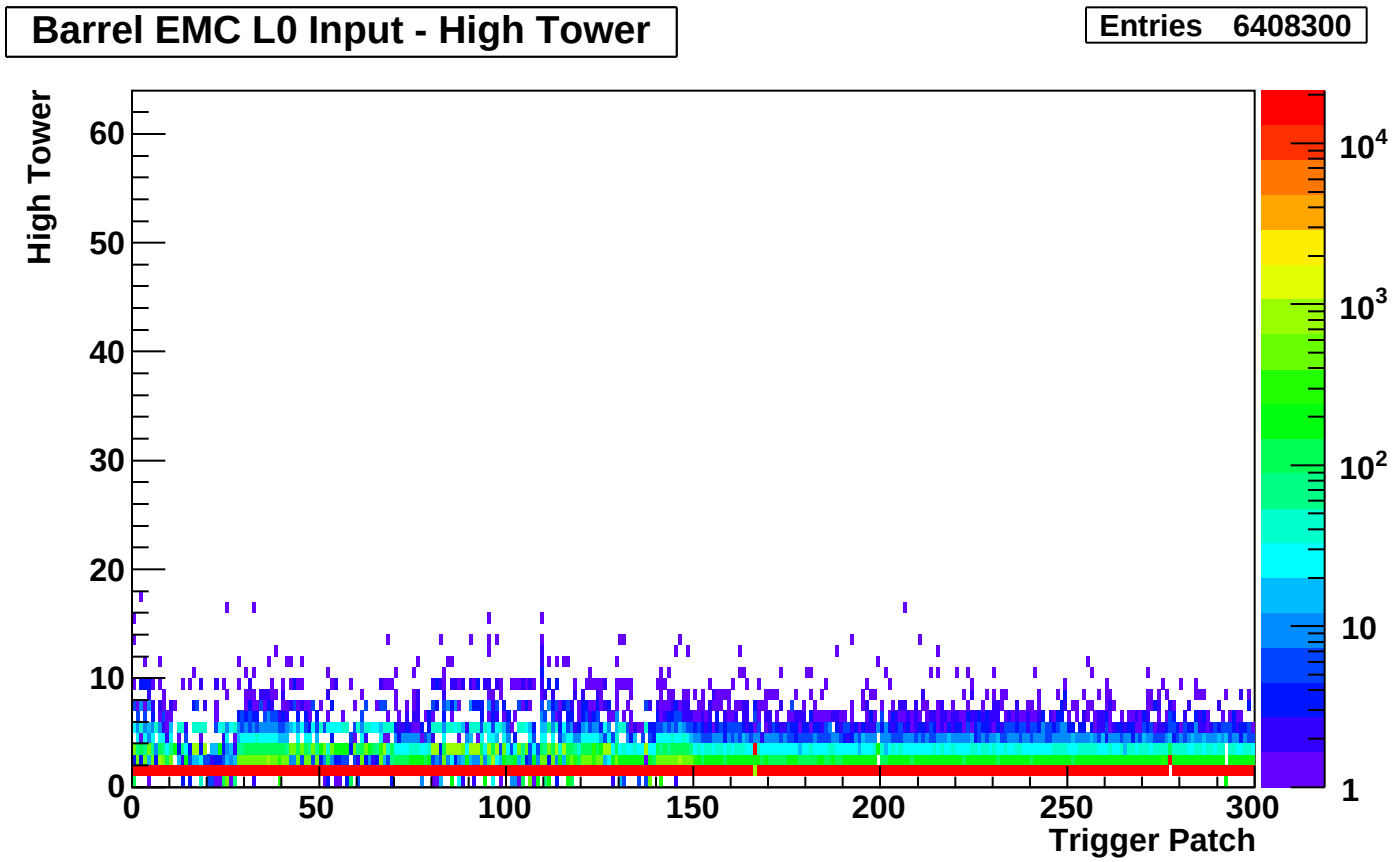
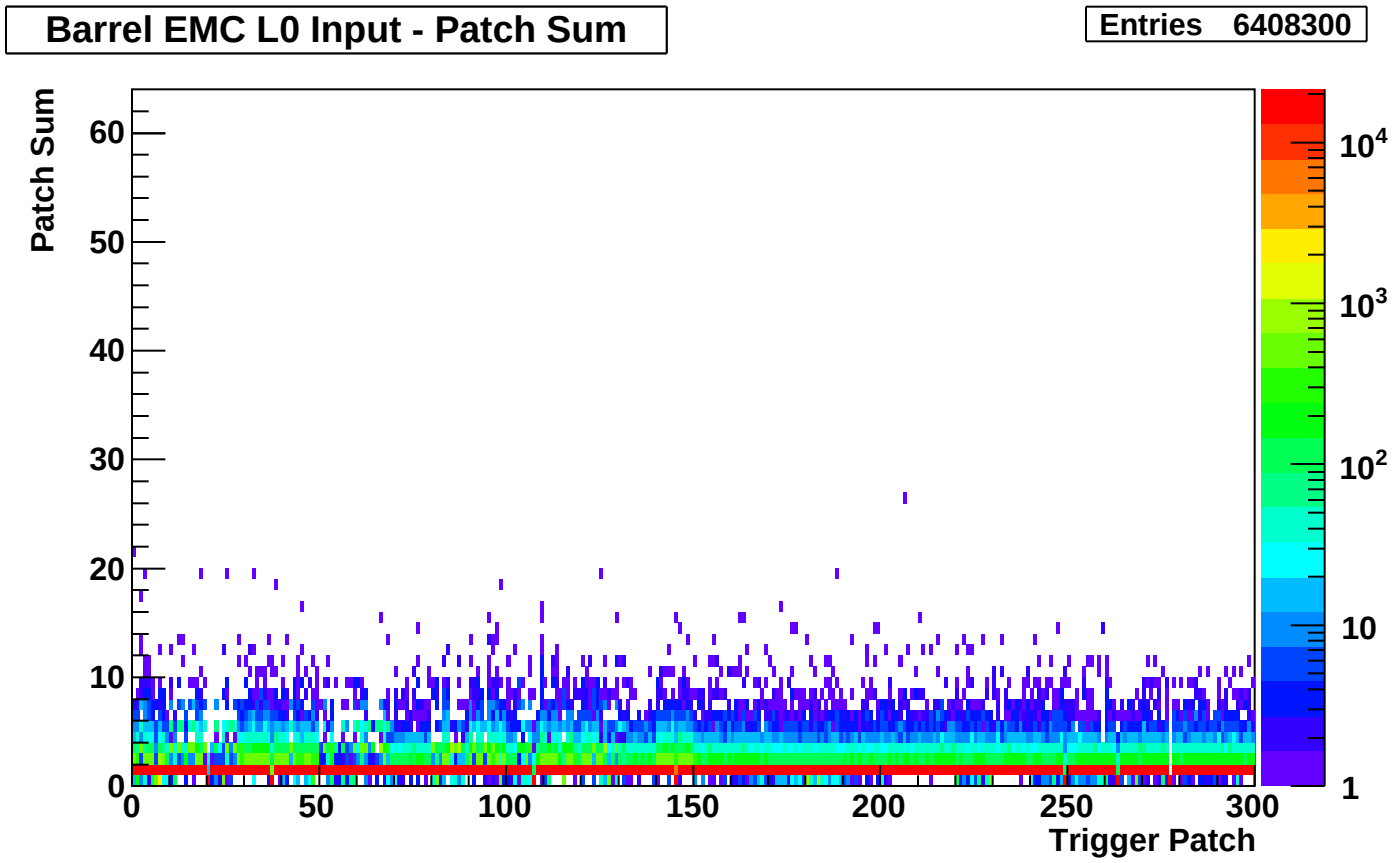
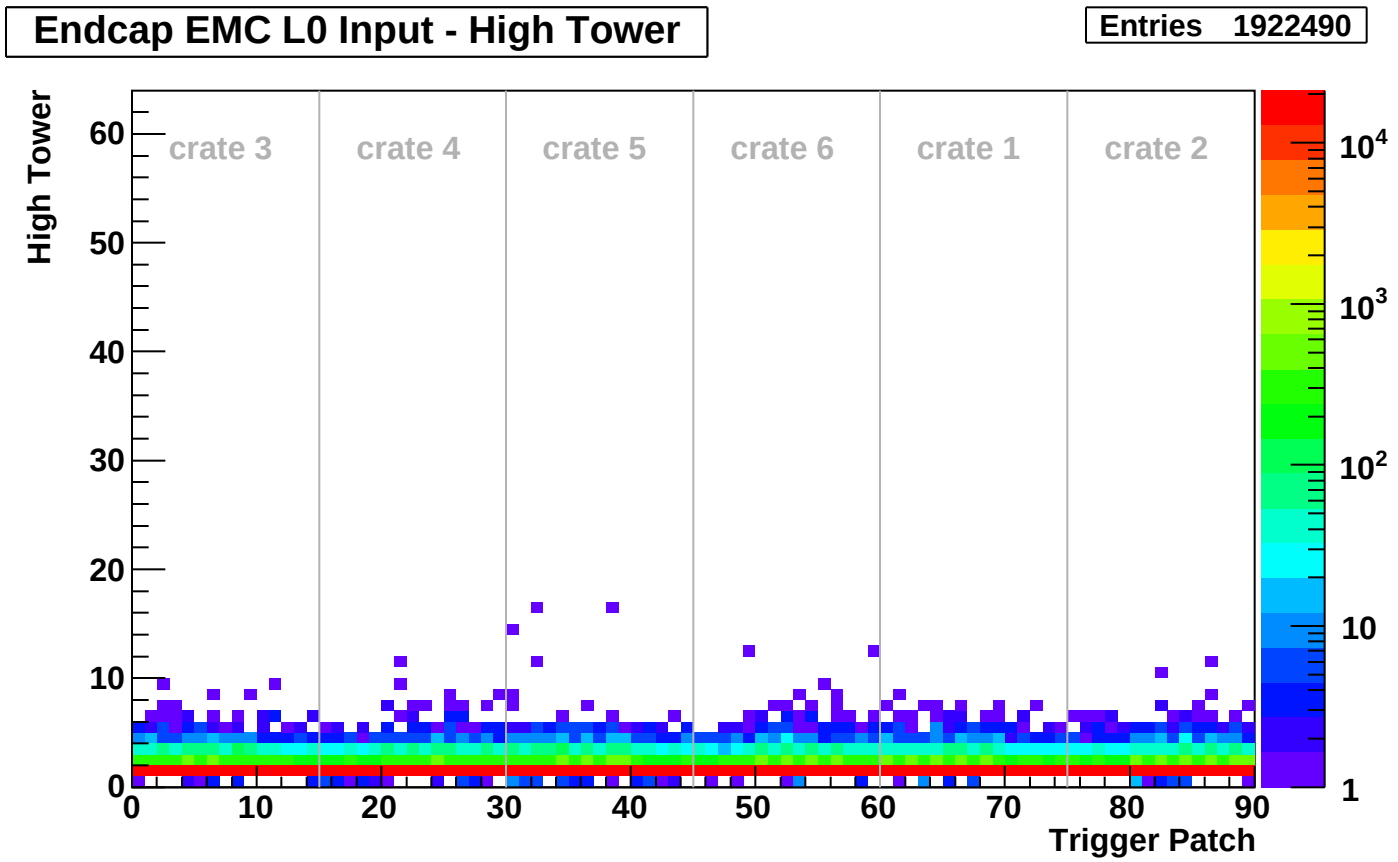
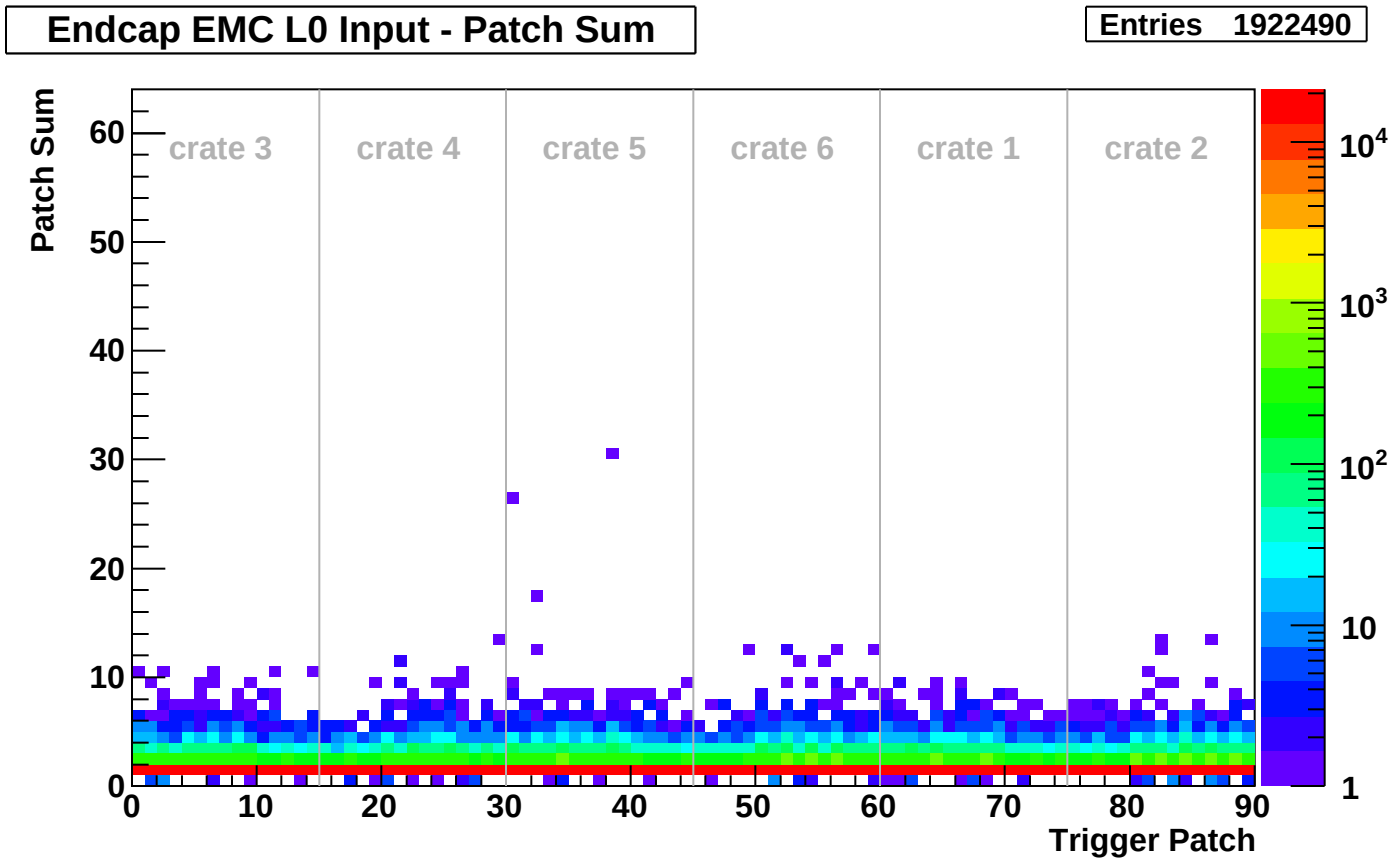
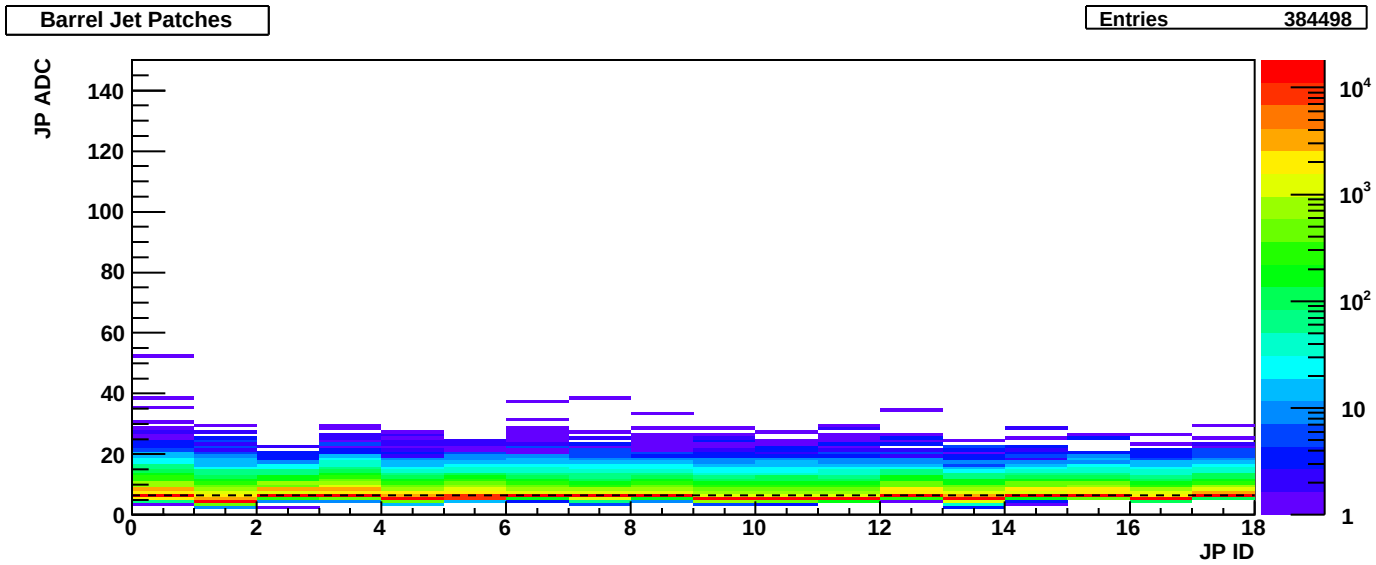
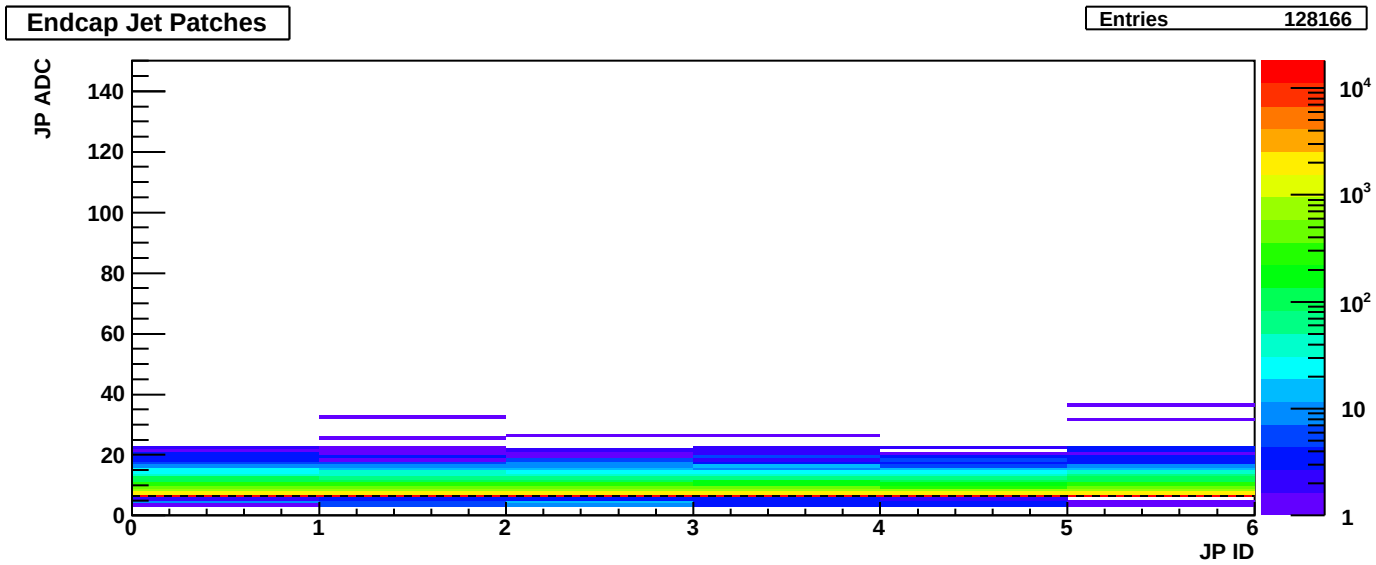

Barrel EMC L0 Input - High Tower
Entries 6408300
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

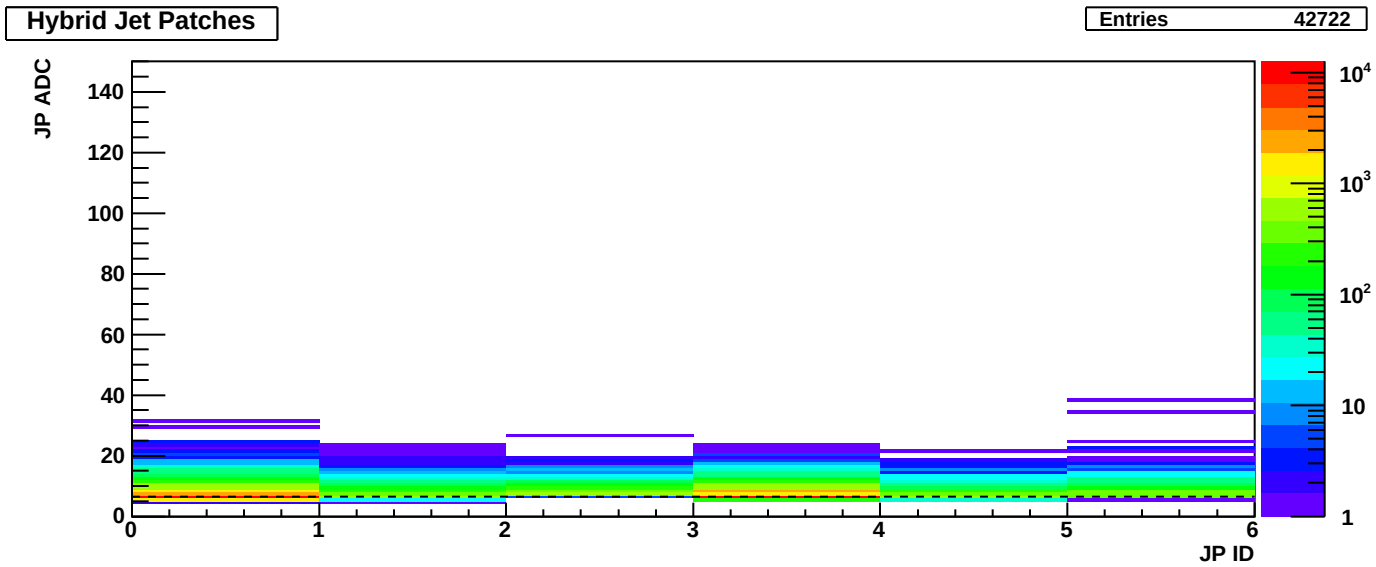

Barrel EMC L0 Input - Patch Sum
Entries 6408300
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

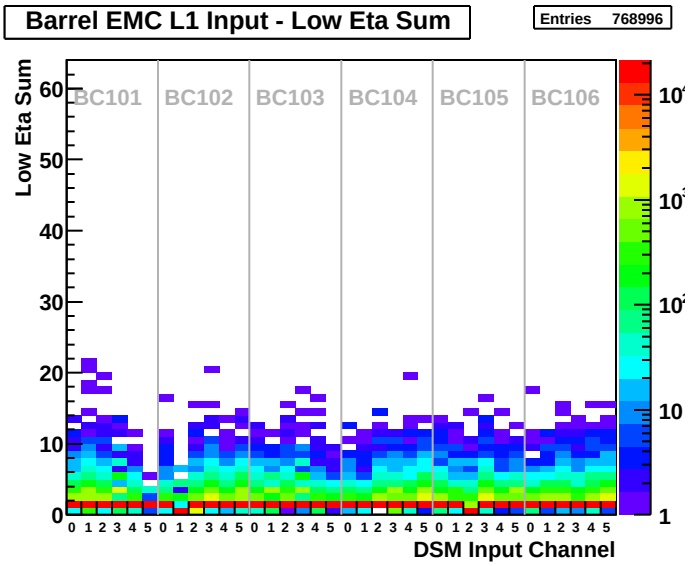

Endcap EMC L0 Input - High Tower
Entries 1922490
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

