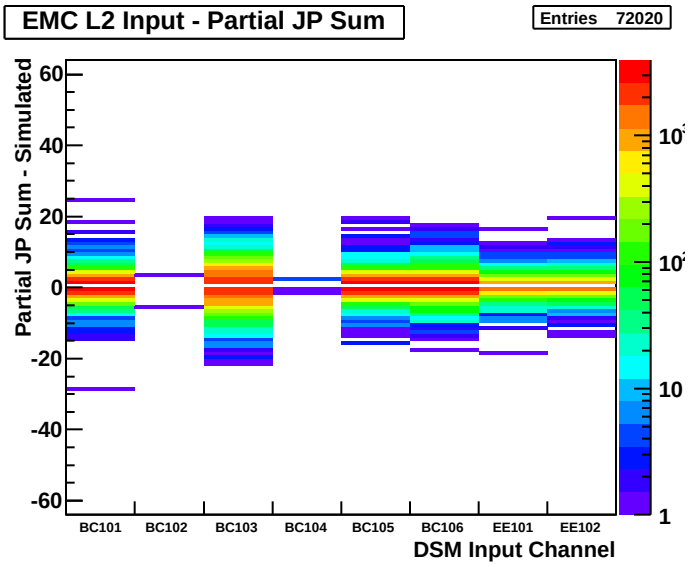

EMC L2 Input - JPY/JPB bits
Entries 160000
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

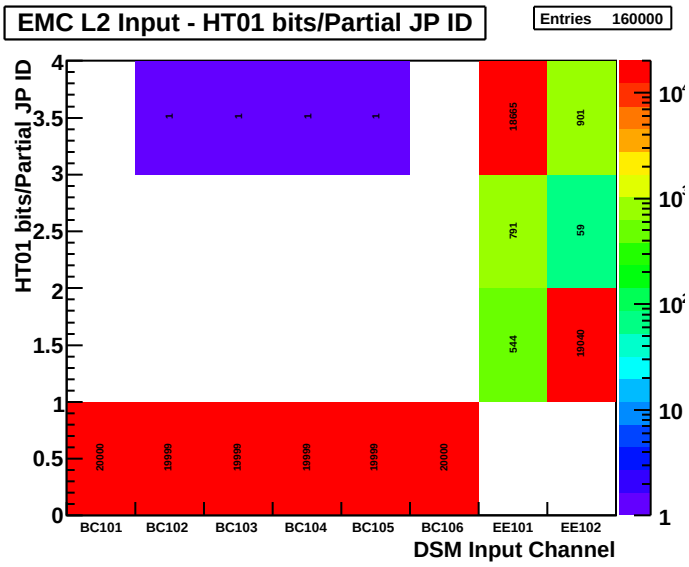

EMC L2 Input - JPY/JPB bits
Entries 3183
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

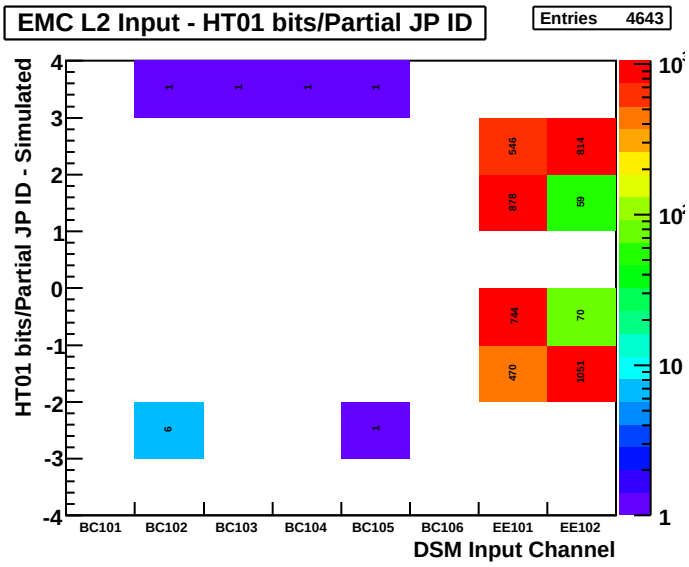

EMC L2 Input - JPZ/JPC bits
Entries 160000
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

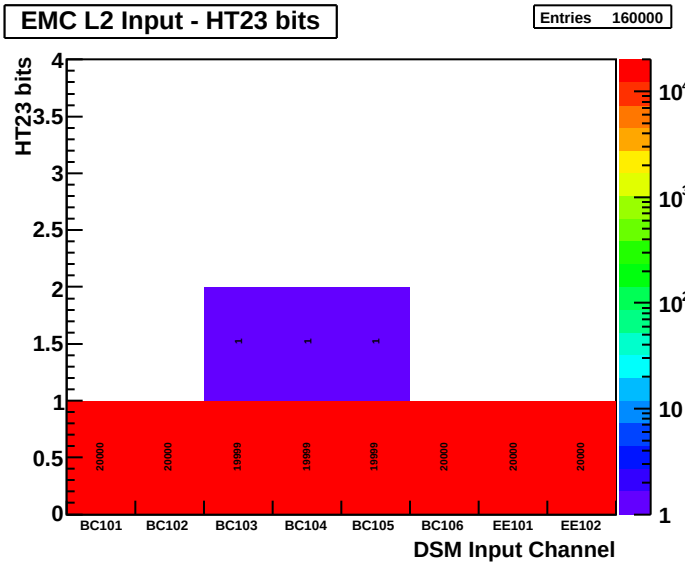

EMC L2 Input - JPZ/JPC bits
Entries 827
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

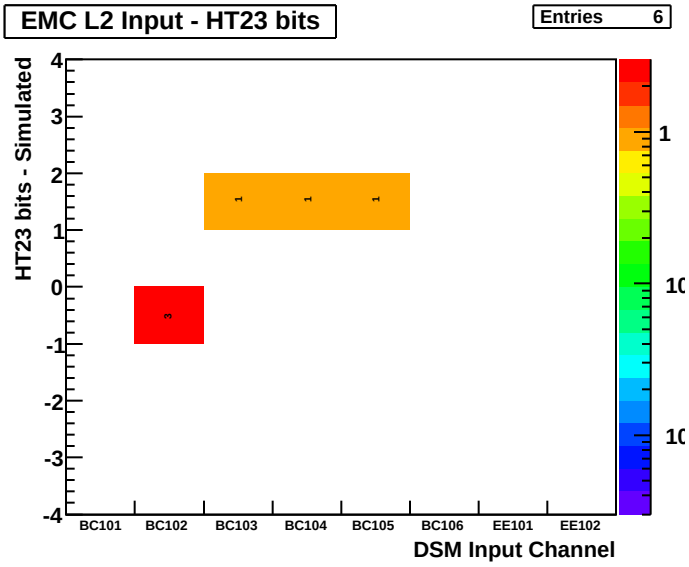

EMC L2 Input - Partial JP Sum
Entries 160000
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

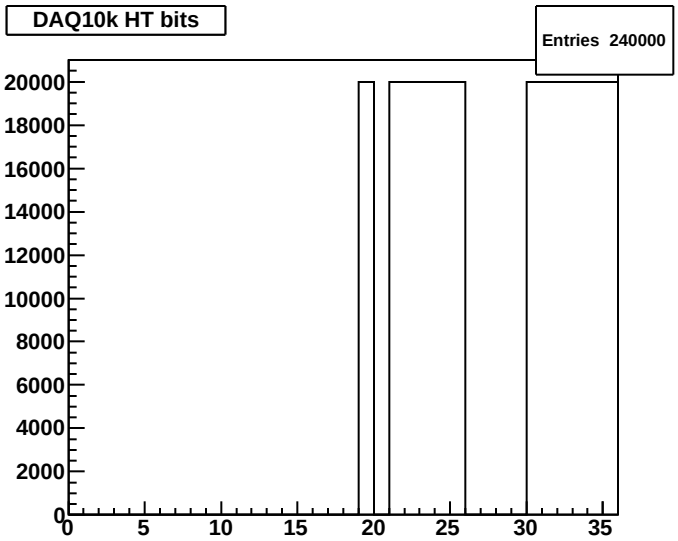

EMC L2 Input - Partial JP Sum
Entries 72020
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

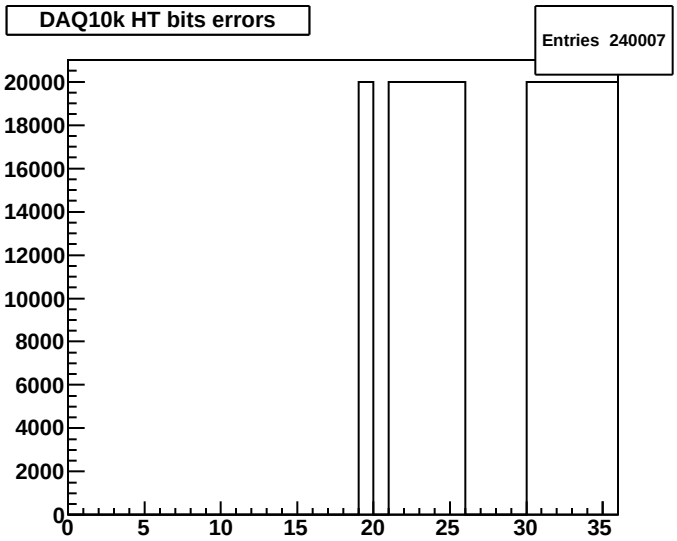

EMC L2 Input - HT01 bits/Partial JP ID
Entries 160000
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

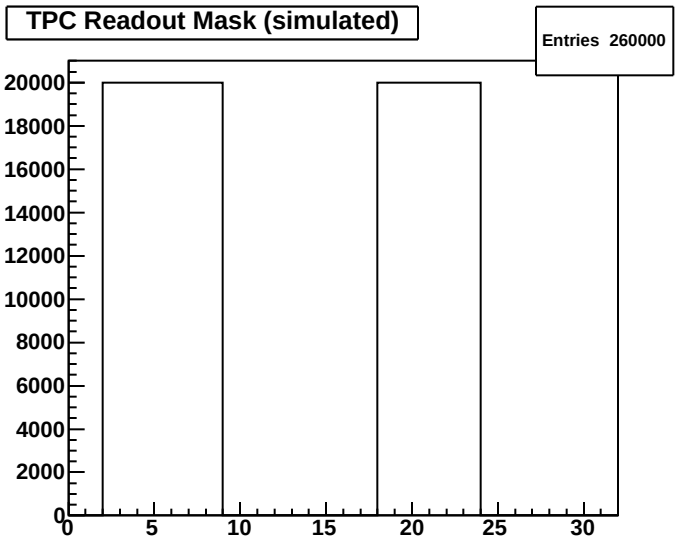

EMC L2 Input - HT01 bits/Partial JP ID
Entries 4643
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

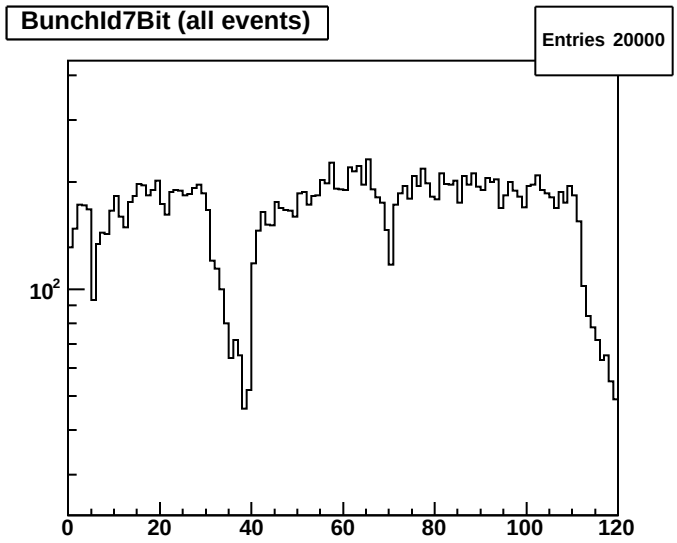

EMC L2 Input - HT23 bits
Entries 160000
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

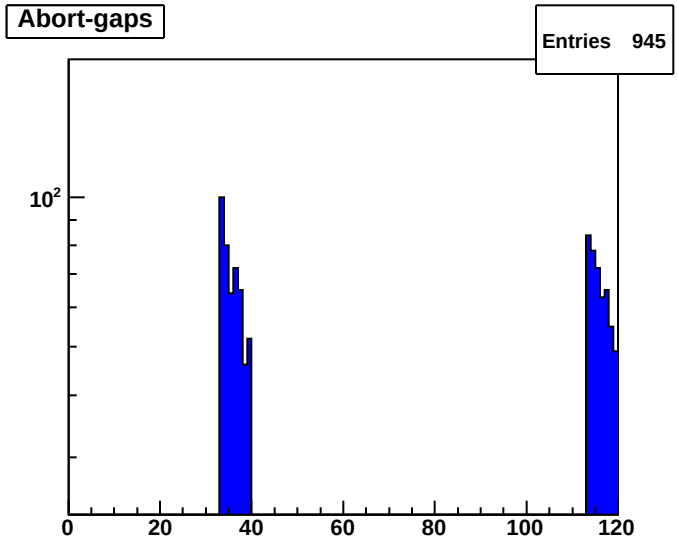

EMC L2 Input - HT23 bits
Entries 6
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

