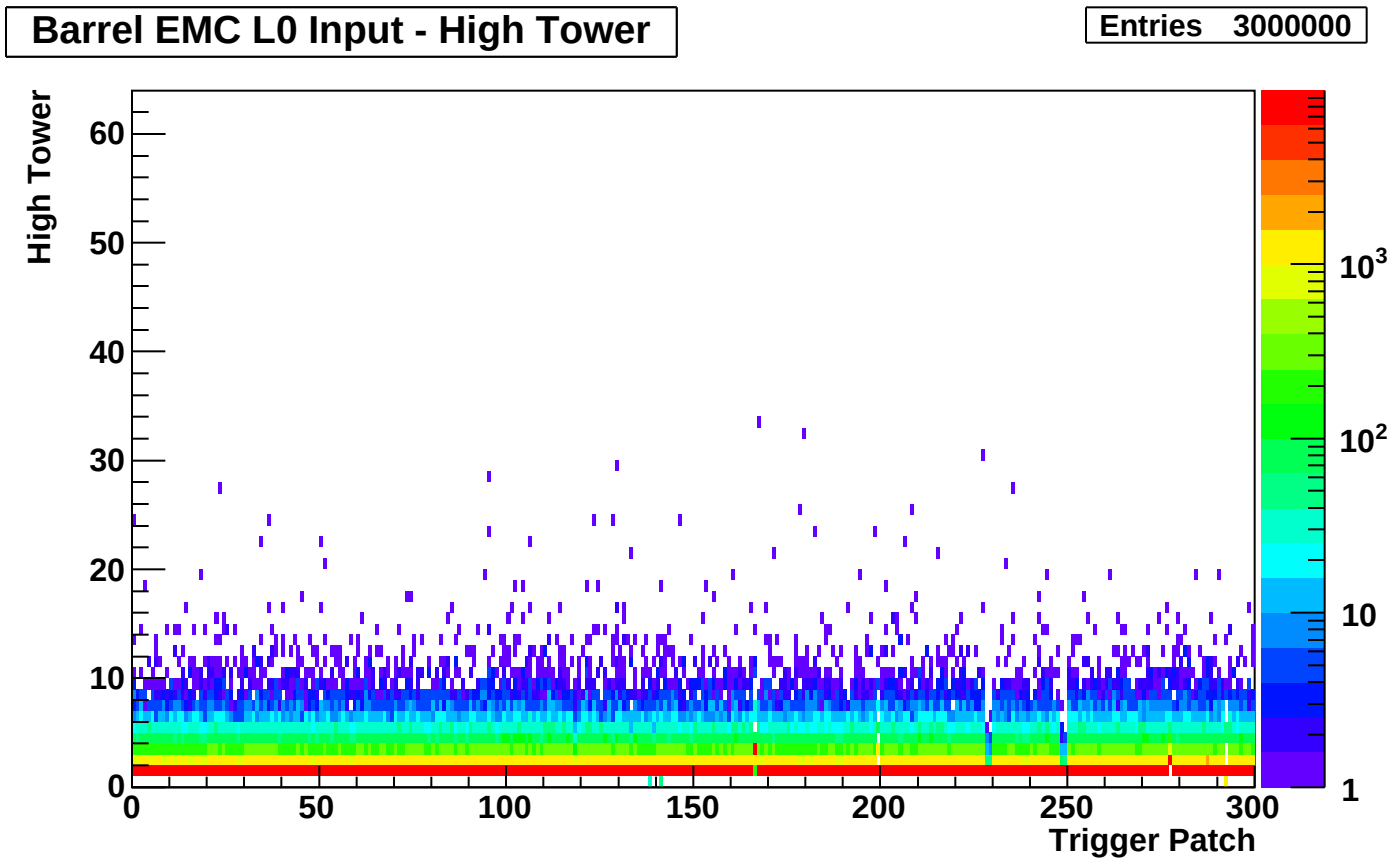
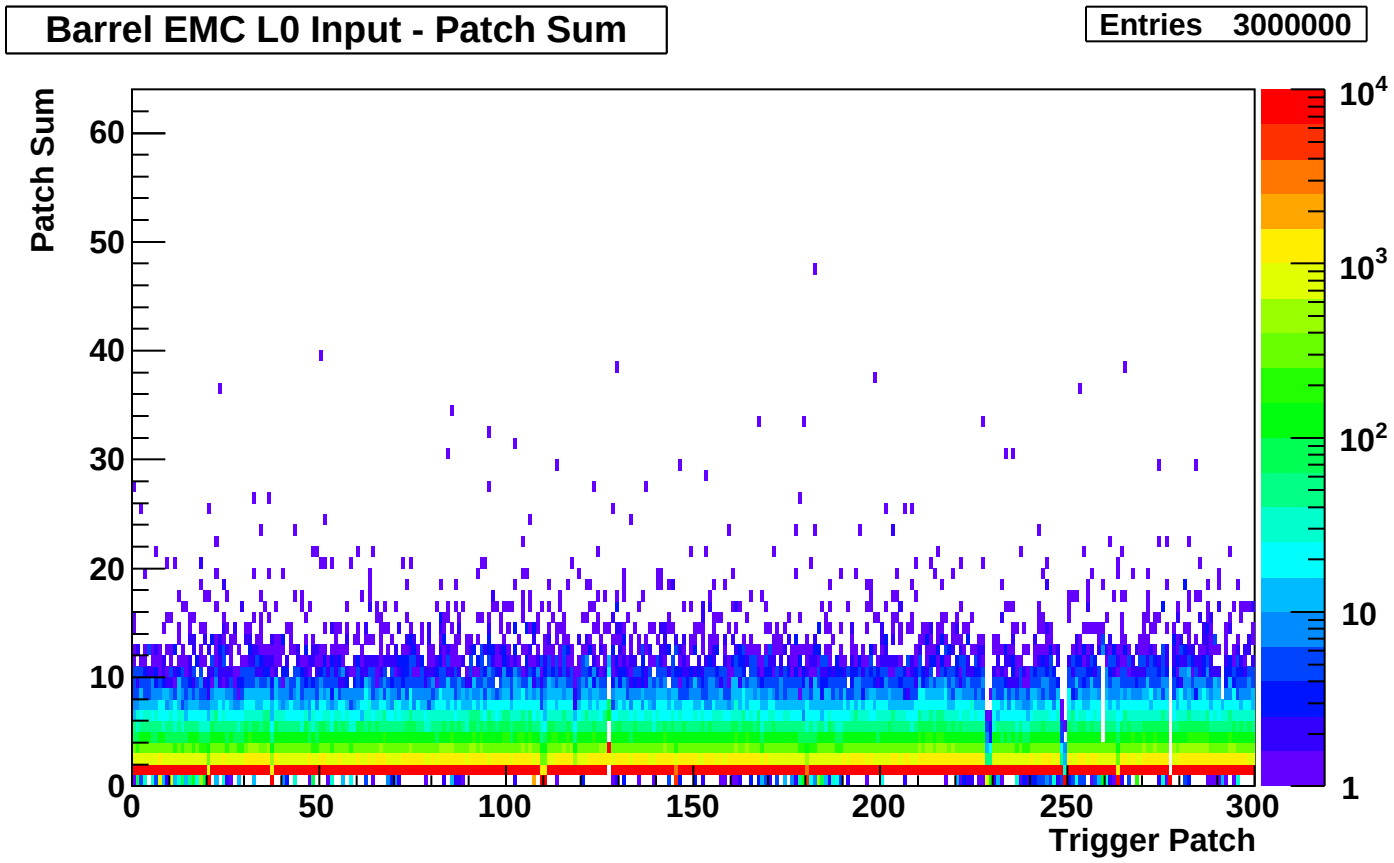
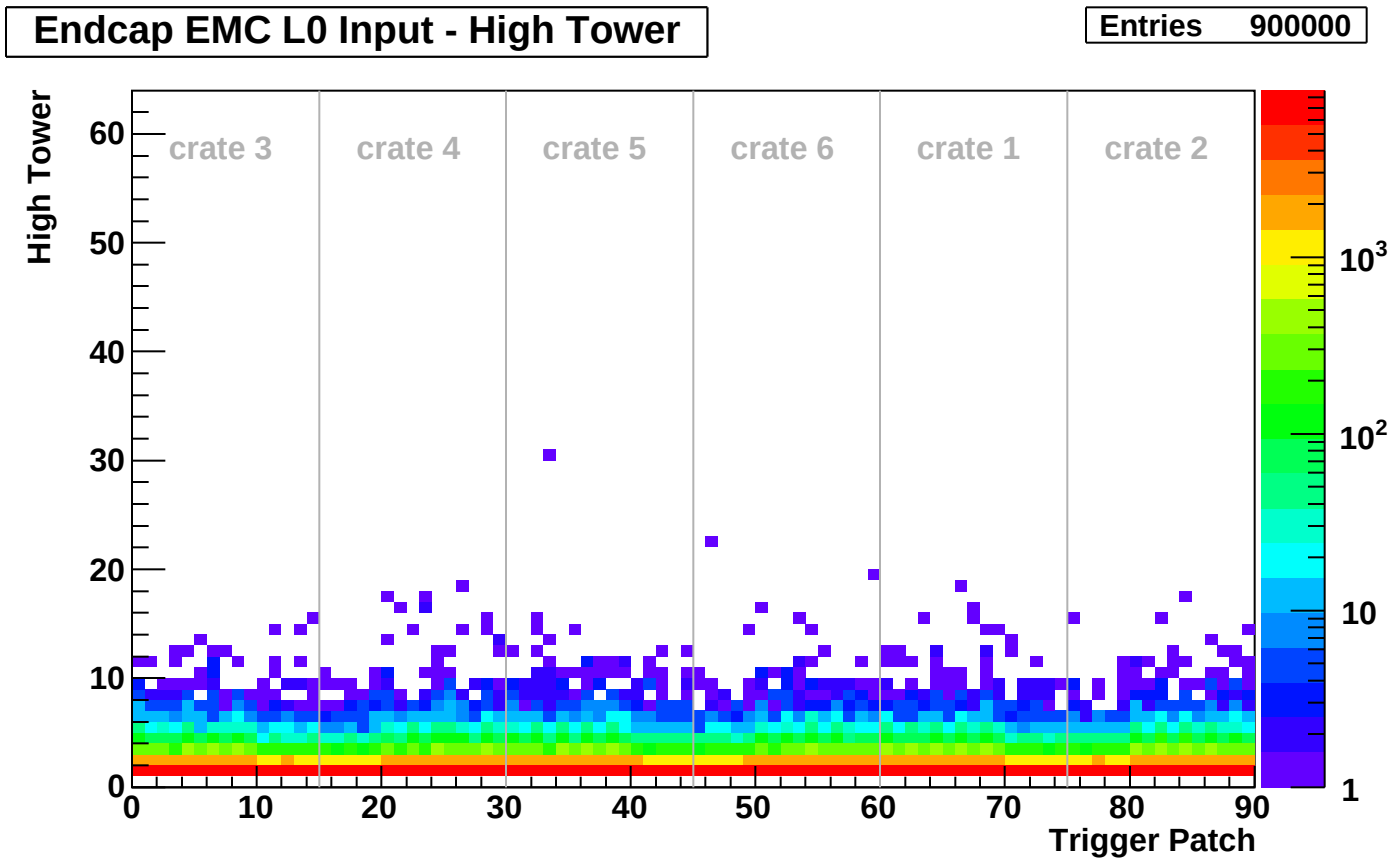
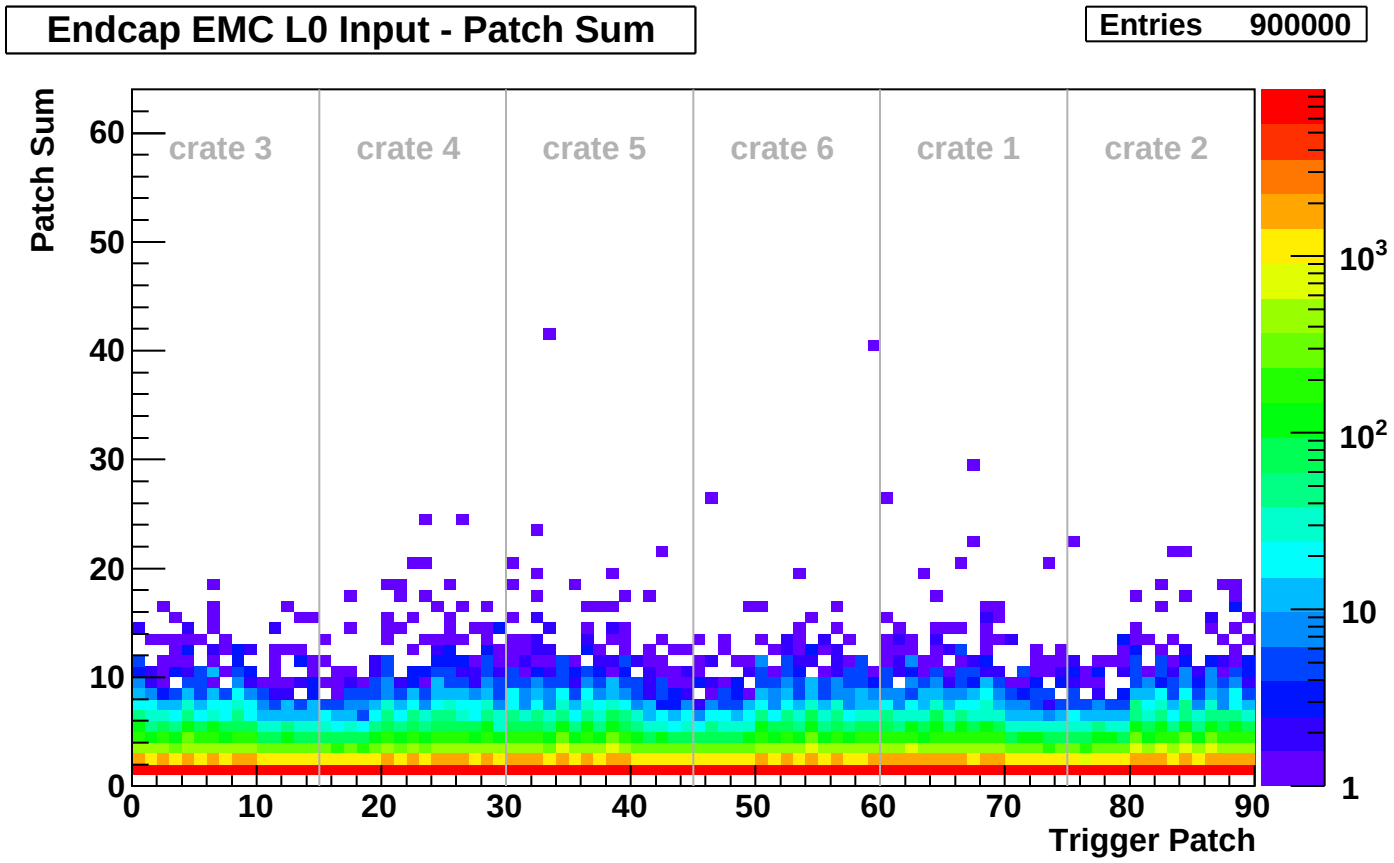
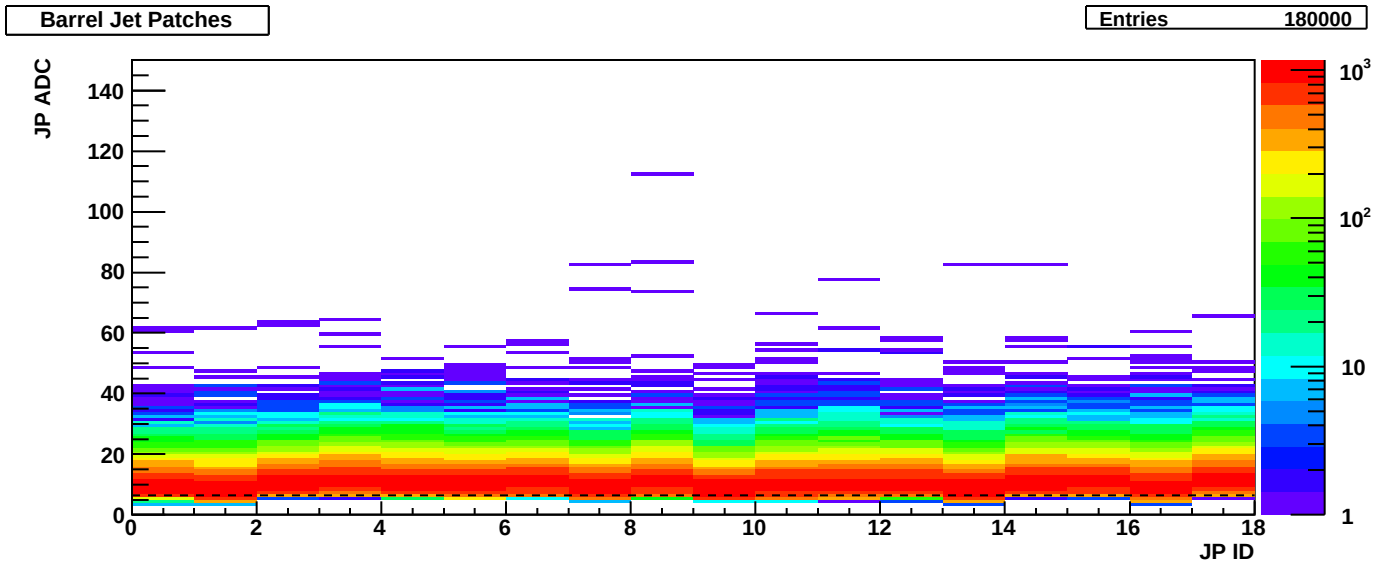
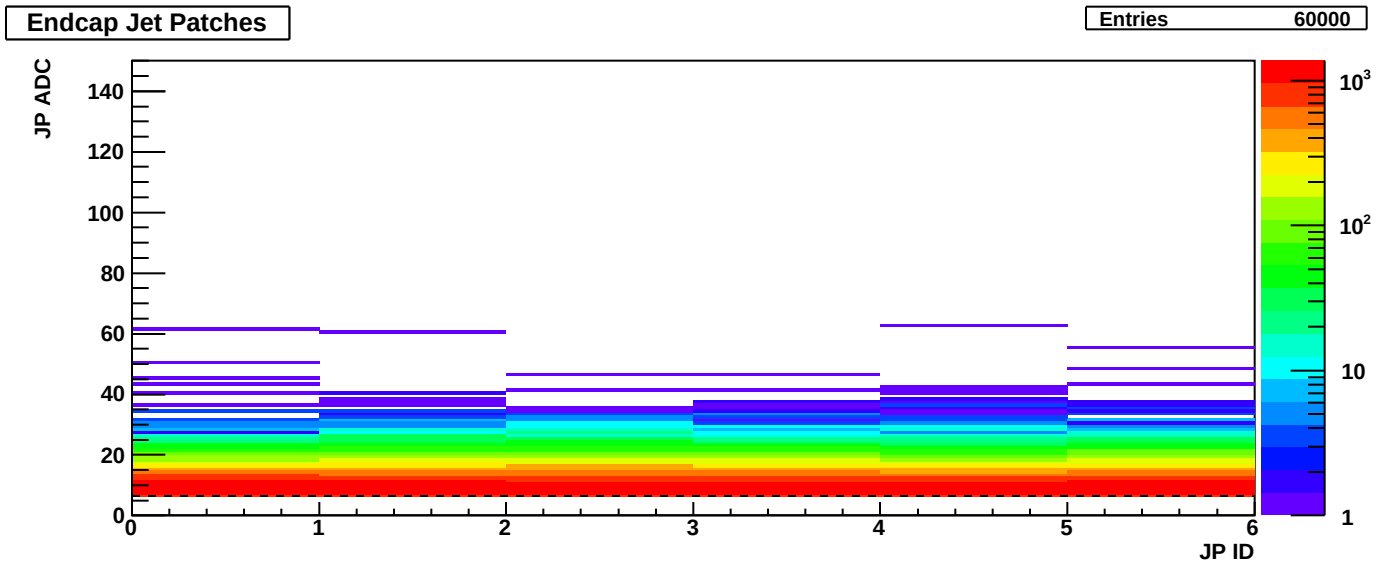

Barrel EMC L0 Input - High Tower
Entries 3000000
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

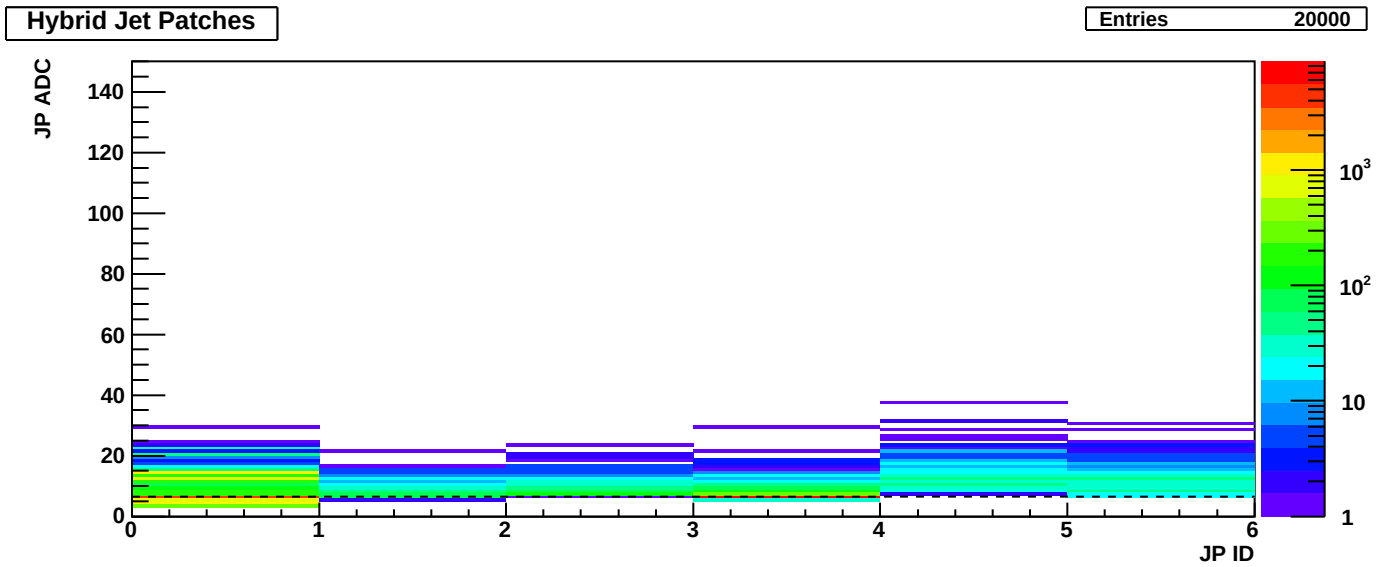

Barrel EMC L0 Input - Patch Sum
Entries 3000000
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

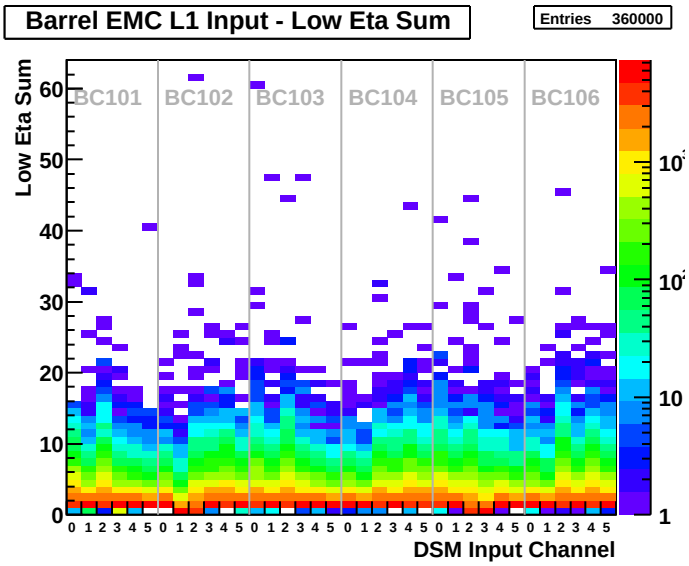

Endcap EMC L0 Input - High Tower
Entries 900000
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

