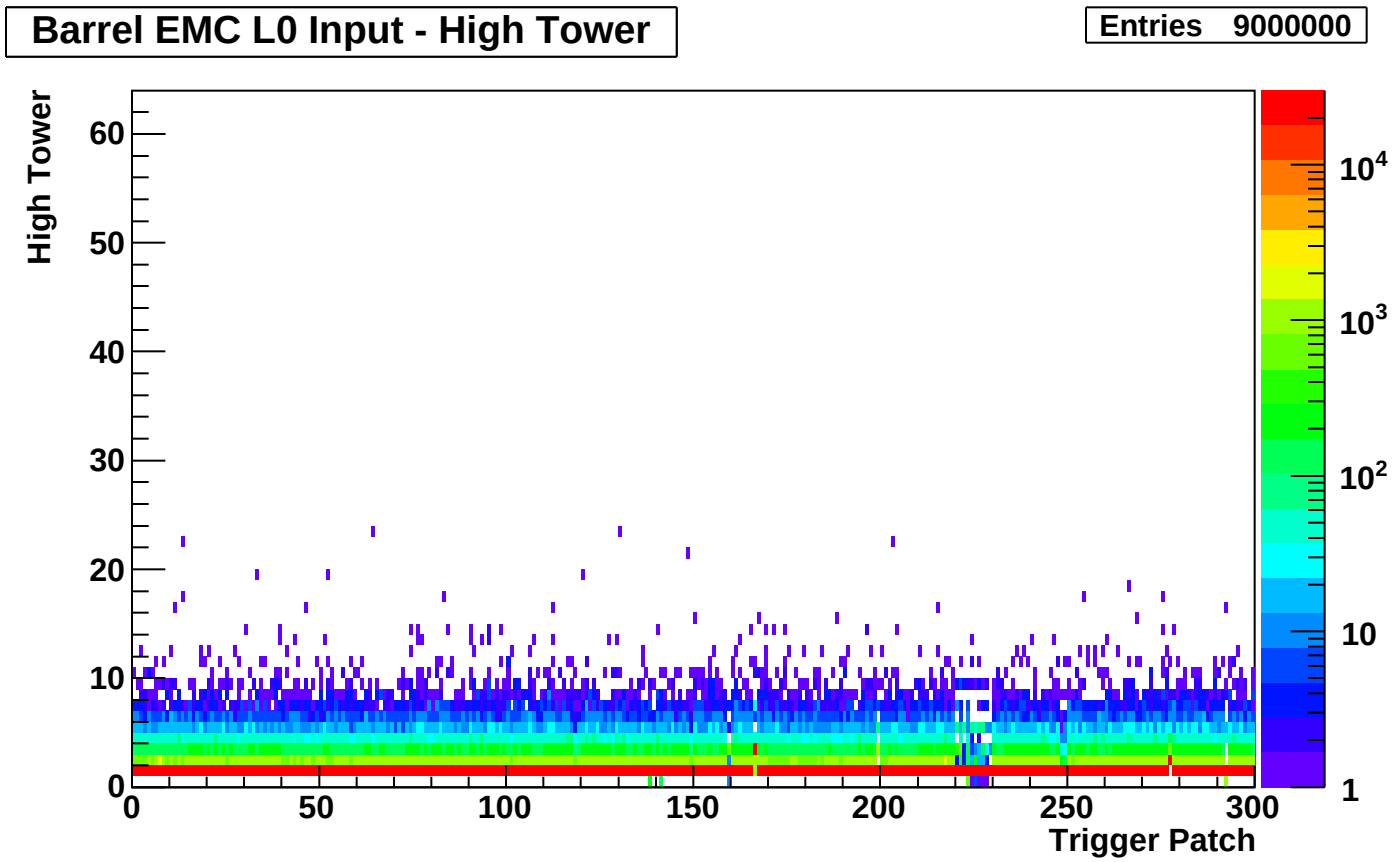
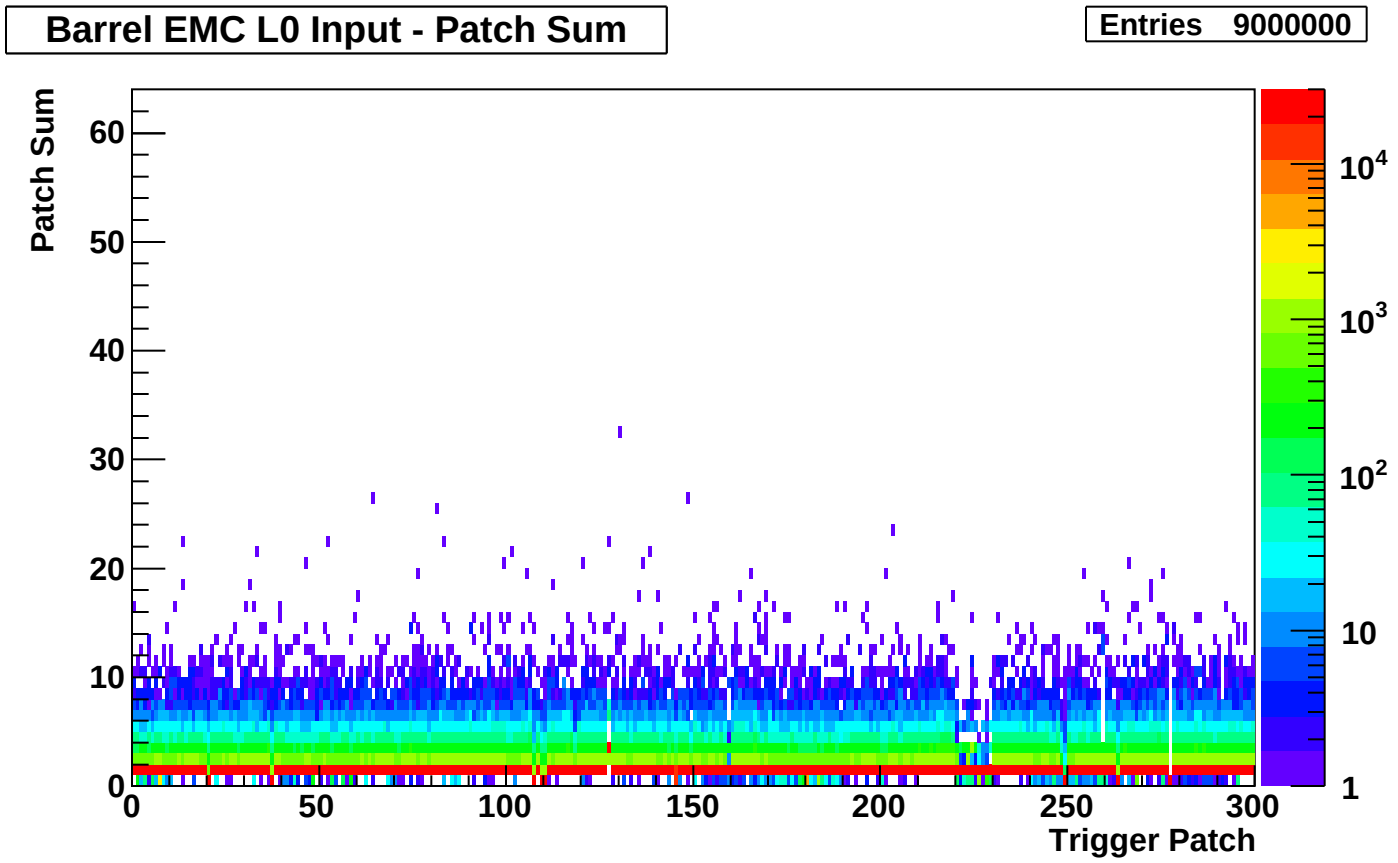
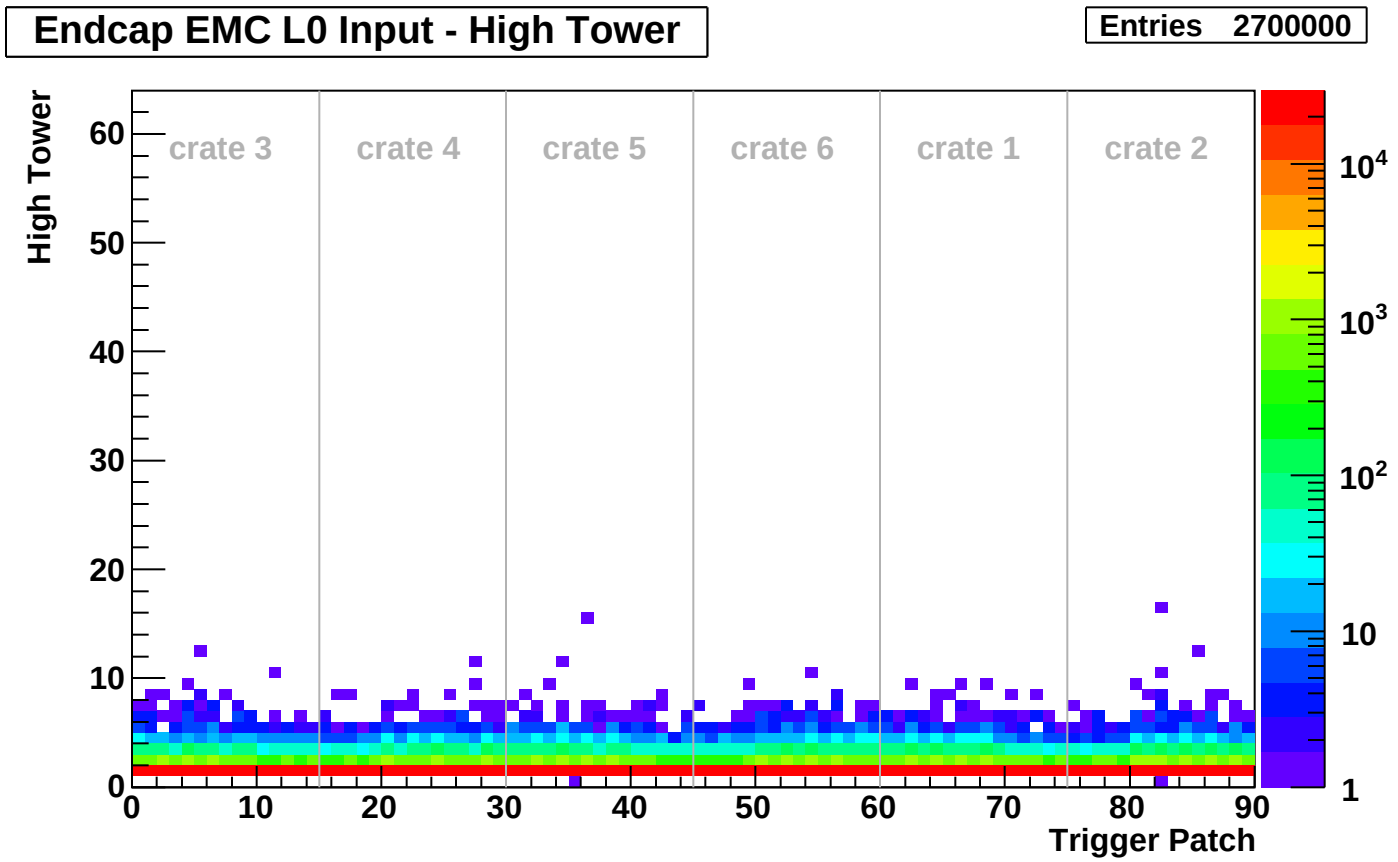
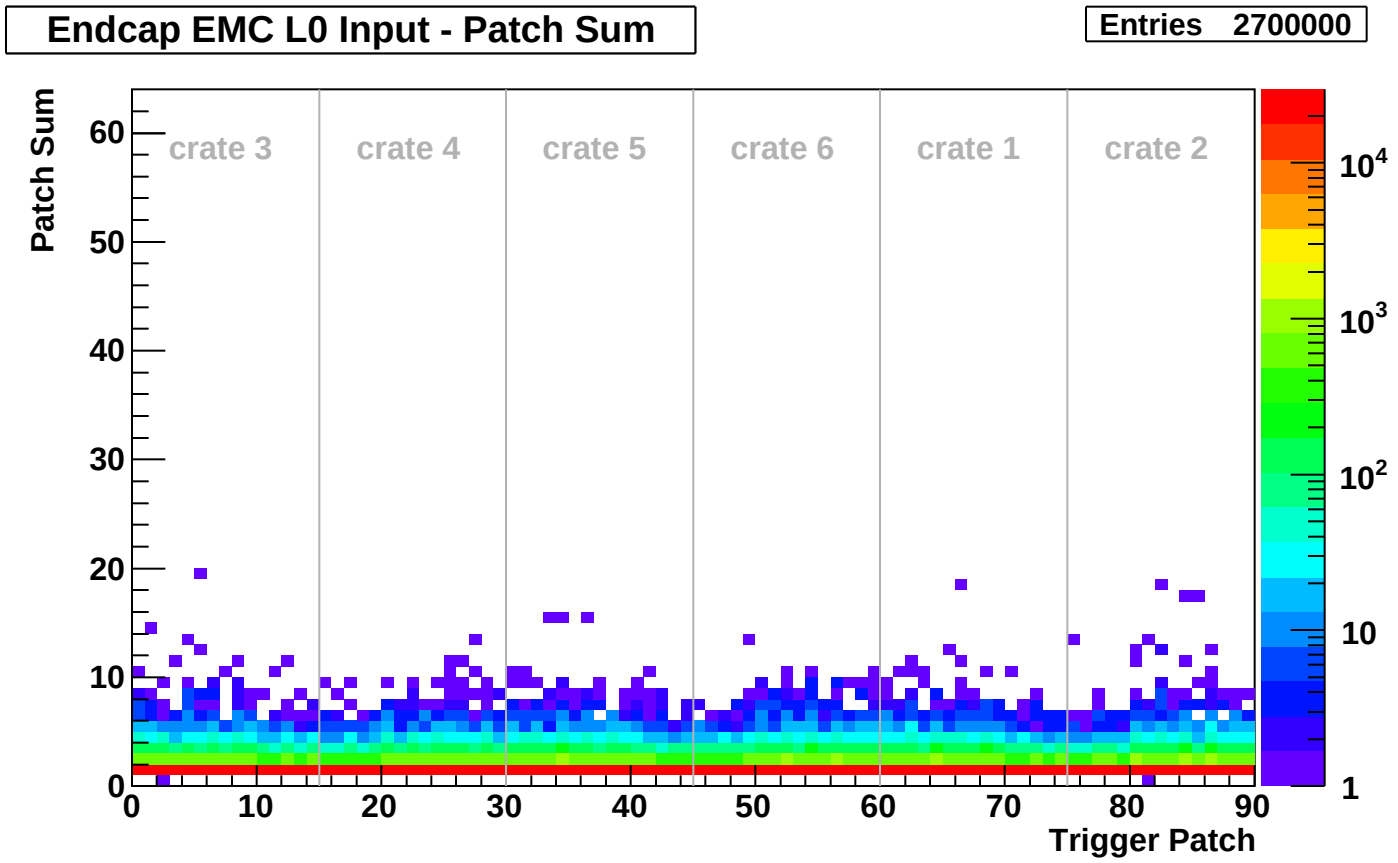
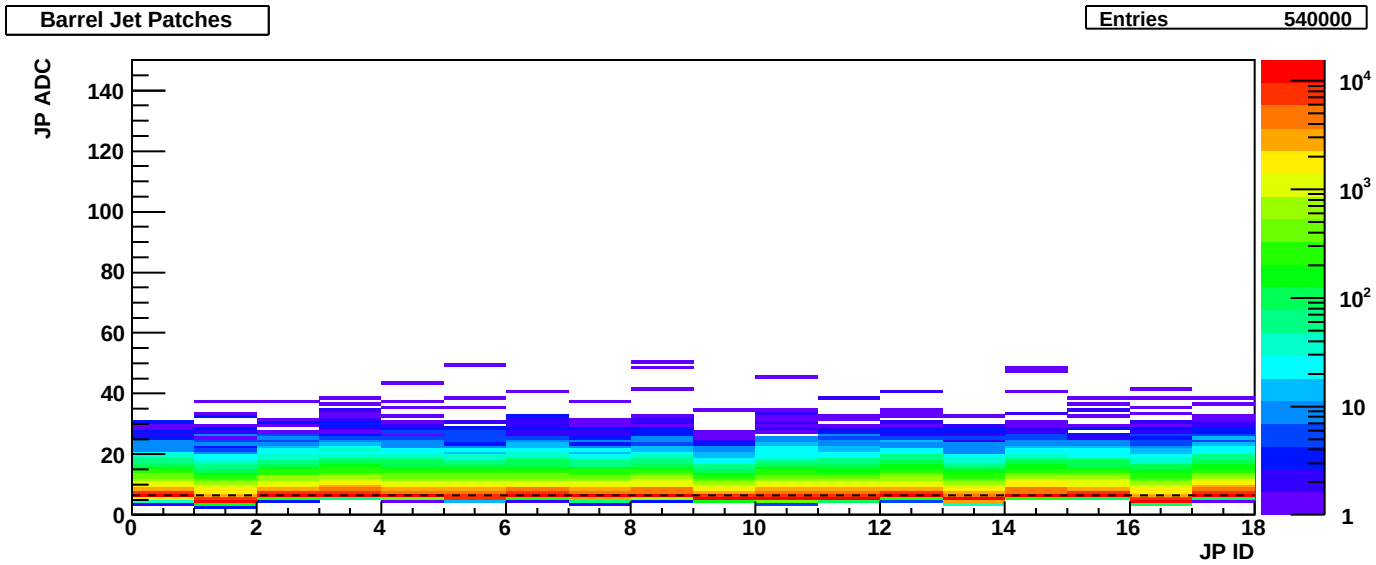
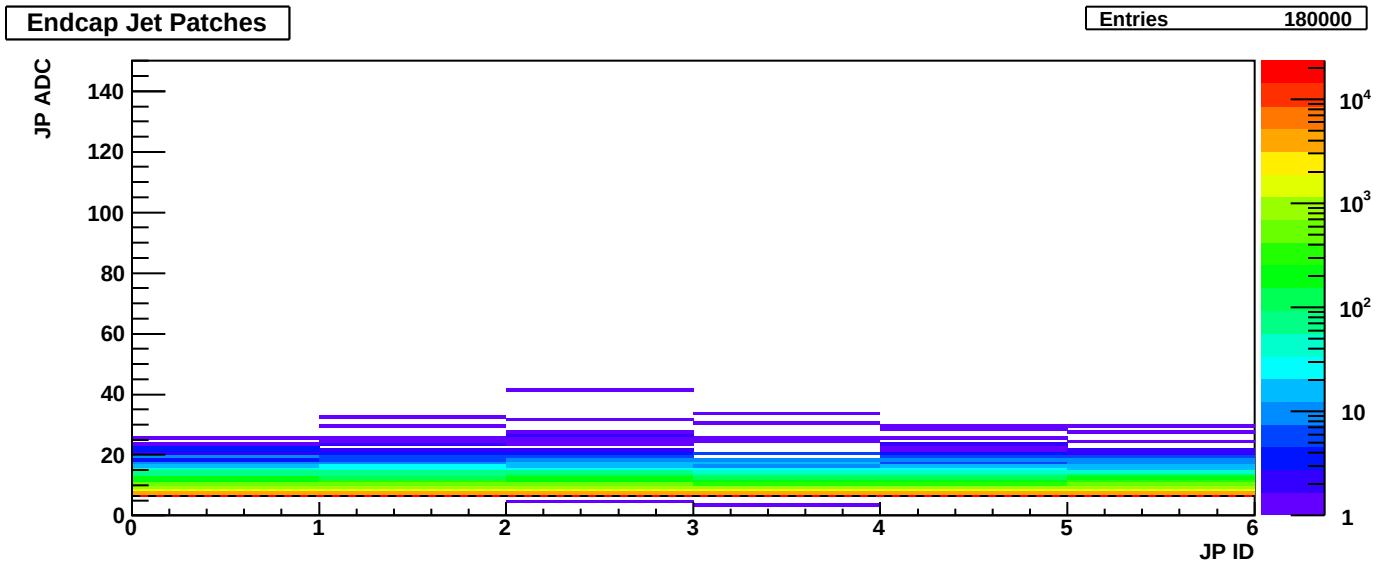

Barrel EMC L0 Input - High Tower
Entries 9000000
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

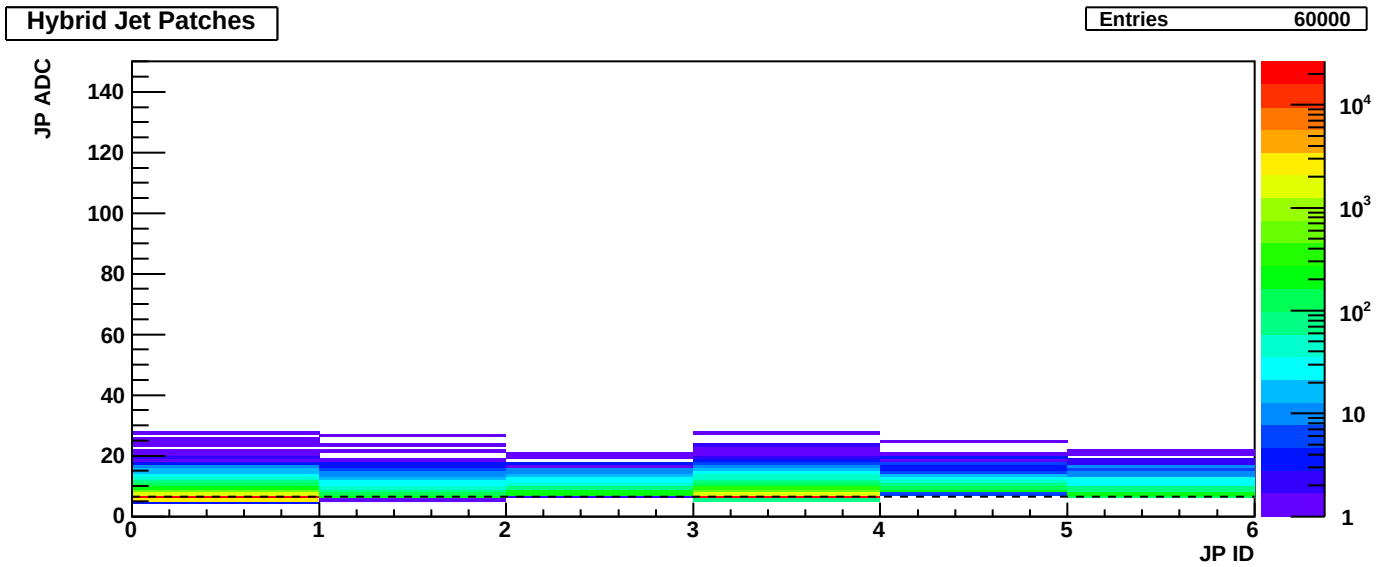

Barrel EMC L0 Input - Patch Sum
Entries 9000000
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

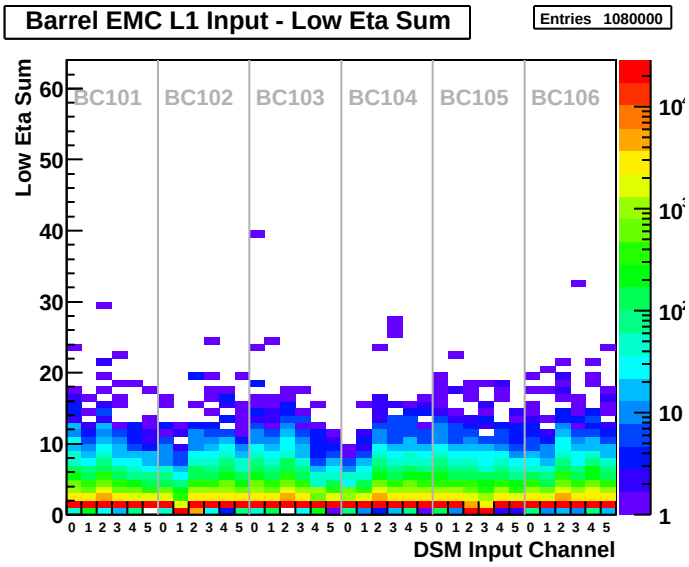

Endcap EMC L0 Input - High Tower
Entries 2700000
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

