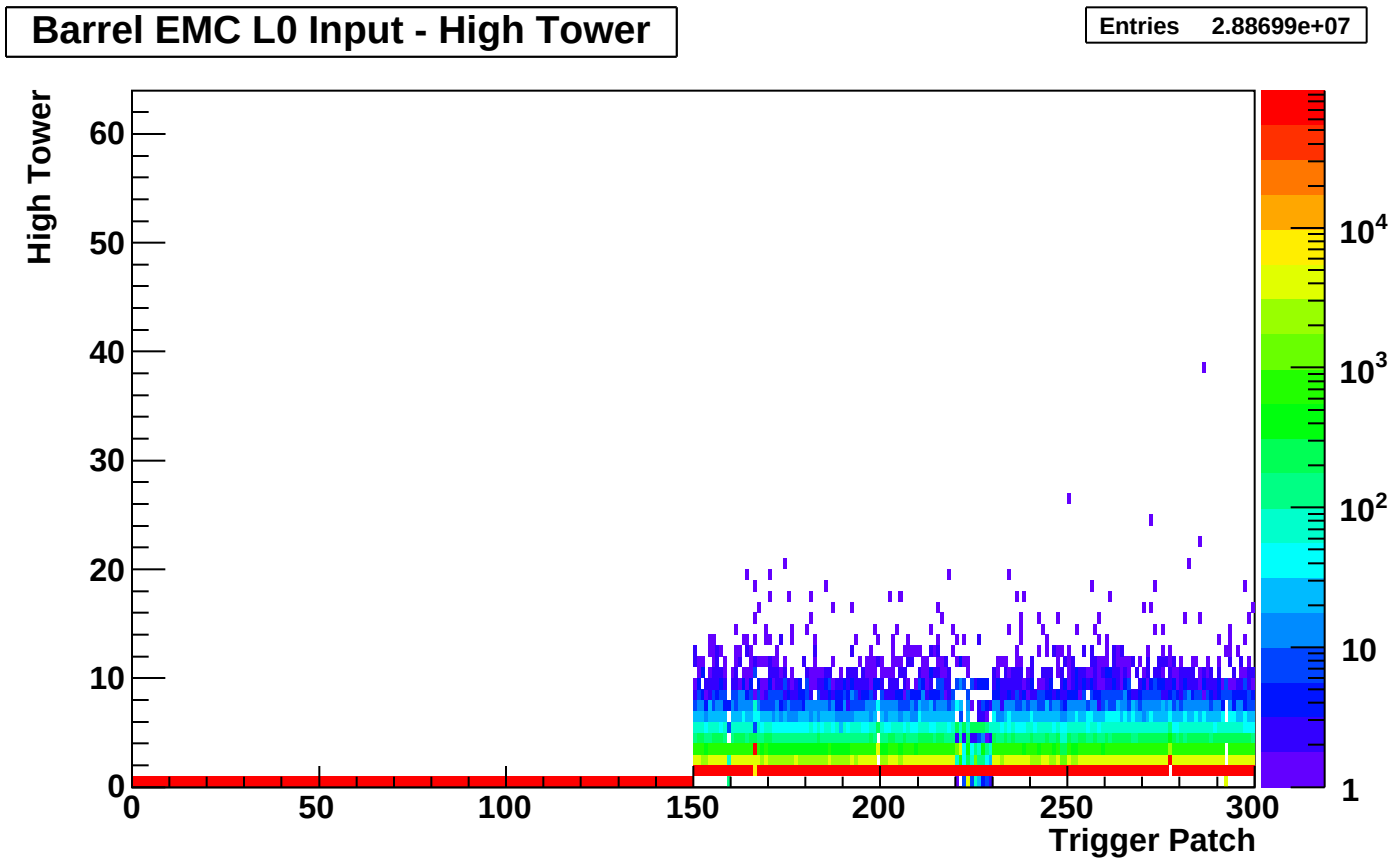
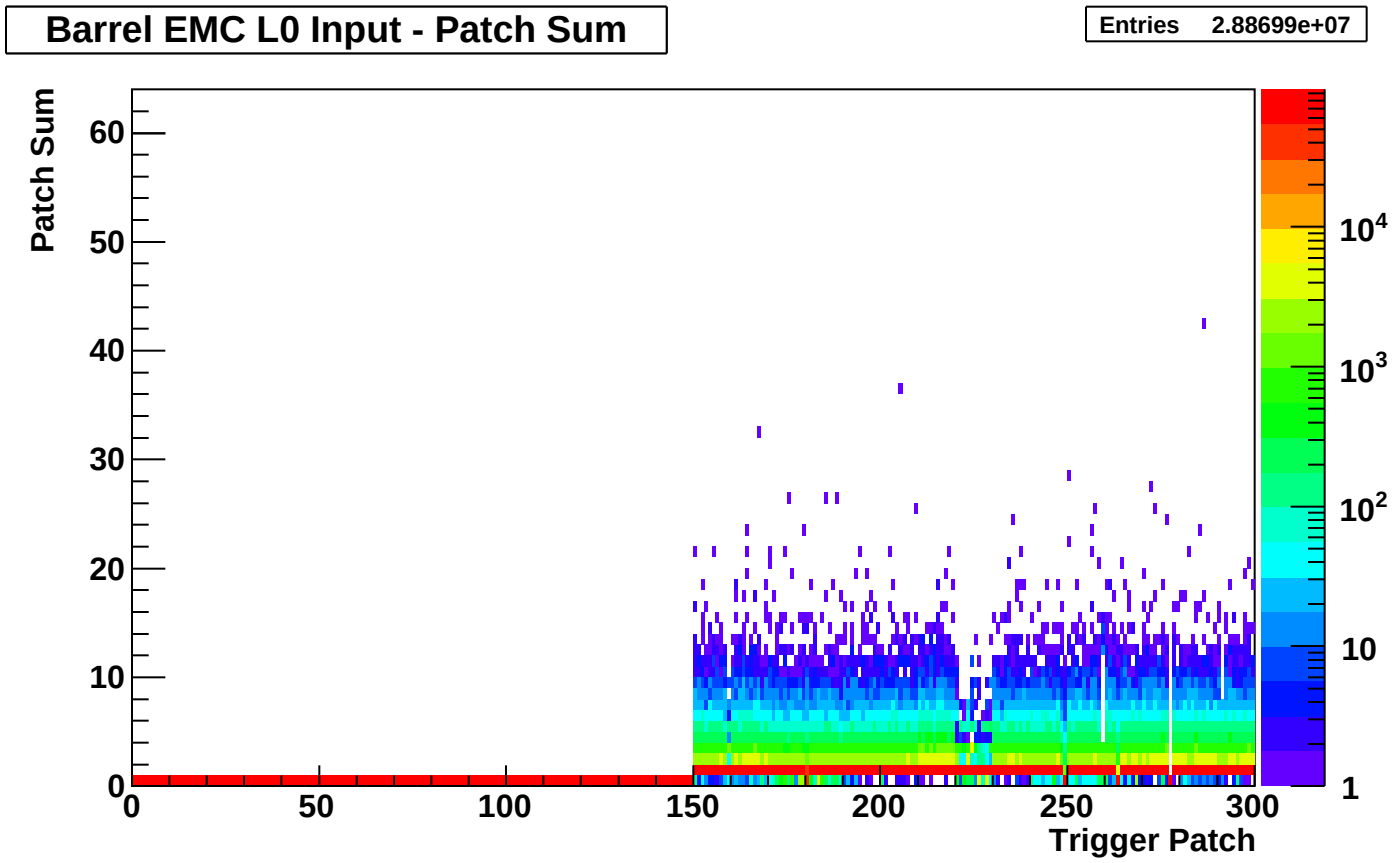
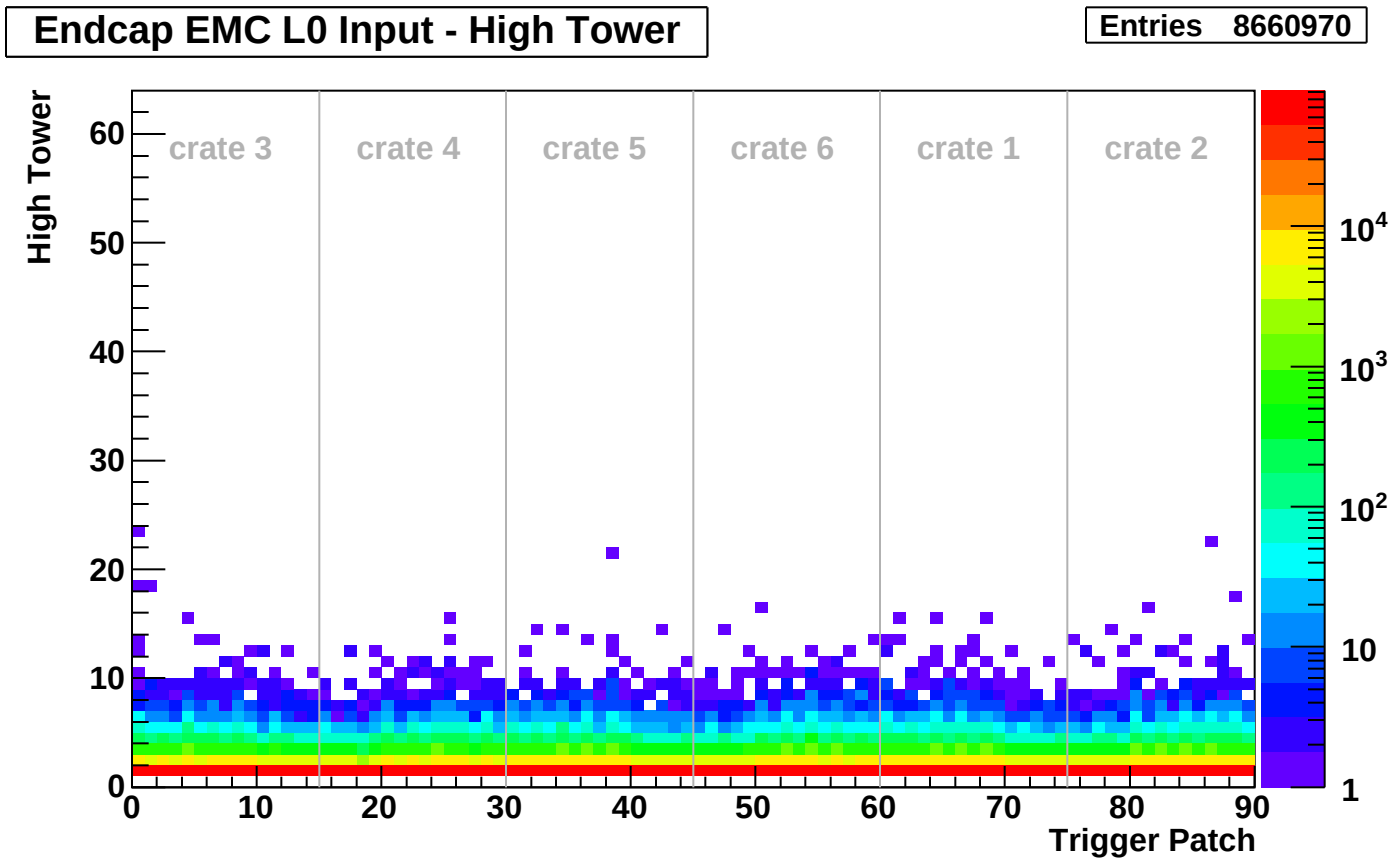
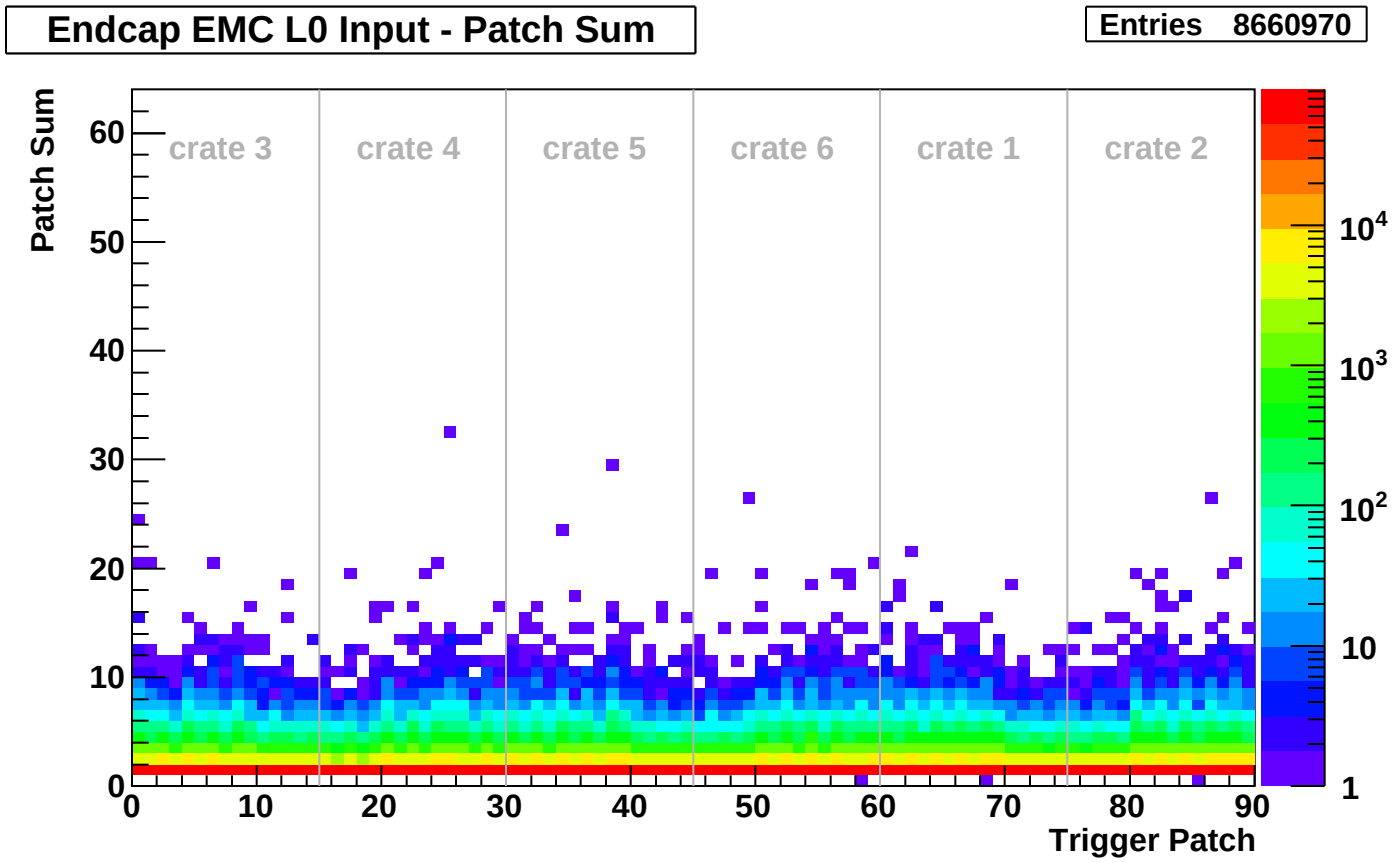
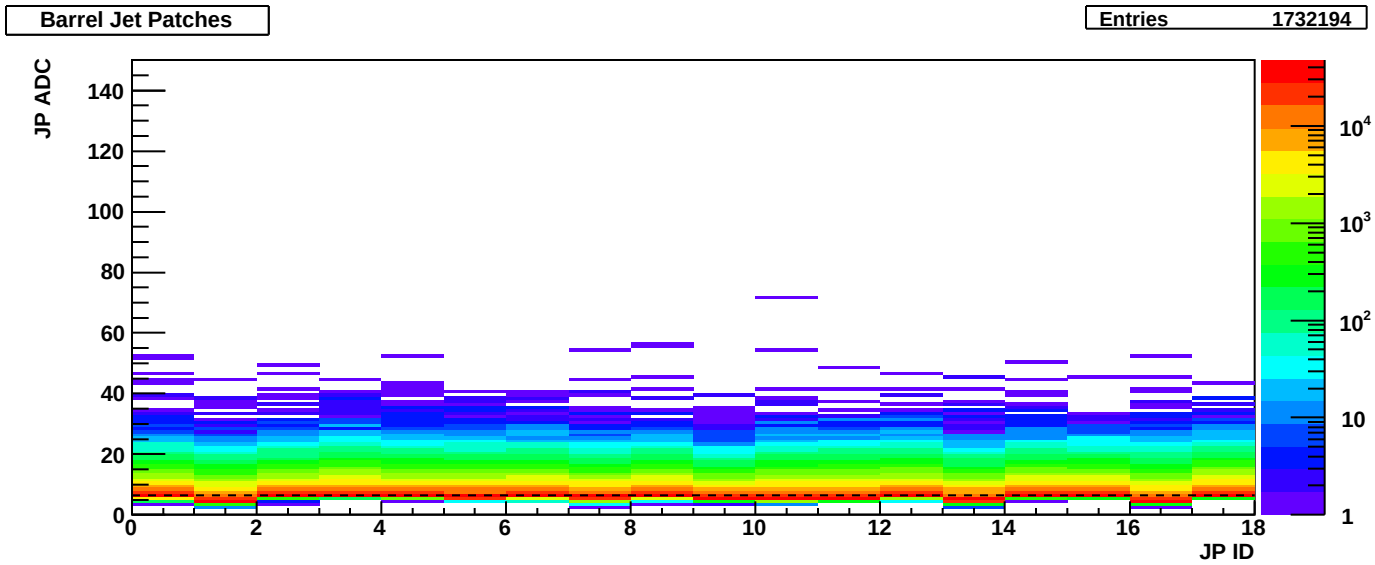
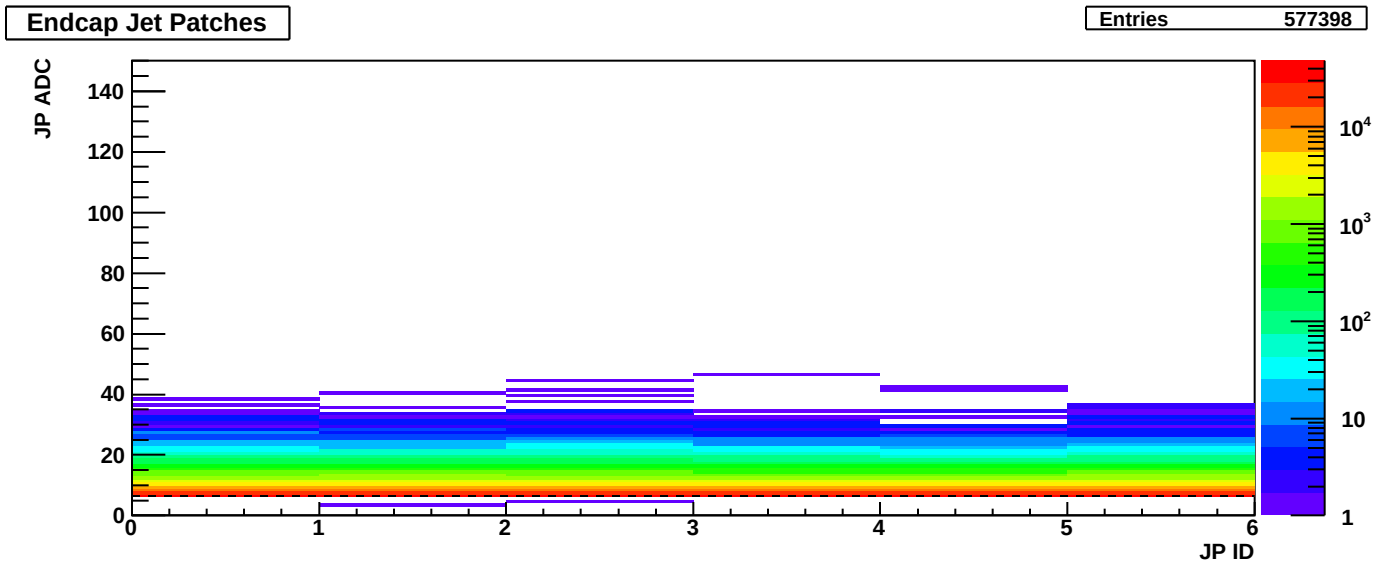

Barrel EMC L0 Input - High Tower
Entries 2.88699e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

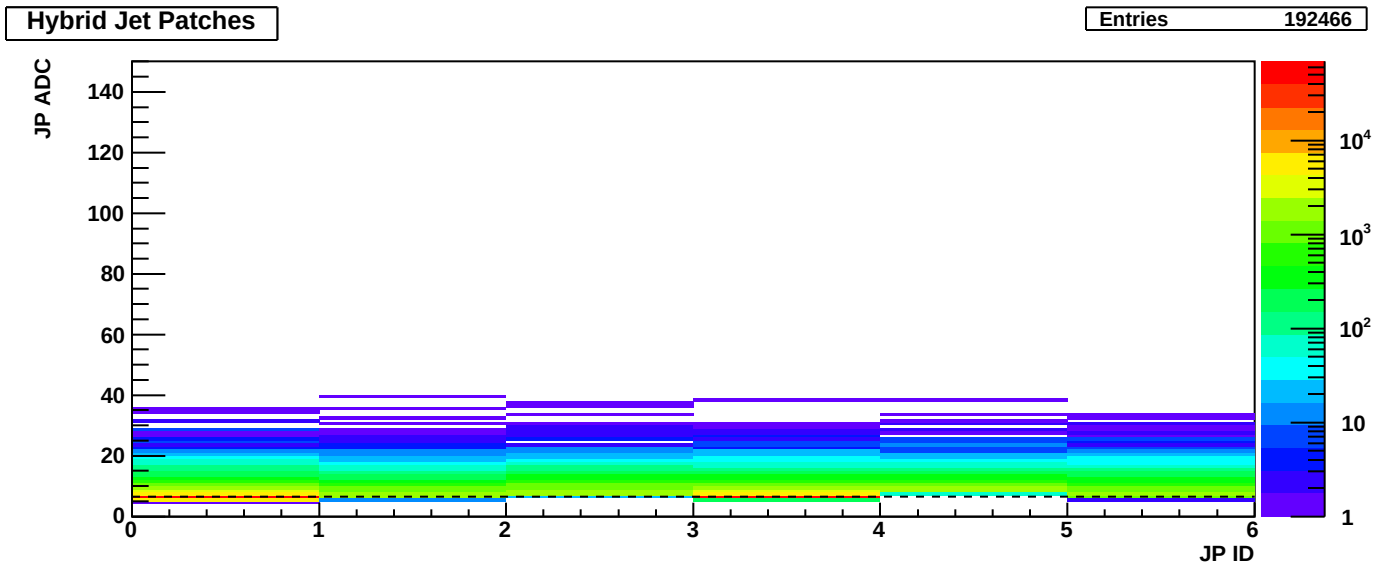

Barrel EMC L0 Input - Patch Sum
Entries 2.88699e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

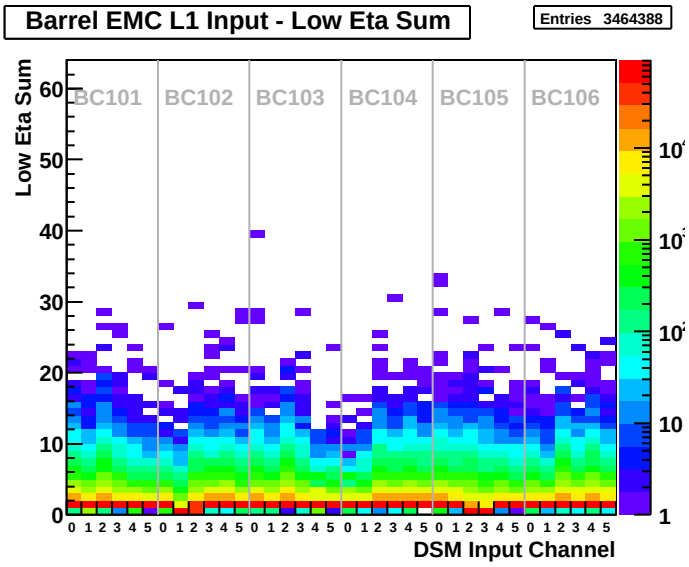

Endcap EMC L0 Input - High Tower
Entries 8660970
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

