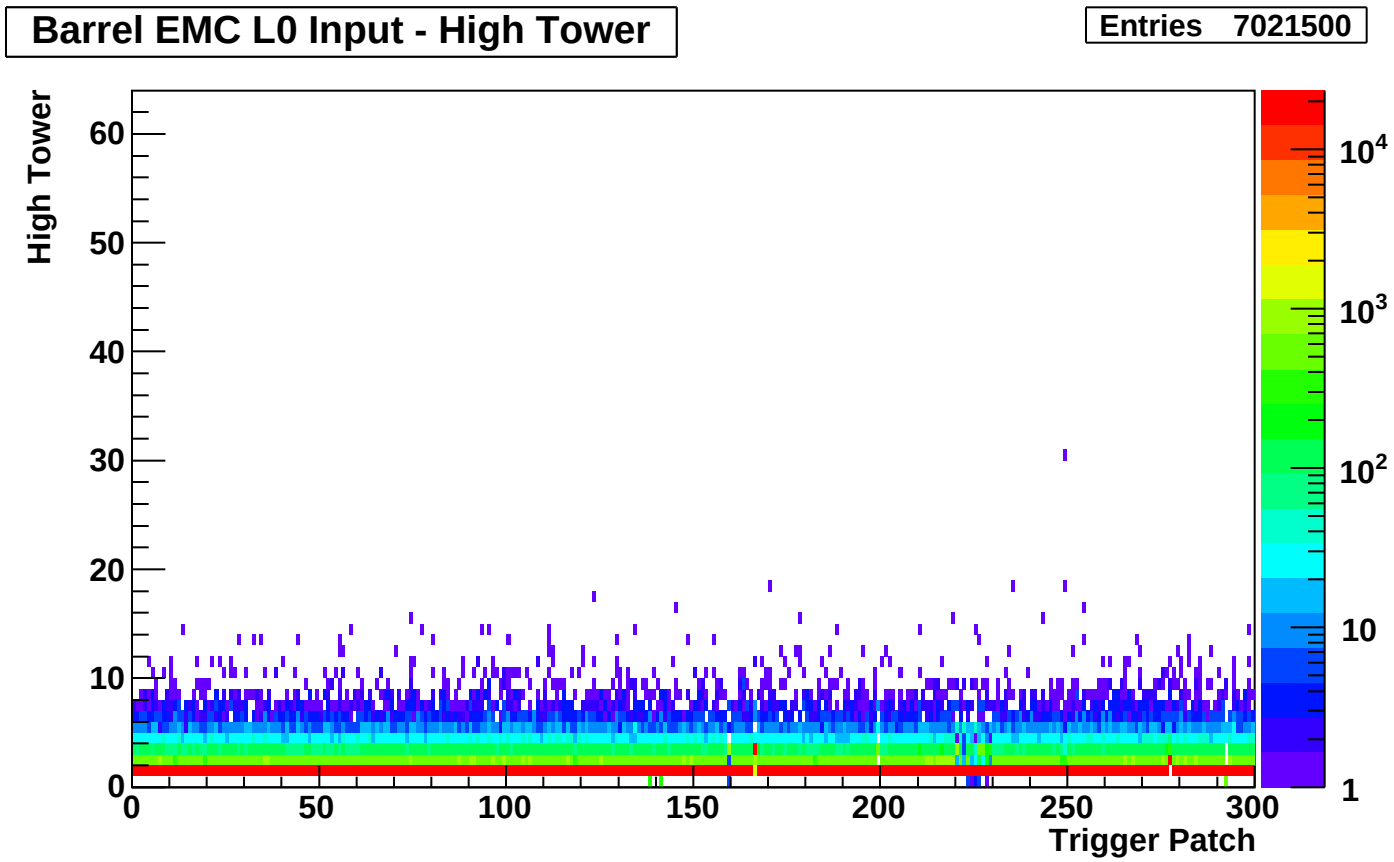
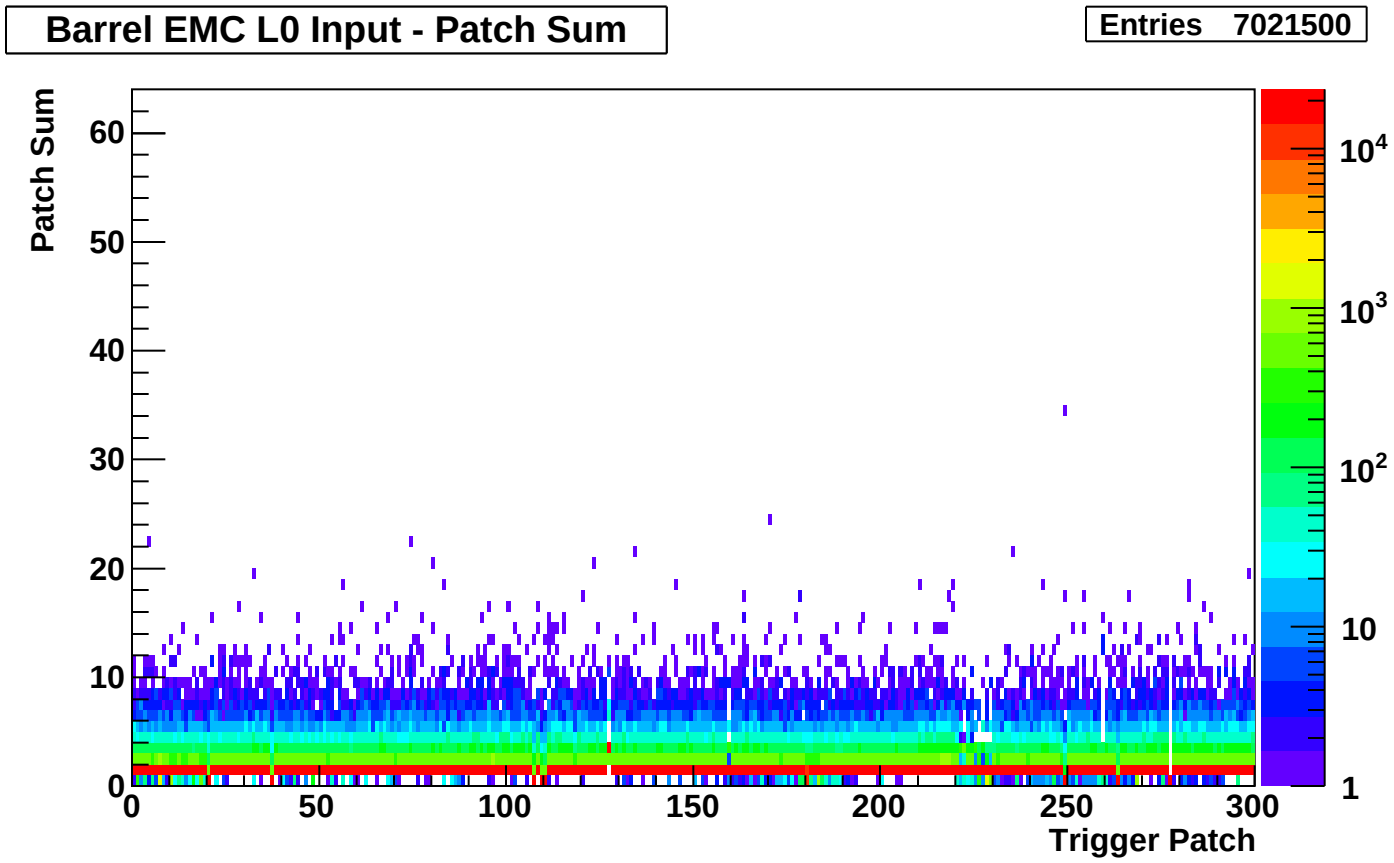
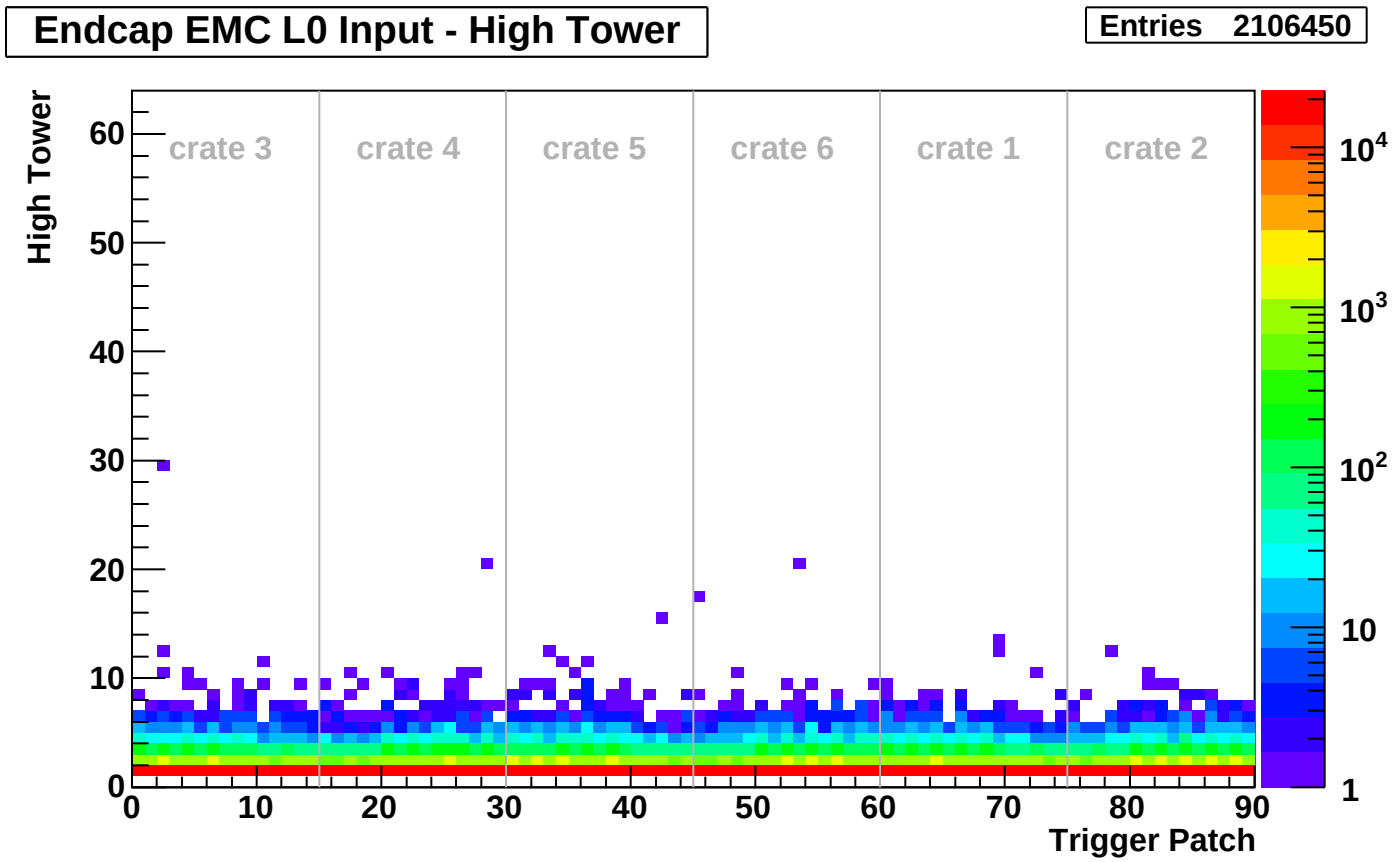
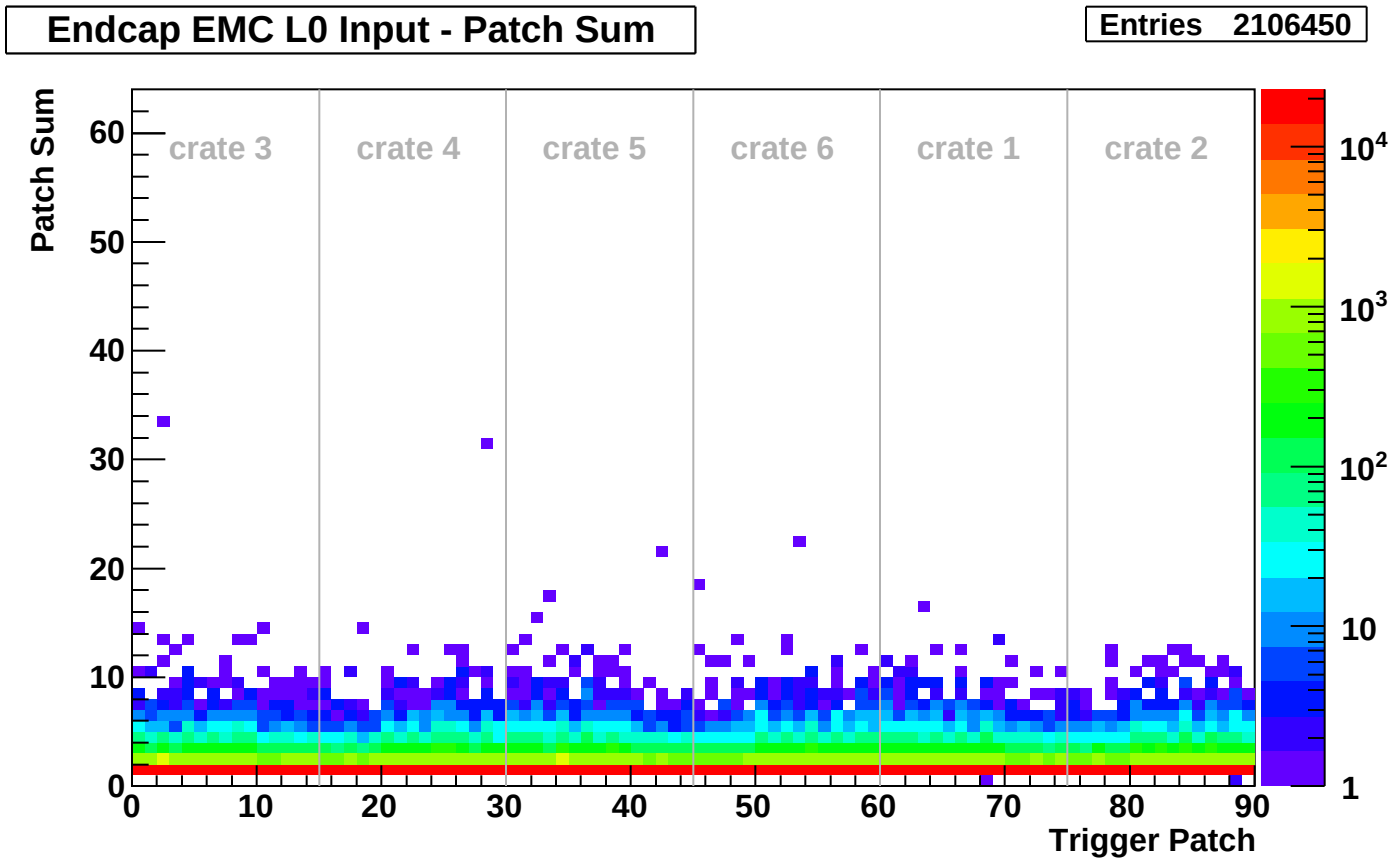
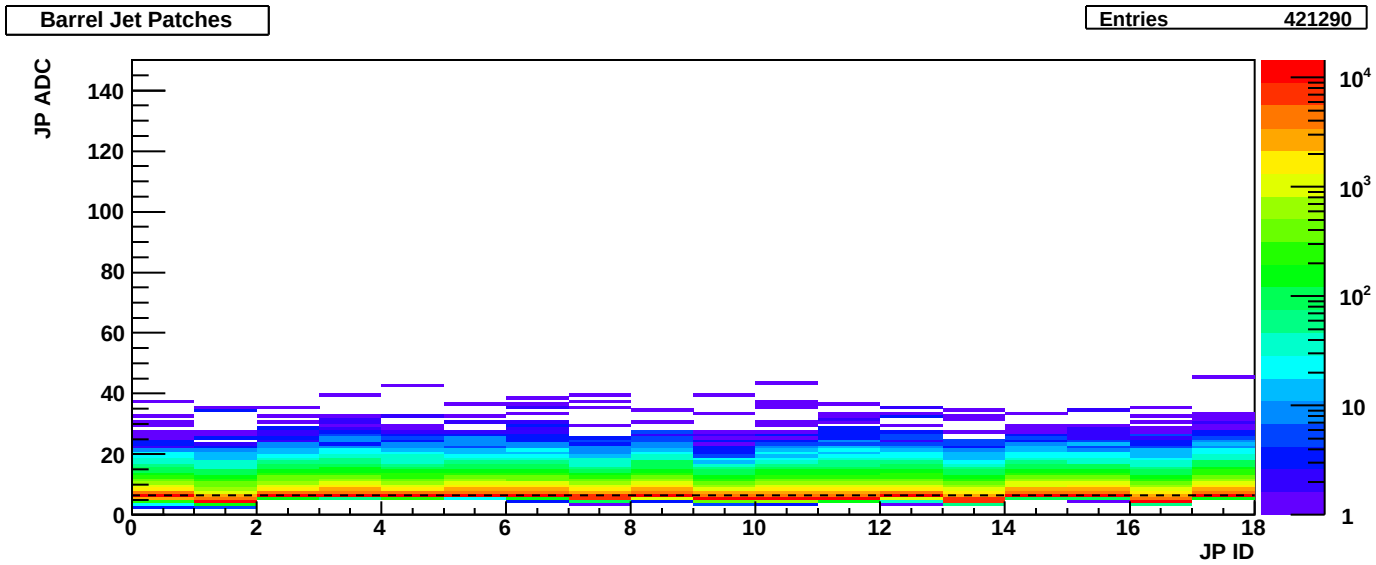
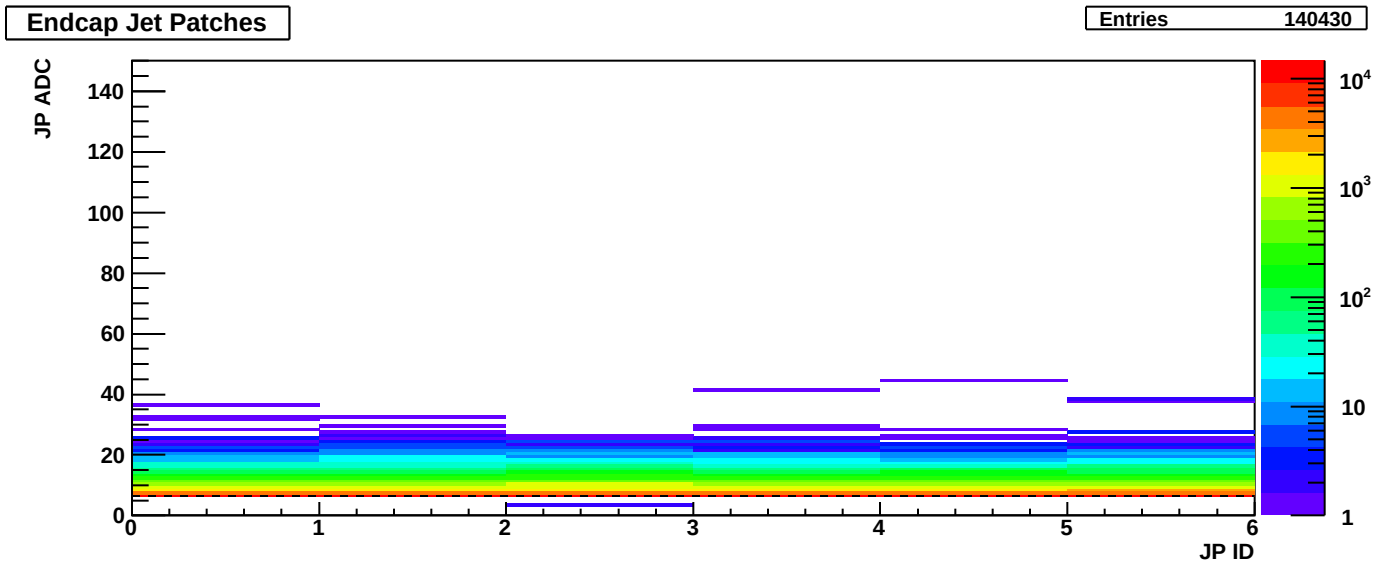

Barrel EMC L0 Input - High Tower
Entries 7021500
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

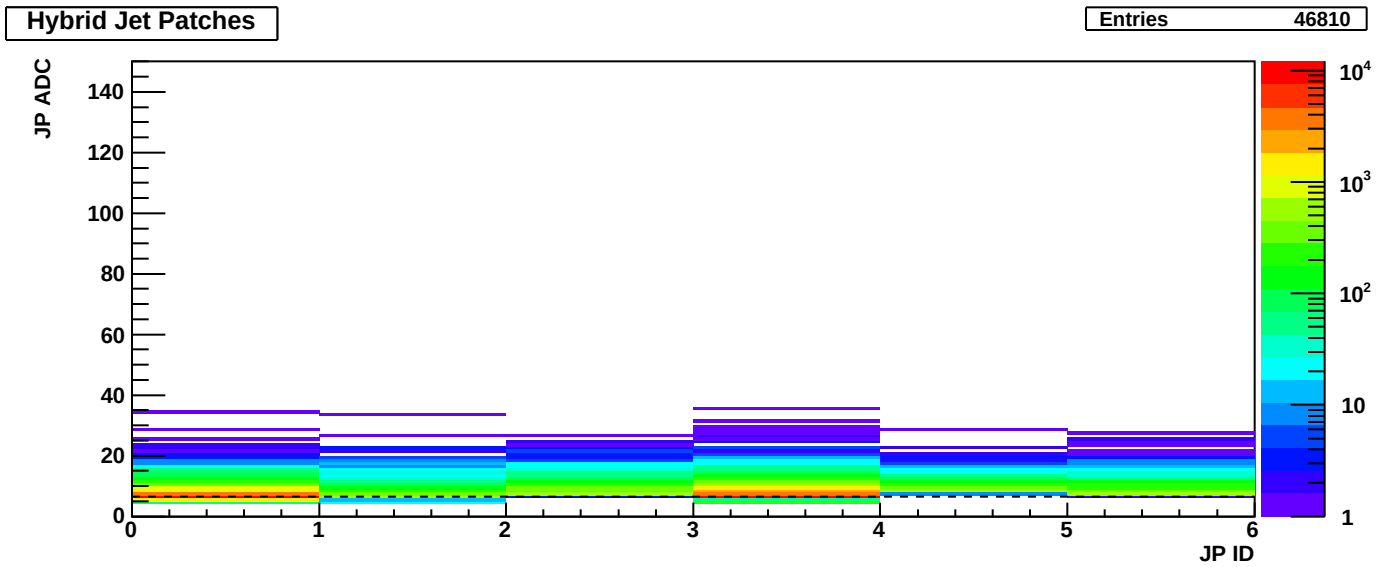

Barrel EMC L0 Input - Patch Sum
Entries 7021500
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
10^2
10^3
10^4

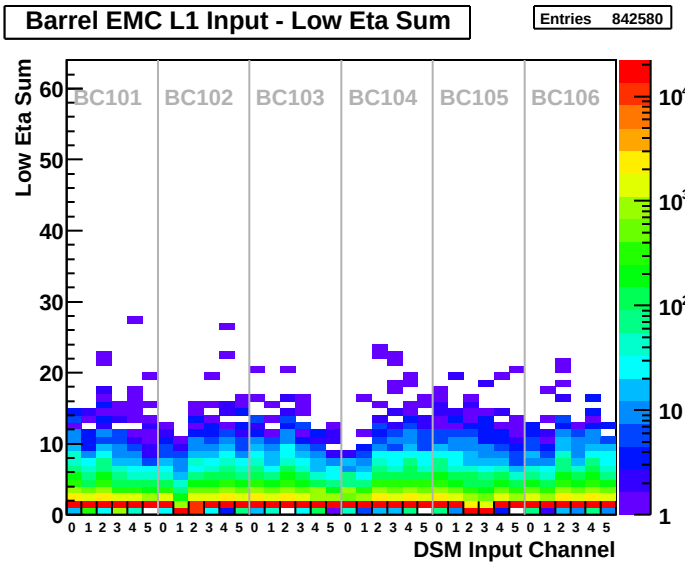

Endcap EMC L0 Input - High Tower
Entries 2106450
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

