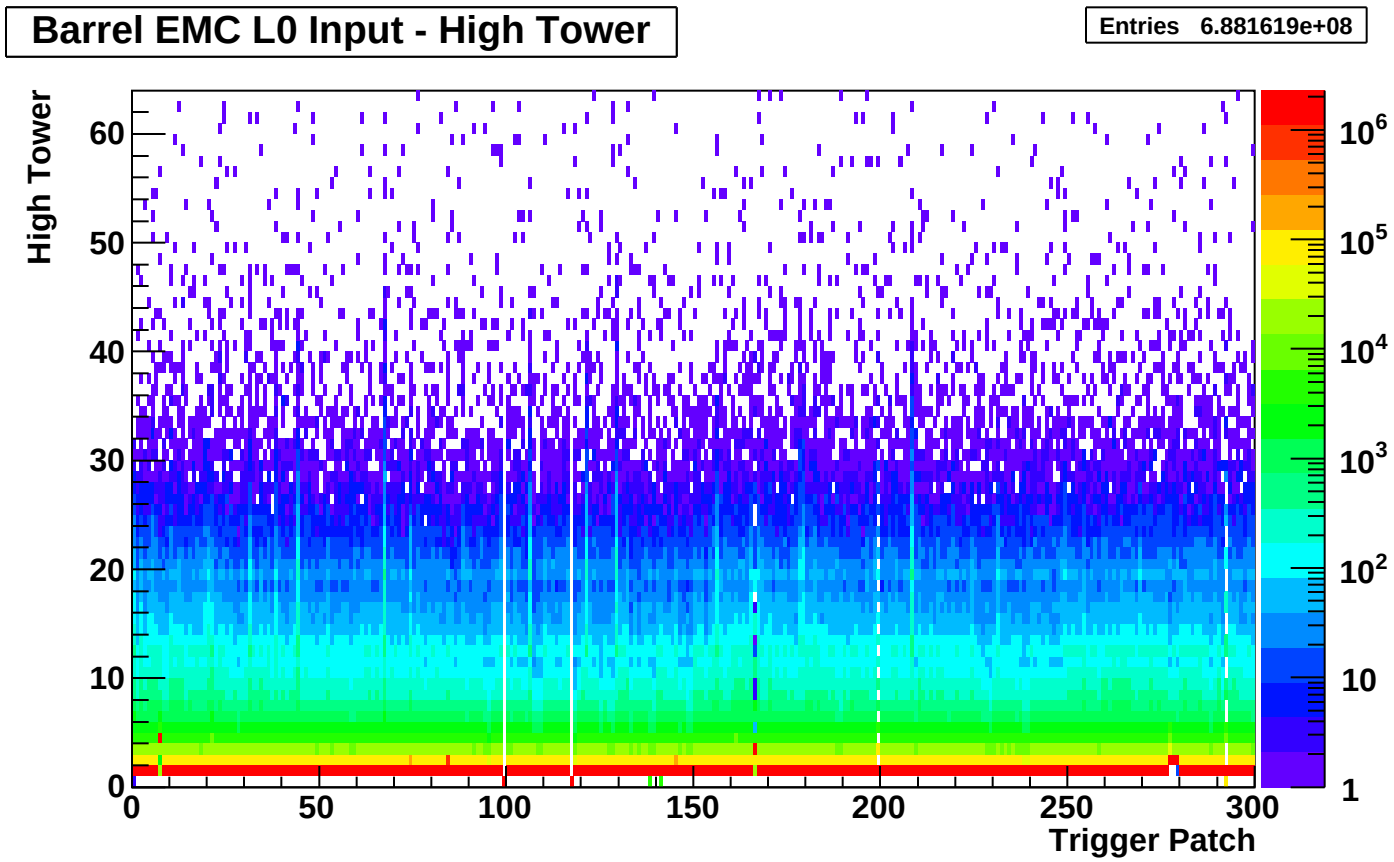
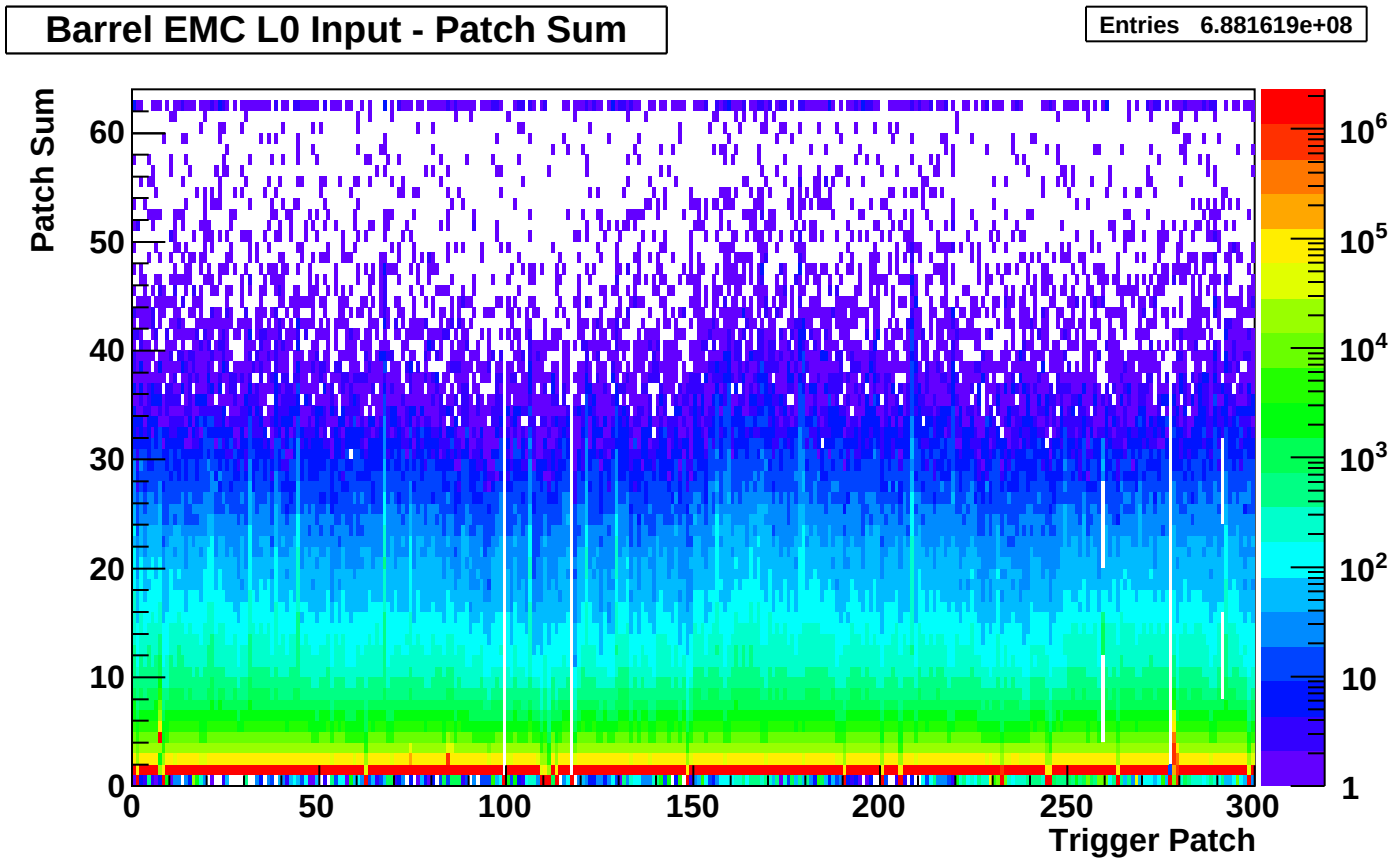
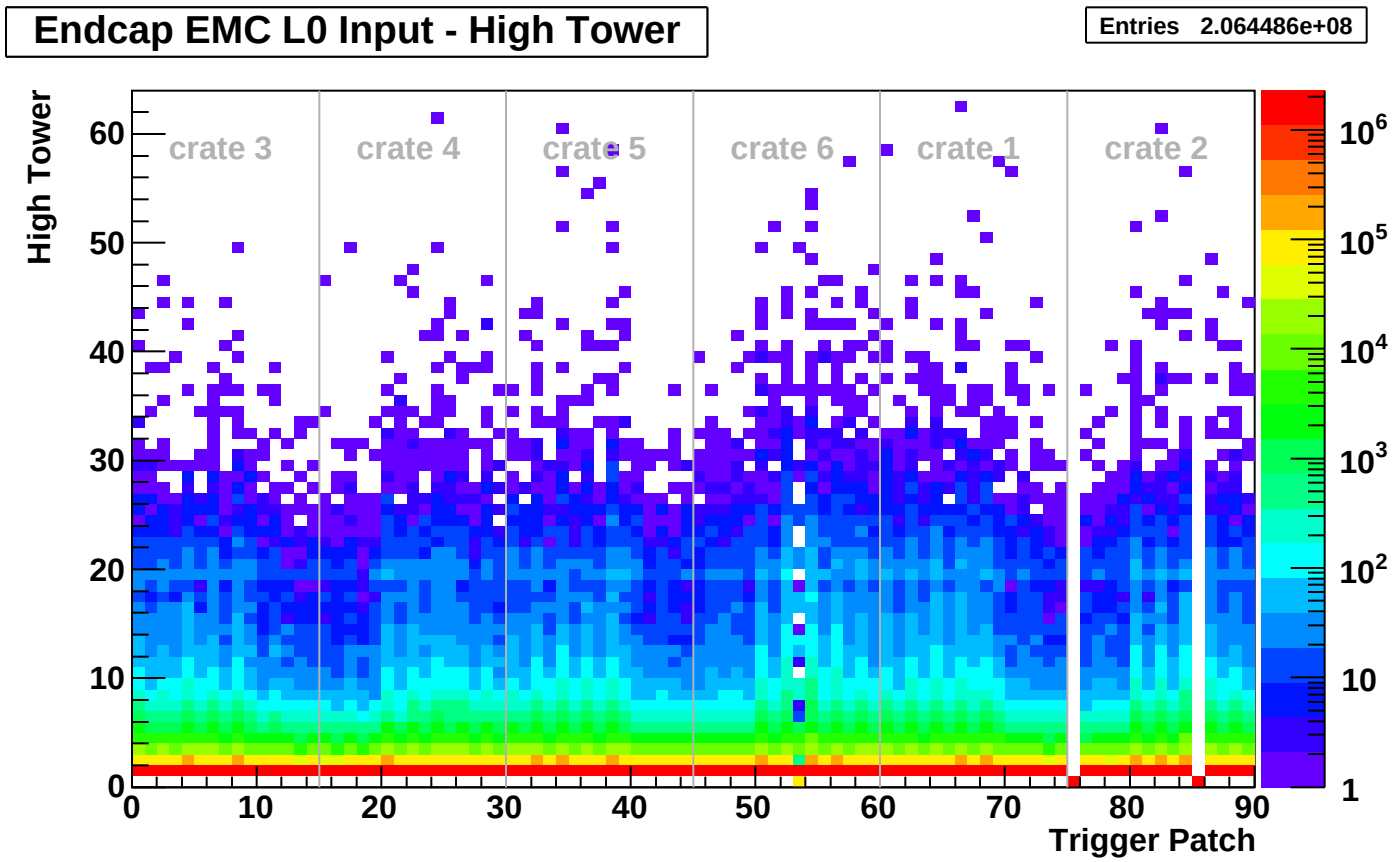
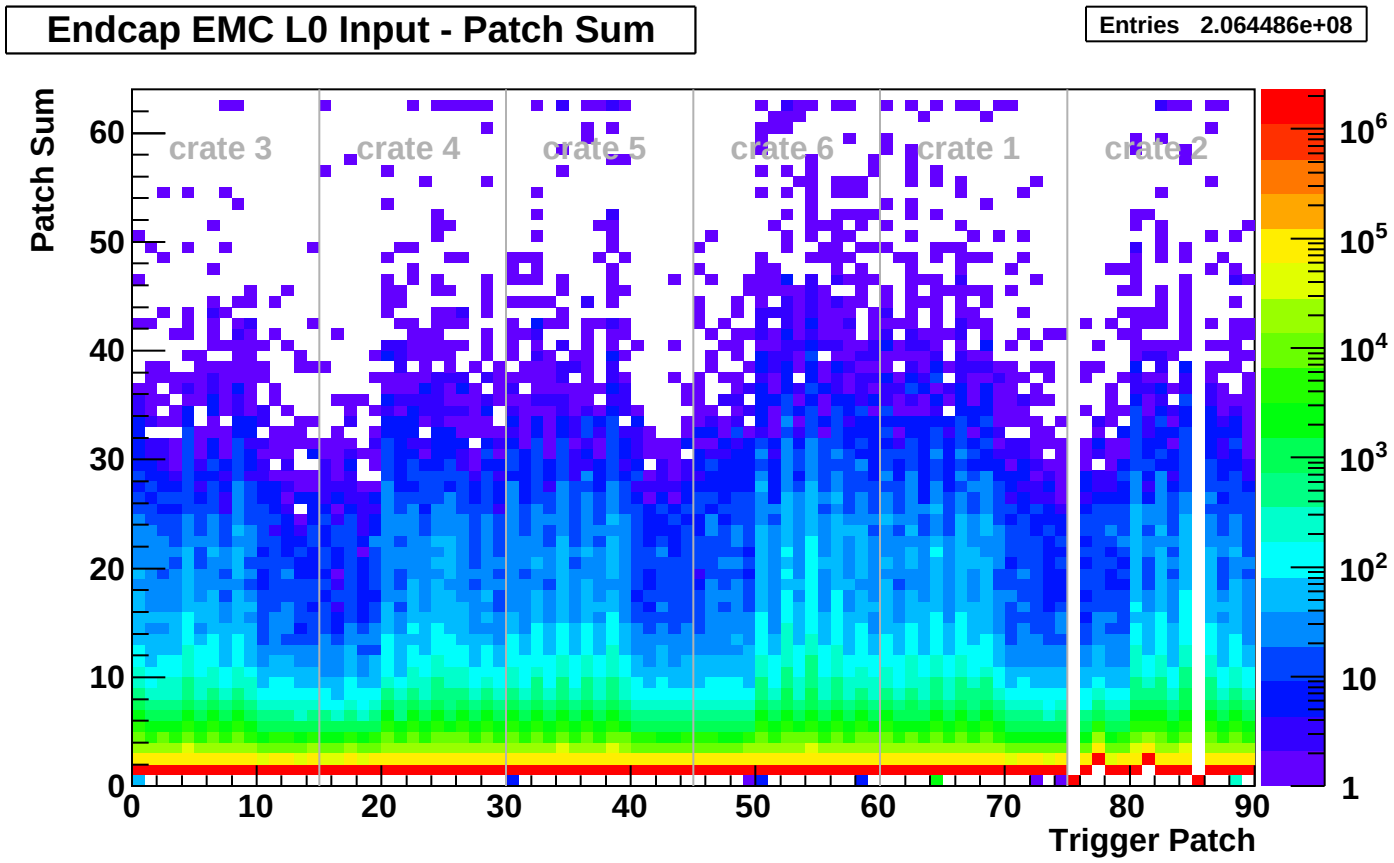
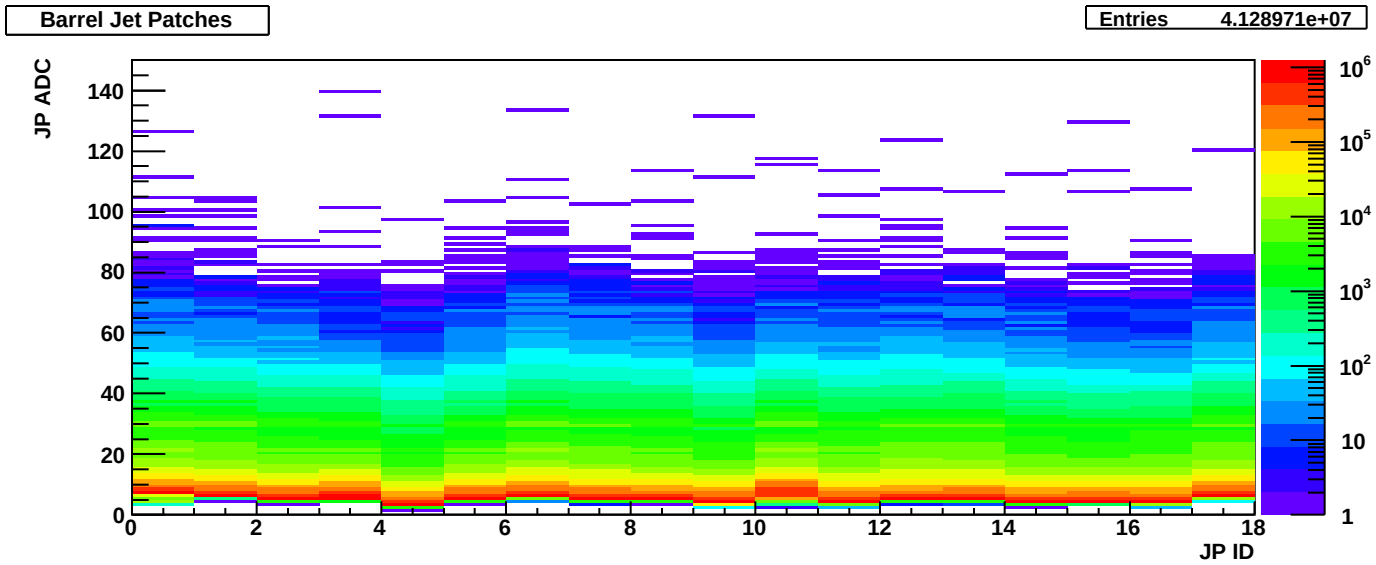
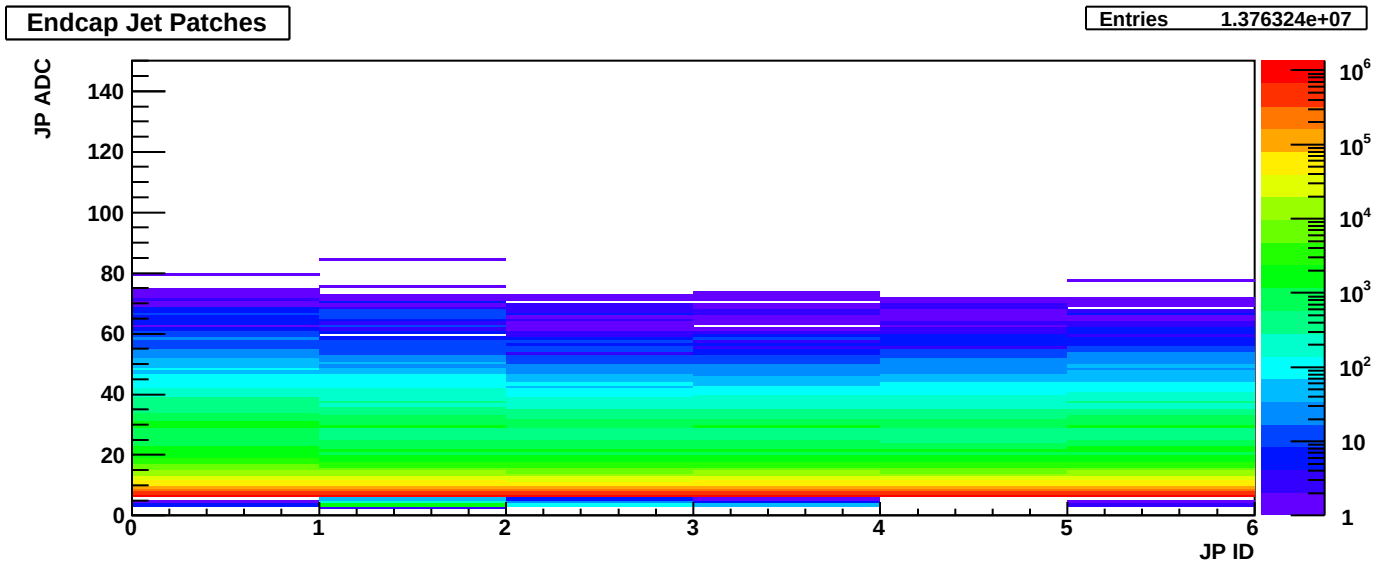

Barrel EMC L0 Input - High Tower
Entries 6.881619e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

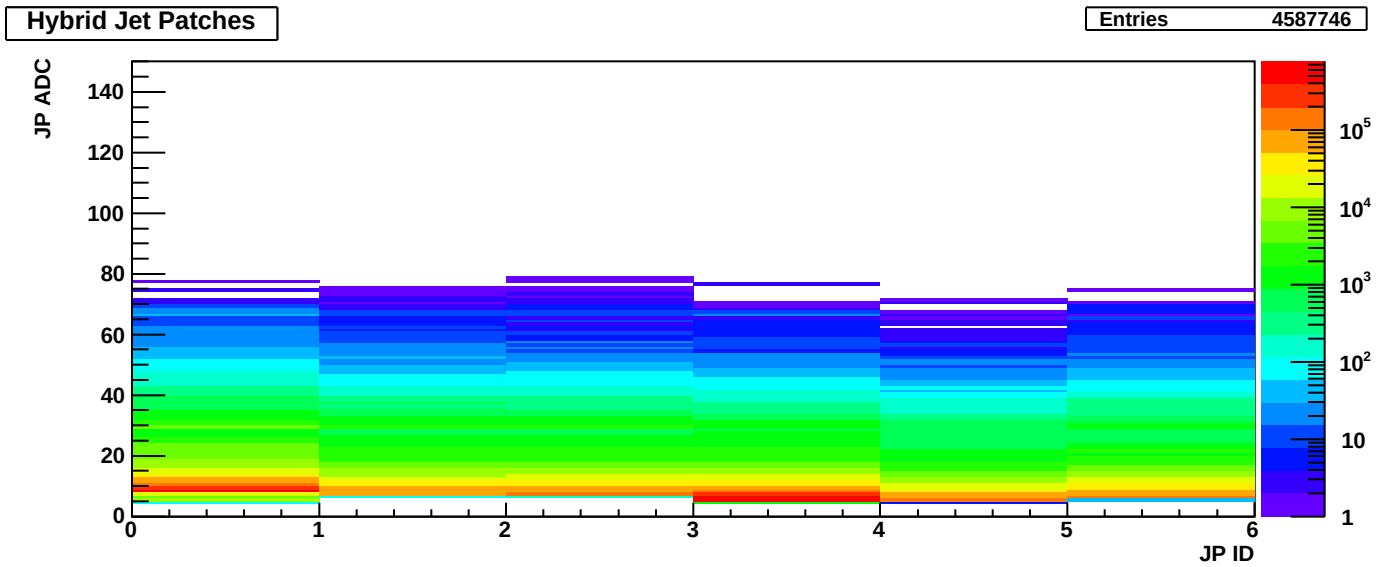

Barrel EMC L0 Input - Patch Sum
Entries 6.881619e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

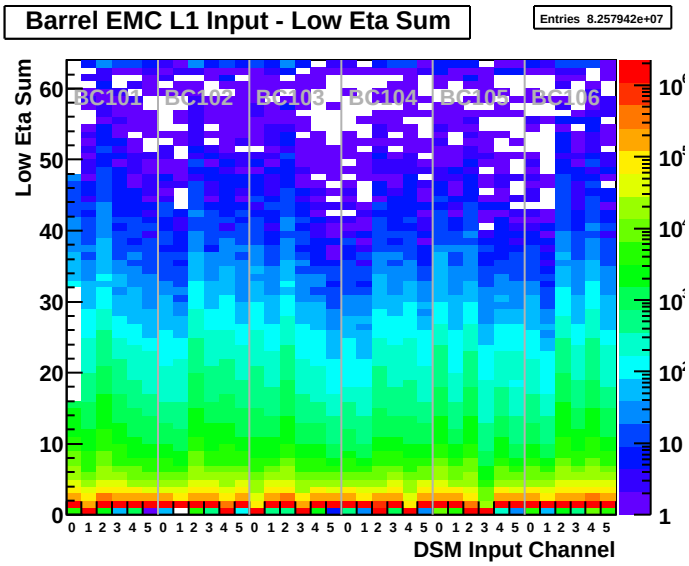

Endcap EMC L0 Input - High Tower
Entries 2.064486e+08
High Tower
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

