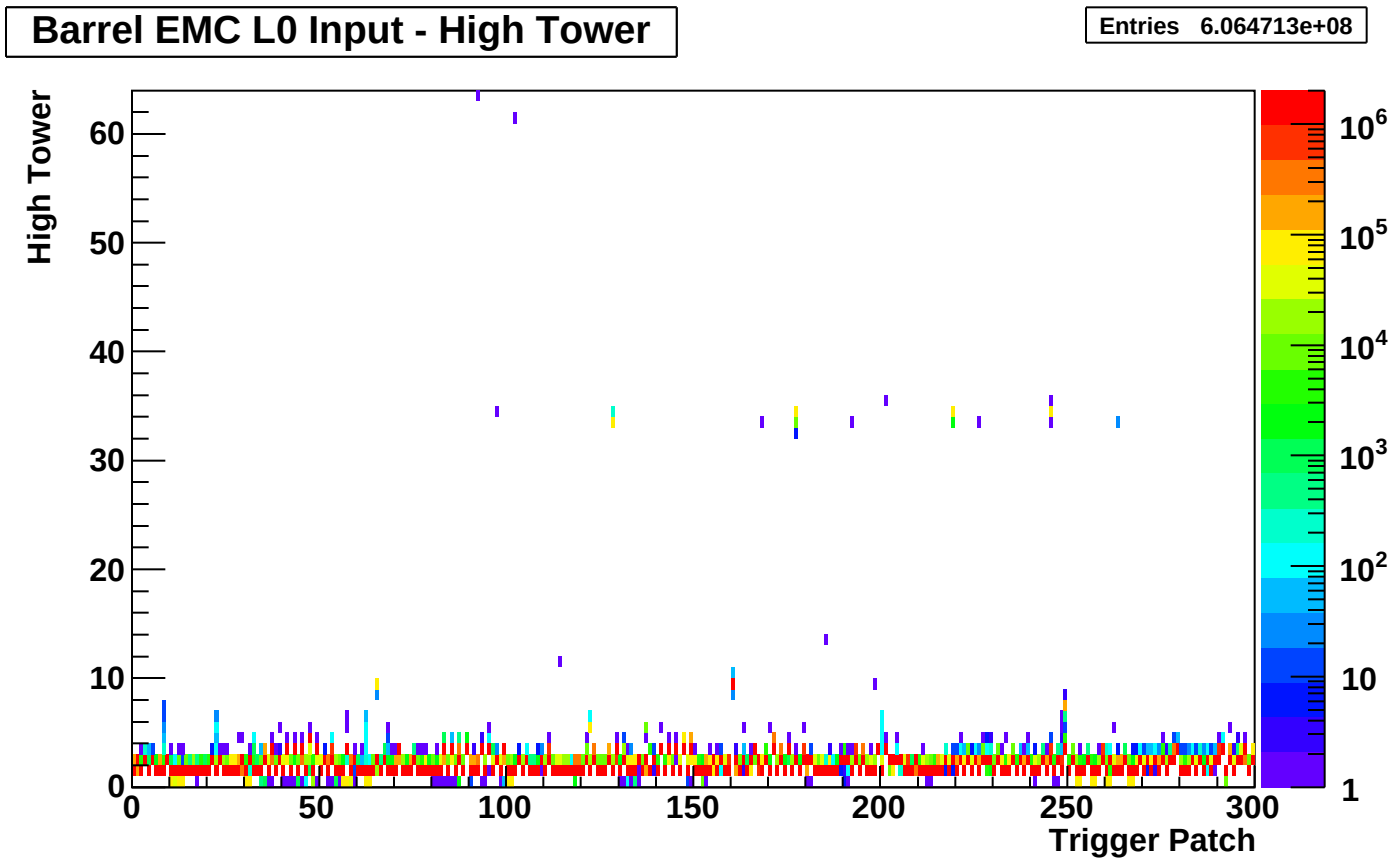
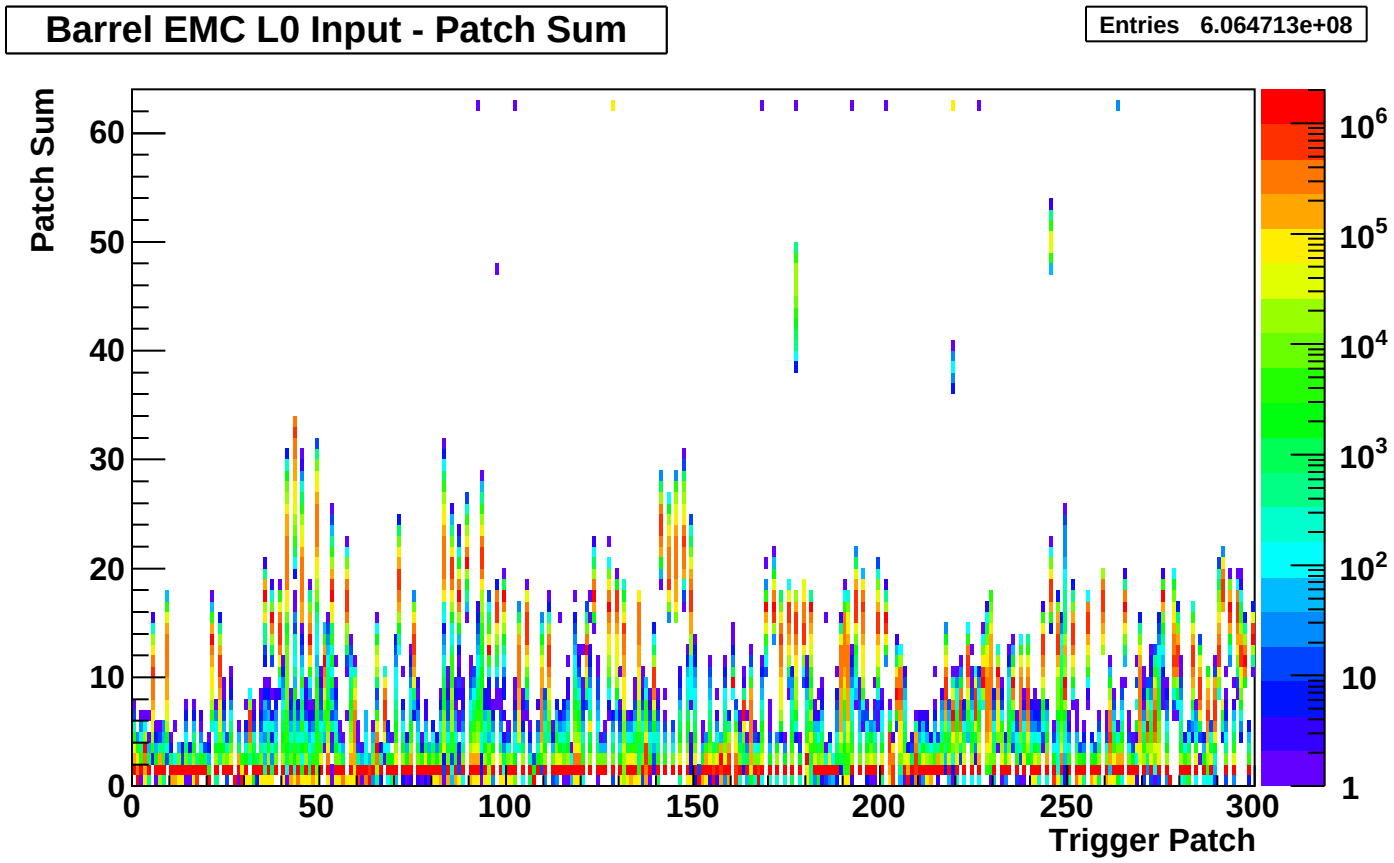
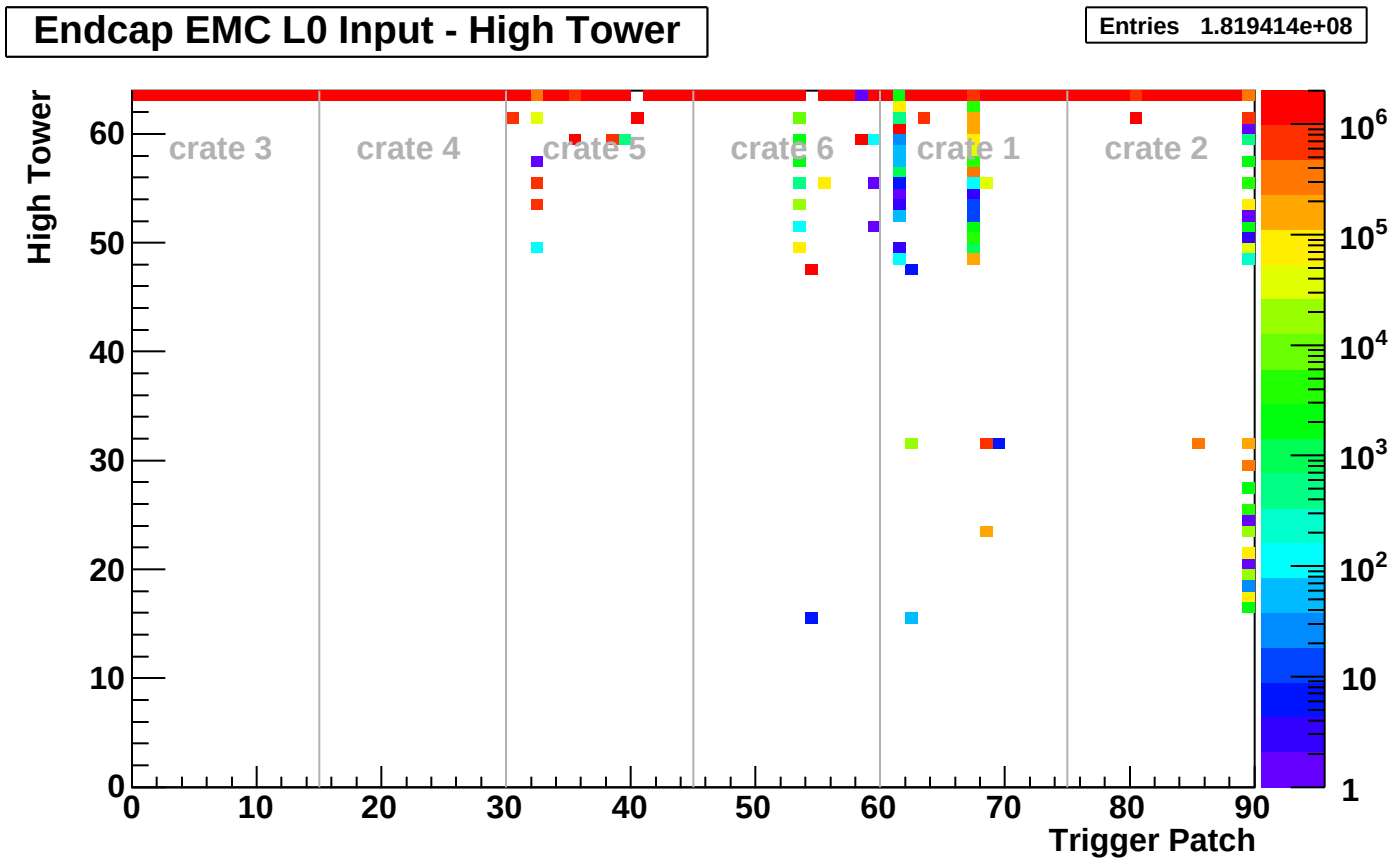
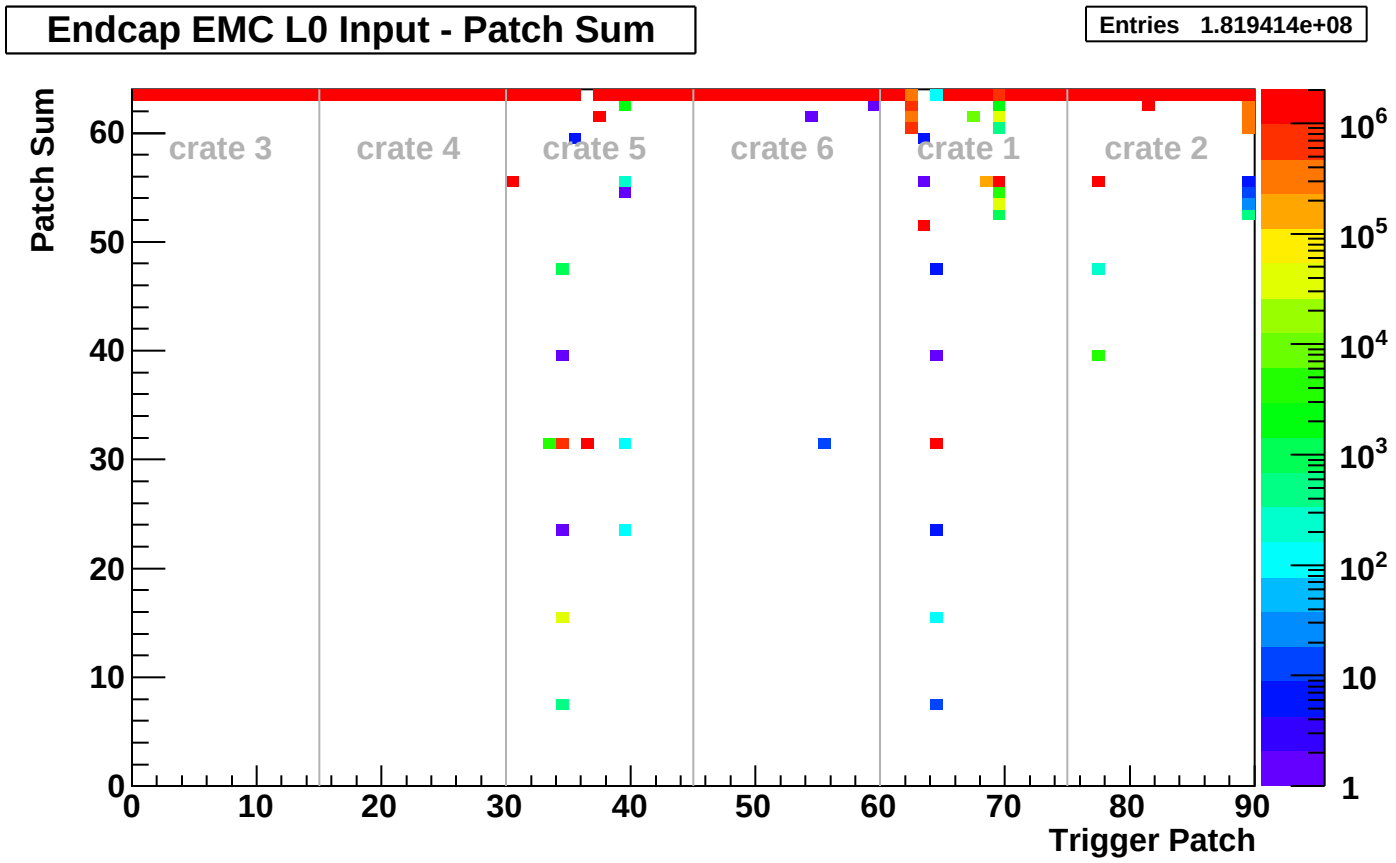
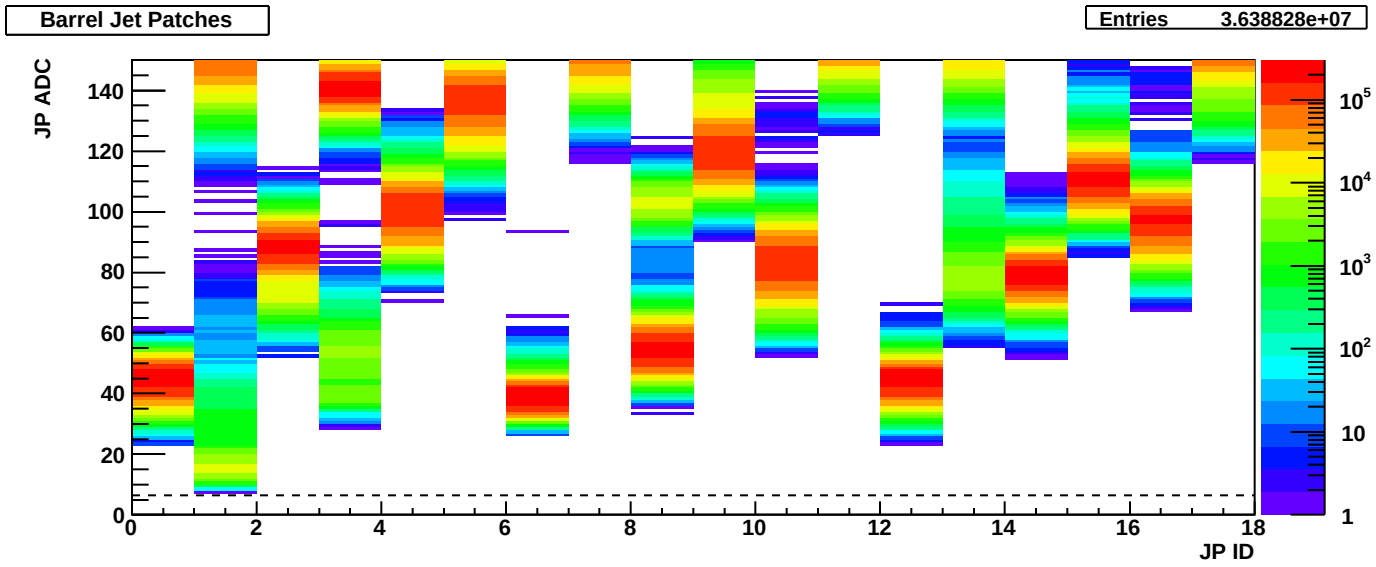
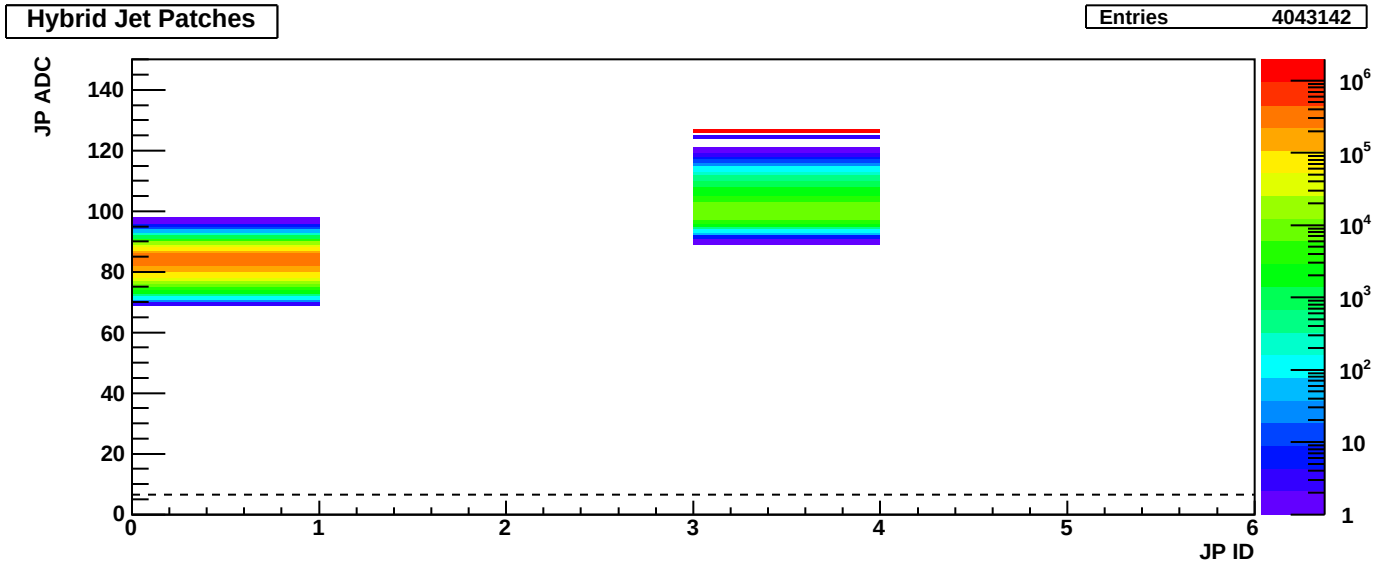

Barrel EMC L0 Input - High Tower
Entries 6.064713e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

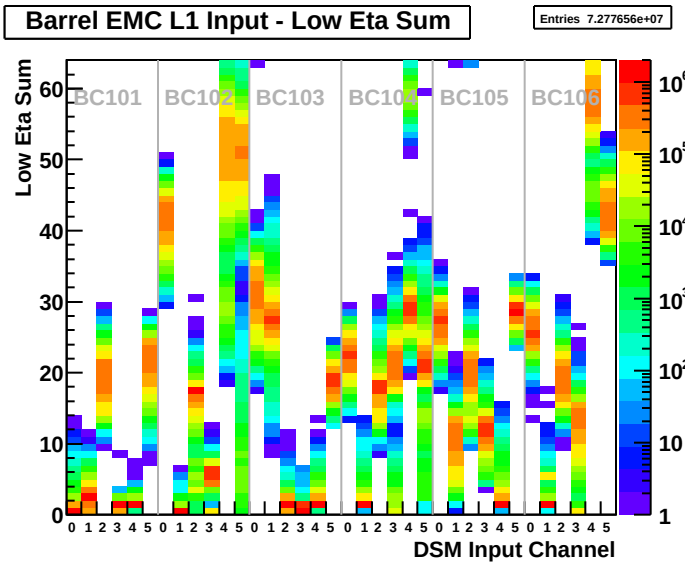

Barrel EMC L0 Input - Patch Sum
Entries 6.064713e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5
10^6

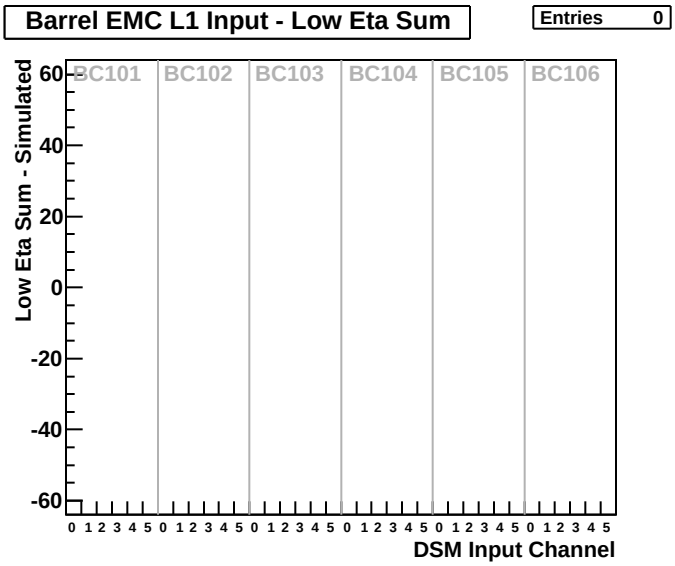

Endcap EMC L0 Input - High Tower
Entries 1.819414e+08
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