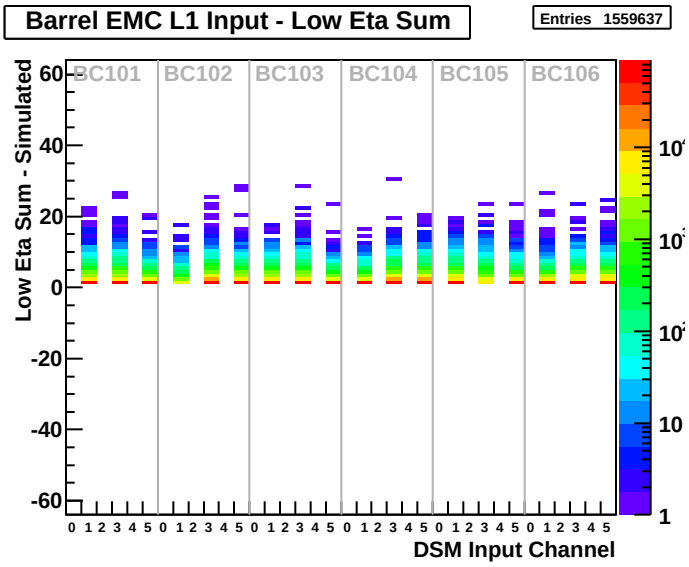

Endcap EMC L0 Input - Patch Sum
Entries 8660970
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

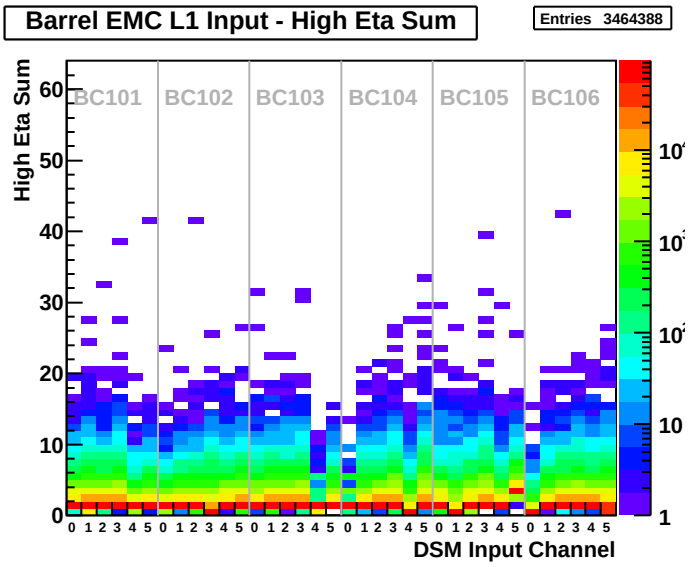

Barrel Jet Patches
Entries 1732194
JP ADC
JP ID

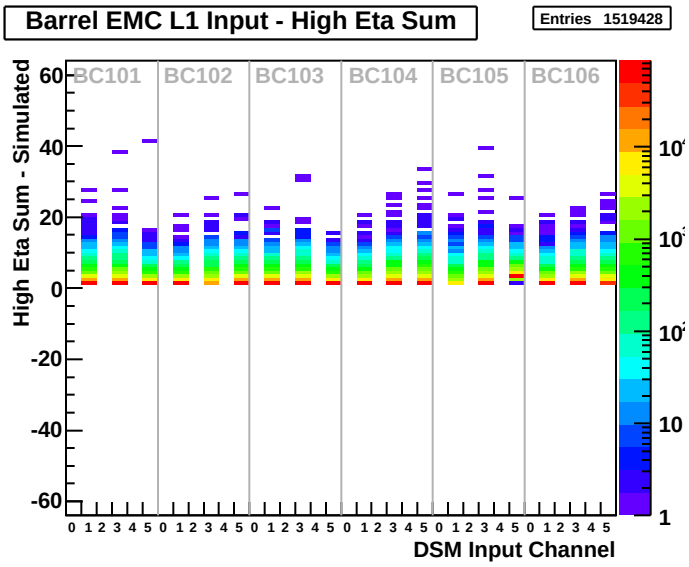

Endcap Jet Patches
Entries 577398
JP ADC
JP ID

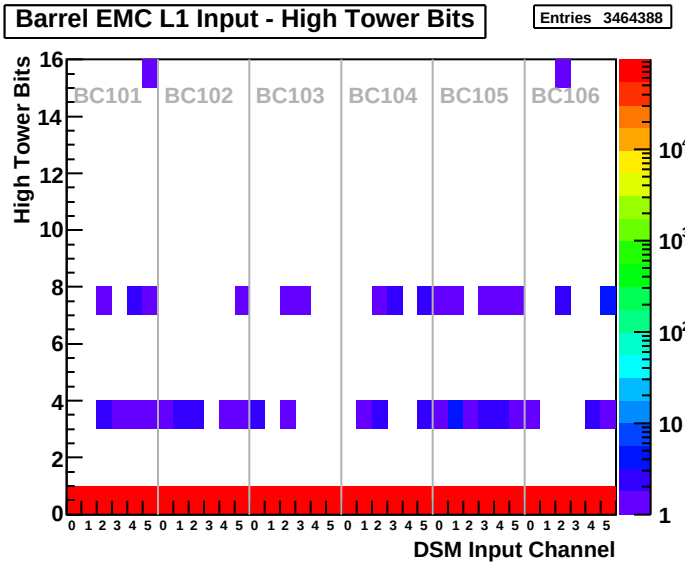

Hybrid Jet Patches
Entries 192466
JP ADC
JP ID

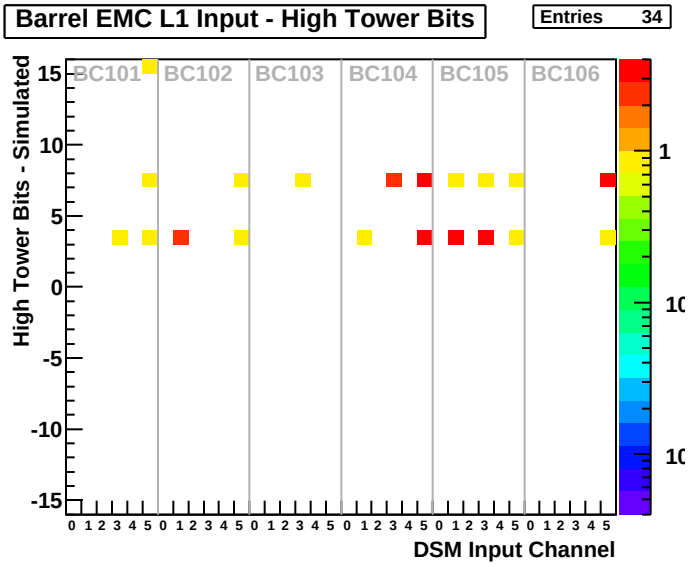

Barrel EMC L1 Input - Low Eta Sum
Entries 3464388
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

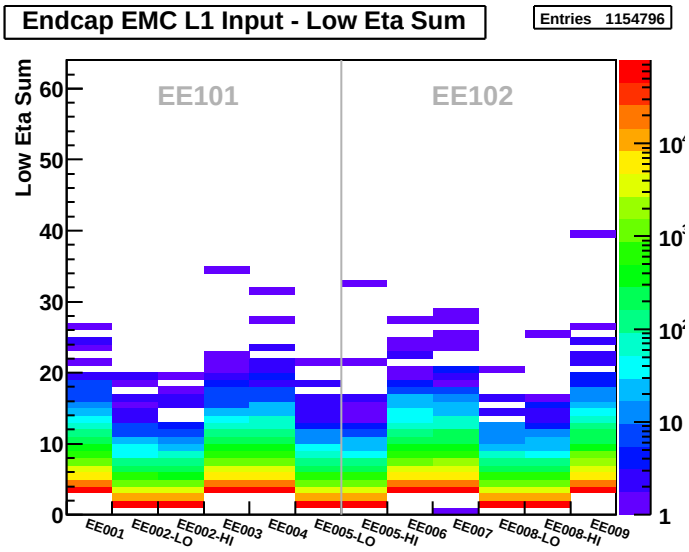

Barrel EMC L1 Input - Low Eta Sum
Entries 1559637
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

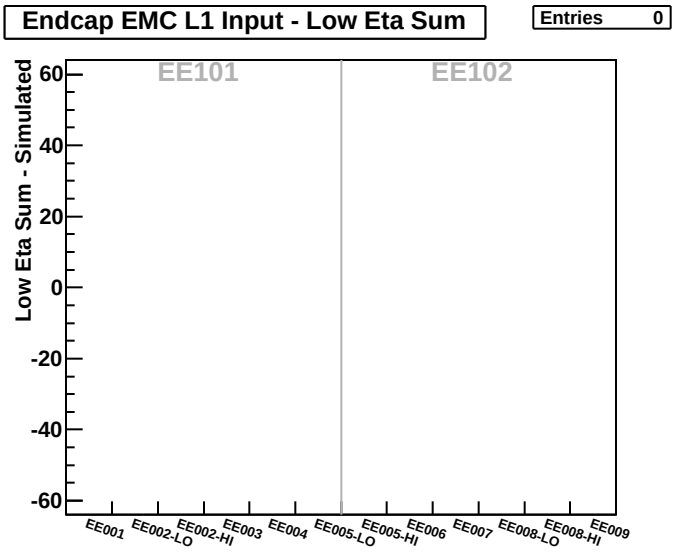

Barrel EMC L1 Input - High Eta Sum
Entries 3464388
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

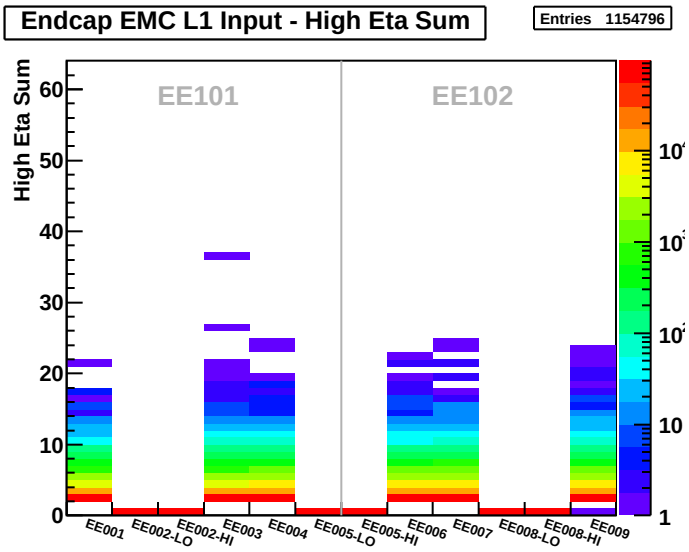

Barrel EMC L1 Input - High Eta Sum
Entries 1519428
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

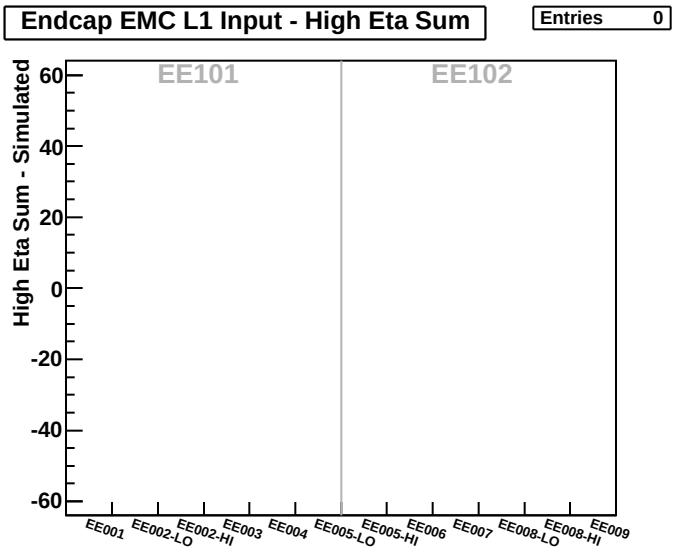

Barrel EMC L1 Input - High Tower Bits
Entries 3464388
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

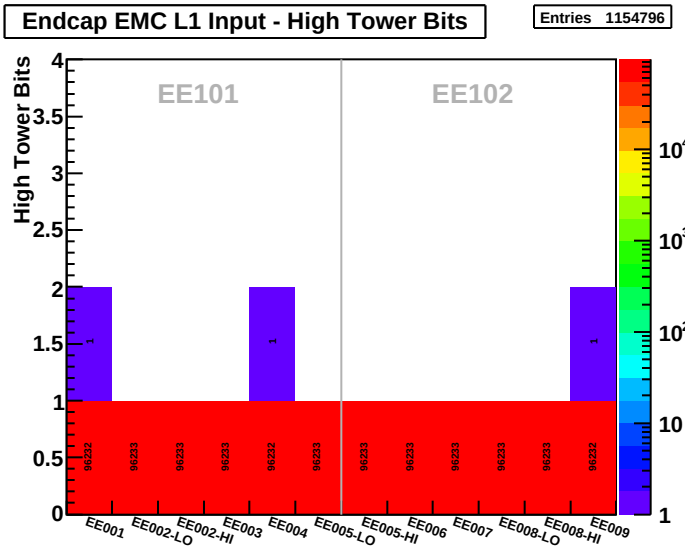

Barrel EMC L1 Input - High Tower Bits
Entries 34
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

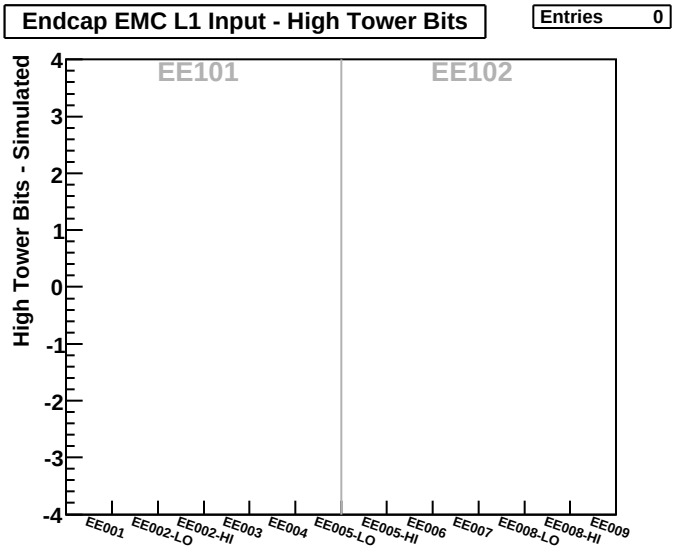

Endcap EMC L1 Input - Low Eta Sum
Entries 1154796
Low Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

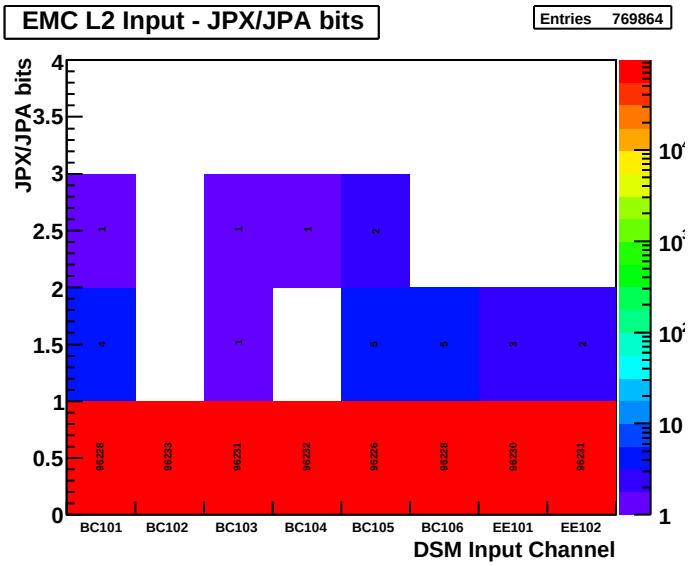

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

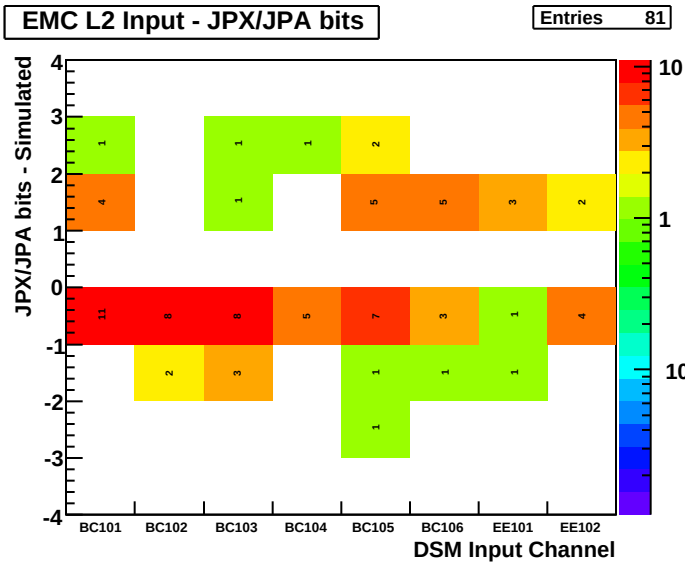

Endcap EMC L1 Input - High Eta Sum
Entries 1154796
High Eta Sum
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

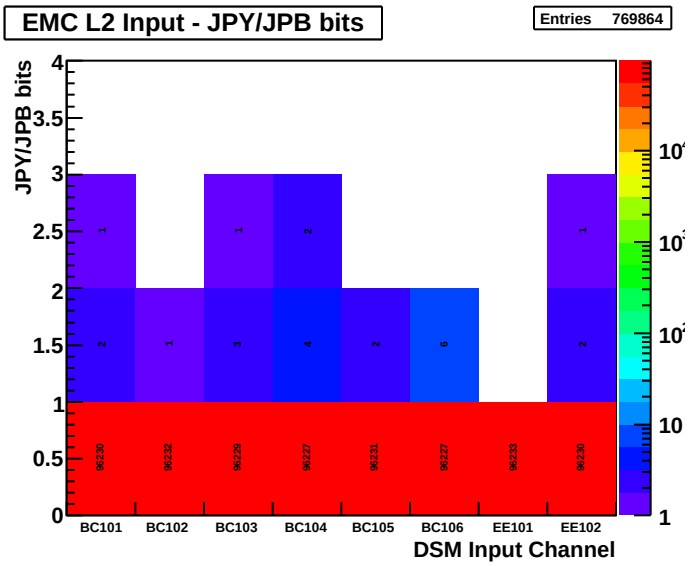

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

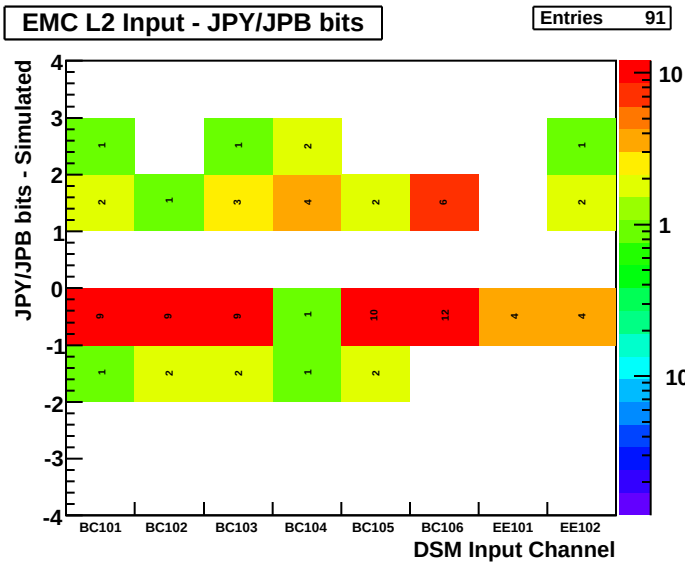

Endcap EMC L1 Input - High Tower Bits
Entries 1154796
High Tower Bits
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

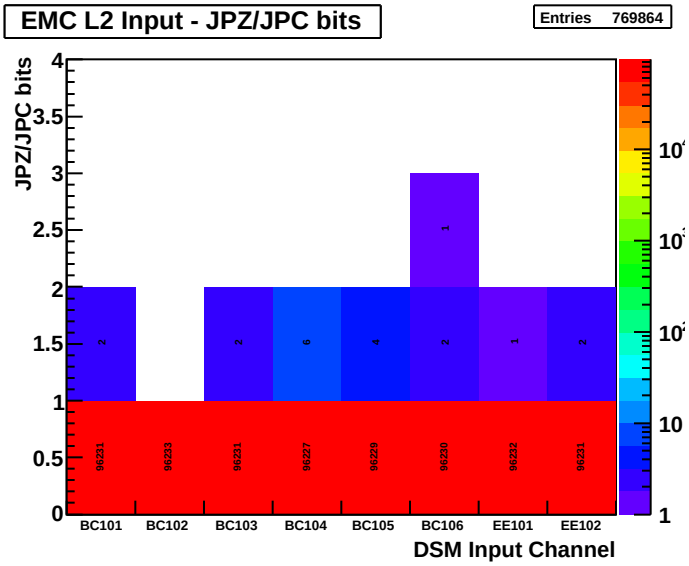

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001
EE002-LO
EE002-HI
EE003
EE004
EE005-LO
EE005-HI
EE006
EE007
EE008-LO
EE008-HI
EE009

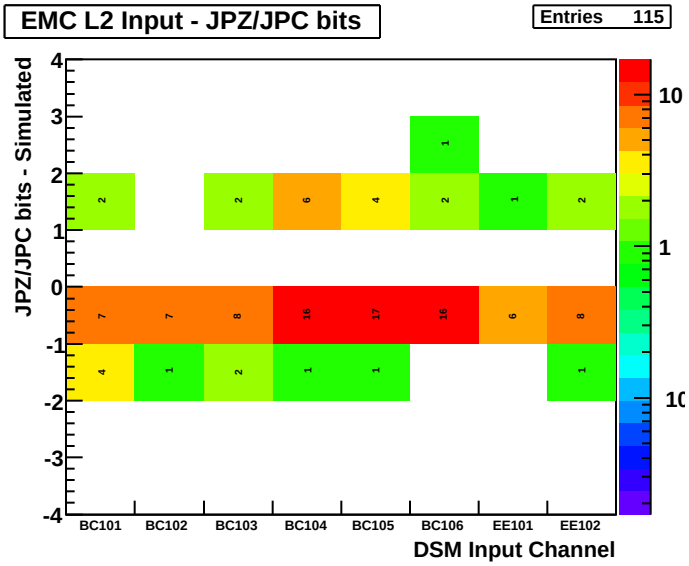

EMC L2 Input - JPX/JPA bits
Entries 769864
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

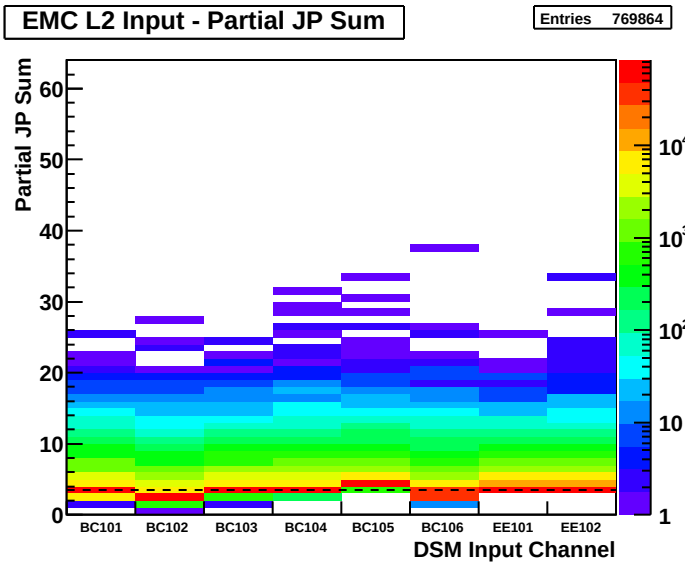

EMC L2 Input - JPX/JPA bits
Entries 81
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