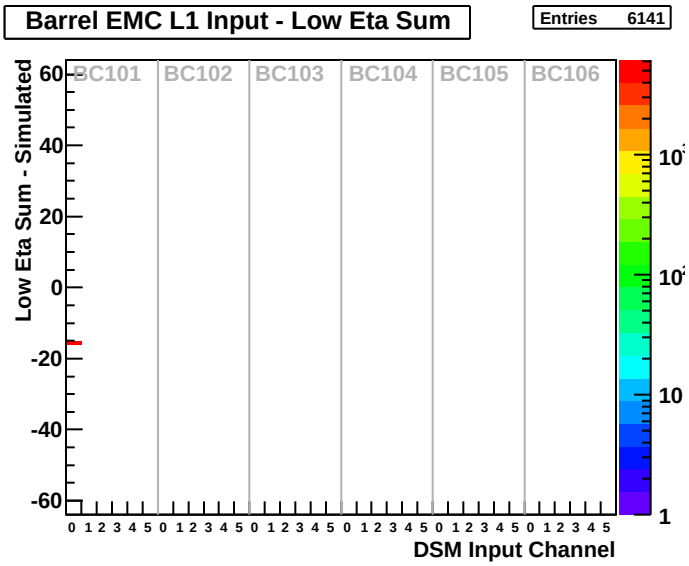

Endcap EMC L0 Input - Patch Sum
Entries 2.064486e+08
Patch Sum
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

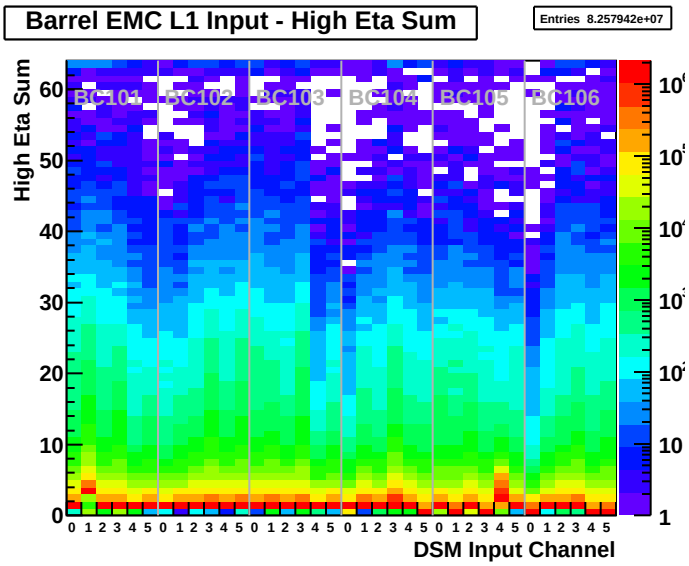

Barrel Jet Patches
Entries 4.128971e+07
JP ADC
JP ID

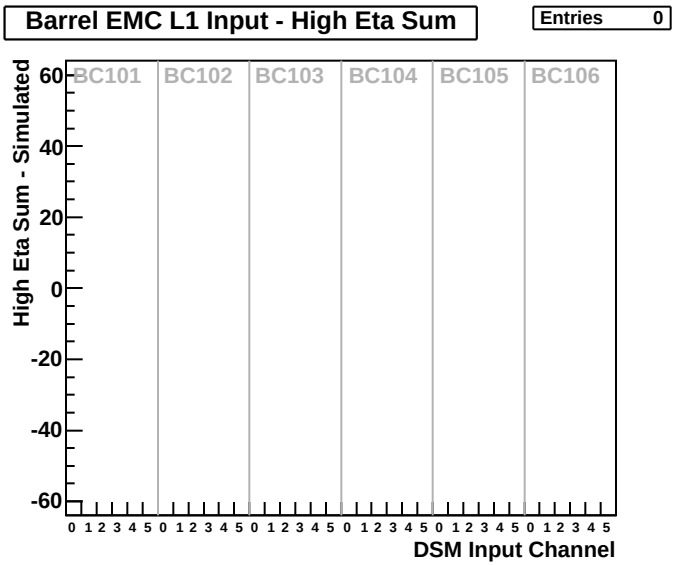

Endcap Jet Patches
Entries 1.376324e+07
JP ADC
JP ID

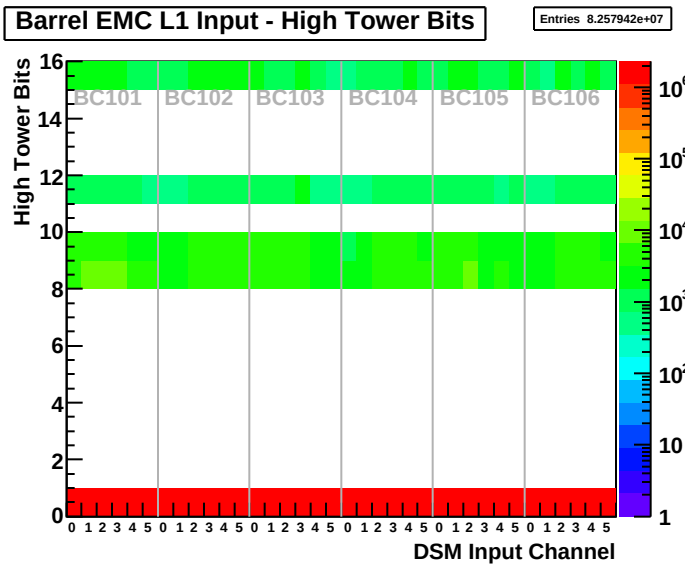

Hybrid Jet Patches
Entries 4587746
JP ADC
JP ID

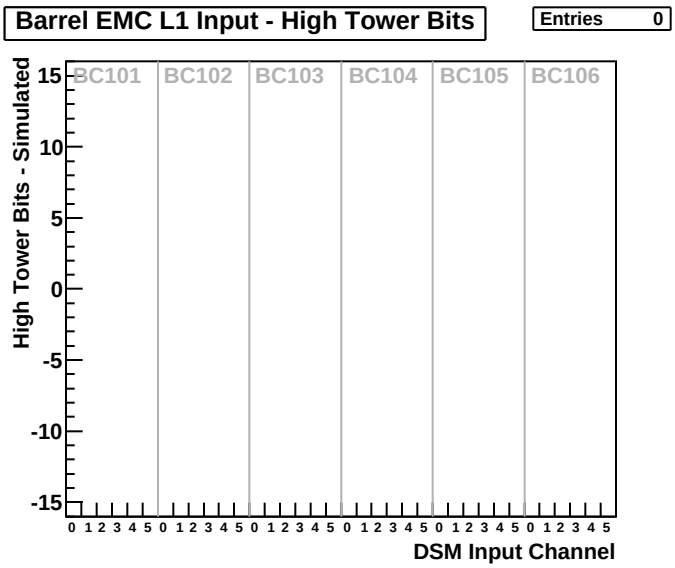

Barrel EMC L1 Input - Low Eta Sum
Entries 8.257942e+07
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

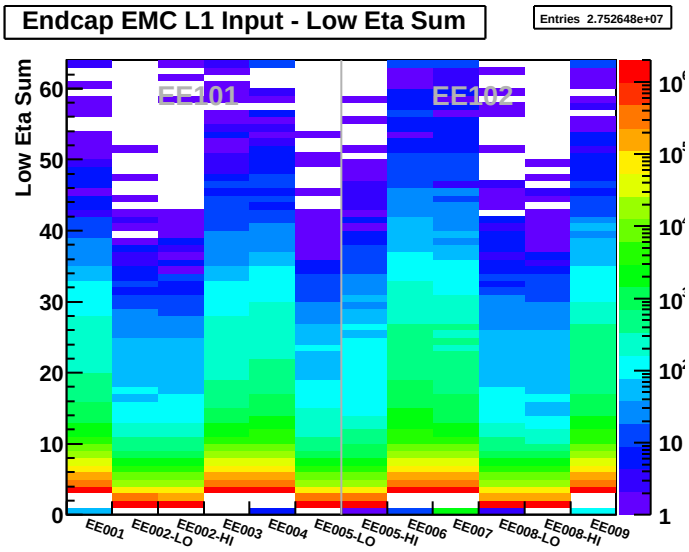

Barrel EMC L1 Input - Low Eta Sum
Entries 6141
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

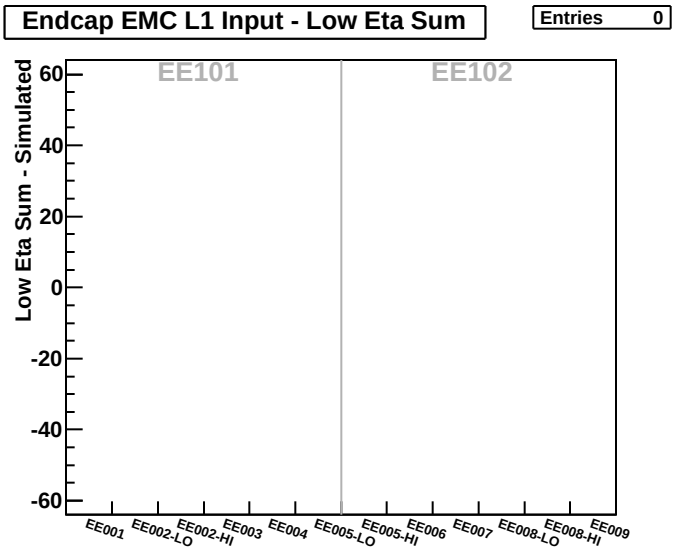

Barrel EMC L1 Input - High Eta Sum
Entries 8.257942e+07
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

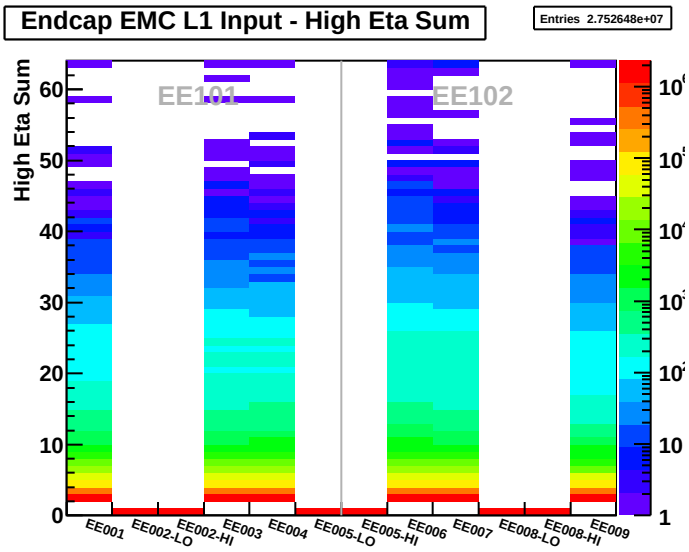

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

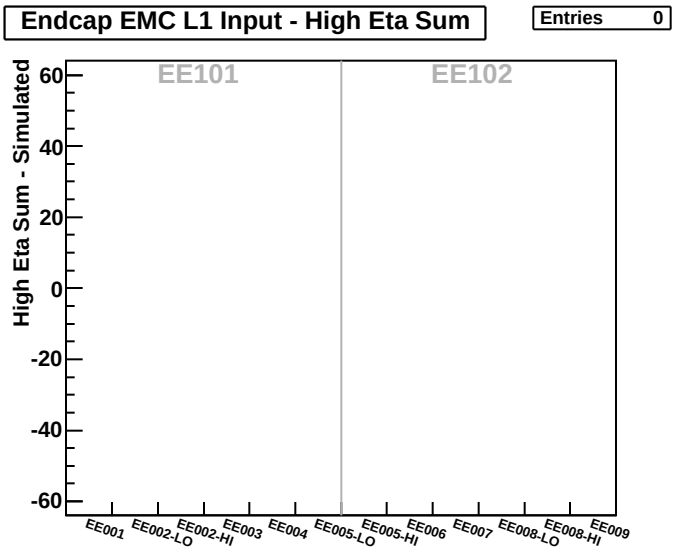

Barrel EMC L1 Input - High Tower Bits
Entries 8.257942e+07
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

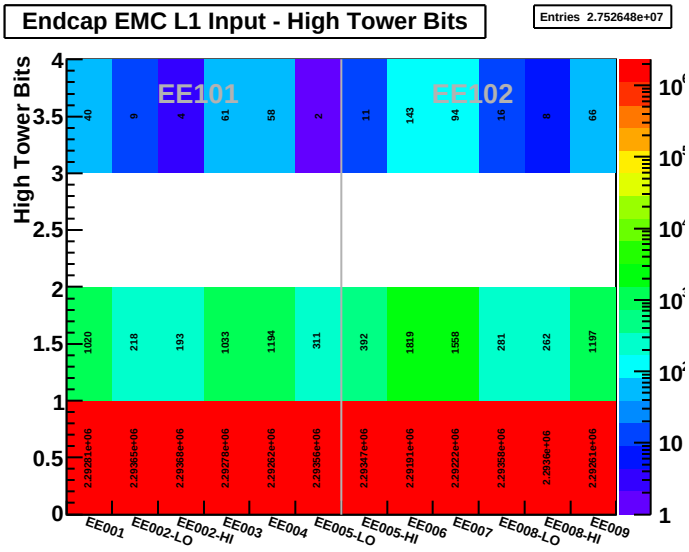

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

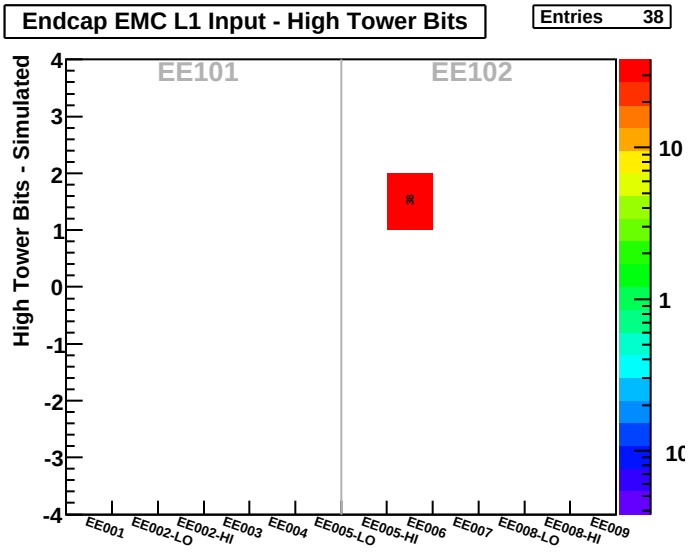

Endcap EMC L1 Input - Low Eta Sum
Entries 2.752648e+07
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

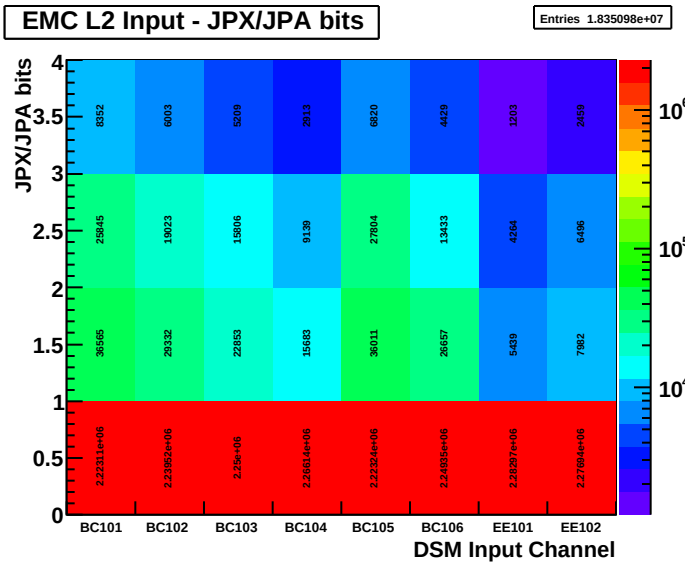

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

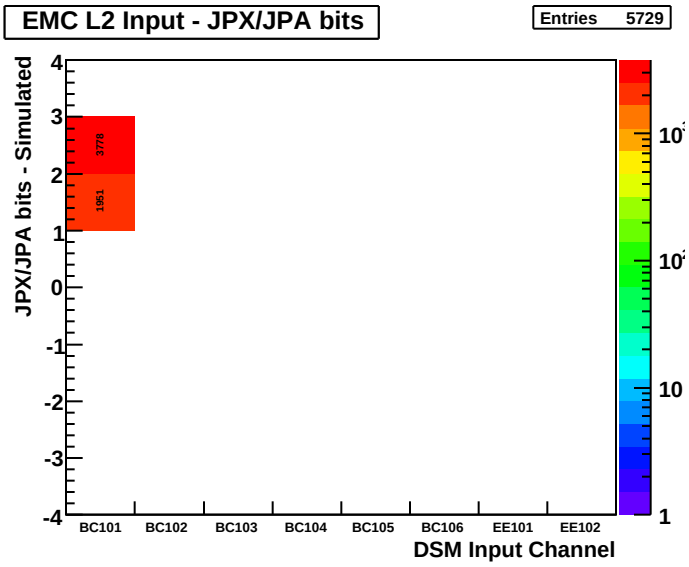

Endcap EMC L1 Input - High Eta Sum
Entries 2.752648e+07
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

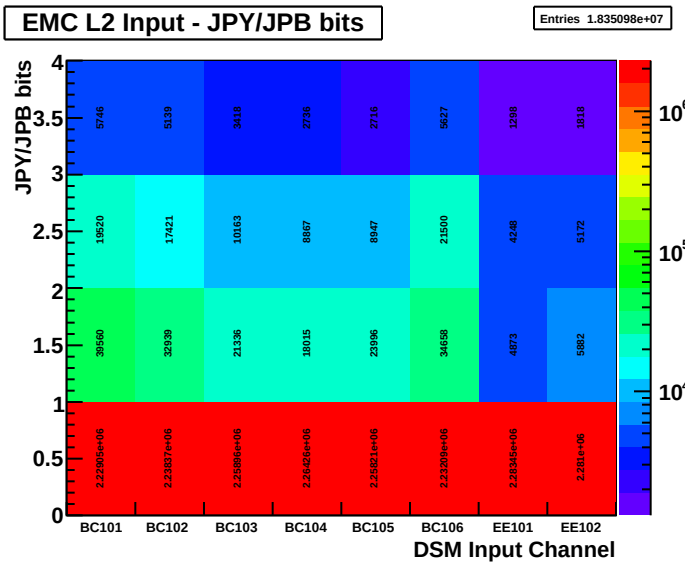

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

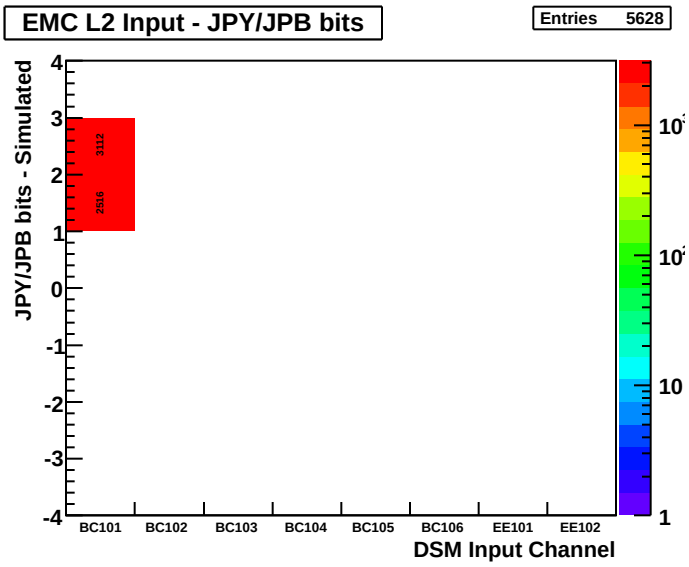

Endcap EMC L1 Input - High Tower Bits
Entries 2.752648e+07
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

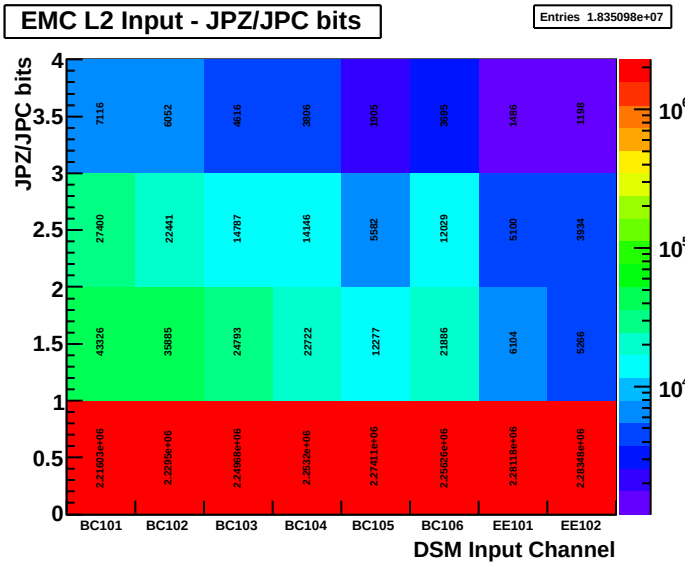

Endcap EMC L1 Input - High Tower Bits
Entries 38
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

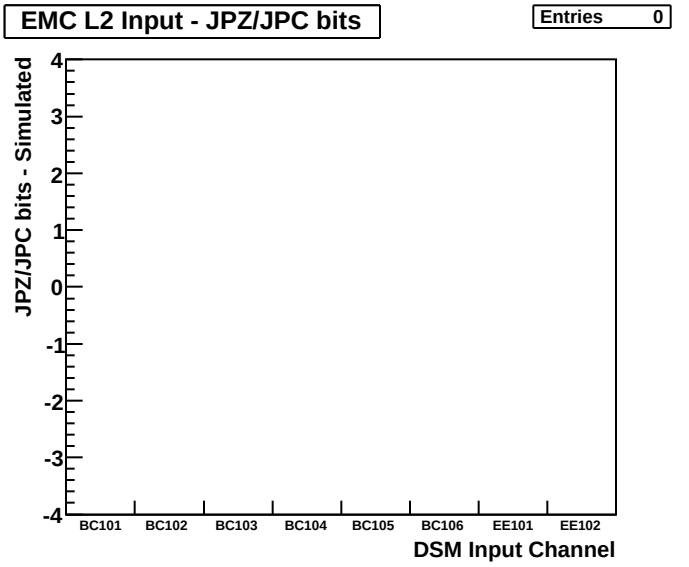

EMC L2 Input - JPX/JPA bits
Entries 1.835098e+07
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

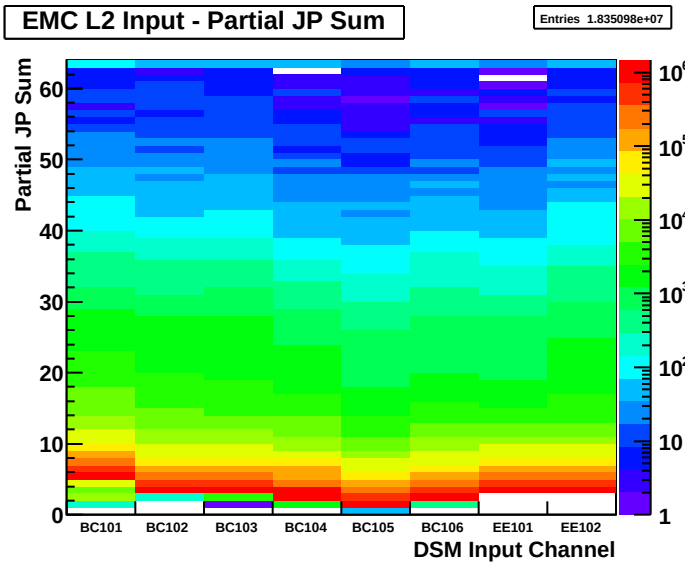

EMC L2 Input - JPX/JPA bits
Entries 5729
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

