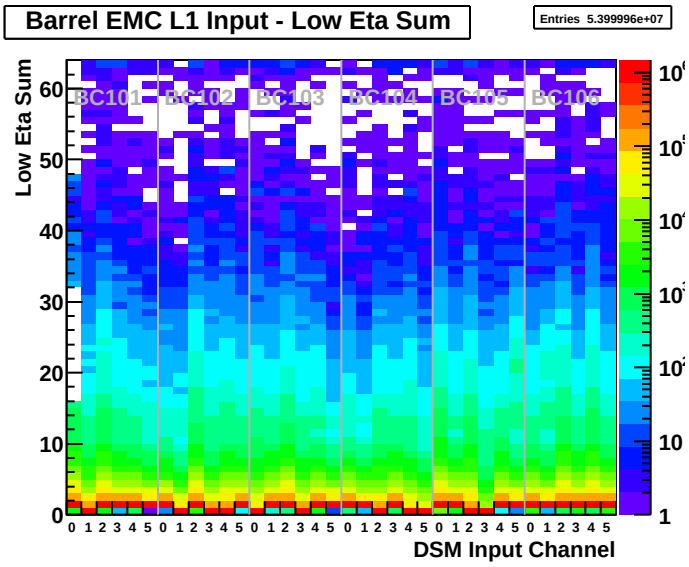
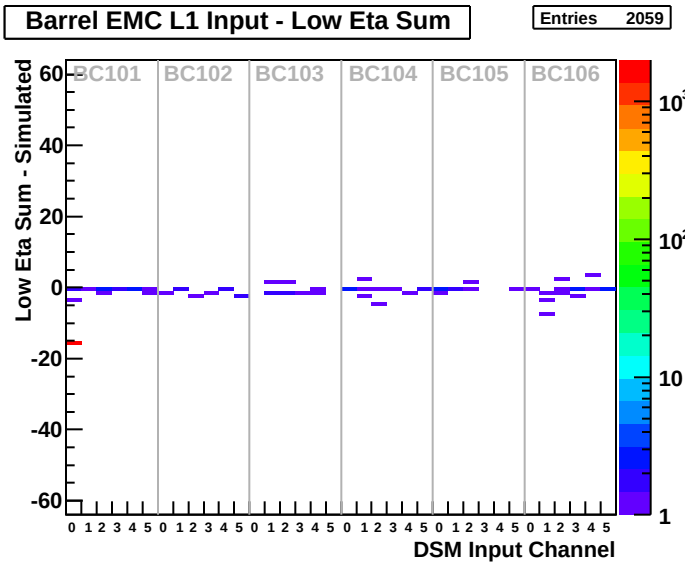
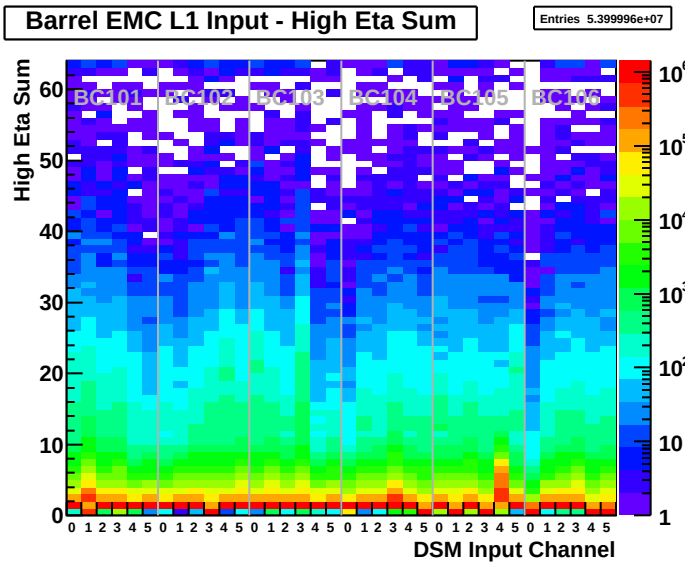
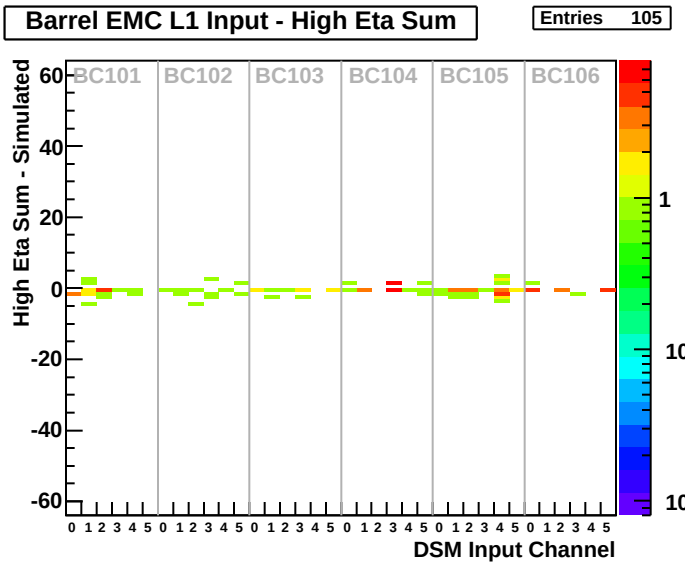
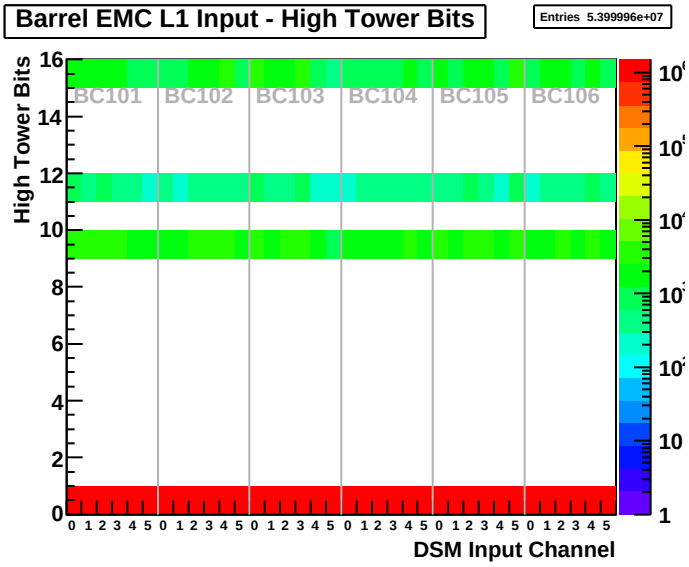
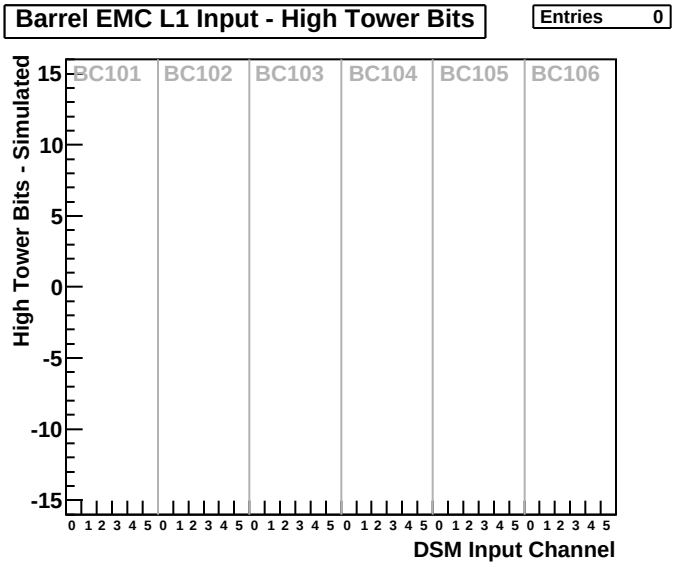

Barrel EMC L1 Input - Low Eta Sum
Entries 5.399996e+07
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

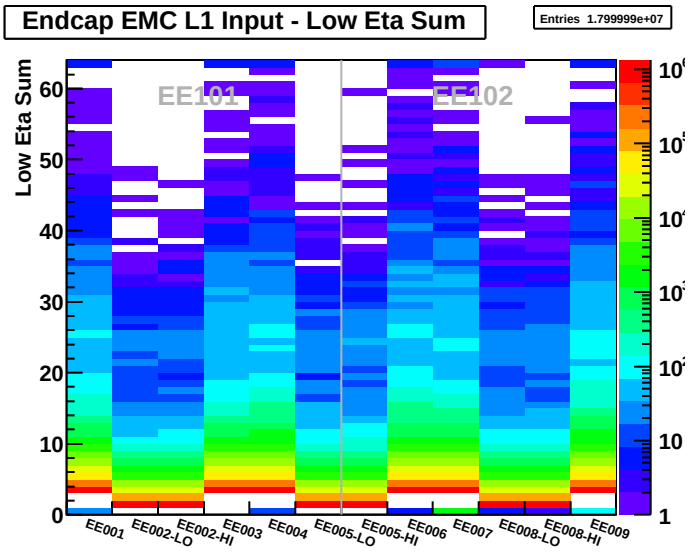

Barrel EMC L1 Input - Low Eta Sum
Entries 2059
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

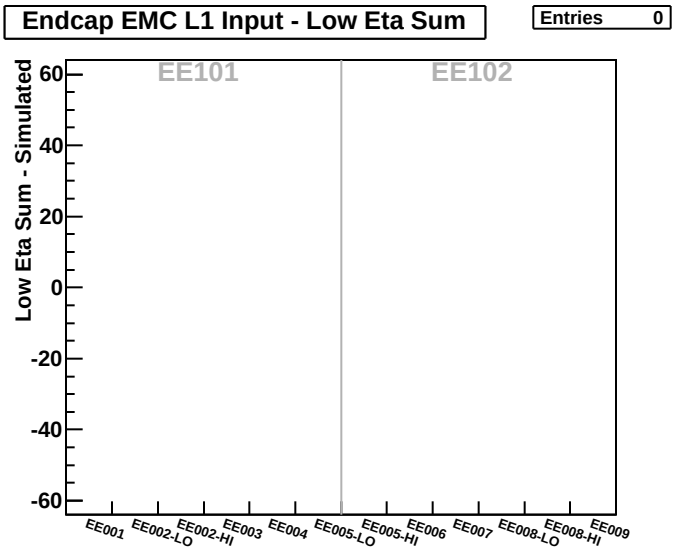

Barrel EMC L1 Input - High Eta Sum
Entries 5.399996e+07
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

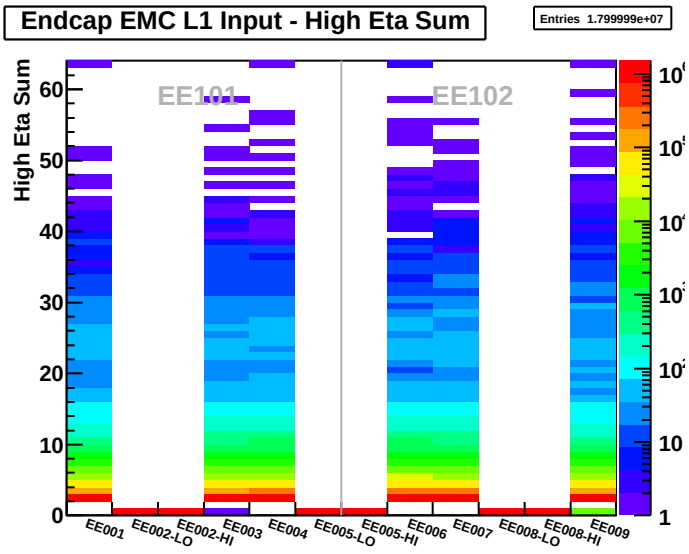

Barrel EMC L1 Input - High Eta Sum
Entries 105
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

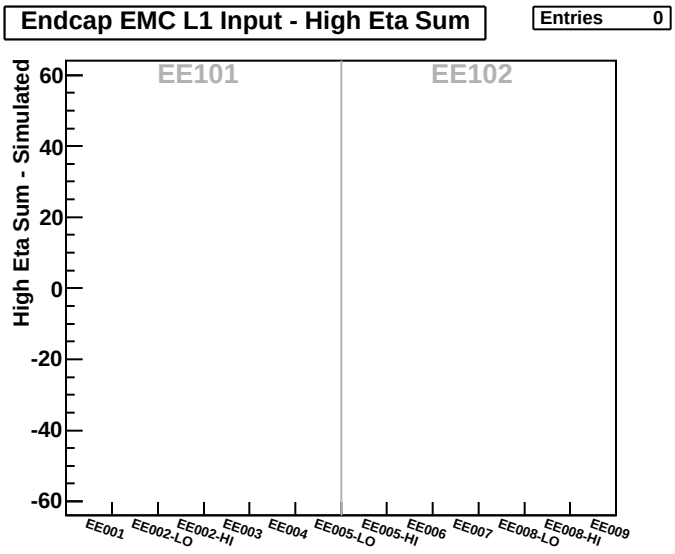

Barrel EMC L1 Input - High Tower Bits
Entries 5.399996e+07
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

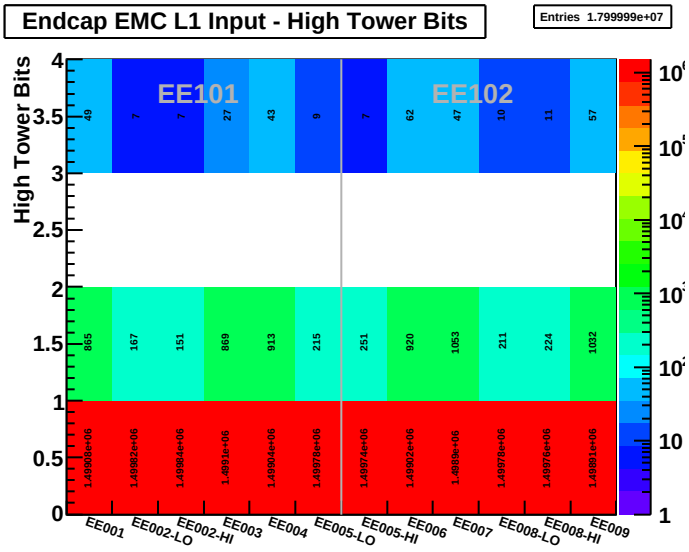

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

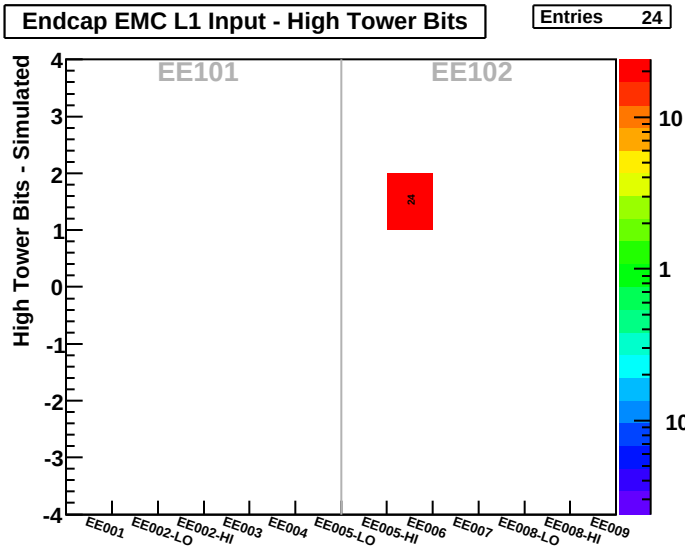

Endcap EMC L1 Input - Low Eta Sum
Entries 1.799999e+07
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

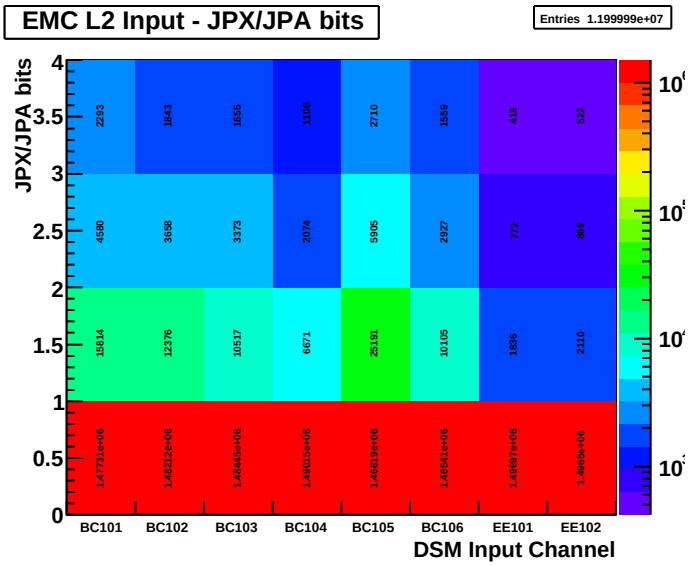

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

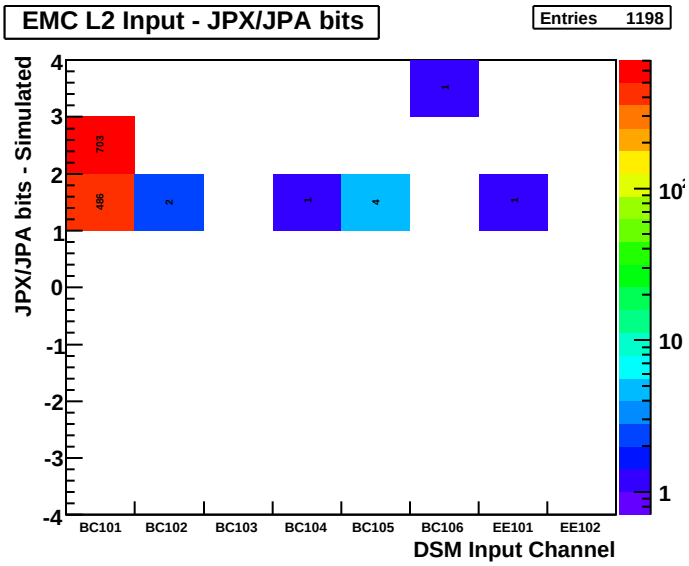

Endcap EMC L1 Input - High Eta Sum
Entries 1.799999e+07
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

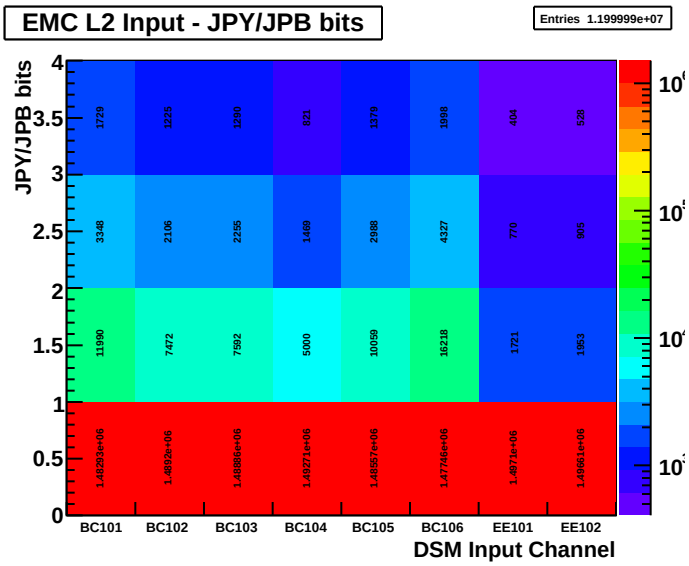

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

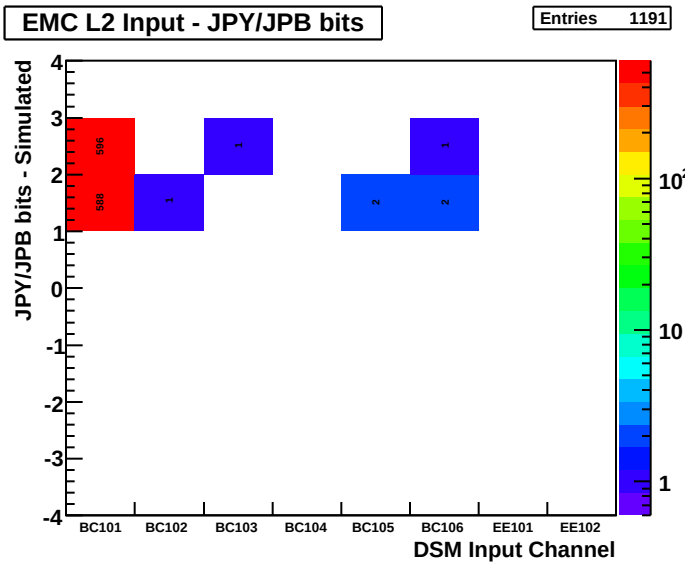

Endcap EMC L1 Input - High Tower Bits
Entries 1.799999e+07
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

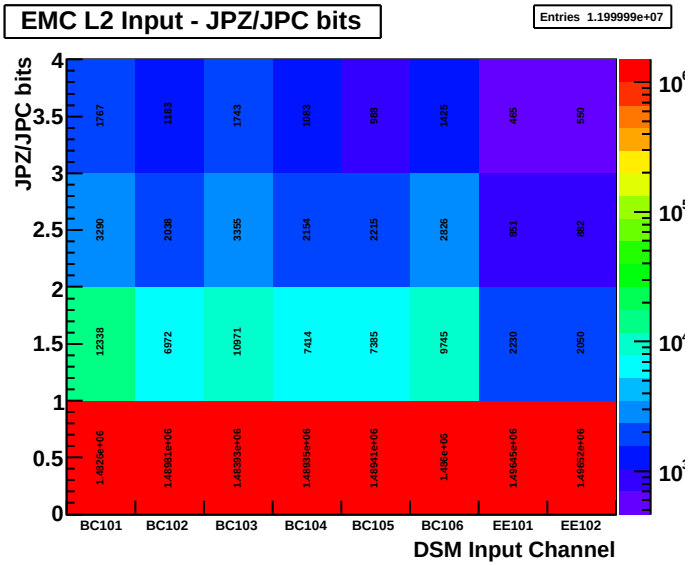

Endcap EMC L1 Input - High Tower Bits
Entries 24
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

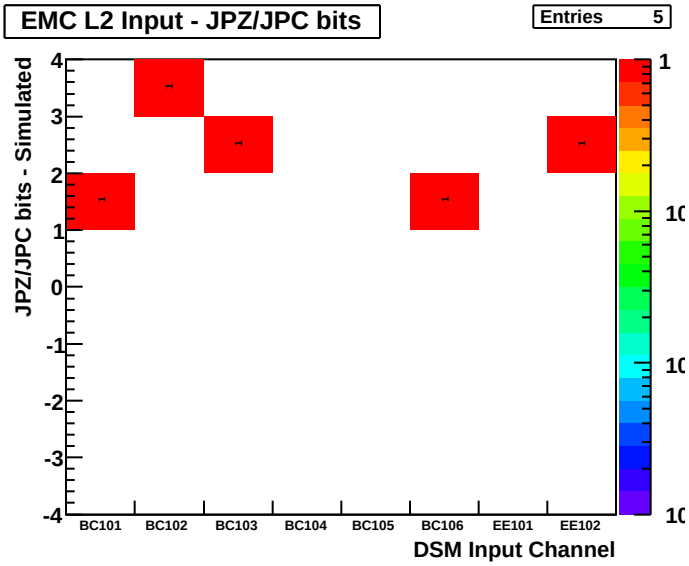

EMC L2 Input - JPX/JPA bits
Entries 1.199999e+07
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
2293 1843 1655 1106 2710 1559 418 522
4580 3658 3373 2074 5905 2927 772 869
15814 12376 10517 6671 25191 10105 1836 2110
1.47731e+06 1.48212e+06 1.48445e+06 1.49015e+06 1.46619e+06 1.48541e+06 1.49897e+06 1.4965e+06

