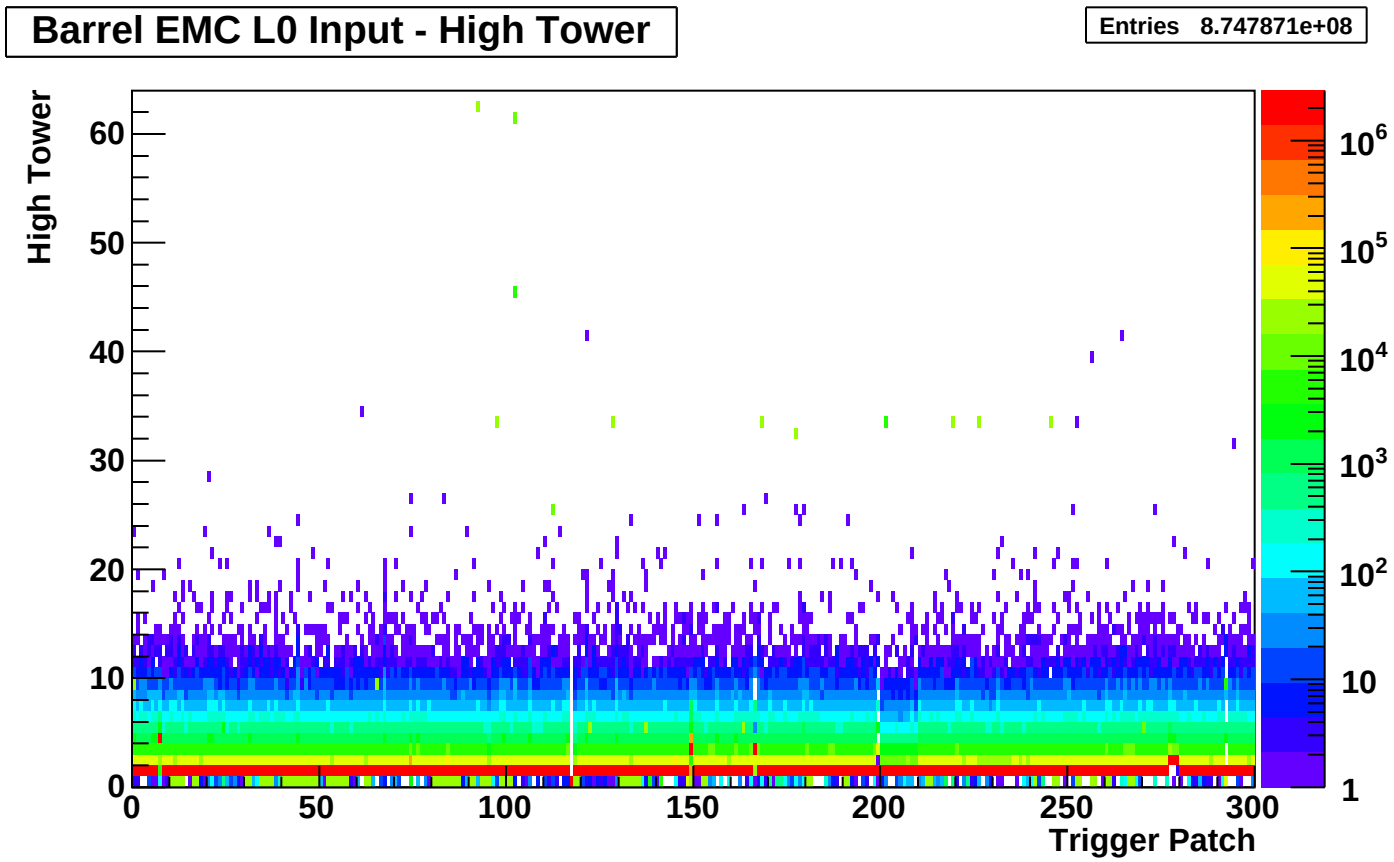
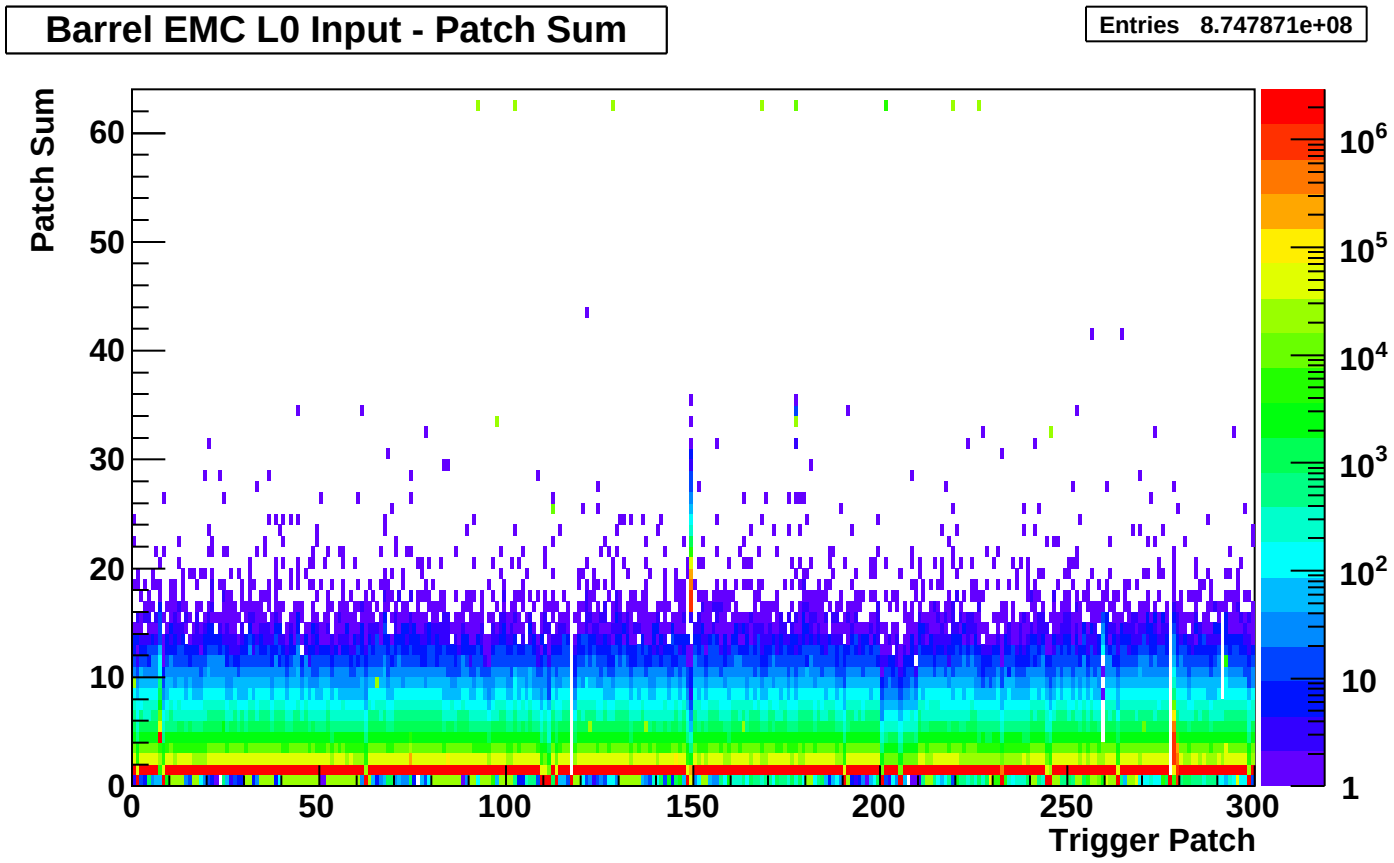
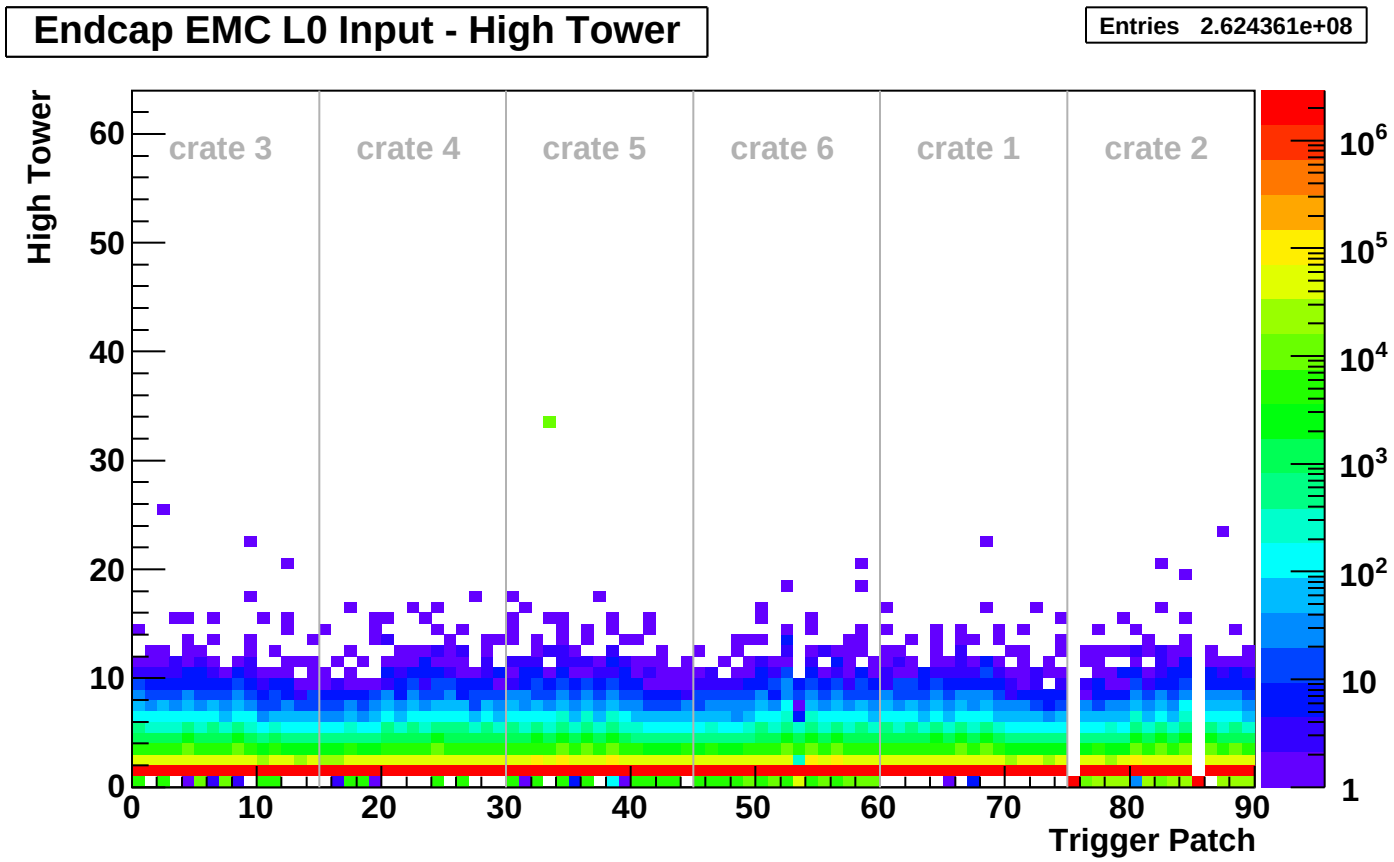
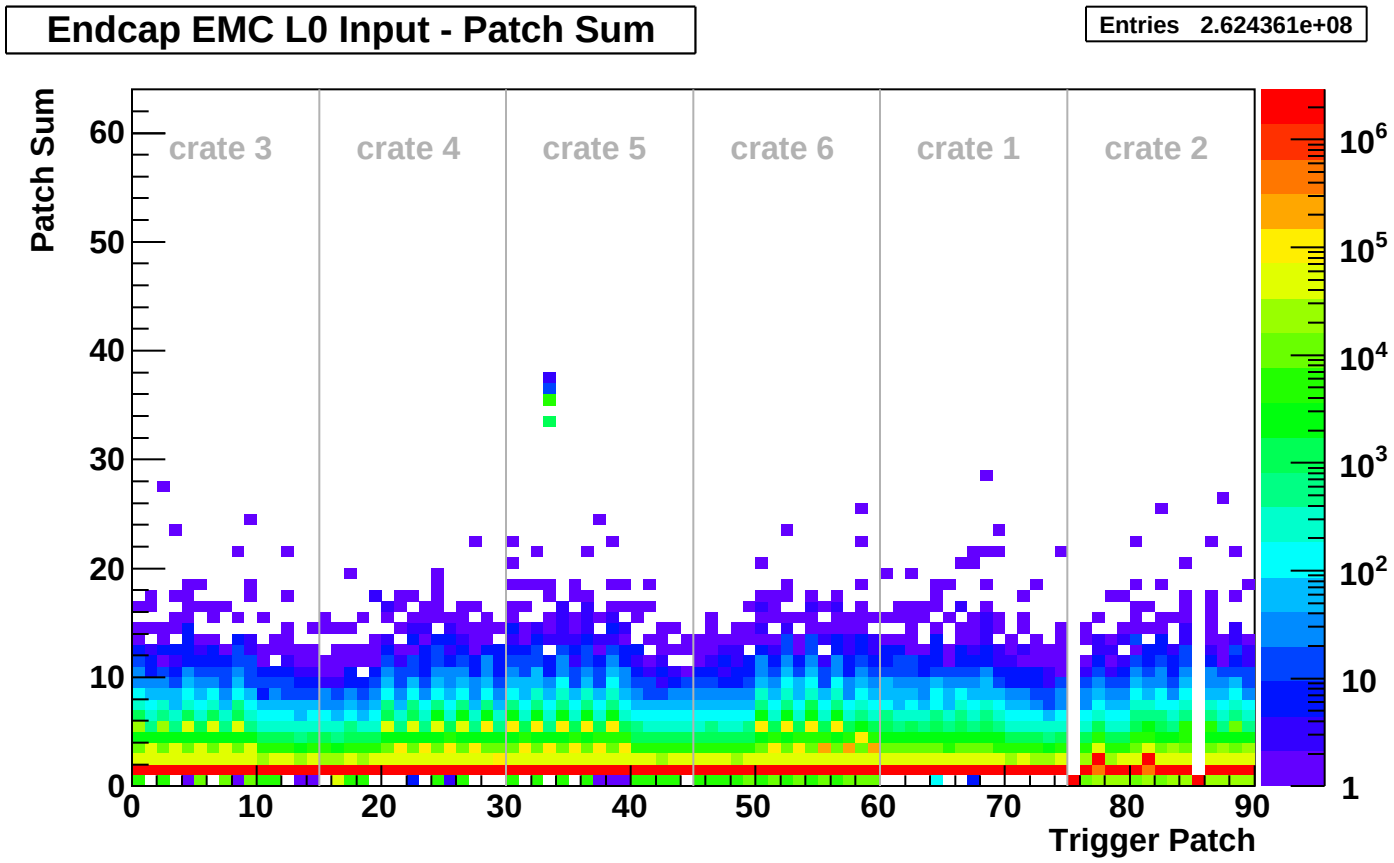