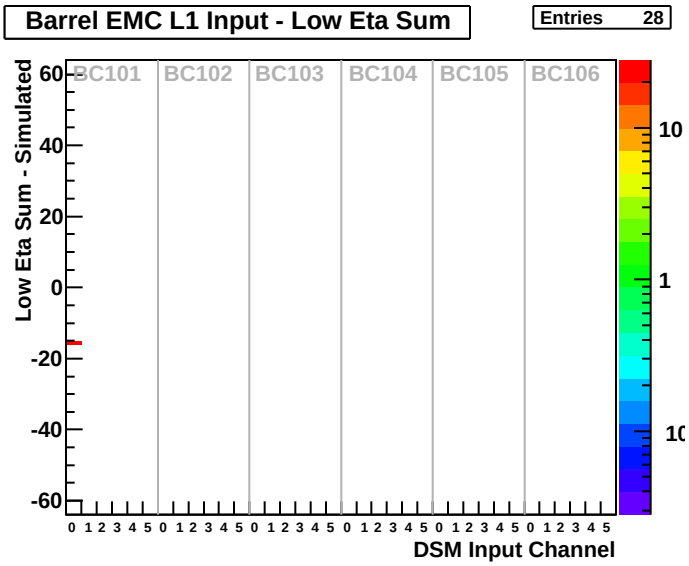

Endcap EMC L0 Input - Patch Sum
Entries 900000
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

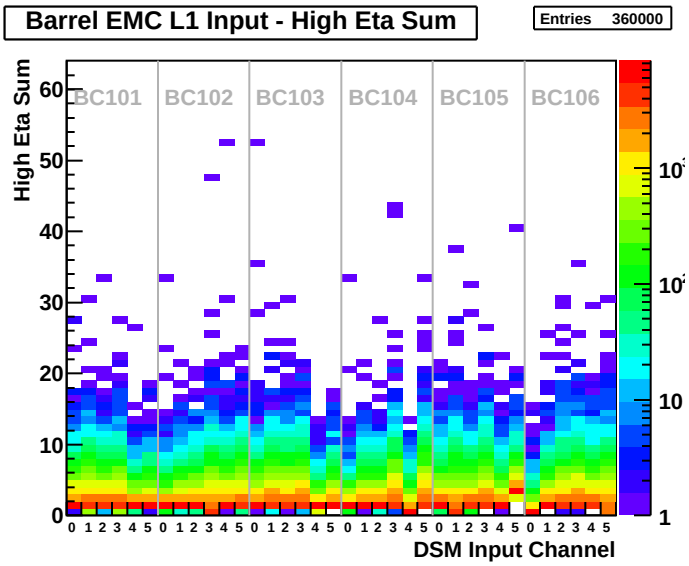

Barrel Jet Patches
Entries 180000
JP ADC
JP ID

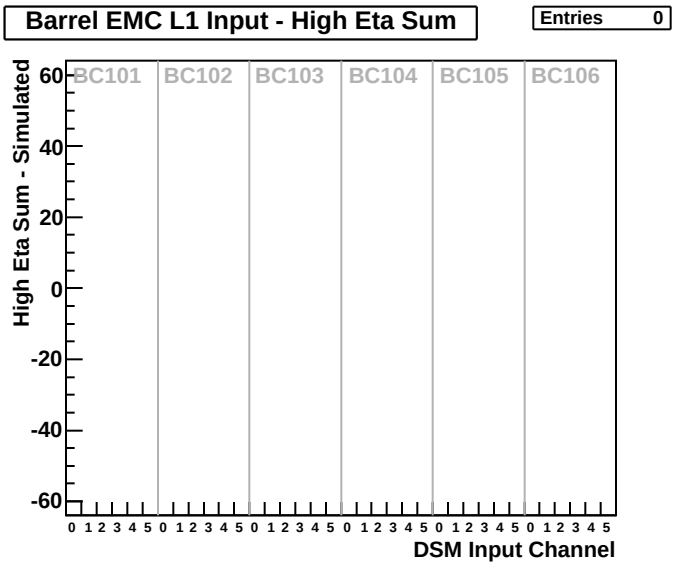

Endcap Jet Patches
Entries 60000
JP ADC
JP ID

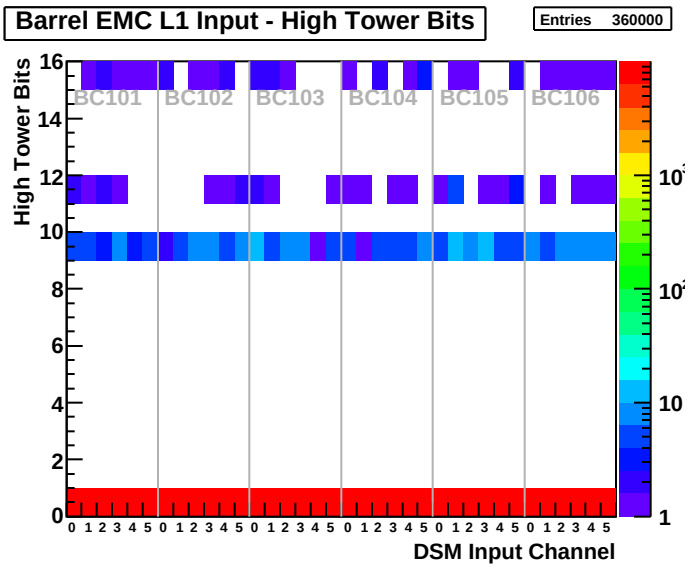

Hybrid Jet Patches
Entries 20000
JP ADC
JP ID

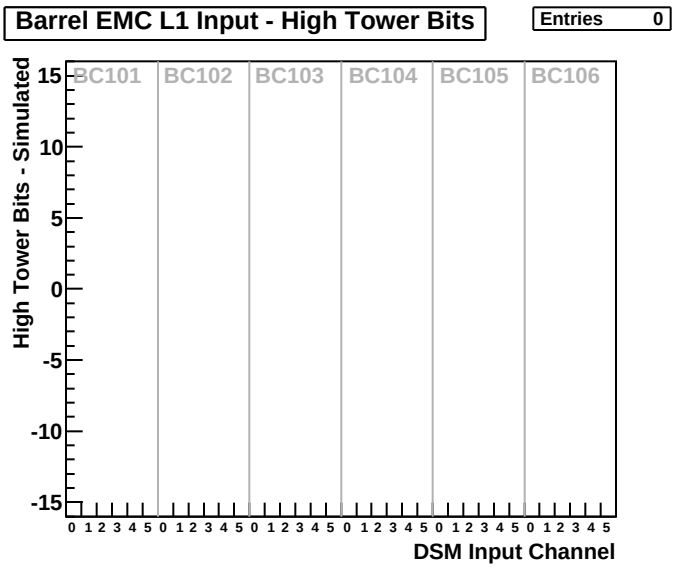

Barrel EMC L1 Input - Low Eta Sum
Entries 360000
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

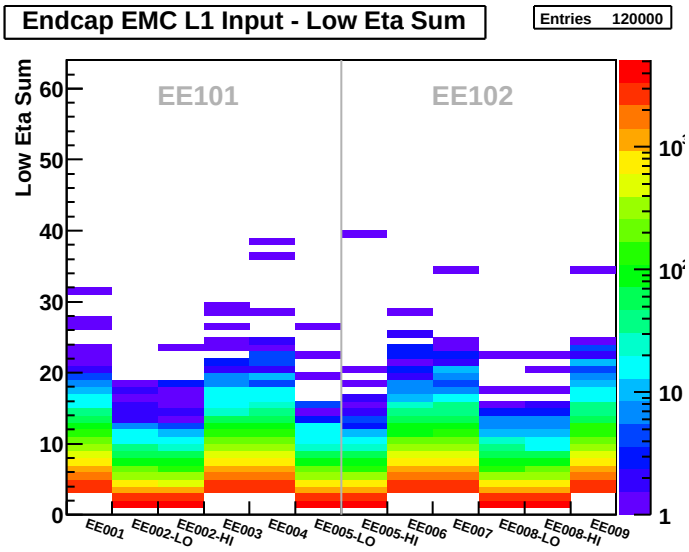

Barrel EMC L1 Input - Low Eta Sum
Entries 28
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

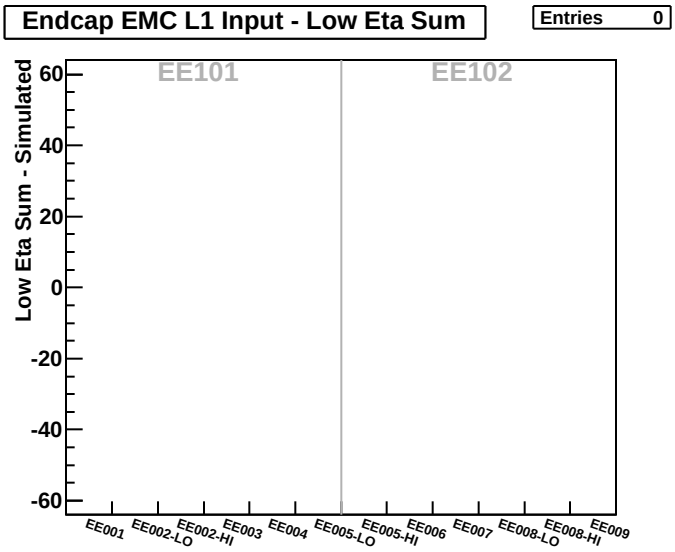

Barrel EMC L1 Input - High Eta Sum
Entries 360000
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

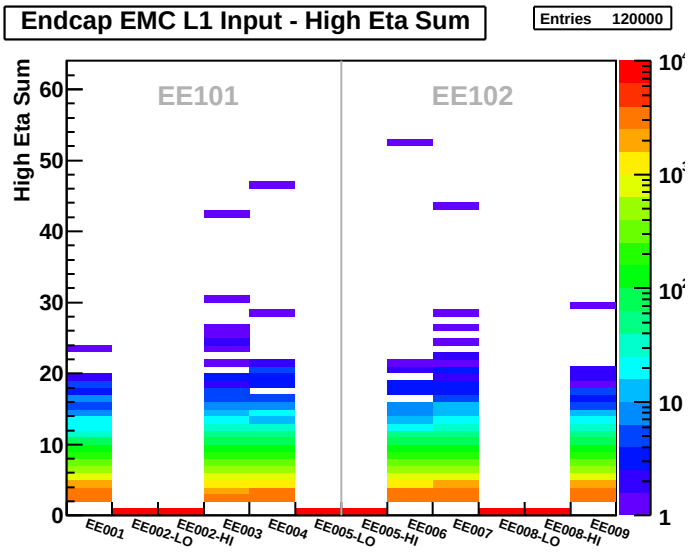

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

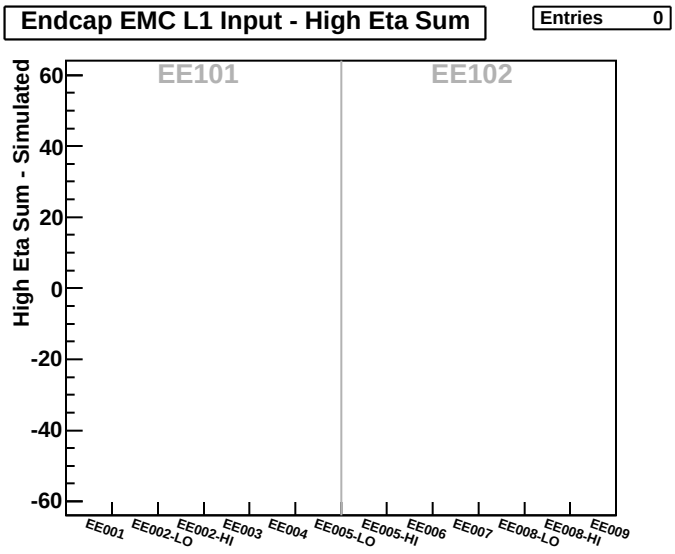

Barrel EMC L1 Input - High Tower Bits
Entries 360000
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

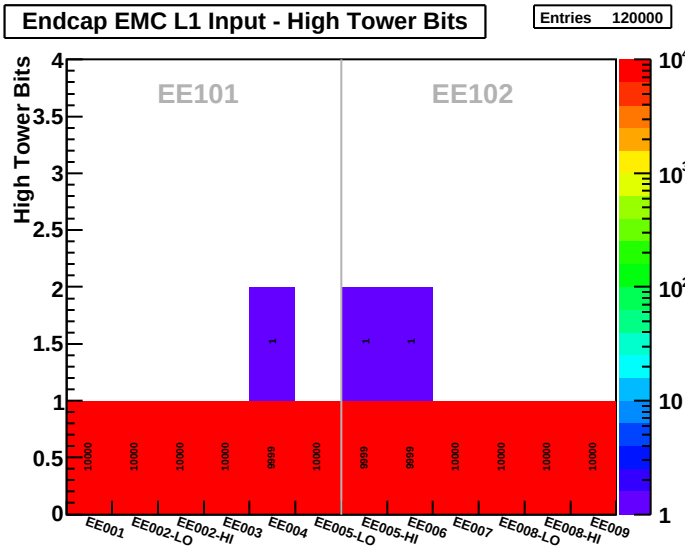

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

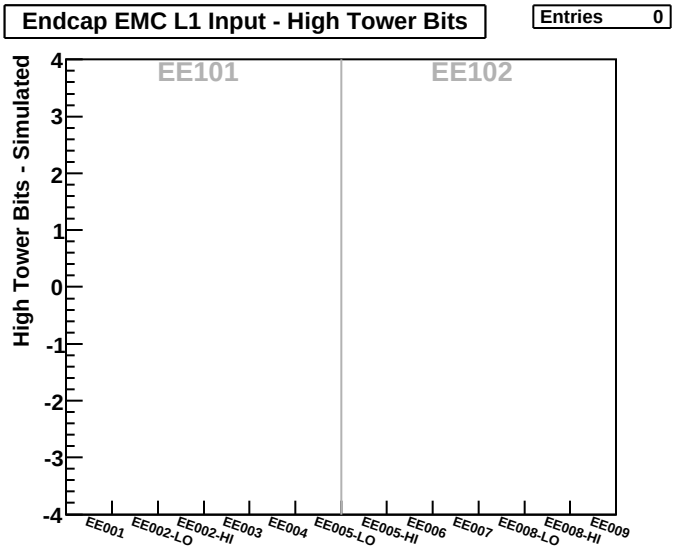

Endcap EMC L1 Input - Low Eta Sum
Entries 120000
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

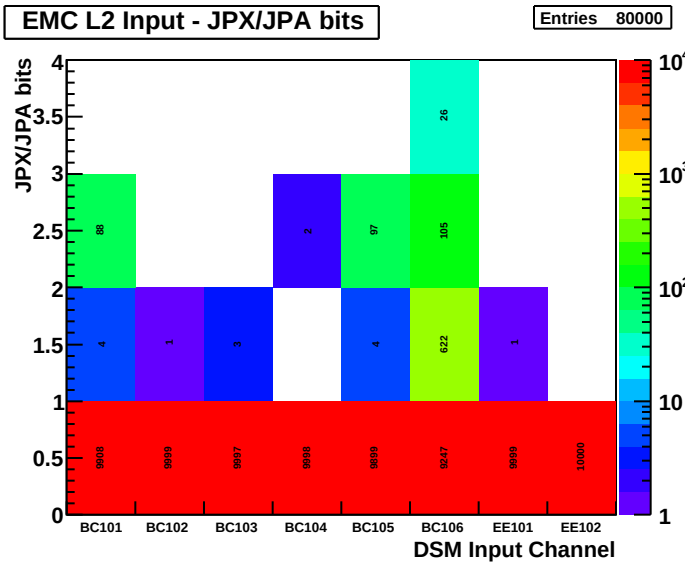

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

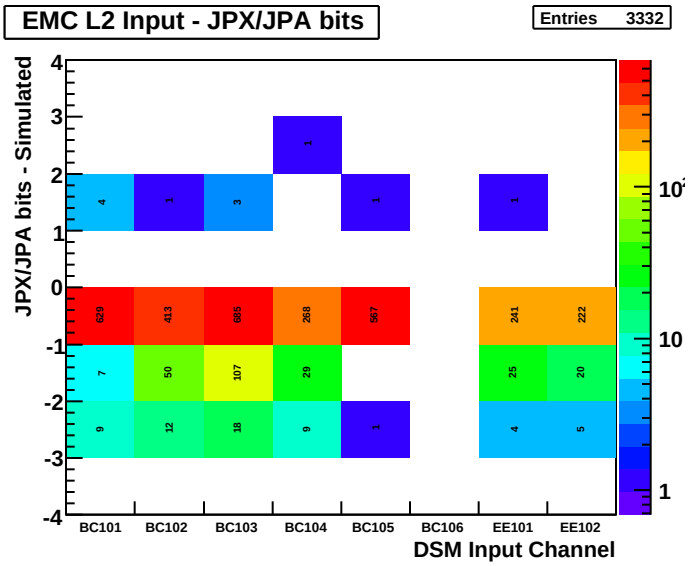

Endcap EMC L1 Input - High Eta Sum
Entries 120000
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

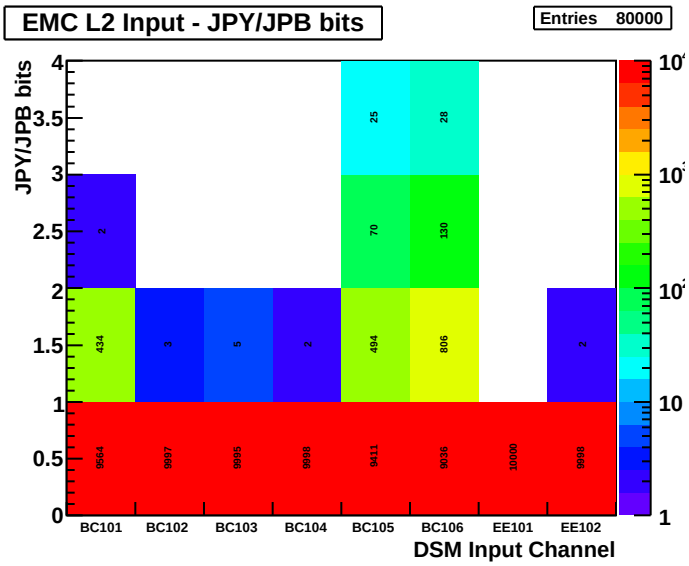

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

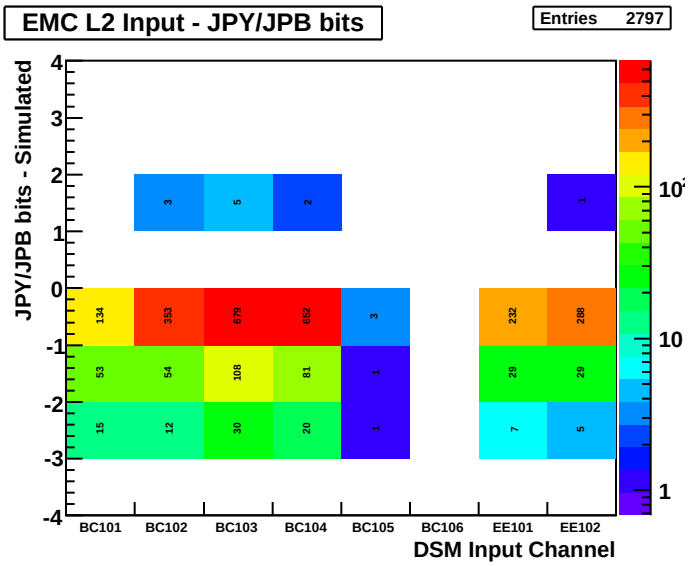

Endcap EMC L1 Input - High Tower Bits
Entries 120000
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

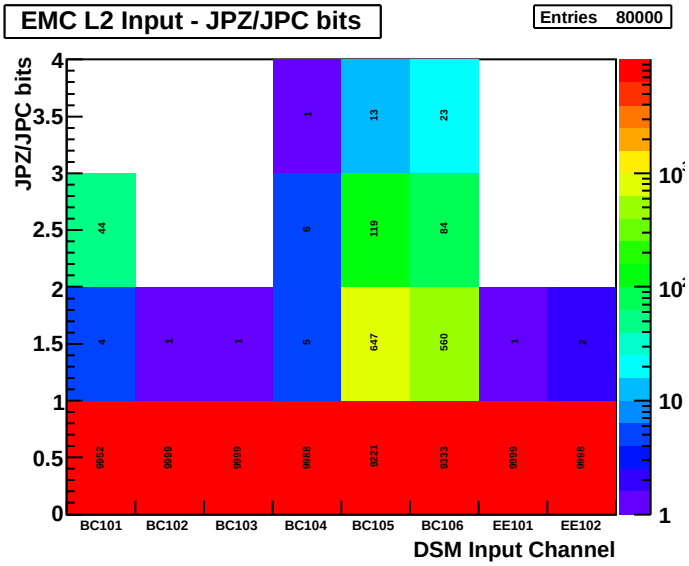

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

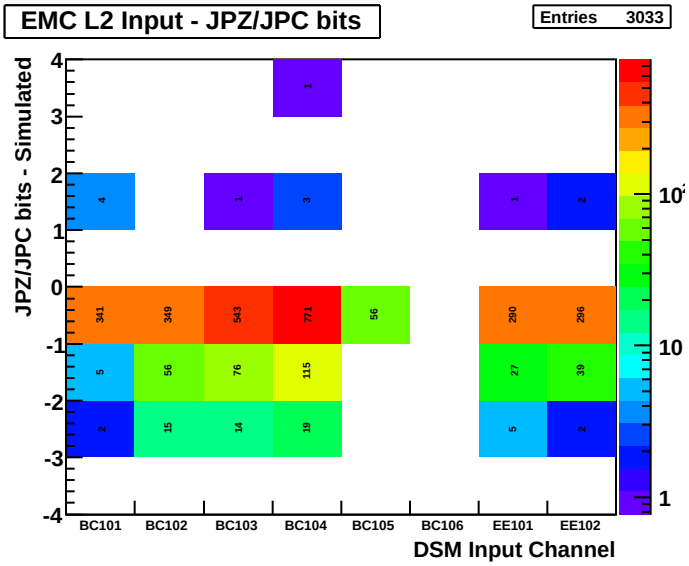

EMC L2 Input - JPX/JPA bits
Entries 80000
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

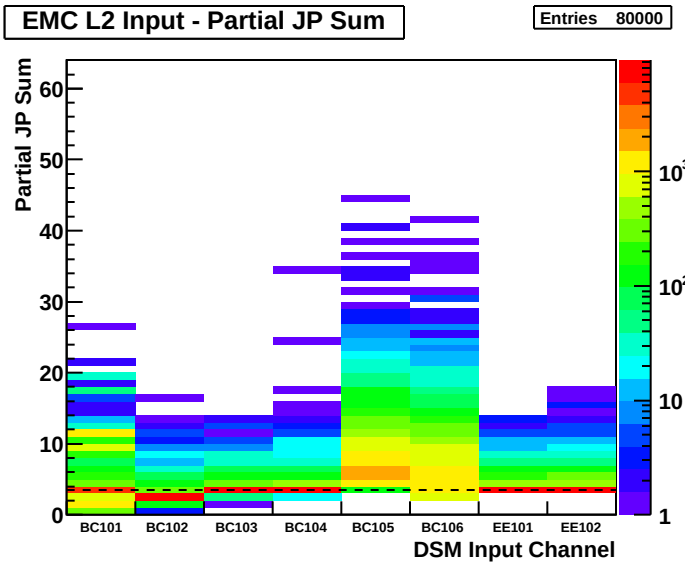

EMC L2 Input - JPX/JPA bits
Entries 3332
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

