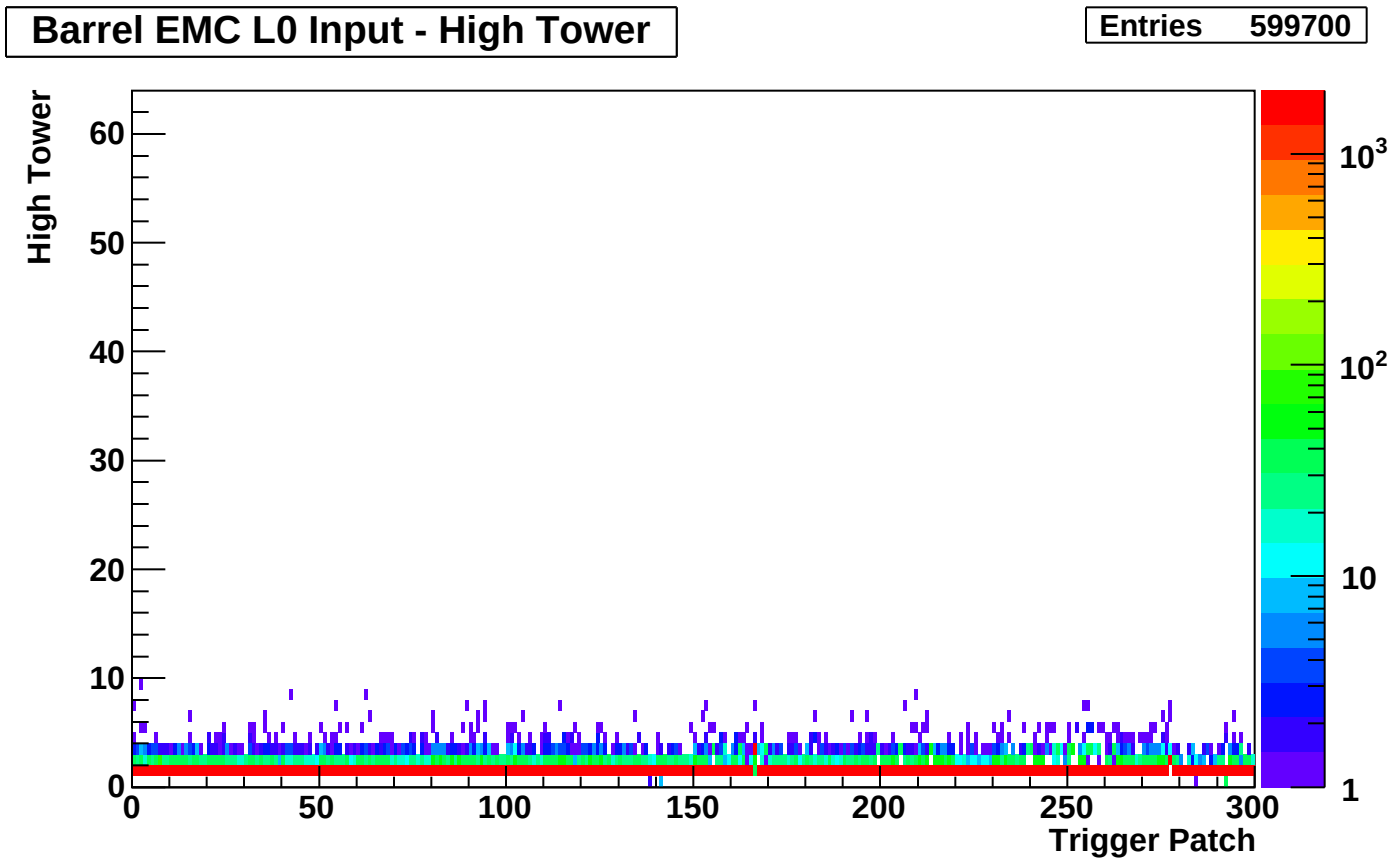
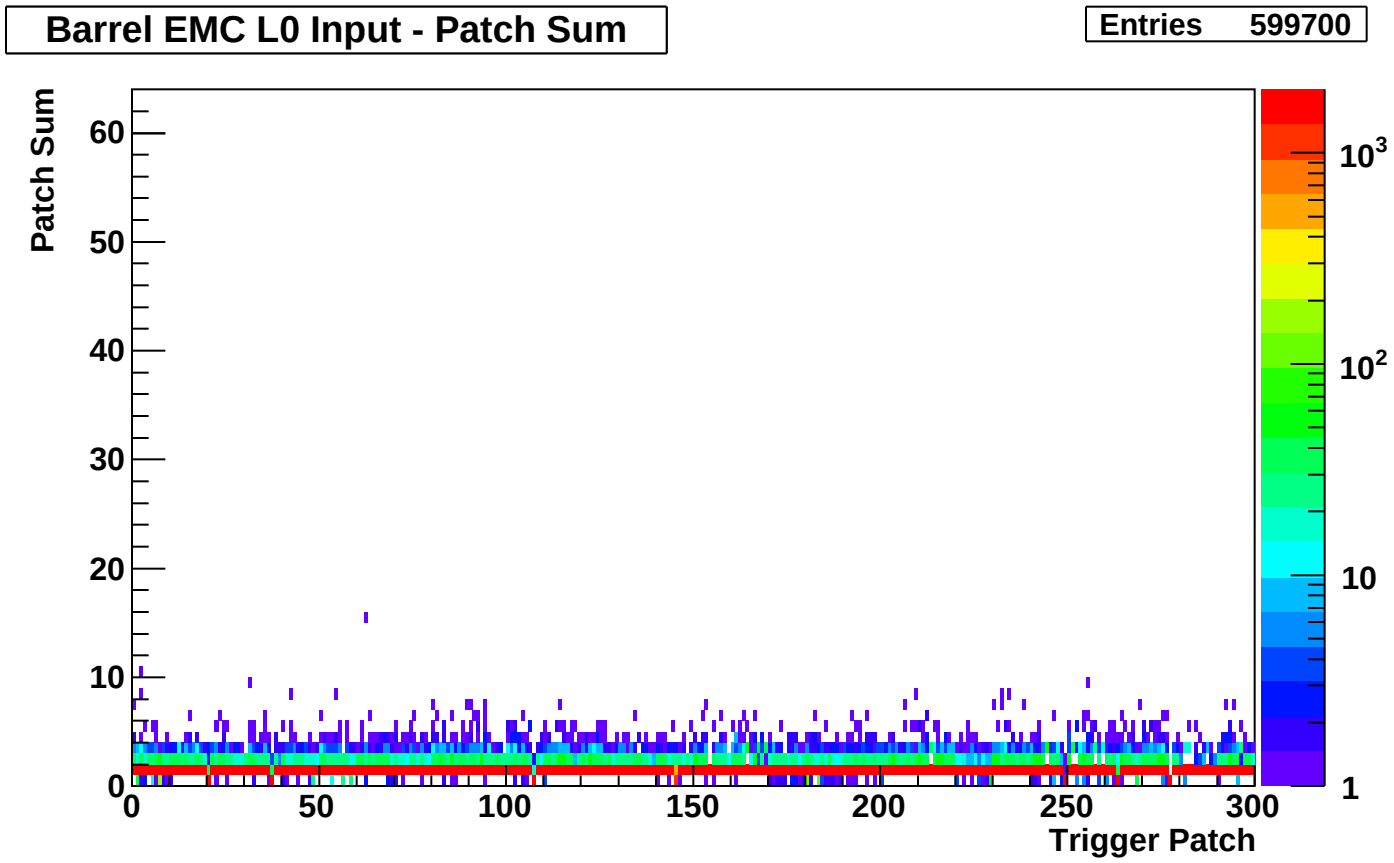
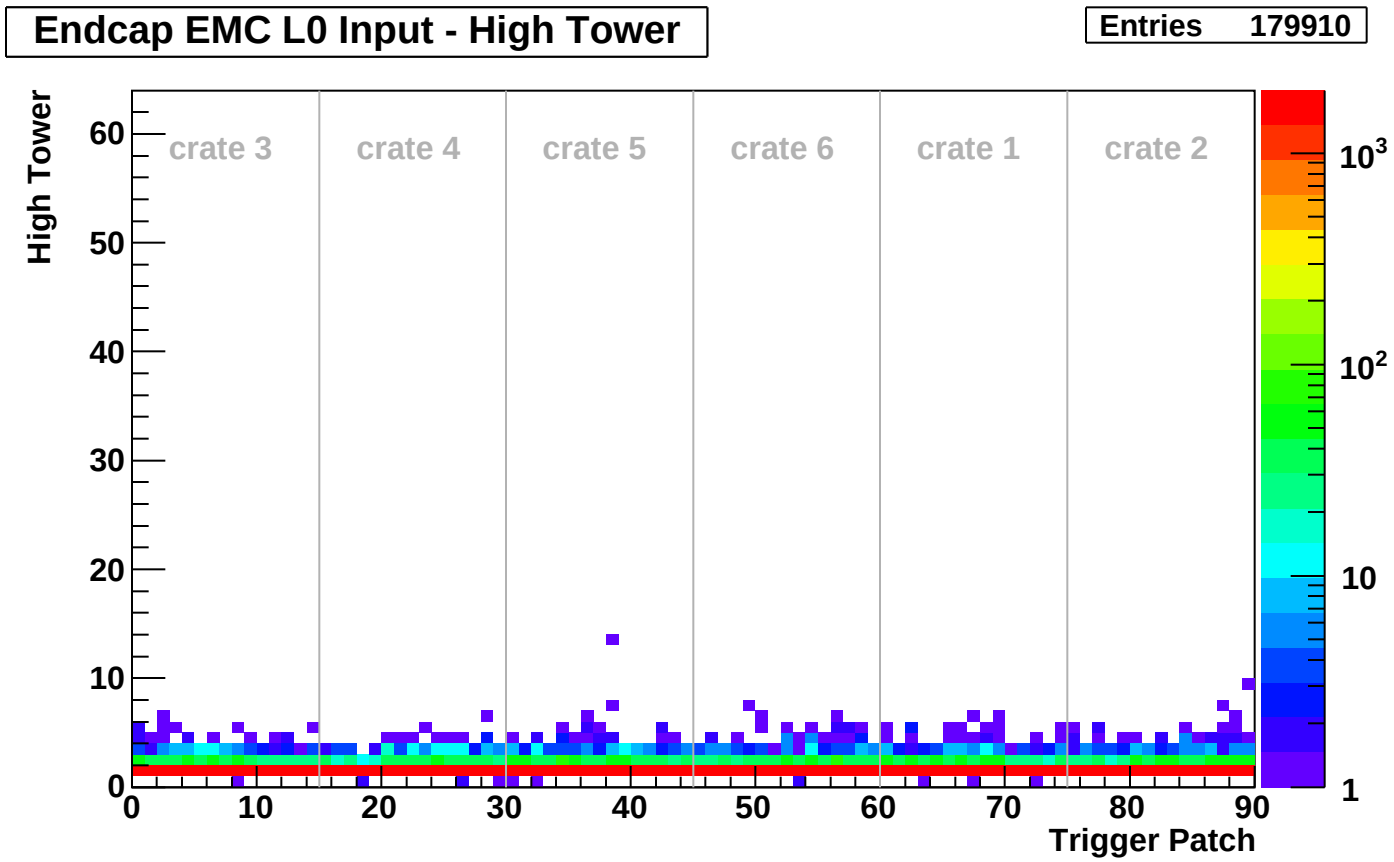
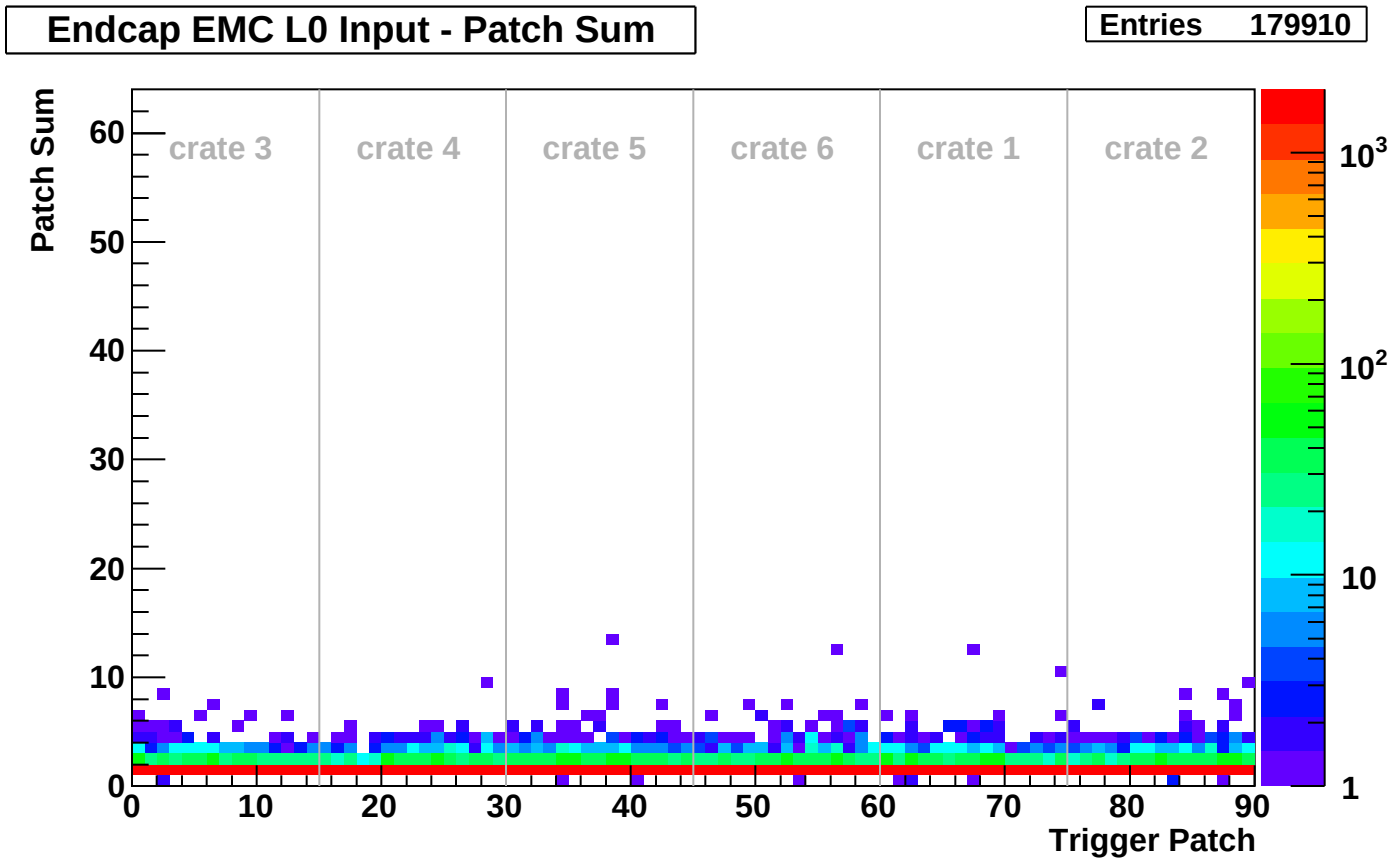
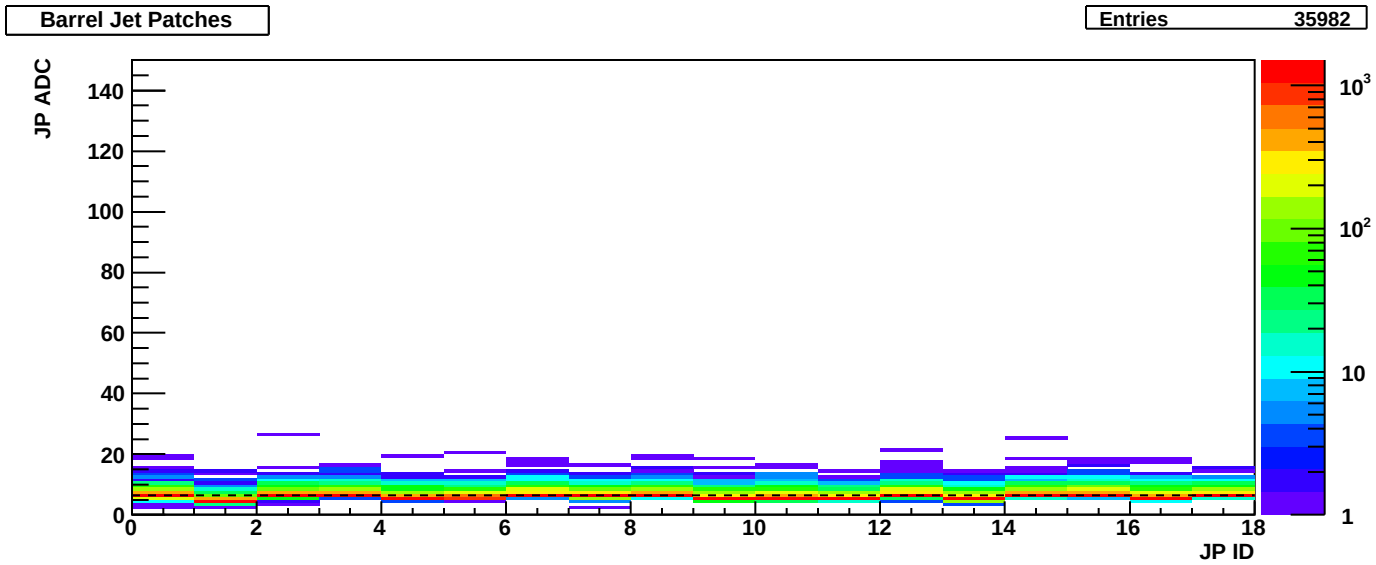
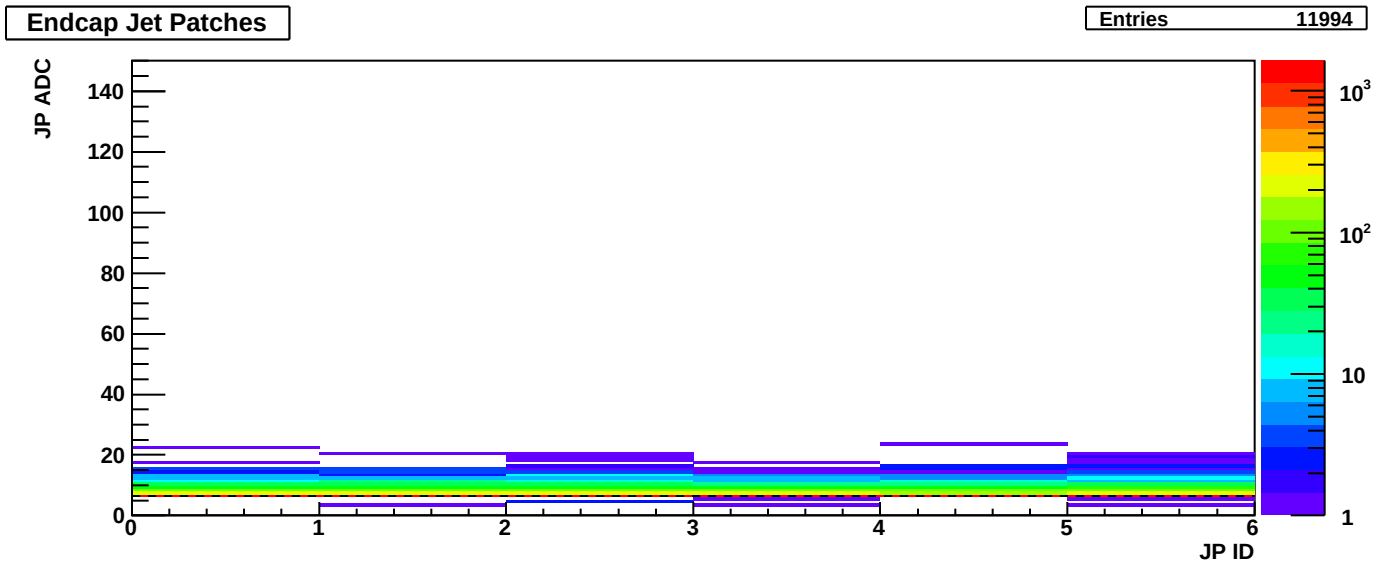

Barrel EMC L0 Input - High Tower
Entries 599700
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

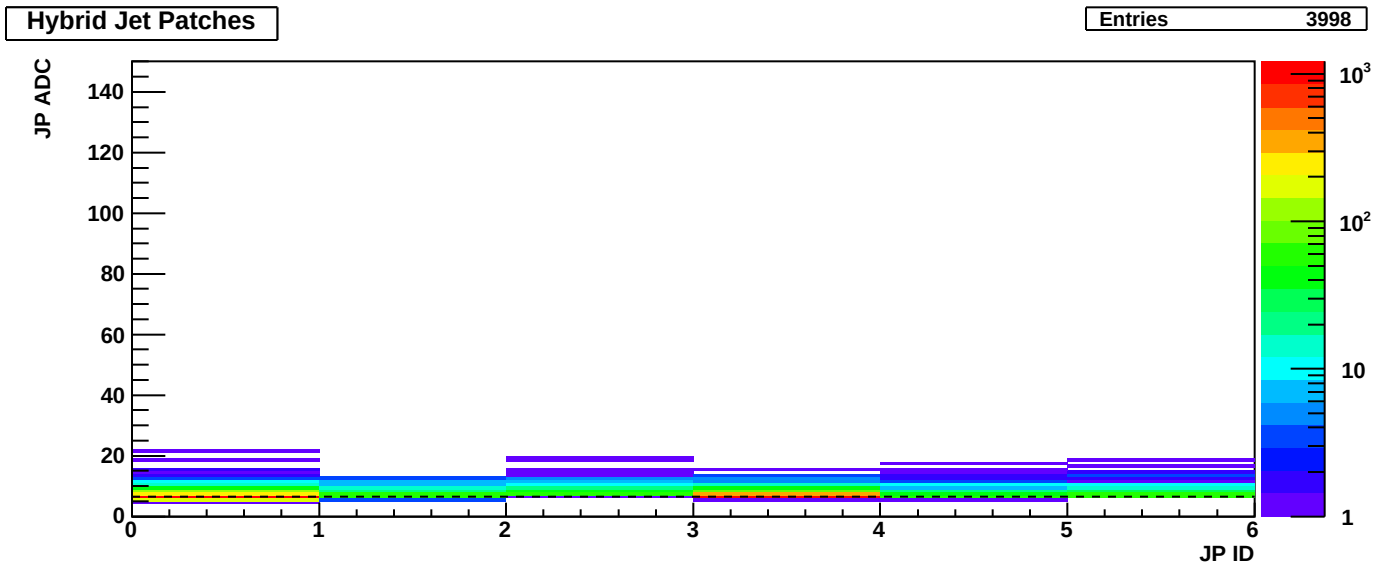

Barrel EMC L0 Input - Patch Sum
Entries 599700
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3

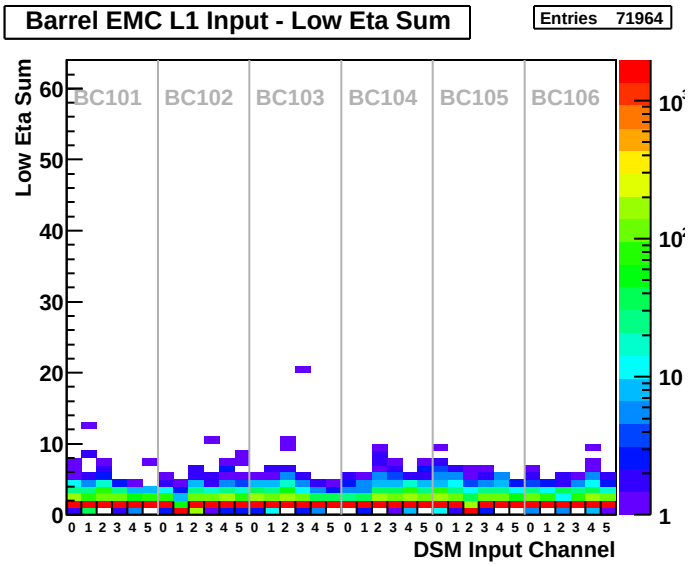

Endcap EMC L0 Input - High Tower
Entries 179910
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