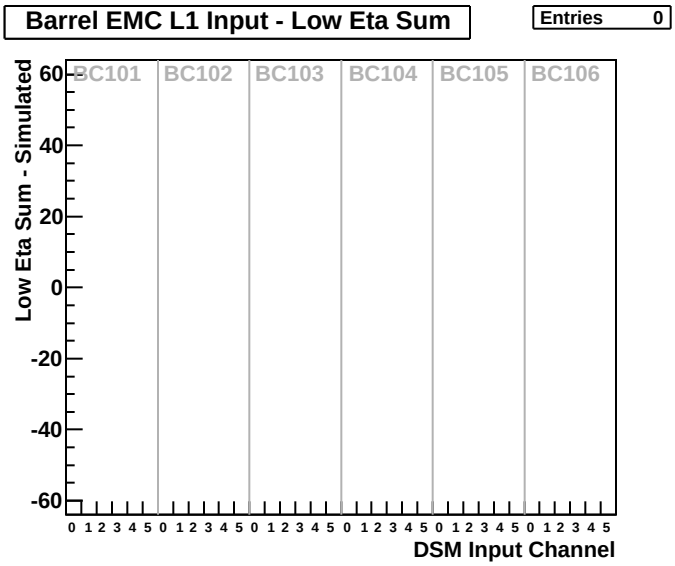

Endcap EMC L0 Input - Patch Sum
Entries 1922490
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

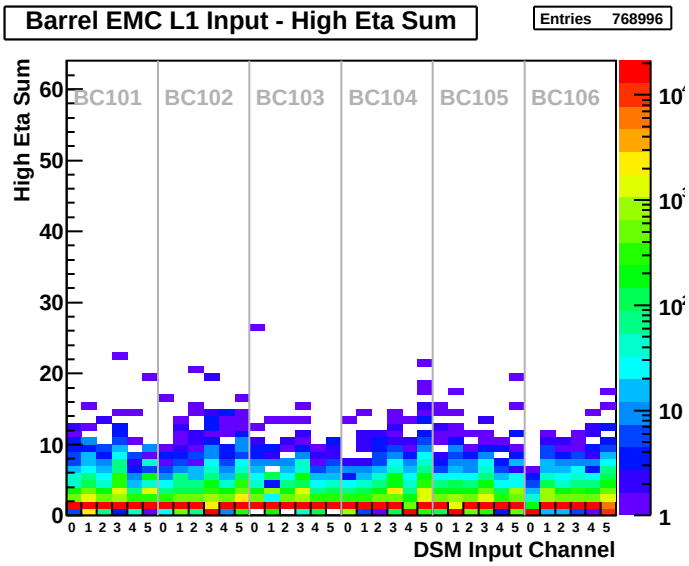

Barrel Jet Patches
Entries 384498
JP ADC
JP ID

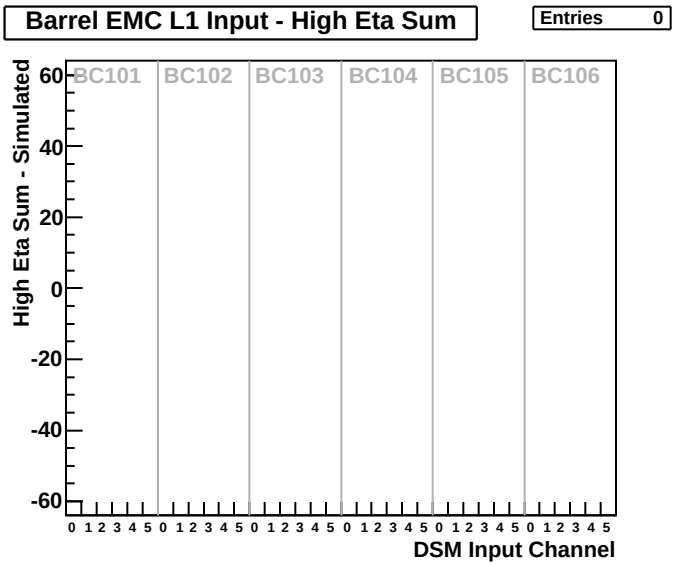

Endcap Jet Patches
Entries 128166
JP ADC
JP ID

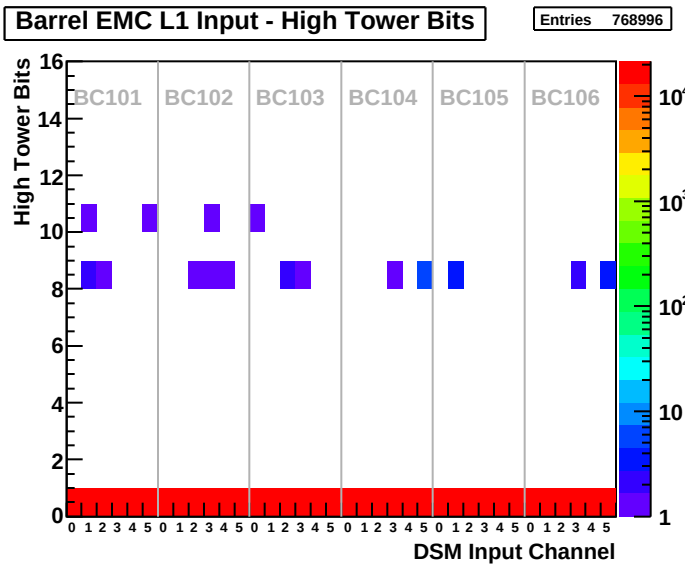

Hybrid Jet Patches
Entries 42722
JP ADC
JP ID

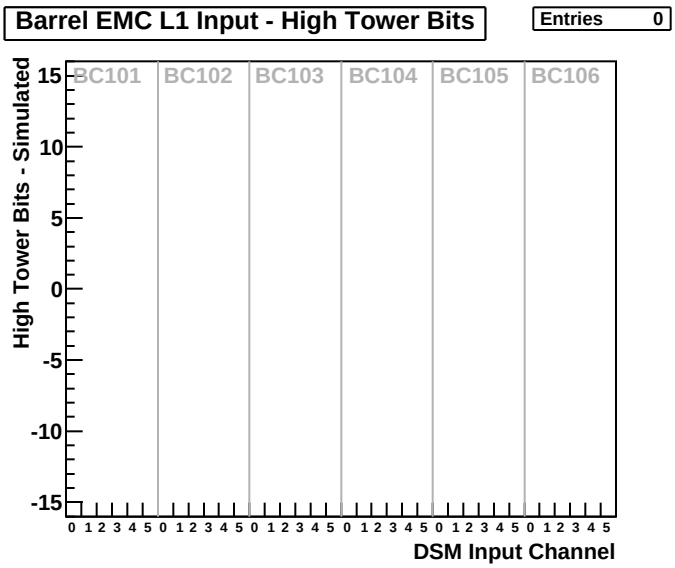

Barrel EMC L1 Input - Low Eta Sum
Entries 768996
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

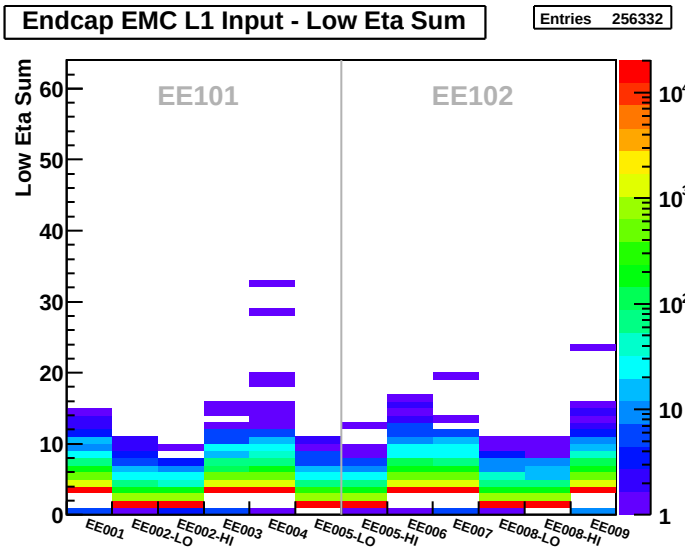

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

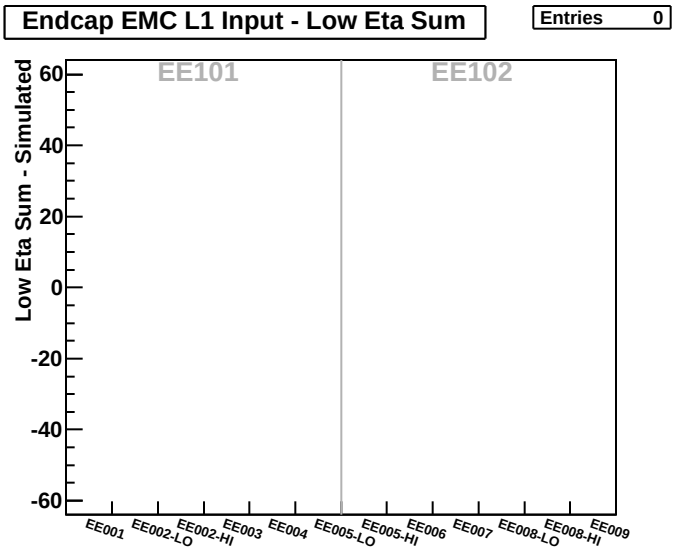

Barrel EMC L1 Input - High Eta Sum
Entries 768996
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

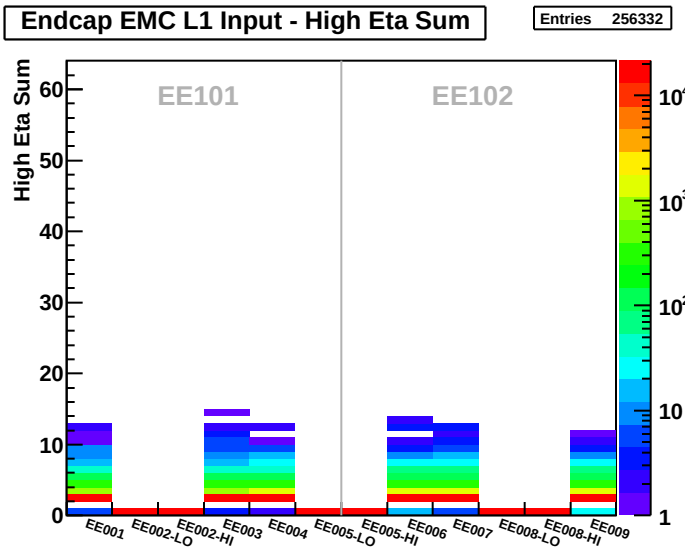

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

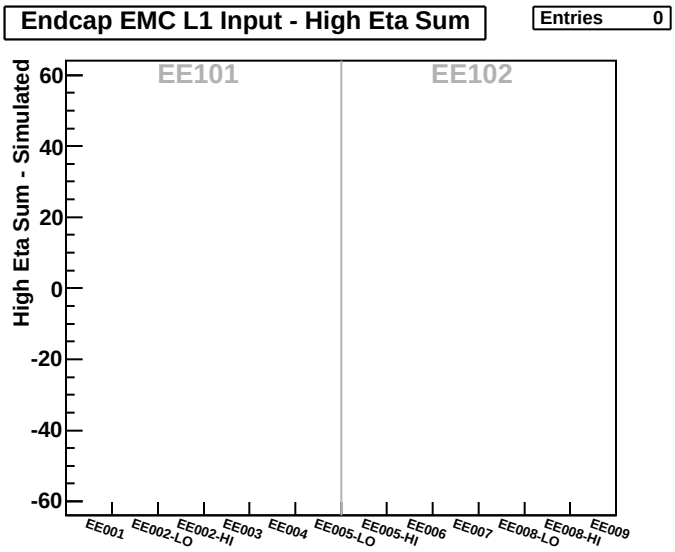

Barrel EMC L1 Input - High Tower Bits
Entries 768996
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

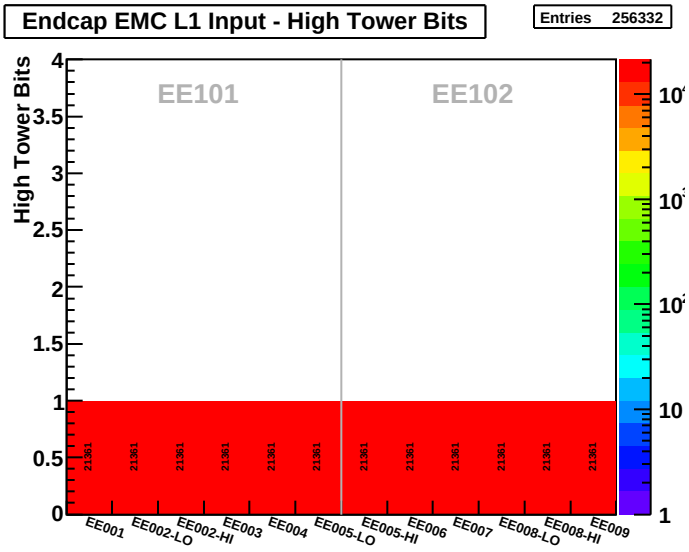

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

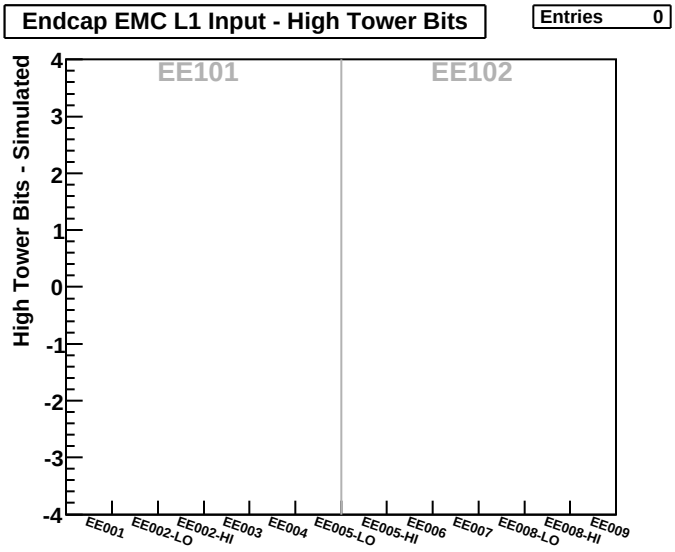

Endcap EMC L1 Input - Low Eta Sum
Entries 256332
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

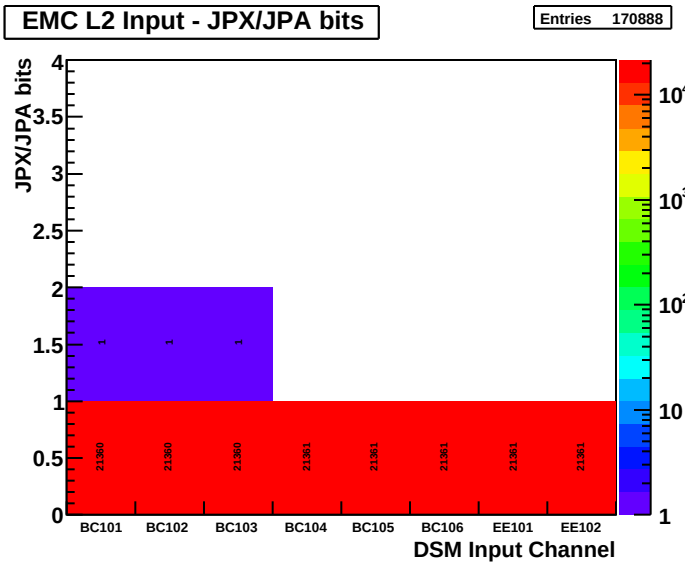

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

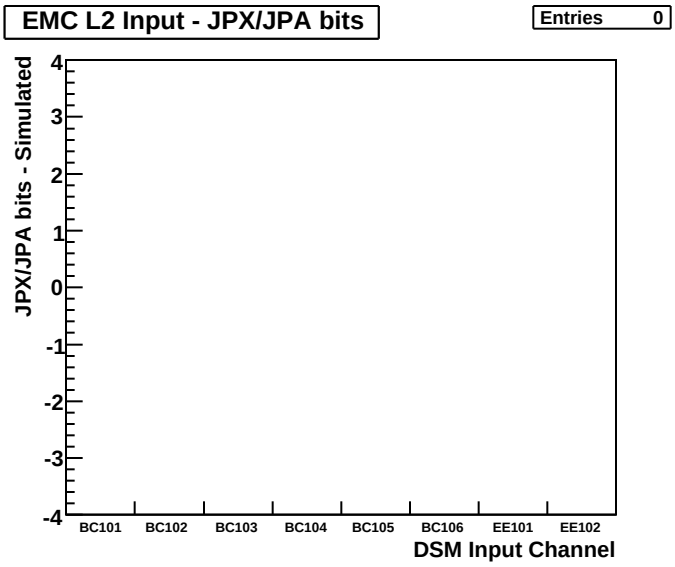

Endcap EMC L1 Input - High Eta Sum
Entries 256332
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

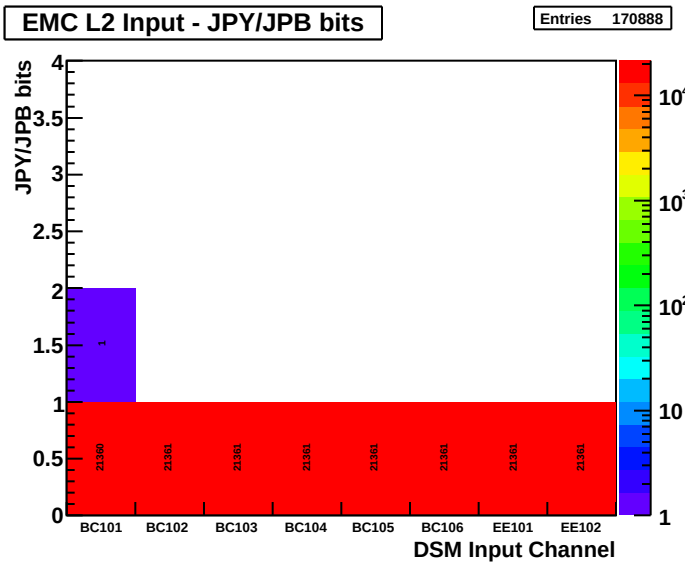

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

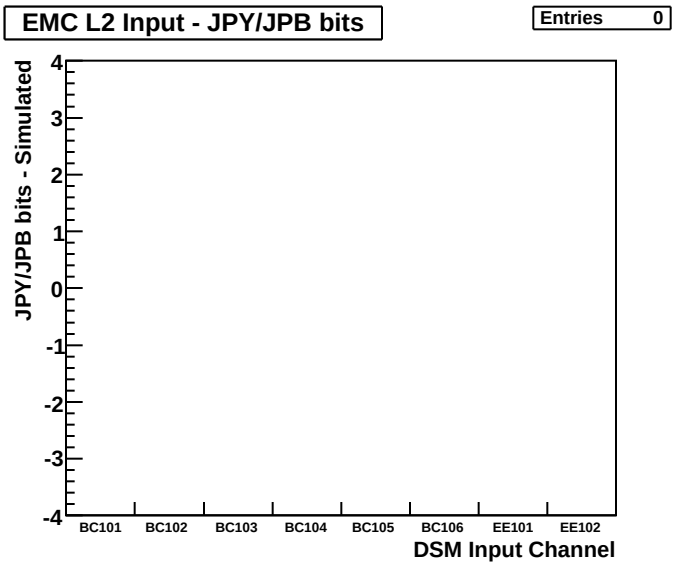

Endcap EMC L1 Input - High Tower Bits
Entries 256332
High Tower Bits
EE101
EE102
21361
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

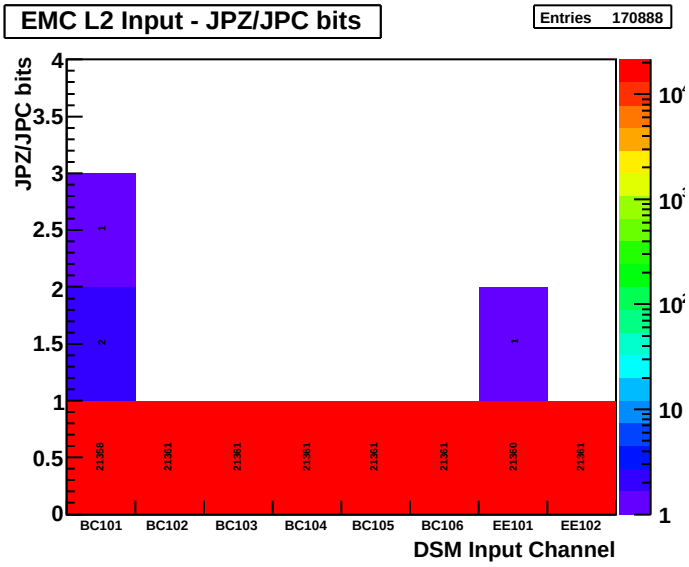

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

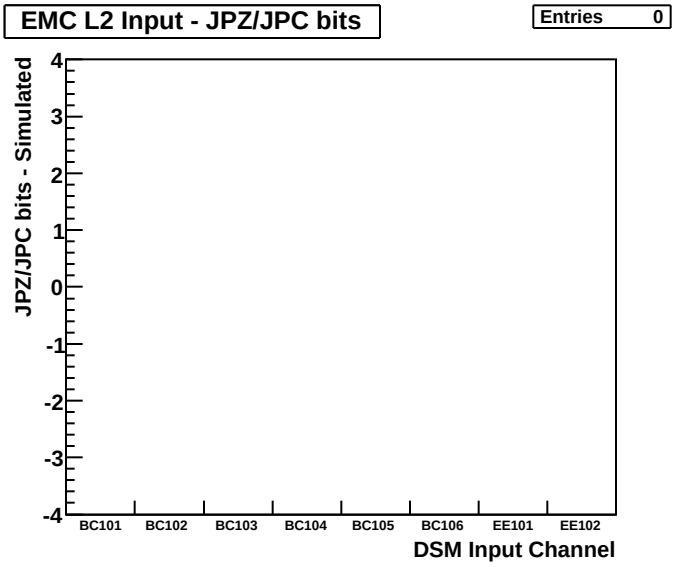

EMC L2 Input - JPX/JPA bits
Entries 170888
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

