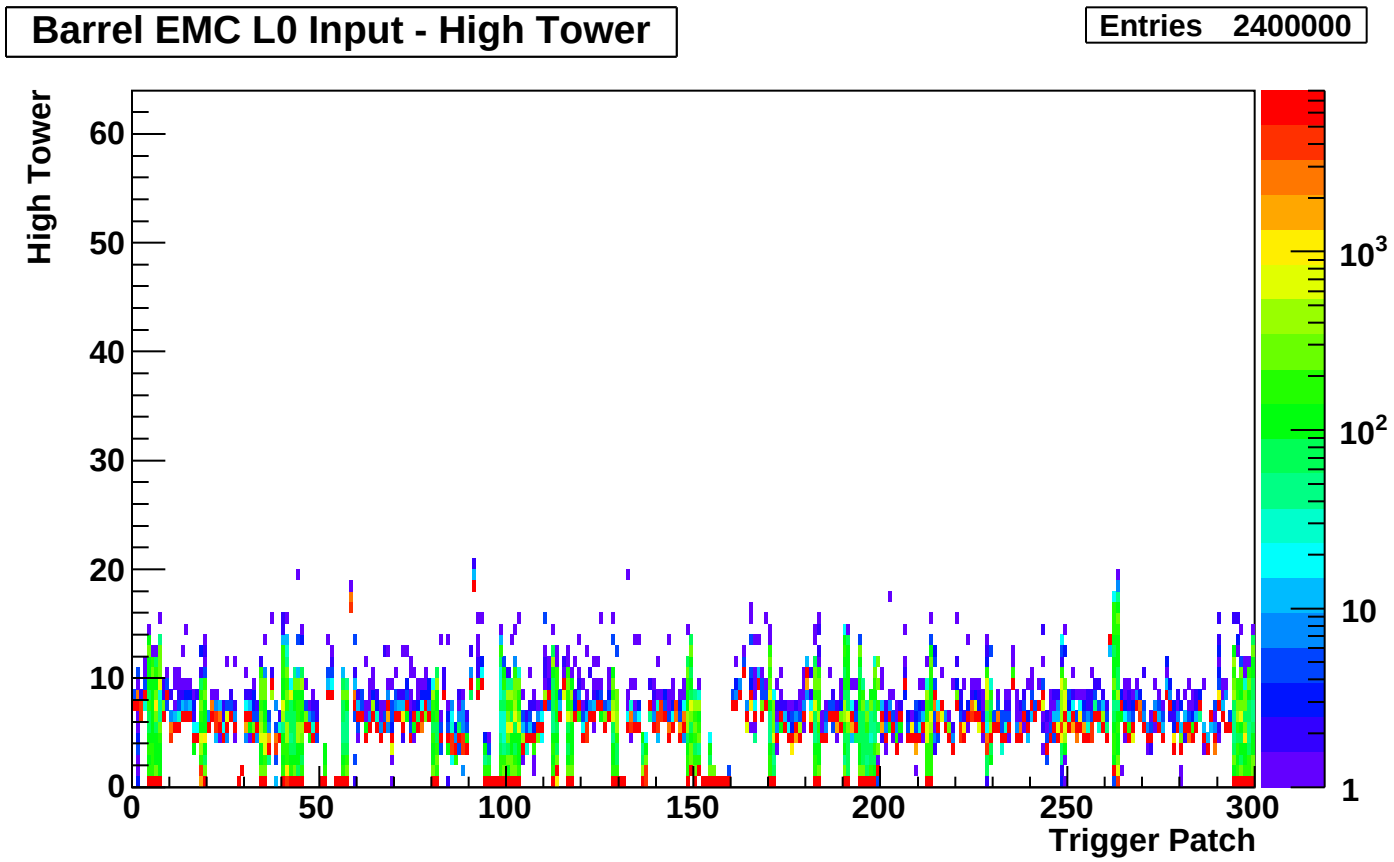
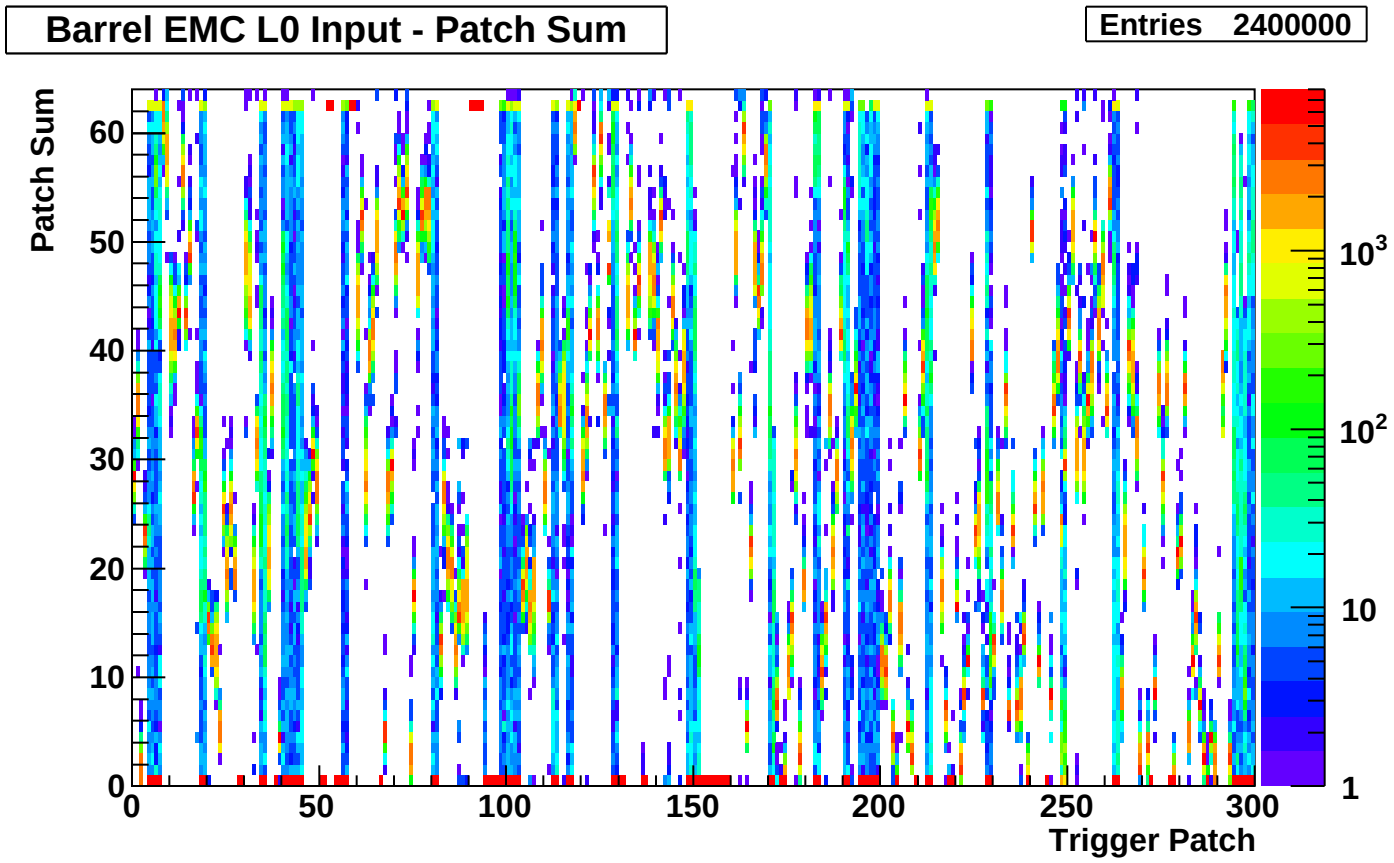
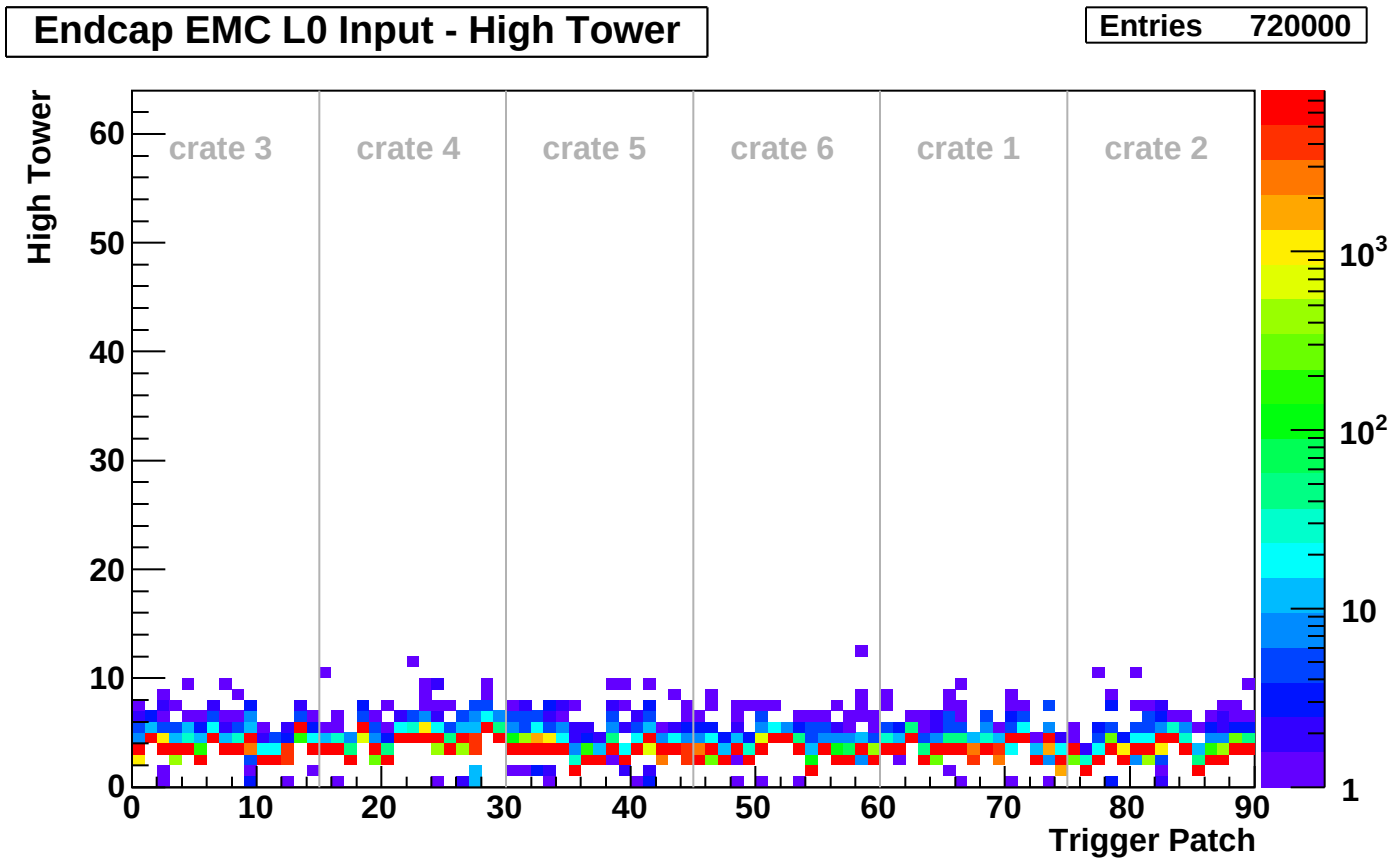
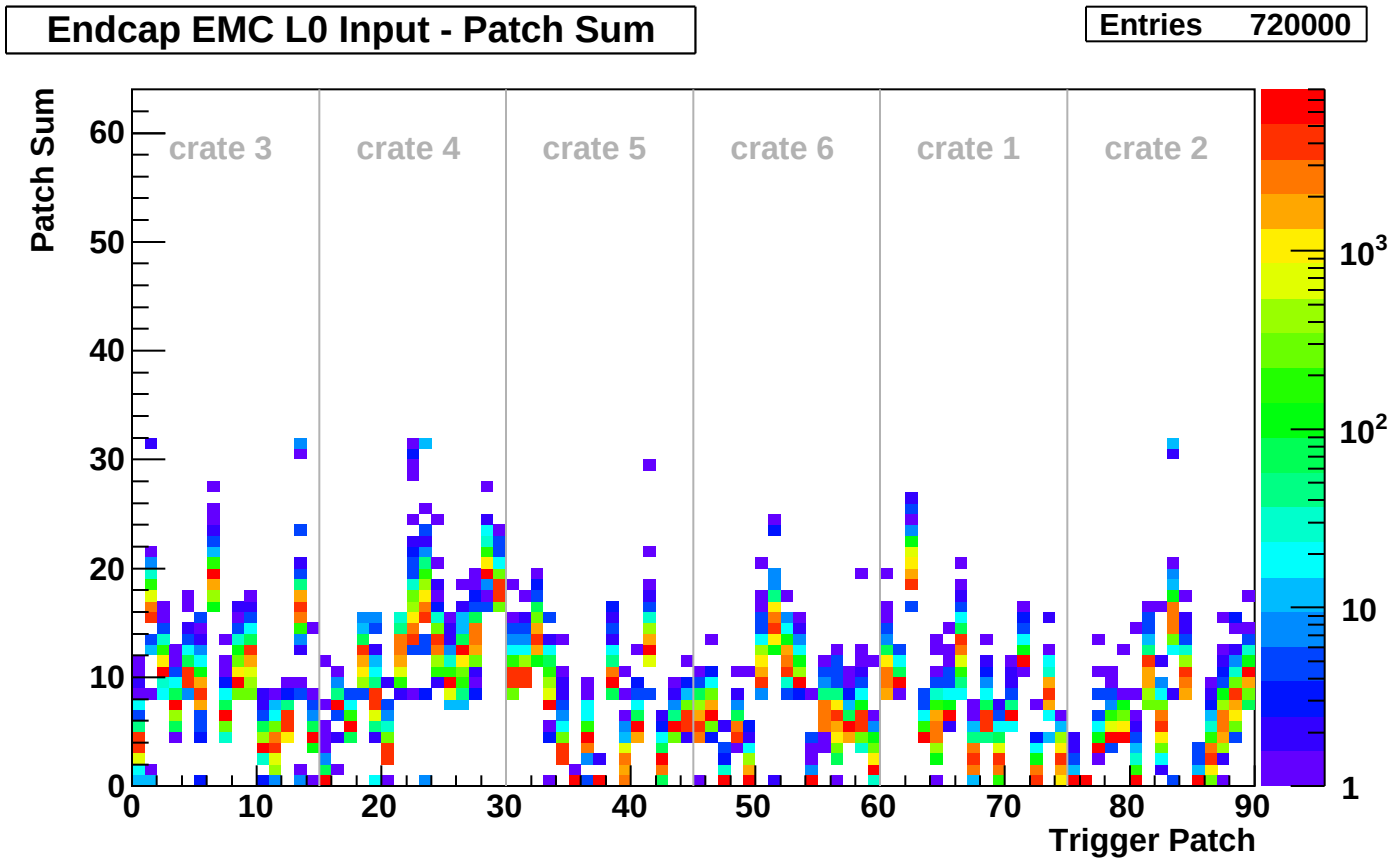
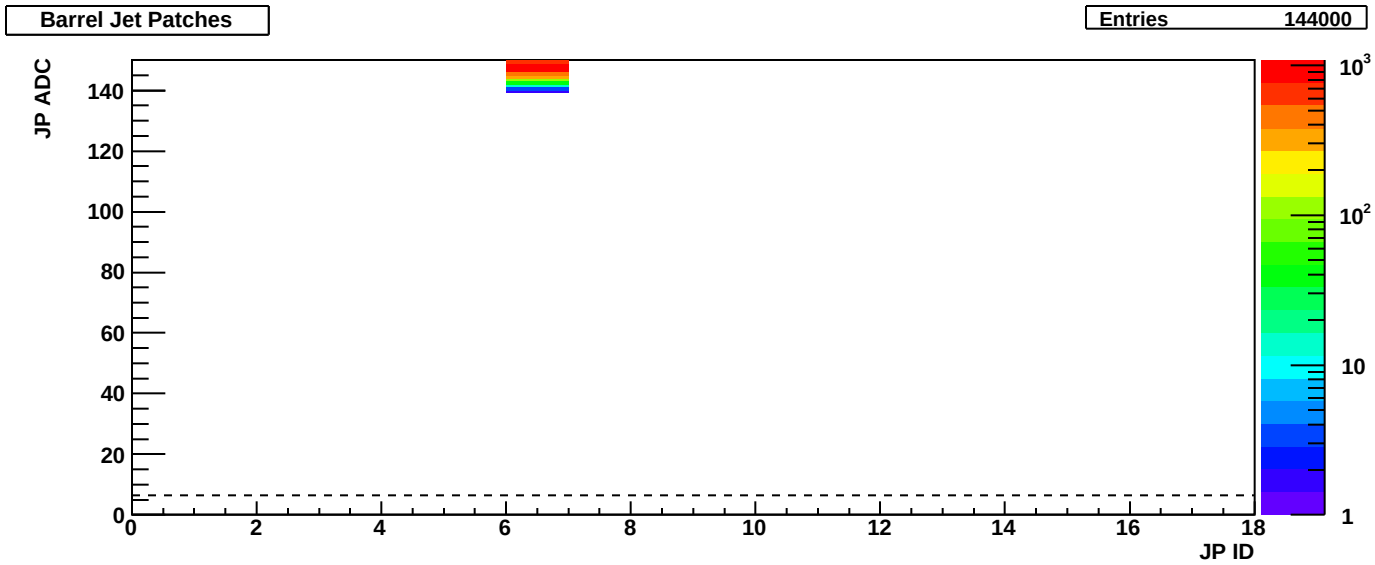
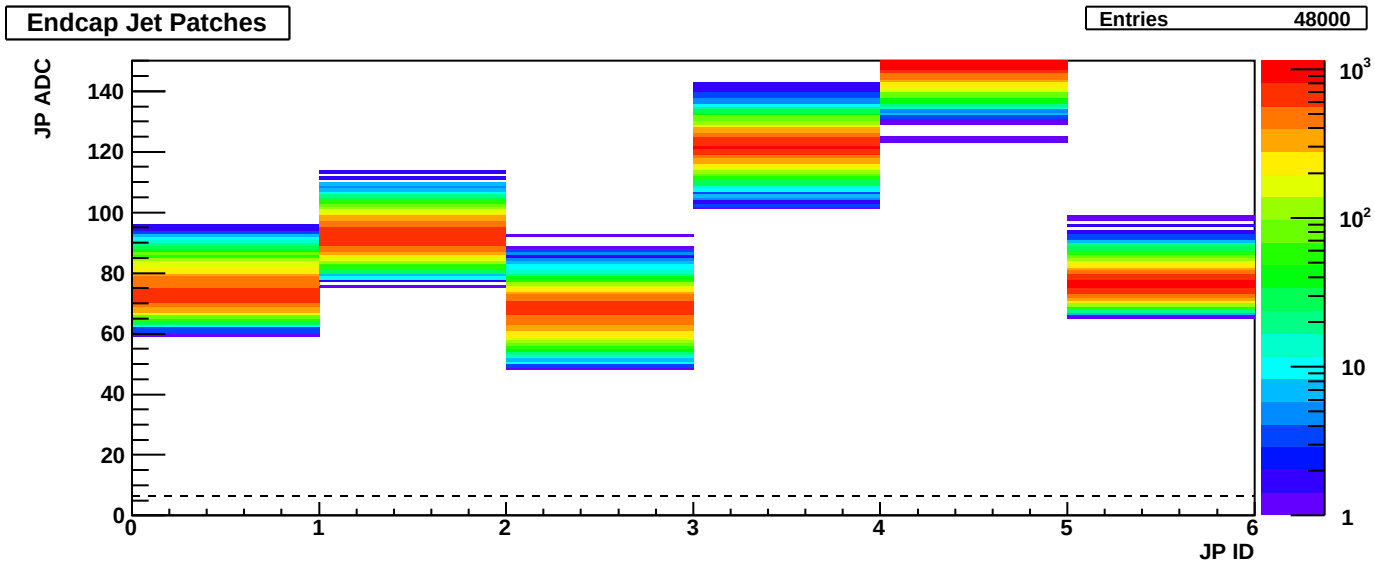

Barrel EMC L0 Input - High Tower
Entries 2400000
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

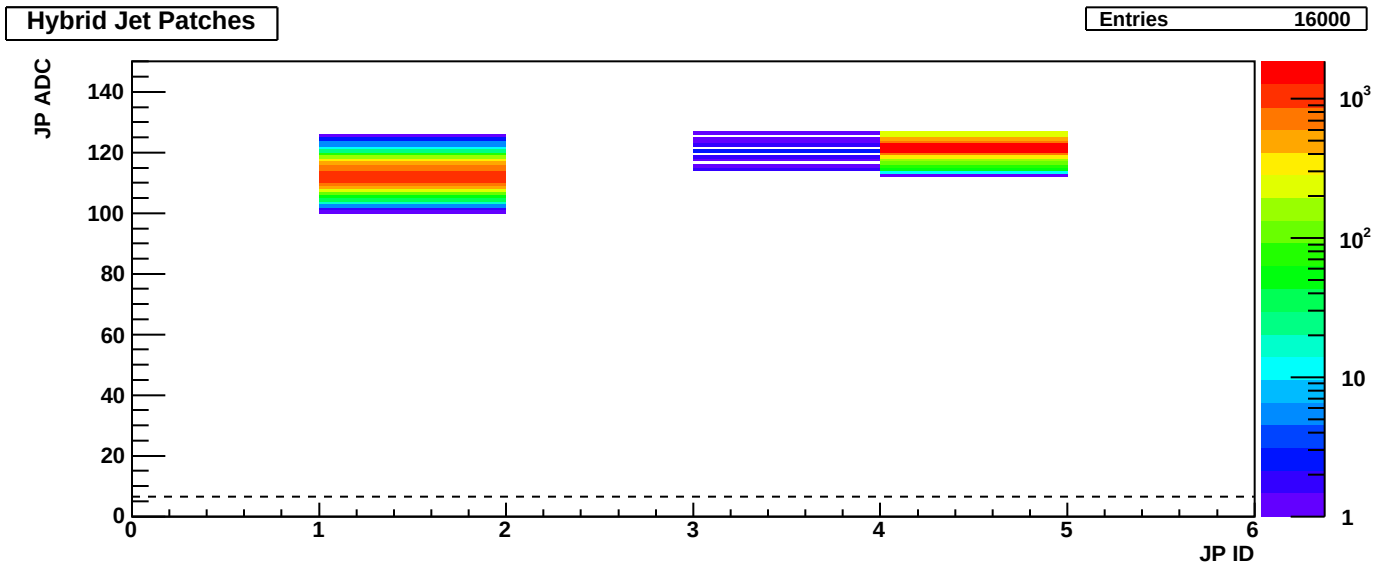

Barrel EMC L0 Input - Patch Sum
Entries 2400000
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

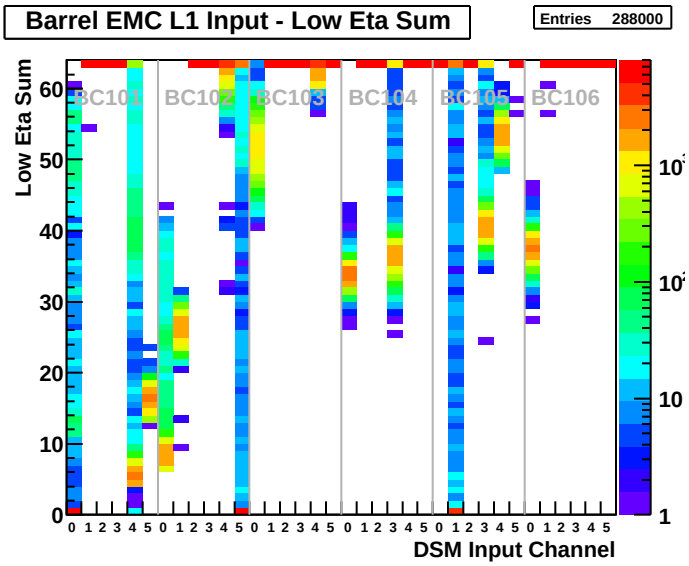

Endcap EMC L0 Input - High Tower
Entries 720000
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