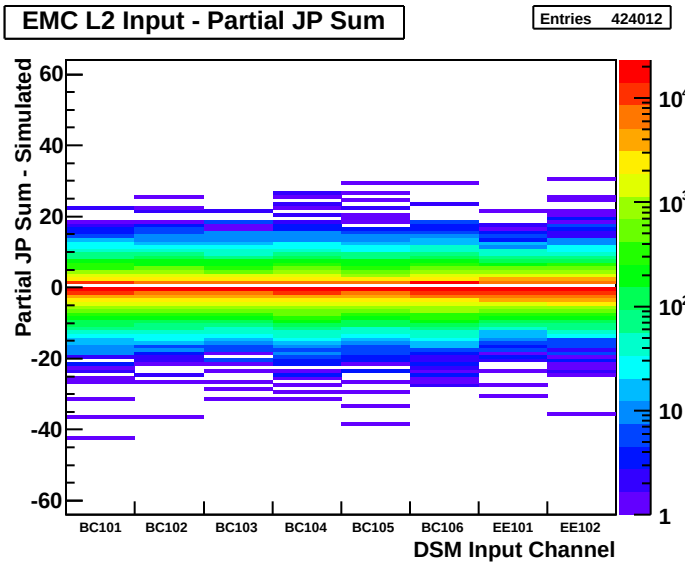

EMC L2 Input - JPY/JPB bits
Entries 769864
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

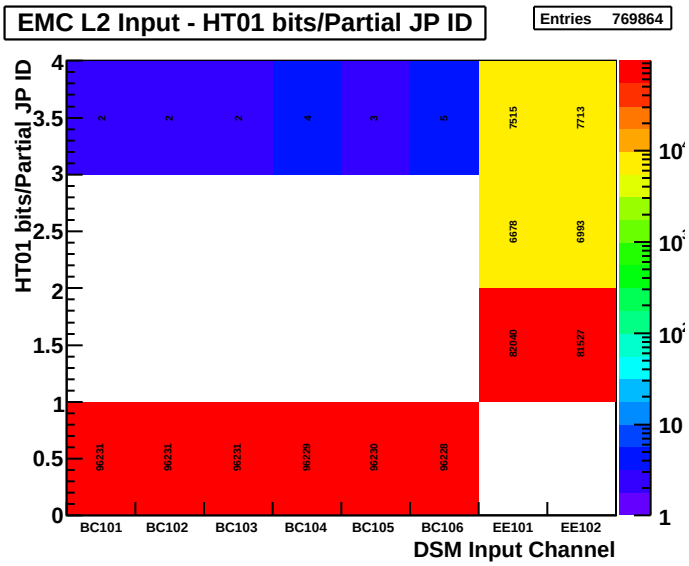

EMC L2 Input - JPY/JPB bits
Entries 91
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

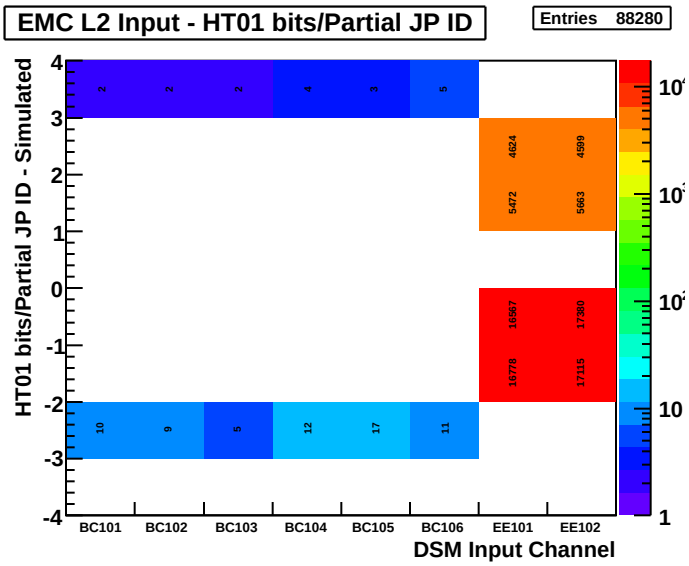

EMC L2 Input - JPZ/JPC bits
Entries 769864
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

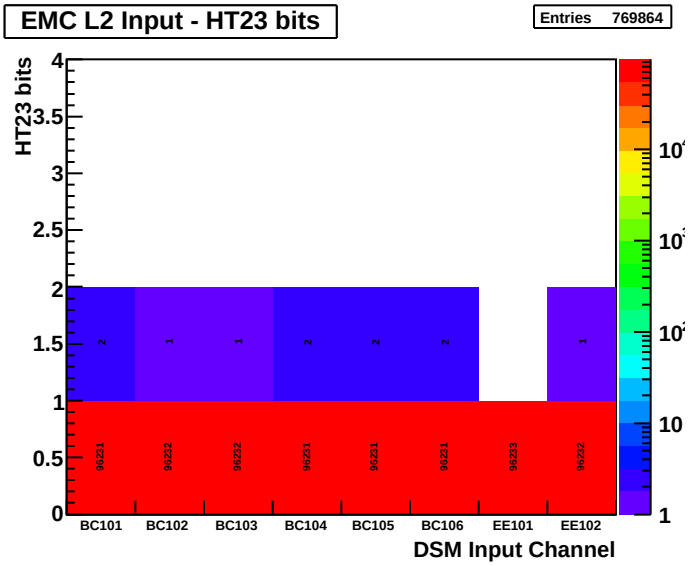

EMC L2 Input - JPZ/JPC bits
Entries 115
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

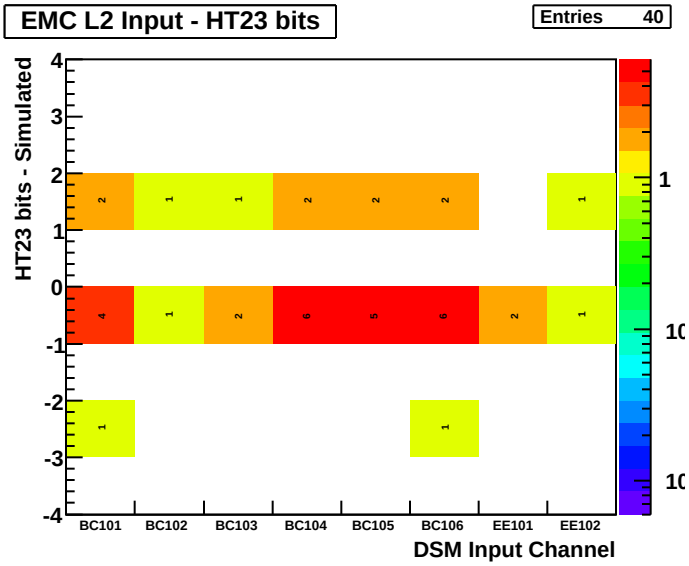

EMC L2 Input - Partial JP Sum
Entries 769864
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

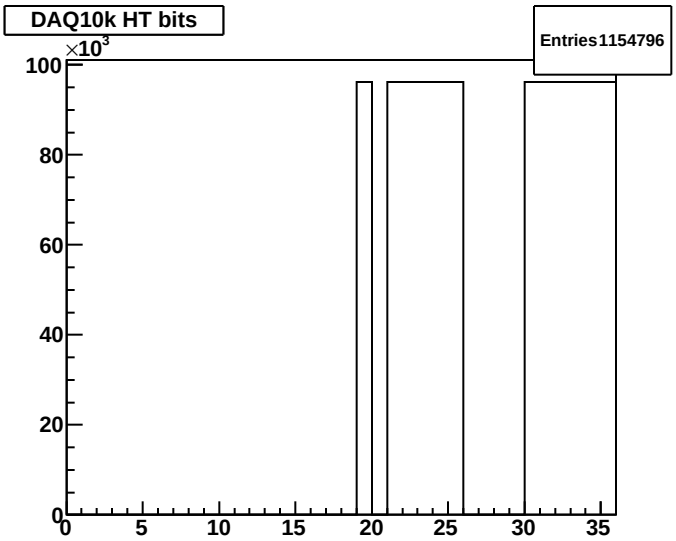

EMC L2 Input - Partial JP Sum
Entries 424012
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

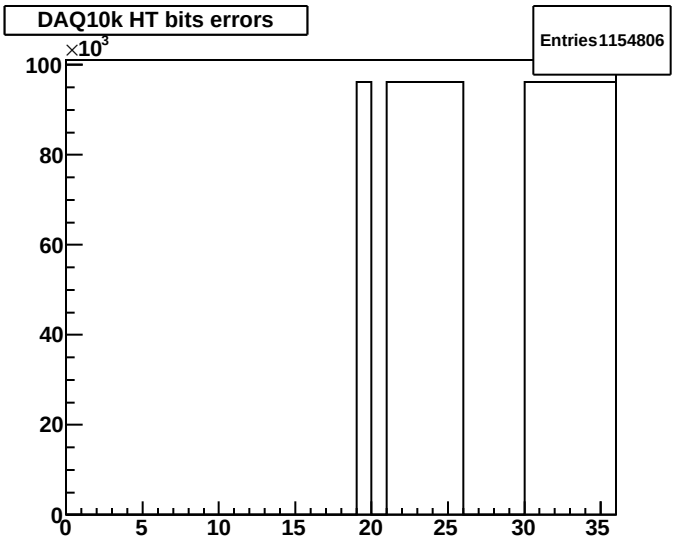

EMC L2 Input - HT01 bits/Partial JP ID
Entries 769864
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

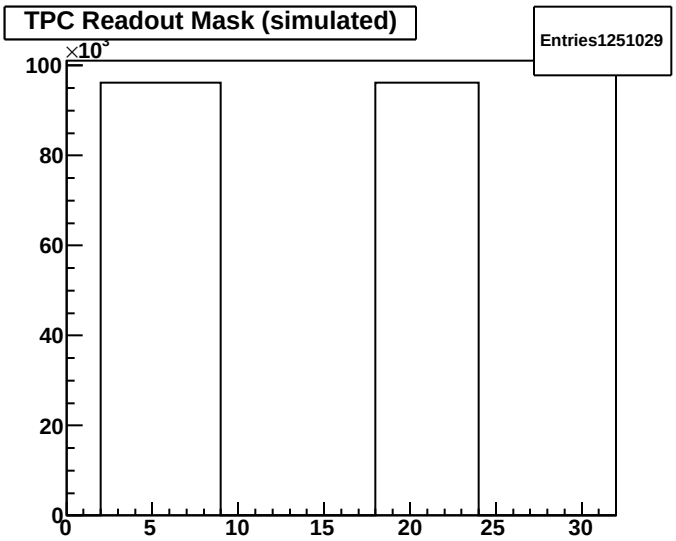

EMC L2 Input - HT01 bits/Partial JP ID
Entries 88280
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

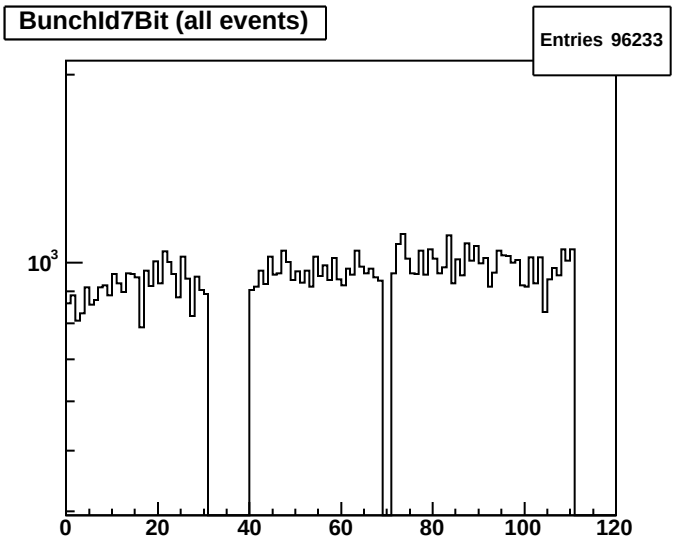

EMC L2 Input - HT23 bits
Entries 769864
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

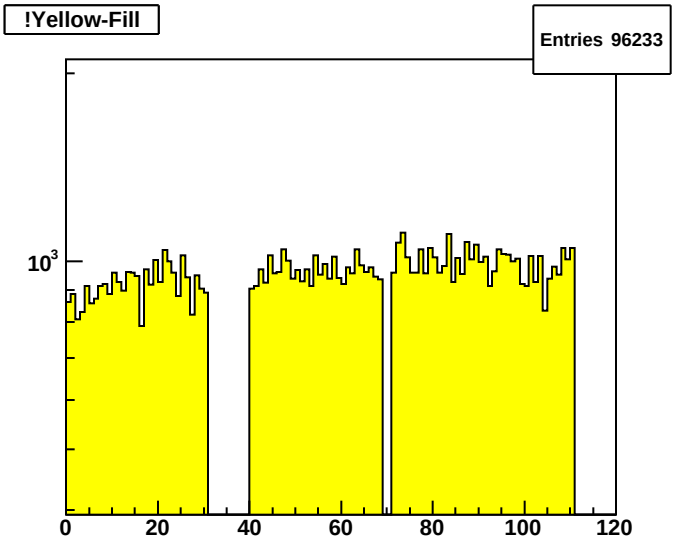

EMC L2 Input - HT23 bits
Entries 40
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

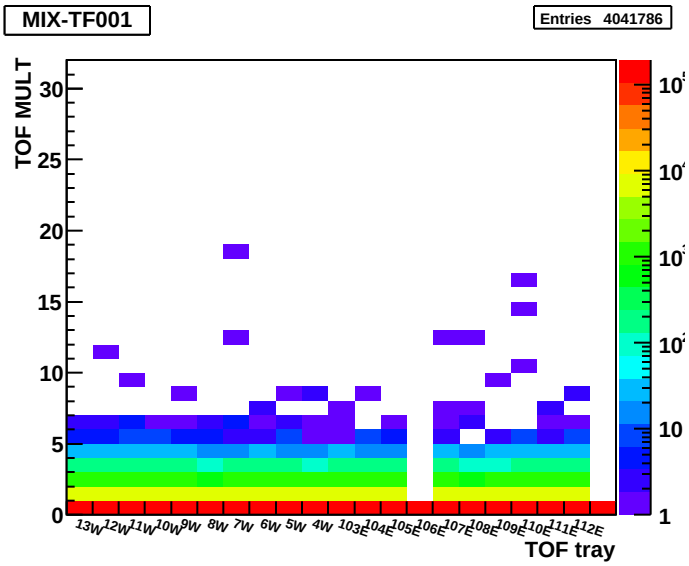

DAQ10k HT bits
Entries 1154796
×10^3
100
80
60
40
20
0
0 5 10 15 20 25 30 35

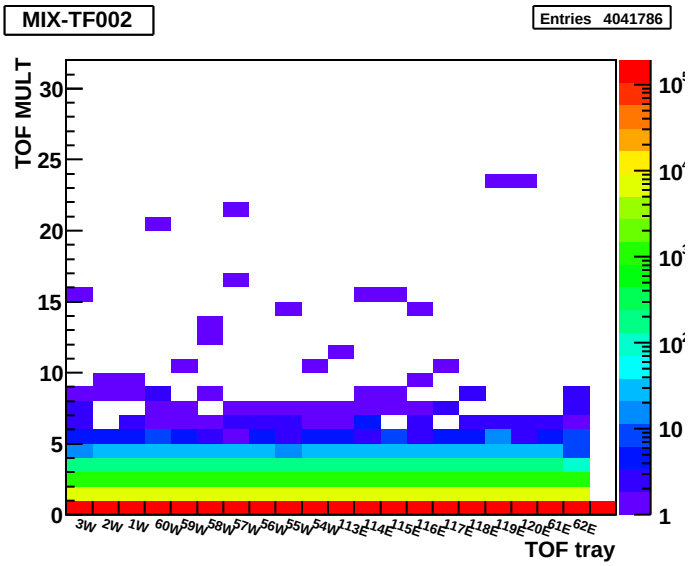

DAQ10k HT bits errors
Entries 1154806
×10^3
100
80
60
40
20
0
0 5 10 15 20 25 30 35

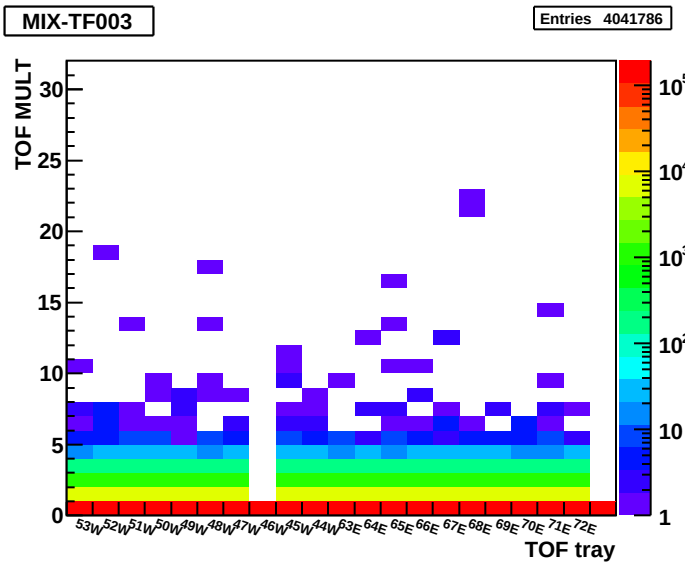

TPC Readout Mask (simulated)
Entries 1251029
×10^3
100
80
60
40
20
0
0 5 10 15 20 25 30

