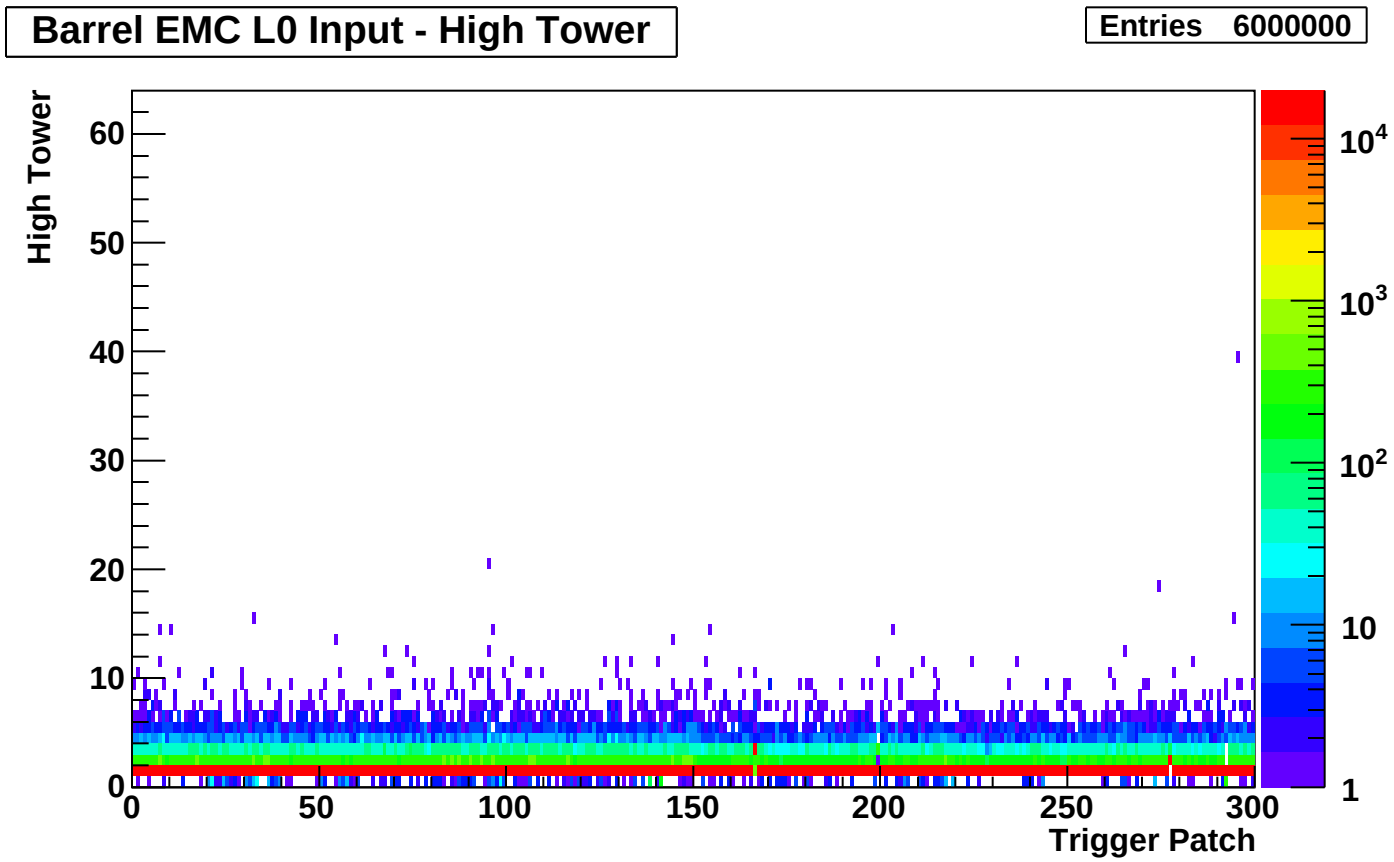
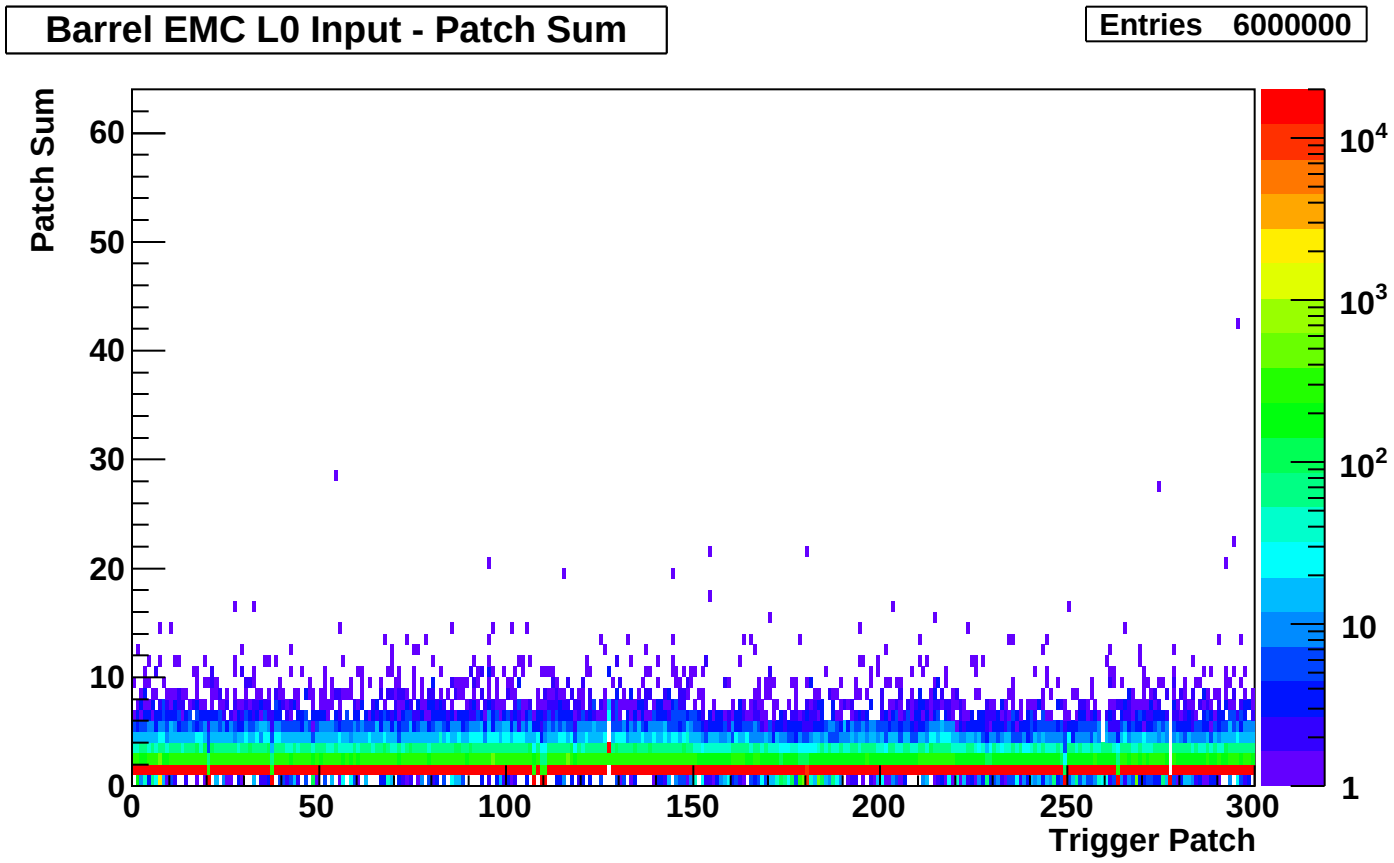
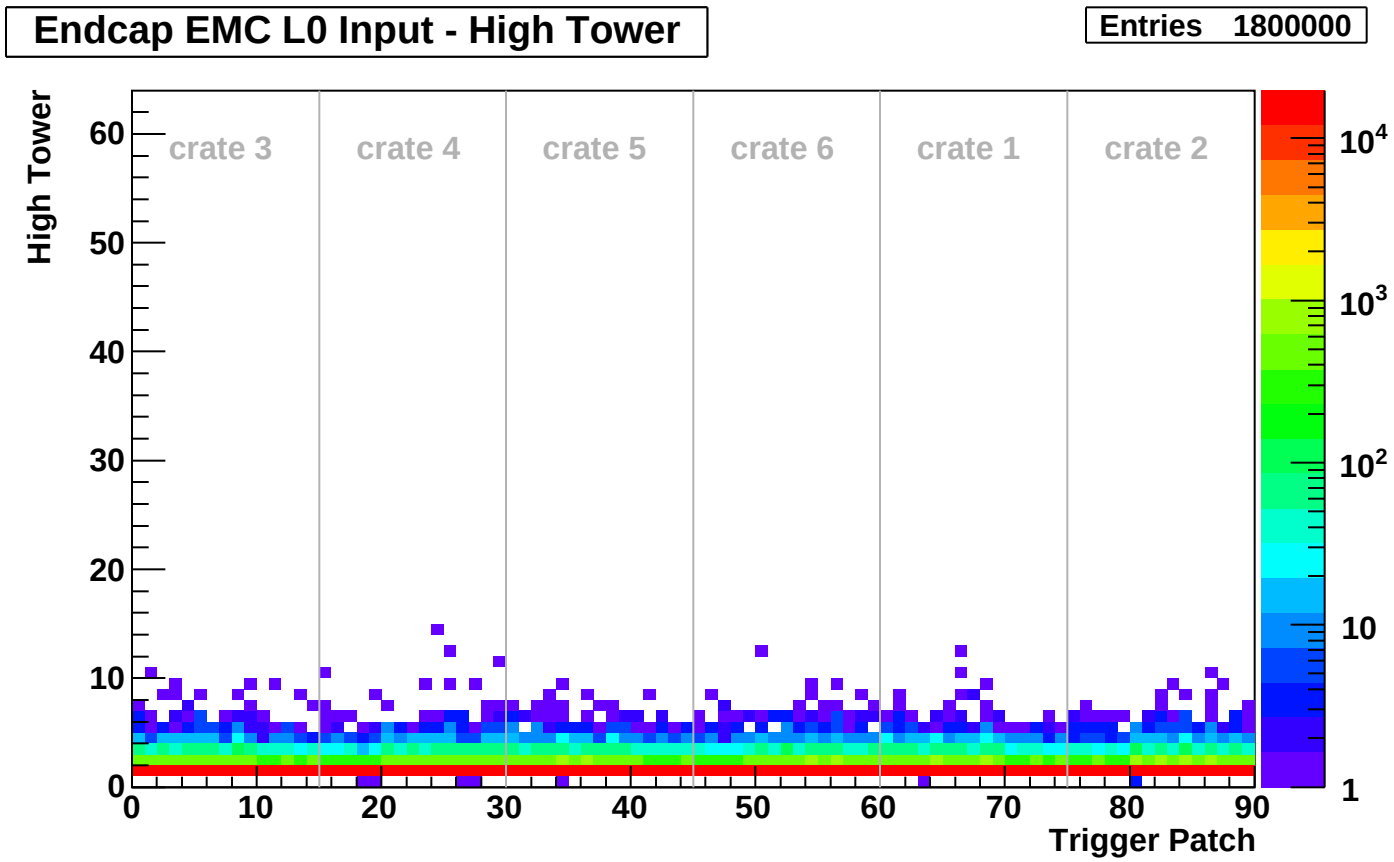
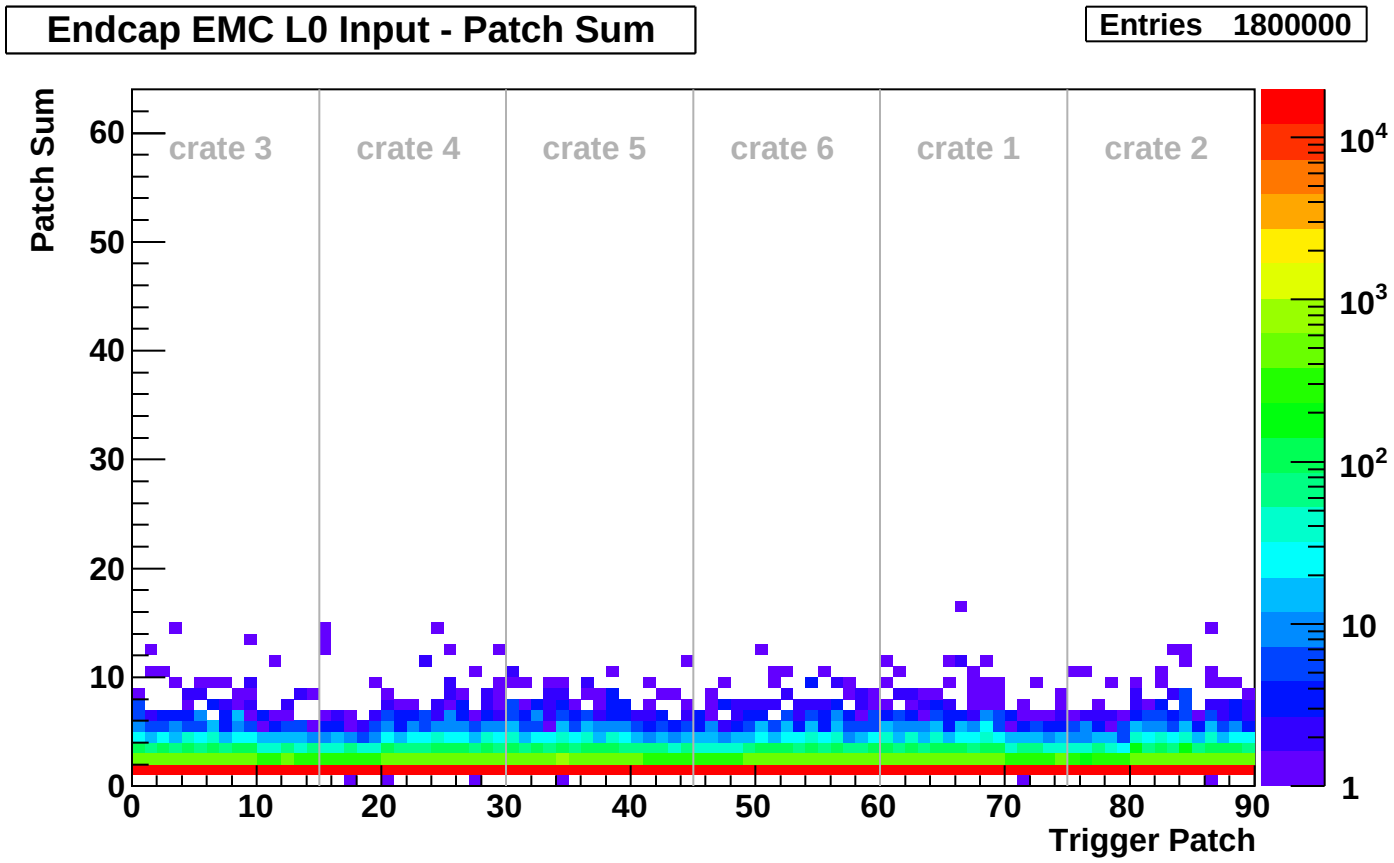
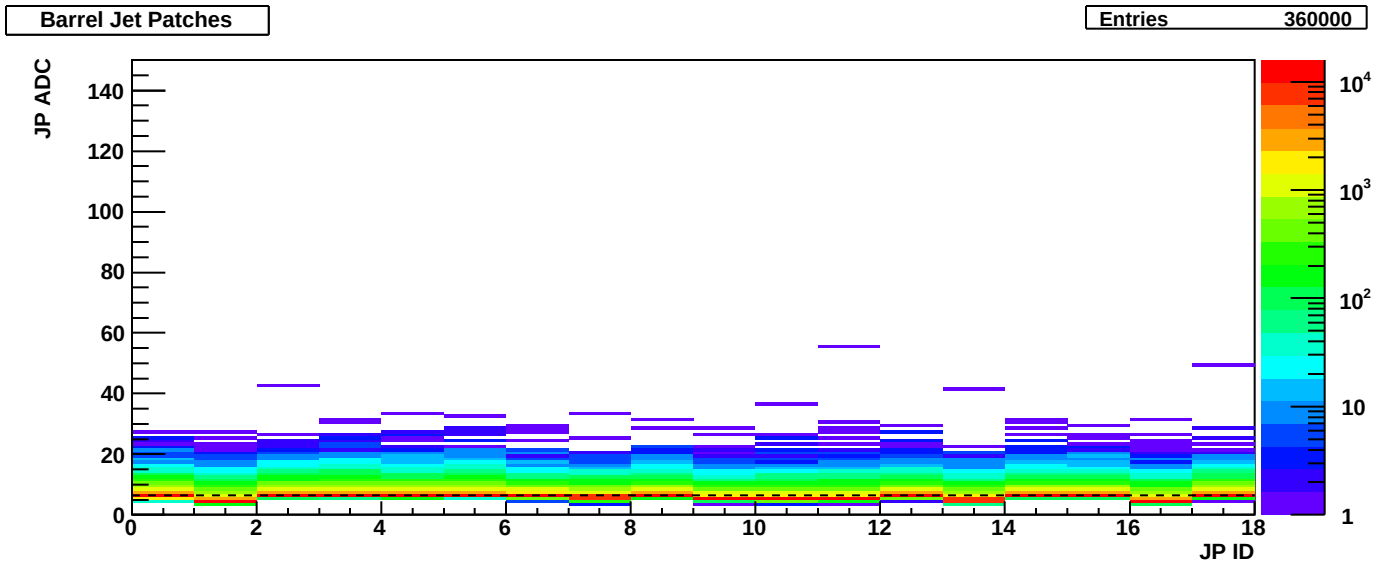
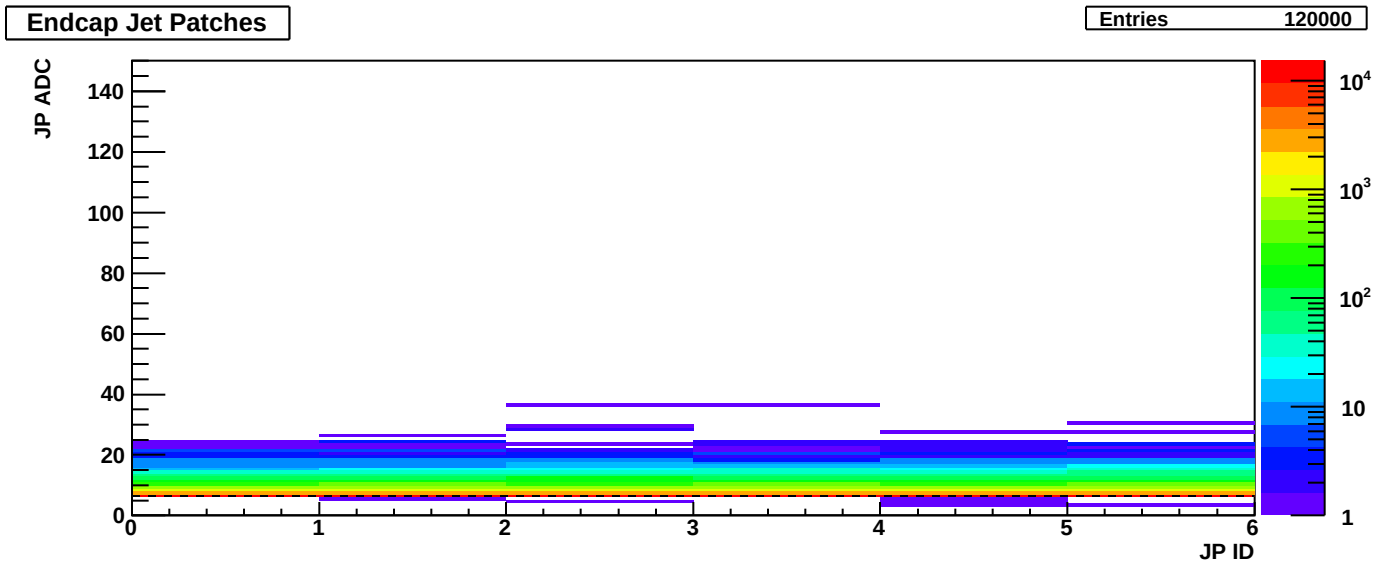

Barrel EMC L0 Input - High Tower
Entries 6000000
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

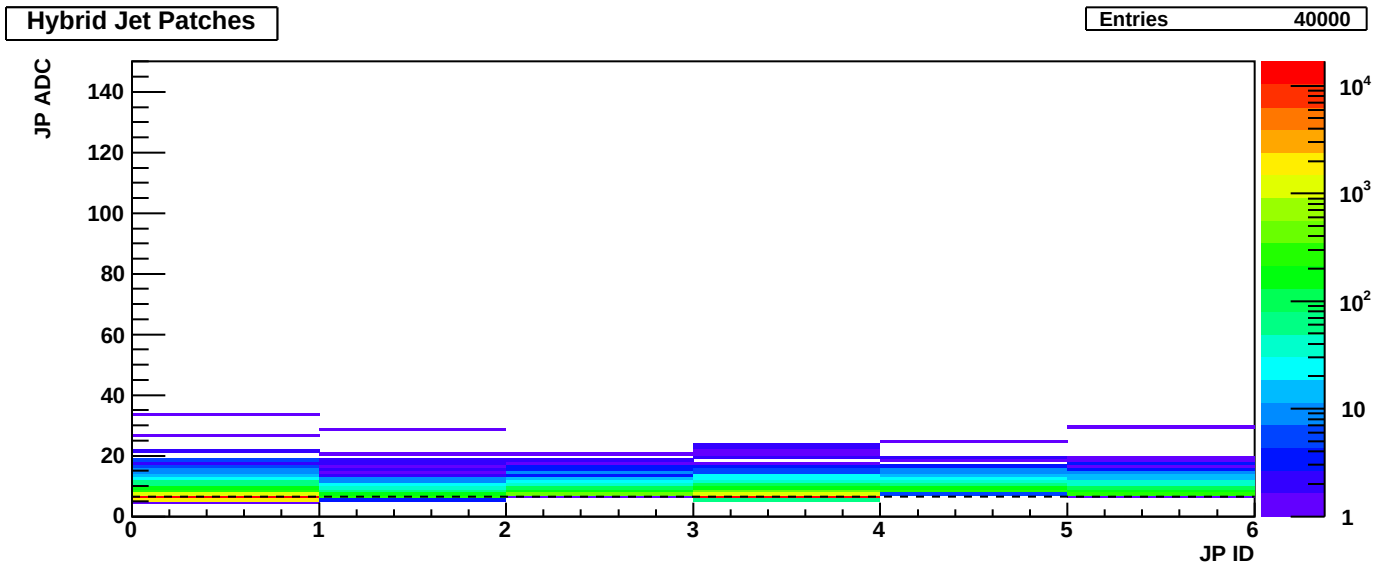

Barrel EMC L0 Input - Patch Sum
Entries 6000000
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

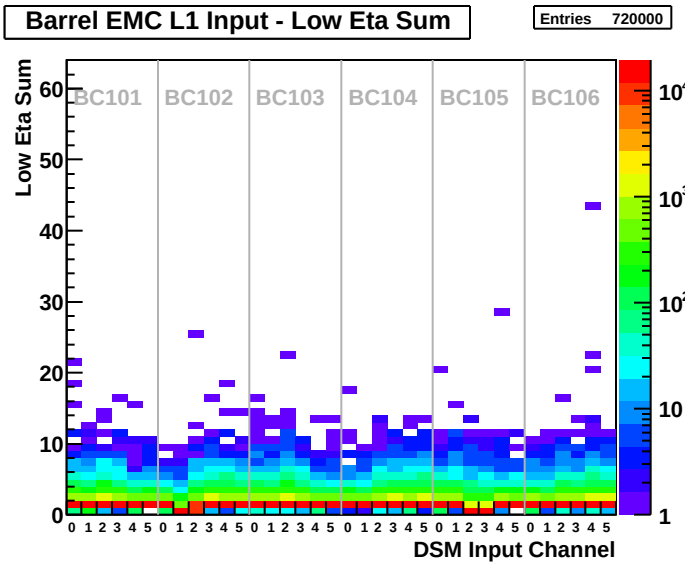

Endcap EMC L0 Input - High Tower
Entries 1800000
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