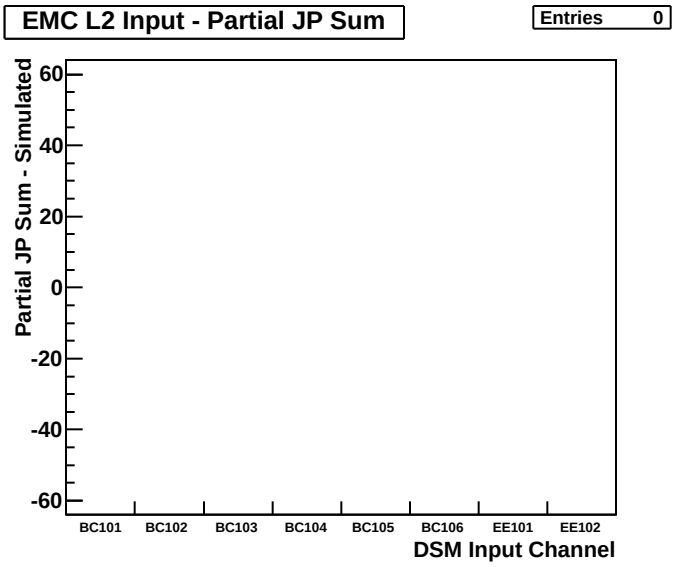

EMC L2 Input - JPY/JPB bits
Entries 1.835098e+07
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

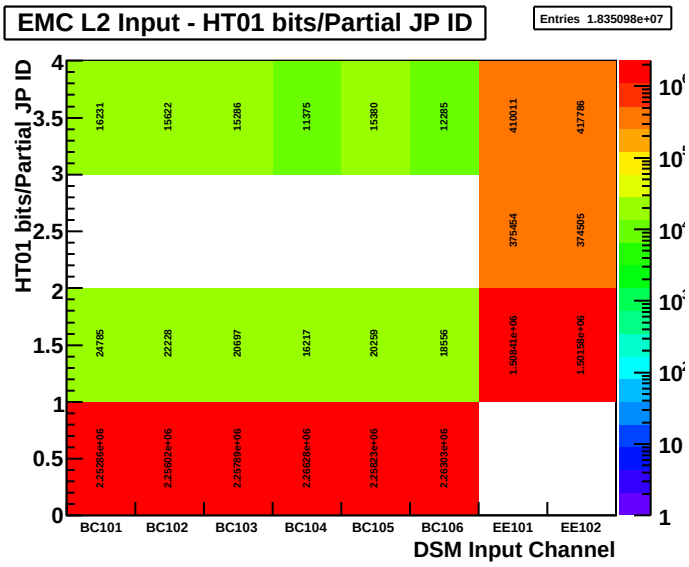

EMC L2 Input - JPY/JPB bits
Entries 5628
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

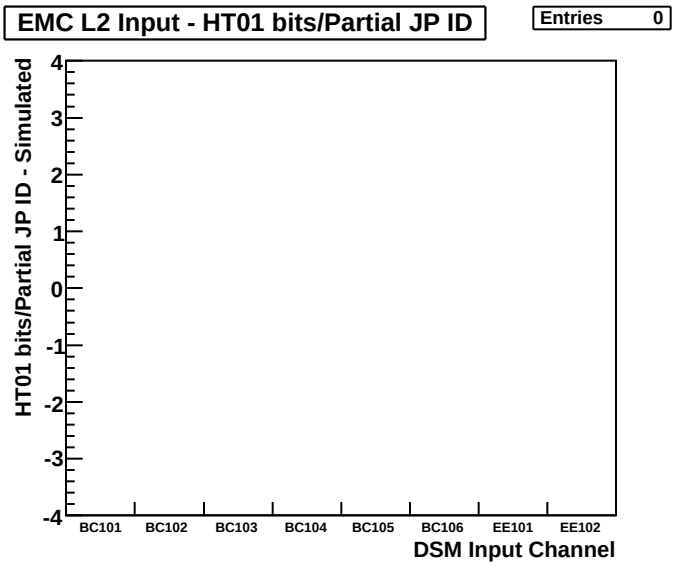

EMC L2 Input - JPZ/JPC bits
Entries 1.835098e+07
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

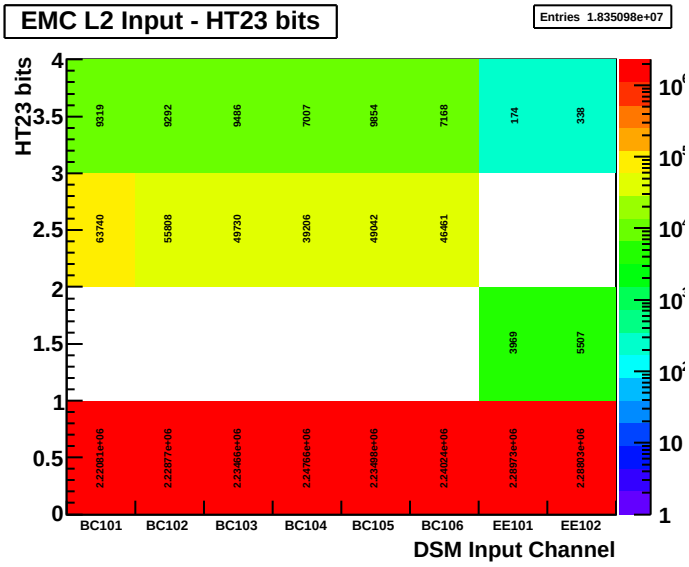

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

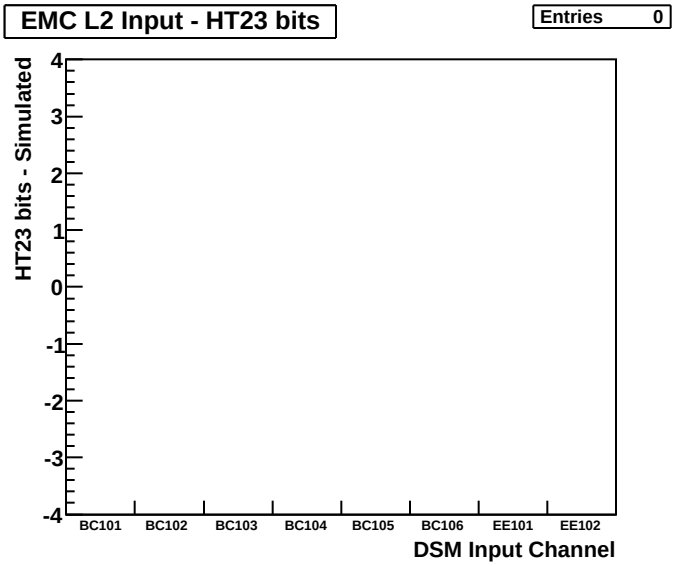

EMC L2 Input - Partial JP Sum
Entries 1.835098e+07
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

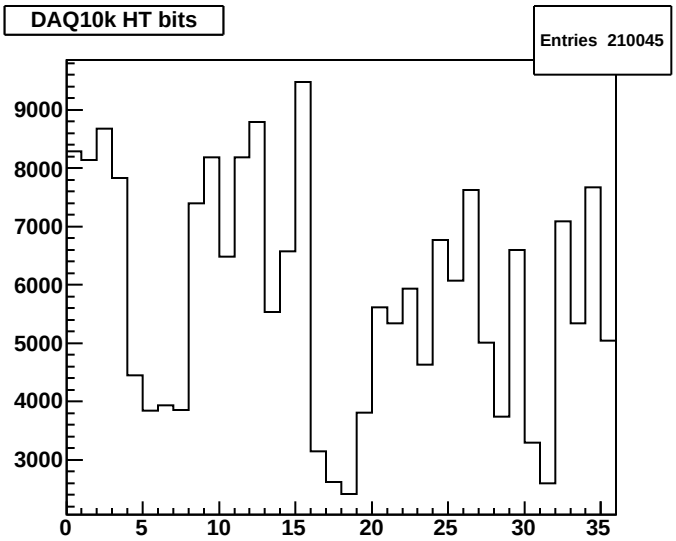

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

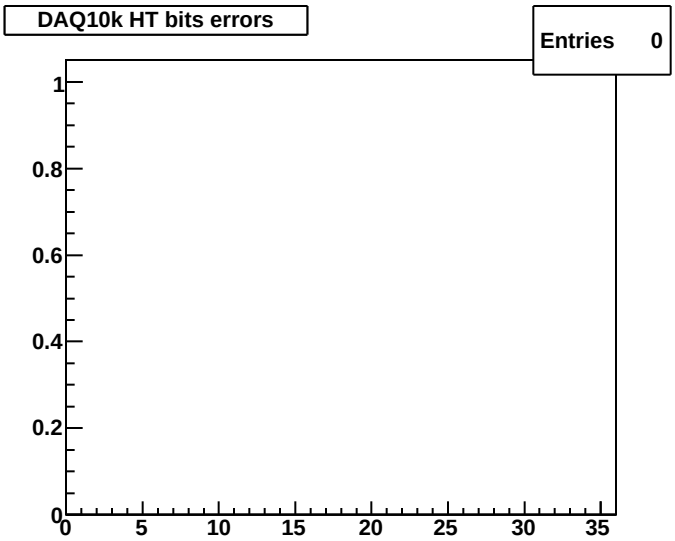

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1.835098e+07
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

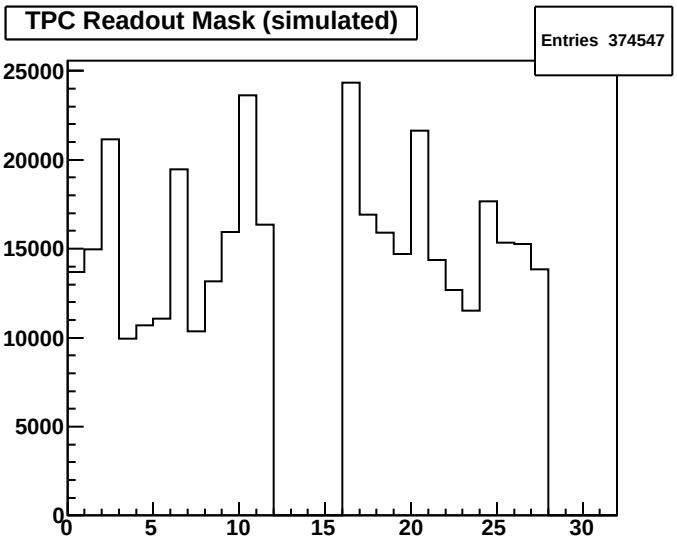

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

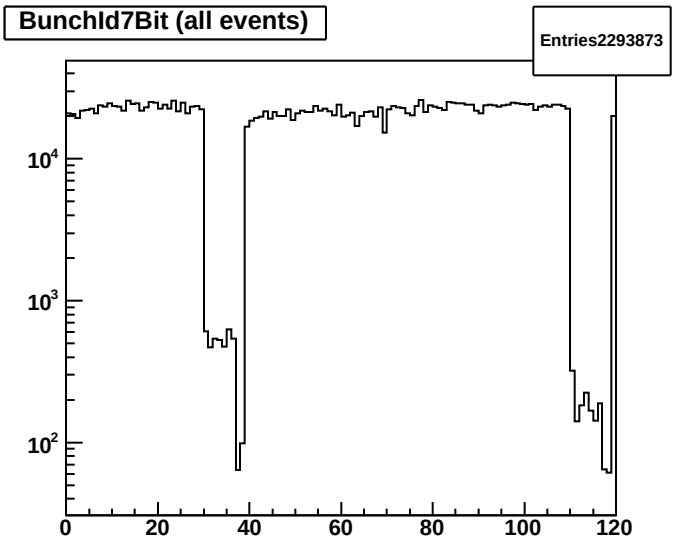

EMC L2 Input - HT23 bits
Entries 1.835098e+07
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

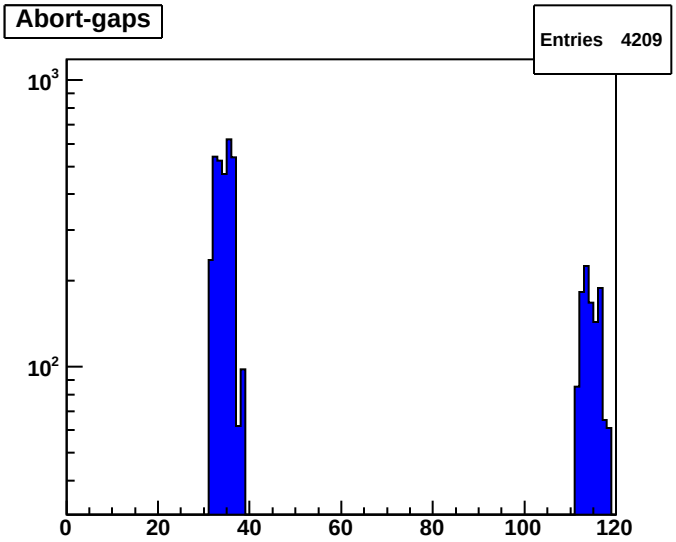

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

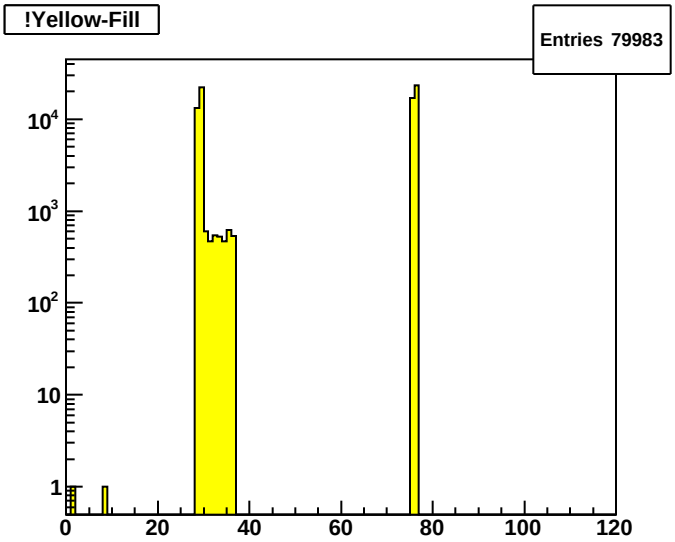

DAQ10k HT bits
Entries 210045
9000
8000
7000
6000
5000
4000
3000
0 5 10 15 20 25 30 35

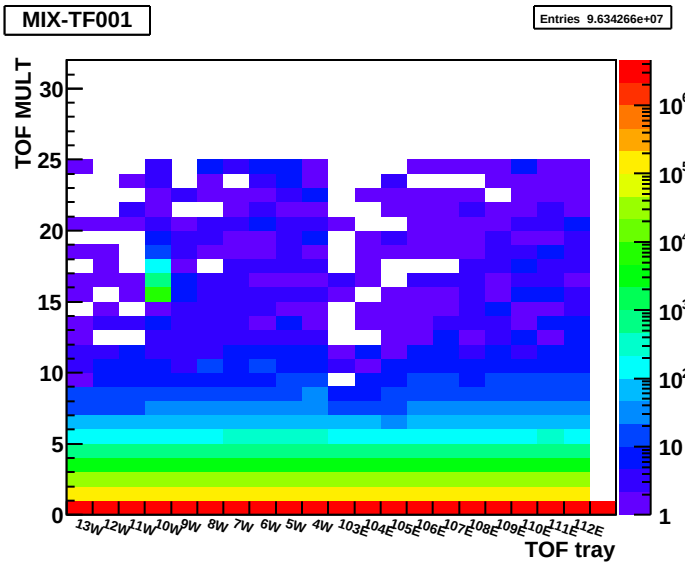

DAQ10k HT bits errors
Entries 0
1
0.8
0.6
0.4
0.2
0
0 5 10 15 20 25 30 35

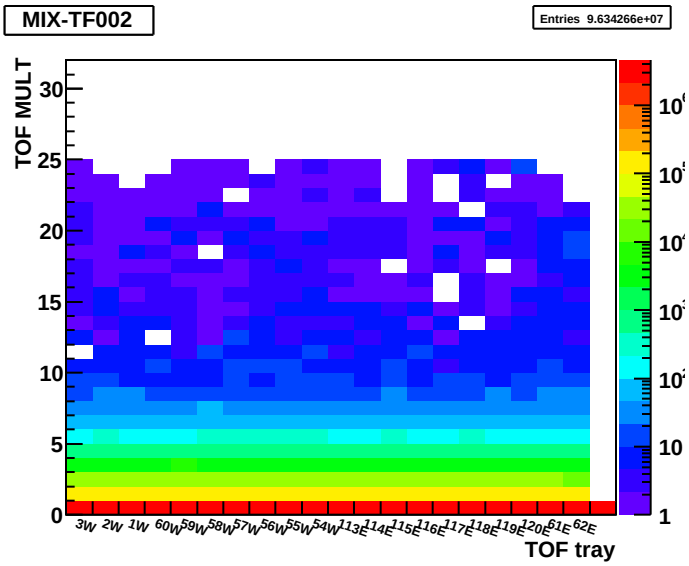

TPC Readout Mask (simulated)
Entries 374547
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30