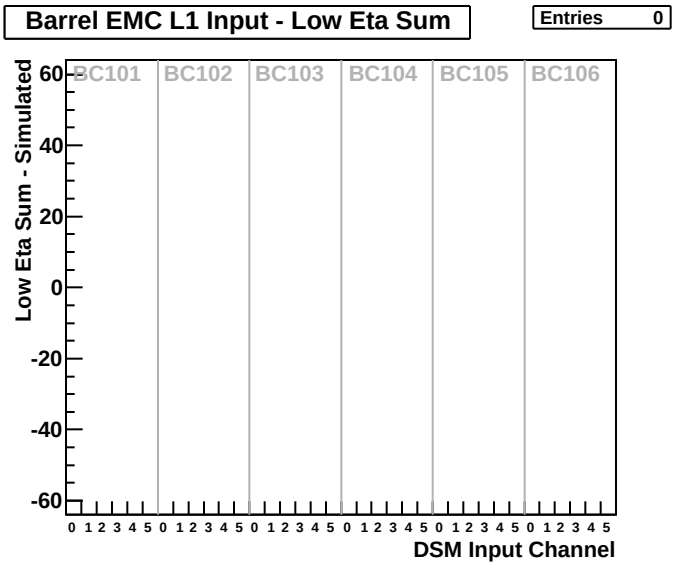

Endcap EMC L0 Input - Patch Sum
Entries 2106450
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

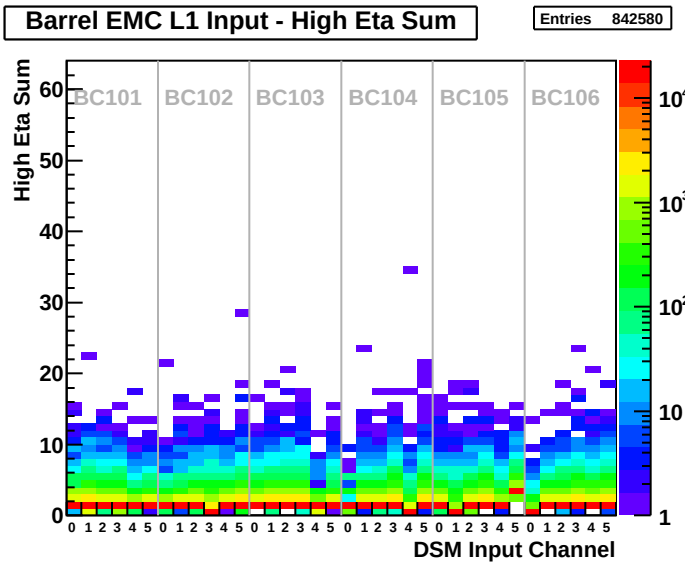

Barrel Jet Patches
Entries 421290
JP ADC
JP ID

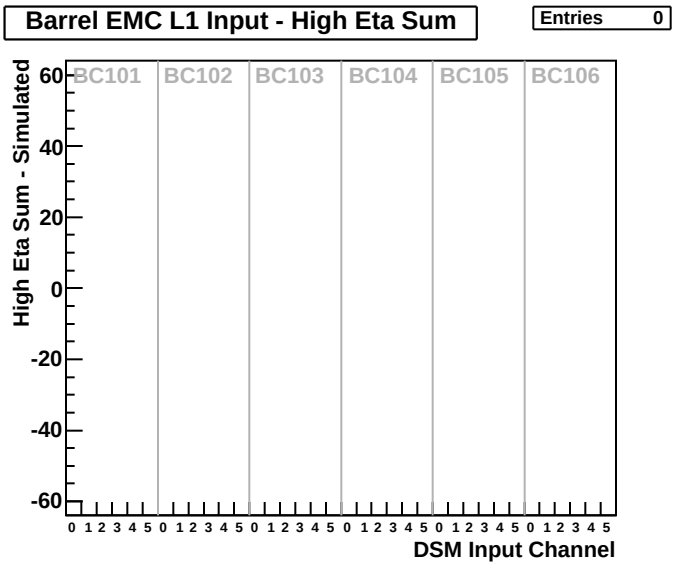

Endcap Jet Patches
Entries 140430
JP ADC
JP ID

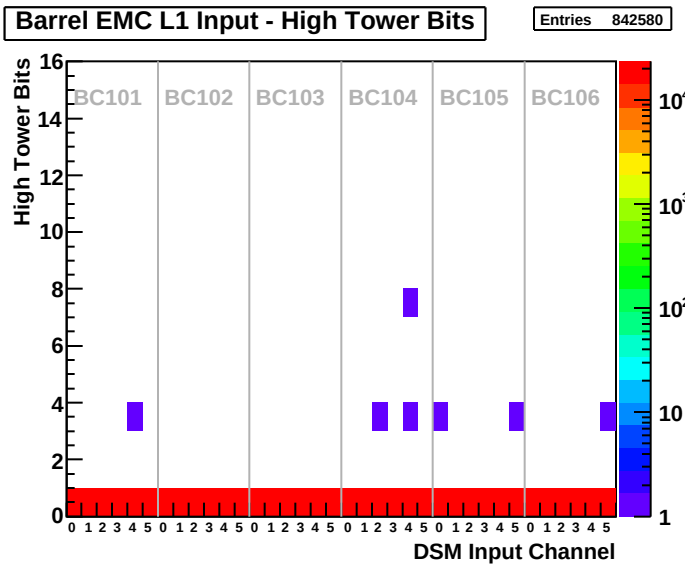

Hybrid Jet Patches
Entries 46810
JP ADC
JP ID

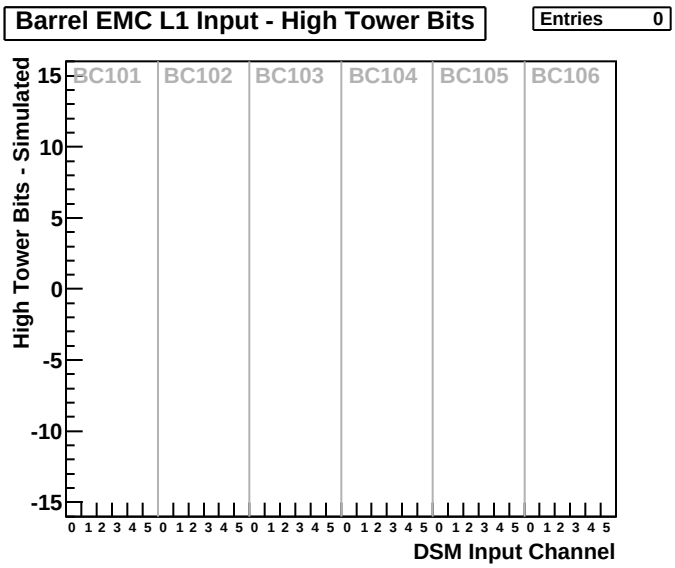

Barrel EMC L1 Input - Low Eta Sum
Entries 842580
Low Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

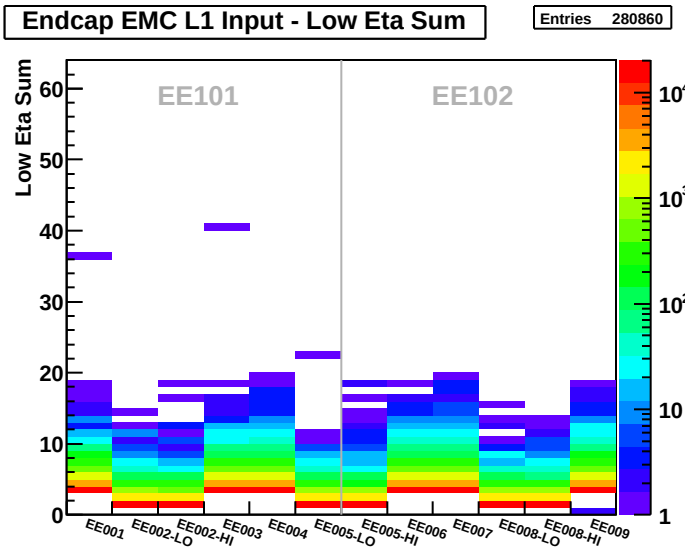

Barrel EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

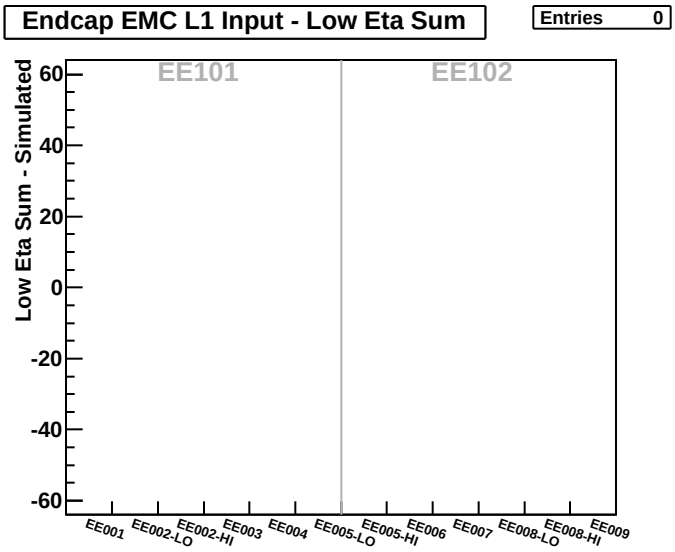

Barrel EMC L1 Input - High Eta Sum
Entries 842580
High Eta Sum
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

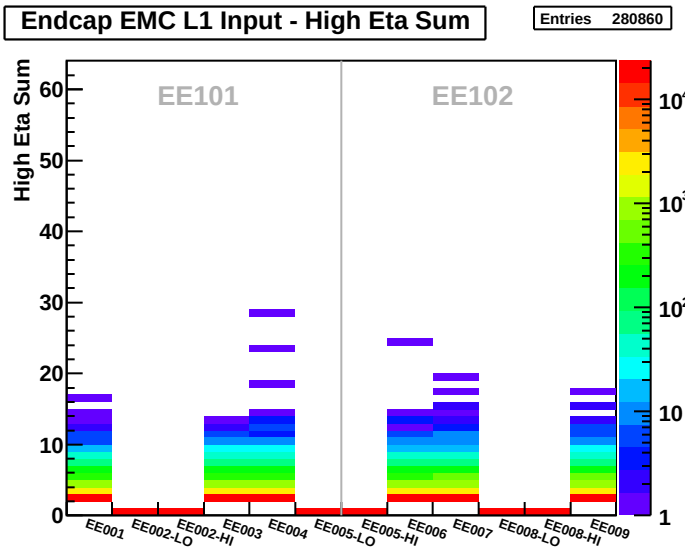

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

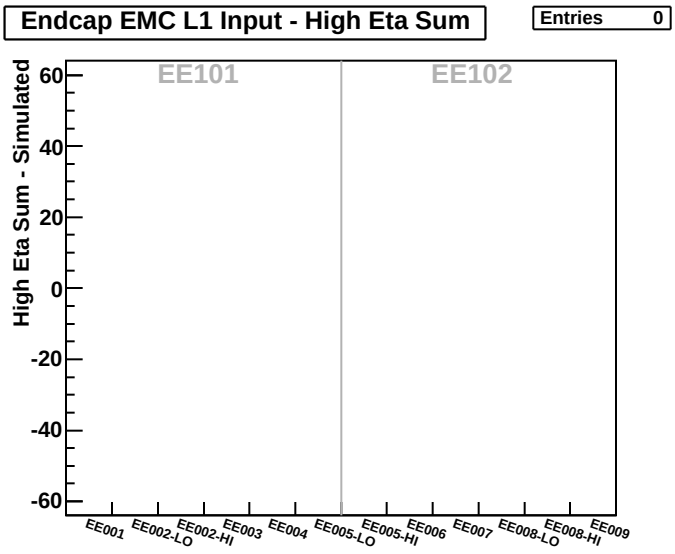

Barrel EMC L1 Input - High Tower Bits
Entries 842580
High Tower Bits
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

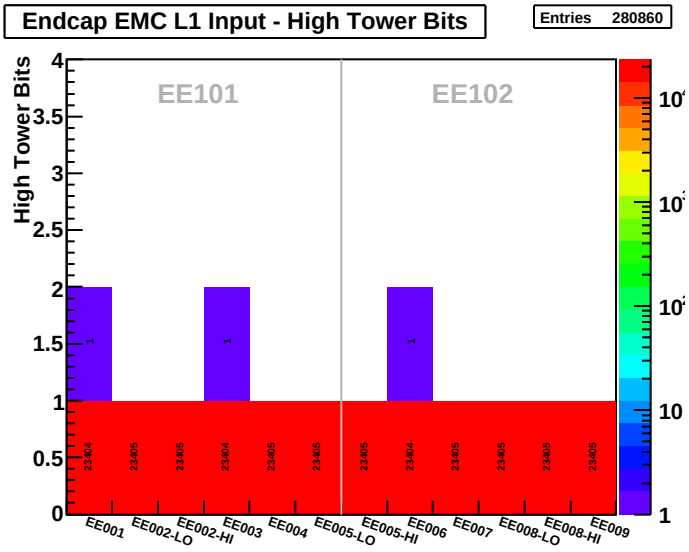

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101 BC102 BC103 BC104 BC105 BC106
DSM Input Channel

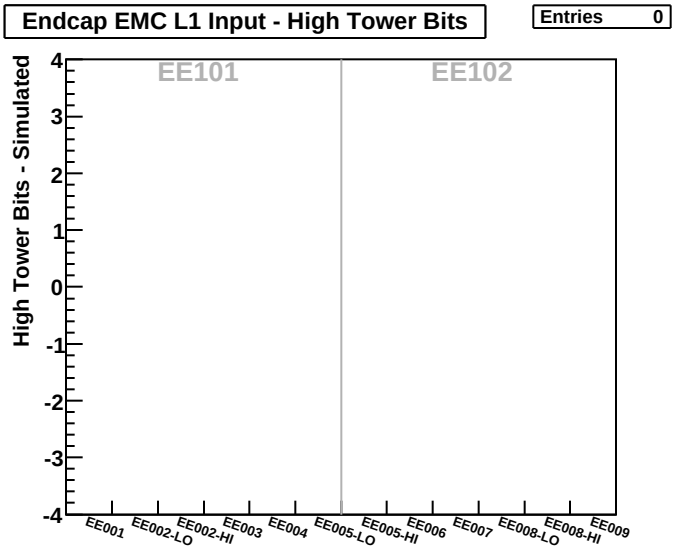

Endcap EMC L1 Input - Low Eta Sum
Entries 280860
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

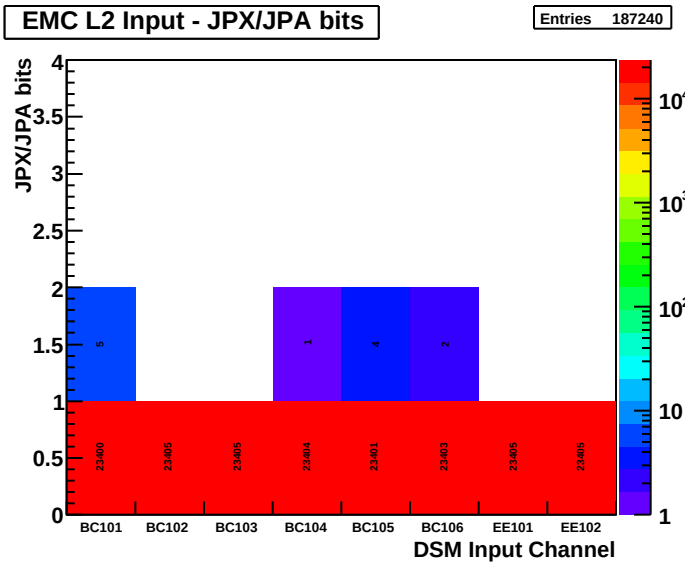

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

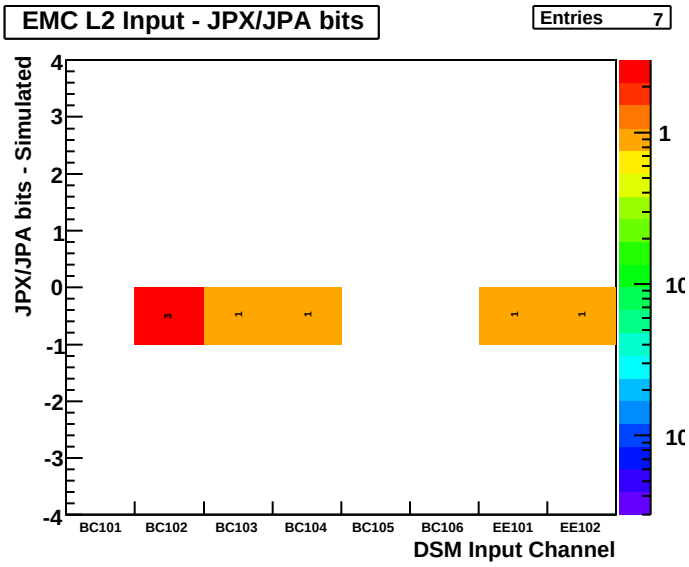

Endcap EMC L1 Input - High Eta Sum
Entries 280860
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

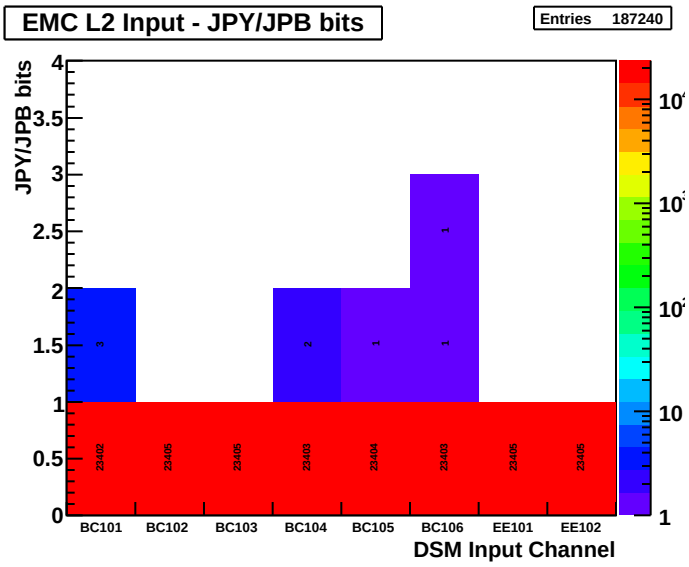

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

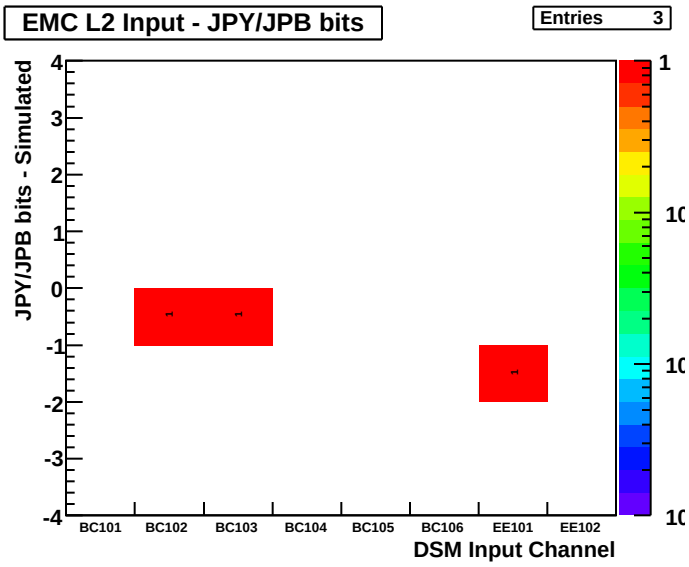

Endcap EMC L1 Input - High Tower Bits
Entries 280860
High Tower Bits
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

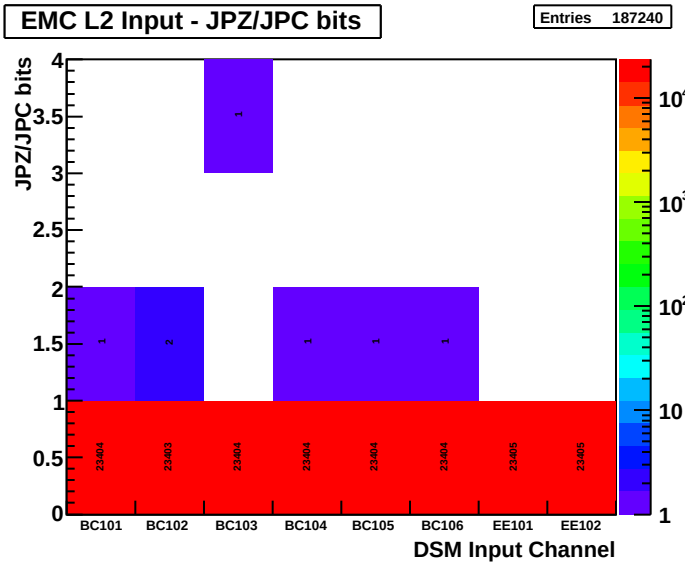

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

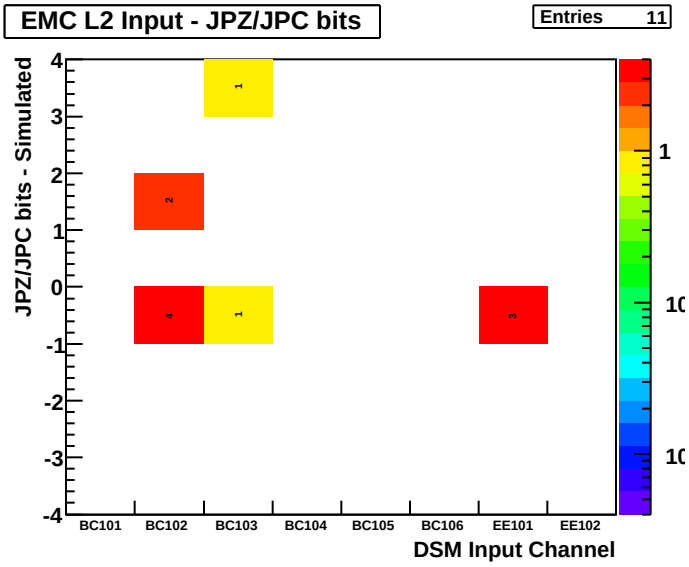

EMC L2 Input - JPX/JPA bits
Entries 187240
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

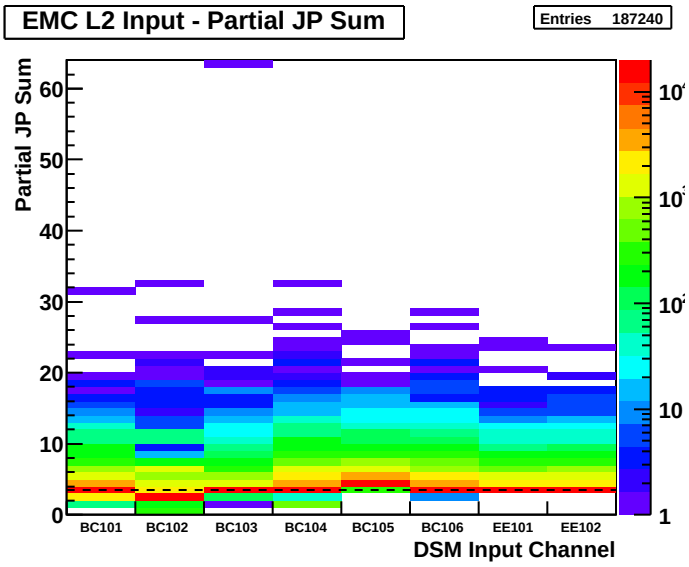

EMC L2 Input - JPX/JPA bits
Entries 7
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