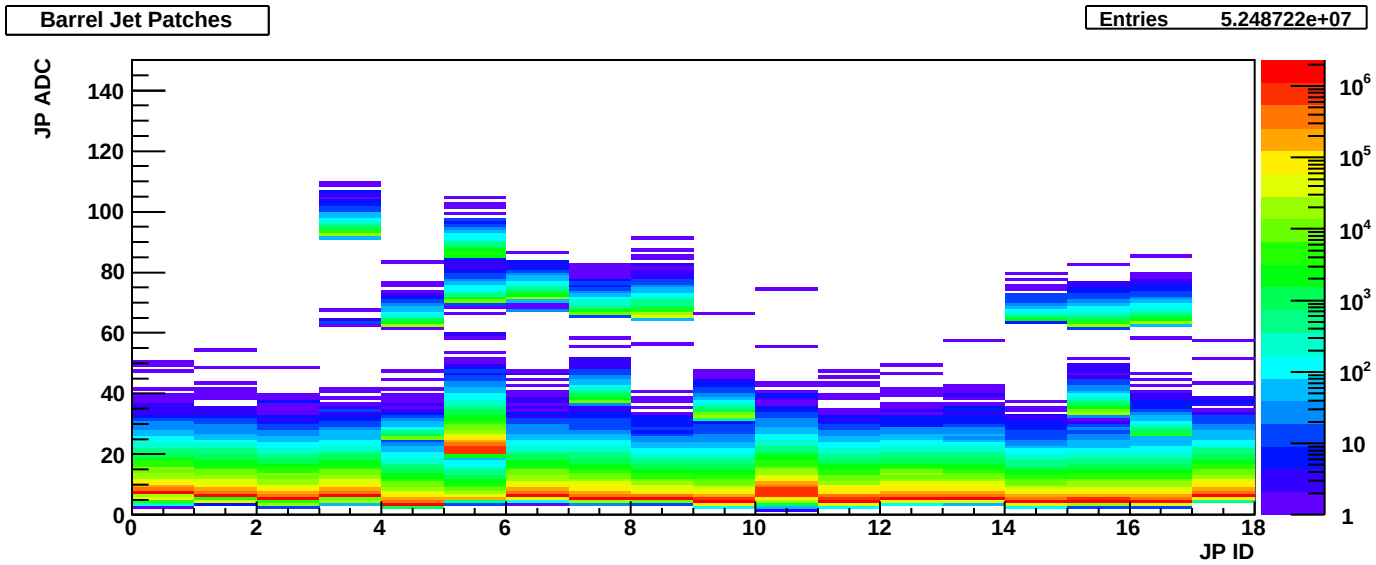
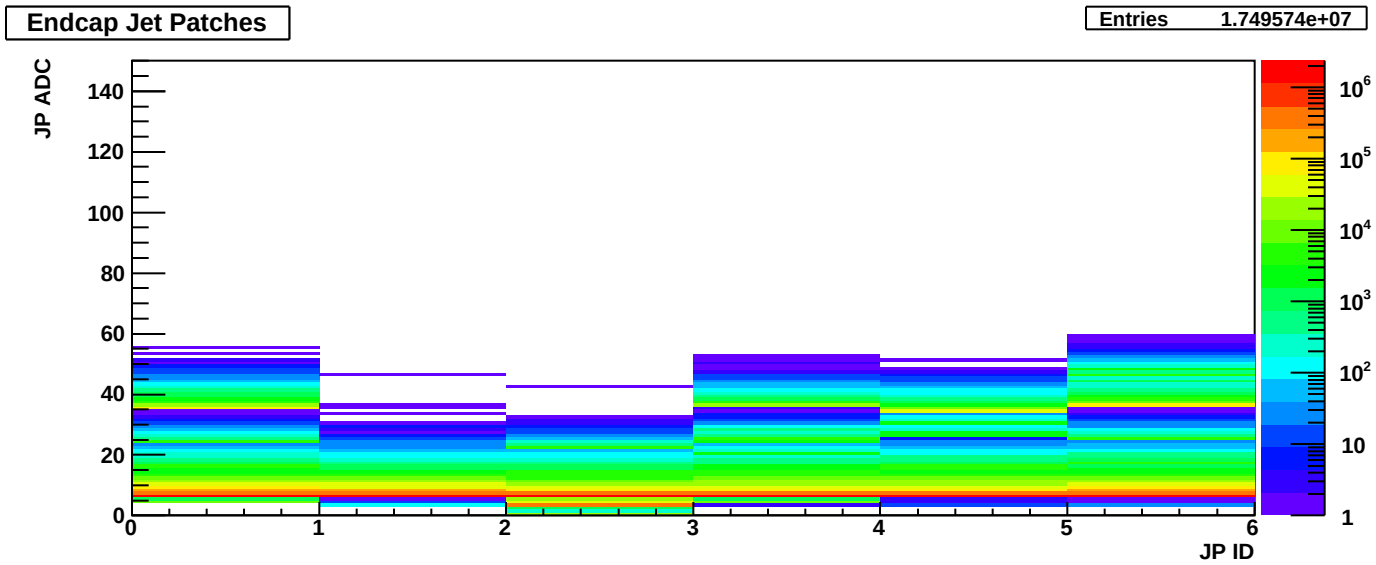

Barrel EMC L0 Input - High Tower
Entries 8.747871e+08
