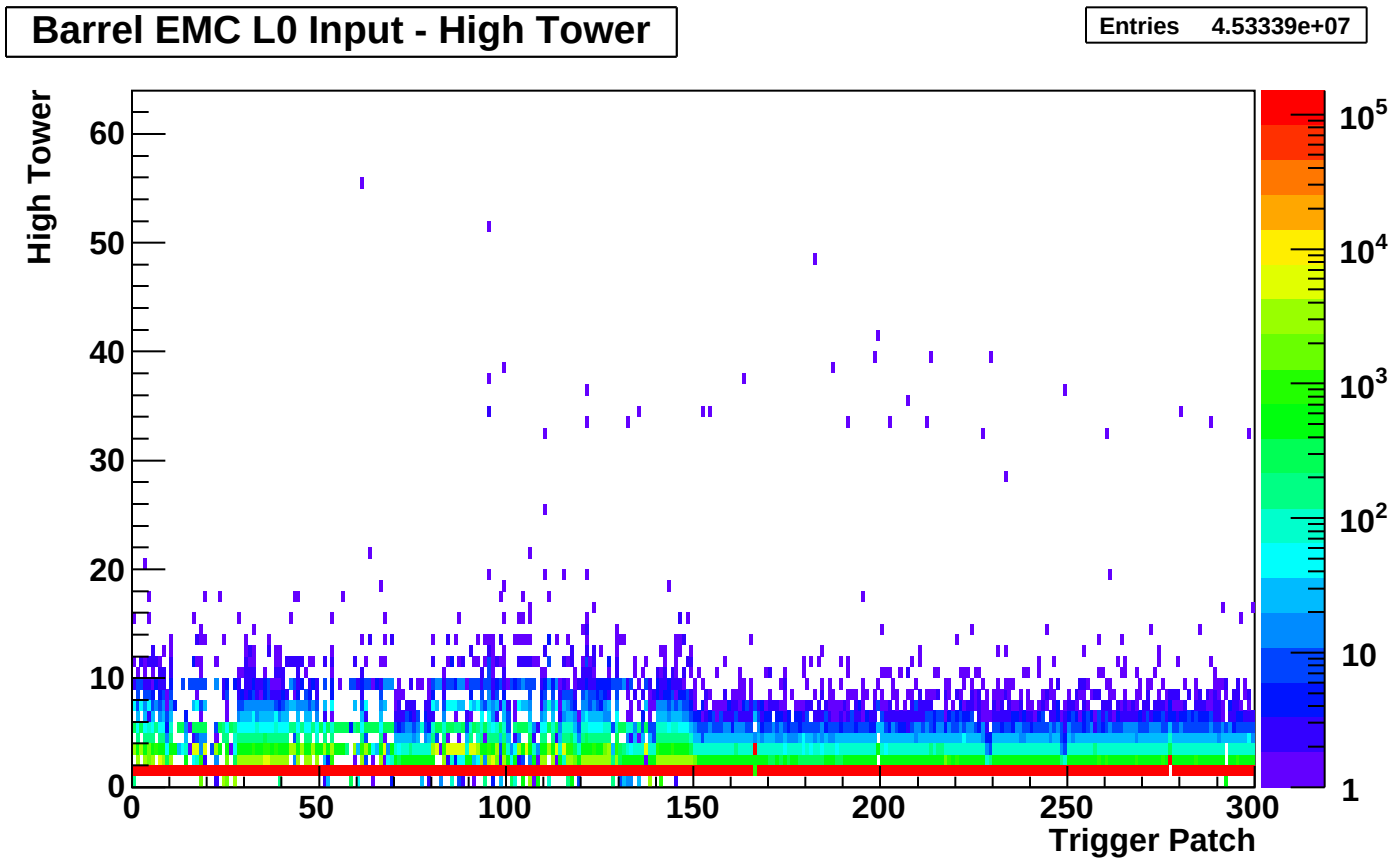
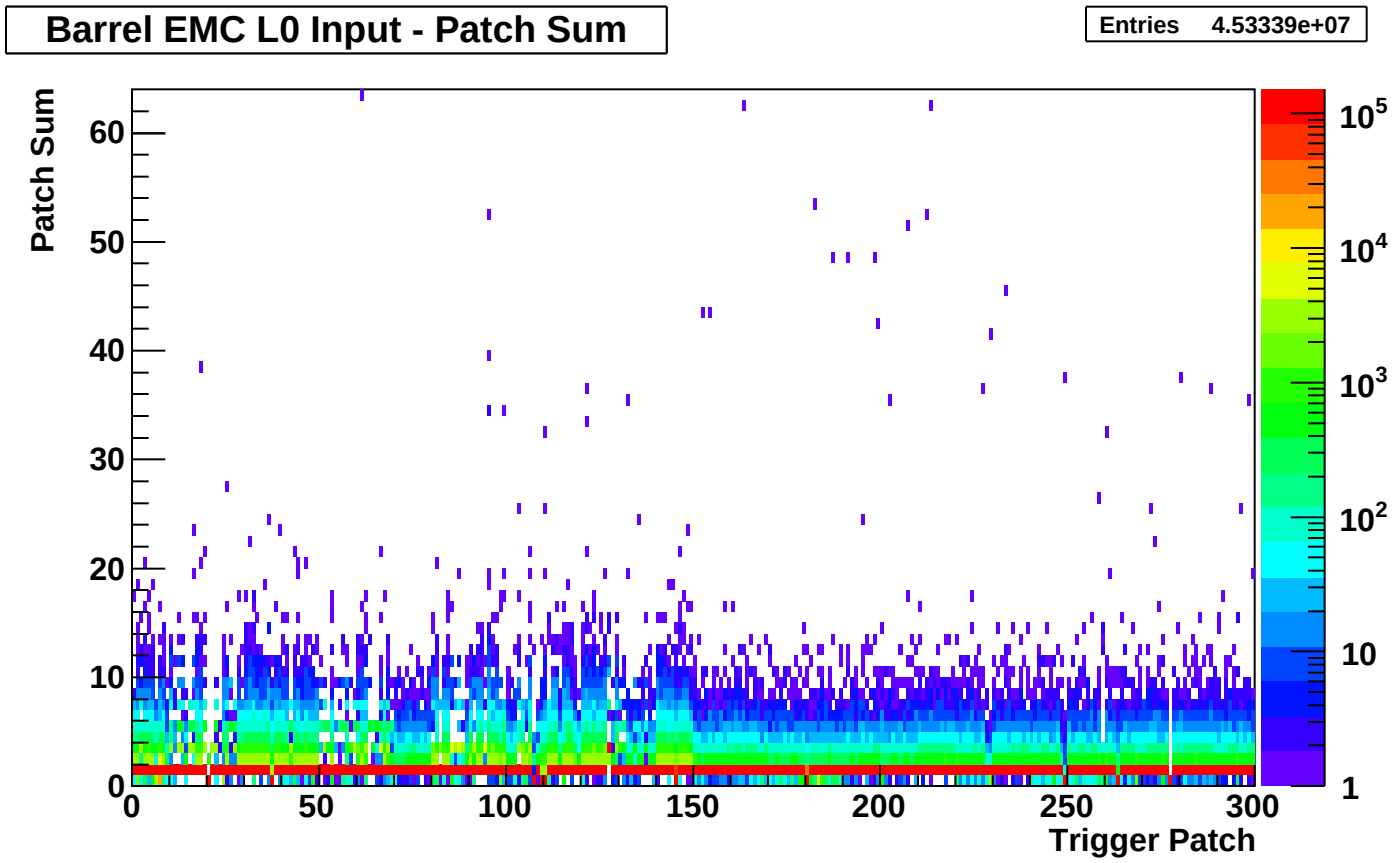
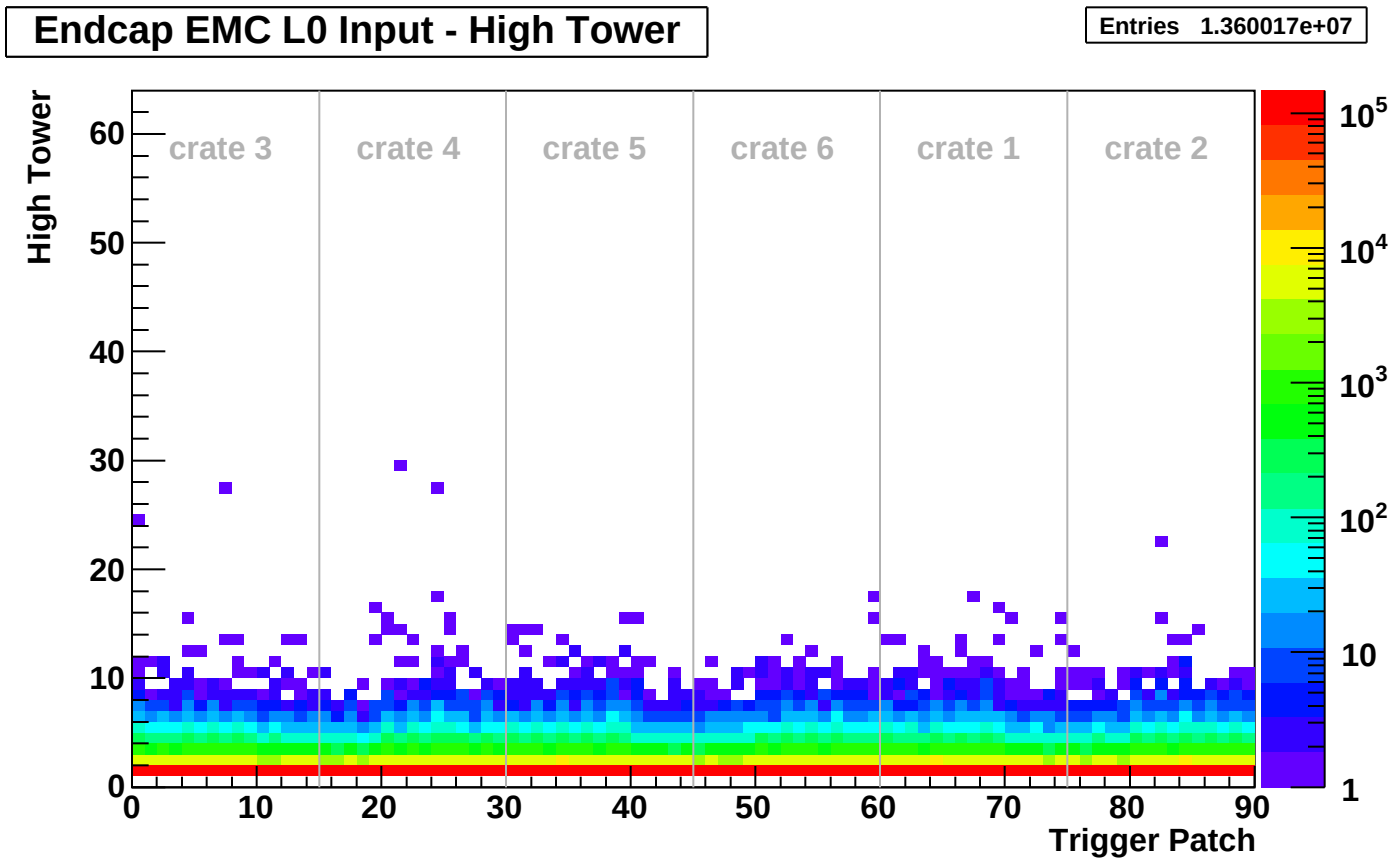
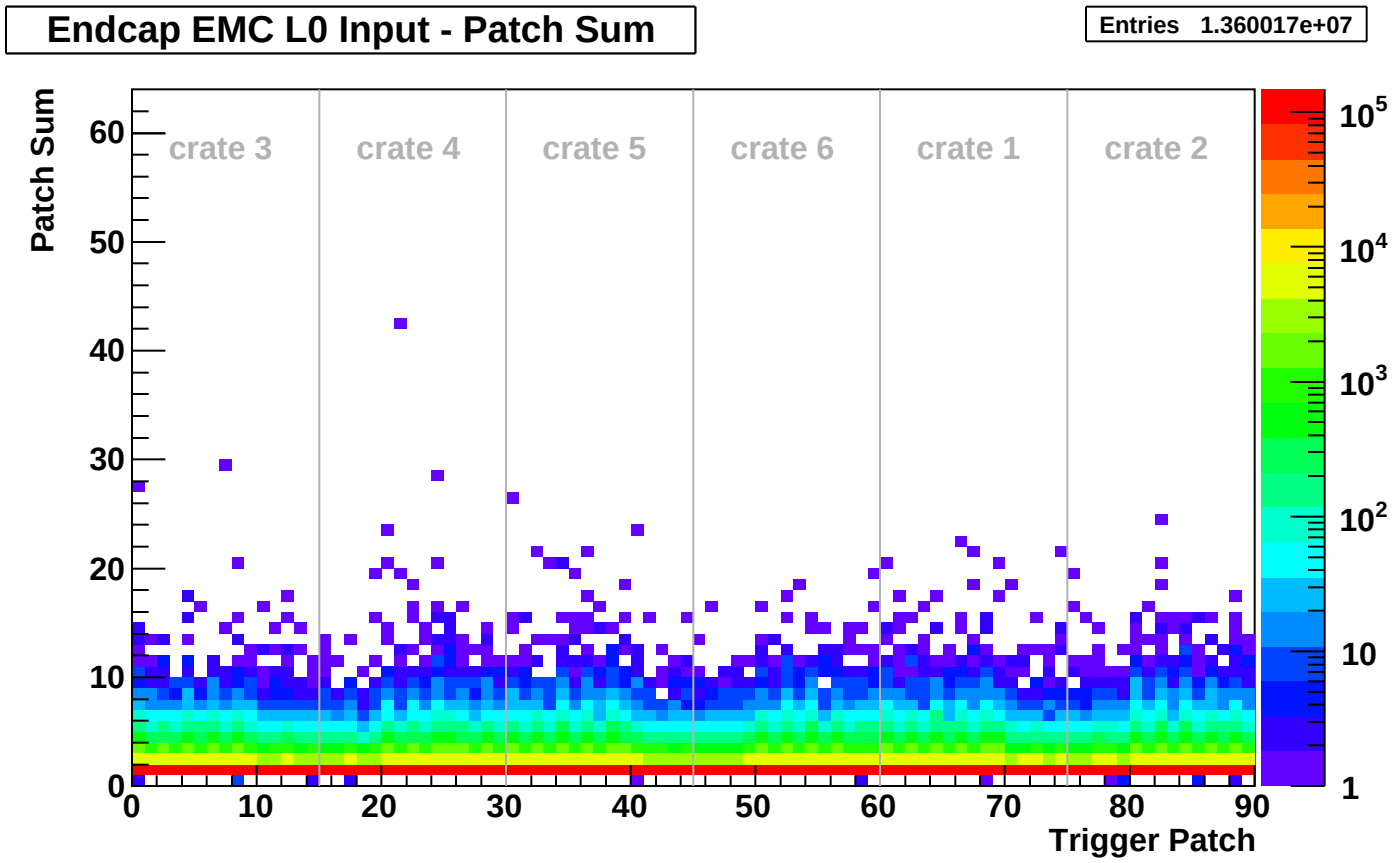
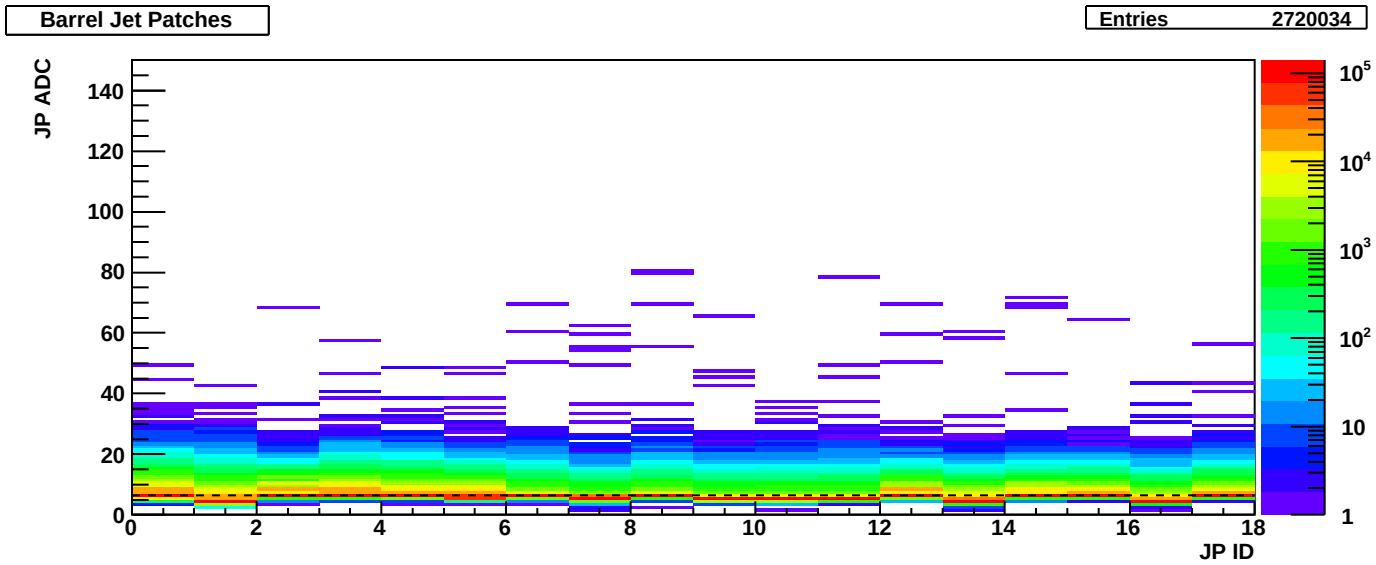
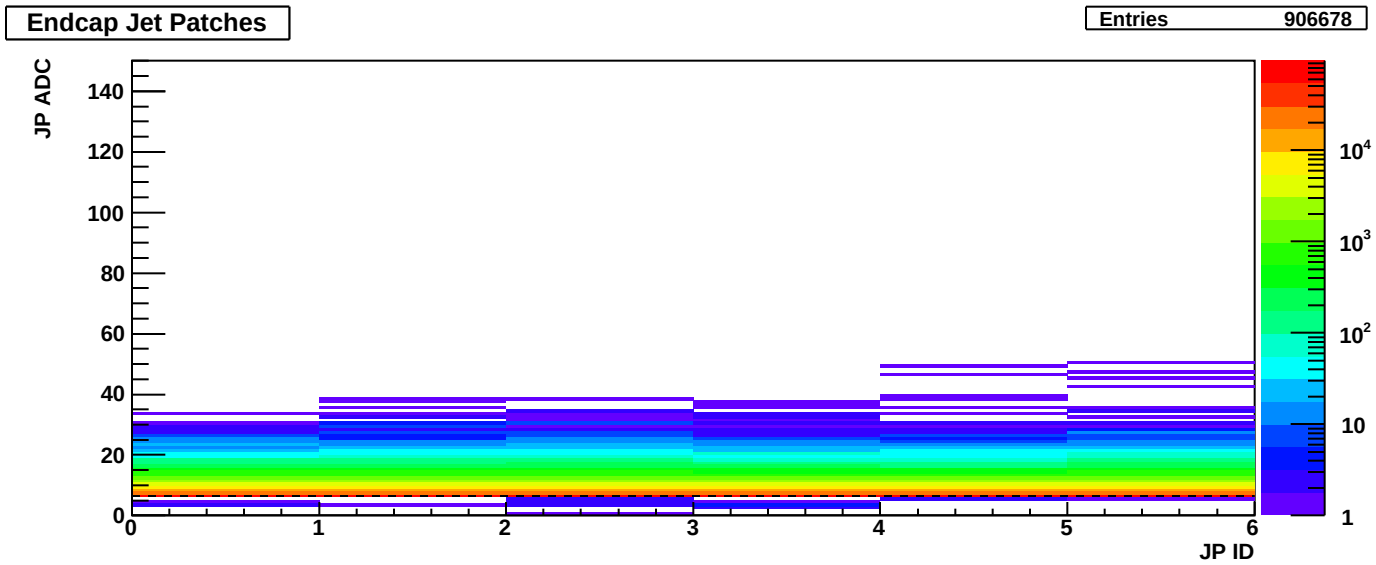

Barrel EMC L0 Input - High Tower
Entries 4.53339e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

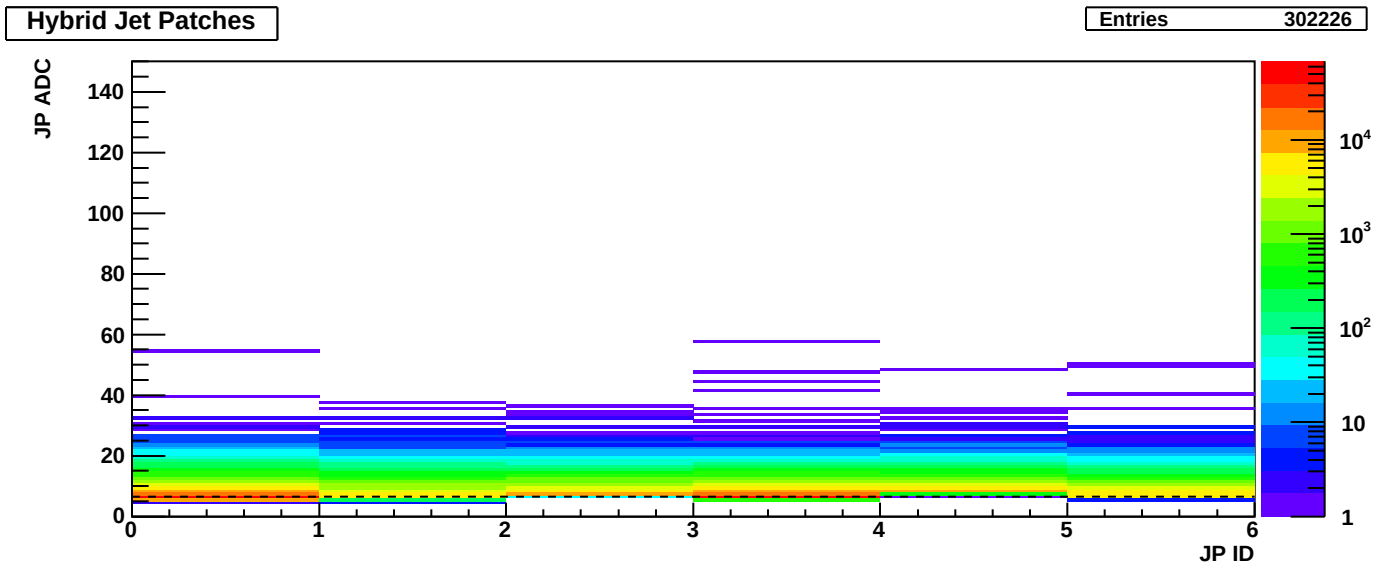

Barrel EMC L0 Input - Patch Sum
Entries 4.53339e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

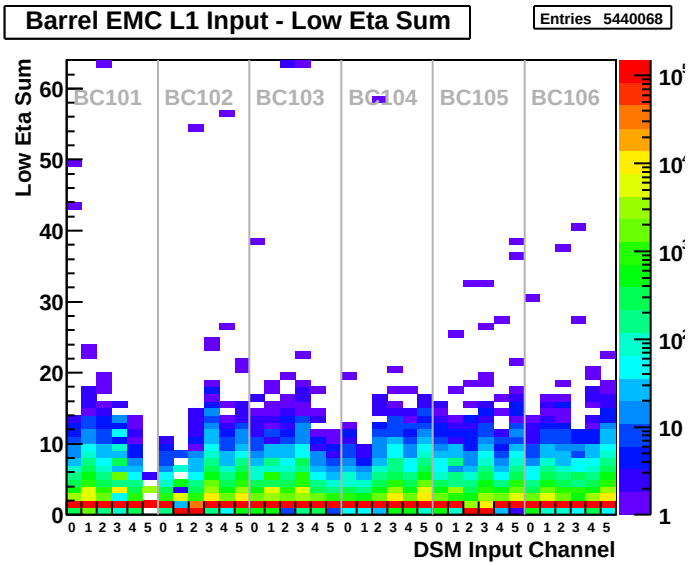

Endcap EMC L0 Input - High Tower
Entries 1.360017e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

