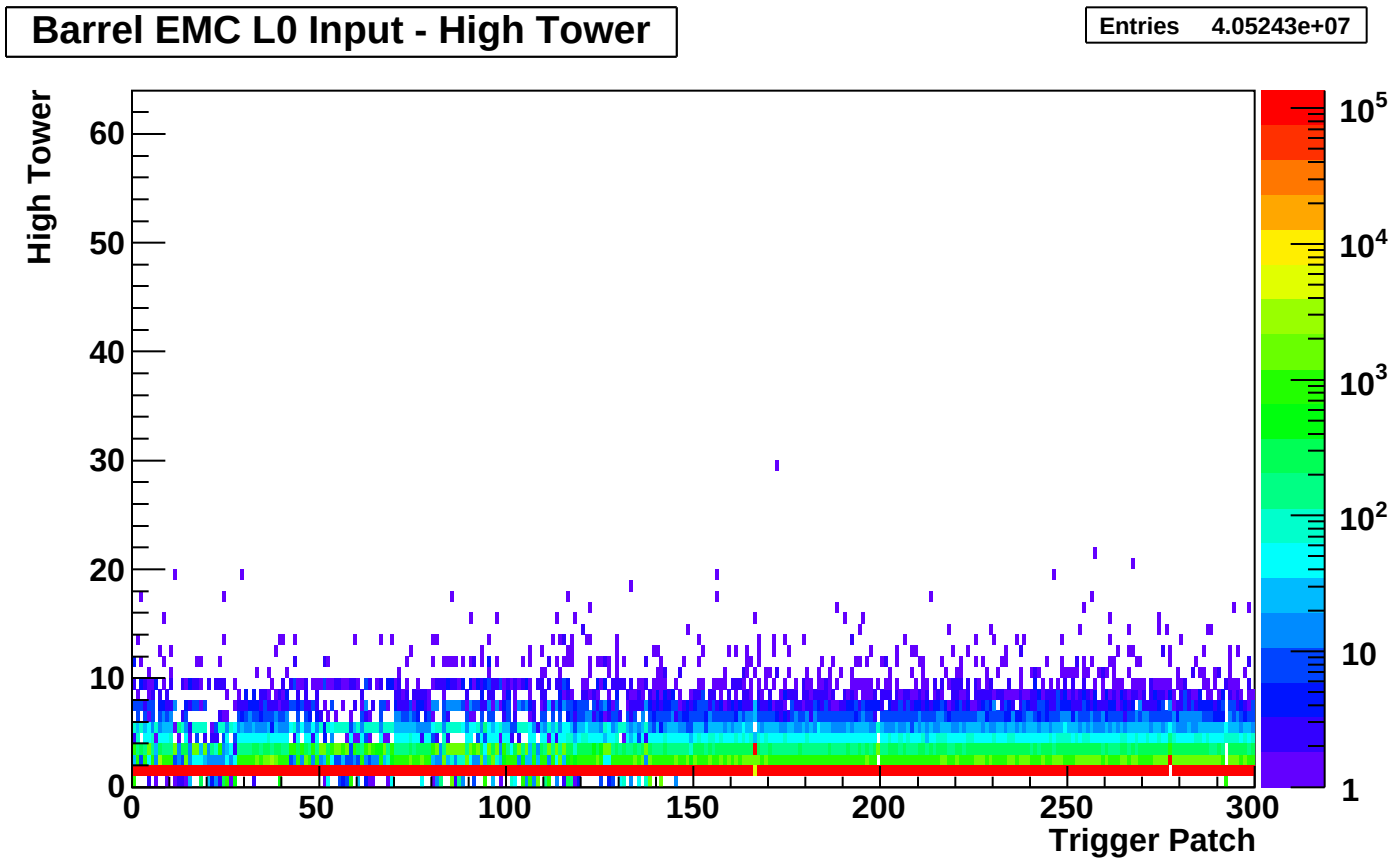
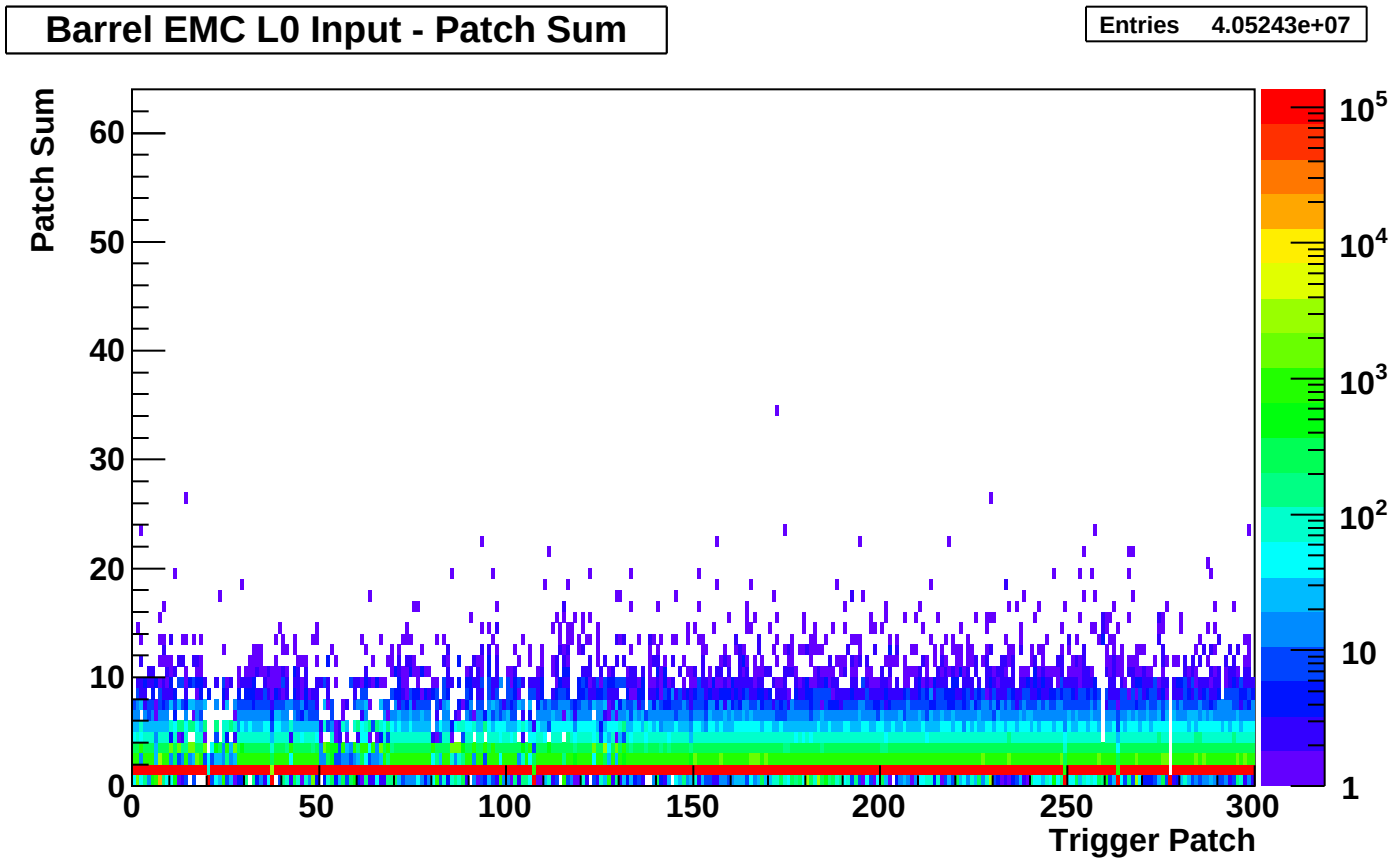
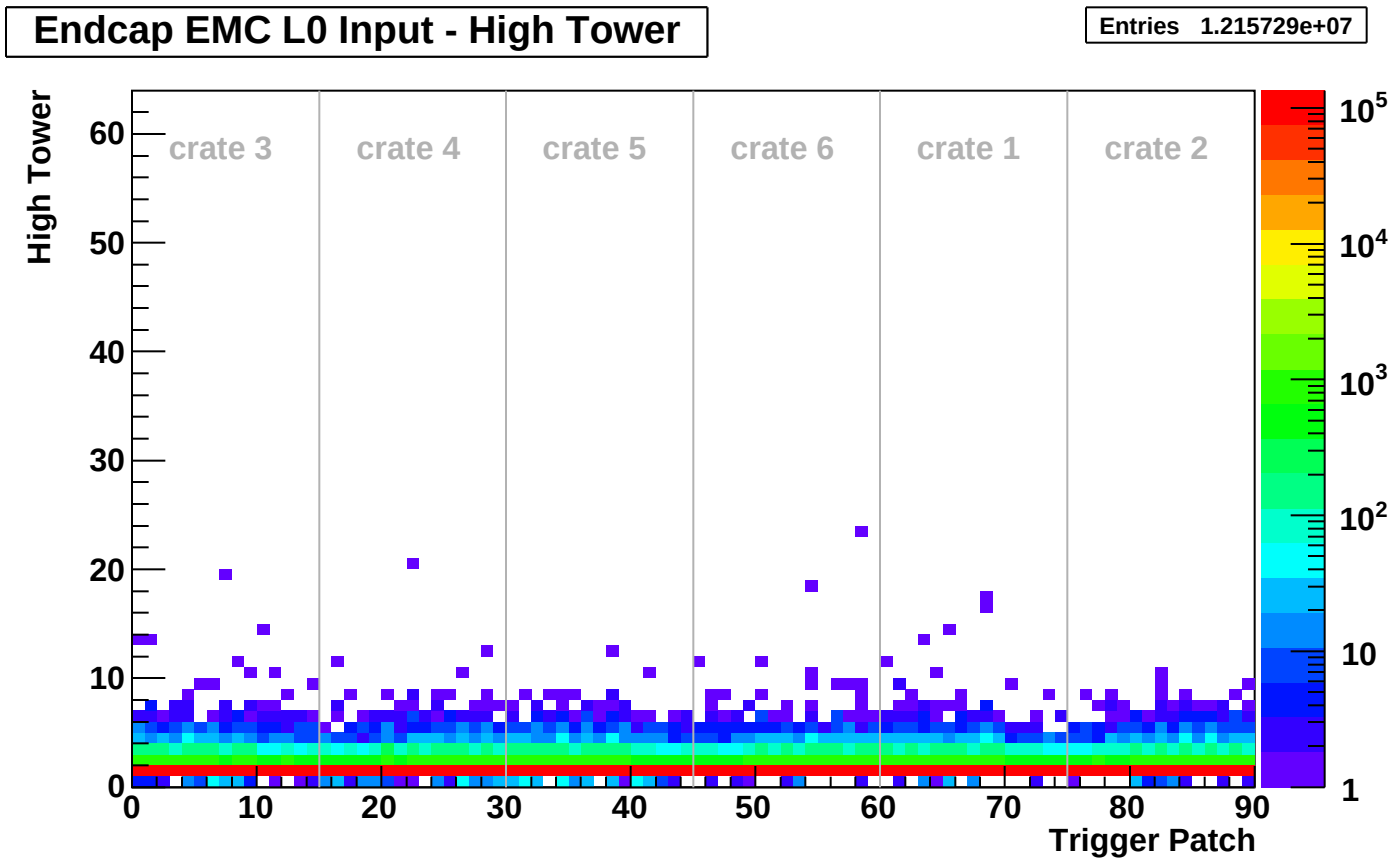
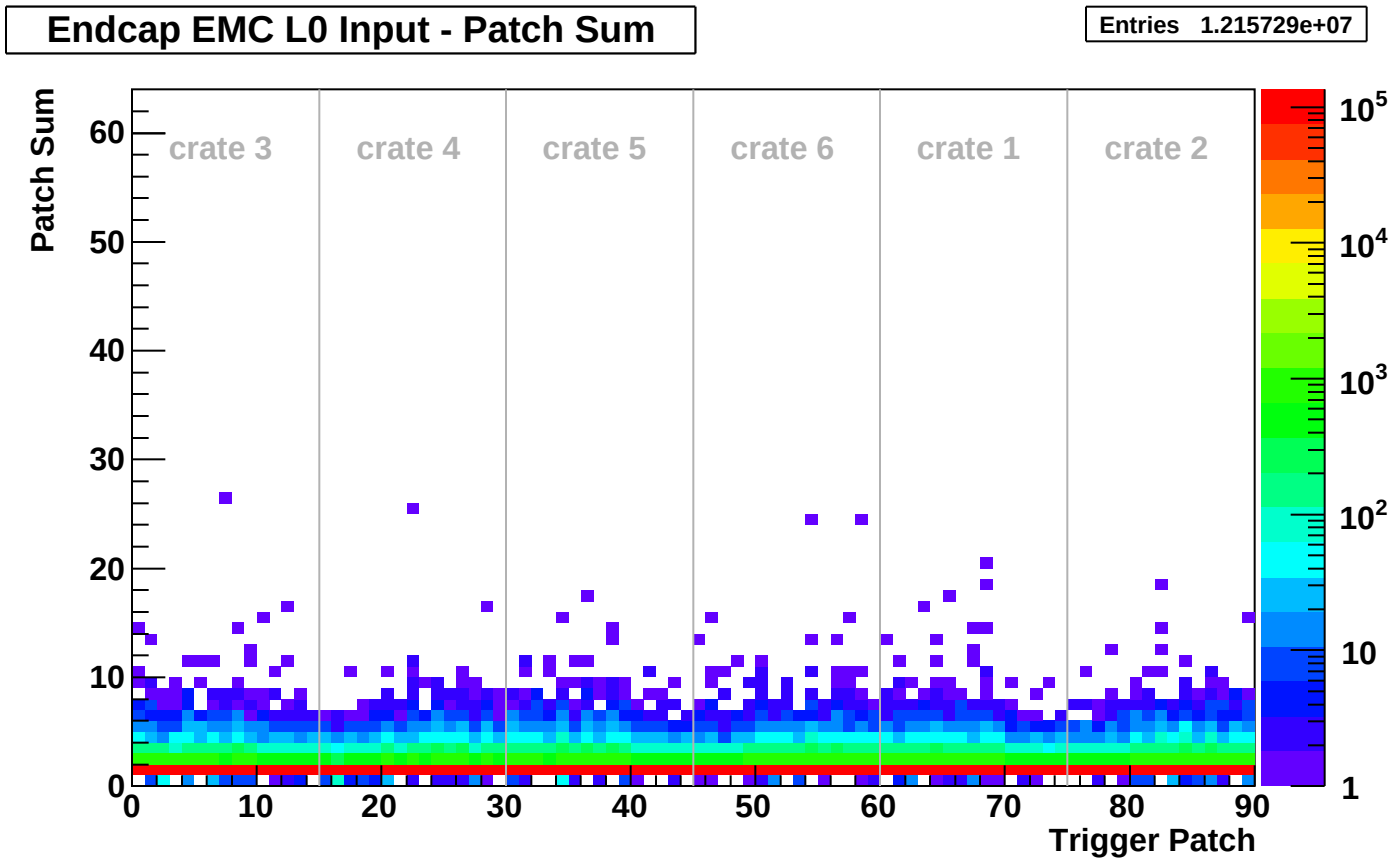
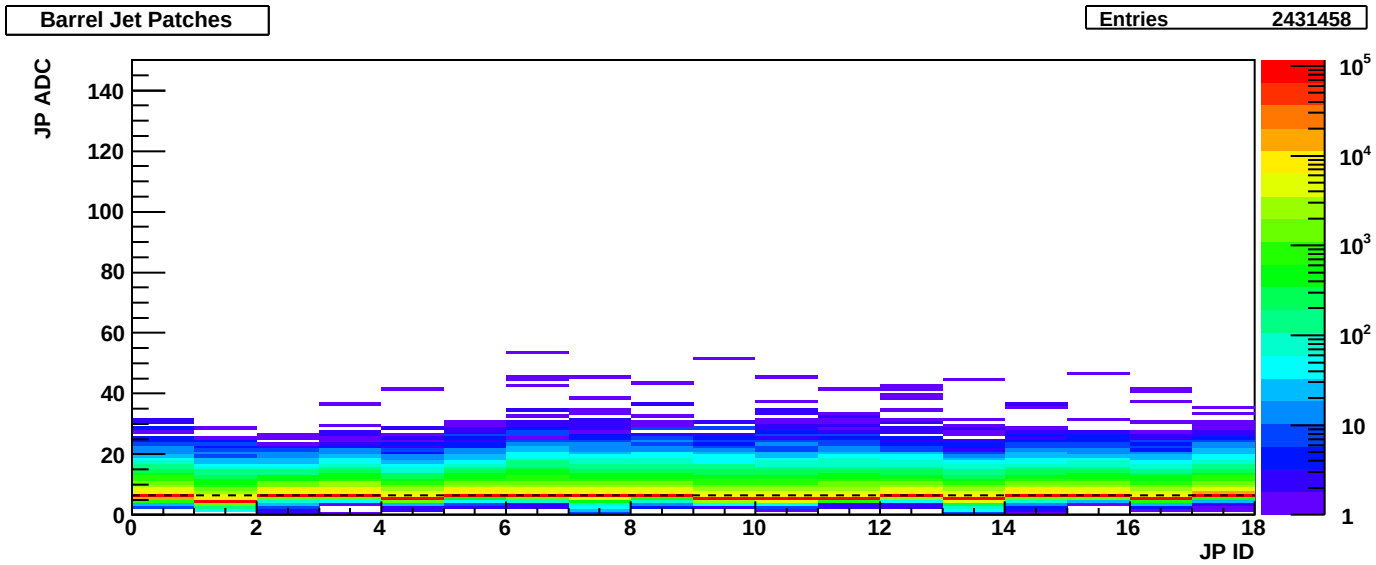
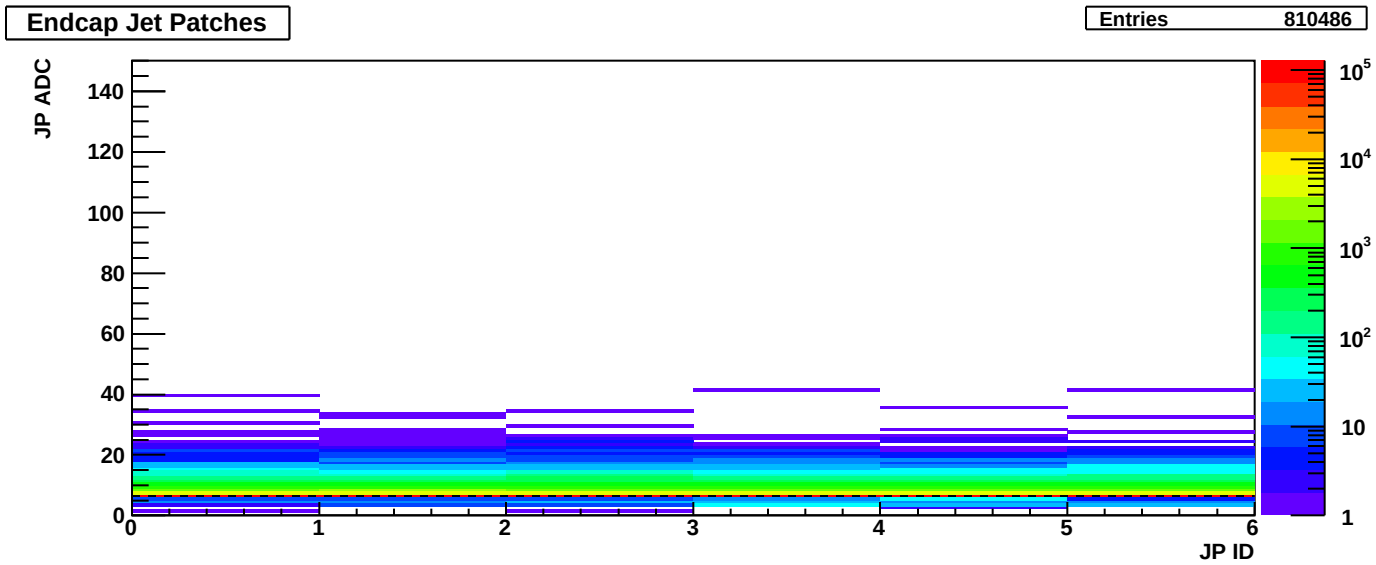

Barrel EMC L0 Input - High Tower
Entries 4.05243e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

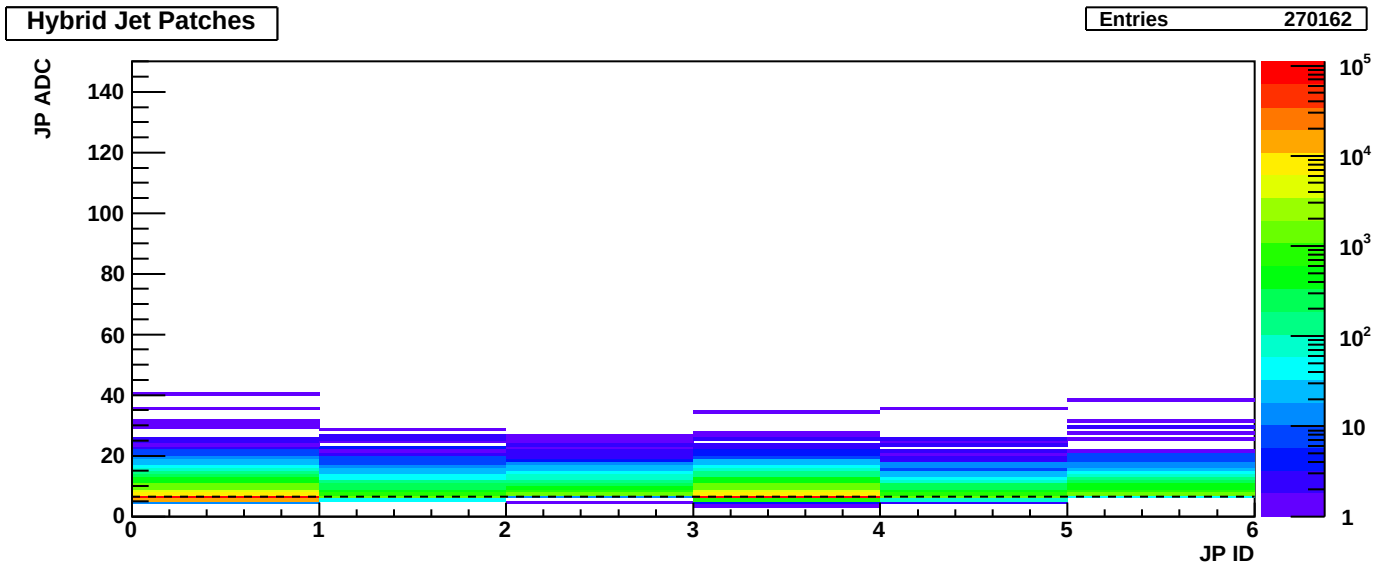

Barrel EMC L0 Input - Patch Sum
Entries 4.05243e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