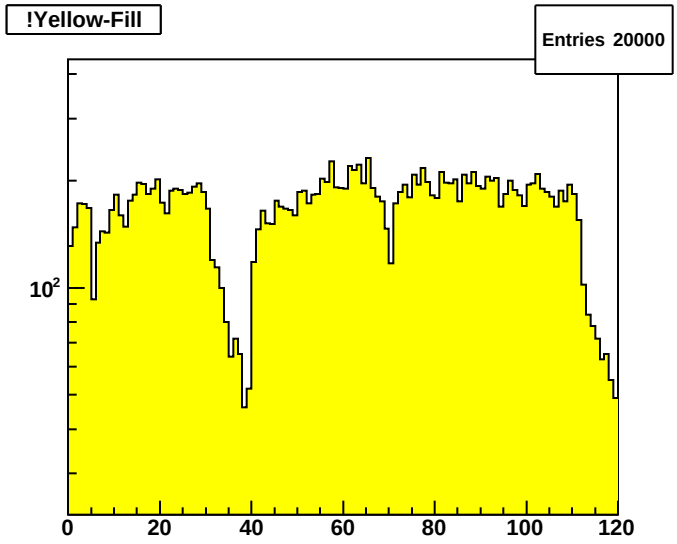

DAQ10k HT bits
Entries 240000

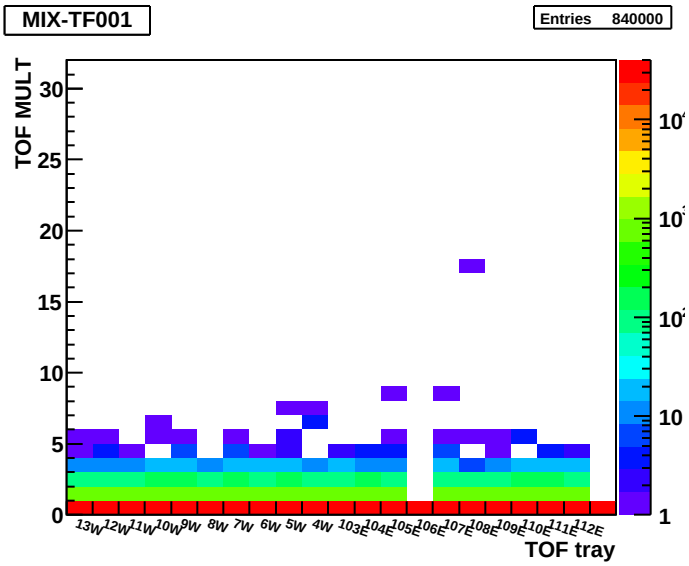

DAQ10k HT bits errors
Entries 240007

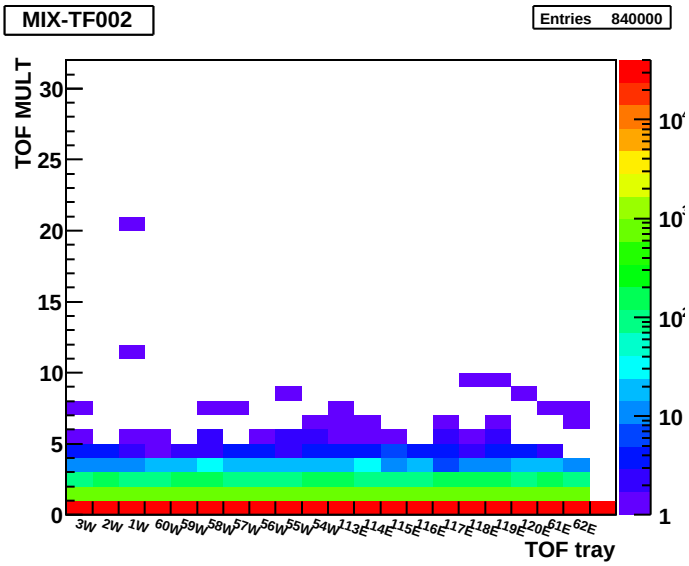

TPC Readout Mask (simulated)
Entries 260000

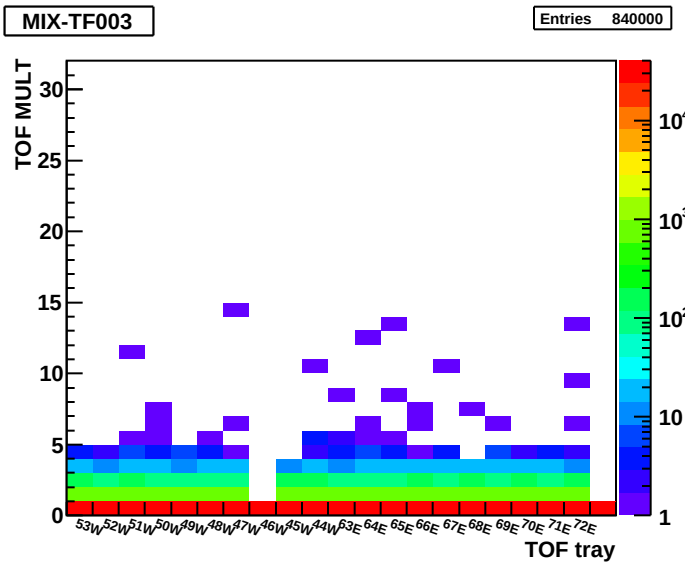

BunchId7Bit (all events)
Entries 20000

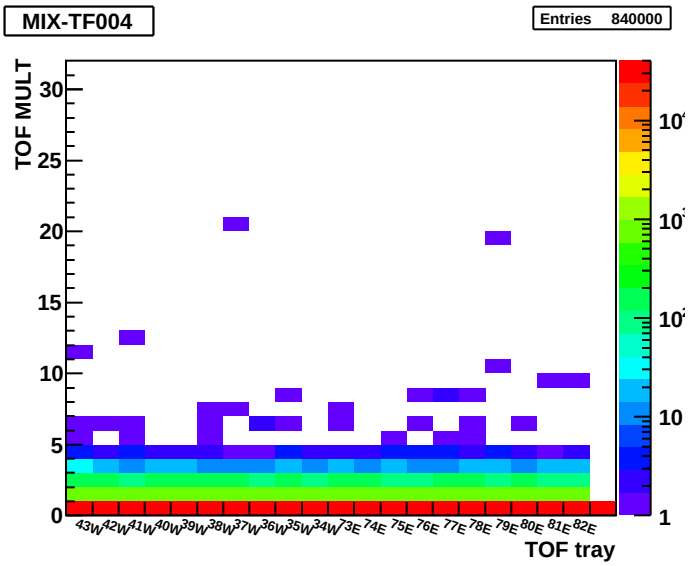

Abort-gaps
Entries 945

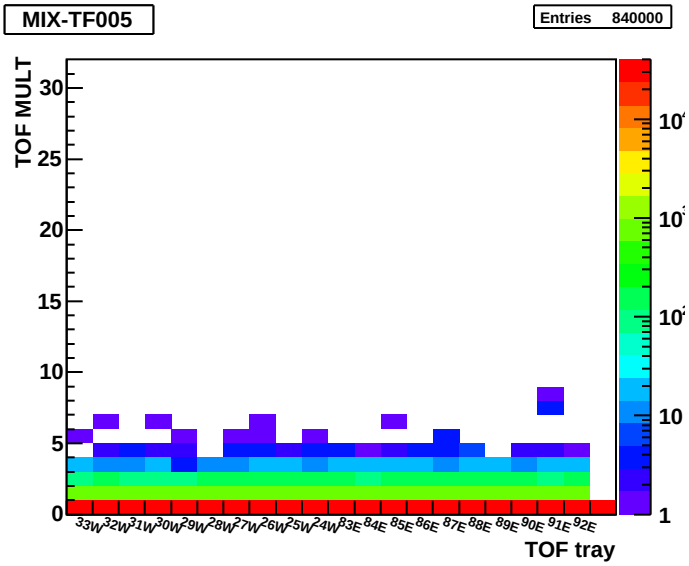

!Yellow-Fill
Entries 20000

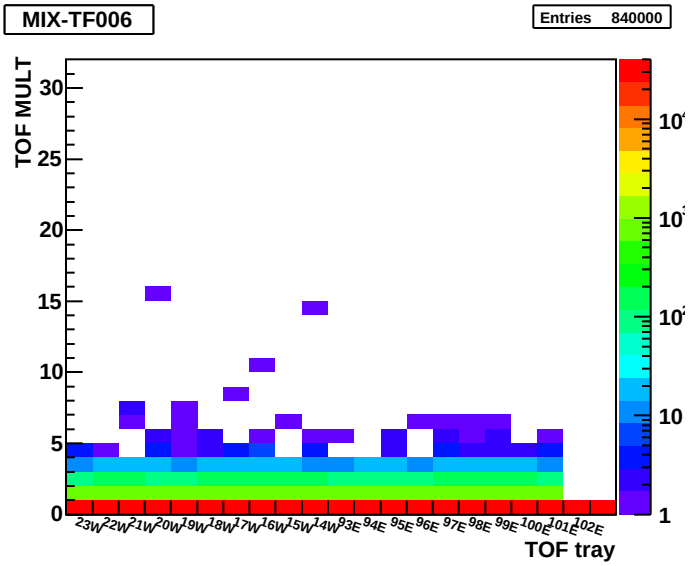

MIX-TF001
Entries 840000
TOF MULT
TOF tray

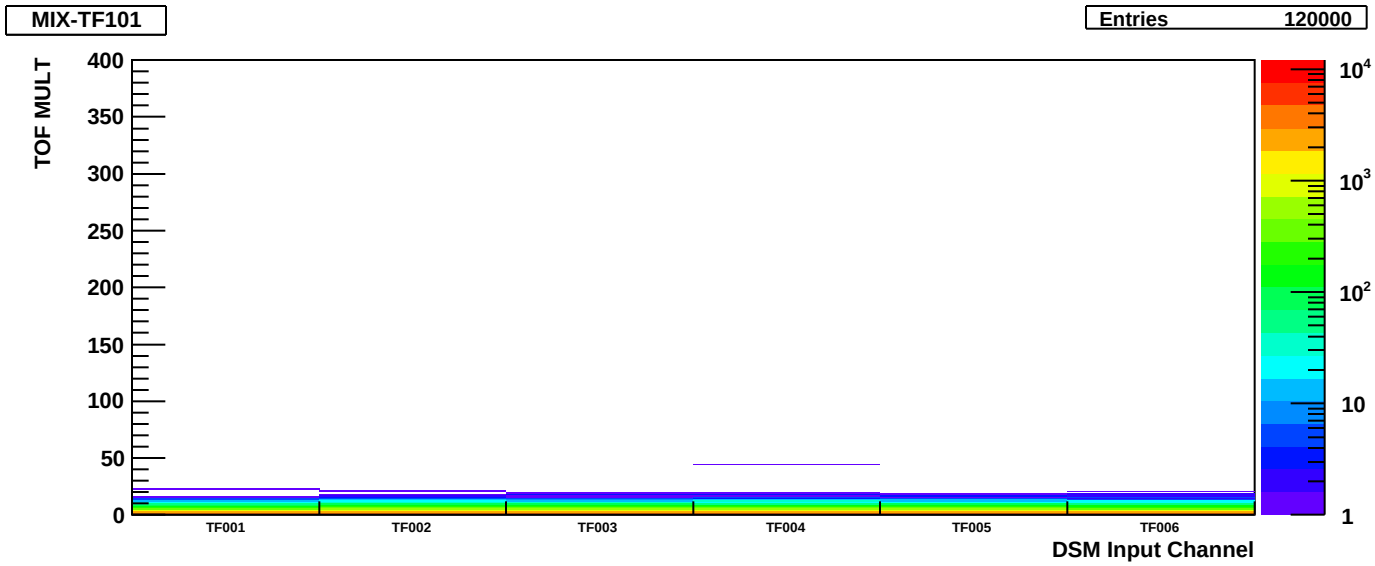

MIX-TF002
Entries 840000
TOF MULT
TOF tray

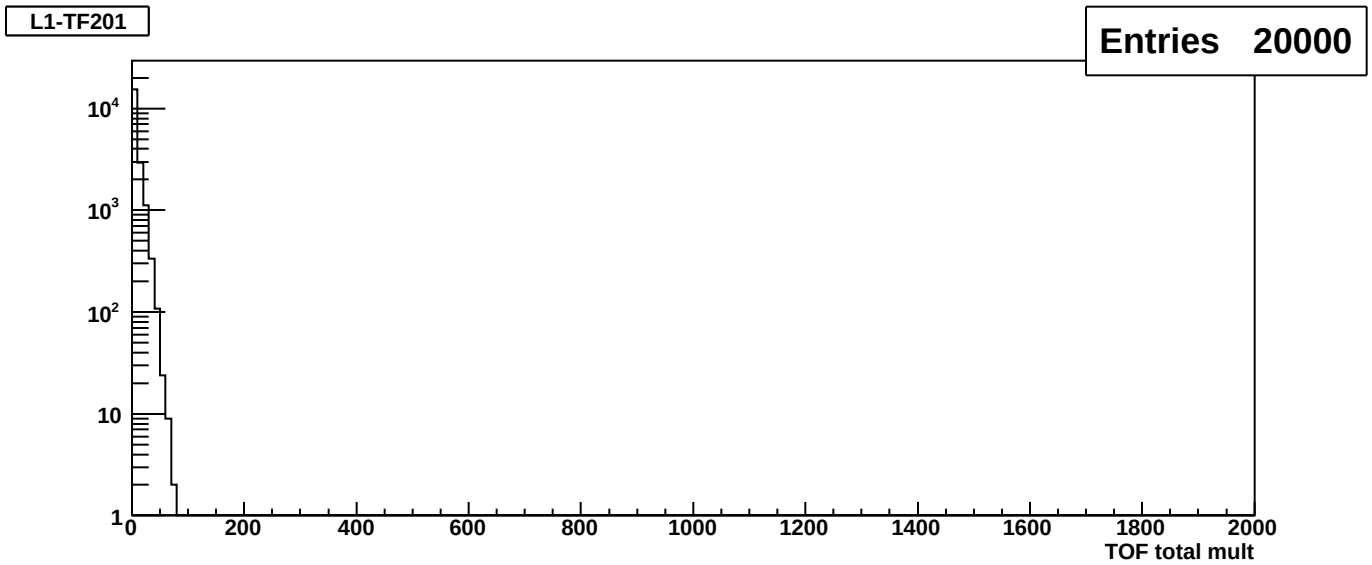

MIX-TF003
Entries 840000
TOF MULT
TOF tray

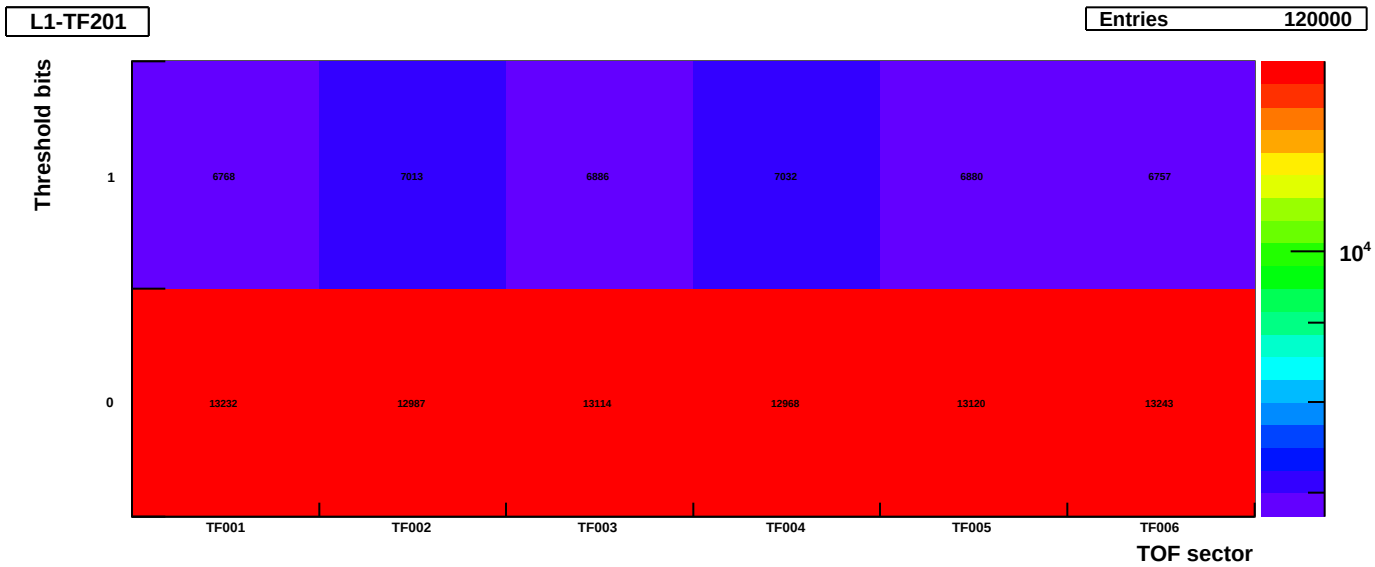

MIX-TF004
Entries 840000
TOF MULT
TOF tray

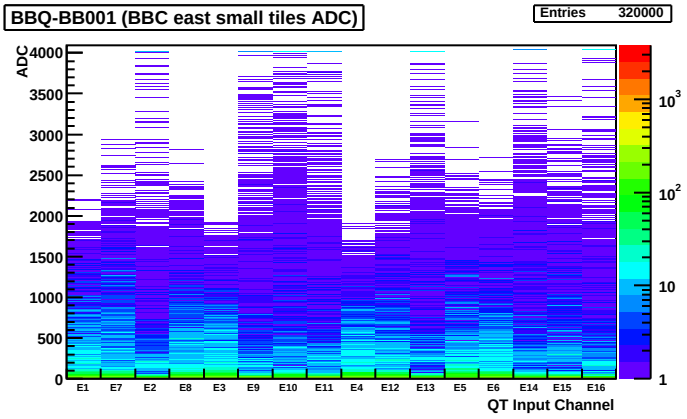

MIX-TF005
Entries 840000
TOF MULT
TOF tray

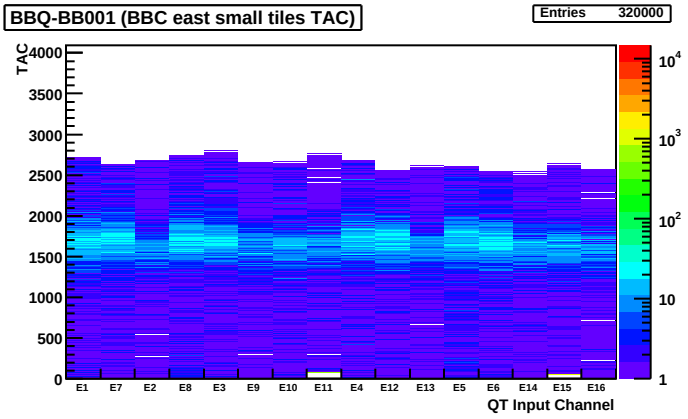

MIX-TF006
Entries 840000
TOF MULT
TOF tray

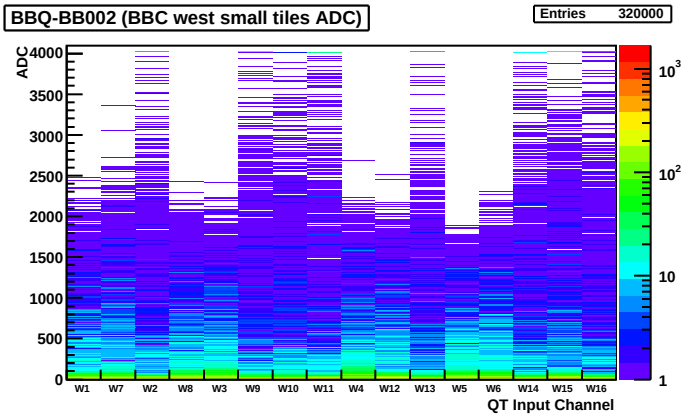

MIX-TF101
Entries 120000
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

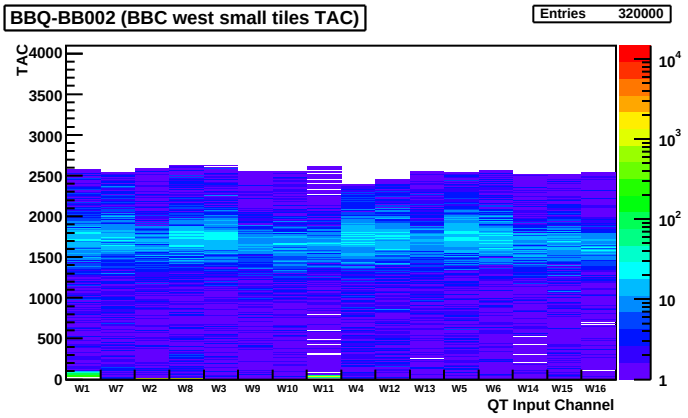

L1-TF201
Entries 20000
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

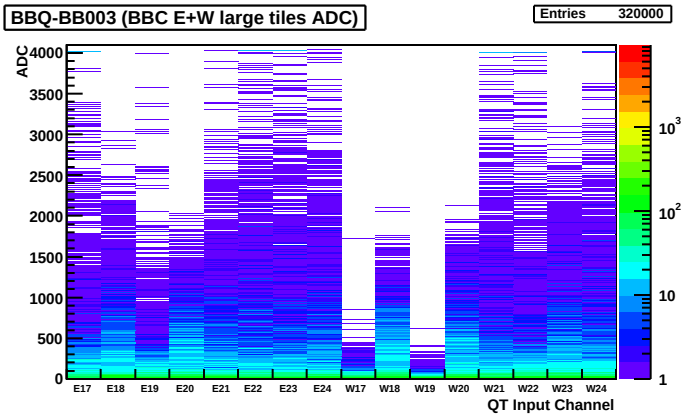

L1-TF201
Entries 120000
Threshold bits
1
0
6768
7013
6886
7032
6880
6757
13232
12987
13114
12968
13120
13243
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4