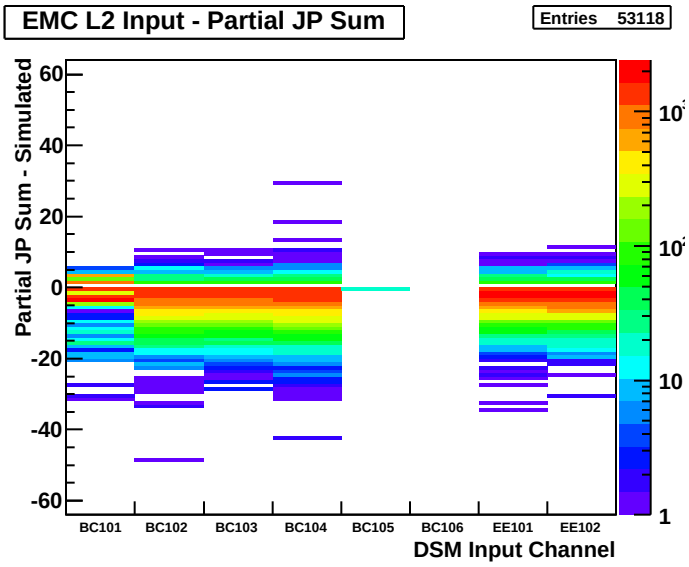

EMC L2 Input - JPY/JPB bits
Entries 80000
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

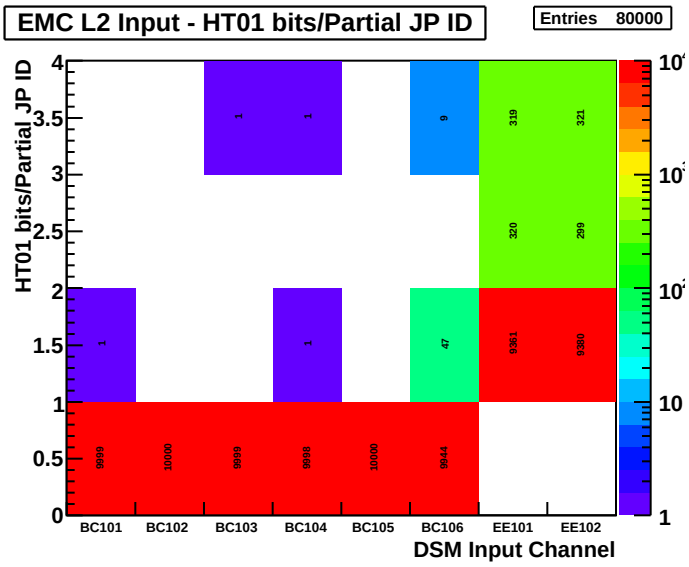

EMC L2 Input - JPY/JPB bits
Entries 2797
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

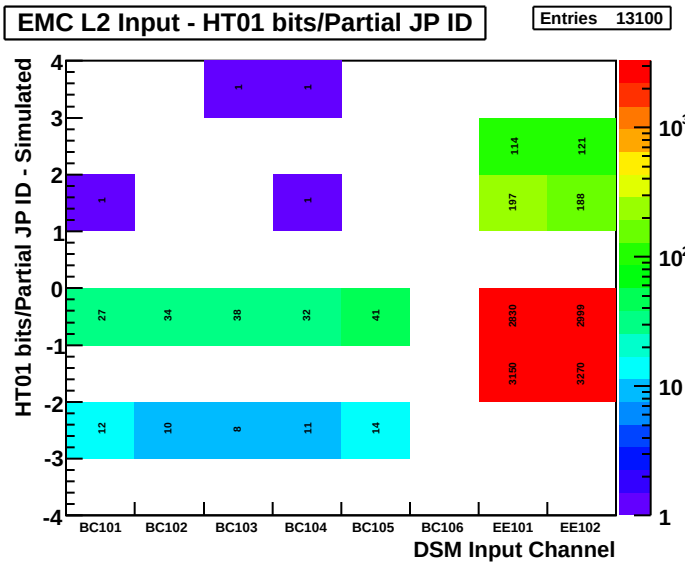

EMC L2 Input - JPZ/JPC bits
Entries 80000
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

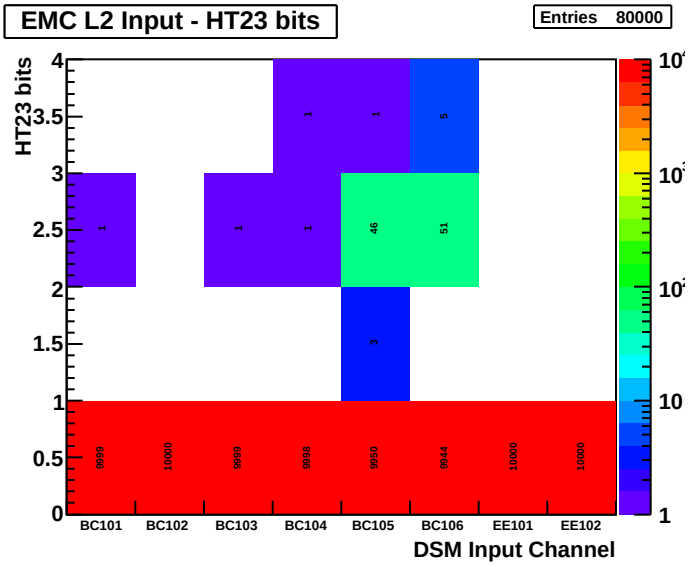

EMC L2 Input - JPZ/JPC bits
Entries 3033
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

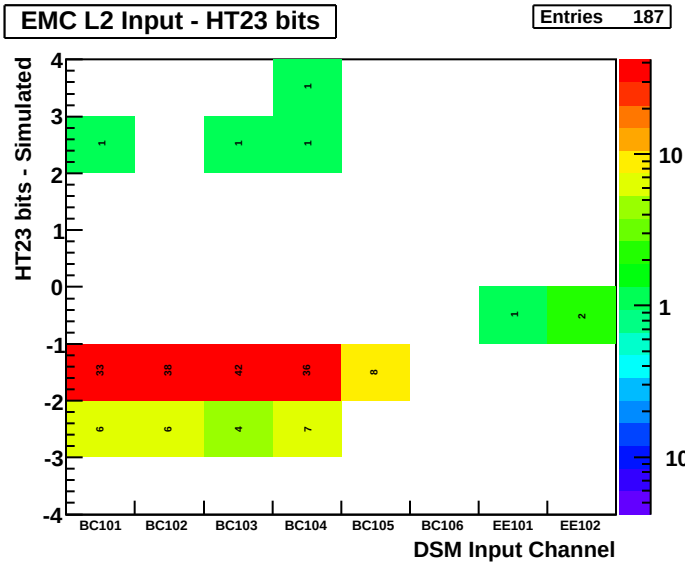

EMC L2 Input - Partial JP Sum
Entries 80000
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

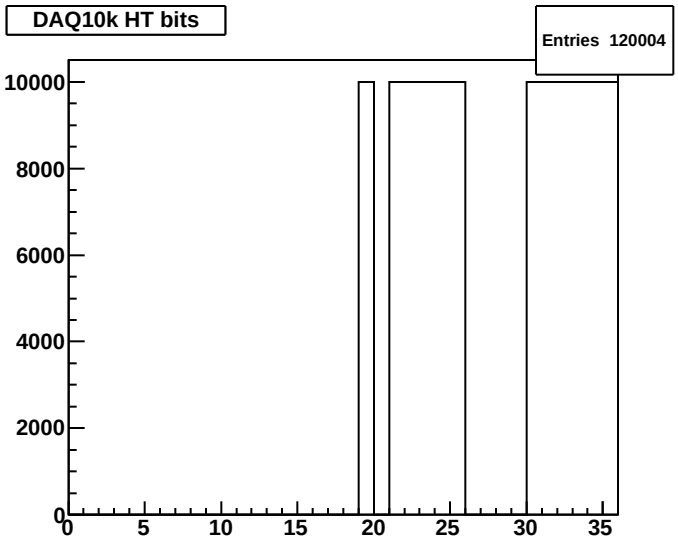

EMC L2 Input - Partial JP Sum
Entries 53118
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

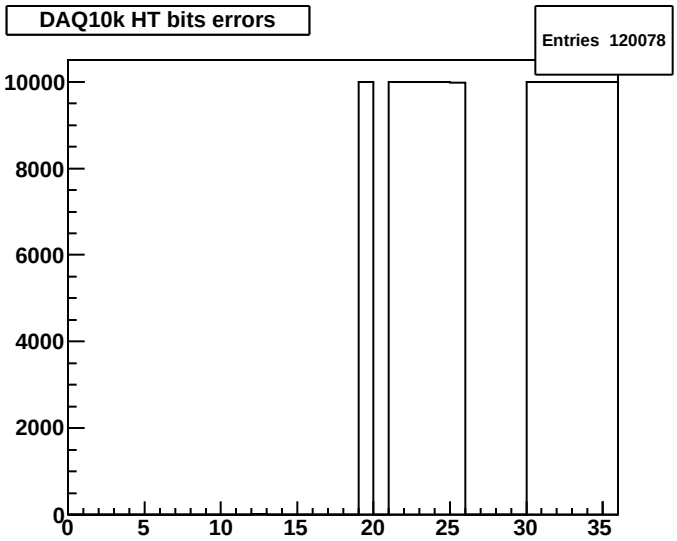

EMC L2 Input - HT01 bits/Partial JP ID
Entries 80000
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

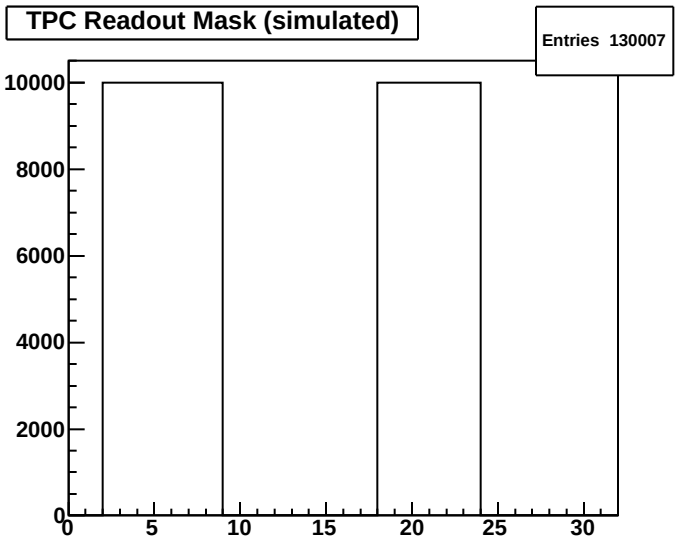

EMC L2 Input - HT01 bits/Partial JP ID
Entries 13100
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

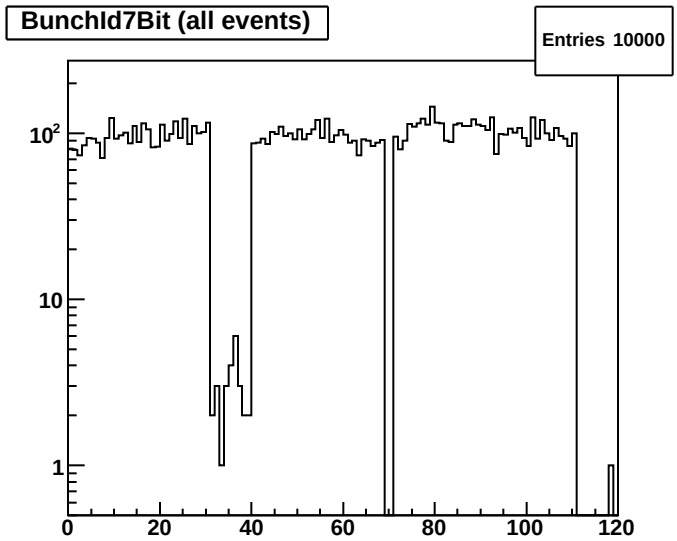

EMC L2 Input - HT23 bits
Entries 80000
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

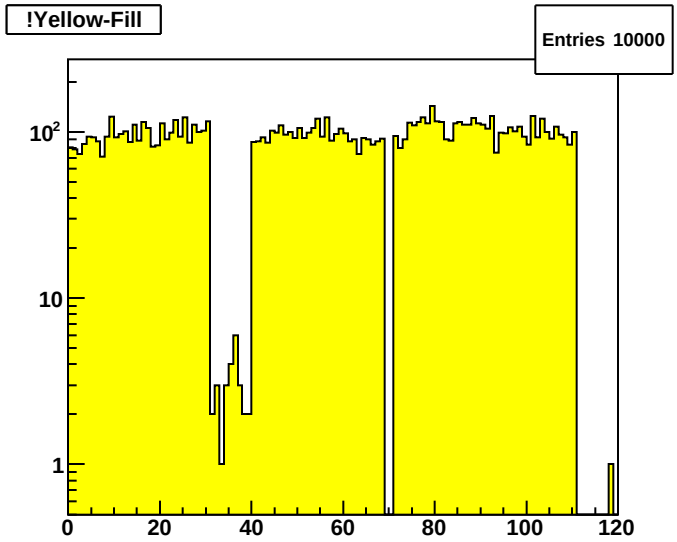

EMC L2 Input - HT23 bits
Entries 187
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

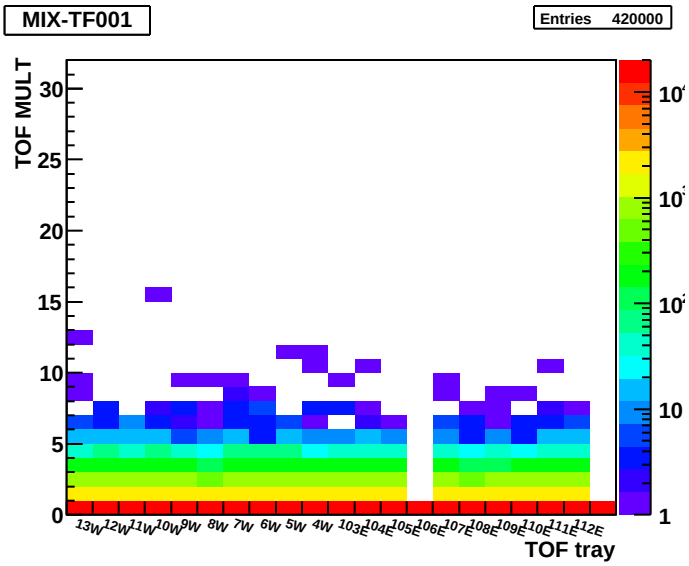

DAQ10k HT bits
Entries 120004
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

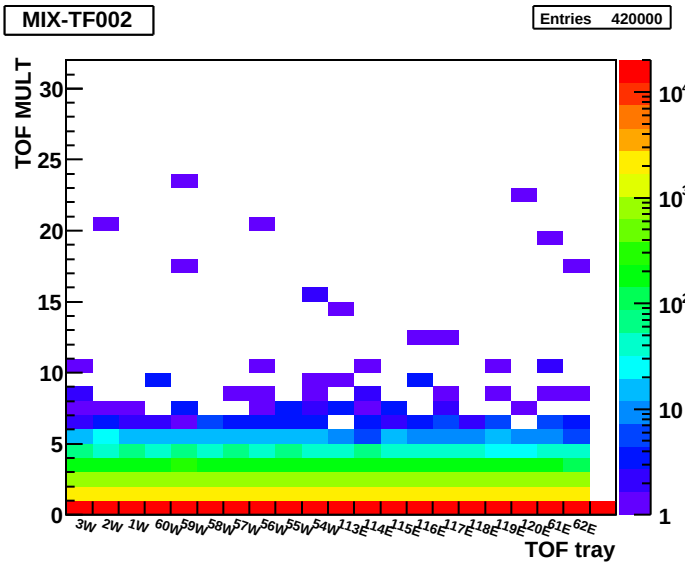

DAQ10k HT bits errors
Entries 120078
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

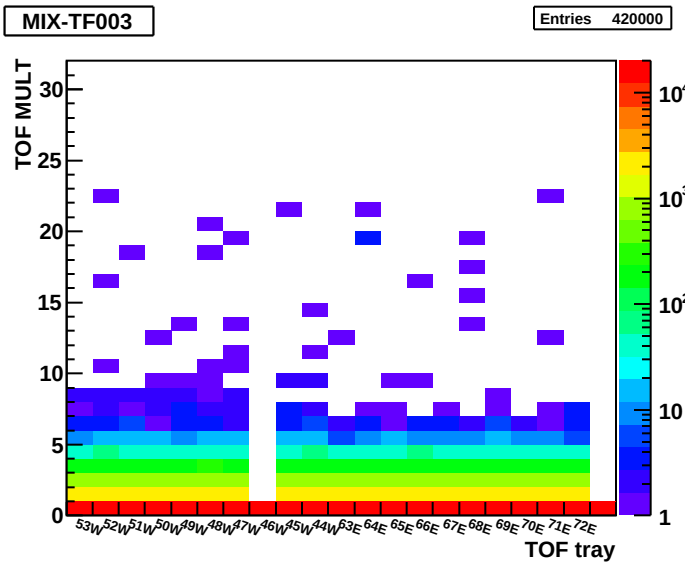

TPC Readout Mask (simulated)
Entries 130007
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30