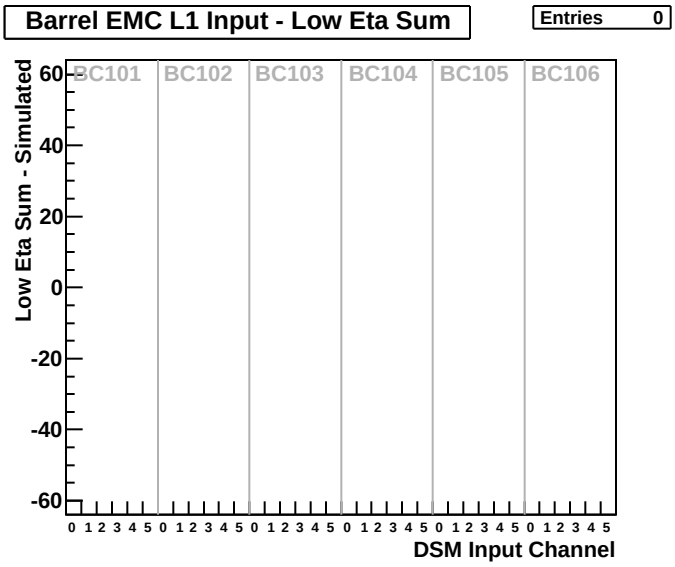

Endcap EMC L0 Input - Patch Sum
Entries 1800000
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

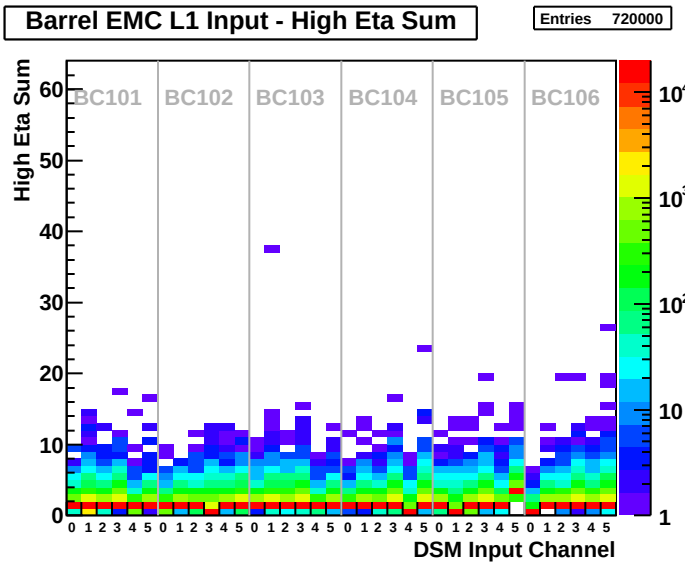

Barrel Jet Patches
Entries 360000
JP ADC
JP ID

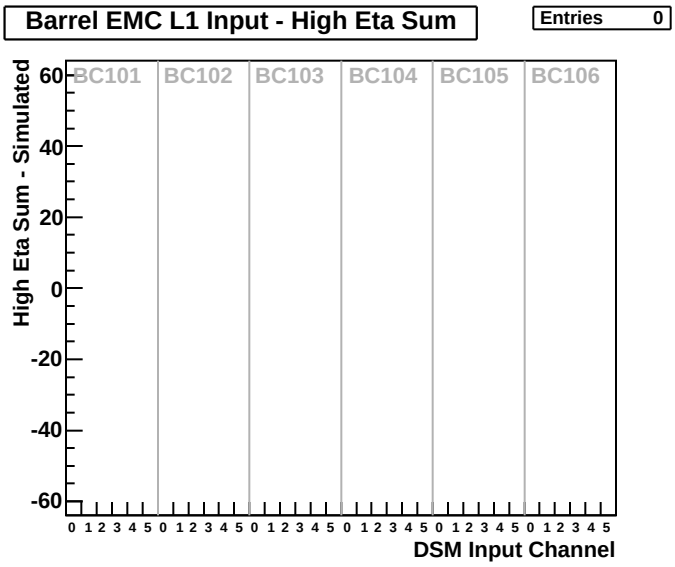

Endcap Jet Patches
Entries 120000
JP ADC
JP ID

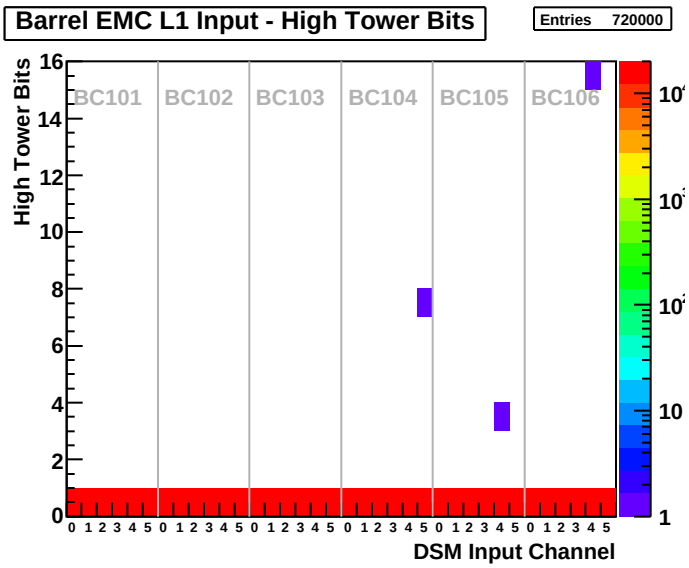

Hybrid Jet Patches
Entries 40000
JP ADC
JP ID

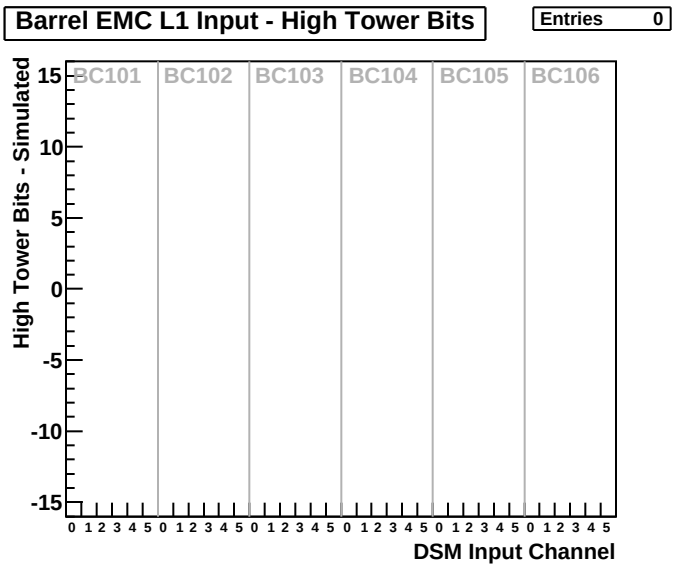

Barrel EMC L1 Input - Low Eta Sum
Entries 720000
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

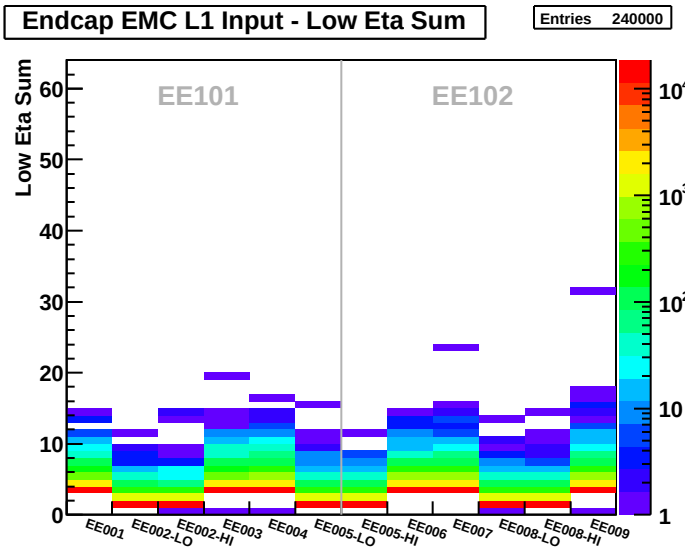

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

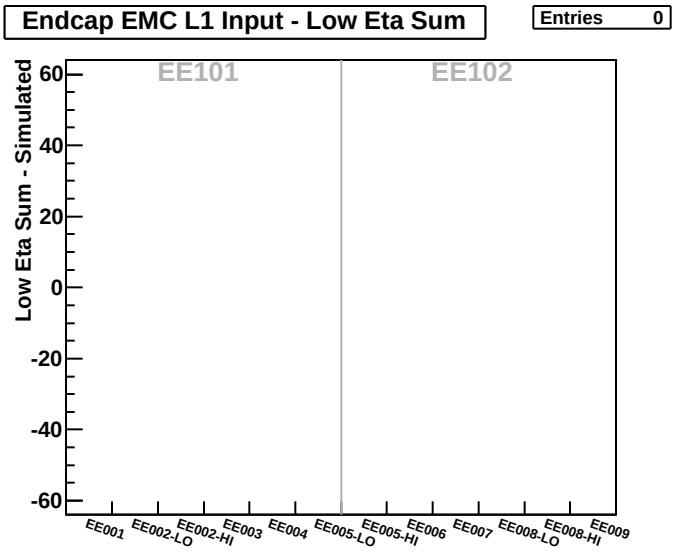

Barrel EMC L1 Input - High Eta Sum
Entries 720000
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

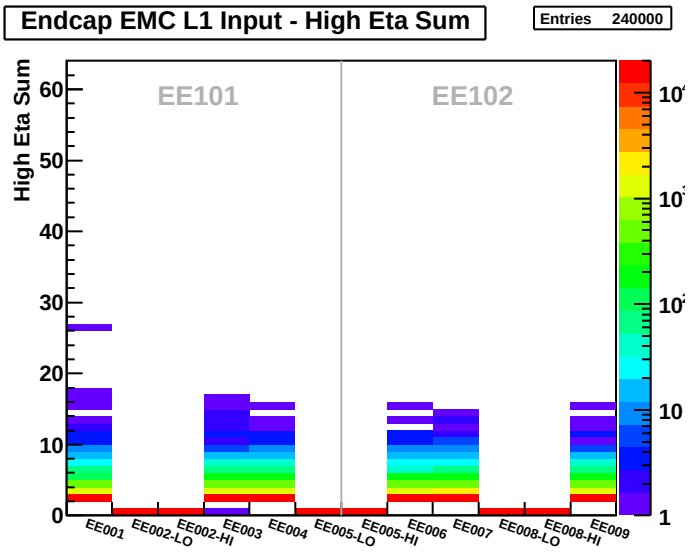

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

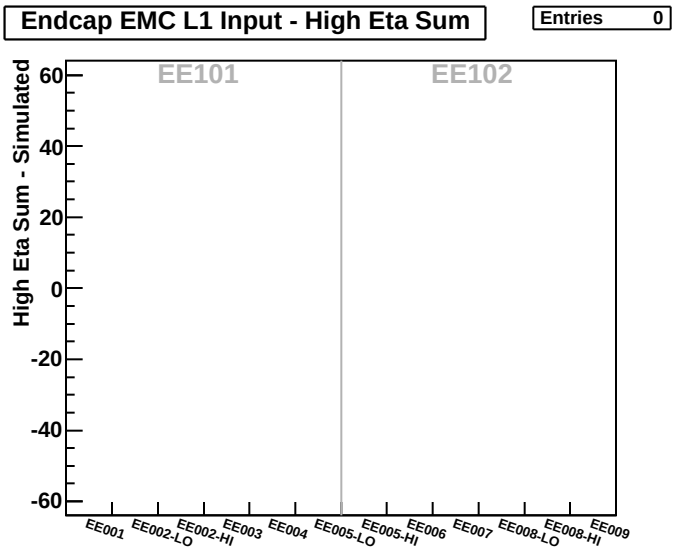

Barrel EMC L1 Input - High Tower Bits
Entries 720000
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

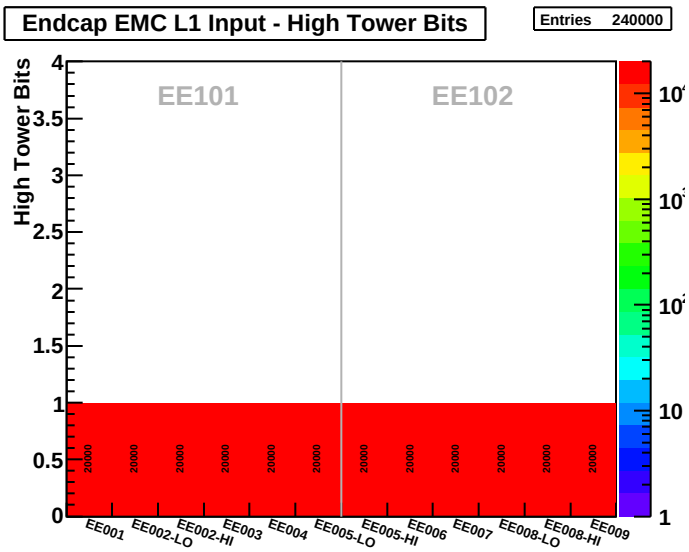

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

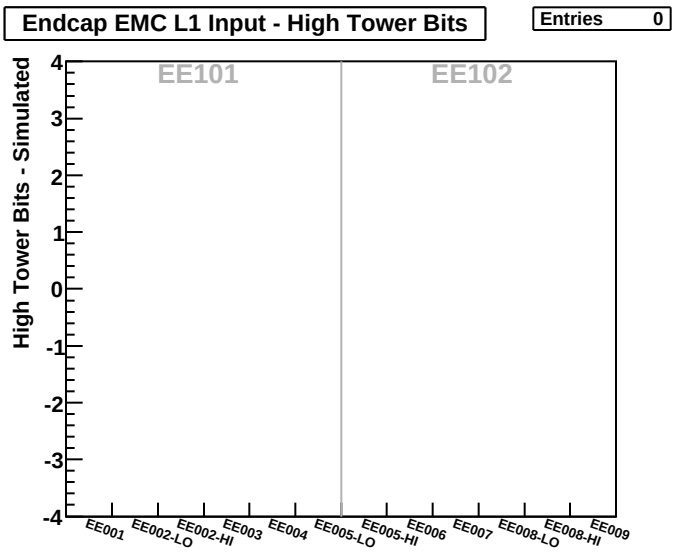

Endcap EMC L1 Input - Low Eta Sum
Entries 240000
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

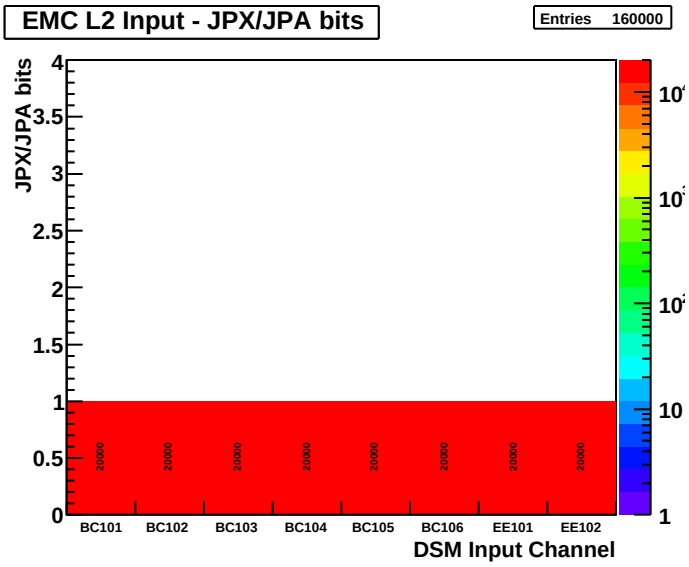

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

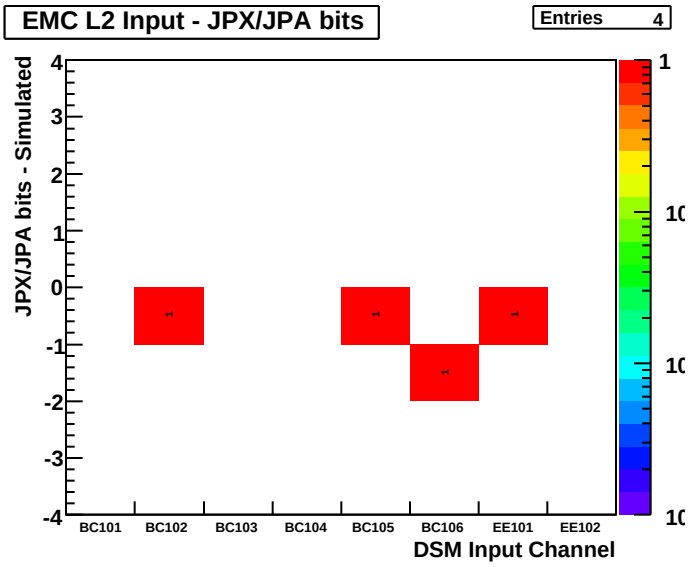

Endcap EMC L1 Input - High Eta Sum
Entries 240000
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

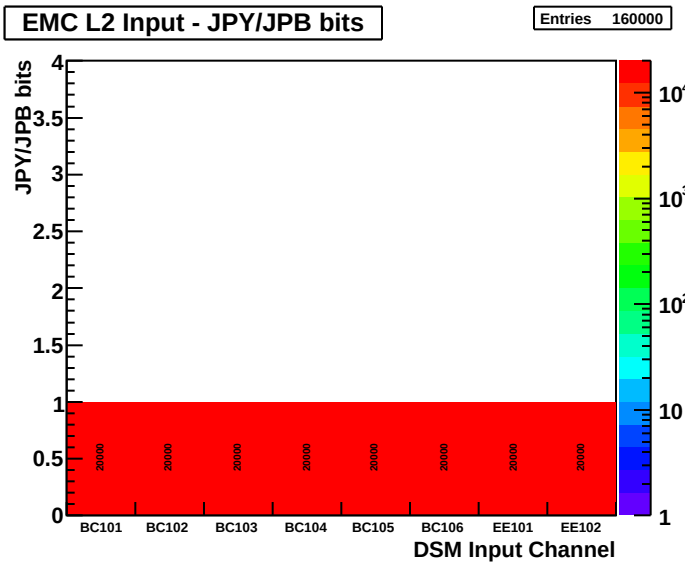

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

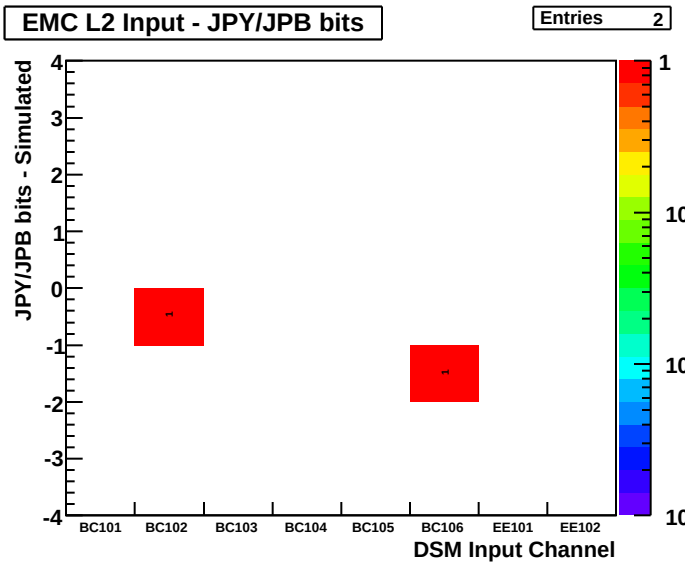

Endcap EMC L1 Input - High Tower Bits
Entries 240000
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

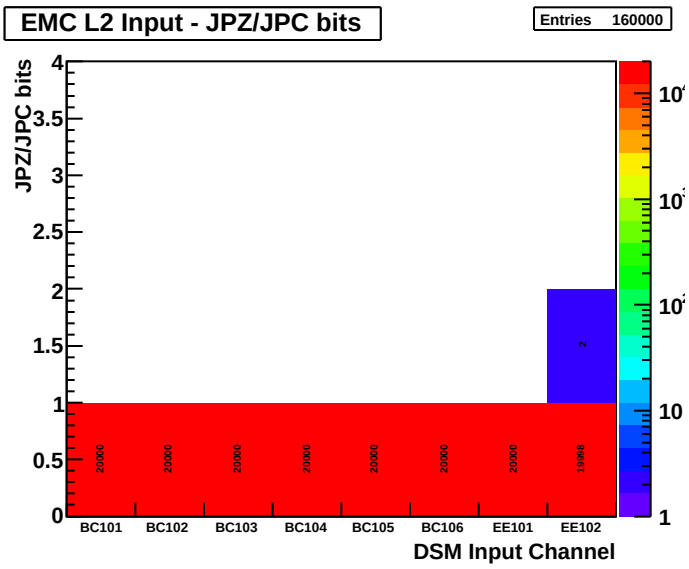

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

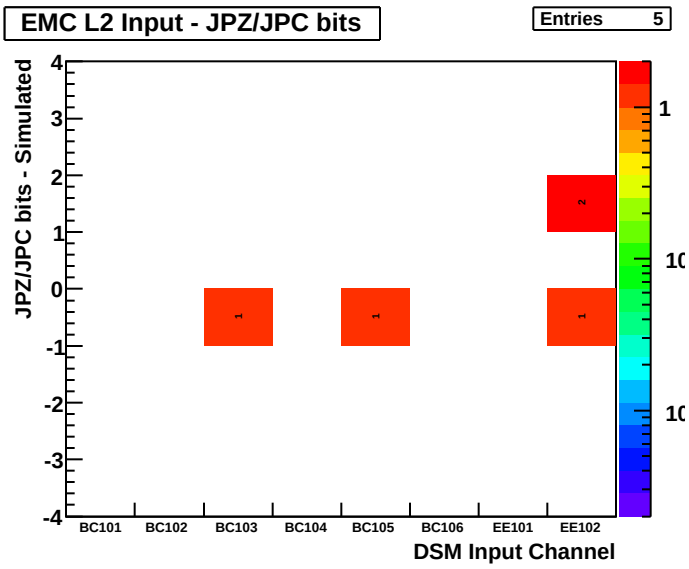

EMC L2 Input - JPX/JPA bits
Entries 160000
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
20000 20000 20000 20000 20000 20000 20000 20000

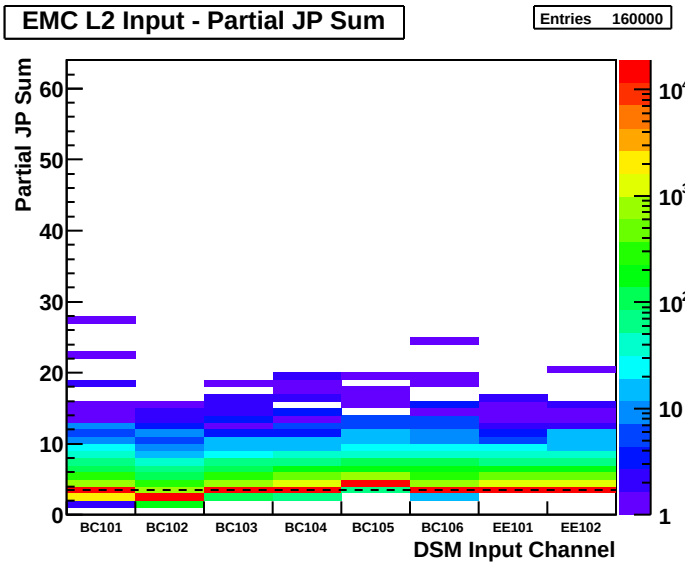

EMC L2 Input - JPX/JPA bits
Entries 4
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

