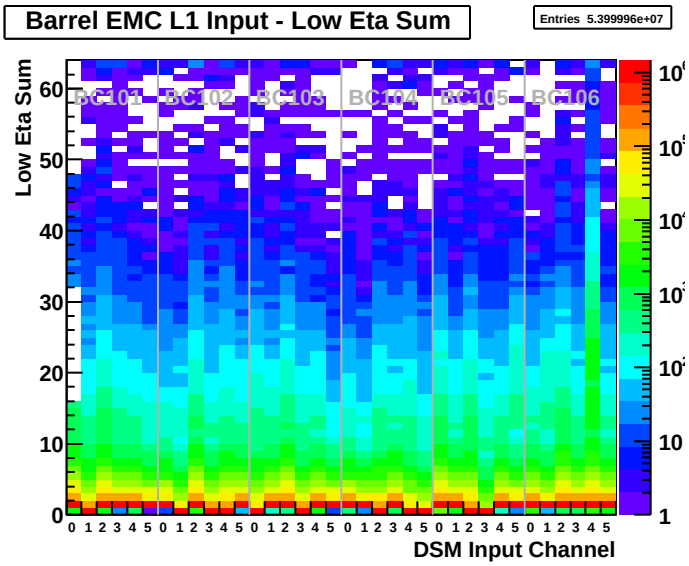
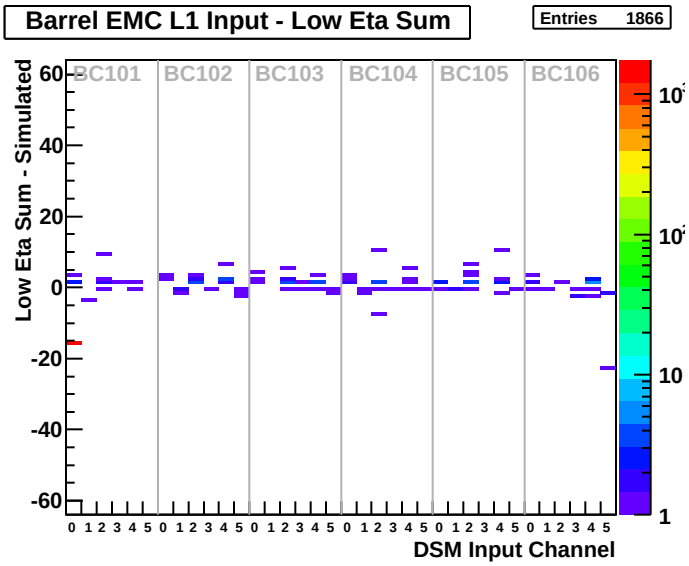
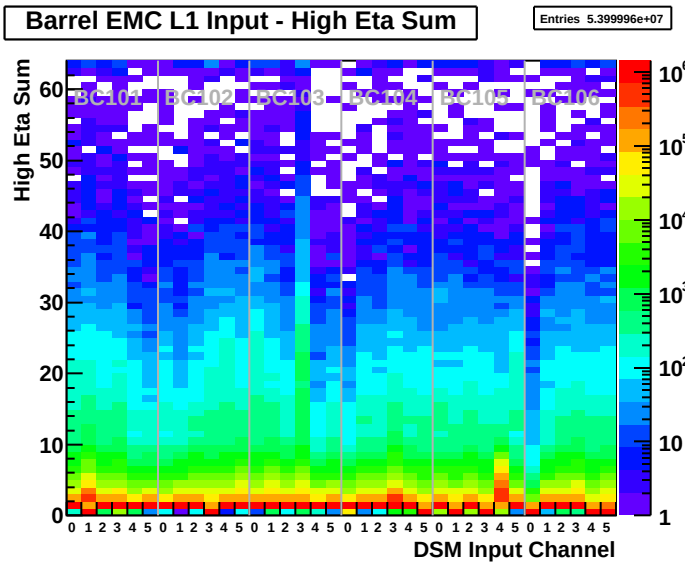
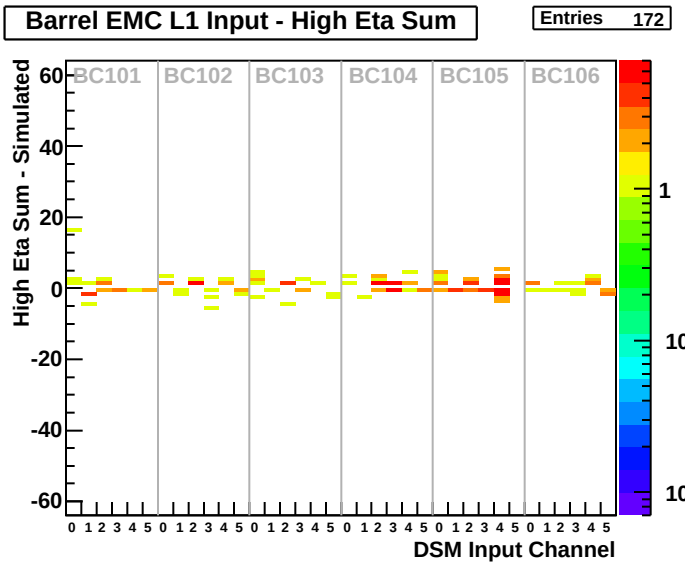
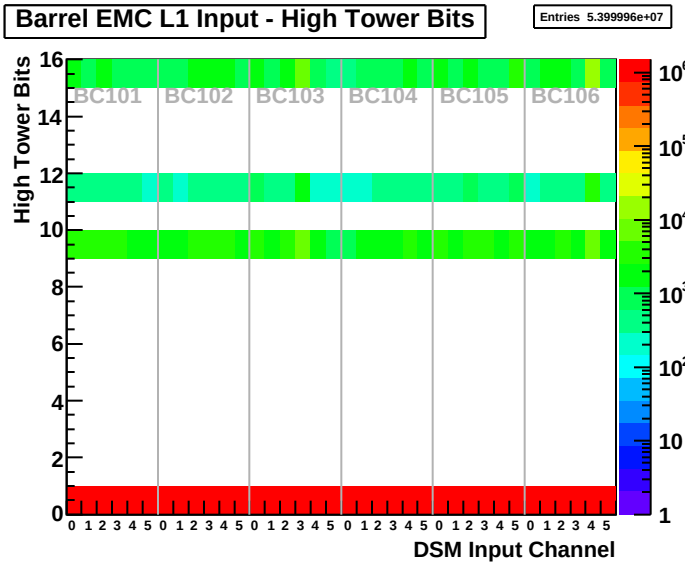
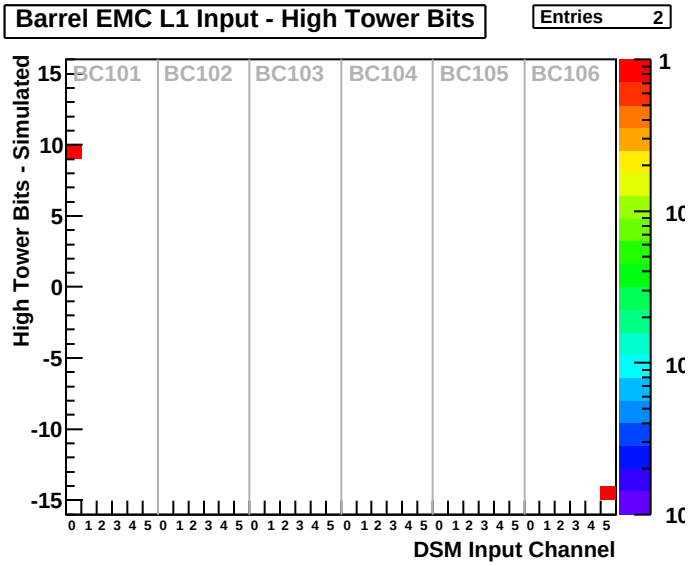

Barrel EMC L1 Input - Low Eta Sum
Entries 5.399996e+07
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

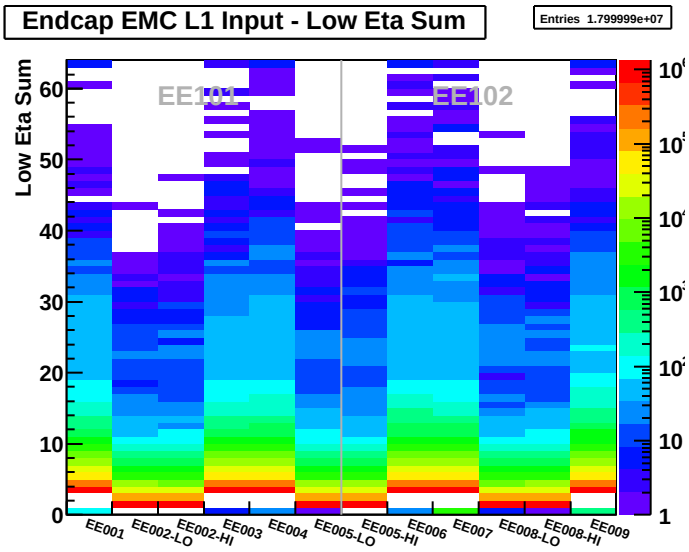

Barrel EMC L1 Input - Low Eta Sum
Entries 1866
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

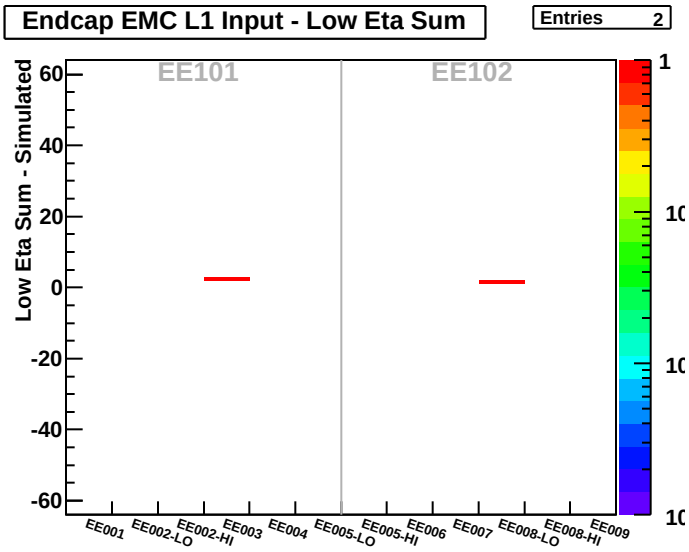

Barrel EMC L1 Input - High Eta Sum
Entries 5.399996e+07
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

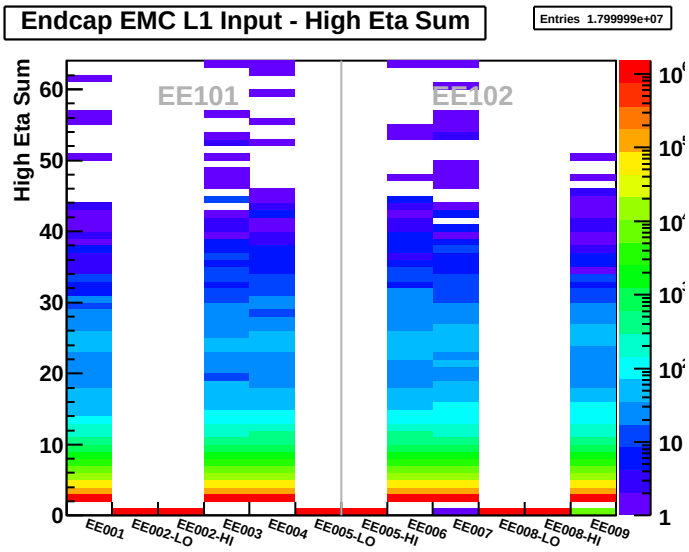

Barrel EMC L1 Input - High Eta Sum
Entries 172
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

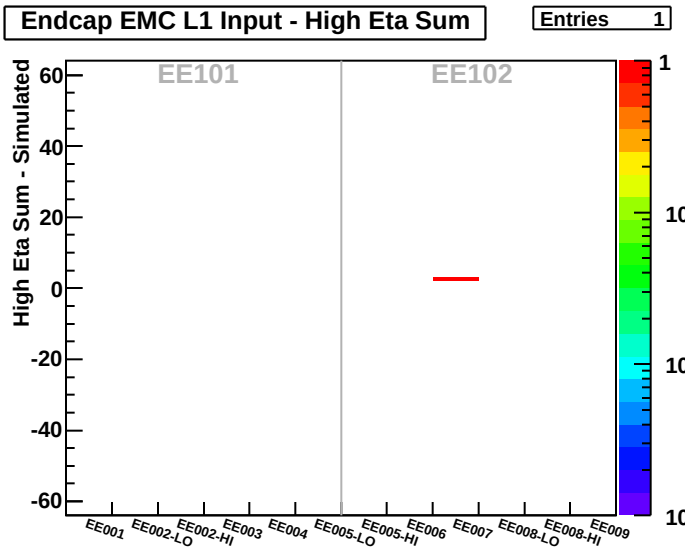

Barrel EMC L1 Input - High Tower Bits
Entries 5.399996e+07
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

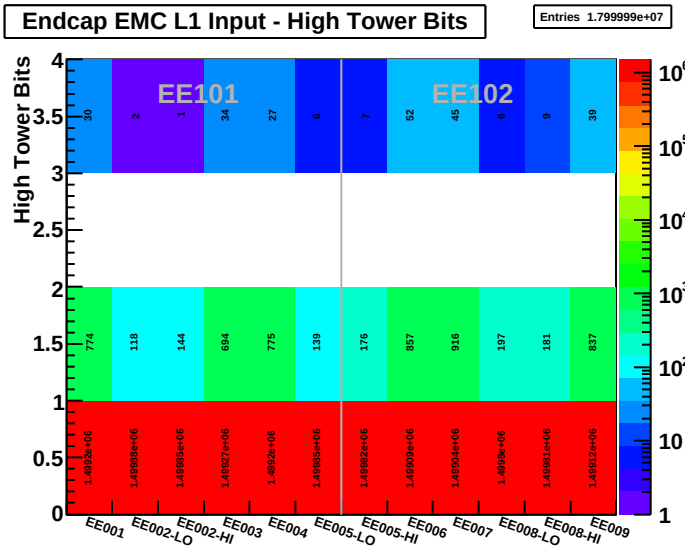

Barrel EMC L1 Input - High Tower Bits
Entries 2
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

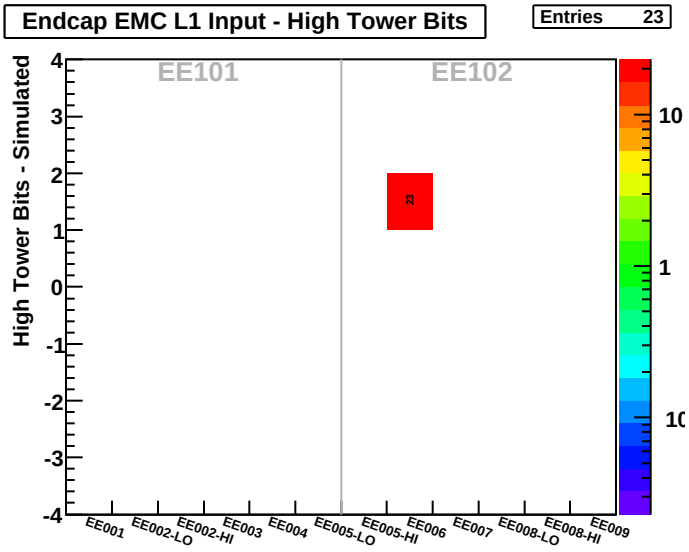

Endcap EMC L1 Input - Low Eta Sum
Entries 1.799999e+07
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

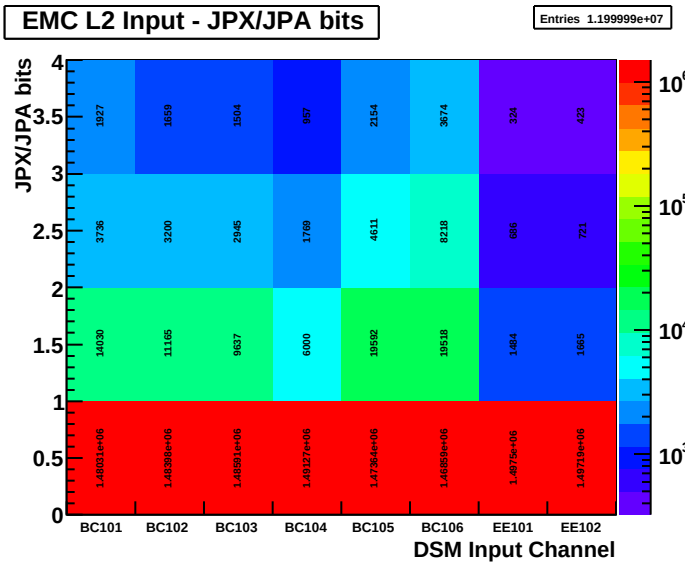

Endcap EMC L1 Input - Low Eta Sum
Entries 2
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

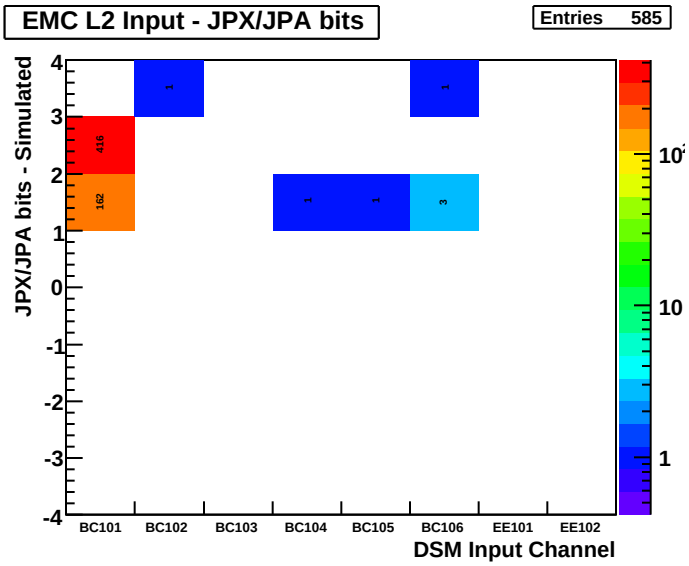

Endcap EMC L1 Input - High Eta Sum
Entries 1.799999e+07
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

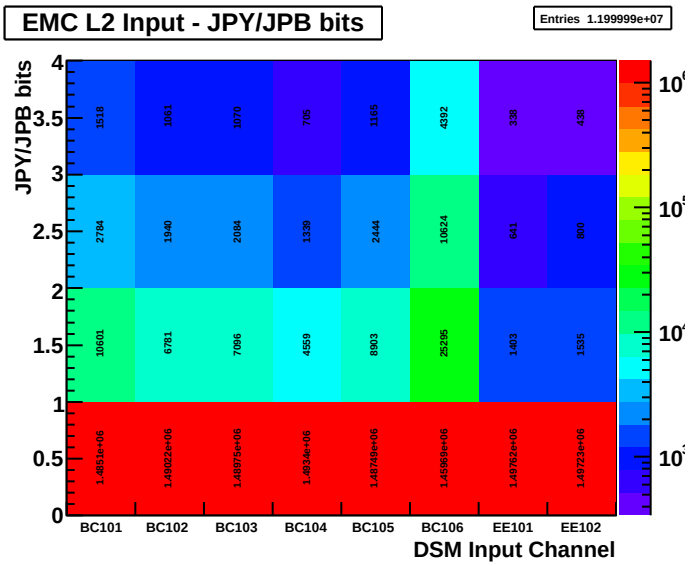

Endcap EMC L1 Input - High Eta Sum
Entries 1
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

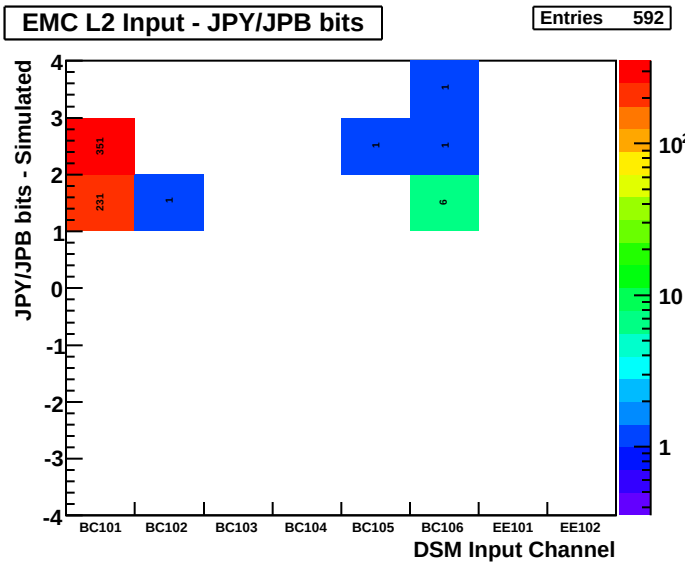

Endcap EMC L1 Input - High Tower Bits
Entries 1.799999e+07
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

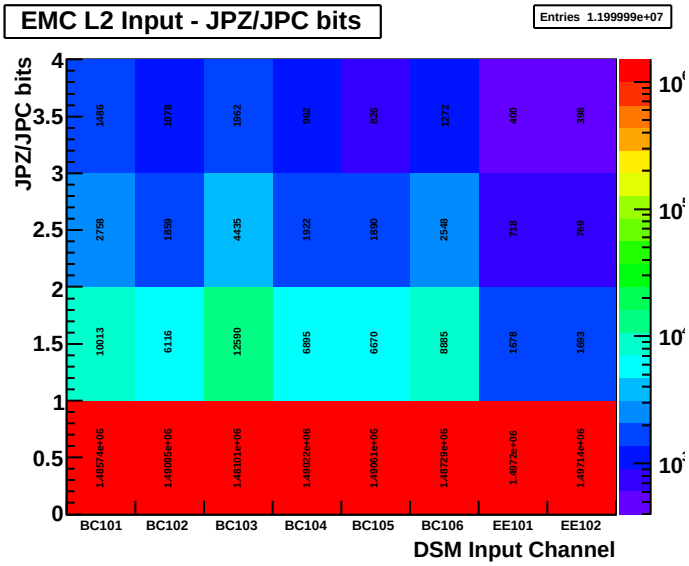

Endcap EMC L1 Input - High Tower Bits
Entries 23
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

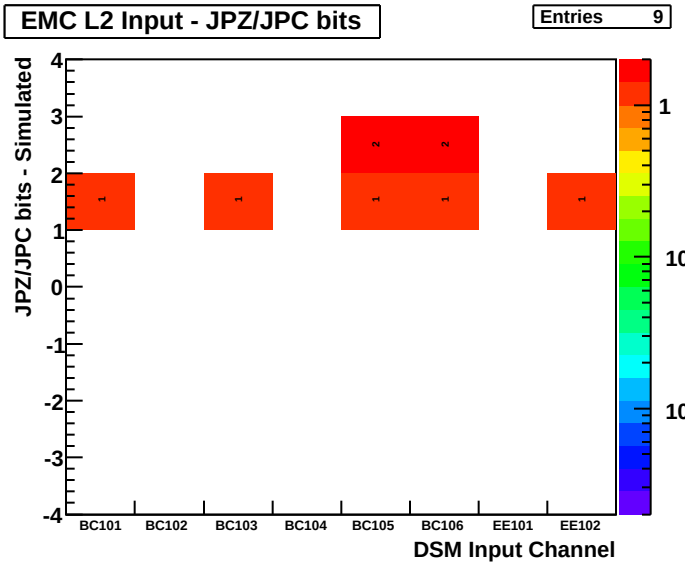

EMC L2 Input - JPX/JPA bits
Entries 1.199999e+07
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1927 1659 1504 957 2154 3674 324 423
3736 3200 2945 1769 4611 8218 686 721
14030 11165 9637 6000 19592 19518 1484 1665
1.48031e+06 1.48338e+06 1.48591e+06 1.49127e+06 1.47934e+06 1.46859e+06 1.4975e+06 1.49719e+06

