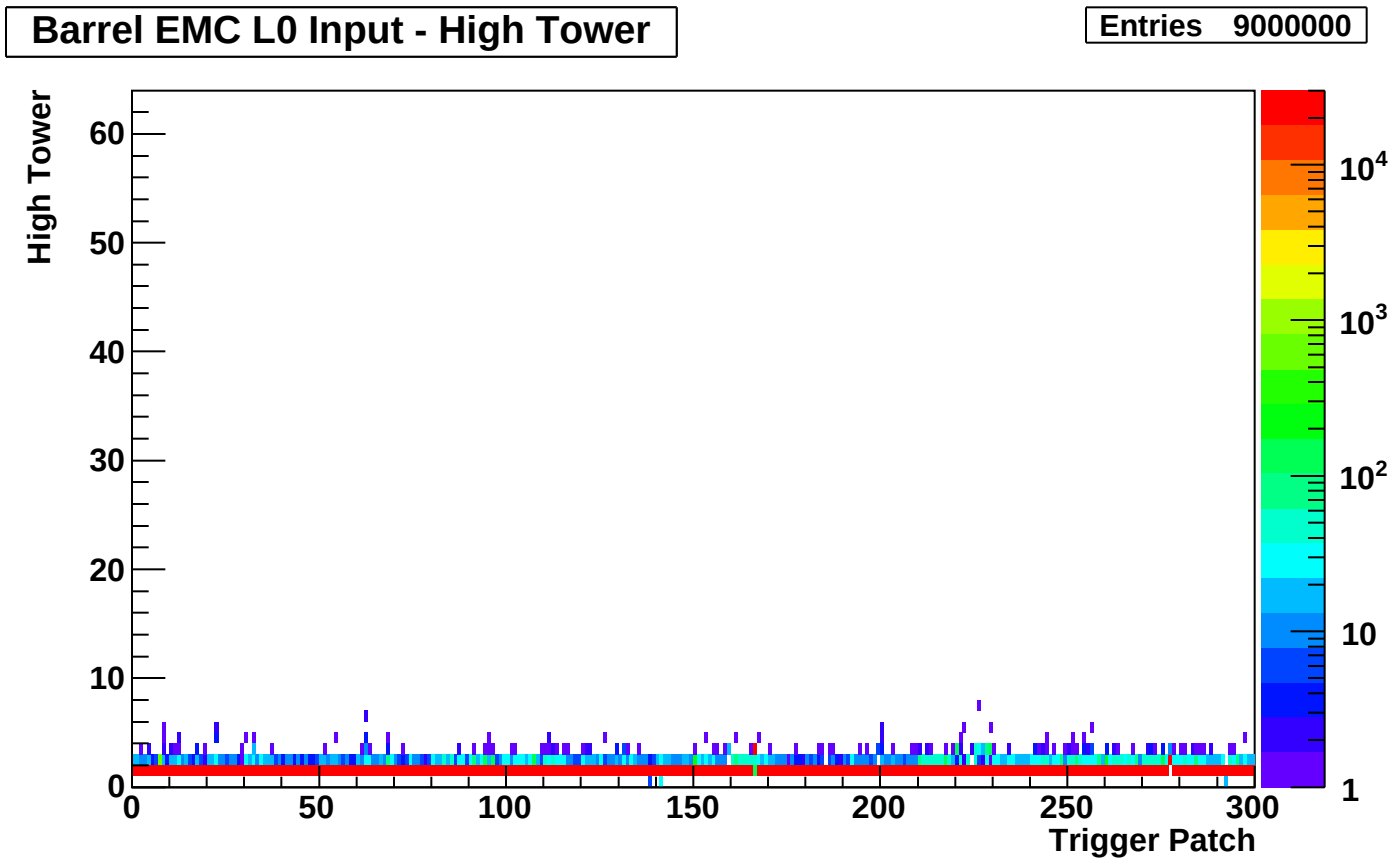
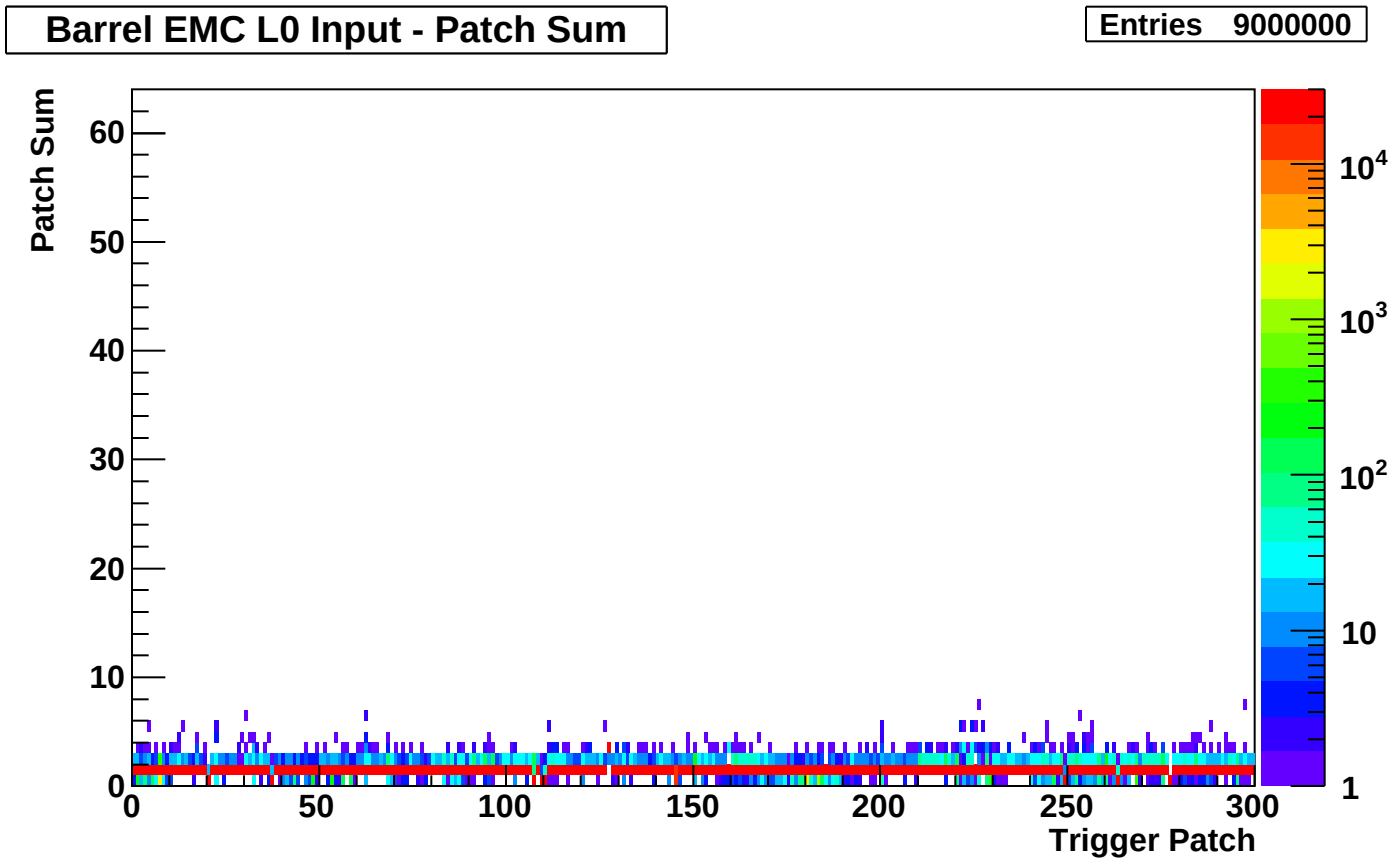
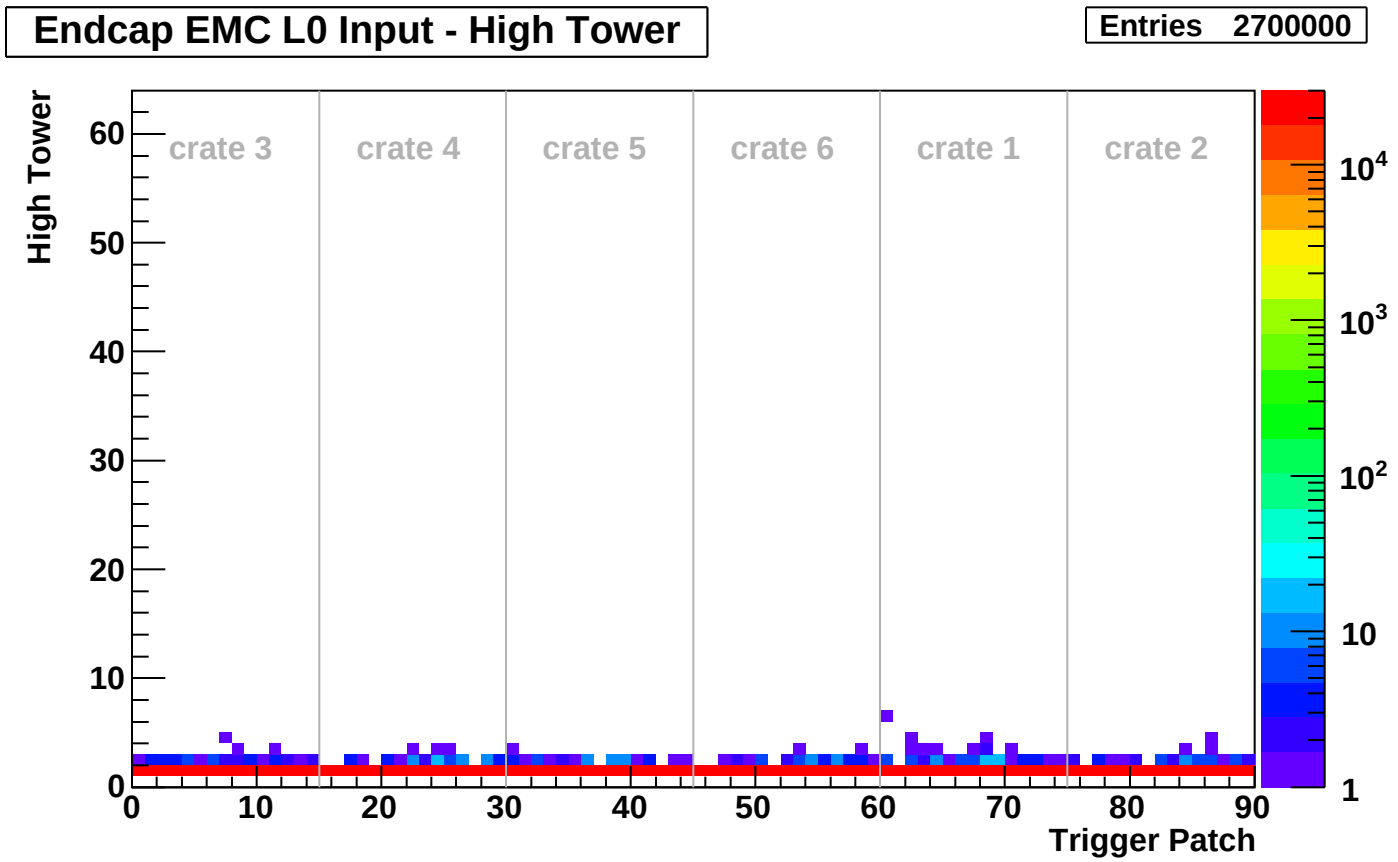
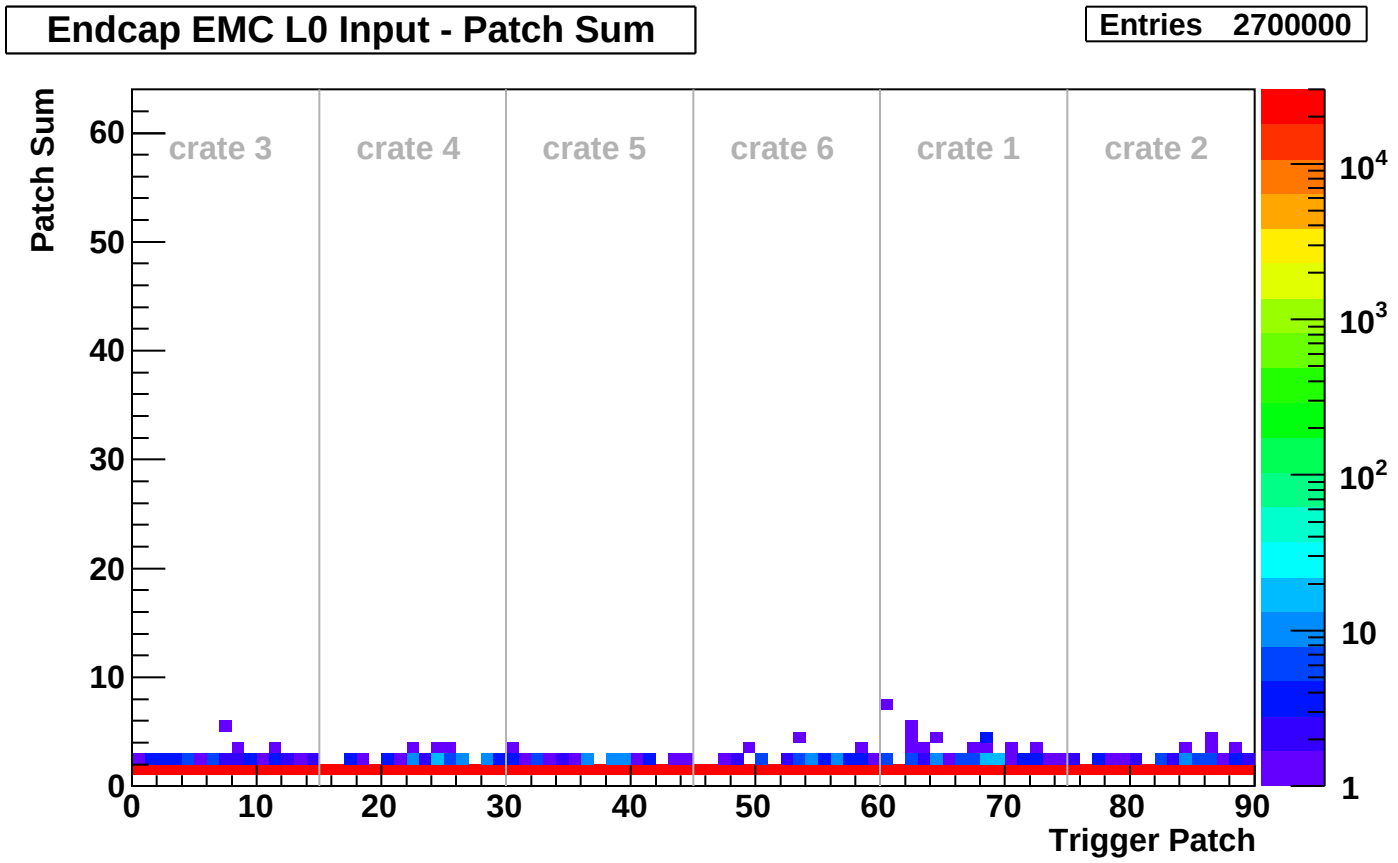
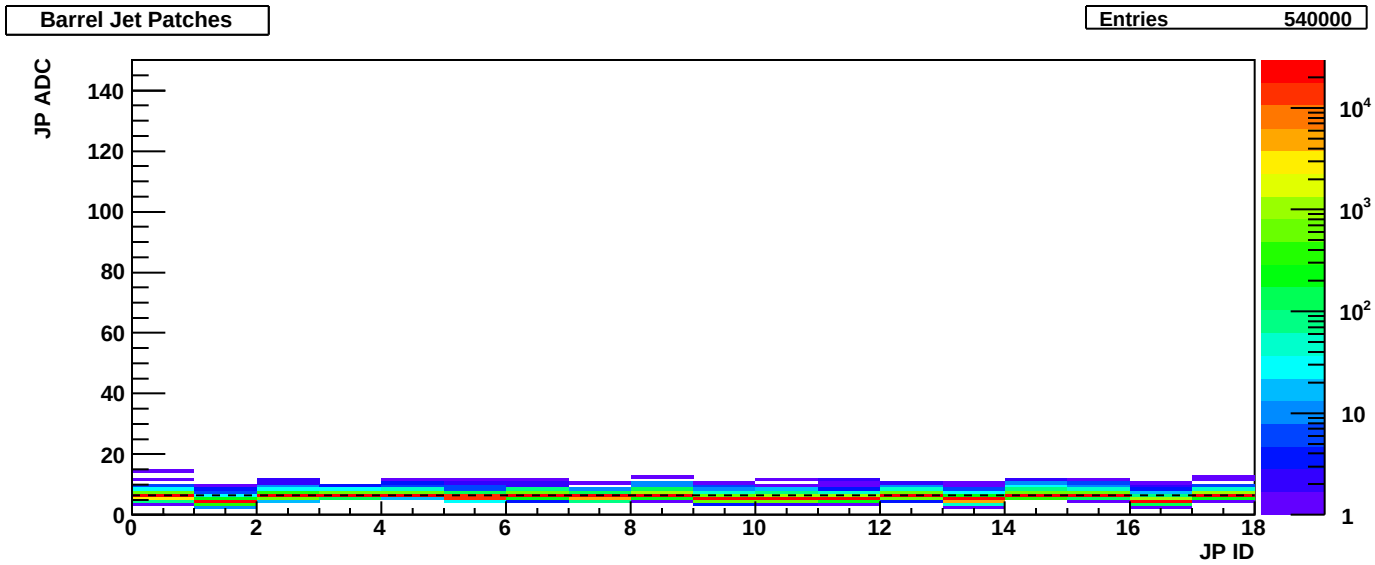
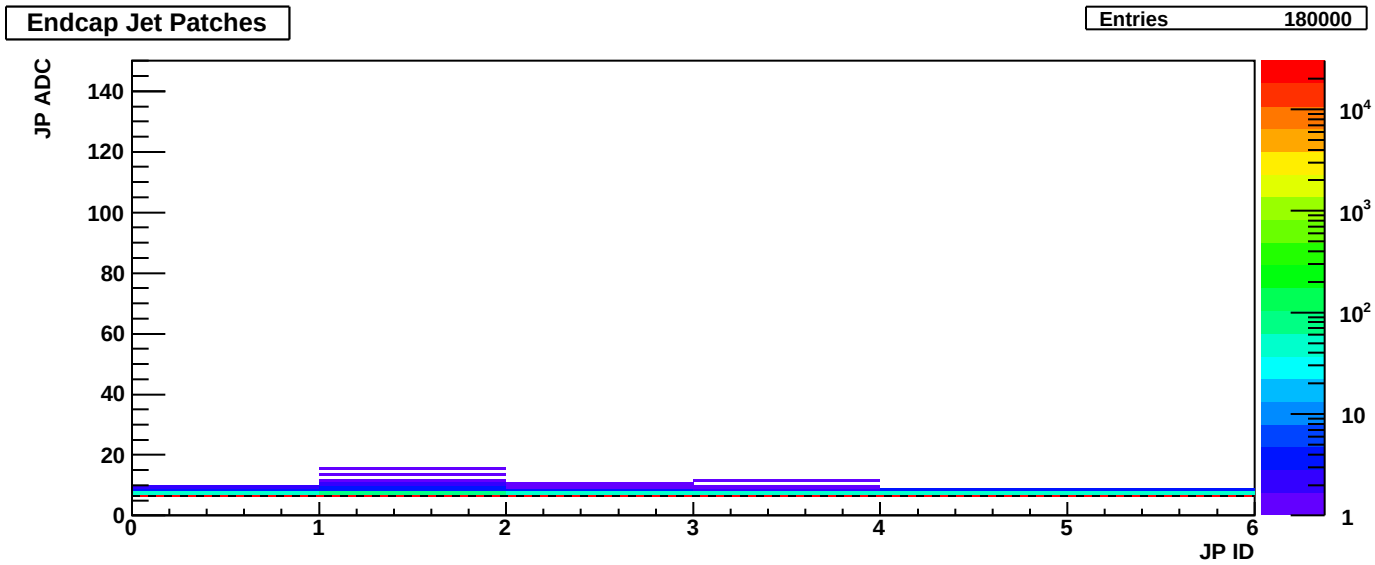

Barrel EMC L0 Input - High Tower
Entries 9000000
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

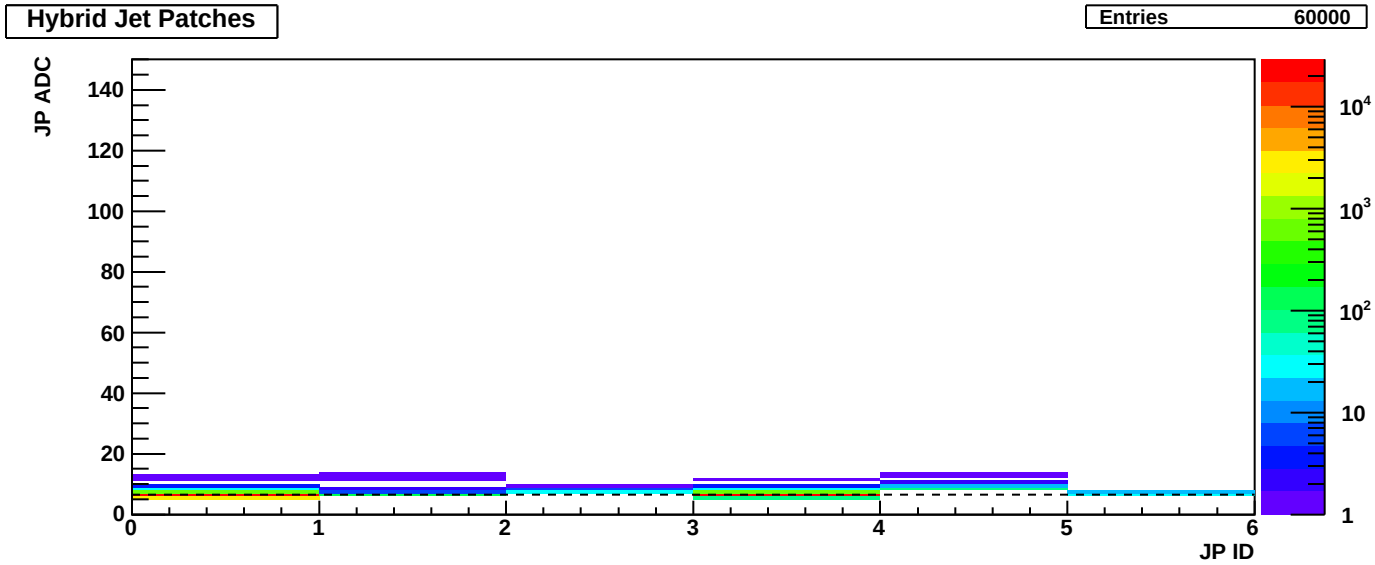

Barrel EMC L0 Input - Patch Sum
Entries 9000000
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

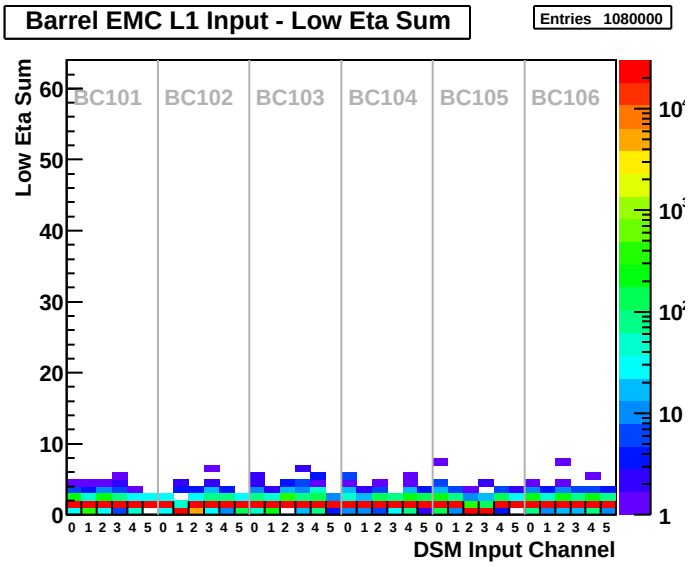

Endcap EMC L0 Input - High Tower
Entries 2700000
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