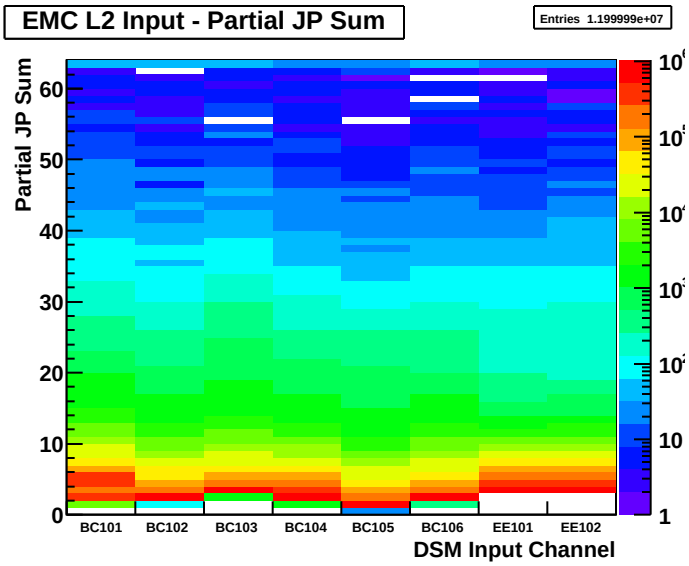

EMC L2 Input - JPX/JPA bits
Entries 1198
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
703 2 1 4 1 1
496

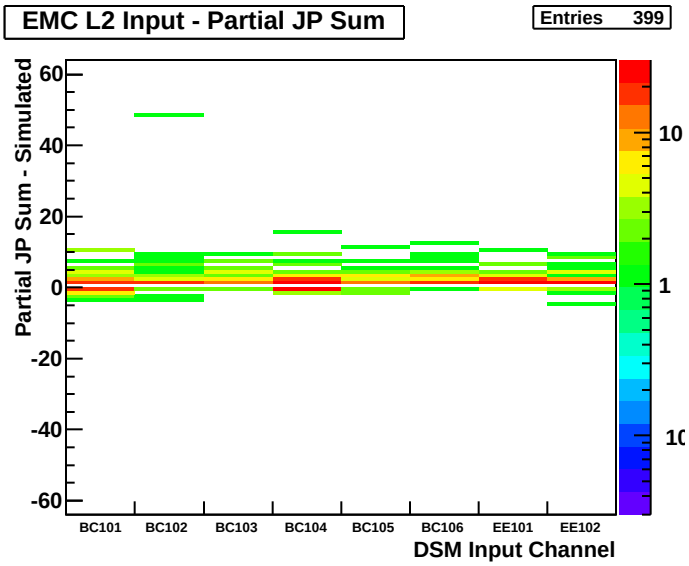

EMC L2 Input - JPY/JPB bits
Entries 1.199999e+07
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1729 1225 1290 821 1379 1998 404 528
3348 2106 2255 1469 2988 4327 770 905
11990 7472 7592 5000 10059 16218 1721 1953
1.48253e+06 1.4892e+06 1.48886e+06 1.49271e+06 1.48597e+06 1.47746e+06 1.4971e+06 1.49661e+06

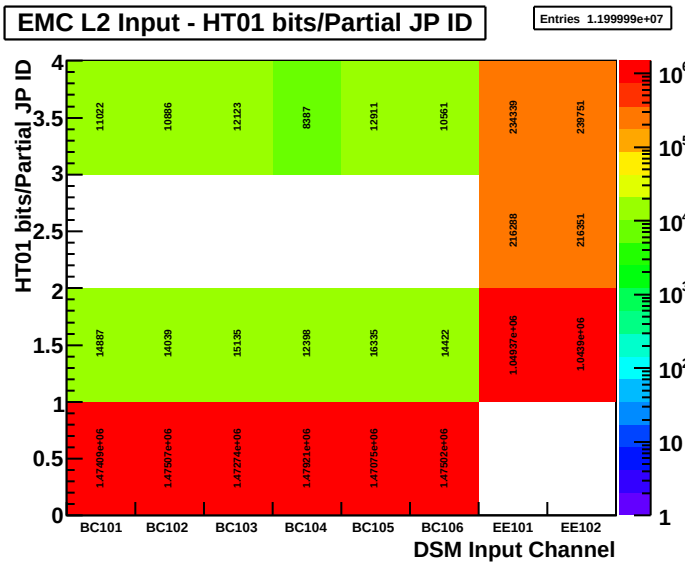

EMC L2 Input - JPY/JPB bits
Entries 1191
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
596 1 1 2 1
588 1 2

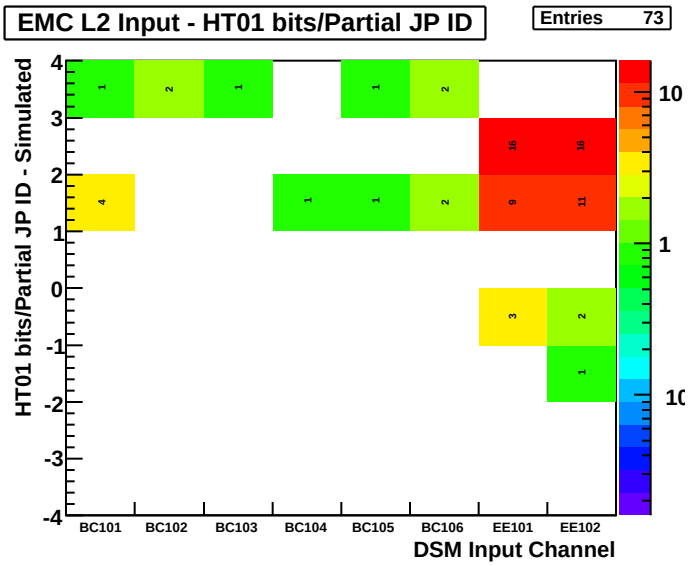

EMC L2 Input - JPZ/JPC bits
Entries 1.199999e+07
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1767 1183 1743 1083 988 1425 465 550
3290 2038 3355 2154 2215 2826 851 882
12338 6972 10971 7414 7385 9745 2230 2050
1.4826e+06 1.48981e+06 1.48393e+06 1.48935e+06 1.48941e+06 1.486e+06 1.49645e+06 1.49652e+06

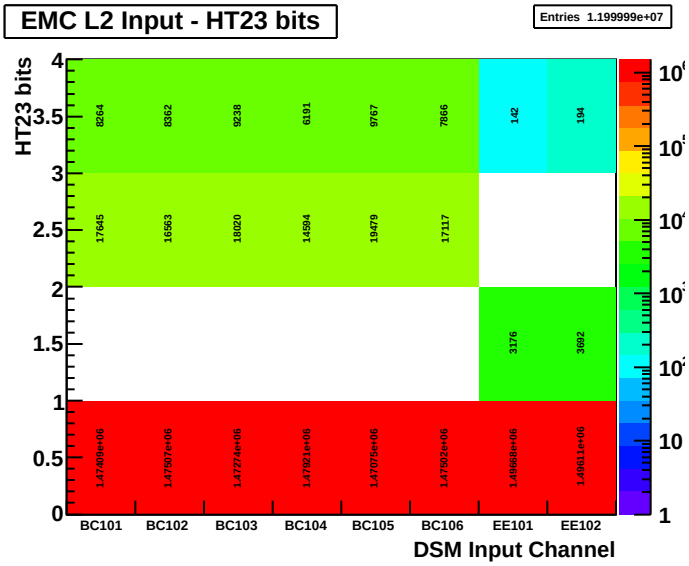

EMC L2 Input - JPZ/JPC bits
Entries 5
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1 1 1 1 1

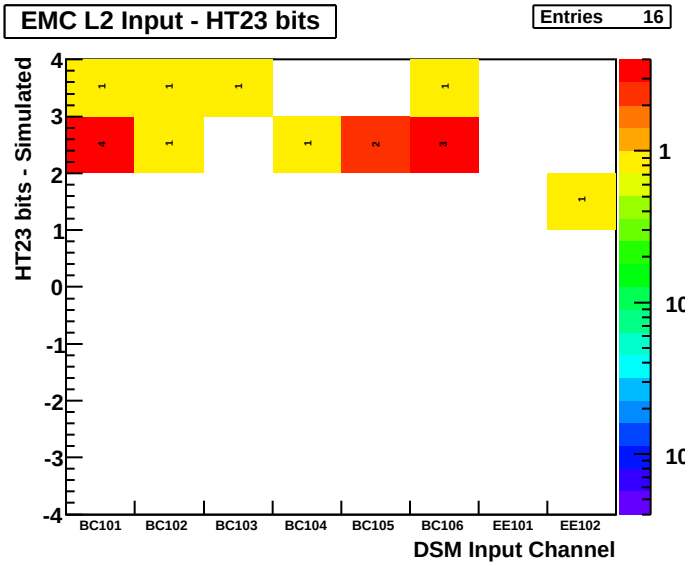

EMC L2 Input - Partial JP Sum
Entries 1.199999e+07
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

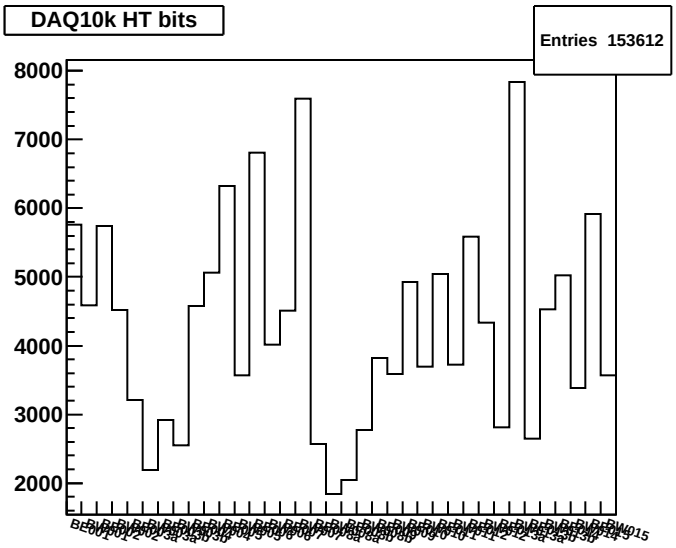

EMC L2 Input - Partial JP Sum
Entries 399
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

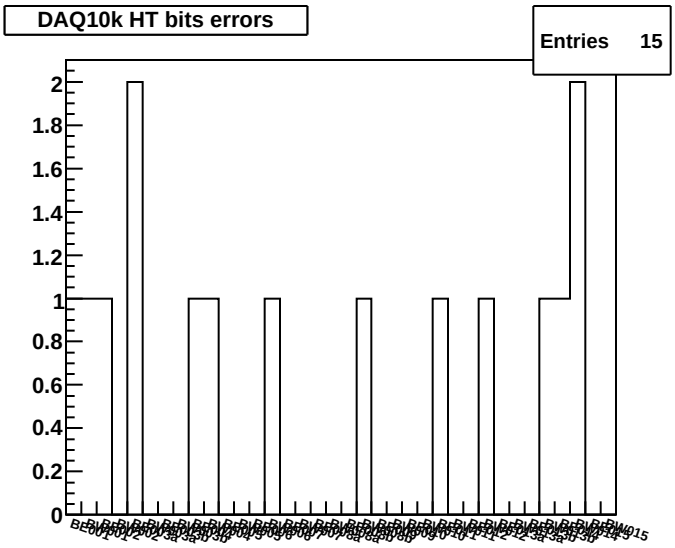

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1.199999e+07
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

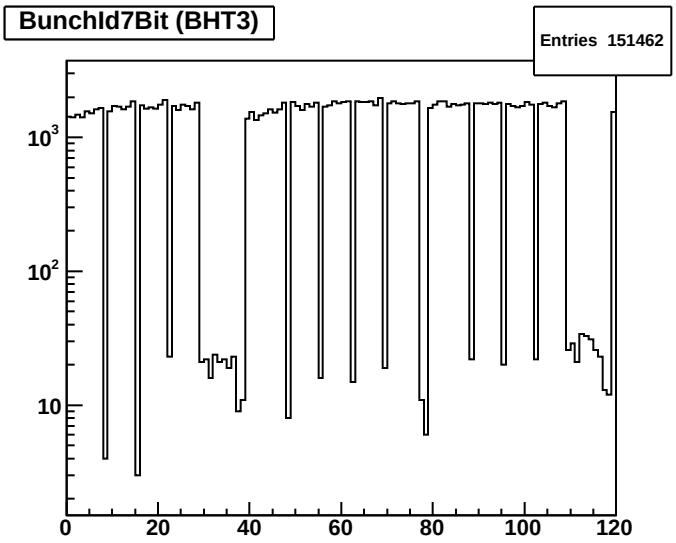

EMC L2 Input - HT01 bits/Partial JP ID
Entries 73
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

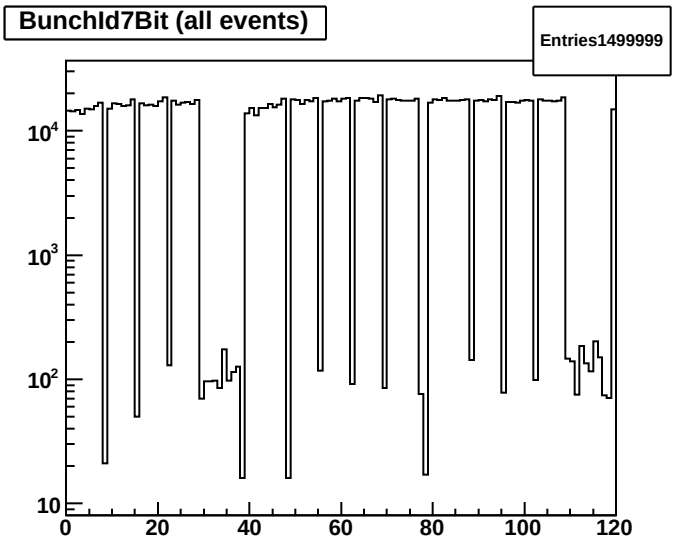

EMC L2 Input - HT23 bits
Entries 1.199999e+07
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

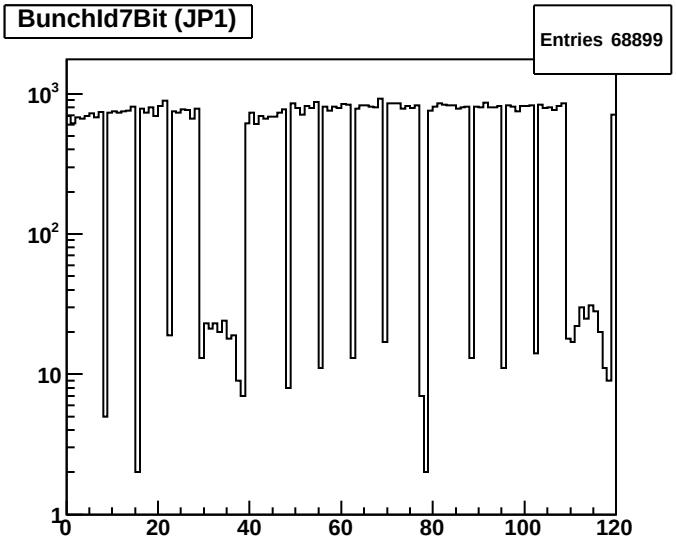

EMC L2 Input - HT23 bits
Entries 16
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

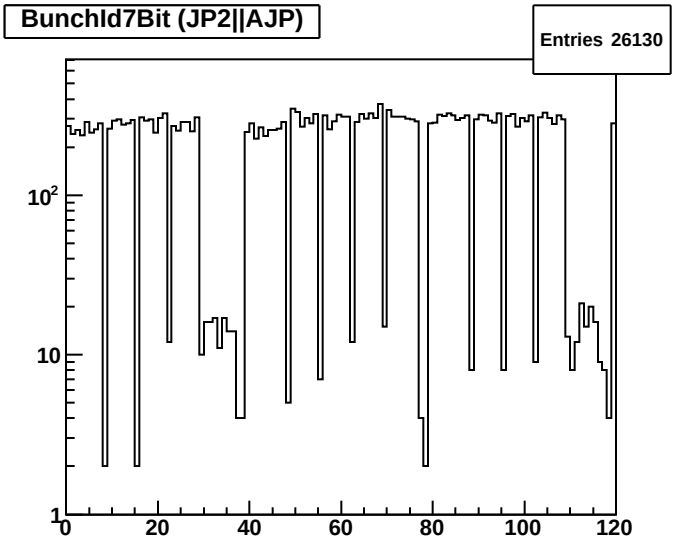

DAQ10k HT bits
Entries 153612
8000
7000
6000
5000
4000
3000
2000

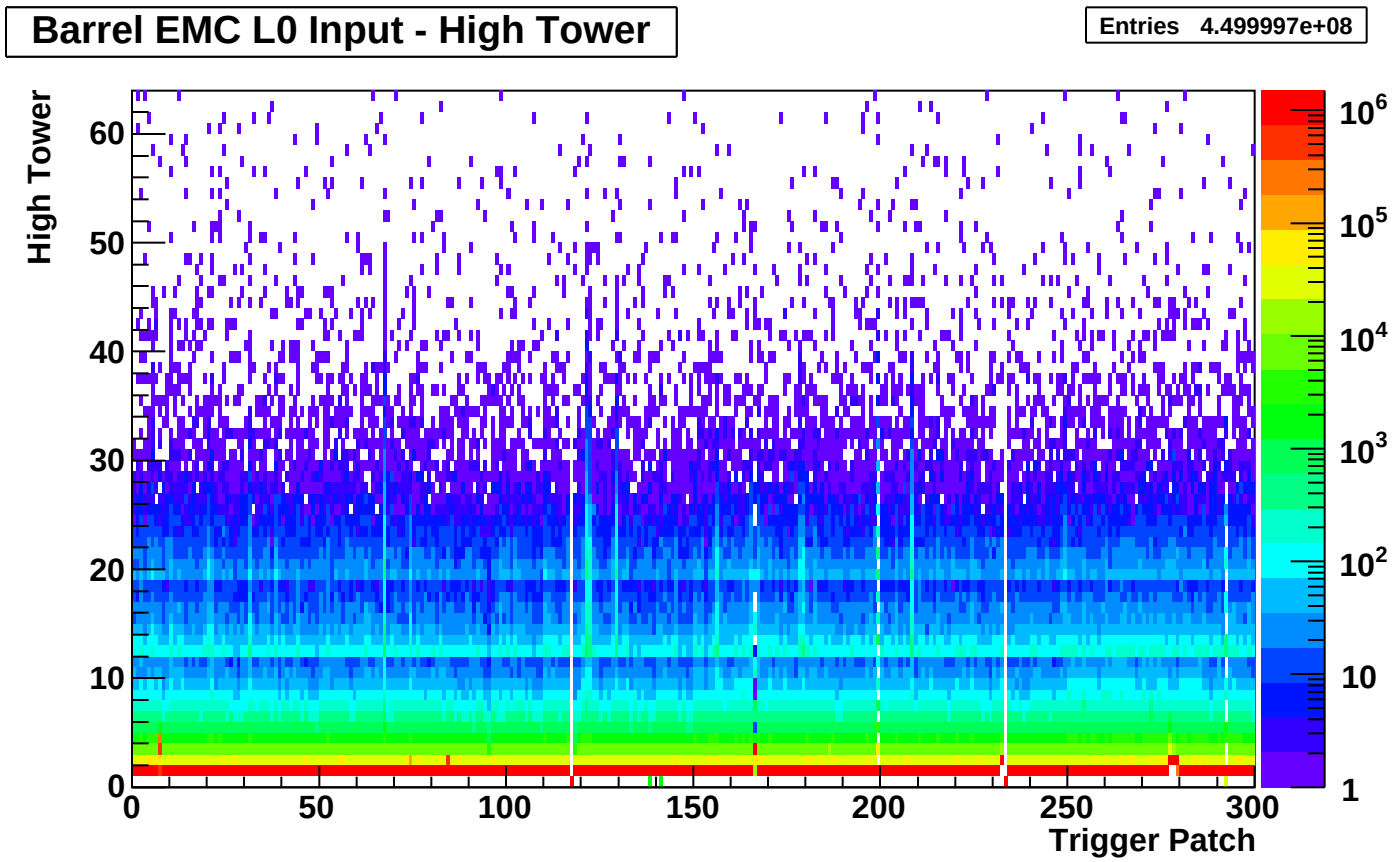

DAQ10k HT bits errors
Entries 15
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0