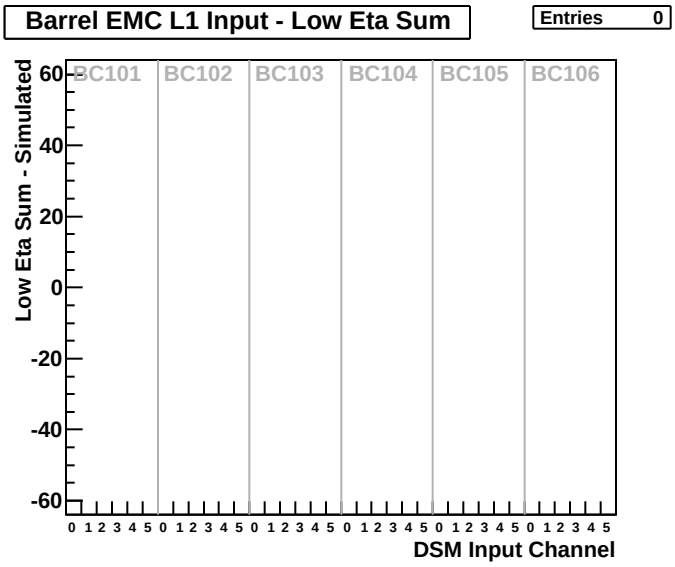

Endcap EMC L0 Input - Patch Sum
Entries 2700000
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

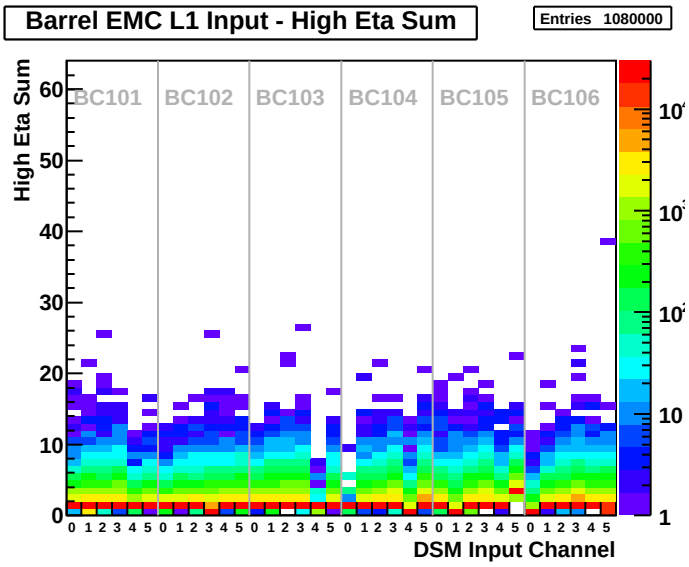

Barrel Jet Patches
Entries 540000
JP ADC
JP ID

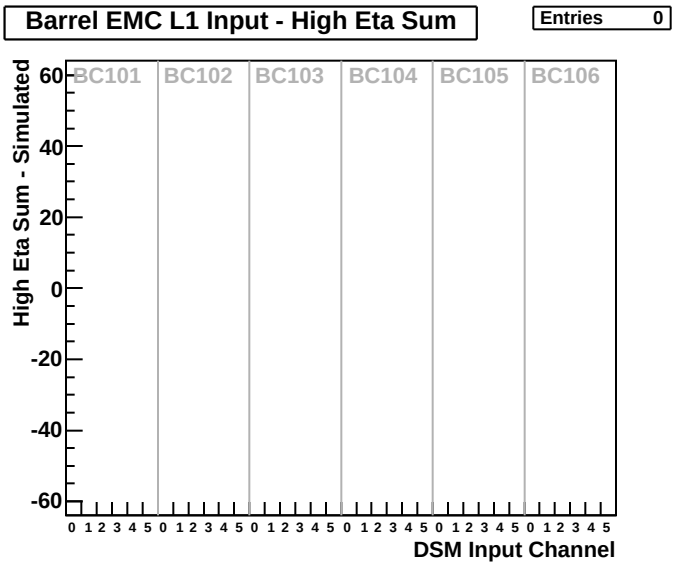

Endcap Jet Patches
Entries 180000
JP ADC
JP ID

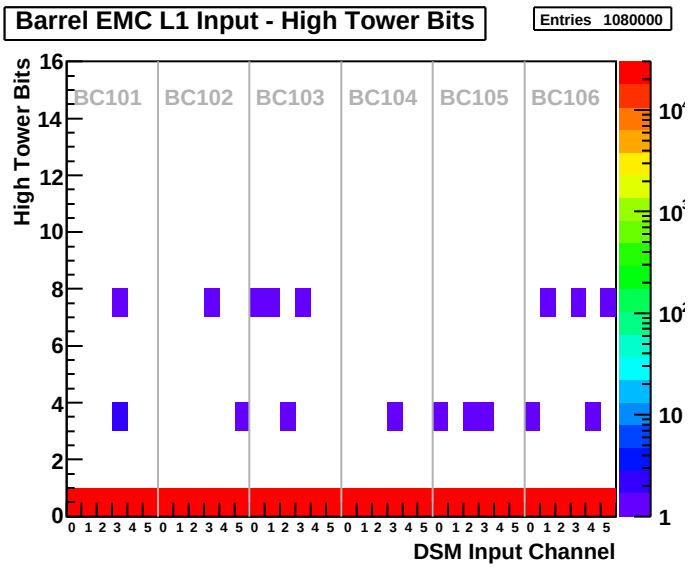

Hybrid Jet Patches
Entries 60000
JP ADC
JP ID

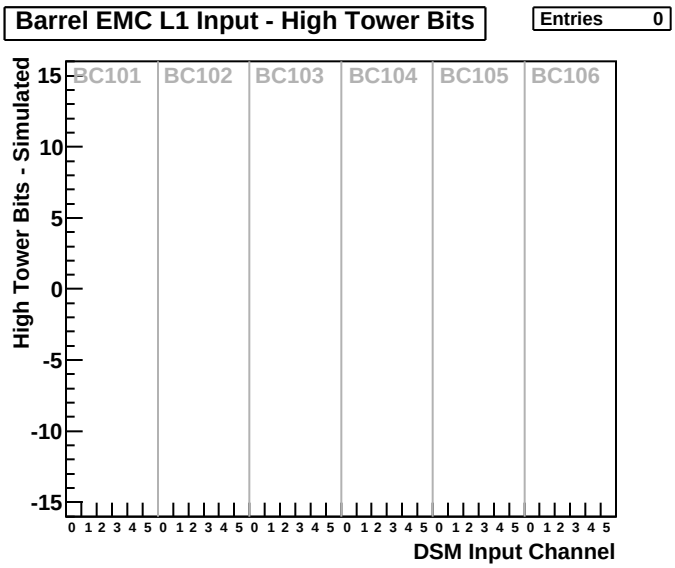

Barrel EMC L1 Input - Low Eta Sum
Entries 1080000
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

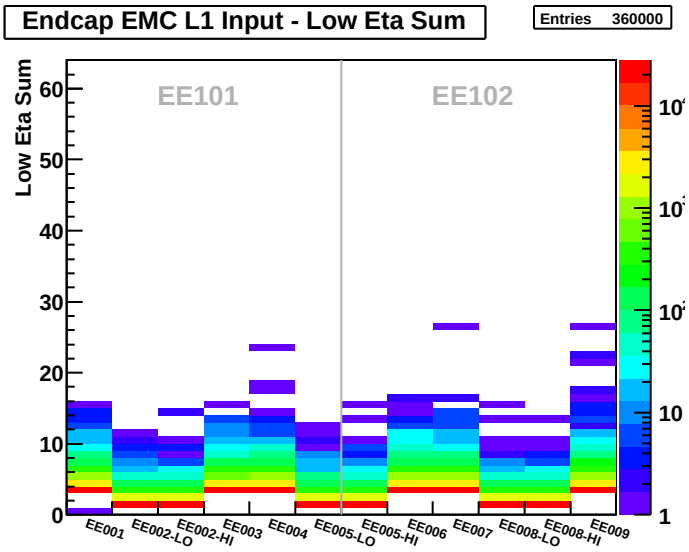

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

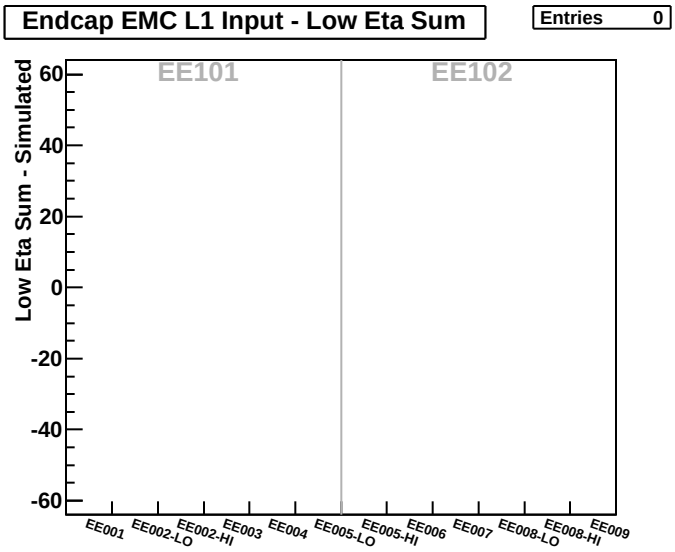

Barrel EMC L1 Input - High Eta Sum
Entries 1080000
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

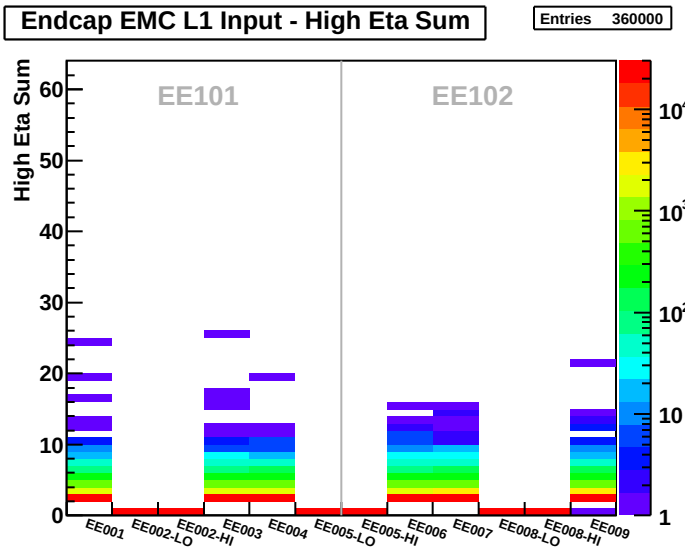

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

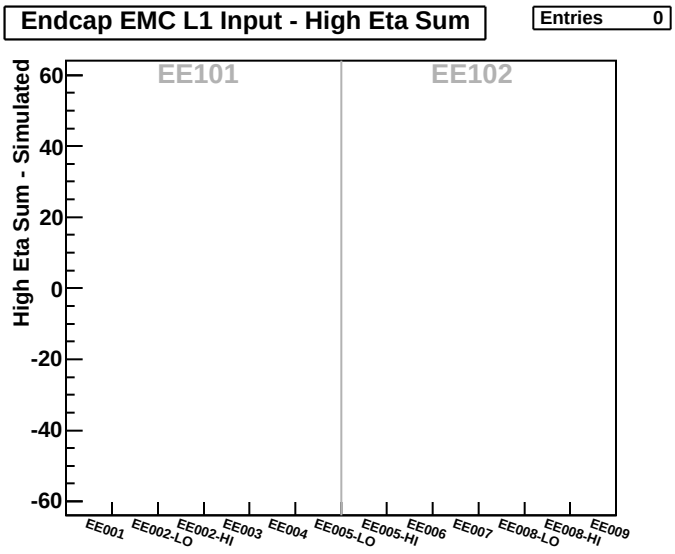

Barrel EMC L1 Input - High Tower Bits
Entries 1080000
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

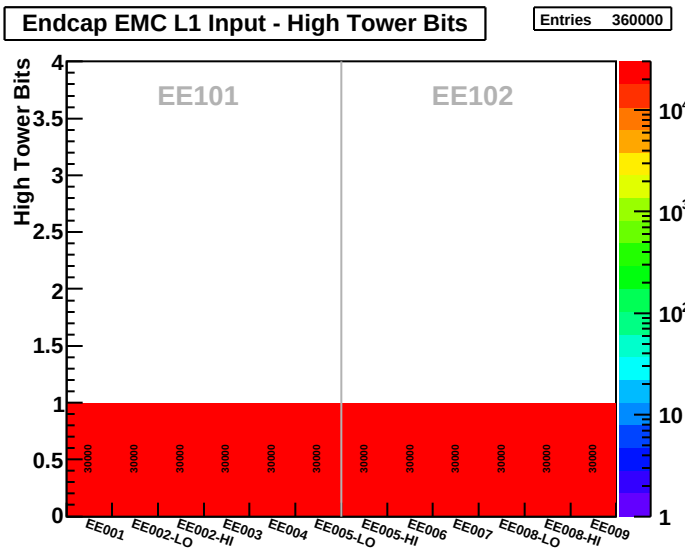

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

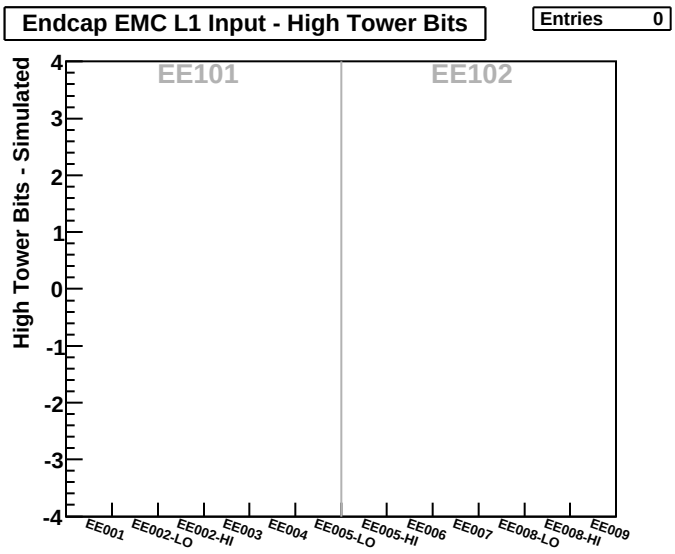

Endcap EMC L1 Input - Low Eta Sum
Entries 360000
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

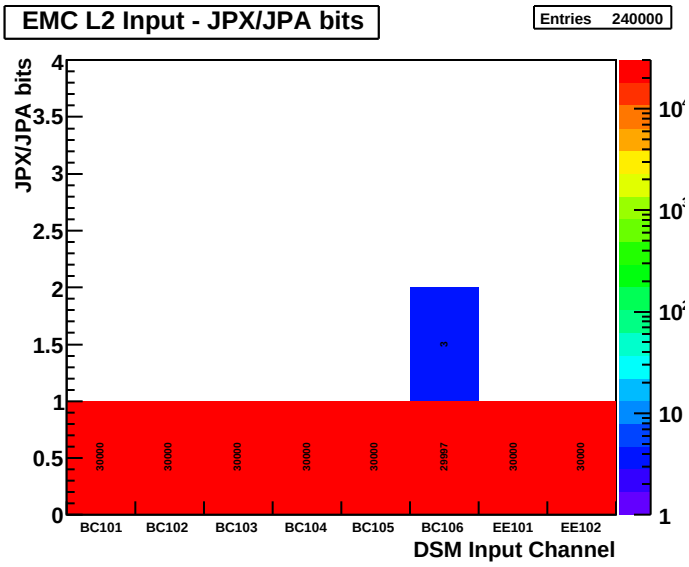

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

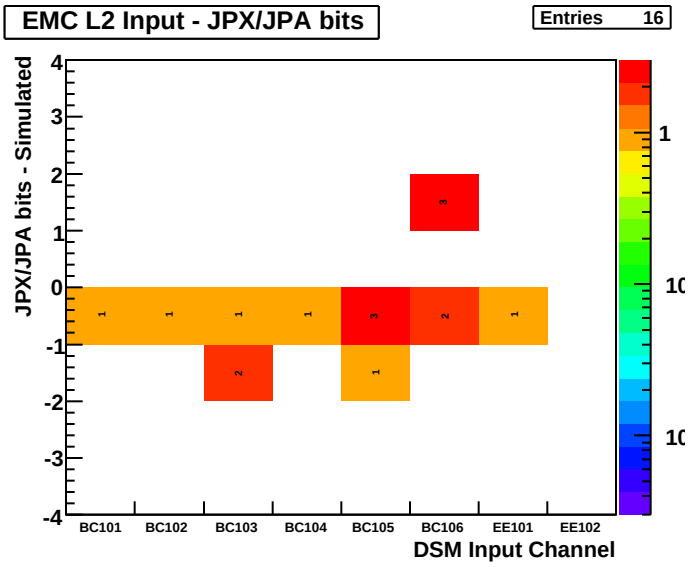

Endcap EMC L1 Input - High Eta Sum
Entries 360000
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

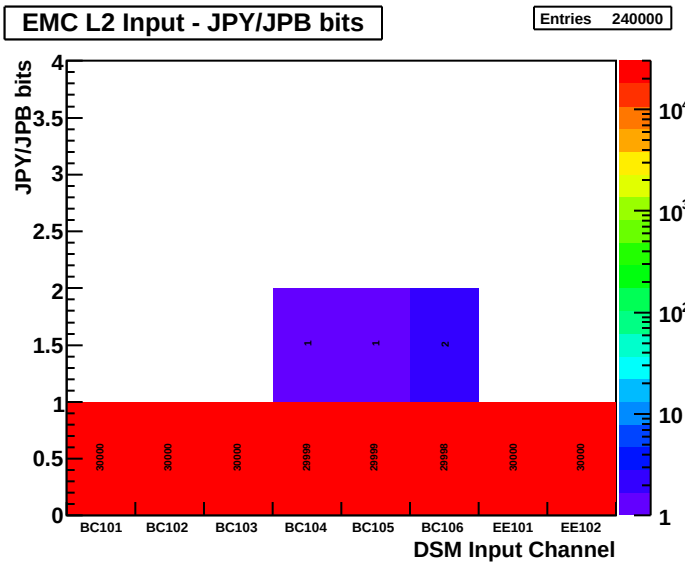

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

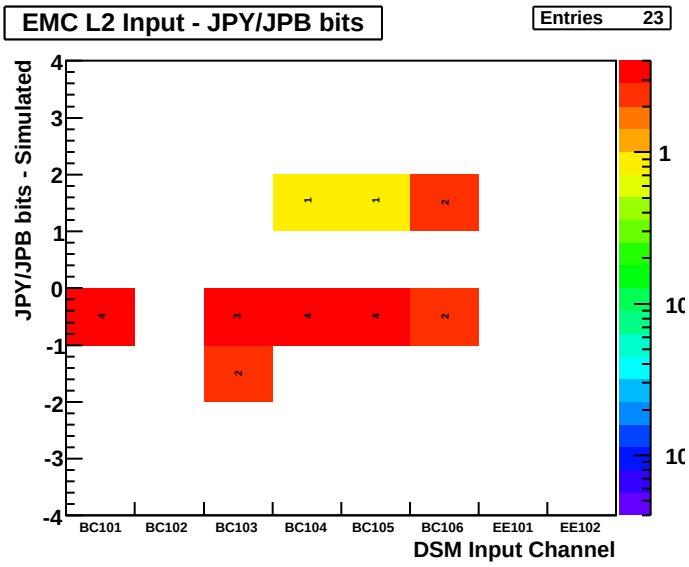

Endcap EMC L1 Input - High Tower Bits
Entries 360000
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

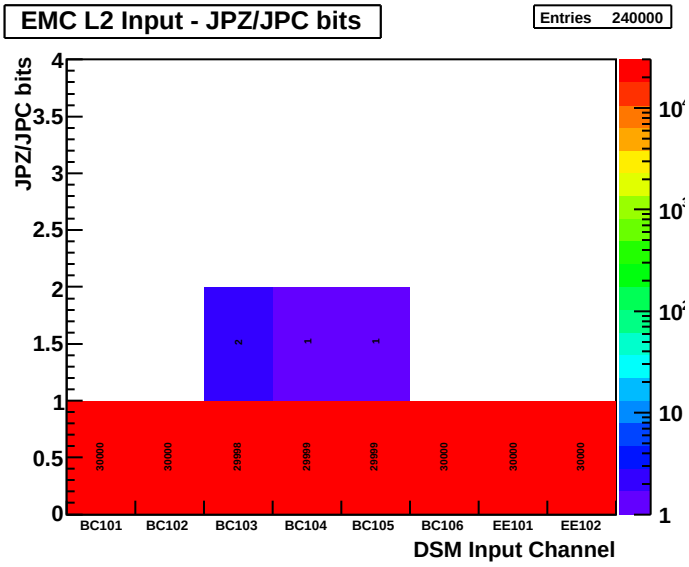

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

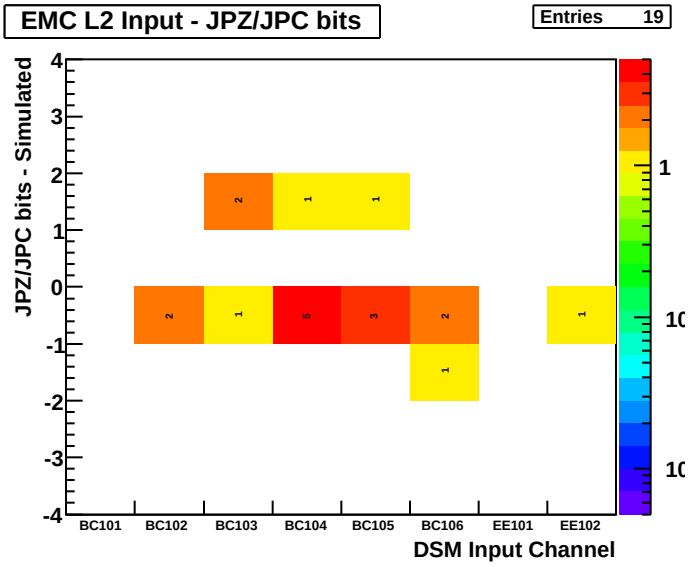

EMC L2 Input - JPX/JPA bits
Entries 240000
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
30000 30000 30000 30000 30000 29997 30000 30000
3

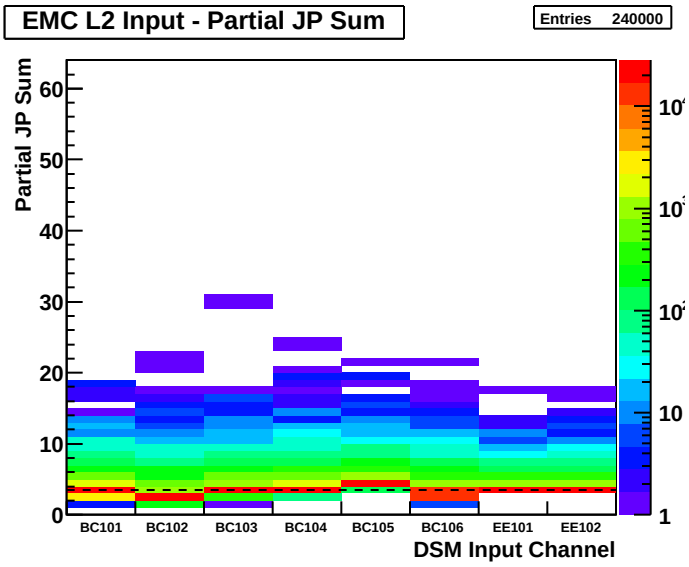

EMC L2 Input - JPX/JPA bits
Entries 16
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