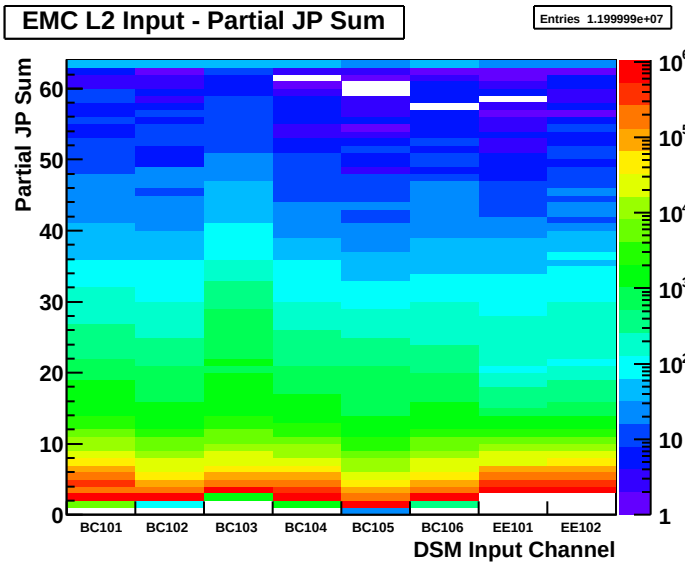

EMC L2 Input - JPX/JPA bits
Entries 585
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
416 1 1
162 1 1 3

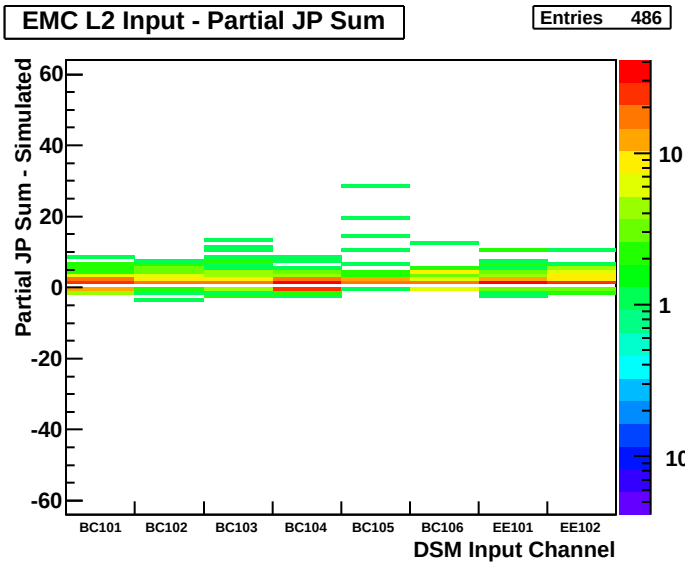

EMC L2 Input - JPY/JPB bits
Entries 1.199999e+07
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1518 1061 1070 705 1165 4392 338 438
2764 1940 2084 1339 2444 10624 641 800
10601 6781 7096 4559 8903 25295 1403 1535
1.4851e+06 1.49022e+06 1.48975e+06 1.4934e+06 1.48749e+06 1.45959e+06 1.49782e+06 1.49723e+06

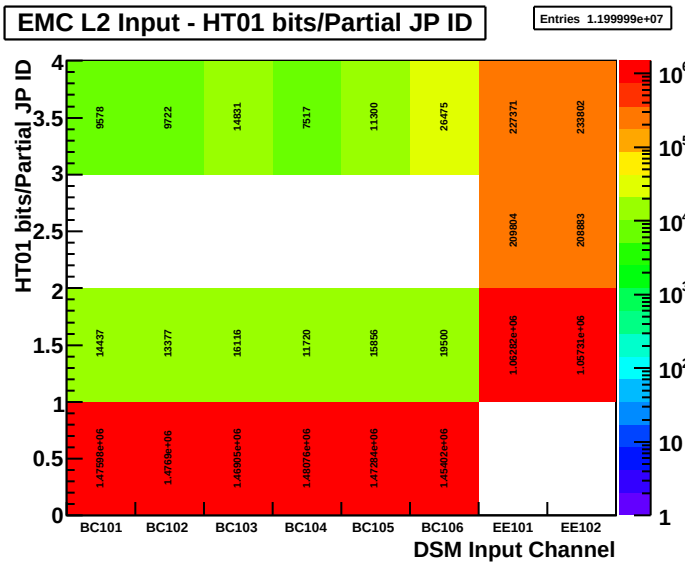

EMC L2 Input - JPY/JPB bits
Entries 592
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1 1
351 1 1
231 1 6

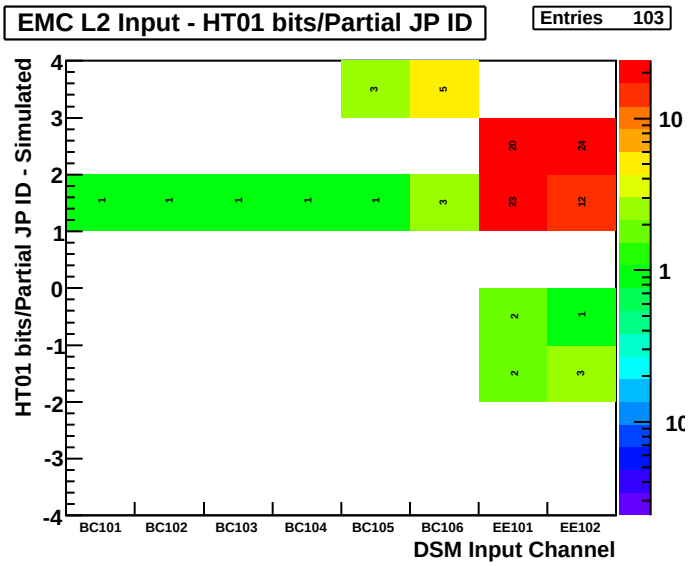

EMC L2 Input - JPZ/JPC bits
Entries 1.199999e+07
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1486 1078 1962 962 826 1272 400 388
2758 1059 4435 1922 1890 2548 718 769
10013 6116 12590 6895 6670 8885 1678 1693
1.48574e+06 1.49095e+06 1.48101e+06 1.49022e+06 1.49061e+06 1.48729e+06 1.4872e+06 1.49714e+06

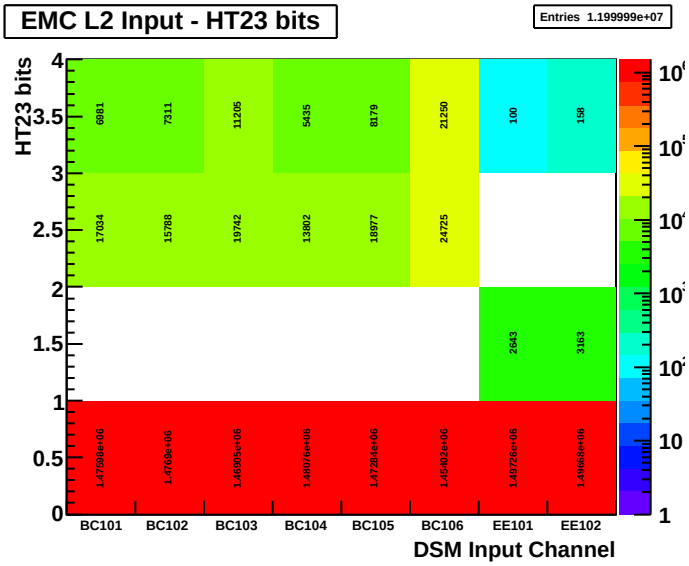

EMC L2 Input - JPZ/JPC bits
Entries 9
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1 1 1
1 1 2 2
1

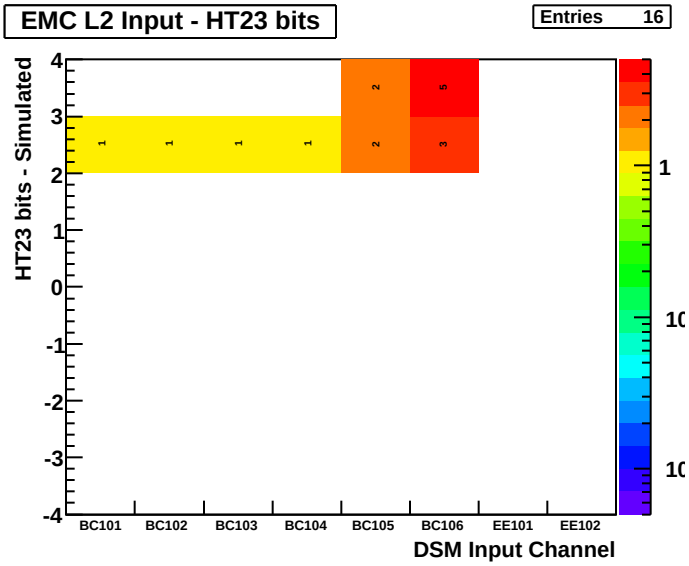

EMC L2 Input - Partial JP Sum
Entries 1.199999e+07
Partial JP Sum
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

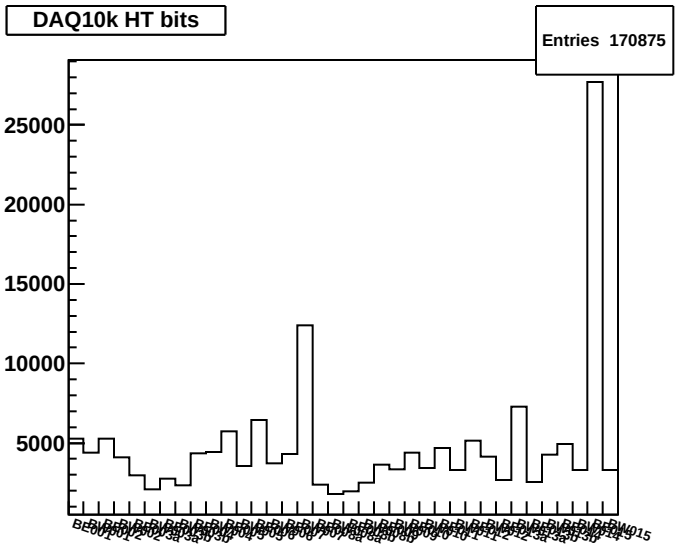

EMC L2 Input - Partial JP Sum
Entries 486
Partial JP Sum - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

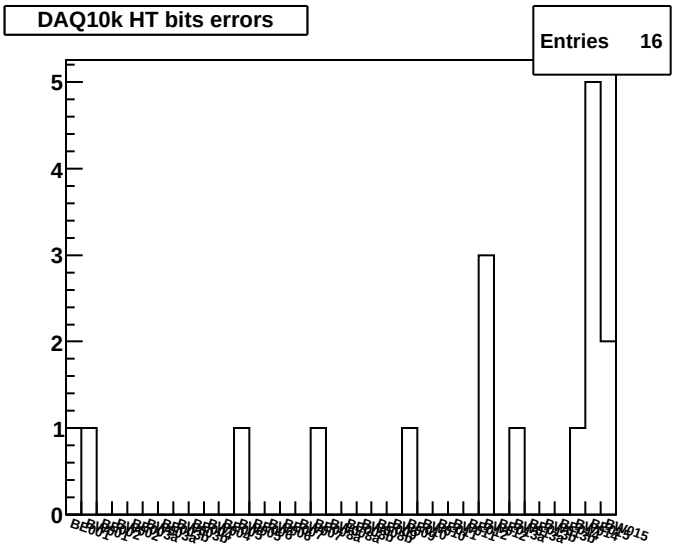

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1.199999e+07
HT01 bits/Partial JP ID
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

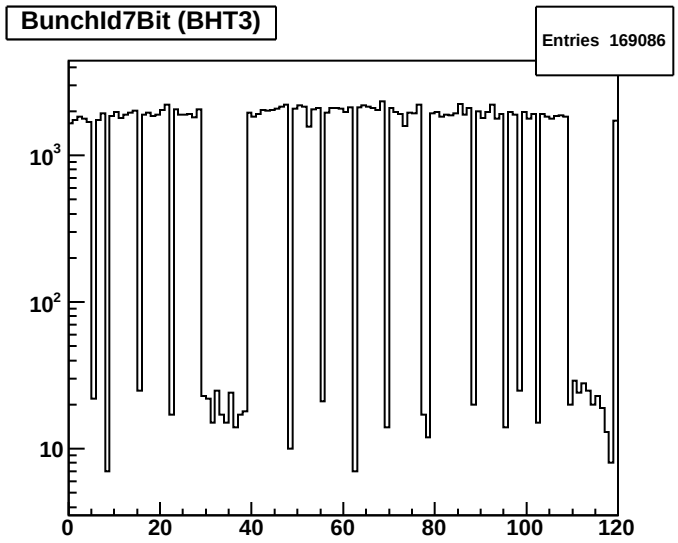

EMC L2 Input - HT01 bits/Partial JP ID
Entries 103
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

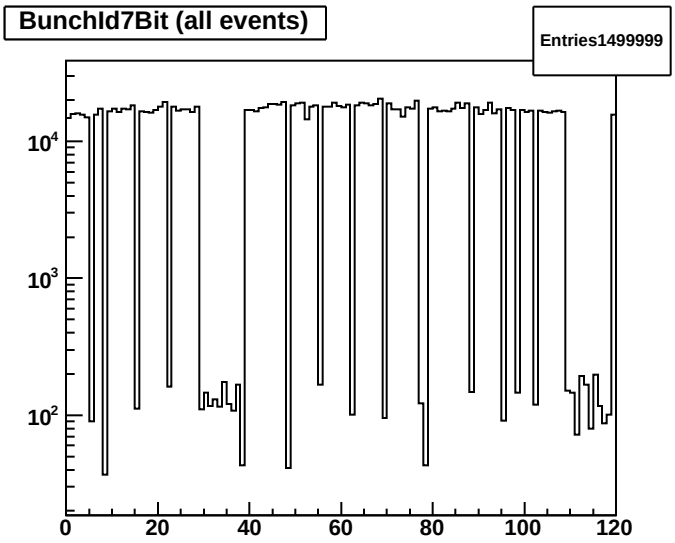

EMC L2 Input - HT23 bits
Entries 1.199999e+07
HT23 bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

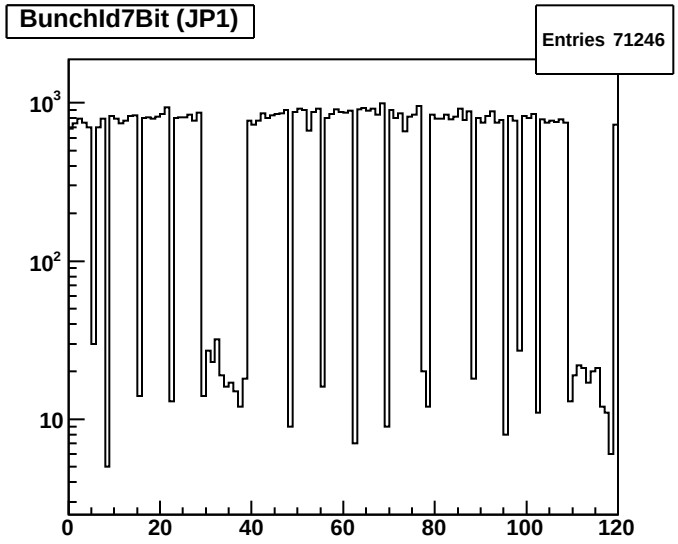

EMC L2 Input - HT23 bits
Entries 16
HT23 bits - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