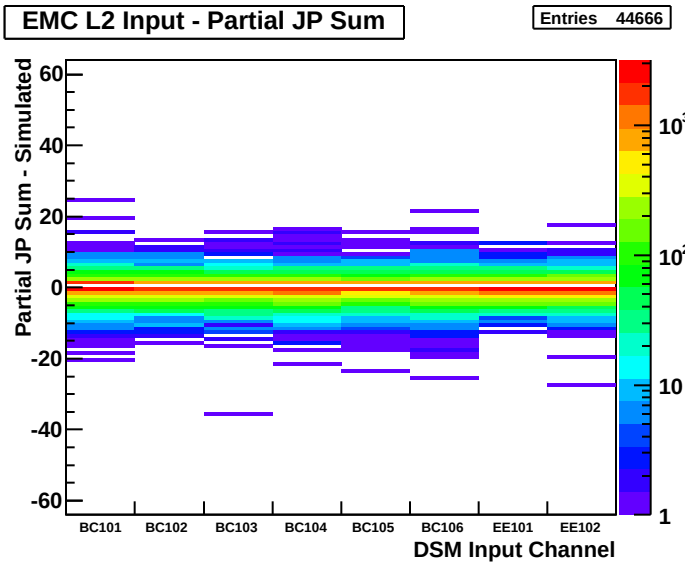

EMC L2 Input - JPY/JPB bits
Entries 160000
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
20000 20000 20000 20000 20000 20000 20000 20000

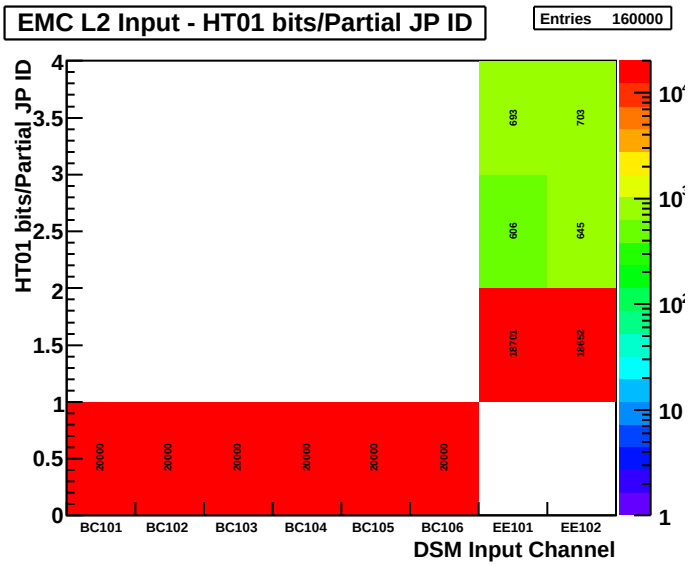

EMC L2 Input - JPY/JPB bits
Entries 2
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

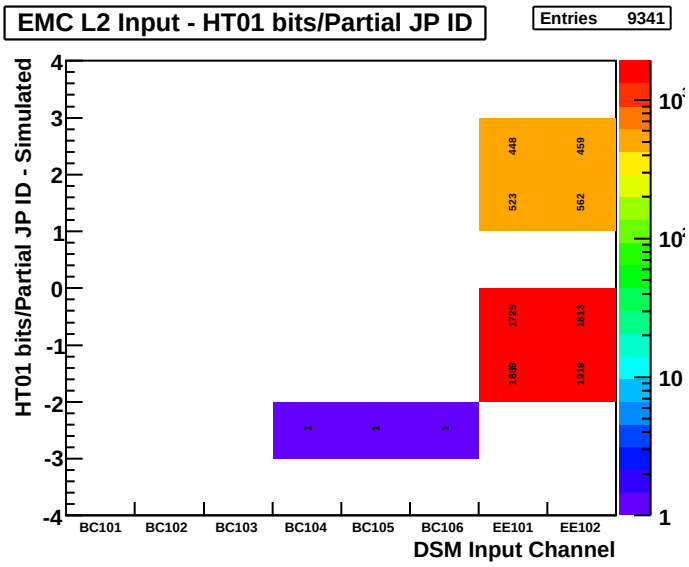

EMC L2 Input - JPZ/JPC bits
Entries 160000
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
20000 20000 20000 20000 20000 20000 20000 19998

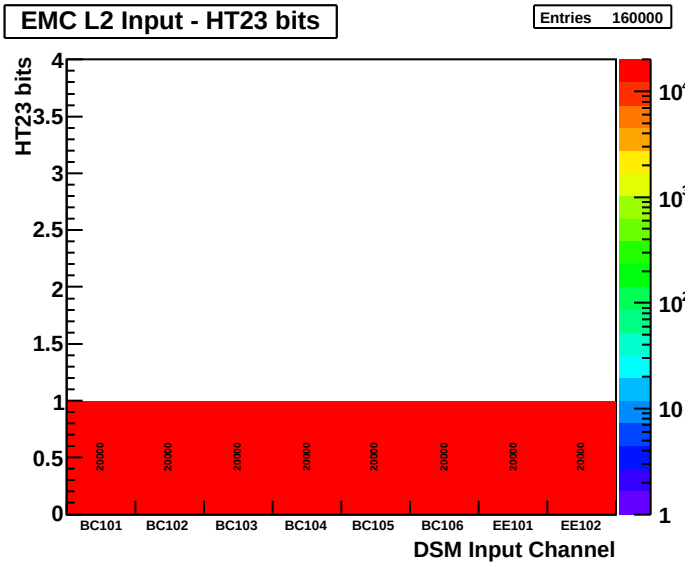

EMC L2 Input - JPZ/JPC bits
Entries 5
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

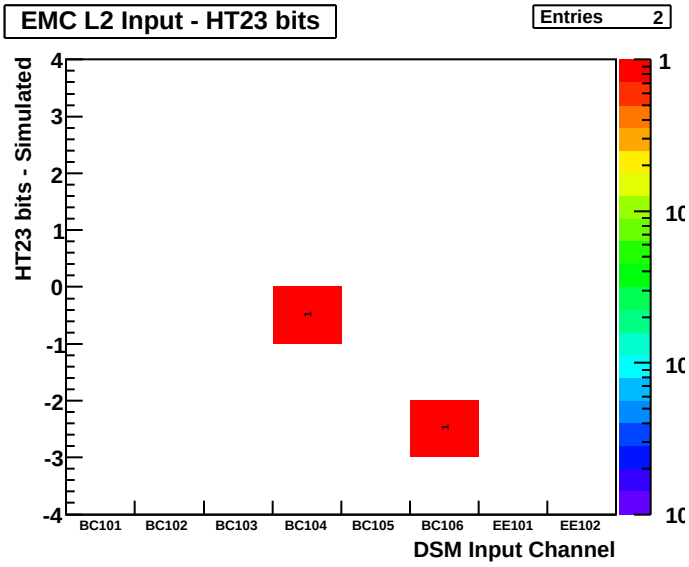

EMC L2 Input - Partial JP Sum
Entries 160000
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

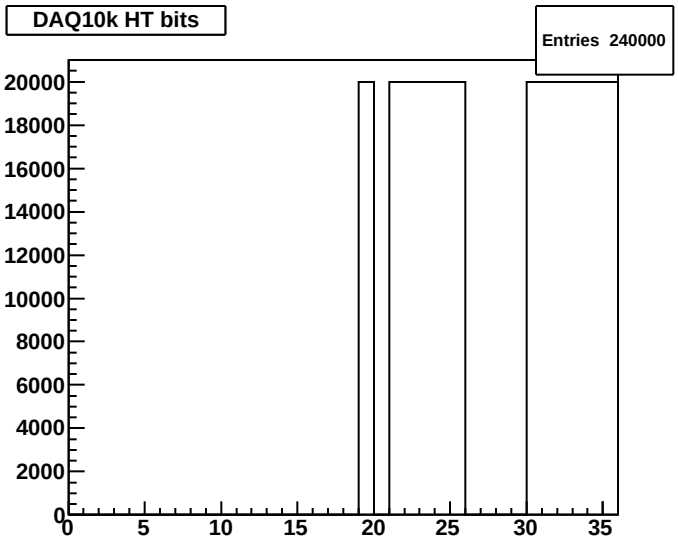

EMC L2 Input - Partial JP Sum
Entries 44666
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

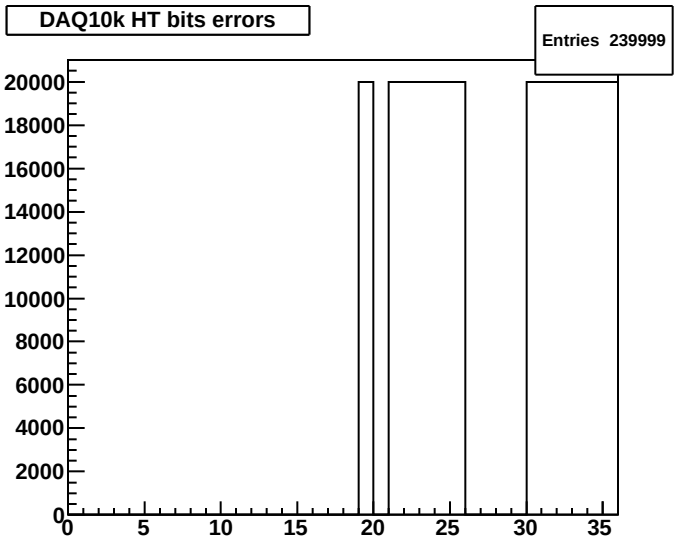

EMC L2 Input - HT01 bits/Partial JP ID
Entries 160000
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

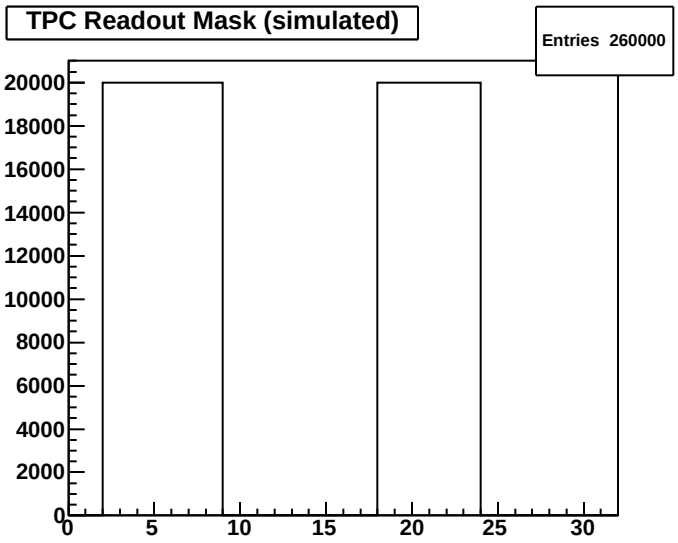

EMC L2 Input - HT01 bits/Partial JP ID
Entries 9341
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

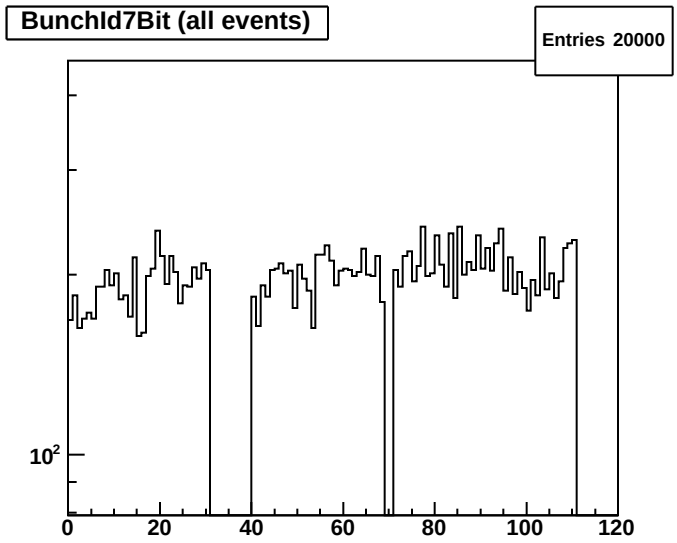

EMC L2 Input - HT23 bits
Entries 160000
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

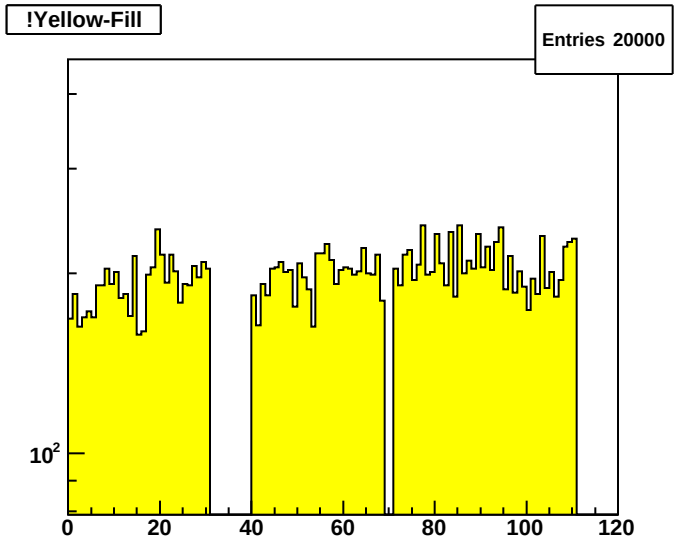

EMC L2 Input - HT23 bits
Entries 2
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

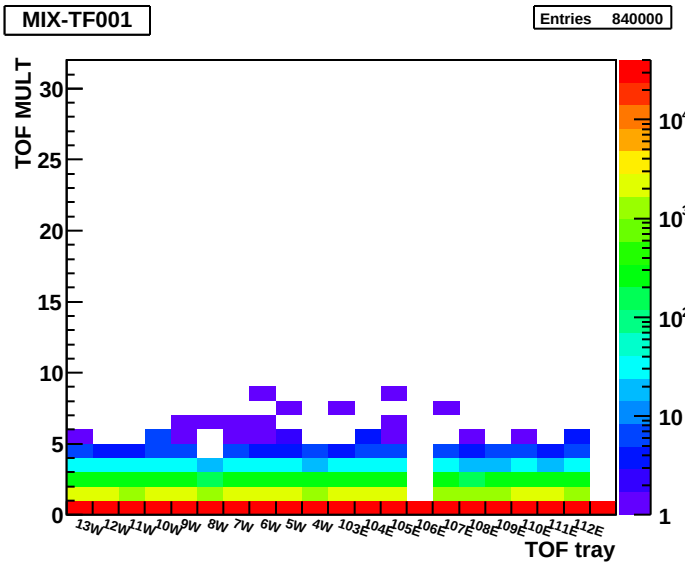

DAQ10k HT bits
Entries 240000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

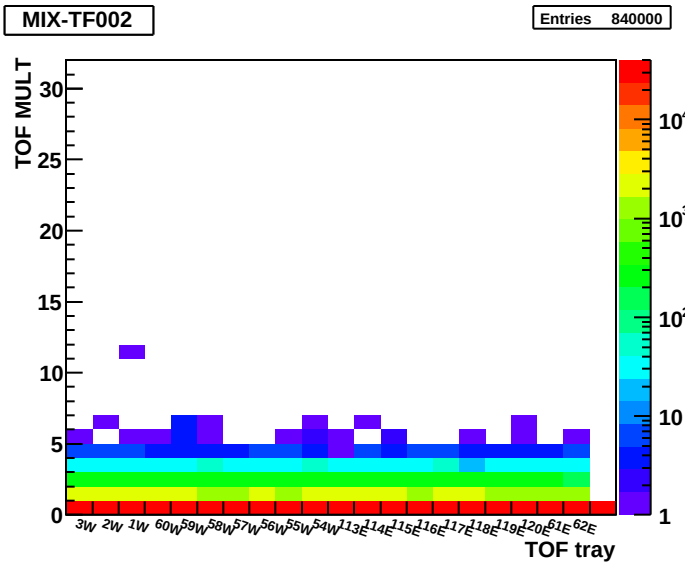

DAQ10k HT bits errors
Entries 239999
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30 35

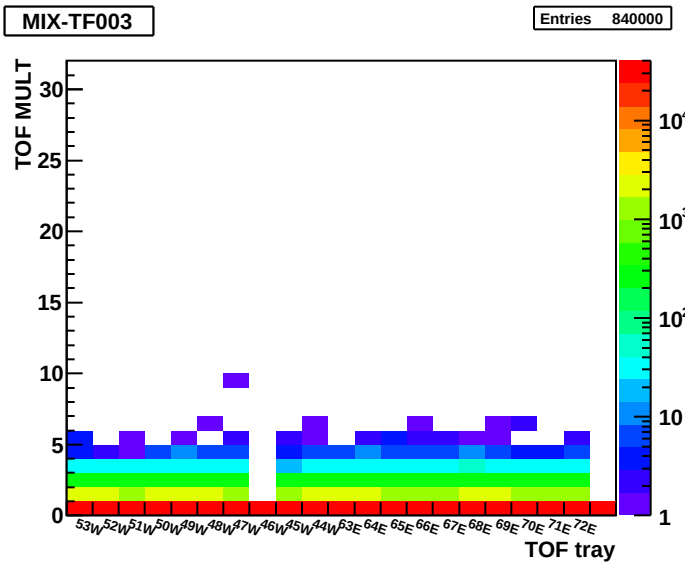

TPC Readout Mask (simulated)
Entries 260000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0 5 10 15 20 25 30