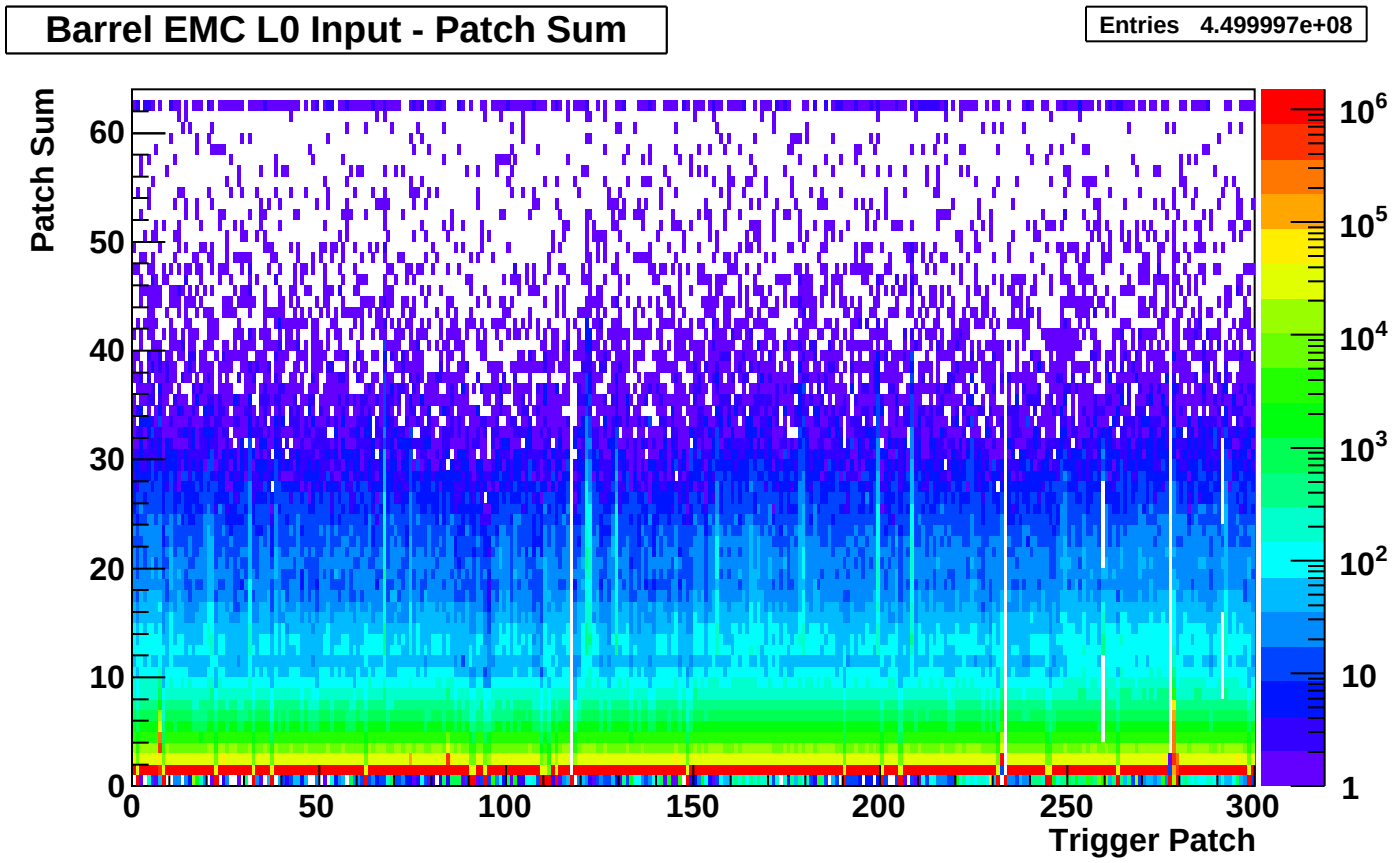

BunchId7Bit (BHT3)
Entries 151462
10^3
10^2
10
0
20
40
60
80
100
120

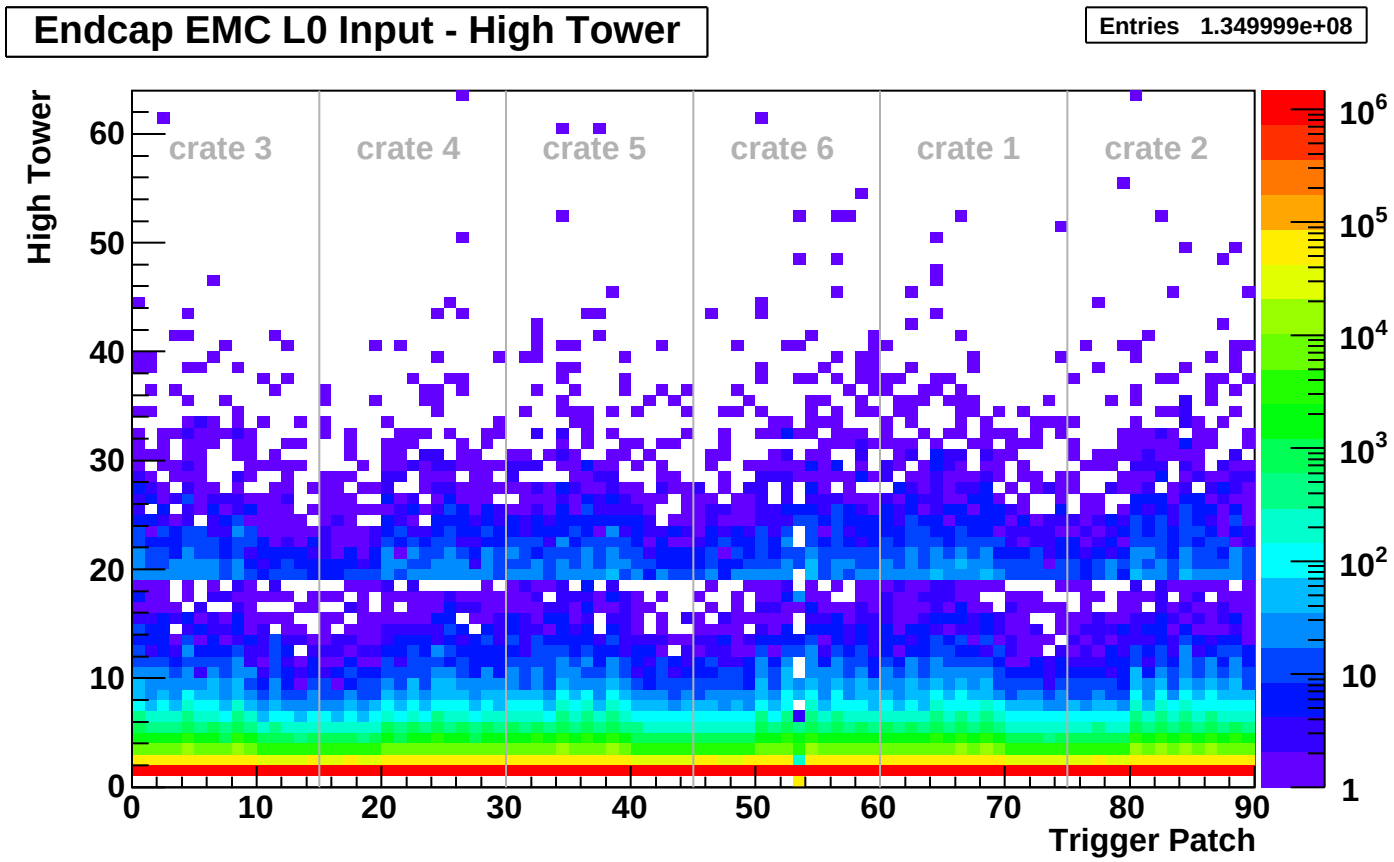

BunchId7Bit (all events)
Entries1499999
10^4
10^3
10^2
10
0
20
40
60
80
100
120

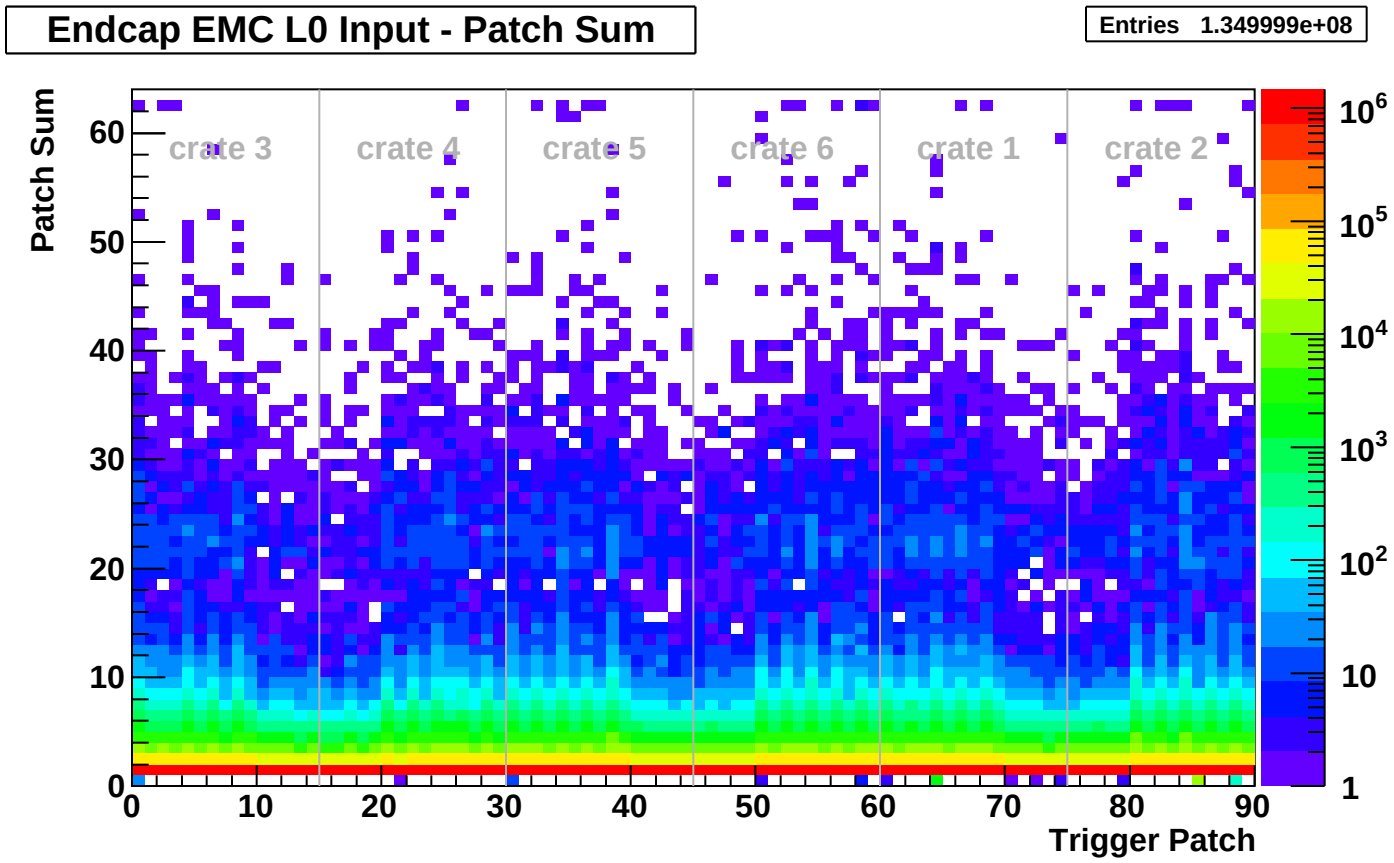

BunchId7Bit (JP1)
Entries 68899
10^3
10^2
10
1
0
20
40
60
80
100
120

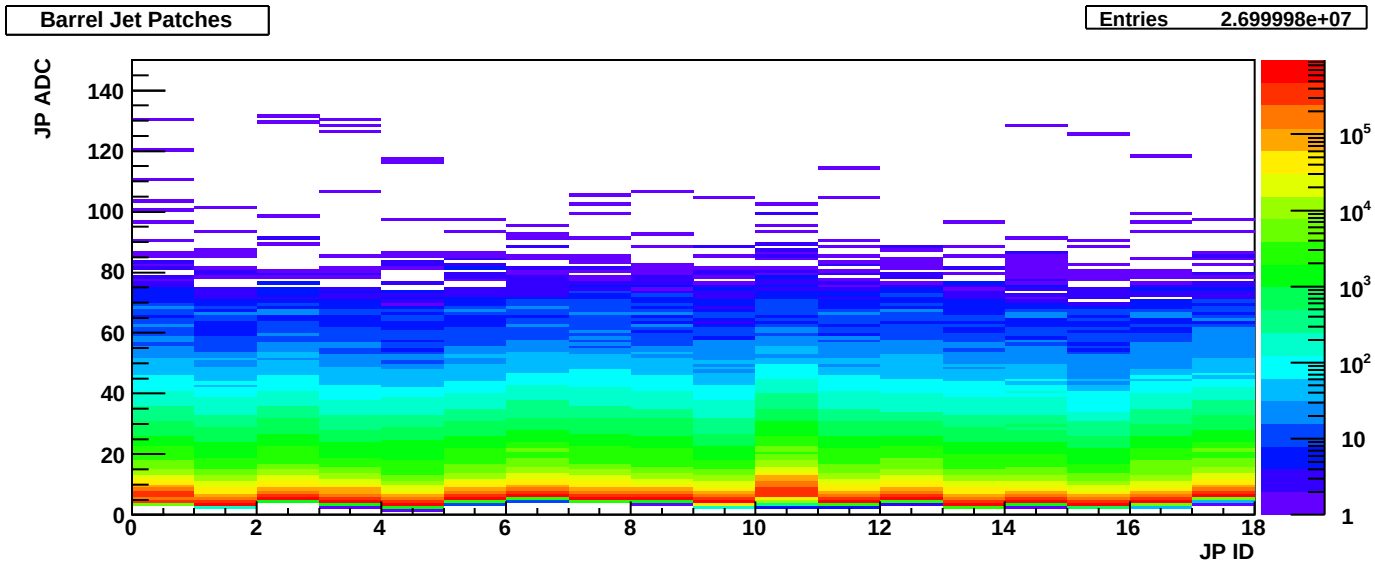

BunchId7Bit (JP2||AJP)
Entries 26130
10^2
10
1
0
20
40
60
80
100
120

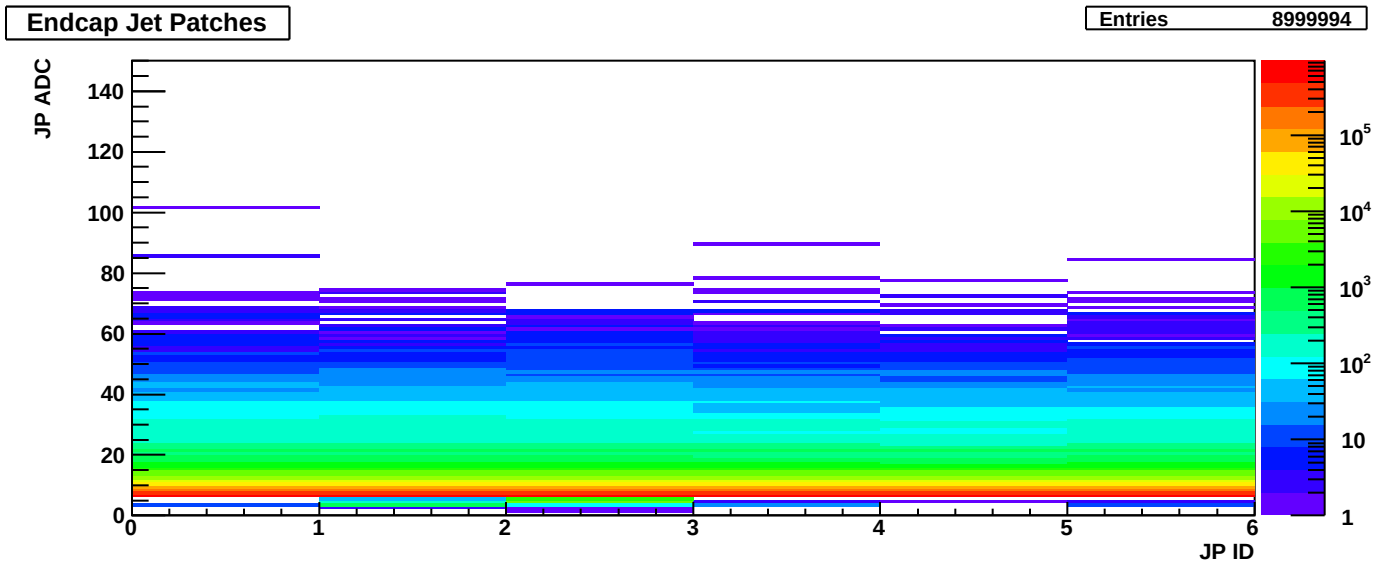

Barrel EMC L0 Input - High Tower
Entries 4.499997e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

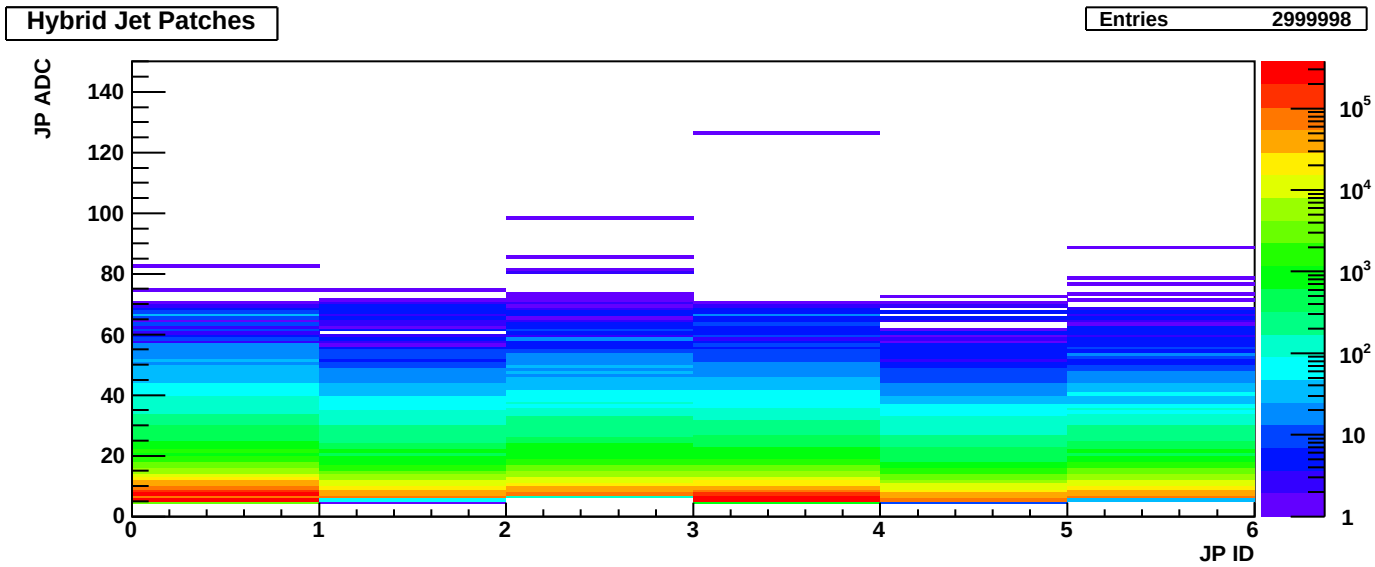

Barrel EMC L0 Input - Patch Sum
Entries 4.499997e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

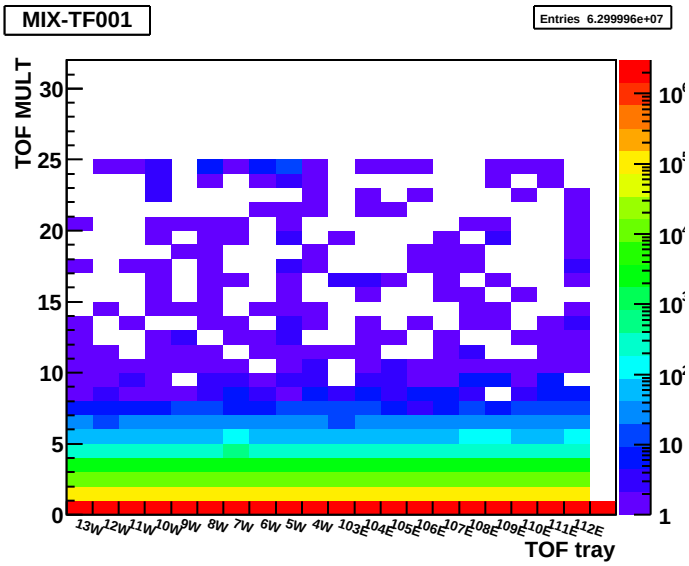

Endcap EMC L0 Input - High Tower
Entries 1.349999e+08
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

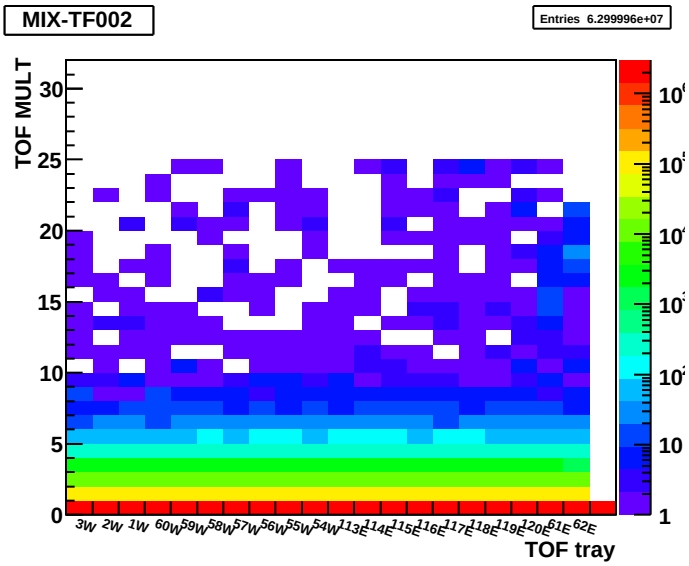

Endcap EMC L0 Input - Patch Sum
Entries 1.349999e+08
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