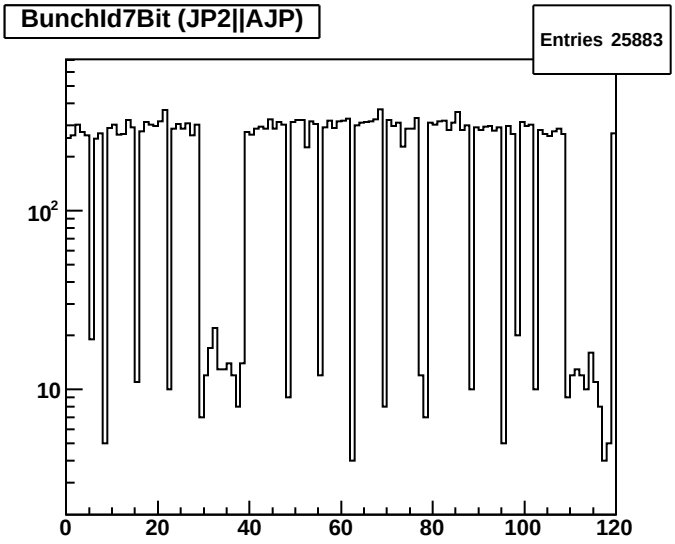

DAQ10k HT bits
Entries 170875
25000
20000
15000
10000
5000

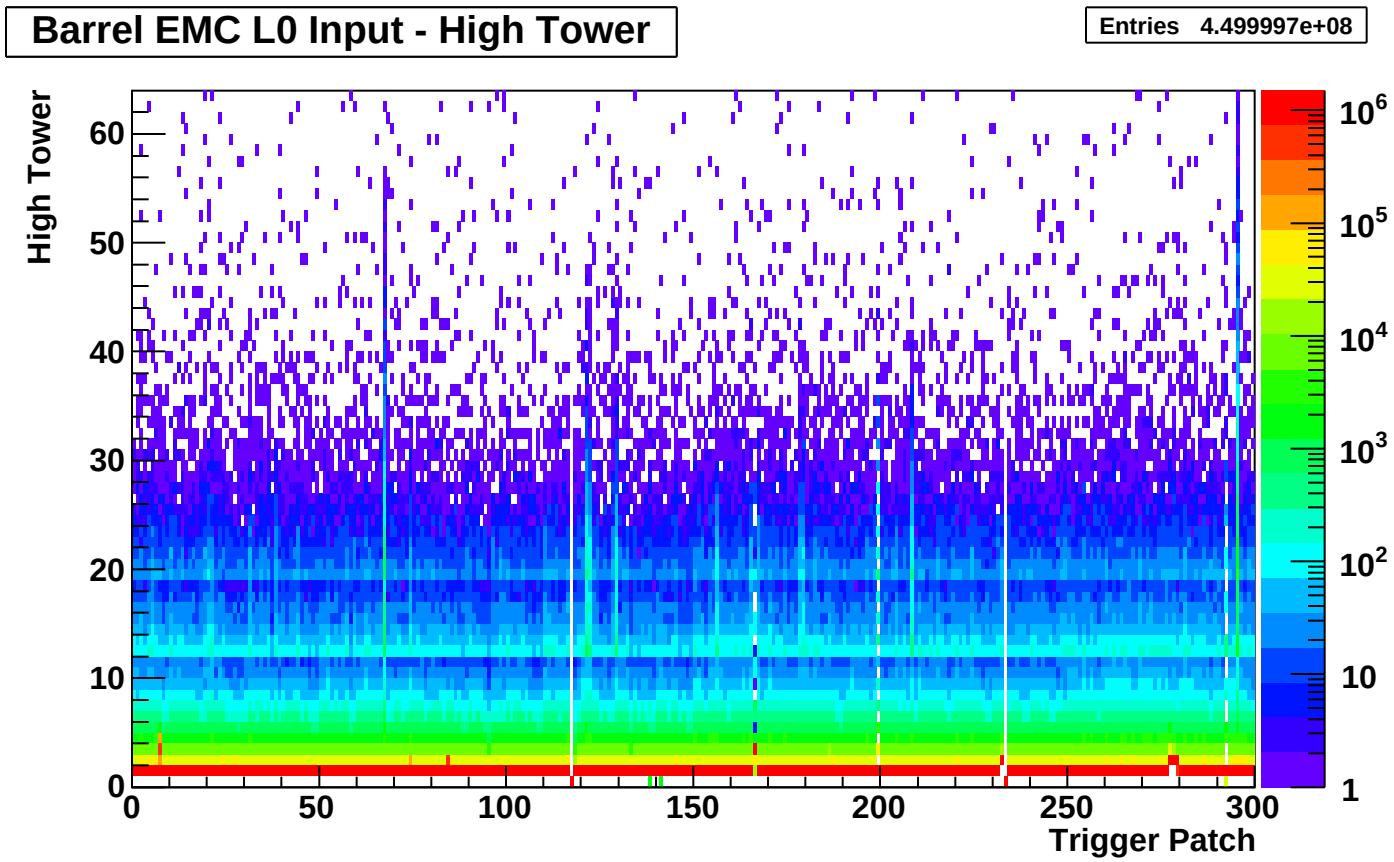

DAQ10k HT bits errors
Entries 16
5
4
3
2
1
0

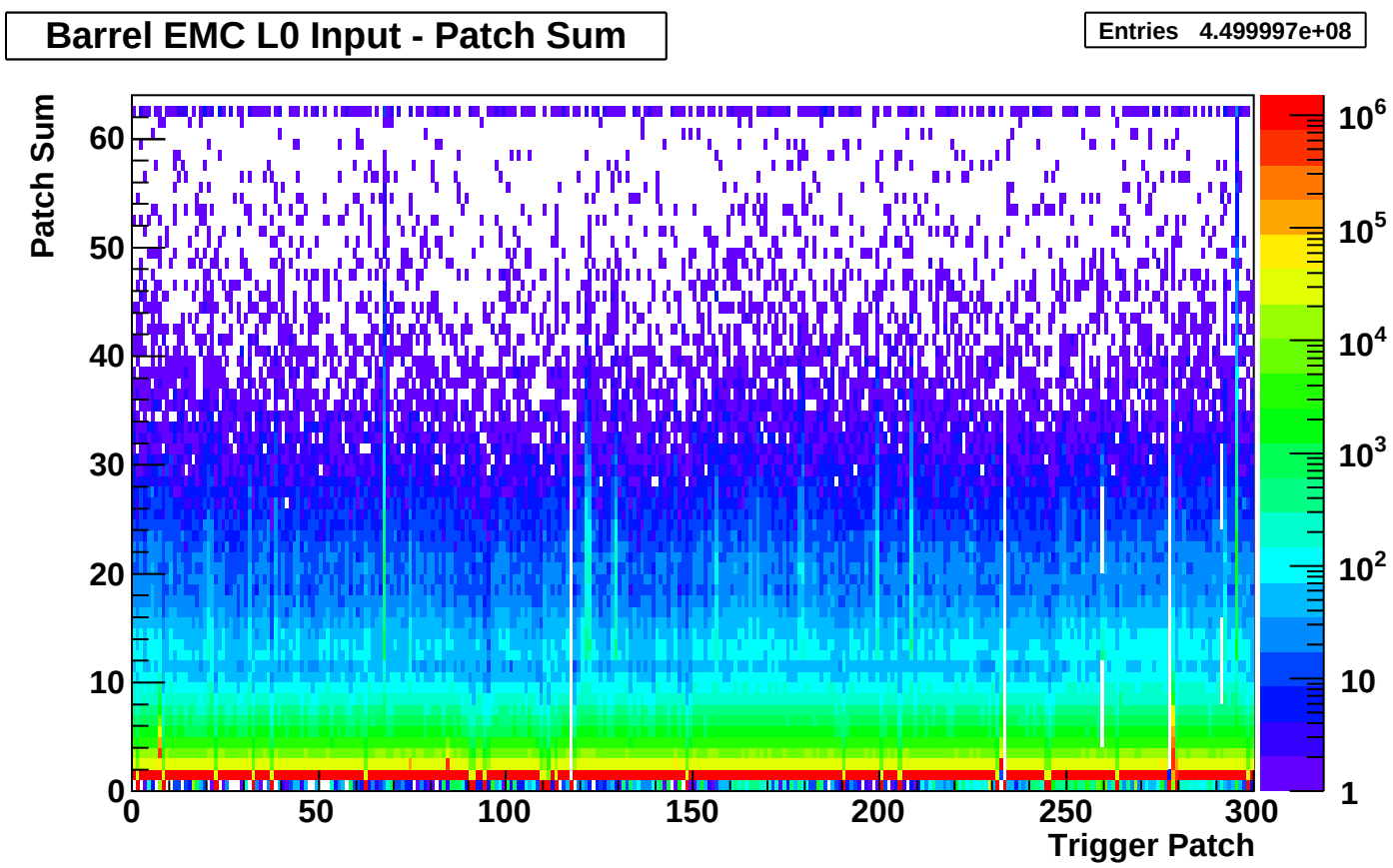

BunchId7Bit (BHT3)
Entries 169086
10^3
10^2
10
0
20
40
60
80
100
120

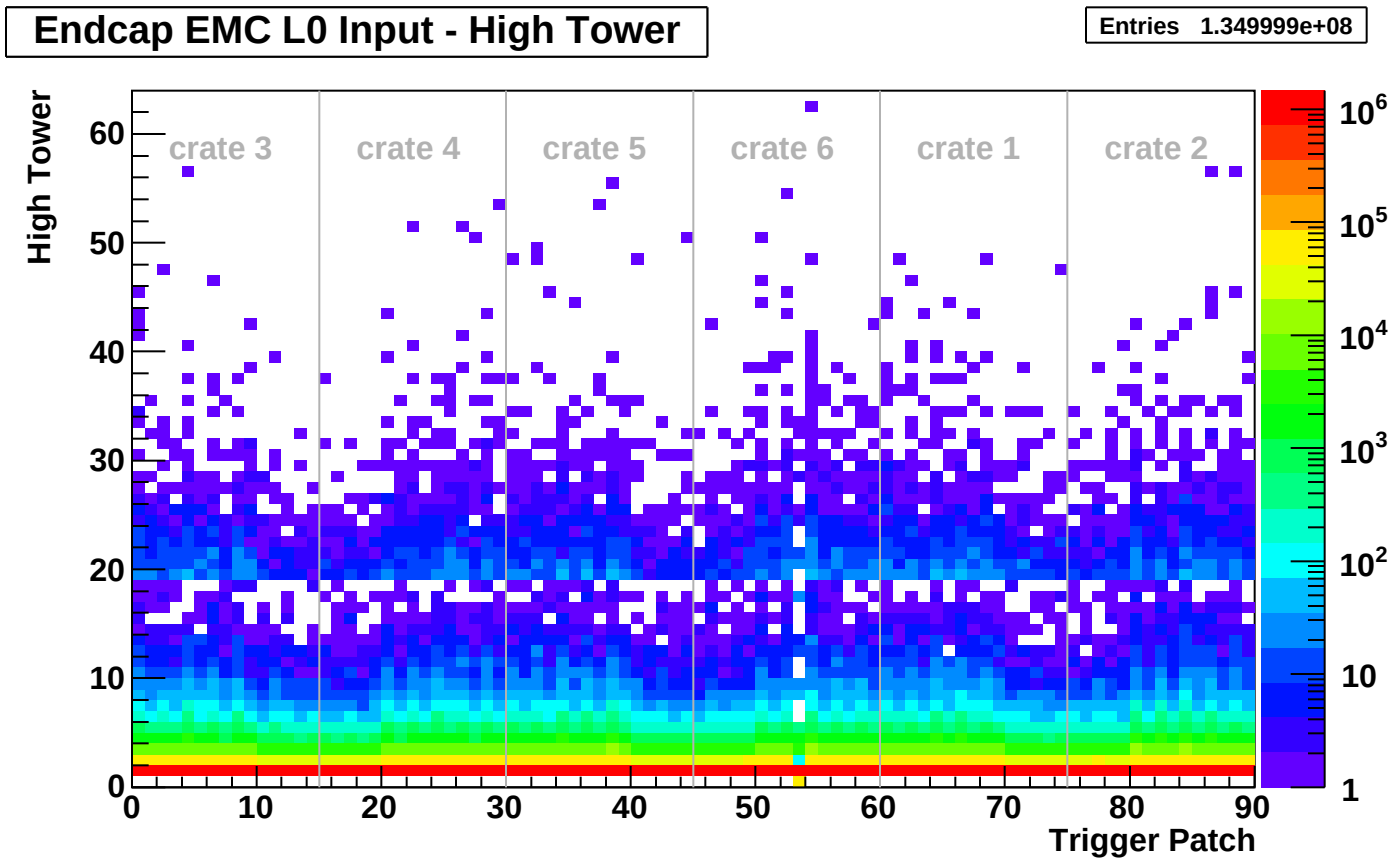

BunchId7Bit (all events)
Entries1499999
10^4
10^3
10^2
0
20
40
60
80
100
120

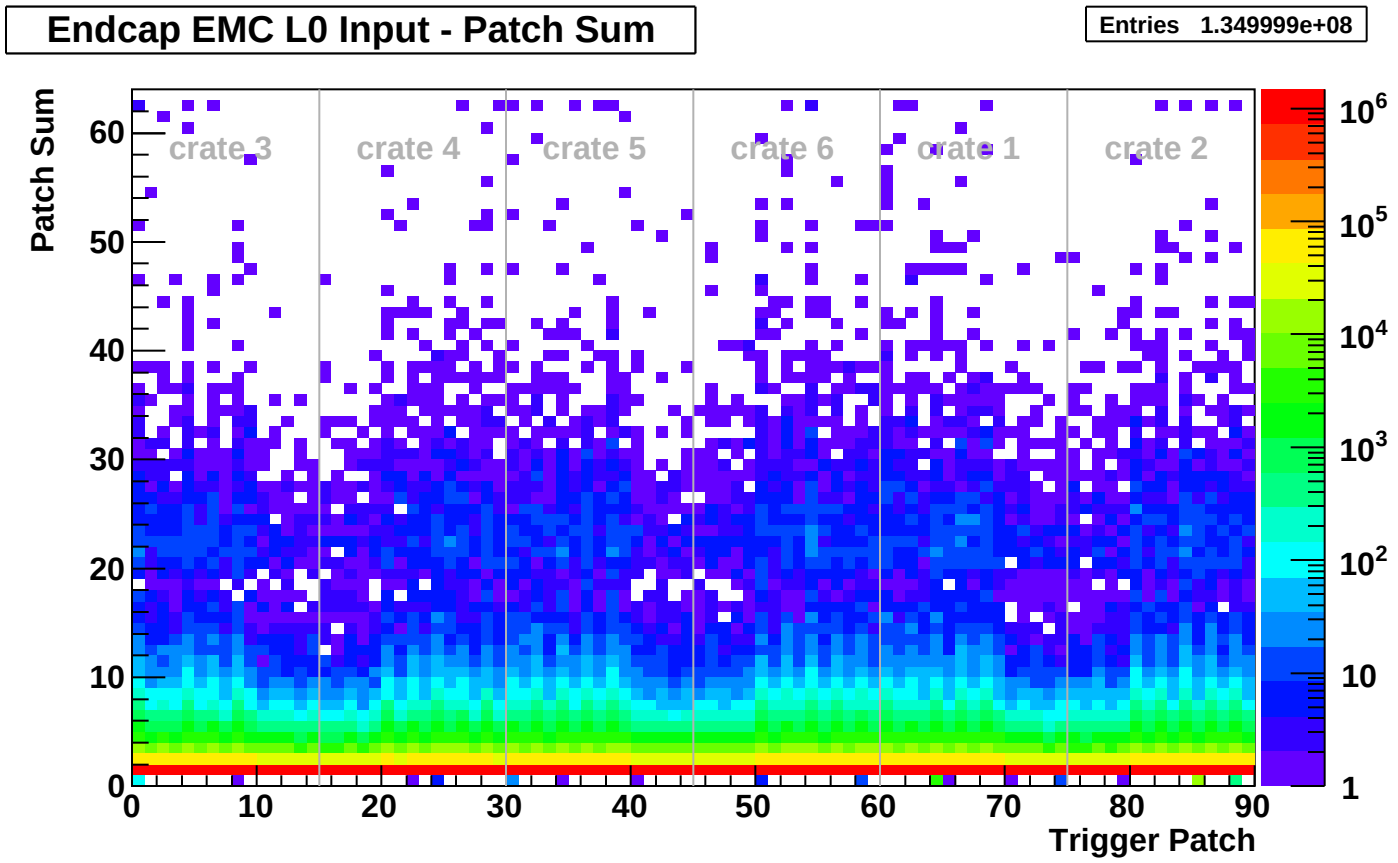

BunchId7Bit (JP1)
Entries 71246
10^3
10^2
10
0
20
40
60
80
100
120

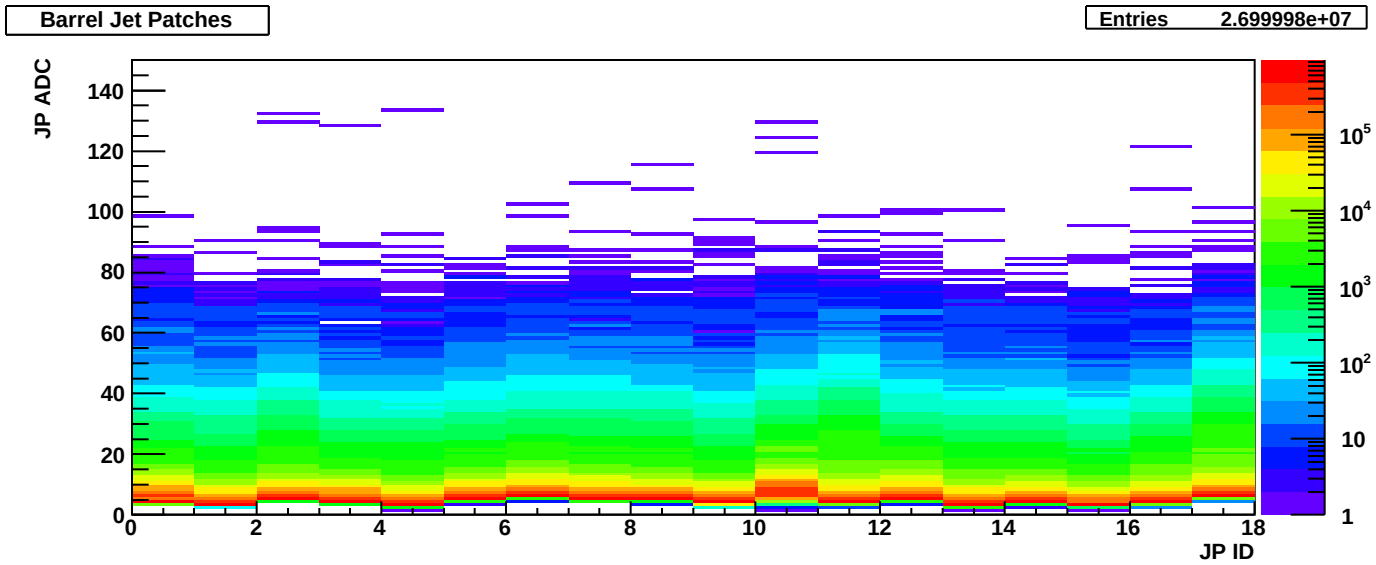

BunchId7Bit (JP2||AJP)
Entries 25883
10^2
10
0
20
40
60
80
100
120

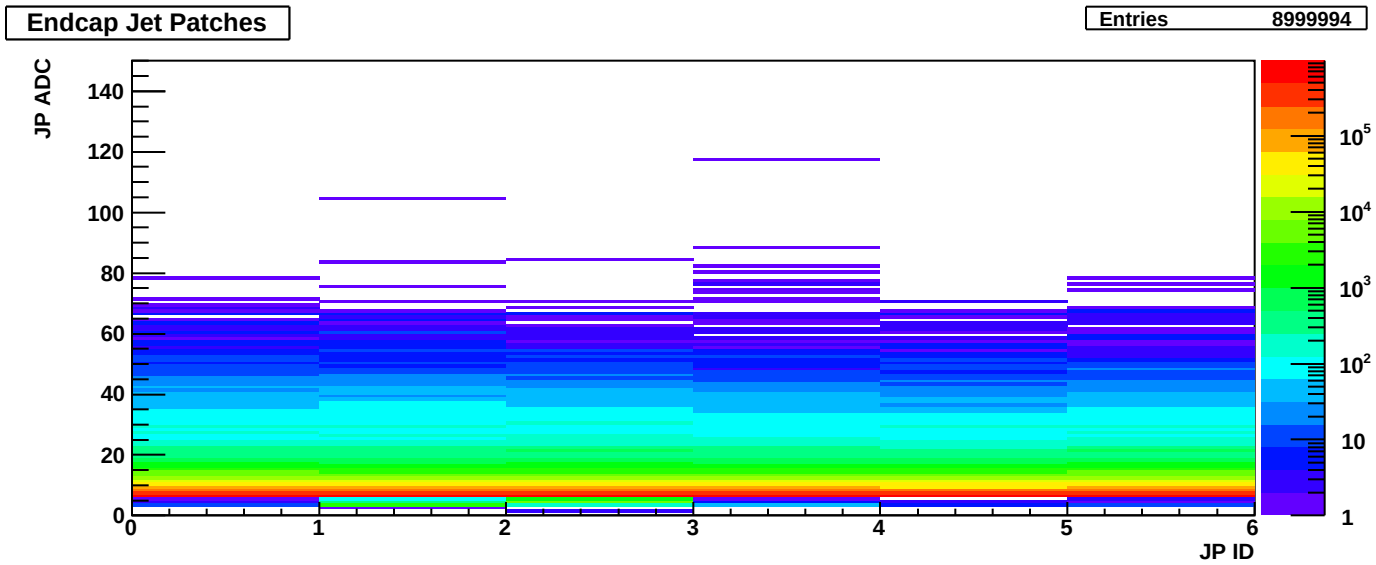

Barrel EMC L0 Input - High Tower
Entries 4.499997e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

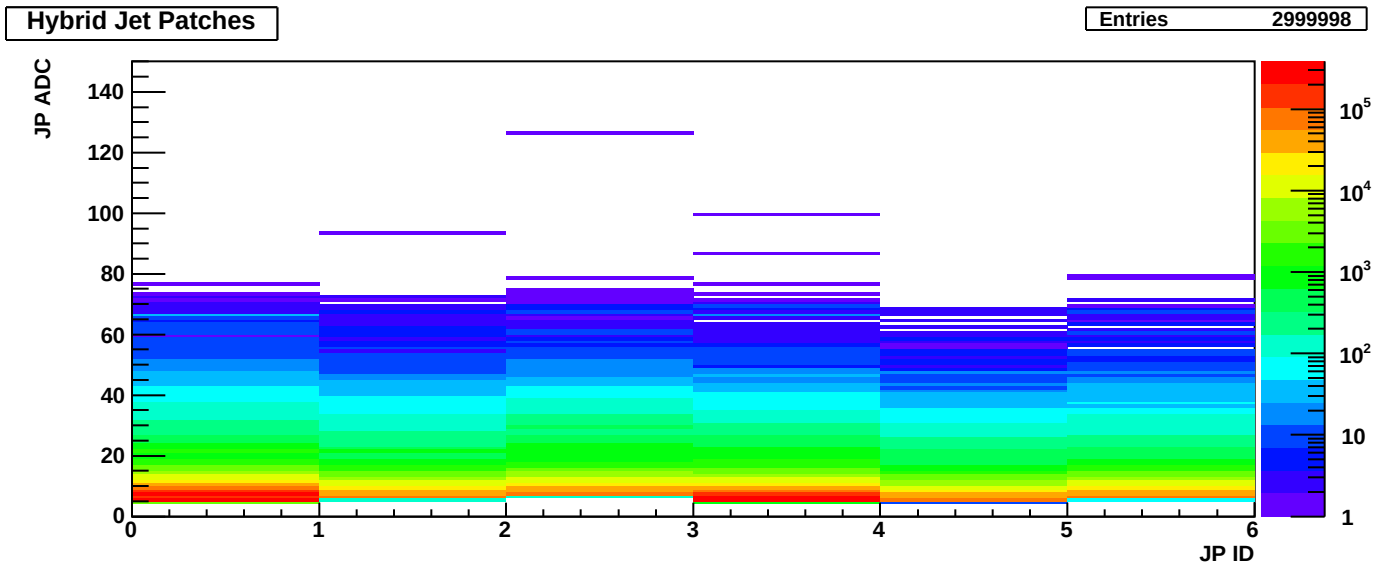

Barrel EMC L0 Input - Patch Sum
Entries 4.499997e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

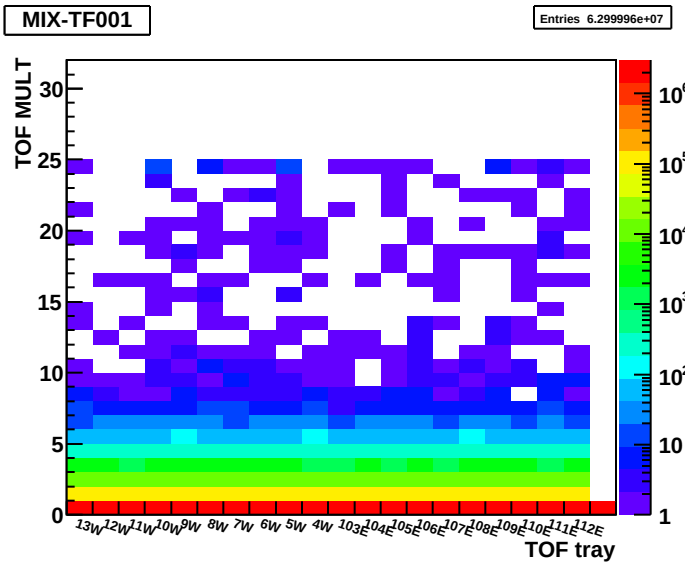

Endcap EMC L0 Input - High Tower
Entries 1.349999e+08
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

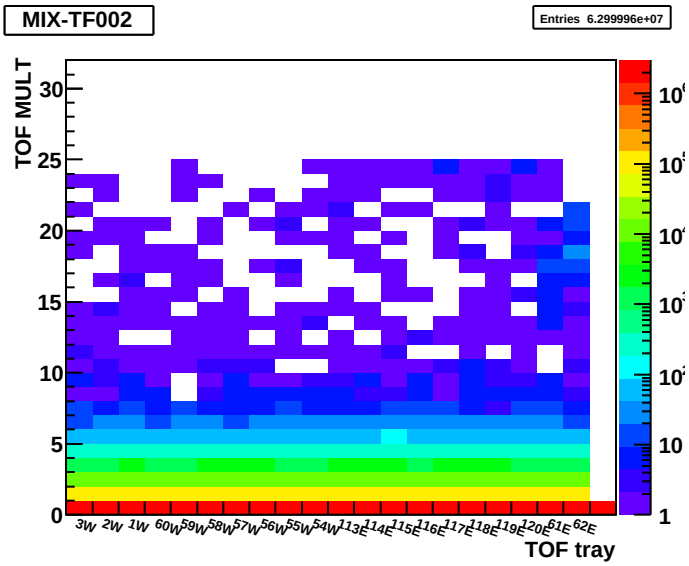

Endcap EMC L0 Input - Patch Sum
Entries 1.349999e+08
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