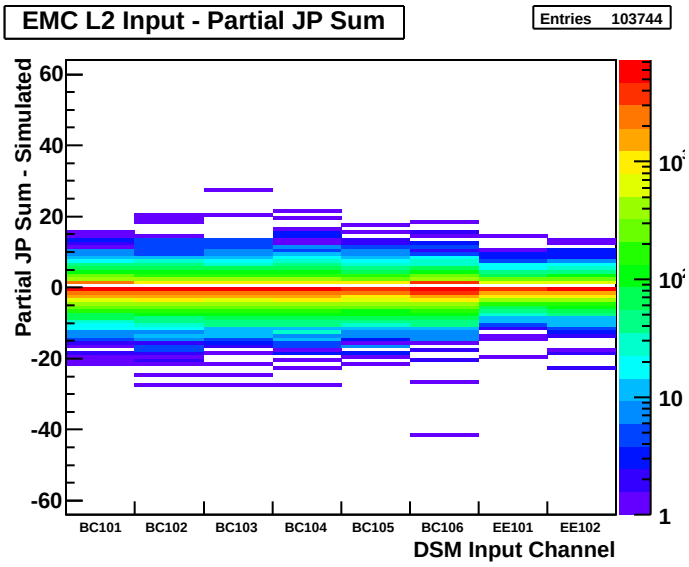

EMC L2 Input - JPY/JPB bits
Entries 240000
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
30000 30000 30000 29999 29999 29998 30000 30000
1 1 2

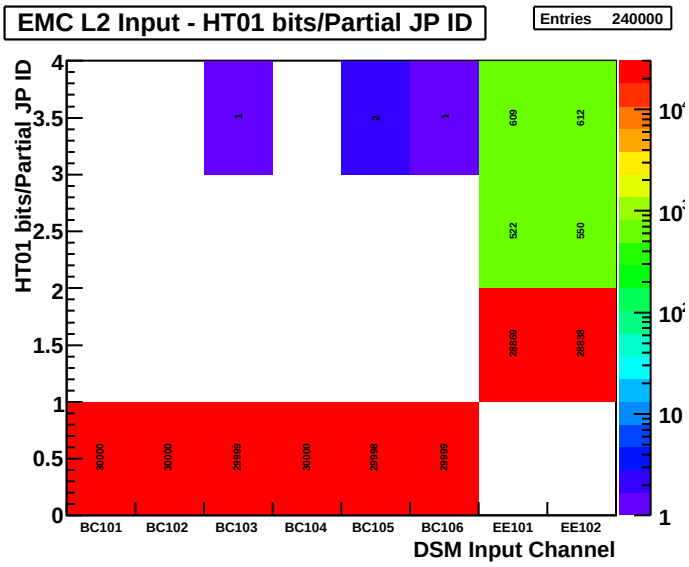

EMC L2 Input - JPY/JPB bits
Entries 23
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

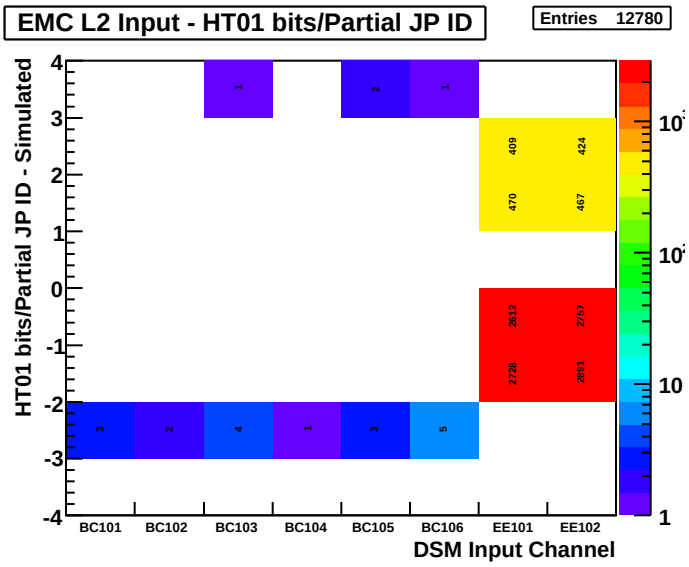

EMC L2 Input - JPZ/JPC bits
Entries 240000
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
30000 30000 29998 29999 29999 30000 30000 30000
2 1 1

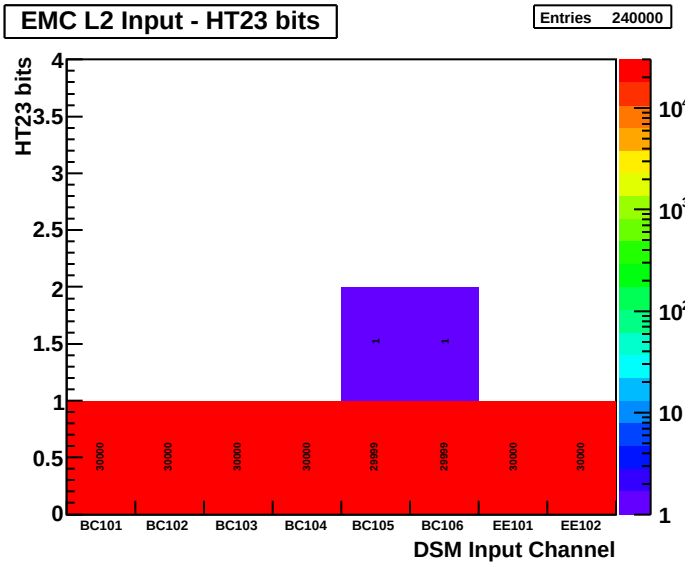

EMC L2 Input - JPZ/JPC bits
Entries 19
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

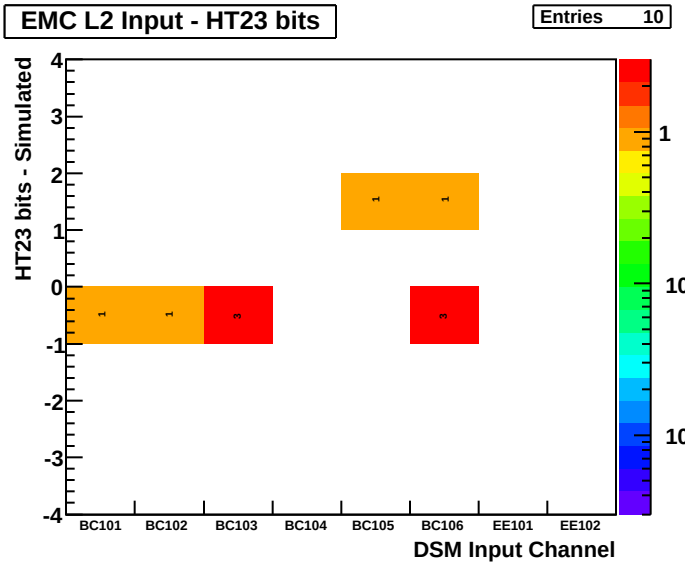

EMC L2 Input - Partial JP Sum
Entries 240000
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

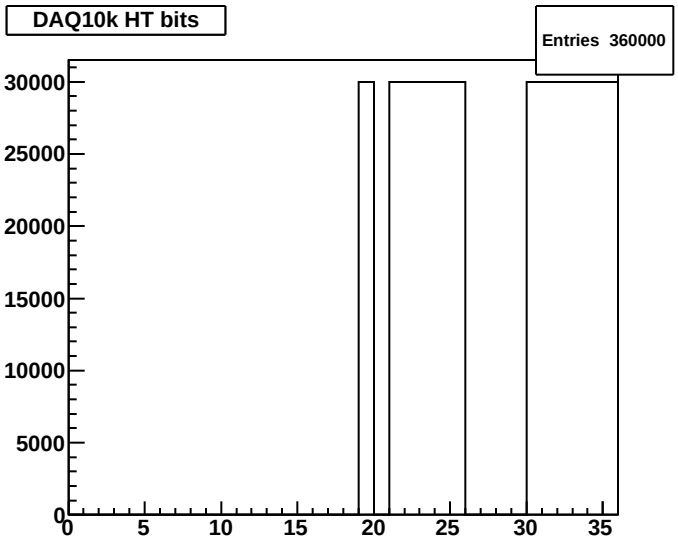

EMC L2 Input - Partial JP Sum
Entries 103744
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

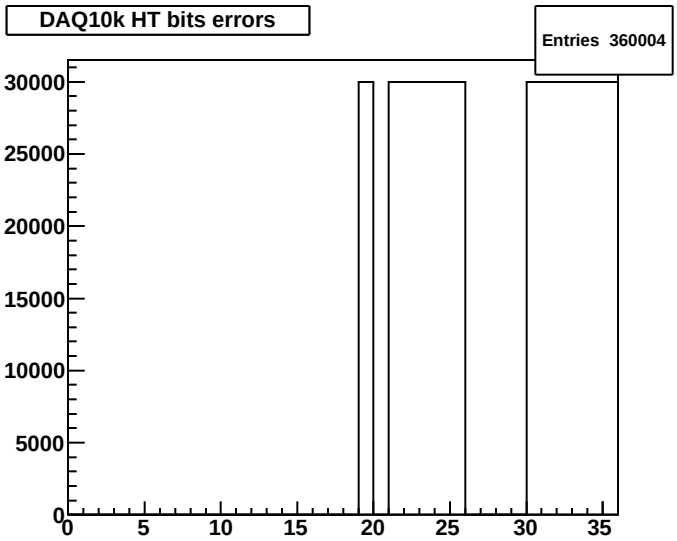

EMC L2 Input - HT01 bits/Partial JP ID
Entries 240000
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

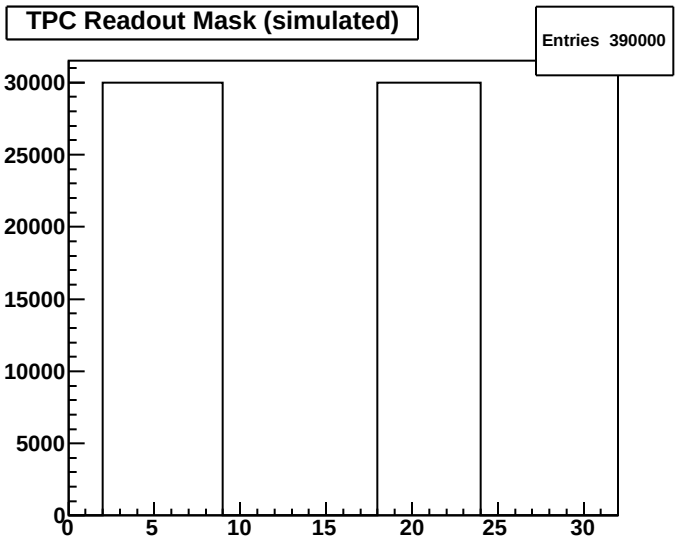

EMC L2 Input - HT01 bits/Partial JP ID
Entries 12780
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

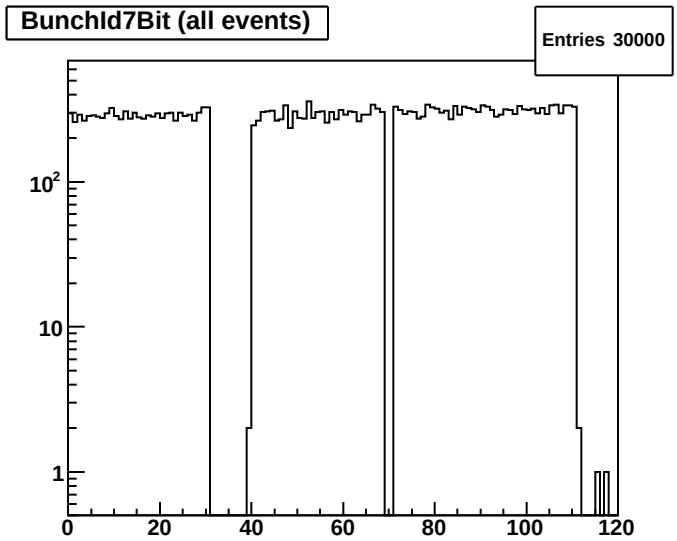

EMC L2 Input - HT23 bits
Entries 240000
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

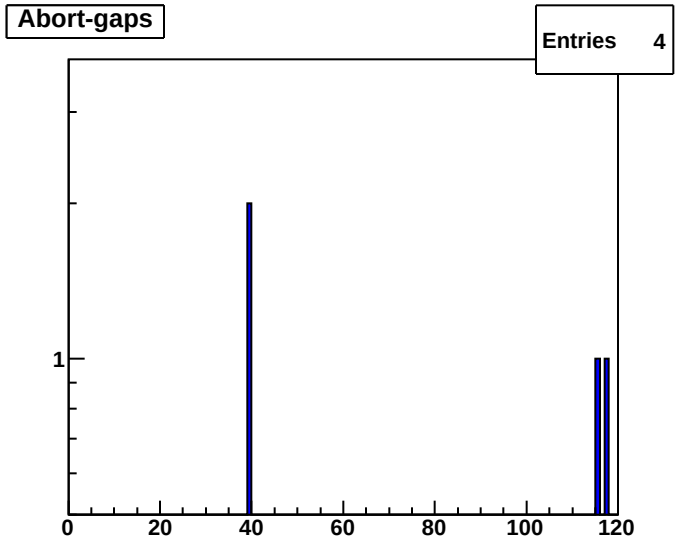

EMC L2 Input - HT23 bits
Entries 10
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

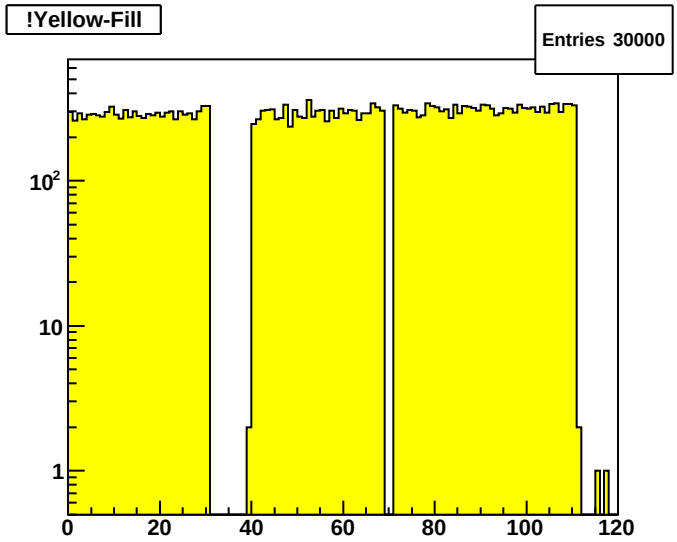

DAQ10k HT bits
Entries 360000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

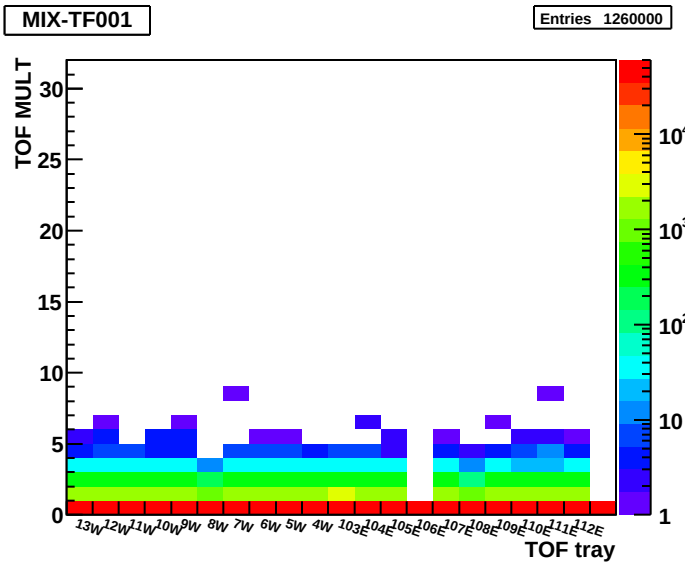

DAQ10k HT bits errors
Entries 360004
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

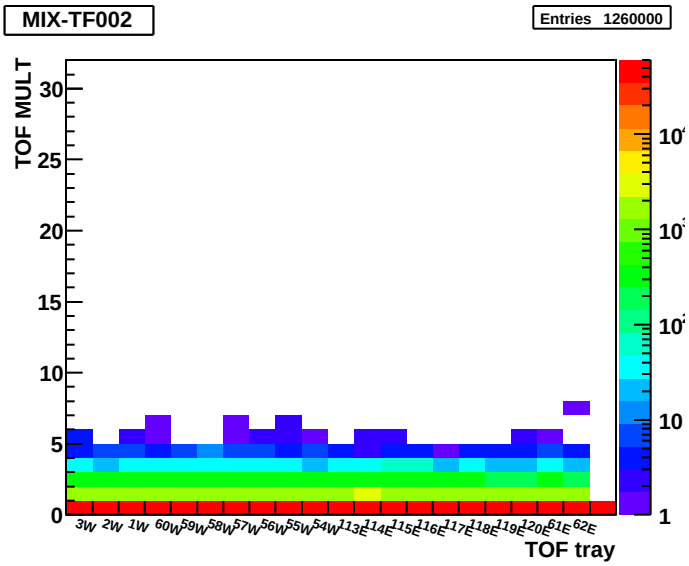

TPC Readout Mask (simulated)
Entries 390000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30

