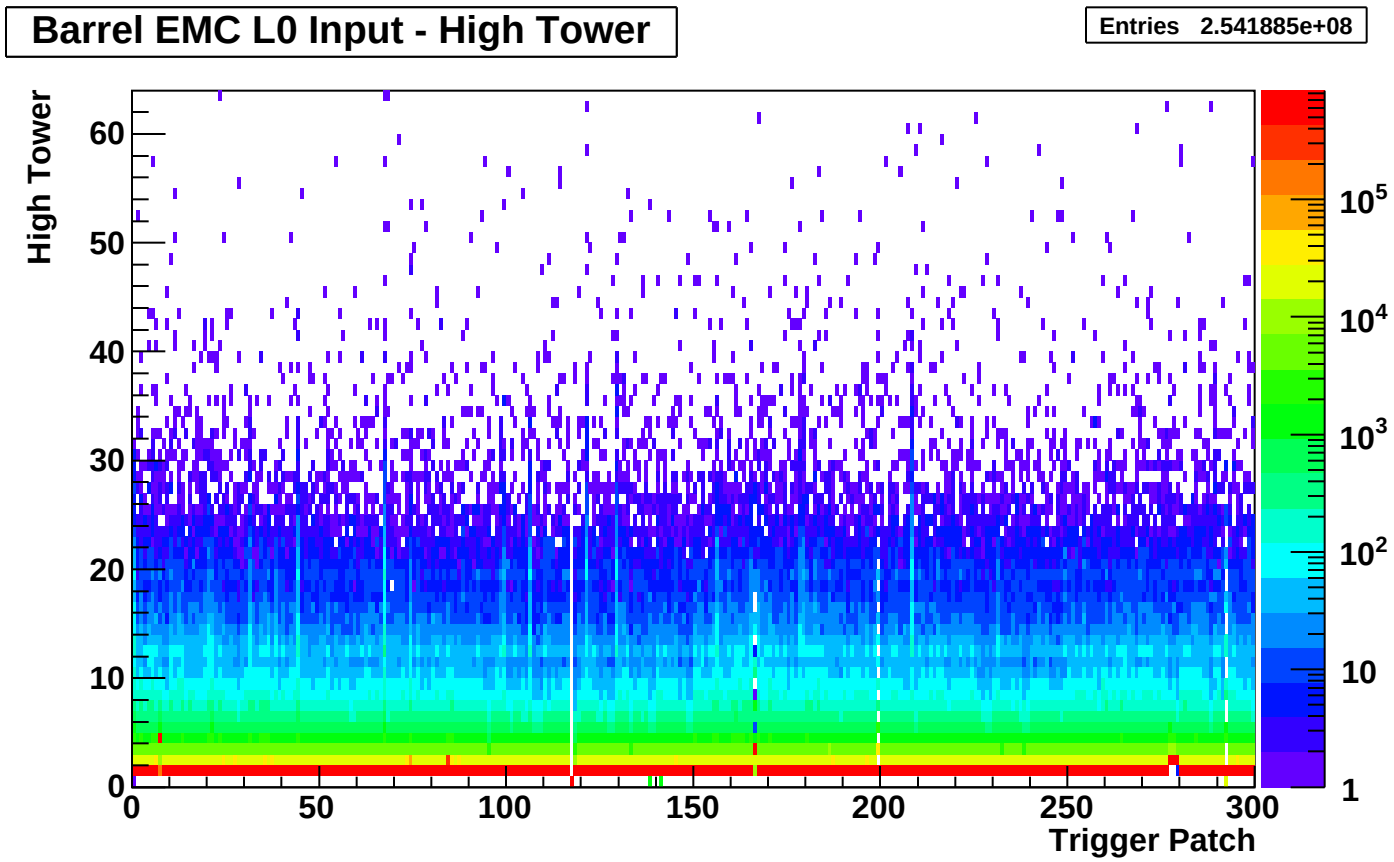
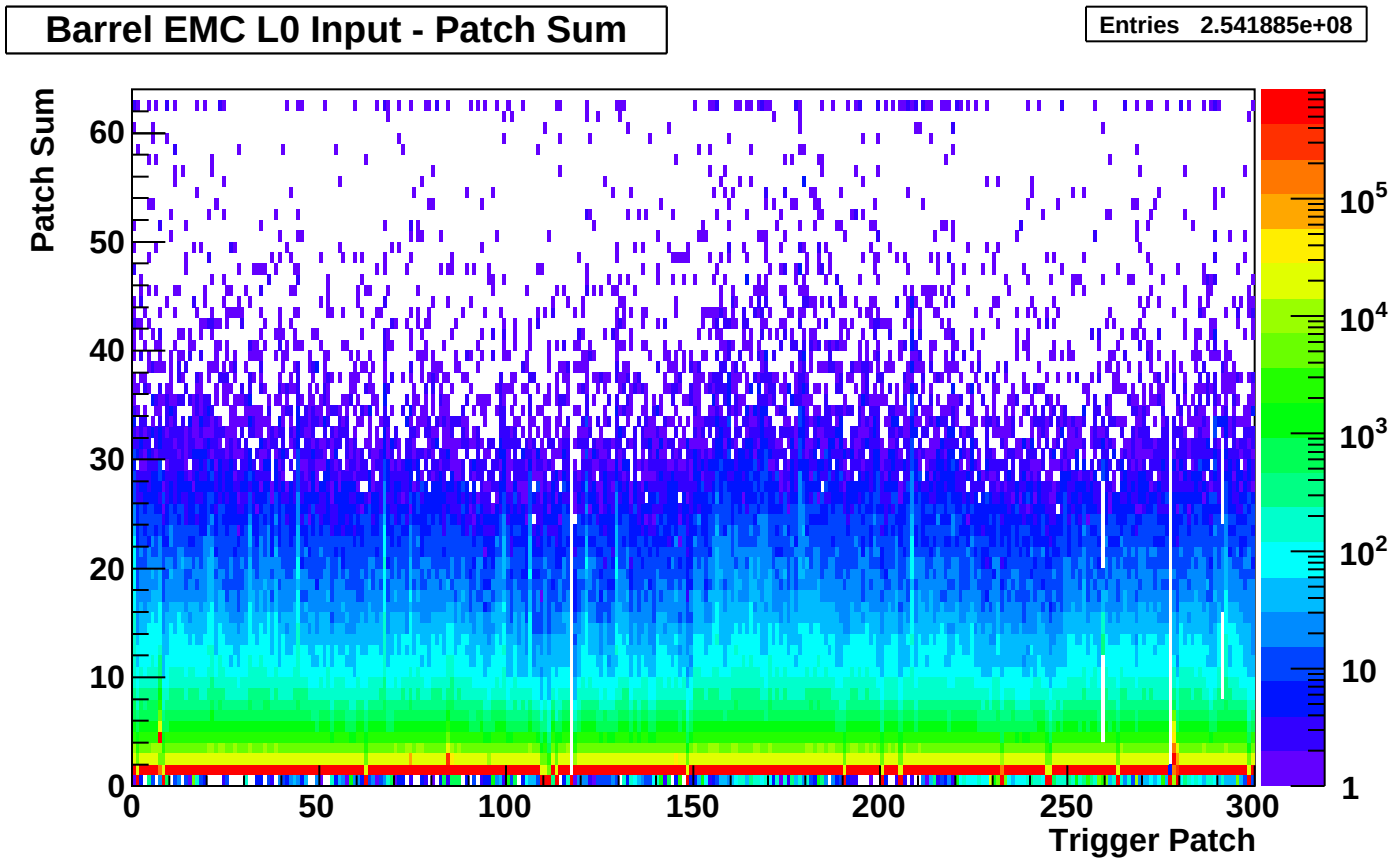
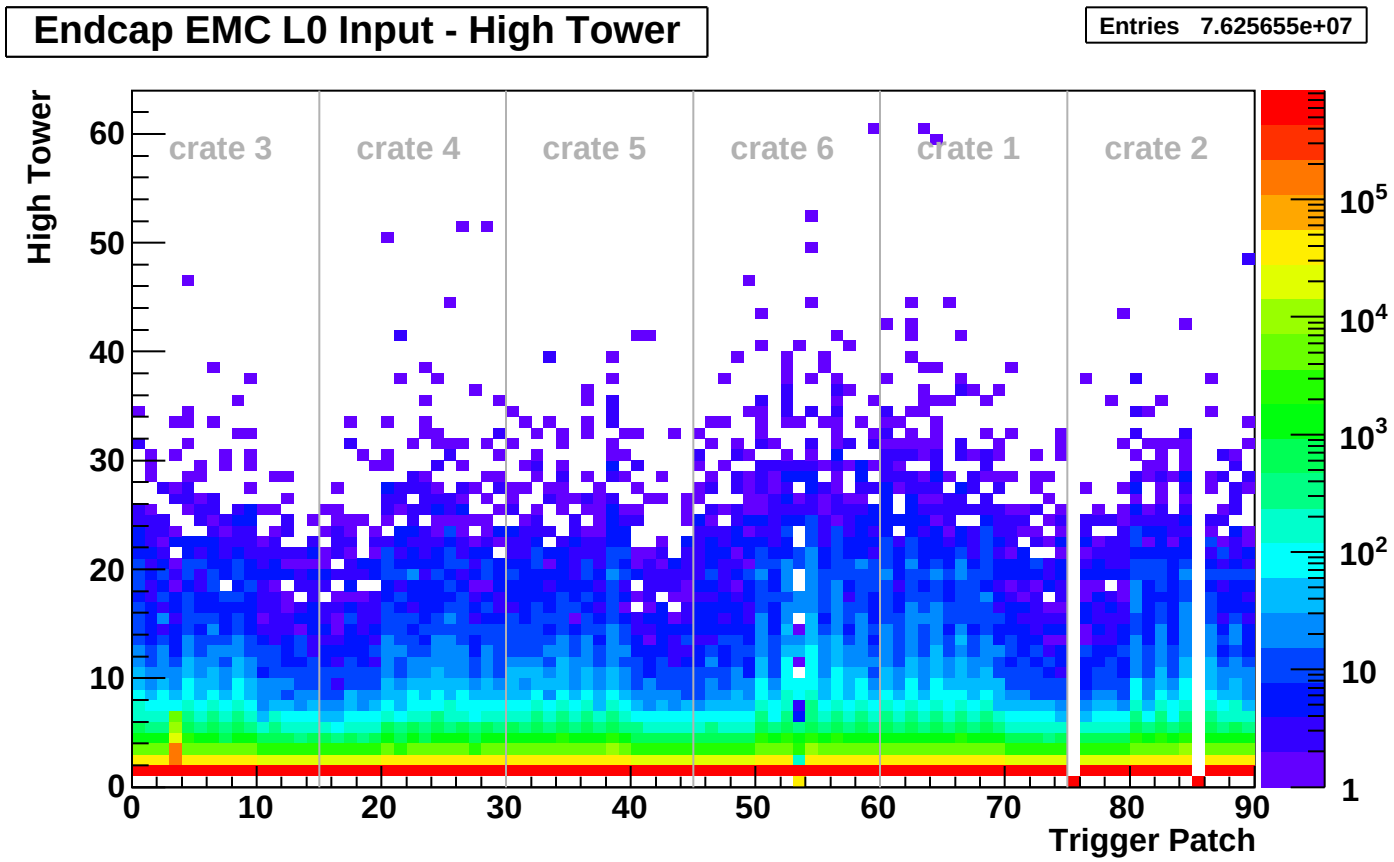
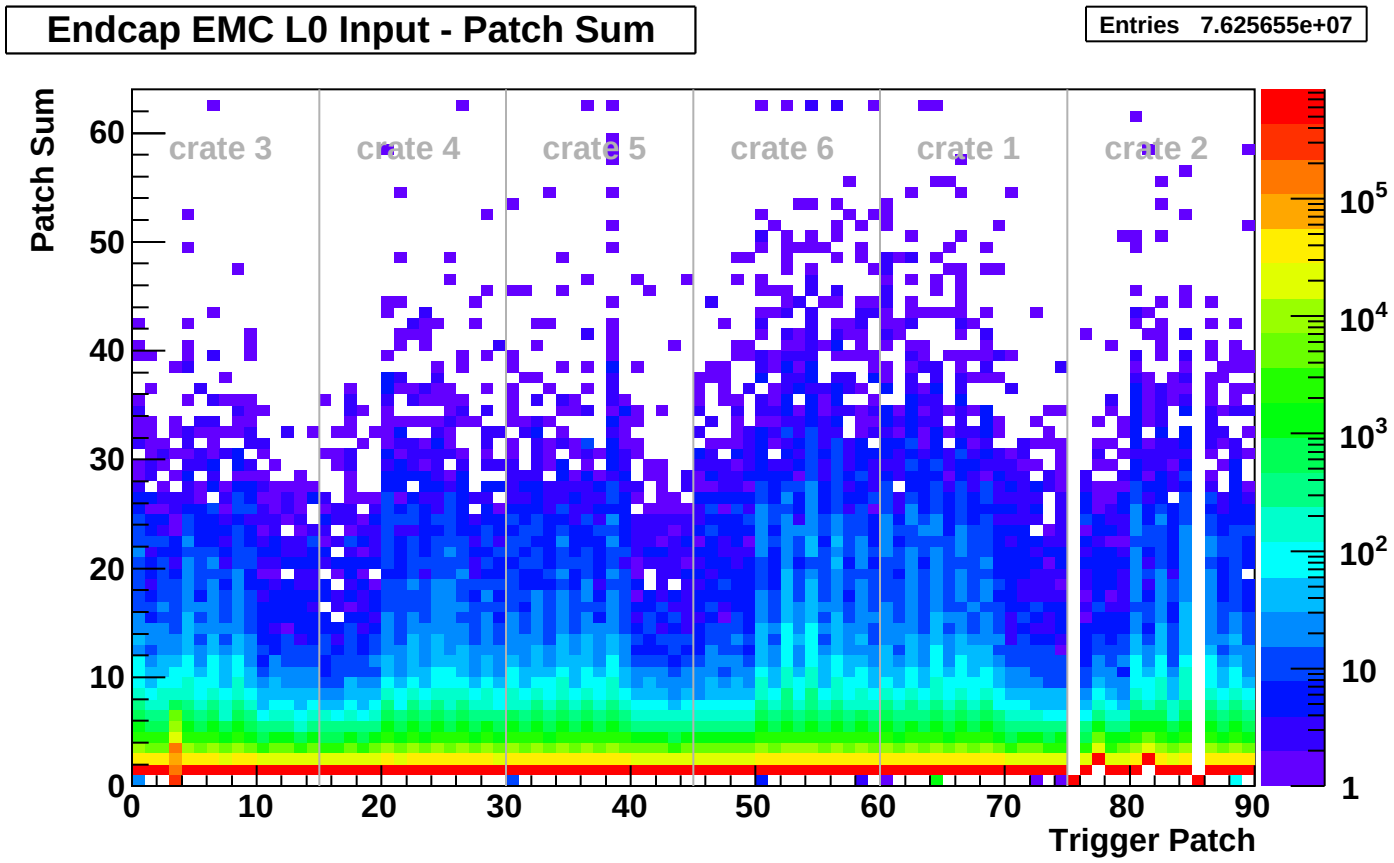
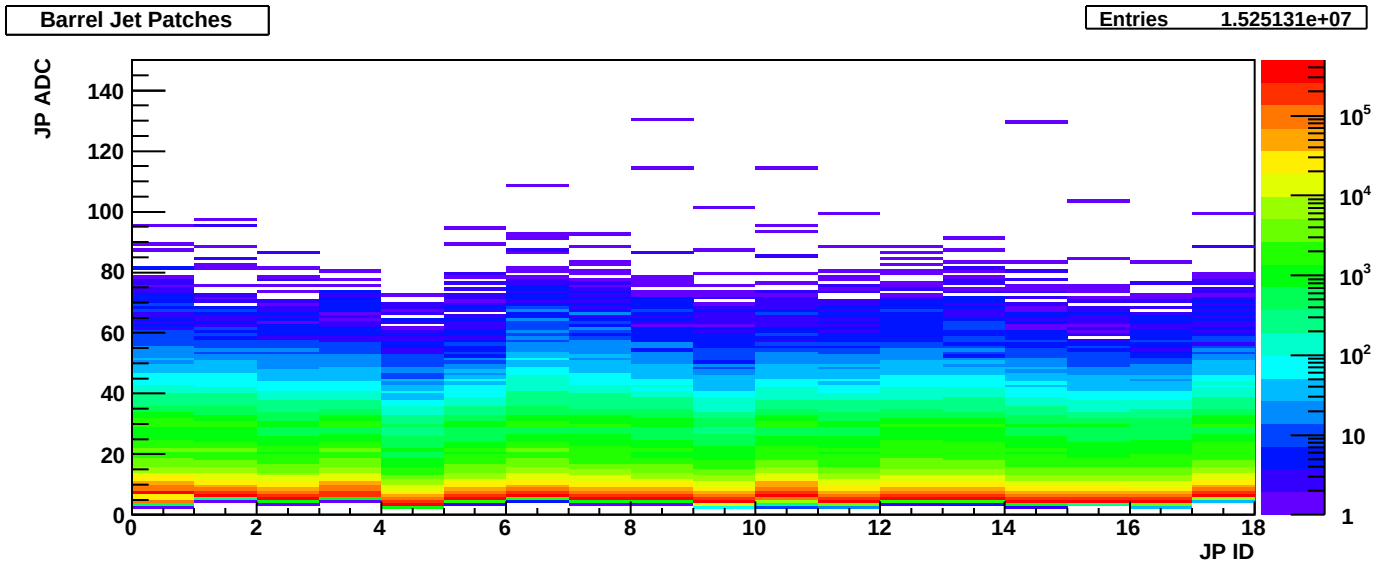
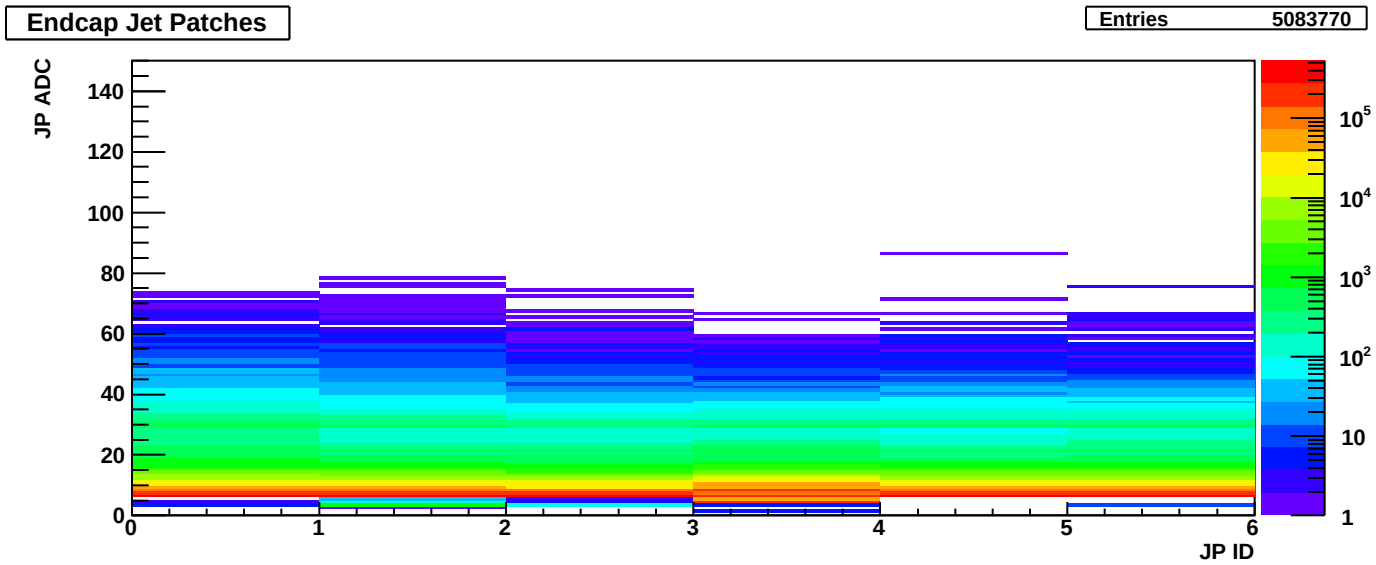

Barrel EMC L0 Input - High Tower
Entries 2.541885e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

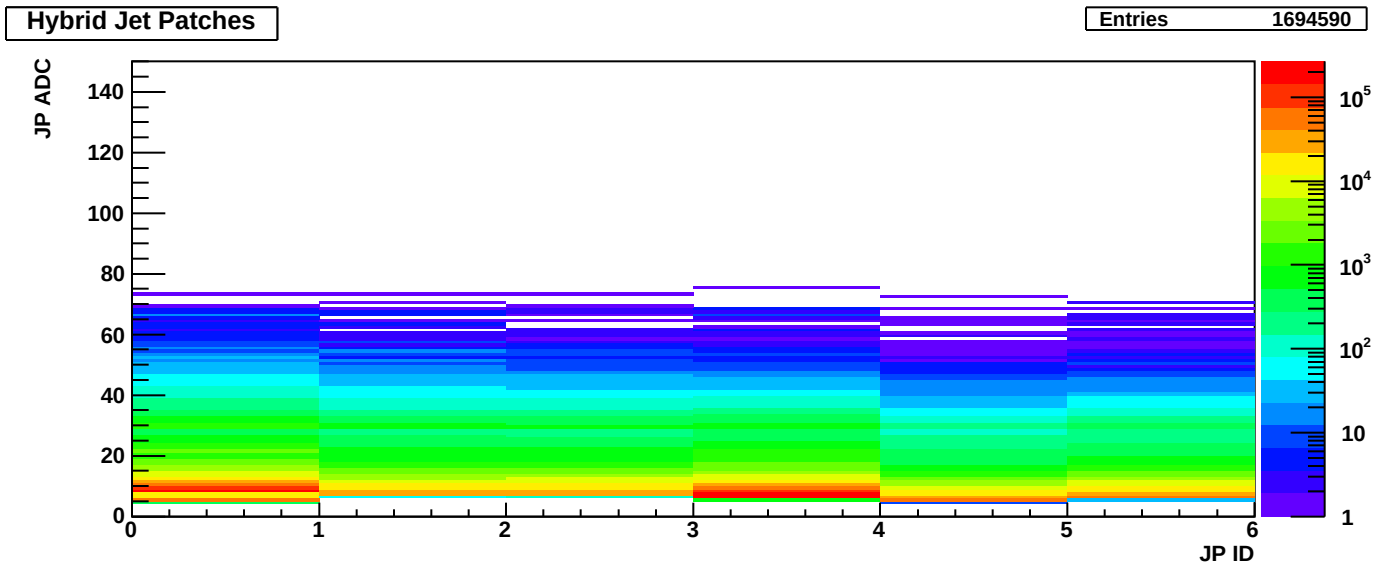

Barrel EMC L0 Input - Patch Sum
Entries 2.541885e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

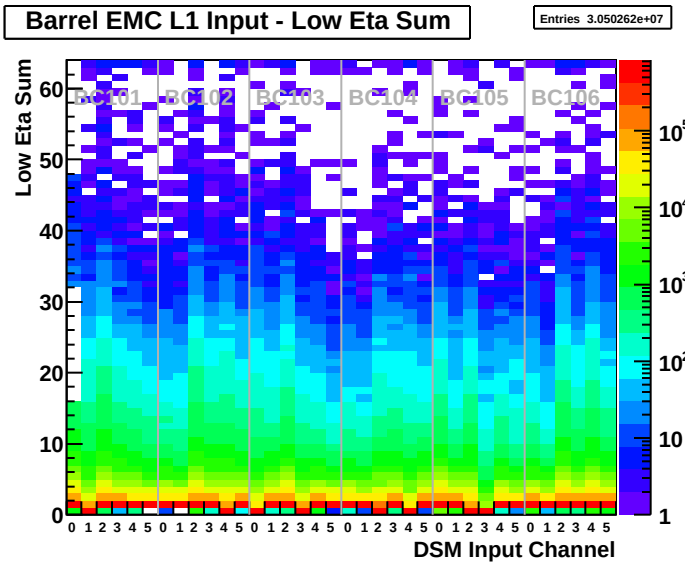

Endcap EMC L0 Input - High Tower
Entries 7.625655e+07
High Tower
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