High Tower
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$
$10^5$
$10^6$

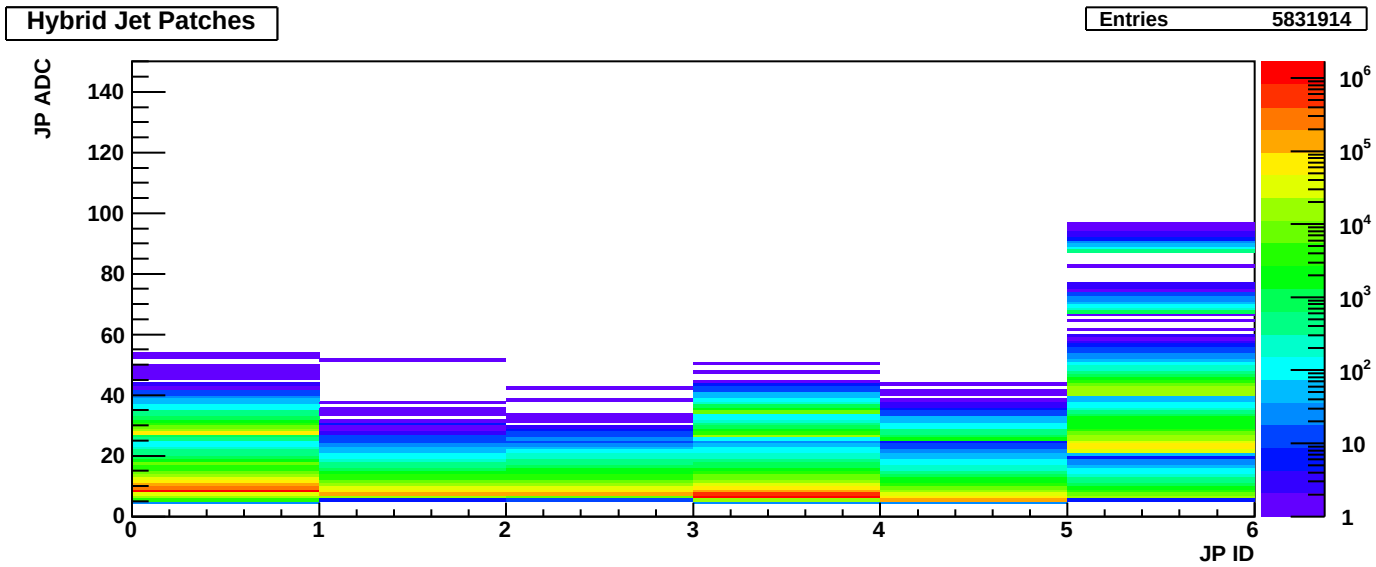

Barrel EMC L0 Input - Patch Sum