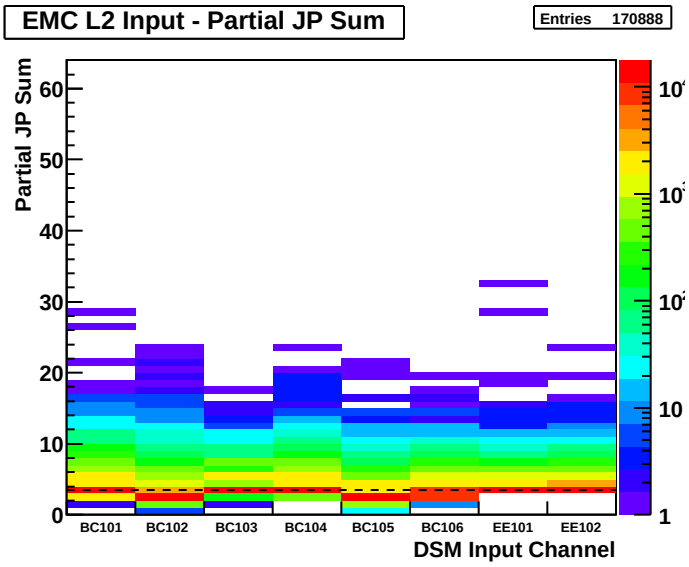

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

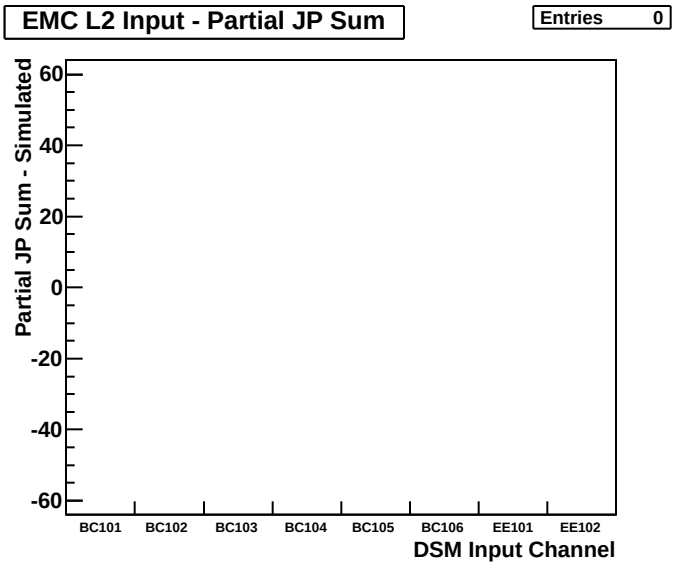

EMC L2 Input - JPY/JPB bits
Entries 170888
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

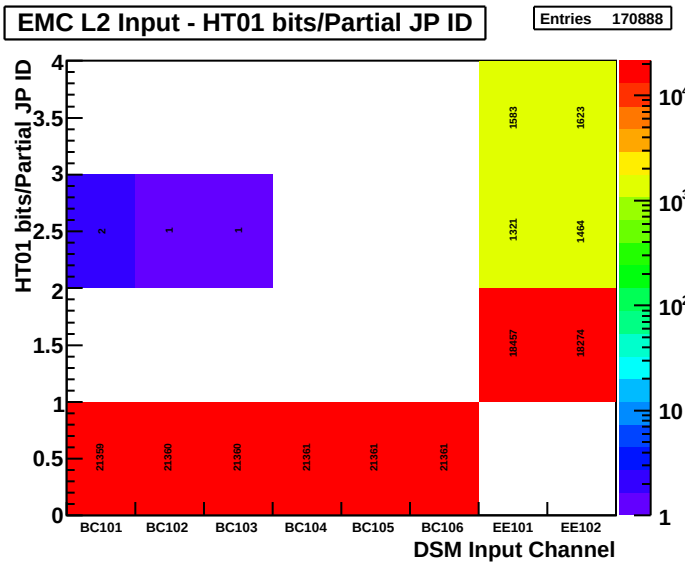

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

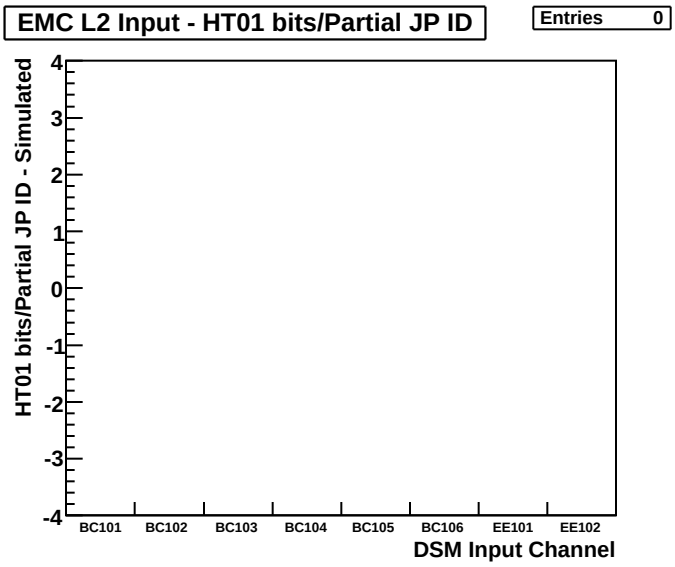

EMC L2 Input - JPZ/JPC bits
Entries 170888
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

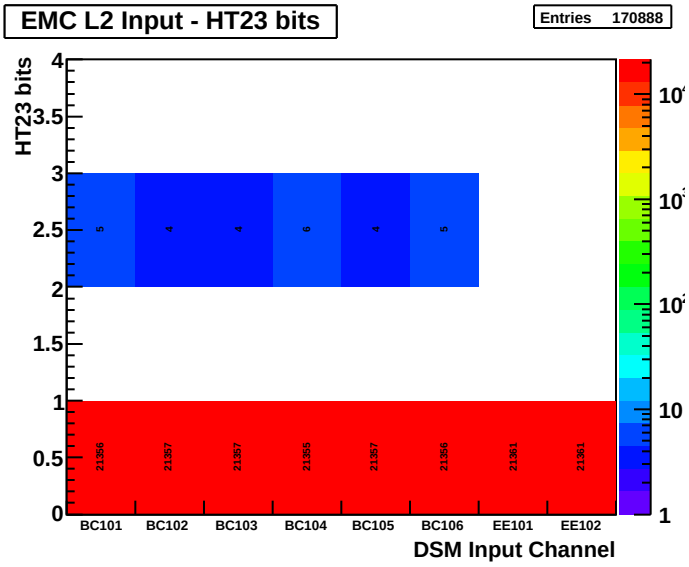

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

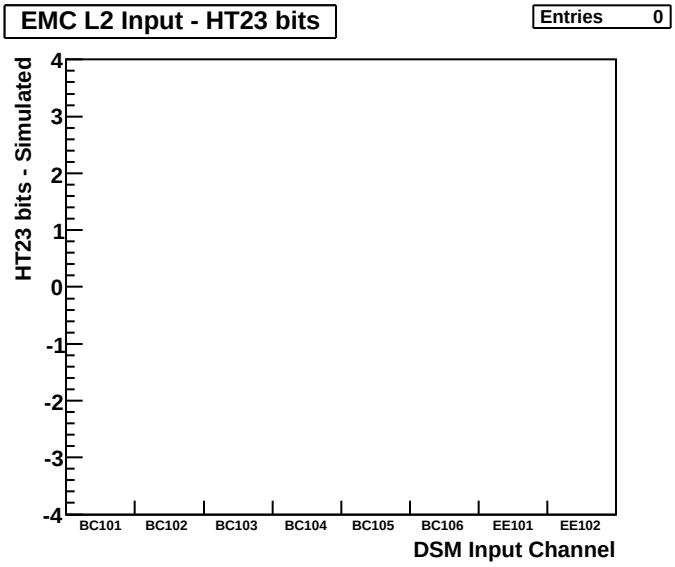

EMC L2 Input - Partial JP Sum
Entries 170888
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

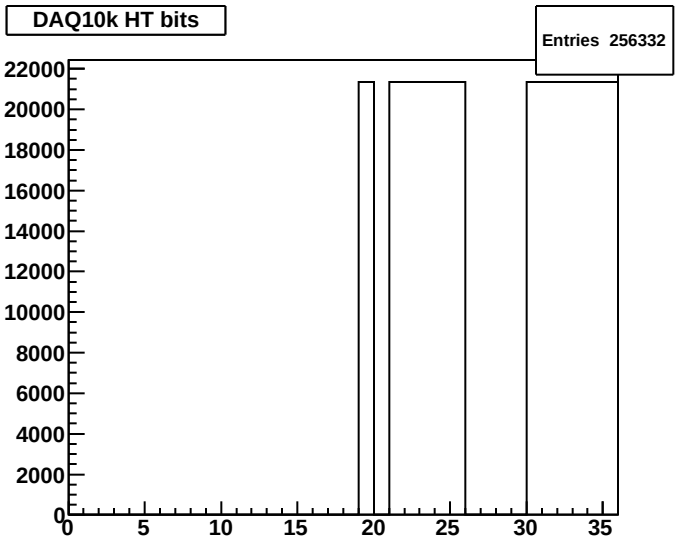

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

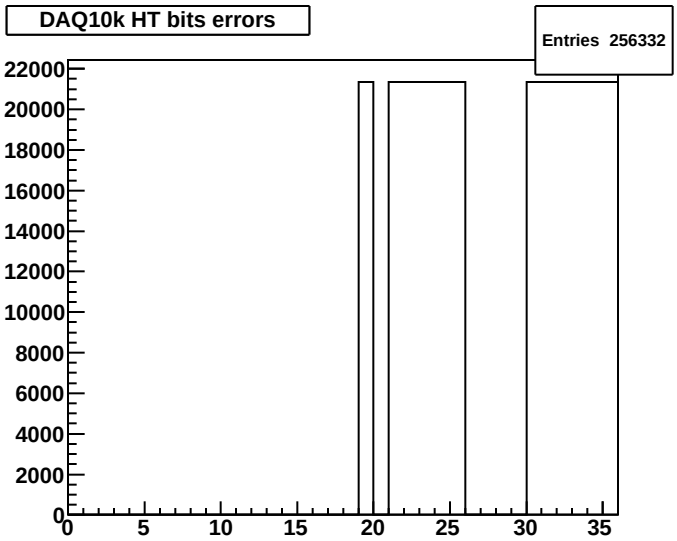

EMC L2 Input - HT01 bits/Partial JP ID
Entries 170888
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

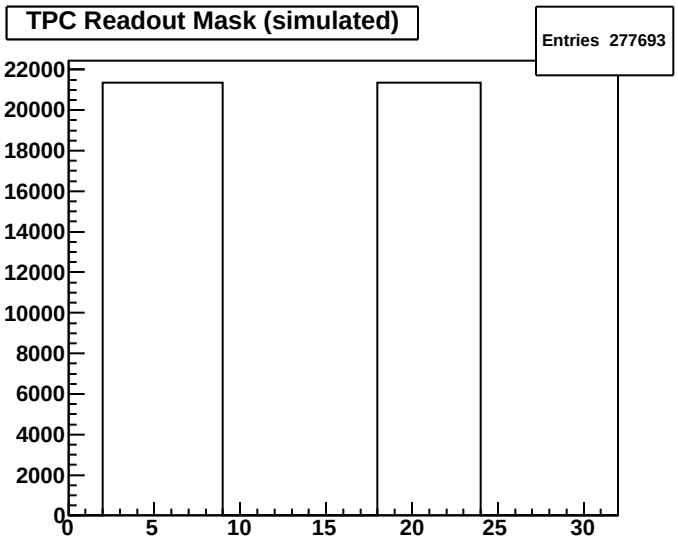

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

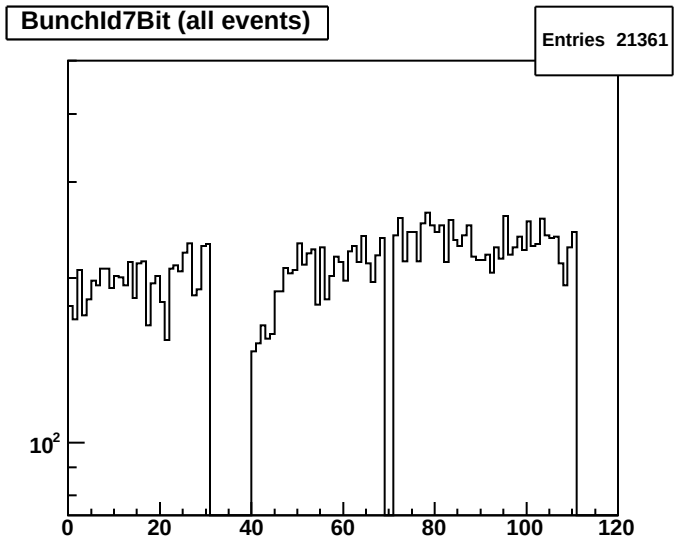

EMC L2 Input - HT23 bits
Entries 170888
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

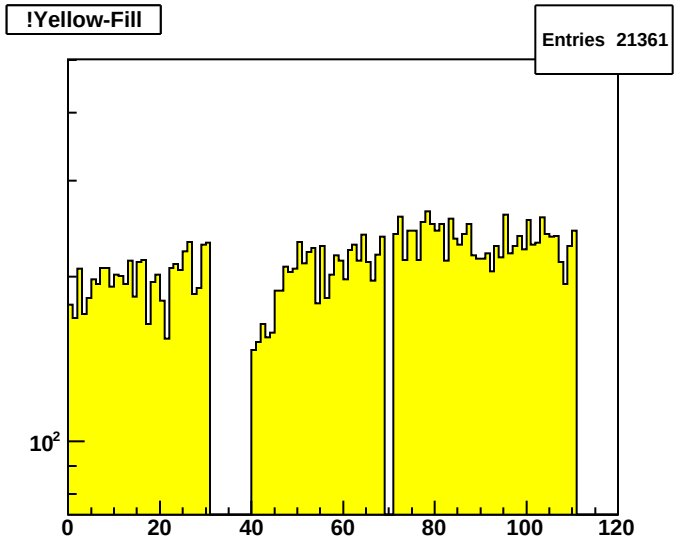

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

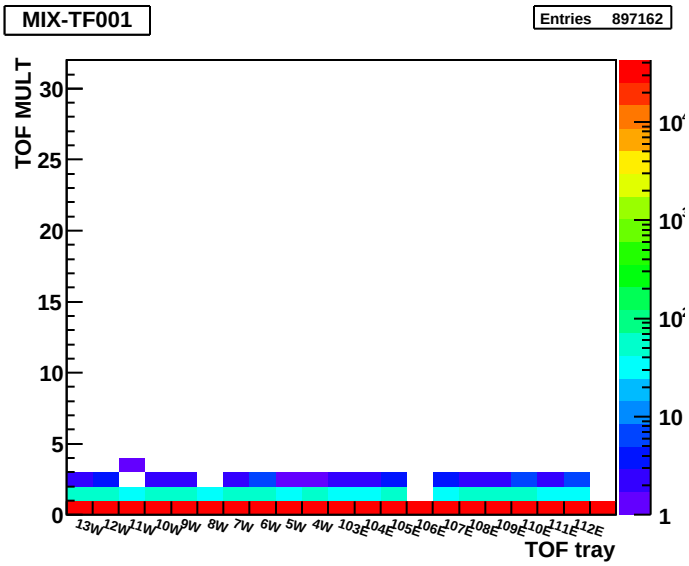

DAQ10k HT bits
Entries 256332
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
5
10
15
20
25
30
35

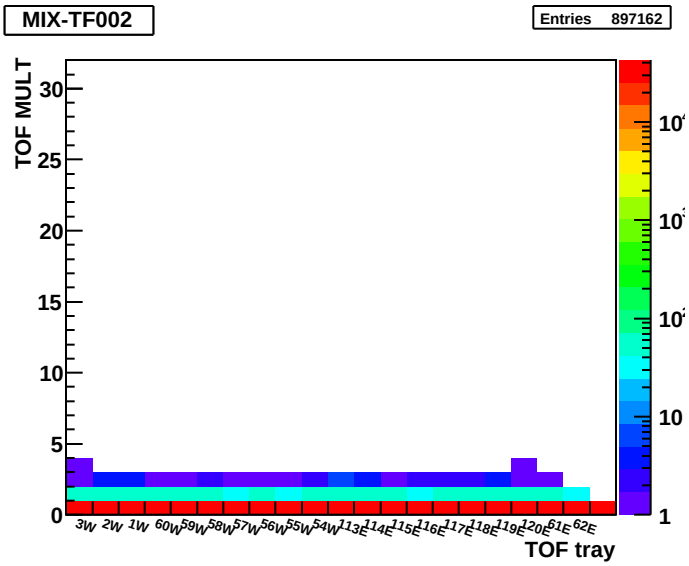

DAQ10k HT bits errors
Entries 256332
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
5
10
15
20
25
30
35

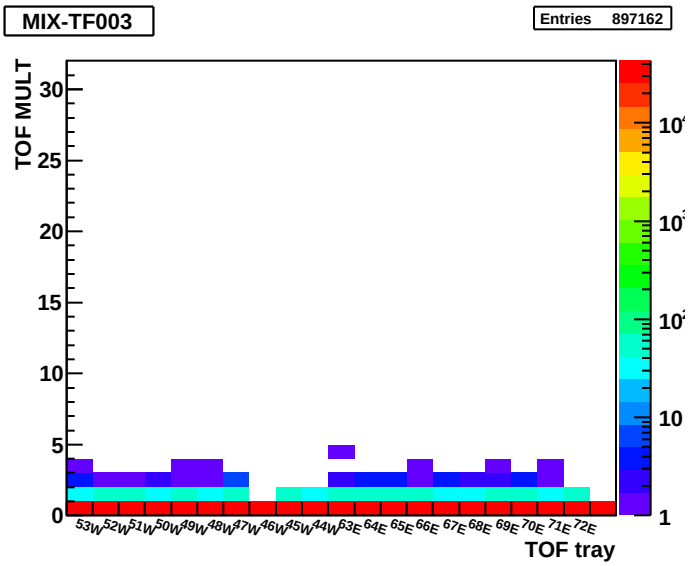

TPC Readout Mask (simulated)
Entries 277693
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
5
10
15
20
25
30