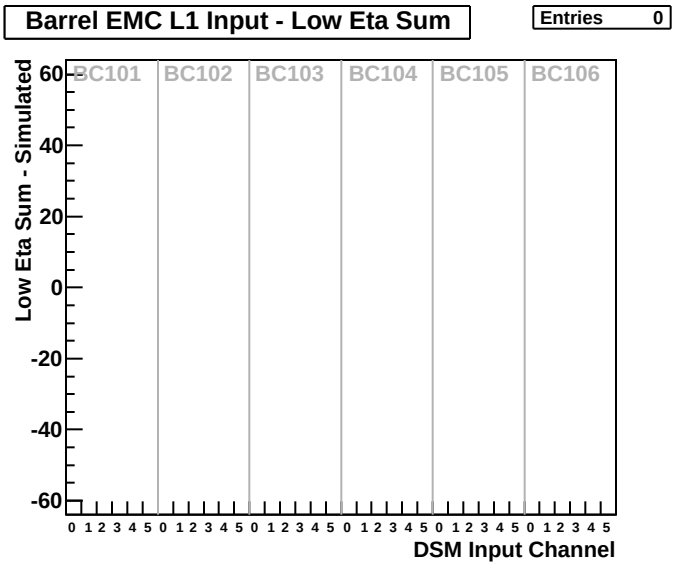

Endcap EMC L0 Input - Patch Sum
Entries 2700000
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

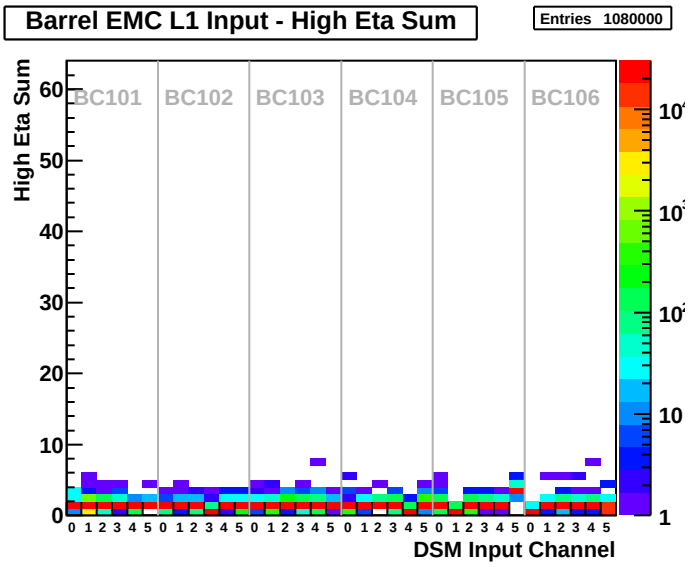

Barrel Jet Patches
Entries 540000
JP ADC
JP ID

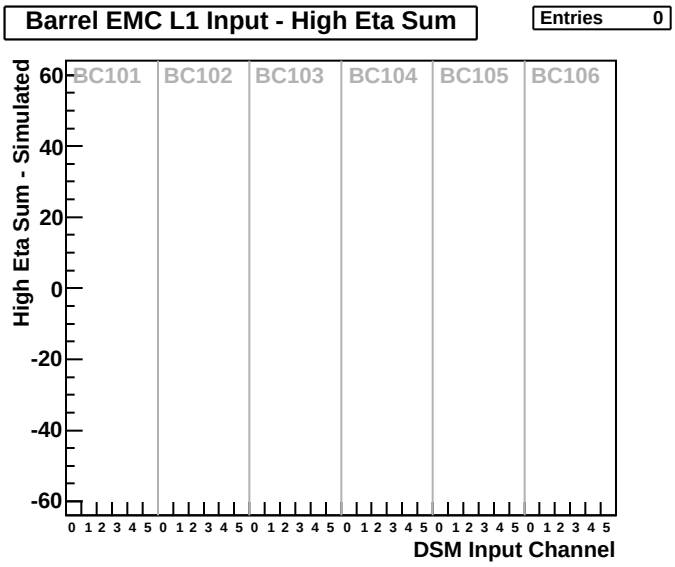

Endcap Jet Patches
Entries 180000
JP ADC
JP ID

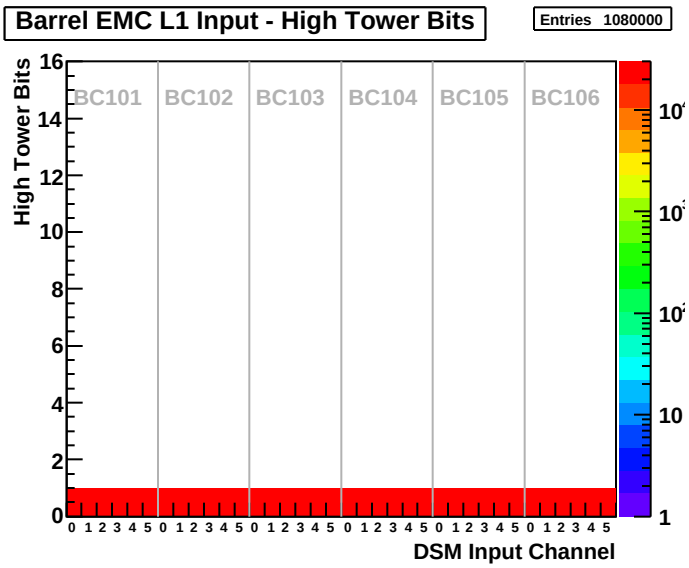

Hybrid Jet Patches
Entries 60000
JP ADC
JP ID

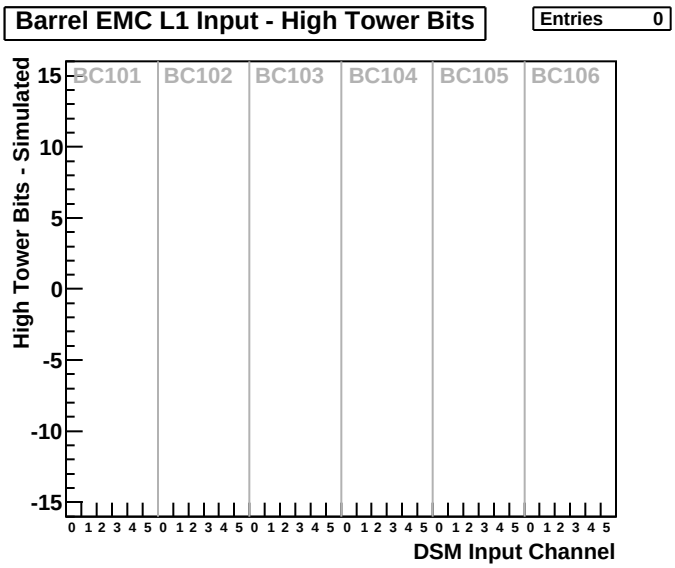

Barrel EMC L1 Input - Low Eta Sum
Entries 1080000
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

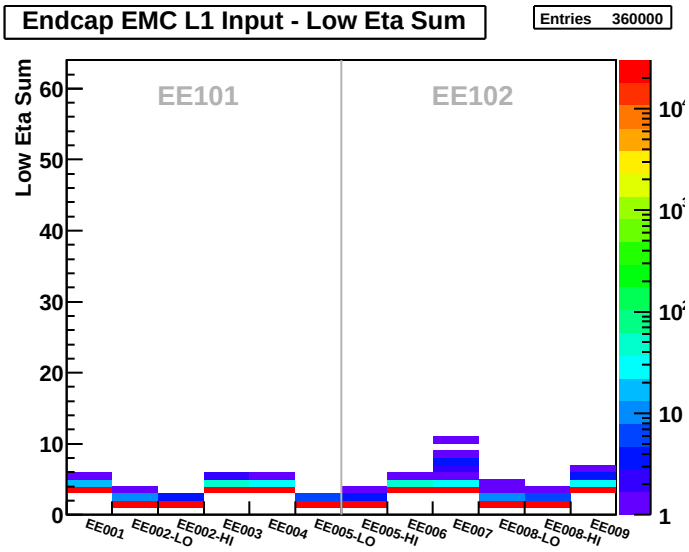

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

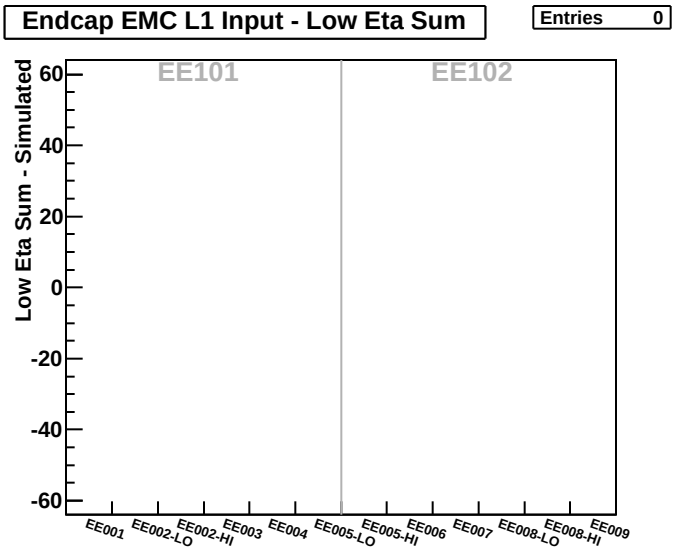

Barrel EMC L1 Input - High Eta Sum
Entries 1080000
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

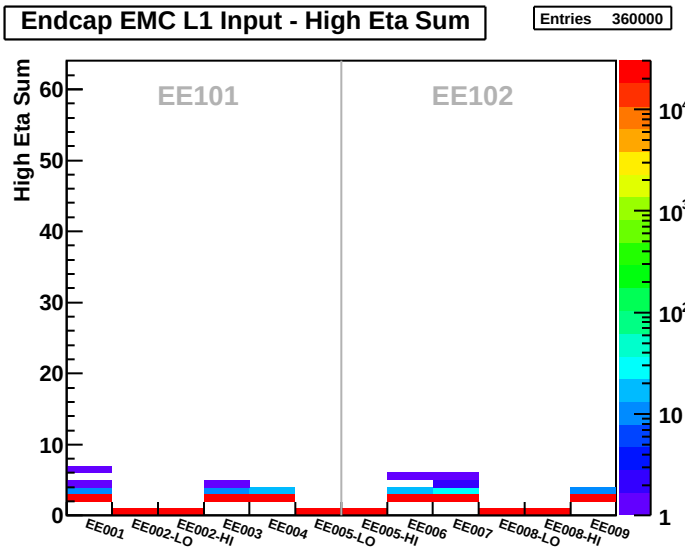

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

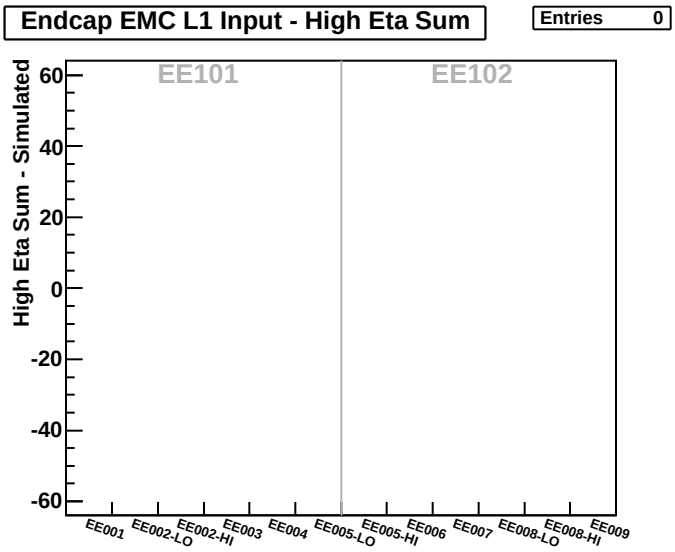

Barrel EMC L1 Input - High Tower Bits
Entries 1080000
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

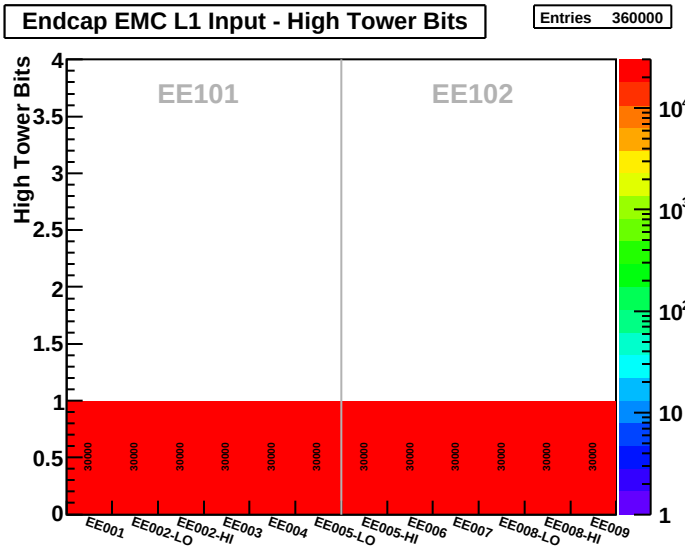

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

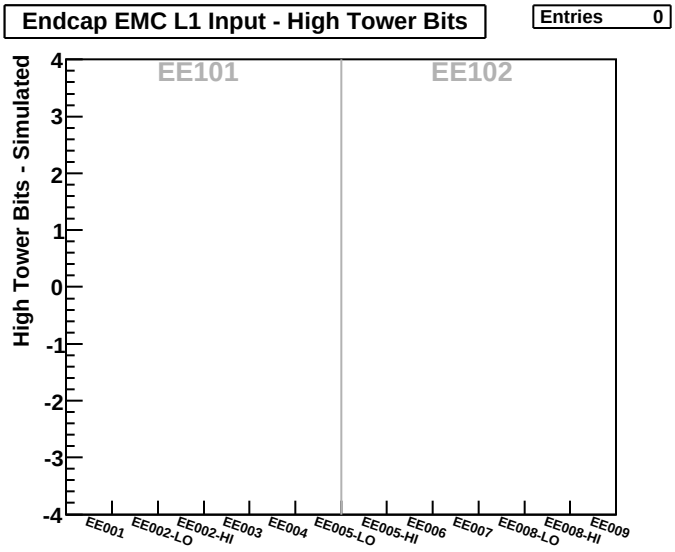

Endcap EMC L1 Input - Low Eta Sum
Entries 360000
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

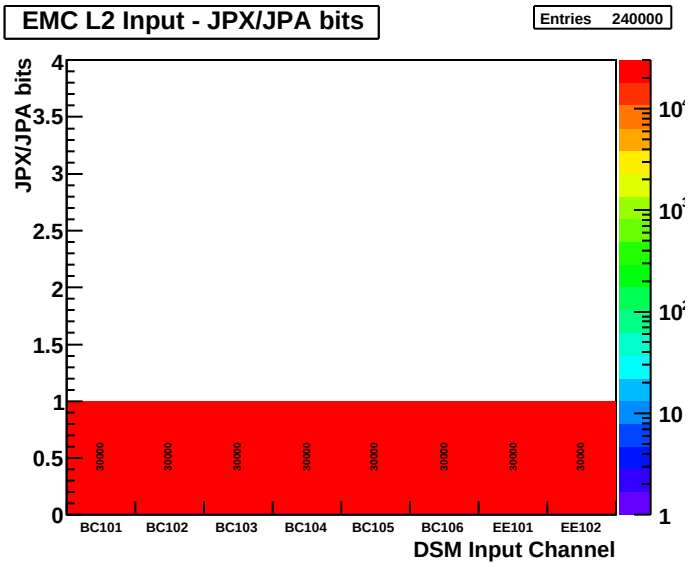

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

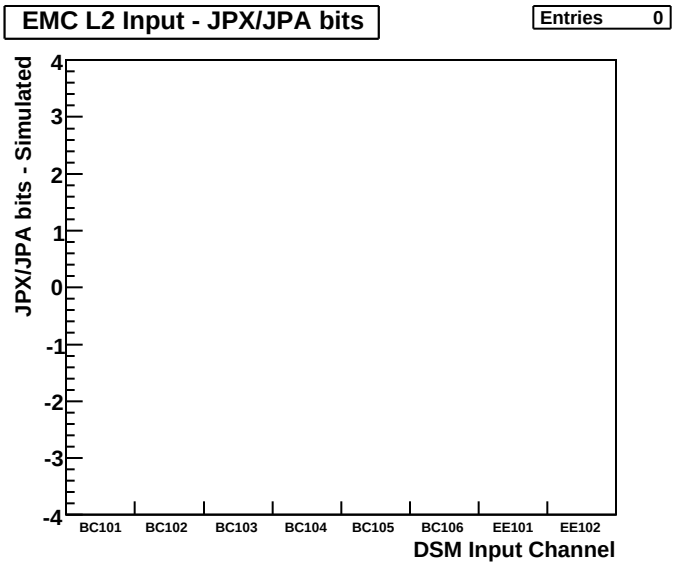

Endcap EMC L1 Input - High Eta Sum
Entries 360000
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

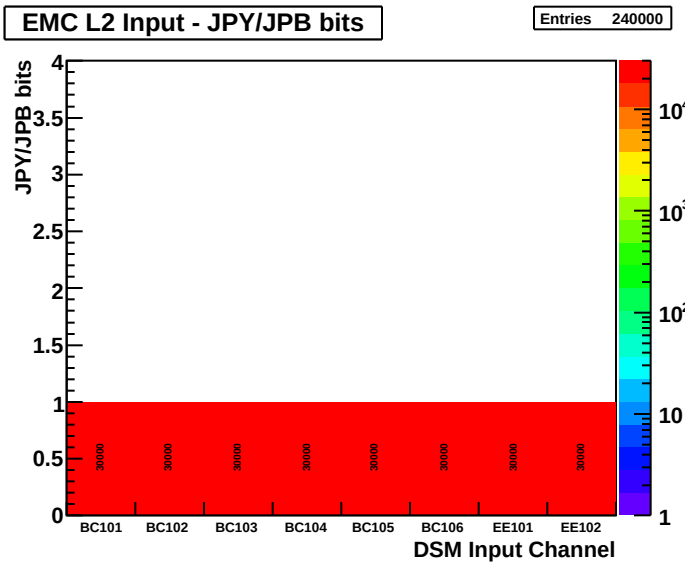

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

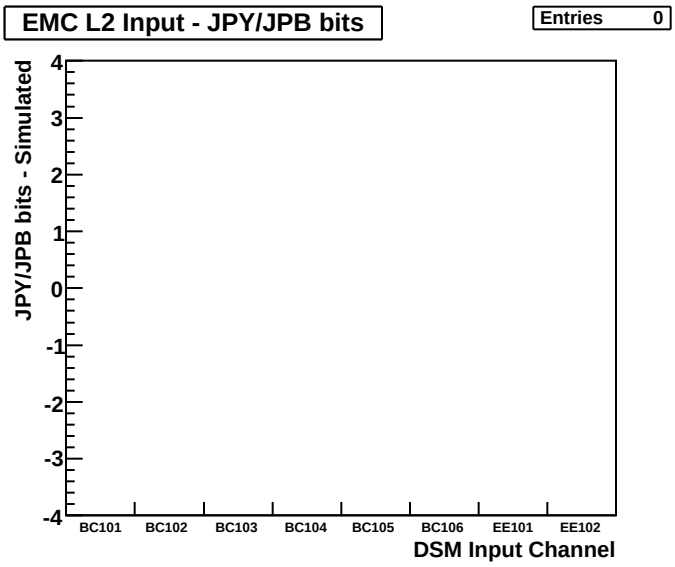

Endcap EMC L1 Input - High Tower Bits
Entries 360000
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

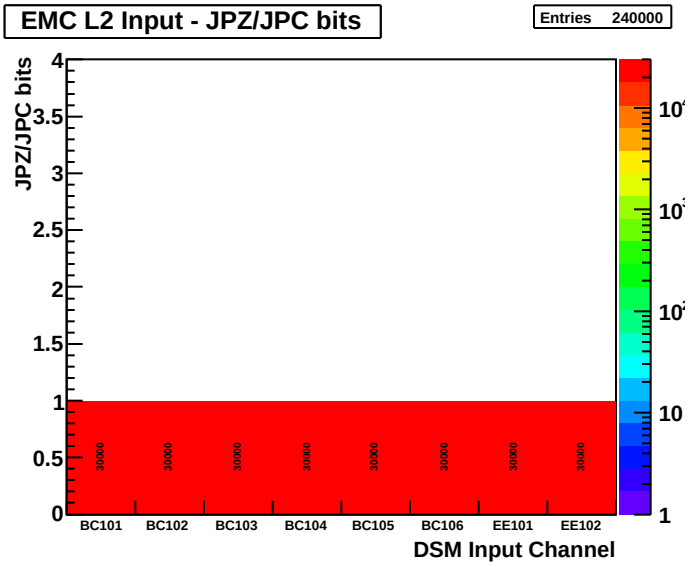

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

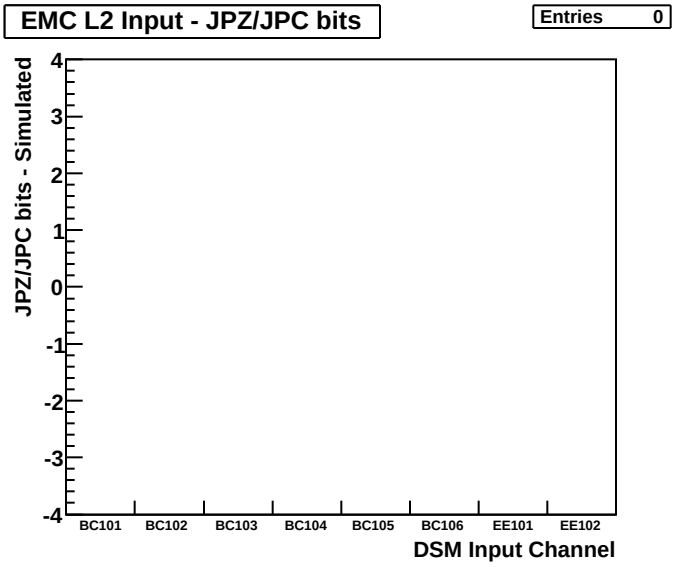

EMC L2 Input - JPX/JPA bits
Entries 240000
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
30000