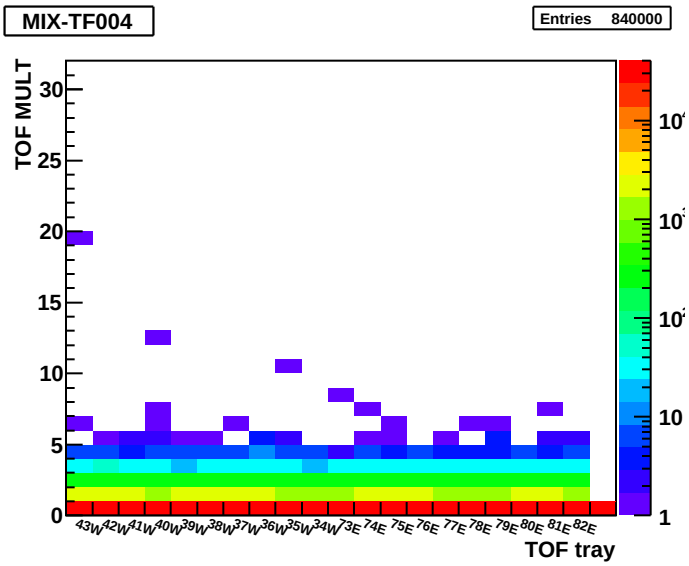

BunchId7Bit (all events)
Entries 20000
10^2
0 20 40 60 80 100 120

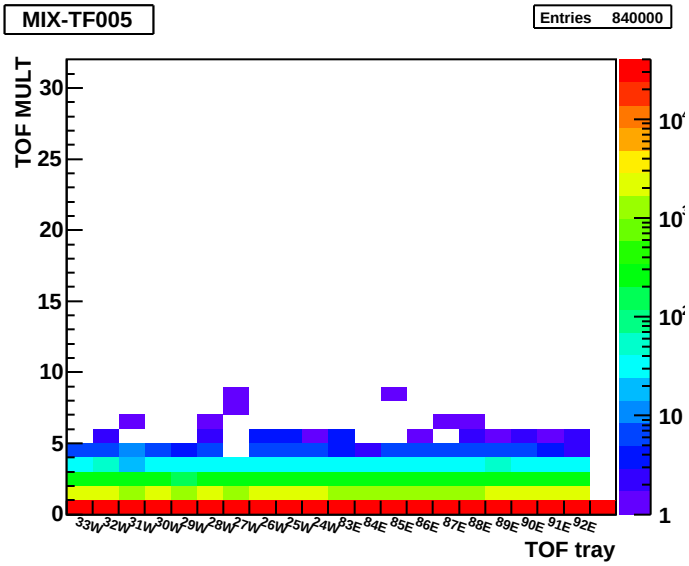

!Yellow-Fill
Entries 20000
10^2
0 20 40 60 80 100 120

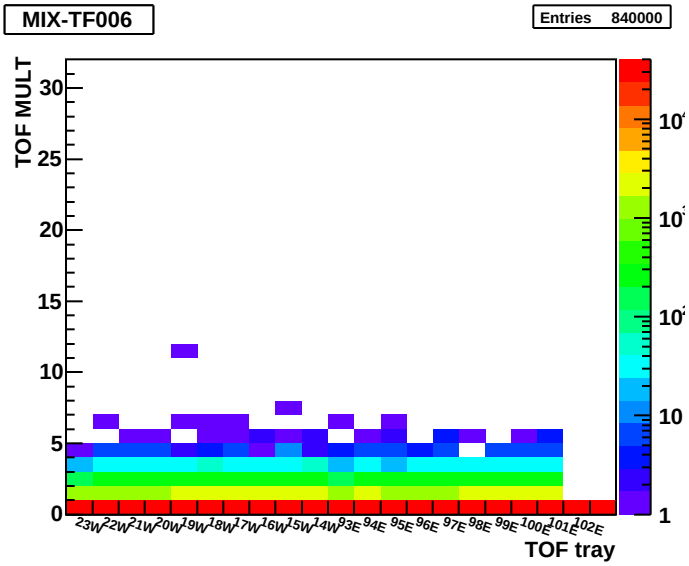

MIX-TF001
Entries 840000
TOF MULT
TOF tray

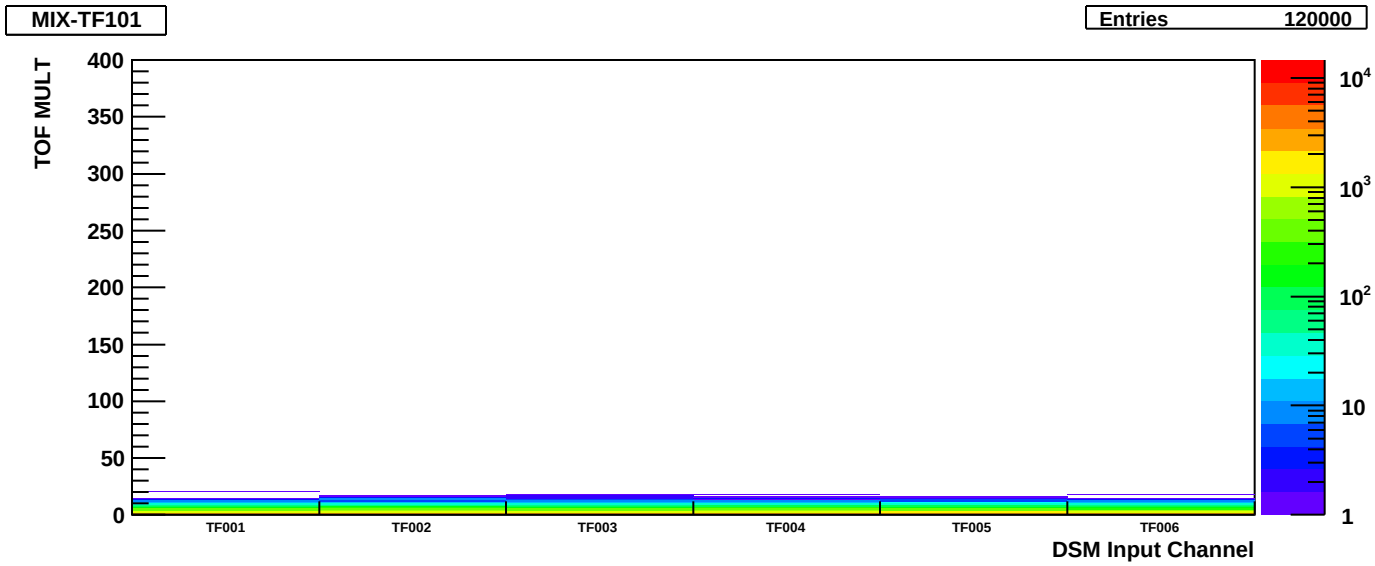

MIX-TF002
Entries 840000
TOF MULT
TOF tray

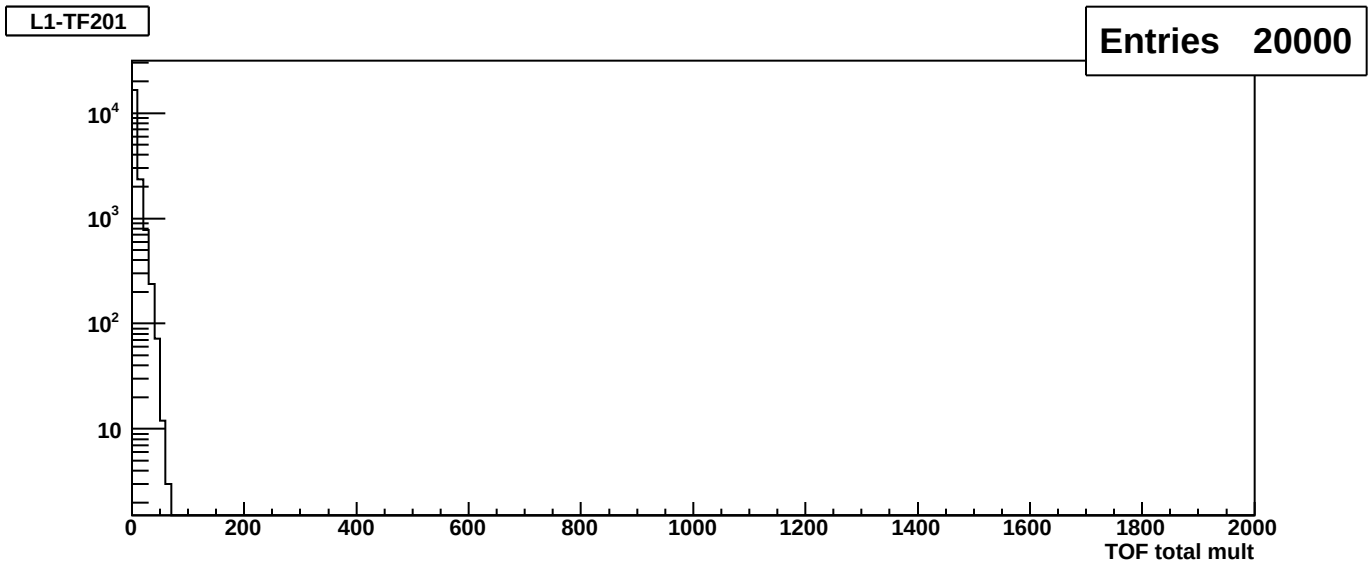

MIX-TF003
Entries 840000
TOF MULT
TOF tray

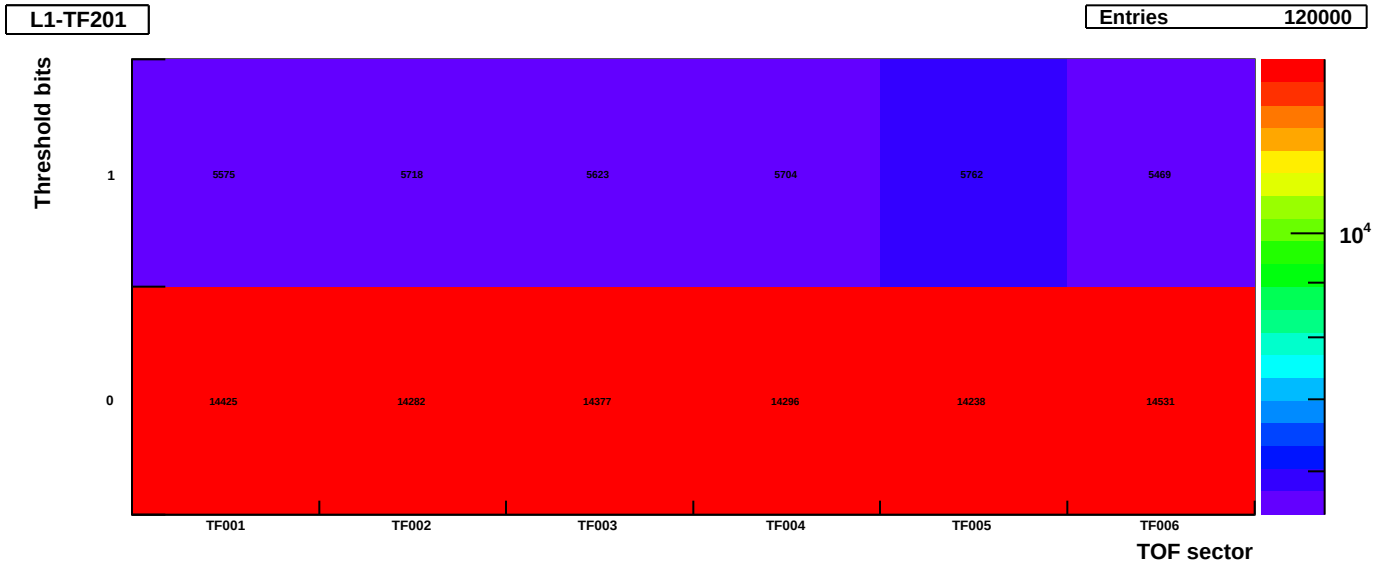

MIX-TF004
Entries 840000
TOF MULT
TOF tray

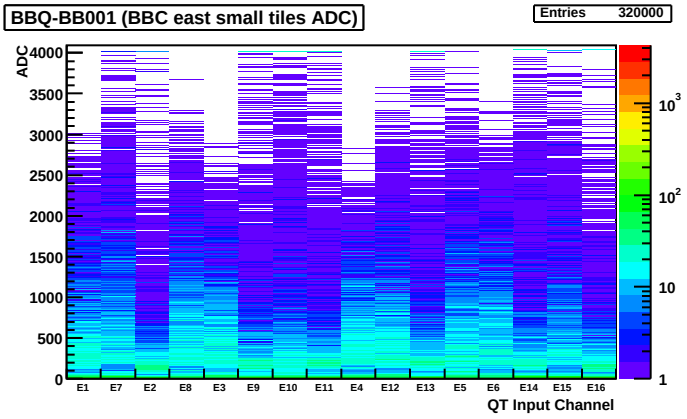

MIX-TF005
Entries 840000
TOF MULT
TOF tray

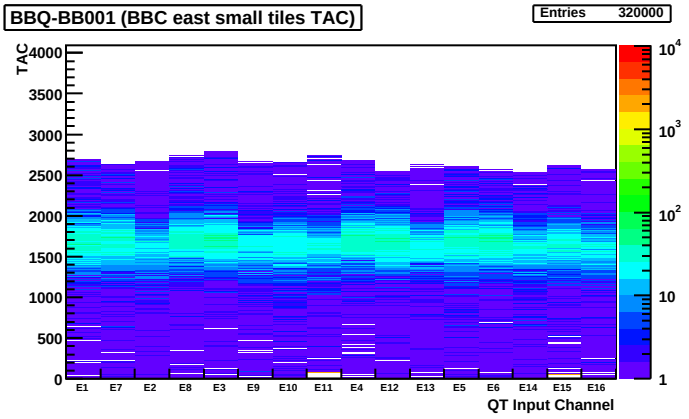

MIX-TF006
Entries 840000
TOF MULT
TOF tray

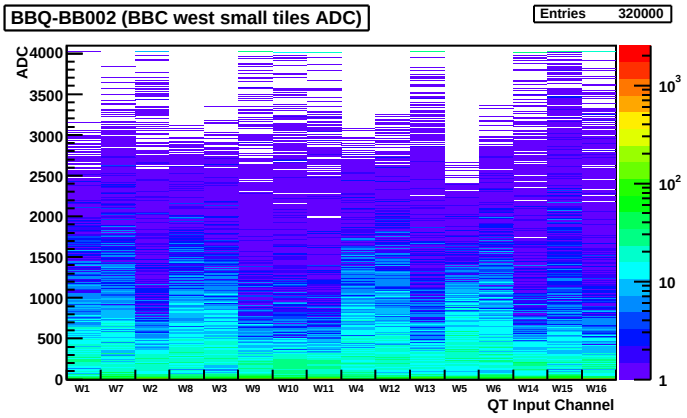

MIX-TF101
Entries 120000
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

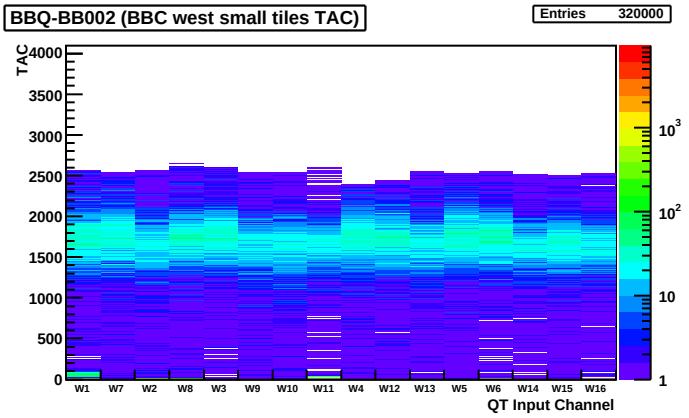

L1-TF201
Entries 20000
10^4
10^3
10^2
10
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

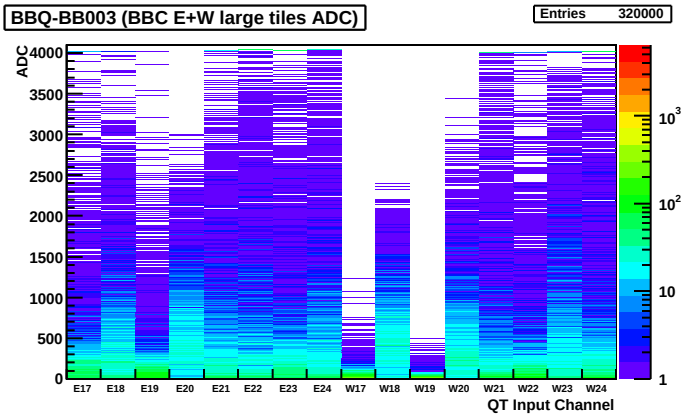

L1-TF201
Entries 120000
Threshold bits
1
0
5575
5718
5623
5704
5762
5469
14425
14282
14377
14296
14238
14531
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4

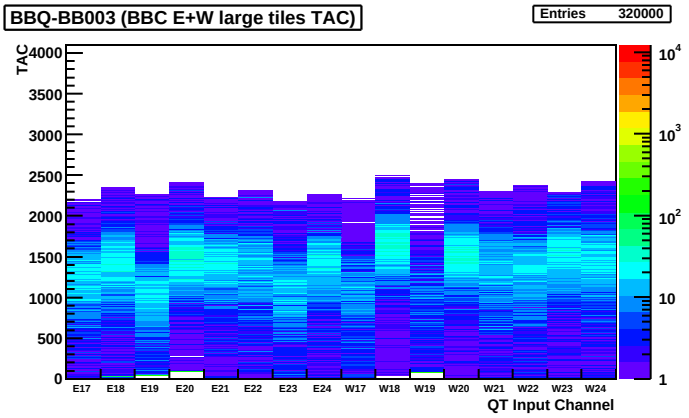

BBQ-BB001 (BBC east small tiles ADC)
Entries 320000
ADC
QT Input Channel

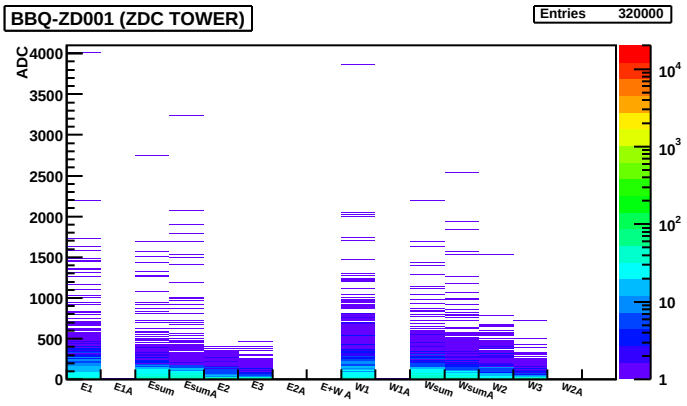

BBQ-BB001 (BBC east small tiles TAC)
Entries 320000
TAC
QT Input Channel

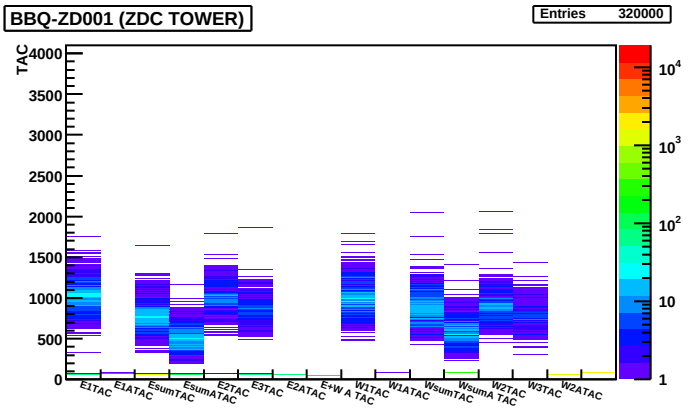

BBQ-BB002 (BBC west small tiles ADC)
Entries 320000
ADC
QT Input Channel

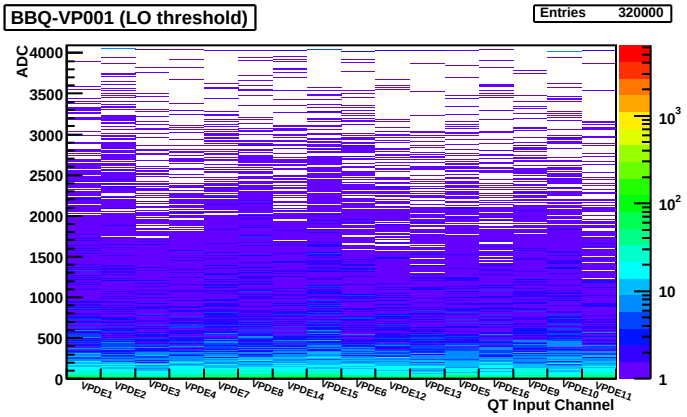

BBQ-BB002 (BBC west small tiles TAC)
Entries 320000
TAC
QT Input Channel

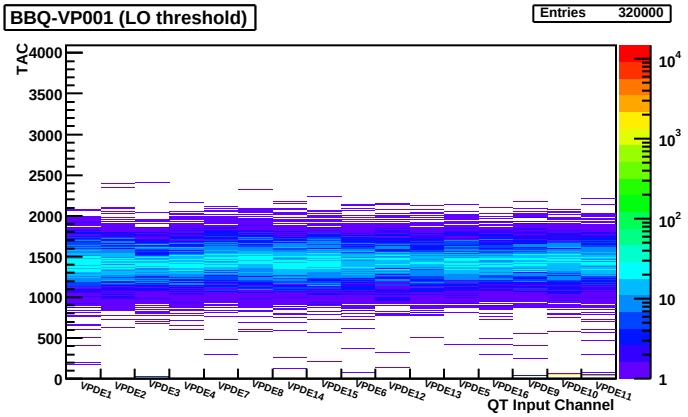

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 320000
ADC
QT Input Channel

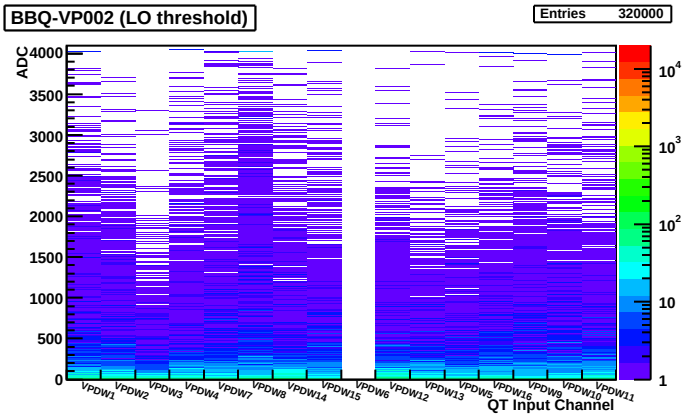

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 320000
TAC
QT Input Channel