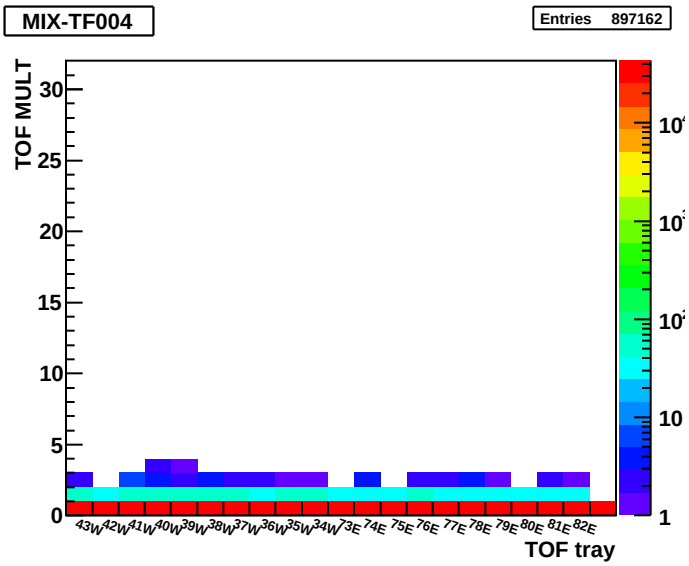

BunchId7Bit (all events)
Entries 21361
10^2
0
20
40
60
80
100
120

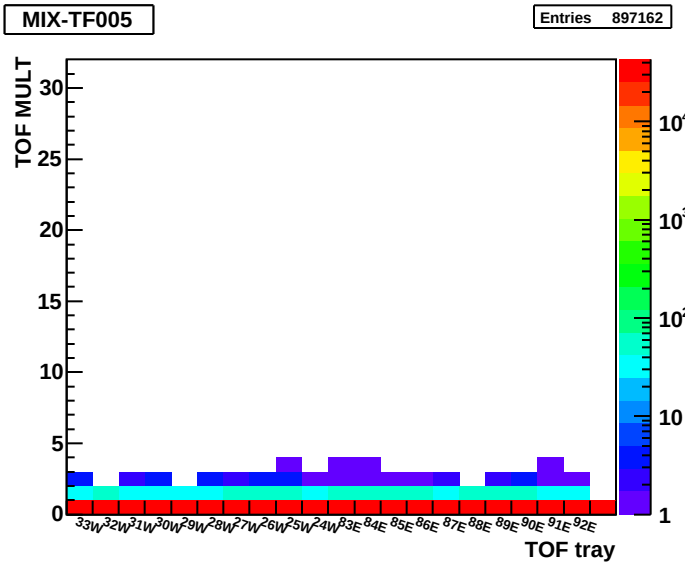

!Yellow-Fill
Entries 21361
10^2
0
20
40
60
80
100
120

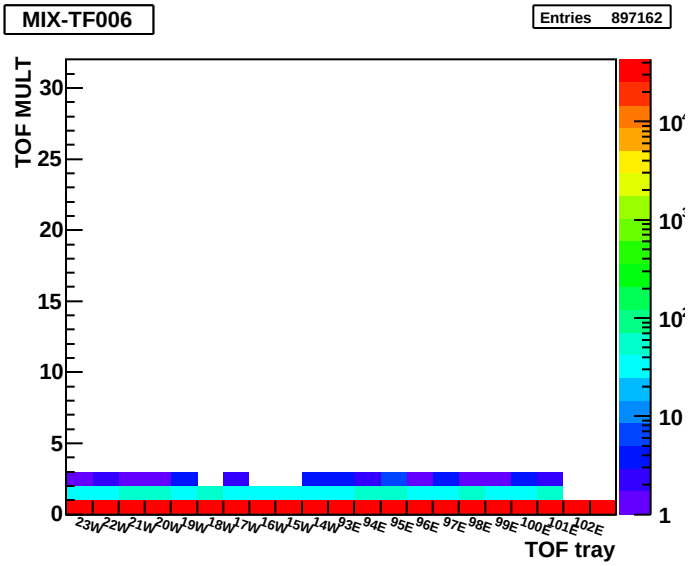

MIX-TF001
Entries 897162
TOF MULT
TOF tray

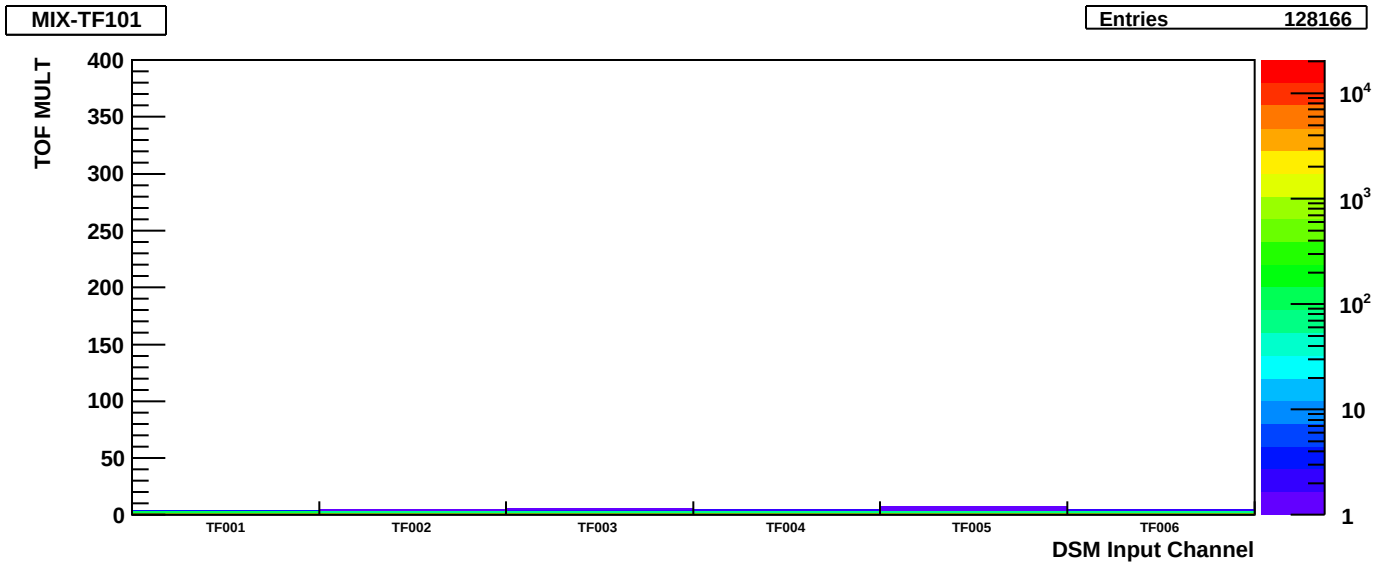

MIX-TF002
Entries 897162
TOF MULT
TOF tray

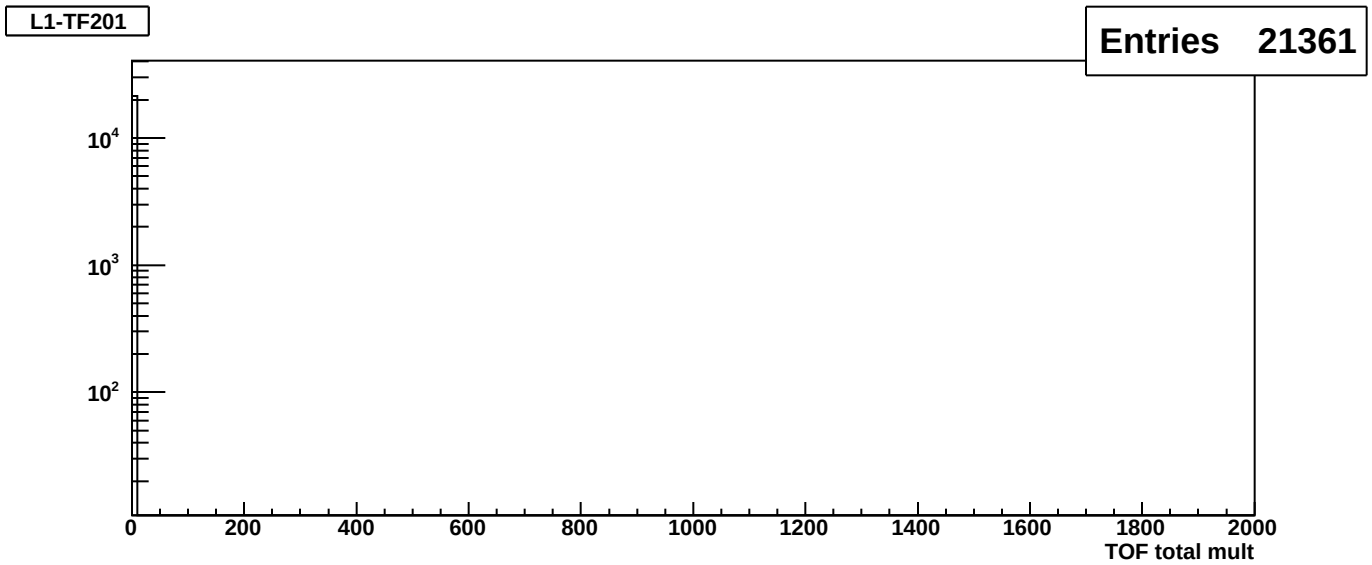

MIX-TF003
Entries 897162
TOF MULT
TOF tray

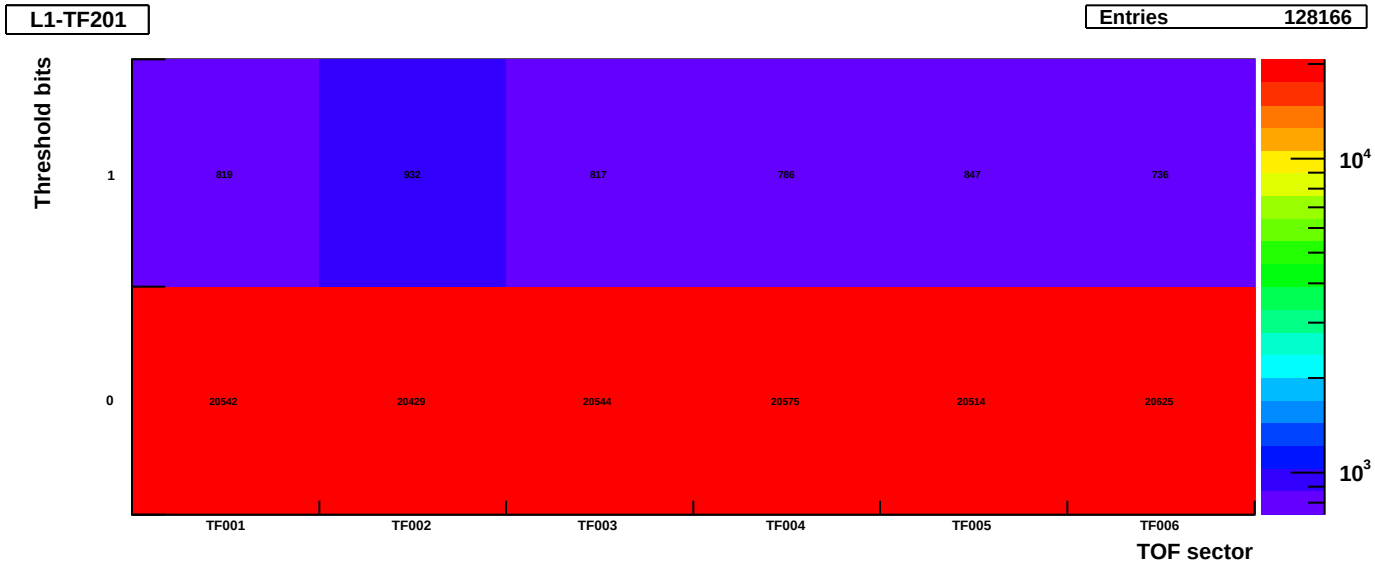

MIX-TF004
Entries 897162
TOF MULT
TOF tray

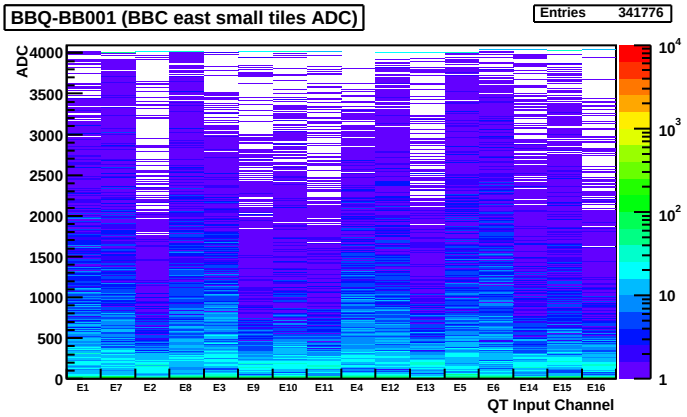

MIX-TF005
Entries 897162
TOF MULT
TOF tray

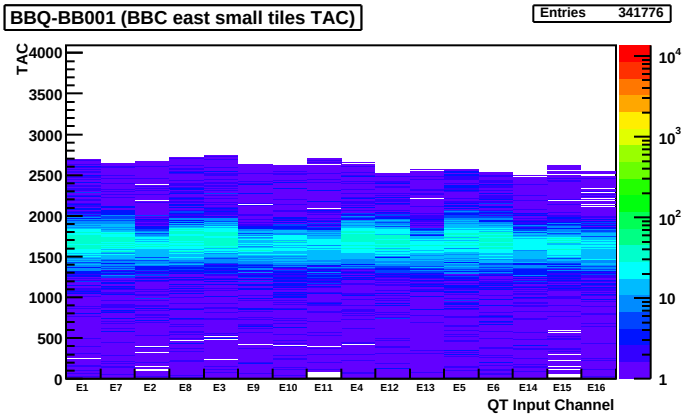

MIX-TF006
Entries 897162
TOF MULT
TOF tray

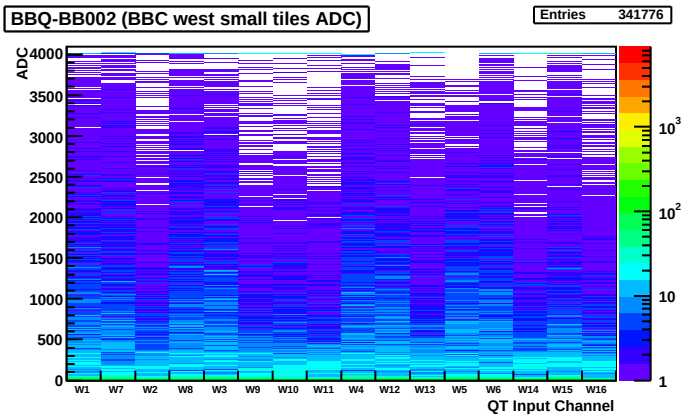

MIX-TF101
Entries 128166
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

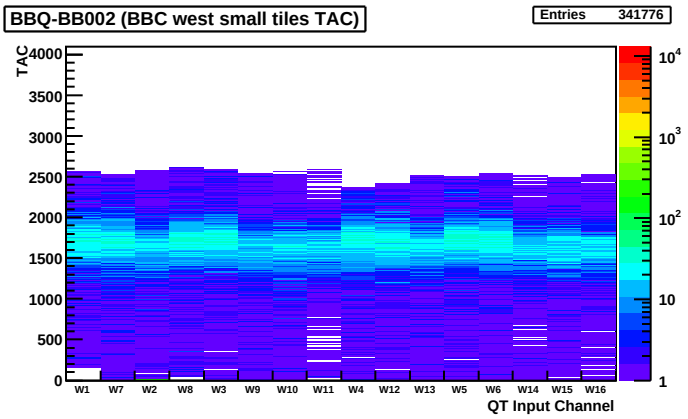

L1-TF201
Entries 21361
10^4
10^3
10^2
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

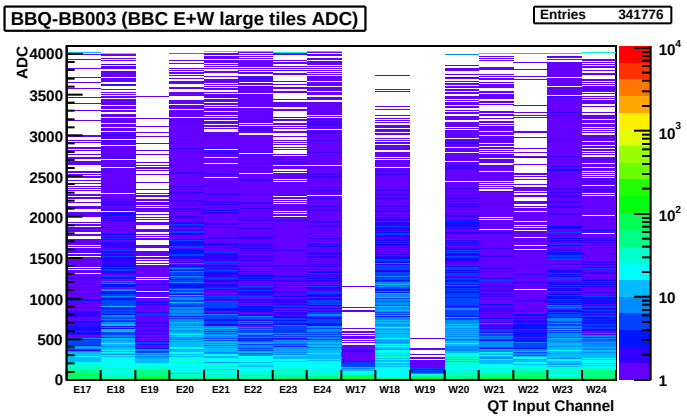

L1-TF201
Entries 128166
Threshold bits
1
0
819
932
817
786
847
736
20542
20429
20544
20575
20514
20625
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4
10^3

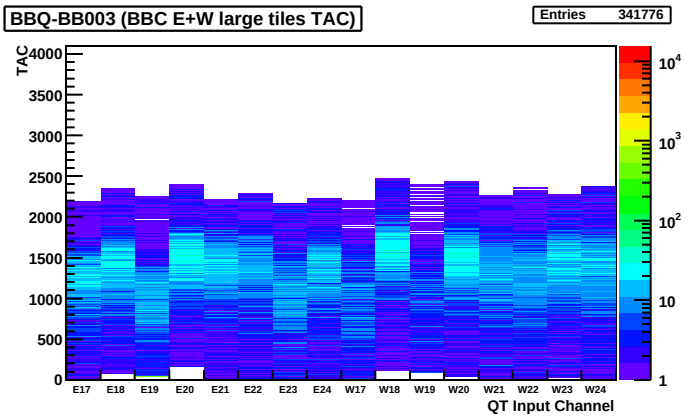

BBQ-BB001 (BBC east small tiles ADC)
Entries 341776
ADC
QT Input Channel

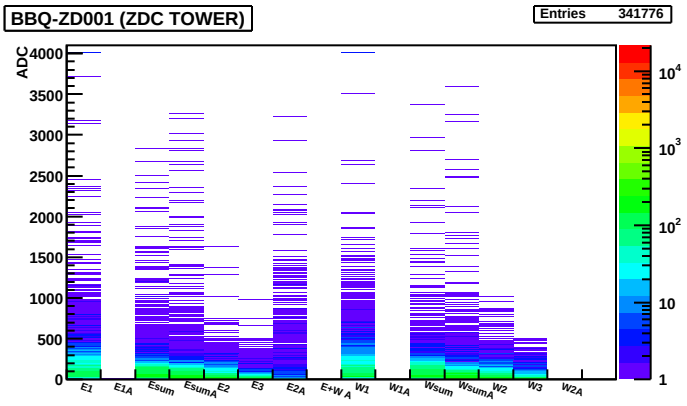

BBQ-BB001 (BBC east small tiles TAC)
Entries 341776
TAC
QT Input Channel

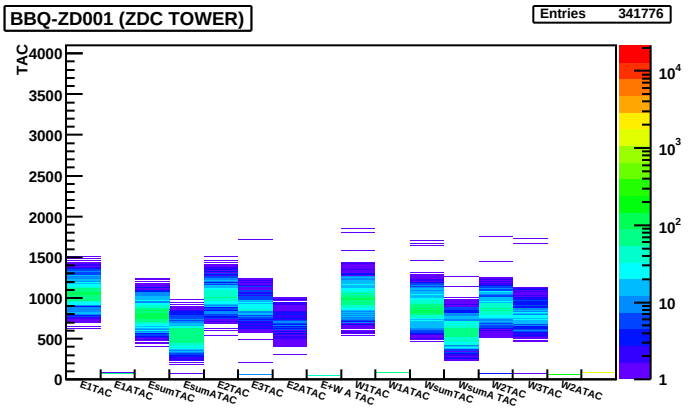

BBQ-BB002 (BBC west small tiles ADC)
Entries 341776
ADC
QT Input Channel

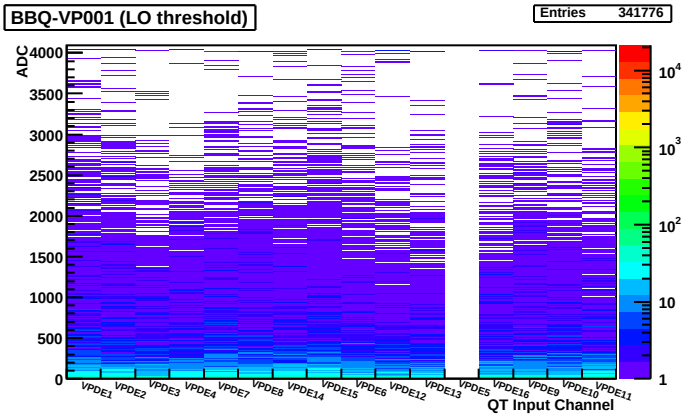

BBQ-BB002 (BBC west small tiles TAC)
Entries 341776
TAC
QT Input Channel

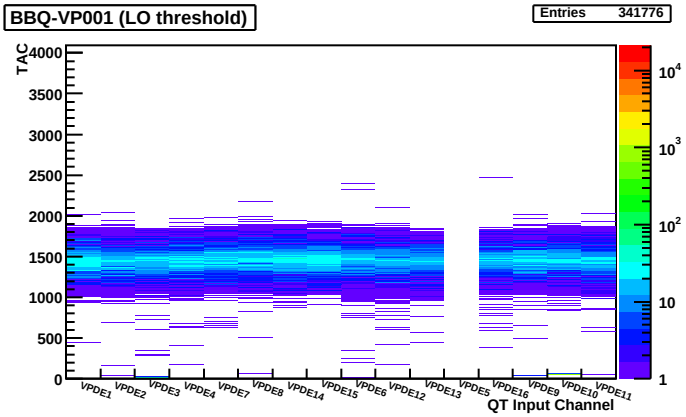

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 341776
ADC
QT Input Channel

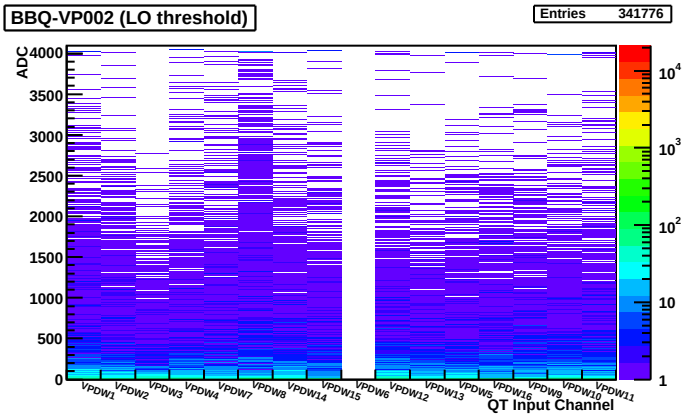

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 341776
TAC
QT Input Channel