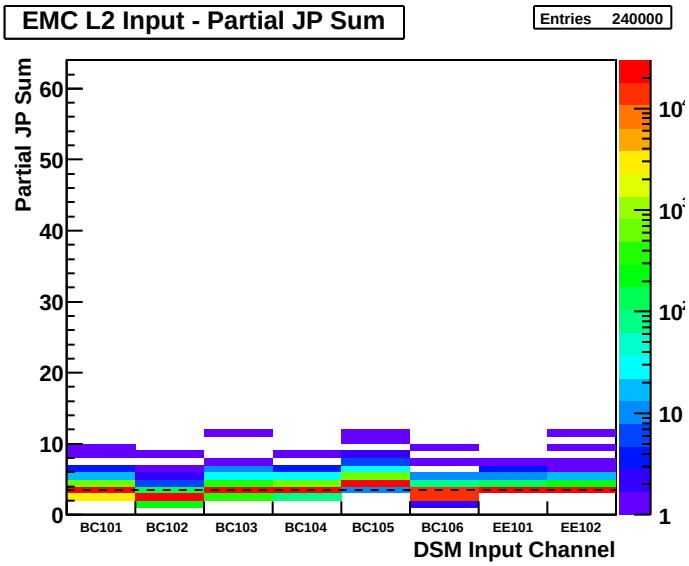

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

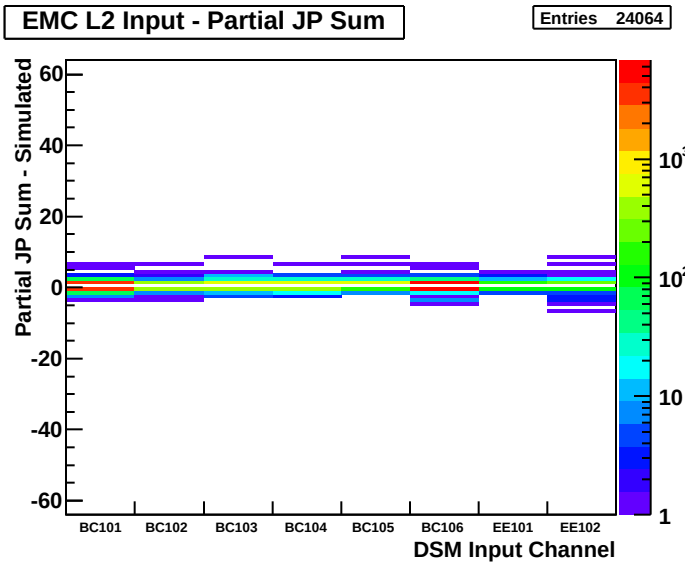

EMC L2 Input - JPY/JPB bits
Entries 240000
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
30000

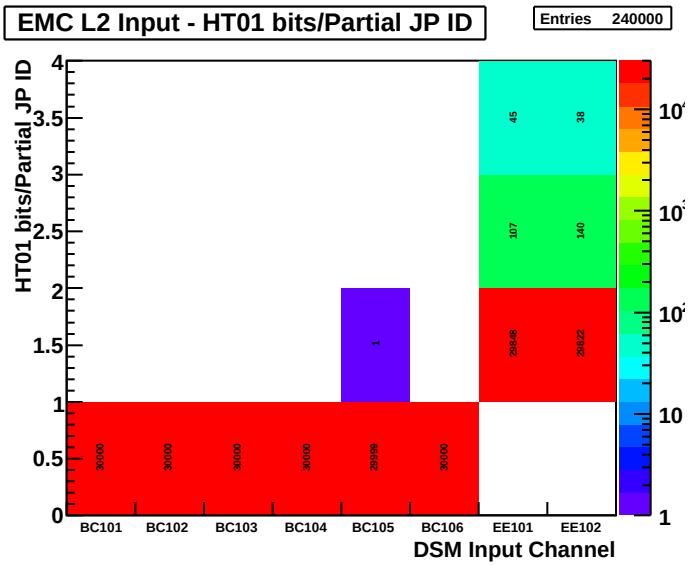

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

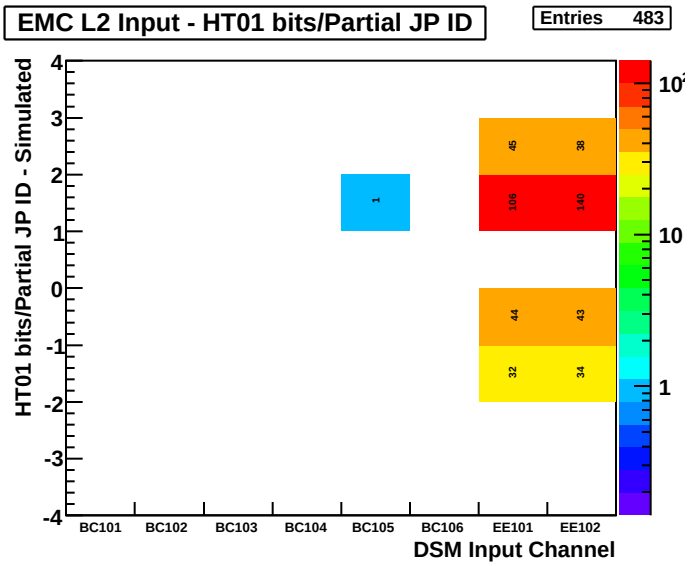

EMC L2 Input - JPZ/JPC bits
Entries 240000
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
30000

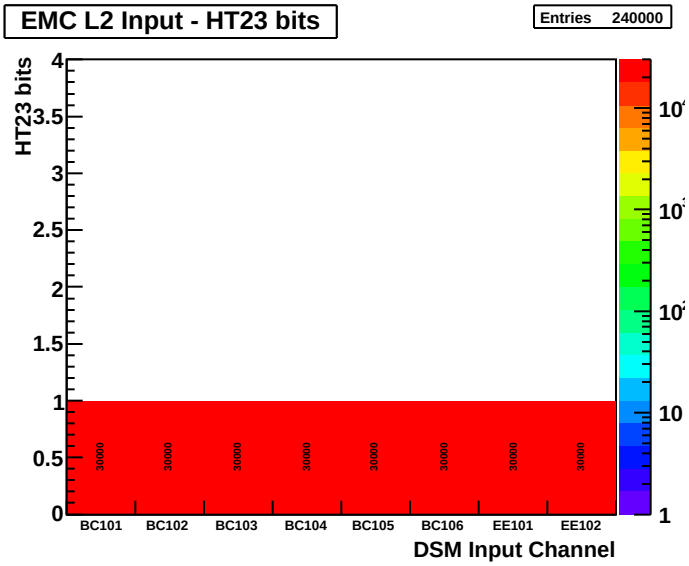

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

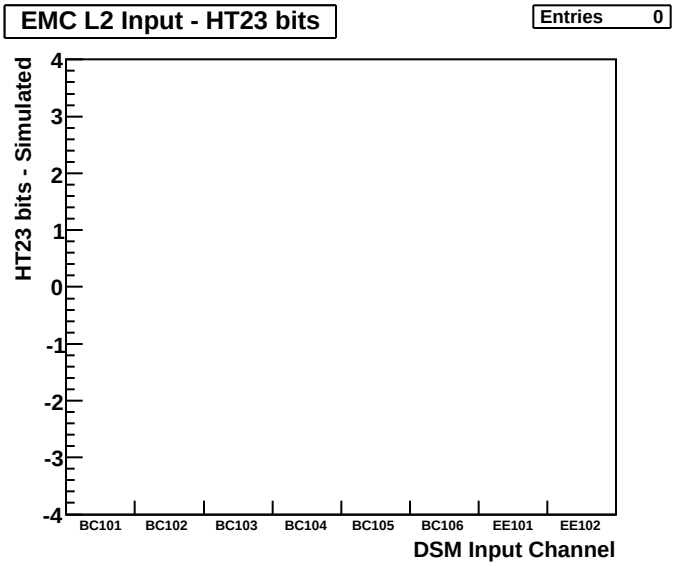

EMC L2 Input - Partial JP Sum
Entries 240000
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

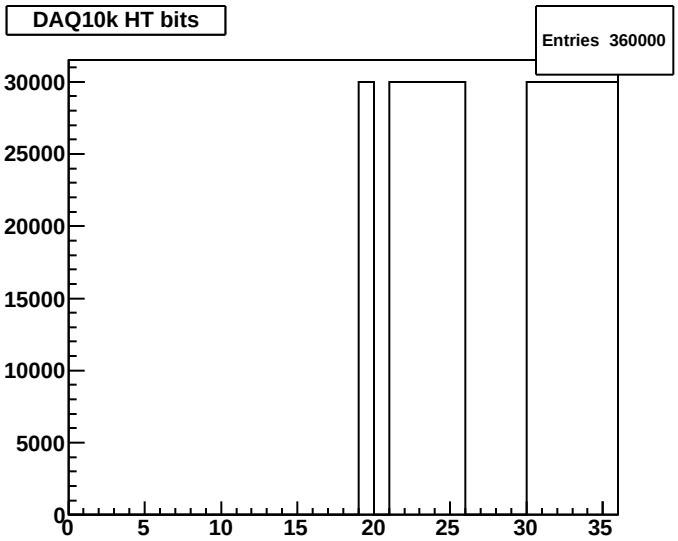

EMC L2 Input - Partial JP Sum
Entries 24064
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

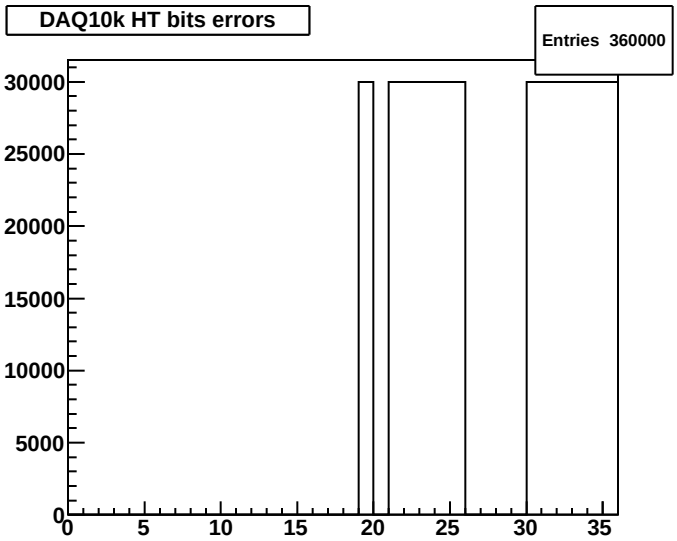

EMC L2 Input - HT01 bits/Partial JP ID
Entries 240000
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

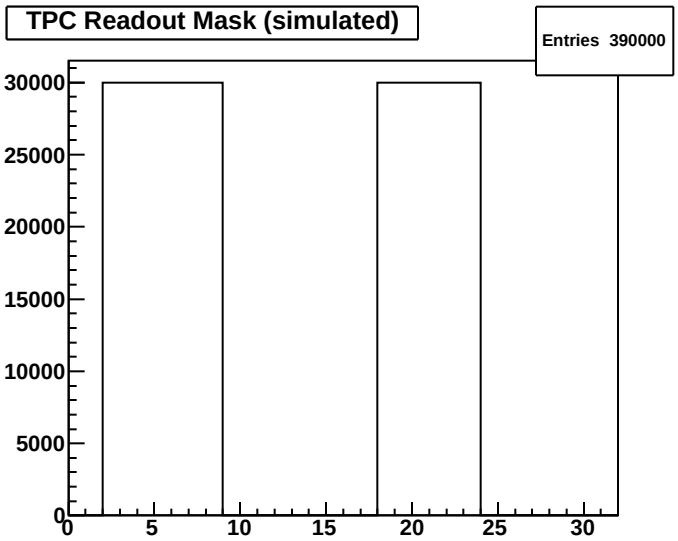

EMC L2 Input - HT01 bits/Partial JP ID
Entries 483
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

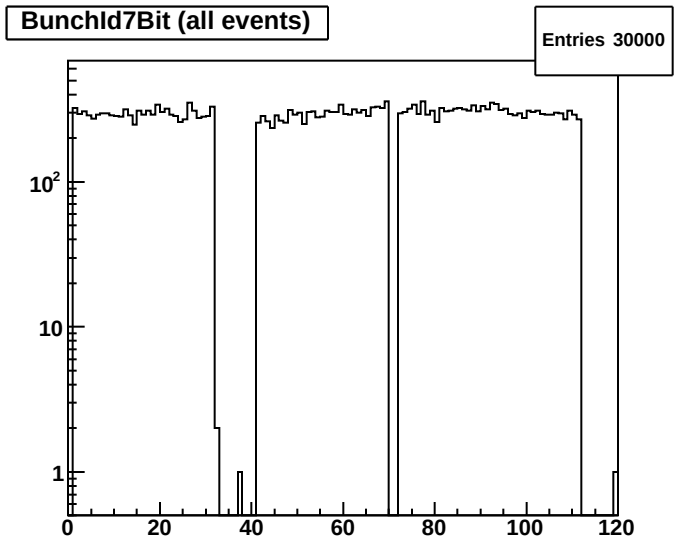

EMC L2 Input - HT23 bits
Entries 240000
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

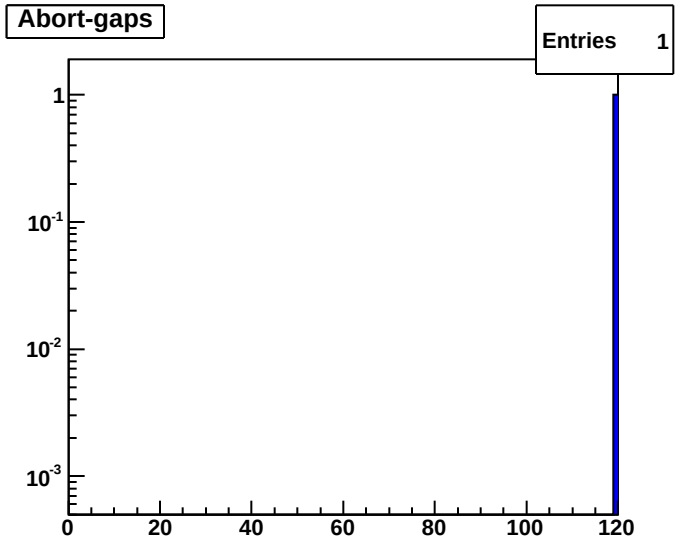

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

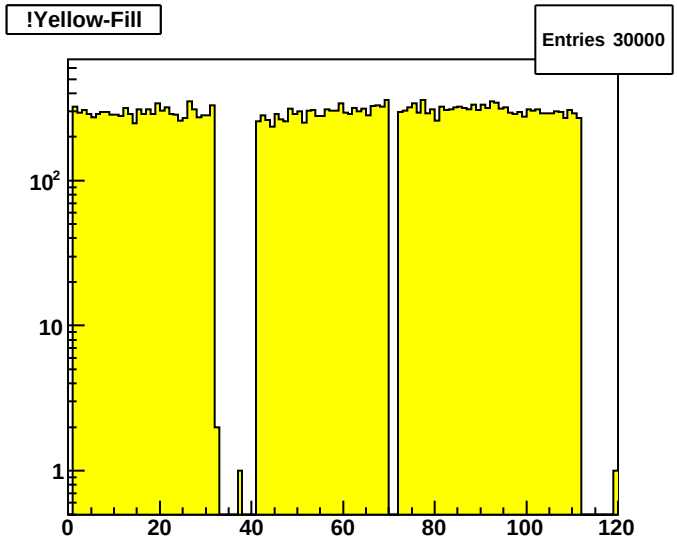

DAQ10k HT bits
Entries 360000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

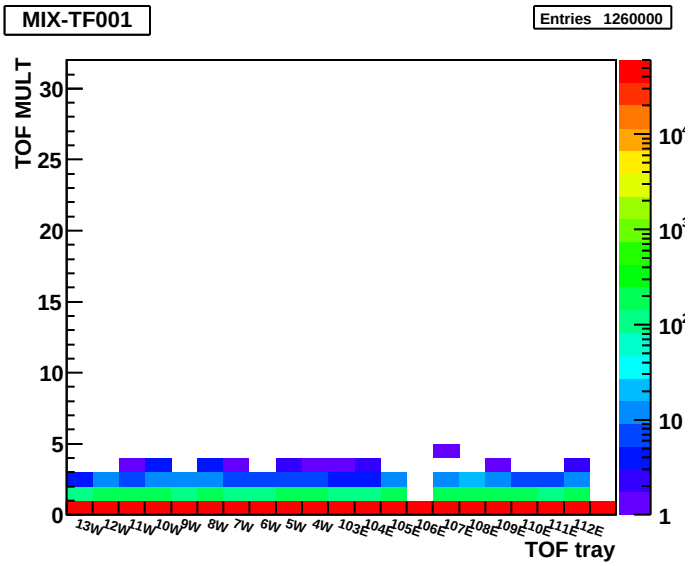

DAQ10k HT bits errors
Entries 360000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

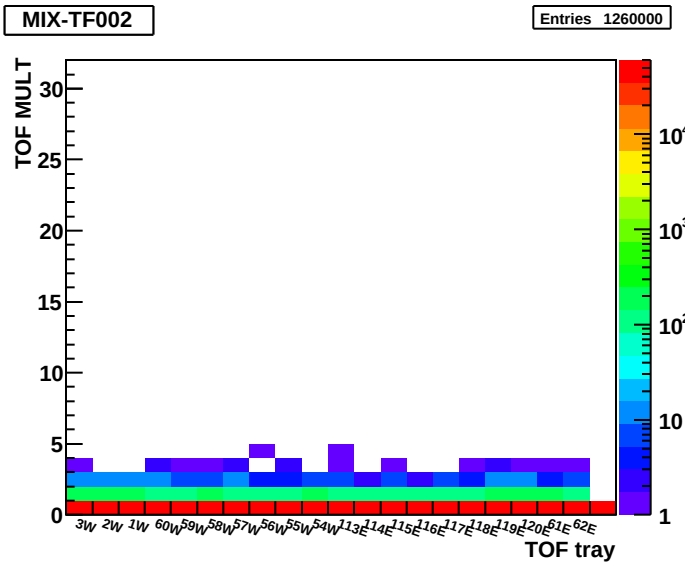

TPC Readout Mask (simulated)
Entries 390000
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30

