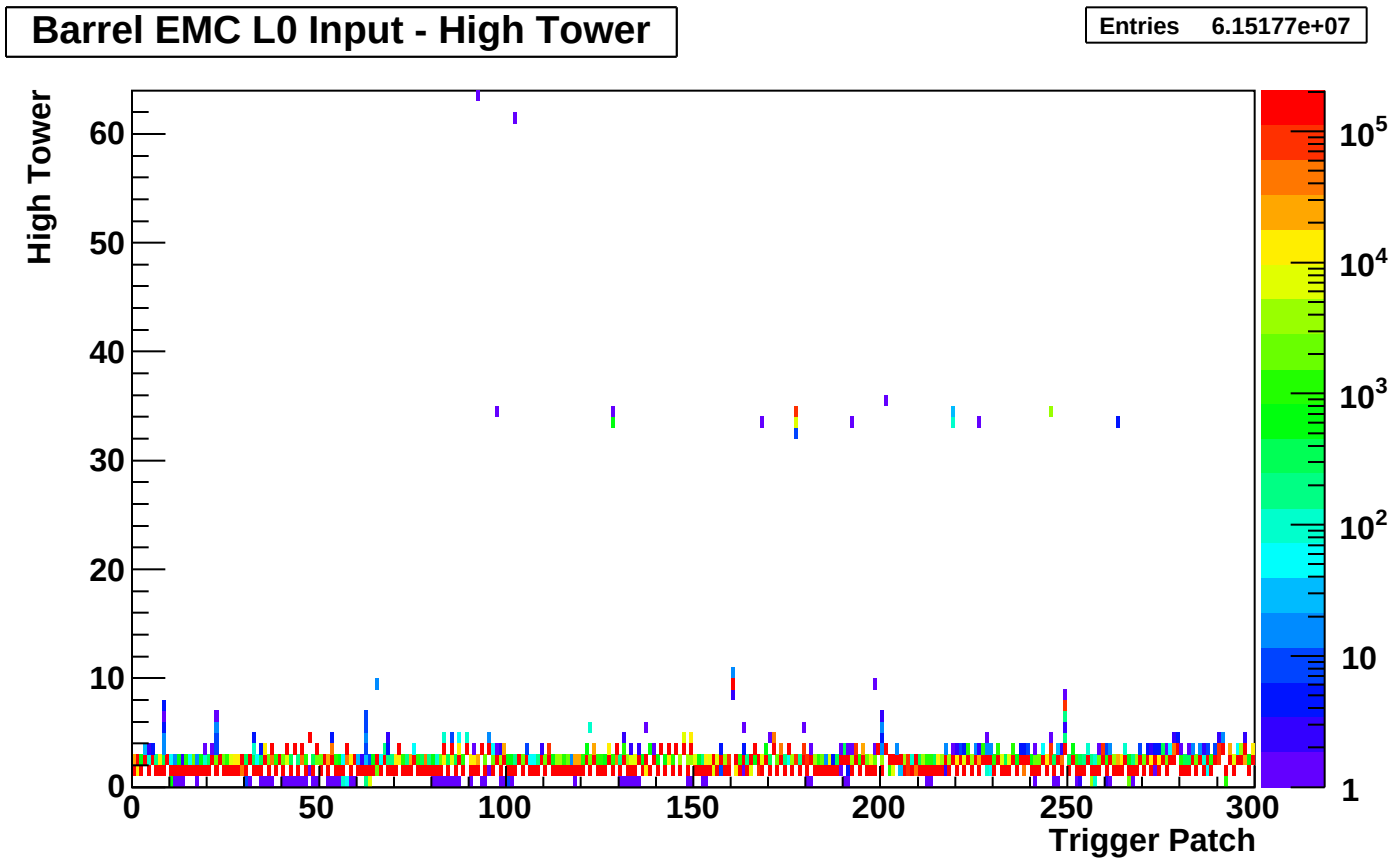
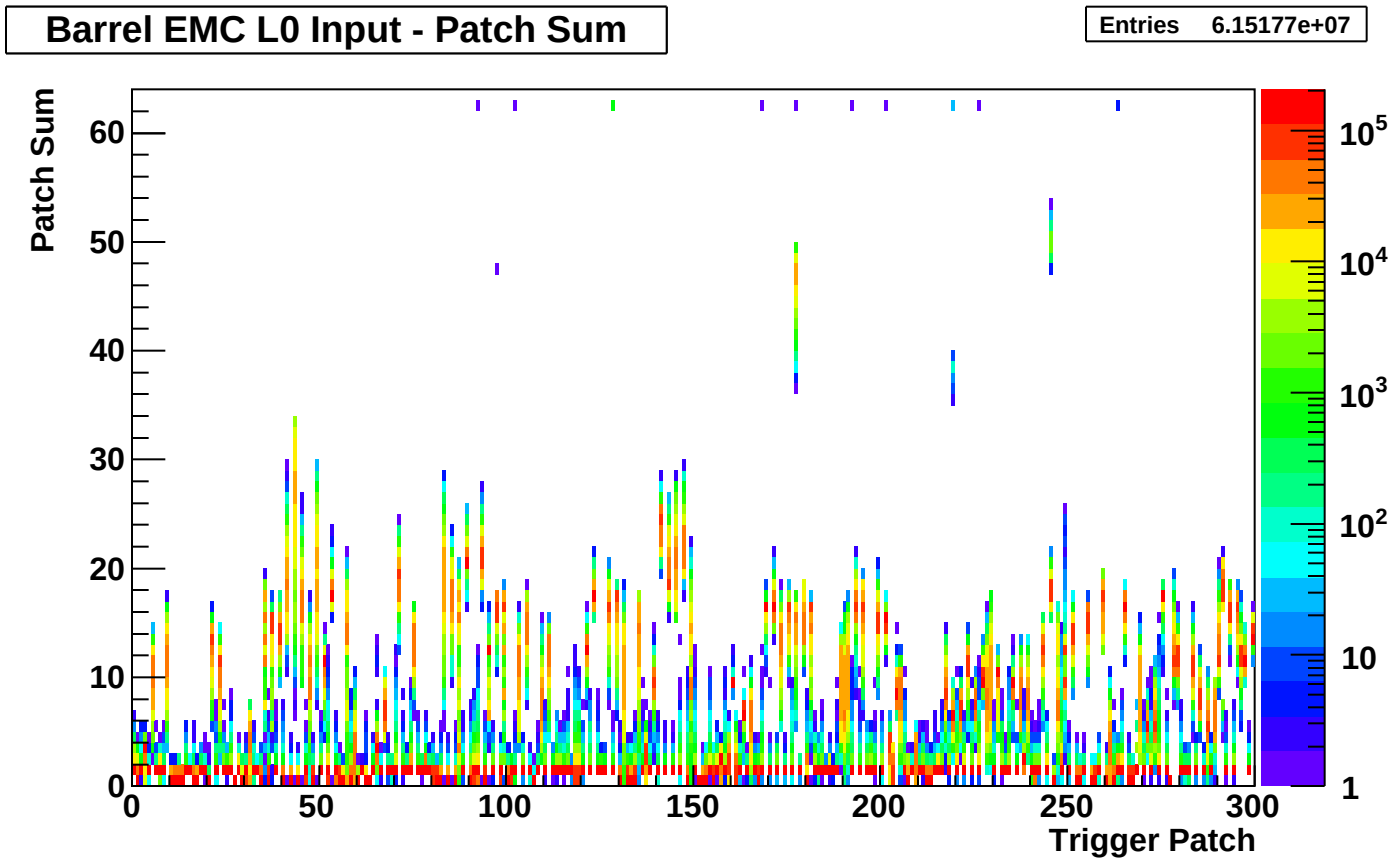
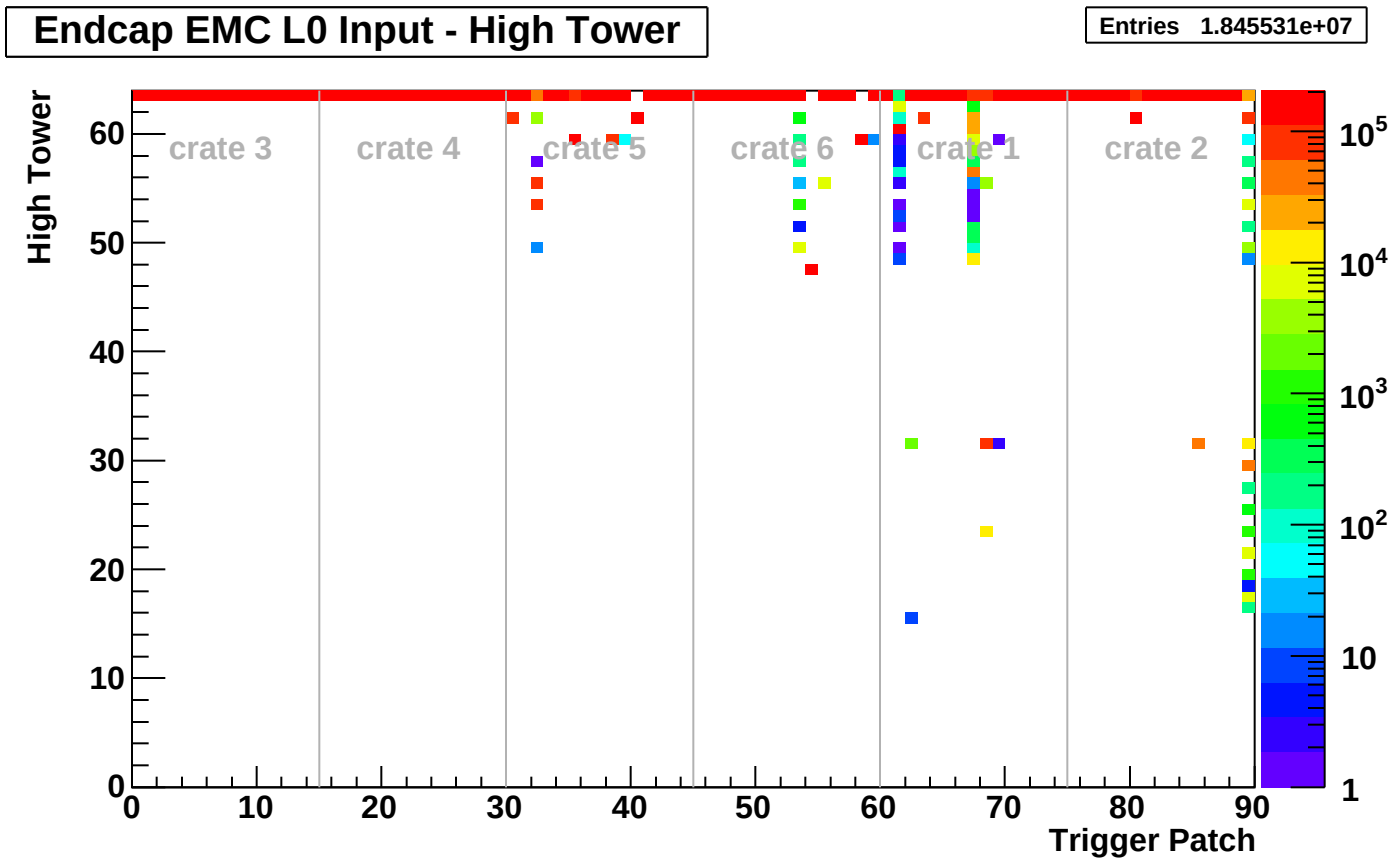
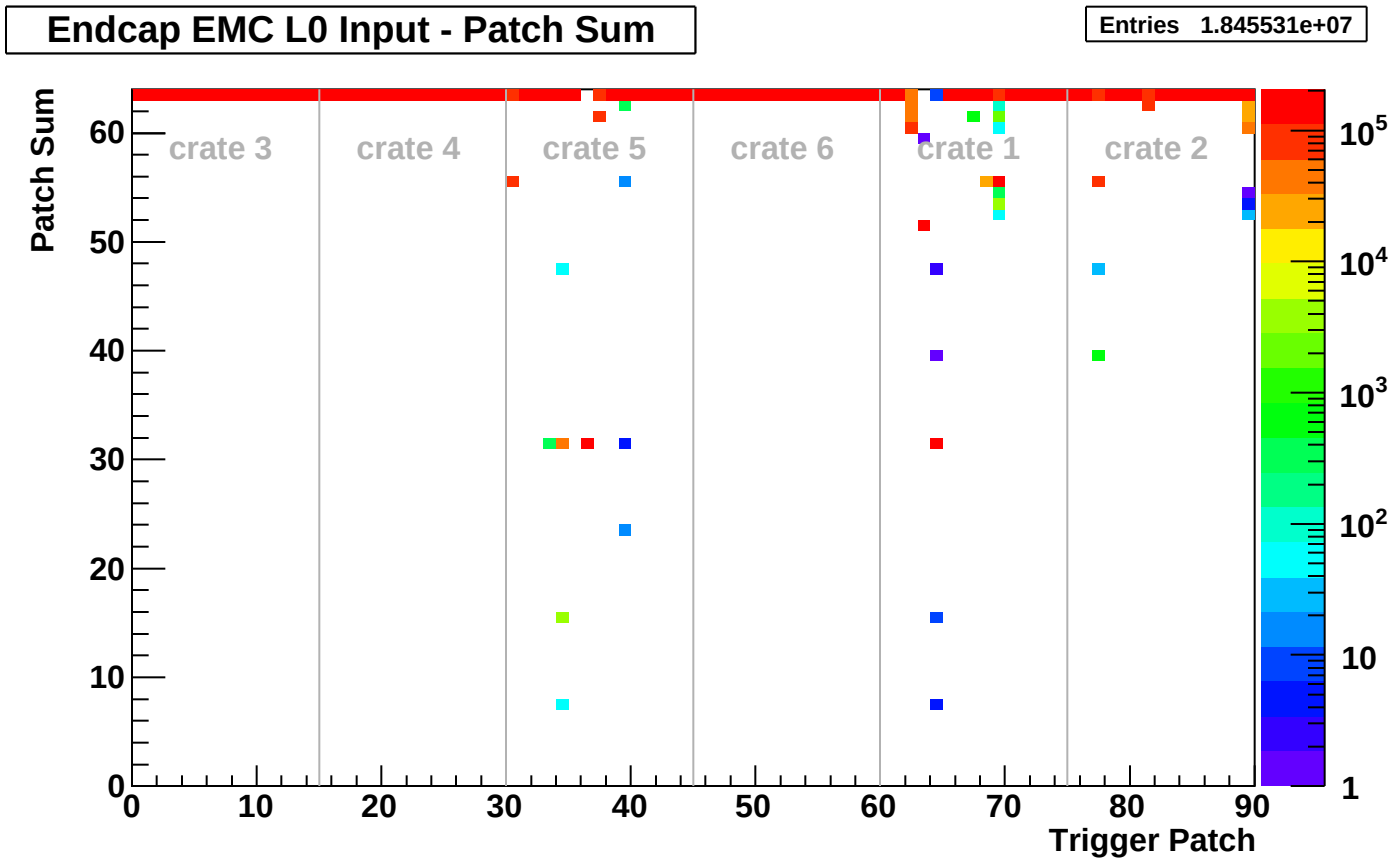
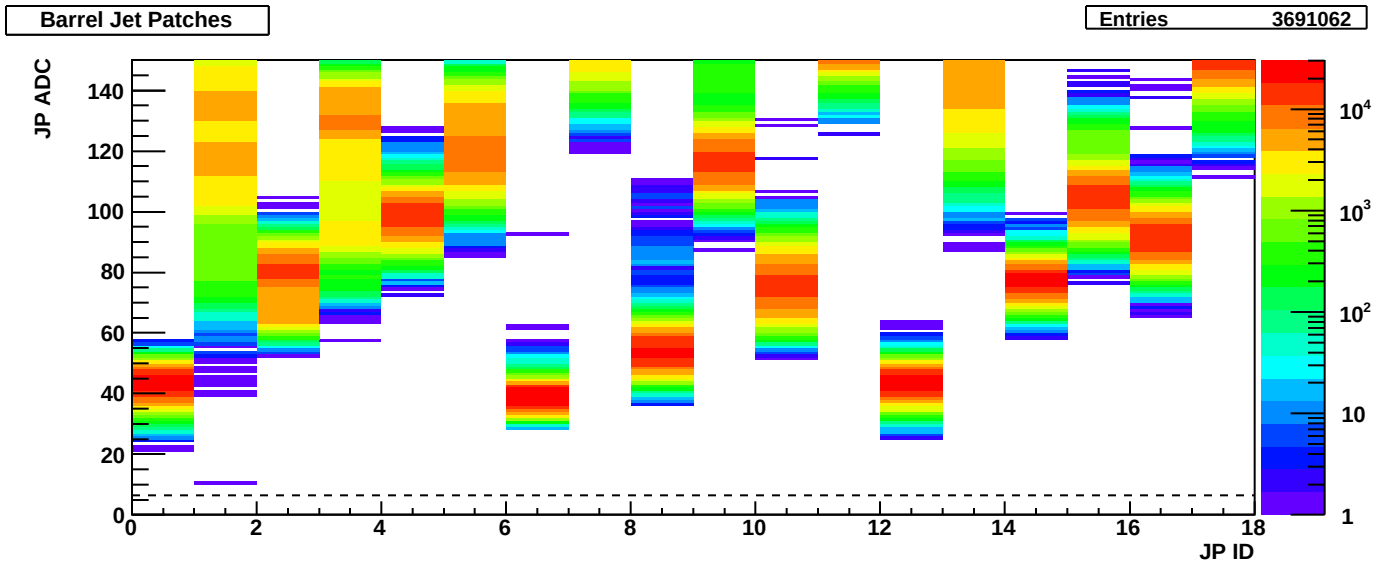
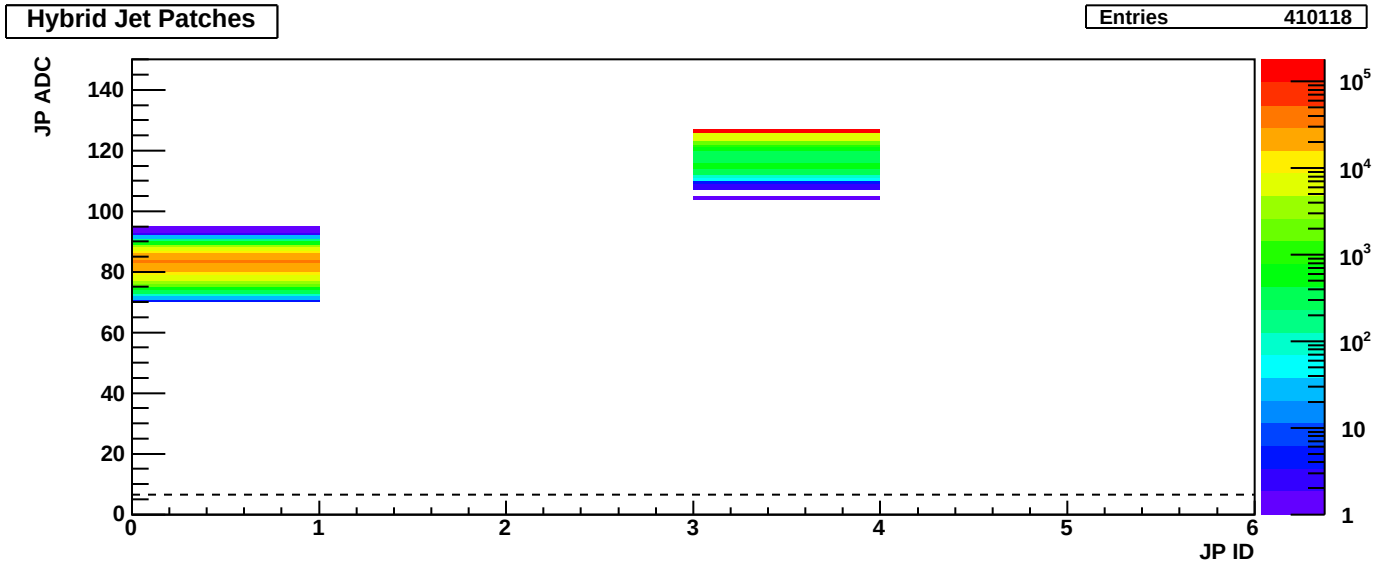

Barrel EMC L0 Input - High Tower
Entries 6.15177e+07
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

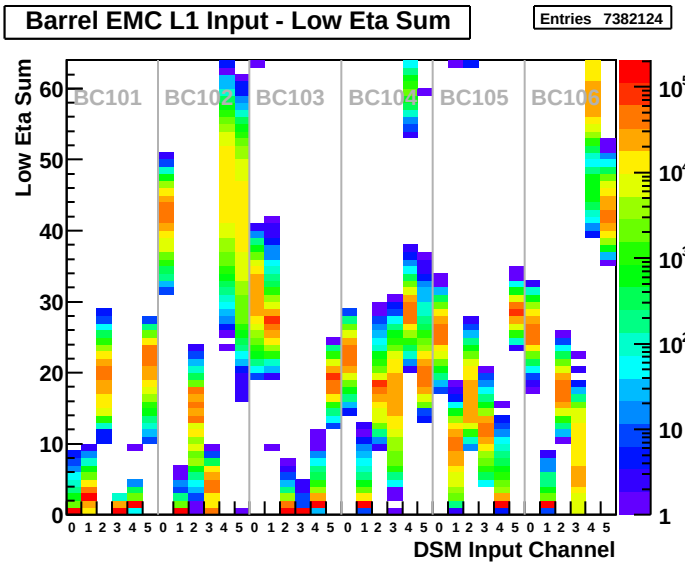

Barrel EMC L0 Input - Patch Sum
Entries 6.15177e+07
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4
10^5

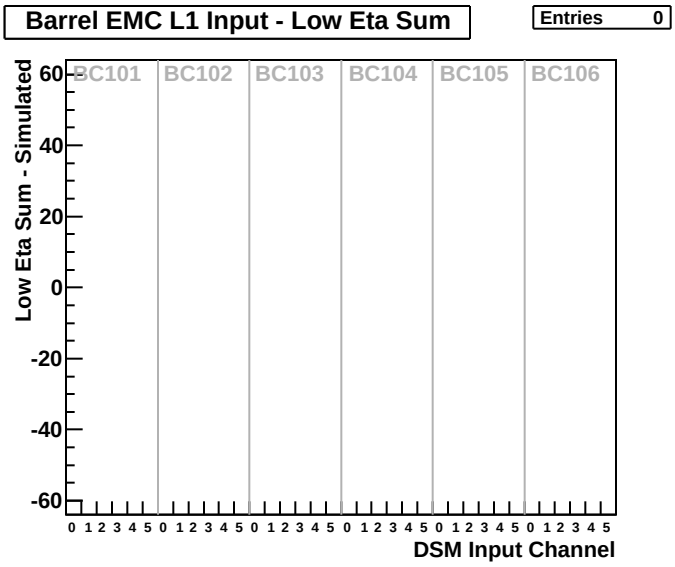

Endcap EMC L0 Input - High Tower
Entries 1.845531e+07
High Tower
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