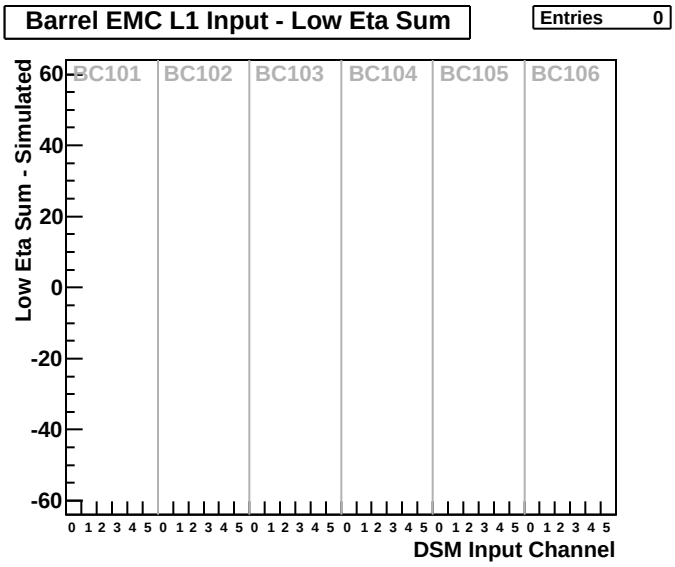

Endcap EMC L0 Input - Patch Sum
Entries 179910
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

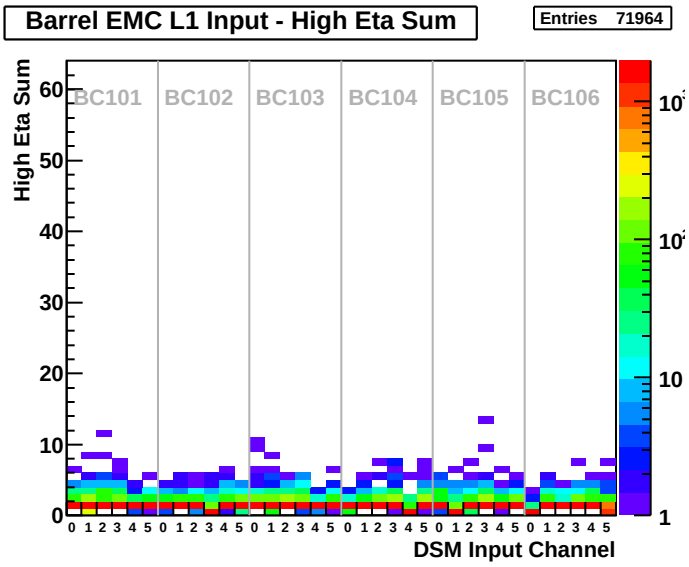

Barrel Jet Patches
Entries 35982
JP ADC
JP ID

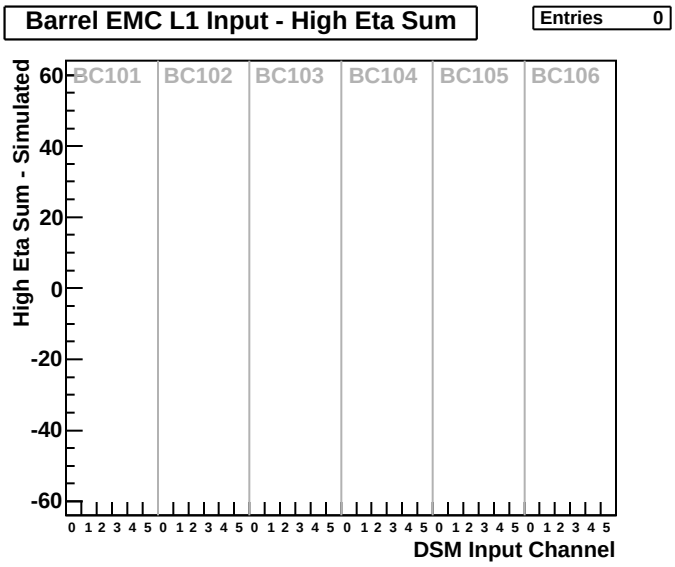

Endcap Jet Patches
Entries 11994
JP ADC
JP ID

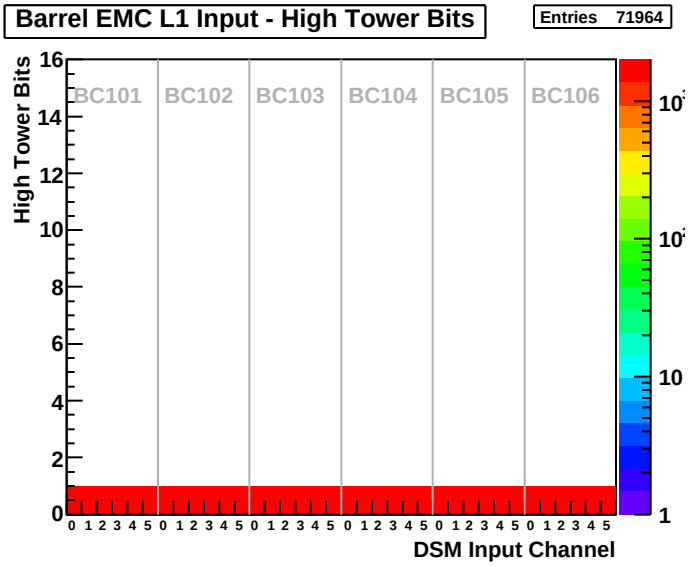

Hybrid Jet Patches
Entries 3998
JP ADC
JP ID

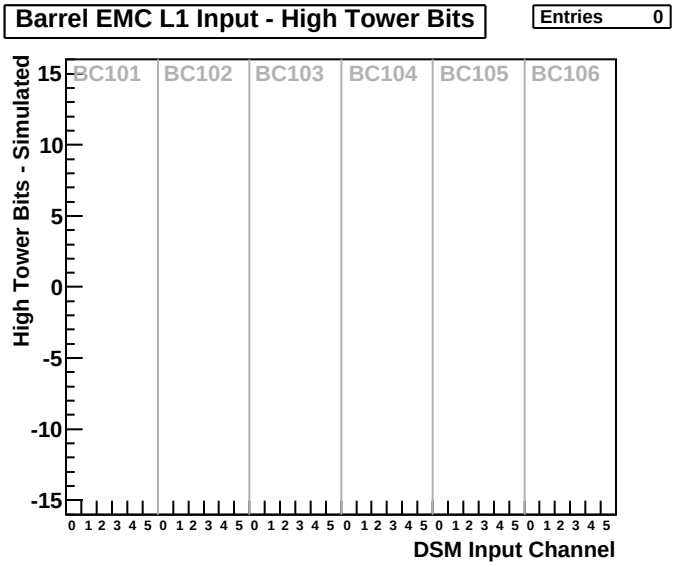

Barrel EMC L1 Input - Low Eta Sum
Entries 71964
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

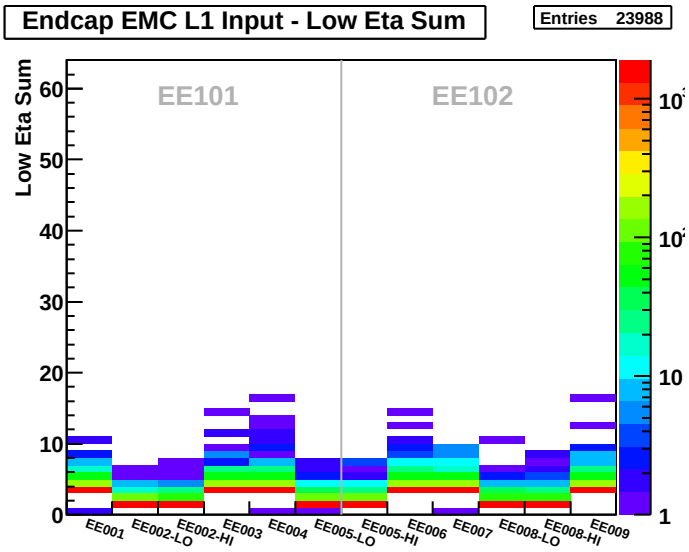

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

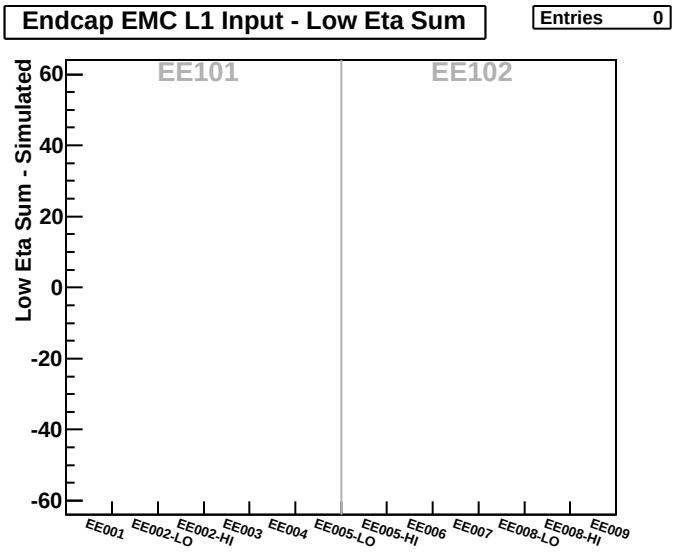

Barrel EMC L1 Input - High Eta Sum
Entries 71964
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

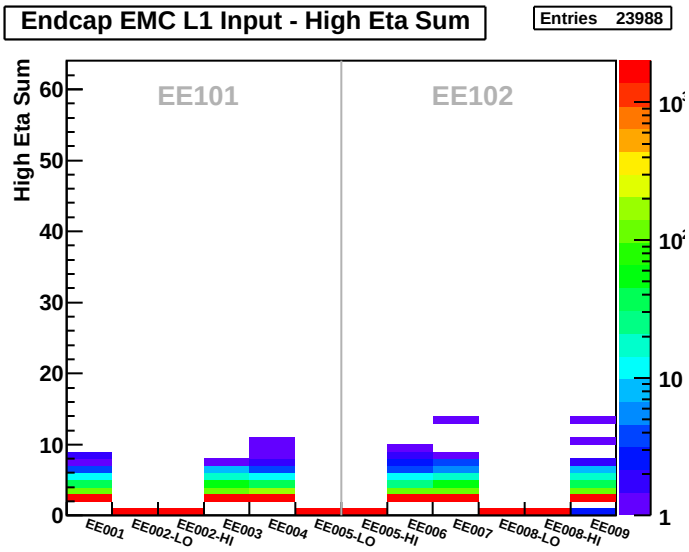

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

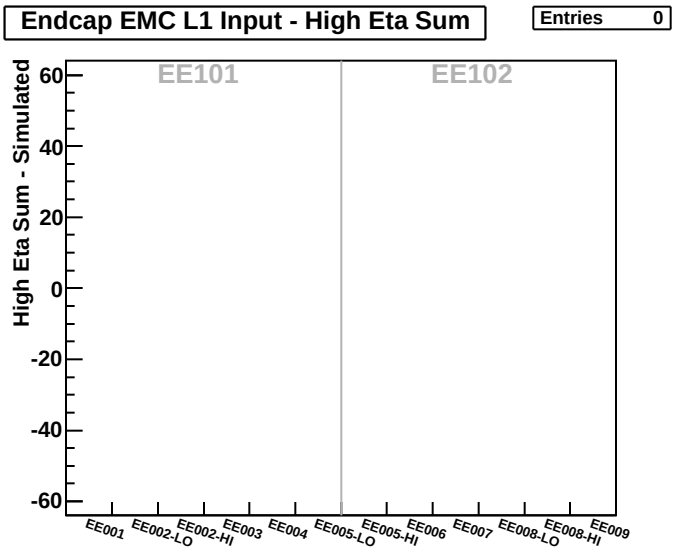

Barrel EMC L1 Input - High Tower Bits
Entries 71964
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

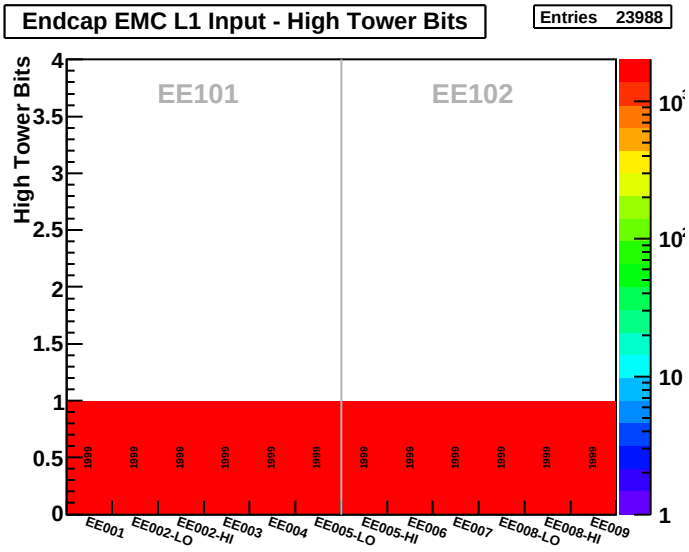

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

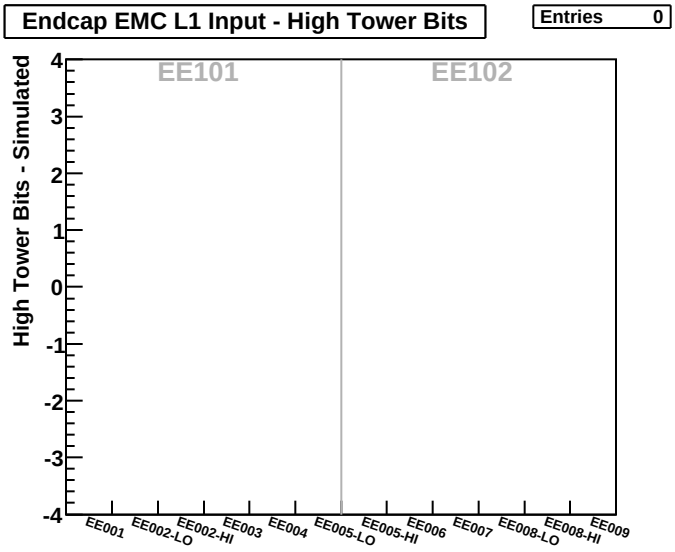

Endcap EMC L1 Input - Low Eta Sum
Entries 23988
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

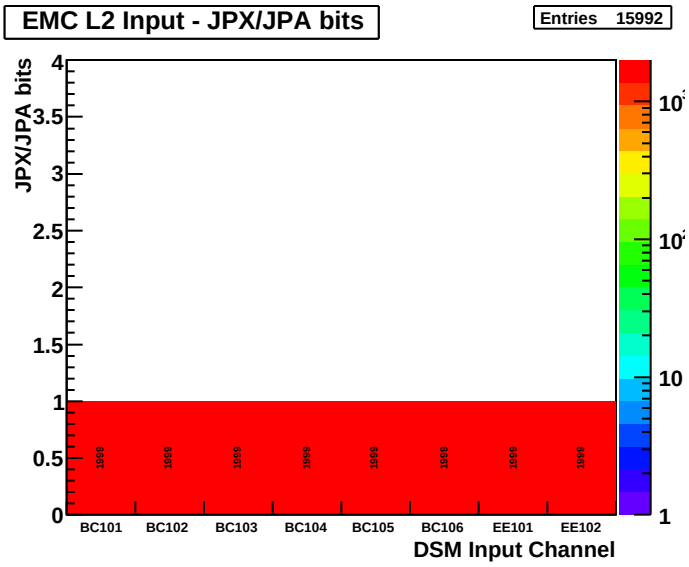

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

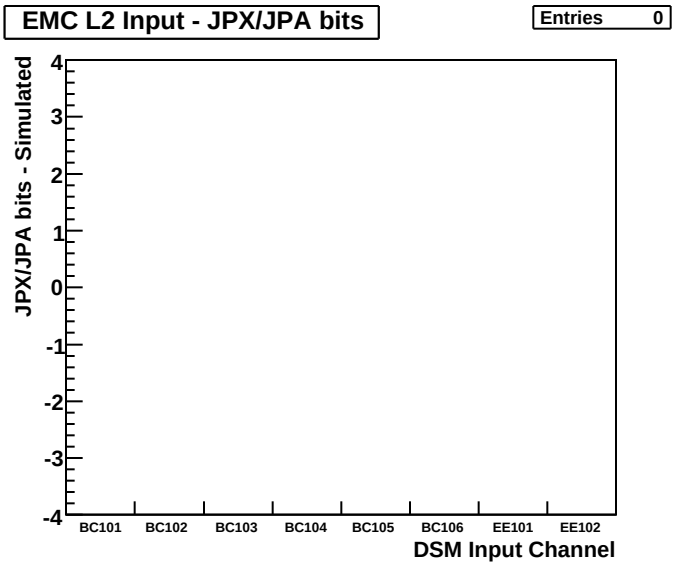

Endcap EMC L1 Input - High Eta Sum
Entries 23988
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

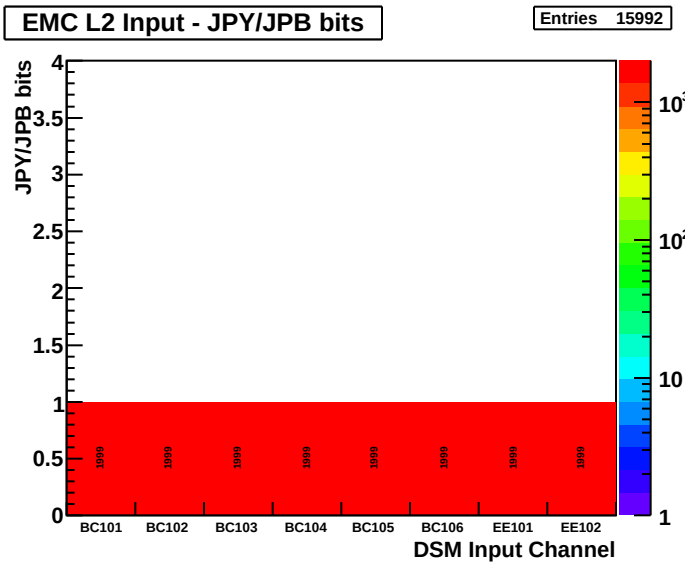

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

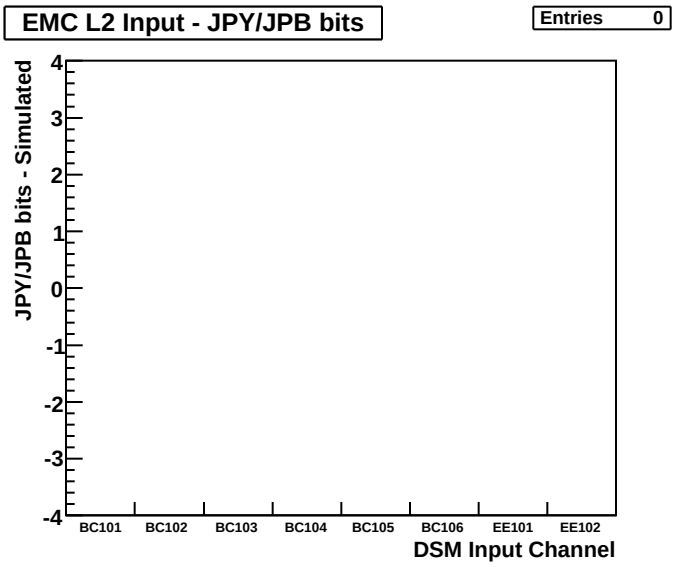

Endcap EMC L1 Input - High Tower Bits
Entries 23988
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

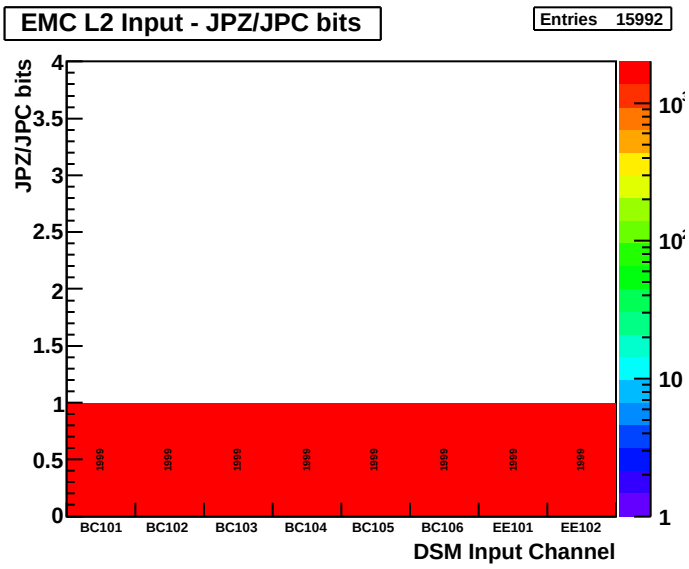

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

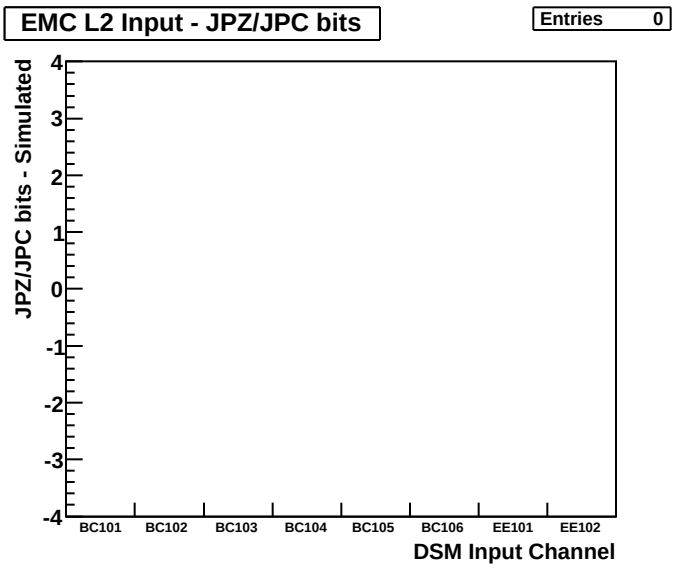

EMC L2 Input - JPX/JPA bits
Entries 15992
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

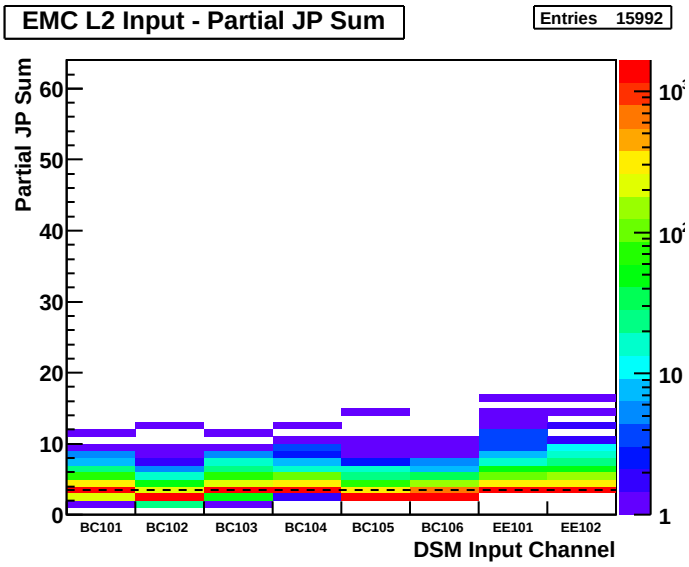

EMC L2 Input - JPX/JPA bits
Entries 0
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