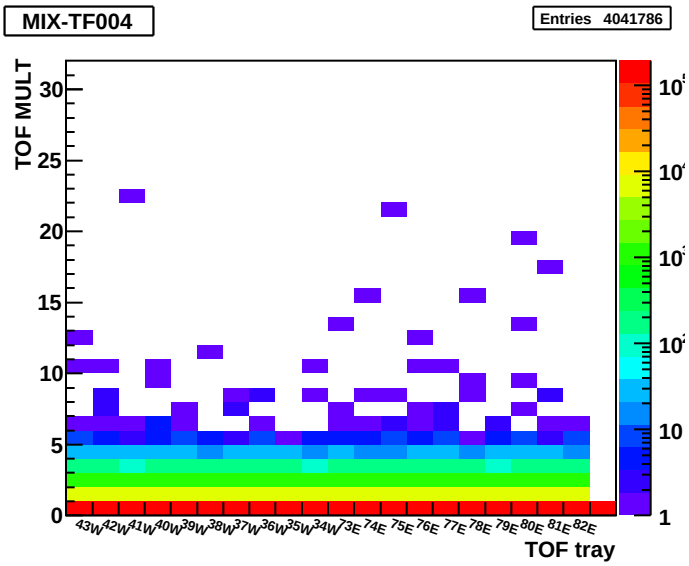

BunchId7Bit (all events)
Entries 96233
10^3
0 20 40 60 80 100 120

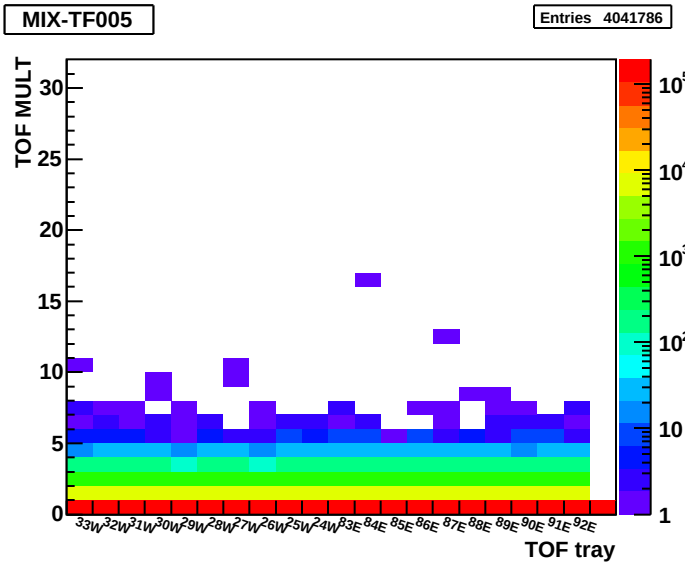

!Yellow-Fill
Entries 96233
10^3
0 20 40 60 80 100 120

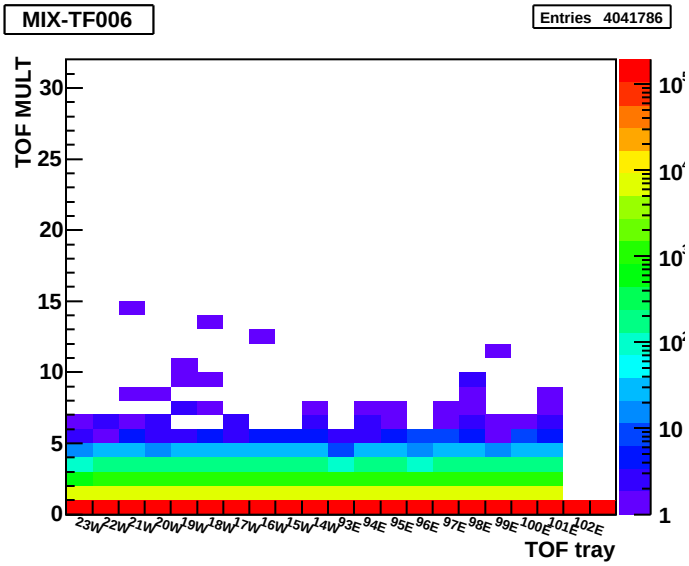

MIX-TF001
Entries 4041786
TOF MULT
TOF tray

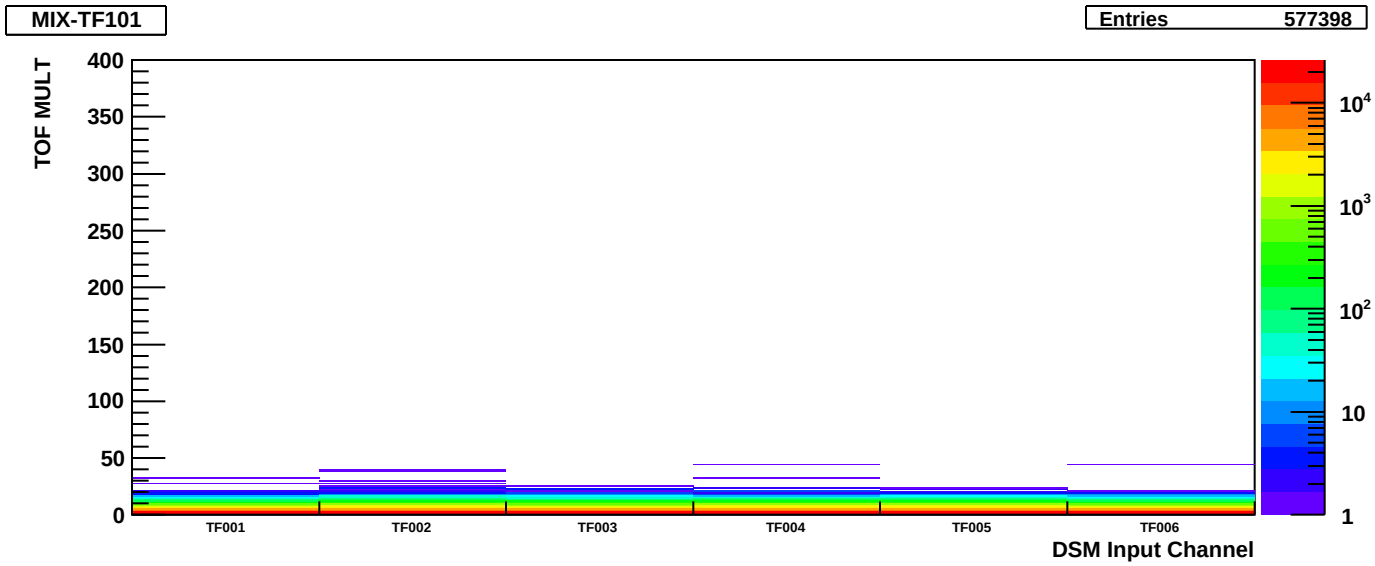

MIX-TF002
Entries 4041786
TOF MULT
TOF tray

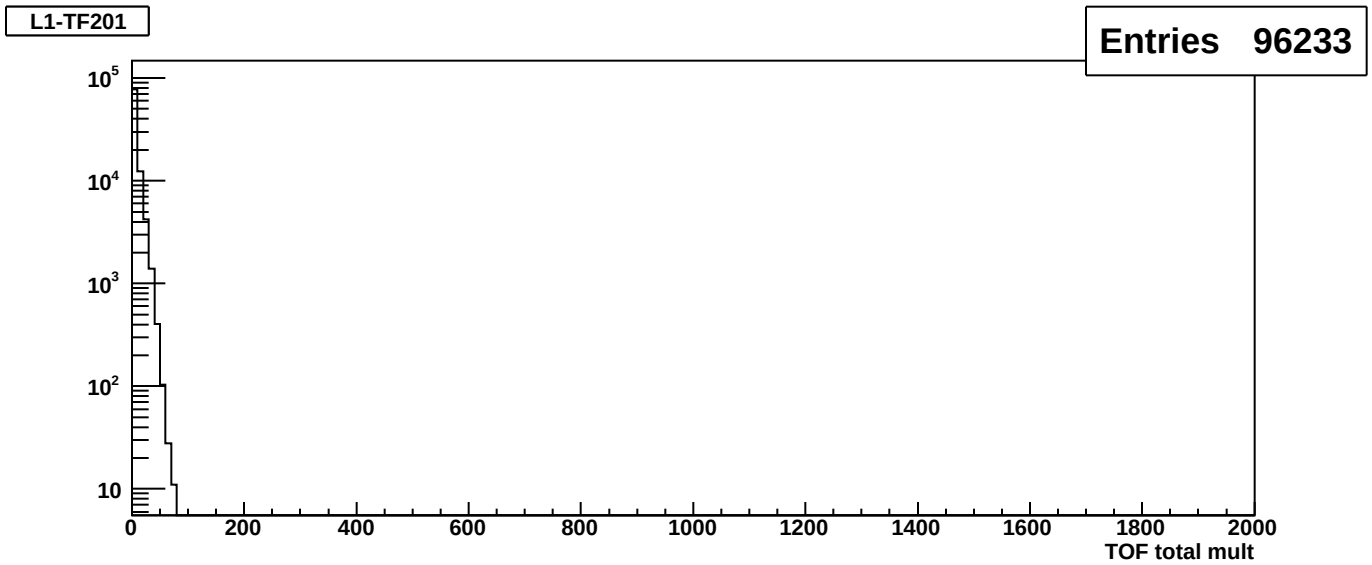

MIX-TF003
Entries 4041786
TOF MULT
TOF tray

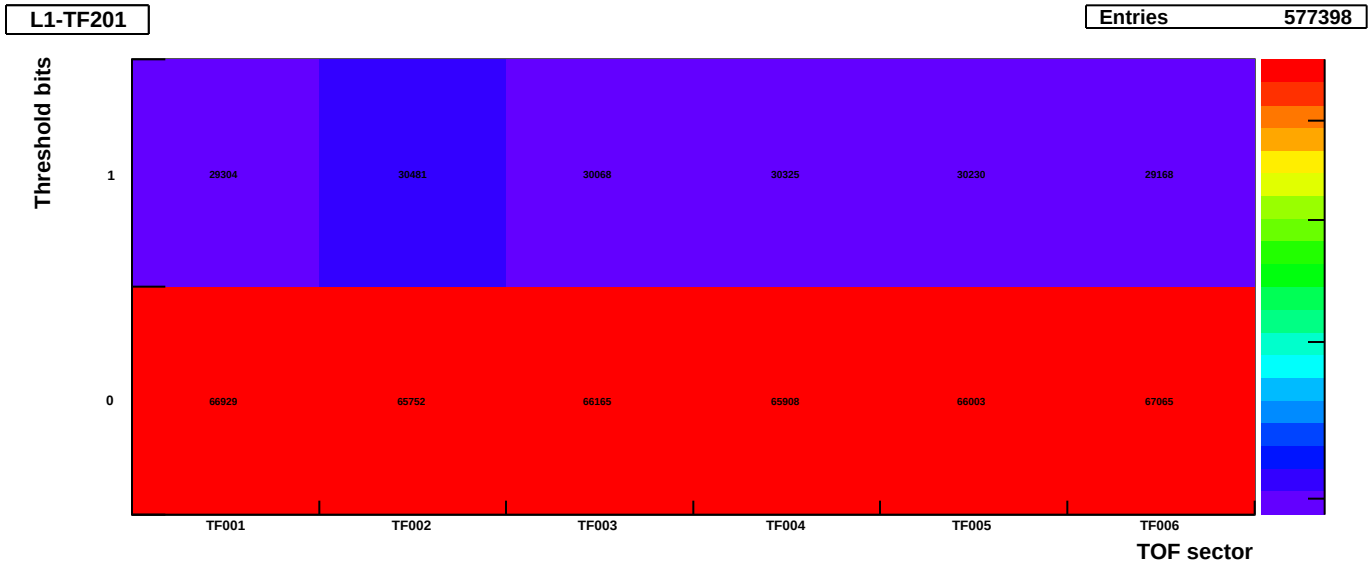

MIX-TF004
Entries 4041786
TOF MULT
TOF tray

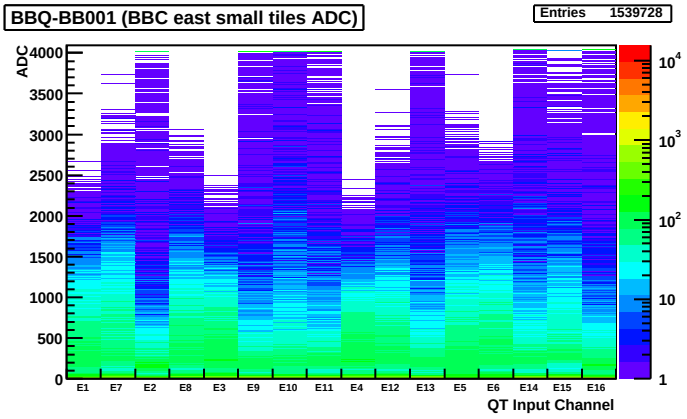

MIX-TF005
Entries 4041786
TOF MULT
TOF tray

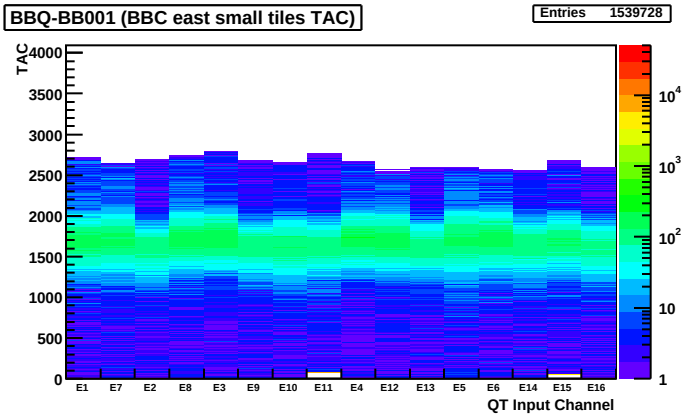

MIX-TF006
Entries 4041786
TOF MULT
TOF tray

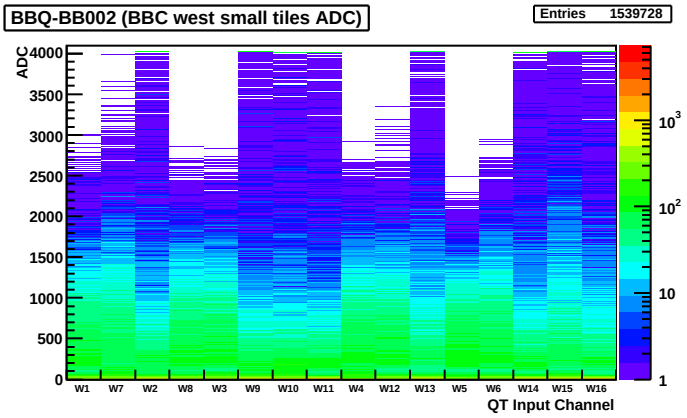

MIX-TF101
Entries 577398
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

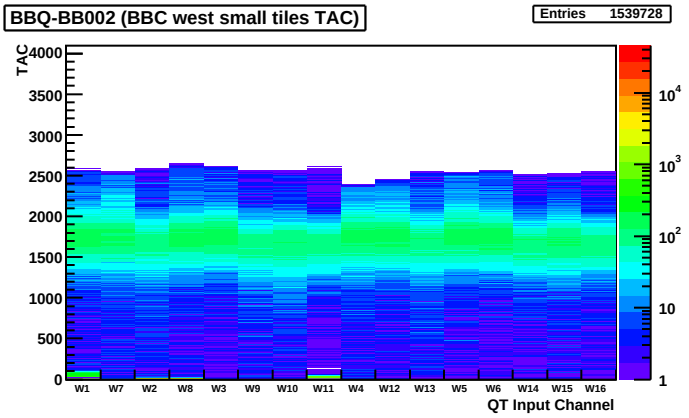

L1-TF201
Entries 96233
10^5
10^4
10^3
10^2
10
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

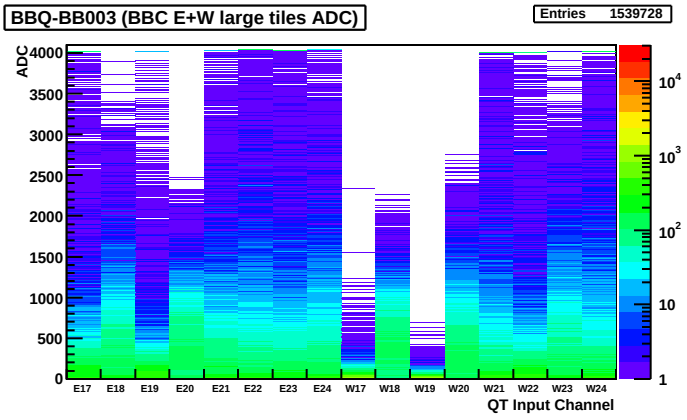

L1-TF201
Entries 577398
Threshold bits
1
0
29304
30481
30068
30325
30230
29168
66929
65752
66165
65908
66003
67065
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

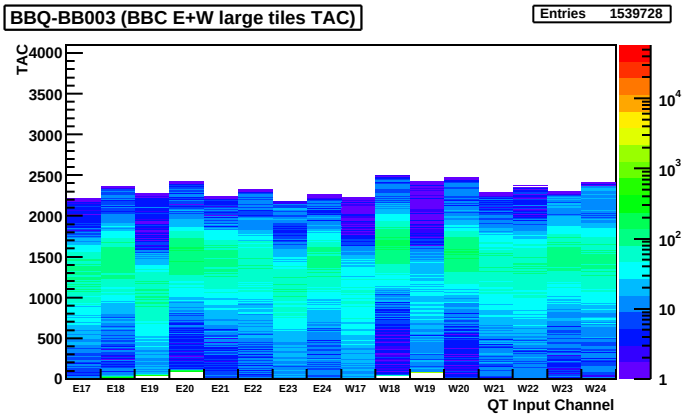

BBQ-BB001 (BBC east small tiles ADC)
Entries 1539728
ADC
QT Input Channel

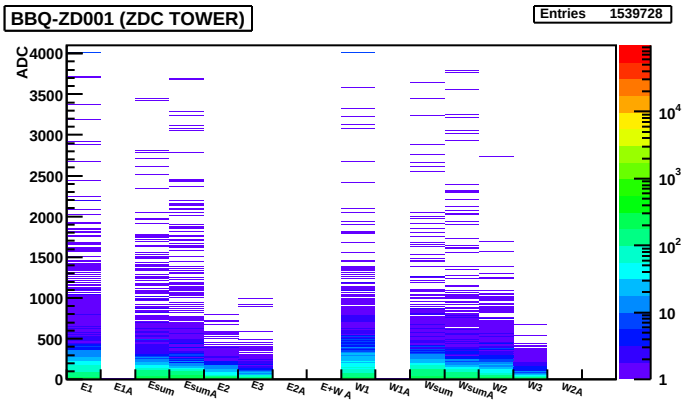

BBQ-BB001 (BBC east small tiles TAC)
Entries 1539728
TAC
QT Input Channel

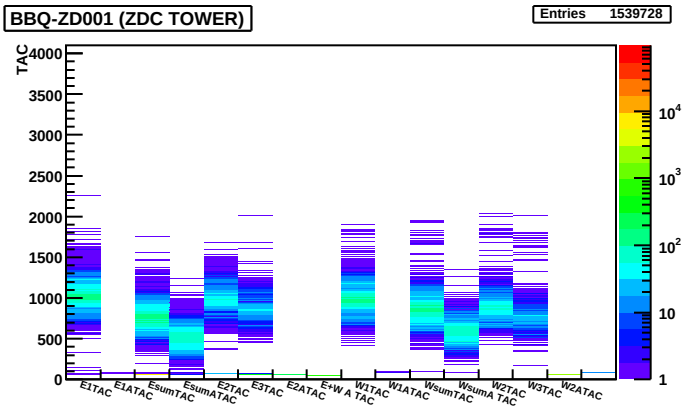

BBQ-BB002 (BBC west small tiles ADC)
Entries 1539728
ADC
QT Input Channel

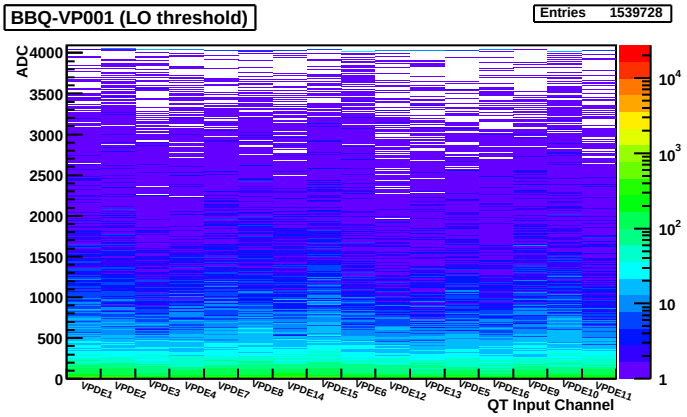

BBQ-BB002 (BBC west small tiles TAC)
Entries 1539728
TAC
QT Input Channel

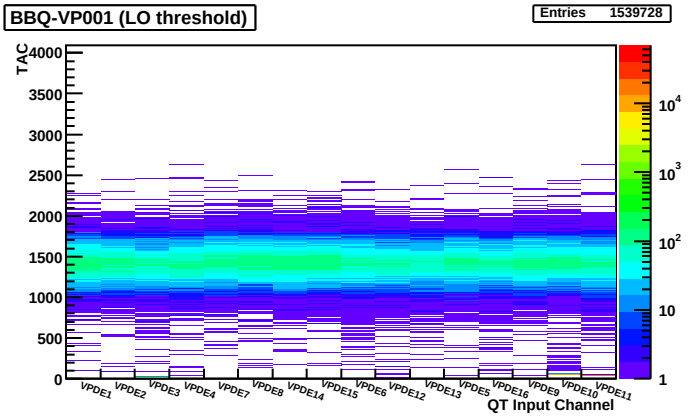

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 1539728
ADC
QT Input Channel

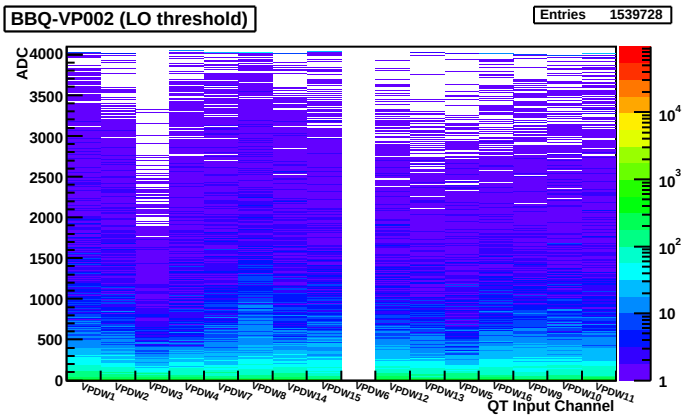

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 1539728
TAC
QT Input Channel