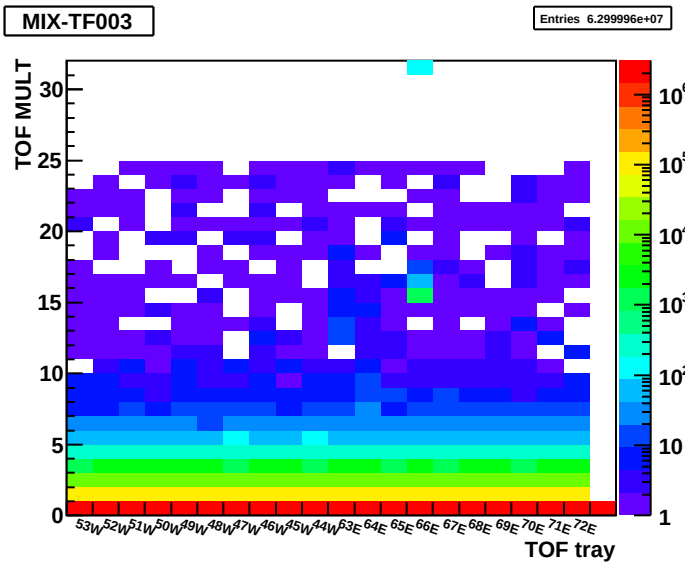

Barrel Jet Patches
Entries 2.699998e+07
JP ADC
JP ID

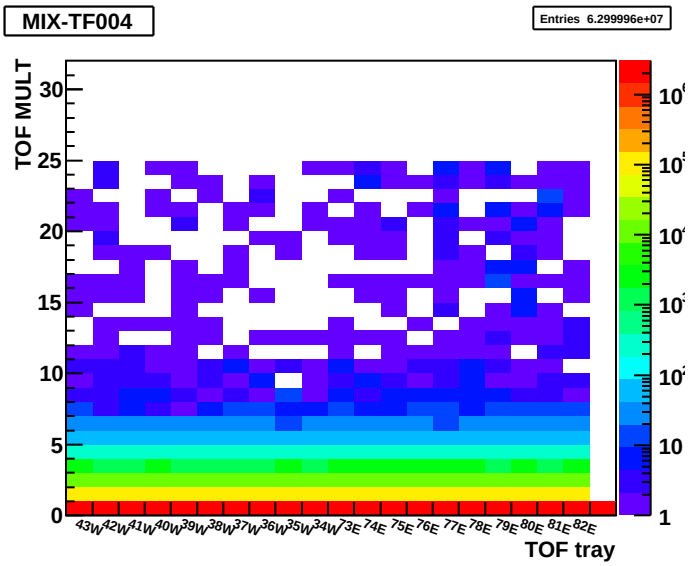

Endcap Jet Patches
Entries 8999994
JP ADC
JP ID

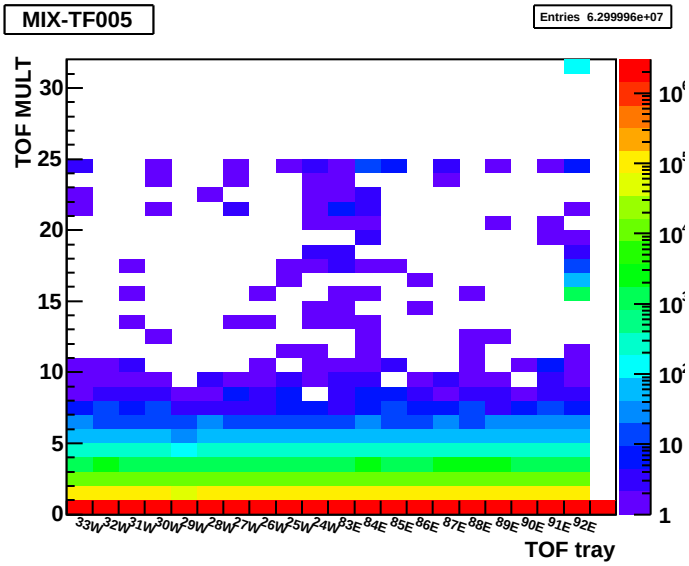

Hybrid Jet Patches
Entries 2999998
JP ADC
JP ID

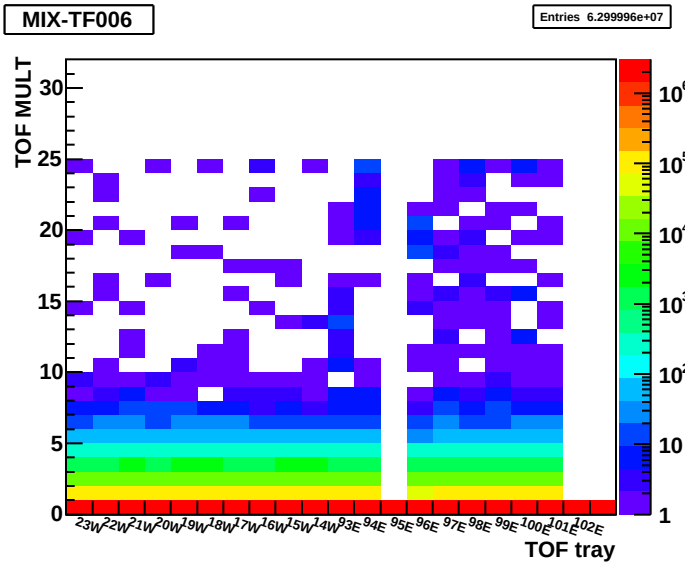

MIX-TF001
Entries 6.299996e+07
TOF MULT
TOF tray

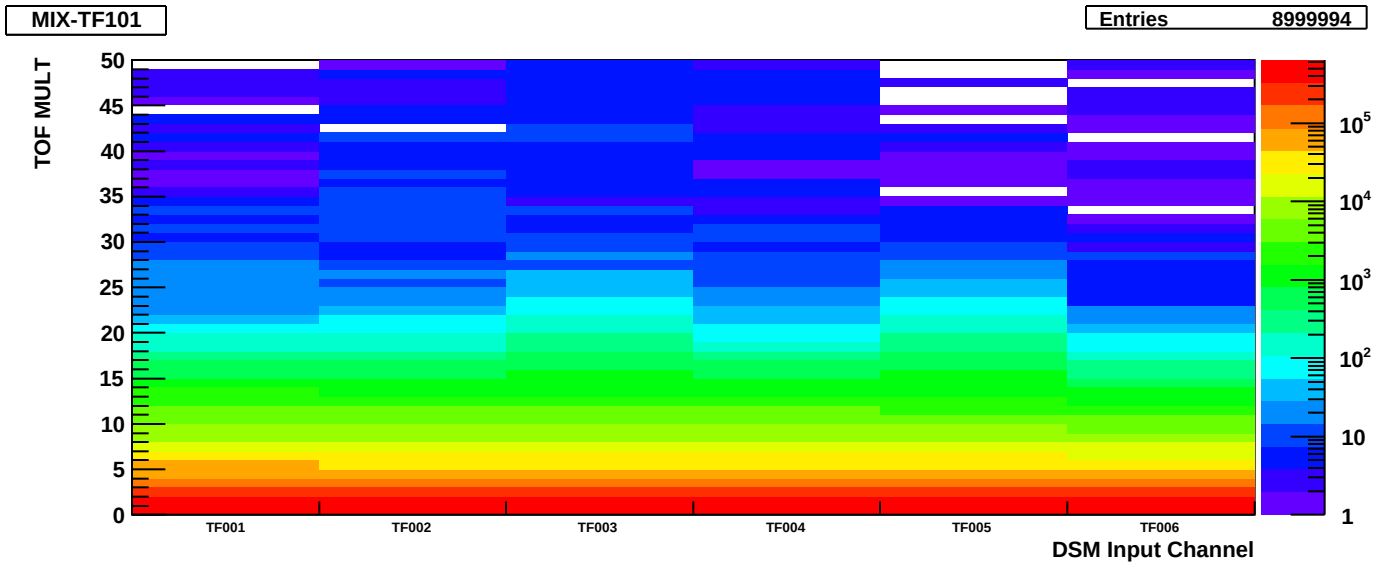

MIX-TF002
Entries 6.299996e+07
TOF MULT
TOF tray

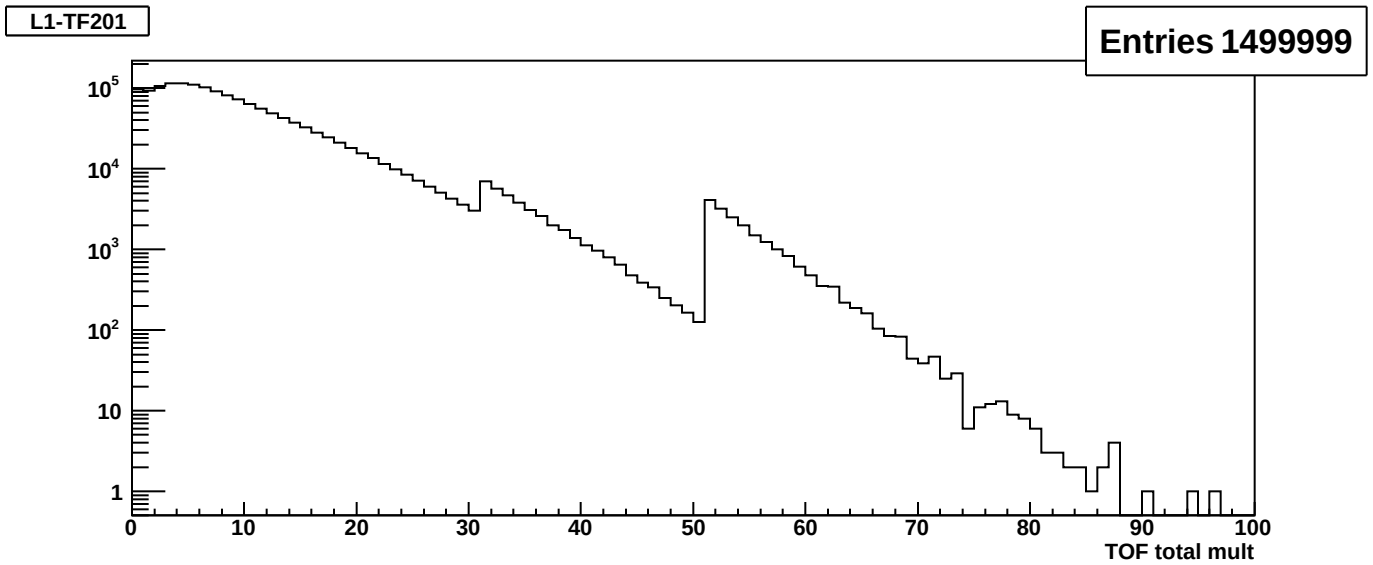

MIX-TF003
Entries 6.299996e+07
TOF MULT
TOF tray

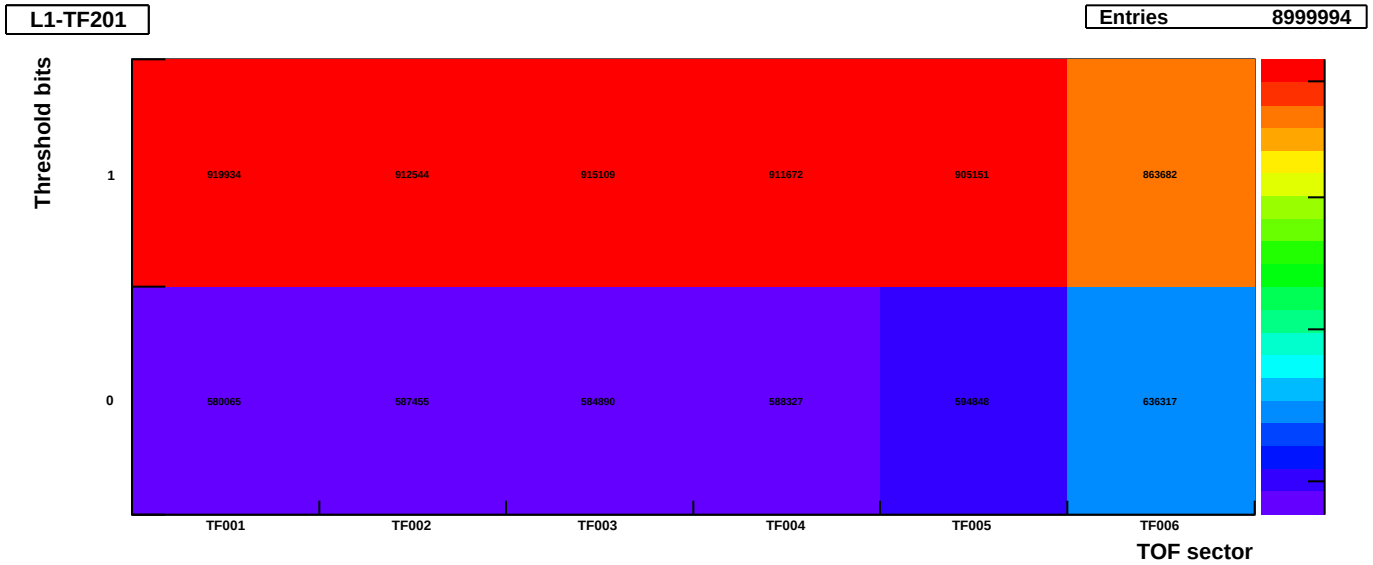

MIX-TF004
Entries 6.299996e+07
TOF MULT
TOF tray

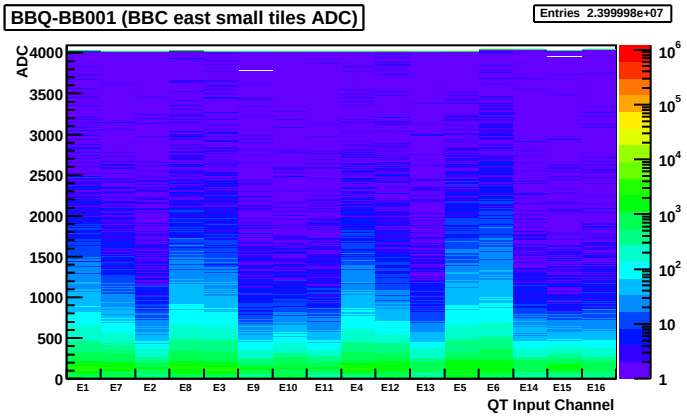

MIX-TF005
Entries 6.299996e+07
TOF MULT
TOF tray

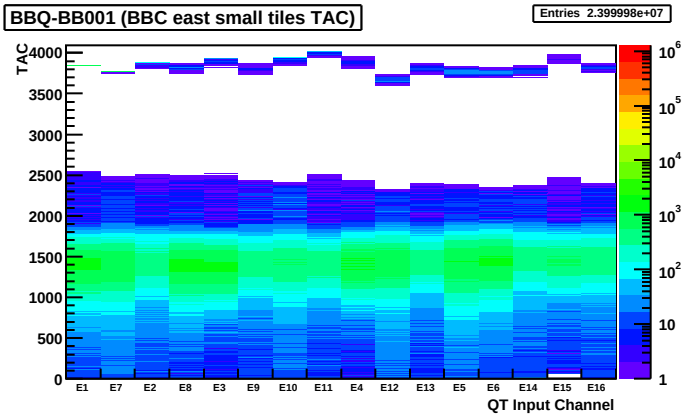

MIX-TF006
Entries 6.299996e+07
TOF MULT
TOF tray

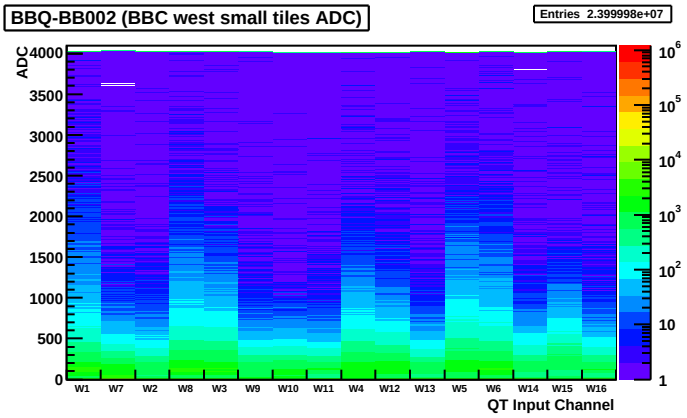

MIX-TF101
Entries 8999994
TOF MULT
50
45
40
35
30
25
20
15
10
5
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

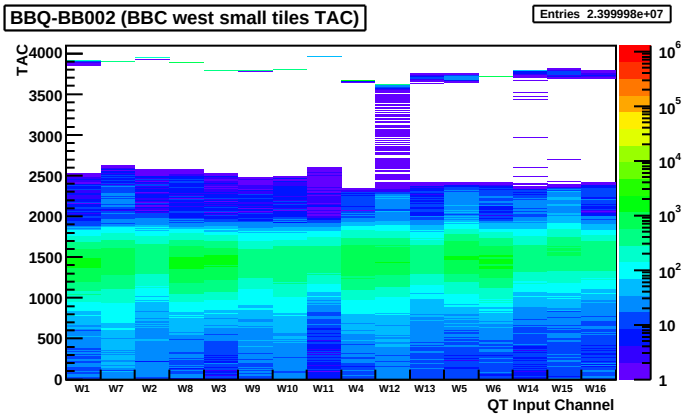

L1-TF201
Entries 1499999
10^5
10^4
10^3
10^2
10
1
0
10
20
30
40
50
60
70
80
90
100
TOF total mult

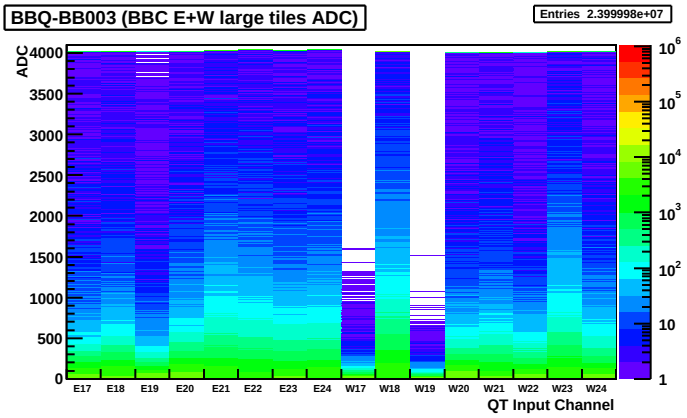

L1-TF201
Entries 8999994
Threshold bits
1
0
919934
912544
915109
911672
905151
863682
580065
587455
584890
588327
594848
636317
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

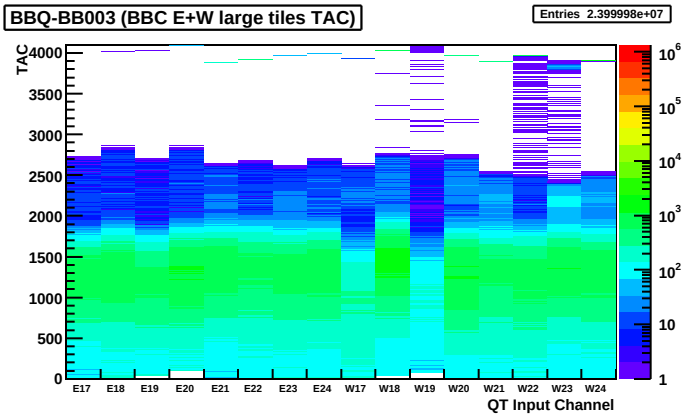

BBQ-BB001 (BBC east small tiles ADC)
Entries 2.399998e+07
ADC
QT Input Channel

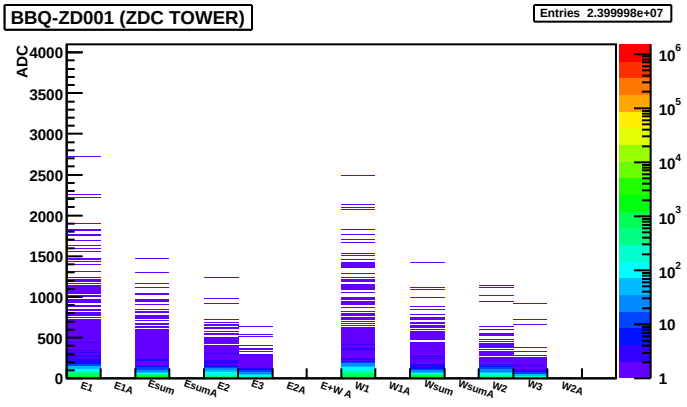

BBQ-BB001 (BBC east small tiles TAC)
Entries 2.399998e+07
TAC
QT Input Channel

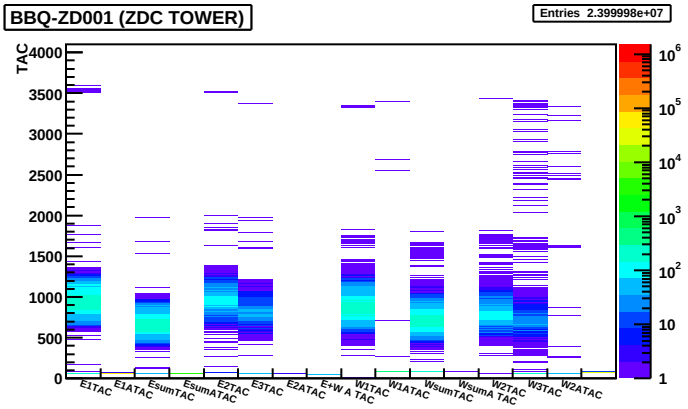

BBQ-BB002 (BBC west small tiles ADC)
Entries 2.399998e+07
ADC
QT Input Channel

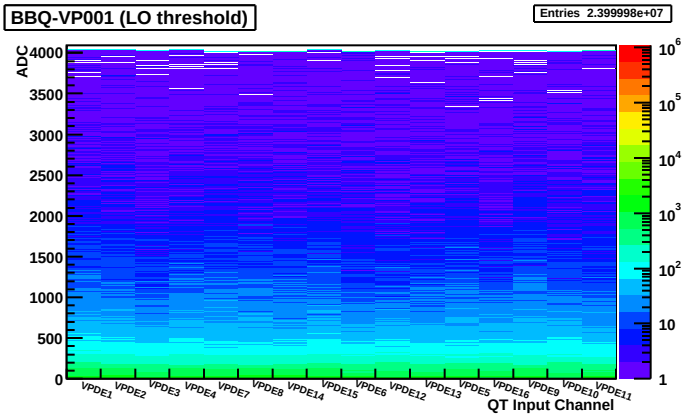

BBQ-BB002 (BBC west small tiles TAC)
Entries 2.399998e+07
TAC
QT Input Channel

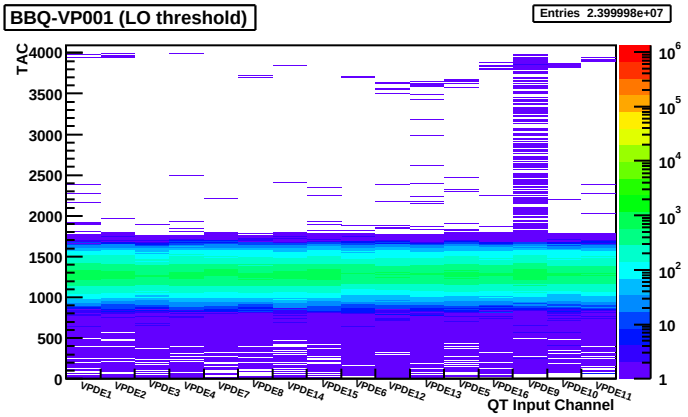

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 2.399998e+07
ADC
QT Input Channel

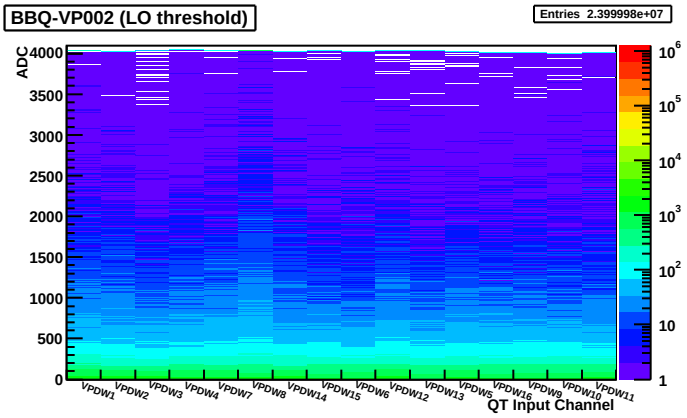

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 2.399998e+07
TAC
QT Input Channel