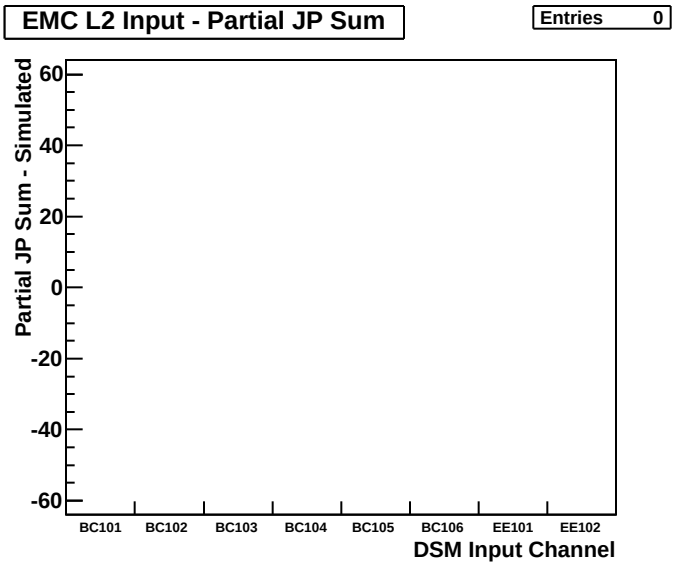

EMC L2 Input - JPY/JPB bits
Entries 15992
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

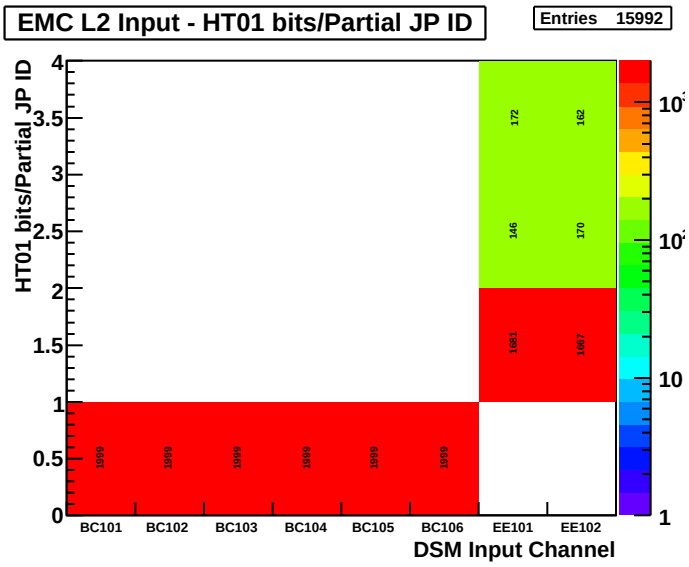

EMC L2 Input - JPY/JPB bits
Entries 0
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

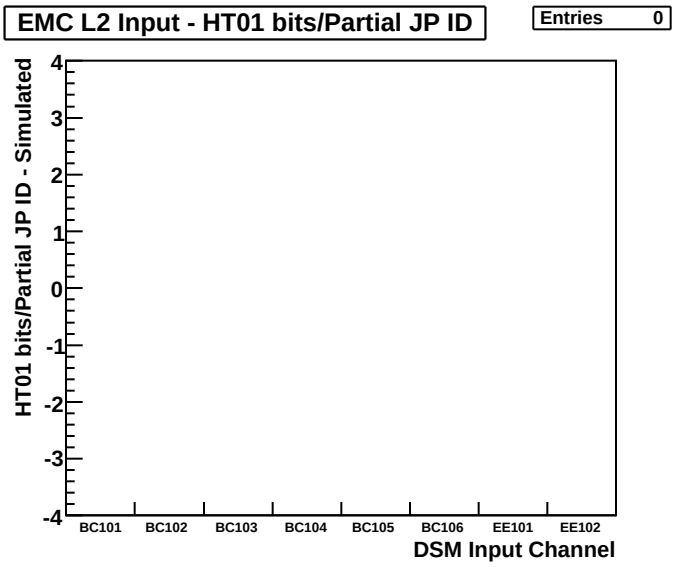

EMC L2 Input - JPZ/JPC bits
Entries 15992
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

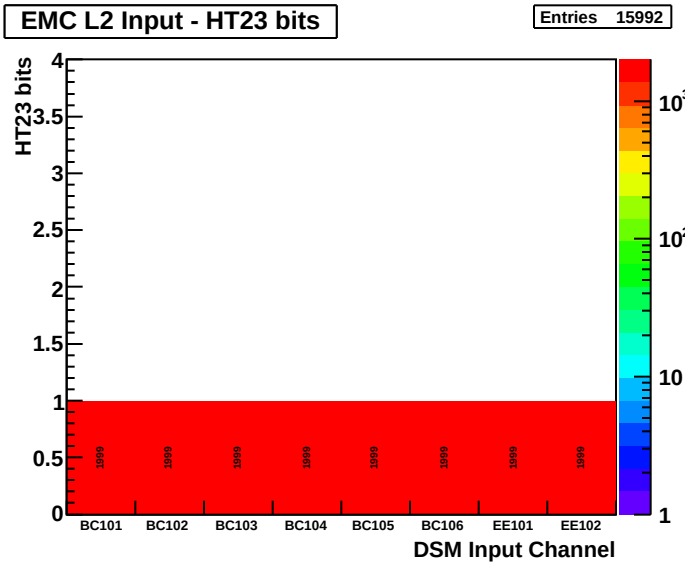

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

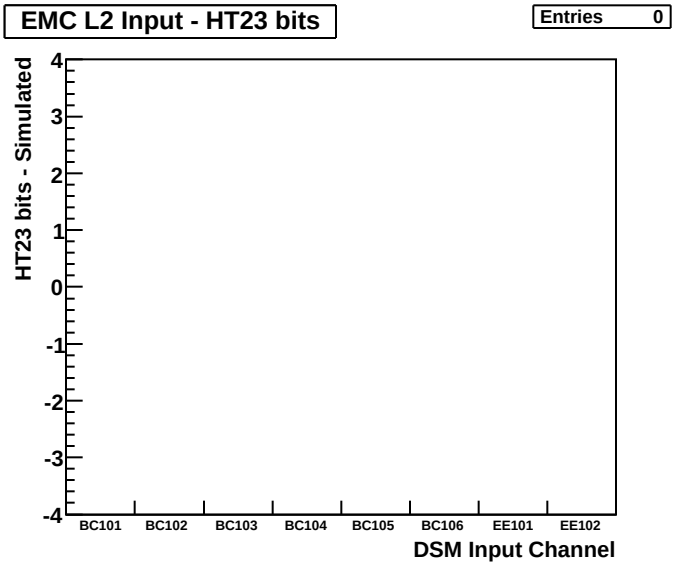

EMC L2 Input - Partial JP Sum
Entries 15992
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

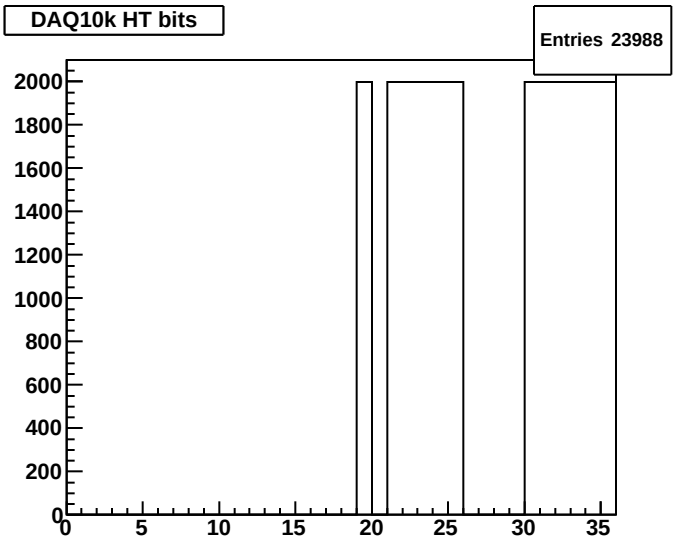

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

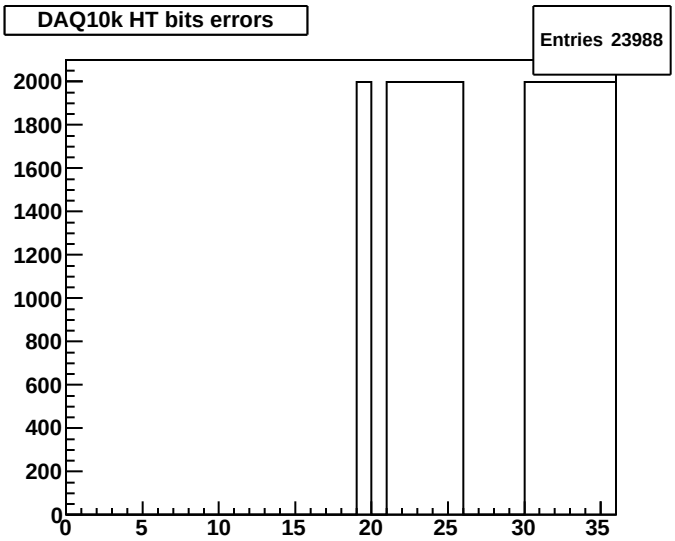

EMC L2 Input - HT01 bits/Partial JP ID
Entries 15992
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

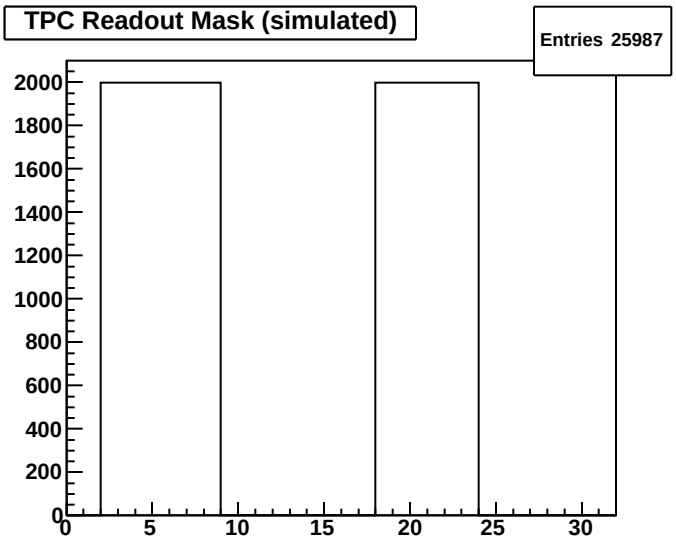

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

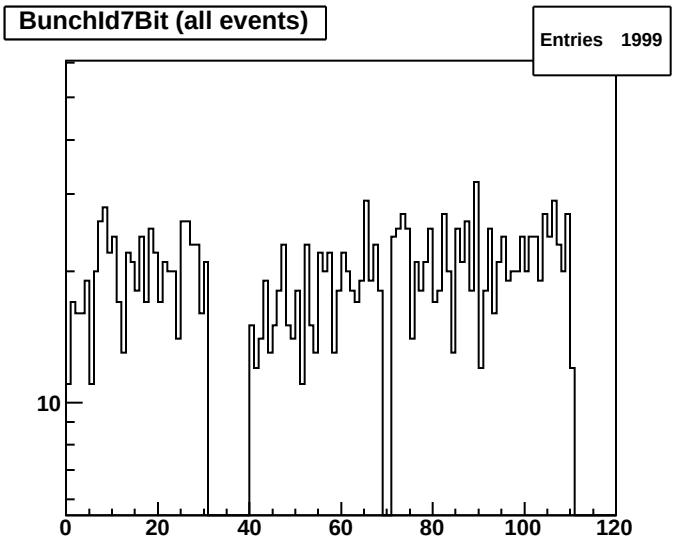

EMC L2 Input - HT23 bits
Entries 15992
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

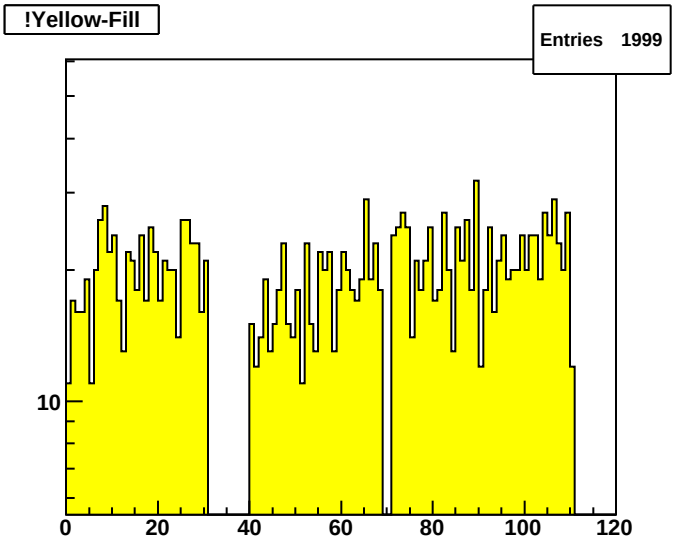

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

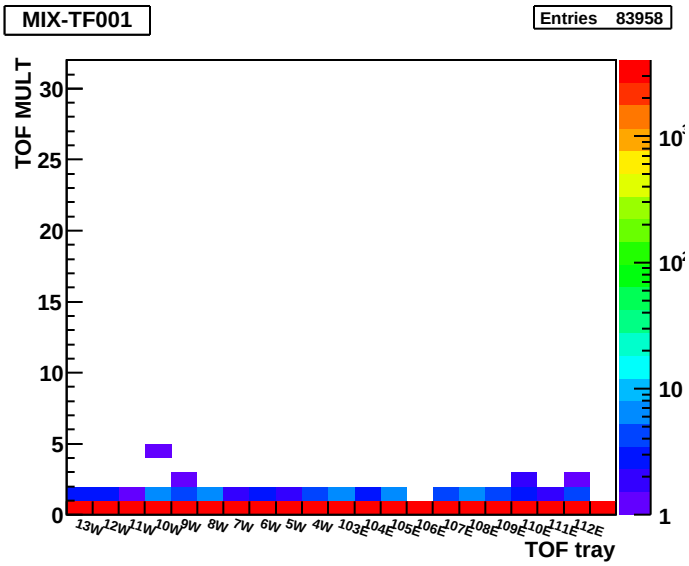

DAQ10k HT bits
Entries 23988
2000
1800
1600
1400
1200
1000
800
600
400
200
0
0
5
10
15
20
25
30
35

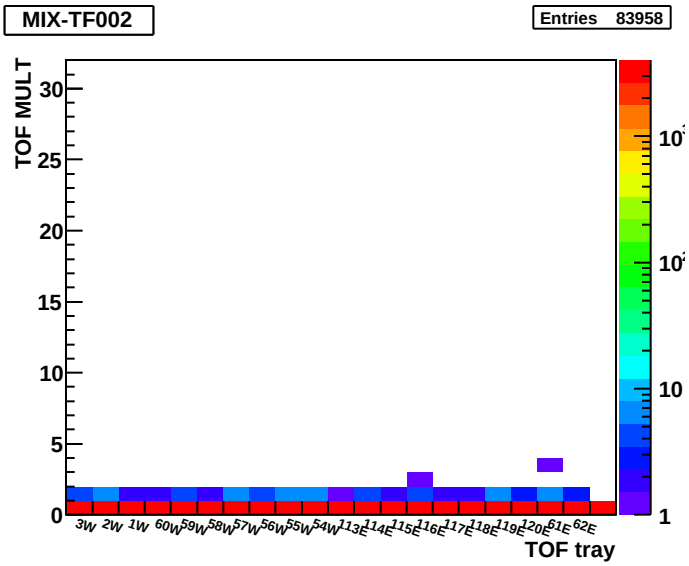

DAQ10k HT bits errors
Entries 23988
2000
1800
1600
1400
1200
1000
800
600
400
200
0
0
5
10
15
20
25
30
35

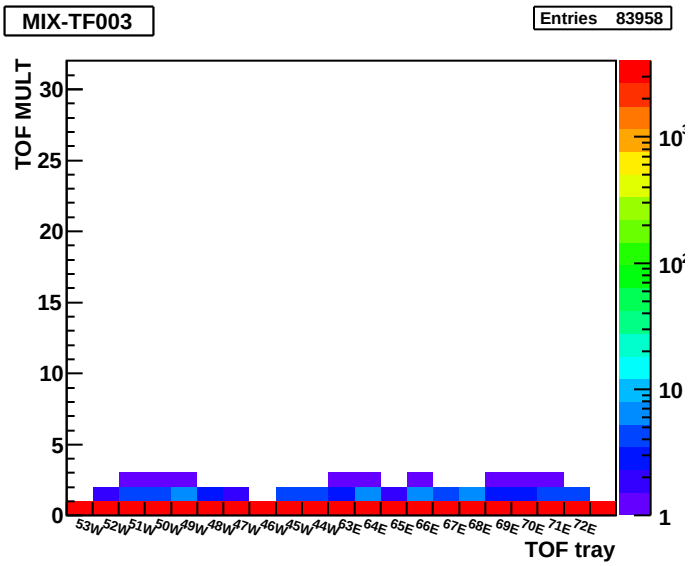

TPC Readout Mask (simulated)
Entries 25987
2000
1800
1600
1400
1200
1000
800
600
400
200
0
0
5
10
15
20
25
30