Entries 8.747871e+08
Patch Sum
Trigger Patch
0
10
20
30
40
50
60
0
50
100
150
200
250
300
1
10
$10^2$
$10^3$
$10^4$
$10^5$
$10^6$

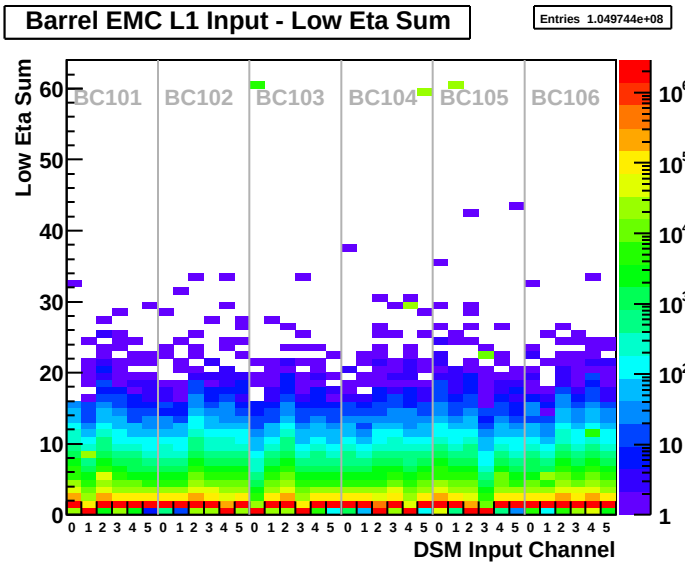

Endcap EMC L0 Input - High Tower
Entries 2.624361e+08
High Tower
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