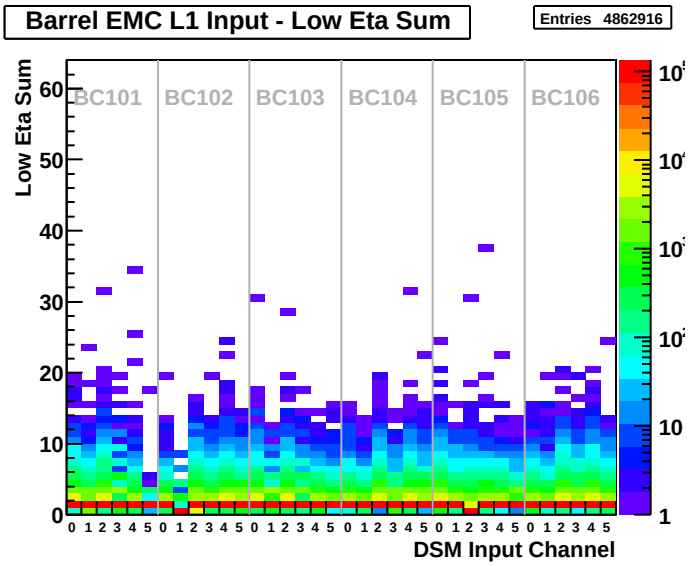

Endcap EMC L0 Input - High Tower
Entries 1.215729e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

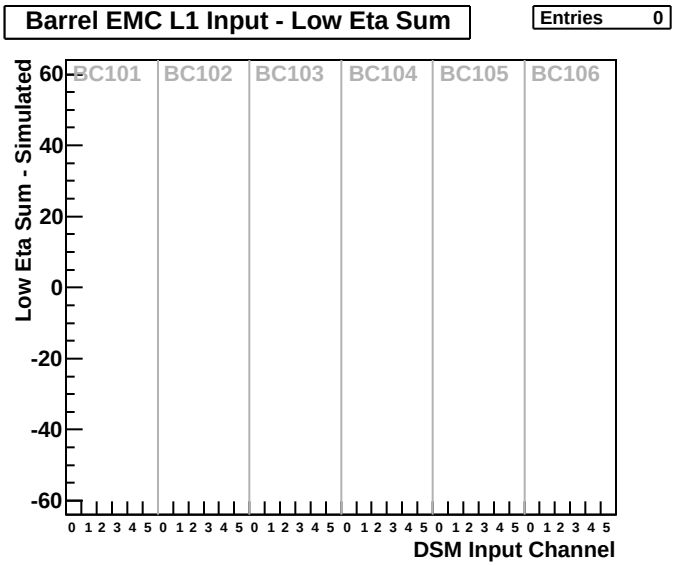

Endcap EMC L0 Input - Patch Sum
Entries 1.215729e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

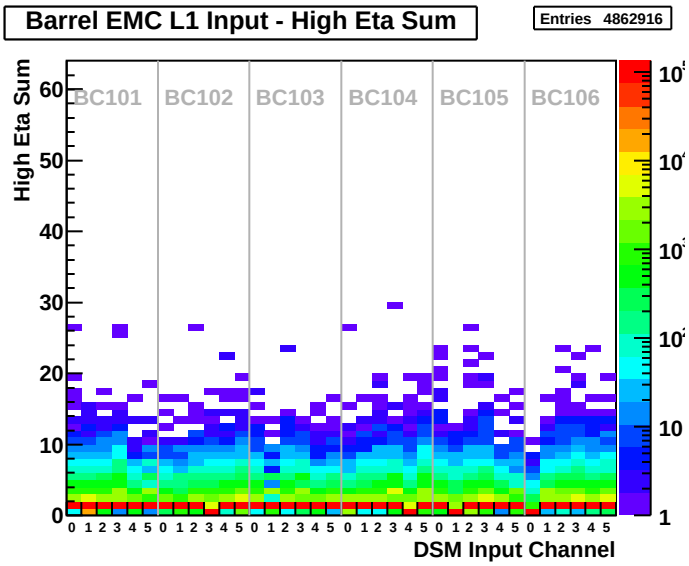

Barrel Jet Patches
Entries 2431458
JP ADC
JP ID

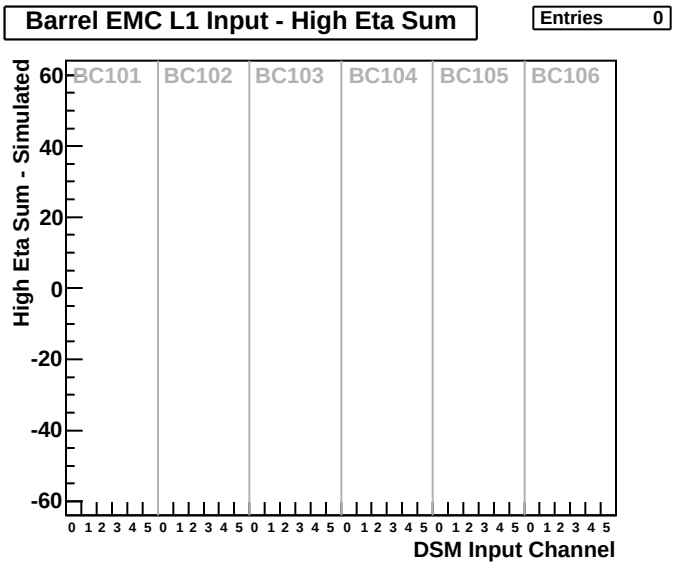

Endcap Jet Patches
Entries 810486
JP ADC
JP ID

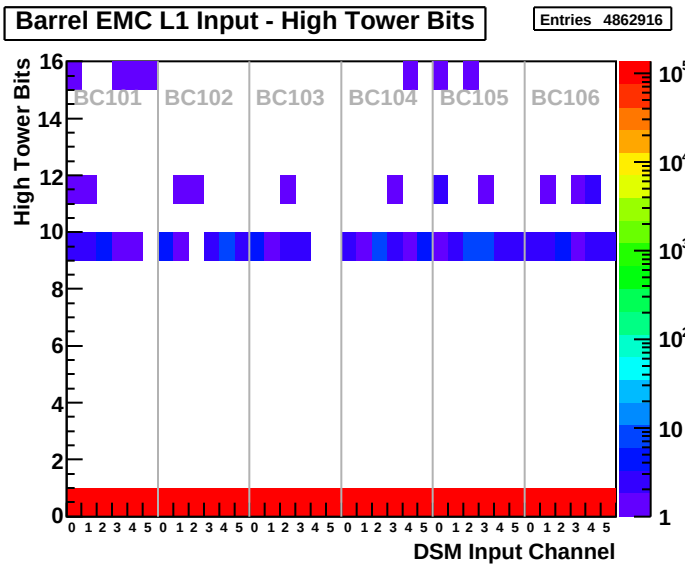

Hybrid Jet Patches
Entries 270162
JP ADC
JP ID

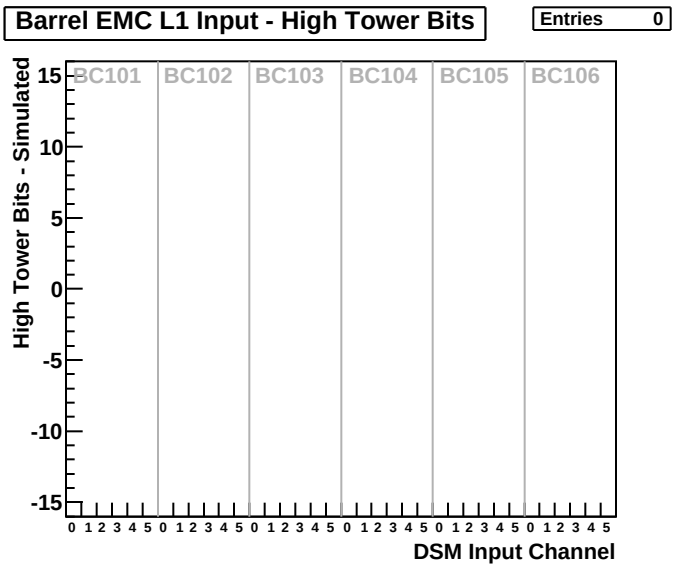

Barrel EMC L1 Input - Low Eta Sum
Entries 4862916
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

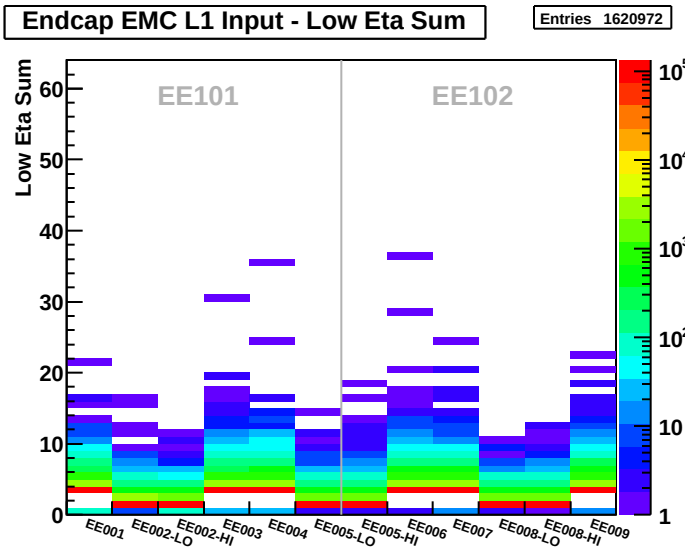

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

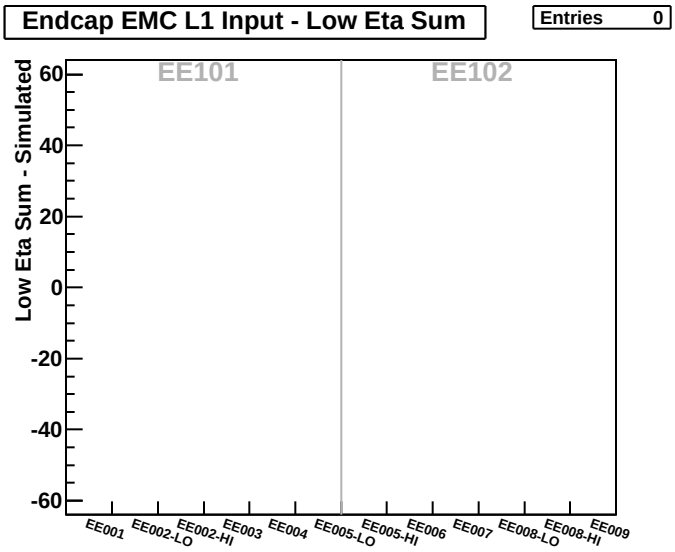

Barrel EMC L1 Input - High Eta Sum
Entries 4862916
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

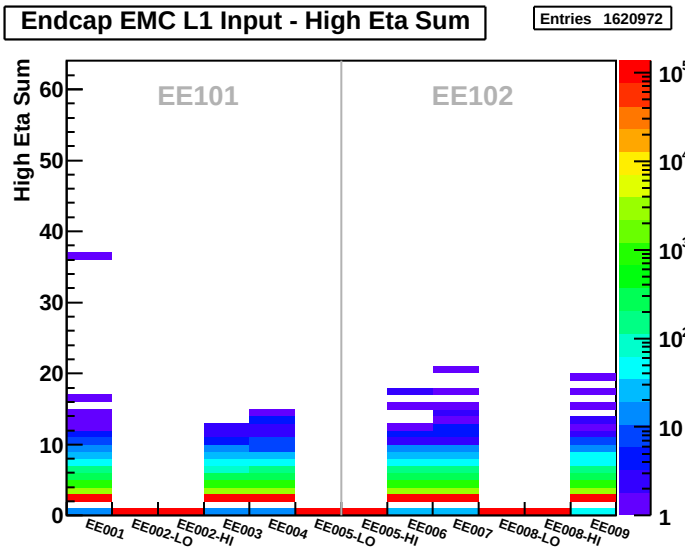

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

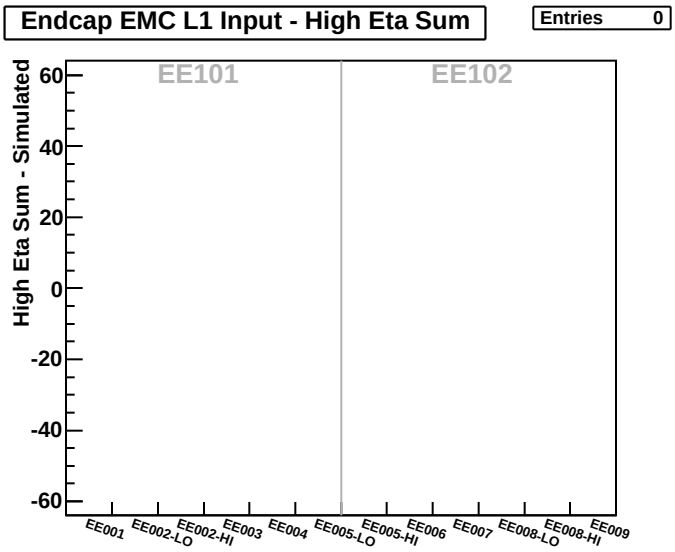

Barrel EMC L1 Input - High Tower Bits
Entries 4862916
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

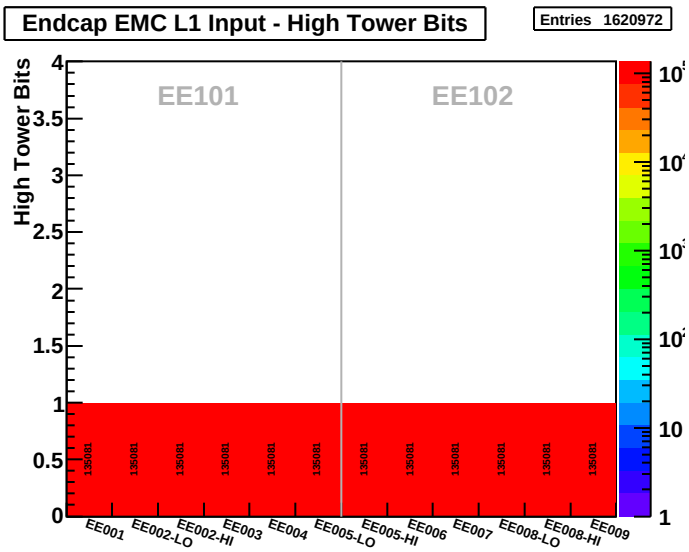

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

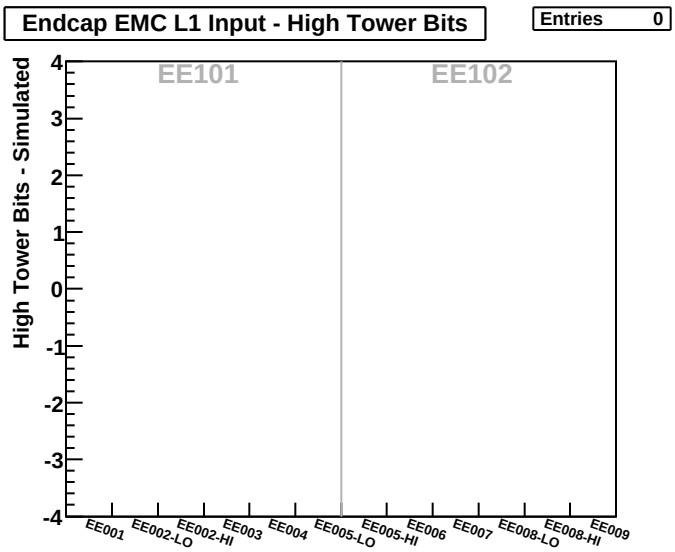

Endcap EMC L1 Input - Low Eta Sum
Entries 1620972
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

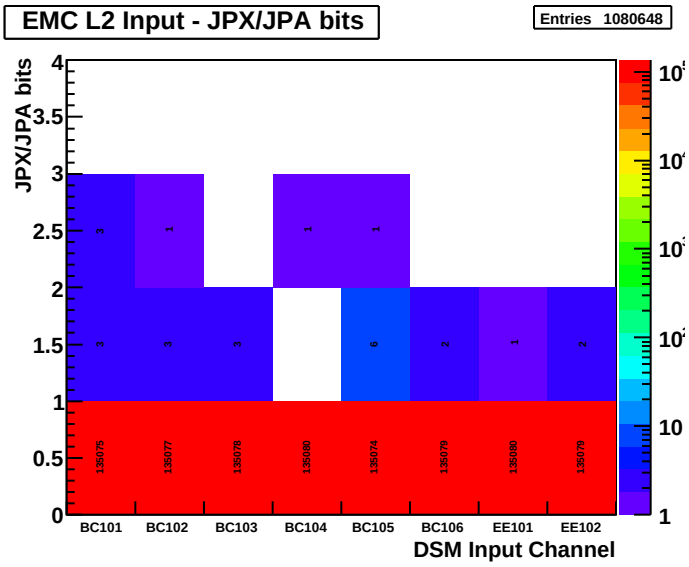

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

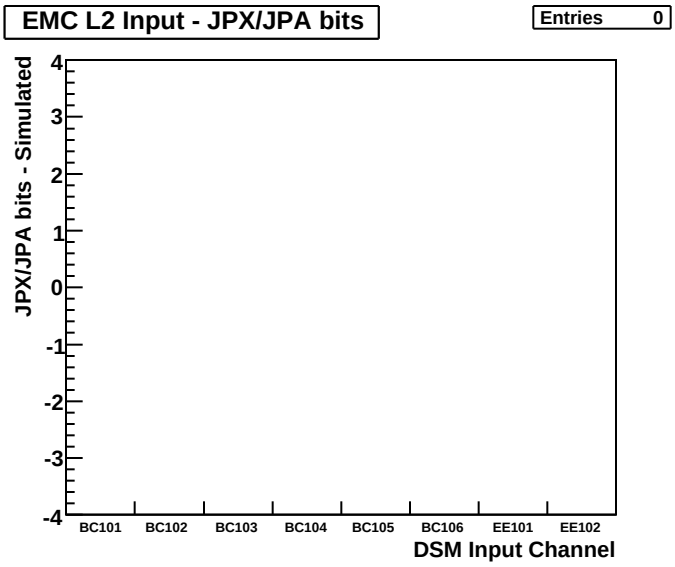

Endcap EMC L1 Input - High Eta Sum
Entries 1620972
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

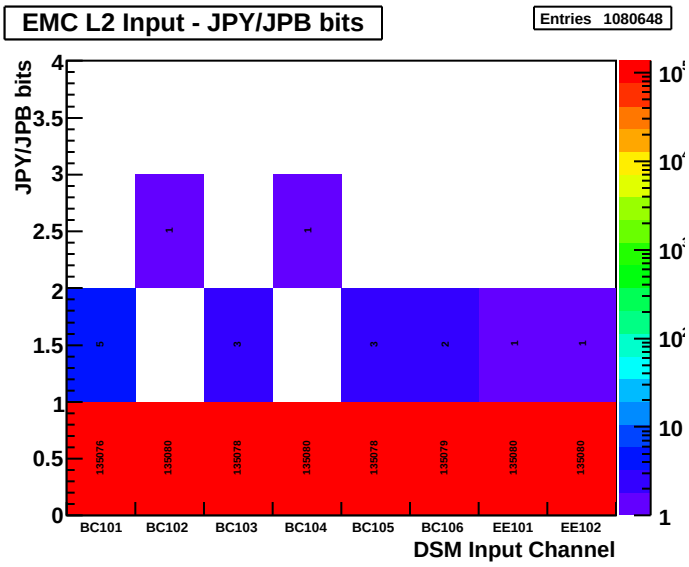

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

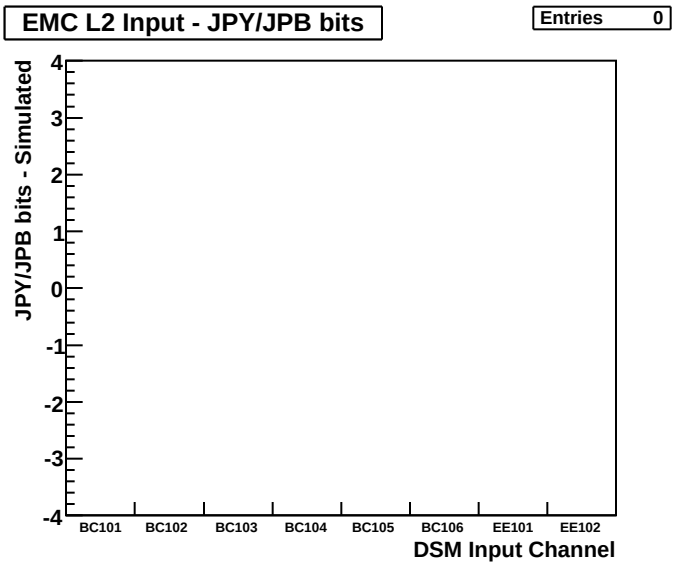

Endcap EMC L1 Input - High Tower Bits
Entries 1620972
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

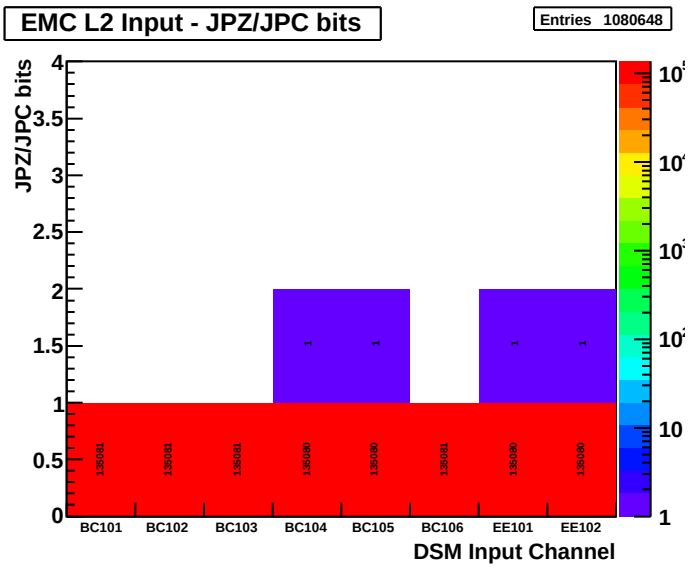

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

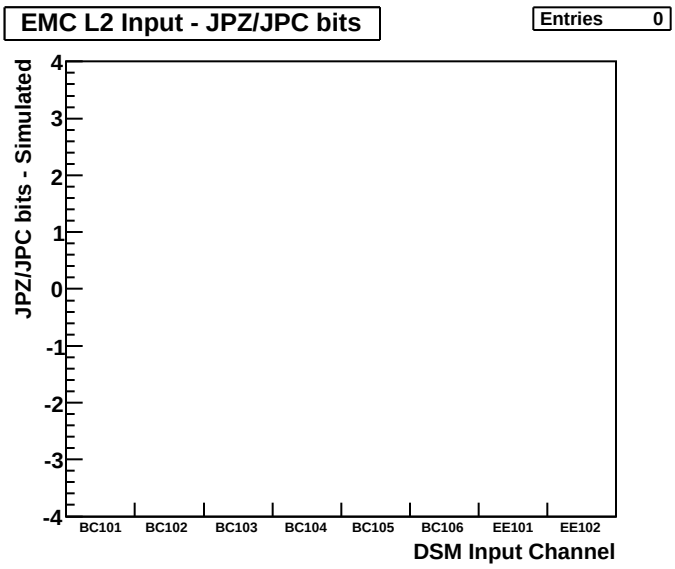

EMC L2 Input - JPX/JPA bits
Entries 1080648
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