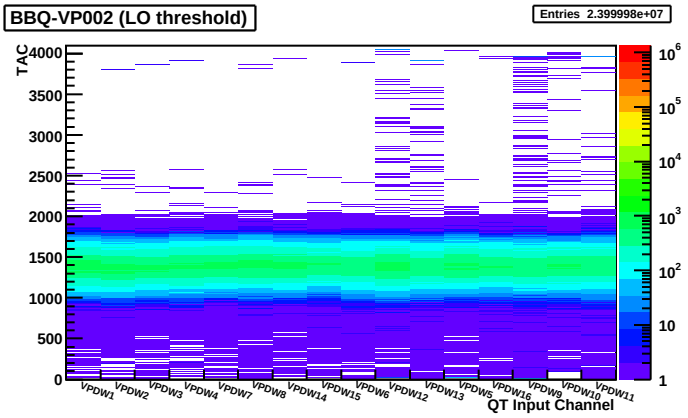

BBQ-ZD001 (ZDC TOWER)
Entries 2.399998e+07
ADC

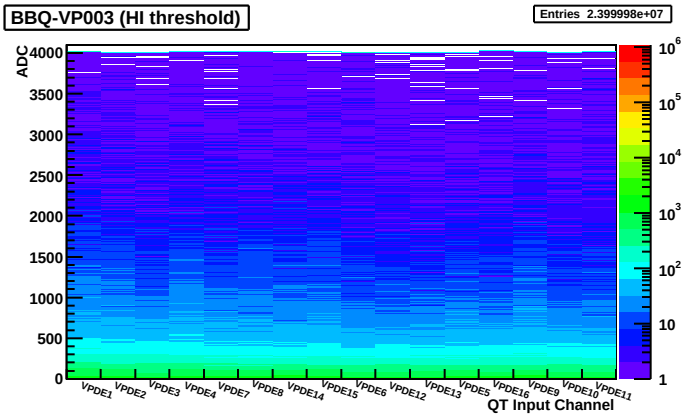

BBQ-ZD001 (ZDC TOWER)
Entries 2.399998e+07
TAC

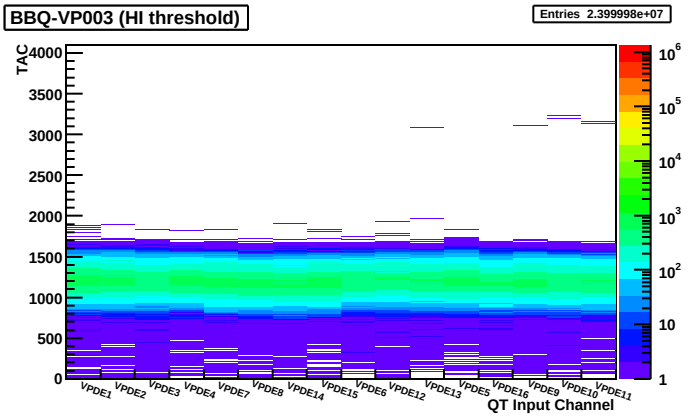

BBQ-VP001 (LO threshold)
Entries 2.399998e+07
ADC
QT Input Channel

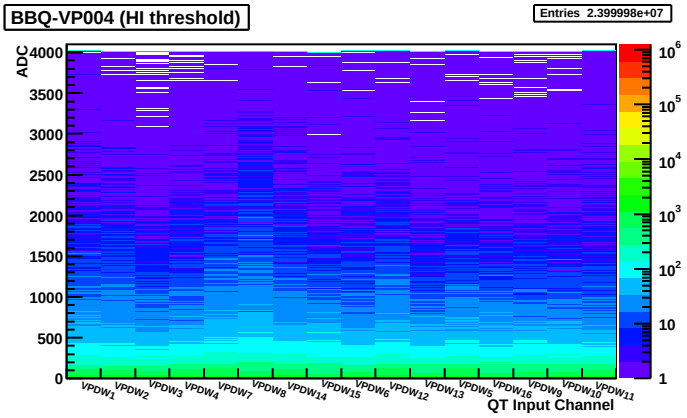

BBQ-VP001 (LO threshold)
Entries 2.399998e+07
TAC
QT Input Channel

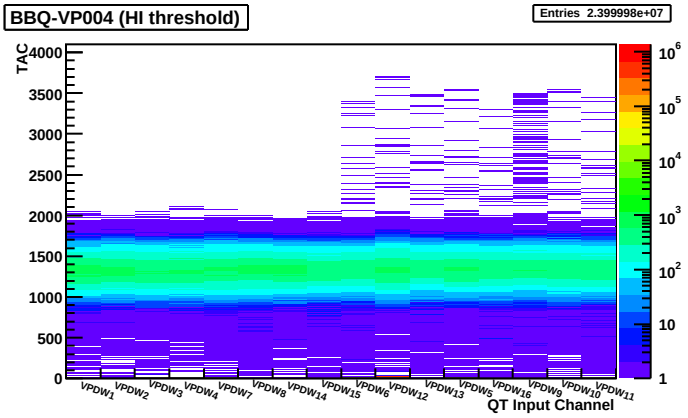

BBQ-VP002 (LO threshold)
Entries 2.399998e+07
ADC
QT Input Channel

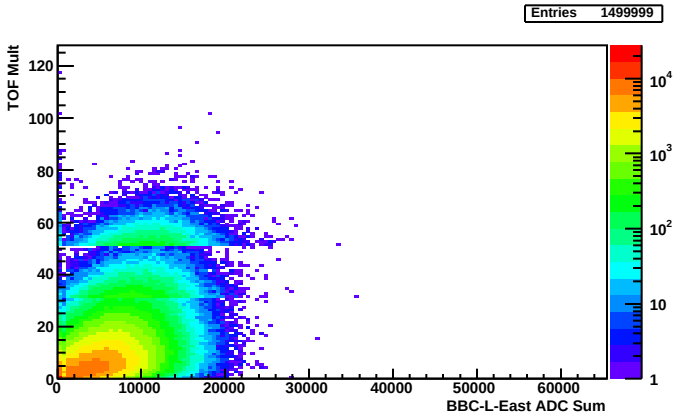

BBQ-VP002 (LO threshold)
Entries 2.399998e+07
TAC
QT Input Channel

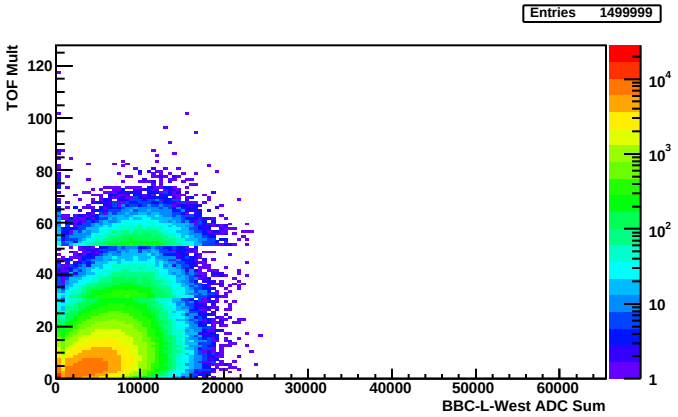

BBQ-VP003 (HI threshold)
Entries 2.399998e+07
ADC
QT Input Channel

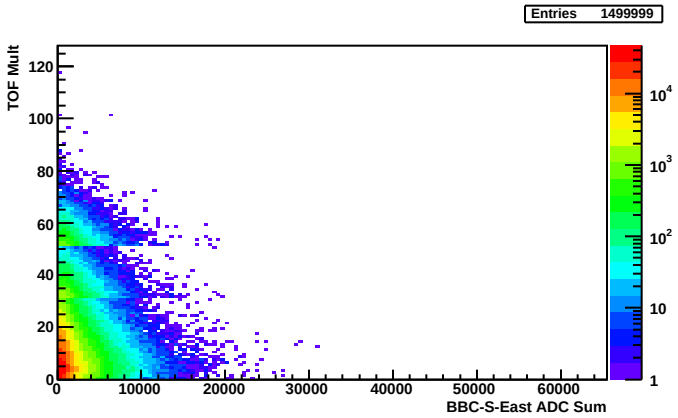

BBQ-VP003 (HI threshold)
Entries 2.399998e+07
TAC
QT Input Channel

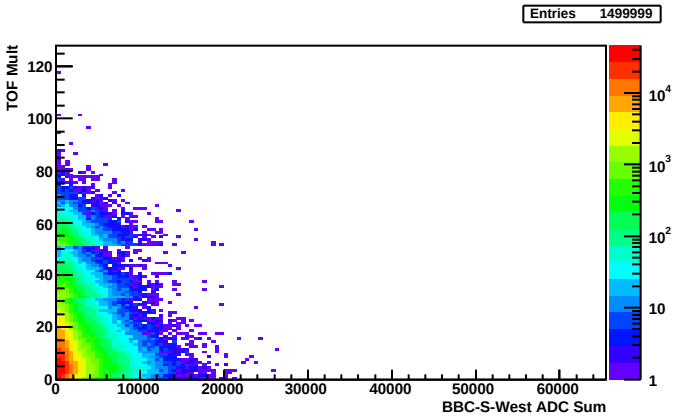

BBQ-VP004 (HI threshold)
Entries 2.399998e+07
ADC
QT Input Channel

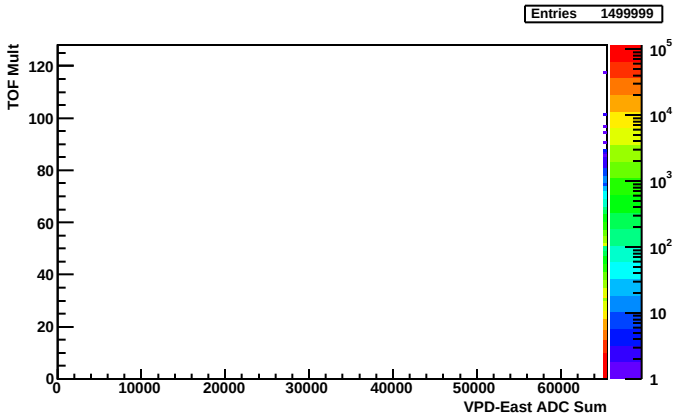

BBQ-VP004 (HI threshold)
Entries 2.399998e+07
TAC
QT Input Channel

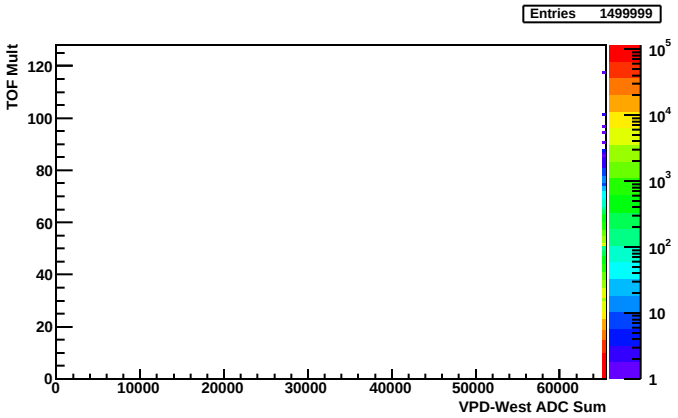

Entries 1499999
TOF Mult
BBC-L-East ADC Sum

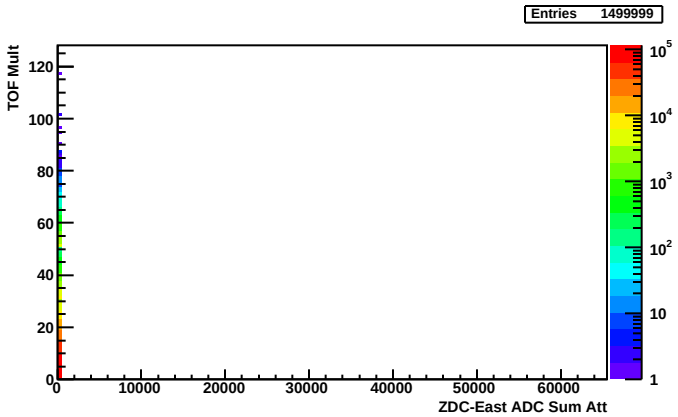

Entries 1499999
TOF Mult
BBC-L-West ADC Sum

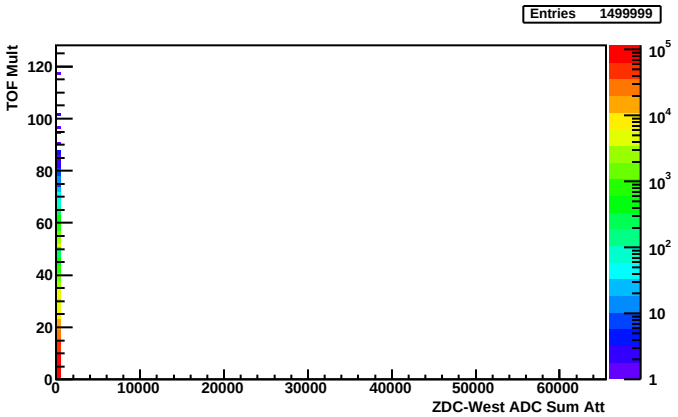

Entries 1499999
TOF Mult
BBC-S-East ADC Sum

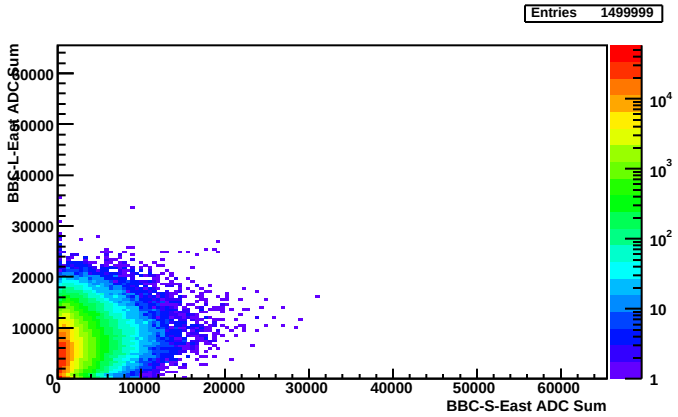

Entries 1499999
TOF Mult
BBC-S-West ADC Sum

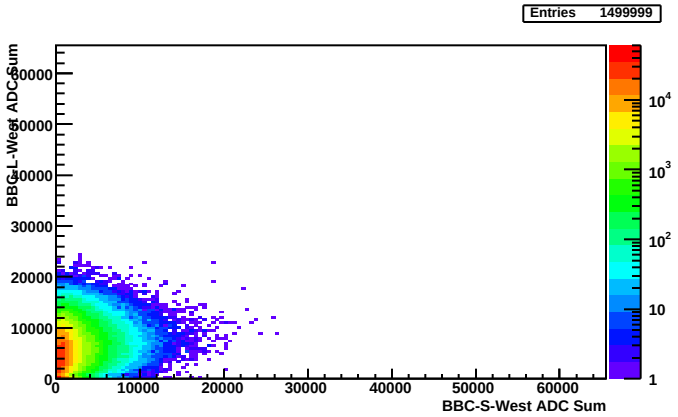

Entries 1499999
TOF Mult
VPD-East ADC Sum

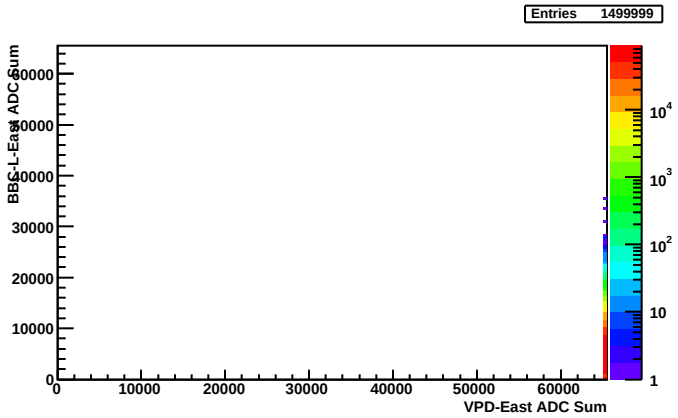

Entries 1499999
TOF Mult
VPD-West ADC Sum

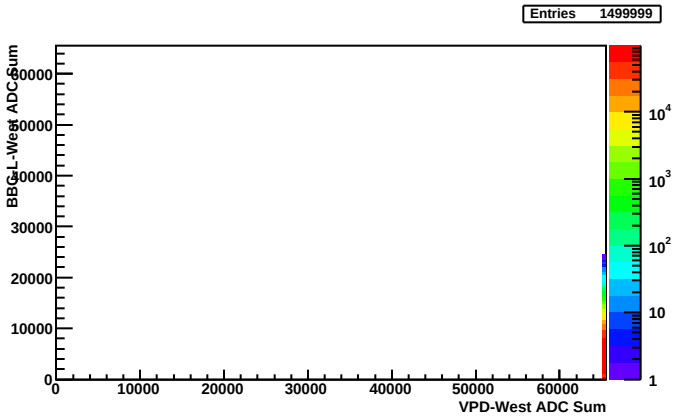

Entries 1499999
TOF Mult
ZDC-East ADC Sum Att

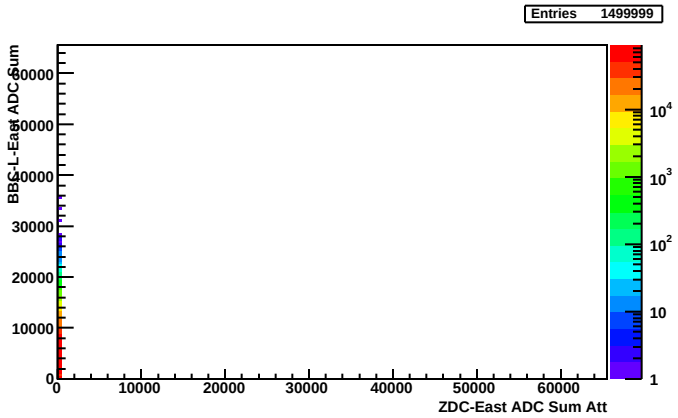

Entries 1499999
TOF Mult
ZDC-West ADC Sum Att

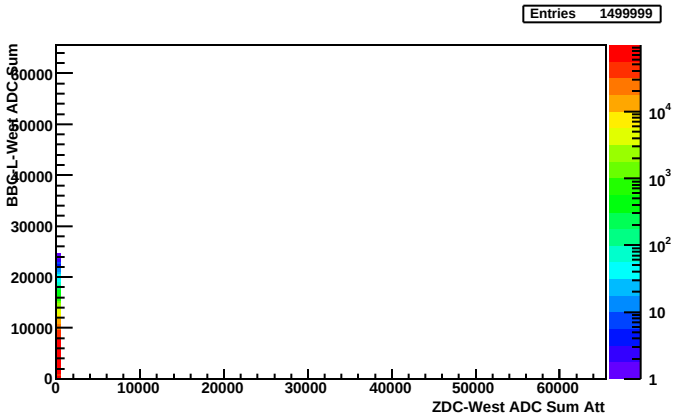

Entries 1499999
BBC-L-East ADC Sum
BBC-S-East ADC Sum

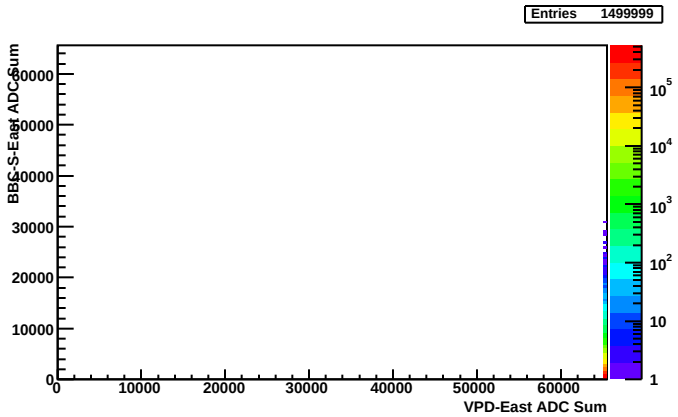

Entries 1499999
BBC-L-West ADC Sum
BBC-S-West ADC Sum

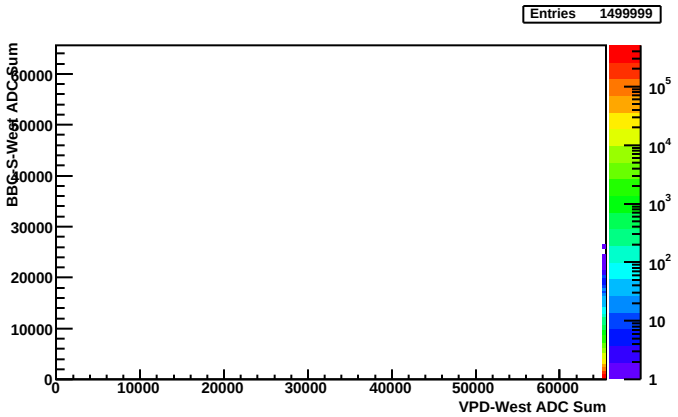

Entries 1499999
BBC-L-East ADC Sum
VPD-East ADC Sum

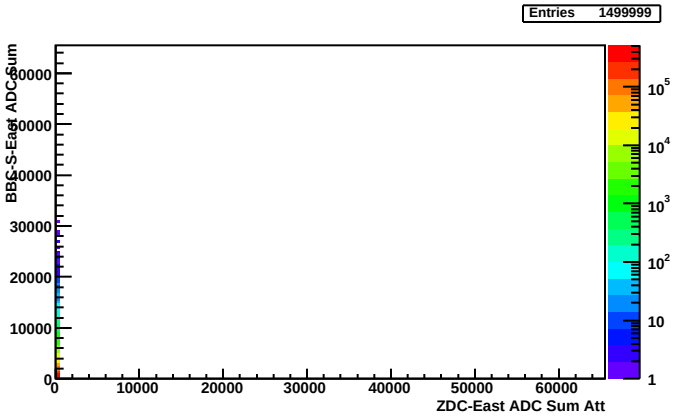

Entries 1499999
BBC-L-West ADC Sum
VPD-West ADC Sum

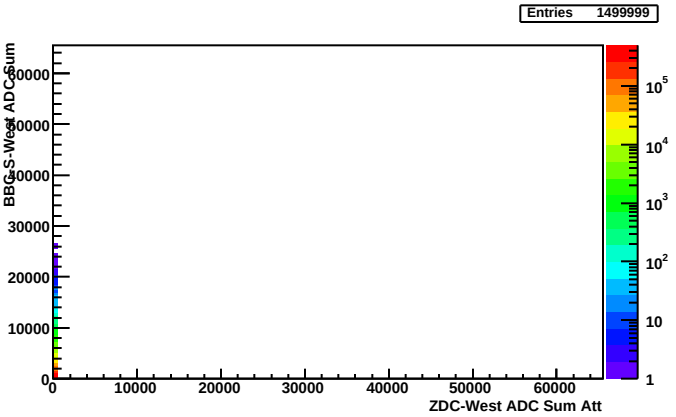

Entries 1499999
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

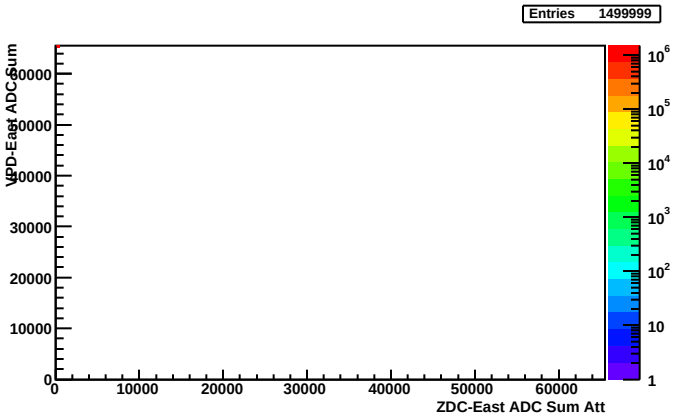

Entries 1499999
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

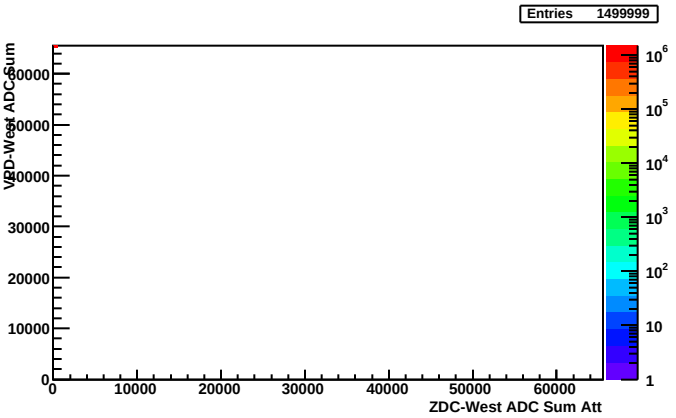

Entries 1499999
BBC-S-East ADC Sum