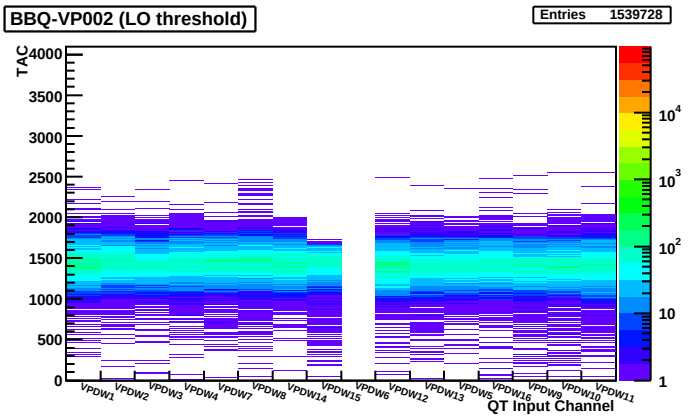

BBQ-ZD001 (ZDC TOWER)
Entries 1539728
ADC

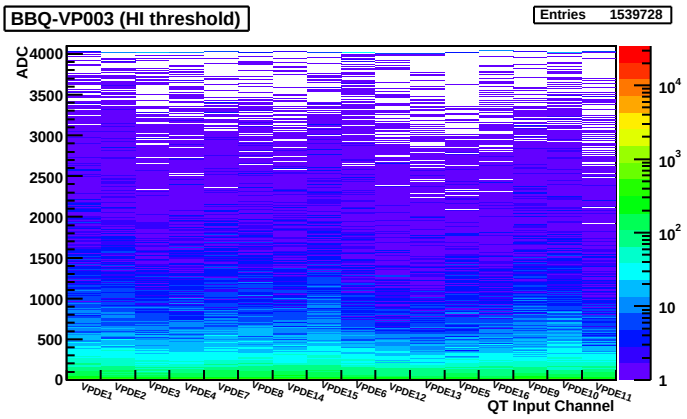

BBQ-ZD001 (ZDC TOWER)
Entries 1539728
TAC

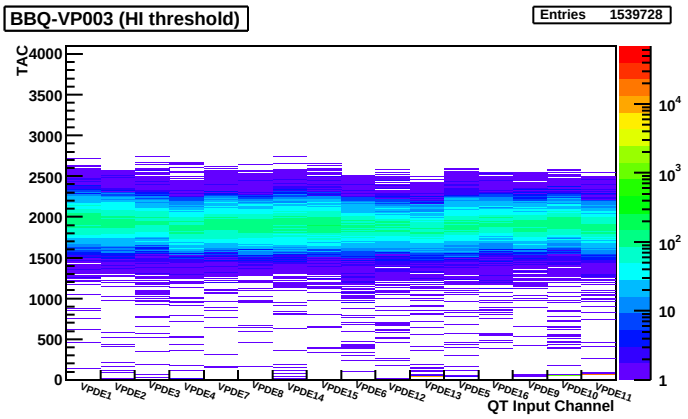

BBQ-VP001 (LO threshold)
Entries 1539728
ADC
QT Input Channel

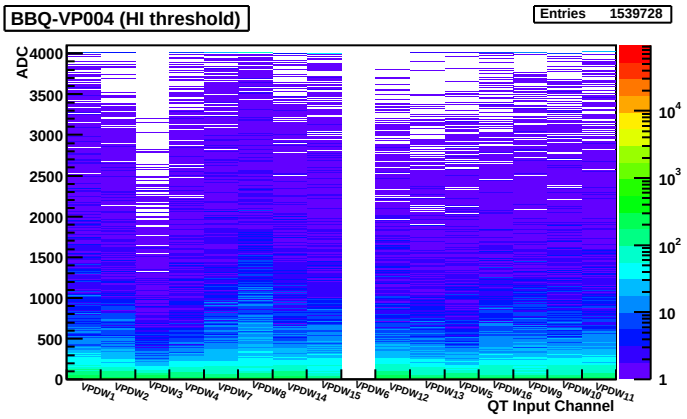

BBQ-VP001 (LO threshold)
Entries 1539728
TAC
QT Input Channel

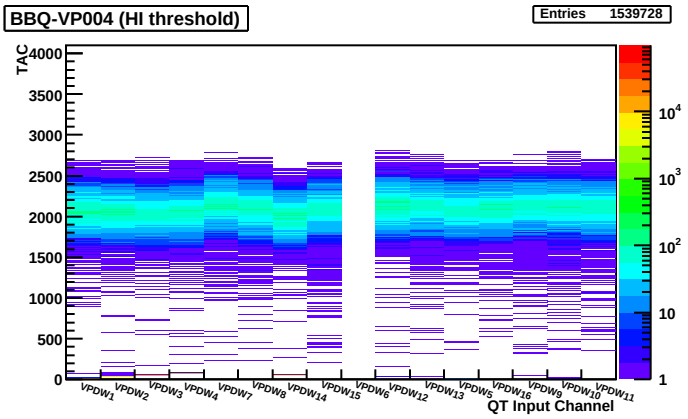

BBQ-VP002 (LO threshold)
Entries 1539728
ADC
QT Input Channel

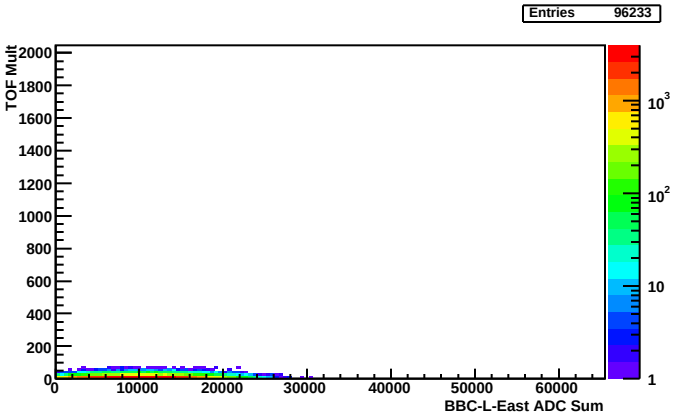

BBQ-VP002 (LO threshold)
Entries 1539728
TAC
QT Input Channel

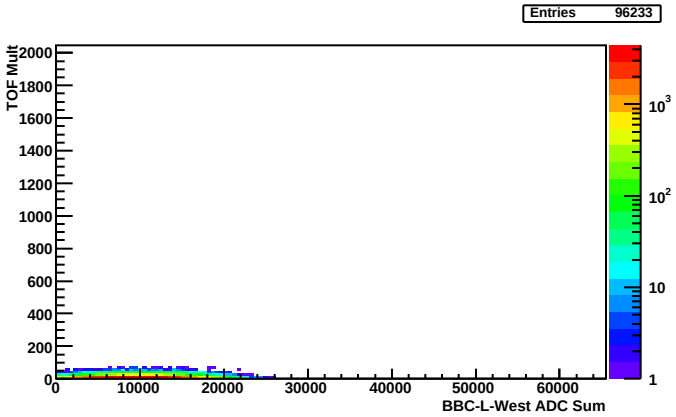

BBQ-VP003 (HI threshold)
Entries 1539728
ADC
QT Input Channel

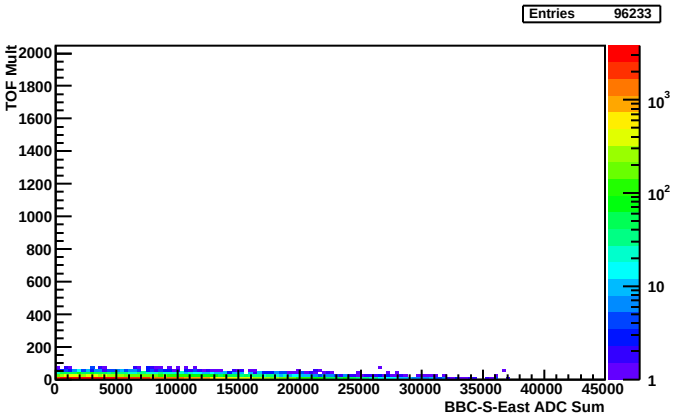

BBQ-VP003 (HI threshold)
Entries 1539728
TAC
QT Input Channel

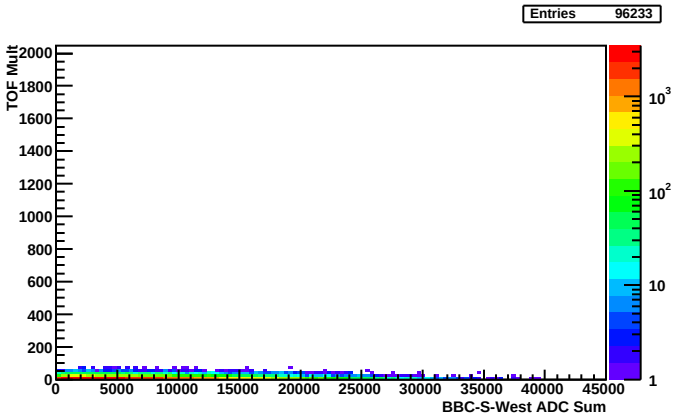

BBQ-VP004 (HI threshold)
Entries 1539728
ADC
QT Input Channel

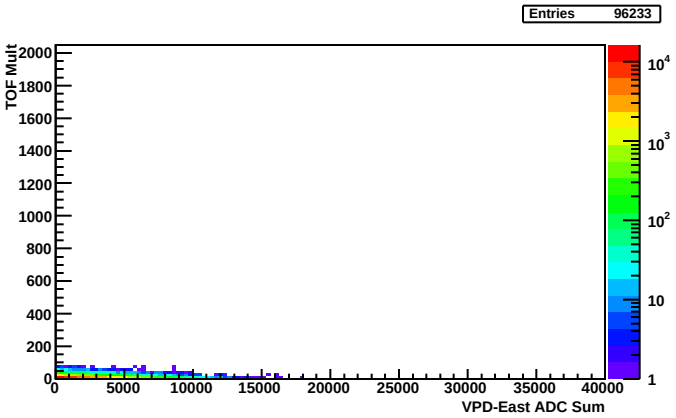

BBQ-VP004 (HI threshold)
Entries 1539728
TAC
QT Input Channel

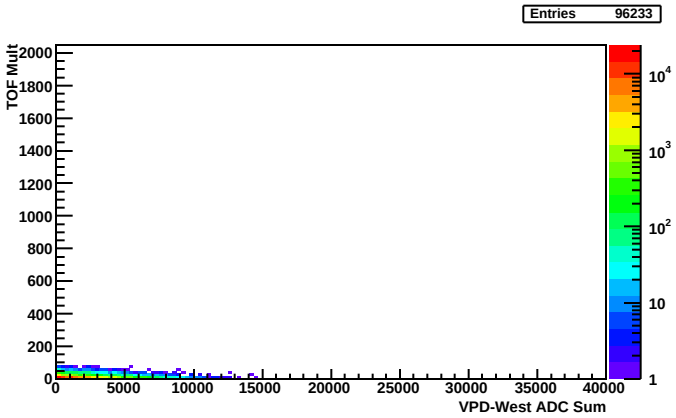

Entries 96233
TOF Mult
BBC-L-East ADC Sum

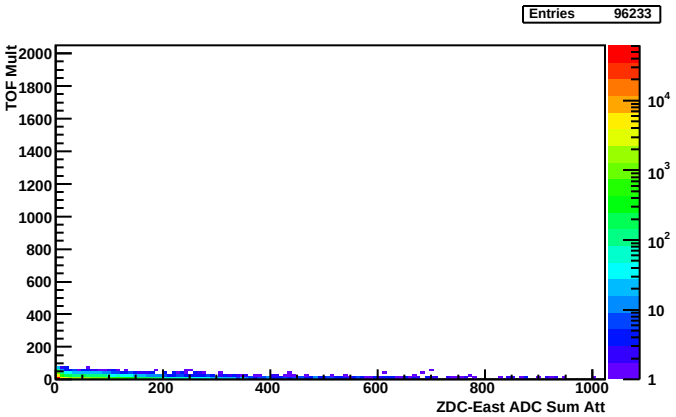

Entries 96233
TOF Mult
BBC-L-West ADC Sum

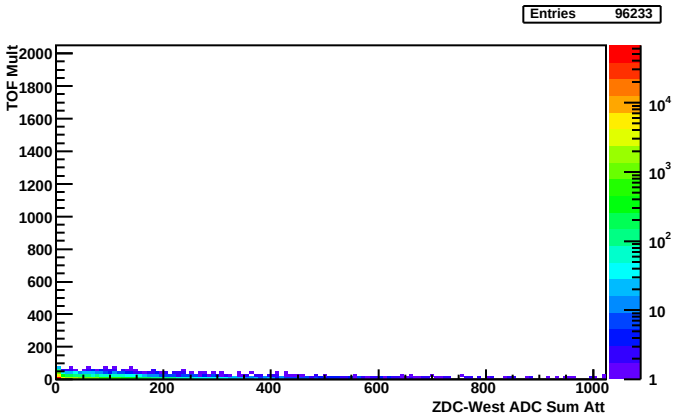

Entries 96233
TOF Mult
BBC-S-East ADC Sum

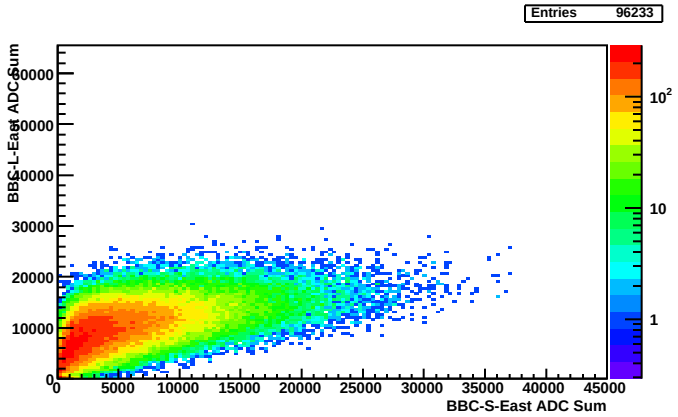

Entries 96233
TOF Mult
BBC-S-West ADC Sum

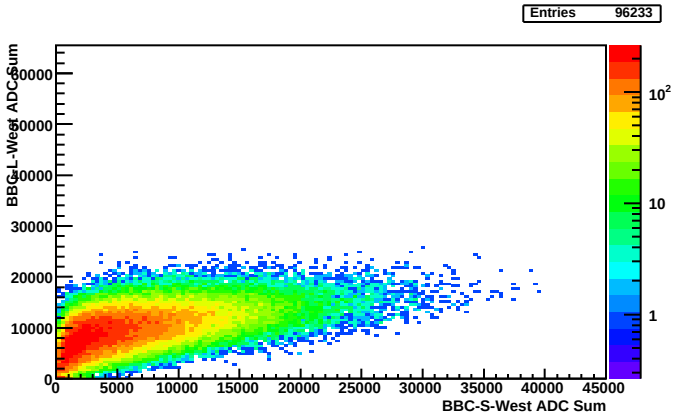

Entries 96233
TOF Mult
VPD-East ADC Sum

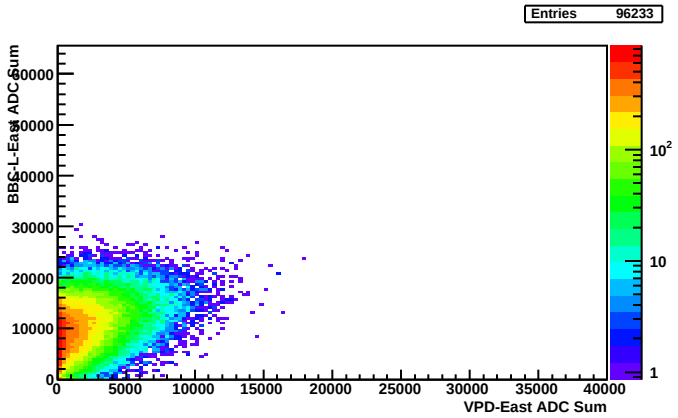

Entries 96233
TOF Mult
VPD-West ADC Sum

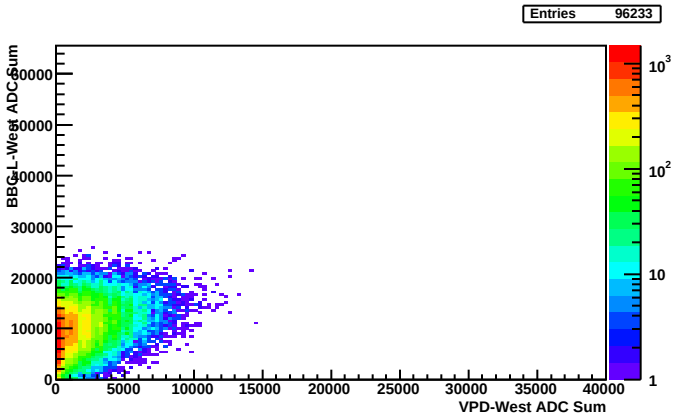

Entries 96233
TOF Mult
ZDC-East ADC Sum Att

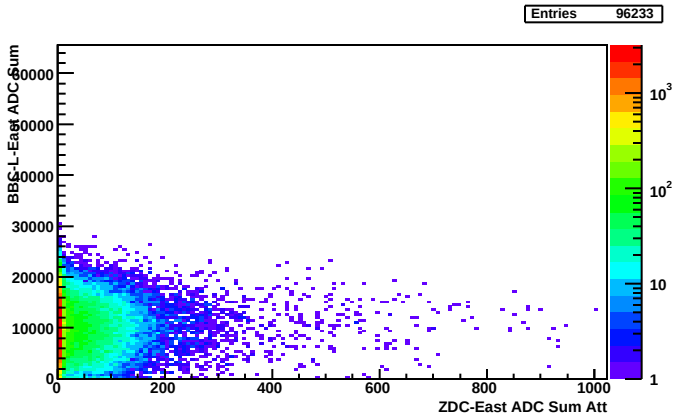

Entries 96233
TOF Mult
ZDC-West ADC Sum Att

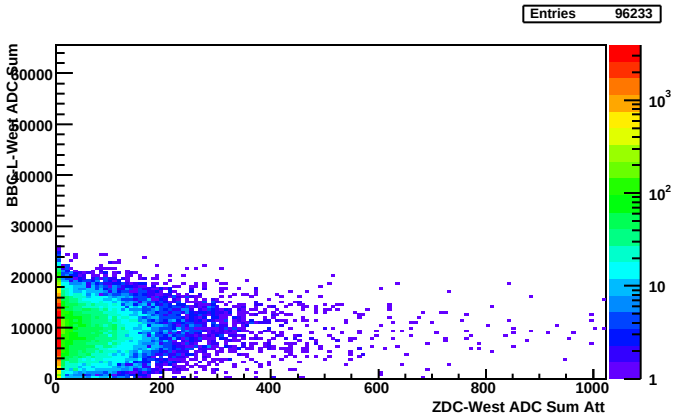

Entries 96233
BBC-L-East ADC Sum
BBC-S-East ADC Sum


Entries 96233
BBC-L-West ADC Sum
BBC-S-West ADC Sum


Entries 96233
BBC-L-East ADC Sum
VPD-East ADC Sum


Entries 96233
BBC-L-West ADC Sum
VPD-West ADC Sum


Entries 96233
BBC-L-East ADC Sum
ZDC-East ADC Sum Att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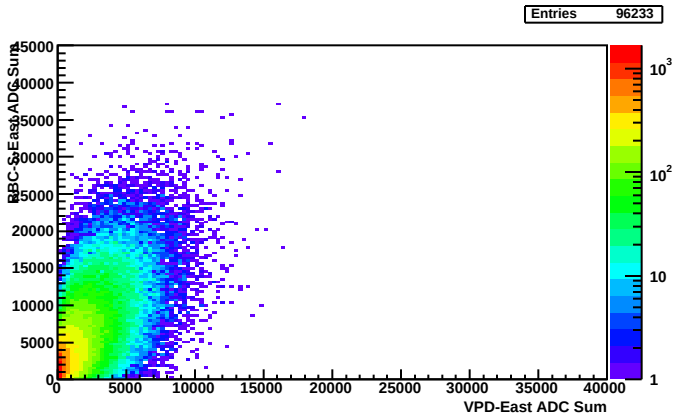
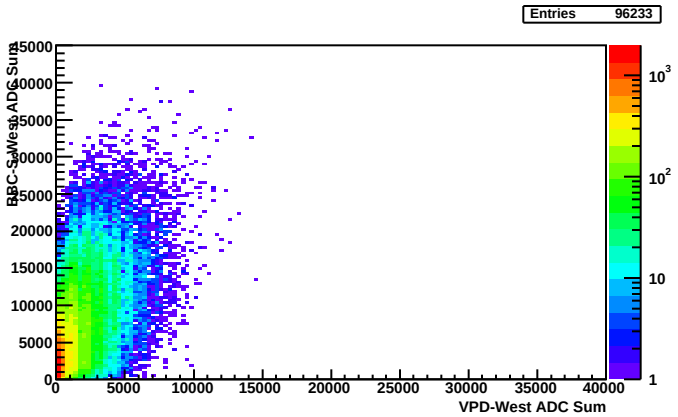
BBC-L-West ADC Sum
ZDC-West ADC Sum Att


Entries 96233
BBC-S-East ADC Sum
VPD-East ADC Sum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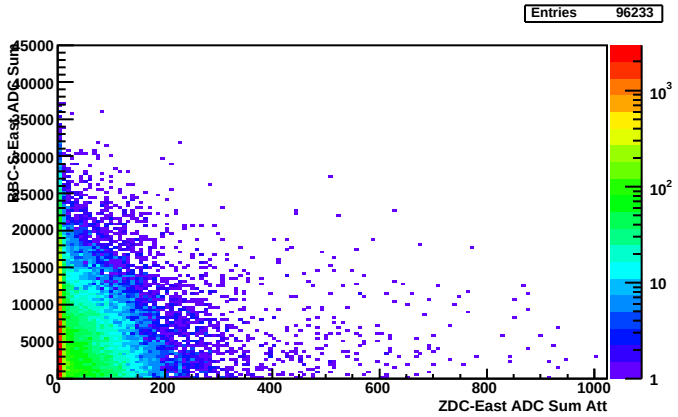
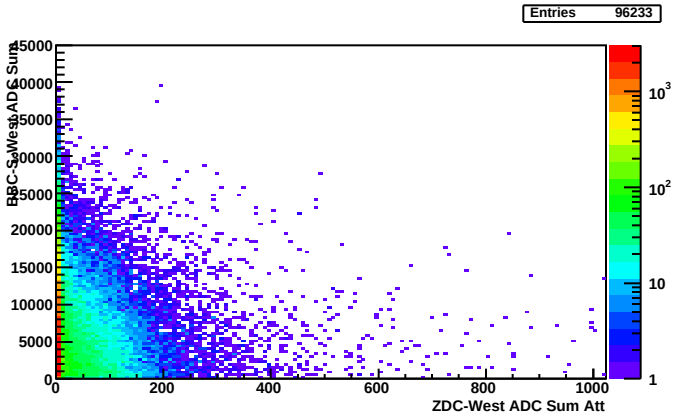
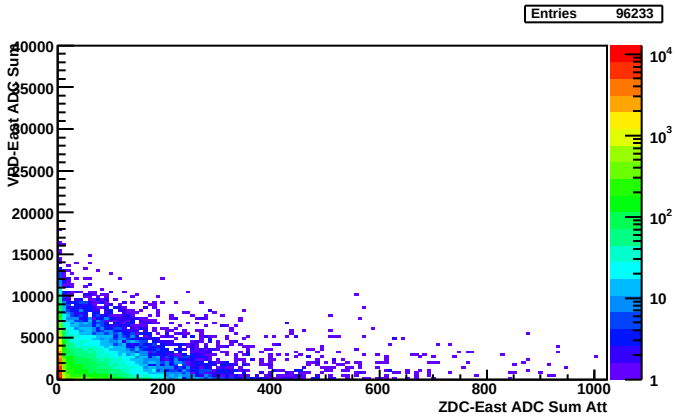
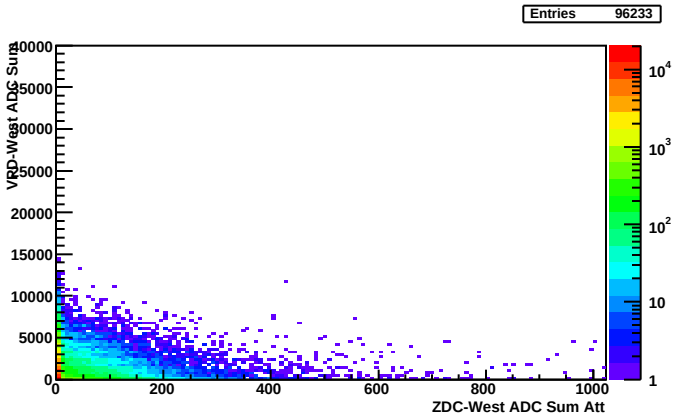
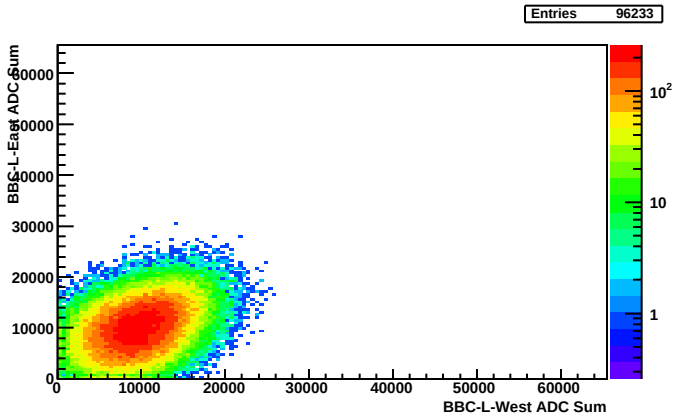
BBC-S-West ADC Sum
VPD-West ADC Sum