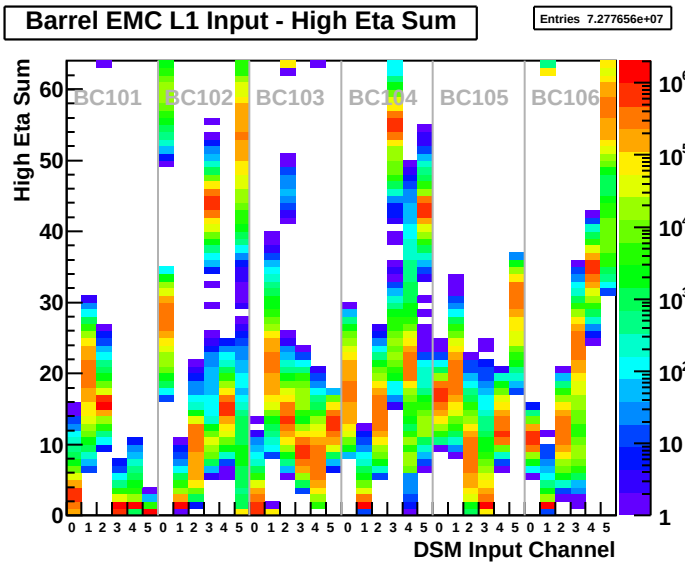

Endcap EMC L0 Input - Patch Sum
Entries 1.819414e+08
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

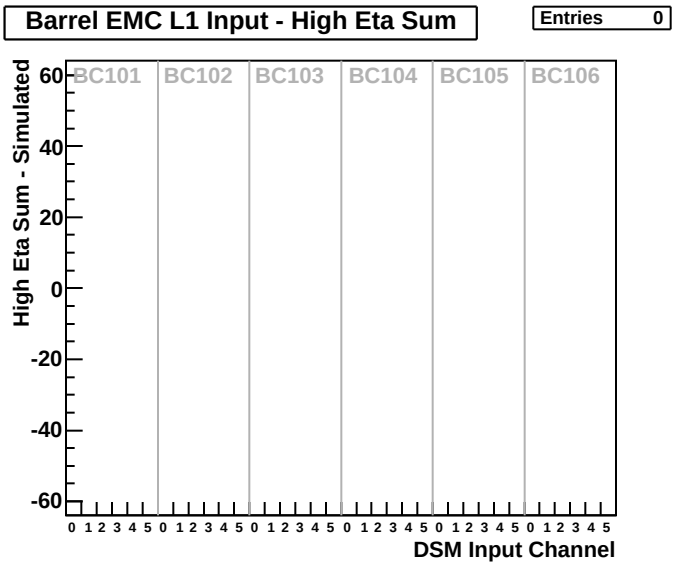

Barrel Jet Patches
Entries 3.638828e+07
JP ADC
JP ID

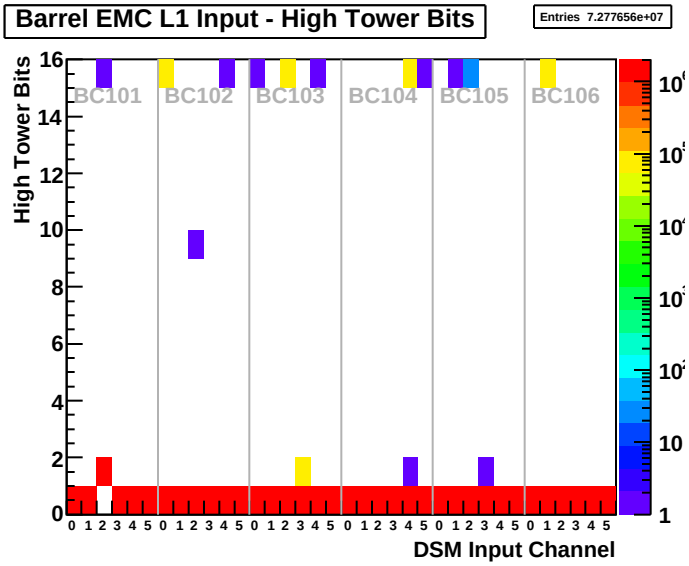

Hybrid Jet Patches
Entries 4043142
JP ADC
JP ID

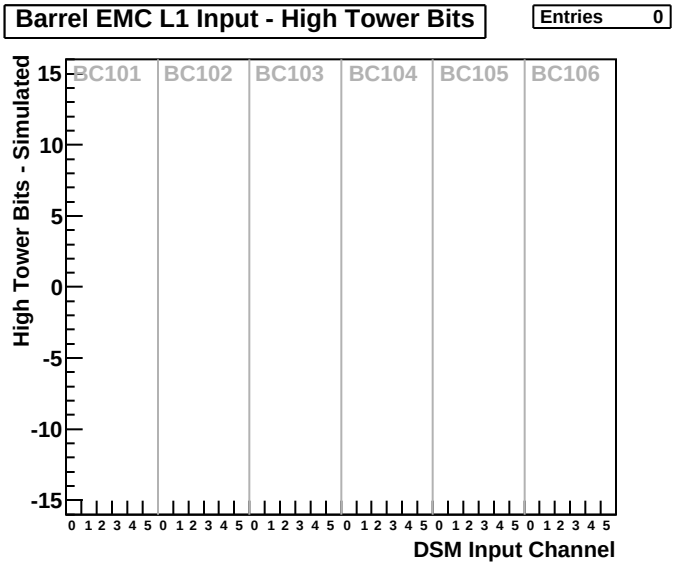

Barrel EMC L1 Input - Low Eta Sum
Entries 7.277656e+07
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

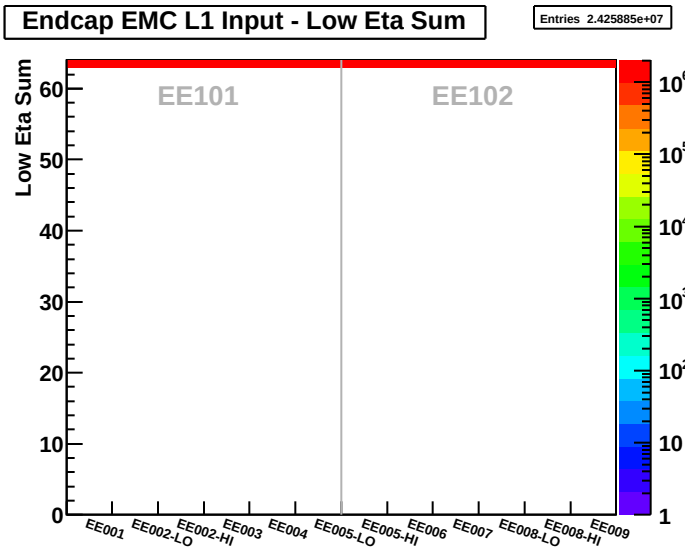

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

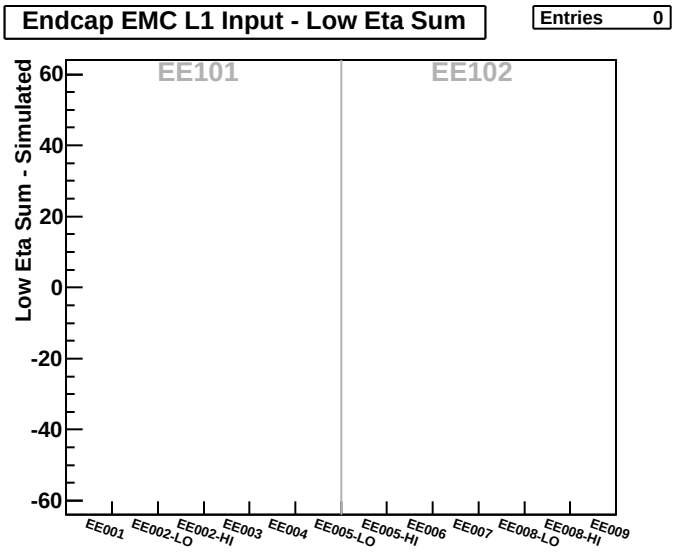

Barrel EMC L1 Input - High Eta Sum
Entries 7.277656e+07
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

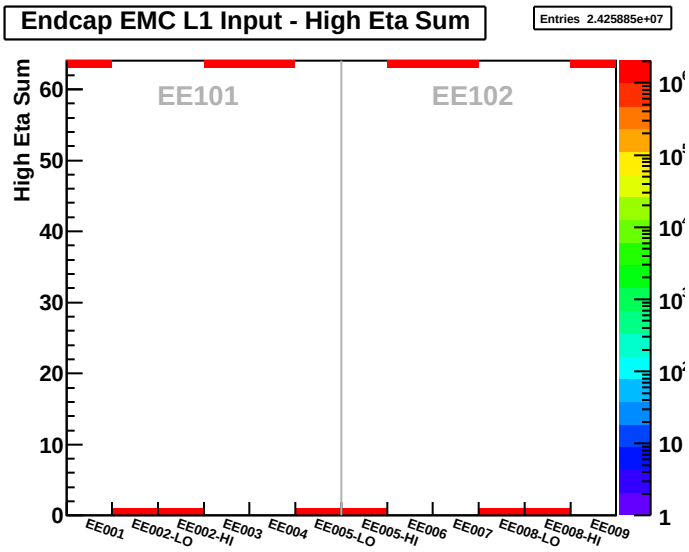

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

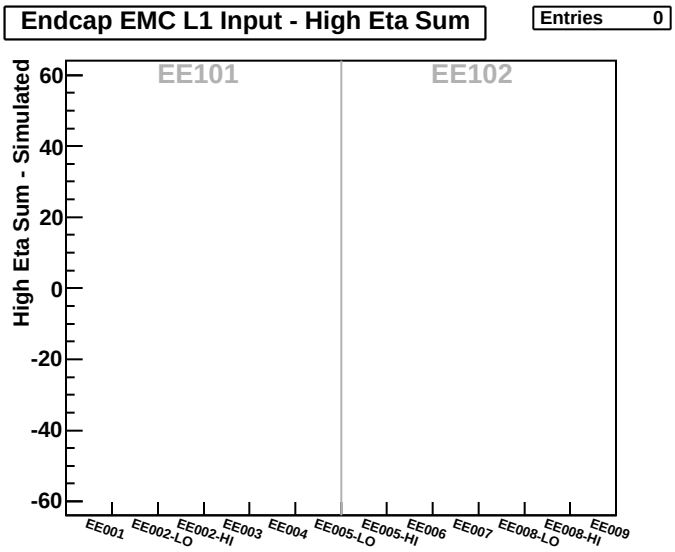

Barrel EMC L1 Input - High Tower Bits
Entries 7.277656e+07
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

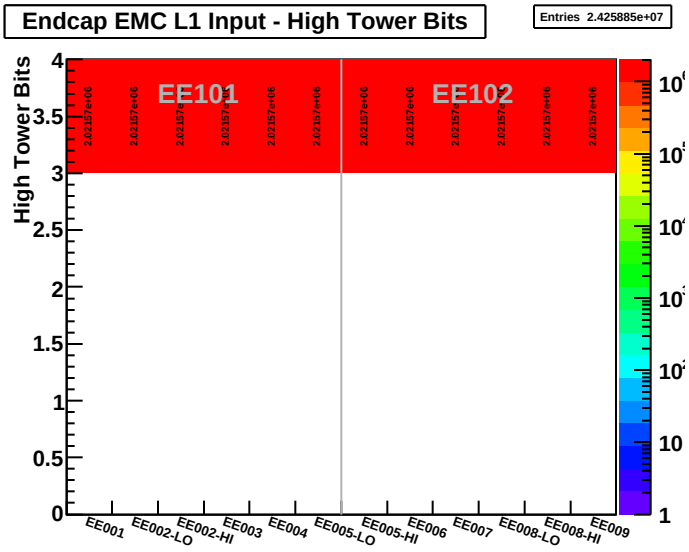

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

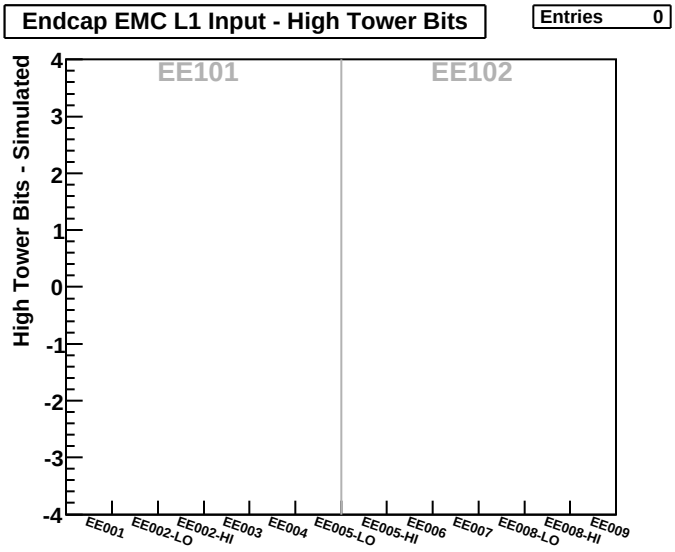

Endcap EMC L1 Input - Low Eta Sum
Entries 2.425885e+07
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

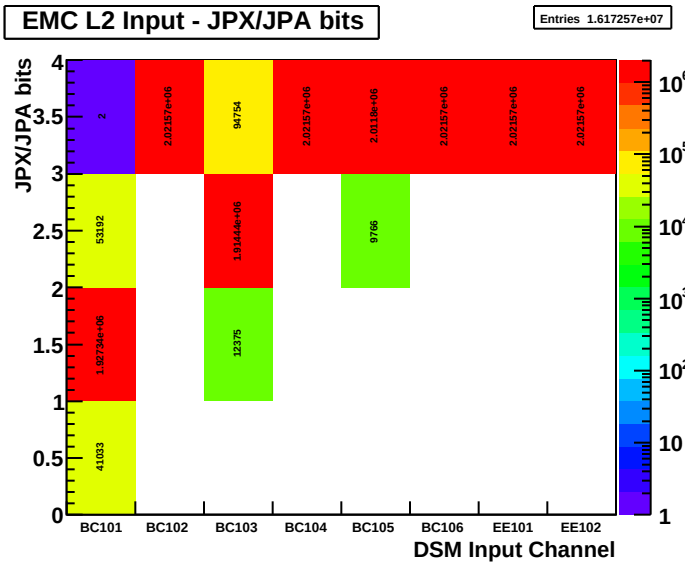

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

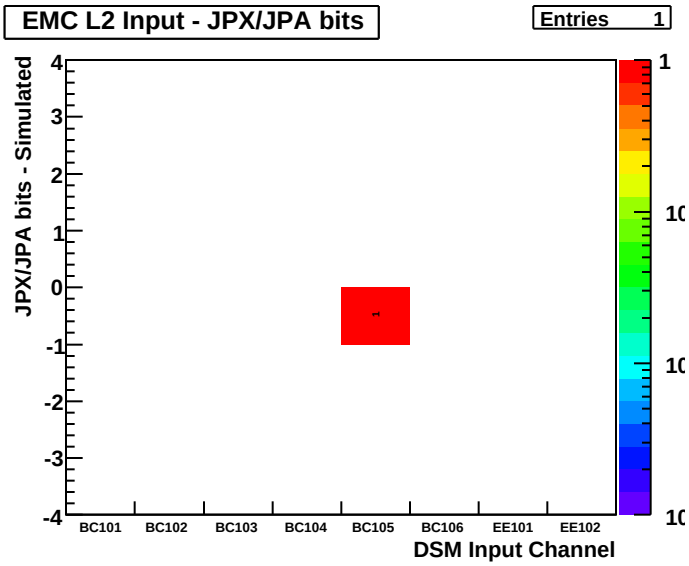

Endcap EMC L1 Input - High Eta Sum
Entries 2.425885e+07
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

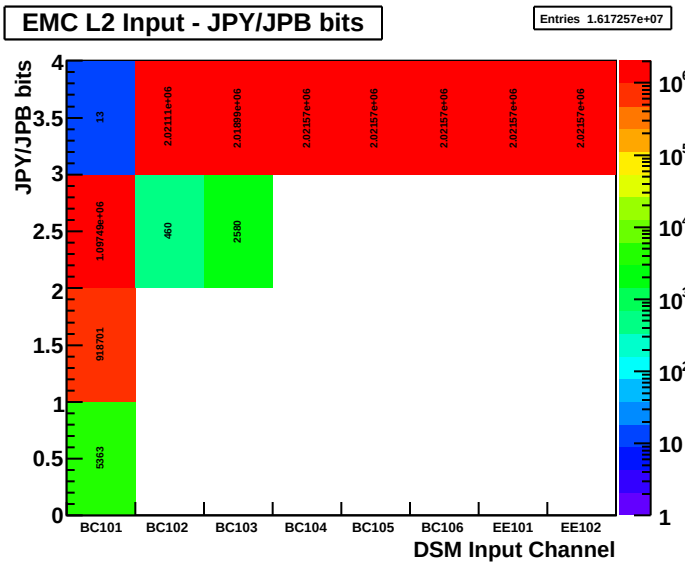

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

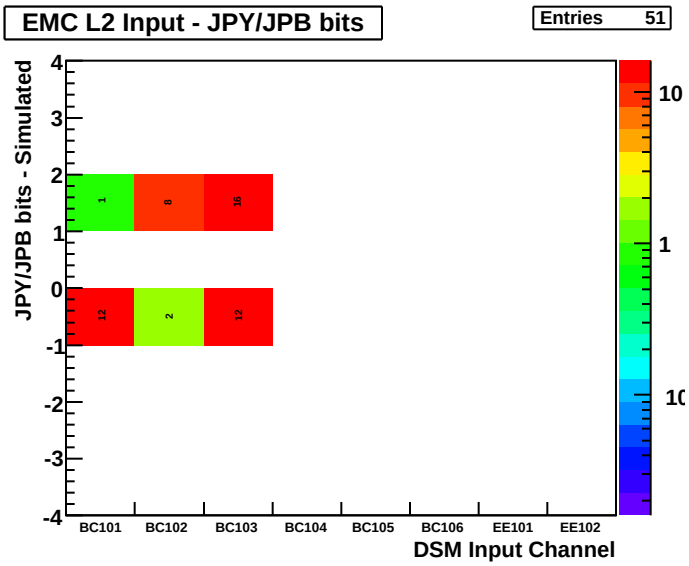

Endcap EMC L1 Input - High Tower Bits
Entries 2.425885e+07
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

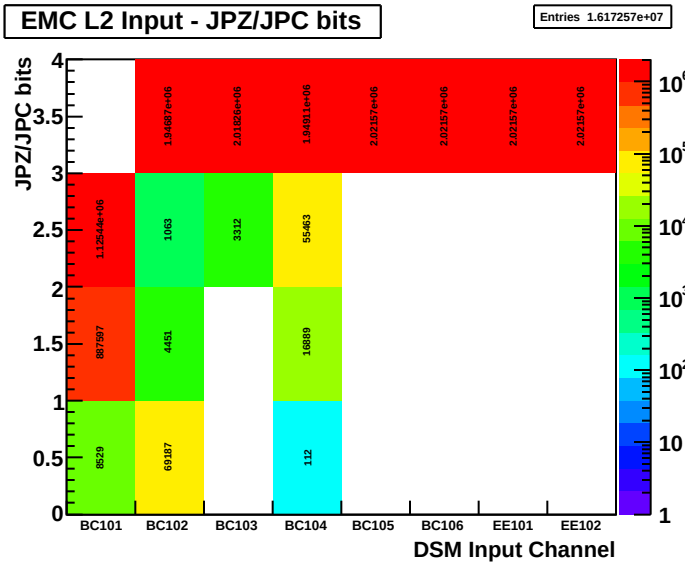

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

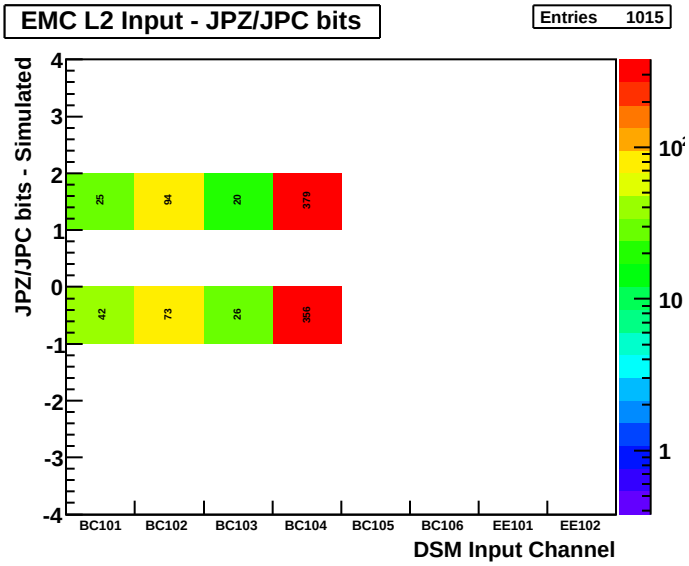

EMC L2 Input - JPX/JPA bits
Entries 1.617257e+07
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
2
2.02157e+06
94754
2.02157e+06
2.0118e+06
2.02157e+06
2.02157e+06
2.02157e+06
53192
1.91444e+06
9766
1.92734e+06
12375
41033

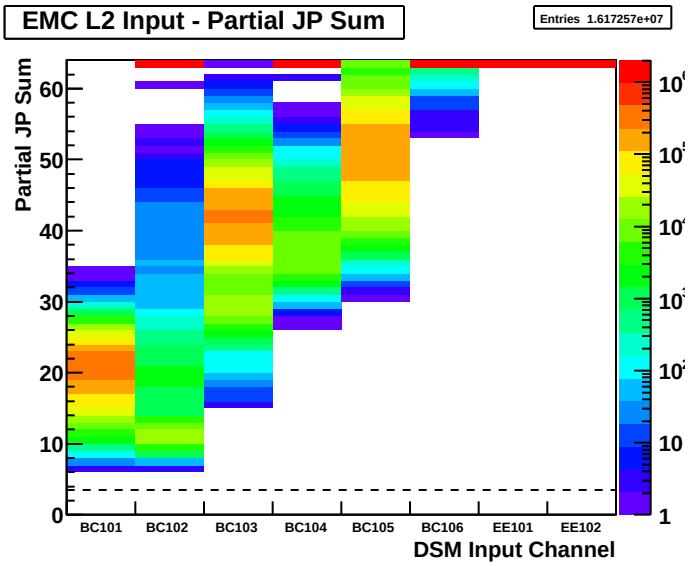

EMC L2 Input - JPX/JPA bits
Entries 1
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1

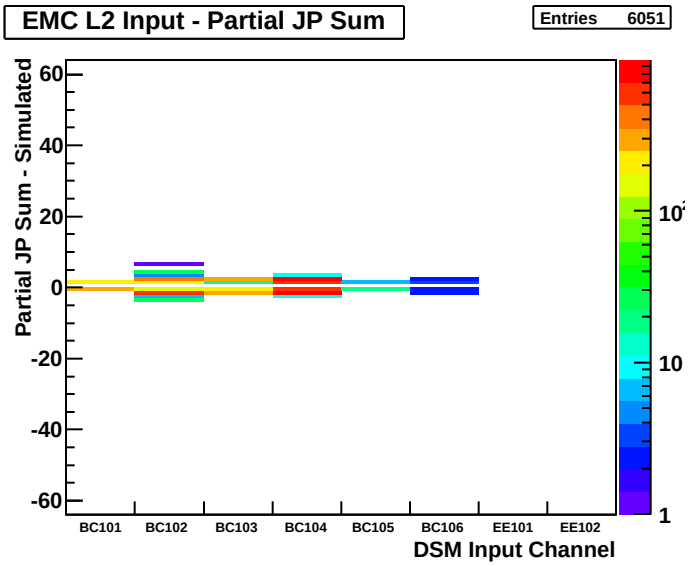

EMC L2 Input - JPY/JPB bits
Entries 1.617257e+07
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
13
2.02111e+06
2.01899e+06
2.02157e+06
2.02157e+06
2.02157e+06
2.02157e+06
2.02157e+06
1.09749e+06
460
2580
918701
5363