VPD-East ADC Sum

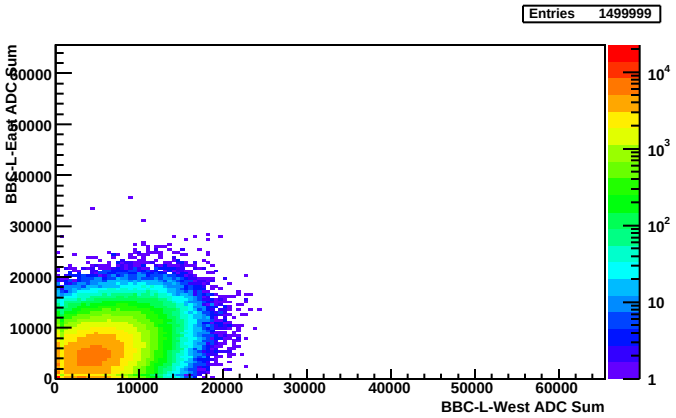

Entries 1499999
BBC-S-West ADC Sum
VPD-West ADC Sum

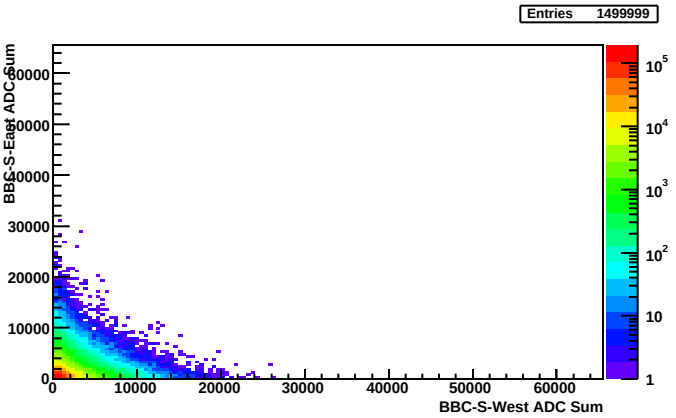

Entries 1499999
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

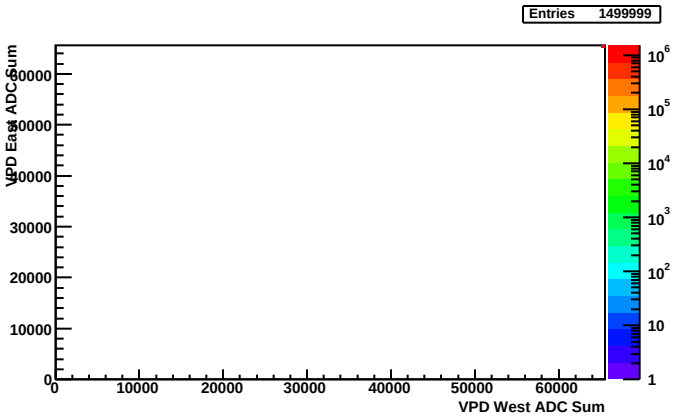

Entries 1499999
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

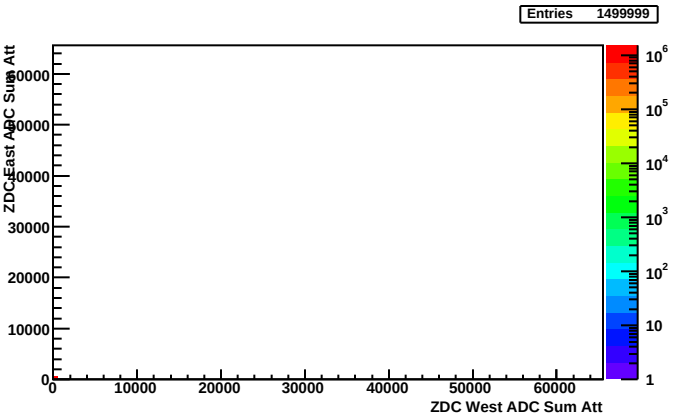

Entries 1499999
VPD-East ADC Sum
ZDC-East ADC Sum Att

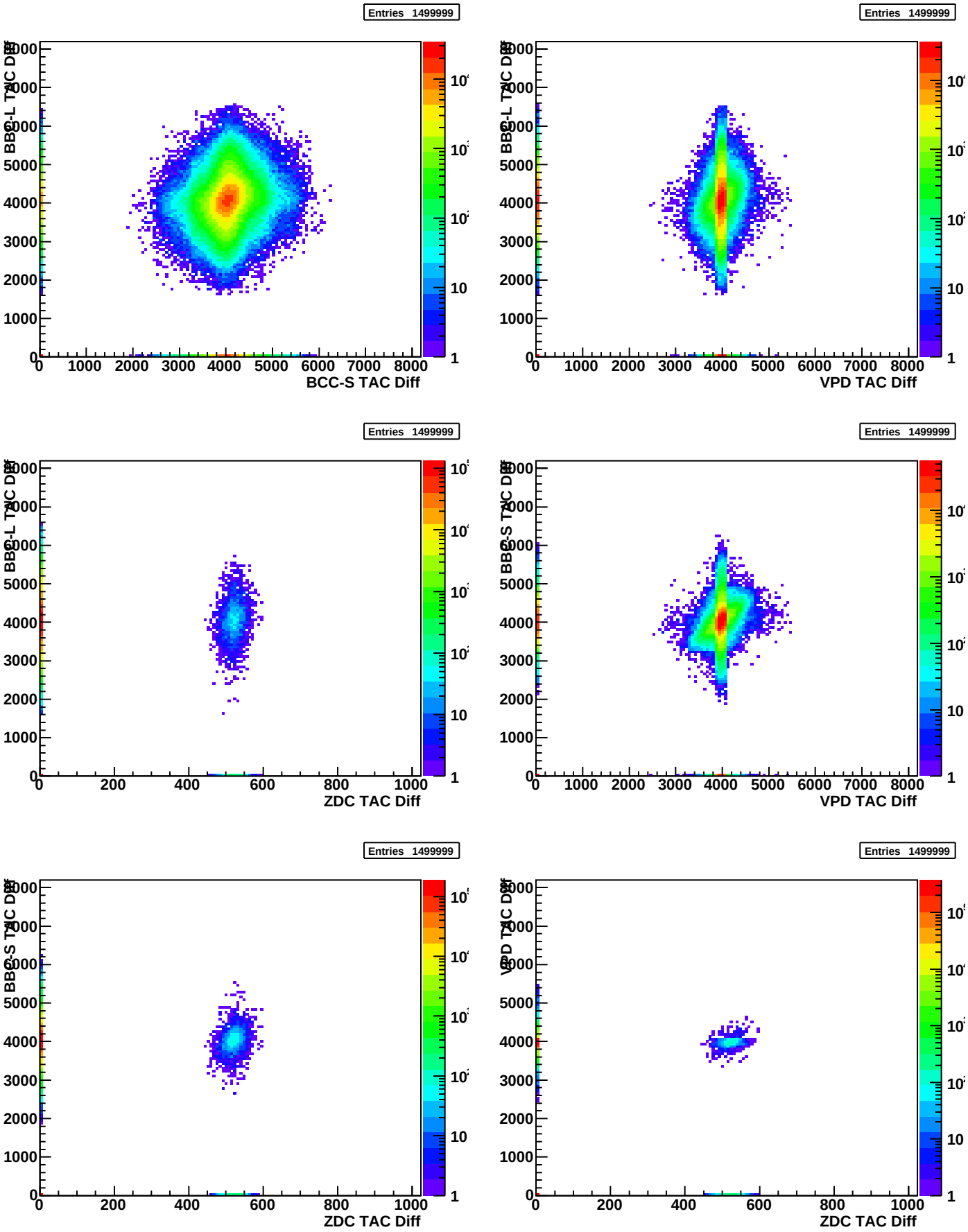

Entries 1499999
VPD-West ADC Sum
ZDC-West ADC Sum Att

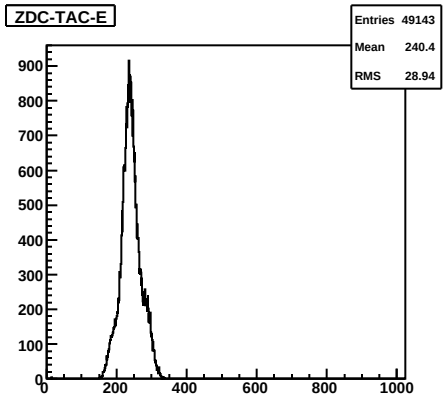

Entries 1499999
BBC-L-East ADC Sum
BBC-L-West ADC Sum

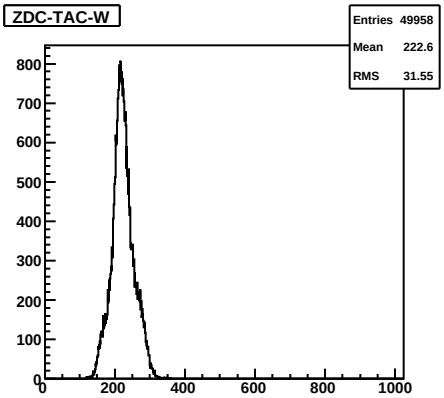

Entries 1499999
BBC-S-East ADC Sum
BBC-S-West ADC Sum

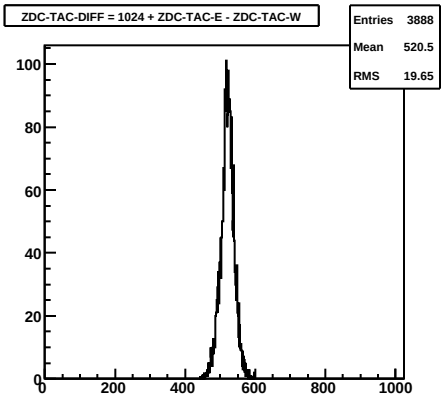

Entries 1499999
VPD East ADC Sum
VPD West ADC Sum

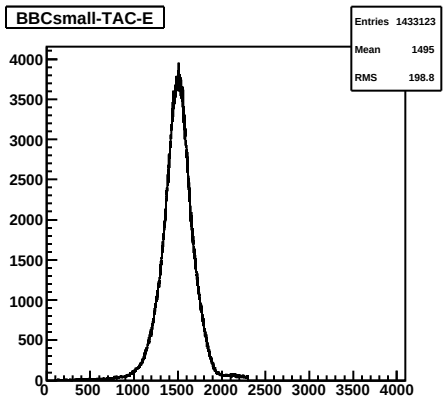

Entries 1499999
ZDC East ADC Sum Att
ZDC West ADC Sum Att

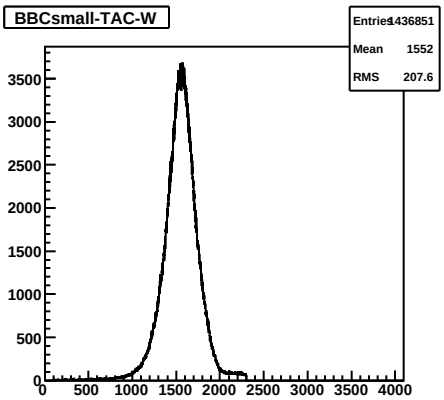

Entries 1499999
BBC-L TAC Diff
BCC-S TAC Diff
Entries 1499999
BBC-L TAC Diff
VPD TAC Diff
Entries 1499999
BBC-L TAC Diff
ZDC TAC Diff
Entries 1499999
BBC-S TAC Diff
VPD TAC Diff
Entries 1499999
BBC-S TAC Diff
ZDC TAC Diff
Entries 1499999
VPD TAC Diff
ZDC TAC Diff

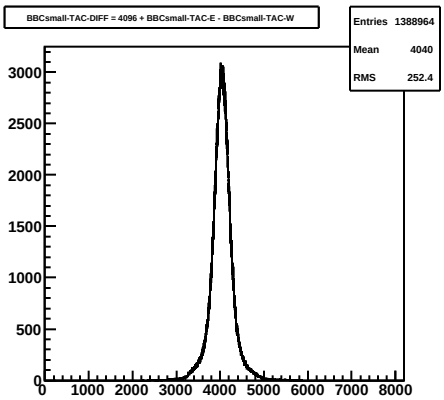

ZDC-TAC-E
Entries 49143
Mean 240.4
RMS 28.94

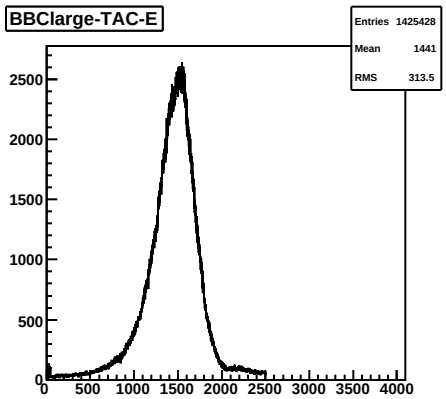

ZDC-TAC-W
Entries 49958
Mean 222.6
RMS 31.55

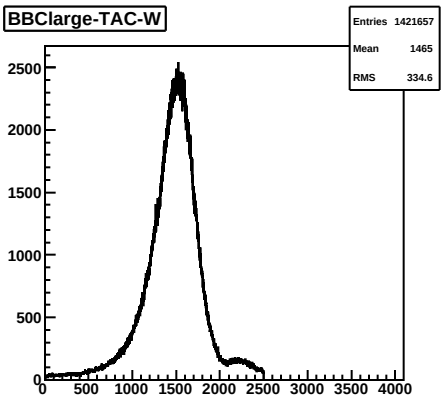

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 3888
Mean 520.5
RMS 19.65

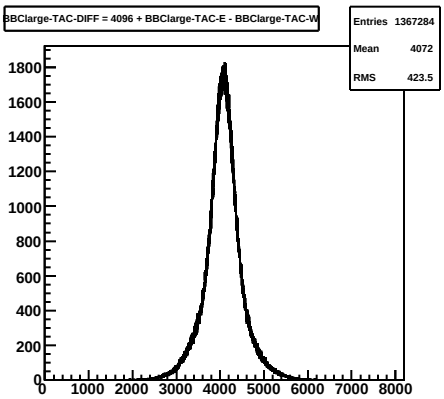

BBCsmall-TAC-E
Entries 1433123
Mean 1495
RMS 198.8

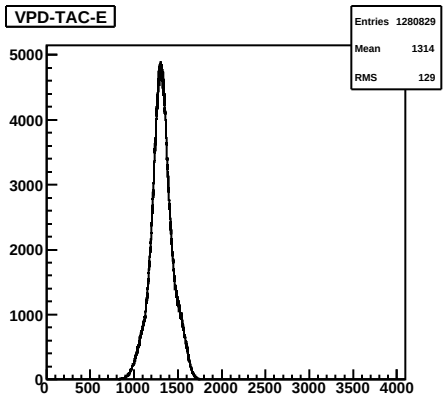

BBCsmall-TAC-W
Entries 1436851
Mean 1552
RMS 207.6

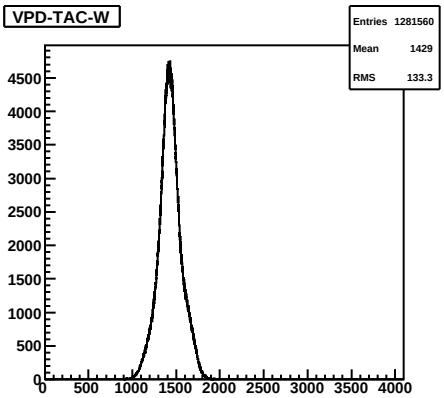

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 1388964
Mean 4040
RMS 252.4

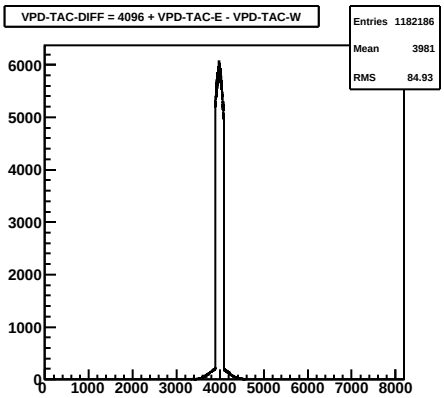

BBClarge-TAC-E
Entries 1425428
Mean 1441
RMS 313.5

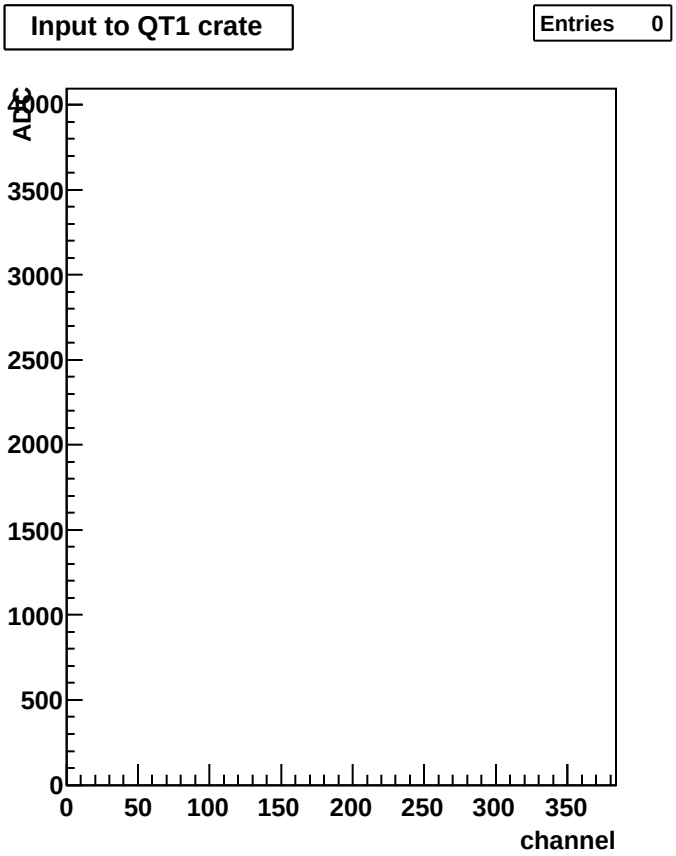

BBClarge-TAC-W
Entries 1421657
Mean 1465
RMS 334.6

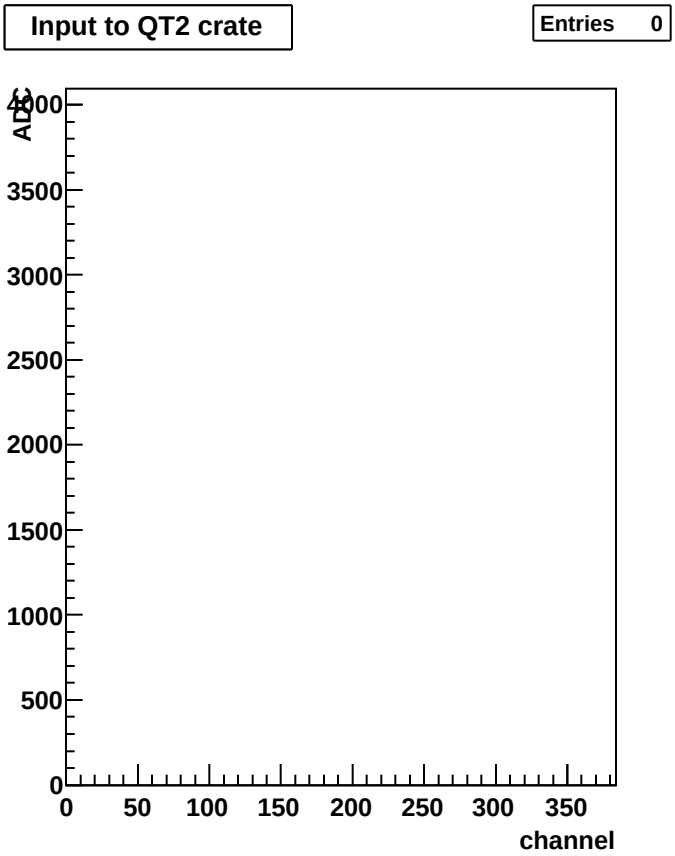

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 1367284
Mean 4072
RMS 423.5

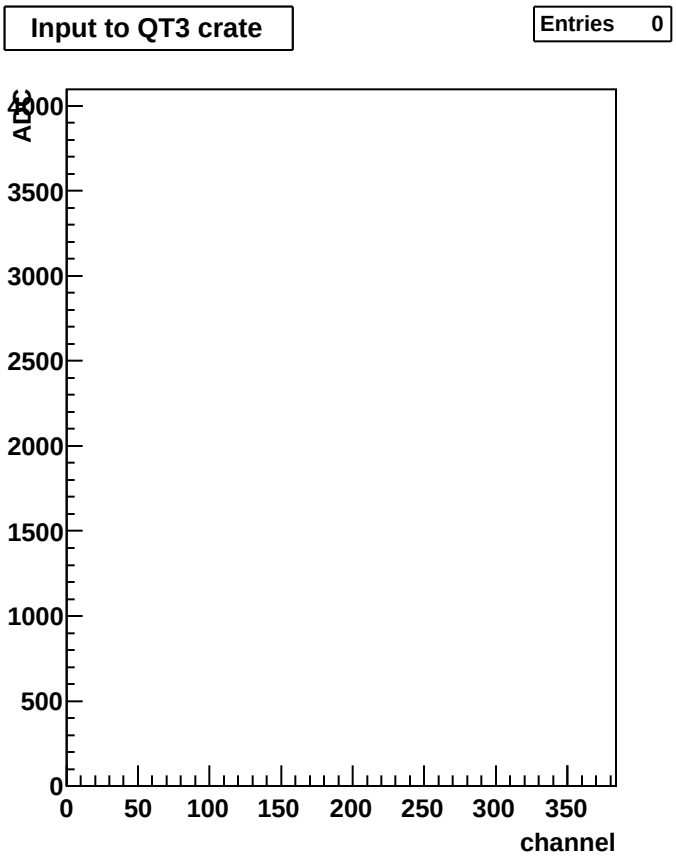

VPD-TAC-E
Entries 1280829
Mean 1314
RMS 129

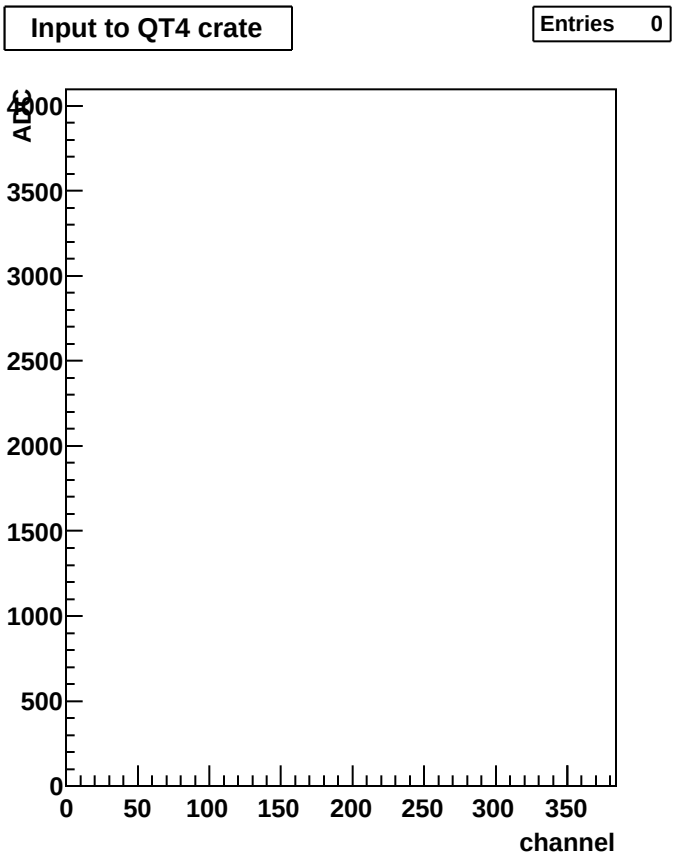

VPD-TAC-W
Entries 1281560
Mean 1429
RMS 133.3

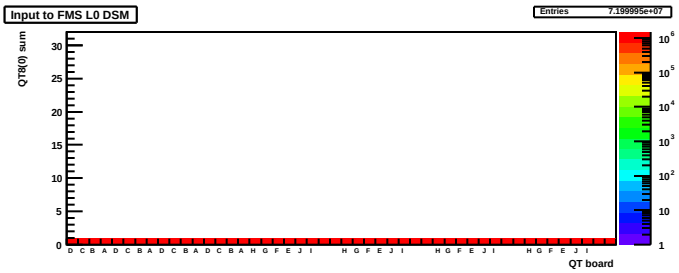

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 1182186
Mean 3981
RMS 84.93