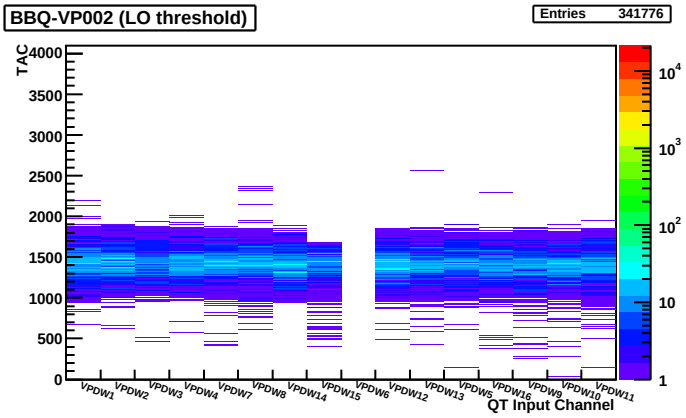

BBQ-ZD001 (ZDC TOWER)
Entries 341776
ADC

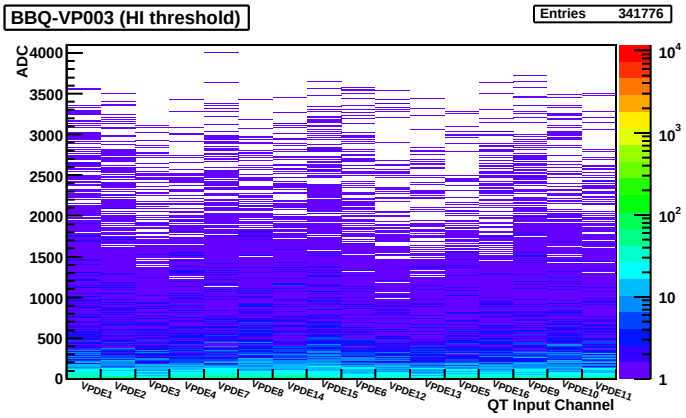

BBQ-ZD001 (ZDC TOWER)
Entries 341776
TAC

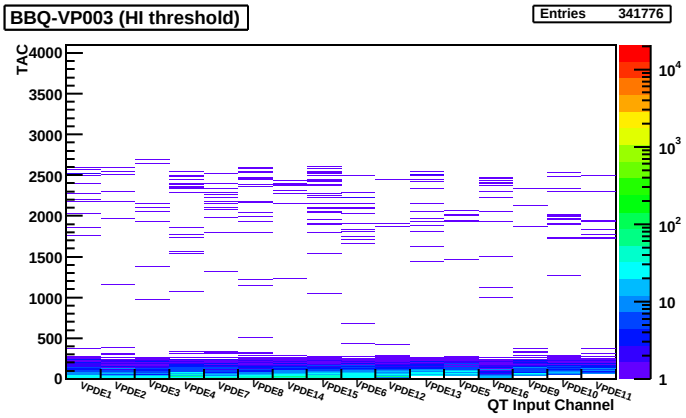

BBQ-VP001 (LO threshold)
Entries 341776
ADC
QT Input Channel

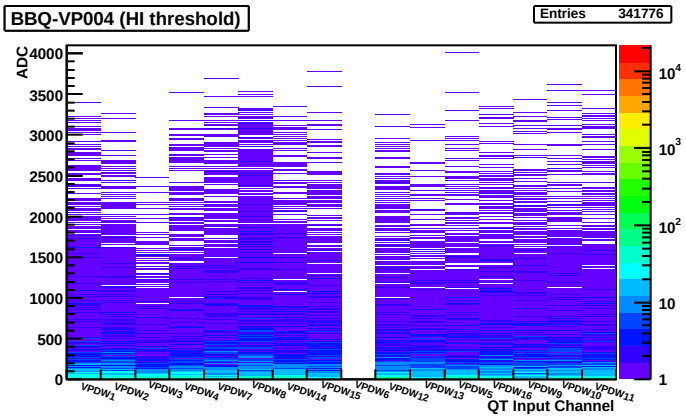

BBQ-VP001 (LO threshold)
Entries 341776
TAC
QT Input Channel

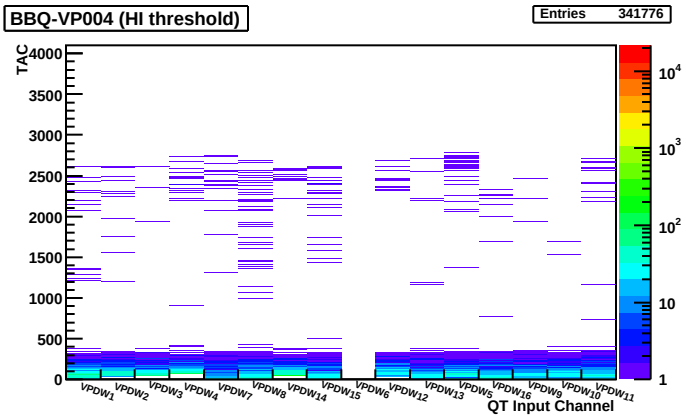

BBQ-VP002 (LO threshold)
Entries 341776
ADC
QT Input Channel

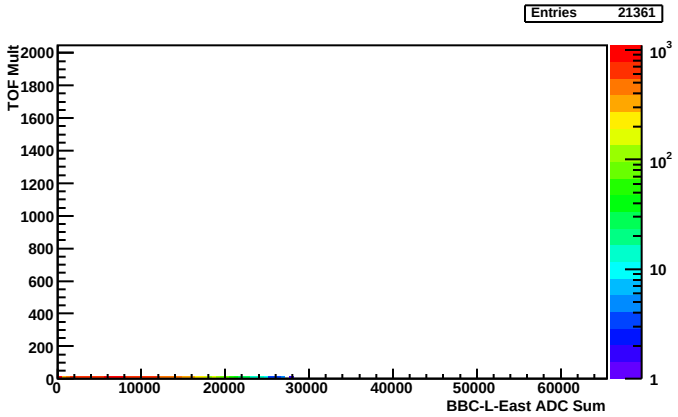

BBQ-VP002 (LO threshold)
Entries 341776
TAC
QT Input Channel

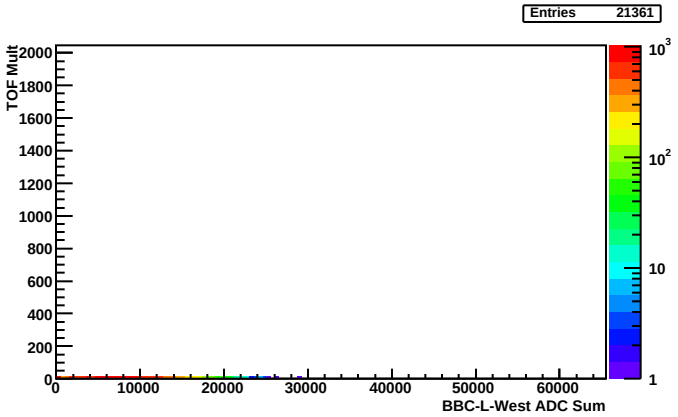

BBQ-VP003 (HI threshold)
Entries 341776
ADC
QT Input Channel

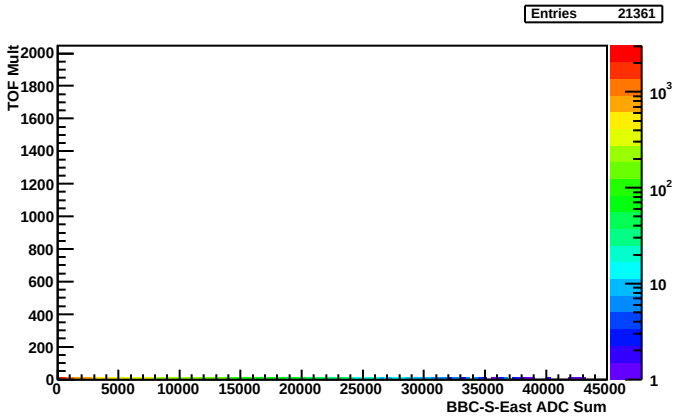

BBQ-VP003 (HI threshold)
Entries 341776
TAC
QT Input Channel

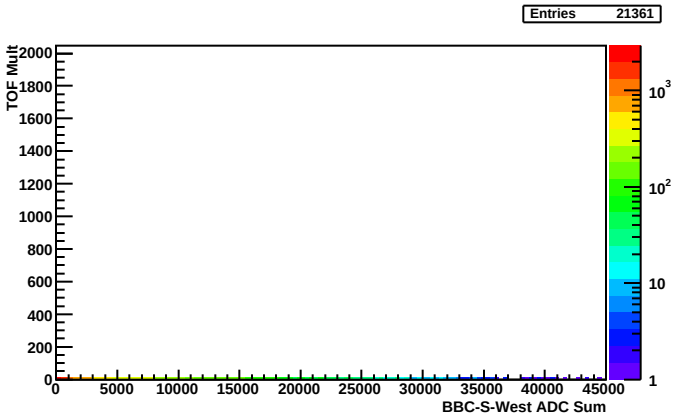

BBQ-VP004 (HI threshold)
Entries 341776
ADC
QT Input Channel

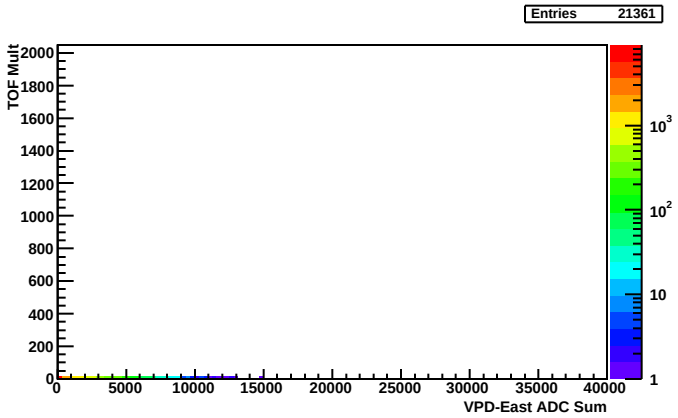

BBQ-VP004 (HI threshold)
Entries 341776
TAC
QT Input Channel

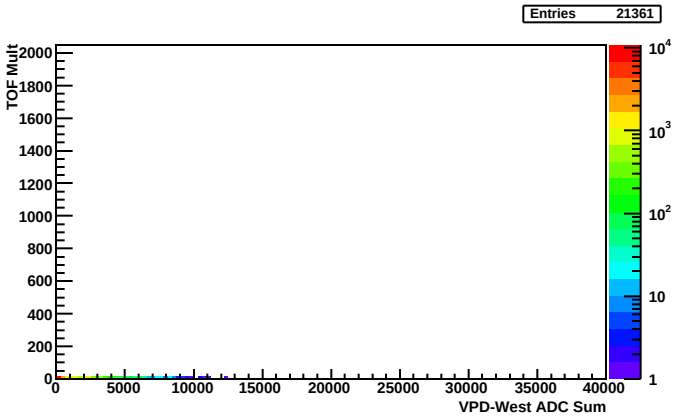

Entries 21361
TOF Mult
BBC-L-East ADC Sum

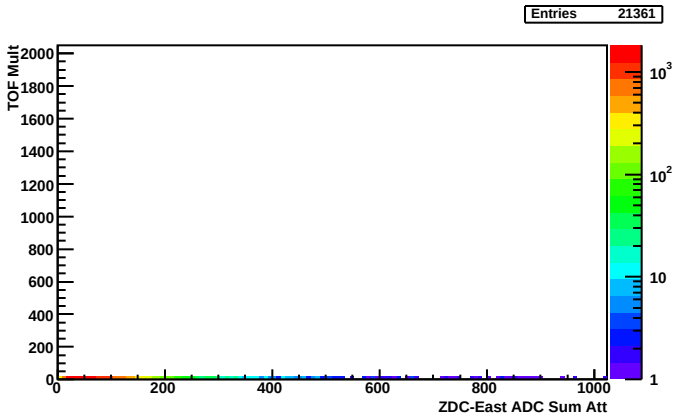

Entries 21361
TOF Mult
BBC-L-West ADC Sum

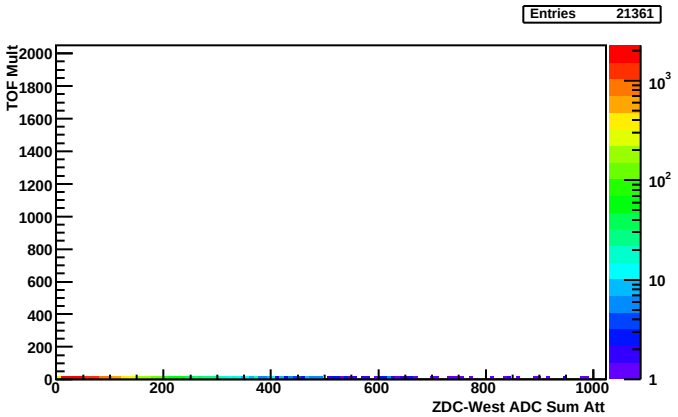

Entries 21361
TOF Mult
BBC-S-East ADC Sum

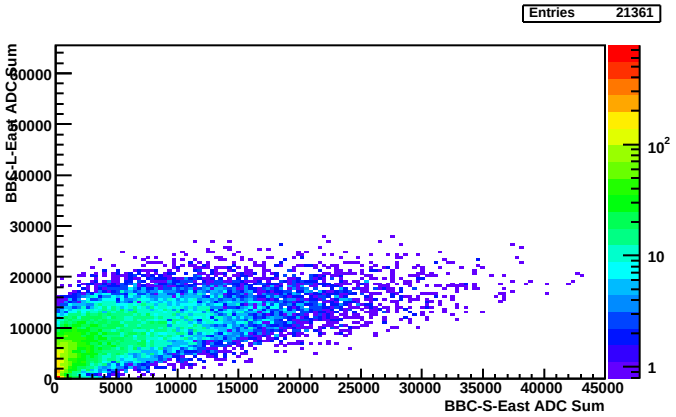

Entries 21361
TOF Mult
BBC-S-West ADC Sum

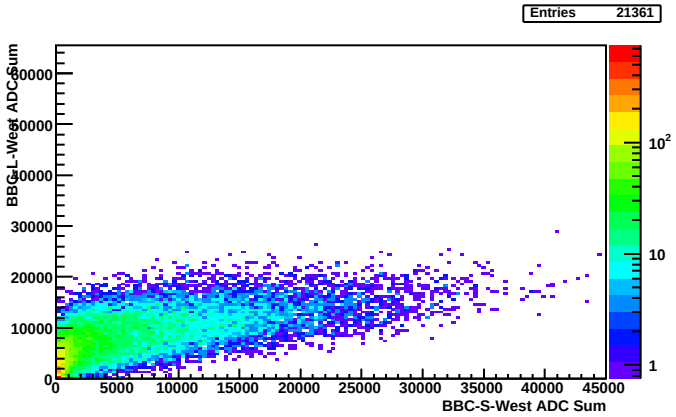

Entries 21361
TOF Mult
VPD-East ADC Sum

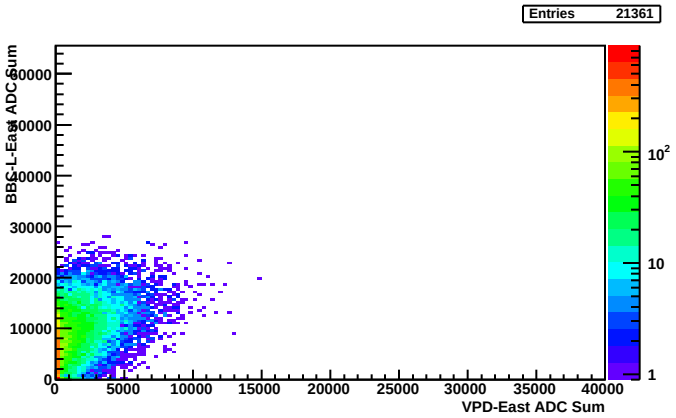

Entries 21361
TOF Mult
VPD-West ADC Sum

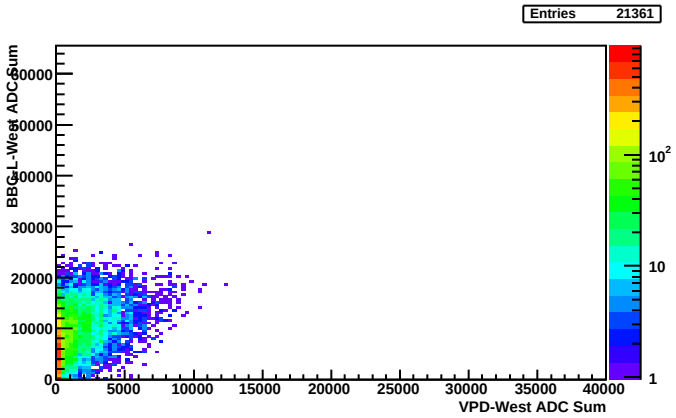

Entries 21361
TOF Mult
ZDC-East ADC Sum Att

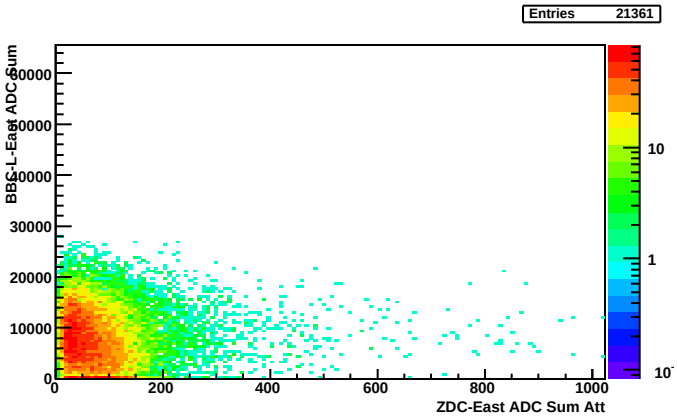

Entries 21361
TOF Mult
ZDC-West ADC Sum Att

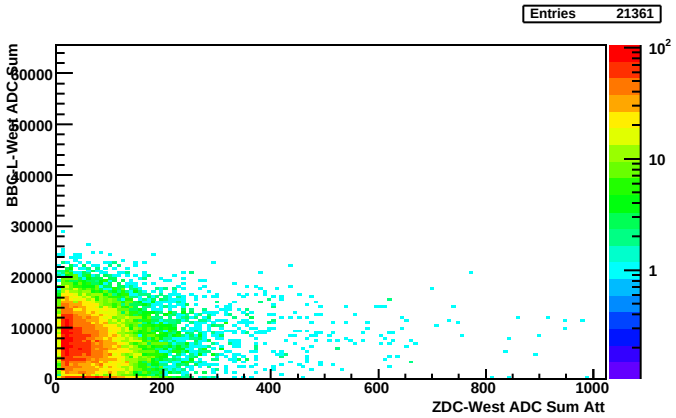

Entries 21361
BBC-L-East ADC Sum
BBC-S-East ADC Sum

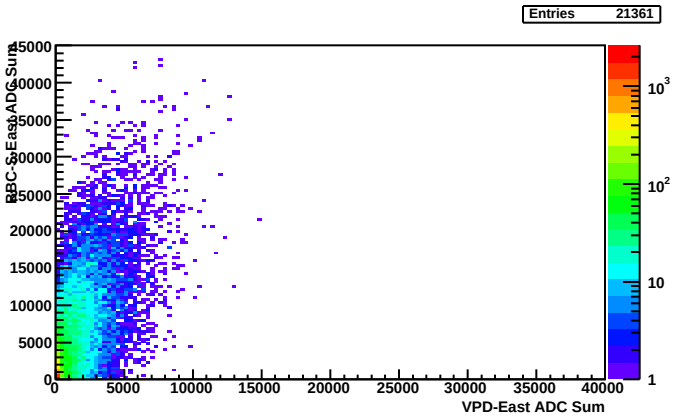

Entries 21361
BBC-L-West ADC Sum
BBC-S-West ADC Sum

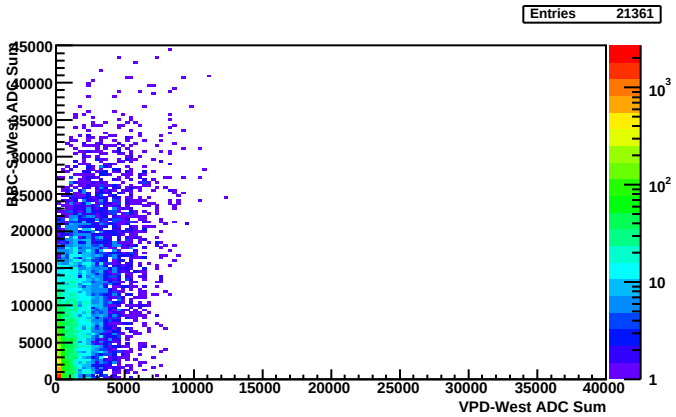

Entries 21361
BBC-L-East ADC Sum
VPD-East ADC Sum

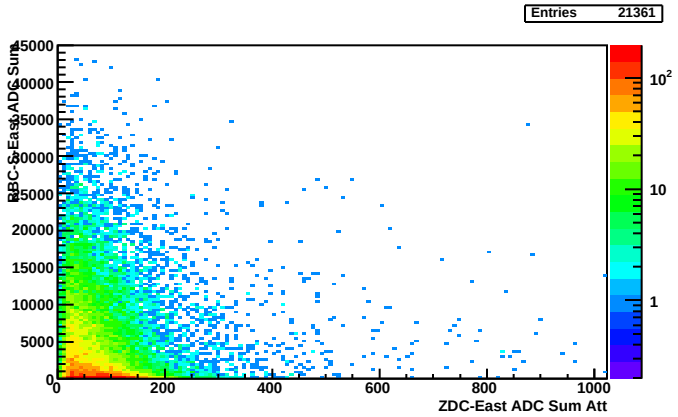

Entries 21361
BBC-L-West ADC Sum
VPD-West ADC Sum

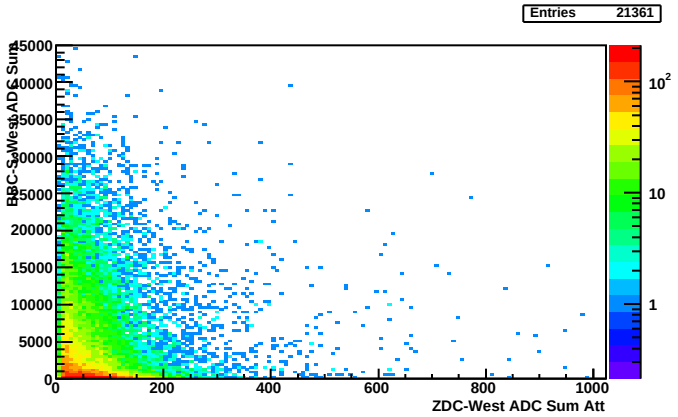

Entries 21361
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

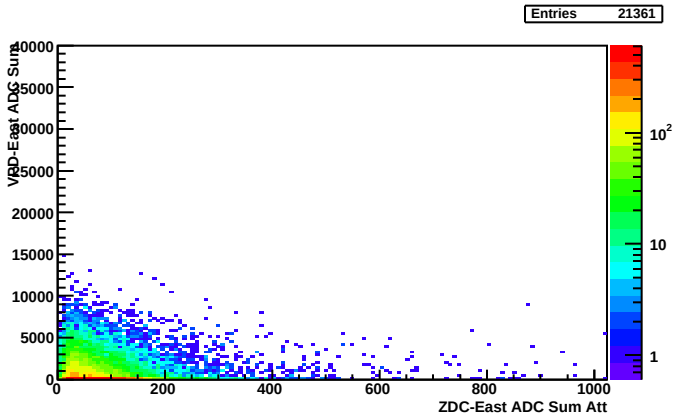

Entries 21361
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

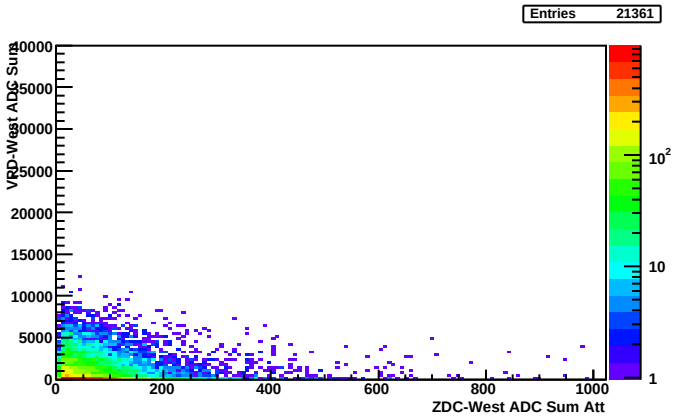

Entries 21361
BBC-S-East ADC Sum
VPD-East ADC Sum

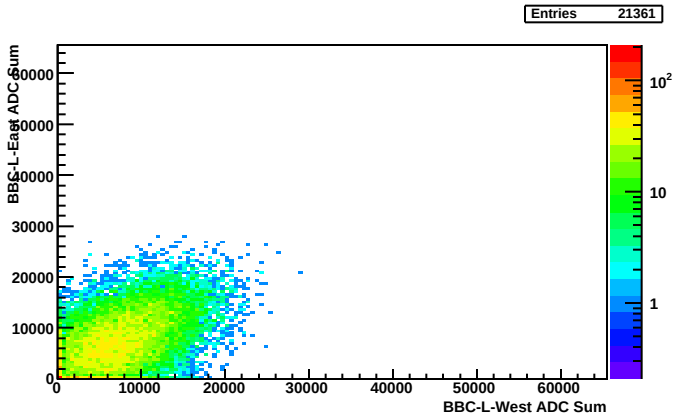

Entries 21361
BBC-S-West ADC Sum
VPD-West ADC Sum

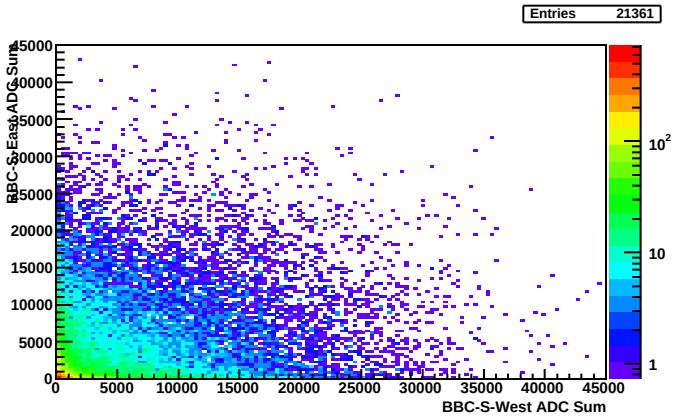

Entries 21361
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

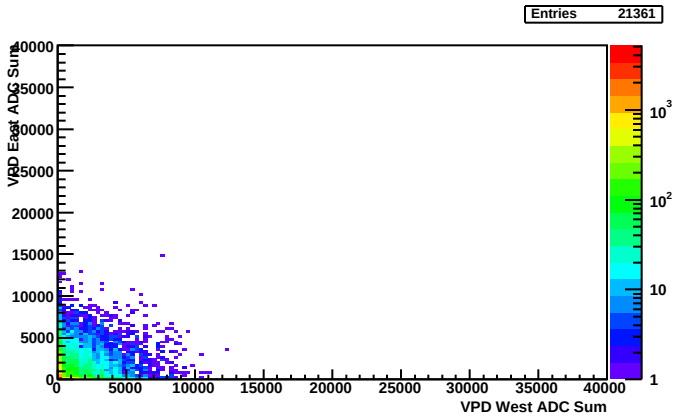

Entries 21361
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

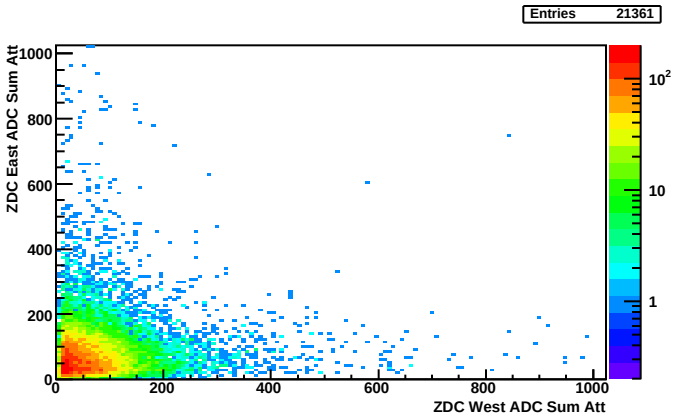

Entries 21361
VPD-East ADC Sum
ZDC-East ADC Sum Att

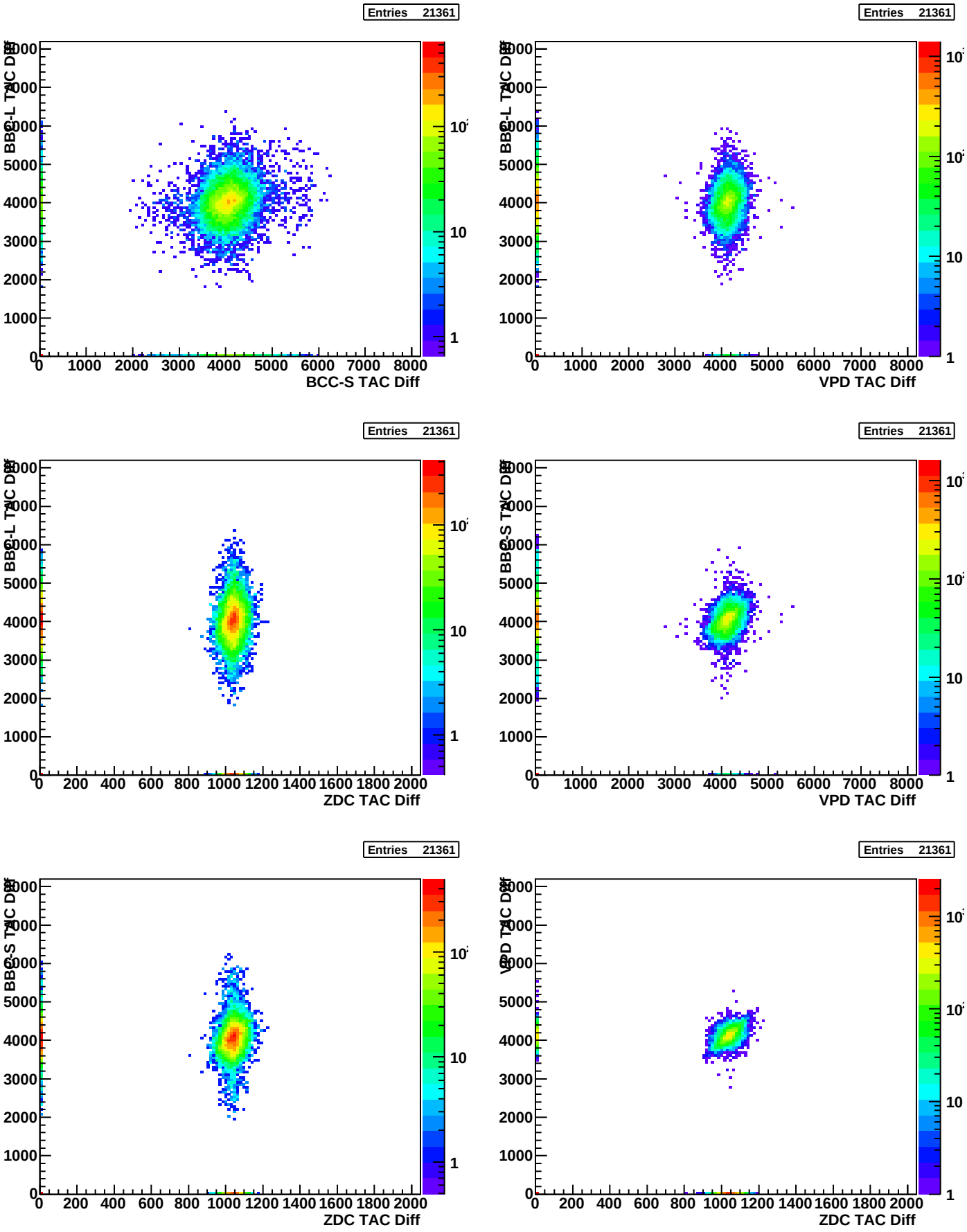

Entries 21361
VPD-West ADC Sum
ZDC-West ADC Sum Att

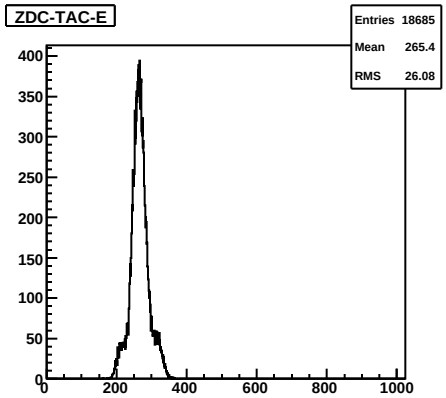

Entries 21361
BBC-L-East ADC Sum
BBC-L-West ADC Sum

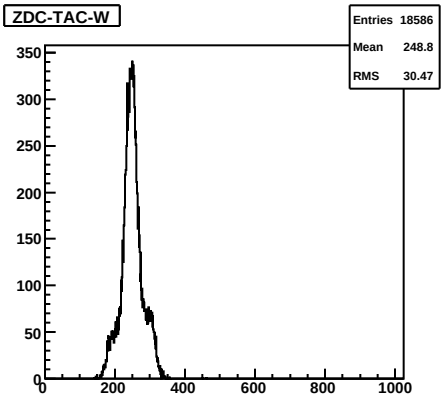

Entries 21361
BBC-S-East ADC Sum
BBC-S-West ADC Sum

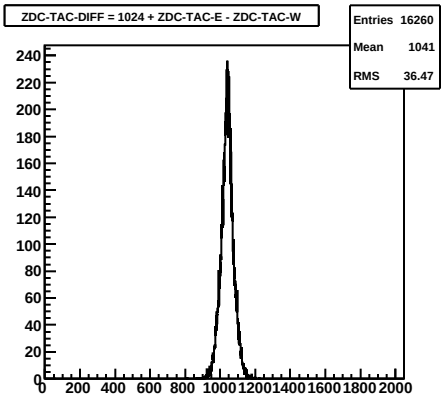

Entries 21361
VPD East ADC Sum
VPD West ADC Sum

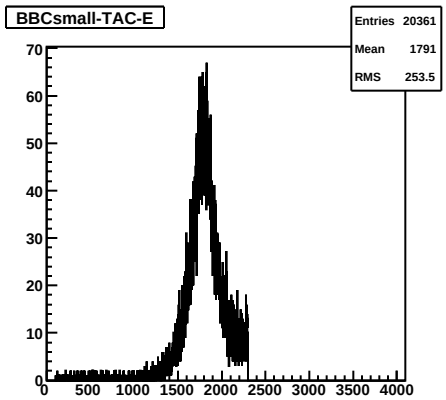

Entries 21361
ZDC East ADC Sum Att
ZDC West ADC Sum Att

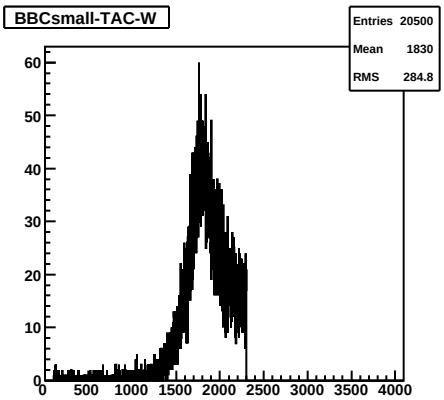

Entries 21361
BBC-L TAC Diff
BCC-S TAC Diff
Entries 21361
BBC-L TAC Diff
VPD TAC Diff
Entries 21361
BBC-L TAC Diff
ZDC TAC Diff
Entries 21361
BBC-S TAC Diff
VPD TAC Diff
Entries 21361
BBC-S TAC Diff
ZDC TAC Diff
Entries 21361
VPD TAC Diff
ZDC TAC Diff