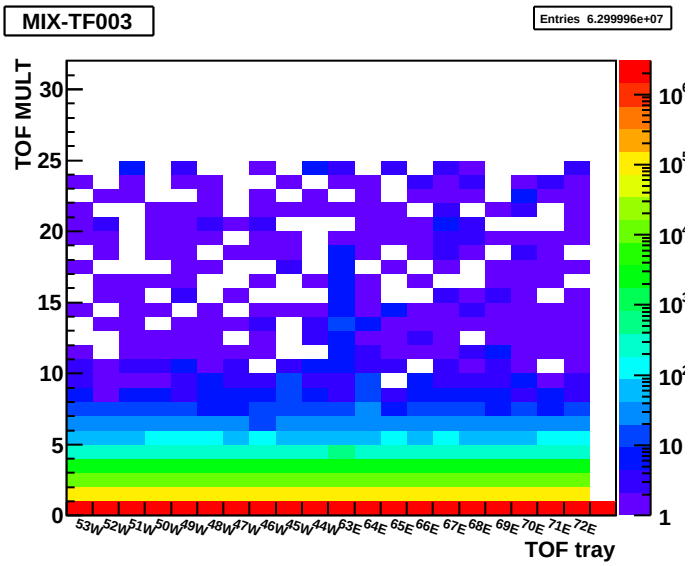

Barrel Jet Patches
Entries 2.699998e+07
JP ADC
JP ID

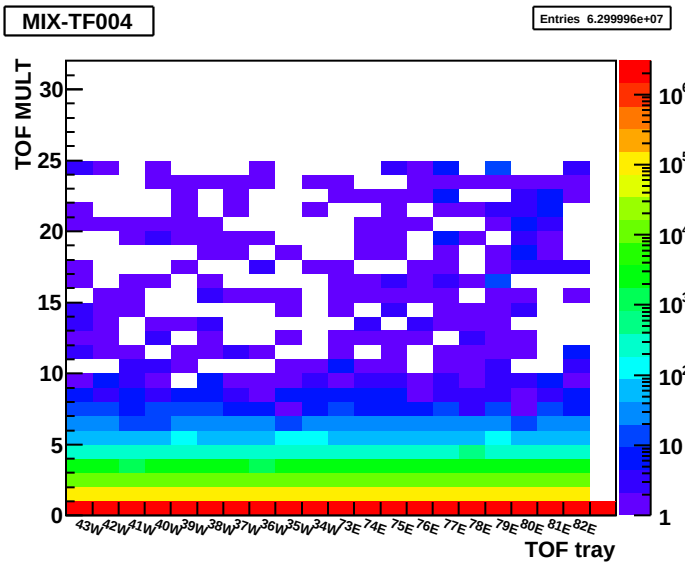

Endcap Jet Patches
Entries 8999994
JP ADC
JP ID

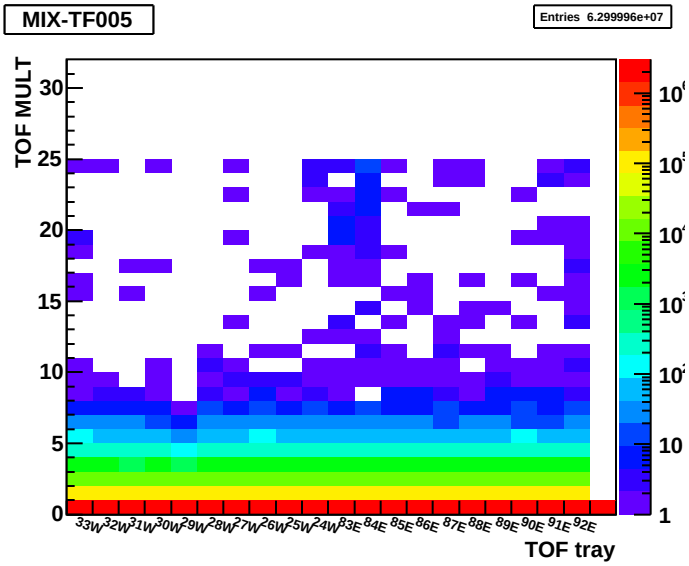

Hybrid Jet Patches
Entries 2999998
JP ADC
JP ID

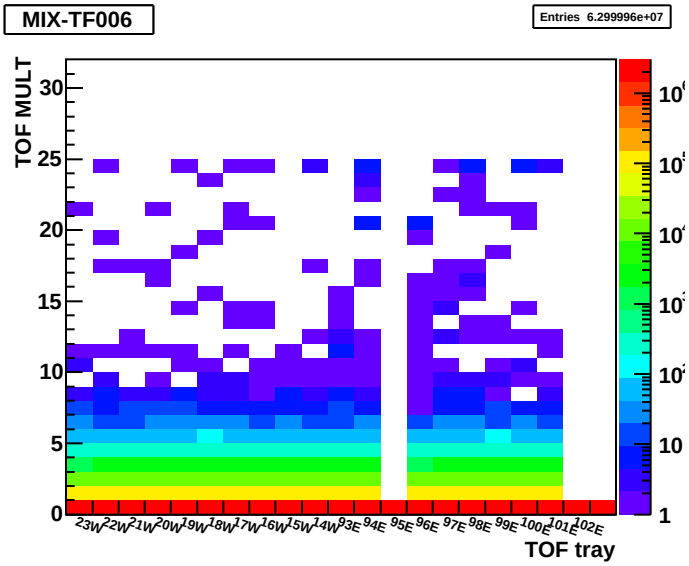

MIX-TF001
Entries 6.299996e+07
TOF MULT
TOF tray

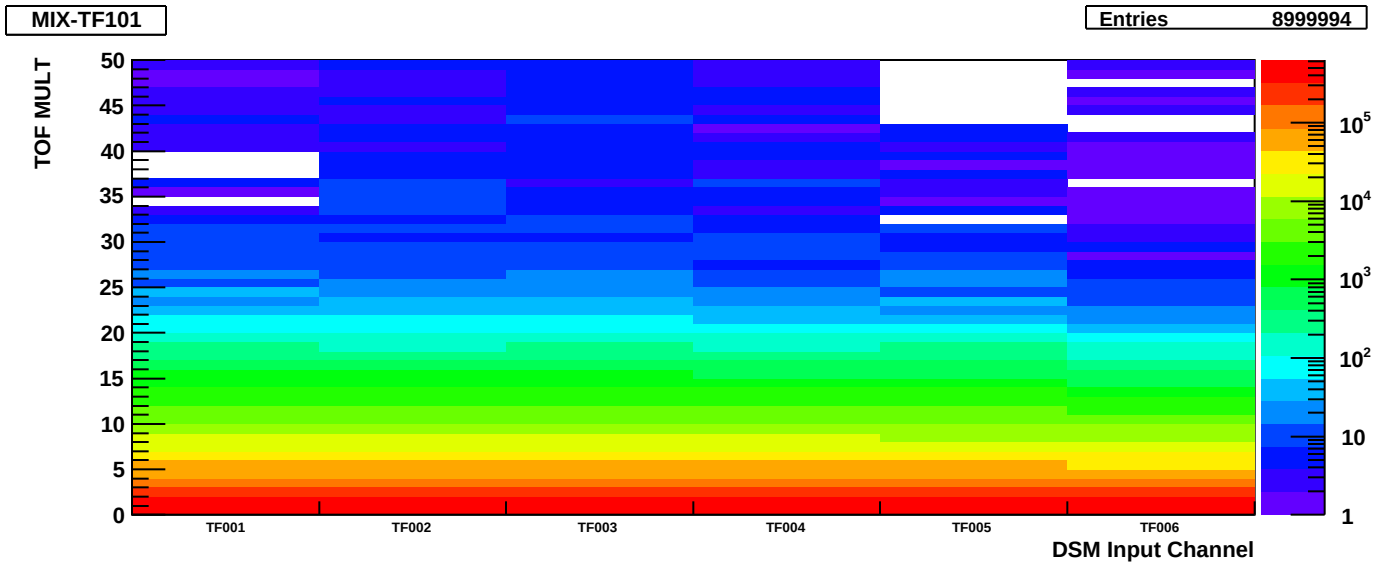

MIX-TF002
Entries 6.299996e+07
TOF MULT
TOF tray

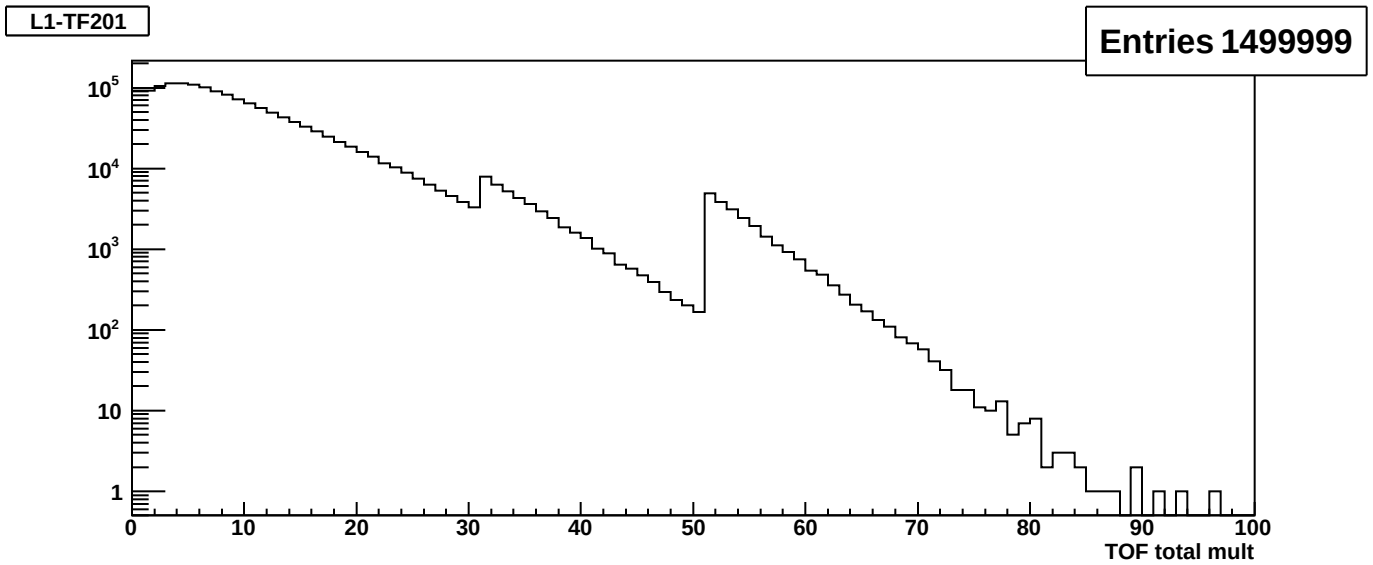

MIX-TF003
Entries 6.299996e+07
TOF MULT
TOF tray

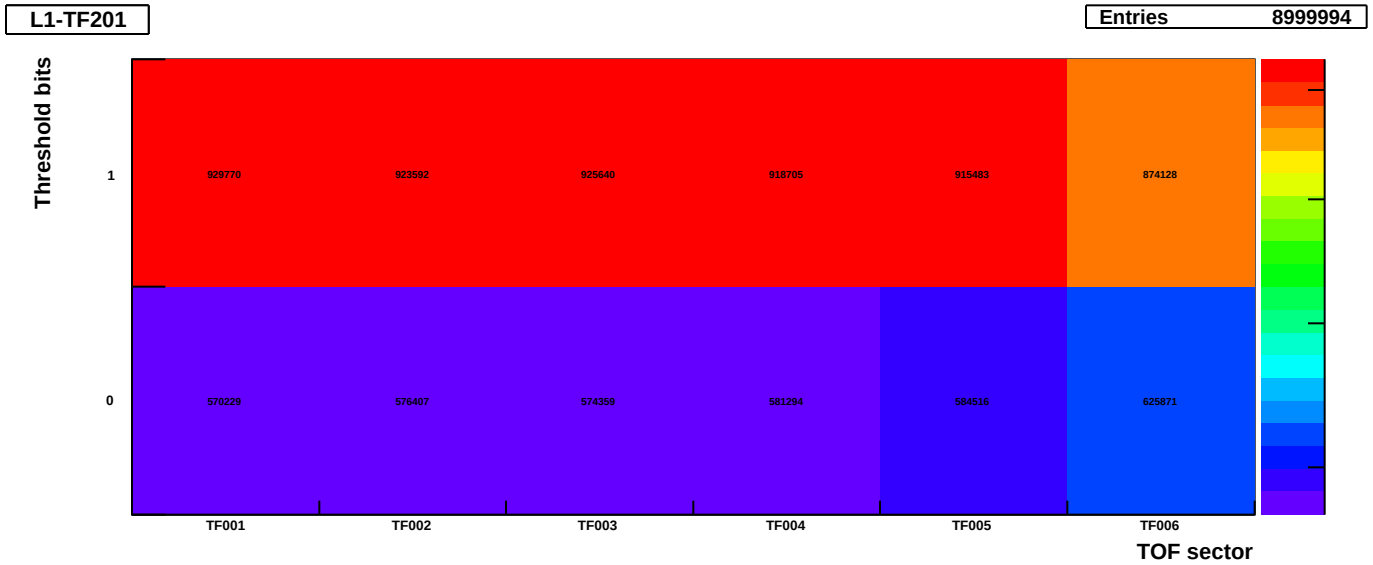

MIX-TF004
Entries 6.299996e+07
TOF MULT
TOF tray

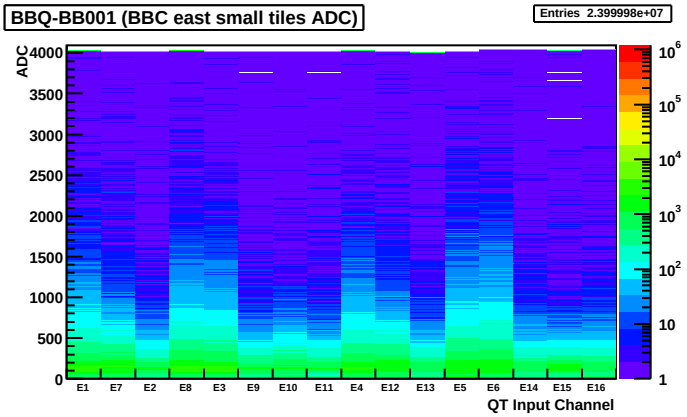

MIX-TF005
Entries 6.299996e+07
TOF MULT
TOF tray

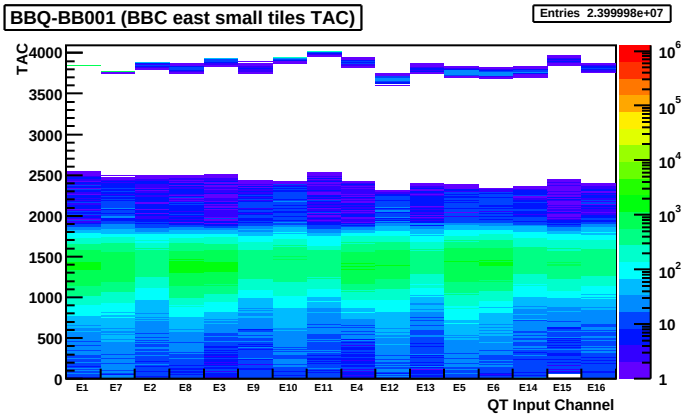

MIX-TF006
Entries 6.299996e+07
TOF MULT
TOF tray

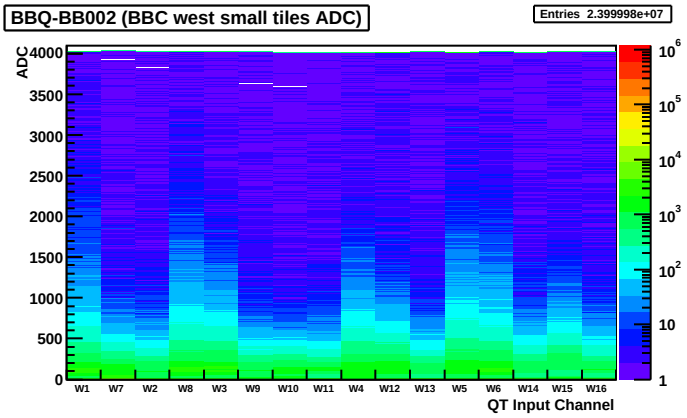

MIX-TF101
Entries 8999994
TOF MULT
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006

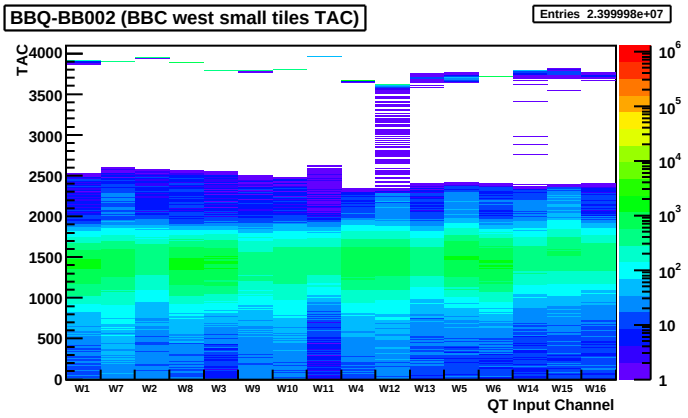

L1-TF201
Entries 1499999
TOF total mult

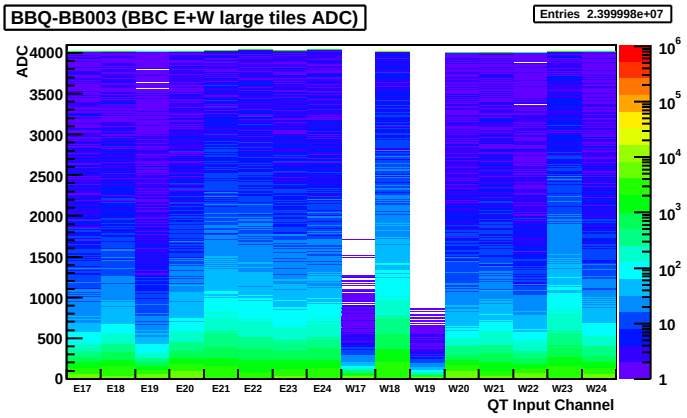

L1-TF201
Entries 8999994
Threshold bits
929770
923592
925640
918705
915483
874128
570229
576407
574359
581294
584516
625871
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

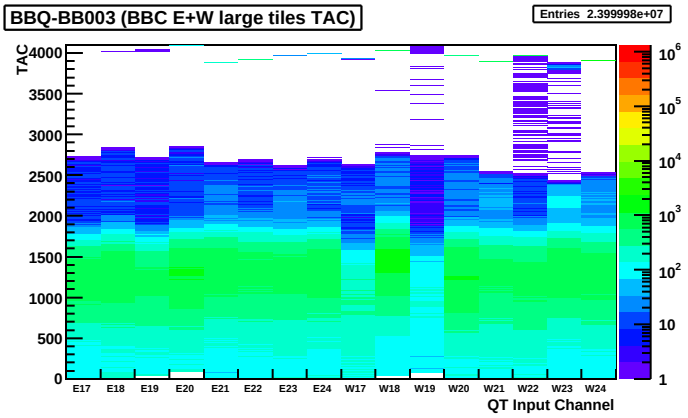

BBQ-BB001 (BBC east small tiles ADC)
Entries 2.399998e+07
ADC
QT Input Channel

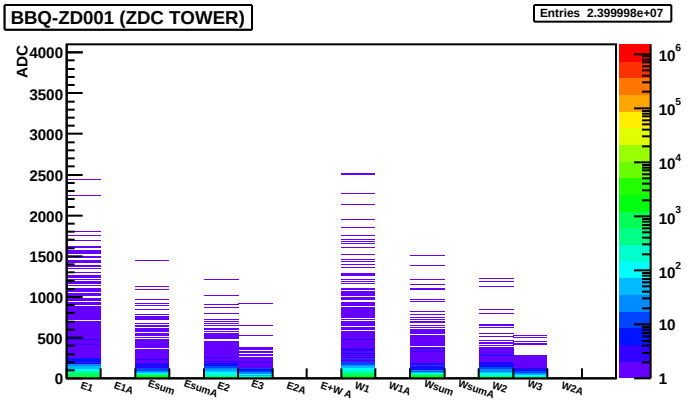

BBQ-BB001 (BBC east small tiles TAC)
Entries 2.399998e+07
TAC
QT Input Channel

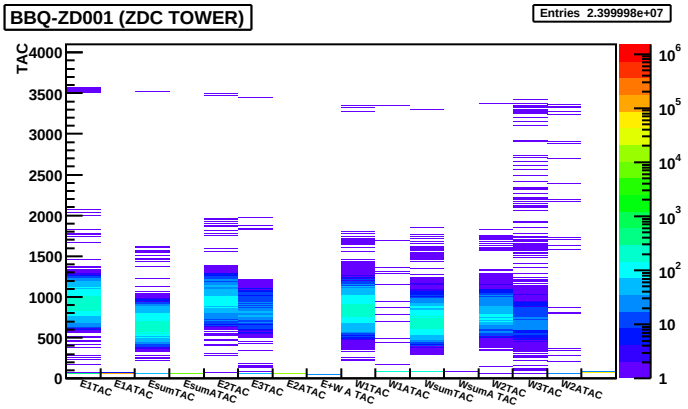

BBQ-BB002 (BBC west small tiles ADC)
Entries 2.399998e+07
ADC
QT Input Channel

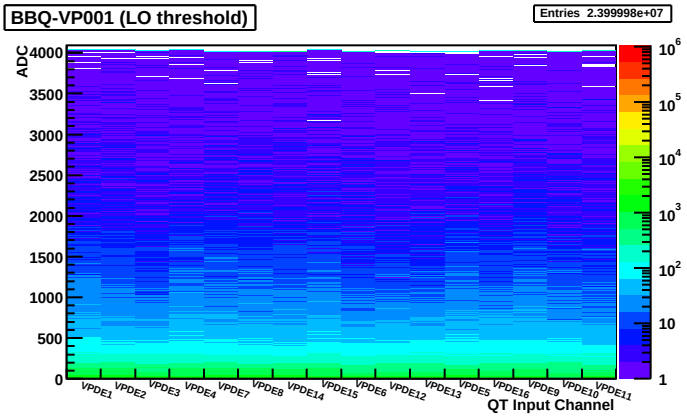

BBQ-BB002 (BBC west small tiles TAC)
Entries 2.399998e+07
TAC
QT Input Channel

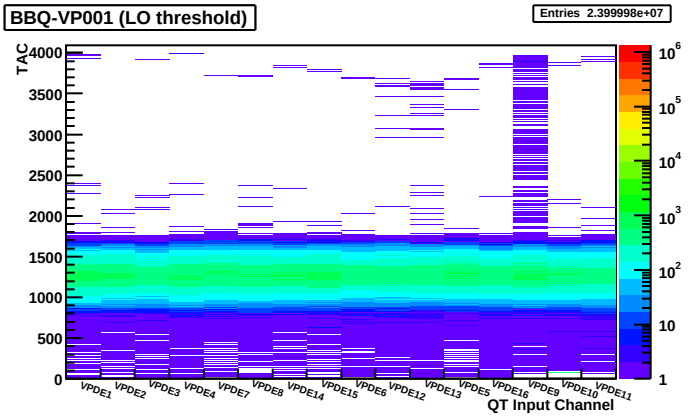

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 2.399998e+07
ADC
QT Input Channel

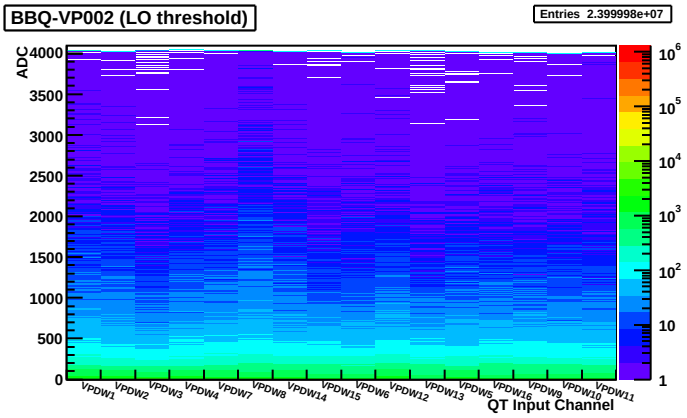

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 2.399998e+07
TAC
QT Input Channel