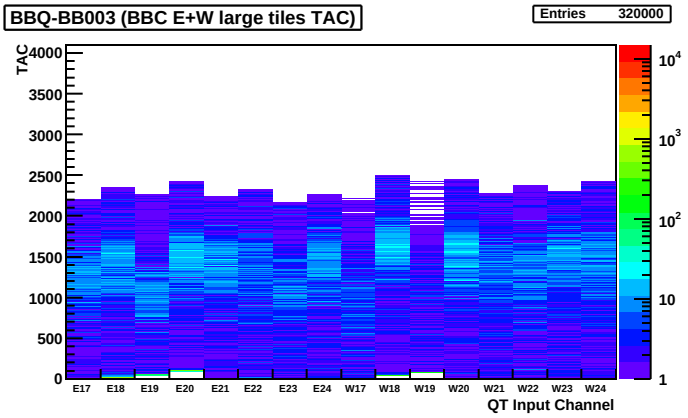

BBQ-BB001 (BBC east small tiles ADC)
Entries 320000
ADC
QT Input Channel

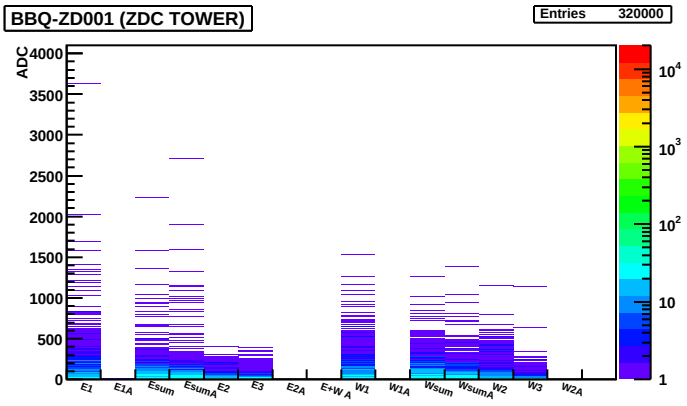

BBQ-BB001 (BBC east small tiles TAC)
Entries 320000
TAC
QT Input Channel

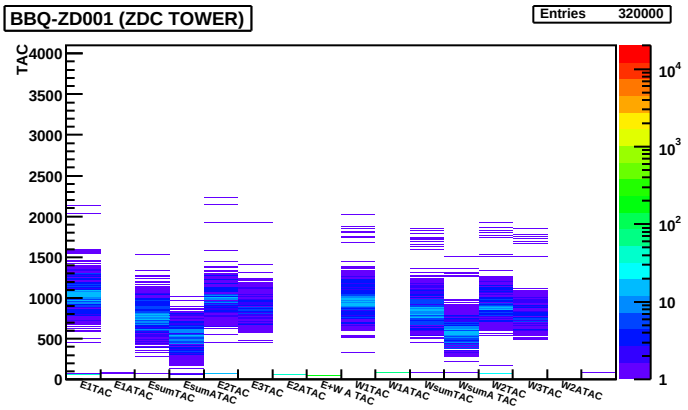

BBQ-BB002 (BBC west small tiles ADC)
Entries 320000
ADC
QT Input Channel

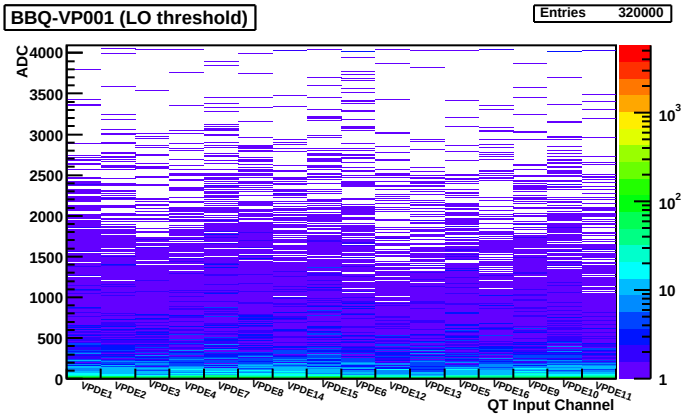

BBQ-BB002 (BBC west small tiles TAC)
Entries 320000
TAC
QT Input Channel

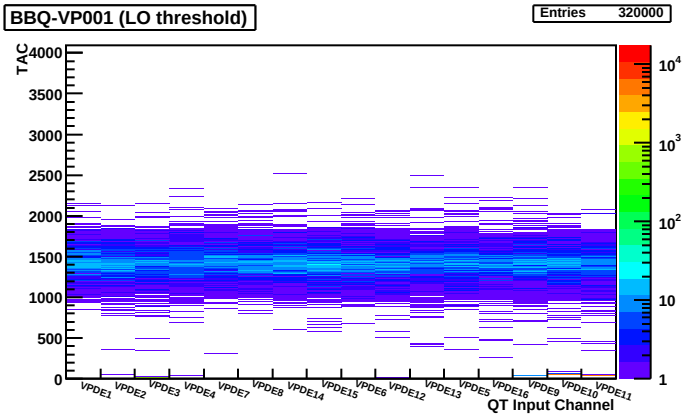

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 320000
ADC
QT Input Channel

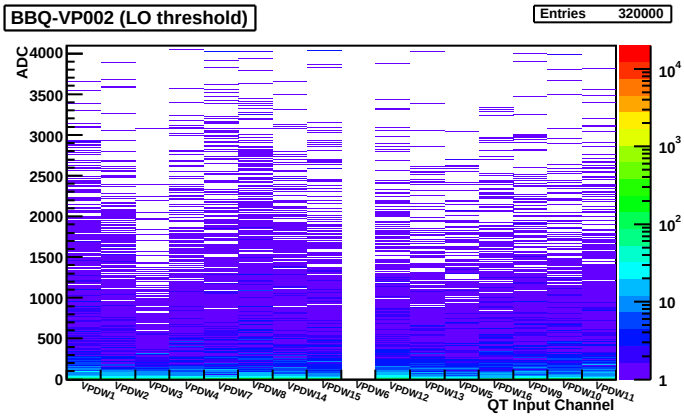

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 320000
TAC
QT Input Channel