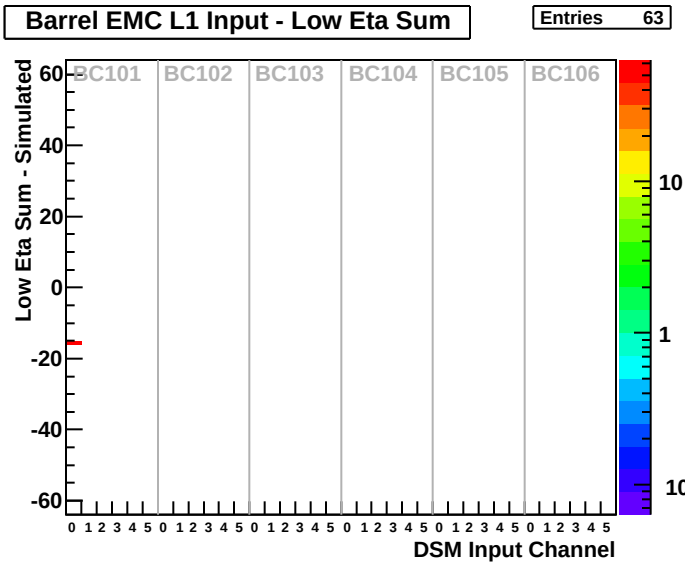

Endcap EMC L0 Input - Patch Sum
Entries 2.624361e+08
Patch Sum
crate 3
crate 4
crate 5
crate 6
crate 1
crate 2