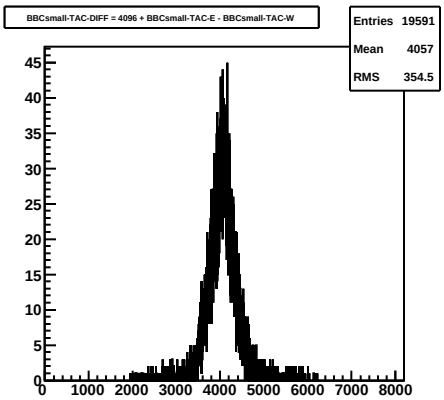

ZDC-TAC-E
Entries 18685
Mean 265.4
RMS 26.08

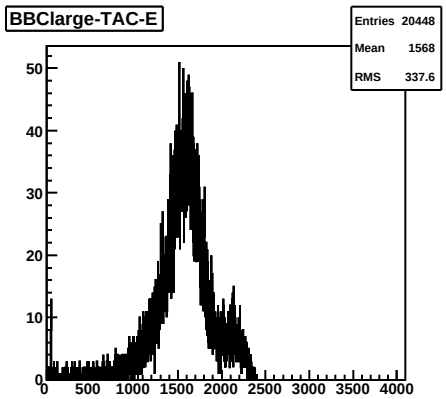

ZDC-TAC-W
Entries 18586
Mean 248.8
RMS 30.47

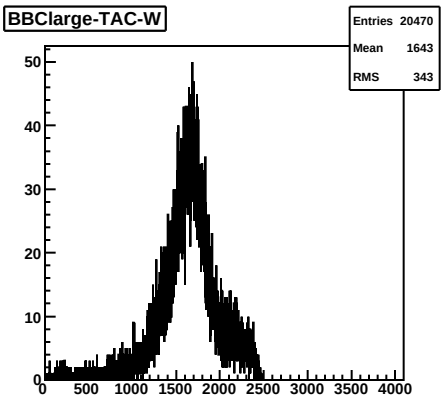

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 16260
Mean 1041
RMS 36.47

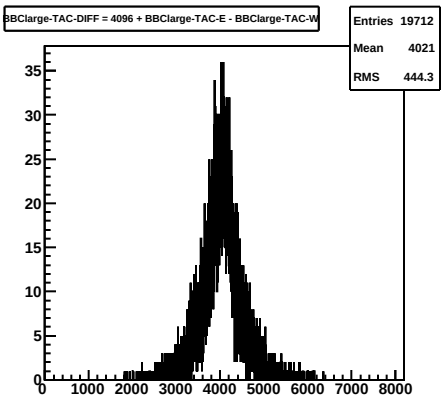

BBCsmall-TAC-E
Entries 20361
Mean 1791
RMS 253.5

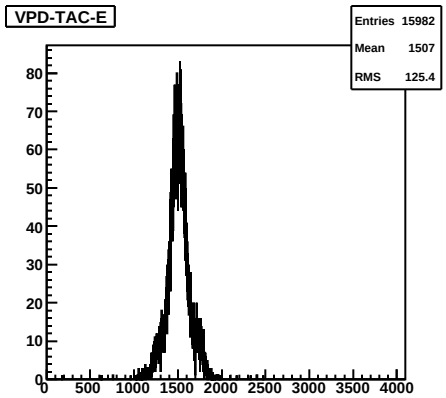

BBCsmall-TAC-W
Entries 20500
Mean 1830
RMS 284.8

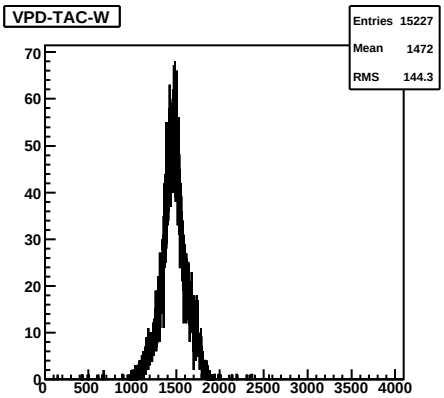

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 19591
Mean 4057
RMS 354.5

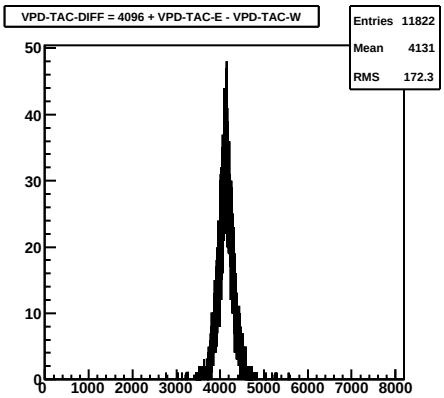

BBClarge-TAC-E
Entries 20448
Mean 1568
RMS 337.6

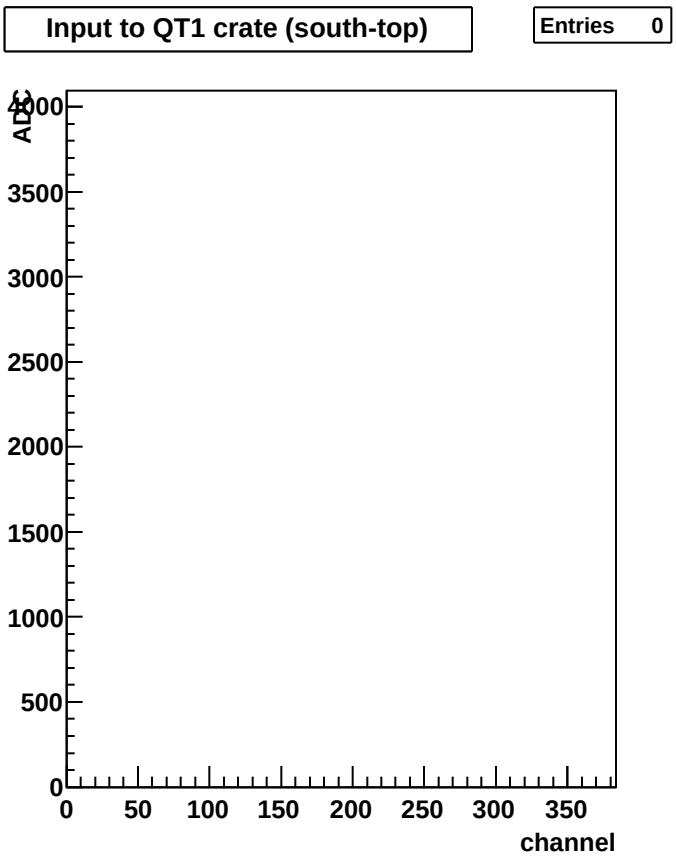

BBClarge-TAC-W
Entries 20470
Mean 1643
RMS 343

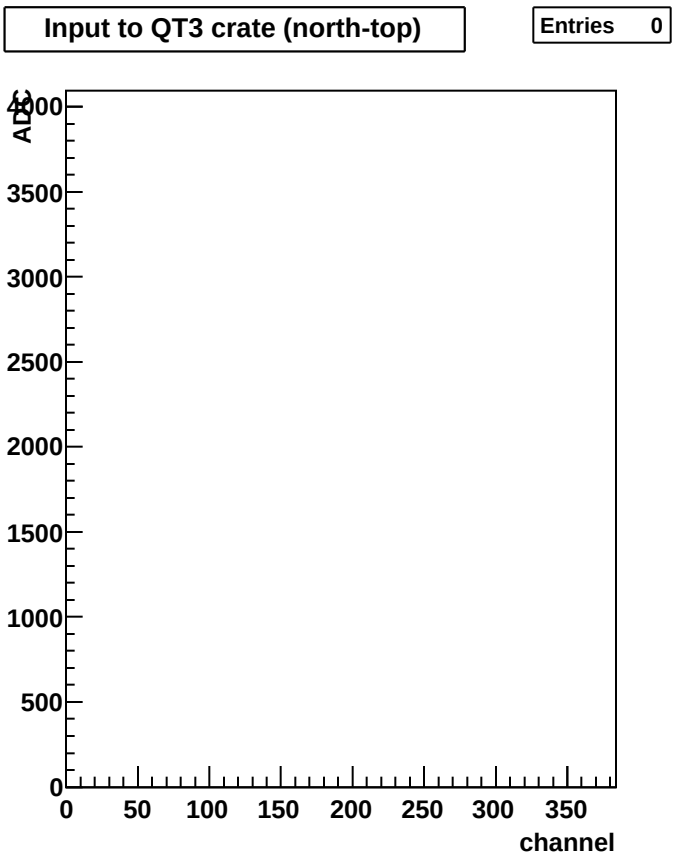

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 19712
Mean 4021
RMS 444.3

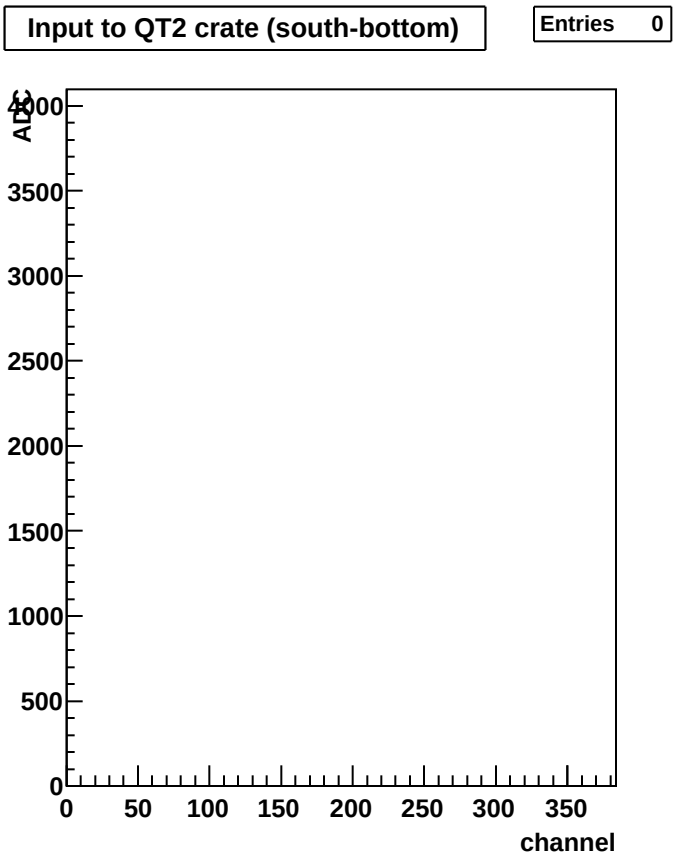

VPD-TAC-E
Entries 15982
Mean 1507
RMS 125.4

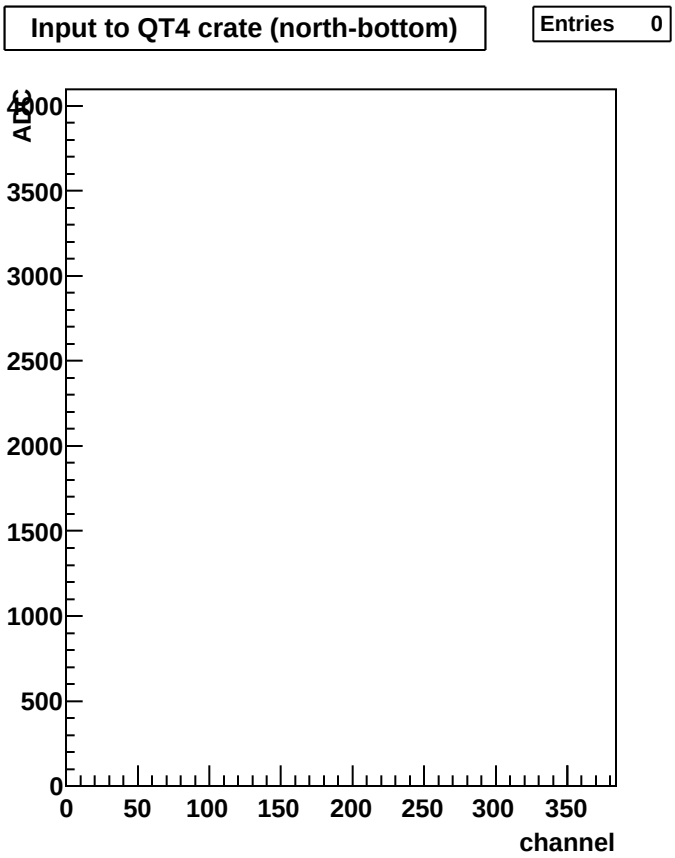

VPD-TAC-W
Entries 15227
Mean 1472
RMS 144.3

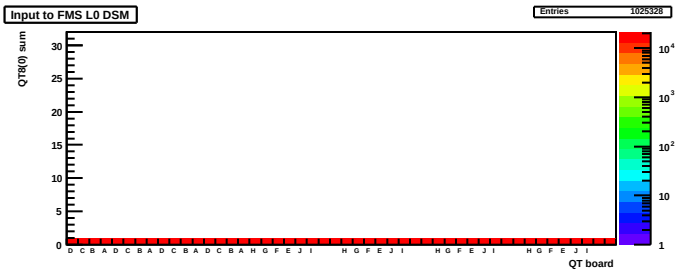

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 11822
Mean 4131
RMS 172.3

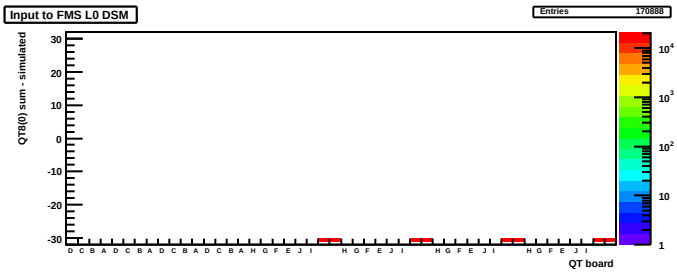

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

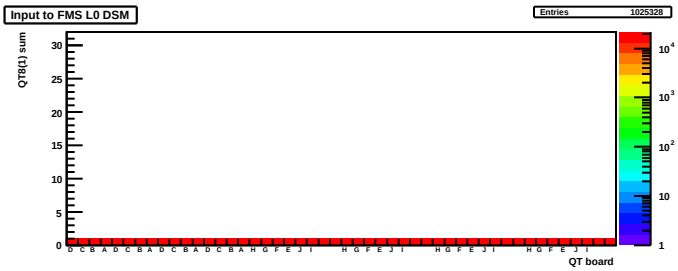

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

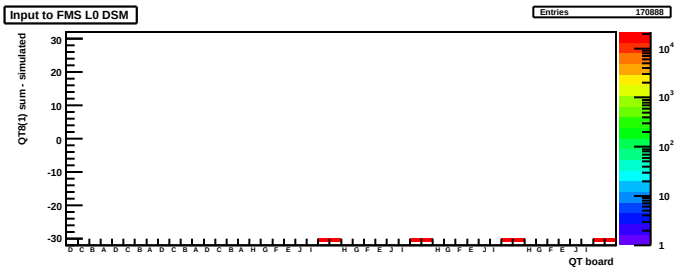

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

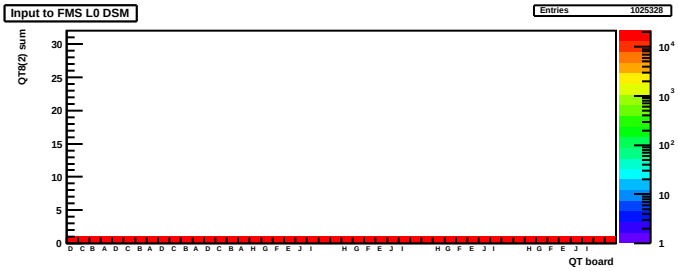

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

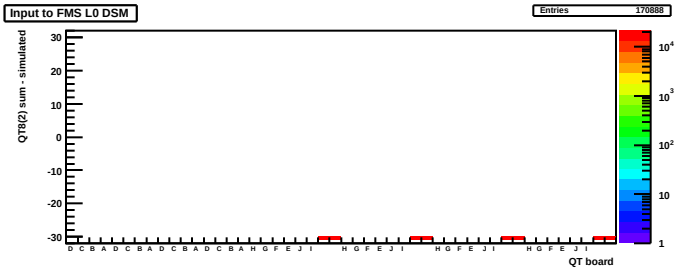

Input to FMS L0 DSM
Entries 1025328
QT8(0) sum
QT board

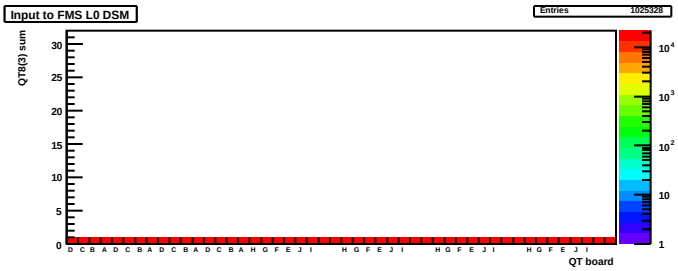

Input to FMS L0 DSM
Entries 170888
QT8(0) sum - simulated
QT board

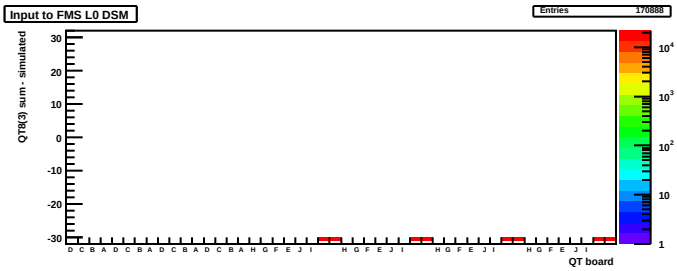

Input to FMS L0 DSM
Entries 1025328
QT8(1) sum
QT board

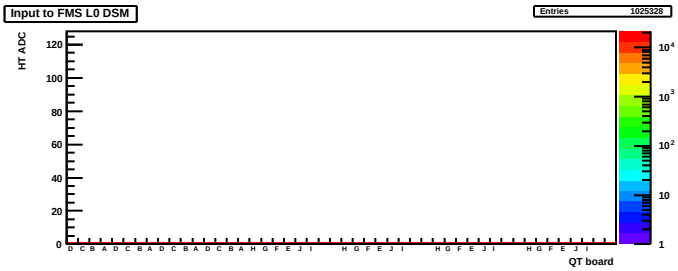

Input to FMS L0 DSM
Entries 170888
QT8(1) sum - simulated
QT board

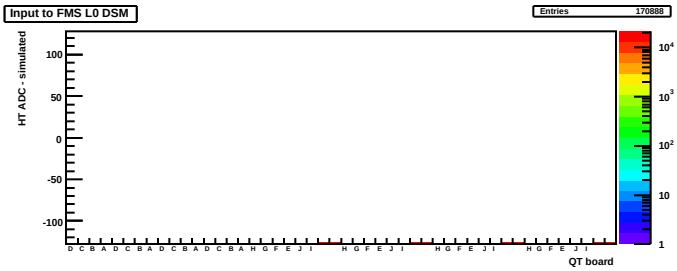

Input to FMS L0 DSM
Entries 1025328
QT8(2) sum
QT board

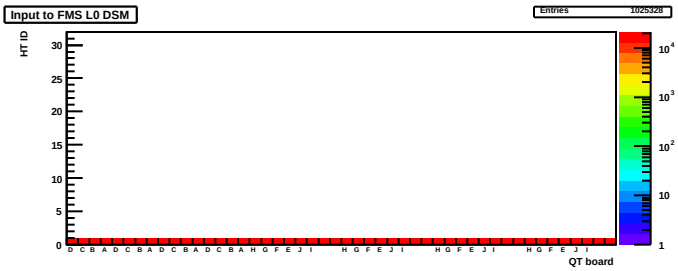

Input to FMS L0 DSM
Entries 170888
QT8(2) sum - simulated
QT board

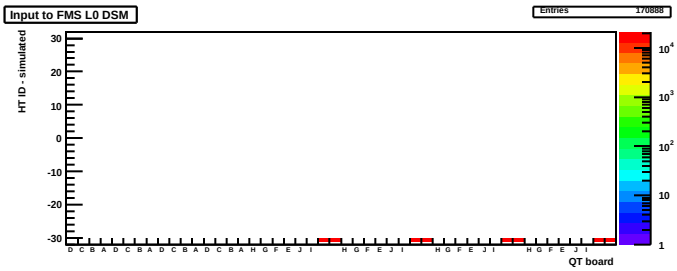

Input to FMS L0 DSM
Entries 1025328
QT8(3) sum
QT board

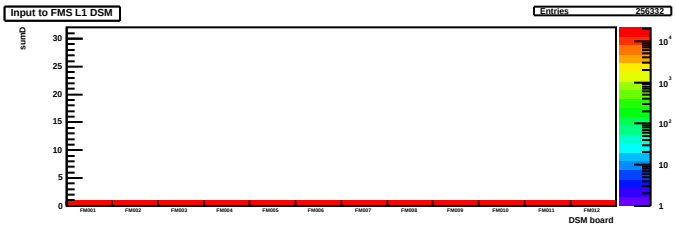