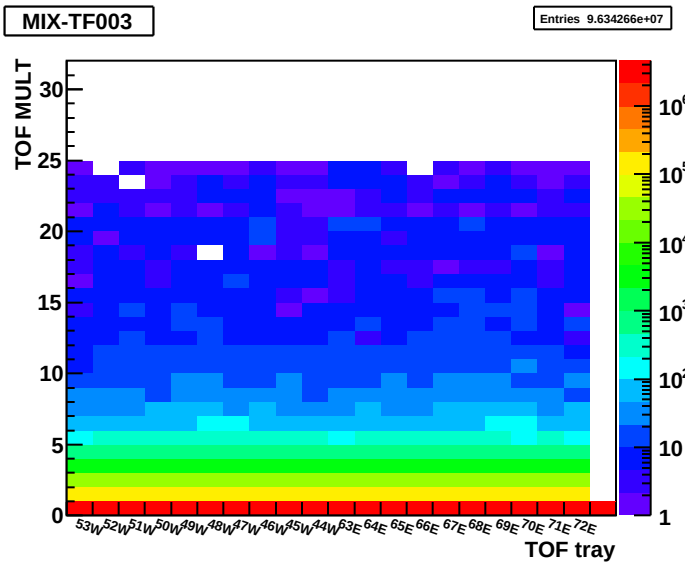

BunchId7Bit (all events)
Entries2293873
10^4
10^3
10^2
0 20 40 60 80 100 120

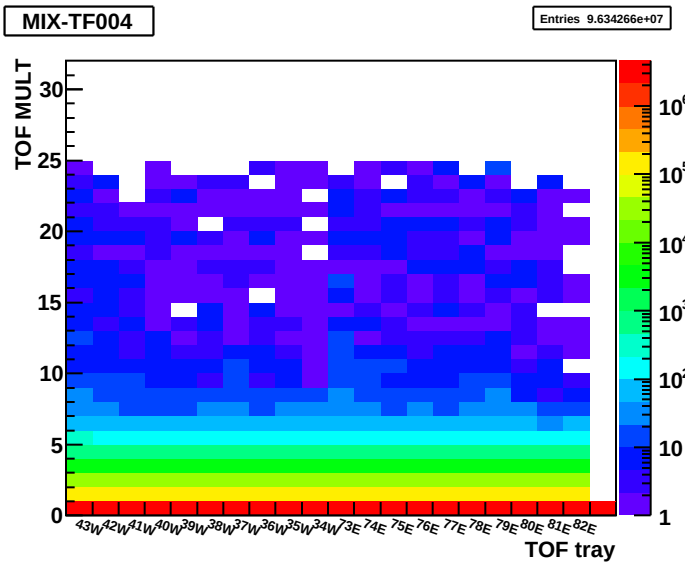

Abort-gaps
Entries 4209
10^3
10^2
0 20 40 60 80 100 120

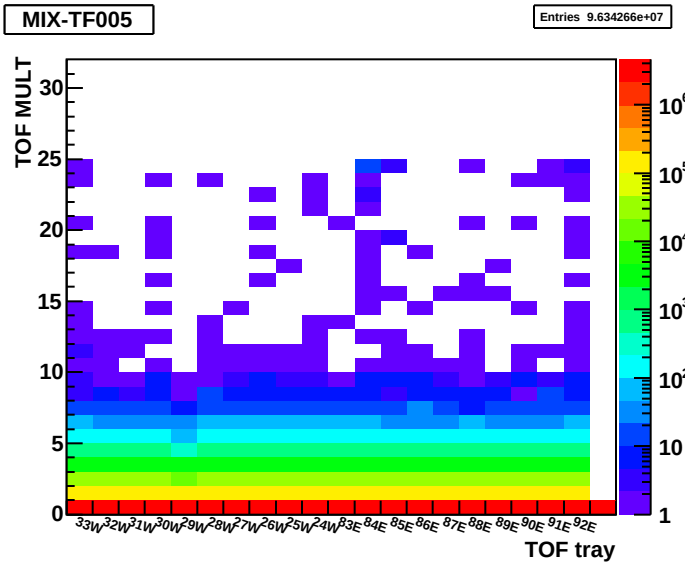

!Yellow-Fill
Entries 79983
10^4
10^3
10^2
10
1
0 20 40 60 80 100 120

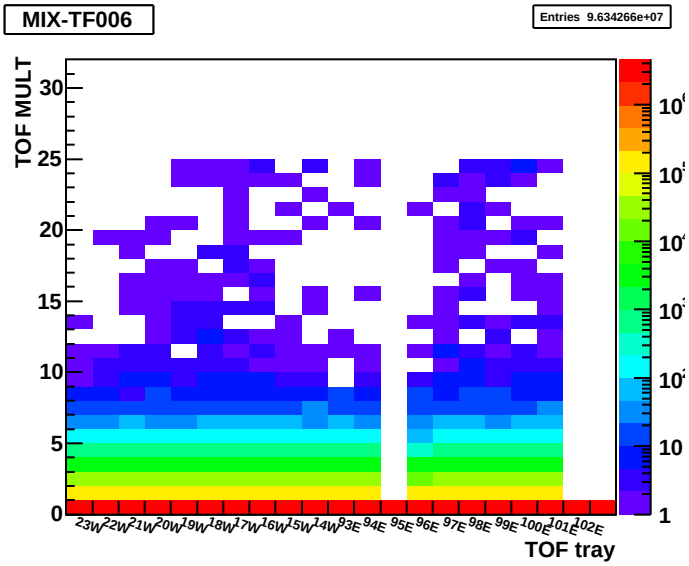

MIX-TF001
Entries 9.634266e+07
TOF MULT
TOF tray

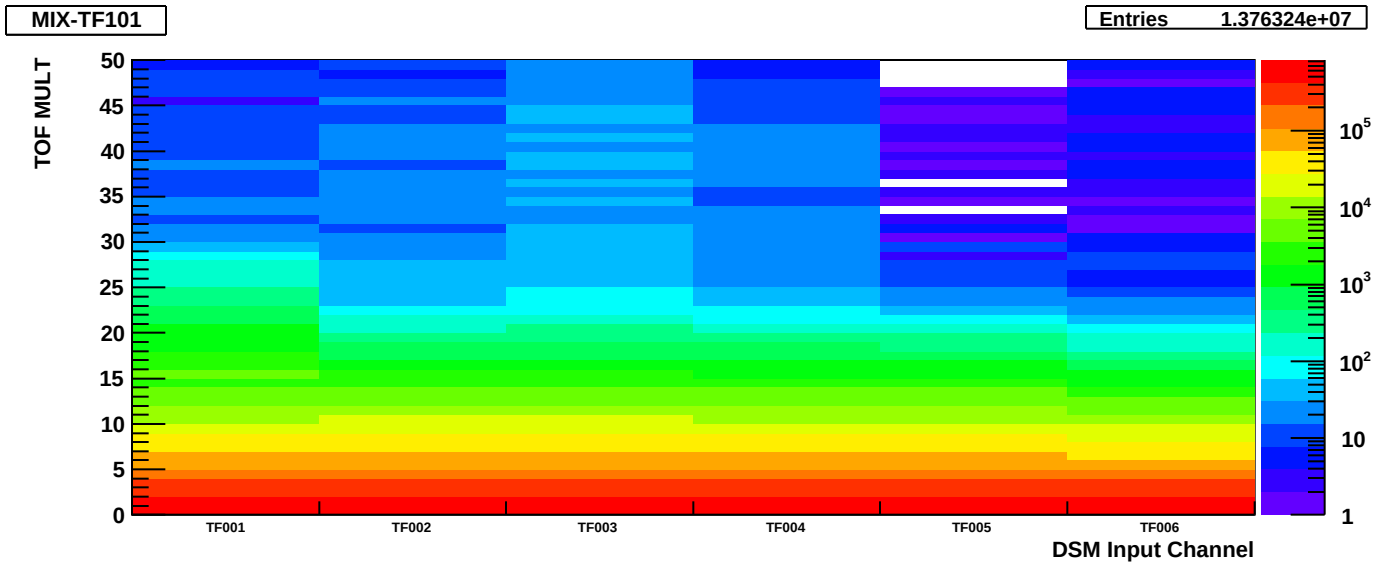

MIX-TF002
Entries 9.634266e+07
TOF MULT
TOF tray

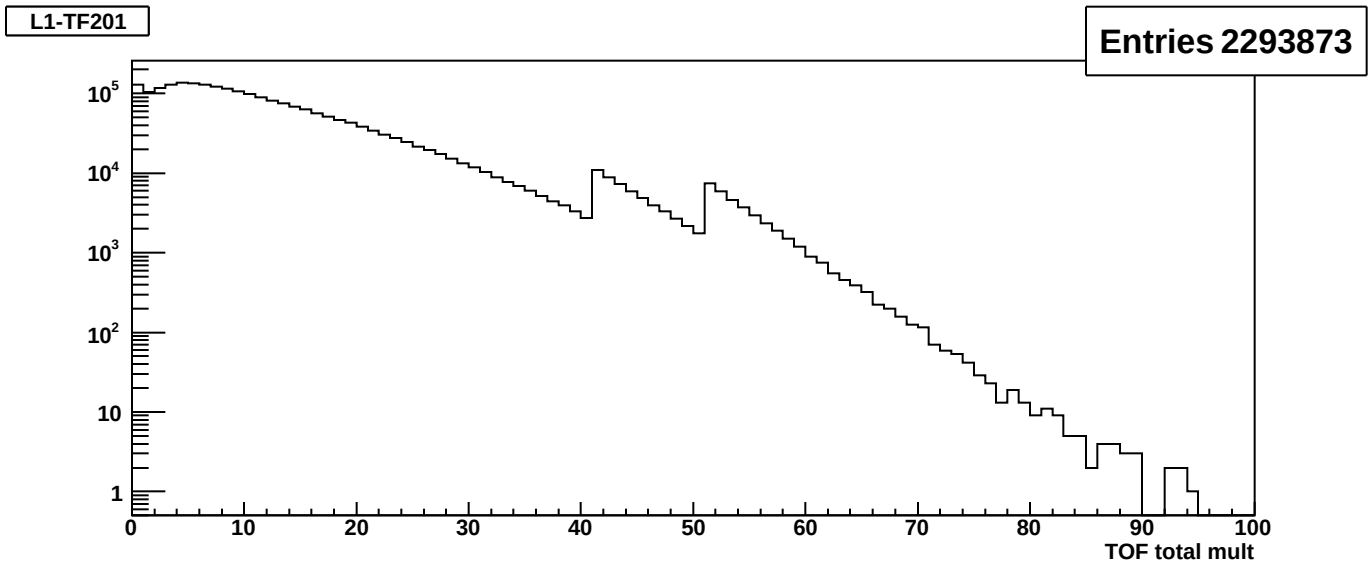

MIX-TF003
Entries 9.634266e+07
TOF MULT
TOF tray

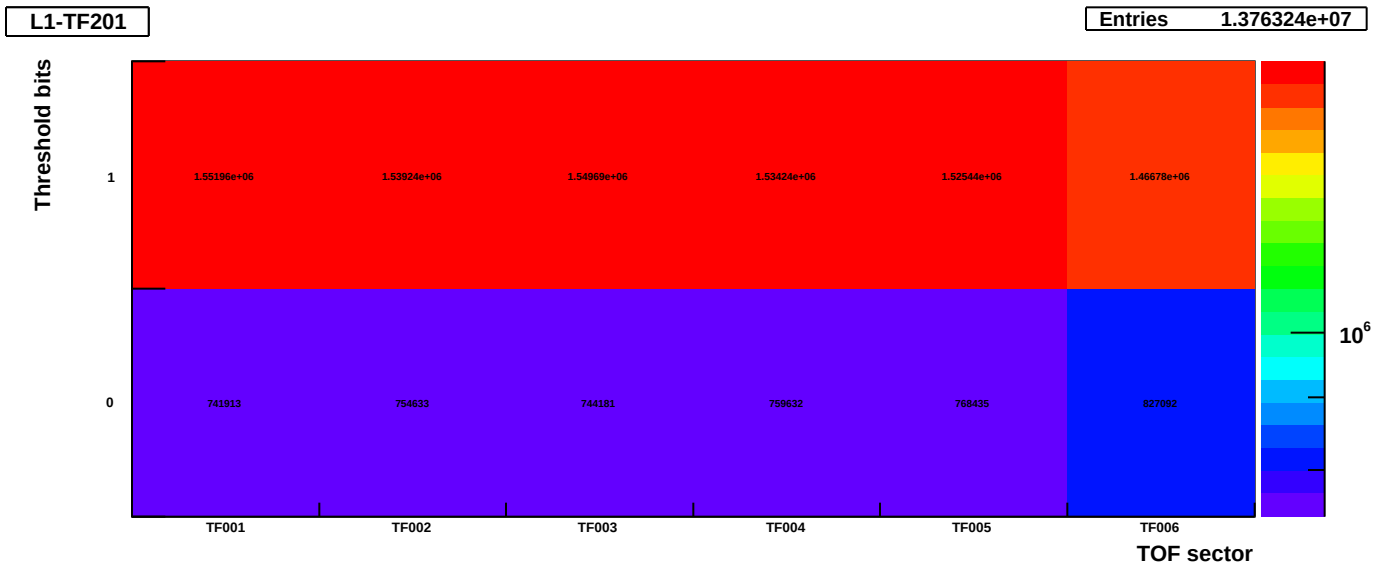

MIX-TF004
Entries 9.634266e+07
TOF MULT
TOF tray

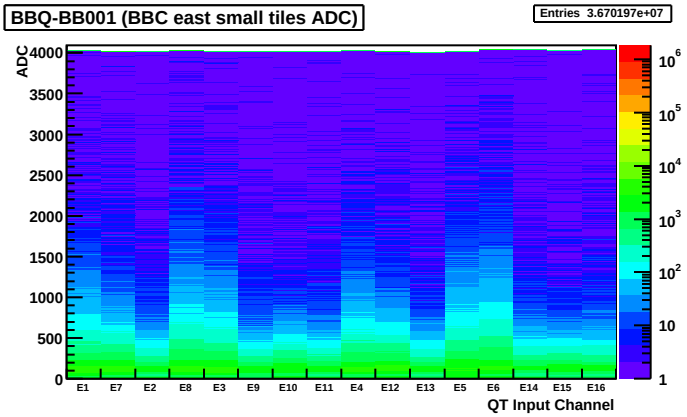

MIX-TF005
Entries 9.634266e+07
TOF MULT
TOF tray

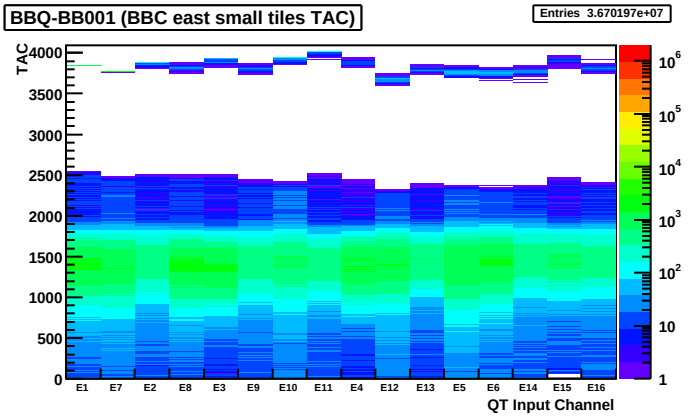

MIX-TF006
Entries 9.634266e+07
TOF MULT
TOF tray

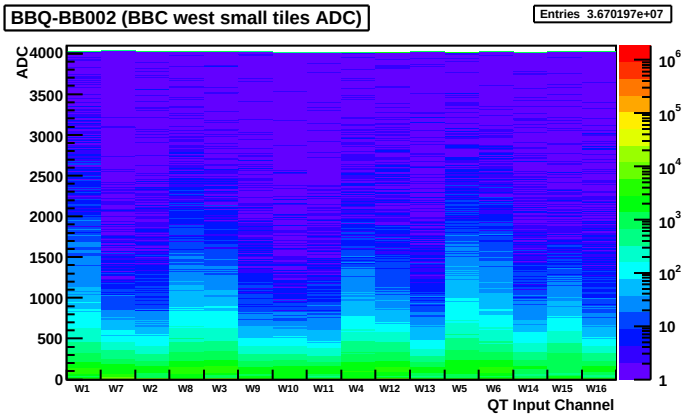

MIX-TF101
Entries 1.376324e+07
TOF MULT
50
45
40
35
30
25
20
15
10
5
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

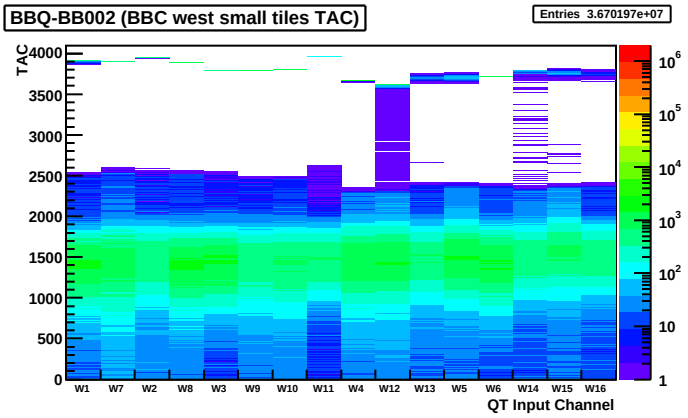

L1-TF201
Entries 2293873
10^5
10^4
10^3
10^2
10
1
0
10
20
30
40
50
60
70
80
90
100
TOF total mult

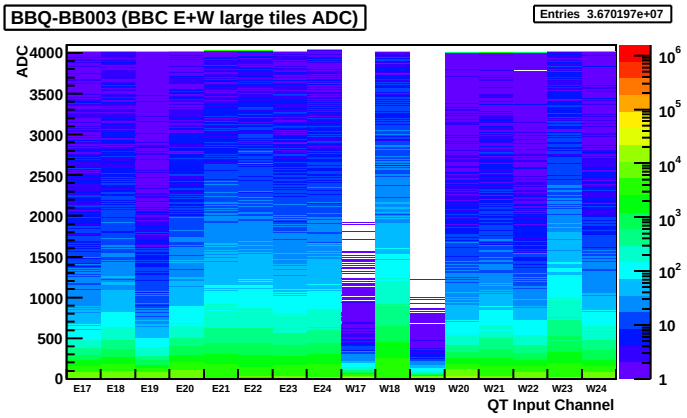

L1-TF201
Entries 1.376324e+07
Threshold bits
1
0
1.55196e+06
1.53924e+06
1.54969e+06
1.53424e+06
1.52544e+06
1.46678e+06
741913
754633
744181
759632
768435
827092
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^6

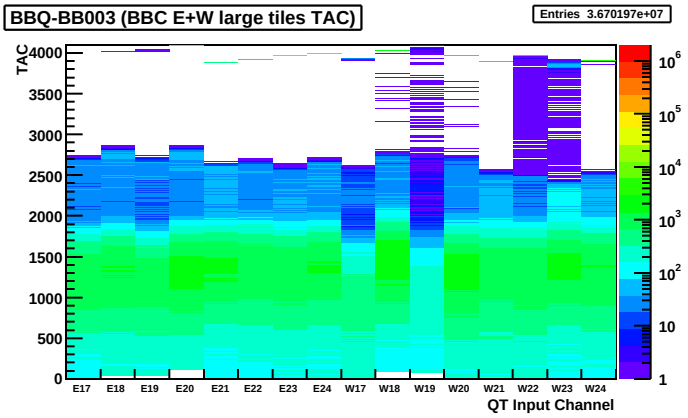

BBQ-BB001 (BBC east small tiles ADC)
Entries 3.670197e+07
ADC
QT Input Channel

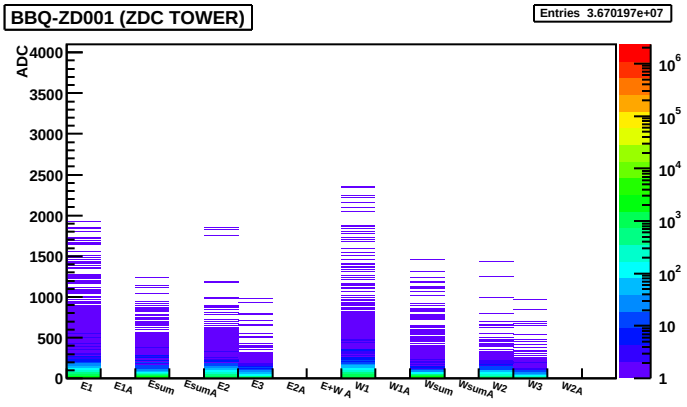

BBQ-BB001 (BBC east small tiles TAC)
Entries 3.670197e+07
TAC
QT Input Channel

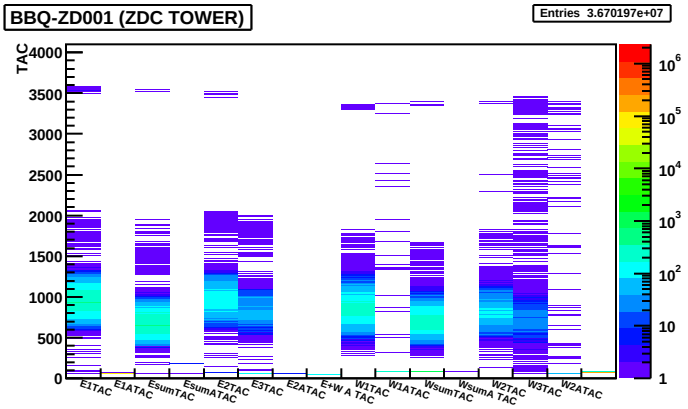

BBQ-BB002 (BBC west small tiles ADC)
Entries 3.670197e+07
ADC
QT Input Channel

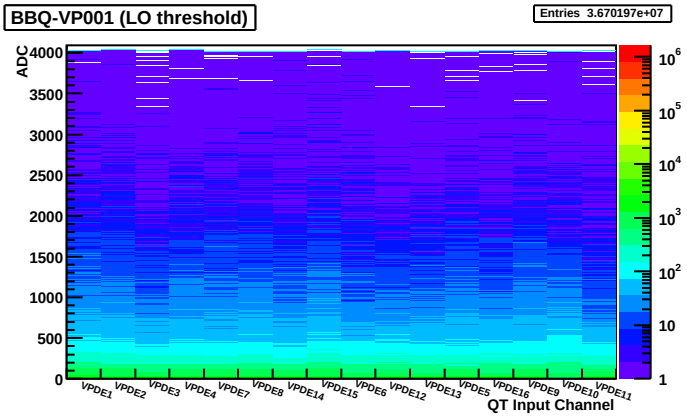

BBQ-BB002 (BBC west small tiles TAC)
Entries 3.670197e+07
TAC
QT Input Channel

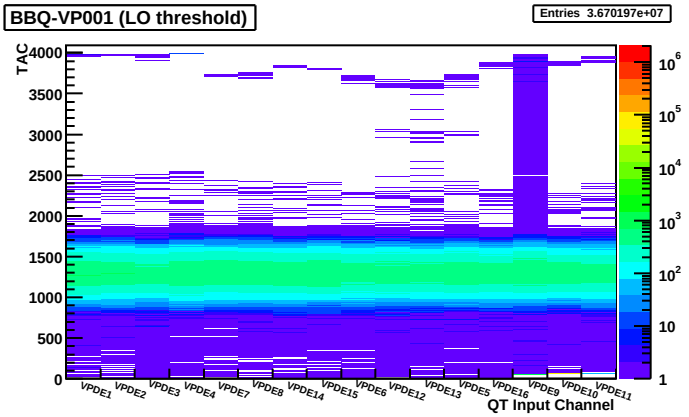

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 3.670197e+07
ADC
QT Input Channel

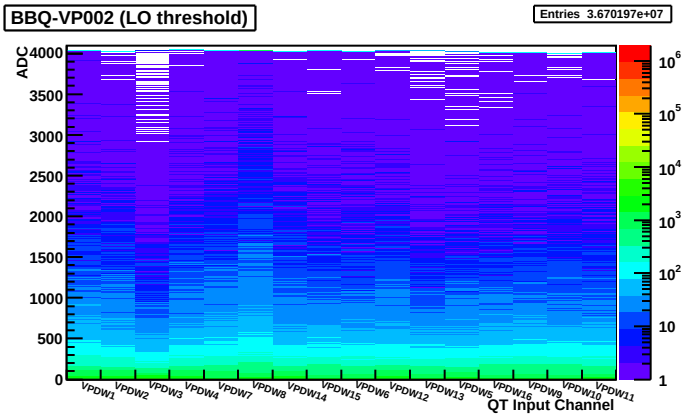

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 3.670197e+07
TAC
QT Input Channel

