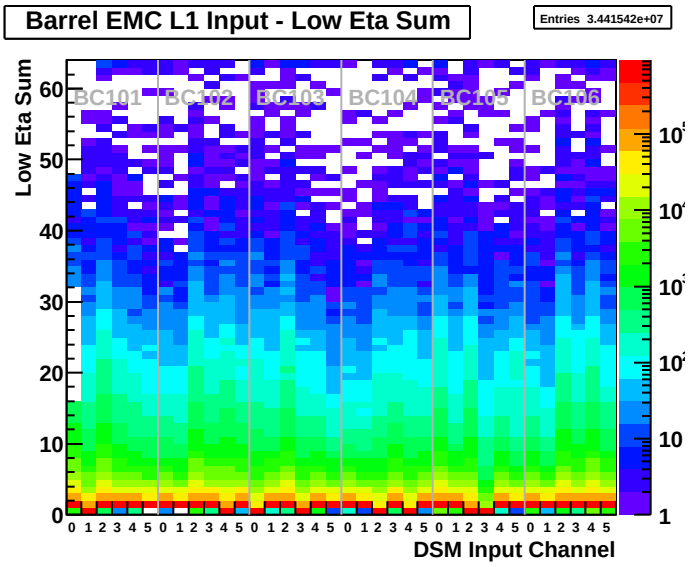
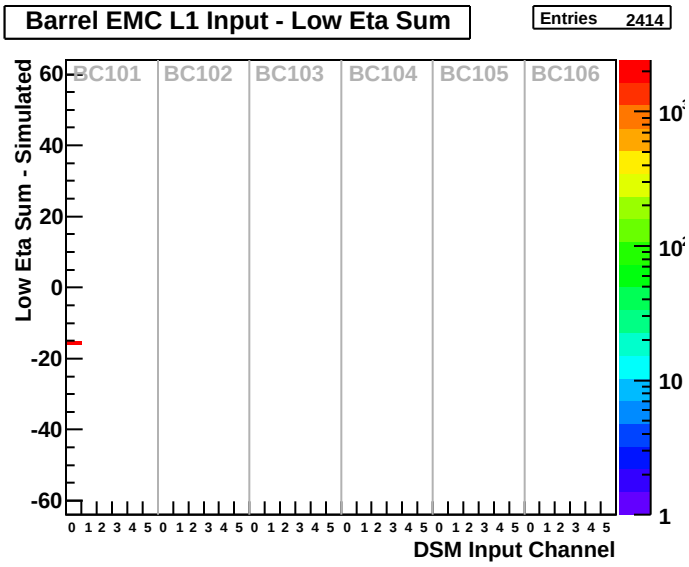
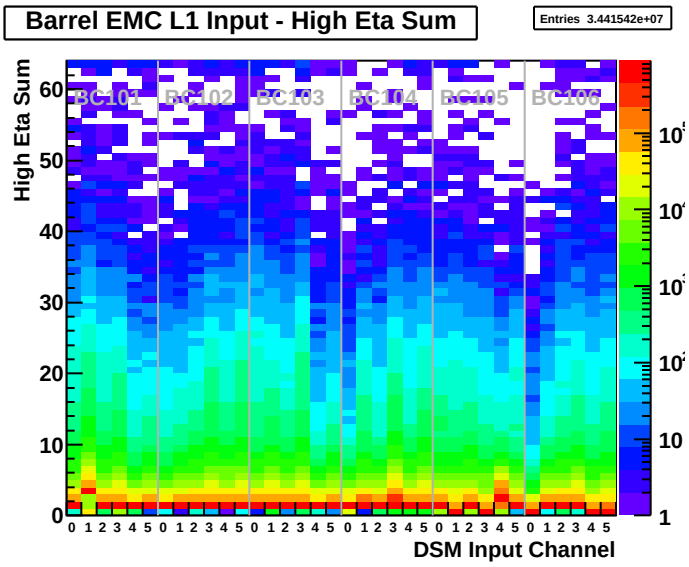
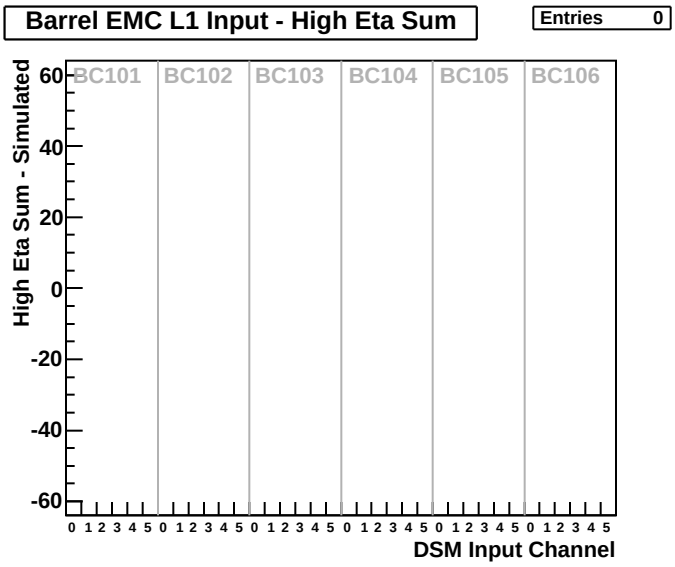
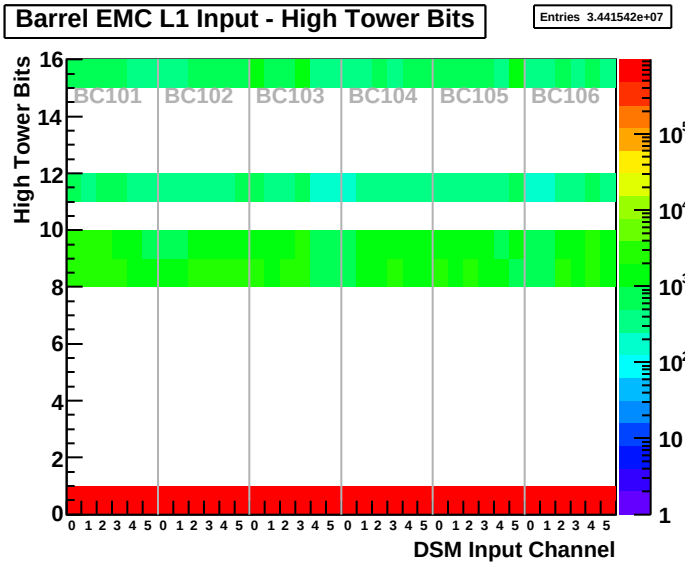
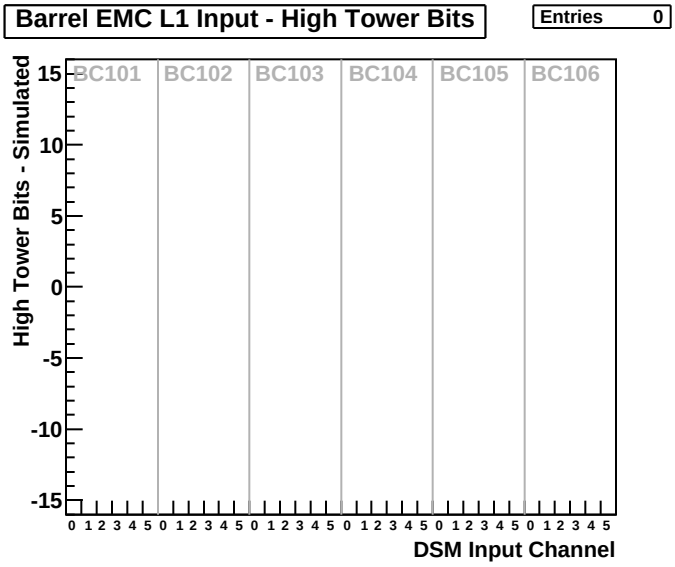

Barrel EMC L1 Input - Low Eta Sum
Entries 3.441542e+07
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

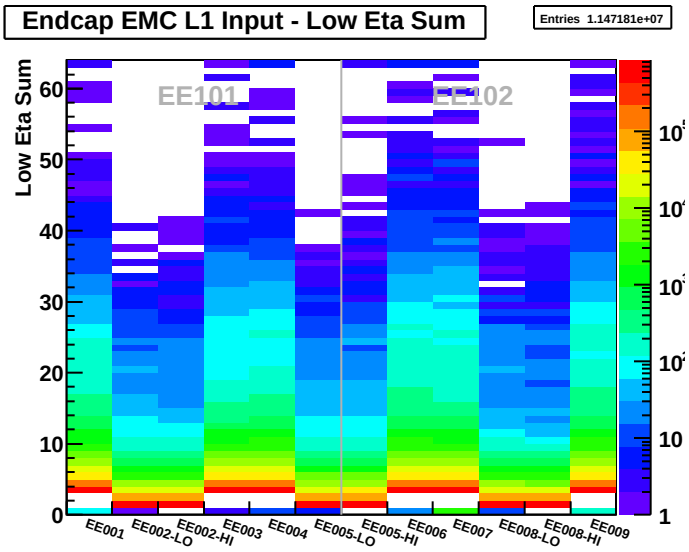

Barrel EMC L1 Input - Low Eta Sum
Entries 2414
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

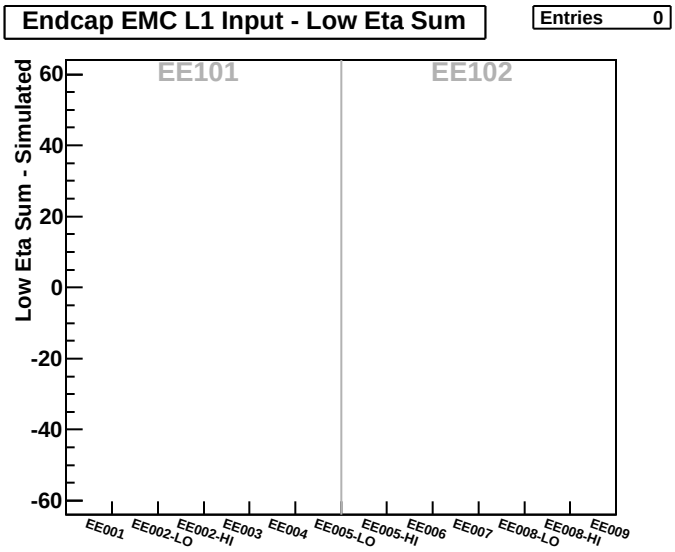

Barrel EMC L1 Input - High Eta Sum
Entries 3.441542e+07
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

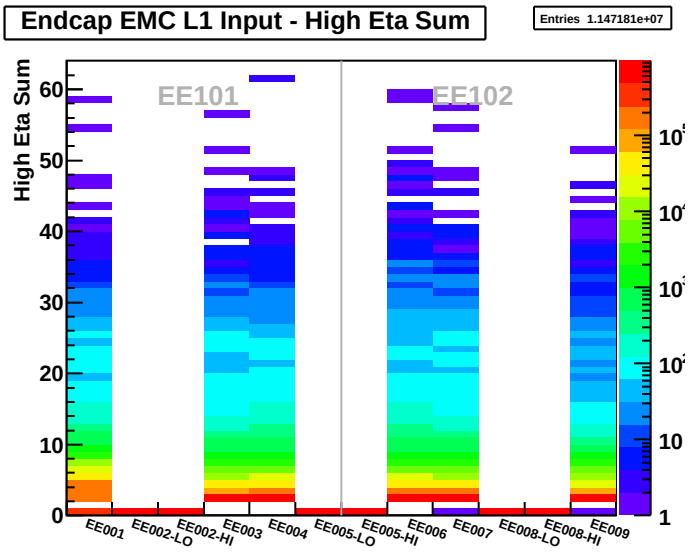

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

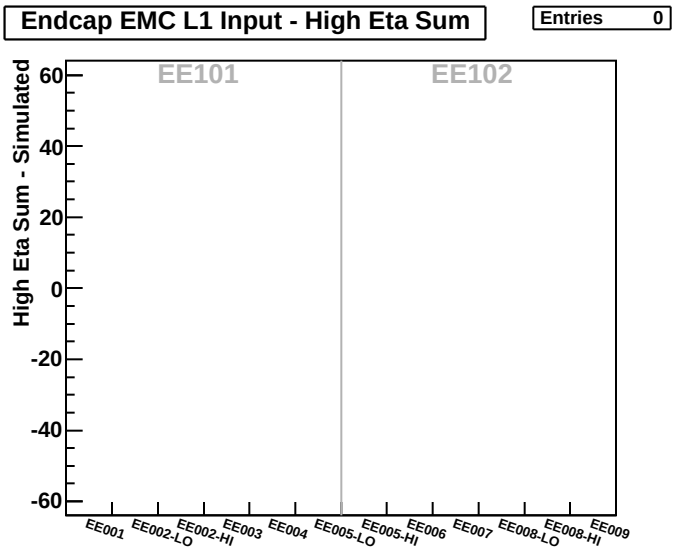

Barrel EMC L1 Input - High Tower Bits
Entries 3.441542e+07
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

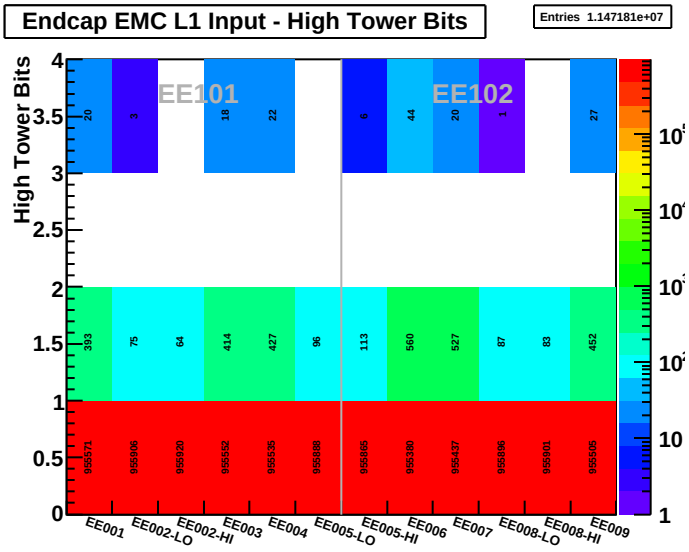

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

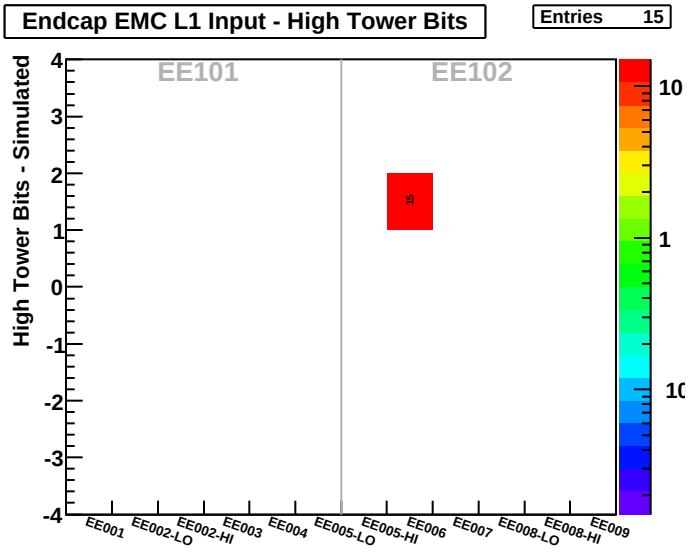

Endcap EMC L1 Input - Low Eta Sum
Entries 1.147181e+07
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

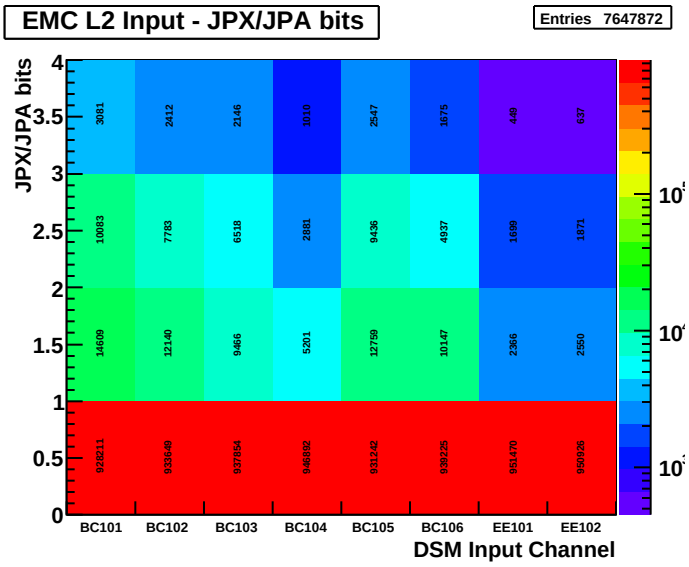

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

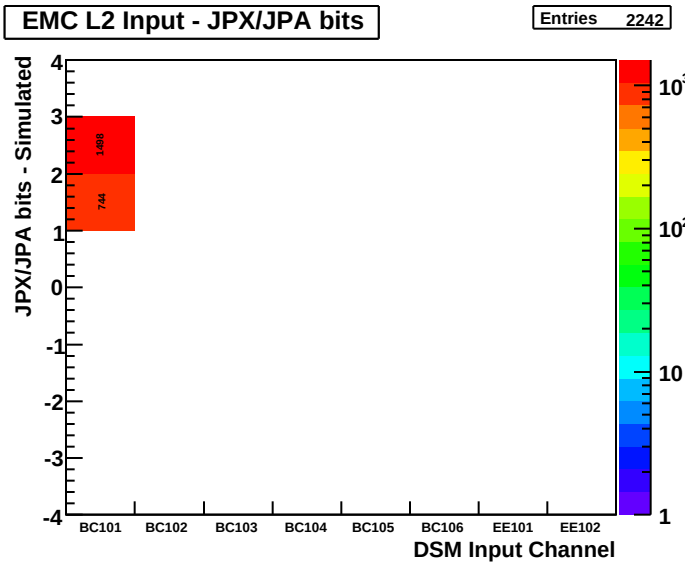

Endcap EMC L1 Input - High Eta Sum
Entries 1.147181e+07
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

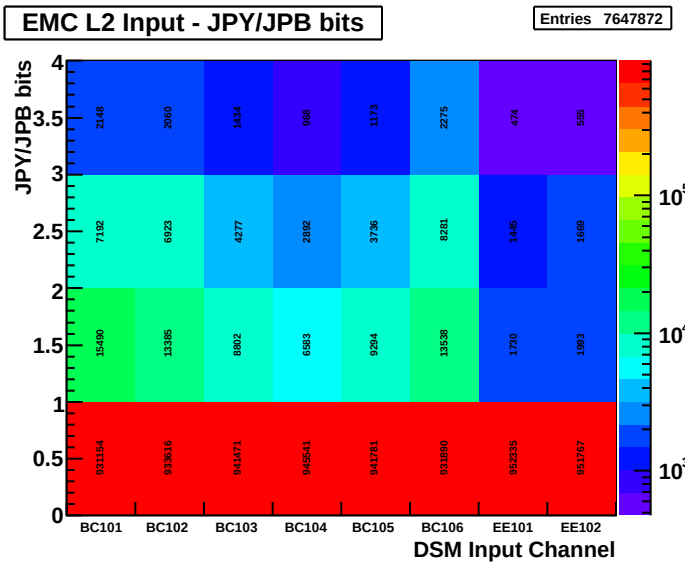

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

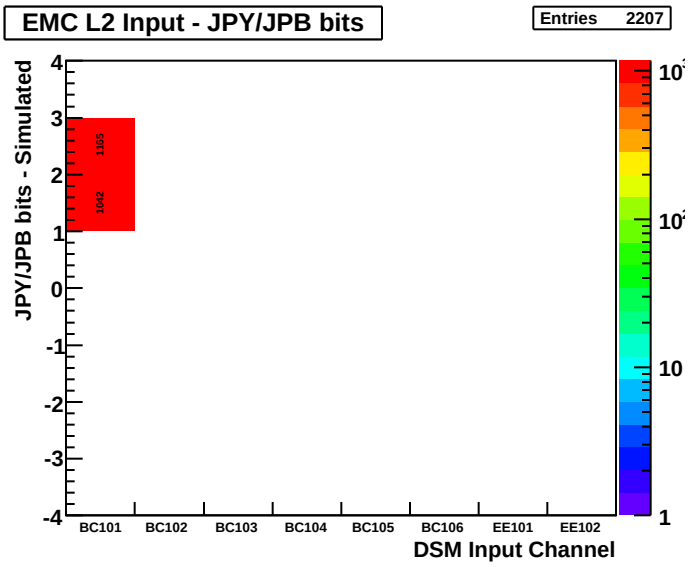

Endcap EMC L1 Input - High Tower Bits
Entries 1.147181e+07
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

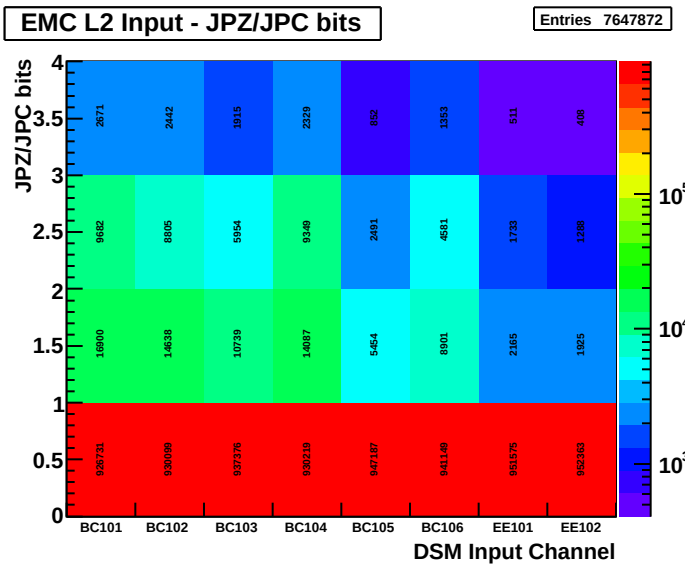

Endcap EMC L1 Input - High Tower Bits
Entries 15
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

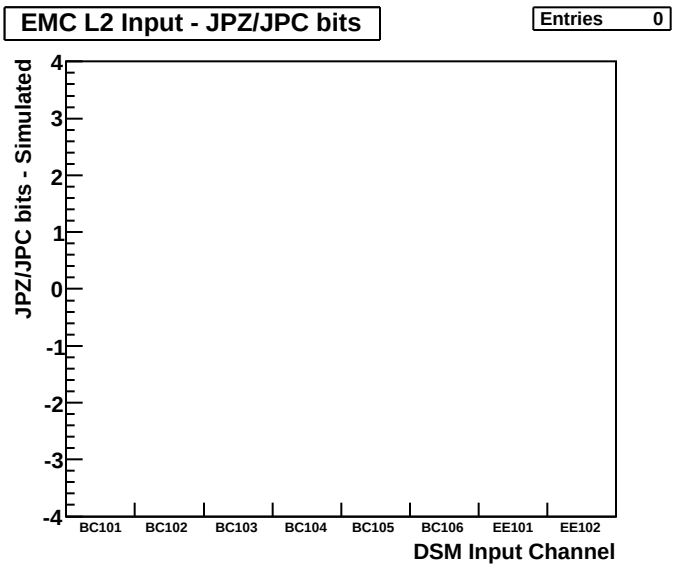

EMC L2 Input - JPX/JPA bits
Entries 7647872
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
3081 2412 2146 1010 2547 1675 449 637
10083 7783 6518 2881 9436 4937 1699 1871
14609 12140 9466 5201 12759 10147 2366 2550
928211 933649 937854 946892 931242 939225 951470 950926