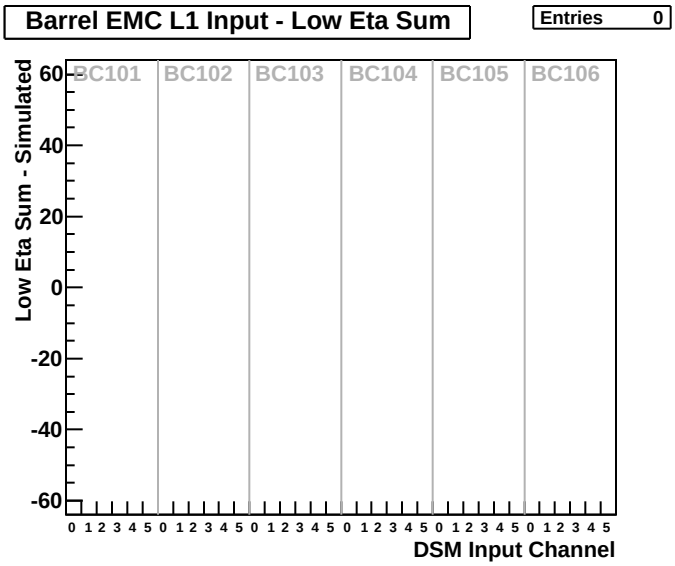

Endcap EMC L0 Input - Patch Sum
Entries 1.360017e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

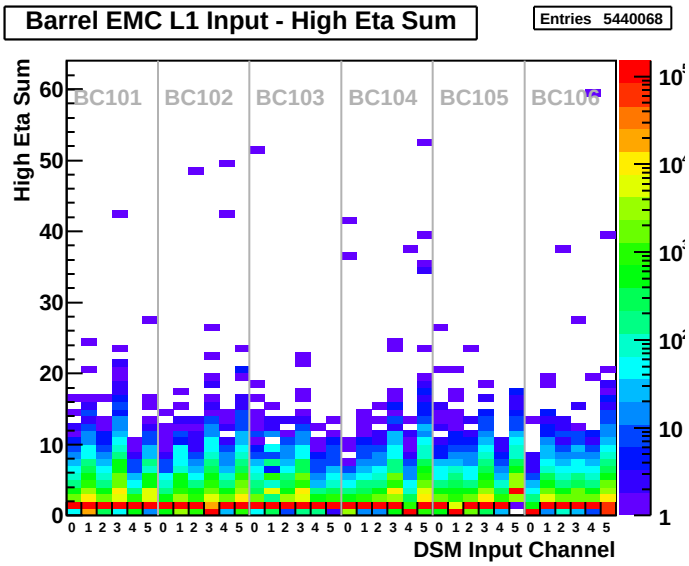

Barrel Jet Patches
Entries 2720034
JP ADC
JP ID

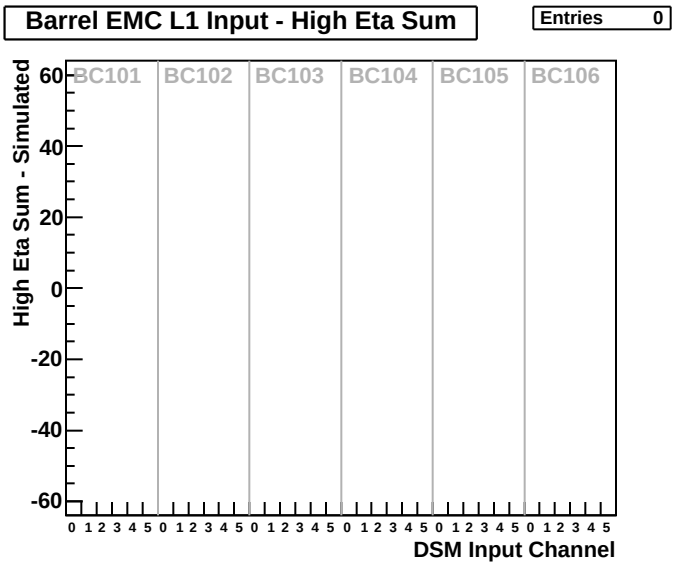

Endcap Jet Patches
Entries 906678
JP ADC
JP ID

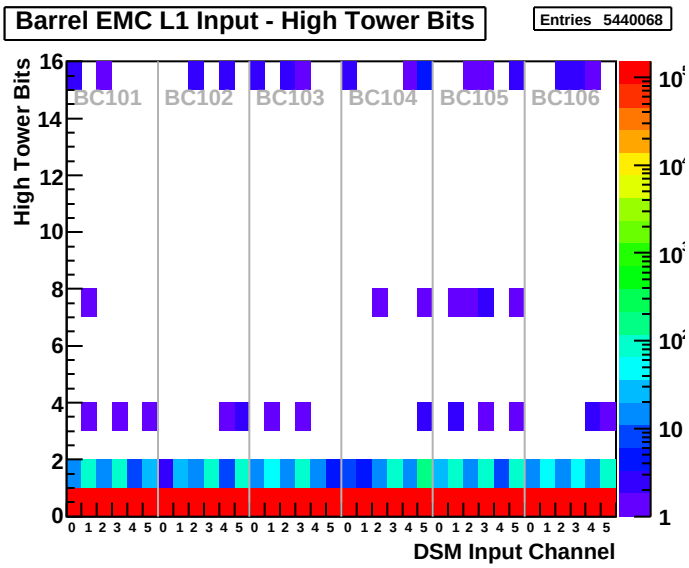

Hybrid Jet Patches
Entries 302226
JP ADC
JP ID

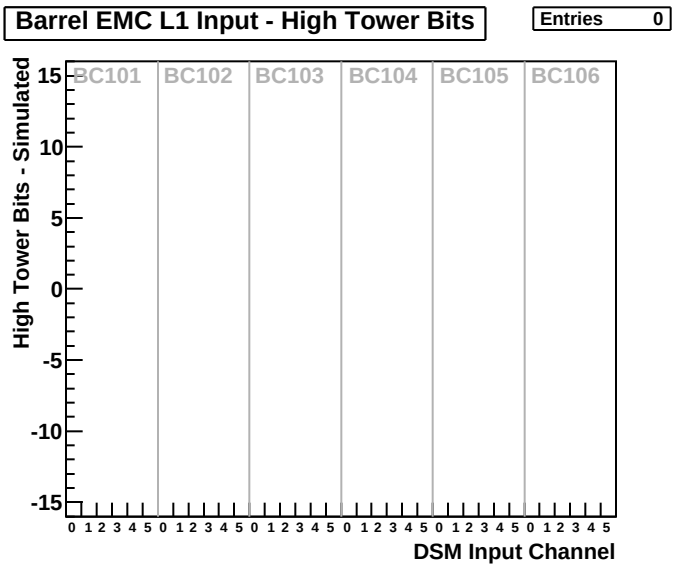

Barrel EMC L1 Input - Low Eta Sum
Entries 5440068
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

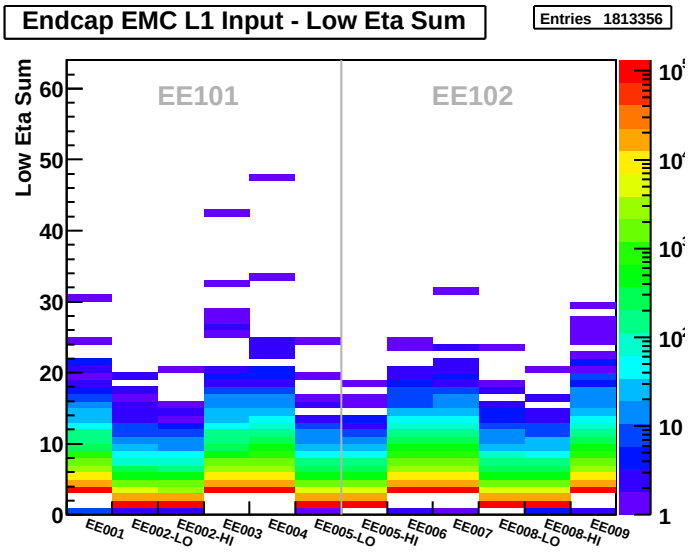

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

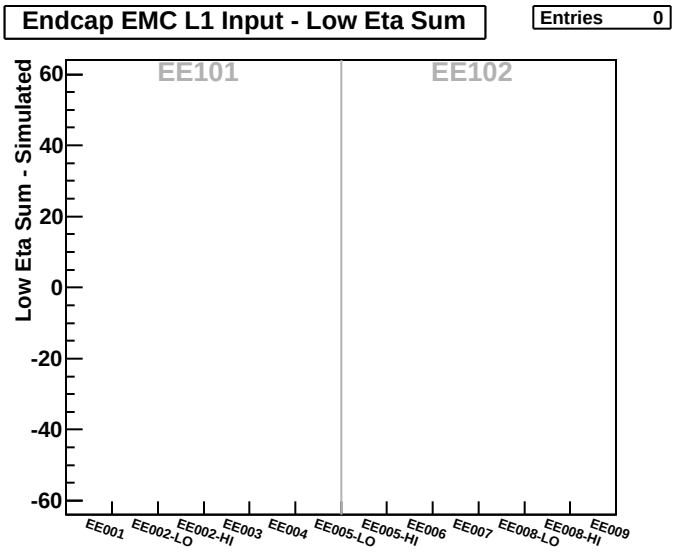

Barrel EMC L1 Input - High Eta Sum
Entries 5440068
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

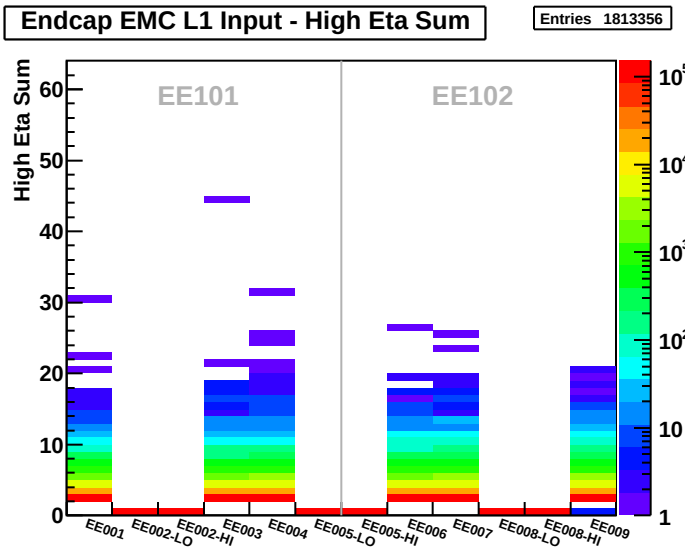

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

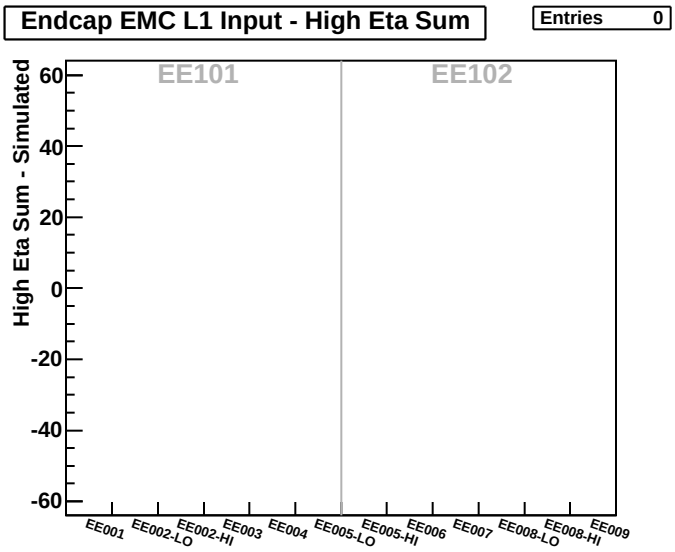

Barrel EMC L1 Input - High Tower Bits
Entries 5440068
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

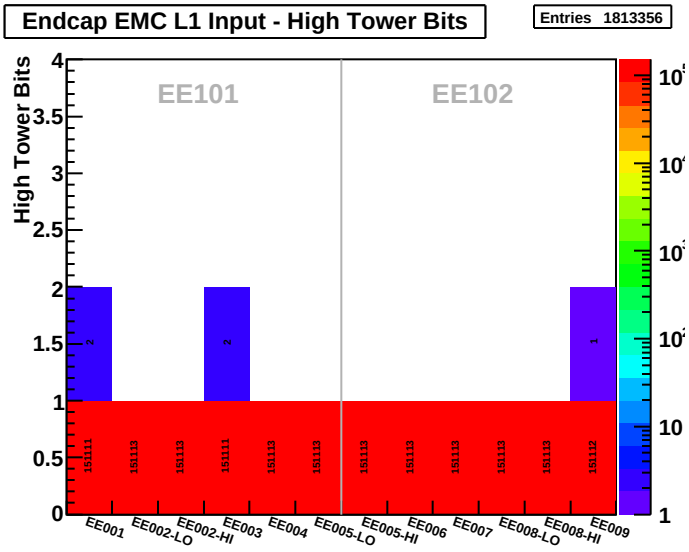

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

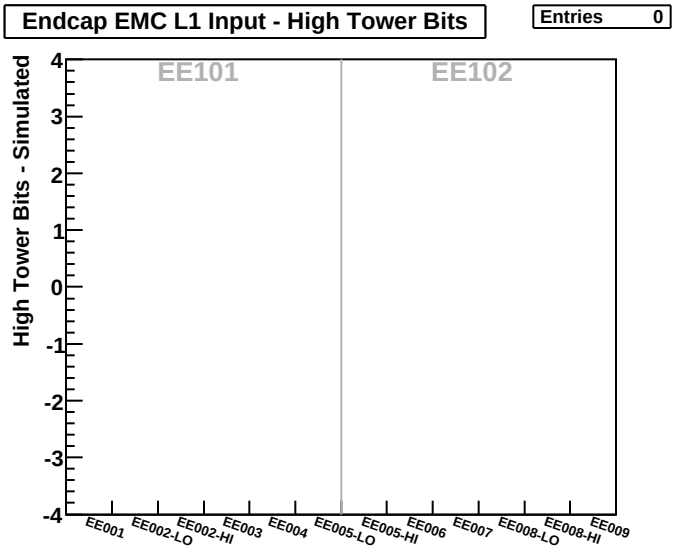

Endcap EMC L1 Input - Low Eta Sum
Entries 1813356
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

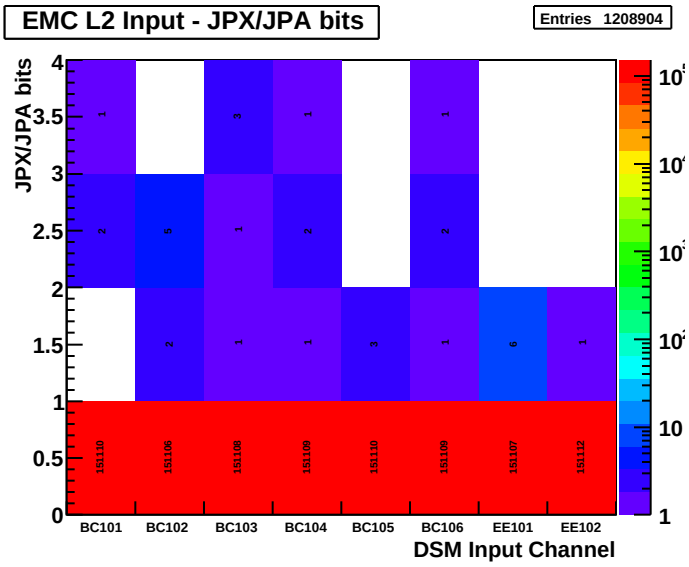

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

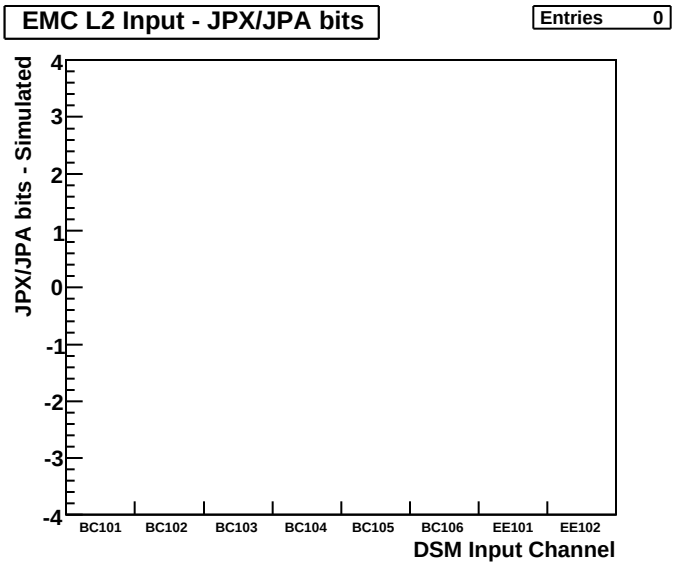

Endcap EMC L1 Input - High Eta Sum
Entries 1813356
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

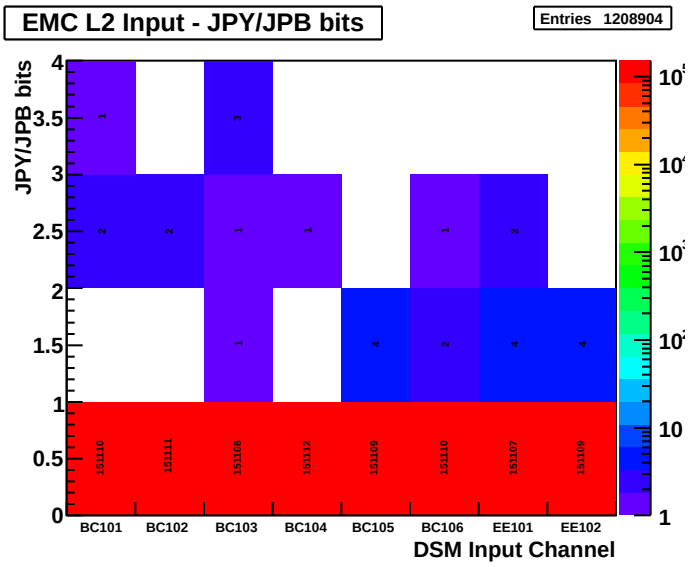

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

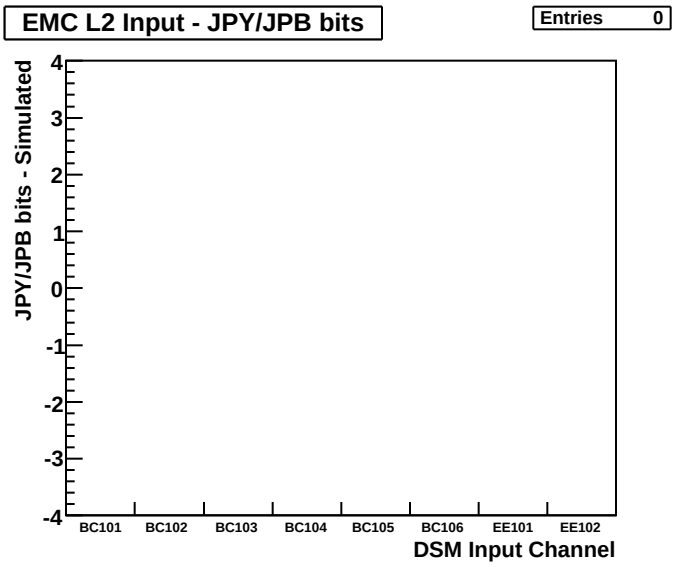

Endcap EMC L1 Input - High Tower Bits
Entries 1813356
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

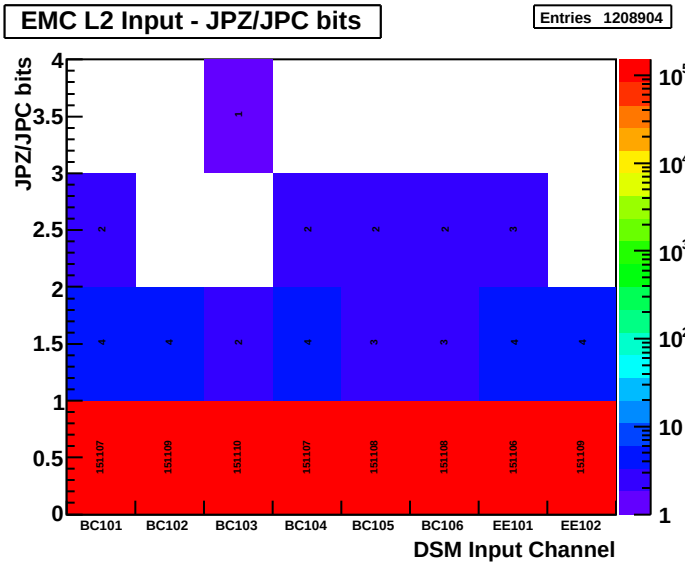

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

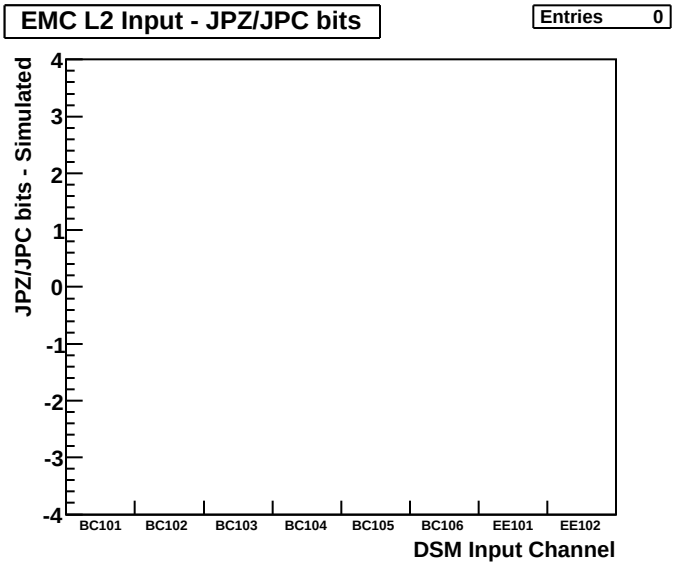

EMC L2 Input - JPX/JPA bits
Entries 1208904
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