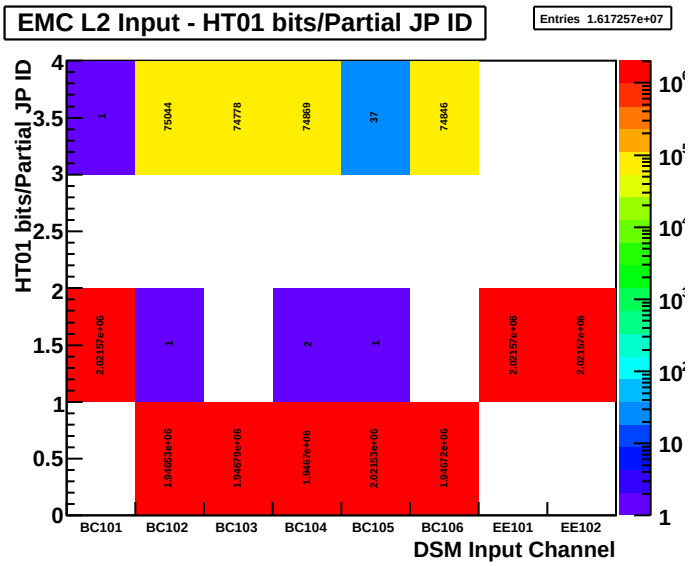

EMC L2 Input - JPY/JPB bits
Entries 51
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1
8
16
12
2
12

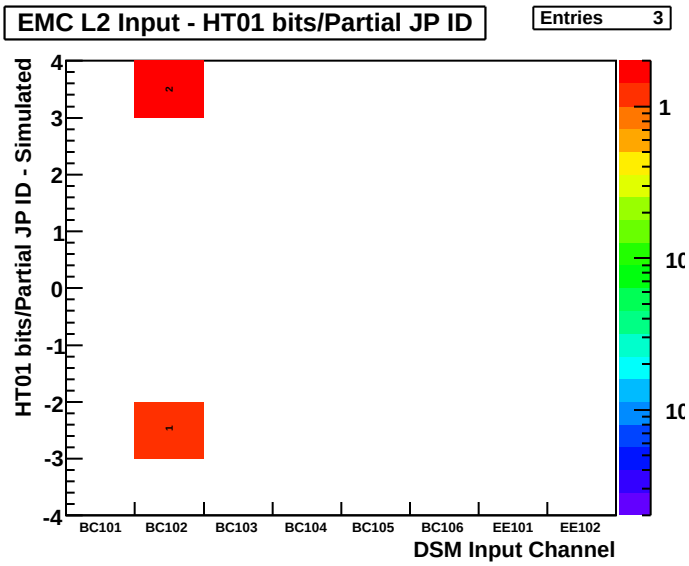

EMC L2 Input - JPZ/JPC bits
Entries 1.617257e+07
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
1.94687e+06
2.01826e+06
1.94911e+06
2.02157e+06
2.02157e+06
2.02157e+06
2.02157e+06
1.12544e+06
1063
3312
55463
887597
4451
16889
8529
69187
112

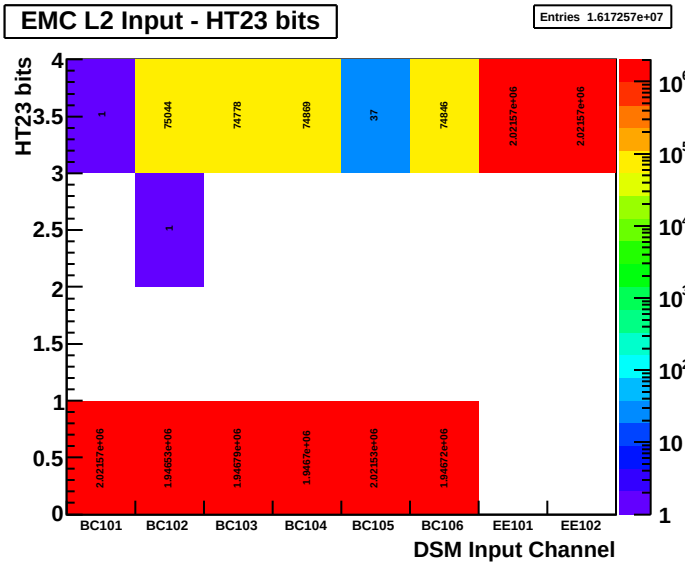

EMC L2 Input - JPZ/JPC bits
Entries 1015
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
25
94
20
379
42
73
26
356

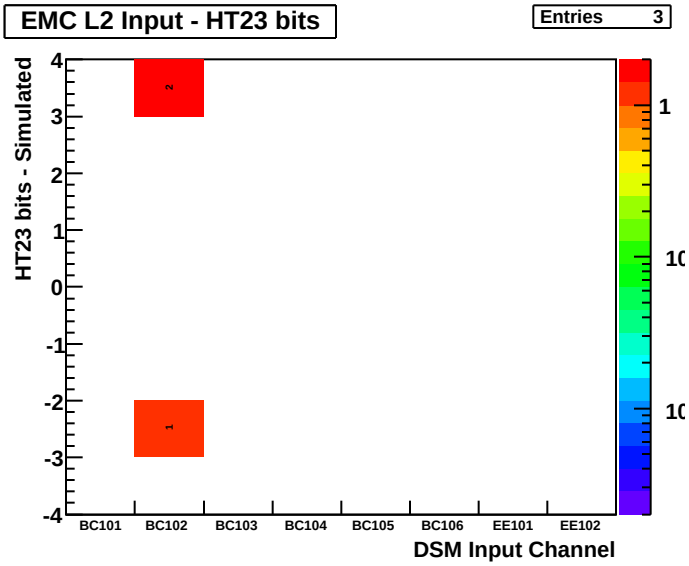

EMC L2 Input - Partial JP Sum
Entries 1.617257e+07
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

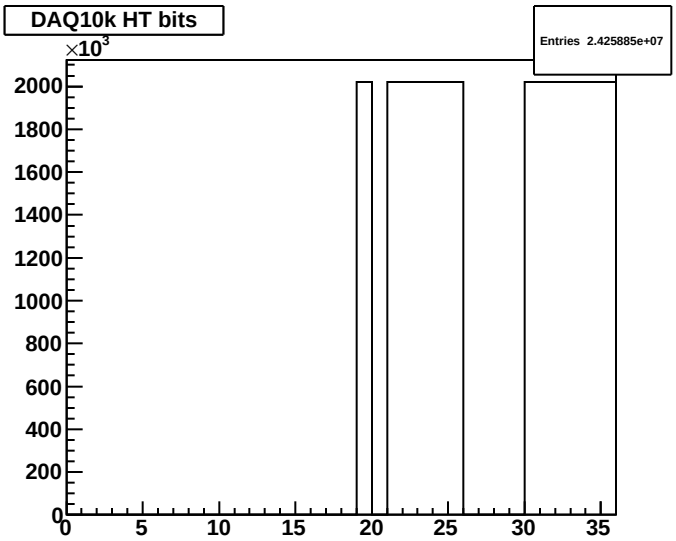

EMC L2 Input - Partial JP Sum
Entries 6051
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

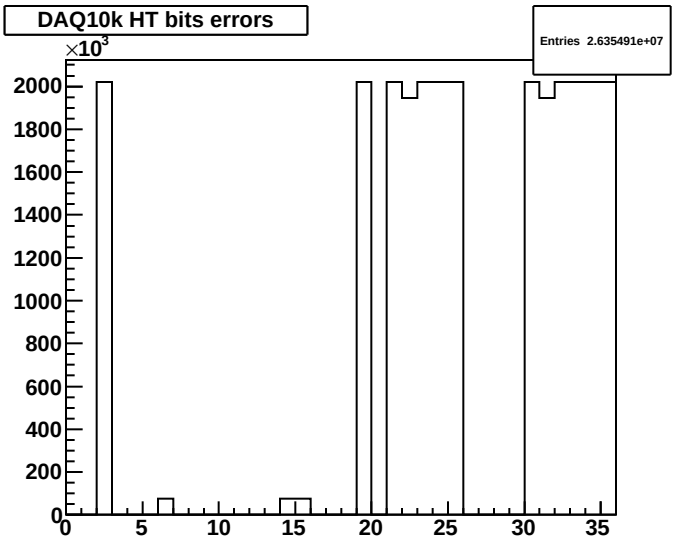

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1.617257e+07
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

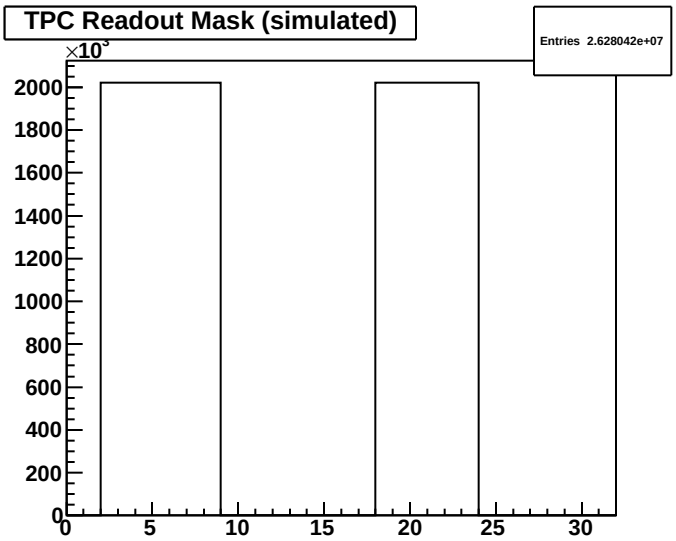

EMC L2 Input - HT01 bits/Partial JP ID
Entries 3
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

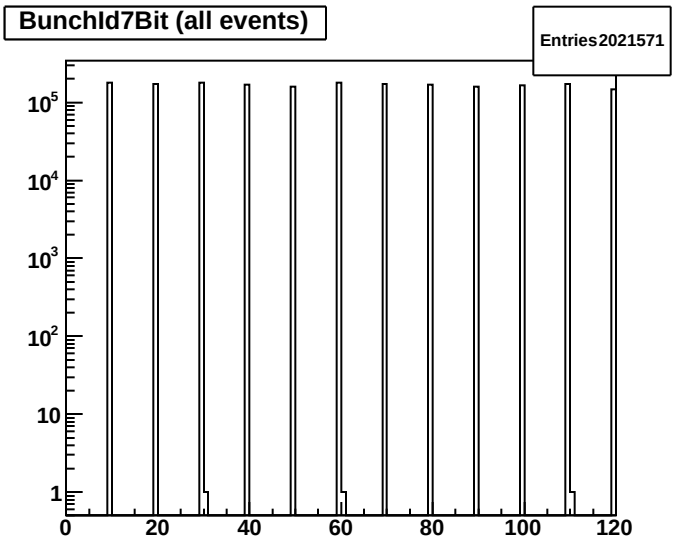

EMC L2 Input - HT23 bits
Entries 1.617257e+07
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

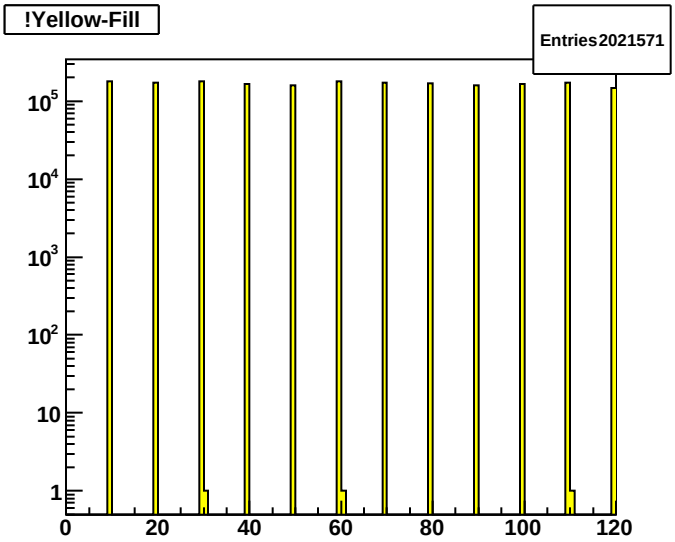

EMC L2 Input - HT23 bits
Entries 3
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

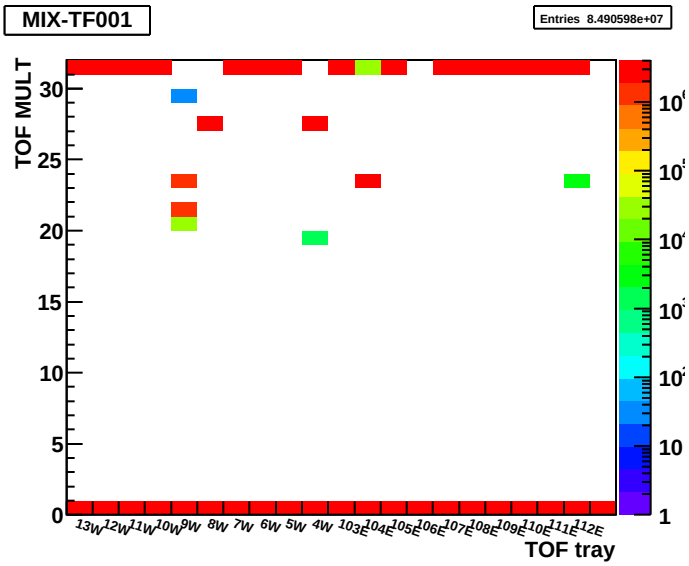

DAQ10k HT bits
Entries 2.425885e+07
×10^3
2000
1800
1600
1400
1200
1000
800
600
400
200
0
0 5 10 15 20 25 30 35

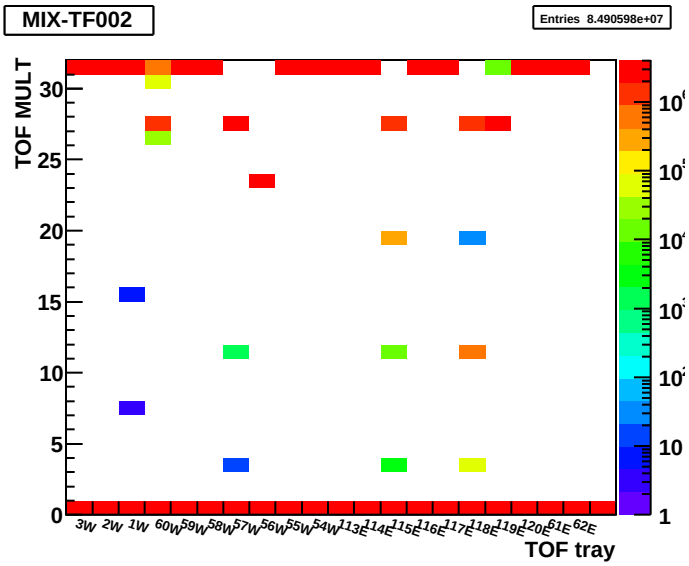

DAQ10k HT bits errors
Entries 2.635491e+07
×10^3
2000
1800
1600
1400
1200
1000
800
600
400
200
0
0 5 10 15 20 25 30 35

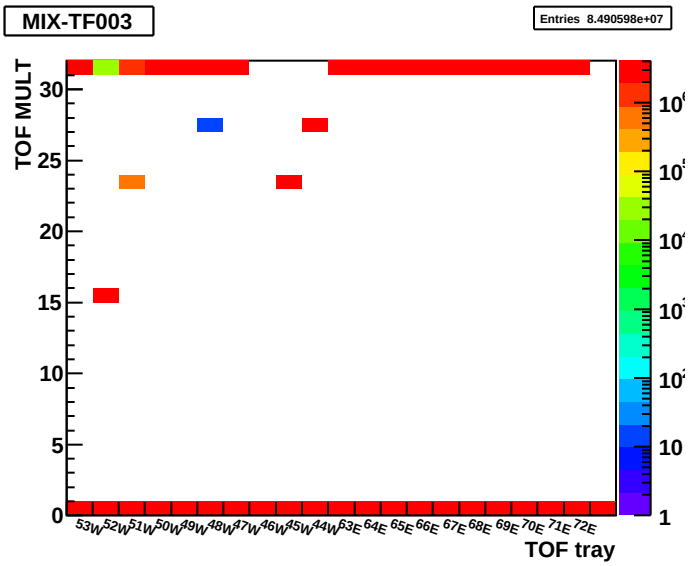

TPC Readout Mask (simulated)
Entries 2.628042e+07
×10^3
2000
1800
1600
1400
1200
1000
800
600
400
200
0
0 5 10 15 20 25 30

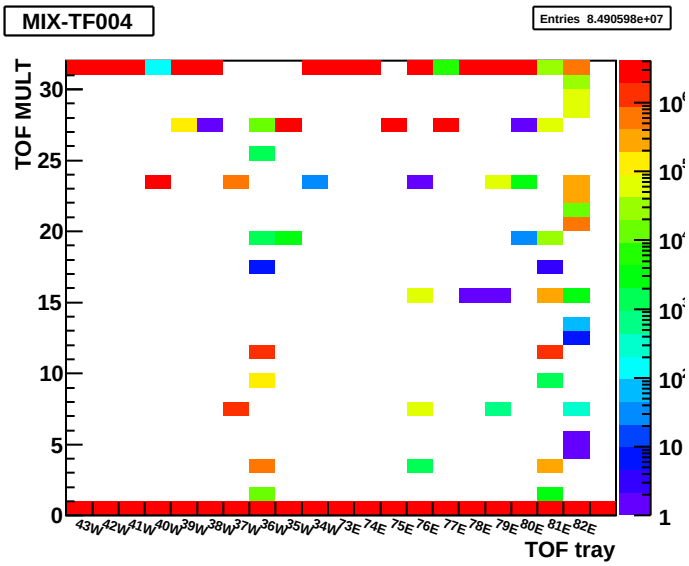

BunchId7Bit (all events)
Entries 2021571
10^5
10^4
10^3
10^2
10
1
0 20 40 60 80 100 120