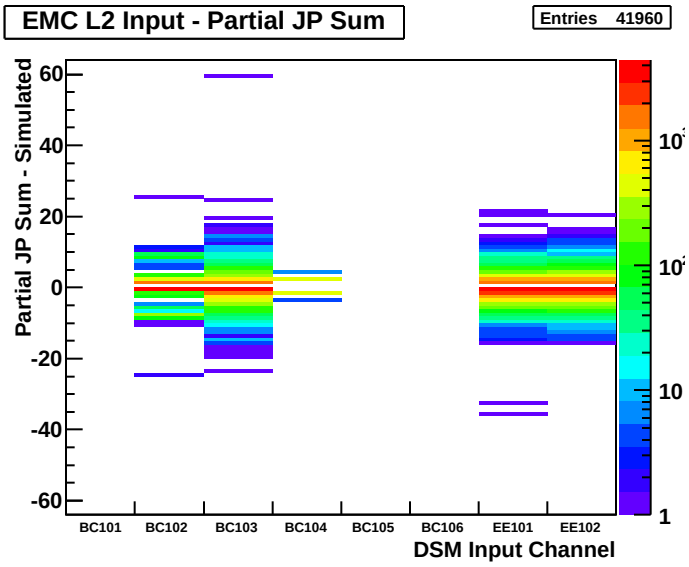

EMC L2 Input - JPY/JPB bits
Entries 187240
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

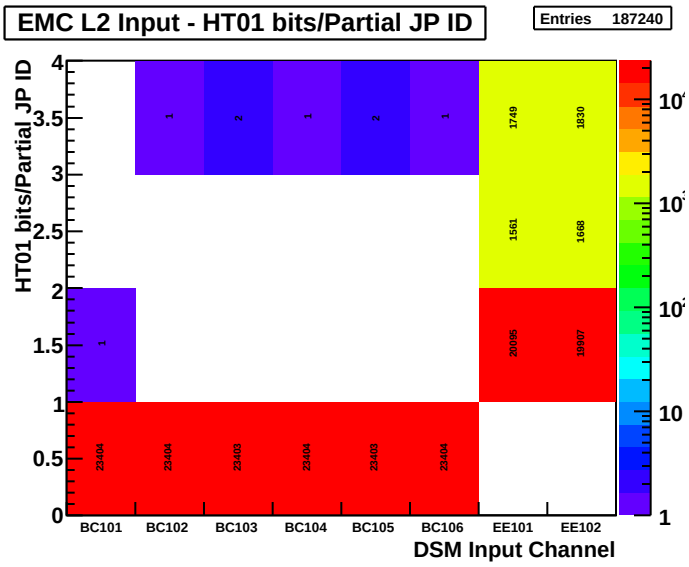

EMC L2 Input - JPY/JPB bits
Entries 3
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

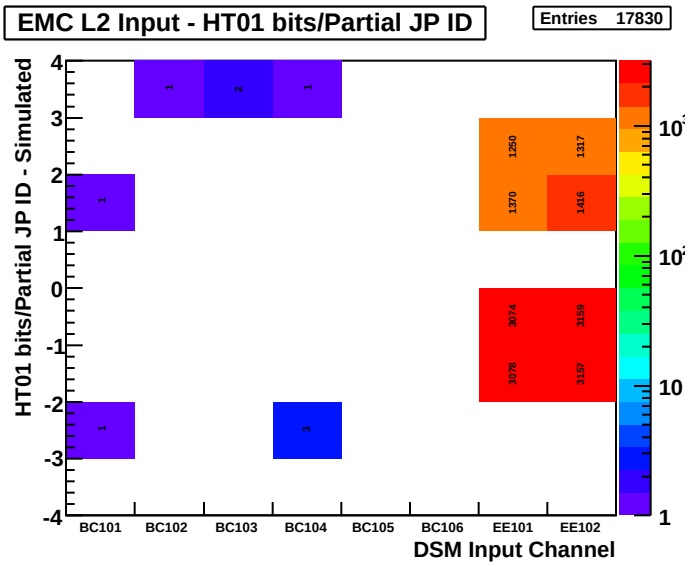

EMC L2 Input - JPZ/JPC bits
Entries 187240
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

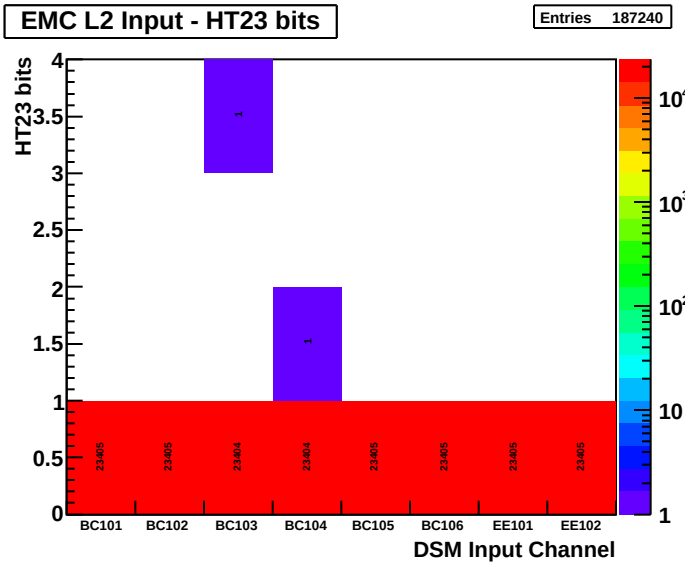

EMC L2 Input - JPZ/JPC bits
Entries 11
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

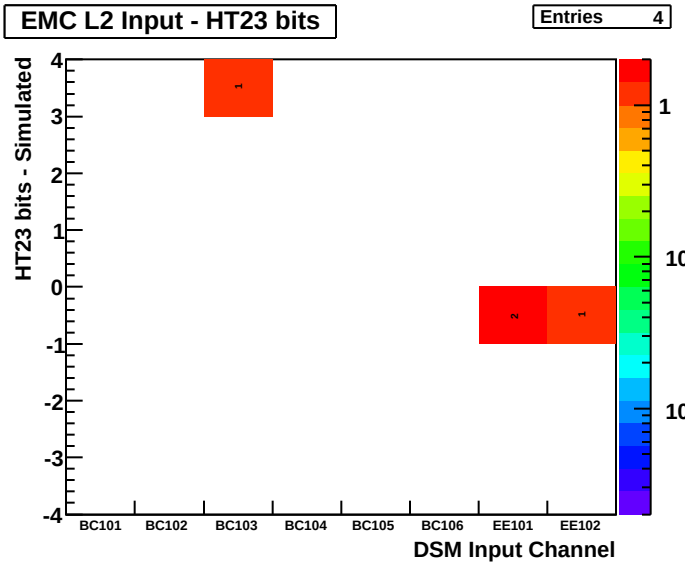

EMC L2 Input - Partial JP Sum
Entries 187240
Partial JP Sum
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

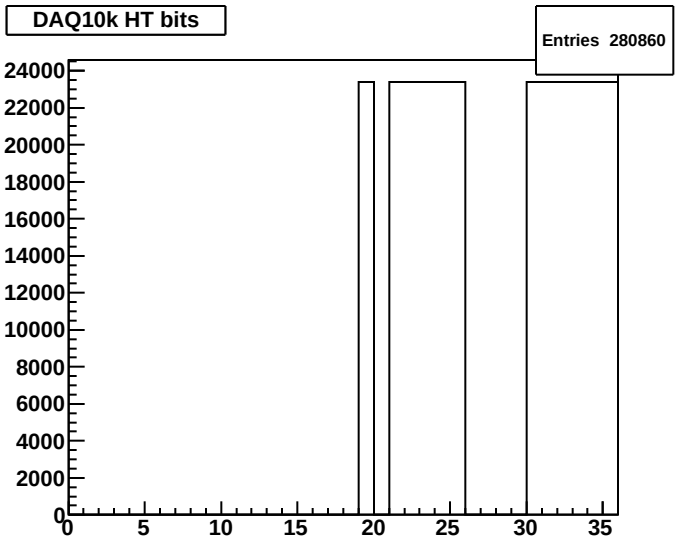

EMC L2 Input - Partial JP Sum
Entries 41960
Partial JP Sum - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

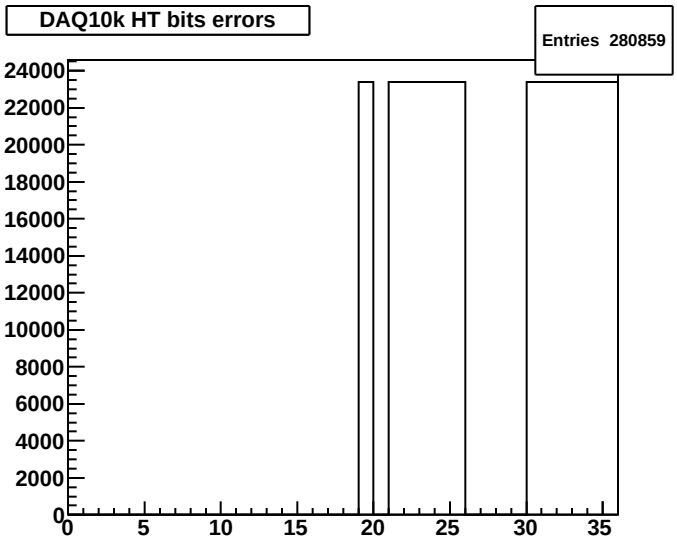

EMC L2 Input - HT01 bits/Partial JP ID
Entries 187240
HT01 bits/Partial JP ID
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

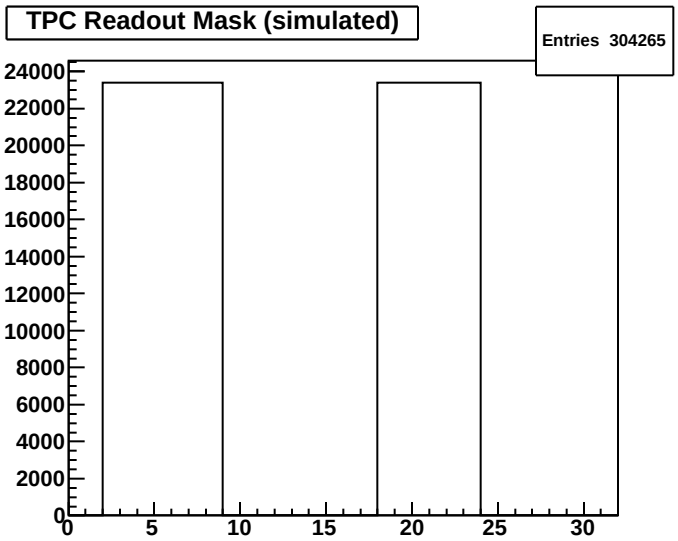

EMC L2 Input - HT01 bits/Partial JP ID
Entries 17830
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

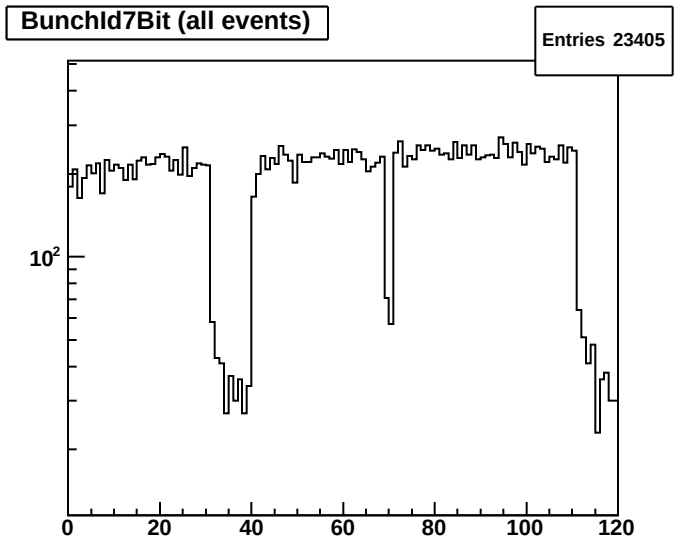

EMC L2 Input - HT23 bits
Entries 187240
HT23 bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

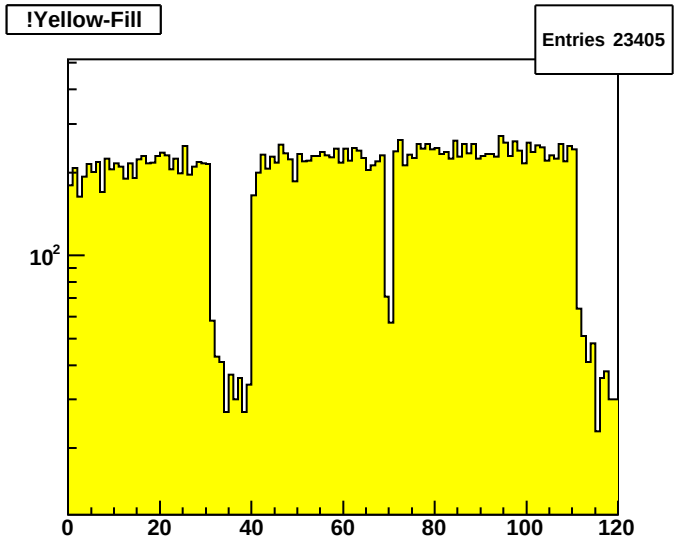

EMC L2 Input - HT23 bits
Entries 4
HT23 bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

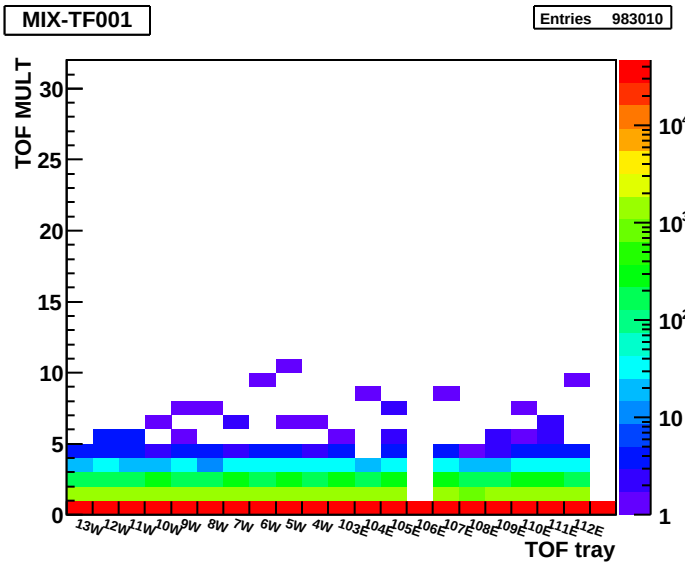

DAQ10k HT bits
Entries 280860
24000
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
5
10
15
20
25
30
35

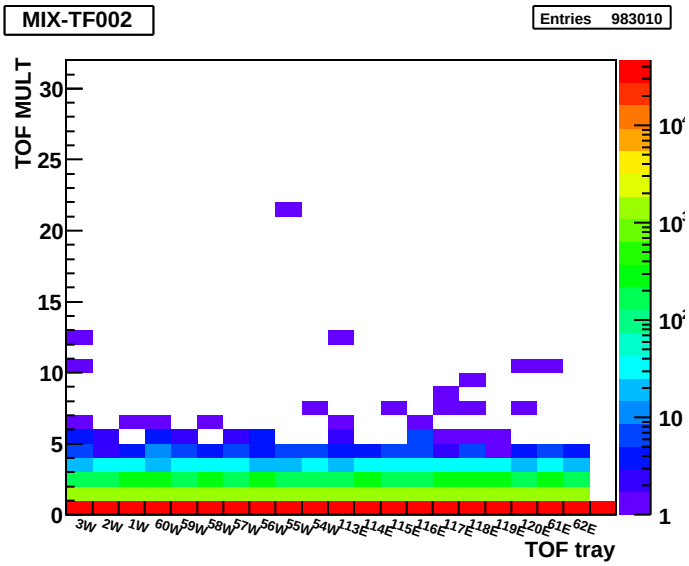

DAQ10k HT bits errors
Entries 280859
24000
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
5
10
15
20
25
30
35

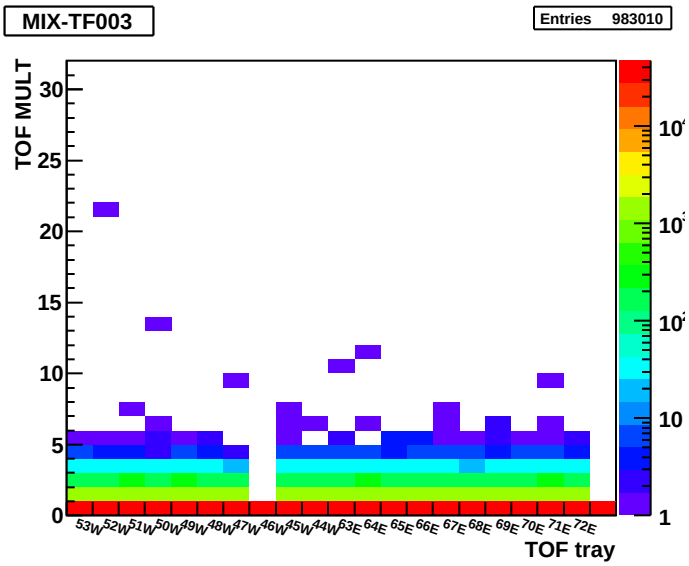

TPC Readout Mask (simulated)
Entries 304265
24000
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
5
10
15
20
25
30