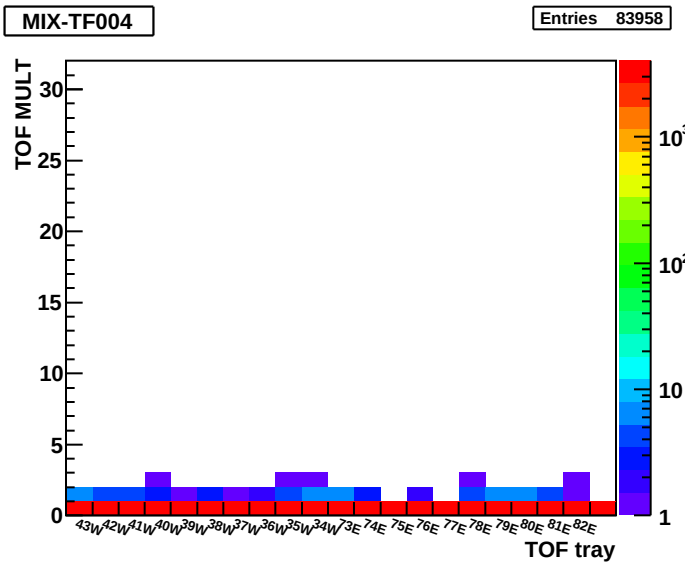

BunchId7Bit (all events)
Entries 1999
10
0
20
40
60
80
100
120

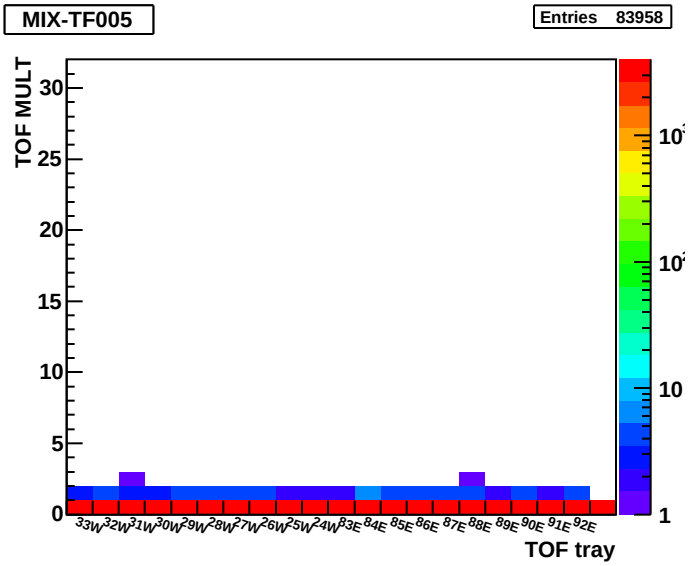

!Yellow-Fill
Entries 1999
10
0
20
40
60
80
100
120

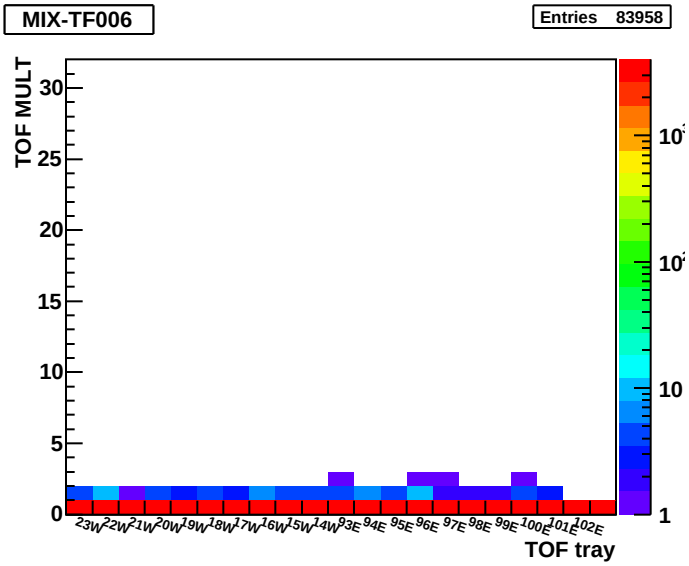

MIX-TF001
Entries 83958
TOF MULT
TOF tray

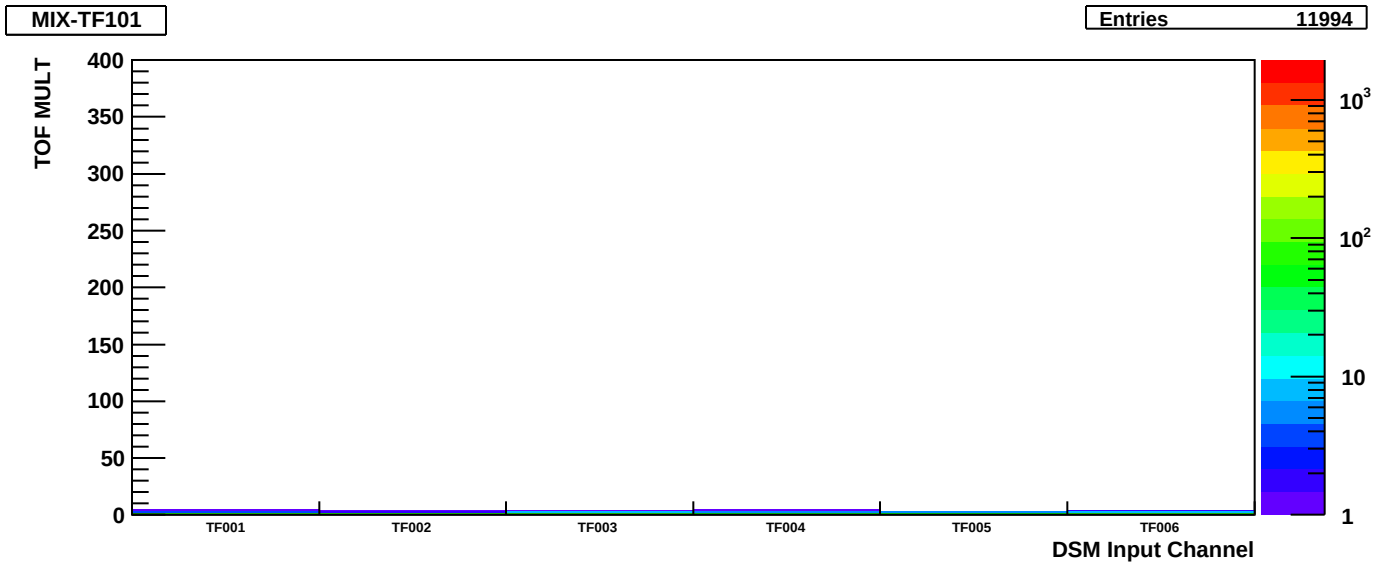

MIX-TF002
Entries 83958
TOF MULT
TOF tray

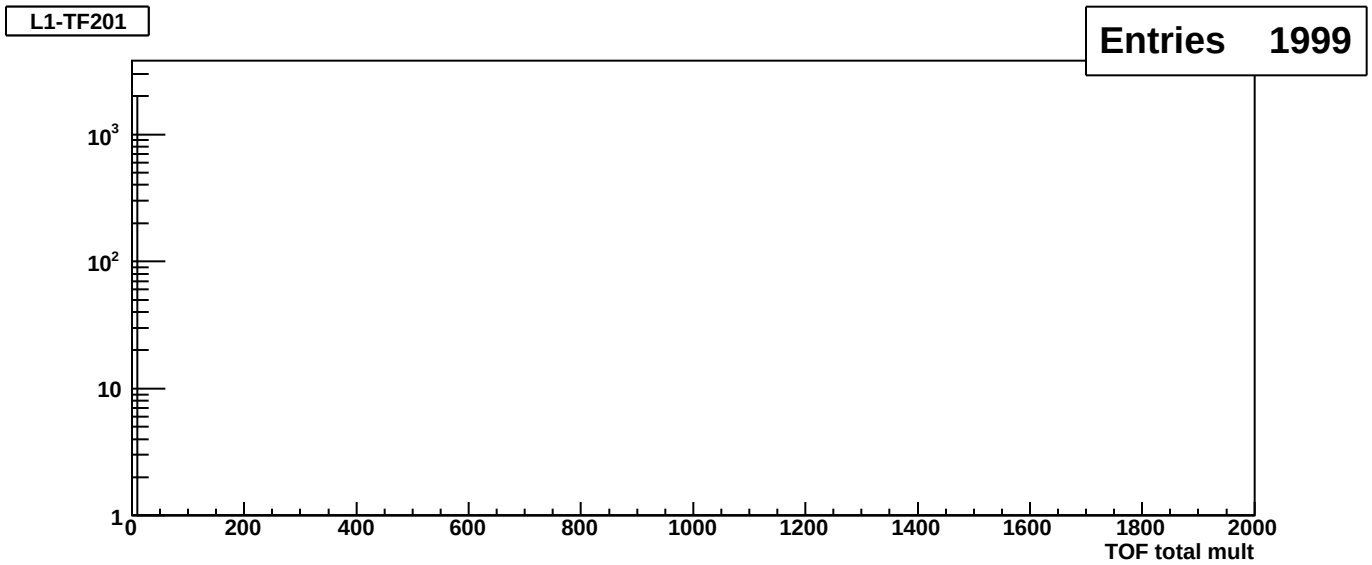

MIX-TF003
Entries 83958
TOF MULT
TOF tray

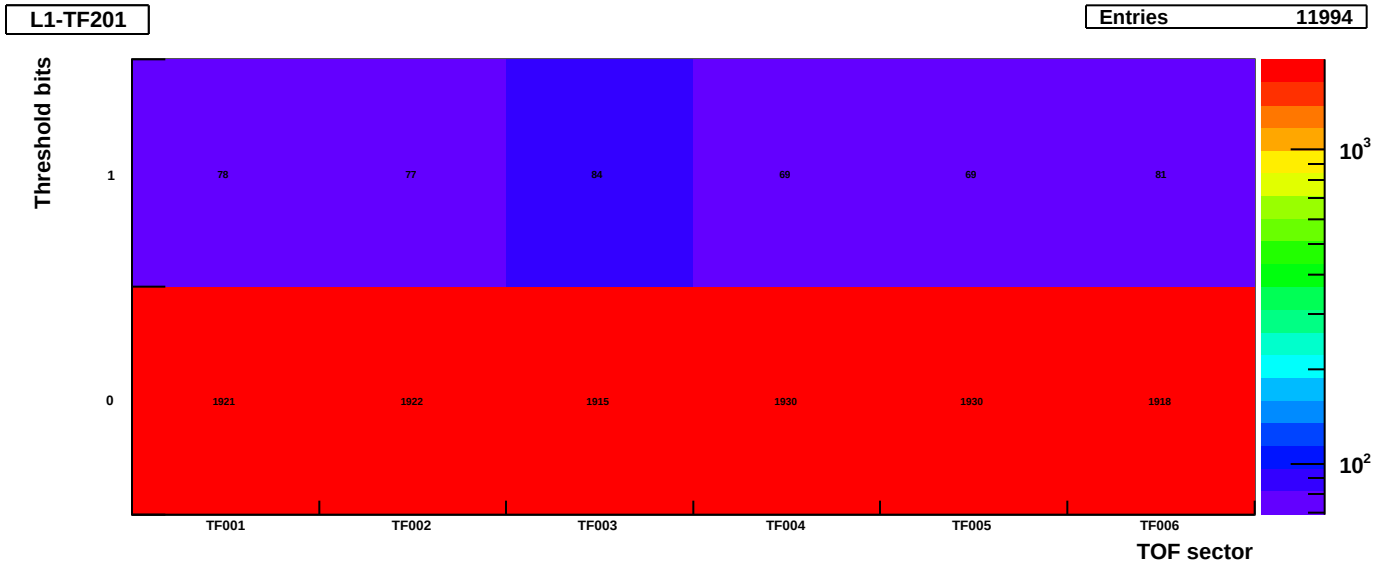

MIX-TF004
Entries 83958
TOF MULT
TOF tray

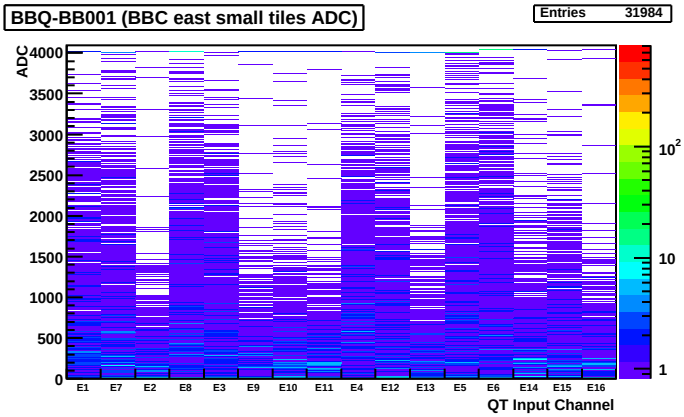

MIX-TF005
Entries 83958
TOF MULT
TOF tray

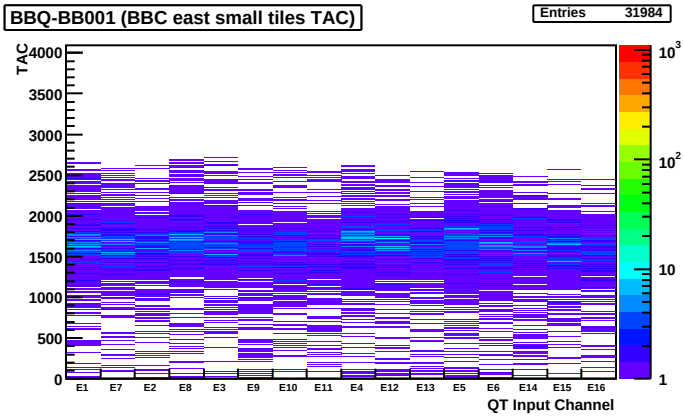

MIX-TF006
Entries 83958
TOF MULT
TOF tray

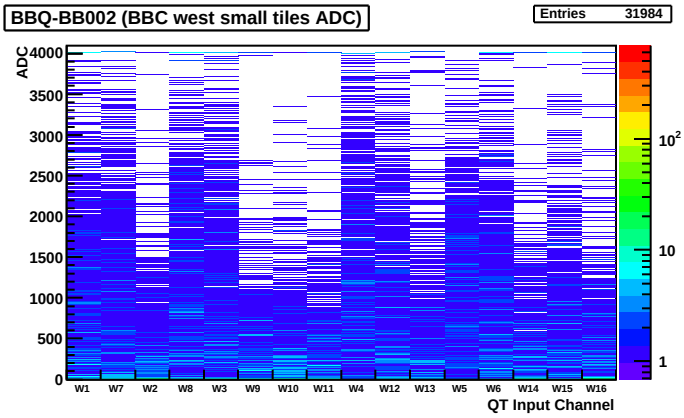

MIX-TF101
Entries 11994
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^3
10^2
10
1

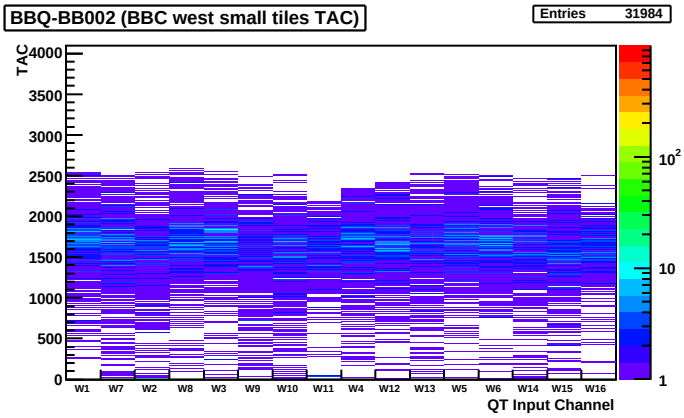

L1-TF201
Entries 1999
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

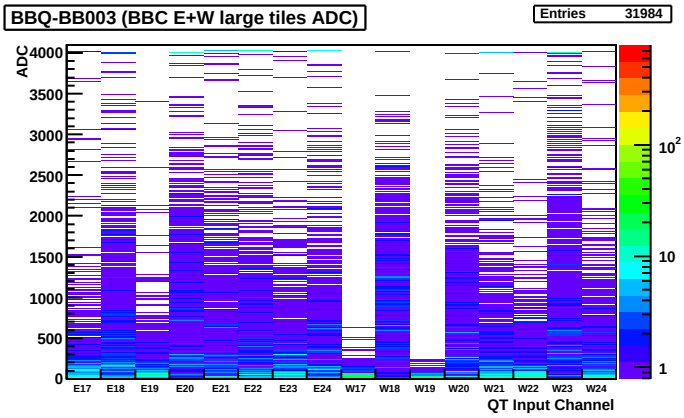

L1-TF201
Entries 11994
Threshold bits
1
0
78
77
84
68
69
81
1921
1922
1915
1930
1930
1918
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^3
10^2