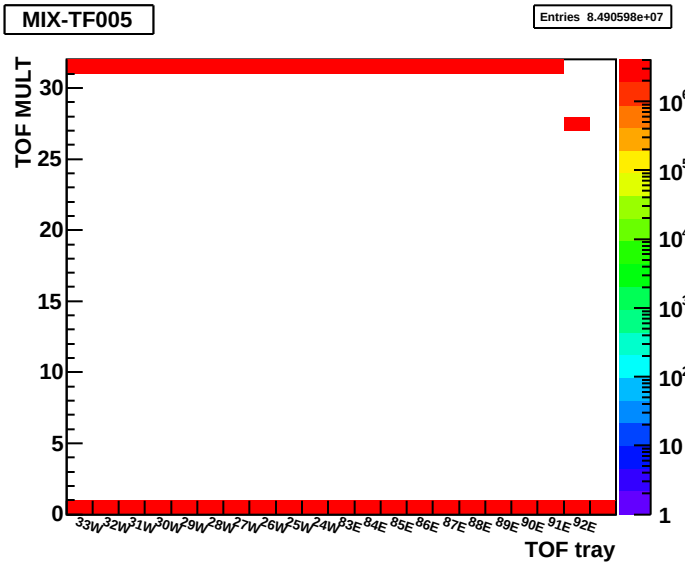

!Yellow-Fill
Entries 2021571
10^5
10^4
10^3
10^2
10
1
0 20 40 60 80 100 120

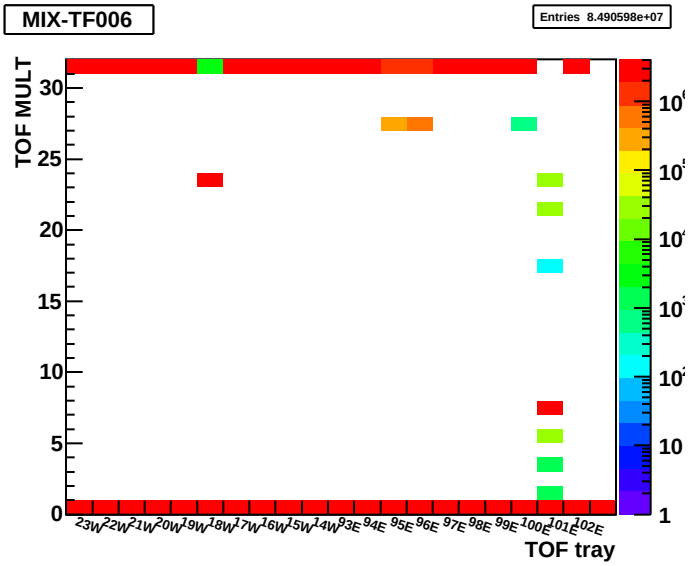

MIX-TF001
Entries 8.490598e+07
TOF MULT
TOF tray

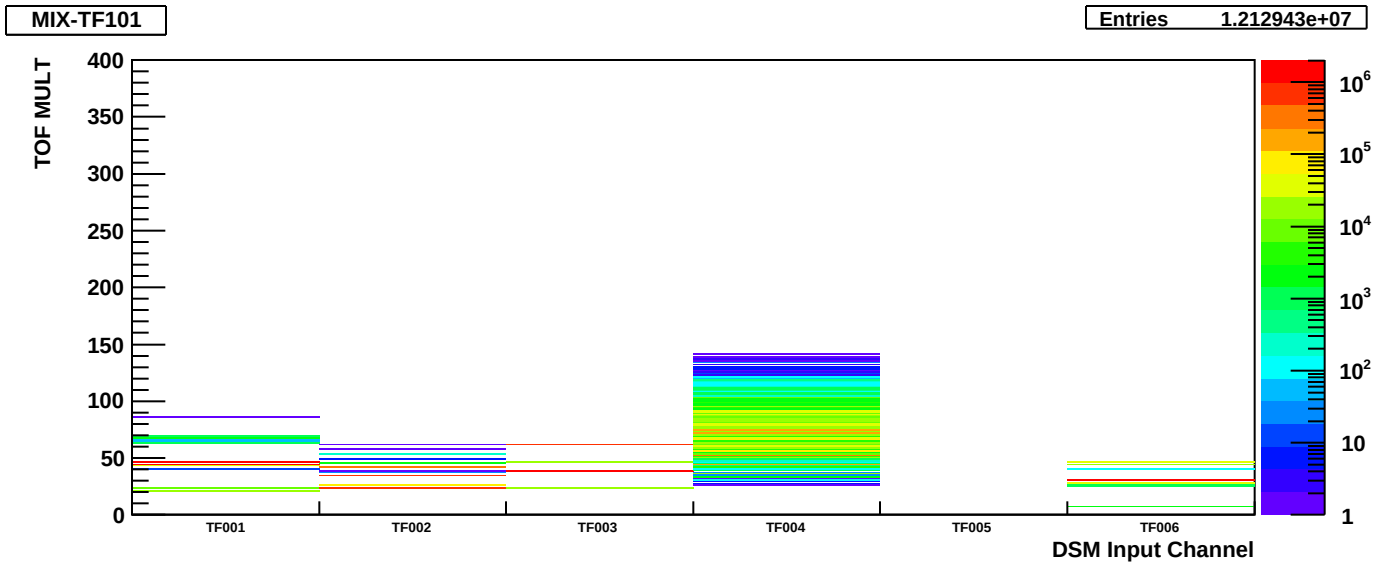

MIX-TF002
Entries 8.490598e+07
TOF MULT
TOF tray

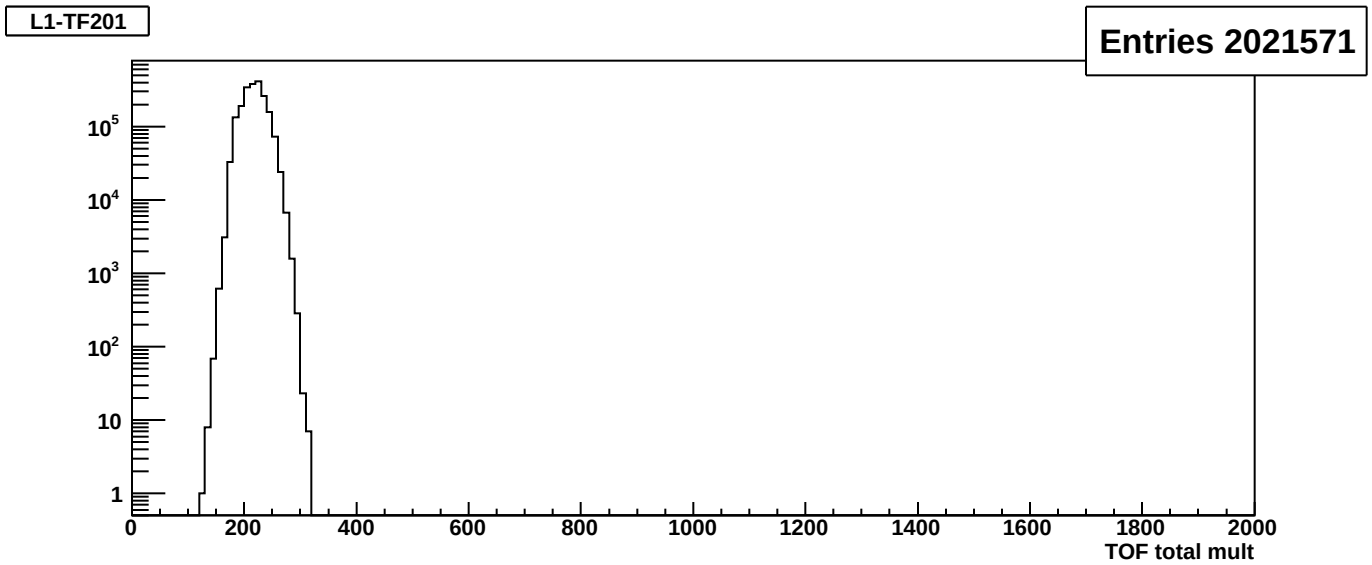

MIX-TF003
Entries 8.490598e+07
TOF MULT
TOF tray

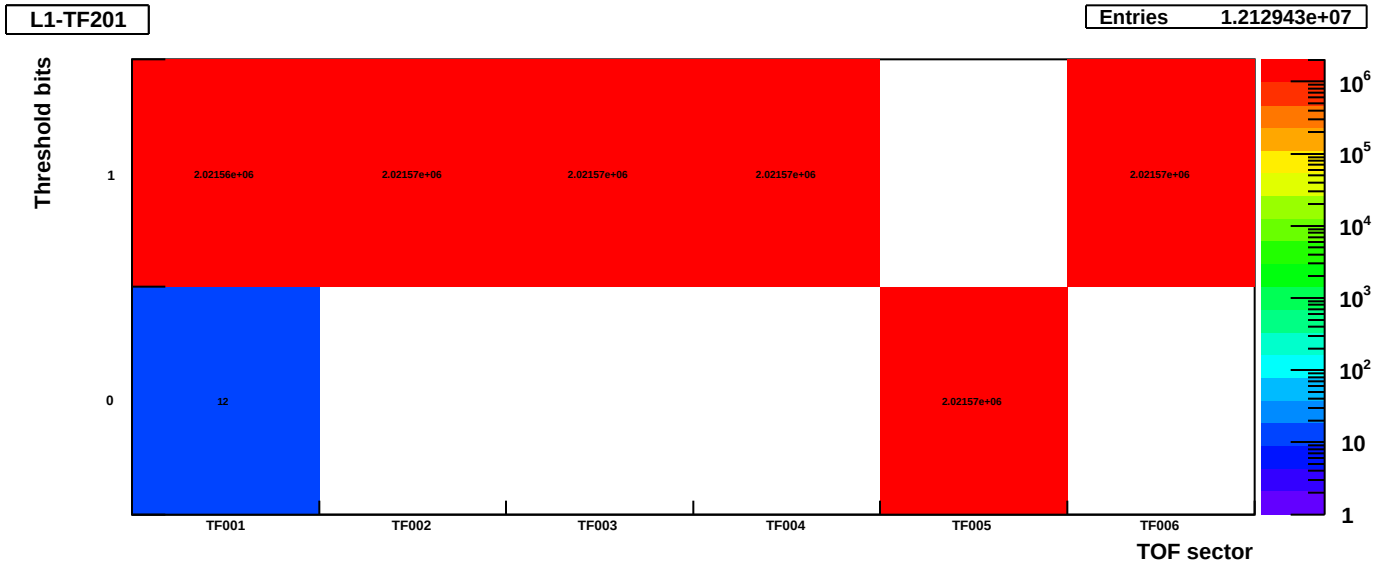

MIX-TF004
Entries 8.490598e+07
TOF MULT
TOF tray

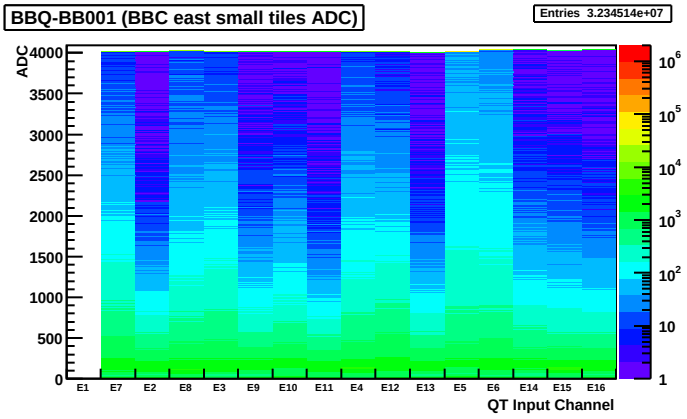

MIX-TF005
Entries 8.490598e+07
TOF MULT
TOF tray

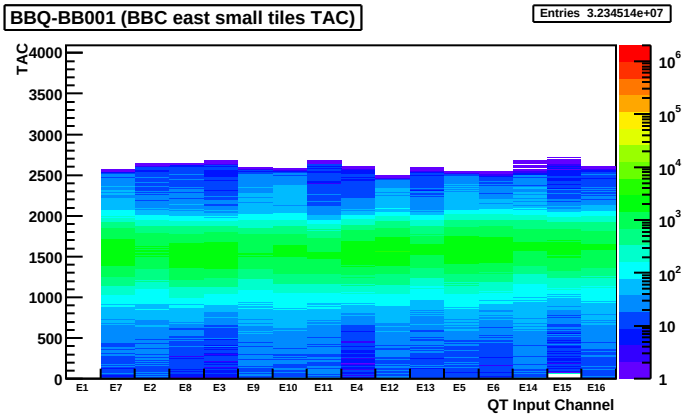

MIX-TF006
Entries 8.490598e+07
TOF MULT
TOF tray

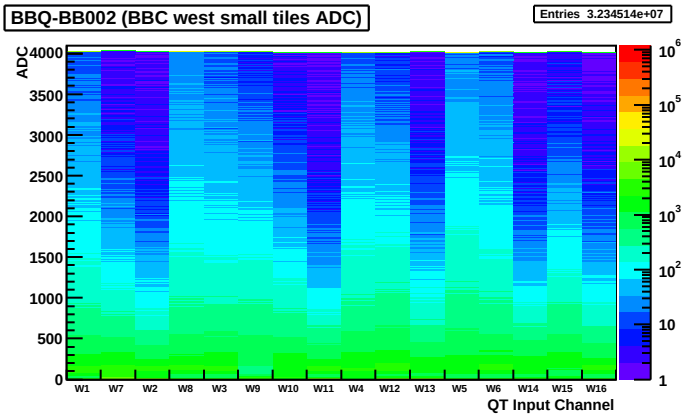

MIX-TF101
Entries 1.212943e+07
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^6
10^5
10^4
10^3
10^2
10
1

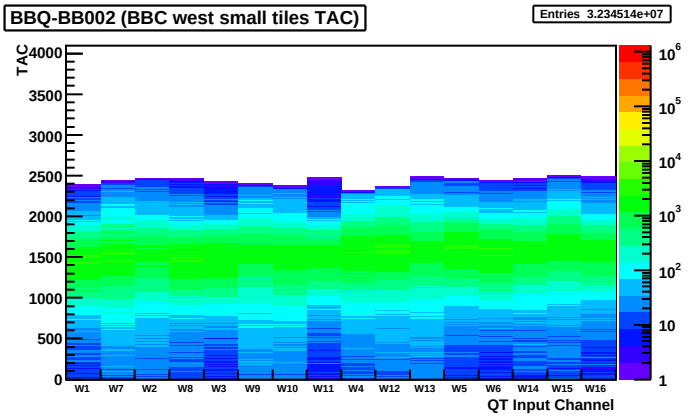

L1-TF201
Entries 2021571
10^5
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

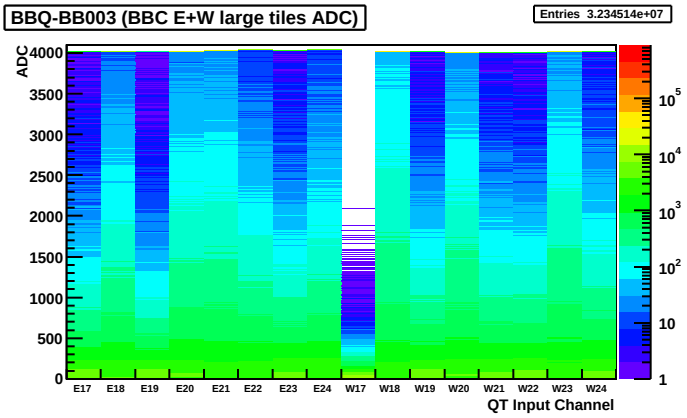

L1-TF201
Entries 1.212943e+07
Threshold bits
1
0
2.02156e+06
2.02157e+06
2.02157e+06
2.02157e+06
2.02157e+06
12
2.02157e+06
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^6
10^5
10^4
10^3
10^2
10
1

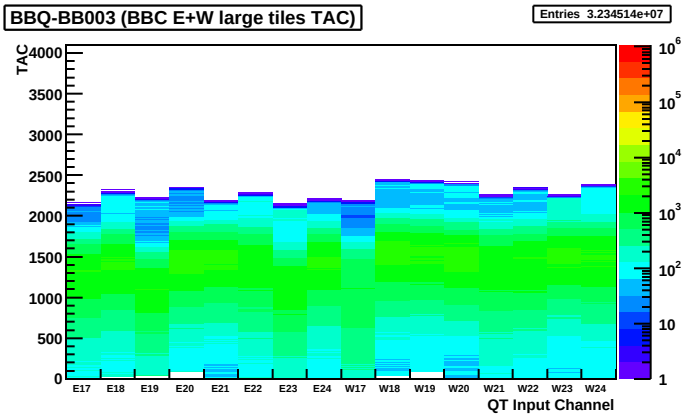

BBQ-BB001 (BBC east small tiles ADC)
Entries 3.234514e+07
ADC
QT Input Channel

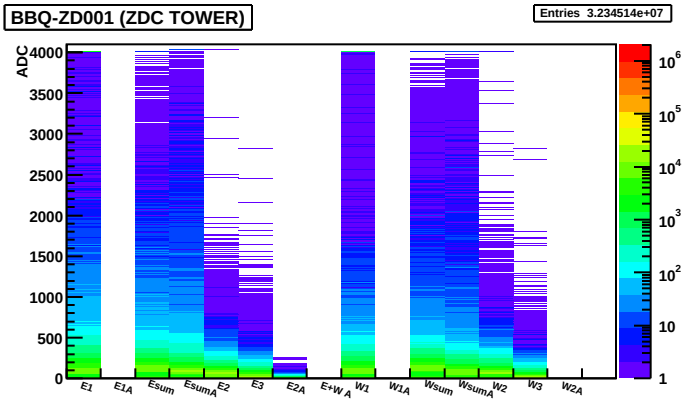

BBQ-BB001 (BBC east small tiles TAC)
Entries 3.234514e+07
TAC
QT Input Channel

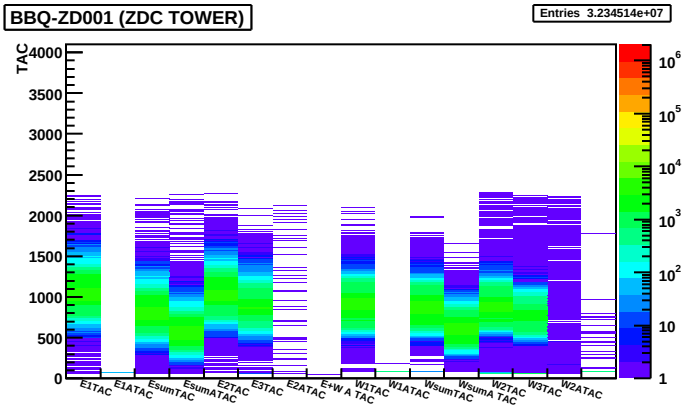

BBQ-BB002 (BBC west small tiles ADC)
Entries 3.234514e+07
ADC
QT Input Channel

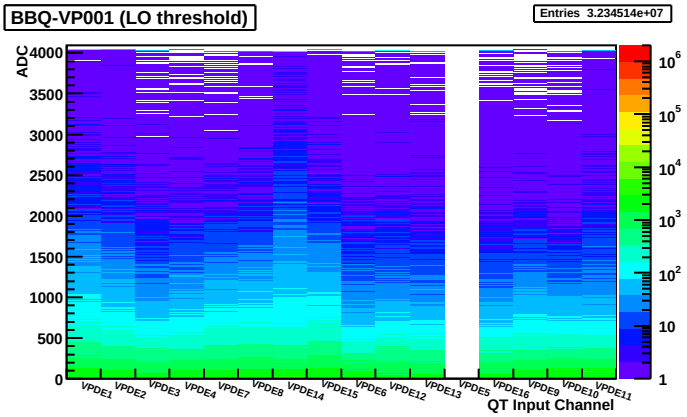

BBQ-BB002 (BBC west small tiles TAC)
Entries 3.234514e+07
TAC
QT Input Channel

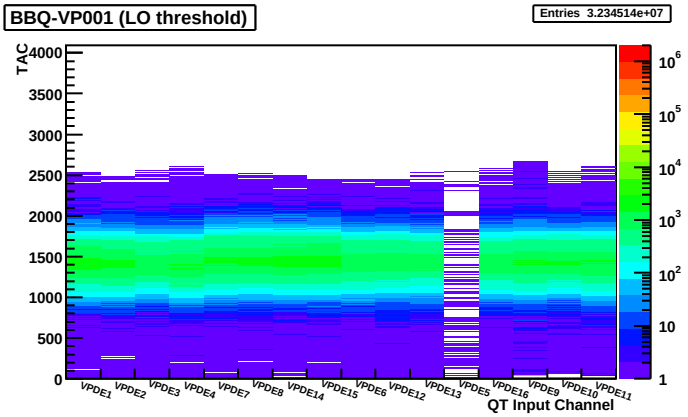

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 3.234514e+07
ADC
QT Input Channel

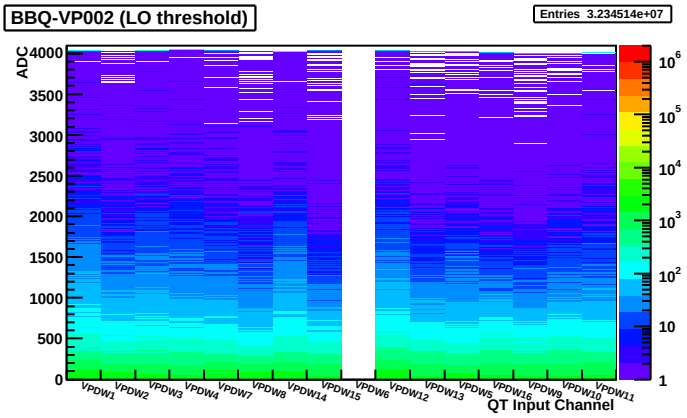

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 3.234514e+07
TAC
QT Input Channel