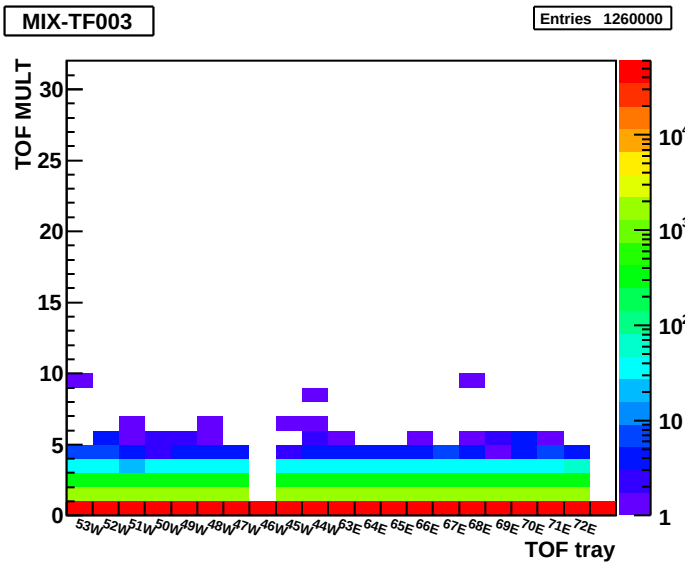

BunchId7Bit (all events)
Entries 30000
10^2
10
1
0 20 40 60 80 100 120

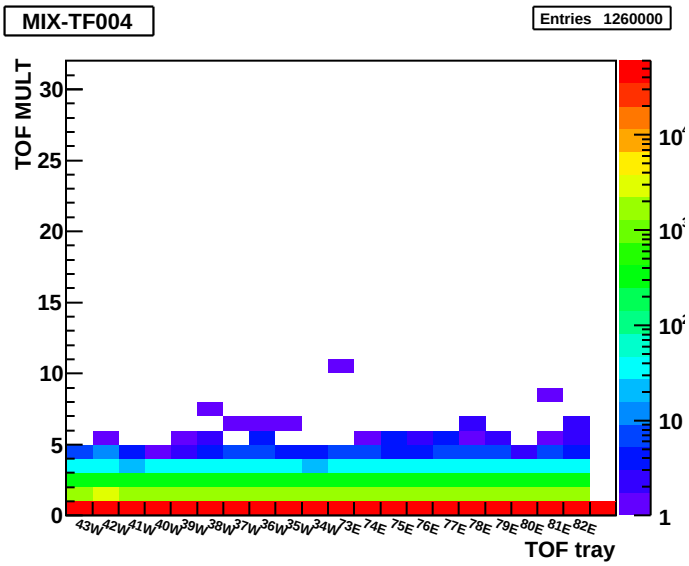

Abort-gaps
Entries 4
1
0 20 40 60 80 100 120

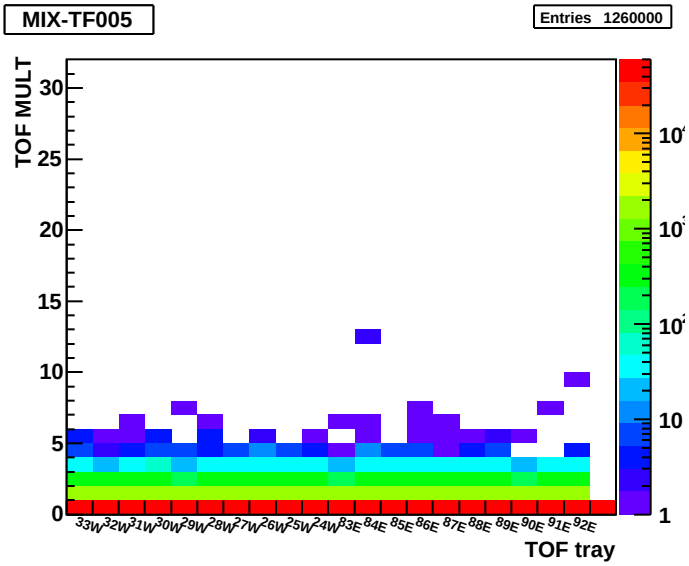

!Yellow-Fill
Entries 30000
10^2
10
1
0 20 40 60 80 100 120

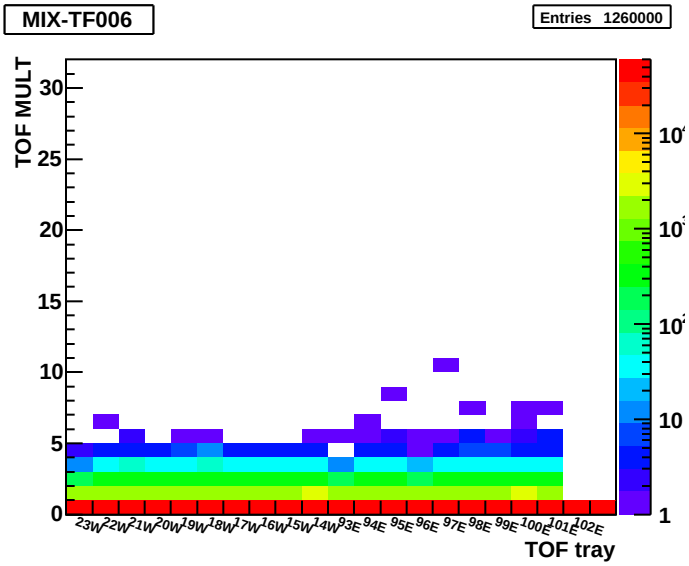

MIX-TF001
Entries 1260000
TOF MULT
TOF tray

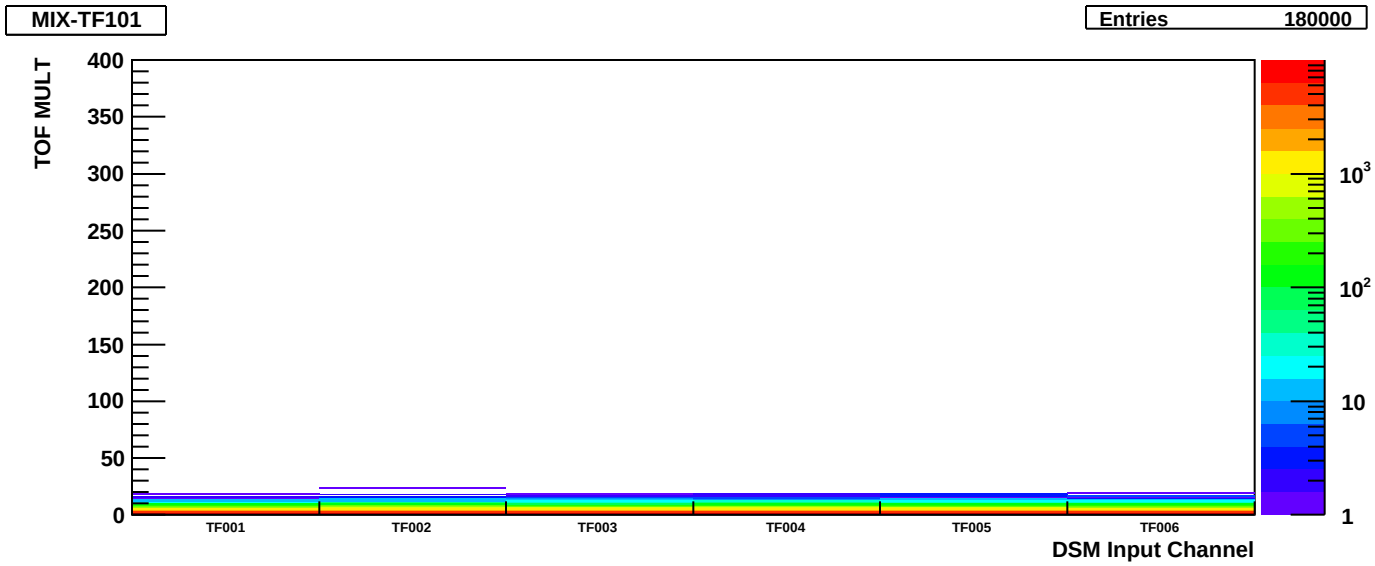

MIX-TF002
Entries 1260000
TOF MULT
TOF tray

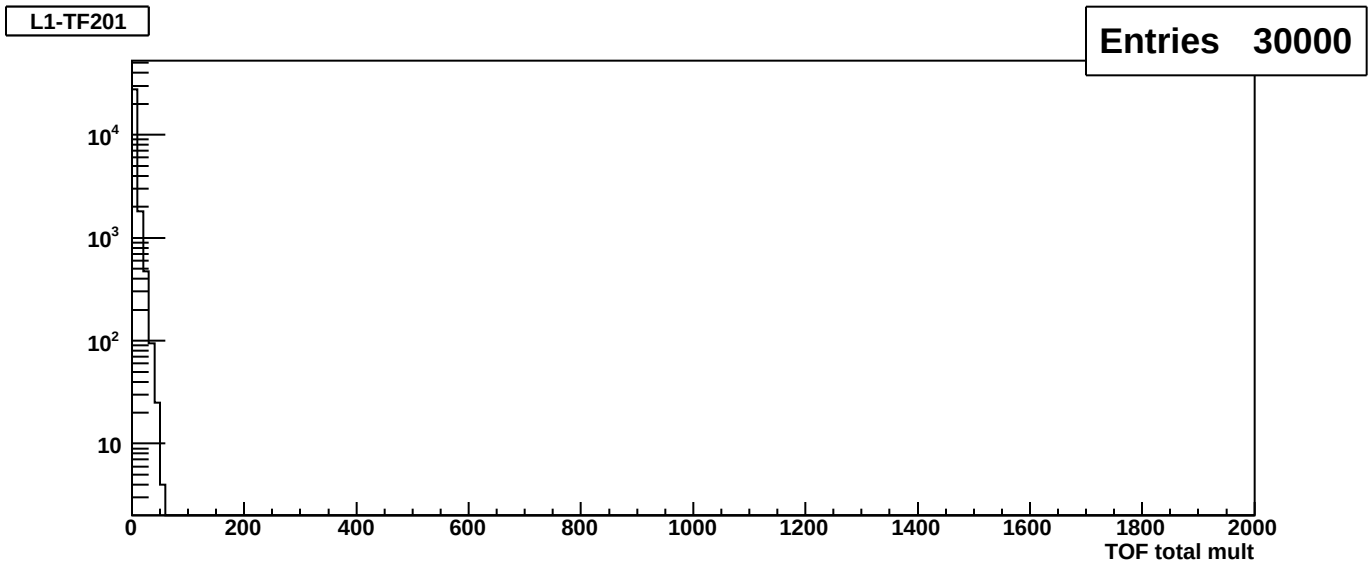

MIX-TF003
Entries 1260000
TOF MULT
TOF tray

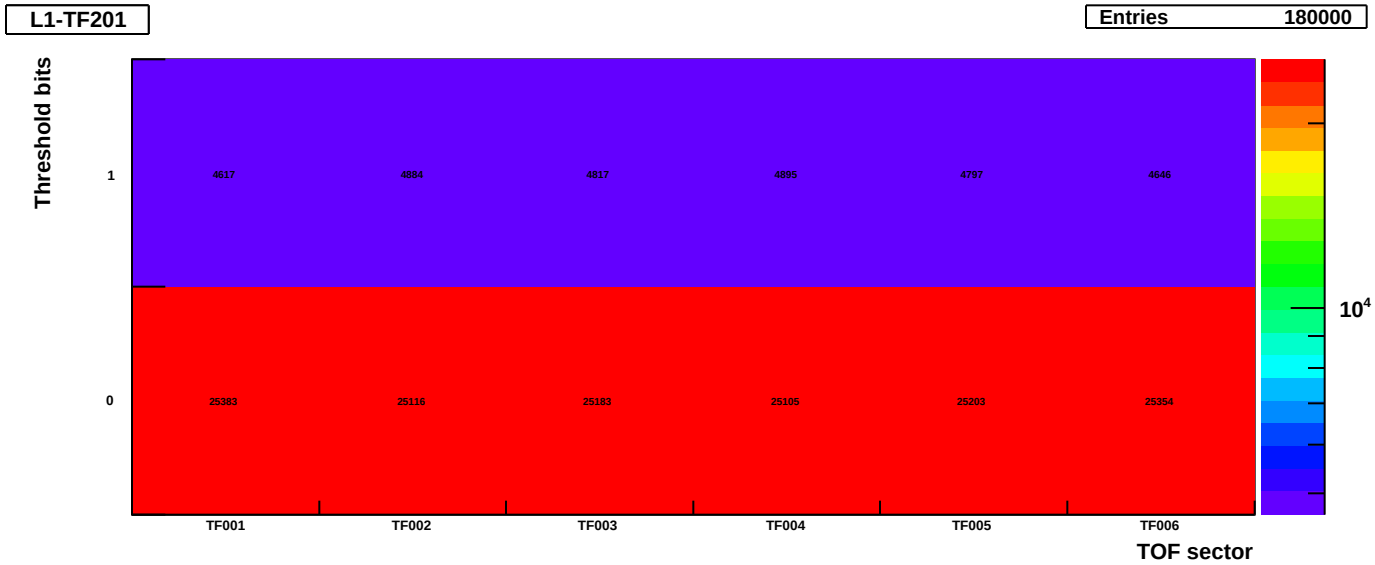

MIX-TF004
Entries 1260000
TOF MULT
TOF tray

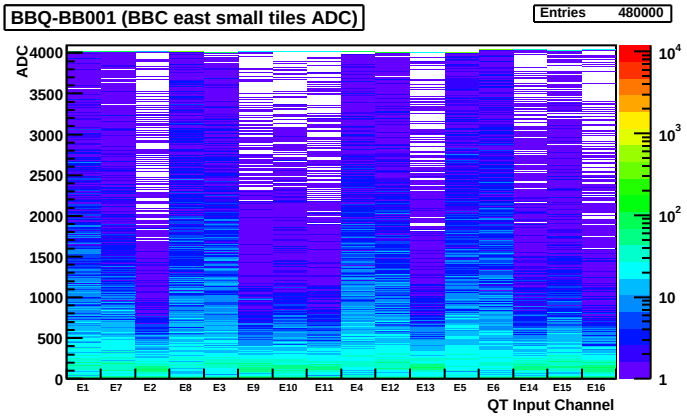

MIX-TF005
Entries 1260000
TOF MULT
TOF tray

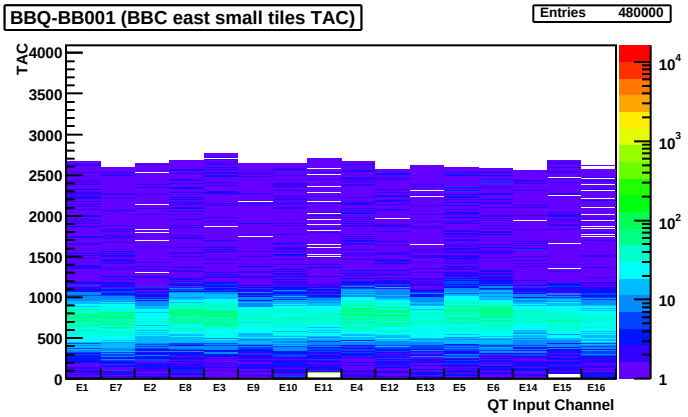

MIX-TF006
Entries 1260000
TOF MULT
TOF tray

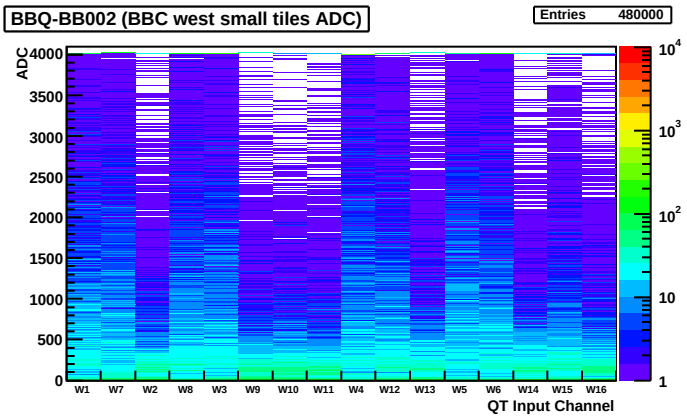

MIX-TF101
Entries 180000
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^3
10^2
10
1

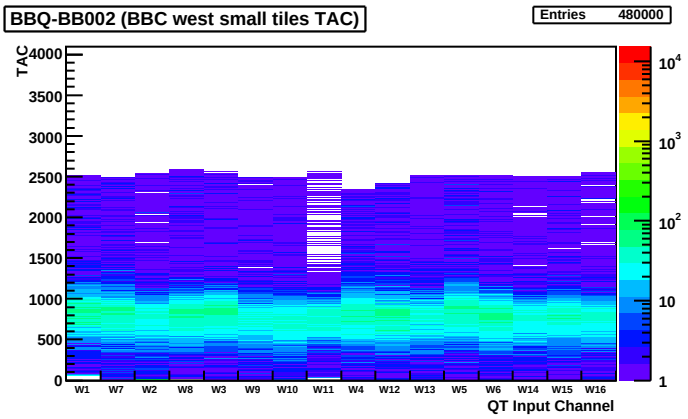

L1-TF201
Entries 30000
10^4
10^3
10^2
10
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

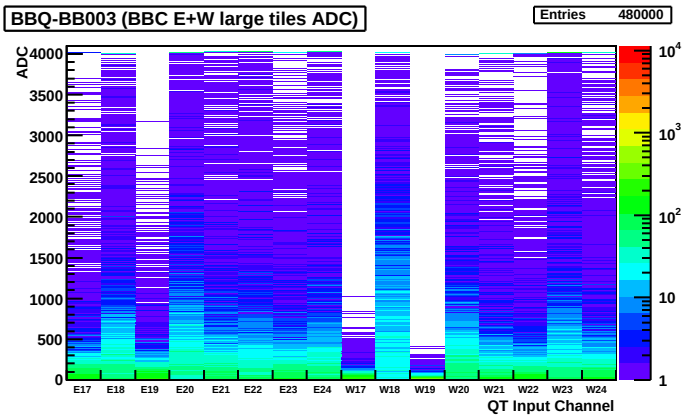

L1-TF201
Entries 180000
Threshold bits
1
0
4617
4884
4817
4895
4797
4646
25383
25116
25183
25105
25203
25354
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4

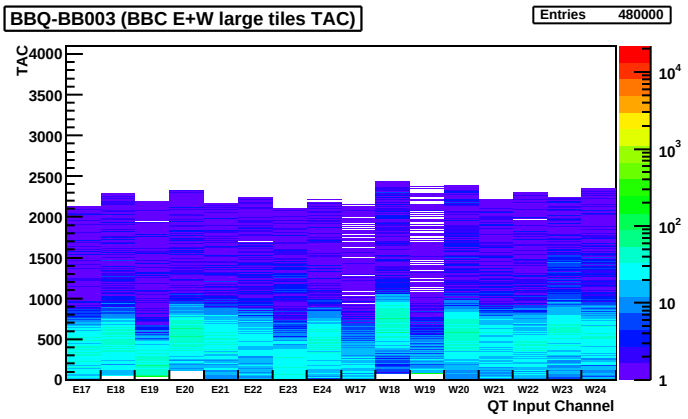

BBQ-BB001 (BBC east small tiles ADC)
Entries 480000
ADC
QT Input Channel

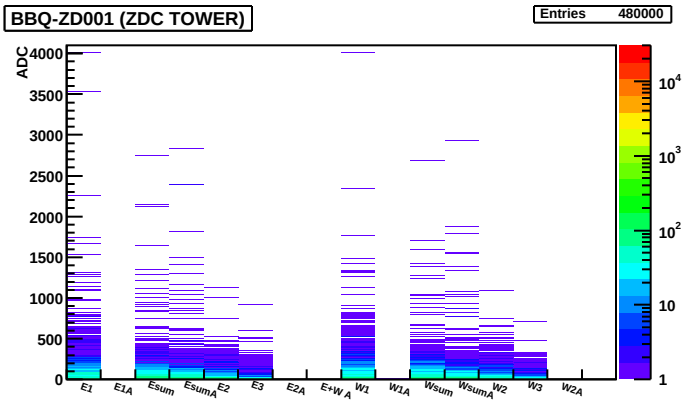

BBQ-BB001 (BBC east small tiles TAC)
Entries 480000
TAC
QT Input Channel

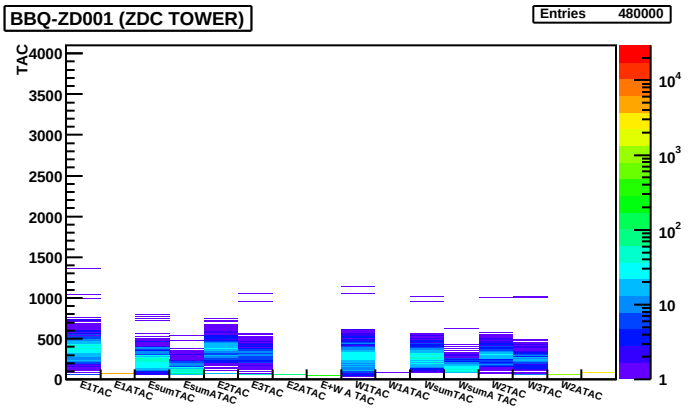

BBQ-BB002 (BBC west small tiles ADC)
Entries 480000
ADC
QT Input Channel

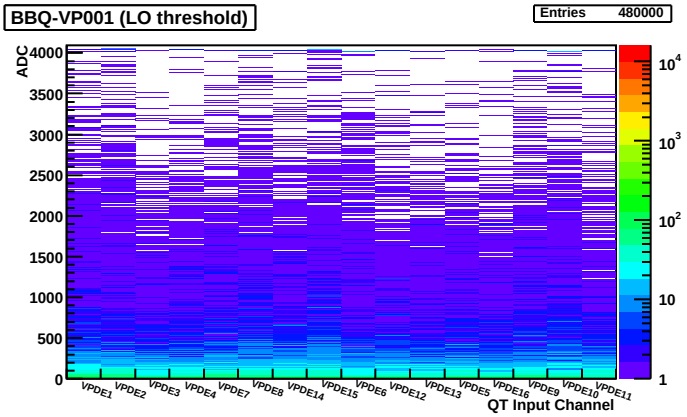

BBQ-BB002 (BBC west small tiles TAC)
Entries 480000
TAC
QT Input Channel

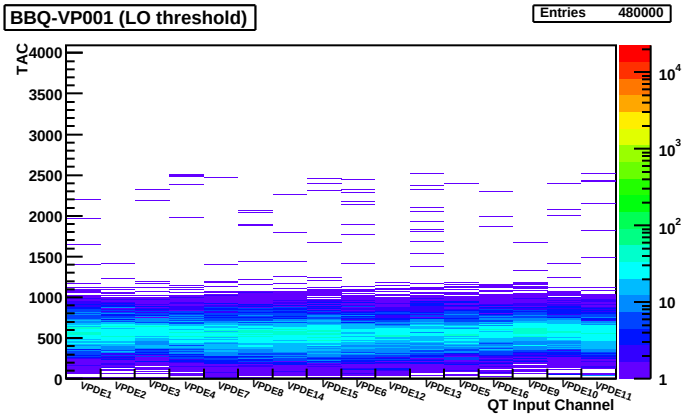

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 480000
ADC
QT Input Channel

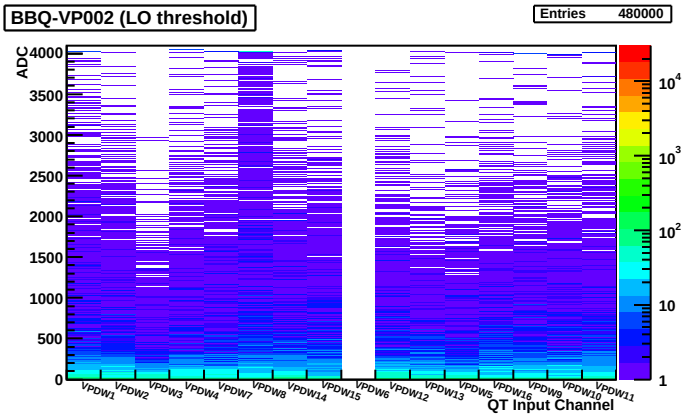

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 480000
TAC
QT Input Channel