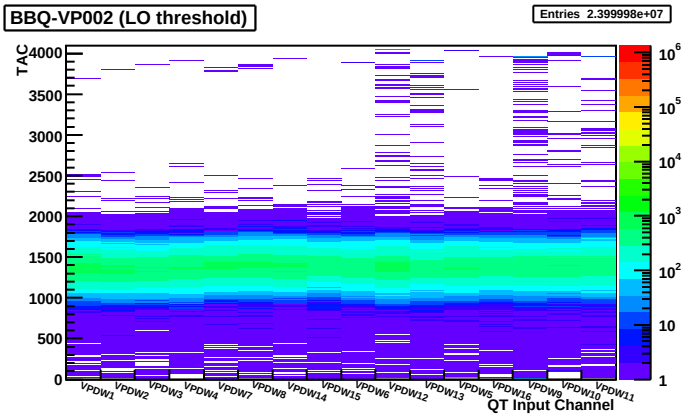

BBQ-ZD001 (ZDC TOWER)
Entries 2.399998e+07
ADC

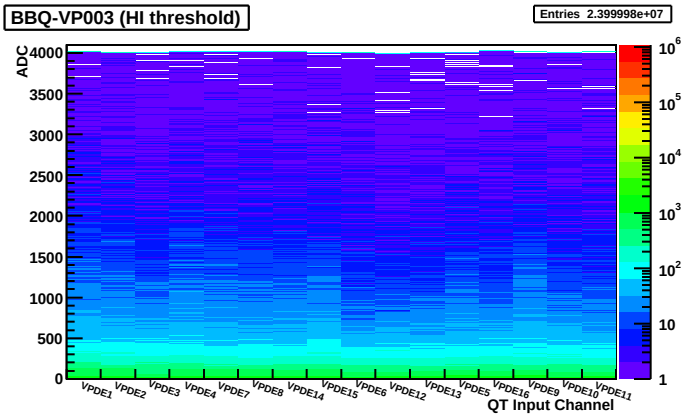

BBQ-ZD001 (ZDC TOWER)
Entries 2.399998e+07
TAC

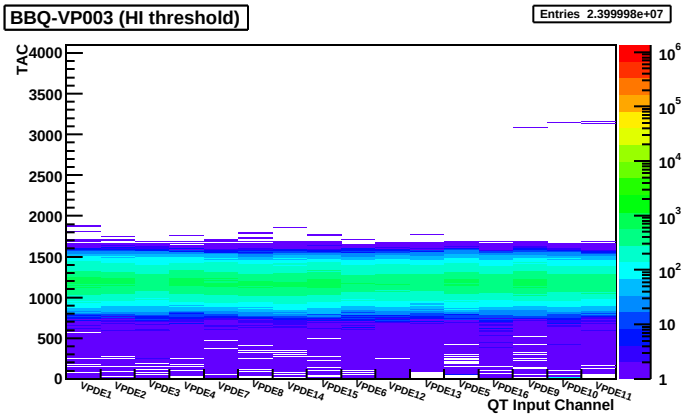

BBQ-VP001 (LO threshold)
Entries 2.399998e+07
ADC
QT Input Channel

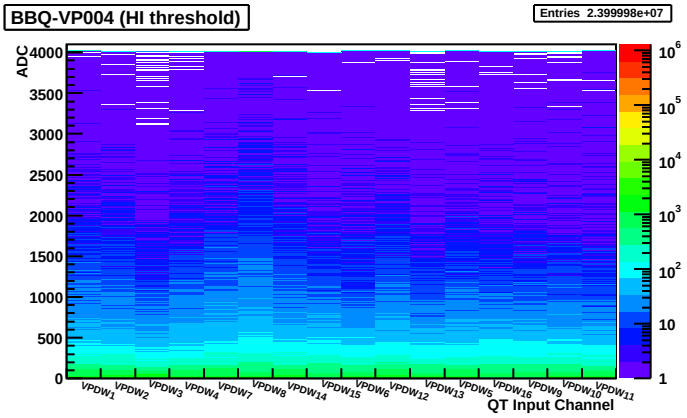

BBQ-VP001 (LO threshold)
Entries 2.399998e+07
TAC
QT Input Channel

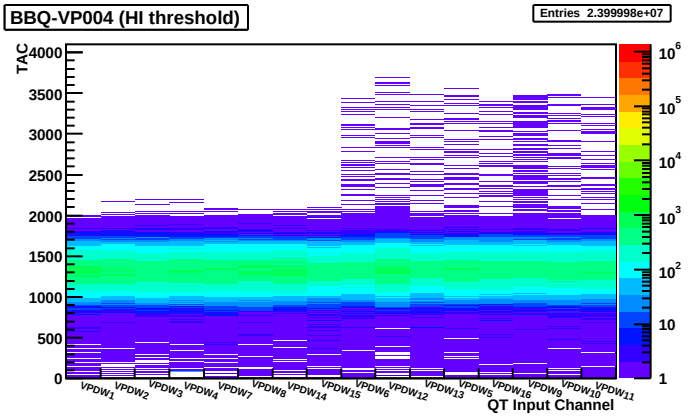

BBQ-VP002 (LO threshold)
Entries 2.399998e+07
ADC
QT Input Channel

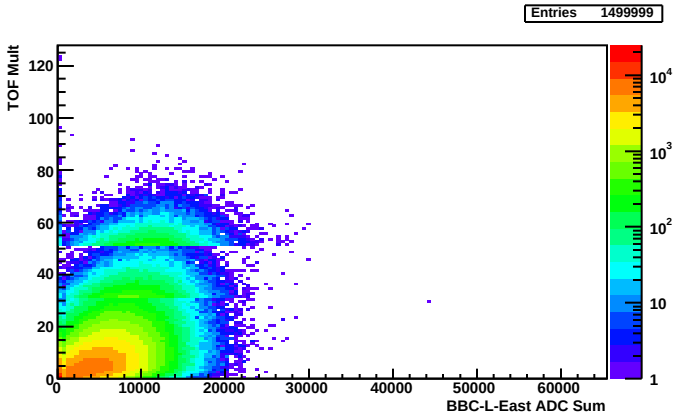

BBQ-VP002 (LO threshold)
Entries 2.399998e+07
TAC
QT Input Channel

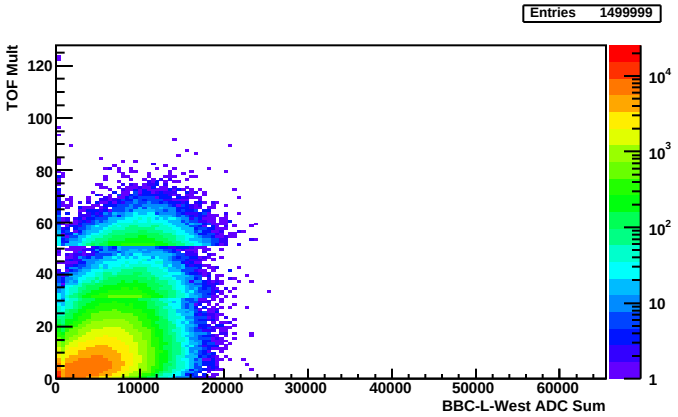

BBQ-VP003 (HI threshold)
Entries 2.399998e+07
ADC
QT Input Channel

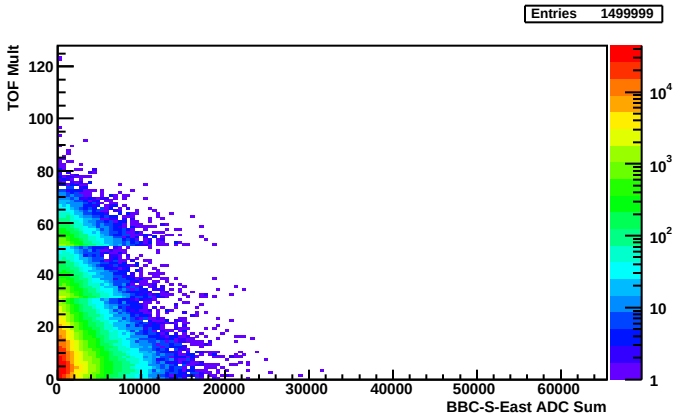

BBQ-VP003 (HI threshold)
Entries 2.399998e+07
TAC
QT Input Channel

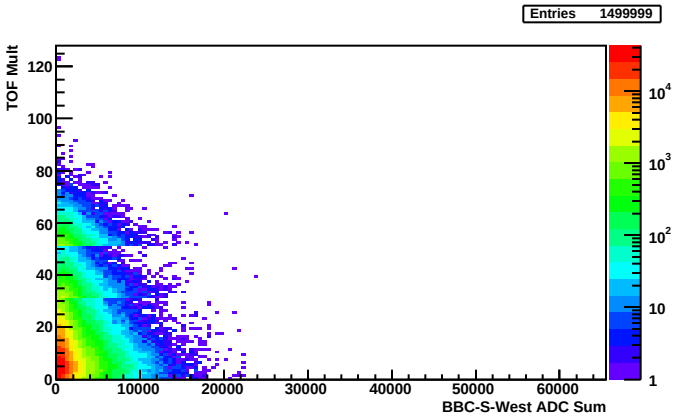

BBQ-VP004 (HI threshold)
Entries 2.399998e+07
ADC
QT Input Channel

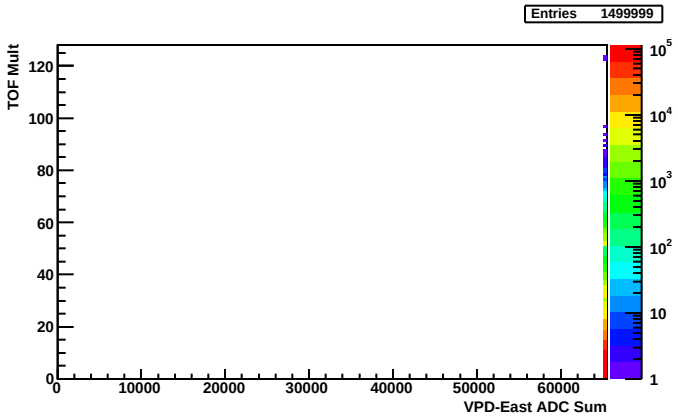

BBQ-VP004 (HI threshold)
Entries 2.399998e+07
TAC
QT Input Channel

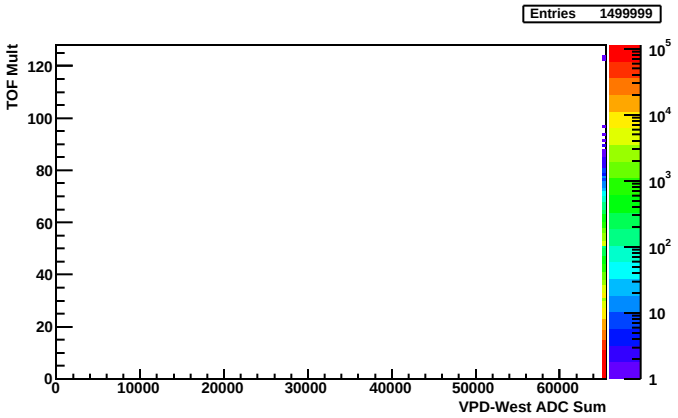

Entries 1499999
TOF Mult
BBC-L-East ADC Sum

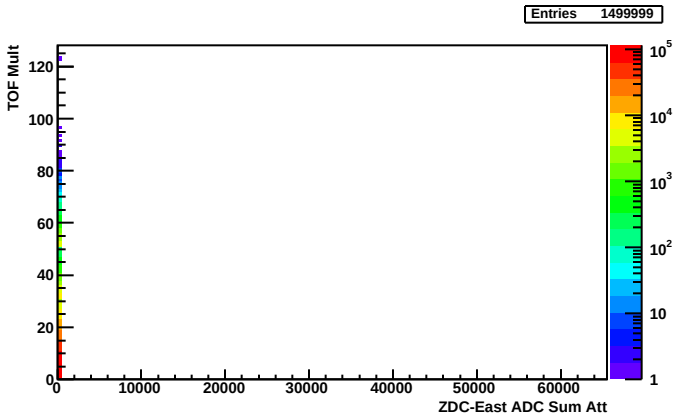

Entries 1499999
TOF Mult
BBC-L-West ADC Sum

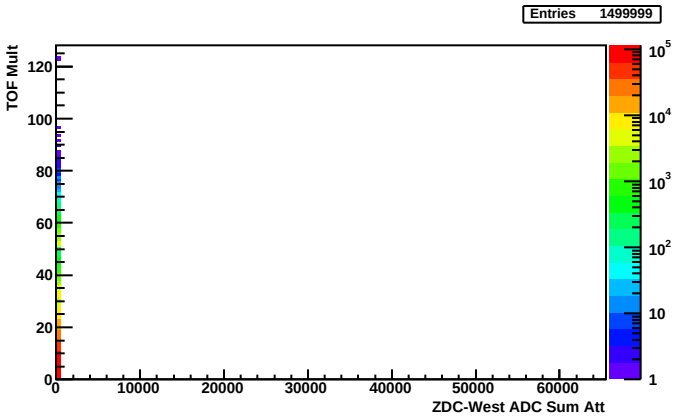

Entries 1499999
TOF Mult
BBC-S-East ADC Sum

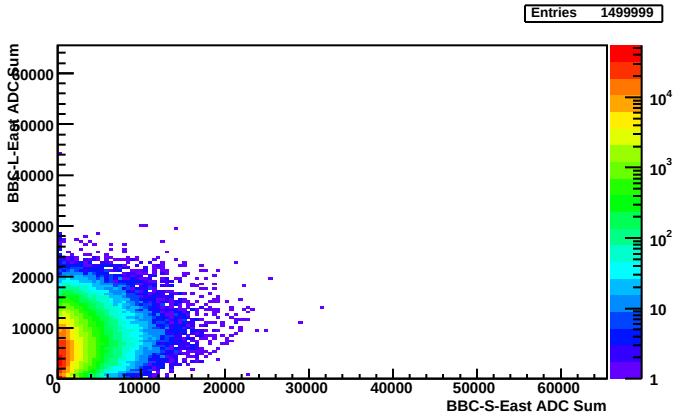

Entries 1499999
TOF Mult
BBC-S-West ADC Sum

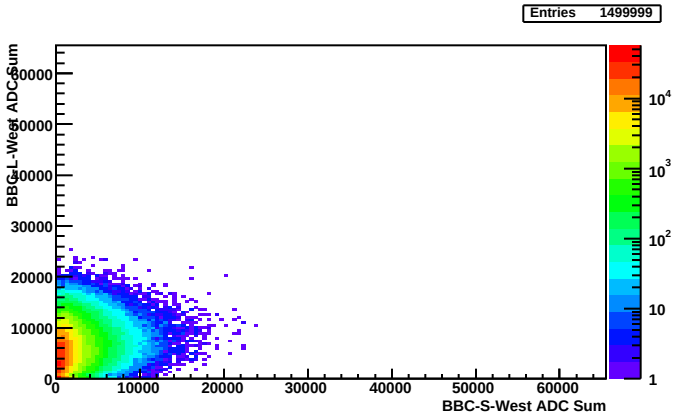

Entries 1499999
TOF Mult
VPD-East ADC Sum

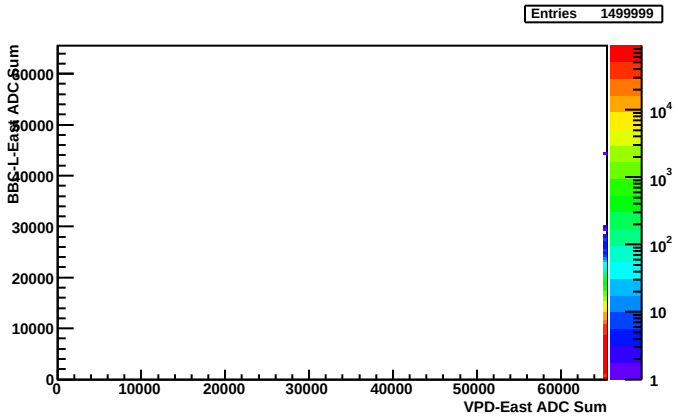

Entries 1499999
TOF Mult
VPD-West ADC Sum

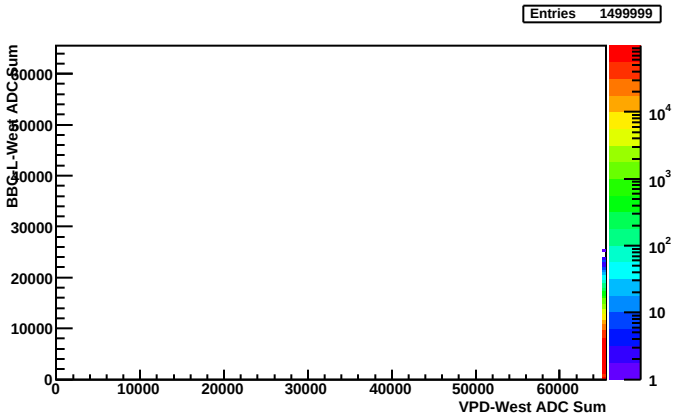

Entries 1499999
TOF Mult
ZDC-East ADC Sum Att

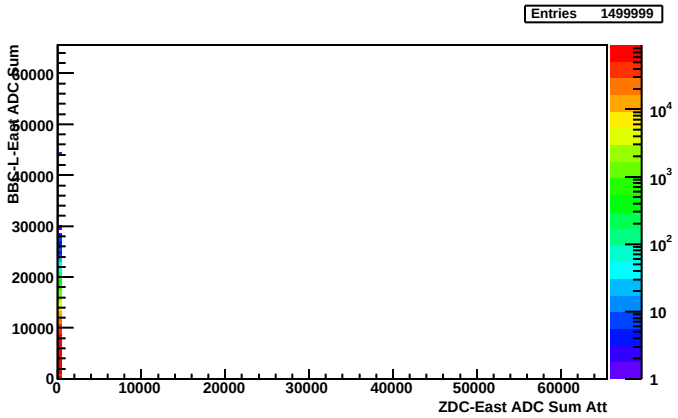

Entries 1499999
TOF Mult
ZDC-West ADC Sum Att

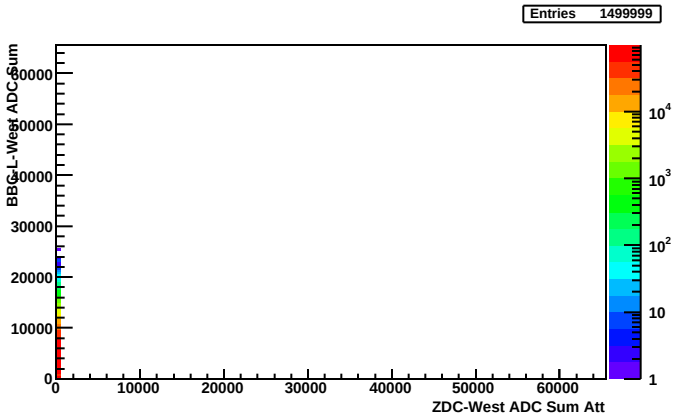

Entries 1499999
BBC-L-East ADC Sum
BBC-S-East ADC Sum

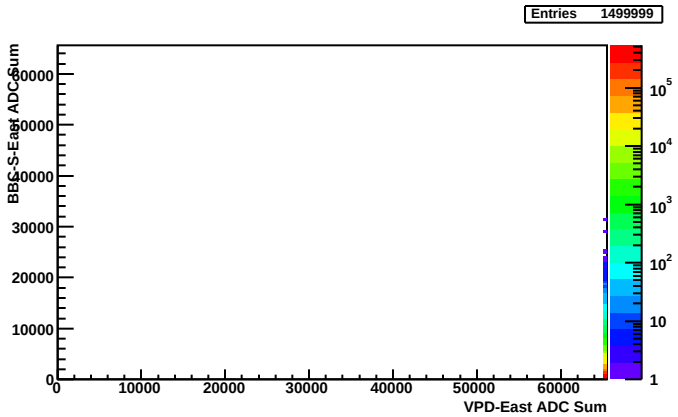

Entries 1499999
BBC-L-West ADC Sum
BBC-S-West ADC Sum

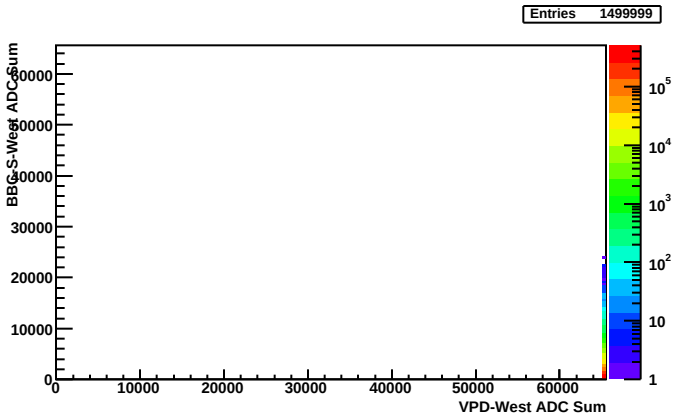

Entries 1499999
BBC-L-East ADC Sum
VPD-East ADC Sum

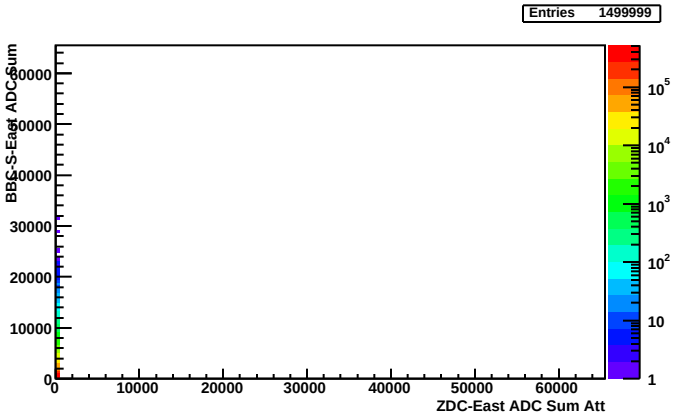

Entries 1499999
BBC-L-West ADC Sum
VPD-West ADC Sum

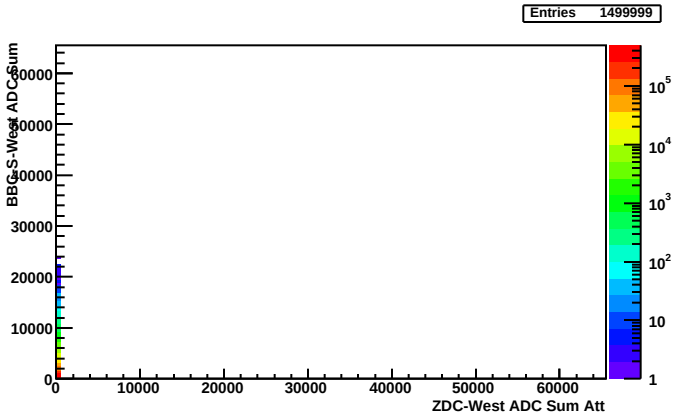

Entries 1499999
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

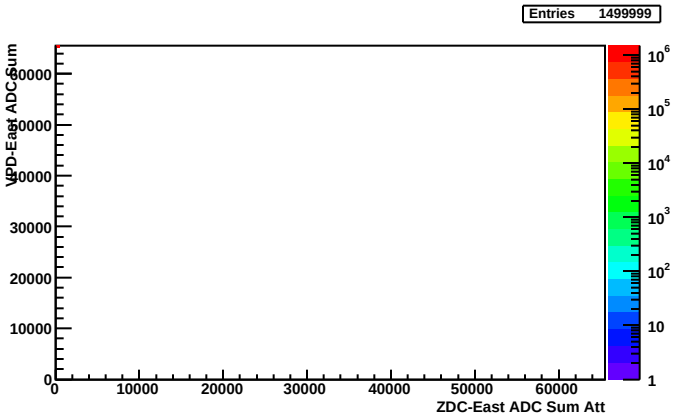

Entries 1499999
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

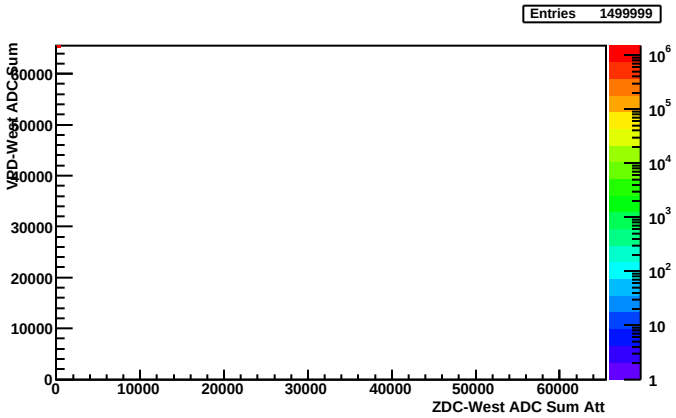

Entries 1499999
BBC-S-East ADC Sum
VPD-East ADC Sum