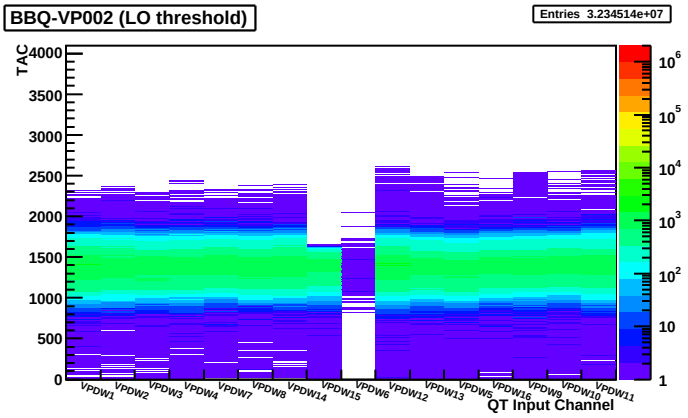

BBQ-ZD001 (ZDC TOWER)
Entries 3.234514e+07
ADC

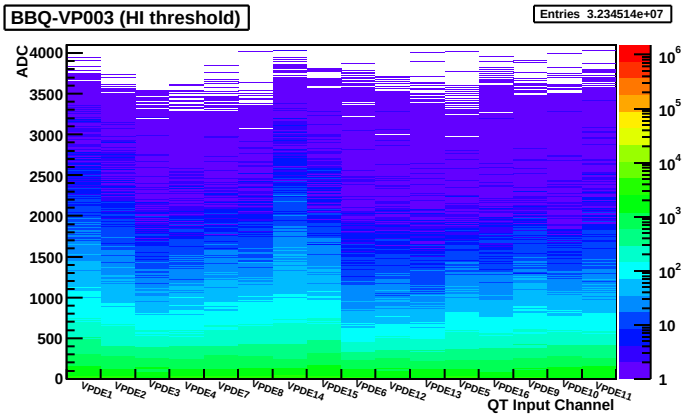

BBQ-ZD001 (ZDC TOWER)
Entries 3.234514e+07
TAC

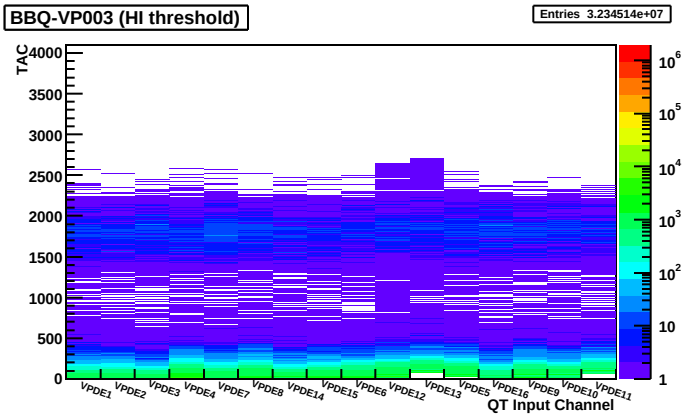

BBQ-VP001 (LO threshold)
Entries 3.234514e+07
ADC
QT Input Channel

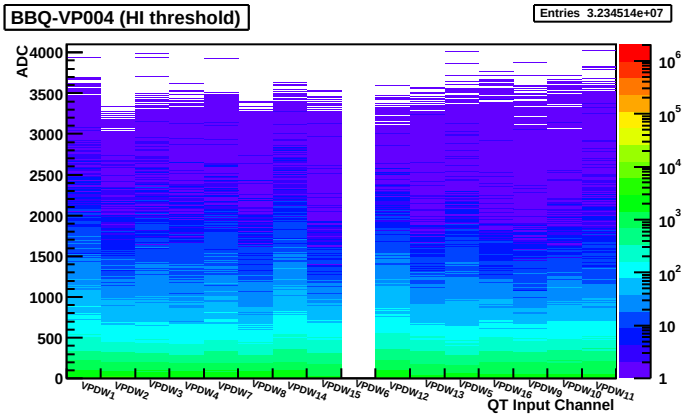

BBQ-VP001 (LO threshold)
Entries 3.234514e+07
TAC
QT Input Channel

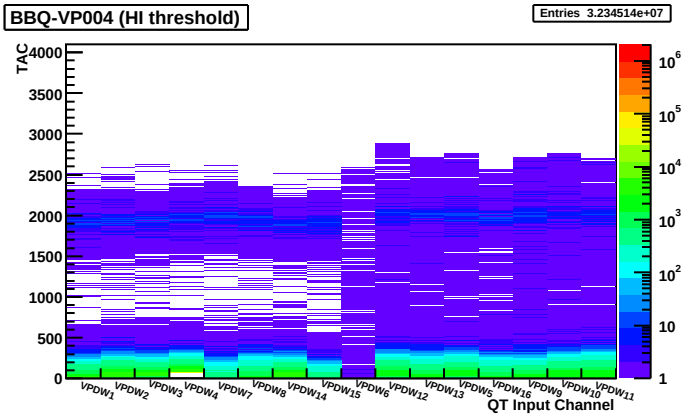

BBQ-VP002 (LO threshold)
Entries 3.234514e+07
ADC
QT Input Channel

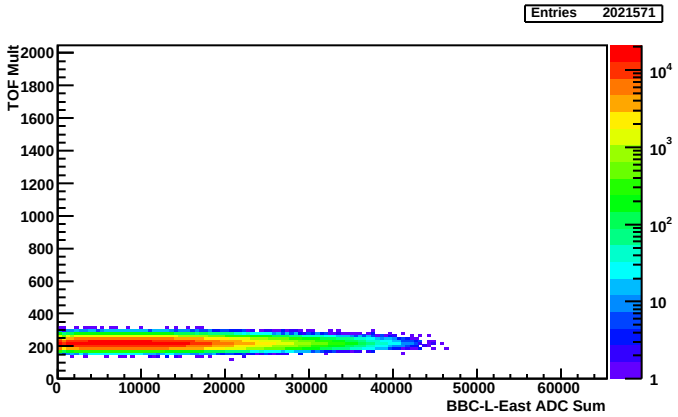

BBQ-VP002 (LO threshold)
Entries 3.234514e+07
TAC
QT Input Channel

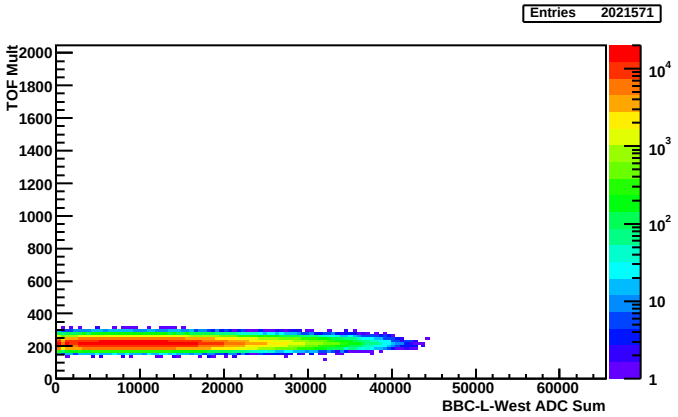

BBQ-VP003 (HI threshold)
Entries 3.234514e+07
ADC
QT Input Channel

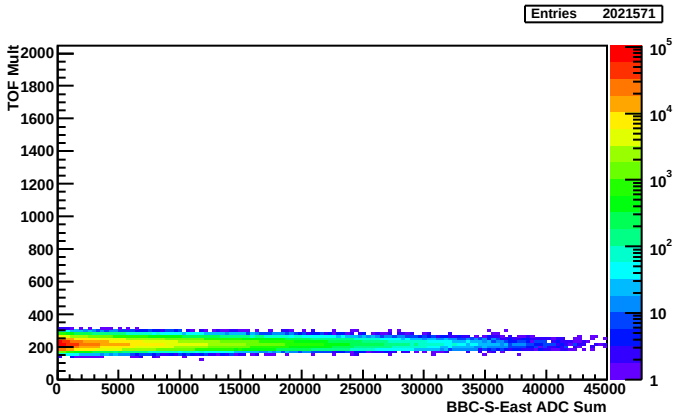

BBQ-VP003 (HI threshold)
Entries 3.234514e+07
TAC
QT Input Channel

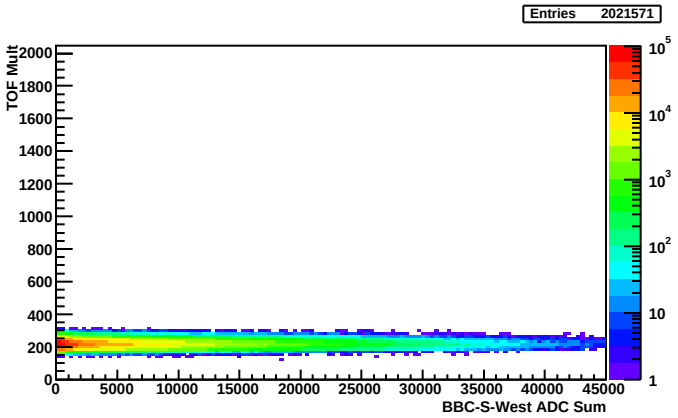

BBQ-VP004 (HI threshold)
Entries 3.234514e+07
ADC
QT Input Channel

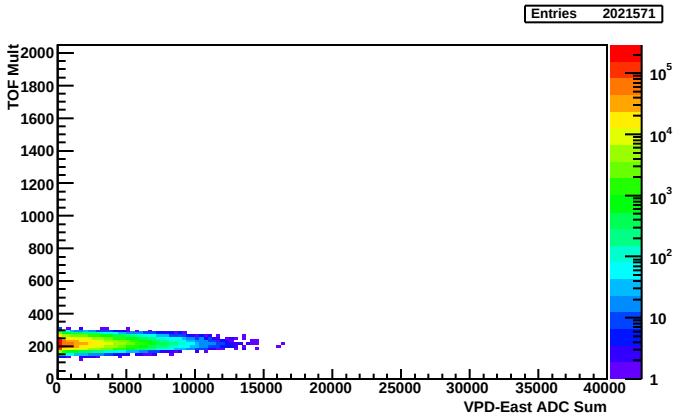

BBQ-VP004 (HI threshold)
Entries 3.234514e+07
TAC
QT Input Channel

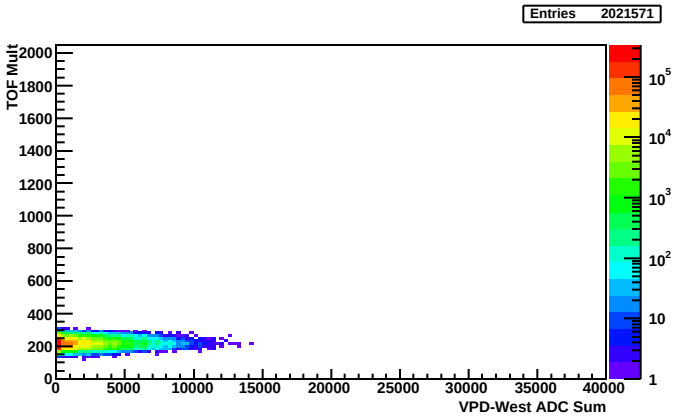

Entries 2021571
TOF Mult
BBC-L-East ADC Sum

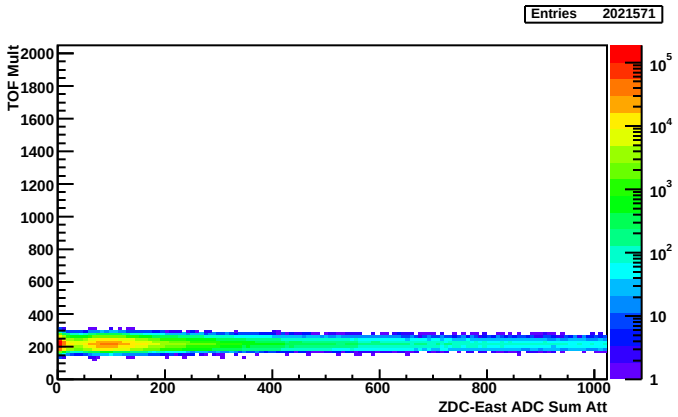

Entries 2021571
TOF Mult
BBC-L-West ADC Sum

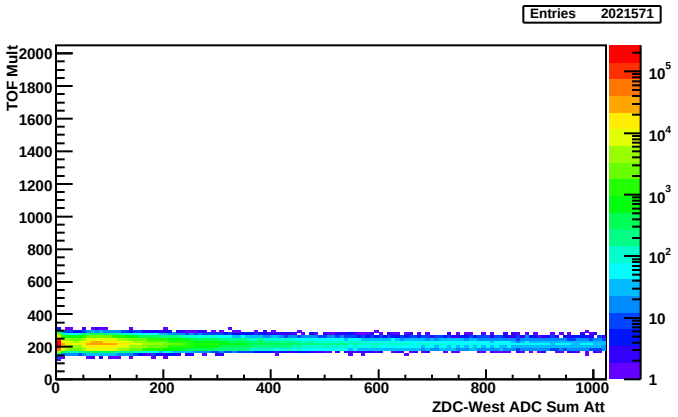

Entries 2021571
TOF Mult
BBC-S-East ADC Sum

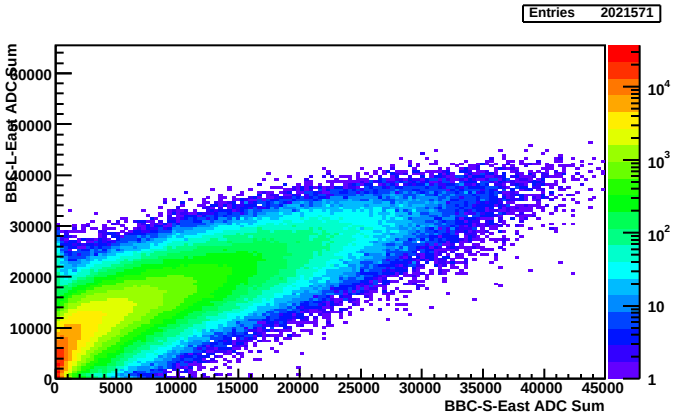

Entries 2021571
TOF Mult
BBC-S-West ADC Sum

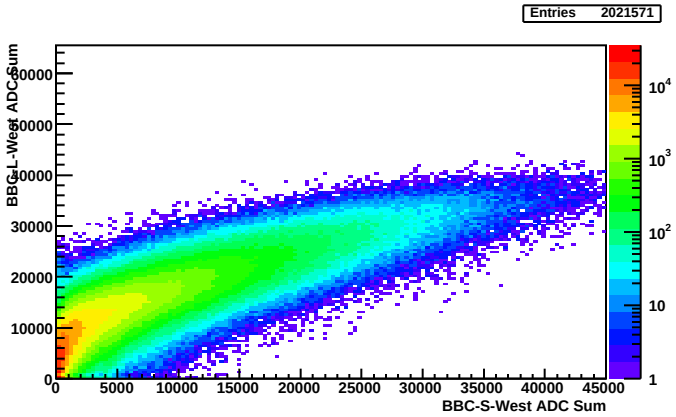

Entries 2021571
TOF Mult
VPD-East ADC Sum

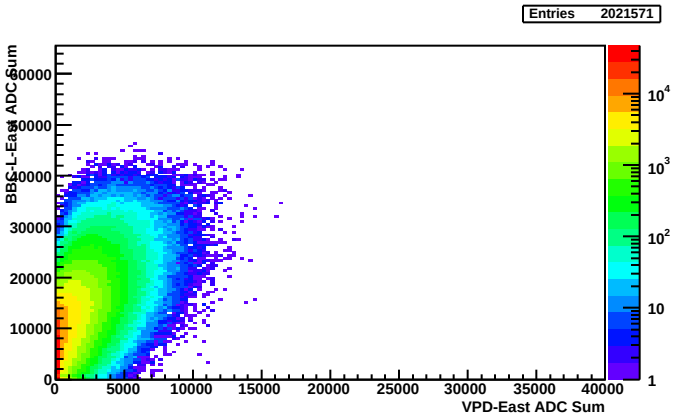

Entries 2021571
TOF Mult
VPD-West ADC Sum

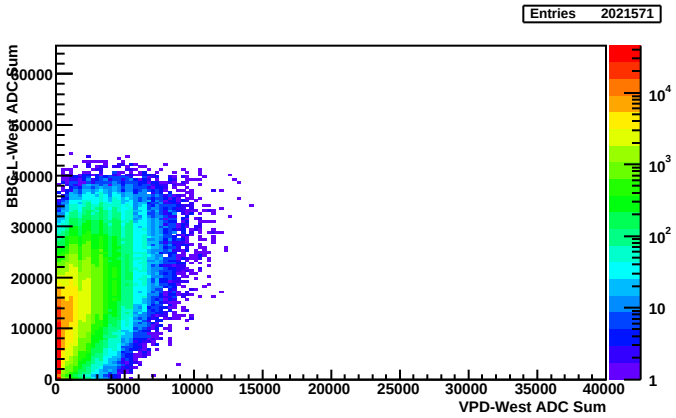

Entries 2021571
TOF Mult
ZDC-East ADC Sum Att

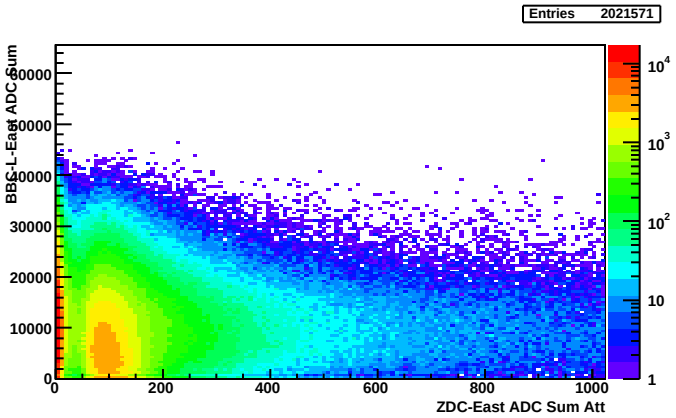

Entries 2021571
TOF Mult
ZDC-West ADC Sum Att

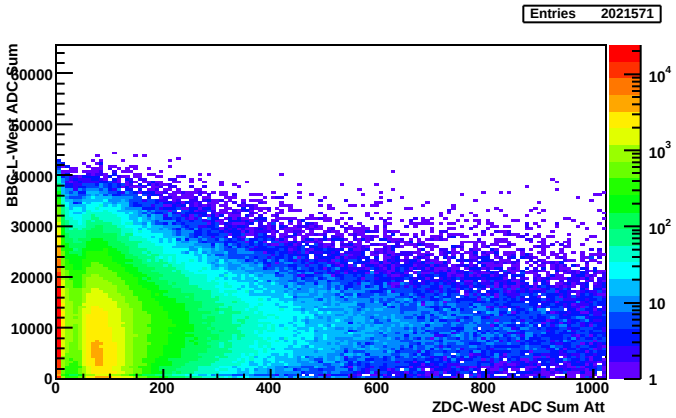

Entries 2021571
BBC-L-East ADC Sum
BBC-S-East ADC Sum

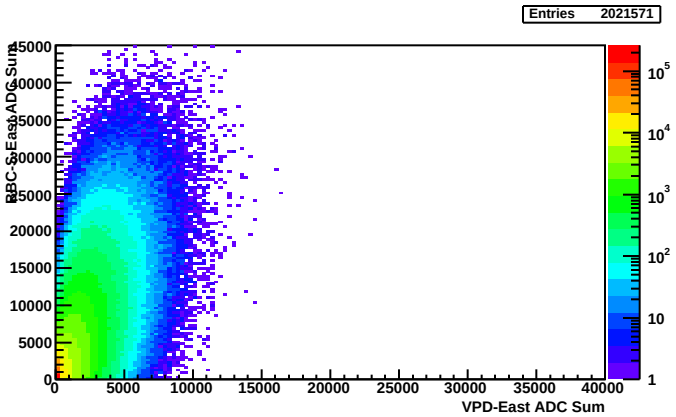

Entries 2021571
BBC-L-West ADC Sum
BBC-S-West ADC Sum

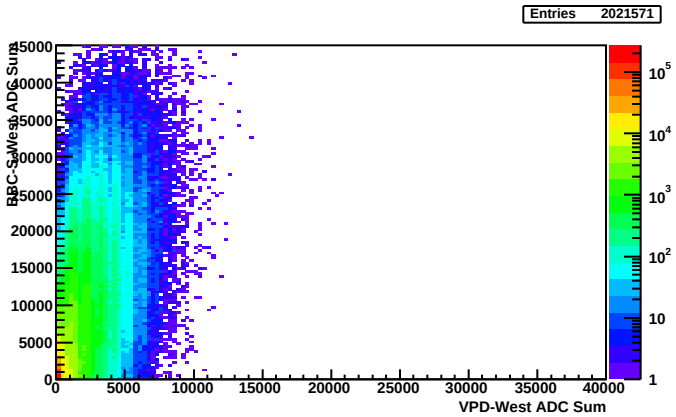

Entries 2021571
BBC-L-East ADC Sum
VPD-East ADC Sum

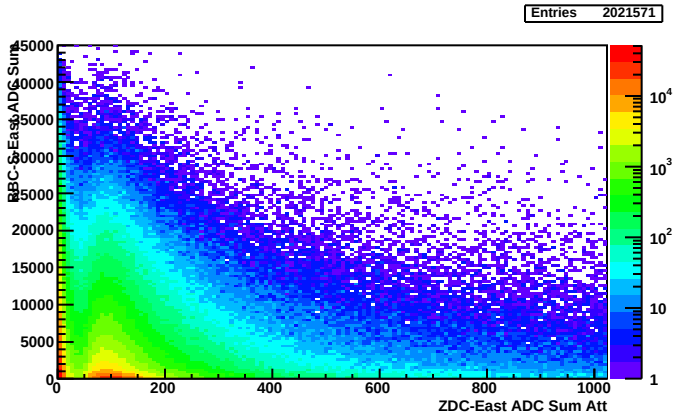

Entries 2021571
BBC-L-West ADC Sum
VPD-West ADC Sum

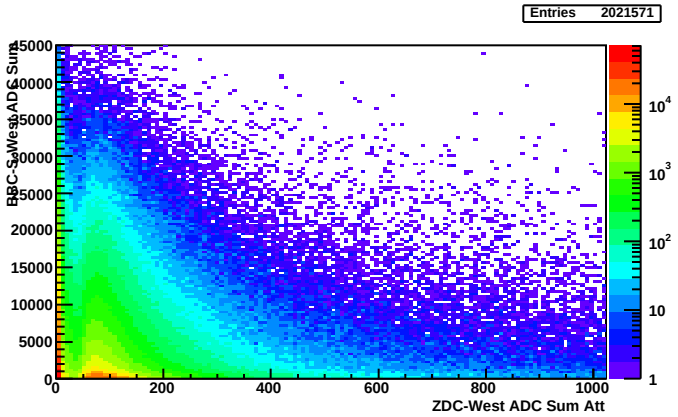

Entries 2021571
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

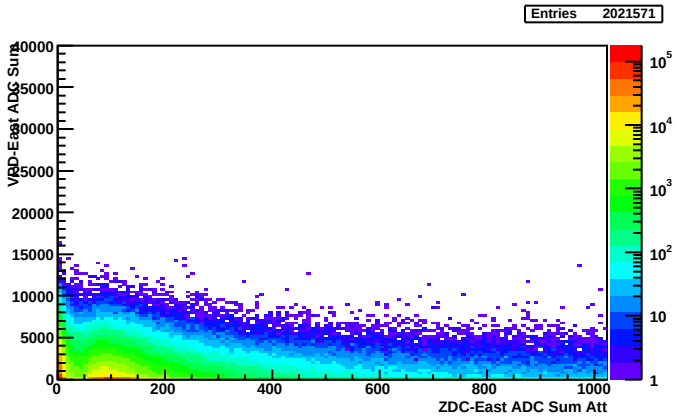

Entries 2021571
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

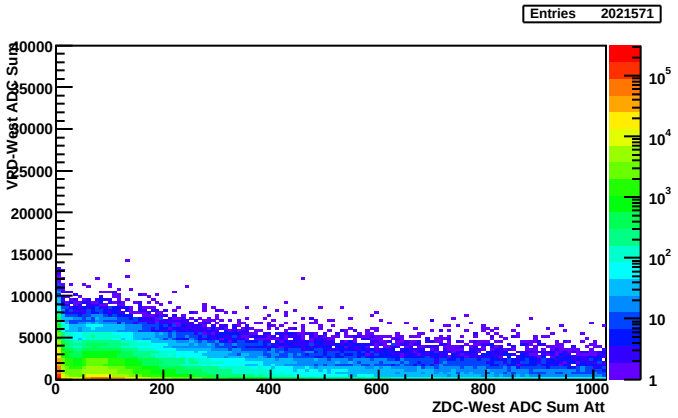

Entries 2021571
BBC-S-East ADC Sum