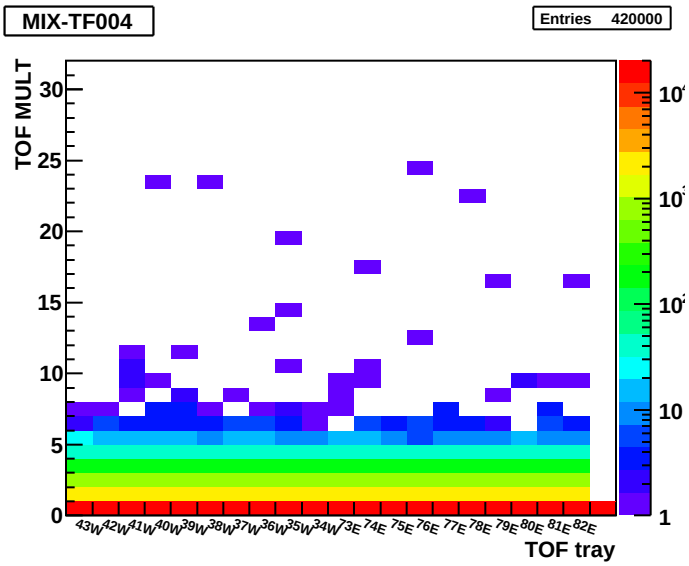

BunchId7Bit (all events)
Entries 10000
10^2
10
1
0 20 40 60 80 100 120

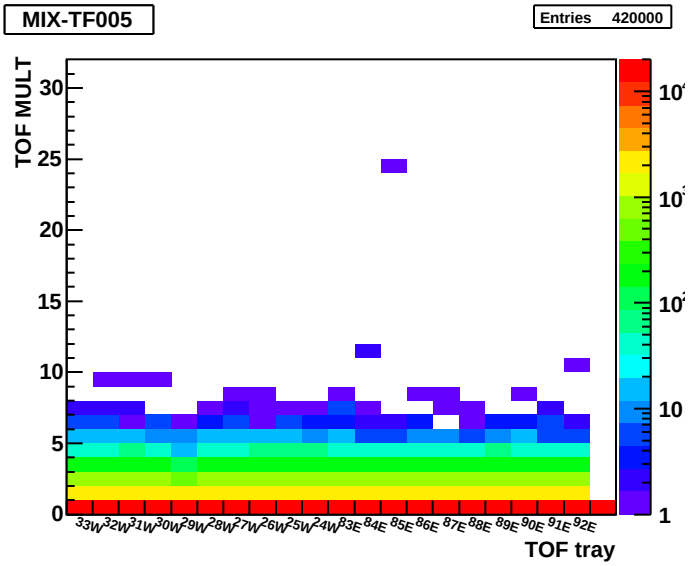

!Yellow-Fill
Entries 10000
10^2
10
1
0 20 40 60 80 100 120

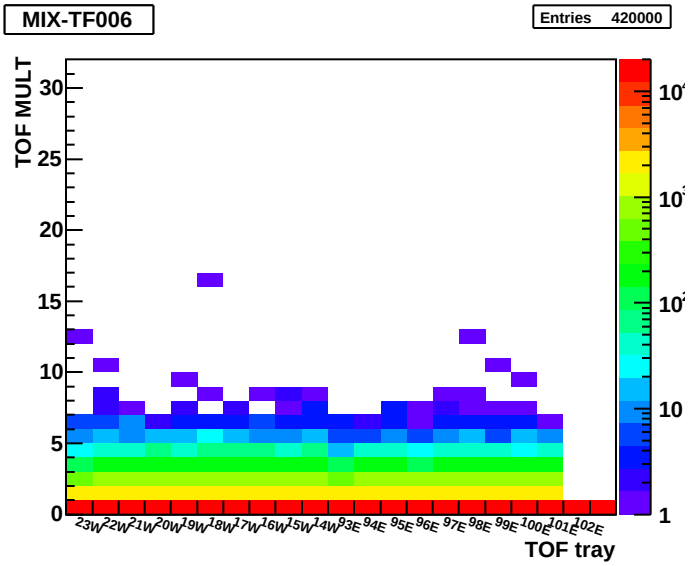

MIX-TF001
Entries 420000
TOF MULT
TOF tray

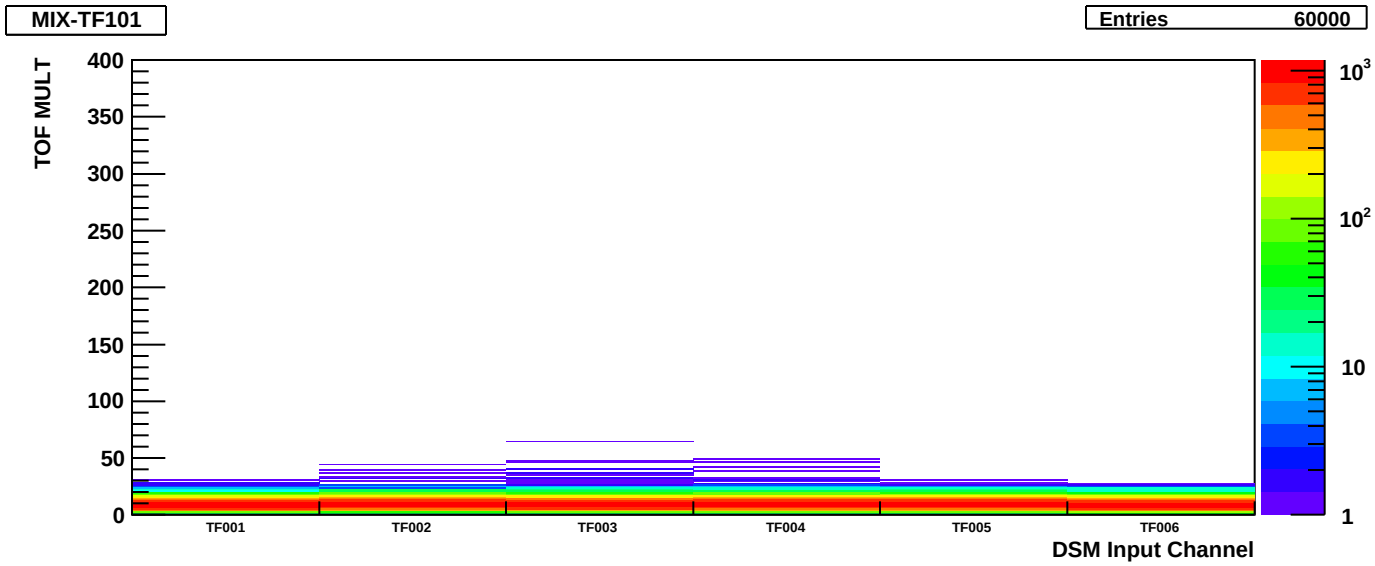

MIX-TF002
Entries 420000
TOF MULT
TOF tray

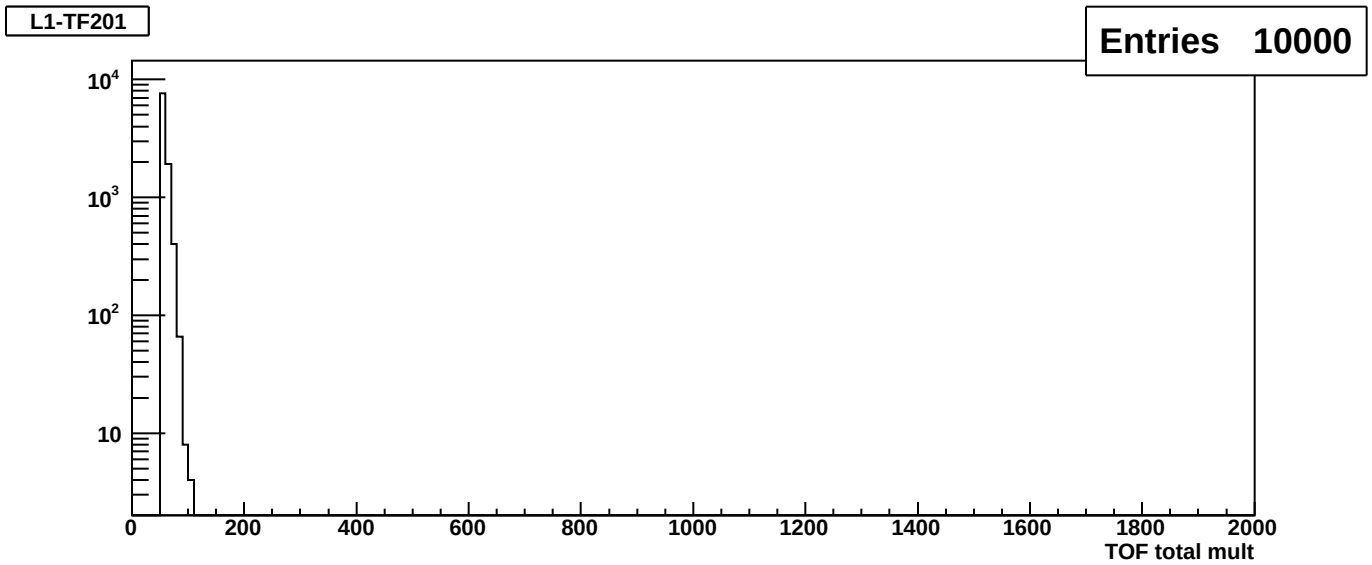

MIX-TF003
Entries 420000
TOF MULT
TOF tray

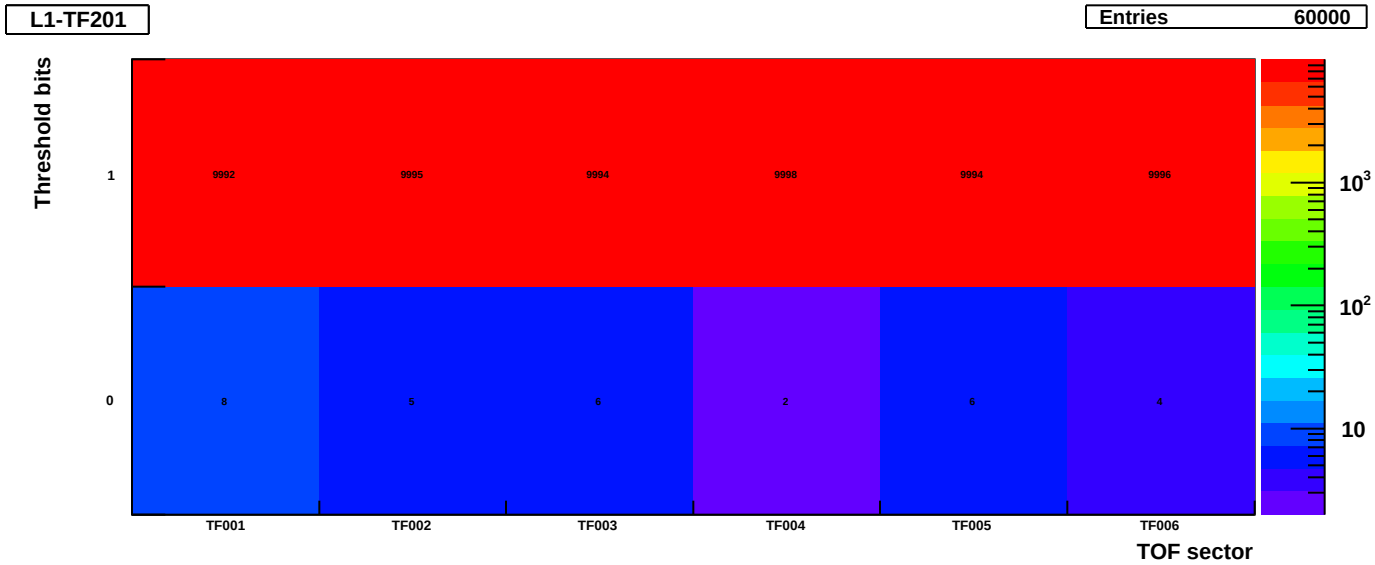

MIX-TF004
Entries 420000
TOF MULT
TOF tray

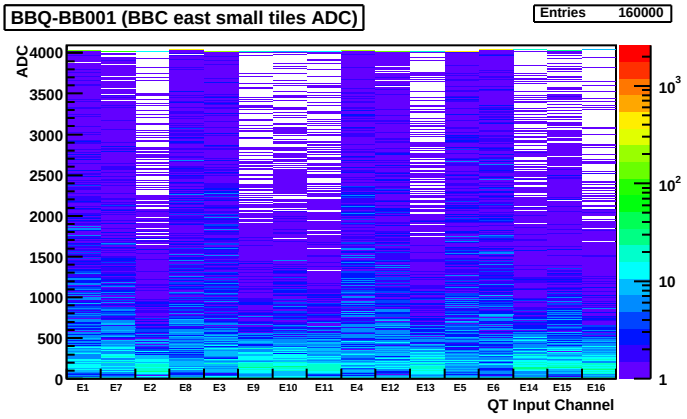

MIX-TF005
Entries 420000
TOF MULT
TOF tray

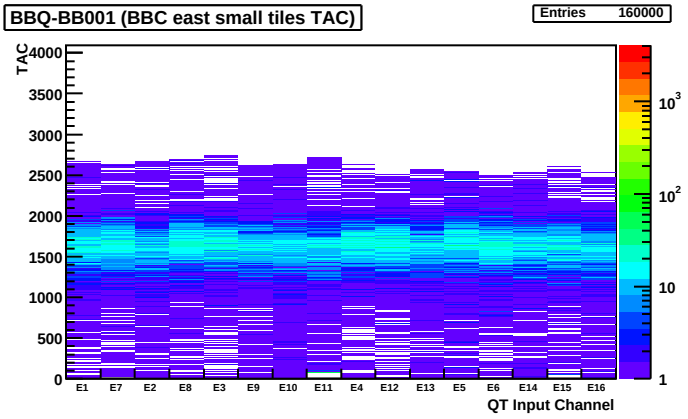

MIX-TF006
Entries 420000
TOF MULT
TOF tray

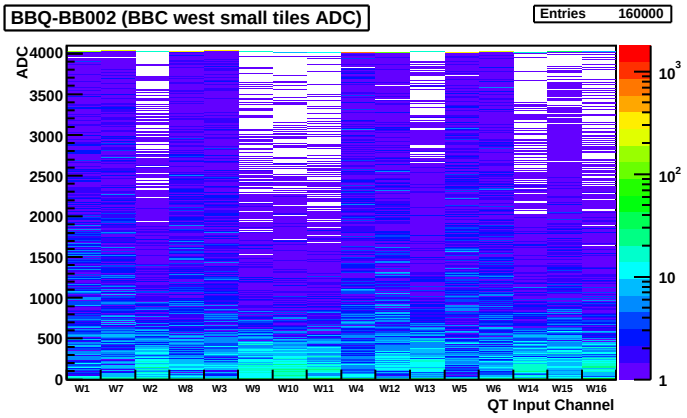

MIX-TF101
Entries 60000
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^3
10^2
10
1

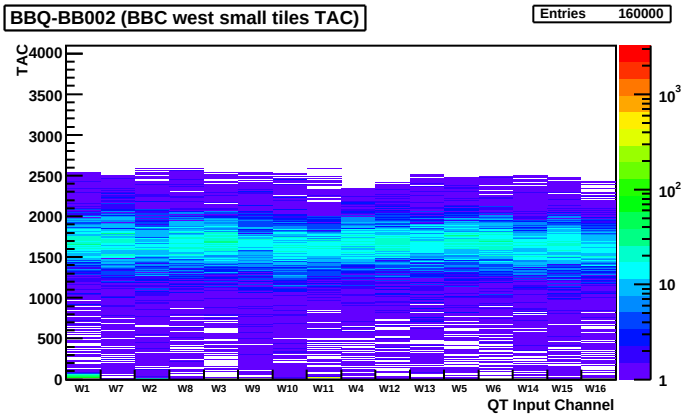

L1-TF201
Entries 10000
10^4
10^3
10^2
10
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

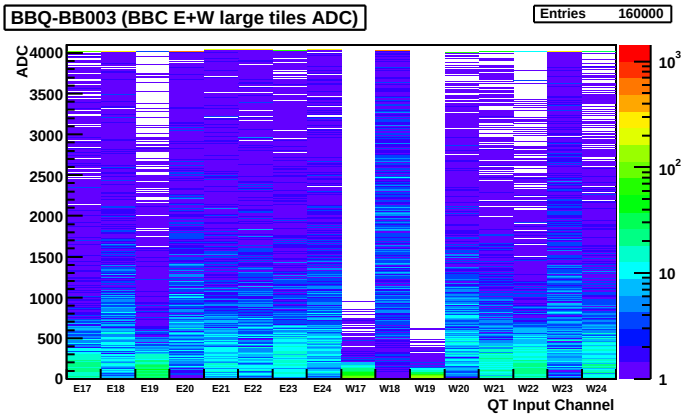

L1-TF201
Entries 60000
Threshold bits
1
0
9992
9995
9994
9998
9994
9996
8
5
6
2
6
4
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^3
10^2
10

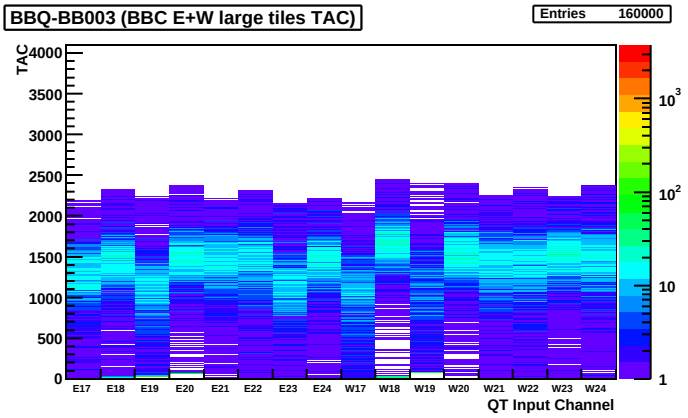

BBQ-BB001 (BBC east small tiles ADC)
Entries 160000
ADC
QT Input Channel

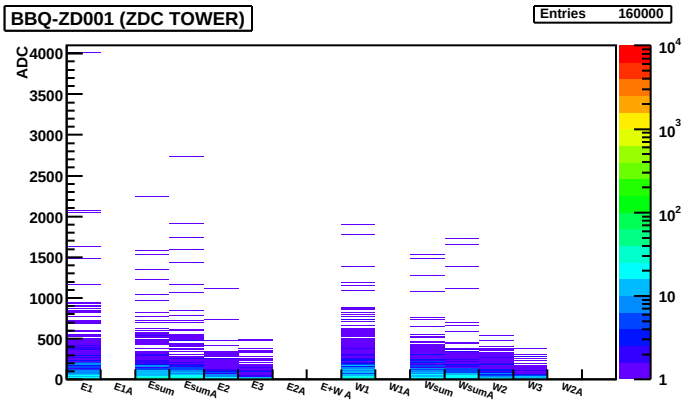

BBQ-BB001 (BBC east small tiles TAC)
Entries 160000
TAC
QT Input Channel

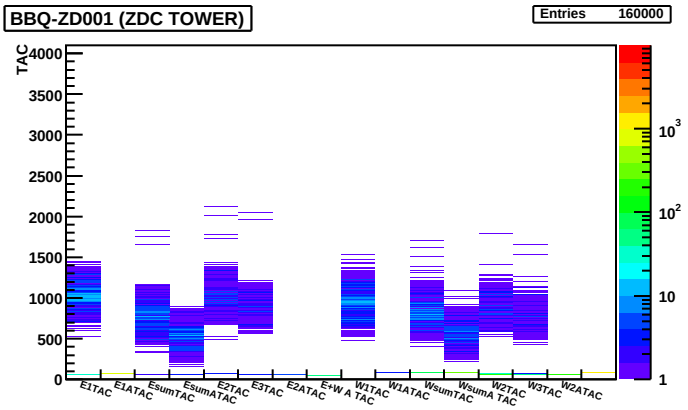

BBQ-BB002 (BBC west small tiles ADC)
Entries 160000
ADC
QT Input Channel

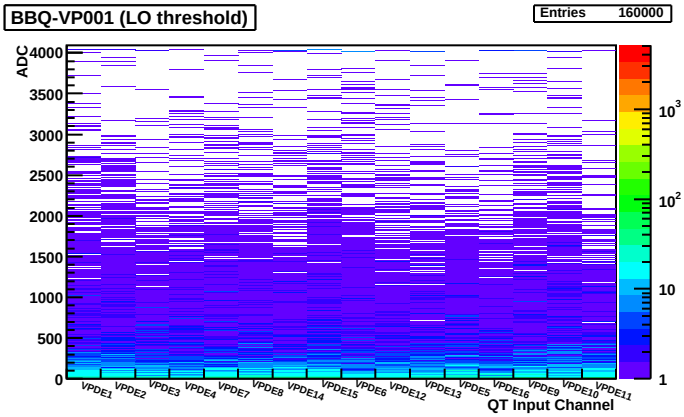

BBQ-BB002 (BBC west small tiles TAC)
Entries 160000
TAC
QT Input Channel

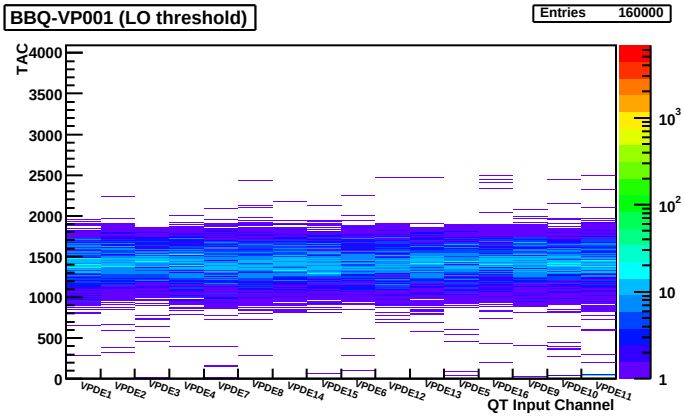

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 160000
ADC
QT Input Channel

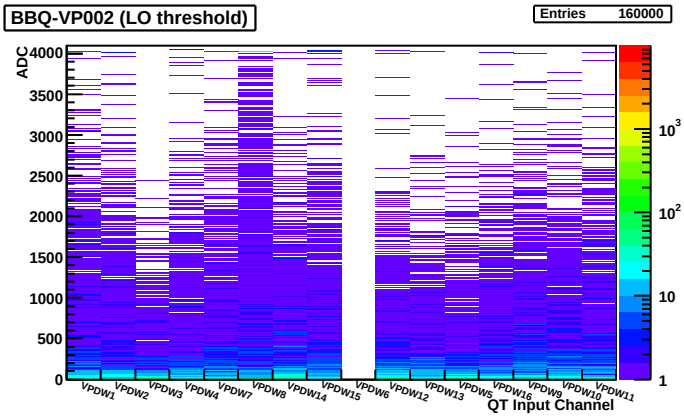

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 160000
TAC
QT Input Channel