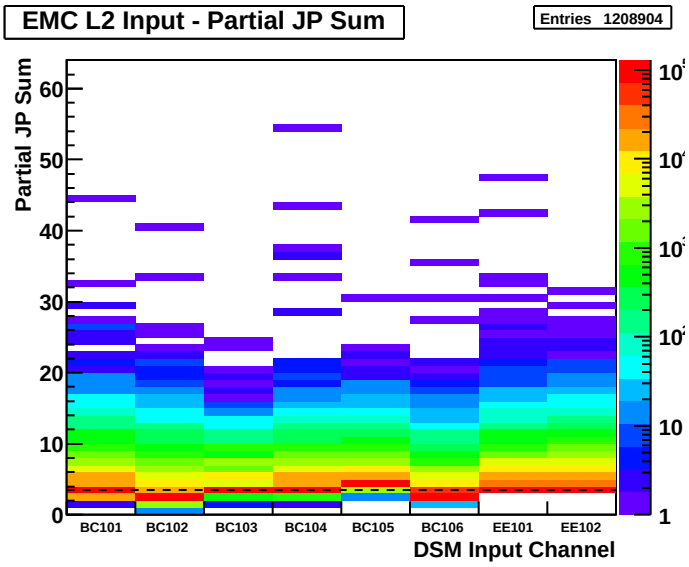

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

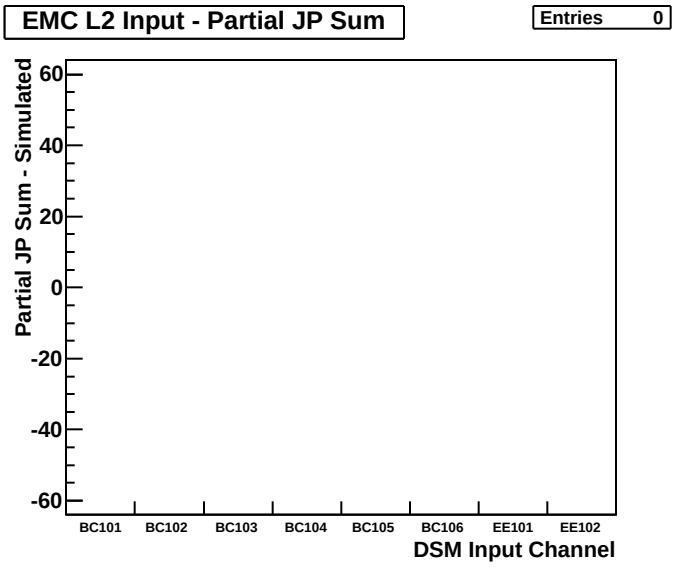

EMC L2 Input - JPY/JPB bits
Entries 1208904
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

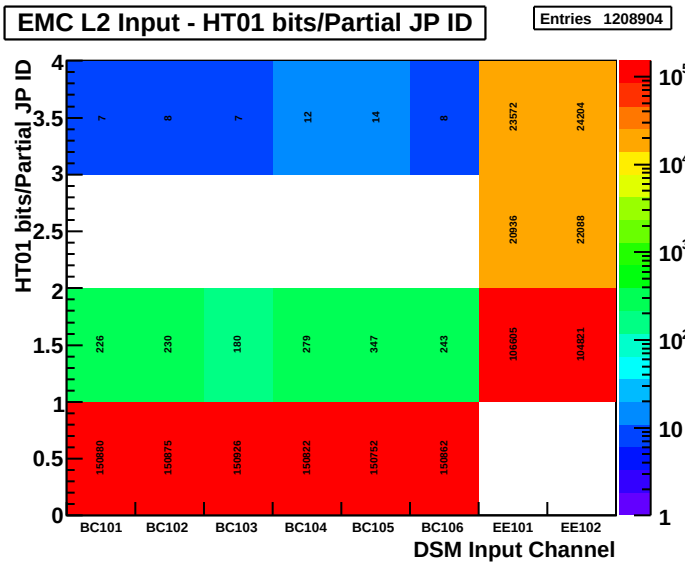

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

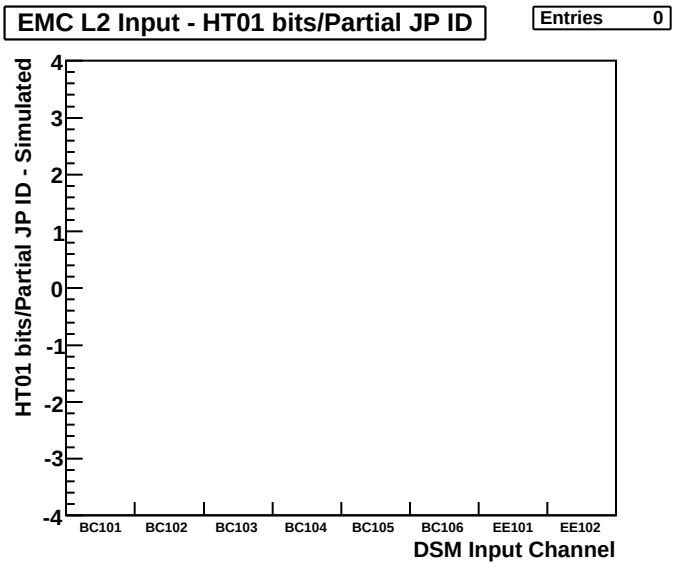

EMC L2 Input - JPZ/JPC bits
Entries 1208904
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

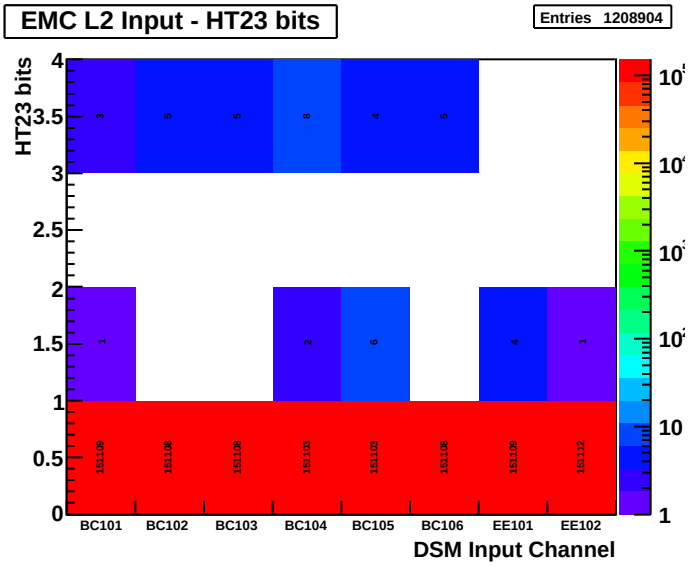

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

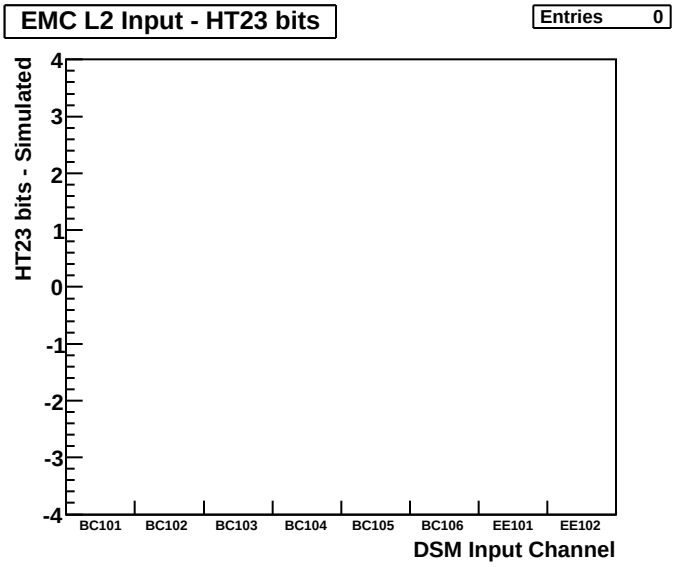

EMC L2 Input - Partial JP Sum
Entries 1208904
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

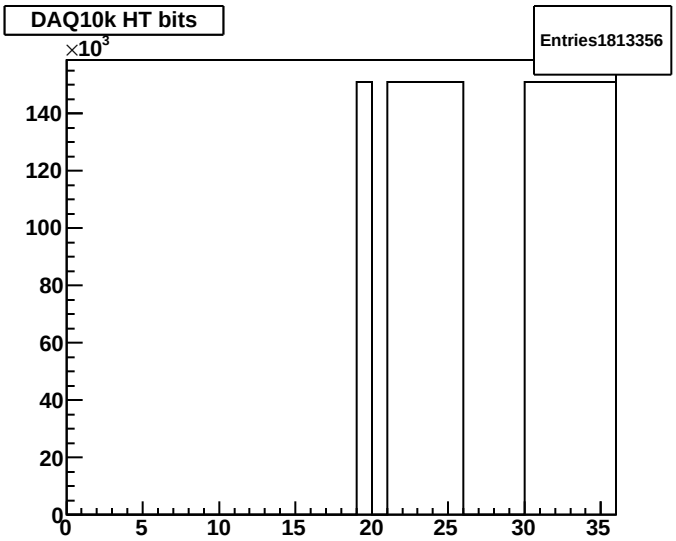

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

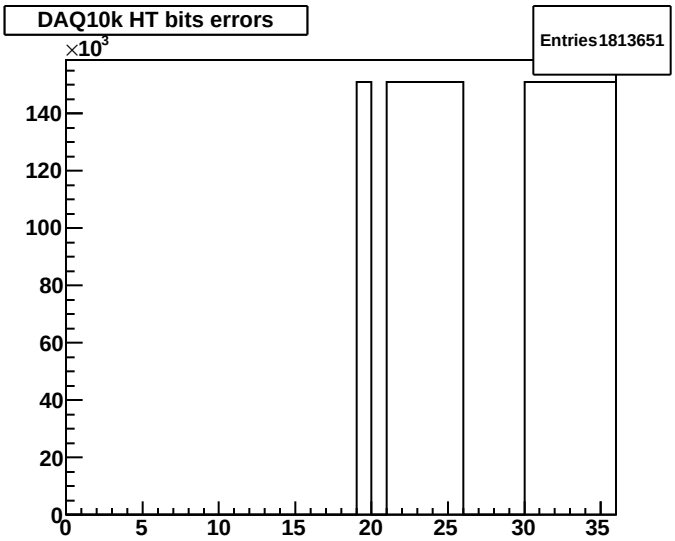

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1208904
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

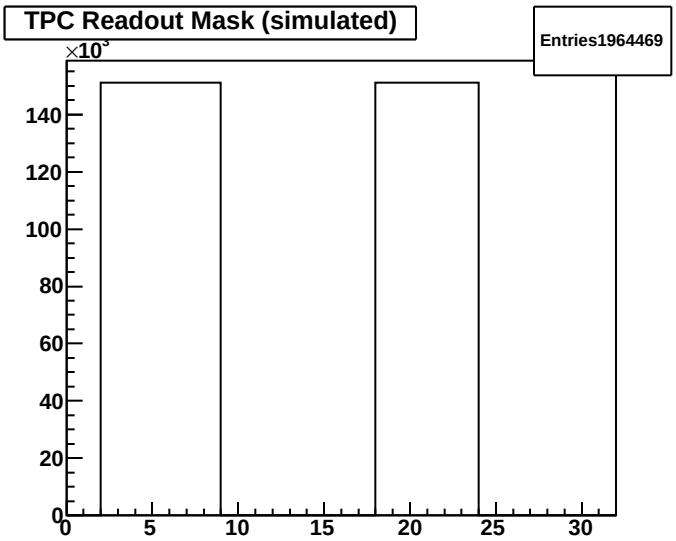

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

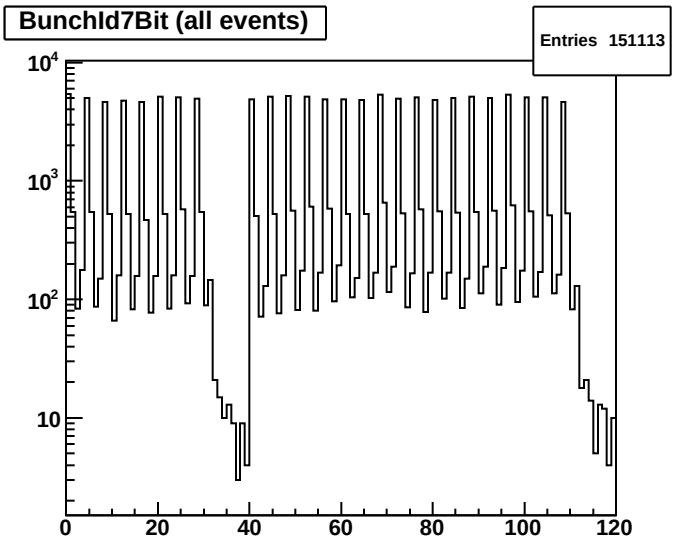

EMC L2 Input - HT23 bits
Entries 1208904
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

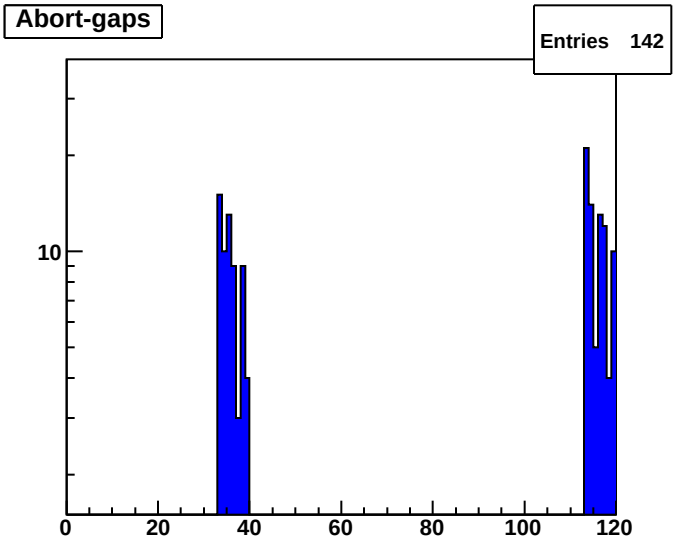

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

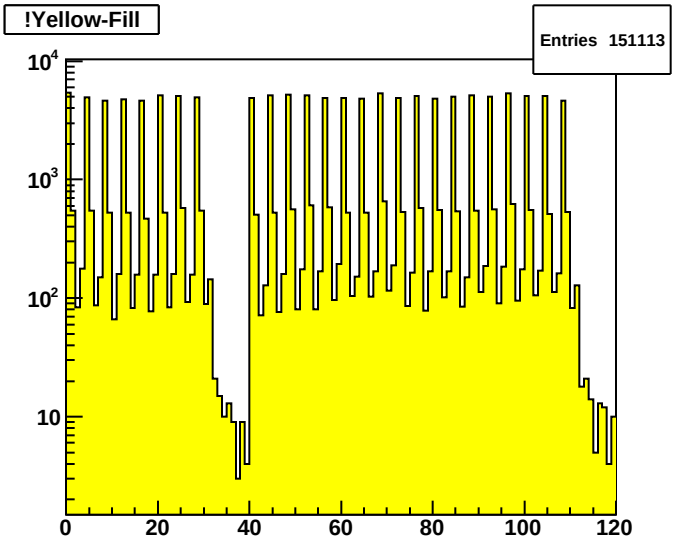

DAQ10k HT bits
Entries1813356
×10^3
140
120
100
80
60
40
20
0
0 5 10 15 20 25 30 35

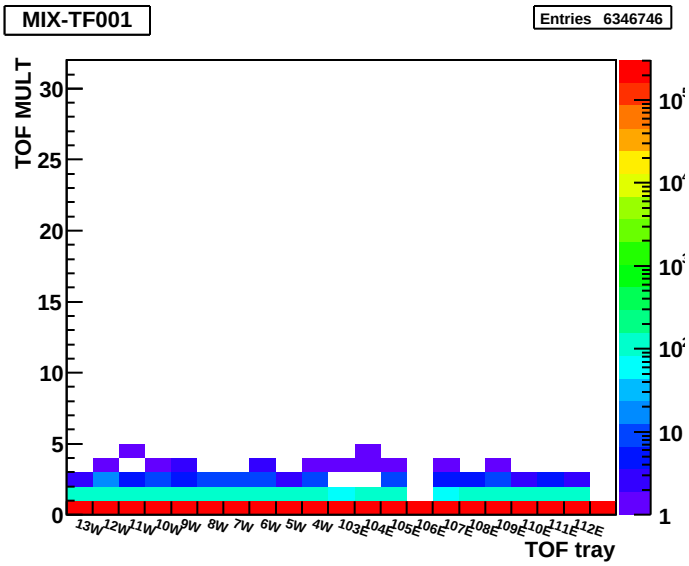

DAQ10k HT bits errors
Entries1813651
×10^3
140
120
100
80
60
40
20
0
0 5 10 15 20 25 30 35

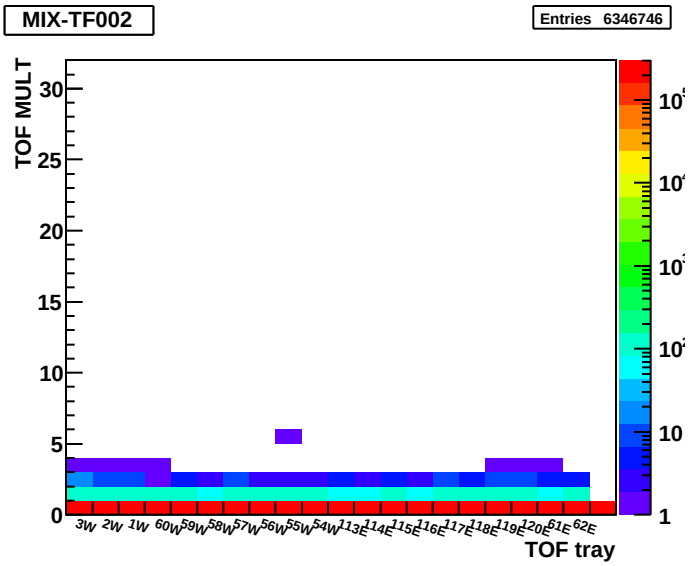

TPC Readout Mask (simulated)
Entries1964469
×10^3
140
120
100
80
60
40
20
0
0 5 10 15 20 25 30