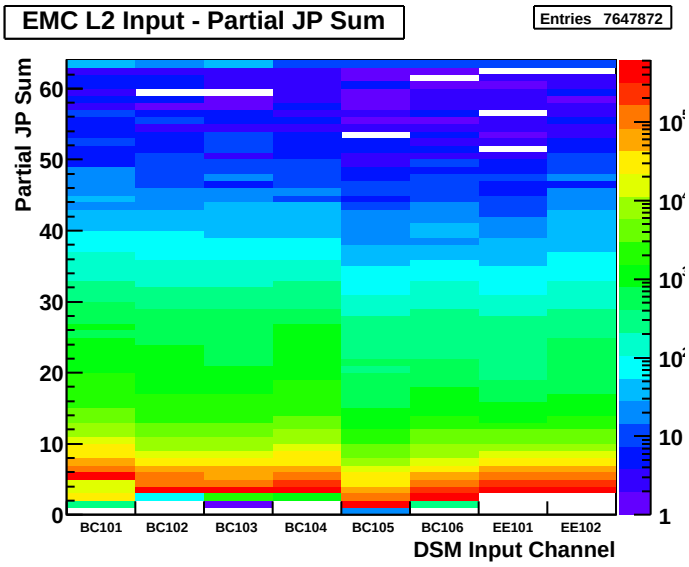

EMC L2 Input - JPX/JPA bits
Entries 2242
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1498
744

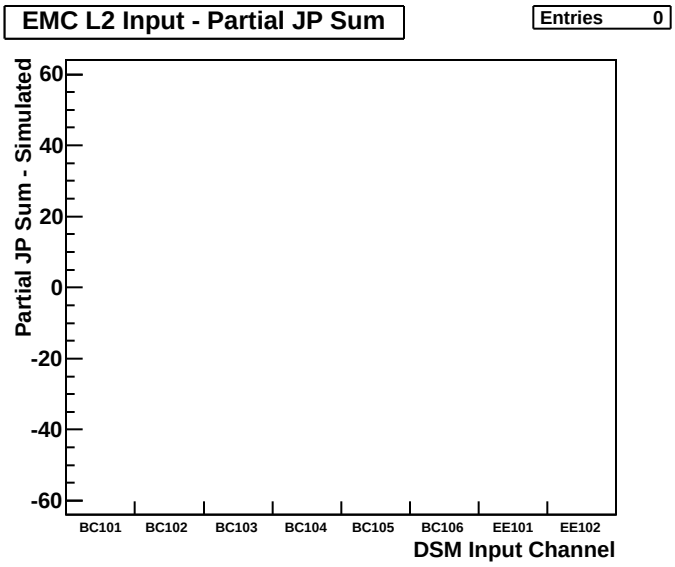

EMC L2 Input - JPY/JPB bits
Entries 7647872
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
2146 2060 1434 968 1173 2275 474 555
7192 6923 4277 2892 3736 8281 1445 1669
15490 13385 8802 6583 9294 13538 1730 1933
931154 933616 941471 945541 941781 931890 952335 951767

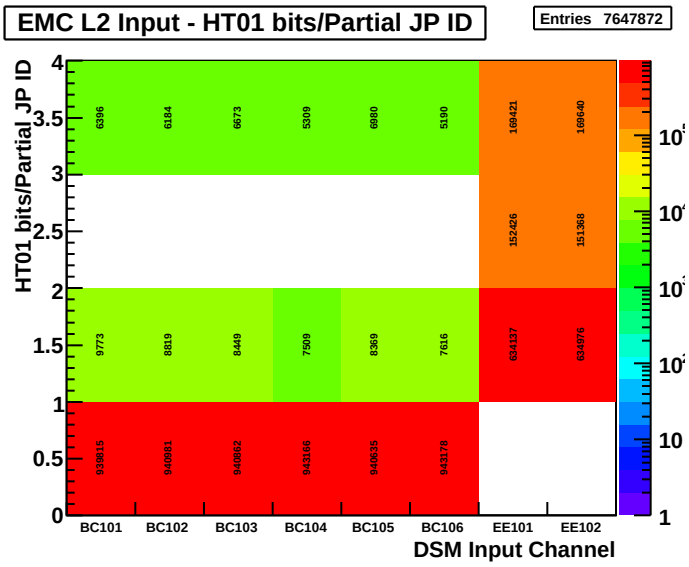

EMC L2 Input - JPY/JPB bits
Entries 2207
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1165
1042

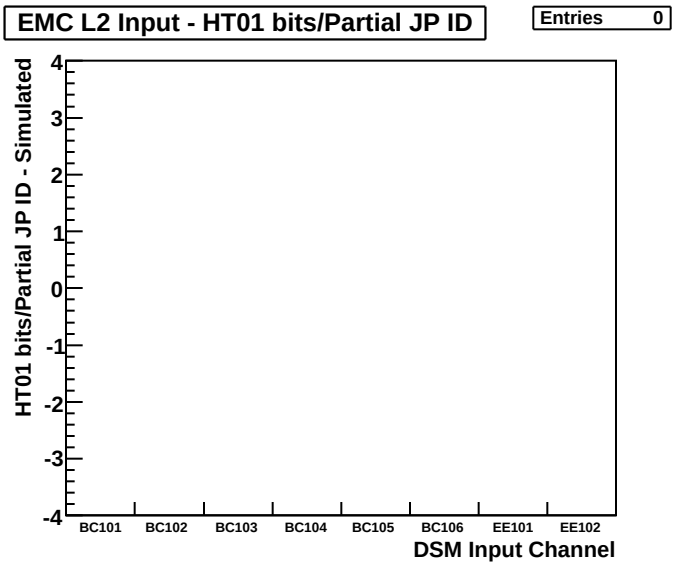

EMC L2 Input - JPZ/JPC bits
Entries 7647872
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
2671 2442 1915 2329 852 1353 511 408
9682 8805 5954 9349 2491 4581 1733 1288
16900 14638 10739 14087 5454 8901 2165 1925
926731 930099 937376 939219 947187 941149 951575 952363

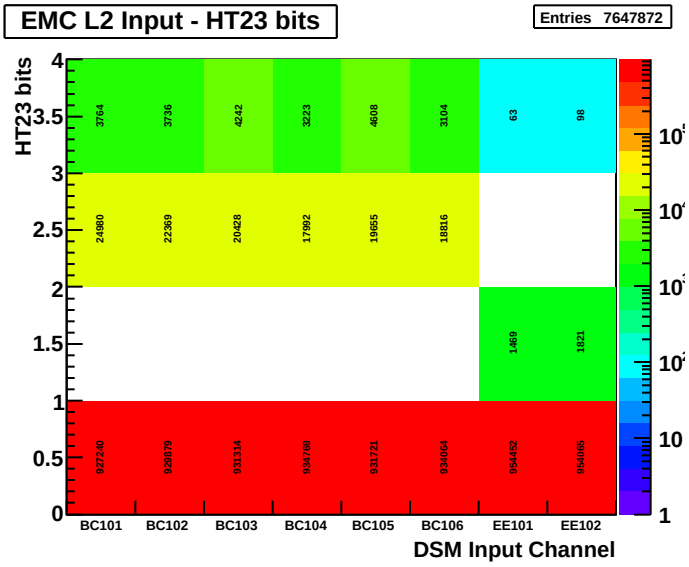

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

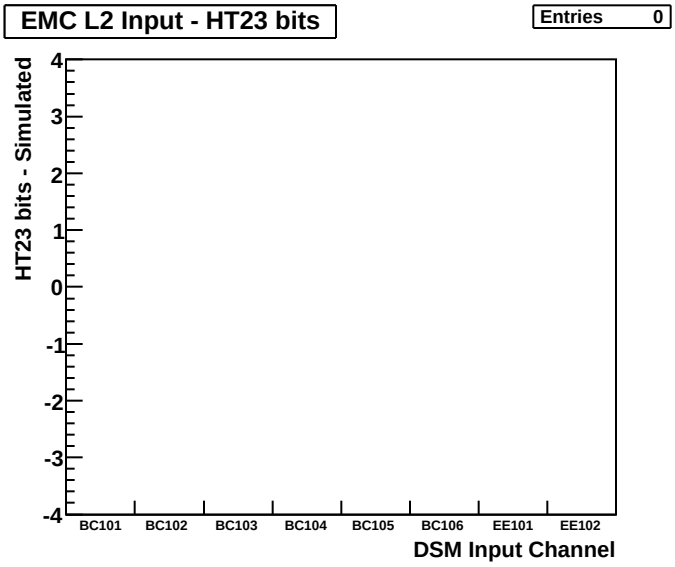

EMC L2 Input - Partial JP Sum
Entries 7647872
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

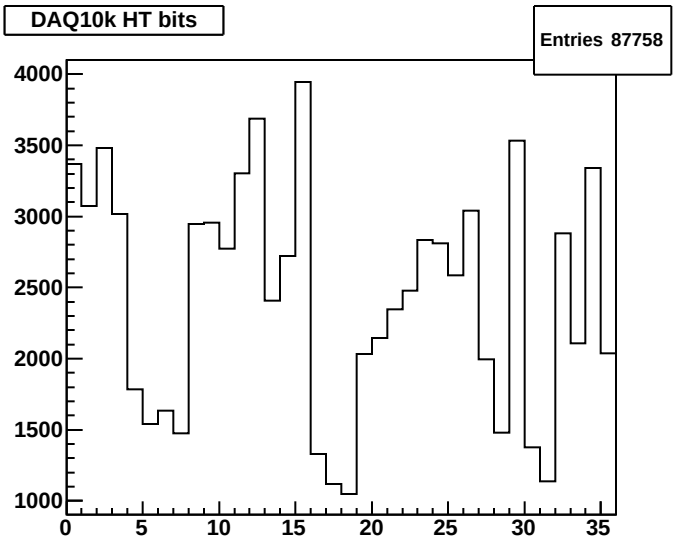

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

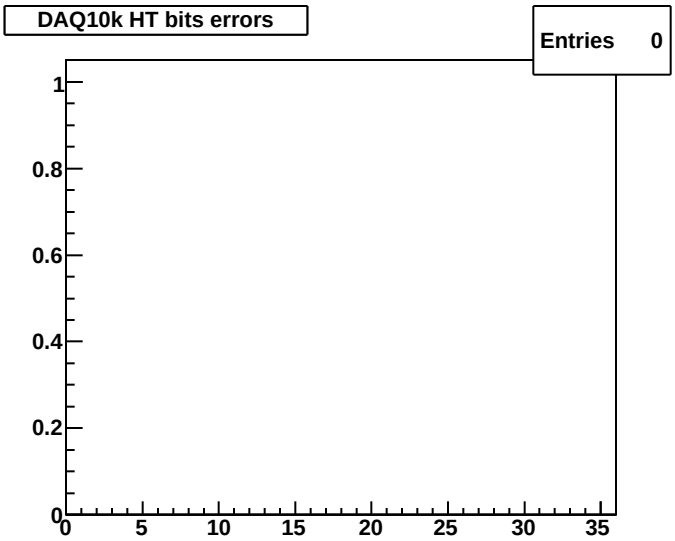

EMC L2 Input - HT01 bits/Partial JP ID
Entries 7647872
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

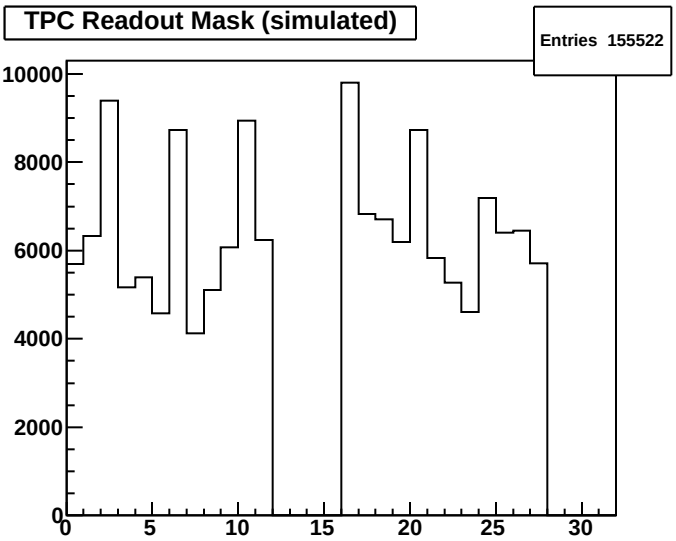

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

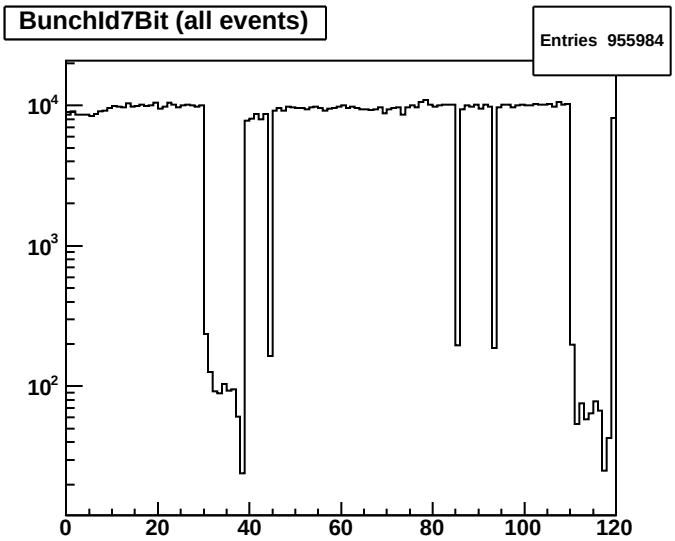

EMC L2 Input - HT23 bits
Entries 7647872
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

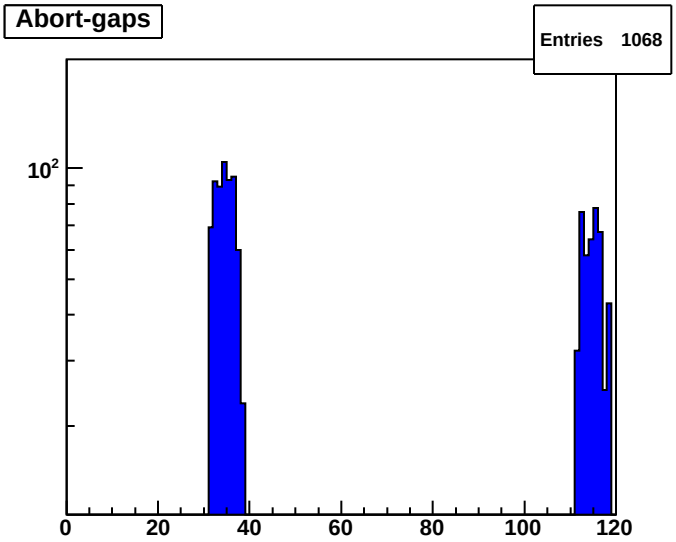

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

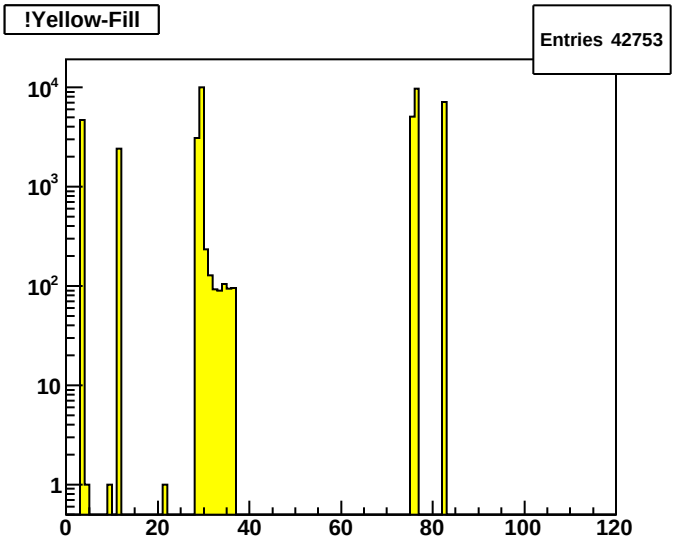

DAQ10k HT bits
Entries 87758
4000
3500
3000
2500
2000
1500
1000
0 5 10 15 20 25 30 35

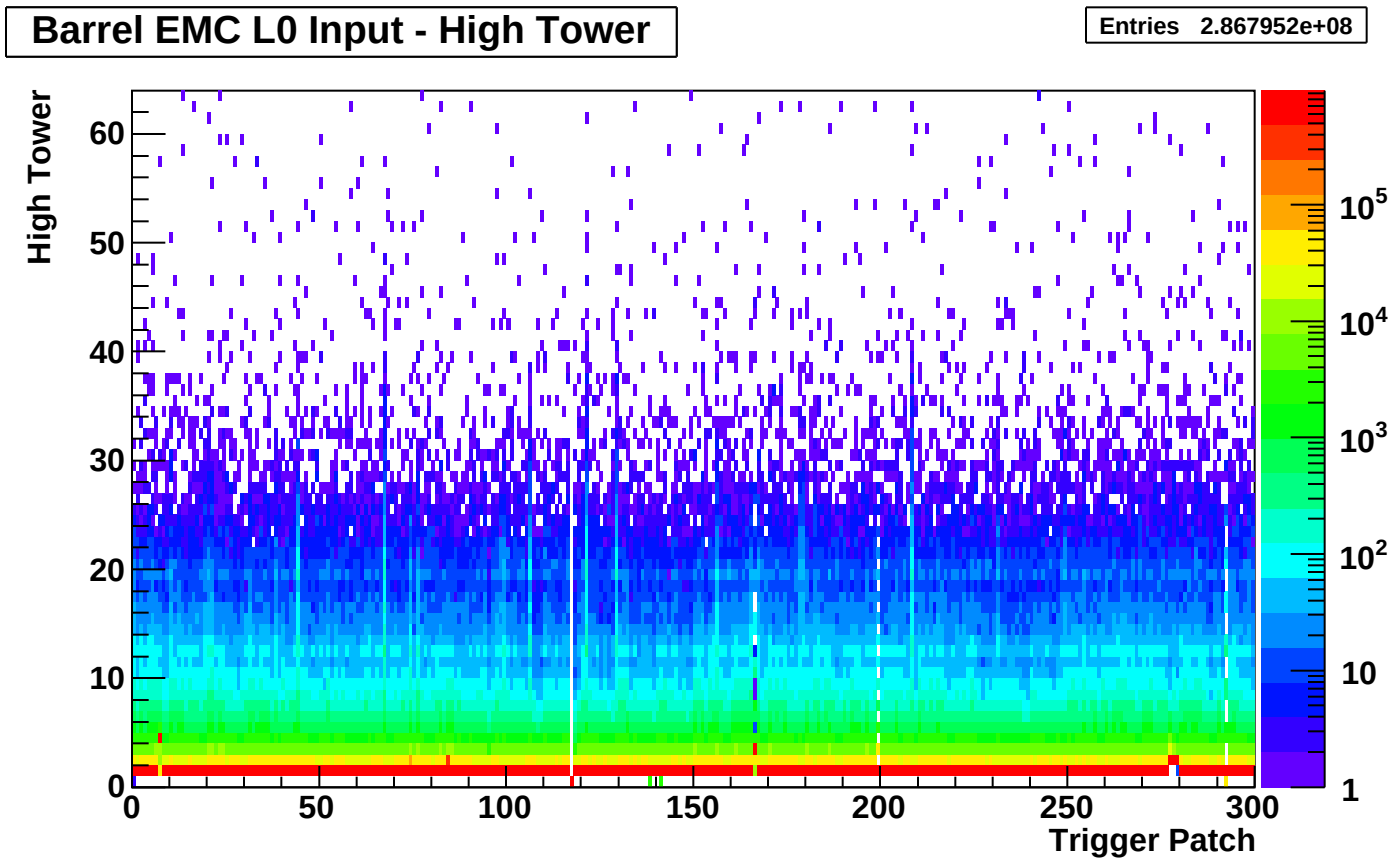

DAQ10k HT bits errors
Entries 0
1
0.8
0.6
0.4
0.2
0
0 5 10 15 20 25 30 35

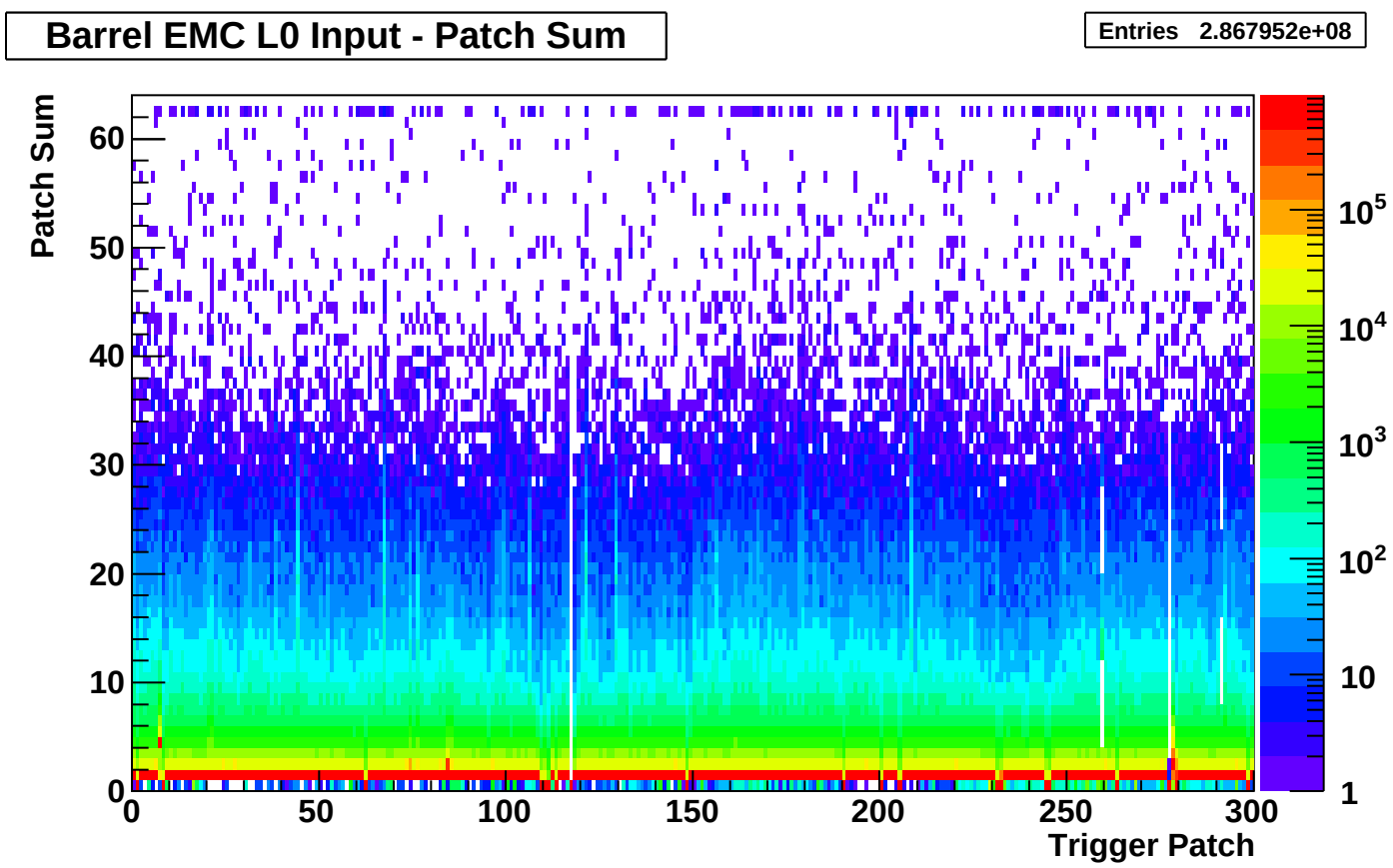

TPC Readout Mask (simulated)
Entries 155522
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30