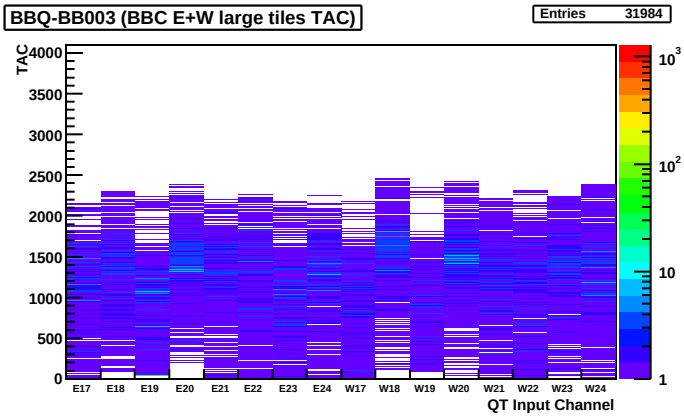

BBQ-BB001 (BBC east small tiles ADC)
Entries 31984
ADC
QT Input Channel

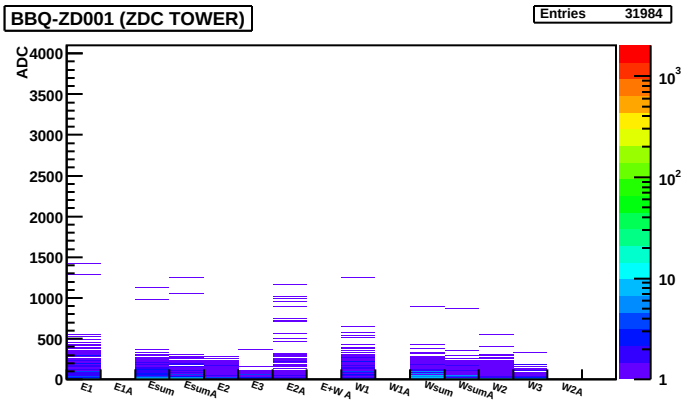

BBQ-BB001 (BBC east small tiles TAC)
Entries 31984
TAC
QT Input Channel

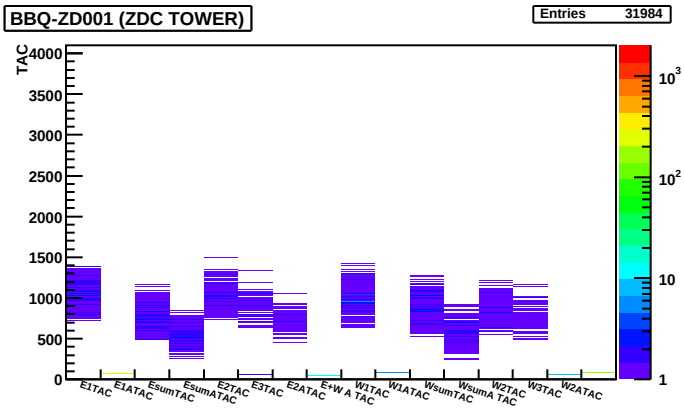

BBQ-BB002 (BBC west small tiles ADC)
Entries 31984
ADC
QT Input Channel

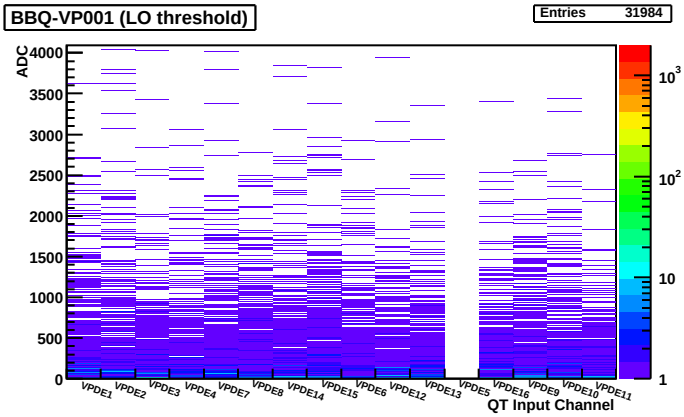

BBQ-BB002 (BBC west small tiles TAC)
Entries 31984
TAC
QT Input Channel

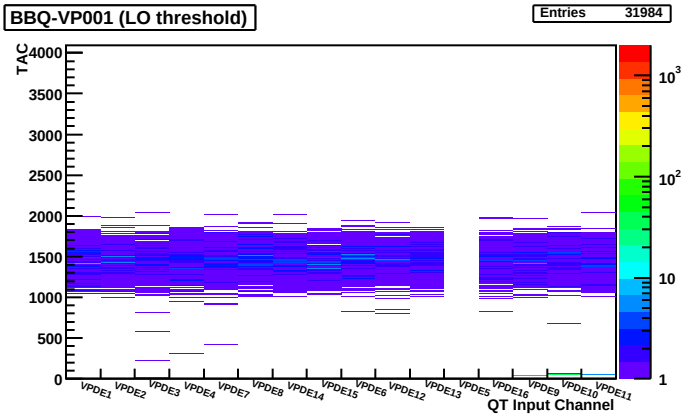

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 31984
ADC
QT Input Channel

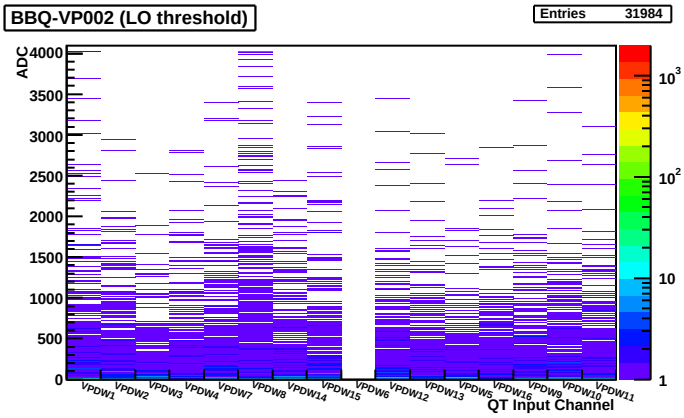

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 31984
TAC
QT Input Channel

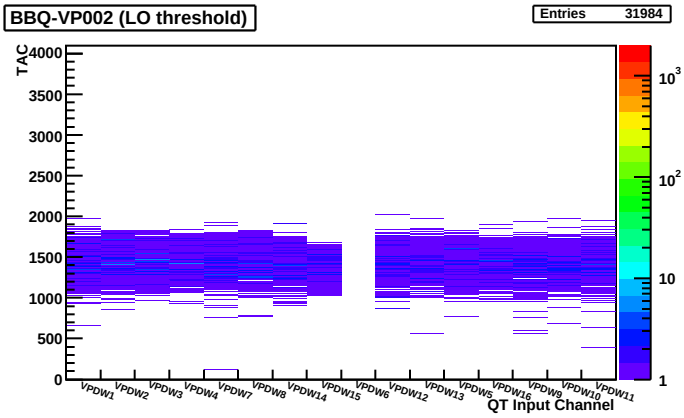

BBQ-ZD001 (ZDC TOWER)
Entries 31984
ADC

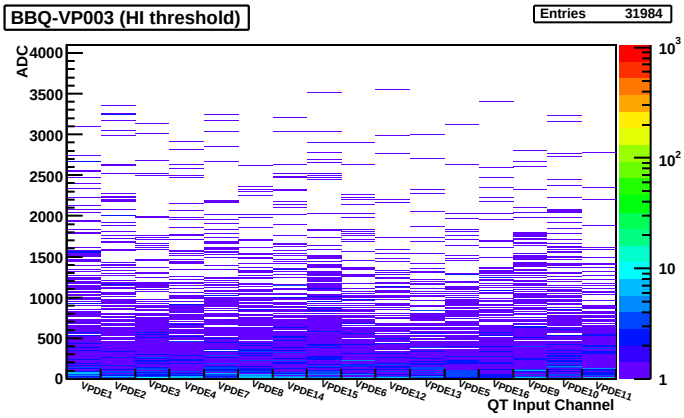

BBQ-ZD001 (ZDC TOWER)
Entries 31984
TAC

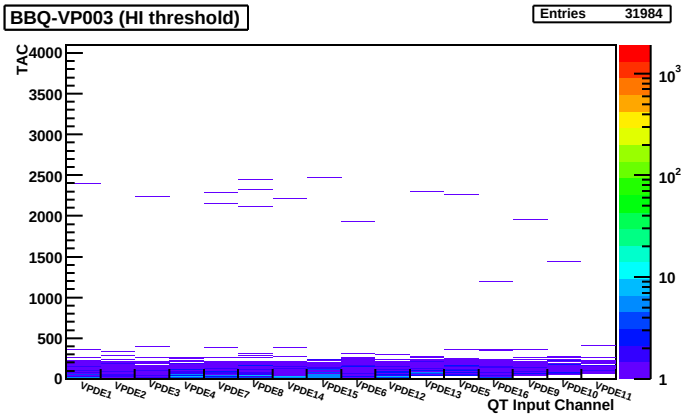

BBQ-VP001 (LO threshold)
Entries 31984
ADC
QT Input Channel

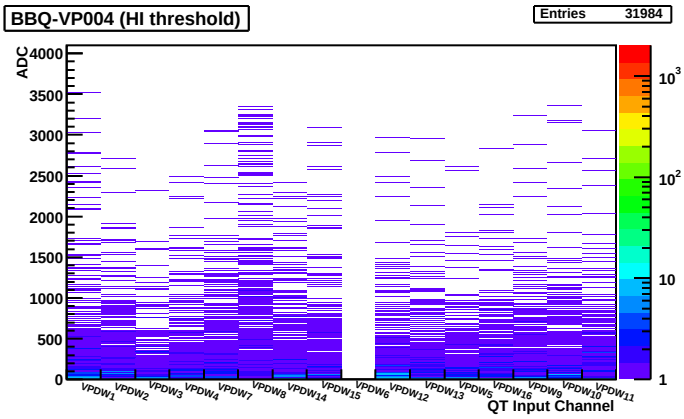

BBQ-VP001 (LO threshold)
Entries 31984
TAC
QT Input Channel

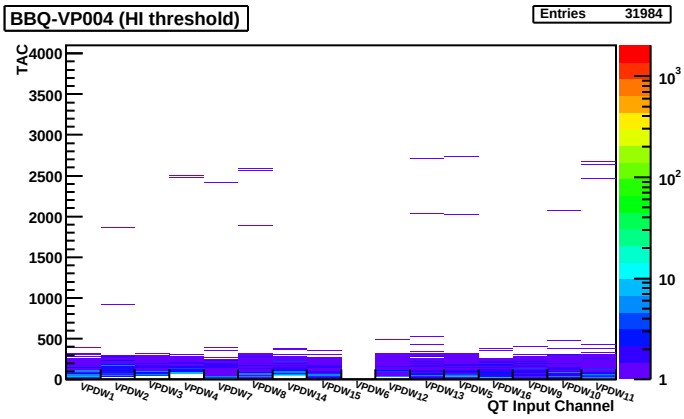

BBQ-VP002 (LO threshold)
Entries 31984
ADC
QT Input Channel

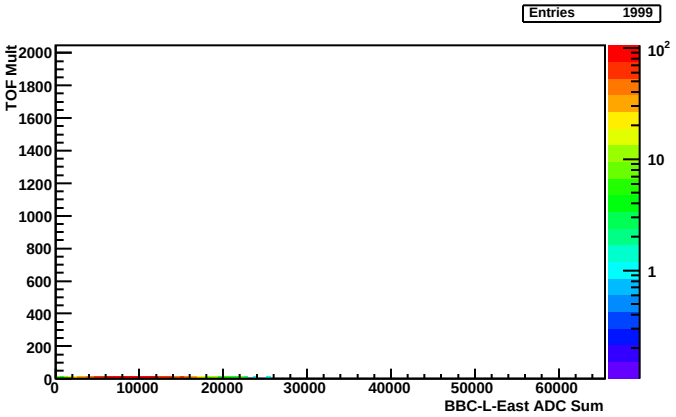

BBQ-VP002 (LO threshold)
Entries 31984
TAC
QT Input Channel

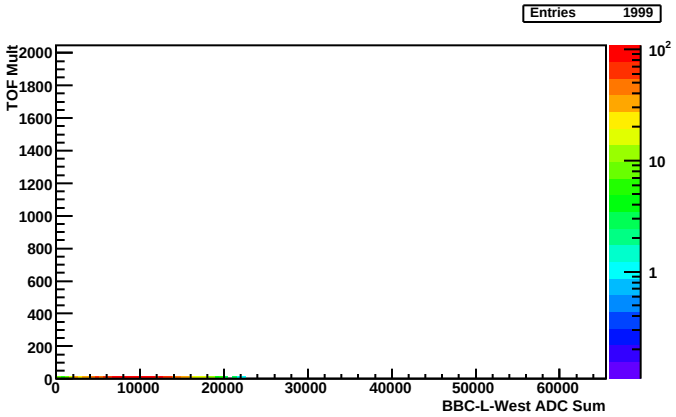

BBQ-VP003 (HI threshold)
Entries 31984
ADC
QT Input Channel

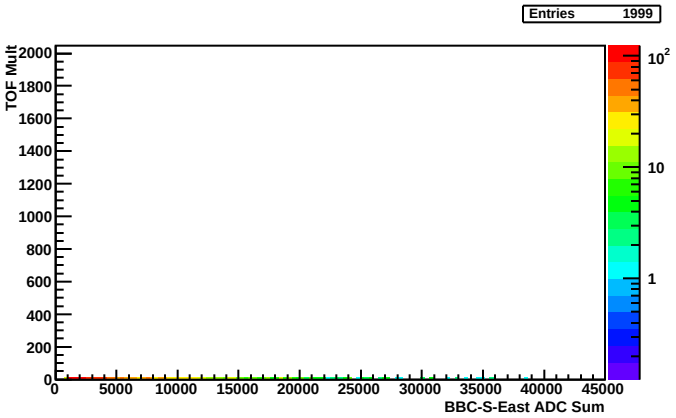

BBQ-VP003 (HI threshold)
Entries 31984
TAC
QT Input Channel

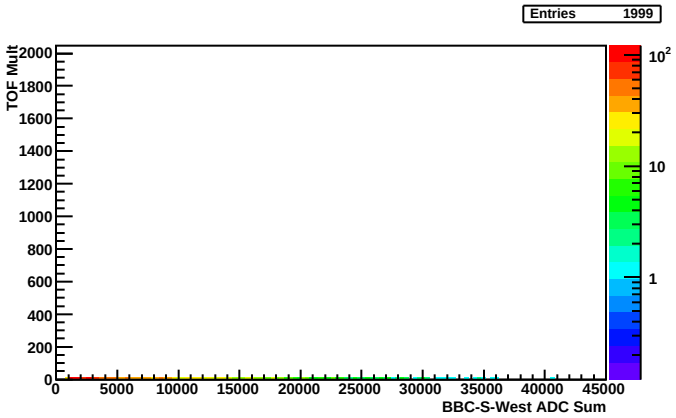

BBQ-VP004 (HI threshold)
Entries 31984
ADC
QT Input Channel

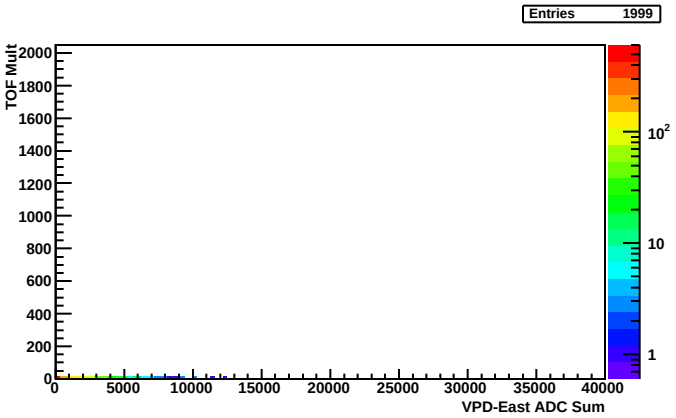

BBQ-VP004 (HI threshold)
Entries 31984
TAC
QT Input Channel

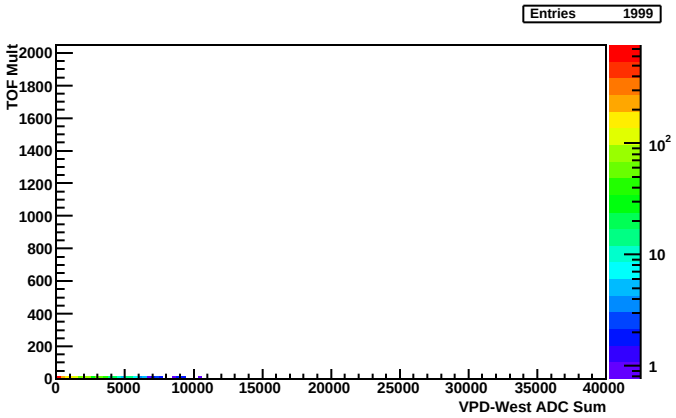

Entries 1999
TOF Mult
BBC-L-East ADC Sum

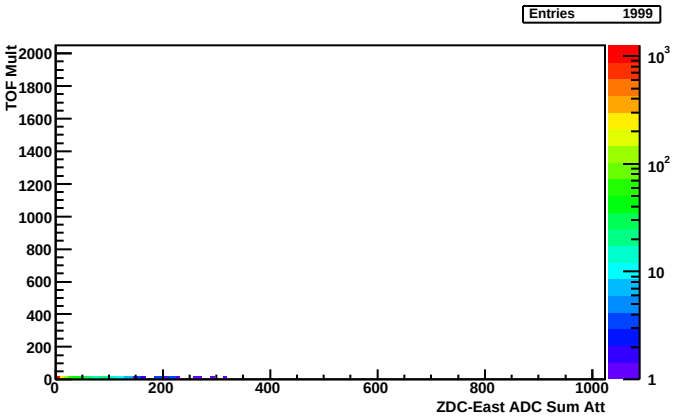

Entries 1999
TOF Mult
BBC-L-West ADC Sum

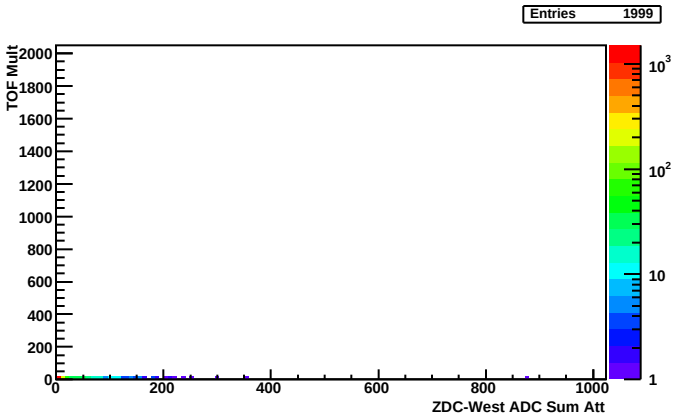

Entries 1999
TOF Mult
BBC-S-East ADC Sum

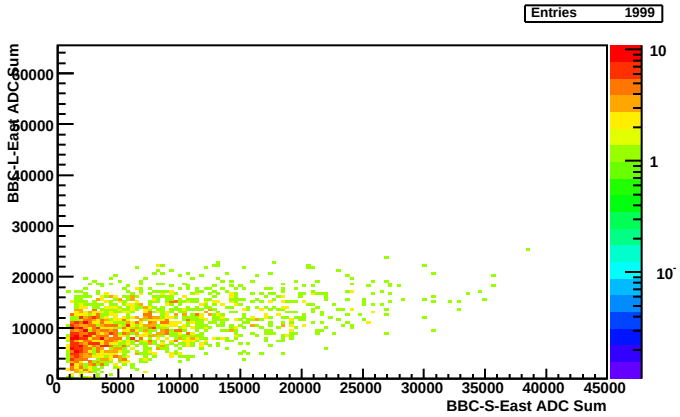

Entries 1999
TOF Mult
BBC-S-West ADC Sum

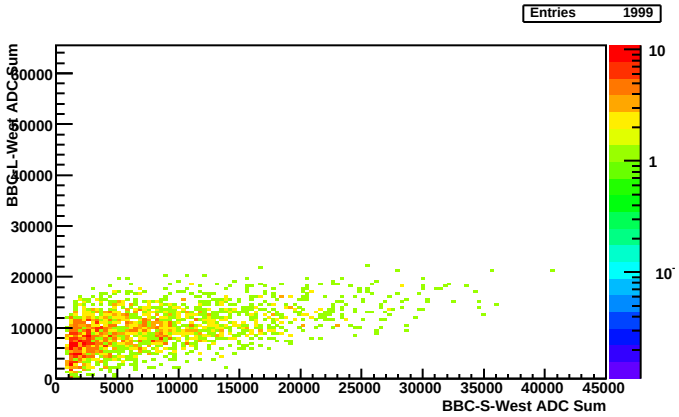

Entries 1999
TOF Mult
VPD-East ADC Sum

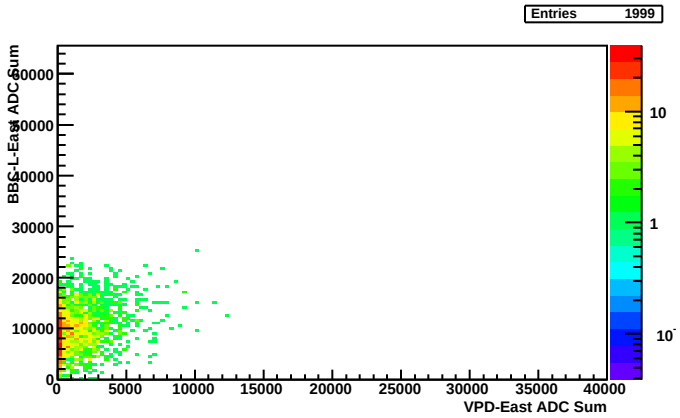

Entries 1999
TOF Mult
VPD-West ADC Sum

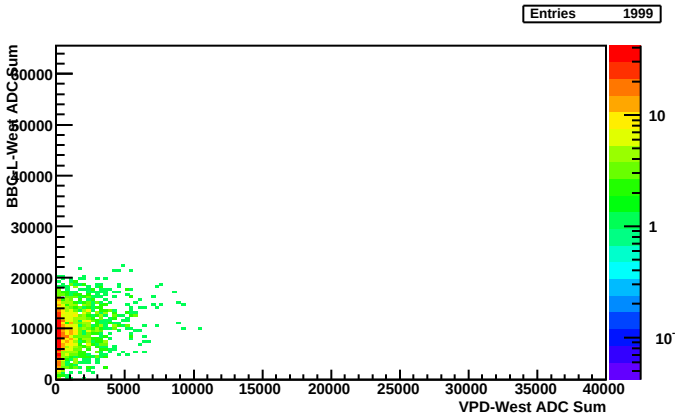

Entries 1999
TOF Mult
ZDC-East ADC Sum Att

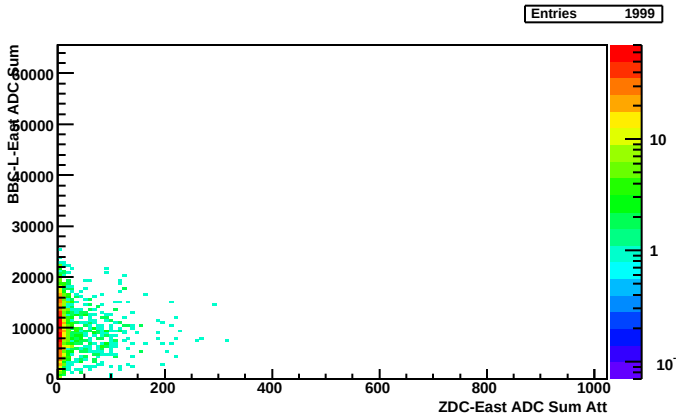

Entries 1999
TOF Mult
ZDC-West ADC Sum Att

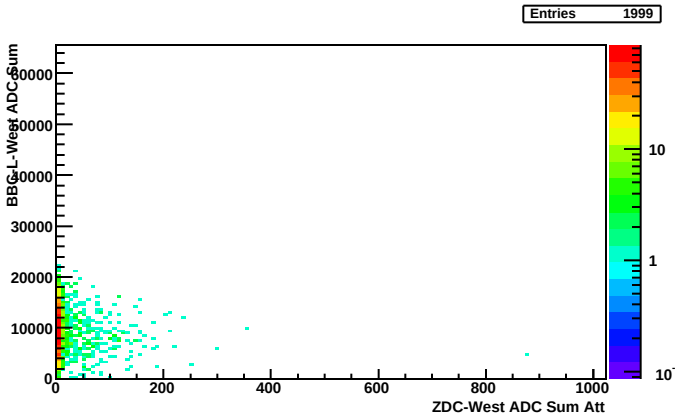

Entries 1999
BBC-L-East ADC Sum
BBC-S-East ADC Sum

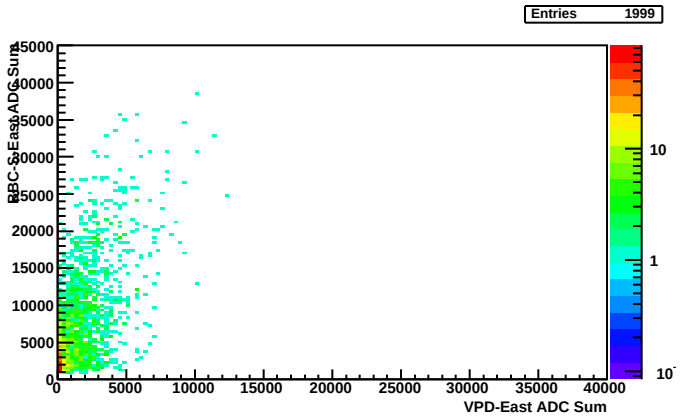

Entries 1999
BBC-L-West ADC Sum
BBC-S-West ADC Sum

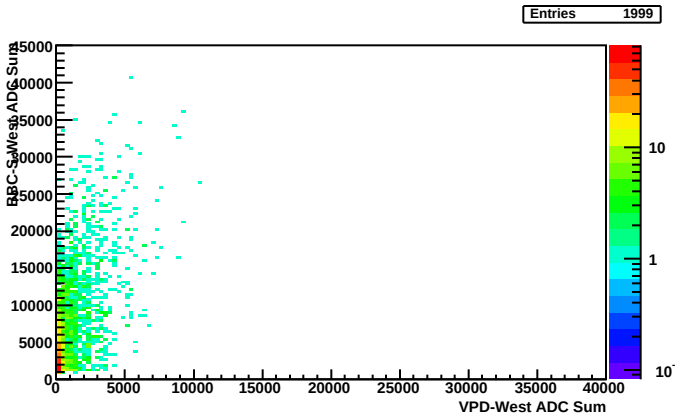

Entries 1999
BBC-L-East ADC Sum
VPD-East ADC Sum

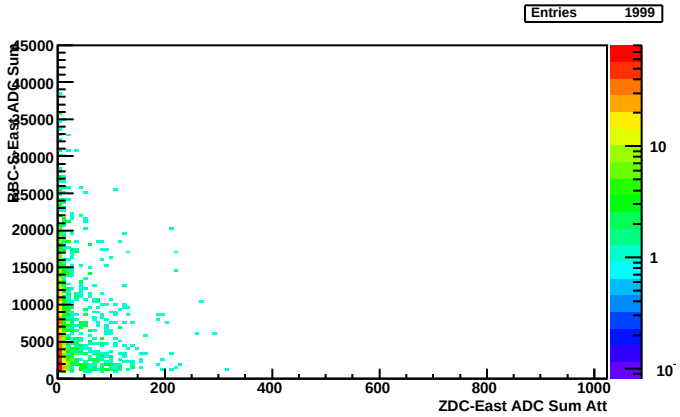

Entries 1999
BBC-L-West ADC Sum
VPD-West ADC Sum

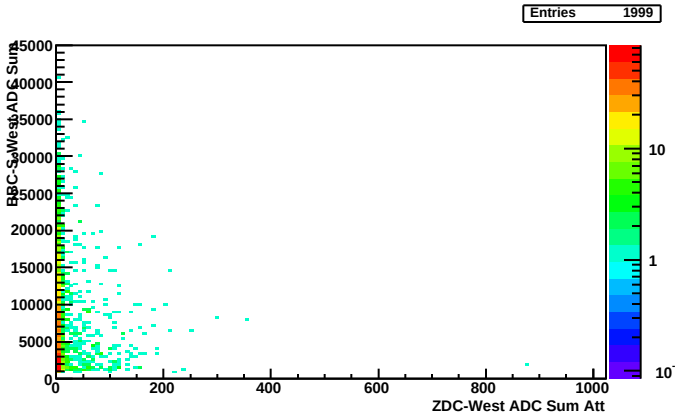

Entries 1999
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

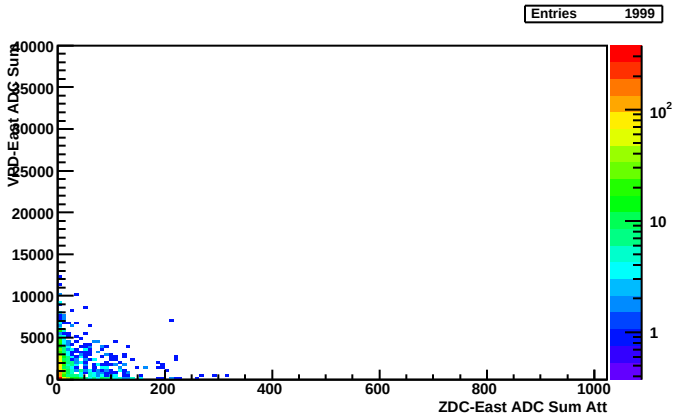

Entries 1999
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