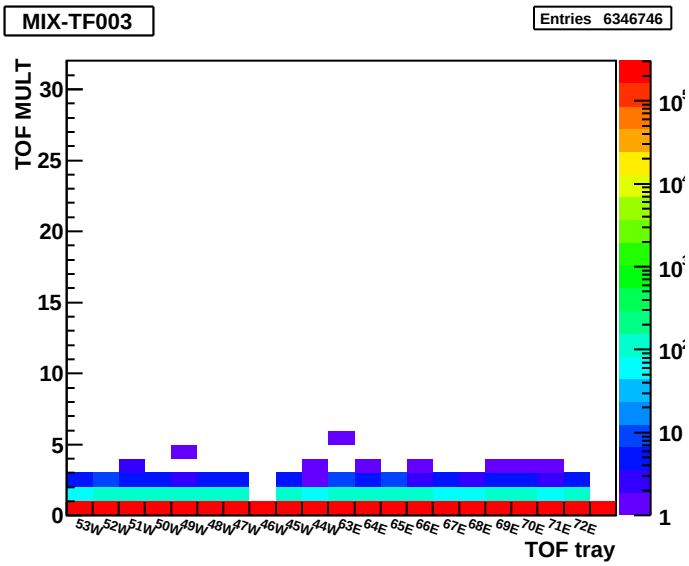

BunchId7Bit (all events)
Entries 151113
10^4
10^3
10^2
10
0 20 40 60 80 100 120

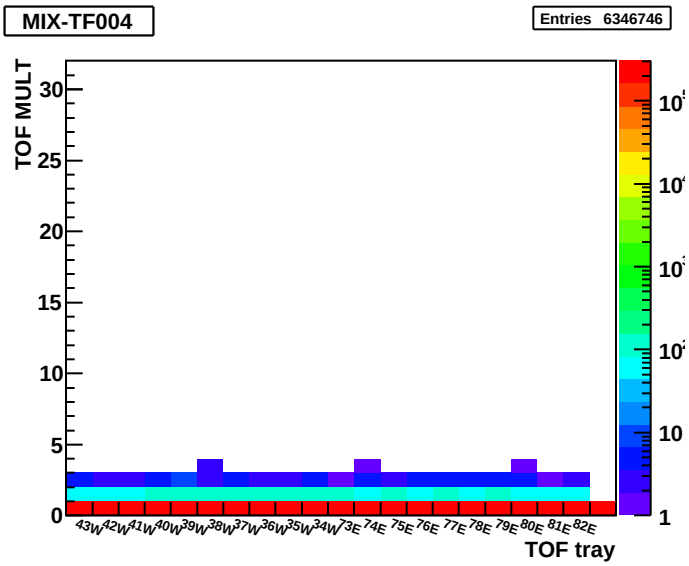

Abort-gaps
Entries 142
10
0 20 40 60 80 100 120

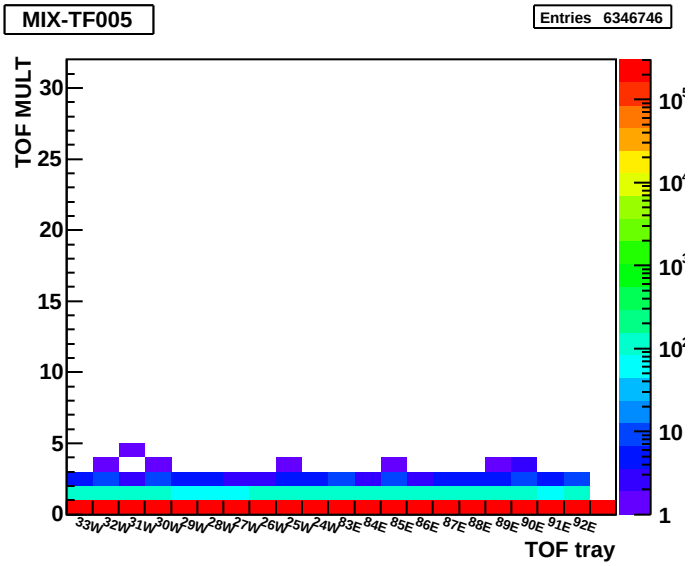

!Yellow-Fill
Entries 151113
10^4
10^3
10^2
10
0 20 40 60 80 100 120

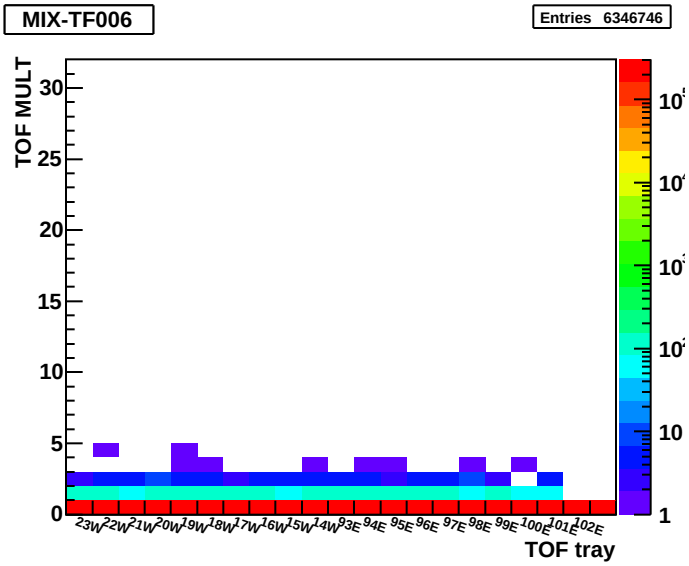

MIX-TF001
Entries 6346746
TOF MULT
TOF tray

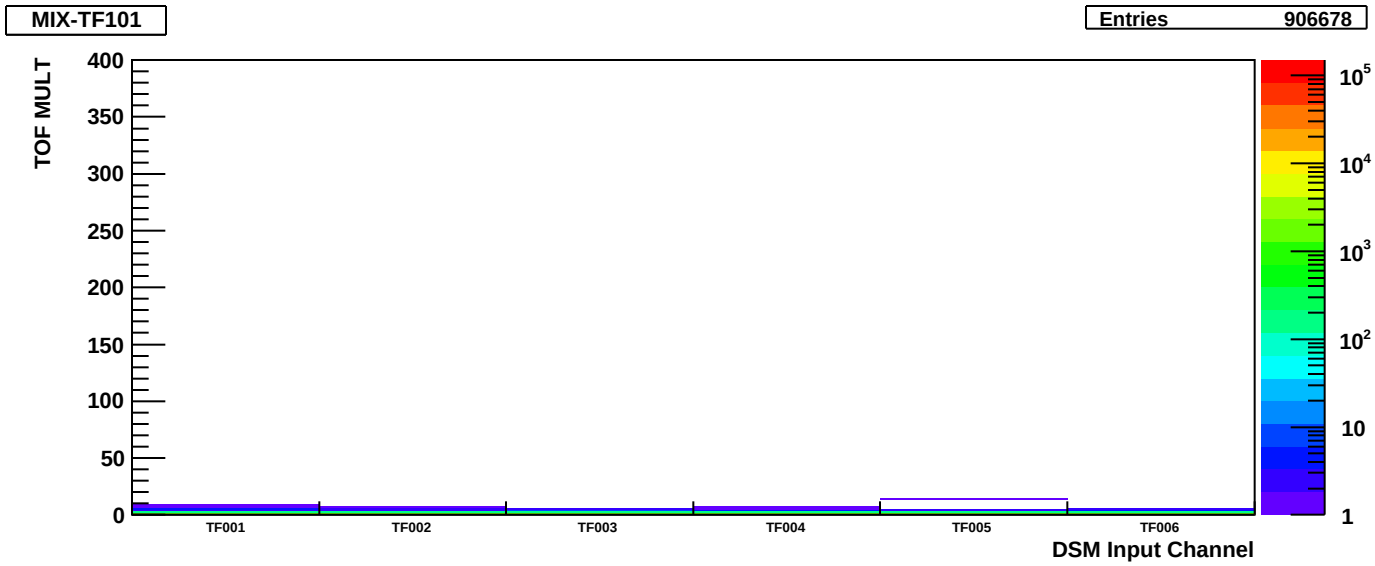

MIX-TF002
Entries 6346746
TOF MULT
TOF tray

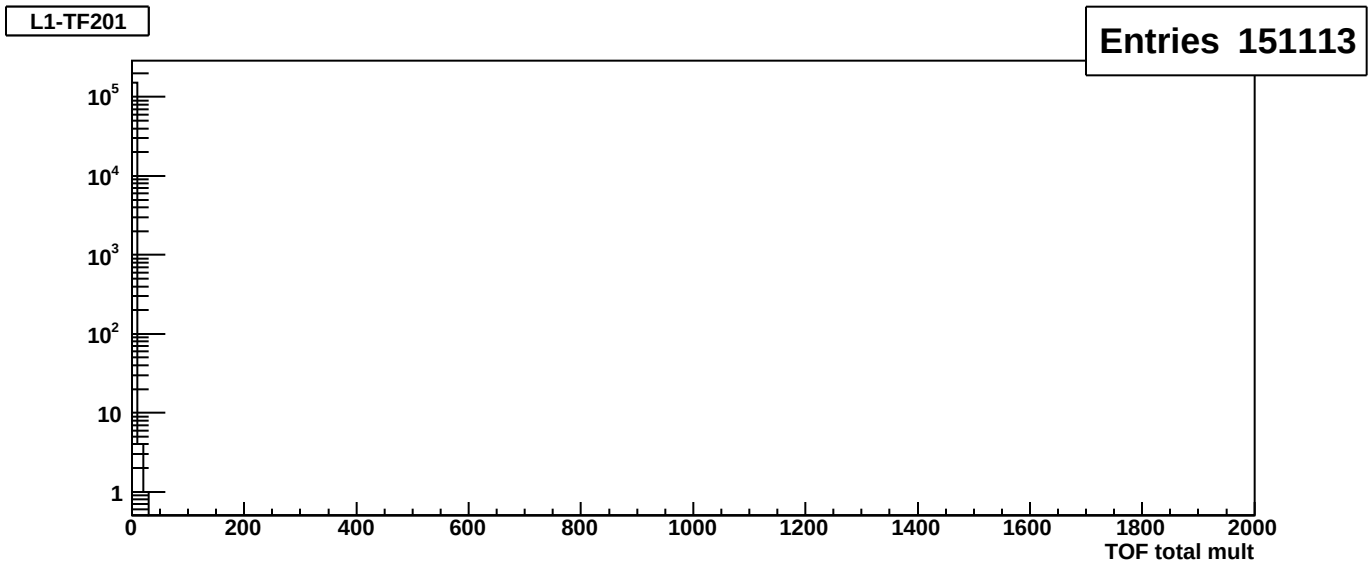

MIX-TF003
Entries 6346746
TOF MULT
TOF tray

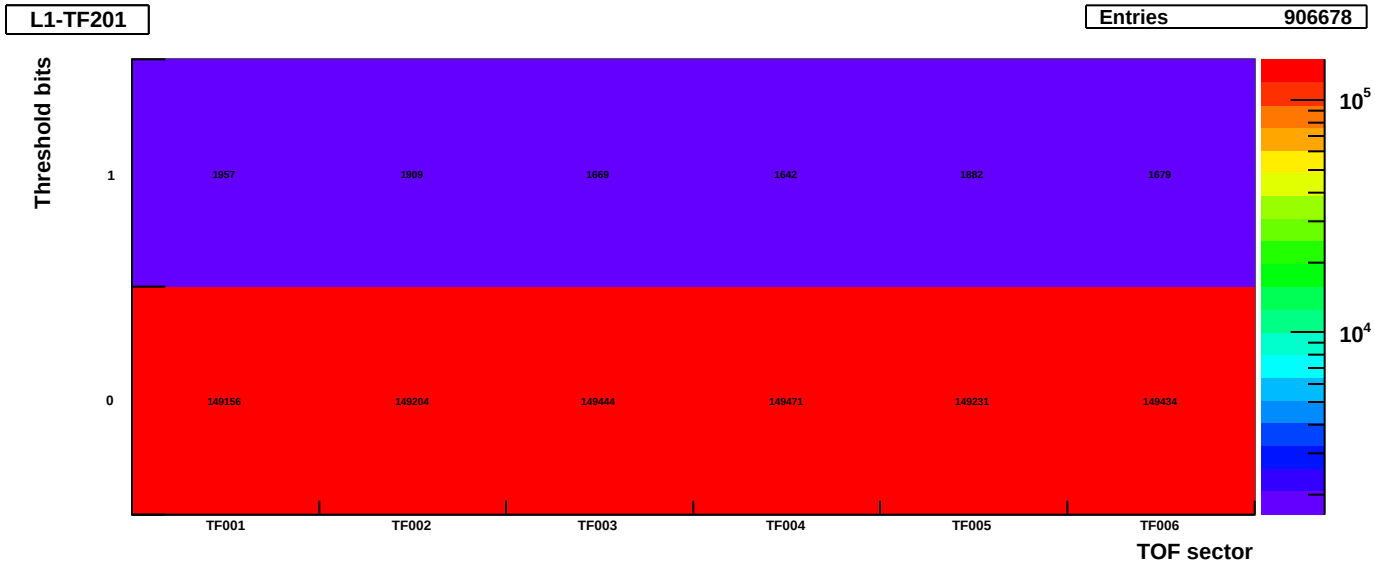

MIX-TF004
Entries 6346746
TOF MULT
TOF tray

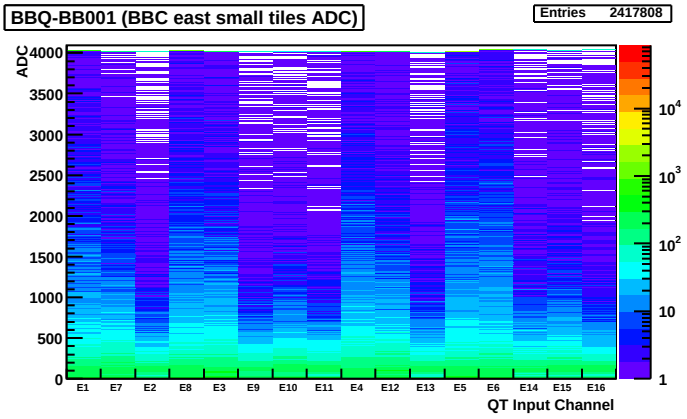

MIX-TF005
Entries 6346746
TOF MULT
TOF tray

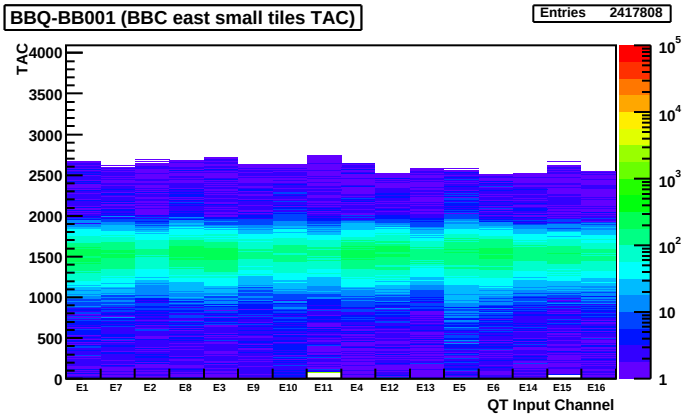

MIX-TF006
Entries 6346746
TOF MULT
TOF tray

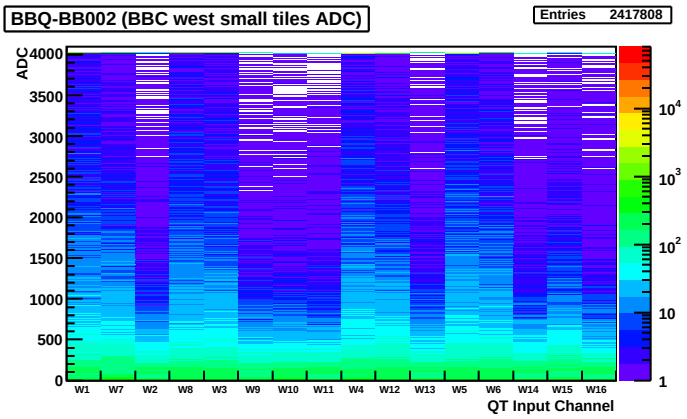

MIX-TF101
Entries 906678
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

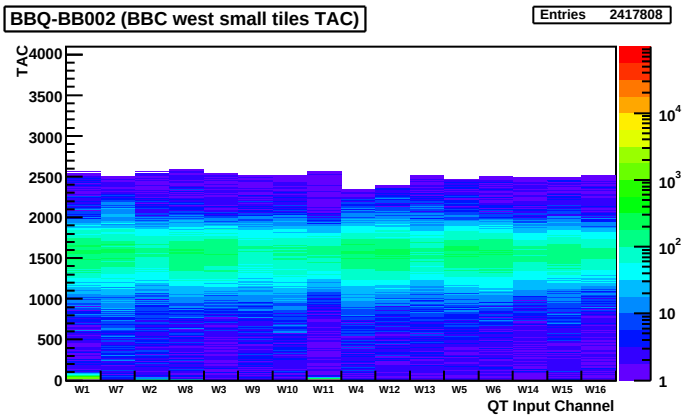

L1-TF201
Entries 151113
10^5
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

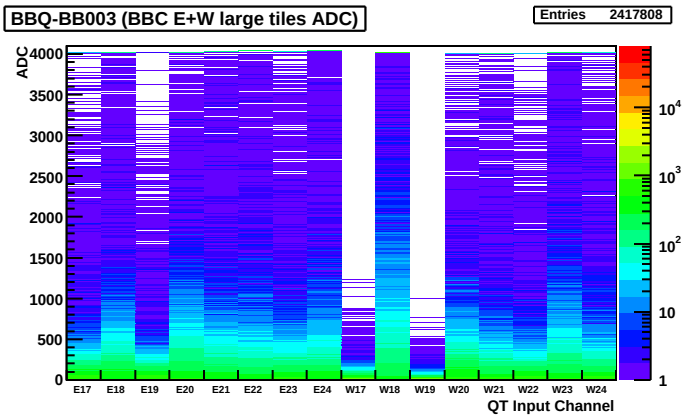

L1-TF201
Entries 906678
Threshold bits
1
0
1957
1909
1669
1642
1882
1679
149156
149204
149444
149471
149231
149434
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^5
10^4

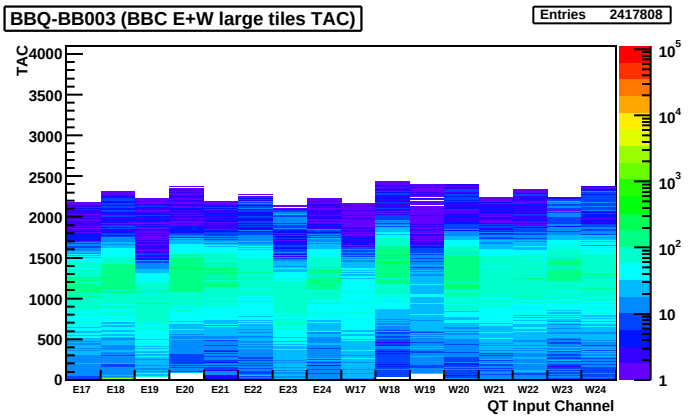

BBQ-BB001 (BBC east small tiles ADC)
Entries 2417808
ADC
QT Input Channel

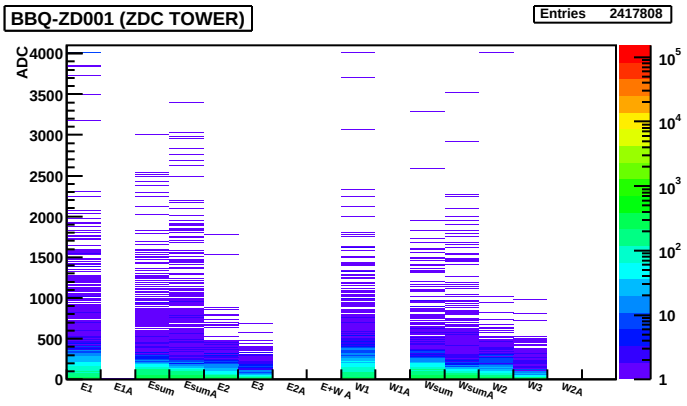

BBQ-BB001 (BBC east small tiles TAC)
Entries 2417808
TAC
QT Input Channel

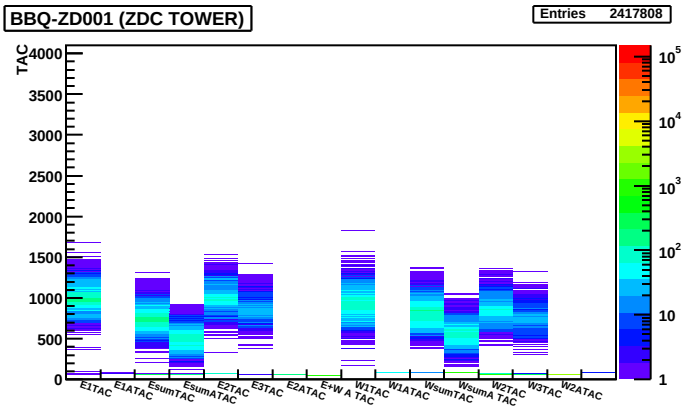

BBQ-BB002 (BBC west small tiles ADC)
Entries 2417808
ADC
QT Input Channel

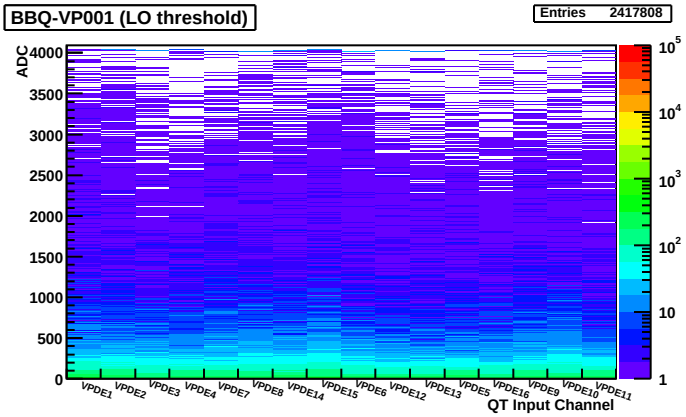

BBQ-BB002 (BBC west small tiles TAC)
Entries 2417808
TAC
QT Input Channel

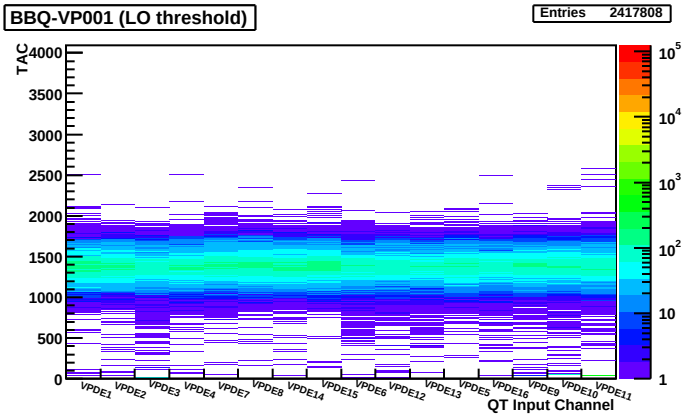

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 2417808
ADC
QT Input Channel

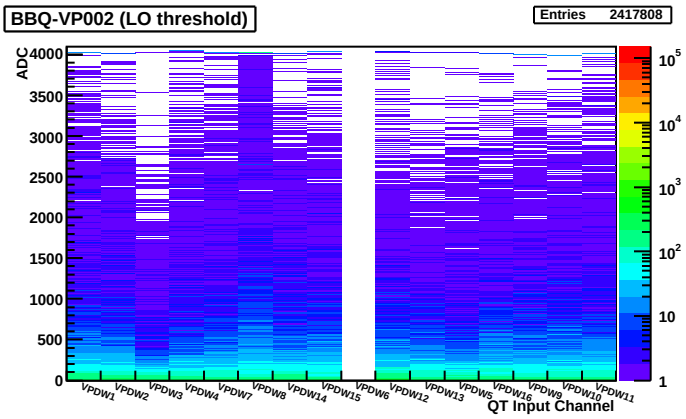

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 2417808
TAC
QT Input Channel