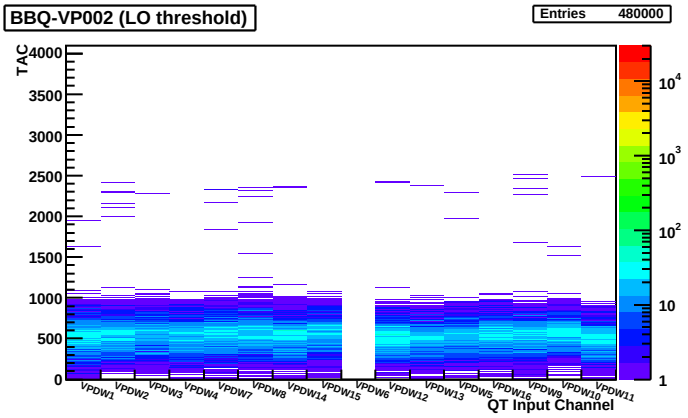

BBQ-ZD001 (ZDC TOWER)
Entries 480000
ADC

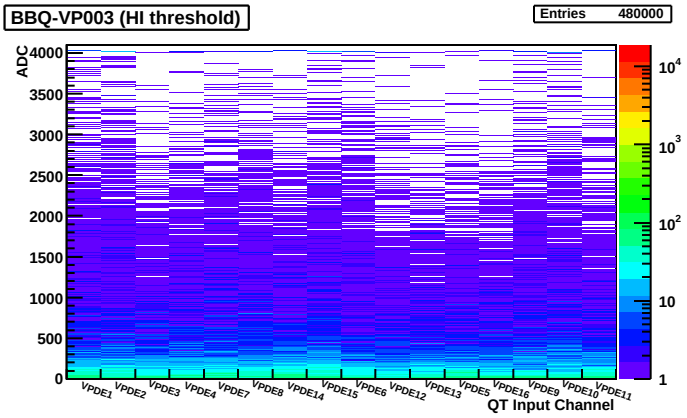

BBQ-ZD001 (ZDC TOWER)
Entries 480000
TAC

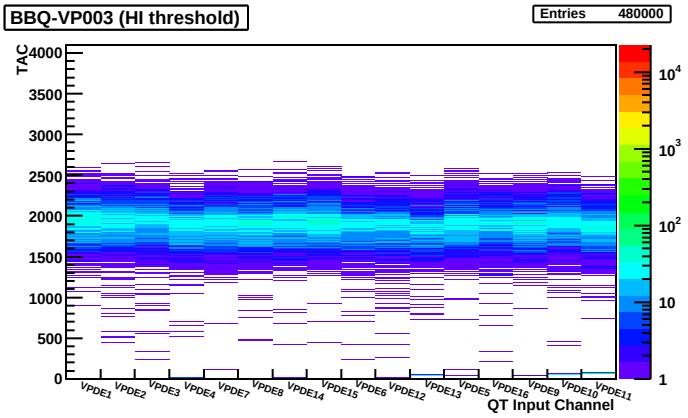

BBQ-VP001 (LO threshold)
Entries 480000
ADC
QT Input Channel

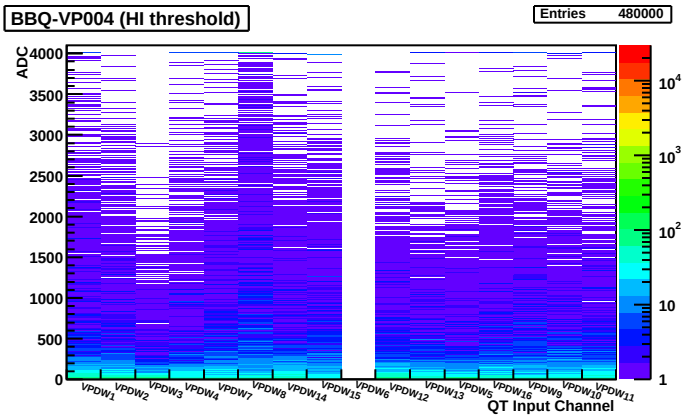

BBQ-VP001 (LO threshold)
Entries 480000
TAC
QT Input Channel

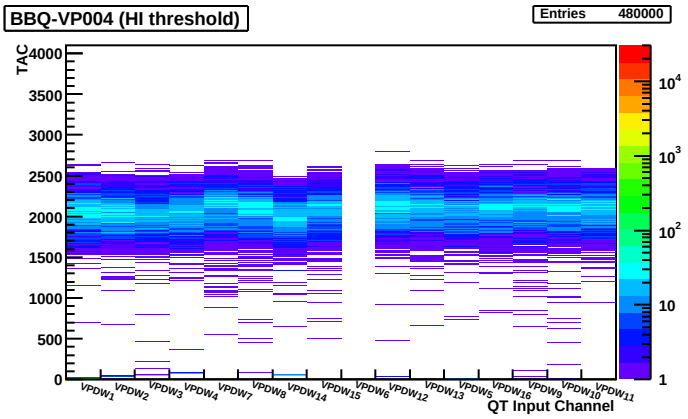

BBQ-VP002 (LO threshold)
Entries 480000
ADC
QT Input Channel

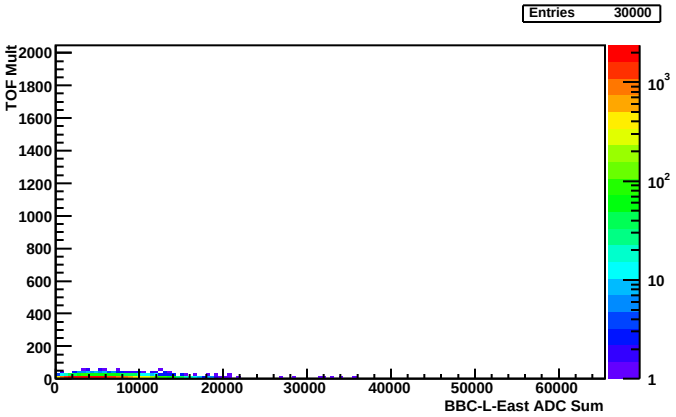

BBQ-VP002 (LO threshold)
Entries 480000
TAC
QT Input Channel

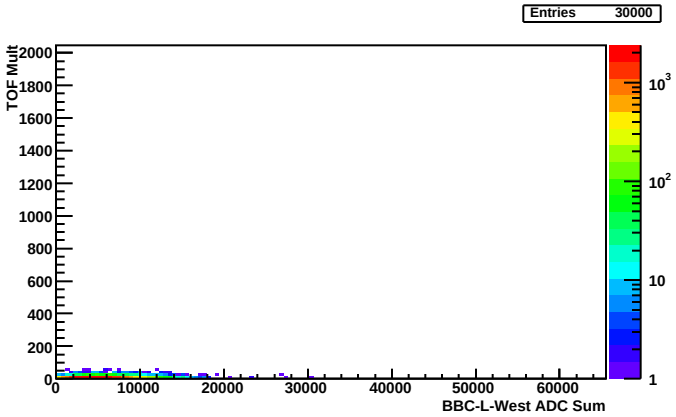

BBQ-VP003 (HI threshold)
Entries 480000
ADC
QT Input Channel

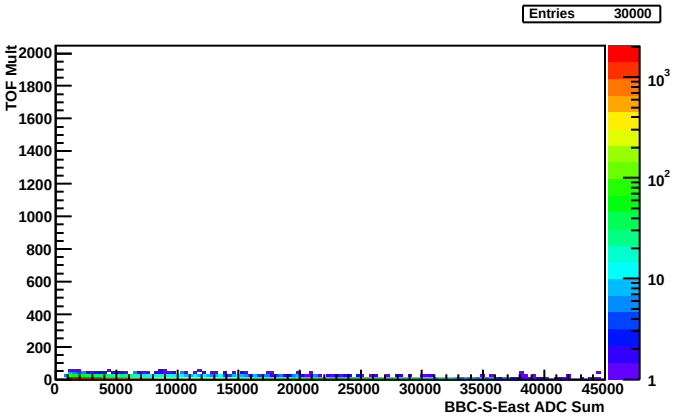

BBQ-VP003 (HI threshold)
Entries 480000
TAC
QT Input Channel

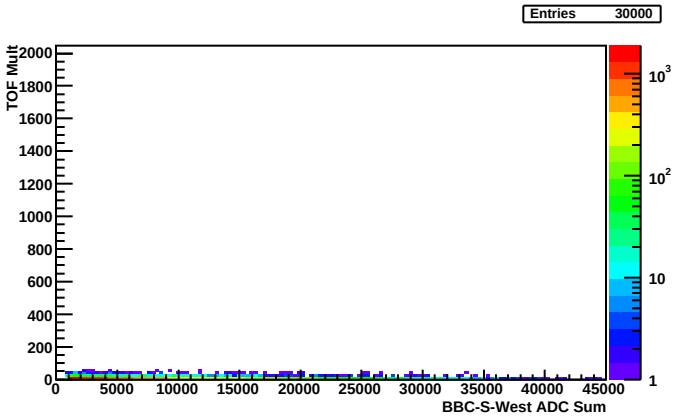

BBQ-VP004 (HI threshold)
Entries 480000
ADC
QT Input Channel

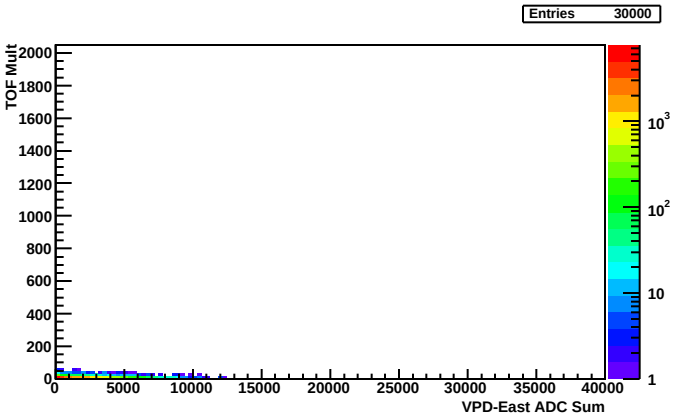

BBQ-VP004 (HI threshold)
Entries 480000
TAC
QT Input Channel

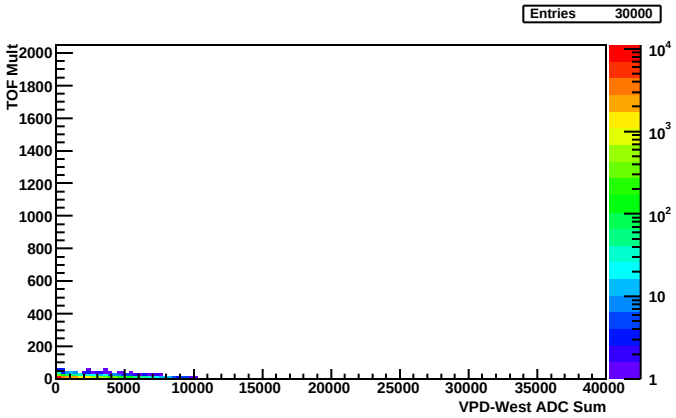

Entries 30000
TOF Mult
BBC-L-East ADC Sum

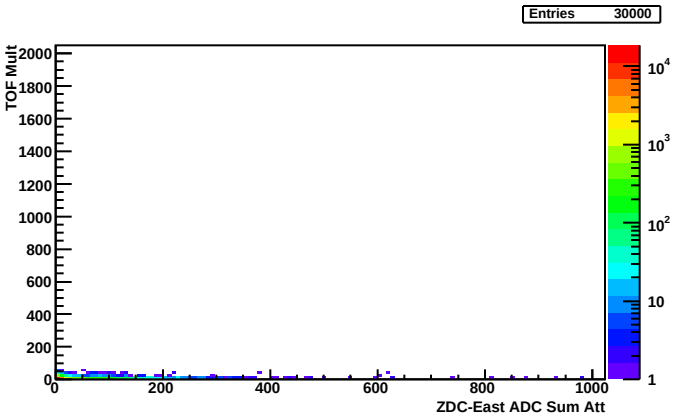

Entries 30000
TOF Mult
BBC-L-West ADC Sum

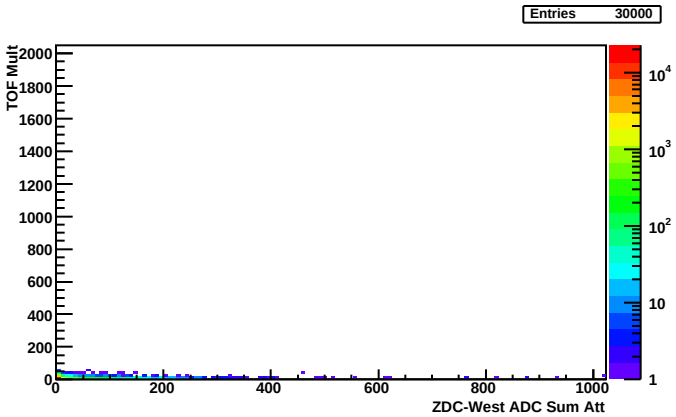

Entries 30000
TOF Mult
BBC-S-East ADC Sum

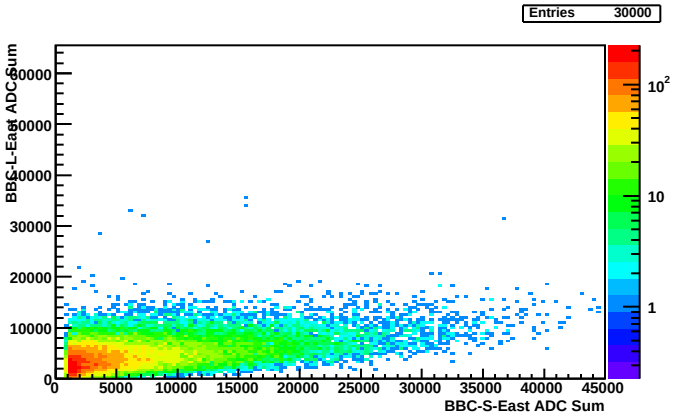

Entries 30000
TOF Mult
BBC-S-West ADC Sum

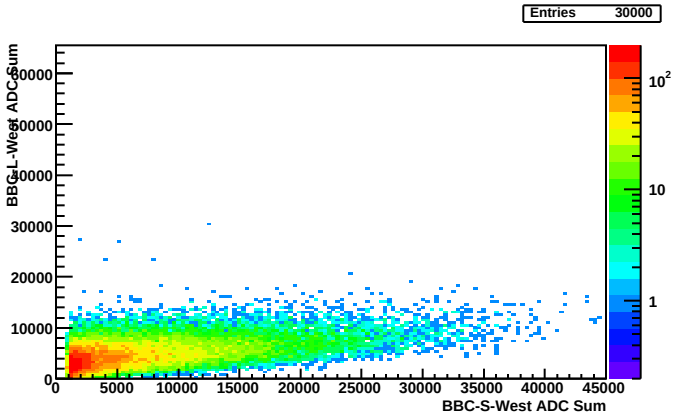

Entries 30000
TOF Mult
VPD-East ADC Sum

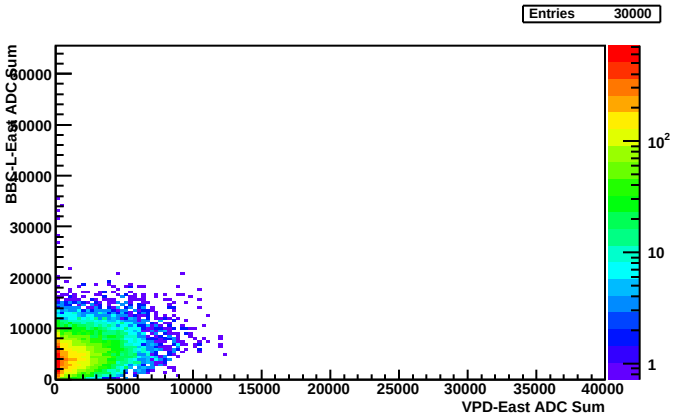

Entries 30000
TOF Mult
VPD-West ADC Sum

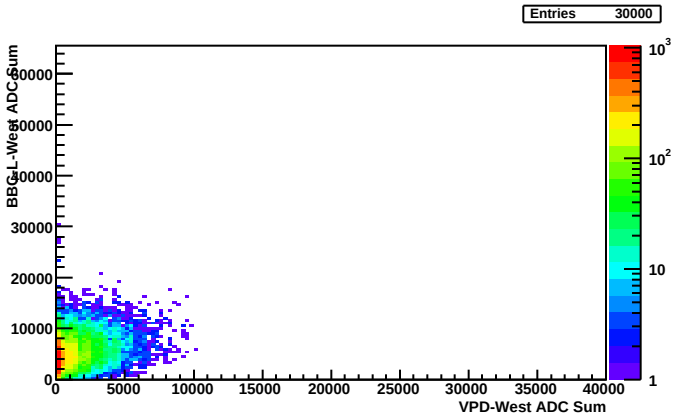

Entries 30000
TOF Mult
ZDC-East ADC Sum Att

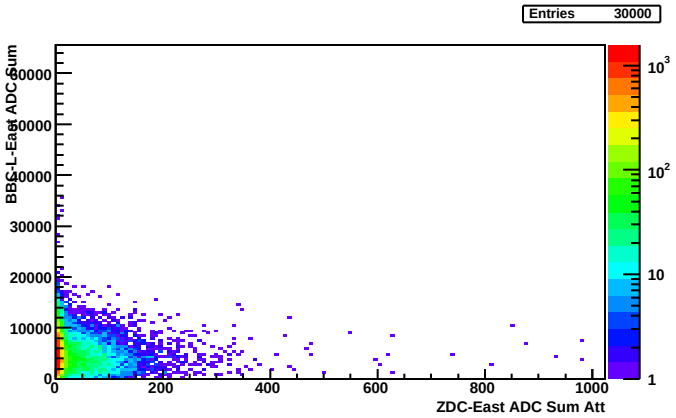

Entries 30000
TOF Mult
ZDC-West ADC Sum Att

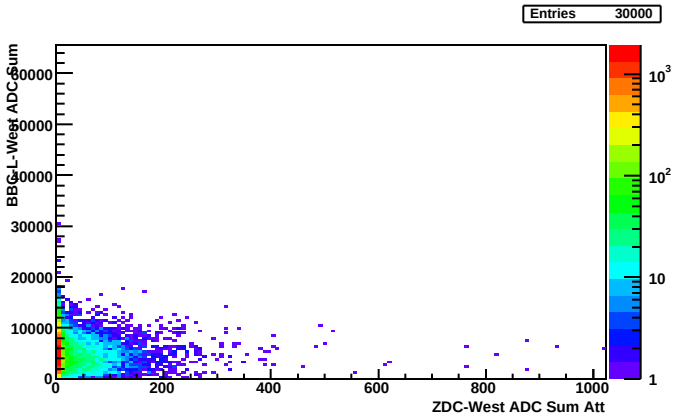

Entries 30000
BBC-L-East ADC Sum
BBC-S-East ADC Sum

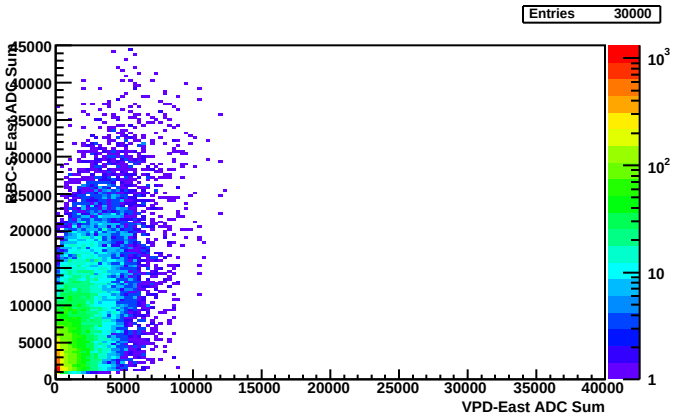

Entries 30000
BBC-L-West ADC Sum
BBC-S-West ADC Sum

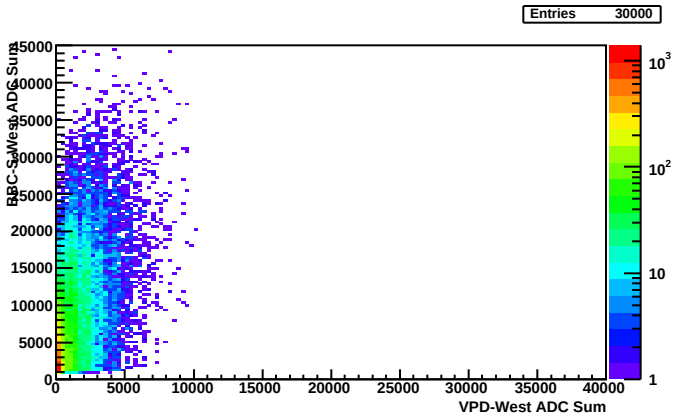

Entries 30000
BBC-L-East ADC Sum
VPD-East ADC Sum

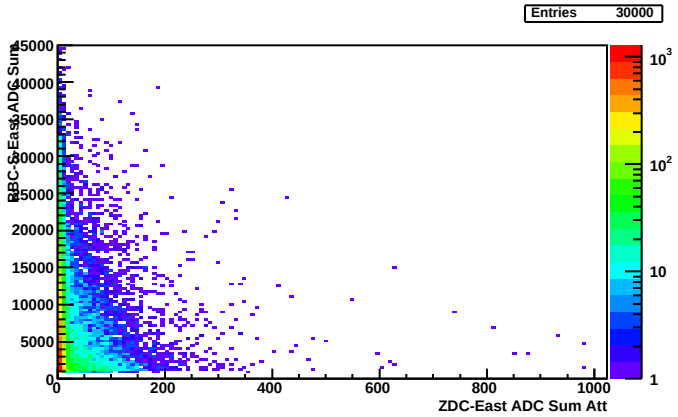

Entries 30000
BBC-L-West ADC Sum
VPD-West ADC Sum

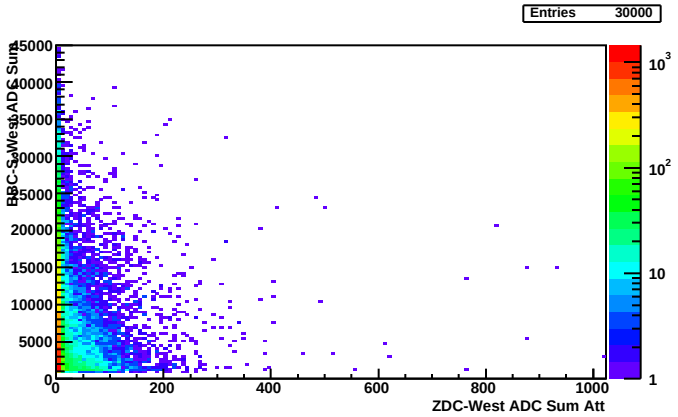

Entries 30000
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

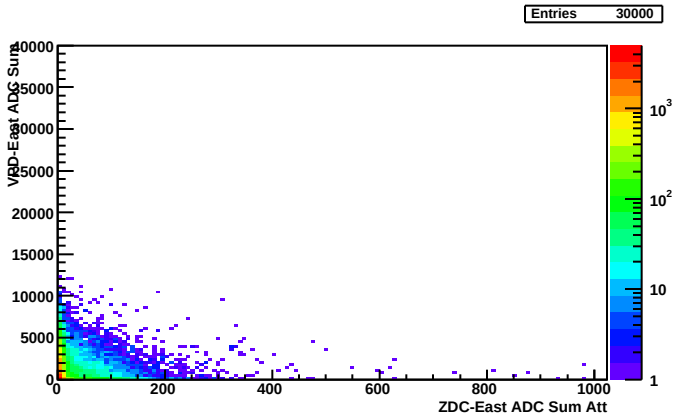

Entries 30000
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

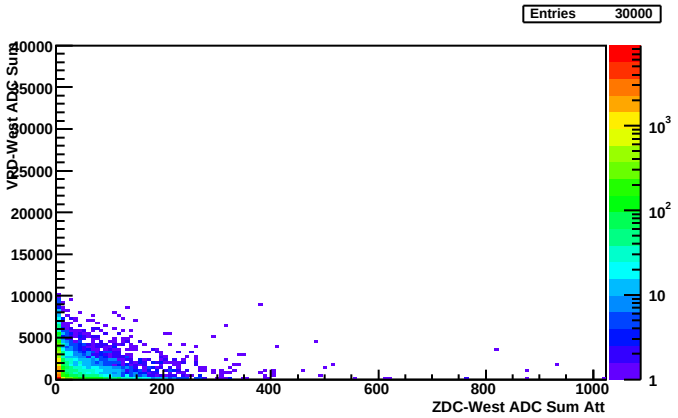

Entries 30000
BBC-S-East ADC Sum
VPD-East ADC Sum

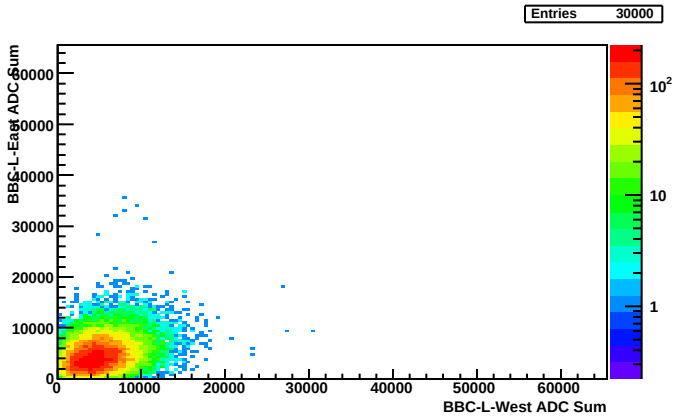

Entries 30000
BBC-S-West ADC Sum
VPD-West ADC Sum


Entries 30000
BBC-S-East ADC Sum
ZDC-East ADC Sum Att


Entries 30000
BBC-S-West ADC Sum
ZDC-West ADC Sum Att


Entries 30000
VPD-East ADC Sum
ZDC-East ADC Sum Att


Entries 30000
VPD-West ADC Sum
ZDC-West ADC Sum Att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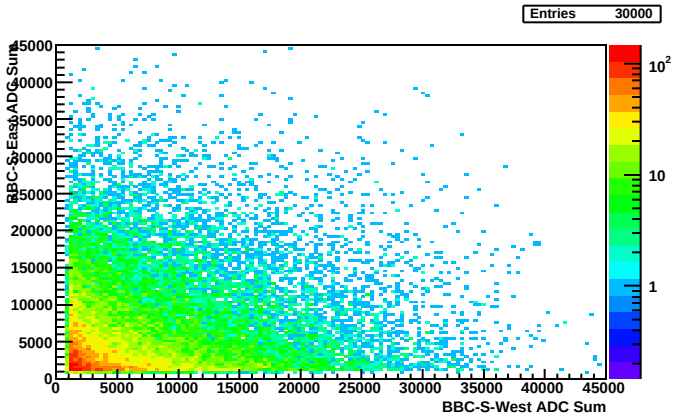
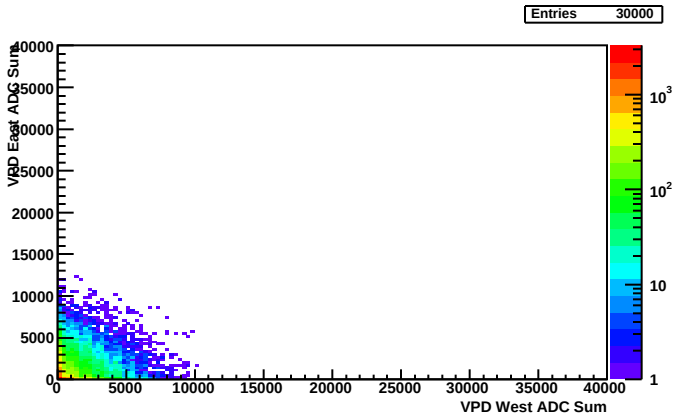
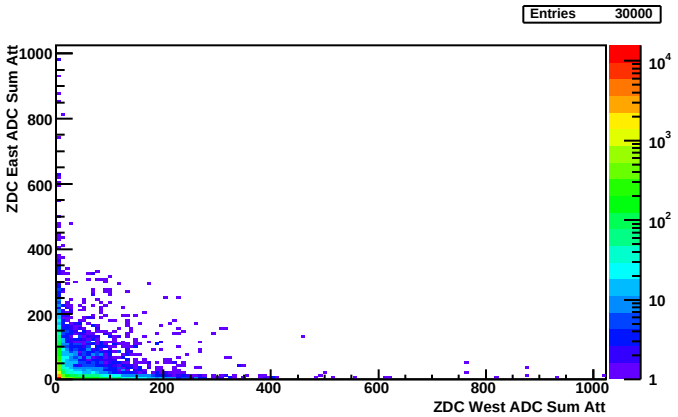
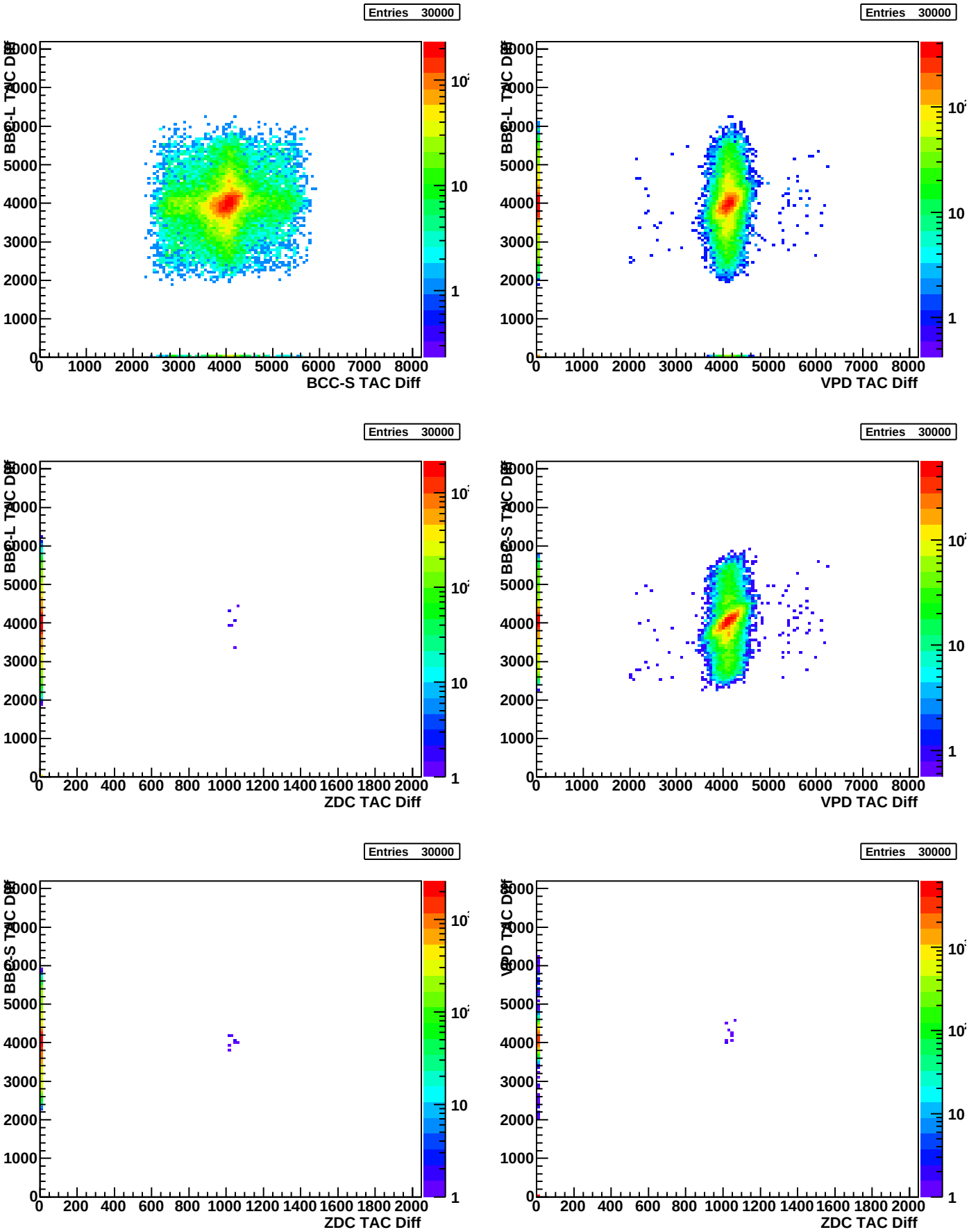
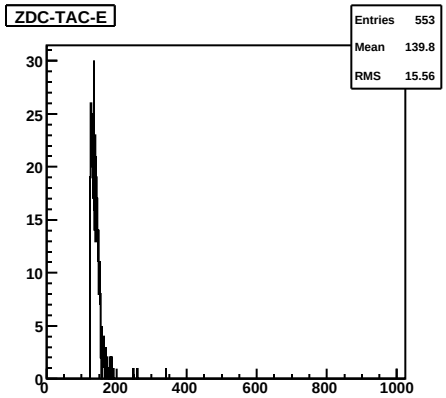
BBC-L-East ADC Sum
BBC-L-West ADC Sum