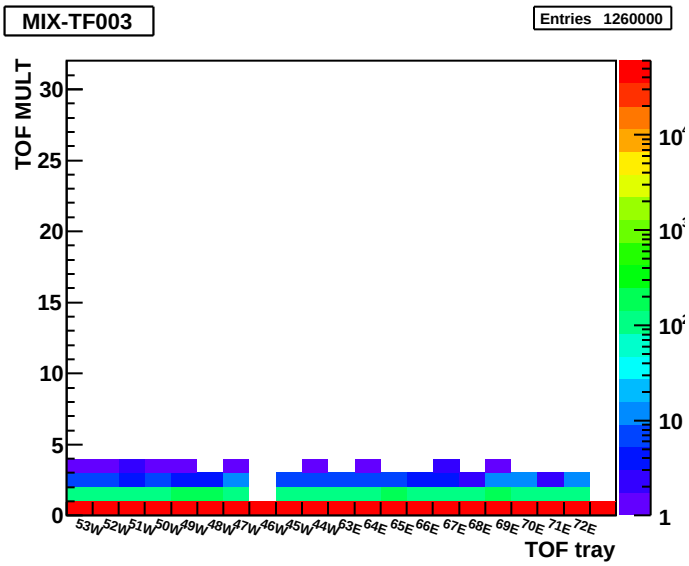

BunchId7Bit (all events)
Entries 30000
10^2
10
1
0 20 40 60 80 100 120

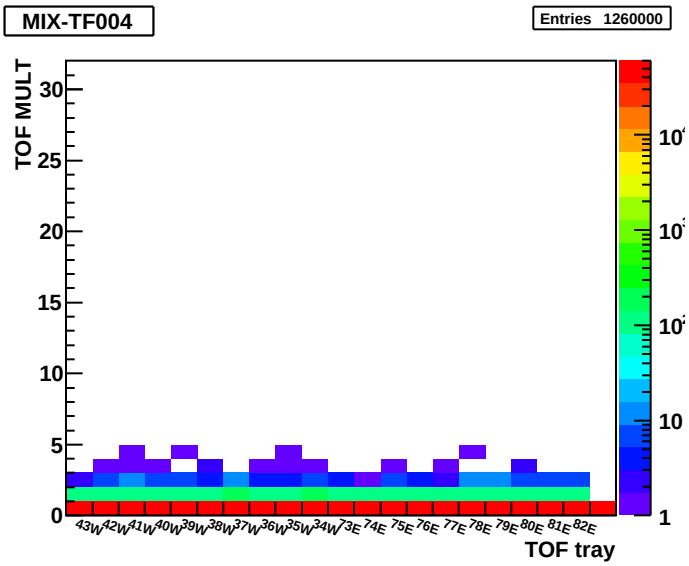

Abort-gaps
Entries 1
1
10^{-1}
10^{-2}
10^{-3}
0 20 40 60 80 100 120

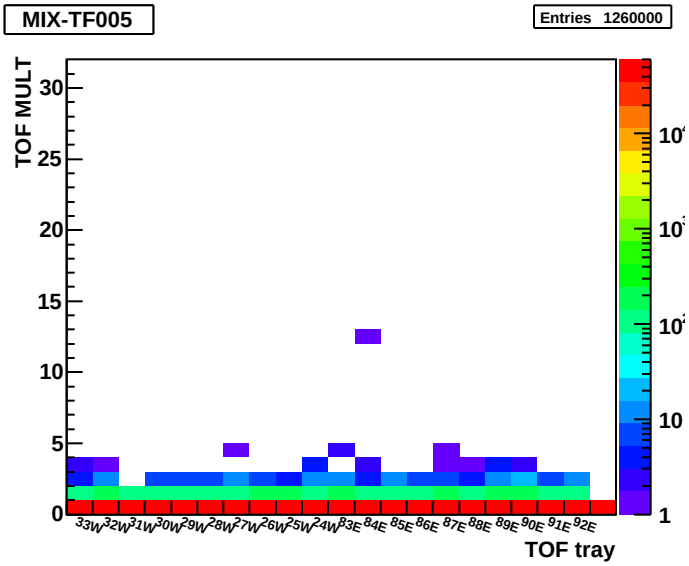

!Yellow-Fill
Entries 30000
10^2
10
1
0 20 40 60 80 100 120

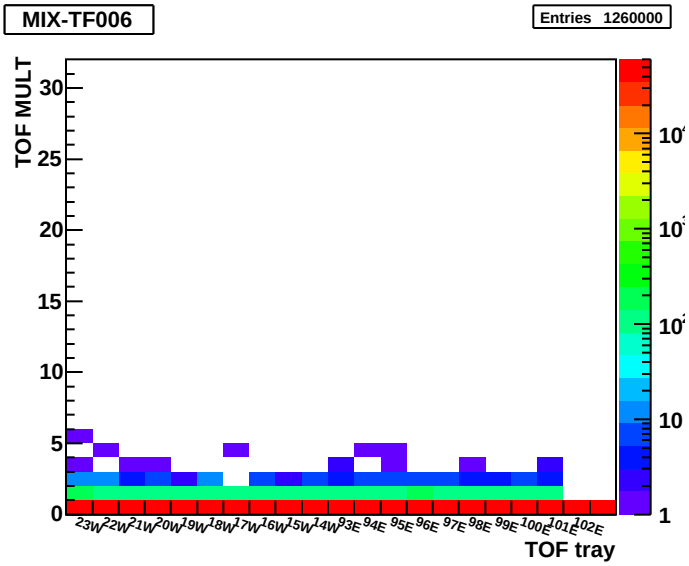

MIX-TF001
Entries 1260000
TOF MULT
TOF tray

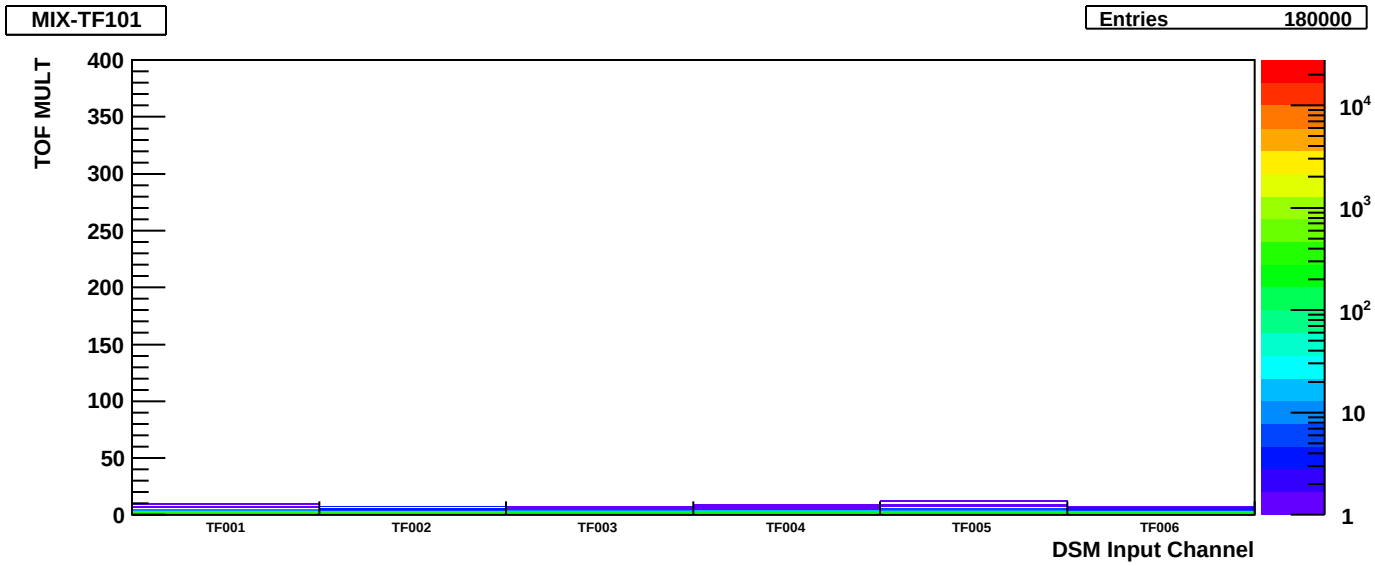

MIX-TF002
Entries 1260000
TOF MULT
TOF tray

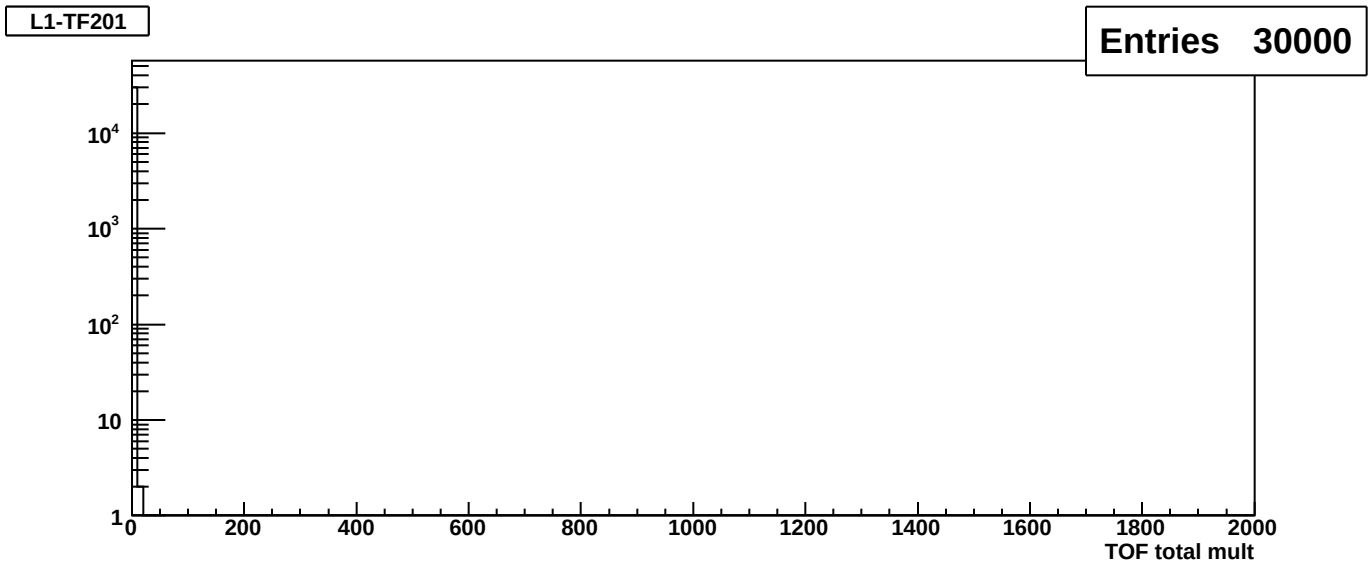

MIX-TF003
Entries 1260000
TOF MULT
TOF tray

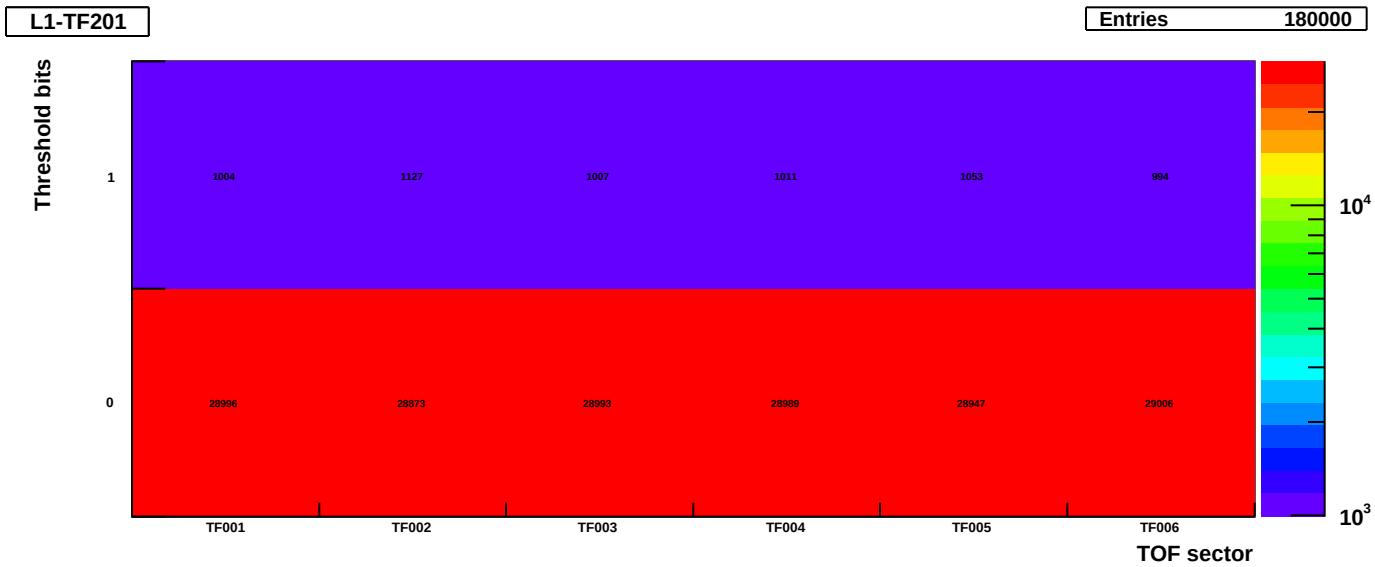

MIX-TF004
Entries 1260000
TOF MULT
TOF tray

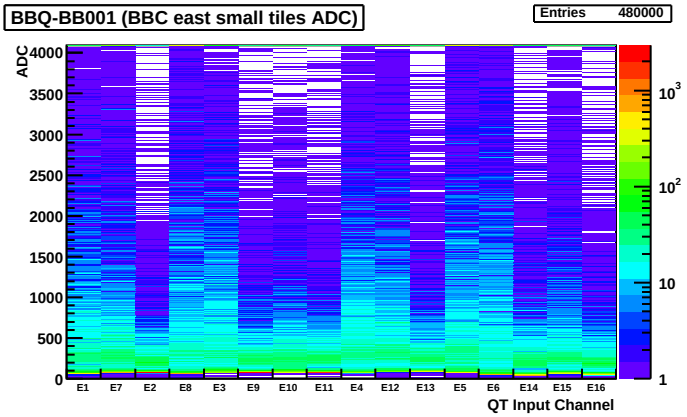

MIX-TF005
Entries 1260000
TOF MULT
TOF tray

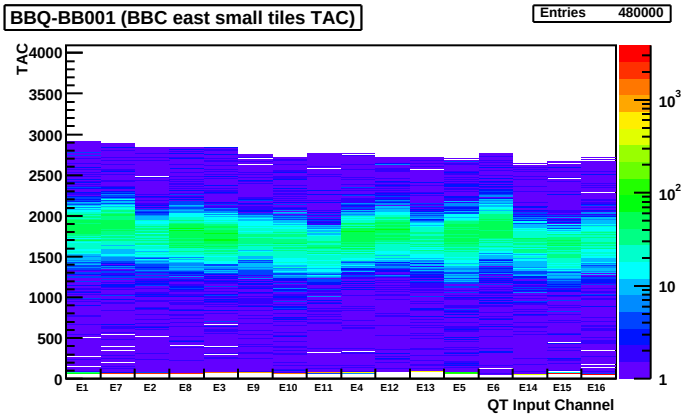

MIX-TF006
Entries 1260000
TOF MULT
TOF tray

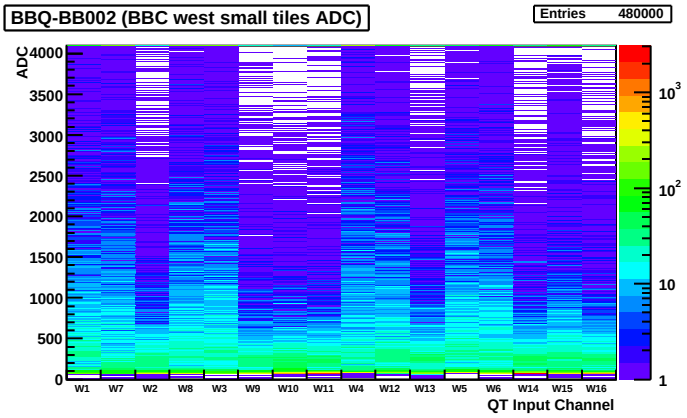

MIX-TF101
Entries 180000
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

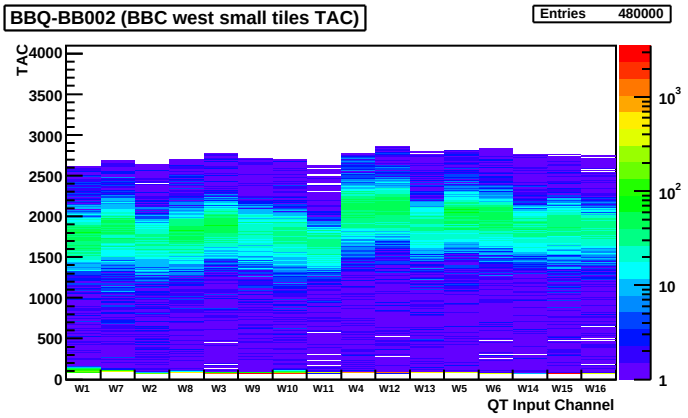

L1-TF201
Entries 30000
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

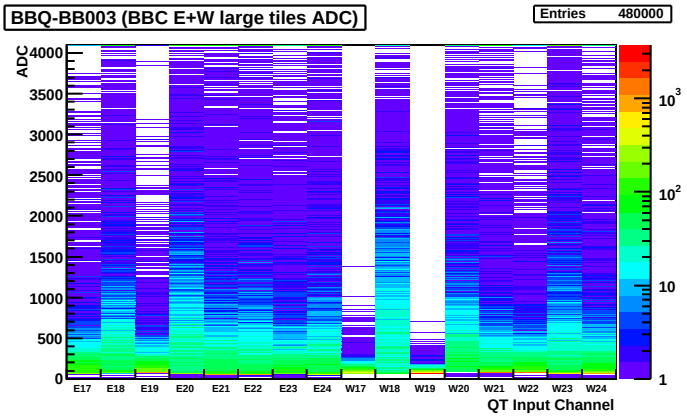

L1-TF201
Entries 180000
Threshold bits
1
0
1004
1127
1007
1011
1053
994
28996
28873
28993
28989
28947
29006
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4
10^3

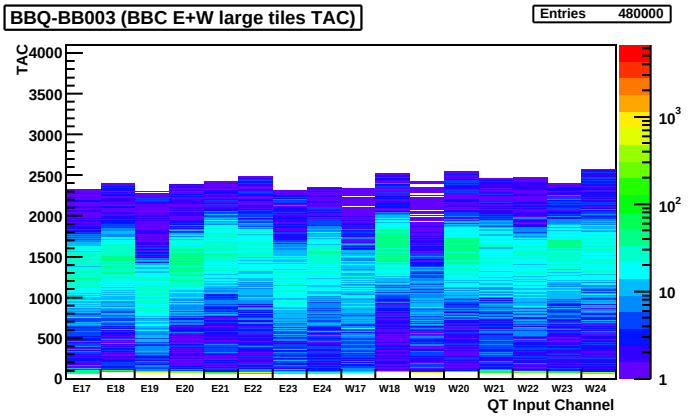

BBQ-BB001 (BBC east small tiles ADC)
Entries 480000
ADC
QT Input Channel

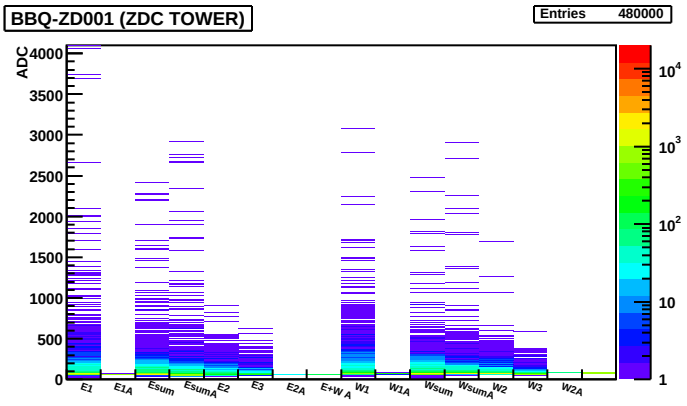

BBQ-BB001 (BBC east small tiles TAC)
Entries 480000
TAC
QT Input Channel

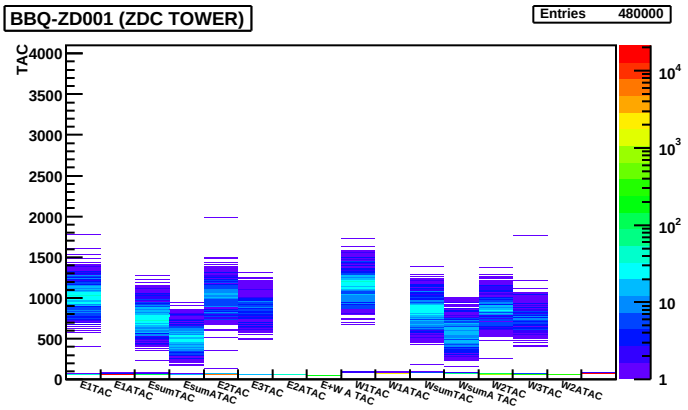

BBQ-BB002 (BBC west small tiles ADC)
Entries 480000
ADC
QT Input Channel

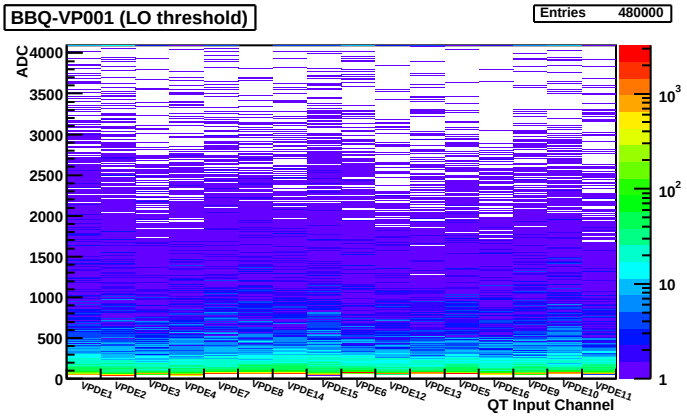

BBQ-BB002 (BBC west small tiles TAC)
Entries 480000
TAC
QT Input Channel

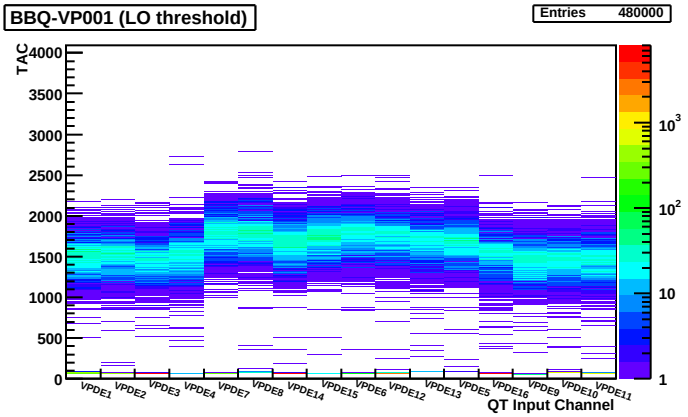

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 480000
ADC
QT Input Channel

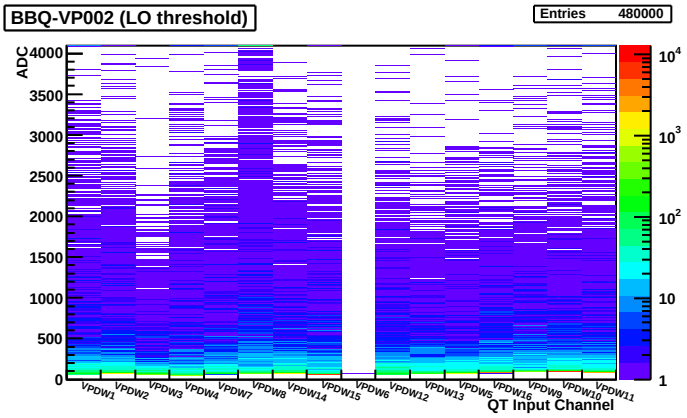

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 480000
TAC
QT Input Channel