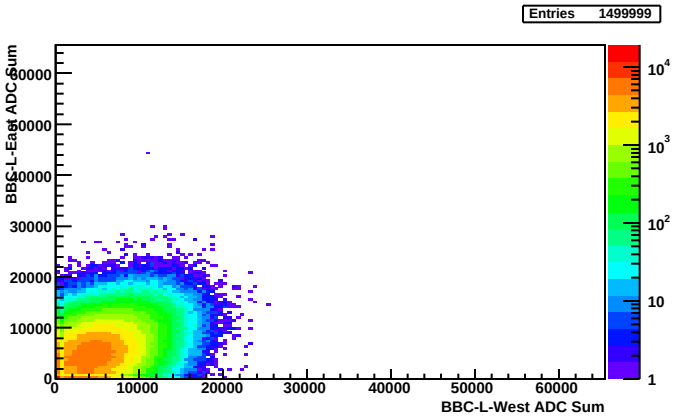

Entries 1499999
BBC-S-West ADC Sum
VPD-West ADC Sum

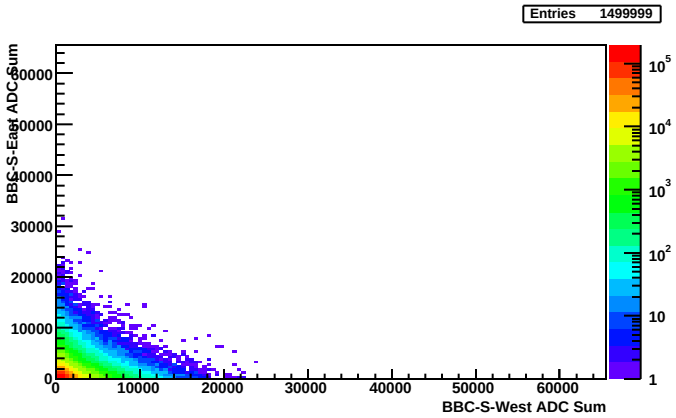

Entries 1499999
BBC-S-East ADC Sum
ZDC-East ADC Sum Att


Entries 1499999
BBC-S-West ADC Sum
ZDC-West ADC Sum Att


Entries 1499999
VPD-East ADC Sum
ZDC-East ADC Sum Att


Entries 1499999
VPD-West ADC Sum
ZDC-West ADC Sum Att


Entries 1499999
BBC-L-East ADC Sum
BBC-L-West ADC Sum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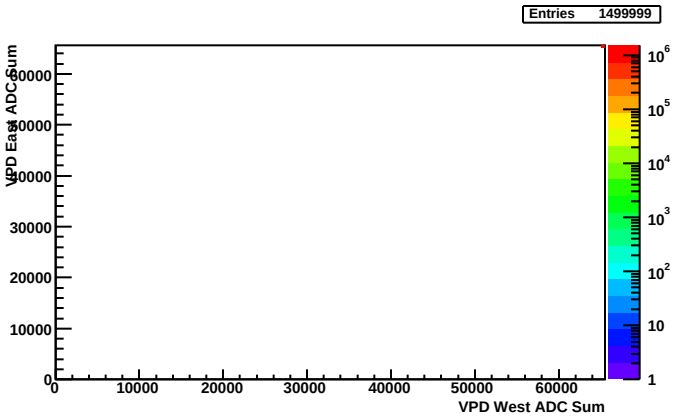
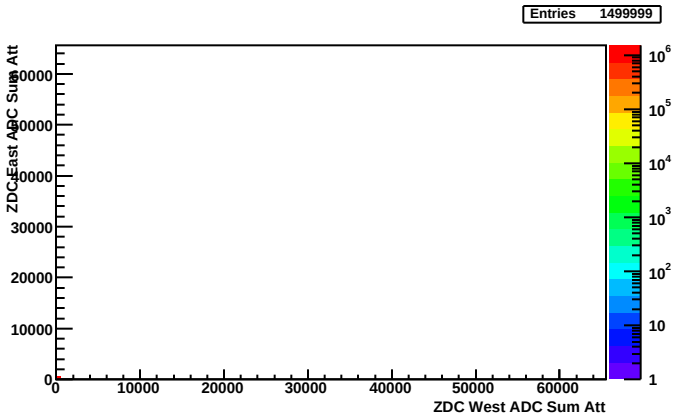
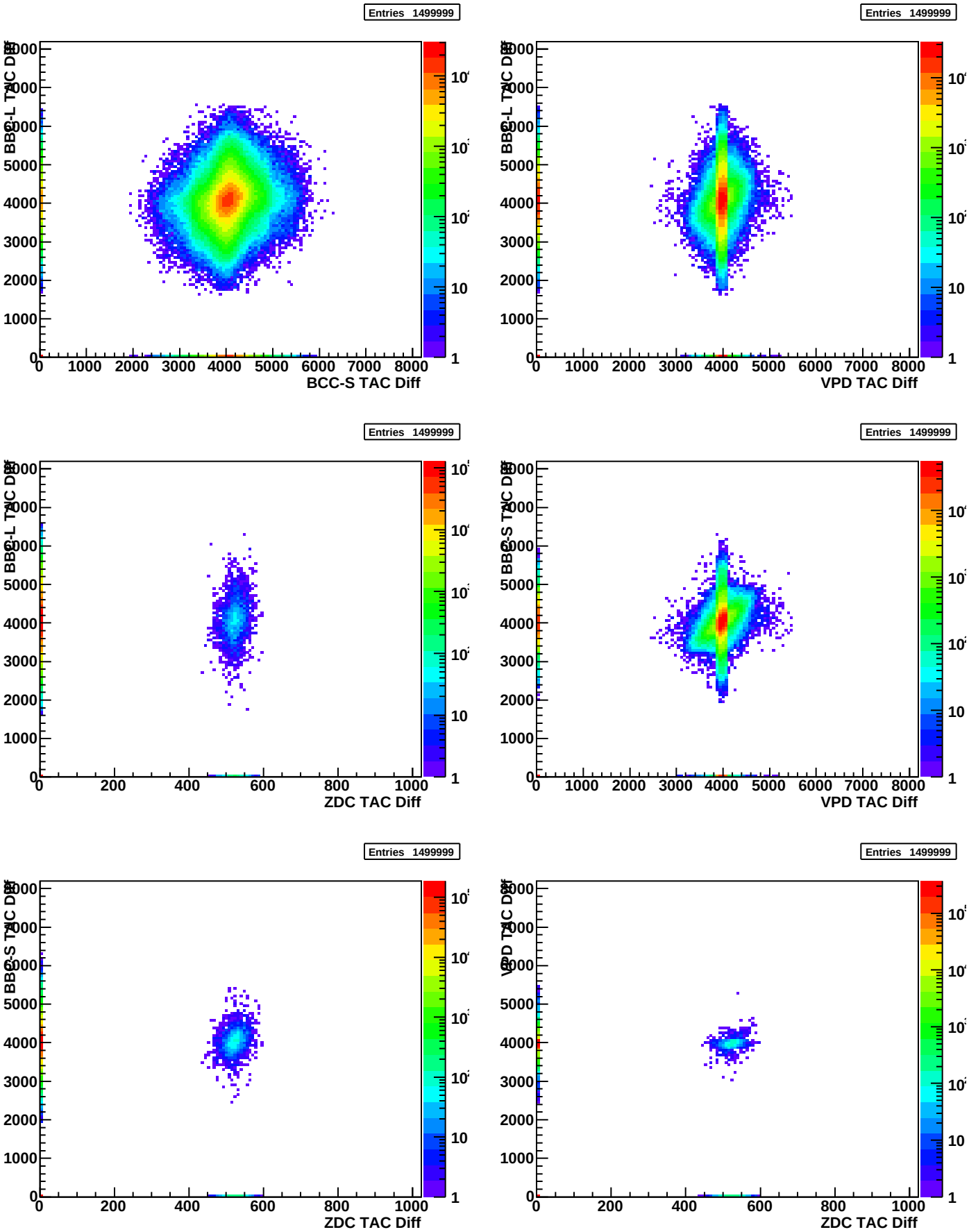
BBC-S-East ADC Sum
BBC-S-West ADC Sum


Entries 1499999
VPD East ADC Sum
VPD West ADC Sum


Entries 1499999
ZDC East ADC Sum Att
ZDC West ADC Sum Att


Entries 1499999
BBC-L TAC Diff
BCC-S TAC Diff
Entries 1499999
BBC-L TAC Diff
VPD TAC Diff
Entries 1499999
BBC-L TAC Diff
ZDC TAC Diff
Entries 1499999
BBC-S TAC Diff
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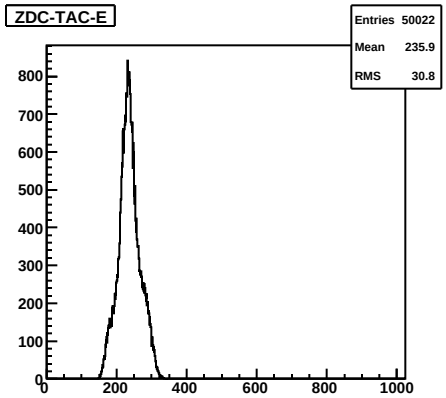
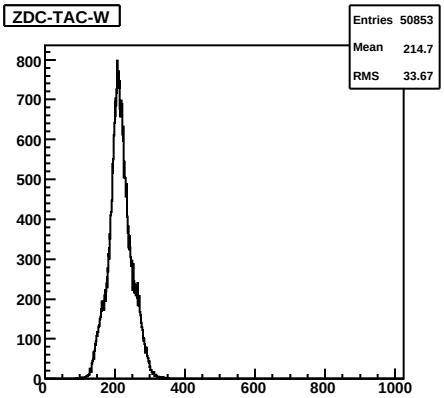
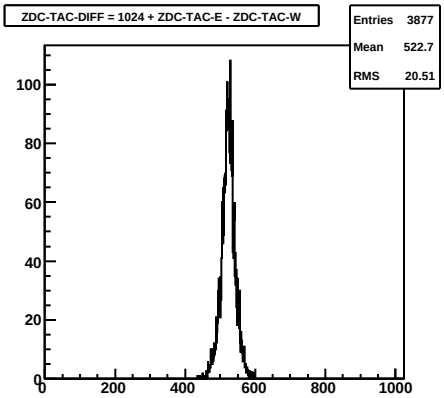
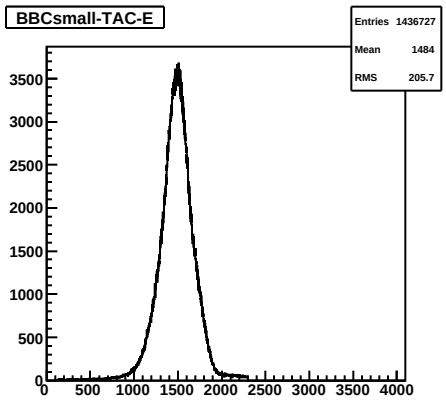
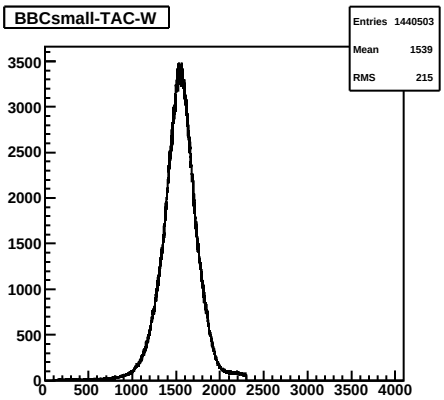
Entries 1499999
BBC-S TAC Diff
ZDC TAC Diff
Entries 1499999
VPD TAC Diff
ZDC TAC Diff

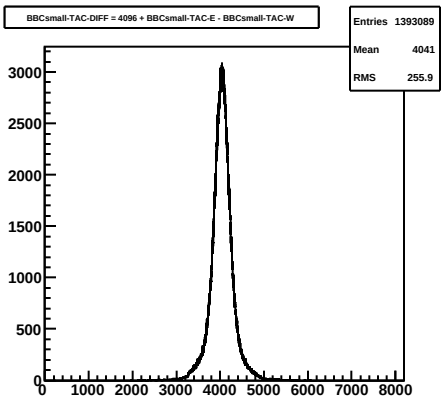

ZDC-TAC-E
Entries 50022
Mean 235.9
RMS 30.8

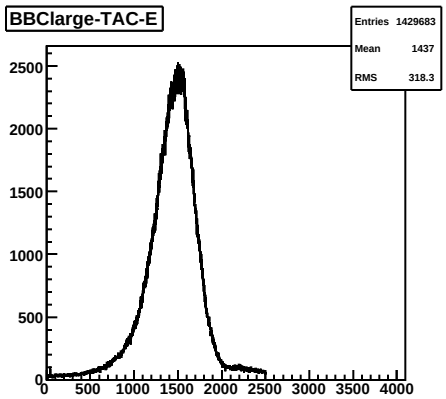

ZDC-TAC-W
Entries 50853
Mean 214.7
RMS 33.67

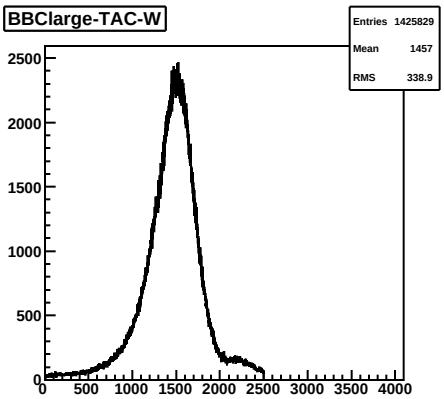

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 3877
Mean 522.7
RMS 20.51

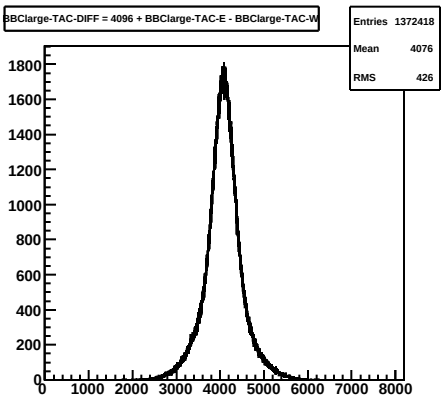

BBCsmall-TAC-E
Entries 1436727
Mean 1484
RMS 205.7

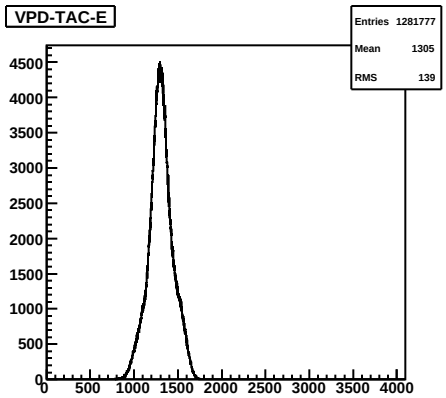

BBCsmall-TAC-W
Entries 1440503
Mean 1539
RMS 215

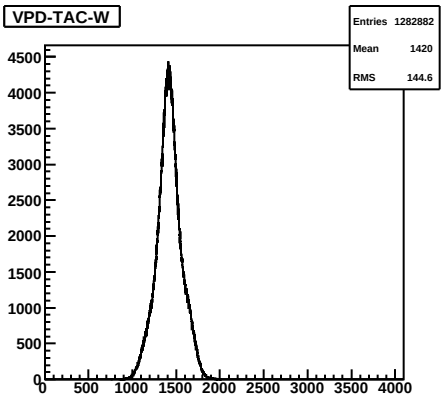

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 1393089
Mean 4041
RMS 255.9

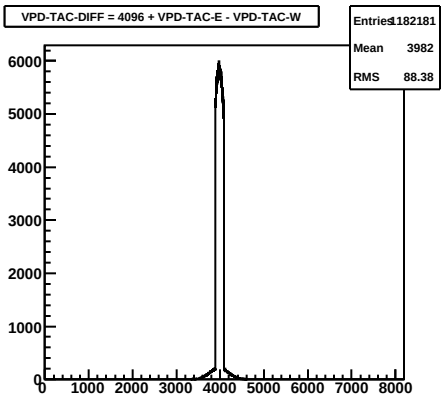

BBClarge-TAC-E
Entries 1429683
Mean 1437
RMS 318.3

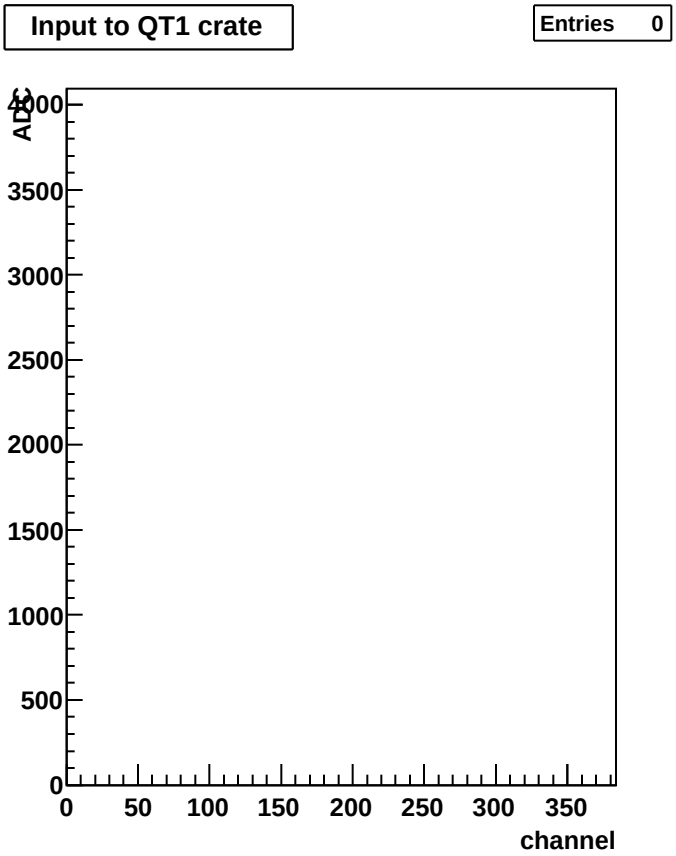

BBClarge-TAC-W
Entries 1425829
Mean 1457
RMS 338.9

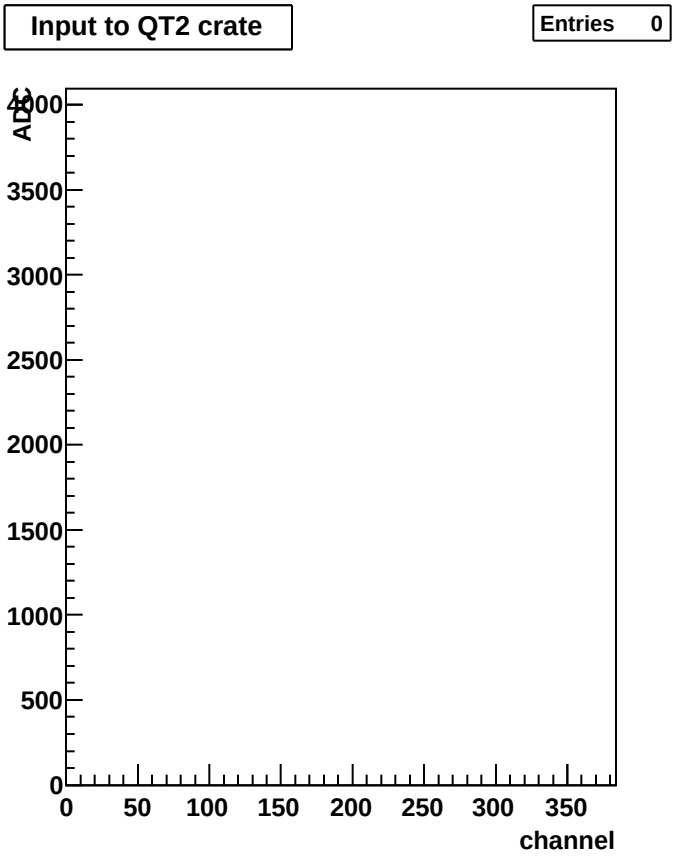

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 1372418
Mean 4076
RMS 426

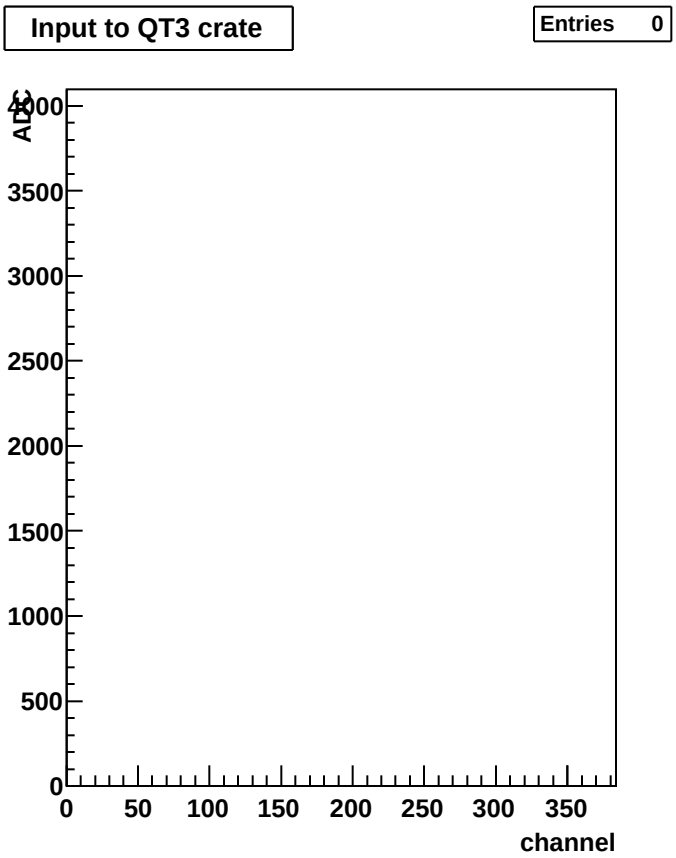

VPD-TAC-E
Entries 1281777
Mean 1305
RMS 139

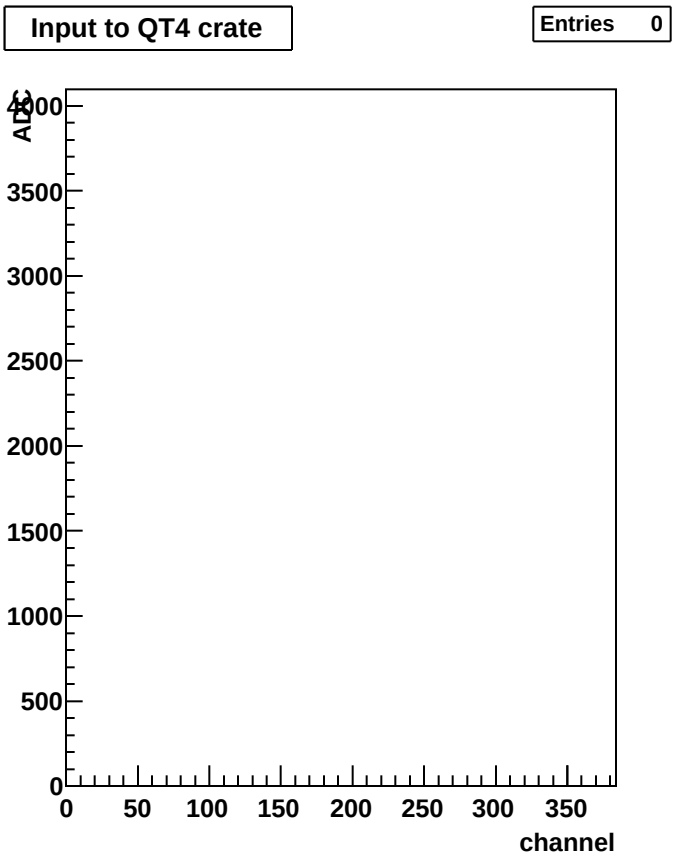

VPD-TAC-W
Entries 1282882
Mean 1420
RMS 144.6

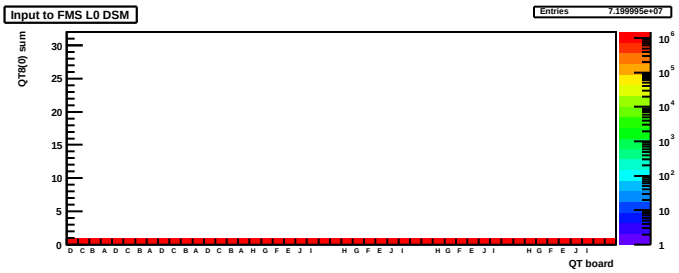

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 1182181
Mean 3982
RMS 88.38