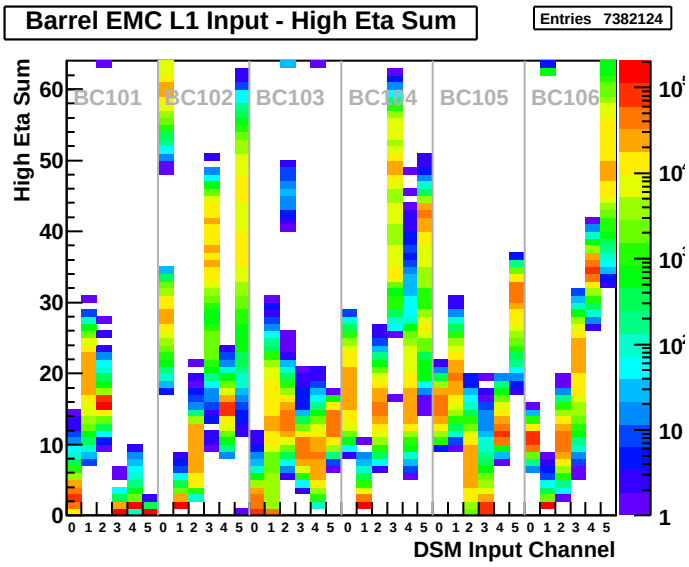

Endcap EMC L0 Input - Patch Sum
Entries 1.845531e+07
Patch Sum
Trigger Patch
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2

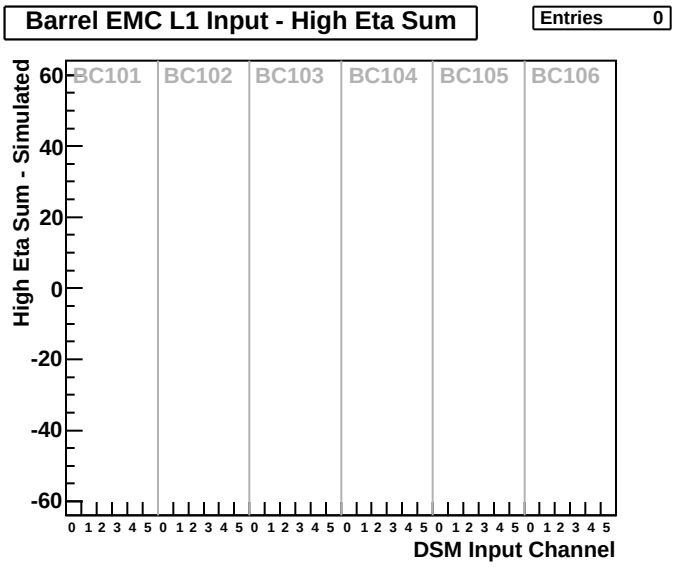

Barrel Jet Patches
Entries 3691062
JP ADC
JP ID

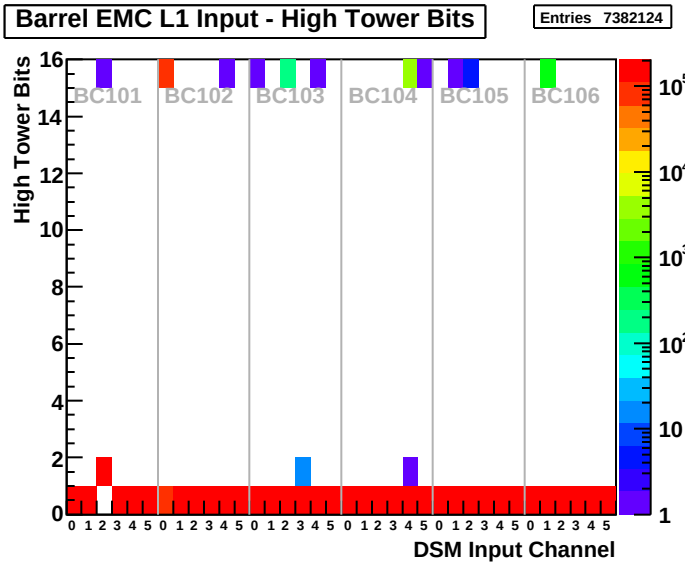

Hybrid Jet Patches
Entries 410118
JP ADC
JP ID

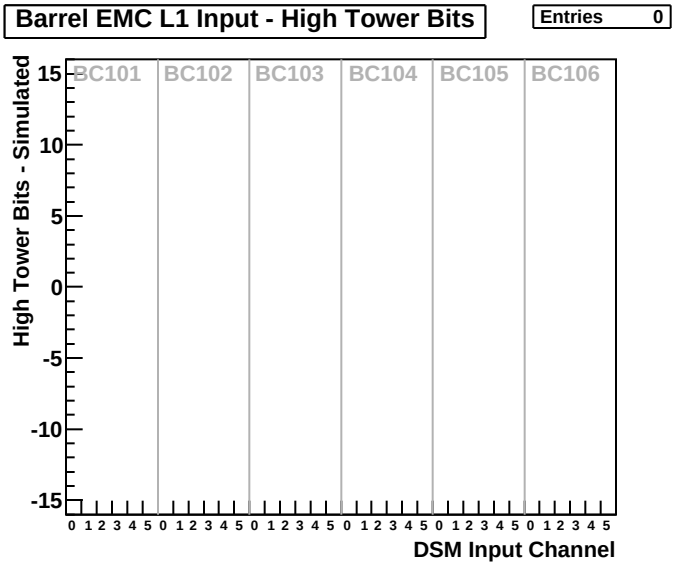

Barrel EMC L1 Input - Low Eta Sum
Entries 7382124
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

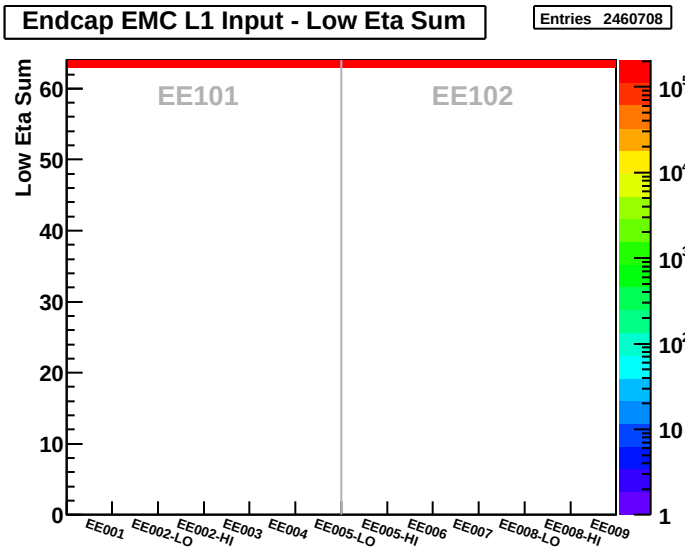

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

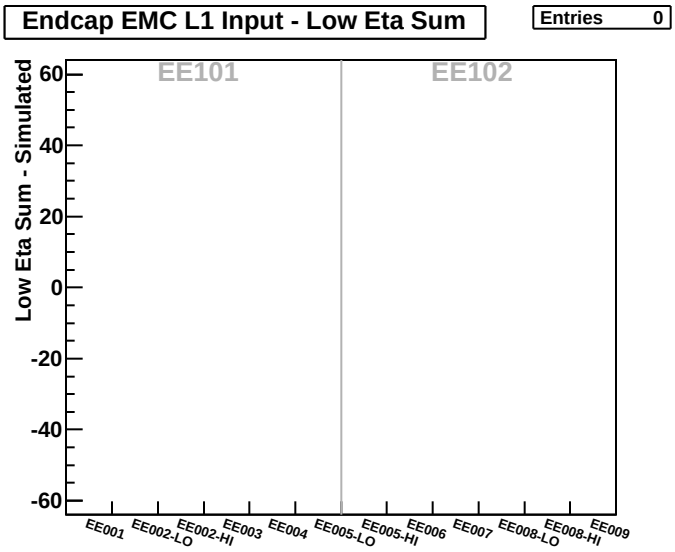

Barrel EMC L1 Input - High Eta Sum
Entries 7382124
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

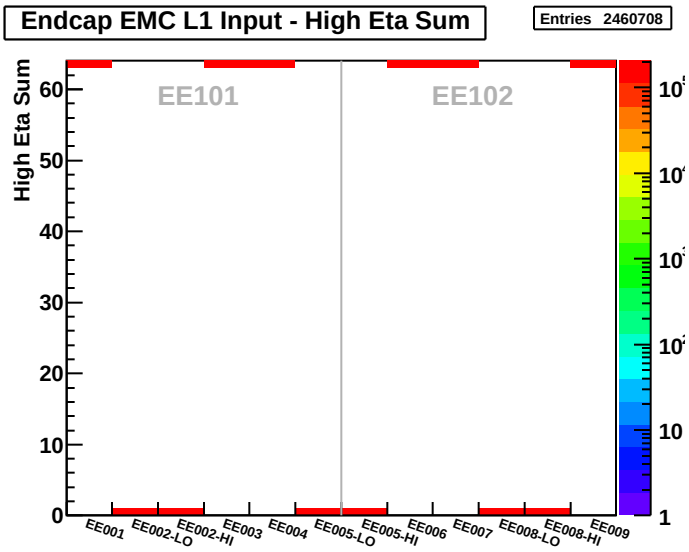

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

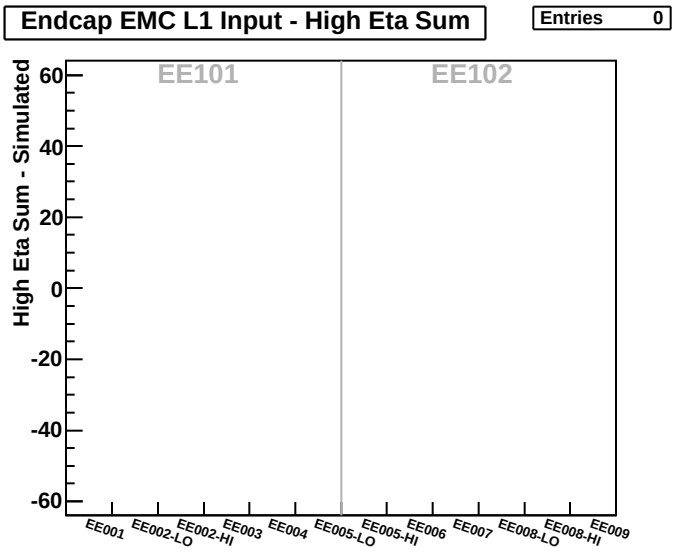

Barrel EMC L1 Input - High Tower Bits
Entries 7382124
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

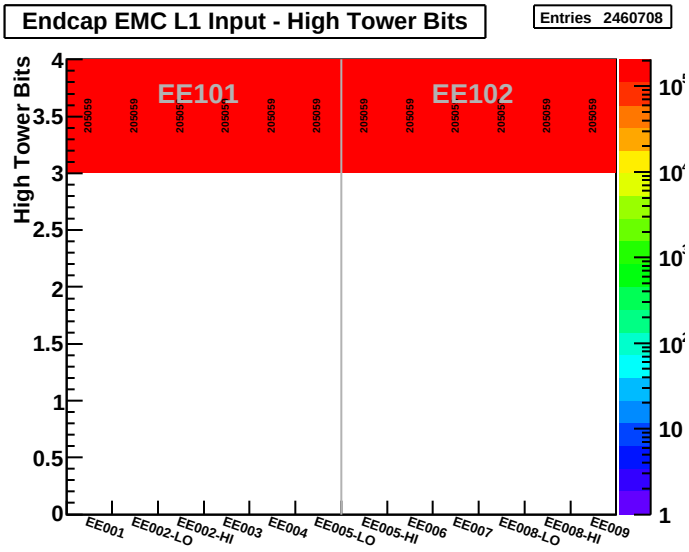

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

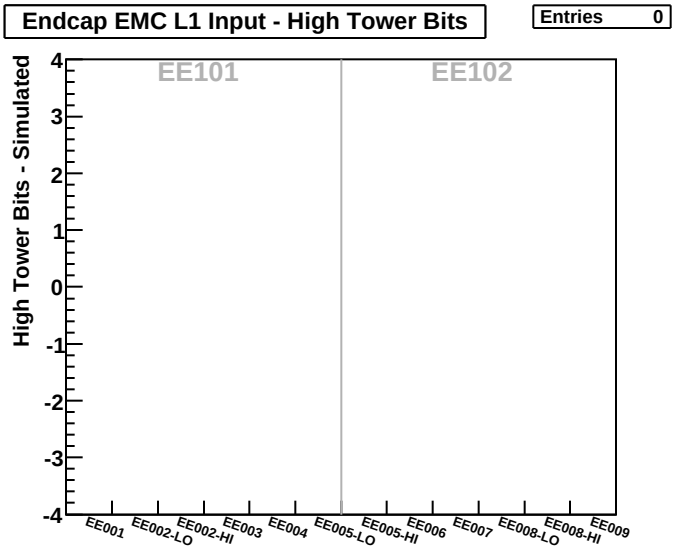

Endcap EMC L1 Input - Low Eta Sum
Entries 2460708
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

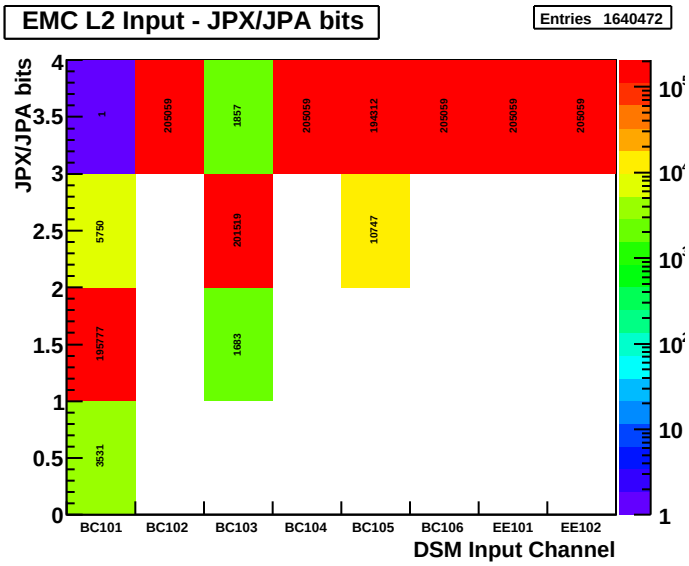

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

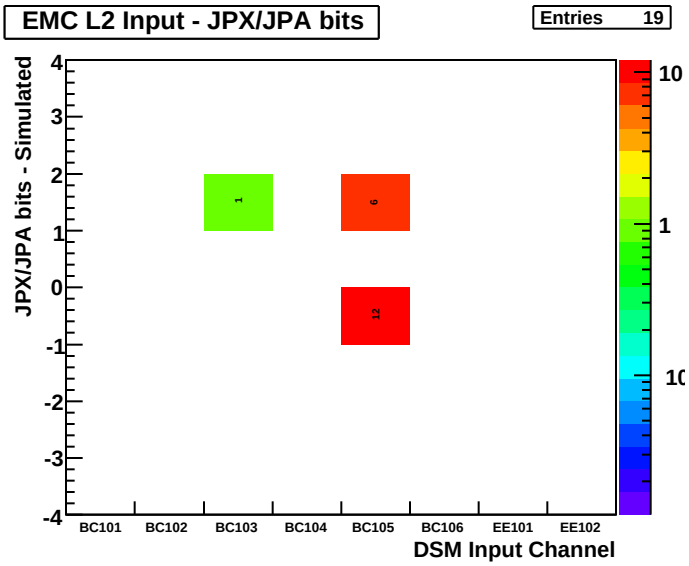

Endcap EMC L1 Input - High Eta Sum
Entries 2460708
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

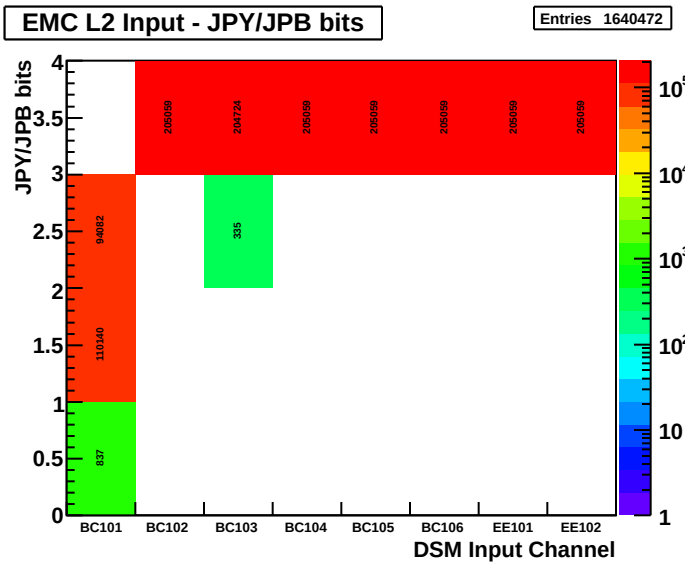

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

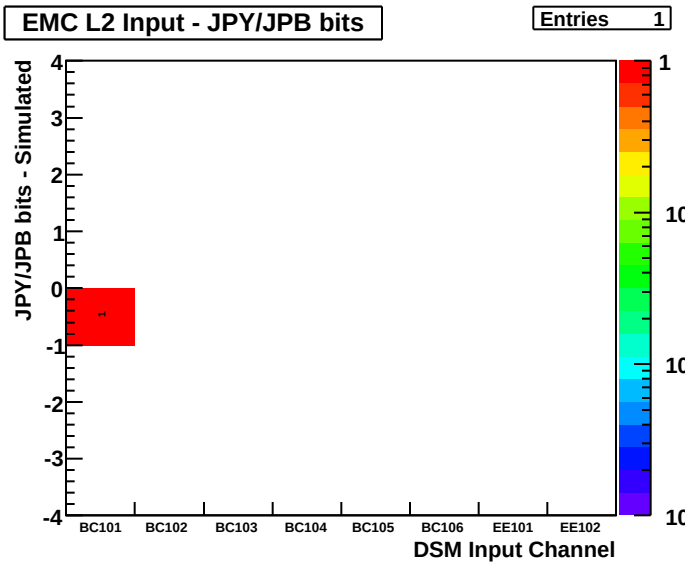

Endcap EMC L1 Input - High Tower Bits
Entries 2460708
High Tower Bits
EE101
EE102
205059
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

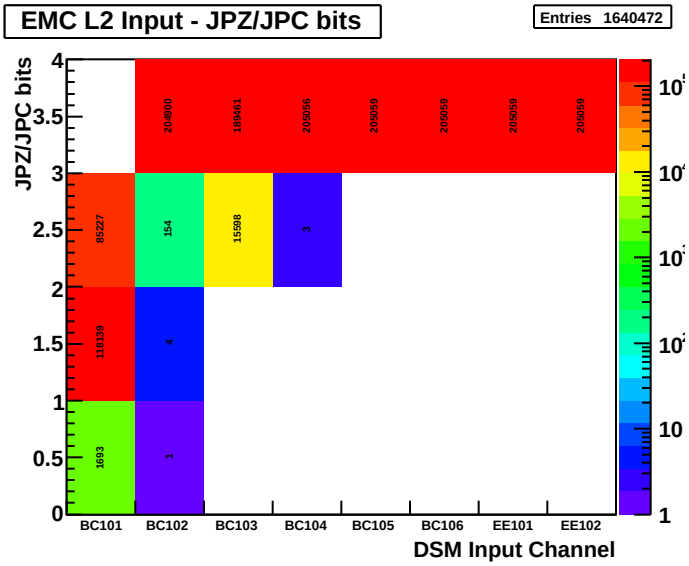

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

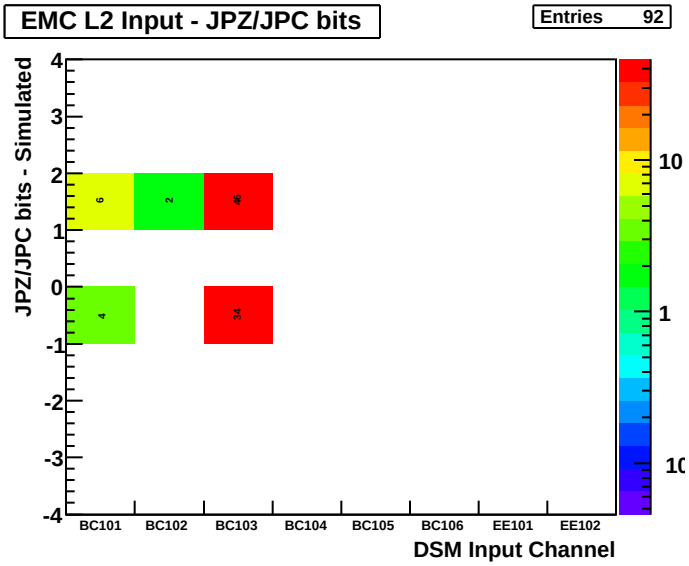

EMC L2 Input - JPX/JPA bits
Entries 1640472
JPX/JPA bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

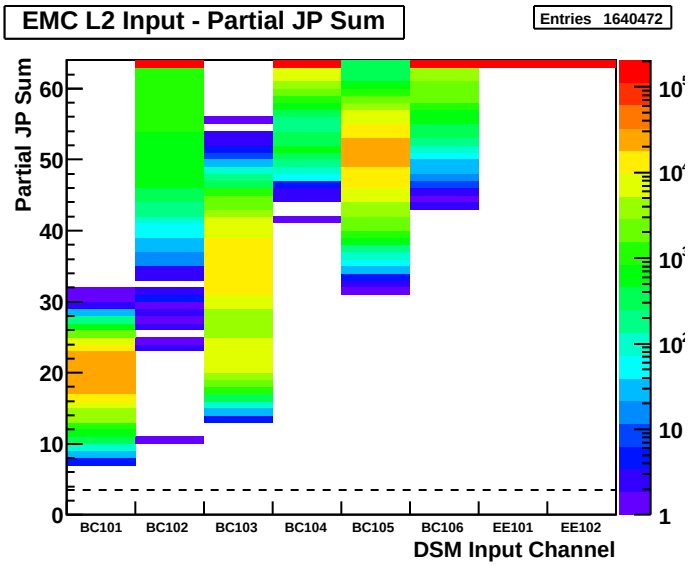

EMC L2 Input - JPX/JPA bits
Entries 19
JPX/JPA bits - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

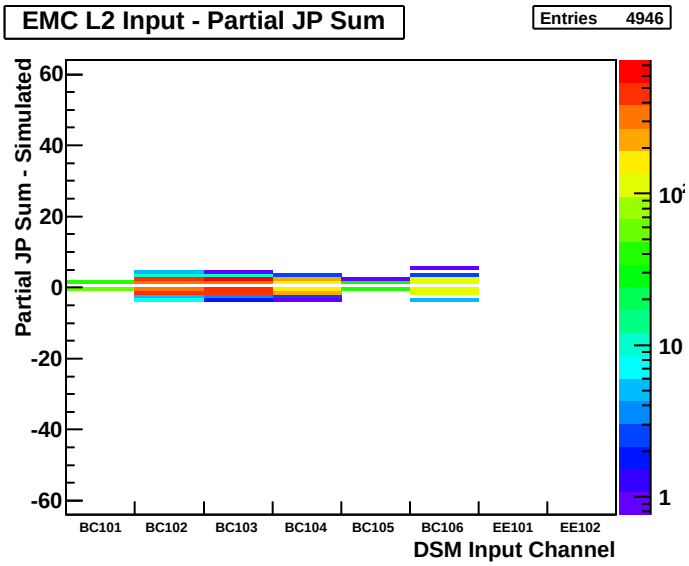

EMC L2 Input - JPY/JPB bits
Entries 1640472
JPY/JPB bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