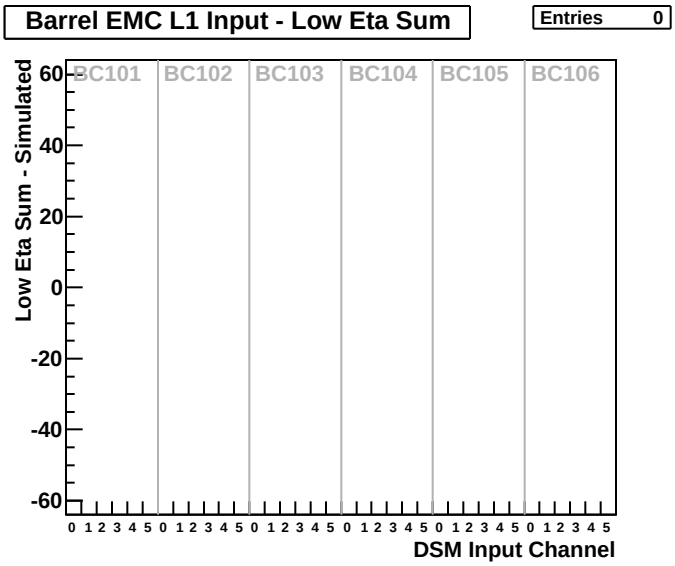

Endcap EMC L0 Input - Patch Sum
Entries 720000
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

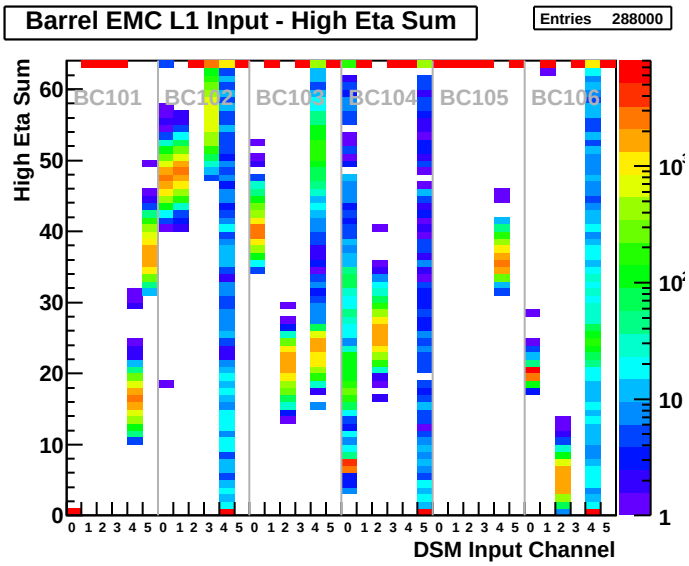

Barrel Jet Patches
Entries 144000
JP ADC
JP ID

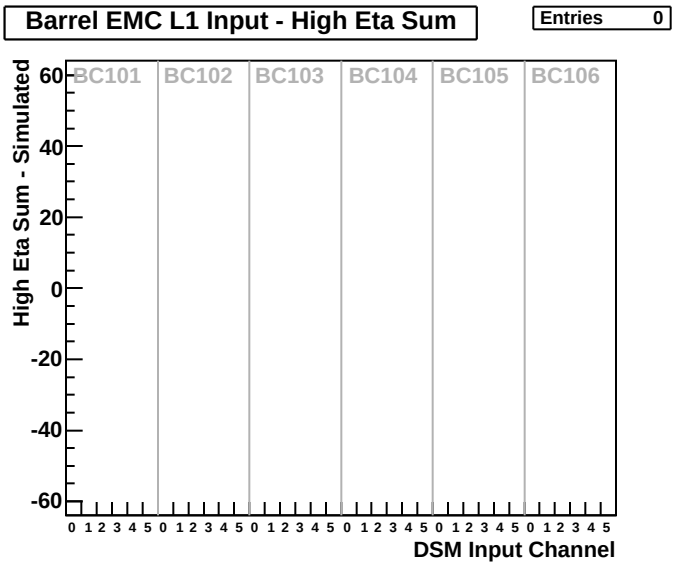

Endcap Jet Patches
Entries 48000
JP ADC
JP ID

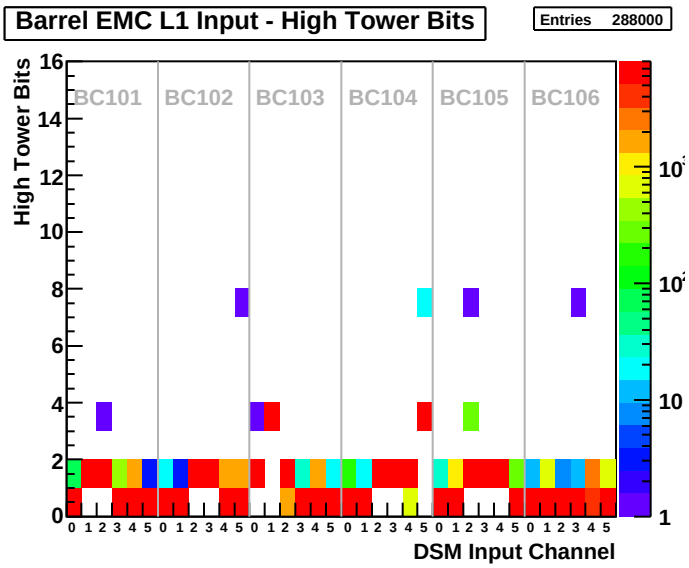

Hybrid Jet Patches
Entries 16000
JP ADC
JP ID

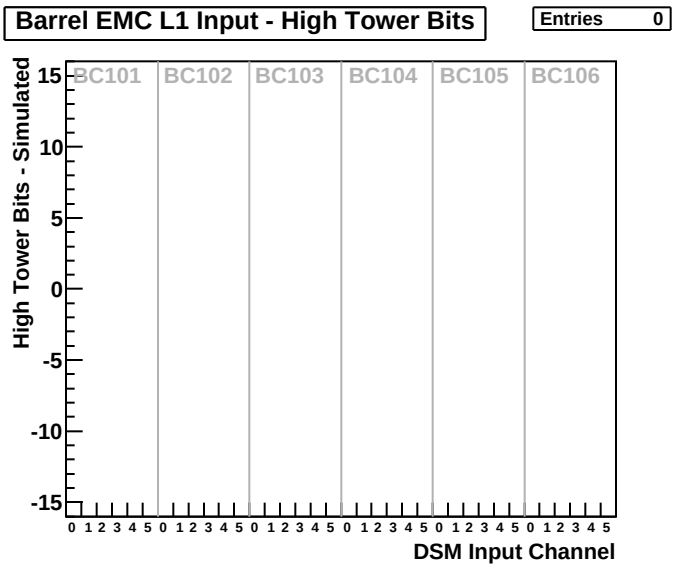

Barrel EMC L1 Input - Low Eta Sum
Entries 288000
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

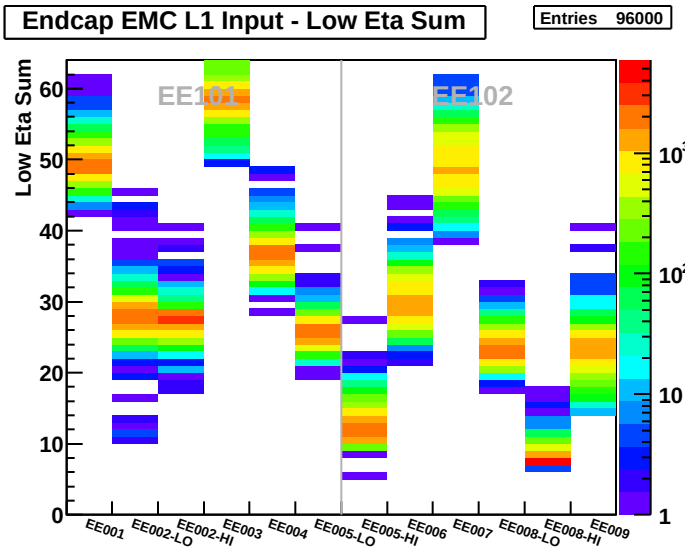

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

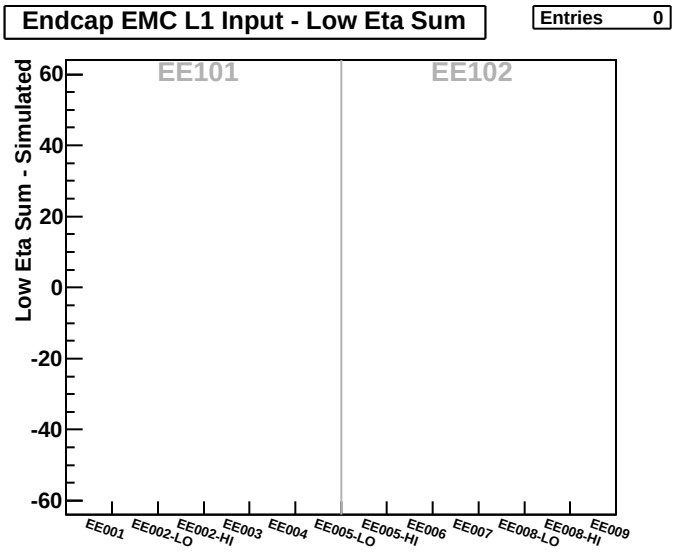

Barrel EMC L1 Input - High Eta Sum
Entries 288000
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

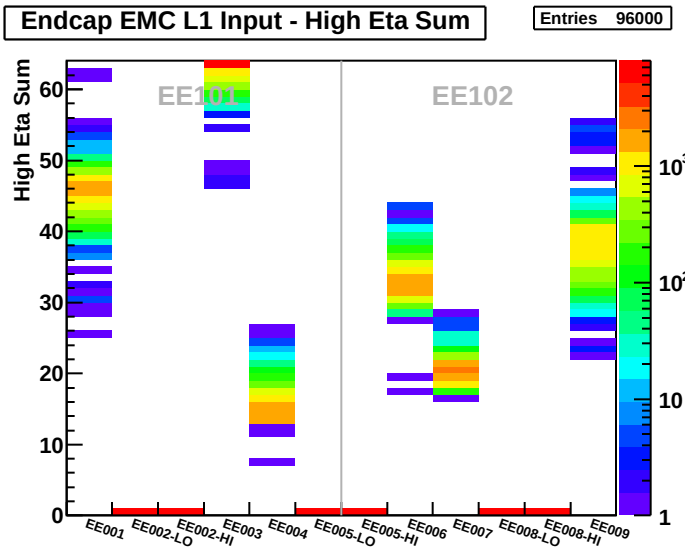

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

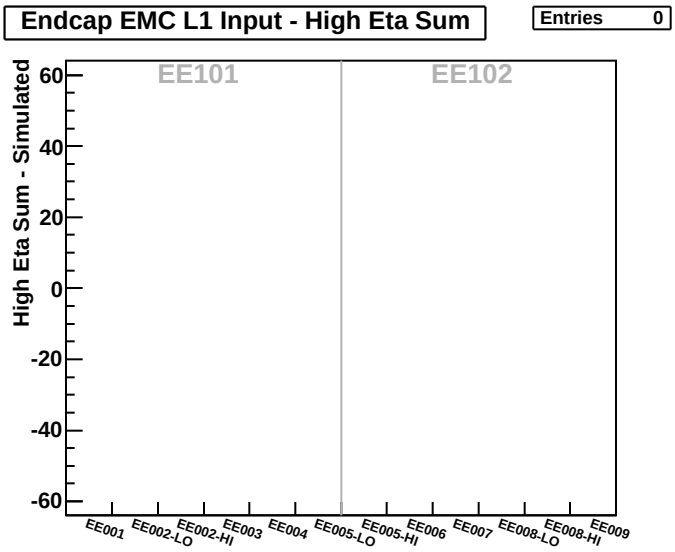

Barrel EMC L1 Input - High Tower Bits
Entries 288000
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

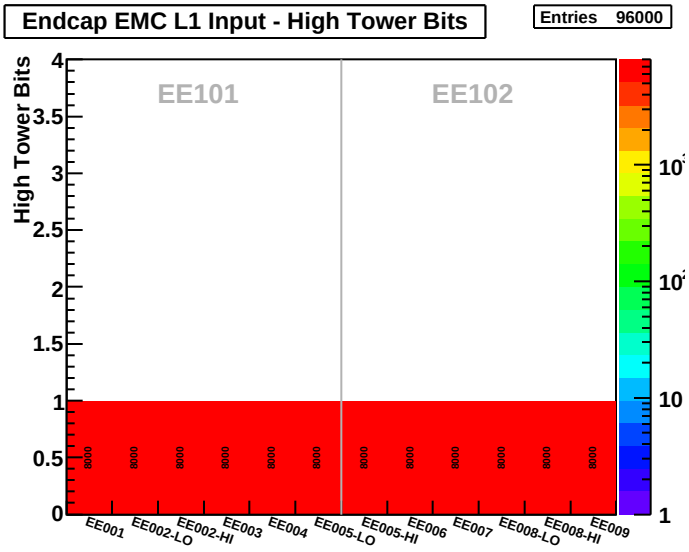

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

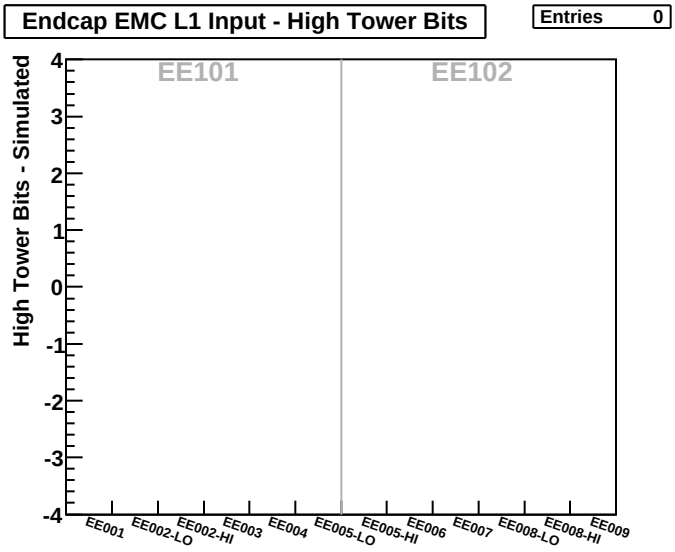

Endcap EMC L1 Input - Low Eta Sum
Entries 96000
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

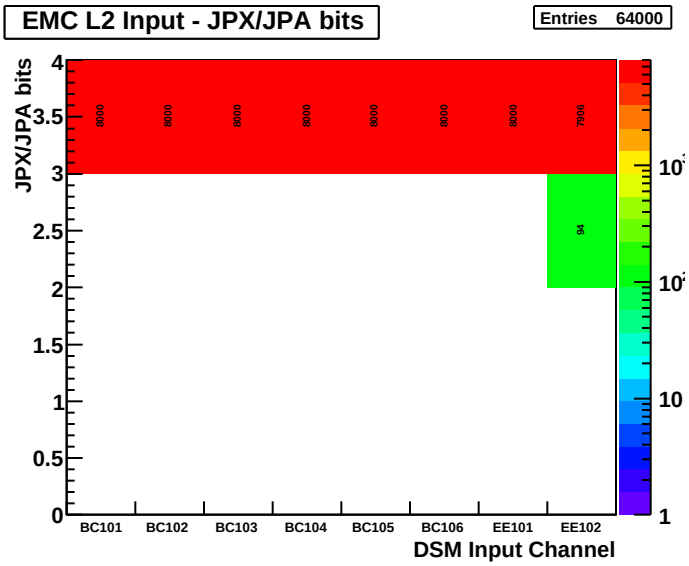

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

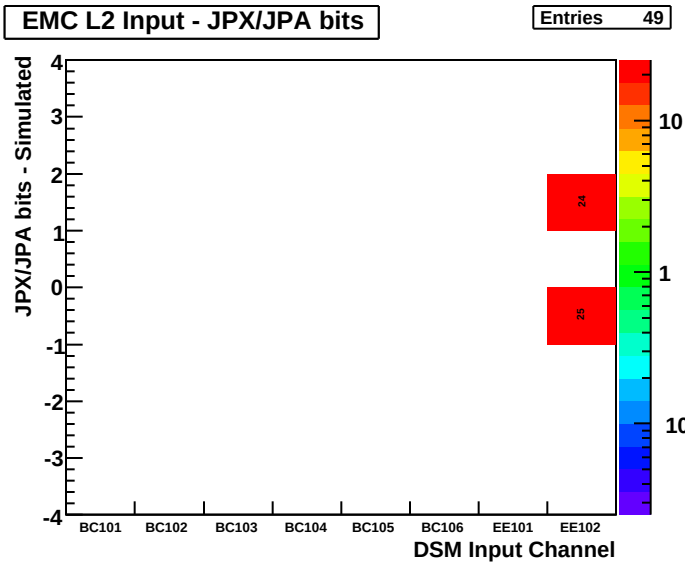

Endcap EMC L1 Input - High Eta Sum
Entries 96000
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

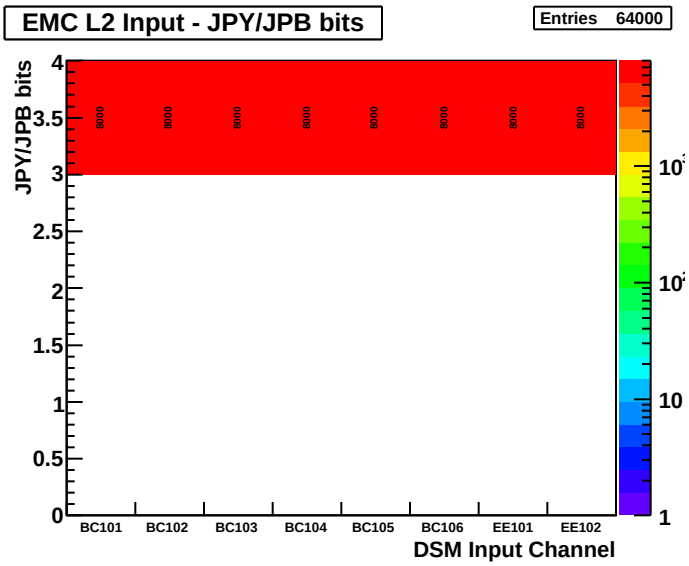

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

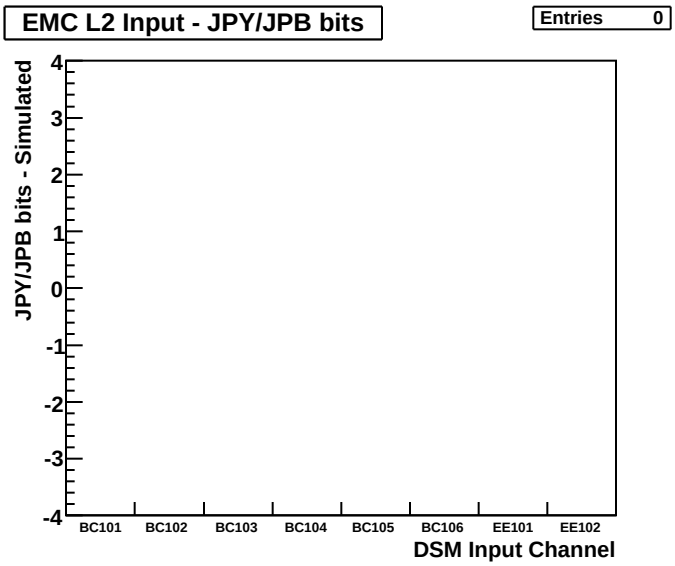

Endcap EMC L1 Input - High Tower Bits
Entries 96000
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

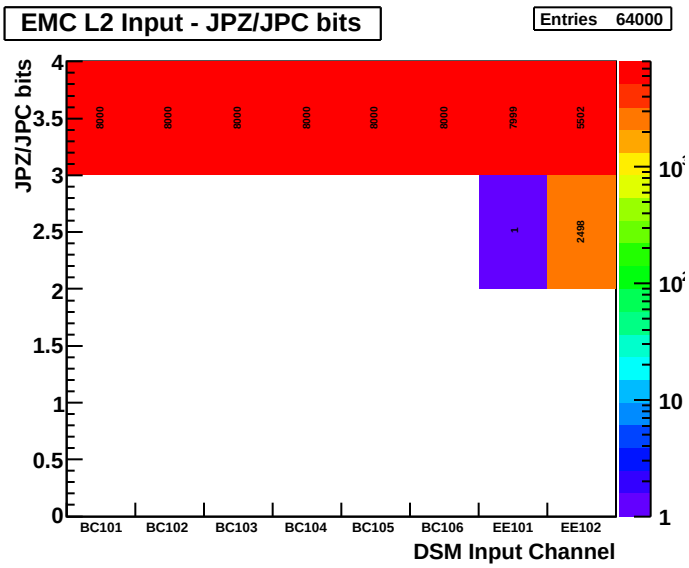

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

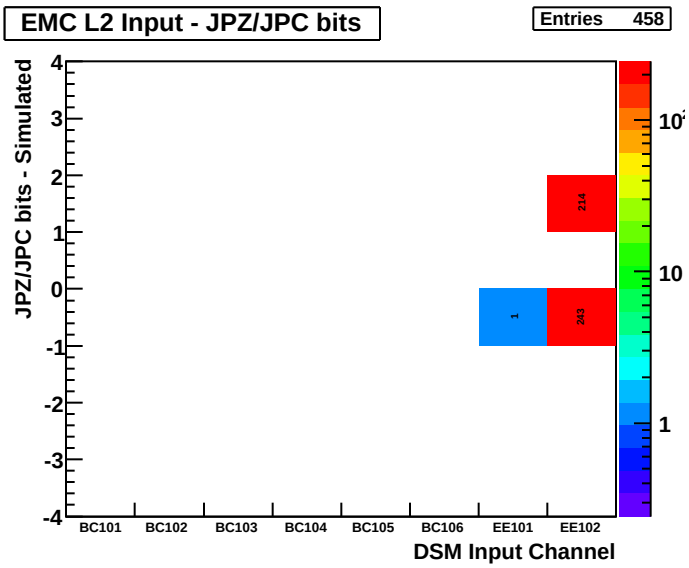

EMC L2 Input - JPX/JPA bits
Entries 64000
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
8000 8000 8000 8000 8000 8000 8000 7906
94

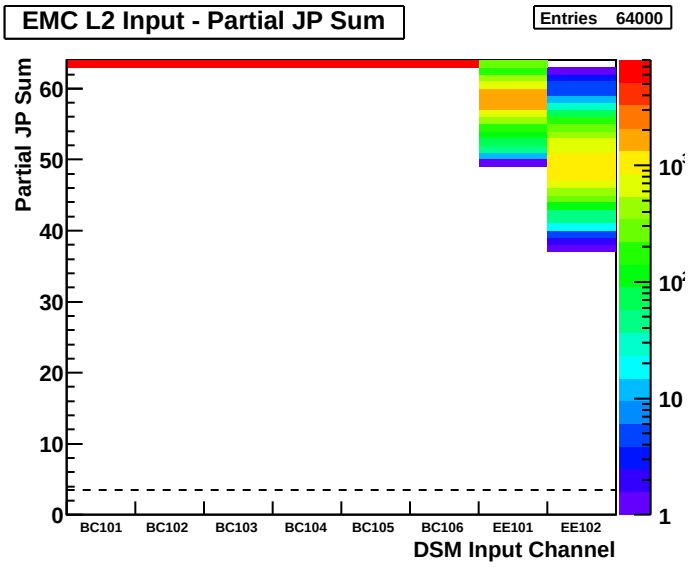

EMC L2 Input - JPX/JPA bits
Entries 49
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
24
25