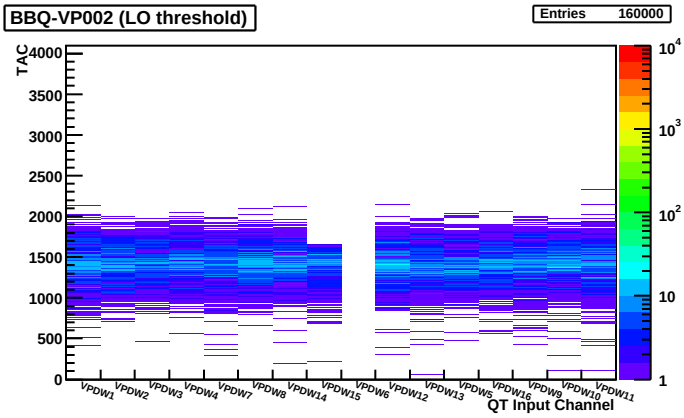

BBQ-ZD001 (ZDC TOWER)
Entries 160000
ADC

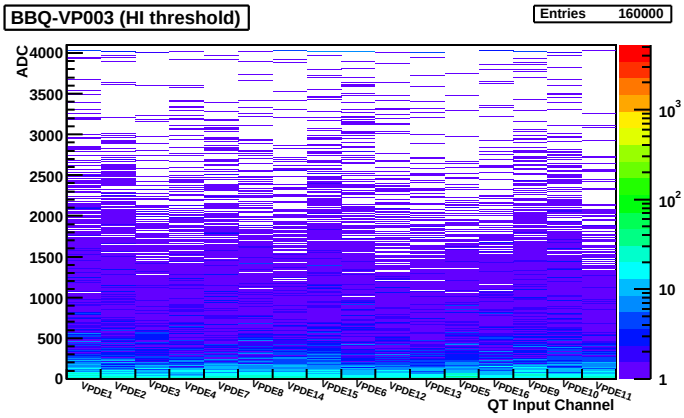

BBQ-ZD001 (ZDC TOWER)
Entries 160000
TAC

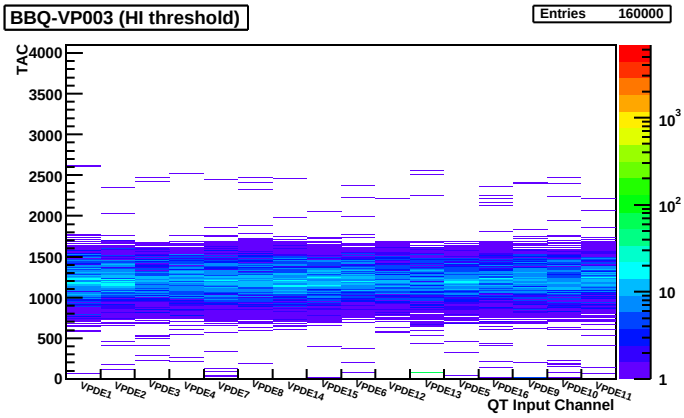

BBQ-VP001 (LO threshold)
Entries 160000
ADC
QT Input Channel

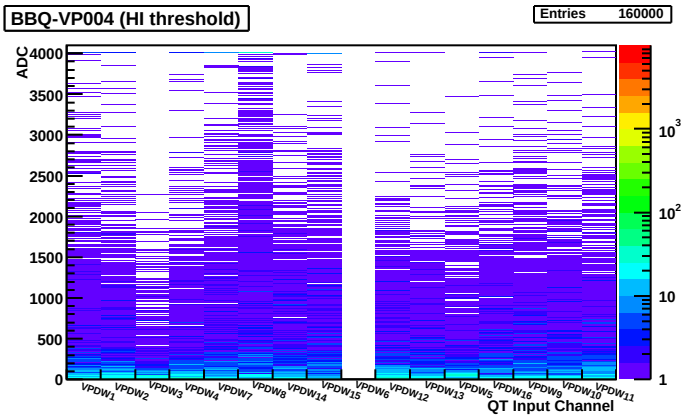

BBQ-VP001 (LO threshold)
Entries 160000
TAC
QT Input Channel

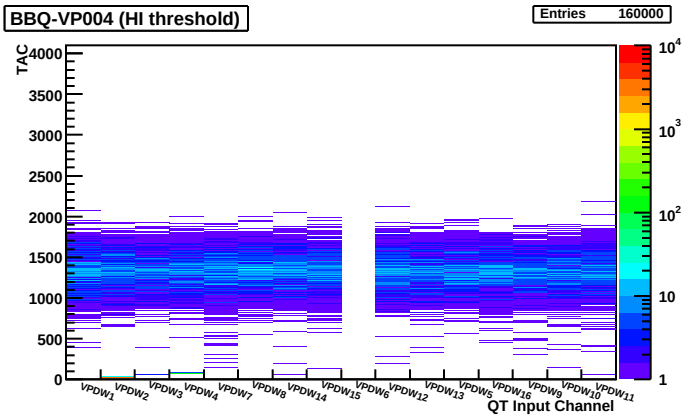

BBQ-VP002 (LO threshold)
Entries 160000
ADC
QT Input Channel

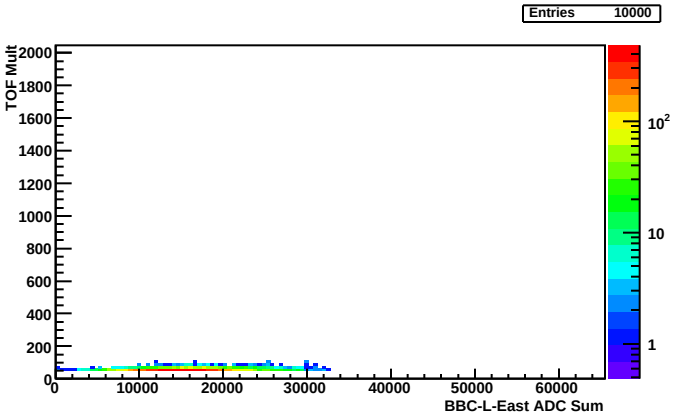

BBQ-VP002 (LO threshold)
Entries 160000
TAC
QT Input Channel

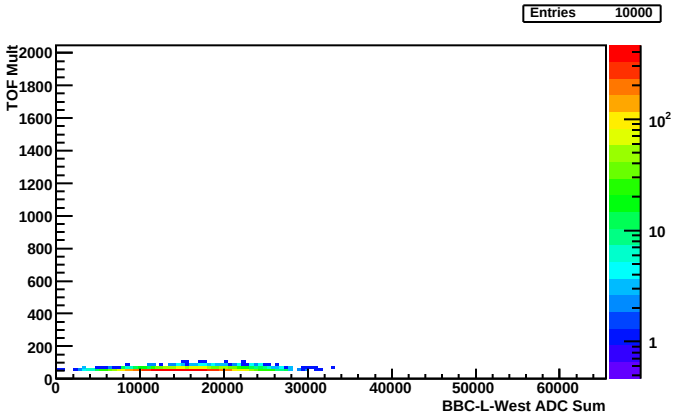

BBQ-VP003 (HI threshold)
Entries 160000
ADC
QT Input Channel

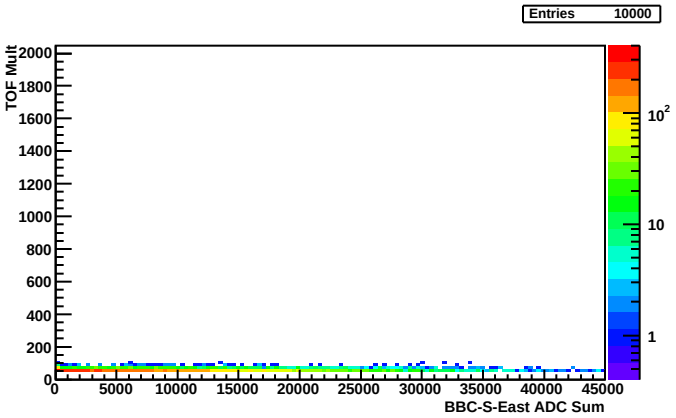

BBQ-VP003 (HI threshold)
Entries 160000
TAC
QT Input Channel

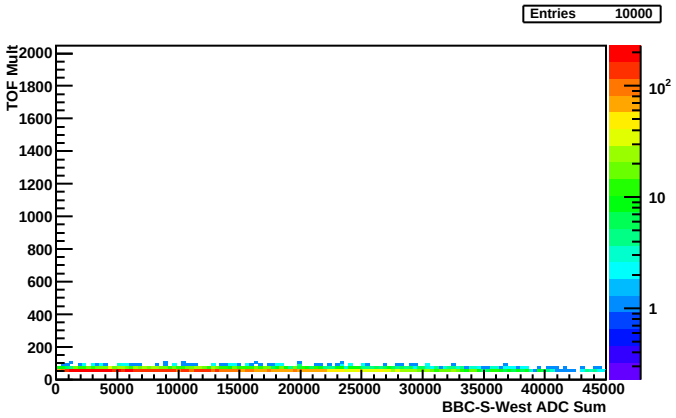

BBQ-VP004 (HI threshold)
Entries 160000
ADC
QT Input Channel

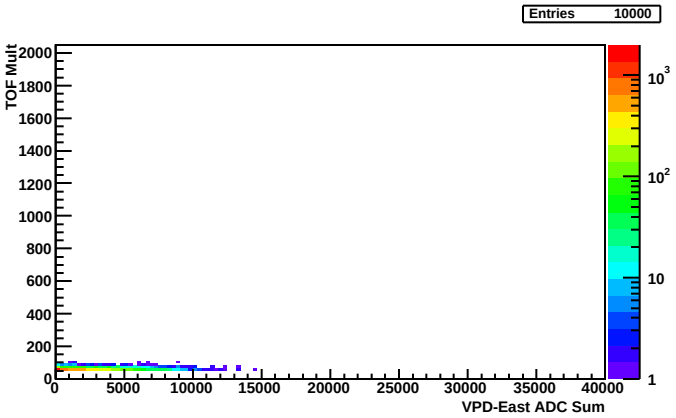

BBQ-VP004 (HI threshold)
Entries 160000
TAC
QT Input Channel

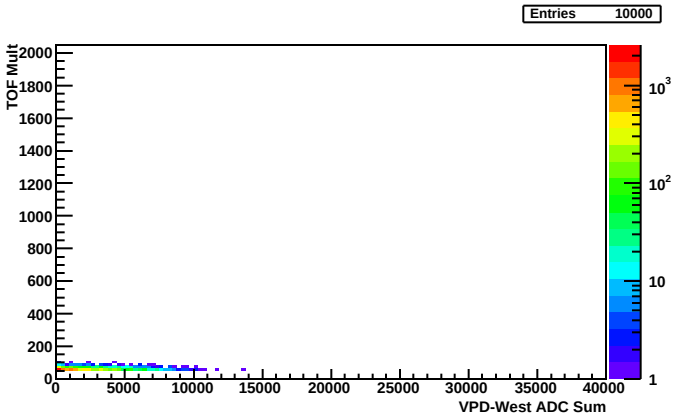

Entries 10000
TOF Mult
BBC-L-East ADC Sum

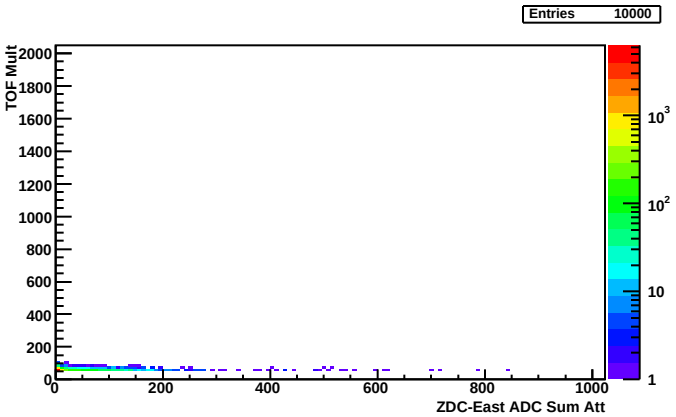

Entries 10000
TOF Mult
BBC-L-West ADC Sum

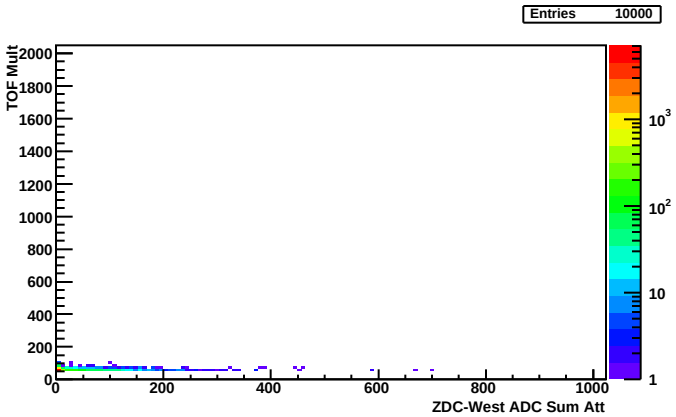

Entries 10000
TOF Mult
BBC-S-East ADC Sum

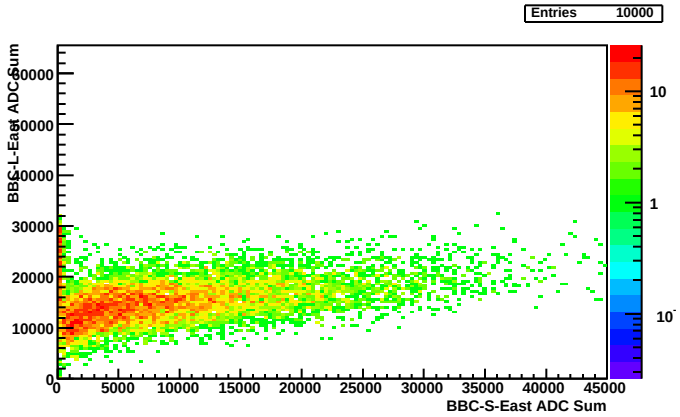

Entries 10000
TOF Mult
BBC-S-West ADC Sum

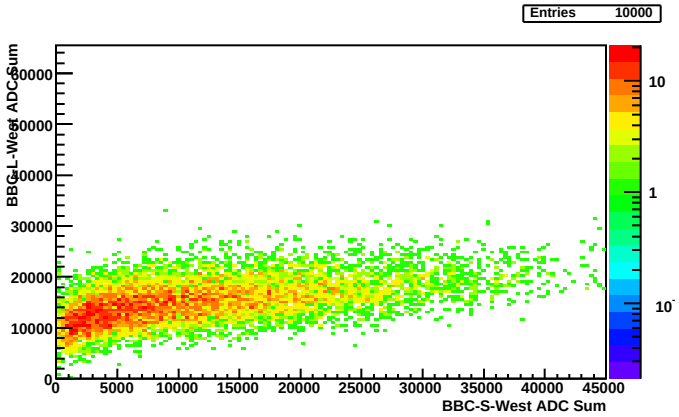

Entries 10000
TOF Mult
VPD-East ADC Sum

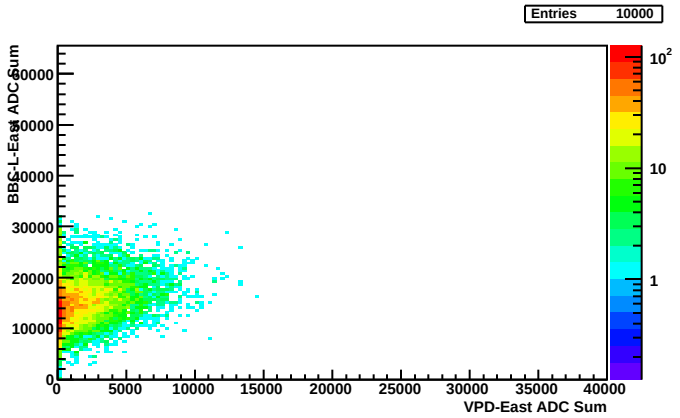

Entries 10000
TOF Mult
VPD-West ADC Sum

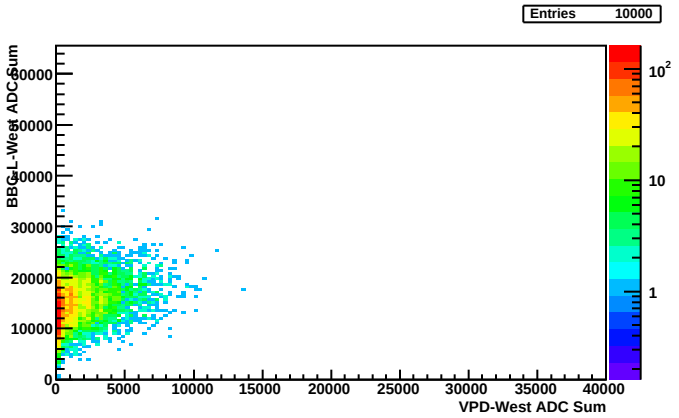

Entries 10000
TOF Mult
ZDC-East ADC Sum Att

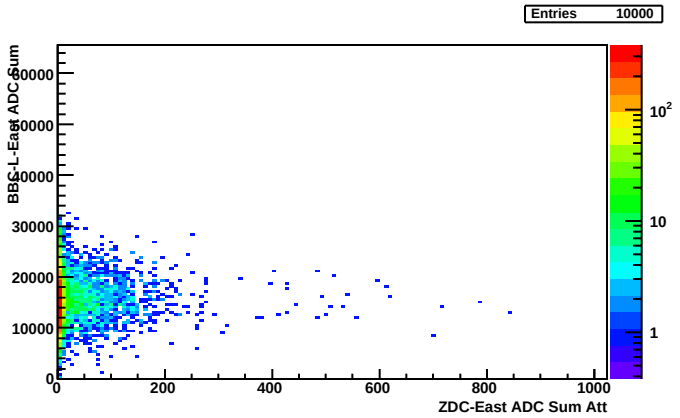

Entries 10000
TOF Mult
ZDC-West ADC Sum Att

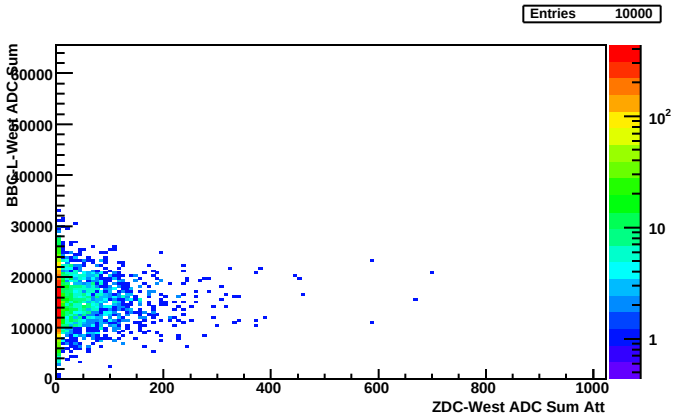

Entries 10000
BBC-L-East ADC Sum
BBC-S-East ADC Sum

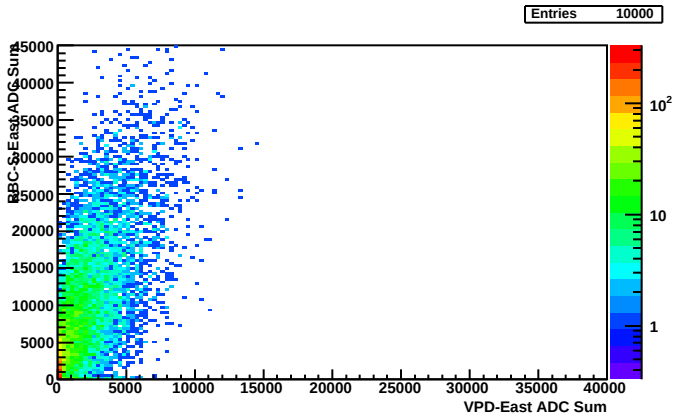

Entries 10000
BBC-L-West ADC Sum
BBC-S-West ADC Sum

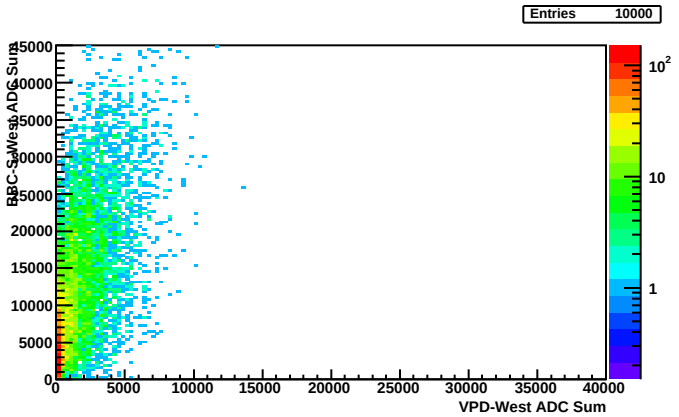

Entries 10000
BBC-L-East ADC Sum
VPD-East ADC Sum

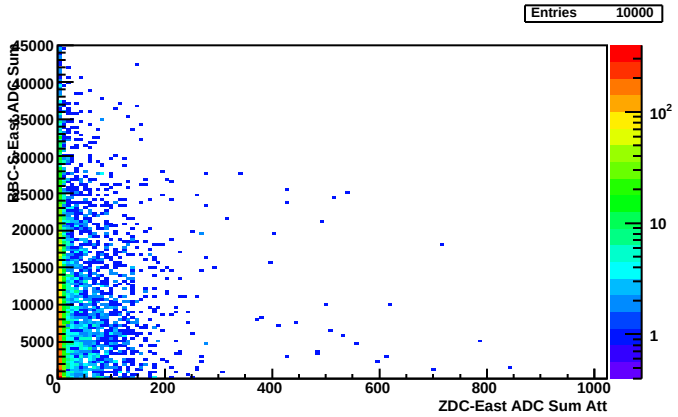

Entries 10000
BBC-L-West ADC Sum
VPD-West ADC Sum

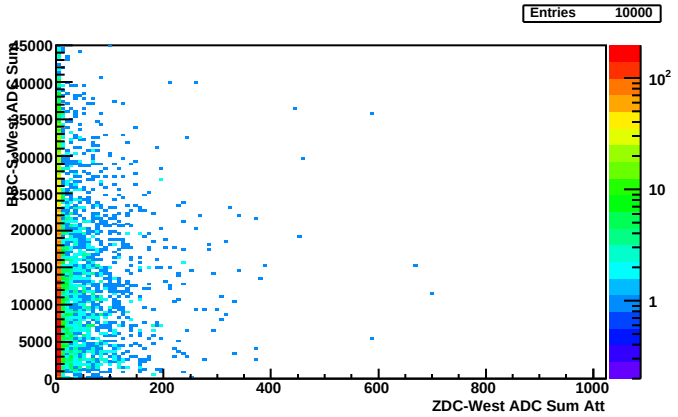

Entries 10000
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

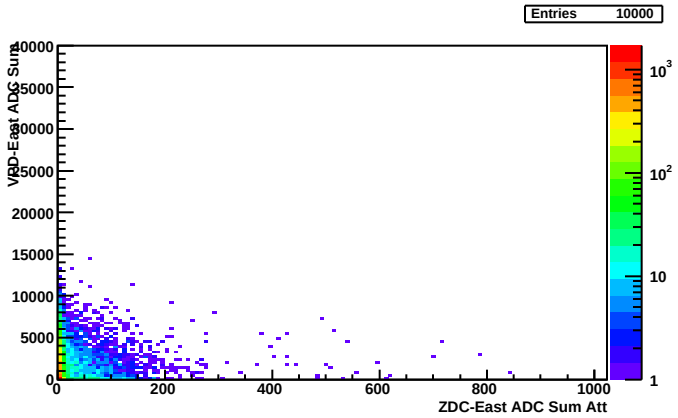

Entries 10000
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

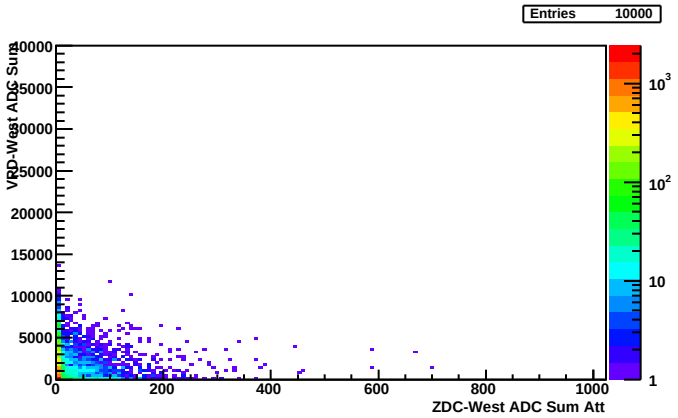

Entries 10000
BBC-S-East ADC Sum
VPD-East ADC Sum

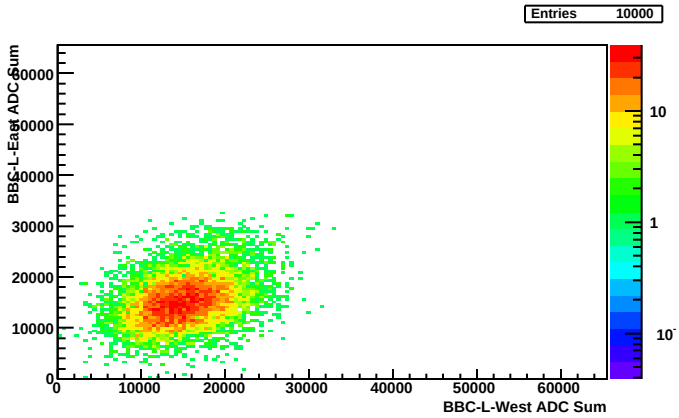

Entries 10000
BBC-S-West ADC Sum
VPD-West ADC Sum

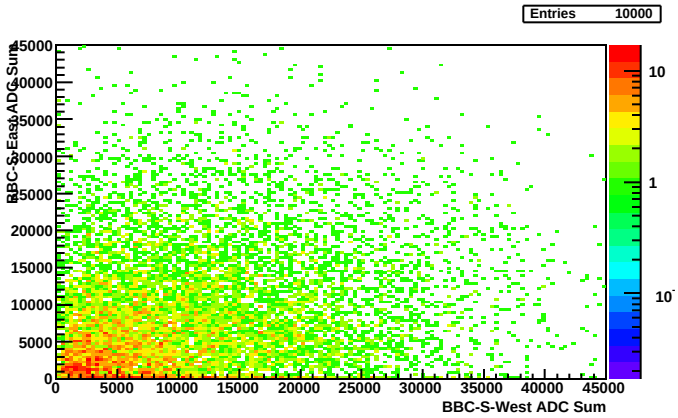

Entries 10000
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

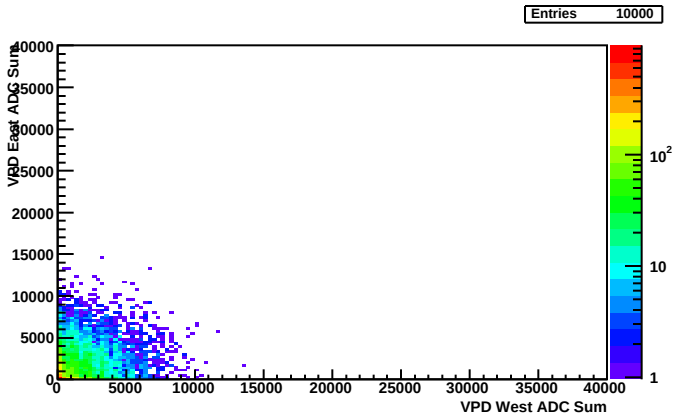

Entries 10000
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

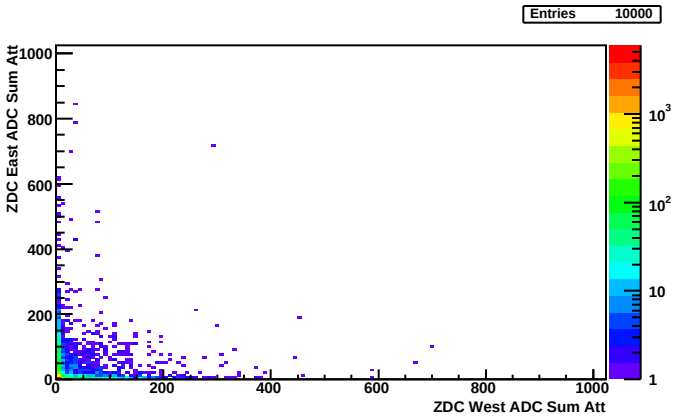

Entries 10000
VPD-East ADC Sum
ZDC-East ADC Sum Att

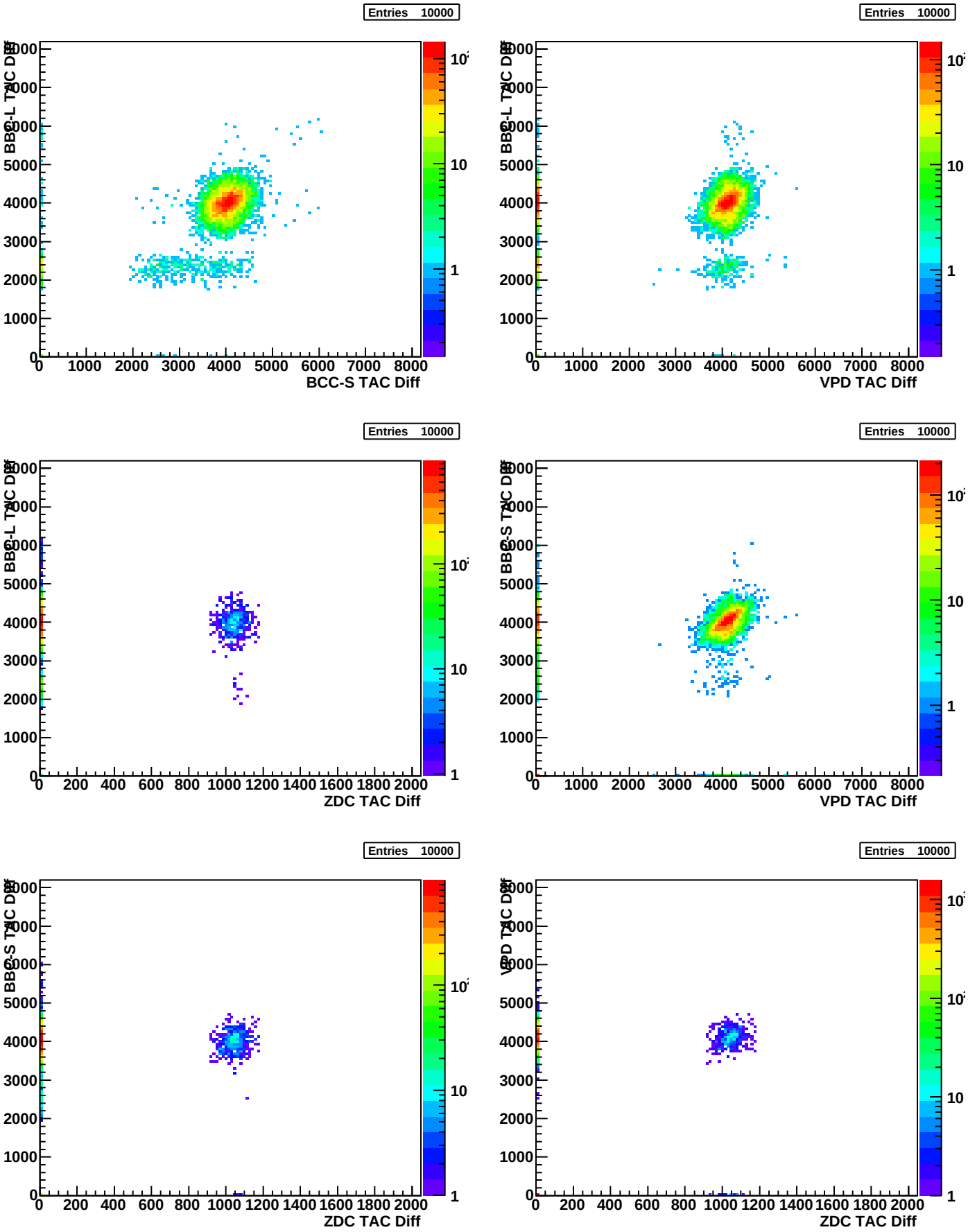

Entries 10000
VPD-West ADC Sum
ZDC-West ADC Sum Att

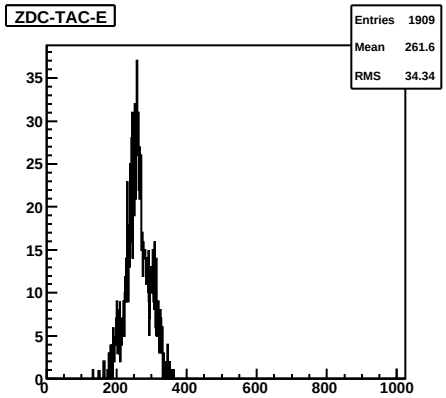

Entries 10000
BBC-L-East ADC Sum
BBC-L-West ADC Sum

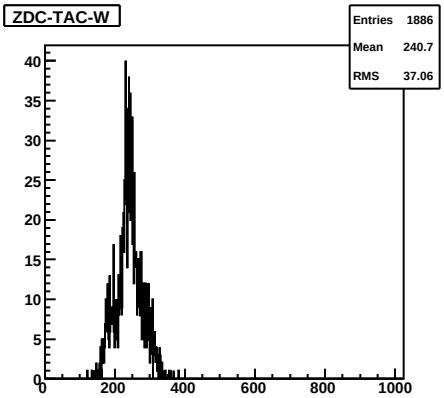

Entries 10000
BBC-S-East ADC Sum
BBC-S-West ADC Sum

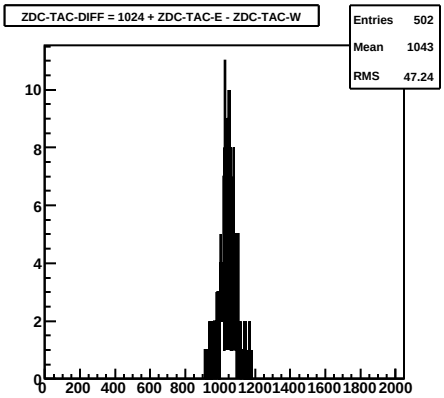

Entries 10000
VPD East ADC Sum
VPD West ADC Sum

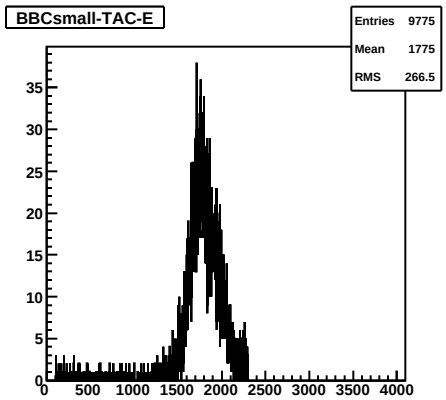

Entries 10000
ZDC East ADC Sum Att
ZDC West ADC Sum Att

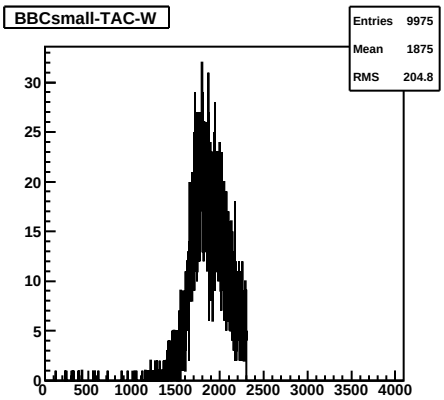

Entries 10000
BBC-L TAC Diff
BCC-S TAC Diff
Entries 10000
BBC-L TAC Diff
VPD TAC Diff
Entries 10000
BBC-L TAC Diff
ZDC TAC Diff
Entries 10000
BBC-S TAC Diff
VPD TAC Diff
Entries 10000
BBC-S TAC Diff
ZDC TAC Diff
Entries 10000
VPD TAC Diff
ZDC TAC Diff