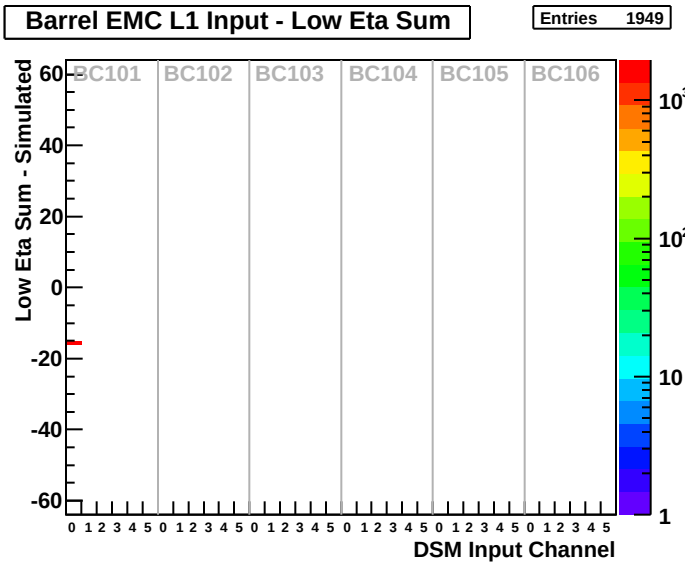

Endcap EMC L0 Input - Patch Sum
Entries 7.625655e+07
Patch Sum
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

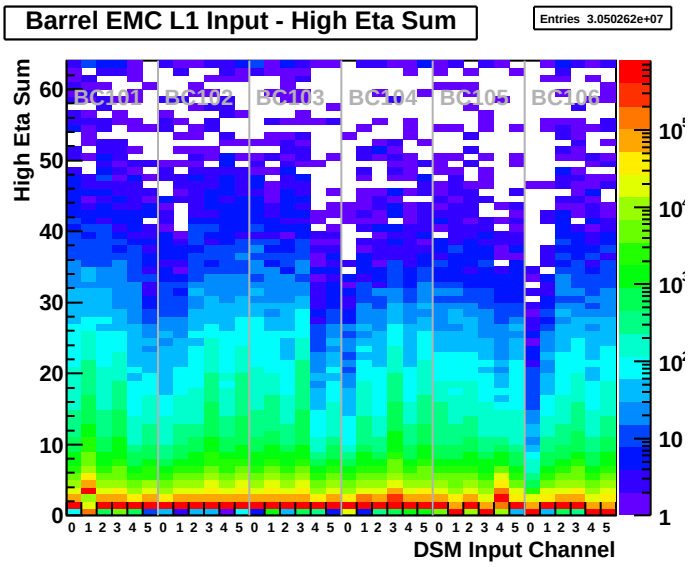

Barrel Jet Patches
Entries 1.525131e+07
JP ADC
JP ID

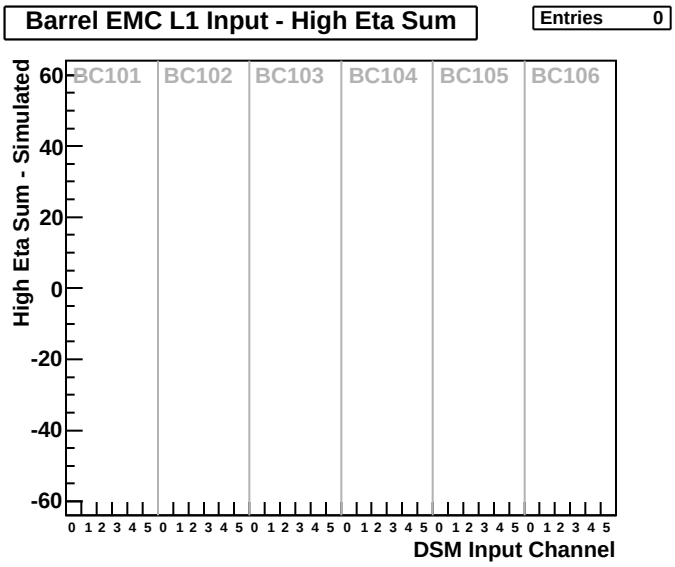

Endcap Jet Patches
Entries 5083770
JP ADC
JP ID

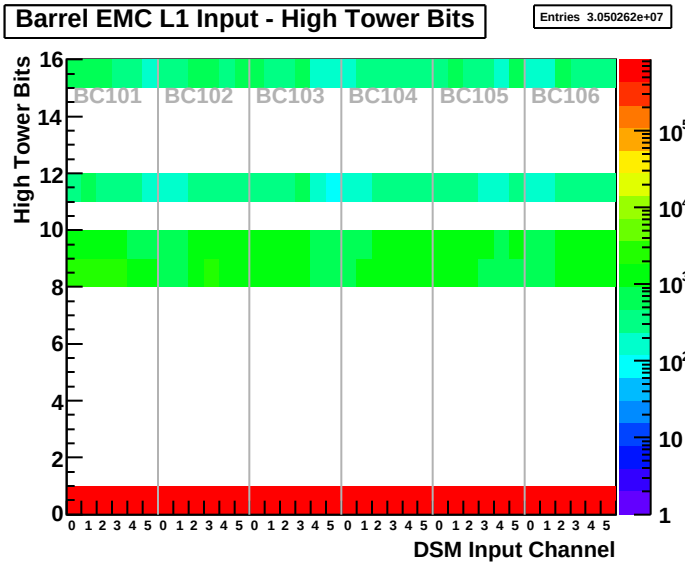

Hybrid Jet Patches
Entries 1694590
JP ADC
JP ID

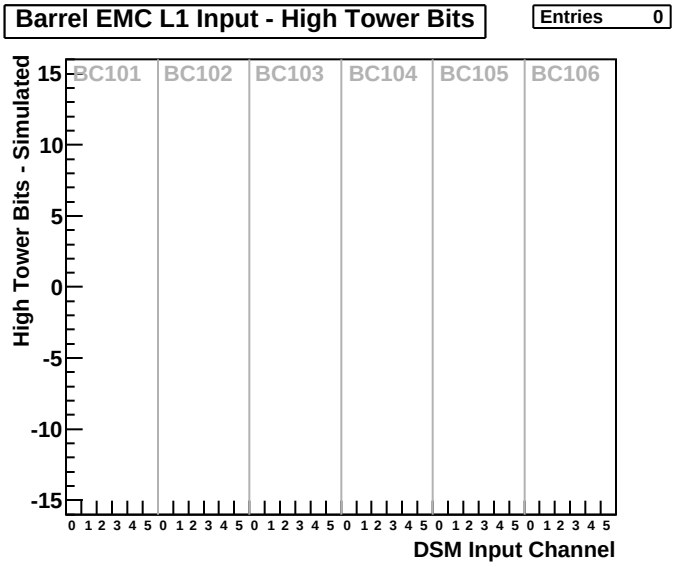

Barrel EMC L1 Input - Low Eta Sum
Entries 3.050262e+07
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

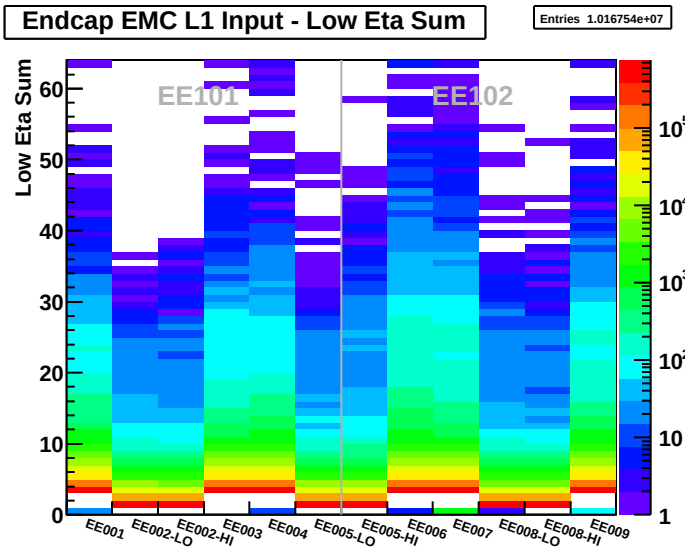

Barrel EMC L1 Input - Low Eta Sum
Entries 1949
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

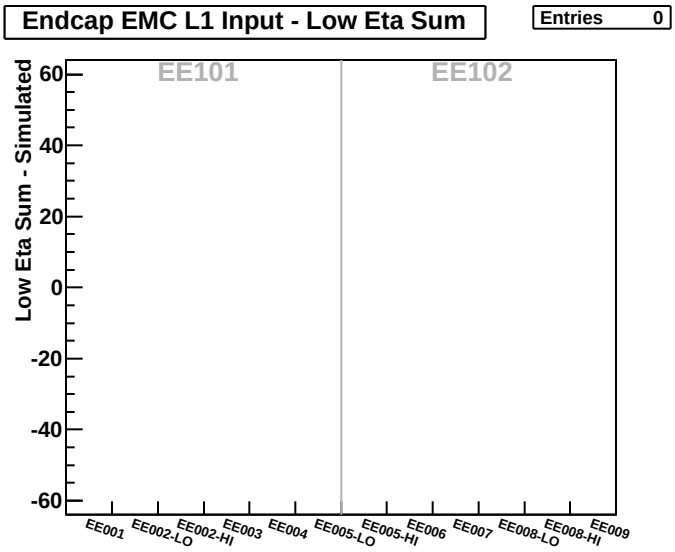

Barrel EMC L1 Input - High Eta Sum
Entries 3.050262e+07
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

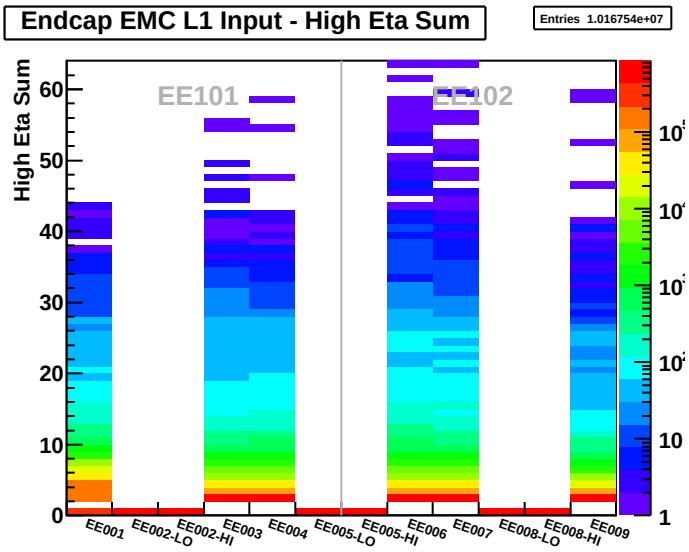

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

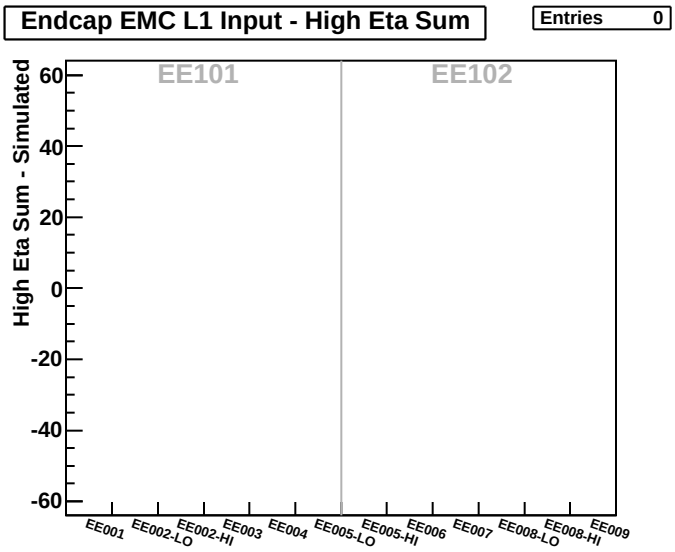

Barrel EMC L1 Input - High Tower Bits
Entries 3.050262e+07
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

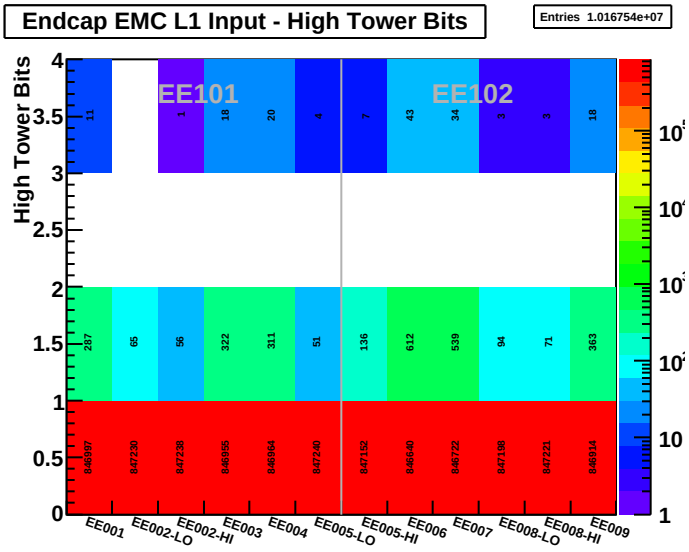

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

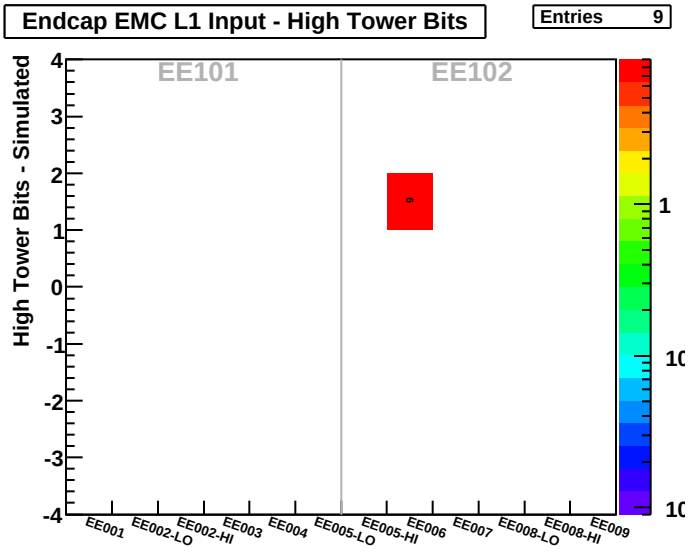

Endcap EMC L1 Input - Low Eta Sum
Entries 1.016754e+07
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

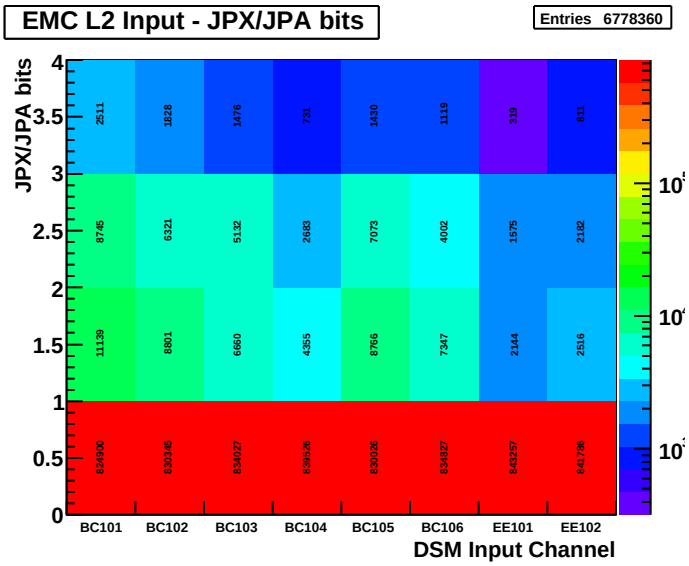

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

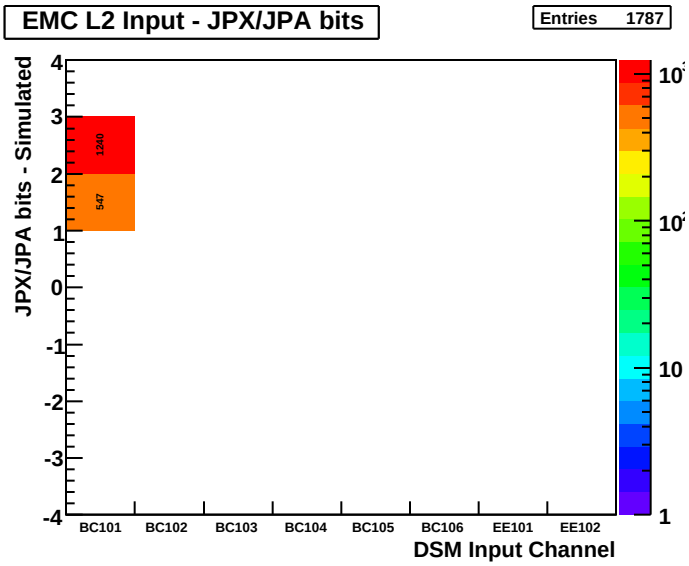

Endcap EMC L1 Input - High Eta Sum
Entries 1.016754e+07
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

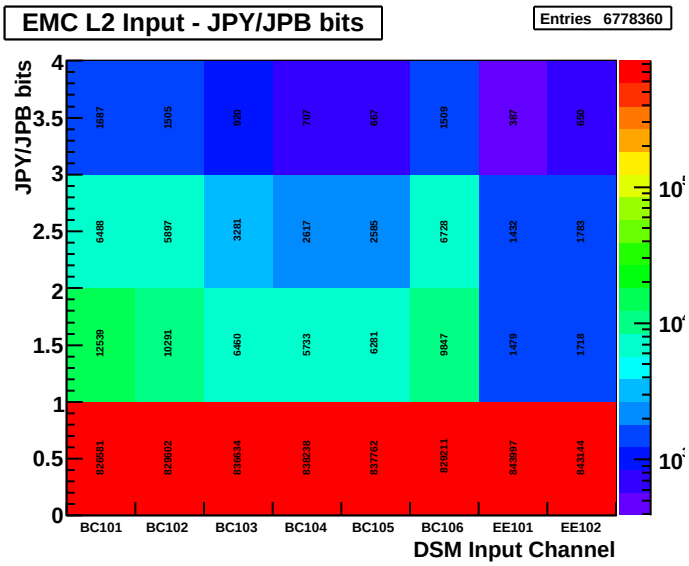

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

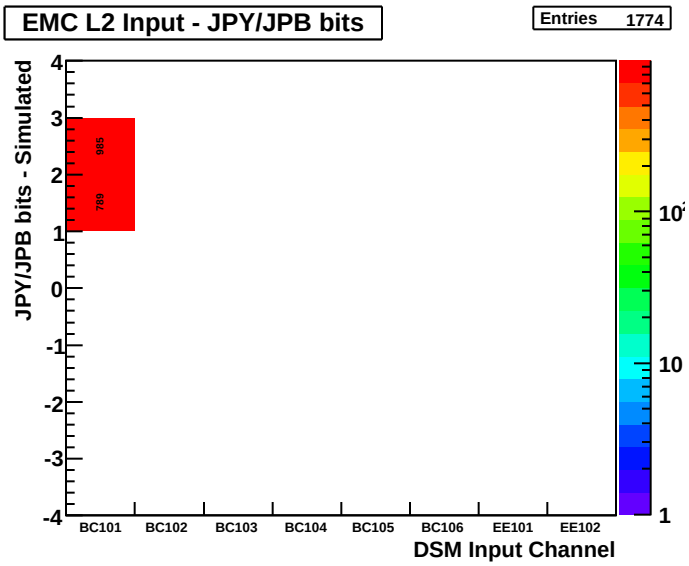

Endcap EMC L1 Input - High Tower Bits
Entries 1.016754e+07
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

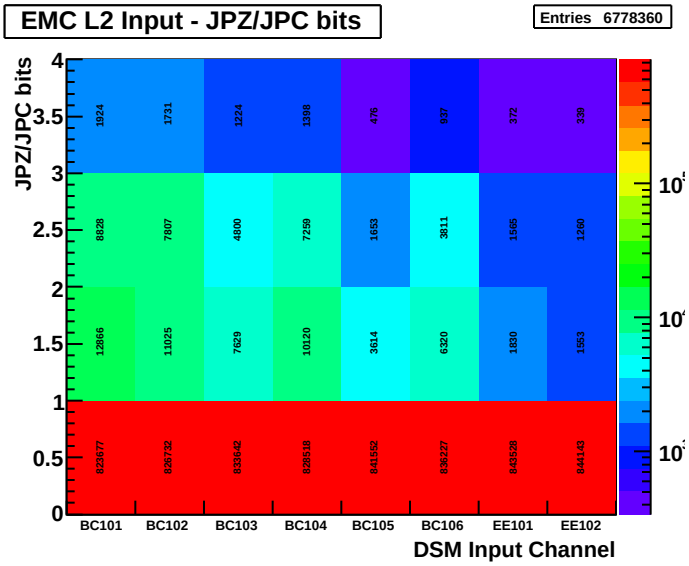

Endcap EMC L1 Input - High Tower Bits
Entries 9
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

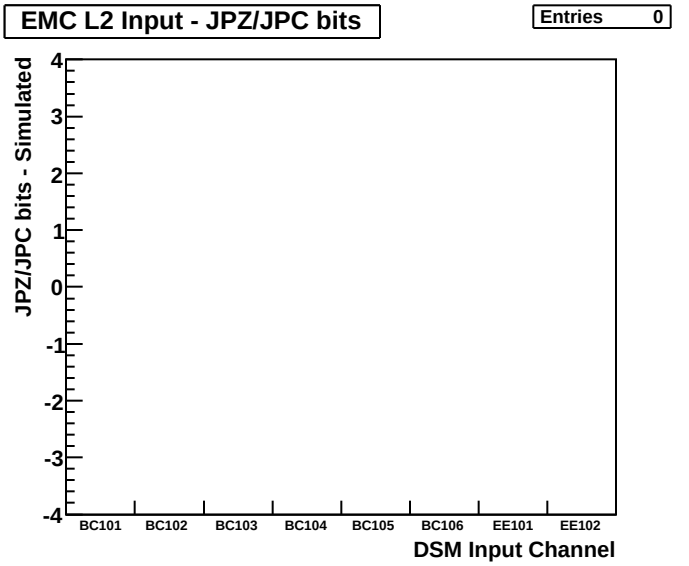

EMC L2 Input - JPX/JPA bits
Entries 6778360
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
2511 1828 1476 731 1430 1119 319 811
8745 6321 5132 2683 7073 4002 1575 2182
11139 8801 6660 4355 8766 7347 2144 2516
824900 833345 834027 839526 830026 834827 842257 841786