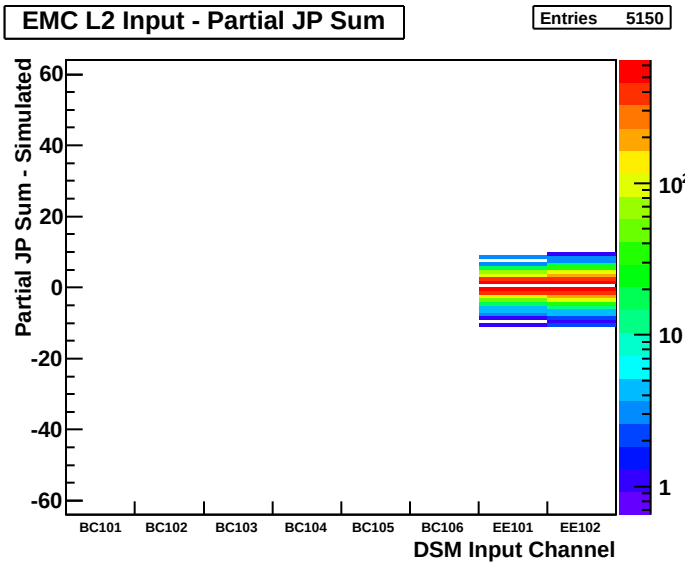

EMC L2 Input - JPY/JPB bits
Entries 64000
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
8000 8000 8000 8000 8000 8000 8000 8000

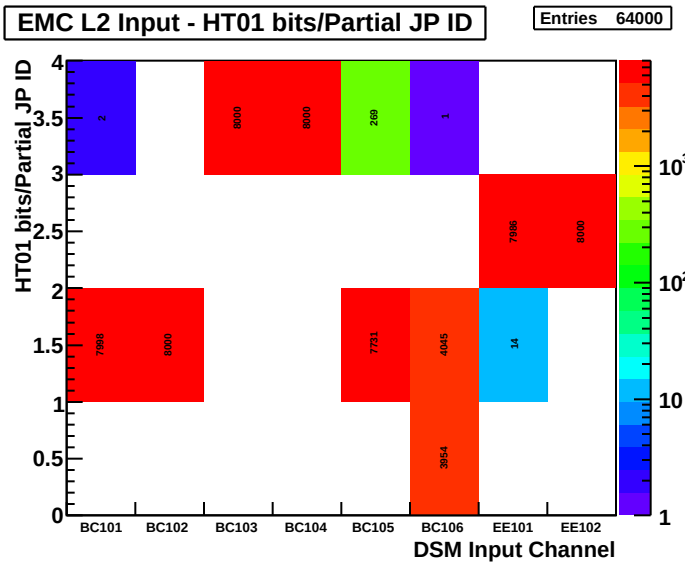

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

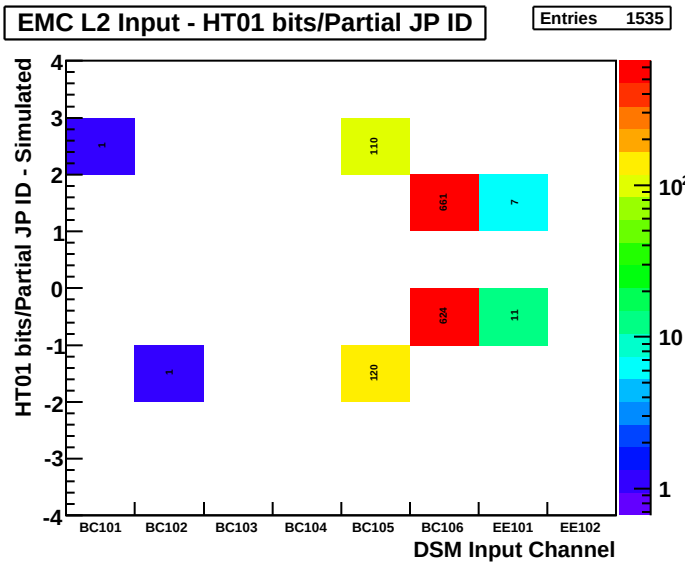

EMC L2 Input - JPZ/JPC bits
Entries 64000
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
8000 8000 8000 8000 8000 8000 7999 5502
1
2498

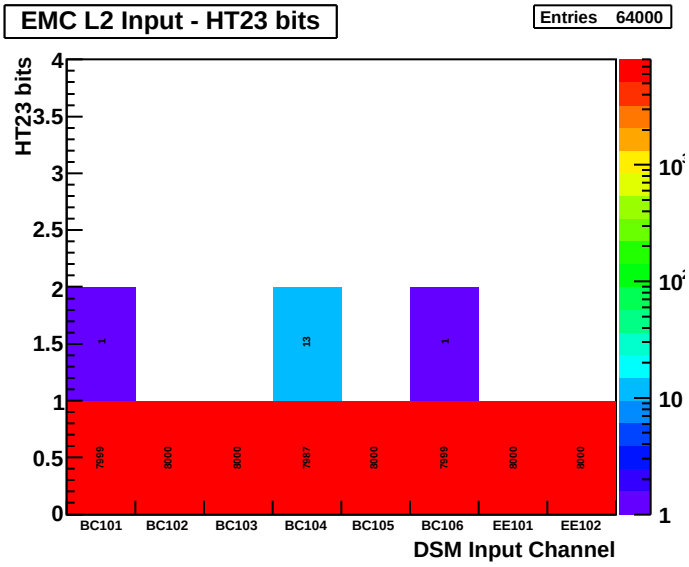

EMC L2 Input - JPZ/JPC bits
Entries 458
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
214
1
243

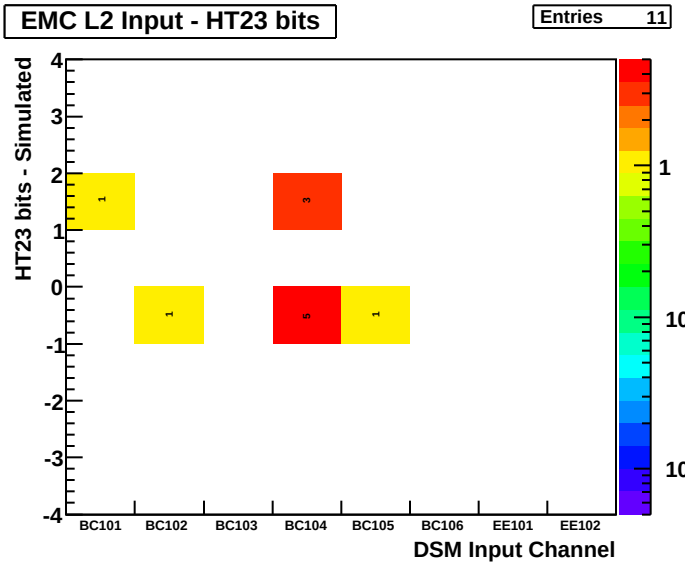

EMC L2 Input - Partial JP Sum
Entries 64000
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

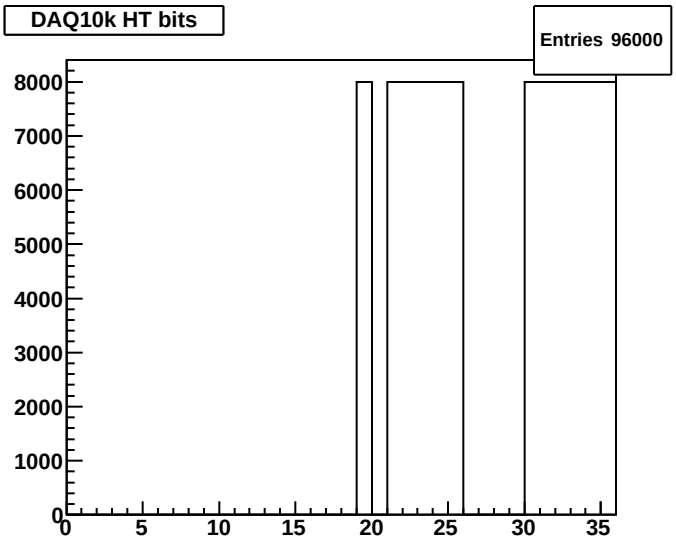

EMC L2 Input - Partial JP Sum
Entries 5150
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

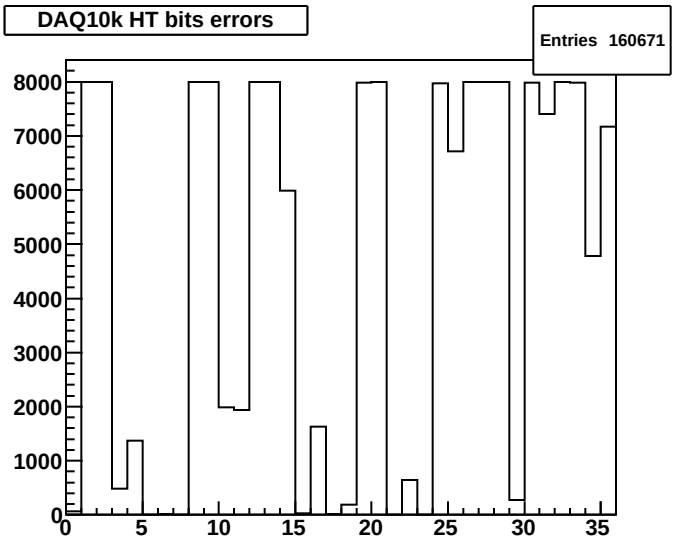

EMC L2 Input - HT01 bits/Partial JP ID
Entries 64000
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

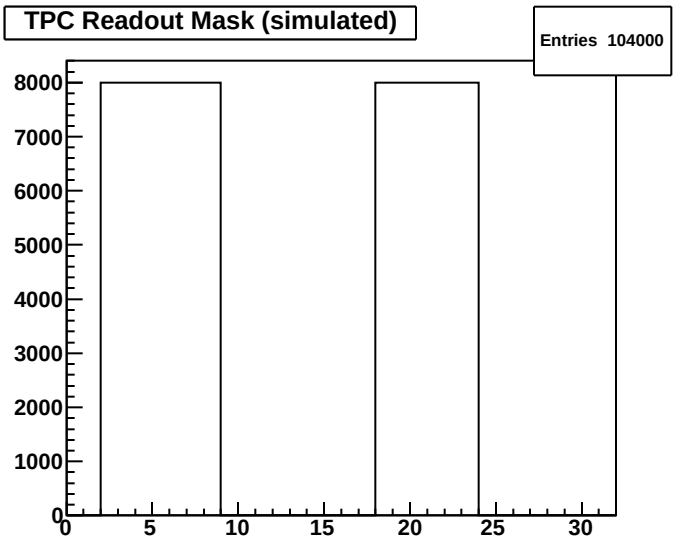

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1535
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

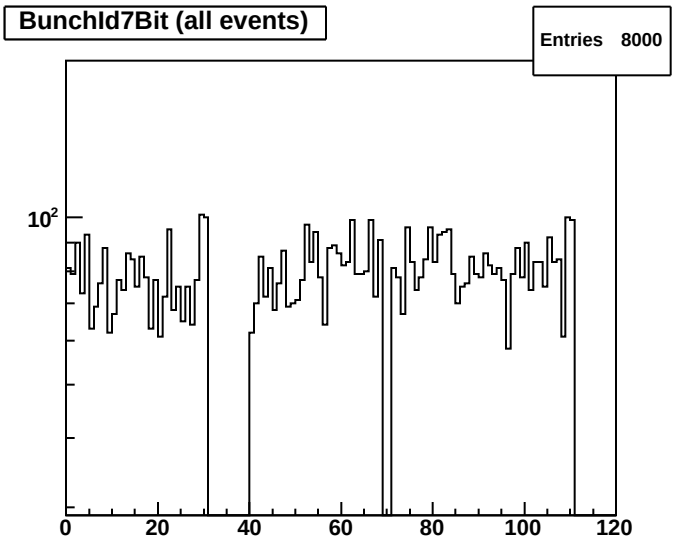

EMC L2 Input - HT23 bits
Entries 64000
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

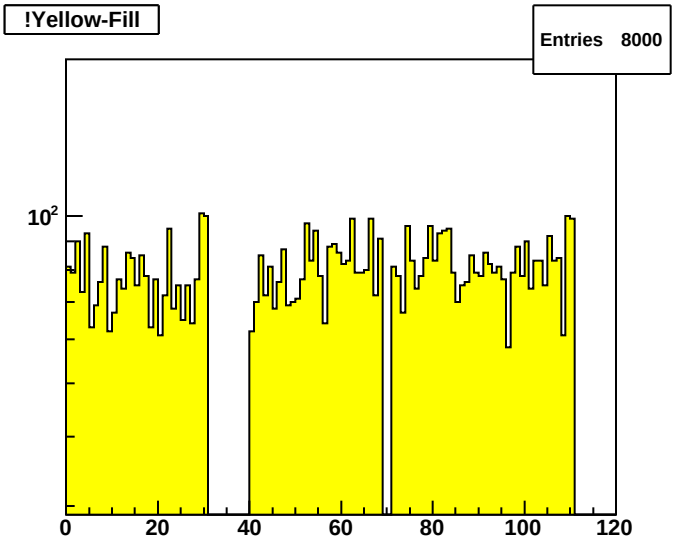

EMC L2 Input - HT23 bits
Entries 11
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

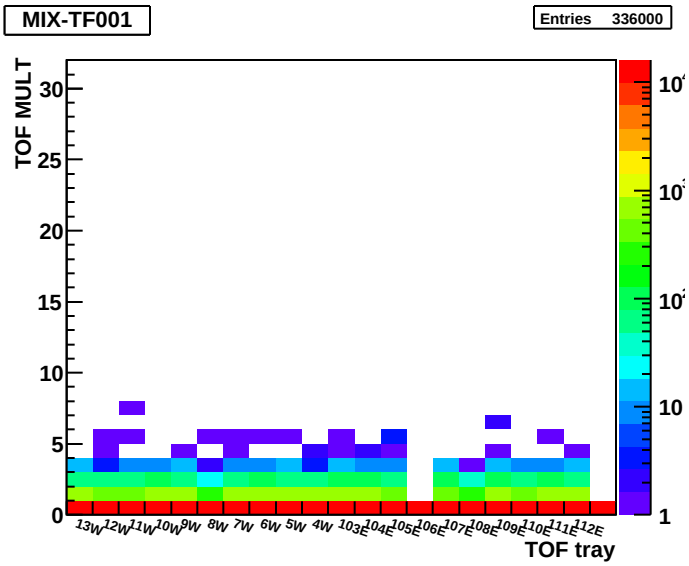

DAQ10k HT bits
Entries 96000
8000
7000
6000
5000
4000
3000
2000
1000
0
0 5 10 15 20 25 30 35

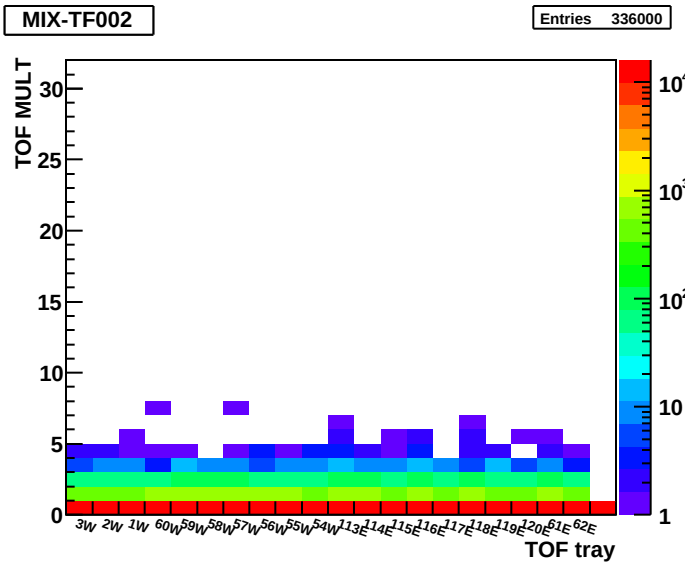

DAQ10k HT bits errors
Entries 160671
8000
7000
6000
5000
4000
3000
2000
1000
0
0 5 10 15 20 25 30 35

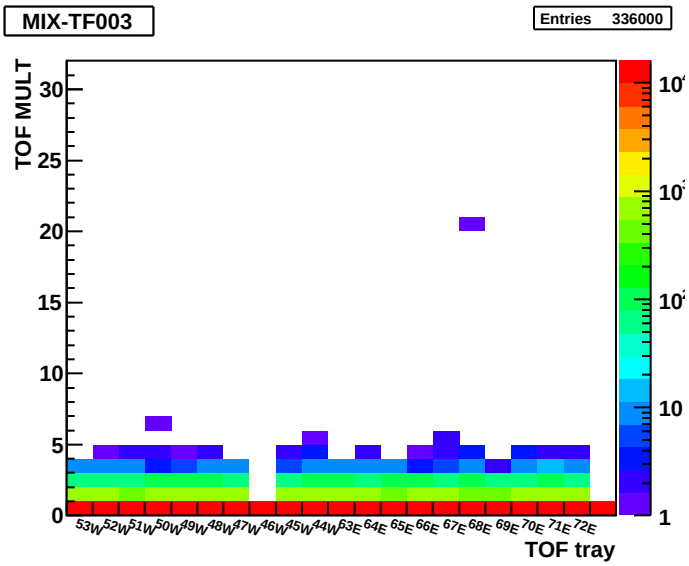

TPC Readout Mask (simulated)
Entries 104000
8000
7000
6000
5000
4000
3000
2000
1000
0
0 5 10 15 20 25 30