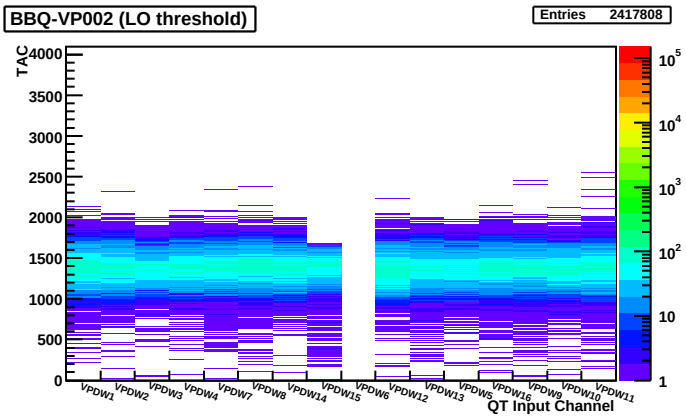

BBQ-ZD001 (ZDC TOWER)
Entries 2417808
ADC

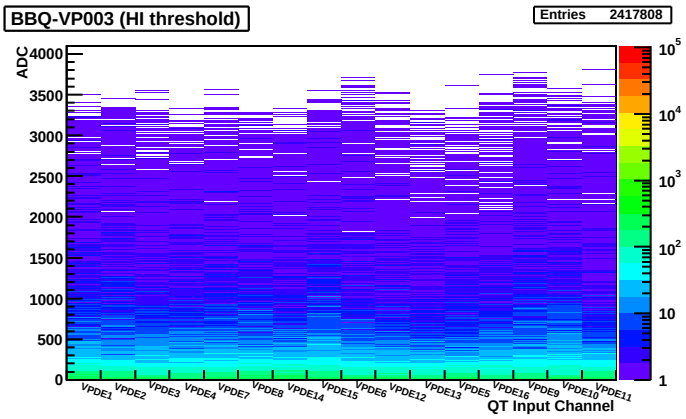

BBQ-ZD001 (ZDC TOWER)
Entries 2417808
TAC

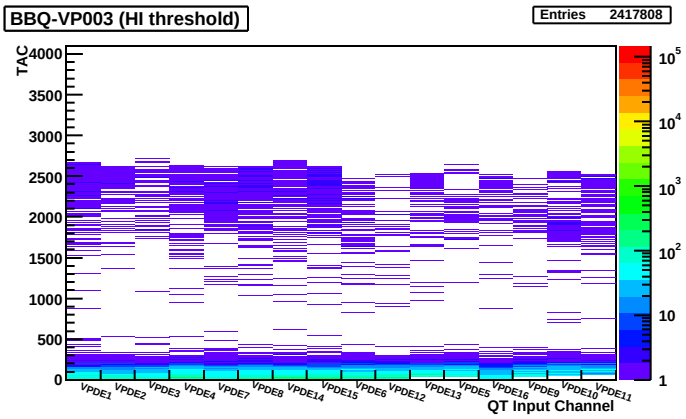

BBQ-VP001 (LO threshold)
Entries 2417808
ADC
QT Input Channel

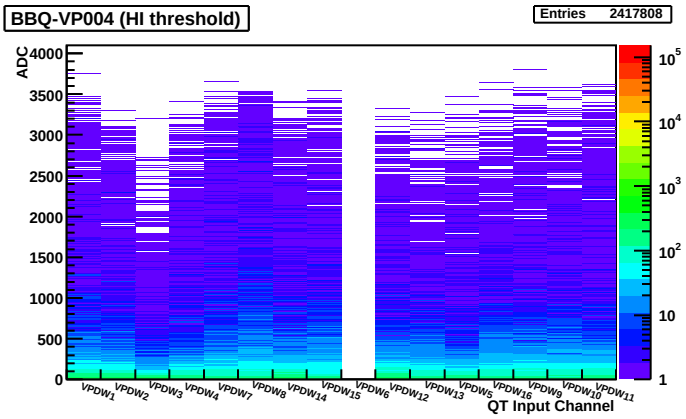

BBQ-VP001 (LO threshold)
Entries 2417808
TAC
QT Input Channel

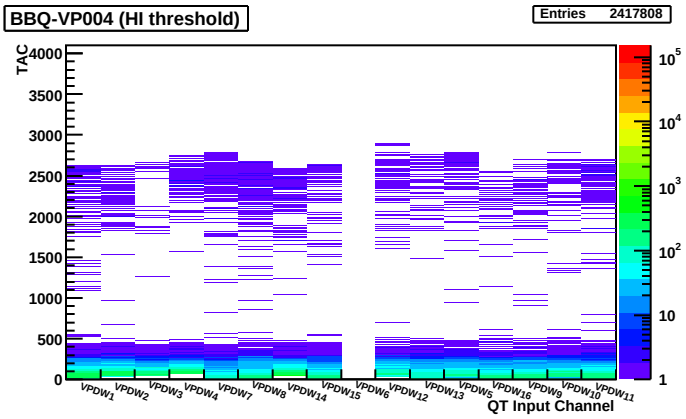

BBQ-VP002 (LO threshold)
Entries 2417808
ADC
QT Input Channel

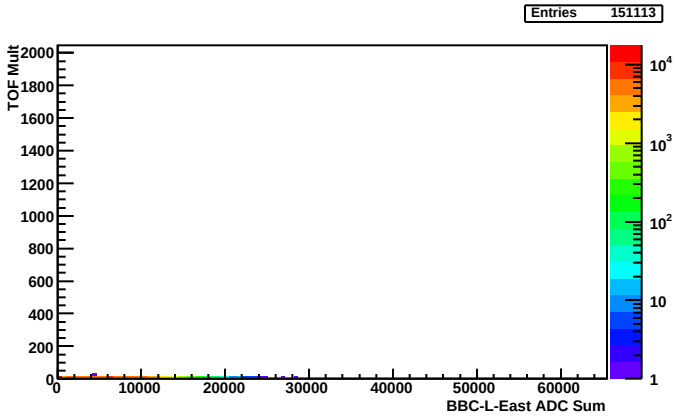

BBQ-VP002 (LO threshold)
Entries 2417808
TAC
QT Input Channel

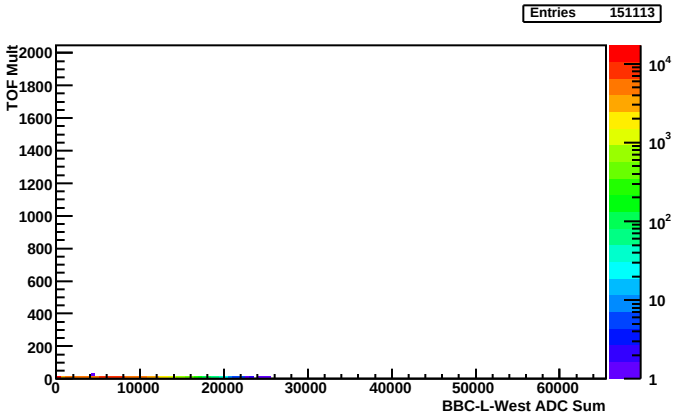

BBQ-VP003 (HI threshold)
Entries 2417808
ADC
QT Input Channel

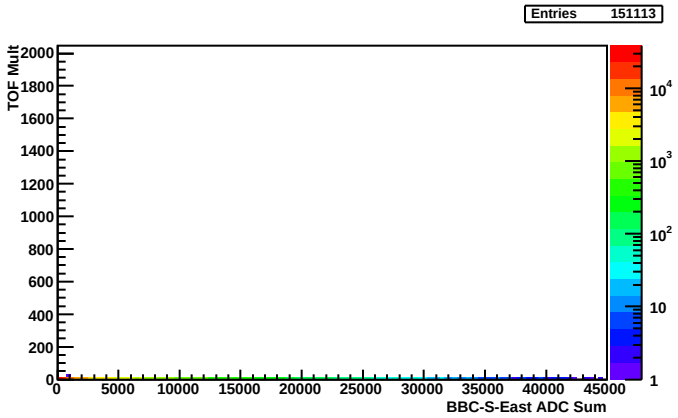

BBQ-VP003 (HI threshold)
Entries 2417808
TAC
QT Input Channel

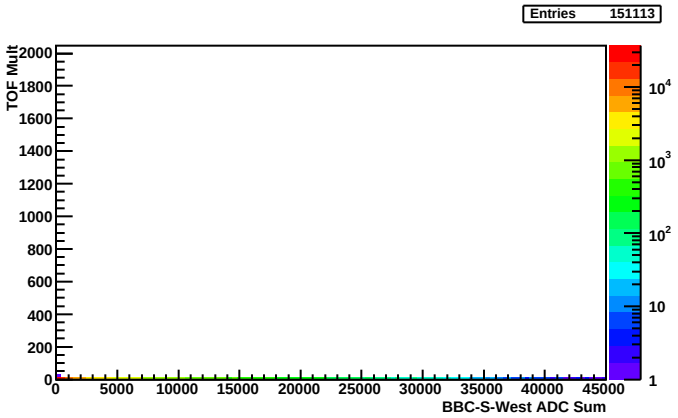

BBQ-VP004 (HI threshold)
Entries 2417808
ADC
QT Input Channel

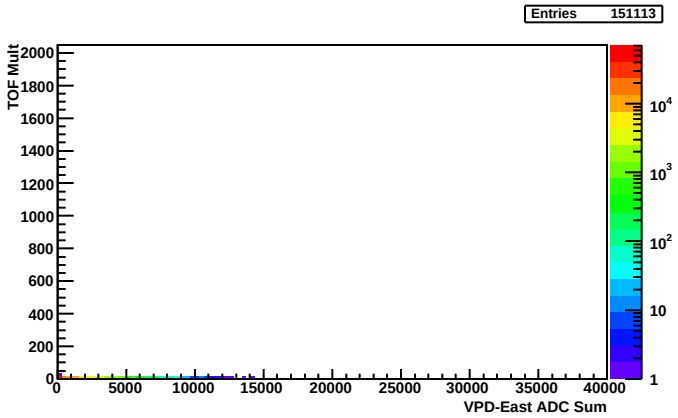

BBQ-VP004 (HI threshold)
Entries 2417808
TAC
QT Input Channel

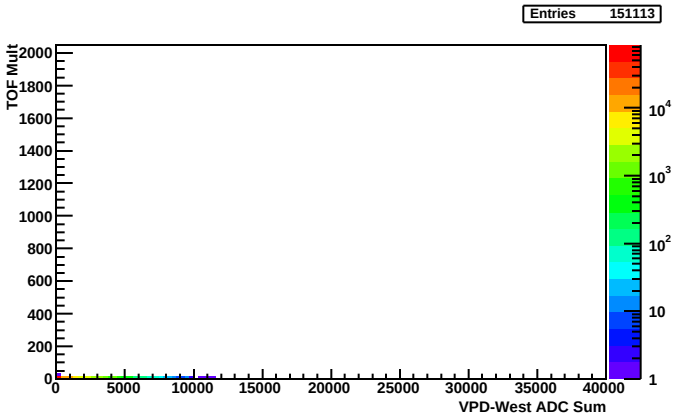

Entries 151113
TOF Mult
BBC-L-East ADC Sum

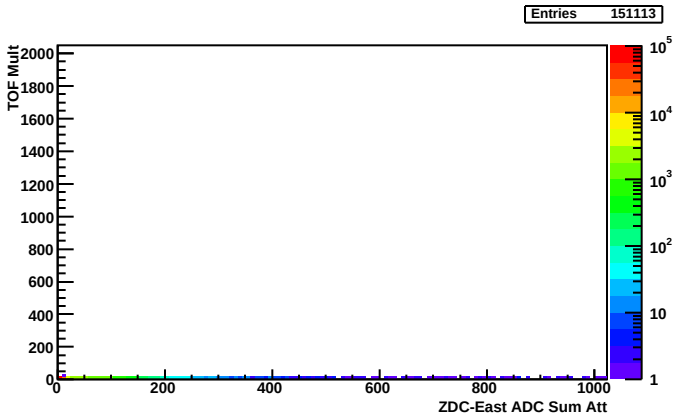

Entries 151113
TOF Mult
BBC-L-West ADC Sum

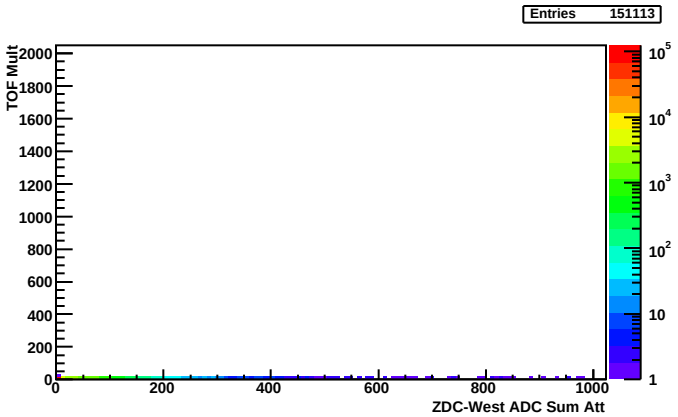

Entries 151113
TOF Mult
BBC-S-East ADC Sum

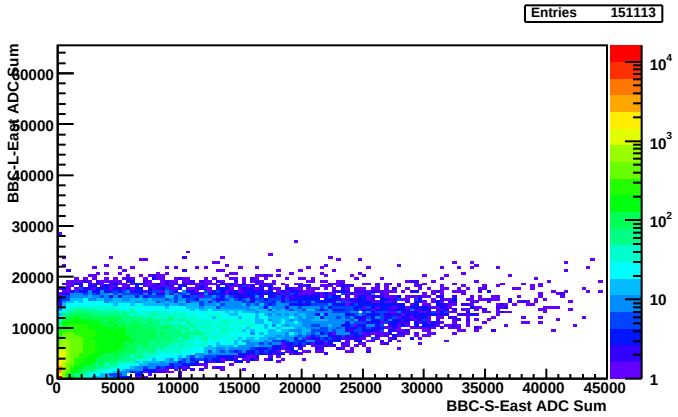

Entries 151113
TOF Mult
BBC-S-West ADC Sum

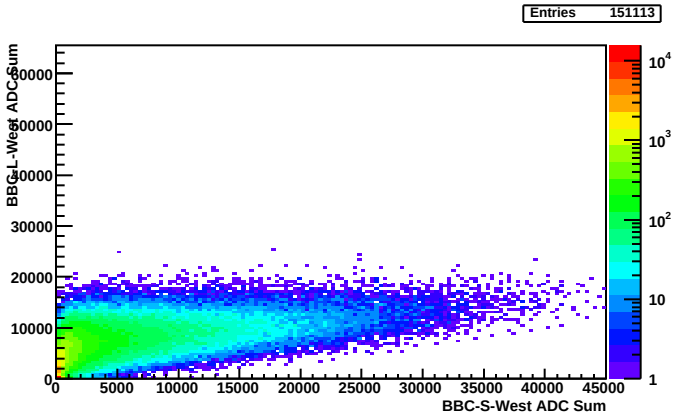

Entries 151113
TOF Mult
VPD-East ADC Sum

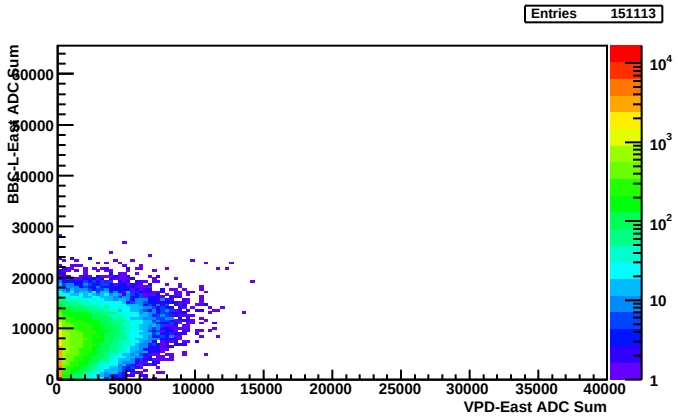

Entries 151113
TOF Mult
VPD-West ADC Sum

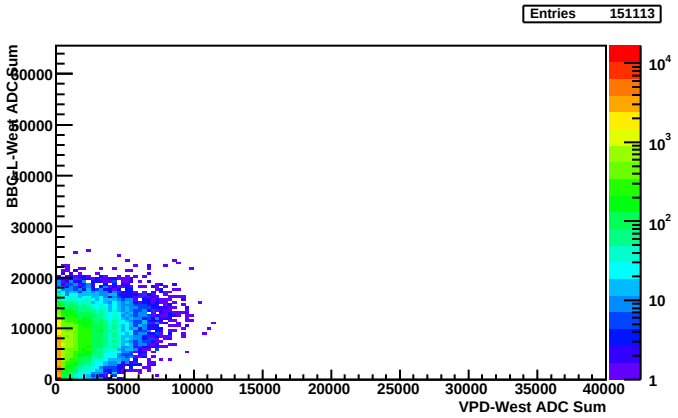

Entries 151113
TOF Mult
ZDC-East ADC Sum Att

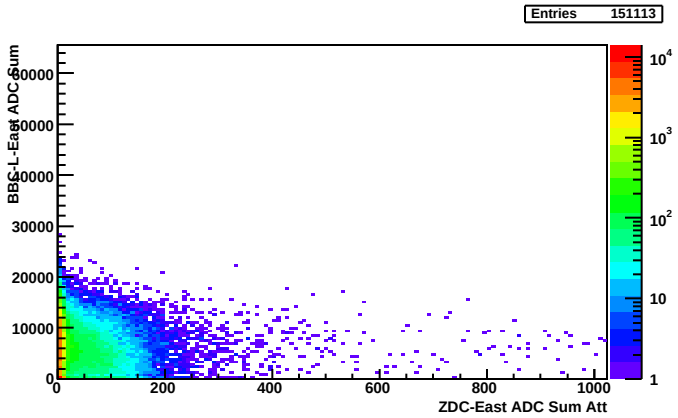

Entries 151113
TOF Mult
ZDC-West ADC Sum Att

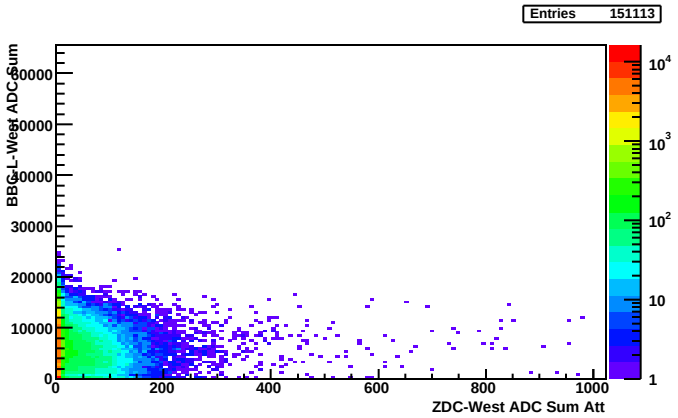

Entries 151113
BBC-L-East ADC Sum
BBC-S-East ADC Sum

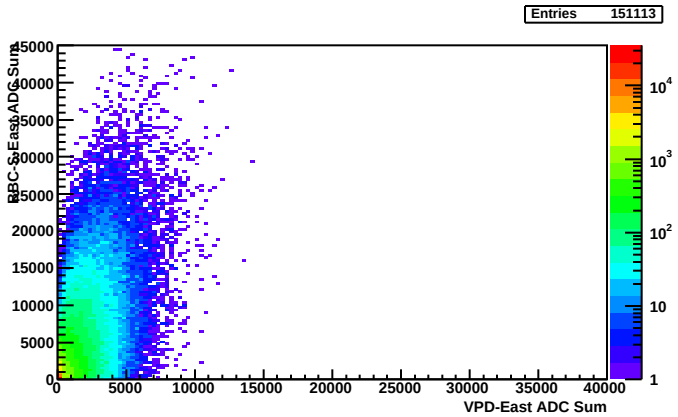

Entries 151113
BBC-L-West ADC Sum
BBC-S-West ADC Sum

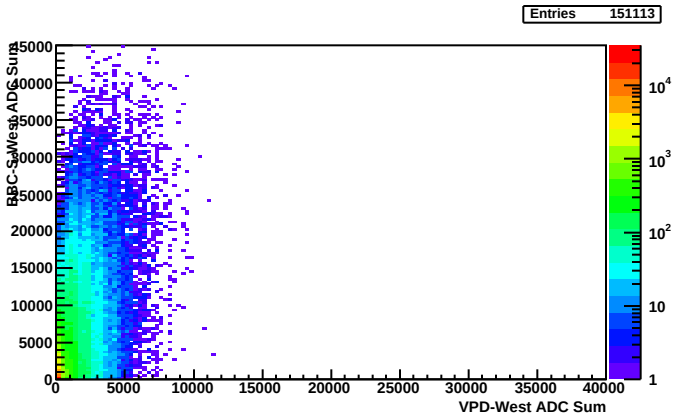

Entries 151113
BBC-L-East ADC Sum
VPD-East ADC Sum

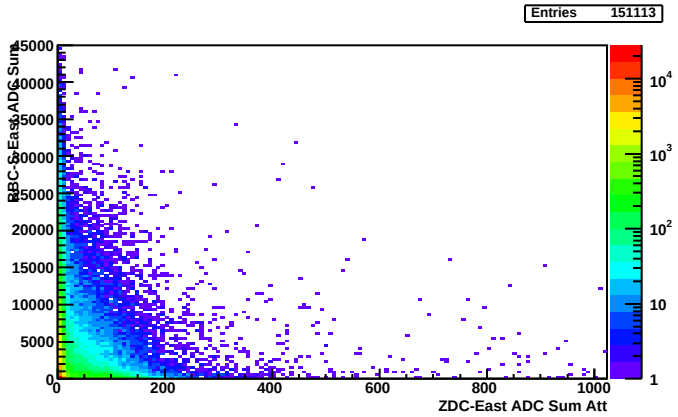

Entries 151113
BBC-L-West ADC Sum
VPD-West ADC Sum

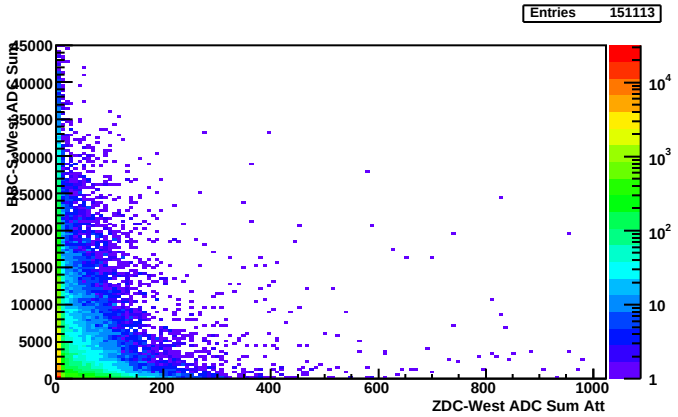

Entries 151113
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

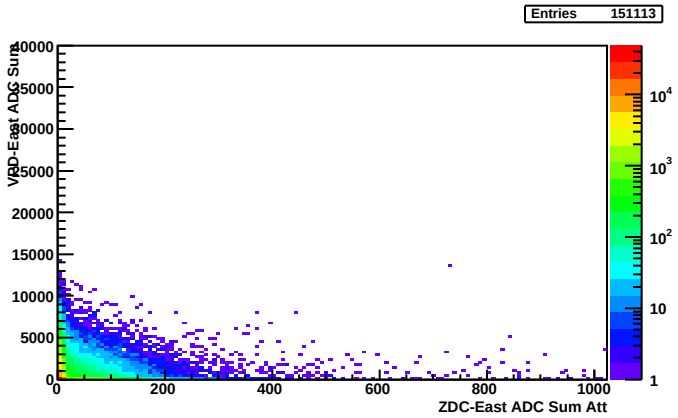

Entries 151113
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

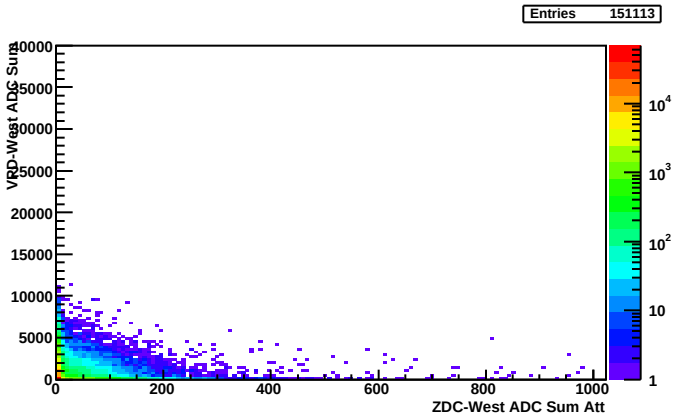

Entries 151113
BBC-S-East ADC Sum
VPD-East ADC Sum

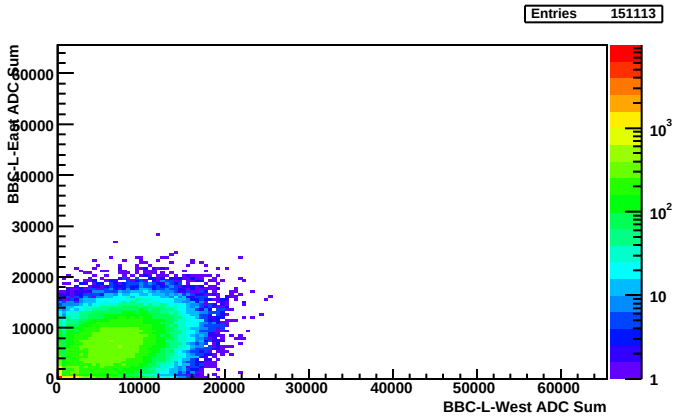

Entries 151113
BBC-S-West ADC Sum
VPD-West ADC Sum

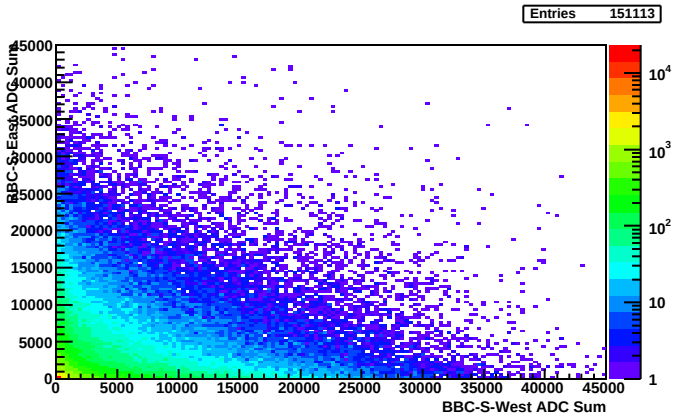

Entries 151113
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

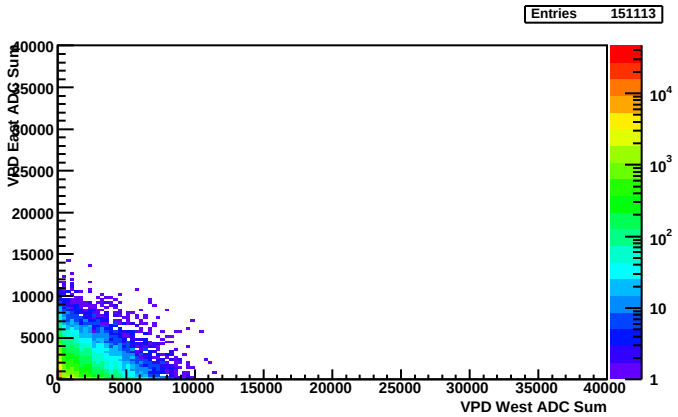

Entries 151113
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

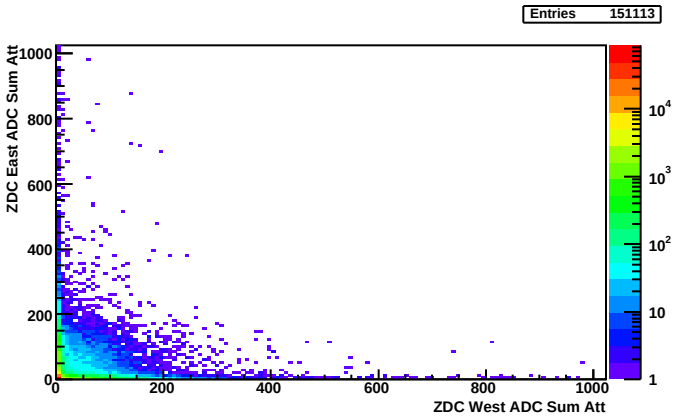

Entries 151113
VPD-East ADC Sum
ZDC-East ADC Sum Att

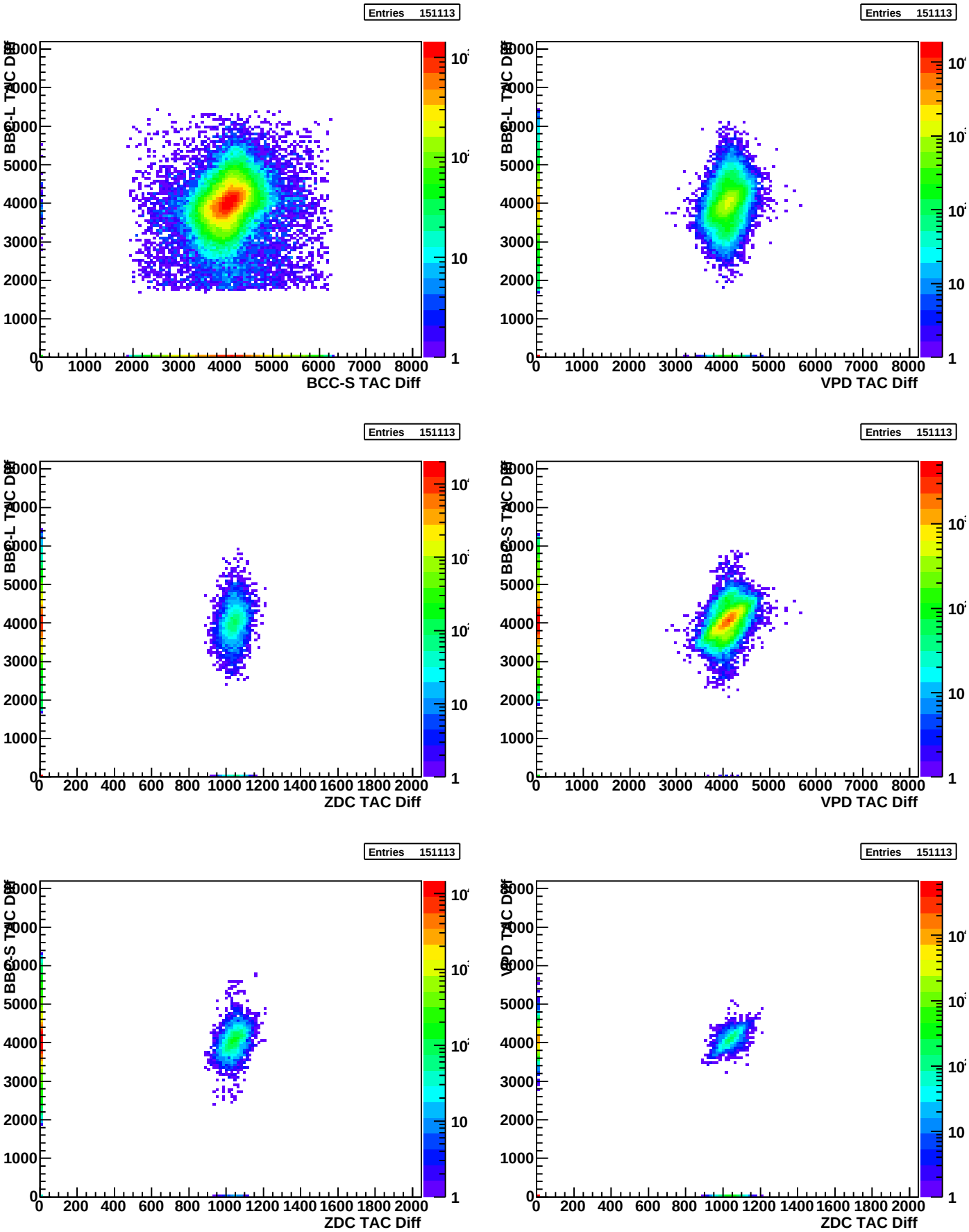

Entries 151113
VPD-West ADC Sum
ZDC-West ADC Sum Att

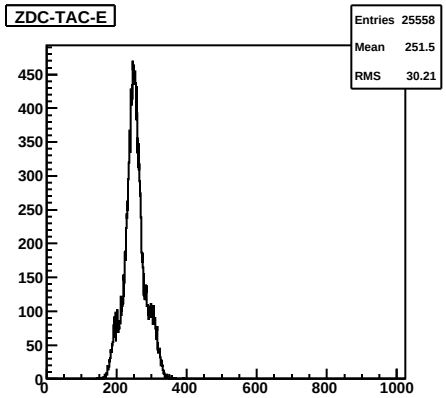

Entries 151113
BBC-L-East ADC Sum
BBC-L-West ADC Sum

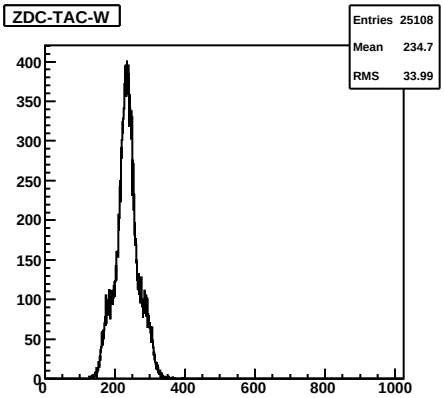

Entries 151113
BBC-S-East ADC Sum
BBC-S-West ADC Sum

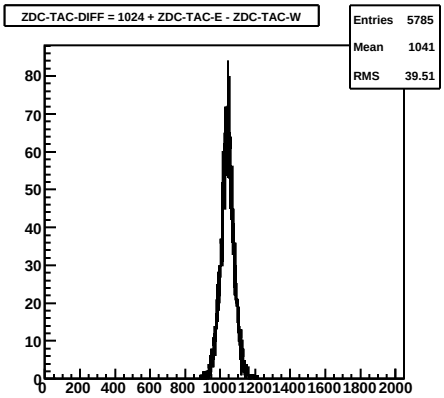

Entries 151113
VPD East ADC Sum
VPD West ADC Sum

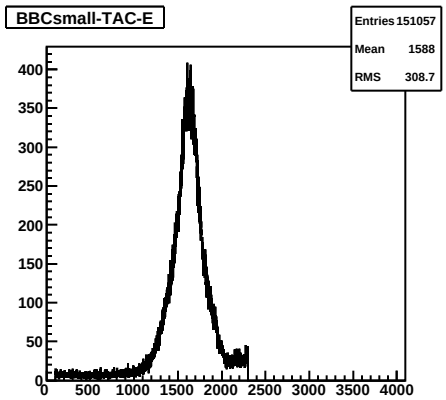

Entries 151113
ZDC East ADC Sum Att
ZDC West ADC Sum Att

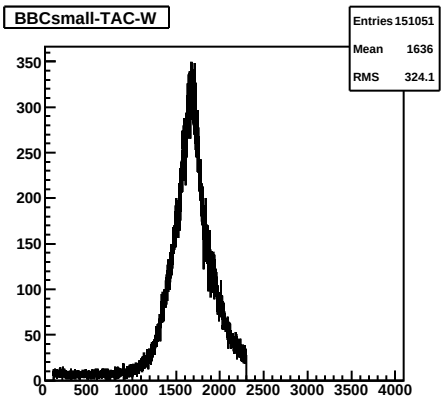

Entries 151113
BBC-L TAC Diff
BCC-S TAC Diff
Entries 151113
BBC-L TAC Diff
VPD TAC Diff
Entries 151113
BBC-L TAC Diff
ZDC TAC Diff
Entries 151113
BBC-S TAC Diff
VPD TAC Diff
Entries 151113
BBC-S TAC Diff
ZDC TAC Diff
Entries 151113
VPD TAC Diff
ZDC TAC Diff