VPD-East ADC Sum

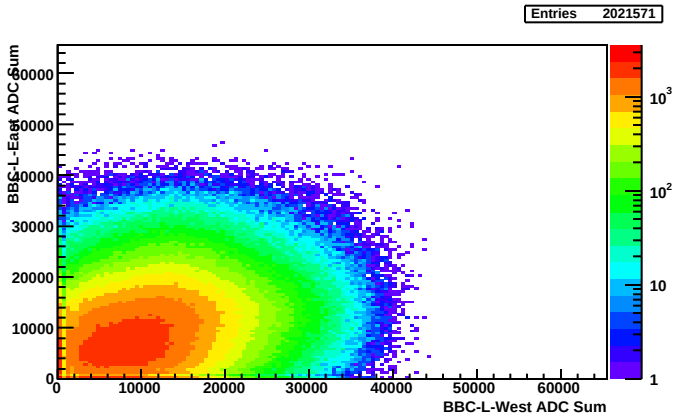

Entries 2021571
BBC-S-West ADC Sum
VPD-West ADC Sum

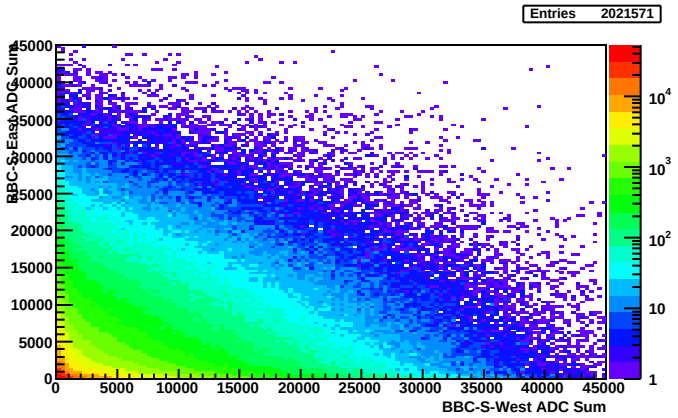

Entries 2021571
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

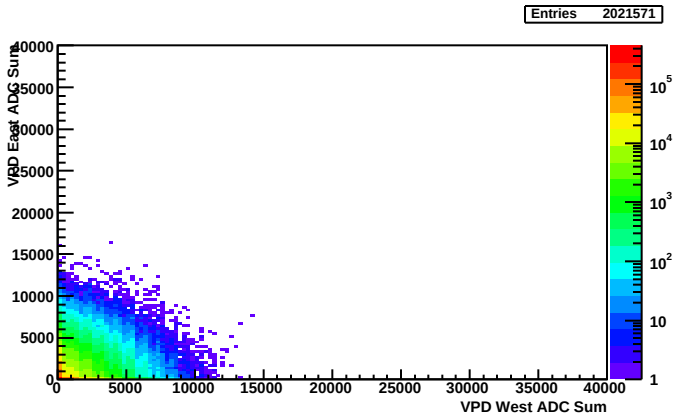

Entries 2021571
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

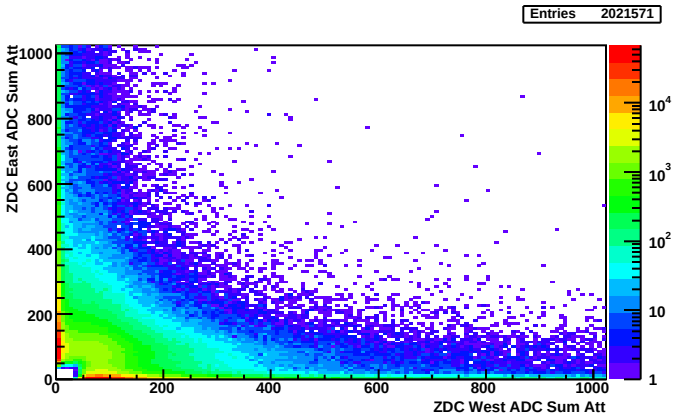

Entries 2021571
VPD-East ADC Sum
ZDC-East ADC Sum Att

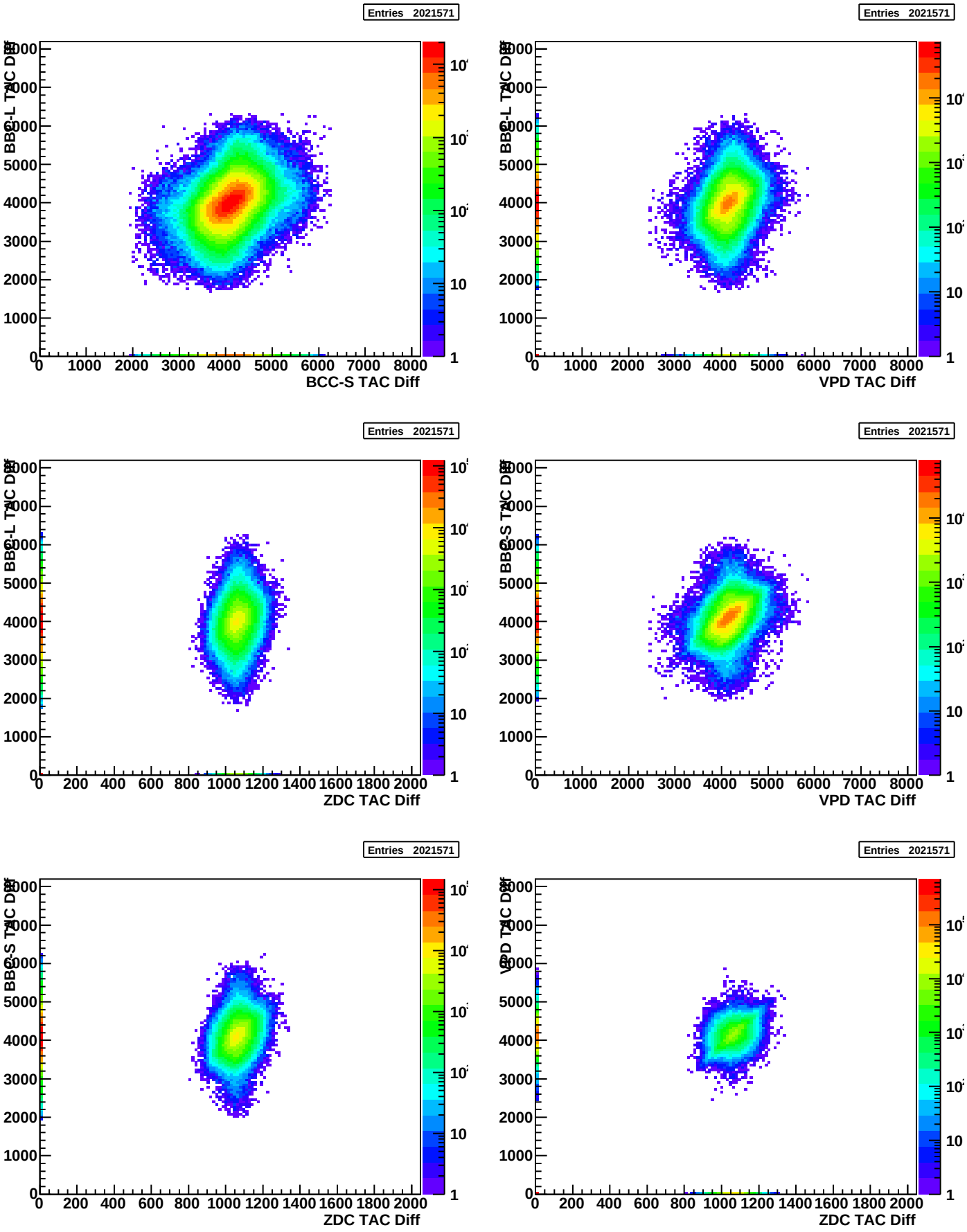

Entries 2021571
VPD-West ADC Sum
ZDC-West ADC Sum Att

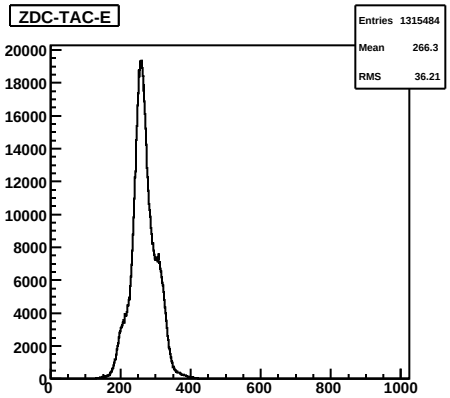

Entries 2021571
BBC-L-East ADC Sum
BBC-L-West ADC Sum

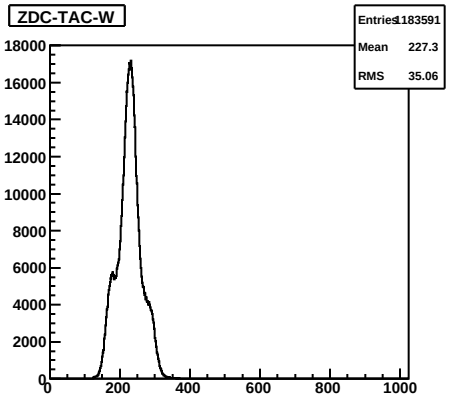

Entries 2021571
BBC-S-East ADC Sum
BBC-S-West ADC Sum

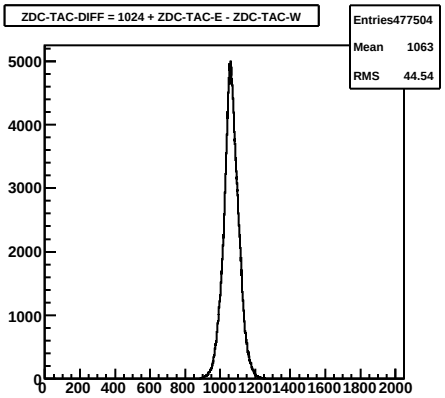

Entries 2021571
VPD East ADC Sum
VPD West ADC Sum

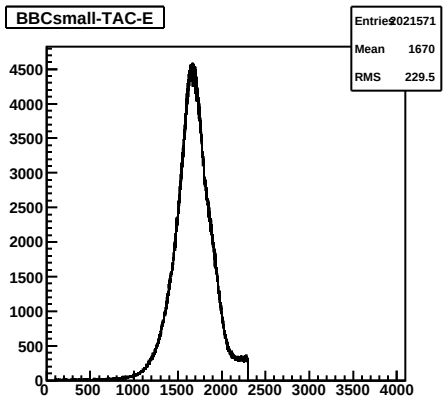

Entries 2021571
ZDC East ADC Sum Att
ZDC West ADC Sum Att

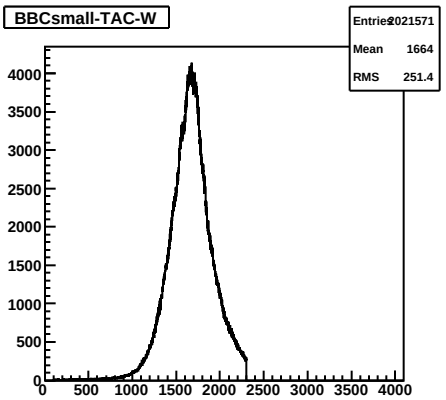

Entries 2021571
BBC-L TAC Diff
BCC-S TAC Diff
Entries 2021571
BBC-L TAC Diff
VPD TAC Diff
Entries 2021571
BBC-L TAC Diff
ZDC TAC Diff
Entries 2021571
BBC-S TAC Diff
VPD TAC Diff
Entries 2021571
BBC-S TAC Diff
ZDC TAC Diff
Entries 2021571
VPD TAC Diff
ZDC TAC Diff

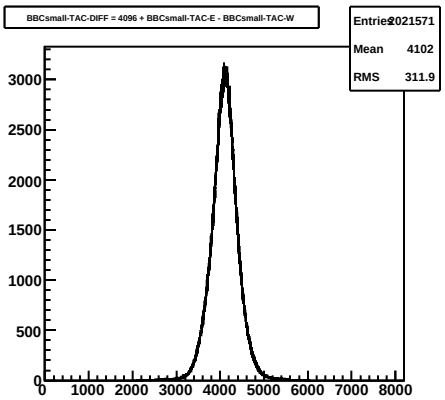

ZDC-TAC-E
Entries 1315484
Mean 266.3
RMS 36.21

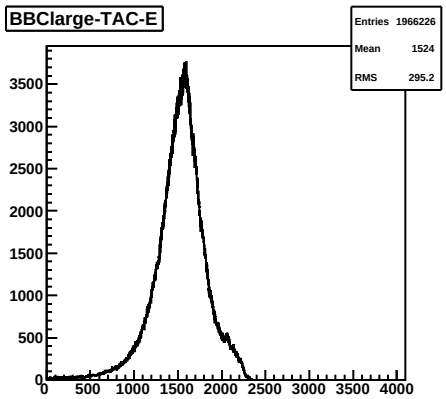

ZDC-TAC-W
Entries 1183591
Mean 227.3
RMS 35.06

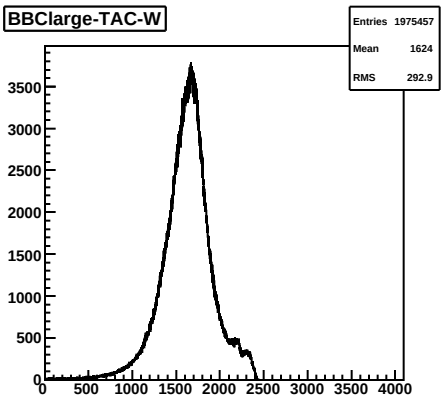

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 477504
Mean 1063
RMS 44.54

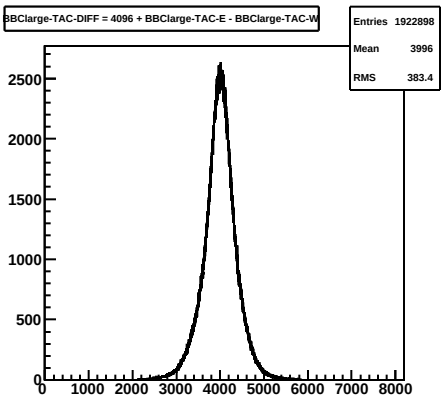

BBCsmall-TAC-E
Entries 2021571
Mean 1670
RMS 229.5

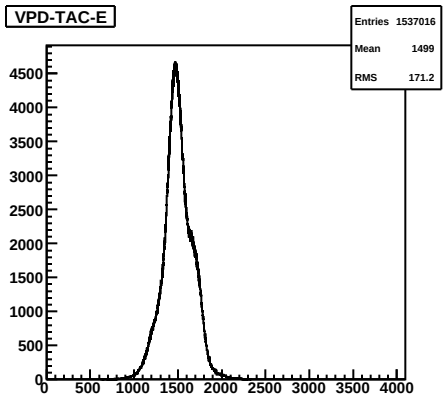

BBCsmall-TAC-W
Entries 2021571
Mean 1664
RMS 251.4

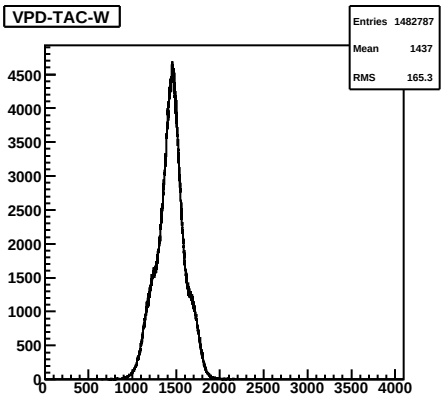

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 2021571
Mean 4102
RMS 311.9

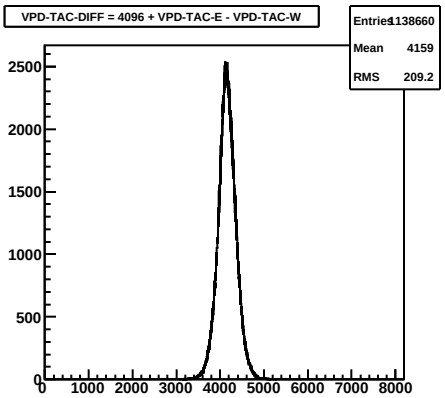

BBClarge-TAC-E
Entries 1966226
Mean 1524
RMS 295.2

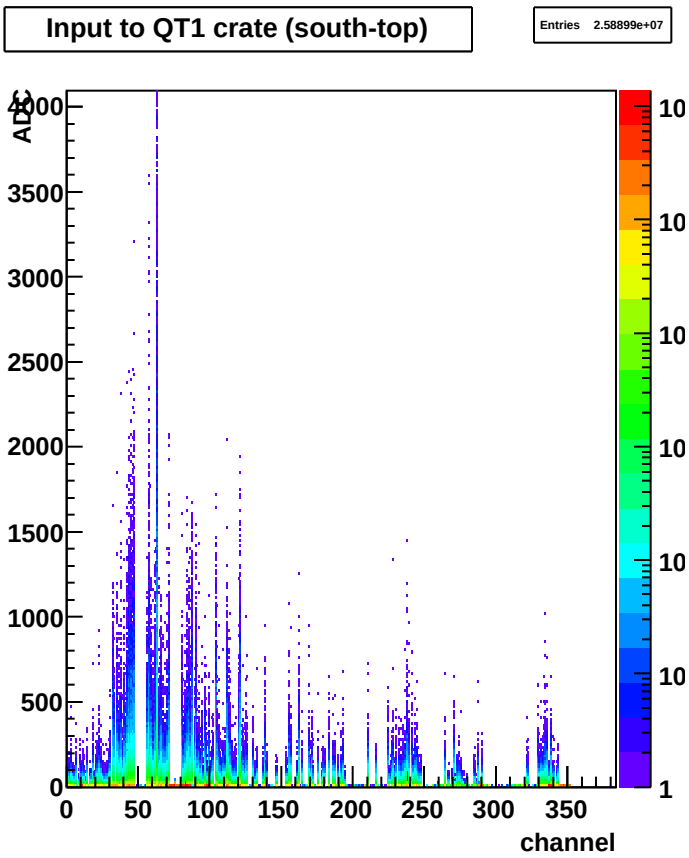

BBClarge-TAC-W
Entries 1975457
Mean 1624
RMS 292.9

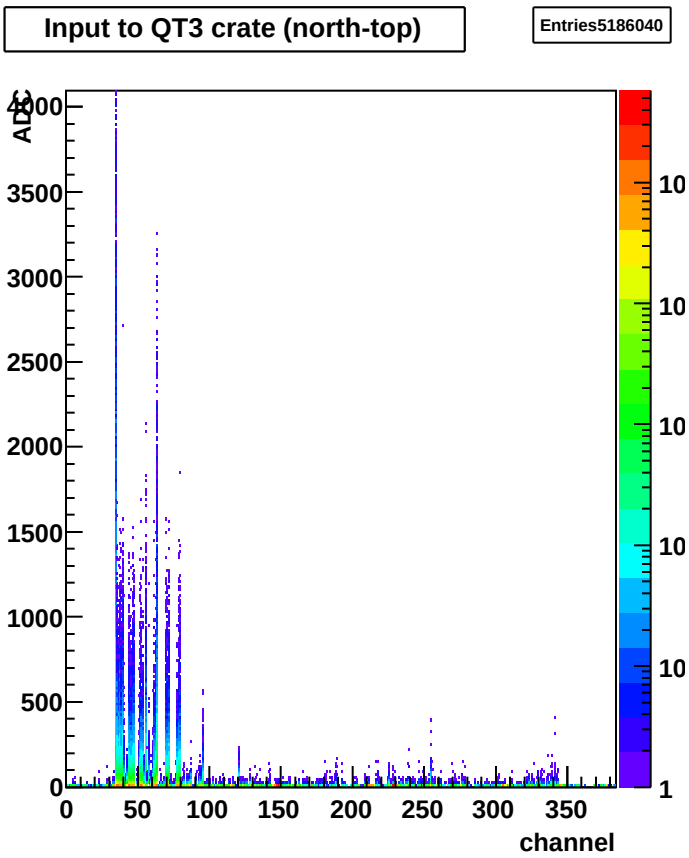

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 1922898
Mean 3996
RMS 383.4

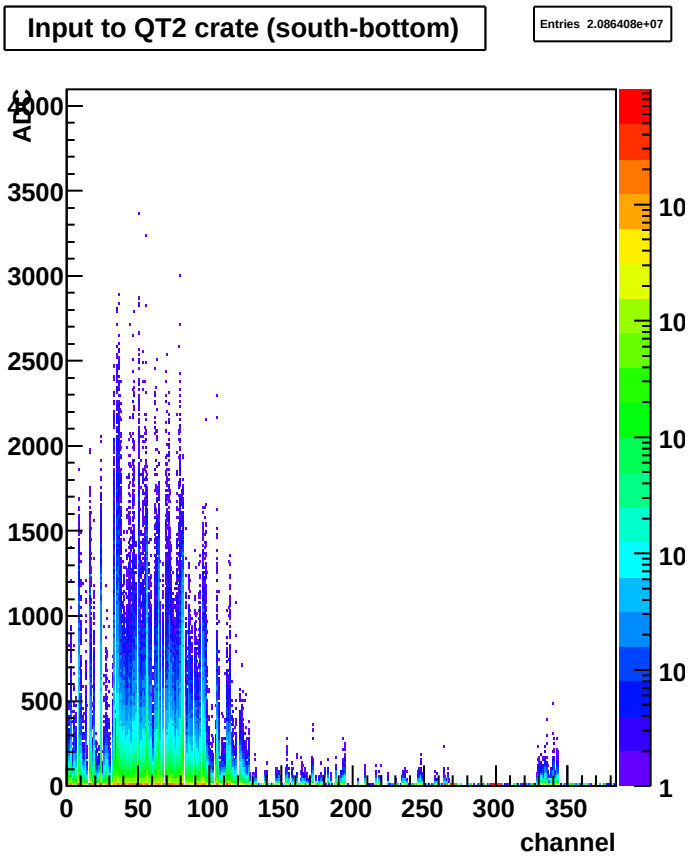

VPD-TAC-E
Entries 1537016
Mean 1499
RMS 171.2

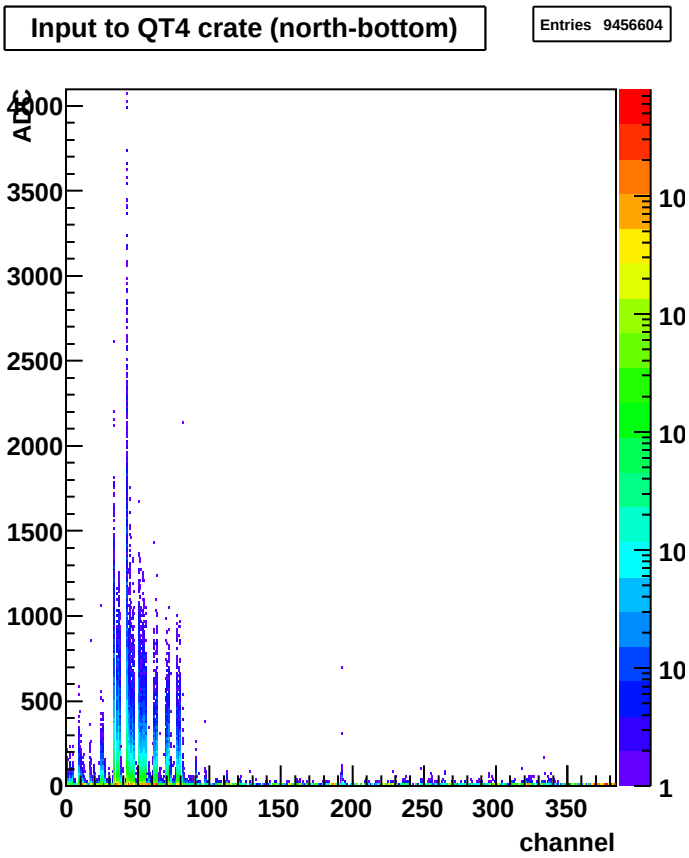

VPD-TAC-W
Entries 1482787
Mean 1437
RMS 165.3

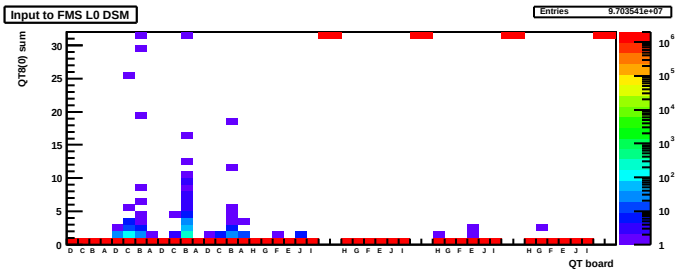

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 1138660
Mean 4159
RMS 209.2