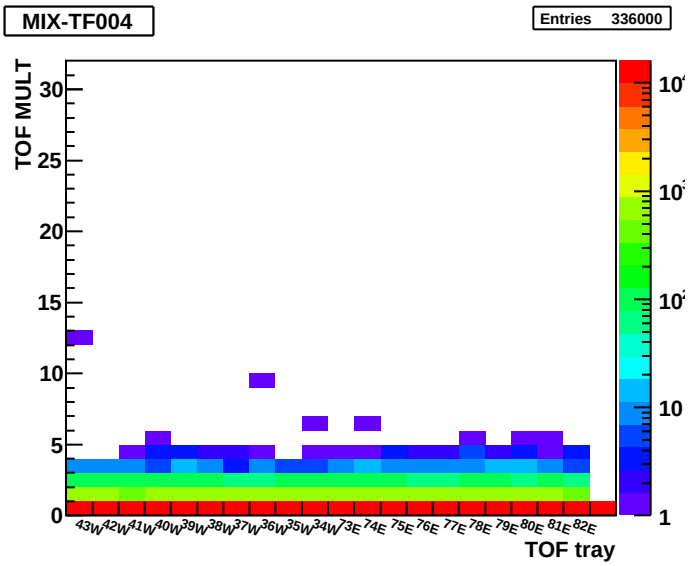

BunchId7Bit (all events)
Entries 8000
10^2
0 20 40 60 80 100 120

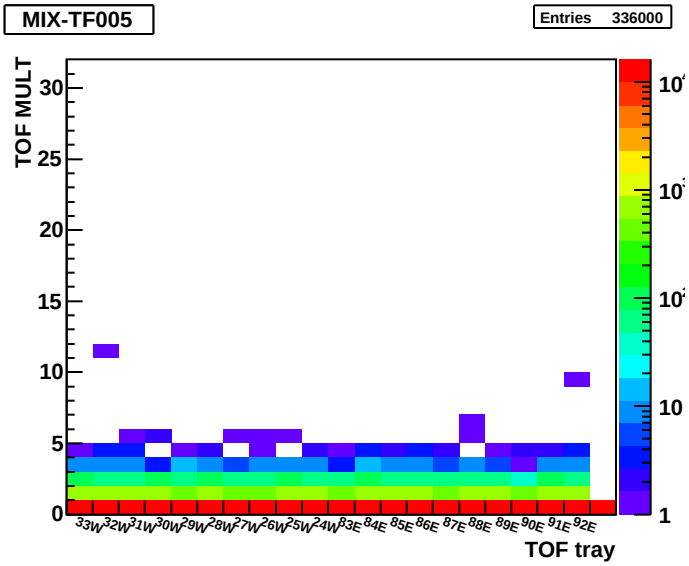

!Yellow-Fill
Entries 8000
10^2
0 20 40 60 80 100 120

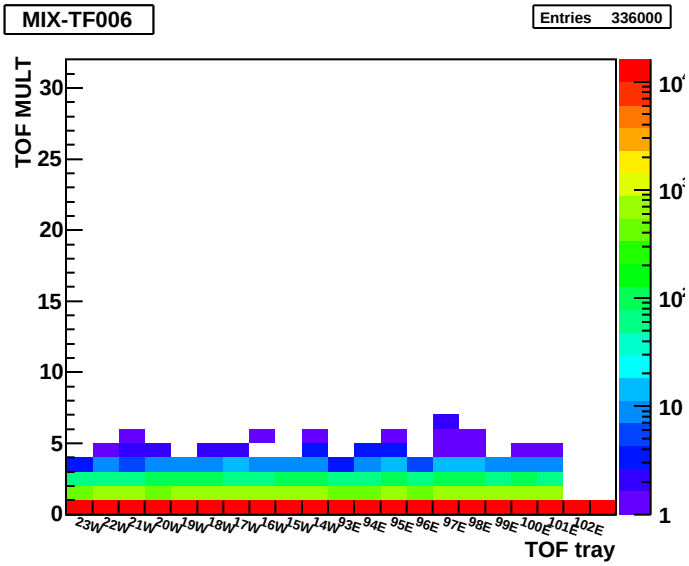

MIX-TF001
Entries 336000
TOF MULT
TOF tray

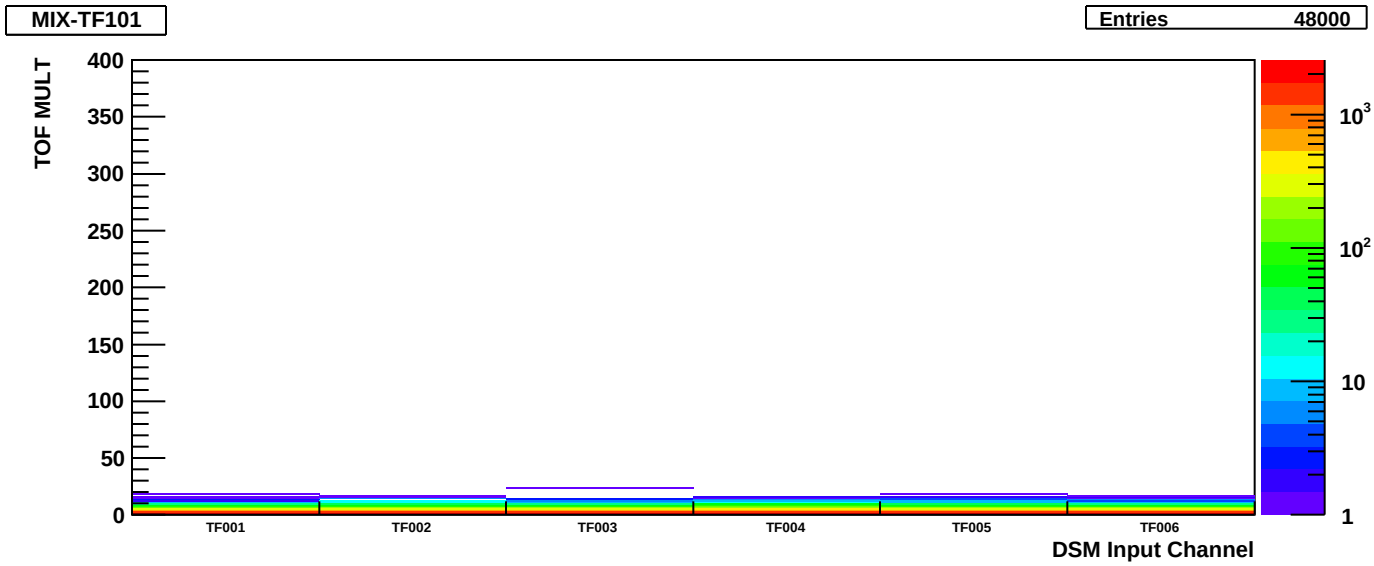

MIX-TF002
Entries 336000
TOF MULT
TOF tray

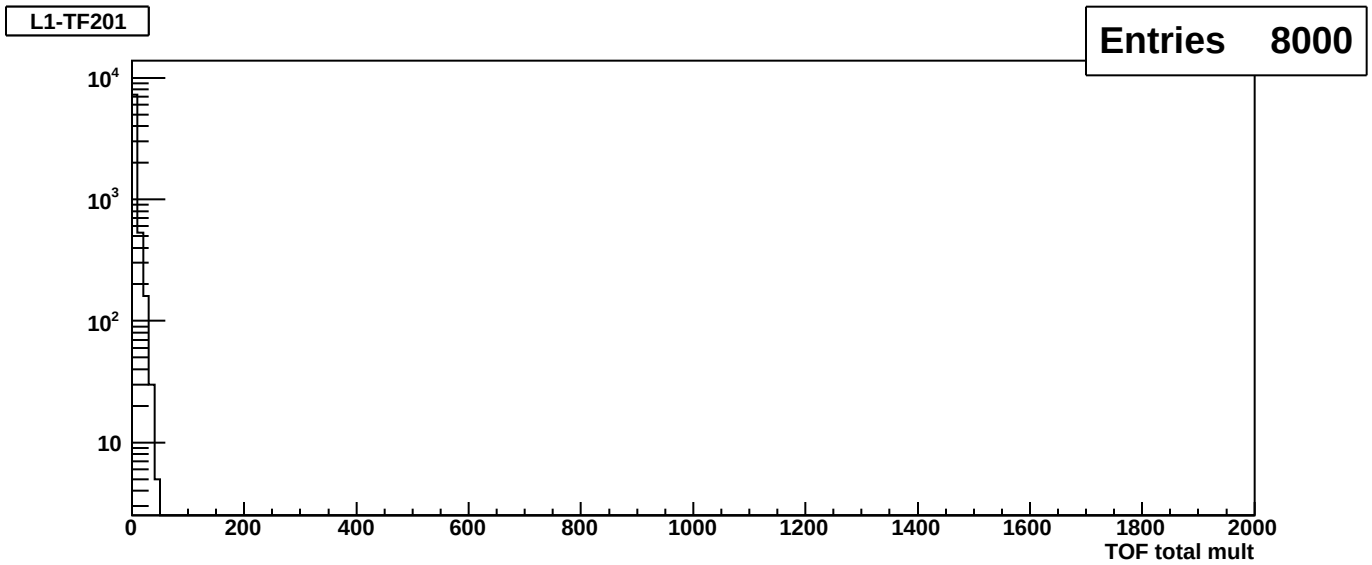

MIX-TF003
Entries 336000
TOF MULT
TOF tray

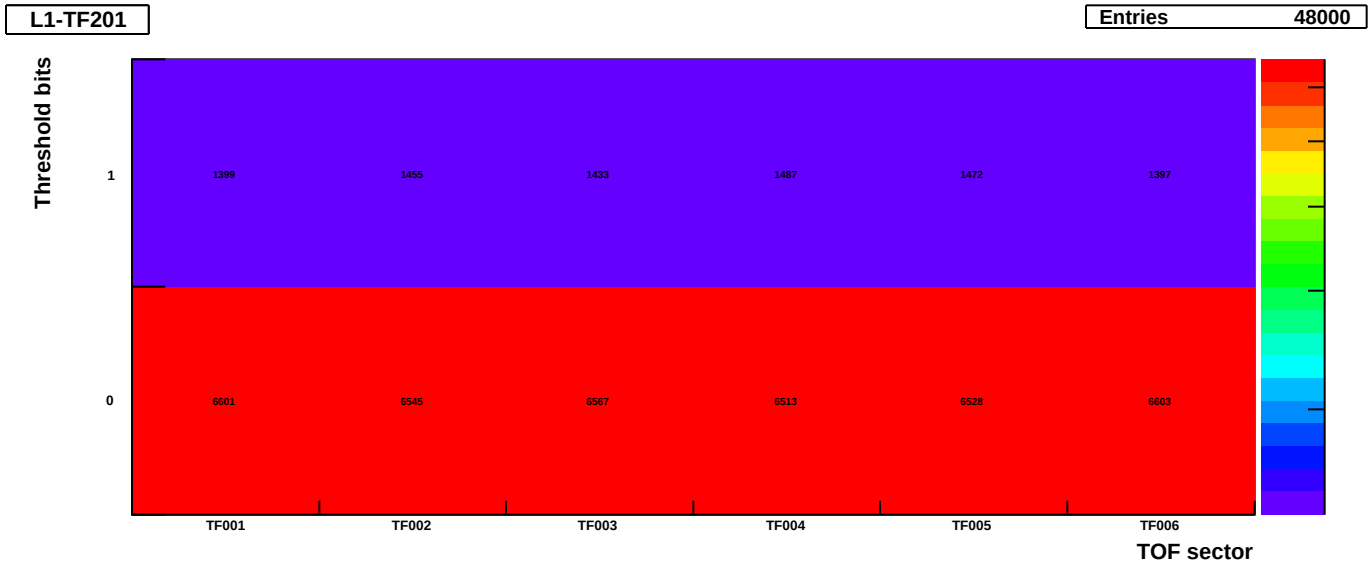

MIX-TF004
Entries 336000
TOF MULT
TOF tray

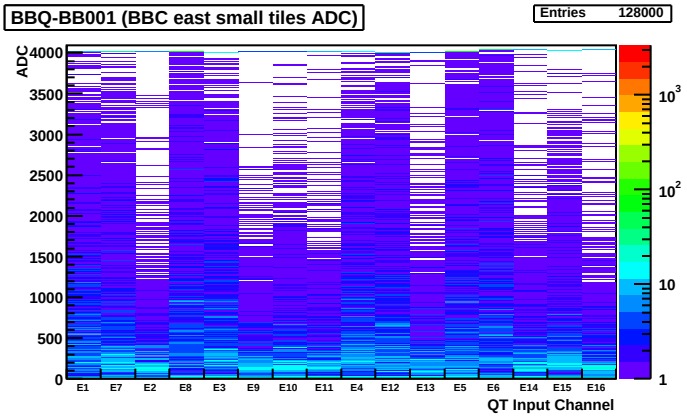

MIX-TF005
Entries 336000
TOF MULT
TOF tray

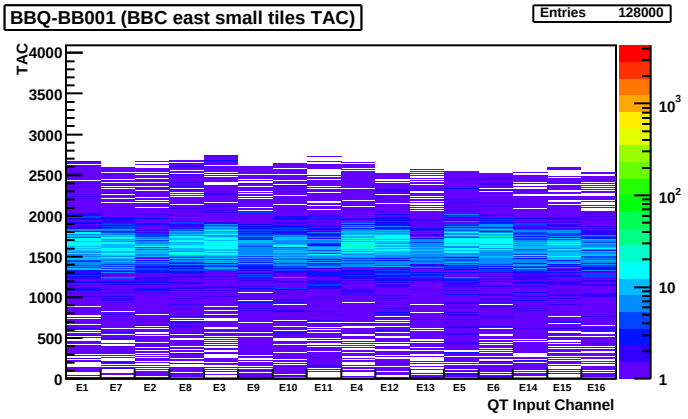

MIX-TF006
Entries 336000
TOF MULT
TOF tray

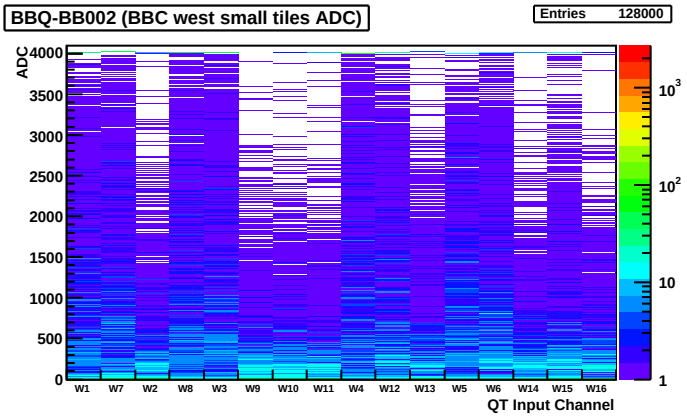

MIX-TF101
Entries 48000
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^3
10^2
10
1

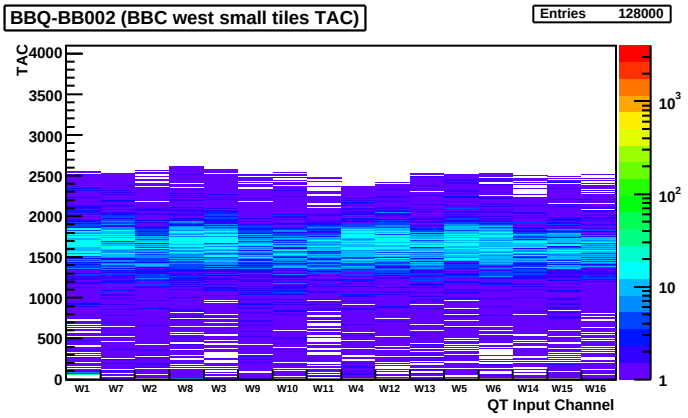

L1-TF201
Entries 8000
10^4
10^3
10^2
10
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

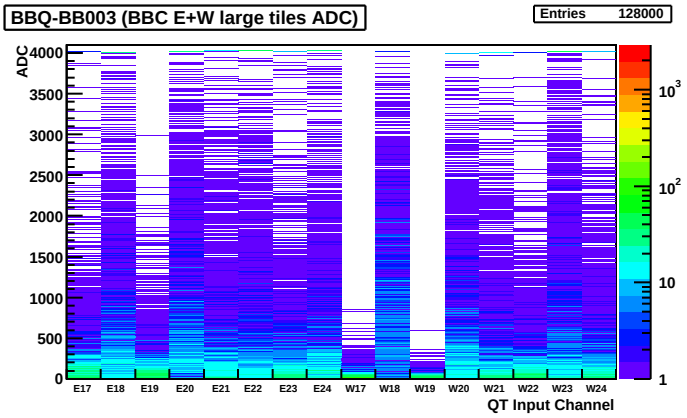

L1-TF201
Entries 48000
Threshold bits
1
0
1399
1455
1433
1487
1472
1397
6601
6545
6567
6513
6528
6603
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

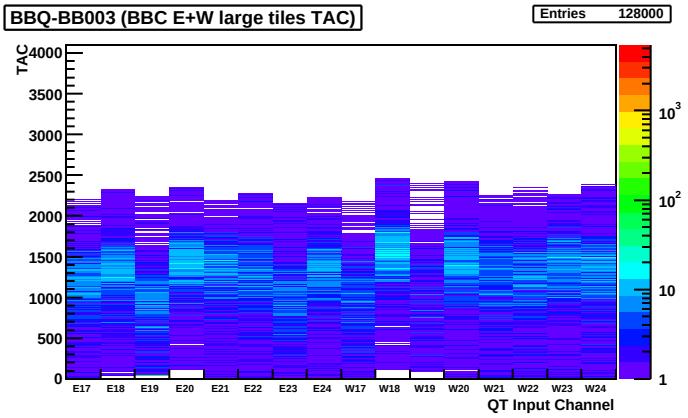

BBQ-BB001 (BBC east small tiles ADC)
Entries 128000
ADC
QT Input Channel

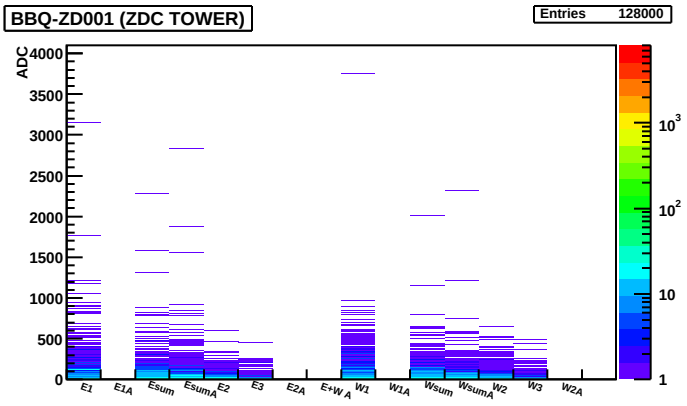

BBQ-BB001 (BBC east small tiles TAC)
Entries 128000
TAC
QT Input Channel

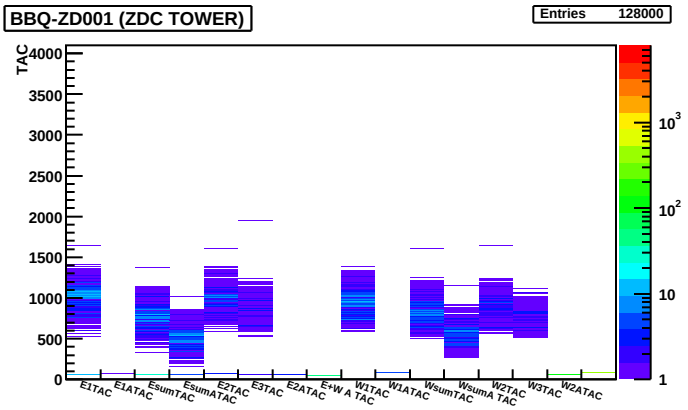

BBQ-BB002 (BBC west small tiles ADC)
Entries 128000
ADC
QT Input Channel

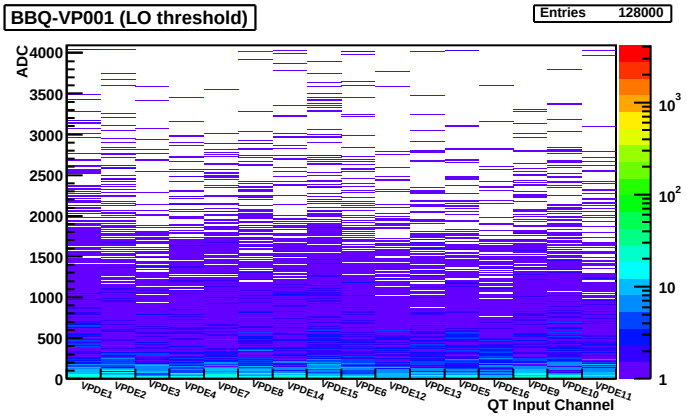

BBQ-BB002 (BBC west small tiles TAC)
Entries 128000
TAC
QT Input Channel

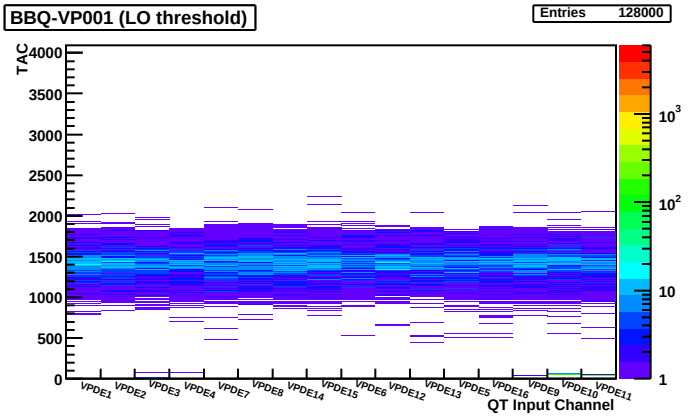

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 128000
ADC
QT Input Channel

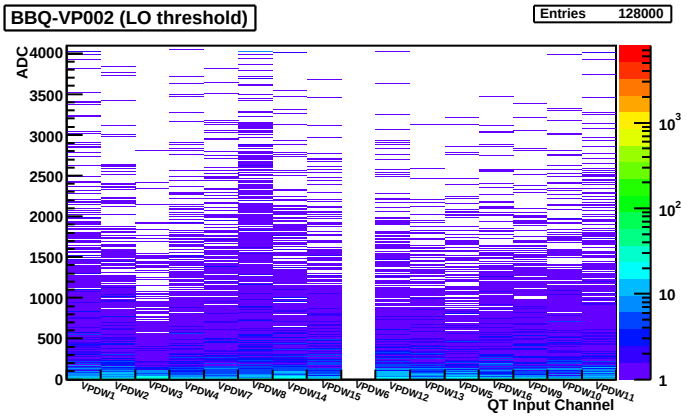

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 128000
TAC
QT Input Channel