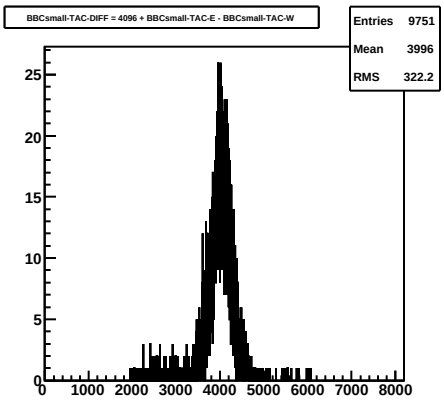

ZDC-TAC-E
Entries 1909
Mean 261.6
RMS 34.34

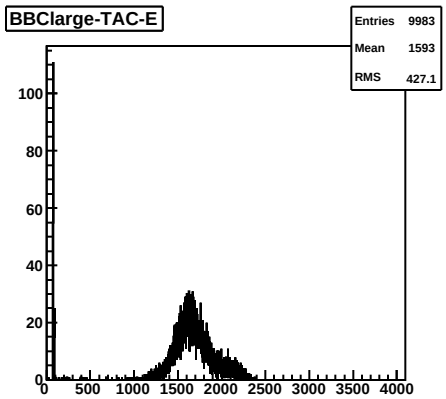

ZDC-TAC-W
Entries 1886
Mean 240.7
RMS 37.06

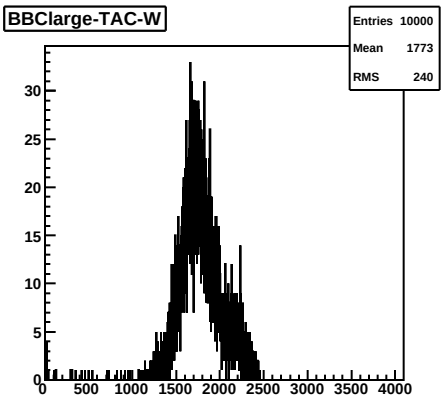

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 502
Mean 1043
RMS 47.24

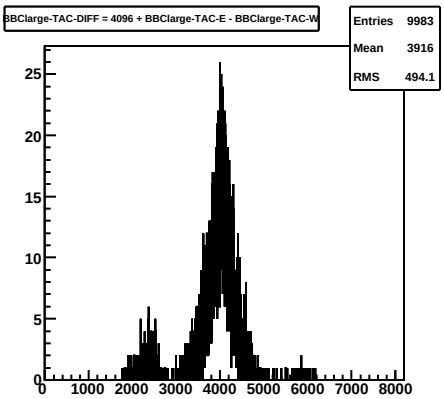

BBCsmall-TAC-E
Entries 9775
Mean 1775
RMS 266.5

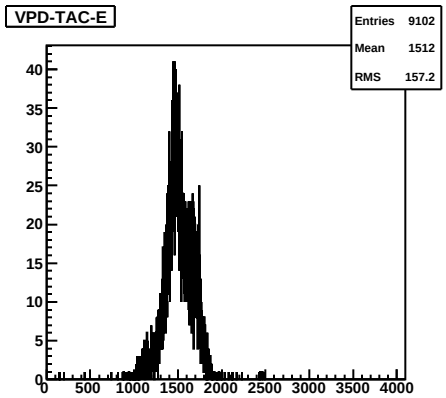

BBCsmall-TAC-W
Entries 9975
Mean 1875
RMS 204.8

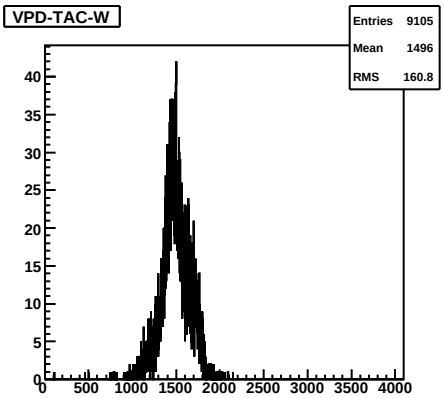

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 9751
Mean 3996
RMS 322.2

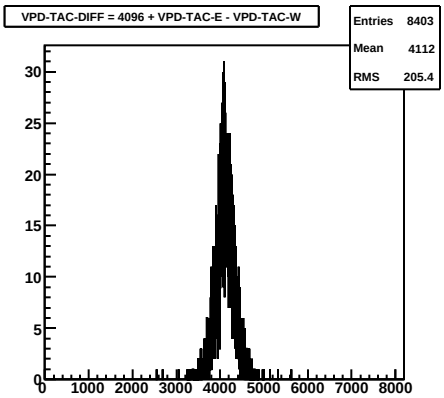

BBClarge-TAC-E
Entries 9983
Mean 1593
RMS 427.1

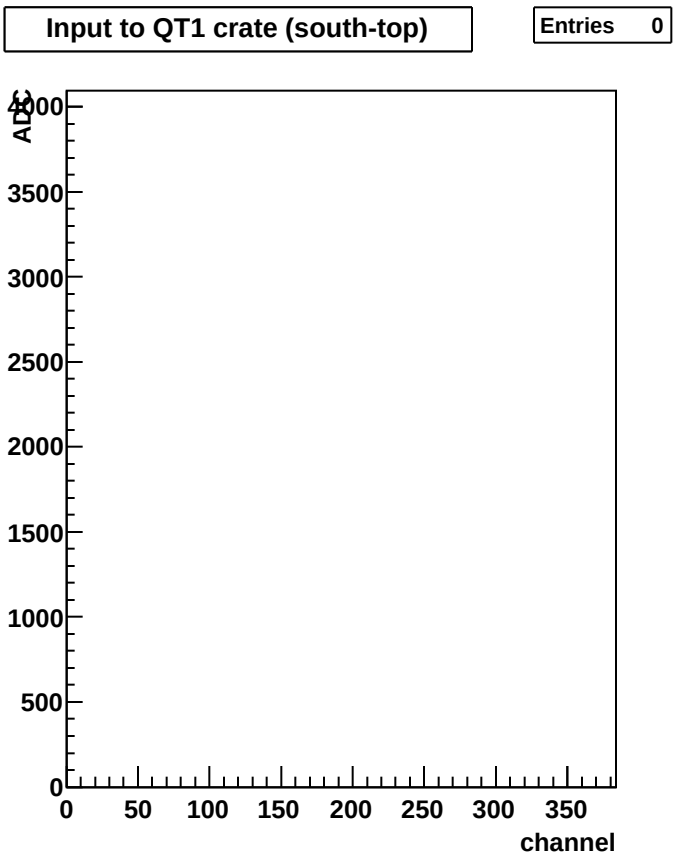

BBClarge-TAC-W
Entries 10000
Mean 1773
RMS 240

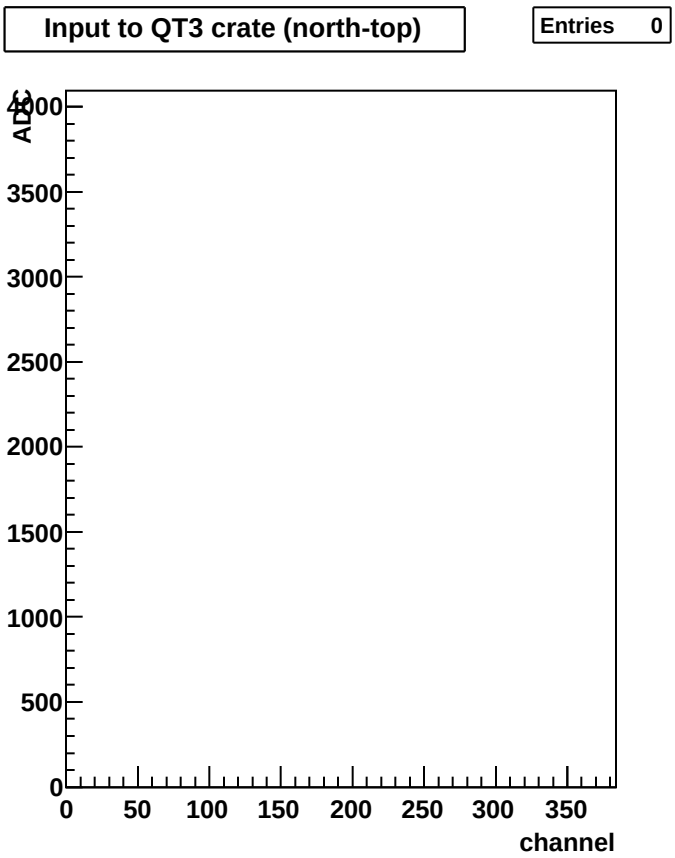

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 9983
Mean 3916
RMS 494.1

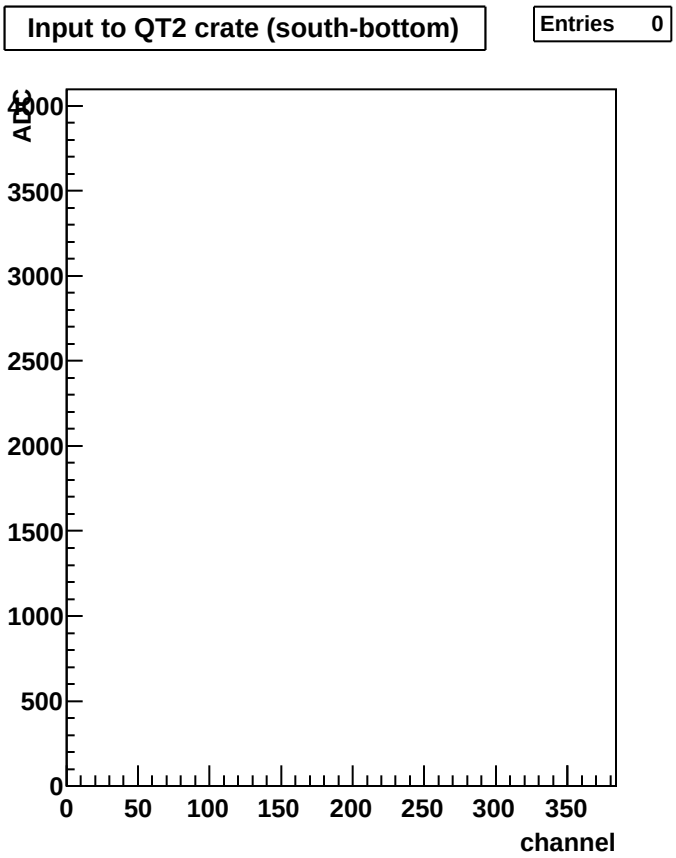

VPD-TAC-E
Entries 9102
Mean 1512
RMS 157.2

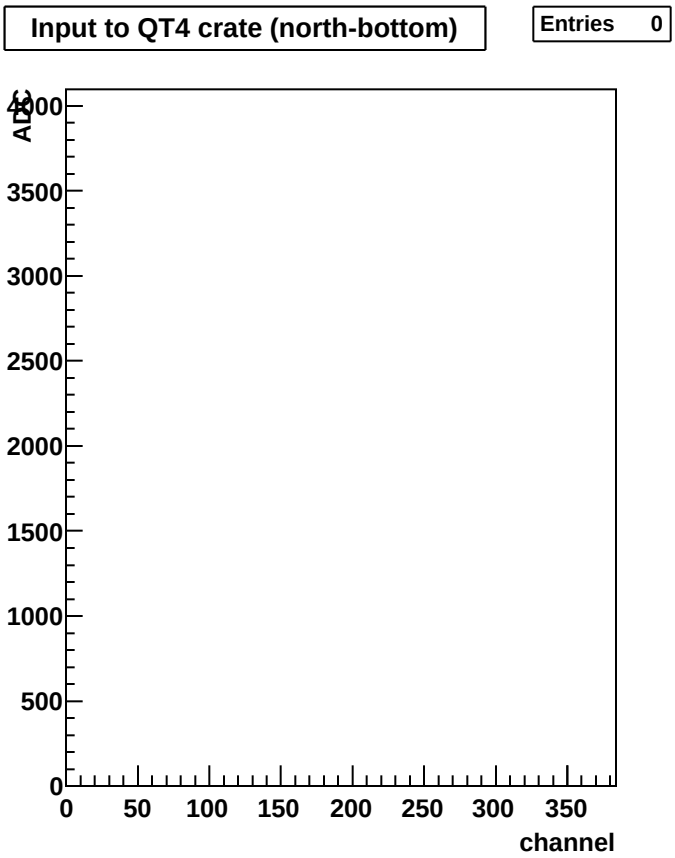

VPD-TAC-W
Entries 9105
Mean 1496
RMS 160.8

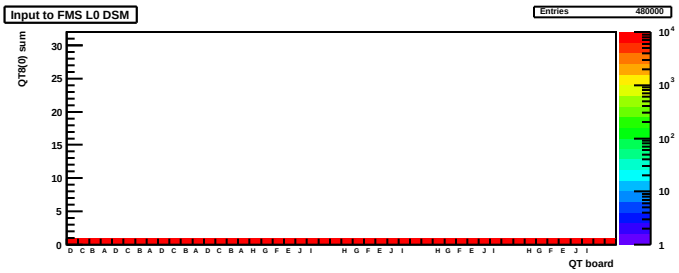

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 8403
Mean 4112
RMS 205.4

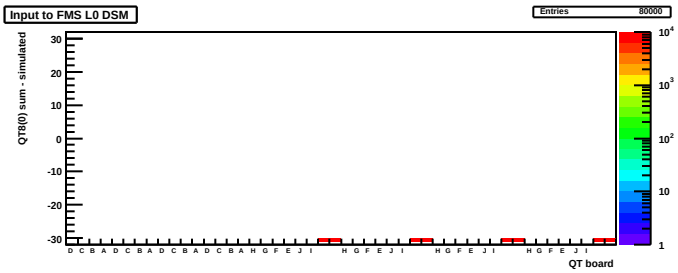

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

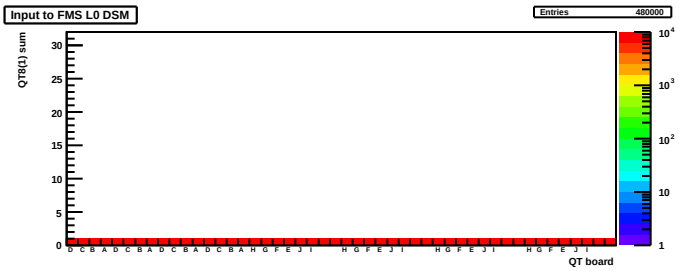

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

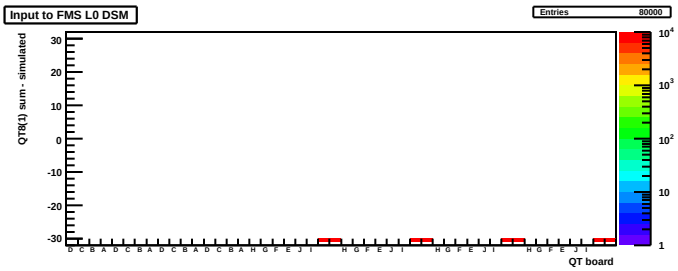

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

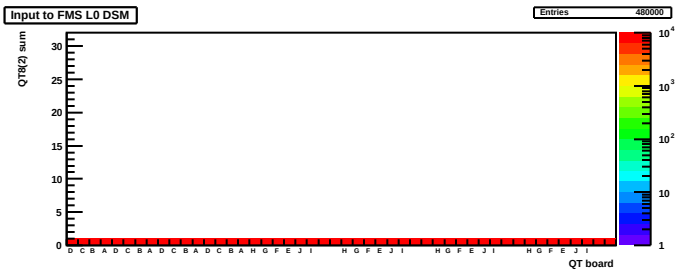

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

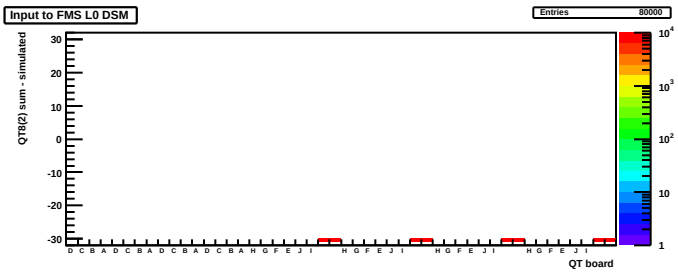

Input to FMS L0 DSM
Entries 480000
QT8(0) sum
QT board

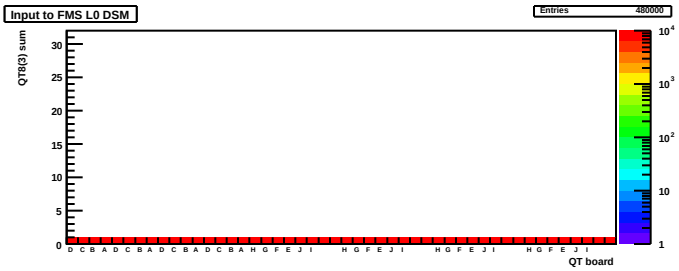

Input to FMS L0 DSM
Entries 80000
QT8(0) sum - simulated
QT board

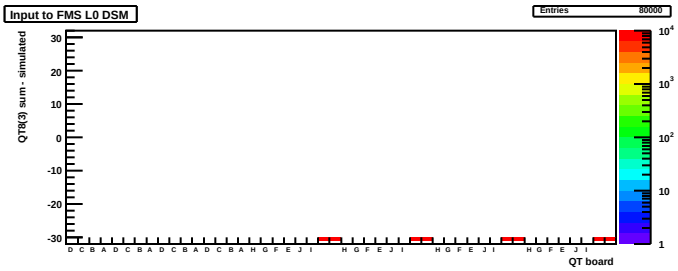

Input to FMS L0 DSM
Entries 480000
QT8(1) sum
QT board

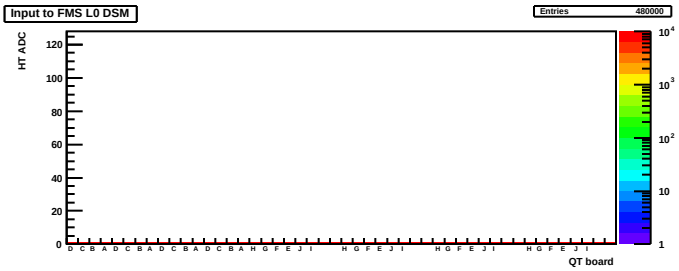

Input to FMS L0 DSM
Entries 80000
QT8(1) sum - simulated
QT board

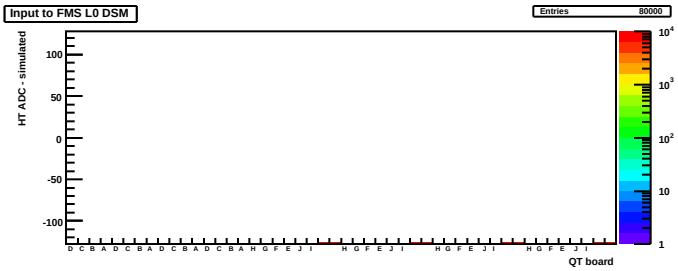

Input to FMS L0 DSM
Entries 480000
QT8(2) sum
QT board

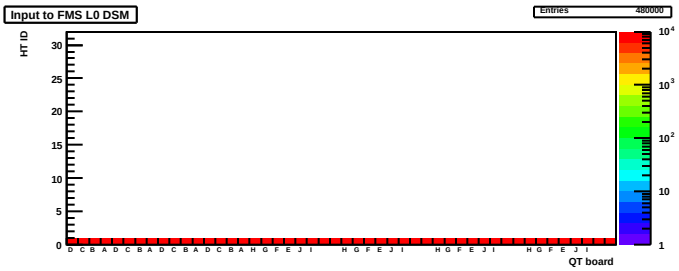

Input to FMS L0 DSM
Entries 80000
QT8(2) sum - simulated
QT board

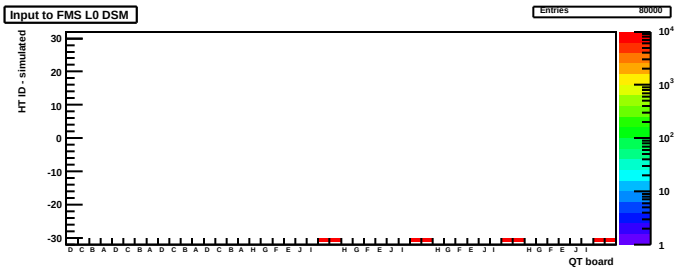

Input to FMS L0 DSM
Entries 480000
QT8(3) sum
QT board

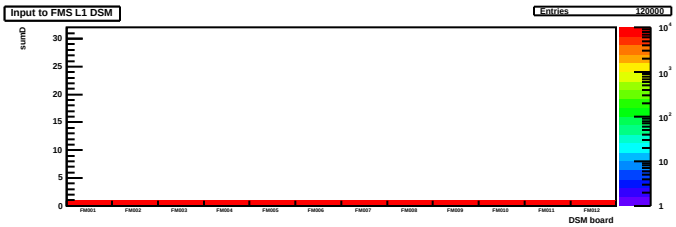