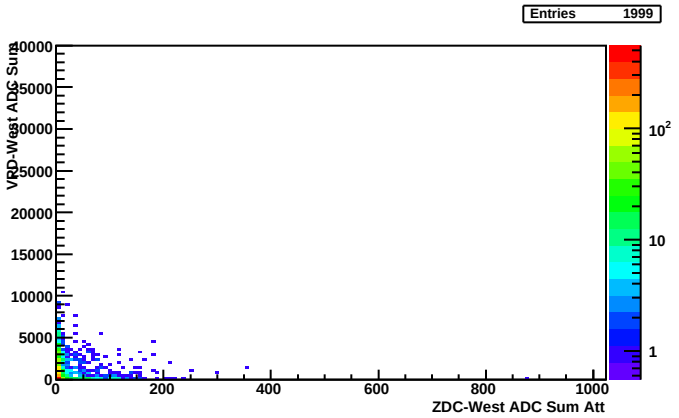

Entries 1999
BBC-S-East ADC Sum
VPD-East ADC Sum

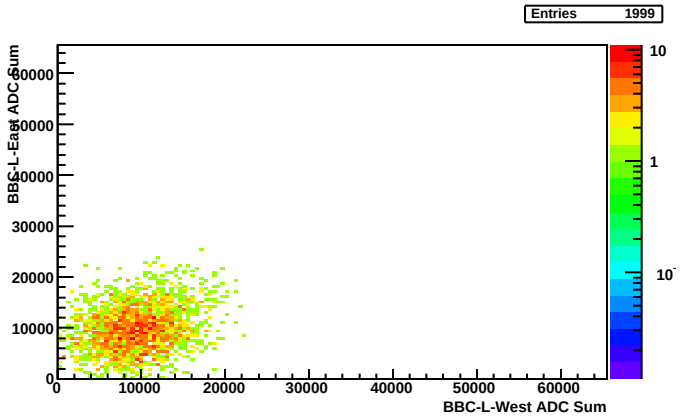

Entries 1999
BBC-S-West ADC Sum
VPD-West ADC Sum

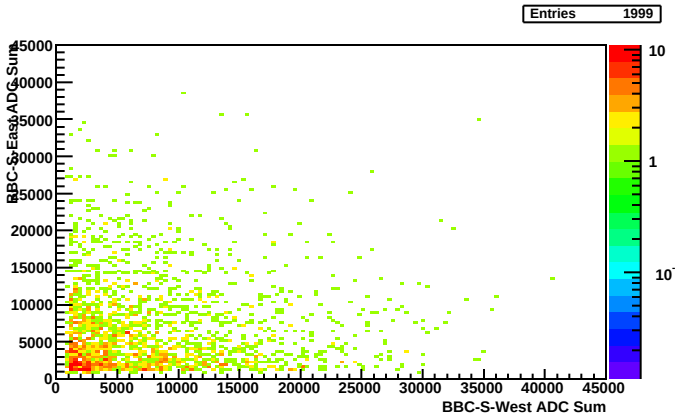

Entries 1999
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

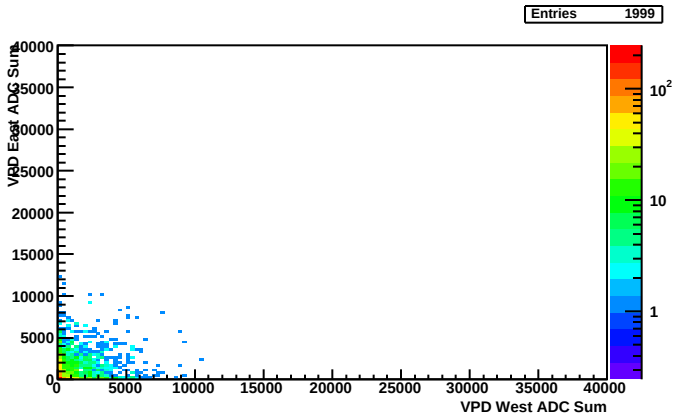

Entries 1999
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

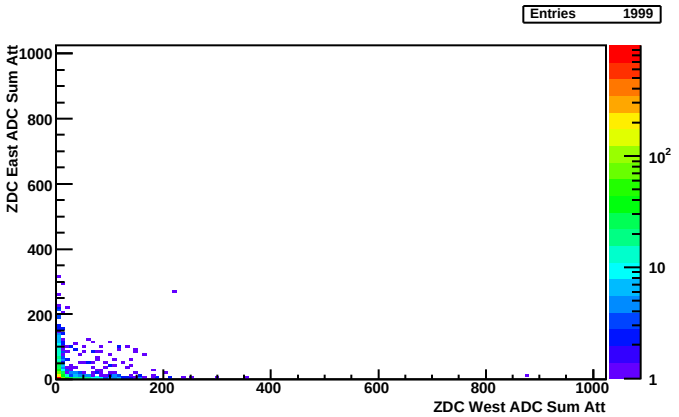

Entries 1999
VPD-East ADC Sum
ZDC-East ADC Sum Att

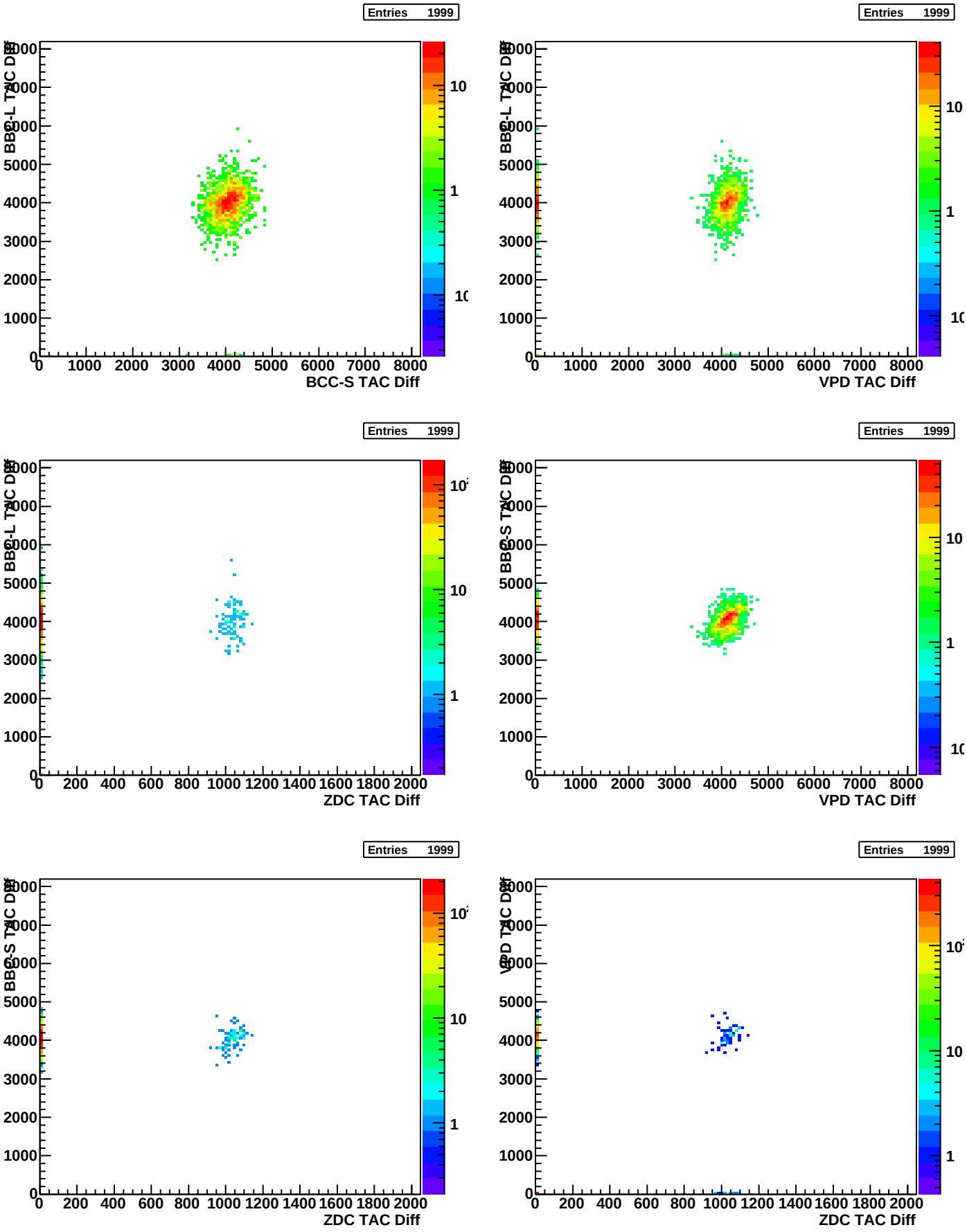

Entries 1999
VPD-West ADC Sum
ZDC-West ADC Sum Att

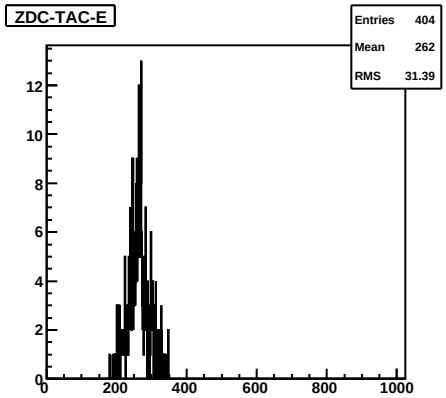

Entries 1999
BBC-L-East ADC Sum
BBC-L-West ADC Sum

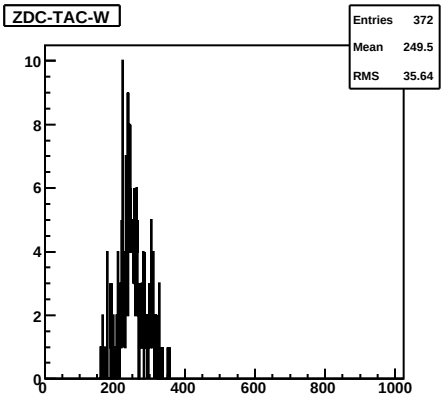

Entries 1999
BBC-S-East ADC Sum
BBC-S-West ADC Sum

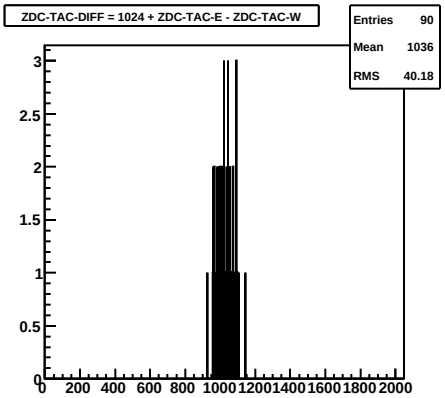

Entries 1999
VPD East ADC Sum
VPD West ADC Sum

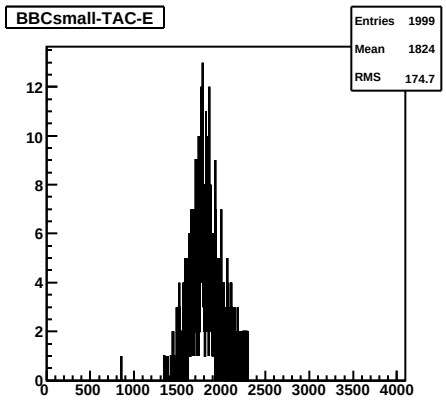

Entries 1999
ZDC East ADC Sum Att
ZDC West ADC Sum Att

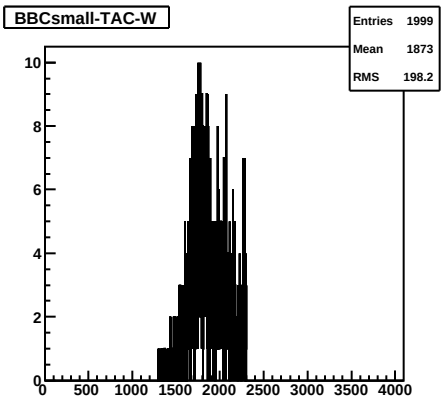

Entries 1999
BBC-L TAC Diff
BCC-S TAC Diff
Entries 1999
BBC-L TAC Diff
VPD TAC Diff
Entries 1999
BBC-L TAC Diff
ZDC TAC Diff
Entries 1999
BBC-S TAC Diff
VPD TAC Diff
Entries 1999
BBC-S TAC Diff
ZDC TAC Diff
Entries 1999
VPD TAC Diff
ZDC TAC Diff

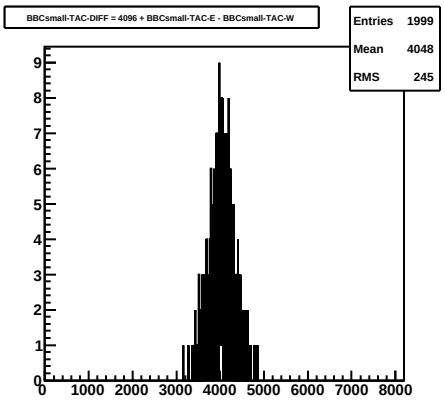

ZDC-TAC-E
Entries 404
Mean 262
RMS 31.39

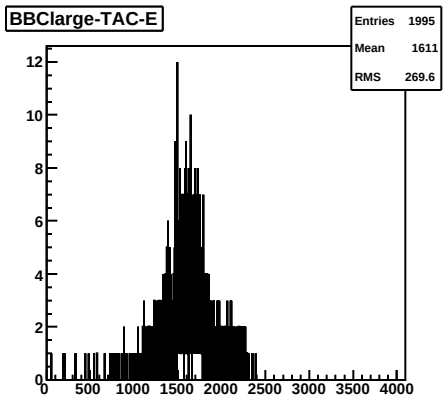

ZDC-TAC-W
Entries 372
Mean 249.5
RMS 35.64

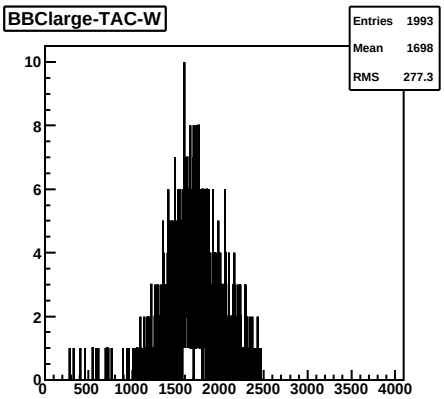

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 90
Mean 1036
RMS 40.18

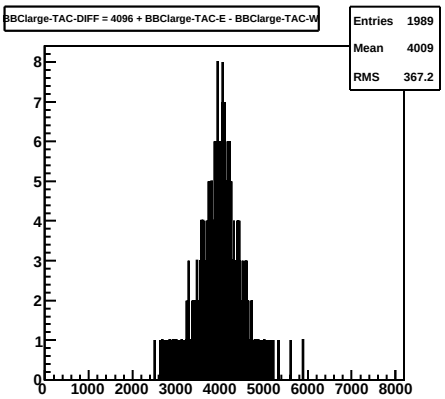

BBCsmall-TAC-E
Entries 1999
Mean 1824
RMS 174.7

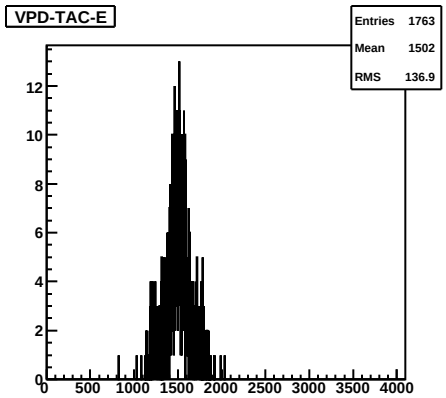

BBCsmall-TAC-W
Entries 1999
Mean 1873
RMS 198.2

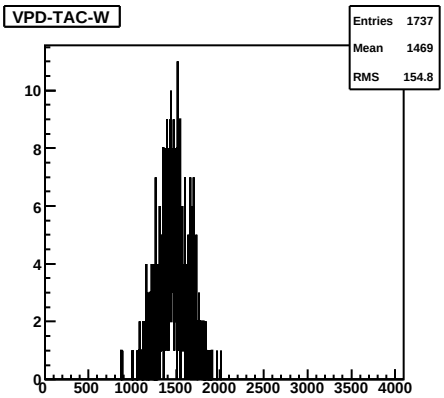

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 1999
Mean 4048
RMS 245

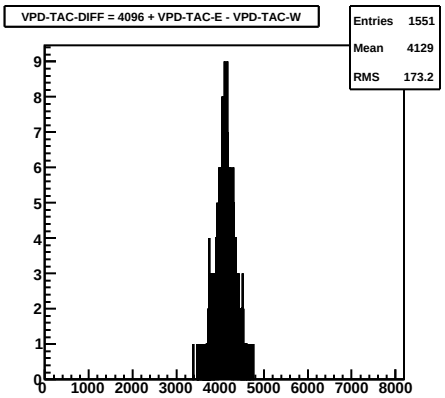

BBClarge-TAC-E
Entries 1995
Mean 1611
RMS 269.6

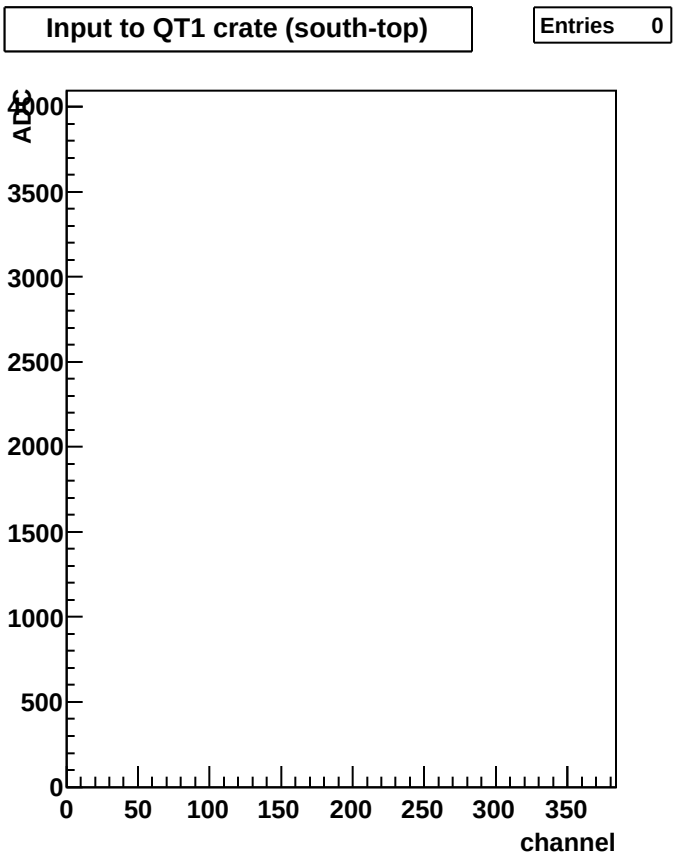

BBClarge-TAC-W
Entries 1993
Mean 1698
RMS 277.3

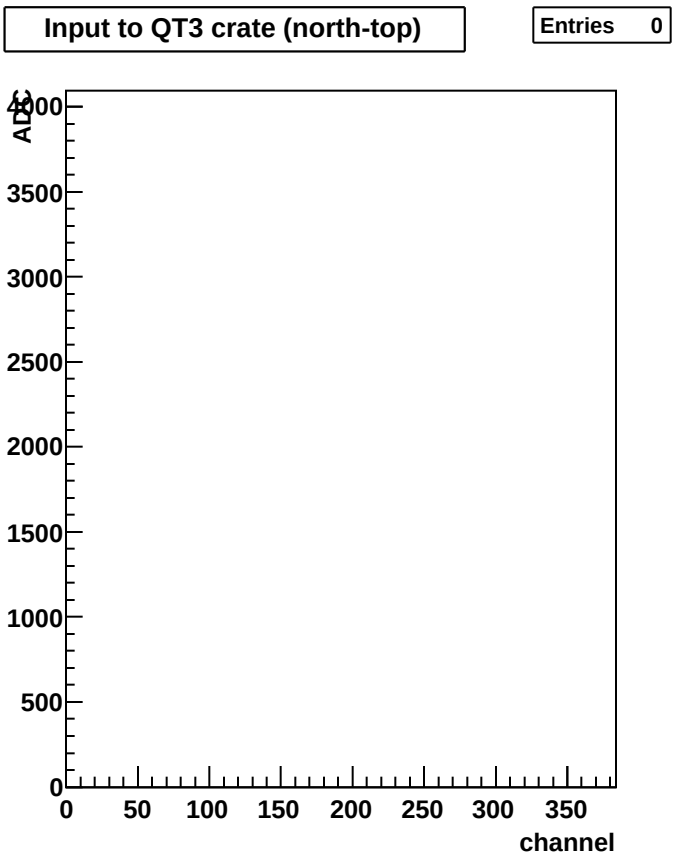

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 1989
Mean 4009
RMS 367.2

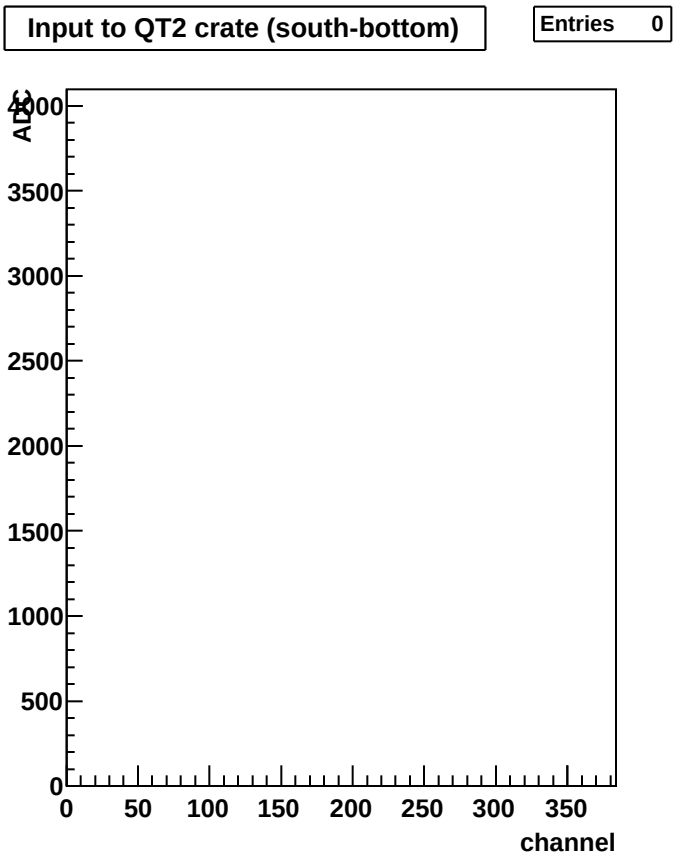

VPD-TAC-E
Entries 1763
Mean 1502
RMS 136.9

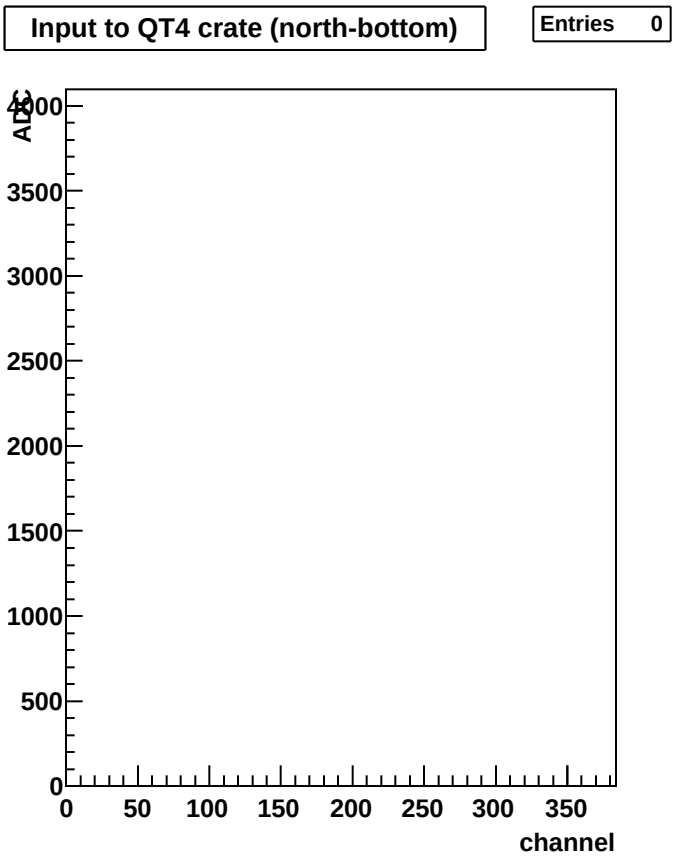

VPD-TAC-W
Entries 1737
Mean 1469
RMS 154.8

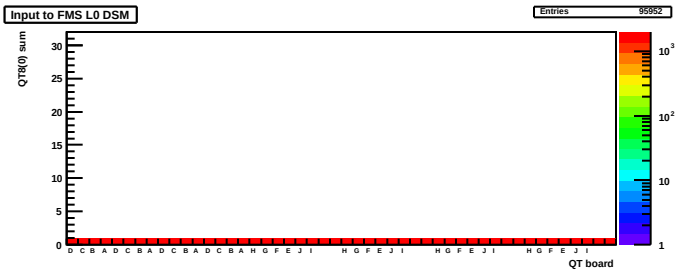

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 1551
Mean 4129
RMS 173.2

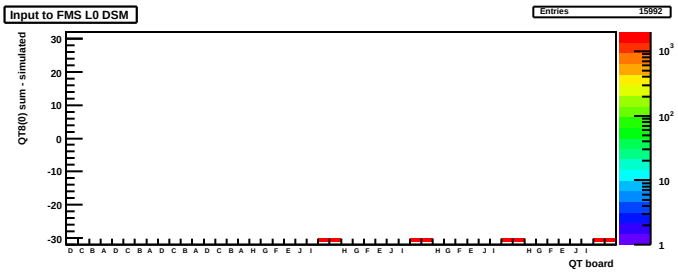

Input to QT1 crate (south-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

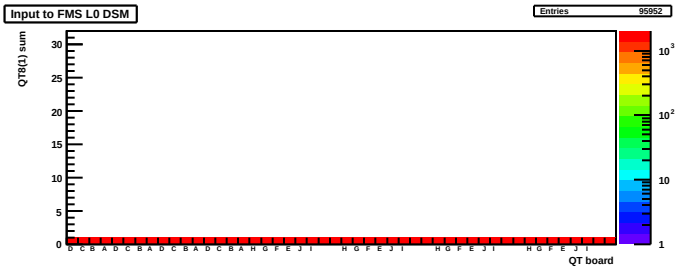

Input to QT3 crate (north-top)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

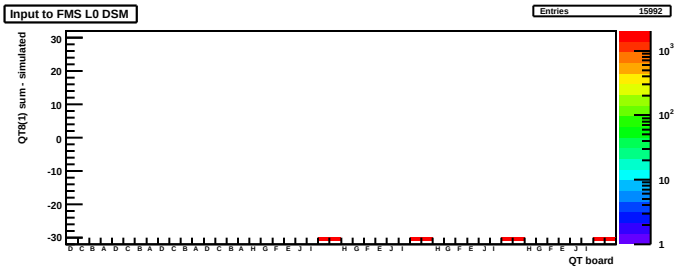

Input to QT2 crate (south-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

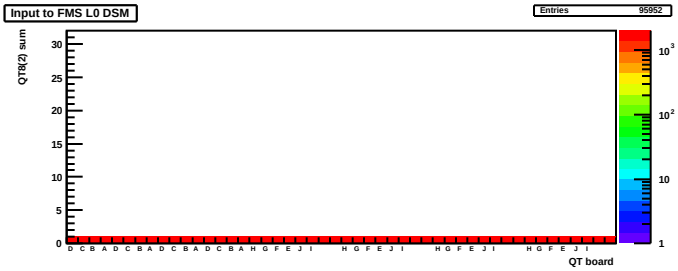

Input to QT4 crate (north-bottom)
Entries 0
ADC
4000
3500
3000
2500
2000
1500
1000
500
0
0 50 100 150 200 250 300 350
channel