Trigger Patch

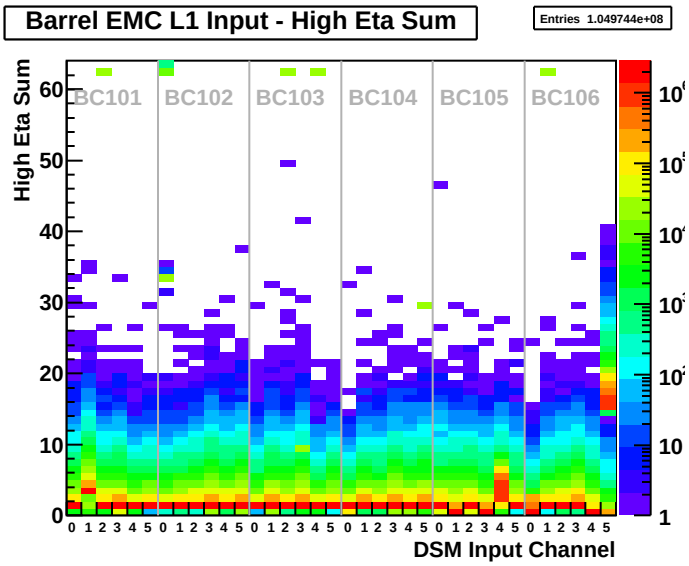

Barrel Jet Patches
Entries 5.248722e+07
JP ADC
JP ID

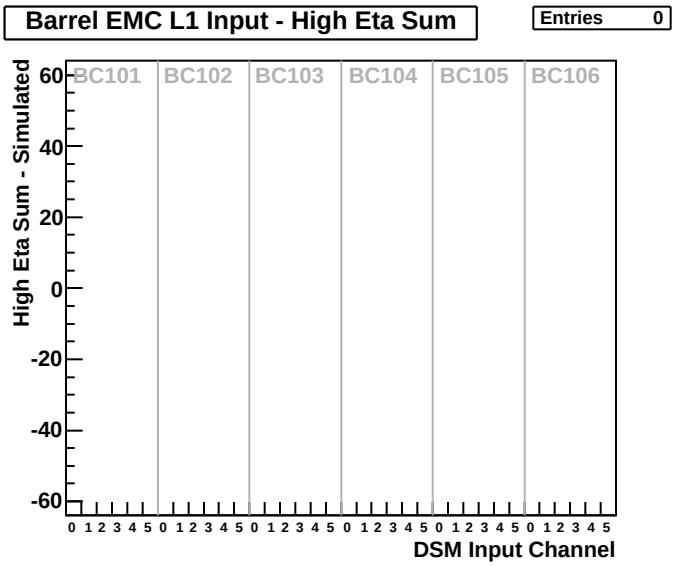