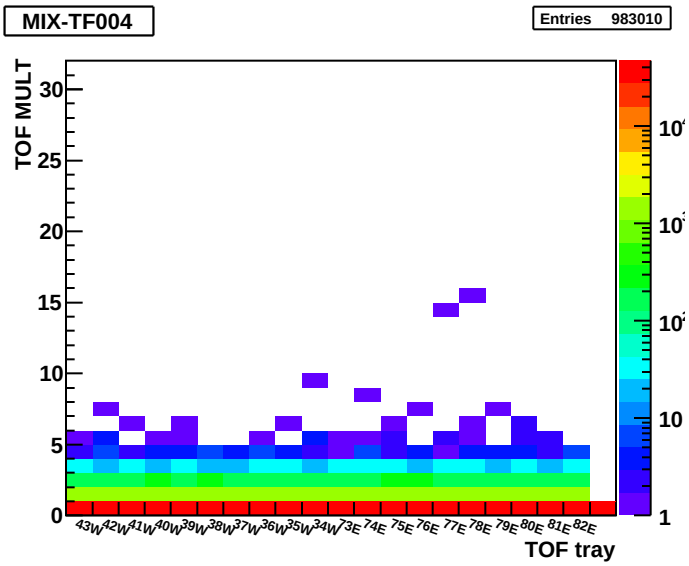

BunchId7Bit (all events)
Entries 23405
10^2
0
20
40
60
80
100
120

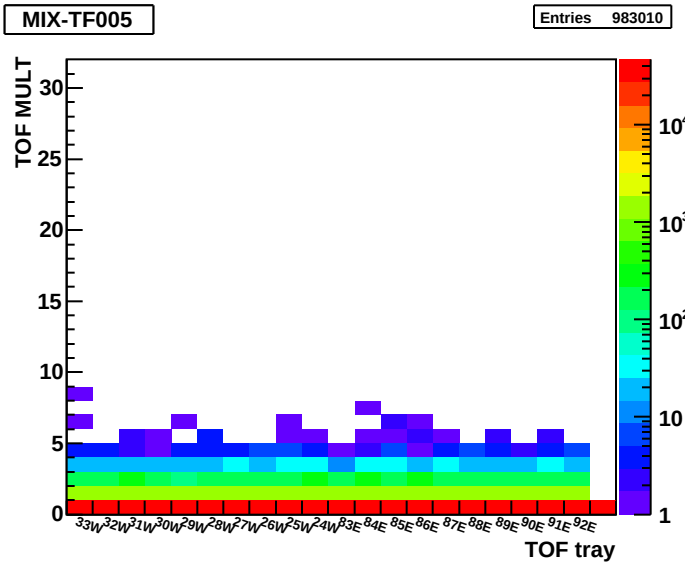

!Yellow-Fill
Entries 23405
10^2
0
20
40
60
80
100
120

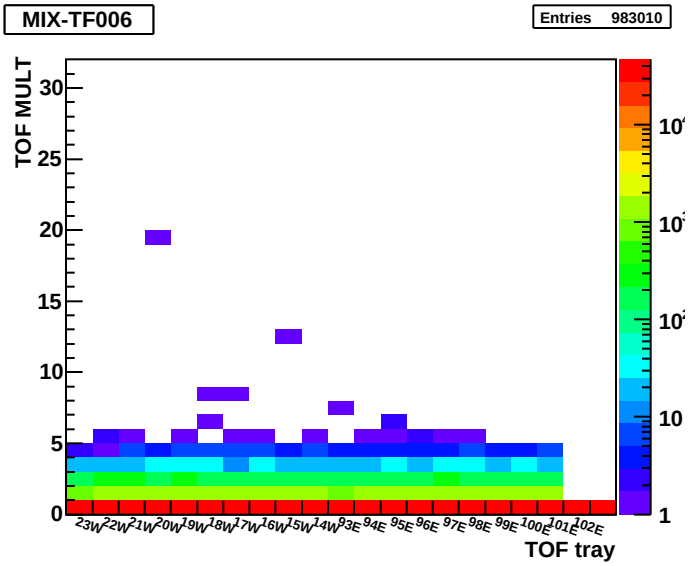

MIX-TF001
Entries 983010
TOF MULT
TOF tray

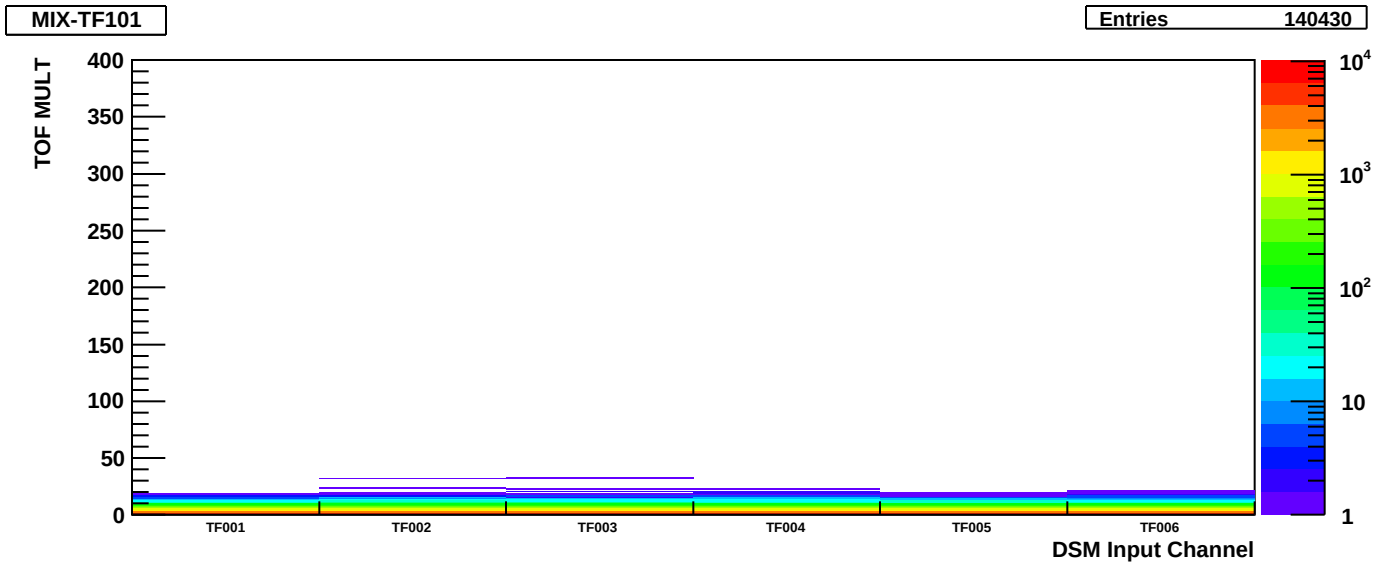

MIX-TF002
Entries 983010
TOF MULT
TOF tray

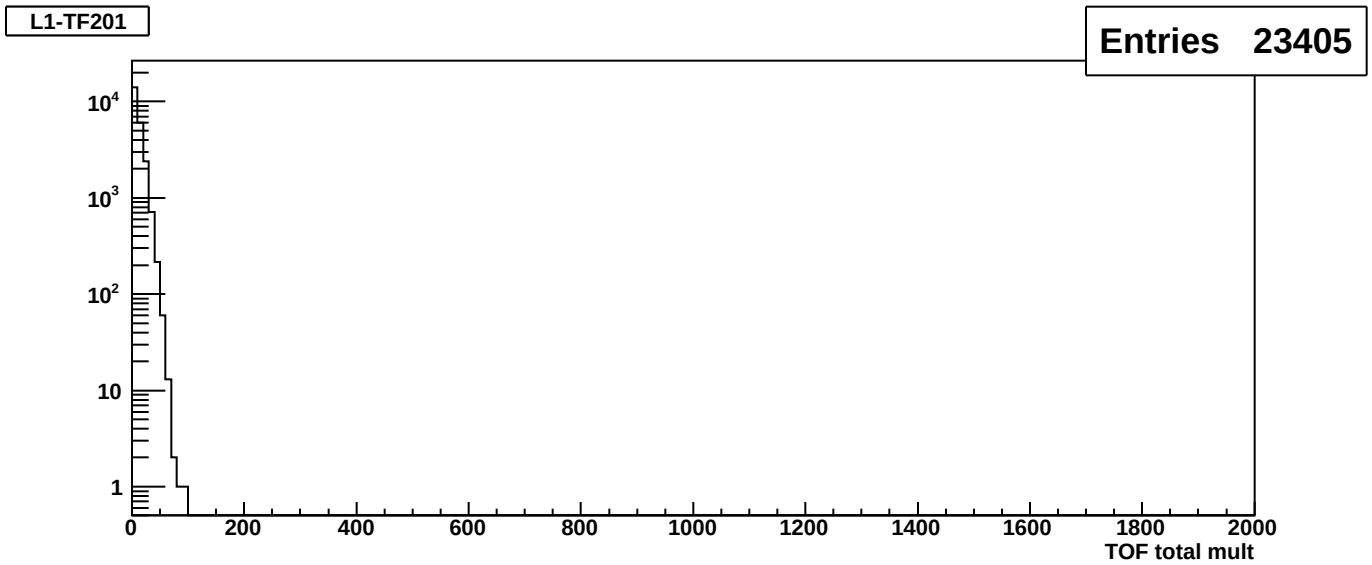

MIX-TF003
Entries 983010
TOF MULT
TOF tray

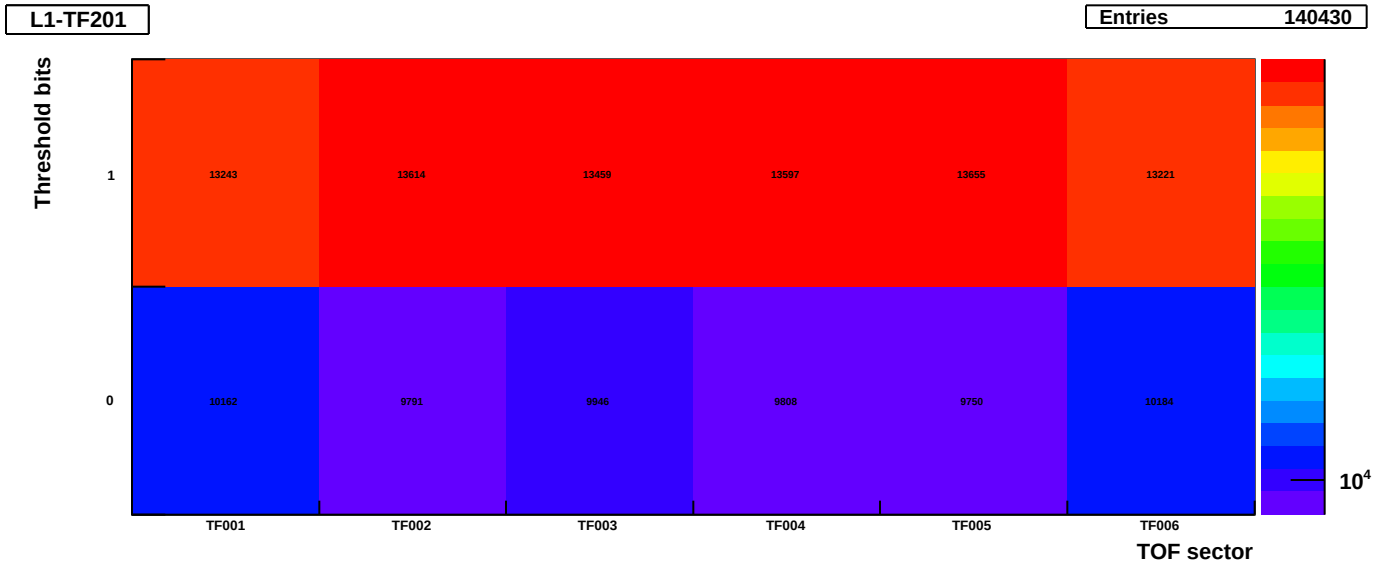

MIX-TF004
Entries 983010
TOF MULT
TOF tray

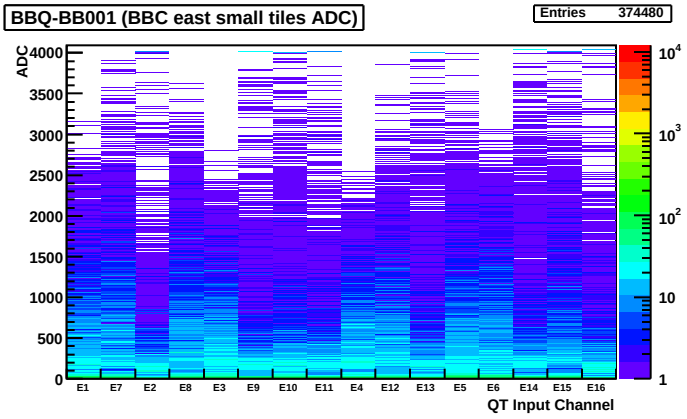

MIX-TF005
Entries 983010
TOF MULT
TOF tray

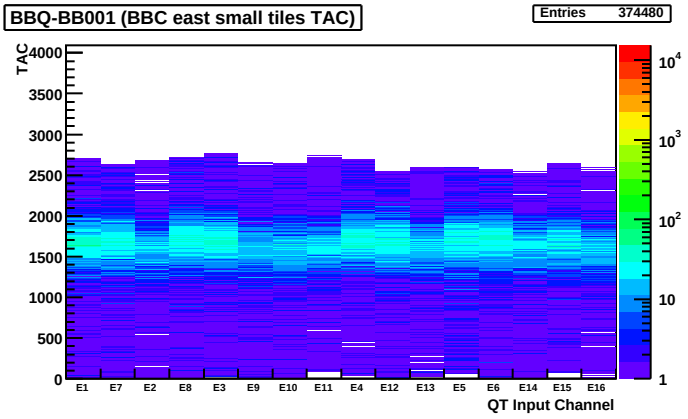

MIX-TF006
Entries 983010
TOF MULT
TOF tray

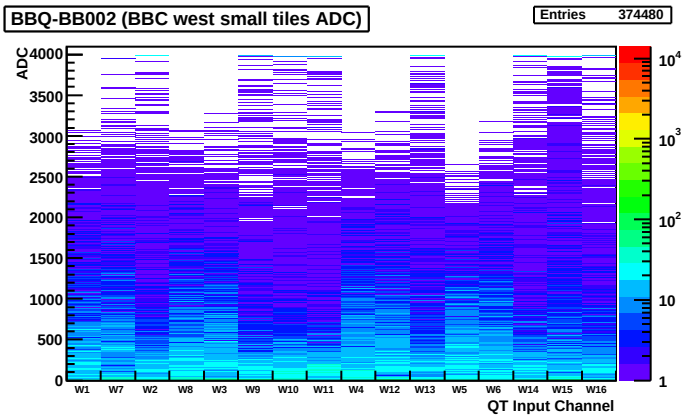

MIX-TF101
Entries 140430
TOF MULT
400
350
300
250
200
150
100
50
0
TF001
TF002
TF003
TF004
TF005
TF006
DSM Input Channel
10^4
10^3
10^2
10
1

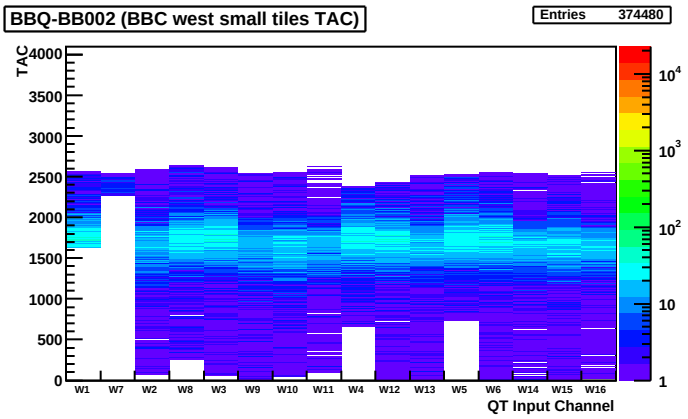

L1-TF201
Entries 23405
10^4
10^3
10^2
10
1
0
200
400
600
800
1000
1200
1400
1600
1800
2000
TOF total mult

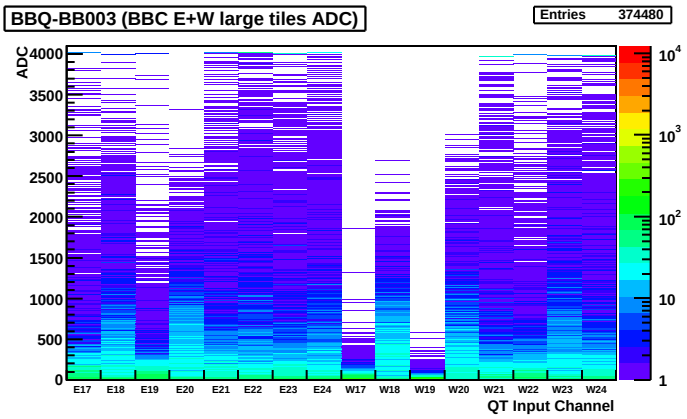

L1-TF201
Entries 140430
Threshold bits
1
0
13243
13614
13459
13597
13655
13221
10162
9791
9946
9808
9750
10184
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector
10^4

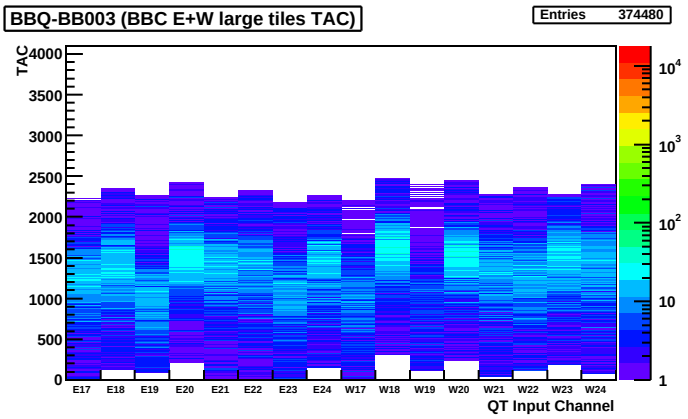

BBQ-BB001 (BBC east small tiles ADC)
Entries 374480
ADC
QT Input Channel

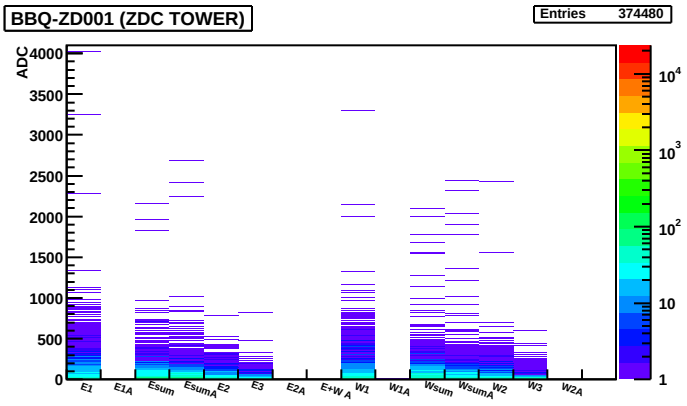

BBQ-BB001 (BBC east small tiles TAC)
Entries 374480
TAC
QT Input Channel

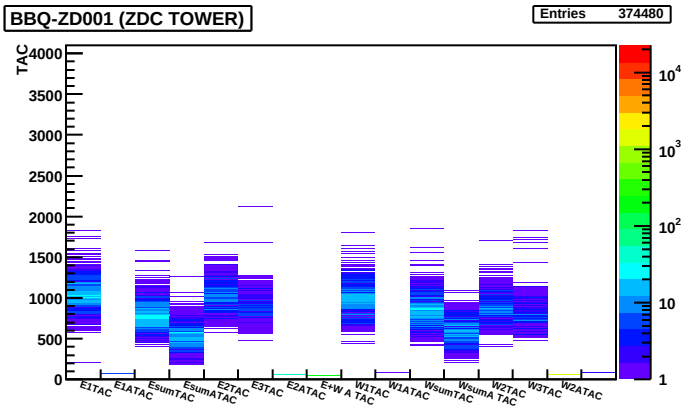

BBQ-BB002 (BBC west small tiles ADC)
Entries 374480
ADC
QT Input Channel

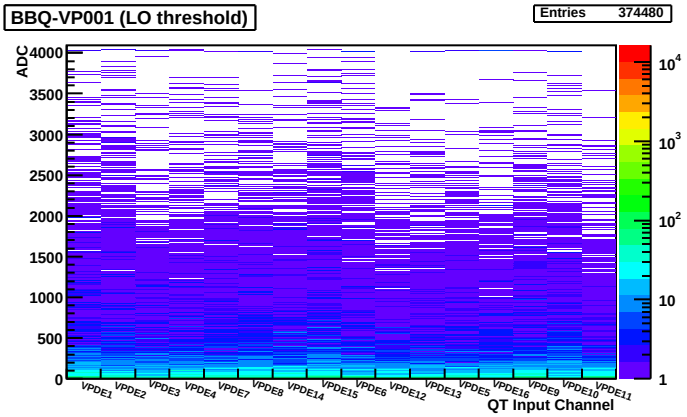

BBQ-BB002 (BBC west small tiles TAC)
Entries 374480
TAC
QT Input Channel

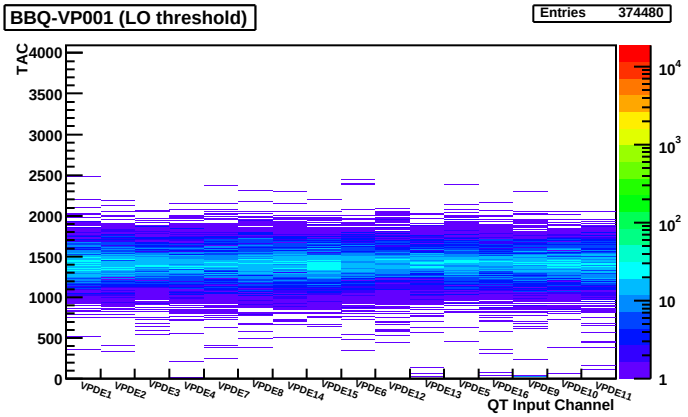

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 374480
ADC
QT Input Channel

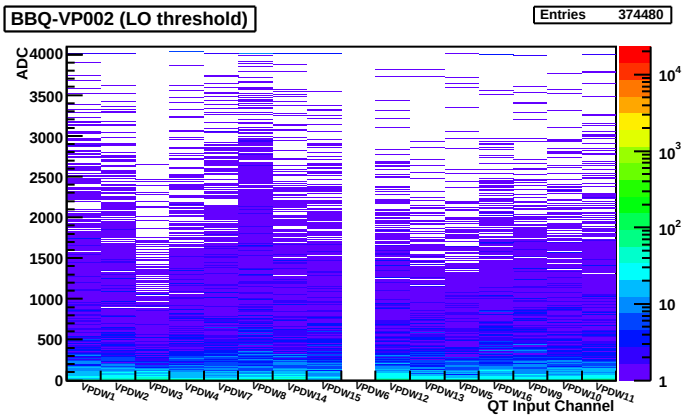

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 374480
TAC
QT Input Channel