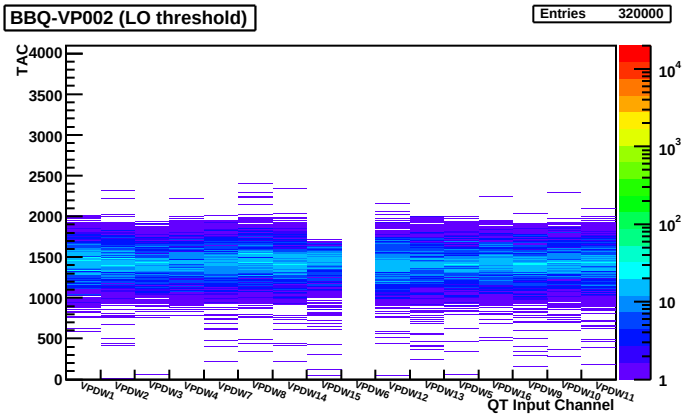

BBQ-ZD001 (ZDC TOWER)
Entries 320000
ADC

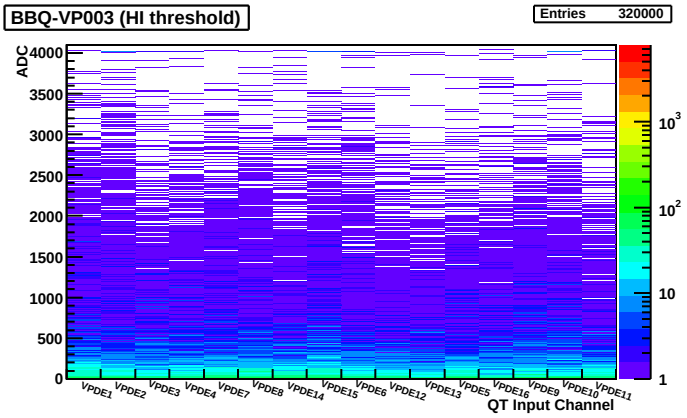

BBQ-ZD001 (ZDC TOWER)
Entries 320000
TAC

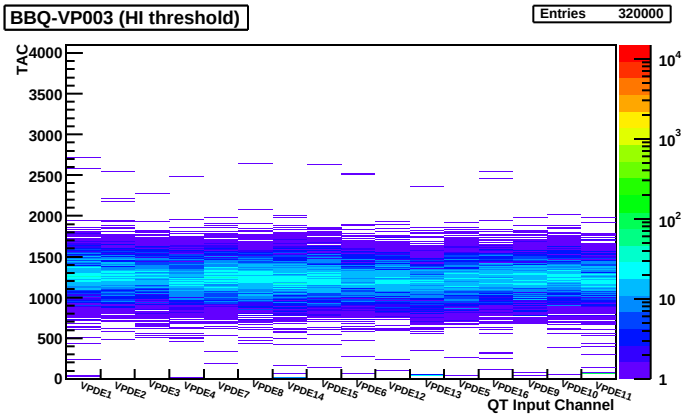

BBQ-VP001 (LO threshold)
Entries 320000
ADC
QT Input Channel

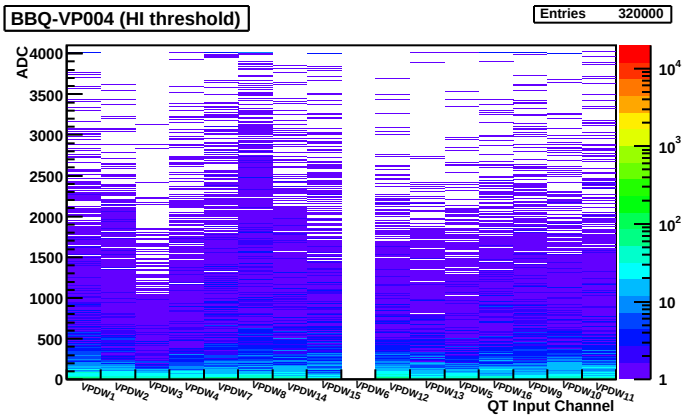

BBQ-VP001 (LO threshold)
Entries 320000
TAC
QT Input Channel

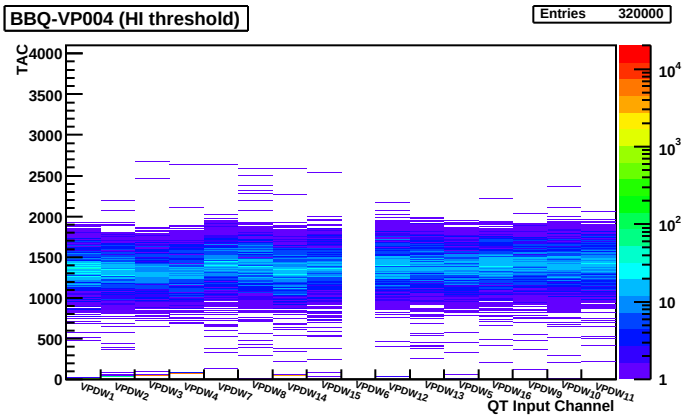

BBQ-VP002 (LO threshold)
Entries 320000
ADC
QT Input Channel

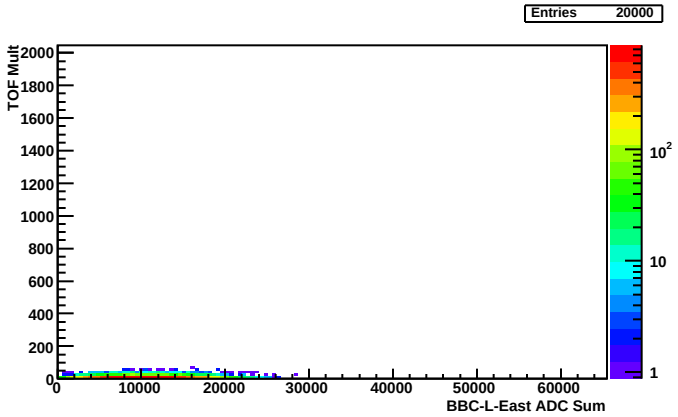

BBQ-VP002 (LO threshold)
Entries 320000
TAC
QT Input Channel

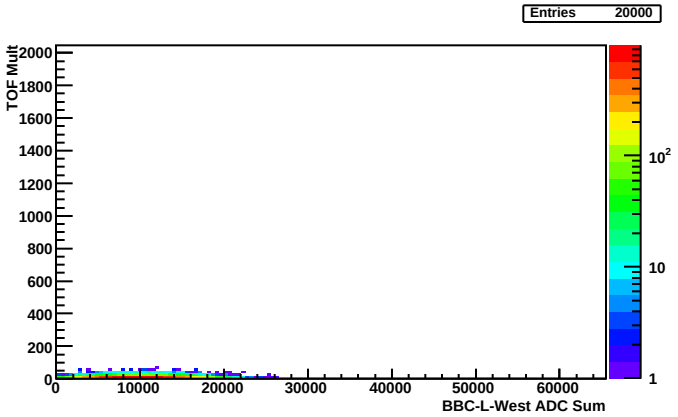

BBQ-VP003 (HI threshold)
Entries 320000
ADC
QT Input Channel

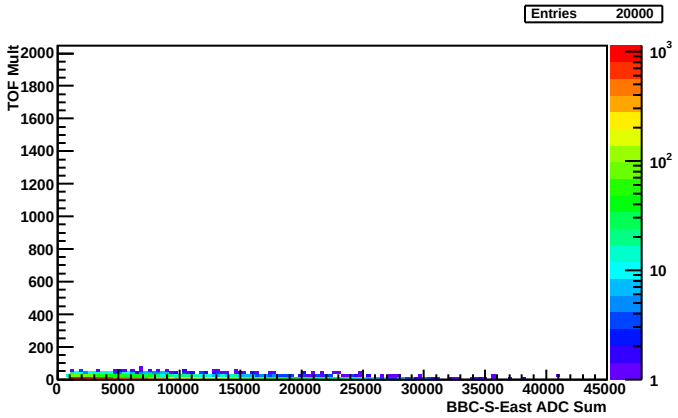

BBQ-VP003 (HI threshold)
Entries 320000
TAC
QT Input Channel

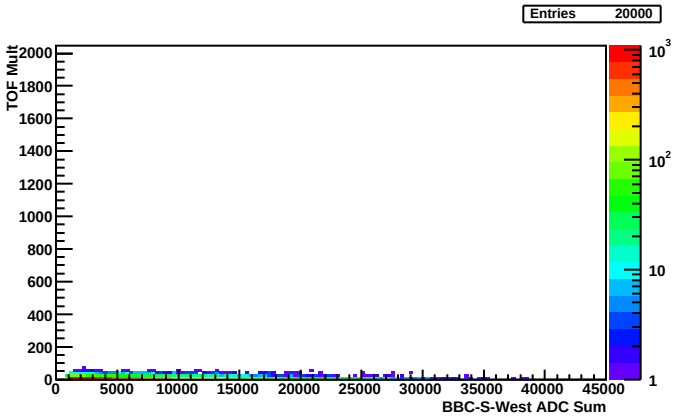

BBQ-VP004 (HI threshold)
Entries 320000
ADC
QT Input Channel

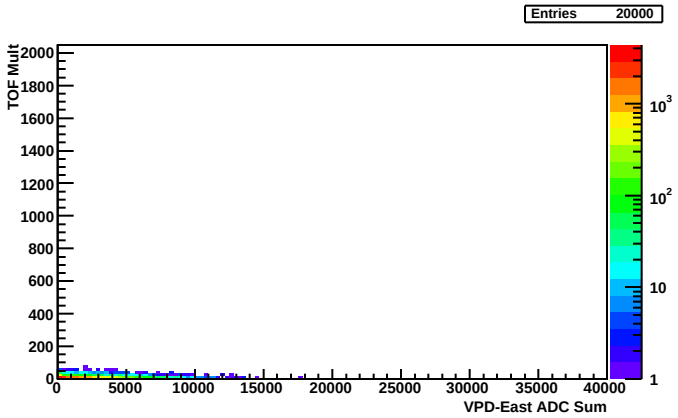

BBQ-VP004 (HI threshold)
Entries 320000
TAC
QT Input Channel

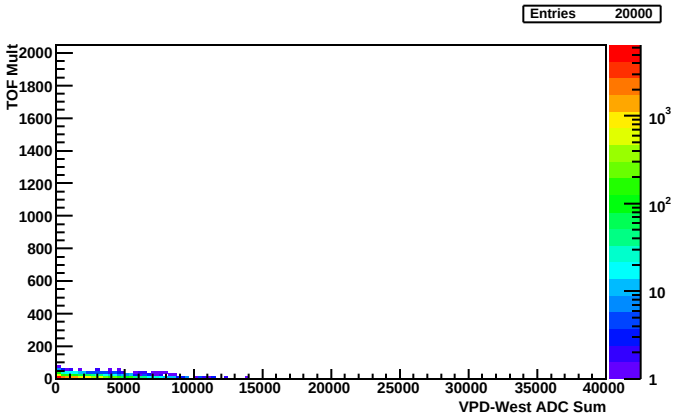

Entries 20000
TOF Mult
BBC-L-East ADC Sum

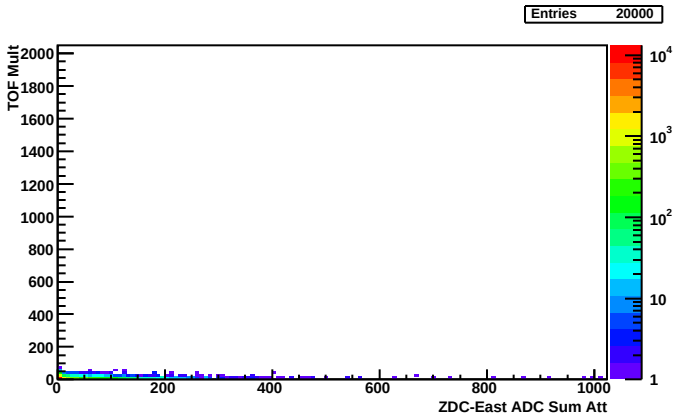

Entries 20000
TOF Mult
BBC-L-West ADC Sum

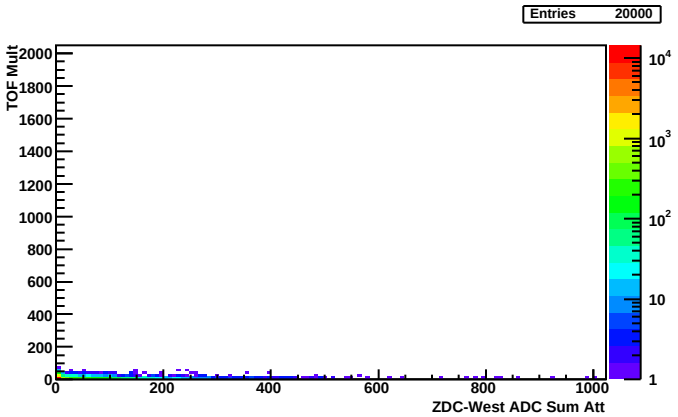

Entries 20000
TOF Mult
BBC-S-East ADC Sum

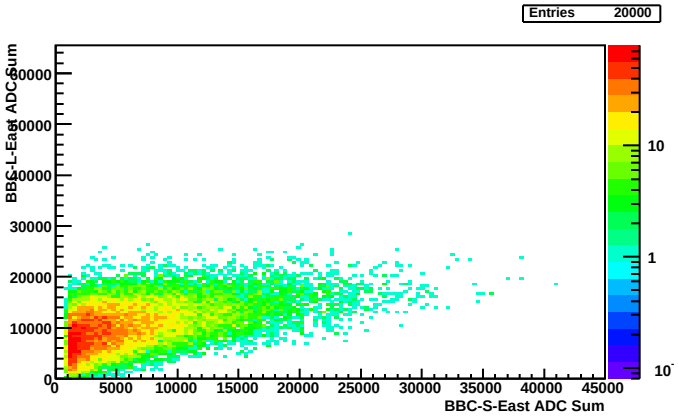

Entries 20000
TOF Mult
BBC-S-West ADC Sum

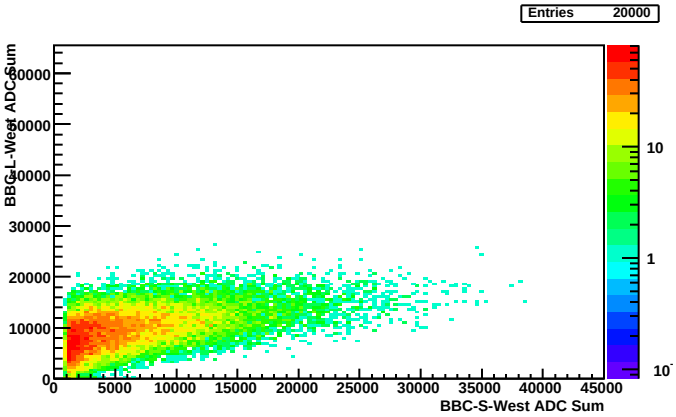

Entries 20000
TOF Mult
VPD-East ADC Sum

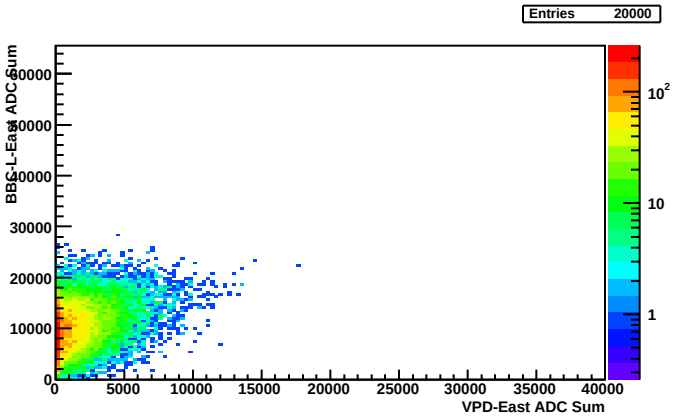

Entries 20000
TOF Mult
VPD-West ADC Sum

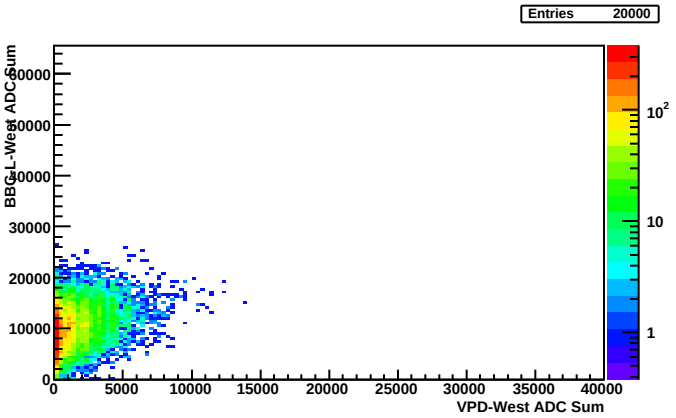

Entries 20000
TOF Mult
ZDC-East ADC Sum Att

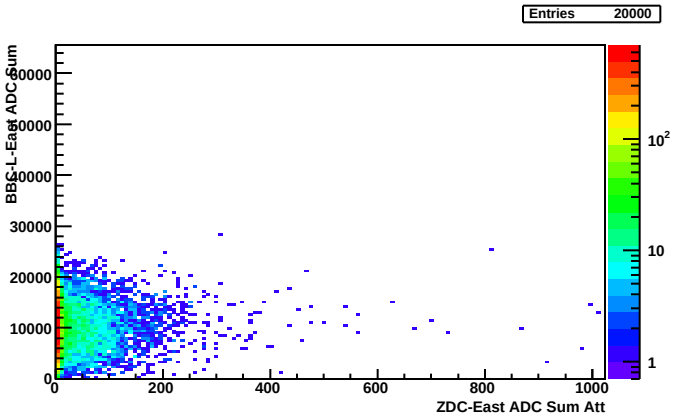

Entries 20000
TOF Mult
ZDC-West ADC Sum Att

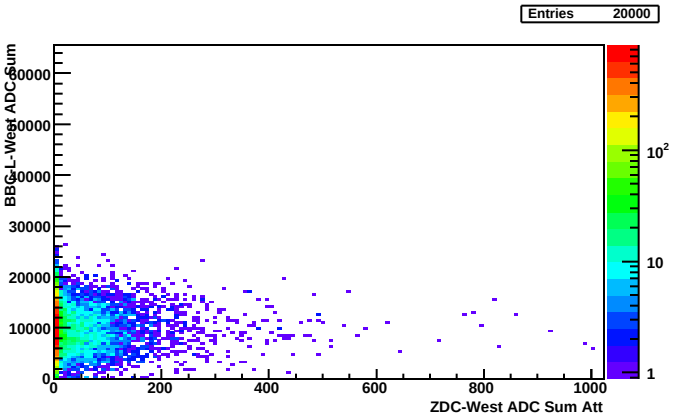

Entries 20000
BBC-L-East ADC Sum
BBC-S-East ADC Sum

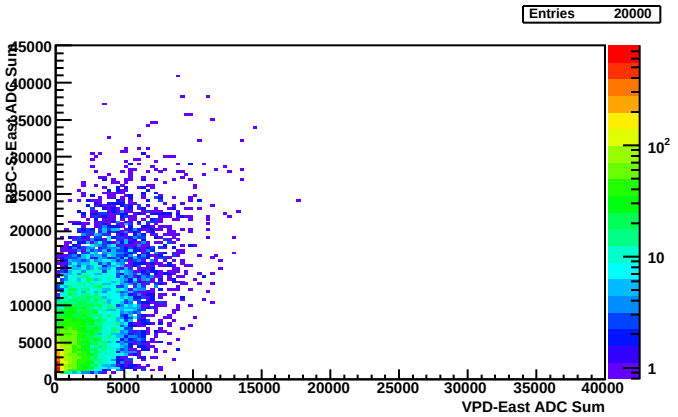

Entries 20000
BBC-L-West ADC Sum
BBC-S-West ADC Sum

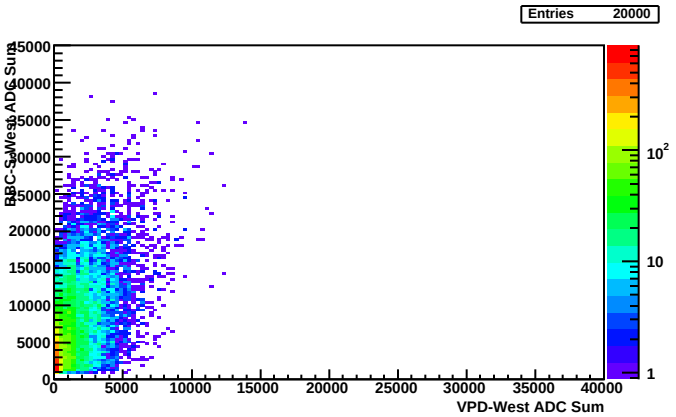

Entries 20000
BBC-L-East ADC Sum
VPD-East ADC Sum

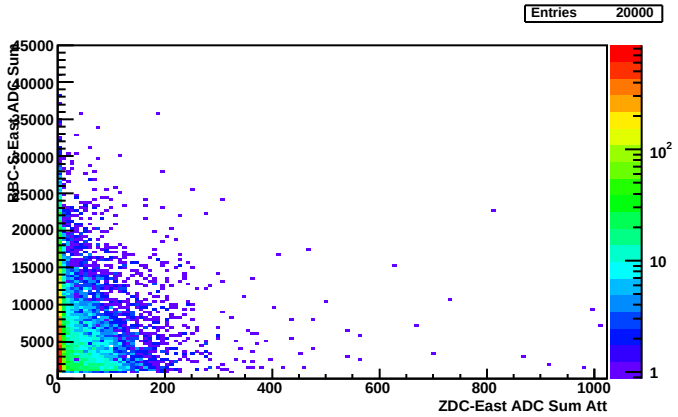

Entries 20000
BBC-L-West ADC Sum
VPD-West ADC Sum

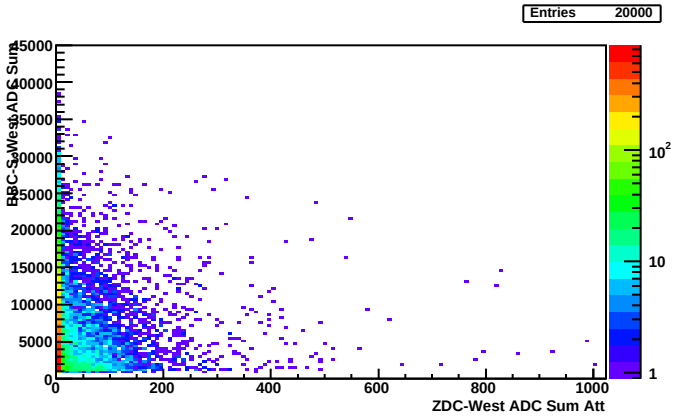

Entries 20000
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

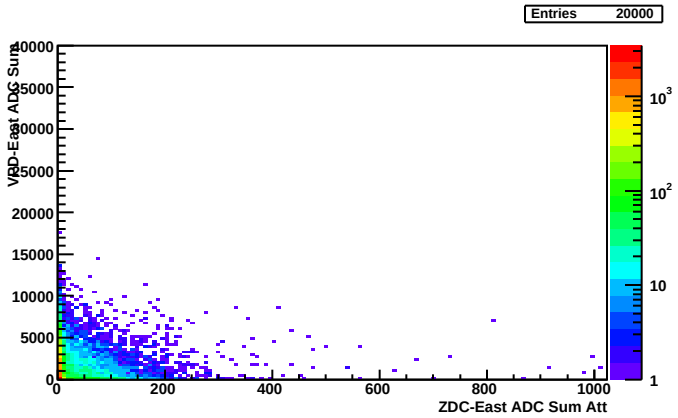

Entries 20000
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

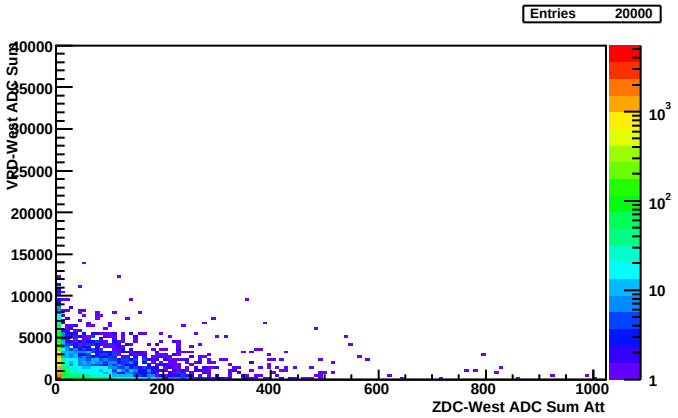

Entries 20000
BBC-S-East ADC Sum
VPD-East ADC Sum

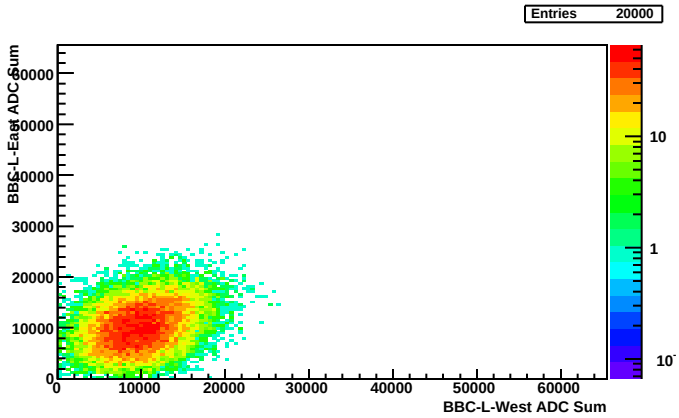

Entries 20000
BBC-S-West ADC Sum
VPD-West ADC Sum


Entries 20000
BBC-S-East ADC Sum
ZDC-East ADC Sum Att


Entries 20000
BBC-S-West ADC Sum
ZDC-West ADC Sum Att


Entries 20000
VPD-East ADC Sum
ZDC-East ADC Sum Att


Entries 20000
VPD-West ADC Sum
ZDC-West ADC Sum Att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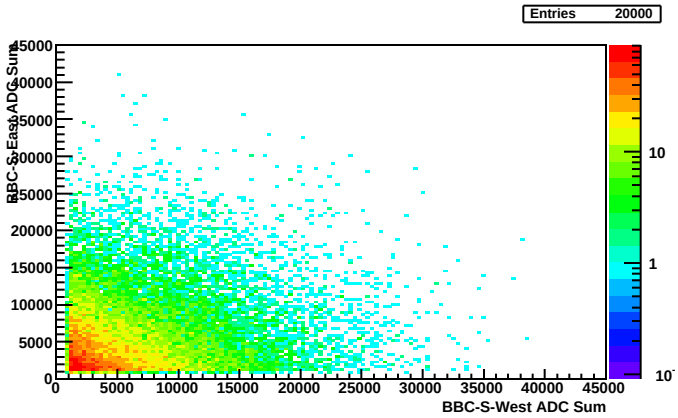
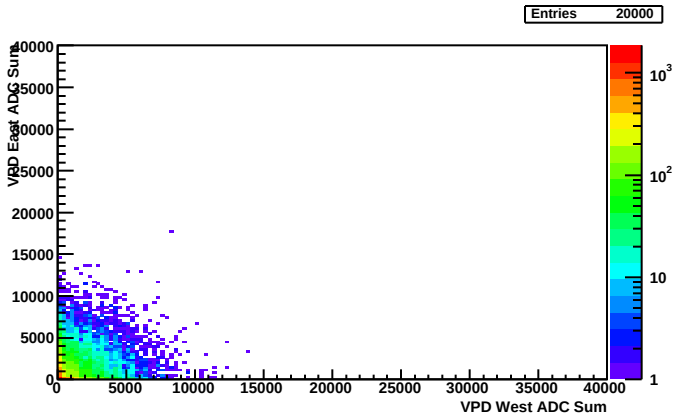
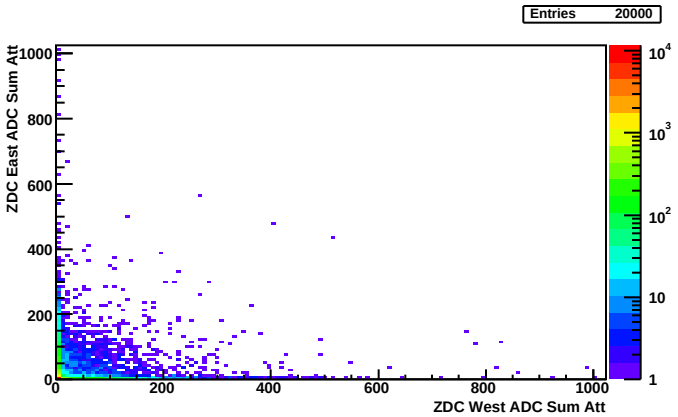
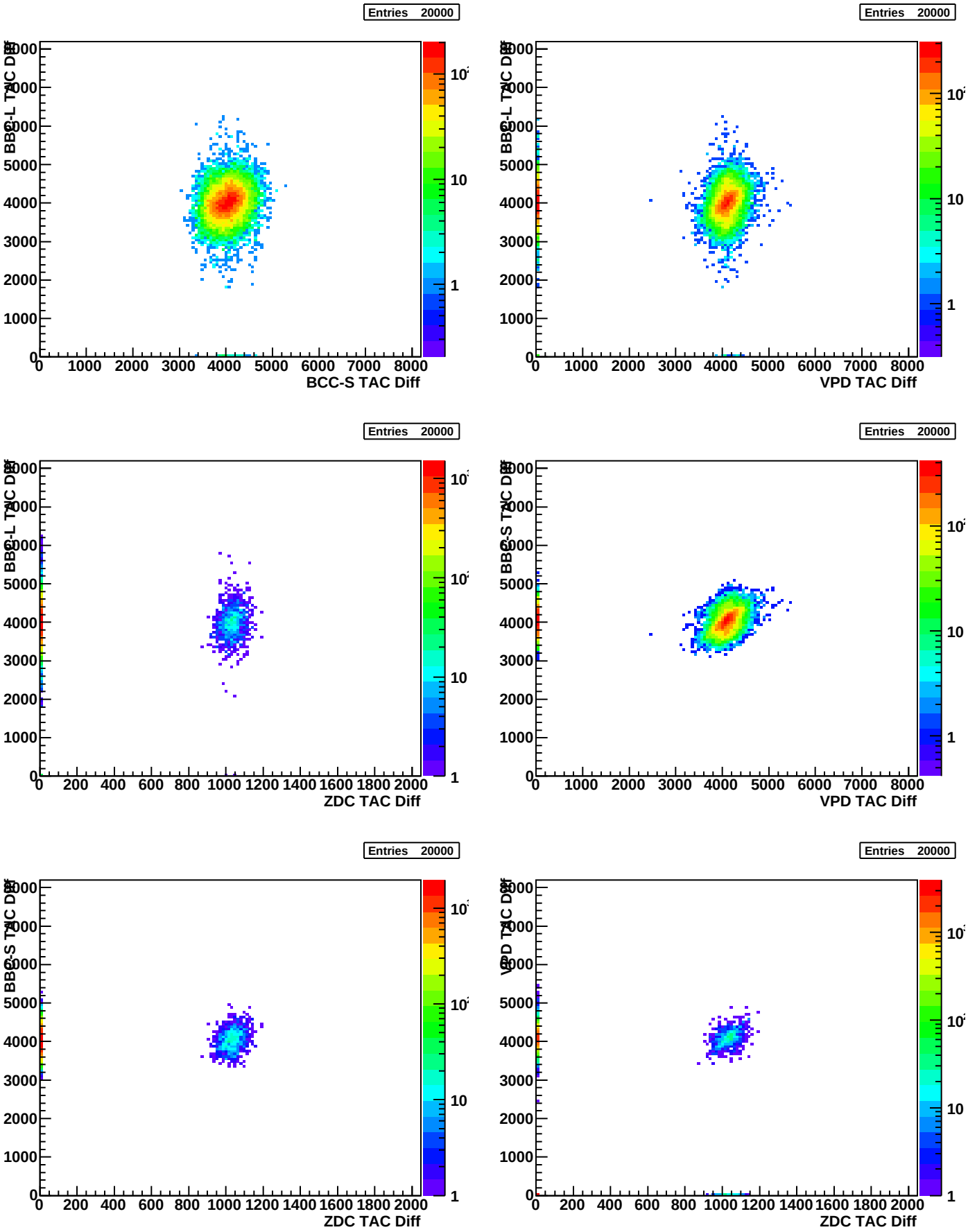
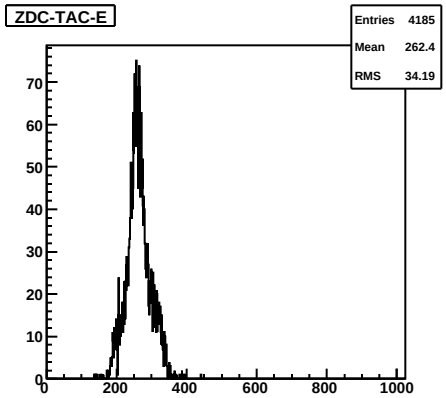
BBC-L-East ADC Sum
BBC-L-West ADC Sum