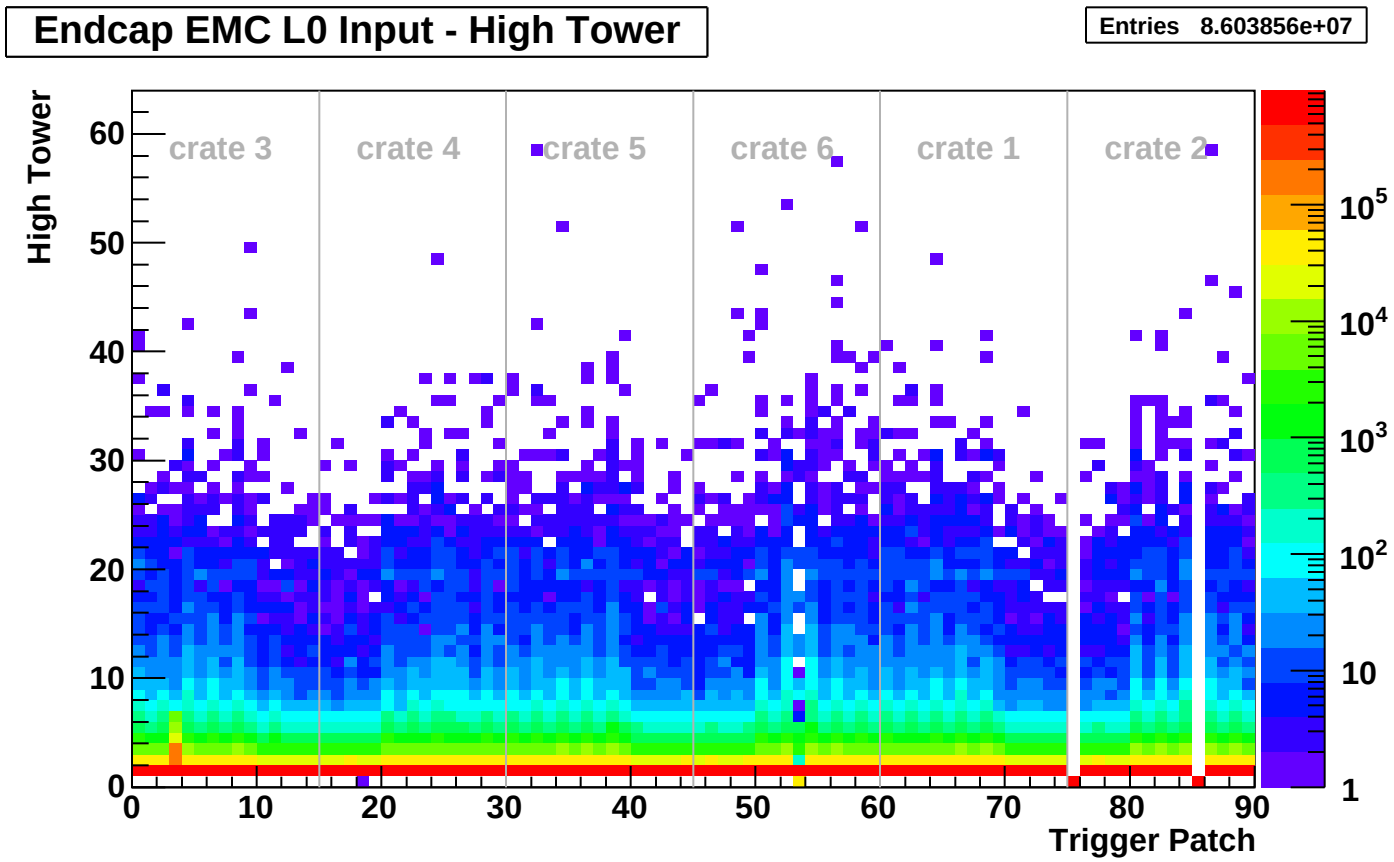

BunchId7Bit (all events)
Entries 955984
10^4
10^3
10^2
0 20 40 60 80 100 120

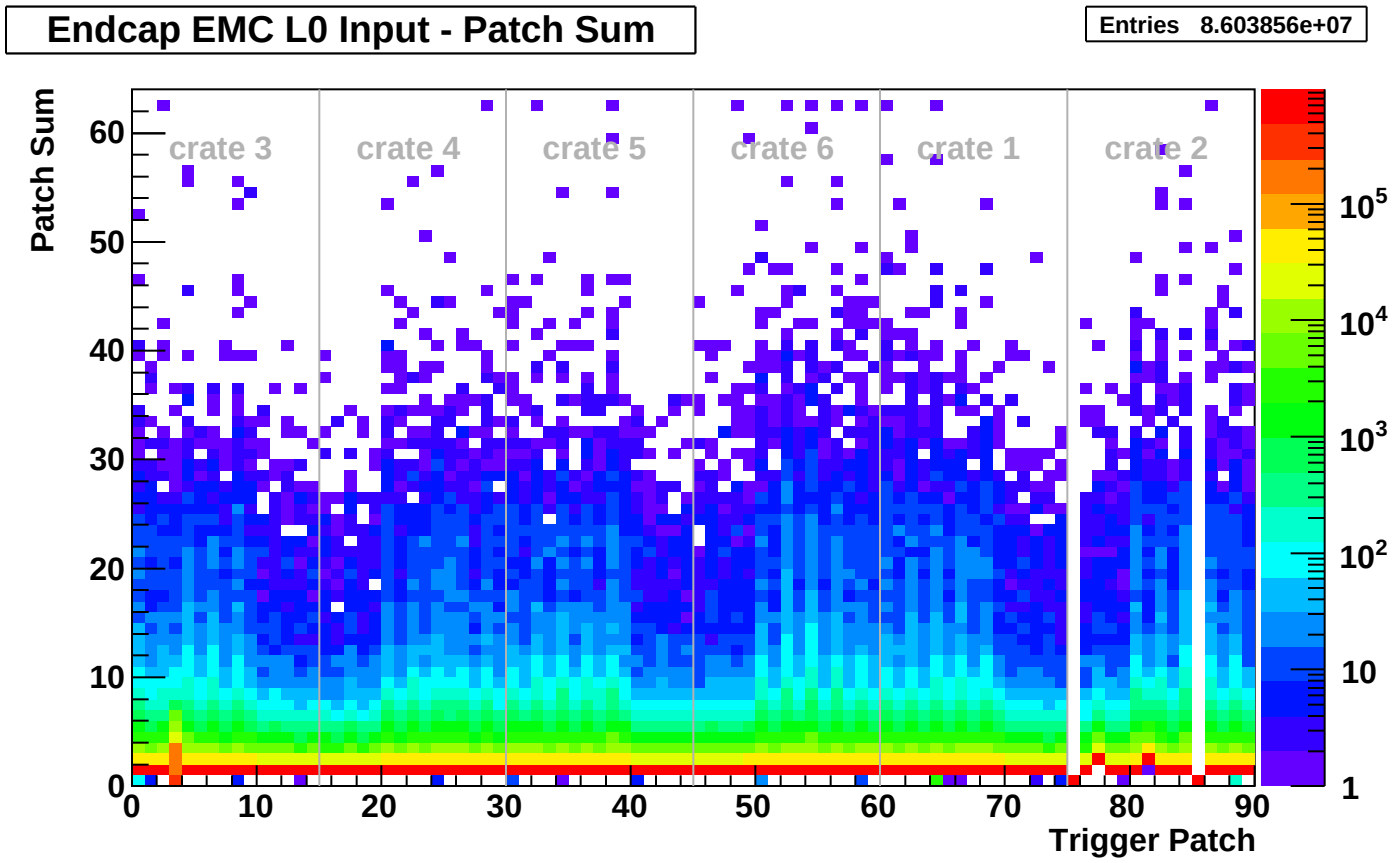

Abort-gaps
Entries 1068
10^2
0 20 40 60 80 100 120

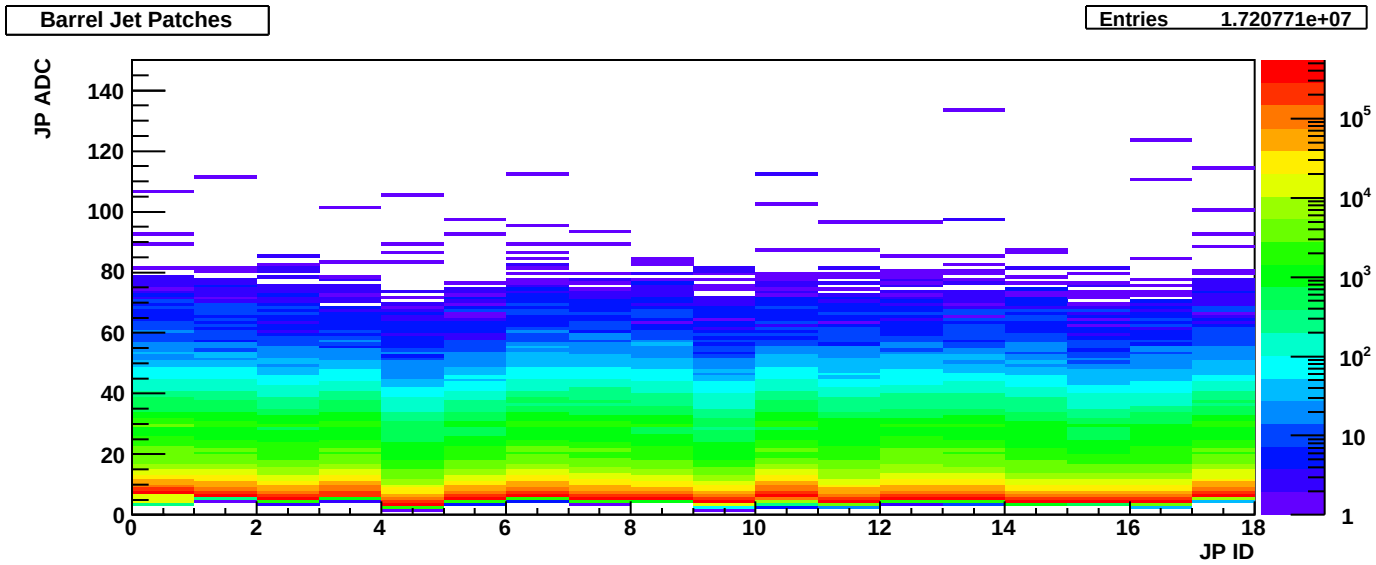

!Yellow-Fill
Entries 42753
10^4
10^3
10^2
10
1
0 20 40 60 80 100 120

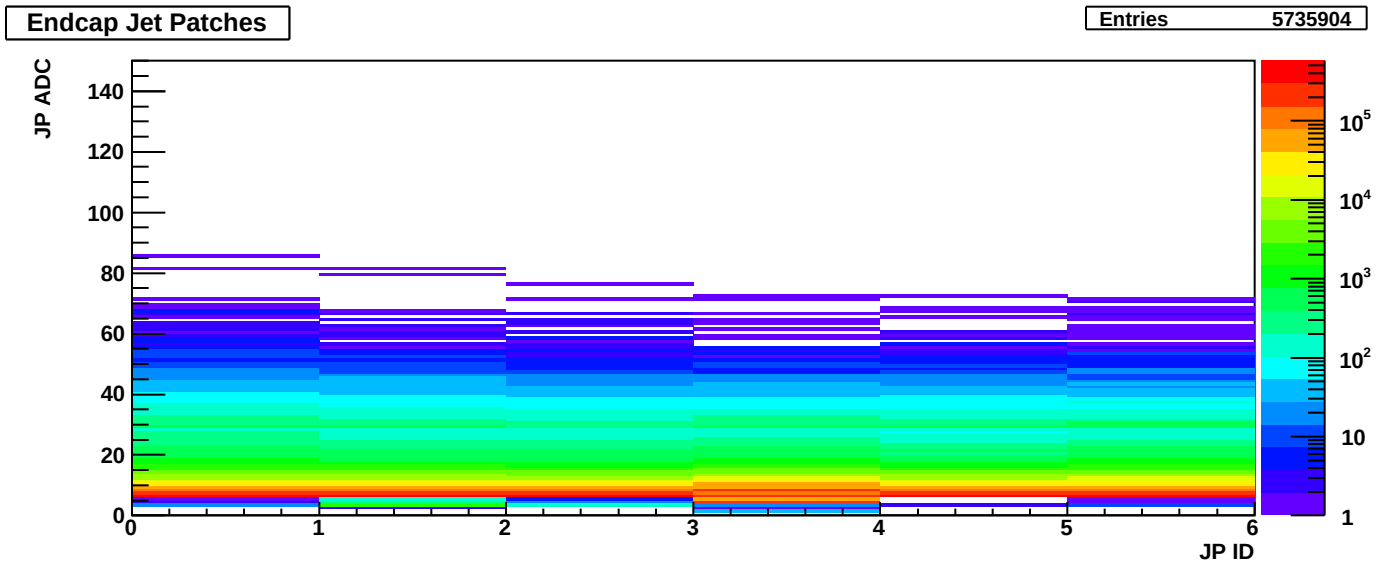

Barrel EMC L0 Input - High Tower
Entries 2.867952e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

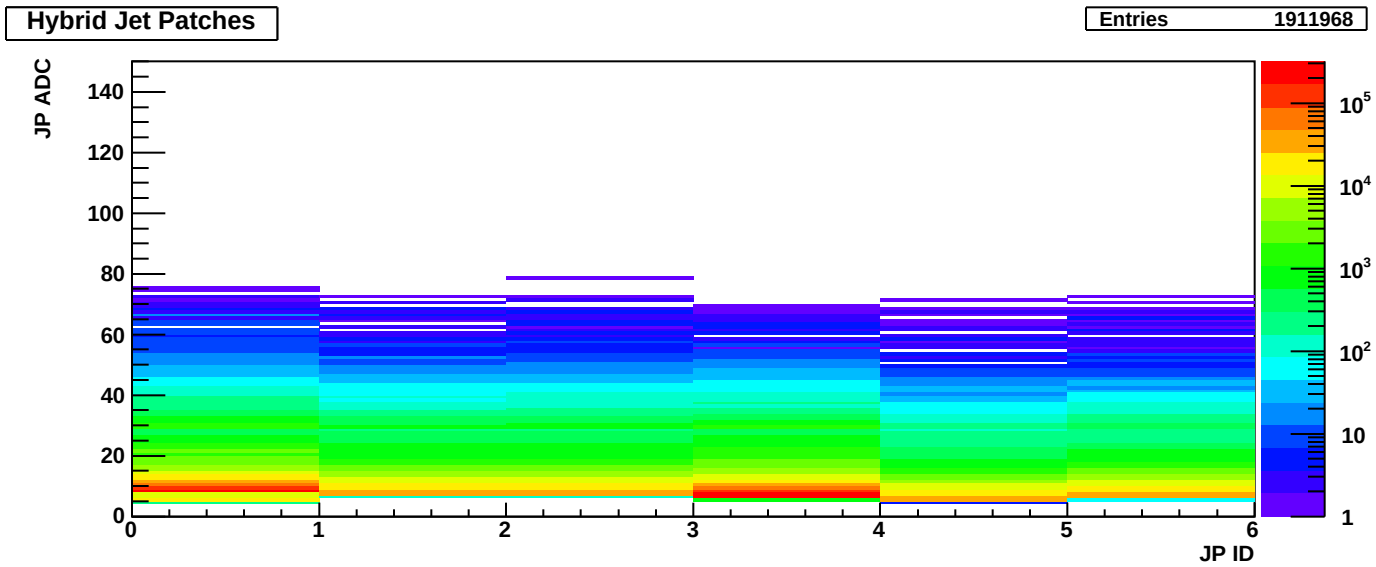

Barrel EMC L0 Input - Patch Sum
Entries 2.867952e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

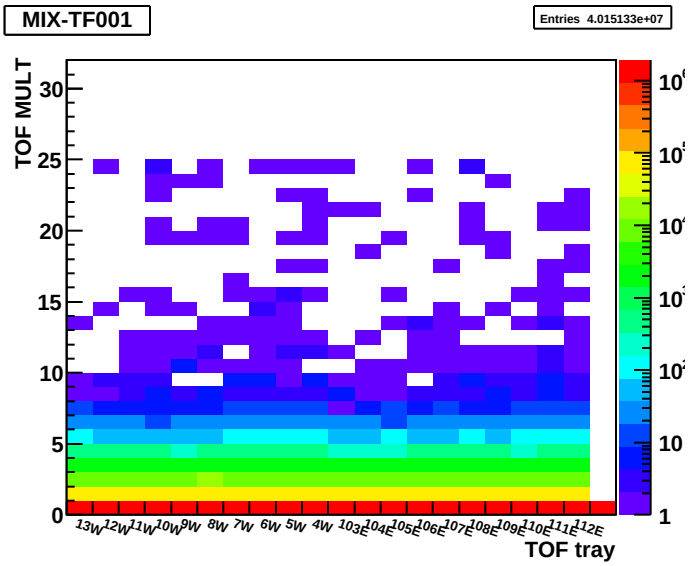

Endcap EMC L0 Input - High Tower
Entries 8.603856e+07
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

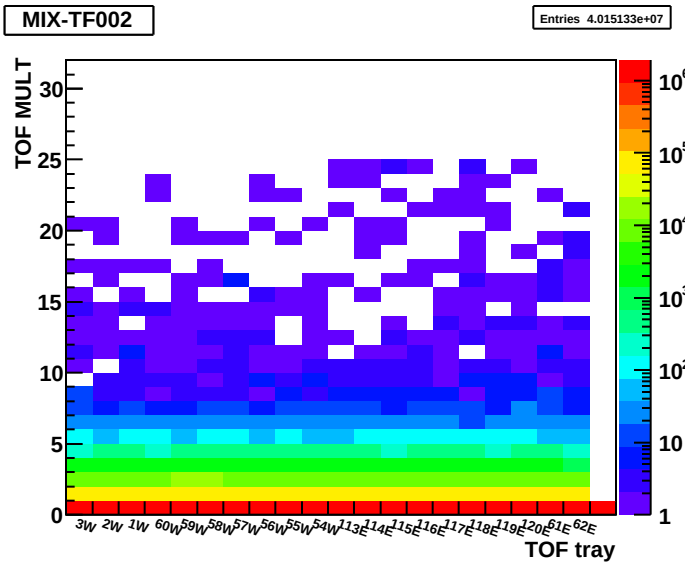

Endcap EMC L0 Input - Patch Sum
Entries 8.603856e+07
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