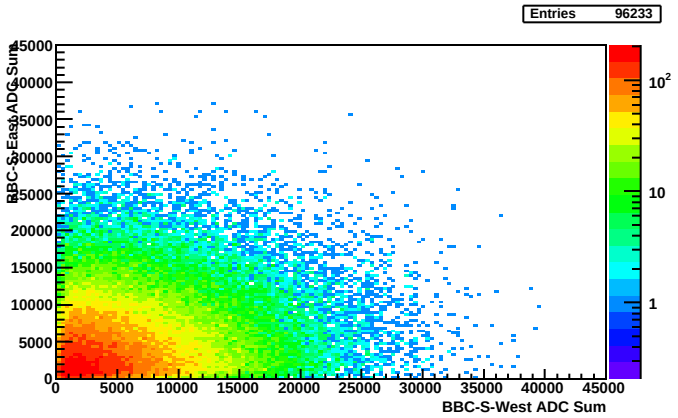

Entries 96233
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

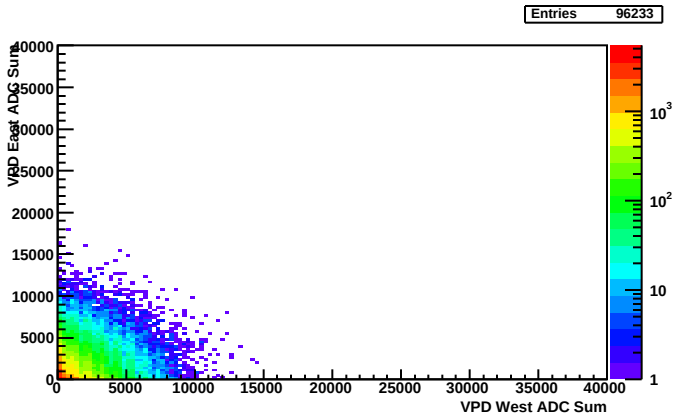

Entries 96233
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

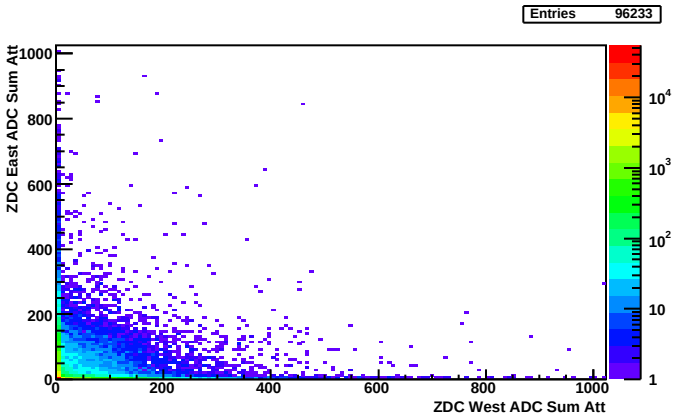

Entries 96233
VPD-East ADC Sum
ZDC-East ADC Sum Att

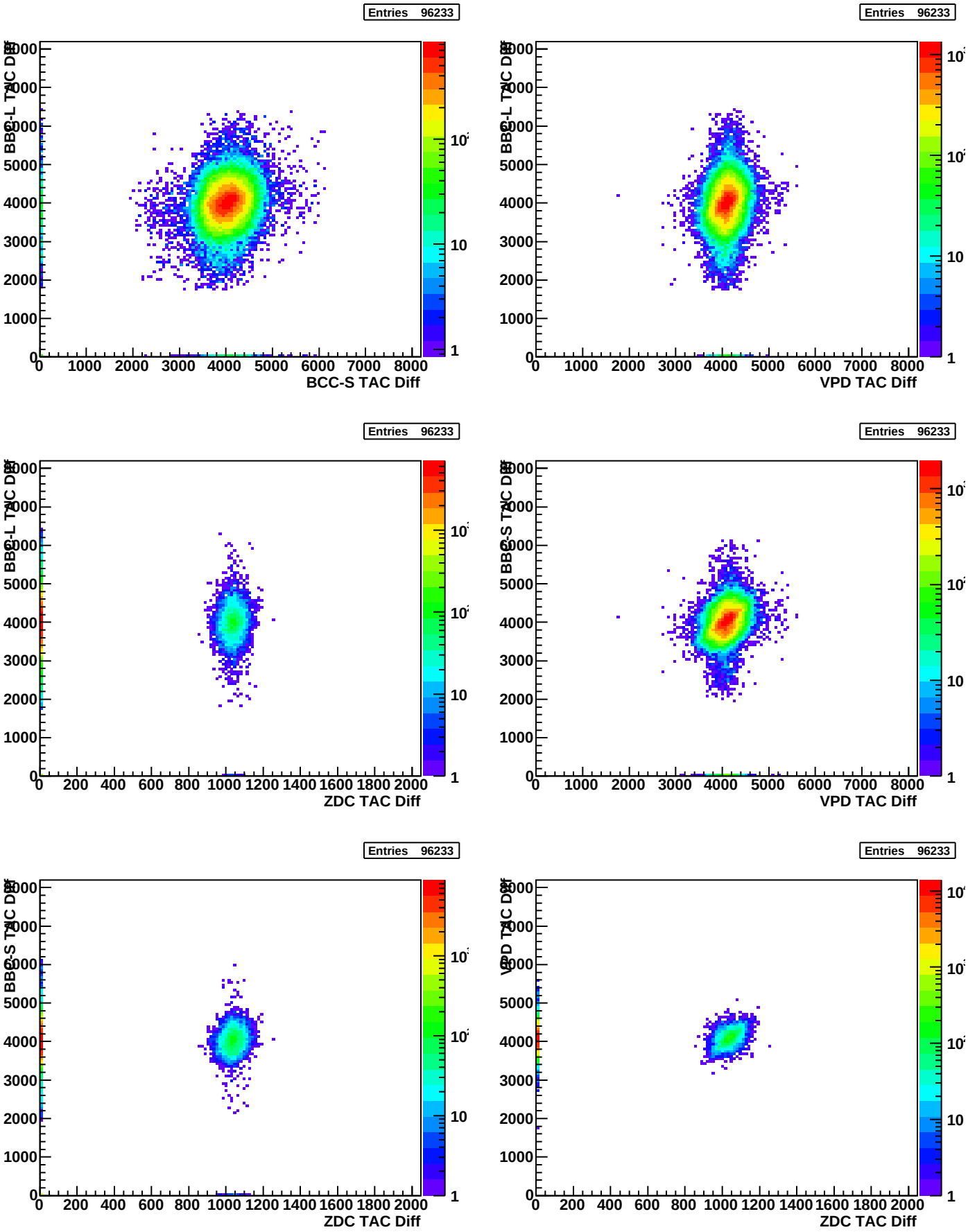

Entries 96233
VPD-West ADC Sum
ZDC-West ADC Sum Att

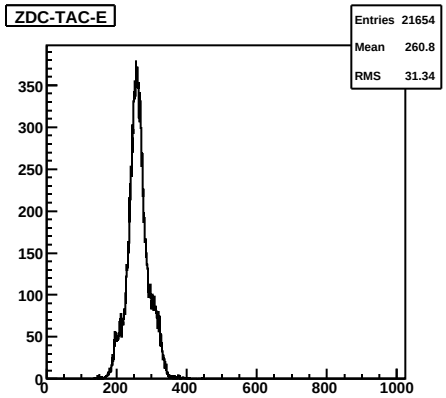

Entries 96233
BBC-L-East ADC Sum
BBC-L-West ADC Sum

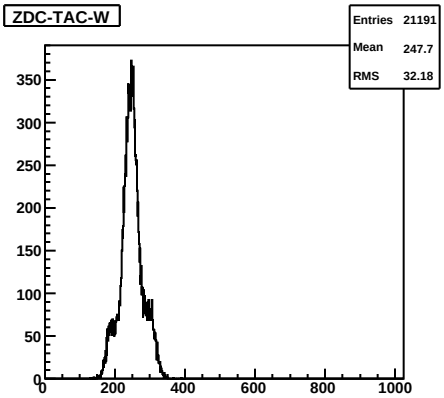

Entries 96233
BBC-S-East ADC Sum
BBC-S-West ADC Sum

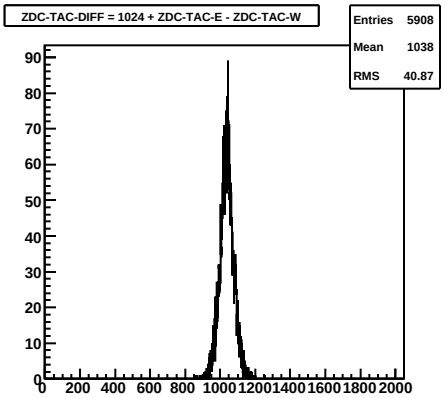

Entries 96233
VPD East ADC Sum
VPD West ADC Sum

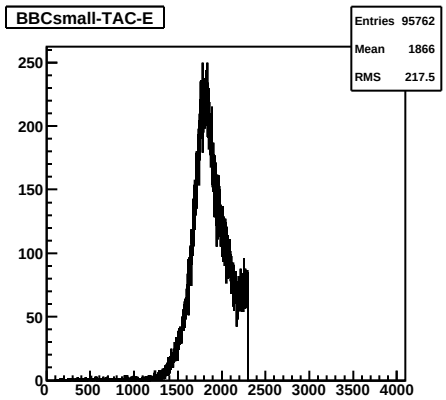

Entries 96233
ZDC East ADC Sum Att
ZDC West ADC Sum Att

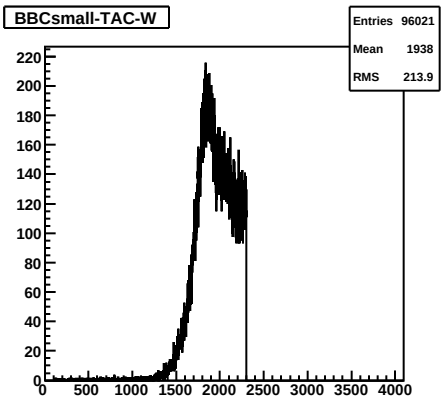

Entries 96233
BBC-L TAC Diff
BCC-S TAC Diff
Entries 96233
BBC-L TAC Diff
VPD TAC Diff
Entries 96233
BBC-L TAC Diff
ZDC TAC Diff
Entries 96233
BBC-S TAC Diff
VPD TAC Diff
Entries 96233
BBC-S TAC Diff
ZDC TAC Diff
Entries 96233
VPD TAC Diff
ZDC TAC Diff