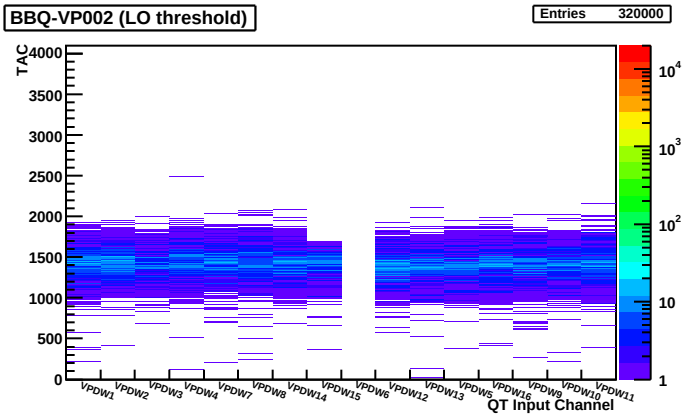

BBQ-ZD001 (ZDC TOWER)
Entries 320000
ADC

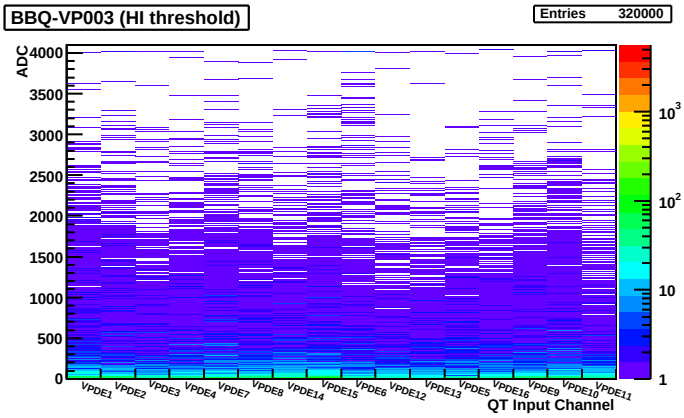

BBQ-ZD001 (ZDC TOWER)
Entries 320000
TAC

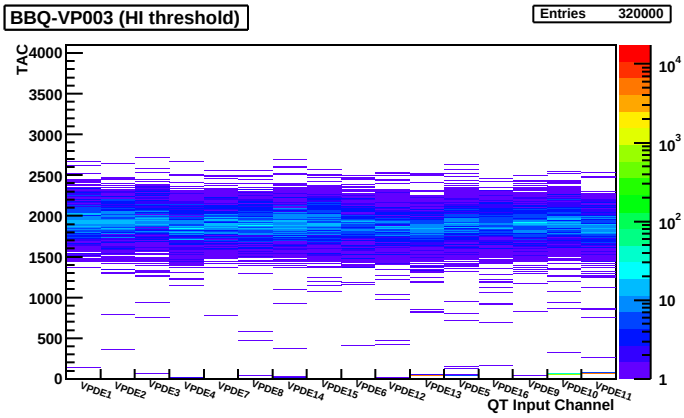

BBQ-VP001 (LO threshold)
Entries 320000
ADC
QT Input Channel

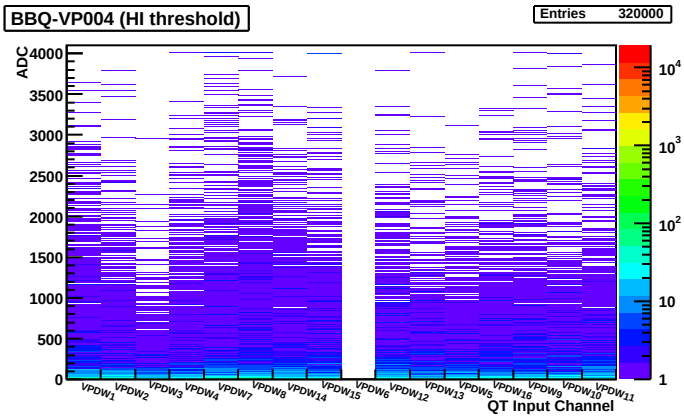

BBQ-VP001 (LO threshold)
Entries 320000
TAC
QT Input Channel

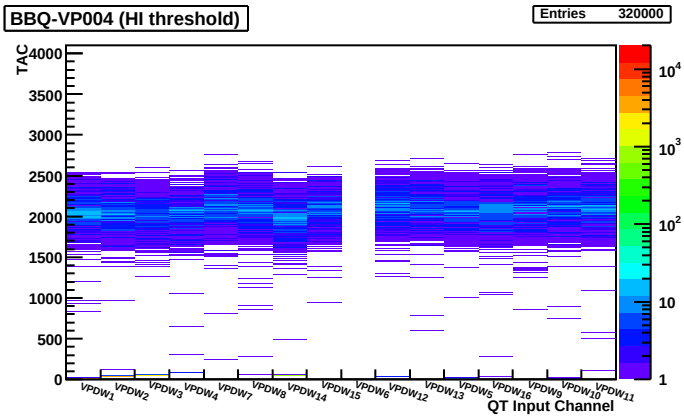

BBQ-VP002 (LO threshold)
Entries 320000
ADC
QT Input Channel

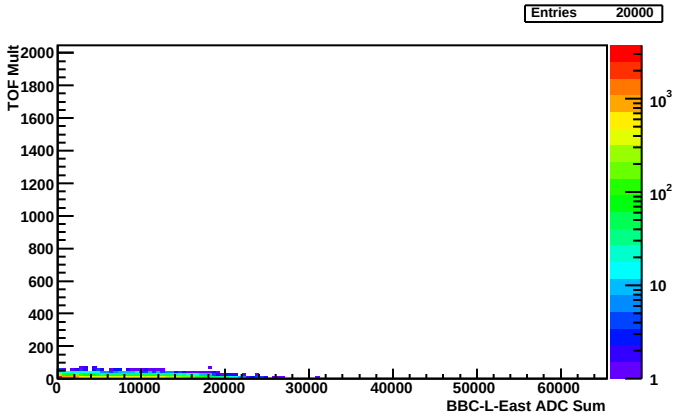

BBQ-VP002 (LO threshold)
Entries 320000
TAC
QT Input Channel

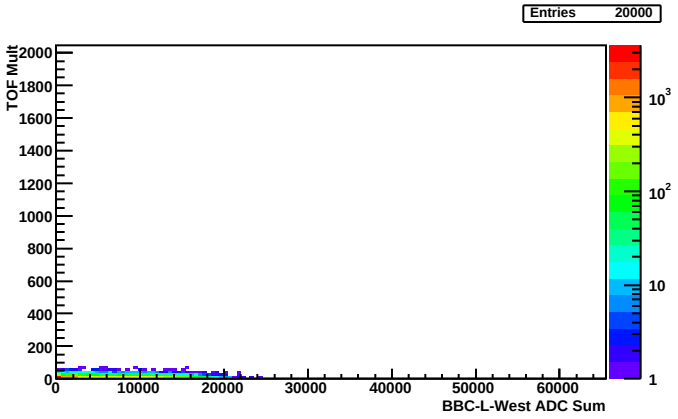

BBQ-VP003 (HI threshold)
Entries 320000
ADC
QT Input Channel

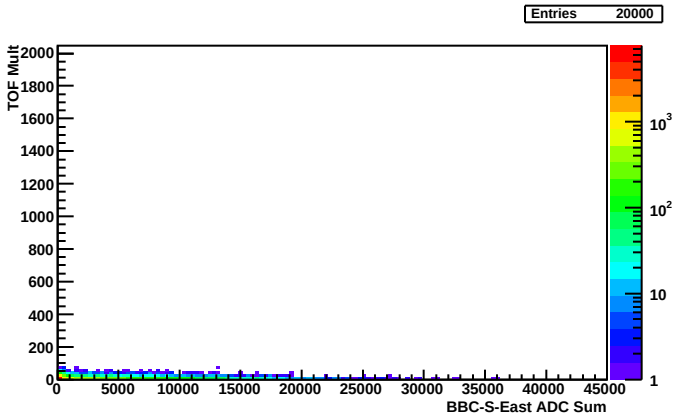

BBQ-VP003 (HI threshold)
Entries 320000
TAC
QT Input Channel

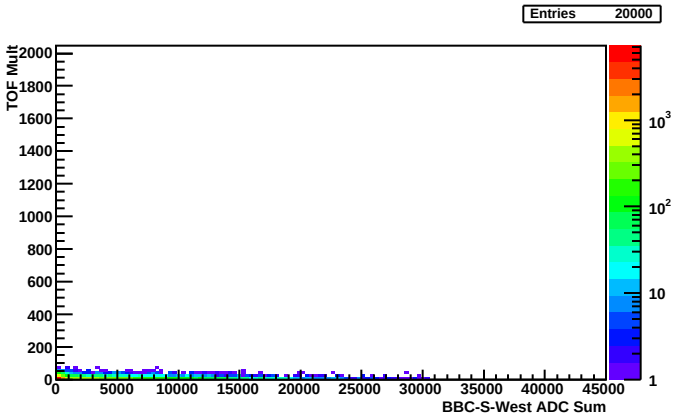

BBQ-VP004 (HI threshold)
Entries 320000
ADC
QT Input Channel

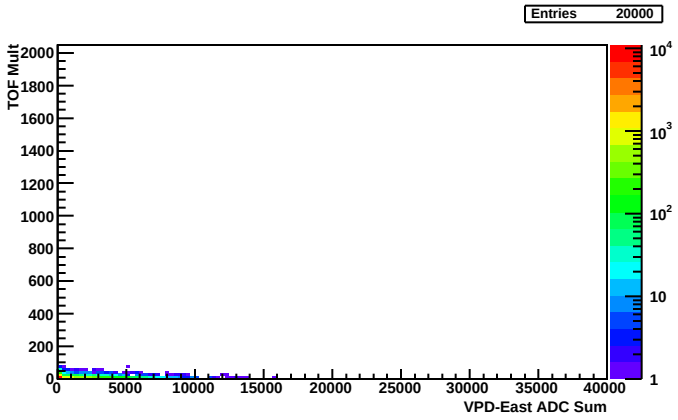

BBQ-VP004 (HI threshold)
Entries 320000
TAC
QT Input Channel

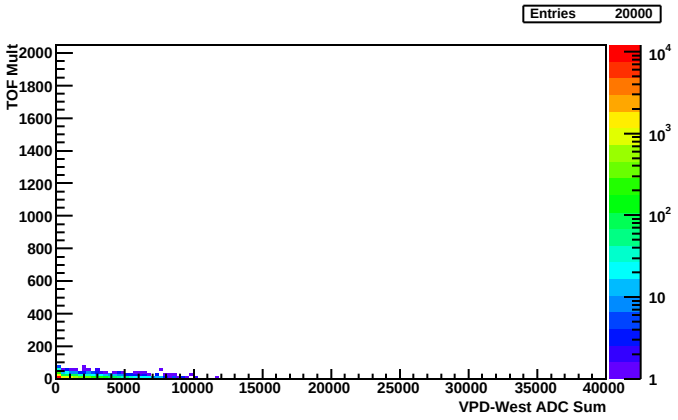

Entries 20000
TOF Mult
BBC-L-East ADC Sum

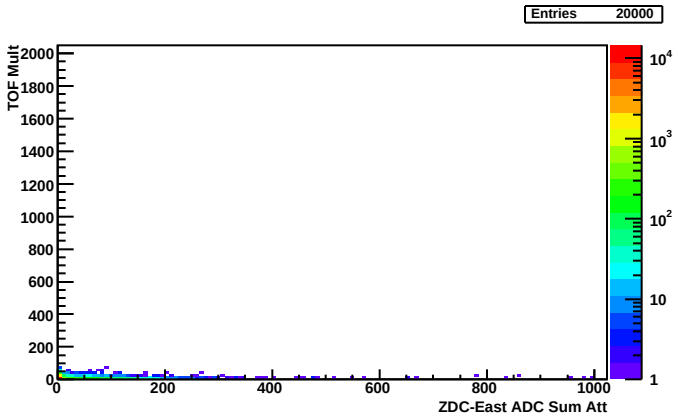

Entries 20000
TOF Mult
BBC-L-West ADC Sum

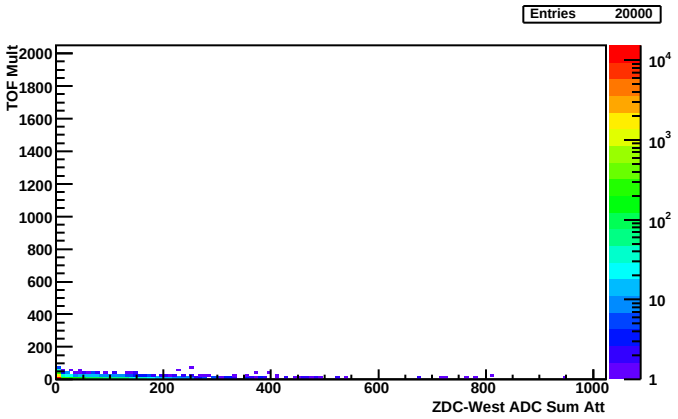

Entries 20000
TOF Mult
BBC-S-East ADC Sum

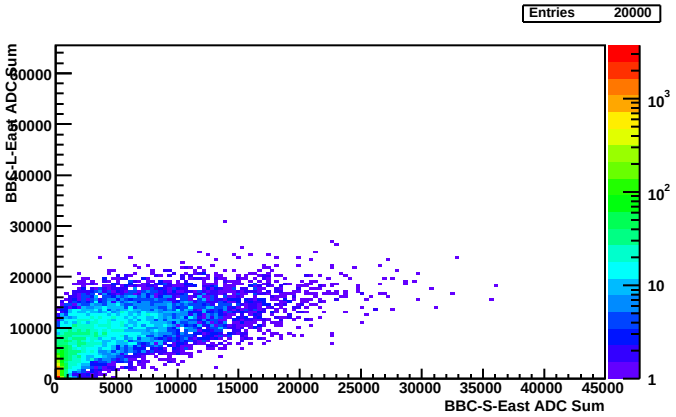

Entries 20000
TOF Mult
BBC-S-West ADC Sum

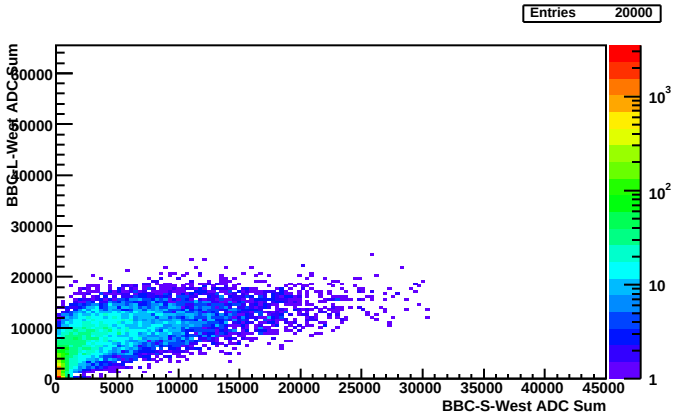

Entries 20000
TOF Mult
VPD-East ADC Sum

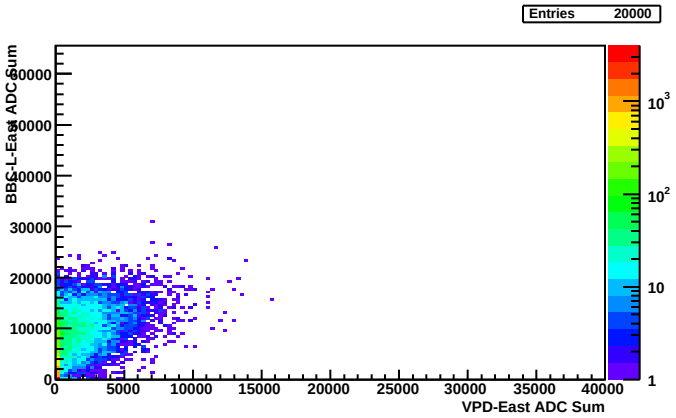

Entries 20000
TOF Mult
VPD-West ADC Sum

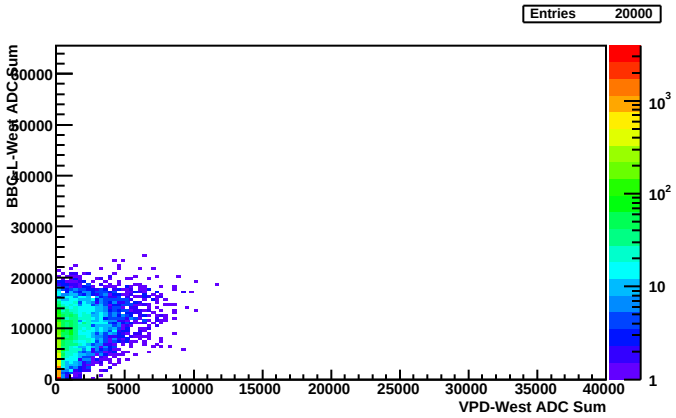

Entries 20000
TOF Mult
ZDC-East ADC Sum Att

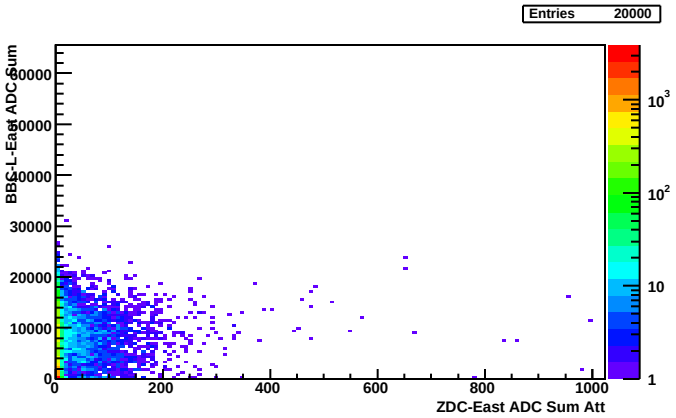

Entries 20000
TOF Mult
ZDC-West ADC Sum Att

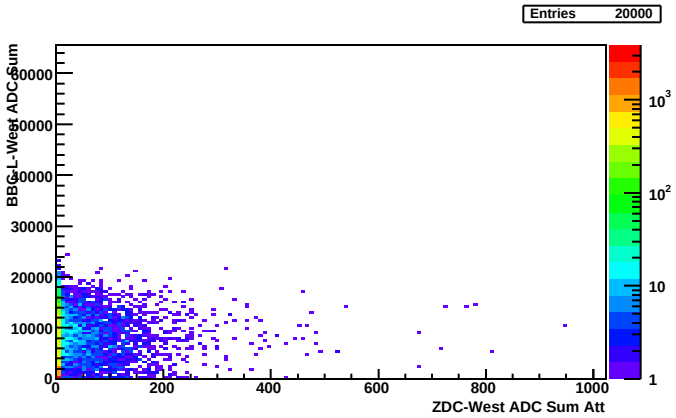

Entries 20000
BBC-L-East ADC Sum
BBC-S-East ADC Sum

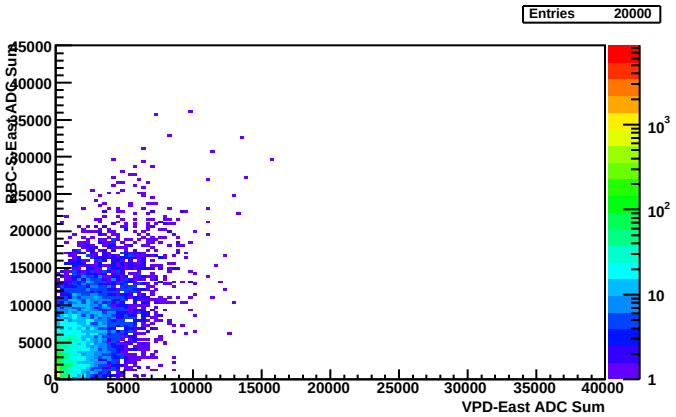

Entries 20000
BBC-L-West ADC Sum
BBC-S-West ADC Sum

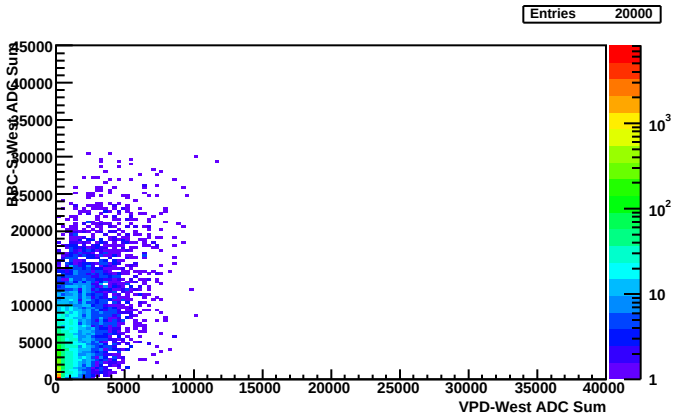

Entries 20000
BBC-L-East ADC Sum
VPD-East ADC Sum

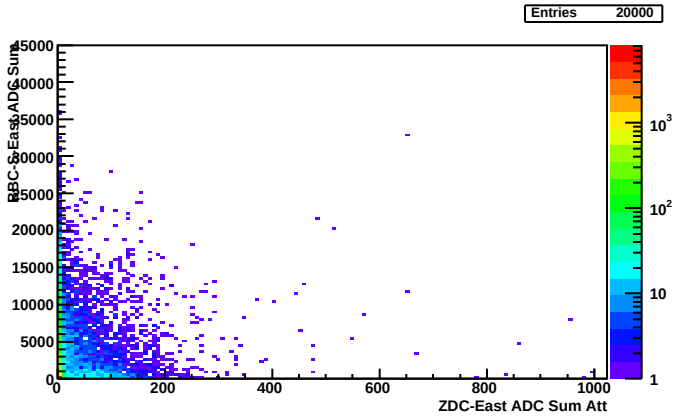

Entries 20000
BBC-L-West ADC Sum
VPD-West ADC Sum

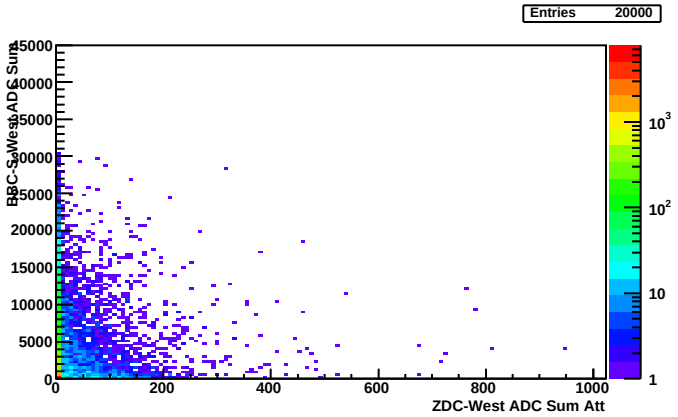

Entries 20000
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

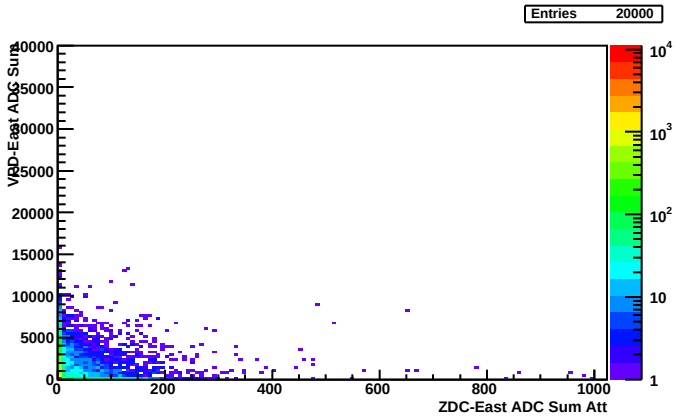

Entries 20000
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

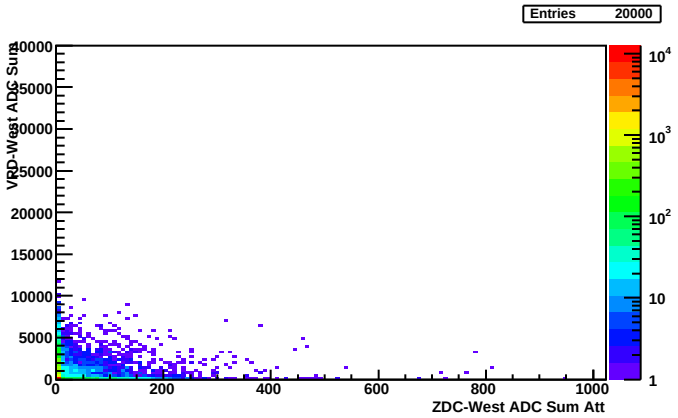

Entries 20000
BBC-S-East ADC Sum
VPD-East ADC Sum


Entries 20000
BBC-S-West ADC Sum
VPD-West ADC Sum


Entries 20000
BBC-S-East ADC Sum
ZDC-East ADC Sum Att


Entries 20000
BBC-S-West ADC Sum
ZDC-West ADC Sum Att


Entries 20000
VPD-East ADC Sum
ZDC-East ADC Sum Att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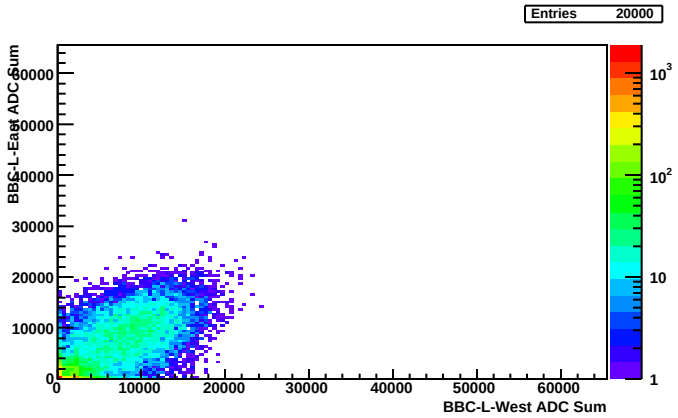
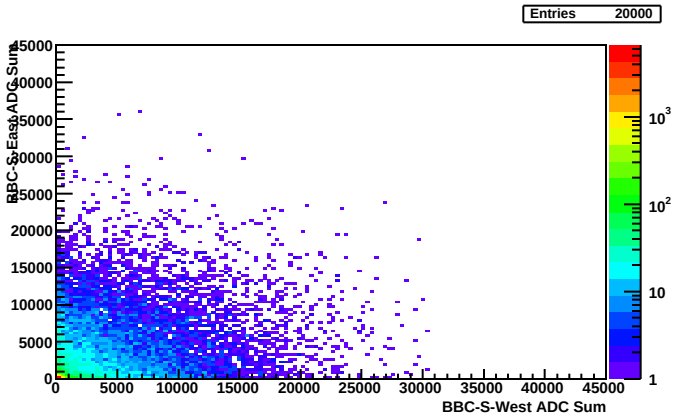
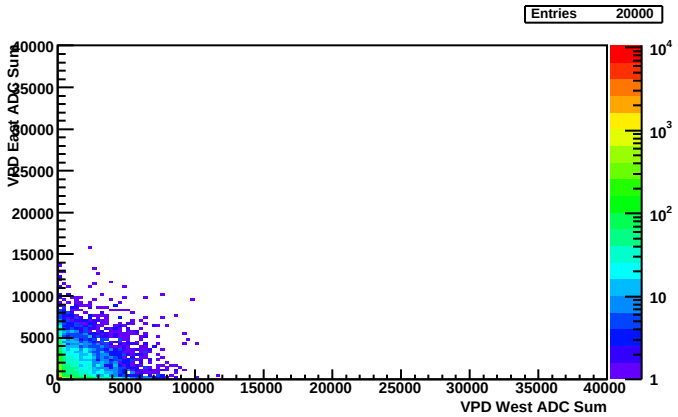
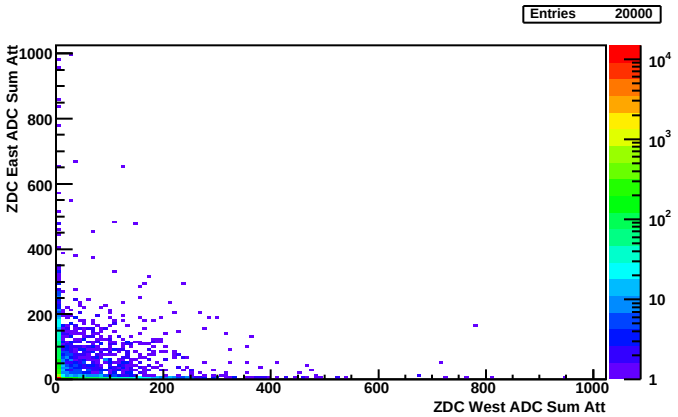
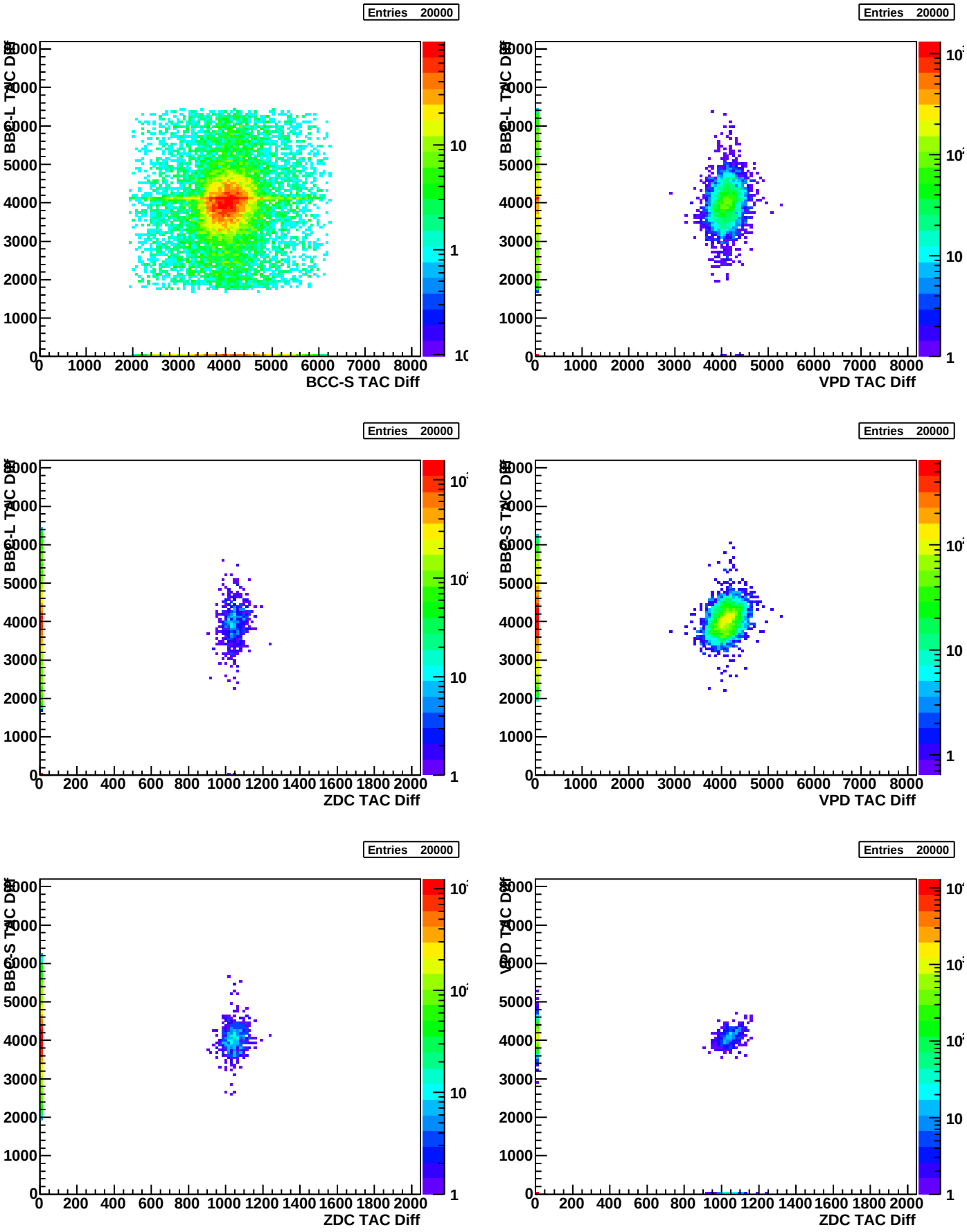
VPD-West ADC Sum
ZDC-West ADC Sum Att