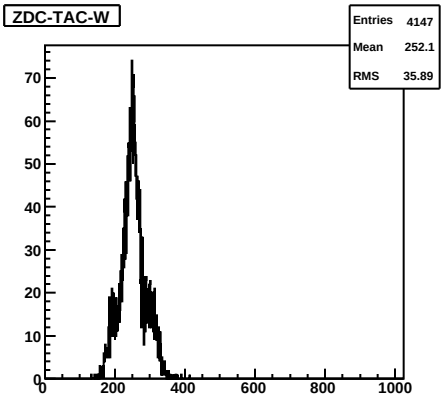

Entries 20000
BBC-S-East ADC Sum
BBC-S-West ADC Sum

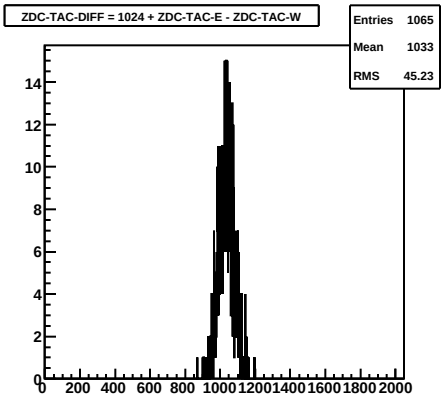

Entries 20000
VPD East ADC Sum
VPD West ADC Sum

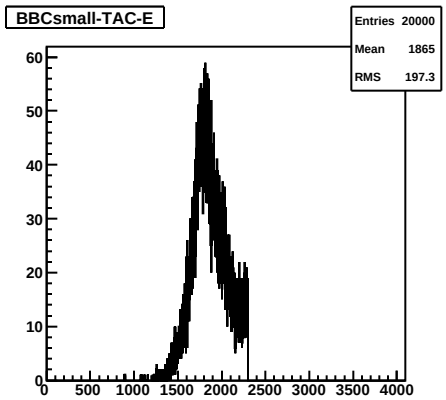

Entries 20000
ZDC East ADC Sum Att
ZDC West ADC Sum Att

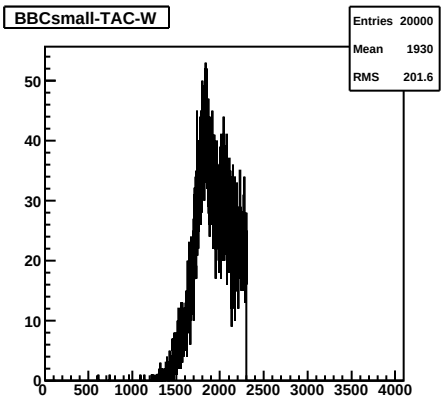

Entries 20000
BBC-L TAC Diff
BCC-S TAC Diff
Entries 20000
BBC-L TAC Diff
VPD TAC Diff
Entries 20000
BBC-L TAC Diff
ZDC TAC Diff
Entries 20000
BBC-S TAC Diff
VPD TAC Diff
Entries 20000
BBC-S TAC Diff
ZDC TAC Diff
Entries 20000
VPD TAC Diff
ZDC TAC Diff