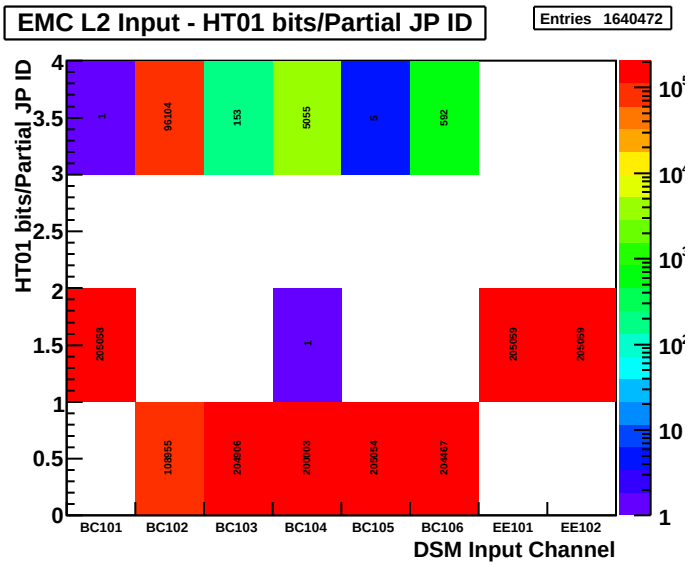

EMC L2 Input - JPY/JPB bits
Entries 1
JPY/JPB bits - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

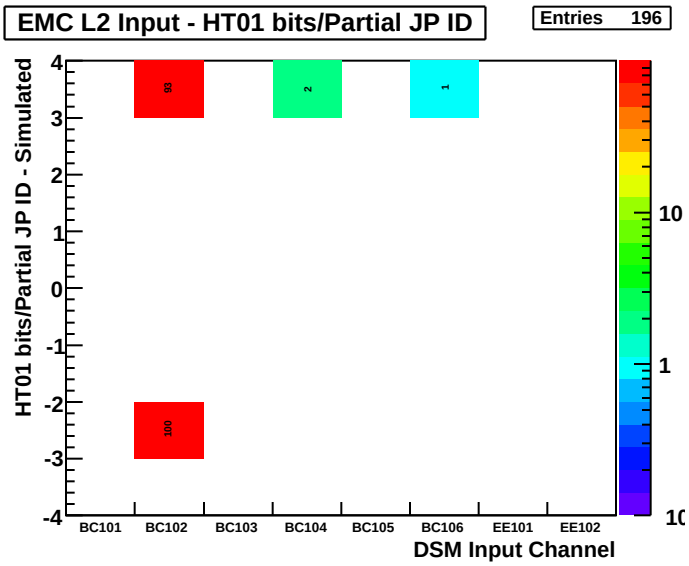

EMC L2 Input - JPZ/JPC bits
Entries 1640472
JPZ/JPC bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

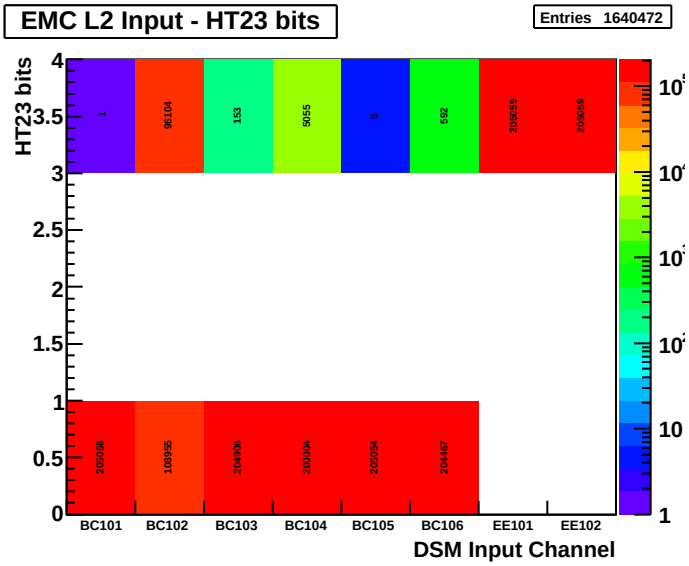

EMC L2 Input - JPZ/JPC bits
Entries 92
JPZ/JPC bits - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

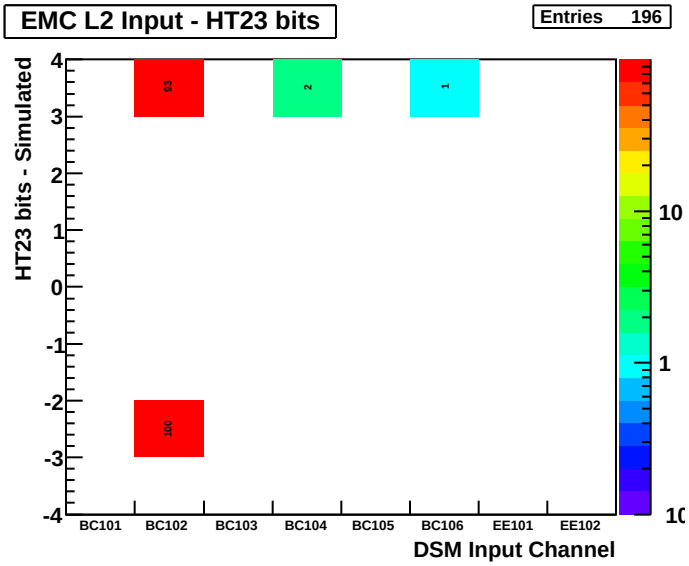

EMC L2 Input - Partial JP Sum
Entries 1640472
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

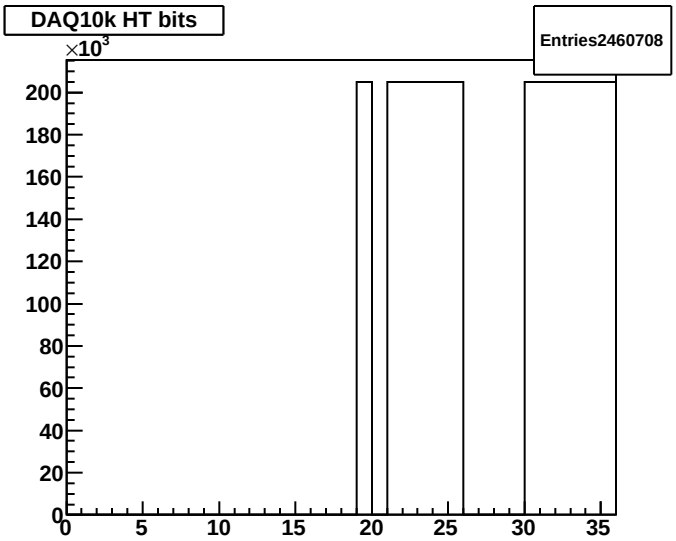

EMC L2 Input - Partial JP Sum
Entries 4946
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

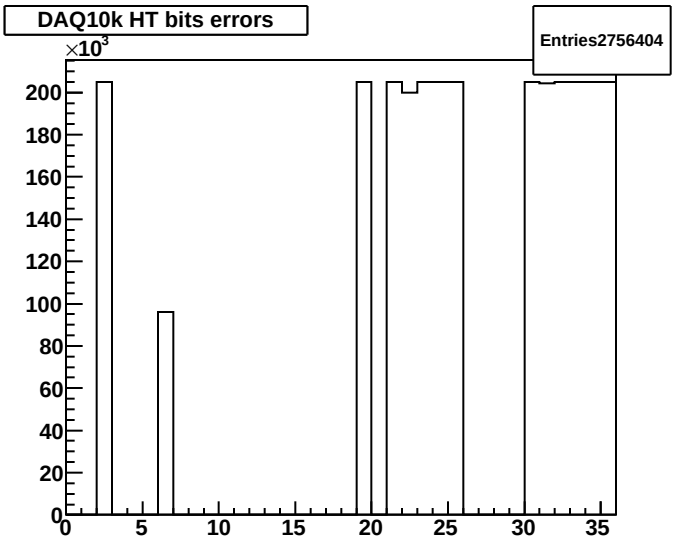

EMC L2 Input - HT01 bits/Partial JP ID
Entries 1640472
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

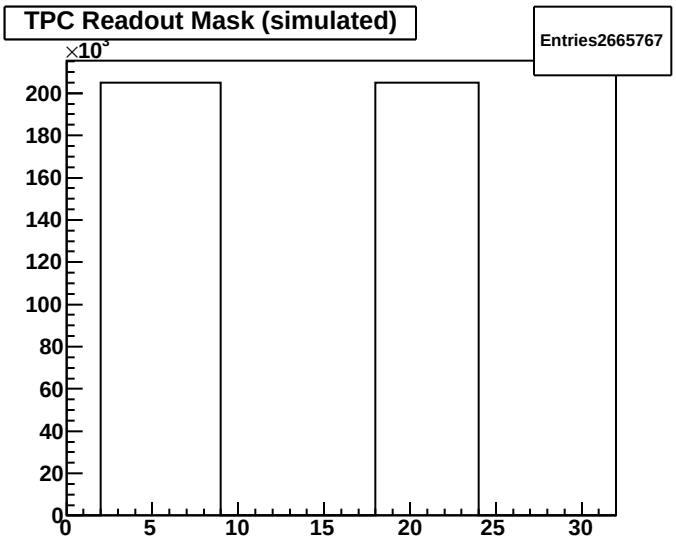

EMC L2 Input - HT01 bits/Partial JP ID
Entries 196
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

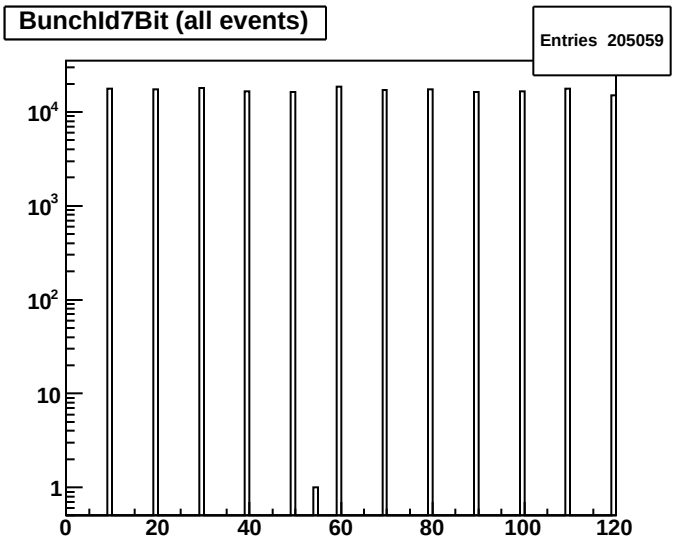

EMC L2 Input - HT23 bits
Entries 1640472
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

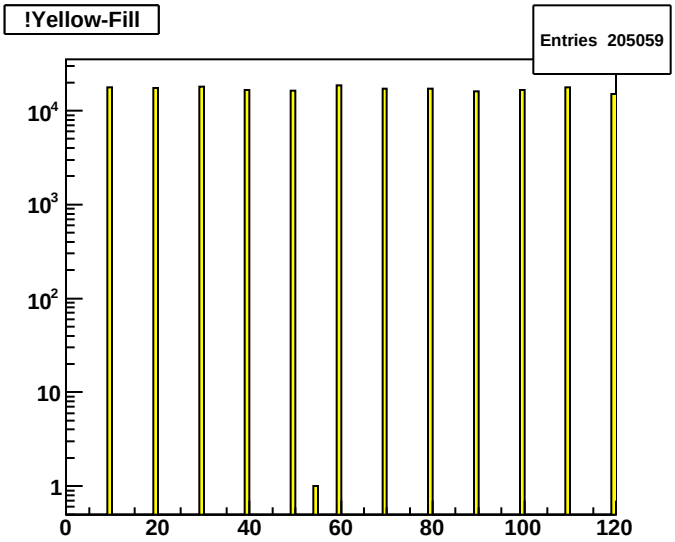

EMC L2 Input - HT23 bits
Entries 196
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

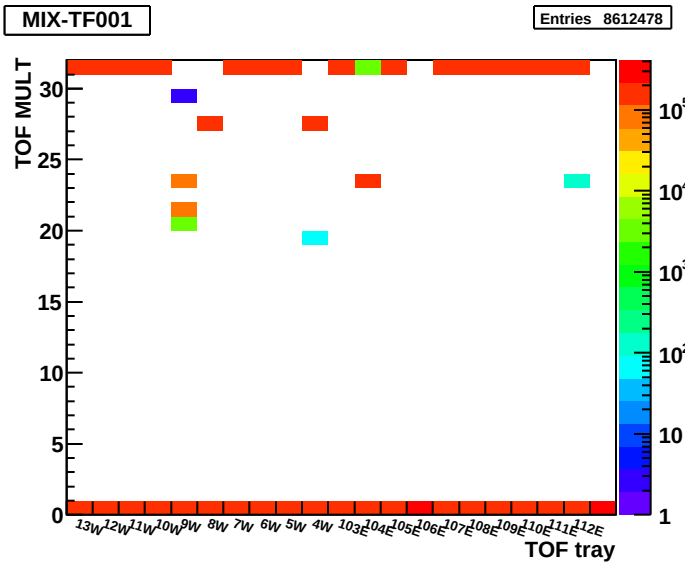

DAQ10k HT bits
Entries2460708
×10^3
200
180
160
140
120
100
80
60
40
20
0
0
5
10
15
20
25
30
35

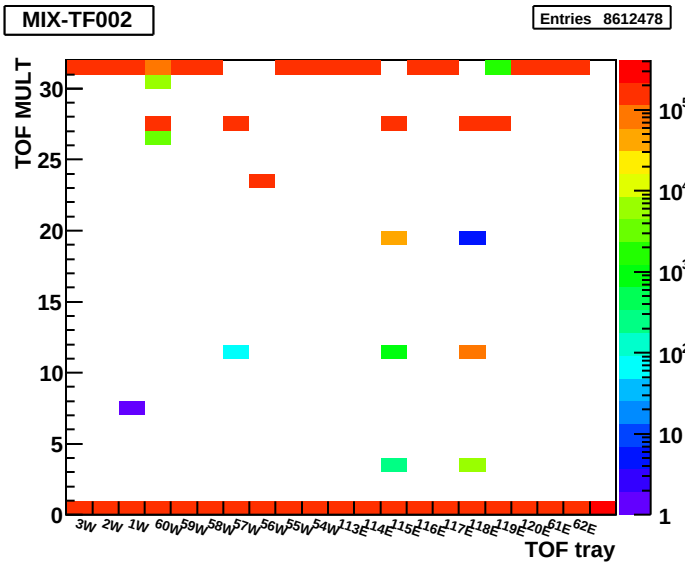

DAQ10k HT bits errors
Entries2756404
×10^3
200
180
160
140
120
100
80
60
40
20
0
0
5
10
15
20
25
30
35

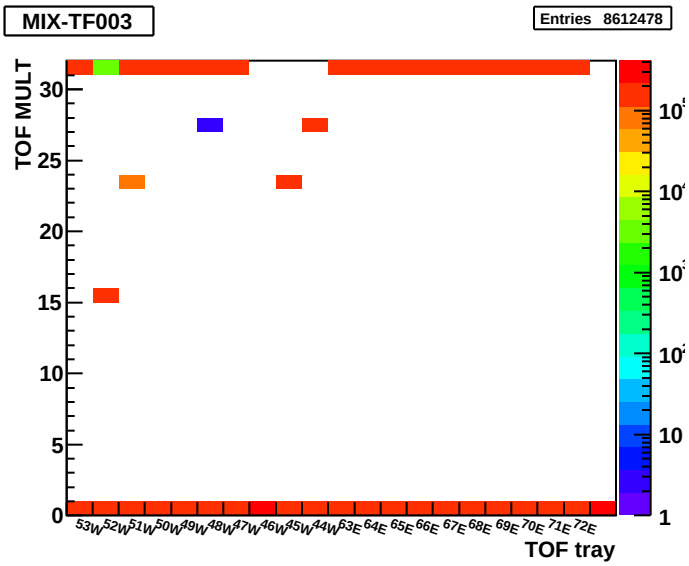

TPC Readout Mask (simulated)
Entries2665767
×10^3
200
180
160
140
120
100
80
60
40
20
0
0
5
10
15
20
25
30

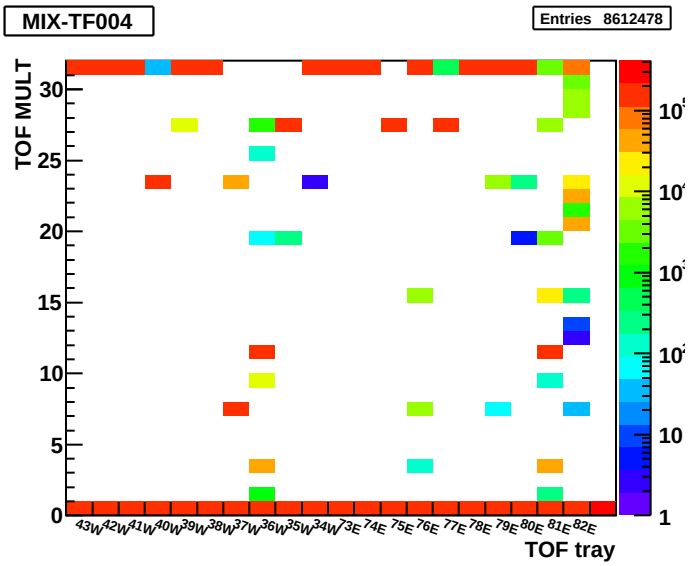

BunchId7Bit (all events)
Entries 205059
10^4
10^3
10^2
10
1
0
20
40
60
80
100
120