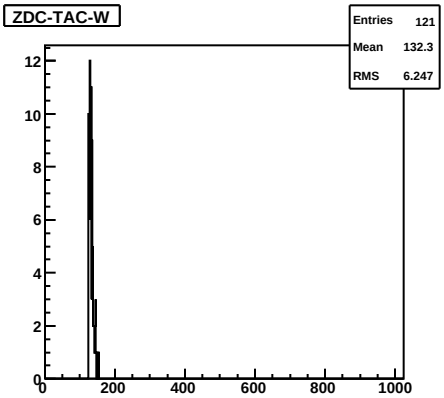

Entries 30000
BBC-S-East ADC Sum
BBC-S-West ADC Sum

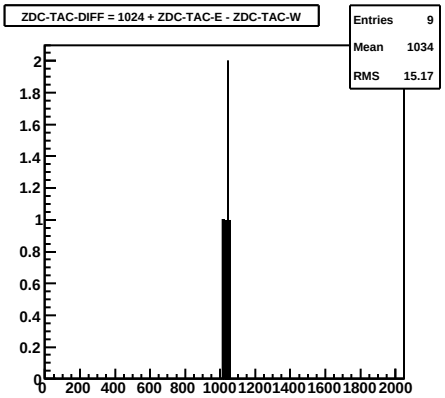

Entries 30000
VPD East ADC Sum
VPD West ADC Sum

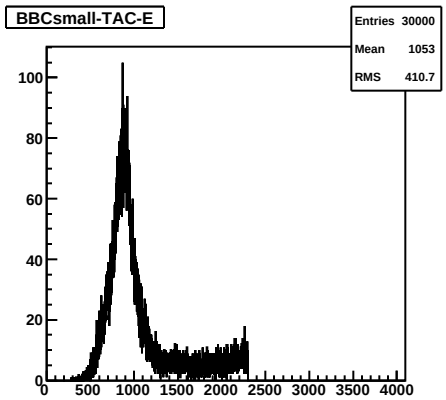

Entries 30000
ZDC East ADC Sum Att
ZDC West ADC Sum Att

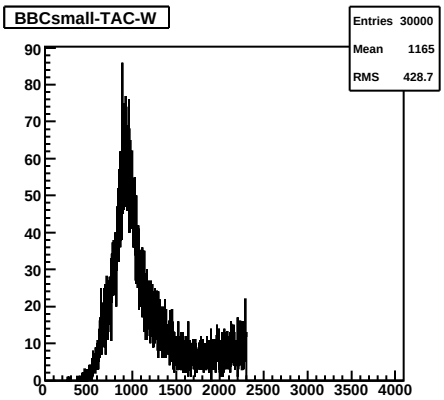

Entries 30000
BBC-L TAC Diff
BCC-S TAC Diff
Entries 30000
BBC-L TAC Diff
VPD TAC Diff
Entries 30000
BBC-L TAC Diff
ZDC TAC Diff
Entries 30000
BBC-S TAC Diff
VPD TAC Diff
Entries 30000
BBC-S TAC Diff
ZDC TAC Diff
Entries 30000
VPD TAC Diff
ZDC TAC Diff