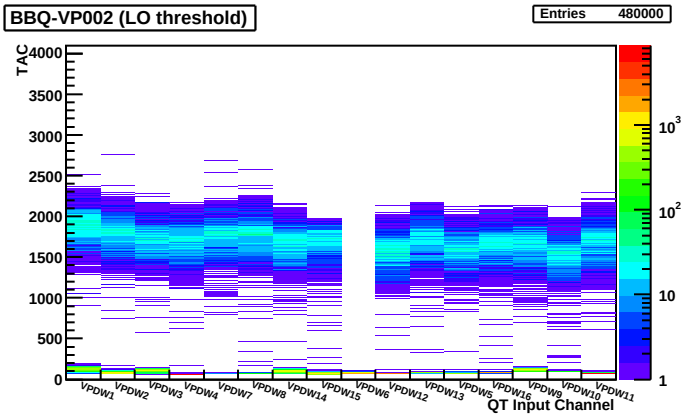

BBQ-ZD001 (ZDC TOWER)
Entries 480000
ADC

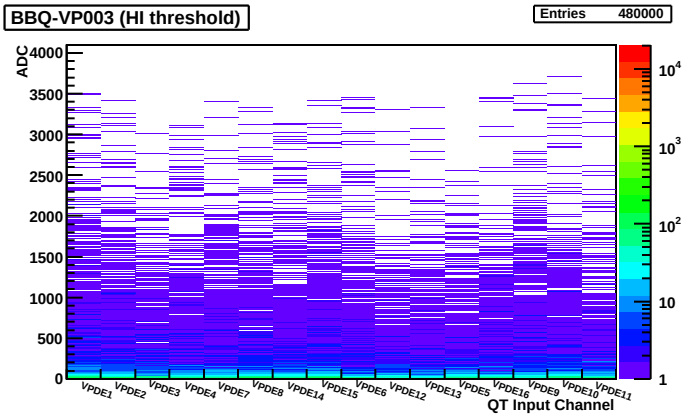

BBQ-ZD001 (ZDC TOWER)
Entries 480000
TAC

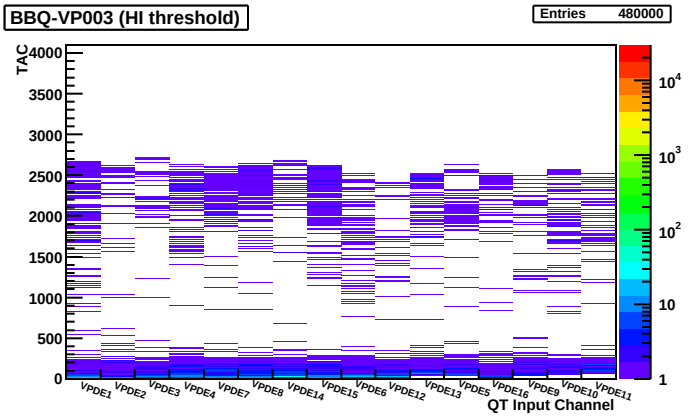

BBQ-VP001 (LO threshold)
Entries 480000
ADC
QT Input Channel

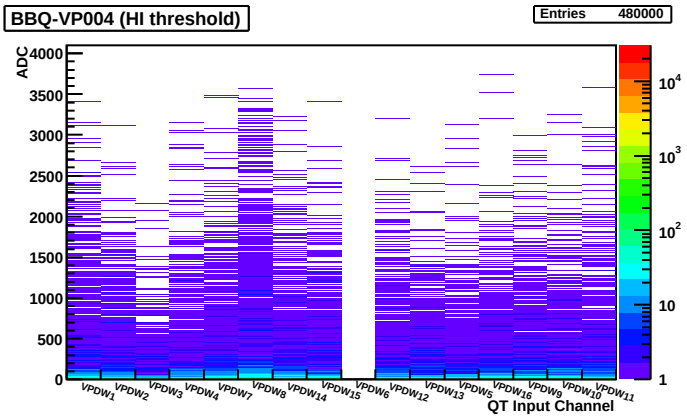

BBQ-VP001 (LO threshold)
Entries 480000
TAC
QT Input Channel

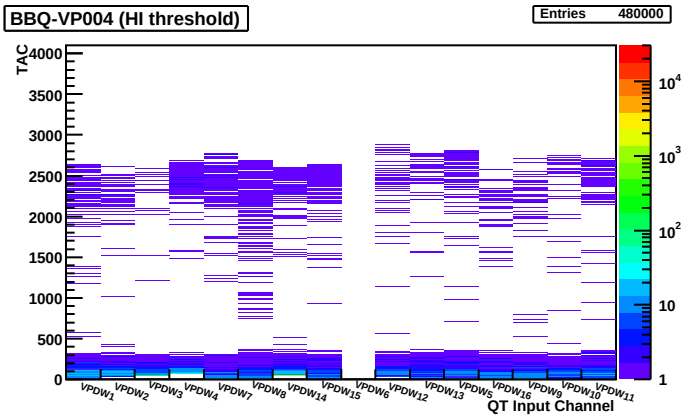

BBQ-VP002 (LO threshold)
Entries 480000
ADC
QT Input Channel

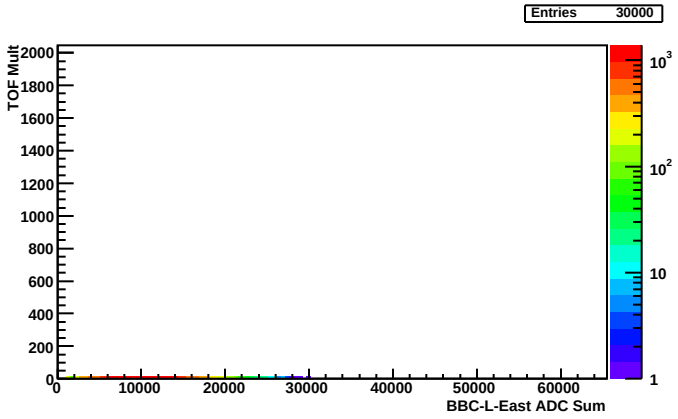

BBQ-VP002 (LO threshold)
Entries 480000
TAC
QT Input Channel

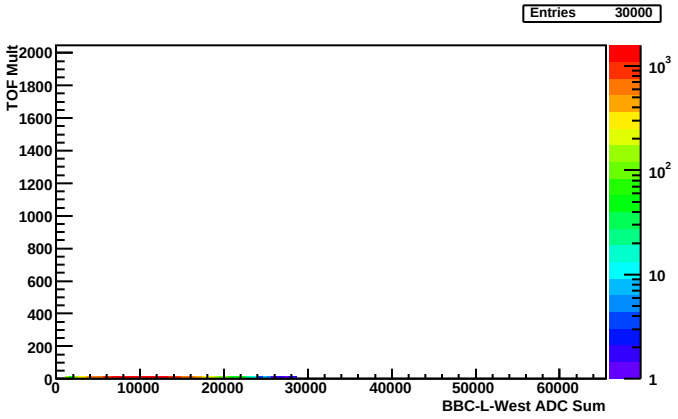

BBQ-VP003 (HI threshold)
Entries 480000
ADC
QT Input Channel

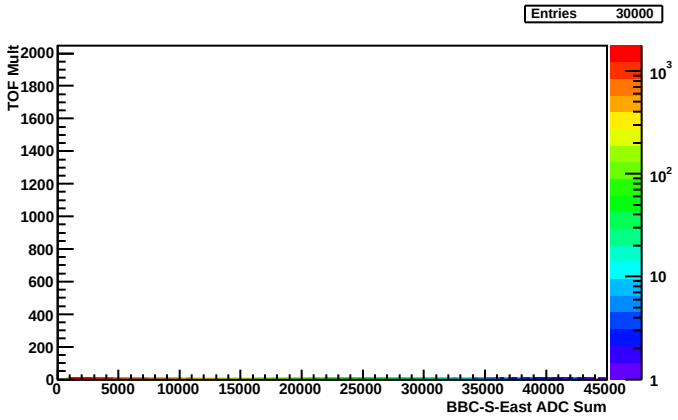

BBQ-VP003 (HI threshold)
Entries 480000
TAC
QT Input Channel

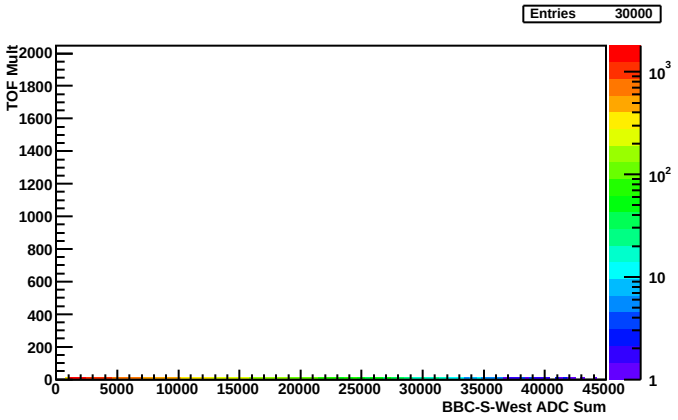

BBQ-VP004 (HI threshold)
Entries 480000
ADC
QT Input Channel

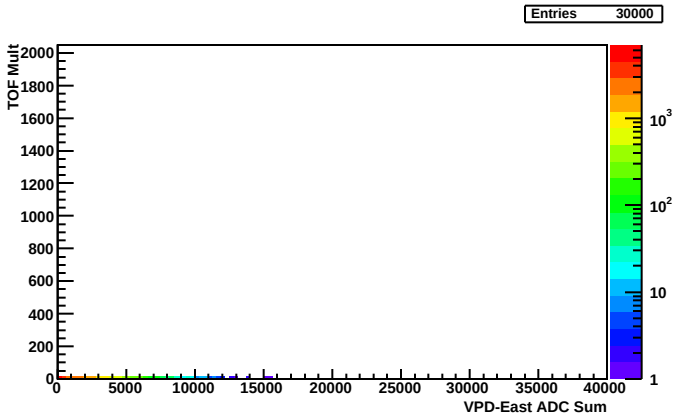

BBQ-VP004 (HI threshold)
Entries 480000
TAC
QT Input Channel

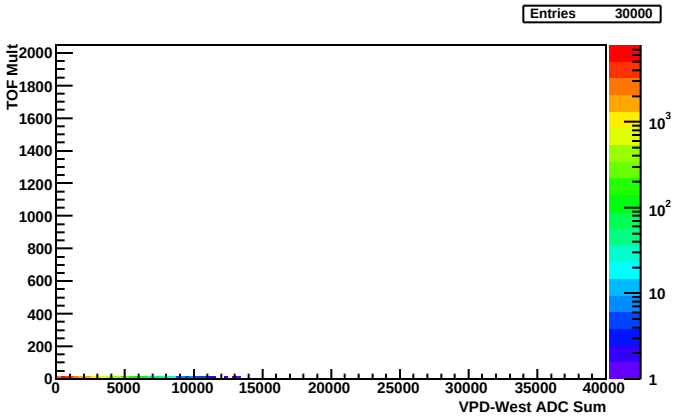

Entries 30000
TOF Mult
BBC-L-East ADC Sum

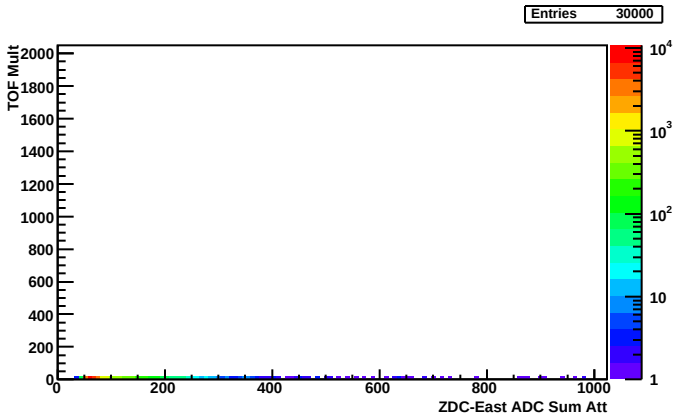

Entries 30000
TOF Mult
BBC-L-West ADC Sum

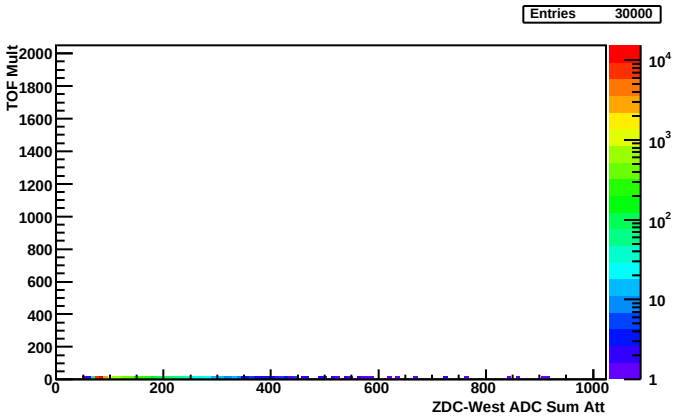

Entries 30000
TOF Mult
BBC-S-East ADC Sum

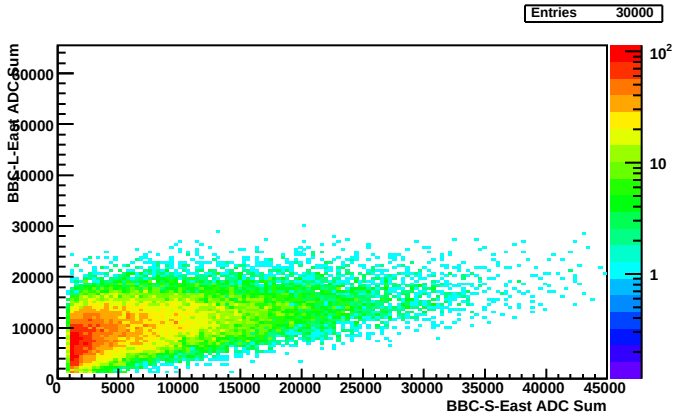

Entries 30000
TOF Mult
BBC-S-West ADC Sum

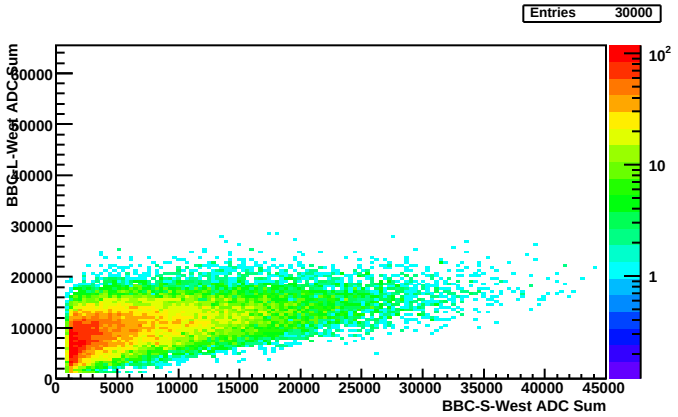

Entries 30000
TOF Mult
VPD-East ADC Sum

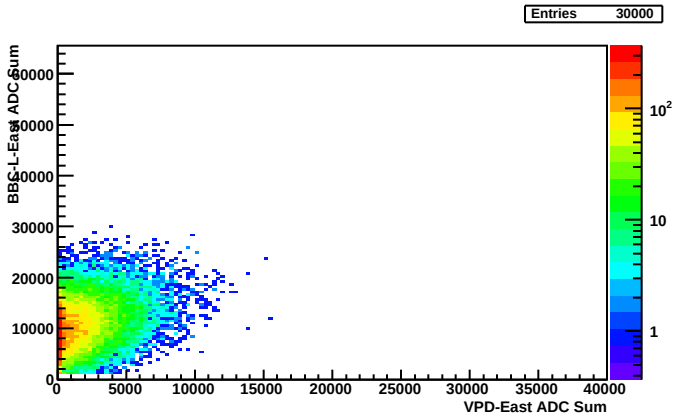

Entries 30000
TOF Mult
VPD-West ADC Sum

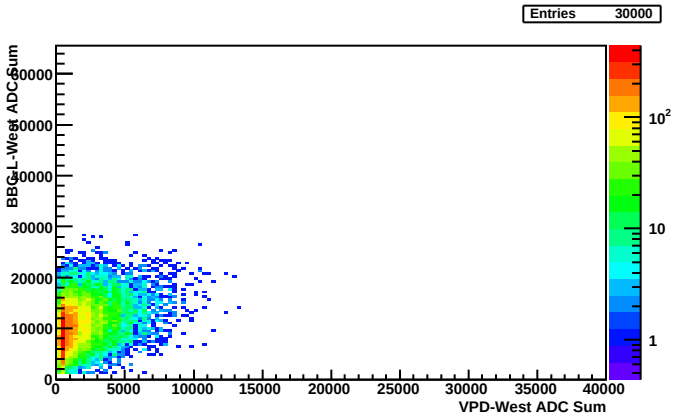

Entries 30000
TOF Mult
ZDC-East ADC Sum Att

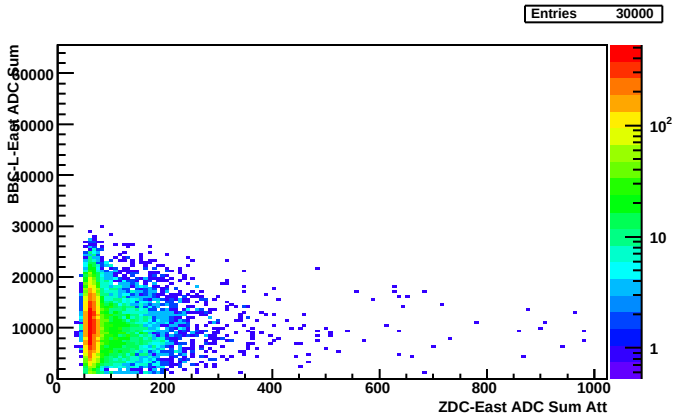

Entries 30000
TOF Mult
ZDC-West ADC Sum Att

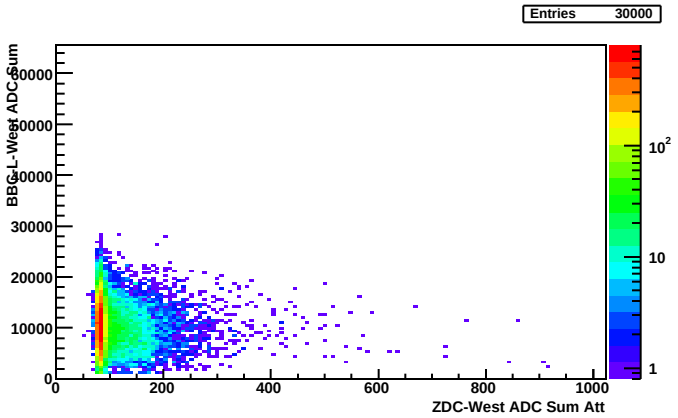

Entries 30000
BBC-L-East ADC Sum
BBC-S-East ADC Sum

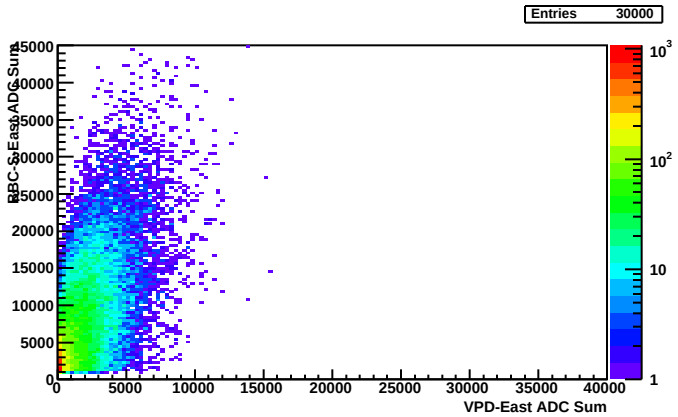

Entries 30000
BBC-L-West ADC Sum
BBC-S-West ADC Sum

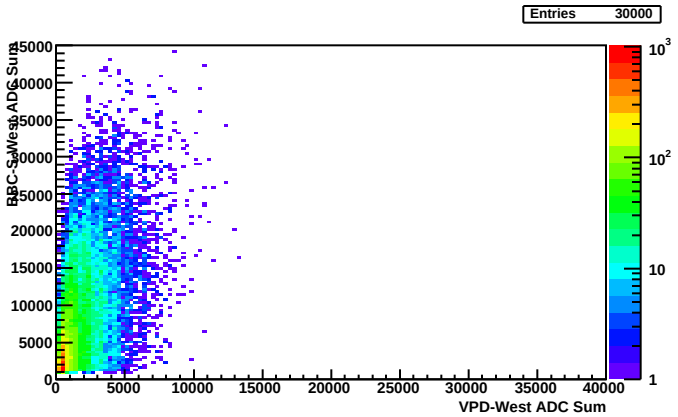

Entries 30000
BBC-L-East ADC Sum
VPD-East ADC Sum

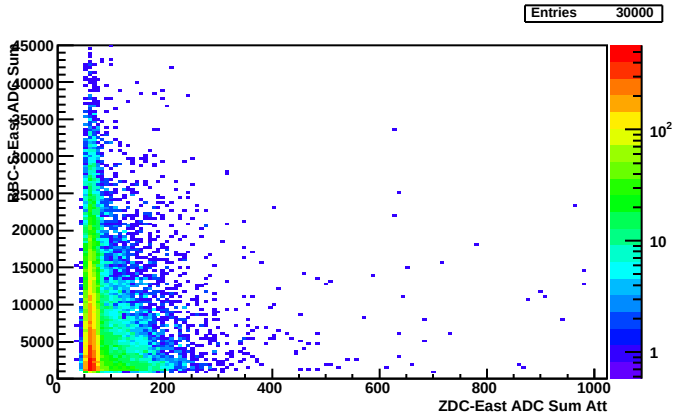

Entries 30000
BBC-L-West ADC Sum
VPD-West ADC Sum

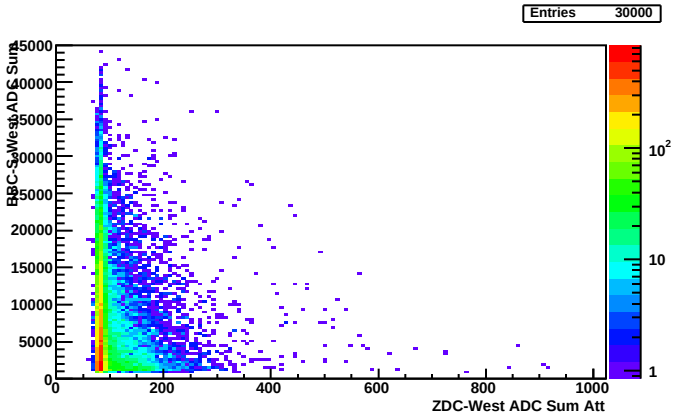

Entries 30000
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

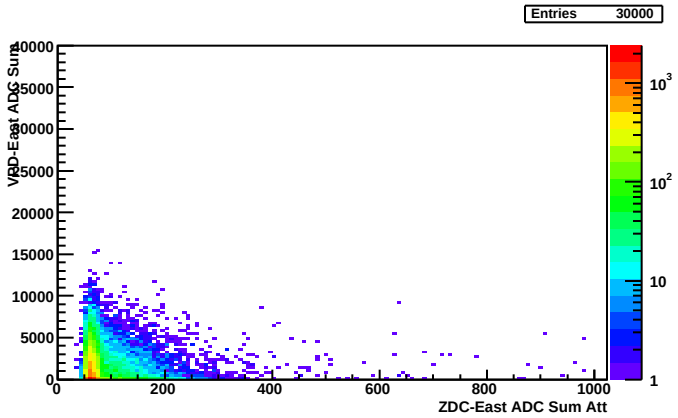

Entries 30000
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

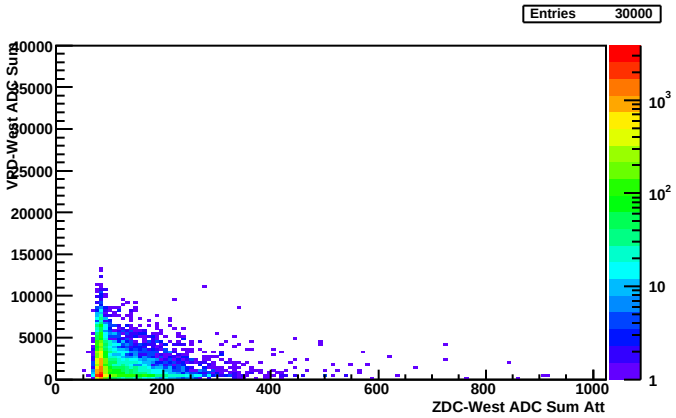

Entries 30000
BBC-S-East ADC Sum
VPD-East ADC Sum

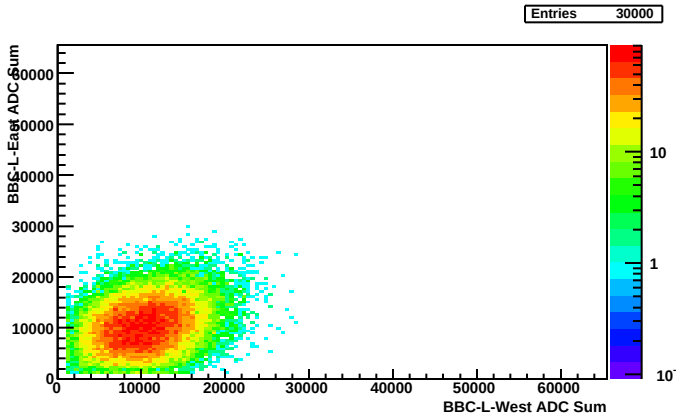

Entries 30000
BBC-S-West ADC Sum
VPD-West ADC Sum

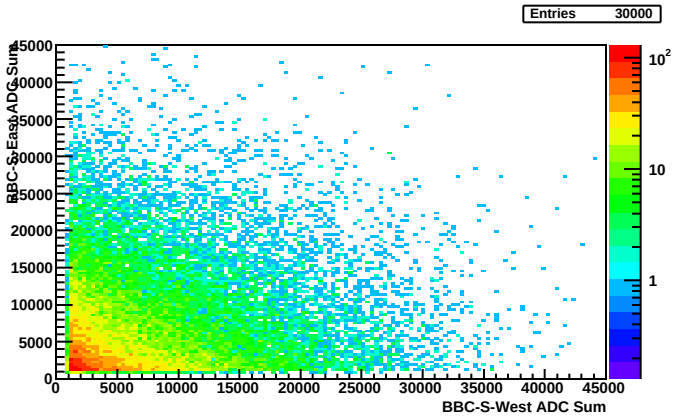

Entries 30000
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

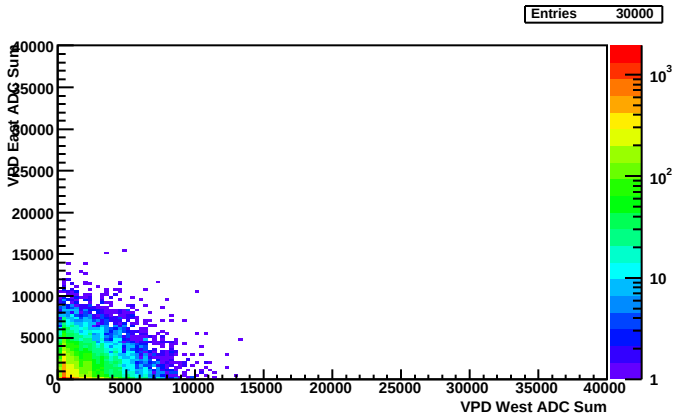

Entries 30000
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

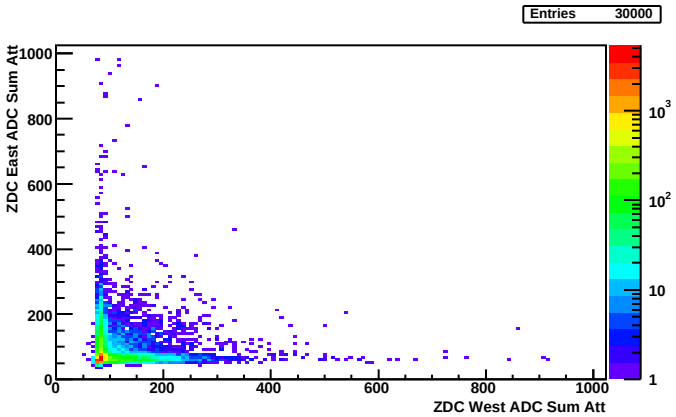

Entries 30000
VPD-East ADC Sum
ZDC-East ADC Sum Att

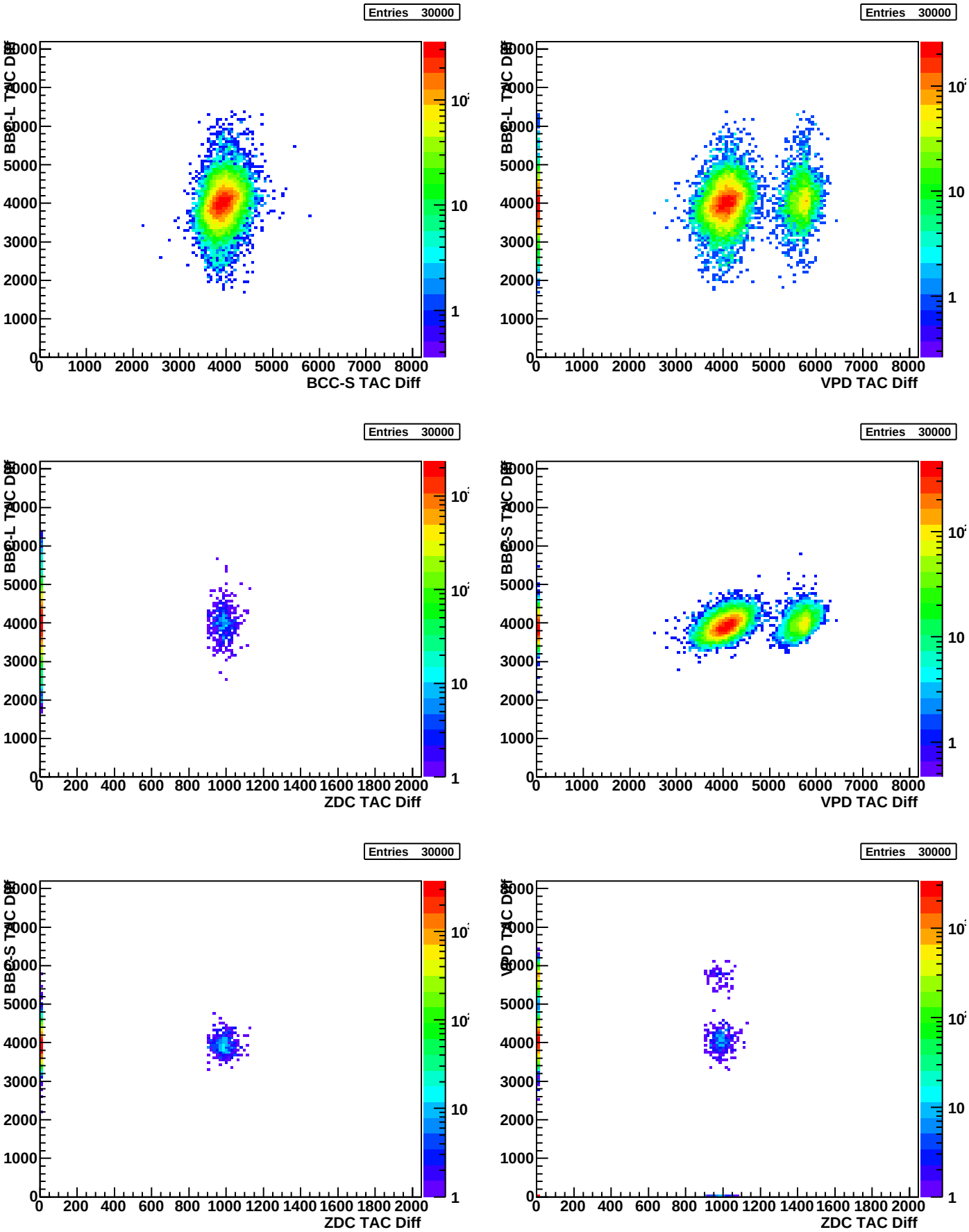

Entries 30000
VPD-West ADC Sum
ZDC-West ADC Sum Att

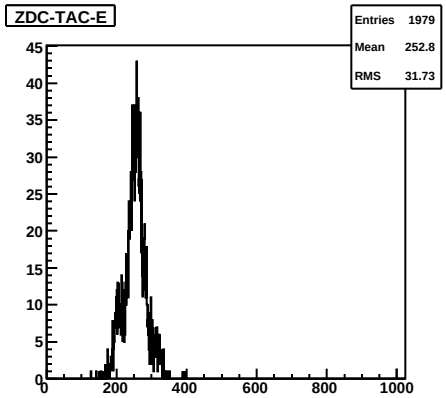

Entries 30000
BBC-L-East ADC Sum
BBC-L-West ADC Sum

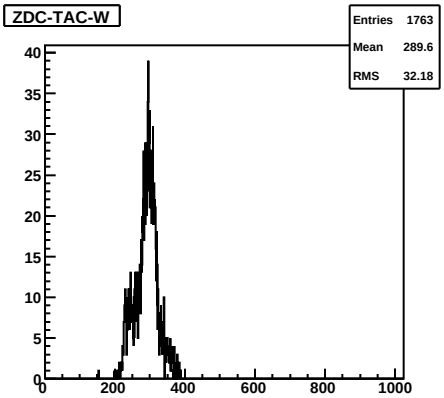

Entries 30000
BBC-S-East ADC Sum
BBC-S-West ADC Sum

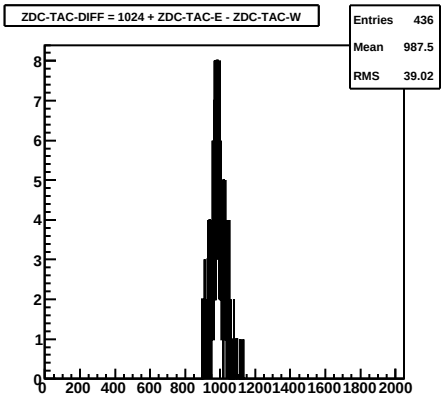

Entries 30000
VPD East ADC Sum
VPD West ADC Sum

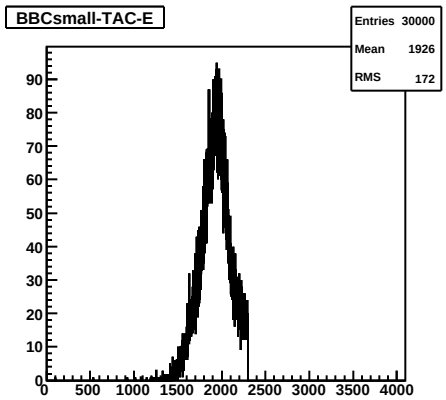

Entries 30000
ZDC East ADC Sum Att
ZDC West ADC Sum Att

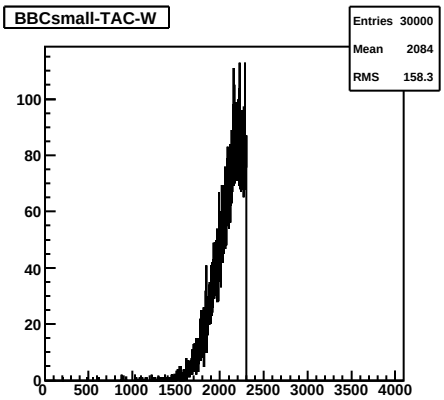

Entries 30000
BBC-L TAC Diff
BCC-S TAC Diff
Entries 30000
BBC-L TAC Diff
VPD TAC Diff
Entries 30000
BBC-L TAC Diff
ZDC TAC Diff
Entries 30000
BBC-S TAC Diff
VPD TAC Diff
Entries 30000
BBC-S TAC Diff
ZDC TAC Diff
Entries 30000
VPD TAC Diff
ZDC TAC Diff