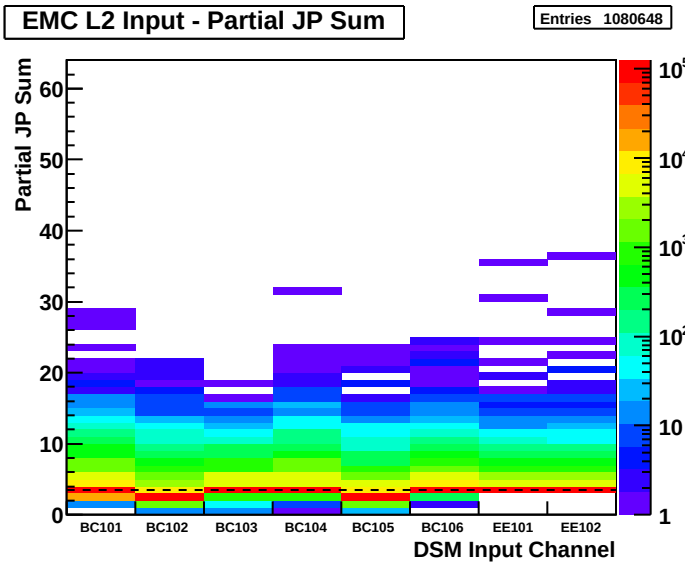

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

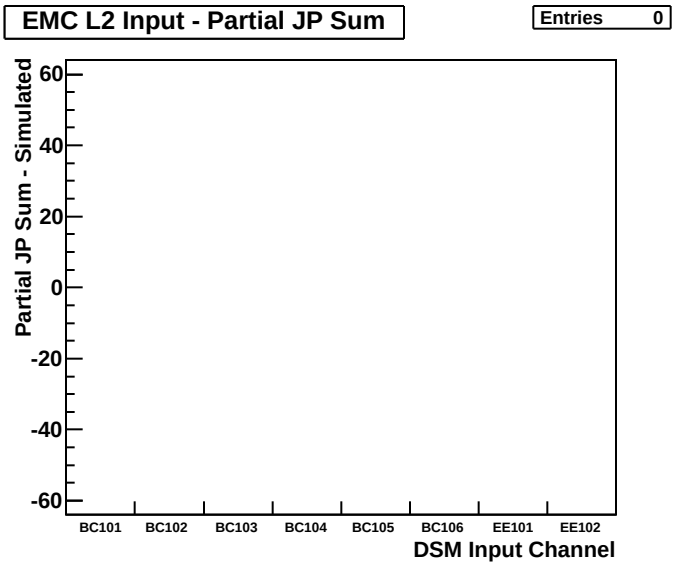

EMC L2 Input - JPY/JPB bits
Entries 1080648
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

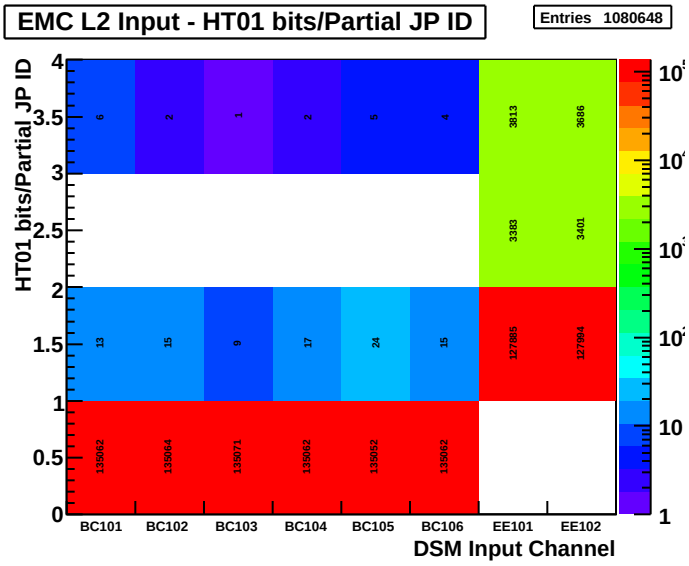

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

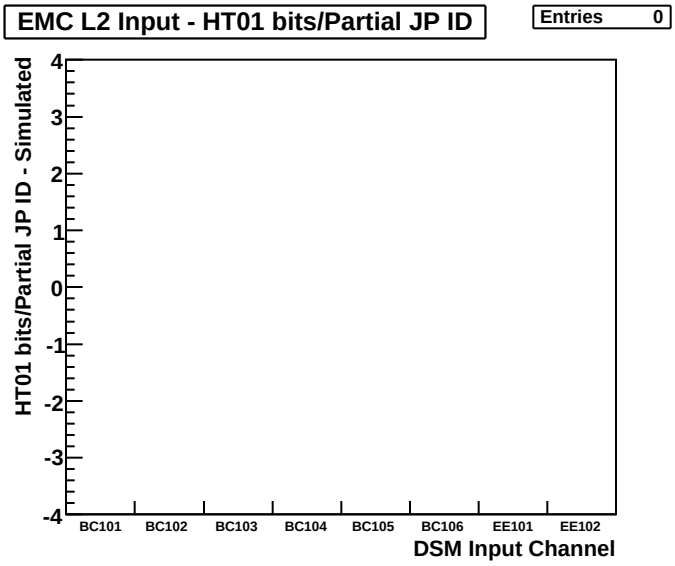

EMC L2 Input - JPZ/JPC bits
Entries 1080648
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

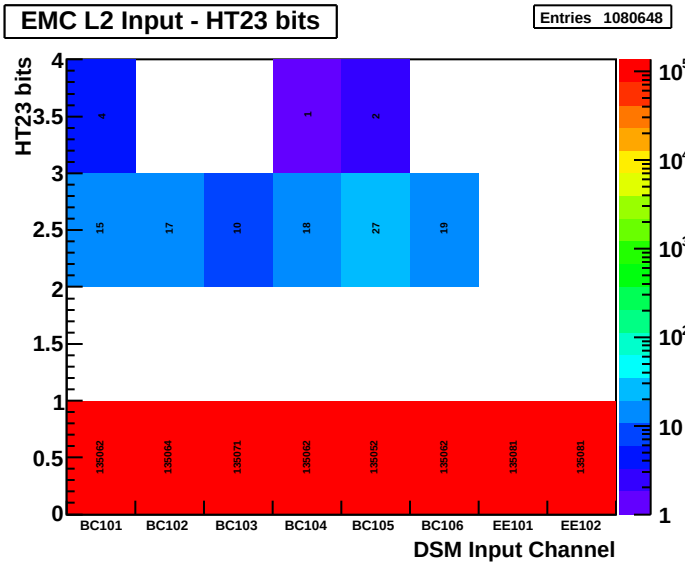

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

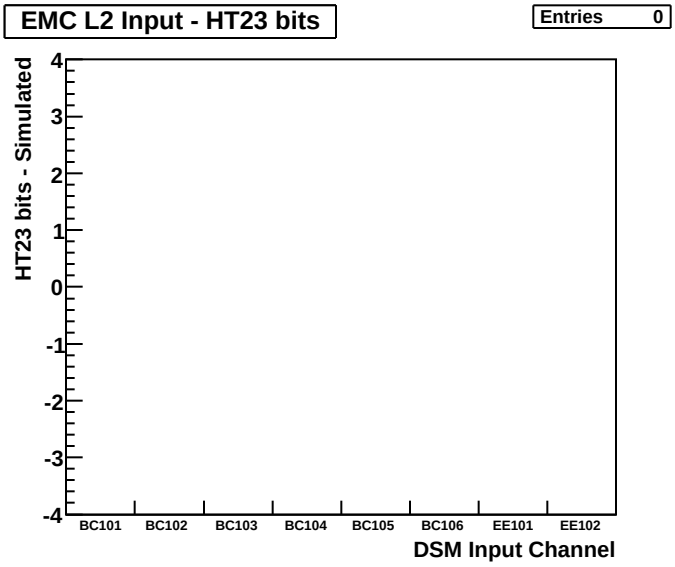

EMC L2 Input - Partial JP Sum
Entries 1080648
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

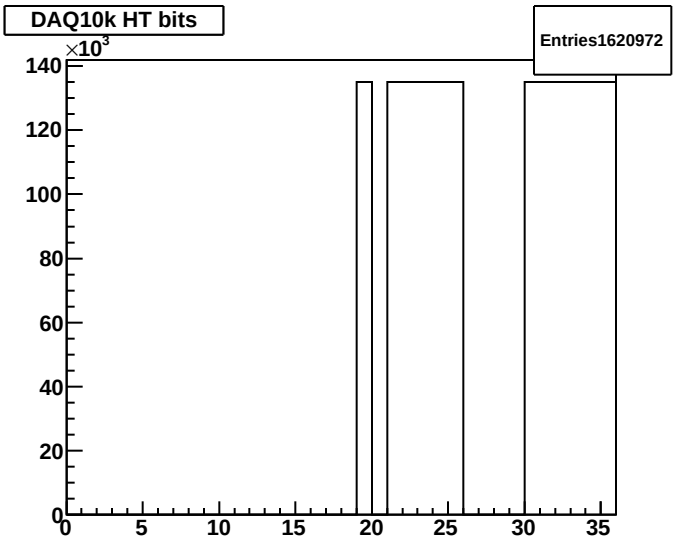

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

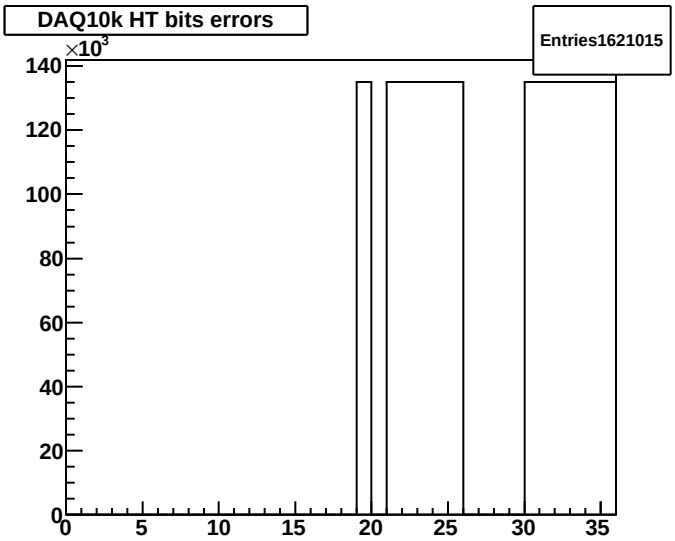

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1080648
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

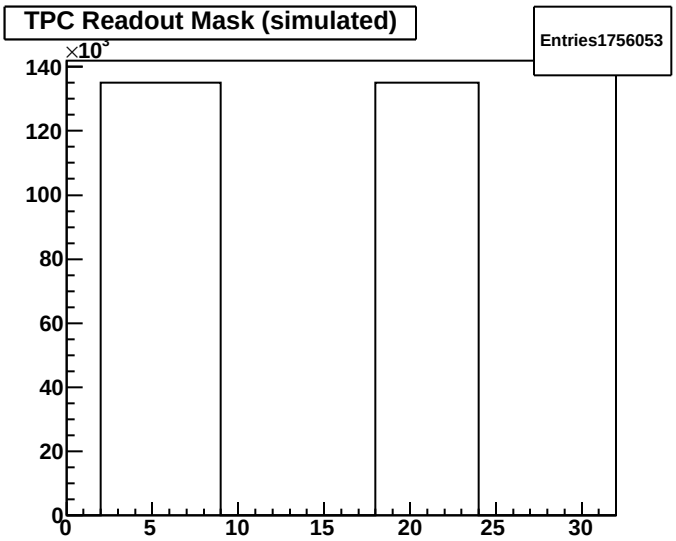

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

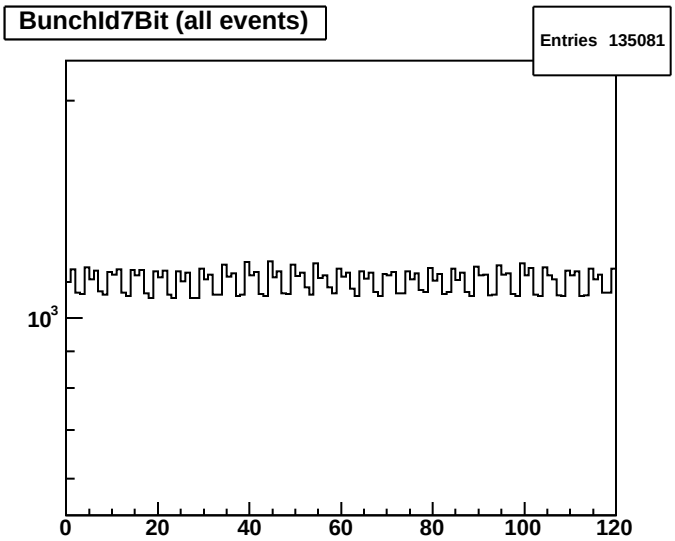

EMC L2 Input - HT23 bits
Entries 1080648
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

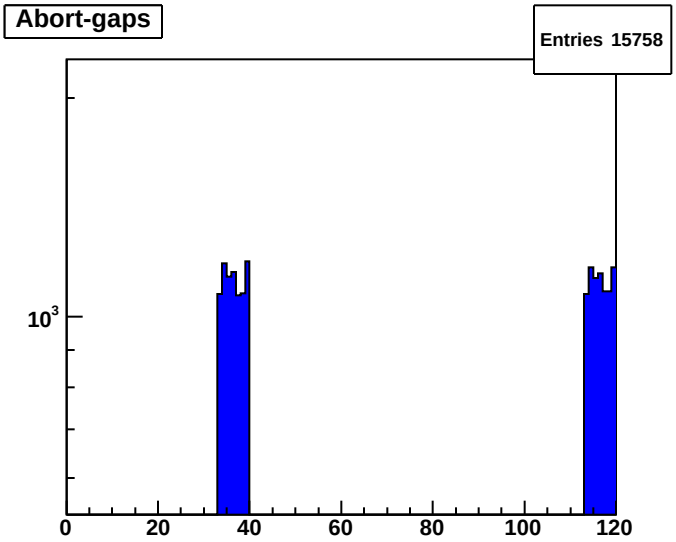

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

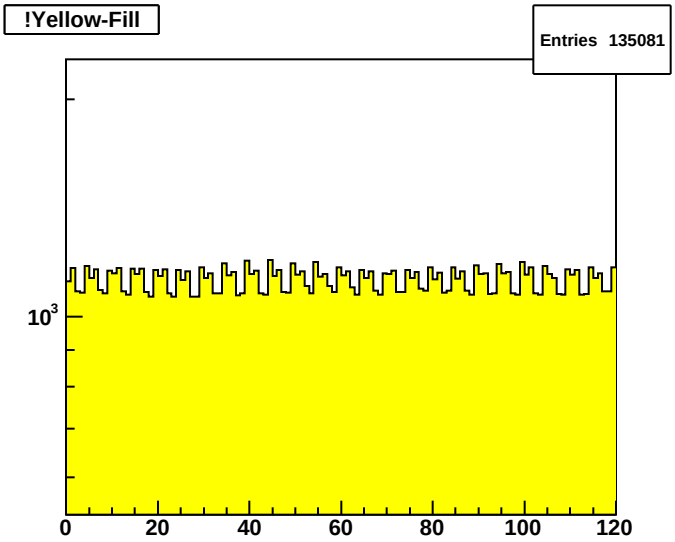

DAQ10k HT bits
Entries1620972
×10^3
140
120
100
80
60
40
20
0
0
5
10
15
20
25
30
35

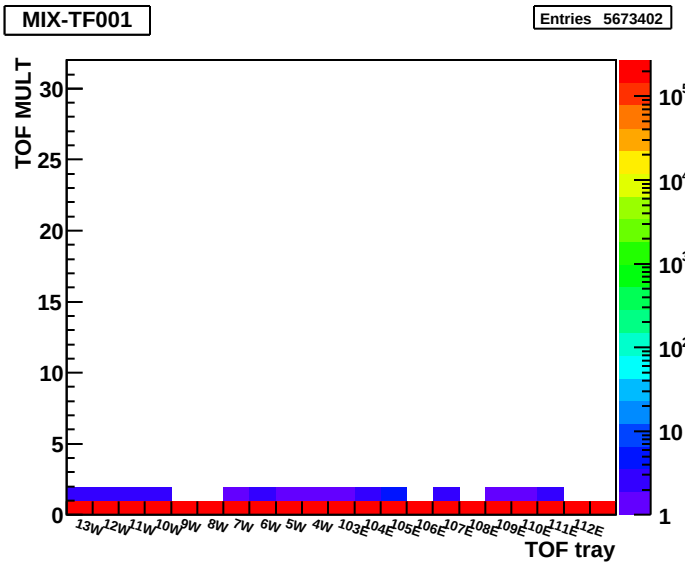

DAQ10k HT bits errors
Entries1621015
×10^3
140
120
100
80
60
40
20
0
0
5
10
15
20
25
30
35

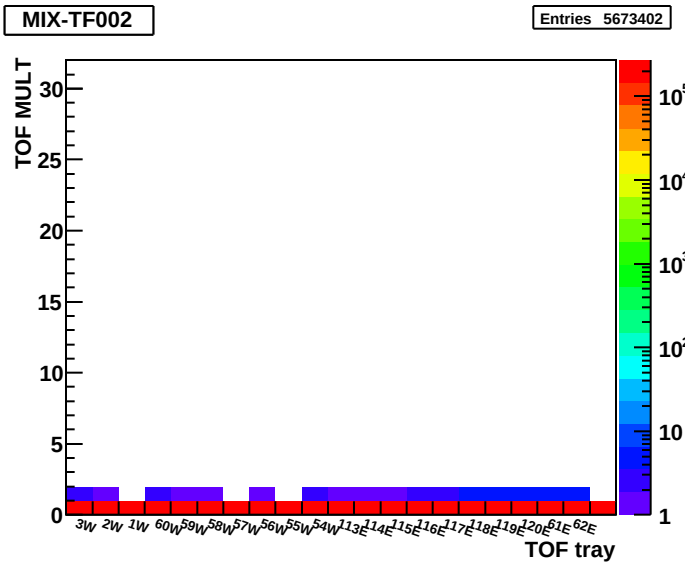

TPC Readout Mask (simulated)
Entries1756053
×10^3
140
120
100
80
60
40
20
0
0
5
10
15
20
25
30