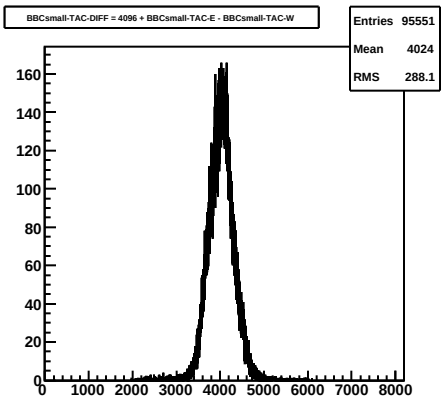

ZDC-TAC-E
Entries 21654
Mean 260.8
RMS 31.34

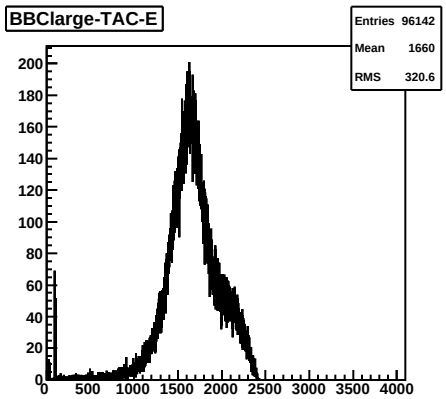

ZDC-TAC-W
Entries 21191
Mean 247.7
RMS 32.18

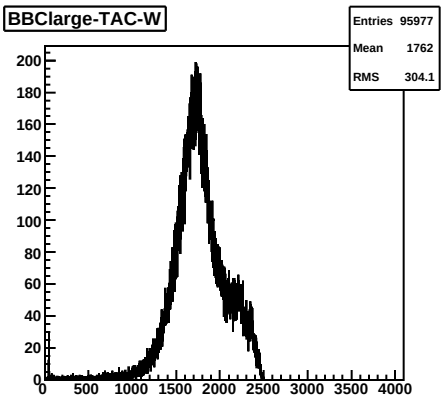

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 5908
Mean 1038
RMS 40.87

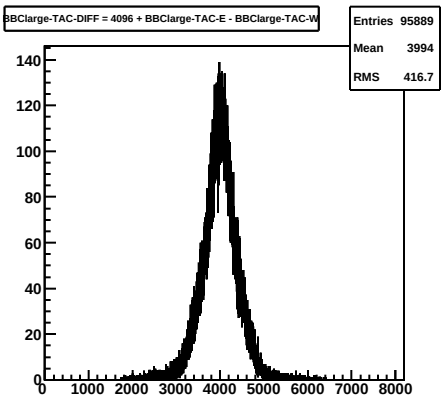

BBCsmall-TAC-E
Entries 95762
Mean 1866
RMS 217.5

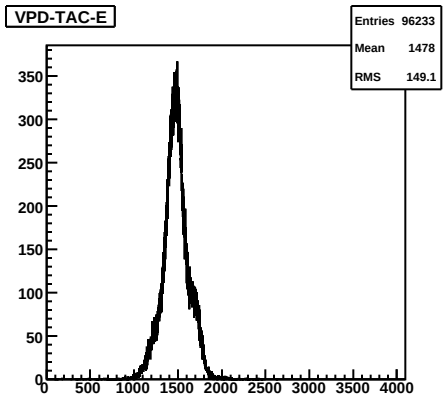

BBCsmall-TAC-W
Entries 96021
Mean 1938
RMS 213.9

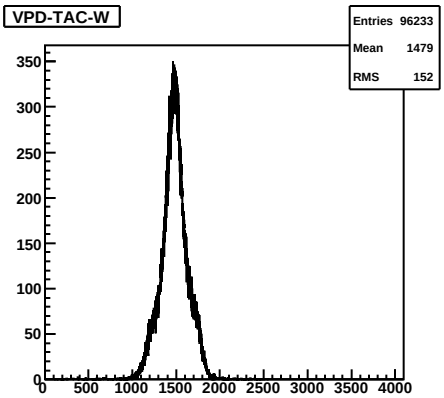

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 95551
Mean 4024
RMS 288.1

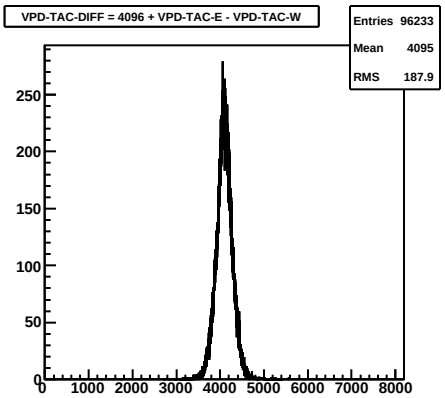

BBClarge-TAC-E
Entries 96142
Mean 1660
RMS 320.6

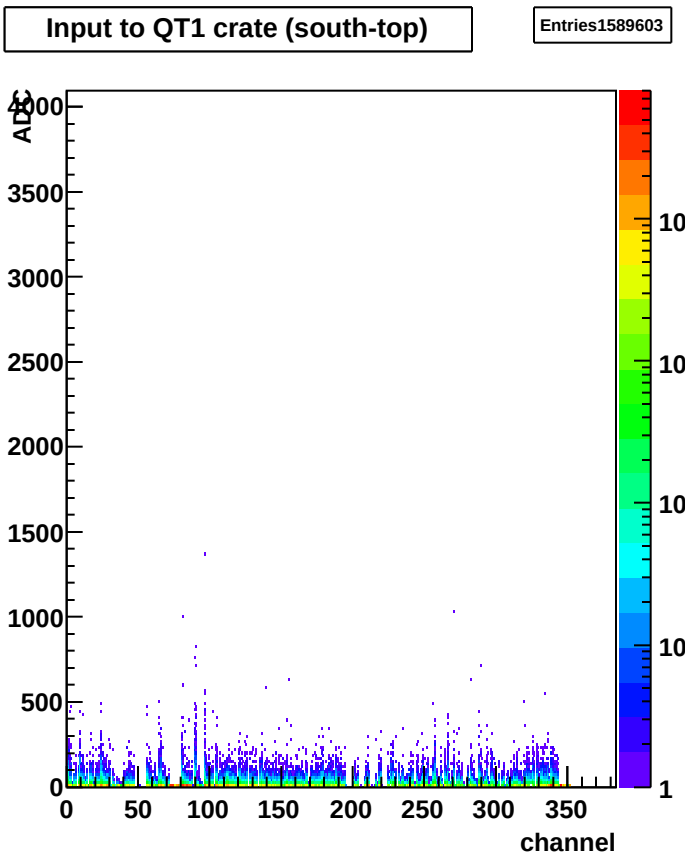

BBClarge-TAC-W
Entries 95977
Mean 1762
RMS 304.1

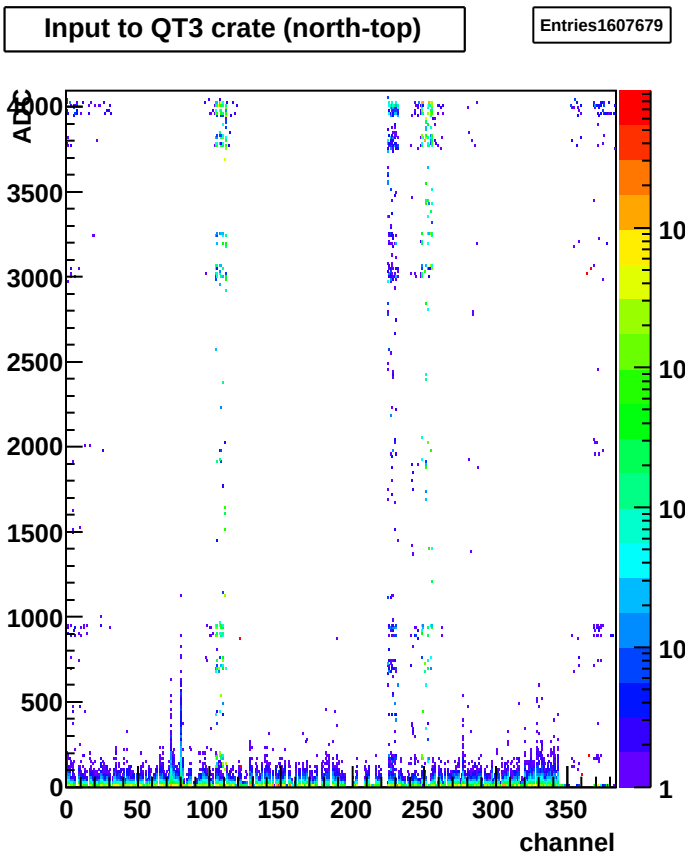

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 95889
Mean 3994
RMS 416.7

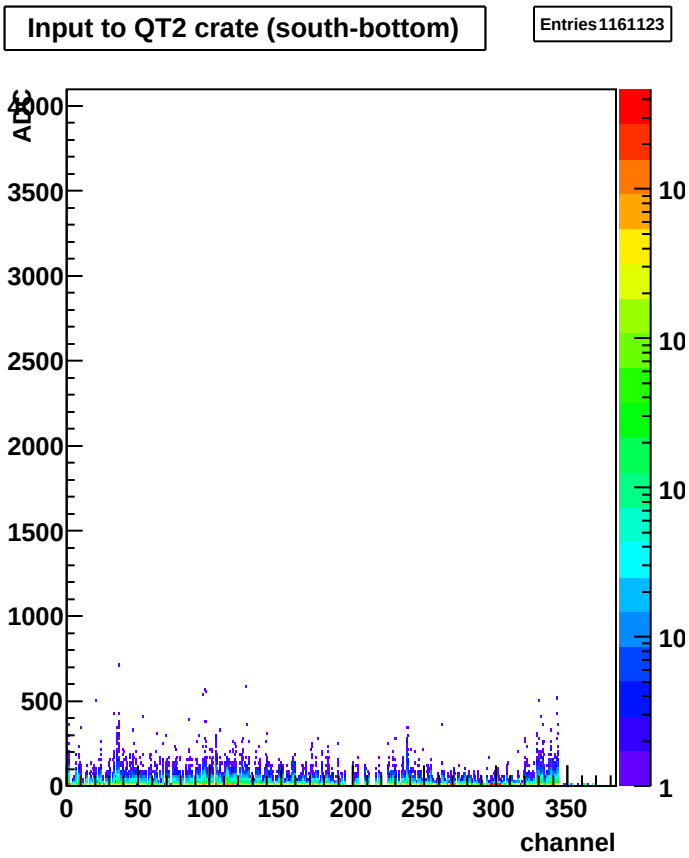

VPD-TAC-E
Entries 96233
Mean 1478
RMS 149.1

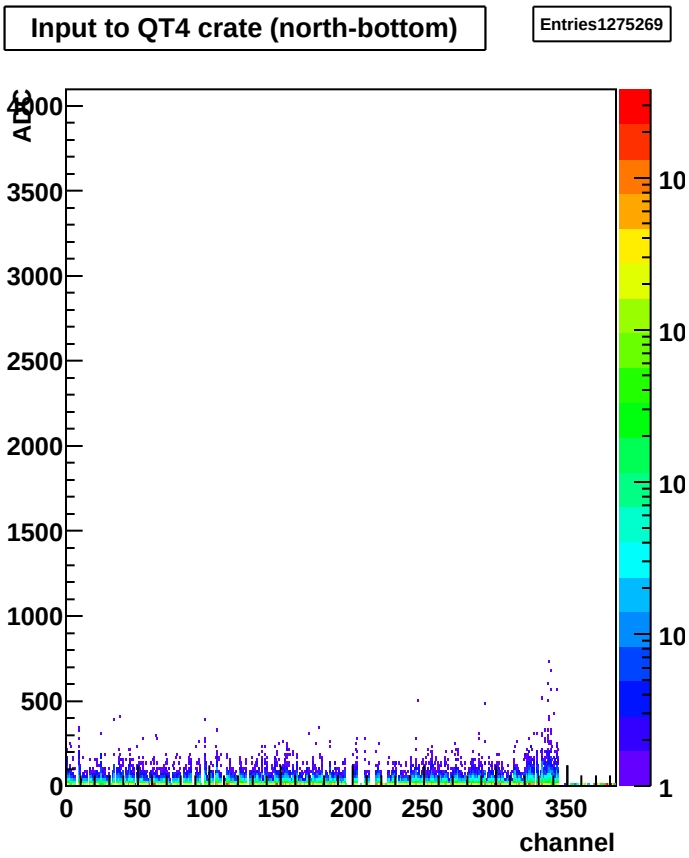

VPD-TAC-W
Entries 96233
Mean 1479
RMS 152

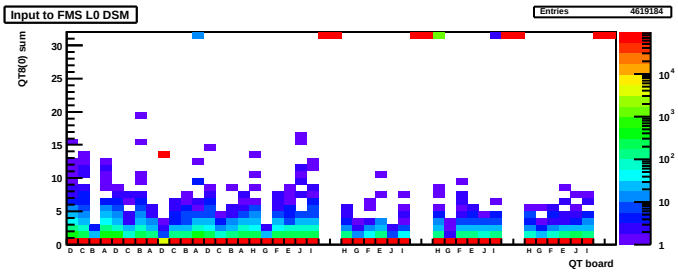

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 96233
Mean 4095
RMS 187.9

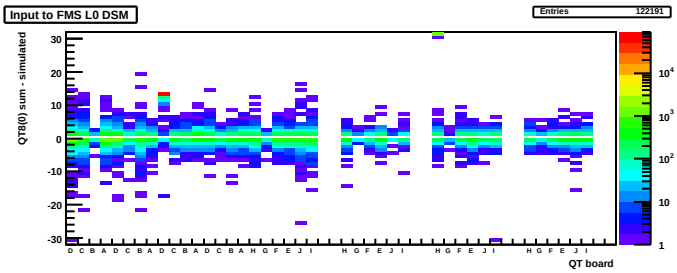

Input to QT1 crate (south-top)
Entries1589603
ADC
channel

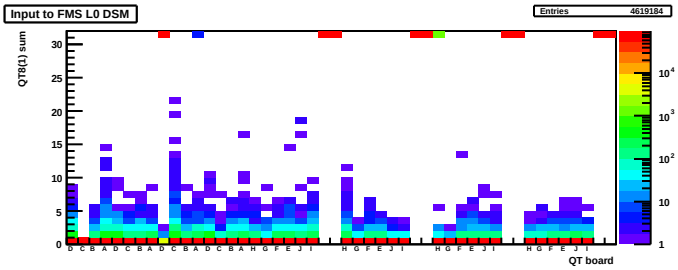

Input to QT3 crate (north-top)
Entries1607679
ADC
channel

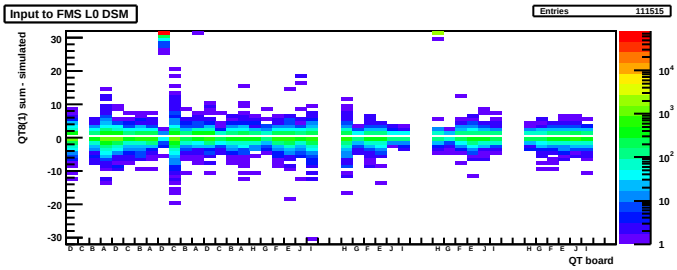

Input to QT2 crate (south-bottom)
Entries1161123
ADC
channel

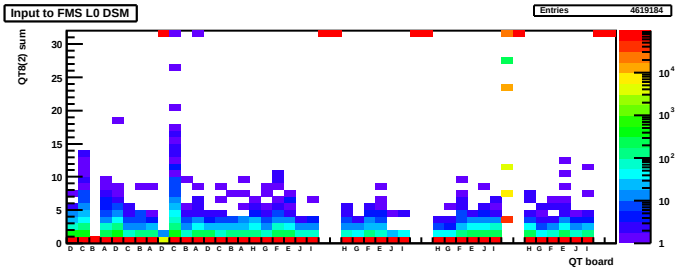

Input to QT4 crate (north-bottom)
Entries1275269
ADC
channel

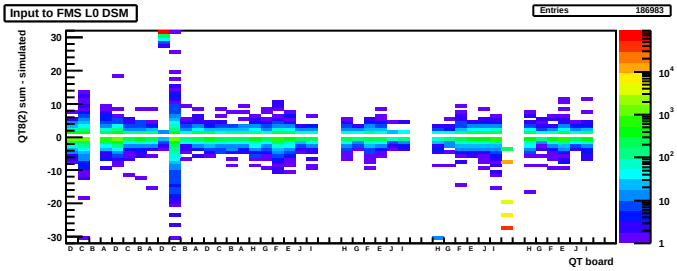

Input to FMS L0 DSM
Entries 4619184
QT8(0) sum
QT board

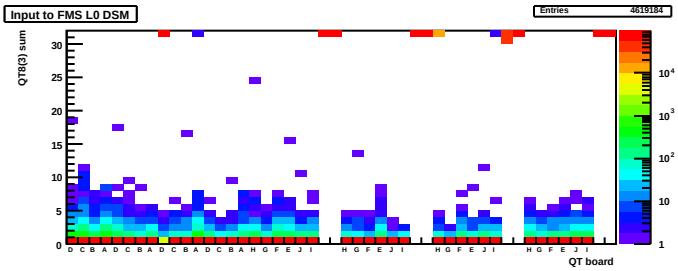

Input to FMS L0 DSM
Entries 122191
QT8(0) sum - simulated
QT board

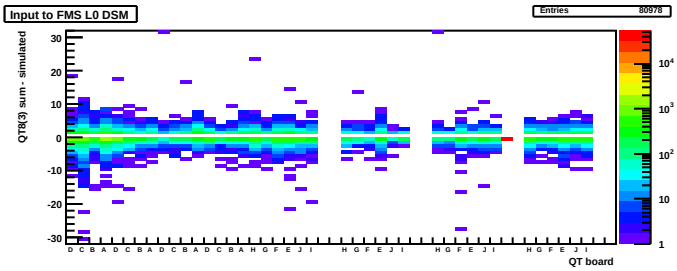

Input to FMS L0 DSM
Entries 4619184
QT8(1) sum
QT board

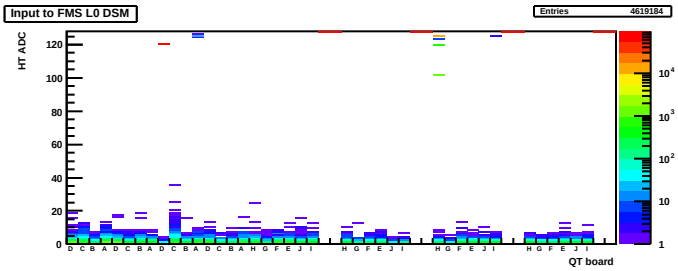

Input to FMS L0 DSM
Entries 111515
QT8(1) sum - simulated
QT board

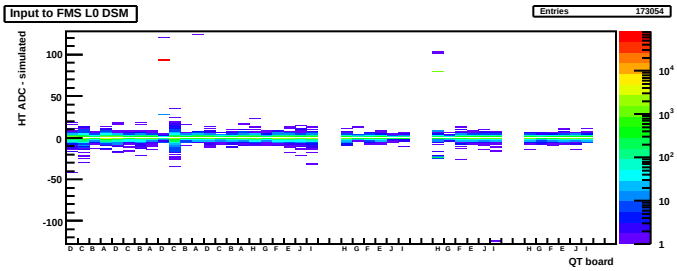

Input to FMS L0 DSM
Entries 4619184
QT8(2) sum
QT board

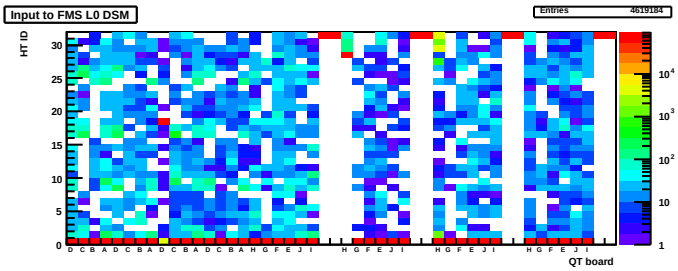

Input to FMS L0 DSM
Entries 186983
QT8(2) sum - simulated
QT board

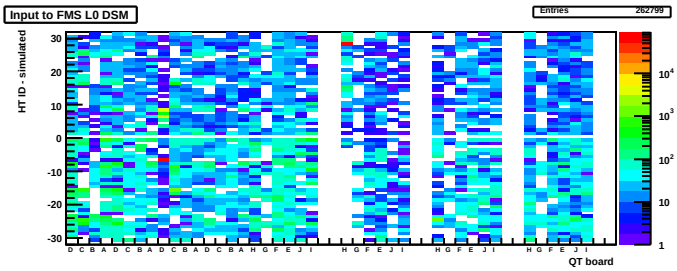

Input to FMS L0 DSM
Entries 4619184
QT8(3) sum
QT board

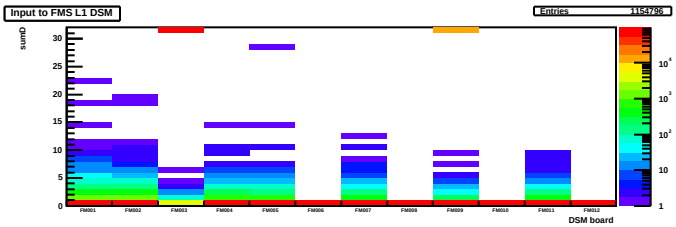

Input to FMS L0 DSM
Entries 80978
QT8(3) sum - simulated
QT board

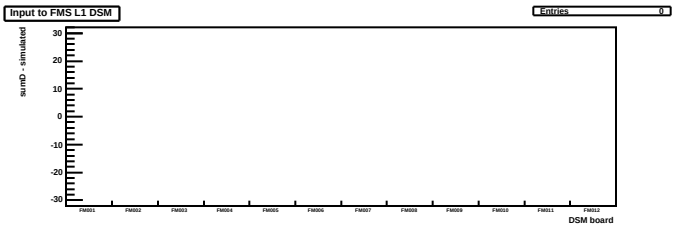

Input to FMS L0 DSM
Entries 4619184
HT ADC
QT board

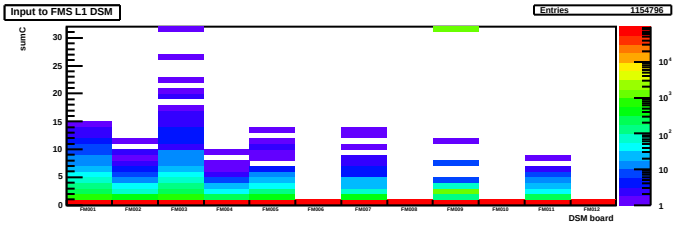

Input to FMS L0 DSM
Entries 173054
HT ADC - simulated
QT board

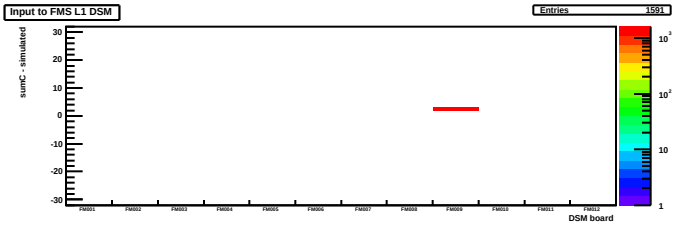

Input to FMS L0 DSM
Entries 4619184
HT ID
QT board

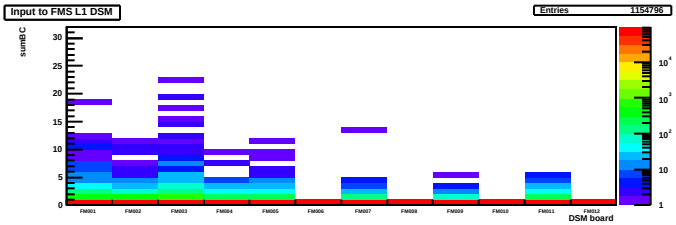

Input to FMS L0 DSM
Entries 262799
HT ID - simulated
QT board

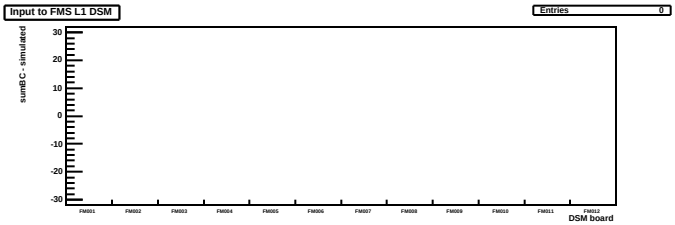

Input to FMS L1 DSM
Entries 1154796
sumD
DSM board

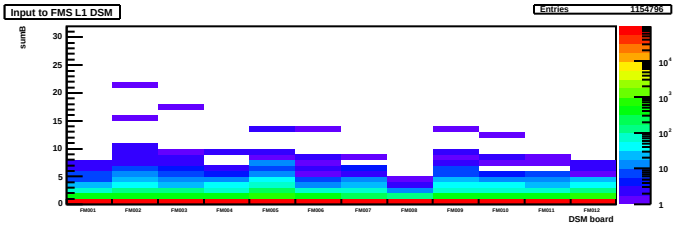

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

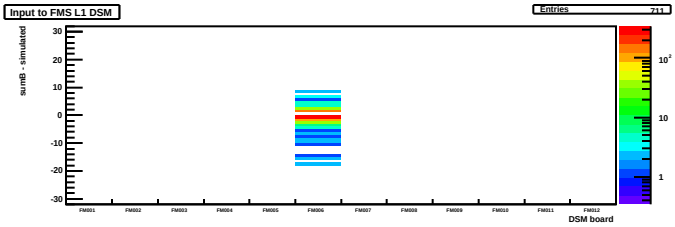

Input to FMS L1 DSM
Entries 1154796
sumC
DSM board

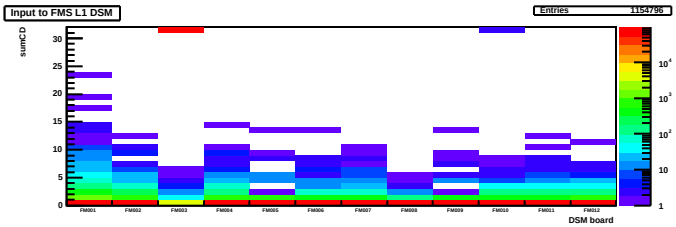

Input to FMS L1 DSM
Entries 1591
sumC - simulated
DSM board

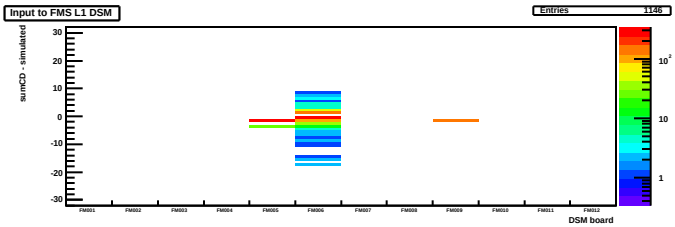

Input to FMS L1 DSM
Entries 1154796
sumBC
DSM board

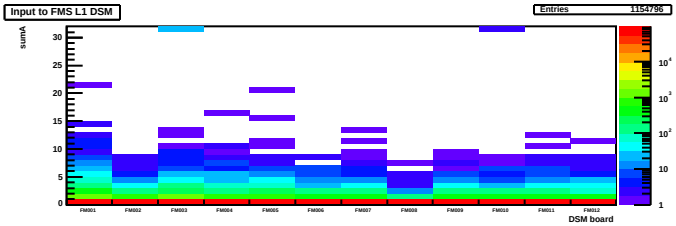

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

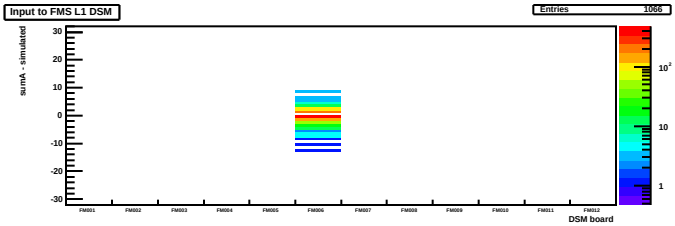

Input to FMS L1 DSM
Entries 1154796
sumB
DSM board

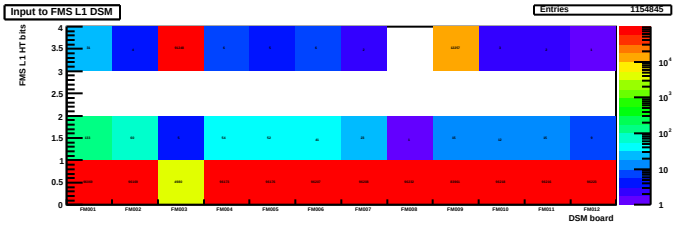

Input to FMS L1 DSM
Entries 711
sumB - simulated
DSM board

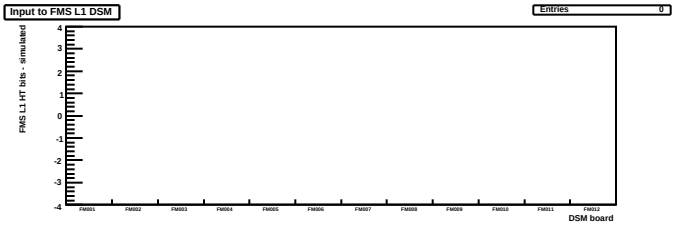

Input to FMS L1 DSM
Entries 1154796
sumCD
DSM board

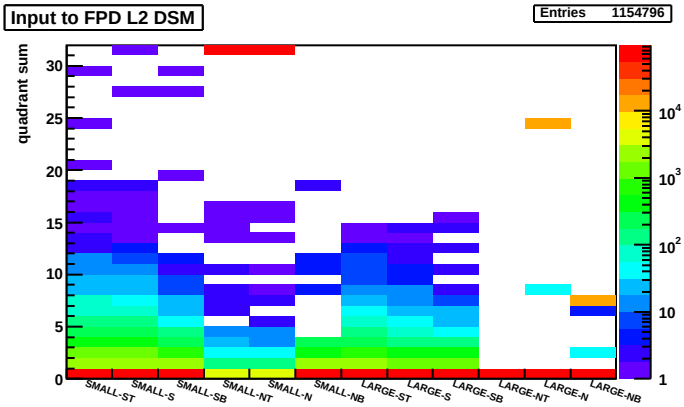

Input to FMS L1 DSM
Entries 1146
sumCD - simulated
DSM board

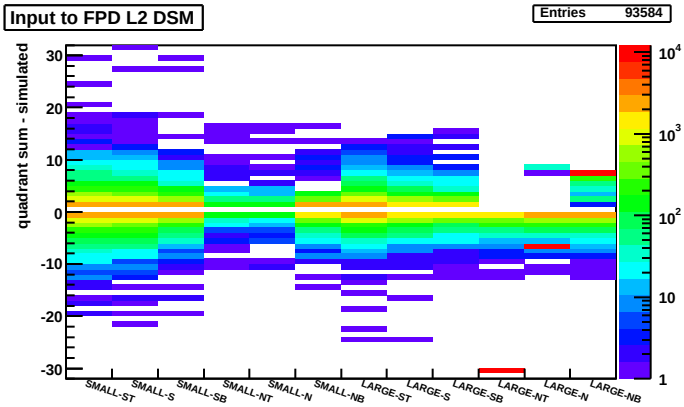

Input to FMS L1 DSM
Entries 1154796
sumA
DSM board

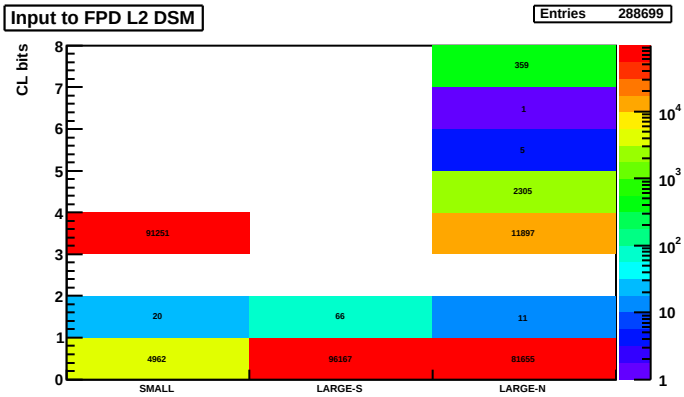

Input to FMS L1 DSM
Entries 1066
sumA - simulated
DSM board

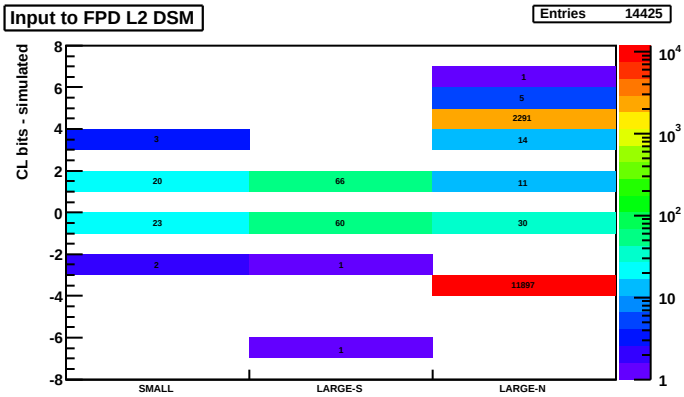

Input to FMS L1 DSM
Entries 1154845
FMS L1 HT bits
DSM board

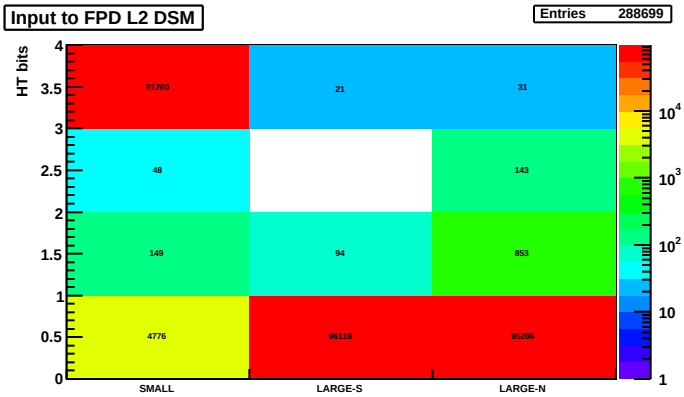

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

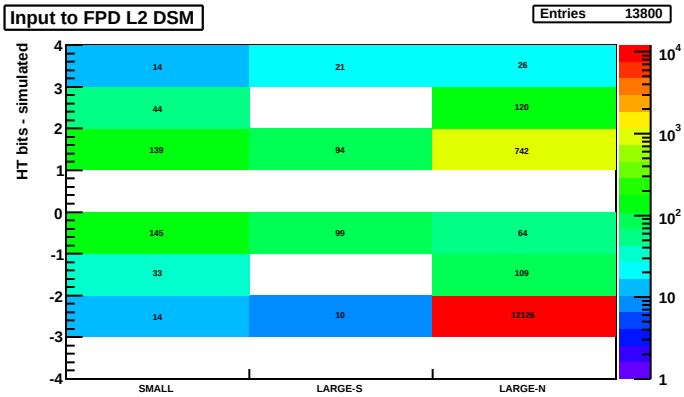

Input to FPD L2 DSM
Entries 1154796
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

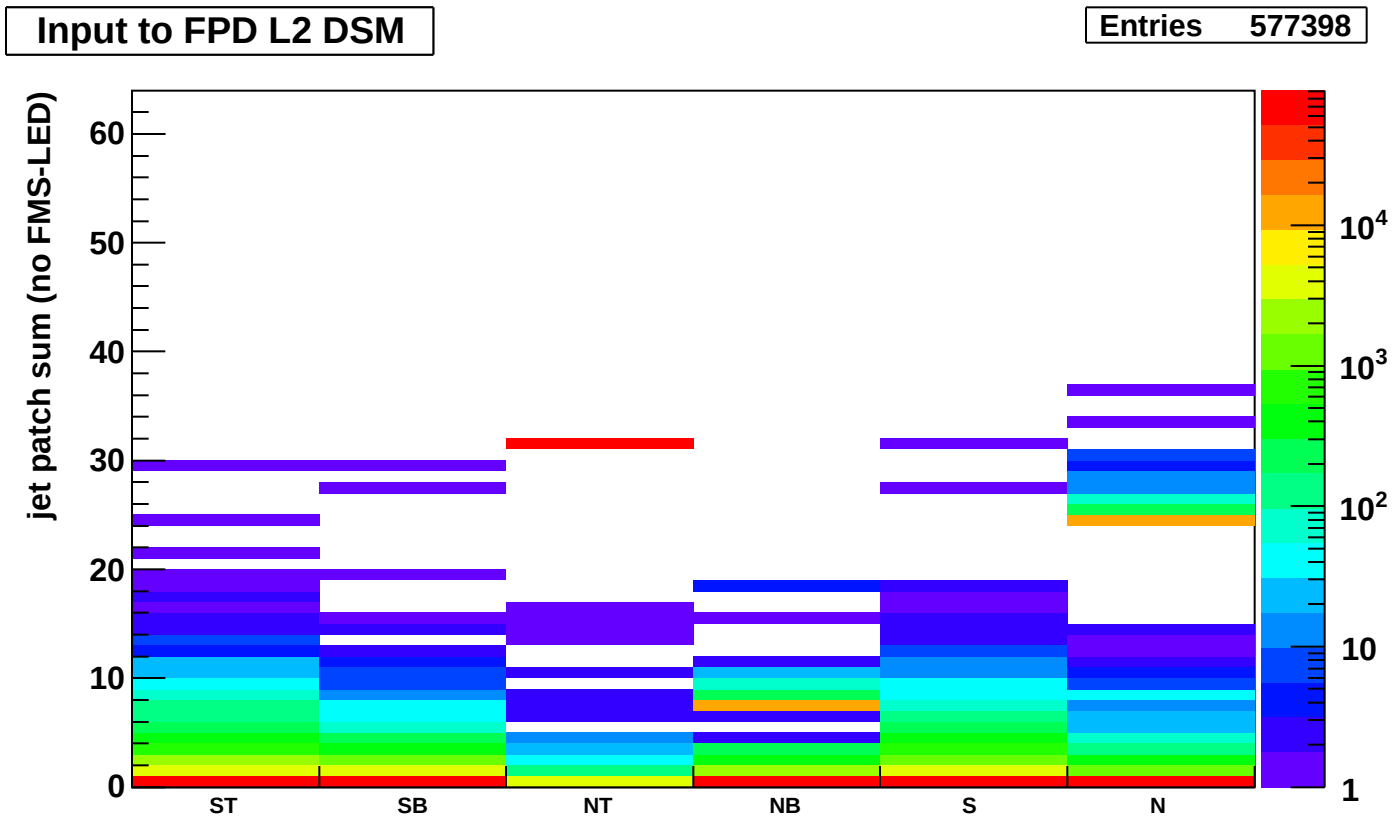

Input to FPD L2 DSM
Entries 93584
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

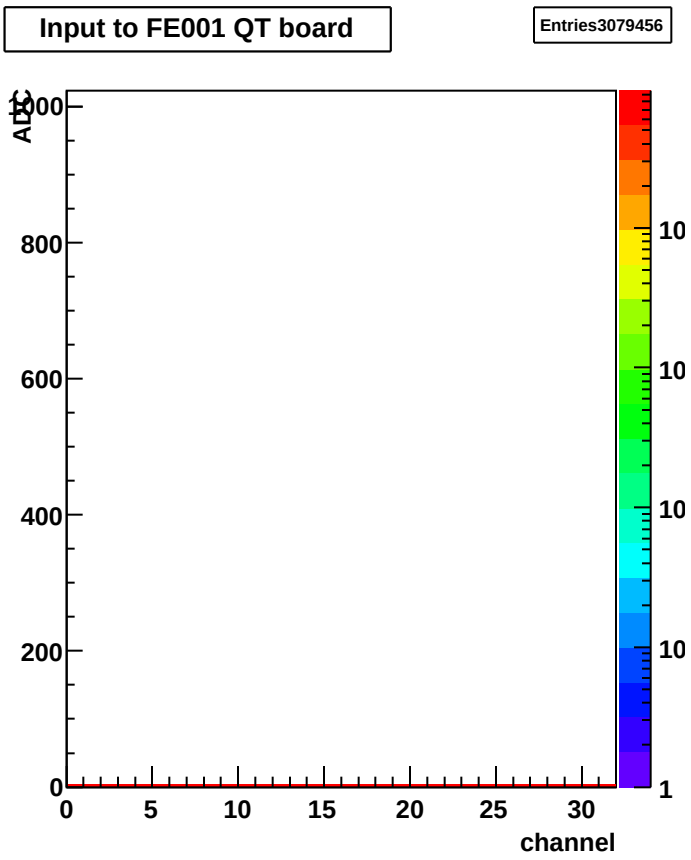

Input to FPD L2 DSM
Entries 288699
CL bits
91251
20
4962
66
96167
359
1
5
2305
11897
11
81655
SMALL
LARGE-S
LARGE-N