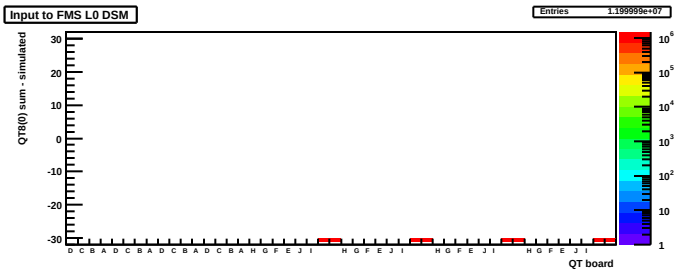

Input to QT1 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

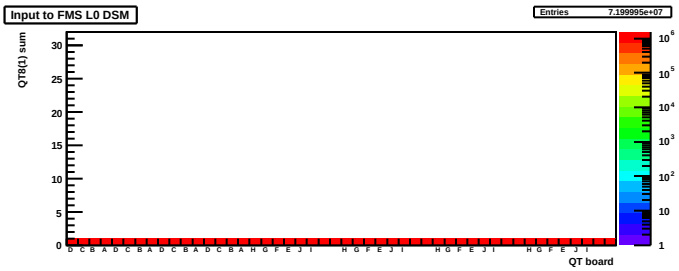

Input to QT2 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

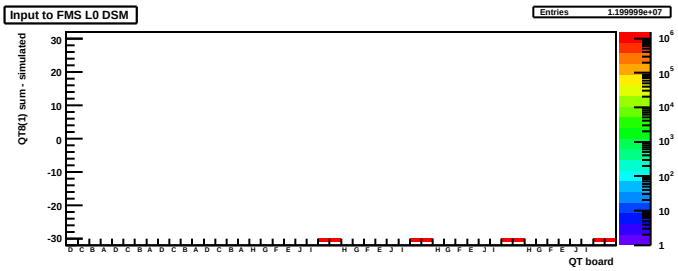

Input to QT3 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

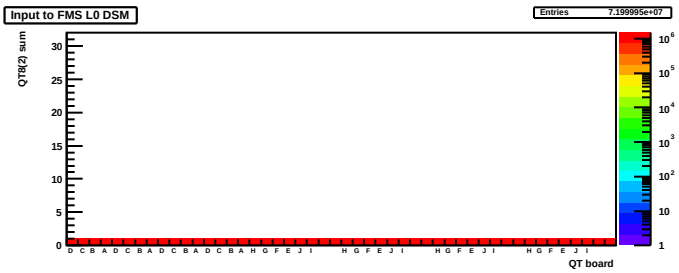

Input to QT4 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

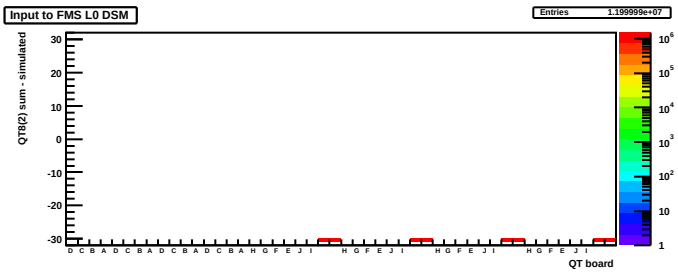

Input to FMS L0 DSM
Entries 7.199995e+07
QT8(0) sum
QT board

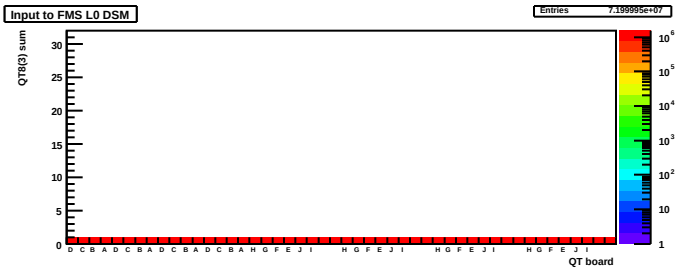

Input to FMS L0 DSM
Entries 1.199999e+07
QT8(0) sum - simulated
QT board

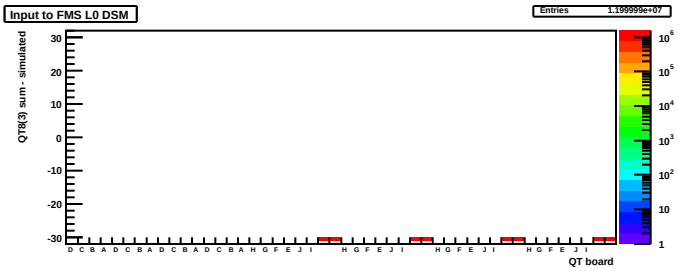

Input to FMS L0 DSM
Entries 7.199995e+07
QT8(1) sum
QT board

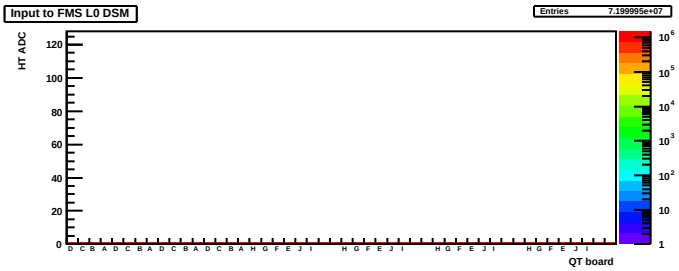

Input to FMS L0 DSM
Entries 1.199999e+07
QT8(1) sum - simulated
QT board

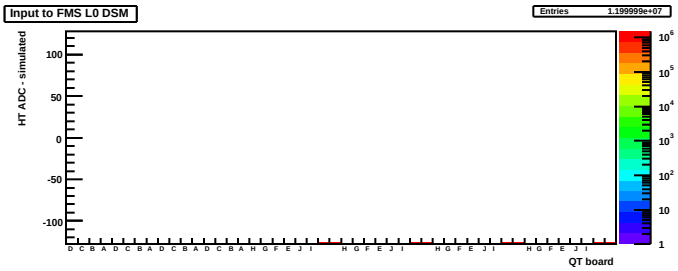

Input to FMS L0 DSM
Entries 7.199995e+07
QT8(2) sum
QT board

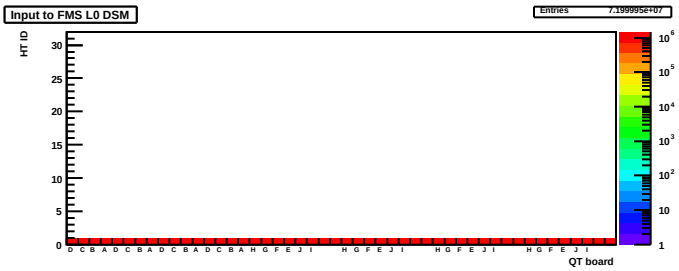

Input to FMS L0 DSM
Entries 1.199999e+07
QT8(2) sum - simulated
QT board

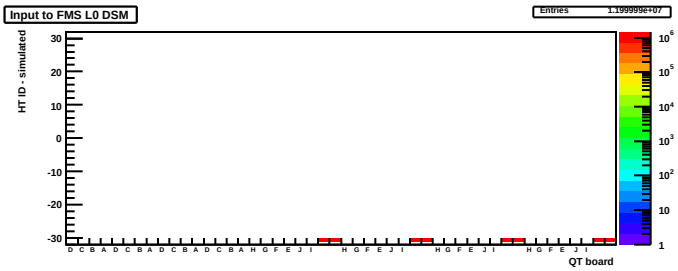

Input to FMS L0 DSM
Entries 7.199995e+07
QT8(3) sum
QT board

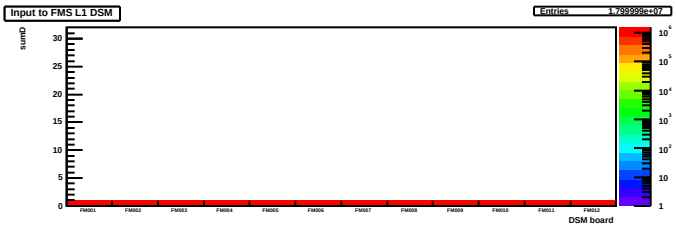

Input to FMS L0 DSM
Entries 1.199999e+07
QT8(3) sum - simulated
QT board

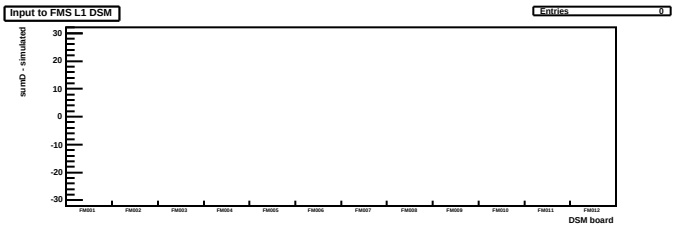

Input to FMS L0 DSM
Entries 7.199995e+07
HT ADC
QT board

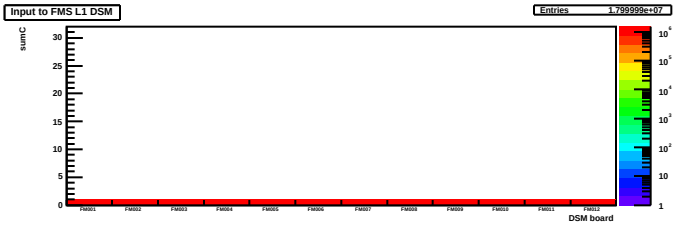

Input to FMS L0 DSM
Entries 1.199999e+07
HT ADC - simulated
QT board

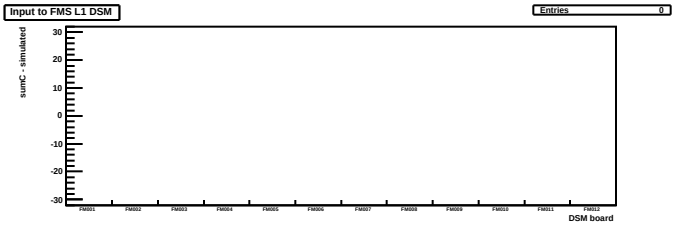

Input to FMS L0 DSM
Entries 7.199995e+07
HT ID
QT board

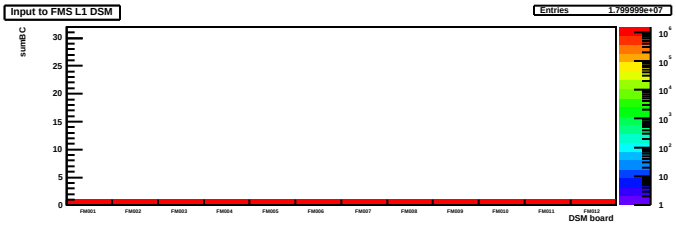

Input to FMS L0 DSM
Entries 1.199999e+07
HT ID - simulated
QT board

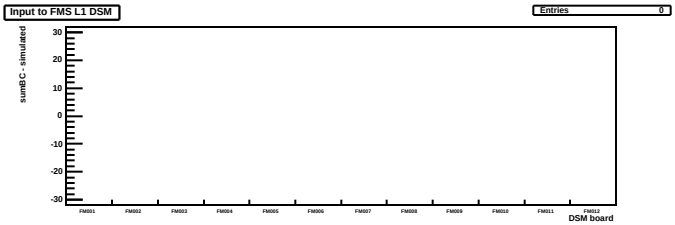

Input to FMS L1 DSM
Entries 1.799999e+07
sumD
DSM board

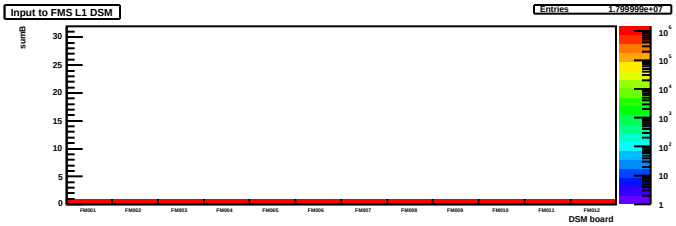

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

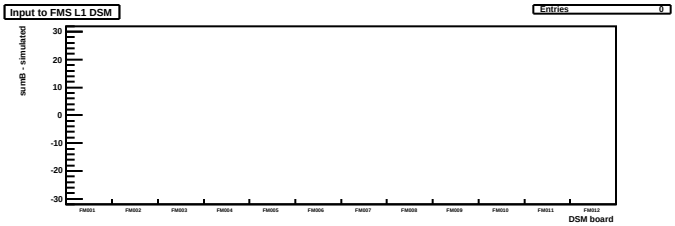

Input to FMS L1 DSM
Entries 1.799999e+07
sumC
DSM board

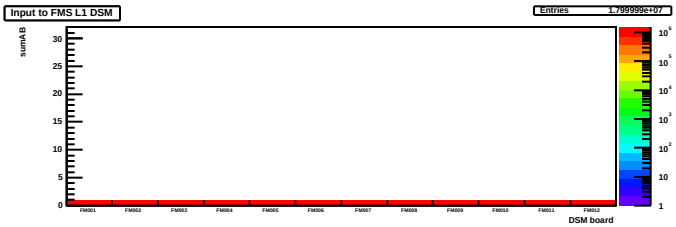

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

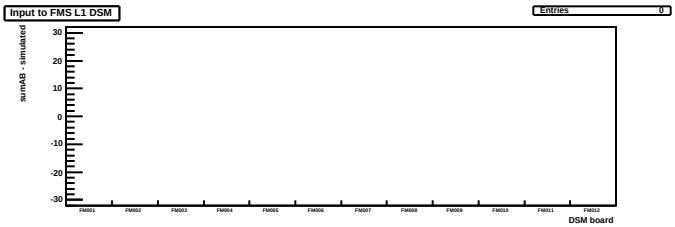

Input to FMS L1 DSM
Entries 1.799999e+07
sumBC
DSM board

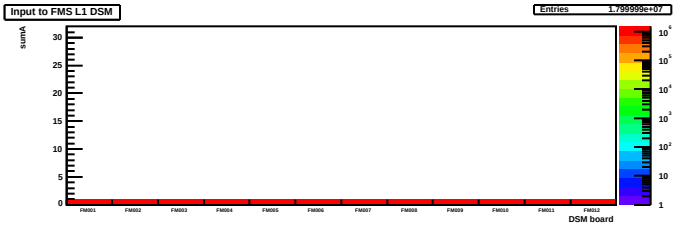

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

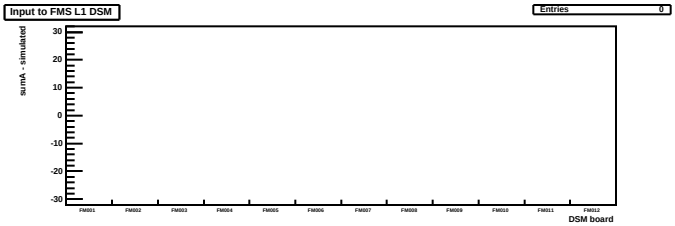

Input to FMS L1 DSM
Entries 1.799999e+07
sumB
DSM board

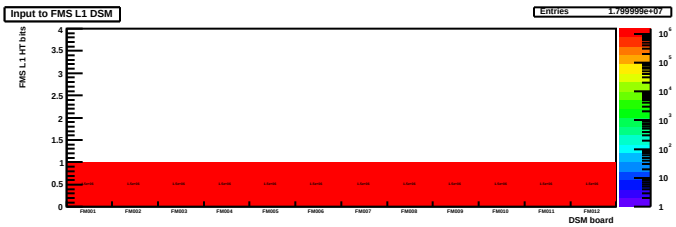

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

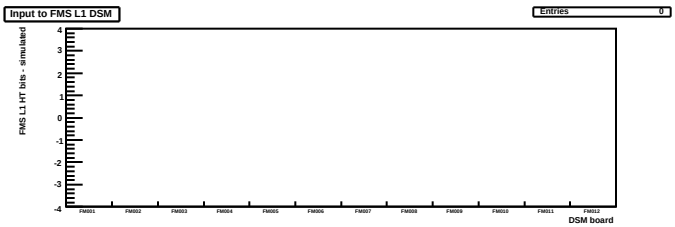

Input to FMS L1 DSM
Entries 1.799999e+07
sumAB
DSM board

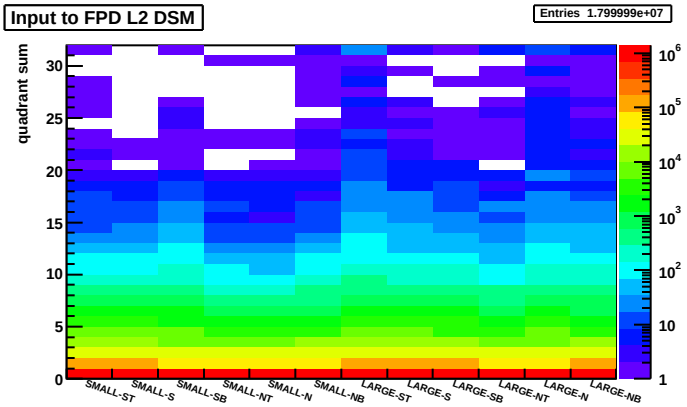

Input to FMS L1 DSM
Entries 0
sumAB - simulated
DSM board

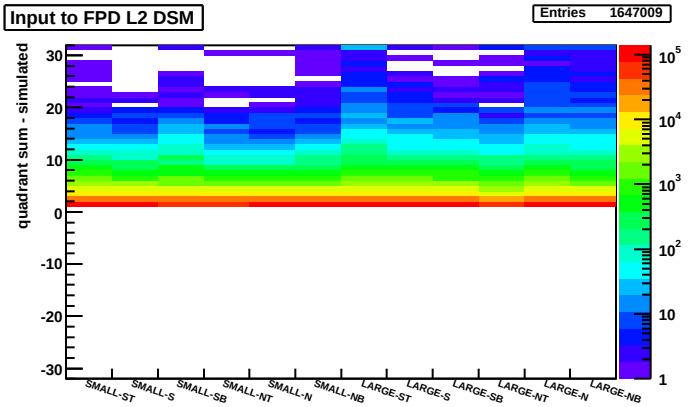

Input to FMS L1 DSM
Entries 1.799999e+07
sumA
DSM board

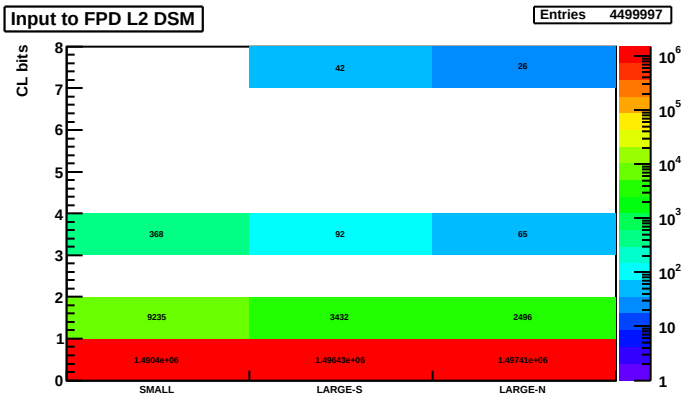

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

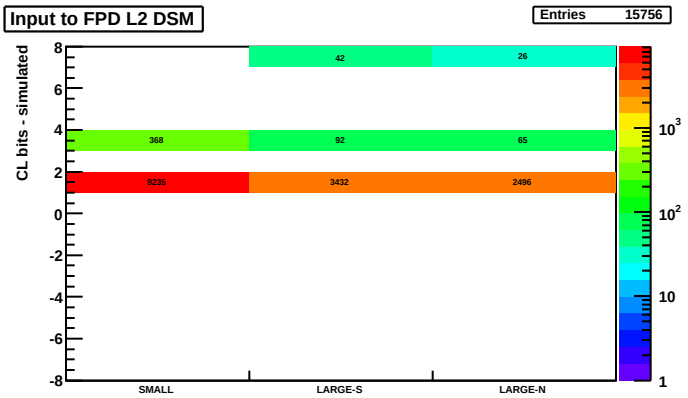

Input to FMS L1 DSM
Entries 1.799999e+07
FMS L1 HT bits
DSM board

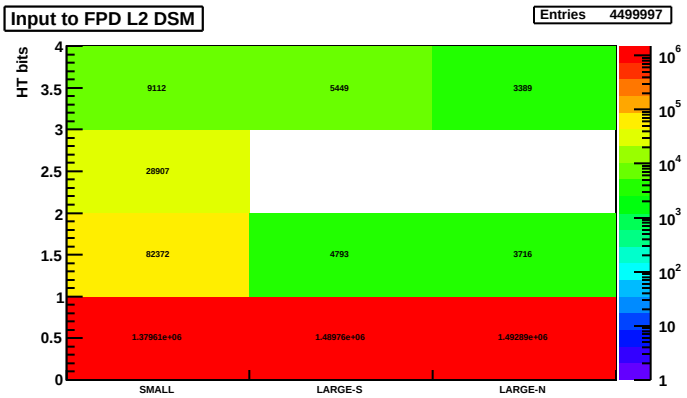

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

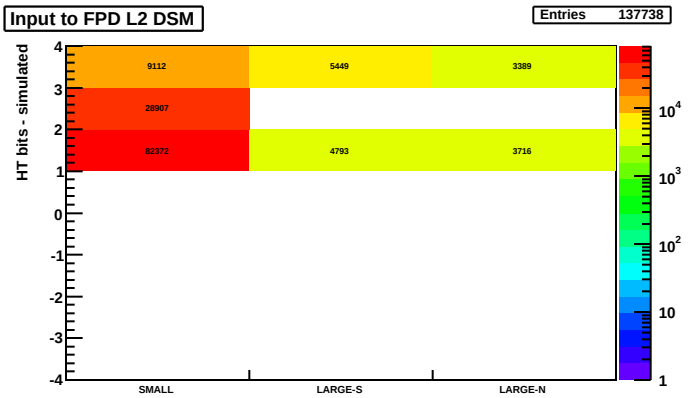

Input to FPD L2 DSM
Entries 1.799999e+07
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

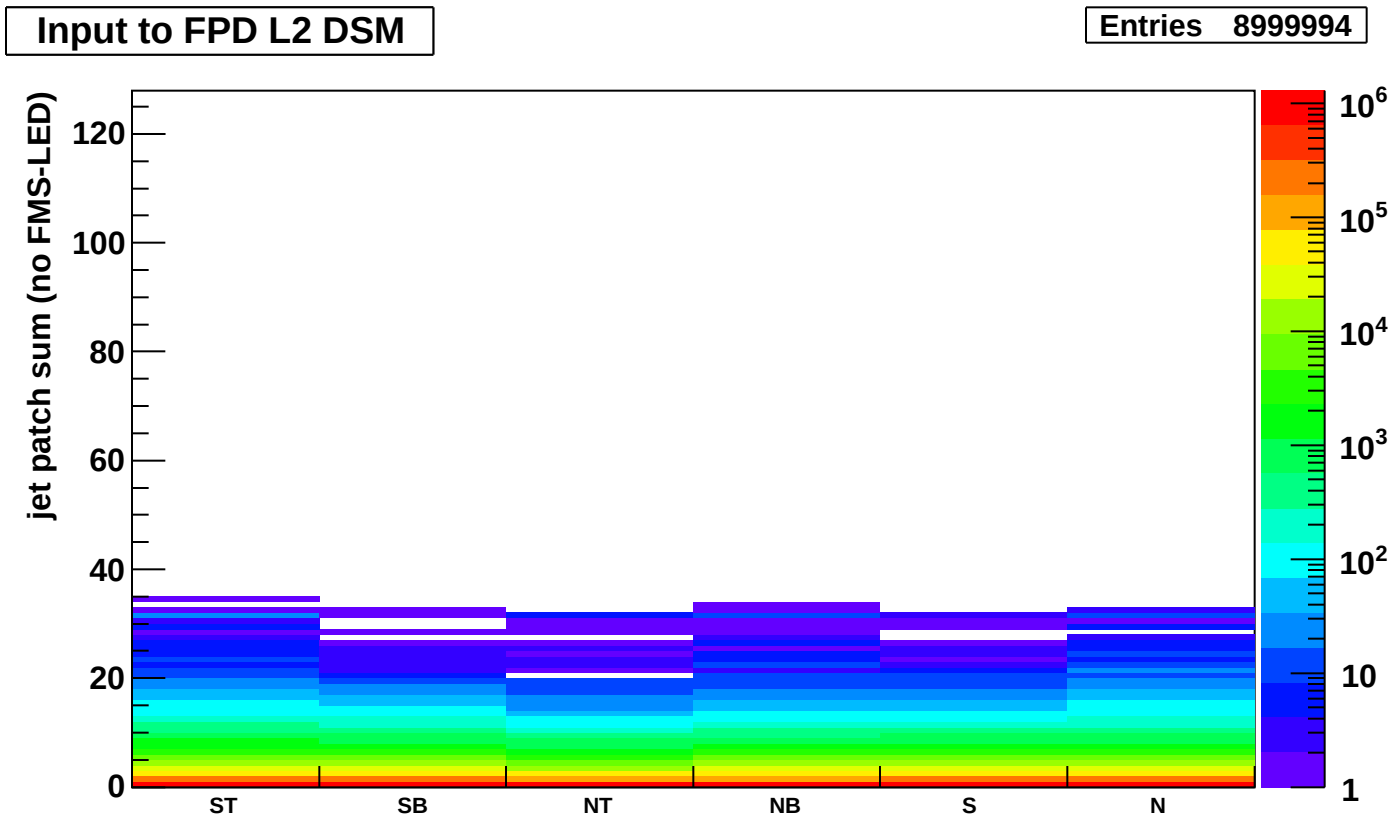

Input to FPD L2 DSM
Entries 1647009
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

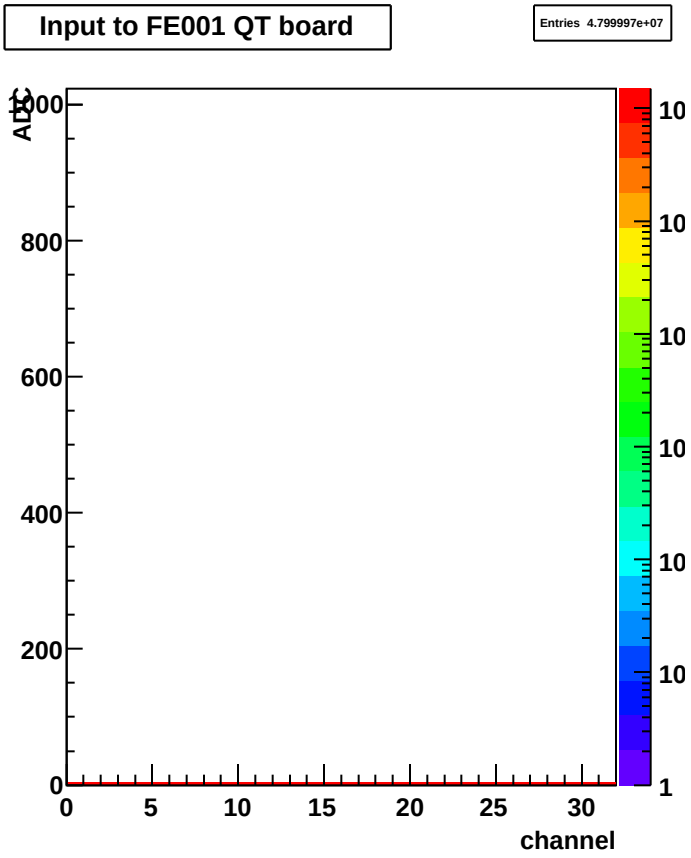

Input to FPD L2 DSM
Entries 4499997
CL bits
42
26
368
92
65
9235
3432
2496
1.4904e+06
1.49643e+06
1.49741e+06
SMALL
LARGE-S
LARGE-N