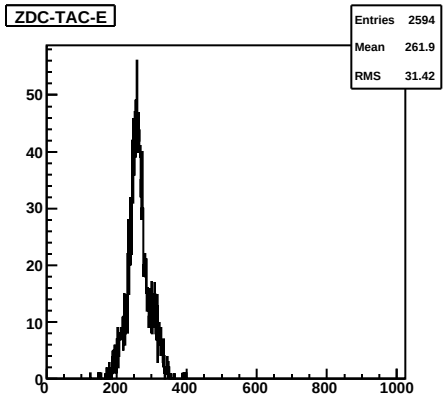

Entries 20000
BBC-L-East ADC Sum
BBC-L-West ADC Sum

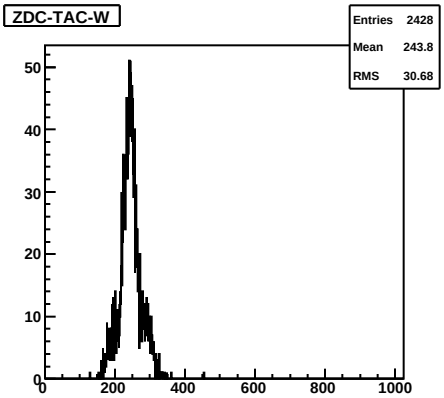

Entries 20000
BBC-S-East ADC Sum
BBC-S-West ADC Sum

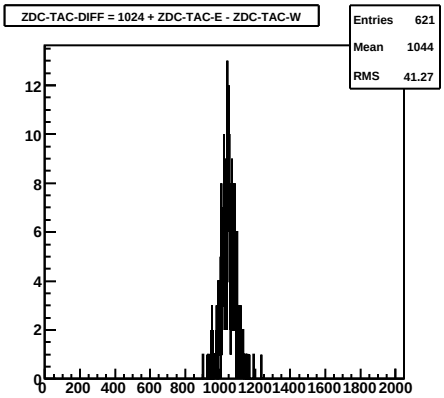

Entries 20000
VPD East ADC Sum
VPD West ADC Sum

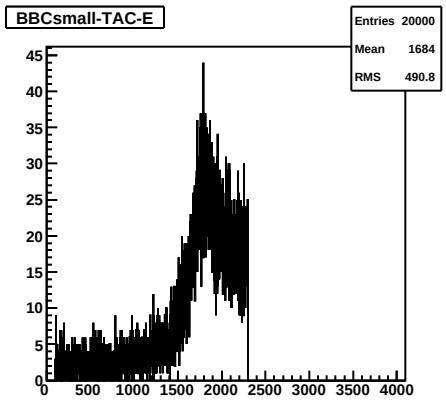

Entries 20000
ZDC East ADC Sum Att
ZDC West ADC Sum Att

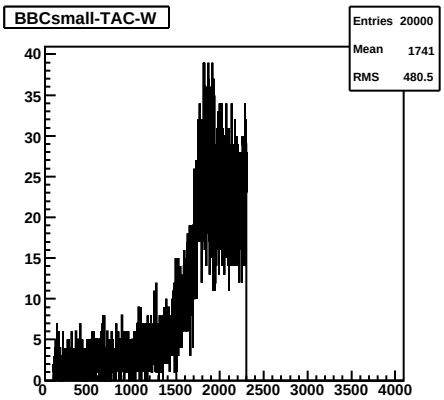

Entries 20000
BBC-L TAC Diff
BCC-S TAC Diff
Entries 20000
BBC-L TAC Diff
VPD TAC Diff
Entries 20000
BBC-L TAC Diff
ZDC TAC Diff
Entries 20000
BBC-S TAC Diff
VPD TAC Diff
Entries 20000
BBC-S TAC Diff
ZDC TAC Diff
Entries 20000
VPD TAC Diff
ZDC TAC Diff