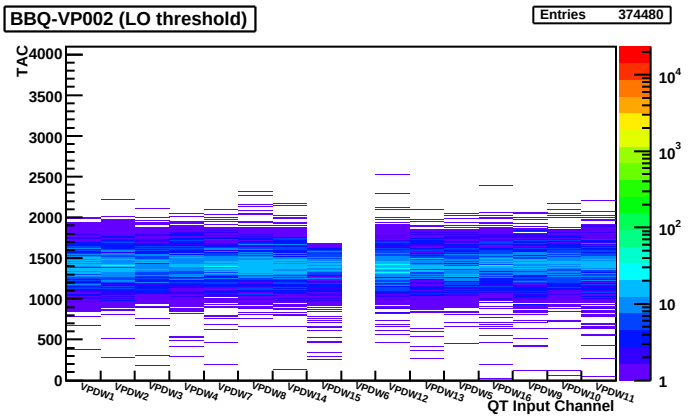

BBQ-ZD001 (ZDC TOWER)
Entries 374480
ADC

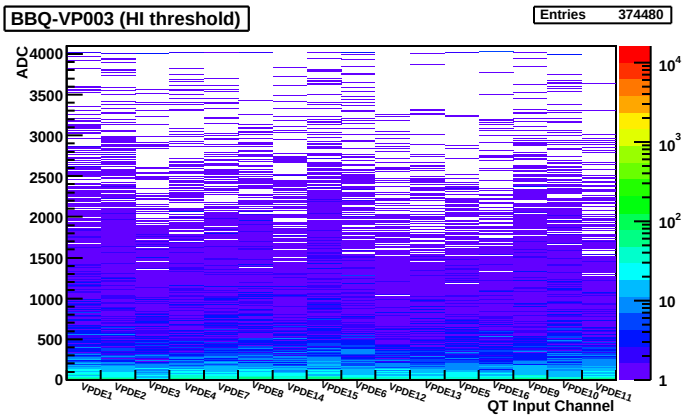

BBQ-ZD001 (ZDC TOWER)
Entries 374480
TAC

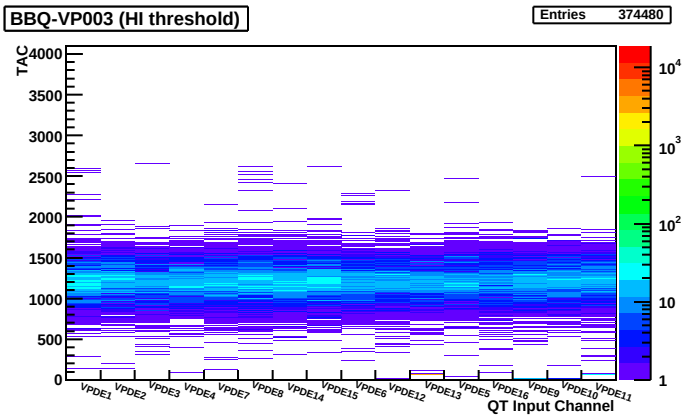

BBQ-VP001 (LO threshold)
Entries 374480
ADC
QT Input Channel

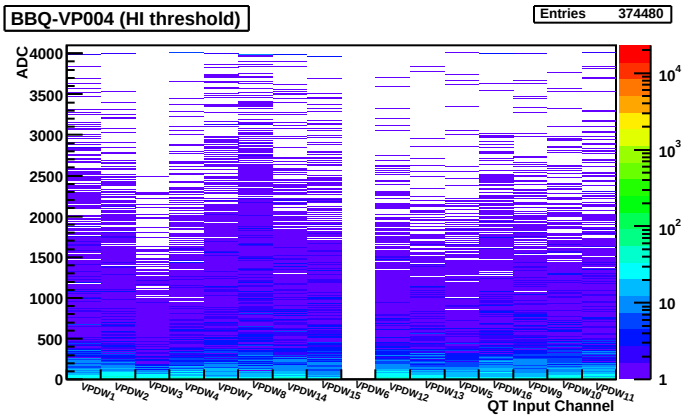

BBQ-VP001 (LO threshold)
Entries 374480
TAC
QT Input Channel

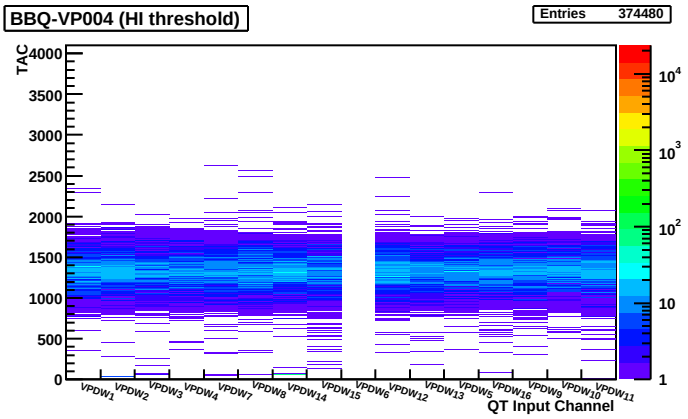

BBQ-VP002 (LO threshold)
Entries 374480
ADC
QT Input Channel

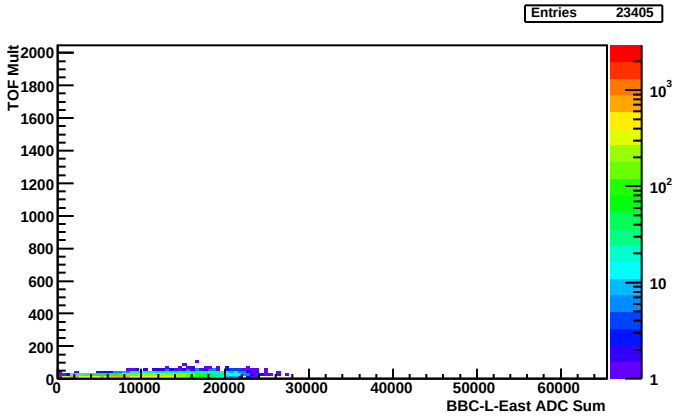

BBQ-VP002 (LO threshold)
Entries 374480
TAC
QT Input Channel

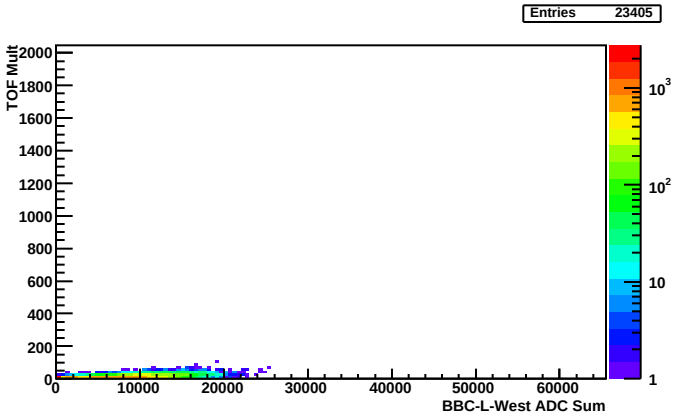

BBQ-VP003 (HI threshold)
Entries 374480
ADC
QT Input Channel

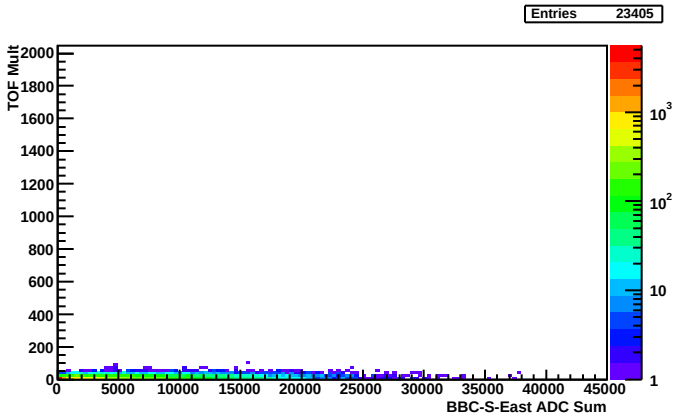

BBQ-VP003 (HI threshold)
Entries 374480
TAC
QT Input Channel

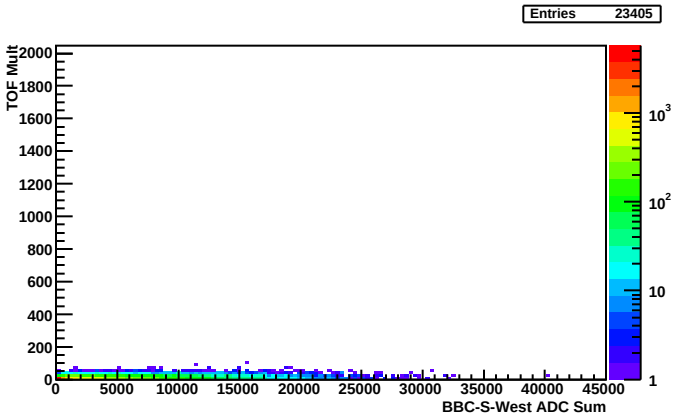

BBQ-VP004 (HI threshold)
Entries 374480
ADC
QT Input Channel

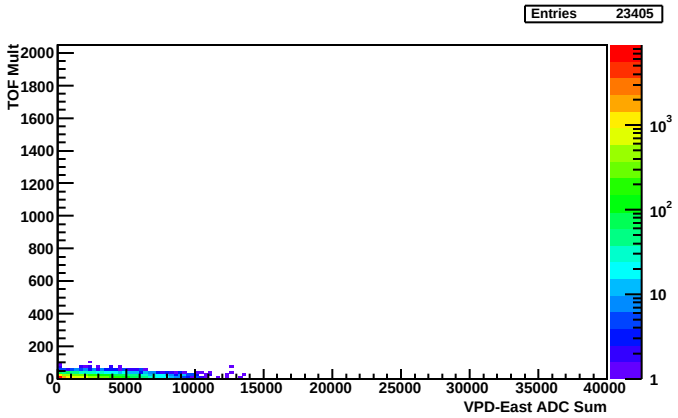

BBQ-VP004 (HI threshold)
Entries 374480
TAC
QT Input Channel

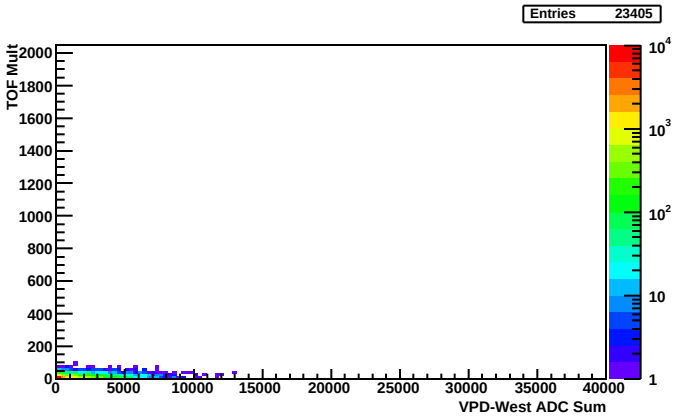

Entries 23405
TOF Mult
BBC-L-East ADC Sum

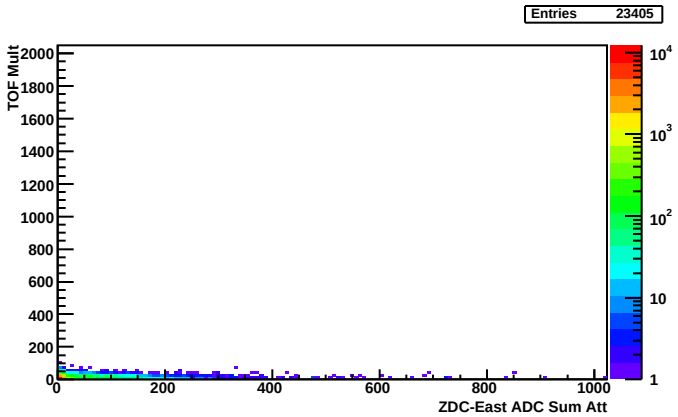

Entries 23405
TOF Mult
BBC-L-West ADC Sum

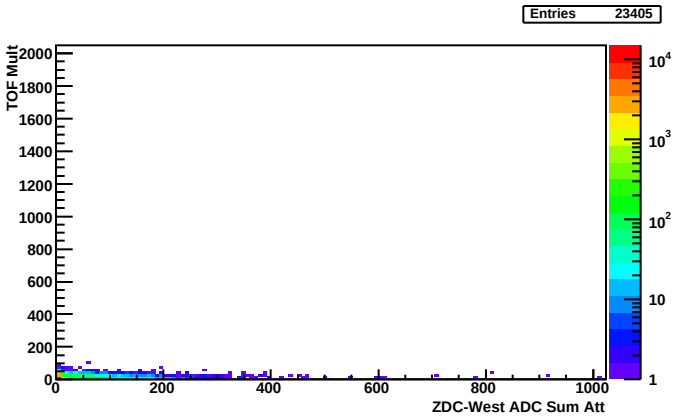

Entries 23405
TOF Mult
BBC-S-East ADC Sum

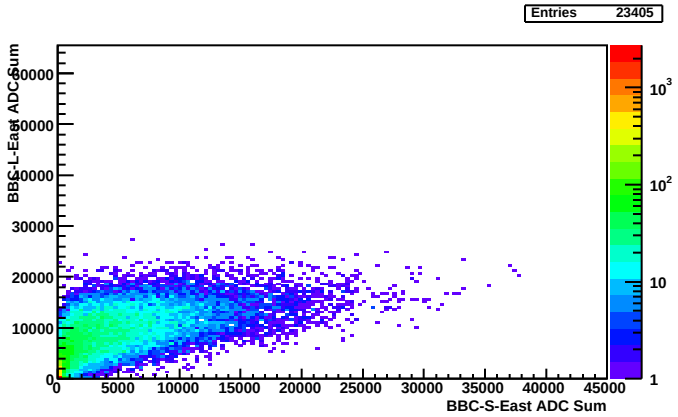

Entries 23405
TOF Mult
BBC-S-West ADC Sum

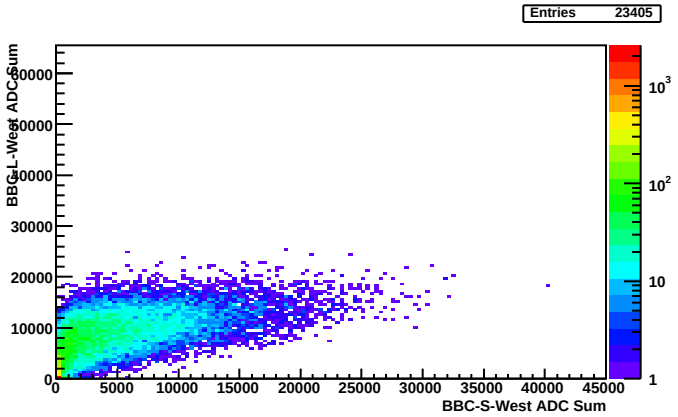

Entries 23405
TOF Mult
VPD-East ADC Sum

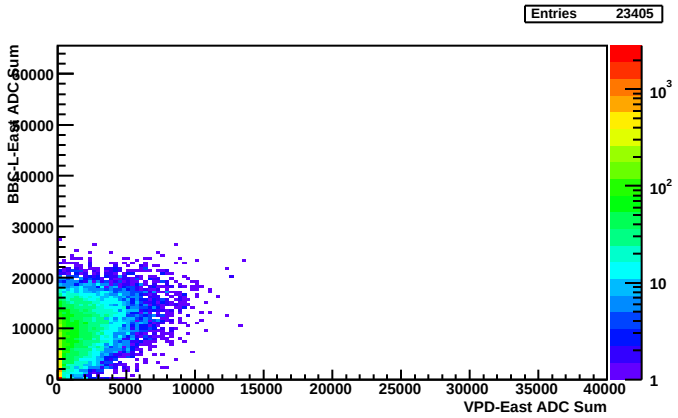

Entries 23405
TOF Mult
VPD-West ADC Sum

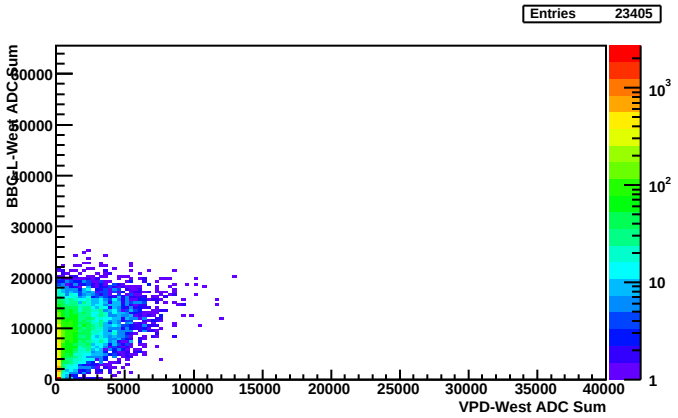

Entries 23405
TOF Mult
ZDC-East ADC Sum Att

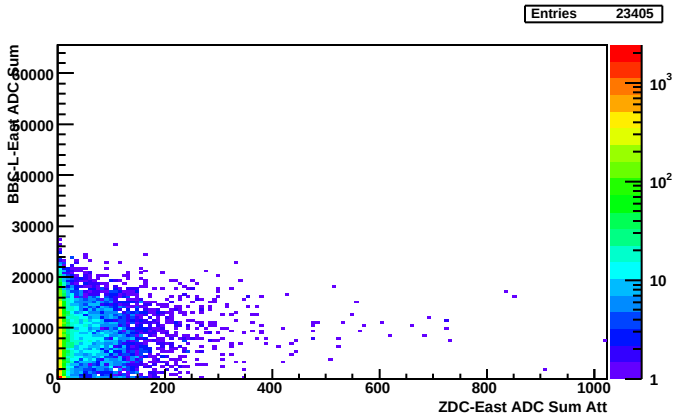

Entries 23405
TOF Mult
ZDC-West ADC Sum Att

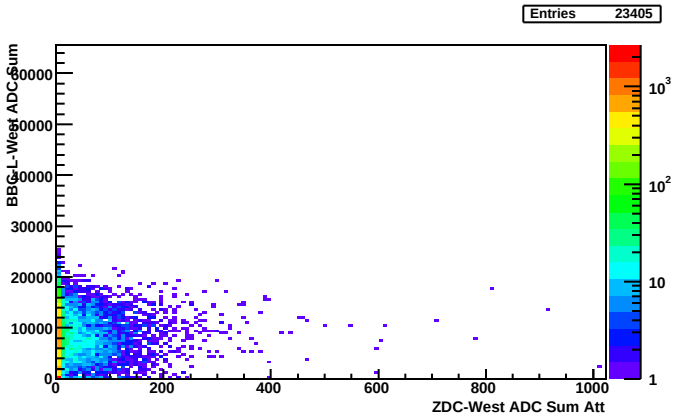

Entries 23405
BBC-L-East ADC Sum
BBC-S-East ADC Sum

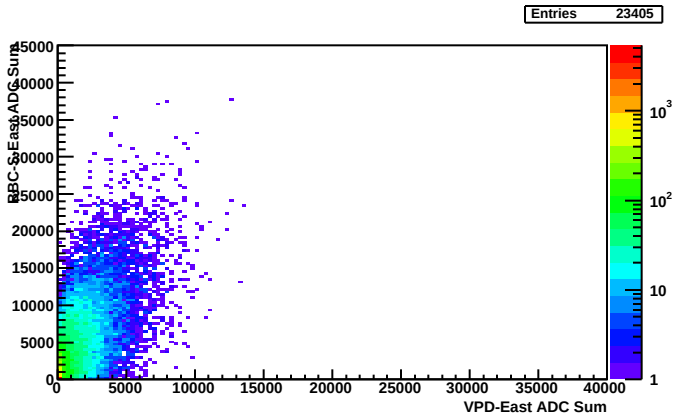

Entries 23405
BBC-L-West ADC Sum
BBC-S-West ADC Sum

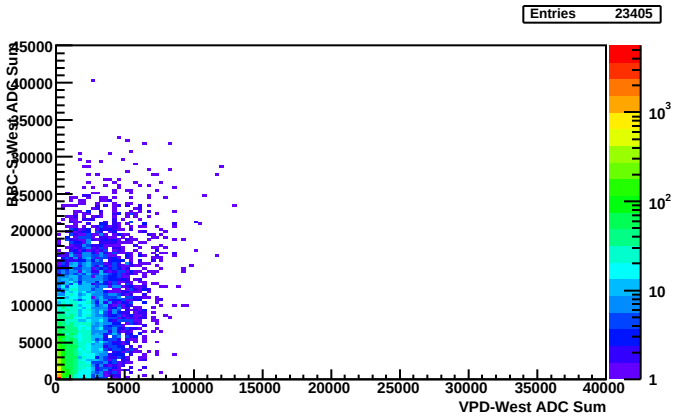

Entries 23405
BBC-L-East ADC Sum
VPD-East ADC Sum

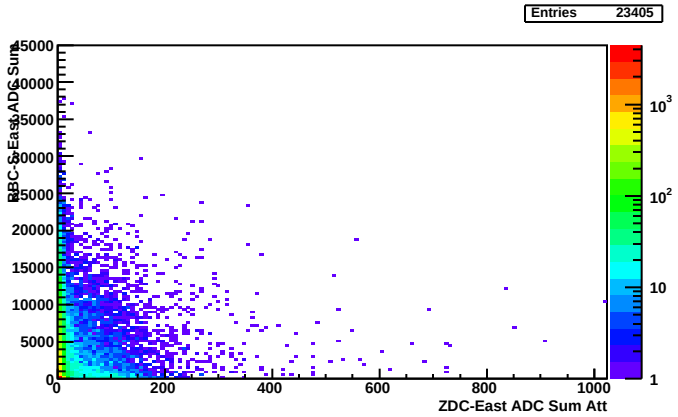

Entries 23405
BBC-L-West ADC Sum
VPD-West ADC Sum

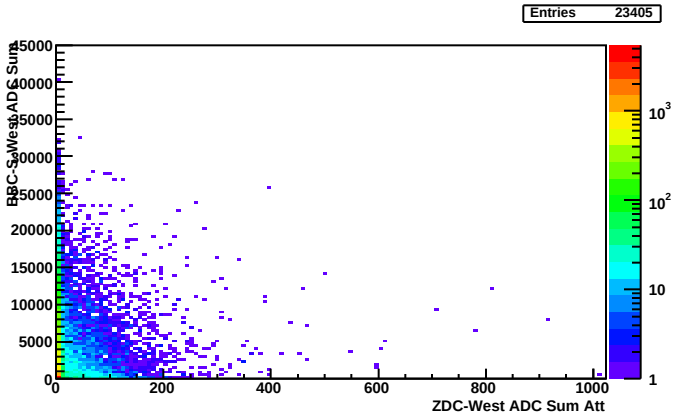

Entries 23405
BBC-L-East ADC Sum
ZDC-East ADC Sum Att

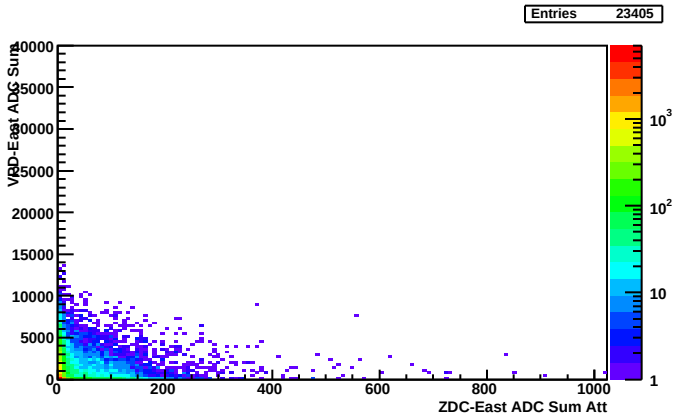

Entries 23405
BBC-L-West ADC Sum
ZDC-West ADC Sum Att

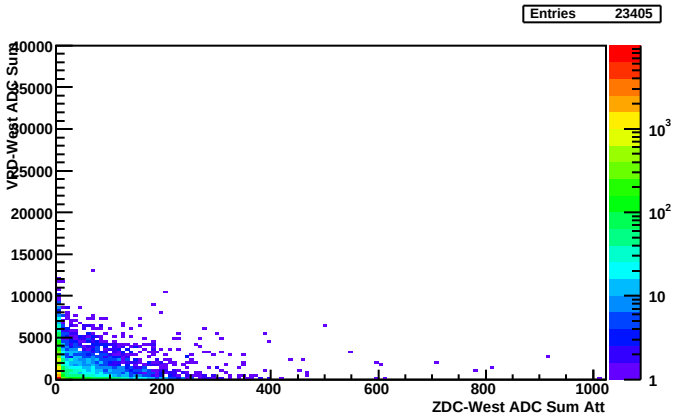

Entries 23405
BBC-S-East ADC Sum
VPD-East ADC Sum

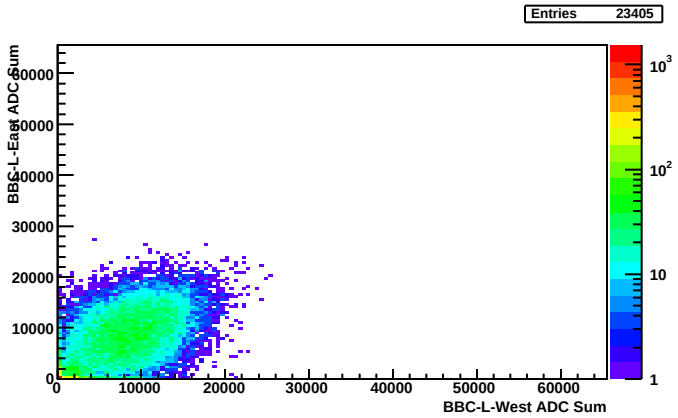

Entries 23405
BBC-S-West ADC Sum
VPD-West ADC Sum

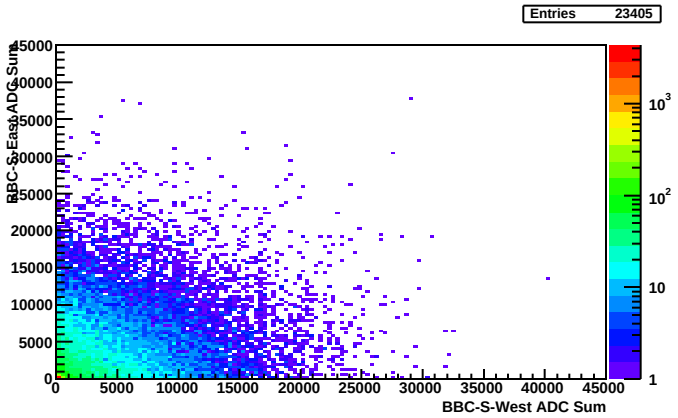

Entries 23405
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

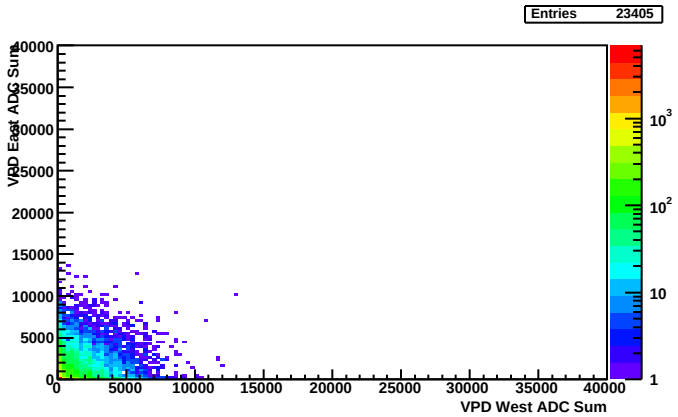

Entries 23405
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

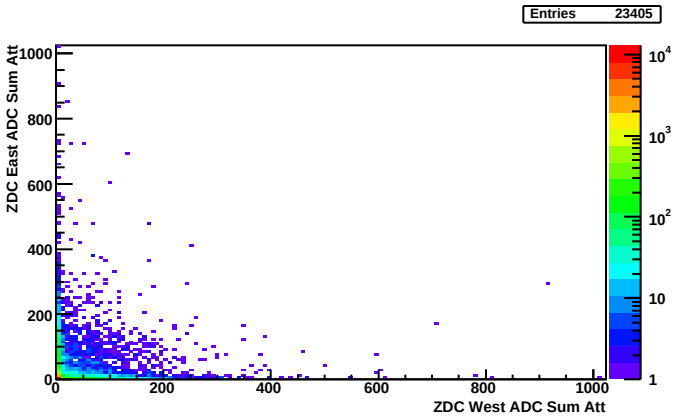

Entries 23405
VPD-East ADC Sum
ZDC-East ADC Sum Att

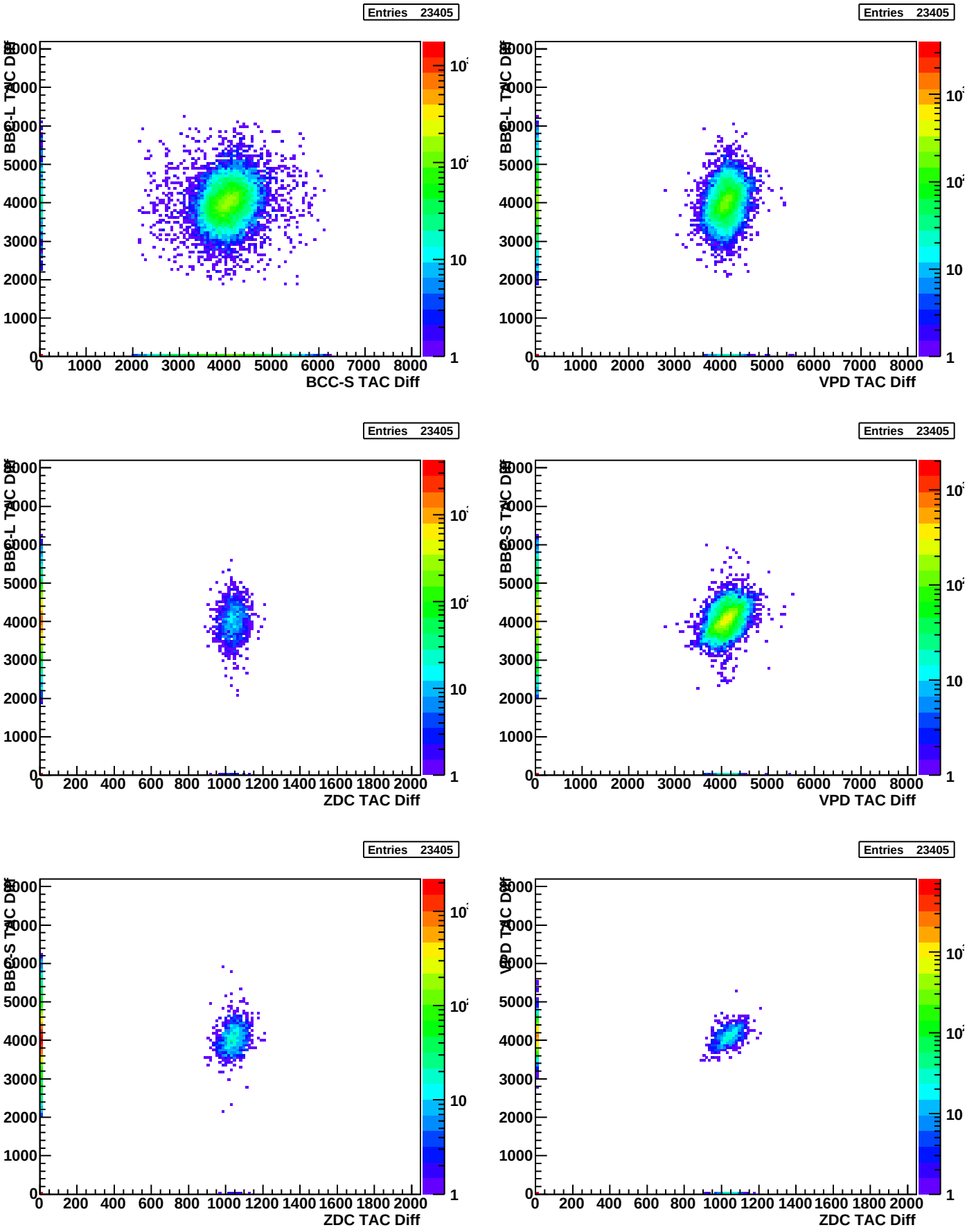

Entries 23405
VPD-West ADC Sum
ZDC-West ADC Sum Att

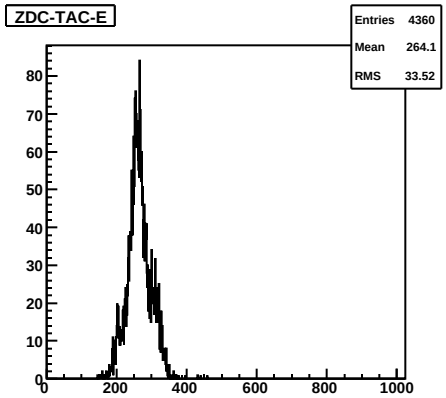

Entries 23405
BBC-L-East ADC Sum
BBC-L-West ADC Sum

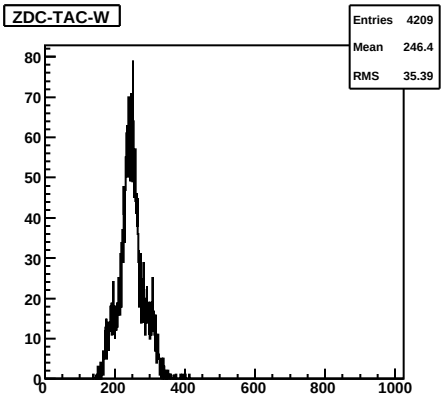

Entries 23405
BBC-S-East ADC Sum
BBC-S-West ADC Sum

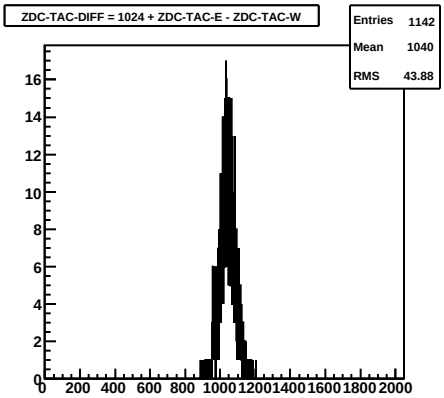

Entries 23405
VPD East ADC Sum
VPD West ADC Sum

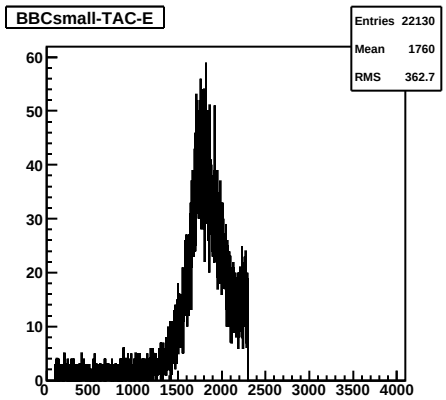

Entries 23405
ZDC East ADC Sum Att
ZDC West ADC Sum Att

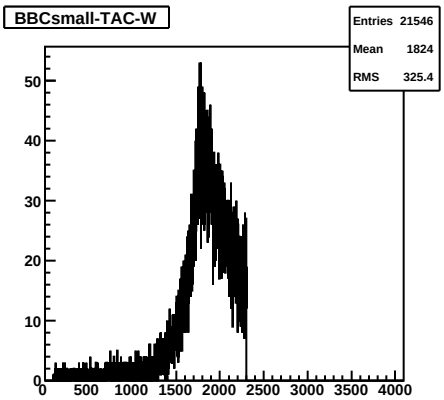

Entries 23405
BBC-L TAC Diff
BCC-S TAC Diff
Entries 23405
BBC-L TAC Diff
VPD TAC Diff
Entries 23405
BBC-L TAC Diff
ZDC TAC Diff
Entries 23405
BBC-S TAC Diff
VPD TAC Diff
Entries 23405
BBC-S TAC Diff
ZDC TAC Diff
Entries 23405
VPD TAC Diff
ZDC TAC Diff