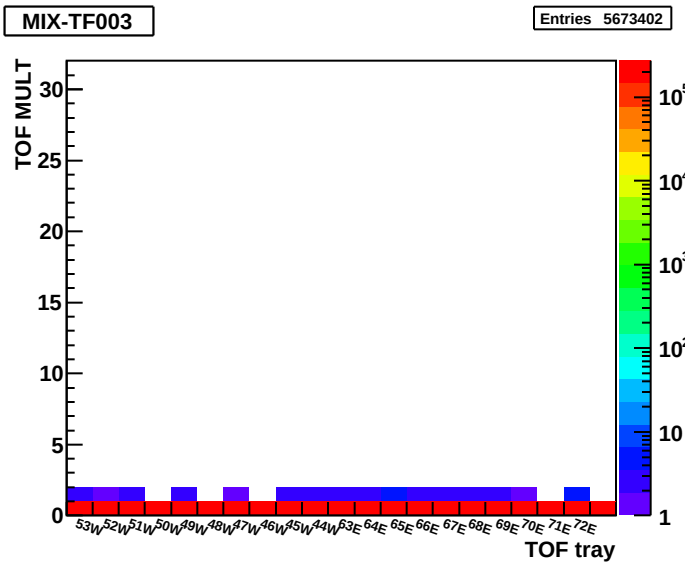

BunchId7Bit (all events)
Entries 135081
10^3
0
20
40
60
80
100
120

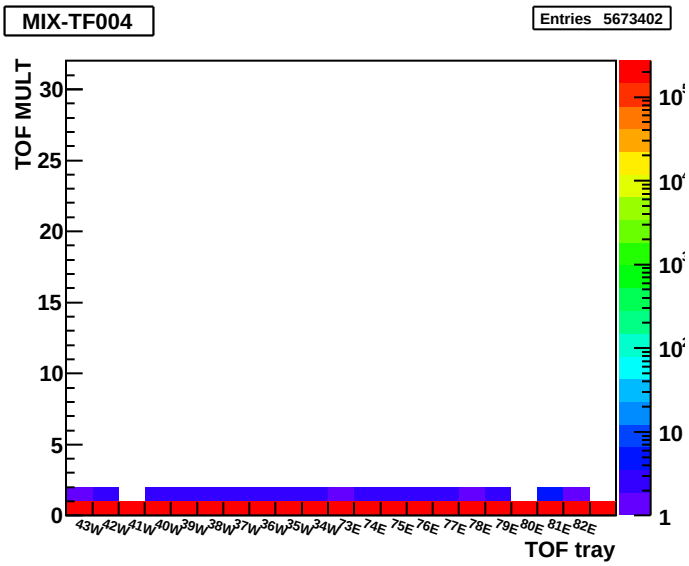

Abort-gaps
Entries 15758
10^3
0
20
40
60
80
100
120

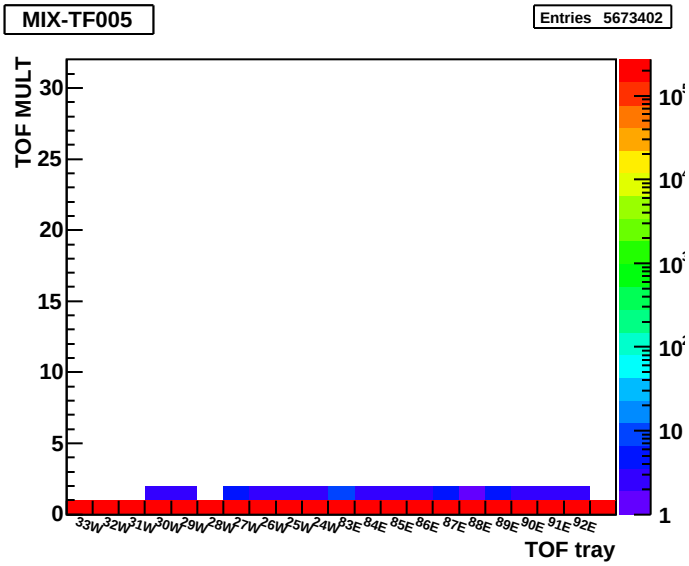

!Yellow-Fill
Entries 135081
10^3
0
20
40
60
80
100
120

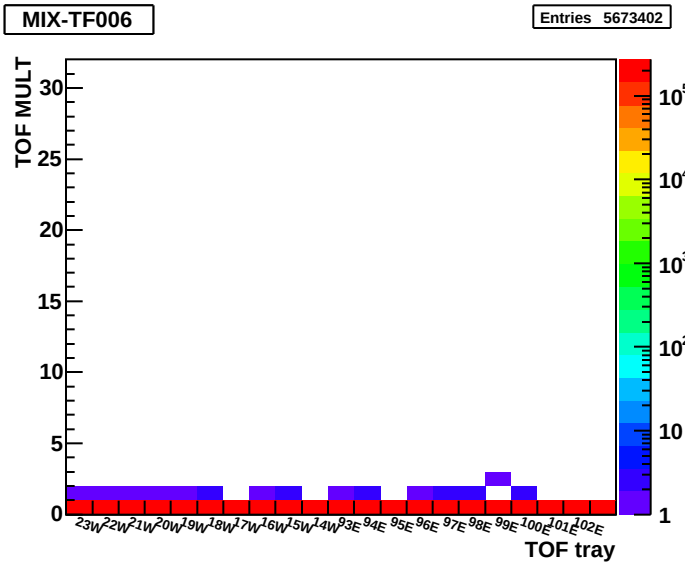

MIX-TF001
Entries 5673402
TOF MULT
TOF tray

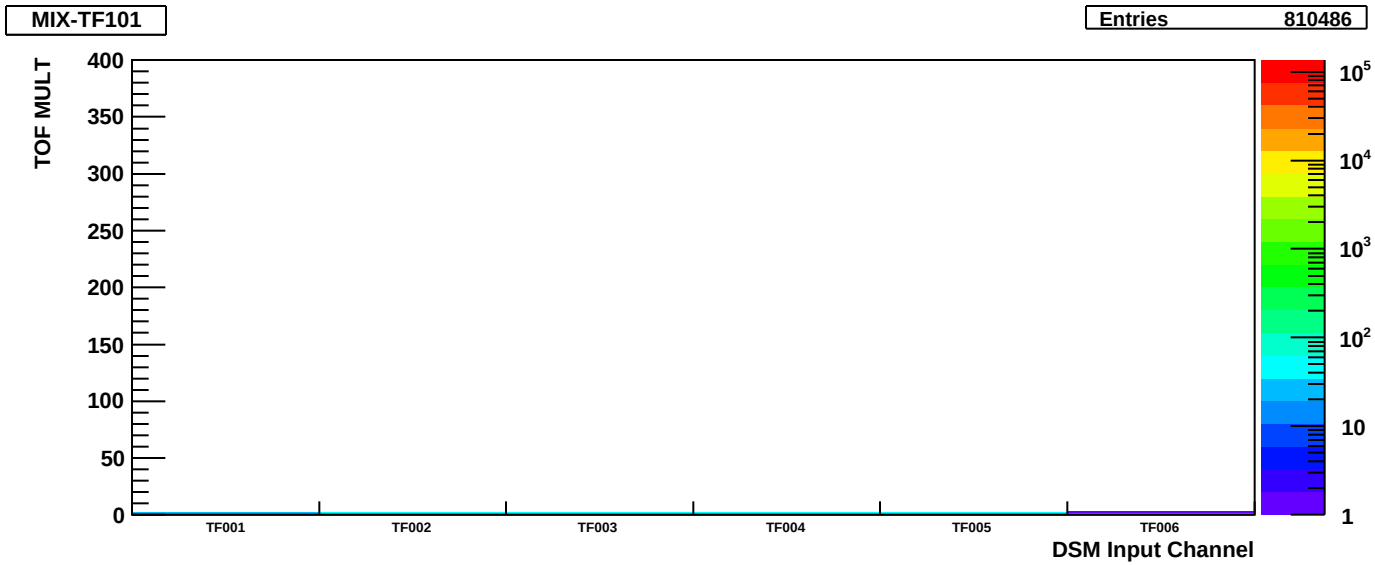

MIX-TF002
Entries 5673402
TOF MULT
TOF tray

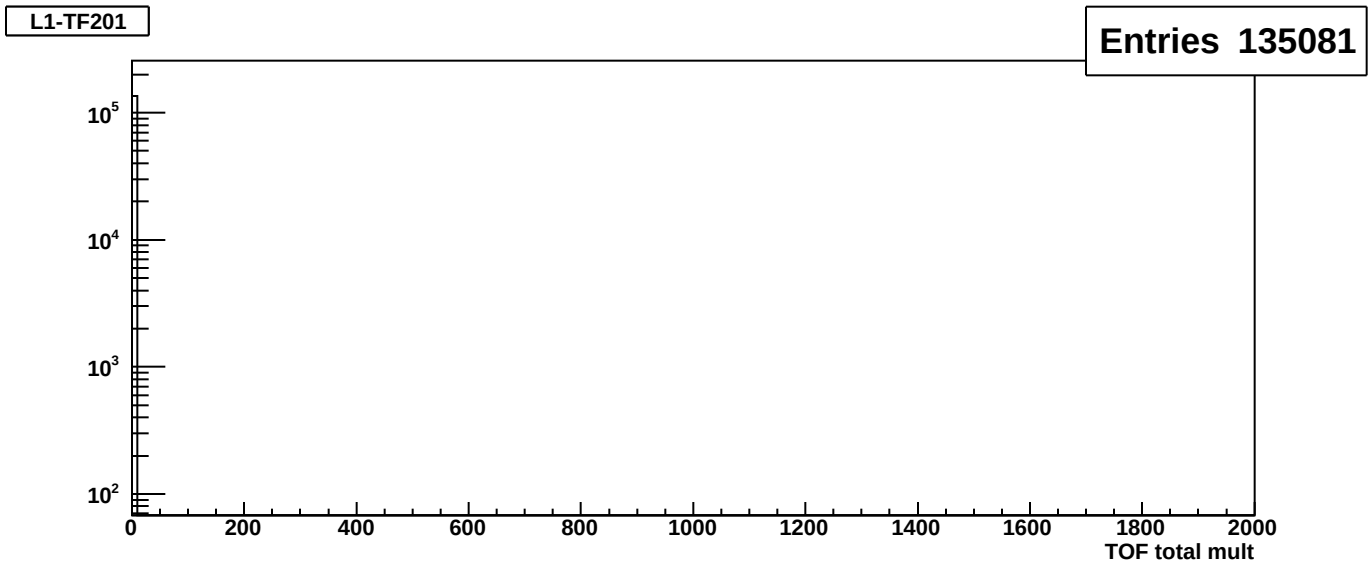

MIX-TF003
Entries 5673402
TOF MULT
TOF tray

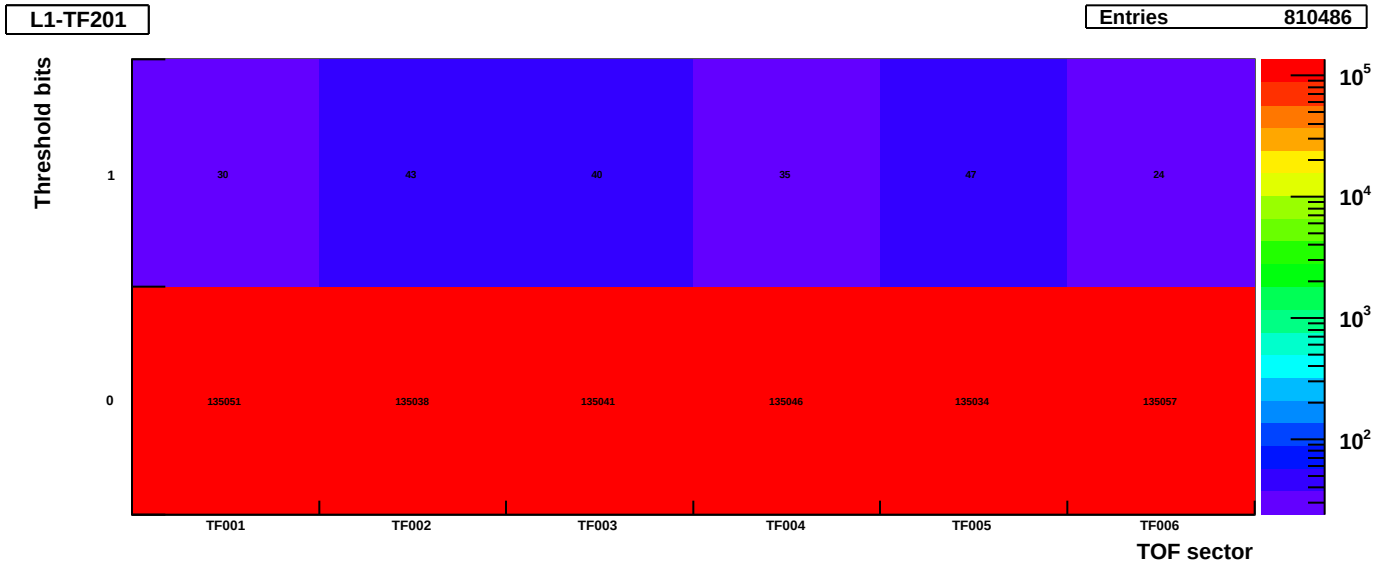

MIX-TF004
Entries 5673402
TOF MULT
TOF tray

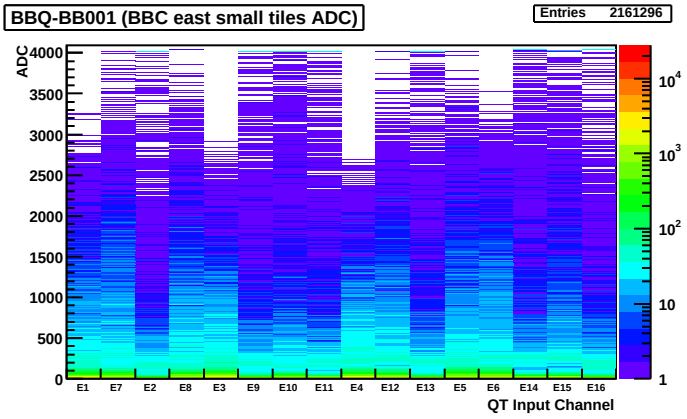

MIX-TF005
Entries 5673402
TOF MULT
TOF tray

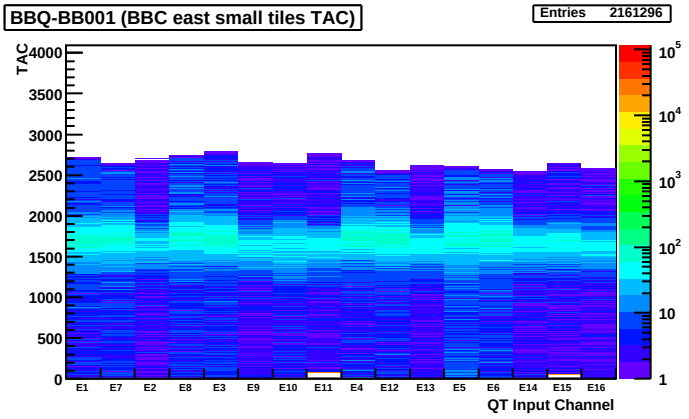

MIX-TF006
Entries 5673402
TOF MULT
TOF tray

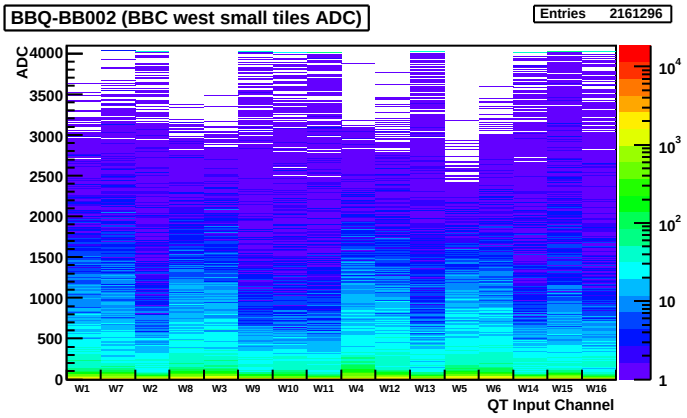

MIX-TF101
Entries 810486
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

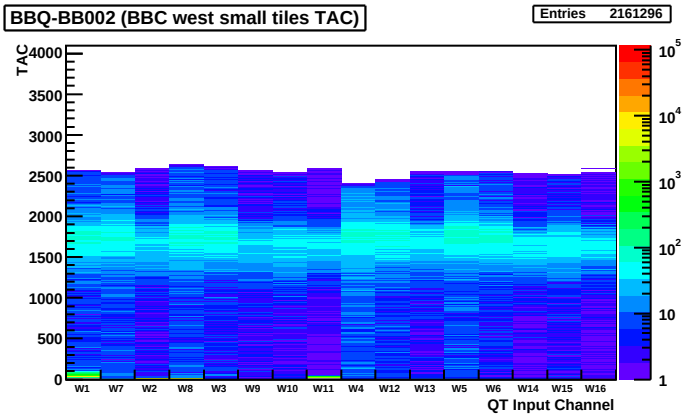

L1-TF201
Entries 135081
10^5
10^4
10^3
10^2
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

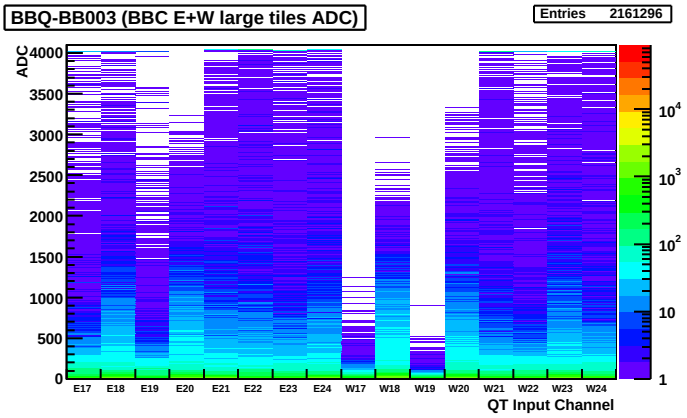

L1-TF201
Entries 810486
Threshold bits
1
0
30
43
40
35
47
24
135051
135038
135041
135046
135034
135057
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^5
10^4
10^3
10^2

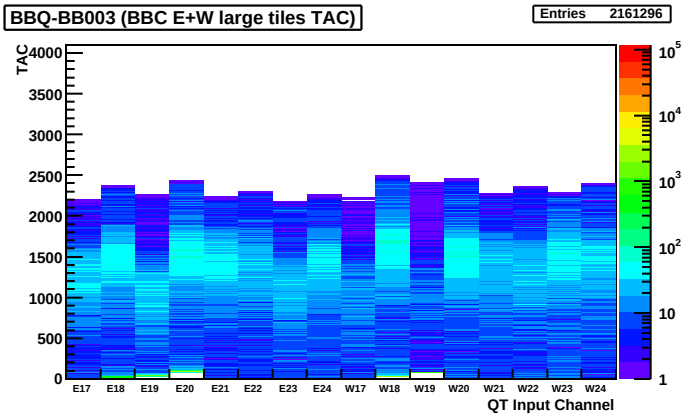

BBQ-BB001 (BBC east small tiles ADC)
Entries 2161296
ADC
QT Input Channel

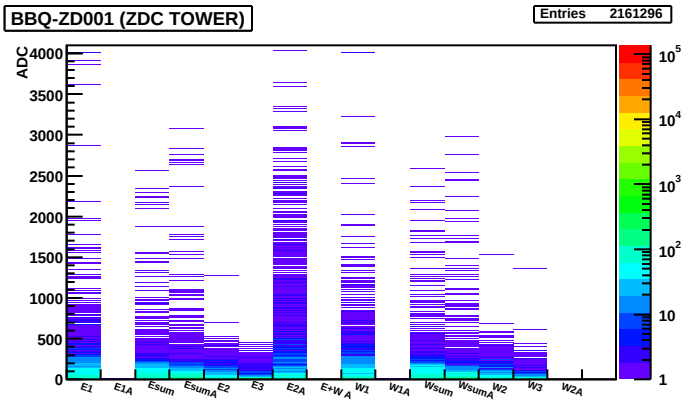

BBQ-BB001 (BBC east small tiles TAC)
Entries 2161296
TAC
QT Input Channel

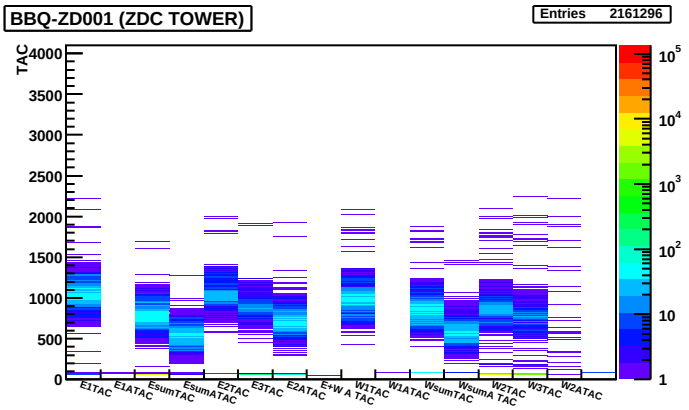

BBQ-BB002 (BBC west small tiles ADC)
Entries 2161296
ADC
QT Input Channel

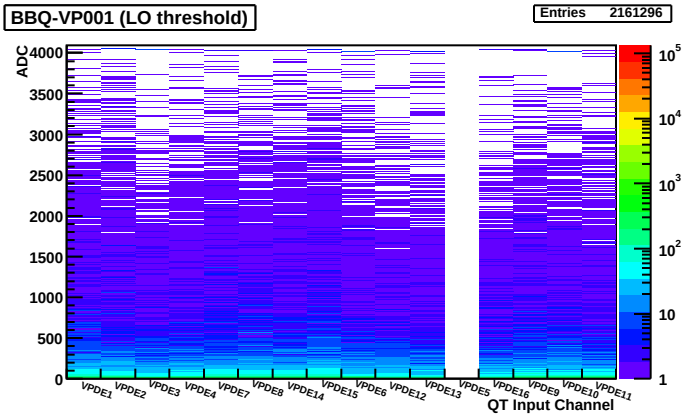

BBQ-BB002 (BBC west small tiles TAC)
Entries 2161296
TAC
QT Input Channel

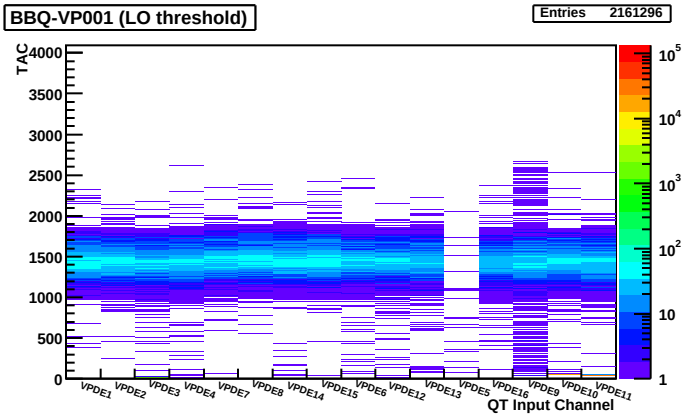

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 2161296
ADC
QT Input Channel

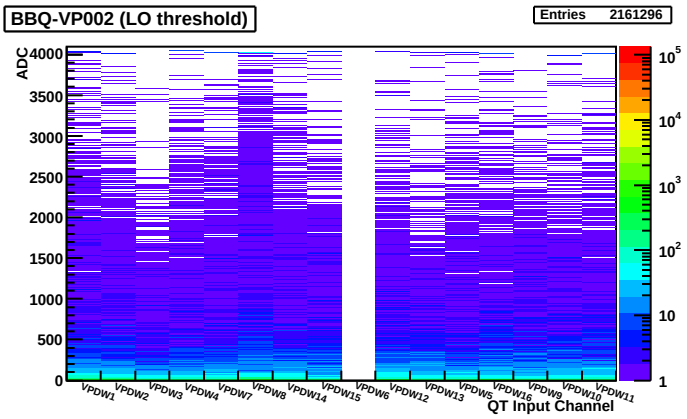

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 2161296
TAC
QT Input Channel