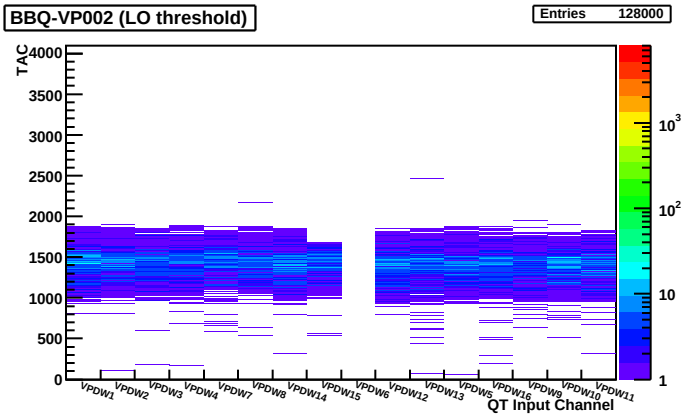

BBQ-ZD001 (ZDC TOWER)
Entries 128000
ADC

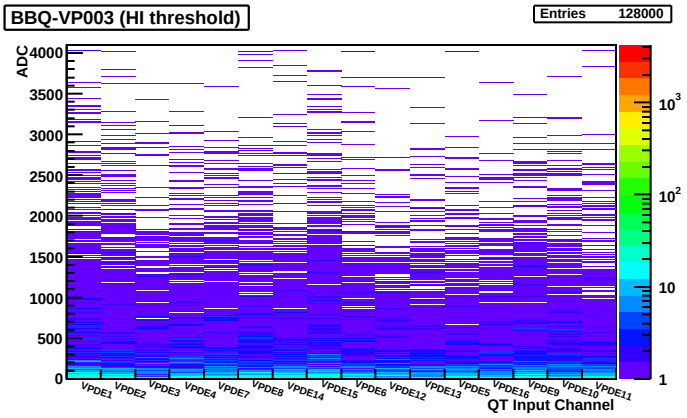

BBQ-ZD001 (ZDC TOWER)
Entries 128000
TAC

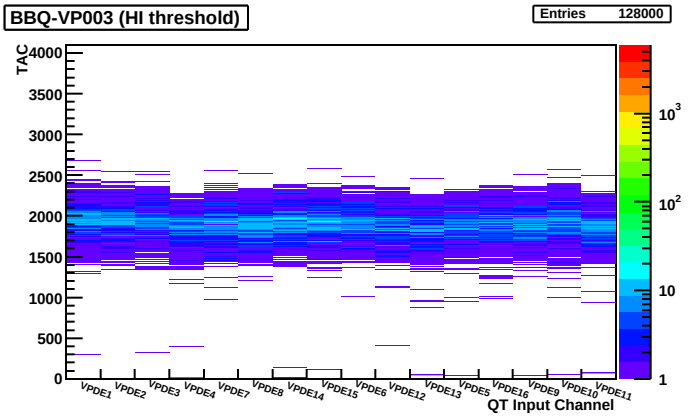

BBQ-VP001 (LO threshold)
Entries 128000
ADC
QT Input Channel

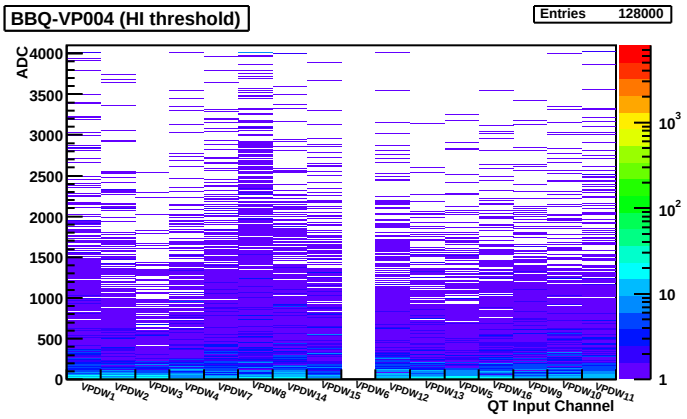

BBQ-VP001 (LO threshold)
Entries 128000
TAC
QT Input Channel

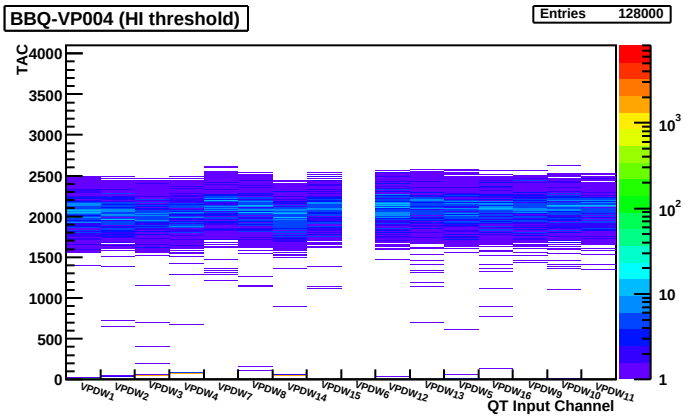

BBQ-VP002 (LO threshold)
Entries 128000
ADC
QT Input Channel

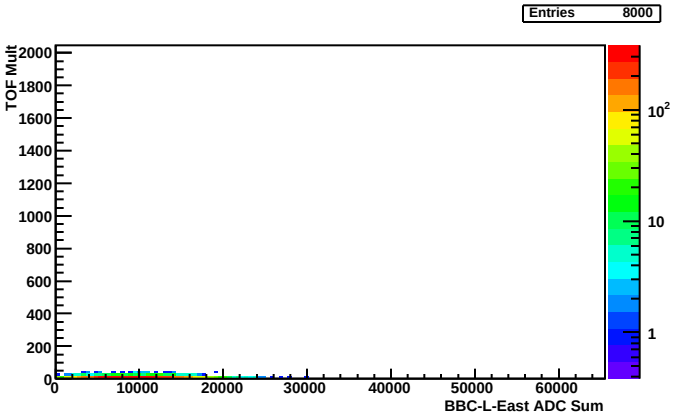

BBQ-VP002 (LO threshold)
Entries 128000
TAC
QT Input Channel

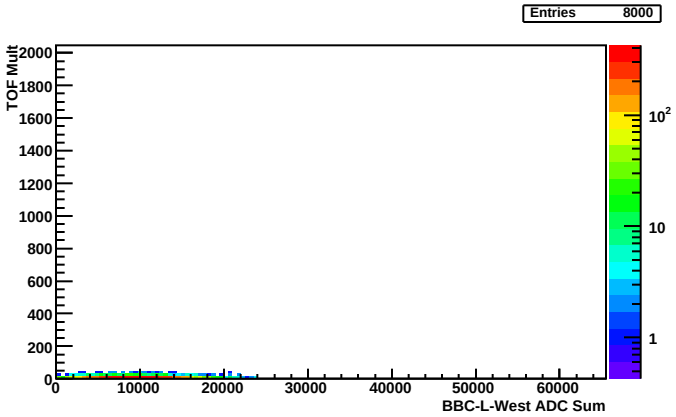

BBQ-VP003 (HI threshold)
Entries 128000
ADC
QT Input Channel

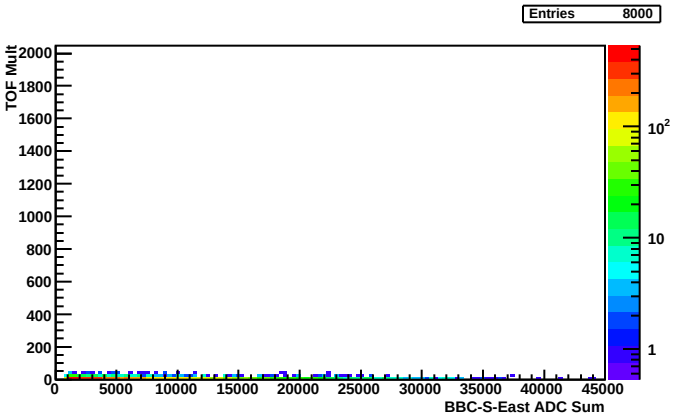

BBQ-VP003 (HI threshold)
Entries 128000
TAC
QT Input Channel

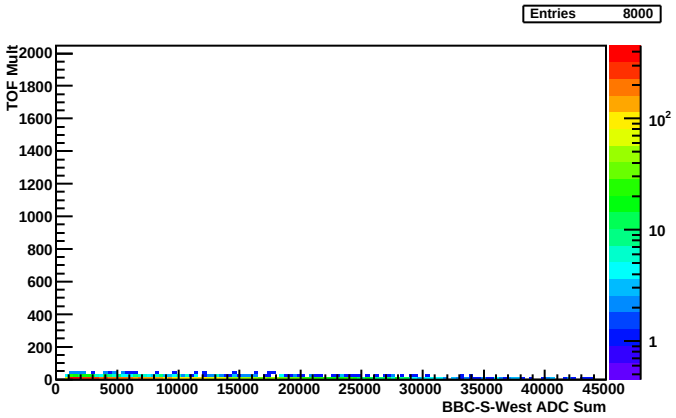

BBQ-VP004 (HI threshold)
Entries 128000
ADC
QT Input Channel

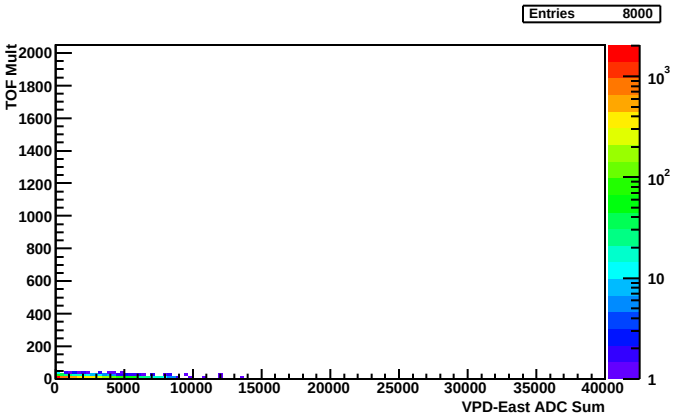

BBQ-VP004 (HI threshold)
Entries 128000
TAC
QT Input Channel

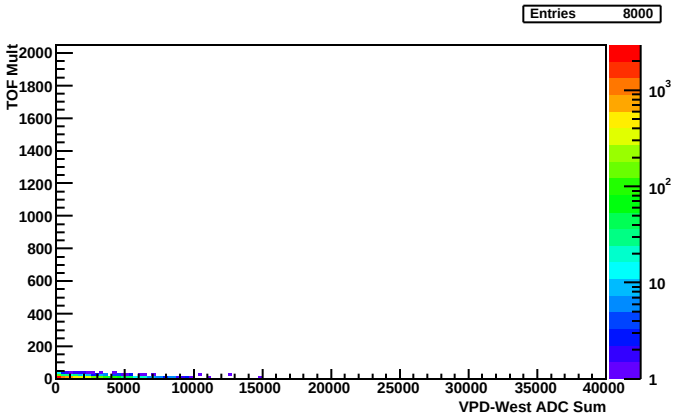

Entries 8000
TOF Mult
BBC-L-East ADC Sum

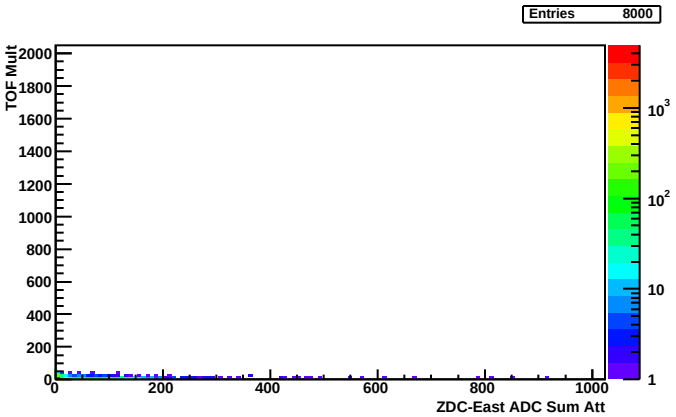

Entries 8000
TOF Mult
BBC-L-West ADC Sum

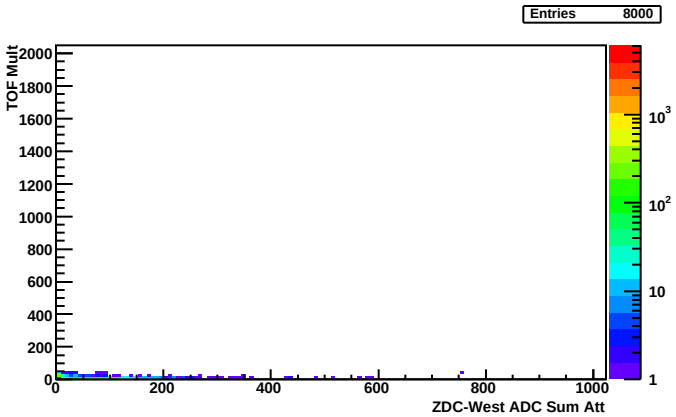

Entries 8000
TOF Mult
BBC-S-East ADC Sum

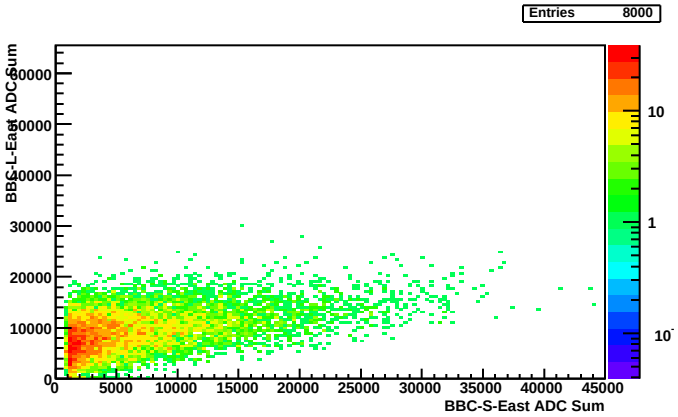

Entries 8000
TOF Mult
BBC-S-West ADC Sum

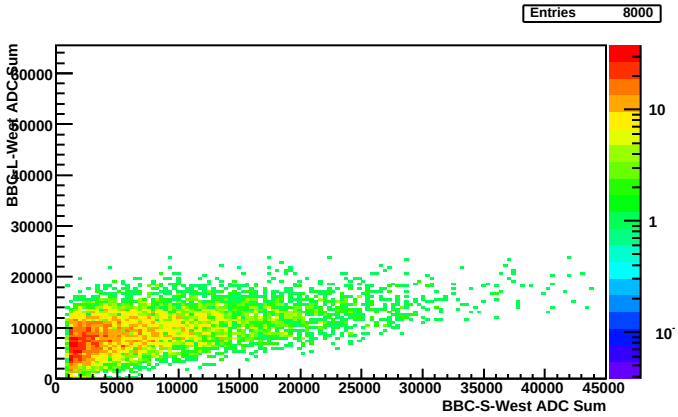

Entries 8000
TOF Mult
VPD-East ADC Sum

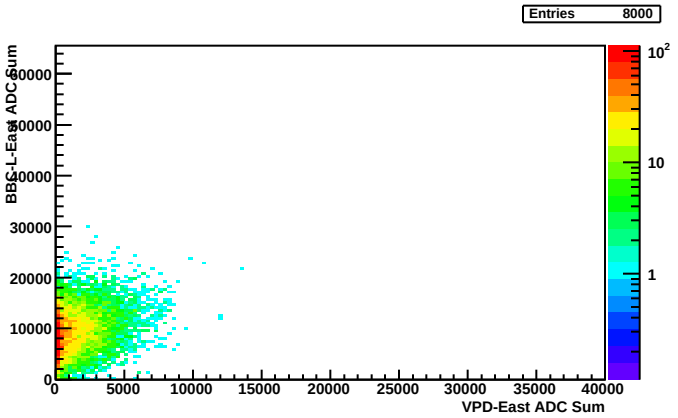

Entries 8000
TOF Mult
VPD-West ADC Sum

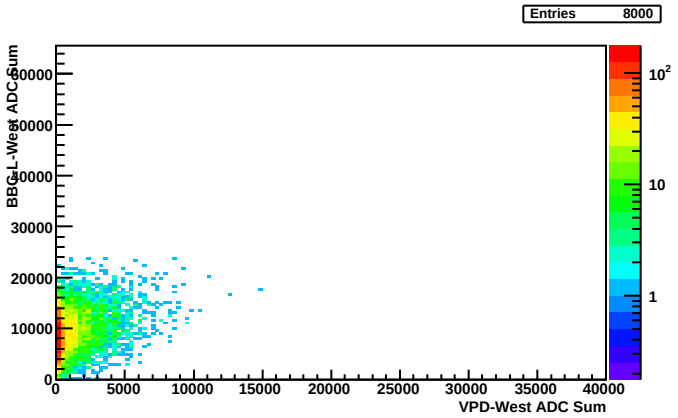

Entries 8000
TOF Mult
ZDC-East ADC Sum Att

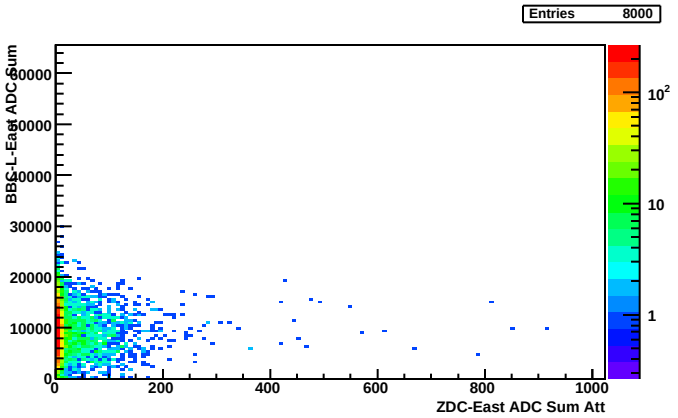

Entries 8000
TOF Mult
ZDC-West ADC Sum Att

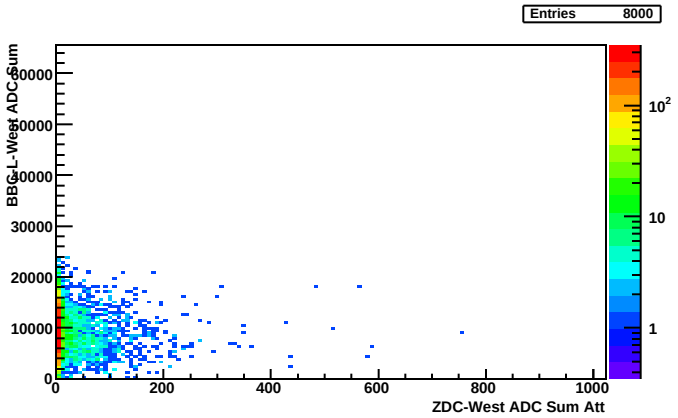

Entries 8000
BBC-L-East ADC Sum
BBC-S-East ADC Sum

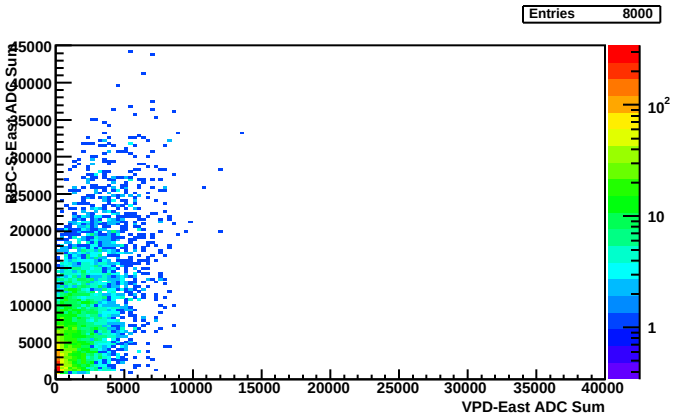

Entries 8000
BBC-L-West ADC Sum
BBC-S-West ADC Sum

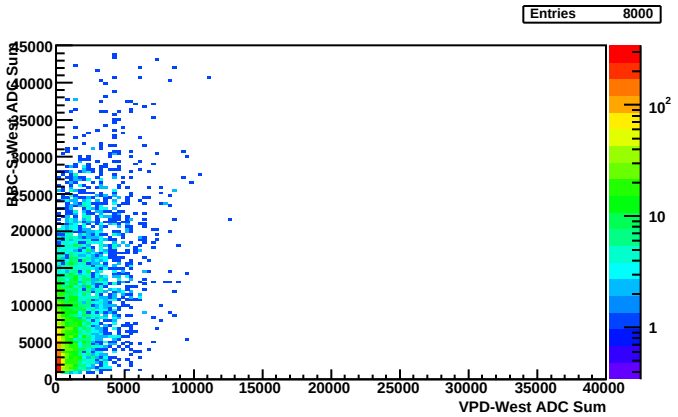

Entries 8000
BBC-L-East ADC Sum
VPD-East ADC Sum

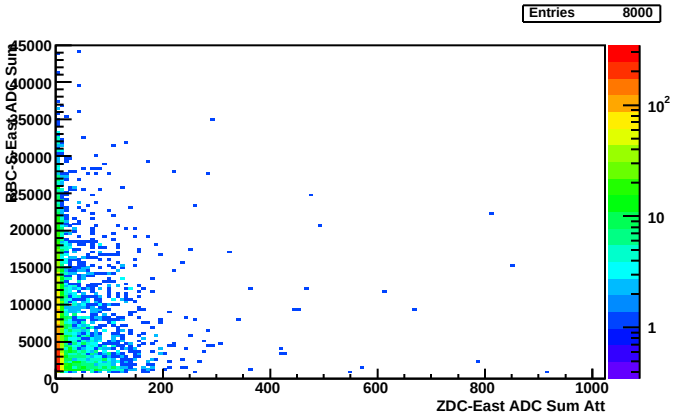

Entries 8000
BBC-L-West ADC Sum
VPD-West ADC Sum

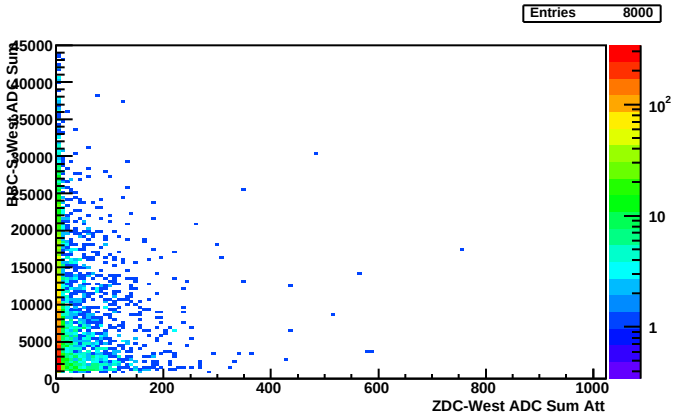

Entries 8000
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

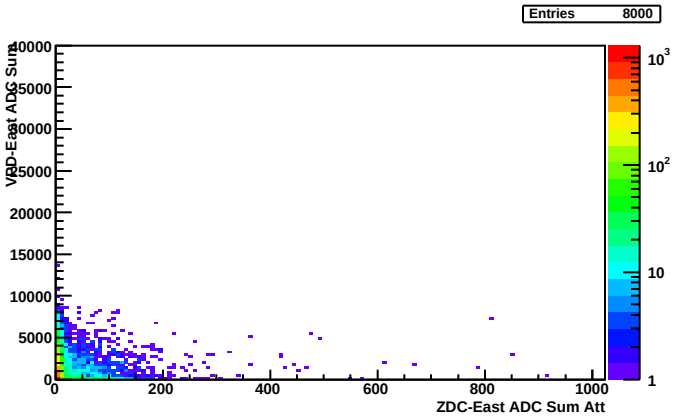

Entries 8000
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

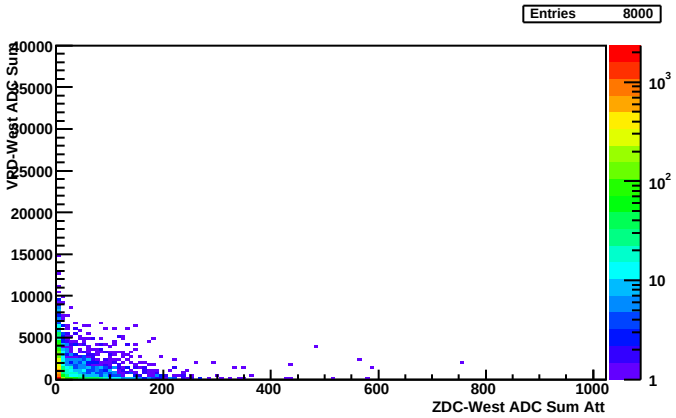

Entries 8000
BBC-S-East ADC Sum
VPD-East ADC Sum

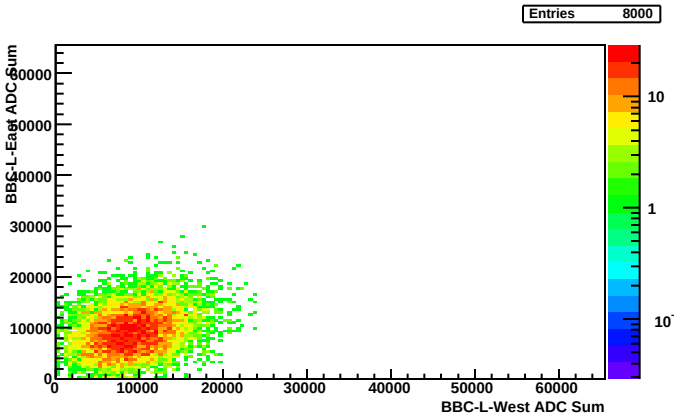

Entries 8000
BBC-S-West ADC Sum
VPD-West ADC Sum

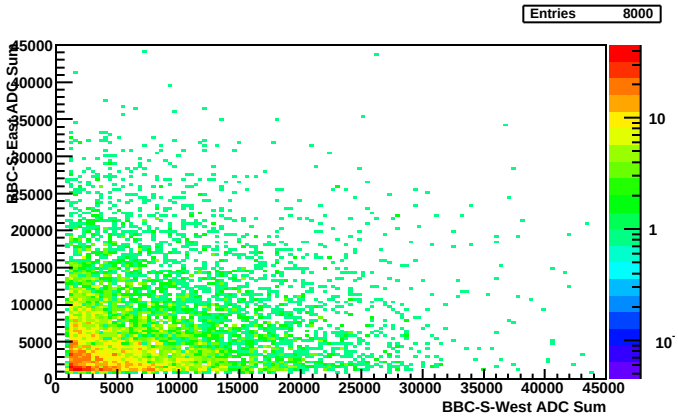

Entries 8000
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

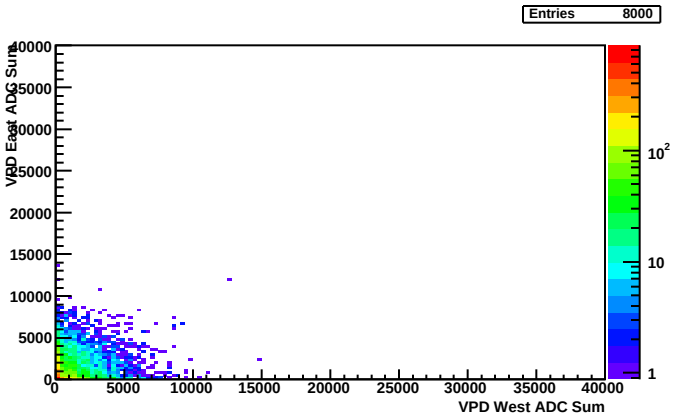

Entries 8000
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

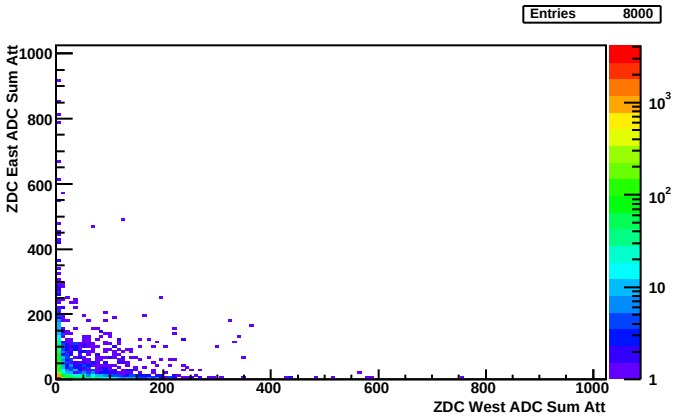

Entries 8000
VPD-East ADC Sum
ZDC-East ADC Sum Att

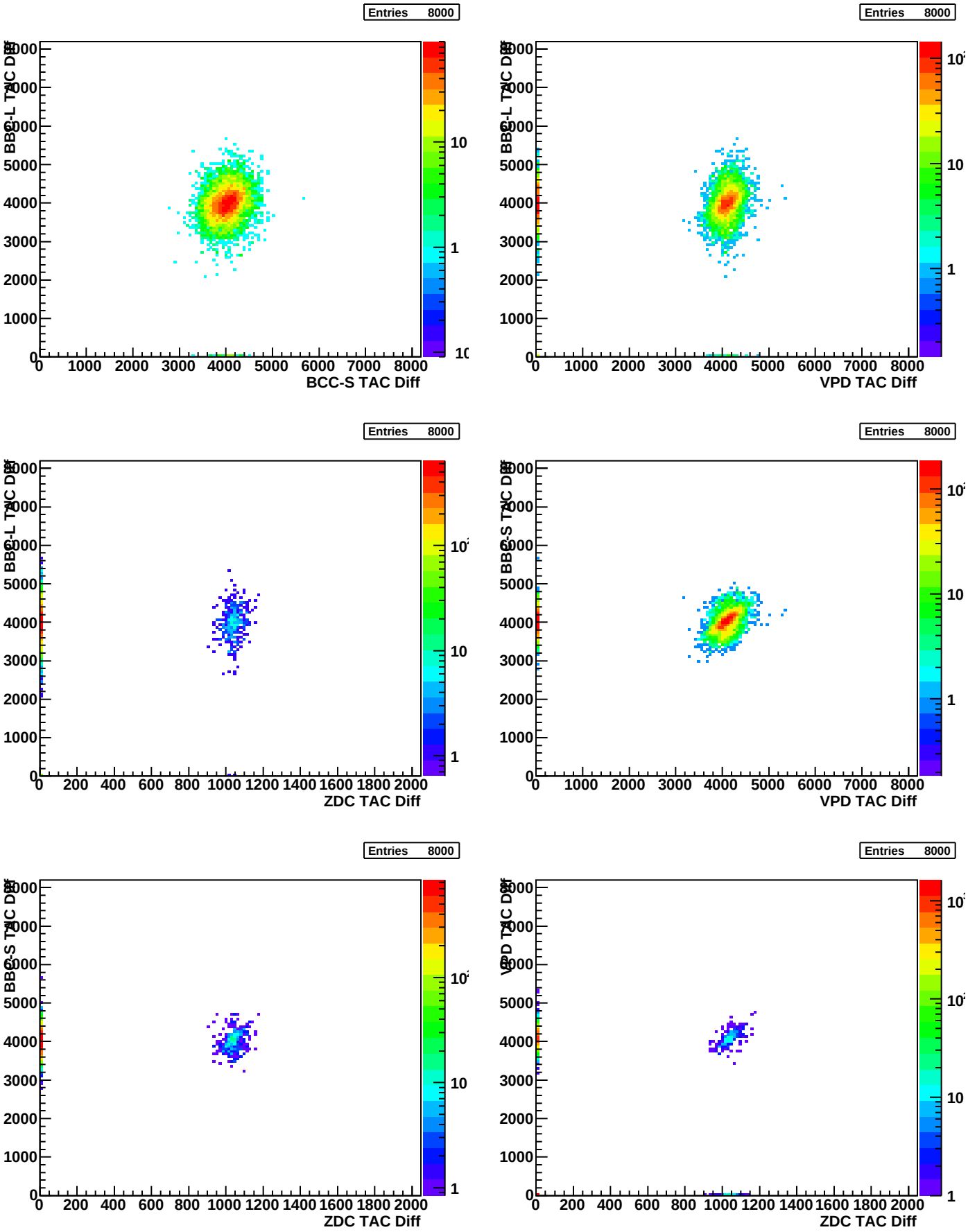

Entries 8000
VPD-West ADC Sum
ZDC-West ADC Sum Att

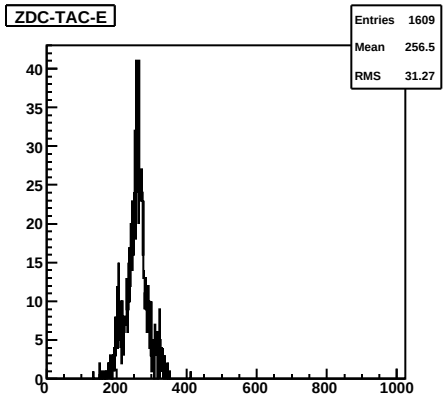

Entries 8000
BBC-L-East ADC Sum
BBC-L-West ADC Sum

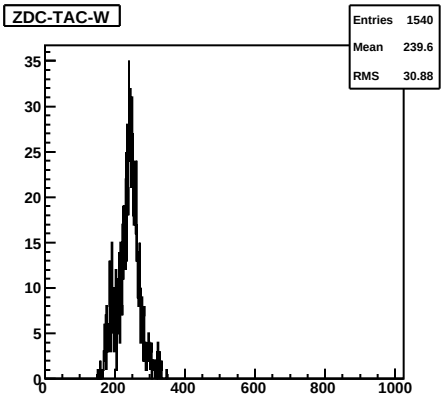

Entries 8000
BBC-S-East ADC Sum
BBC-S-West ADC Sum

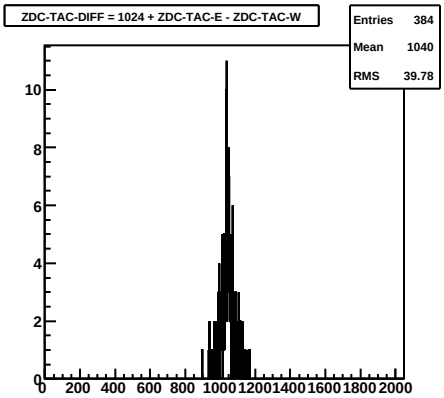

Entries 8000
VPD East ADC Sum
VPD West ADC Sum

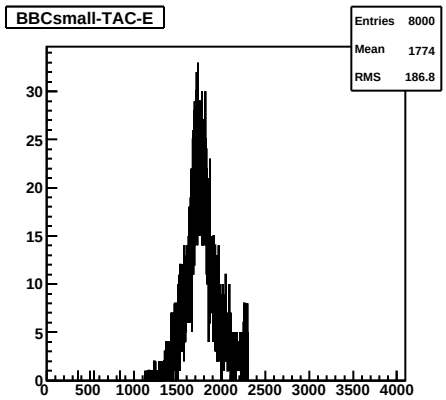

Entries 8000
ZDC East ADC Sum Att
ZDC West ADC Sum Att

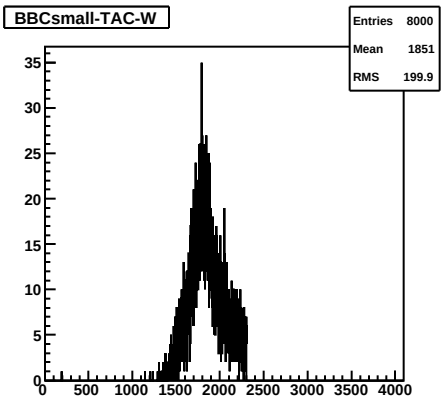

Entries 8000
BBC-L TAC Diff
BCC-S TAC Diff
Entries 8000
BBC-L TAC Diff
VPD TAC Diff
Entries 8000
BBC-L TAC Diff
ZDC TAC Diff
Entries 8000
BBC-S TAC Diff
VPD TAC Diff
Entries 8000
BBC-S TAC Diff
ZDC TAC Diff
Entries 8000
VPD TAC Diff
ZDC TAC Diff