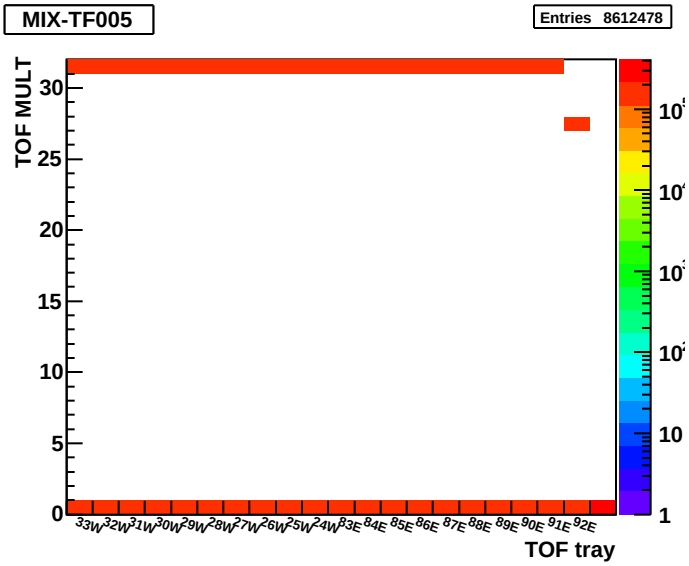

!Yellow-Fill
Entries 205059
10^4
10^3
10^2
10
1
0
20
40
60
80
100
120

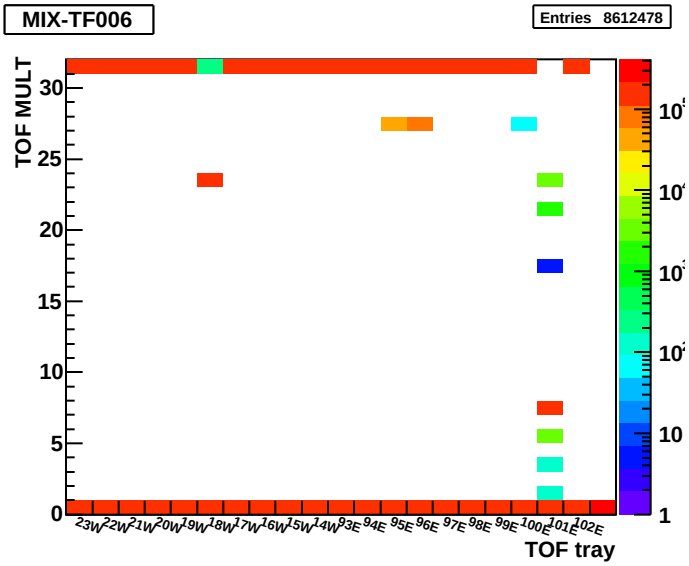

MIX-TF001
Entries 8612478
TOF MULT
TOF tray

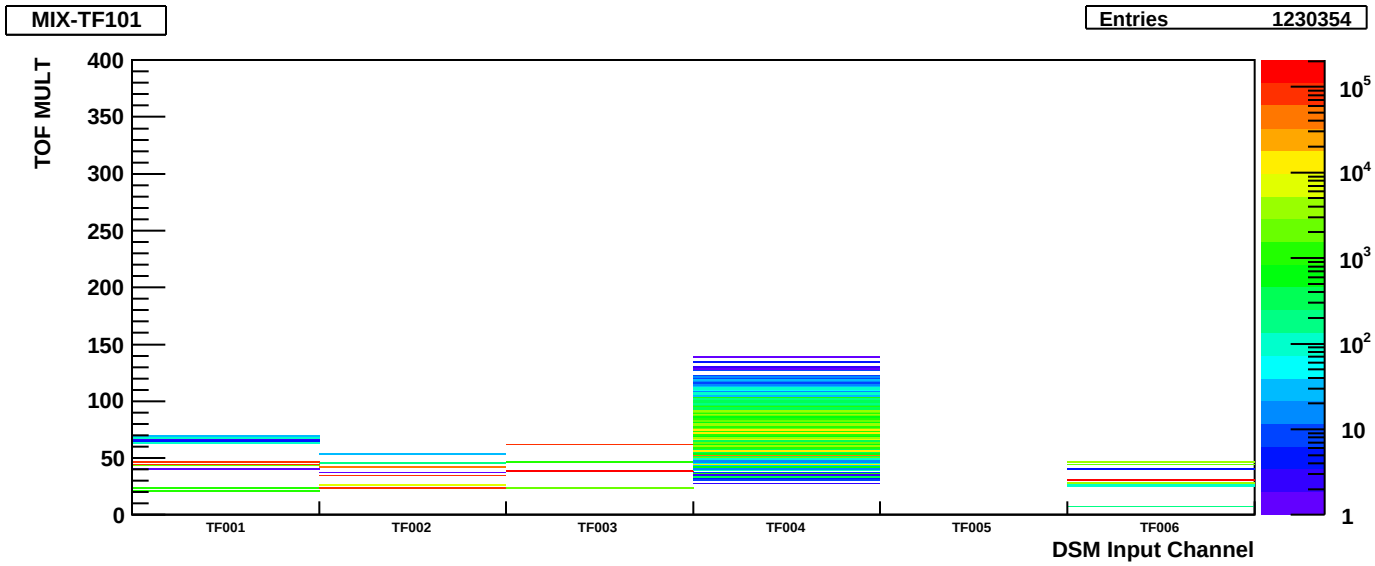

MIX-TF002
Entries 8612478
TOF MULT
TOF tray

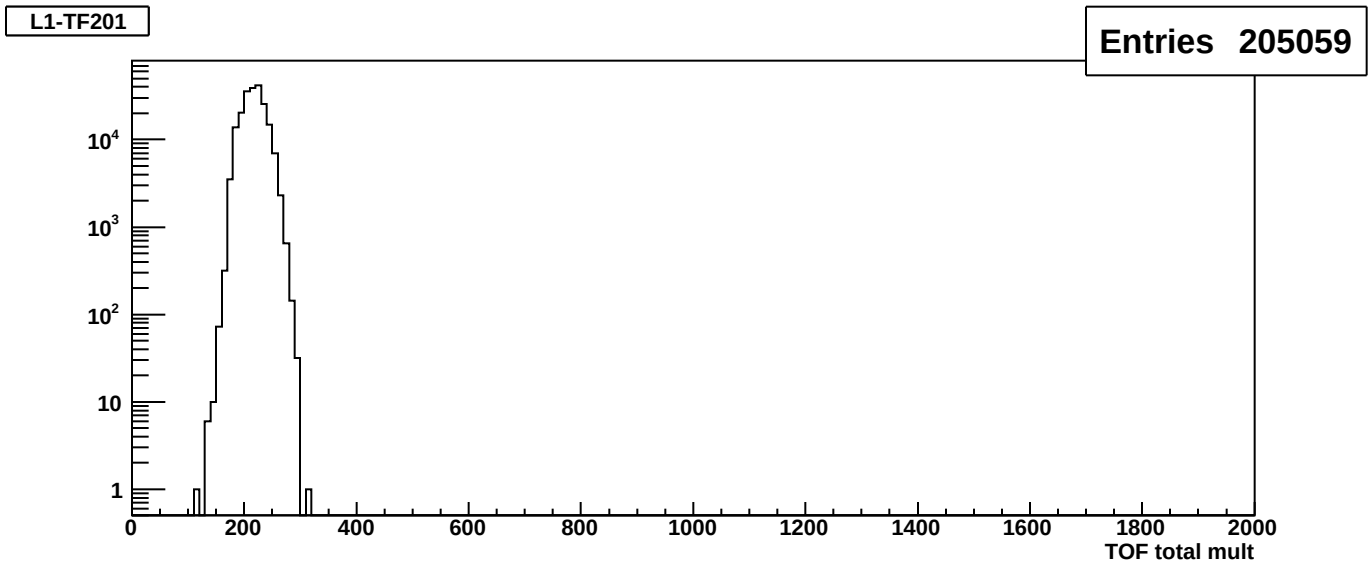

MIX-TF003
Entries 8612478
TOF MULT
TOF tray

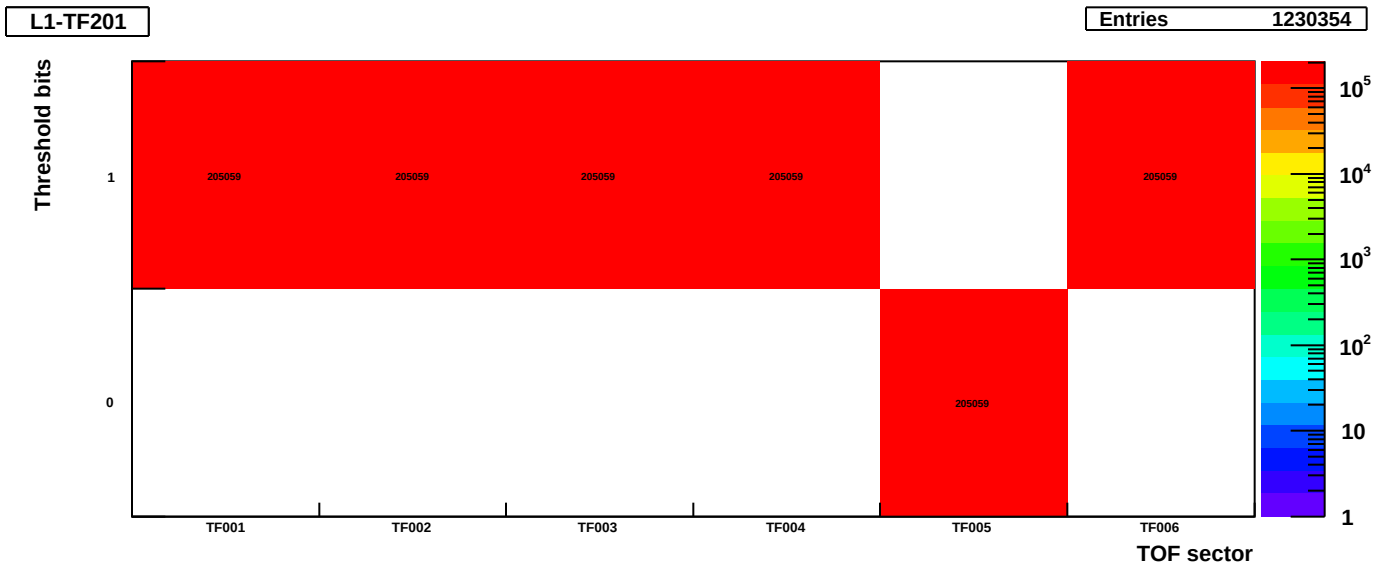

MIX-TF004
Entries 8612478
TOF MULT
TOF tray

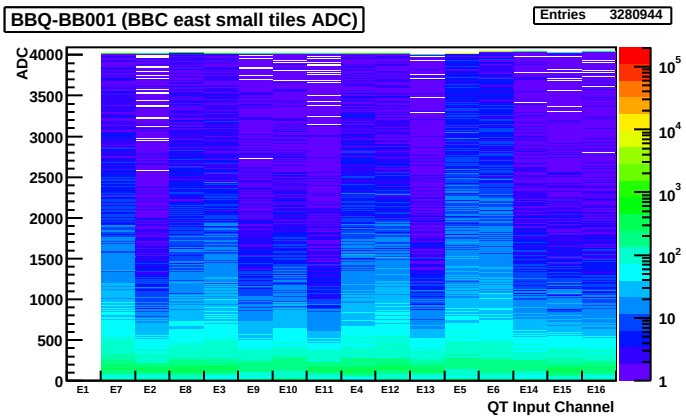

MIX-TF005
Entries 8612478
TOF MULT
TOF tray

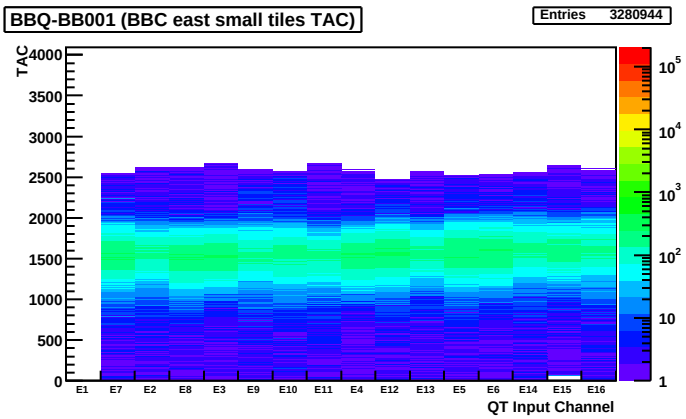

MIX-TF006
Entries 8612478
TOF MULT
TOF tray

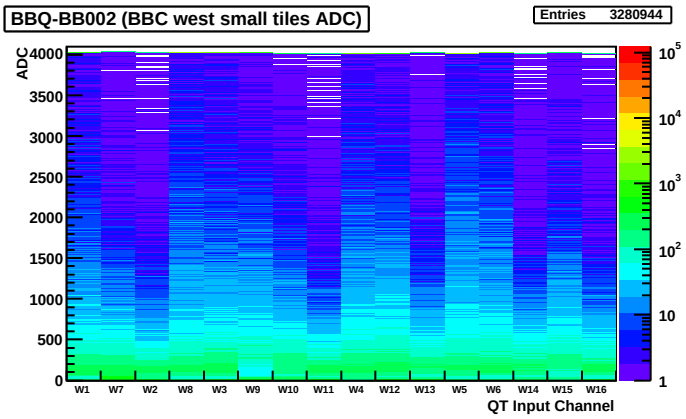

MIX-TF101
Entries 1230354
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^5
10^4
10^3
10^2
10
1

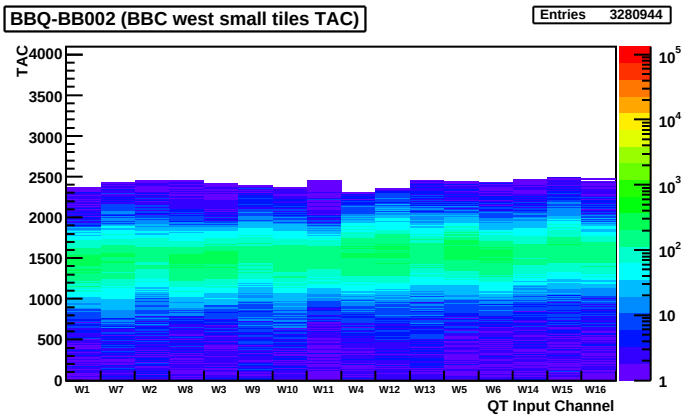

L1-TF201
Entries 205059
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

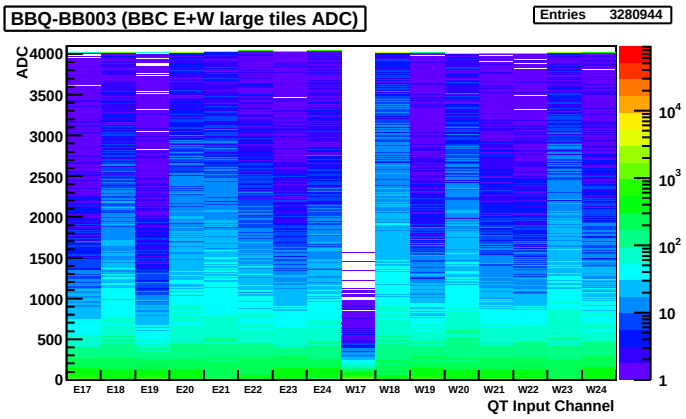

L1-TF201
Entries 1230354
Threshold bits
1
0
205059
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^5
10^4
10^3
10^2
10
1

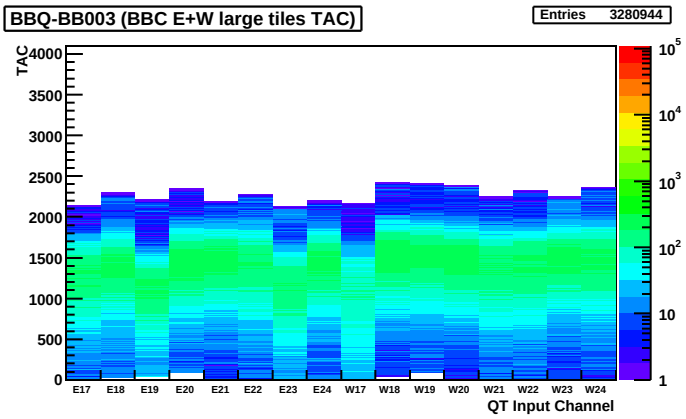

BBQ-BB001 (BBC east small tiles ADC)
Entries 3280944
ADC
QT Input Channel

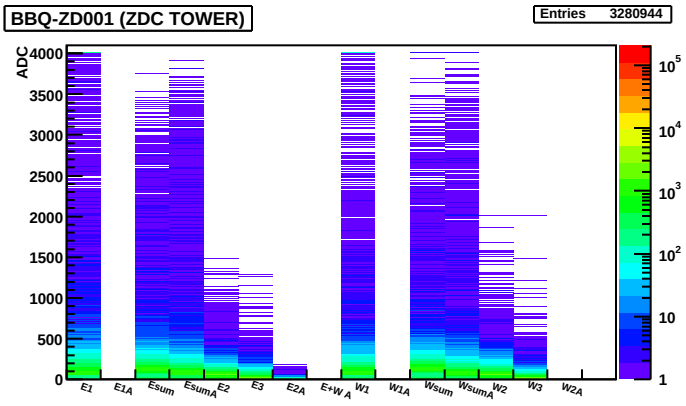

BBQ-BB001 (BBC east small tiles TAC)
Entries 3280944
TAC
QT Input Channel

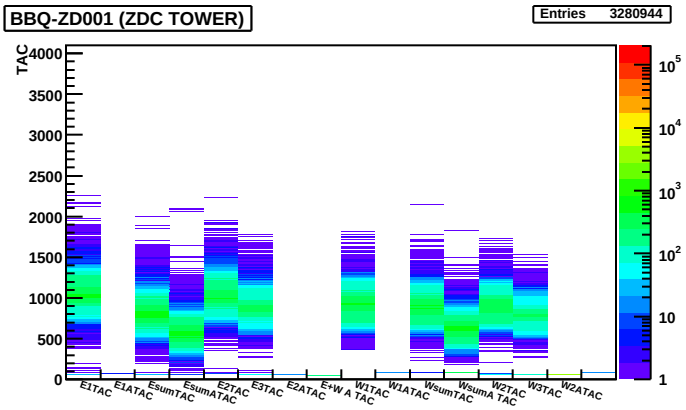

BBQ-BB002 (BBC west small tiles ADC)
Entries 3280944
ADC
QT Input Channel

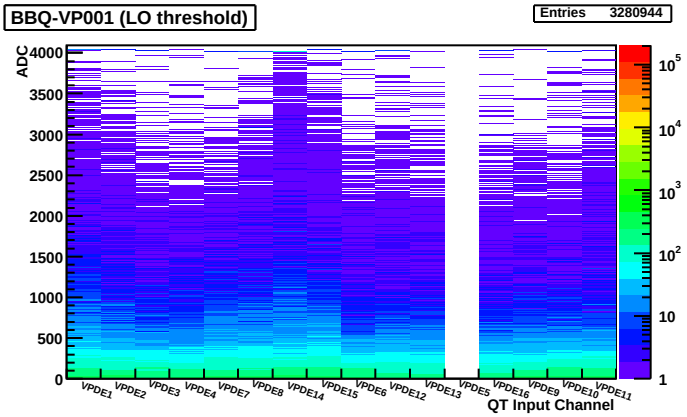

BBQ-BB002 (BBC west small tiles TAC)
Entries 3280944
TAC
QT Input Channel

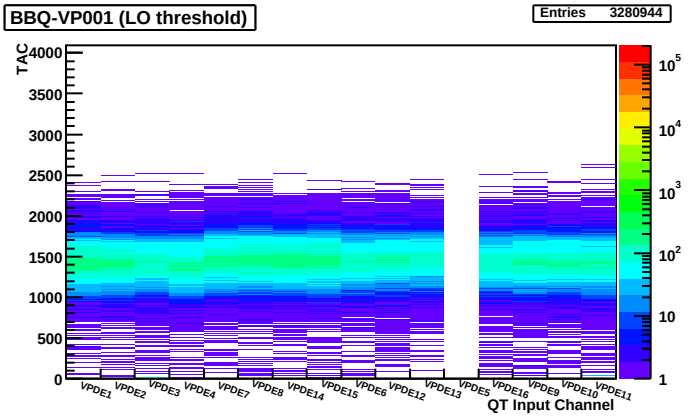

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 3280944
ADC
QT Input Channel

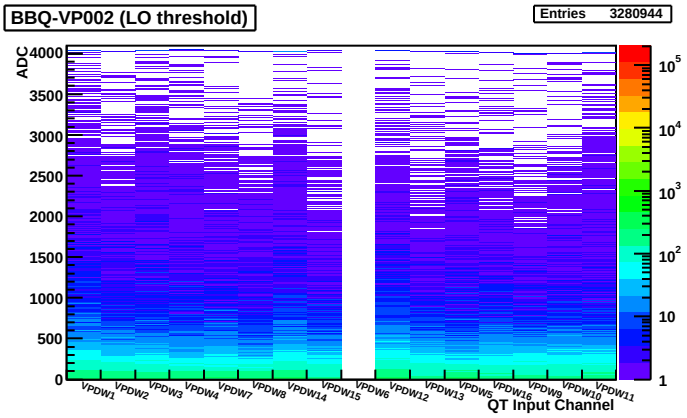

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 3280944
TAC
QT Input Channel