Input to FMS L0 DSM
Entries 170888
QT8(3) sum - simulated
QT board

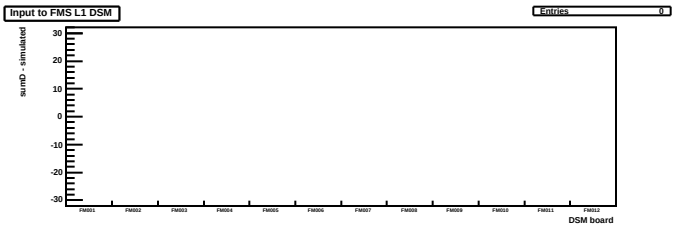

Input to FMS L0 DSM
Entries 1025328
HT ADC
QT board

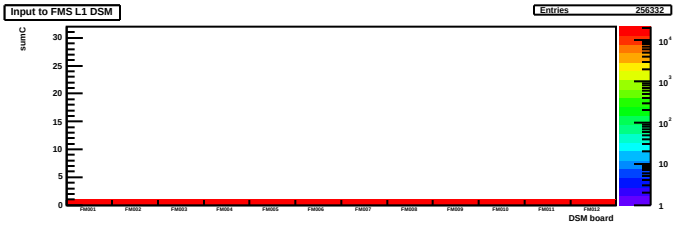

Input to FMS L0 DSM
Entries 170888
HT ADC - simulated
QT board

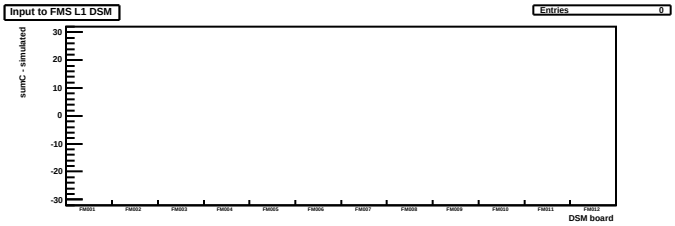

Input to FMS L0 DSM
Entries 1025328
HT ID
QT board

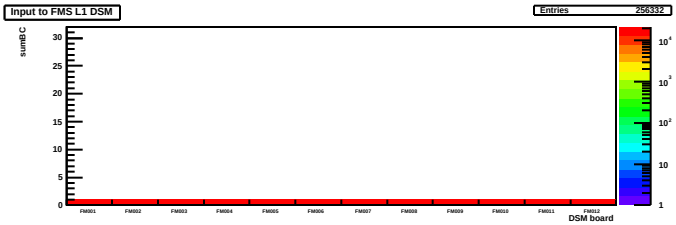

Input to FMS L0 DSM
Entries 170888
HT ID - simulated
QT board

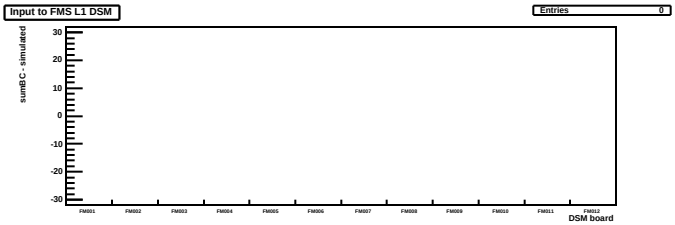

Input to FMS L1 DSM
Entries 256332
sumD
DSM board

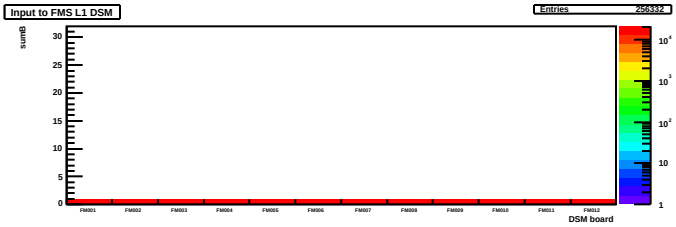

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

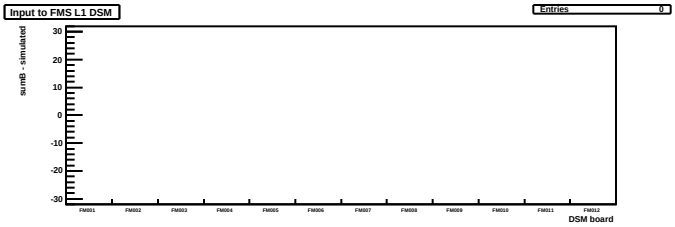

Input to FMS L1 DSM
Entries 256332
sumC
DSM board

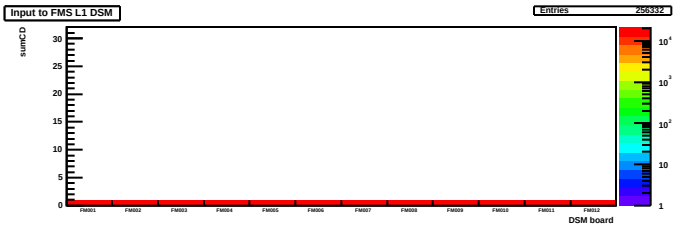

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

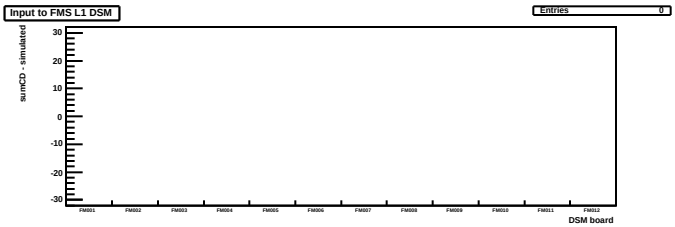

Input to FMS L1 DSM
Entries 256332
sumBC
DSM board

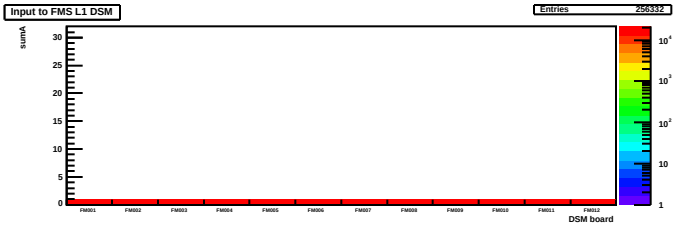

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

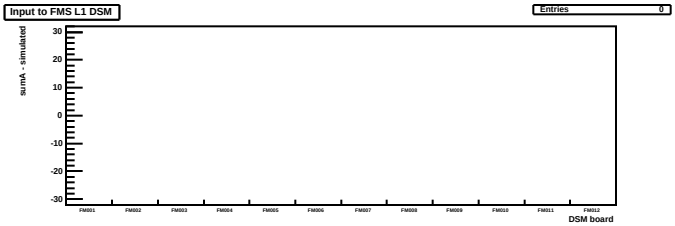

Input to FMS L1 DSM
Entries 256332
sumB
DSM board

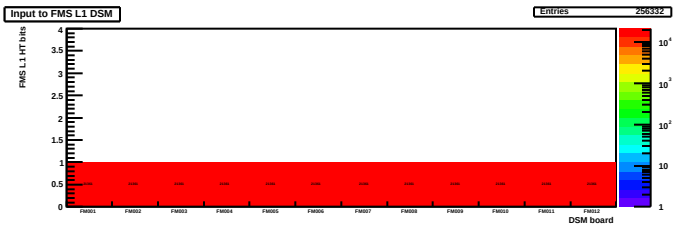

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

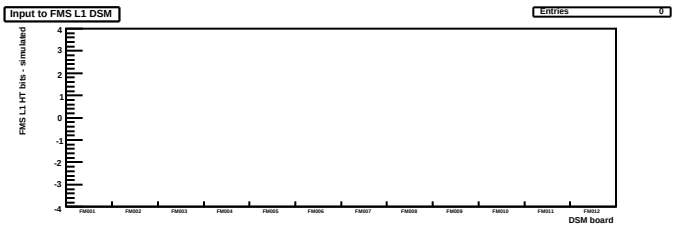

Input to FMS L1 DSM
Entries 256332
sumCD
DSM board

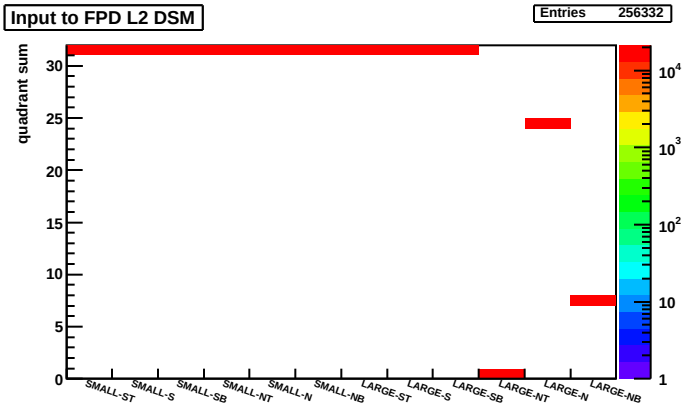

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

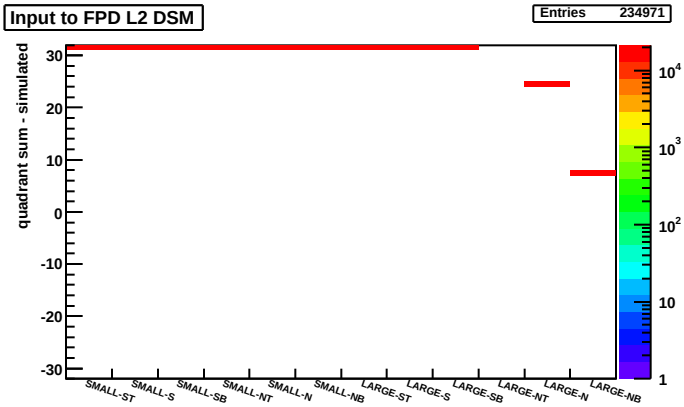

Input to FMS L1 DSM
Entries 256332
sumA
DSM board

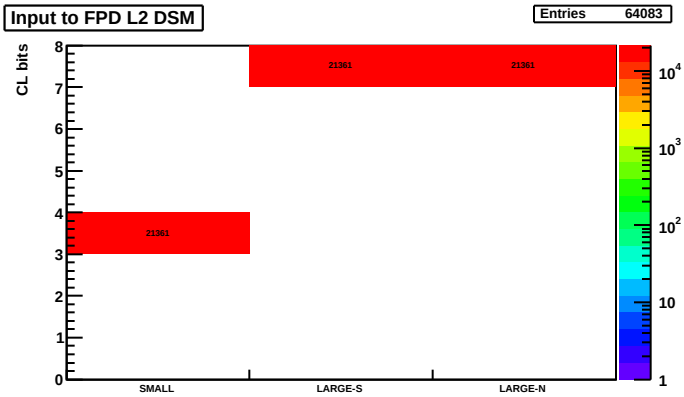

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

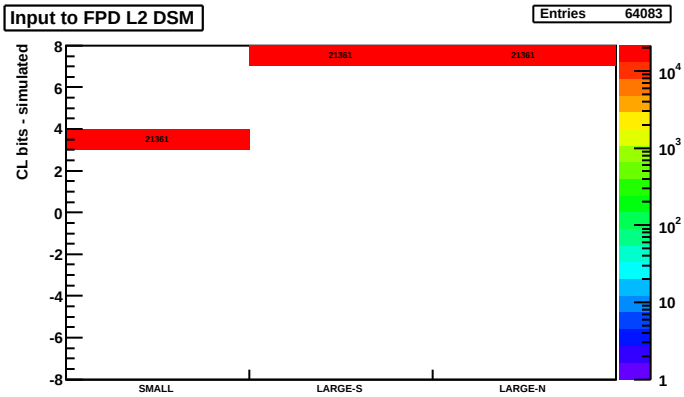

Input to FMS L1 DSM
Entries 256332
FMS L1 HT bits
DSM board

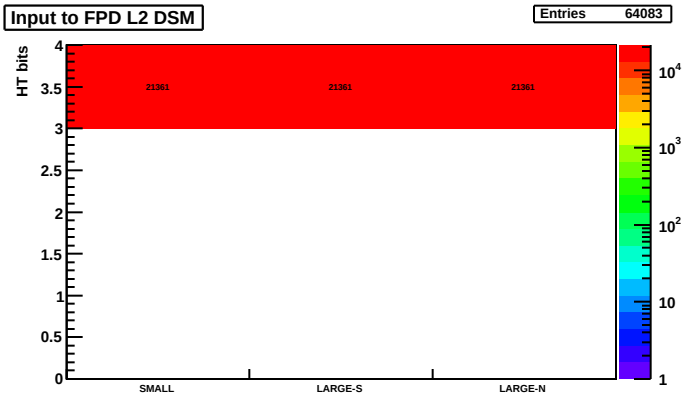

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

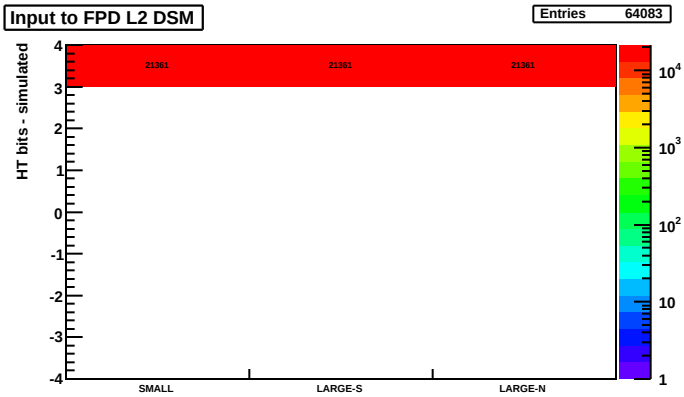

Input to FPD L2 DSM
Entries 256332
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

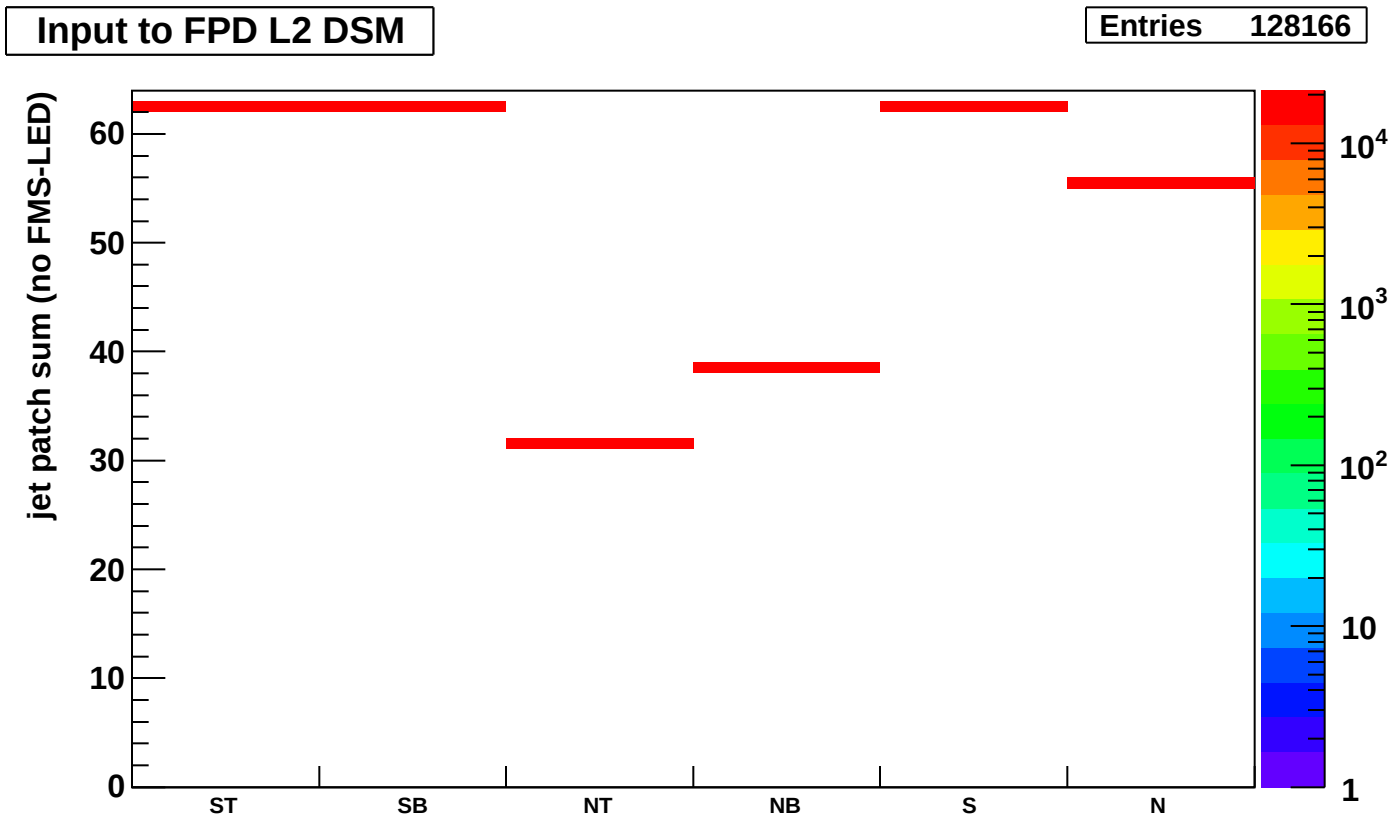

Input to FPD L2 DSM
Entries 234971
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

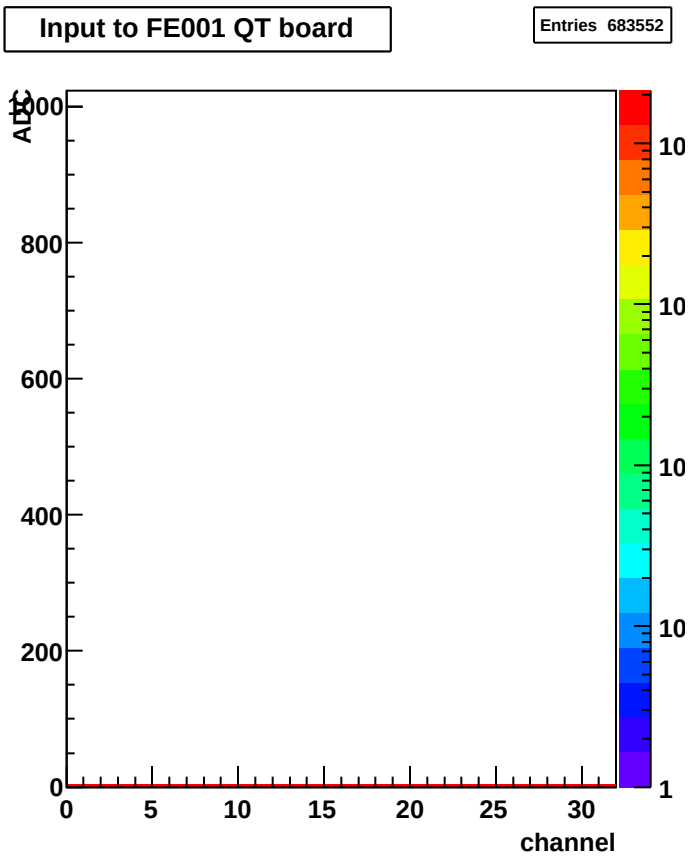

Input to FPD L2 DSM
Entries 64083
CL bits
21361
21361
21361
SMALL
LARGE-S
LARGE-N

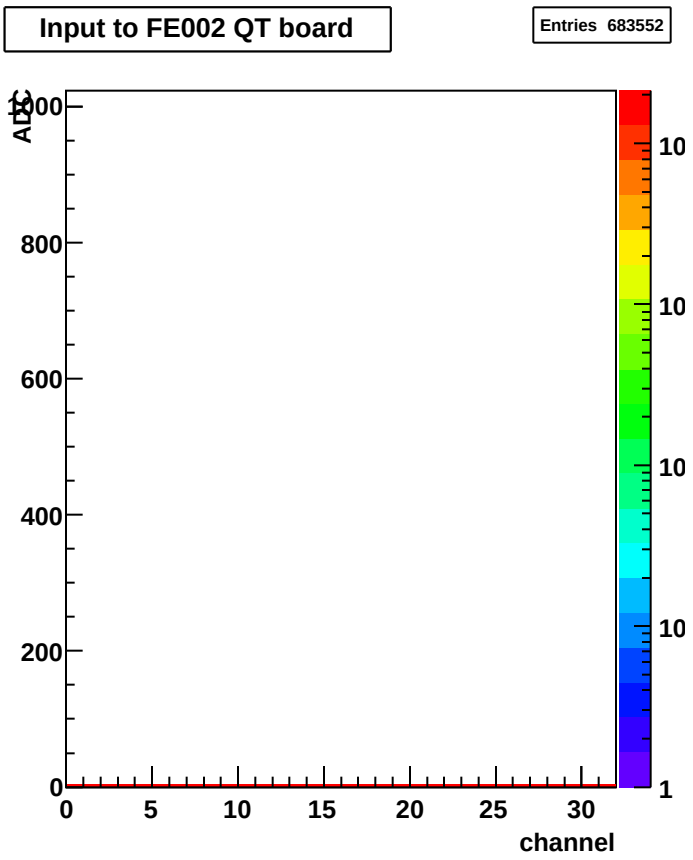

Input to FPD L2 DSM
Entries 64083
CL bits - simulated
21361
21361
21361
SMALL
LARGE-S
LARGE-N