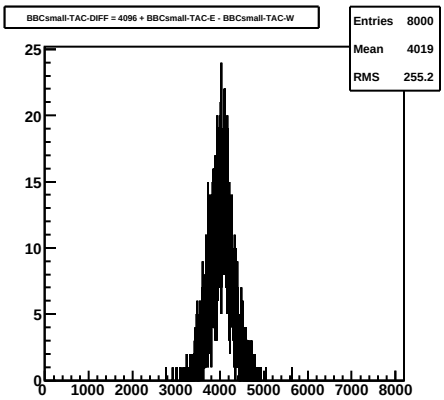

ZDC-TAC-E
Entries 1609
Mean 256.5
RMS 31.27

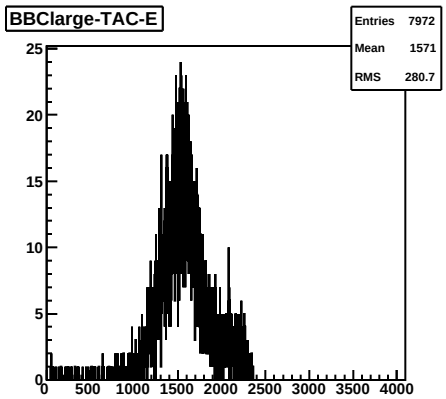

ZDC-TAC-W
Entries 1540
Mean 239.6
RMS 30.88

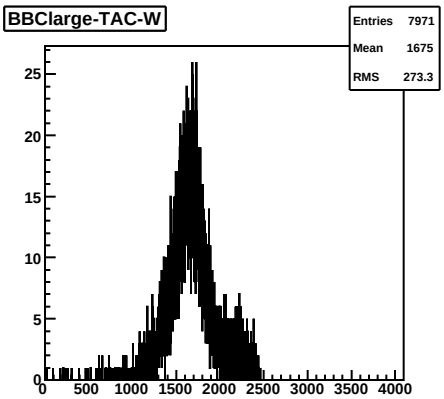

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 384
Mean 1040
RMS 39.78

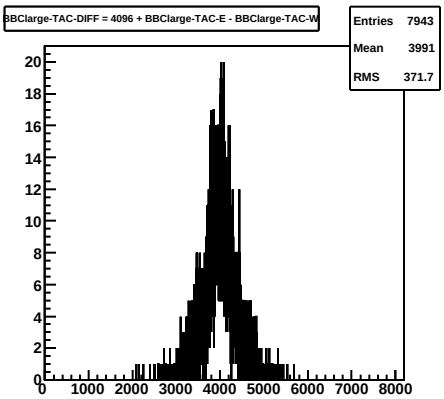

BBCsmall-TAC-E
Entries 8000
Mean 1774
RMS 186.8

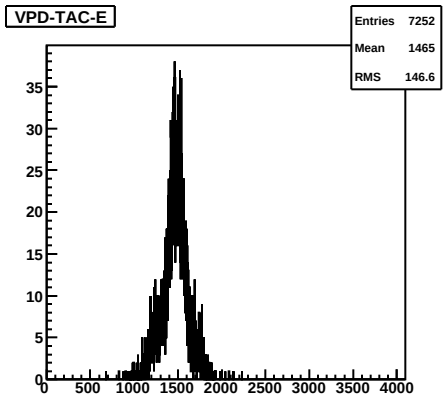

BBCsmall-TAC-W
Entries 8000
Mean 1851
RMS 199.9

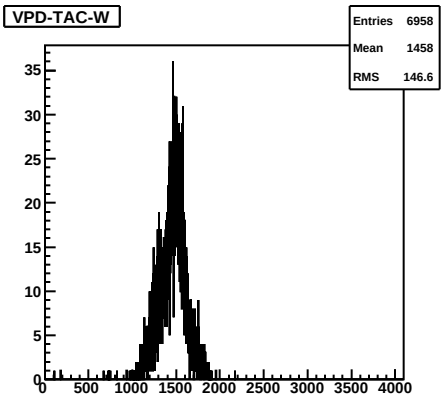

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 8000
Mean 4019
RMS 255.2

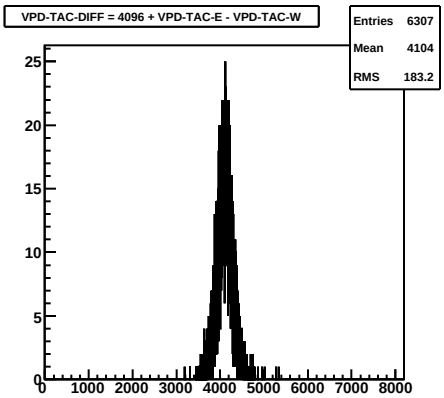

BBClarge-TAC-E
Entries 7972
Mean 1571
RMS 280.7

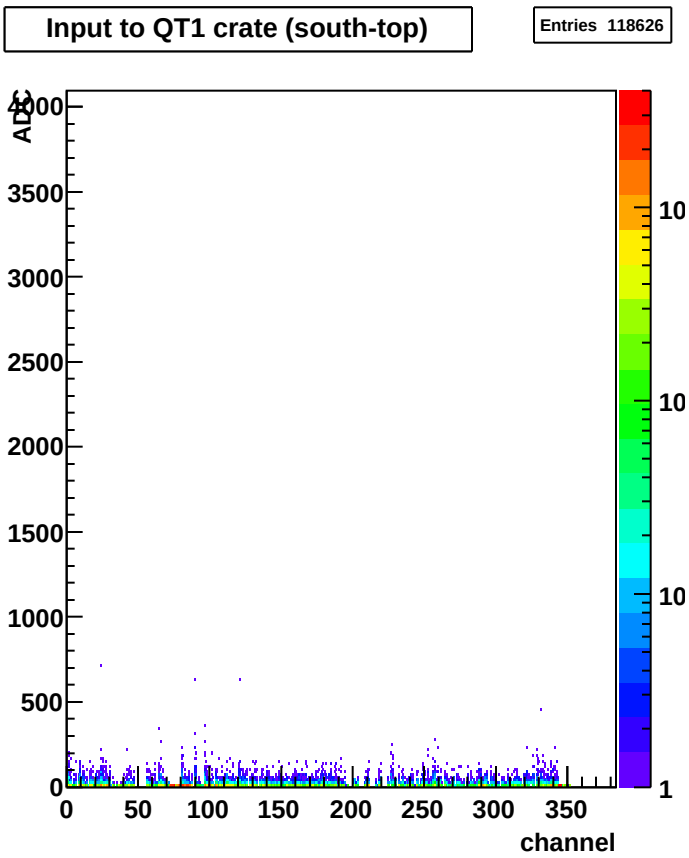

BBClarge-TAC-W
Entries 7971
Mean 1675
RMS 273.3

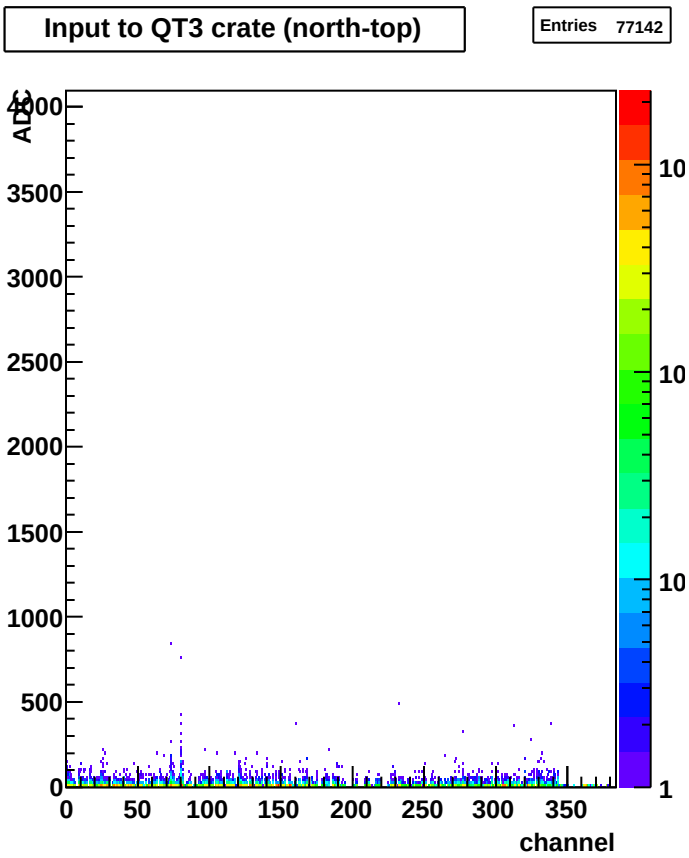

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 7943
Mean 3991
RMS 371.7

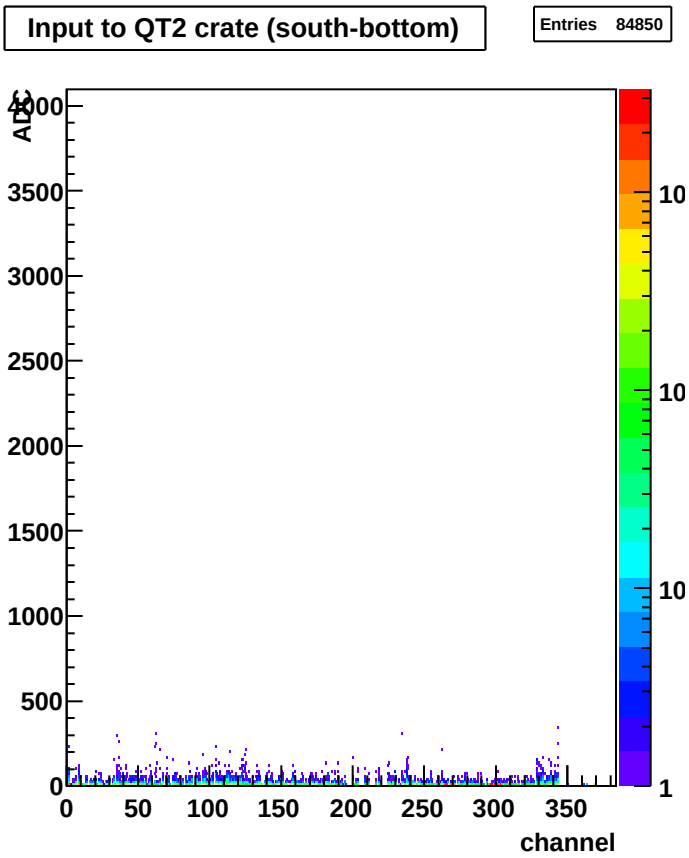

VPD-TAC-E
Entries 7252
Mean 1465
RMS 146.6

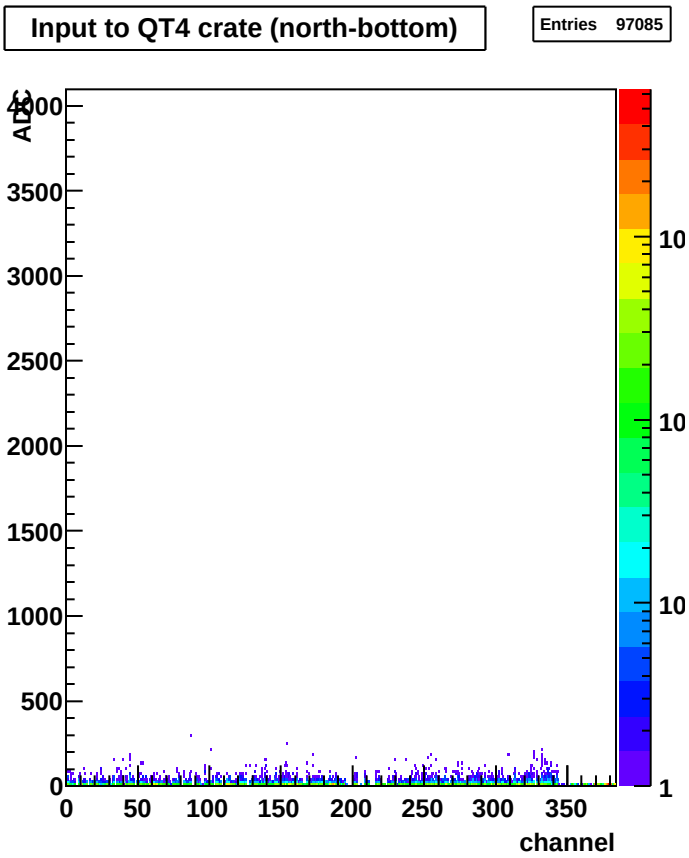

VPD-TAC-W
Entries 6958
Mean 1458
RMS 146.6

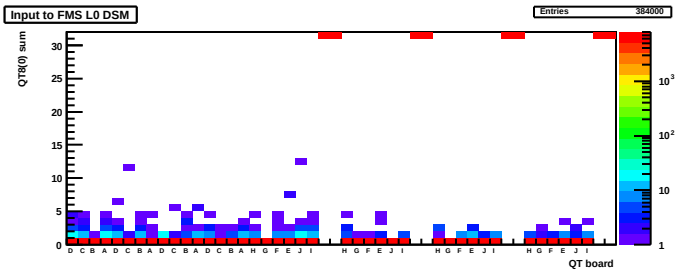

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 6307
Mean 4104
RMS 183.2

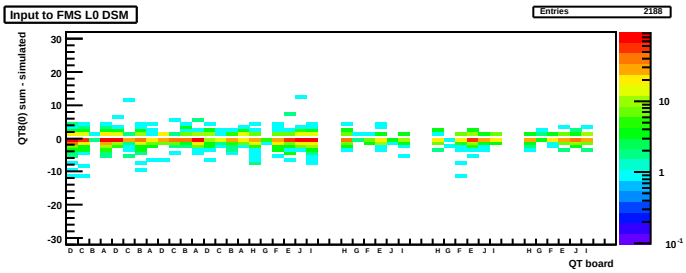

Input to QT1 crate (south-top)
Entries 118626
ADC
channel

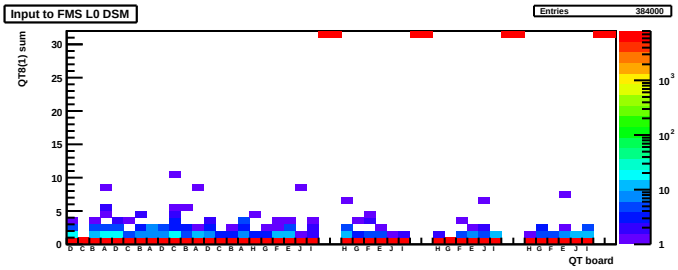

Input to QT3 crate (north-top)
Entries 77142
ADC
channel

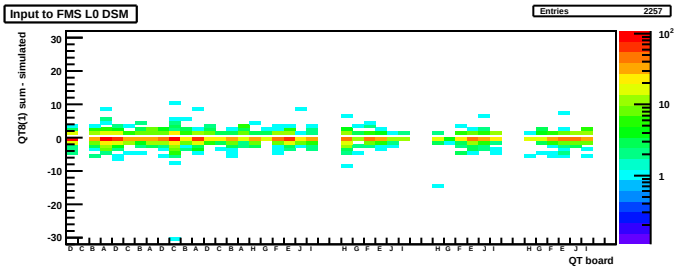

Input to QT2 crate (south-bottom)
Entries 84850
ADC
channel

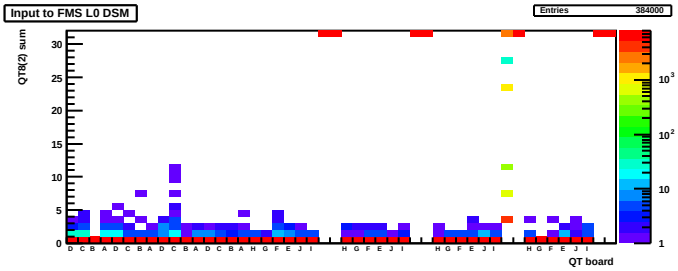

Input to QT4 crate (north-bottom)
Entries 97085
ADC
channel

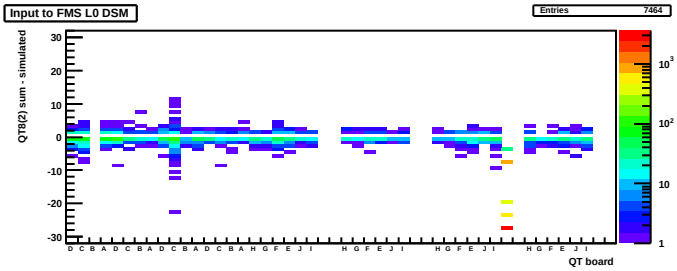

Input to FMS L0 DSM
Entries 384000
QT8(0) sum
QT board

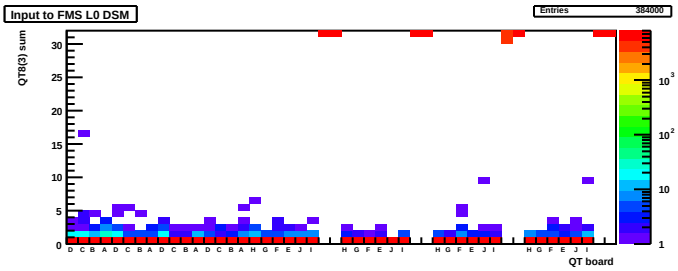

Input to FMS L0 DSM
Entries 2188
QT8(0) sum - simulated
QT board

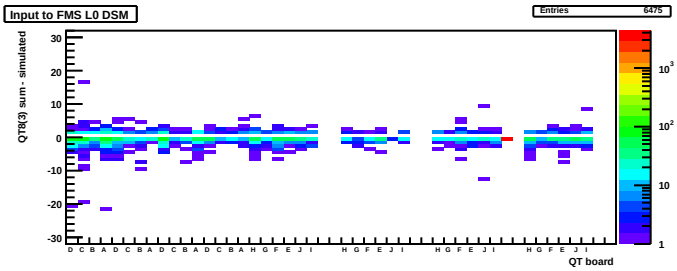

Input to FMS L0 DSM
Entries 384000
QT8(1) sum
QT board

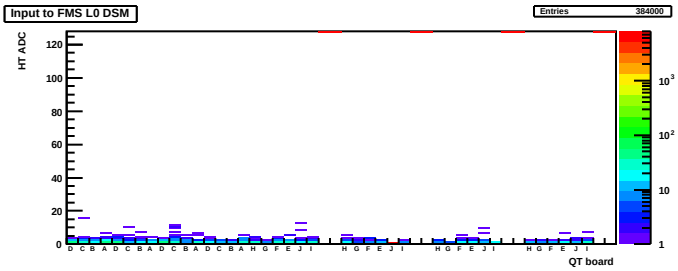

Input to FMS L0 DSM
Entries 2257
QT8(1) sum - simulated
QT board

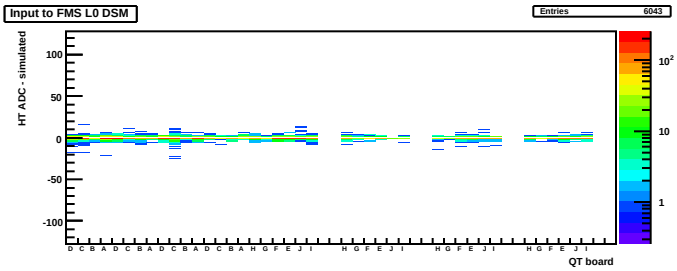

Input to FMS L0 DSM
Entries 384000
QT8(2) sum
QT board

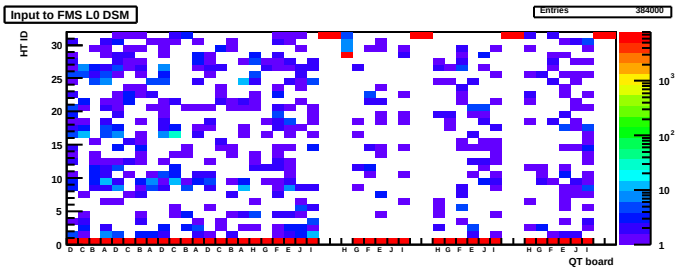

Input to FMS L0 DSM
Entries 7464
QT8(2) sum - simulated
QT board

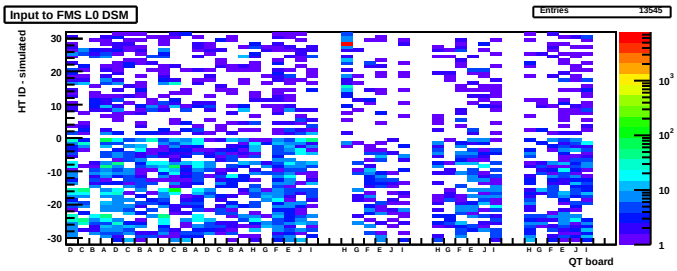

Input to FMS L0 DSM
Entries 384000
QT8(3) sum
QT board

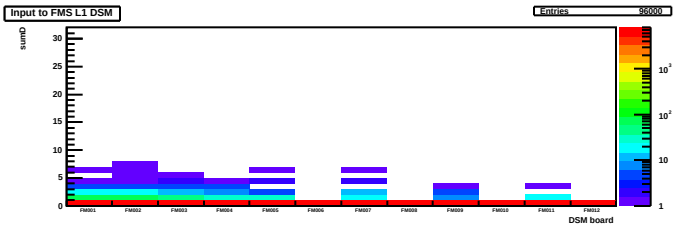