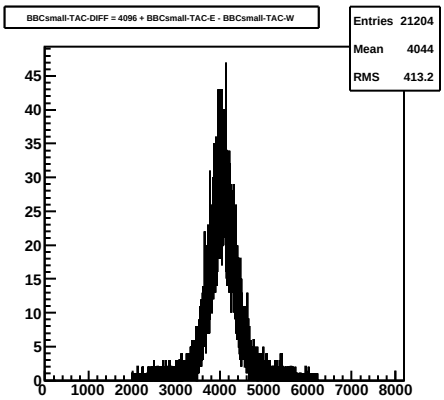

ZDC-TAC-E
Entries 4360
Mean 264.1
RMS 33.52

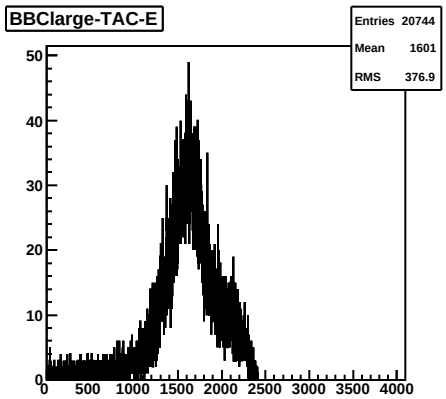

ZDC-TAC-W
Entries 4209
Mean 246.4
RMS 35.39

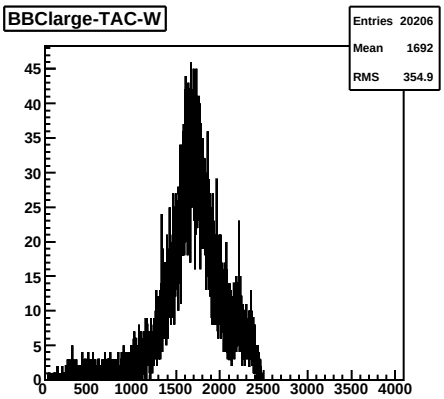

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 1142
Mean 1040
RMS 43.88

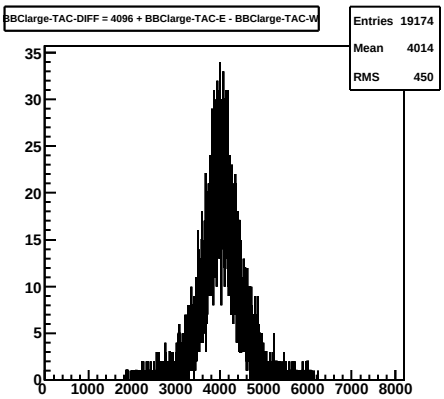

BBCsmall-TAC-E
Entries 22130
Mean 1760
RMS 362.7

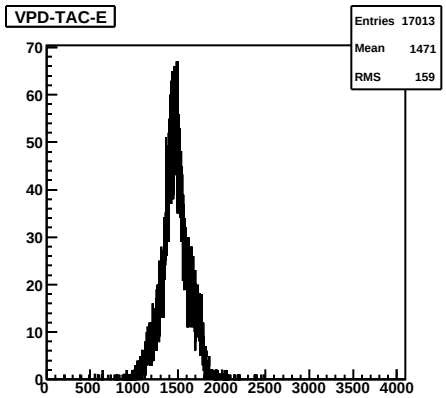

BBCsmall-TAC-W
Entries 21546
Mean 1824
RMS 325.4

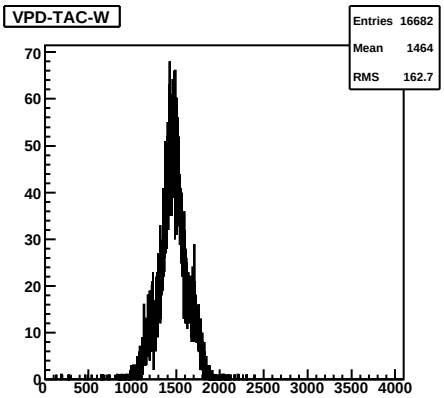

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 21204
Mean 4044
RMS 413.2

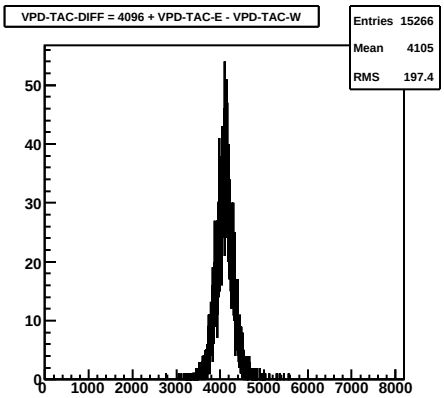

BBClarge-TAC-E
Entries 20744
Mean 1601
RMS 376.9

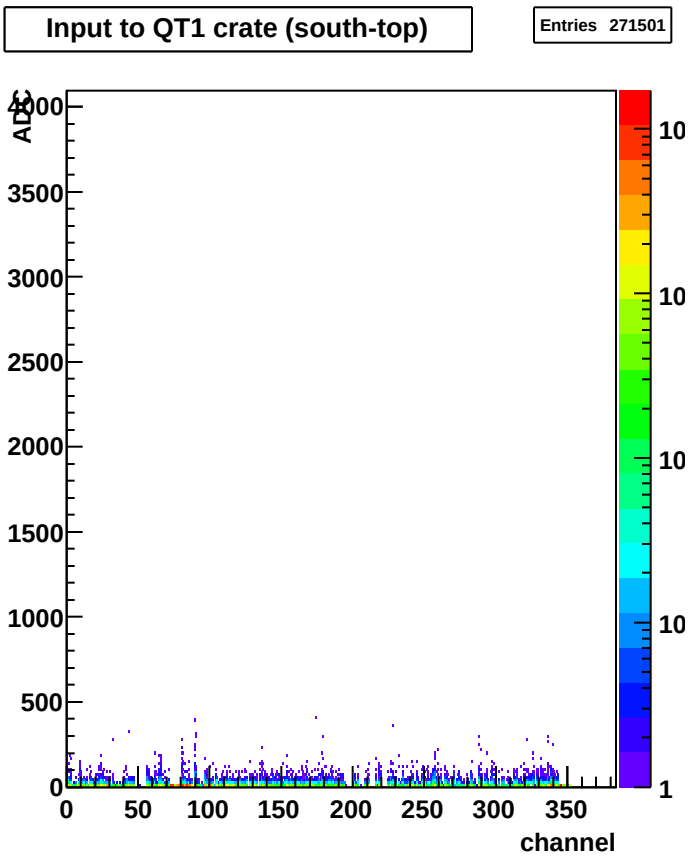

BBClarge-TAC-W
Entries 20206
Mean 1692
RMS 354.9

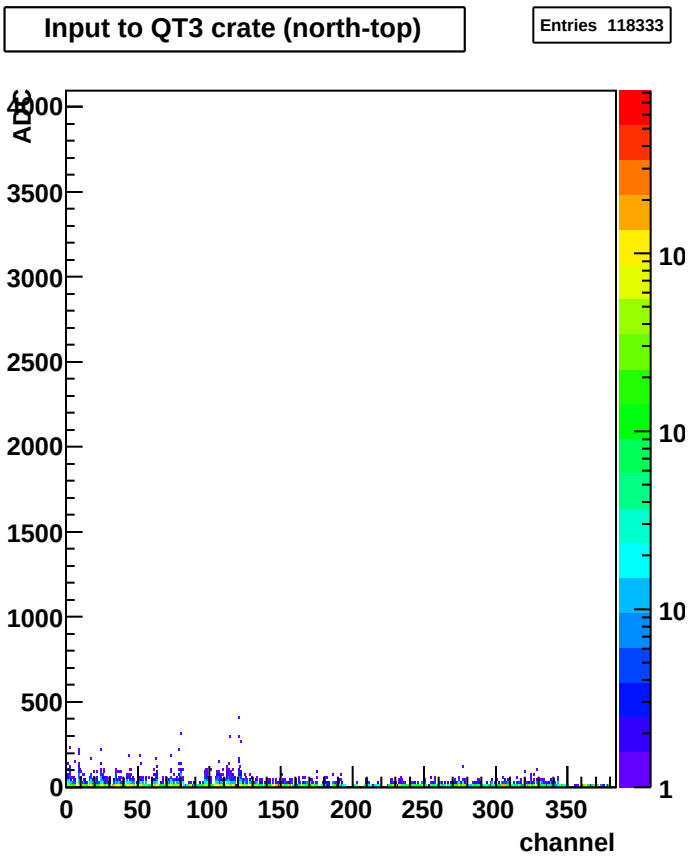

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 19174
Mean 4014
RMS 450

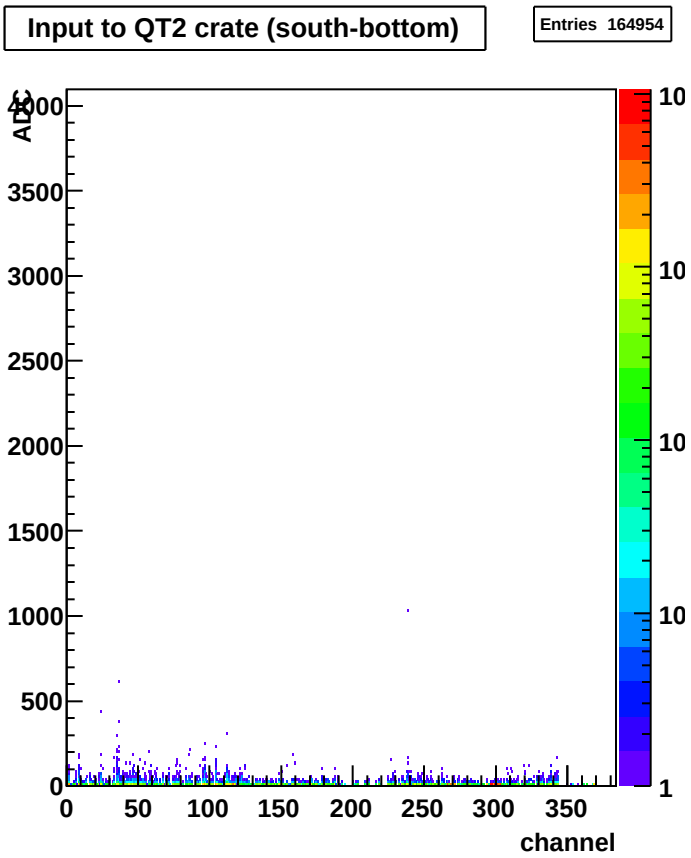

VPD-TAC-E
Entries 17013
Mean 1471
RMS 159

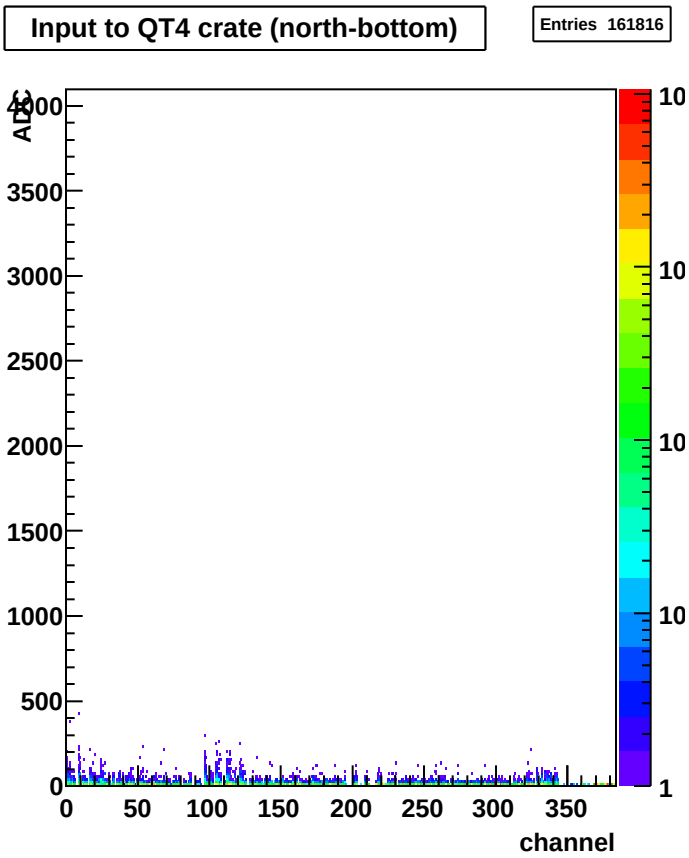

VPD-TAC-W
Entries 16682
Mean 1464
RMS 162.7

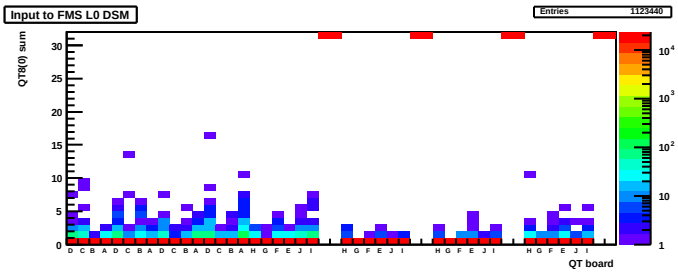

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 15266
Mean 4105
RMS 197.4

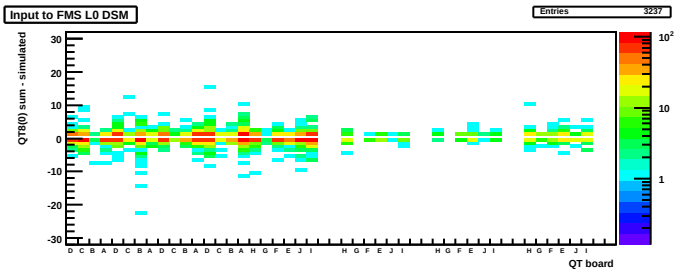

Input to QT1 crate (south-top)
Entries 271501
ADC
channel

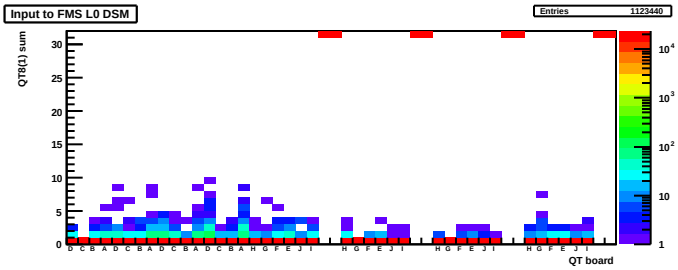

Input to QT3 crate (north-top)
Entries 118333
ADC
channel

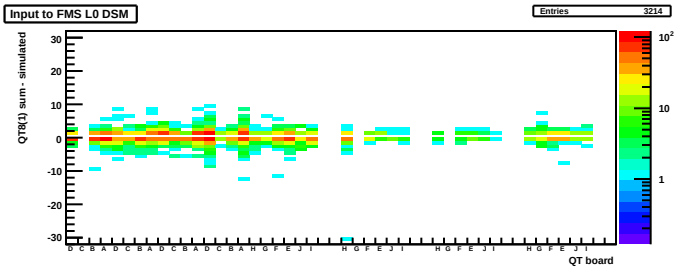

Input to QT2 crate (south-bottom)
Entries 164954
ADC
channel

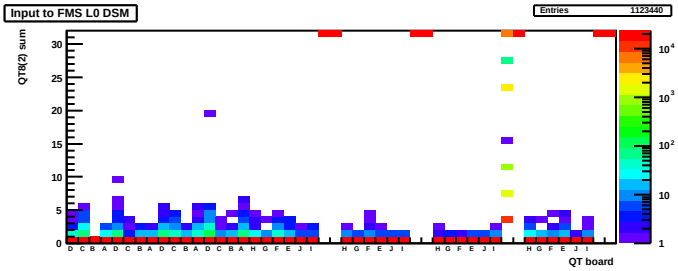

Input to QT4 crate (north-bottom)
Entries 161816
ADC
channel

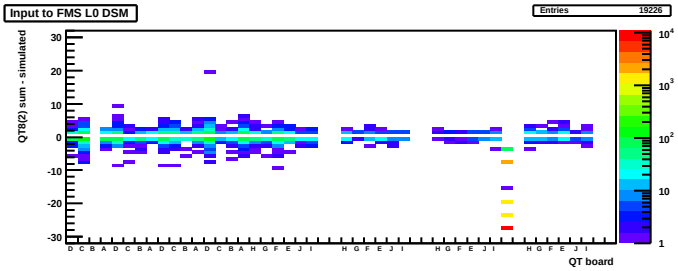

Input to FMS L0 DSM
Entries 1123440
QT8(0) sum
QT board

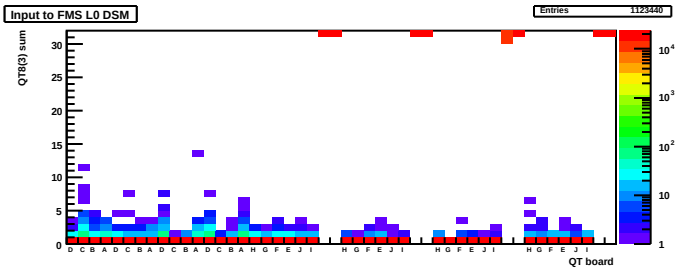

Input to FMS L0 DSM
Entries 3237
QT8(0) sum - simulated
QT board

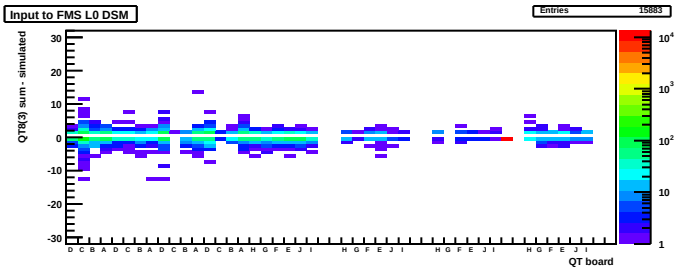

Input to FMS L0 DSM
Entries 1123440
QT8(1) sum
QT board

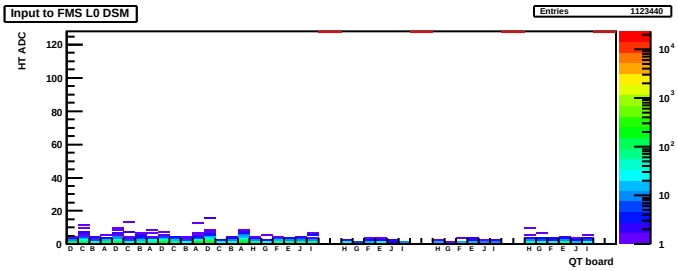

Input to FMS L0 DSM
Entries 3214
QT8(1) sum - simulated
QT board

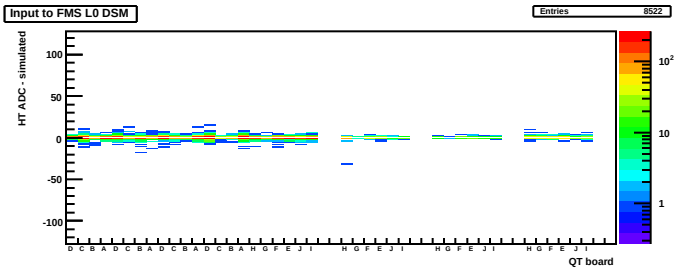

Input to FMS L0 DSM
Entries 1123440
QT8(2) sum
QT board

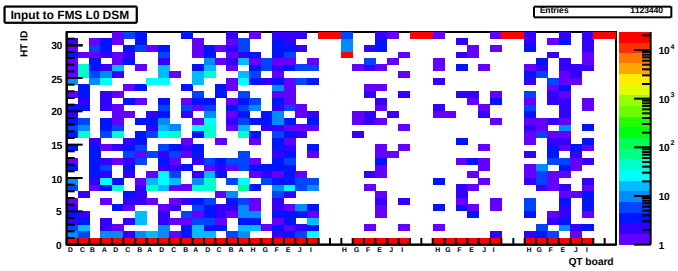

Input to FMS L0 DSM
Entries 19226
QT8(2) sum - simulated
QT board

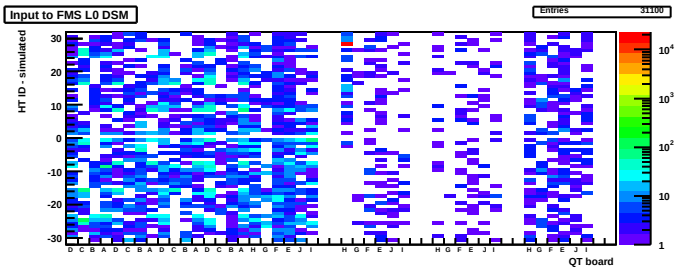

Input to FMS L0 DSM