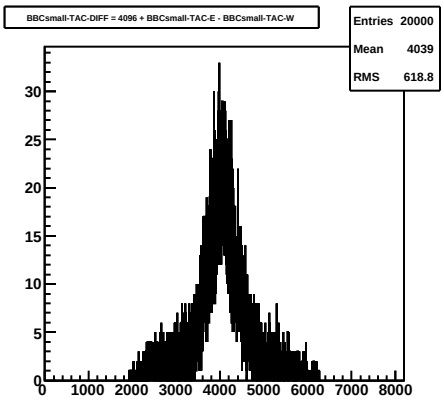

ZDC-TAC-E
Entries 2594
Mean 261.9
RMS 31.42

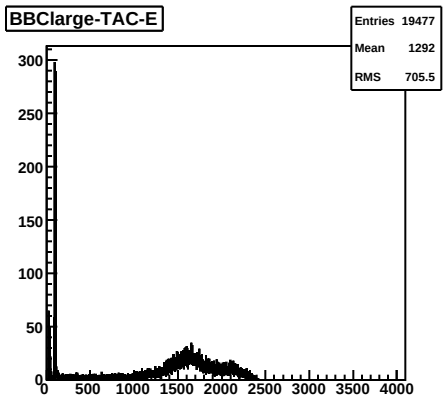

ZDC-TAC-W
Entries 2428
Mean 243.8
RMS 30.68

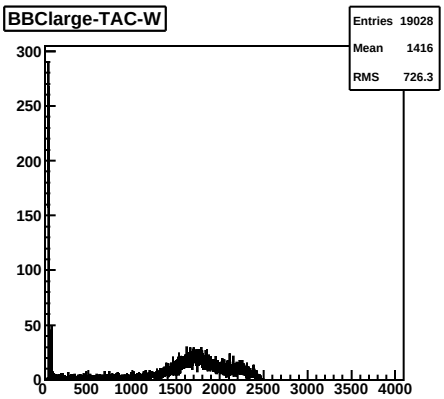

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 621
Mean 1044
RMS 41.27

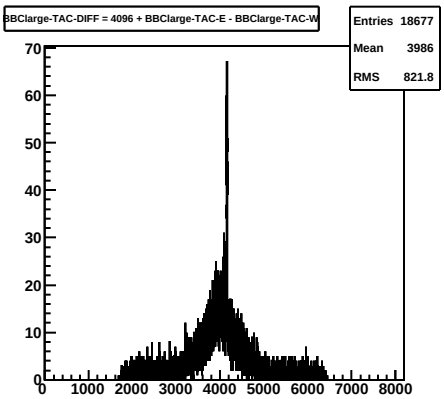

BBCsmall-TAC-E
Entries 20000
Mean 1684
RMS 490.8

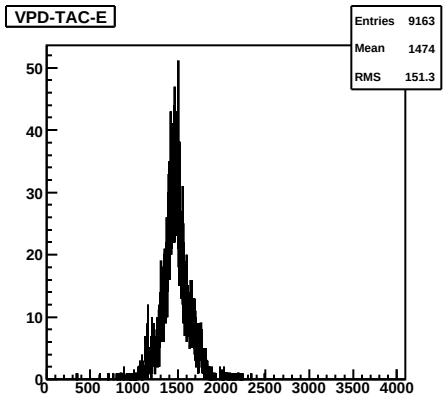

BBCsmall-TAC-W
Entries 20000
Mean 1741
RMS 480.5

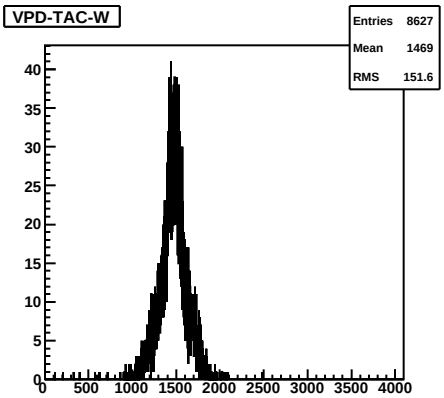

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 20000
Mean 4039
RMS 618.8

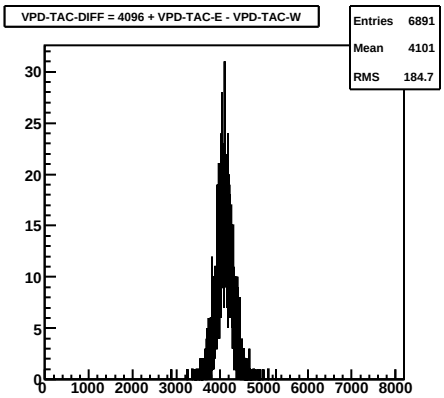

BBClarge-TAC-E
Entries 19477
Mean 1292
RMS 705.5

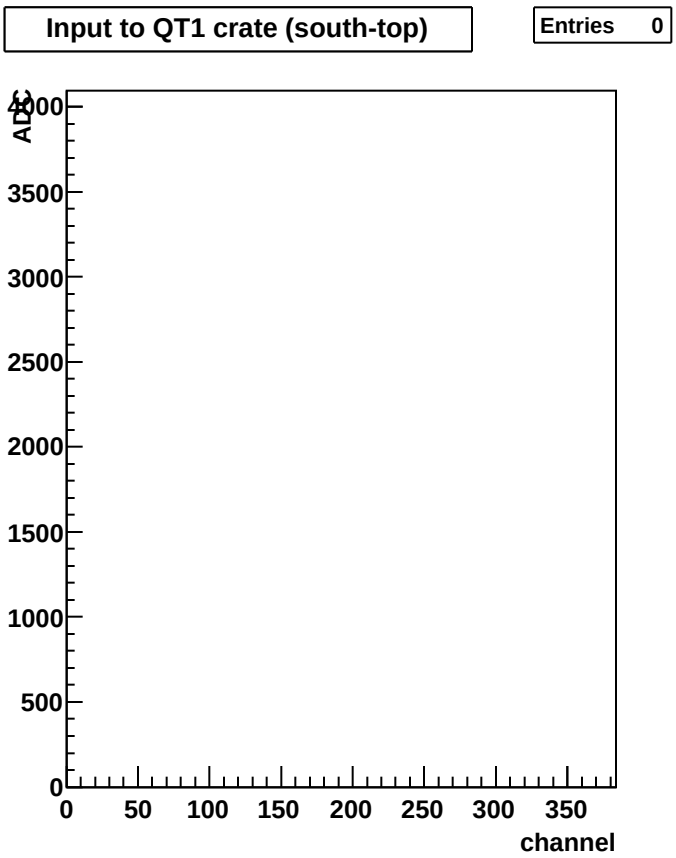

BBClarge-TAC-W
Entries 19028
Mean 1416
RMS 726.3

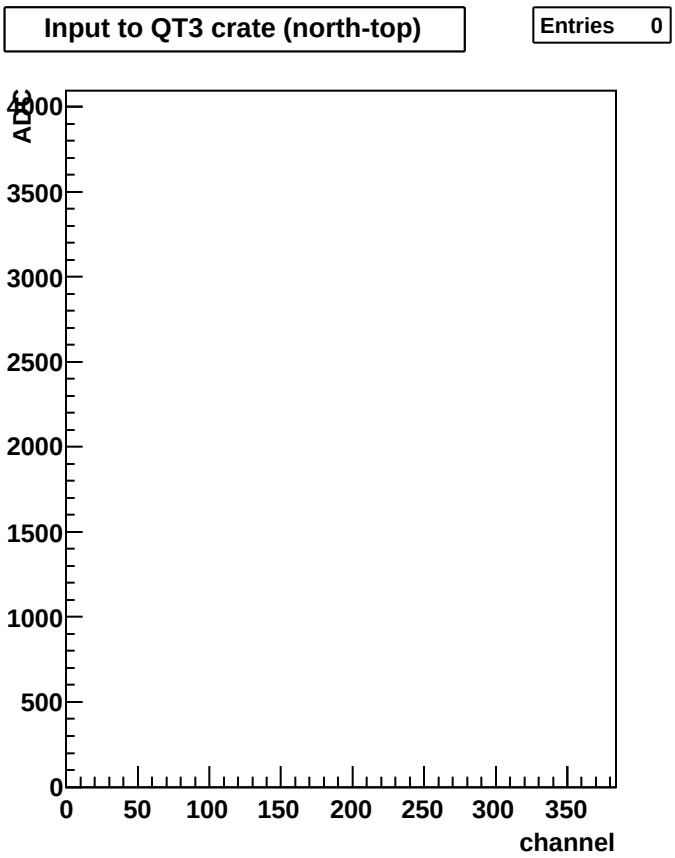

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 18677
Mean 3986
RMS 821.8

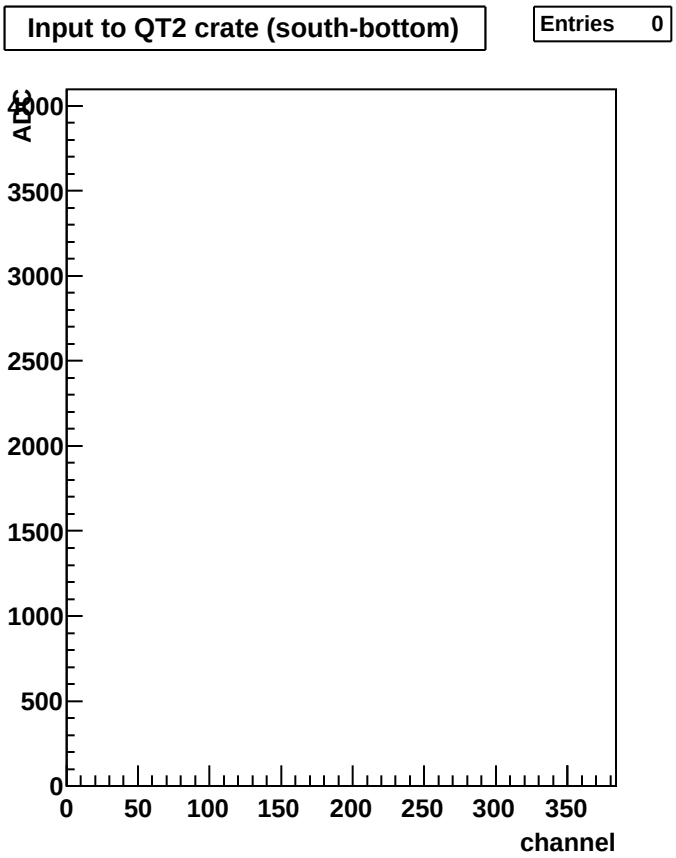

VPD-TAC-E
Entries 9163
Mean 1474
RMS 151.3

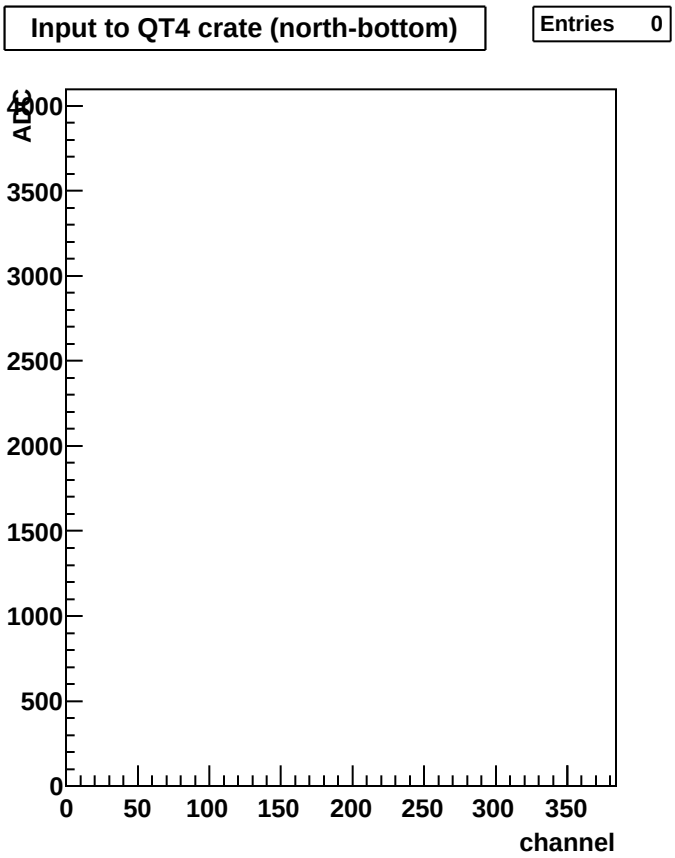

VPD-TAC-W
Entries 8627
Mean 1469
RMS 151.6

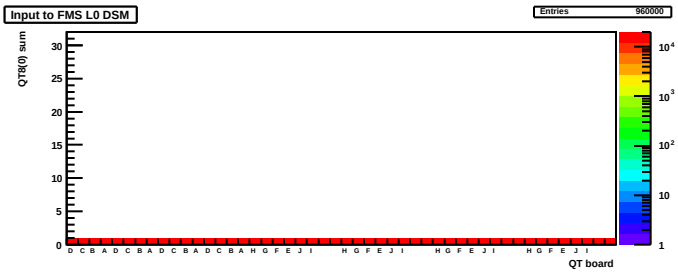

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 6891
Mean 4101
RMS 184.7

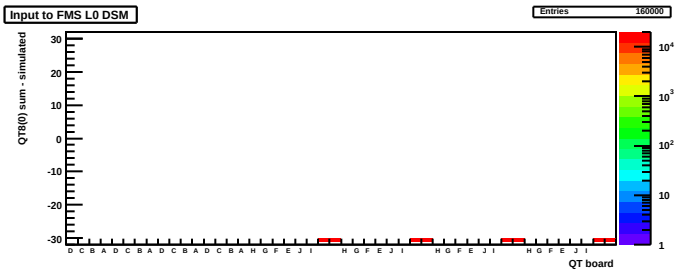

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

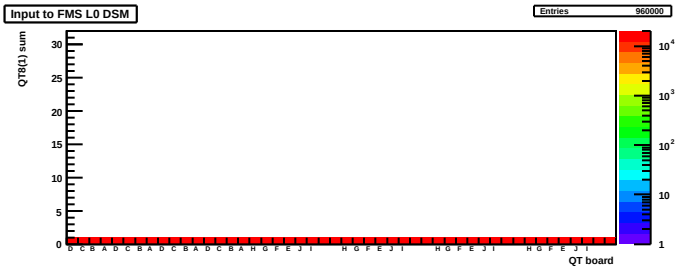

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

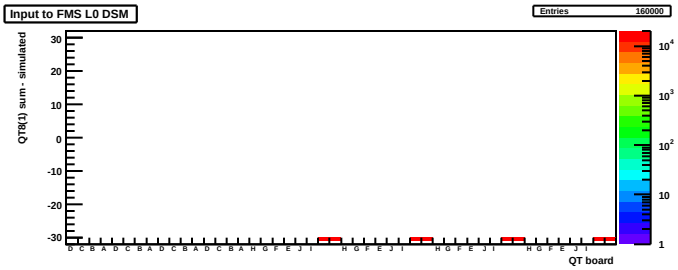

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

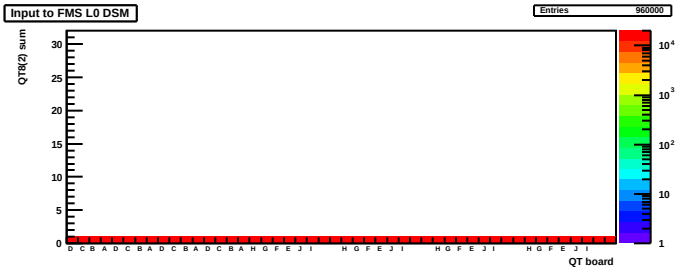

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

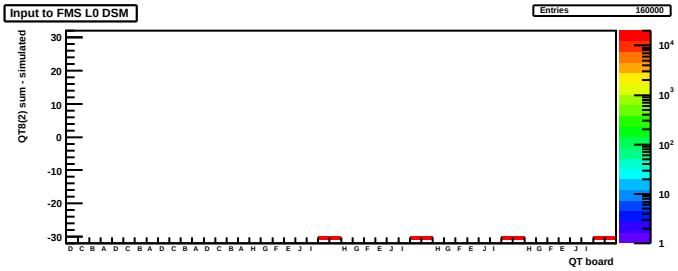

Input to FMS L0 DSM
Entries 960000
QT8(0) sum
QT board

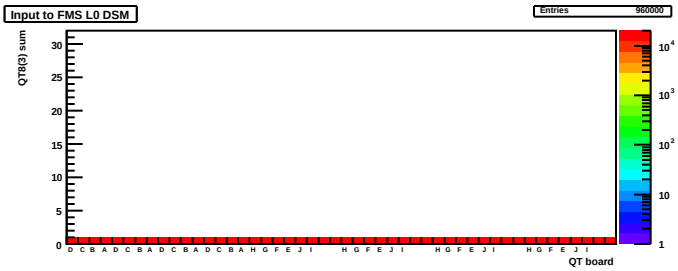

Input to FMS L0 DSM
Entries 160000
QT8(0) sum - simulated
QT board

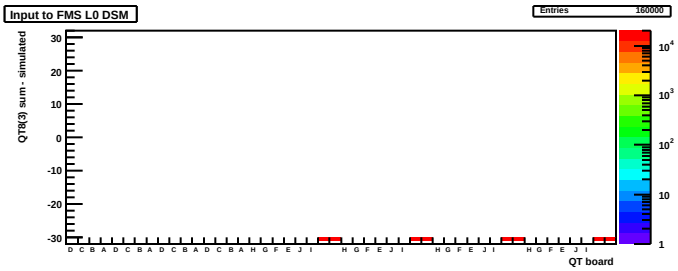

Input to FMS L0 DSM
Entries 960000
QT8(1) sum
QT board

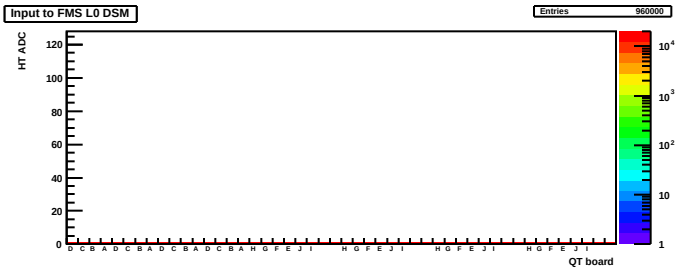

Input to FMS L0 DSM
Entries 160000
QT8(1) sum - simulated
QT board

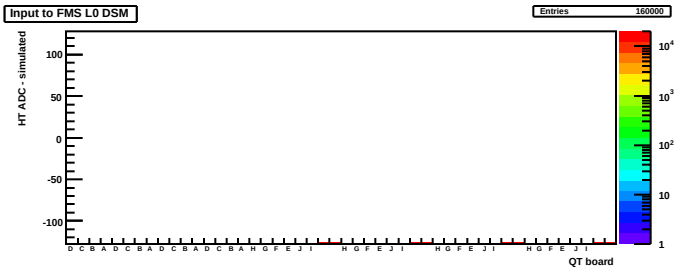

Input to FMS L0 DSM
Entries 960000
QT8(2) sum
QT board

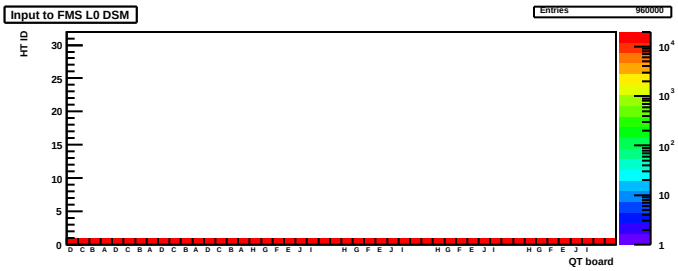

Input to FMS L0 DSM
Entries 160000
QT8(2) sum - simulated
QT board

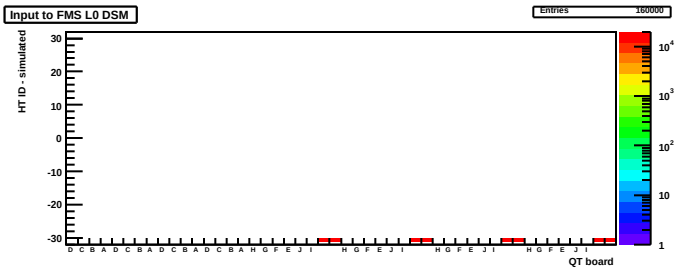

Input to FMS L0 DSM
Entries 960000
QT8(3) sum
QT board

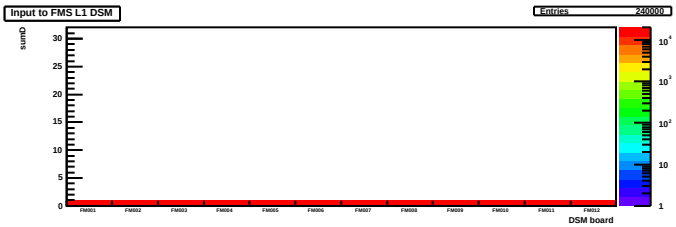

Input to FMS L0 DSM
Entries 160000
QT8(3) sum - simulated
QT board

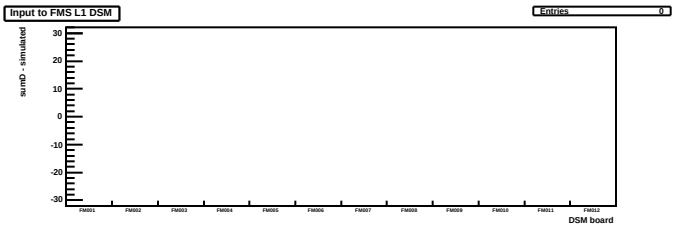

Input to FMS L0 DSM
Entries 960000
HT ADC
QT board

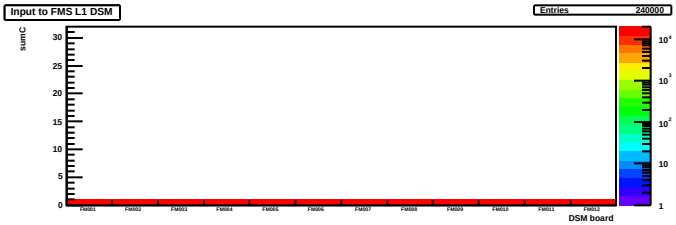