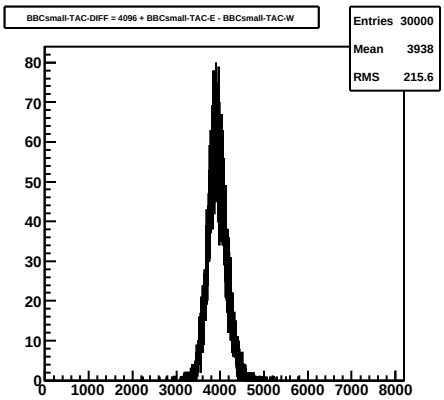

ZDC-TAC-E
Entries 1979
Mean 252.8
RMS 31.73

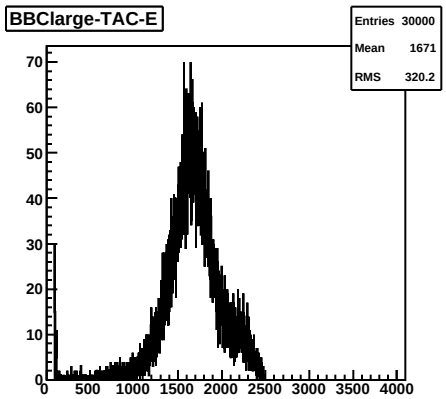

ZDC-TAC-W
Entries 1763
Mean 289.6
RMS 32.18

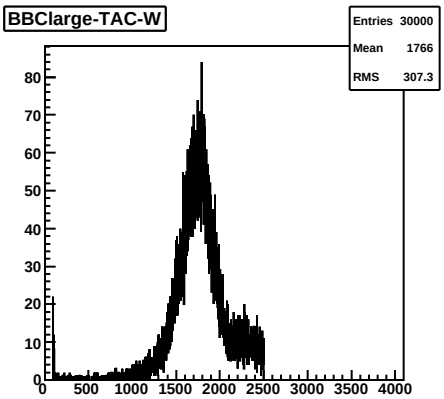

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 436
Mean 987.5
RMS 39.02

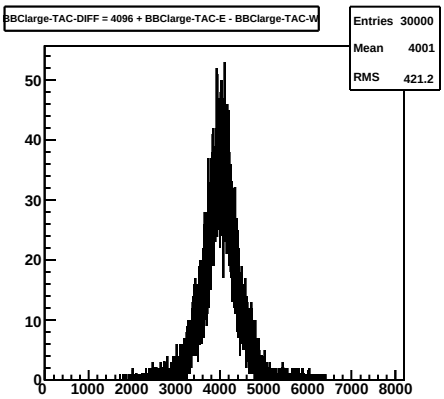

BBCsmall-TAC-E
Entries 30000
Mean 1926
RMS 172

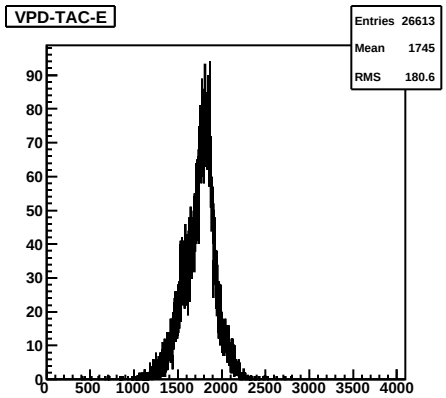

BBCsmall-TAC-W
Entries 30000
Mean 2084
RMS 158.3

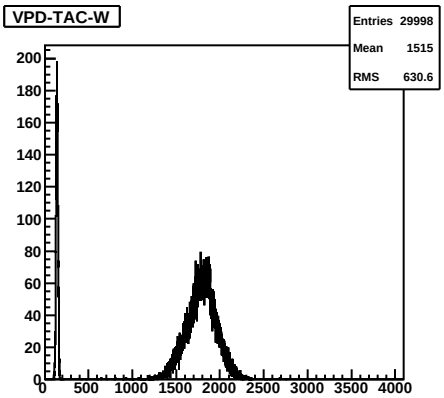

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 30000
Mean 3938
RMS 215.6

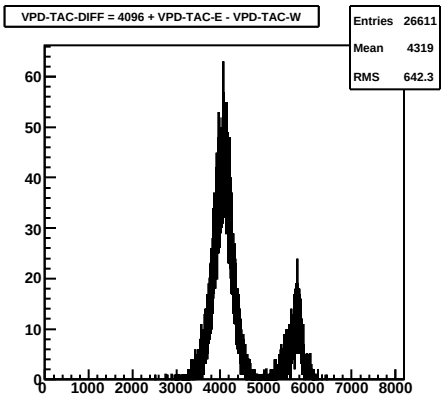

BBClarge-TAC-E
Entries 30000
Mean 1671
RMS 320.2

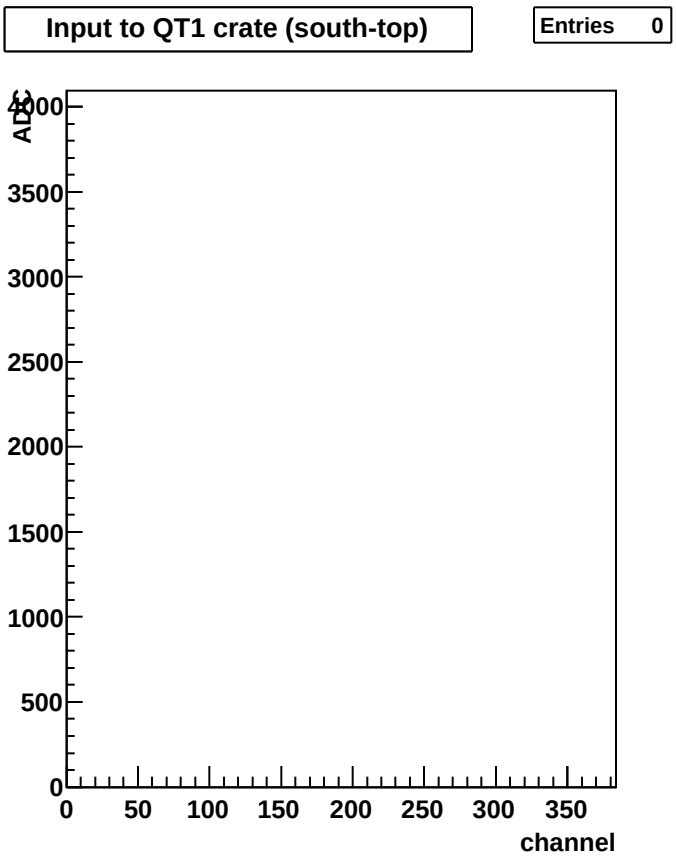

BBClarge-TAC-W
Entries 30000
Mean 1766
RMS 307.3

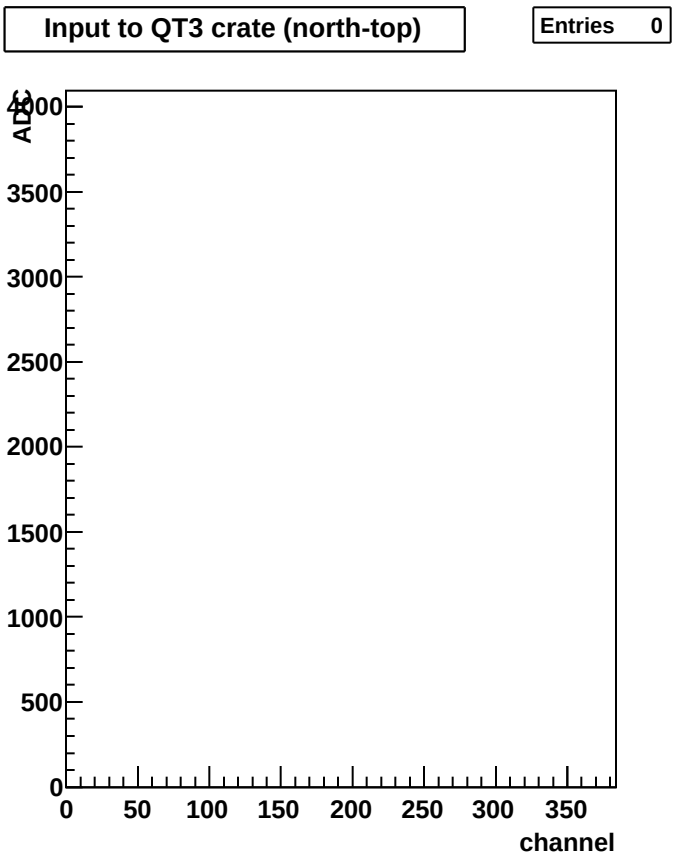

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 30000
Mean 4001
RMS 421.2

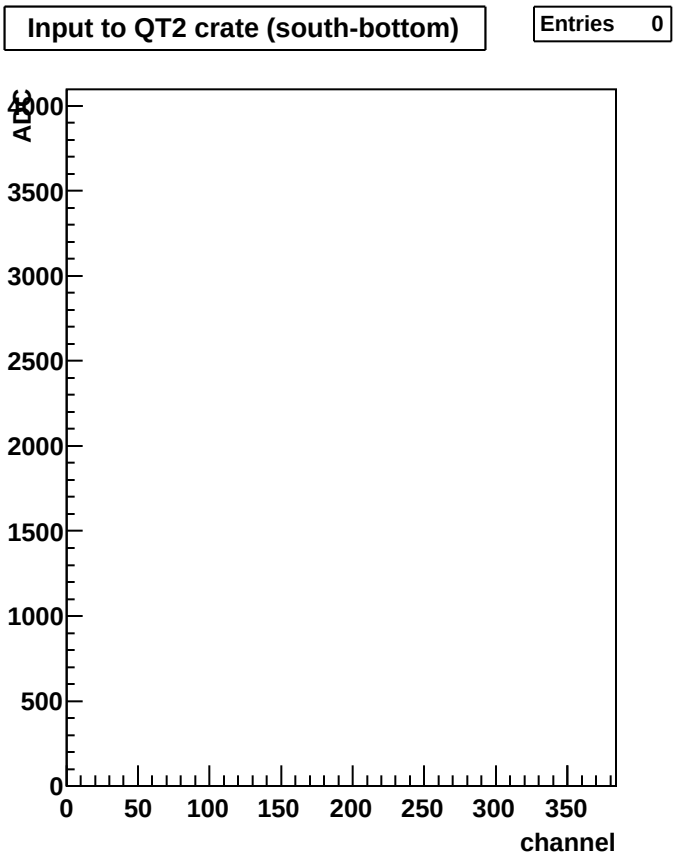

VPD-TAC-E
Entries 26613
Mean 1745
RMS 180.6

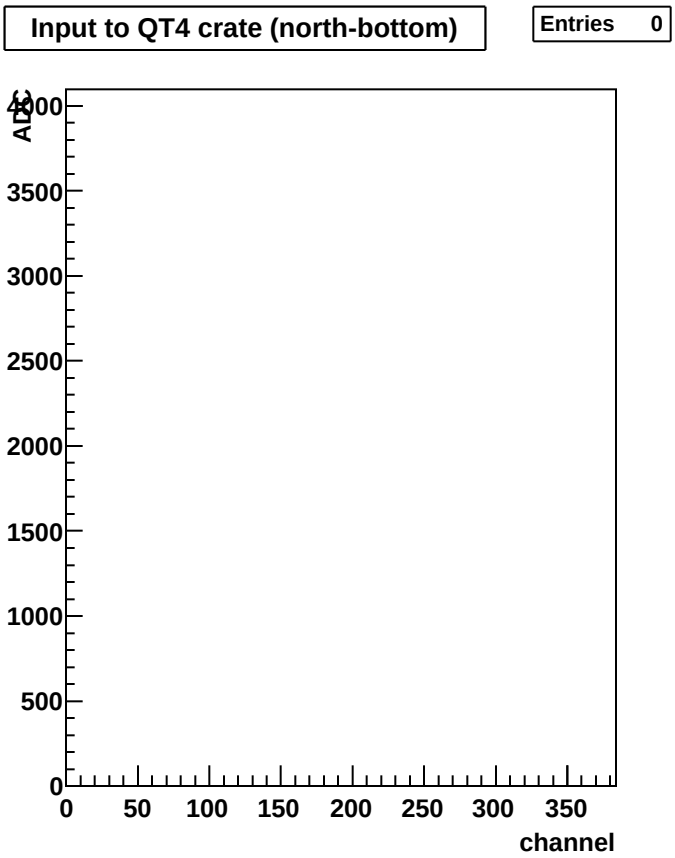

VPD-TAC-W
Entries 29998
Mean 1515
RMS 630.6

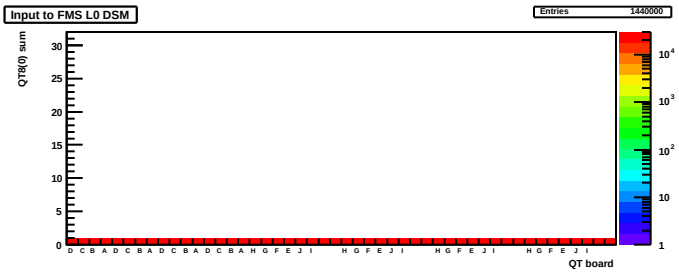

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 26611
Mean 4319
RMS 642.3

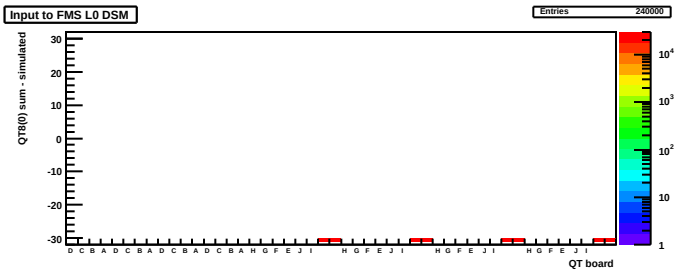

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

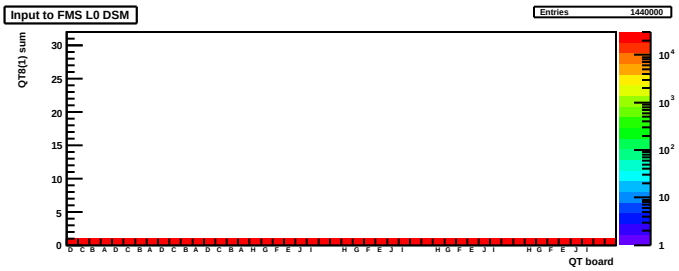

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

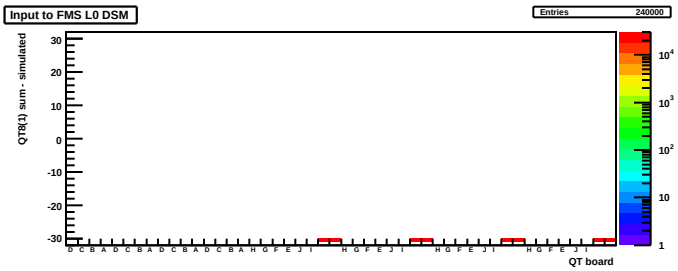

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

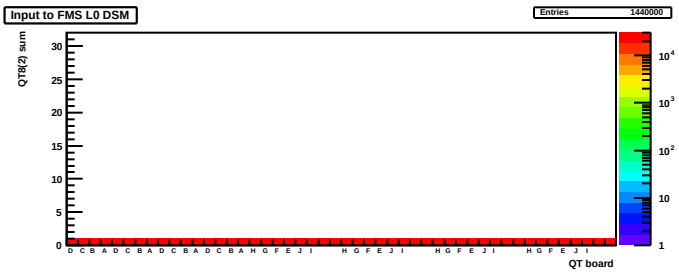

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

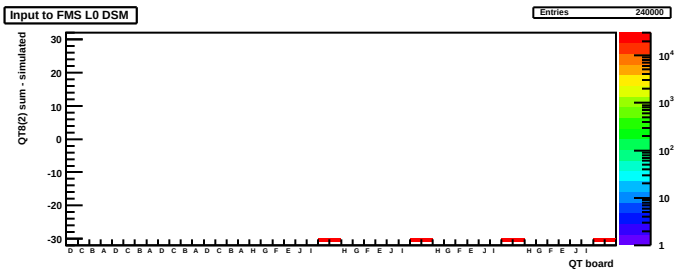

Input to FMS L0 DSM
Entries 1440000
QT8(0) sum
QT board

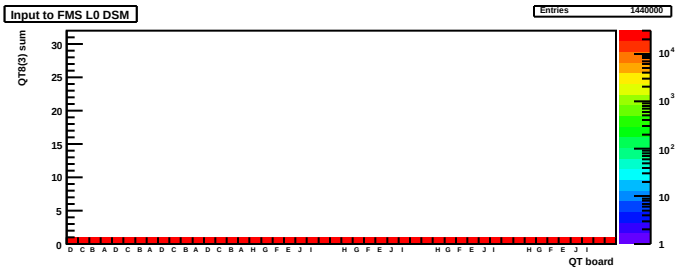

Input to FMS L0 DSM
Entries 240000
QT8(0) sum - simulated
QT board

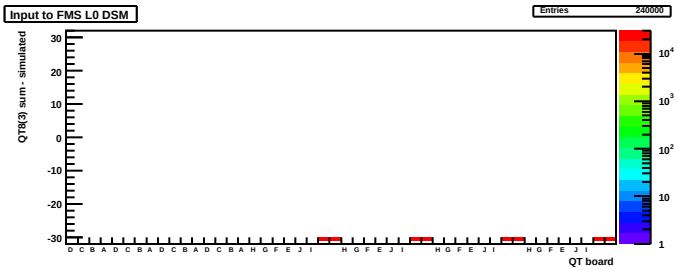

Input to FMS L0 DSM
Entries 1440000
QT8(1) sum
QT board

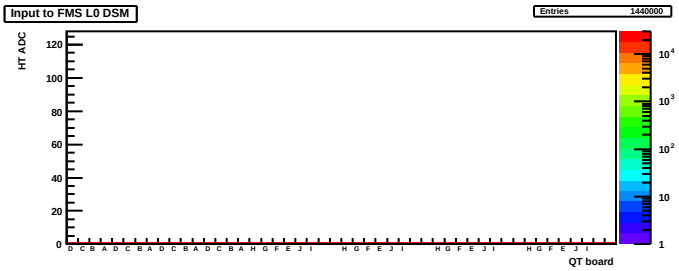

Input to FMS L0 DSM
Entries 240000
QT8(1) sum - simulated
QT board

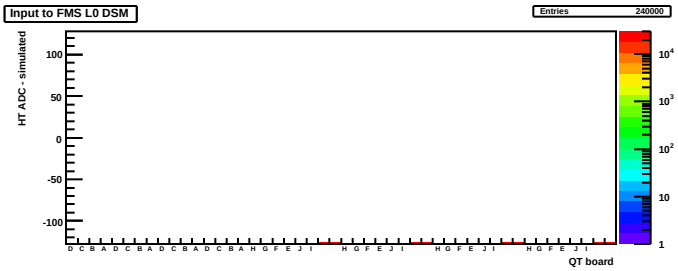

Input to FMS L0 DSM
Entries 1440000
QT8(2) sum
QT board

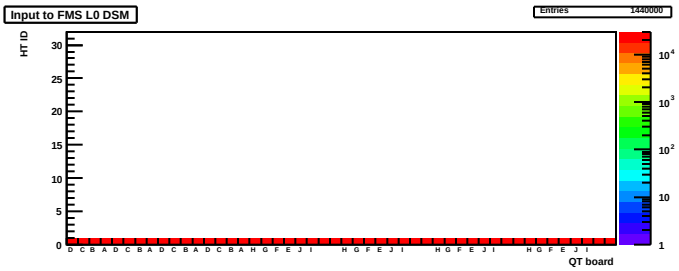

Input to FMS L0 DSM
Entries 240000
QT8(2) sum - simulated
QT board

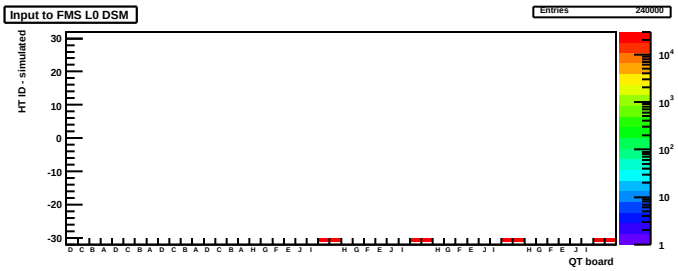

Input to FMS L0 DSM
Entries 1440000
QT8(3) sum
QT board

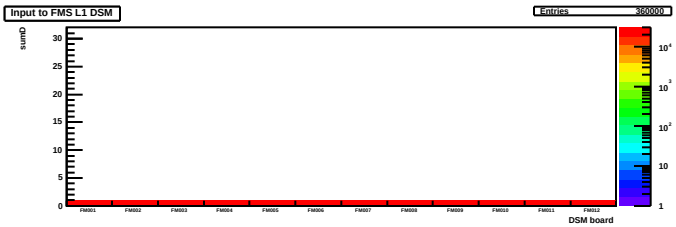