Input to FMS L0 DSM
Entries 80000
QT8(3) sum - simulated
QT board

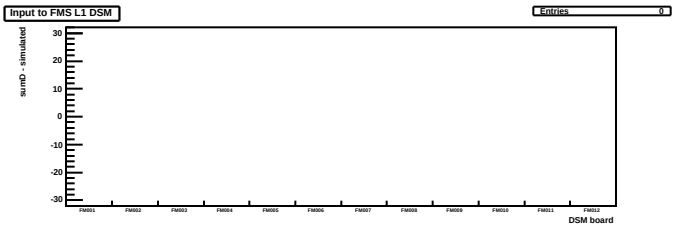

Input to FMS L0 DSM
Entries 480000
HT ADC
QT board

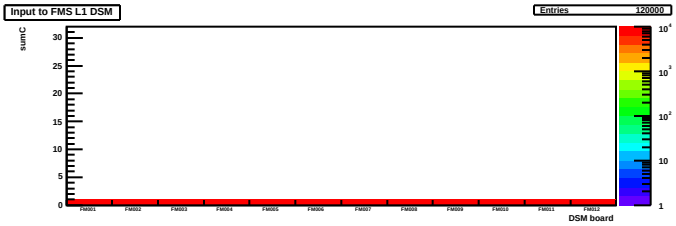

Input to FMS L0 DSM
Entries 80000
HT ADC - simulated
QT board

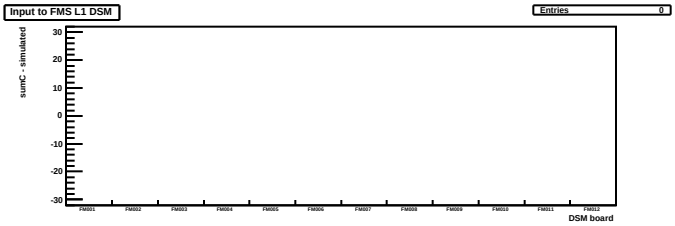

Input to FMS L0 DSM
Entries 480000
HT ID
QT board

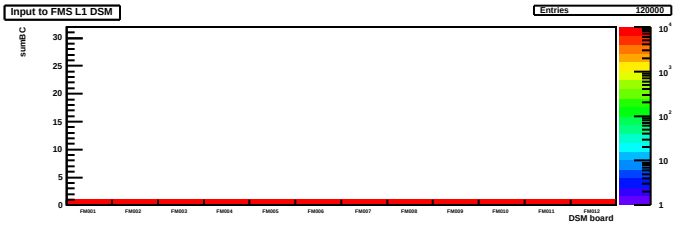

Input to FMS L0 DSM
Entries 80000
HT ID - simulated
QT board

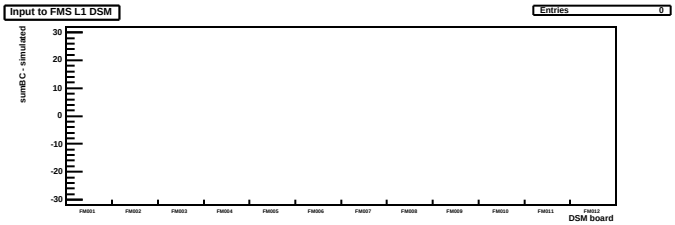

Input to FMS L1 DSM
Entries 120000
sumD
DSM board

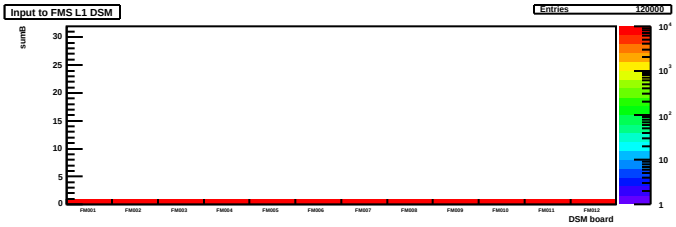

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

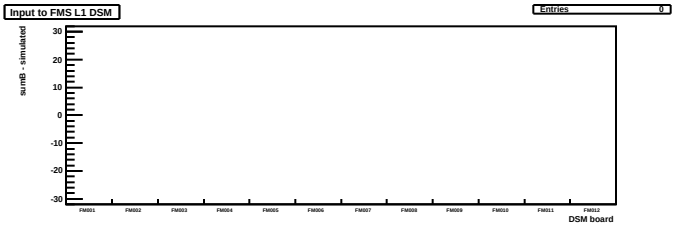

Input to FMS L1 DSM
Entries 120000
sumC
DSM board

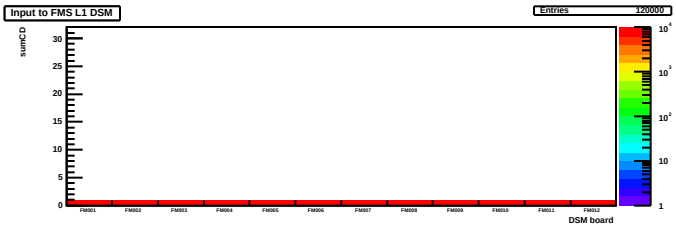

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

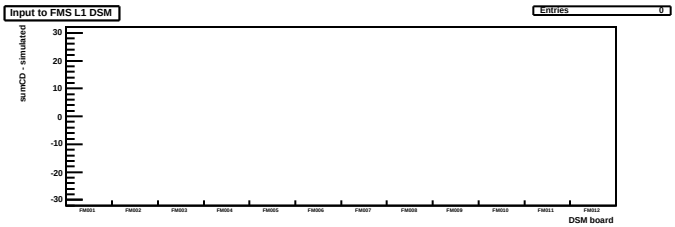

Input to FMS L1 DSM
Entries 120000
sumBC
DSM board

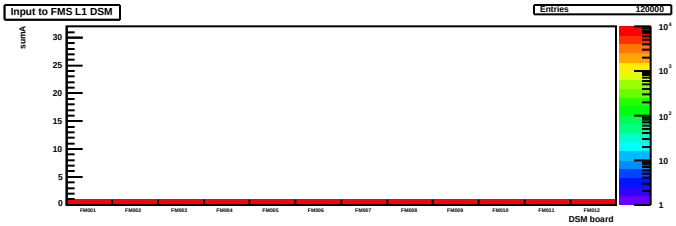

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

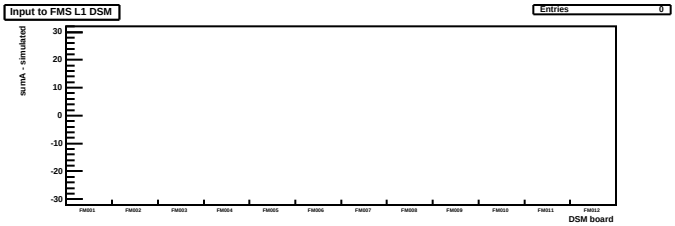

Input to FMS L1 DSM
Entries 120000
sumB
DSM board

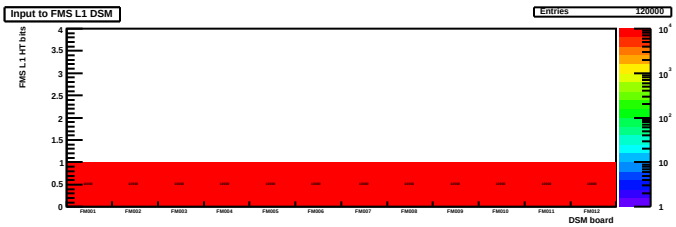

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

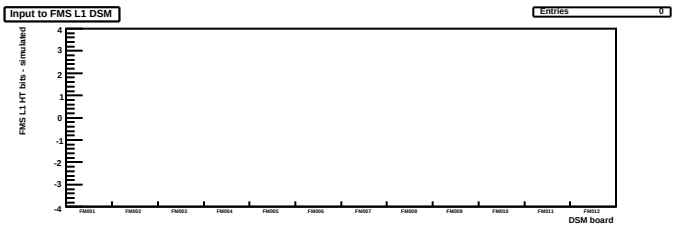

Input to FMS L1 DSM
Entries 120000
sumCD
DSM board

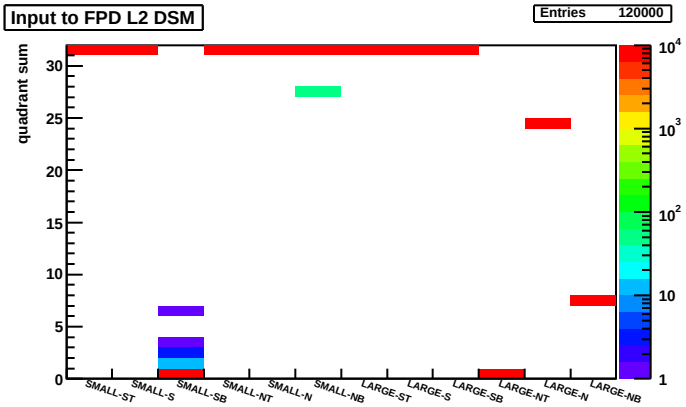

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

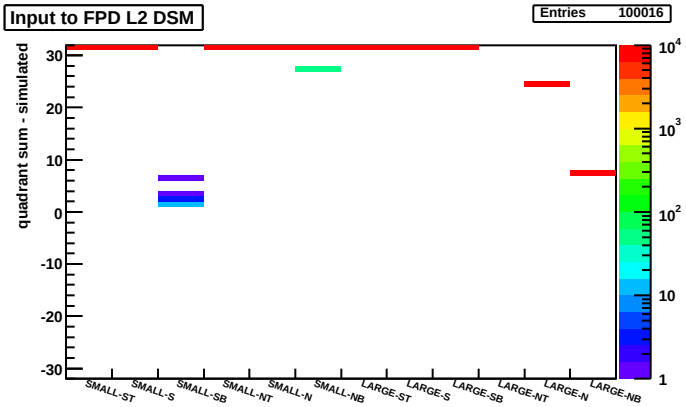

Input to FMS L1 DSM
Entries 120000
sumA
DSM board

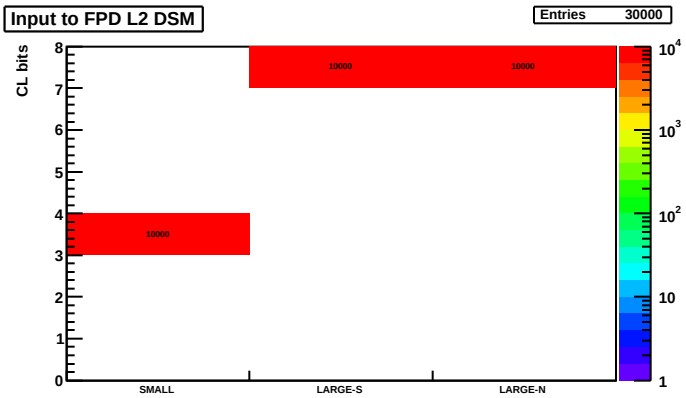

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

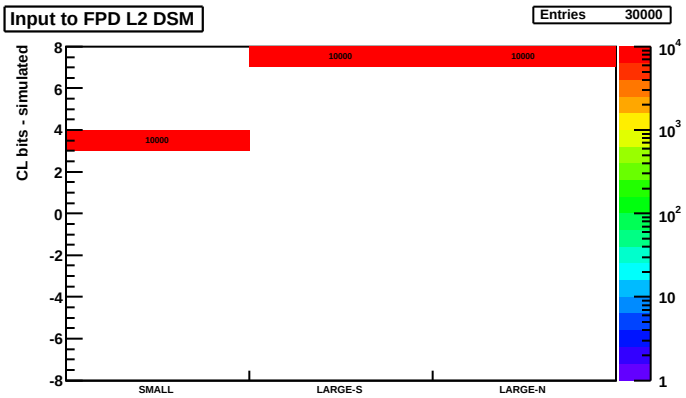

Input to FMS L1 DSM
Entries 120000
FMS L1 HT bits
DSM board

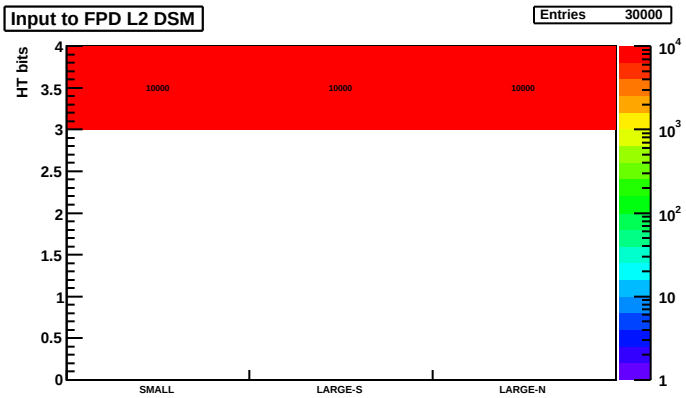

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

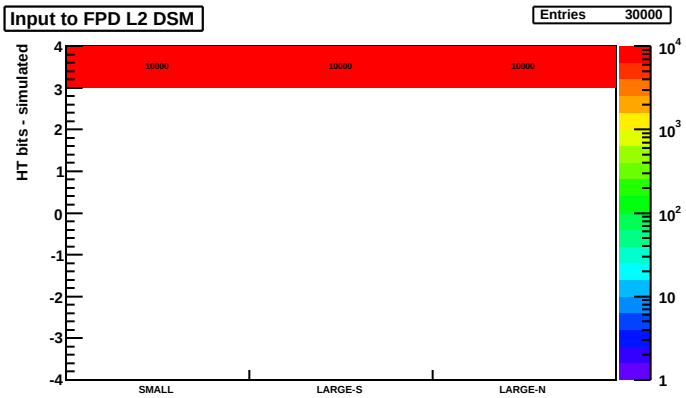

Input to FPD L2 DSM
Entries 120000
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

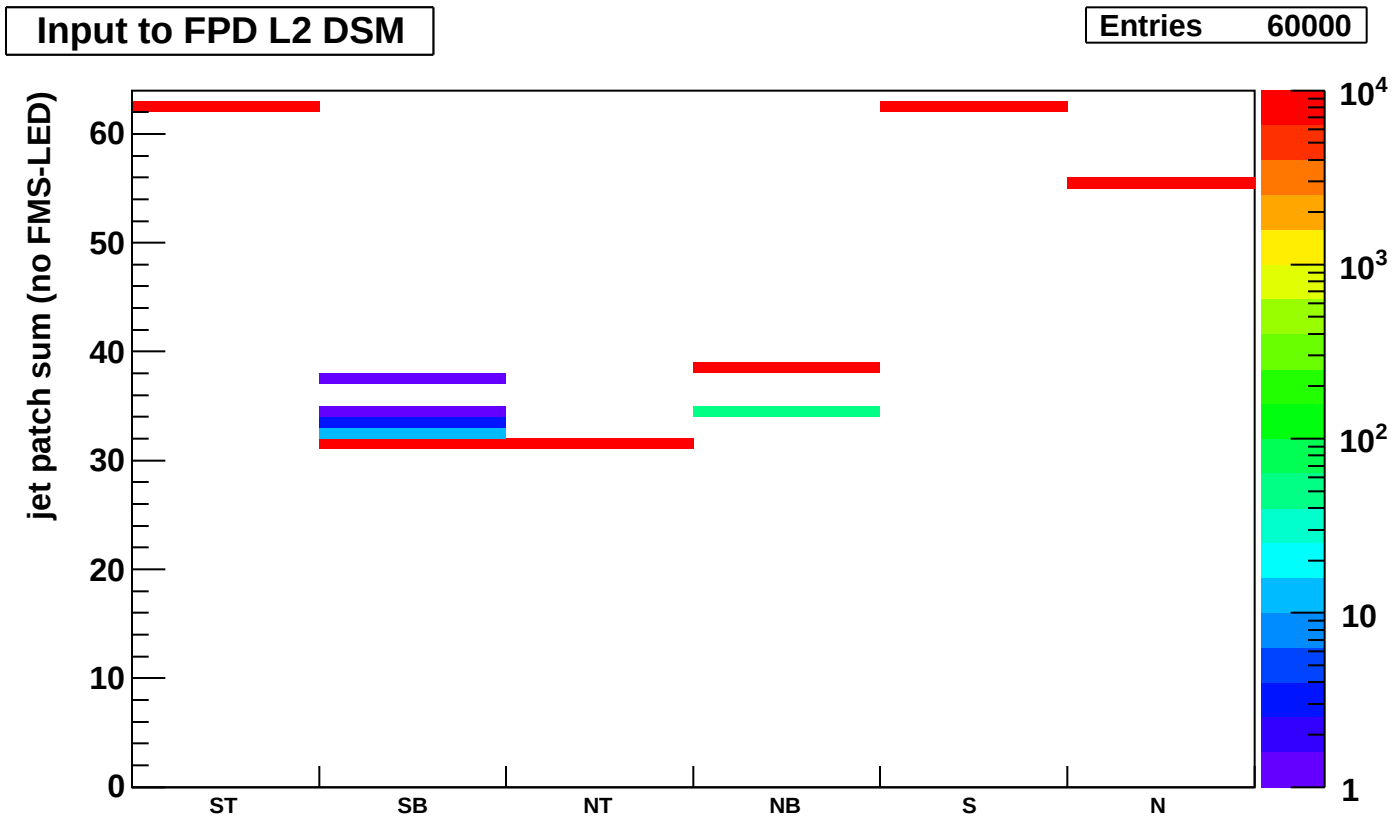

Input to FPD L2 DSM
Entries 100016
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

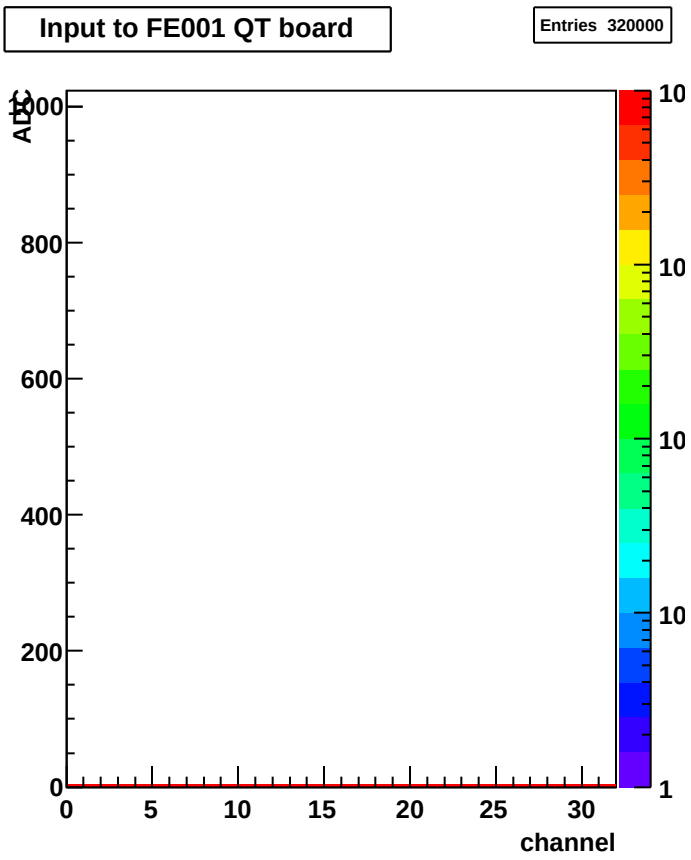

Input to FPD L2 DSM
Entries 30000
CL bits
10000
10000
10000
SMALL
LARGE-S
LARGE-N

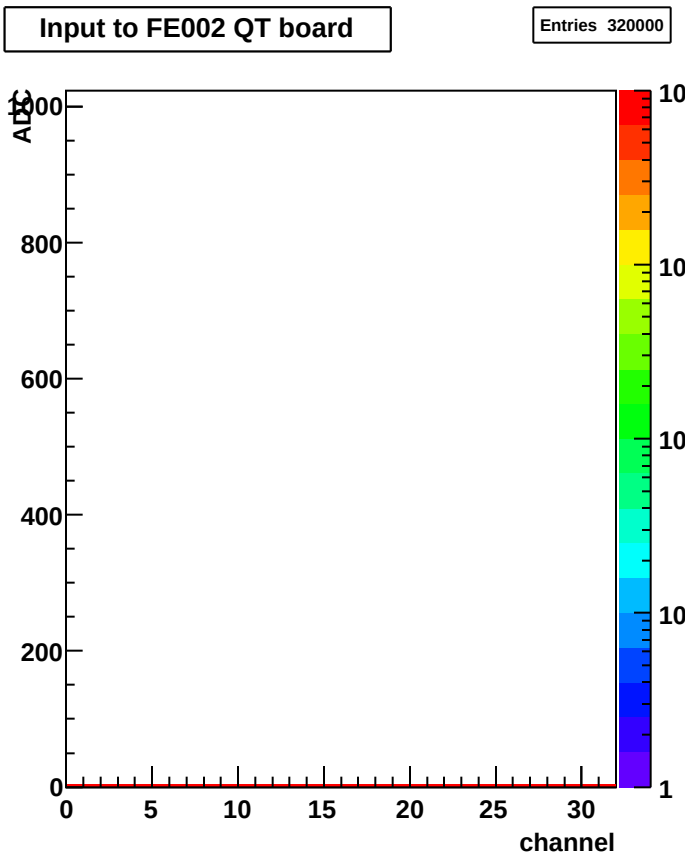

Input to FPD L2 DSM
Entries 30000
CL bits - simulated
10000
10000
10000
SMALL
LARGE-S
LARGE-N