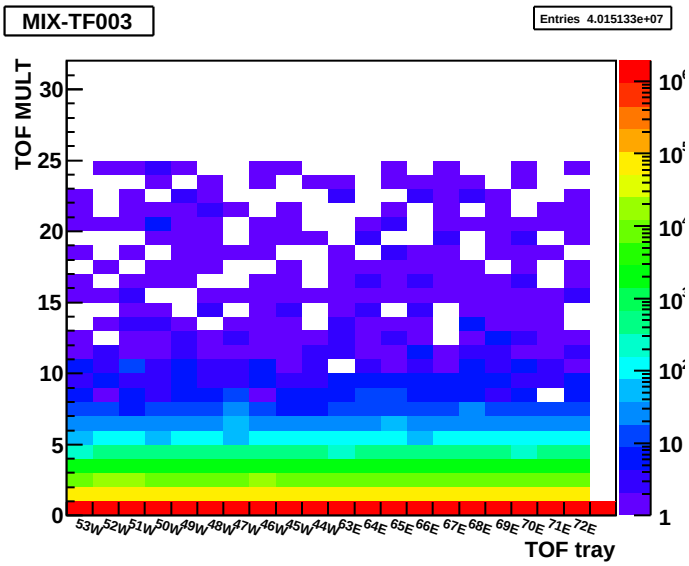

Barrel Jet Patches
Entries 1.720771e+07
JP ADC
JP ID

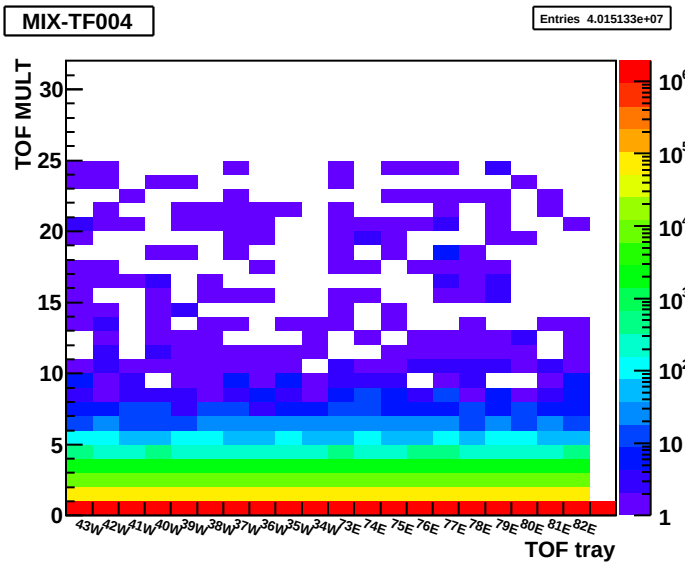

Endcap Jet Patches
Entries 5735904
JP ADC
JP ID

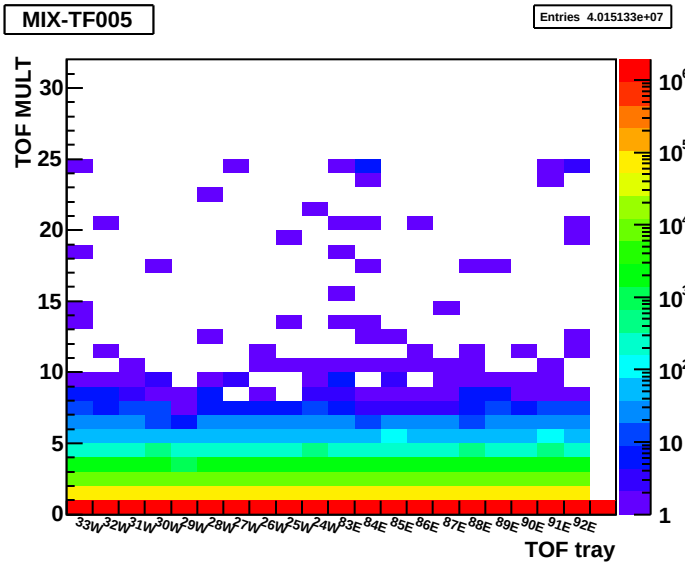

Hybrid Jet Patches
Entries 1911968
JP ADC
JP ID

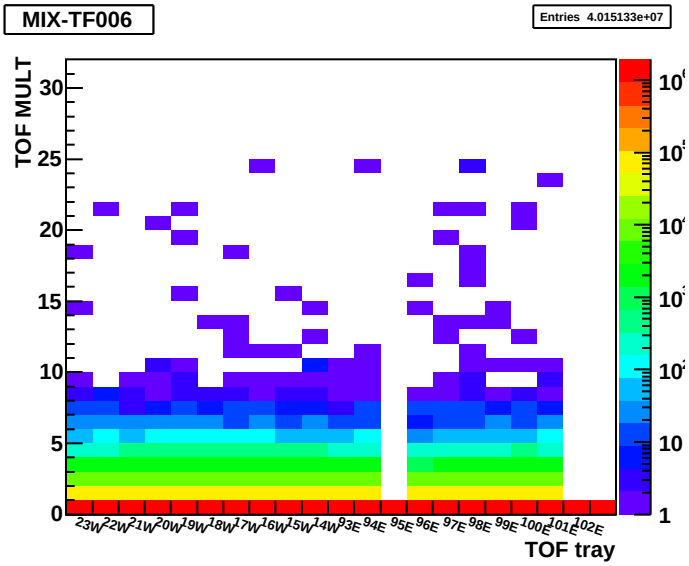

MIX-TF001
Entries 4.015133e+07
TOF MULT
TOF tray

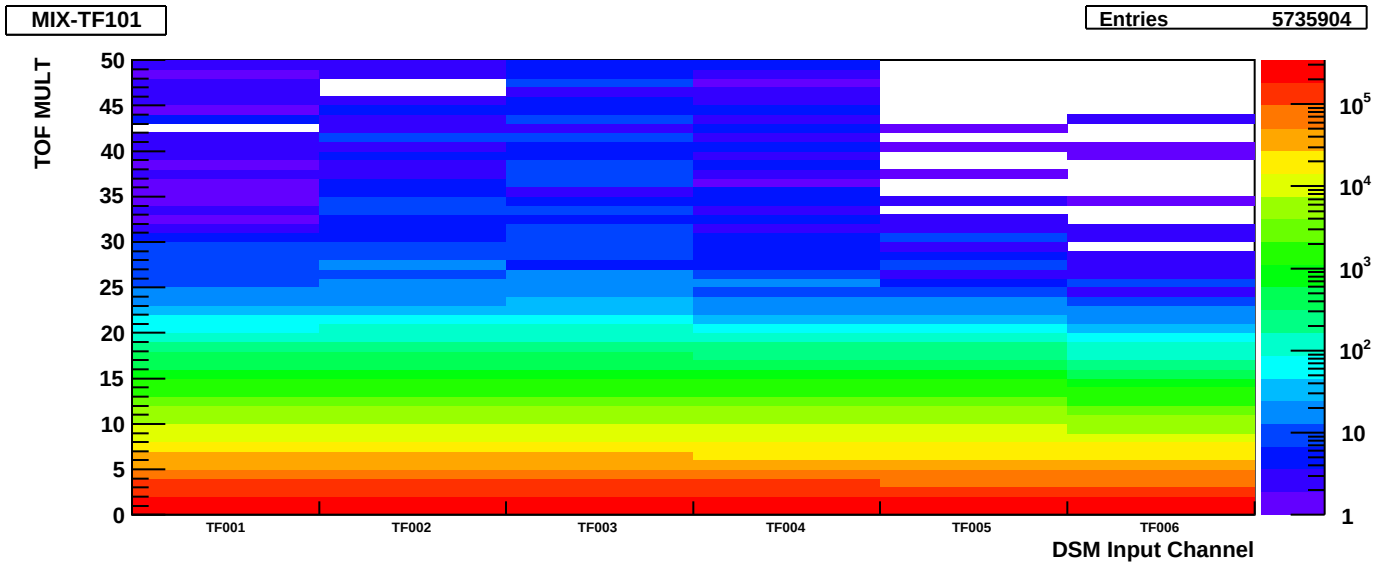

MIX-TF002
Entries 4.015133e+07
TOF MULT
TOF tray

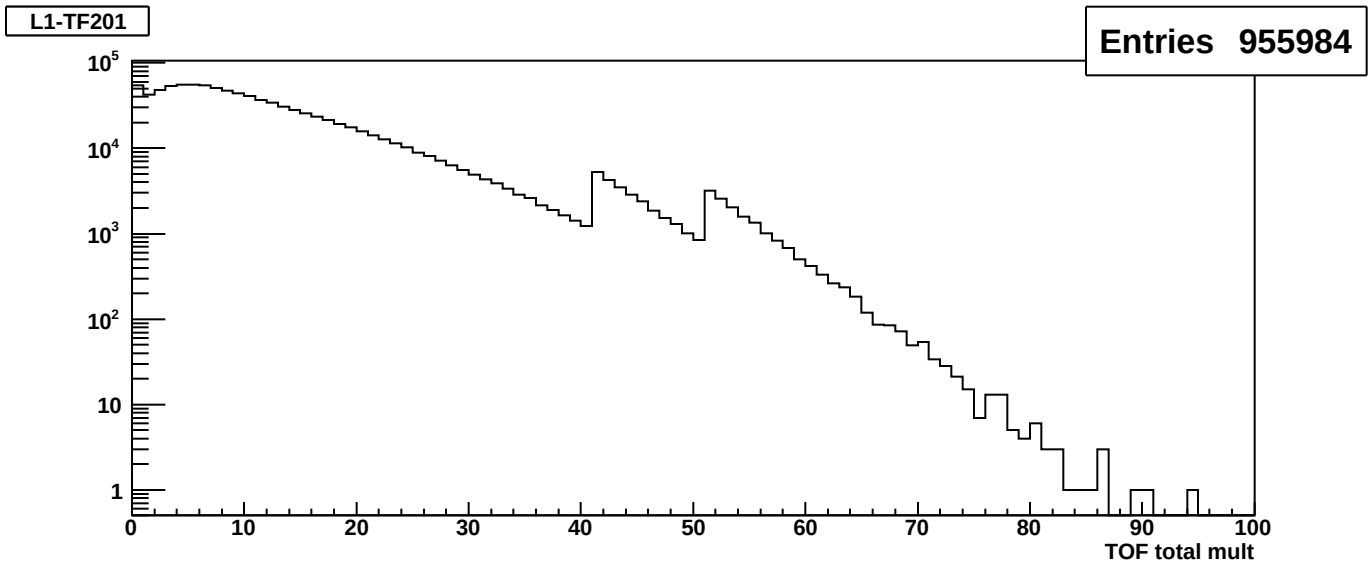

MIX-TF003
Entries 4.015133e+07
TOF MULT
TOF tray

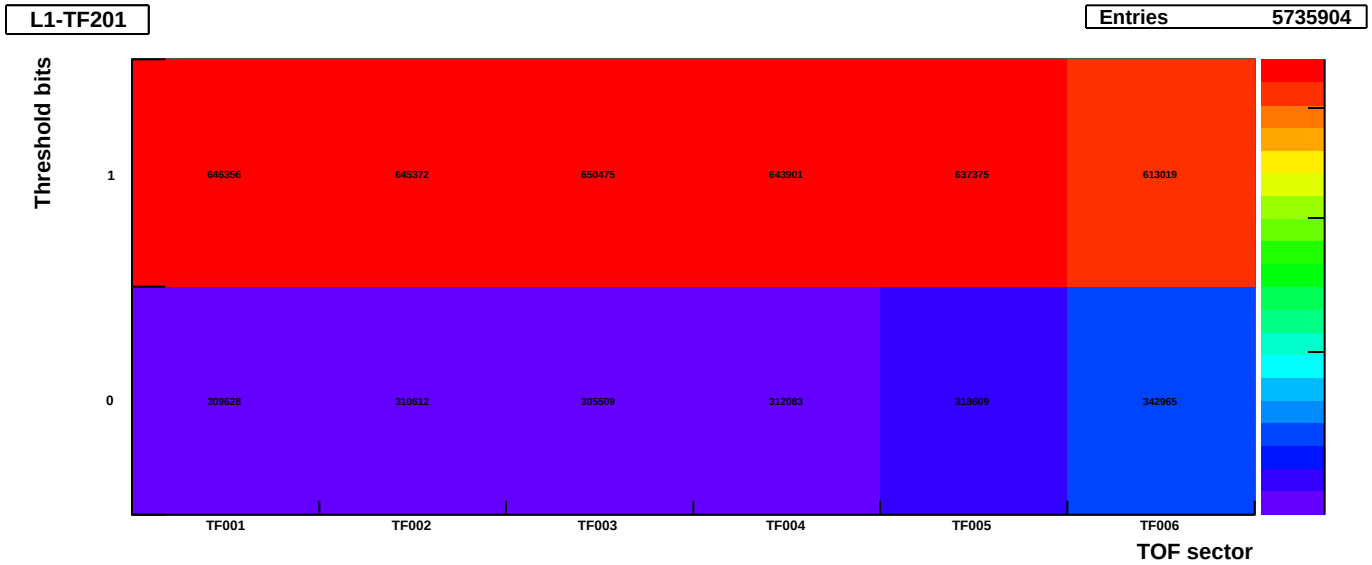

MIX-TF004
Entries 4.015133e+07
TOF MULT
TOF tray

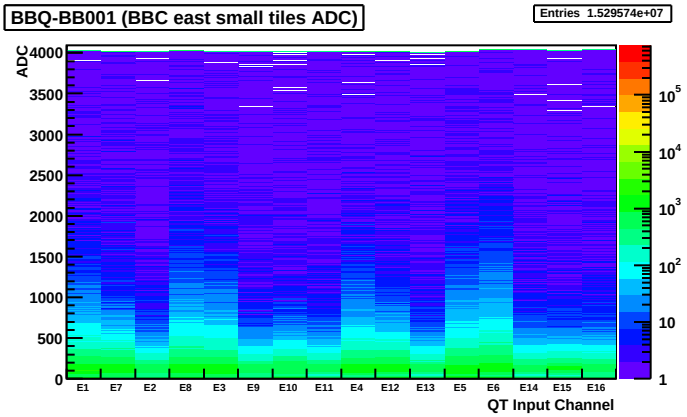

MIX-TF005
Entries 4.015133e+07
TOF MULT
TOF tray

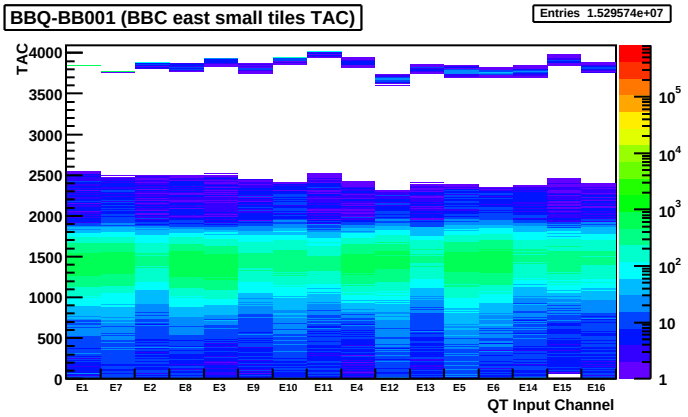

MIX-TF006
Entries 4.015133e+07
TOF MULT
TOF tray

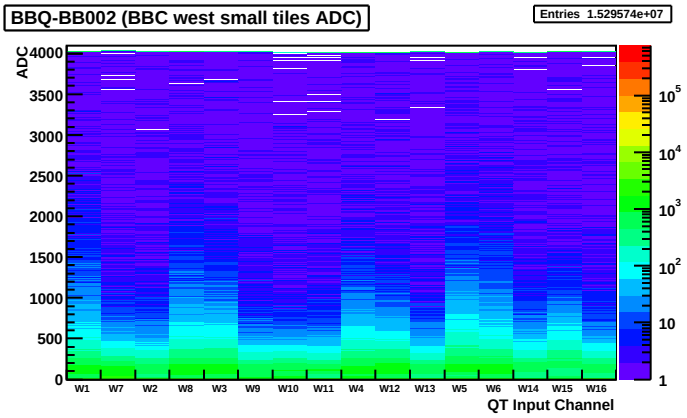

MIX-TF101
Entries 5735904
TOF MULT
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

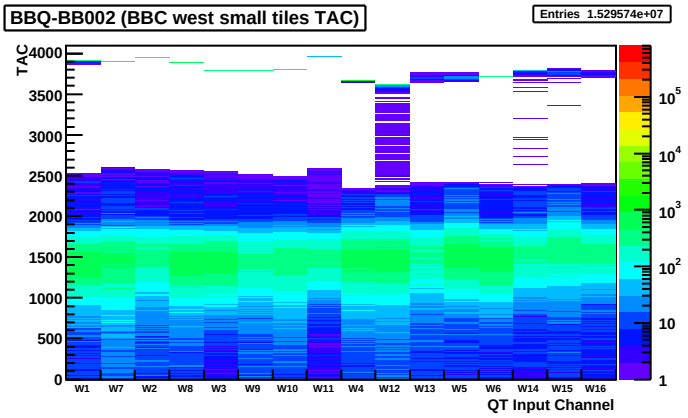

L1-TF201
Entries 955984
TOF total mult

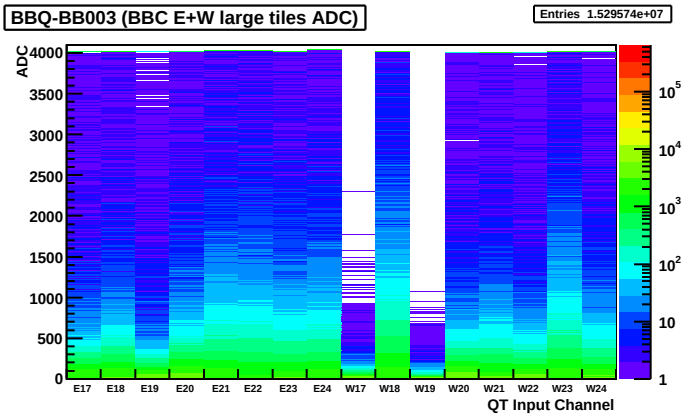

L1-TF201
Entries 5735904
Threshold bits
646356
645372
650475
643901
637375
613019
309628
310612
305509
312083
318609
342965
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

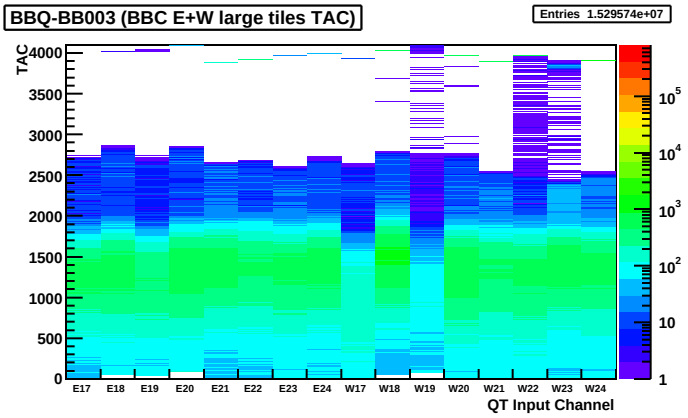

BBQ-BB001 (BBC east small tiles ADC)
Entries 1.529574e+07
ADC
QT Input Channel

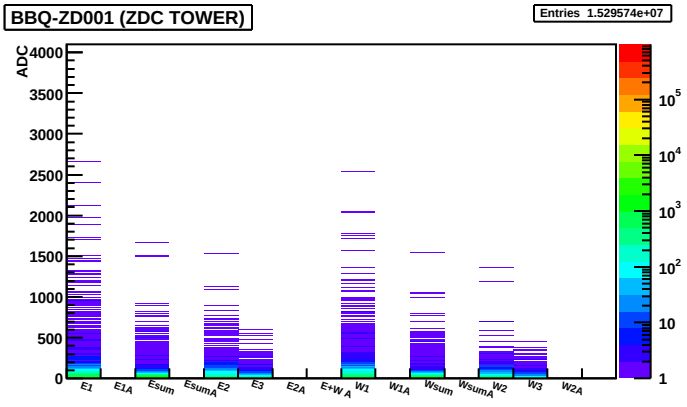

BBQ-BB001 (BBC east small tiles TAC)
Entries 1.529574e+07
TAC
QT Input Channel

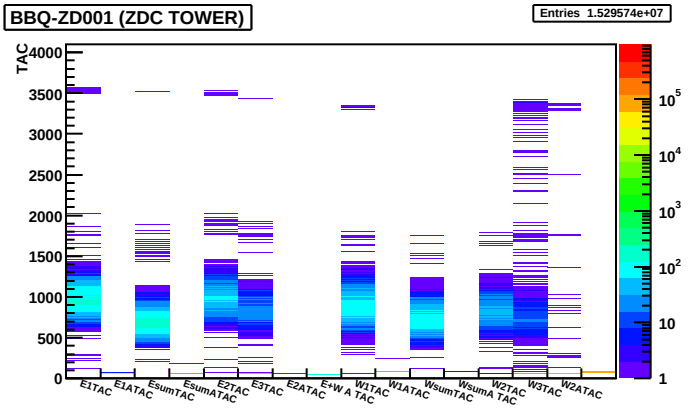

BBQ-BB002 (BBC west small tiles ADC)
Entries 1.529574e+07
ADC
QT Input Channel

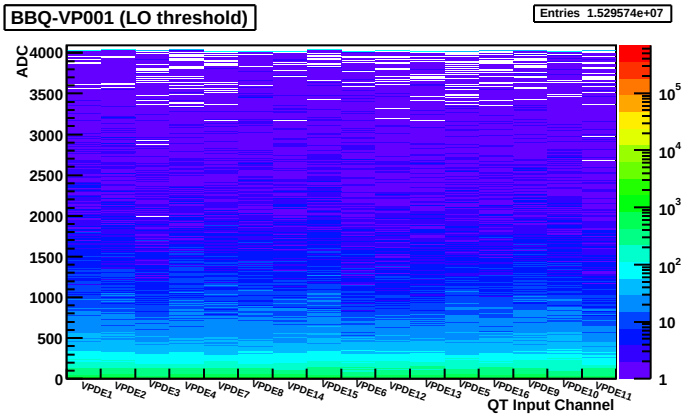

BBQ-BB002 (BBC west small tiles TAC)
Entries 1.529574e+07
TAC
QT Input Channel

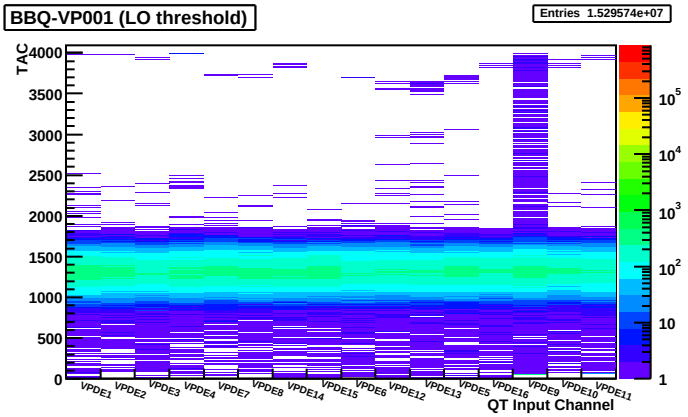

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 1.529574e+07
ADC
QT Input Channel

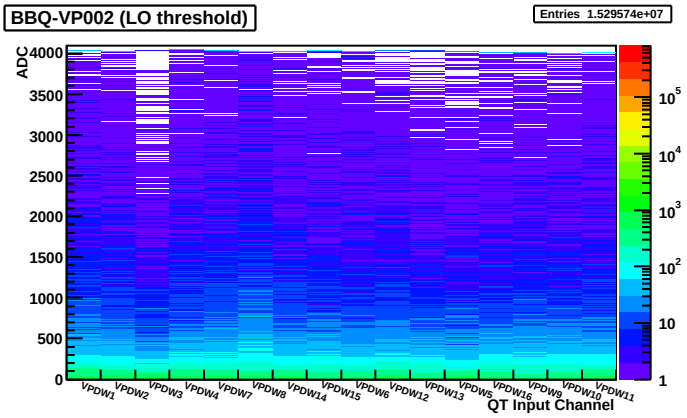

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 1.529574e+07
TAC
QT Input Channel