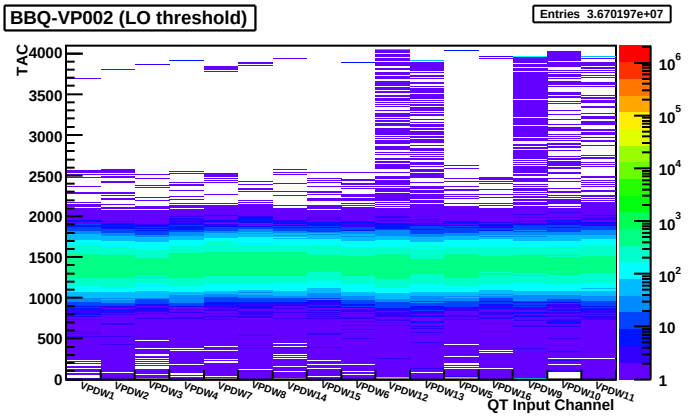

BBQ-ZD001 (ZDC TOWER)
Entries 3.670197e+07
ADC

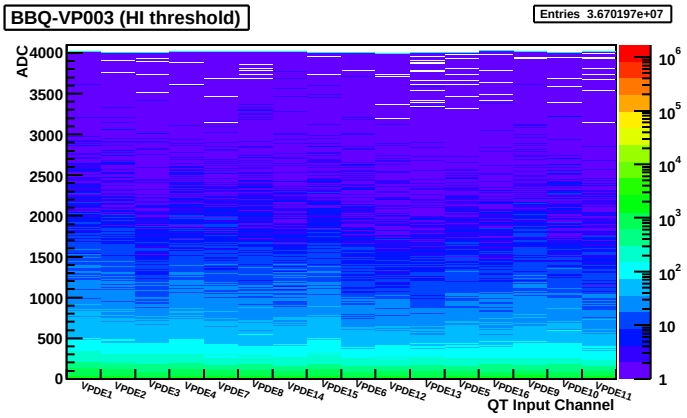

BBQ-ZD001 (ZDC TOWER)
Entries 3.670197e+07
TAC

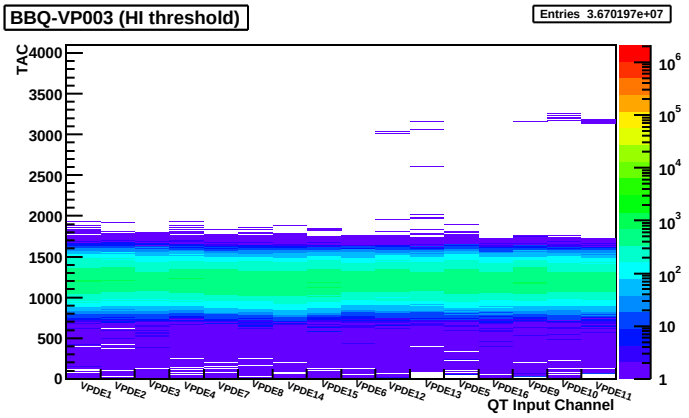

BBQ-VP001 (LO threshold)
Entries 3.670197e+07
ADC
QT Input Channel

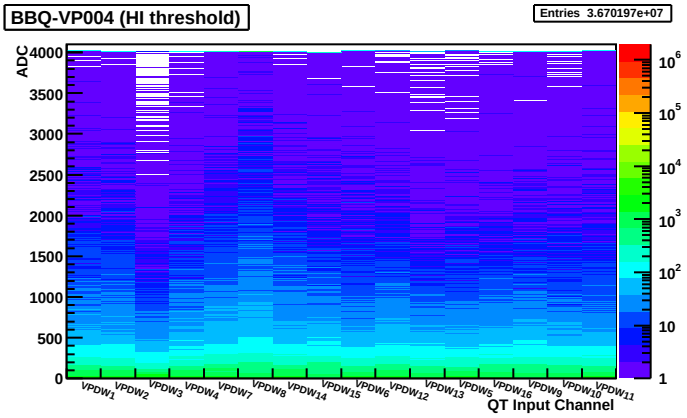

BBQ-VP001 (LO threshold)
Entries 3.670197e+07
TAC
QT Input Channel

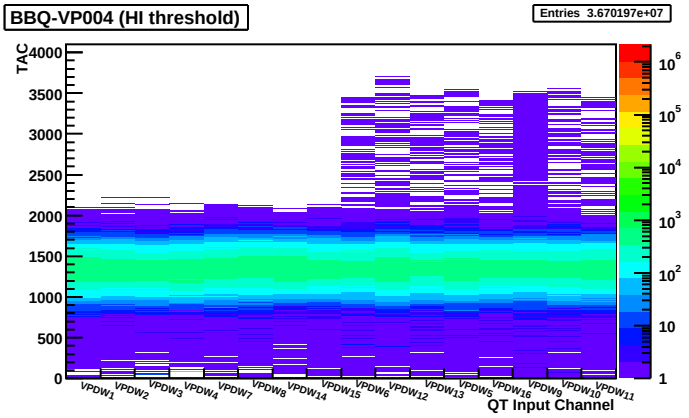

BBQ-VP002 (LO threshold)
Entries 3.670197e+07
ADC
QT Input Channel

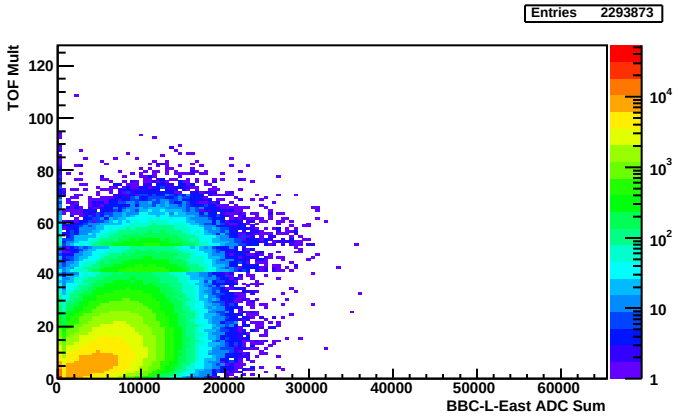

BBQ-VP002 (LO threshold)
Entries 3.670197e+07
TAC
QT Input Channel

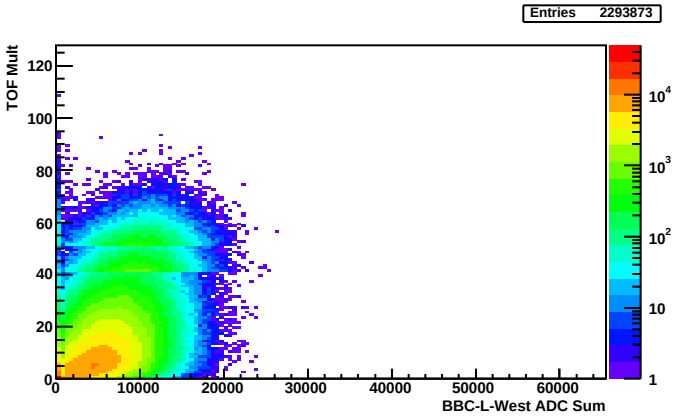

BBQ-VP003 (HI threshold)
Entries 3.670197e+07
ADC
QT Input Channel

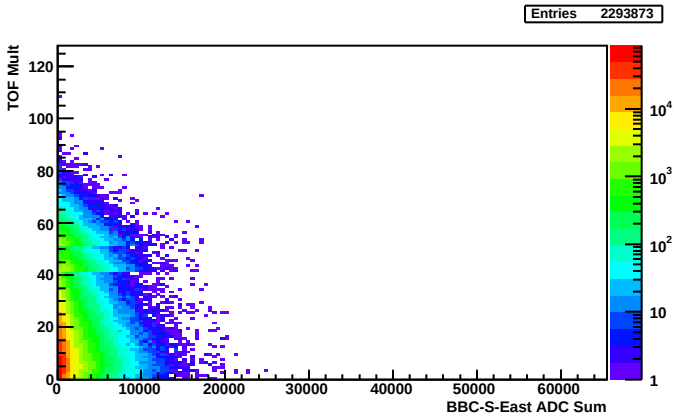

BBQ-VP003 (HI threshold)
Entries 3.670197e+07
TAC
QT Input Channel

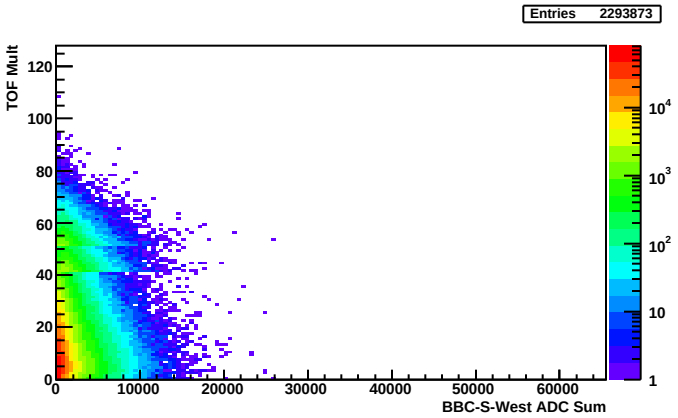

BBQ-VP004 (HI threshold)
Entries 3.670197e+07
ADC
QT Input Channel

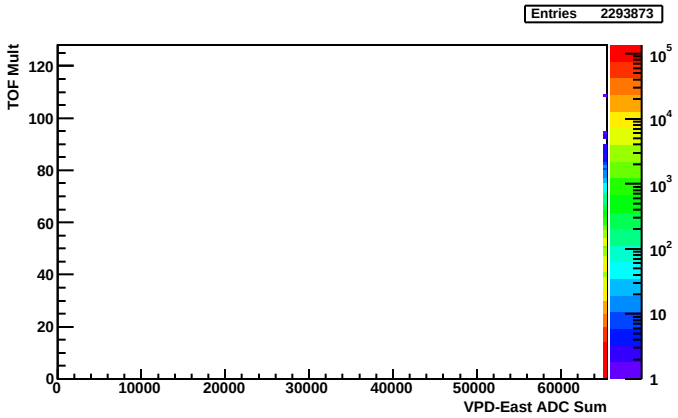

BBQ-VP004 (HI threshold)
Entries 3.670197e+07
TAC
QT Input Channel

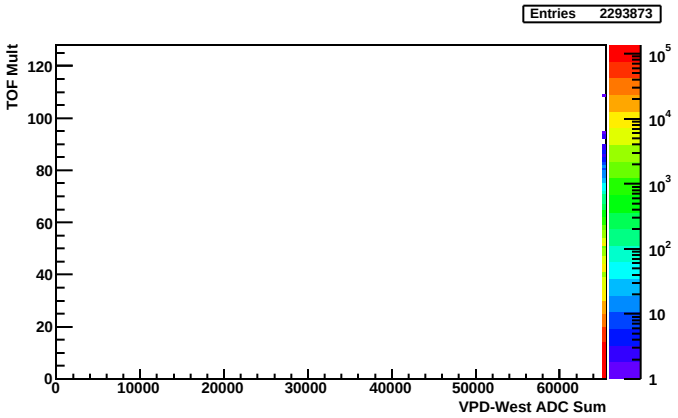

Entries 2293873
TOF Mult
BBC-L-East ADC Sum

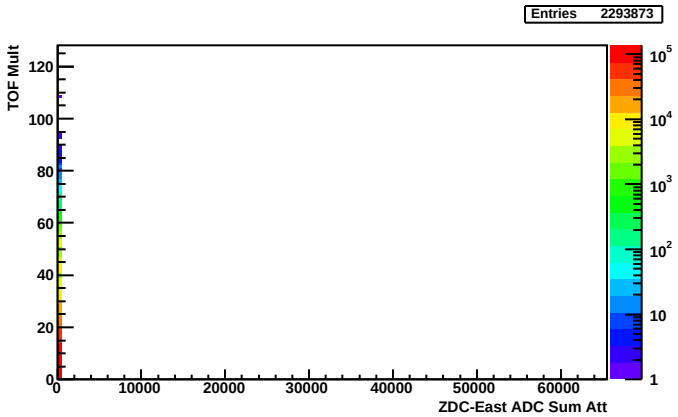

Entries 2293873
TOF Mult
BBC-L-West ADC Sum

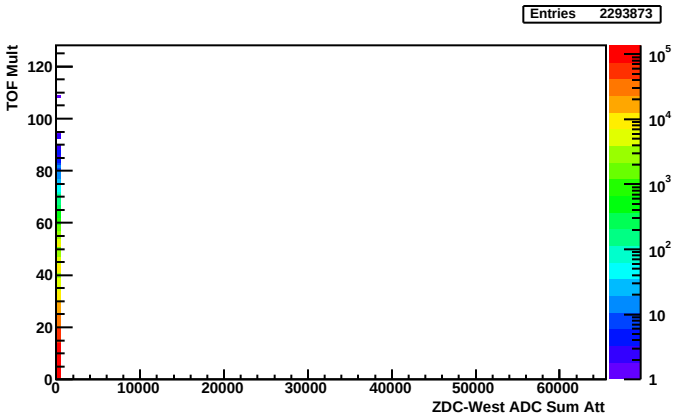

Entries 2293873
TOF Mult
BBC-S-East ADC Sum

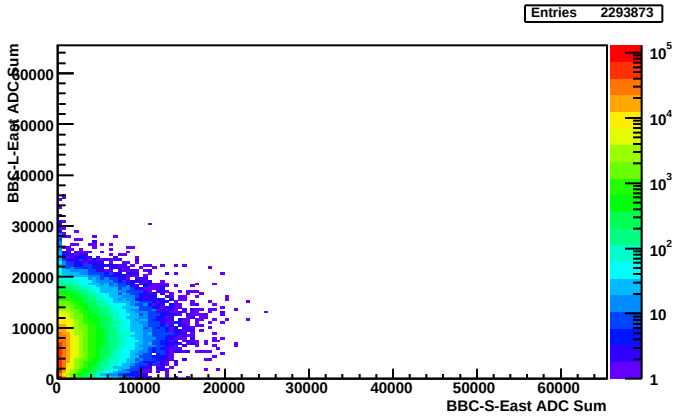

Entries 2293873
TOF Mult
BBC-S-West ADC Sum

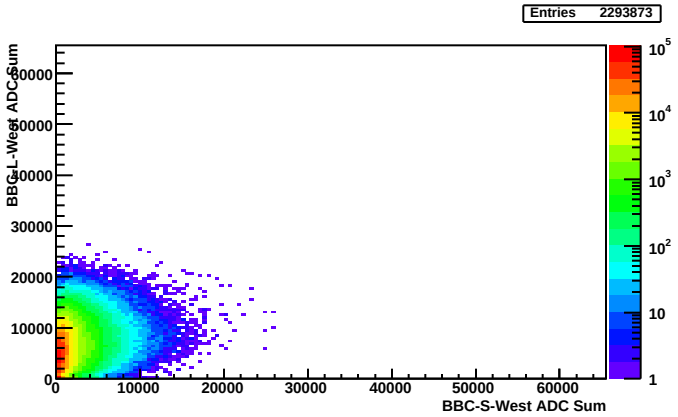

Entries 2293873
TOF Mult
VPD-East ADC Sum

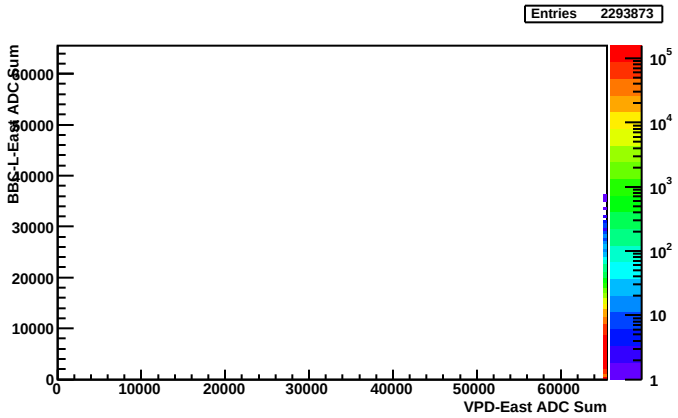

Entries 2293873
TOF Mult
VPD-West ADC Sum

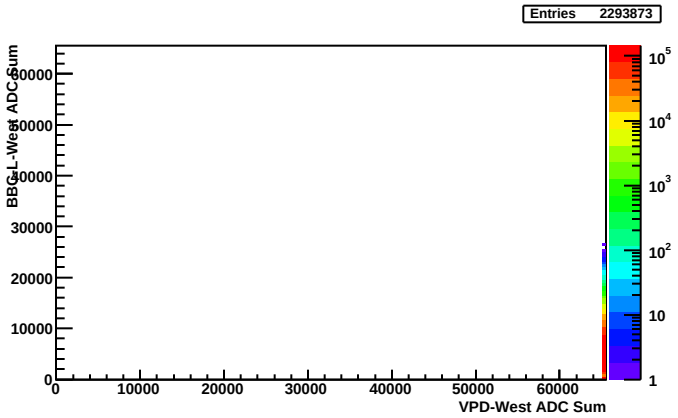

Entries 2293873
TOF Mult
ZDC-East ADC Sum Att

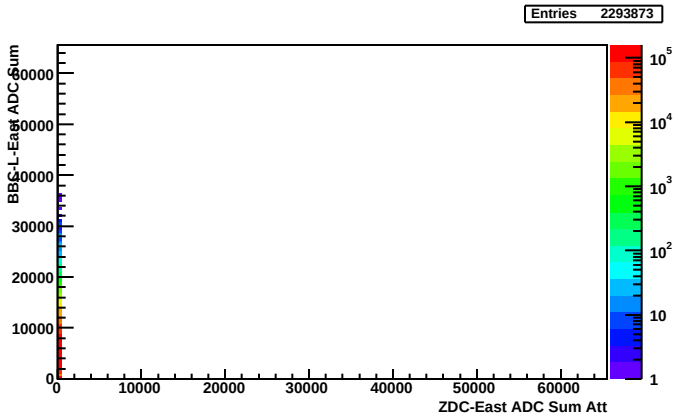

Entries 2293873
TOF Mult
ZDC-West ADC Sum Att

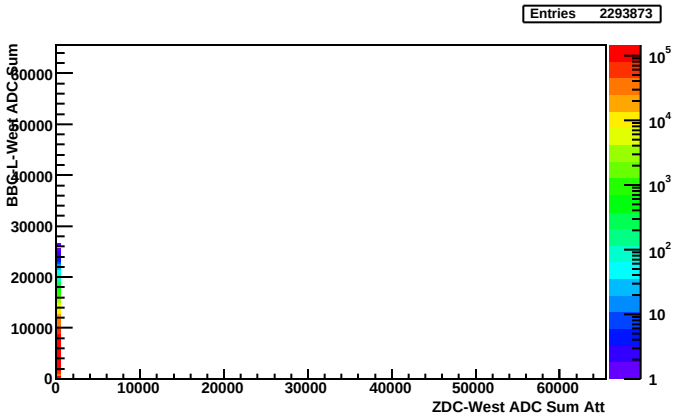

Entries 2293873
BBC-L-East ADC Sum
BBC-S-East ADC Sum

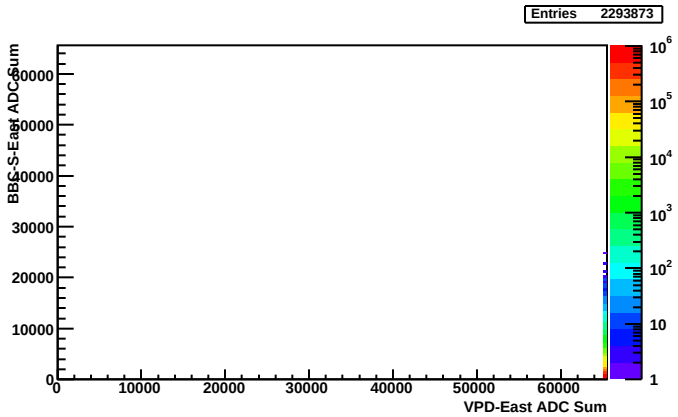

Entries 2293873
BBC-L-West ADC Sum
BBC-S-West ADC Sum

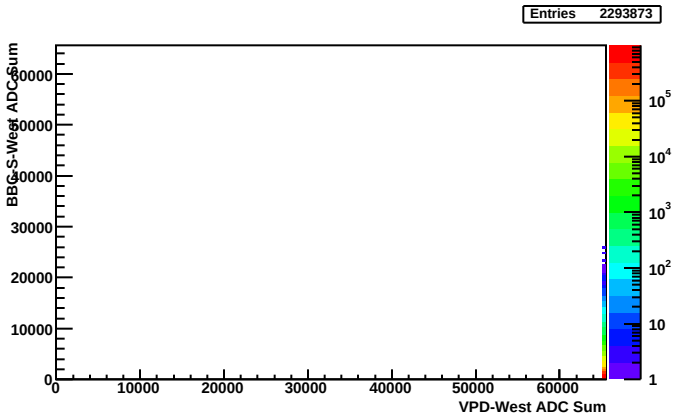

Entries 2293873
BBC-L-East ADC Sum
VPD-East ADC Sum

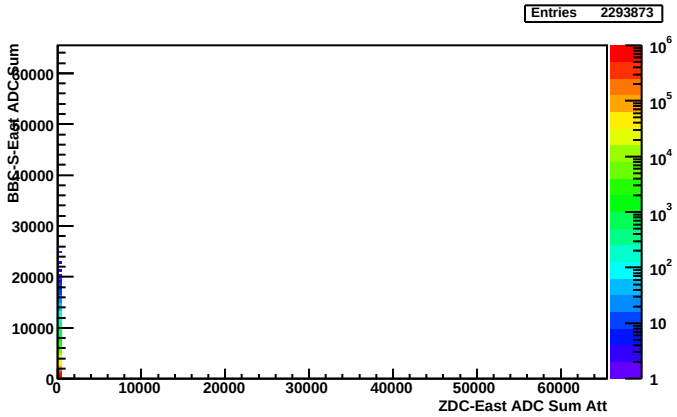

Entries 2293873
BBC-L-West ADC Sum
VPD-West ADC Sum

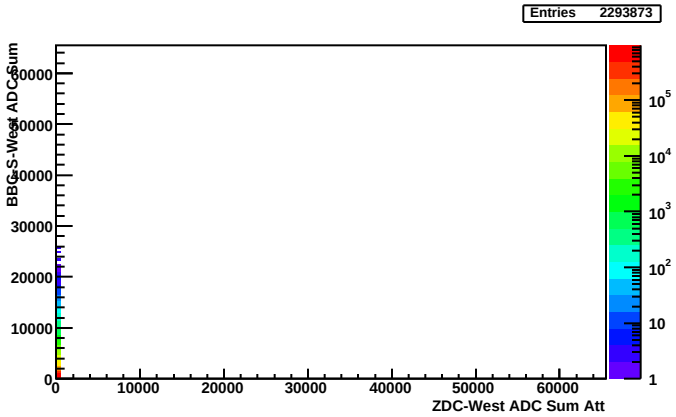

Entries 2293873
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

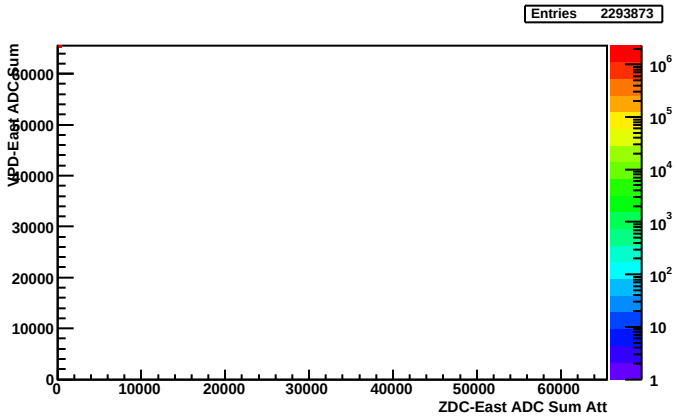

Entries 2293873
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

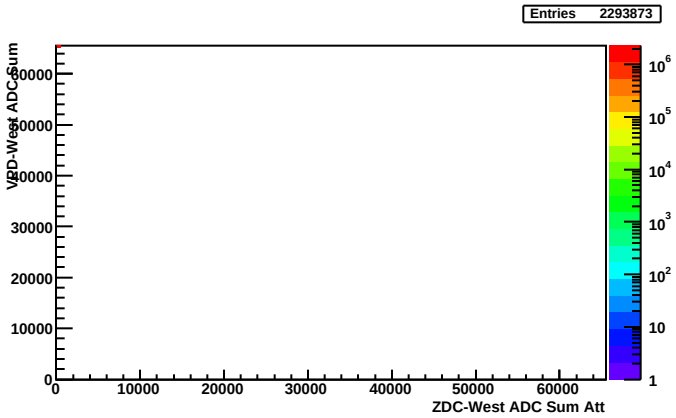

Entries 2293873
BBC-S-East ADC Sum
VPD-East ADC Sum

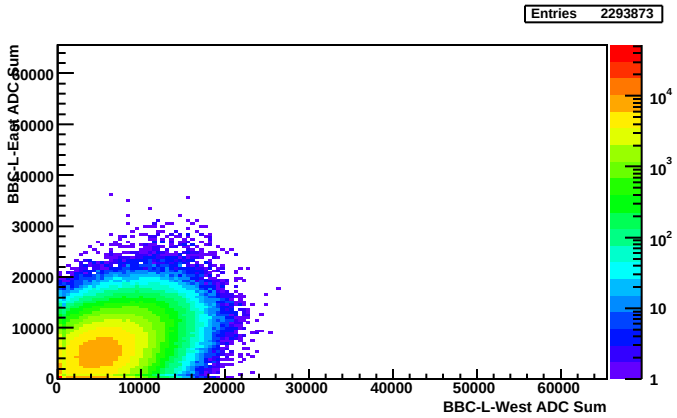

Entries 2293873
BBC-S-West ADC Sum
VPD-West ADC Sum