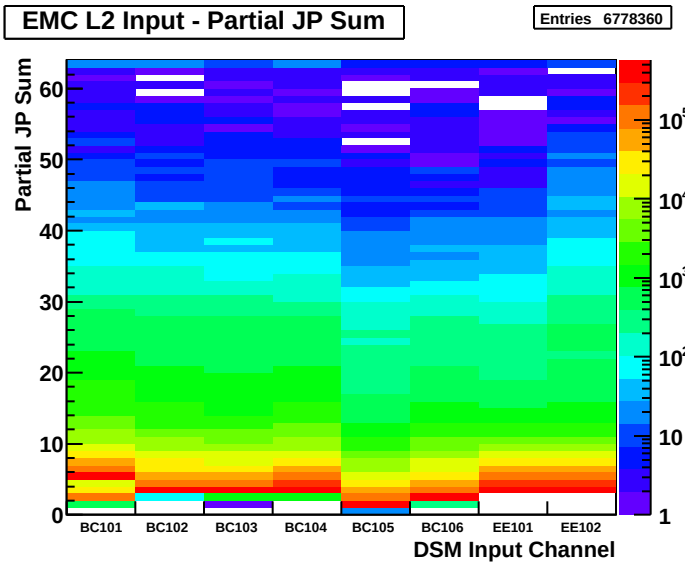

EMC L2 Input - JPX/JPA bits
Entries 1787
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1240
547

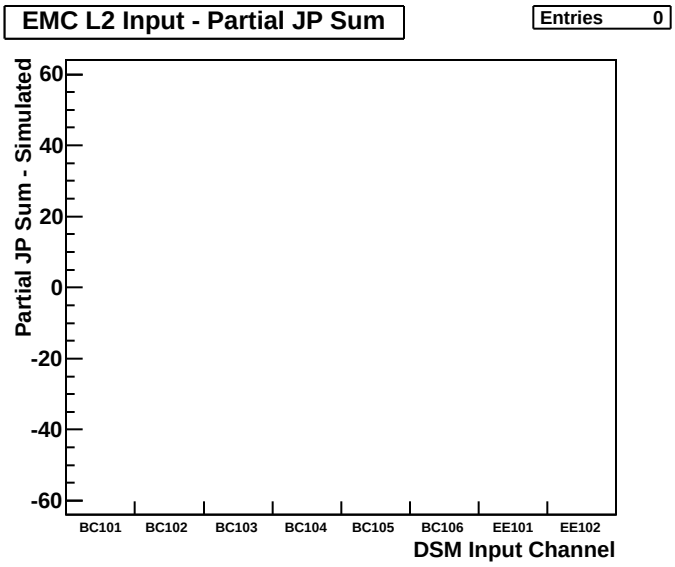

EMC L2 Input - JPY/JPB bits
Entries 6778360
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1687 1505 920 707 667 1509 387 650
6488 5897 3281 2617 2585 6728 1432 1783
12539 10291 6460 5733 6281 9947 1479 1718
826581 828602 836634 838238 837762 829211 843997 843144

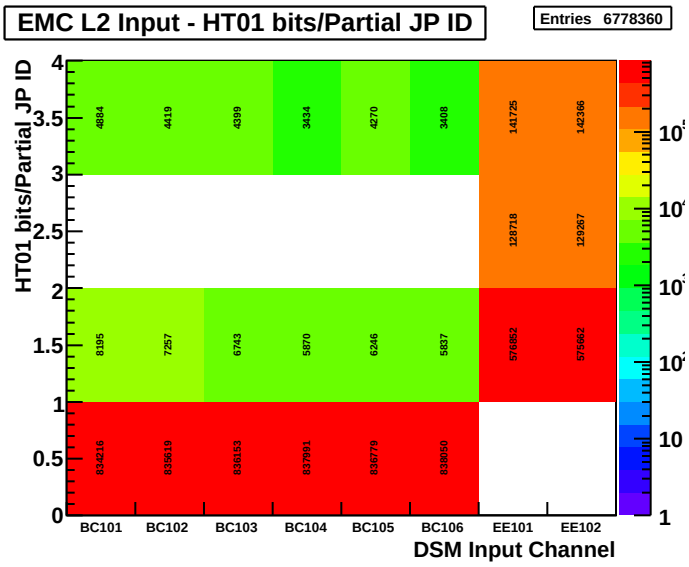

EMC L2 Input - JPY/JPB bits
Entries 1774
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
985
789

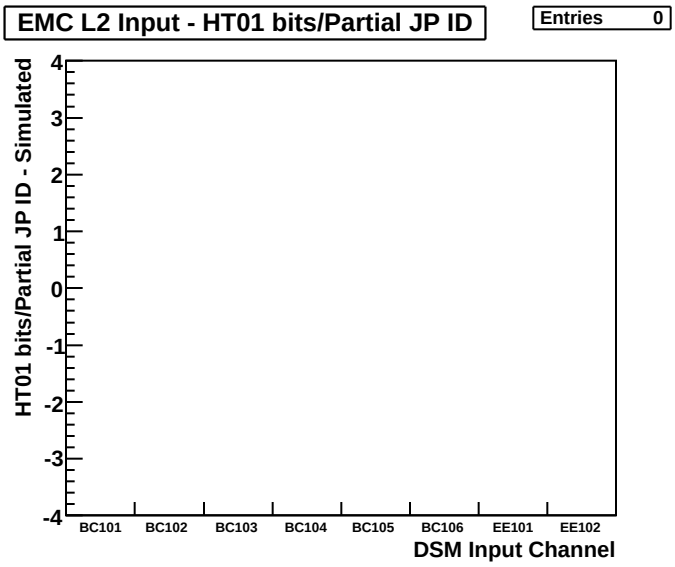

EMC L2 Input - JPZ/JPC bits
Entries 6778360
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1924 1731 1224 1398 476 937 372 339
8828 7607 4800 7259 1653 3611 1565 1260
12866 11025 7629 10120 3614 6320 1830 1553
823677 826732 833542 828518 841552 836227 843528 844143

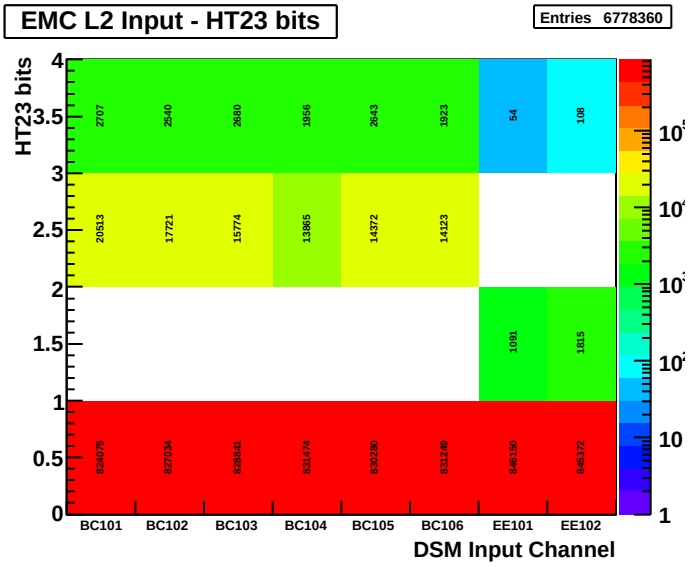

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

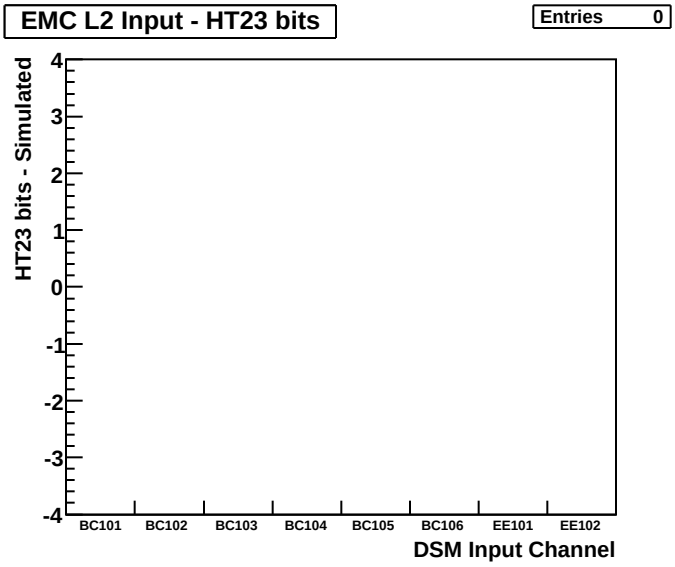

EMC L2 Input - Partial JP Sum
Entries 6778360
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

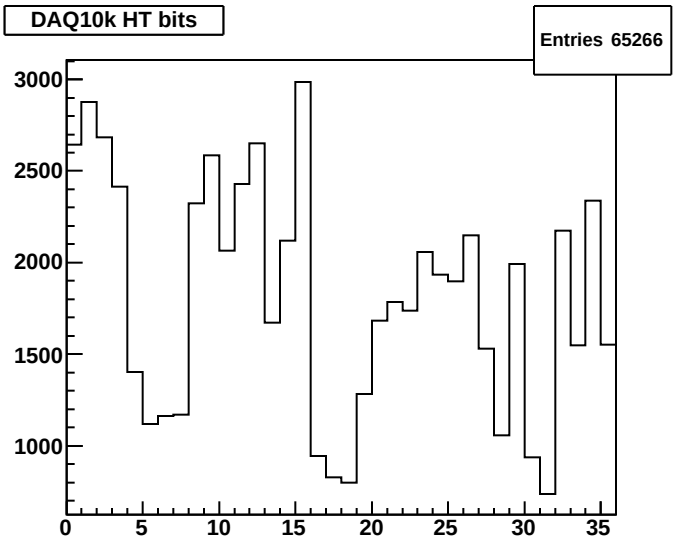

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

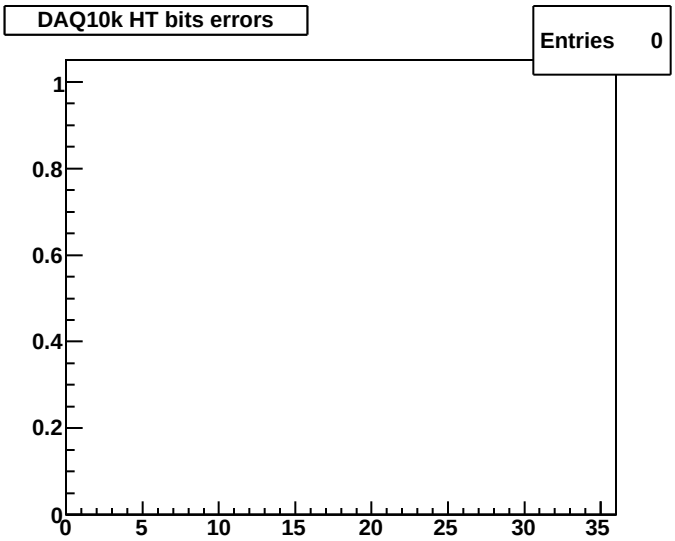

EMC L2 Input - HT01 bits/Partial JP ID
Entries 6778360
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

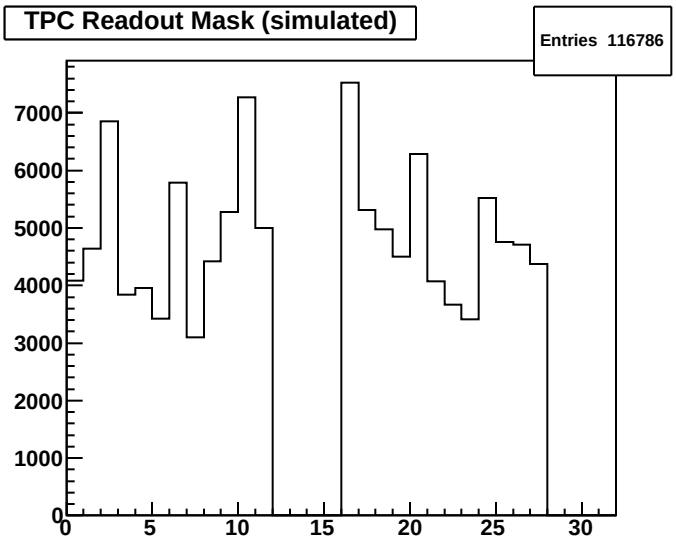

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

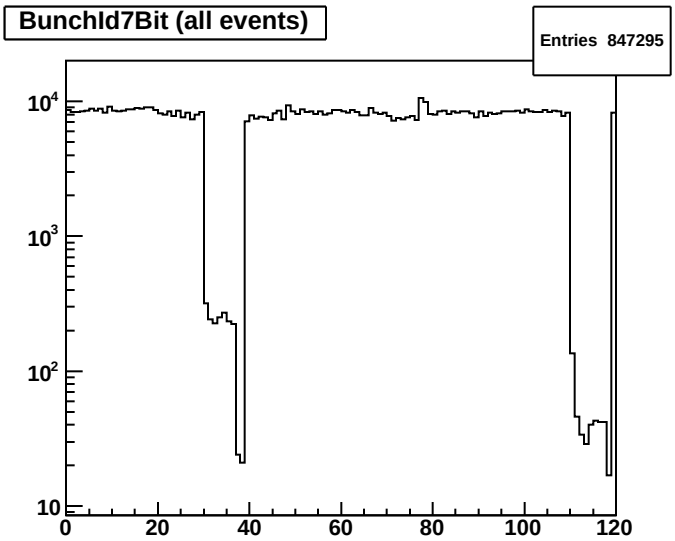

EMC L2 Input - HT23 bits
Entries 6778360
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

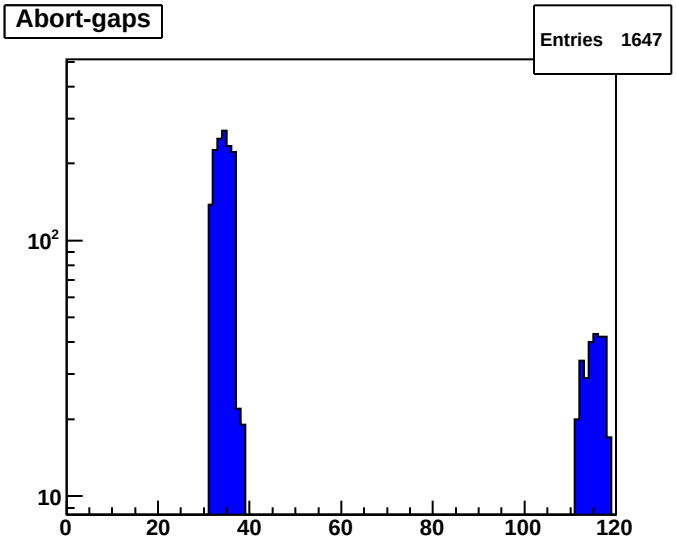

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

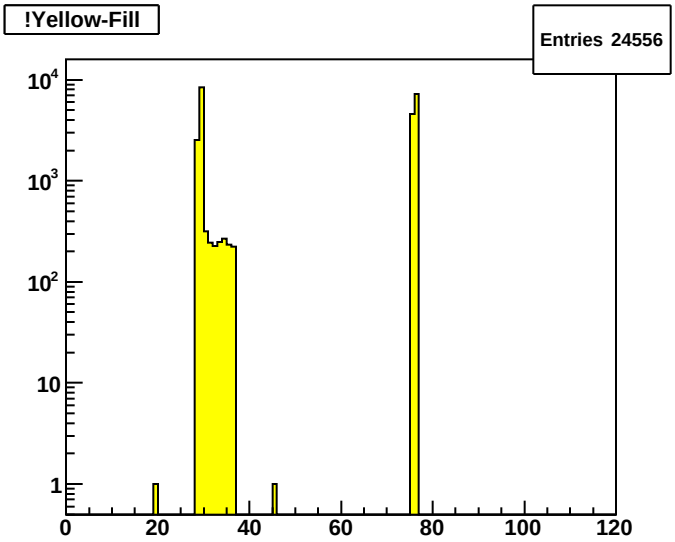

DAQ10k HT bits
Entries 65266
3000
2500
2000
1500
1000
0
5
10
15
20
25
30
35

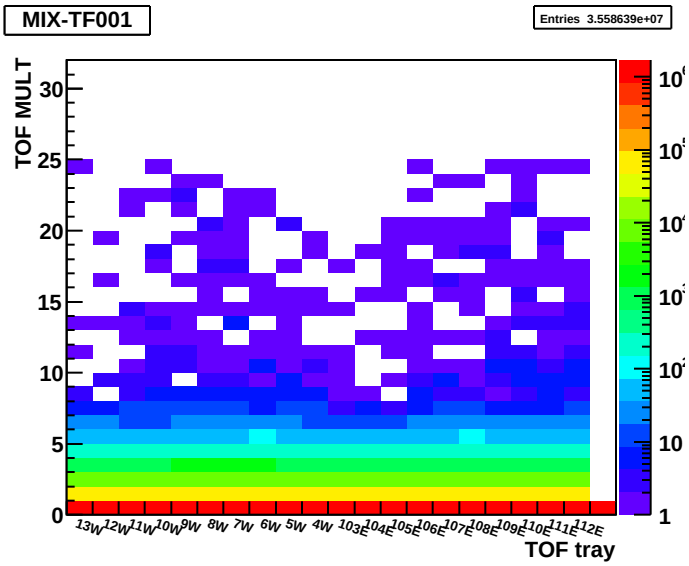

DAQ10k HT bits errors
Entries 0
1
0.8
0.6
0.4
0.2
0
0
5
10
15
20
25
30
35

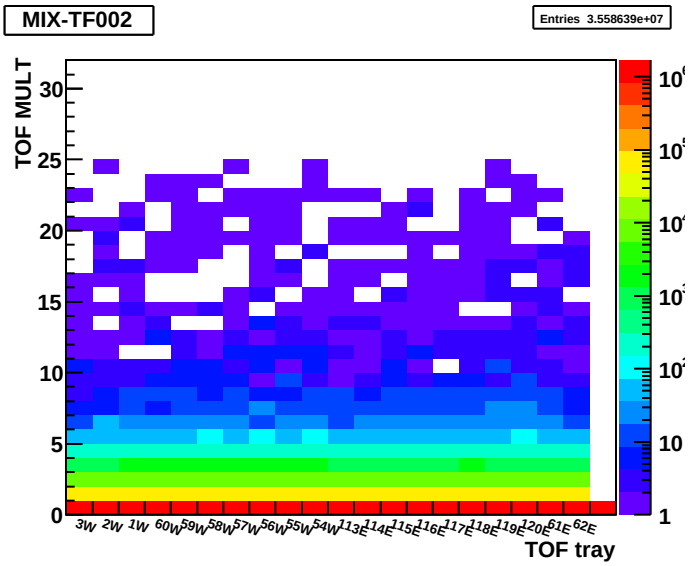

TPC Readout Mask (simulated)
Entries 116786
7000
6000
5000
4000
3000
2000
1000
0
0
5
10
15
20
25
30