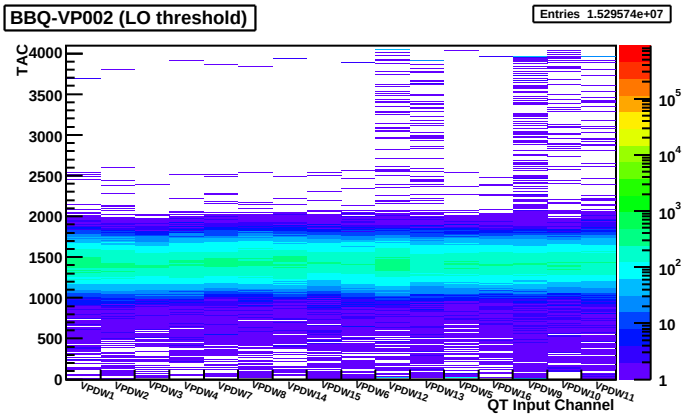

BBQ-ZD001 (ZDC TOWER)
Entries 1.529574e+07
ADC

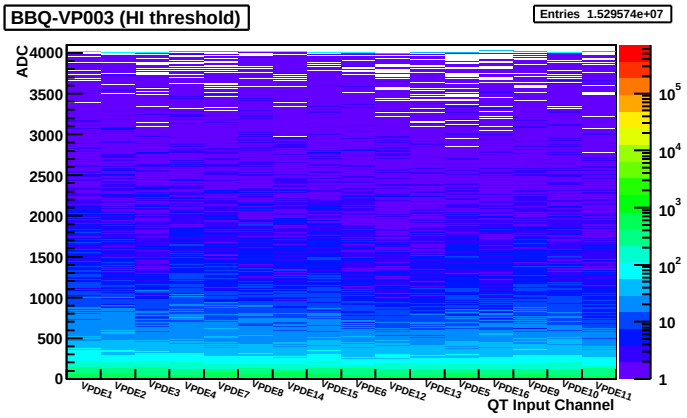

BBQ-ZD001 (ZDC TOWER)
Entries 1.529574e+07
TAC

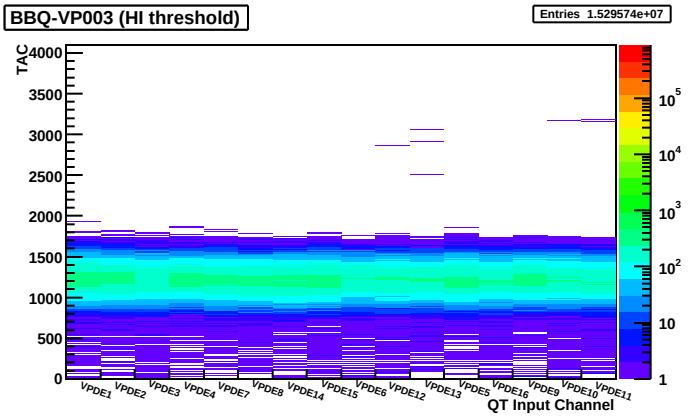

BBQ-VP001 (LO threshold)
Entries 1.529574e+07
ADC
QT Input Channel

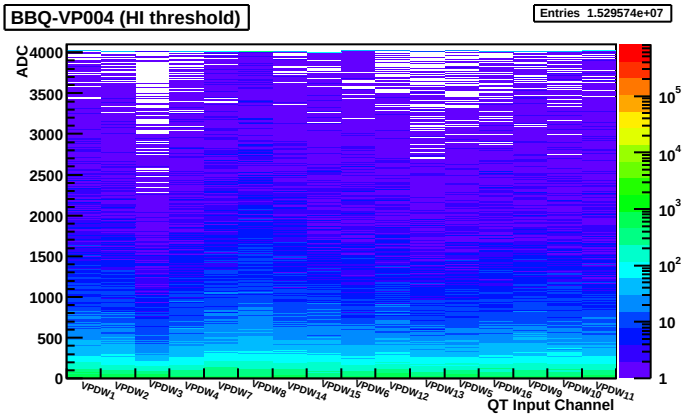

BBQ-VP001 (LO threshold)
Entries 1.529574e+07
TAC
QT Input Channel

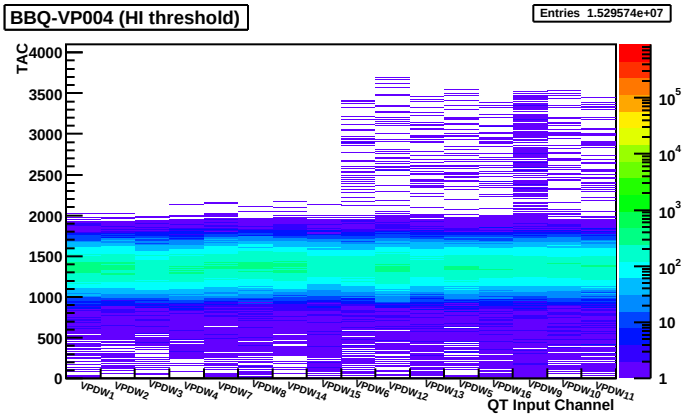

BBQ-VP002 (LO threshold)
Entries 1.529574e+07
ADC
QT Input Channel

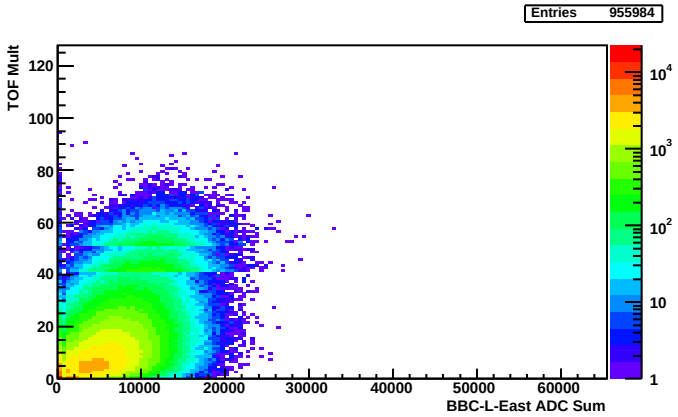

BBQ-VP002 (LO threshold)
Entries 1.529574e+07
TAC
QT Input Channel

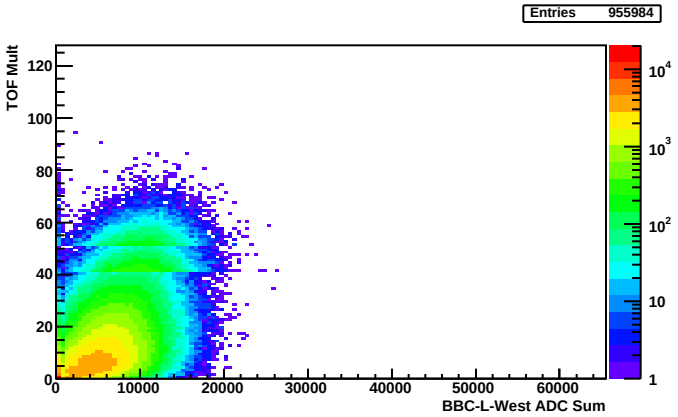

BBQ-VP003 (HI threshold)
Entries 1.529574e+07
ADC
QT Input Channel

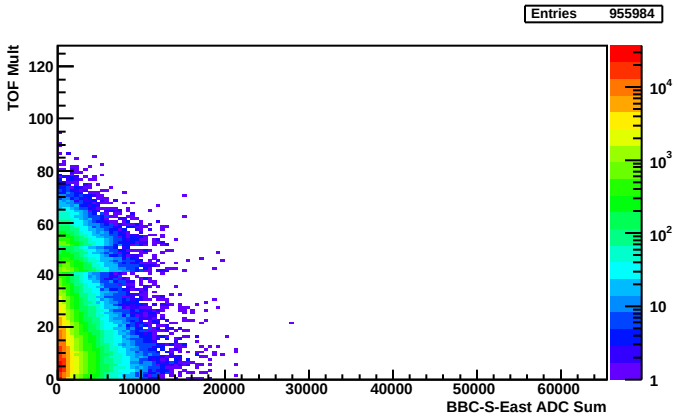

BBQ-VP003 (HI threshold)
Entries 1.529574e+07
TAC
QT Input Channel

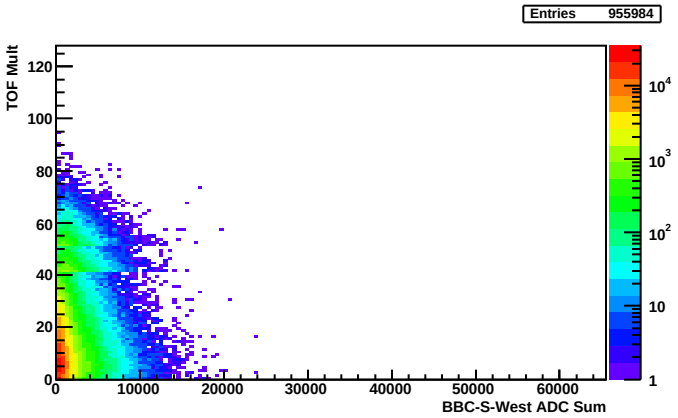

BBQ-VP004 (HI threshold)
Entries 1.529574e+07
ADC
QT Input Channel

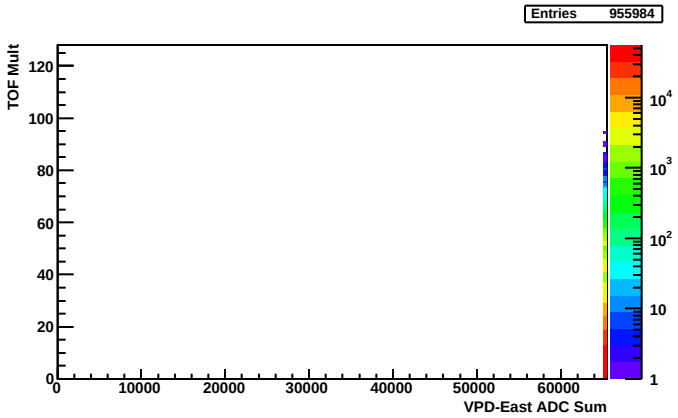

BBQ-VP004 (HI threshold)
Entries 1.529574e+07
TAC
QT Input Channel

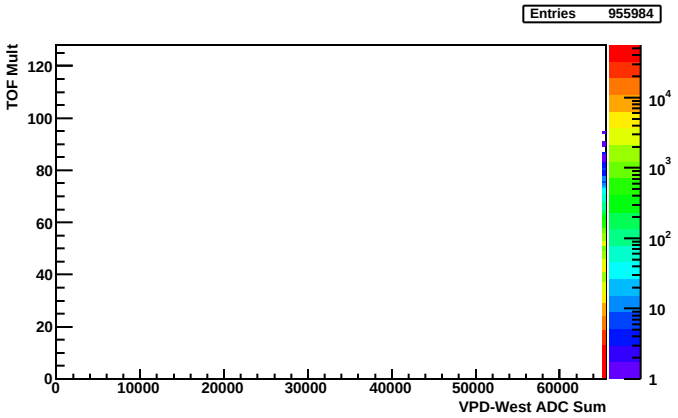

Entries 955984
TOF Mult
BBC-L-East ADC Sum

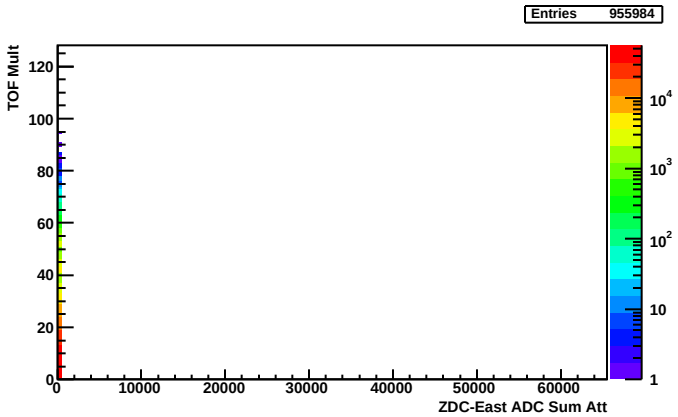

Entries 955984
TOF Mult
BBC-L-West ADC Sum

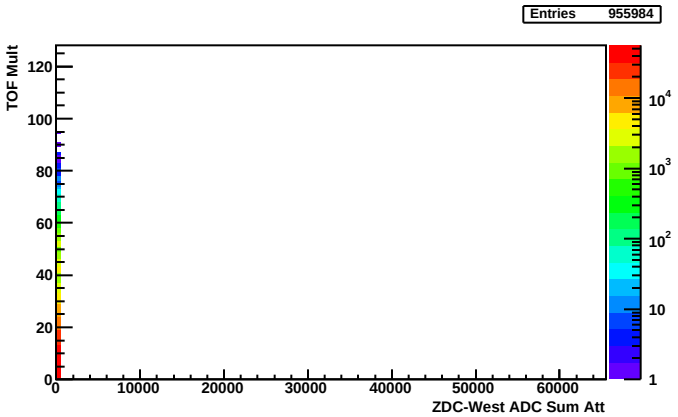

Entries 955984
TOF Mult
BBC-S-East ADC Sum

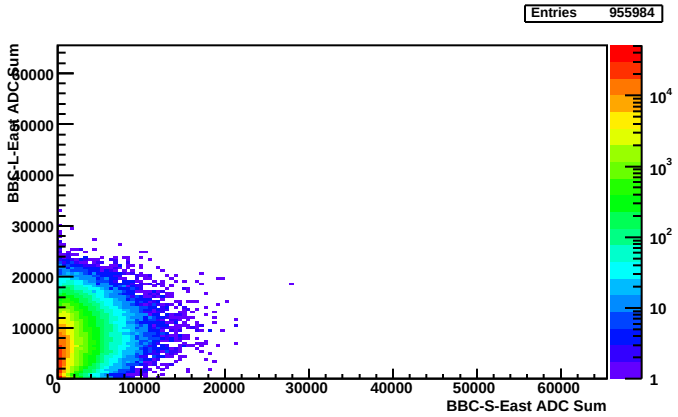

Entries 955984
TOF Mult
BBC-S-West ADC Sum

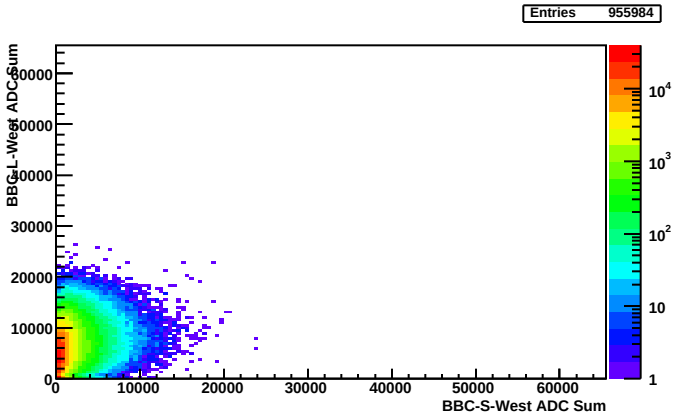

Entries 955984
TOF Mult
VPD-East ADC Sum

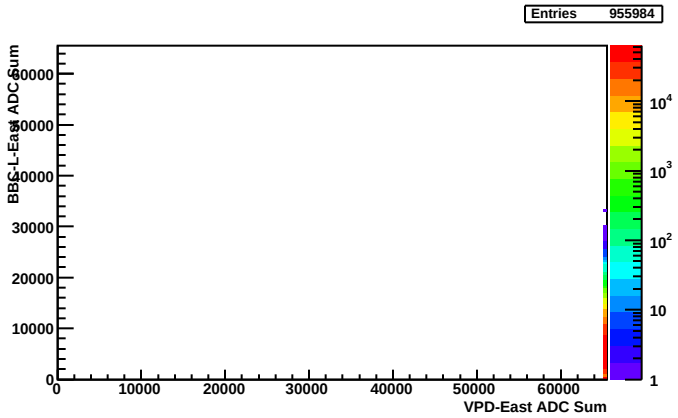

Entries 955984
TOF Mult
VPD-West ADC Sum

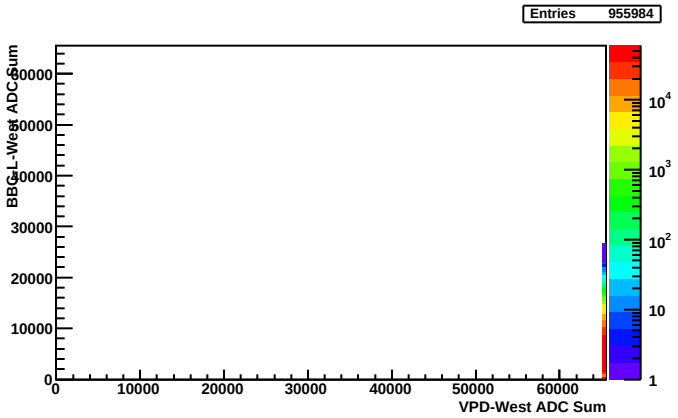

Entries 955984
TOF Mult
ZDC-East ADC Sum Att


Entries 955984
TOF Mult
ZDC-West ADC Sum Att


Entries 955984
BBC-L-East ADC Sum
BBC-S-East ADC Sum


Entries 955984
BBC-L-West ADC Sum
BBC-S-West ADC Sum


Entries 955984
BBC-L-East ADC Sum
VPD-East ADC Sum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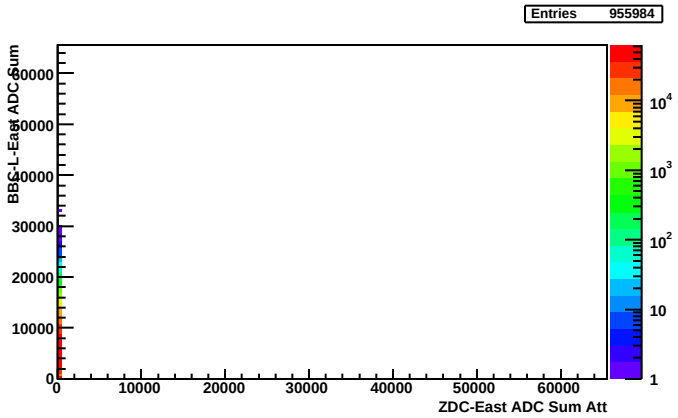
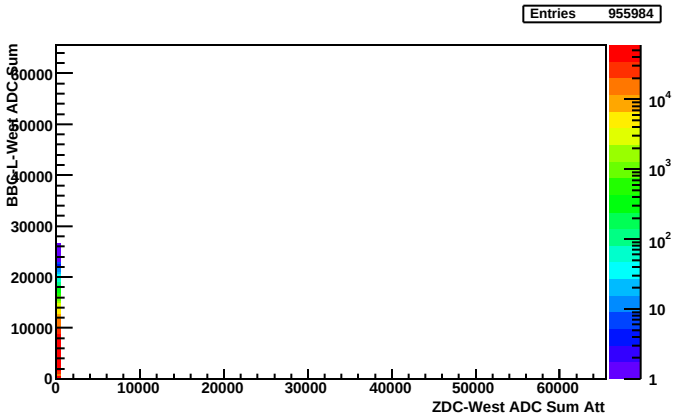
BBC-L-West ADC Sum
VPD-West ADC Sum


Entries 955984
BBC-L-East ADC Sum
ZDC-East ADC Sum Att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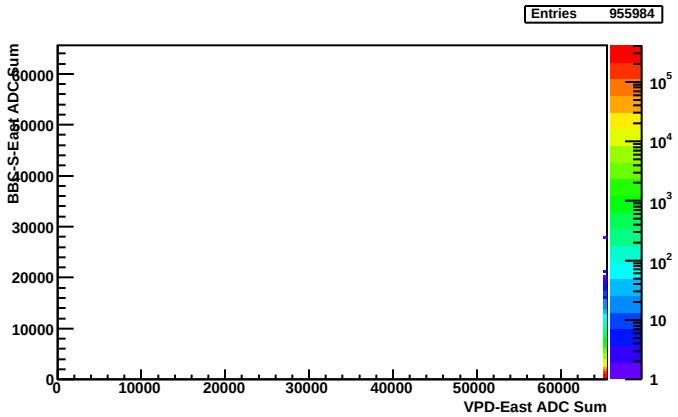
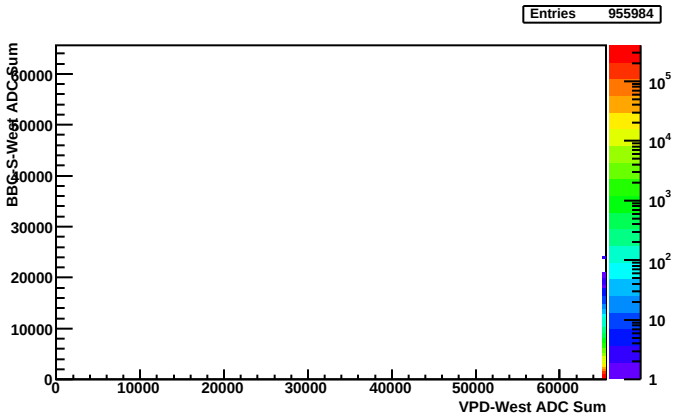
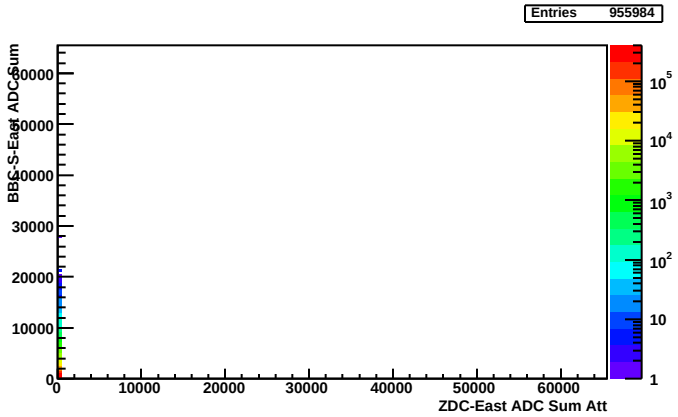
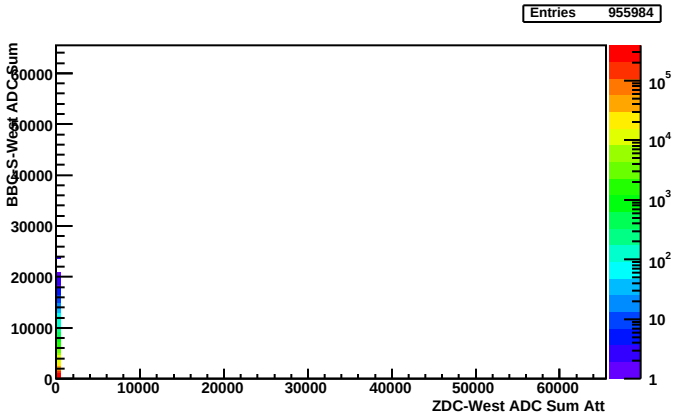
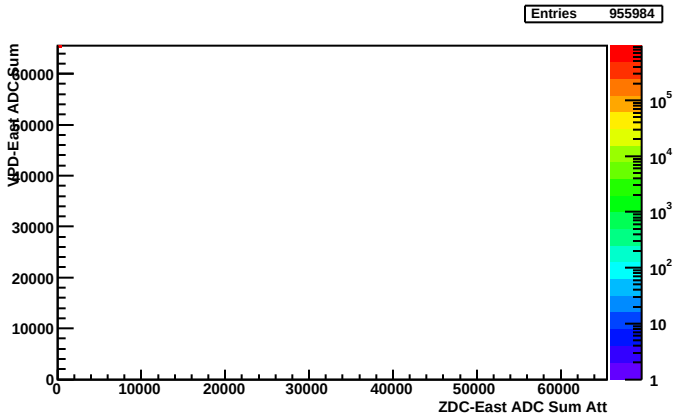
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