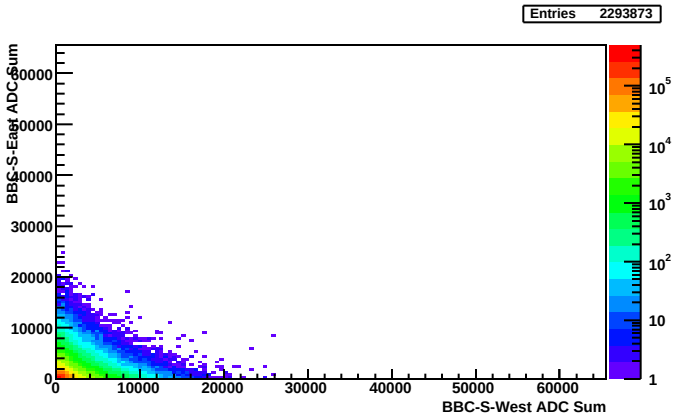

Entries 2293873
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

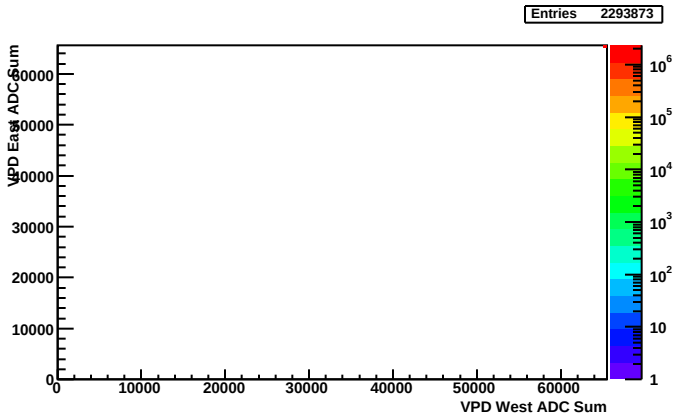

Entries 2293873
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

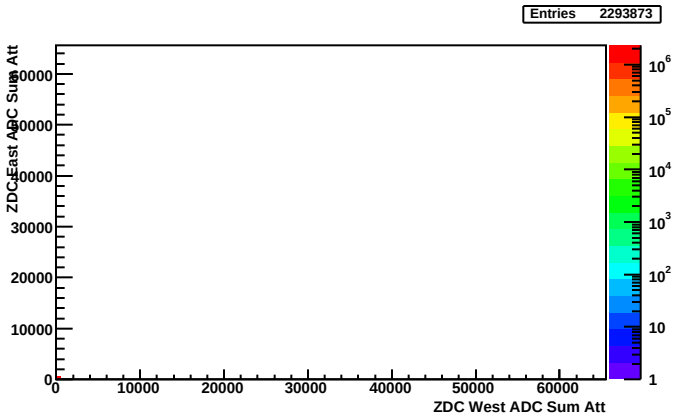

Entries 2293873
VPD-East ADC Sum
ZDC-East ADC Sum Att

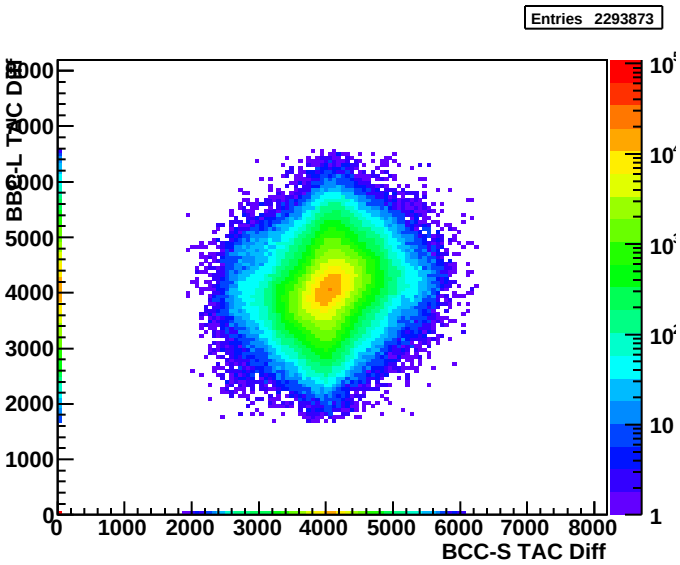

Entries 2293873
VPD-West ADC Sum
ZDC-West ADC Sum Att

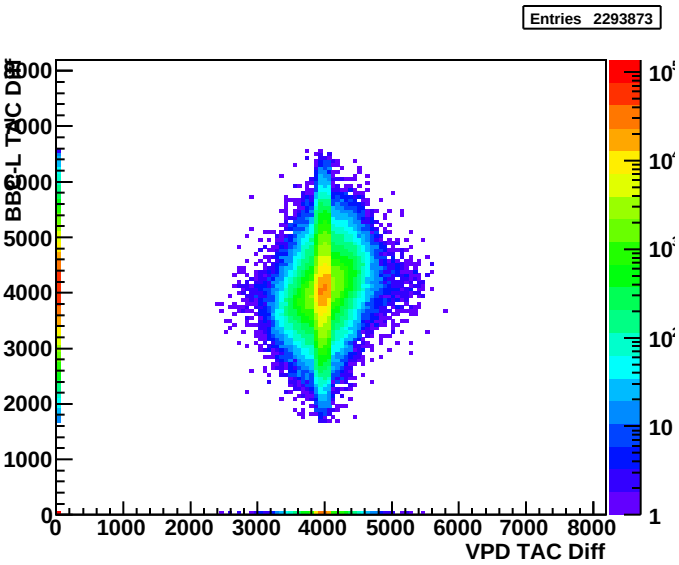

Entries 2293873
BBC-L-East ADC Sum
BBC-L-West ADC Sum

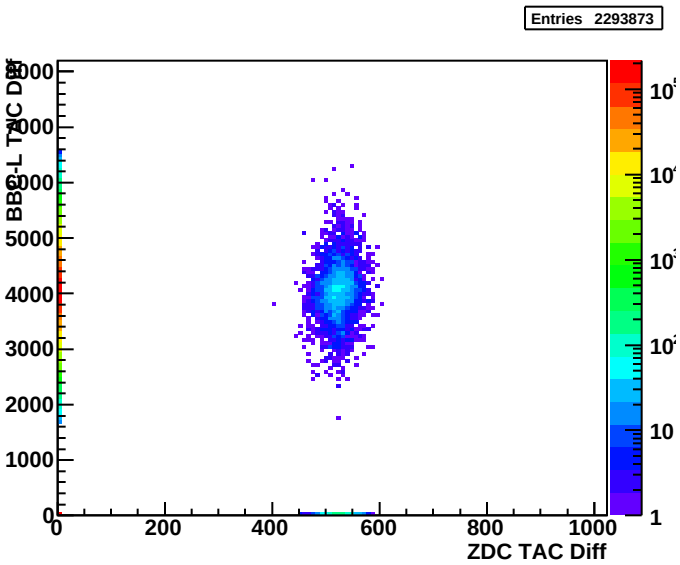

Entries 2293873
BBC-S-East ADC Sum
BBC-S-West ADC Sum

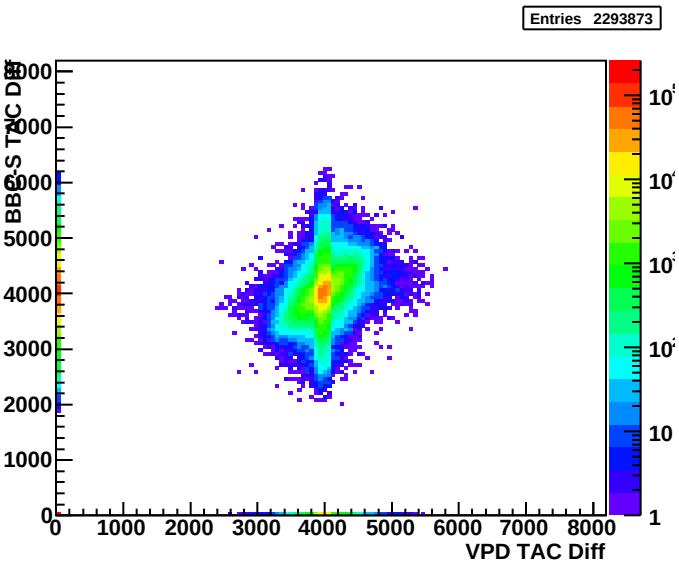

Entries 2293873
VPD East ADC Sum
VPD West ADC Sum

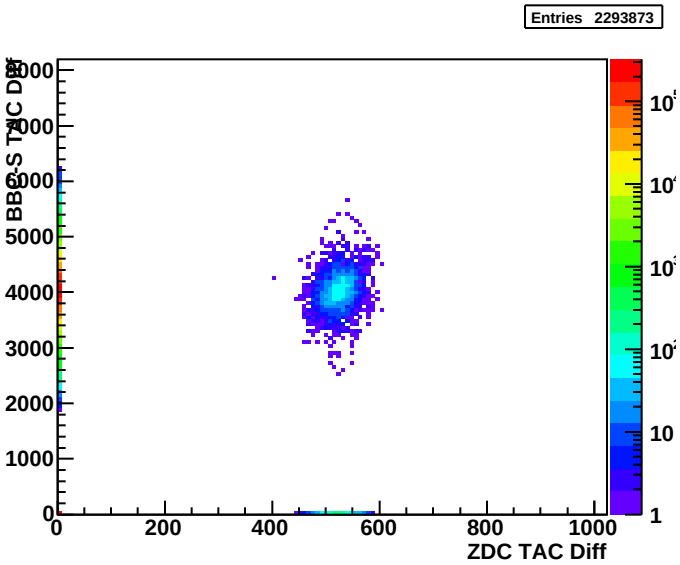

Entries 2293873
ZDC East ADC Sum Att
ZDC West ADC Sum Att

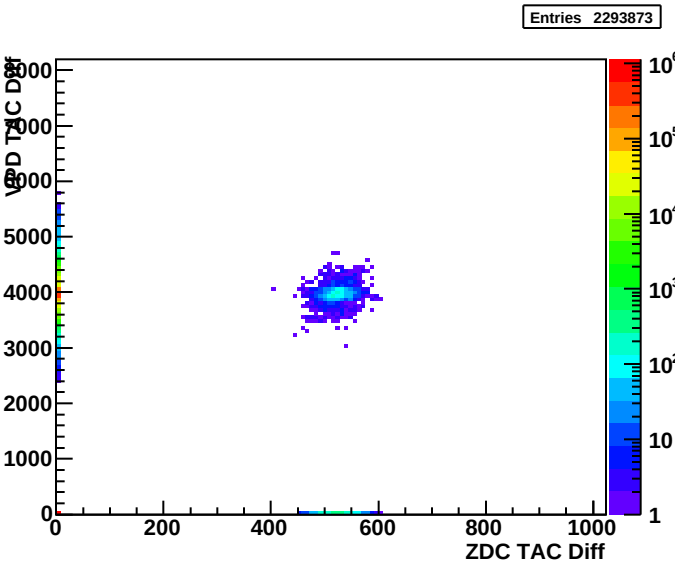

Entries 2293873
BBC-L TAC Diff
BCC-S TAC Diff

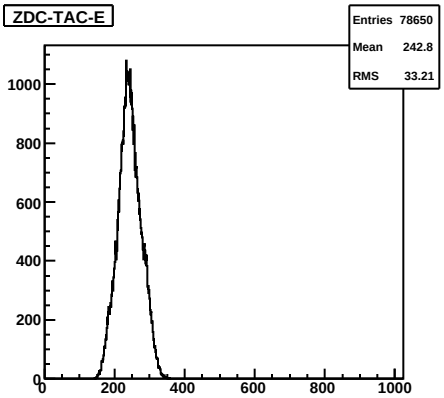

Entries 2293873
BBC-L TAC Diff
VPD TAC Diff

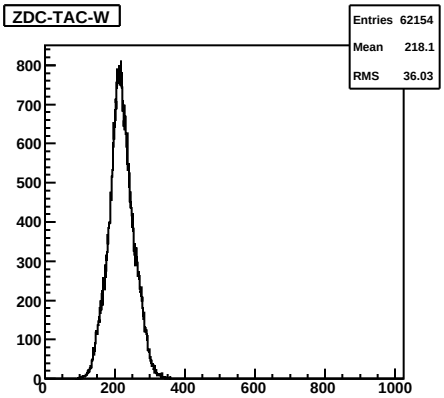

Entries 2293873
BBC-L TAC Diff
ZDC TAC Diff

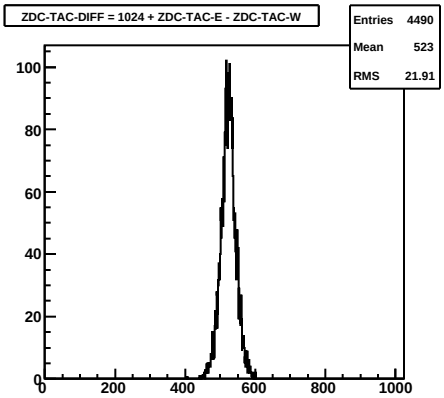

Entries 2293873
BBC-S TAC Diff
VPD TAC Diff

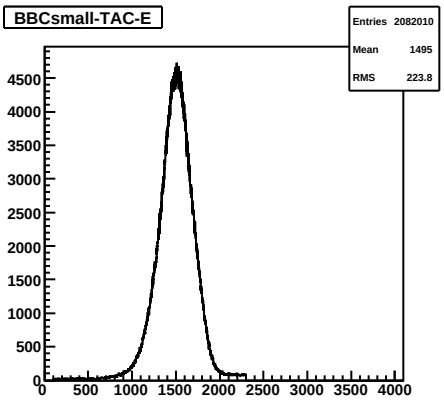

Entries 2293873
BBC-S TAC Diff
ZDC TAC Diff

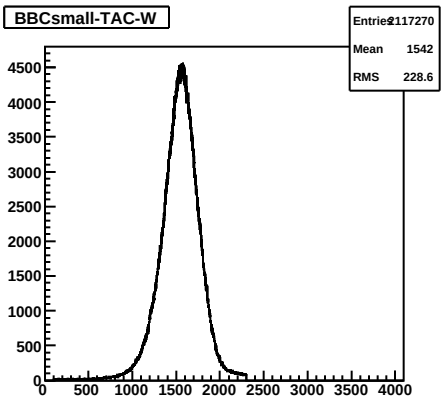

Entries 2293873
VPD TAC Diff
ZDC TAC Diff

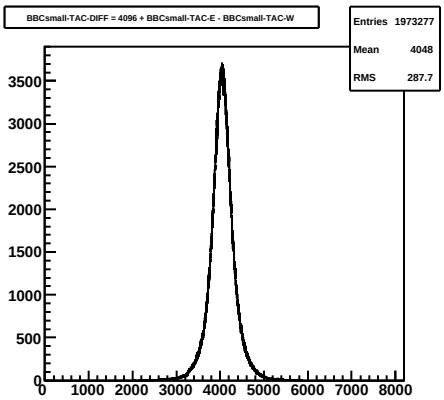

ZDC-TAC-E
Entries 78650
Mean 242.8
RMS 33.21

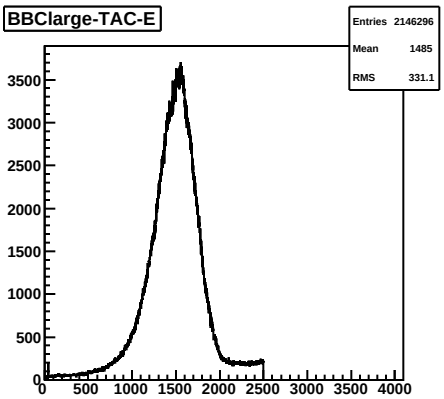

ZDC-TAC-W
Entries 62154
Mean 218.1
RMS 36.03

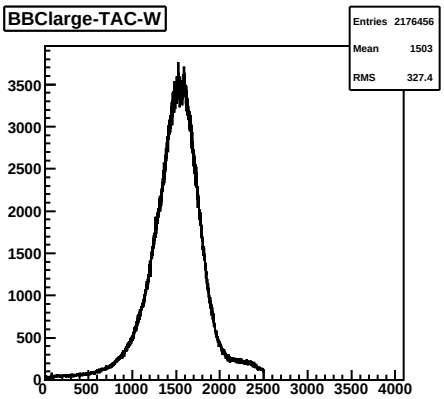

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 4490
Mean 523
RMS 21.91

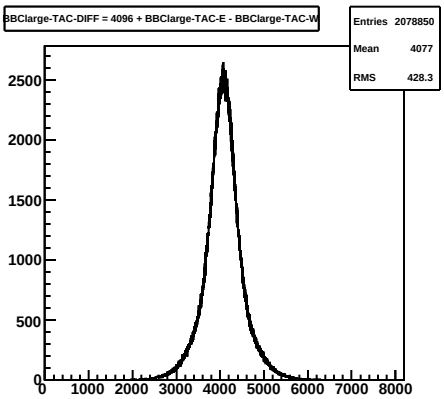

BBCsmall-TAC-E
Entries 2082010
Mean 1495
RMS 223.8

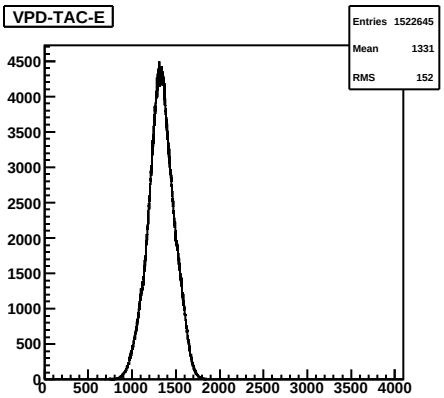

BBCsmall-TAC-W
Entries 2117270
Mean 1542
RMS 228.6

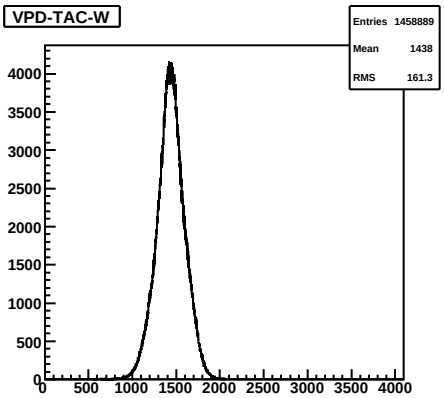

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 1973277
Mean 4048
RMS 287.7

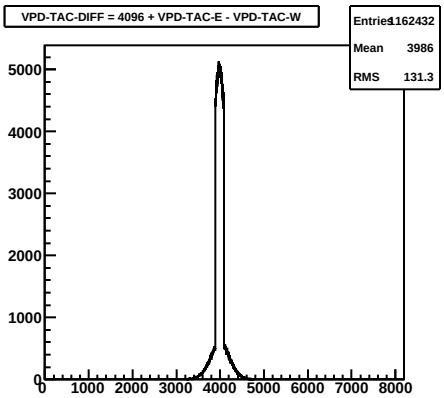

BBClarge-TAC-E
Entries 2146296
Mean 1485
RMS 331.1

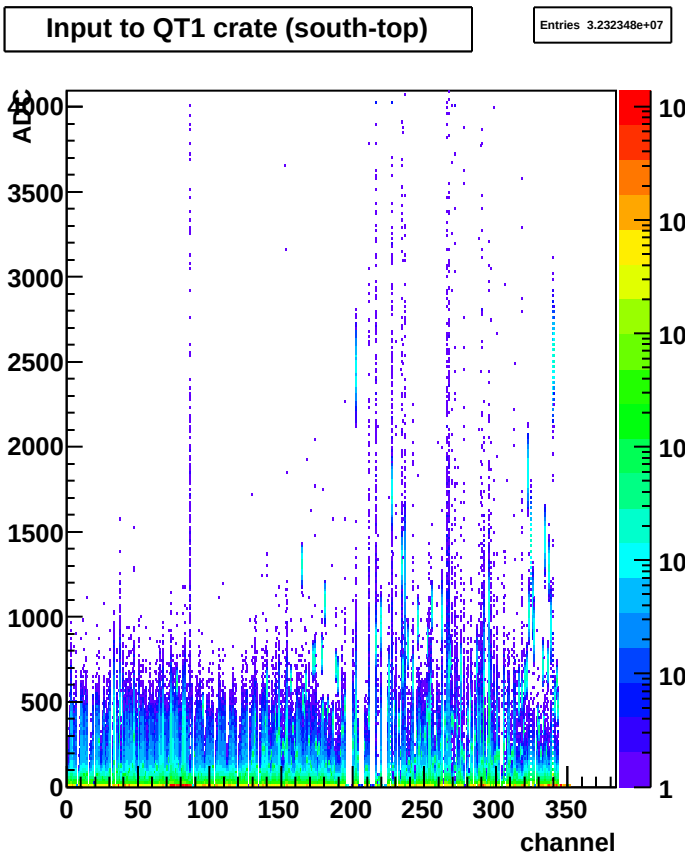

BBClarge-TAC-W
Entries 2176456
Mean 1503
RMS 327.4

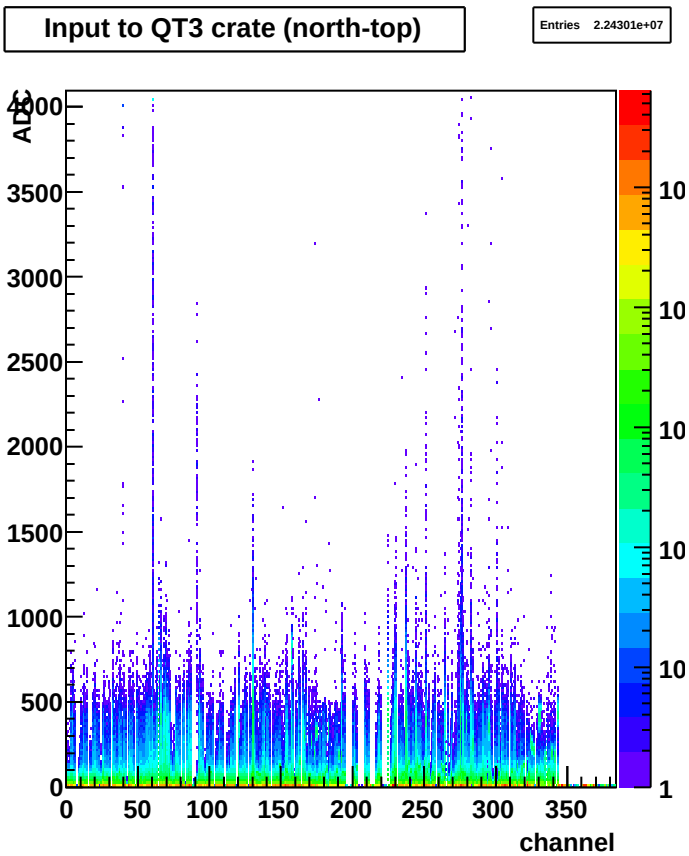

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 2078850
Mean 4077
RMS 428.3

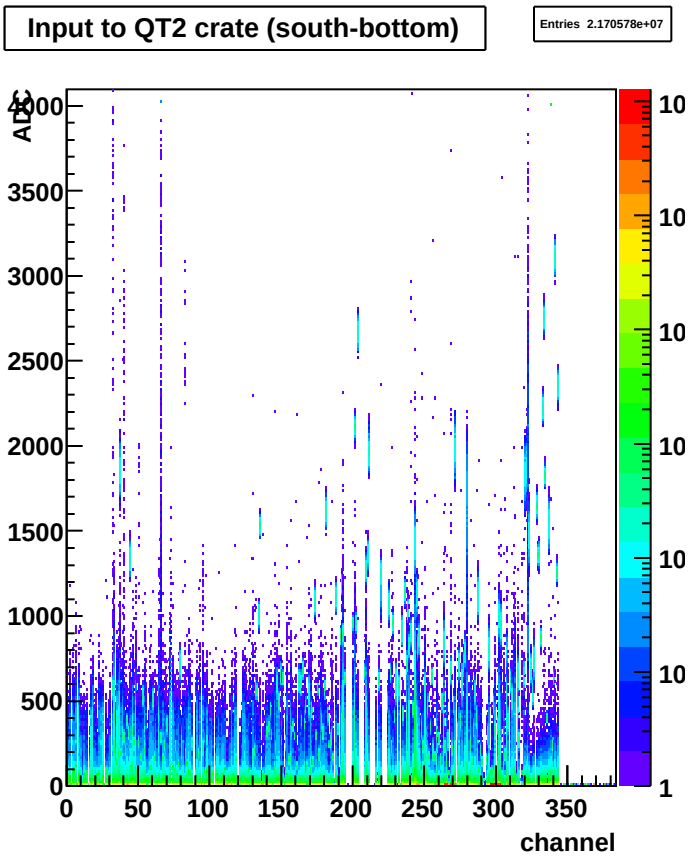

VPD-TAC-E
Entries 1522645
Mean 1331
RMS 152

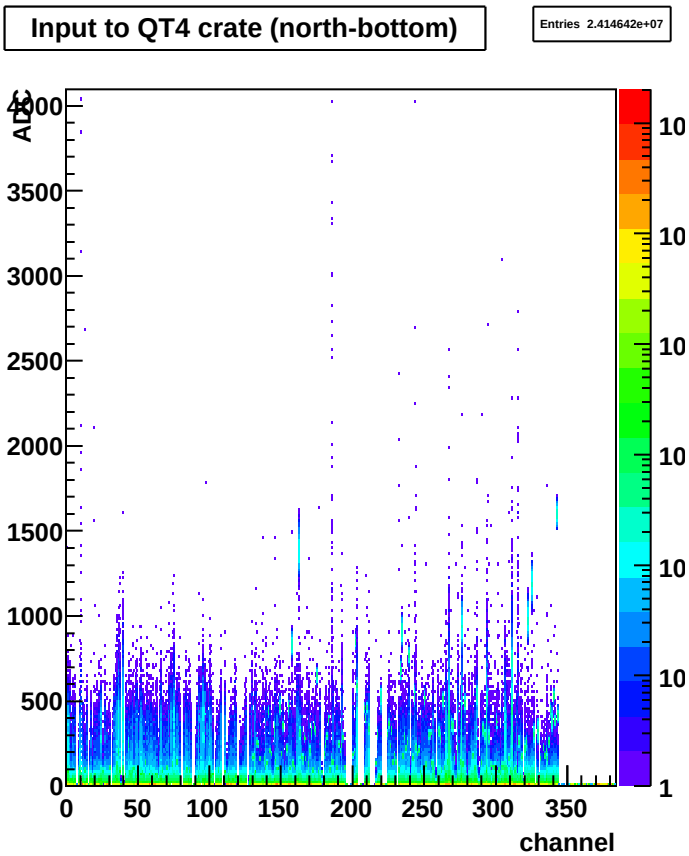

VPD-TAC-W
Entries 1458889
Mean 1438
RMS 161.3

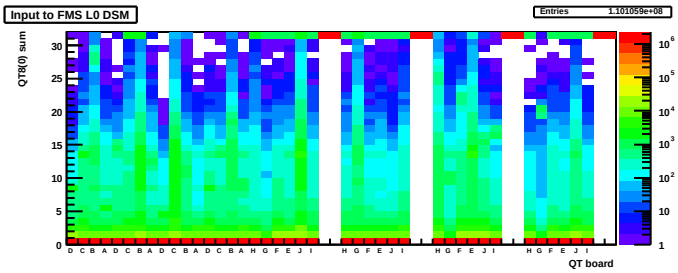

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 1162432
Mean 3986
RMS 131.3