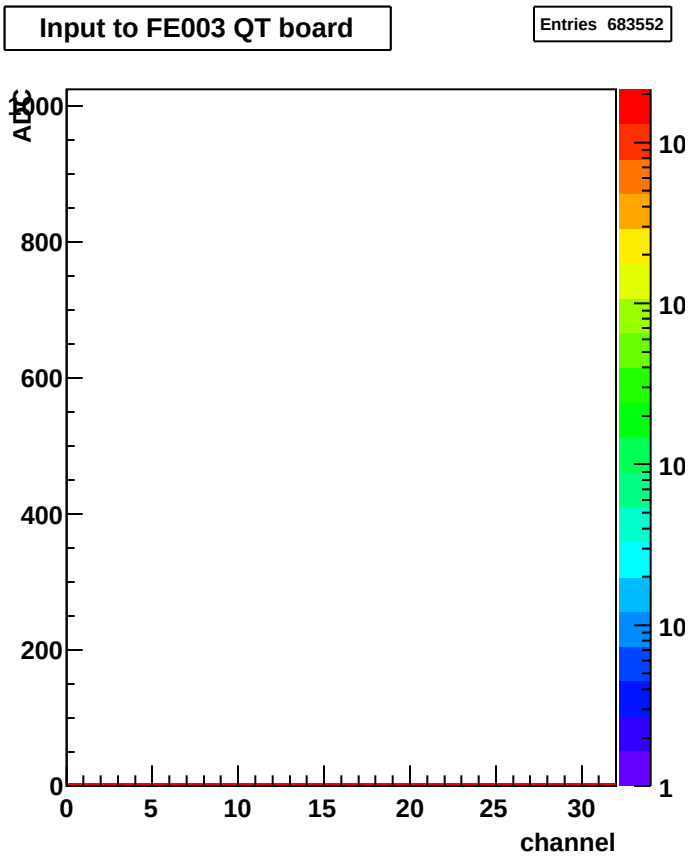

Input to FPD L2 DSM
Entries 64083
HT bits
21361
21361
21361
SMALL
LARGE-S
LARGE-N

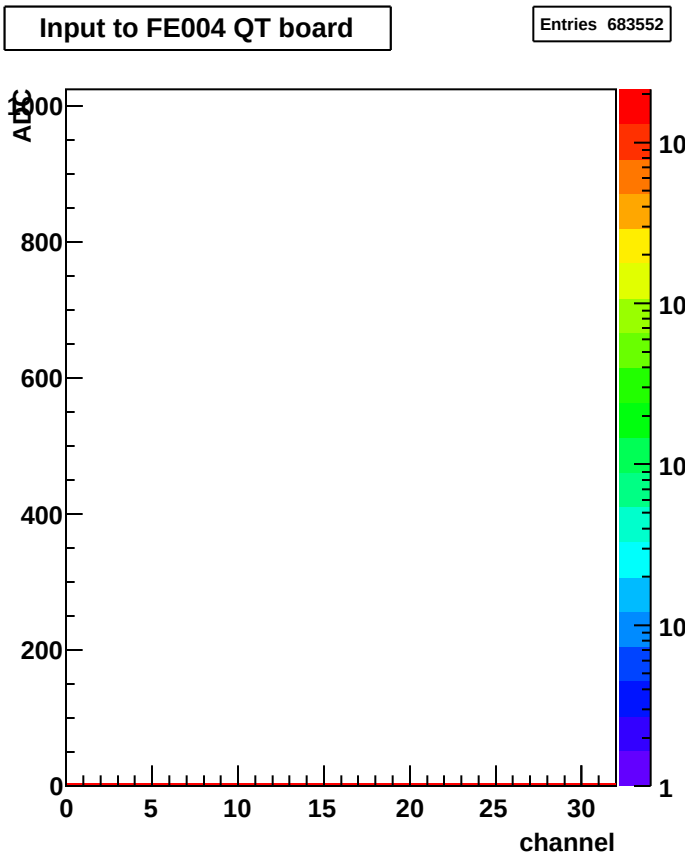

Input to FPD L2 DSM
Entries 64083
HT bits - simulated
21361
21361
21361
SMALL
LARGE-S
LARGE-N

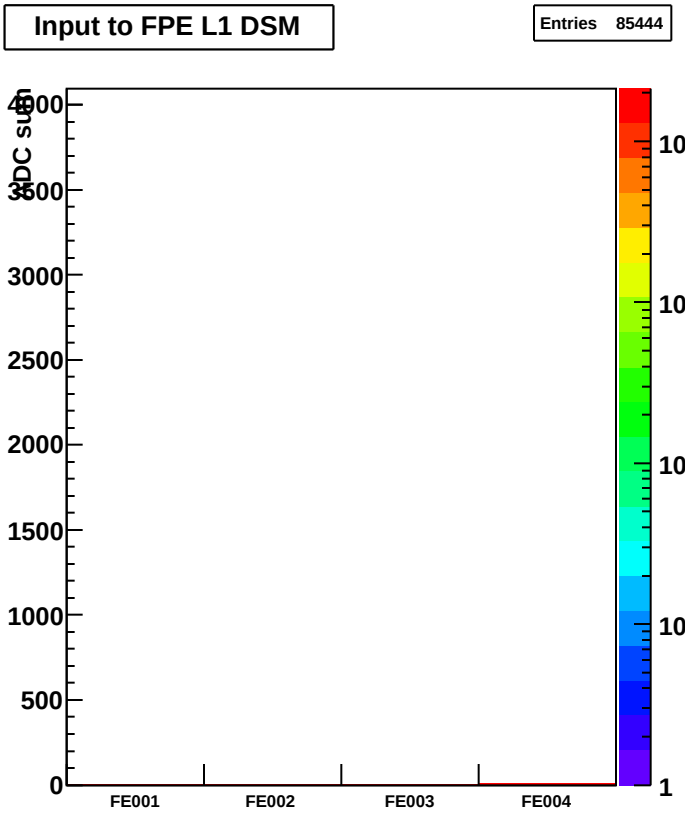

Input to FPD L2 DSM
Entries 128166
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

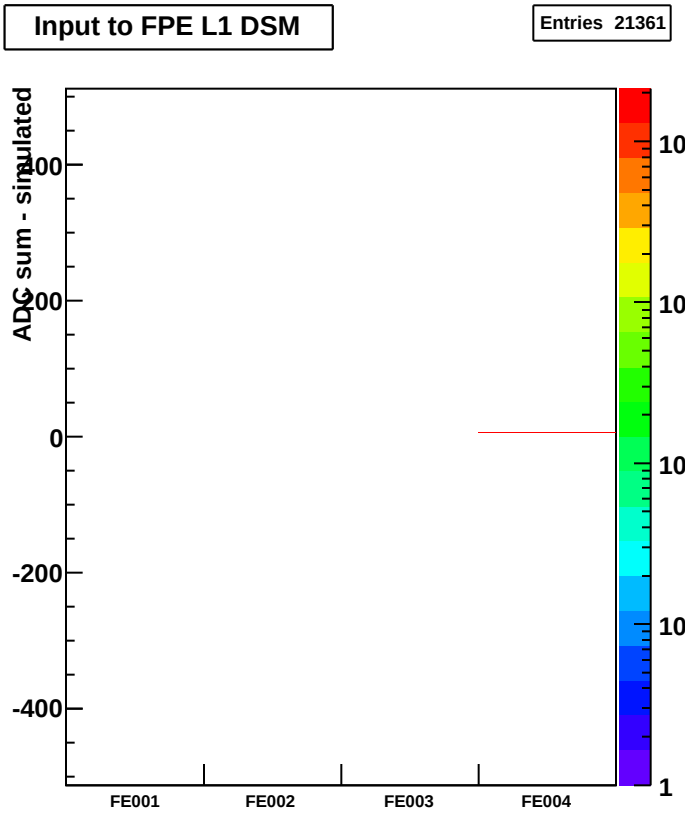

Input to FE001 QT board
Entries 683552
ADC
channel

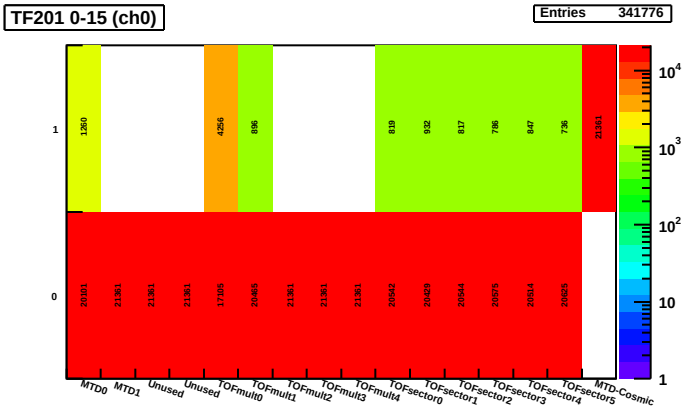

Input to FE002 QT board
Entries 683552
ADC
channel

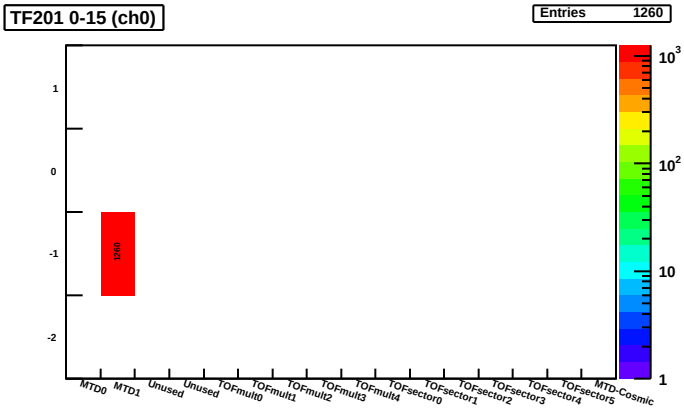

Input to FE003 QT board
Entries 683552
ADC
channel

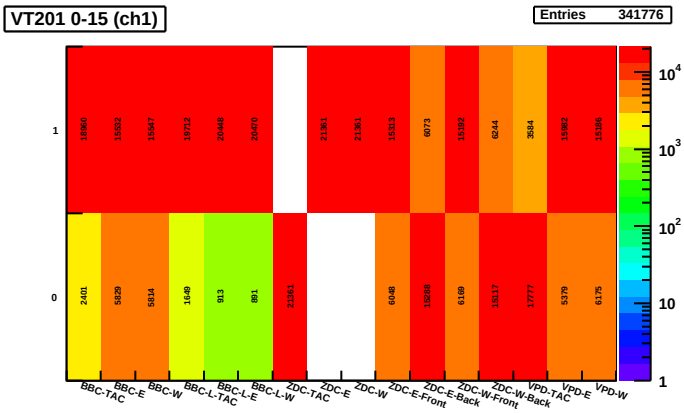

Input to FE004 QT board
Entries 683552
ADC
channel

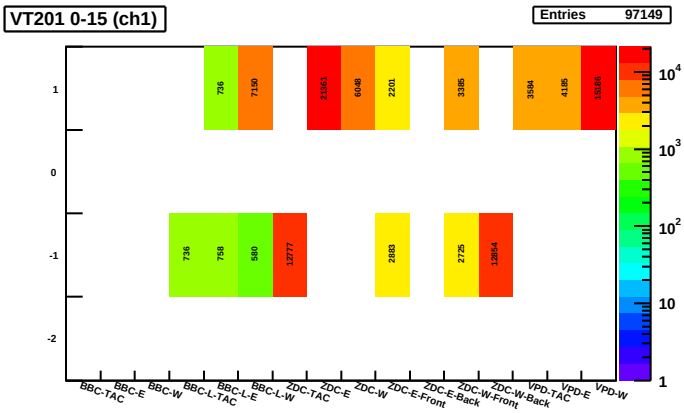

Input to FPE L1 DSM
Entries 85444
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1

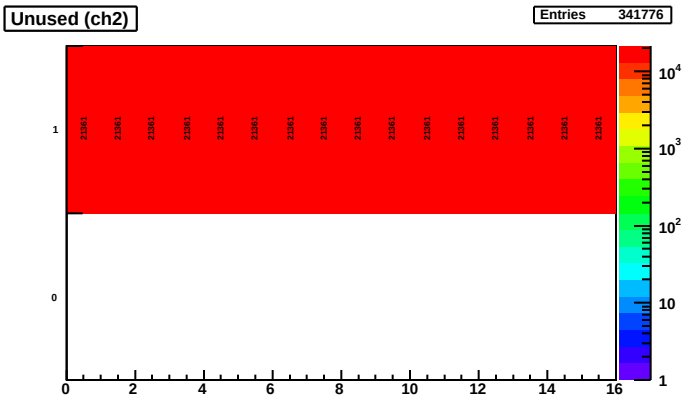

Input to FPE L1 DSM
Entries 21361
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1


TF201 0-15 (ch0)
Entries 341776
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 1260
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 341776
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 97149
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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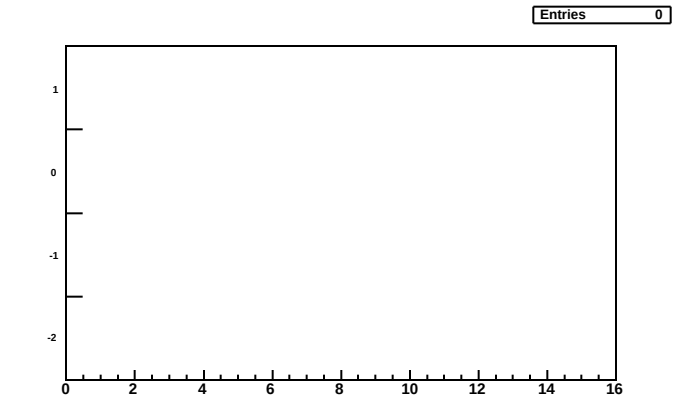
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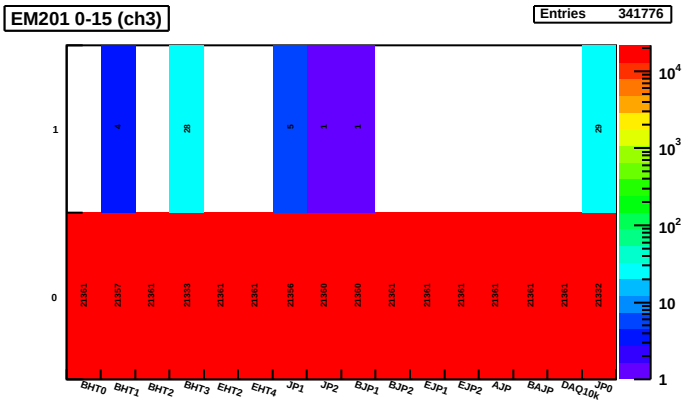
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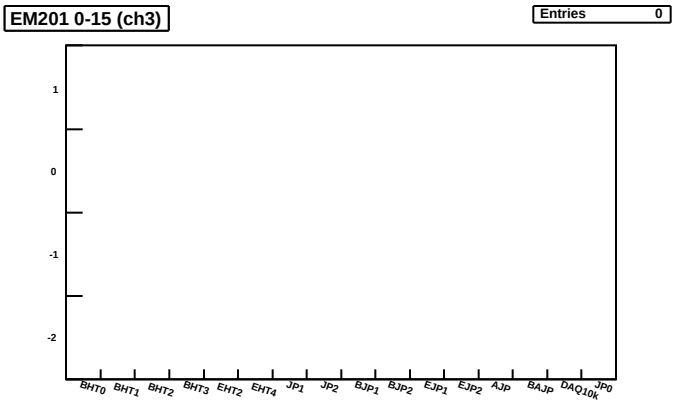
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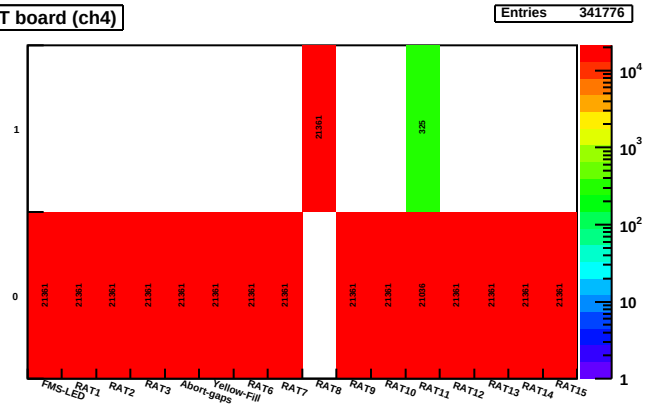
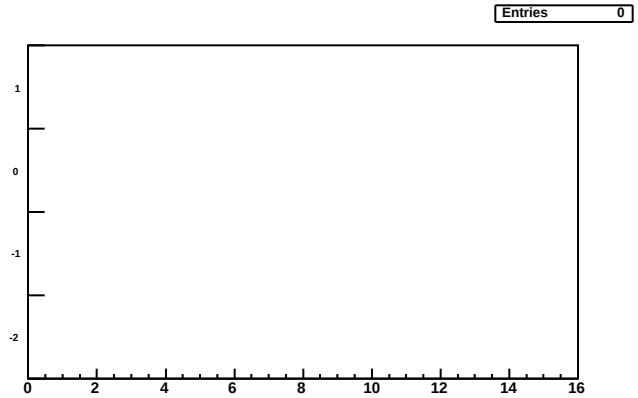
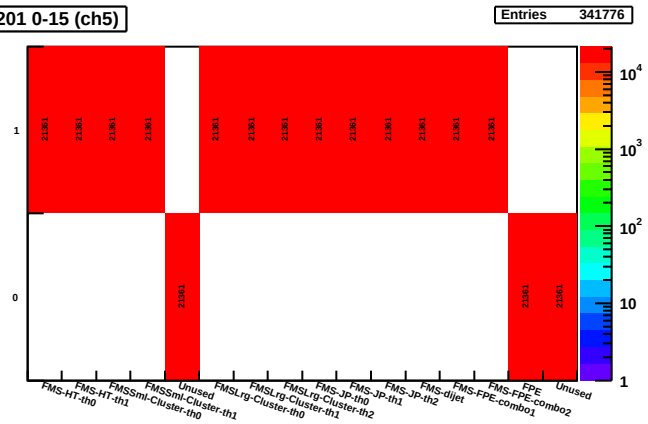
RAT board (ch4)





FP201 0-15 (ch5)



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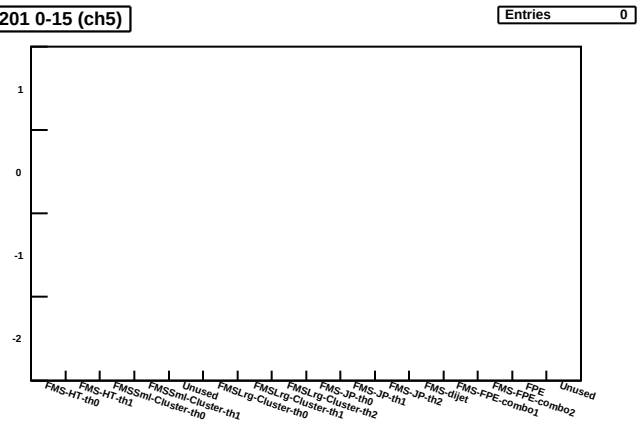
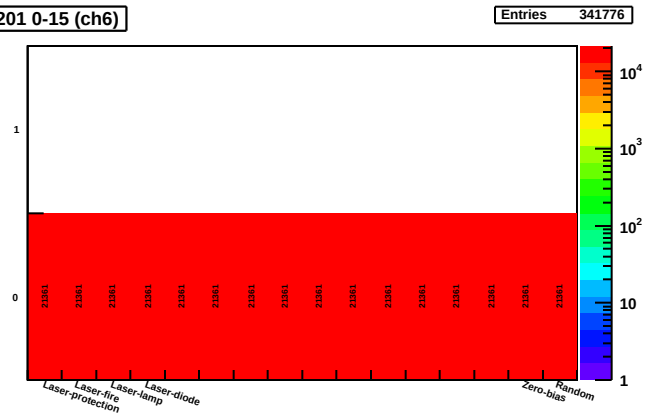
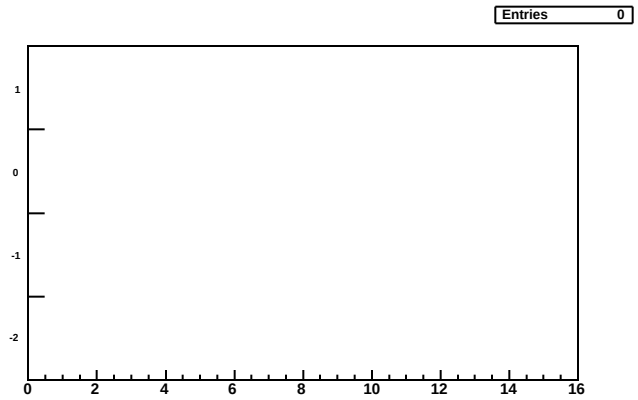
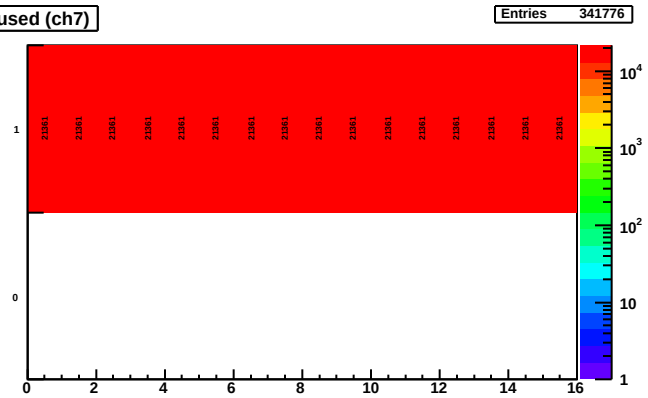
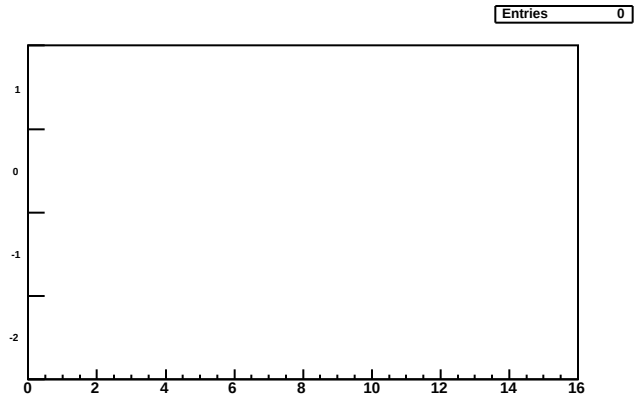


ST201 0-15 (ch6)





Unused (ch7)