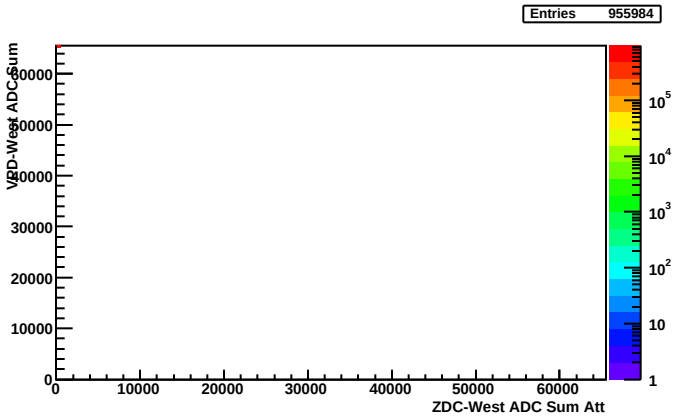

Entries 955984
BBC-S-East ADC Sum
VPD-East ADC Sum

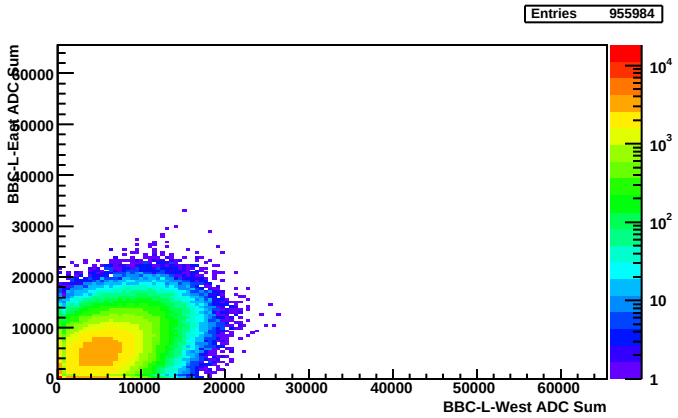

Entries 955984
BBC-S-West ADC Sum
VPD-West ADC Sum

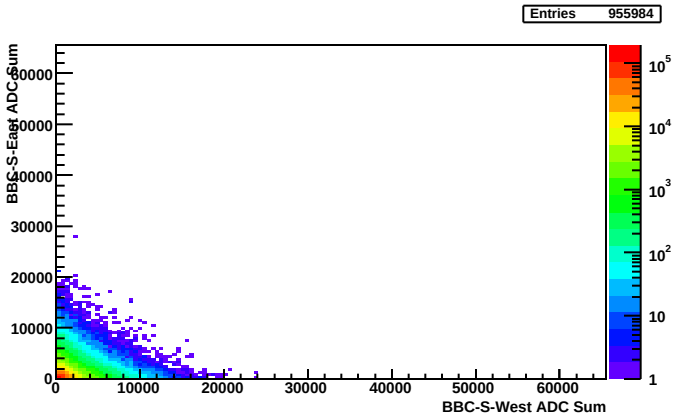

Entries 955984
BBC-S-East ADC Sum
ZDC-East ADC Sum Att


Entries 955984
BBC-S-West ADC Sum
ZDC-West ADC Sum Att


Entries 955984
VPD-East ADC Sum
ZDC-East ADC Sum Att


Entries 955984
VPD-West ADC Sum
ZDC-West ADC Sum Att


Entries 955984
BBC-L-East ADC Sum
BBC-L-West ADC Sum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BBC-S-East ADC Sum
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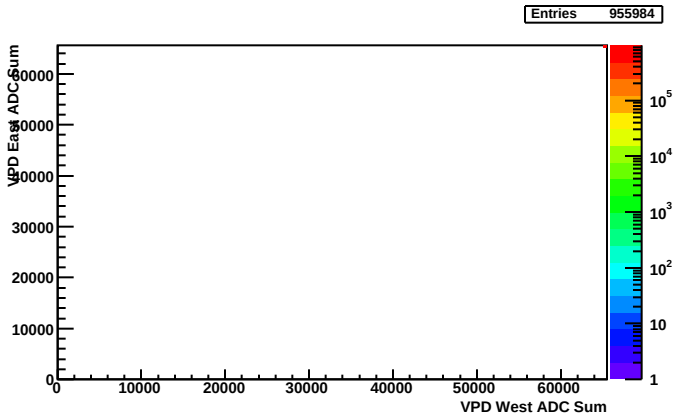
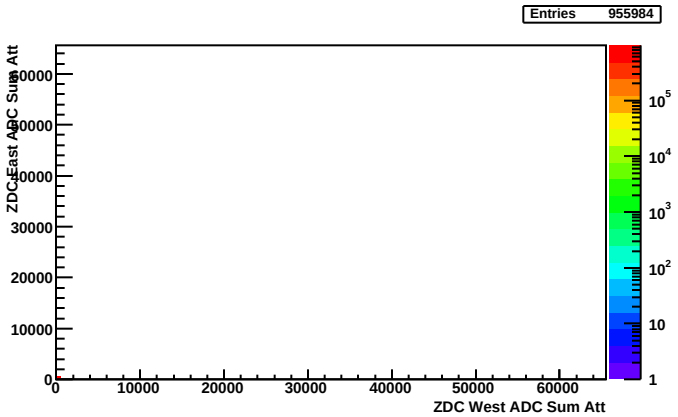
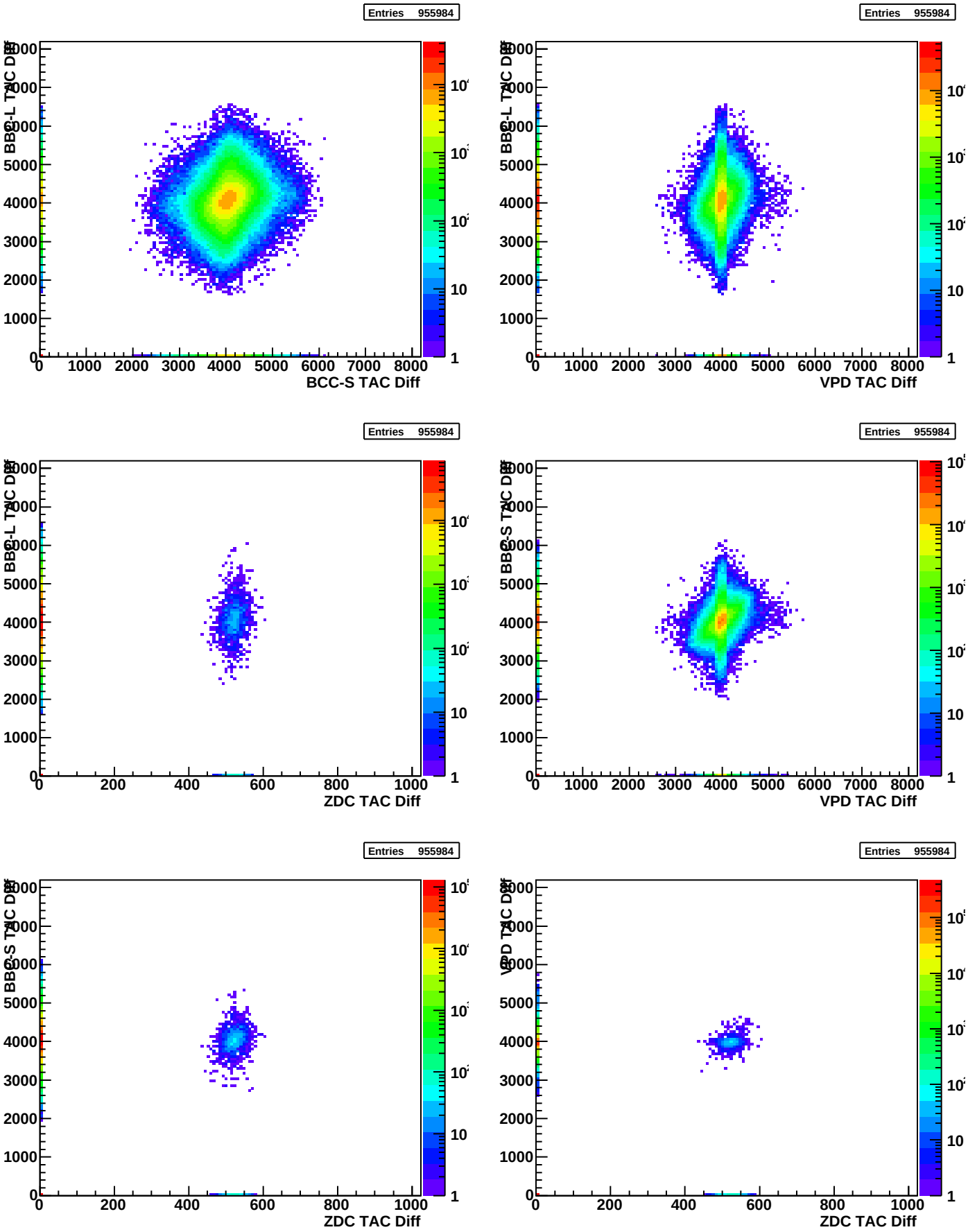

Entries 955984
VPD East ADC Sum
VPD West ADC Sum


Entries 955984
ZDC East ADC Sum Att
ZDC West ADC Sum Att


Entries 955984
BBC-L TAC Diff
BCC-S TAC Diff
Entries 955984
BBC-L TAC Diff
VPD TAC Diff
Entries 955984
BBC-L TAC Diff
ZDC TAC Diff
Entries 955984
BBC-S TAC Diff
VPD TAC Diff
Entries 955984
BBC-S TAC Diff
ZDC TAC Diff
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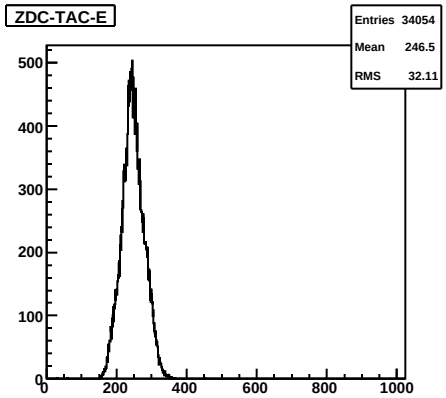
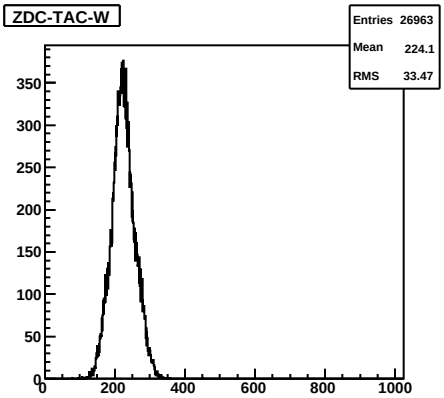
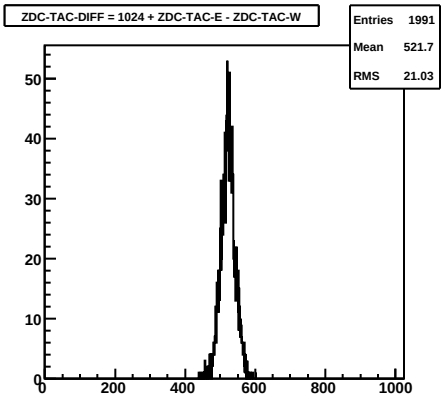
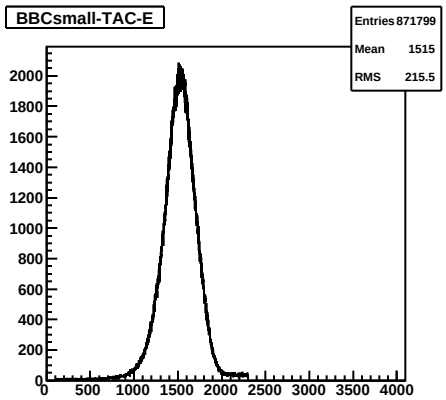
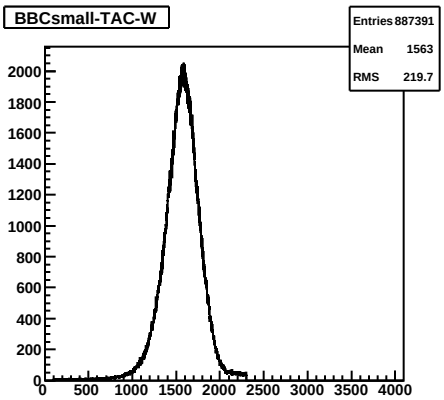
VPD TAC Diff
ZDC TAC Diff