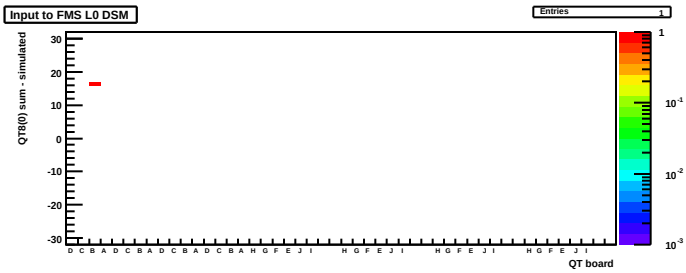

Input to QT1 crate (south-top)
Entries 3.232348e+07
ADC
channel

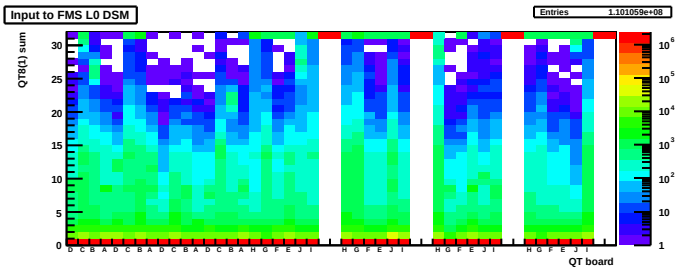

Input to QT3 crate (north-top)
Entries 2.24301e+07
ADC
channel

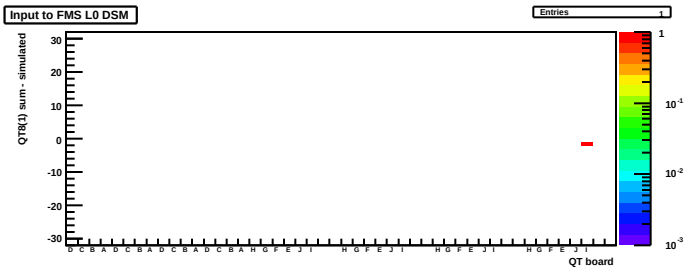

Input to QT2 crate (south-bottom)
Entries 2.170578e+07
ADC
channel

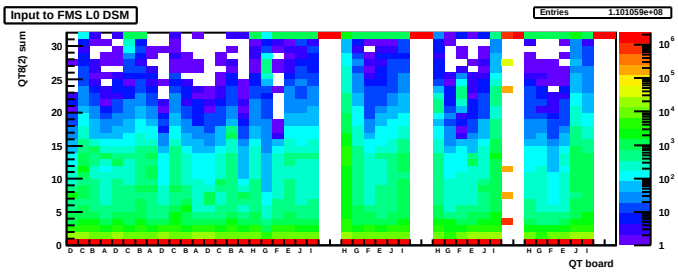

Input to QT4 crate (north-bottom)
Entries 2.414642e+07
ADC
channel

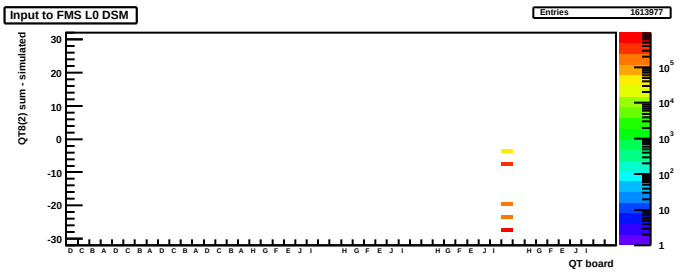

Input to FMS L0 DSM
Entries 1.101059e+08
QT8(0) sum
QT board

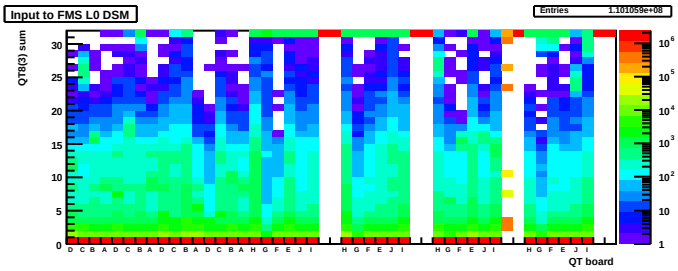

Input to FMS L0 DSM
Entries 1
QT8(0) sum - simulated
QT board

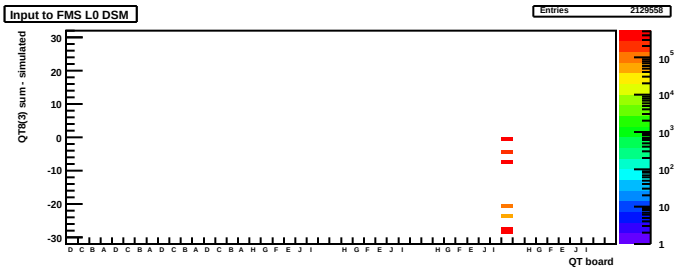

Input to FMS L0 DSM
Entries 1.101059e+08
QT8(1) sum
QT board

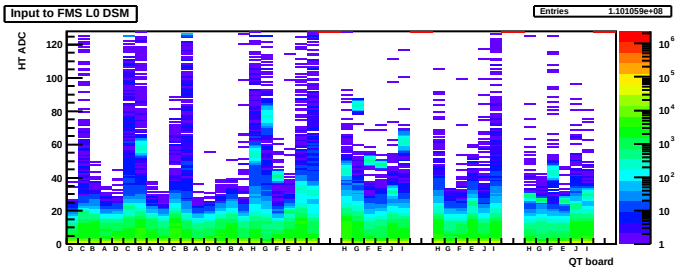

Input to FMS L0 DSM
Entries 1
QT8(1) sum - simulated
QT board

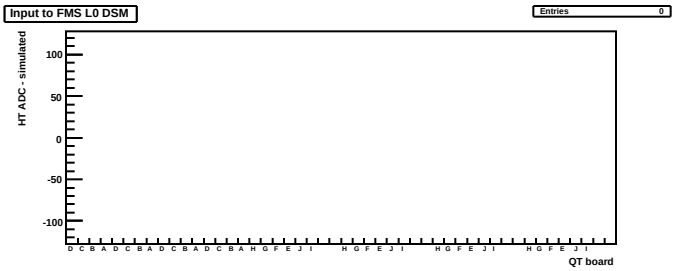

Input to FMS L0 DSM
Entries 1.101059e+08
QT8(2) sum
QT board

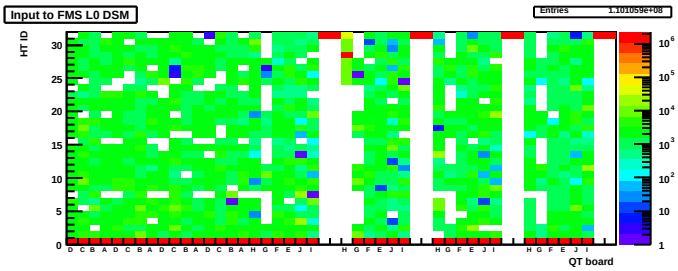

Input to FMS L0 DSM
Entries 1613977
QT8(2) sum - simulated
QT board

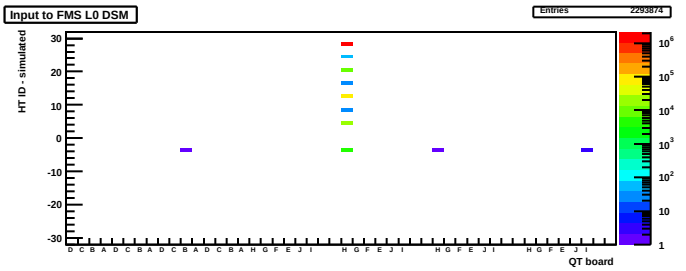

Input to FMS L0 DSM
Entries 1.101059e+08
QT8(3) sum
QT board

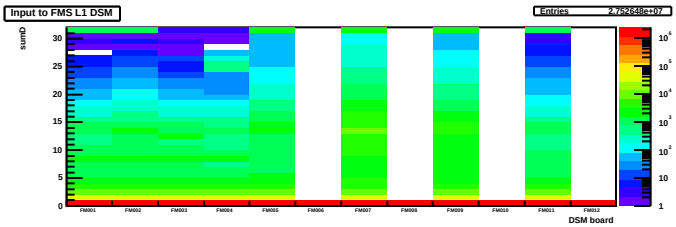

Input to FMS L0 DSM
Entries 2129558
QT8(3) sum - simulated
QT board

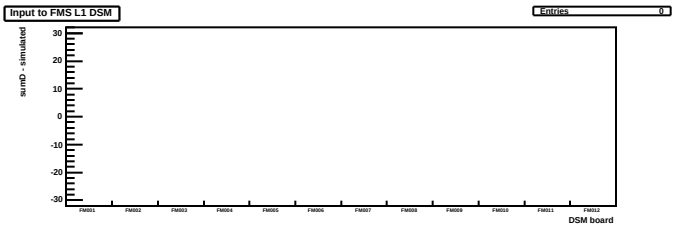

Input to FMS L0 DSM
Entries 1.101059e+08
HT ADC
QT board

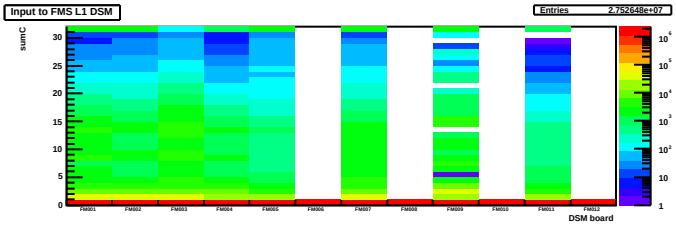

Input to FMS L0 DSM
Entries 0
HT ADC - simulated
QT board

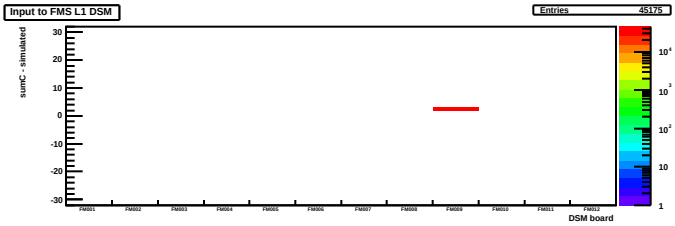

Input to FMS L0 DSM
Entries 1.101059e+08
HT ID
QT board

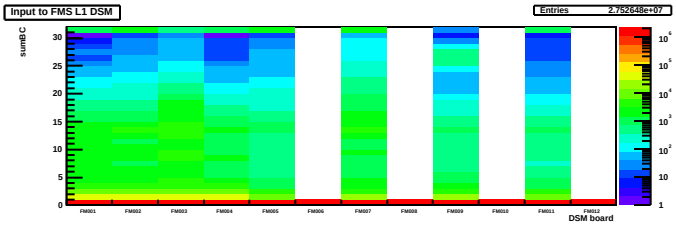

Input to FMS L0 DSM
Entries 2293874
HT ID - simulated
QT board

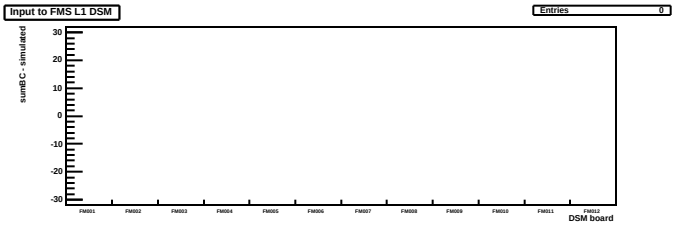

Input to FMS L1 DSM
Entries 2.752648e+07
sumD
DSM board

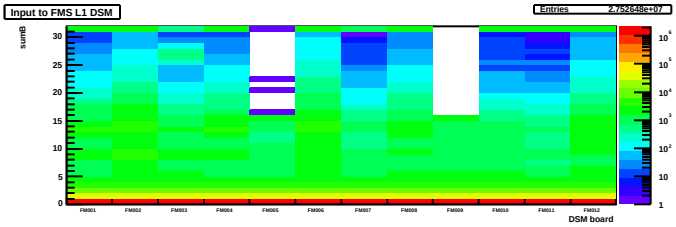

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

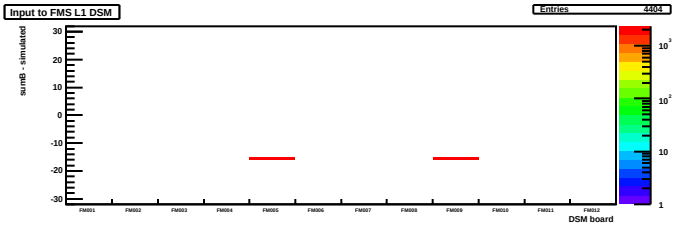

Input to FMS L1 DSM
Entries 2.752648e+07
sumC
DSM board

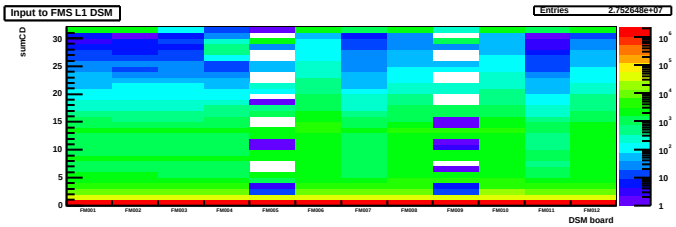

Input to FMS L1 DSM
Entries 45175
sumC - simulated
DSM board

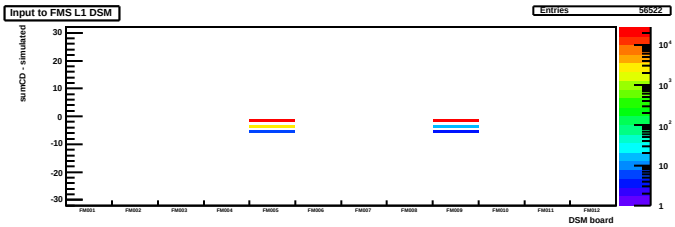

Input to FMS L1 DSM
Entries 2.752648e+07
sumBC
DSM board

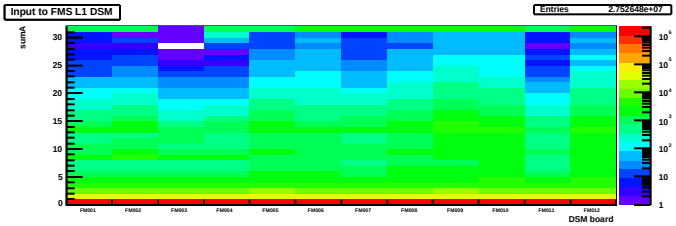

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

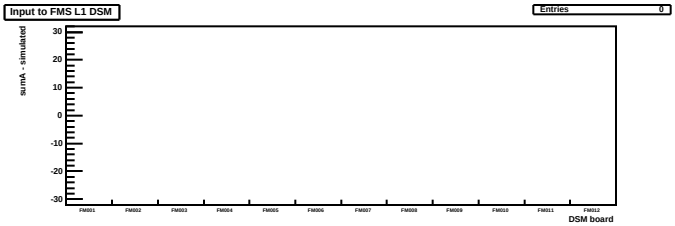

Input to FMS L1 DSM
Entries 2.752648e+07
sumB
DSM board

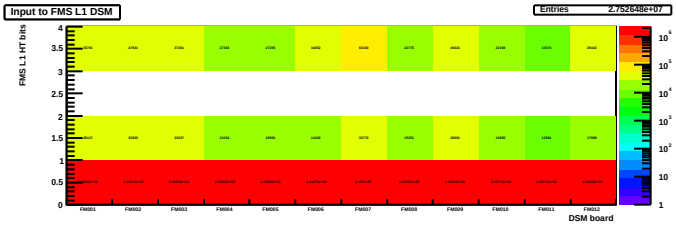

Input to FMS L1 DSM
Entries 4404
sumB - simulated
DSM board

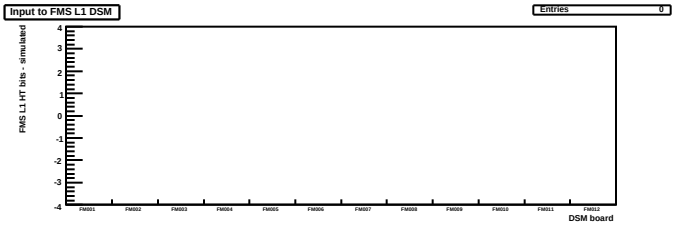

Input to FMS L1 DSM
Entries 2.752648e+07
sumCD
DSM board

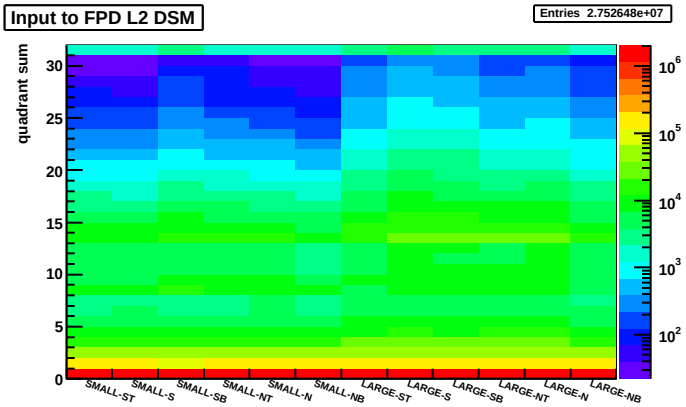

Input to FMS L1 DSM
Entries 56522
sumCD - simulated
DSM board

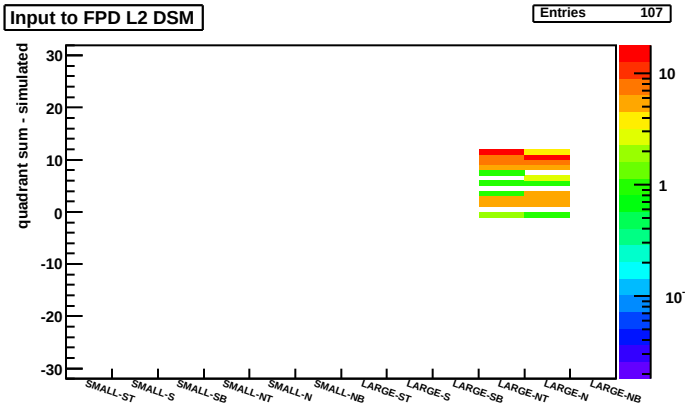

Input to FMS L1 DSM
Entries 2.752648e+07
sumA
DSM board

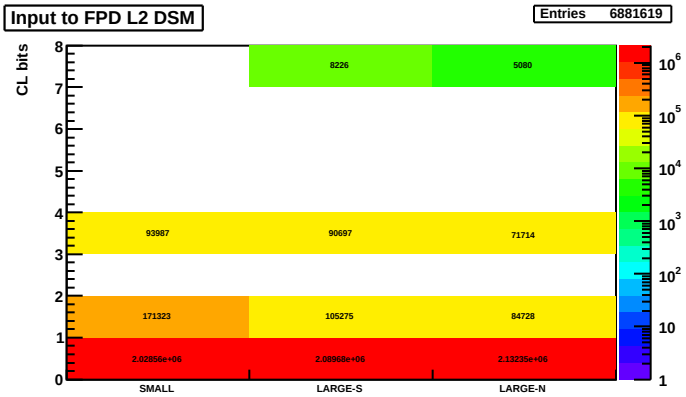

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

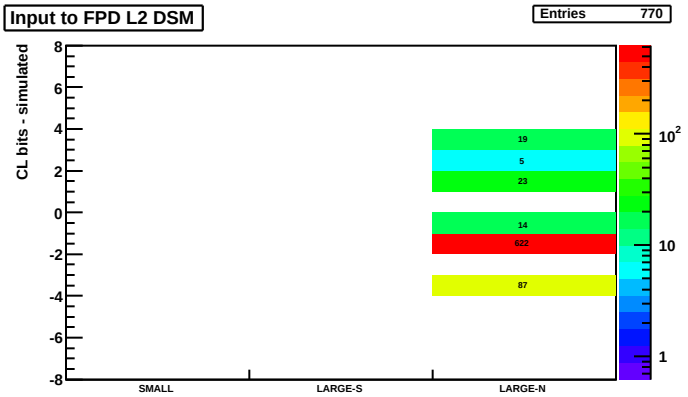

Input to FMS L1 DSM
Entries 2.752648e+07
FMS L1 HT bits
DSM board

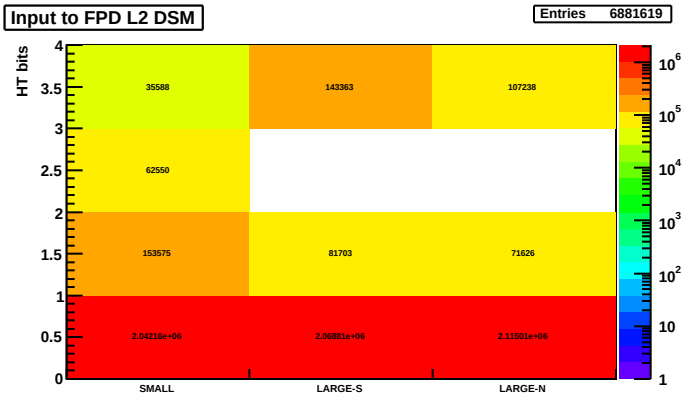

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

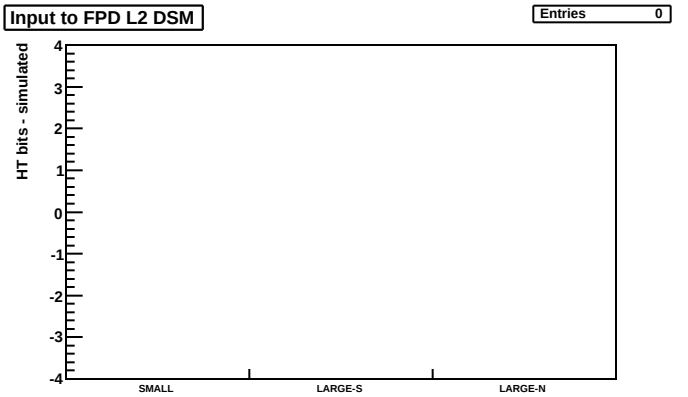

Input to FPD L2 DSM
Entries 2.752648e+07
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

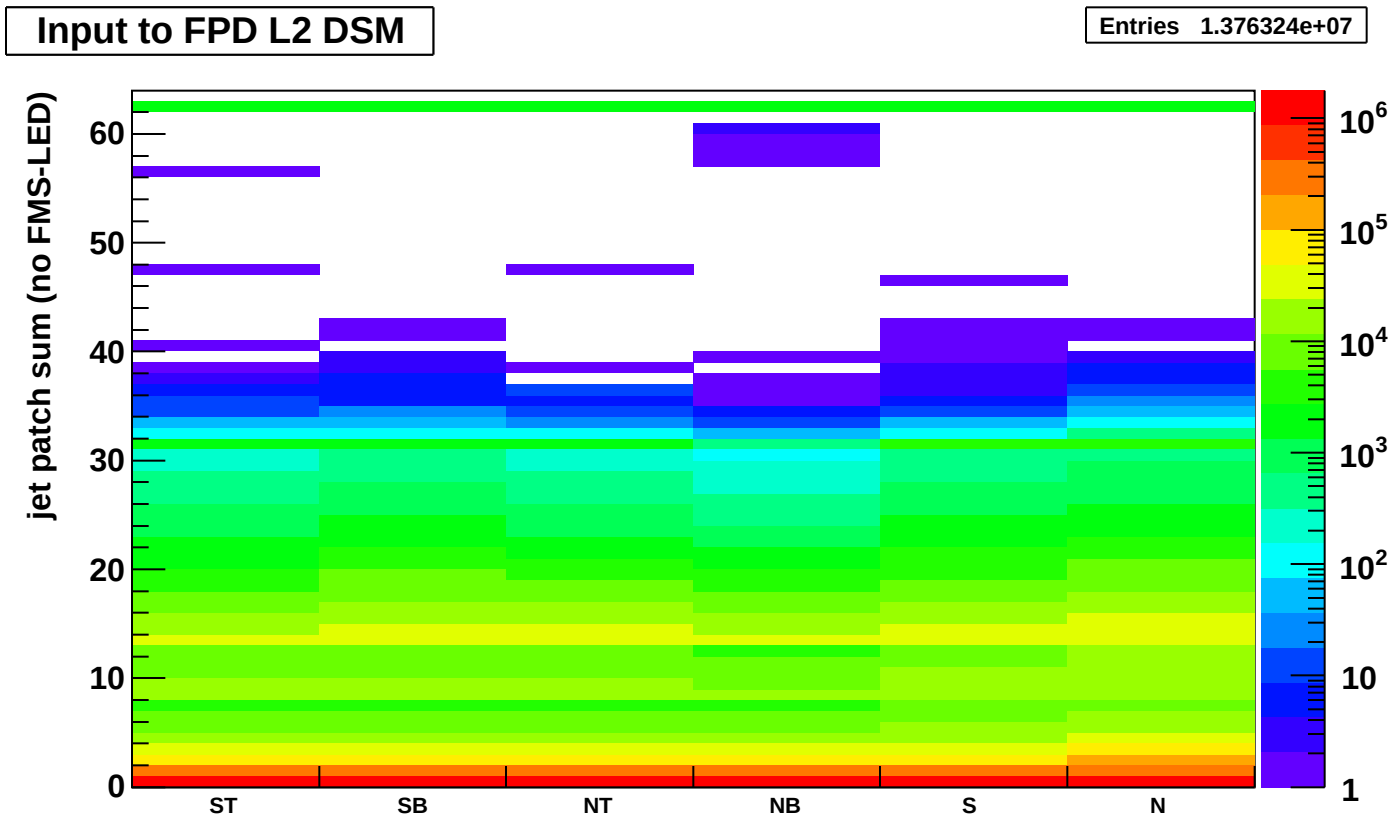

Input to FPD L2 DSM
Entries 107
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