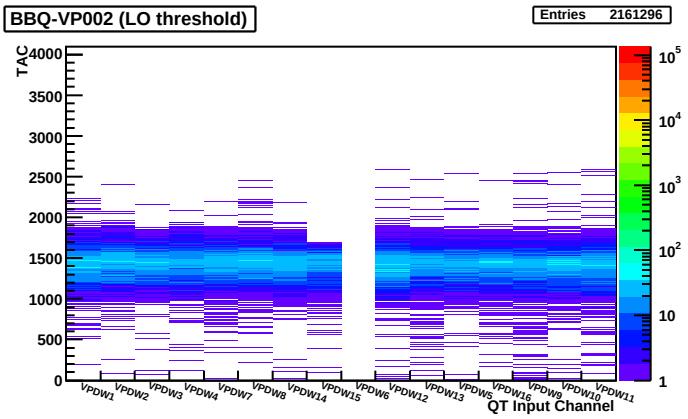

BBQ-ZD001 (ZDC TOWER)
Entries 2161296
ADC

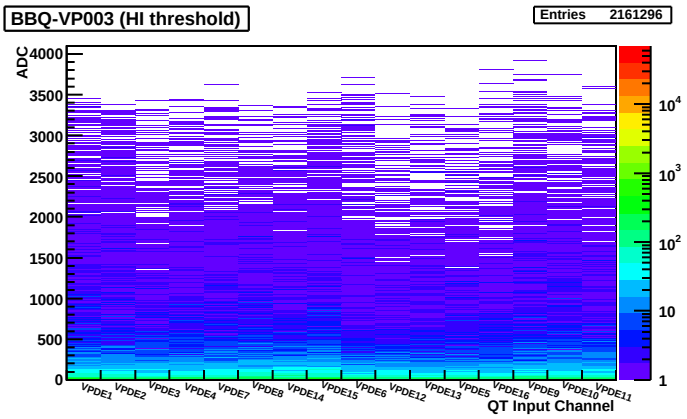

BBQ-ZD001 (ZDC TOWER)
Entries 2161296
TAC

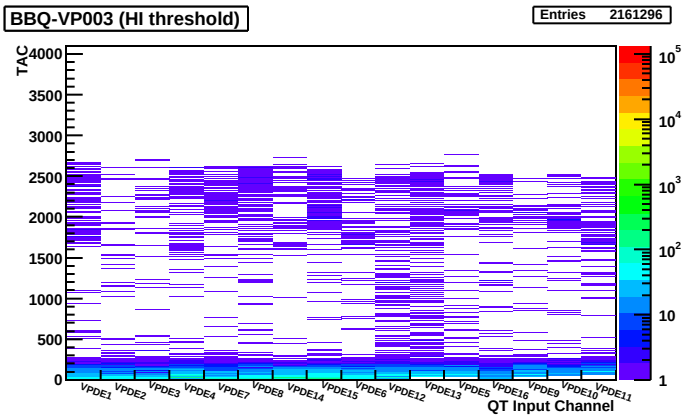

BBQ-VP001 (LO threshold)
Entries 2161296
ADC
QT Input Channel

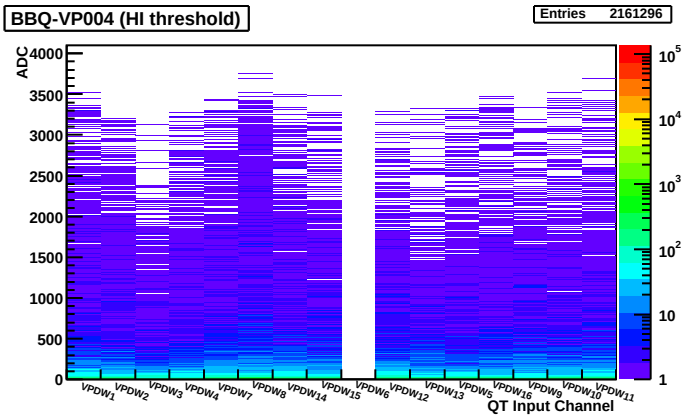

BBQ-VP001 (LO threshold)
Entries 2161296
TAC
QT Input Channel

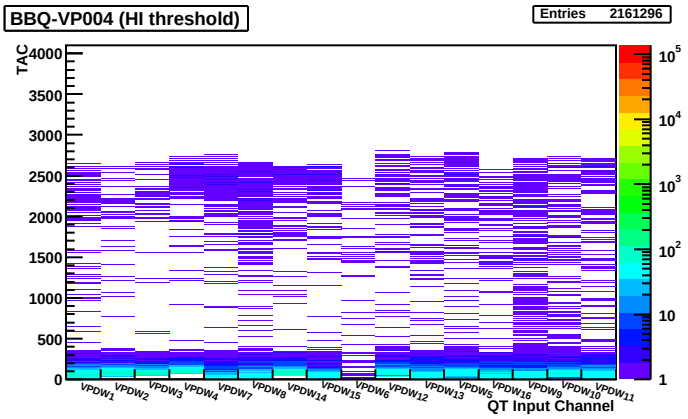

BBQ-VP002 (LO threshold)
Entries 2161296
ADC
QT Input Channel

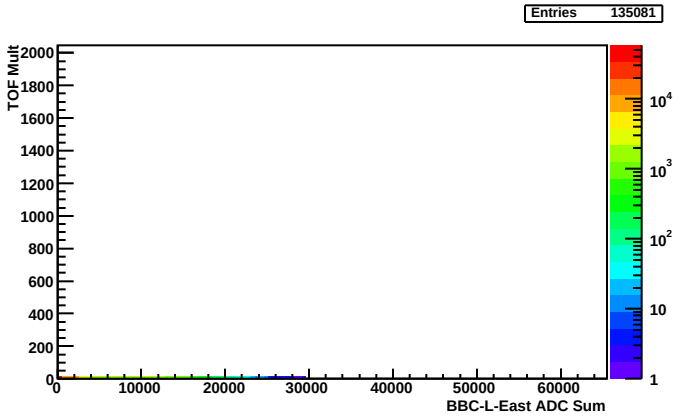

BBQ-VP002 (LO threshold)
Entries 2161296
TAC
QT Input Channel

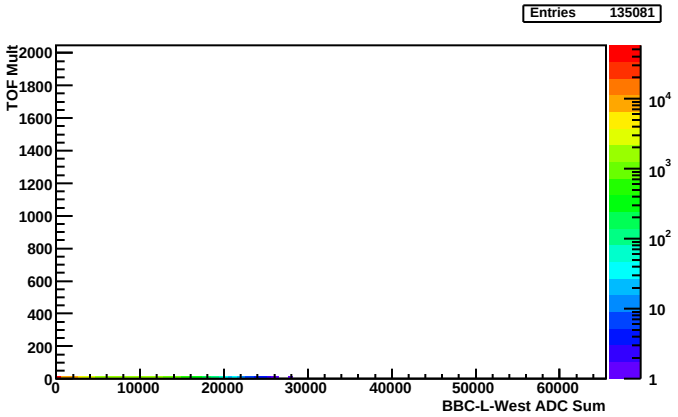

BBQ-VP003 (HI threshold)
Entries 2161296
ADC
QT Input Channel

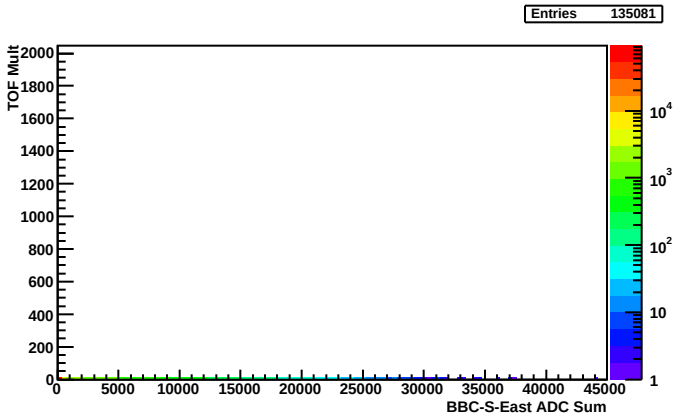

BBQ-VP003 (HI threshold)
Entries 2161296
TAC
QT Input Channel

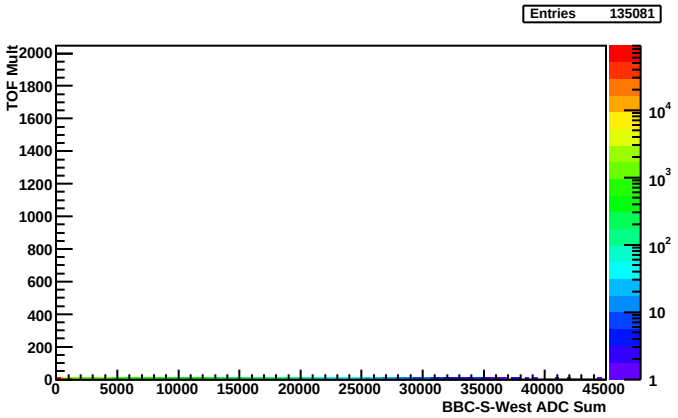

BBQ-VP004 (HI threshold)
Entries 2161296
ADC
QT Input Channel

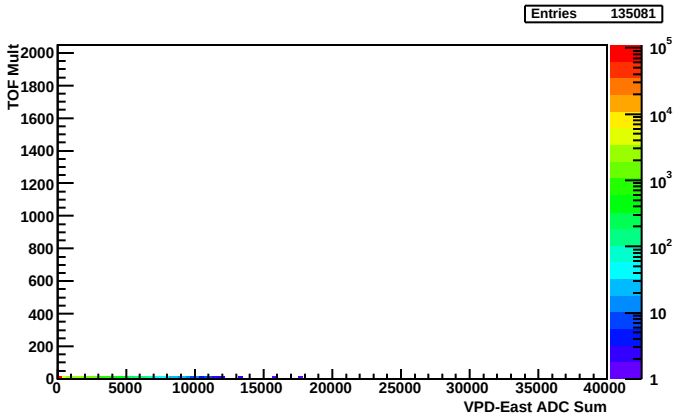

BBQ-VP004 (HI threshold)
Entries 2161296
TAC
QT Input Channel

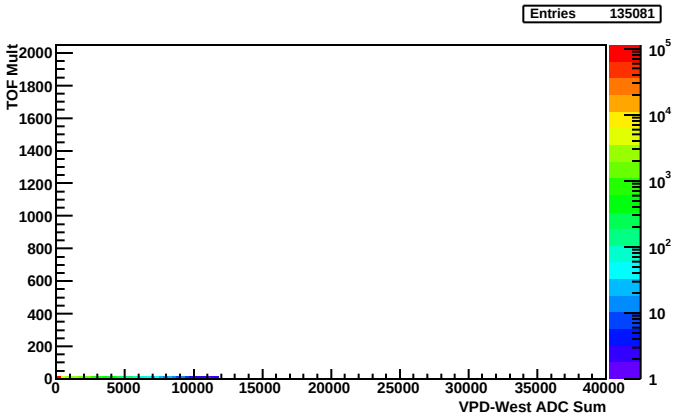

Entries 135081
TOF Mult
BBC-L-East ADC Sum

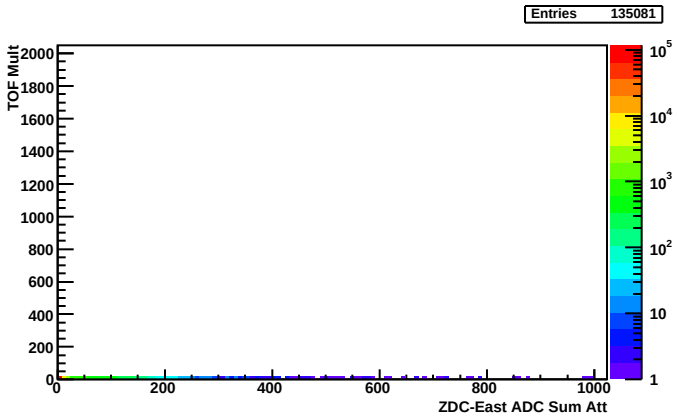

Entries 135081
TOF Mult
BBC-L-West ADC Sum

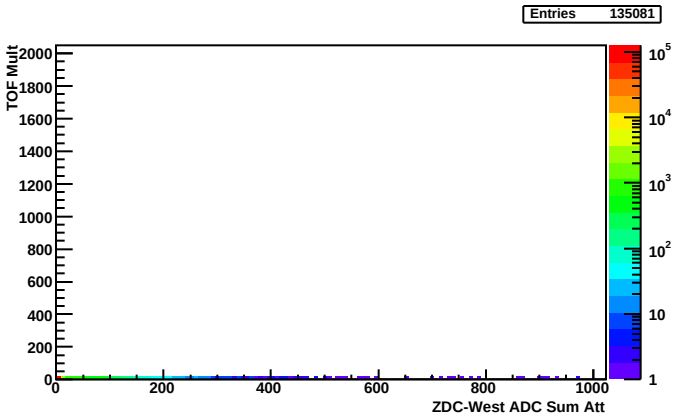

Entries 135081
TOF Mult
BBC-S-East ADC Sum

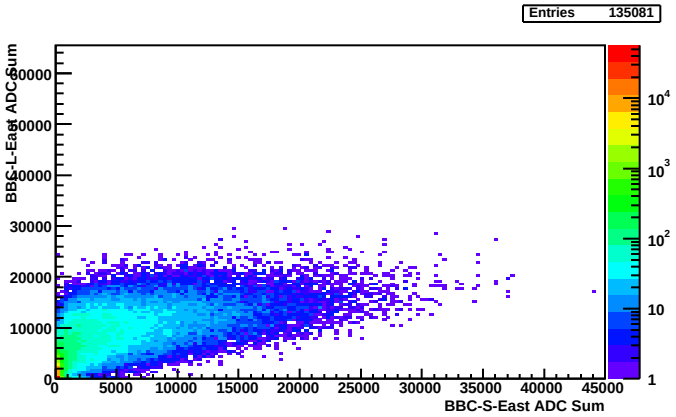

Entries 135081
TOF Mult
BBC-S-West ADC Sum

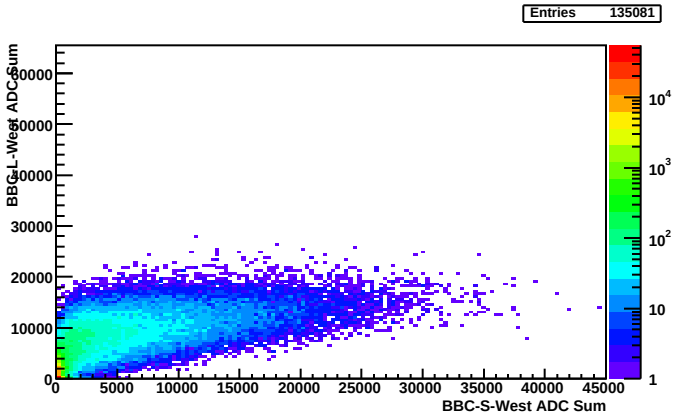

Entries 135081
TOF Mult
VPD-East ADC Sum

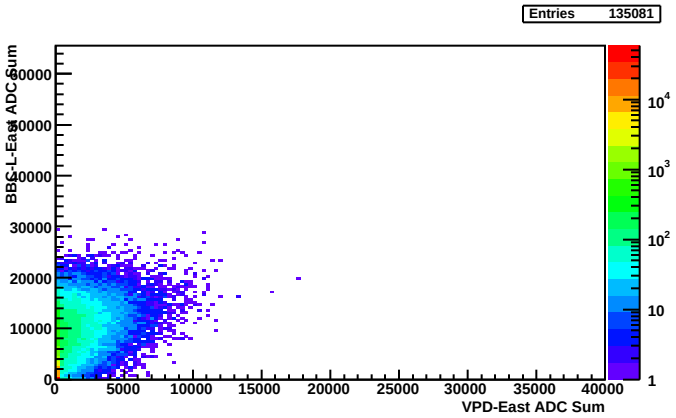

Entries 135081
TOF Mult
VPD-West ADC Sum

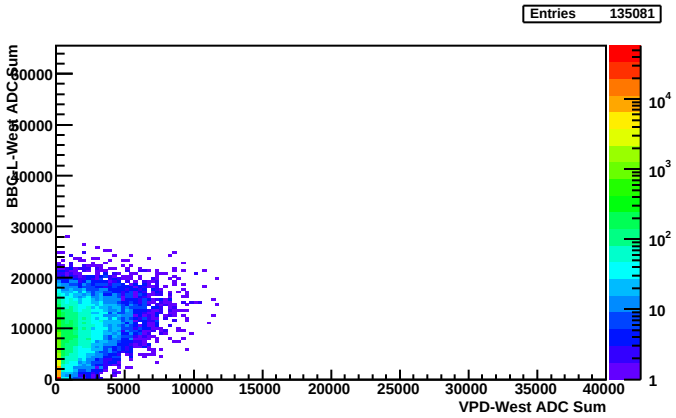

Entries 135081
TOF Mult
ZDC-East ADC Sum Att

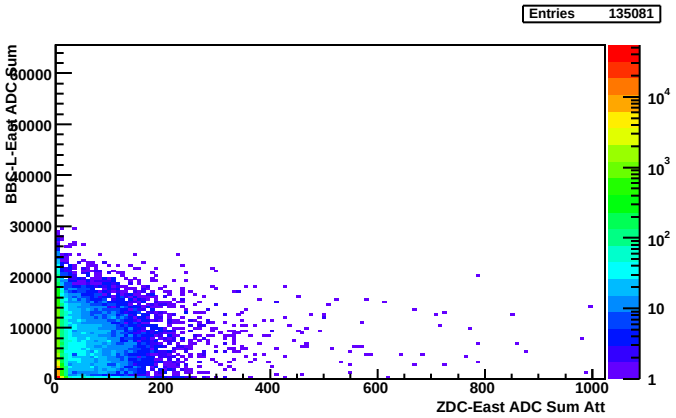

Entries 135081
TOF Mult
ZDC-West ADC Sum Att

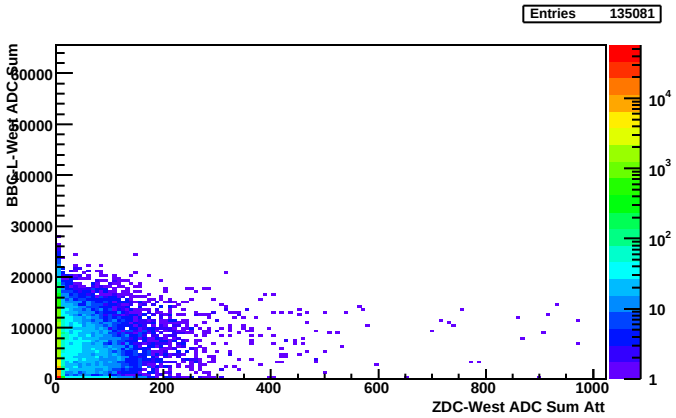

Entries 135081
BBC-L-East ADC Sum
BBC-S-East ADC Sum

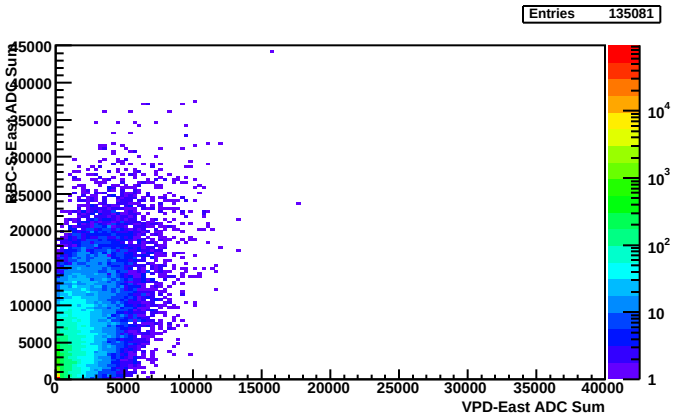

Entries 135081
BBC-L-West ADC Sum
BBC-S-West ADC Sum

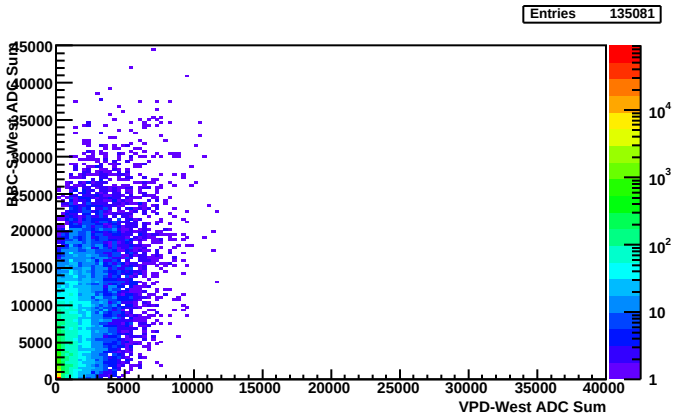

Entries 135081
BBC-L-East ADC Sum
VPD-East ADC Sum

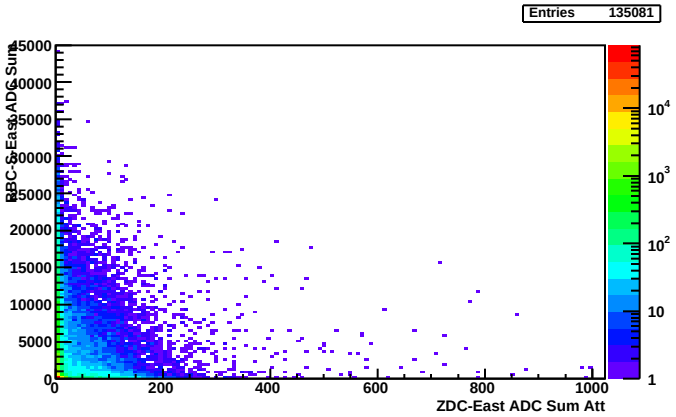

Entries 135081
BBC-L-West ADC Sum
VPD-West ADC Sum

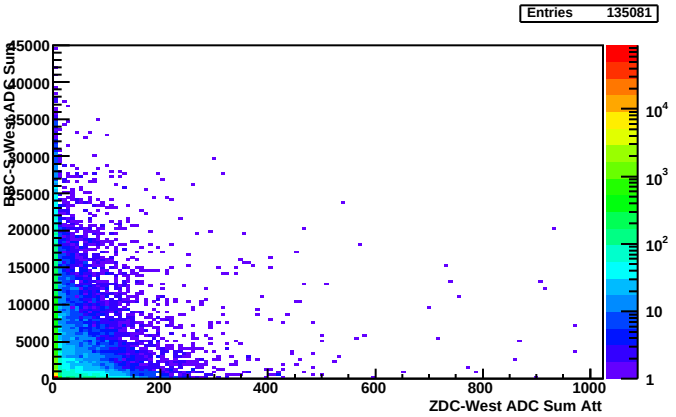

Entries 135081
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

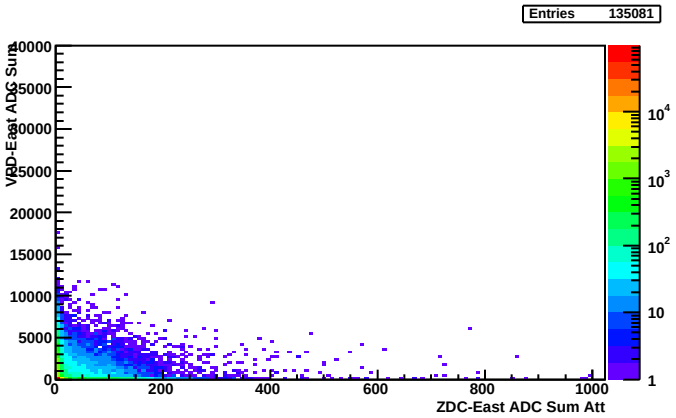

Entries 135081
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

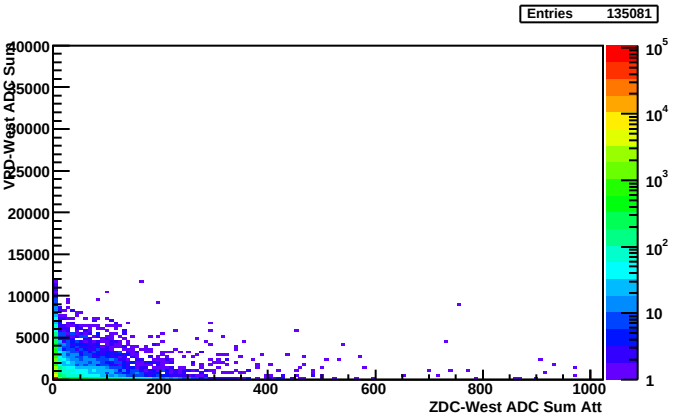

Entries 135081
BBC-S-East ADC Sum
VPD-East ADC Sum

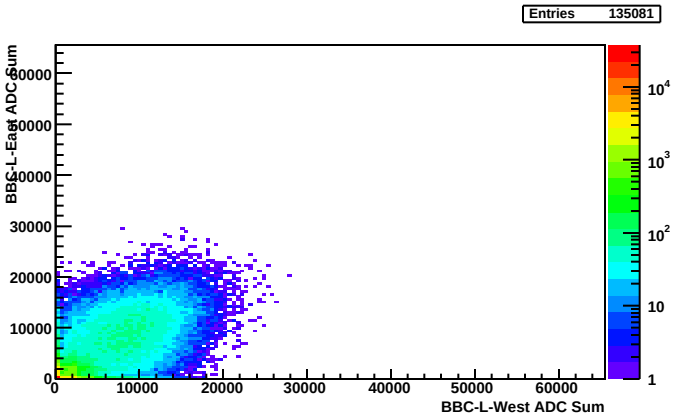

Entries 135081
BBC-S-West ADC Sum
VPD-West ADC Sum

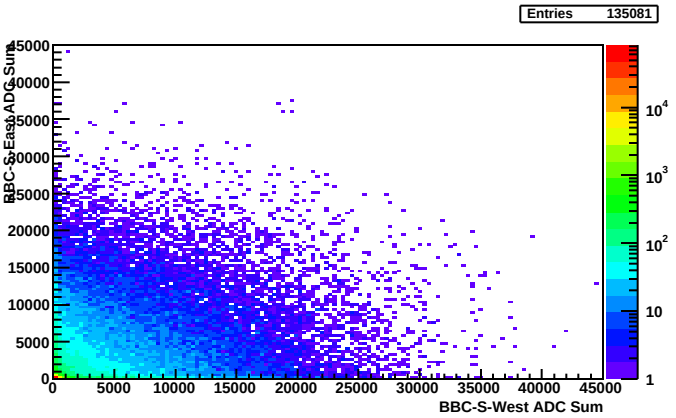

Entries 135081
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

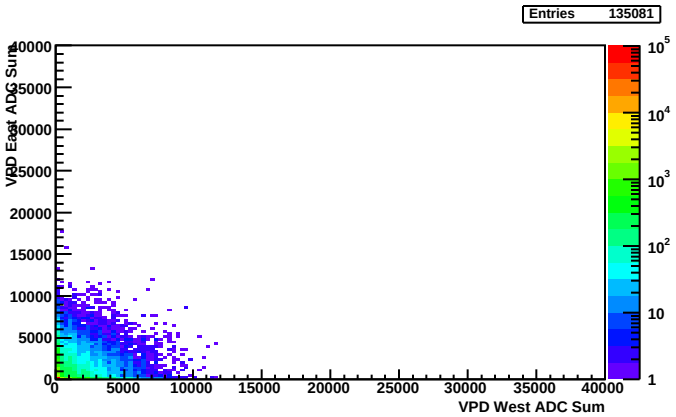

Entries 135081
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

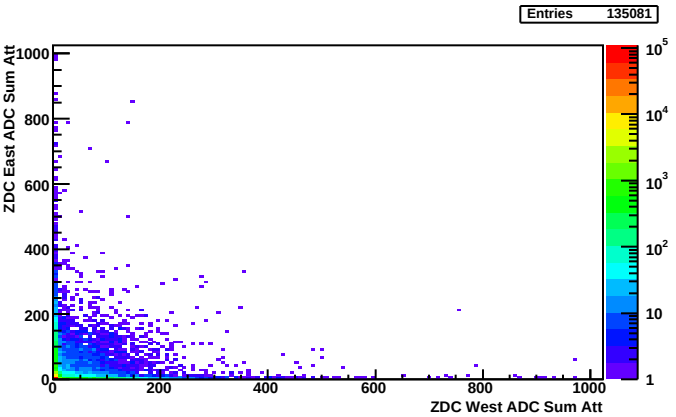

Entries 135081
VPD-East ADC Sum
ZDC-East ADC Sum Att

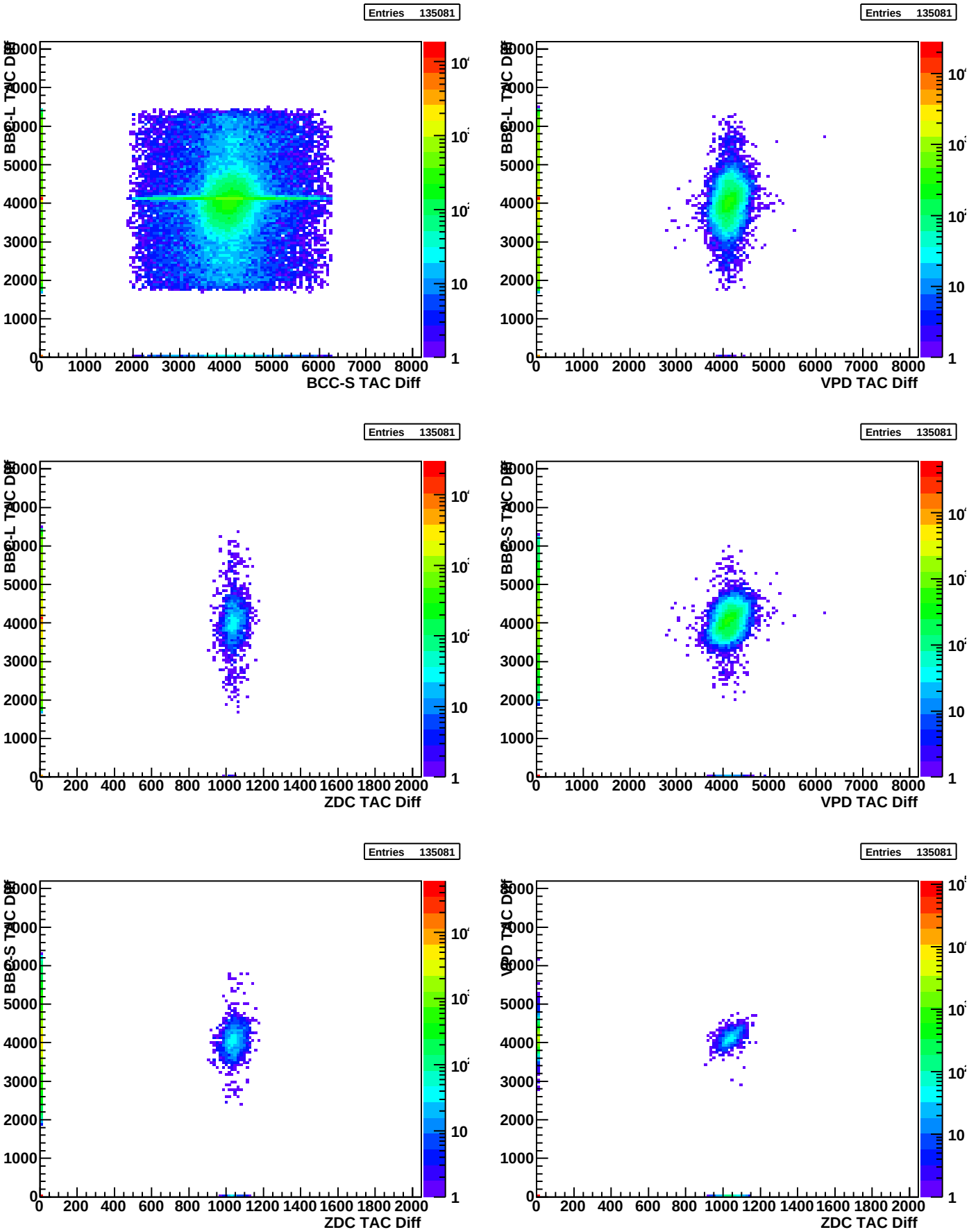

Entries 135081
VPD-West ADC Sum
ZDC-West ADC Sum Att

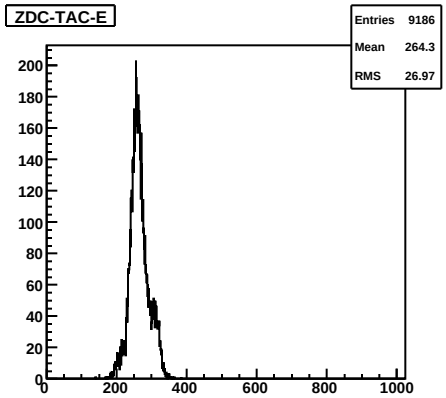

Entries 135081
BBC-L-East ADC Sum
BBC-L-West ADC Sum

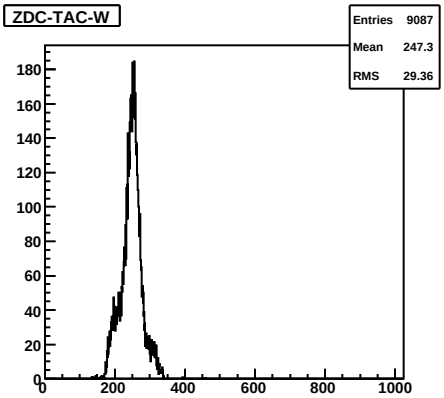

Entries 135081
BBC-S-East ADC Sum
BBC-S-West ADC Sum

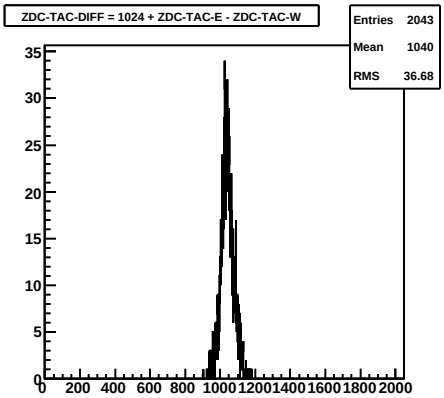

Entries 135081
VPD East ADC Sum
VPD West ADC Sum

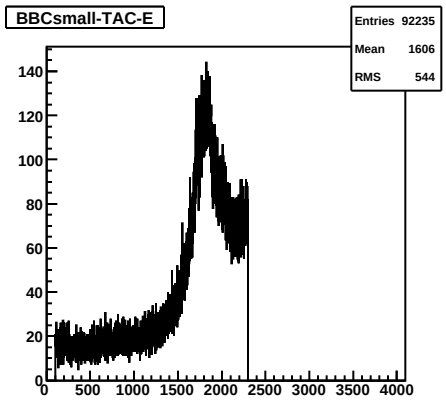

Entries 135081
ZDC East ADC Sum Att
ZDC West ADC Sum Att

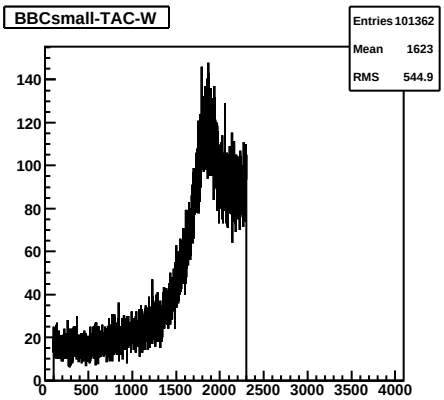

Entries 135081
BBC-L TAC Diff
BCC-S TAC Diff
Entries 135081
BBC-L TAC Diff
VPD TAC Diff
Entries 135081
BBC-L TAC Diff
ZDC TAC Diff
Entries 135081
BBC-S TAC Diff
VPD TAC Diff
Entries 135081
BBC-S TAC Diff
ZDC TAC Diff
Entries 135081
VPD TAC Diff
ZDC TAC Diff