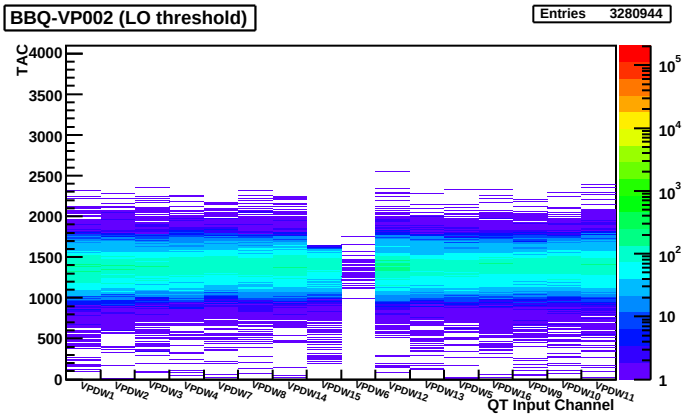

BBQ-ZD001 (ZDC TOWER)
Entries 3280944
ADC

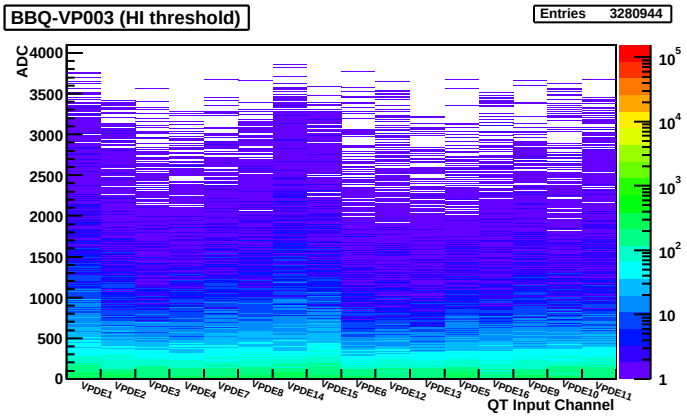

BBQ-ZD001 (ZDC TOWER)
Entries 3280944
TAC

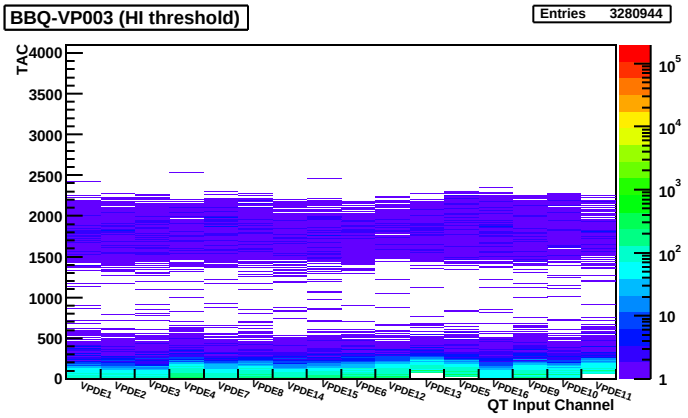

BBQ-VP001 (LO threshold)
Entries 3280944
ADC
QT Input Channel

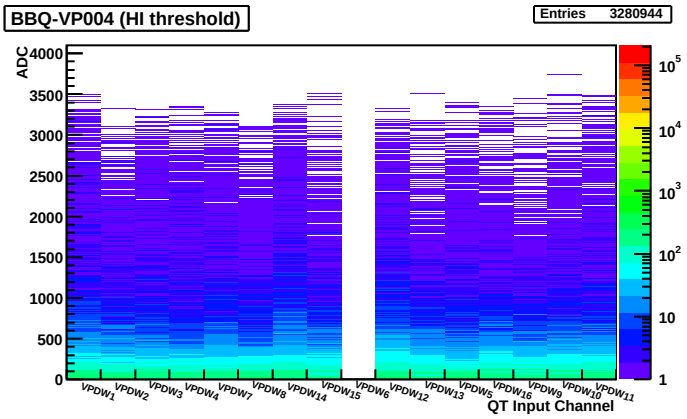

BBQ-VP001 (LO threshold)
Entries 3280944
TAC
QT Input Channel

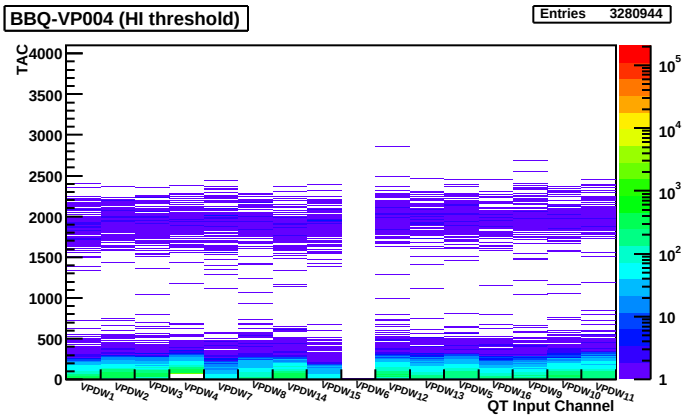

BBQ-VP002 (LO threshold)
Entries 3280944
ADC
QT Input Channel

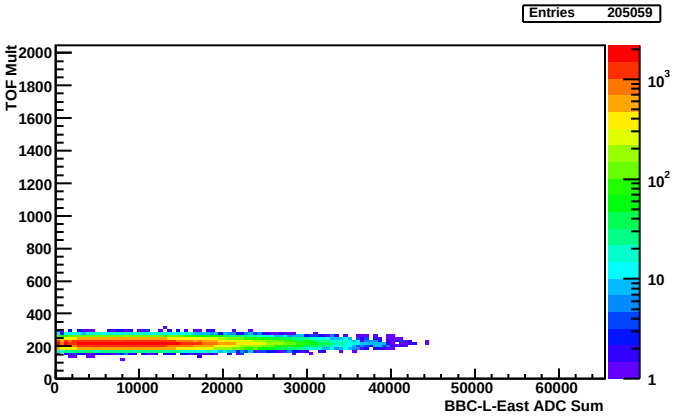

BBQ-VP002 (LO threshold)
Entries 3280944
TAC
QT Input Channel

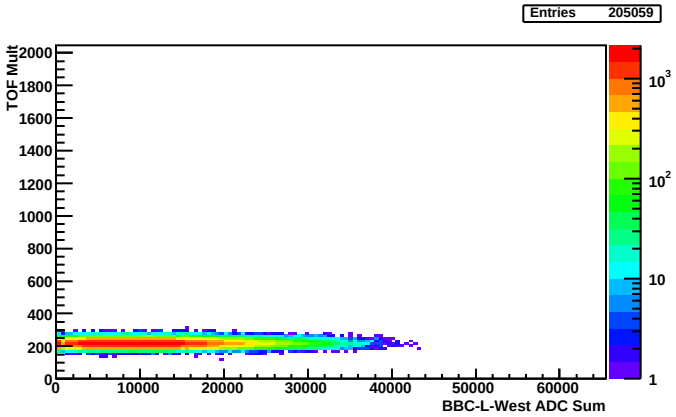

BBQ-VP003 (HI threshold)
Entries 3280944
ADC
QT Input Channel

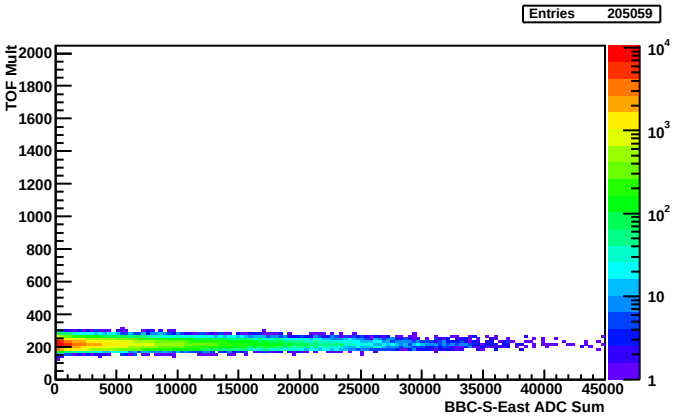

BBQ-VP003 (HI threshold)
Entries 3280944
TAC
QT Input Channel

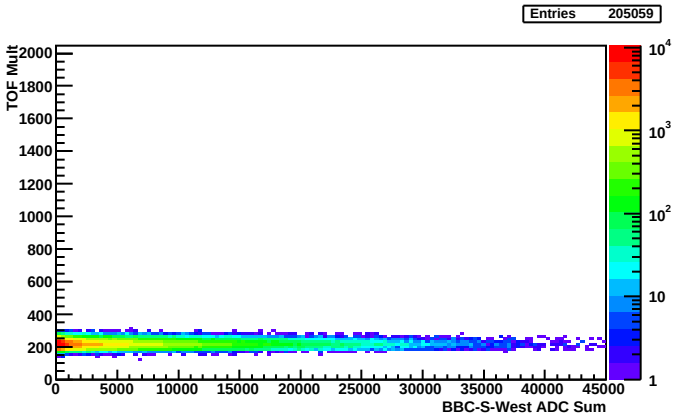

BBQ-VP004 (HI threshold)
Entries 3280944
ADC
QT Input Channel

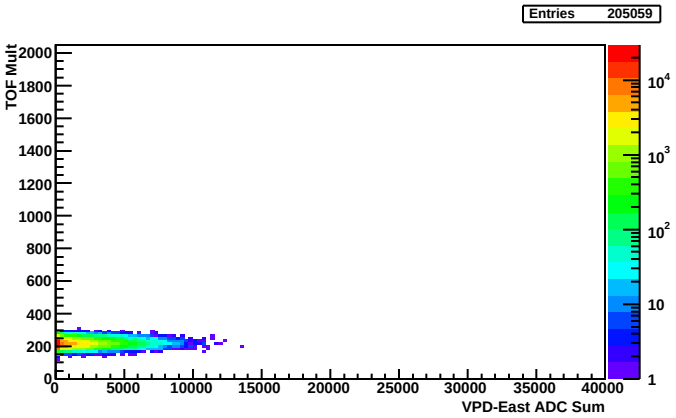

BBQ-VP004 (HI threshold)
Entries 3280944
TAC
QT Input Channel

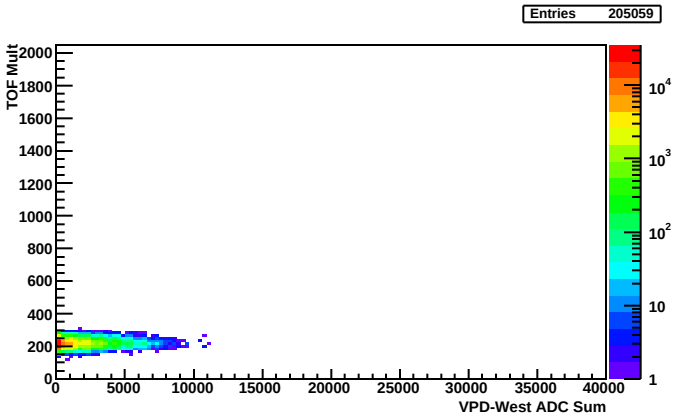

Entries 205059
TOF Mult
BBC-L-East ADC Sum

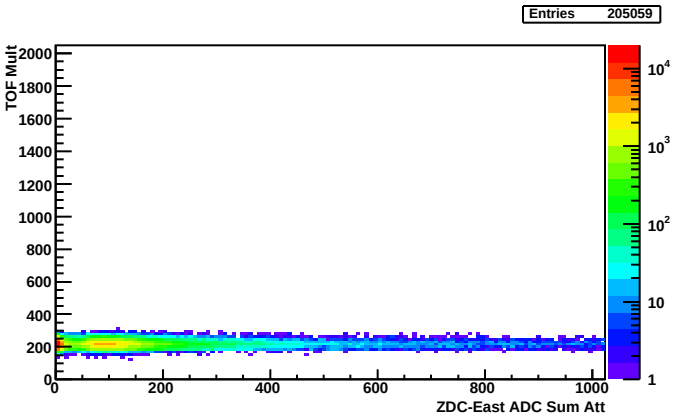

Entries 205059
TOF Mult
BBC-L-West ADC Sum

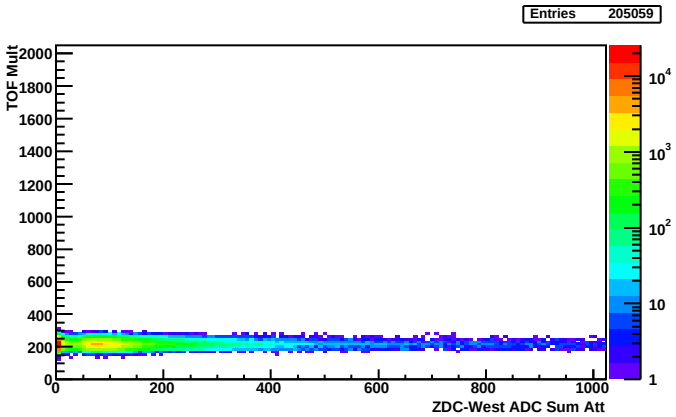

Entries 205059
TOF Mult
BBC-S-East ADC Sum

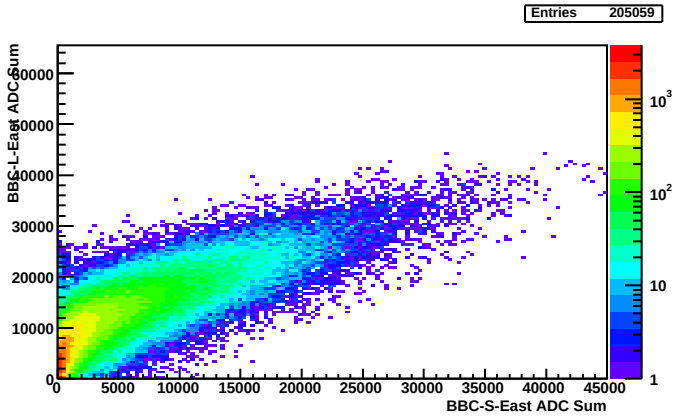

Entries 205059
TOF Mult
BBC-S-West ADC Sum

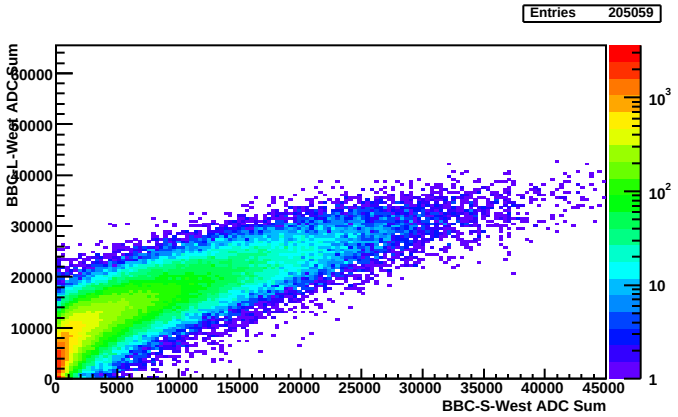

Entries 205059
TOF Mult
VPD-East ADC Sum

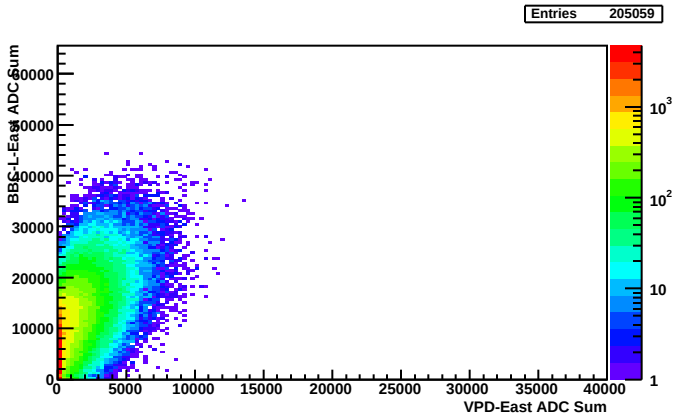

Entries 205059
TOF Mult
VPD-West ADC Sum

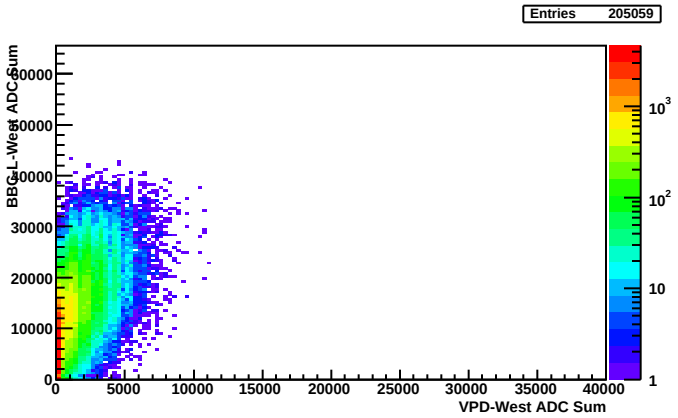

Entries 205059
TOF Mult
ZDC-East ADC Sum Att

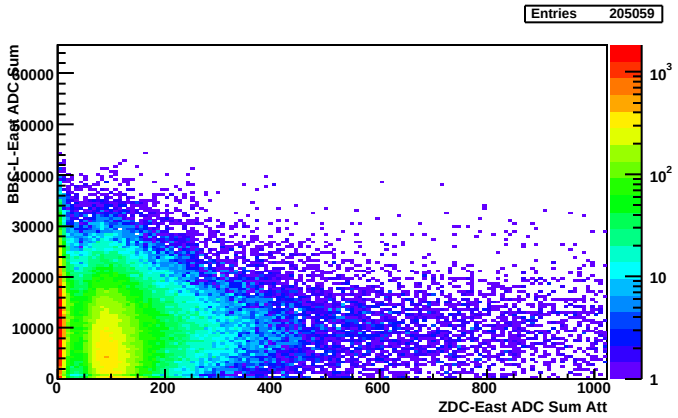

Entries 205059
TOF Mult
ZDC-West ADC Sum Att

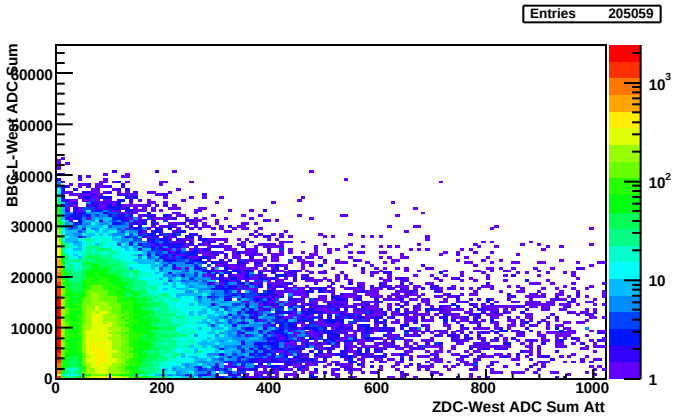

Entries 205059
BBC-L-East ADC Sum
BBC-S-East ADC Sum


Entries 205059
BBC-L-West ADC Sum
BBC-S-West ADC Sum


Entries 205059
BBC-L-East ADC Sum
VPD-East ADC Sum


Entries 205059
BBC-L-West ADC Sum
VPD-West ADC Sum


Entries 205059
BBC-L-East ADC Sum
ZDC-East ADC Sum Att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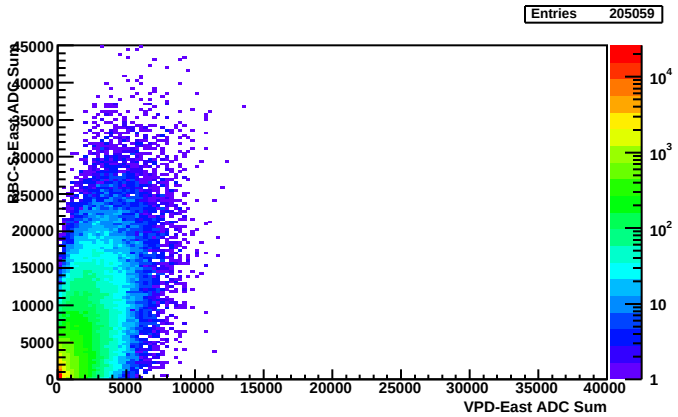
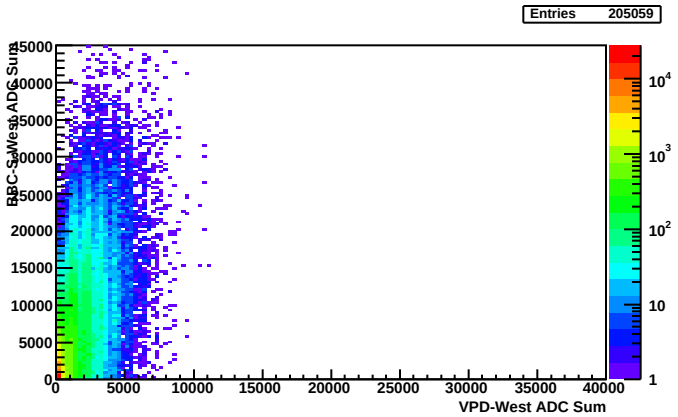
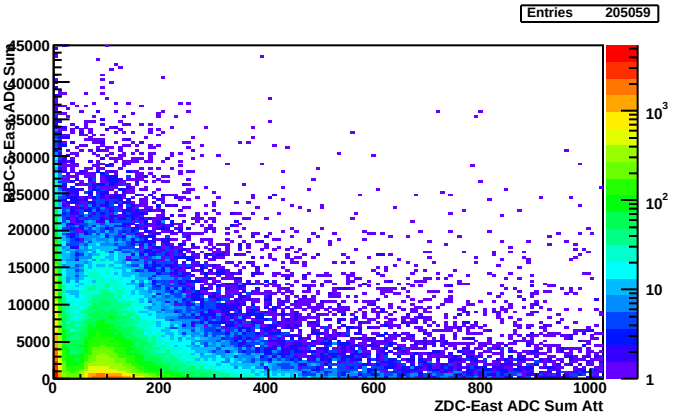
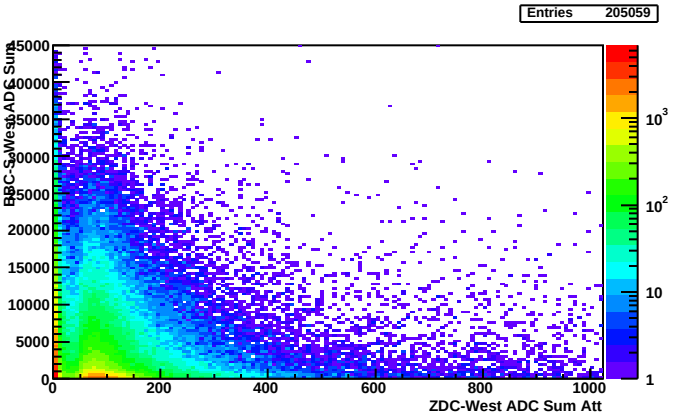
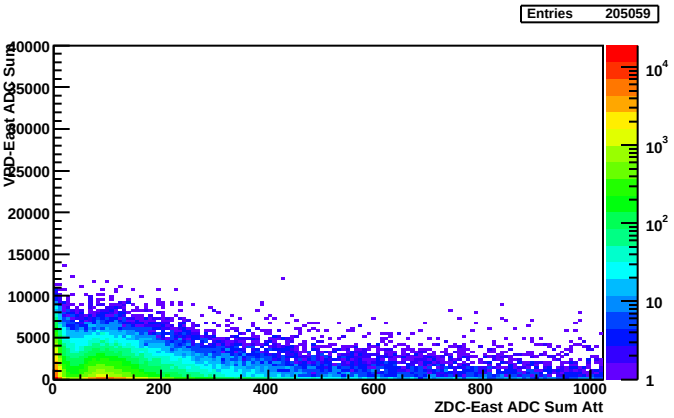
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