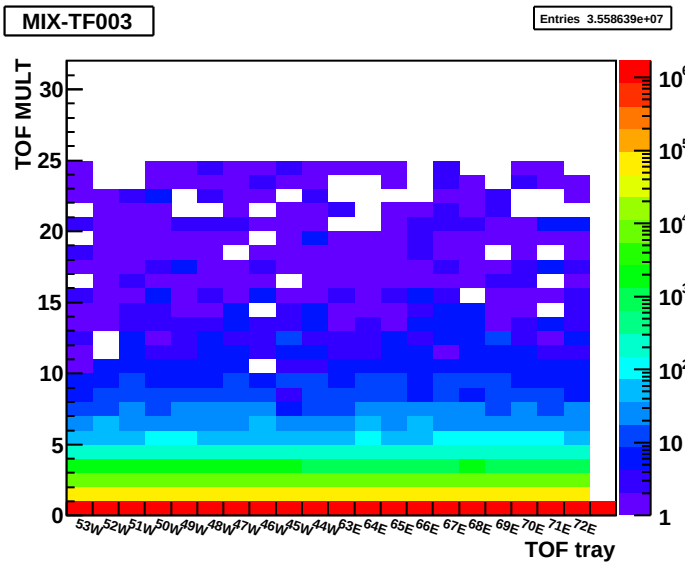

BunchId7Bit (all events)
Entries 847295
10^4
10^3
10^2
10
0
20
40
60
80
100
120

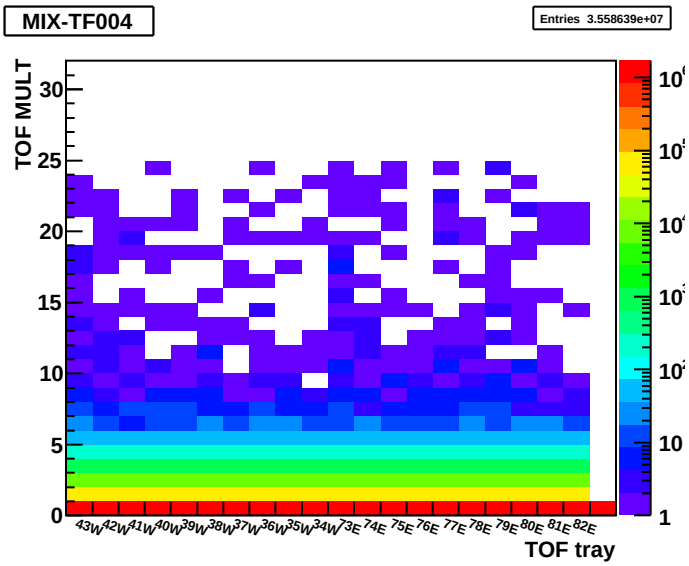

Abort-gaps
Entries 1647
10^2
10
0
20
40
60
80
100
120

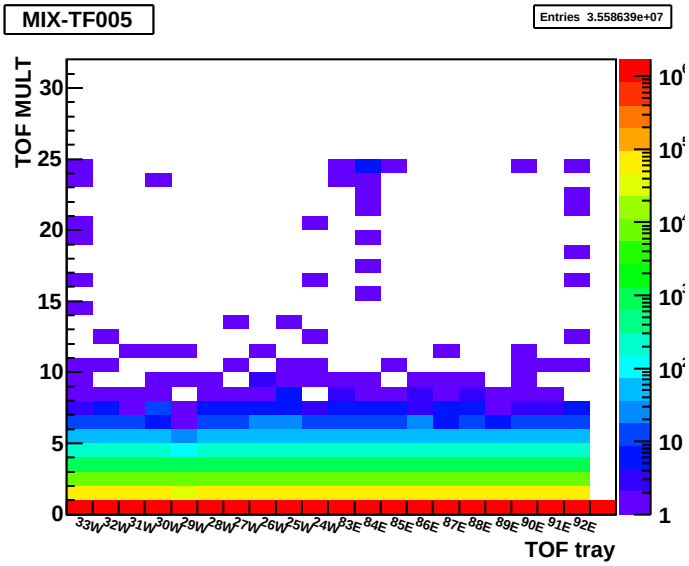

!Yellow-Fill
Entries 24556
10^4
10^3
10^2
10
1
0
20
40
60
80
100
120

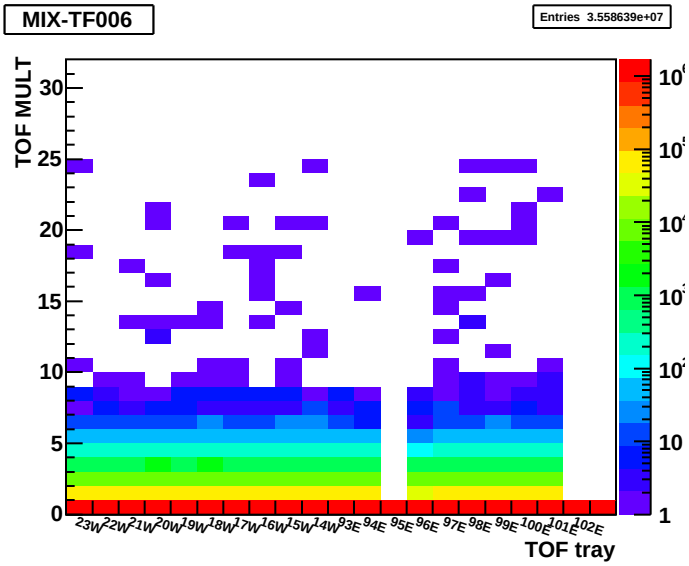

MIX-TF001
Entries 3.558639e+07
TOF MULT
TOF tray

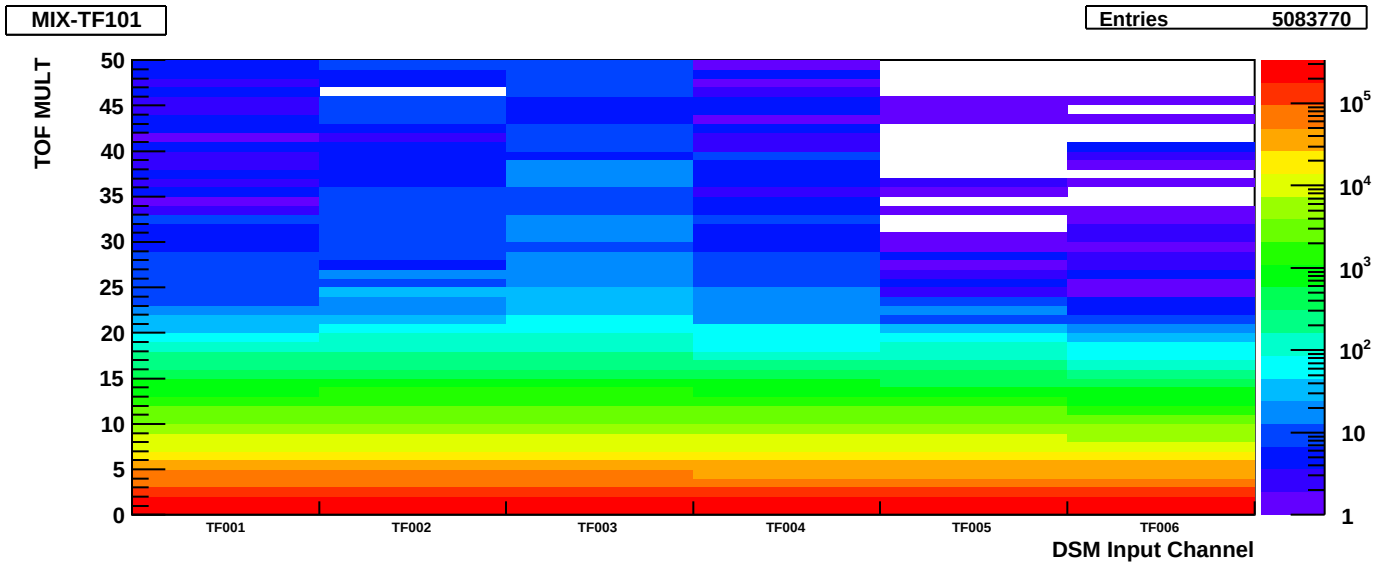

MIX-TF002
Entries 3.558639e+07
TOF MULT
TOF tray

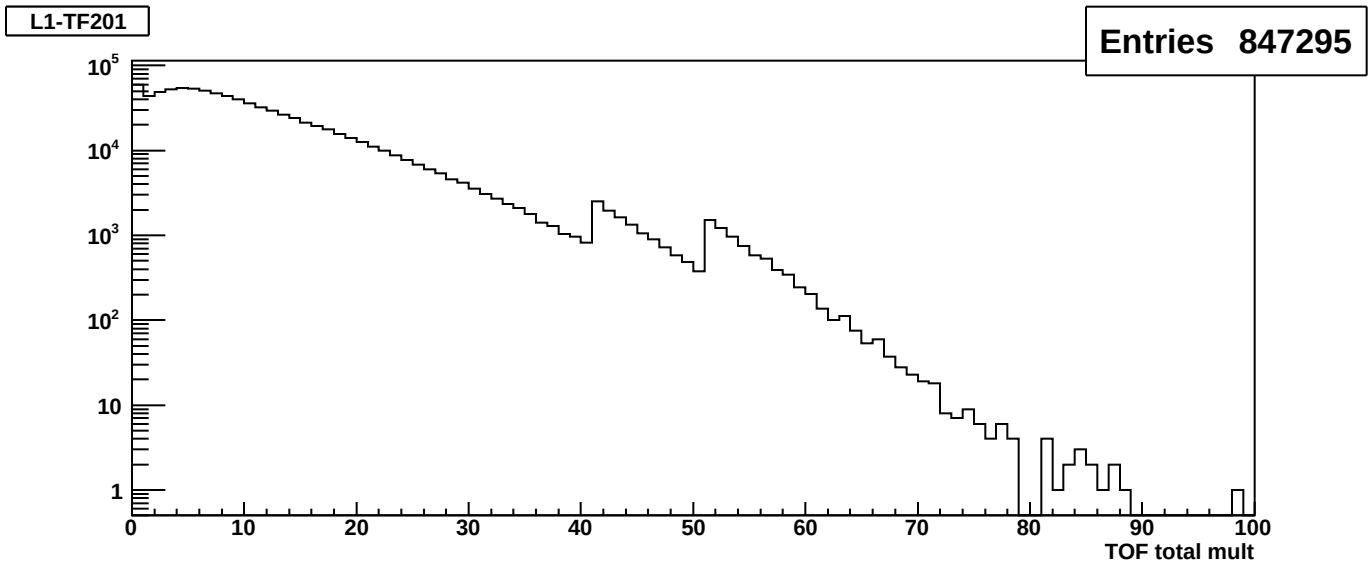

MIX-TF003
Entries 3.558639e+07
TOF MULT
TOF tray

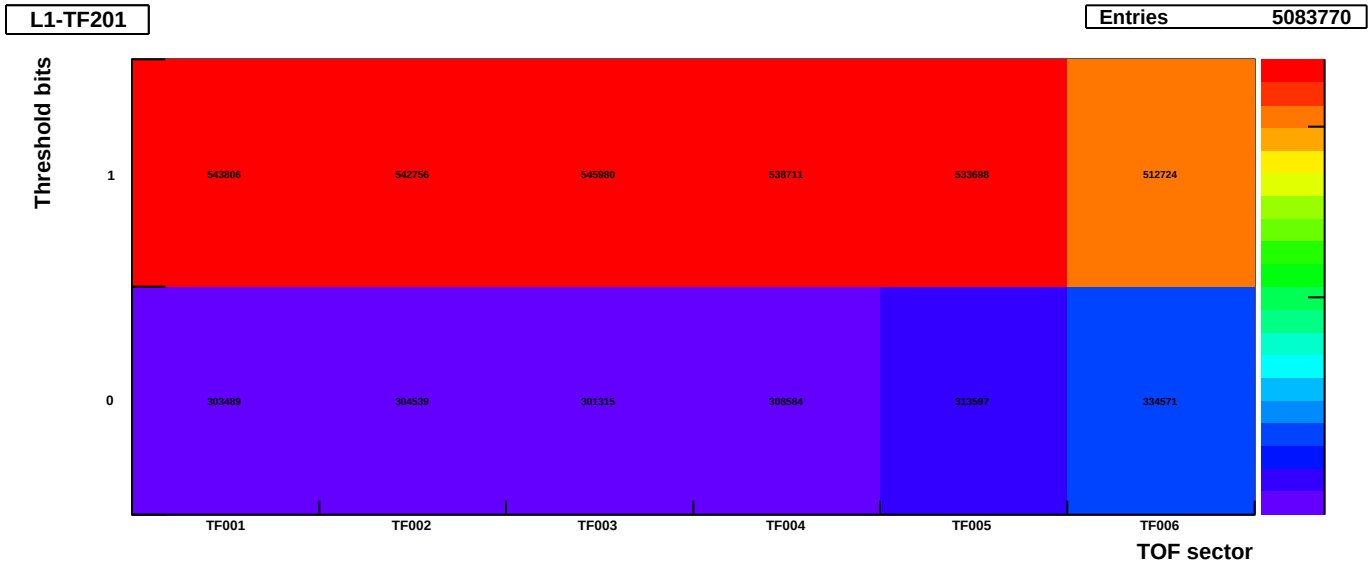

MIX-TF004
Entries 3.558639e+07
TOF MULT
TOF tray

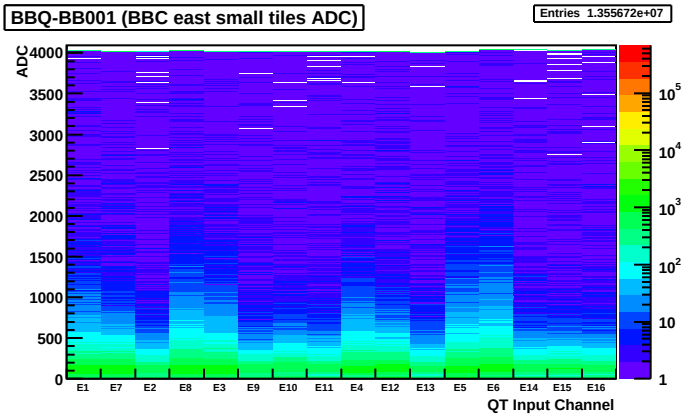

MIX-TF005
Entries 3.558639e+07
TOF MULT
TOF tray

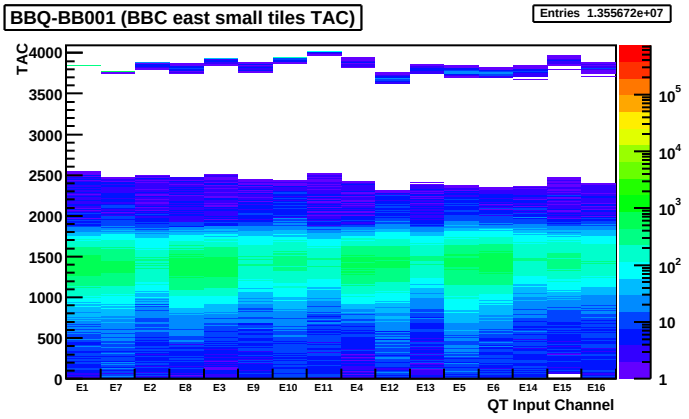

MIX-TF006
Entries 3.558639e+07
TOF MULT
TOF tray

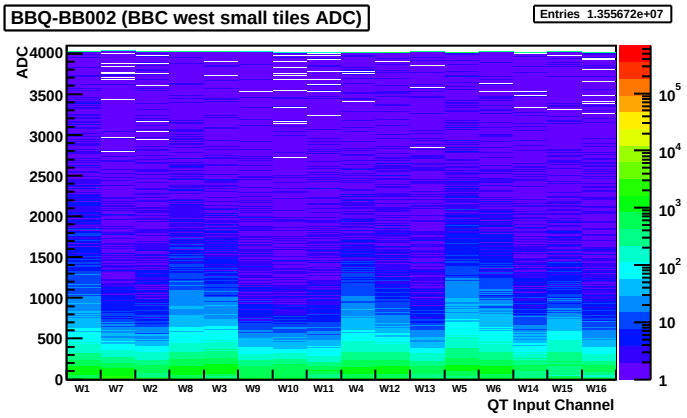

MIX-TF101
Entries 5083770
TOF MULT
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

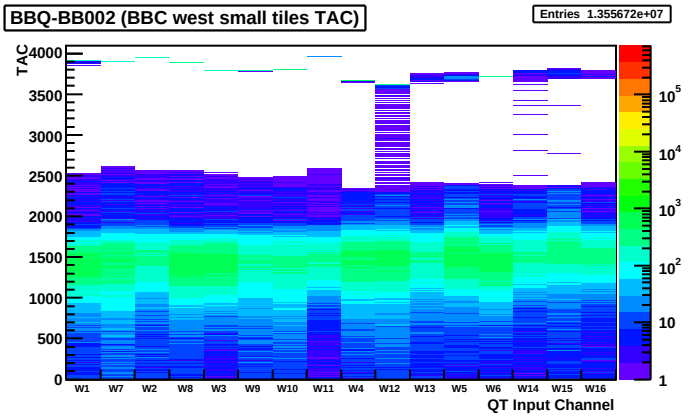

L1-TF201
Entries 847295
TOF total mult

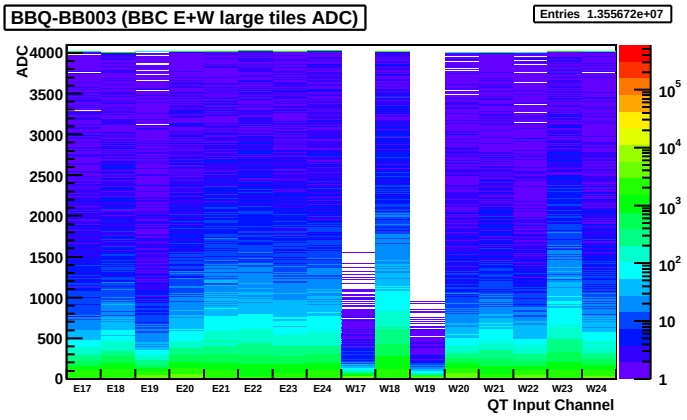

L1-TF201
Entries 5083770
Threshold bits
543806
542756
545980
538711
533698
512724
303489
304539
301315
308584
313597
334571
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

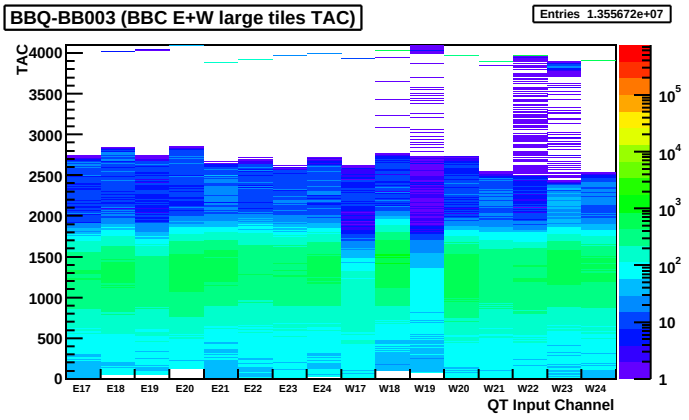

BBQ-BB001 (BBC east small tiles ADC)
Entries 1.355672e+07
ADC
QT Input Channel

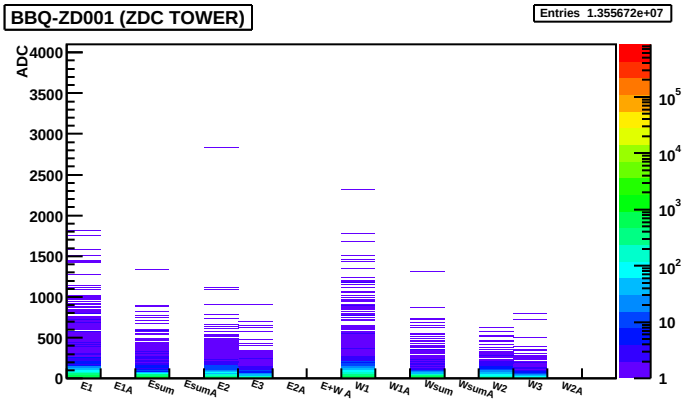

BBQ-BB001 (BBC east small tiles TAC)
Entries 1.355672e+07
TAC
QT Input Channel

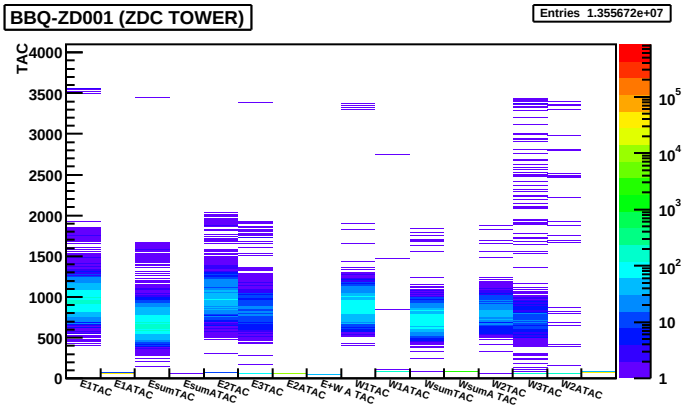

BBQ-BB002 (BBC west small tiles ADC)
Entries 1.355672e+07
ADC
QT Input Channel

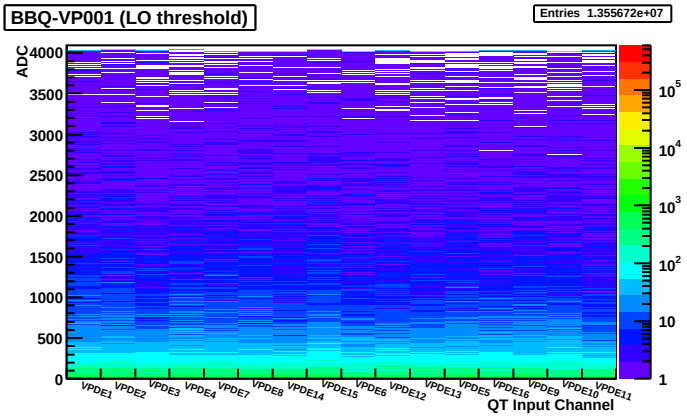

BBQ-BB002 (BBC west small tiles TAC)
Entries 1.355672e+07
TAC
QT Input Channel

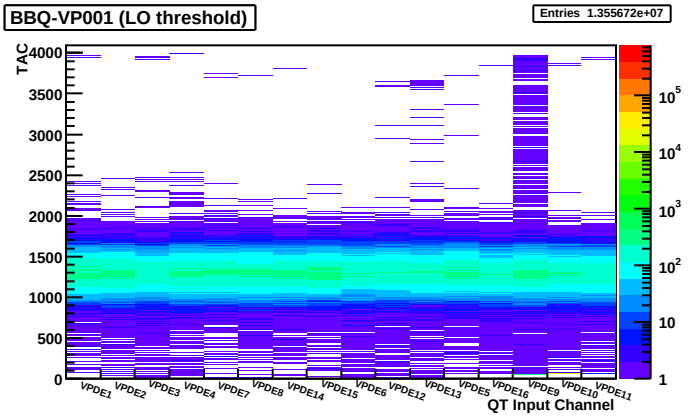

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 1.355672e+07
ADC
QT Input Channel

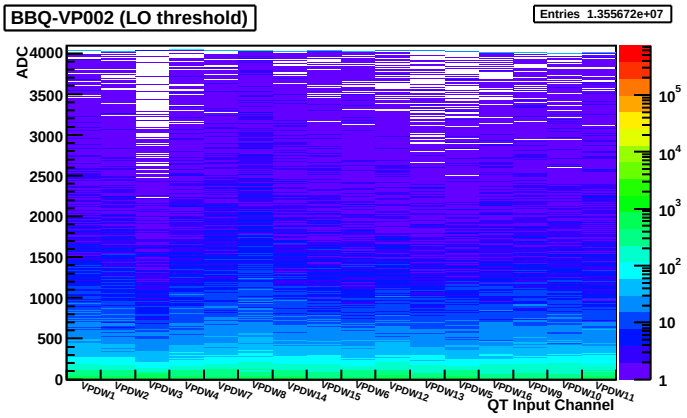

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 1.355672e+07
TAC
QT Input Channel