Entries 1123440
QT8(3) sum
QT board

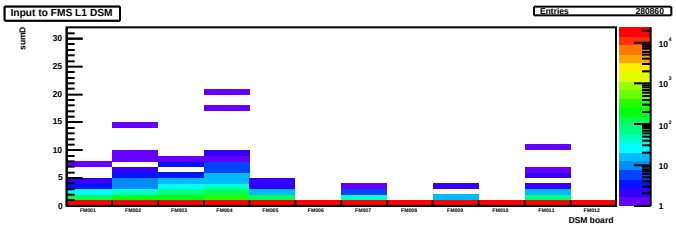

Input to FMS L0 DSM
Entries 15883
QT8(3) sum - simulated
QT board

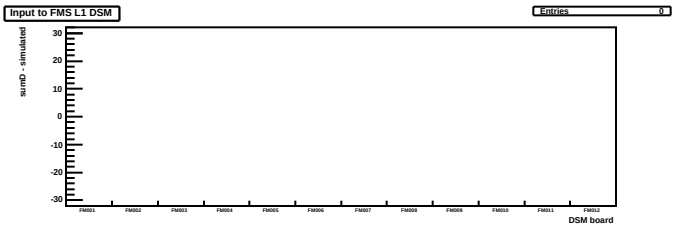

Input to FMS L0 DSM
Entries 1123440
HT ADC
QT board

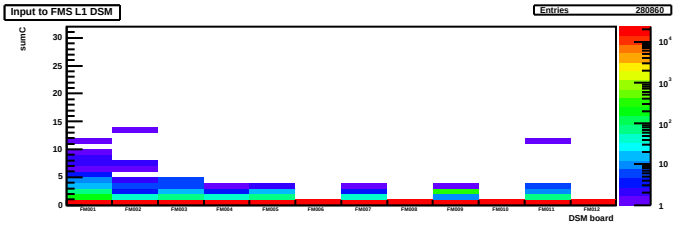

Input to FMS L0 DSM
Entries 8522
HT ADC - simulated
QT board

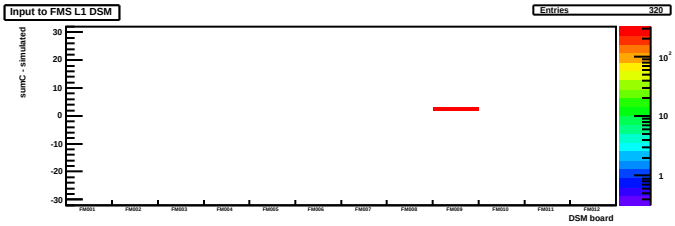

Input to FMS L0 DSM
Entries 1123440
HT ID
QT board

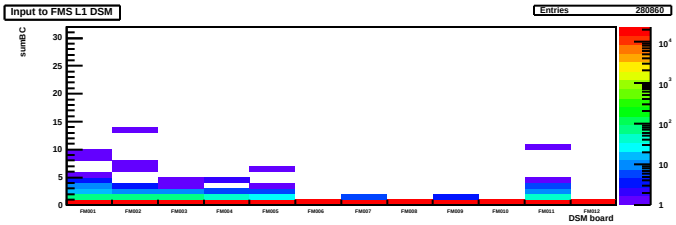

Input to FMS L0 DSM
Entries 31100
HT ID - simulated
QT board

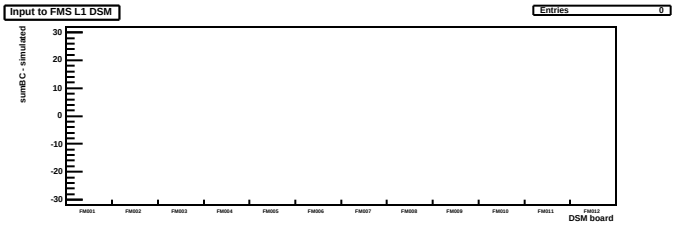

Input to FMS L1 DSM
Entries 280860
sumD
DSM board

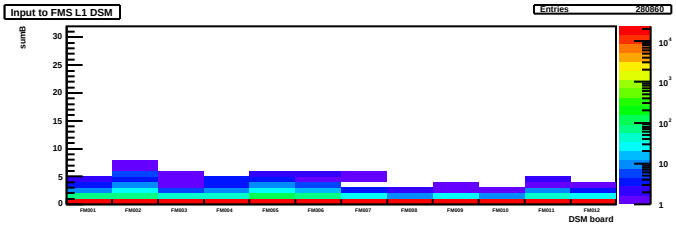

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

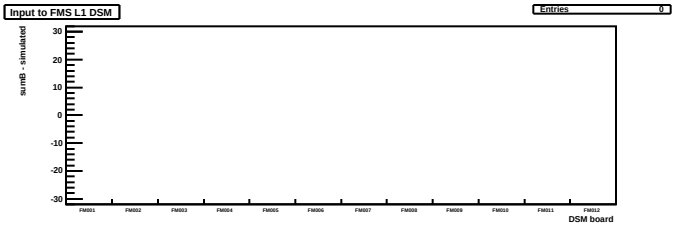

Input to FMS L1 DSM
Entries 280860
sumC
DSM board

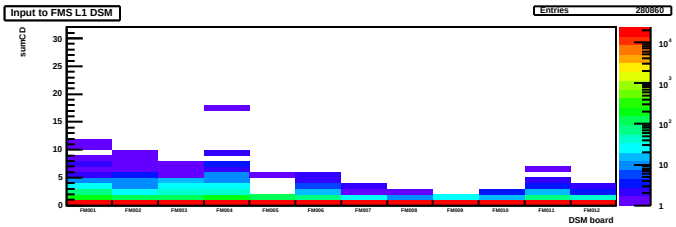

Input to FMS L1 DSM
Entries 320
sumC - simulated
DSM board

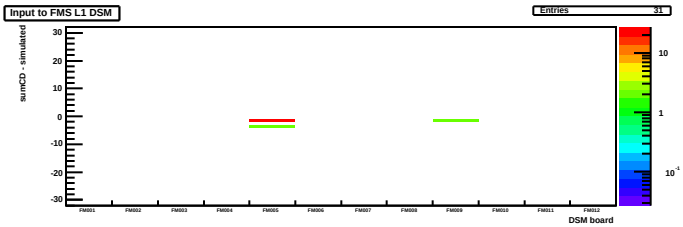

Input to FMS L1 DSM
Entries 280860
sumBC
DSM board

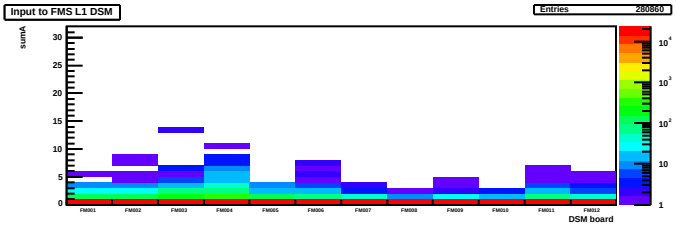

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

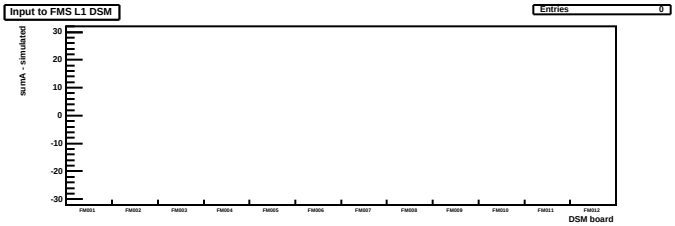

Input to FMS L1 DSM
Entries 280860
sumB
DSM board

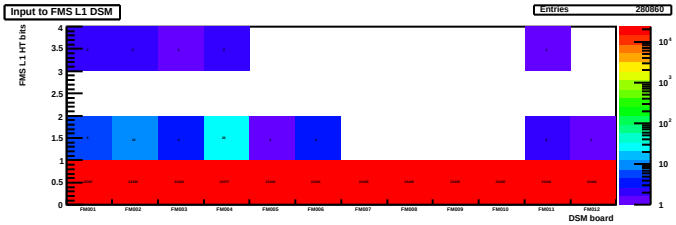

Input to FMS L1 DSM
Entries 0
sumB - simulated
DSM board

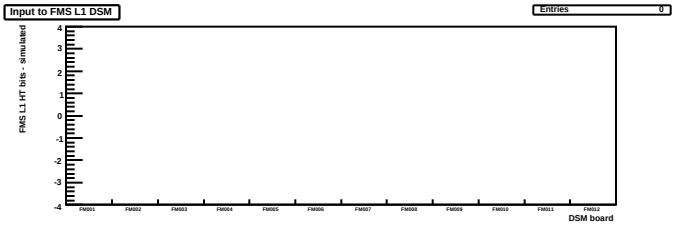

Input to FMS L1 DSM
Entries 280860
sumCD
DSM board

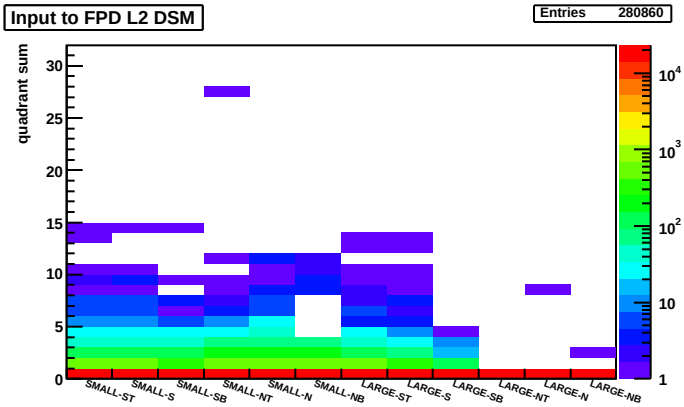

Input to FMS L1 DSM
Entries 31
sumCD - simulated
DSM board

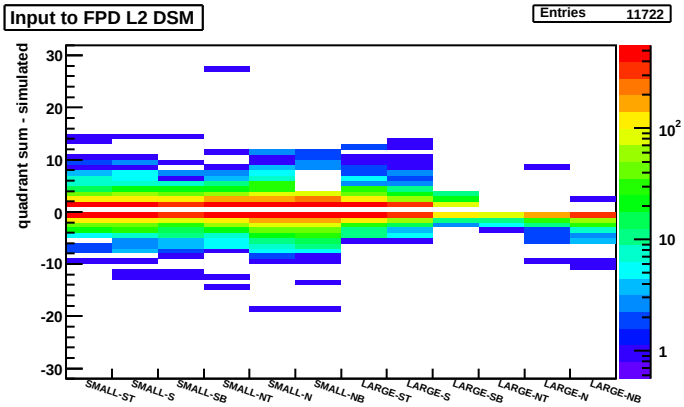

Input to FMS L1 DSM
Entries 280860
sumA
DSM board

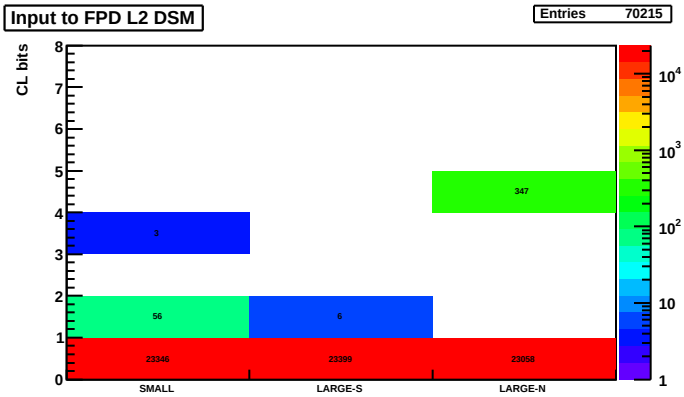

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

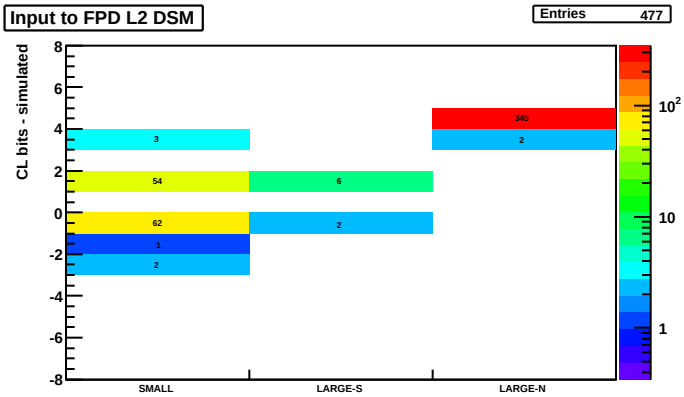

Input to FMS L1 DSM
Entries 280860
FMS L1 HT bits
DSM board

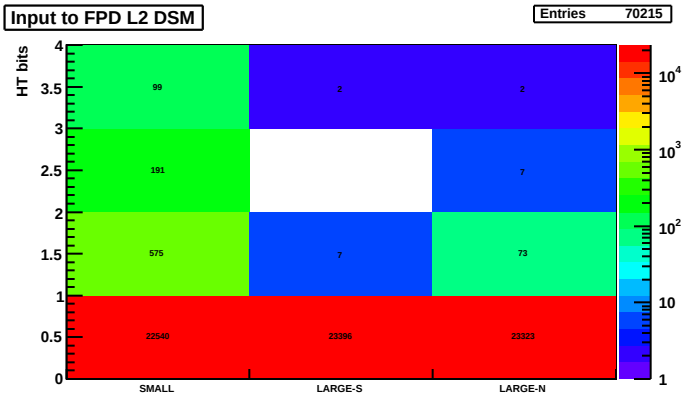

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

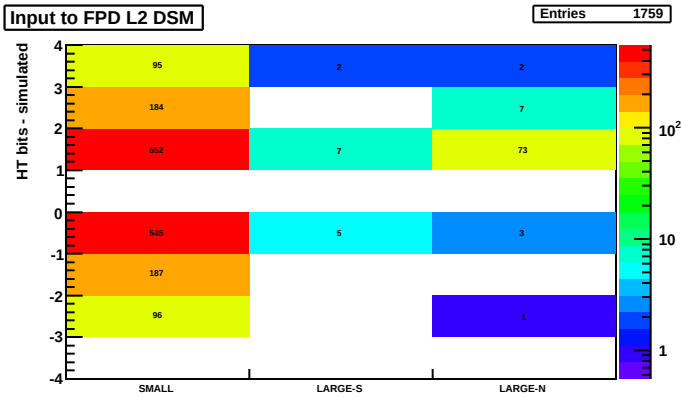

Input to FPD L2 DSM
Entries 280860
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

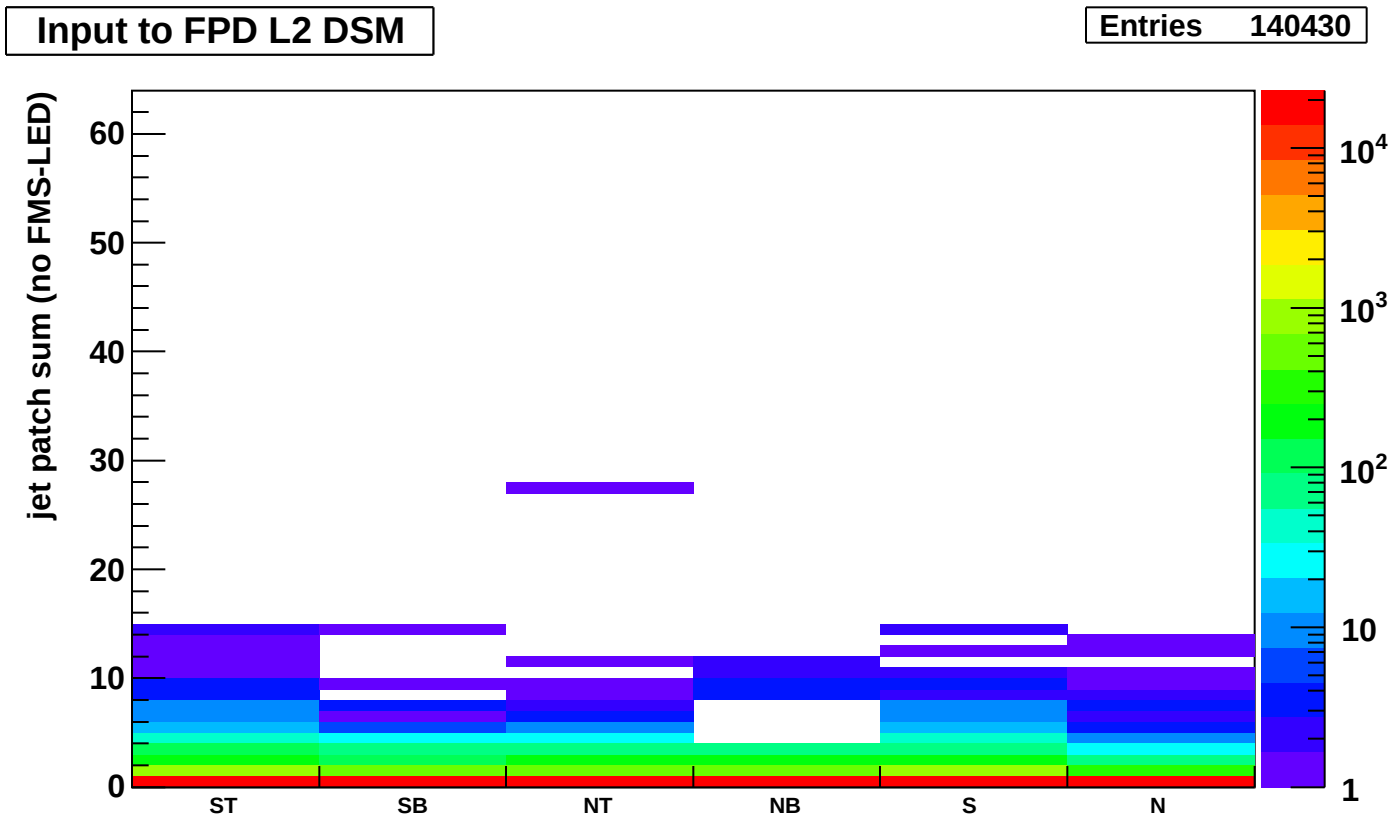

Input to FPD L2 DSM
Entries 11722
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

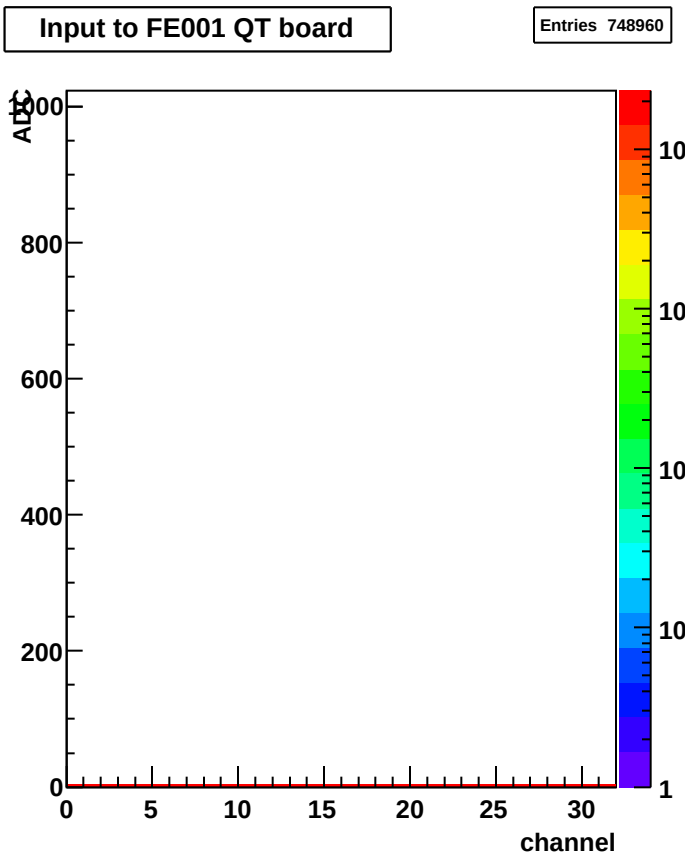

Input to FPD L2 DSM
Entries 70215
CL bits
3
347
56
6
23346
23399
23058
SMALL
LARGE-S
LARGE-N