Input to FMS L0 DSM
Entries 160000
HT ADC - simulated
QT board

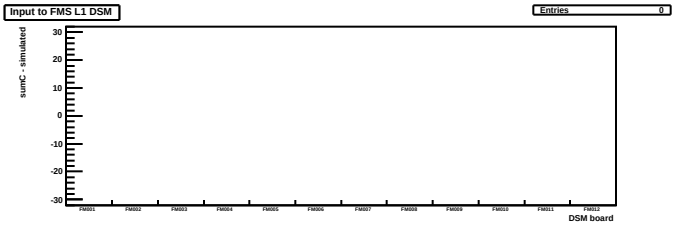

Input to FMS L0 DSM
Entries 960000
HT ID
QT board

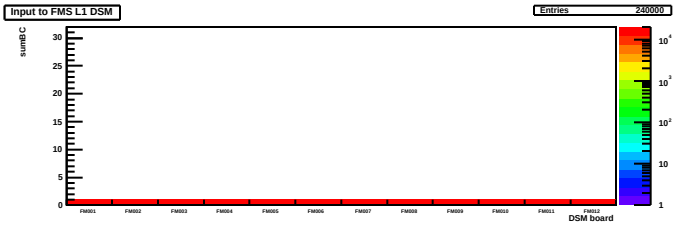

Input to FMS L0 DSM
Entries 160000
HT ID - simulated
QT board

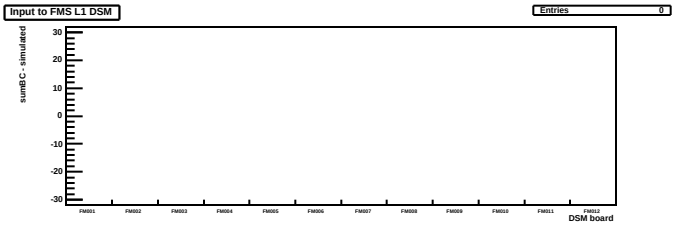

Input to FMS L1 DSM
Entries 240000
sumD
DSM board

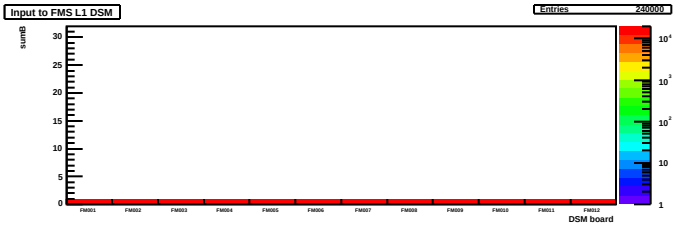

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

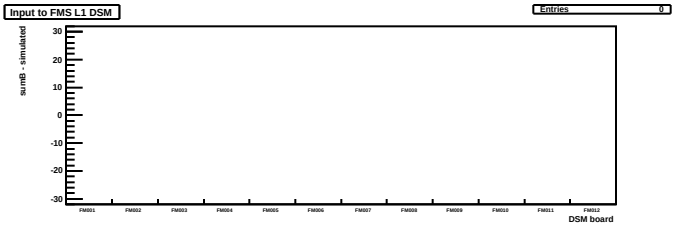

Input to FMS L1 DSM
Entries 240000
sumC
DSM board

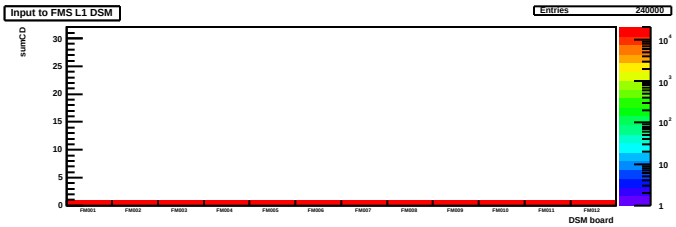

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

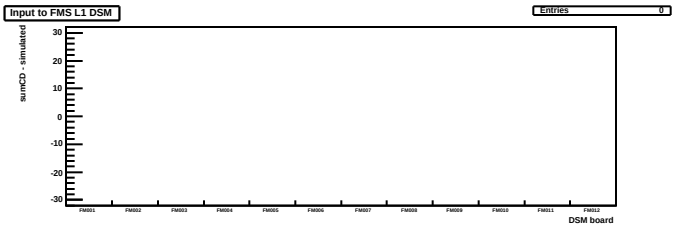

Input to FMS L1 DSM
Entries 240000
sumBC
DSM board

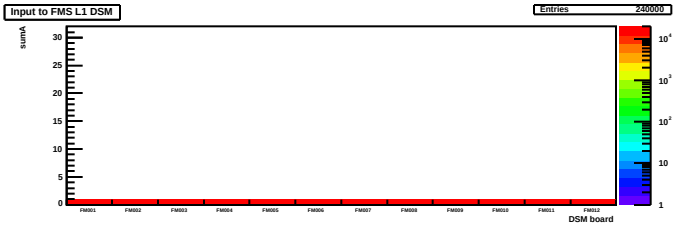

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

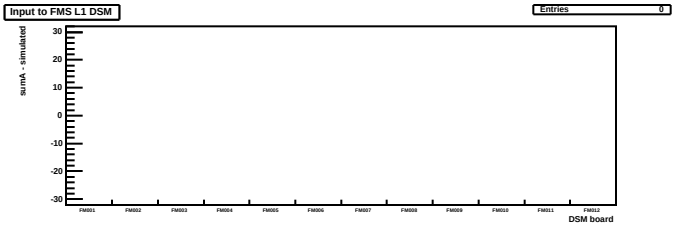

Input to FMS L1 DSM
Entries 240000
sumB
DSM board

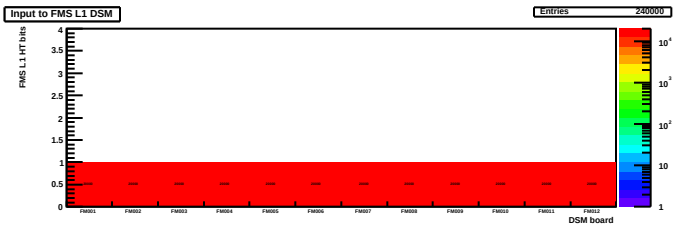

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

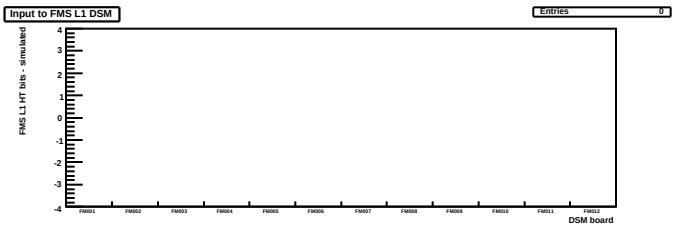

Input to FMS L1 DSM
Entries 240000
sumCD
DSM board

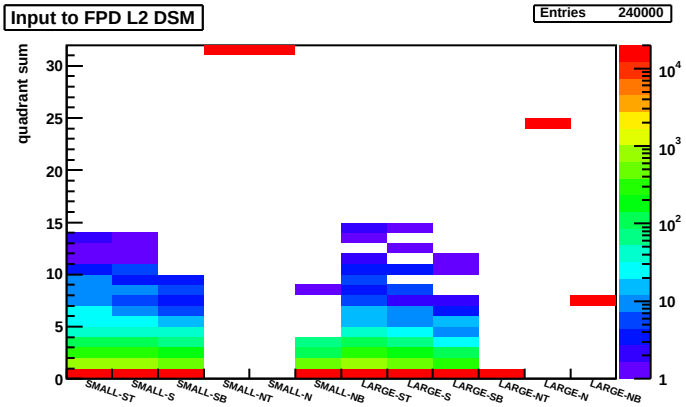

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

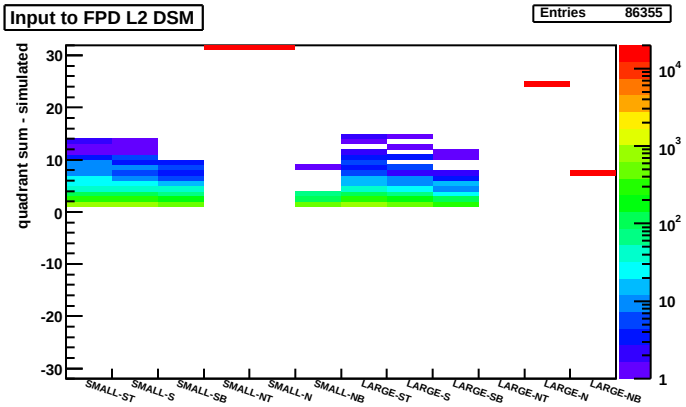

Input to FMS L1 DSM
Entries 240000
sumA
DSM board

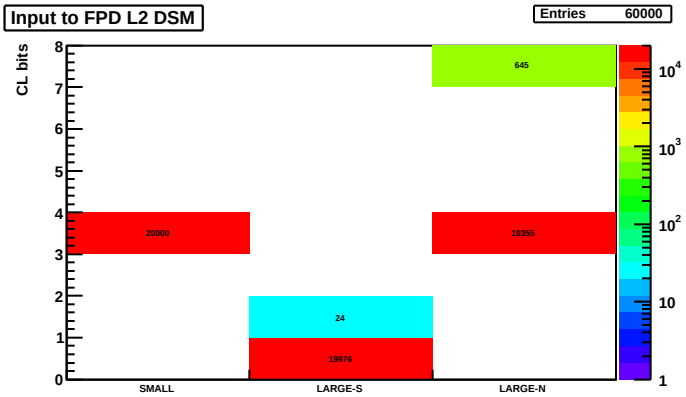

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

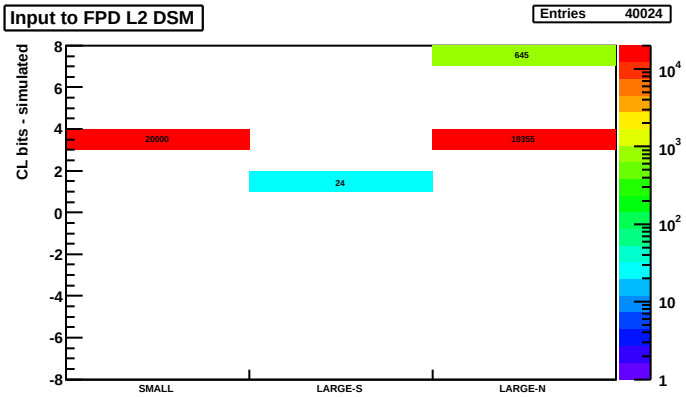

Input to FMS L1 DSM
Entries 240000
FMS L1 HT bits
DSM board

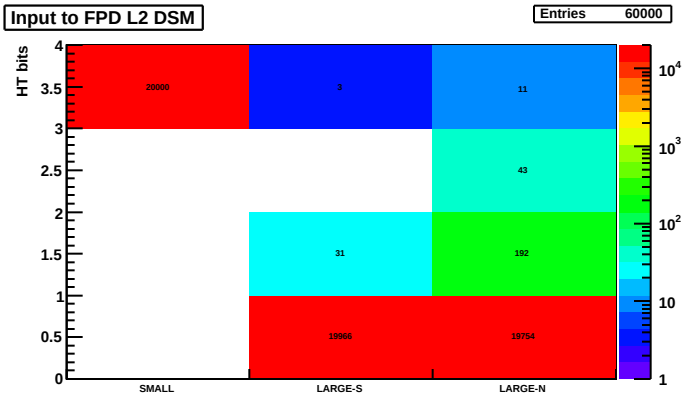

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

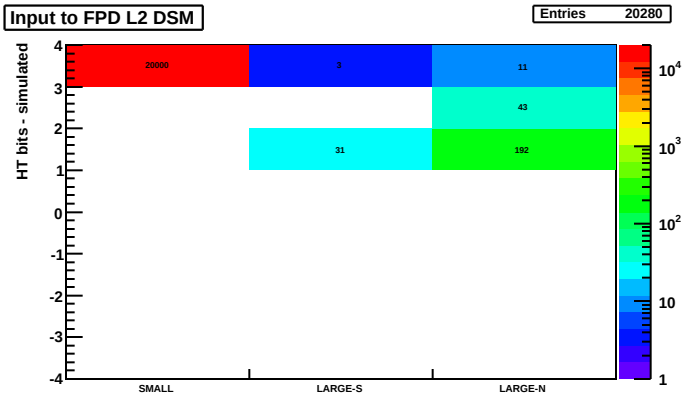

Input to FPD L2 DSM
Entries 240000
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

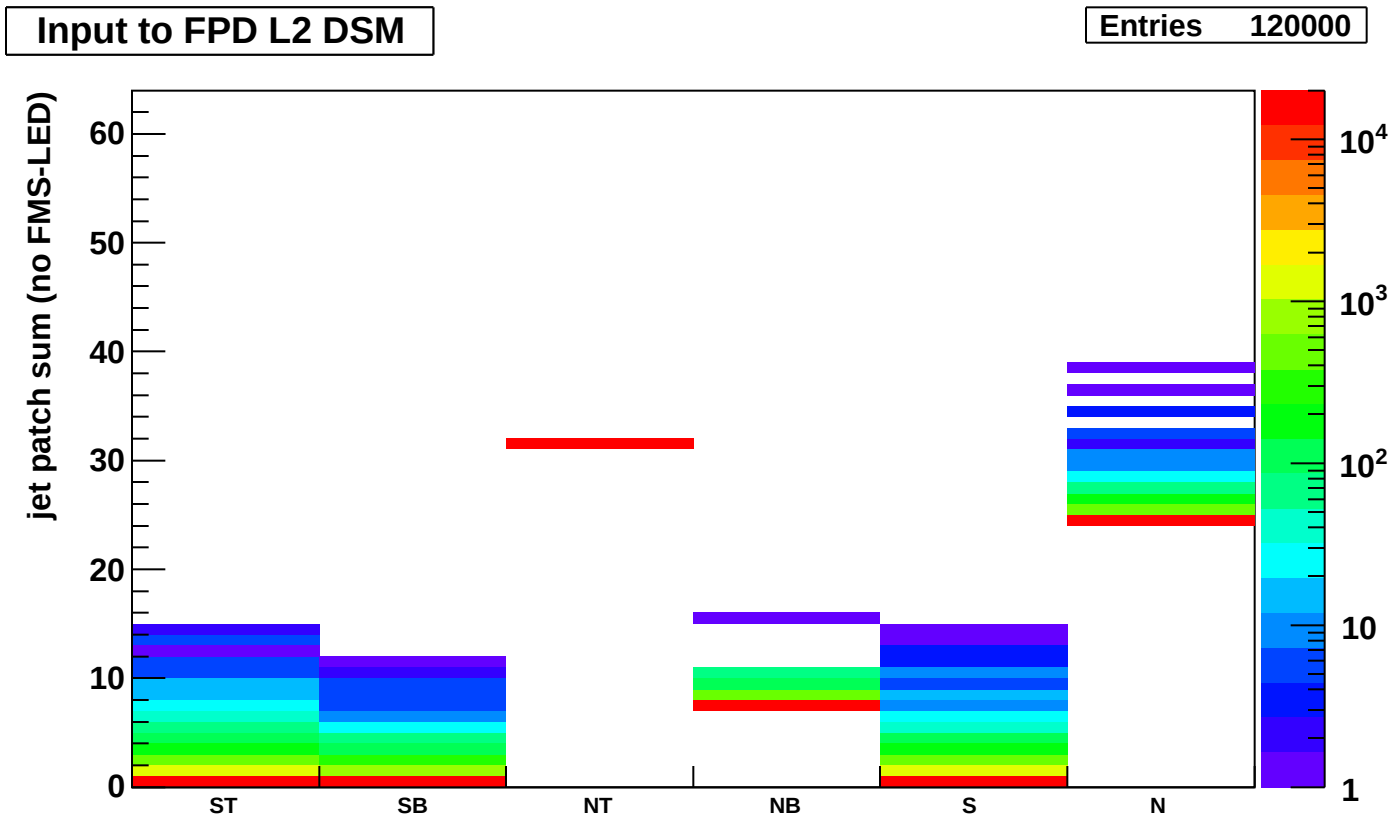

Input to FPD L2 DSM
Entries 86355
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

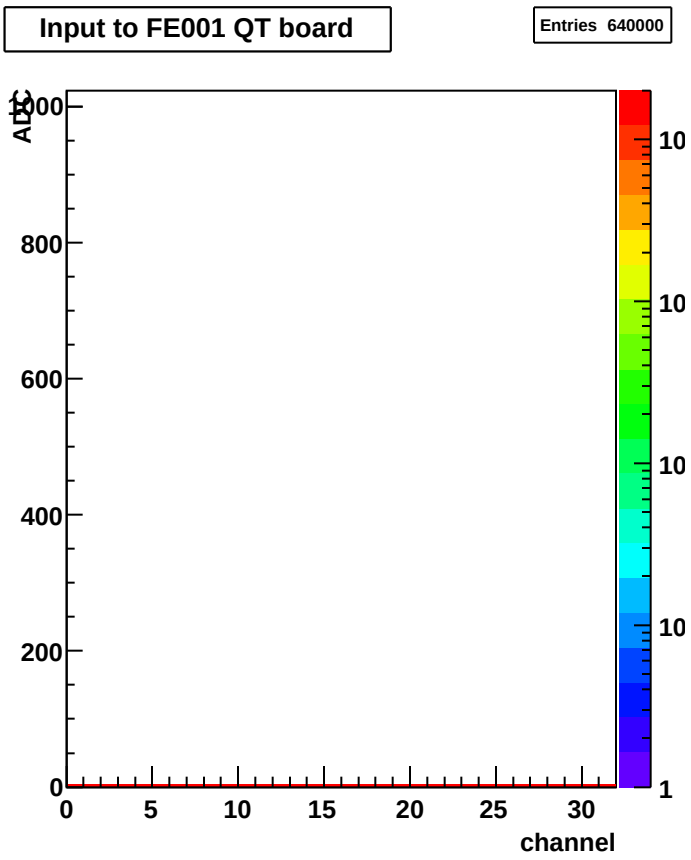

Input to FPD L2 DSM
Entries 60000
CL bits
20000
24
19976
645
19355
SMALL
LARGE-S
LARGE-N

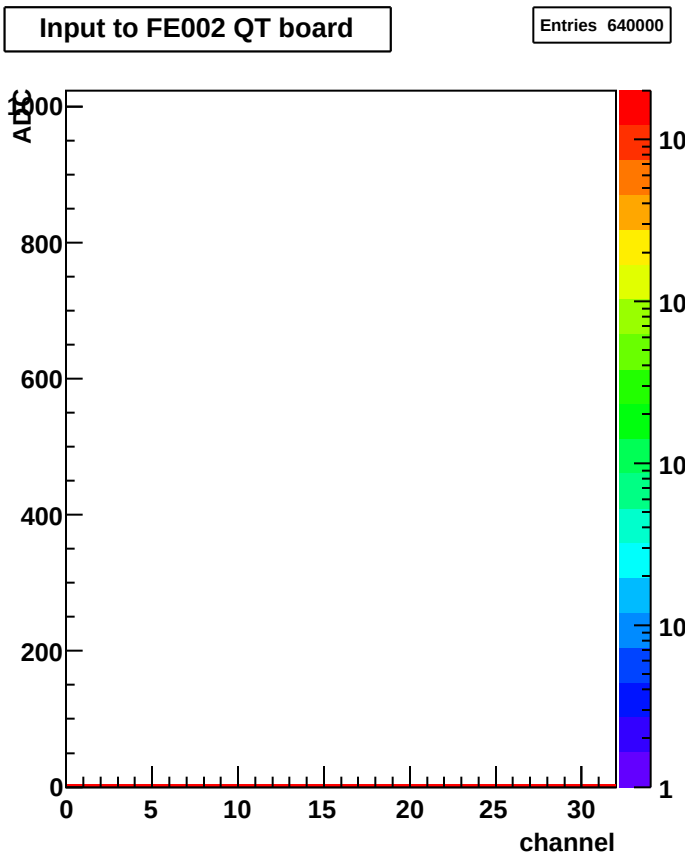

Input to FPD L2 DSM
Entries 40024
CL bits - simulated
20000
24
645
19355
SMALL
LARGE-S
LARGE-N

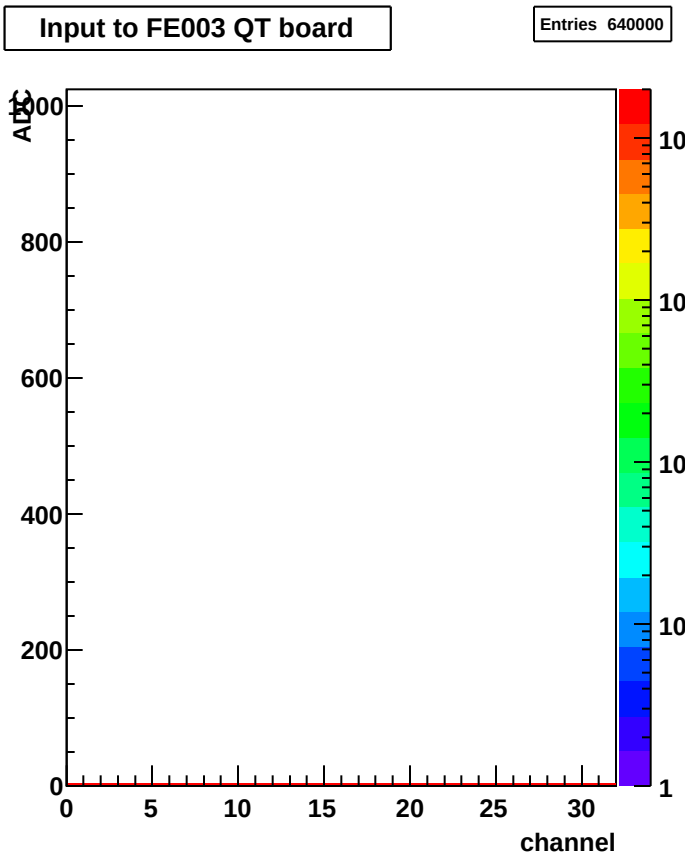

Input to FPD L2 DSM
Entries 60000
HT bits
20000
3
11
43
31
192
19966
19754
SMALL
LARGE-S
LARGE-N

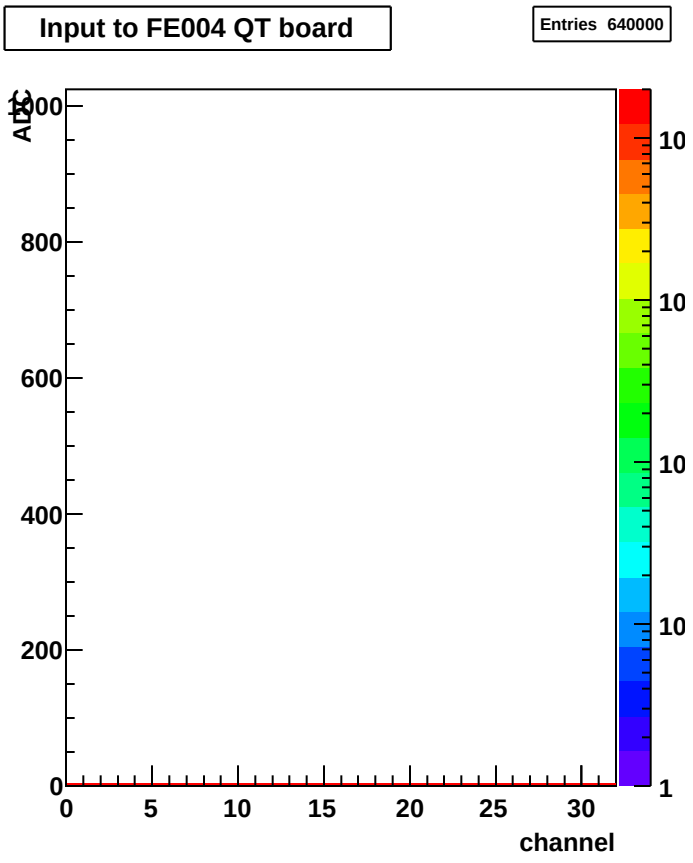

Input to FPD L2 DSM
Entries 20280
HT bits - simulated
20000
3
11
43
31
192
SMALL
LARGE-S
LARGE-N

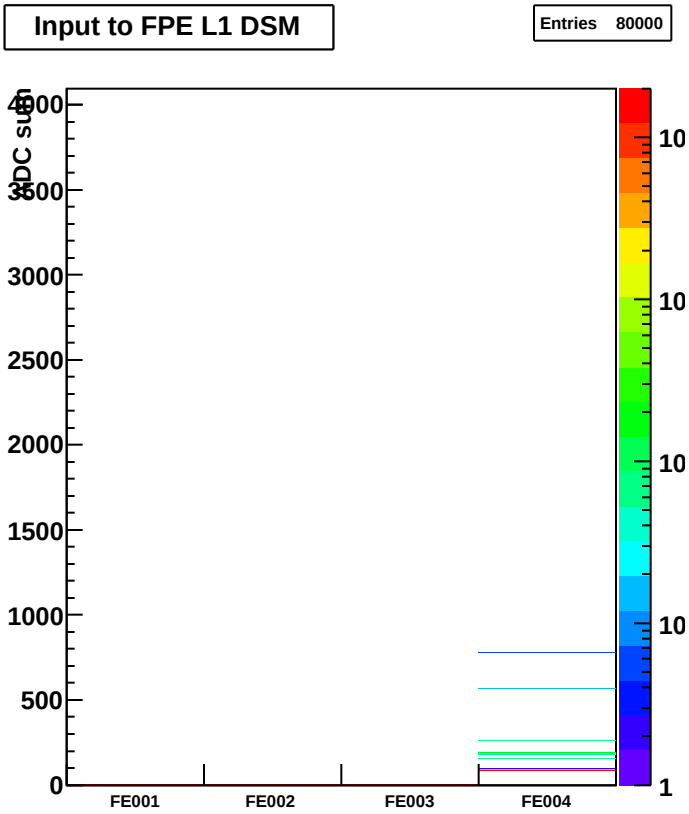

Input to FPD L2 DSM
Entries 120000
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