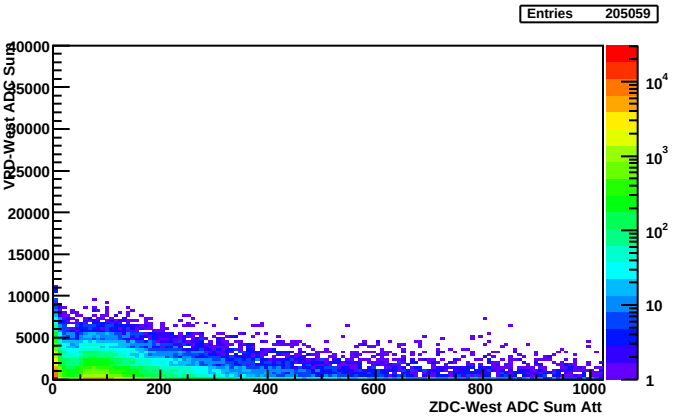

Entries 205059
BBC-S-East ADC Sum
VPD-East ADC Sum

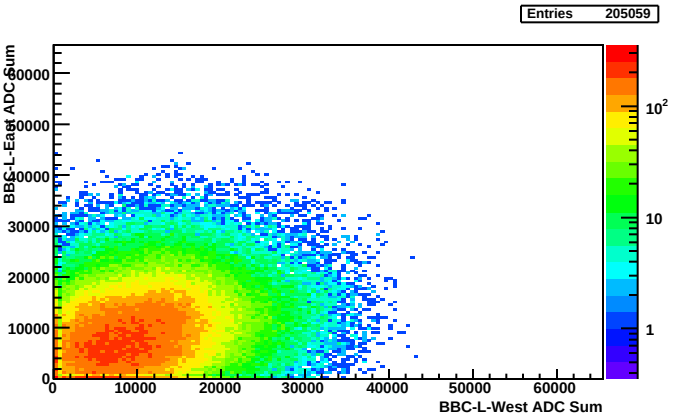

Entries 205059
BBC-S-West ADC Sum
VPD-West ADC Sum

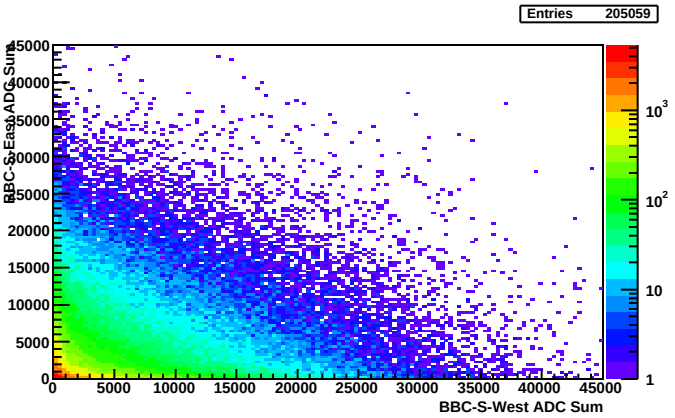

Entries 205059
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

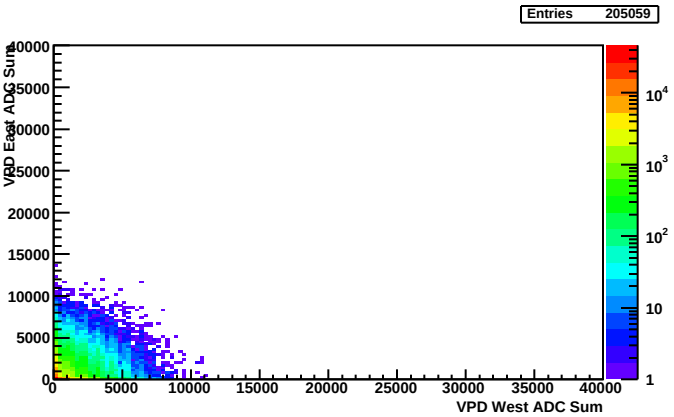

Entries 205059
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

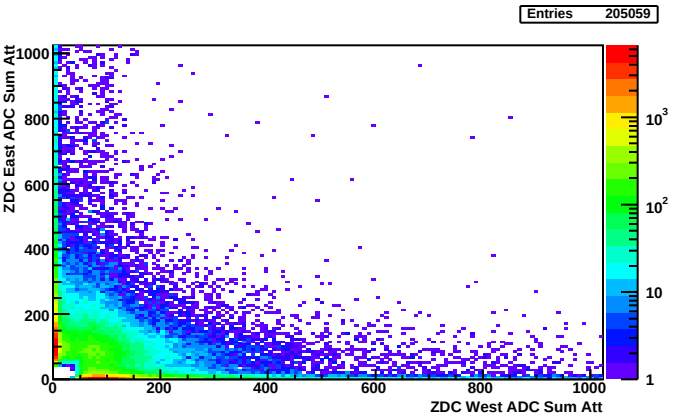

Entries 205059
VPD-East ADC Sum
ZDC-East ADC Sum Att

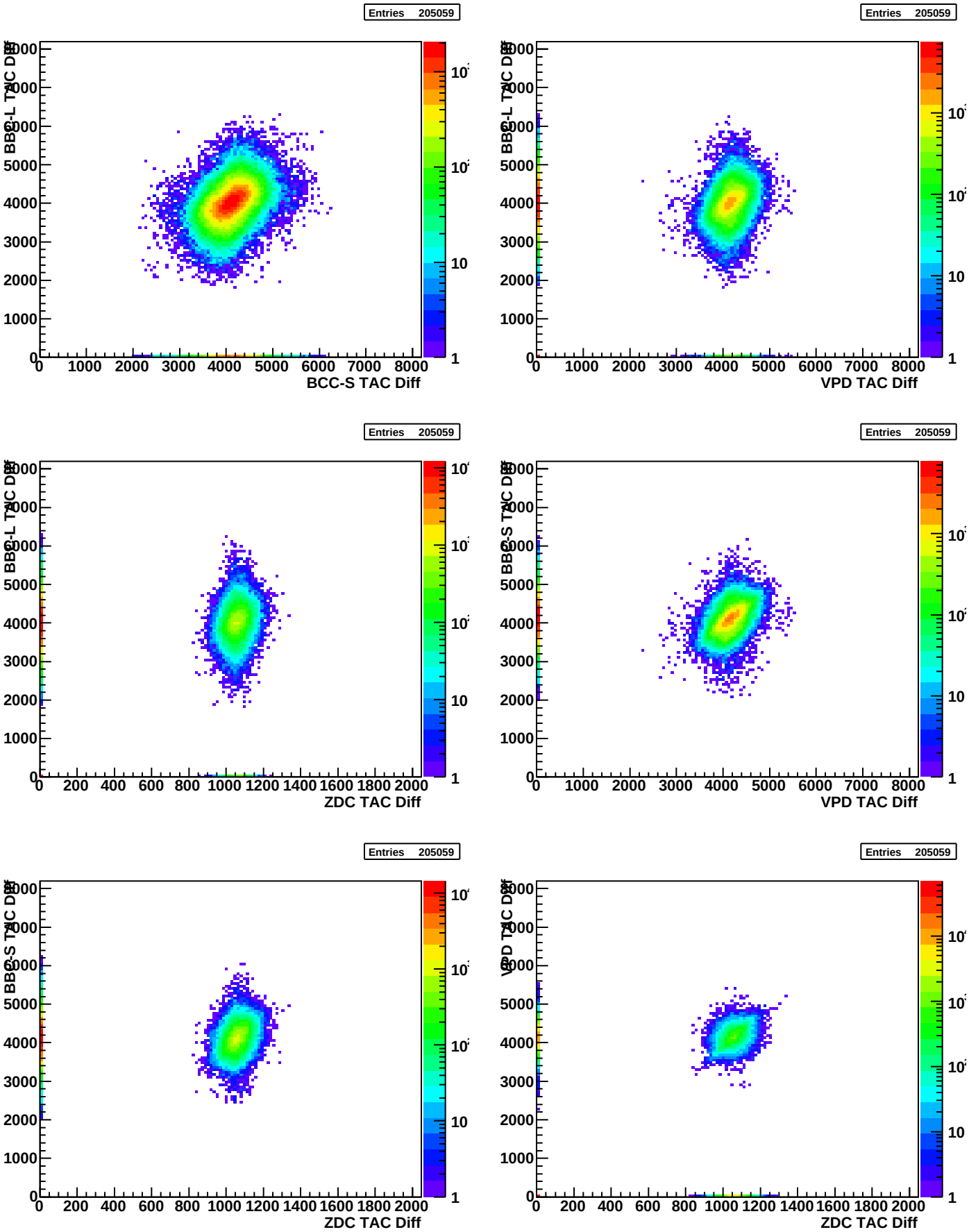

Entries 205059
VPD-West ADC Sum
ZDC-West ADC Sum Att

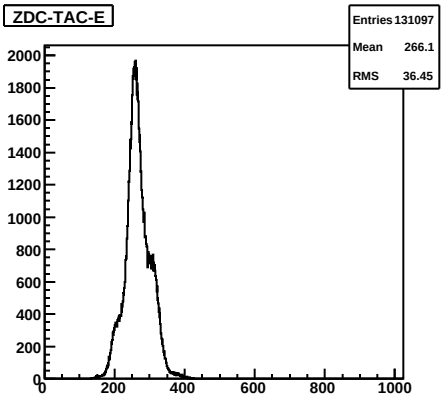

Entries 205059
BBC-L-East ADC Sum
BBC-L-West ADC Sum

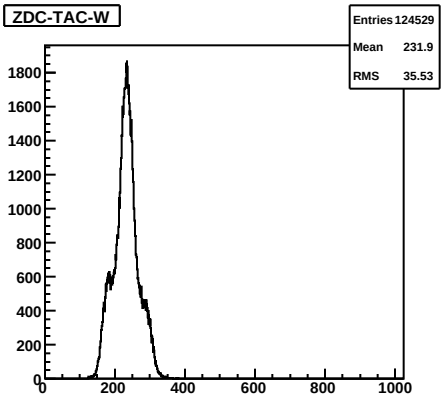

Entries 205059
BBC-S-East ADC Sum
BBC-S-West ADC Sum

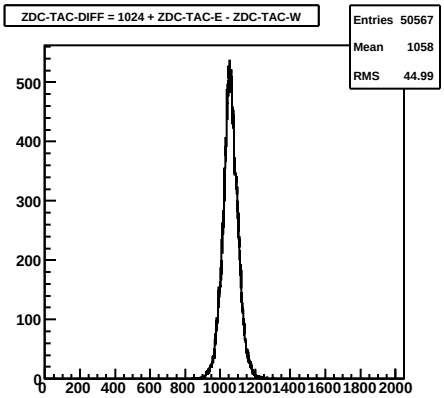

Entries 205059
VPD East ADC Sum
VPD West ADC Sum

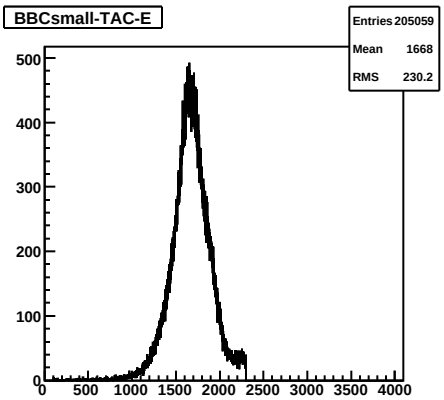

Entries 205059
ZDC East ADC Sum Att
ZDC West ADC Sum Att

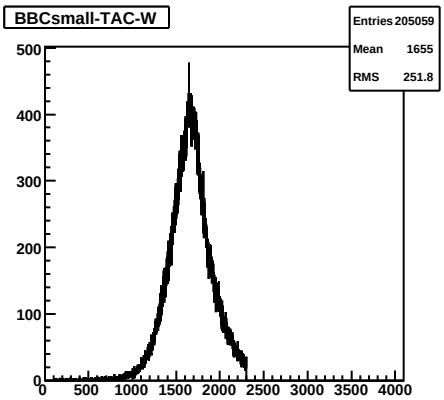

Entries 205059
BBC-L TAC Diff
BCC-S TAC Diff
Entries 205059
BBC-L TAC Diff
VPD TAC Diff
Entries 205059
BBC-L TAC Diff
ZDC TAC Diff
Entries 205059
BBC-S TAC Diff
VPD TAC Diff
Entries 205059
BBC-S TAC Diff
ZDC TAC Diff
Entries 205059
VPD TAC Diff
ZDC TAC Diff