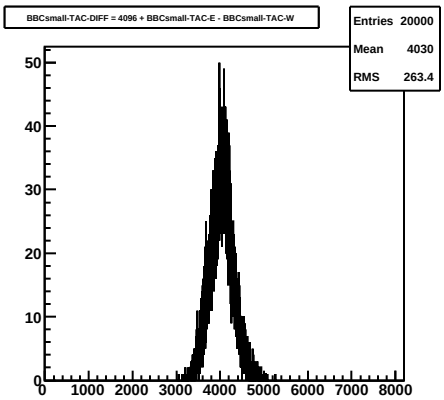

ZDC-TAC-E
Entries 4185
Mean 262.4
RMS 34.19

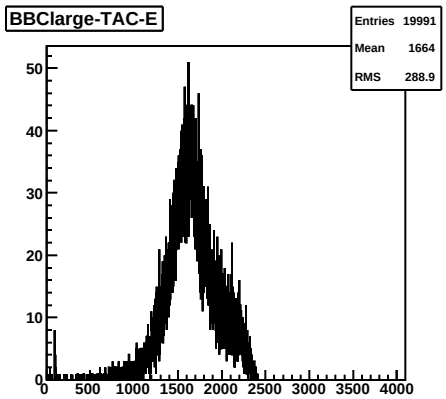

ZDC-TAC-W
Entries 4147
Mean 252.1
RMS 35.89

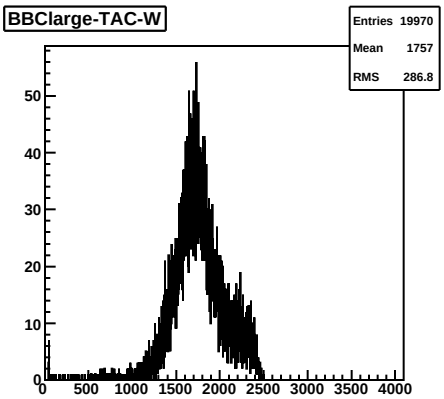

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 1065
Mean 1033
RMS 45.23

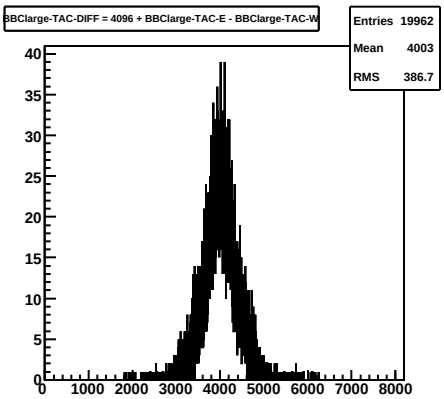

BBCsmall-TAC-E
Entries 20000
Mean 1865
RMS 197.3

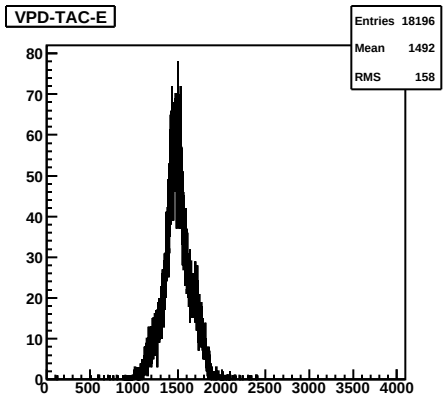

BBCsmall-TAC-W
Entries 20000
Mean 1930
RMS 201.6

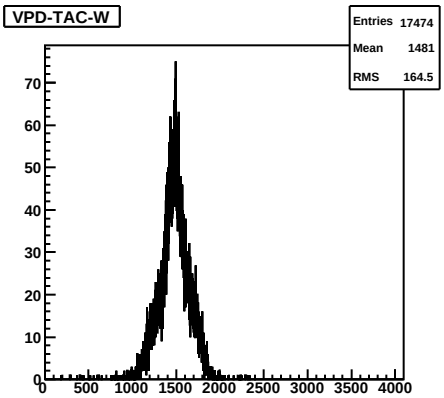

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 20000
Mean 4030
RMS 263.4

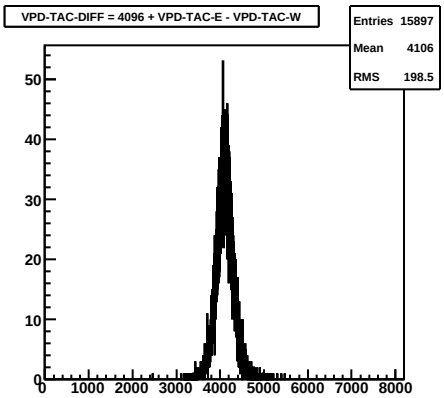

BBClarge-TAC-E
Entries 19991
Mean 1664
RMS 288.9

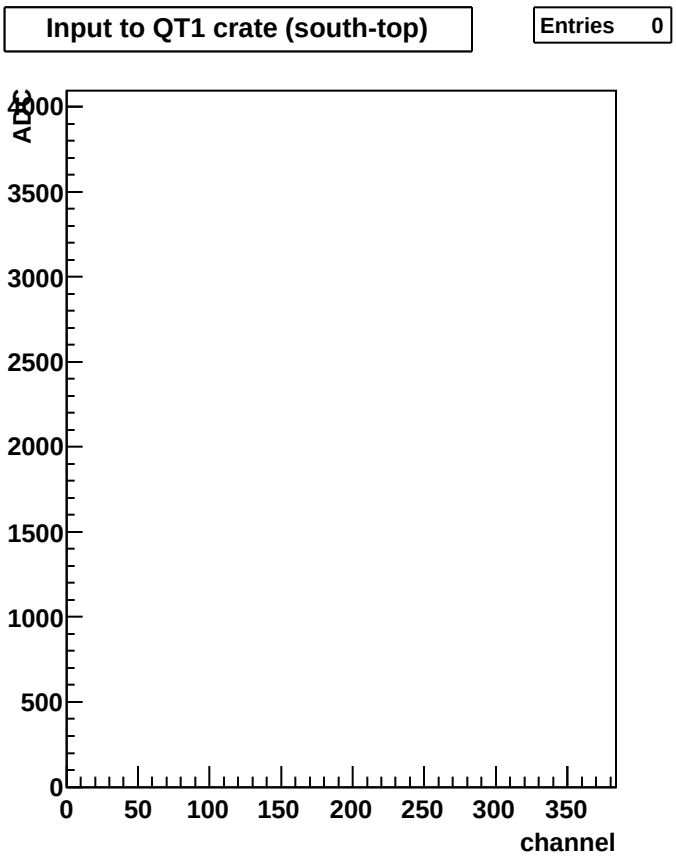

BBClarge-TAC-W
Entries 19970
Mean 1757
RMS 286.8

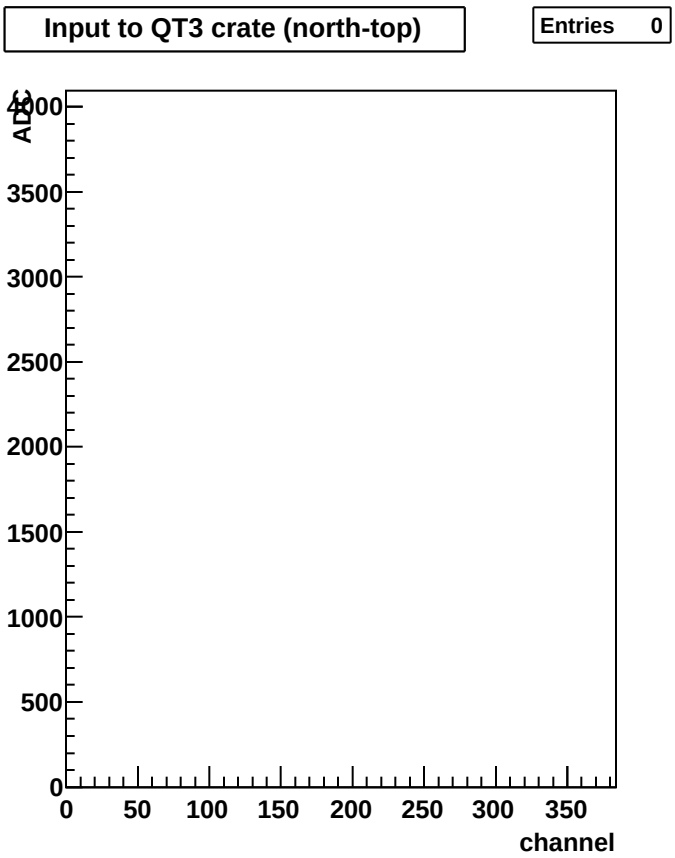

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 19962
Mean 4003
RMS 386.7

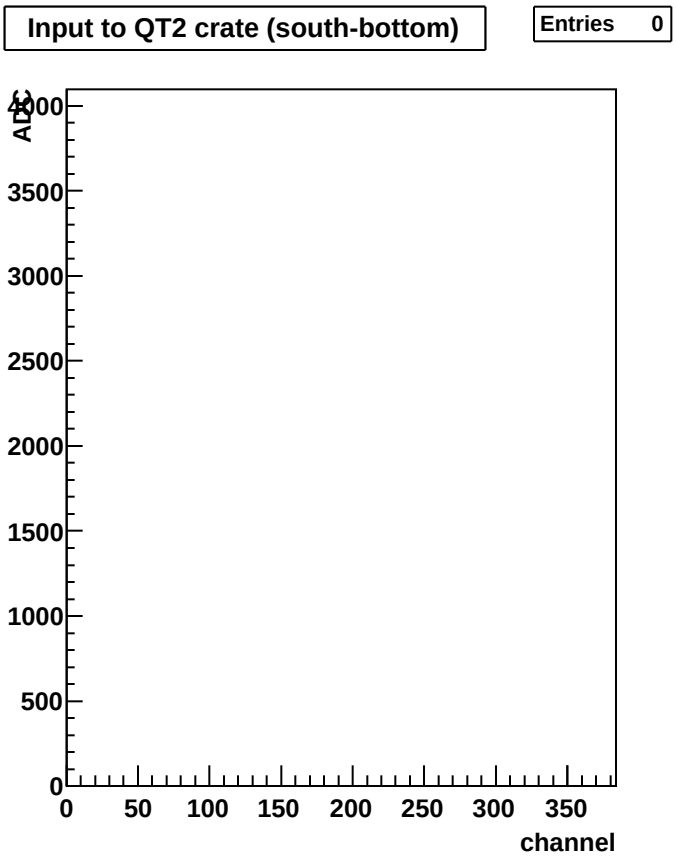

VPD-TAC-E
Entries 18196
Mean 1492
RMS 158

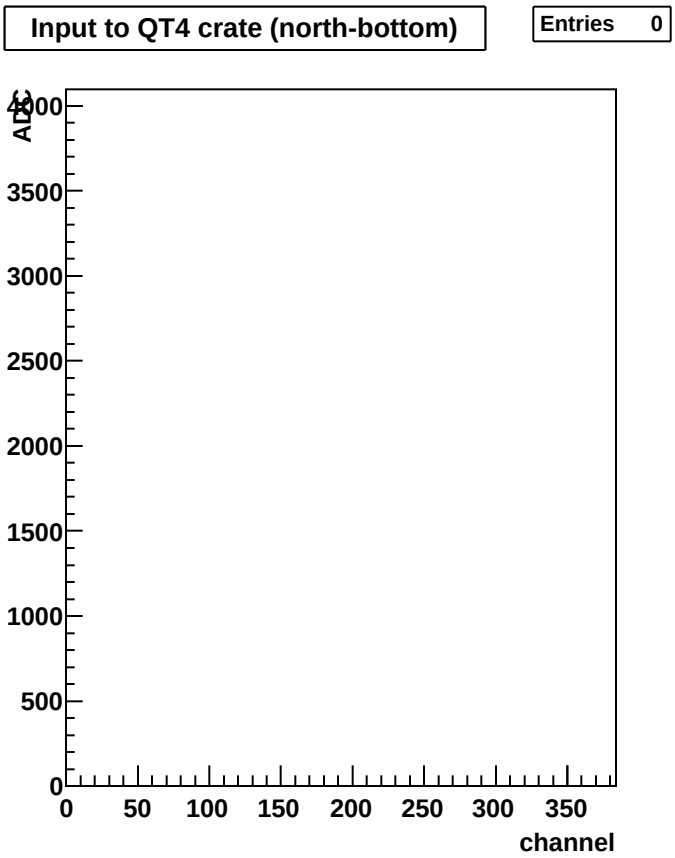

VPD-TAC-W
Entries 17474
Mean 1481
RMS 164.5

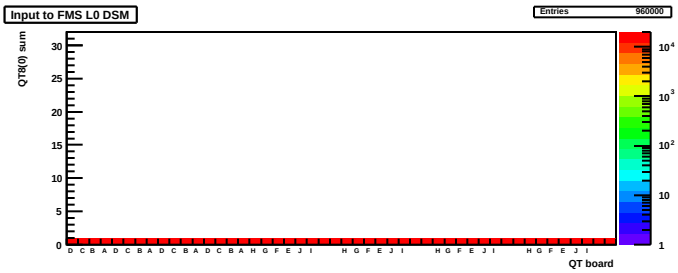

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 15897
Mean 4106
RMS 198.5

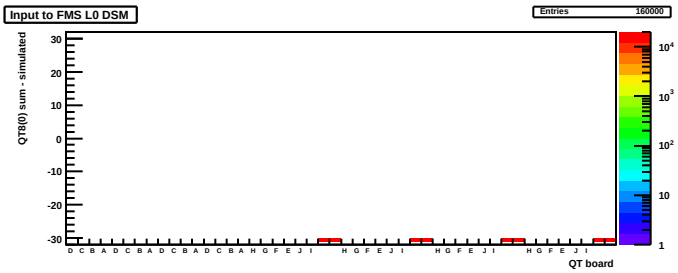

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

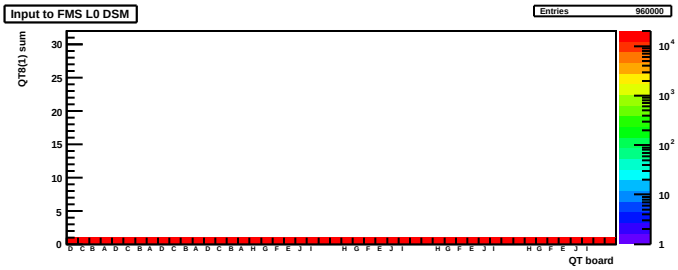

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

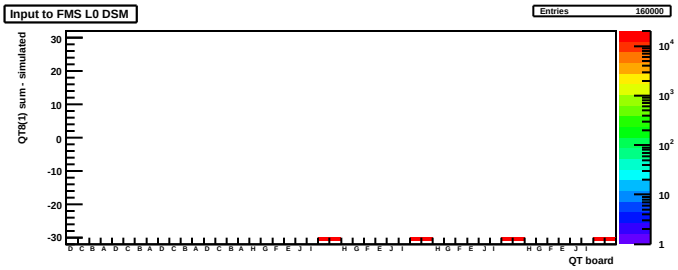

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

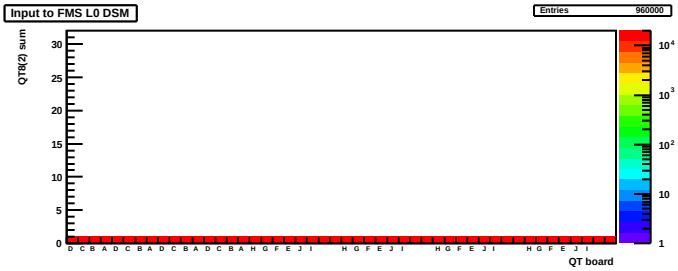

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

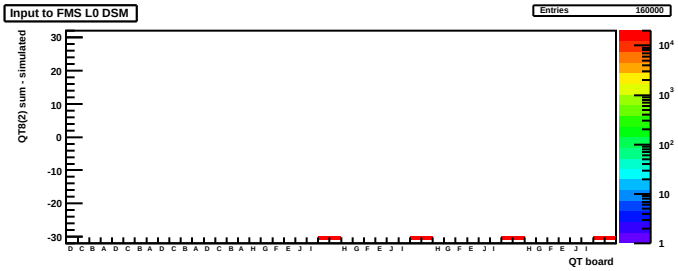

Input to FMS L0 DSM
Entries 960000
QT8(0) sum
QT board

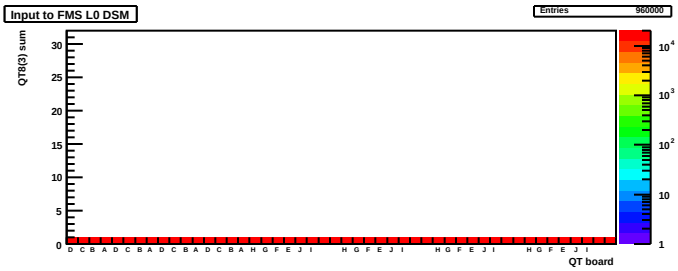

Input to FMS L0 DSM
Entries 160000
QT8(0) sum - simulated
QT board

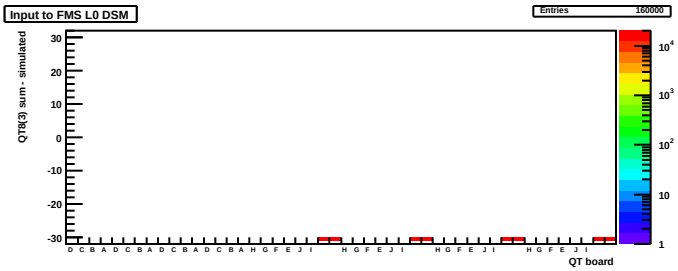

Input to FMS L0 DSM
Entries 960000
QT8(1) sum
QT board

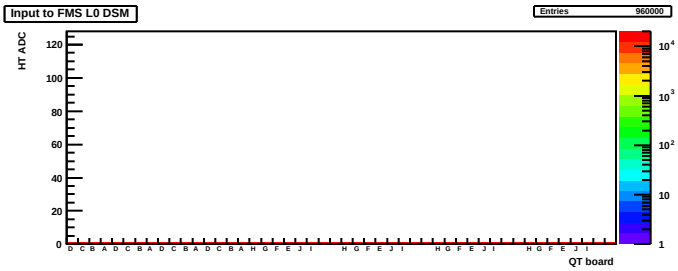

Input to FMS L0 DSM
Entries 160000
QT8(1) sum - simulated
QT board

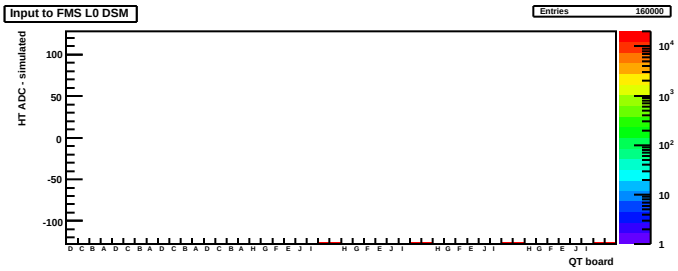

Input to FMS L0 DSM
Entries 960000
QT8(2) sum
QT board

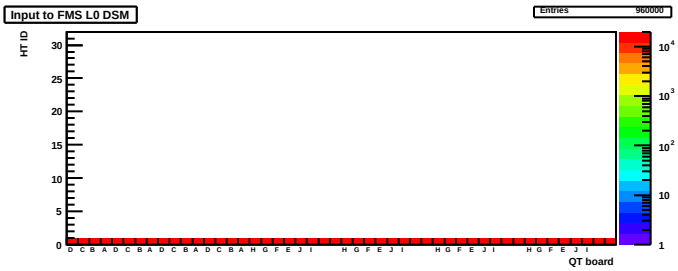

Input to FMS L0 DSM
Entries 160000
QT8(2) sum - simulated
QT board

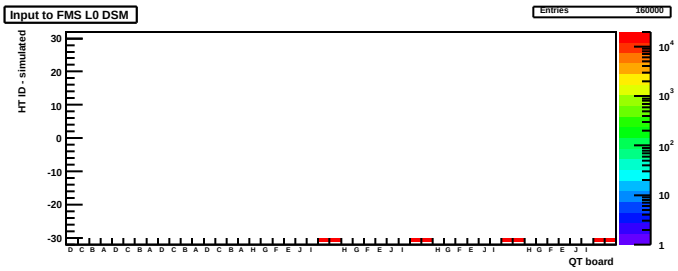

Input to FMS L0 DSM
Entries 960000
QT8(3) sum
QT board

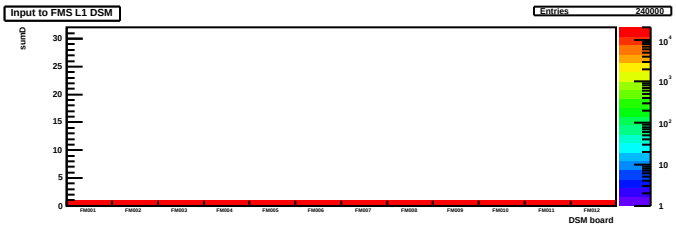

Input to FMS L0 DSM
Entries 160000
QT8(3) sum - simulated
QT board

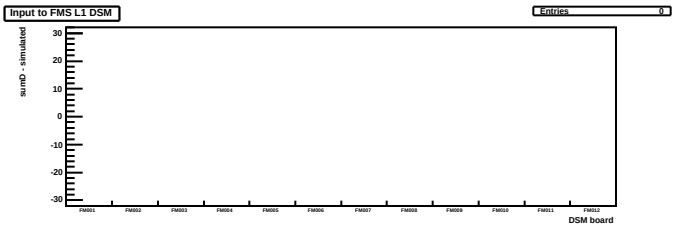

Input to FMS L0 DSM
Entries 960000
HT ADC
QT board

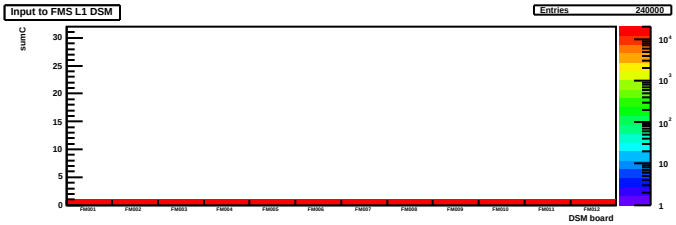

Input to FMS L0 DSM
Entries 160000
HT ADC - simulated
QT board

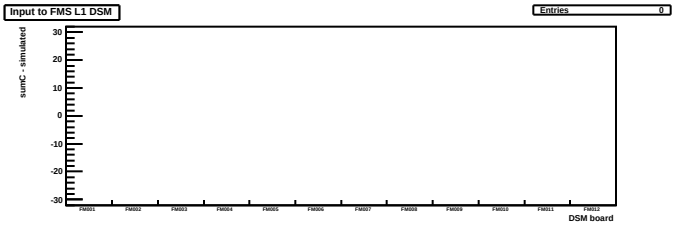

Input to FMS L0 DSM
Entries 960000
HT ID
QT board

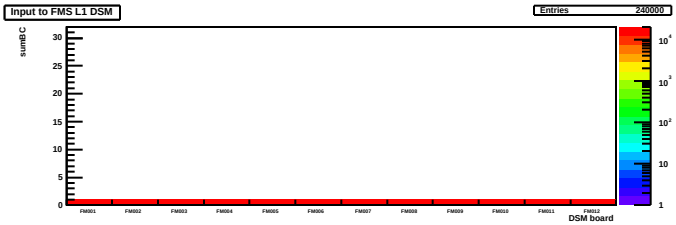

Input to FMS L0 DSM
Entries 160000
HT ID - simulated
QT board

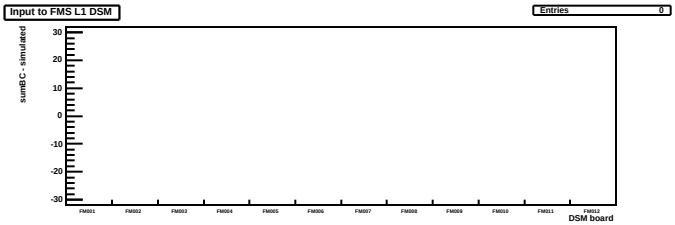

Input to FMS L1 DSM
Entries 240000
sumD
DSM board

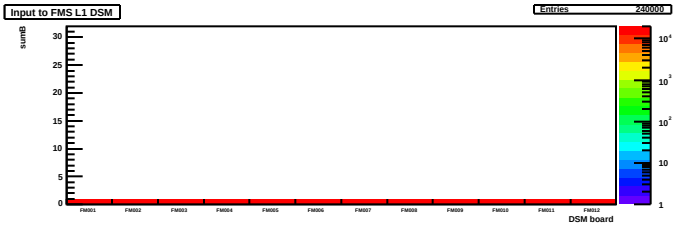

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

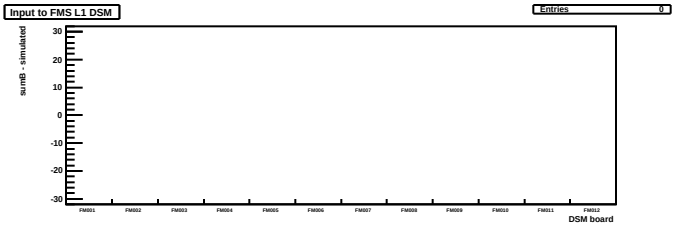

Input to FMS L1 DSM
Entries 240000
sumC
DSM board

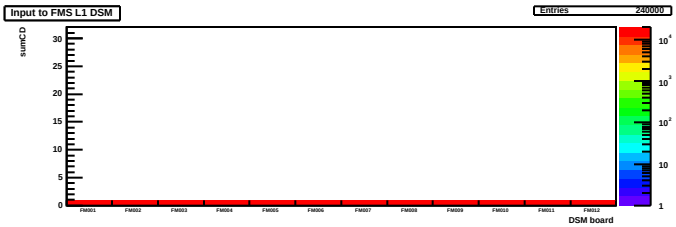

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

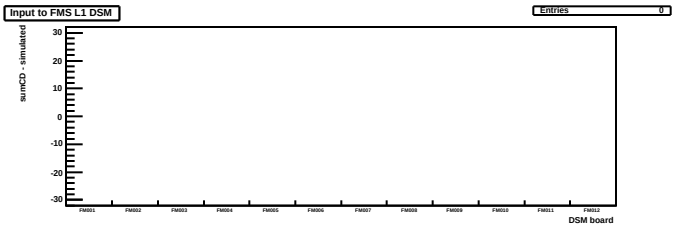

Input to FMS L1 DSM
Entries 240000
sumBC
DSM board

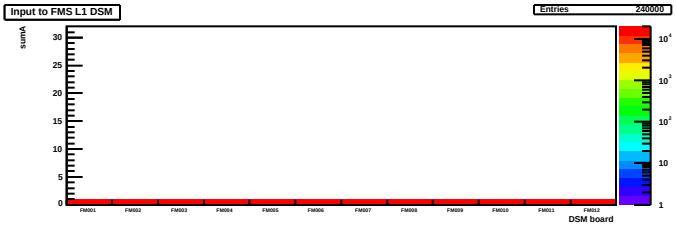

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

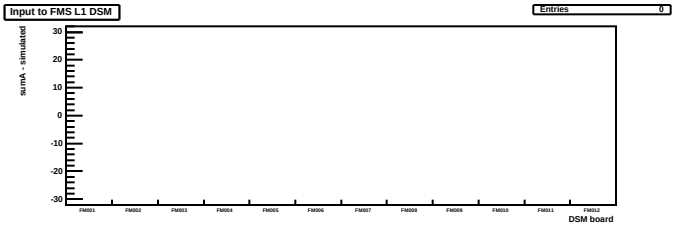

Input to FMS L1 DSM
Entries 240000
sumB
DSM board

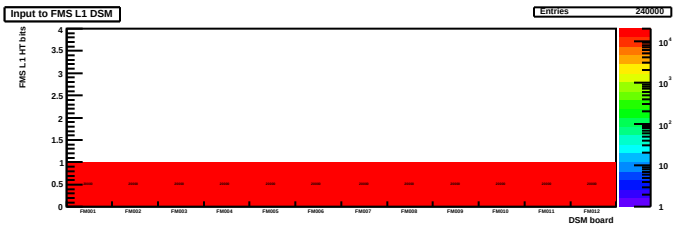

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

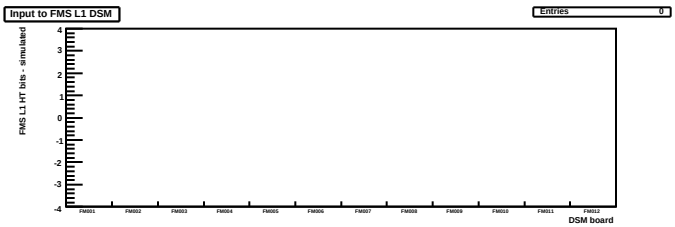

Input to FMS L1 DSM
Entries 240000
sumCD
DSM board

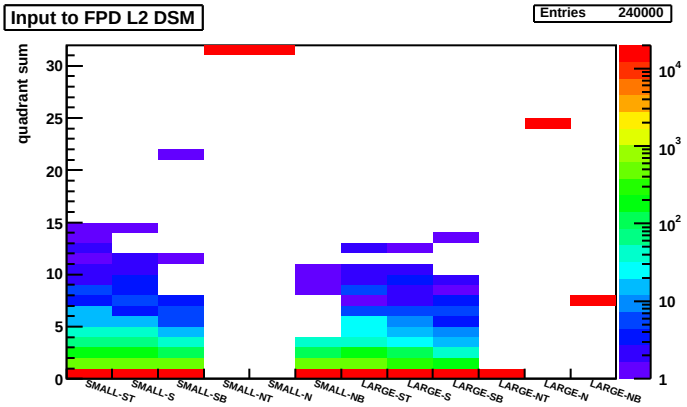

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

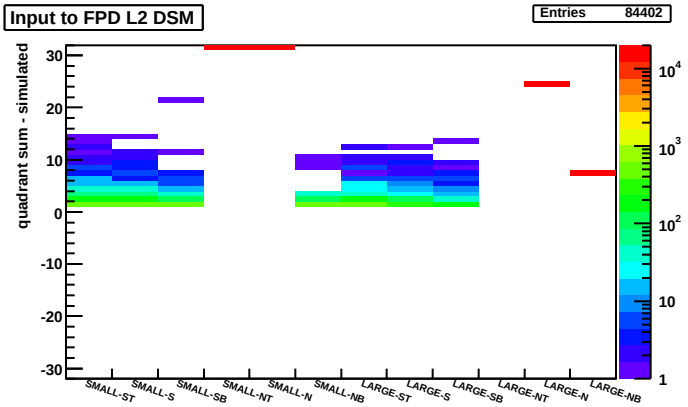

Input to FMS L1 DSM
Entries 240000
sumA
DSM board

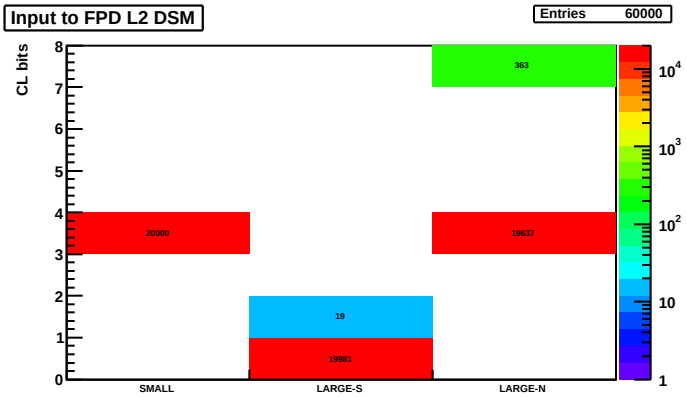

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

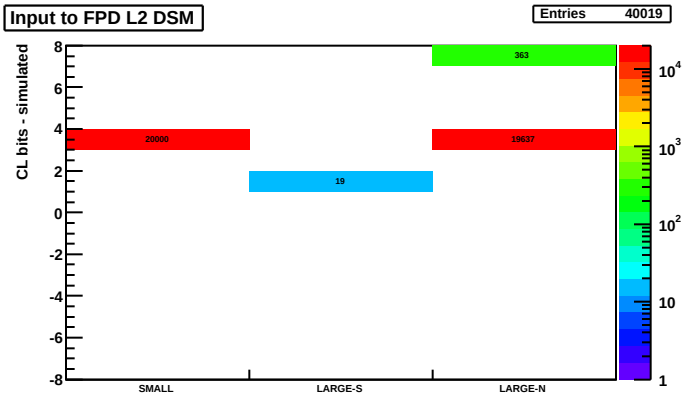

Input to FMS L1 DSM
Entries 240000
FMS L1 HT bits
DSM board

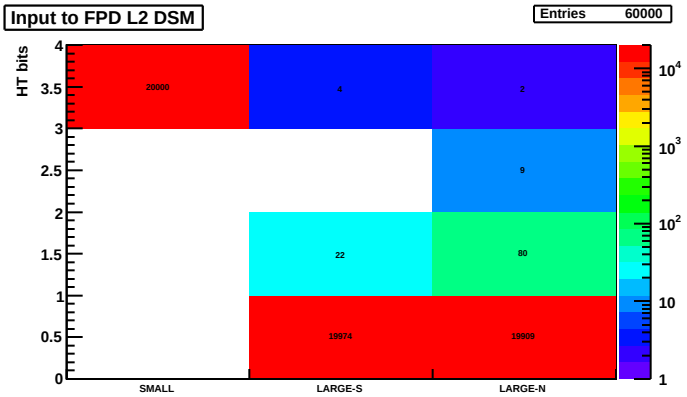

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

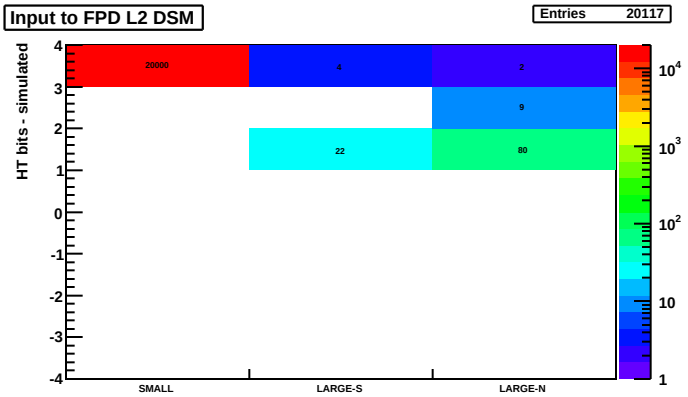

Input to FPD L2 DSM
Entries 240000
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

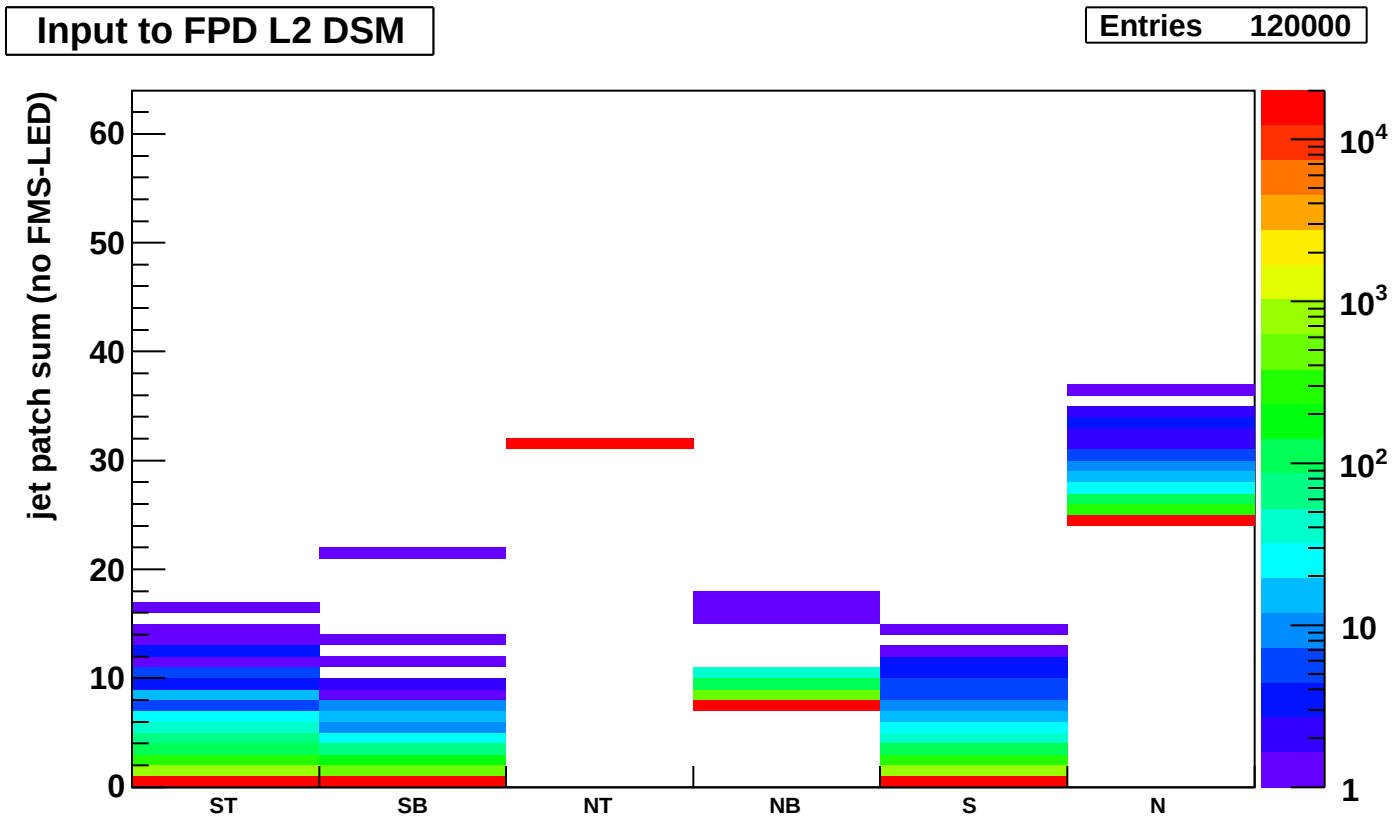

Input to FPD L2 DSM
Entries 84402
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

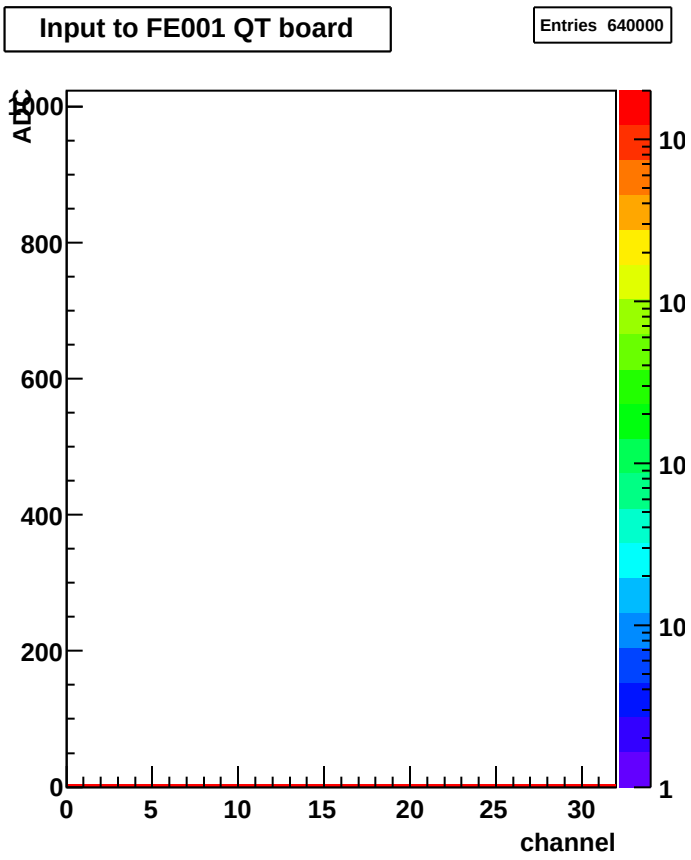

Input to FPD L2 DSM
Entries 60000
CL bits
363
20000
19637
19
19981
SMALL
LARGE-S
LARGE-N