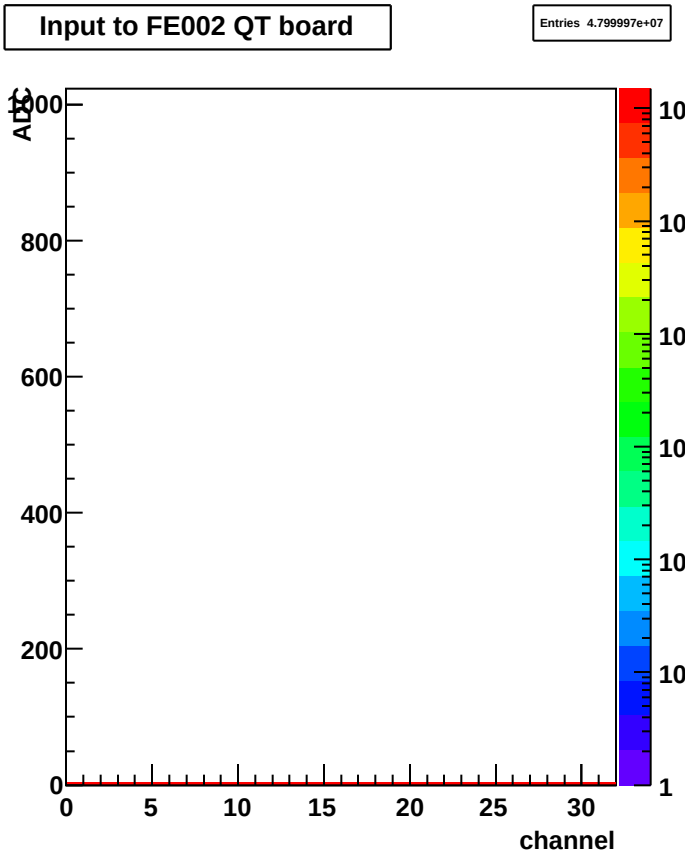

Input to FPD L2 DSM
Entries 15756
CL bits - simulated
42
26
368
92
65
9235
3432
2496
SMALL
LARGE-S
LARGE-N

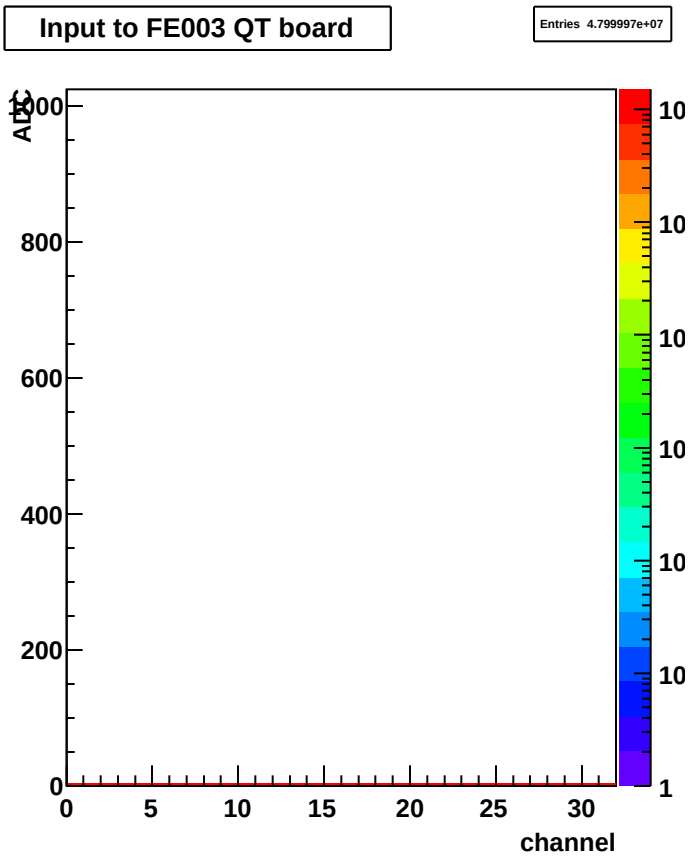

Input to FPD L2 DSM
Entries 4499997
HT bits
9112
5449
3389
28907
82372
4793
3716
1.37961e+06
1.48976e+06
1.49289e+06
SMALL
LARGE-S
LARGE-N

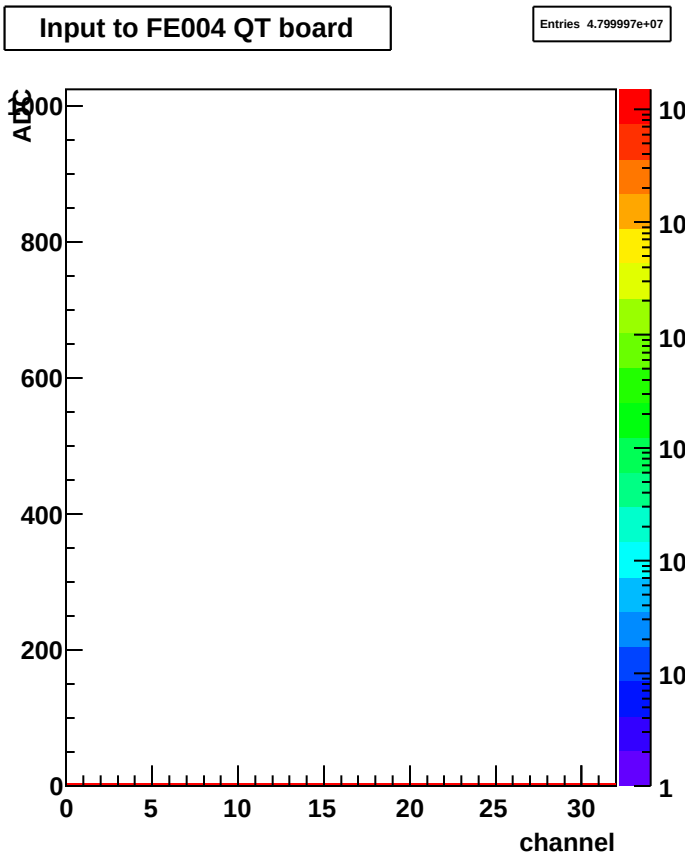

Input to FPD L2 DSM
Entries 137738
HT bits - simulated
9112
5449
3389
28907
82372
4793
3716
SMALL
LARGE-S
LARGE-N

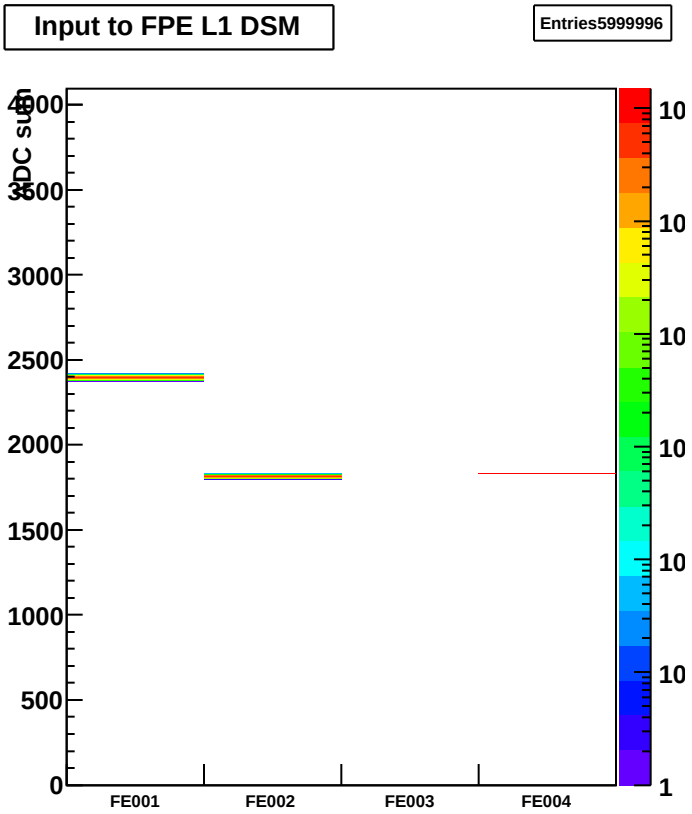

Input to FPD L2 DSM
Entries 8999994
jet patch sum (no FMS-LED)
0
20
40
60
80
100
120
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5
10^6


Input to FE001 QT board
Entries 4.799997e+07
ADC
channel


Input to FE002 QT board
Entries 4.799997e+07
ADC
channel


Input to FE003 QT board
Entries 4.799997e+07
ADC
channel


Input to FE004 QT board
Entries 4.799997e+07
ADC
channel


Input to FPE L1 DSM
Entries5999996
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
10
1

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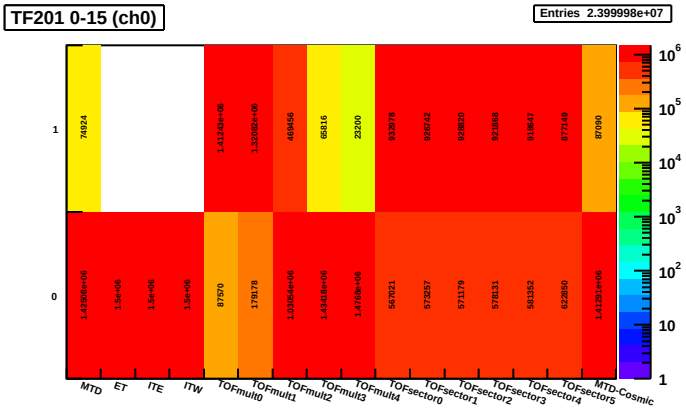

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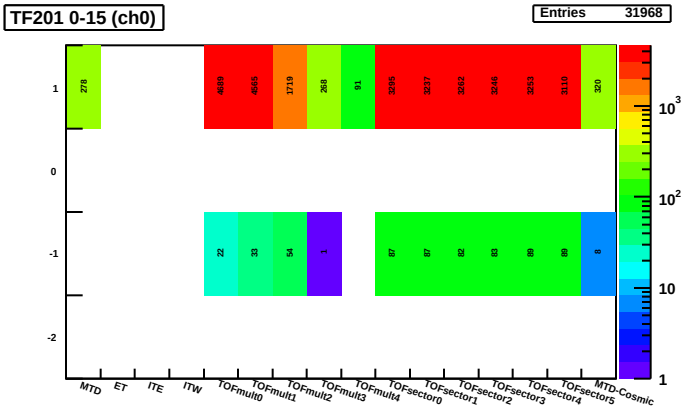

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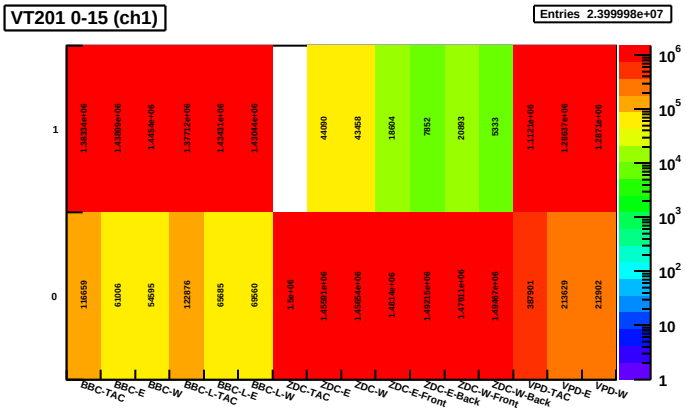

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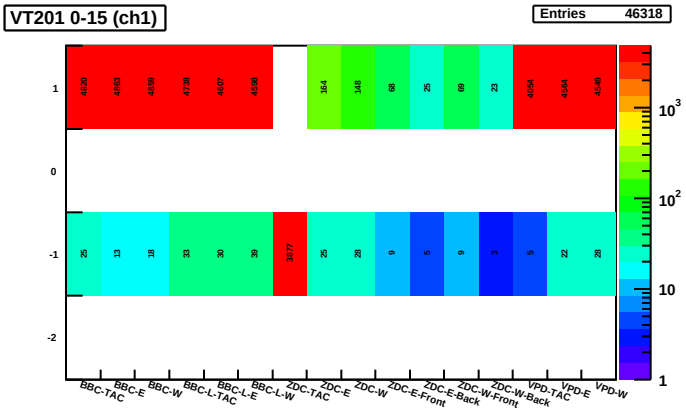

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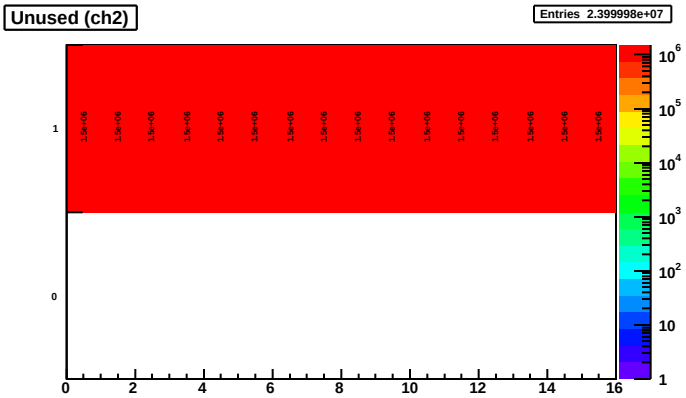

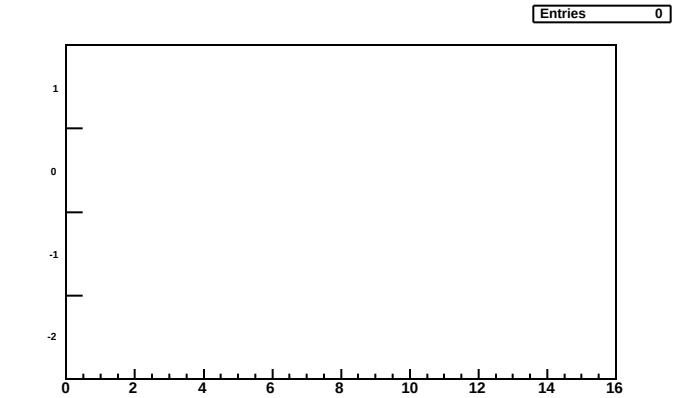

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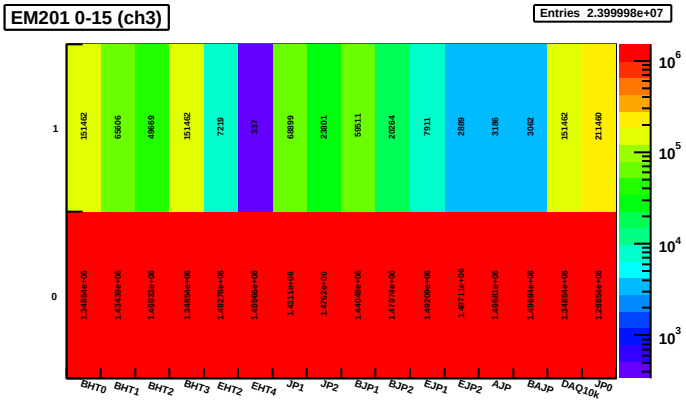

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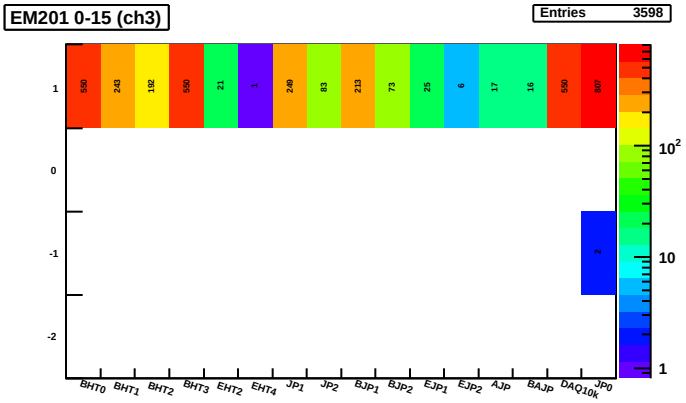
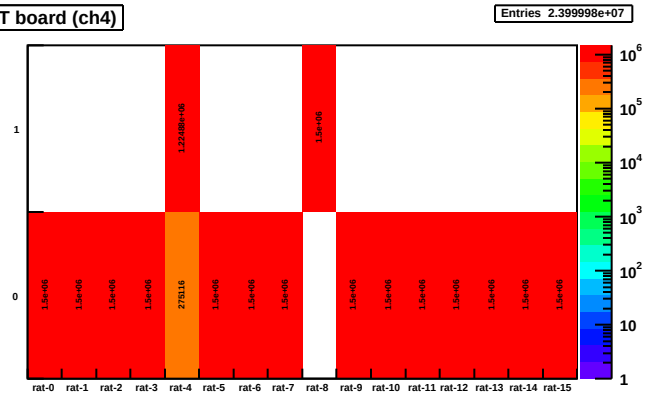
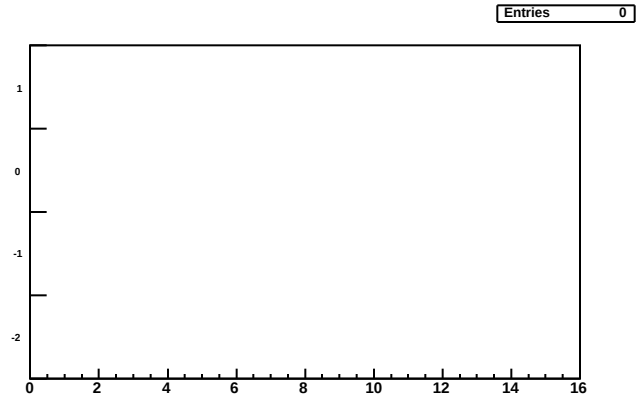


RAT board (ch4)





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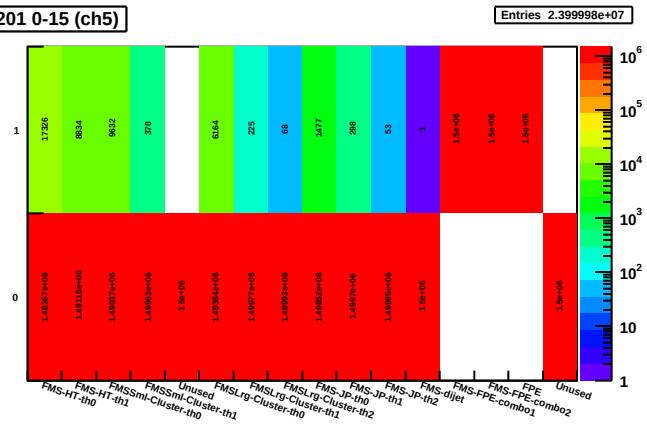

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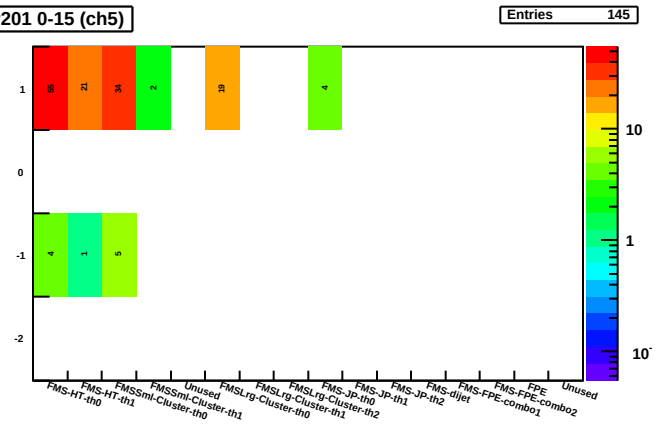

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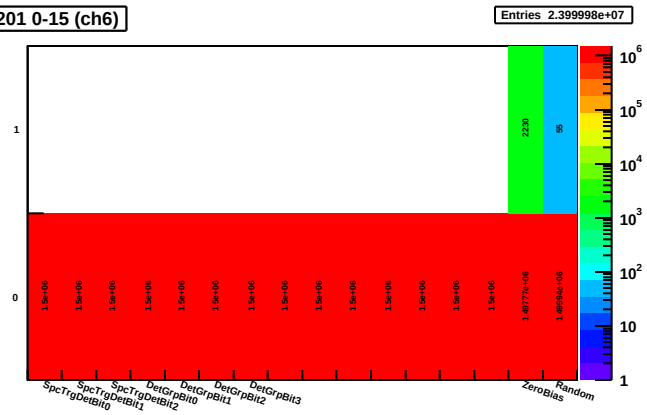

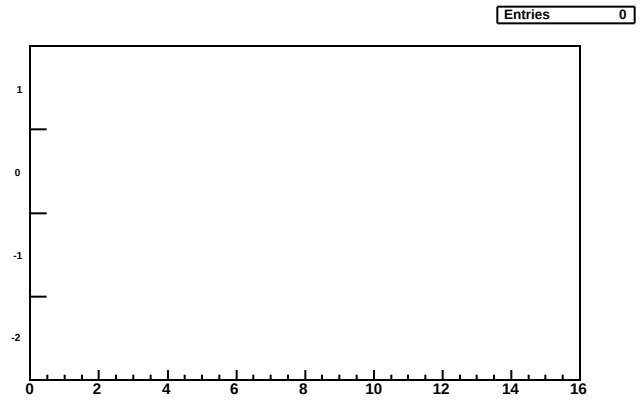
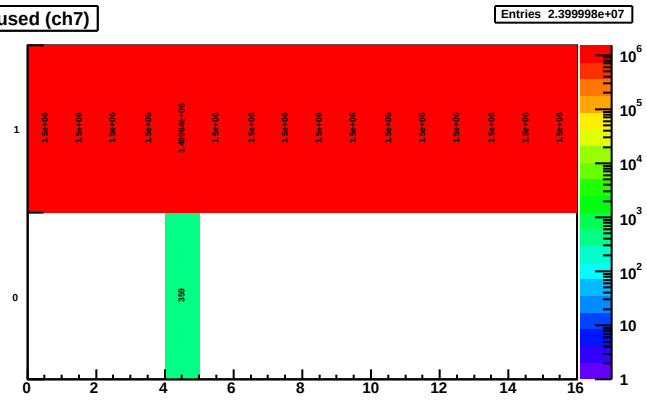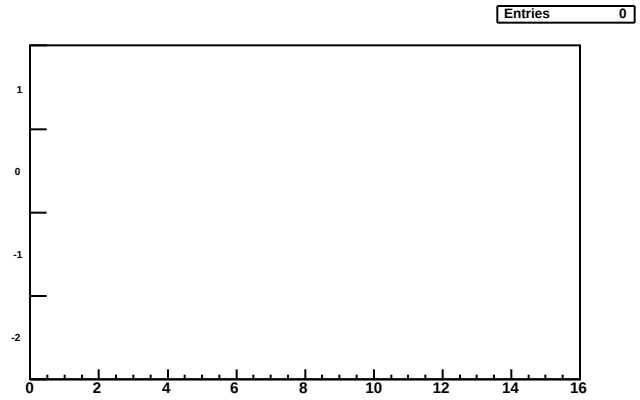
Unused (ch7)