Input to FMS L0 DSM
Entries 240000
QT8(3) sum - simulated
QT board

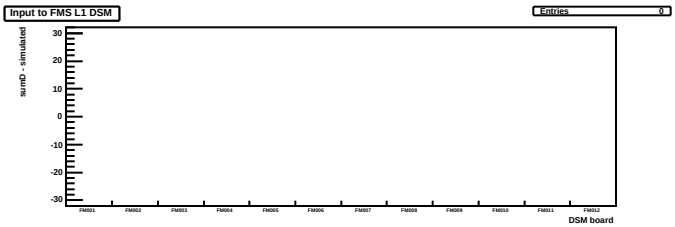

Input to FMS L0 DSM
Entries 1440000
HT ADC
QT board

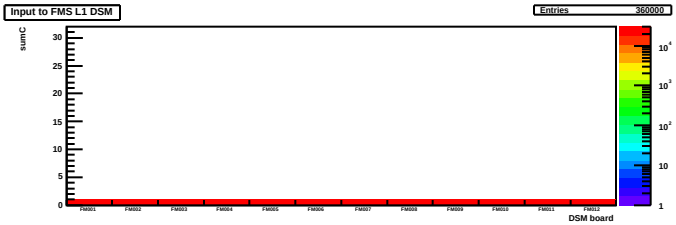

Input to FMS L0 DSM
Entries 240000
HT ADC - simulated
QT board

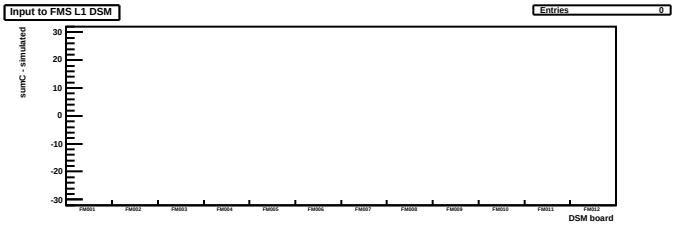

Input to FMS L0 DSM
Entries 1440000
HT ID
QT board

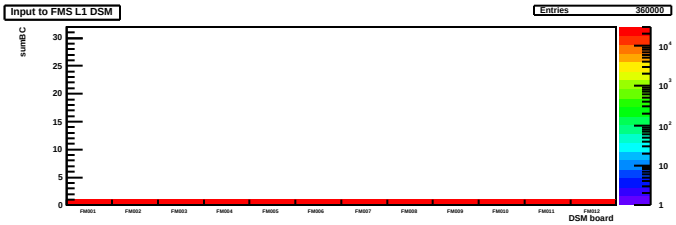

Input to FMS L0 DSM
Entries 240000
HT ID - simulated
QT board

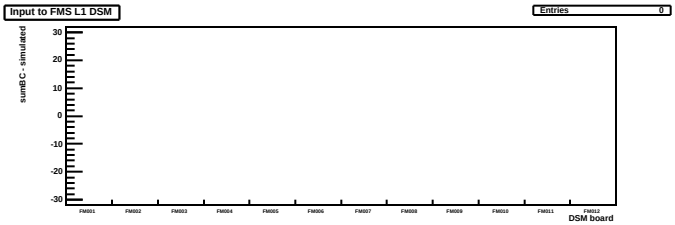

Input to FMS L1 DSM
Entries 360000
sumD
DSM board

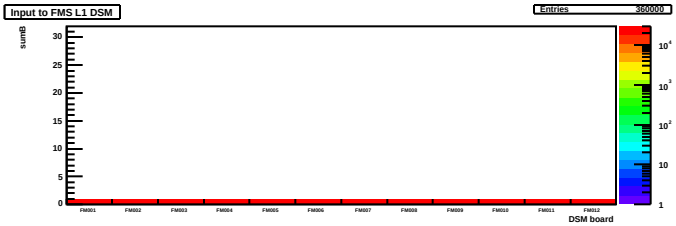

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

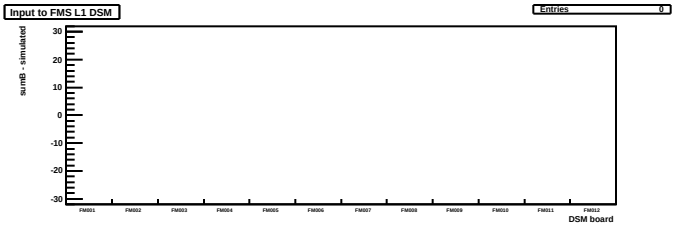

Input to FMS L1 DSM
Entries 360000
sumC
DSM board

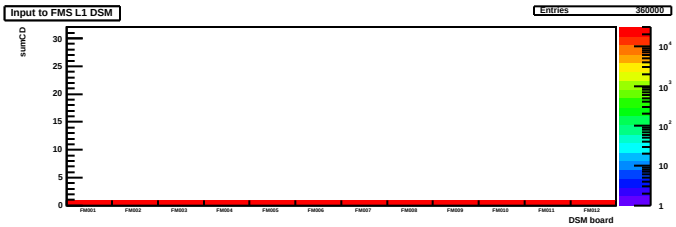

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

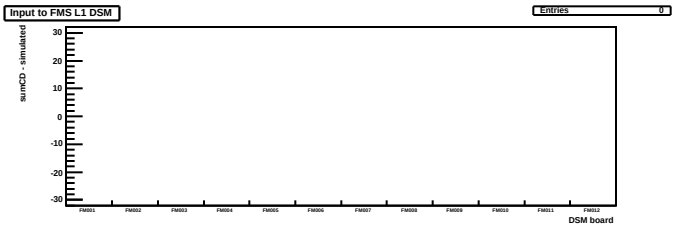

Input to FMS L1 DSM
Entries 360000
sumBC
DSM board

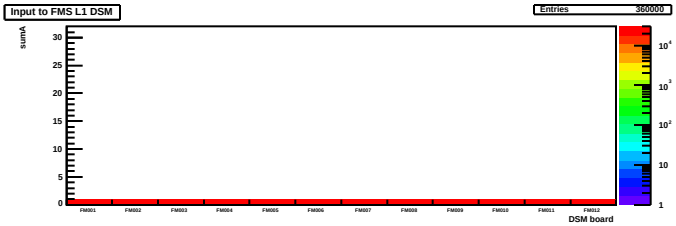

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

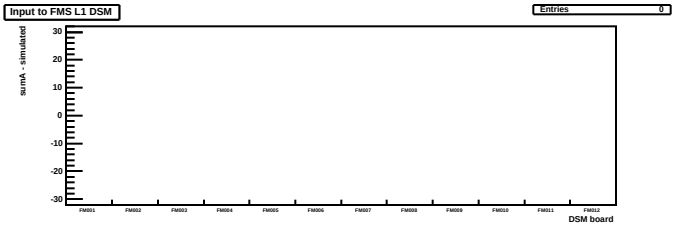

Input to FMS L1 DSM
Entries 360000
sumB
DSM board

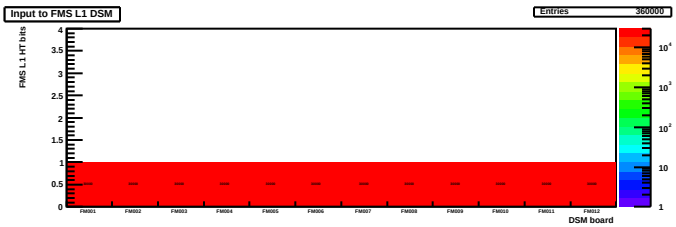

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

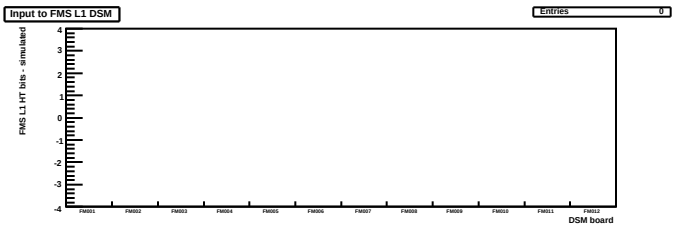

Input to FMS L1 DSM
Entries 360000
sumCD
DSM board

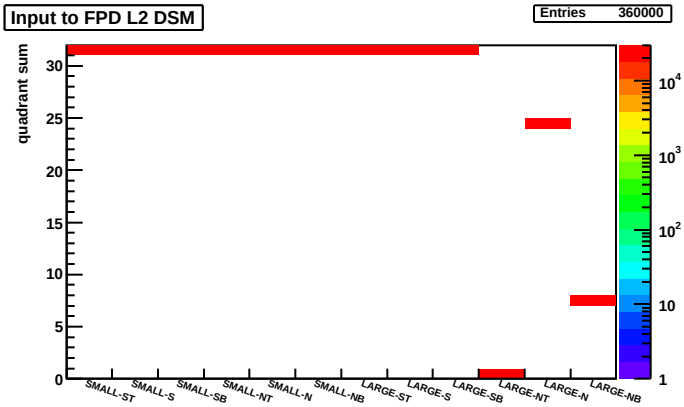

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

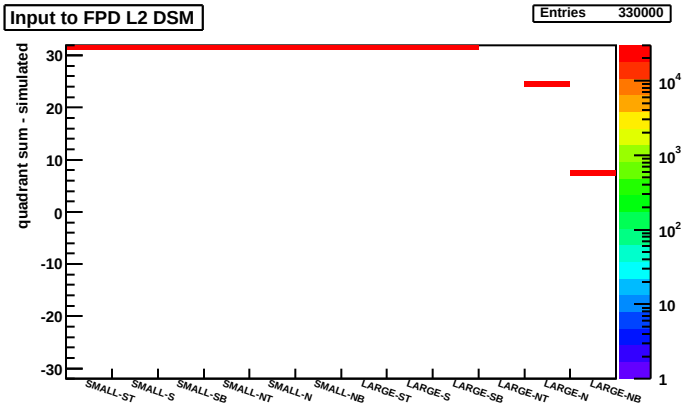

Input to FMS L1 DSM
Entries 360000
sumA
DSM board

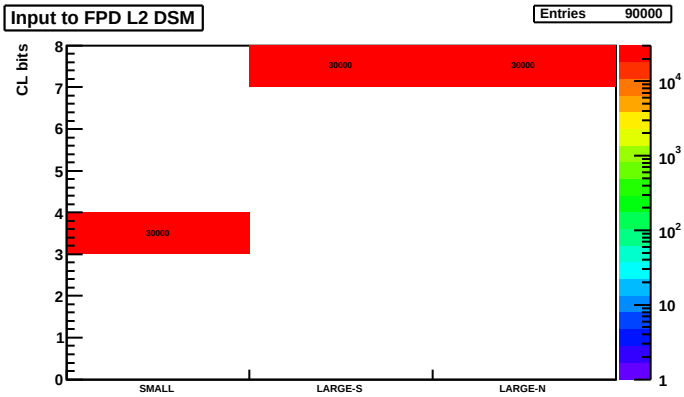

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

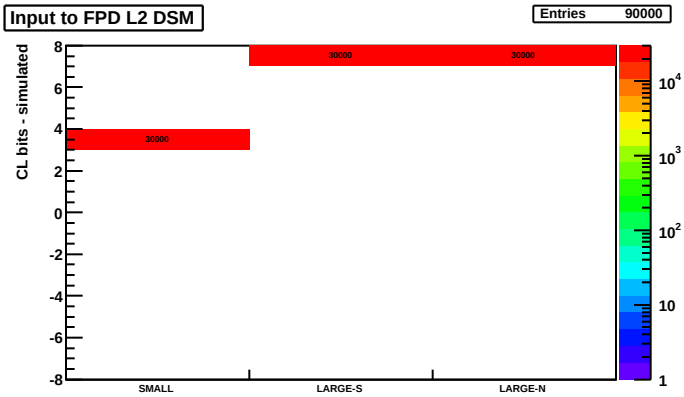

Input to FMS L1 DSM
Entries 360000
FMS L1 HT bits
DSM board

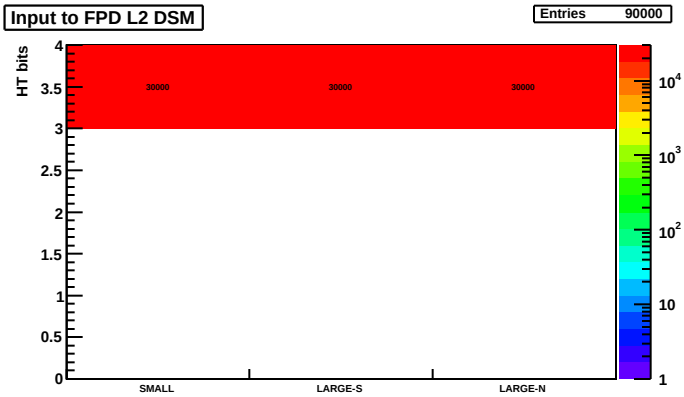

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

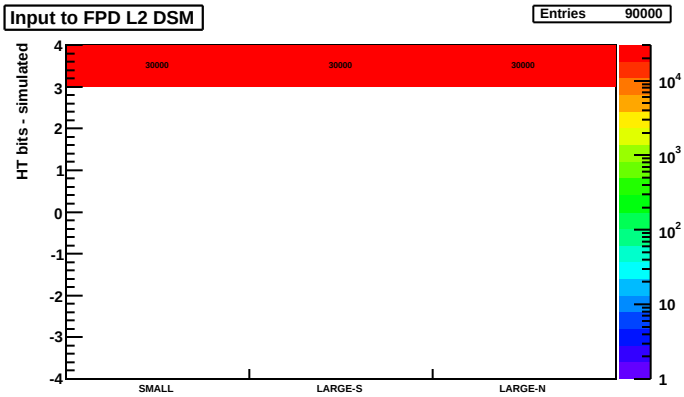

Input to FPD L2 DSM
Entries 360000
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

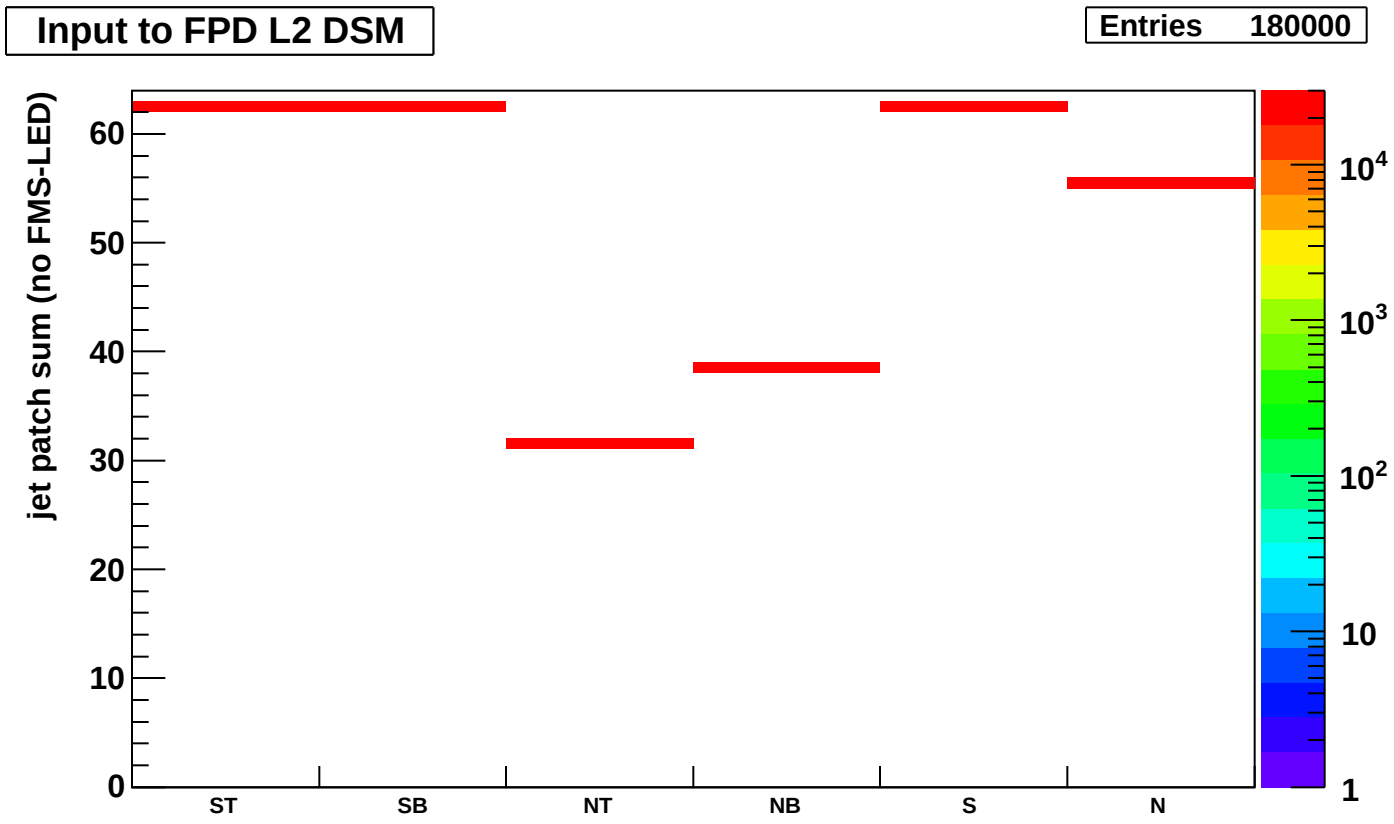

Input to FPD L2 DSM
Entries 330000
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

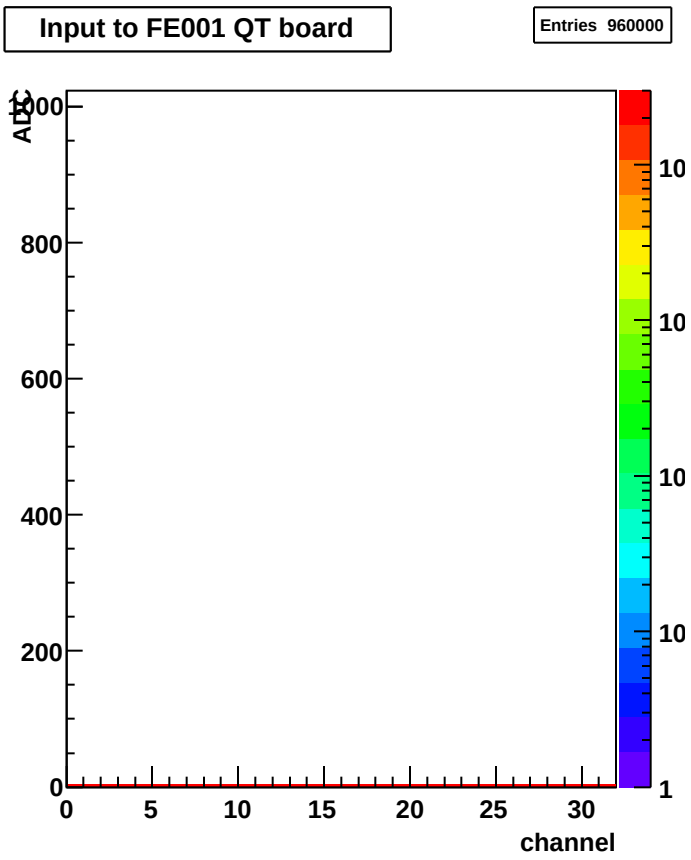

Input to FPD L2 DSM
Entries 90000
CL bits
30000
30000
30000
SMALL
LARGE-S
LARGE-N

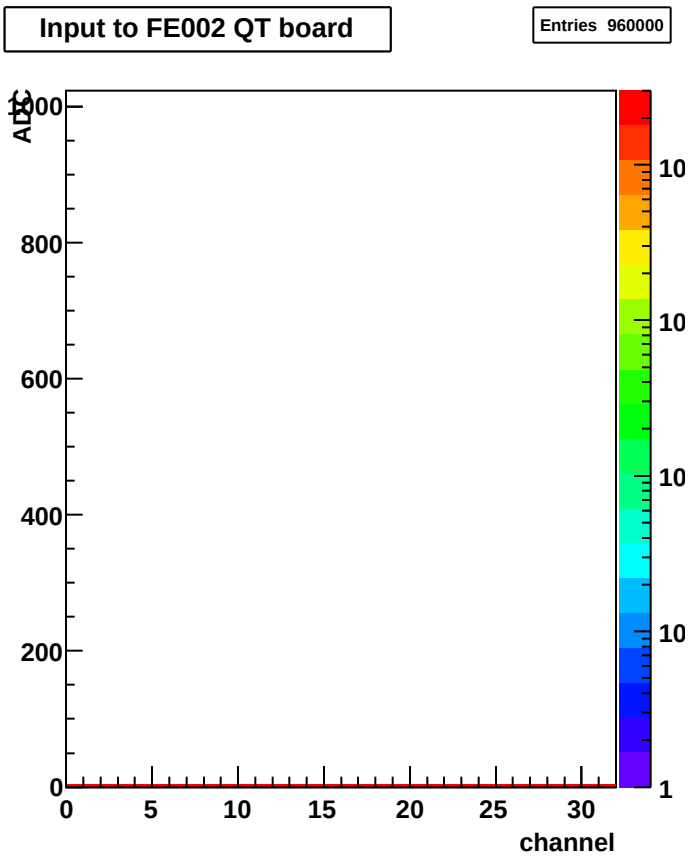

Input to FPD L2 DSM
Entries 90000
CL bits - simulated
30000
30000
30000
SMALL
LARGE-S
LARGE-N