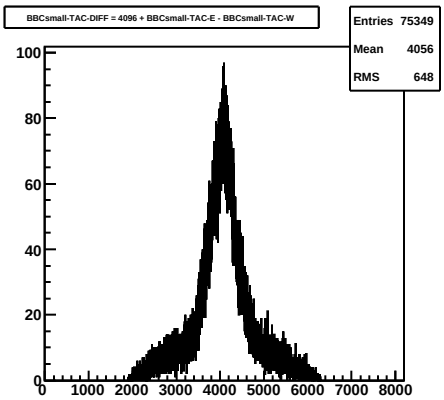

ZDC-TAC-E
Entries 9186
Mean 264.3
RMS 26.97

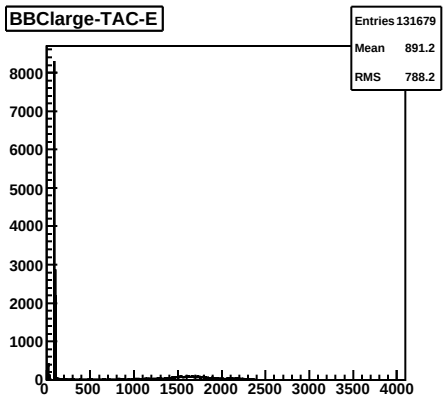

ZDC-TAC-W
Entries 9087
Mean 247.3
RMS 29.36

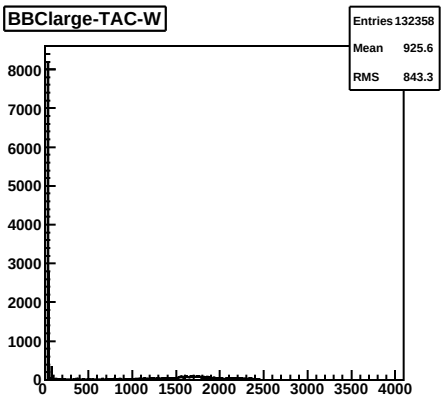

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 2043
Mean 1040
RMS 36.68

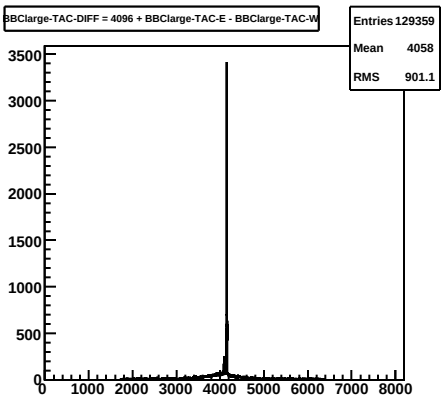

BBCsmall-TAC-E
Entries 92235
Mean 1606
RMS 544

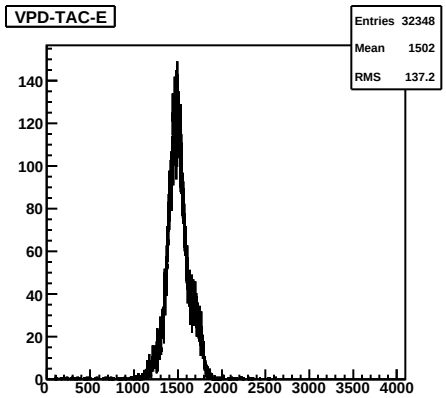

BBCsmall-TAC-W
Entries 101362
Mean 1623
RMS 544.9

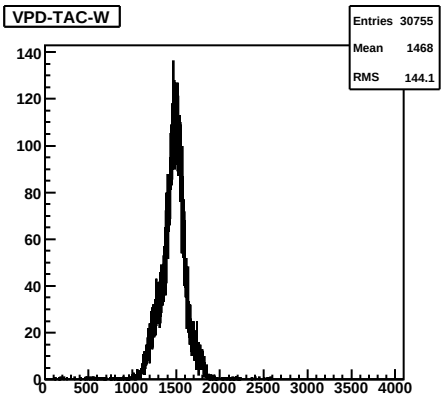

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 75349
Mean 4056
RMS 648

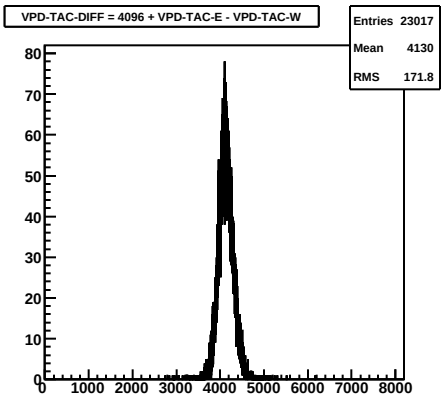

BBClarge-TAC-E
Entries 131679
Mean 891.2
RMS 788.2

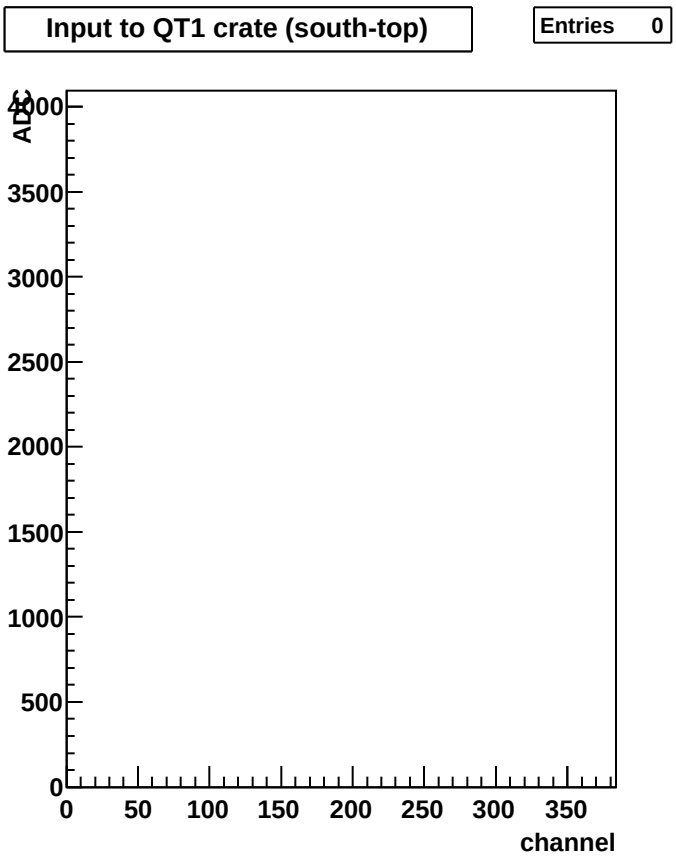

BBClarge-TAC-W
Entries 132358
Mean 925.6
RMS 843.3

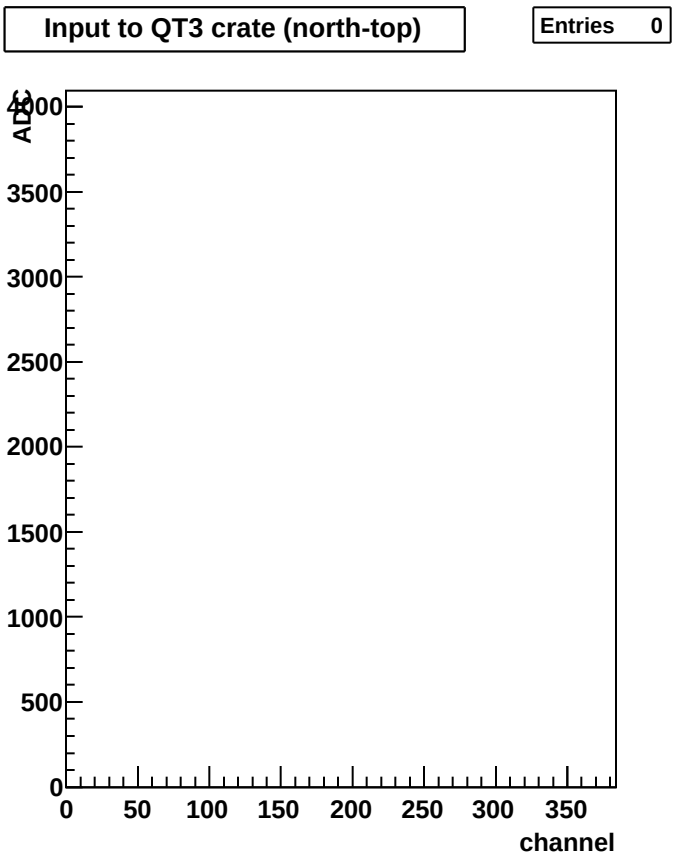

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 129359
Mean 4058
RMS 901.1

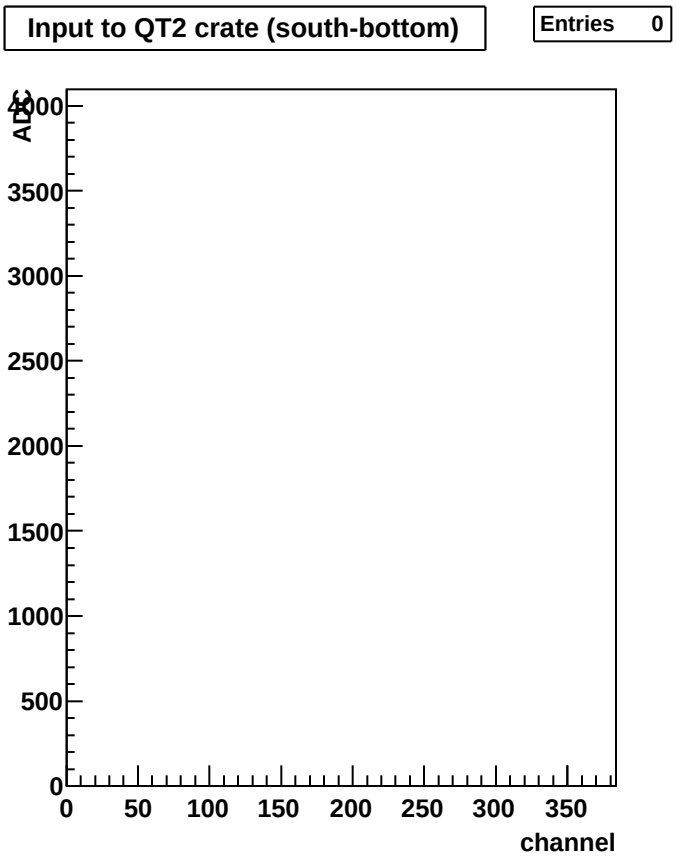

VPD-TAC-E
Entries 32348
Mean 1502
RMS 137.2

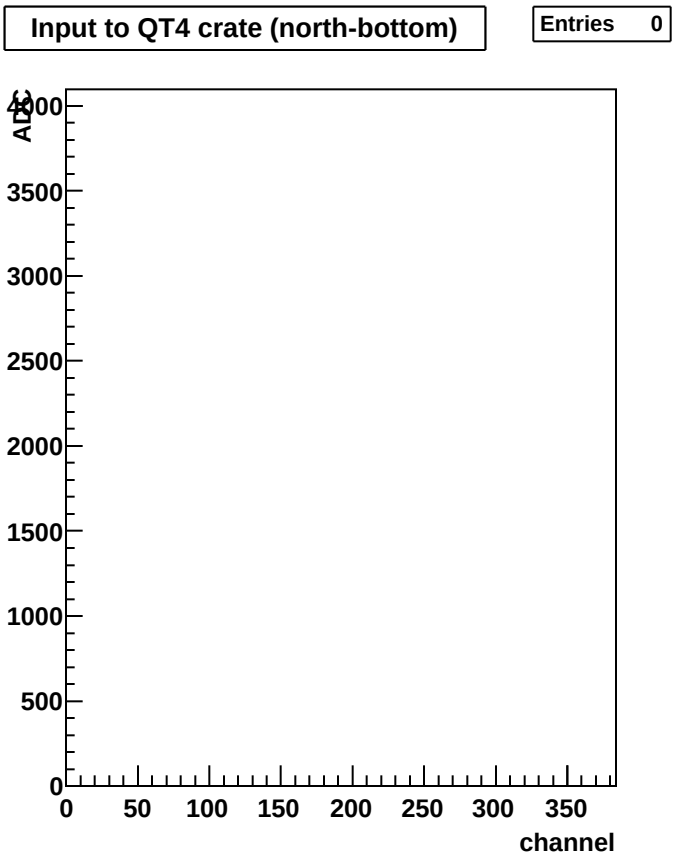

VPD-TAC-W
Entries 30755
Mean 1468
RMS 144.1

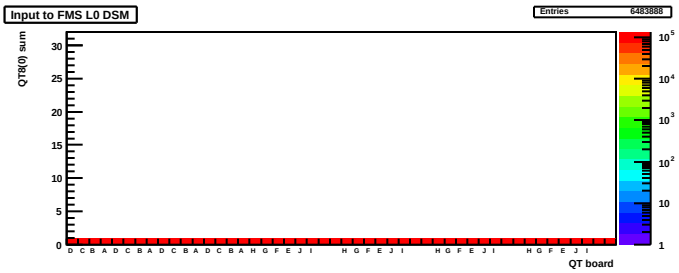

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 23017
Mean 4130
RMS 171.8

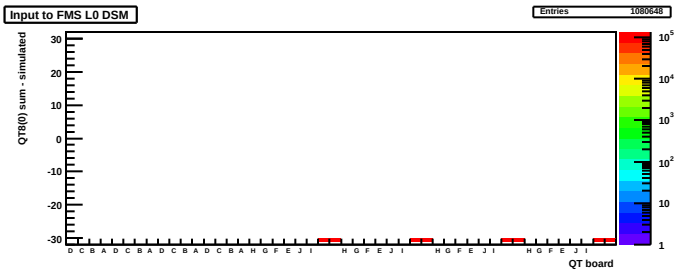

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

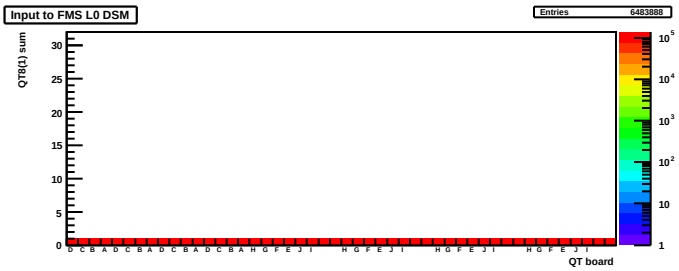

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

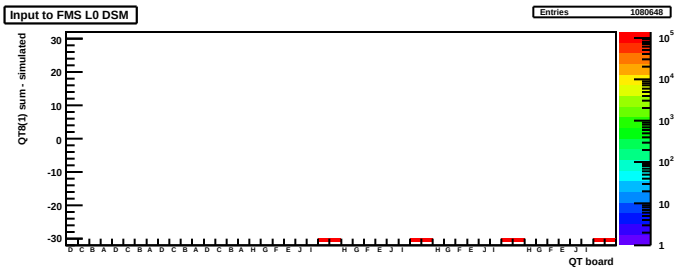

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

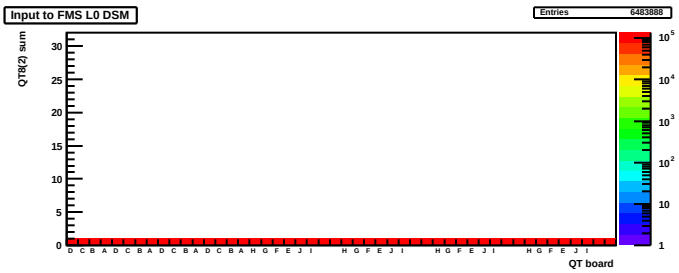

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

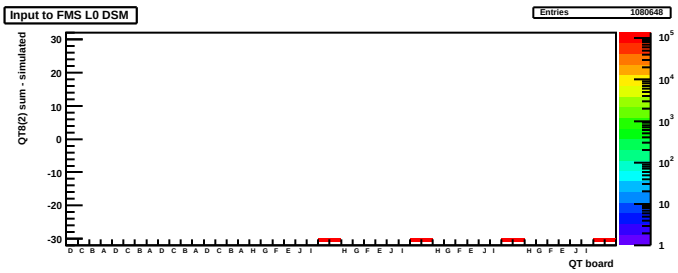

Input to FMS L0 DSM
Entries 6483888
QT8(0) sum
QT board

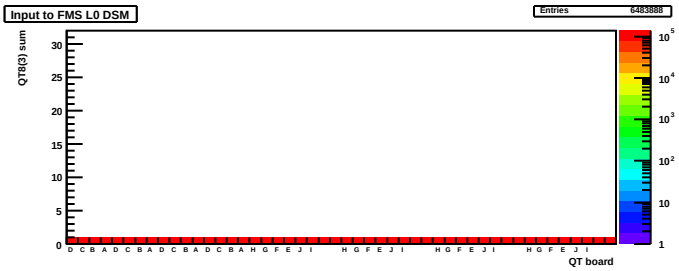

Input to FMS L0 DSM
Entries 1080648
QT8(0) sum - simulated
QT board

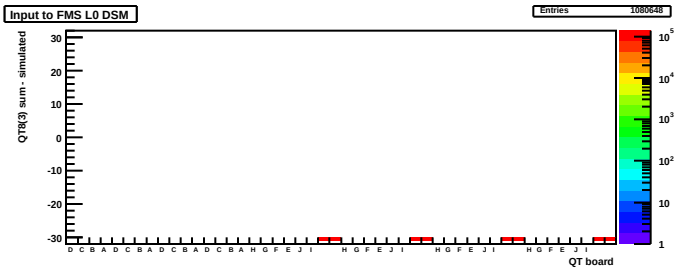

Input to FMS L0 DSM
Entries 6483888
QT8(1) sum
QT board

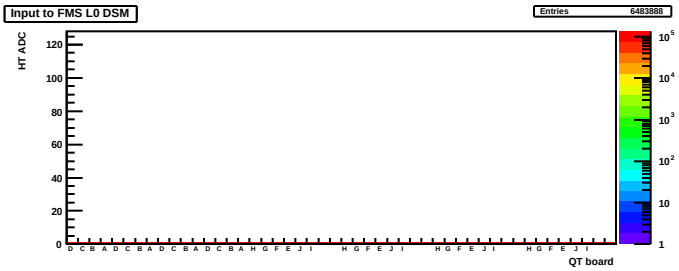

Input to FMS L0 DSM
Entries 1080648
QT8(1) sum - simulated
QT board

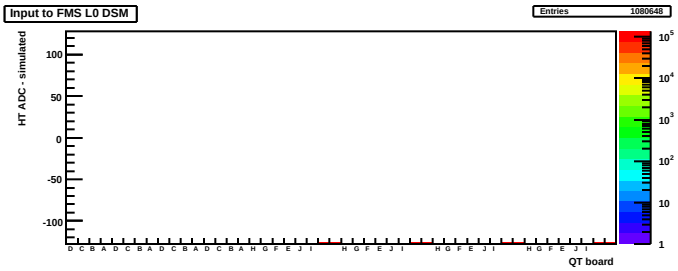

Input to FMS L0 DSM
Entries 6483888
QT8(2) sum
QT board

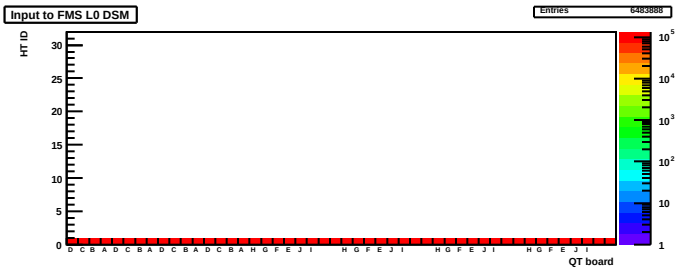

Input to FMS L0 DSM
Entries 1080648
QT8(2) sum - simulated
QT board