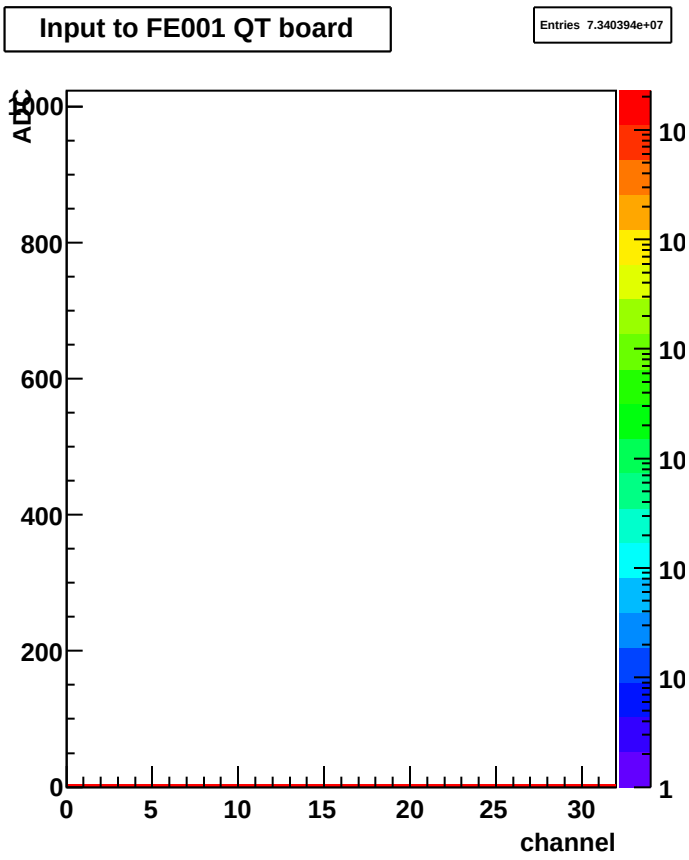

Input to FPD L2 DSM
Entries 6881619
CL bits
8226
5080
93987
90697
71714
171323
105275
84728
2.02856e+06
2.08968e+06
2.13235e+06
SMALL
LARGE-S
LARGE-N

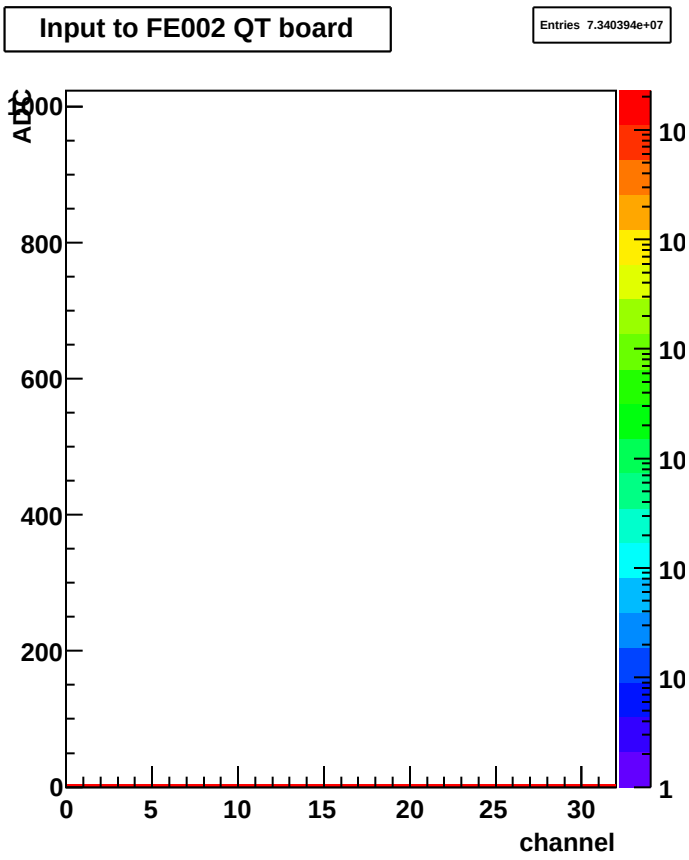

Input to FPD L2 DSM
Entries 770
CL bits - simulated
19
5
23
14
622
87
SMALL
LARGE-S
LARGE-N

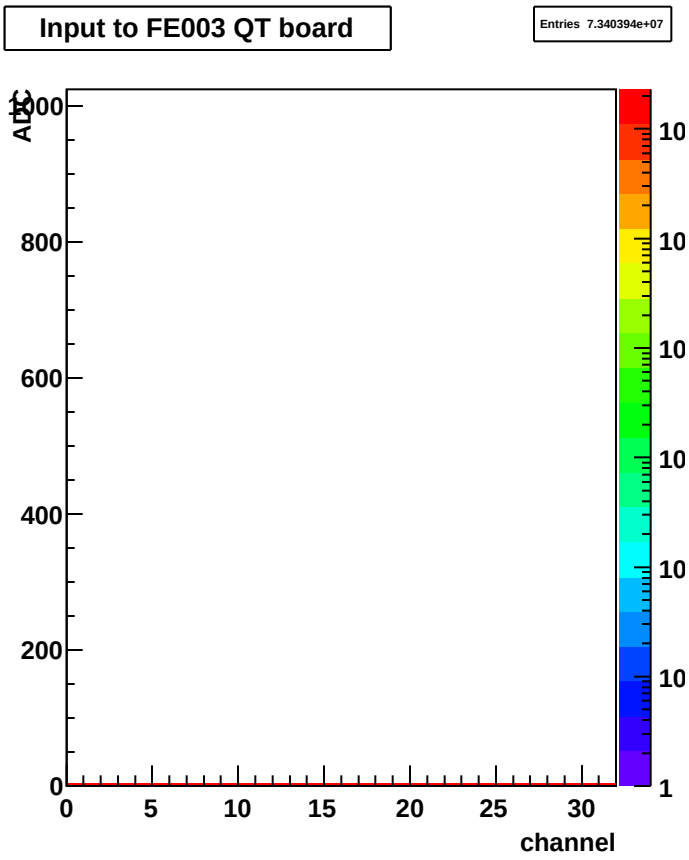

Input to FPD L2 DSM
Entries 6881619
HT bits
35588
143363
107238
62550
153575
81703
71626
2.04216e+06
2.06881e+06
2.11501e+06
SMALL
LARGE-S
LARGE-N

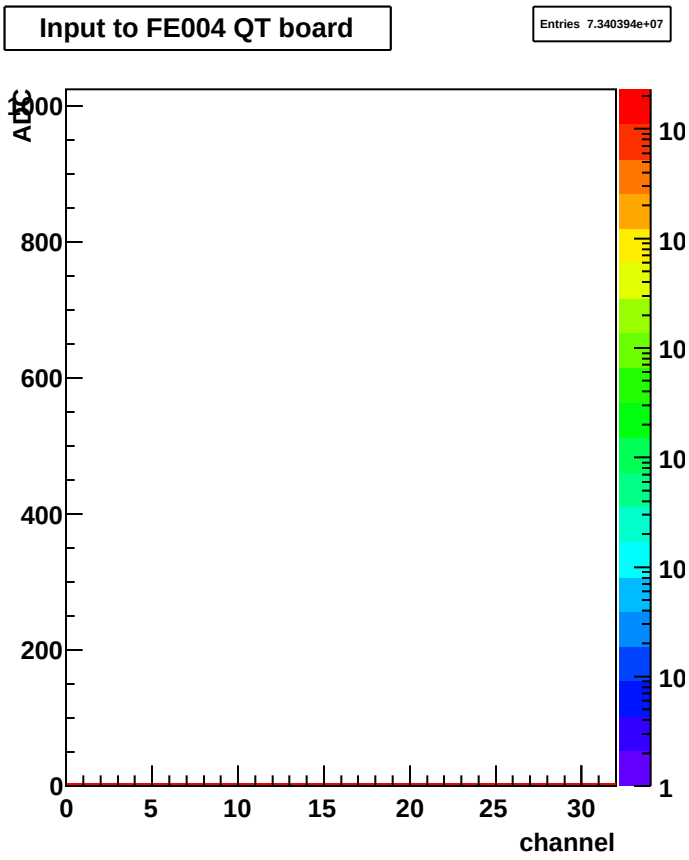

Input to FPD L2 DSM
Entries 0
HT bits - simulated
SMALL
LARGE-S
LARGE-N

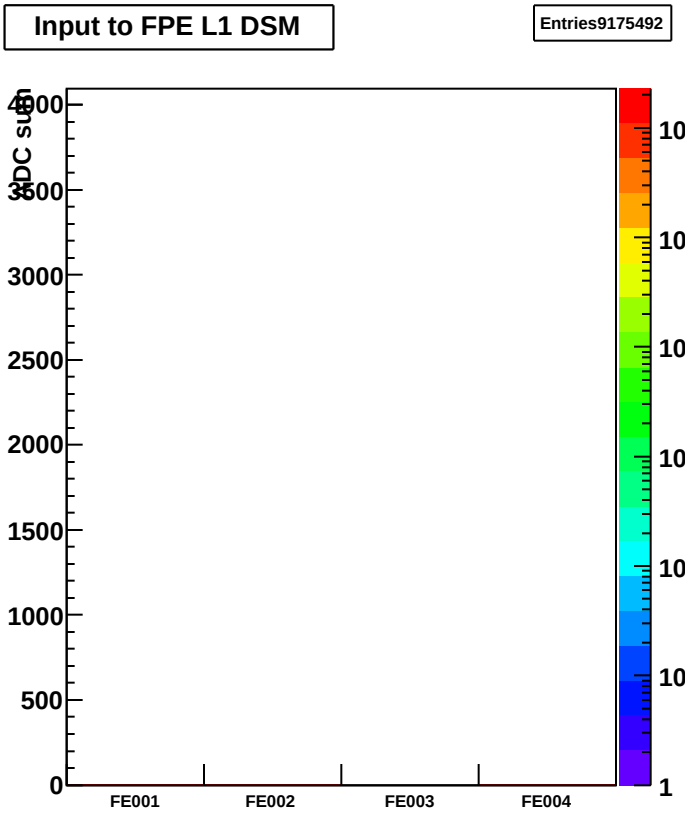

Input to FPD L2 DSM
Entries 1.376324e+07
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5
10^6


Input to FE001 QT board
Entries 7.340394e+07
ADC
channel


Input to FE002 QT board
Entries 7.340394e+07
ADC
channel


Input to FE003 QT board
Entries 7.340394e+07
ADC
channel


Input to FE004 QT board
Entries 7.340394e+07
ADC
channel


Input to FPE L1 DSM
Entries9175492
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
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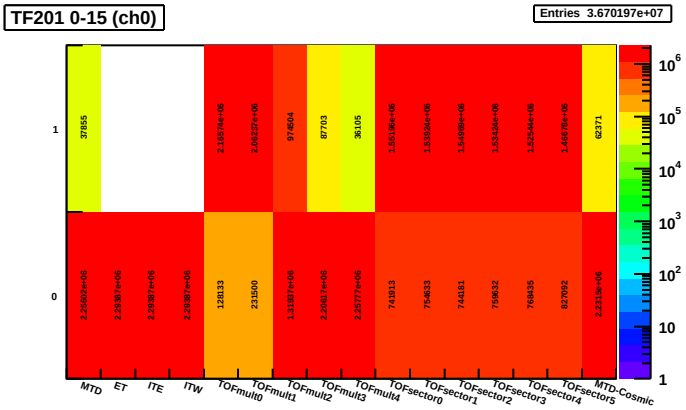
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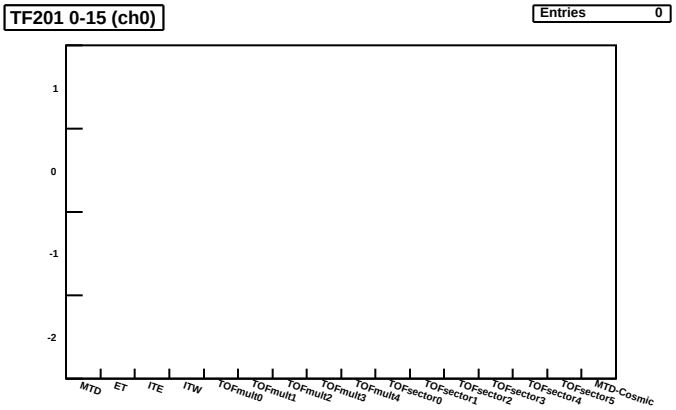
MTD ET ITE ITW TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic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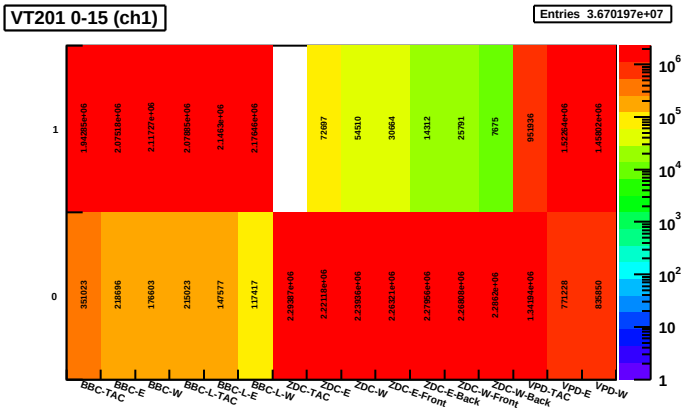
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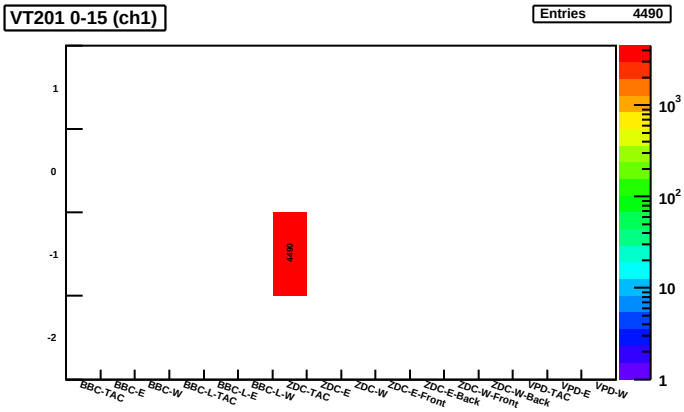
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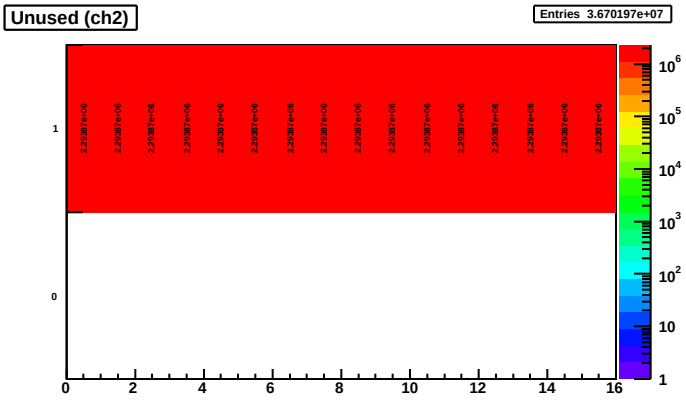
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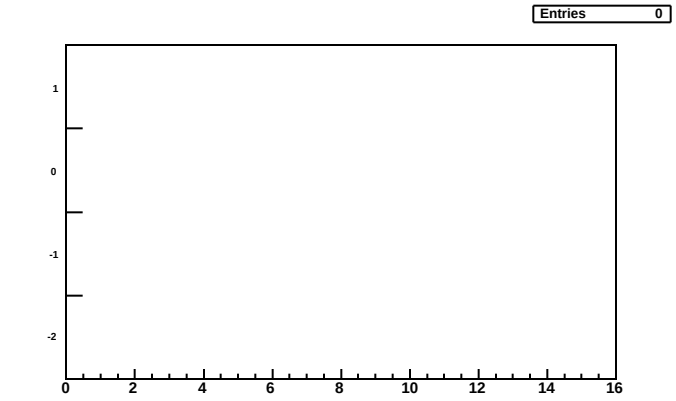
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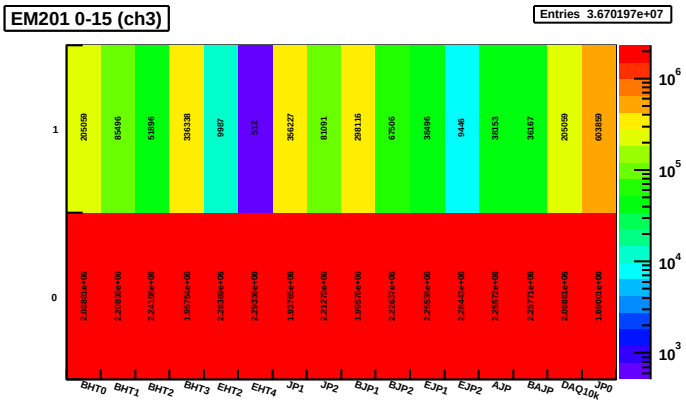
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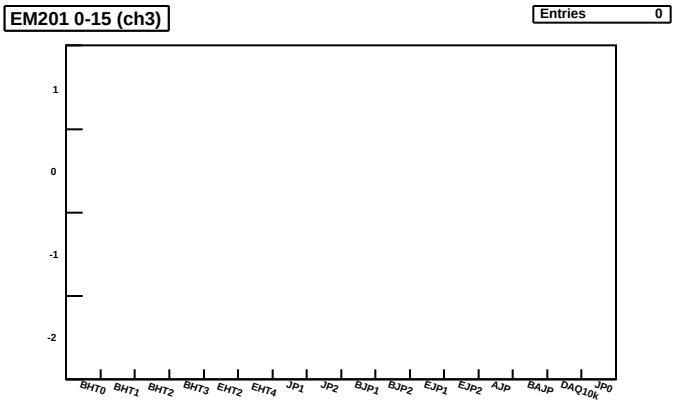
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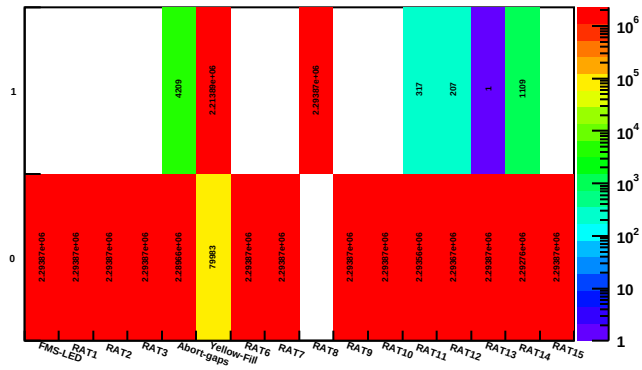
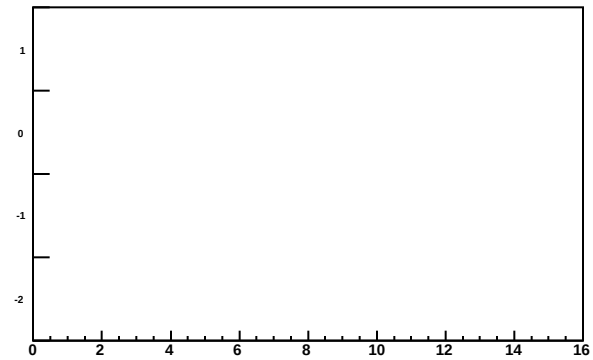
RAT board (ch4)





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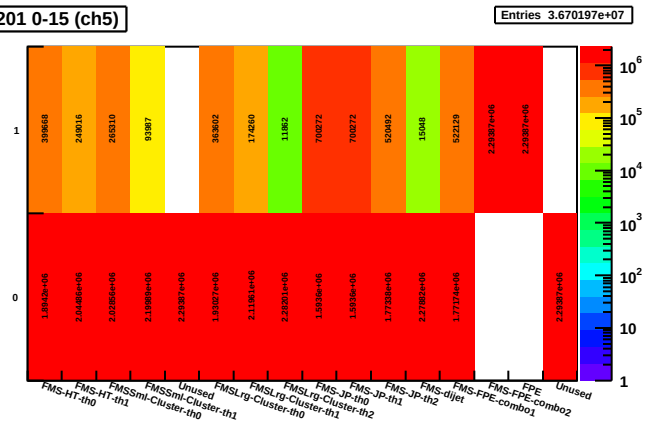

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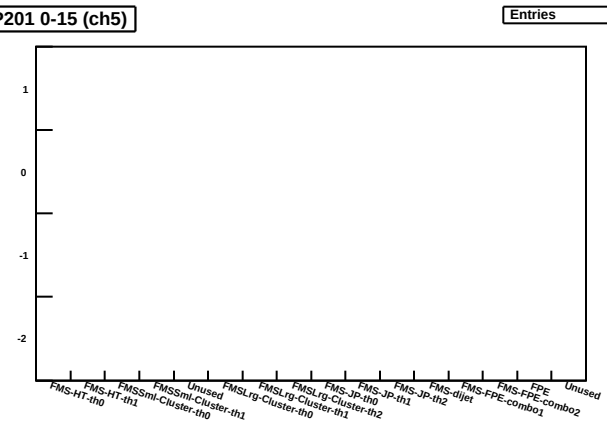
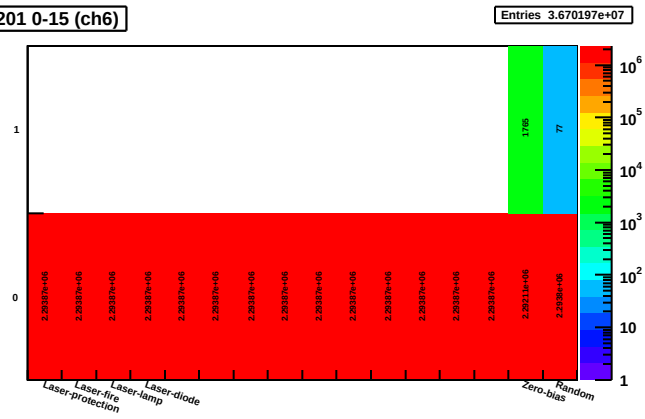
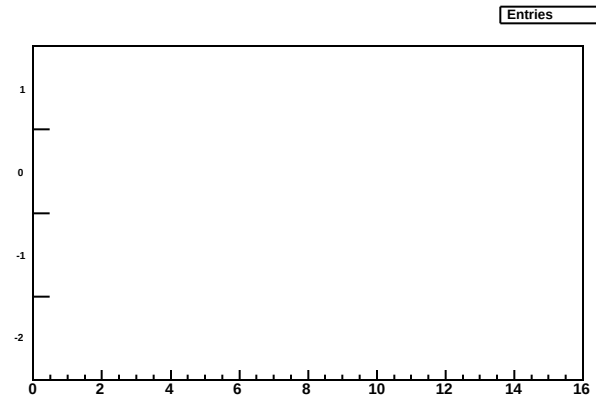
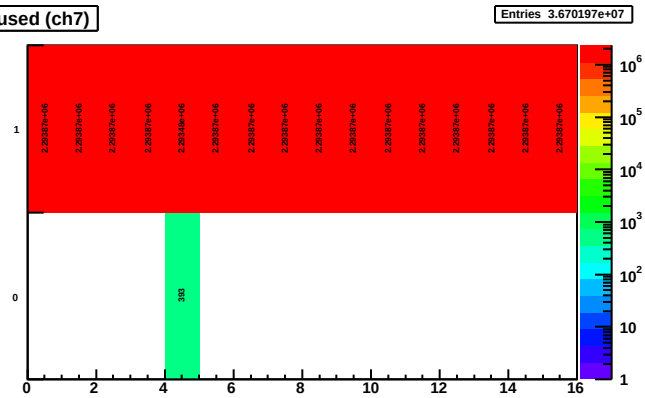
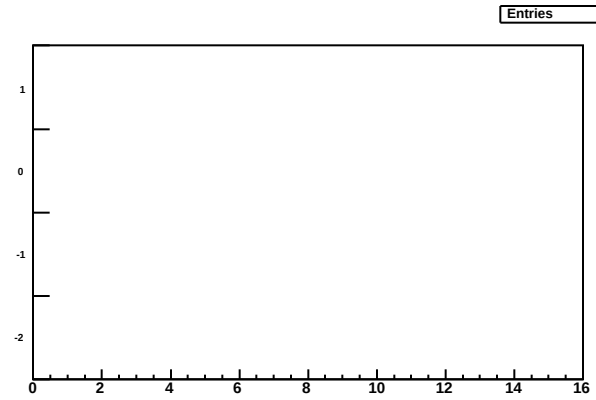


ST201 0-15 (ch6)





Unused (ch7)