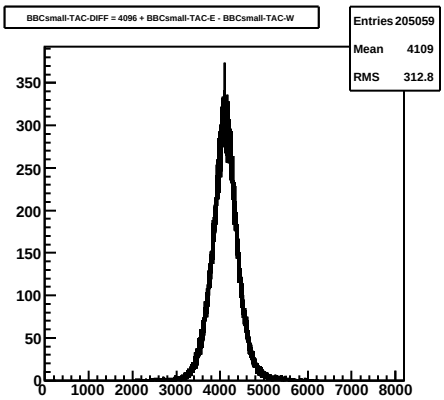

ZDC-TAC-E
Entries 131097
Mean 266.1
RMS 36.45

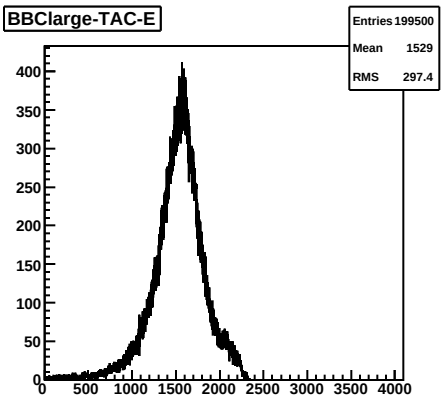

ZDC-TAC-W
Entries 124529
Mean 231.9
RMS 35.53

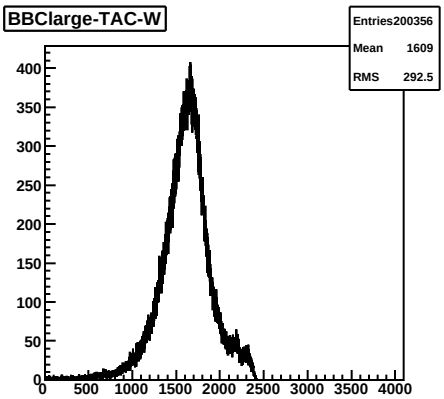

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 50567
Mean 1058
RMS 44.99

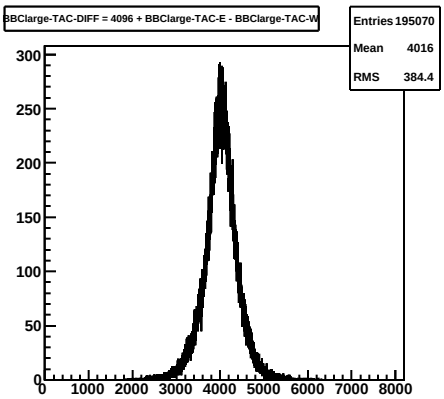

BBCsmall-TAC-E
Entries 205059
Mean 1668
RMS 230.2

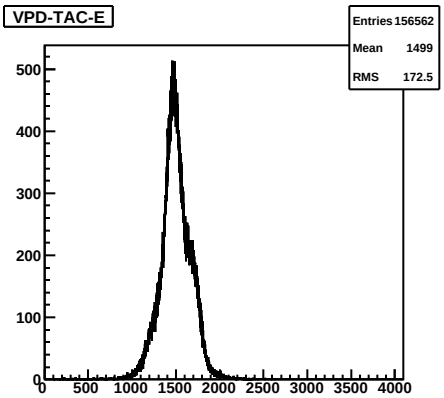

BBCsmall-TAC-W
Entries 205059
Mean 1655
RMS 251.8

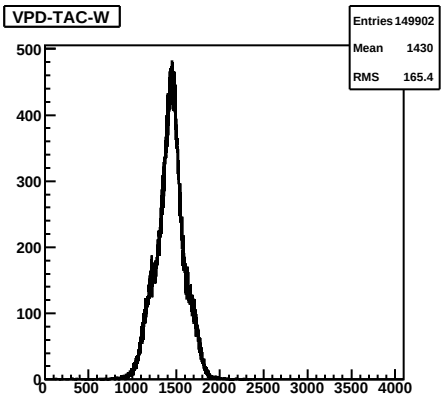

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 205059
Mean 4109
RMS 312.8

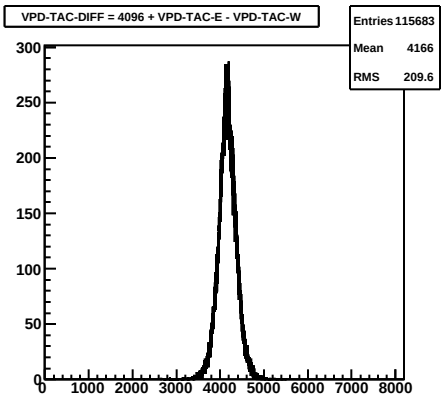

BBClarge-TAC-E
Entries 199500
Mean 1529
RMS 297.4

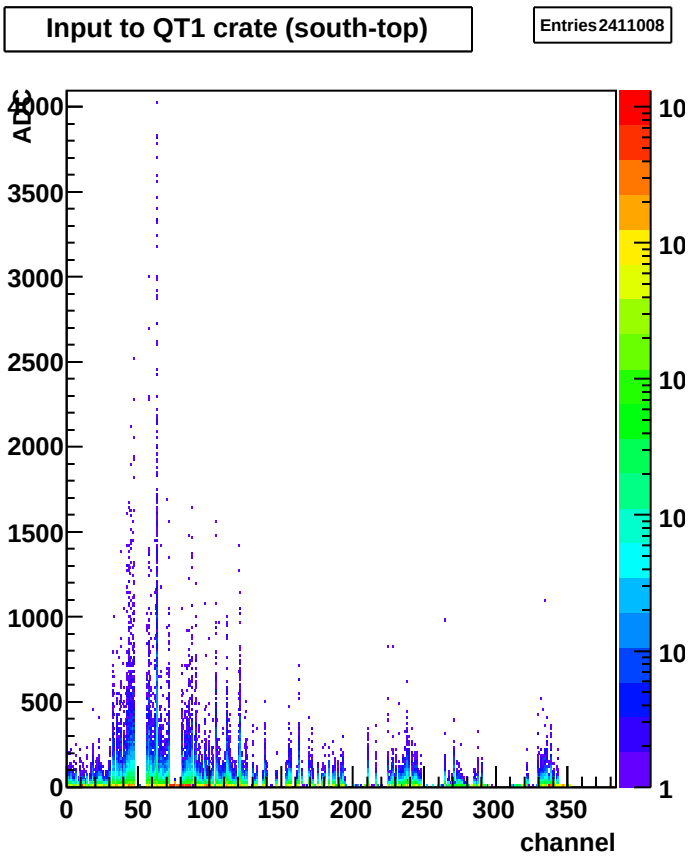

BBClarge-TAC-W
Entries 200356
Mean 1609
RMS 292.5

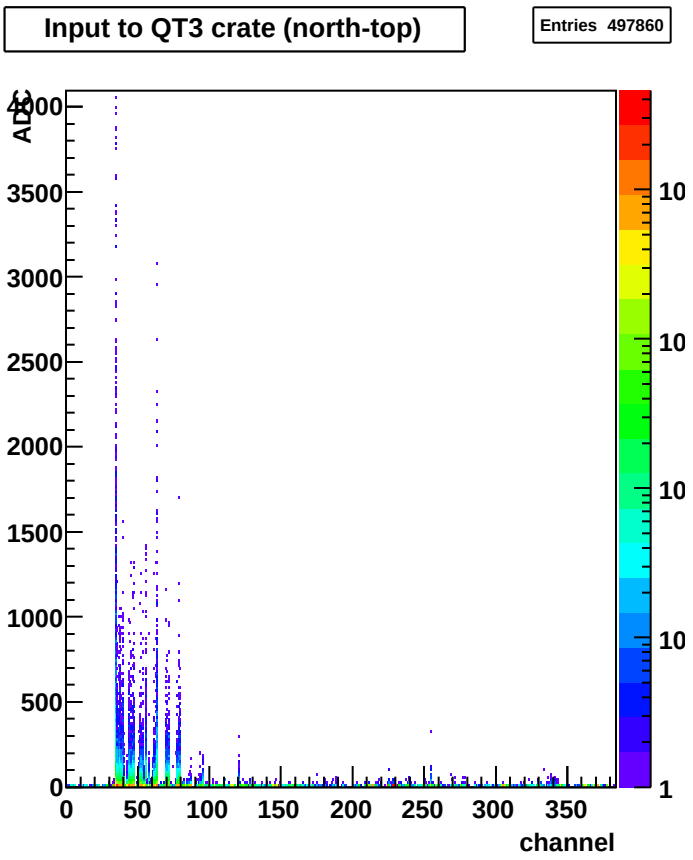

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 195070
Mean 4016
RMS 384.4

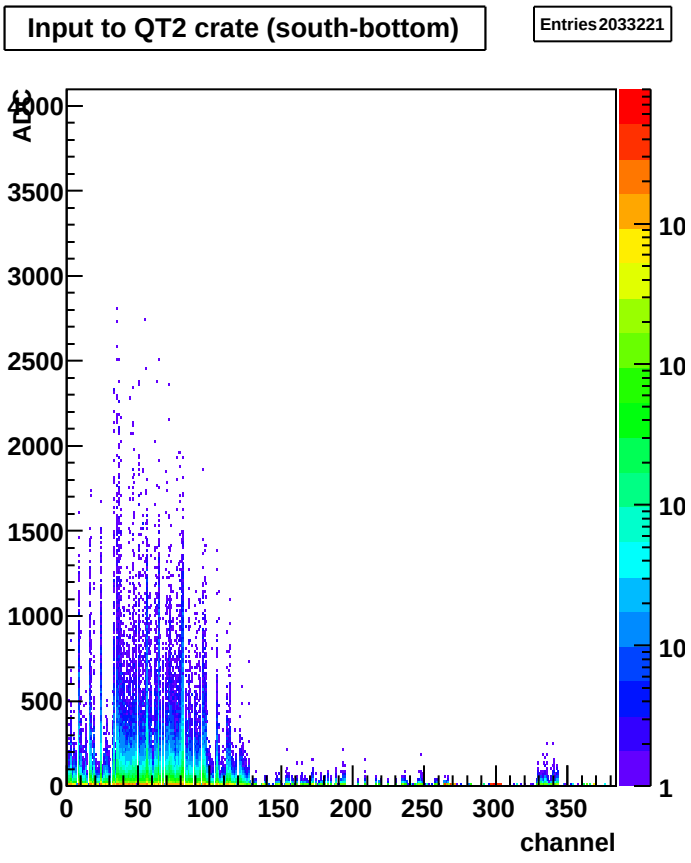

VPD-TAC-E
Entries 156562
Mean 1499
RMS 172.5

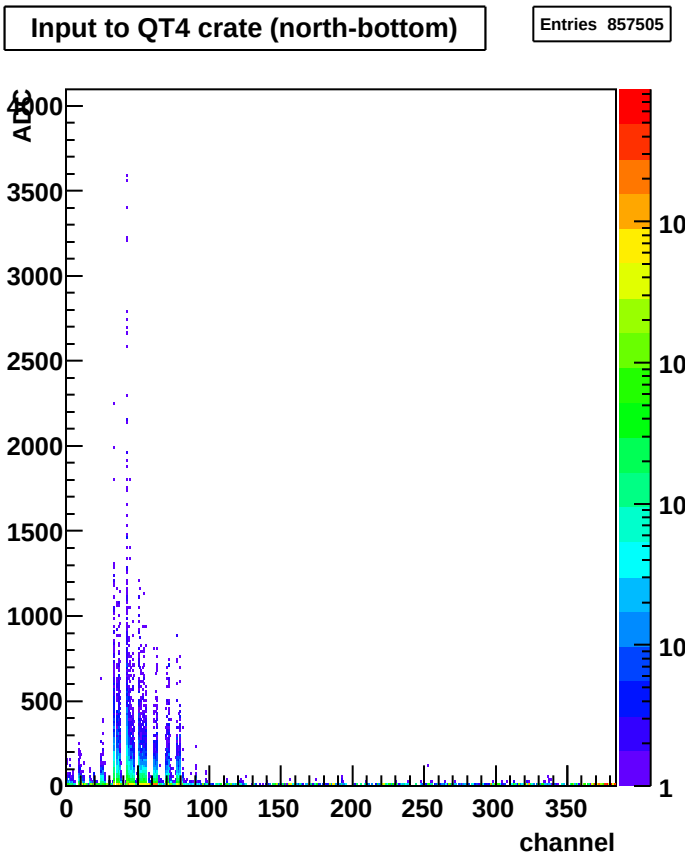

VPD-TAC-W
Entries 149902
Mean 1430
RMS 165.4

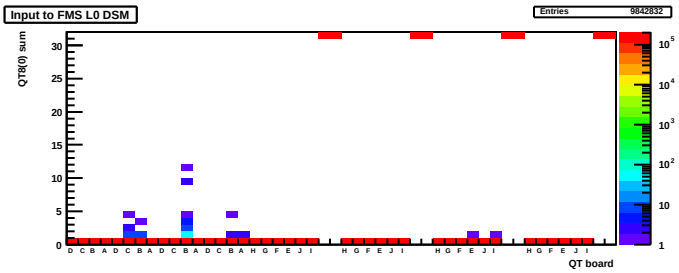

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 115683
Mean 4166
RMS 209.6

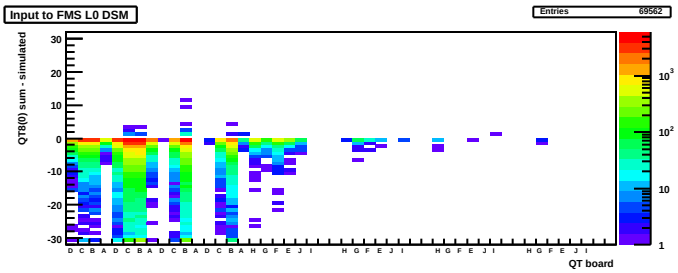

Input to QT1 crate (south-top)
Entries 2411008
ADC
channel

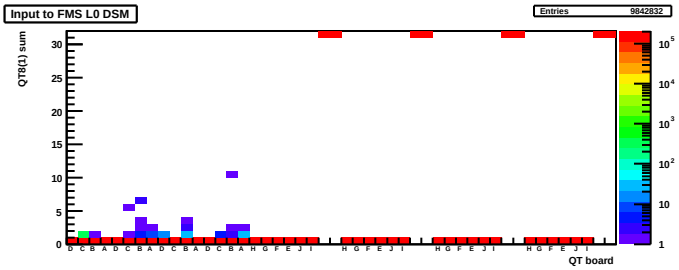

Input to QT3 crate (north-top)
Entries 497860
ADC
channel

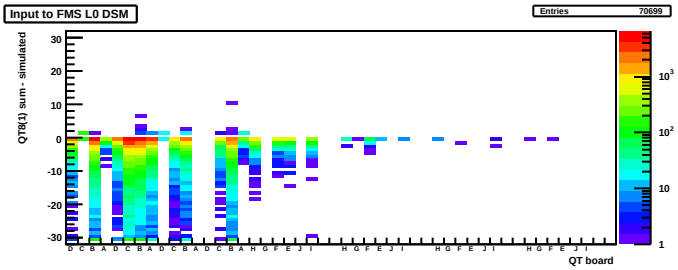

Input to QT2 crate (south-bottom)
Entries 2033221
ADC
channel

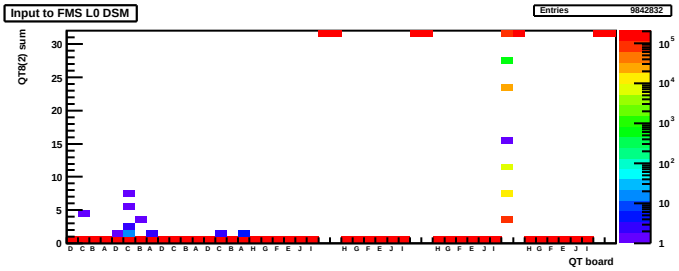

Input to QT4 crate (north-bottom)
Entries 857505
ADC
channel

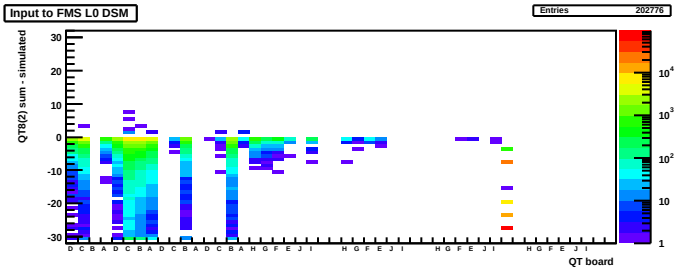

Input to FMS L0 DSM
Entries 9842832
QT8(0) sum
QT board

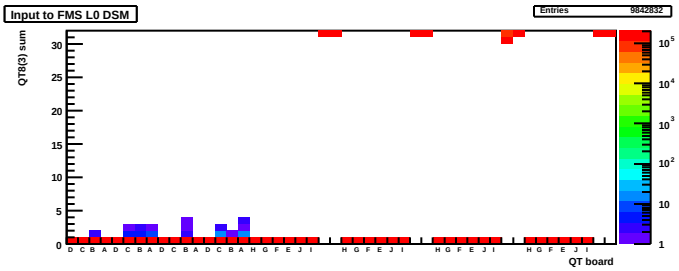

Input to FMS L0 DSM
Entries 69562
QT8(0) sum - simulated
QT board

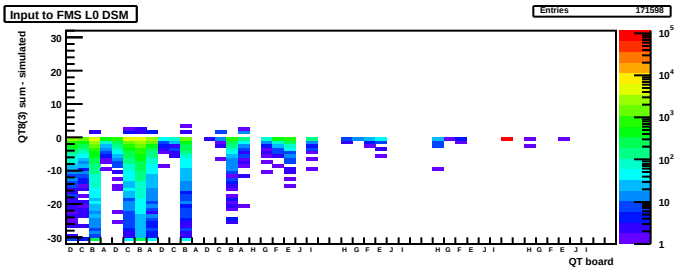

Input to FMS L0 DSM
Entries 9842832
QT8(1) sum
QT board

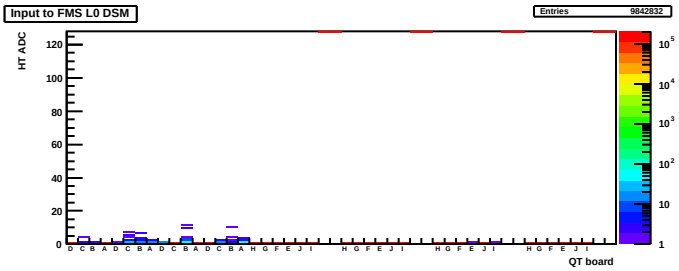

Input to FMS L0 DSM
Entries 70699
QT8(1) sum - simulated
QT board

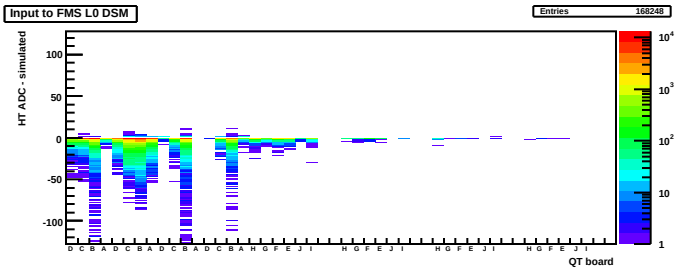

Input to FMS L0 DSM
Entries 9842832
QT8(2) sum
QT board

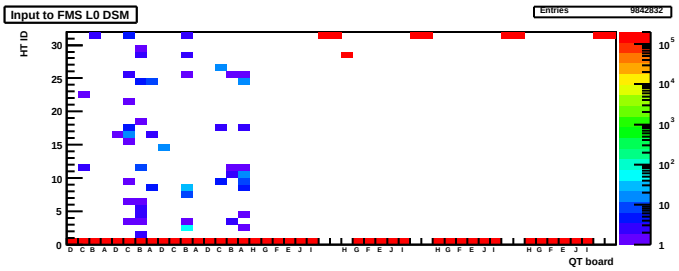

Input to FMS L0 DSM
Entries 202776
QT8(2) sum - simulated
QT board

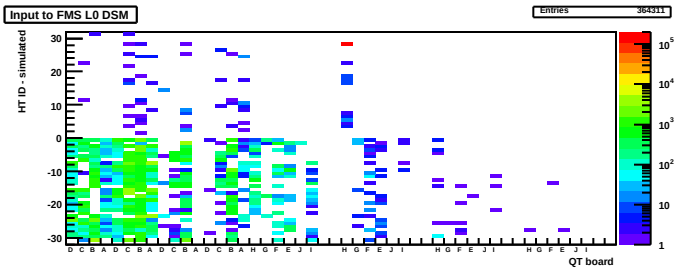

Input to FMS L0 DSM
Entries 9842832
QT8(3) sum
QT board

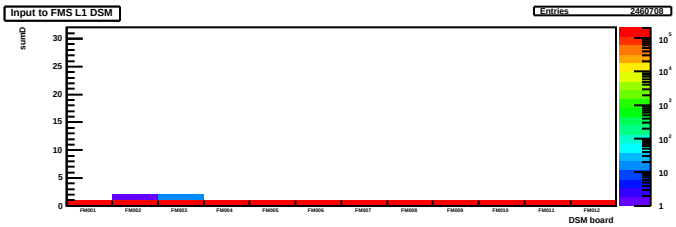

Input to FMS L0 DSM
Entries 171598
QT8(3) sum - simulated
QT board

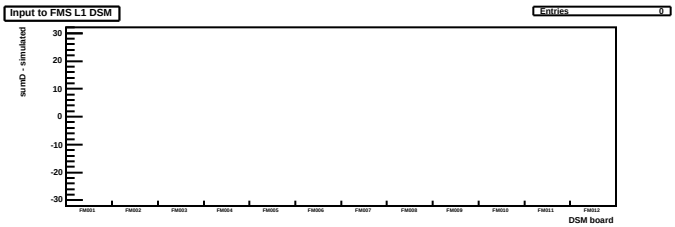

Input to FMS L0 DSM
Entries 9842832
HT ADC
QT board

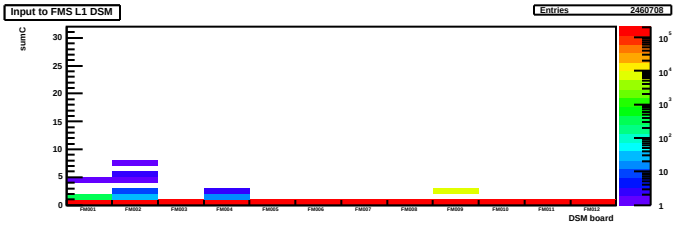

Input to FMS L0 DSM
Entries 168248
HT ADC - simulated
QT board

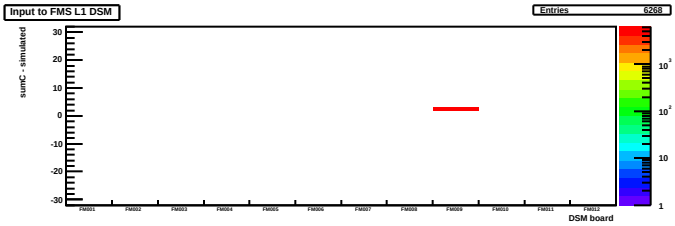

Input to FMS L0 DSM
Entries 9842832
HT ID
QT board

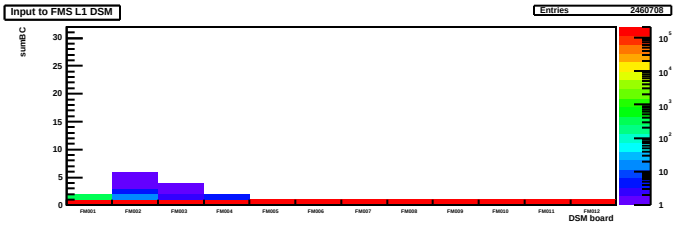

Input to FMS L0 DSM
Entries 364311
HT ID - simulated
QT board

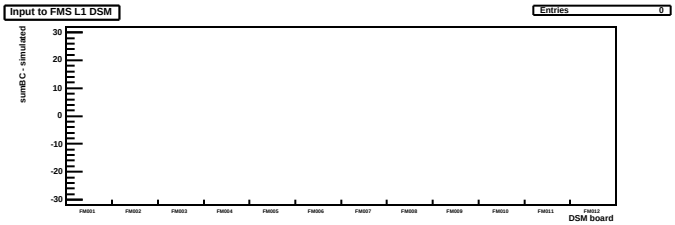

Input to FMS L1 DSM
Entries 2460708
sumD
DSM board

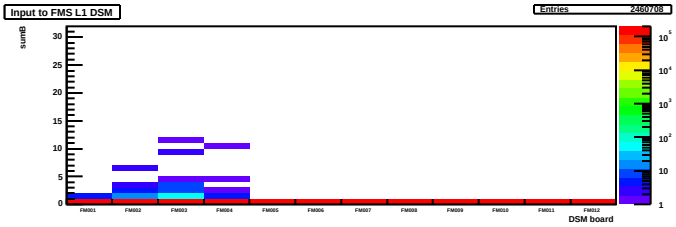

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

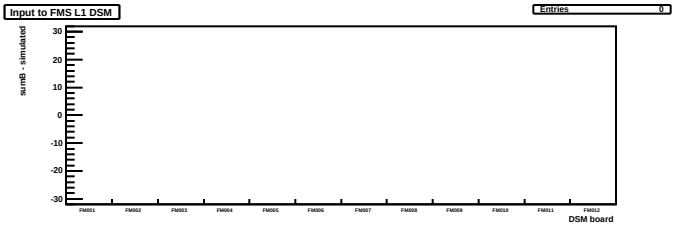

Input to FMS L1 DSM
Entries 2460708
sumC
DSM board

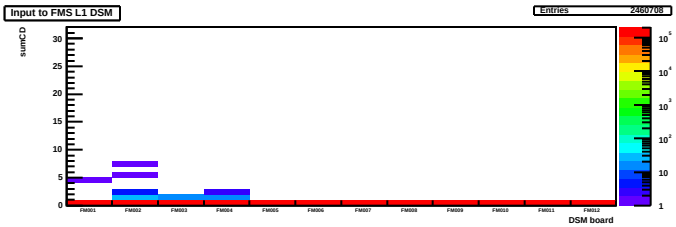

Input to FMS L1 DSM
Entries 6268
sumC - simulated
DSM board

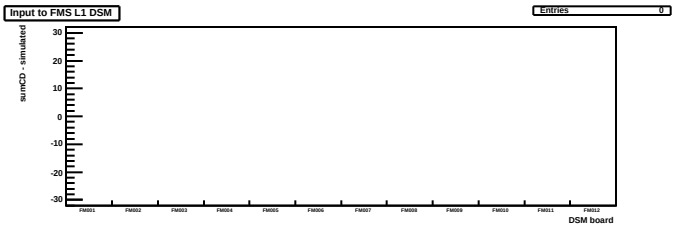

Input to FMS L1 DSM
Entries 2460708
sumBC
DSM board

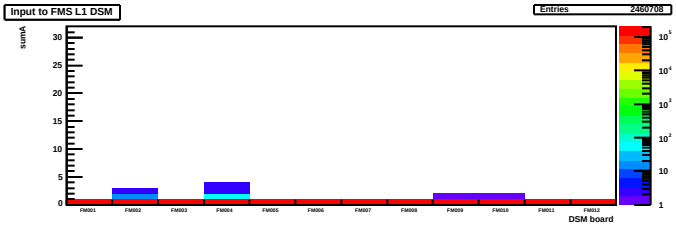

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

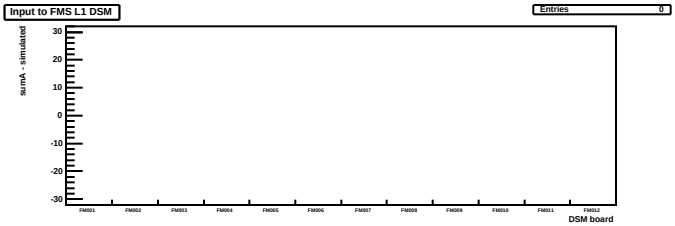

Input to FMS L1 DSM
Entries 2460708
sumB
DSM board

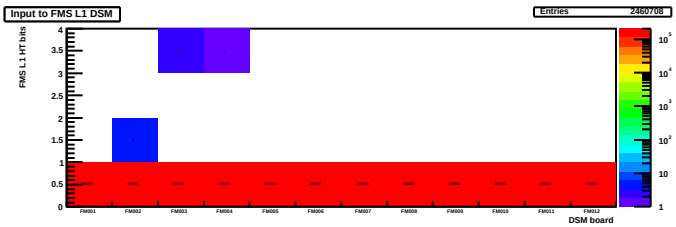

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

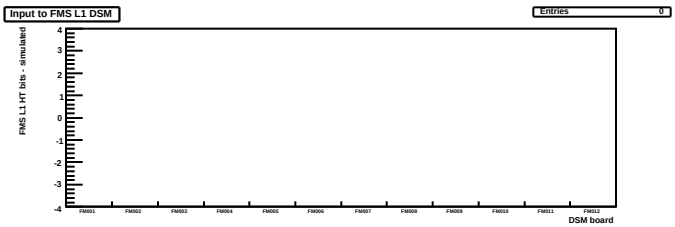

Input to FMS L1 DSM
Entries 2460708
sumCD
DSM board

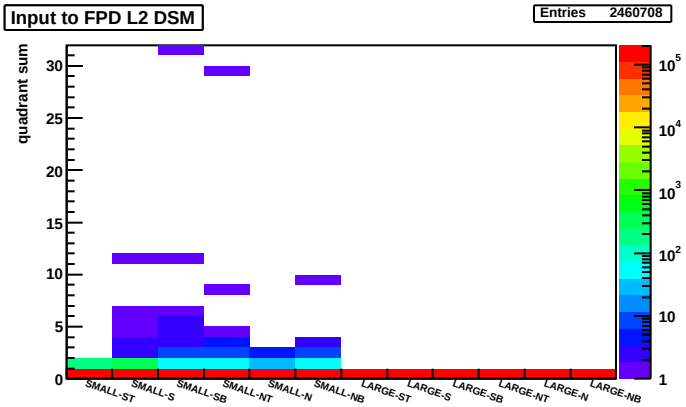

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

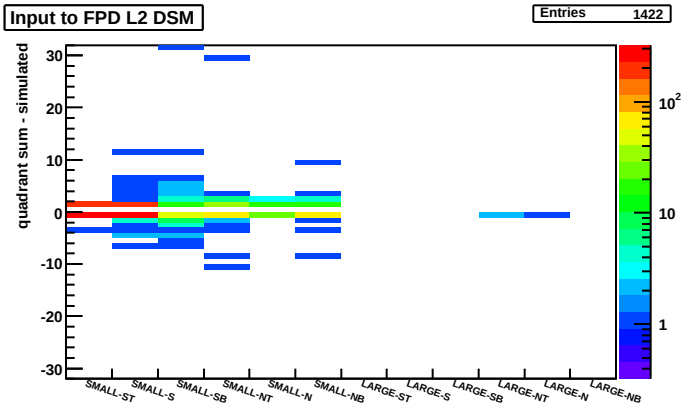

Input to FMS L1 DSM
Entries 2460708
sumA
DSM board

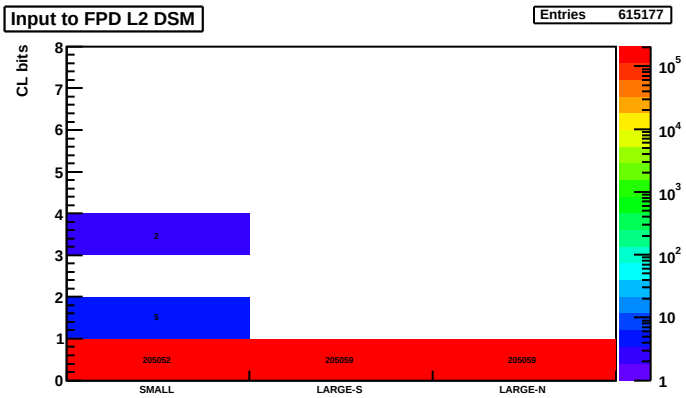

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

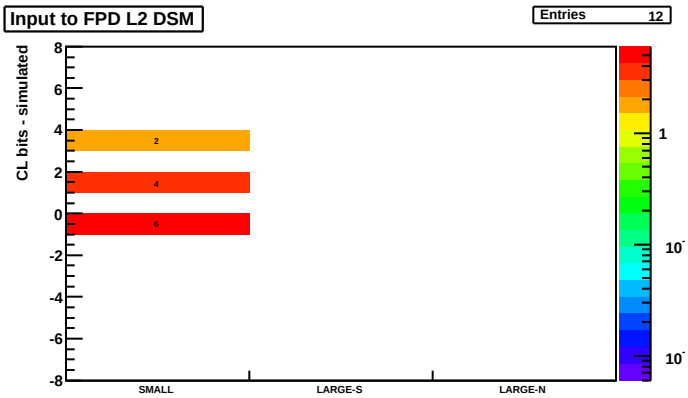

Input to FMS L1 DSM
Entries 2460708
FMS L1 HT bits
DSM board

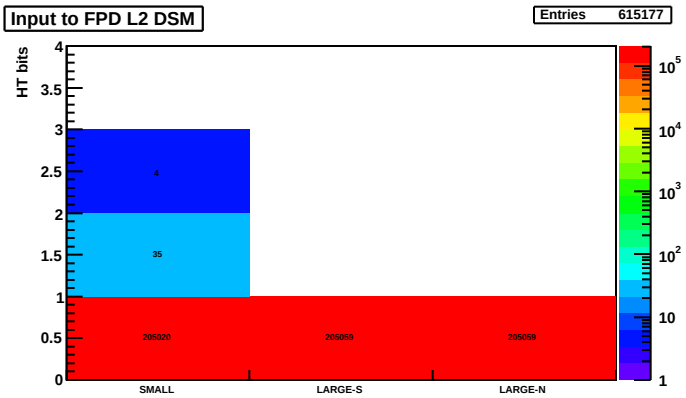

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

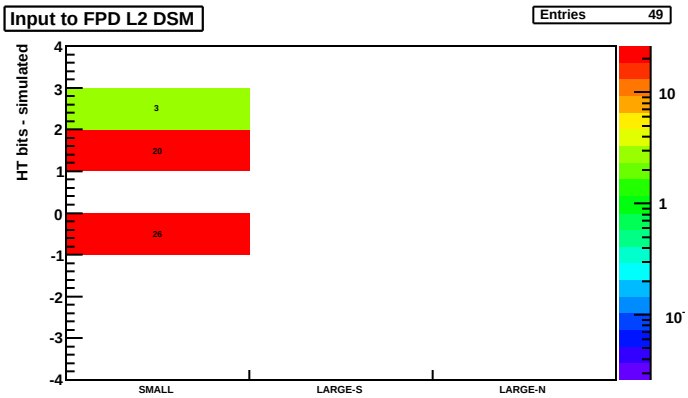

Input to FPD L2 DSM
Entries 2460708
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

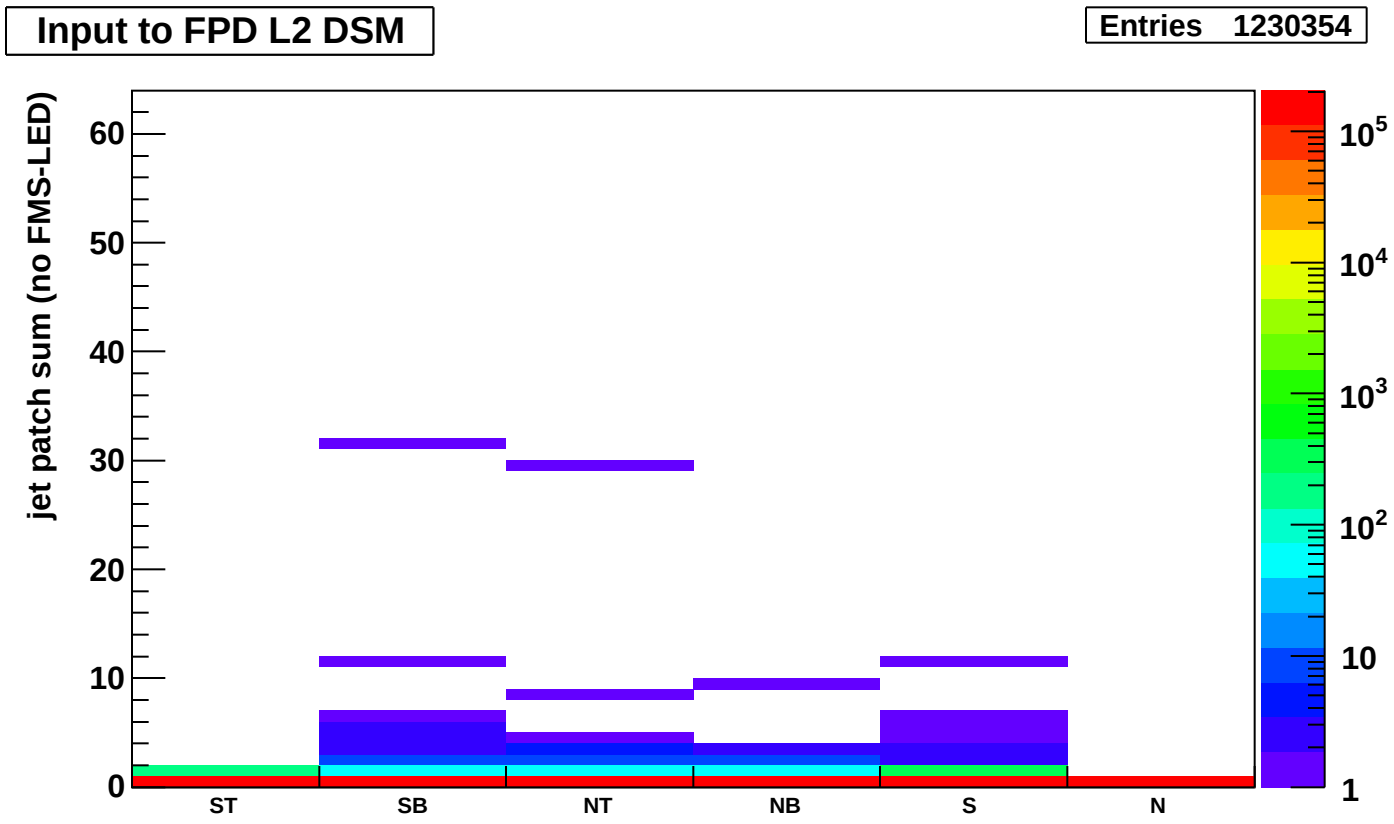

Input to FPD L2 DSM
Entries 1422
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

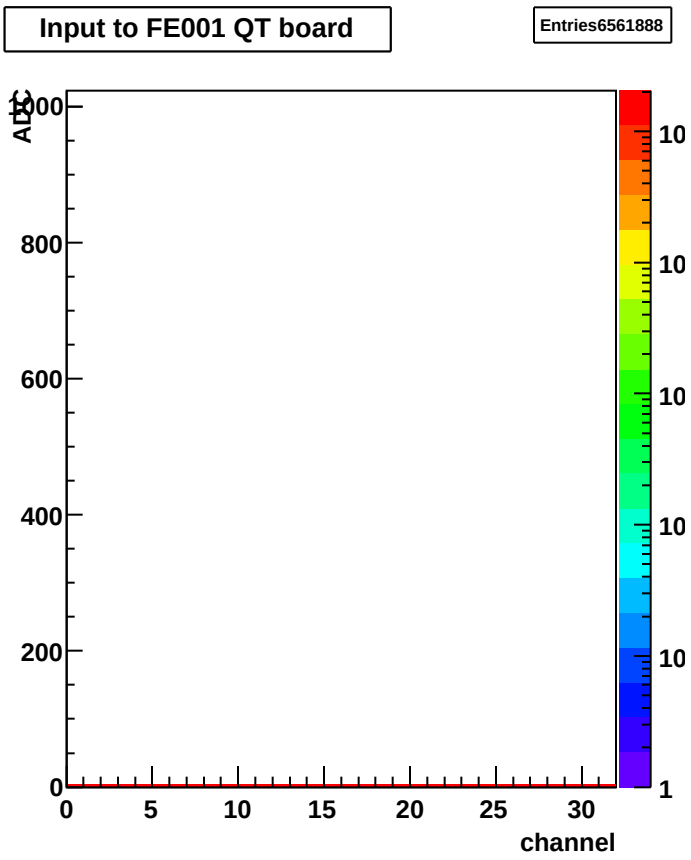

Input to FPD L2 DSM
Entries 615177
CL bits
2
5
205052
205059
205059
SMALL
LARGE-S
LARGE-N