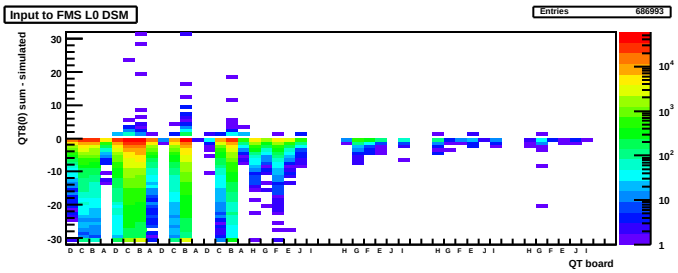

Input to QT1 crate (south-top)
Entries 2.58899e+07
ADC
channel

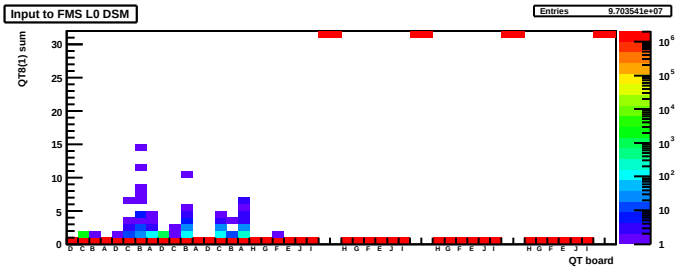

Input to QT3 crate (north-top)
Entries5186040
ADC
channel

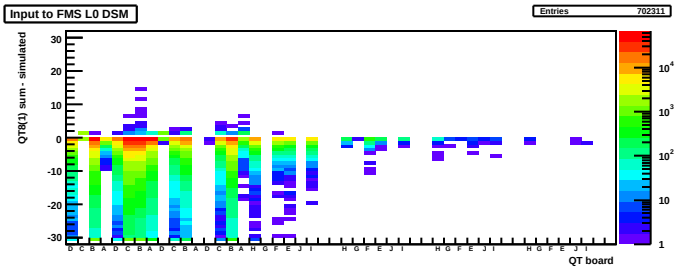

Input to QT2 crate (south-bottom)
Entries 2.086408e+07
ADC
channel

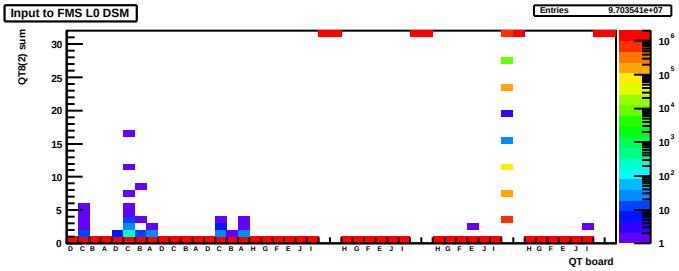

Input to QT4 crate (north-bottom)
Entries 9456604
ADC
channel

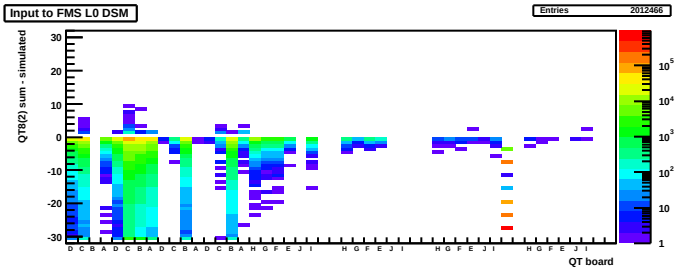

Input to FMS L0 DSM
Entries 9.703541e+07
QT8(0) sum
QT board

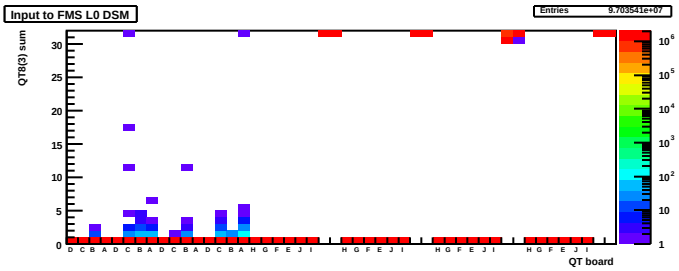

Input to FMS L0 DSM
Entries 686993
QT8(0) sum - simulated
QT board

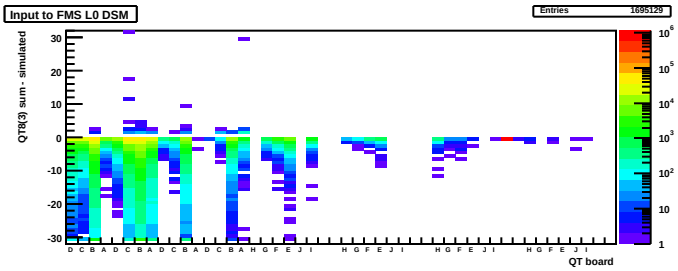

Input to FMS L0 DSM
Entries 9.703541e+07
QT8(1) sum
QT board

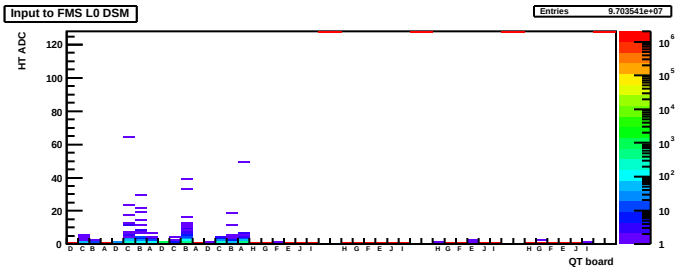

Input to FMS L0 DSM
Entries 702311
QT8(1) sum - simulated
QT board

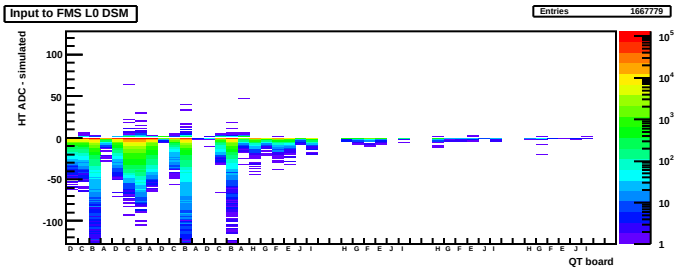

Input to FMS L0 DSM
Entries 9.703541e+07
QT8(2) sum
QT board

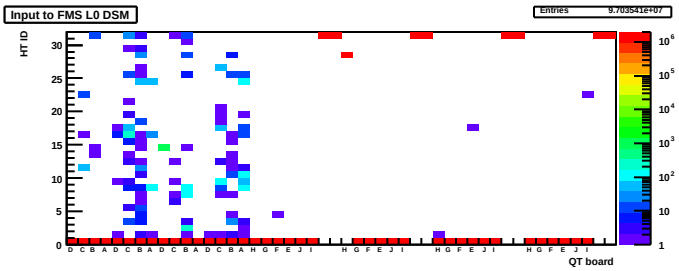

Input to FMS L0 DSM
Entries 2012466
QT8(2) sum - simulated
QT board

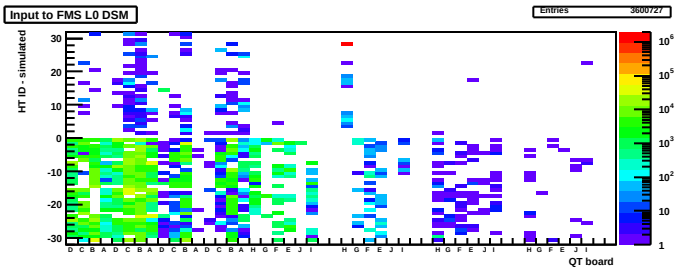

Input to FMS L0 DSM
Entries 9.703541e+07
QT8(3) sum
QT board

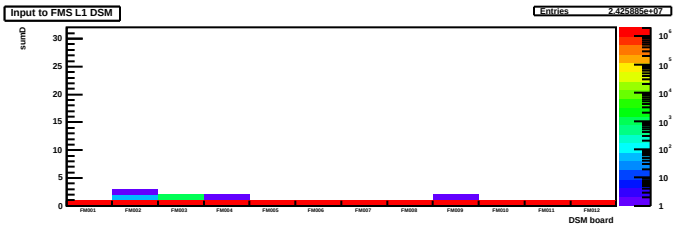

Input to FMS L0 DSM
Entries 1695129
QT8(3) sum - simulated
QT board

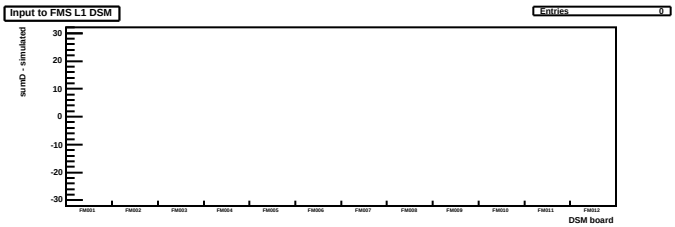

Input to FMS L0 DSM
Entries 9.703541e+07
HT ADC
QT board

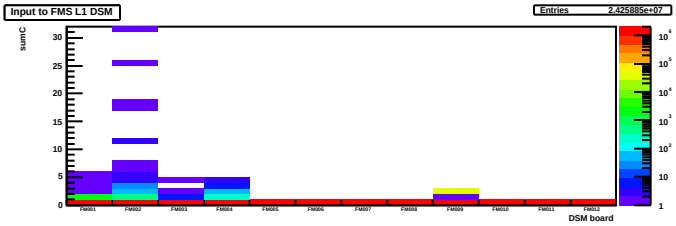

Input to FMS L0 DSM
Entries 1667779
HT ADC - simulated
QT board

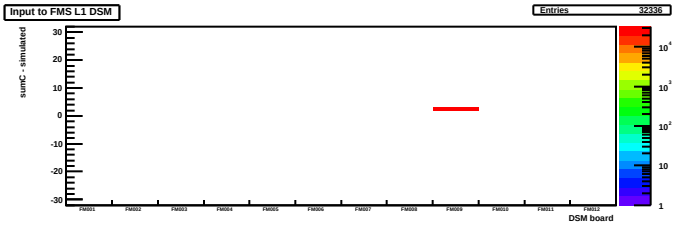

Input to FMS L0 DSM
Entries 9.703541e+07
HT ID
QT board

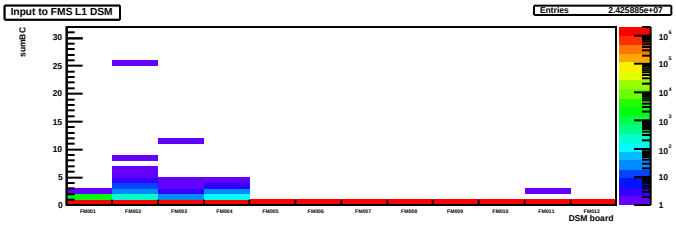

Input to FMS L0 DSM
Entries 3600727
HT ID - simulated
QT board

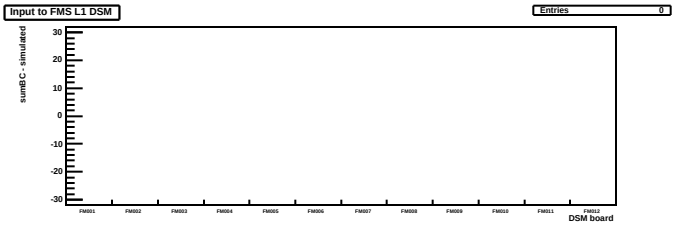

Input to FMS L1 DSM
Entries 2.425885e+07
sumD
DSM board

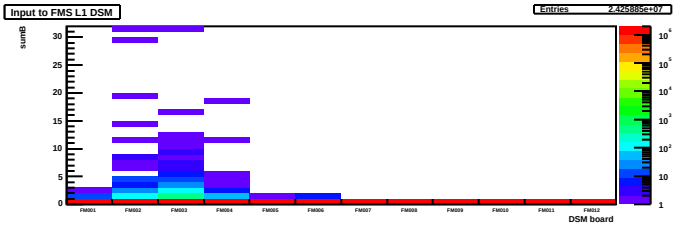

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

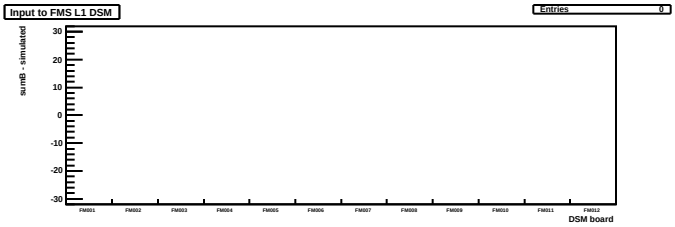

Input to FMS L1 DSM
Entries 2.425885e+07
sumC
DSM board

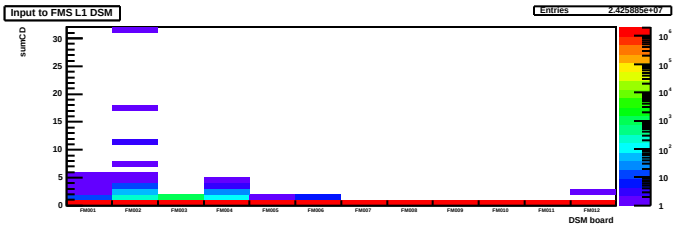

Input to FMS L1 DSM
Entries 32336
sumC - simulated
DSM board

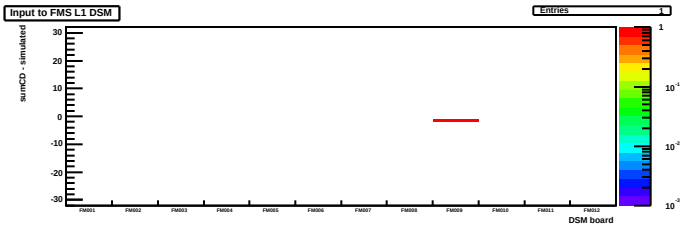

Input to FMS L1 DSM
Entries 2.425885e+07
sumBC
DSM board

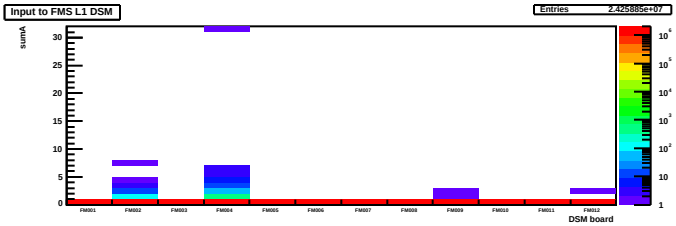

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

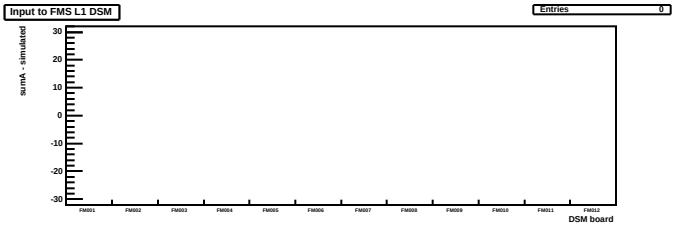

Input to FMS L1 DSM
Entries 2.425885e+07
sumB
DSM board

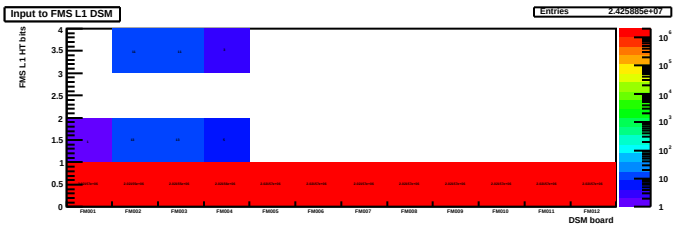

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

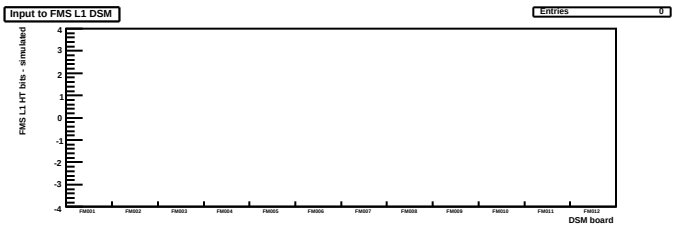

Input to FMS L1 DSM
Entries 2.425885e+07
sumCD
DSM board

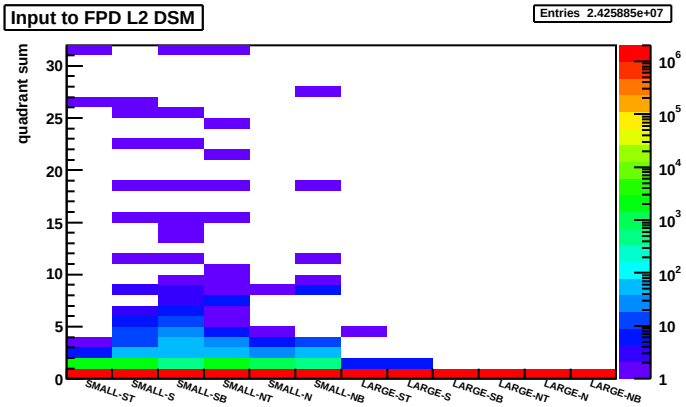

Input to FMS L1 DSM
Entries 1
sumCD - simulated
DSM board

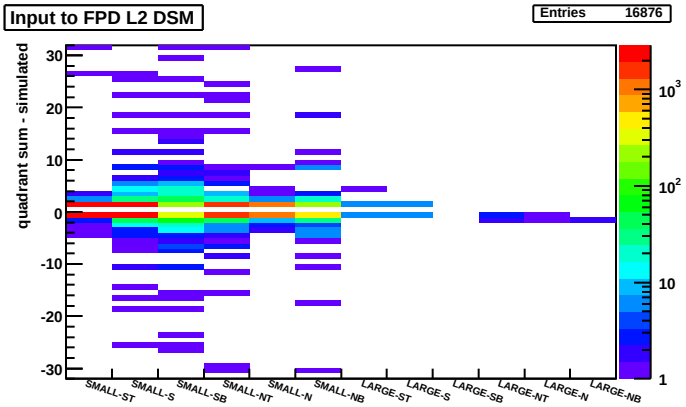

Input to FMS L1 DSM
Entries 2.425885e+07
sumA
DSM board

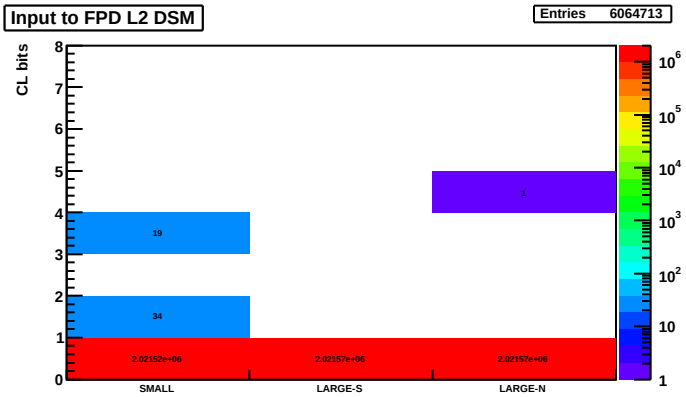

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

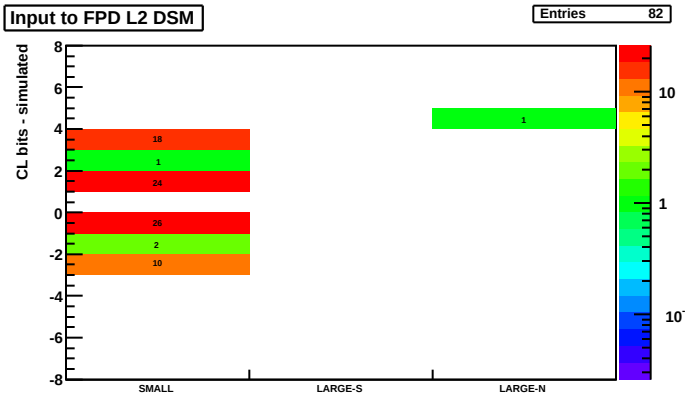

Input to FMS L1 DSM
Entries 2.425885e+07
FMS L1 HT bits
DSM board

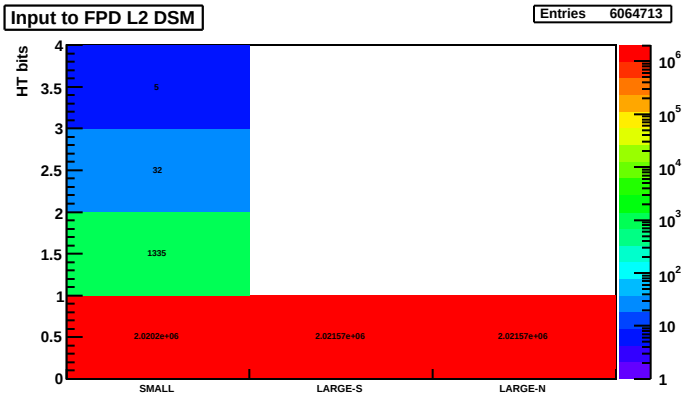

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

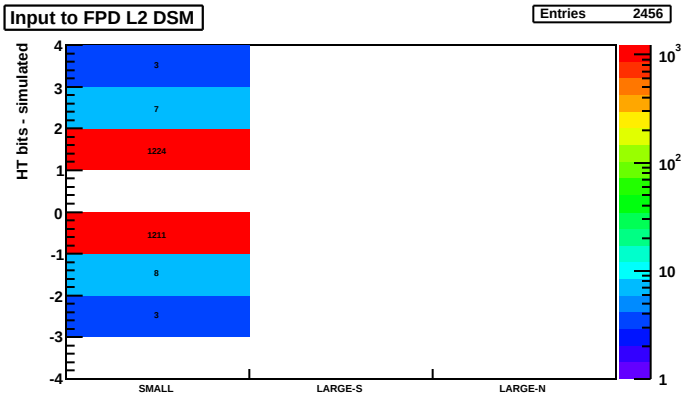

Input to FPD L2 DSM
Entries 2.425885e+07
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

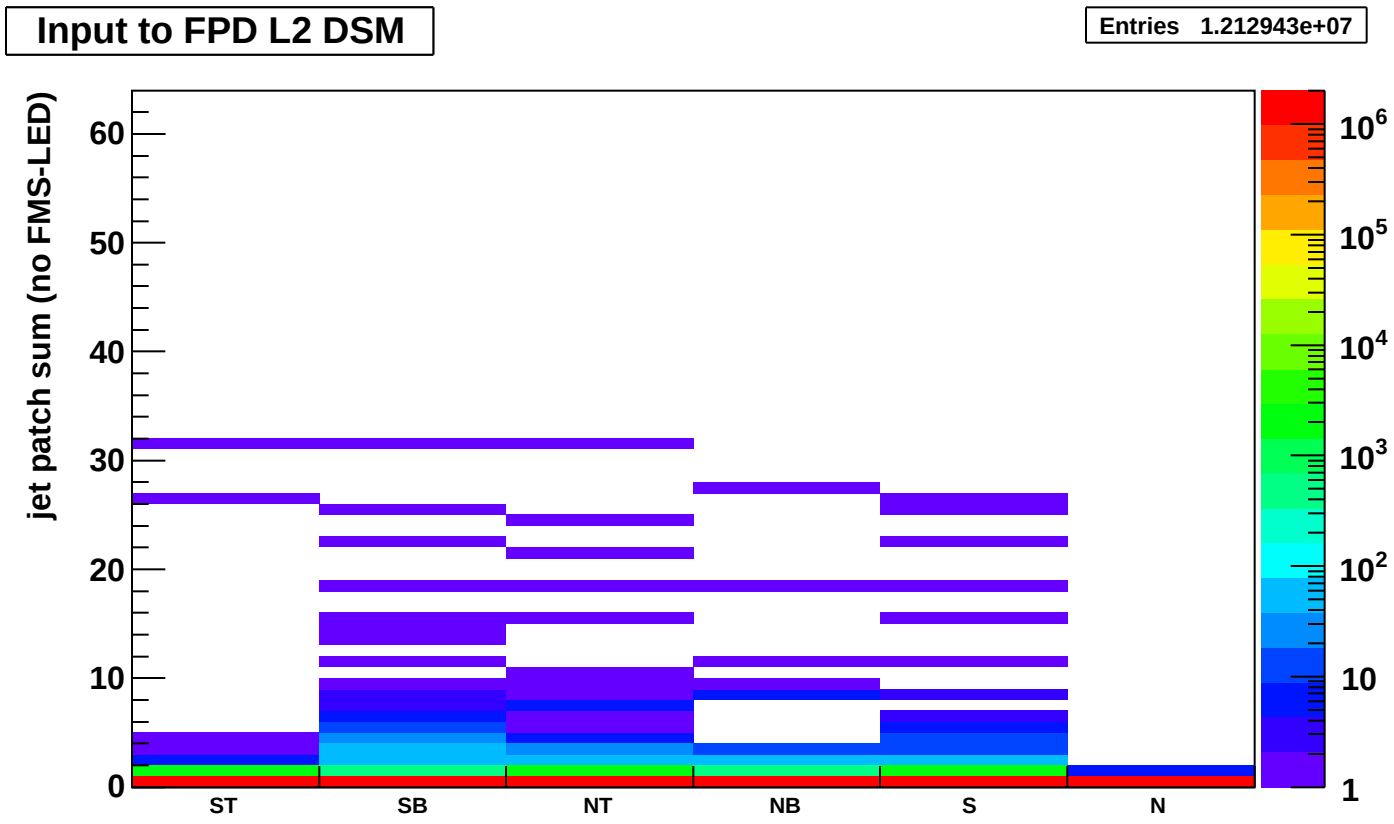

Input to FPD L2 DSM
Entries 16876
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

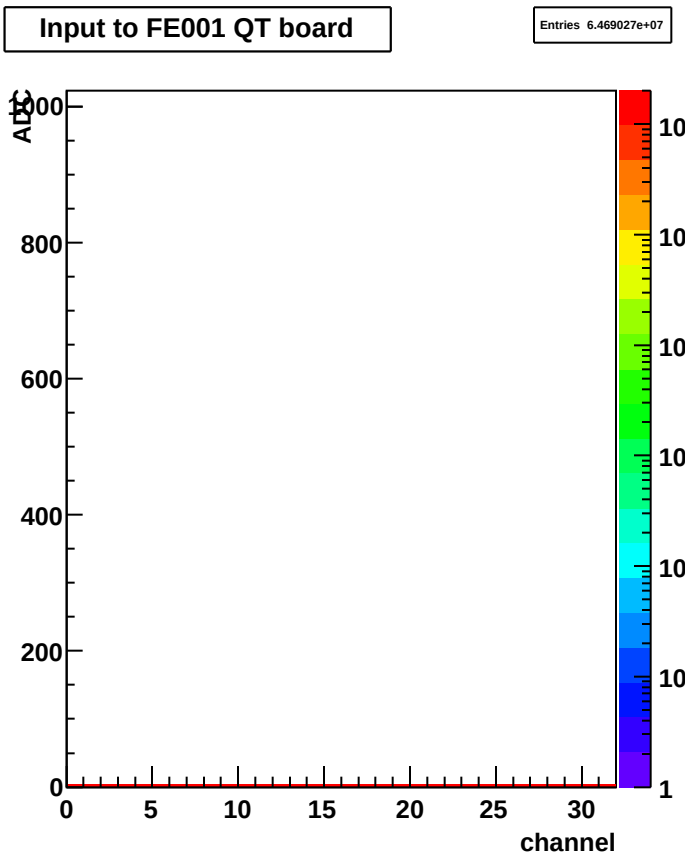

Input to FPD L2 DSM
Entries 6064713
CL bits
19
34
2.02152e+06
2.02157e+06
2.02157e+06
1
SMALL
LARGE-S
LARGE-N

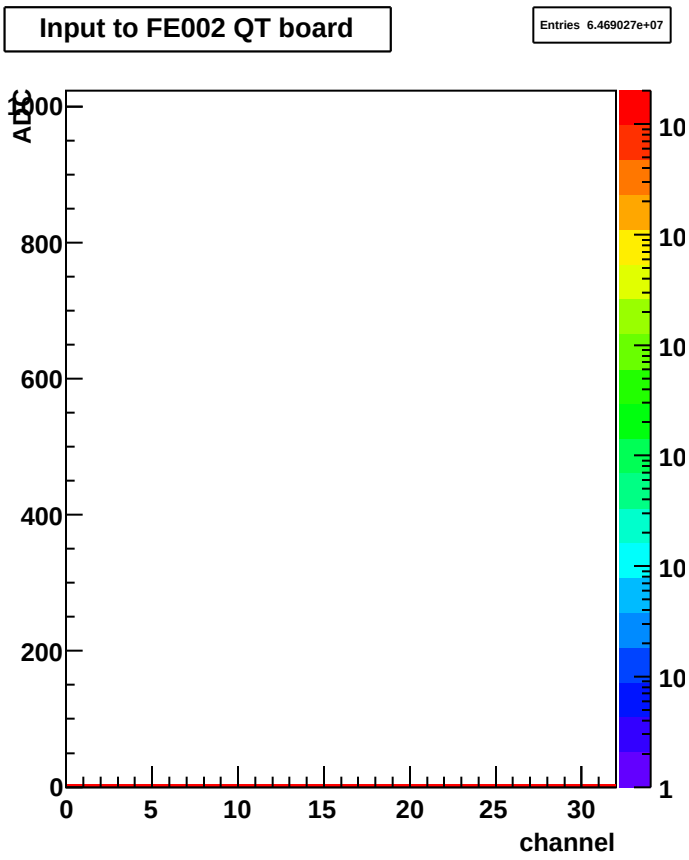

Input to FPD L2 DSM
Entries 82
CL bits - simulated
18
1
24
26
2
10
1
SMALL
LARGE-S
LARGE-N