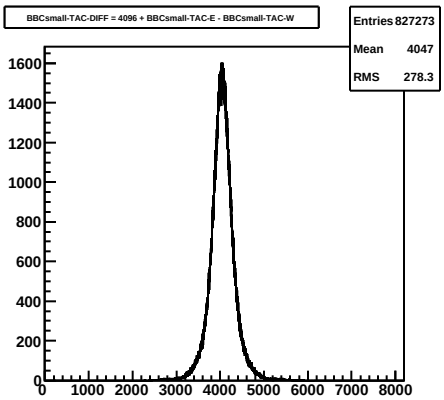

ZDC-TAC-E
Entries 34054
Mean 246.5
RMS 32.11

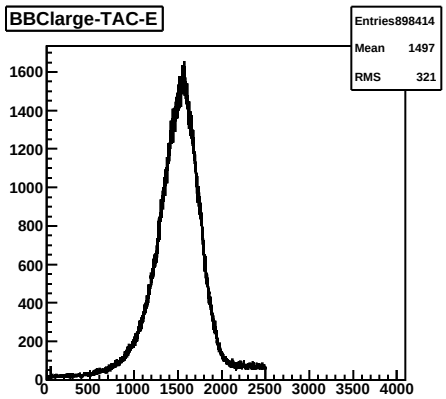

ZDC-TAC-W
Entries 26963
Mean 224.1
RMS 33.47

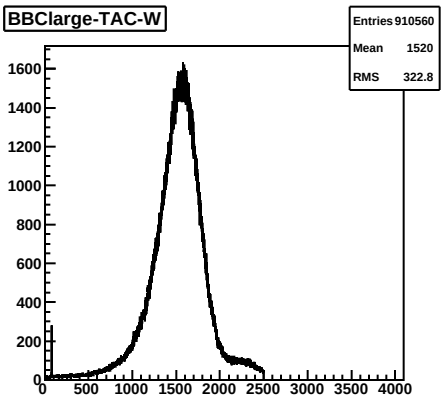

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 1991
Mean 521.7
RMS 21.03

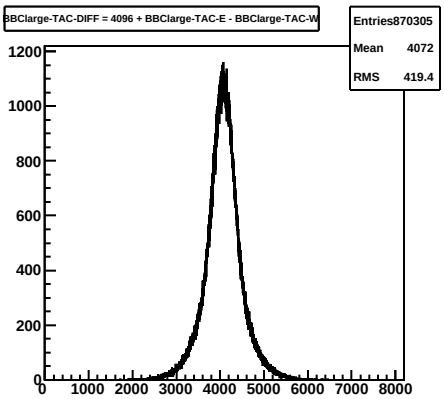

BBCsmall-TAC-E
Entries 871799
Mean 1515
RMS 215.5

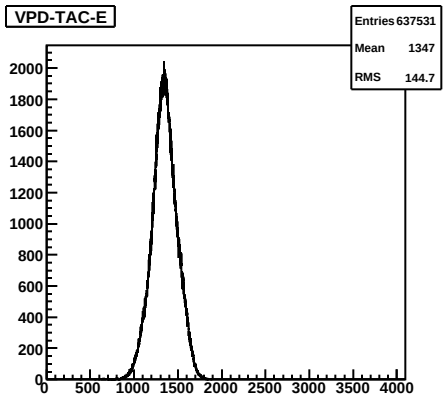

BBCsmall-TAC-W
Entries 887391
Mean 1563
RMS 219.7

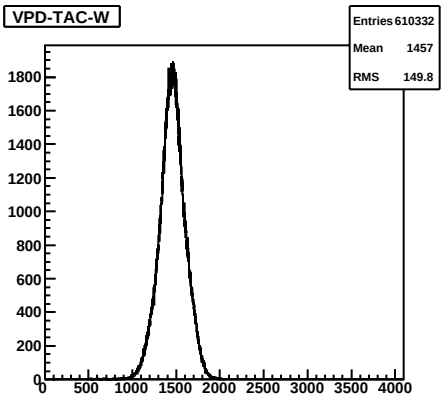

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 827273
Mean 4047
RMS 278.3

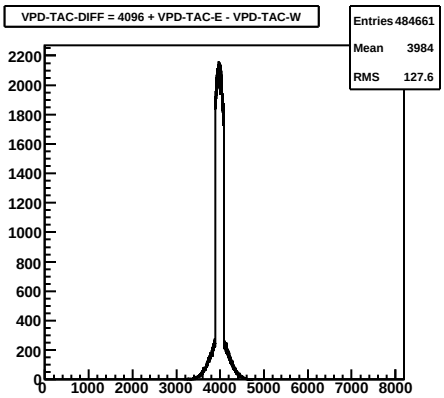

BBClarge-TAC-E
Entries 898414
Mean 1497
RMS 321

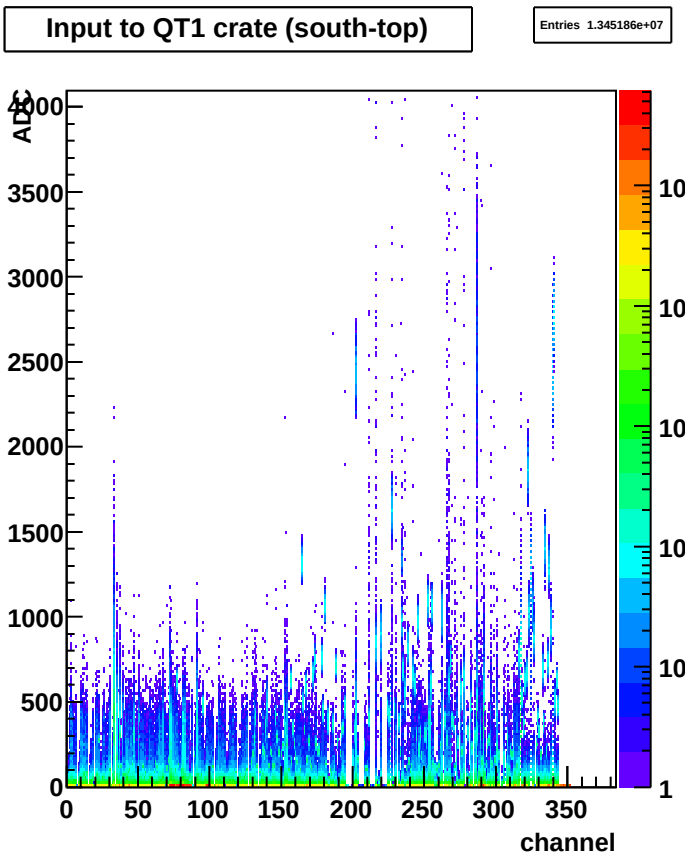

BBClarge-TAC-W
Entries 910560
Mean 1520
RMS 322.8

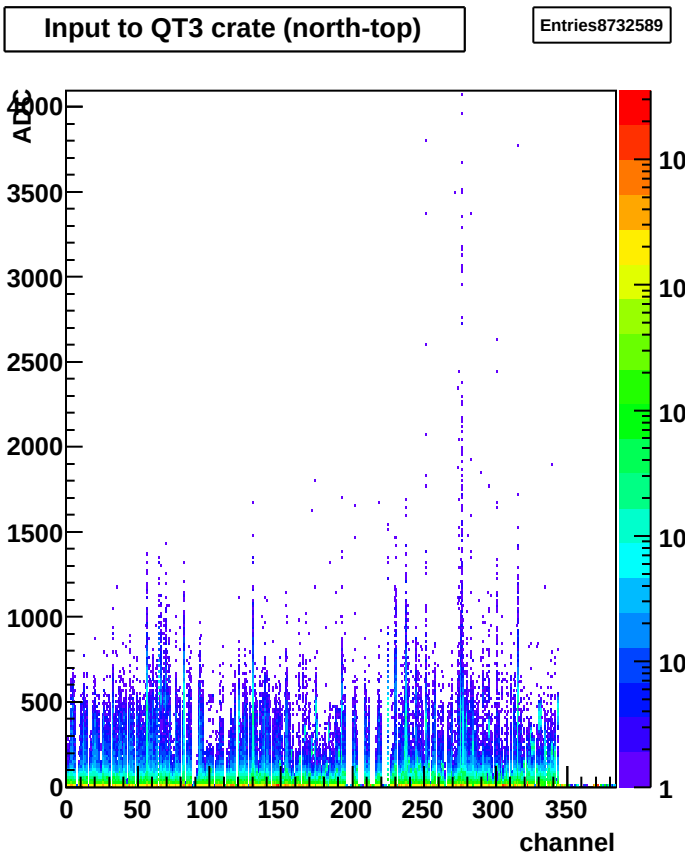

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 870305
Mean 4072
RMS 419.4

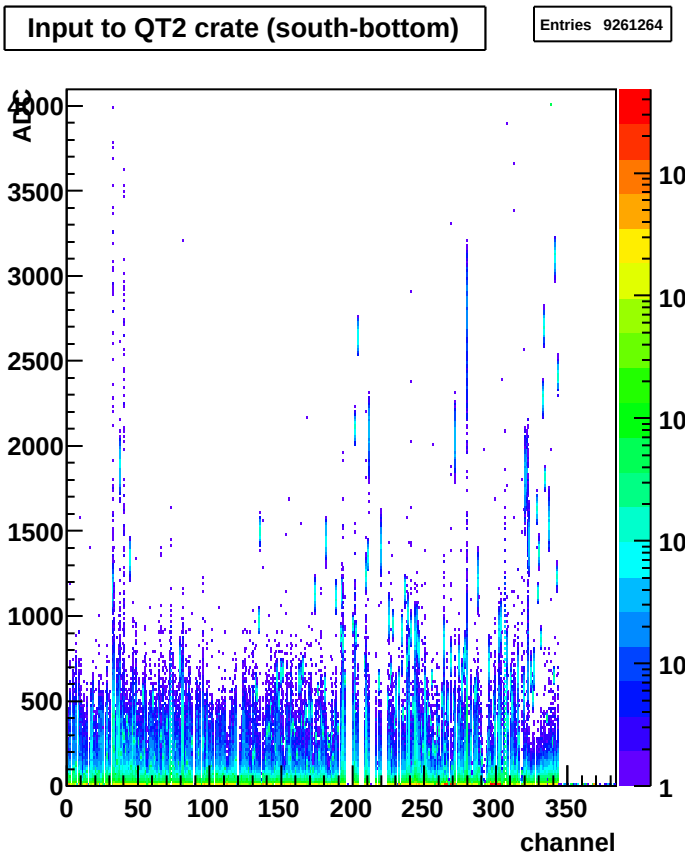

VPD-TAC-E
Entries 637531
Mean 1347
RMS 144.7

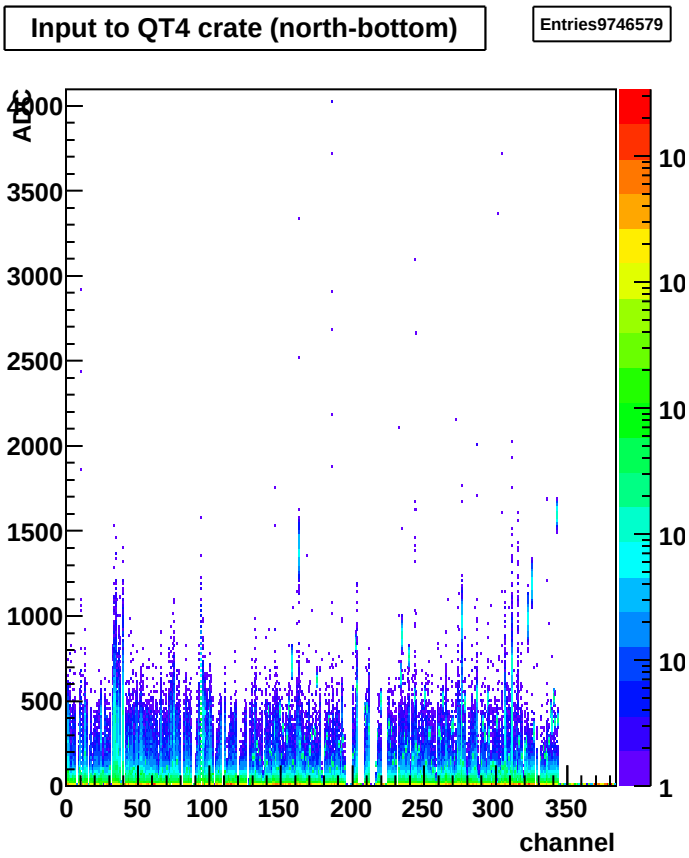

VPD-TAC-W
Entries 610332
Mean 1457
RMS 149.8

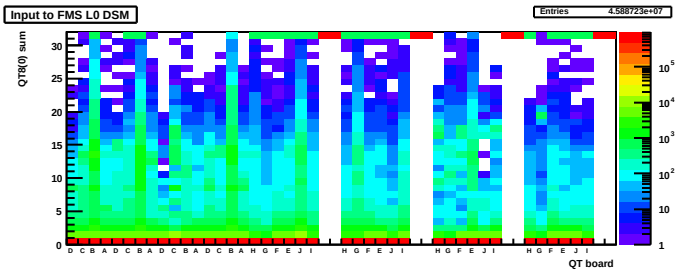

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 484661
Mean 3984
RMS 127.6

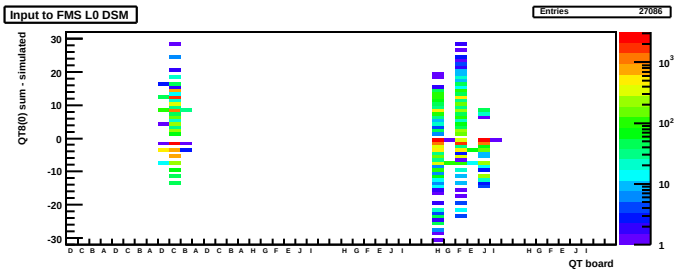

Input to QT1 crate (south-top)
Entries 1.345186e+07
ADC
channel

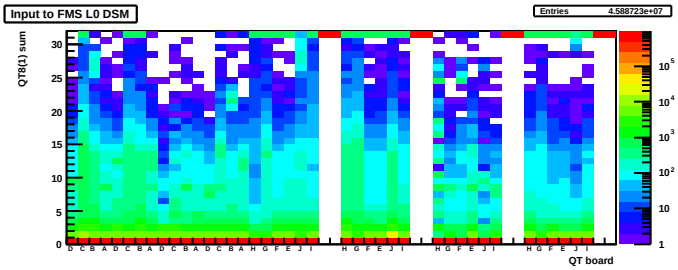

Input to QT3 crate (north-top)
Entries8732589
ADC
channel

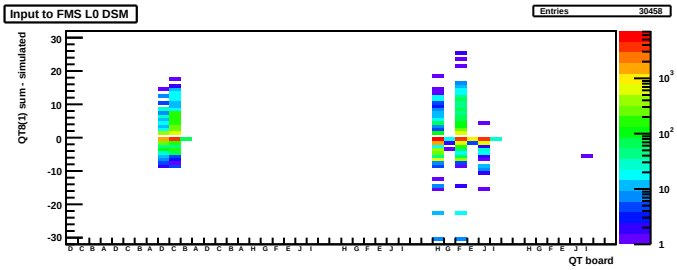

Input to QT2 crate (south-bottom)
Entries 9261264
ADC
channel

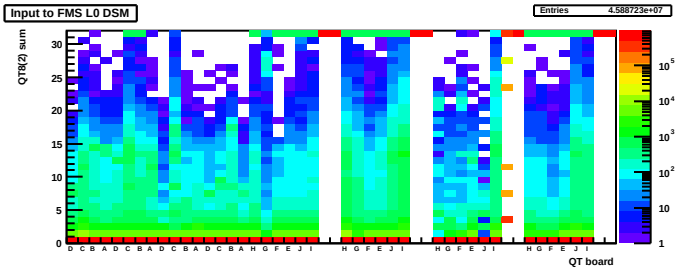

Input to QT4 crate (north-bottom)
Entries9746579
ADC
channel

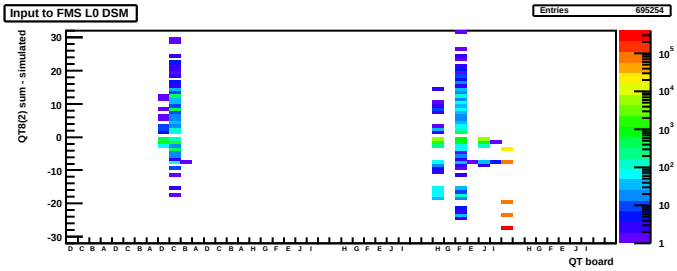

Input to FMS L0 DSM
Entries 4.588723e+07
QT8(0) sum
QT board

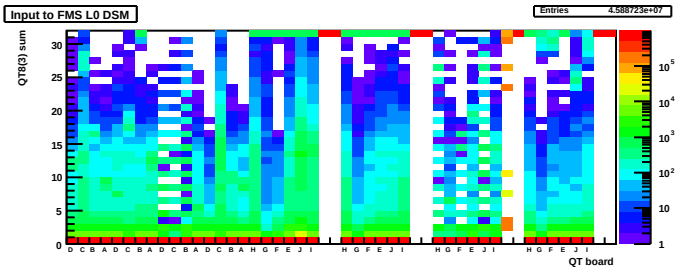

Input to FMS L0 DSM
Entries 27086
QT8(0) sum - simulated
QT board

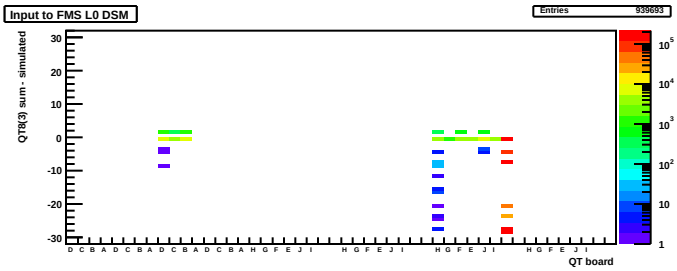

Input to FMS L0 DSM
Entries 4.588723e+07
QT8(1) sum
QT board

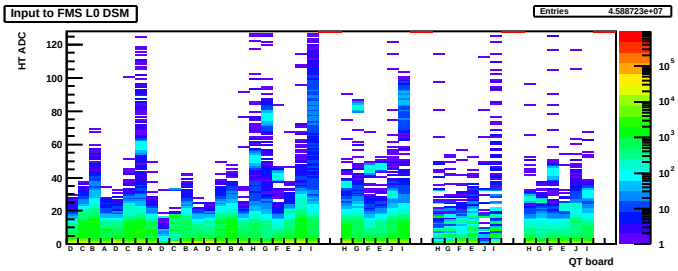

Input to FMS L0 DSM
Entries 30458
QT8(1) sum - simulated
QT board

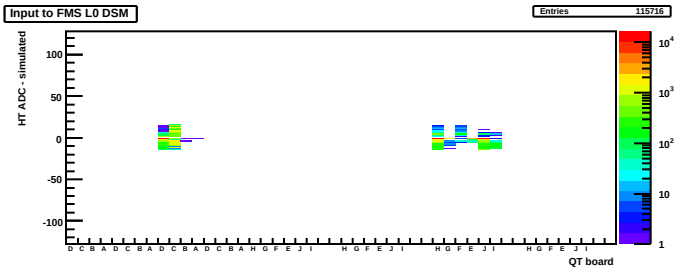

Input to FMS L0 DSM
Entries 4.588723e+07
QT8(2) sum
QT board

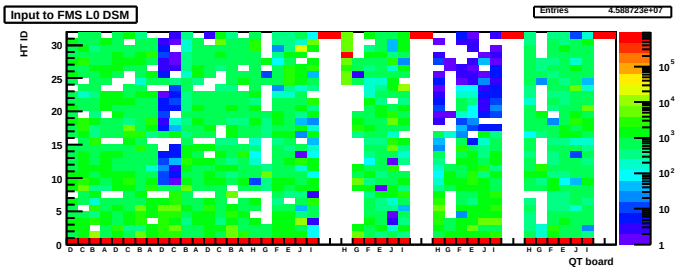

Input to FMS L0 DSM
Entries 695254
QT8(2) sum - simulated
QT board

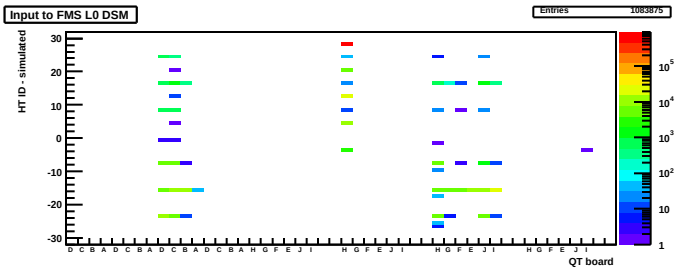

Input to FMS L0 DSM
Entries 4.588723e+07
QT8(3) sum
QT board

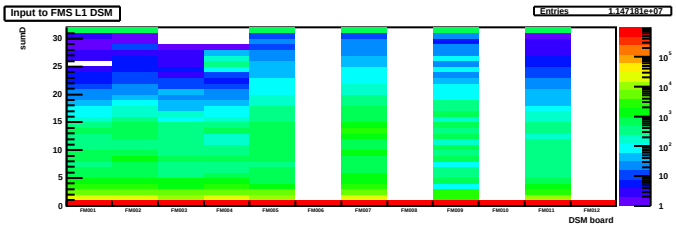

Input to FMS L0 DSM
Entries 939693
QT8(3) sum - simulated
QT board

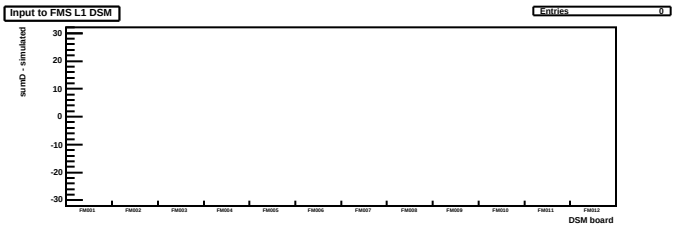

Input to FMS L0 DSM
Entries 4.588723e+07
HT ADC
QT board

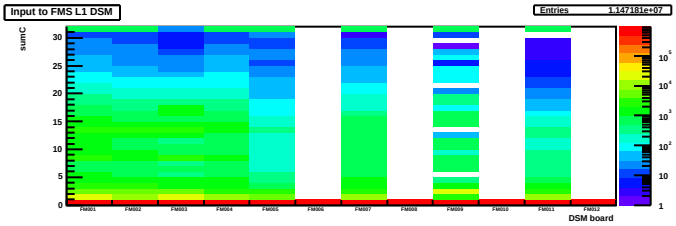

Input to FMS L0 DSM
Entries 115716
HT ADC - simulated
QT board

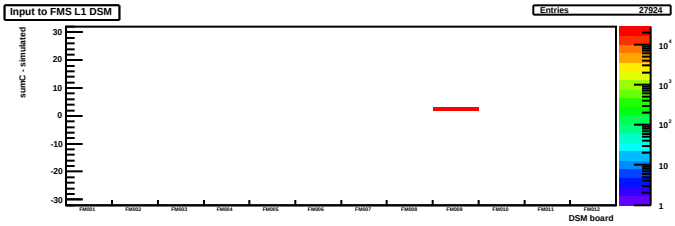

Input to FMS L0 DSM
Entries 4.588723e+07
HT ID
QT board

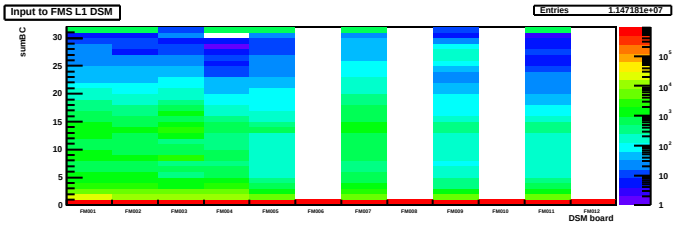

Input to FMS L0 DSM
Entries 1083875
HT ID - simulated
QT board

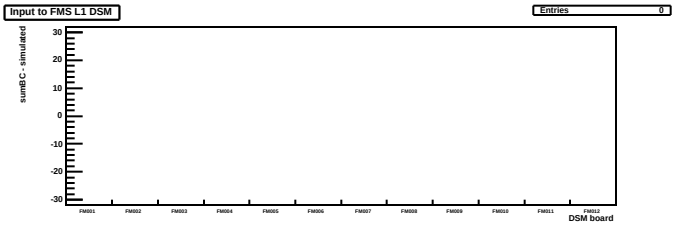

Input to FMS L1 DSM
Entries 1.147181e+07
sumD
DSM board

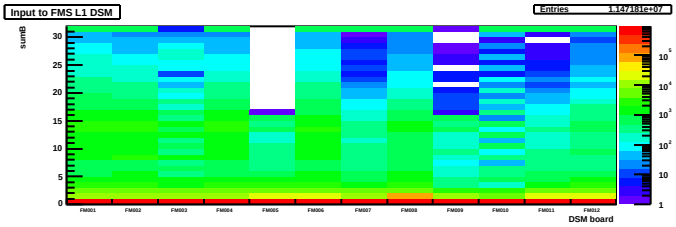

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

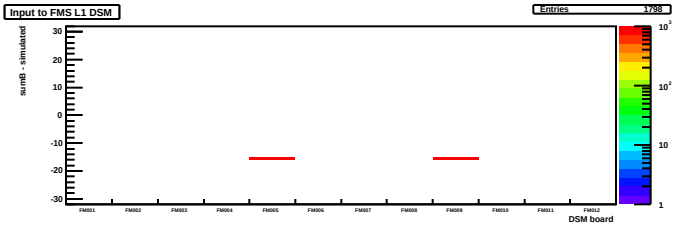

Input to FMS L1 DSM
Entries 1.147181e+07
sumC
DSM board

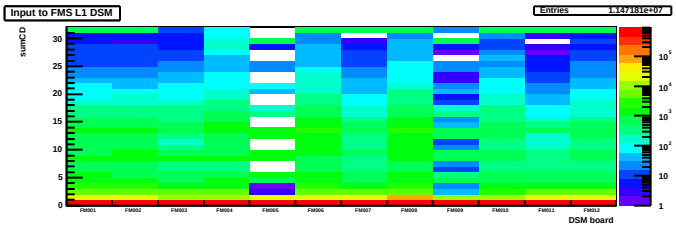

Input to FMS L1 DSM
Entries 27924
sumC - simulated
DSM board

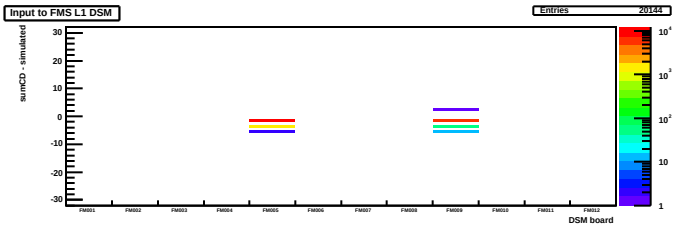

Input to FMS L1 DSM
Entries 1.147181e+07
sumBC
DSM board

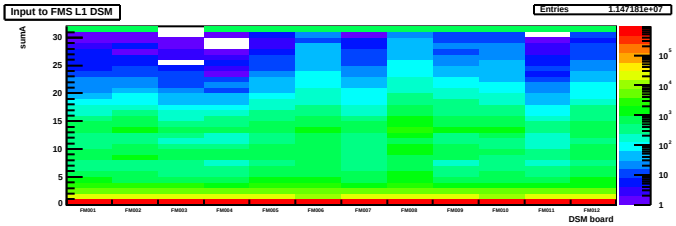

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

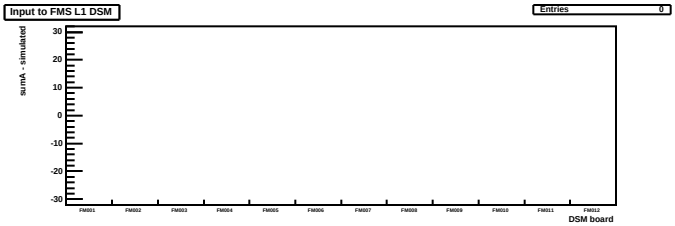

Input to FMS L1 DSM
Entries 1.147181e+07
sumB
DSM board

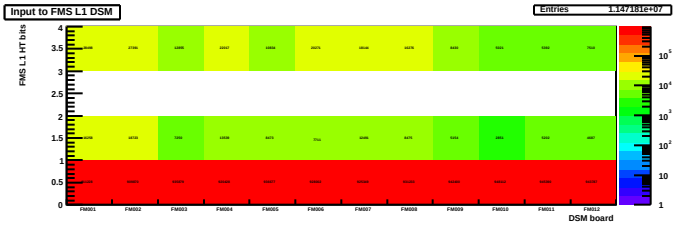

Input to FMS L1 DSM
Entries 1798
sumB - simulated
DSM board

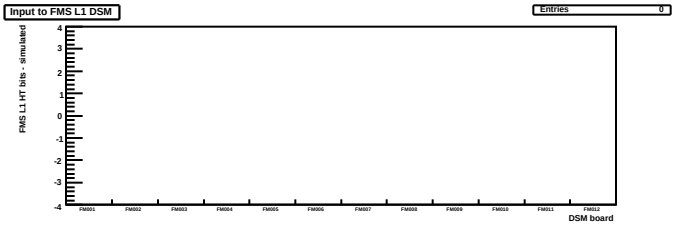

Input to FMS L1 DSM
Entries 1.147181e+07
sumCD
DSM board

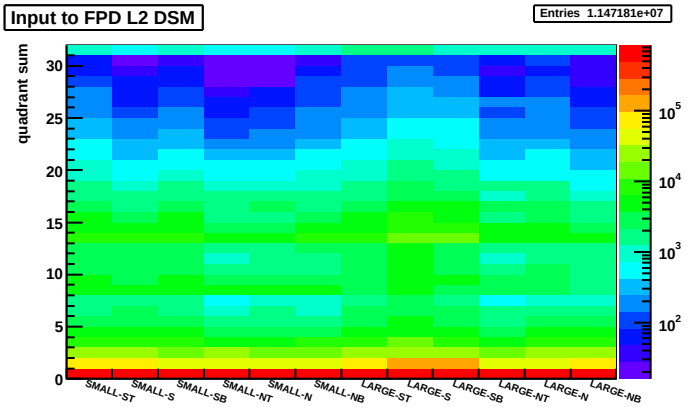

Input to FMS L1 DSM
Entries 20144
sumCD - simulated
DSM board

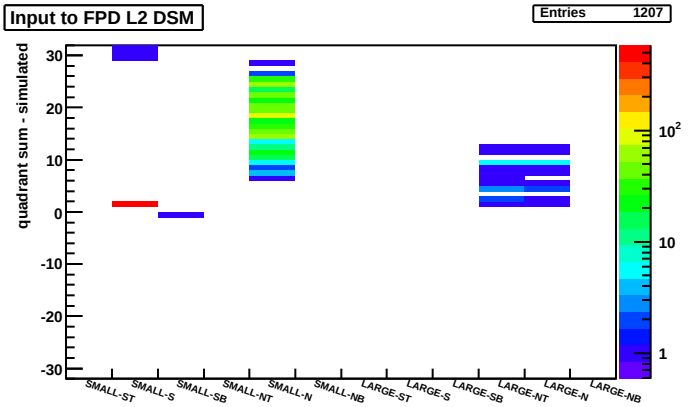

Input to FMS L1 DSM
Entries 1.147181e+07
sumA
DSM board

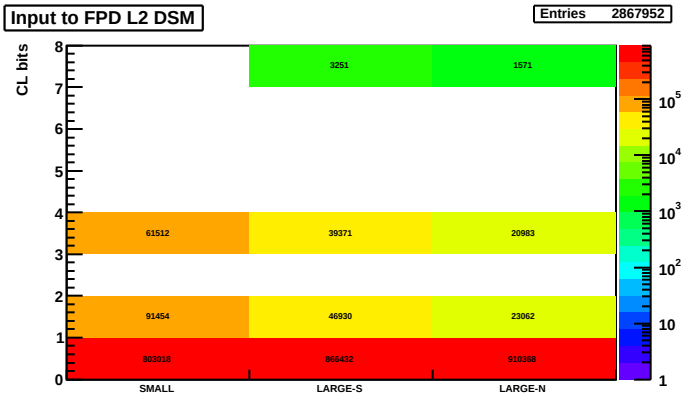

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

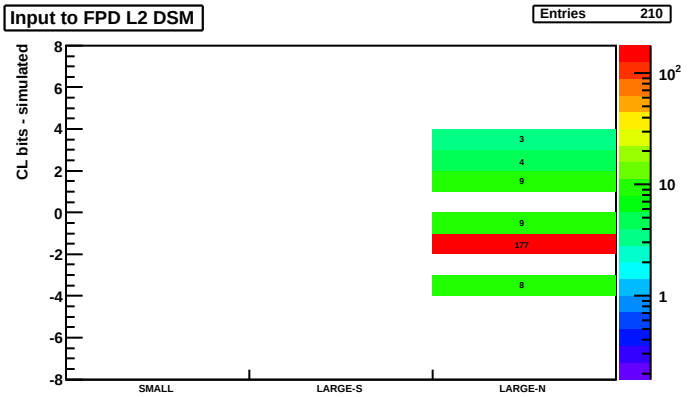

Input to FMS L1 DSM
Entries 1.147181e+07
FMS L1 HT bits
DSM board

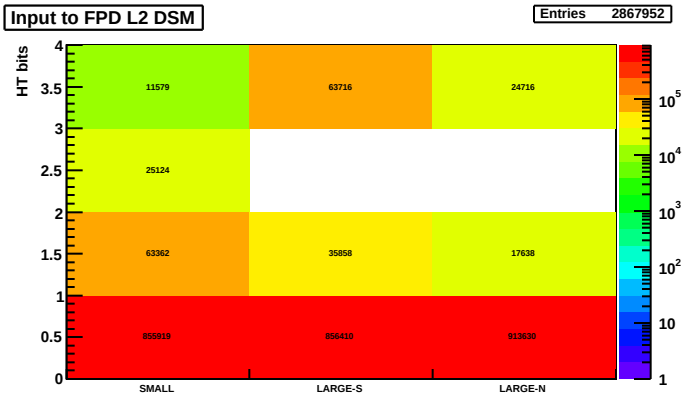

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

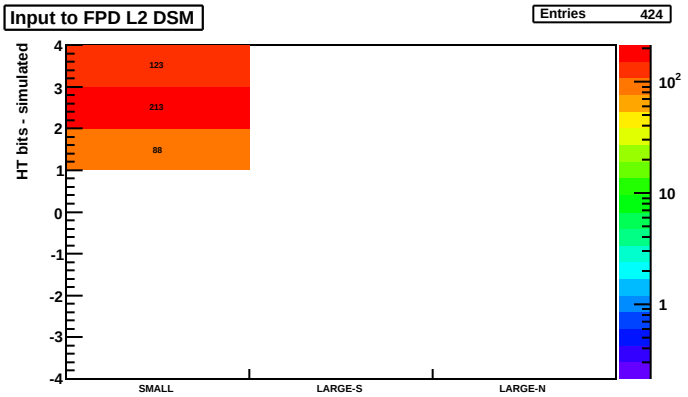

Input to FPD L2 DSM
Entries 1.147181e+07
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

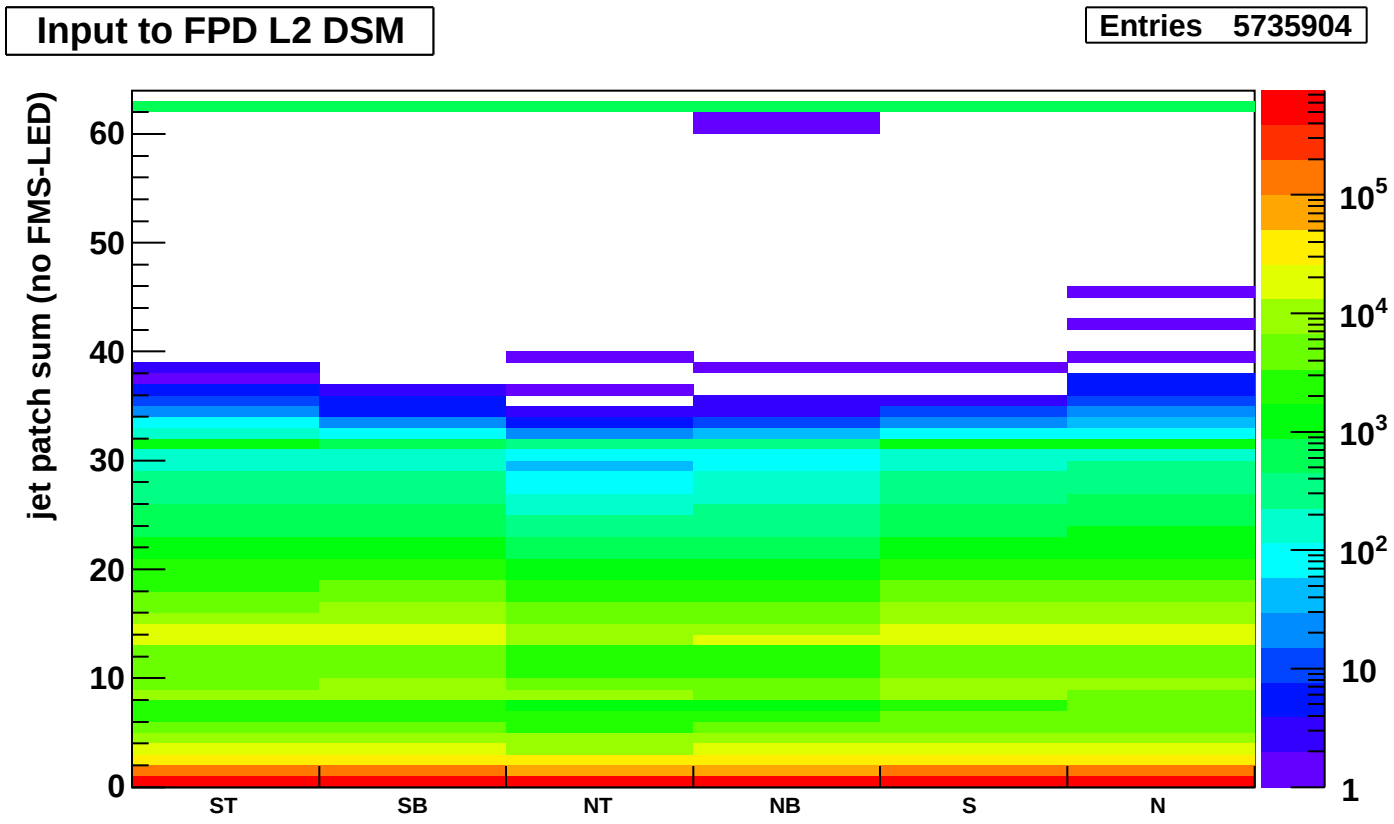

Input to FPD L2 DSM
Entries 1207
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