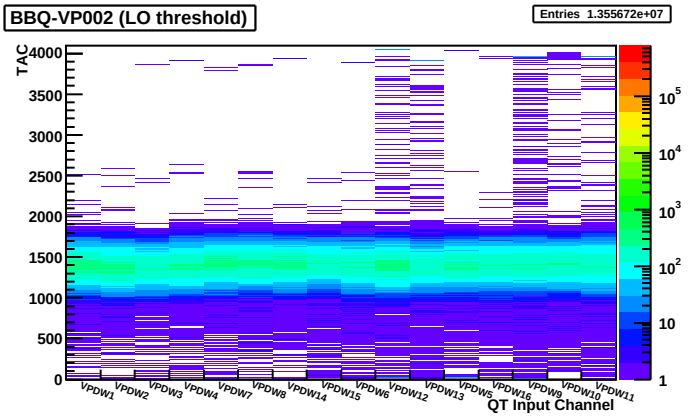

BBQ-ZD001 (ZDC TOWER)
Entries 1.355672e+07
ADC

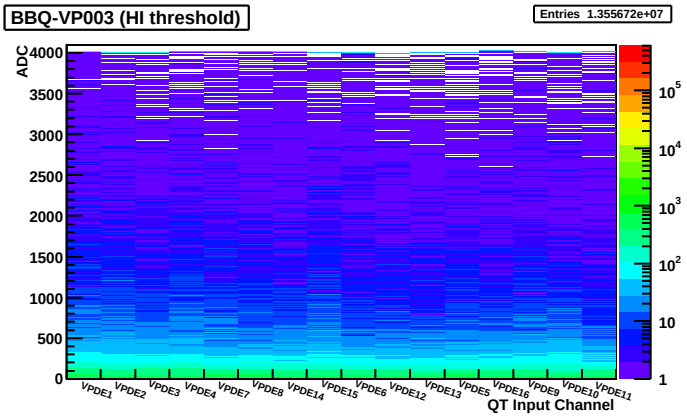

BBQ-ZD001 (ZDC TOWER)
Entries 1.355672e+07
TAC

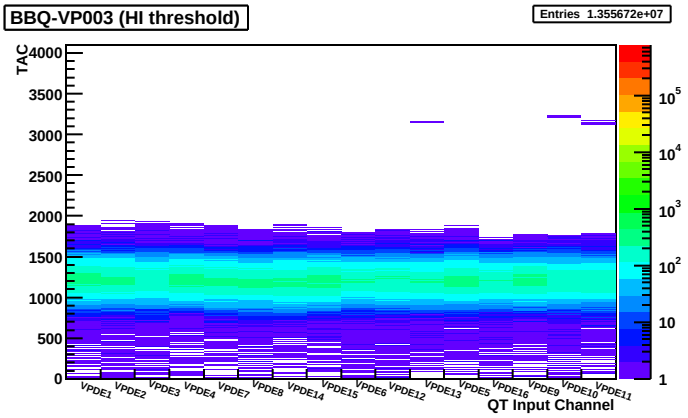

BBQ-VP001 (LO threshold)
Entries 1.355672e+07
ADC
QT Input Channel

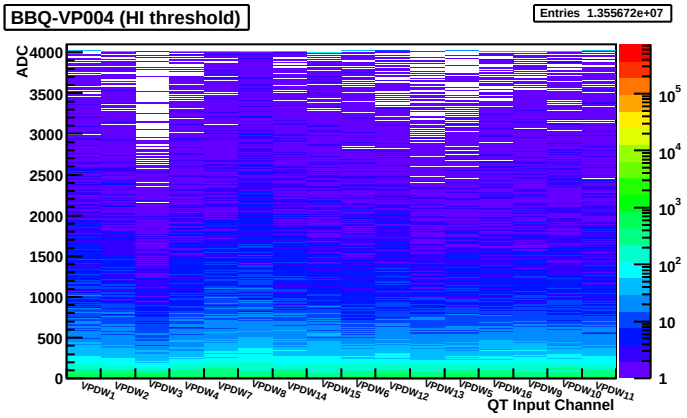

BBQ-VP001 (LO threshold)
Entries 1.355672e+07
TAC
QT Input Channel

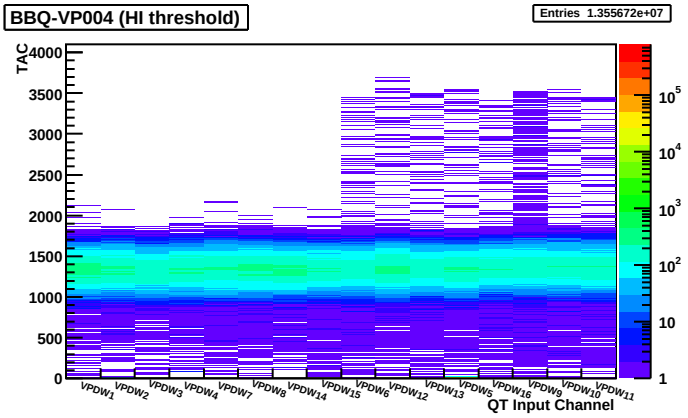

BBQ-VP002 (LO threshold)
Entries 1.355672e+07
ADC
QT Input Channel

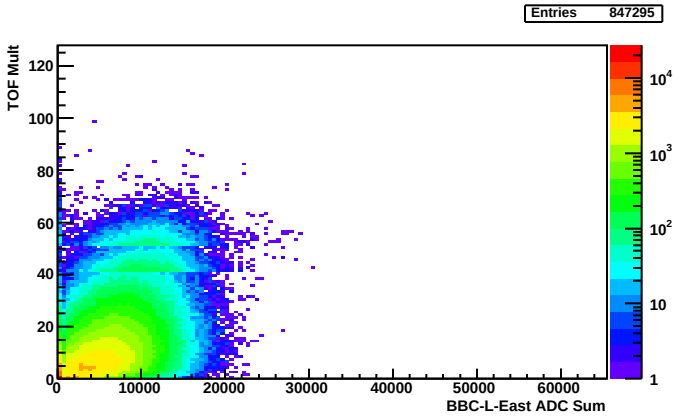

BBQ-VP002 (LO threshold)
Entries 1.355672e+07
TAC
QT Input Channel

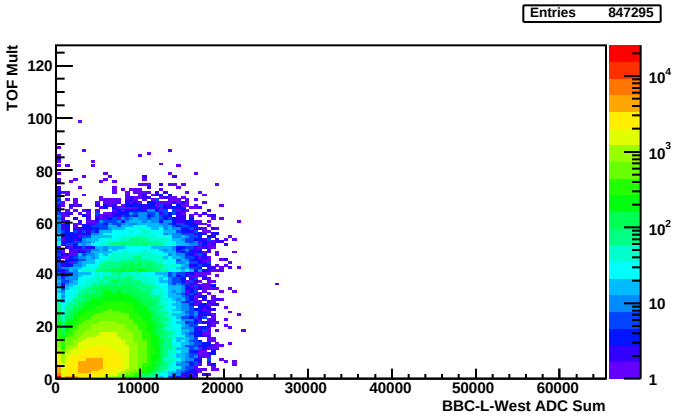

BBQ-VP003 (HI threshold)
Entries 1.355672e+07
ADC
QT Input Channel

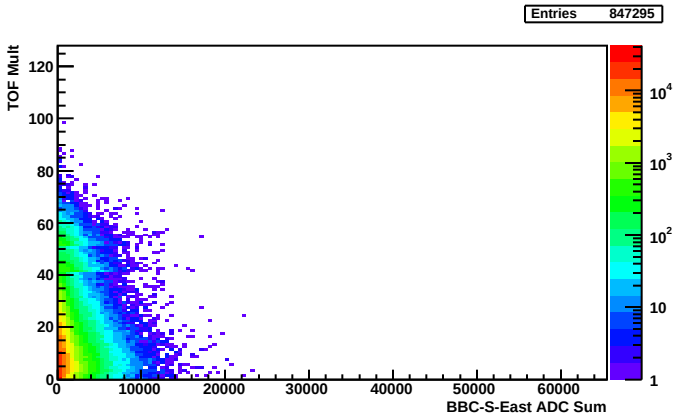

BBQ-VP003 (HI threshold)
Entries 1.355672e+07
TAC
QT Input Channel

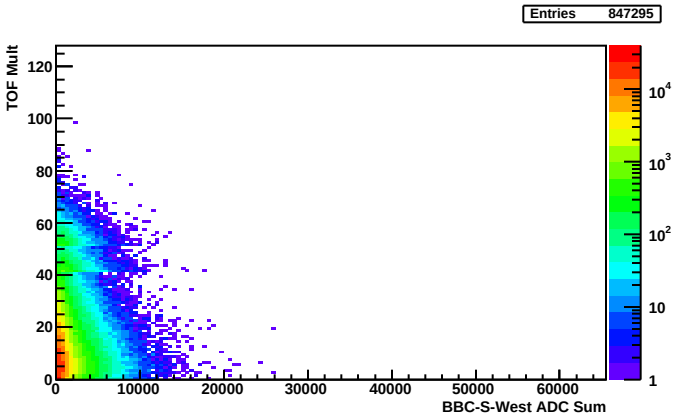

BBQ-VP004 (HI threshold)
Entries 1.355672e+07
ADC
QT Input Channel

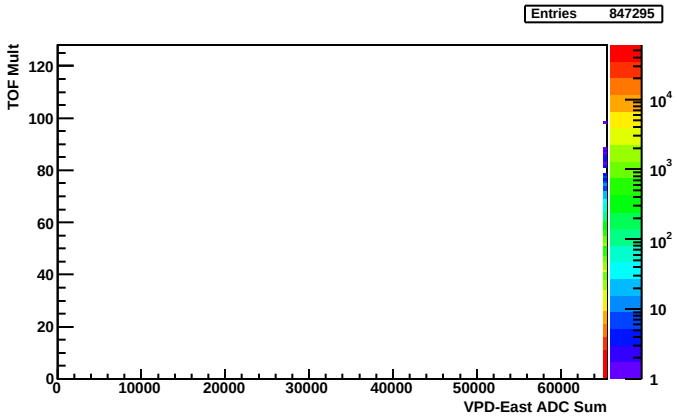

BBQ-VP004 (HI threshold)
Entries 1.355672e+07
TAC
QT Input Channel

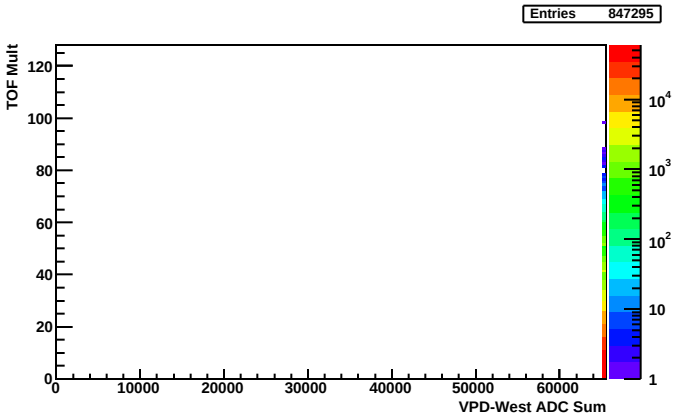

Entries 847295
TOF Mult
BBC-L-East ADC Sum

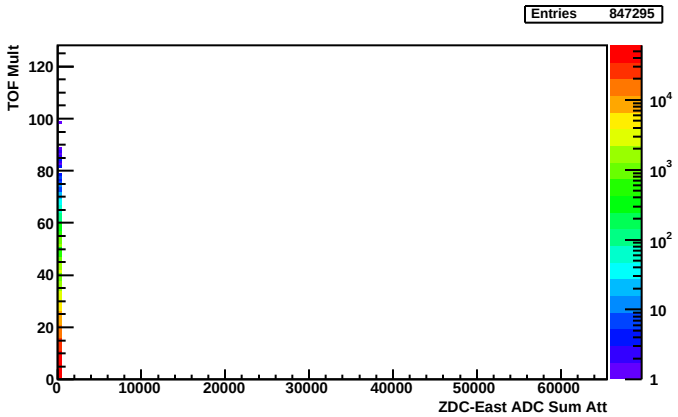

Entries 847295
TOF Mult
BBC-L-West ADC Sum

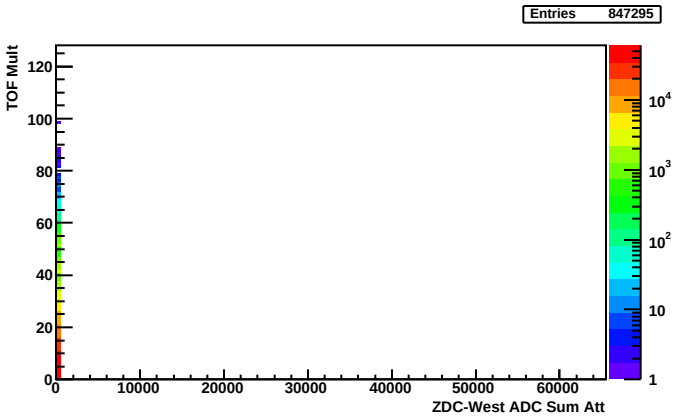

Entries 847295
TOF Mult
BBC-S-East ADC Sum

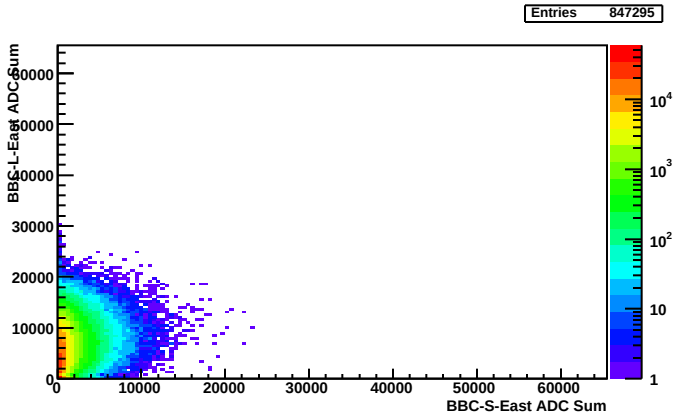

Entries 847295
TOF Mult
BBC-S-West ADC Sum

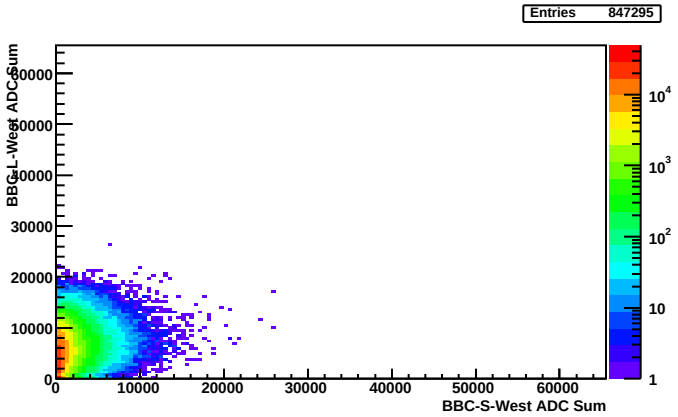

Entries 847295
TOF Mult
VPD-East ADC Sum

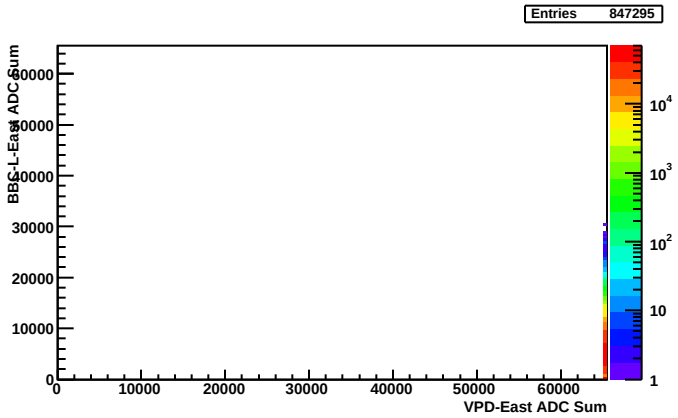

Entries 847295
TOF Mult
VPD-West ADC Sum

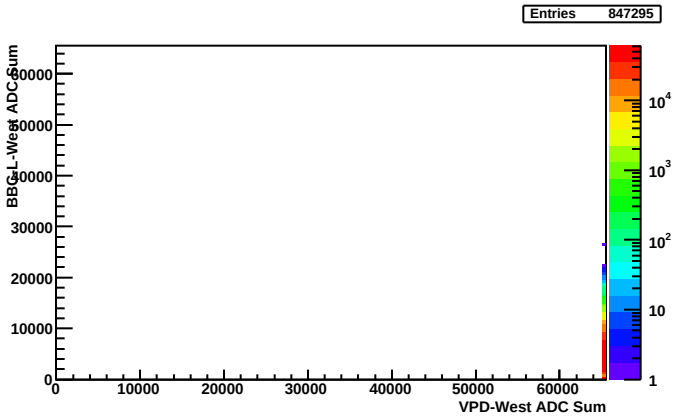

Entries 847295
TOF Mult
ZDC-East ADC Sum Att


Entries 847295
TOF Mult
ZDC-West ADC Sum Att


Entries 847295
BBC-L-East ADC Sum
BBC-S-East ADC Sum


Entries 847295
BBC-L-West ADC Sum
BBC-S-West ADC Sum


Entries 847295
BBC-L-East ADC Sum
VPD-East ADC Sum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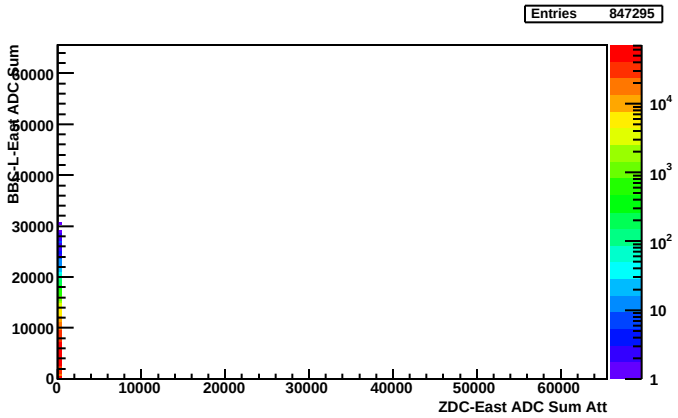
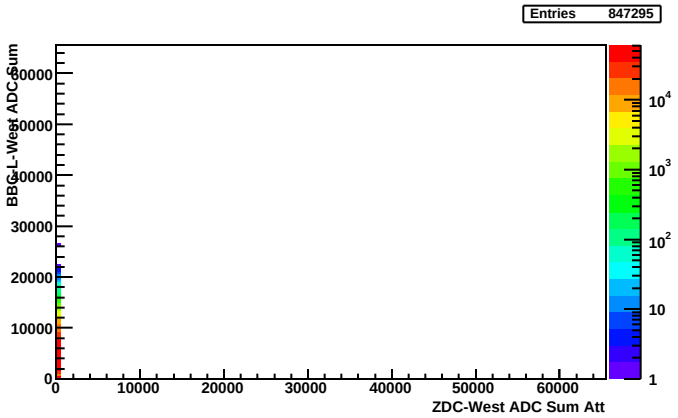
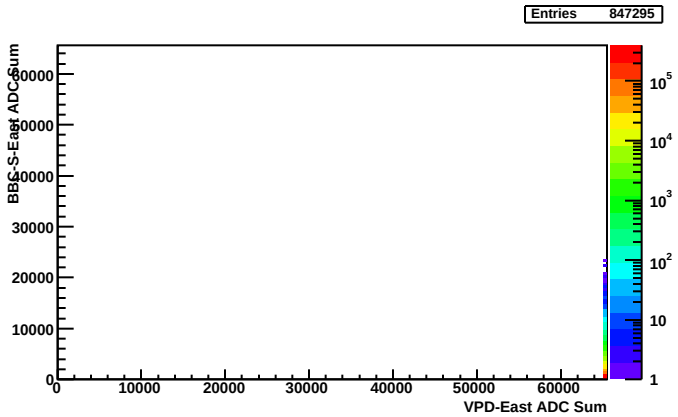
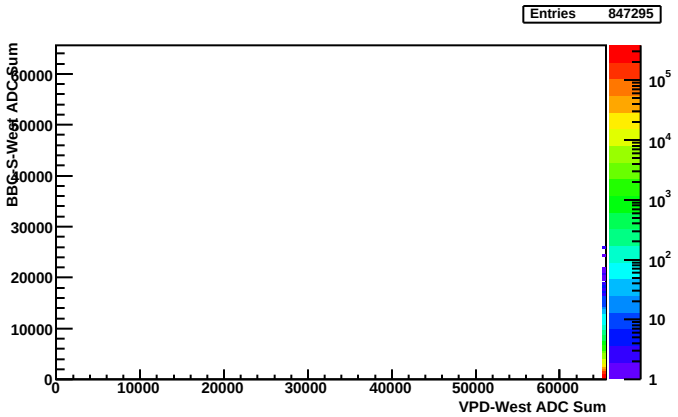
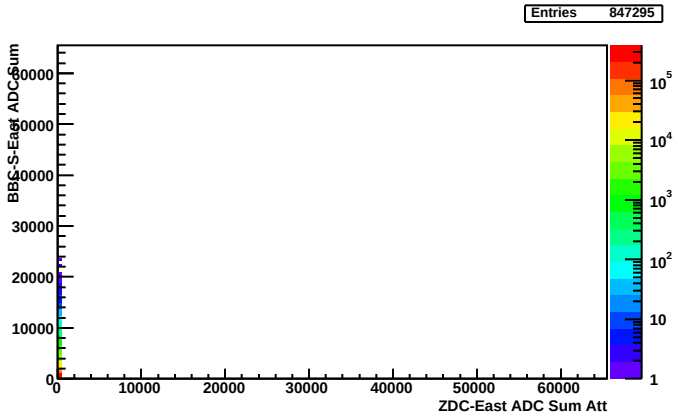
BBC-L-West ADC Sum
VPD-West ADC Sum