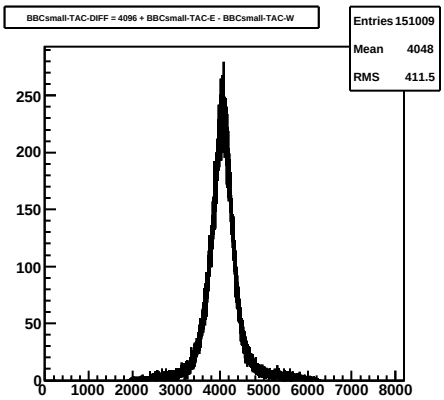

ZDC-TAC-E
Entries 25558
Mean 251.5
RMS 30.21

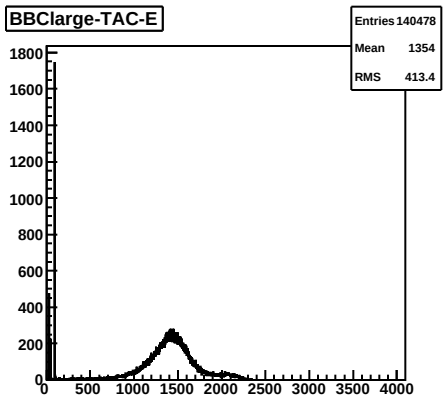

ZDC-TAC-W
Entries 25108
Mean 234.7
RMS 33.99

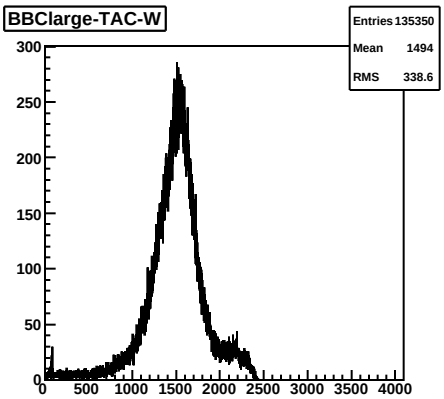

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 5785
Mean 1041
RMS 39.51

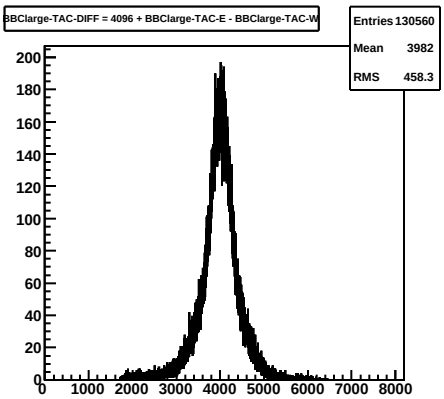

BBCsmall-TAC-E
Entries 151057
Mean 1588
RMS 308.7

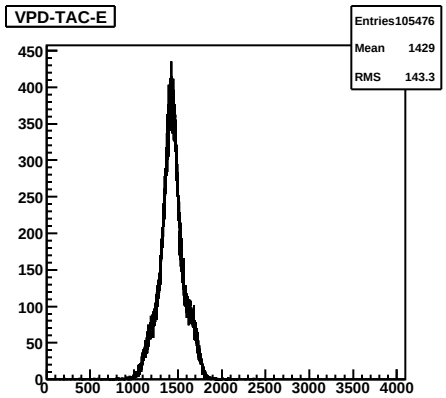

BBCsmall-TAC-W
Entries 151051
Mean 1636
RMS 324.1

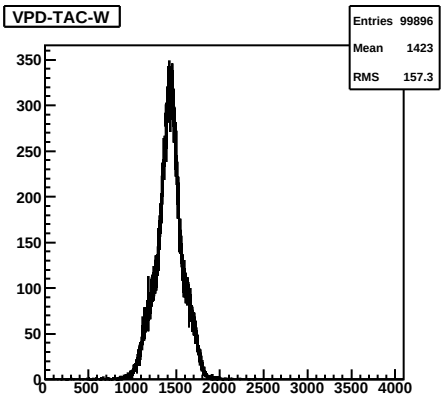

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 151009
Mean 4048
RMS 411.5

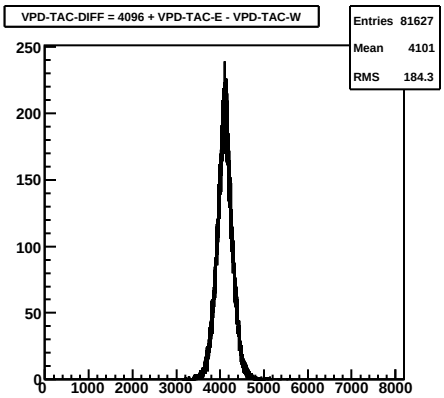

BBClarge-TAC-E
Entries 140478
Mean 1354
RMS 413.4

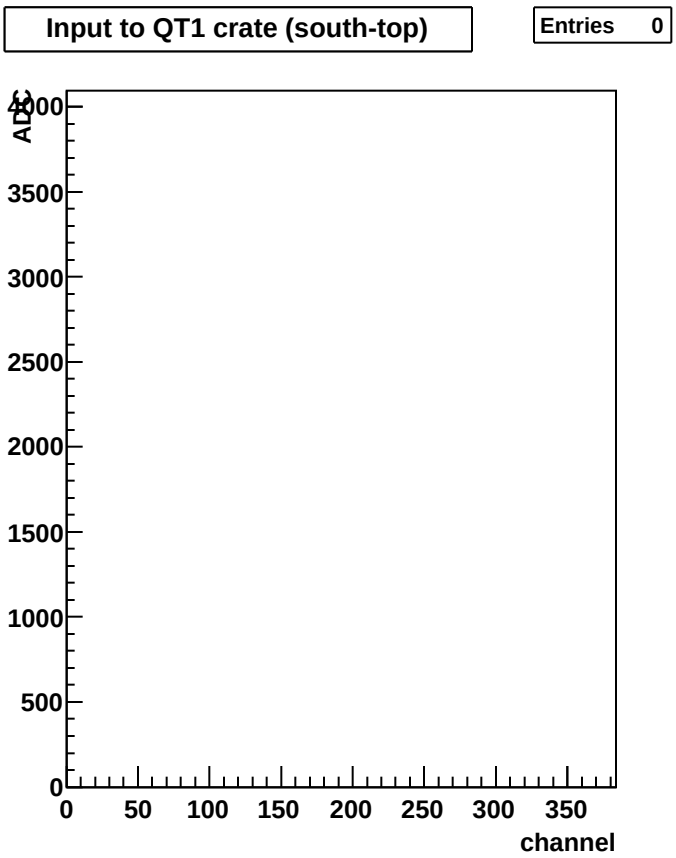

BBClarge-TAC-W
Entries 135350
Mean 1494
RMS 338.6

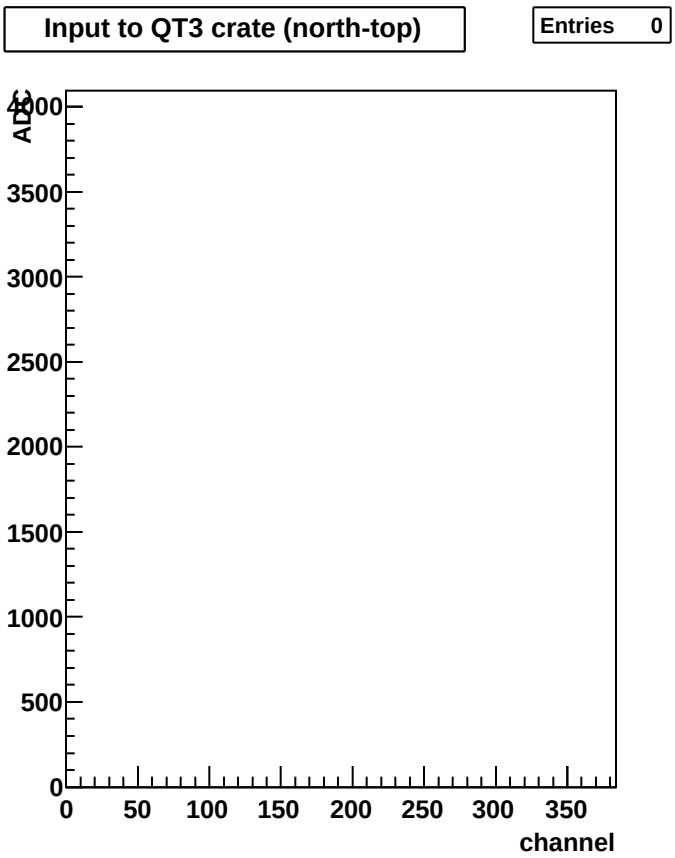

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 130560
Mean 3982
RMS 458.3

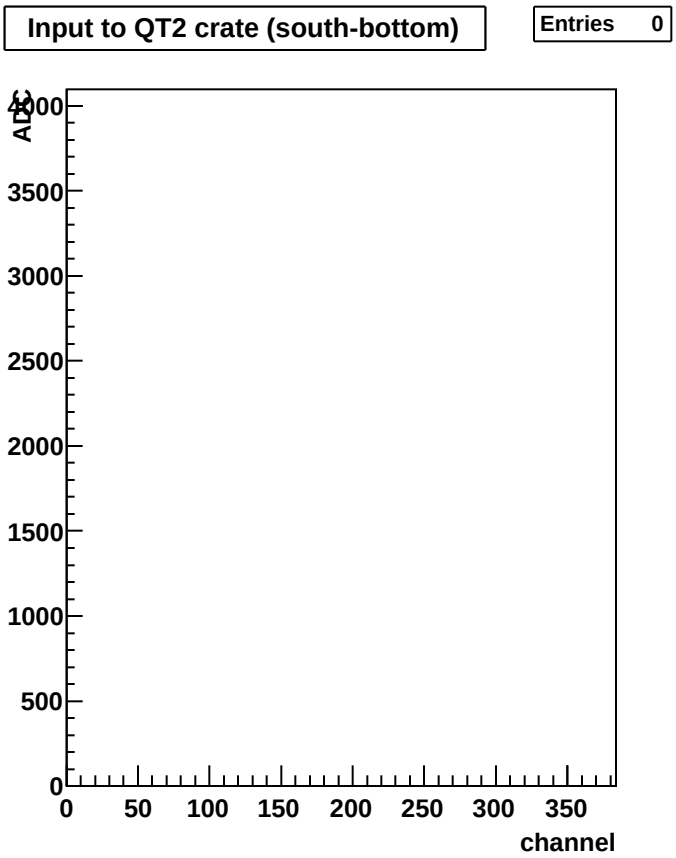

VPD-TAC-E
Entries 105476
Mean 1429
RMS 143.3

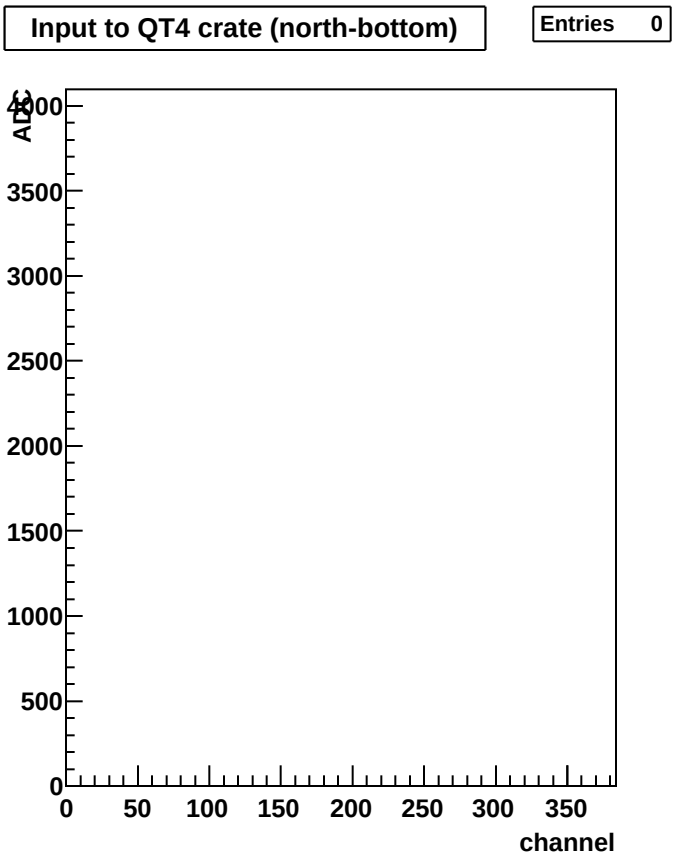

VPD-TAC-W
Entries 99896
Mean 1423
RMS 157.3

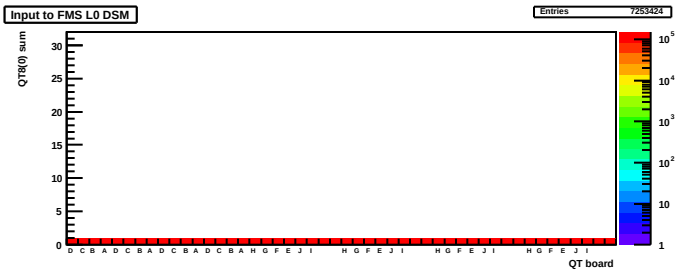

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 81627
Mean 4101
RMS 184.3

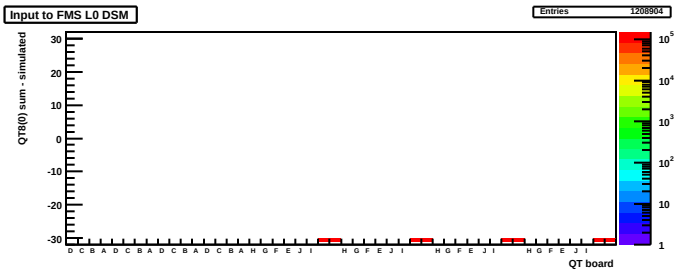

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

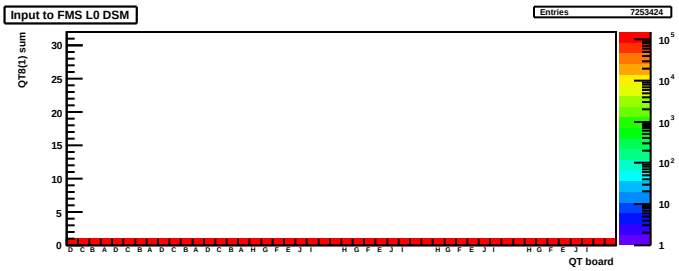

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

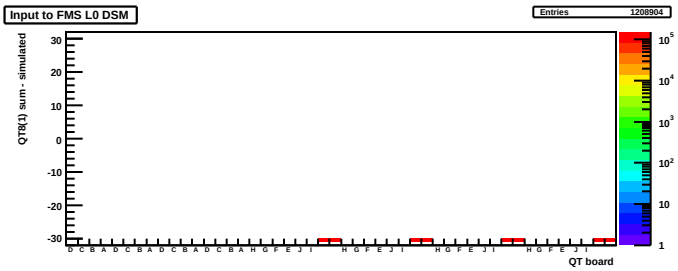

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

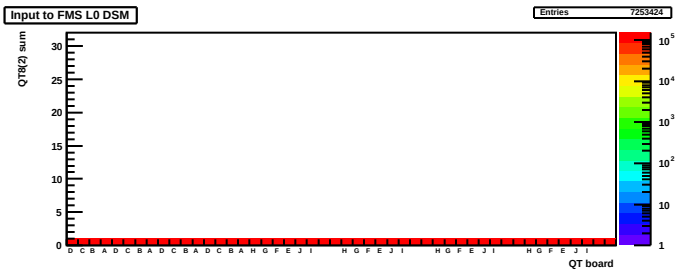

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

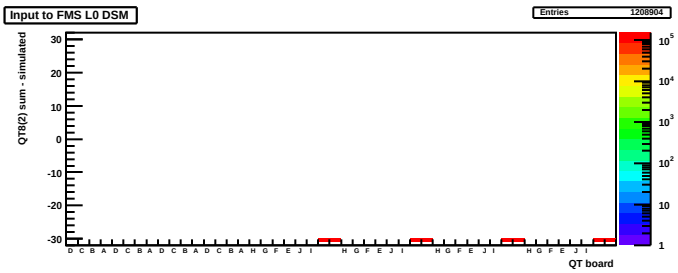

Input to FMS L0 DSM
Entries 7253424
QT8(0) sum
QT board

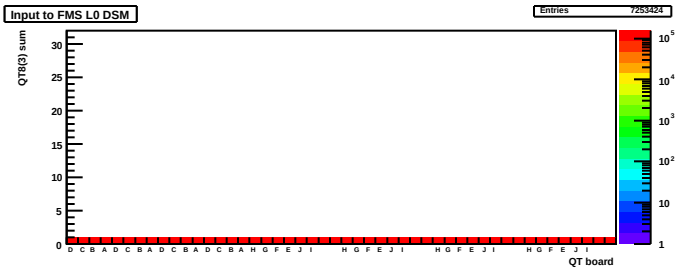

Input to FMS L0 DSM
Entries 1208904
QT8(0) sum - simulated
QT board

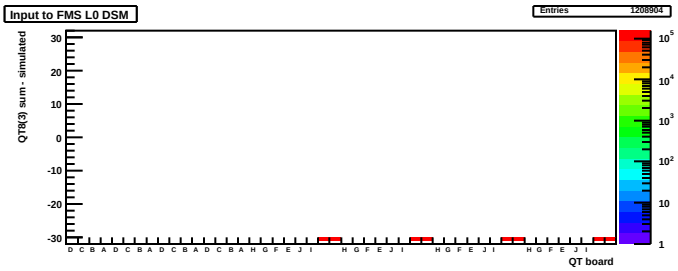

Input to FMS L0 DSM
Entries 7253424
QT8(1) sum
QT board

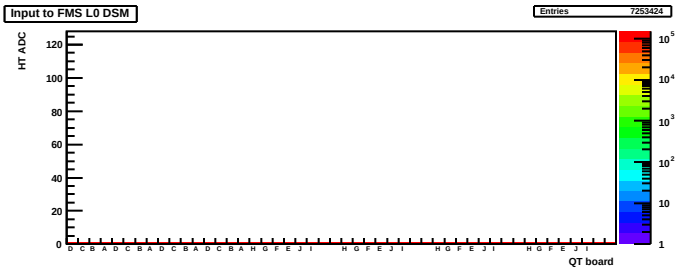

Input to FMS L0 DSM
Entries 1208904
QT8(1) sum - simulated
QT board

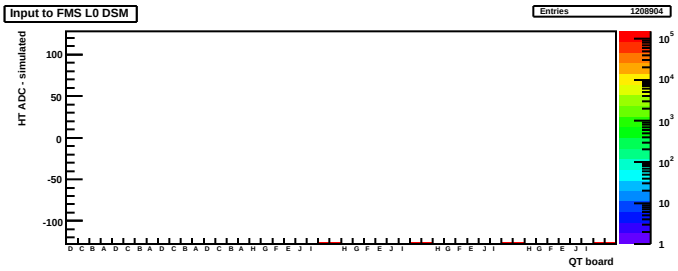

Input to FMS L0 DSM
Entries 7253424
QT8(2) sum
QT board

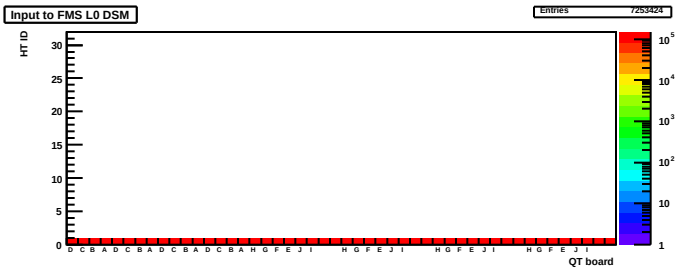

Input to FMS L0 DSM
Entries 1208904
QT8(2) sum - simulated
QT board

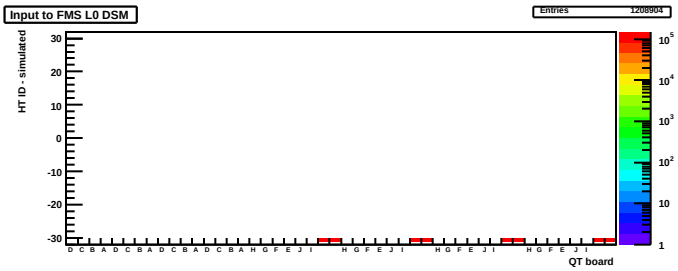

Input to FMS L0 DSM