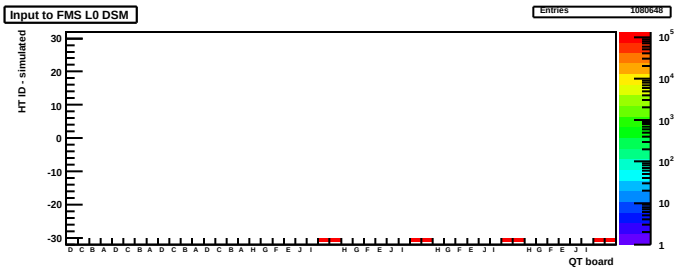

Input to FMS L0 DSM
Entries 6483888
QT8(3) sum
QT board

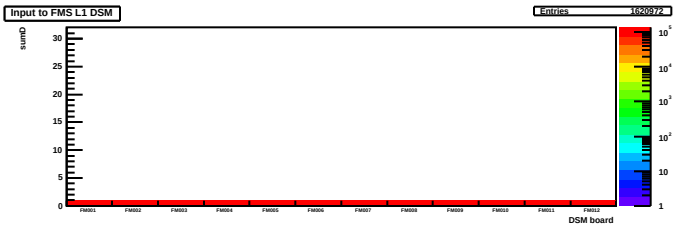

Input to FMS L0 DSM
Entries 1080648
QT8(3) sum - simulated
QT board

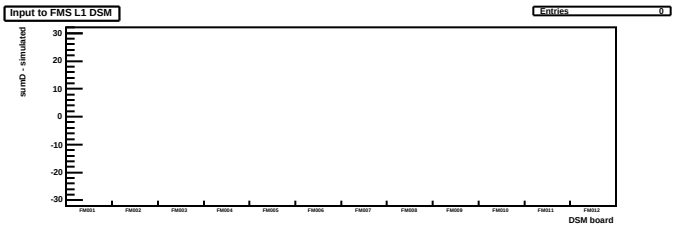

Input to FMS L0 DSM
Entries 6483888
HT ADC
QT board

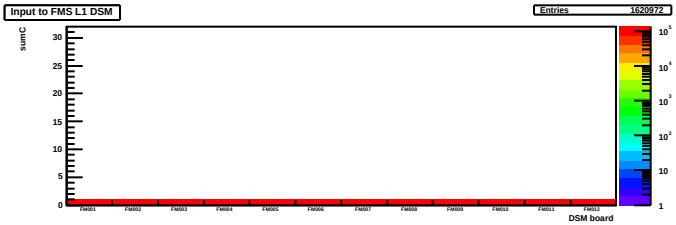

Input to FMS L0 DSM
Entries 1080648
HT ADC - simulated
QT board

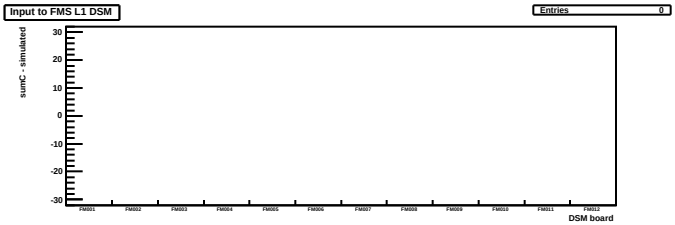

Input to FMS L0 DSM
Entries 6483888
HT ID
QT board

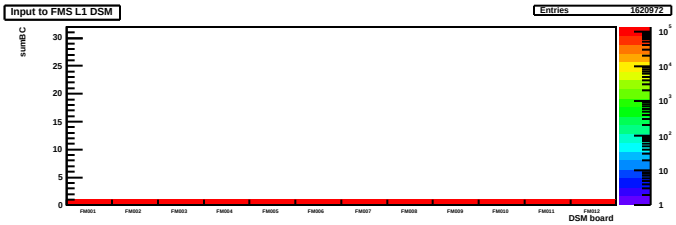

Input to FMS L0 DSM
Entries 1080648
HT ID - simulated
QT board

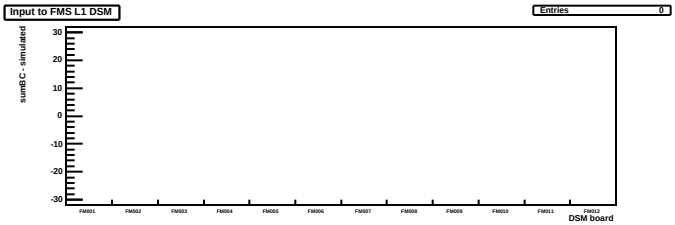

Input to FMS L1 DSM
Entries 1620972
sumD
DSM board

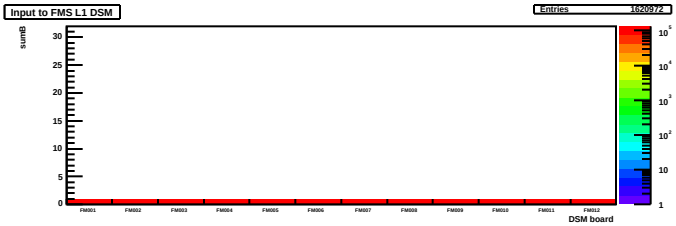

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

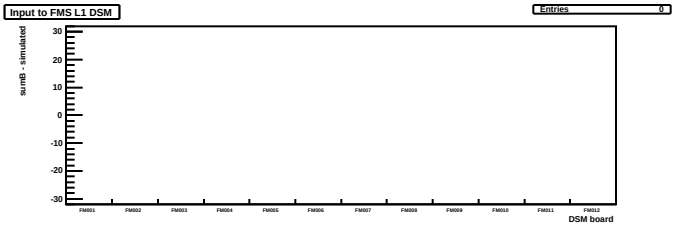

Input to FMS L1 DSM
Entries 1620972
sumC
DSM board

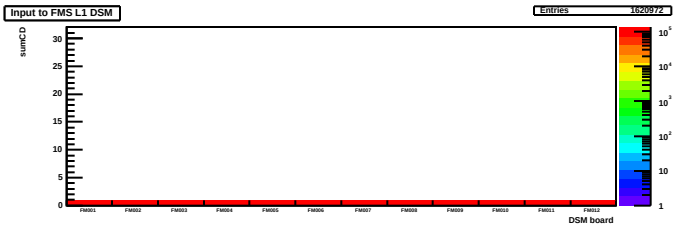

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

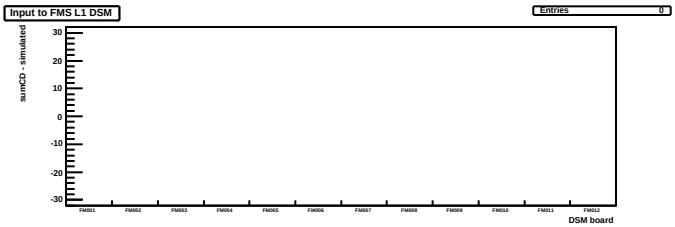

Input to FMS L1 DSM
Entries 1620972
sumBC
DSM board

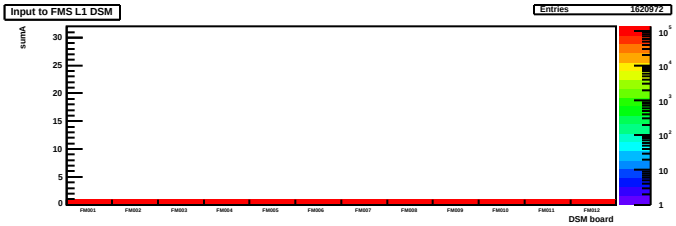

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

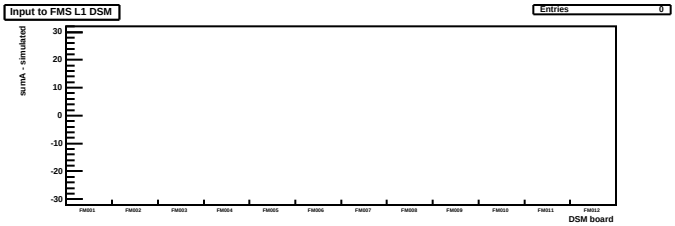

Input to FMS L1 DSM
Entries 1620972
sumB
DSM board

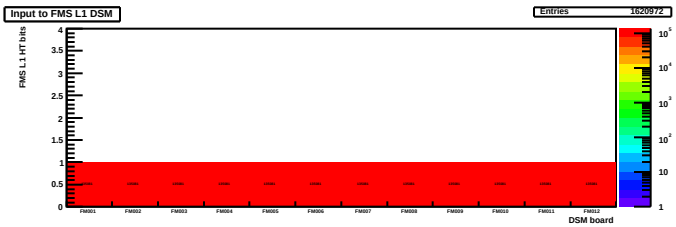

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

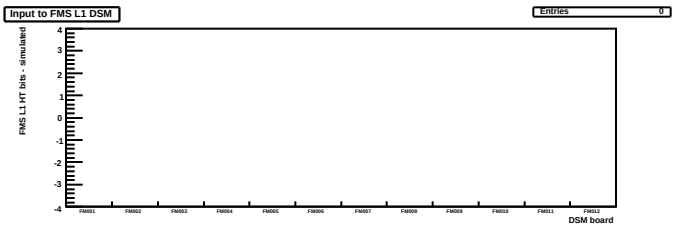

Input to FMS L1 DSM
Entries 1620972
sumCD
DSM board

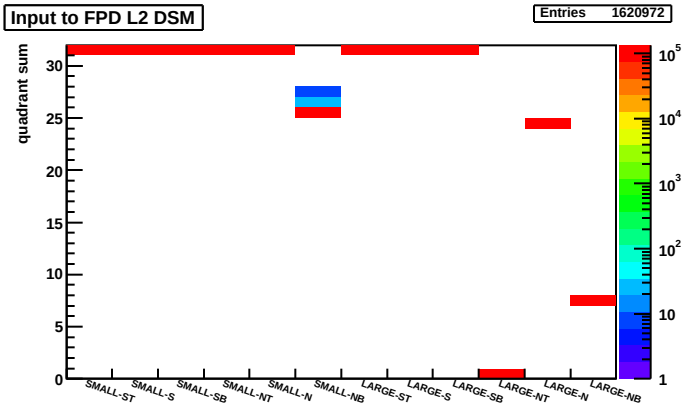

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

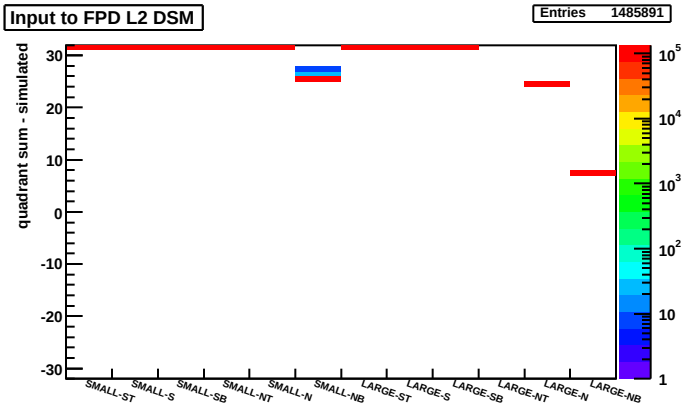

Input to FMS L1 DSM
Entries 1620972
sumA
DSM board

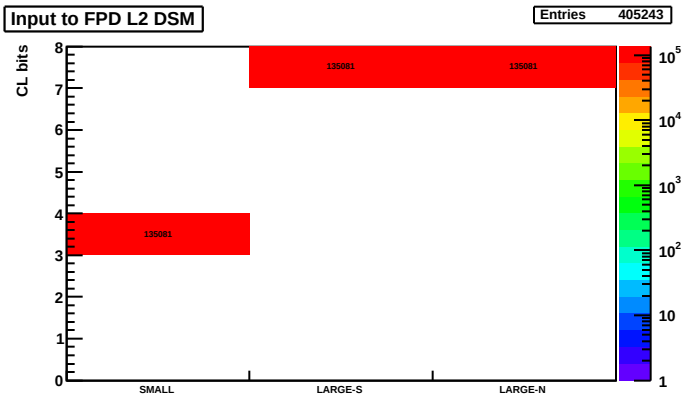

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

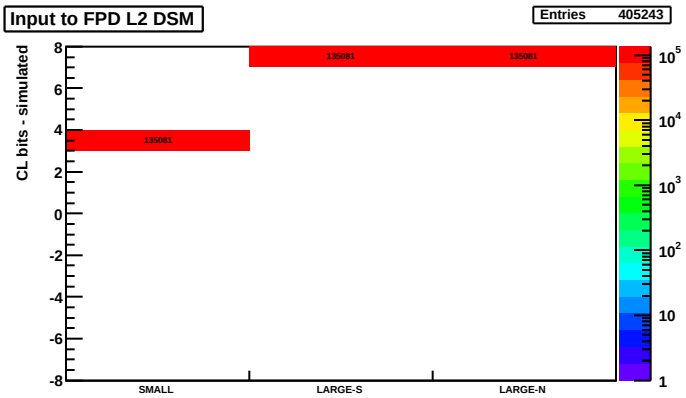

Input to FMS L1 DSM
Entries 1620972
FMS L1 HT bits
DSM board

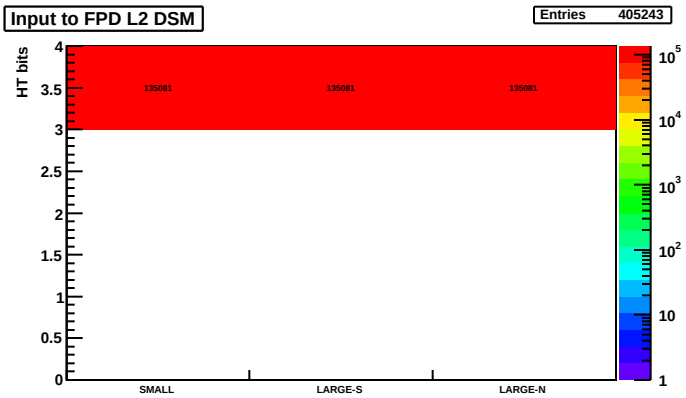

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

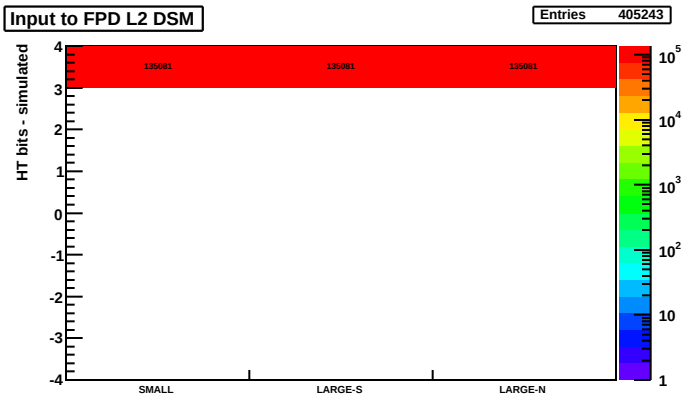

Input to FPD L2 DSM
Entries 1620972
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

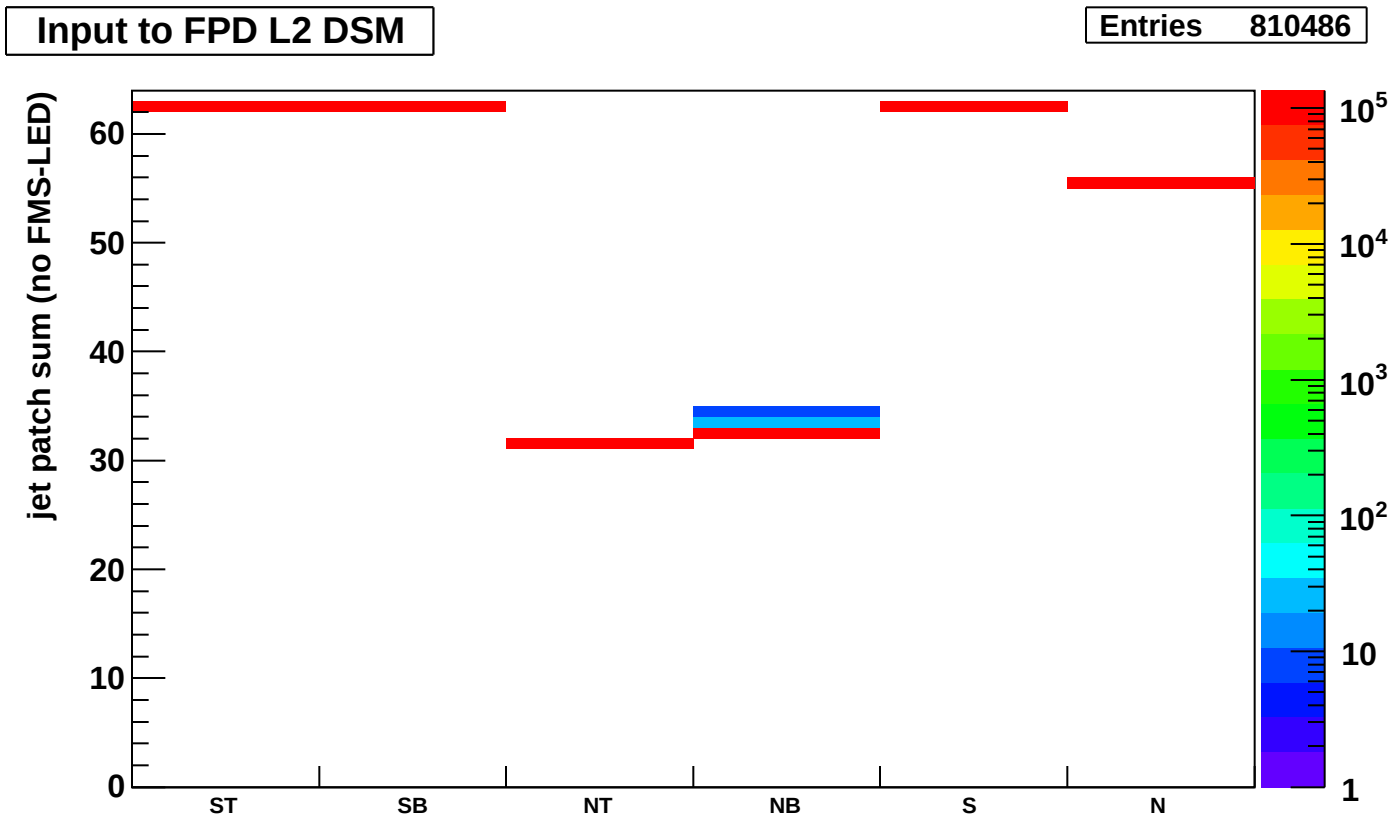

Input to FPD L2 DSM
Entries 1485891
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