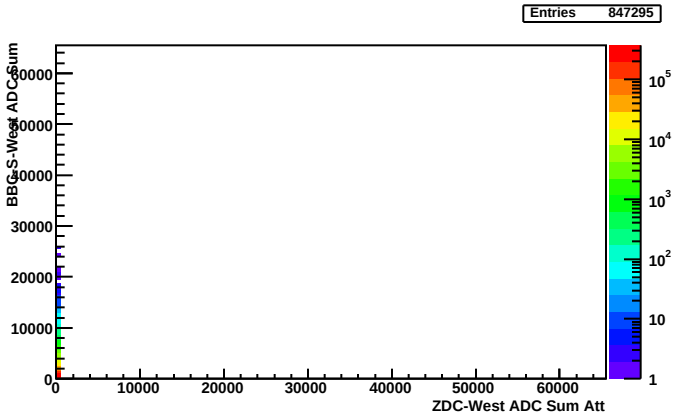

Entries 847295
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

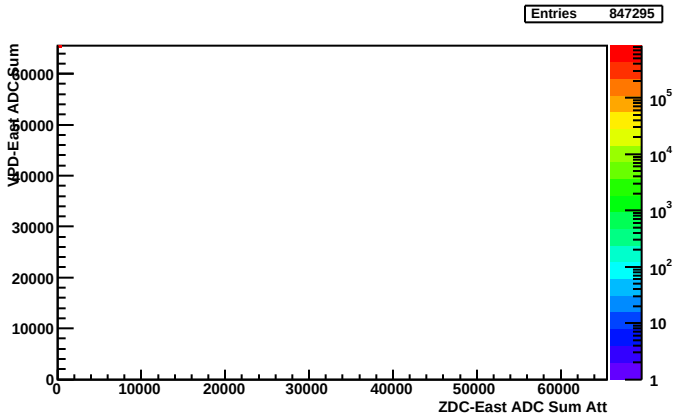

Entries 847295
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

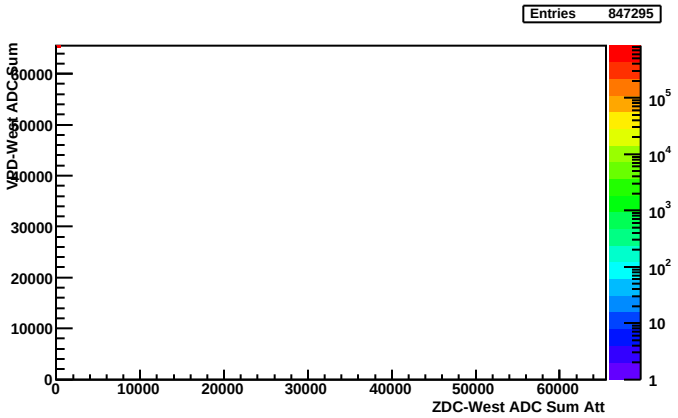

Entries 847295
BBC-S-East ADC Sum
VPD-East ADC Sum

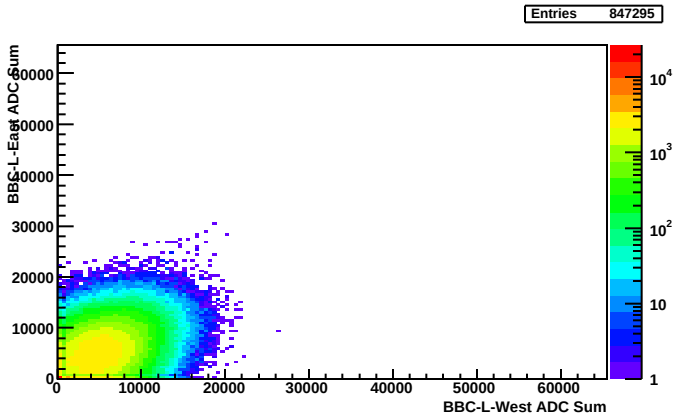

Entries 847295
BBC-S-West ADC Sum
VPD-West ADC Sum

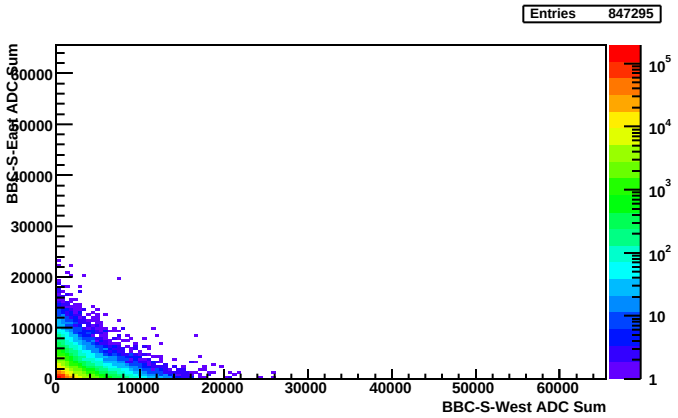

Entries 847295
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

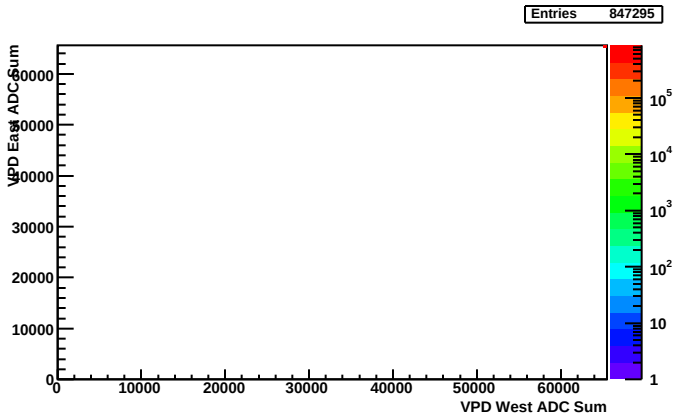

Entries 847295
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

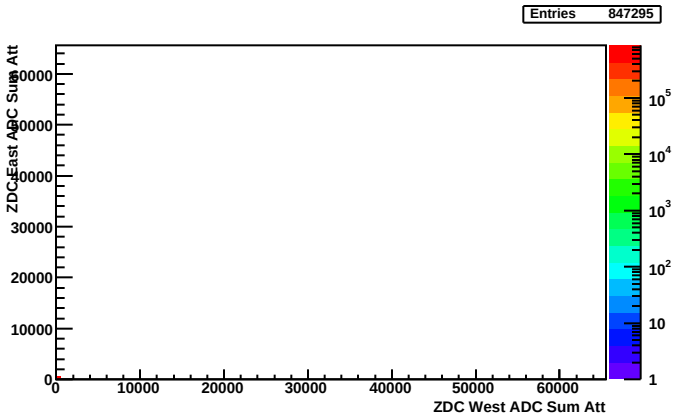

Entries 847295
VPD-East ADC Sum
ZDC-East ADC Sum Att

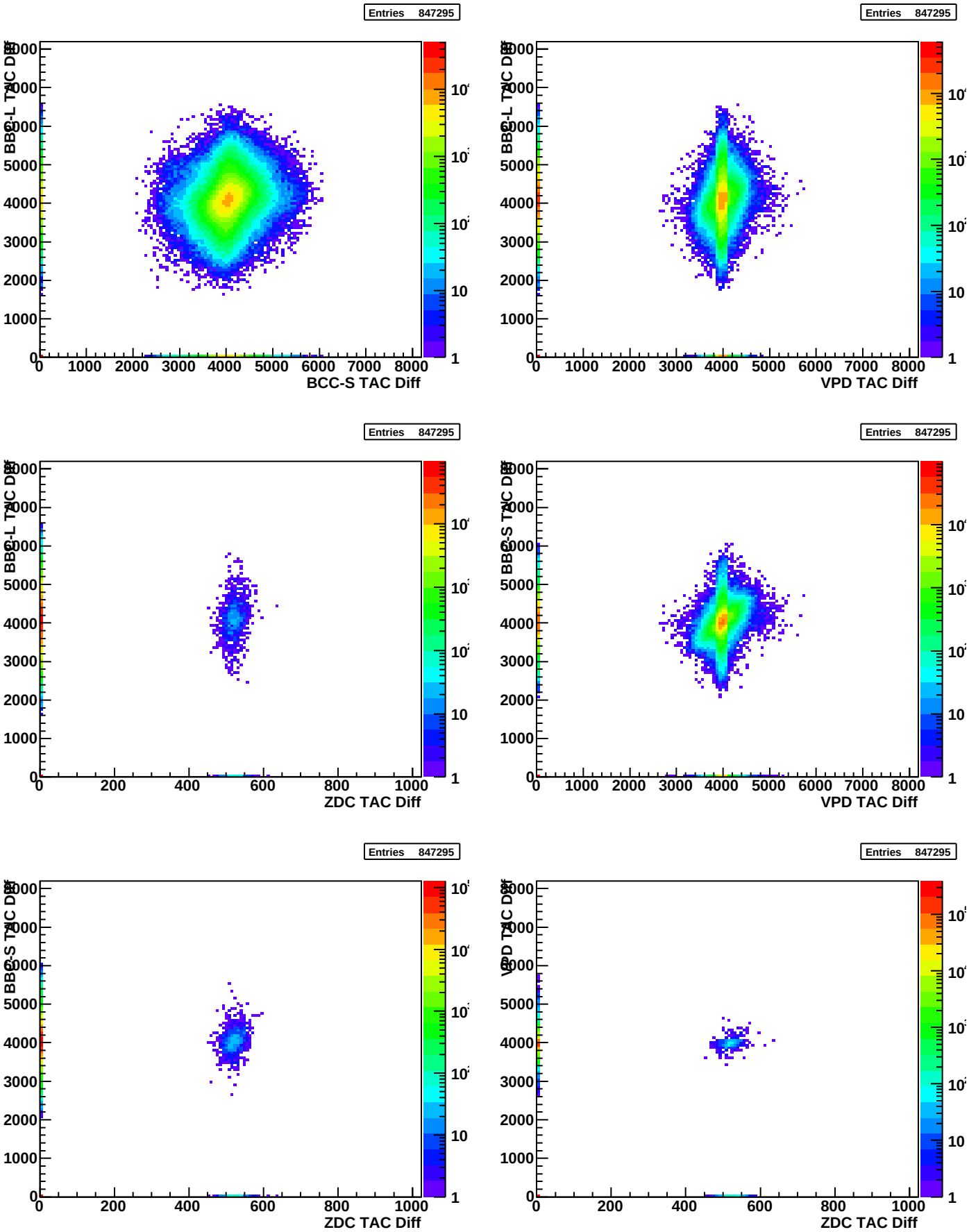

Entries 847295
VPD-West ADC Sum
ZDC-West ADC Sum Att

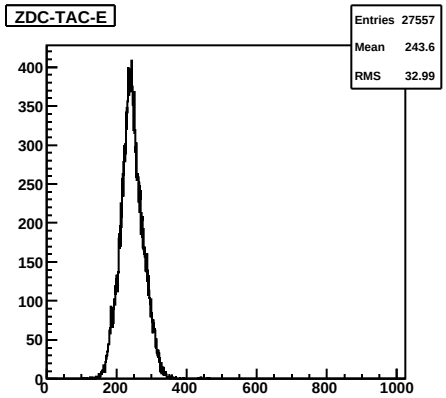

Entries 847295
BBC-L-East ADC Sum
BBC-L-West ADC Sum

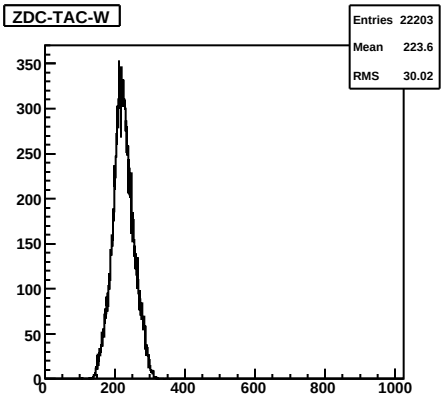

Entries 847295
BBC-S-East ADC Sum
BBC-S-West ADC Sum

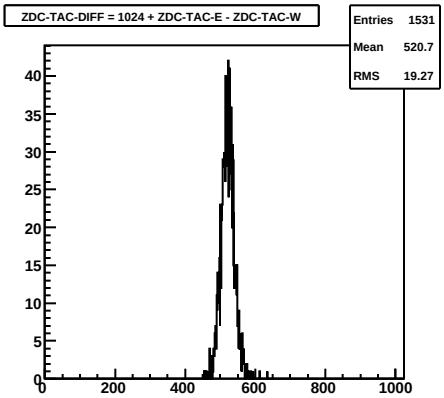

Entries 847295
VPD East ADC Sum
VPD West ADC Sum

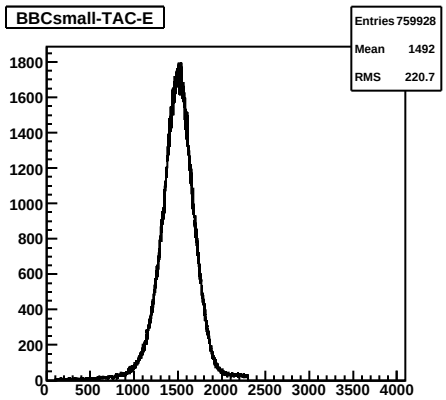

Entries 847295
ZDC East ADC Sum Att
ZDC West ADC Sum Att

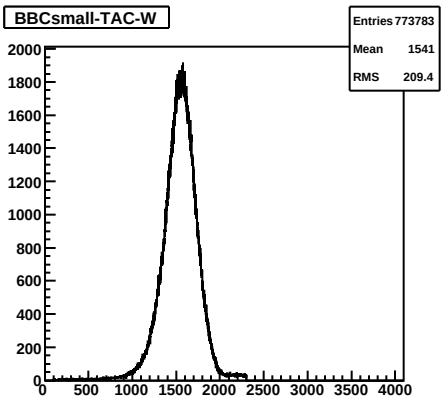

Entries 847295
BBC-L TAC Diff
BCC-S TAC Diff
Entries 847295
BBC-L TAC Diff
VPD TAC Diff
Entries 847295
BBC-L TAC Diff
ZDC TAC Diff
Entries 847295
BBC-S TAC Diff
VPD TAC Diff
Entries 847295
BBC-S TAC Diff
ZDC TAC Diff
Entries 847295
VPD TAC Diff
ZDC TAC Diff