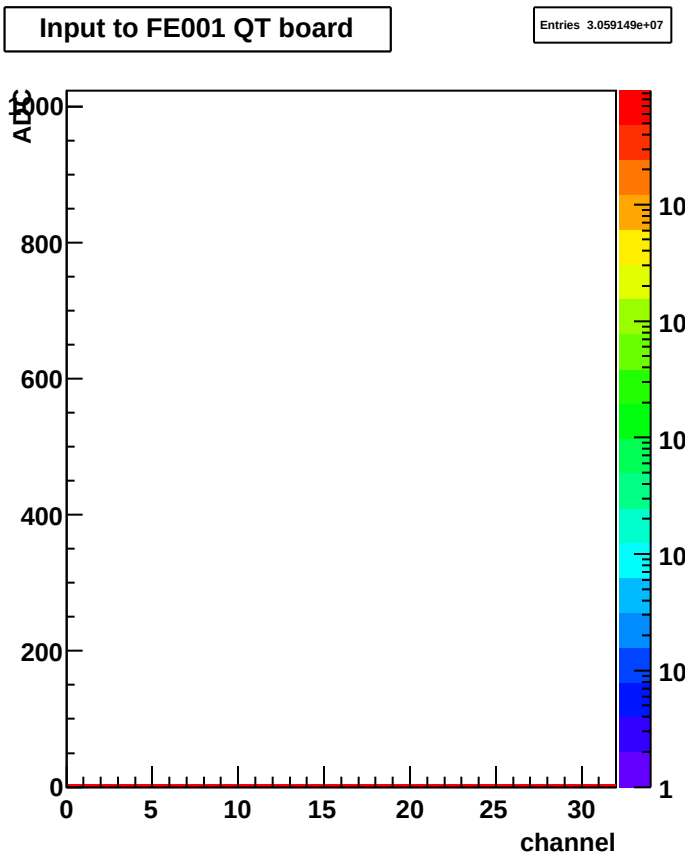

Input to FPD L2 DSM
Entries 2867952
CL bits
3251
1571
61512
39371
20983
91454
46930
23062
803018
866432
910368
SMALL
LARGE-S
LARGE-N

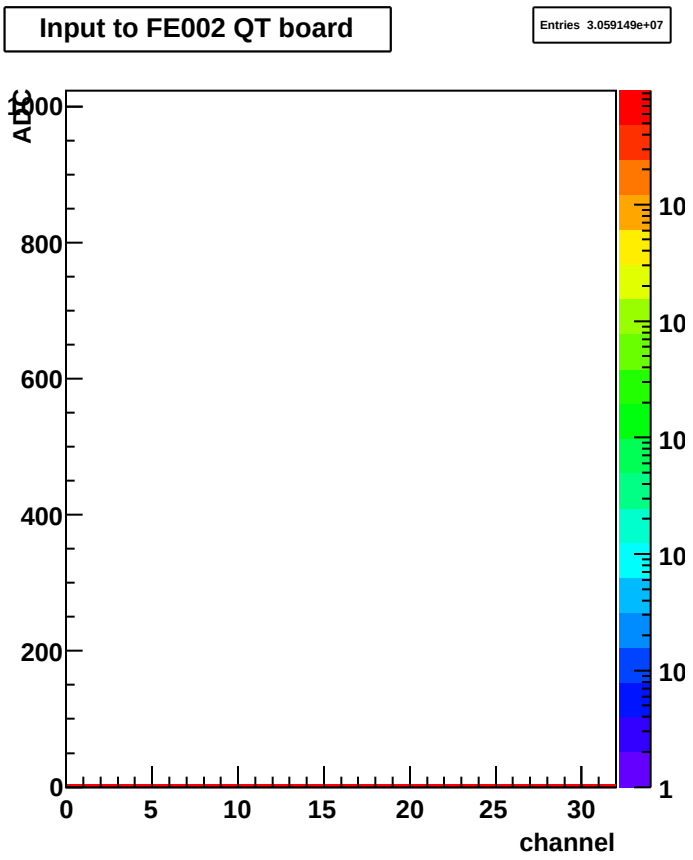

Input to FPD L2 DSM
Entries 210
CL bits - simulated
3
4
9
9
177
8
SMALL
LARGE-S
LARGE-N

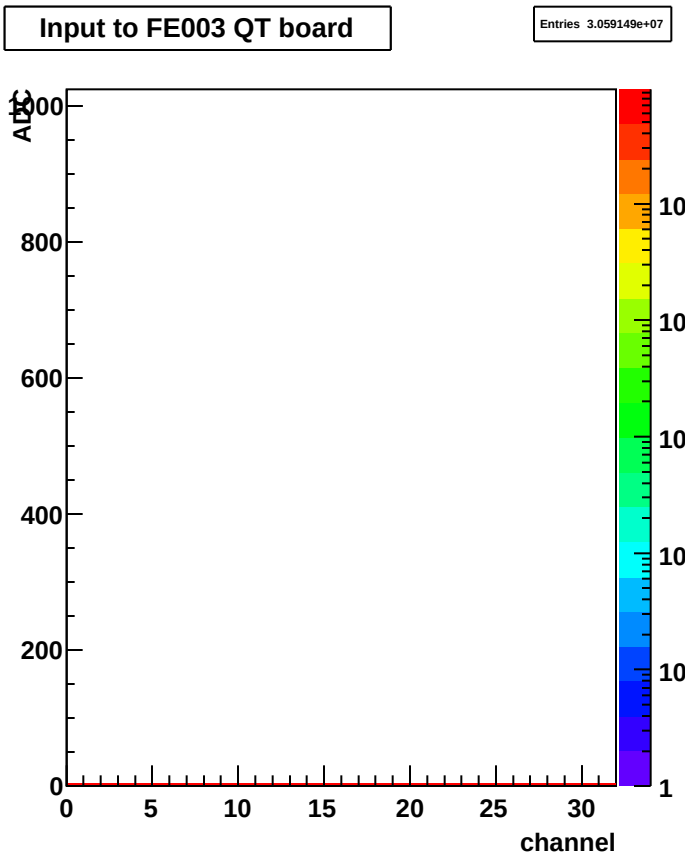

Input to FPD L2 DSM
Entries 2867952
HT bits
11579
63716
24716
25124
63362
35858
17638
855919
856410
913630
SMALL
LARGE-S
LARGE-N

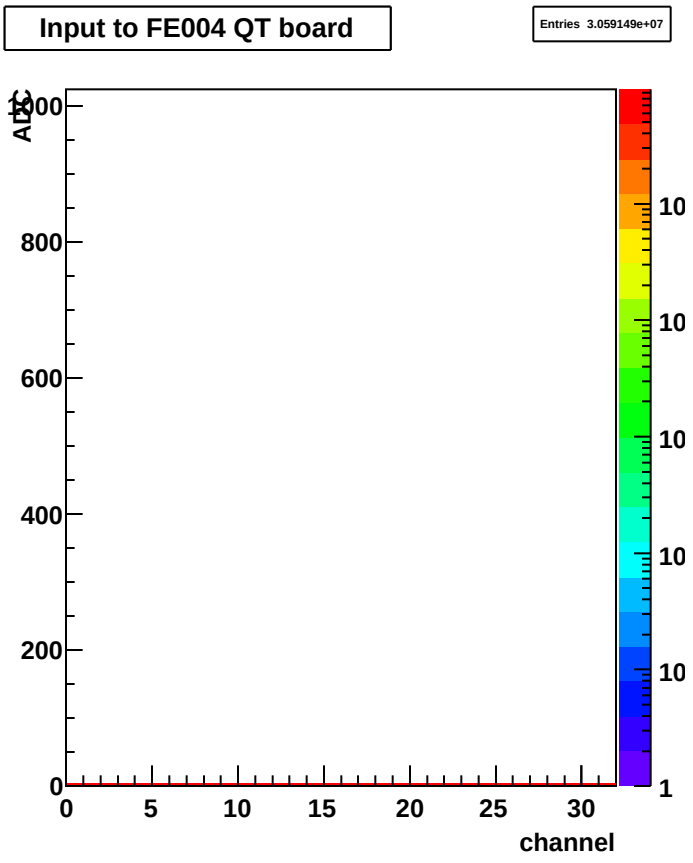

Input to FPD L2 DSM
Entries 424
HT bits - simulated
123
213
88
SMALL
LARGE-S
LARGE-N

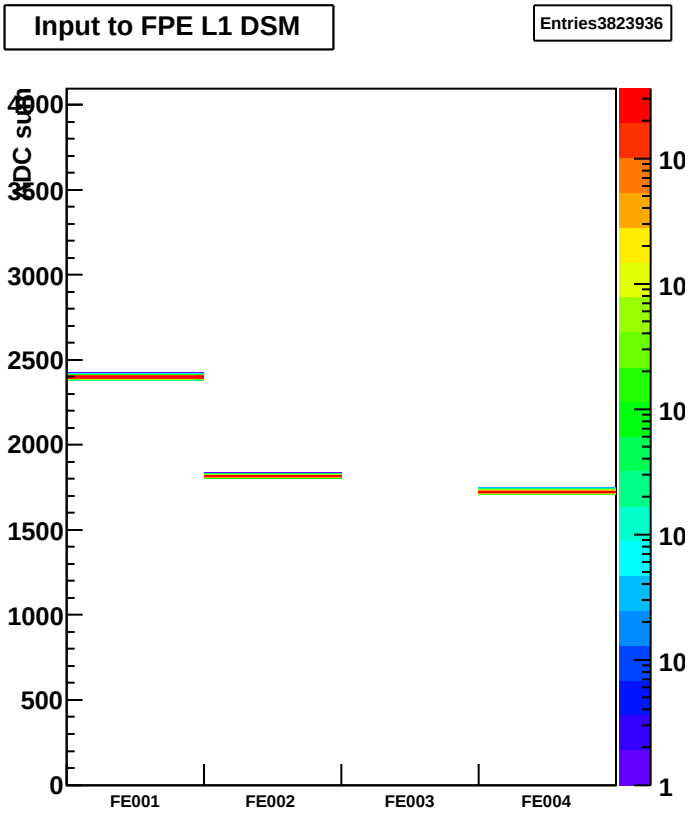

Input to FPD L2 DSM
Entries 5735904
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

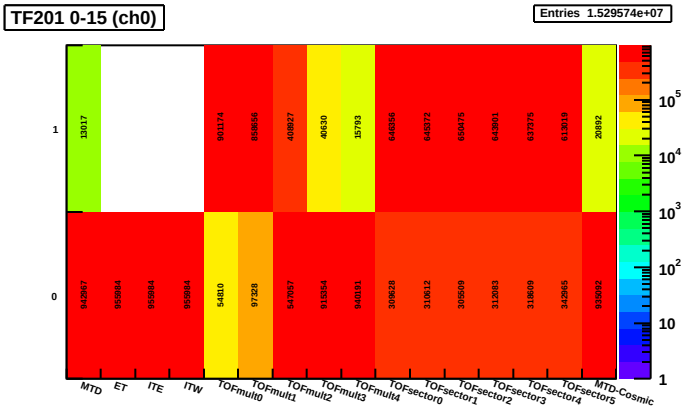

Input to FE001 QT board
Entries 3.059149e+07
ADC
channel

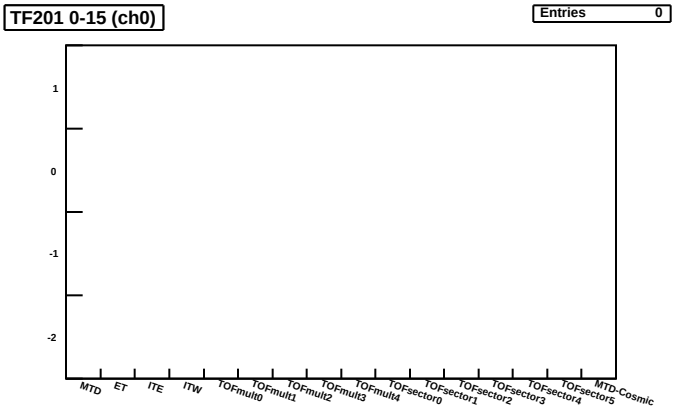

Input to FE002 QT board
Entries 3.059149e+07
ADC
channel

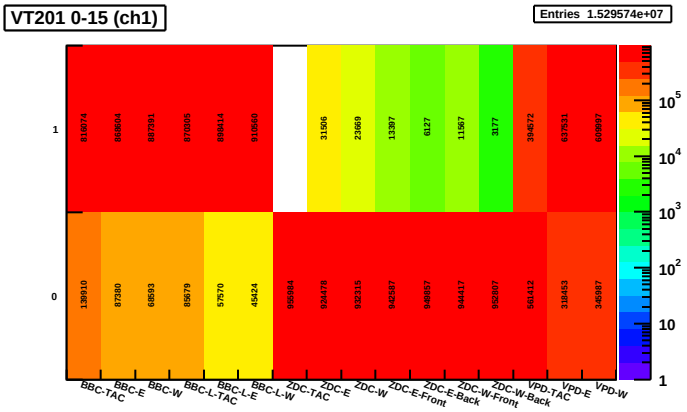

Input to FE003 QT board
Entries 3.059149e+07
ADC
channel


Input to FE004 QT board
Entries 3.059149e+07
ADC
channel


Input to FPE L1 DSM
Entries3823936
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 1.529574e+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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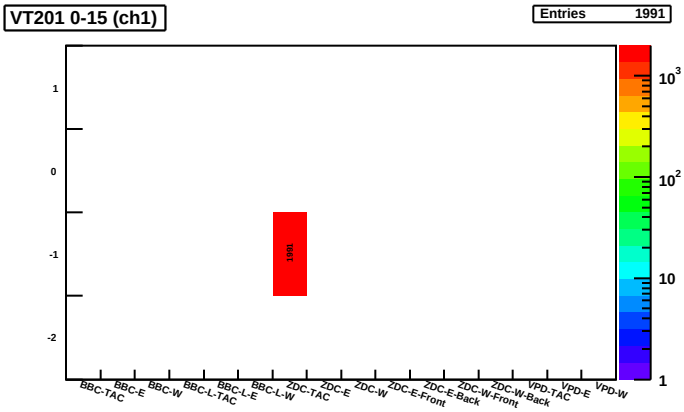
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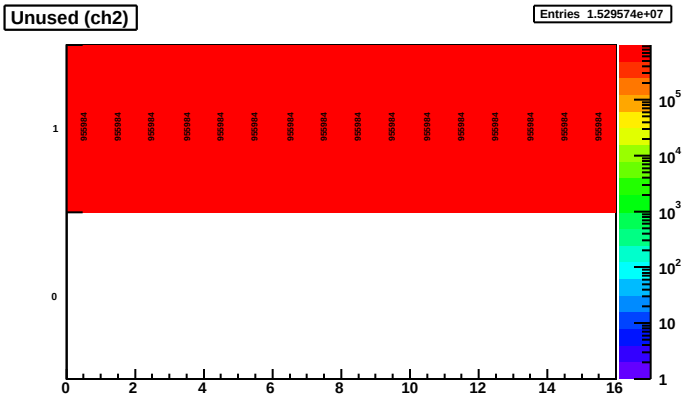
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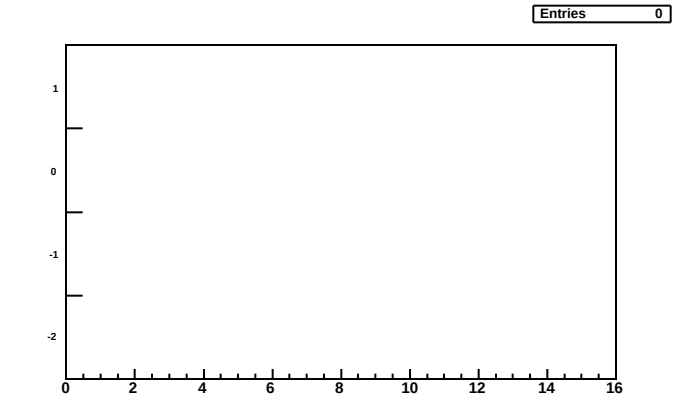
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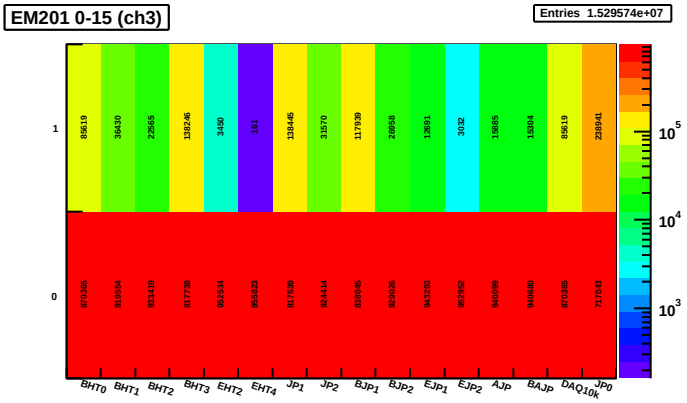
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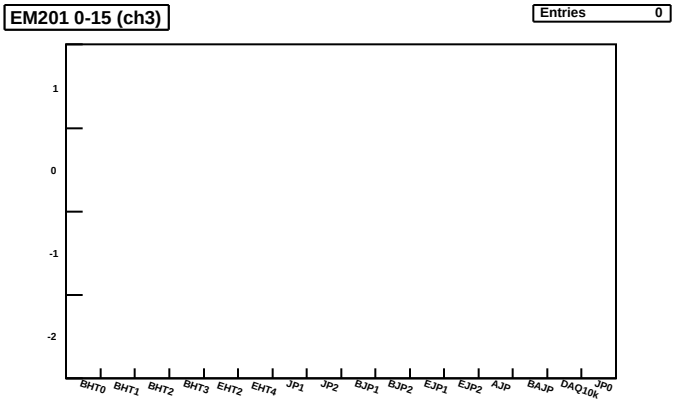
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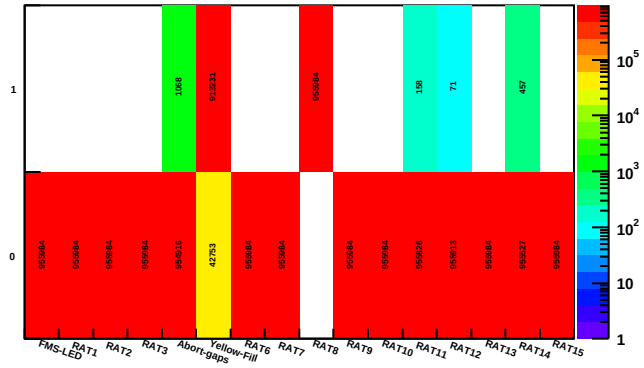
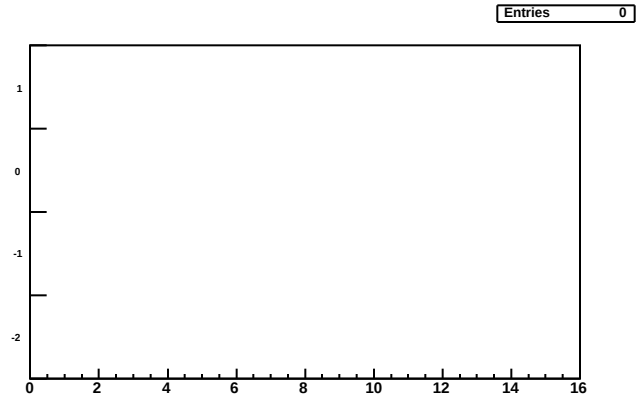
RAT board (ch4)





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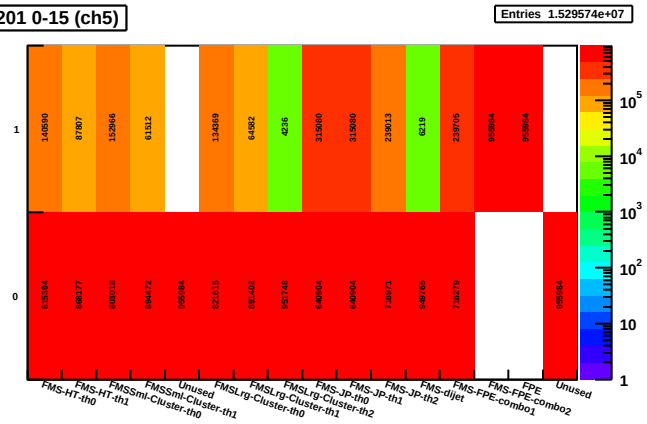

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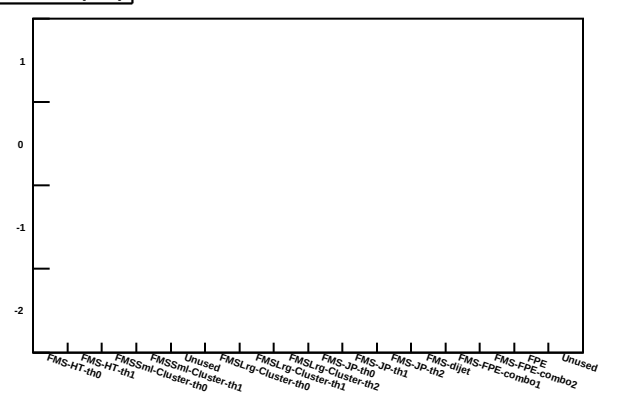
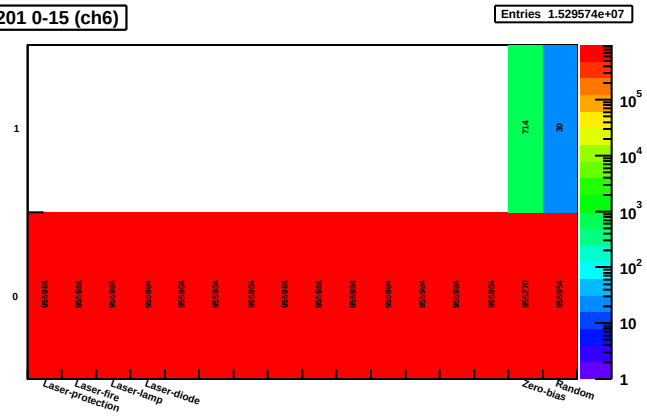
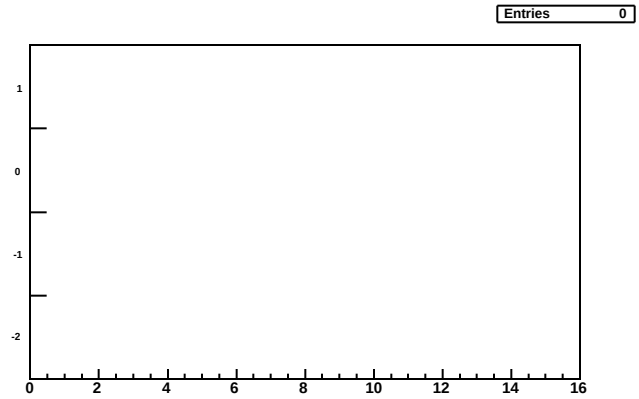
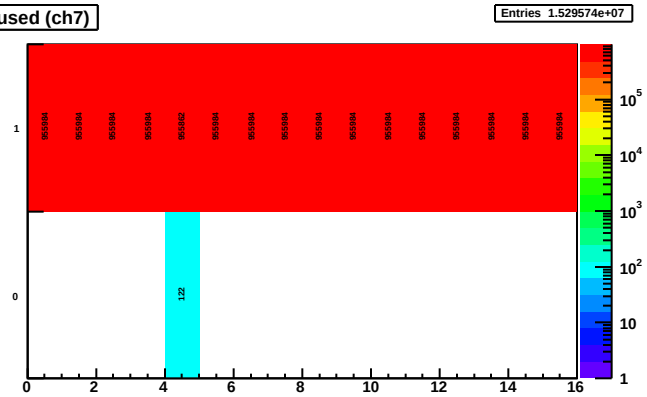
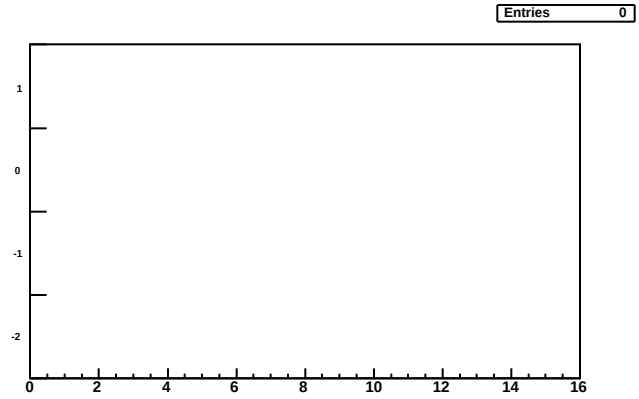


ST201 0-15 (ch6)





Unused (ch7)