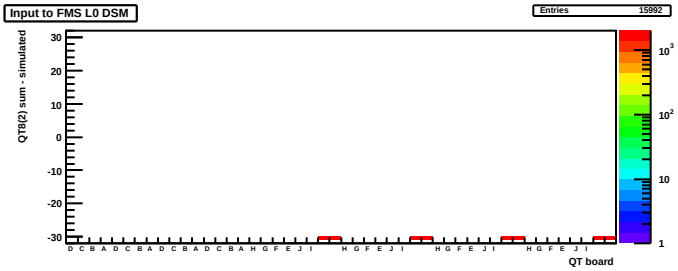

Input to FMS L0 DSM
Entries 95952
QT8(0) sum
QT board

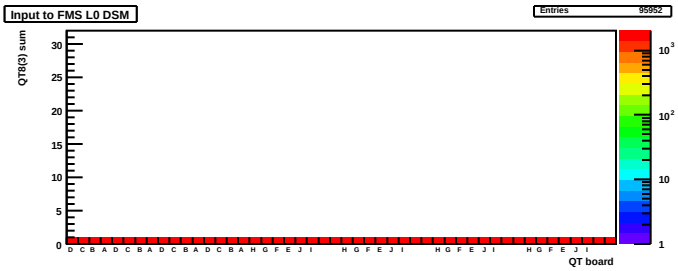

Input to FMS L0 DSM
Entries 15992
QT8(0) sum - simulated
QT board

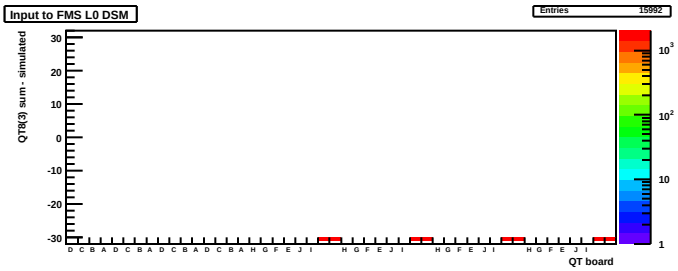

Input to FMS L0 DSM
Entries 95952
QT8(1) sum
QT board

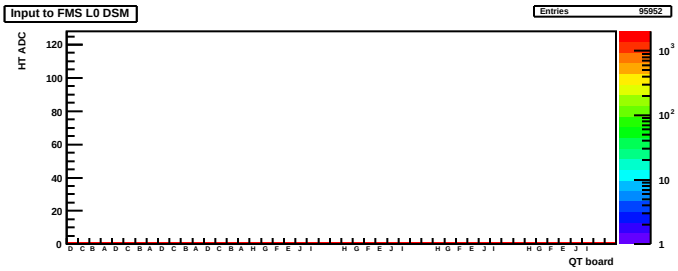

Input to FMS L0 DSM
Entries 15992
QT8(1) sum - simulated
QT board

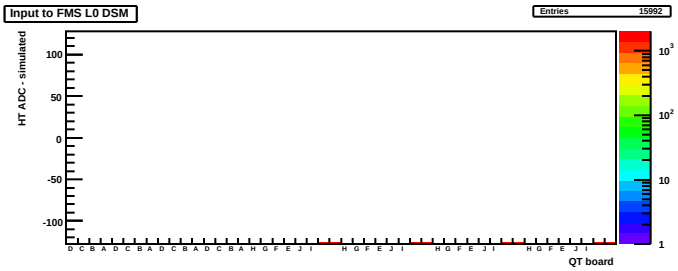

Input to FMS L0 DSM
Entries 95952
QT8(2) sum
QT board

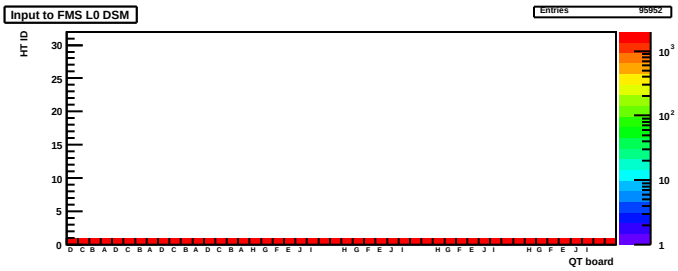

Input to FMS L0 DSM
Entries 15992
QT8(2) sum - simulated
QT board

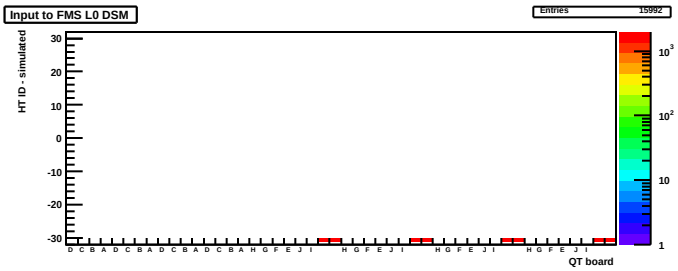

Input to FMS L0 DSM
Entries 95952
QT8(3) sum
QT board

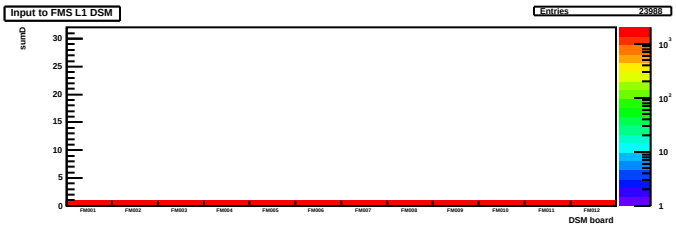

Input to FMS L0 DSM
Entries 15992
QT8(3) sum - simulated
QT board

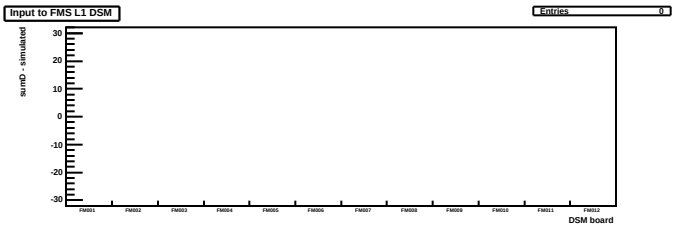

Input to FMS L0 DSM
Entries 95952
HT ADC
QT board

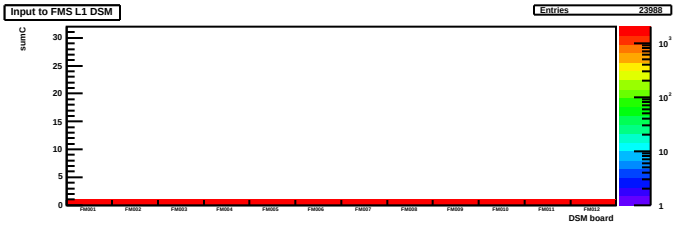

Input to FMS L0 DSM
Entries 15992
HT ADC - simulated
QT board

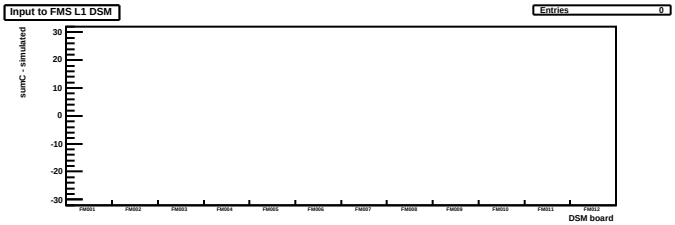

Input to FMS L0 DSM
Entries 95952
HT ID
QT board

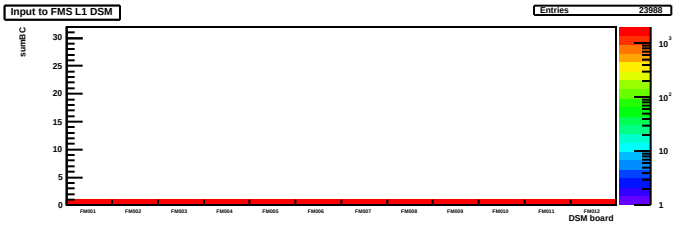

Input to FMS L0 DSM
Entries 15992
HT ID - simulated
QT board

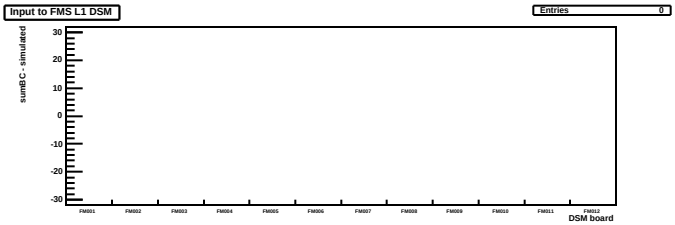

Input to FMS L1 DSM
Entries 23988
sumD
DSM board

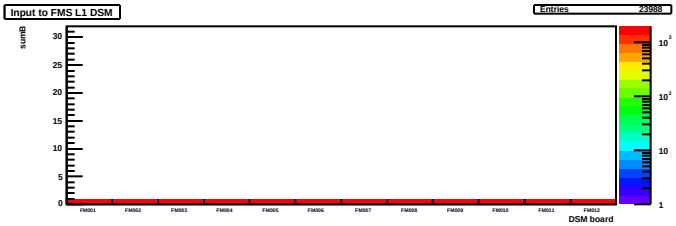

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

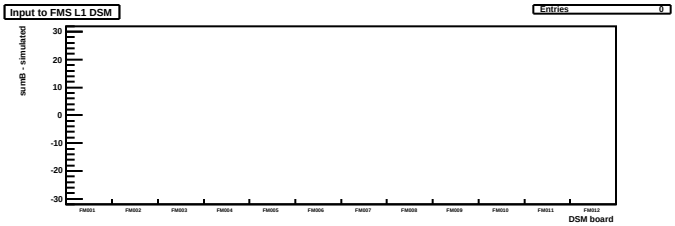

Input to FMS L1 DSM
Entries 23988
sumC
DSM board

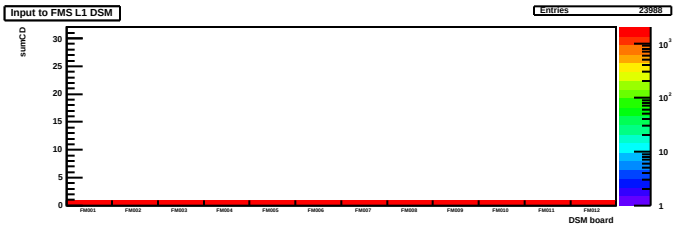

Input to FMS L1 DSM
Entries 0
sumC - simulated
DSM board

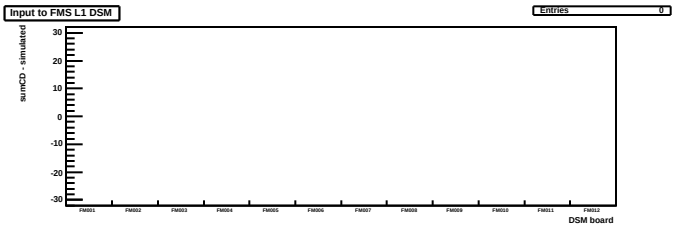

Input to FMS L1 DSM
Entries 23988
sumBC
DSM board

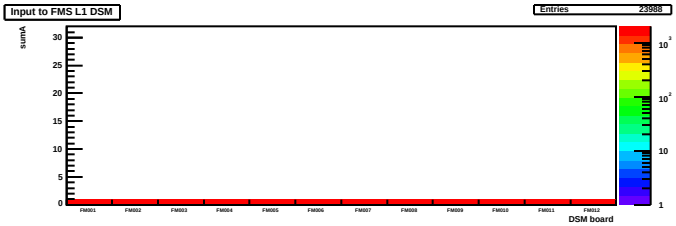

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

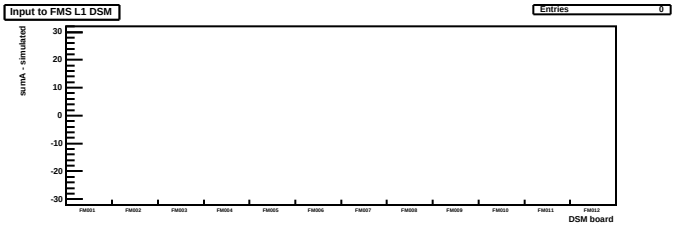

Input to FMS L1 DSM
Entries 23988
sumB
DSM board

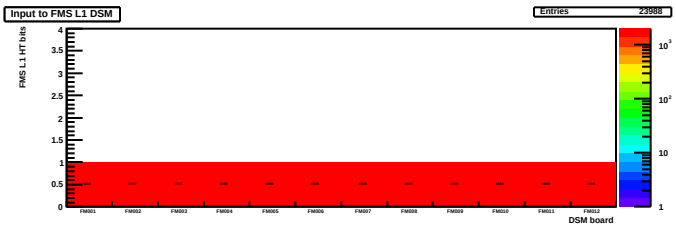

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

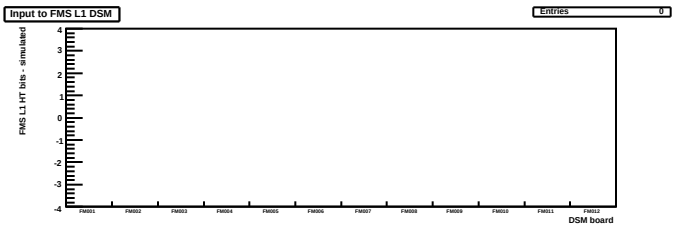

Input to FMS L1 DSM
Entries 23988
sumCD
DSM board

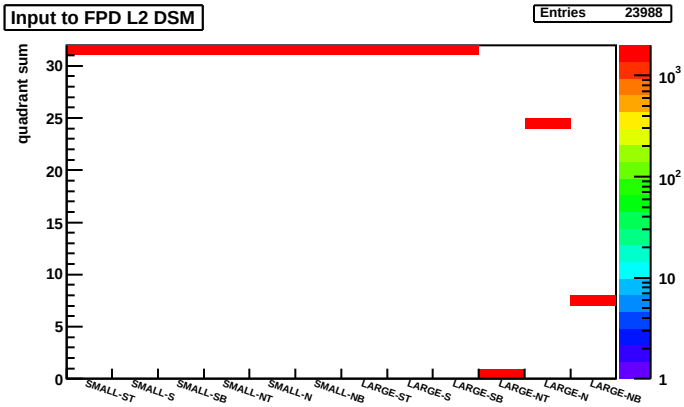

Input to FMS L1 DSM
Entries 0
sumCD - simulated
DSM board

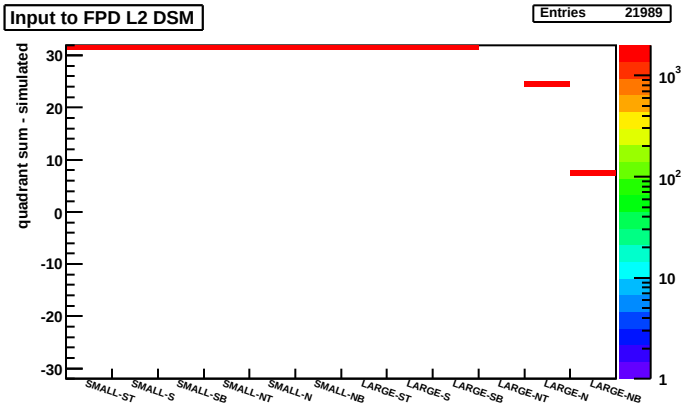

Input to FMS L1 DSM
Entries 23988
sumA
DSM board

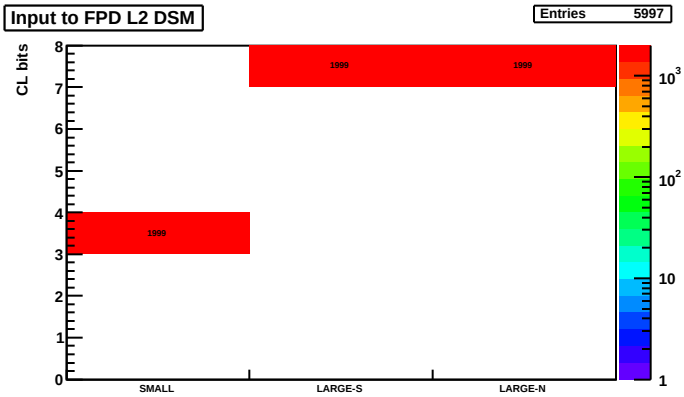

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

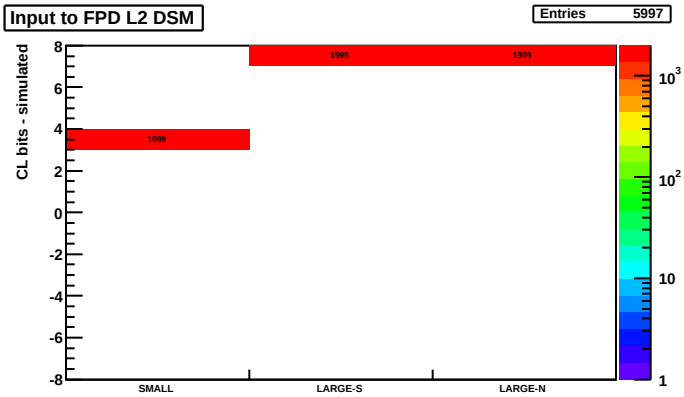

Input to FMS L1 DSM
Entries 23988
FMS L1 HT bits
DSM board

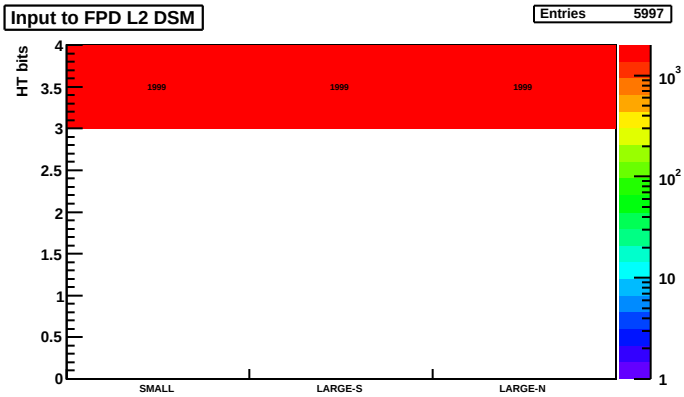

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

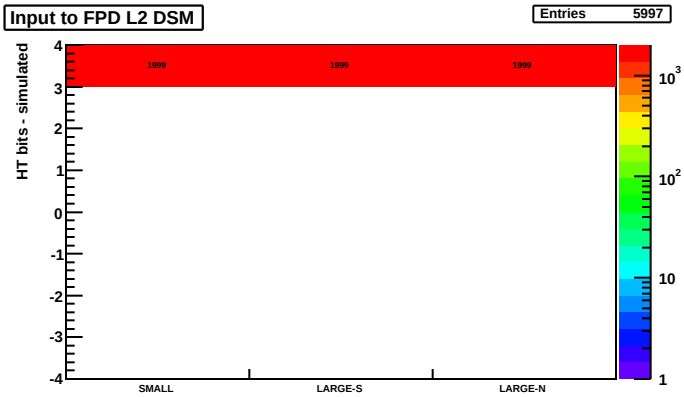

Input to FPD L2 DSM
Entries 23988
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

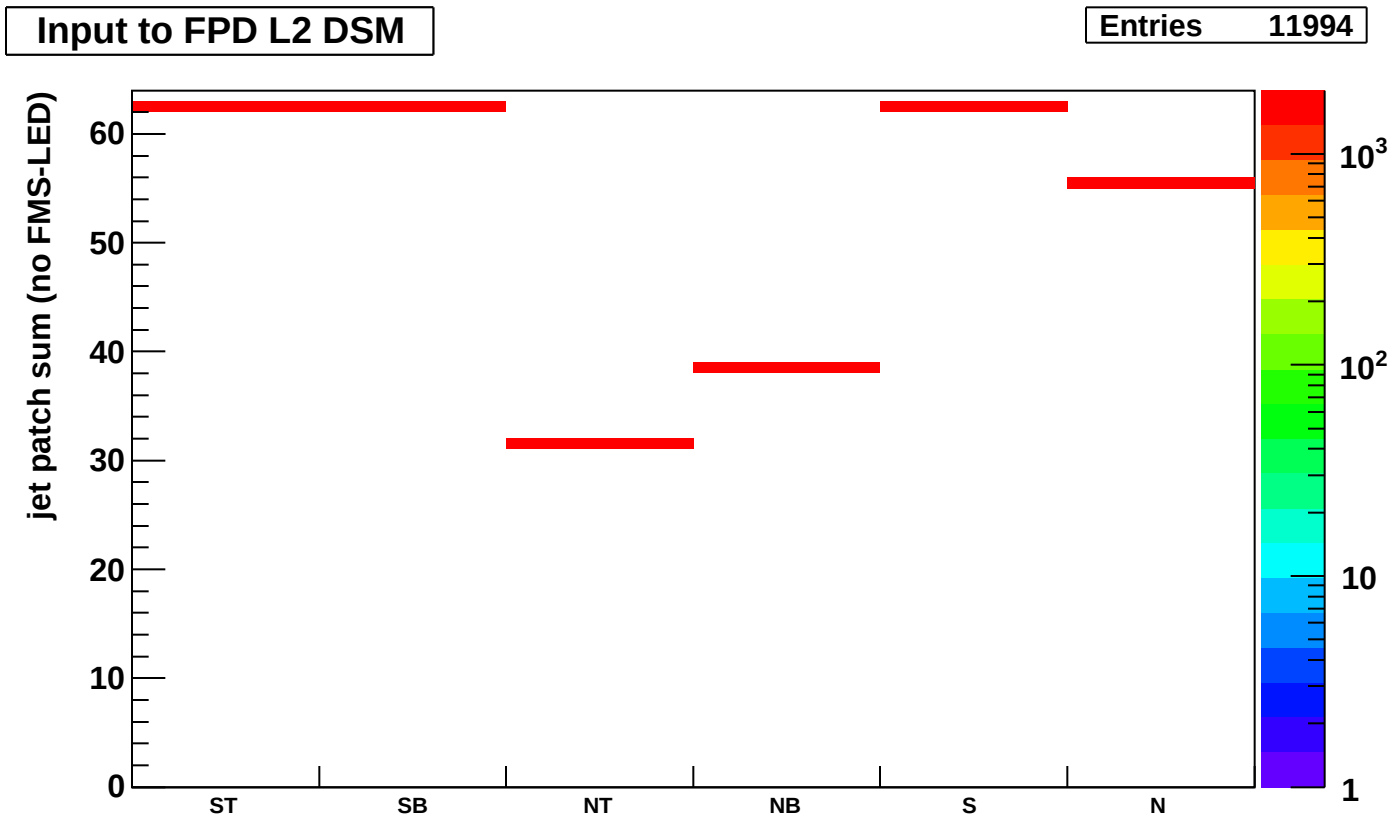

Input to FPD L2 DSM
Entries 21989
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