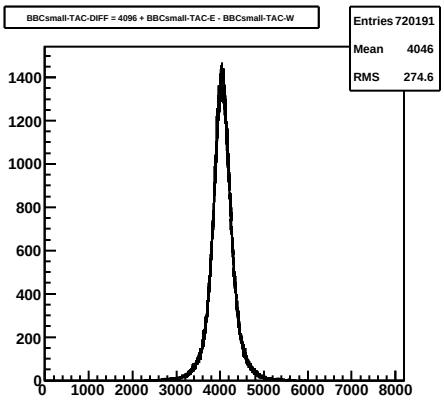

ZDC-TAC-E
Entries 27557
Mean 243.6
RMS 32.99

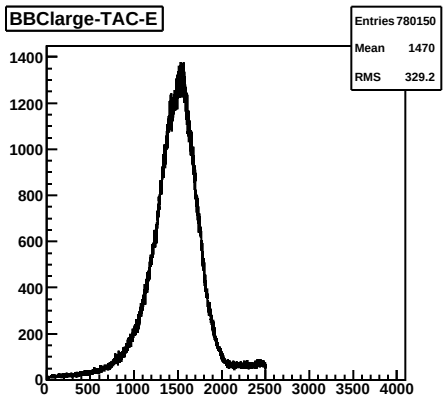

ZDC-TAC-W
Entries 22203
Mean 223.6
RMS 30.02

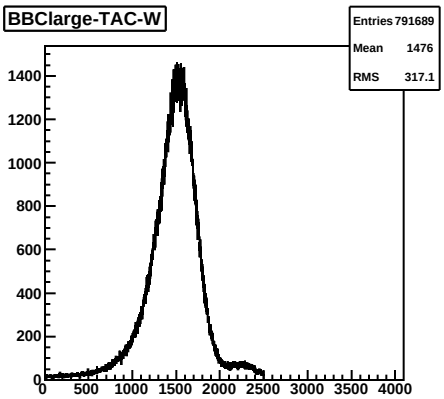

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 1531
Mean 520.7
RMS 19.27

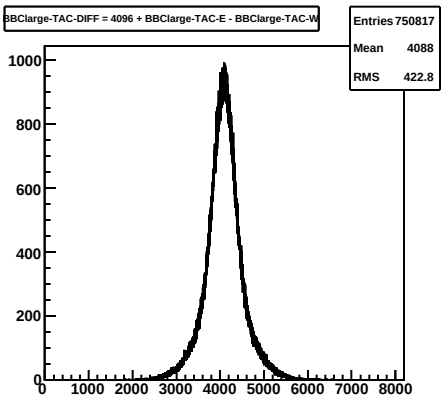

BBCsmall-TAC-E
Entries 759928
Mean 1492
RMS 220.7

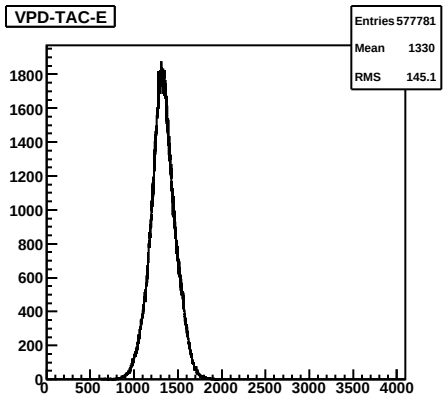

BBCsmall-TAC-W
Entries 773783
Mean 1541
RMS 209.4

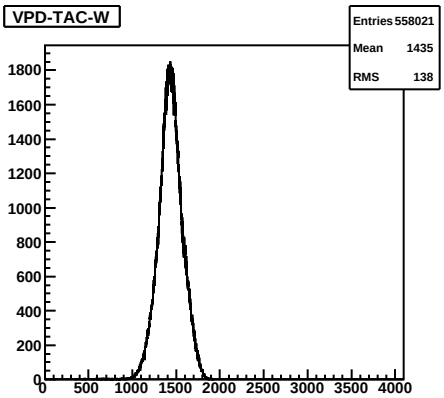

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 720191
Mean 4046
RMS 274.6

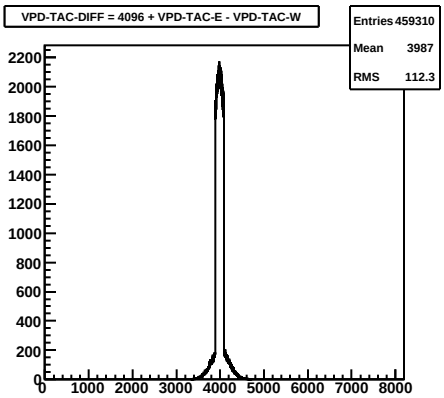

BBClarge-TAC-E
Entries 780150
Mean 1470
RMS 329.2

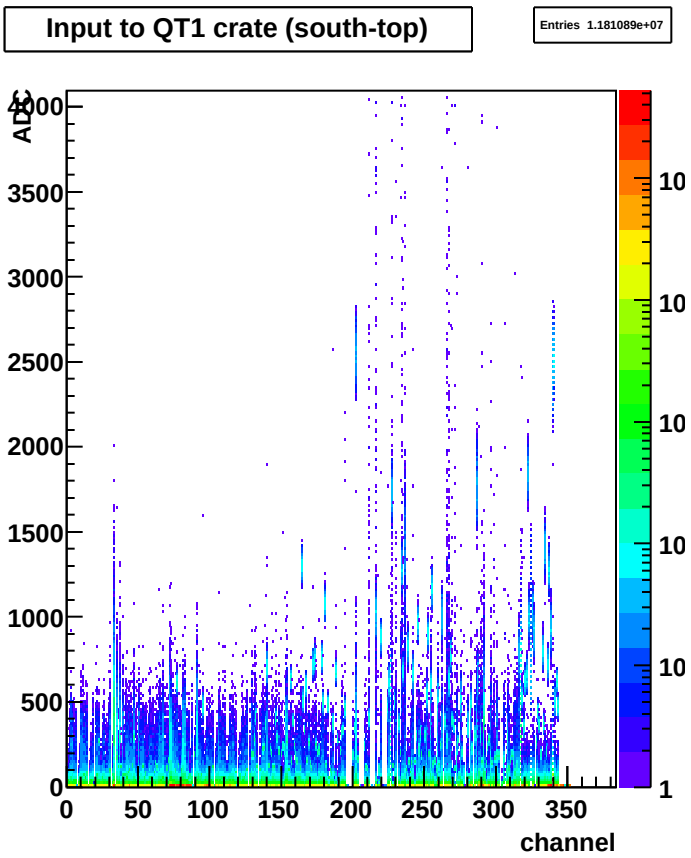

BBClarge-TAC-W
Entries 791689
Mean 1476
RMS 317.1

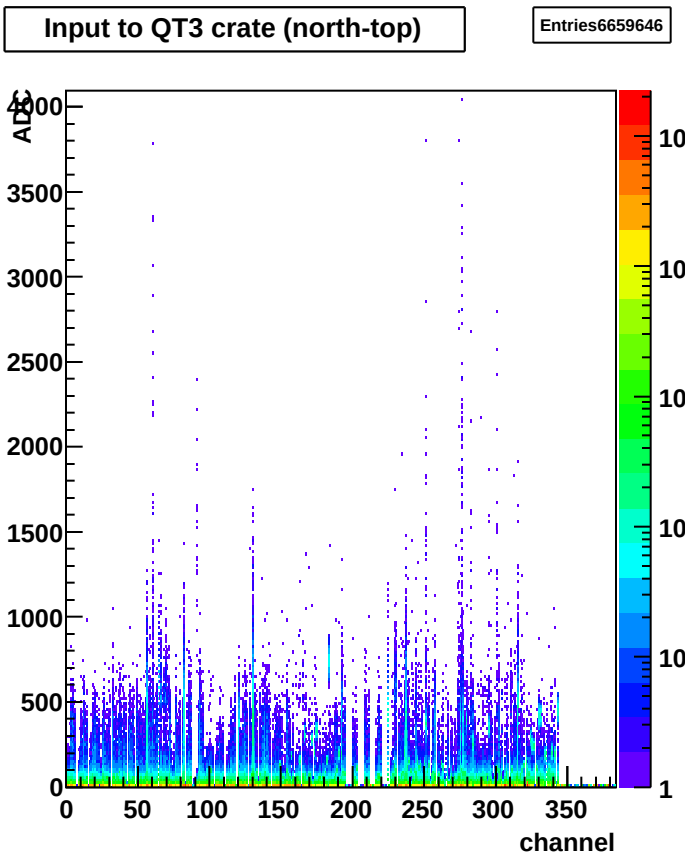

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 750817
Mean 4088
RMS 422.8

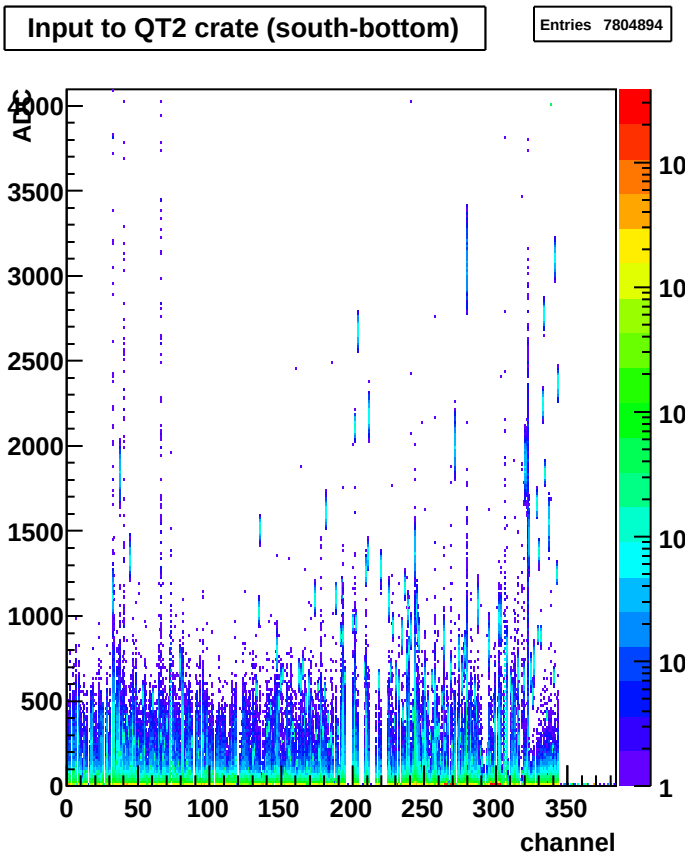

VPD-TAC-E
Entries 577781
Mean 1330
RMS 145.1

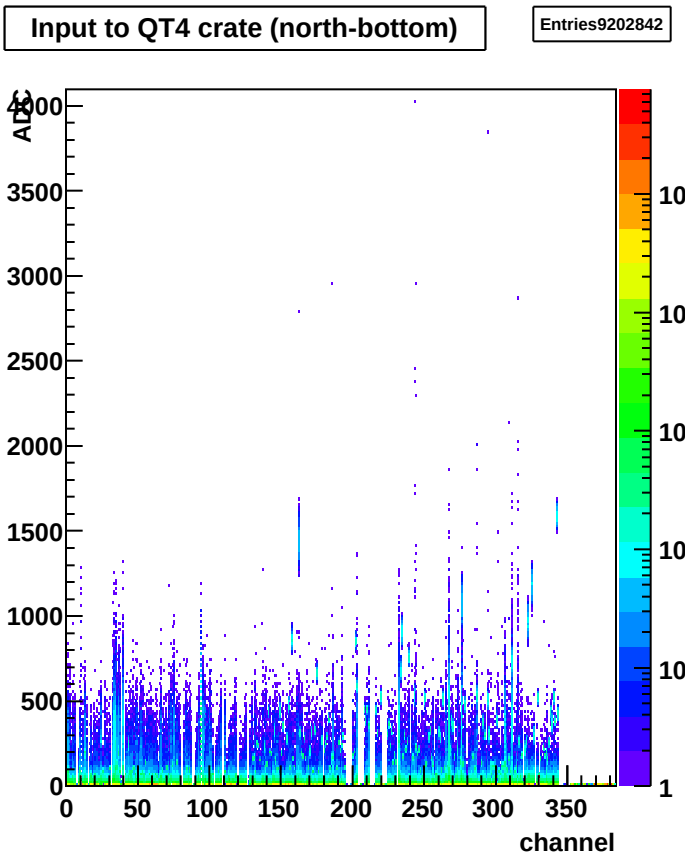

VPD-TAC-W
Entries 558021
Mean 1435
RMS 138

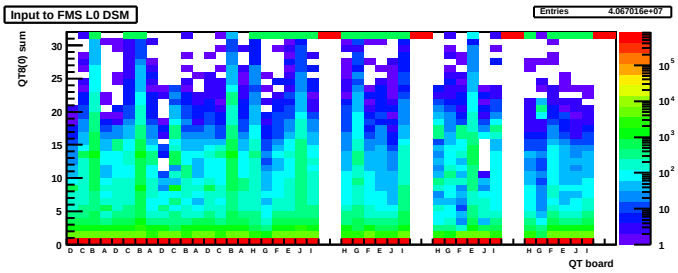

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 459310
Mean 3987
RMS 112.3

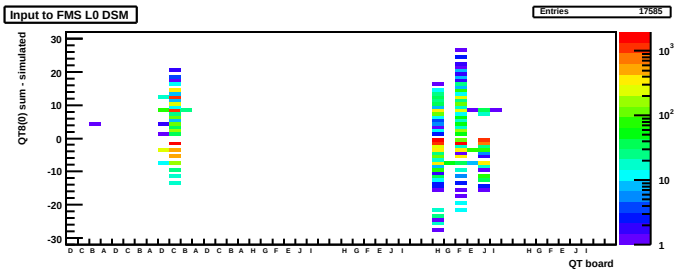

Input to QT1 crate (south-top)
Entries 1.181089e+07
ADC
channel

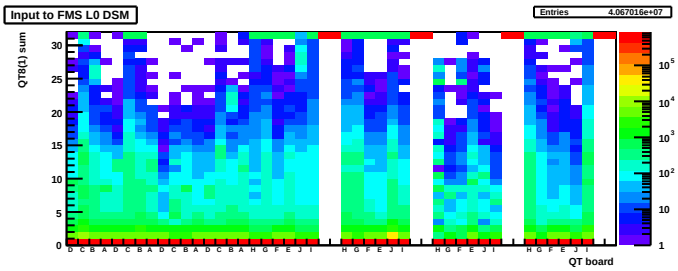

Input to QT3 crate (north-top)
Entries6659646
ADC
channel

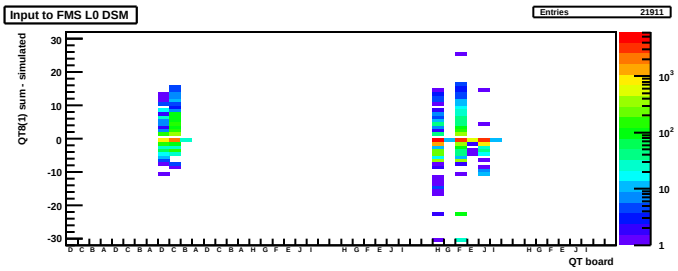

Input to QT2 crate (south-bottom)
Entries 7804894
ADC
channel

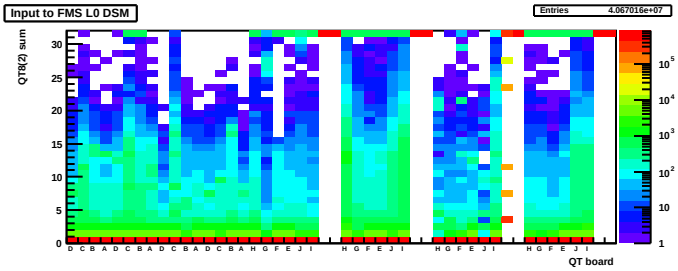

Input to QT4 crate (north-bottom)
Entries9202842
ADC
channel

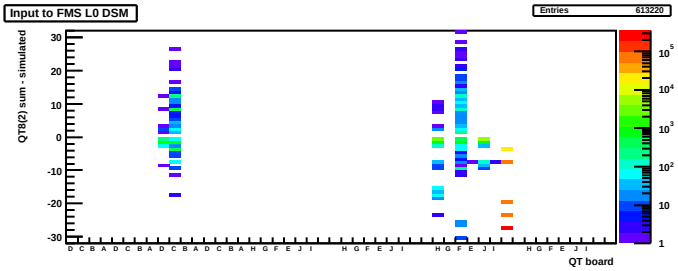

Input to FMS L0 DSM
Entries 4.067016e+07
QT8(0) sum
QT board

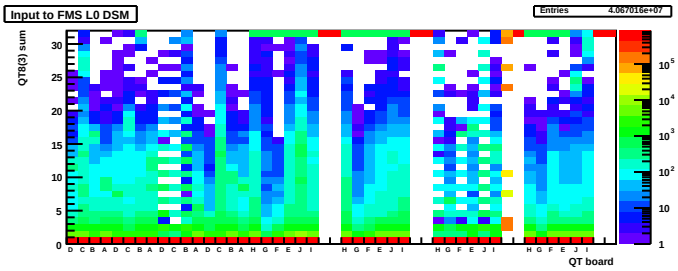

Input to FMS L0 DSM
Entries 17585
QT8(0) sum - simulated
QT board

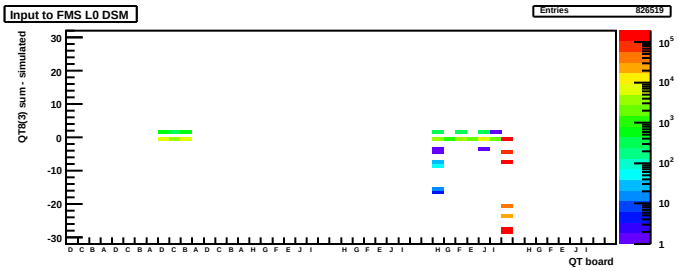

Input to FMS L0 DSM
Entries 4.067016e+07
QT8(1) sum
QT board

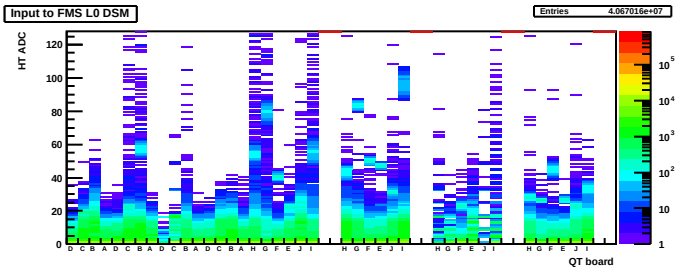

Input to FMS L0 DSM
Entries 21911
QT8(1) sum - simulated
QT board

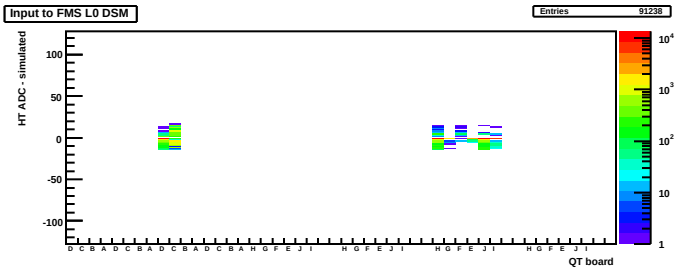

Input to FMS L0 DSM
Entries 4.067016e+07
QT8(2) sum
QT board

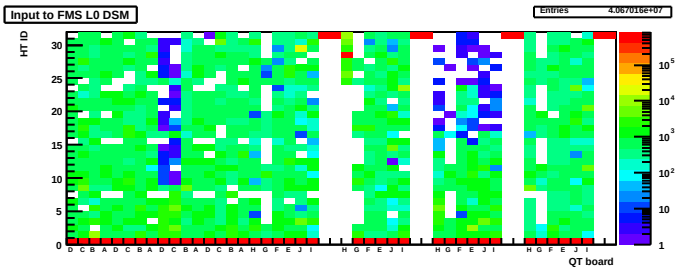

Input to FMS L0 DSM
Entries 613220
QT8(2) sum - simulated
QT board

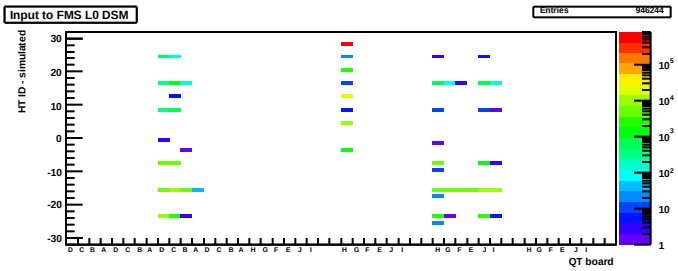

Input to FMS L0 DSM
Entries 4.067016e+07
QT8(3) sum
QT board

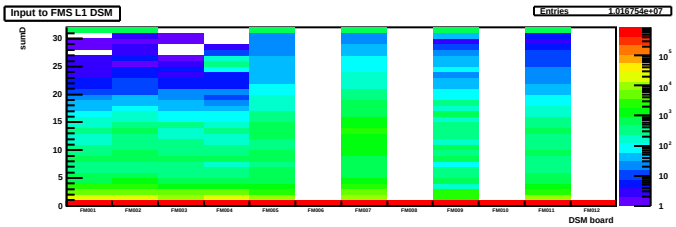

Input to FMS L0 DSM
Entries 826519
QT8(3) sum - simulated
QT board

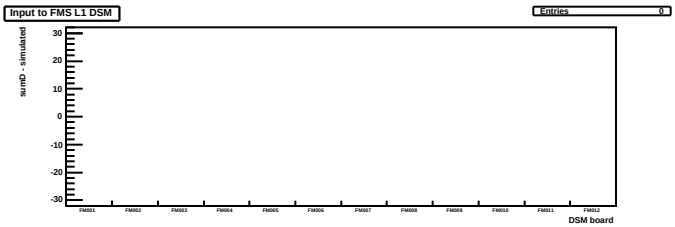

Input to FMS L0 DSM
Entries 4.067016e+07
HT ADC
QT board

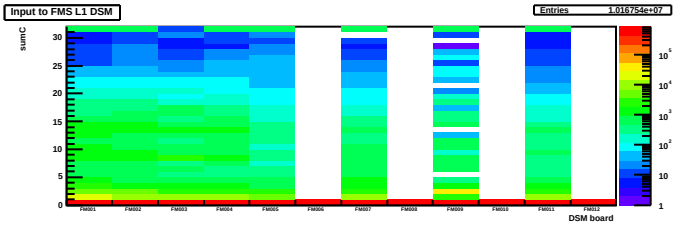

Input to FMS L0 DSM
Entries 91238
HT ADC - simulated
QT board

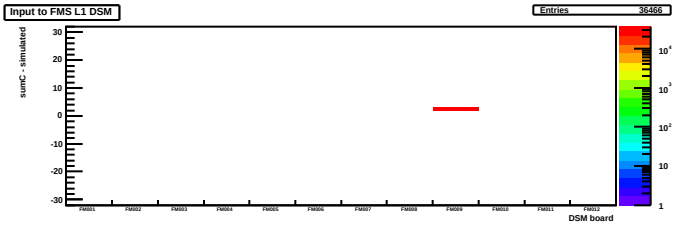

Input to FMS L0 DSM
Entries 4.067016e+07
HT ID
QT board

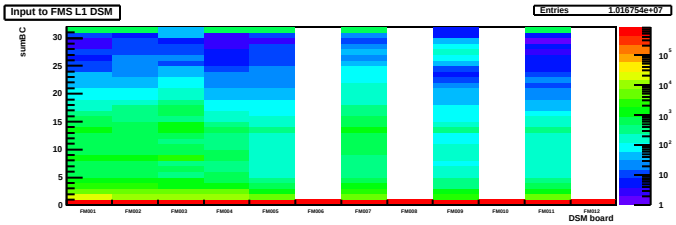

Input to FMS L0 DSM
Entries 946244
HT ID - simulated
QT board

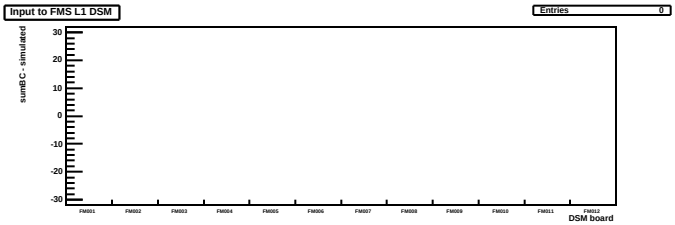

Input to FMS L1 DSM
Entries 1.016754e+07
sumD
DSM board

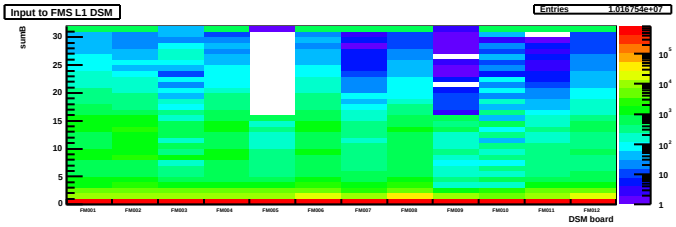

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

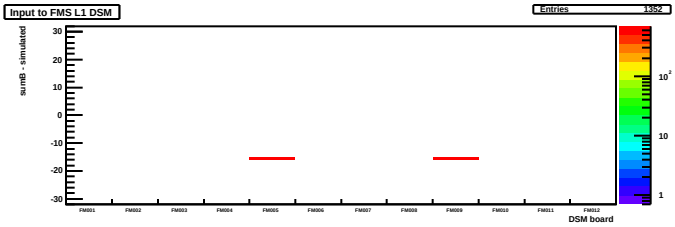

Input to FMS L1 DSM
Entries 1.016754e+07
sumC
DSM board

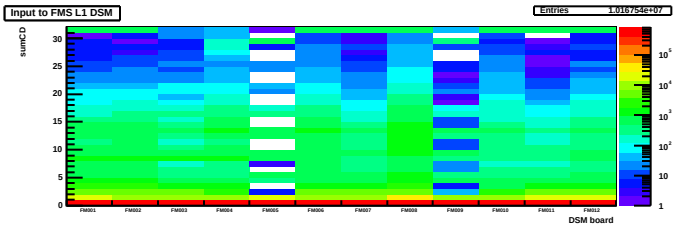

Input to FMS L1 DSM
Entries 36466
sumC - simulated
DSM board

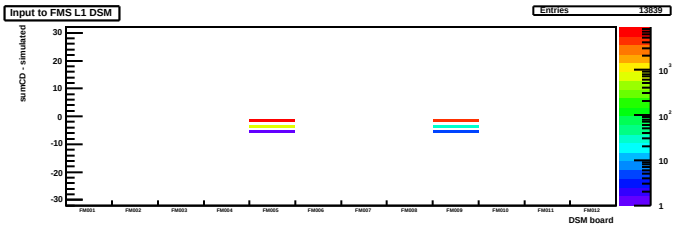

Input to FMS L1 DSM
Entries 1.016754e+07
sumBC
DSM board

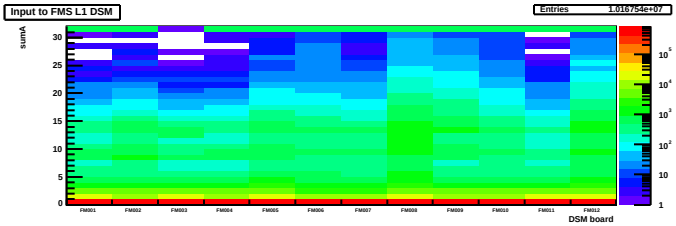

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

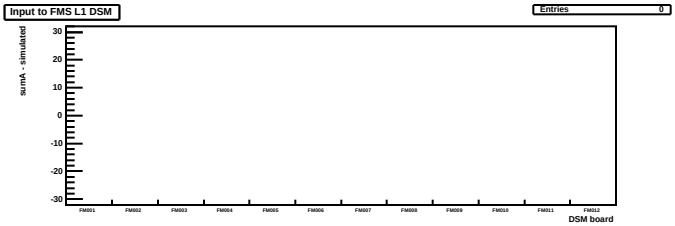

Input to FMS L1 DSM
Entries 1.016754e+07
sumB
DSM board

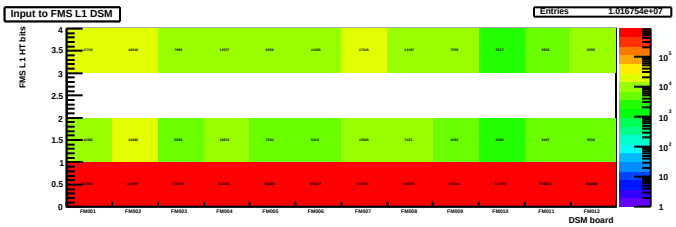

Input to FMS L1 DSM
Entries 1352
sumB - simulated
DSM board

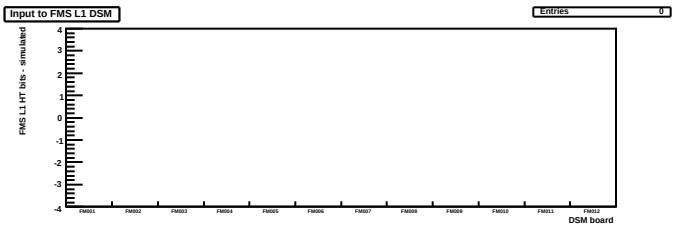

Input to FMS L1 DSM
Entries 1.016754e+07
sumCD
DSM board

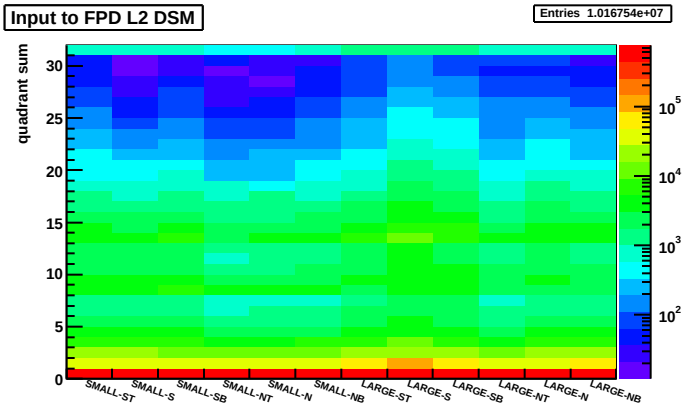

Input to FMS L1 DSM
Entries 13839
sumCD - simulated
DSM board

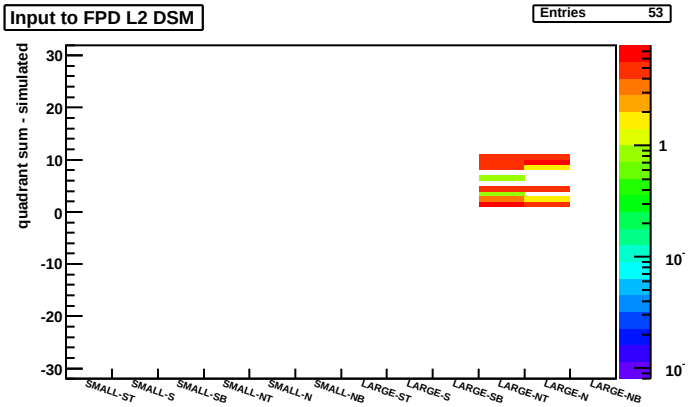

Input to FMS L1 DSM
Entries 1.016754e+07
sumA
DSM board

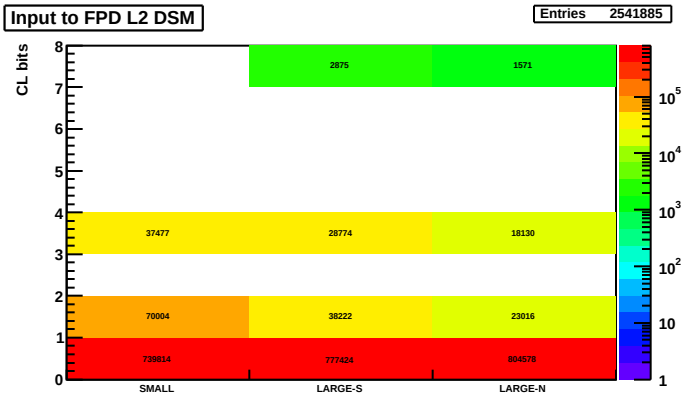

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

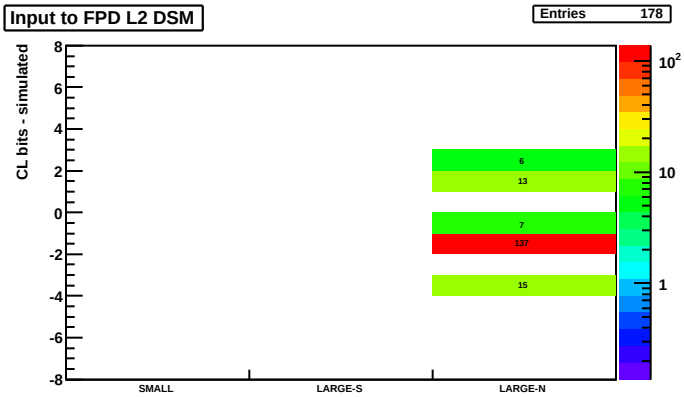

Input to FMS L1 DSM
Entries 1.016754e+07
FMS L1 HT bits
DSM board

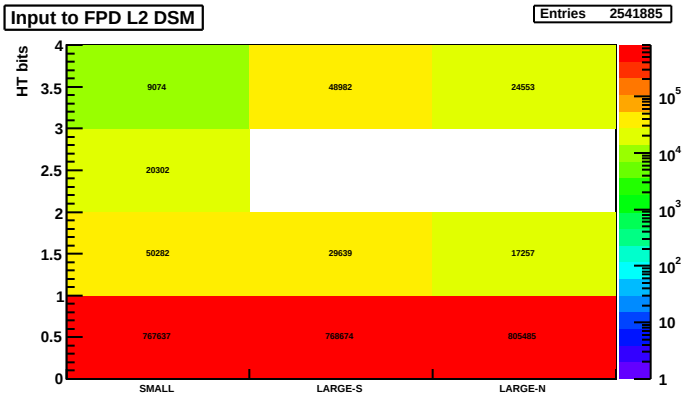

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

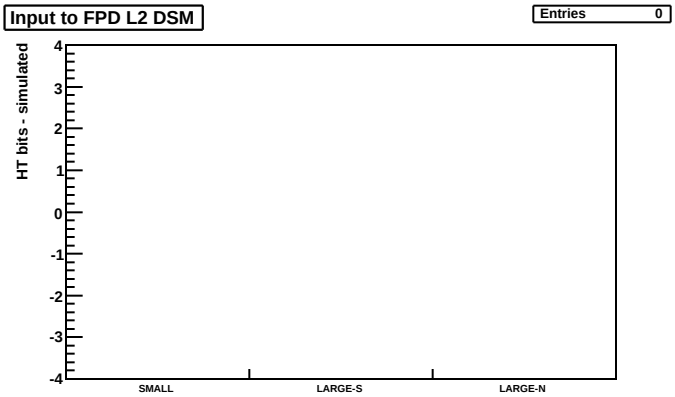

Input to FPD L2 DSM
Entries 1.016754e+07
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

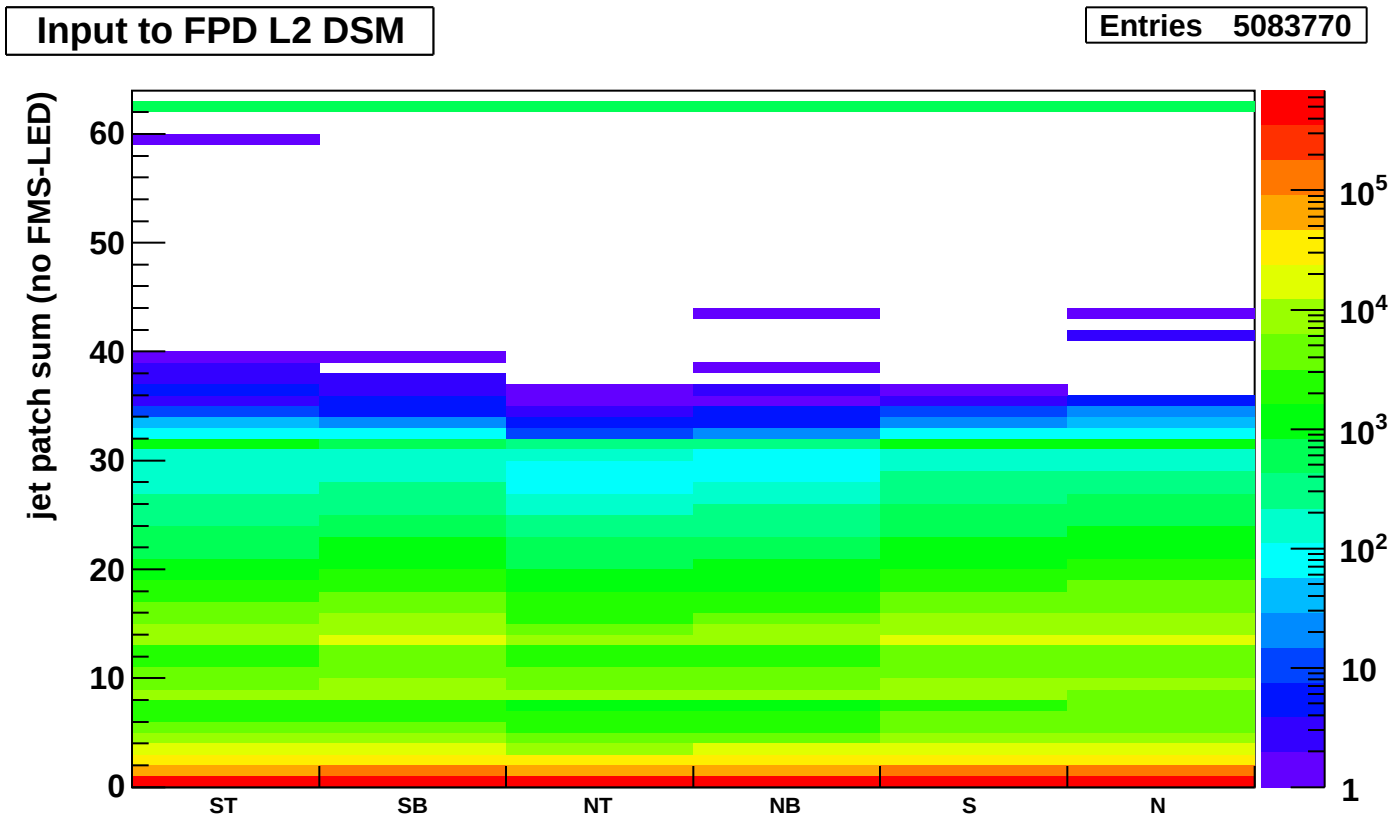

Input to FPD L2 DSM
Entries 53
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