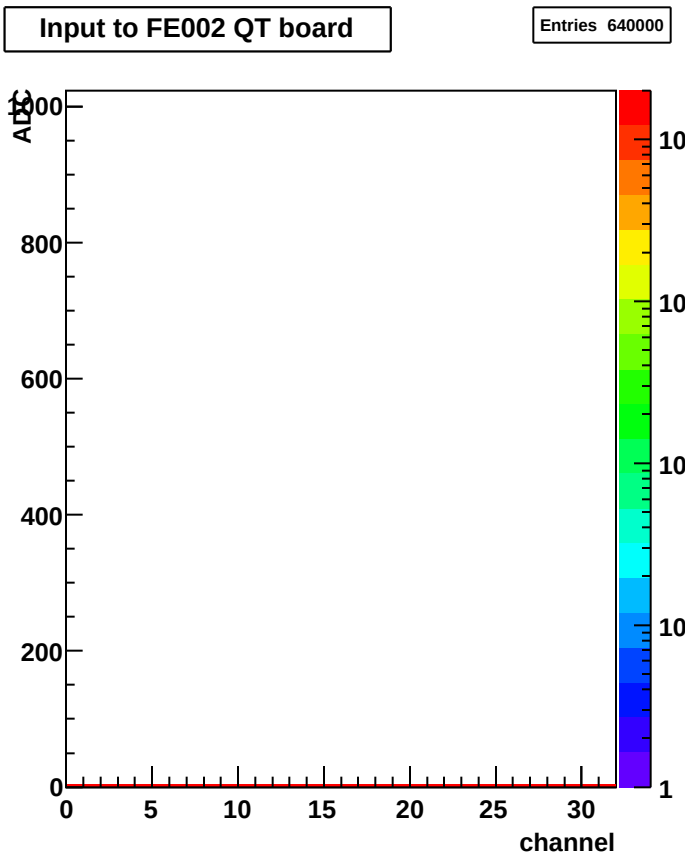

Input to FPD L2 DSM
Entries 40019
CL bits - simulated
363
20000
19637
19
SMALL
LARGE-S
LARGE-N

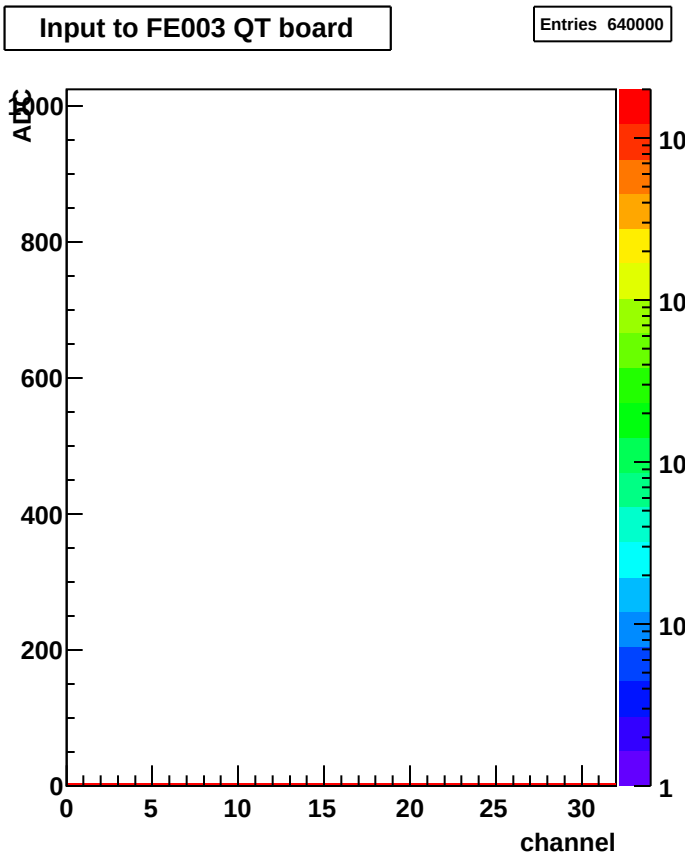

Input to FPD L2 DSM
Entries 60000
HT bits
20000
4
2
9
22
80
19974
19909
SMALL
LARGE-S
LARGE-N

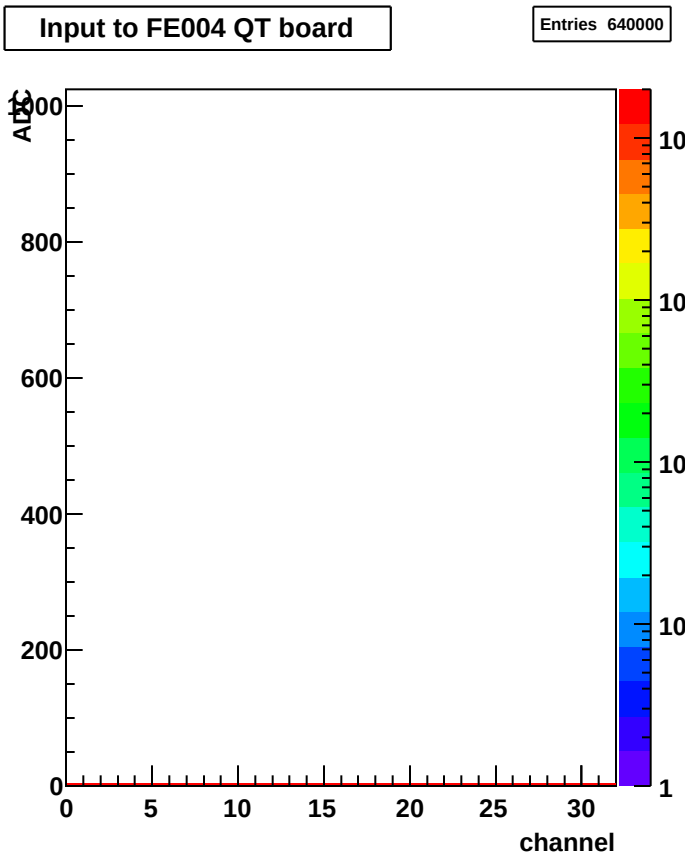

Input to FPD L2 DSM
Entries 20117
HT bits - simulated
20000
4
2
9
22
80
SMALL
LARGE-S
LARGE-N

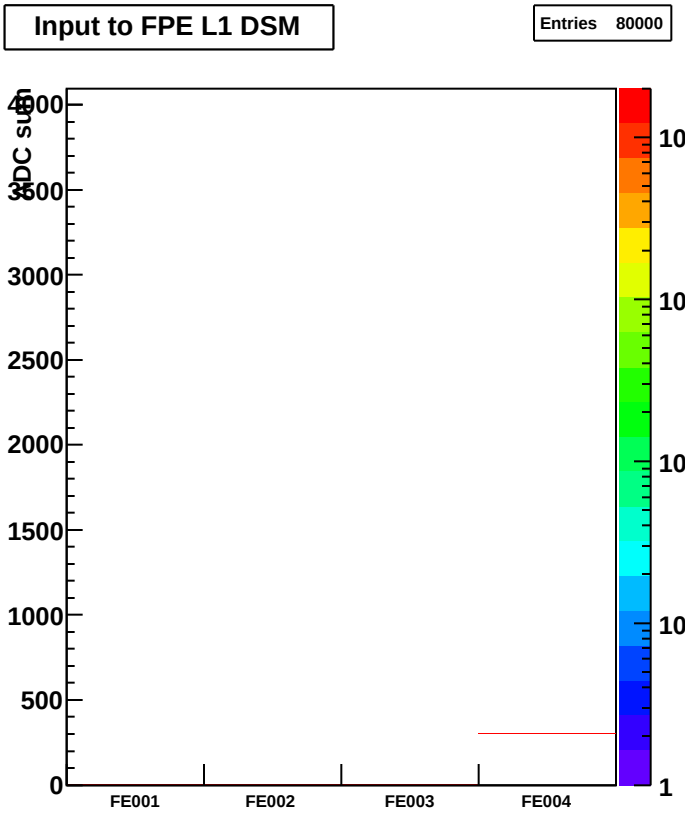

Input to FPD L2 DSM
Entries 120000
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

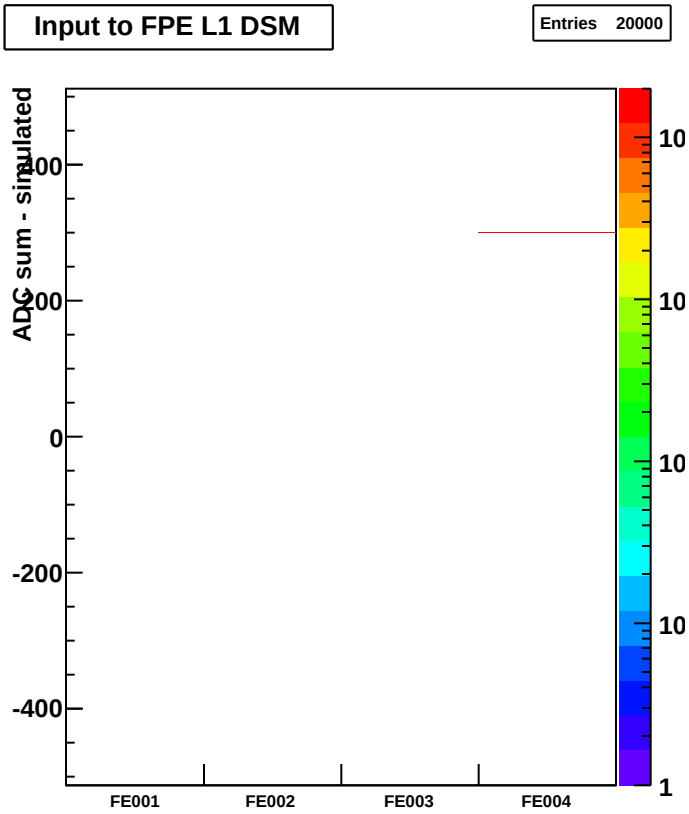

Input to FE001 QT board
Entries 640000
ADC
channel

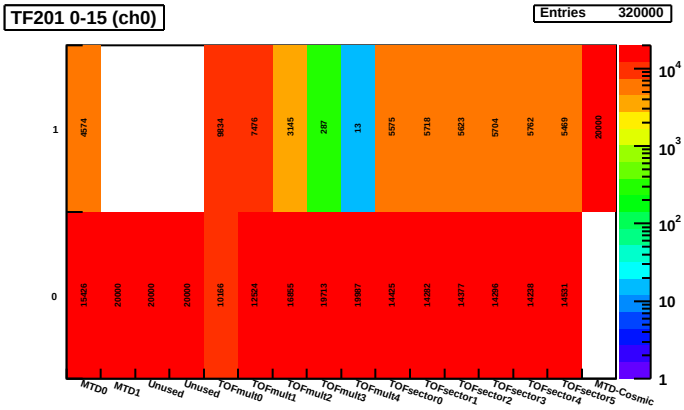

Input to FE002 QT board
Entries 640000
ADC
channel

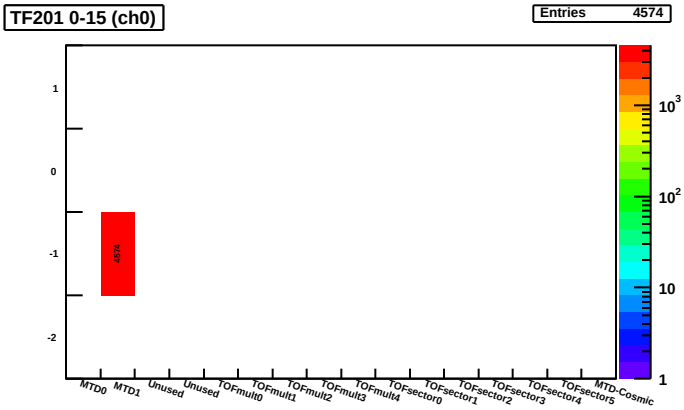

Input to FE003 QT board
Entries 640000
ADC
channel

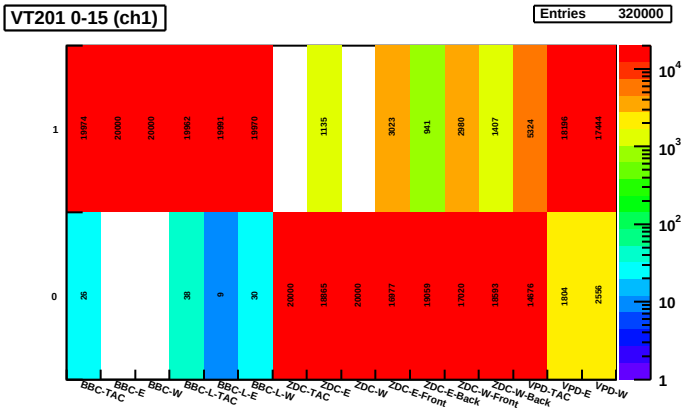

Input to FE004 QT board
Entries 640000
ADC
channel

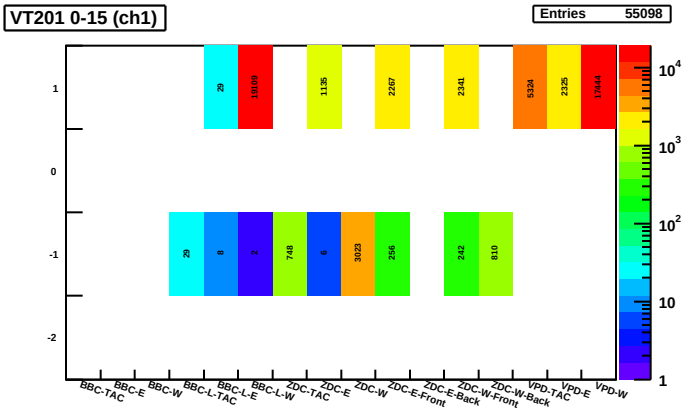

Input to FPE L1 DSM
Entries 80000
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1

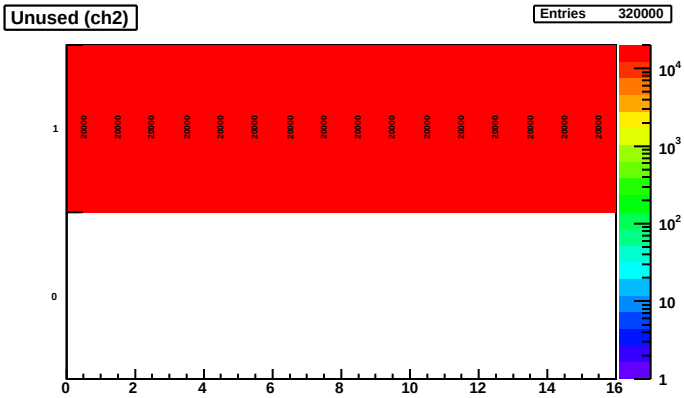

Input to FPE L1 DSM
Entries 20000
ADC sum - simulated
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
10
1


TF201 0-15 (ch0)
Entries 320000
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


TF201 0-15 (ch0)
Entries 4574
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 320000
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 55098
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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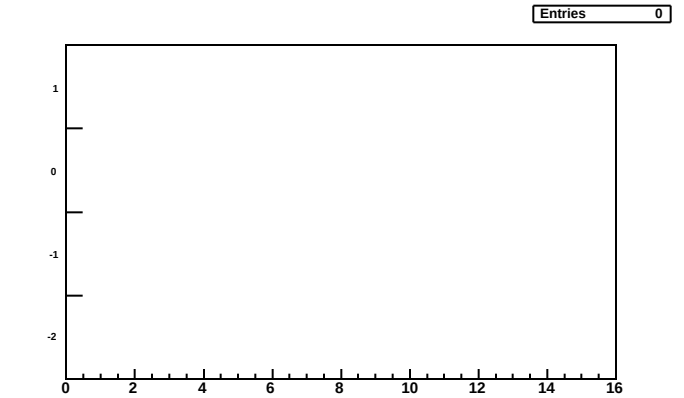
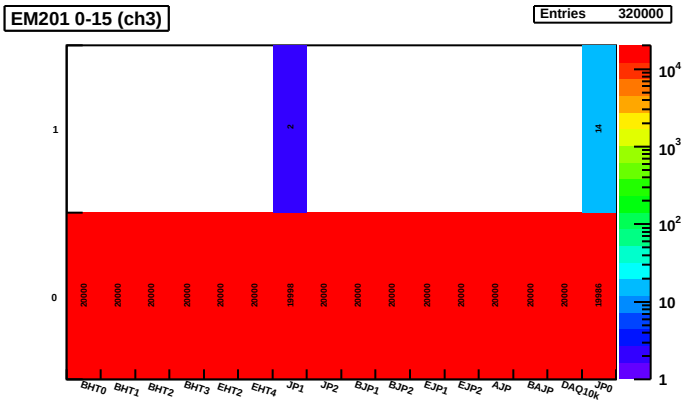
Entries 320000


Entries 0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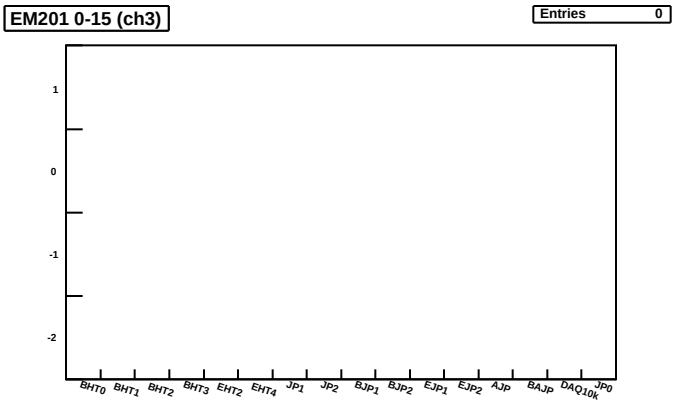
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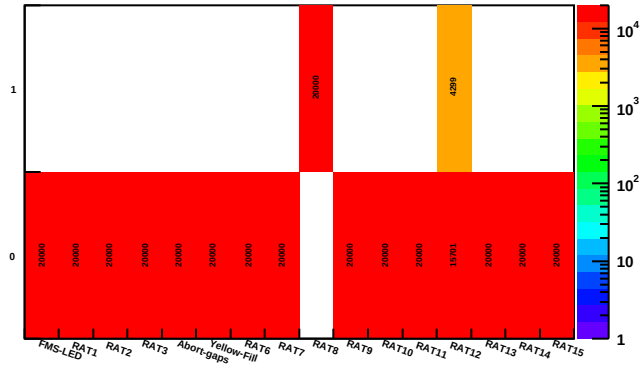
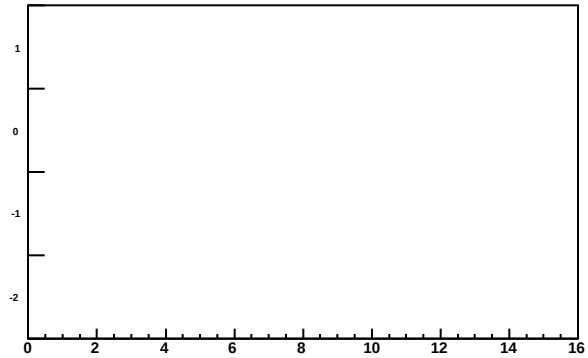
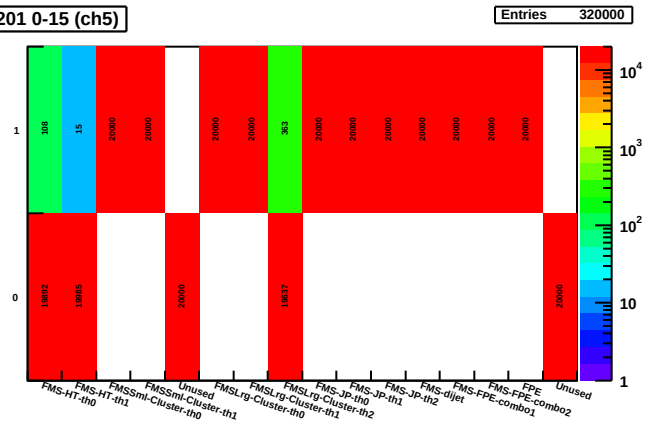
RAT board (ch4)





FP201 0-15 (ch5)



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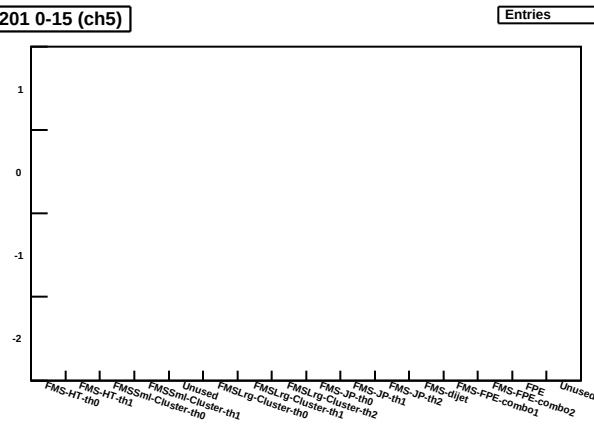
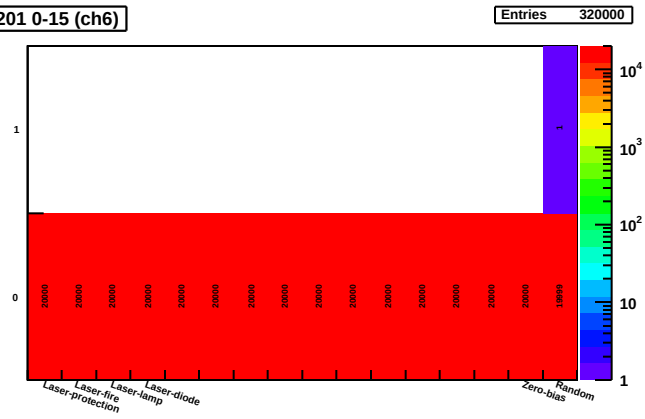
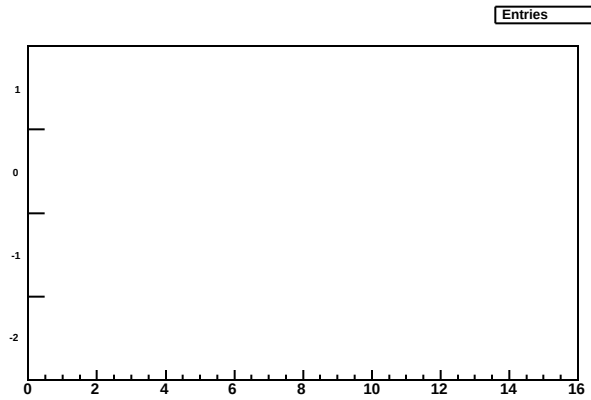
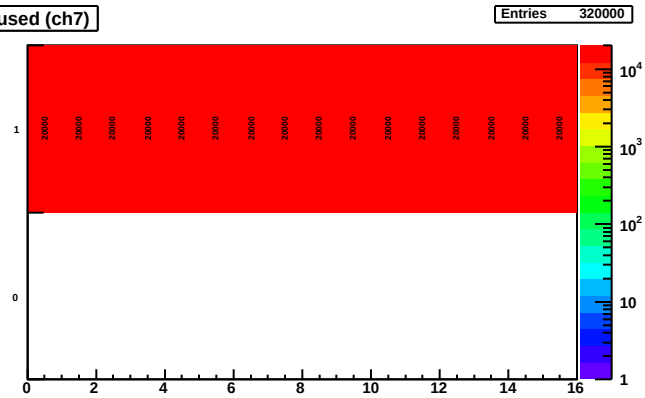
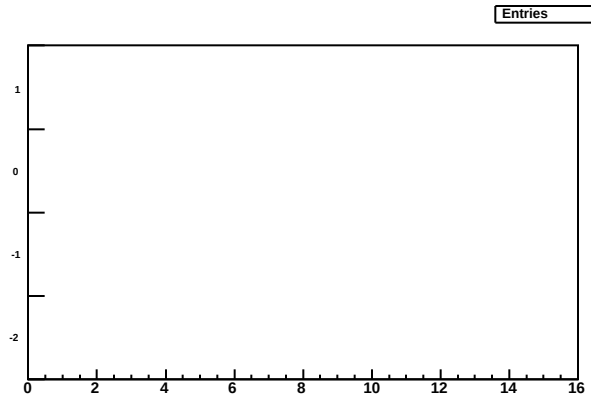


ST201 0-15 (ch6)





Unused (ch7)