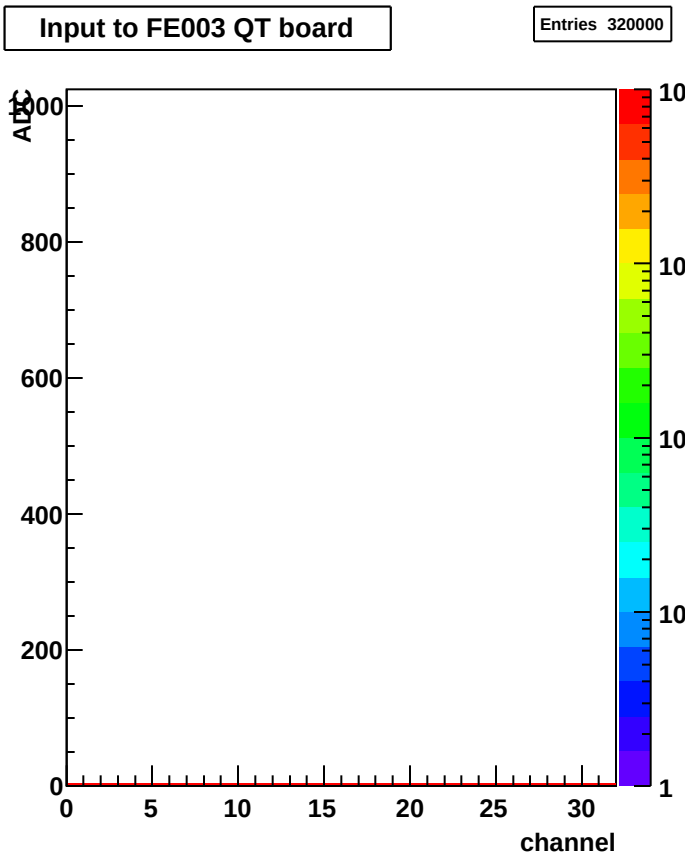

Input to FPD L2 DSM
Entries 30000
HT bits
10000
10000
10000
SMALL
LARGE-S
LARGE-N

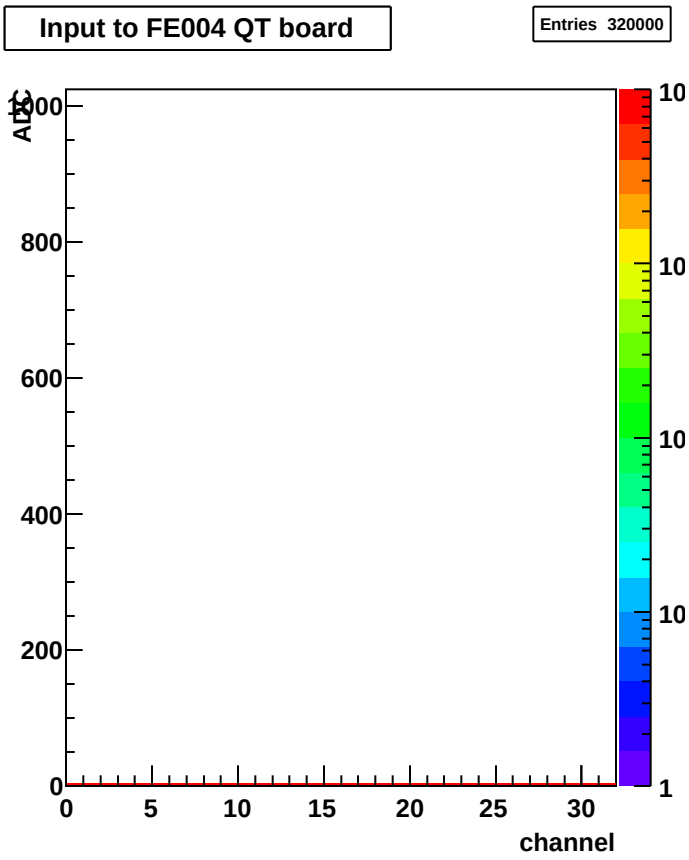

Input to FPD L2 DSM
Entries 30000
HT bits - simulated
10000
10000
10000
SMALL
LARGE-S
LARGE-N

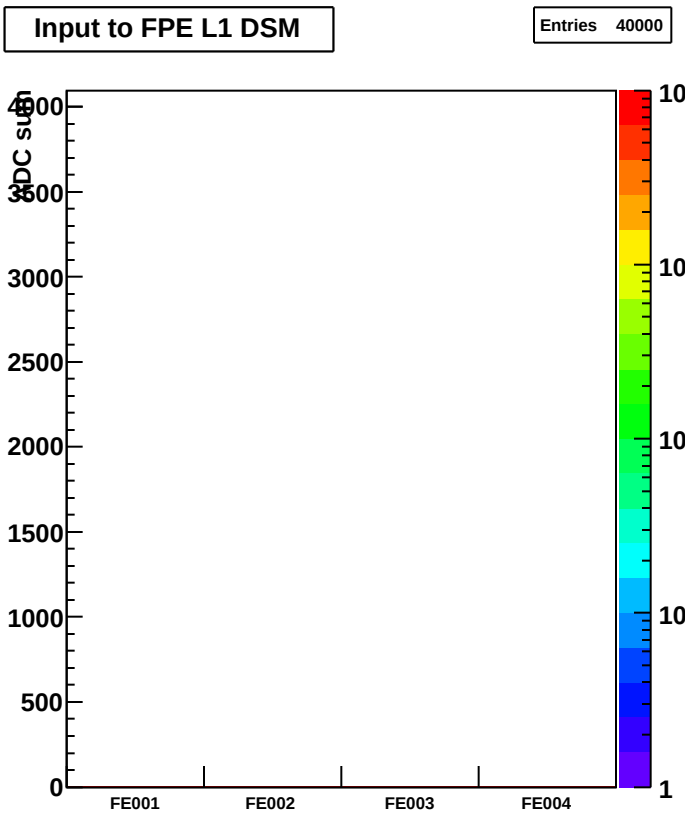

Input to FPD L2 DSM
Entries 60000
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

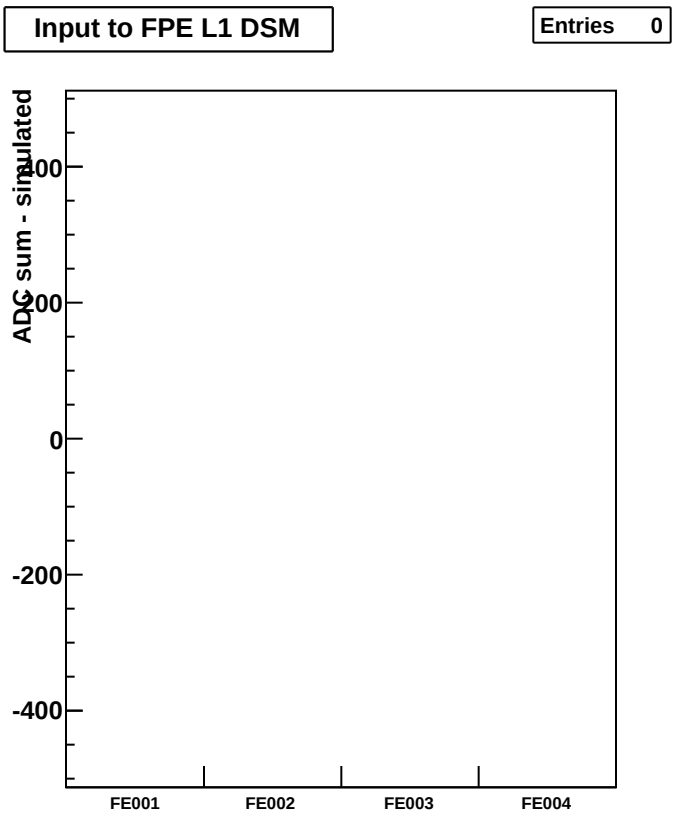

Input to FE001 QT board
Entries 320000
ADC
channel

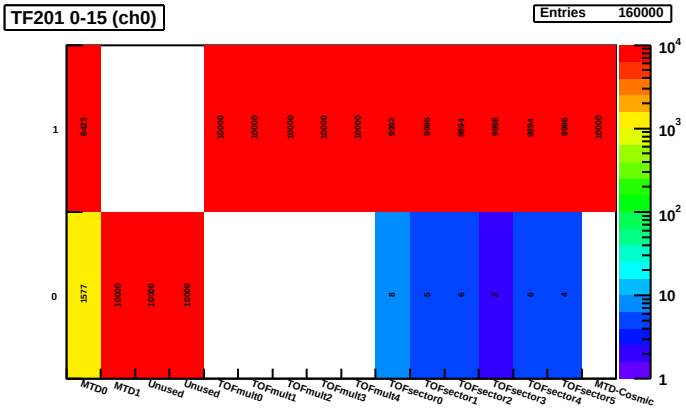

Input to FE002 QT board
Entries 320000
ADC
channel

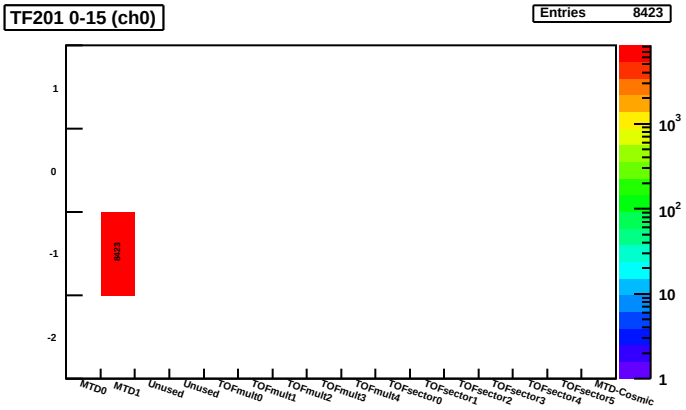

Input to FE003 QT board
Entries 320000
ADC
channel

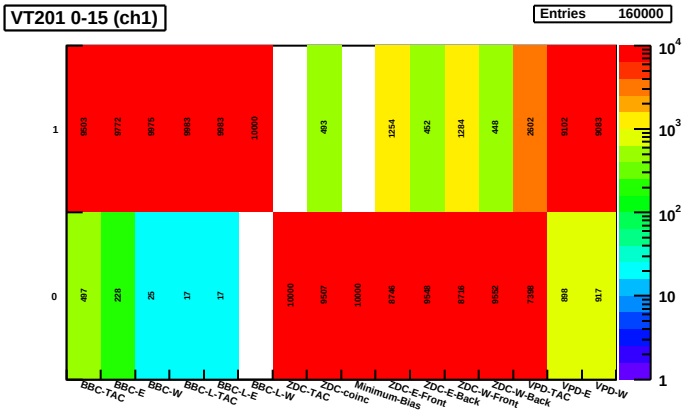

Input to FE004 QT board
Entries 320000
ADC
channel

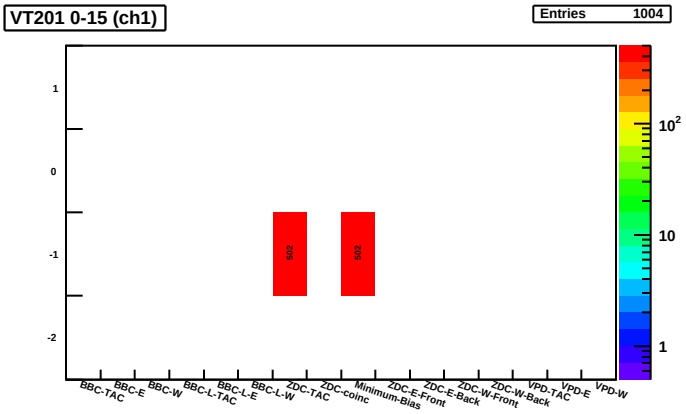

Input to FPE L1 DSM
Entries 40000
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1

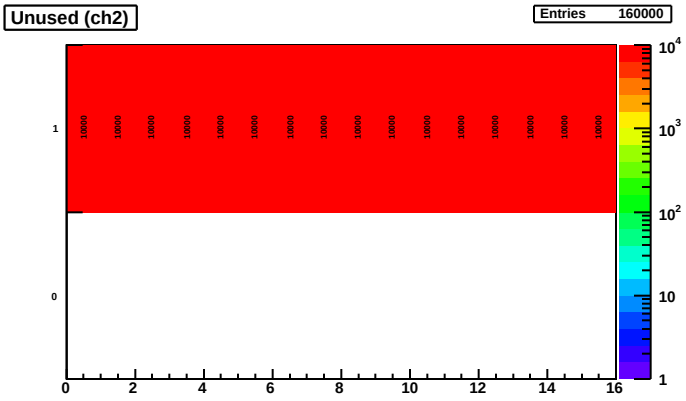

Input to FPE L1 DSM
Entries 0
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004

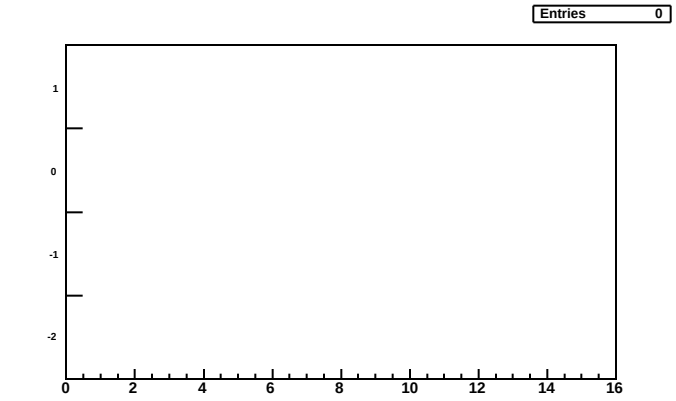

TF201 0-15 (ch0)
Entries 160000
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

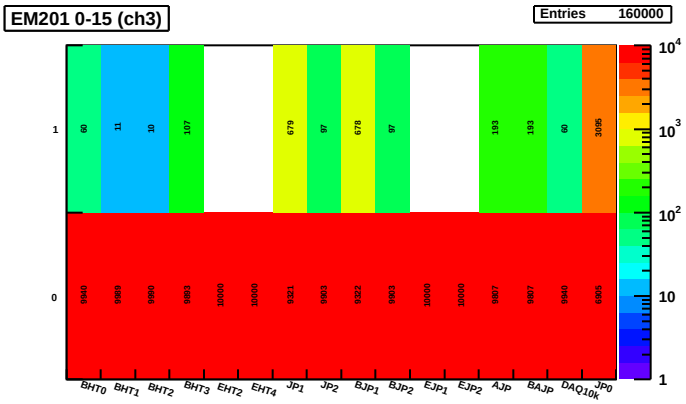

TF201 0-15 (ch0)
Entries 8423
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 160000
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-coinc Minimum-Bias ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 1004
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-coinc Minimum-Bias ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


Unused (ch2)
Entries 160000


Entries 0


EM201 0-15 (ch3)
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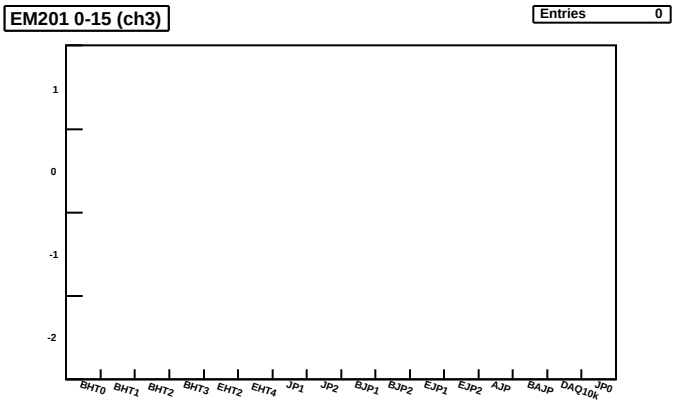
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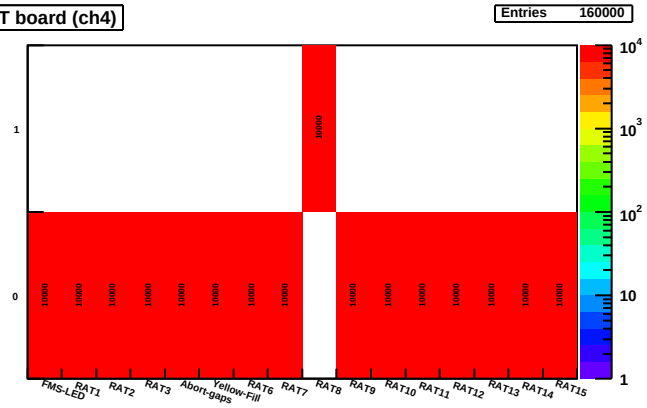
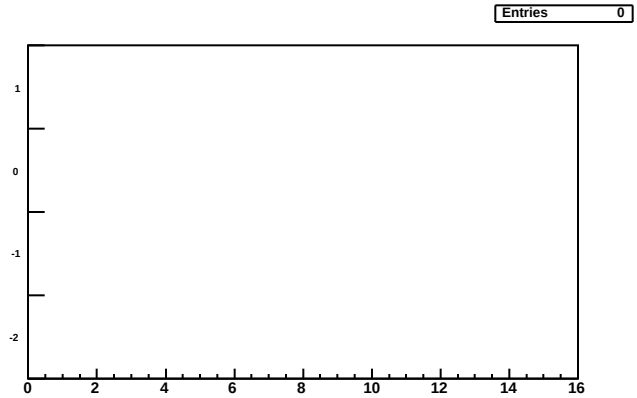
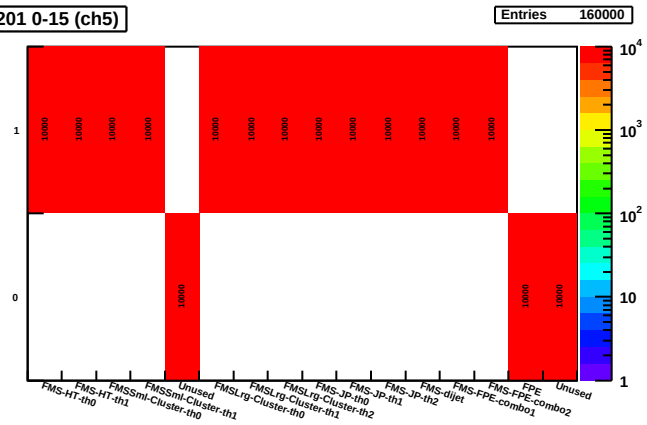
RAT board (ch4)





FP201 0-15 (ch5)



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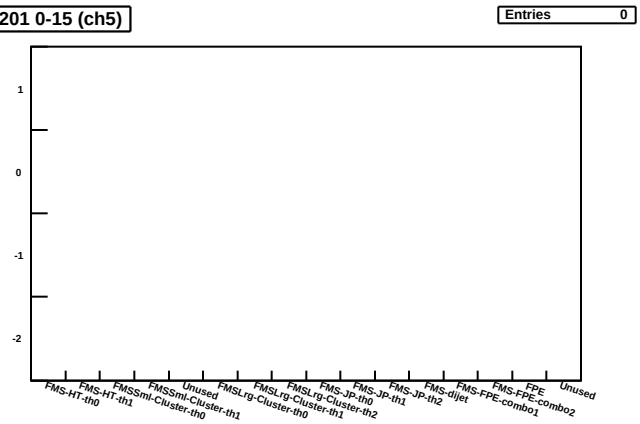
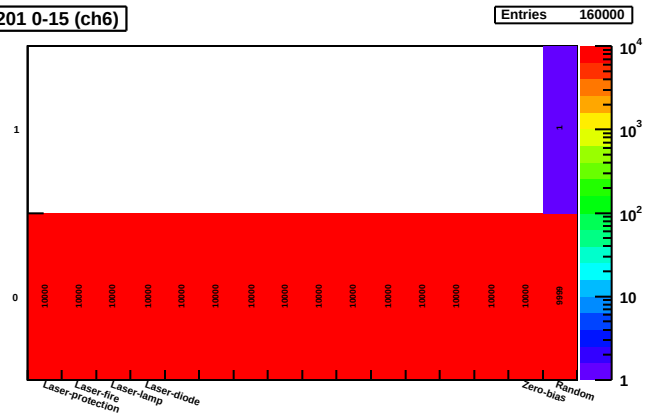
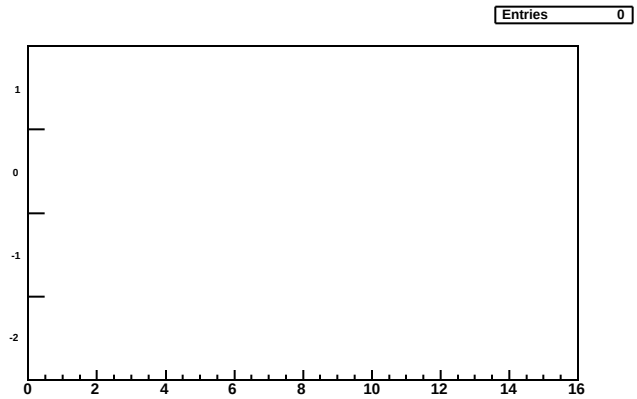
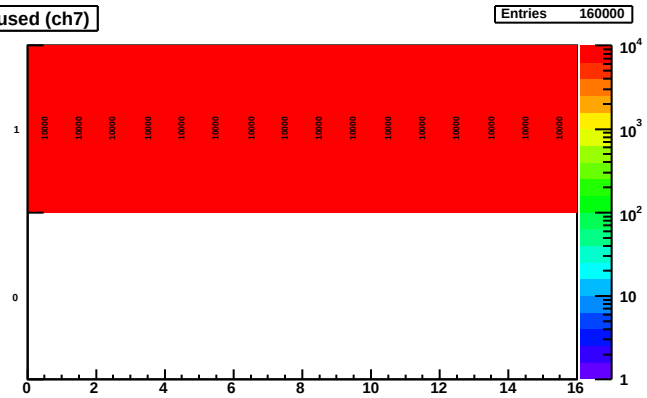
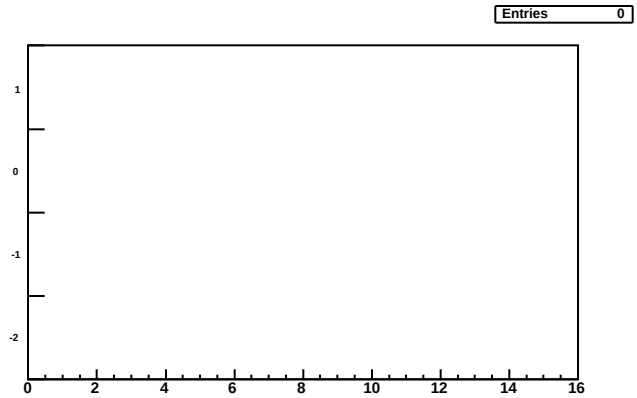


ST201 0-15 (ch6)





Unused (ch7)