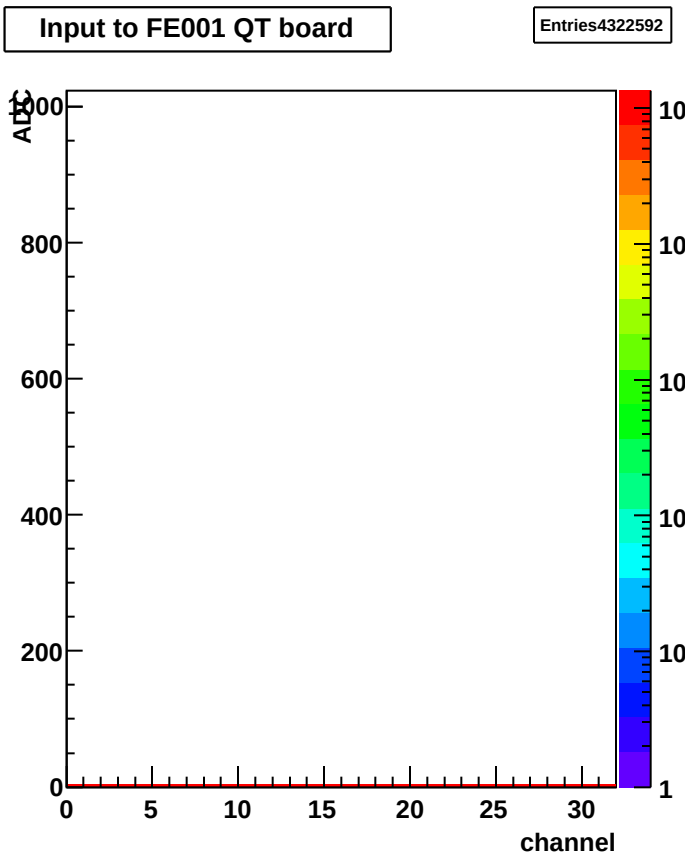

Input to FPD L2 DSM
Entries 405243
CL bits
135081
135081
135081
SMALL
LARGE-S
LARGE-N

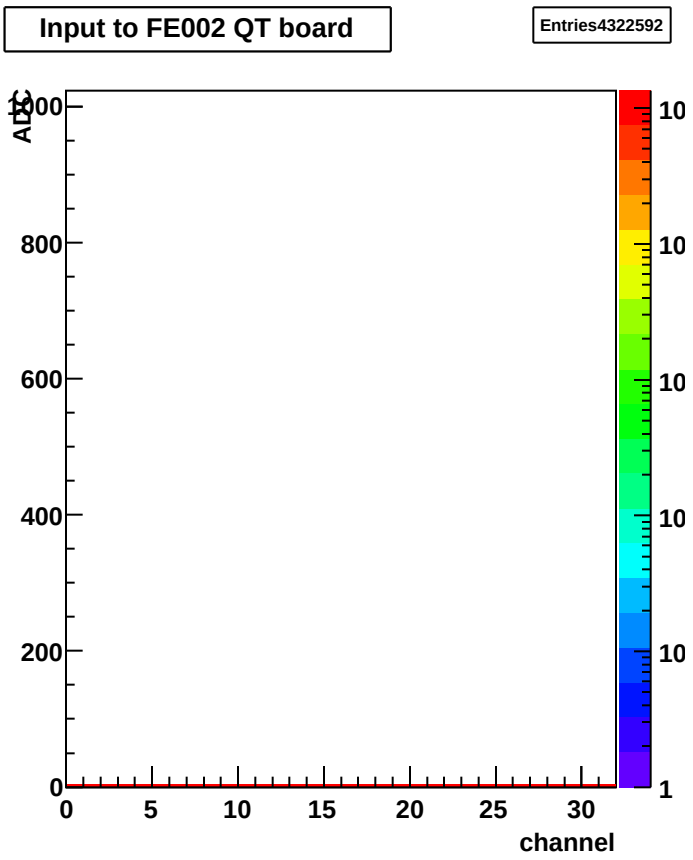

Input to FPD L2 DSM
Entries 405243
CL bits - simulated
135081
135081
135081
SMALL
LARGE-S
LARGE-N

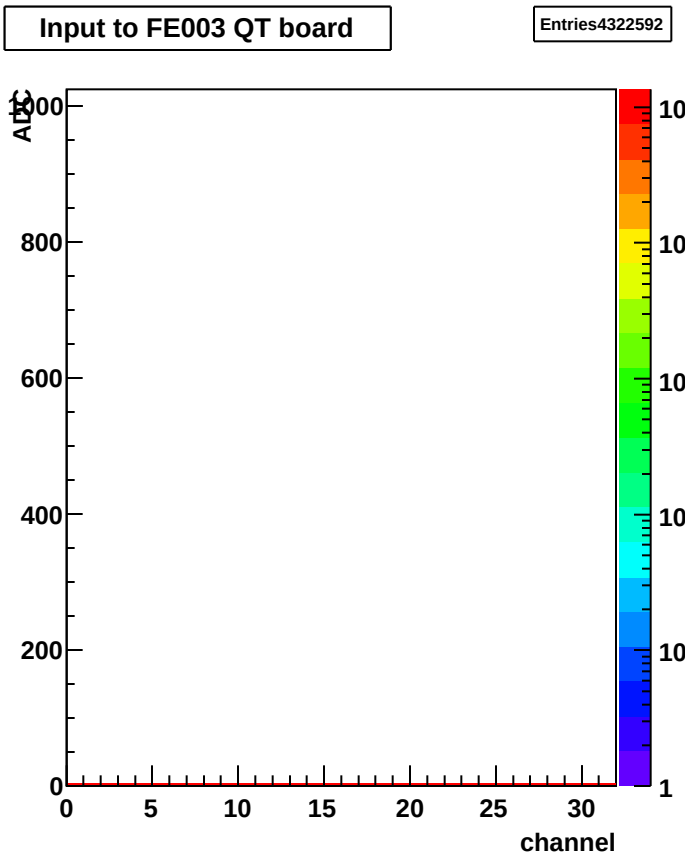

Input to FPD L2 DSM
Entries 405243
HT bits
135081
135081
135081
SMALL
LARGE-S
LARGE-N

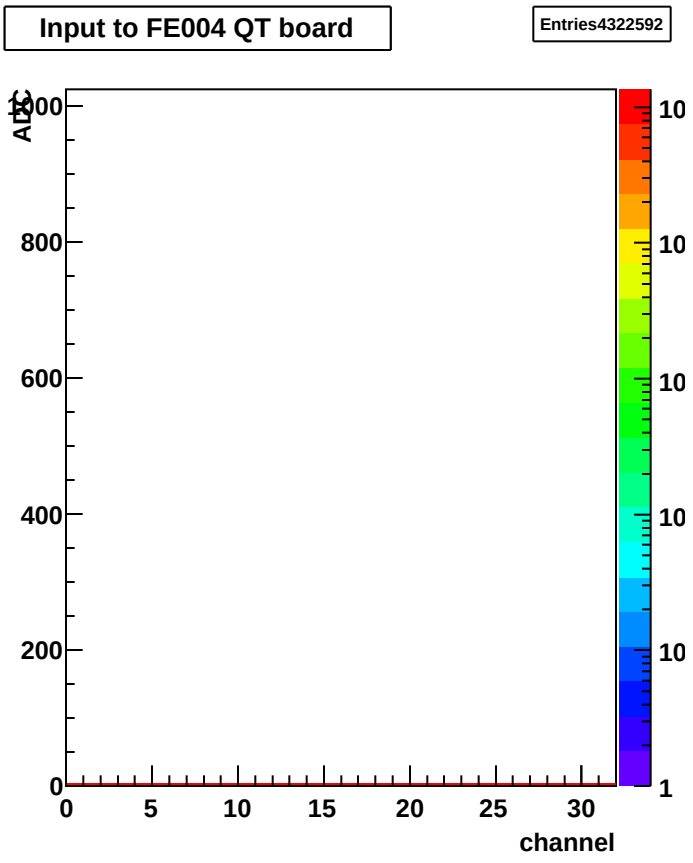

Input to FPD L2 DSM
Entries 405243
HT bits - simulated
135081
135081
135081
SMALL
LARGE-S
LARGE-N

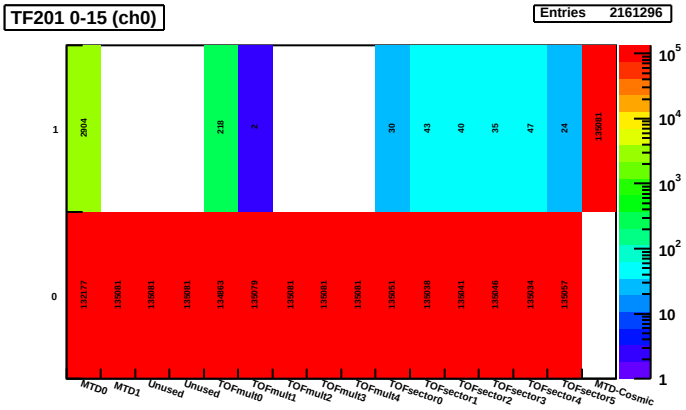

Input to FPD L2 DSM
Entries 810486
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

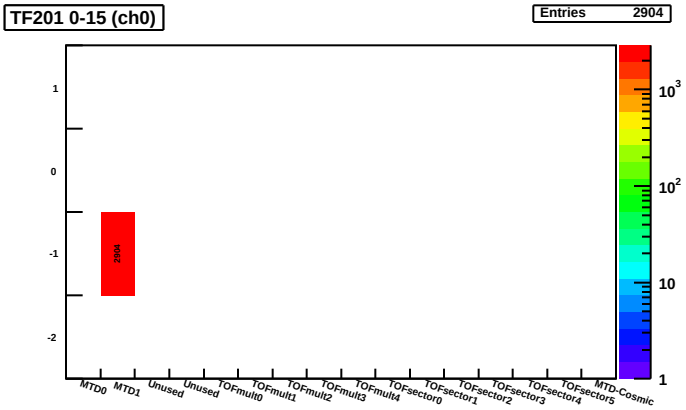

Input to FE001 QT board
Entries4322592
ADC
channel

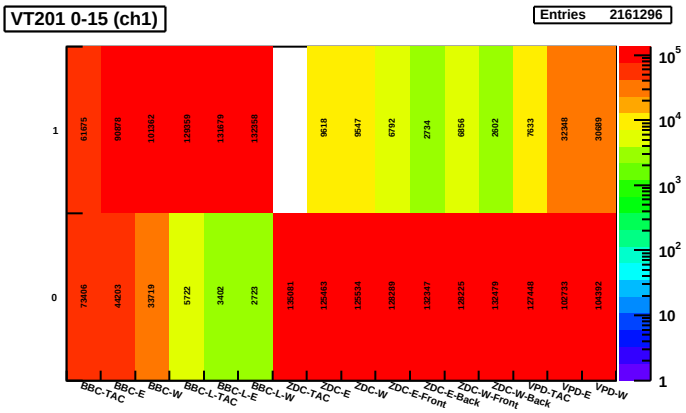

Input to FE002 QT board
Entries4322592
ADC
channel

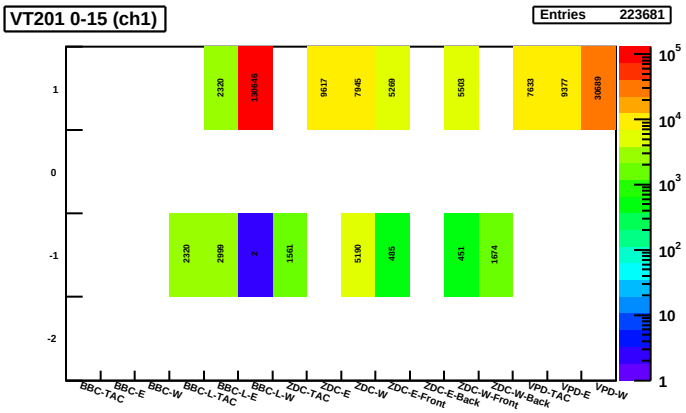

Input to FE003 QT board
Entries4322592
ADC
channel

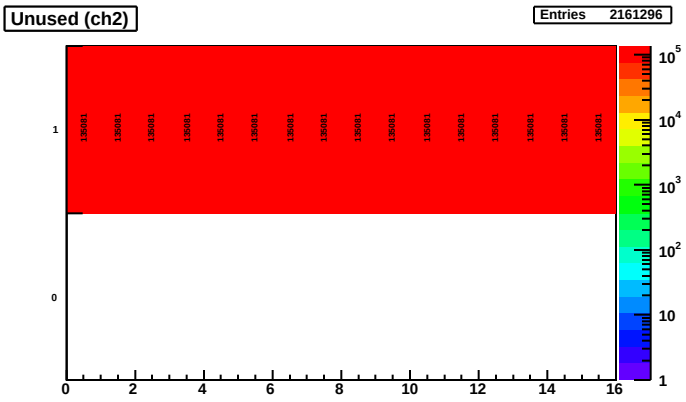

Input to FE004 QT board
Entries4322592
ADC
channel


TF201 0-15 (ch0)
Entries 2161296
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 2904
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 2161296
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 223681
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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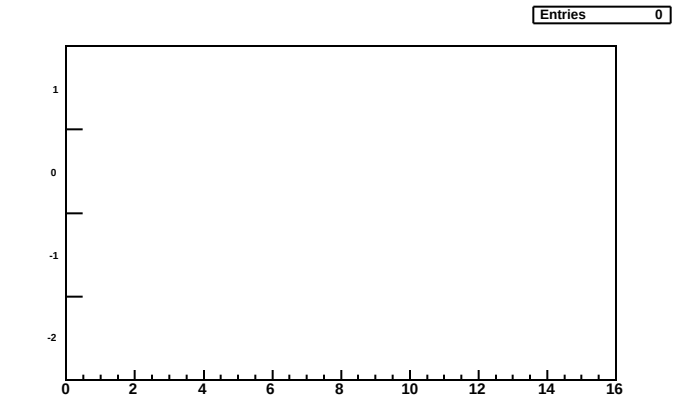
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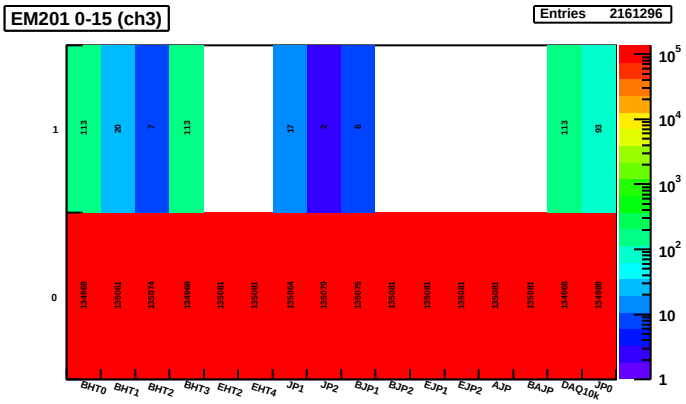
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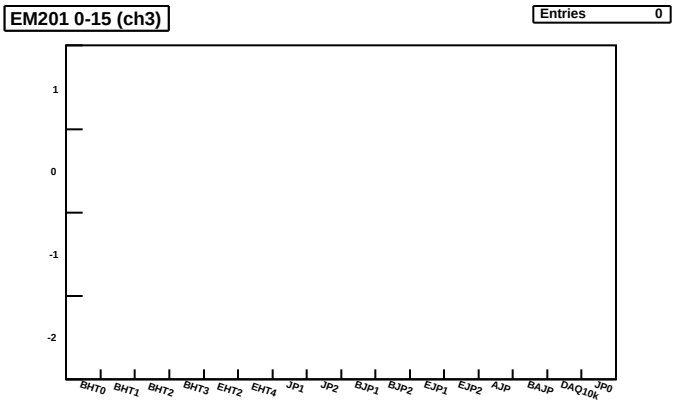
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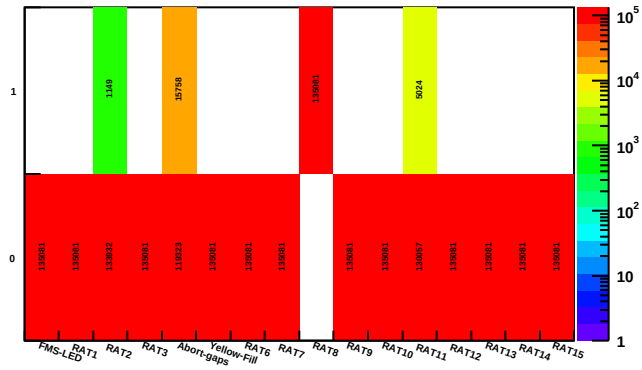
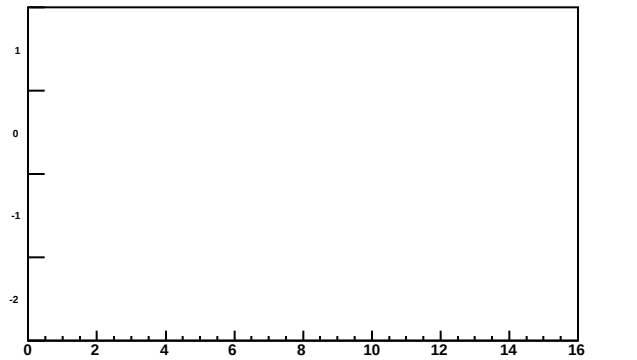
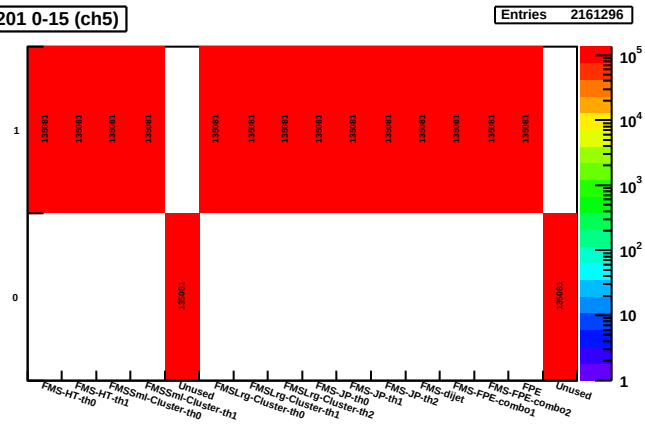
RAT board (ch4)





FP201 0-15 (ch5)



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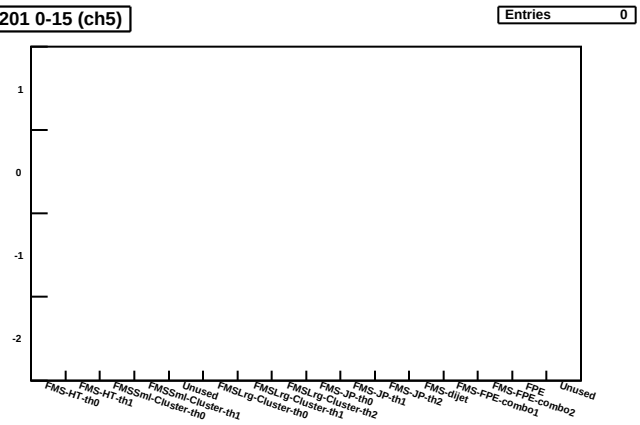
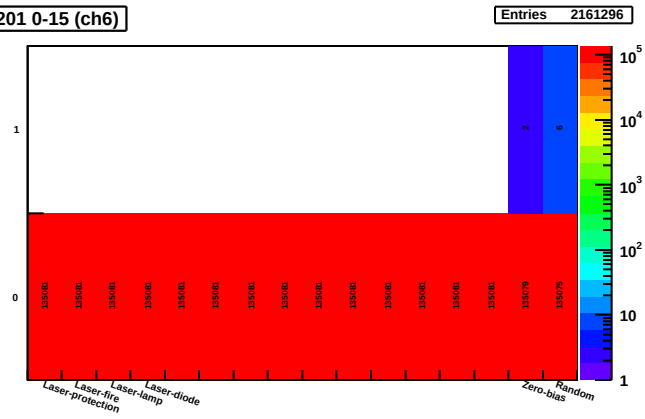
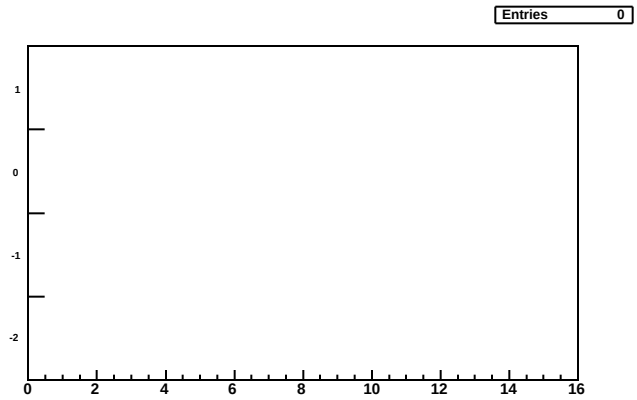
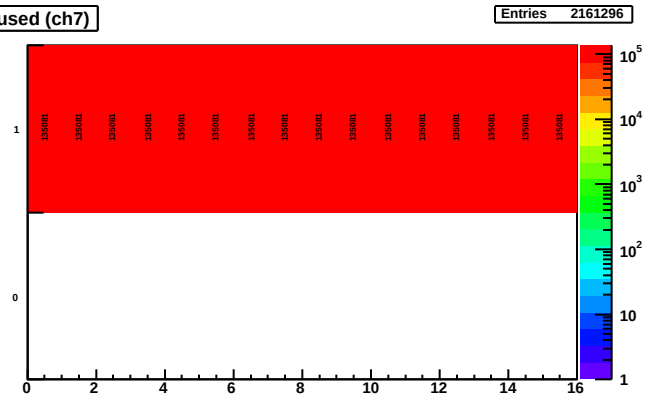
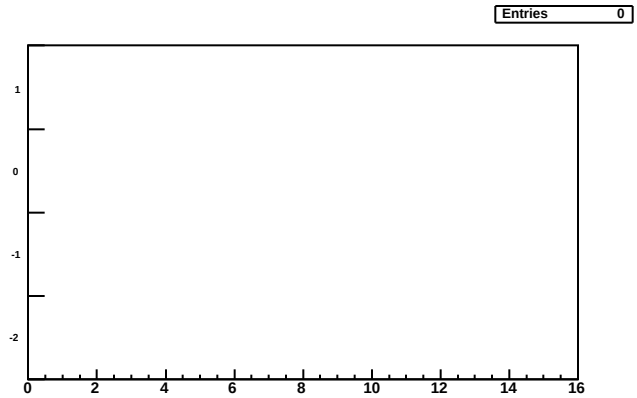


ST201 0-15 (ch6)





Unused (ch7)