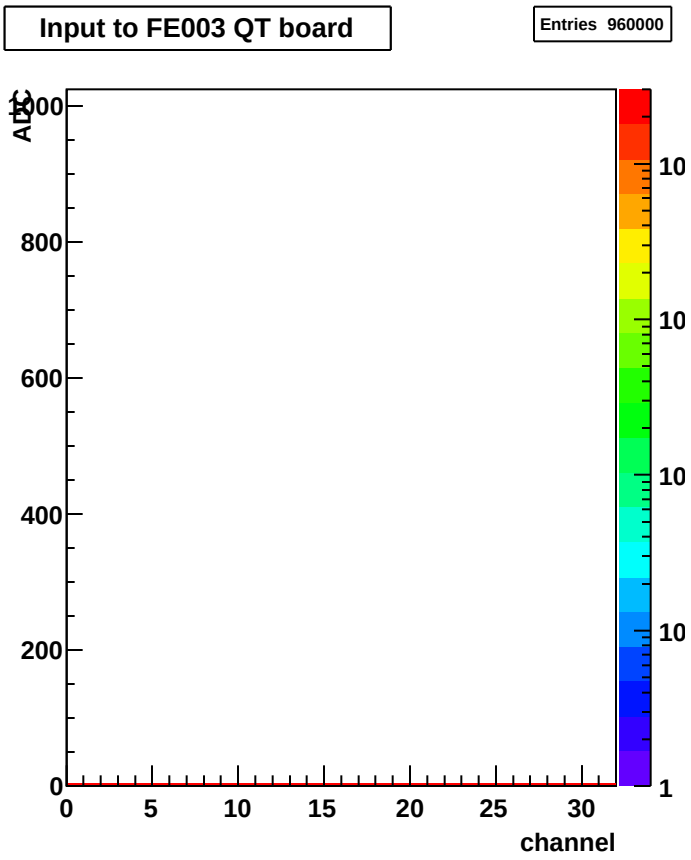

Input to FPD L2 DSM
Entries 90000
HT bits
30000
30000
30000
SMALL
LARGE-S
LARGE-N

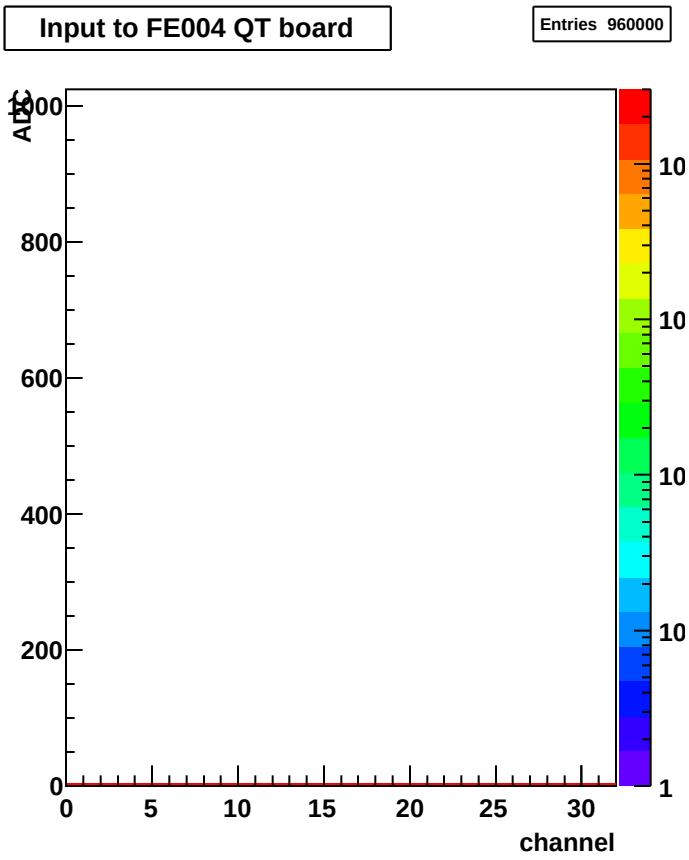

Input to FPD L2 DSM
Entries 90000
HT bits - simulated
30000
30000
30000
SMALL
LARGE-S
LARGE-N

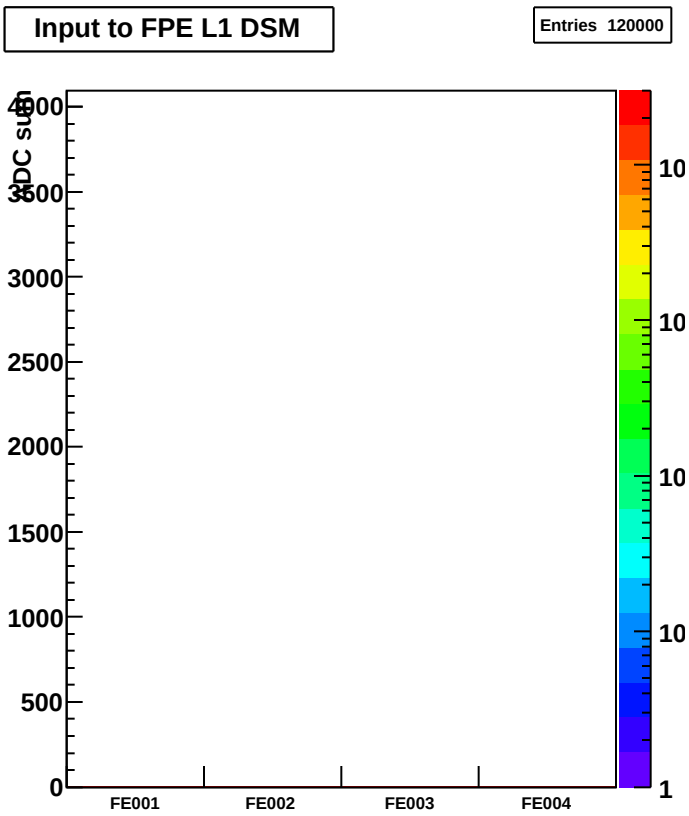

Input to FPD L2 DSM
Entries 180000
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

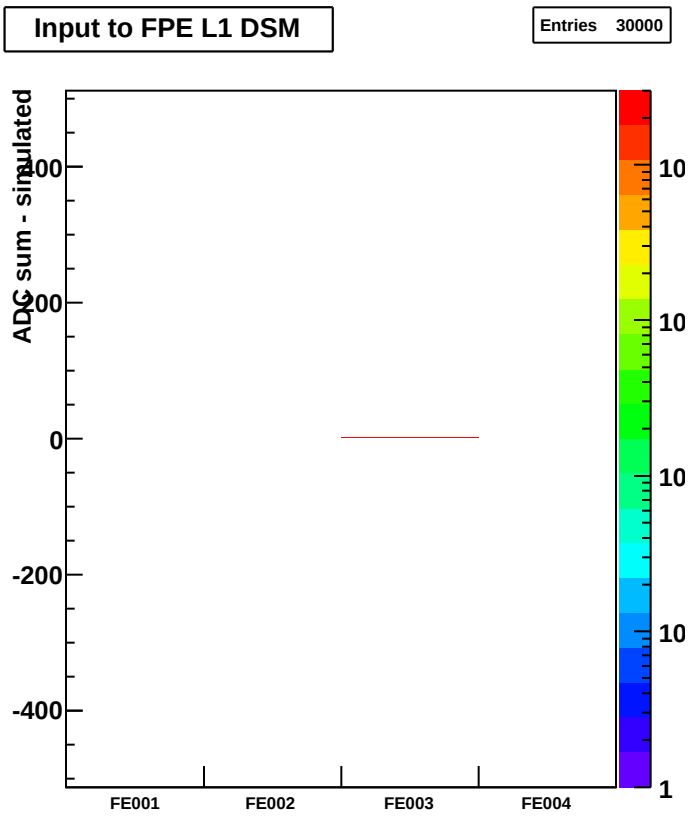

Input to FE001 QT board
Entries 960000
ADC
channel

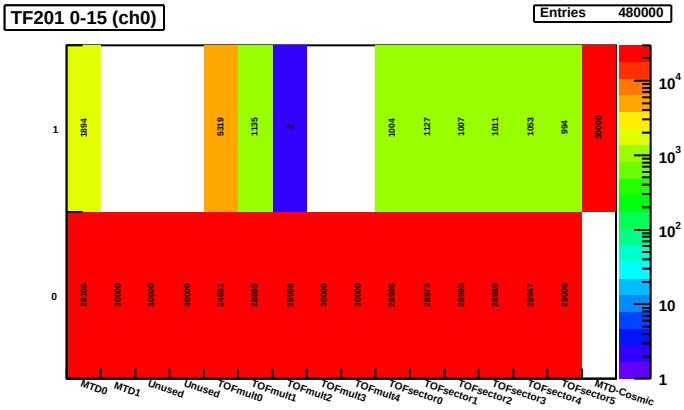

Input to FE002 QT board
Entries 960000
ADC
channel

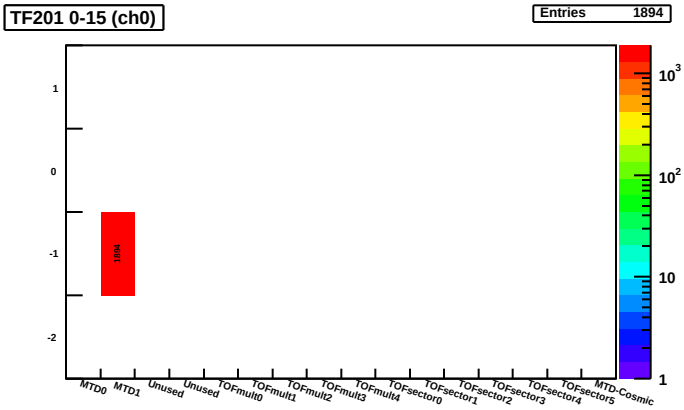

Input to FE003 QT board
Entries 960000
ADC
channel

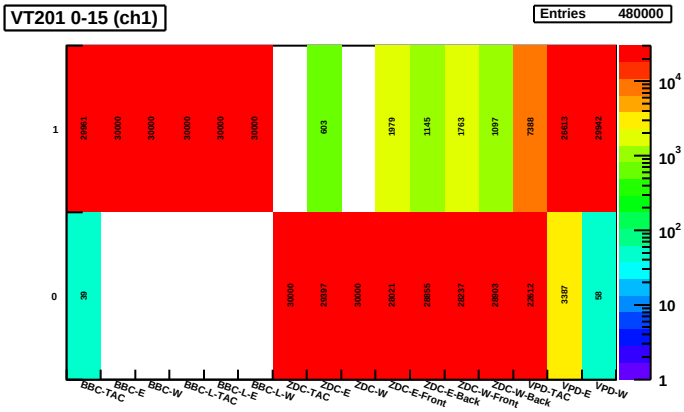

Input to FE004 QT board
Entries 960000
ADC
channel

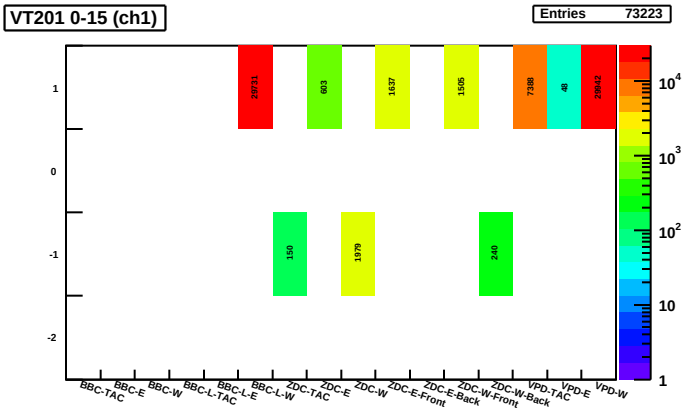

Input to FPE L1 DSM
Entries 120000
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


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
1894 5319 1135 2 1004 1127 1007 1011 1053 994 30000
28106 30000 30000 30000 24481 28865 29988 30000 30000 28986 28873 28983 28989 28947 29006
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 1894
1894
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 480000
29961 30000 30000 30000 30000 30000 603 1979 1145 1763 1097 7388 25613 29942
39 30000 28397 30000 28021 28855 28237 28803 28312 3387 58
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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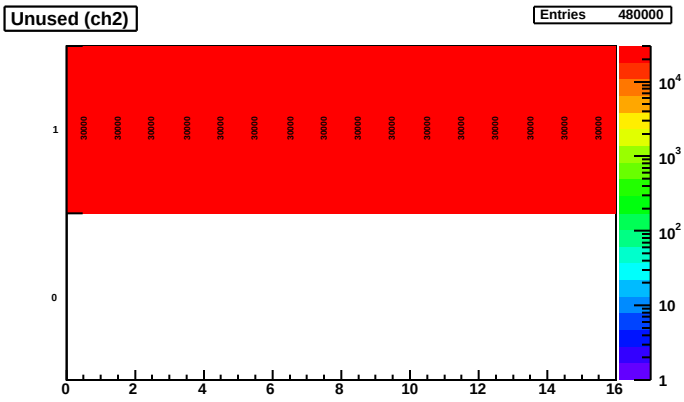
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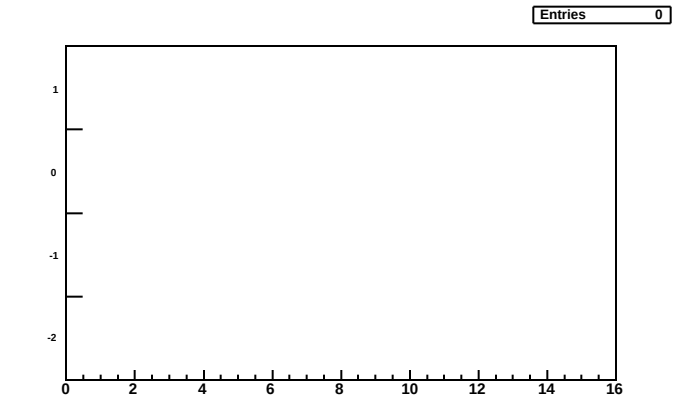
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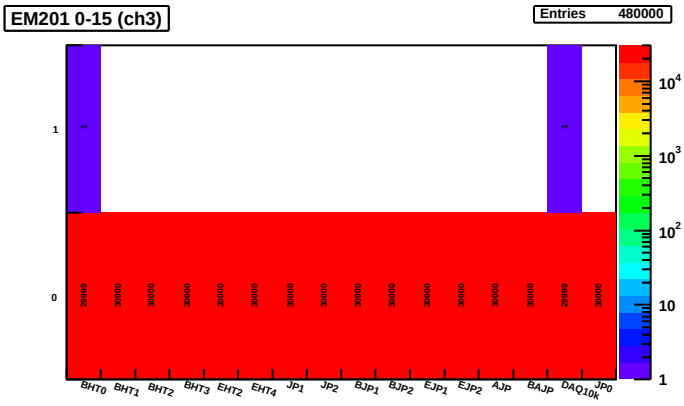
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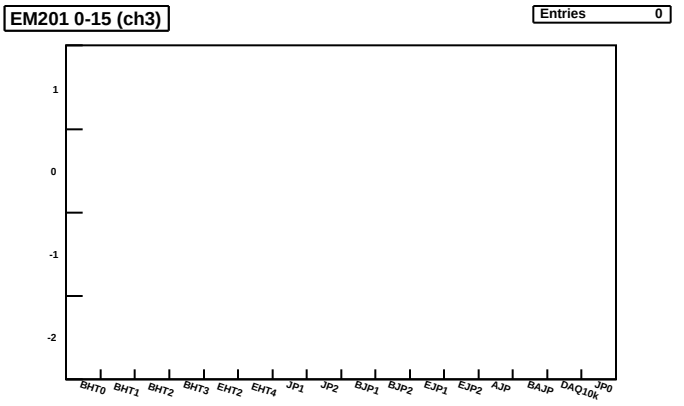
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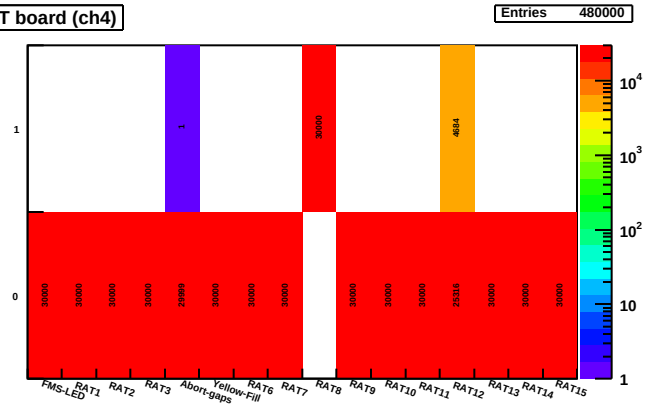
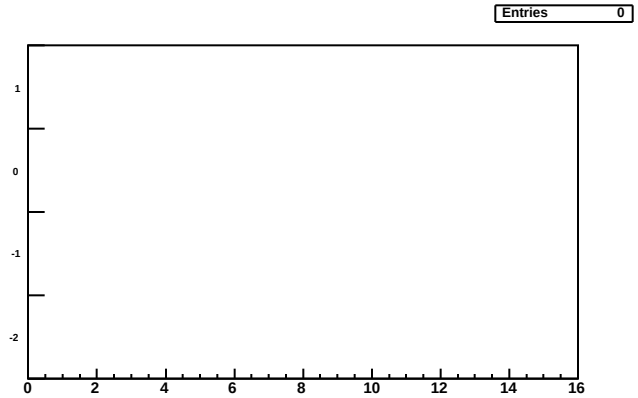
RAT board (ch4)





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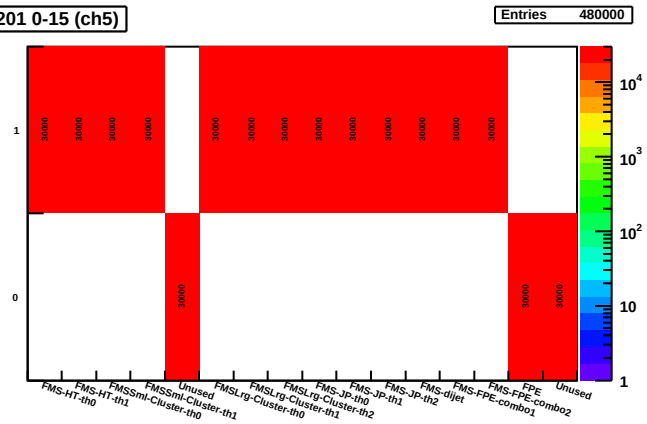

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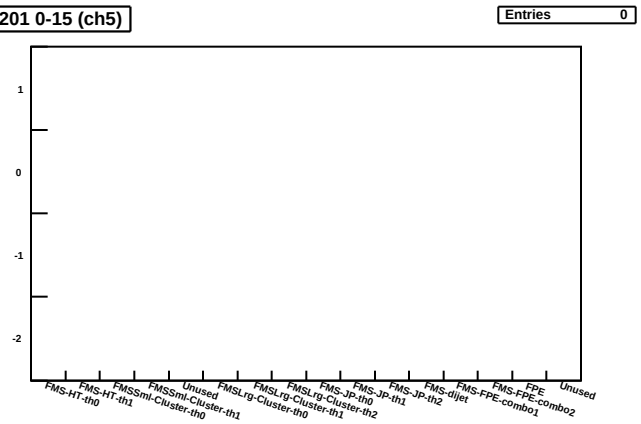

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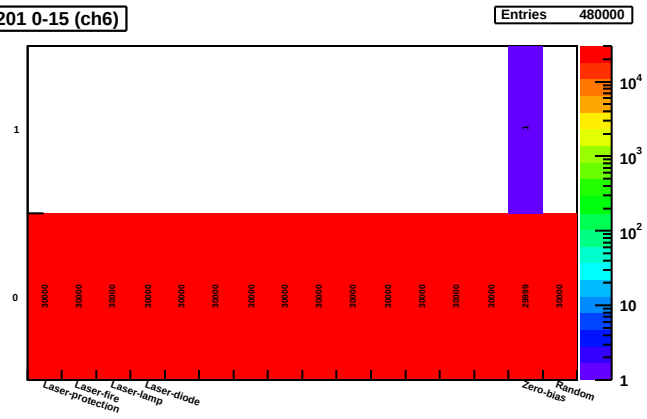

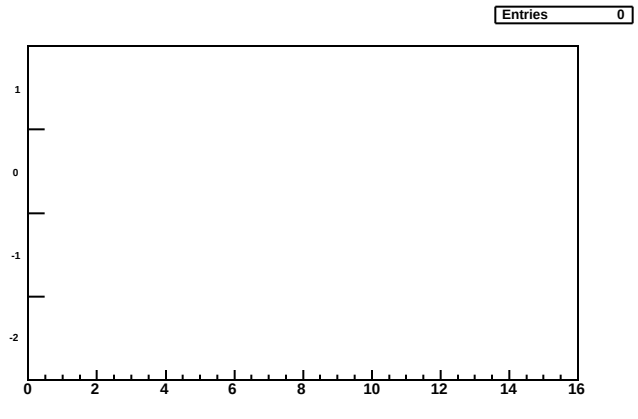
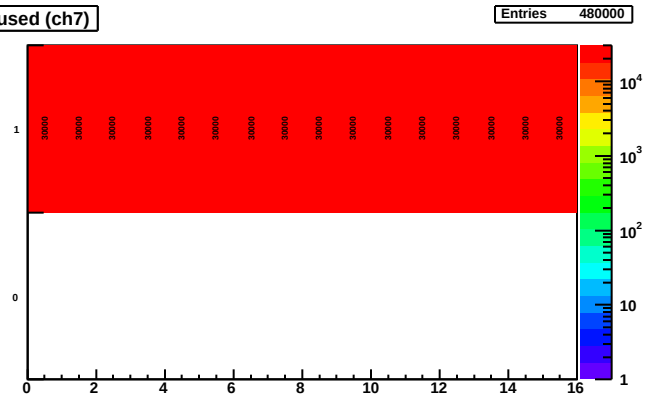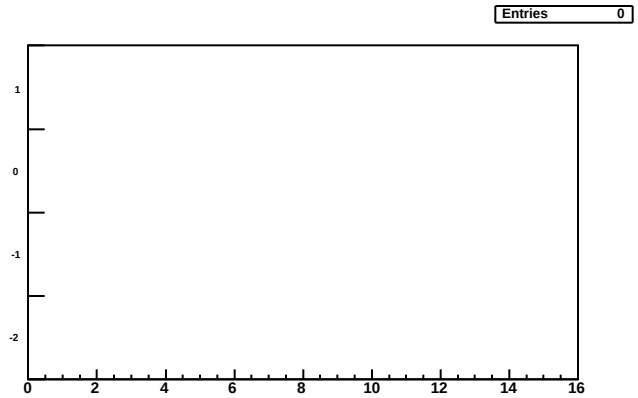
Unused (ch7)