Entries 7253424
QT8(3) sum
QT board

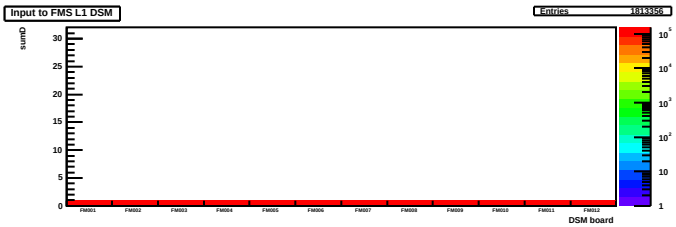

Input to FMS L0 DSM
Entries 1208904
QT8(3) sum - simulated
QT board

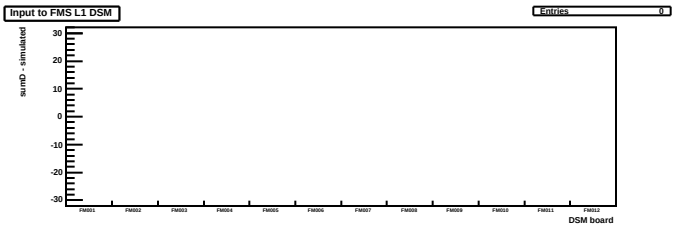

Input to FMS L0 DSM
Entries 7253424
HT ADC
QT board

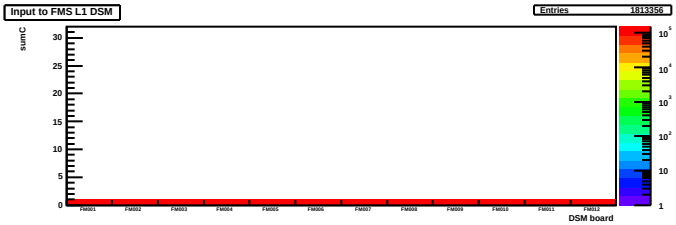

Input to FMS L0 DSM
Entries 1208904
HT ADC - simulated
QT board

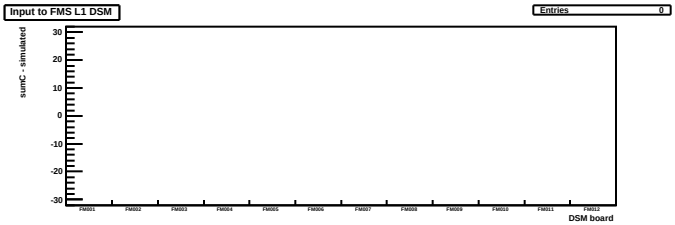

Input to FMS L0 DSM
Entries 7253424
HT ID
QT board

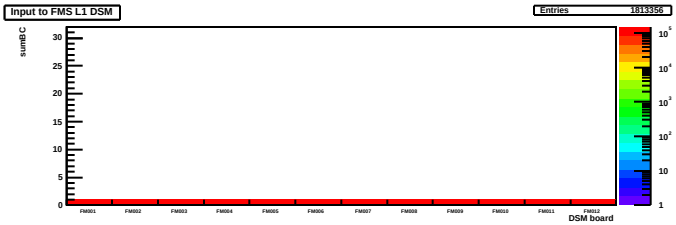

Input to FMS L0 DSM
Entries 1208904
HT ID - simulated
QT board

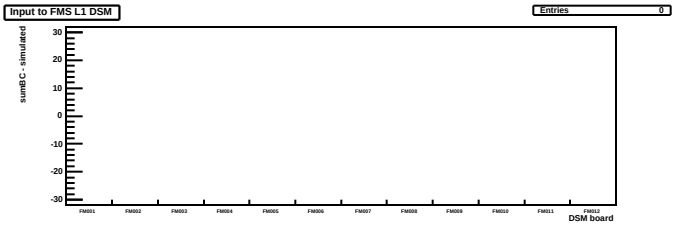

Input to FMS L1 DSM
Entries 1813356
sumD
DSM board

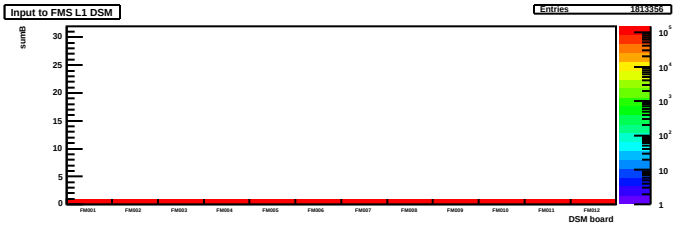

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

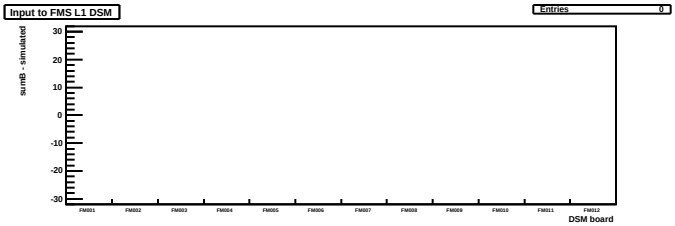

Input to FMS L1 DSM
Entries 1813356
sumC
DSM board

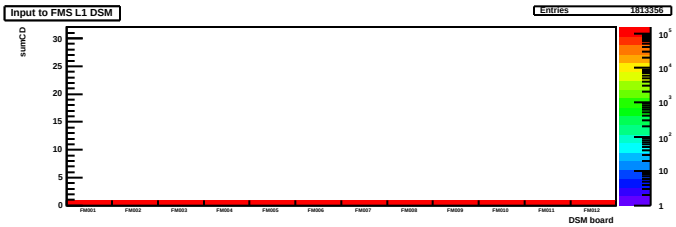

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

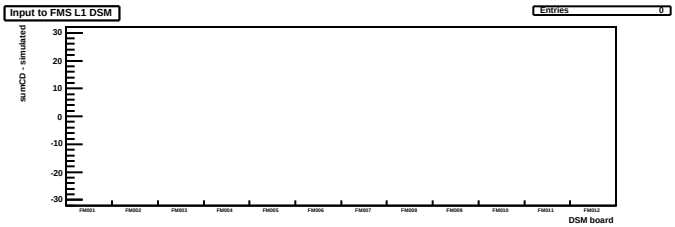

Input to FMS L1 DSM
Entries 1813356
sumBC
DSM board

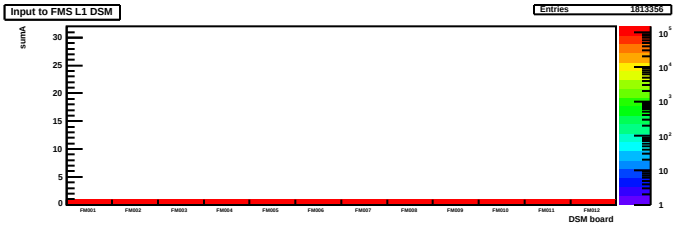

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

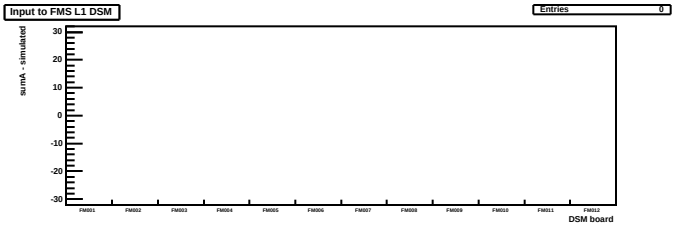

Input to FMS L1 DSM
Entries 1813356
sumB
DSM board

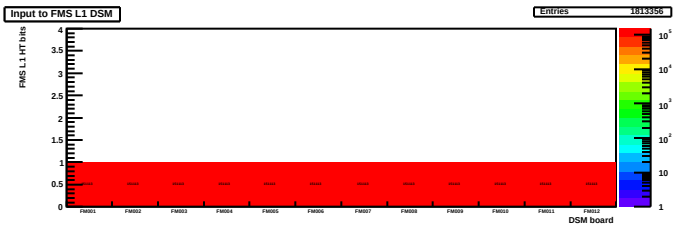

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

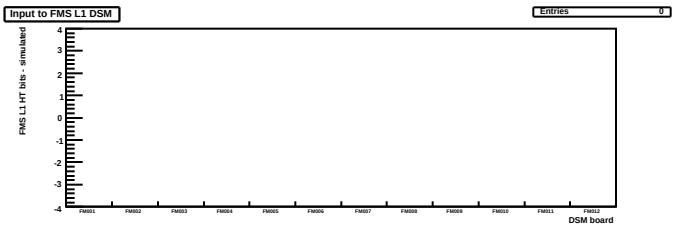

Input to FMS L1 DSM
Entries 1813356
sumCD
DSM board

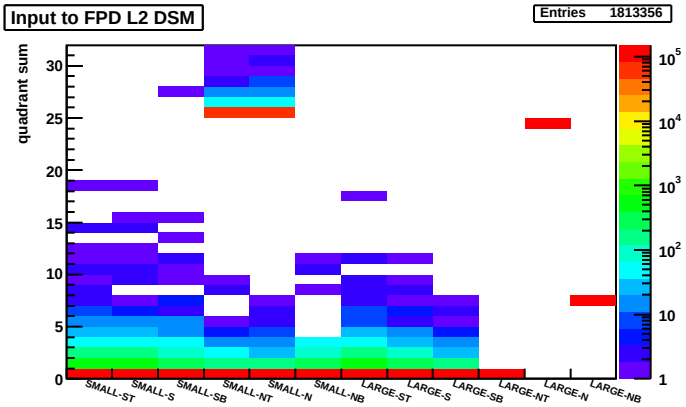

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

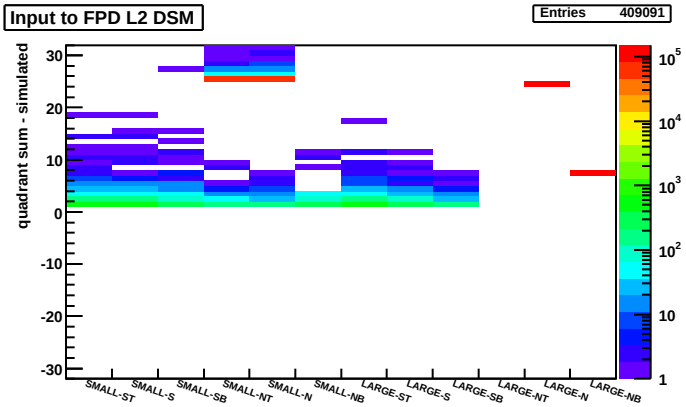

Input to FMS L1 DSM
Entries 1813356
sumA
DSM board

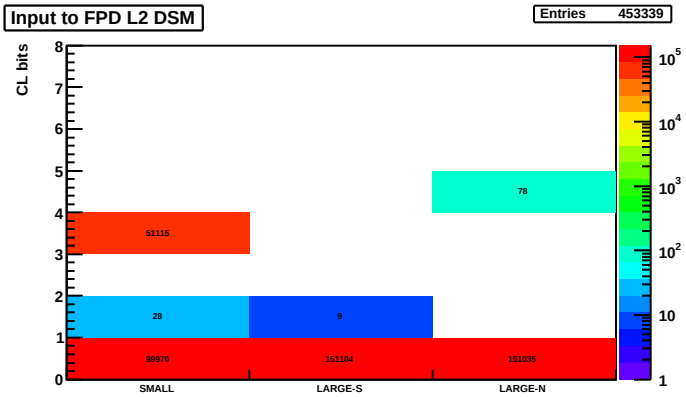

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

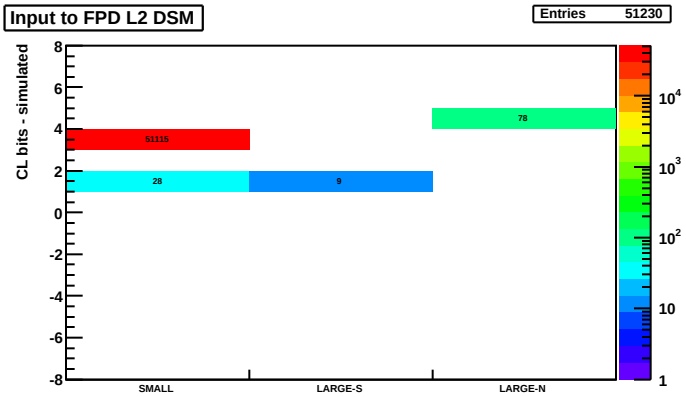

Input to FMS L1 DSM
Entries 1813356
FMS L1 HT bits
DSM board

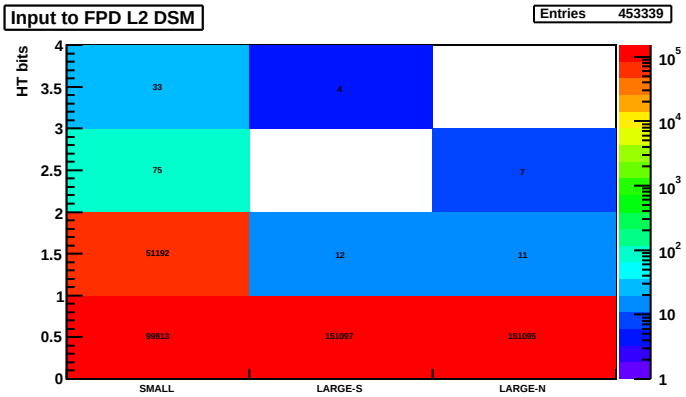

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

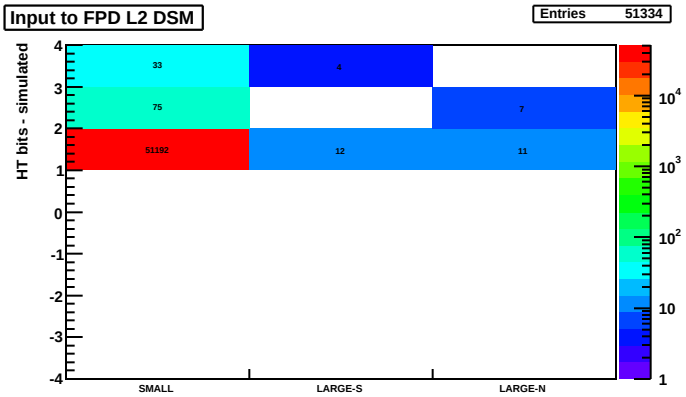

Input to FPD L2 DSM
Entries 1813356
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

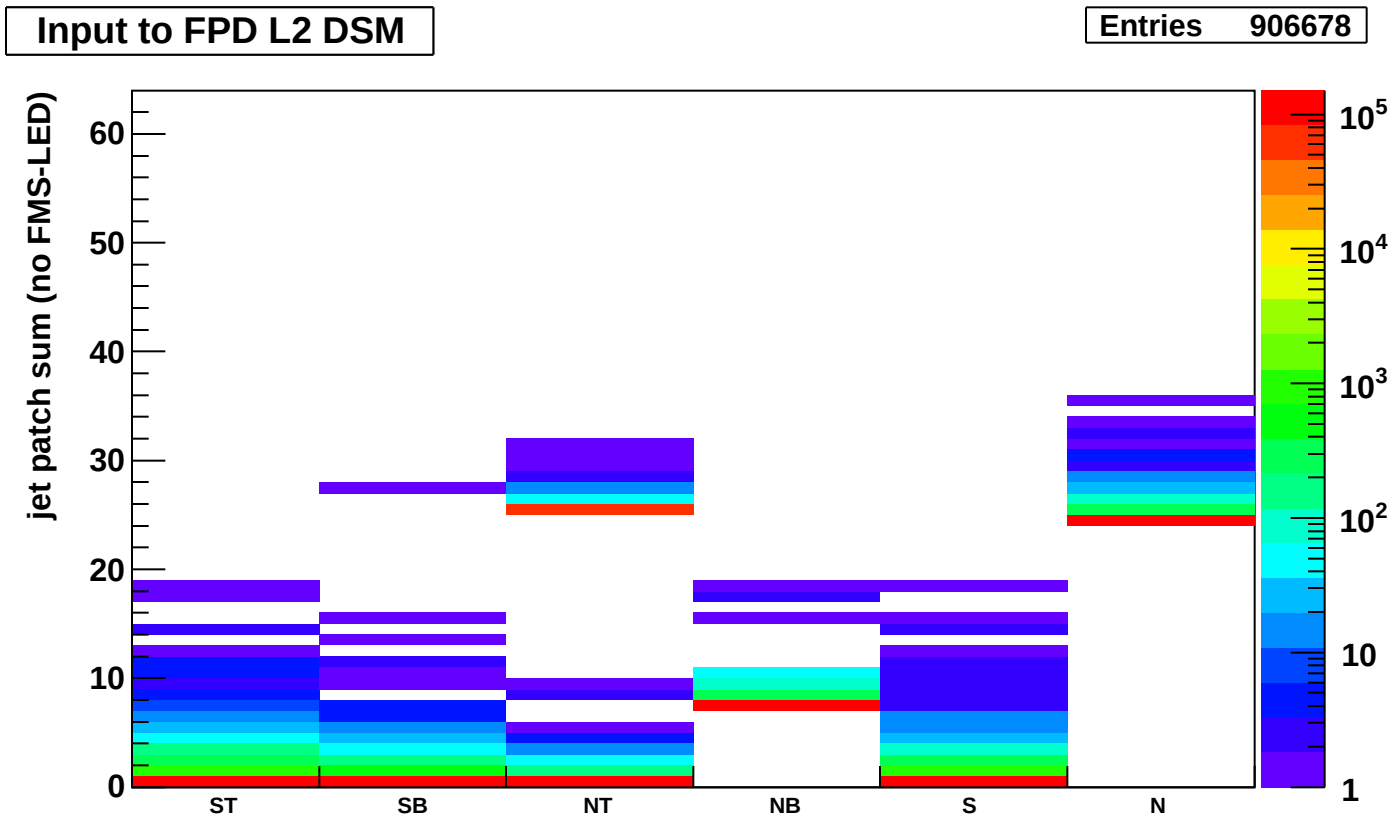

Input to FPD L2 DSM
Entries 409091
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

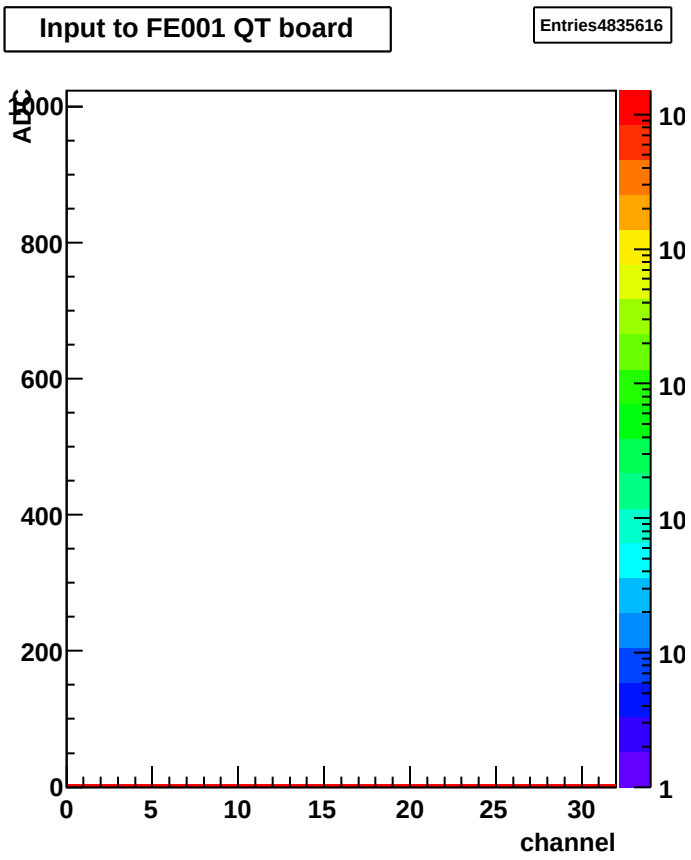

Input to FPD L2 DSM
Entries 453339
CL bits
51115
28
9
78
99970
151104
151035
SMALL
LARGE-S
LARGE-N