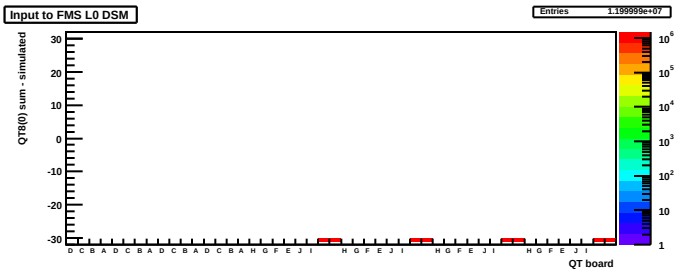

Input to QT1 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

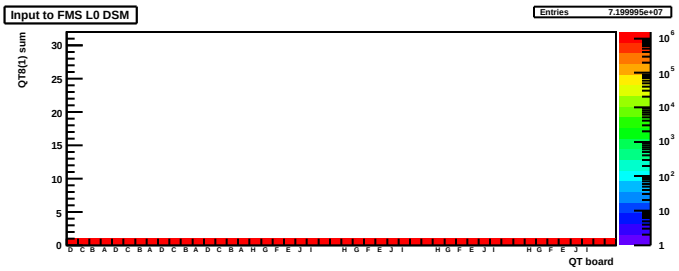

Input to QT2 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

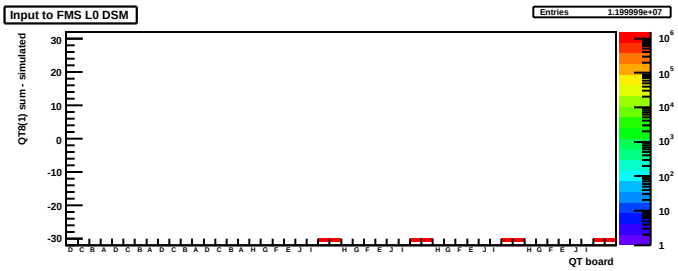

Input to QT3 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

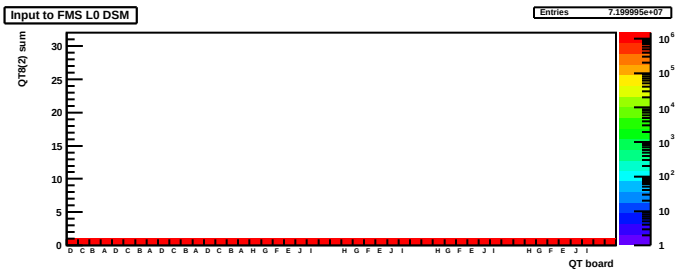

Input to QT4 crate
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

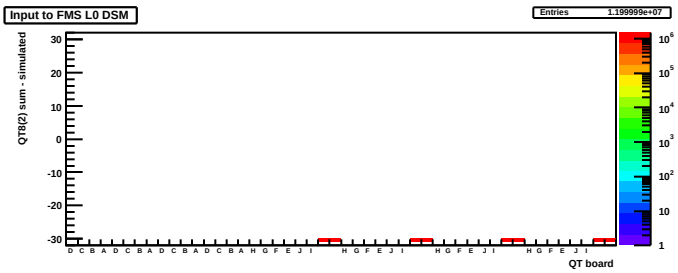

Input to FMS L0 DSM
Entries 7.199995e+07
QT8(0) sum
QT board

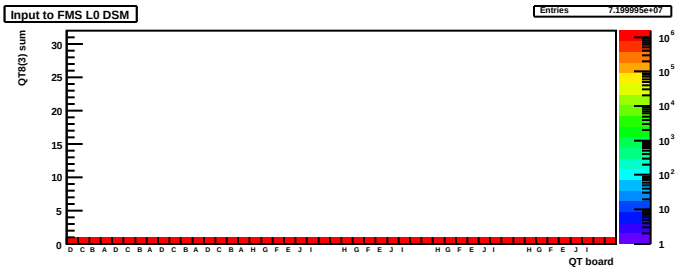

Input to FMS L0 DSM
Entries 1.199999e+07
QT8(0) sum - simulated
QT board

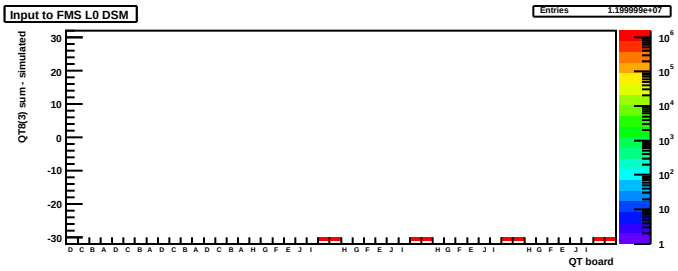

Input to FMS L0 DSM
Entries 7.199995e+07
QT8(1) sum
QT board

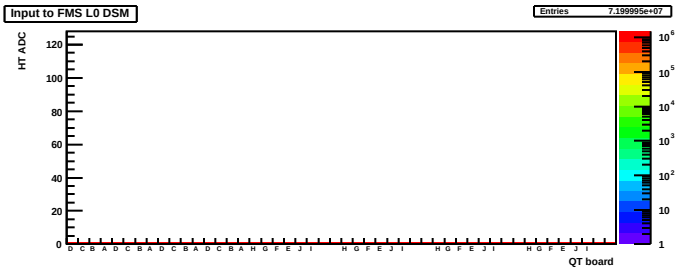

Input to FMS L0 DSM
Entries 1.199999e+07
QT8(1) sum - simulated
QT board

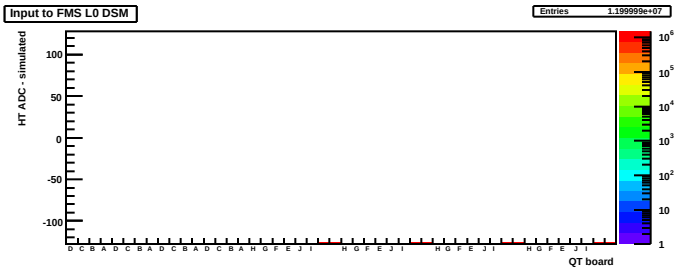

Input to FMS L0 DSM
Entries 7.199995e+07
QT8(2) sum
QT board

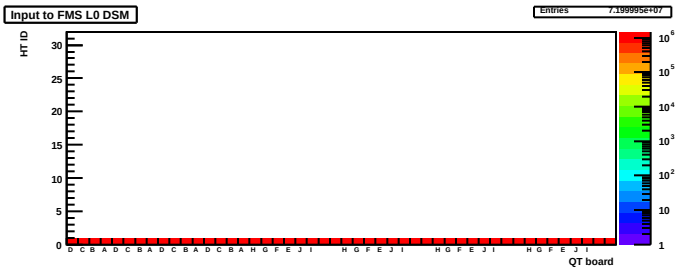

Input to FMS L0 DSM
Entries 1.199999e+07
QT8(2) sum - simulated
QT board

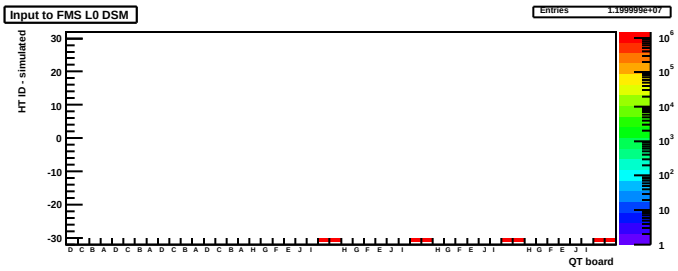

Input to FMS L0 DSM
Entries 7.199995e+07
QT8(3) sum
QT board

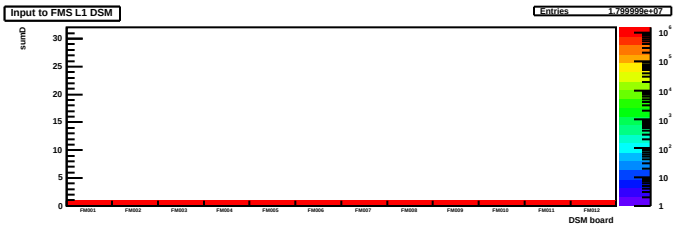

Input to FMS L0 DSM
Entries 1.199999e+07
QT8(3) sum - simulated
QT board

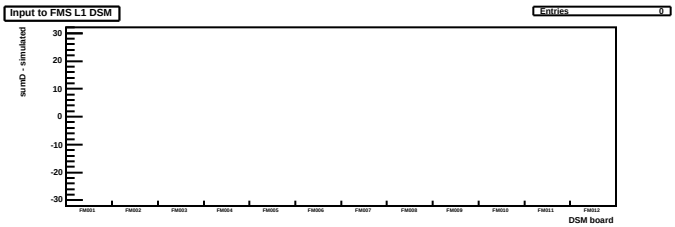

Input to FMS L0 DSM
Entries 7.199995e+07
HT ADC
QT board

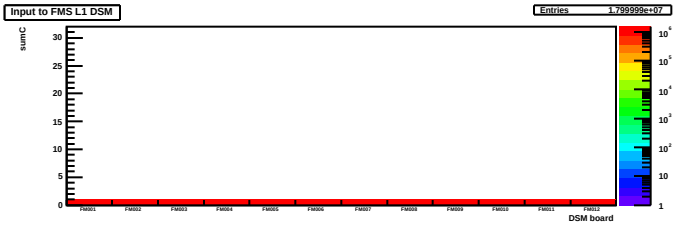

Input to FMS L0 DSM
Entries 1.199999e+07
HT ADC - simulated
QT board

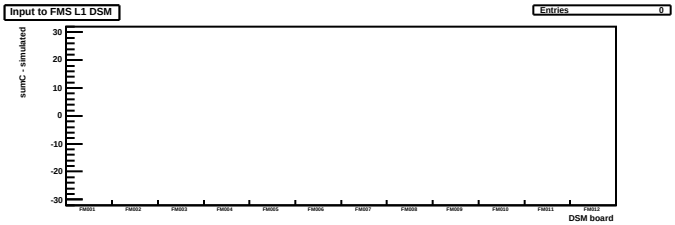

Input to FMS L0 DSM
Entries 7.199995e+07
HT ID
QT board

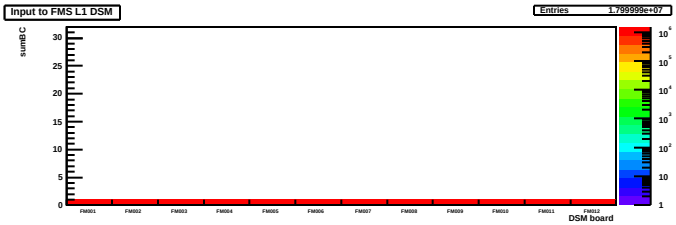

Input to FMS L0 DSM
Entries 1.199999e+07
HT ID - simulated
QT board

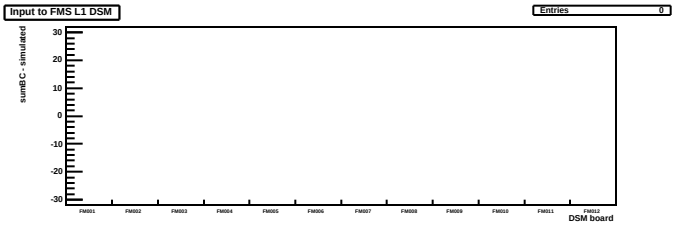

Input to FMS L1 DSM
Entries 1.799999e+07
sumD
DSM board

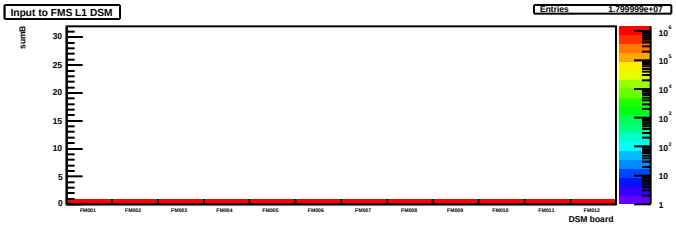

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

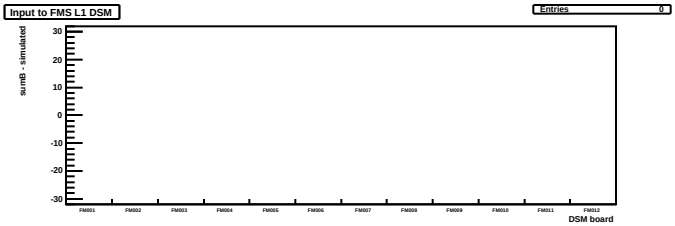

Input to FMS L1 DSM
Entries 1.799999e+07
sumC
DSM board

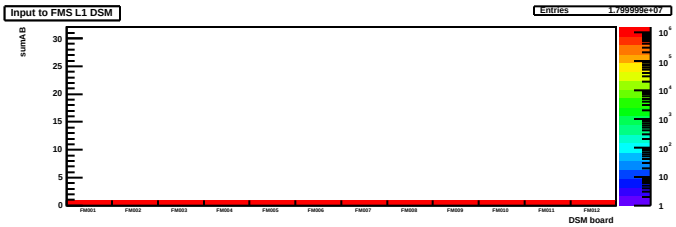

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

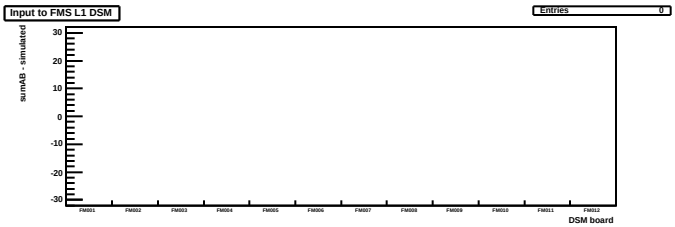

Input to FMS L1 DSM
Entries 1.799999e+07
sumBC
DSM board

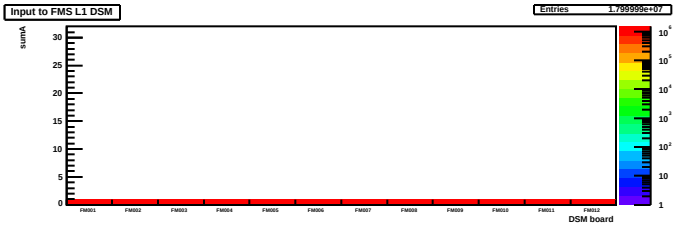

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

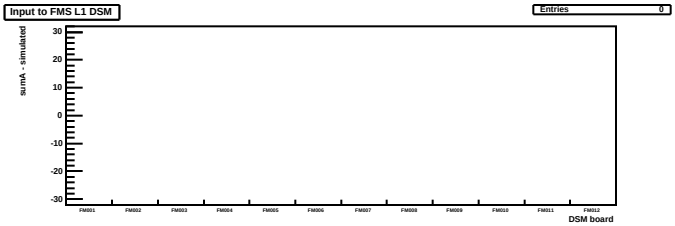

Input to FMS L1 DSM
Entries 1.799999e+07
sumB
DSM board

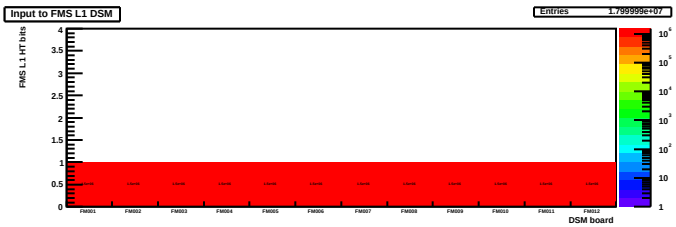

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

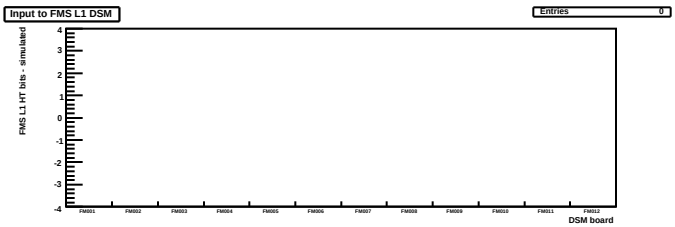

Input to FMS L1 DSM
Entries 1.799999e+07
sumAB
DSM board

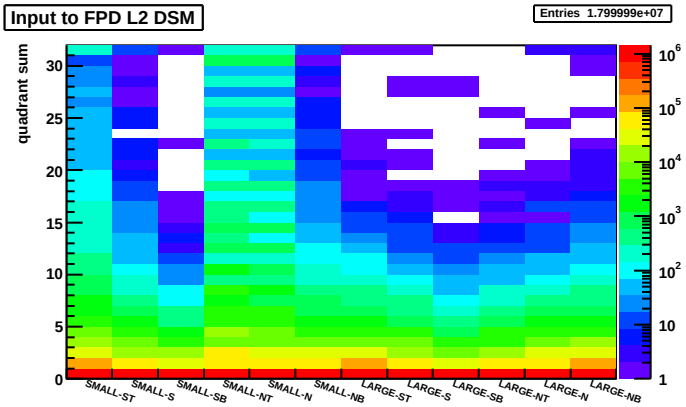

Input to FMS L1 DSM
Entries 0
sumAB - simulated
DSM board

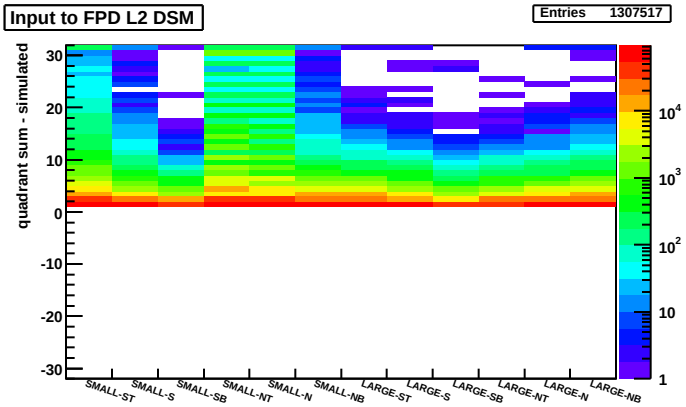

Input to FMS L1 DSM
Entries 1.799999e+07
sumA
DSM board

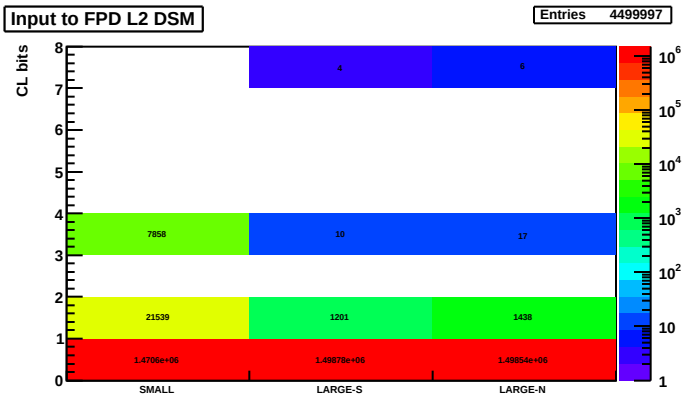

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

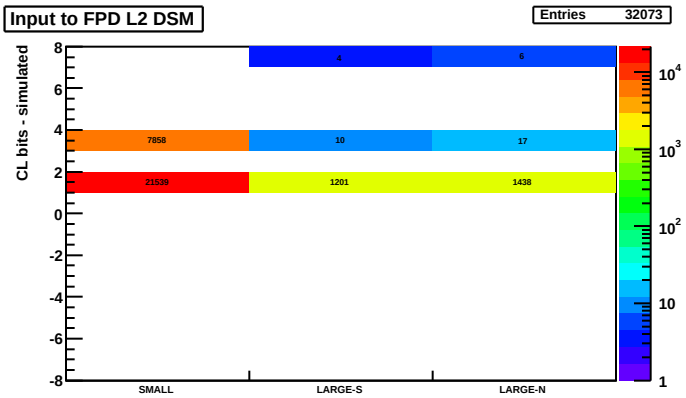

Input to FMS L1 DSM
Entries 1.799999e+07
FMS L1 HT bits
DSM board

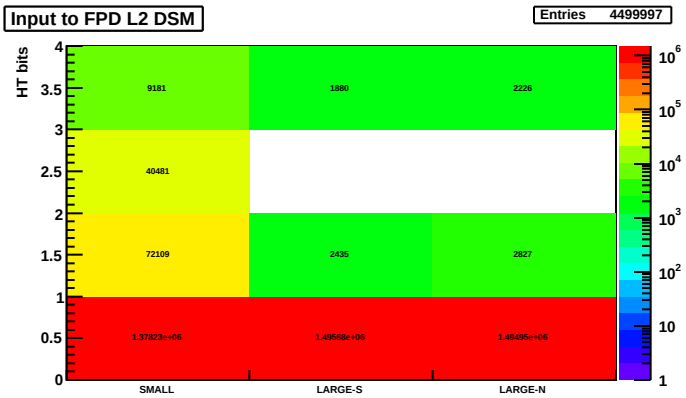

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

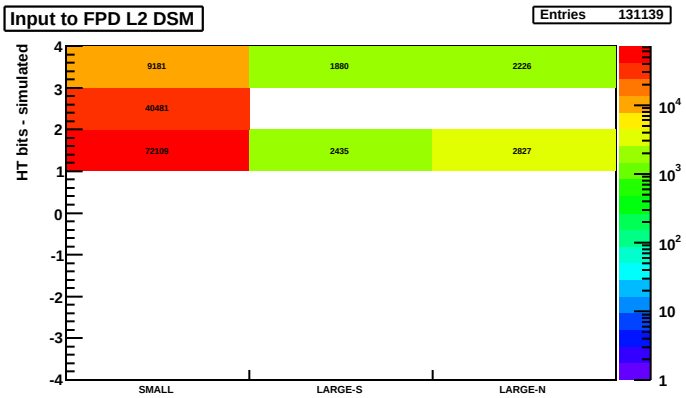

Input to FPD L2 DSM
Entries 1.799999e+07
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

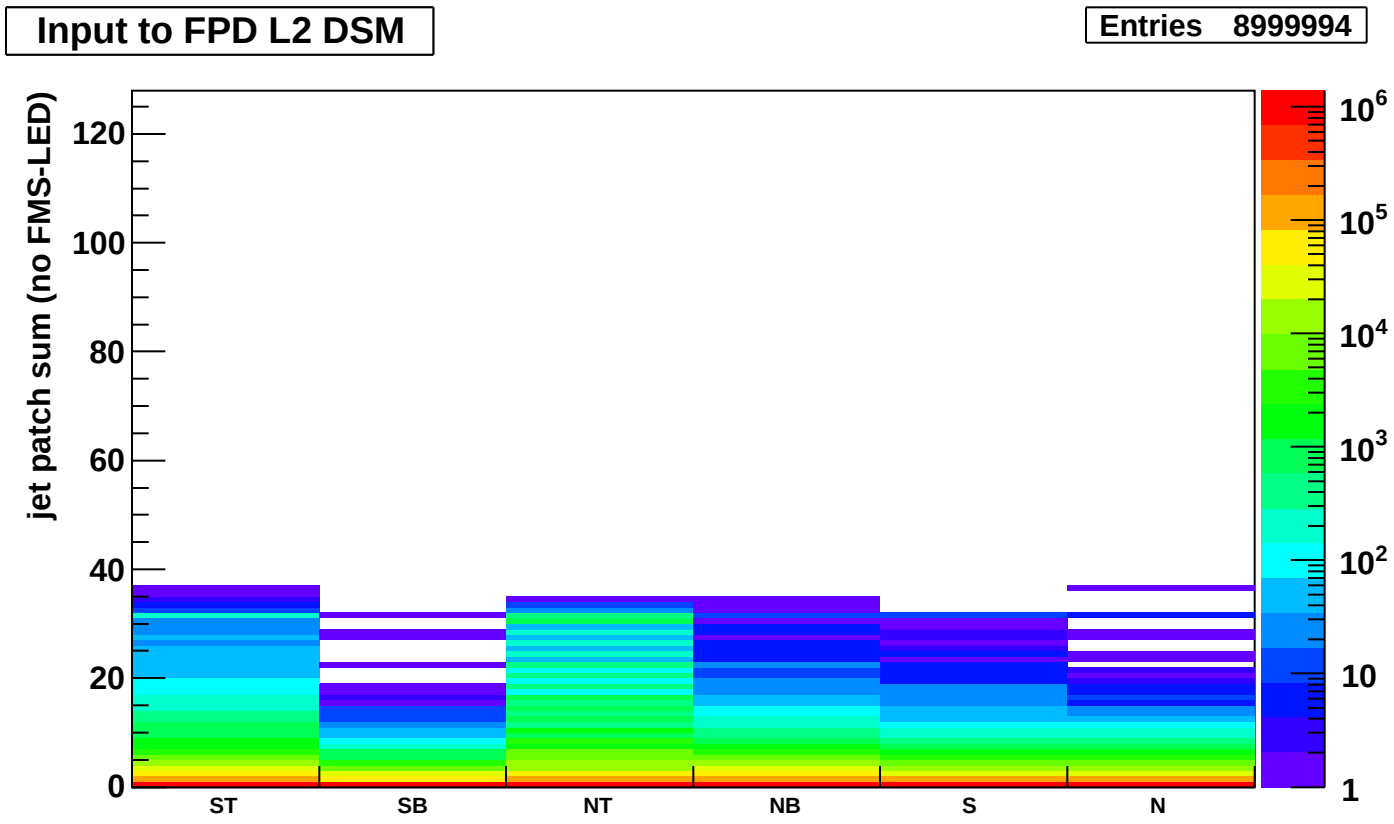

Input to FPD L2 DSM
Entries 1307517
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