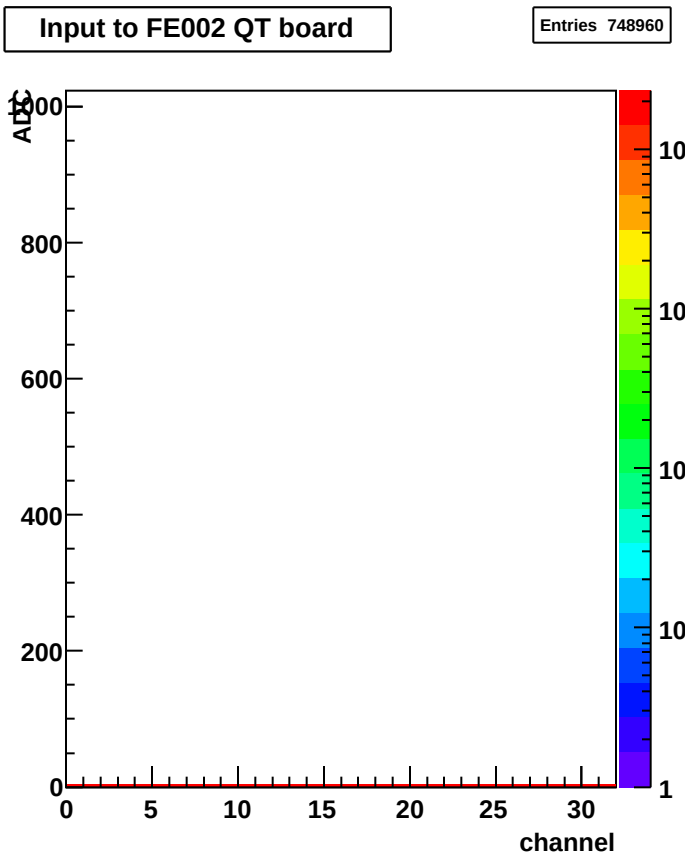

Input to FPD L2 DSM
Entries 477
CL bits - simulated
3
345
2
54
6
62
2
1
2
SMALL
LARGE-S
LARGE-N

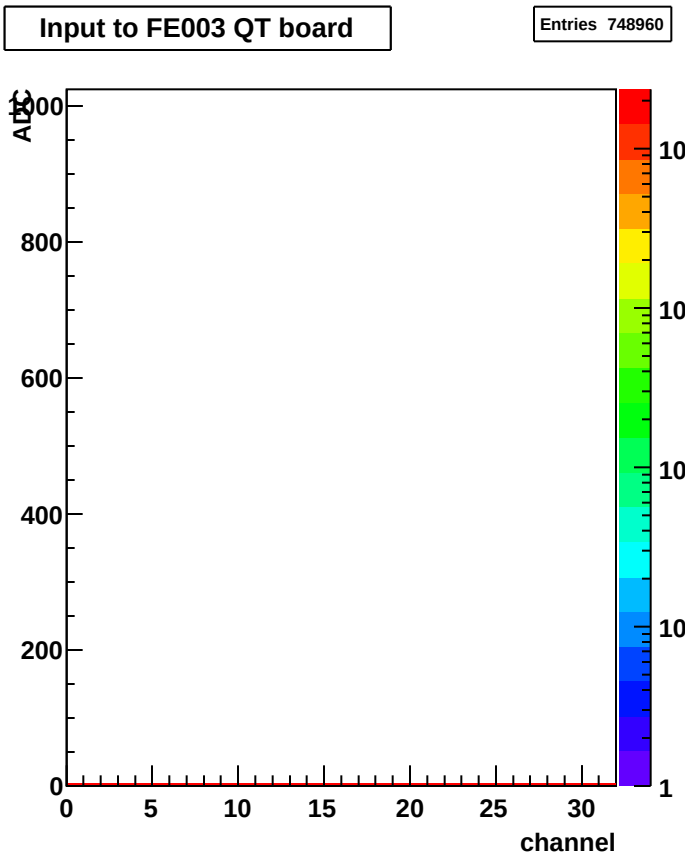

Input to FPD L2 DSM
Entries 70215
HT bits
99
2
2
191
7
575
7
73
22540
23396
23323
SMALL
LARGE-S
LARGE-N

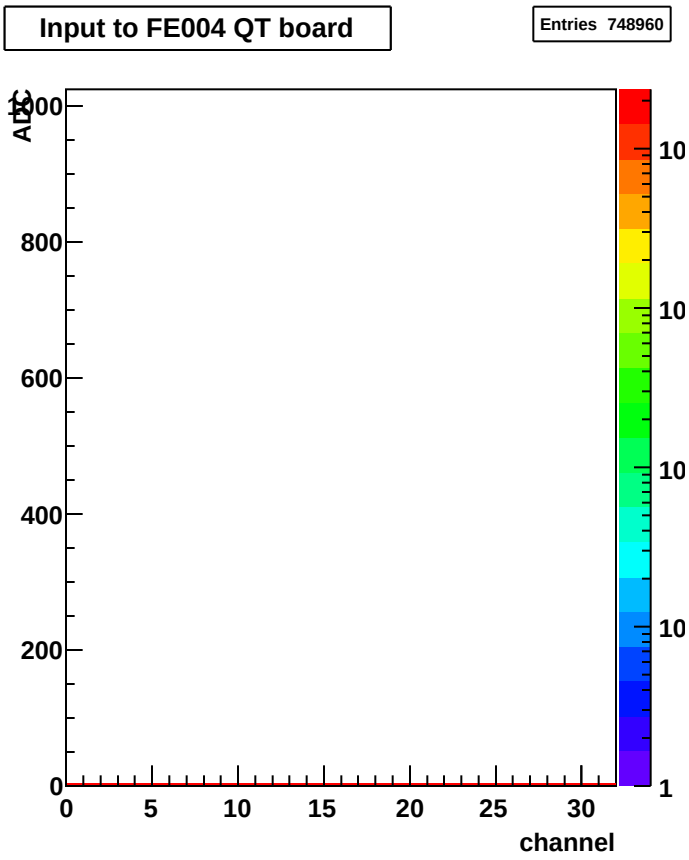

Input to FPD L2 DSM
Entries 1759
HT bits - simulated
95
2
2
184
7
552
7
73
545
5
3
187
96
1
SMALL
LARGE-S
LARGE-N

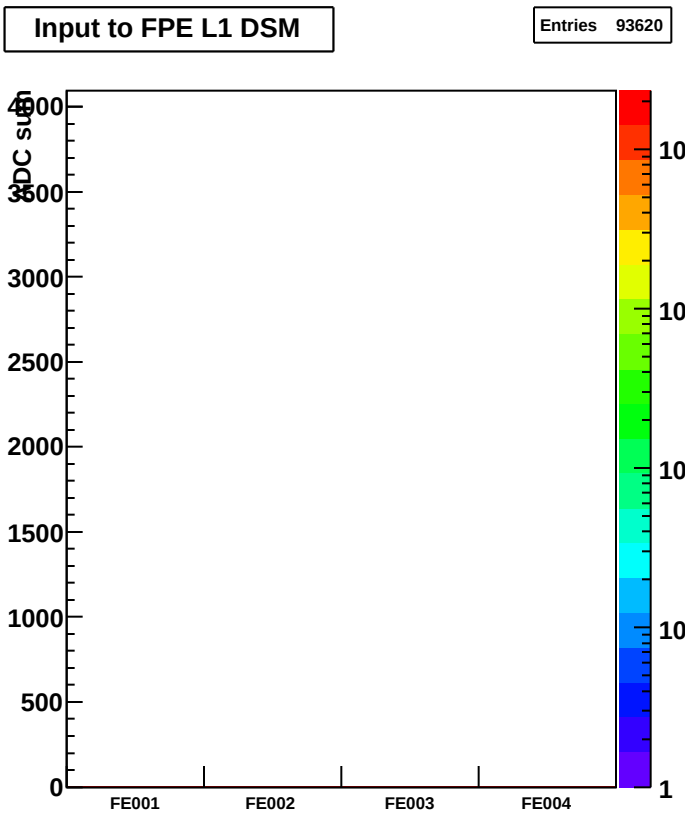

Input to FPD L2 DSM
Entries 140430
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
10^2
10^3
10^4

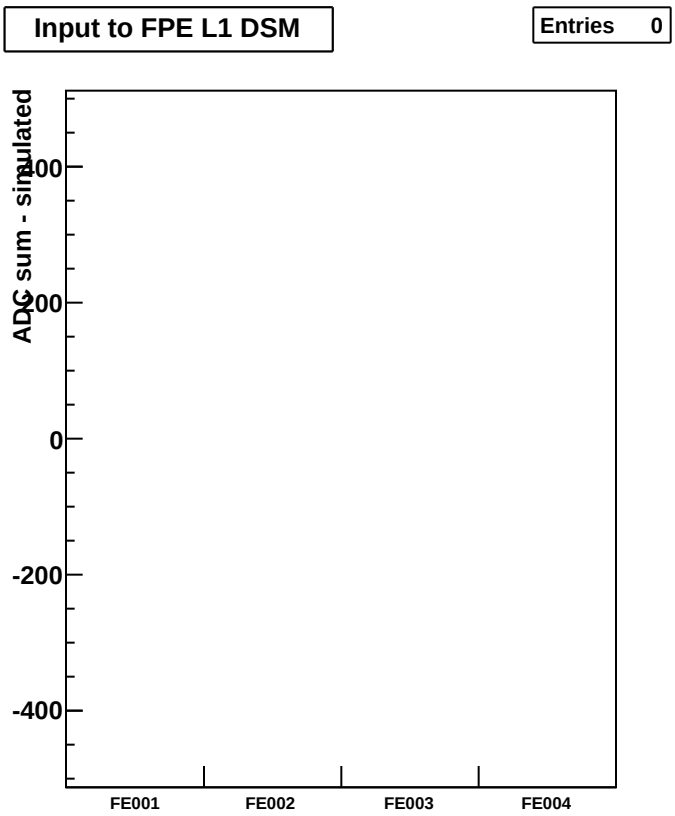

Input to FE001 QT board
Entries 748960
ADC
channel


Input to FE002 QT board
Entries 748960
ADC
channel

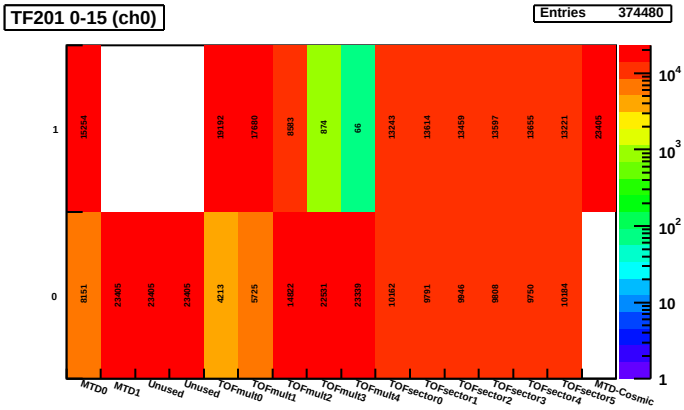

Input to FE003 QT board
Entries 748960
ADC
channel


Input to FE004 QT board
Entries 748960
ADC
channel

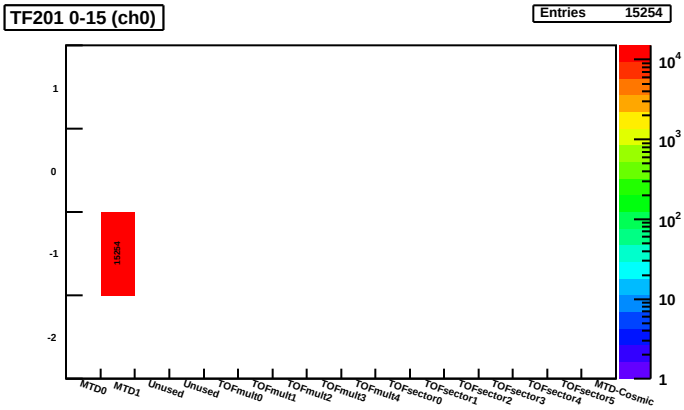

Input to FPE L1 DSM
Entries 93620
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
1


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

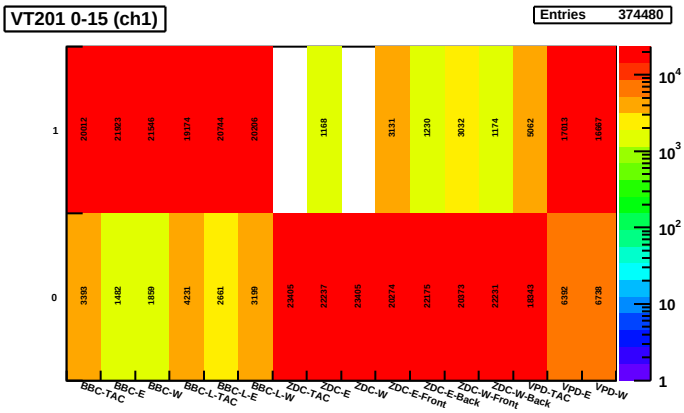
TF201 0-15 (ch0)



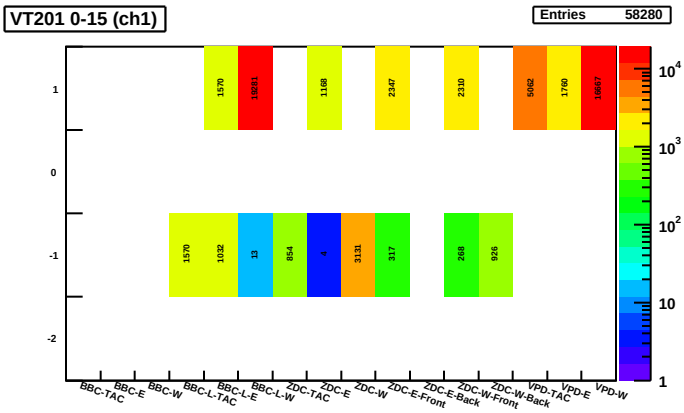
TF201 0-15 (ch0)



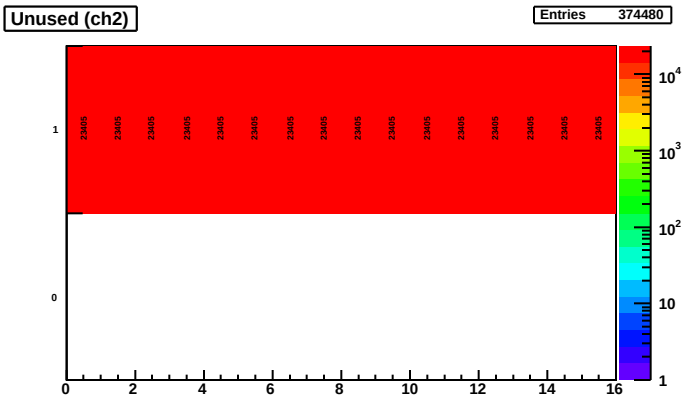
VT201 0-15 (ch1)

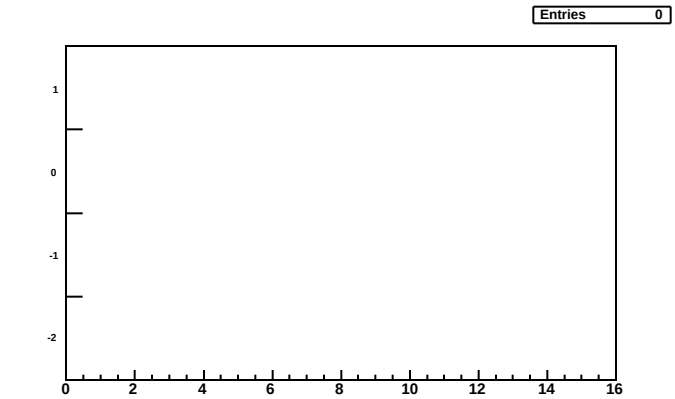


VT201 0-15 (ch1)

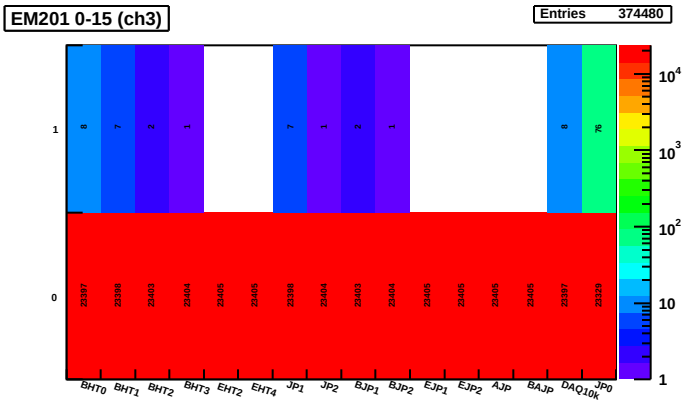


Unused (ch2)





EM201 0-15 (ch3)



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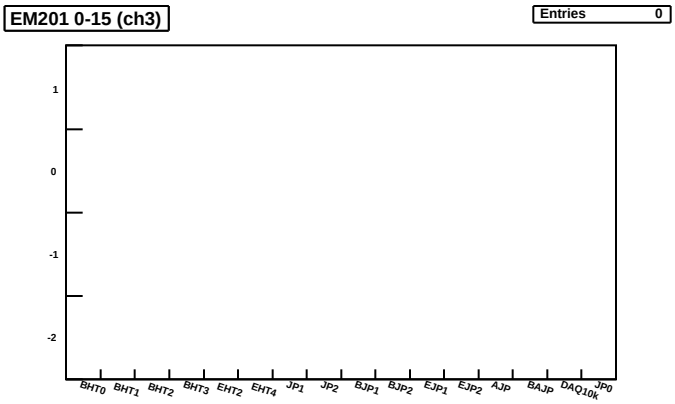
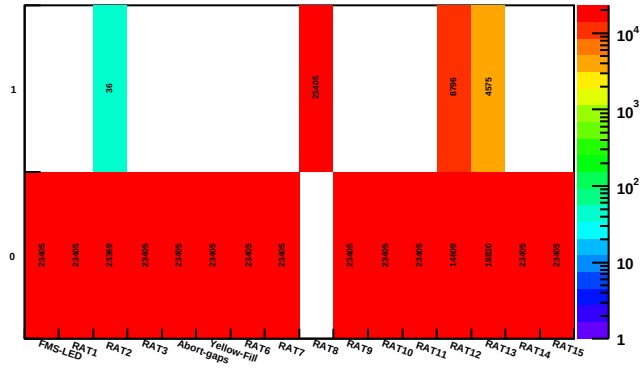
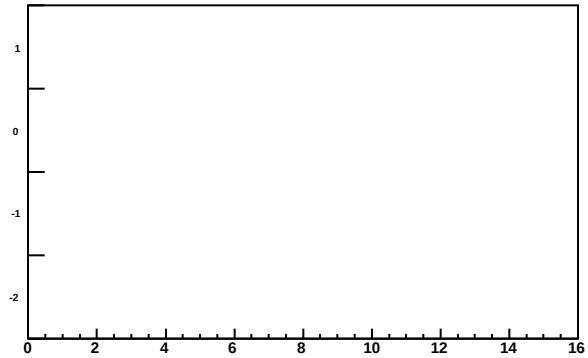
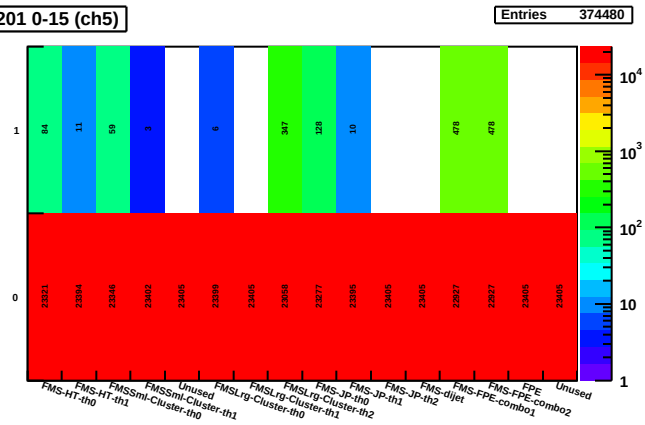


RAT board (ch4)





FP201 0-15 (ch5)



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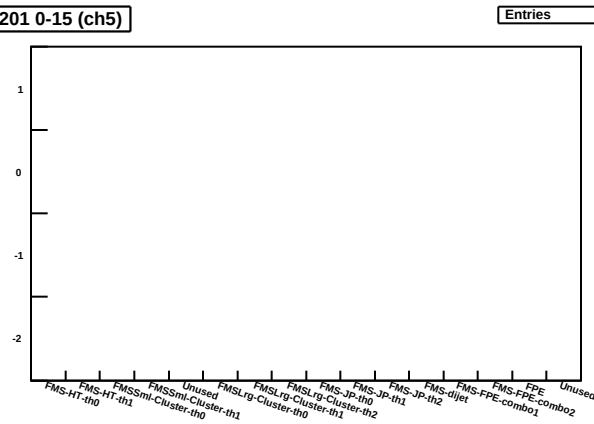

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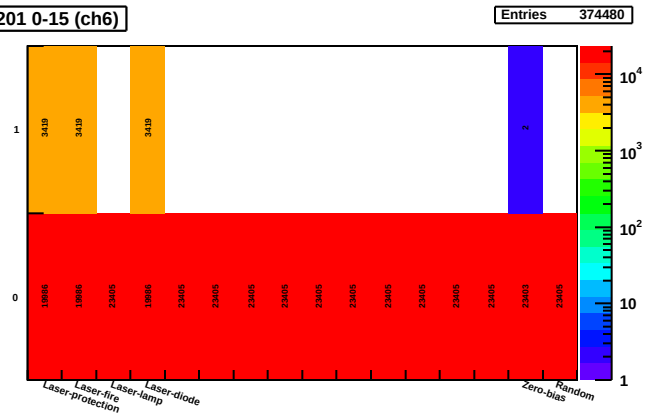

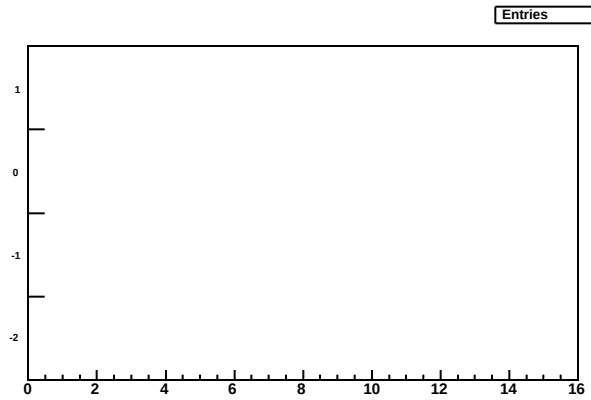
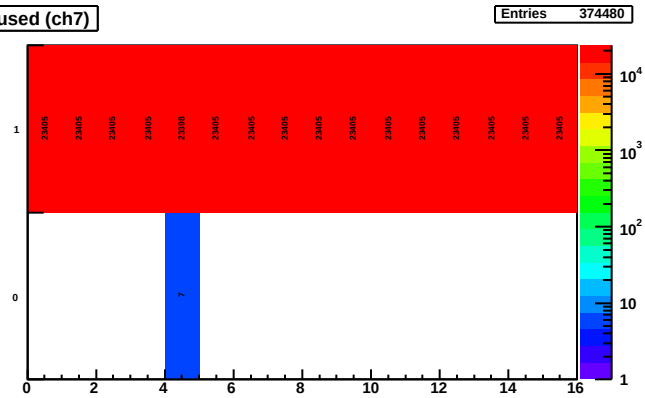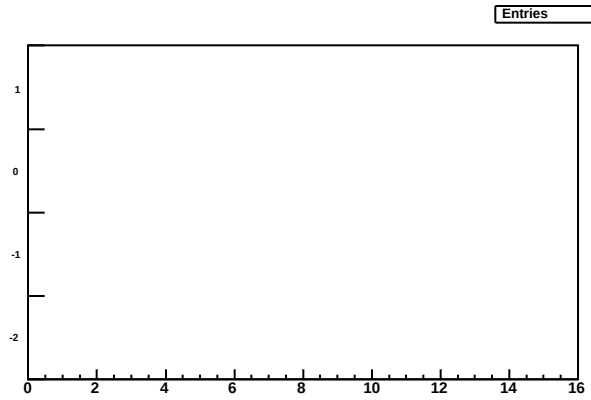
Unused (ch7)