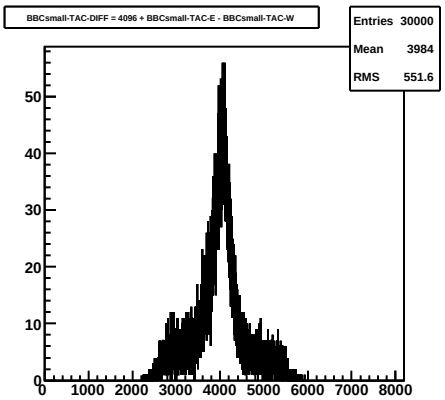

ZDC-TAC-E
Entries 553
Mean 139.8
RMS 15.56

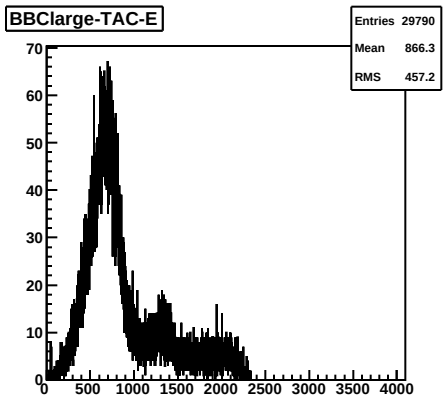

ZDC-TAC-W
Entries 121
Mean 132.3
RMS 6.247

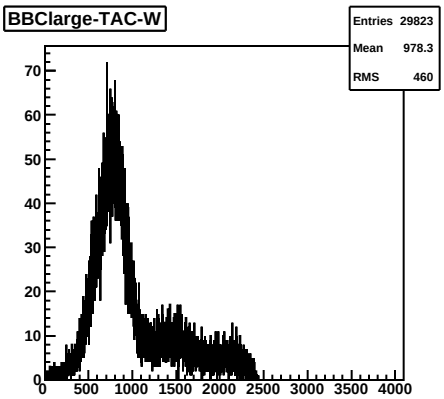

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 9
Mean 1034
RMS 15.17

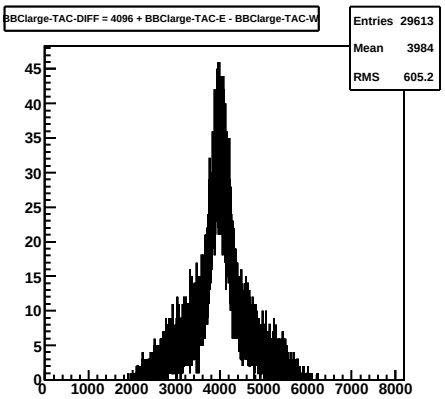

BBCsmall-TAC-E
Entries 30000
Mean 1053
RMS 410.7

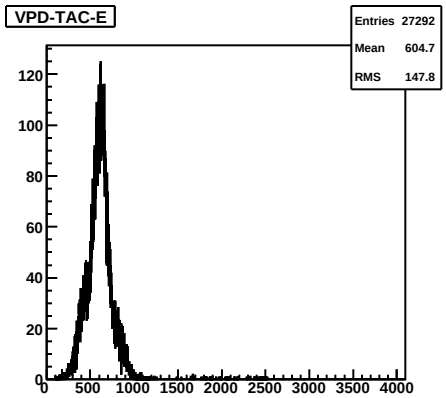

BBCsmall-TAC-W
Entries 30000
Mean 1165
RMS 428.7

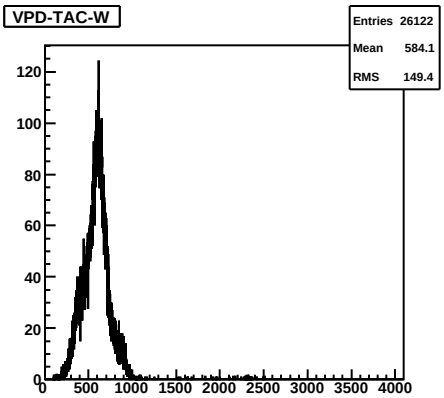

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 30000
Mean 3984
RMS 551.6

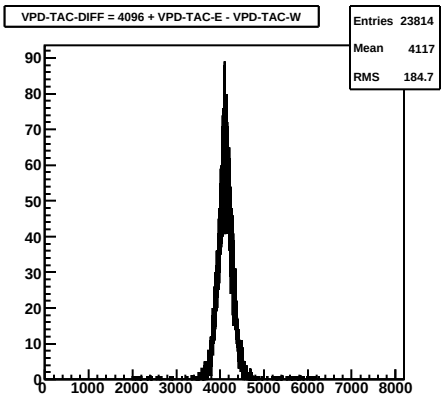

BBClarge-TAC-E
Entries 29790
Mean 866.3
RMS 457.2

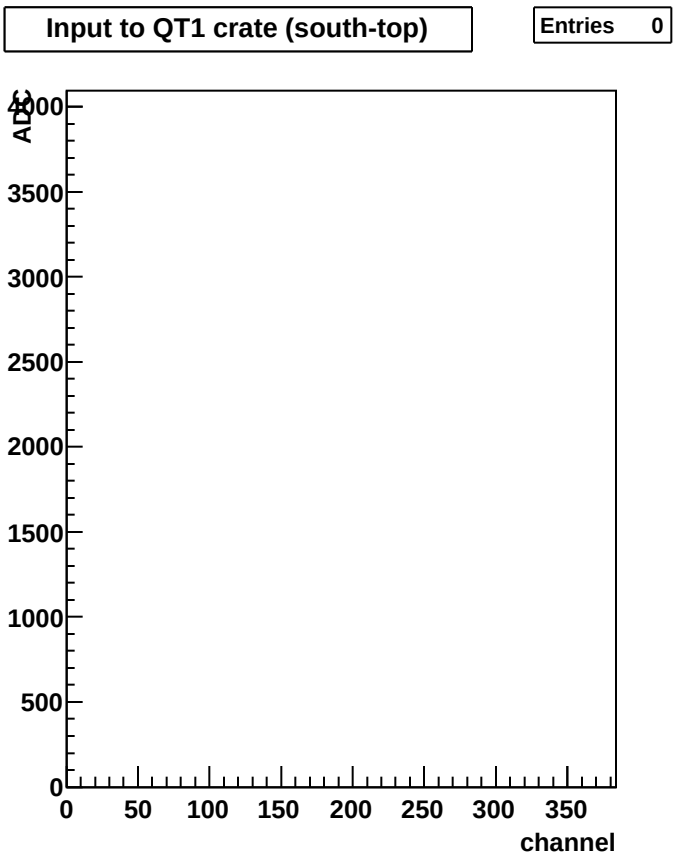

BBClarge-TAC-W
Entries 29823
Mean 978.3
RMS 460

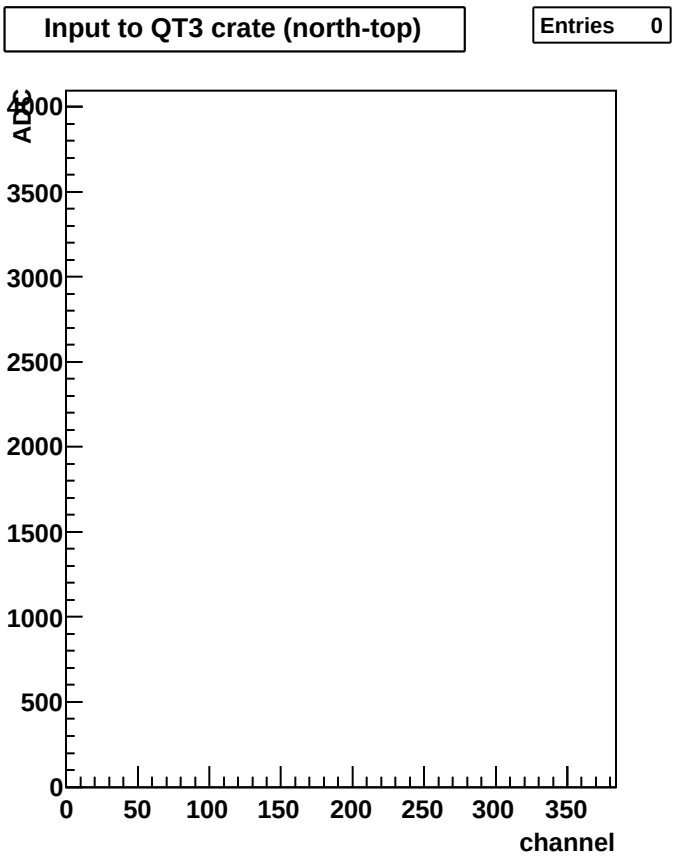

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 29613
Mean 3984
RMS 605.2

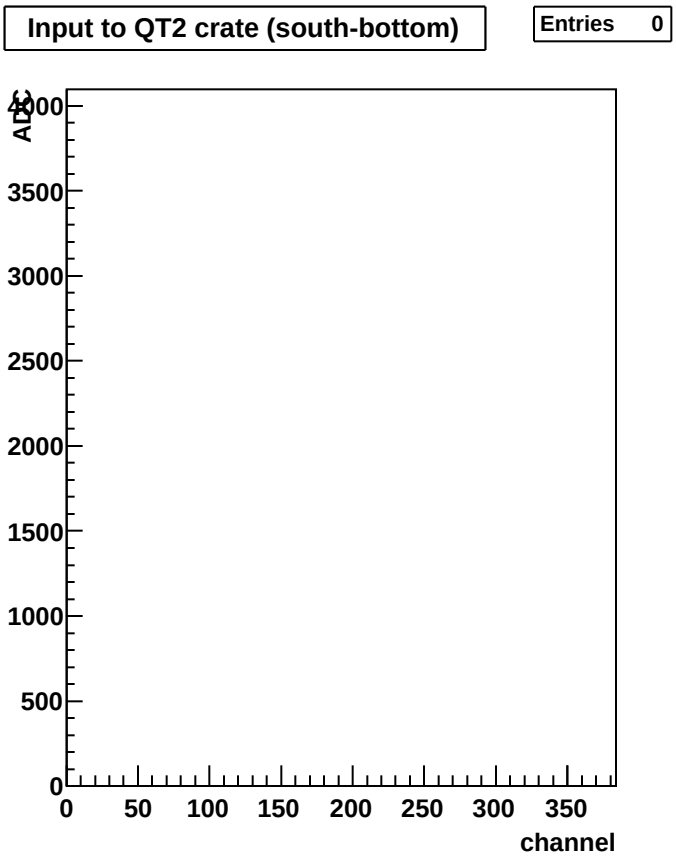

VPD-TAC-E
Entries 27292
Mean 604.7
RMS 147.8

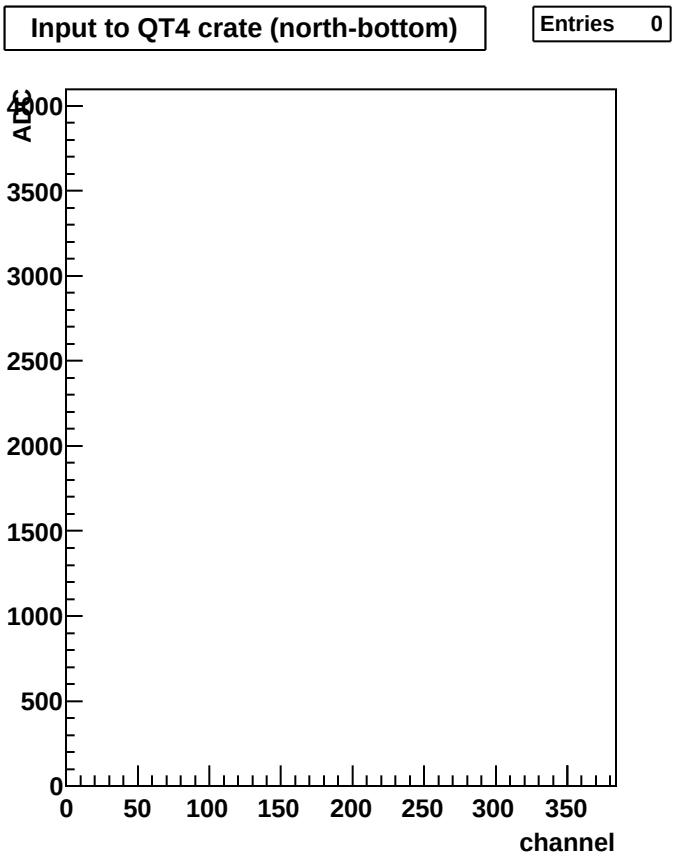

VPD-TAC-W
Entries 26122
Mean 584.1
RMS 149.4

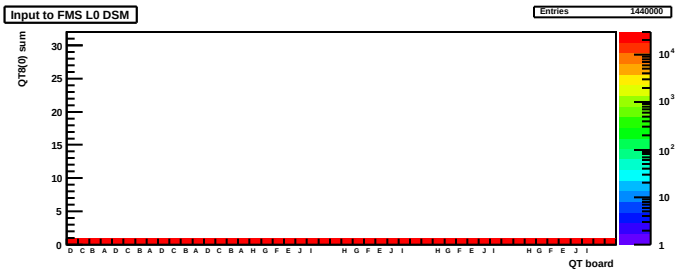

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 23814
Mean 4117
RMS 184.7

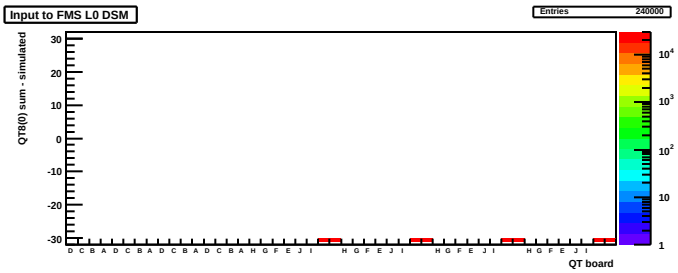

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

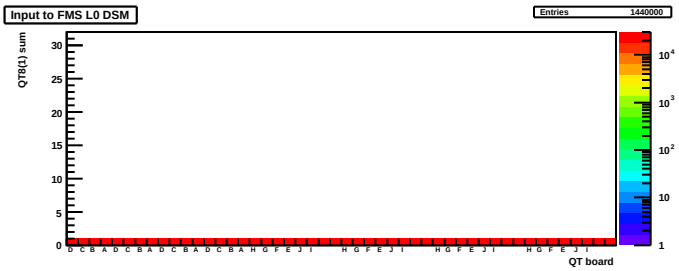

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

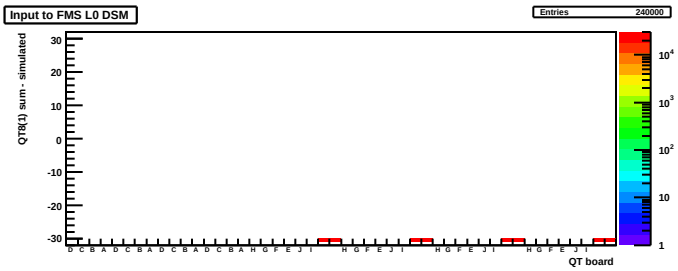

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

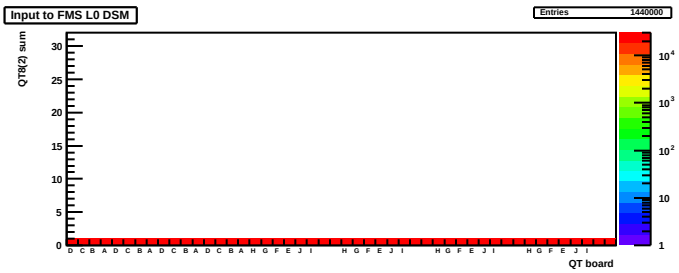

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

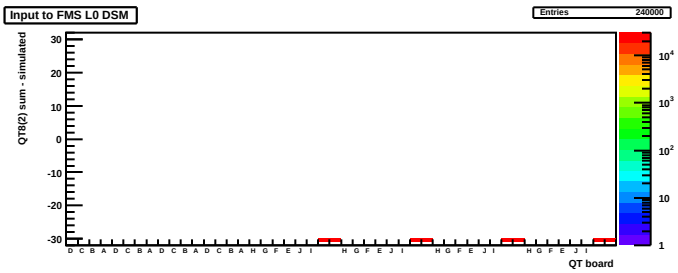

Input to FMS L0 DSM
Entries 1440000
QT8(0) sum
QT board

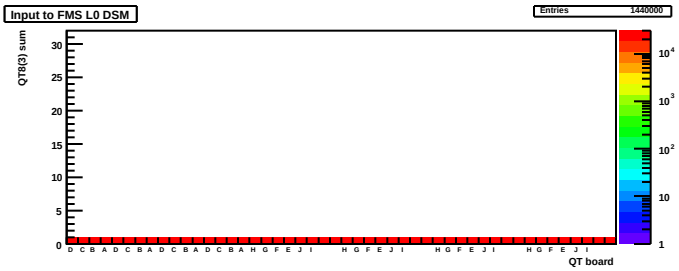

Input to FMS L0 DSM
Entries 240000
QT8(0) sum - simulated
QT board

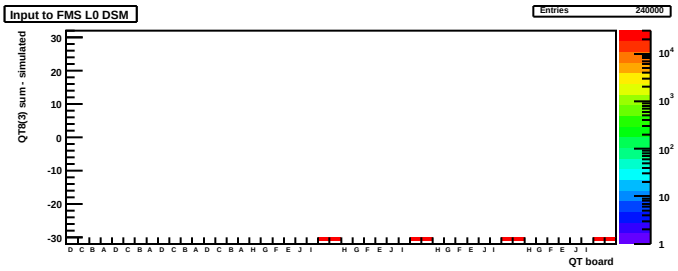

Input to FMS L0 DSM
Entries 1440000
QT8(1) sum
QT board

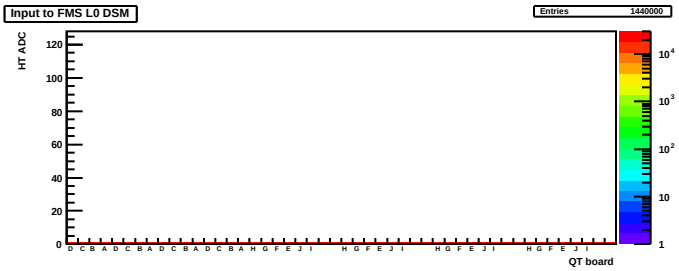

Input to FMS L0 DSM
Entries 240000
QT8(1) sum - simulated
QT board

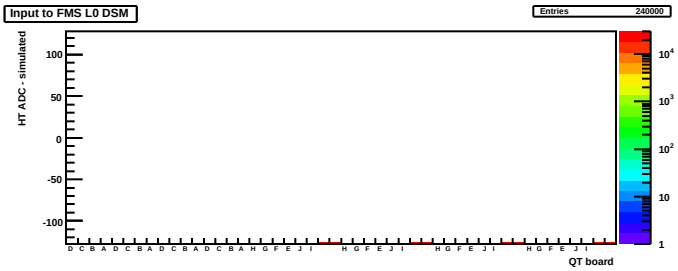

Input to FMS L0 DSM
Entries 1440000
QT8(2) sum
QT board

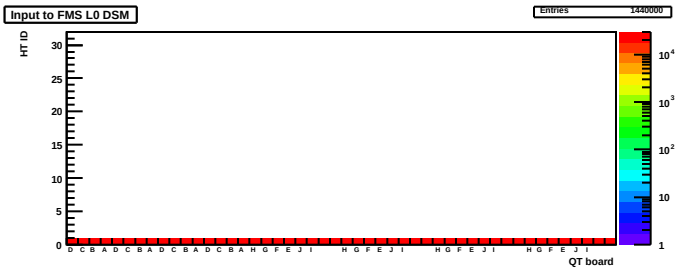

Input to FMS L0 DSM
Entries 240000
QT8(2) sum - simulated
QT board

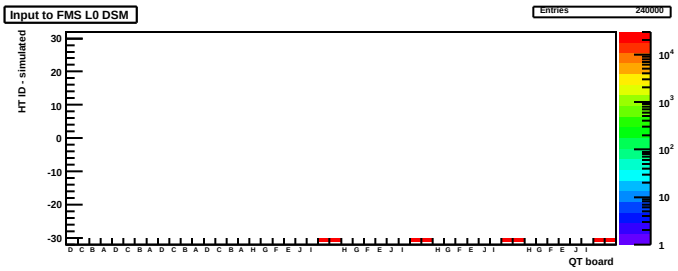

Input to FMS L0 DSM
Entries 1440000
QT8(3) sum
QT board

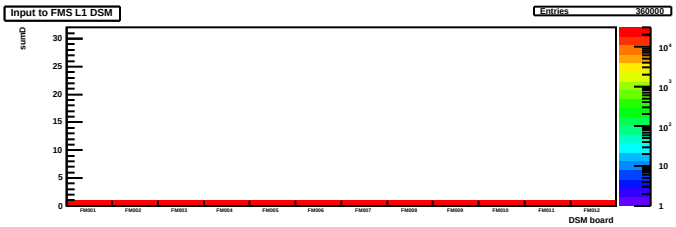

Input to FMS L0 DSM
Entries 240000
QT8(3) sum - simulated
QT board

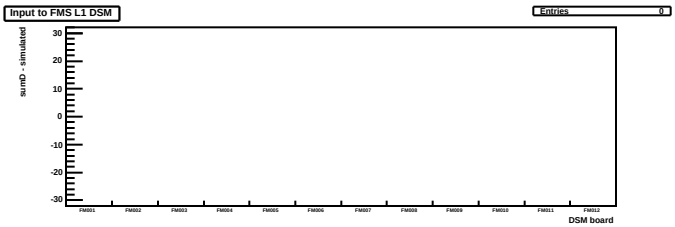

Input to FMS L0 DSM
Entries 1440000
HT ADC
QT board

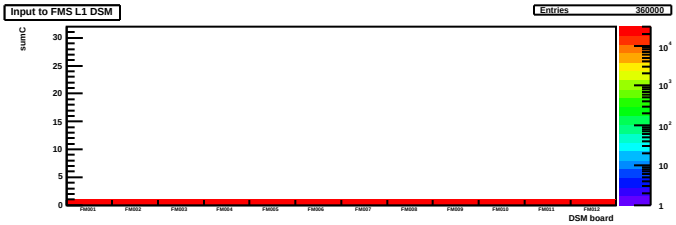

Input to FMS L0 DSM
Entries 240000
HT ADC - simulated
QT board

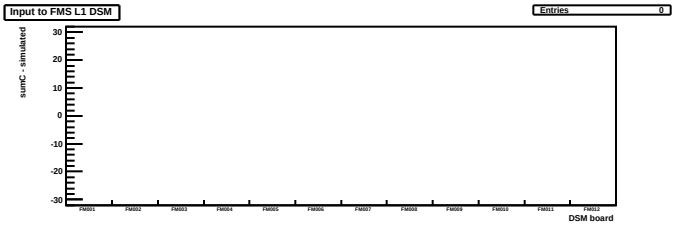

Input to FMS L0 DSM
Entries 1440000
HT ID
QT board

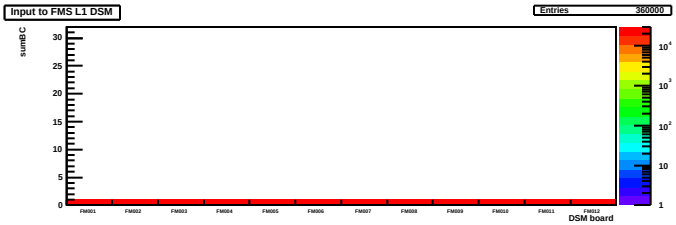

Input to FMS L0 DSM
Entries 240000
HT ID - simulated
QT board

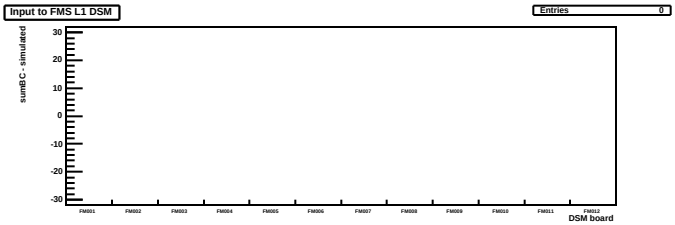

Input to FMS L1 DSM
Entries 360000
sumD
DSM board

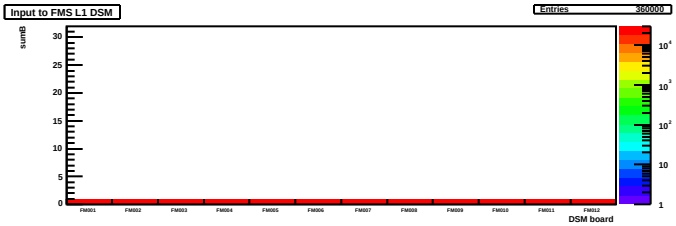

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

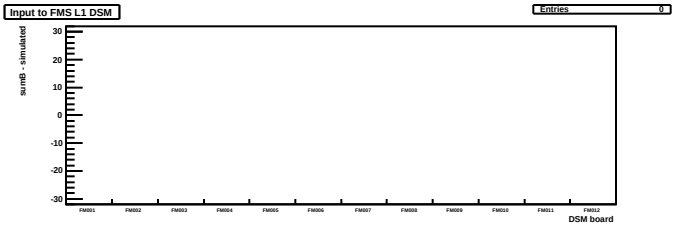

Input to FMS L1 DSM
Entries 360000
sumC
DSM board

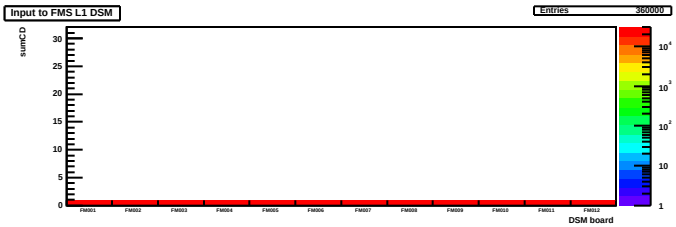

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

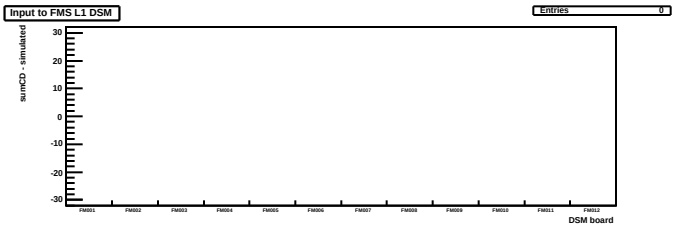

Input to FMS L1 DSM
Entries 360000
sumBC
DSM board

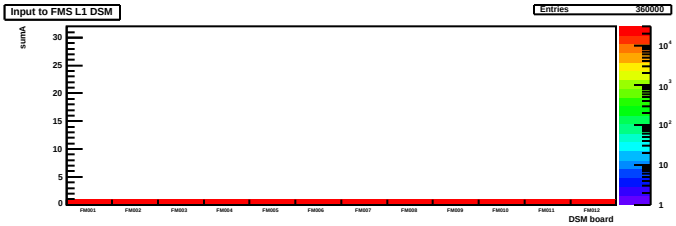

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

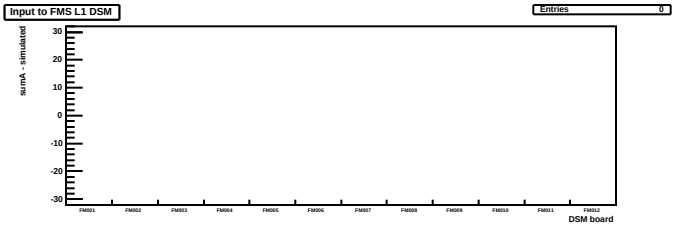

Input to FMS L1 DSM
Entries 360000
sumB
DSM board

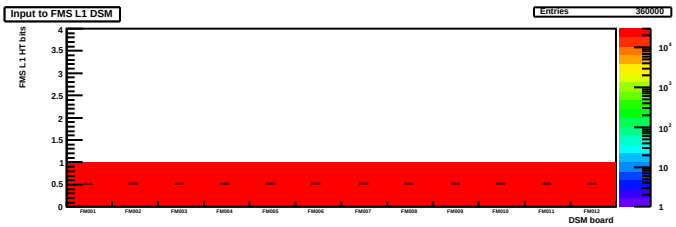

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

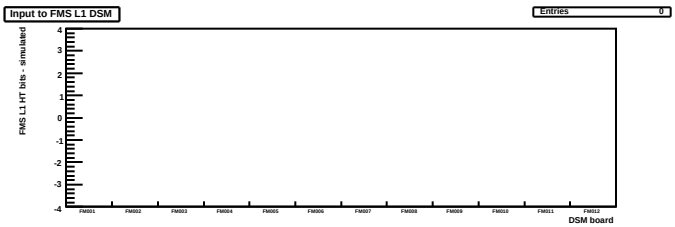

Input to FMS L1 DSM
Entries 360000
sumCD
DSM board

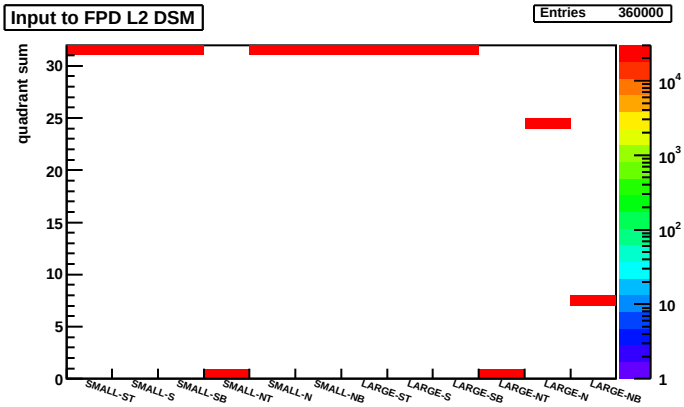

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

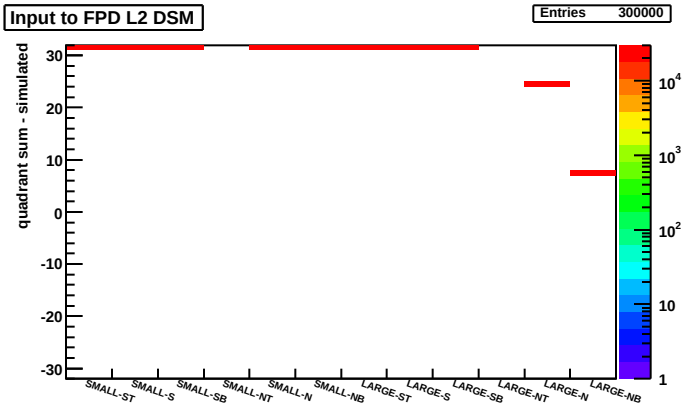

Input to FMS L1 DSM
Entries 360000
sumA
DSM board

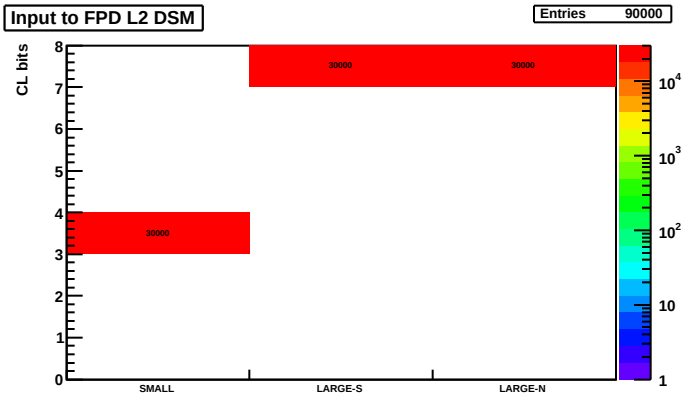

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

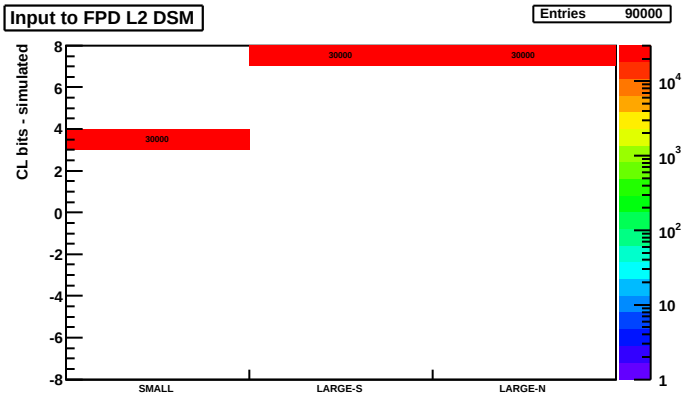

Input to FMS L1 DSM
Entries 360000
FMS L1 HT bits
DSM board

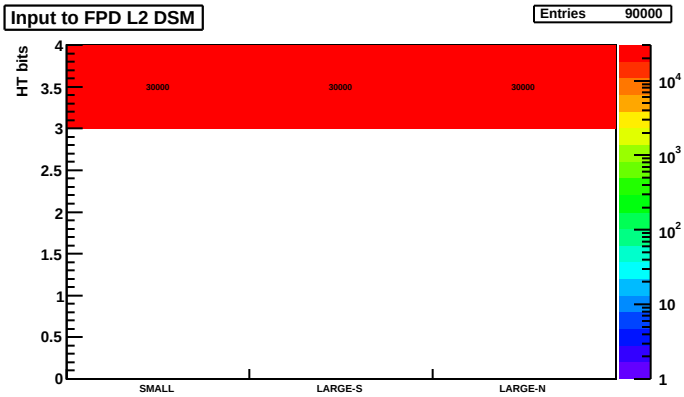

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

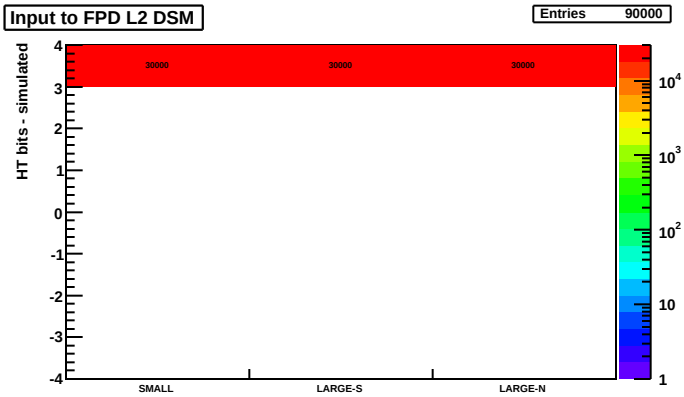

Input to FPD L2 DSM
Entries 360000
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

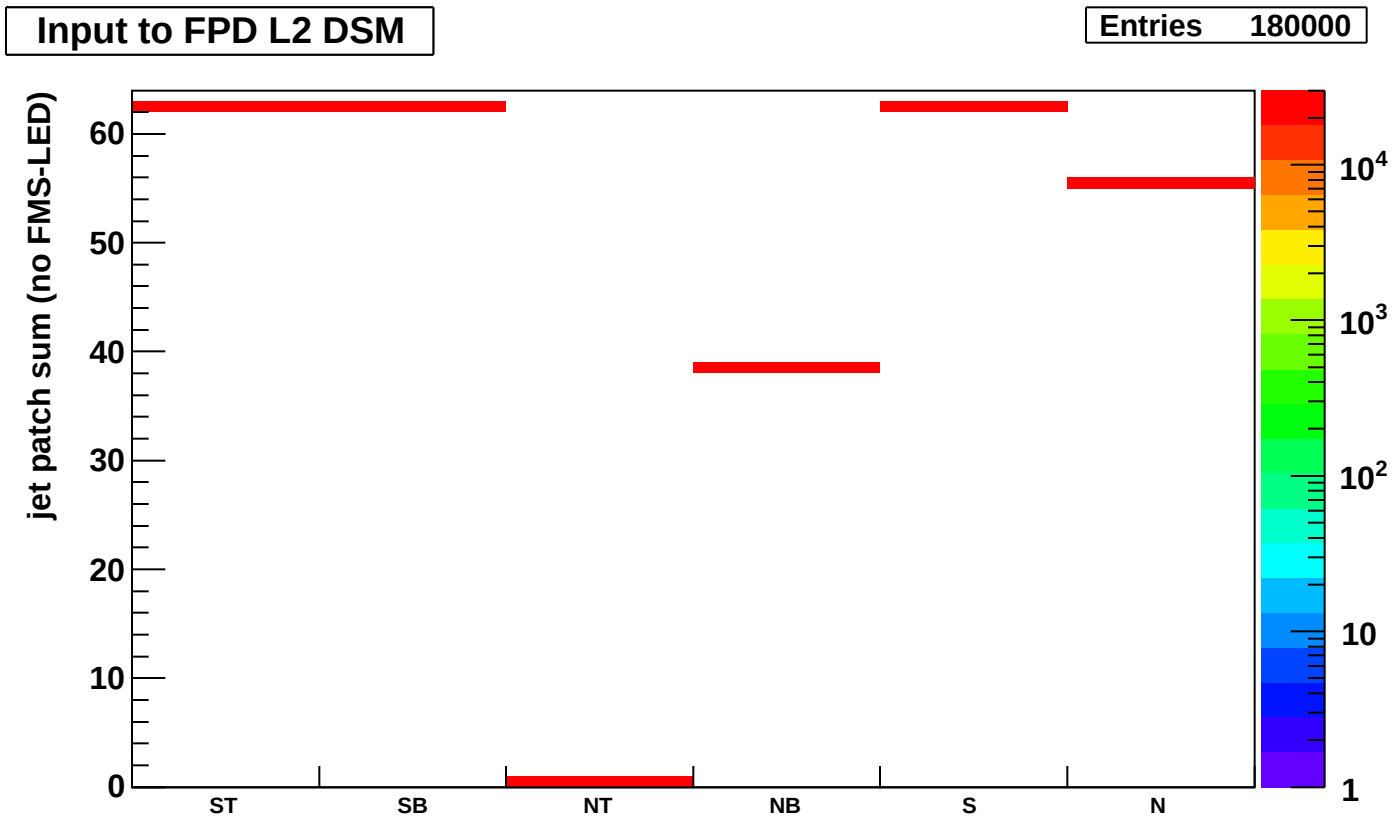

Input to FPD L2 DSM
Entries 300000
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

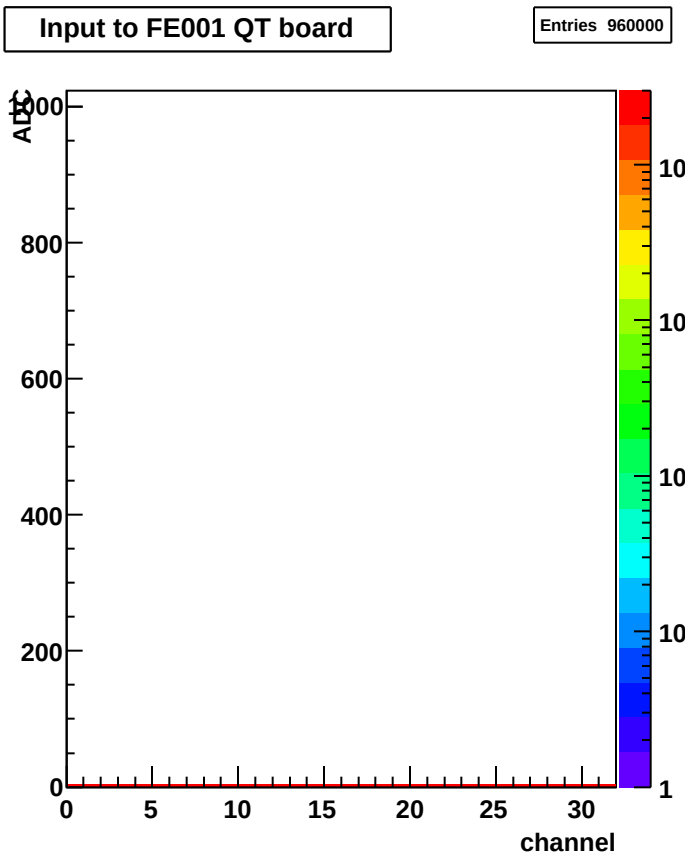

Input to FPD L2 DSM
Entries 90000
CL bits
30000
30000
30000
SMALL
LARGE-S
LARGE-N