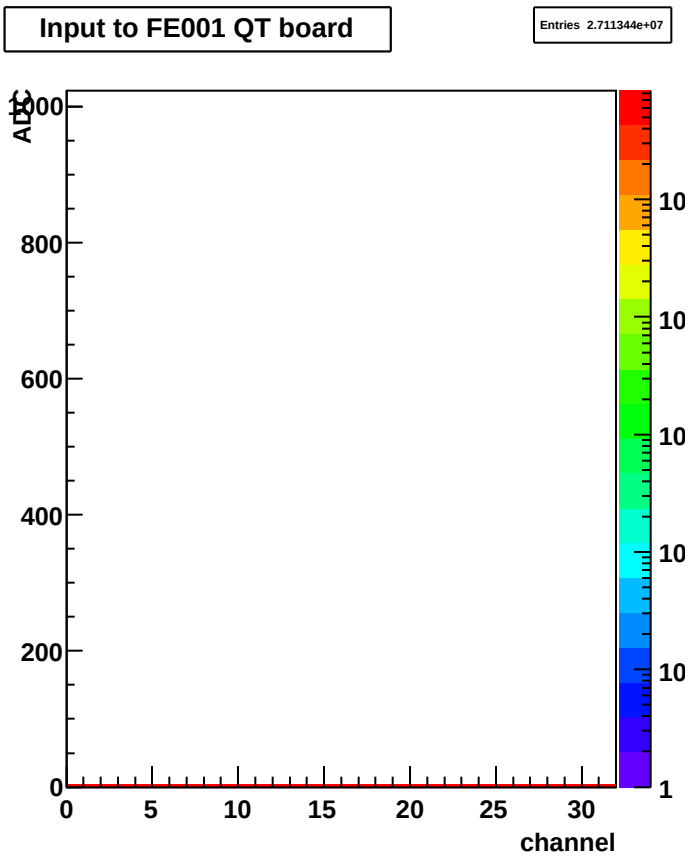

Input to FPD L2 DSM
Entries 2541885
CL bits
2875
1571
37477
28774
18130
70004
38222
23016
739814
777424
804578
SMALL
LARGE-S
LARGE-N

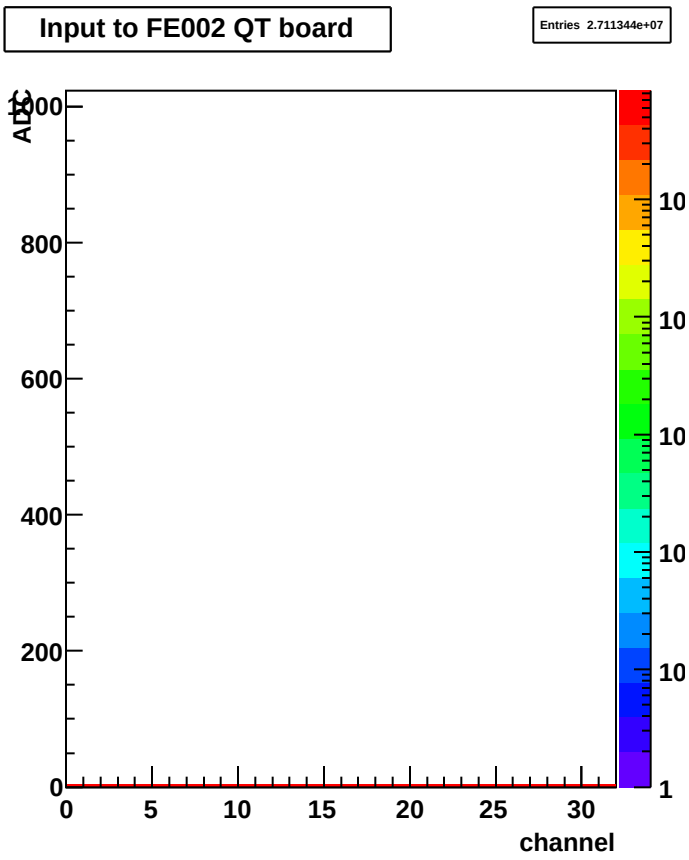

Input to FPD L2 DSM
Entries 178
CL bits - simulated
6
13
7
137
15
SMALL
LARGE-S
LARGE-N

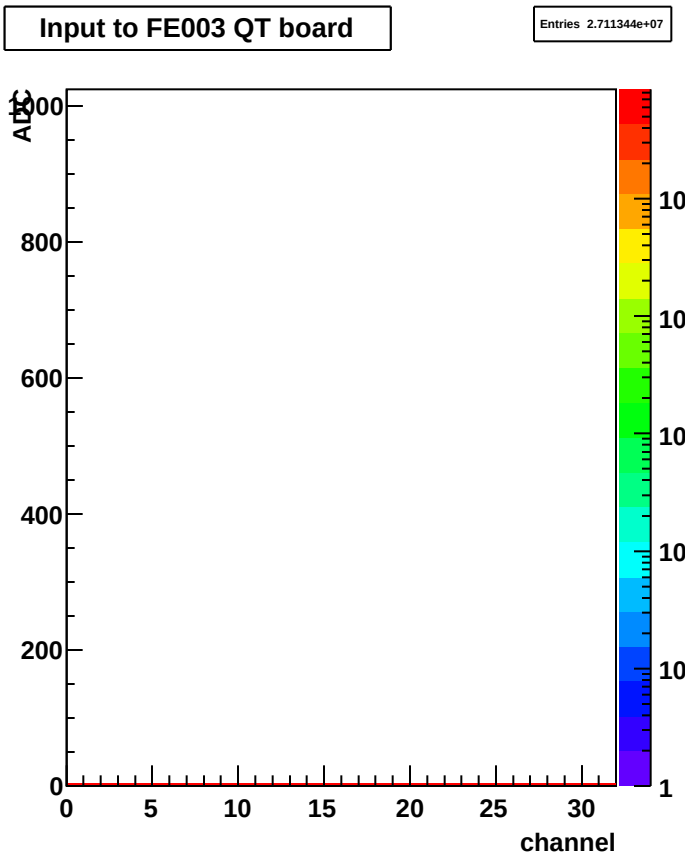

Input to FPD L2 DSM
Entries 2541885
HT bits
9074
48982
24553
20302
50282
29639
17257
767637
768674
805485
SMALL
LARGE-S
LARGE-N

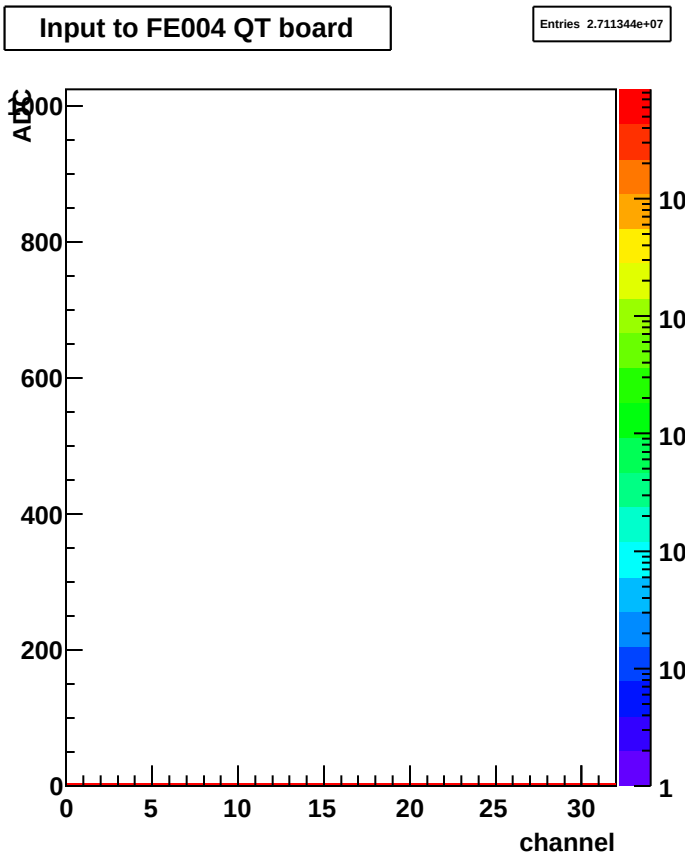

Input to FPD L2 DSM
Entries 0
HT bits - simulated
SMALL
LARGE-S
LARGE-N

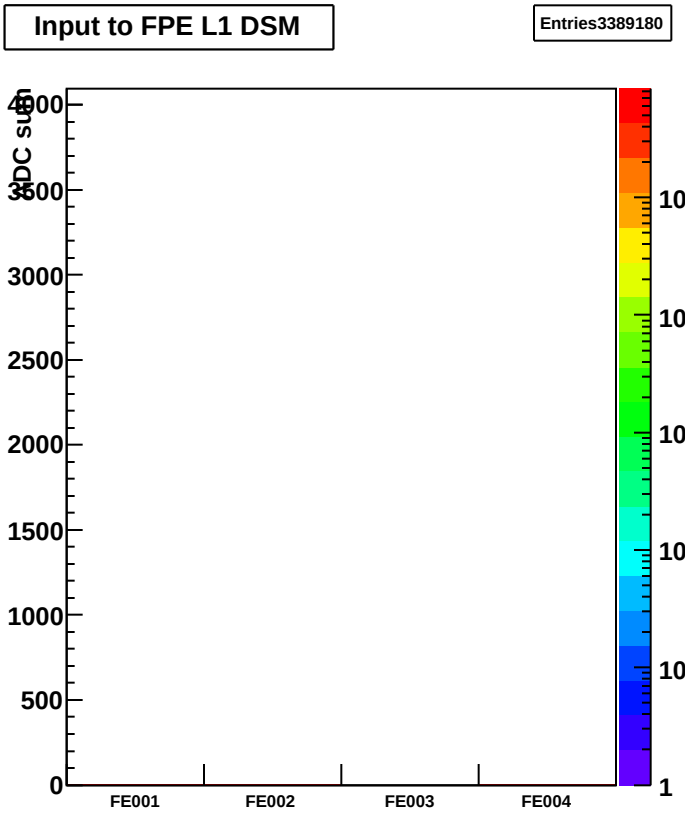

Input to FPD L2 DSM
Entries 5083770
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

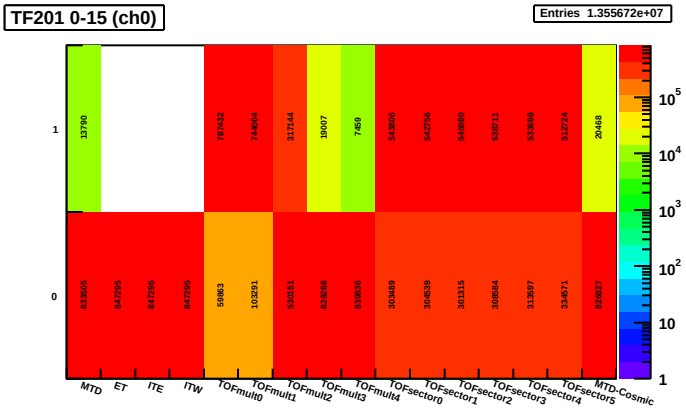

Input to FE001 QT board
Entries 2.711344e+07
ADC
channel

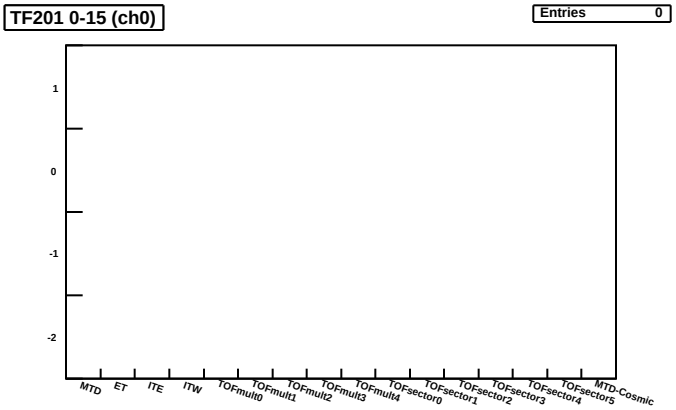

Input to FE002 QT board
Entries 2.711344e+07
ADC
channel

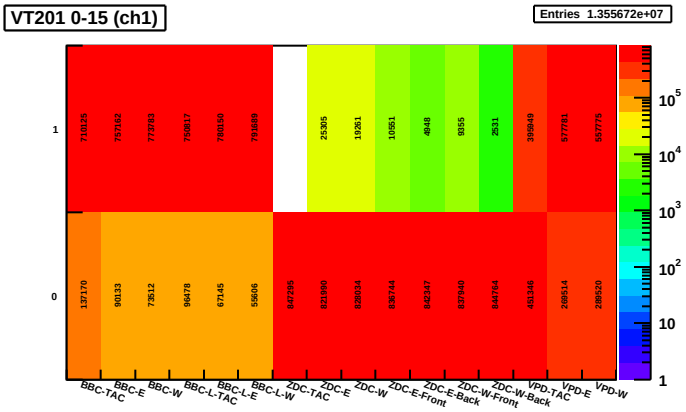

Input to FE003 QT board
Entries 2.711344e+07
ADC
channel

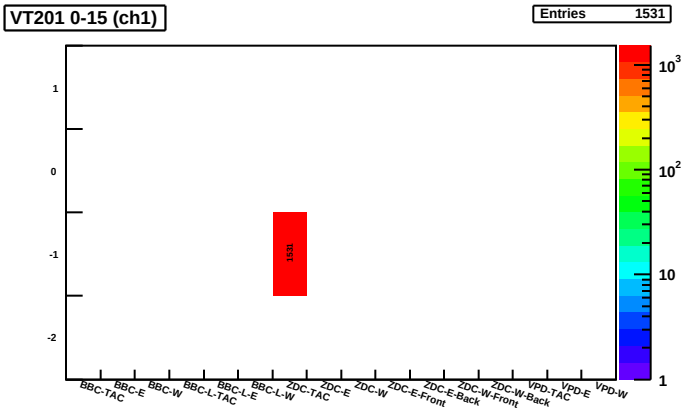

Input to FE004 QT board
Entries 2.711344e+07
ADC
channel


Input to FPE L1 DSM
Entries3389180
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1


TF201 0-15 (ch0)
Entries 1.355672e+07
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 0
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 1.355672e+07
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 1531
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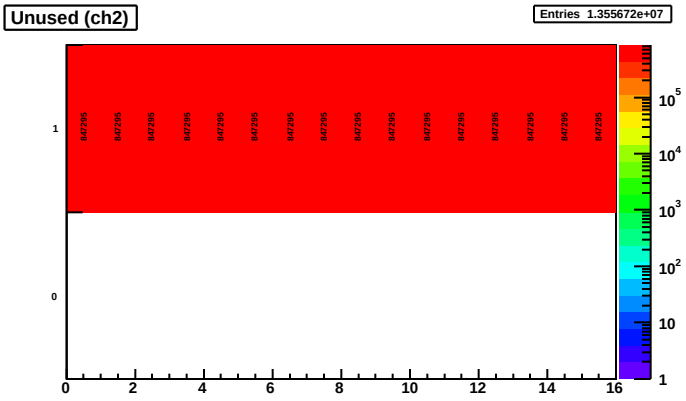
Unused (ch2)
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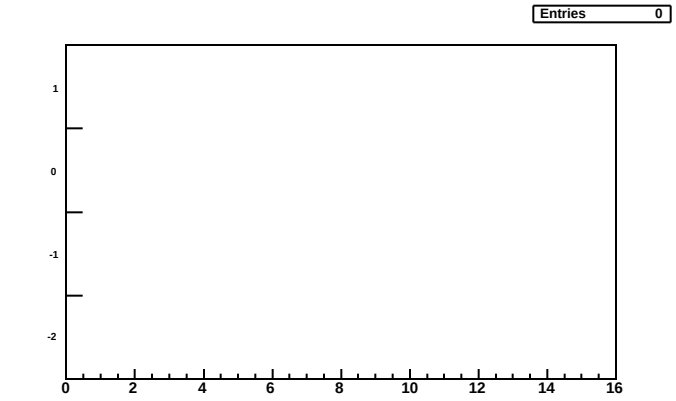
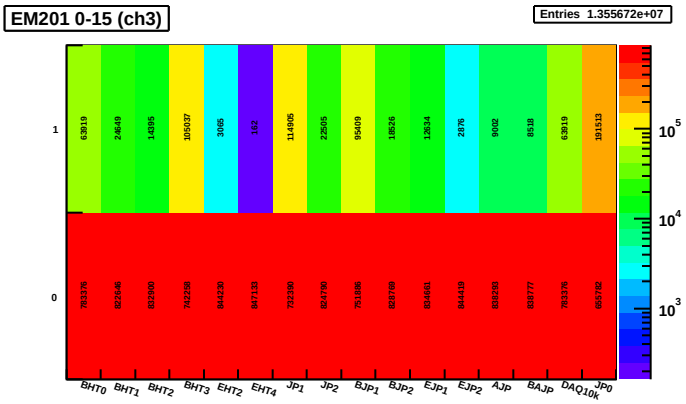
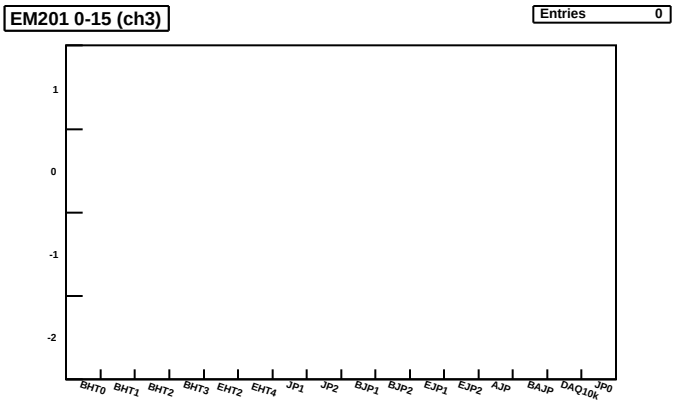

Entries 0


EM201 0-15 (ch3)
Entries 1.355672e+07
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0


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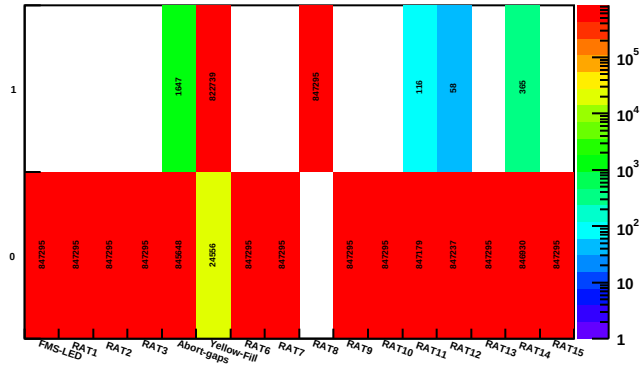
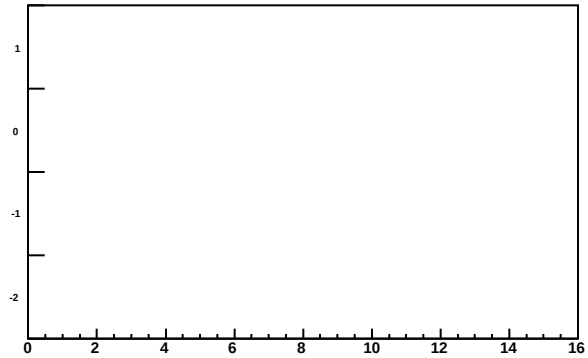
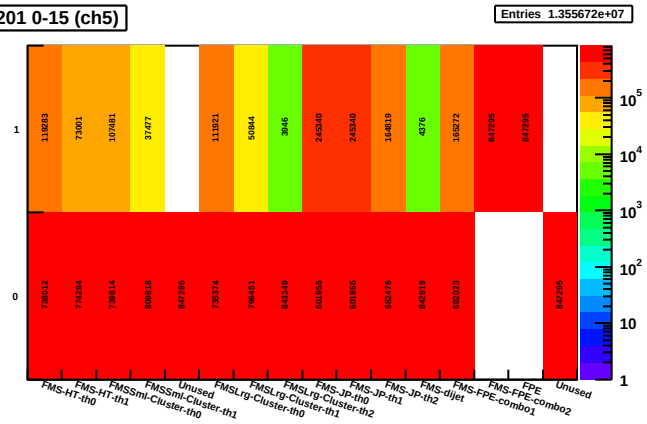
RAT board (ch4)

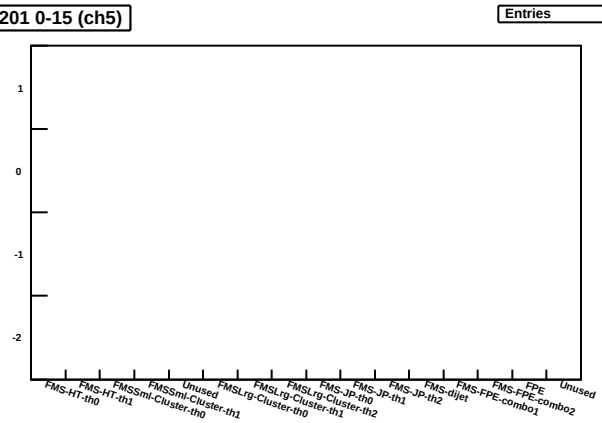




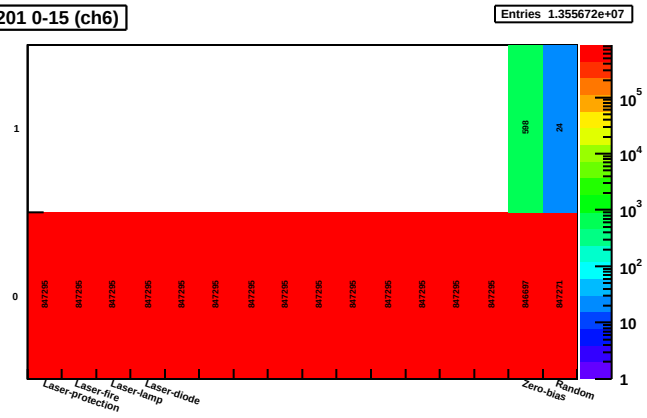
FP201 0-15 (ch5)

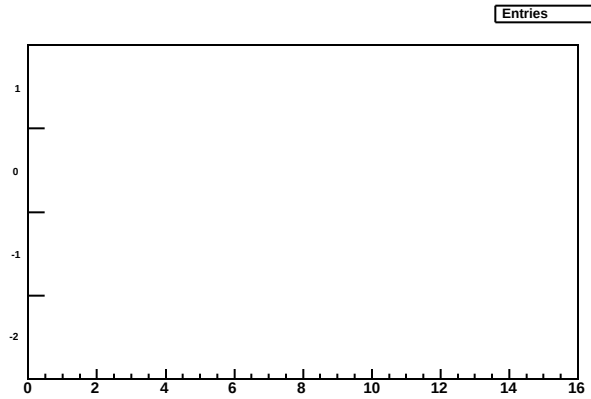
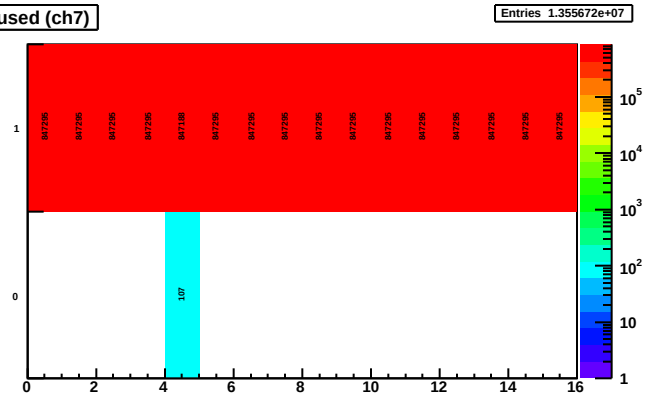
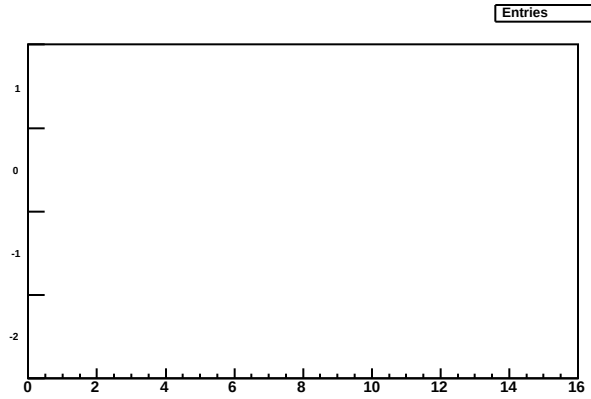


FP201 0-15 (ch5)



ST201 0-15 (ch6)





Unused (ch7)