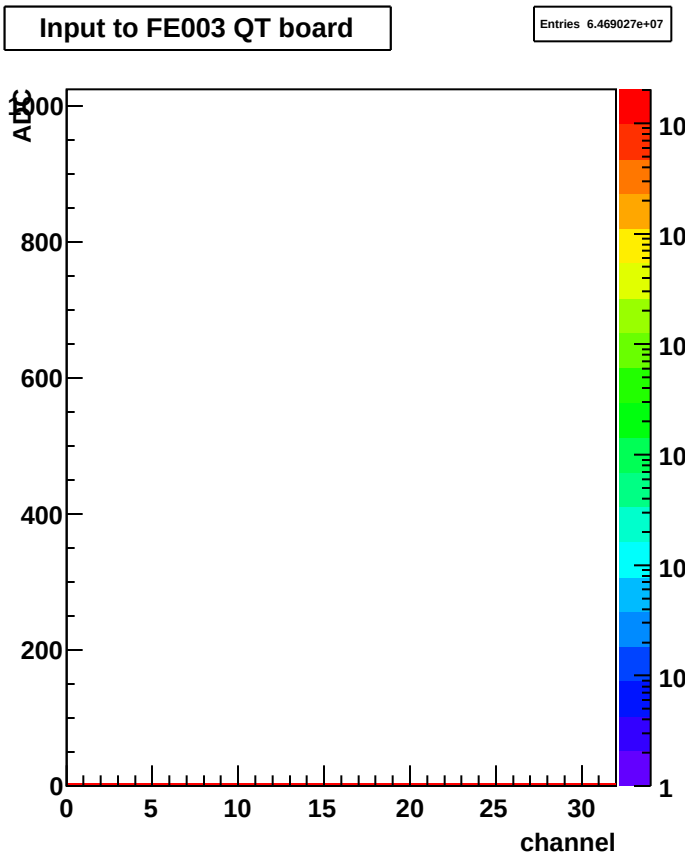

Input to FPD L2 DSM
Entries 6064713
HT bits
5
32
1335
2.0202e+06
2.02157e+06
2.02157e+06
SMALL
LARGE-S
LARGE-N

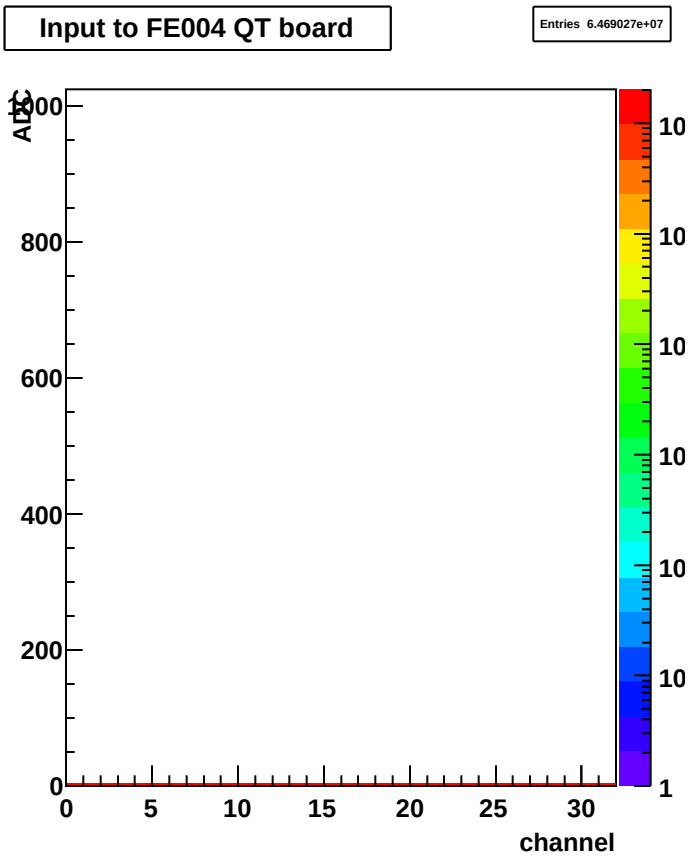

Input to FPD L2 DSM
Entries 2456
HT bits - simulated
3
7
1224
1211
8
3
SMALL
LARGE-S
LARGE-N

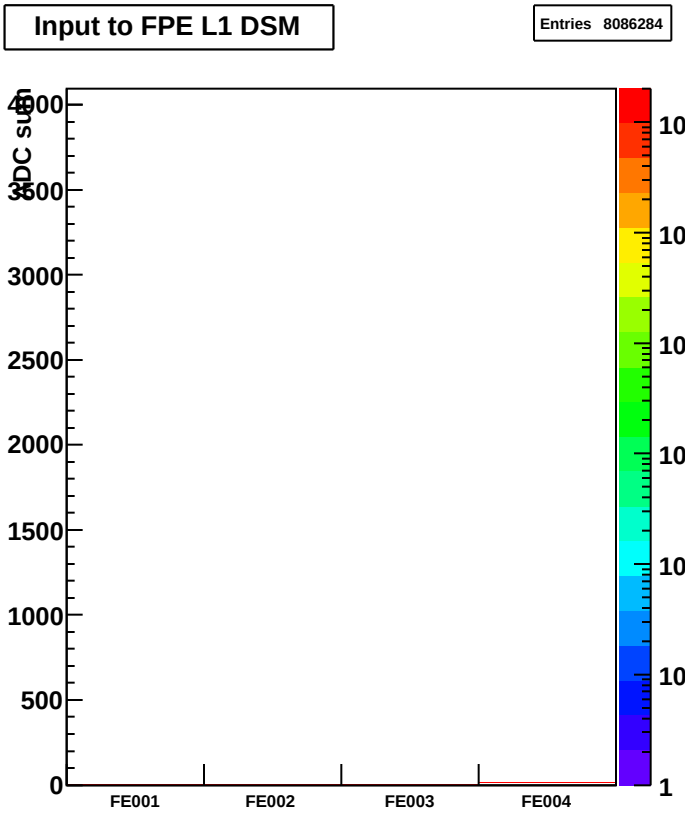

Input to FPD L2 DSM
Entries 1.212943e+07
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5
10^6

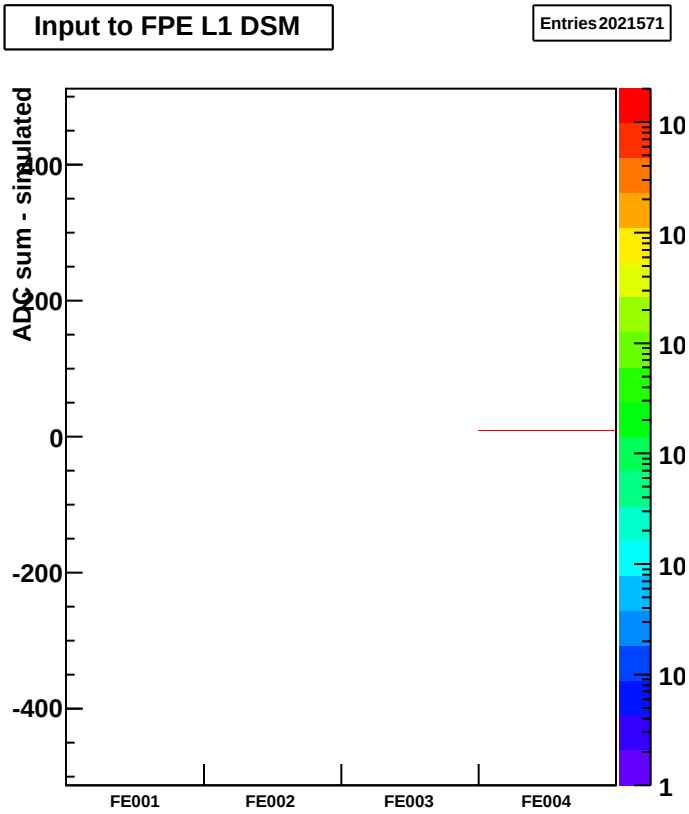

Input to FE001 QT board
Entries 6.469027e+07
ADC
channel


Input to FE002 QT board
Entries 6.469027e+07
ADC
channel

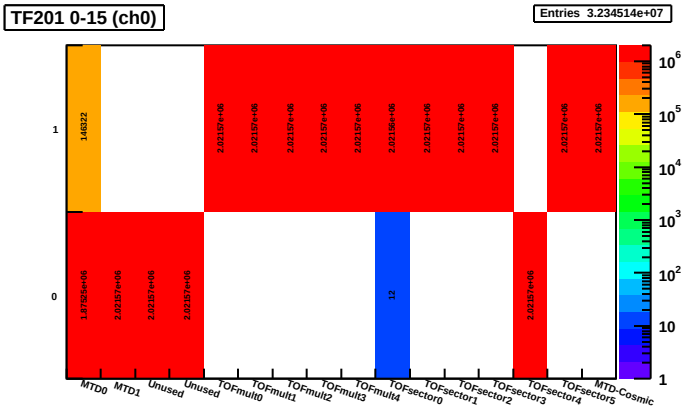

Input to FE003 QT board
Entries 6.469027e+07
ADC
channel


Input to FE004 QT board
Entries 6.469027e+07
ADC
channel


Input to FPE L1 DSM
Entries 8086284
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
10
1


Input to FPE L1 DSM
Entries 2021571
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
10
10
1

TF201 0-15 (ch0)



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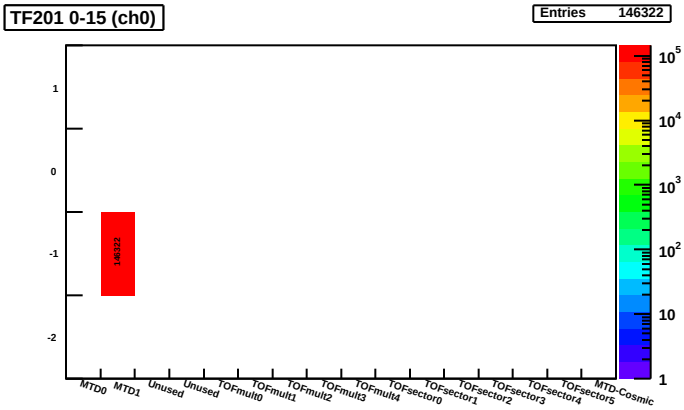

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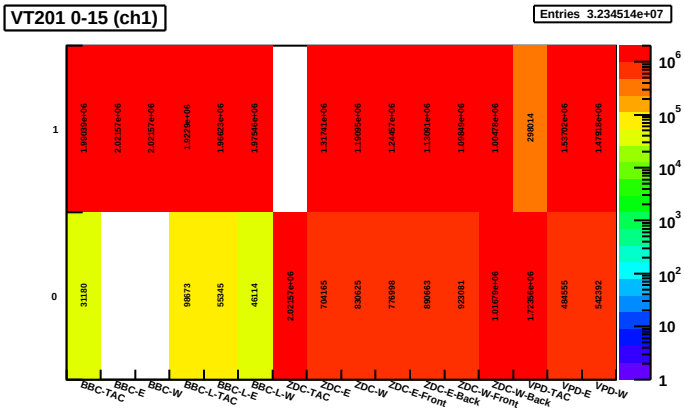

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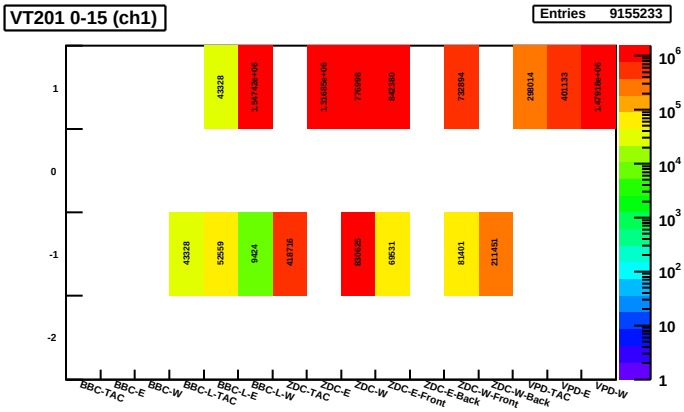

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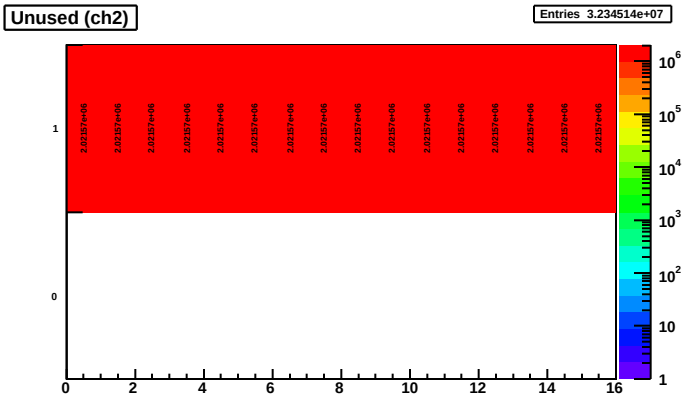

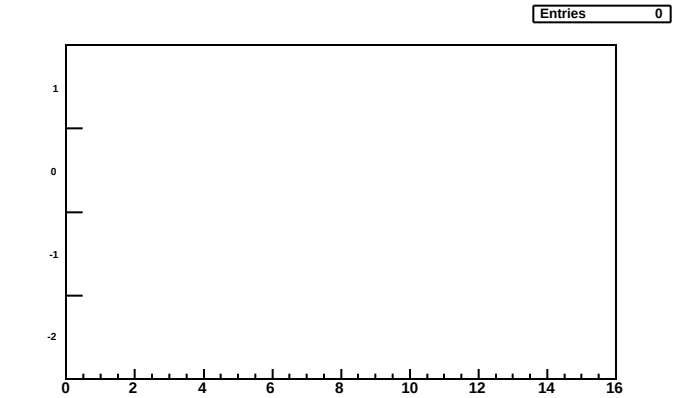

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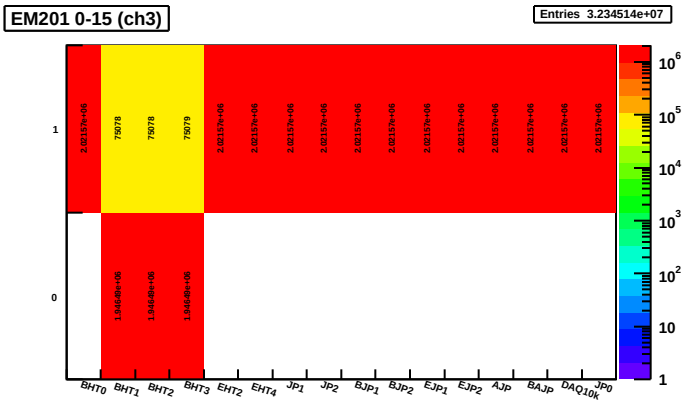

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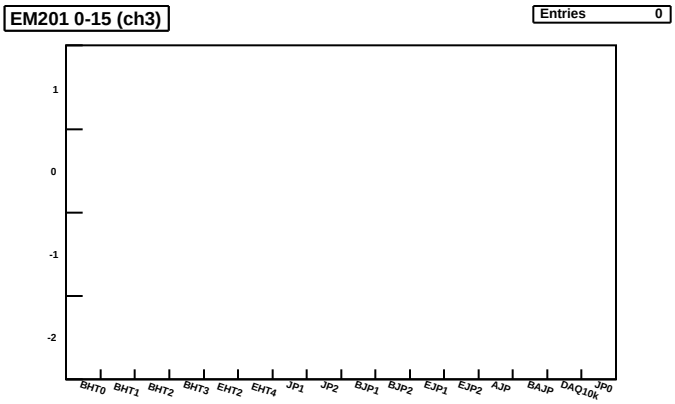
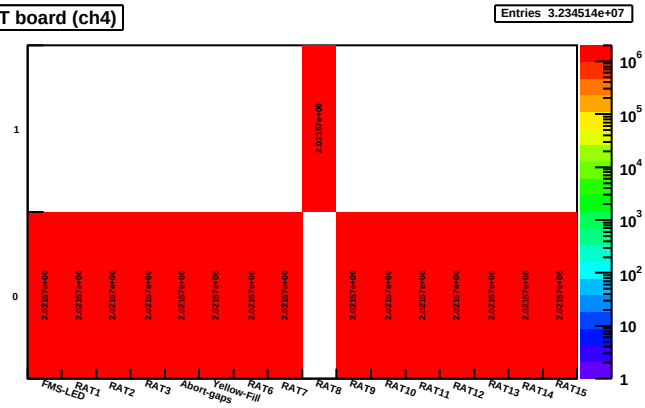
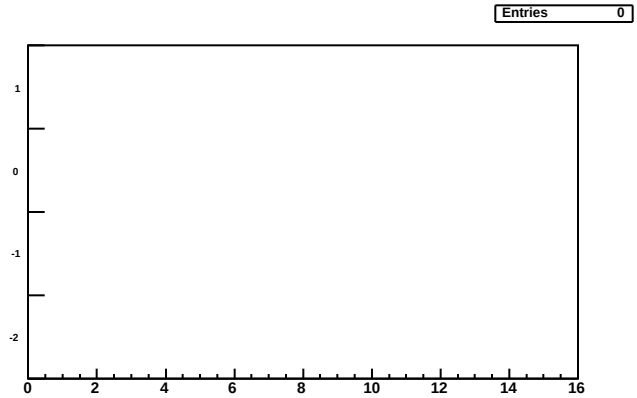


RAT board (ch4)





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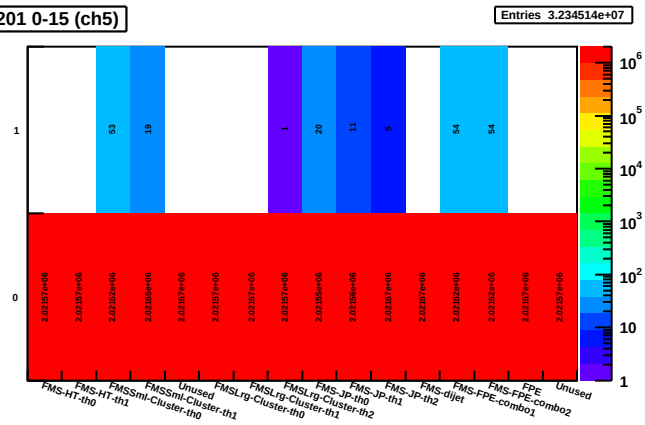

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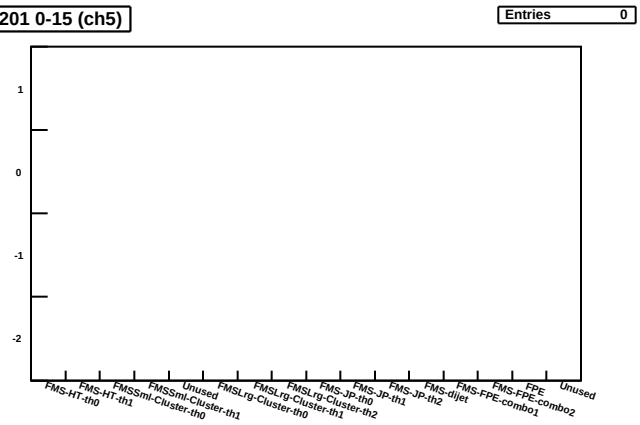

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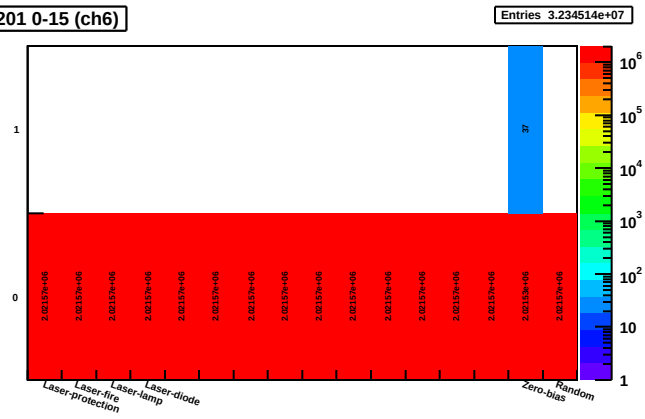

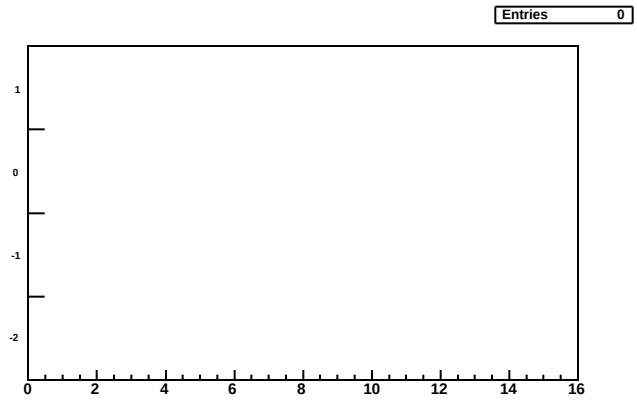
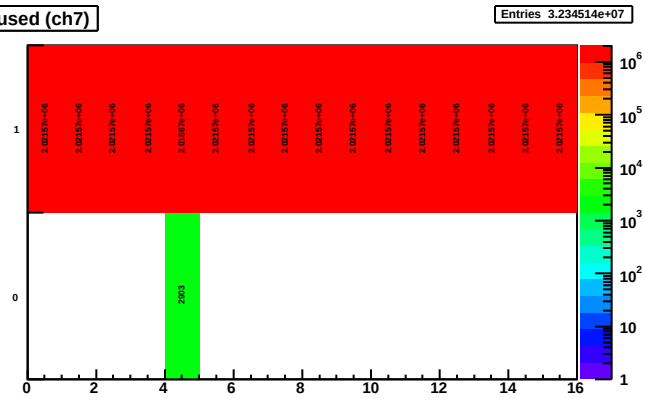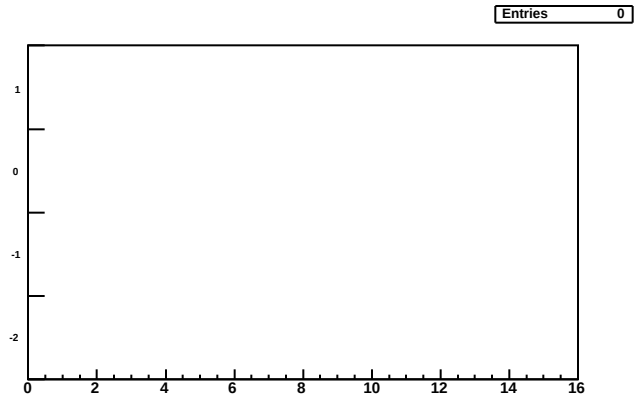
Unused (ch7)