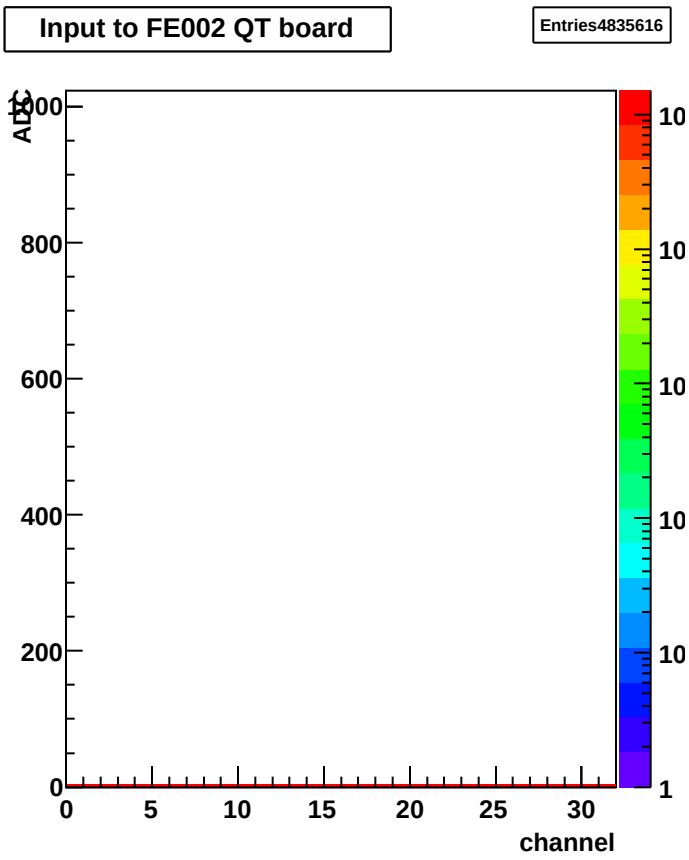

Input to FPD L2 DSM
Entries 51230
CL bits - simulated
51115
28
9
78
SMALL
LARGE-S
LARGE-N

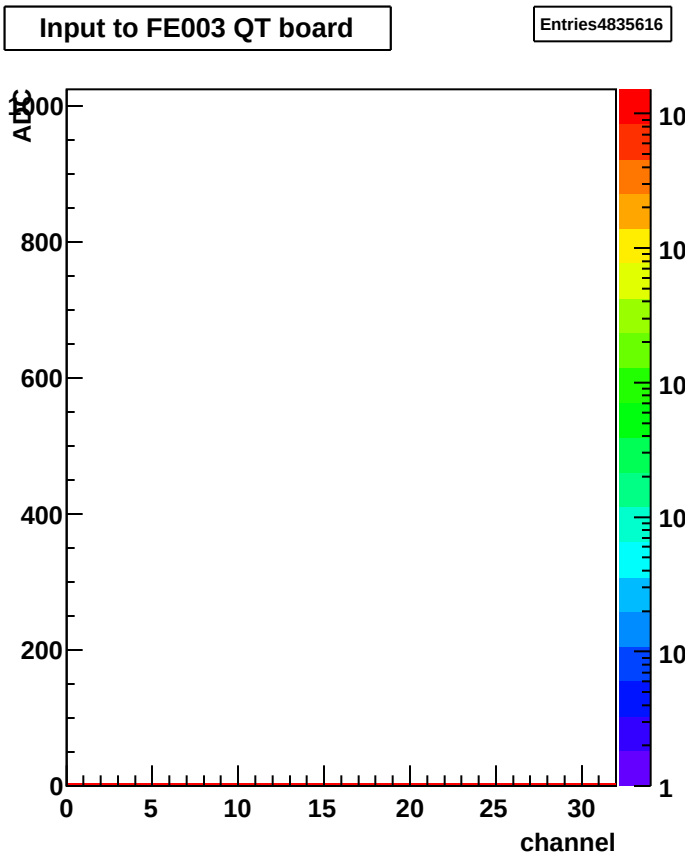

Input to FPD L2 DSM
Entries 453339
HT bits
33
4
75
7
51192
12
11
99813
151097
151095
SMALL
LARGE-S
LARGE-N

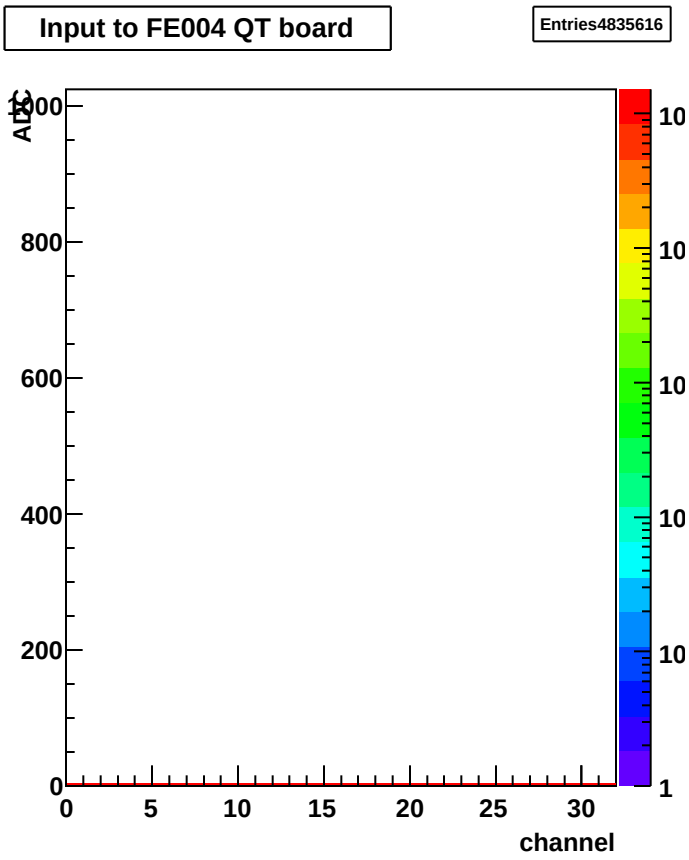

Input to FPD L2 DSM
Entries 51334
HT bits - simulated
33
4
75
7
51192
12
11
SMALL
LARGE-S
LARGE-N

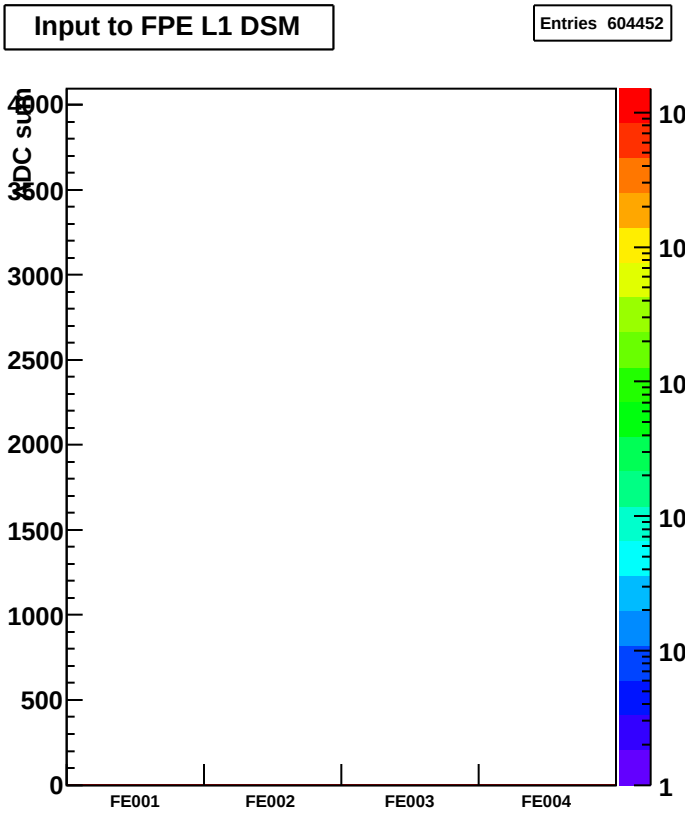

Input to FPD L2 DSM
Entries 906678
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

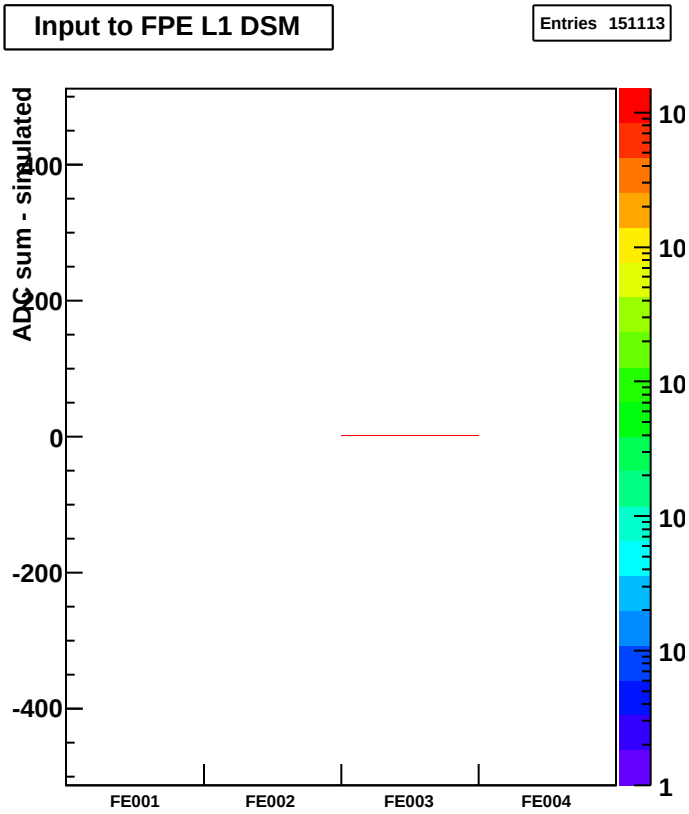

Input to FE001 QT board
Entries4835616
ADC
channel

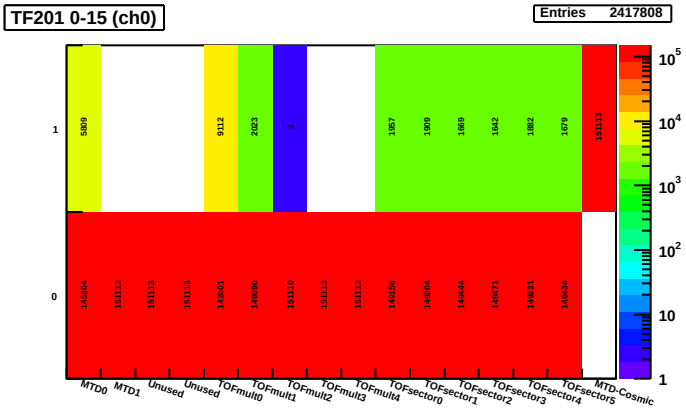

Input to FE002 QT board
Entries4835616
ADC
channel

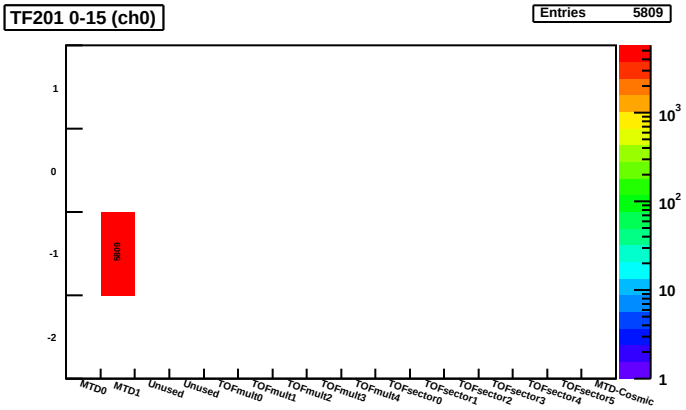

Input to FE003 QT board
Entries4835616
ADC
channel

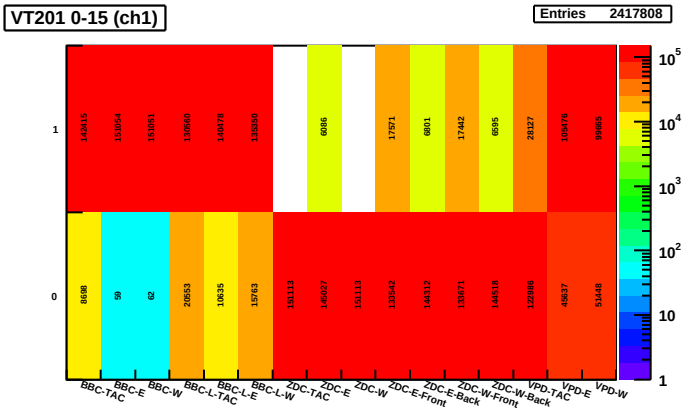

Input to FE004 QT board
Entries4835616
ADC
channel

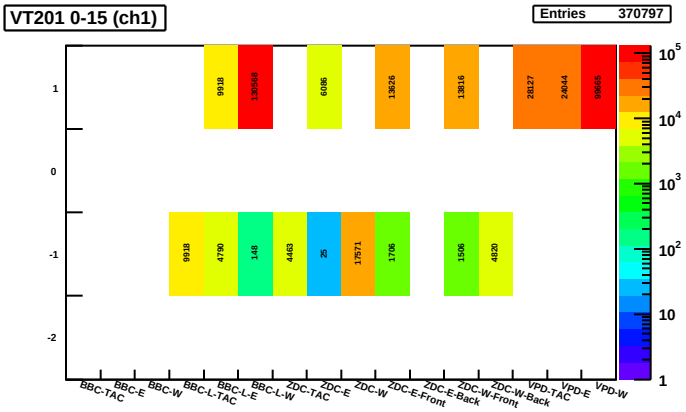

Input to FPE L1 DSM
Entries 604452
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1

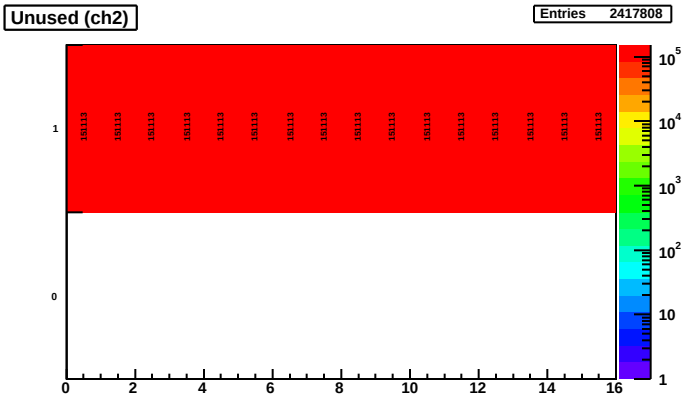

Input to FPE L1 DSM
Entries 151113
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
10
1

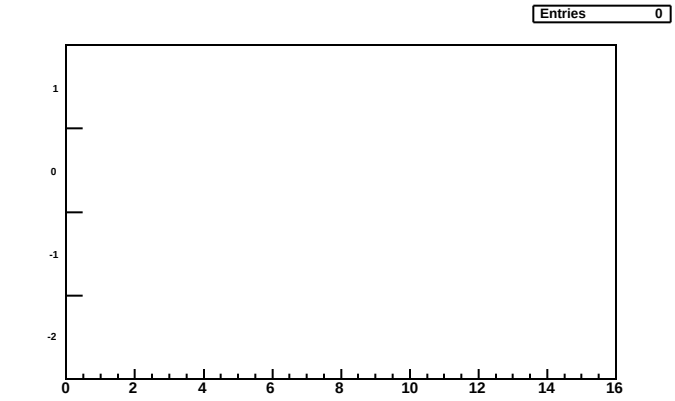

TF201 0-15 (ch0)
Entries 2417808
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

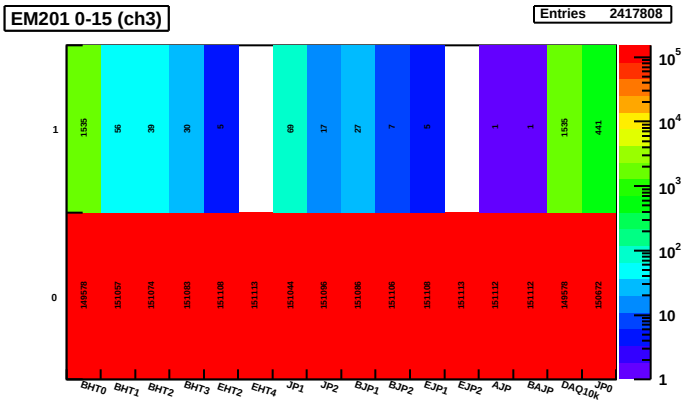

TF201 0-15 (ch0)
Entries 5809
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 2417808
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 370797
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


Unused (ch2)
Entries 2417808


Entries 0


EM201 0-15 (ch3)
Entries 2417808
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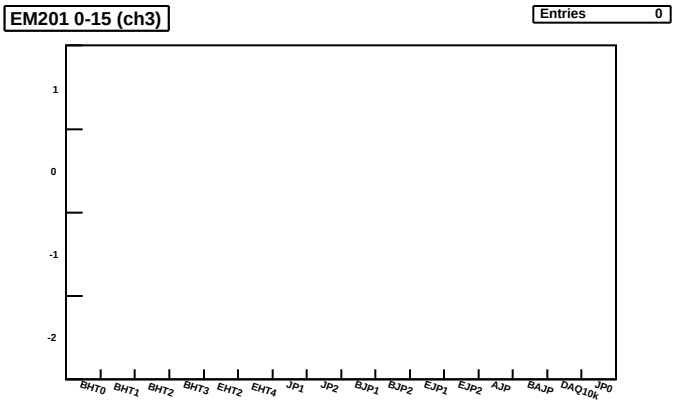
EM201 0-15 (ch3)
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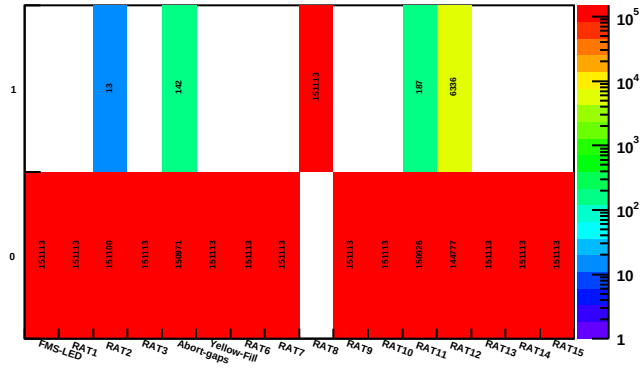
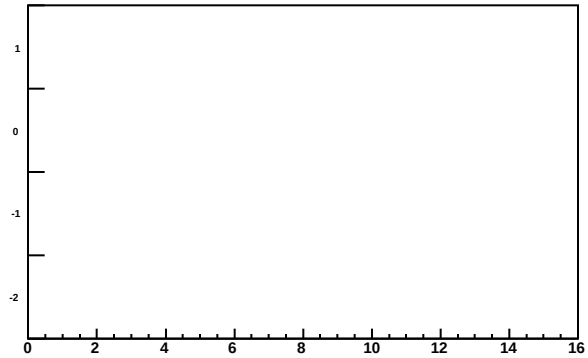
RAT board (ch4)





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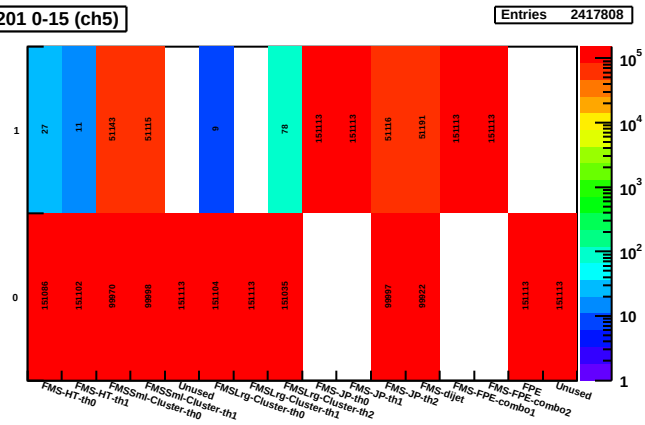

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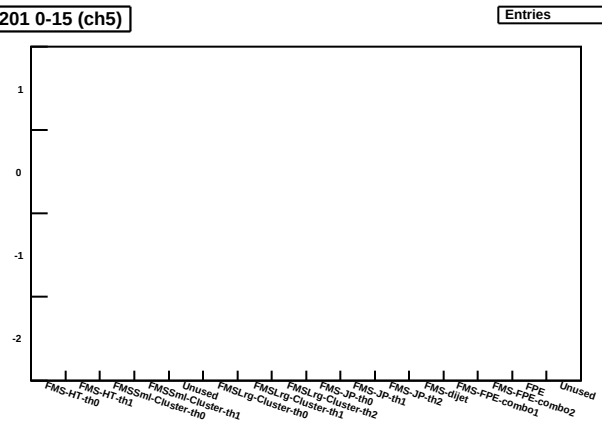
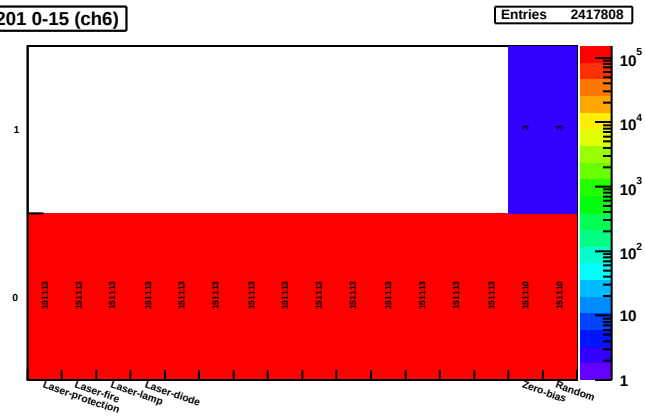
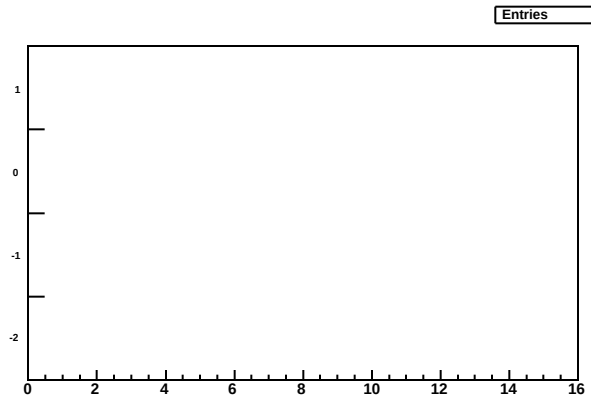
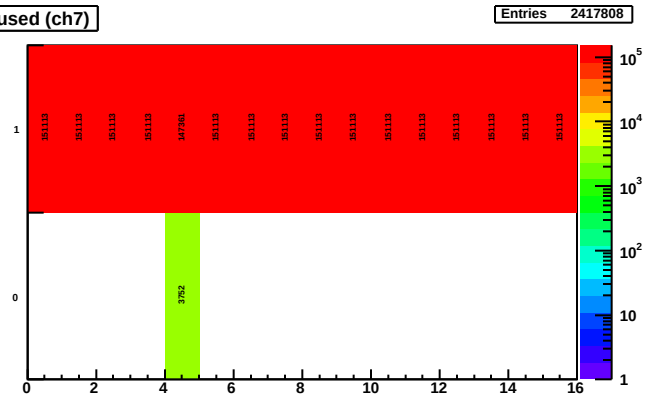
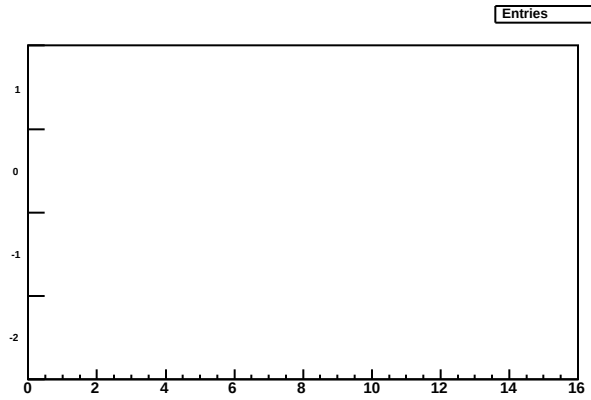


ST201 0-15 (ch6)





Unused (ch7)