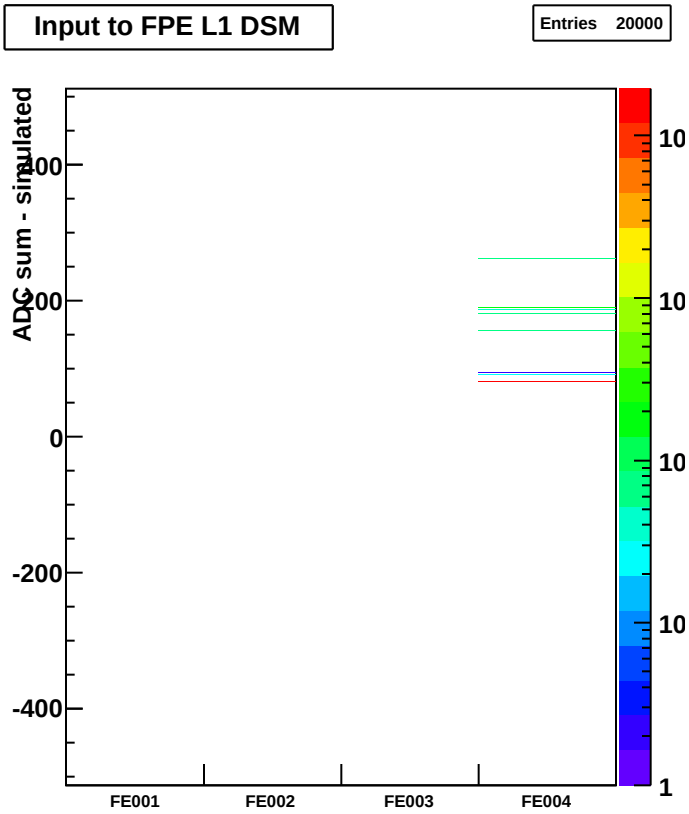

Input to FE001 QT board
Entries 640000
ADC
channel

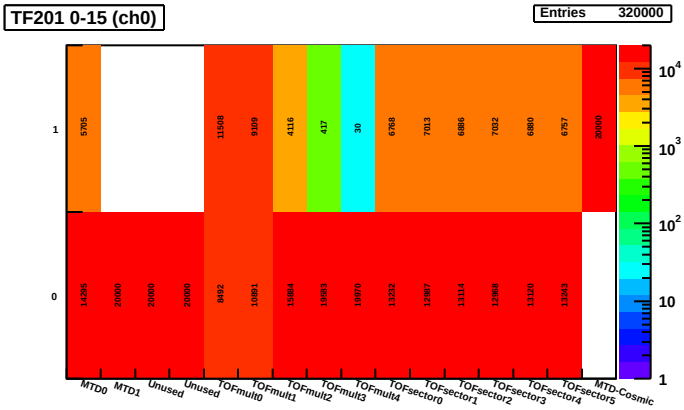

Input to FE002 QT board
Entries 640000
ADC
channel

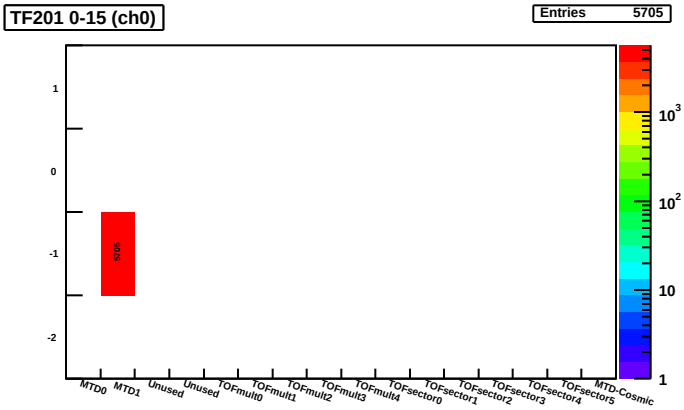

Input to FE003 QT board
Entries 640000
ADC
channel

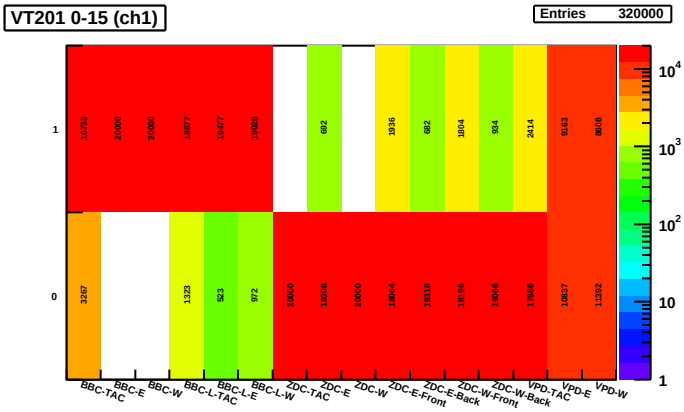

Input to FE004 QT board
Entries 640000
ADC
channel

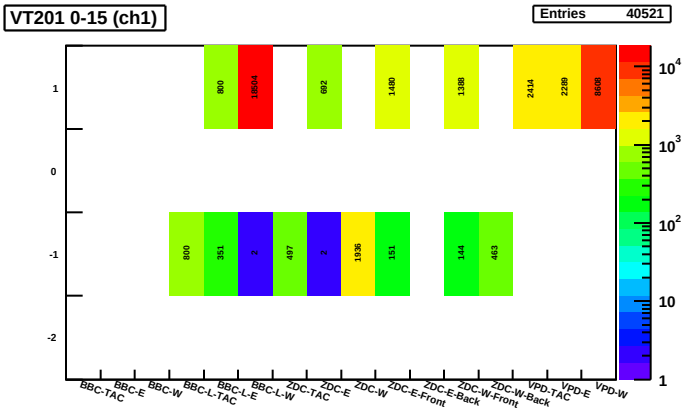

Input to FPE L1 DSM
Entries 80000
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1

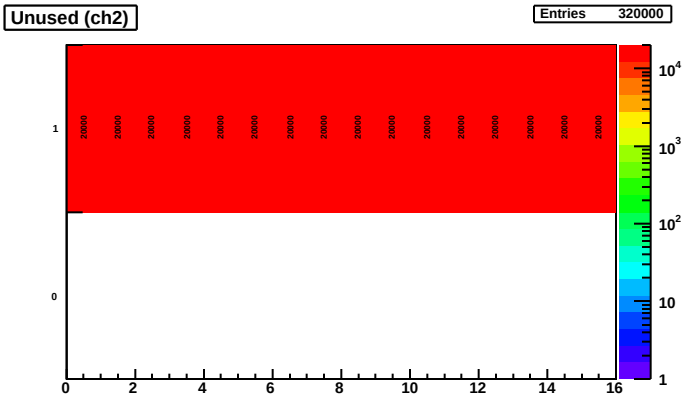

Input to FPE L1 DSM
Entries 20000
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1

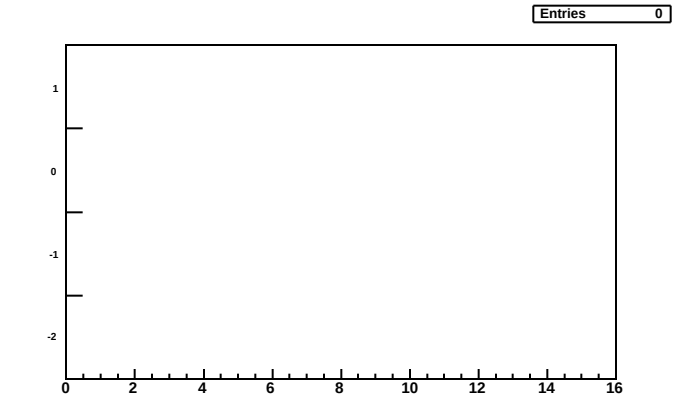

TF201 0-15 (ch0)
Entries 320000
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

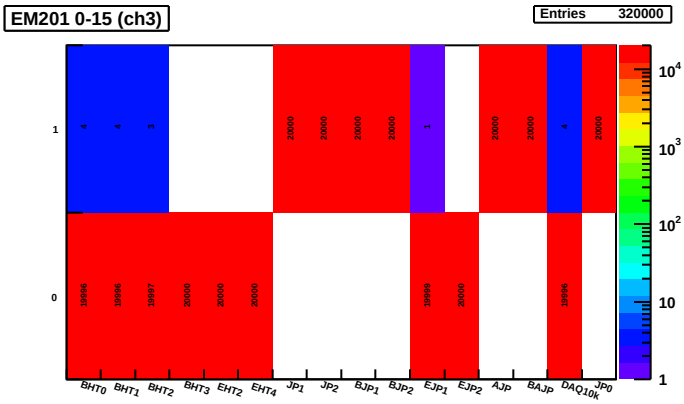

TF201 0-15 (ch0)
Entries 5705
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

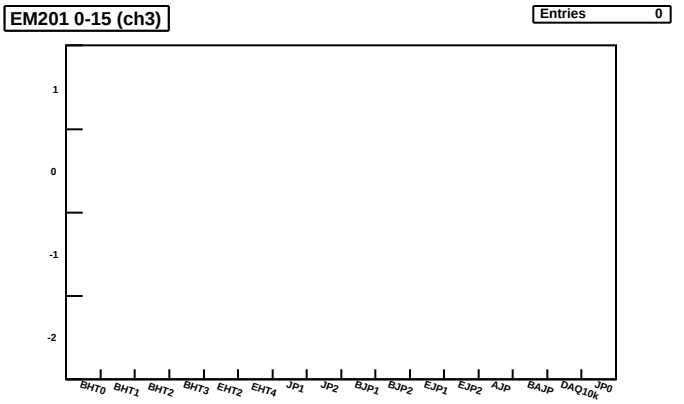

VT201 0-15 (ch1)
Entries 320000
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W

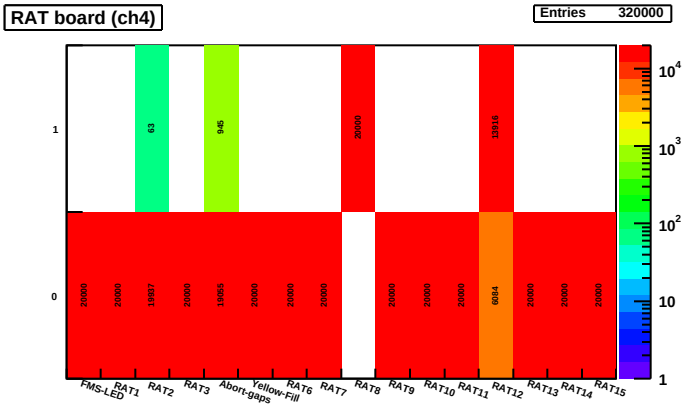

VT201 0-15 (ch1)
Entries 40521
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W

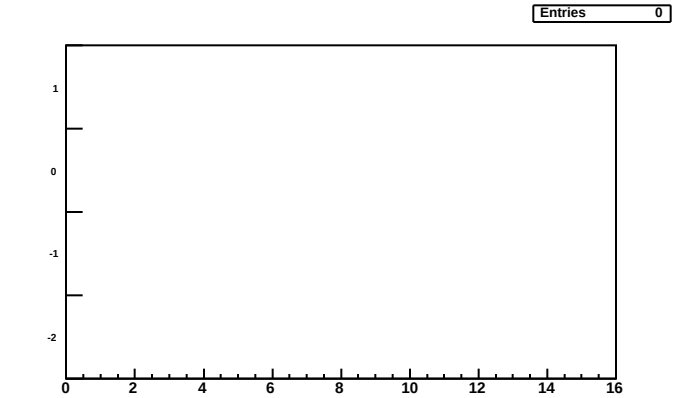

Unused (ch2)
Entries 320000

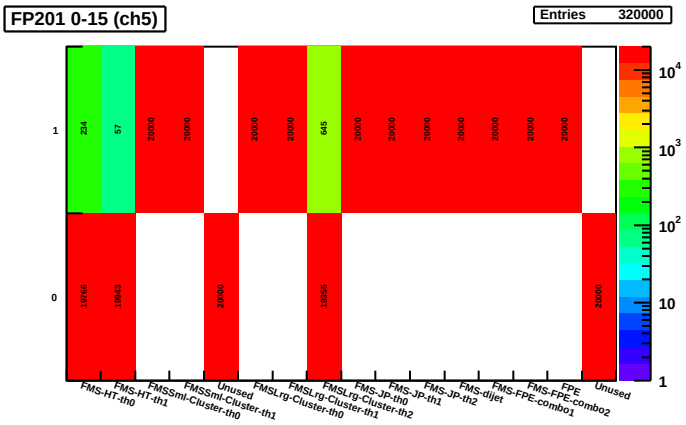

Entries 0

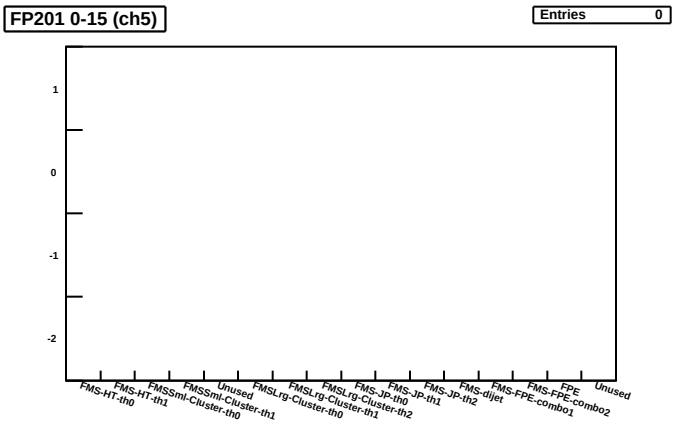

EM201 0-15 (ch3)
Entries 320000
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

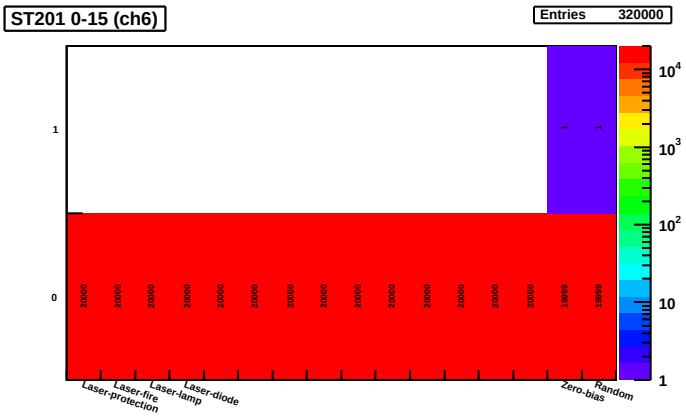

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

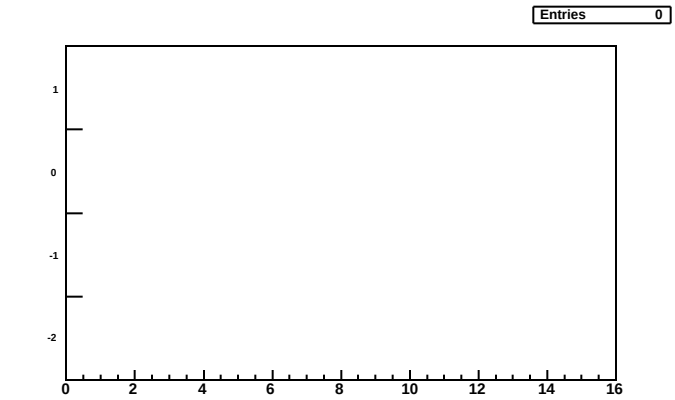

RAT board (ch4)
Entries 320000
FMS-LED
RAT1
RAT2
RAT3
Abort-gaps
Yellow-Fill
RAT6
RAT7
RAT8
RAT9
RAT10
RAT11
RAT12
RAT13
RAT14
RAT15

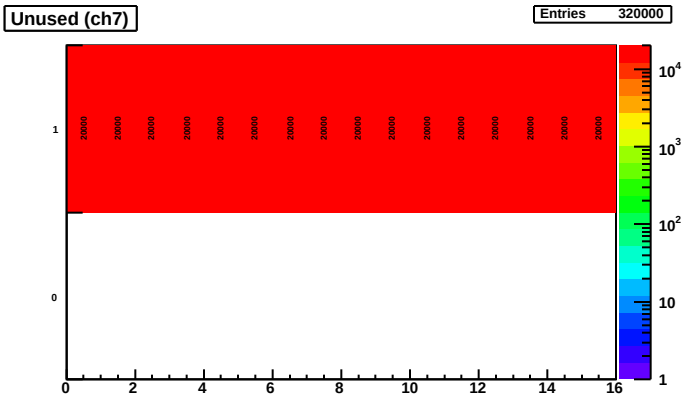

Entries 0

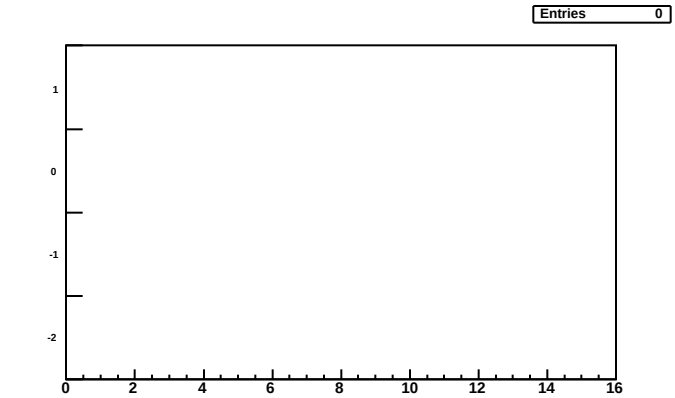

FP201 0-15 (ch5)
Entries 320000
FMS-HT-th0
FMS-HT-th1
FMSSml-Cluster-th0
FMSSml-Cluster-th1
Unused
FMSLrg-Cluster-th0
FMSLrg-Cluster-th1
FMS-JP-th0
FMS-JP-th1
FMS-JP-th2
FMS-dijet
FMS-FPE-combo1
FPE
FMS-FPE-combo2
Unused


FP201 0-15 (ch5)
Entries 0
FMS-HT-th0
FMS-HT-th1
FMSSml-Cluster-th0
FMSSml-Cluster-th1
Unused
FMSLrg-Cluster-th0
FMSLrg-Cluster-th1
FMS-JP-th0
FMS-JP-th1
FMS-JP-th2
FMS-dijet
FMS-FPE-combo1
FPE
FMS-FPE-combo2
Unused


ST201 0-15 (ch6)
Entries 320000
Laser-protection
Laser-fire
Laser-lamp
Laser-diode
Zero-bias
Random


Entries 0


Unused (ch7)
Entries 320000


Entries 0