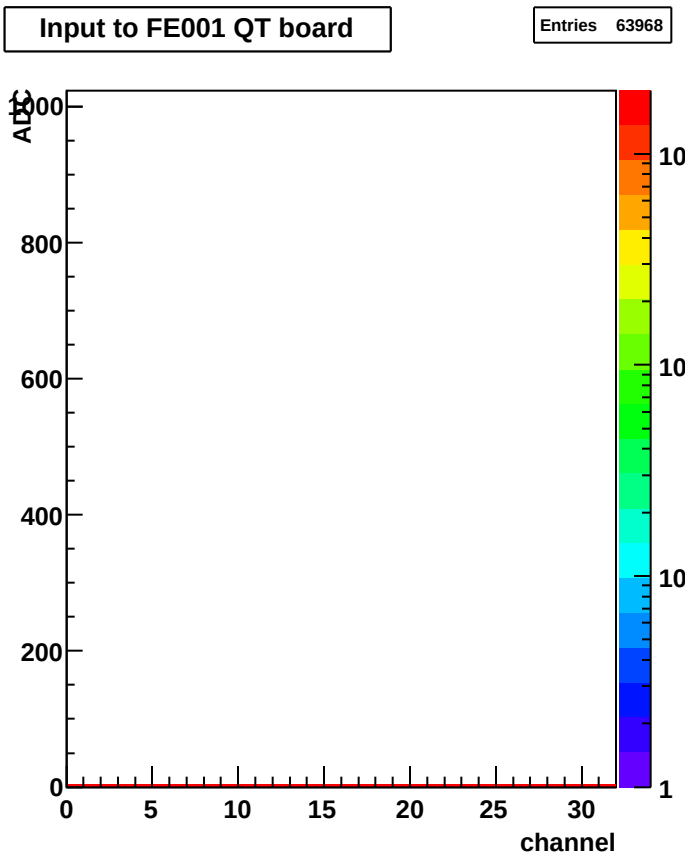

Input to FPD L2 DSM
Entries 5997
CL bits
1999
SMALL
LARGE-S
LARGE-N

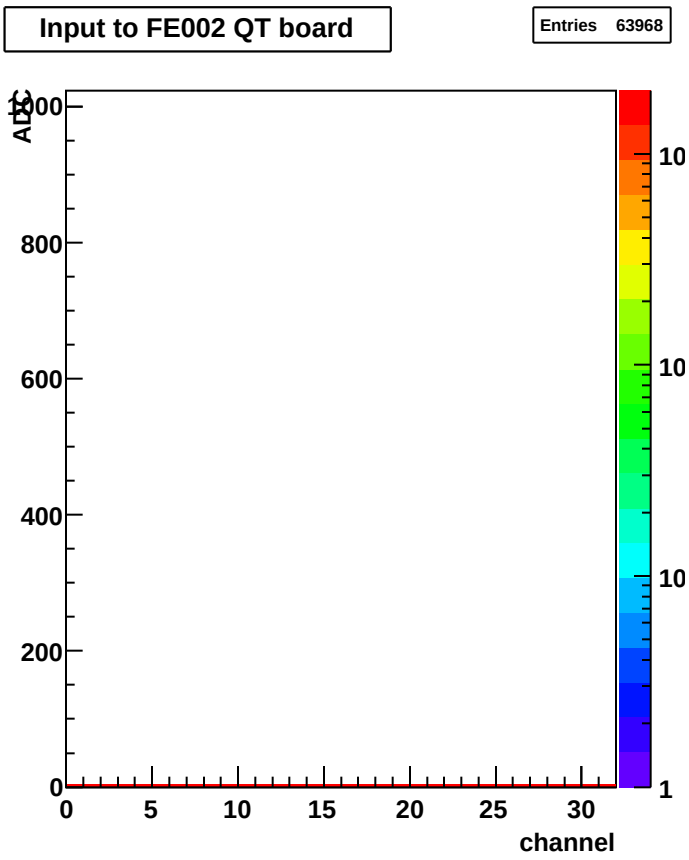

Input to FPD L2 DSM
Entries 5997
CL bits - simulated
1999
SMALL
LARGE-S
LARGE-N

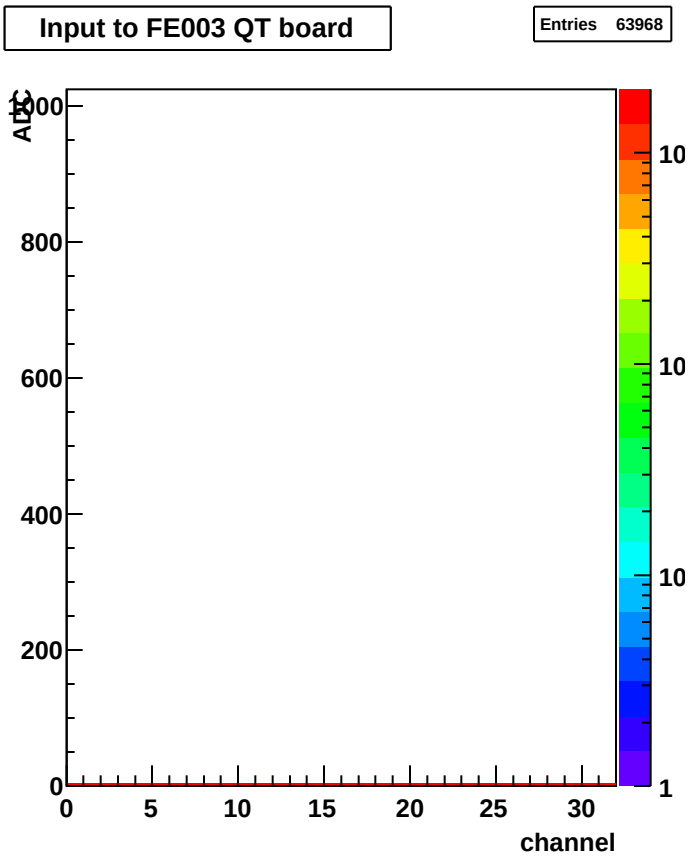

Input to FPD L2 DSM
Entries 5997
HT bits
1999
SMALL
LARGE-S
LARGE-N

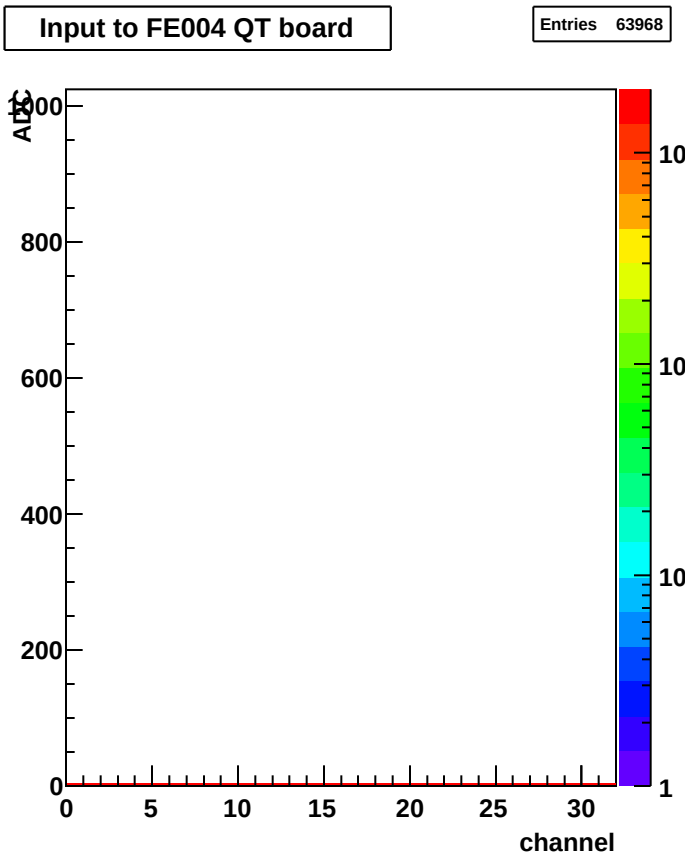

Input to FPD L2 DSM
Entries 5997
HT bits - simulated
1999
SMALL
LARGE-S
LARGE-N

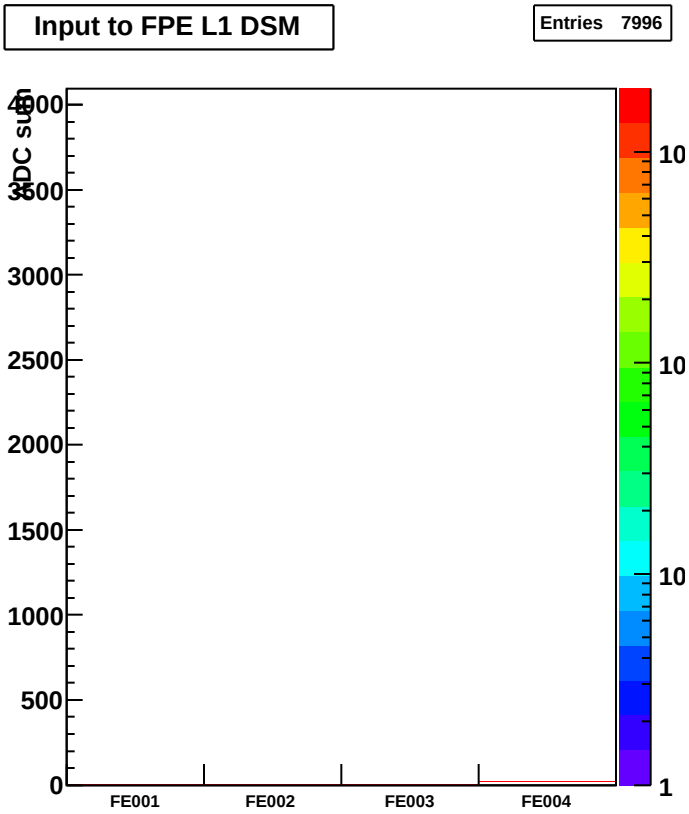

Input to FPD L2 DSM
Entries 11994
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3

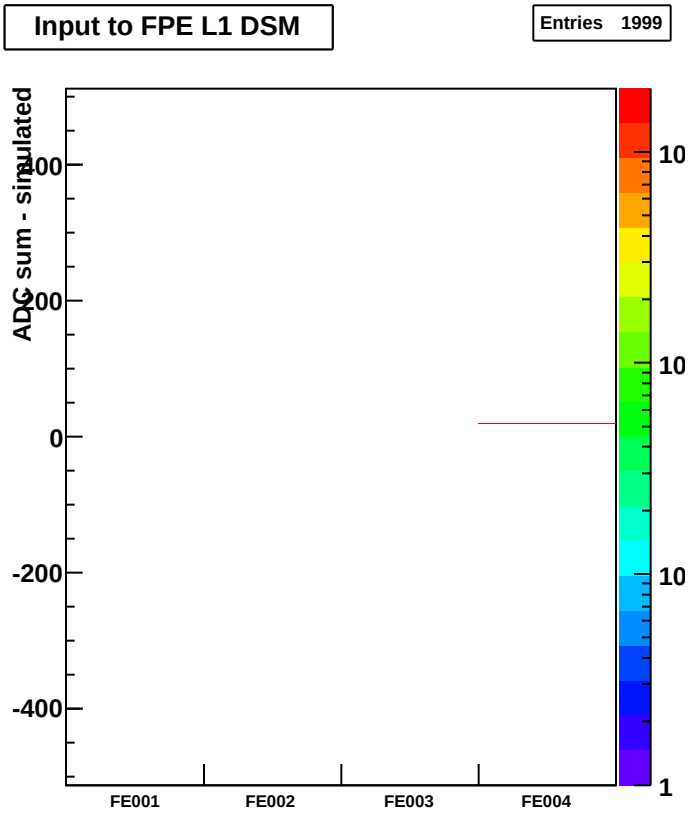

Input to FE001 QT board
Entries 63968
ADC
channel

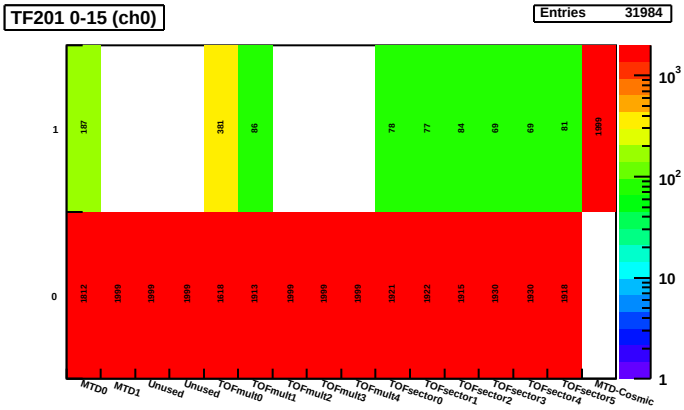

Input to FE002 QT board
Entries 63968
ADC
channel

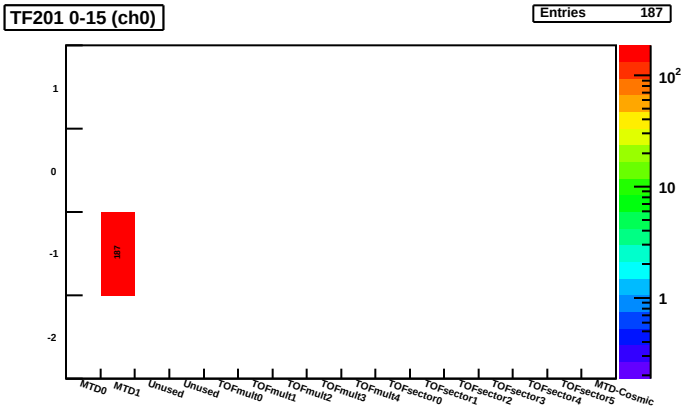

Input to FE003 QT board
Entries 63968
ADC
channel

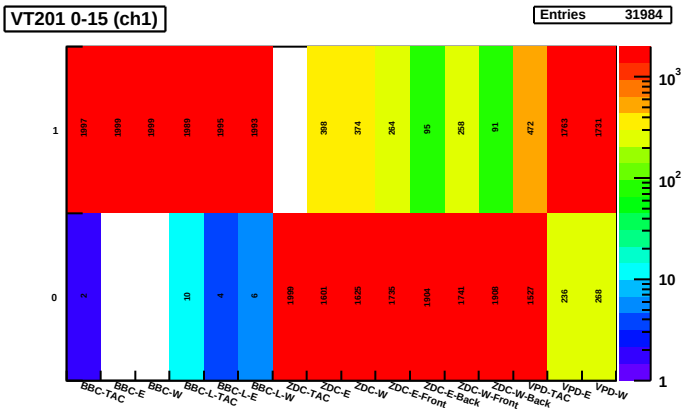

Input to FE004 QT board
Entries 63968
ADC
channel

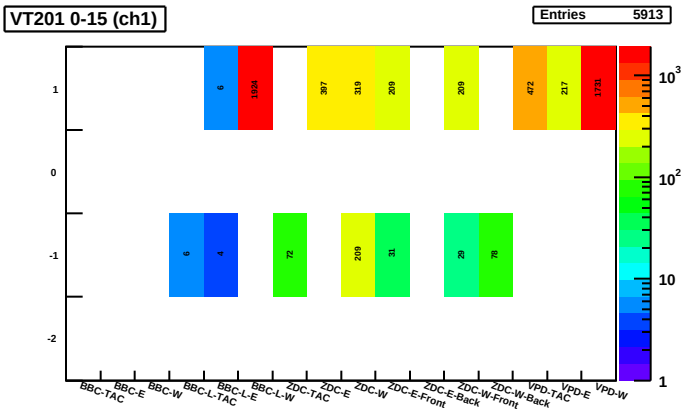

Input to FPE L1 DSM
Entries 7996
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
1

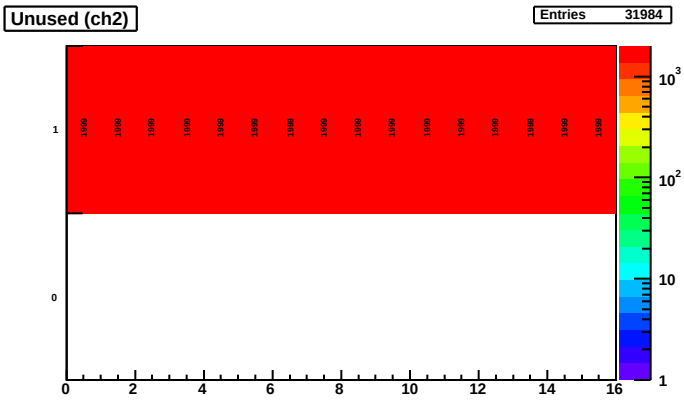

Input to FPE L1 DSM
Entries 1999
ADC sum - simulated
200
0
-200
-400
FE001
FE002
FE003
FE004
10
10
10
1

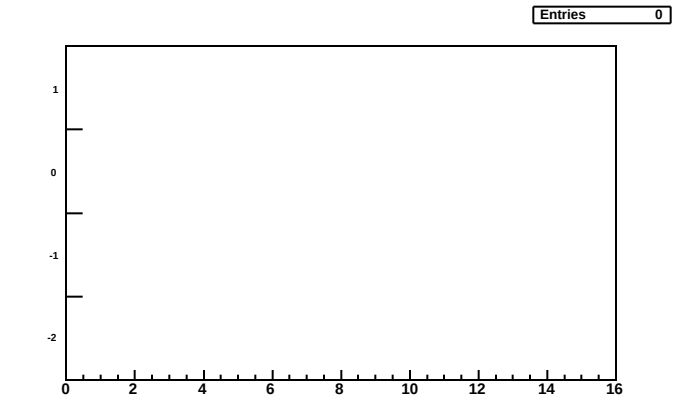

TF201 0-15 (ch0)
Entries 31984
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic

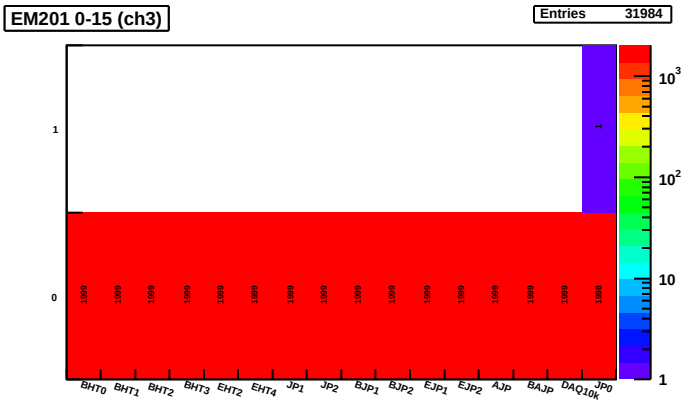

TF201 0-15 (ch0)
Entries 187
MTD0 MTD1 Unused Unused TOFmult0 TOFmult1 TOFmult2 TOFmult3 TOFmult4 TOFsector0 TOFsector1 TOFsector2 TOFsector3 TOFsector4 TOFsector5 MTD-Cosmic


VT201 0-15 (ch1)
Entries 31984
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 5913
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


Unused (ch2)
Entries 31984


Entries 0


EM201 0-15 (ch3)
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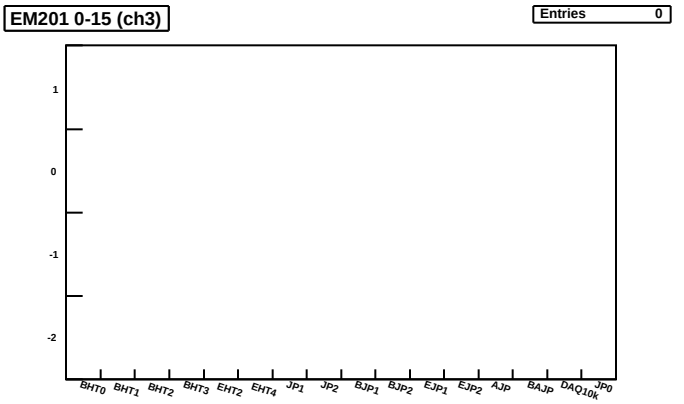
EM201 0-15 (ch3)
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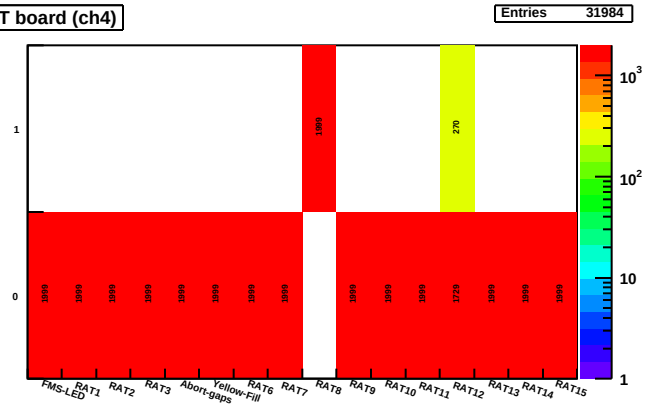
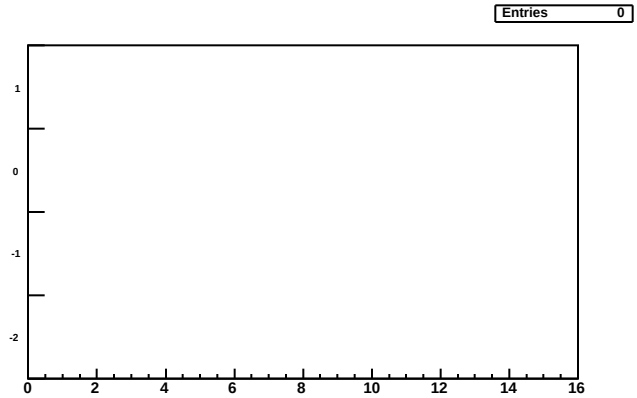
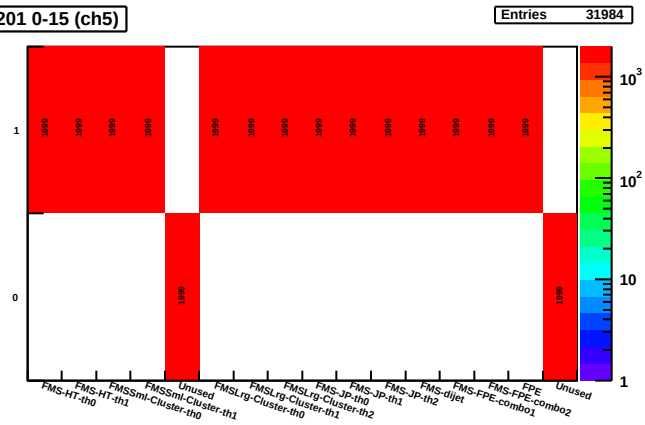
BHT0 BHT1 BHT2 BHT3 EHT2 EHT4 JP1 JP2 BJP1 BJP2 EJP1 EJP2 AJP BAJP DAQ10k JP0

RAT board (ch4)





FP201 0-15 (ch5)



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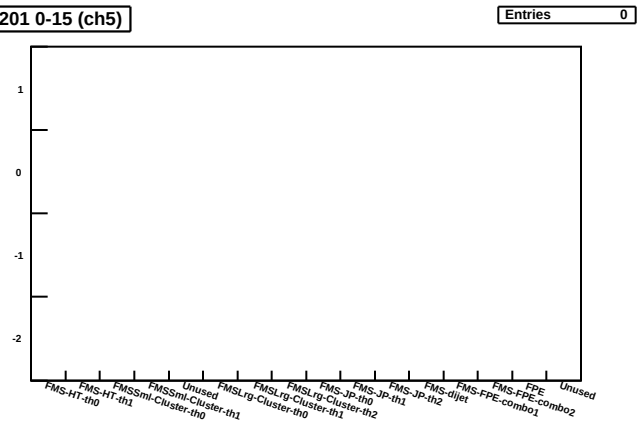
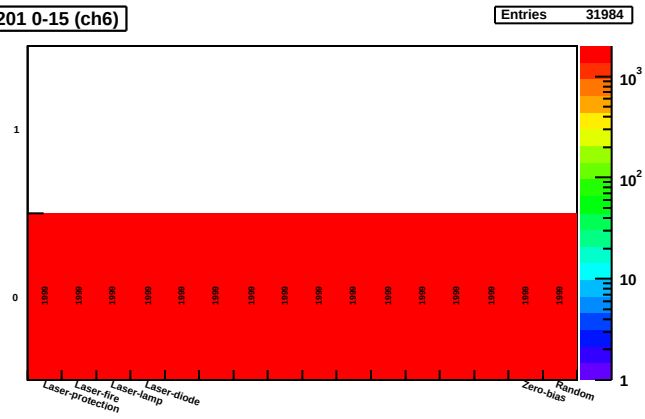
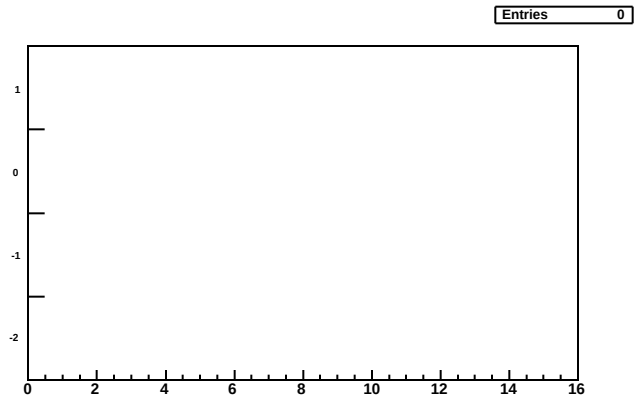
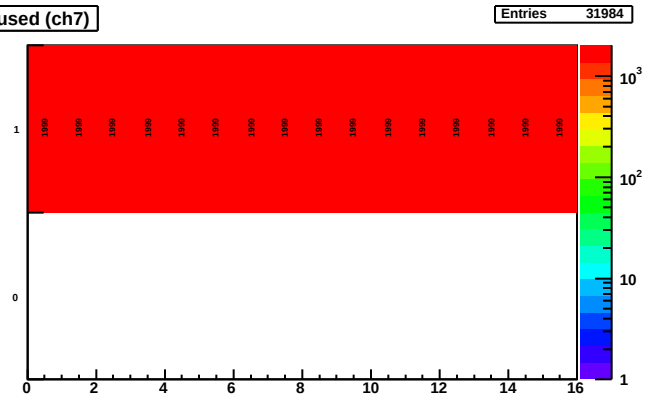
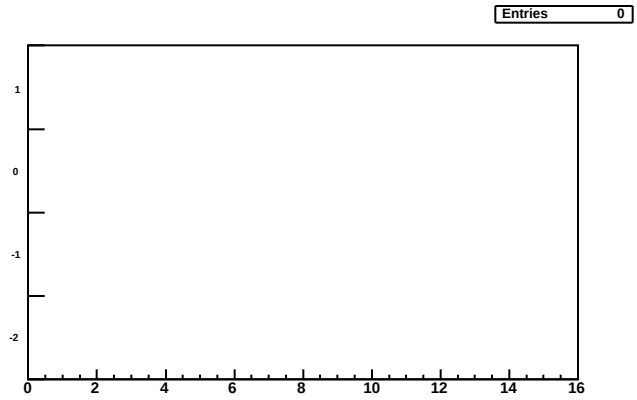


ST201 0-15 (ch6)





Unused (ch7)