Input to FMS L0 DSM
Entries 6475
QT8(3) sum - simulated
QT board

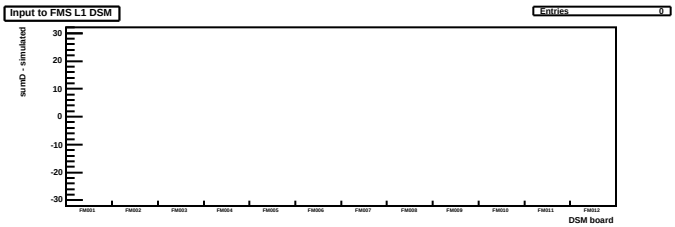

Input to FMS L0 DSM
Entries 384000
HT ADC
QT board

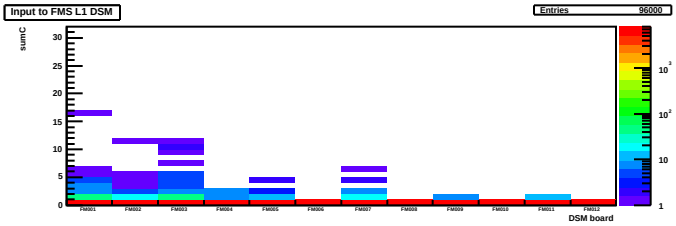

Input to FMS L0 DSM
Entries 6043
HT ADC - simulated
QT board

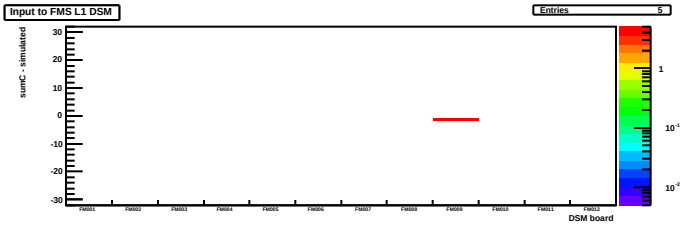

Input to FMS L0 DSM
Entries 384000
HT ID
QT board

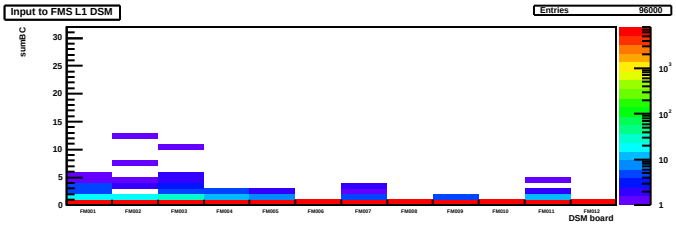

Input to FMS L0 DSM
Entries 13545
HT ID - simulated
QT board

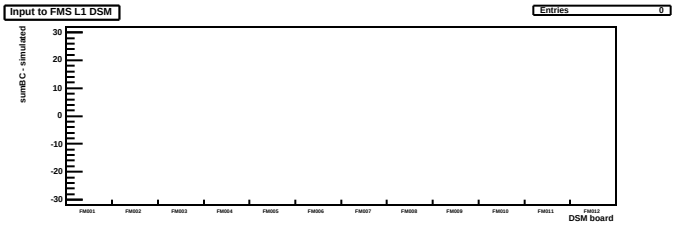

Input to FMS L1 DSM
Entries 96000
sumD
DSM board

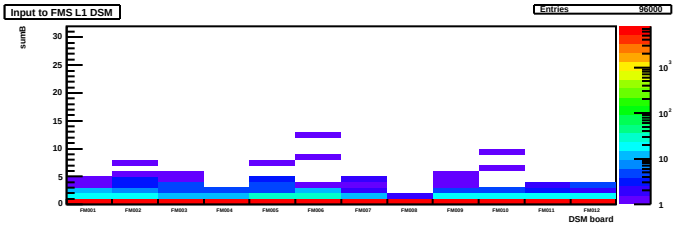

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

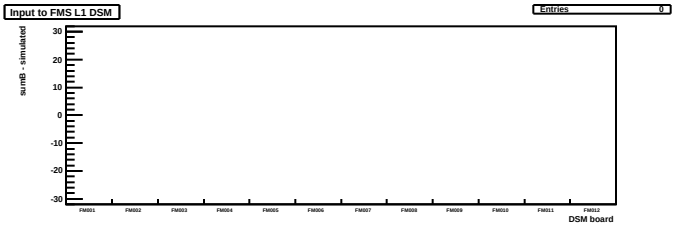

Input to FMS L1 DSM
Entries 96000
sumC
DSM board

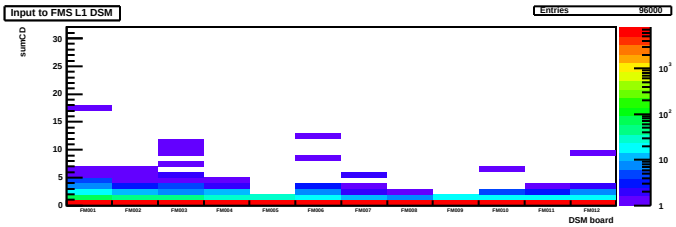

Input to FMS L1 DSM
Entries 5
sumC - simulated
DSM board

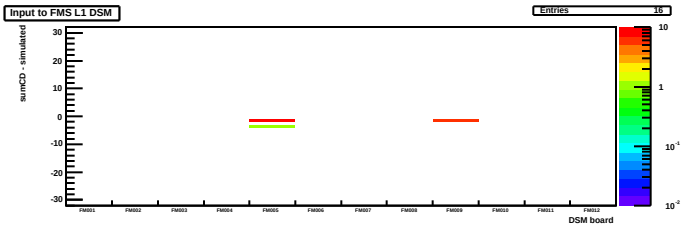

Input to FMS L1 DSM
Entries 96000
sumBC
DSM board

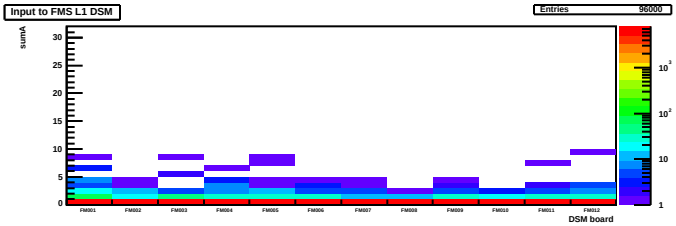

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

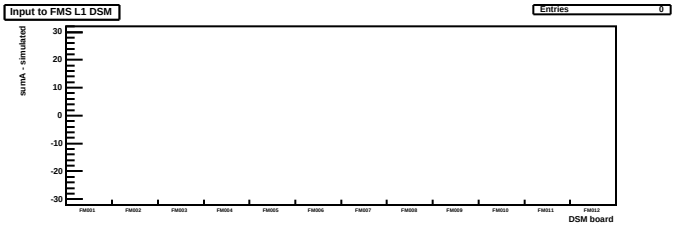

Input to FMS L1 DSM
Entries 96000
sumB
DSM board

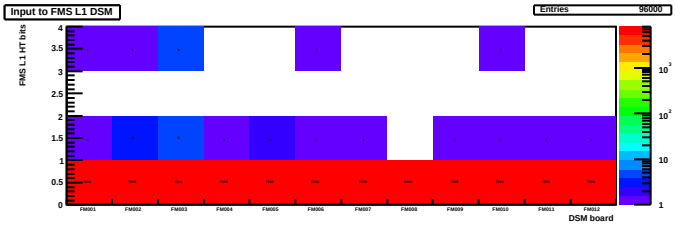

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

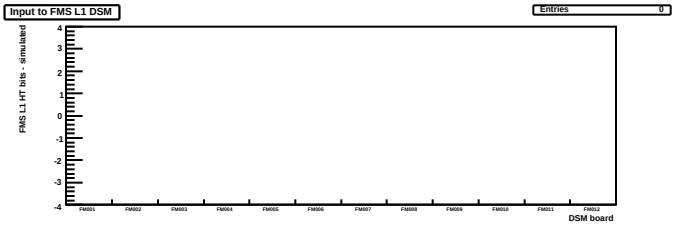

Input to FMS L1 DSM
Entries 96000
sumCD
DSM board

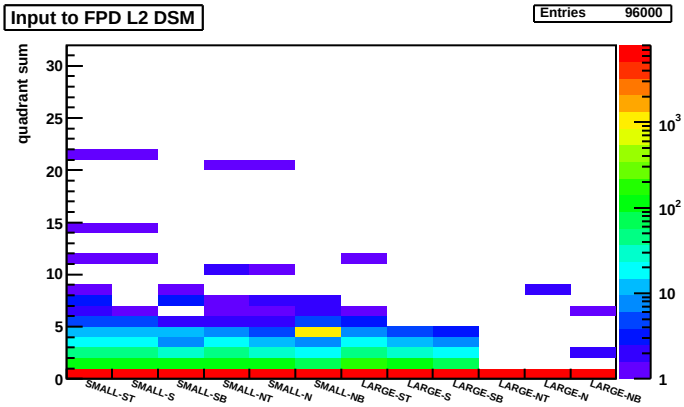

Input to FMS L1 DSM
Entries 16
sumCD - simulated
DSM board

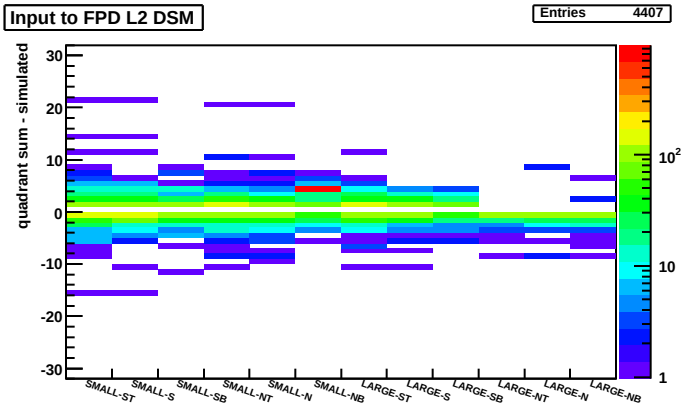

Input to FMS L1 DSM
Entries 96000
sumA
DSM board

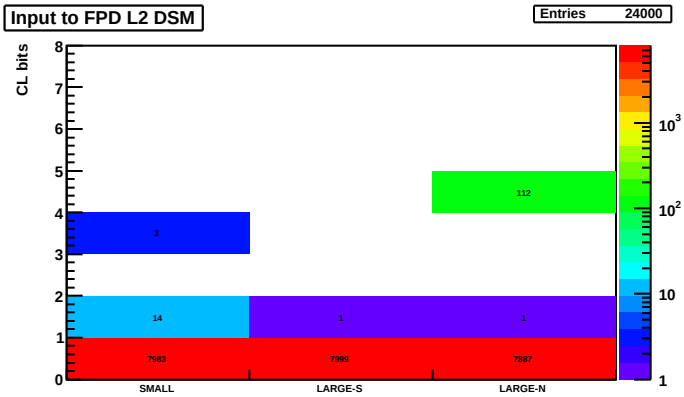

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

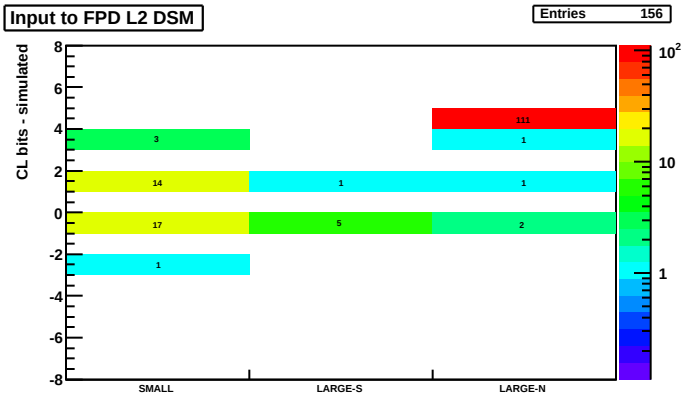

Input to FMS L1 DSM
Entries 96000
FMS L1 HT bits
DSM board

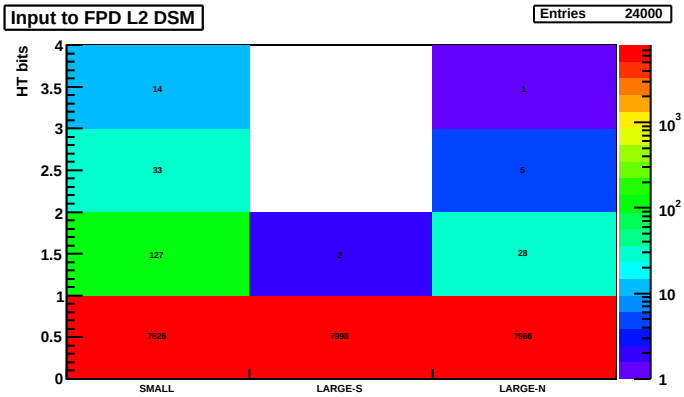

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

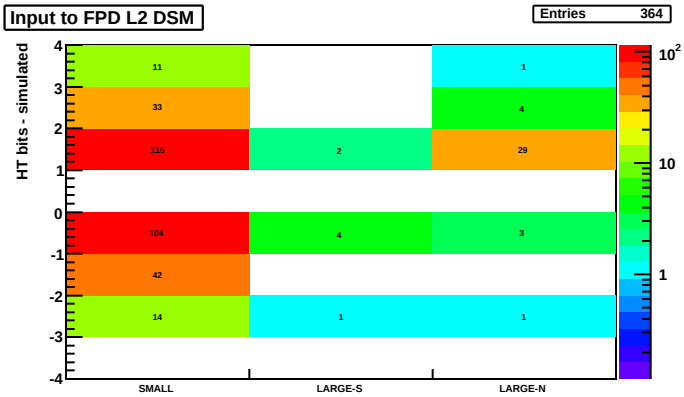

Input to FPD L2 DSM
Entries 96000
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

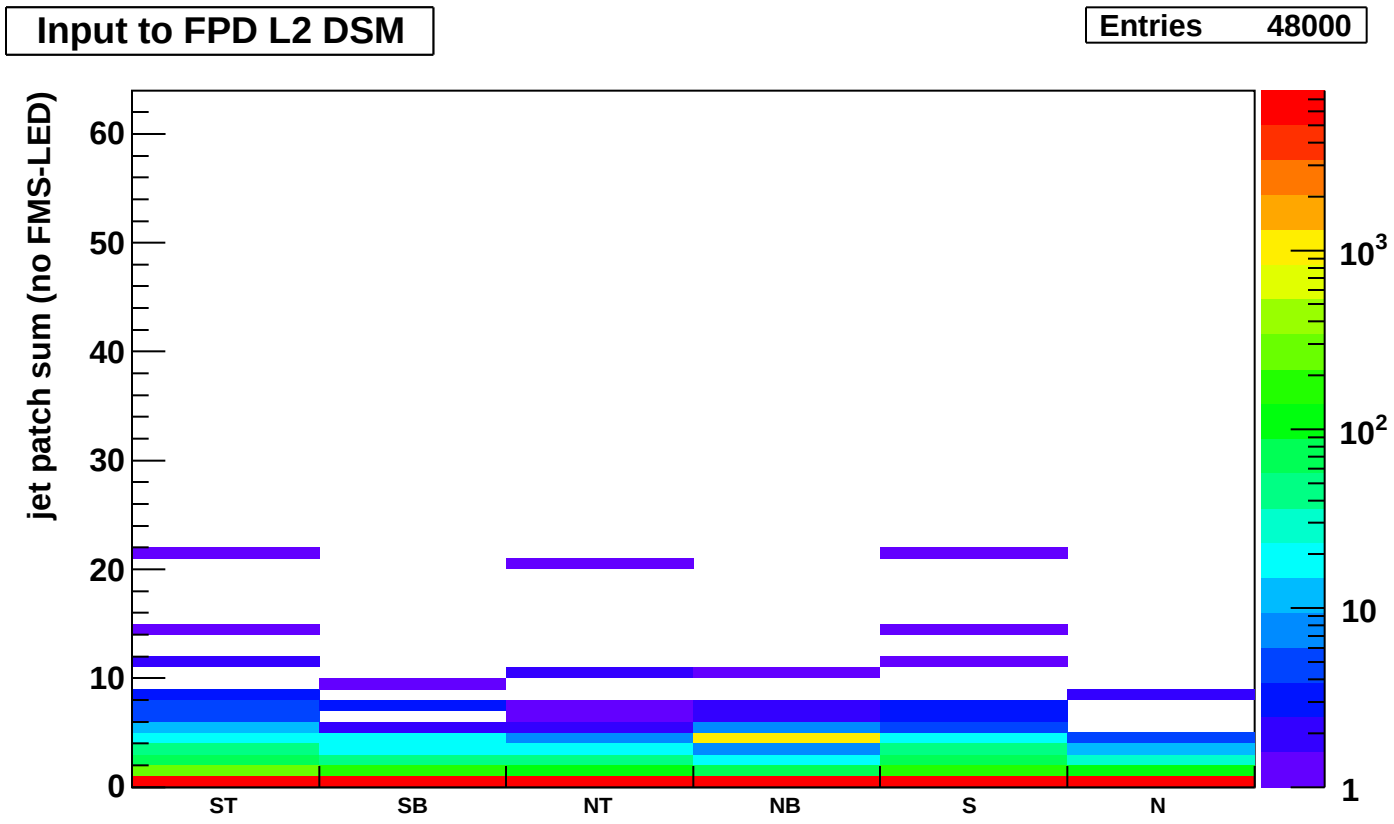

Input to FPD L2 DSM
Entries 4407
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

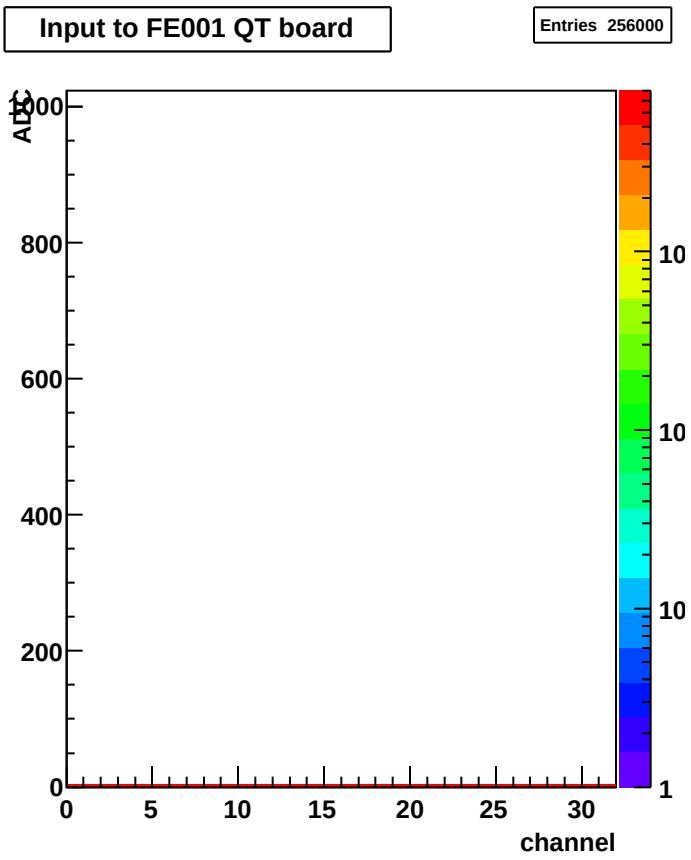

Input to FPD L2 DSM
Entries 24000
CL bits
3
112
14
1
1
7983
7999
7887
SMALL
LARGE-S
LARGE-N

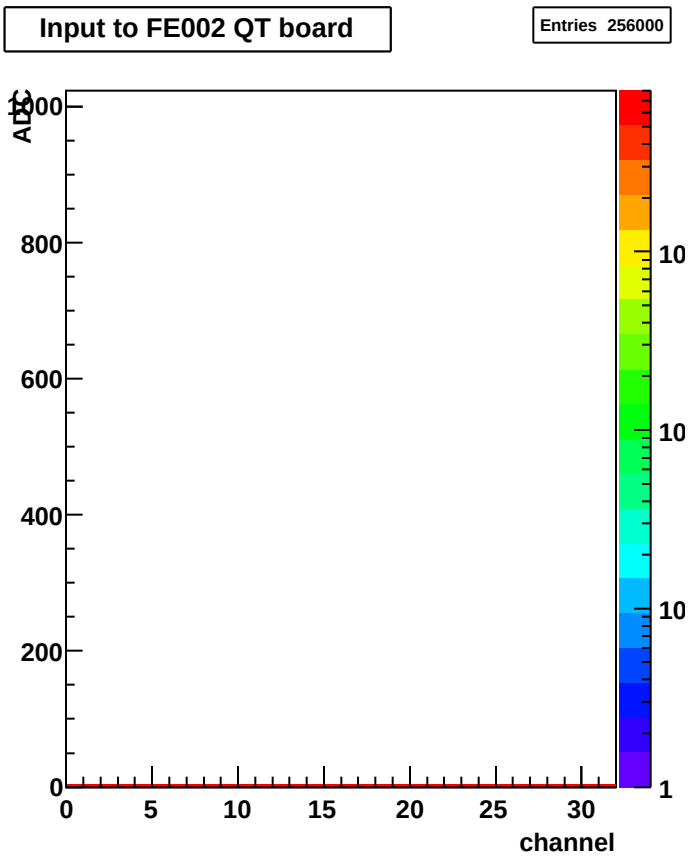

Input to FPD L2 DSM
Entries 156
CL bits - simulated
111
3
1
14
1
1
17
5
2
1
SMALL
LARGE-S
LARGE-N