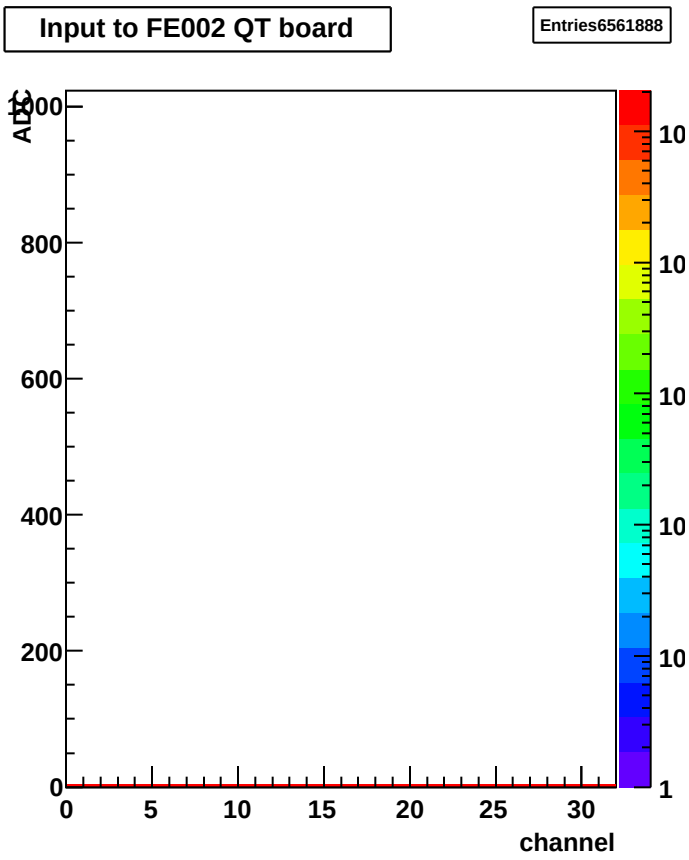

Input to FPD L2 DSM
Entries 12
CL bits - simulated
2
4
6
SMALL
LARGE-S
LARGE-N

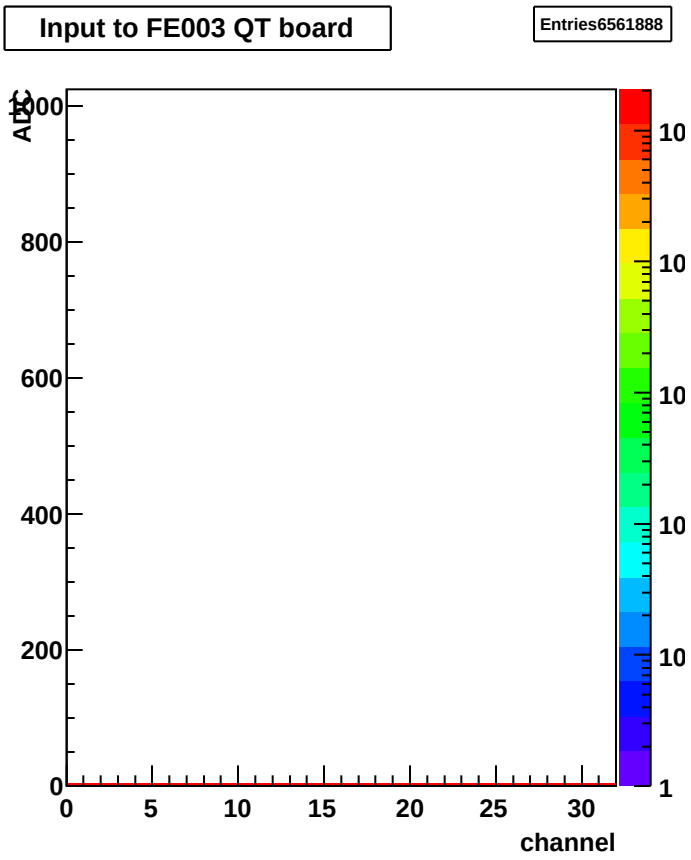

Input to FPD L2 DSM
Entries 615177
HT bits
4
35
205020
205059
205059
SMALL
LARGE-S
LARGE-N

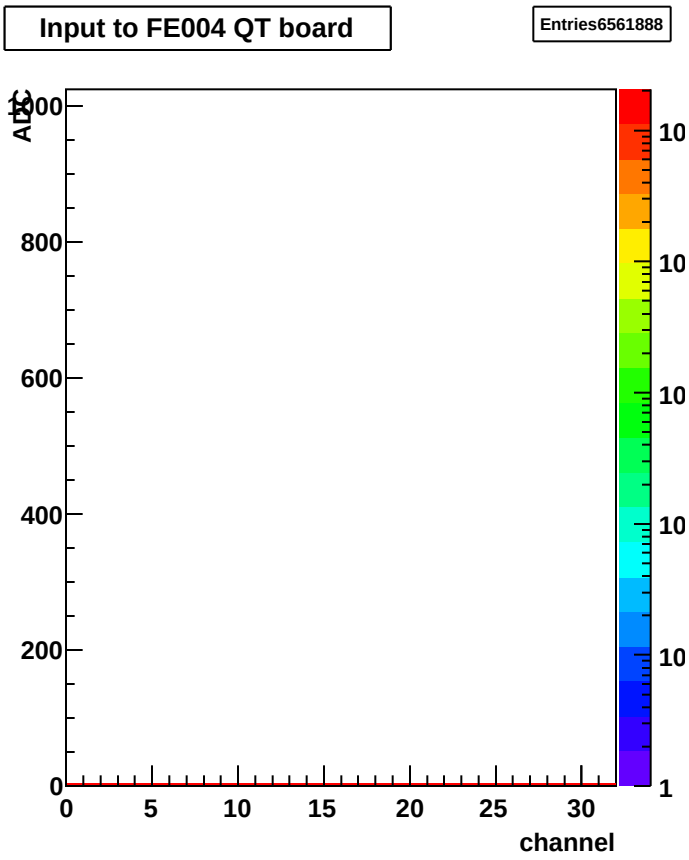

Input to FPD L2 DSM
Entries 49
HT bits - simulated
3
20
26
SMALL
LARGE-S
LARGE-N

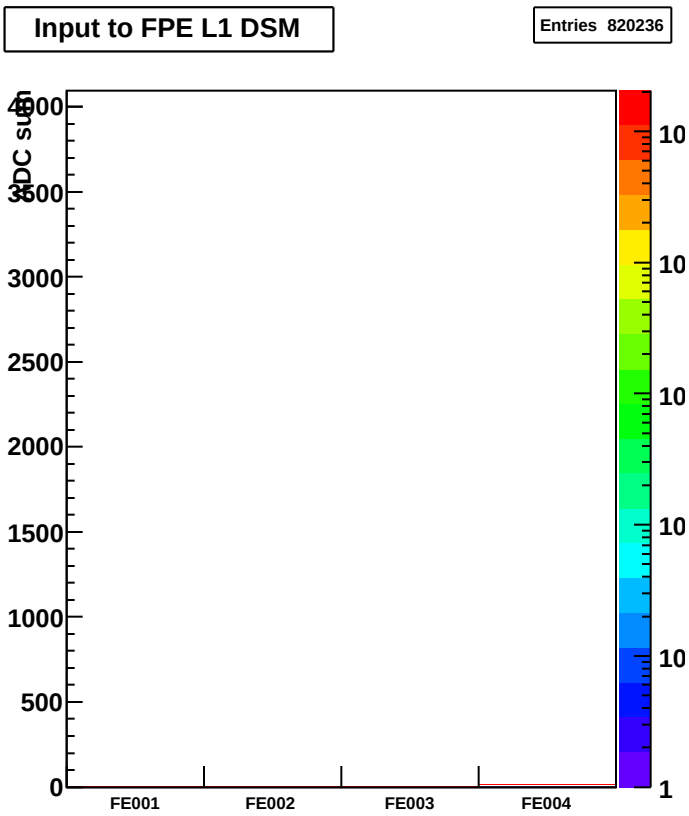

Input to FPD L2 DSM
Entries 1230354
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4
10^5

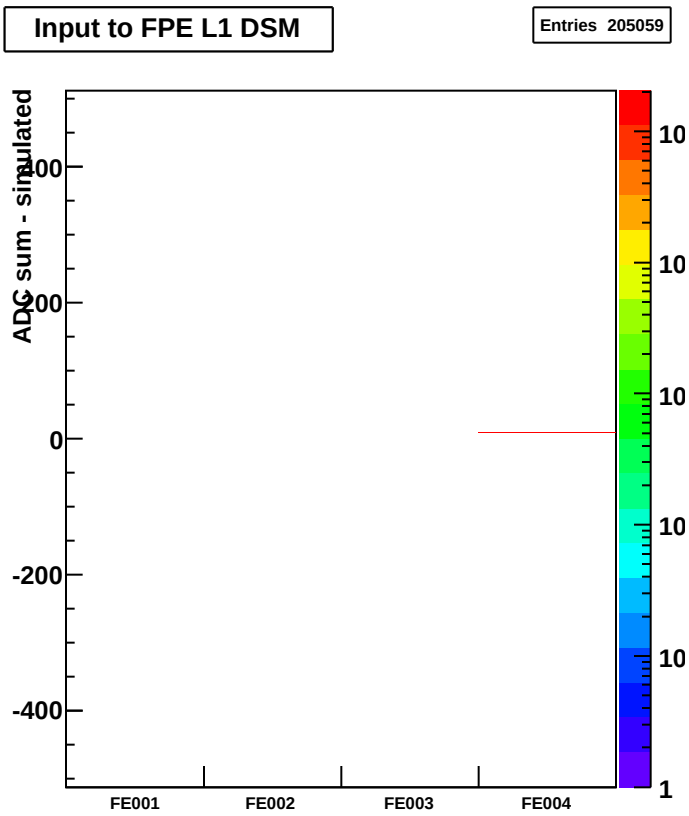

Input to FE001 QT board
Entries6561888
ADC
channel

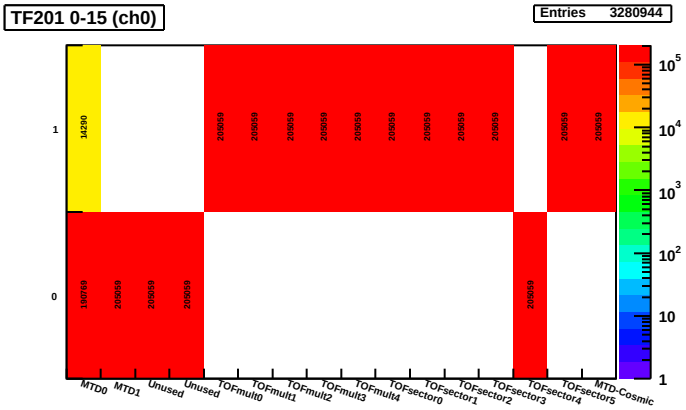

Input to FE002 QT board
Entries6561888
ADC
channel

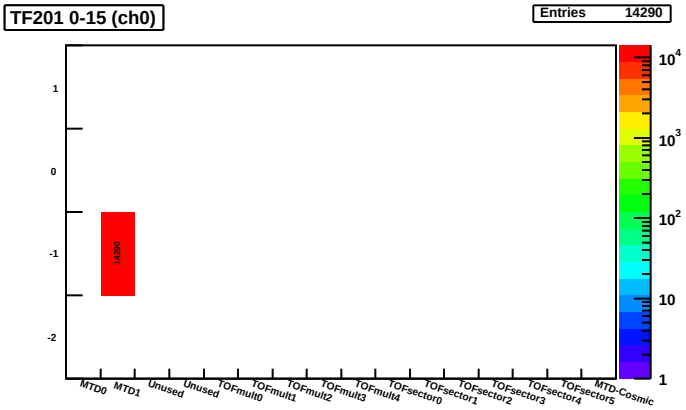

Input to FE003 QT board
Entries6561888
ADC
channel

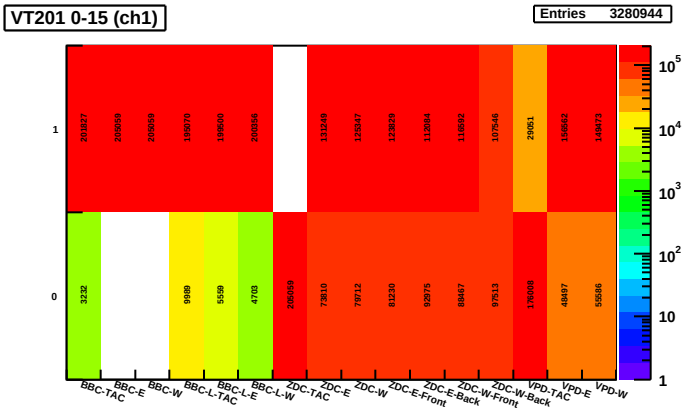

Input to FE004 QT board
Entries6561888
ADC
channel

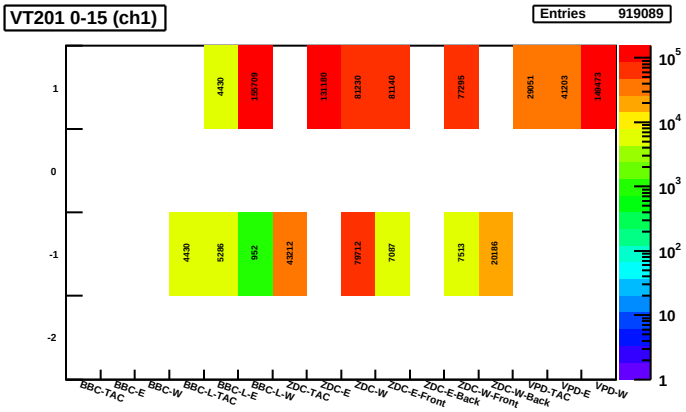

Input to FPE L1 DSM
Entries 820236
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
1

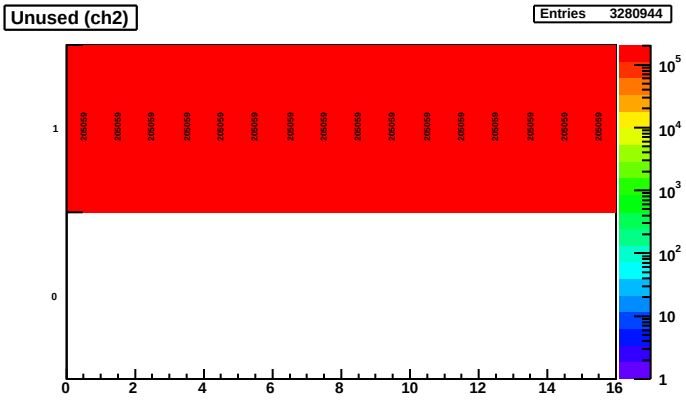

Input to FPE L1 DSM
Entries 205059
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
10
1


TF201 0-15 (ch0)
Entries 3280944
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 14290
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 3280944
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W


VT201 0-15 (ch1)
Entries 919089
BBC-TAC BBC-E BBC-W BBC-L-TAC BBC-L-E BBC-L-W ZDC-TAC ZDC-E ZDC-W ZDC-E-Front ZDC-E-Back ZDC-W-Front ZDC-W-Back VPD-TAC VPD-E VPD-W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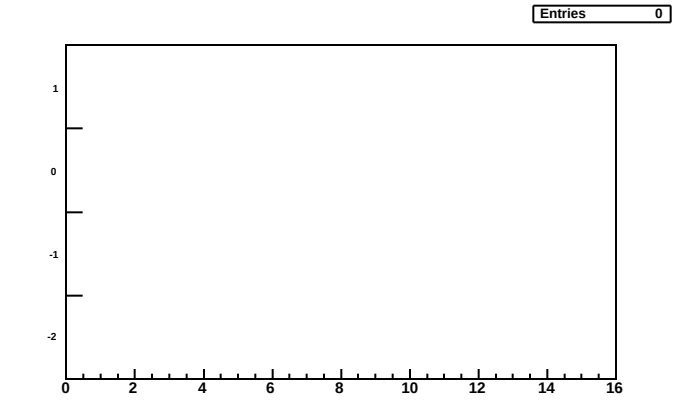
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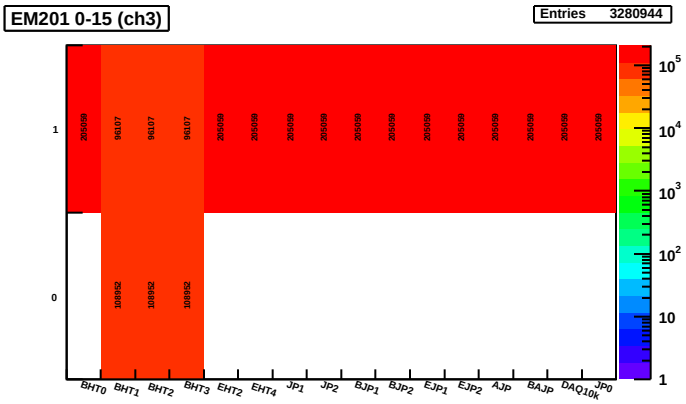
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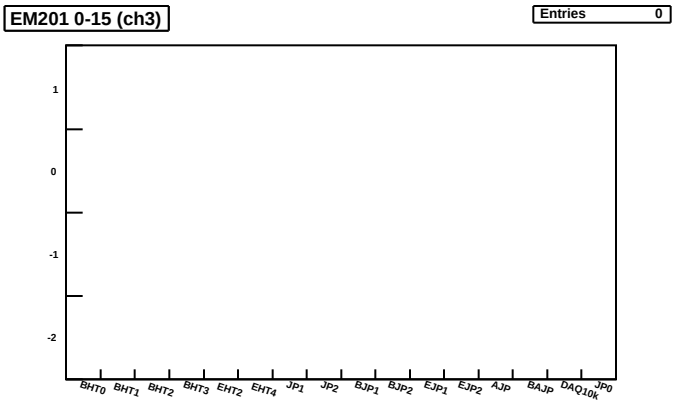
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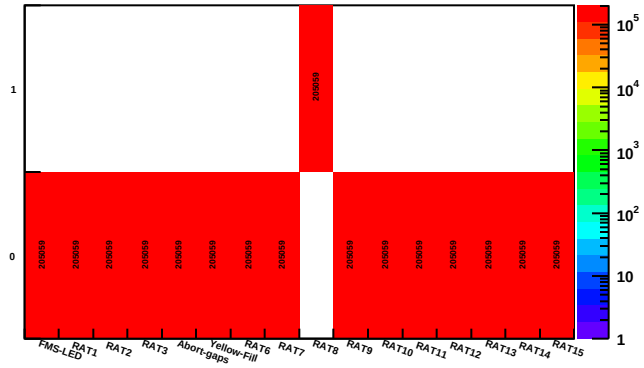
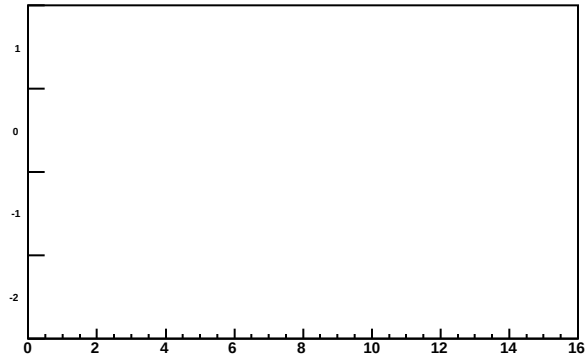
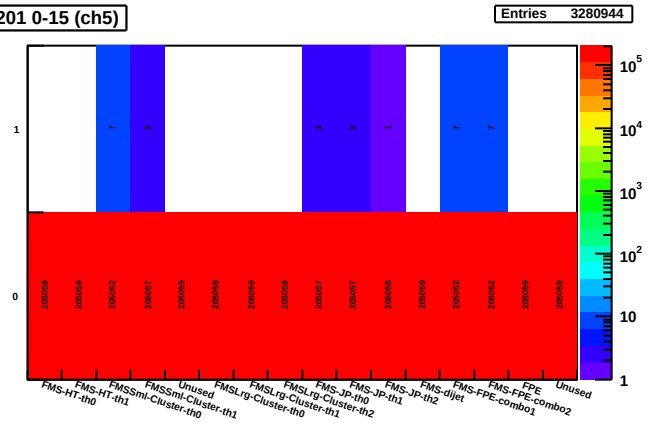
RAT board (ch4)





FP201 0-15 (ch5)



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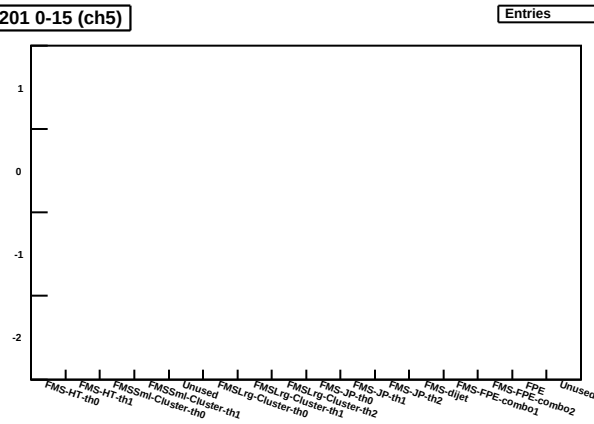
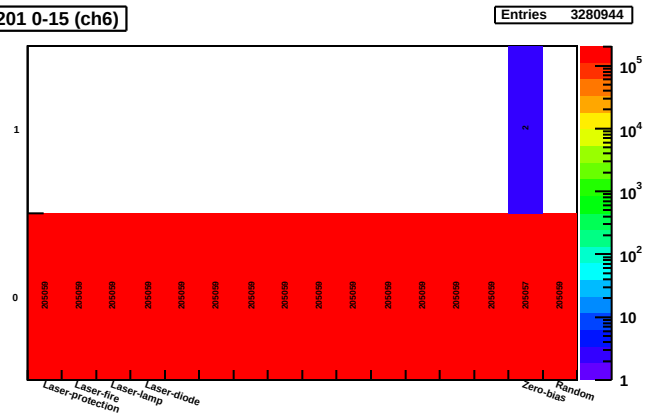
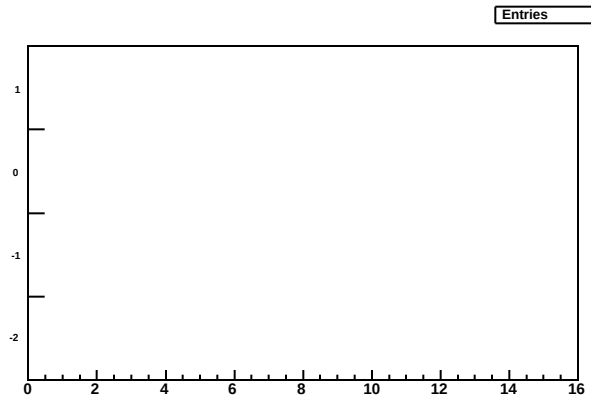
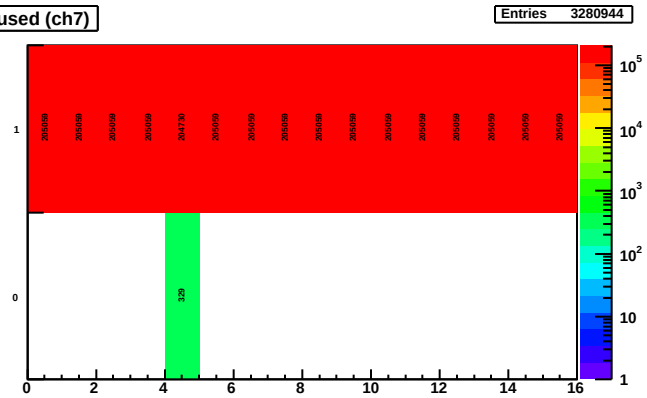
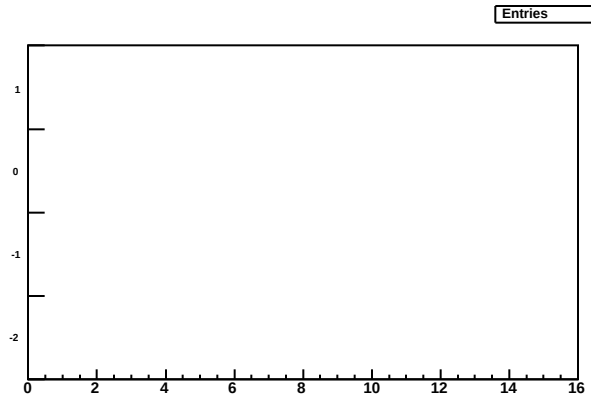


ST201 0-15 (ch6)





Unused (ch7)