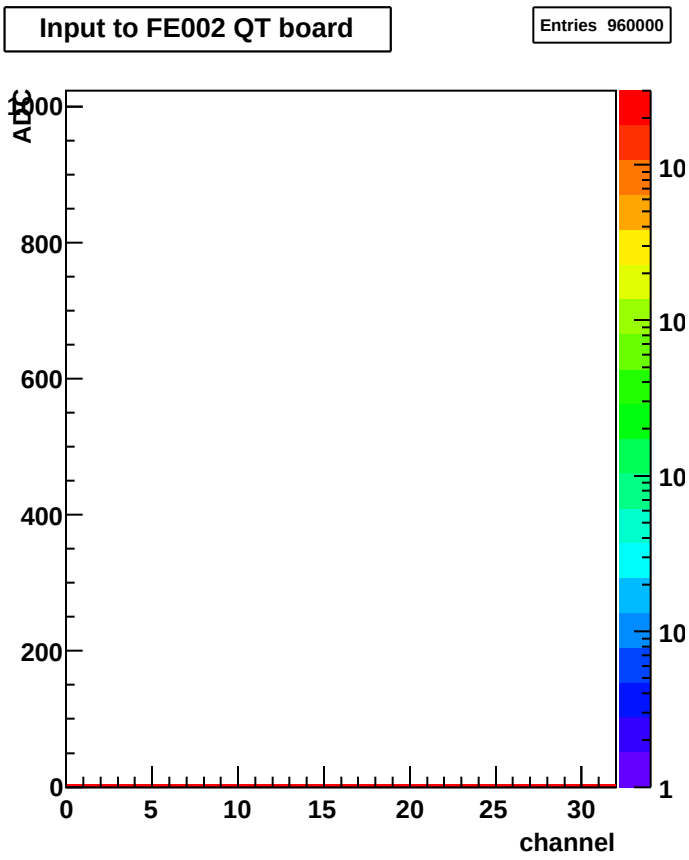

Input to FPD L2 DSM
Entries 90000
CL bits - simulated
30000
30000
30000
SMALL
LARGE-S
LARGE-N

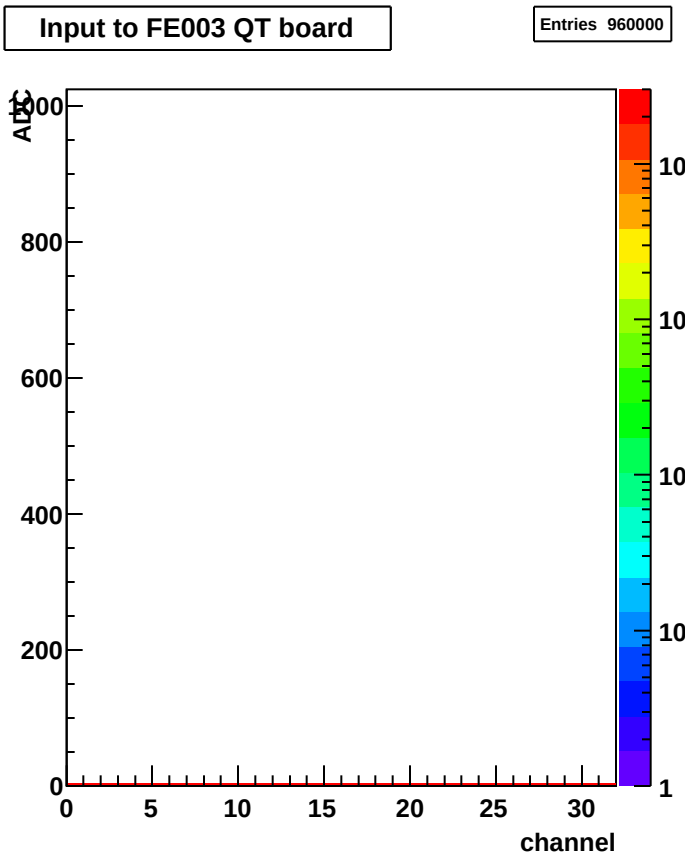

Input to FPD L2 DSM
Entries 90000
HT bits
30000
30000
30000
SMALL
LARGE-S
LARGE-N

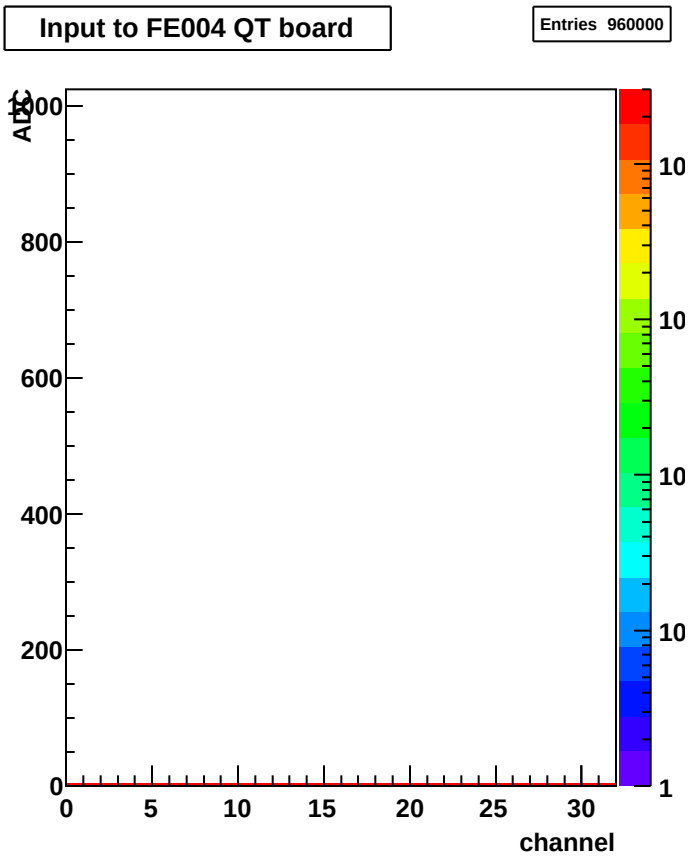

Input to FPD L2 DSM
Entries 90000
HT bits - simulated
30000
30000
30000
SMALL
LARGE-S
LARGE-N

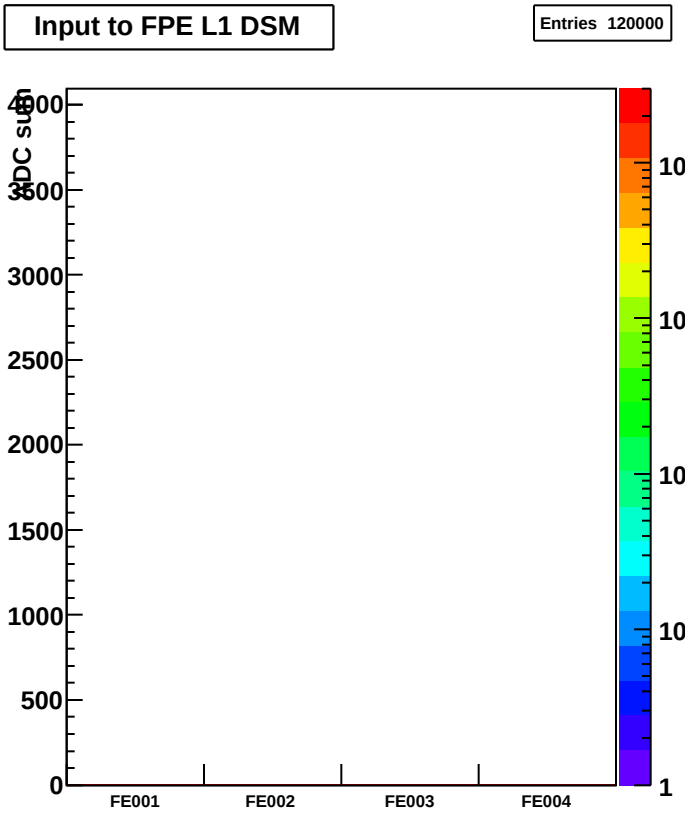

Input to FPD L2 DSM
Entries 180000
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

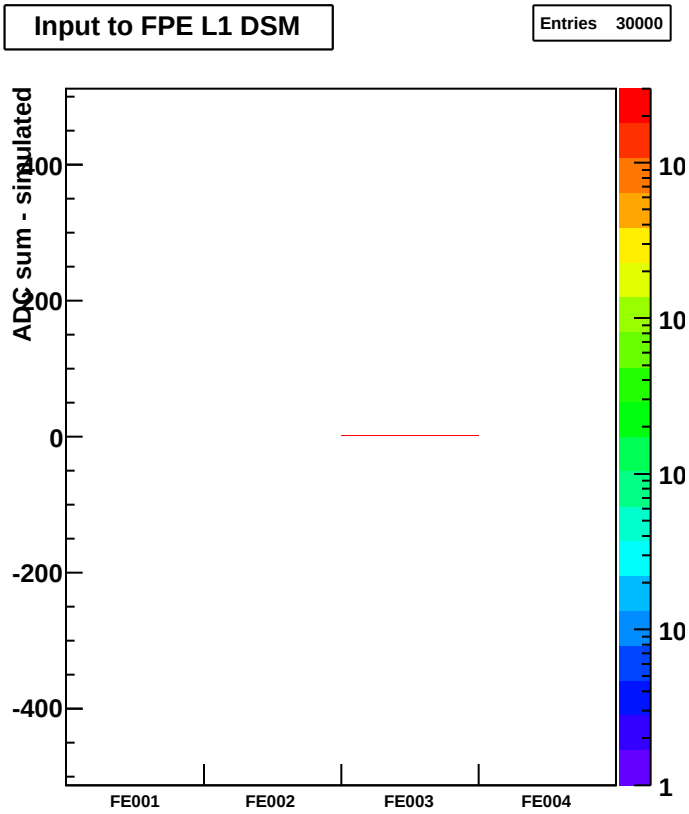

Input to FE001 QT board
Entries 960000
ADC
channel

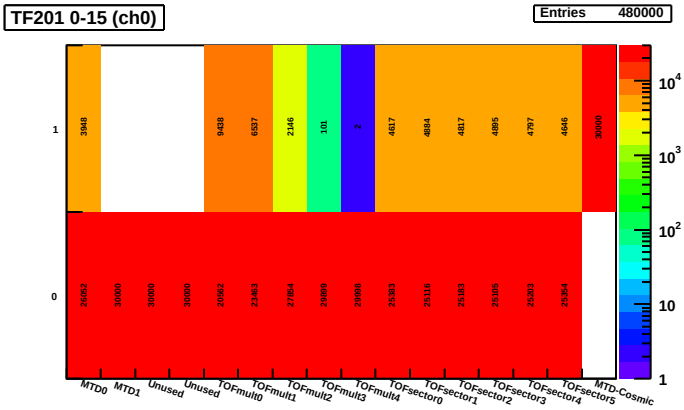

Input to FE002 QT board
Entries 960000
ADC
channel

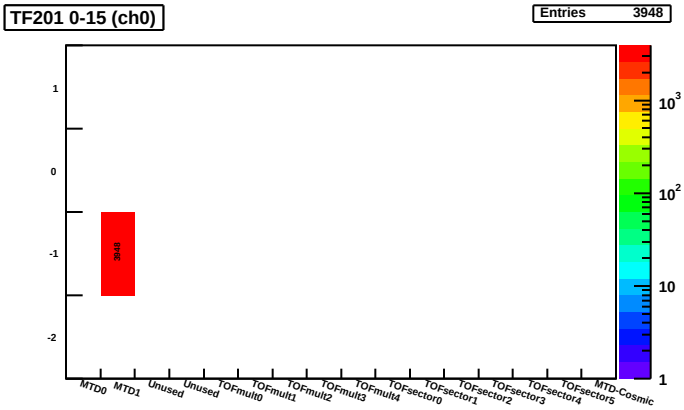

Input to FE003 QT board
Entries 960000
ADC
channel

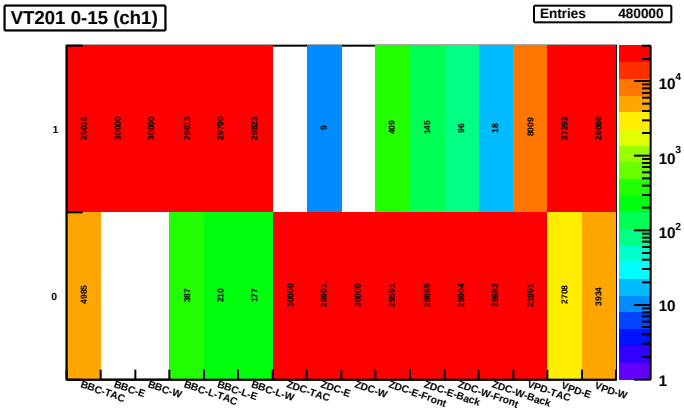

Input to FE004 QT board
Entries 960000
ADC
channel

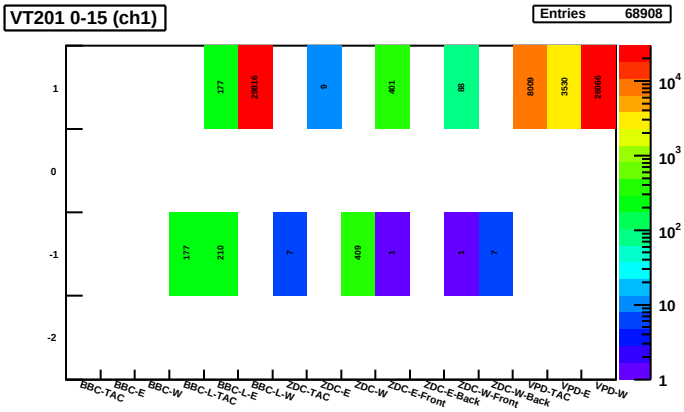

Input to FPE L1 DSM
Entries 120000
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


Input to FPE L1 DSM
Entries 30000
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1


TF201 0-15 (ch0)
Entries 480000
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 3948
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 480000
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 68908
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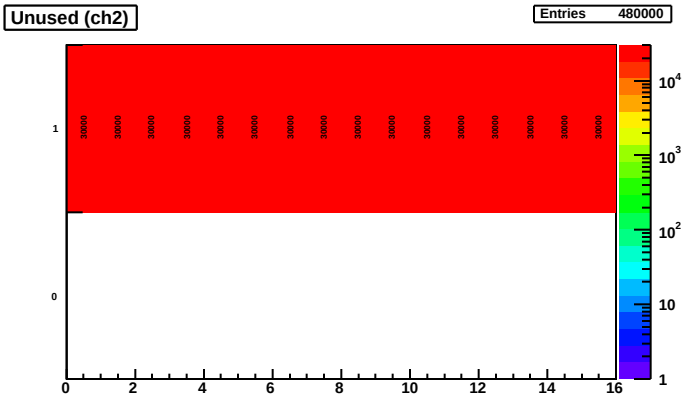
Unused (ch2)
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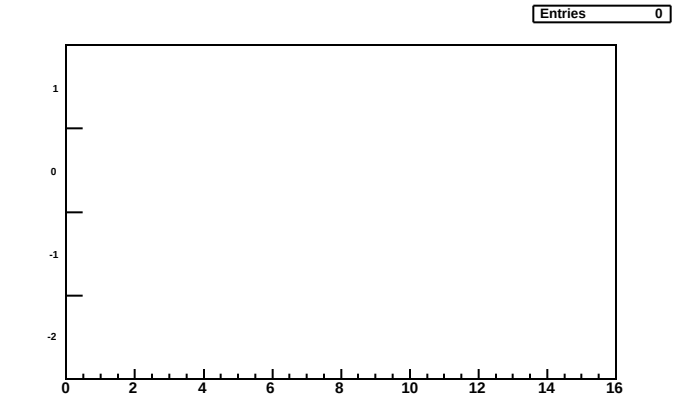
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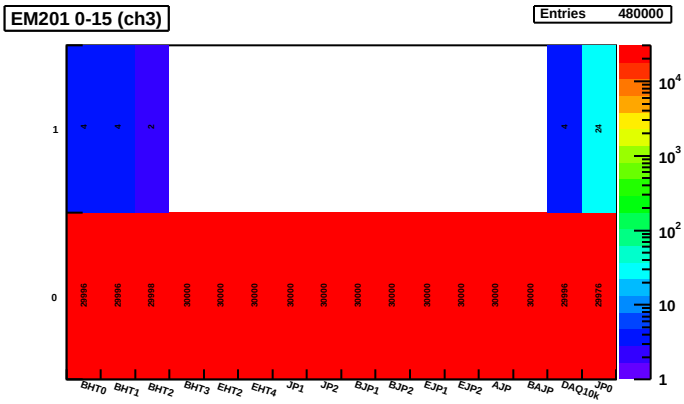
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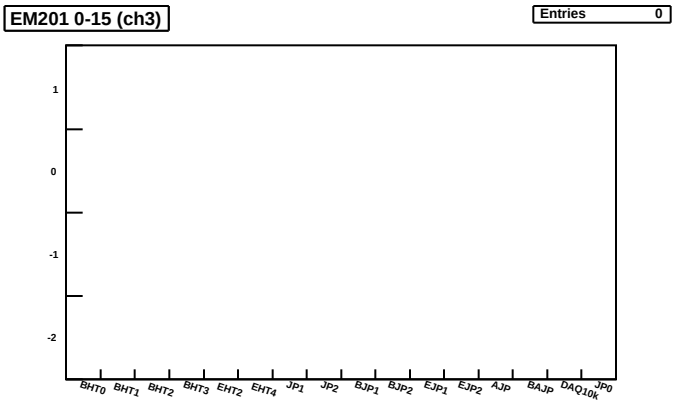
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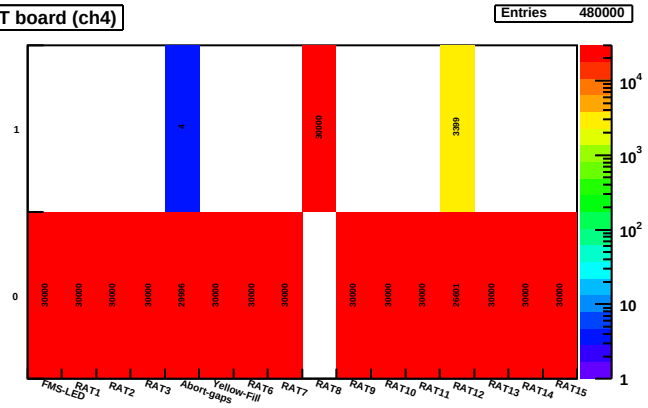
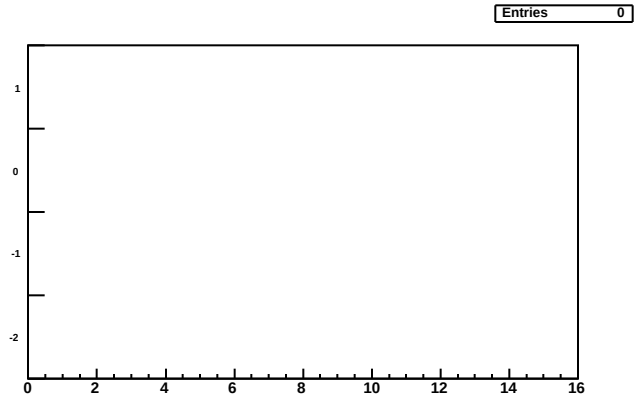
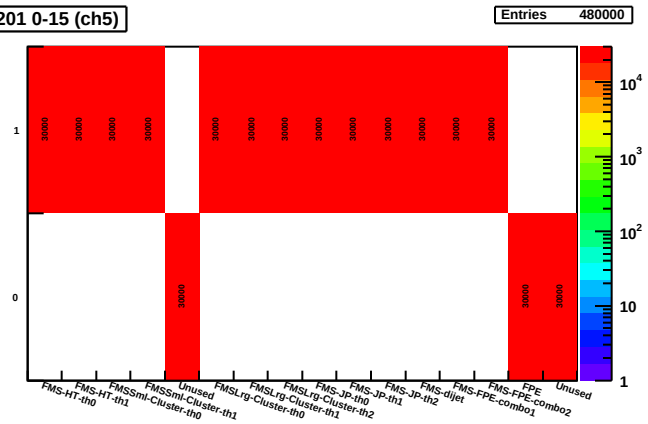
RAT board (ch4)

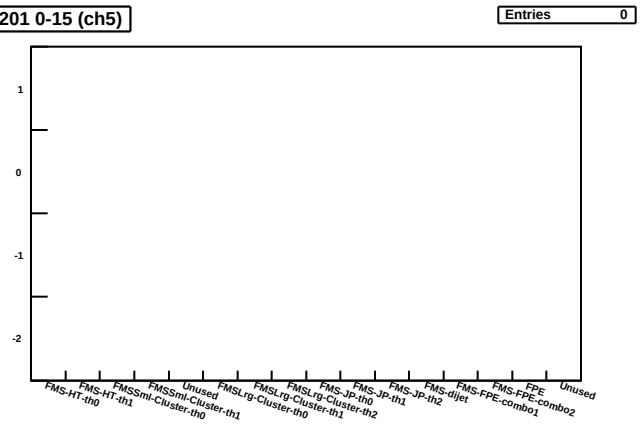




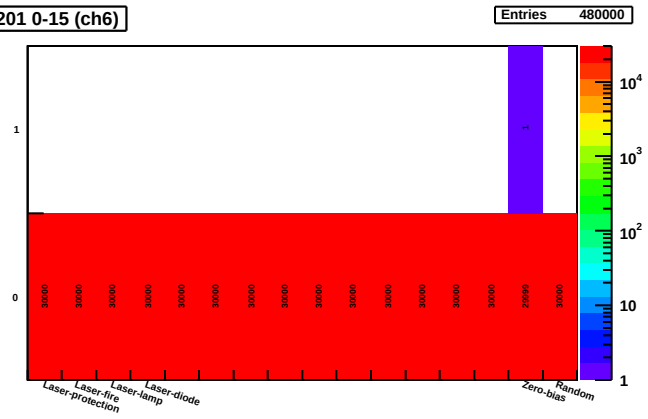
FP201 0-15 (ch5)

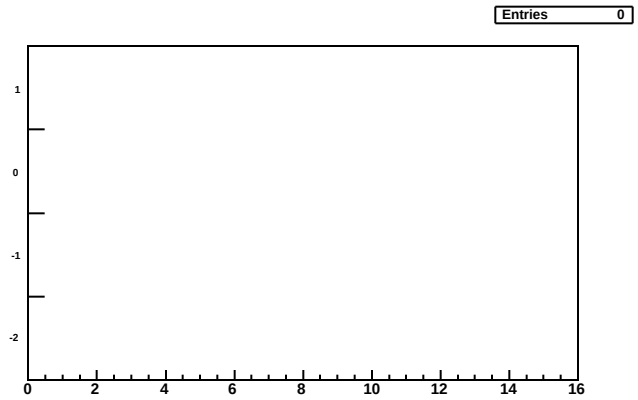
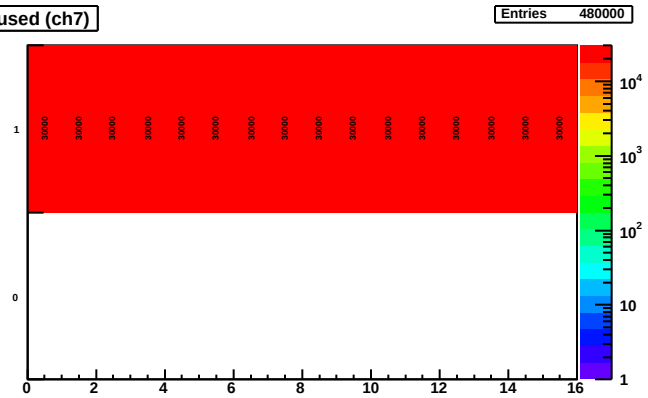
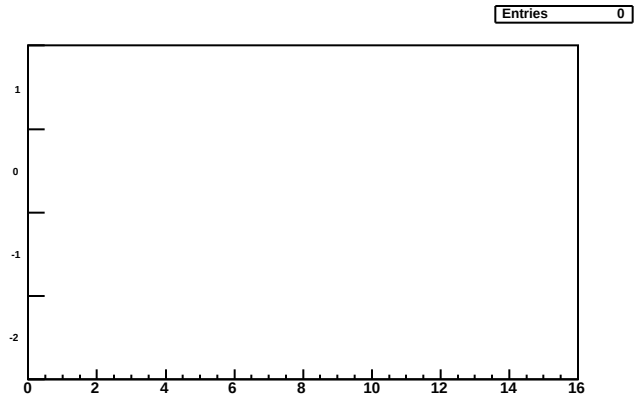


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)