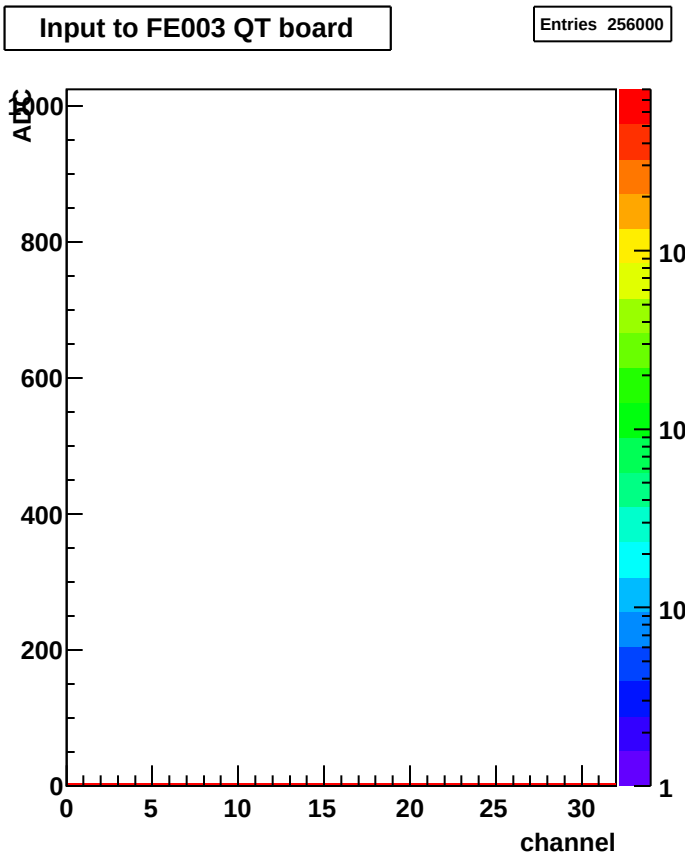

Input to FPD L2 DSM
Entries 24000
HT bits
14
1
33
5
127
2
28
7826
7998
7966
SMALL
LARGE-S
LARGE-N

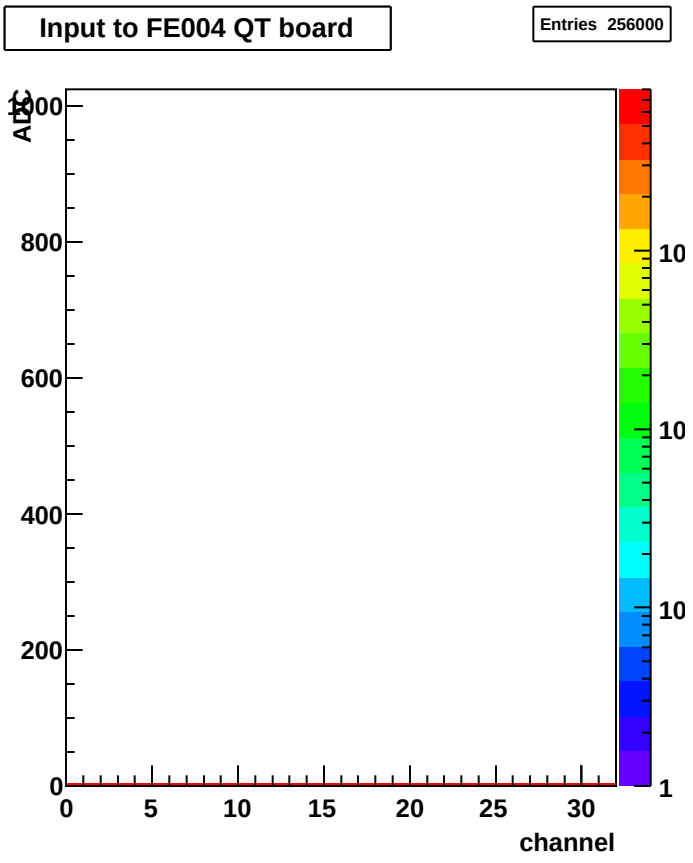

Input to FPD L2 DSM
Entries 364
HT bits - simulated
11
1
33
4
115
2
29
104
4
3
42
14
1
1
SMALL
LARGE-S
LARGE-N

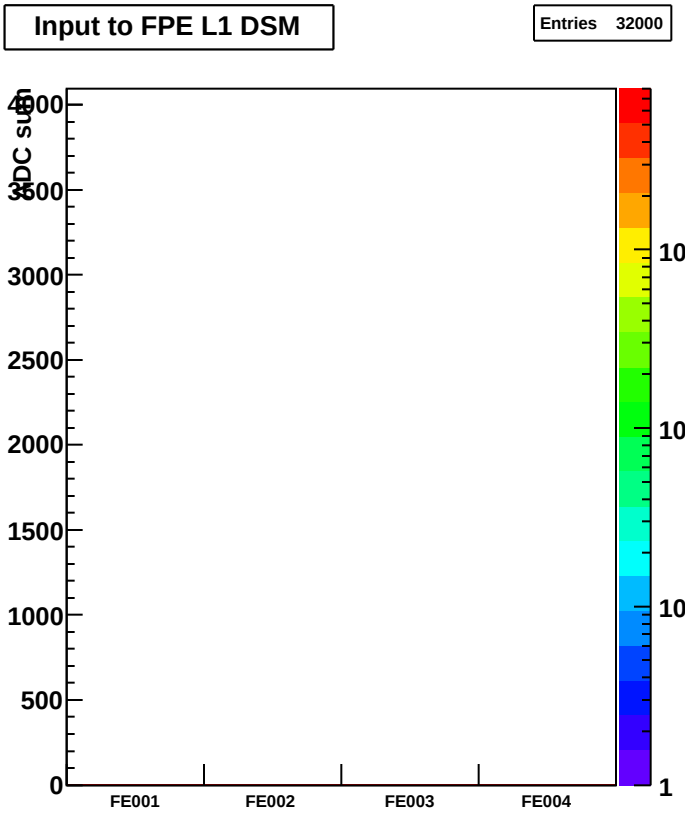

Input to FPD L2 DSM
Entries 48000
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3

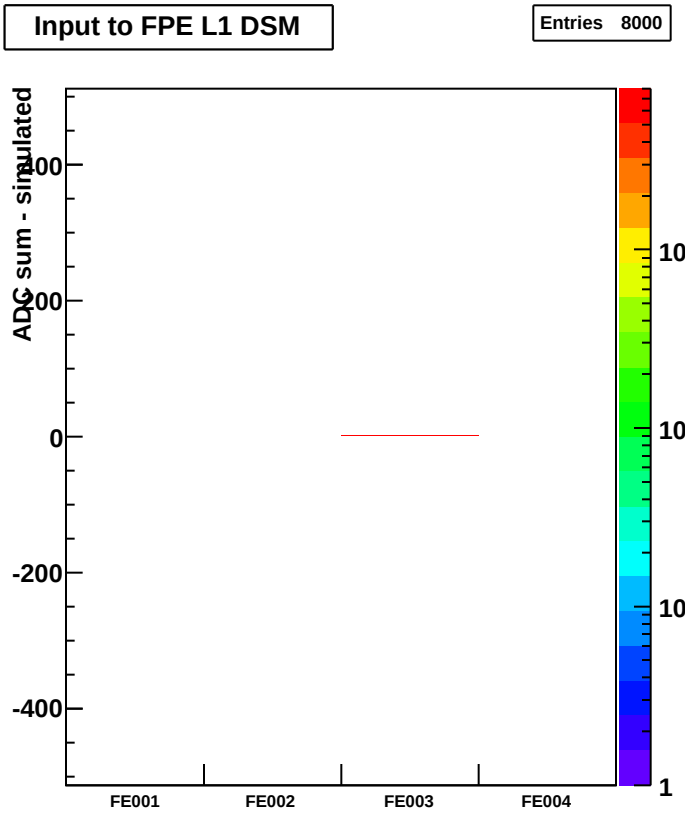

Input to FE001 QT board
Entries 256000
ADC
channel

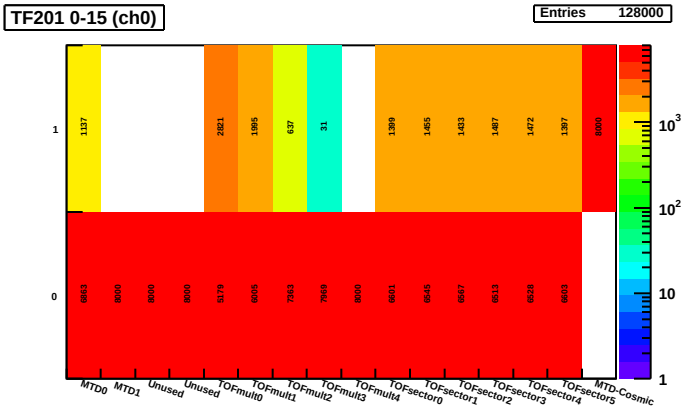

Input to FE002 QT board
Entries 256000
ADC
channel

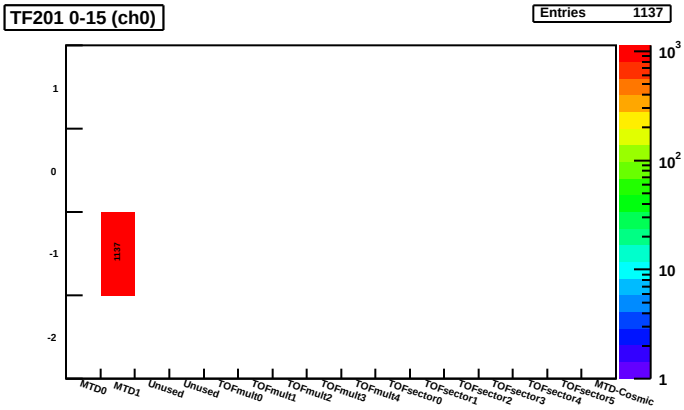

Input to FE003 QT board
Entries 256000
ADC
channel

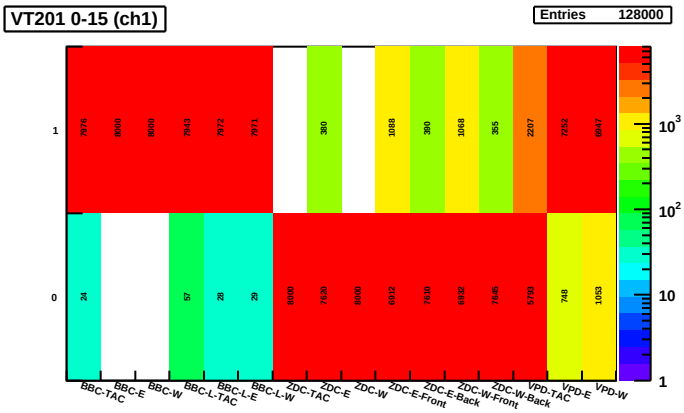

Input to FE004 QT board
Entries 256000
ADC
channel

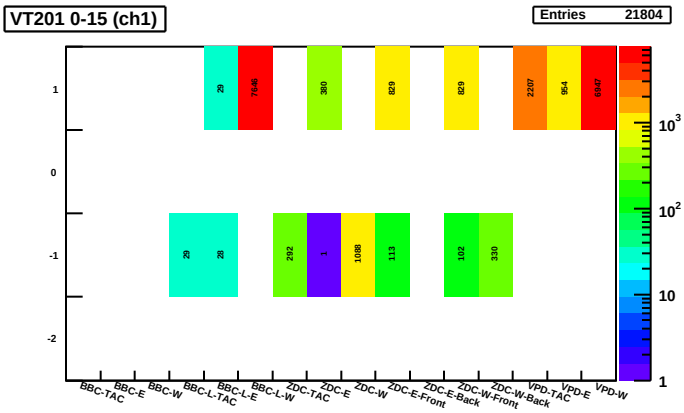

Input to FPE L1 DSM
Entries 32000
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
1

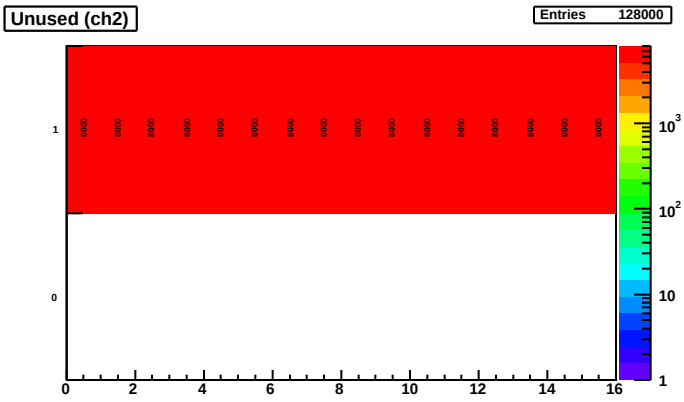

Input to FPE L1 DSM
Entries 8000
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
1

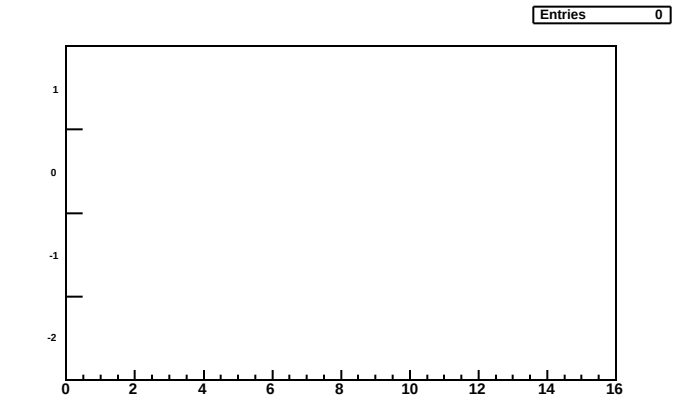

TF201 0-15 (ch0)
Entries 128000
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

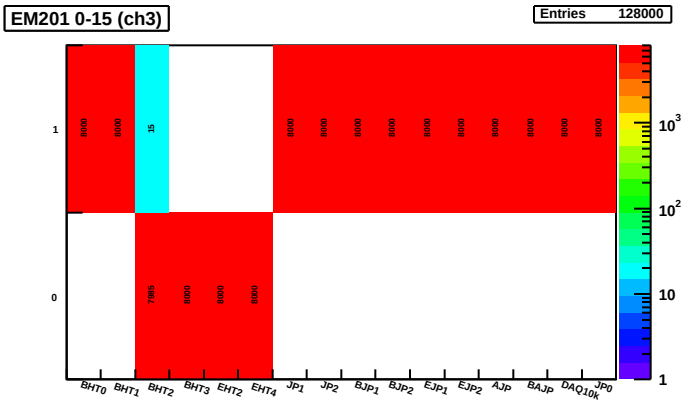

TF201 0-15 (ch0)
Entries 1137
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

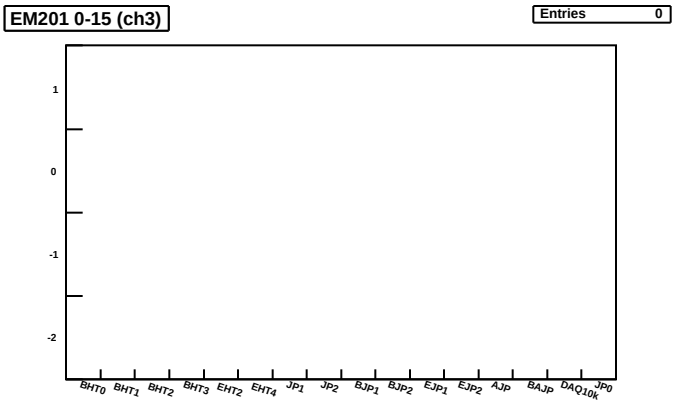

VT201 0-15 (ch1)
Entries 128000
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 21804
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

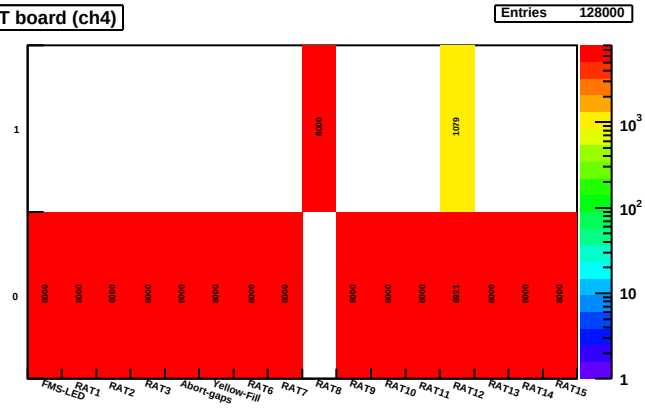

Unused (ch2)
Entries 128000

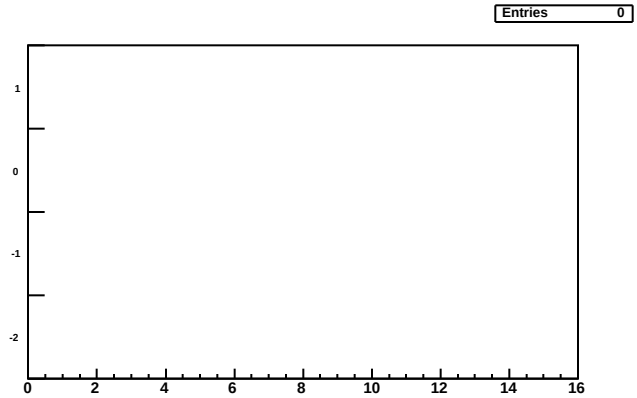

Entries 0


EM201 0-15 (ch3)
Entries 128000
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

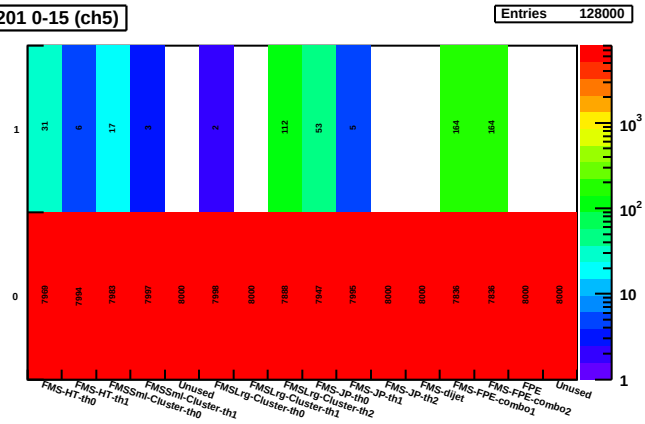

EM201 0-15 (ch3)
Entries 0
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

RAT board (ch4)

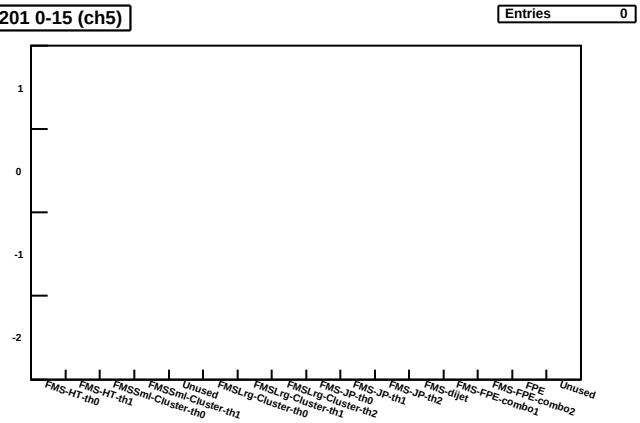




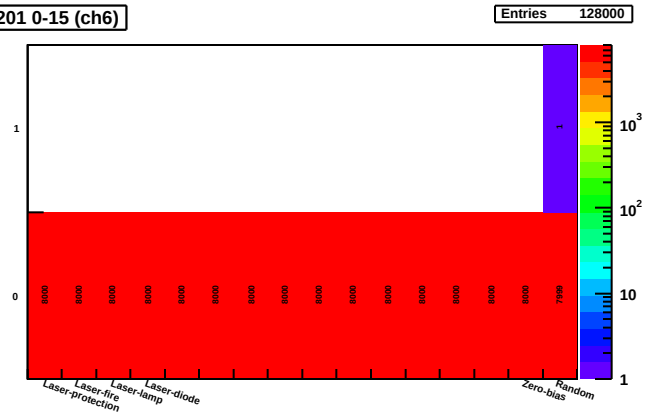
FP201 0-15 (ch5)

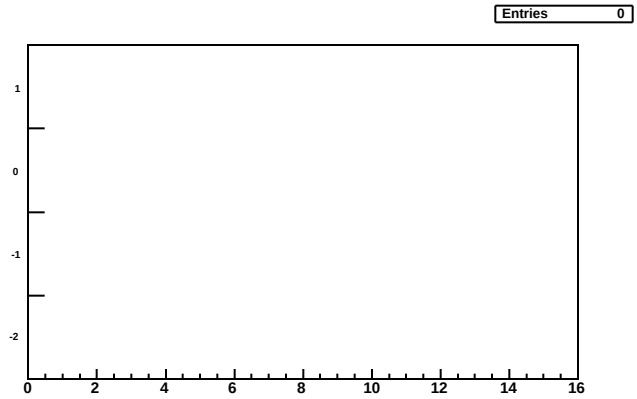
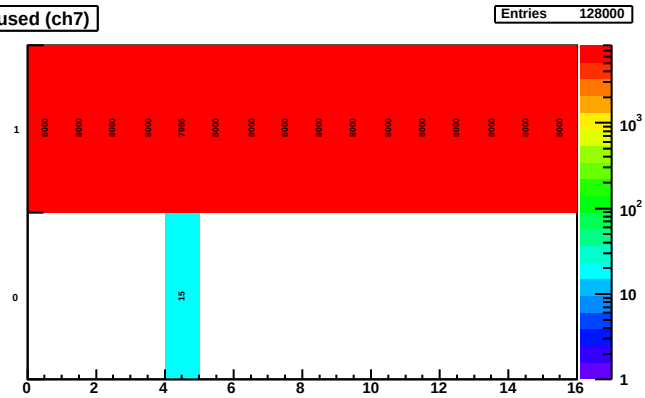
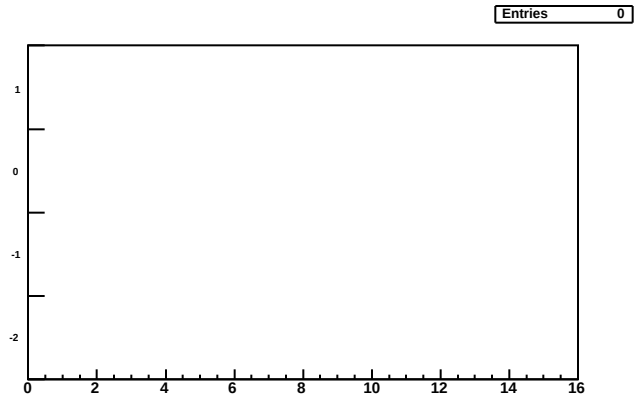


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)