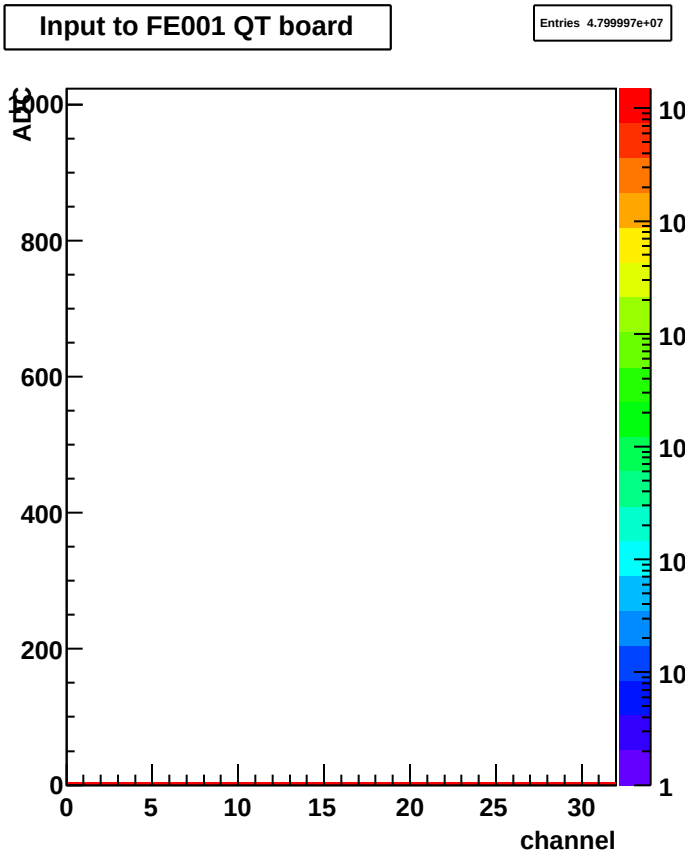

Input to FPD L2 DSM
Entries 4499997
CL bits
4
6
7858
10
17
21539
1201
1438
1.4706e+06
1.49878e+06
1.49854e+06
SMALL
LARGE-S
LARGE-N

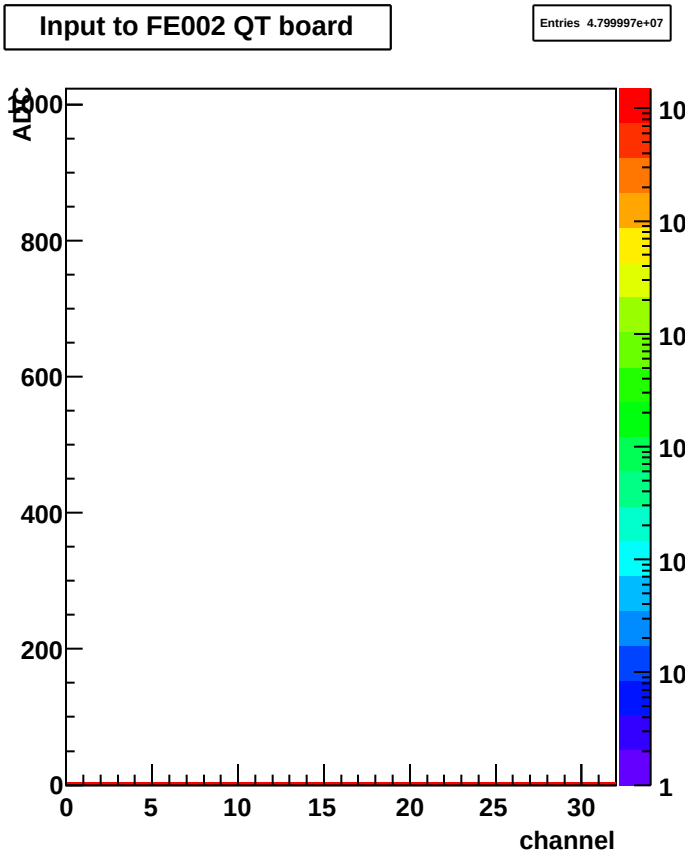

Input to FPD L2 DSM
Entries 32073
CL bits - simulated
4
6
7858
10
17
21539
1201
1438
SMALL
LARGE-S
LARGE-N

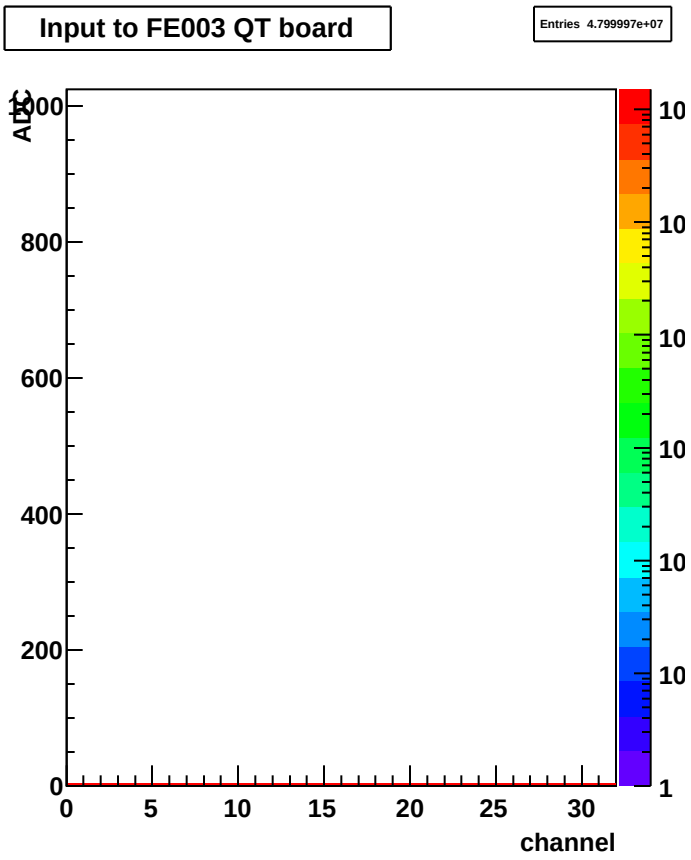

Input to FPD L2 DSM
Entries 4499997
HT bits
9181
1880
2226
40481
72109
2435
2827
1.37823e+06
1.49568e+06
1.49495e+06
SMALL
LARGE-S
LARGE-N

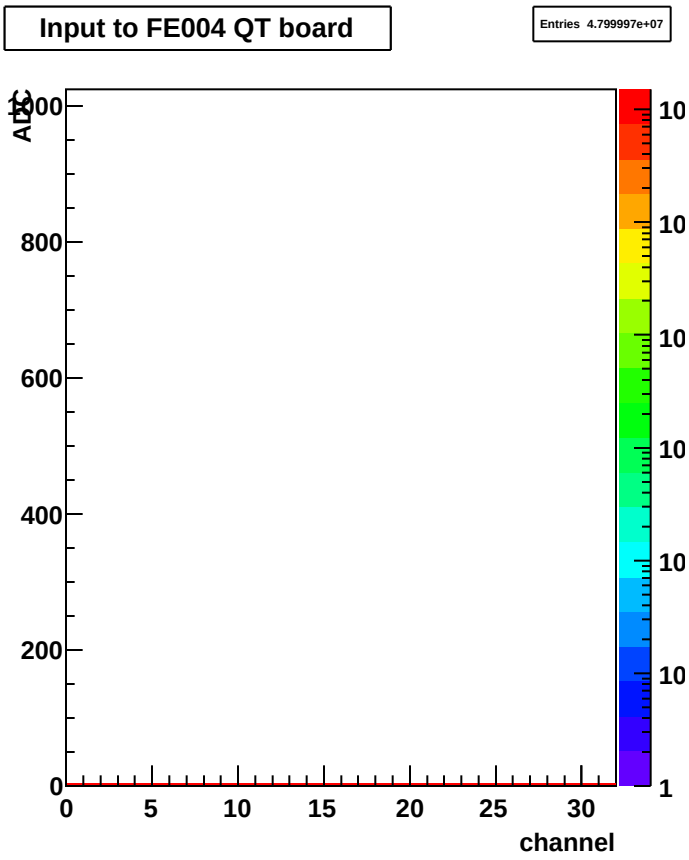

Input to FPD L2 DSM
Entries 131139
HT bits - simulated
9181
1880
2226
40481
72109
2435
2827
SMALL
LARGE-S
LARGE-N

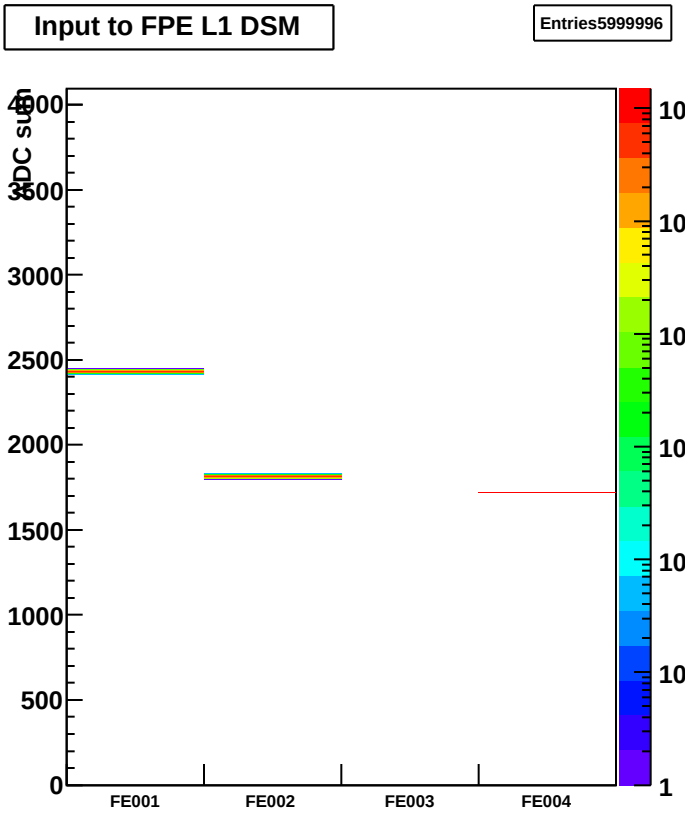

Input to FPD L2 DSM
Entries 8999994
jet patch sum (no FMS-LED)
0
20
40
60
80
100
120
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5
10^6


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
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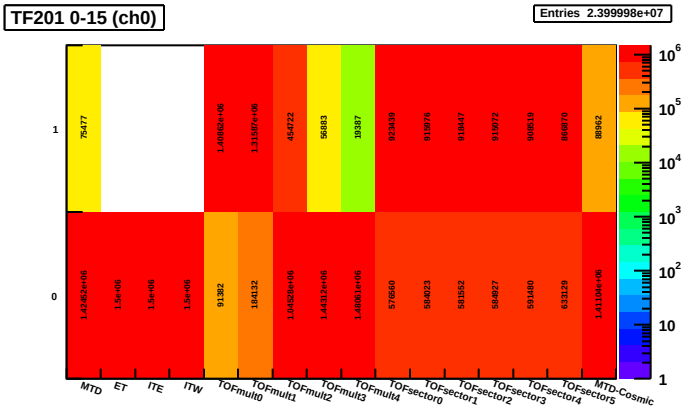
TF201 0-15 (ch0)



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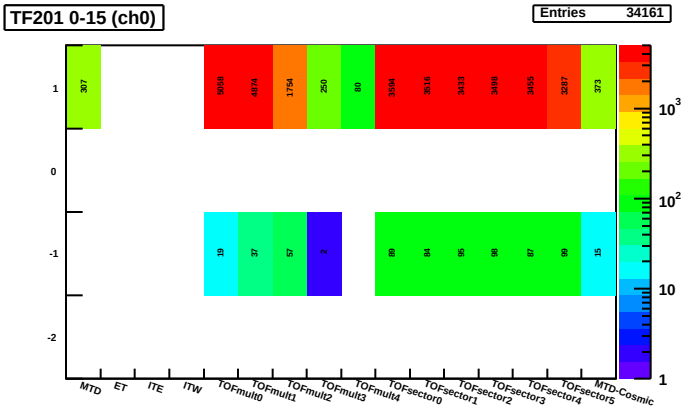

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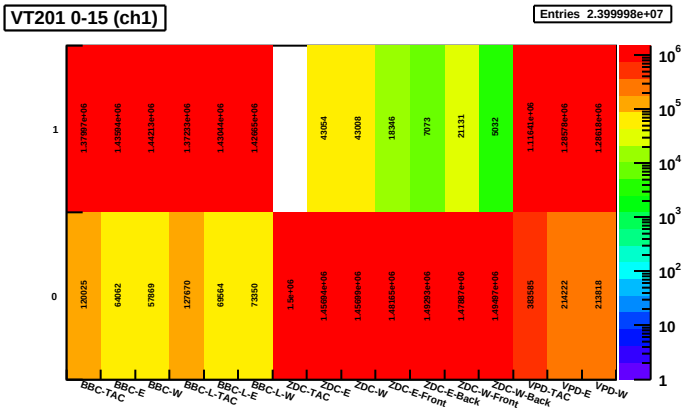

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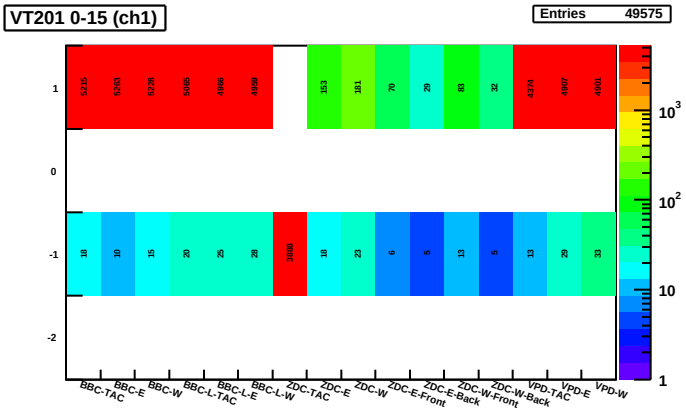

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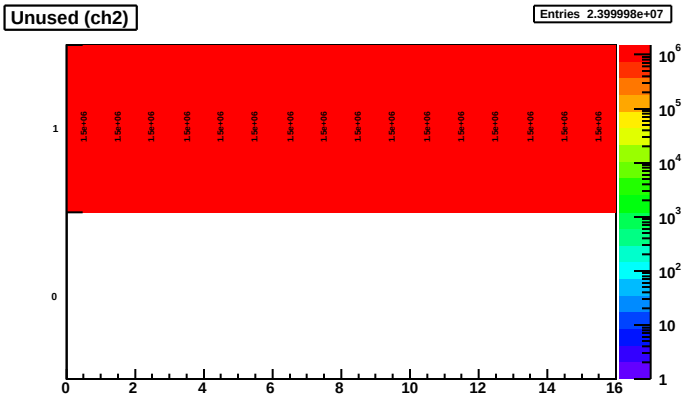

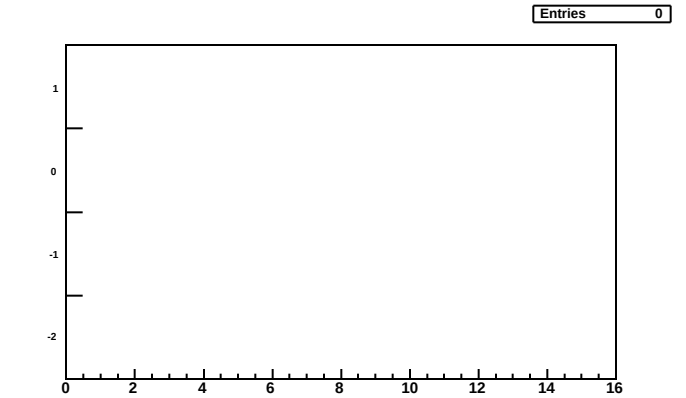

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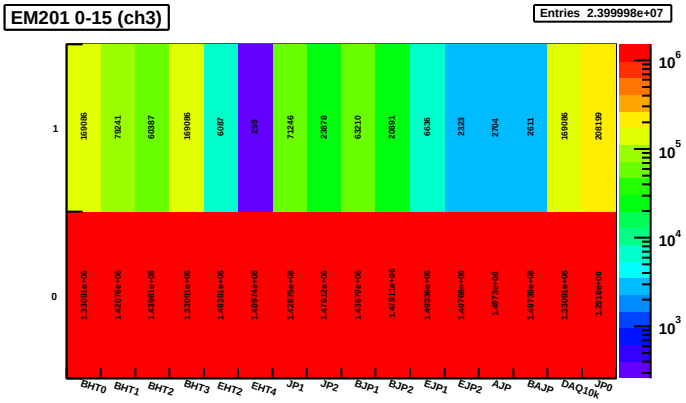

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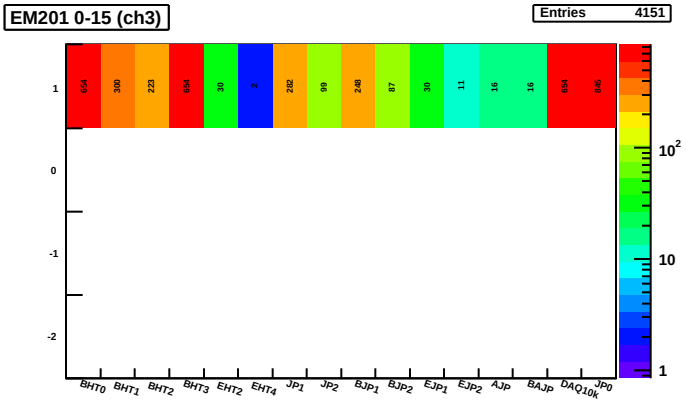
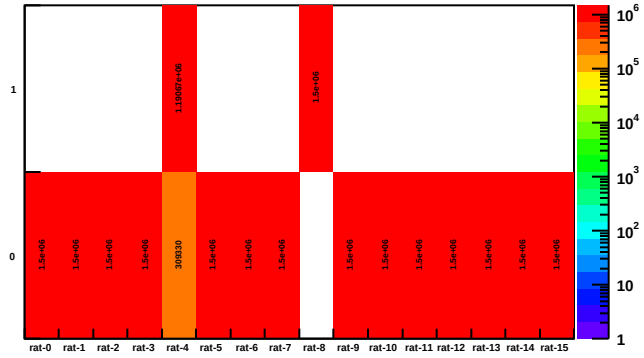
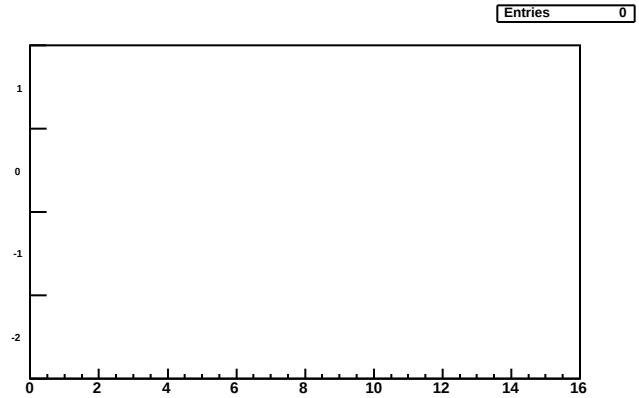


RAT board (ch4)





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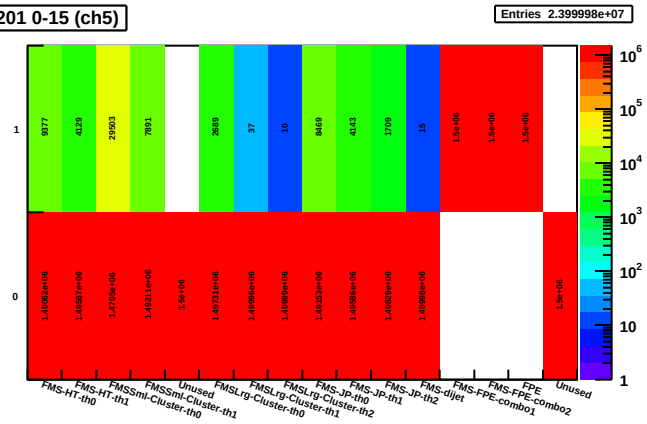

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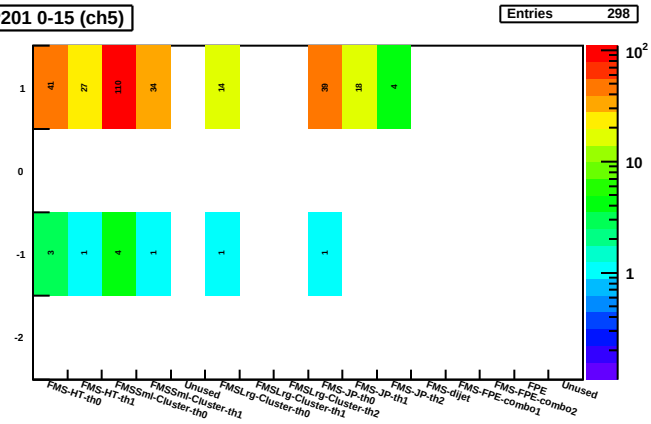

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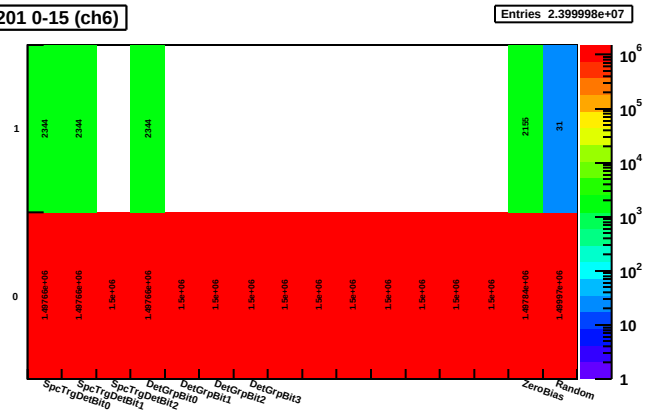

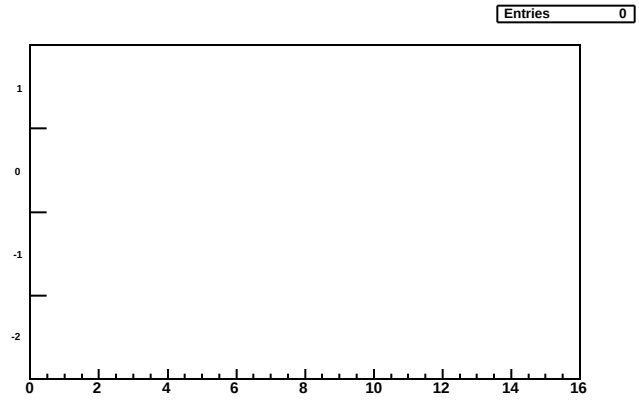
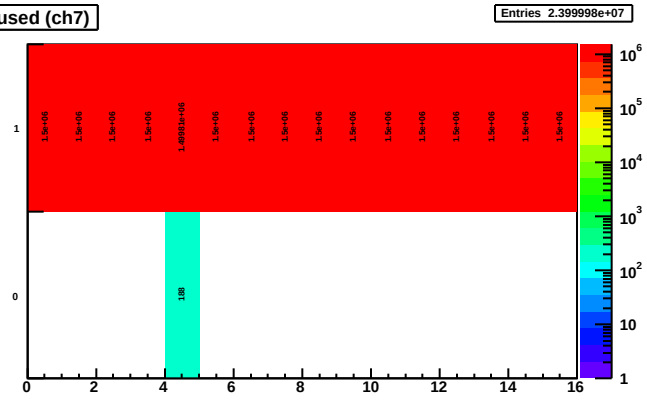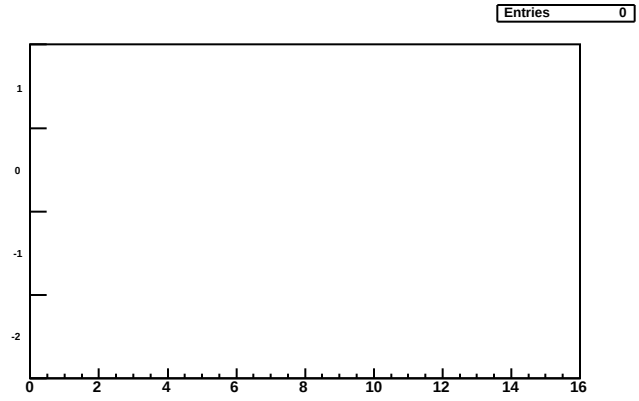
Unused (ch7)