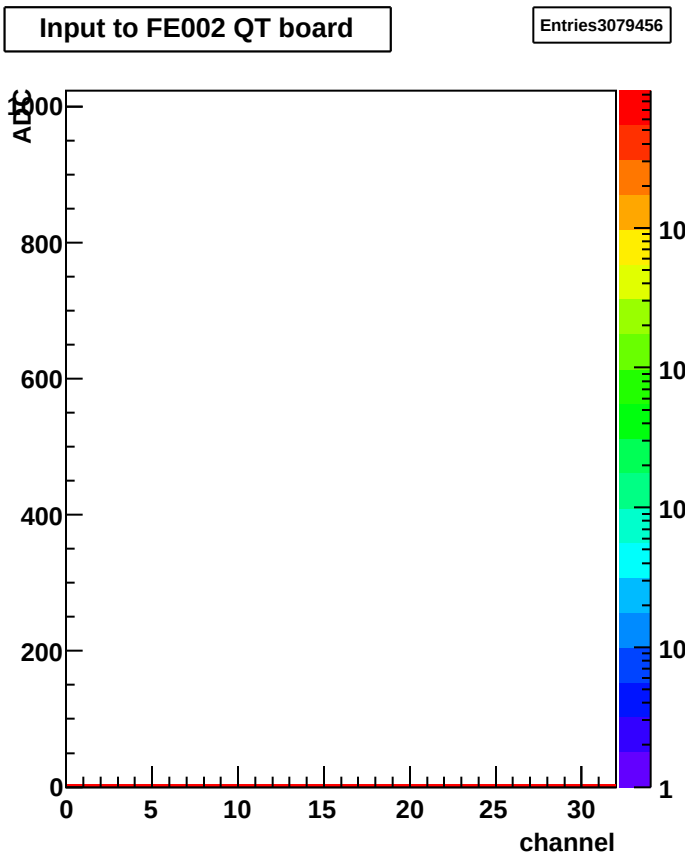

Input to FPD L2 DSM
Entries 14425
CL bits - simulated
3
20
23
2
1
66
60
1
1
5
2291
14
11
30
11897
SMALL
LARGE-S
LARGE-N

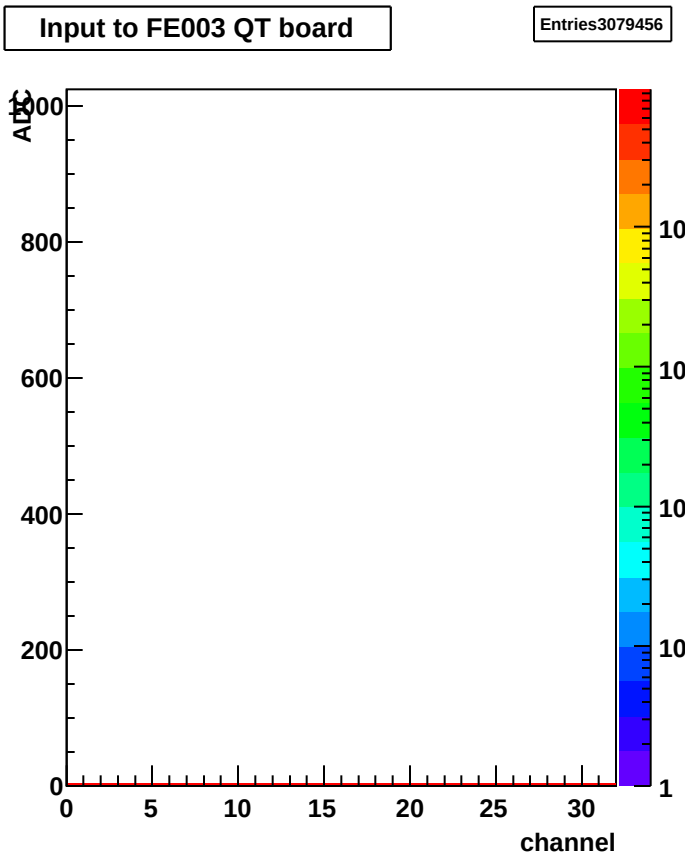

Input to FPD L2 DSM
Entries 288699
HT bits
91260
21
31
48
143
149
94
853
4776
96118
95206
SMALL
LARGE-S
LARGE-N

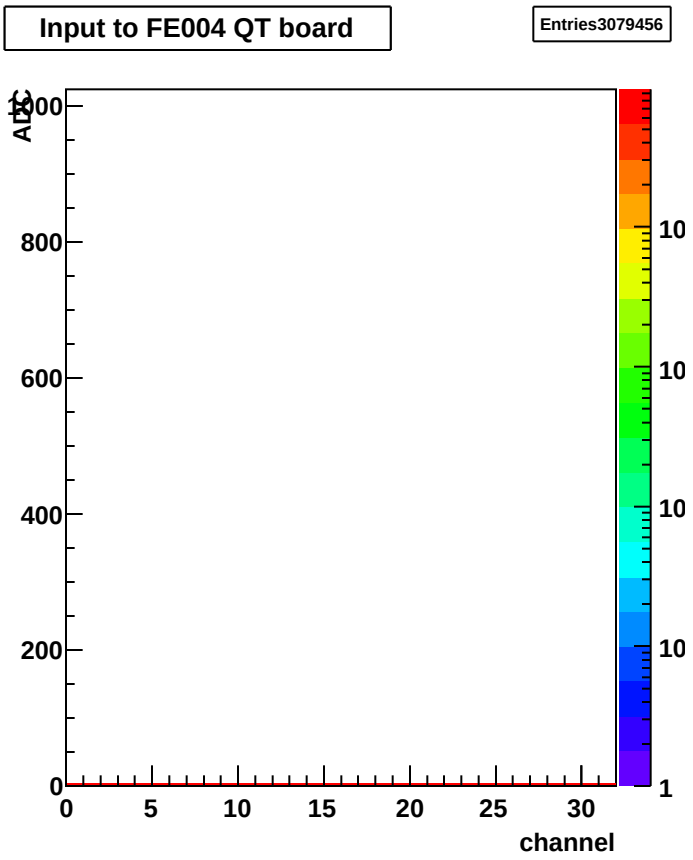

Input to FPD L2 DSM
Entries 13800
HT bits - simulated
14
21
26
44
120
139
94
742
145
99
64
33
109
14
10
12126
SMALL
LARGE-S
LARGE-N

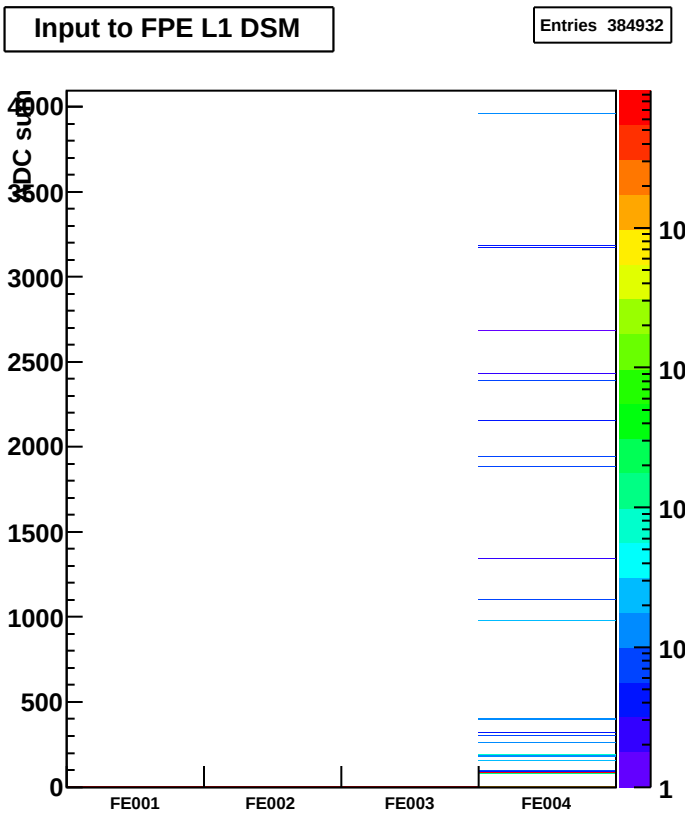

Input to FPD L2 DSM
Entries 577398
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

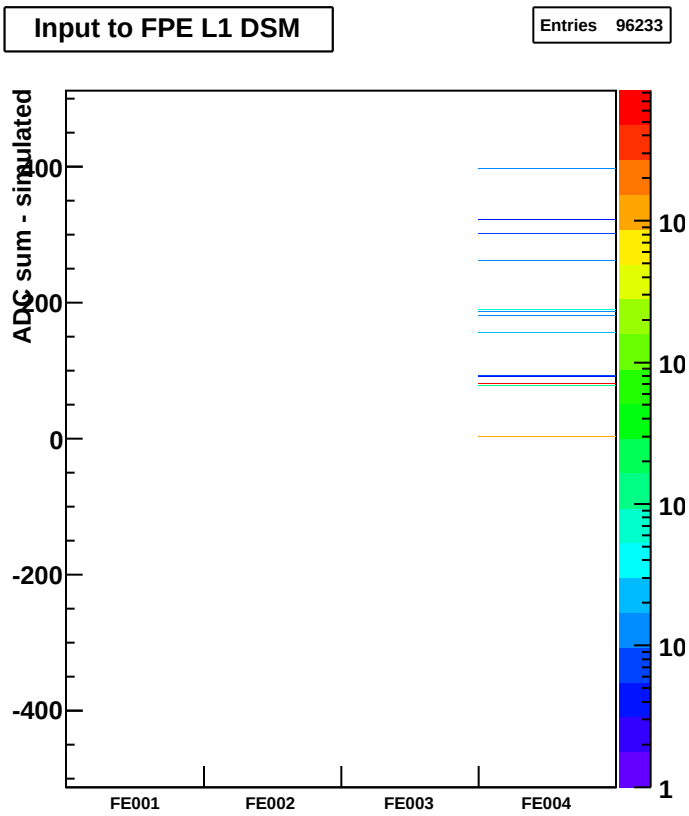

Input to FE001 QT board
Entries3079456
ADC
channel

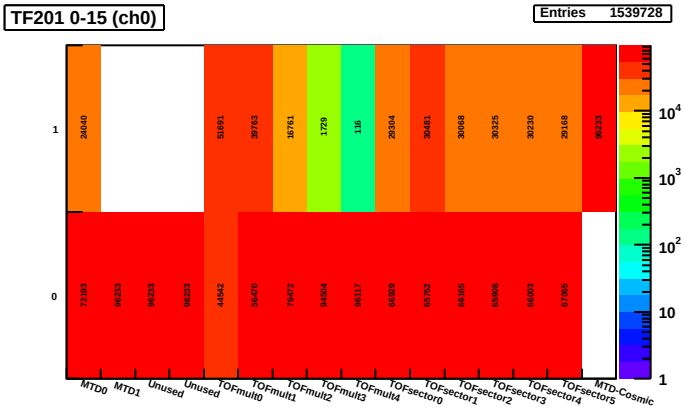

Input to FE002 QT board
Entries3079456
ADC
channel

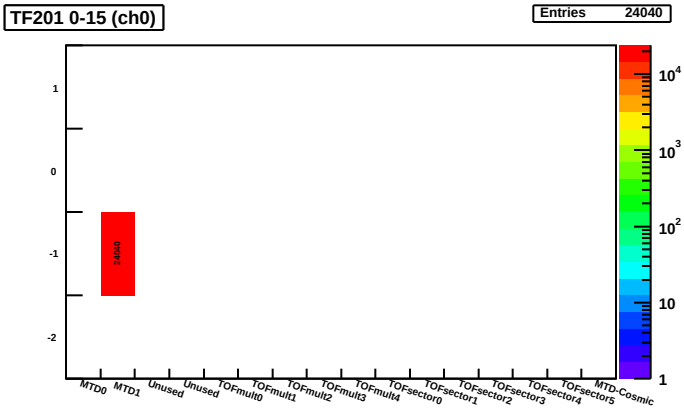

Input to FE003 QT board
Entries3079456
ADC
channel

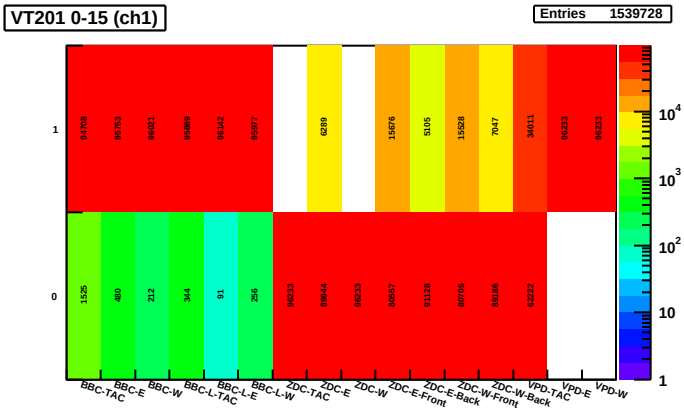

Input to FE004 QT board
Entries3079456
ADC
channel

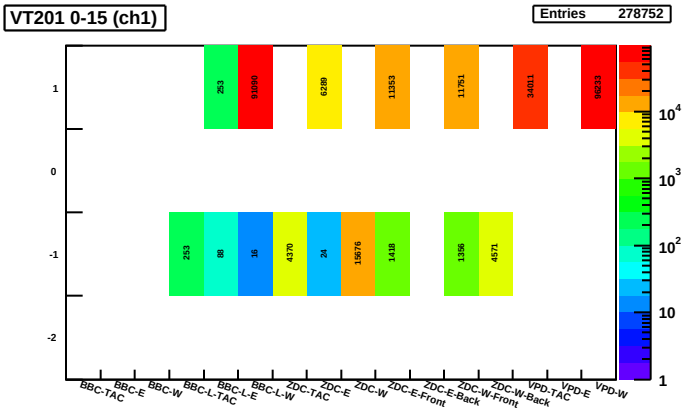

Input to FPE L1 DSM
Entries 384932
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1

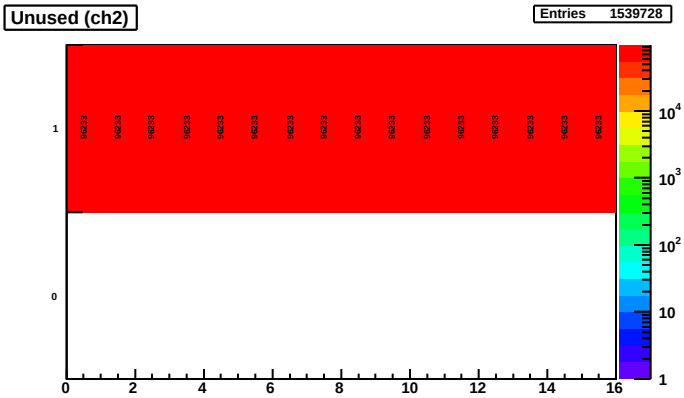

Input to FPE L1 DSM
Entries 96233
ADC sum - simulated
200
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1


TF201 0-15 (ch0)
Entries 1539728
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 24040
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 1539728
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 278752
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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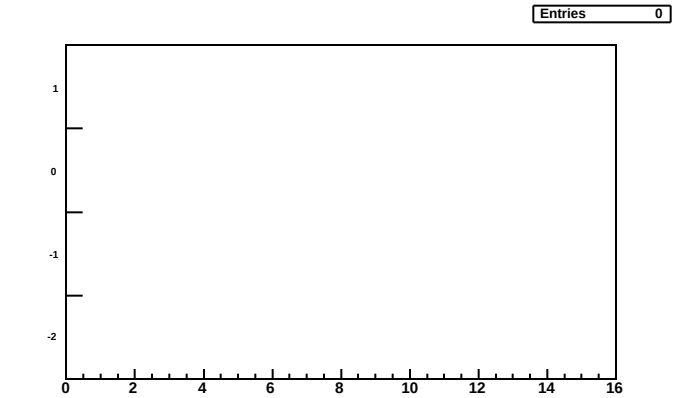
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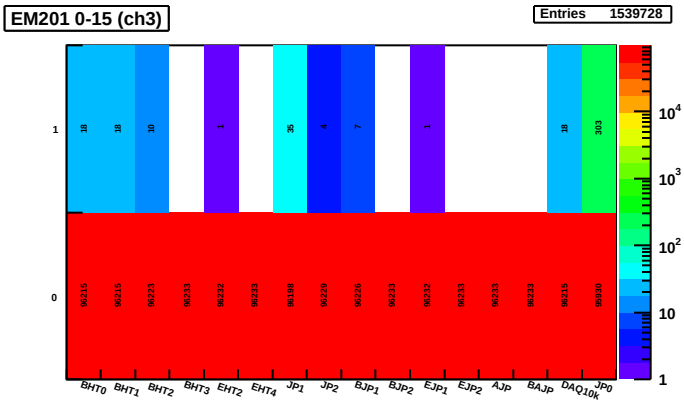
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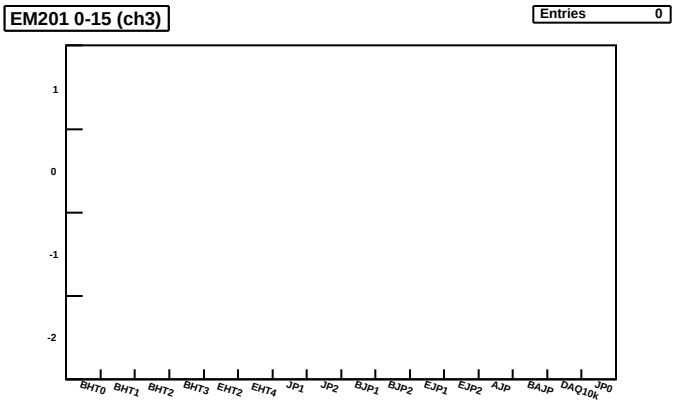
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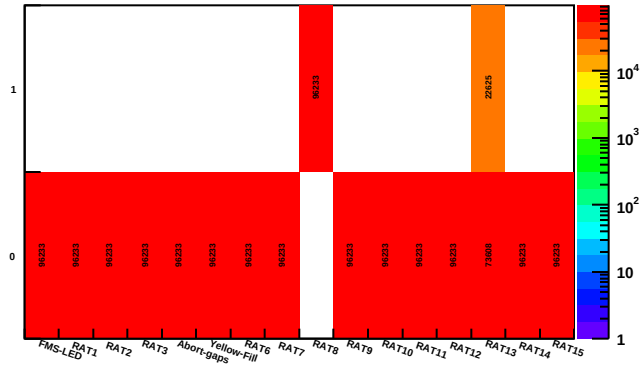
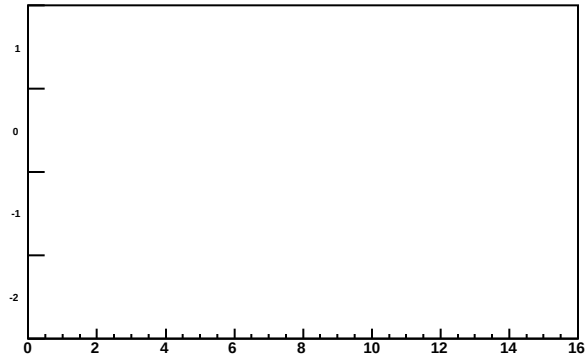
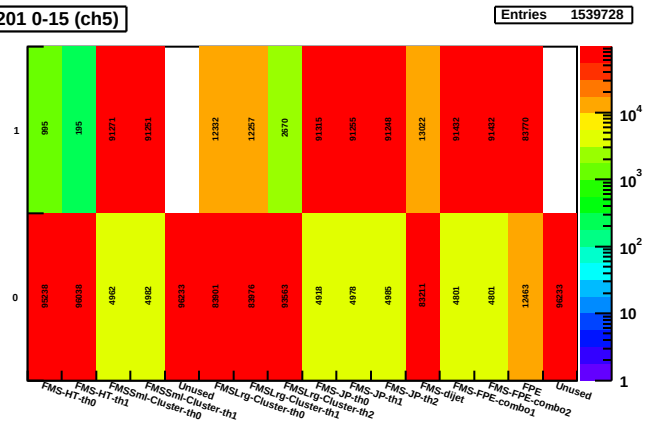
RAT board (ch4)





FP201 0-15 (ch5)



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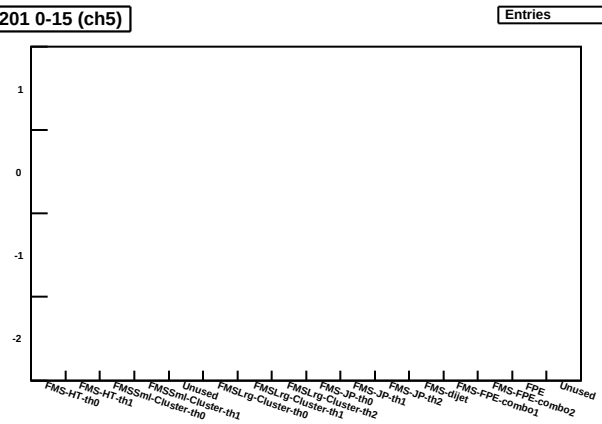
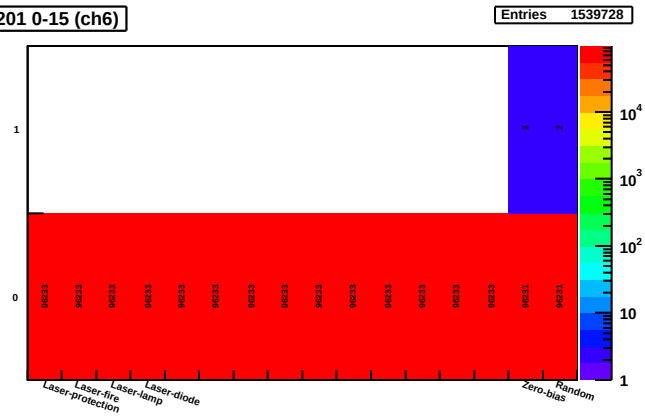
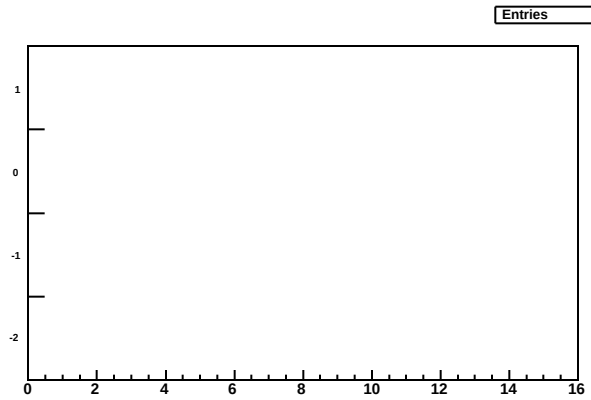
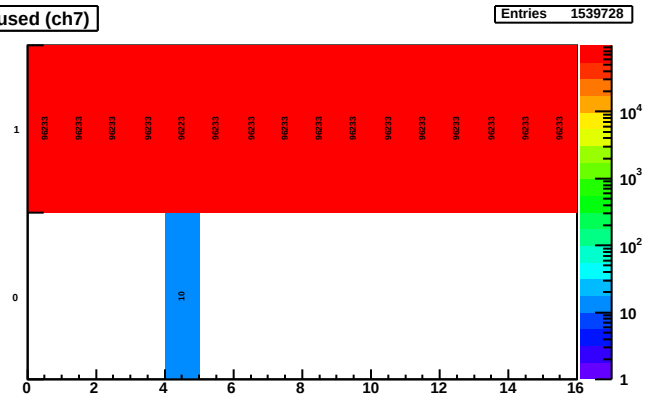
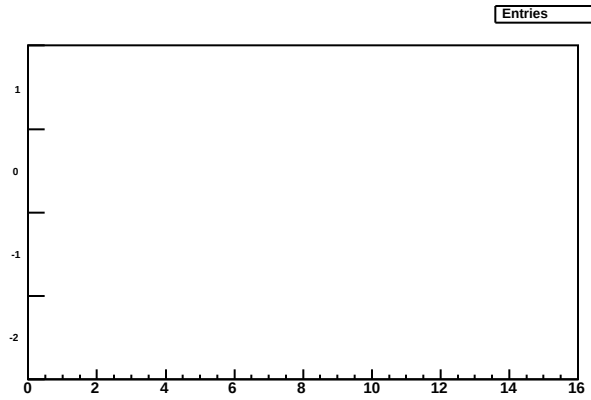


ST201 0-15 (ch6)





Unused (ch7)