Endcap Jet Patches
Entries 1.749574e+07
JP ADC
JP ID

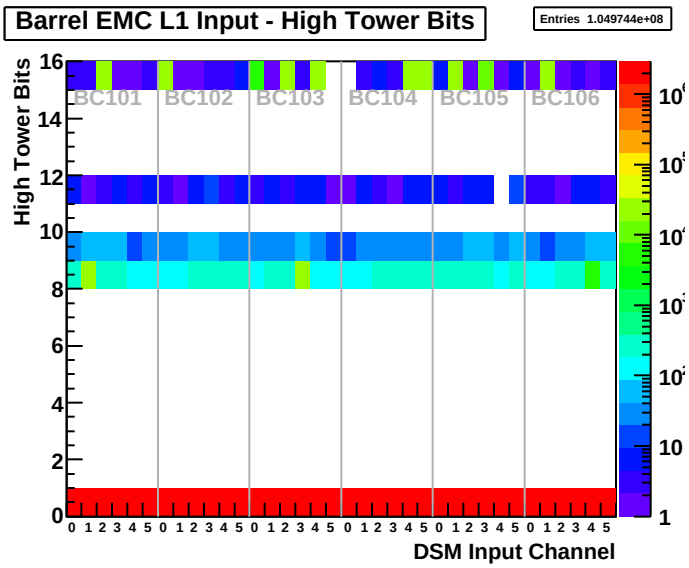

Hybrid Jet Patches
Entries 5831914
JP ADC
JP ID

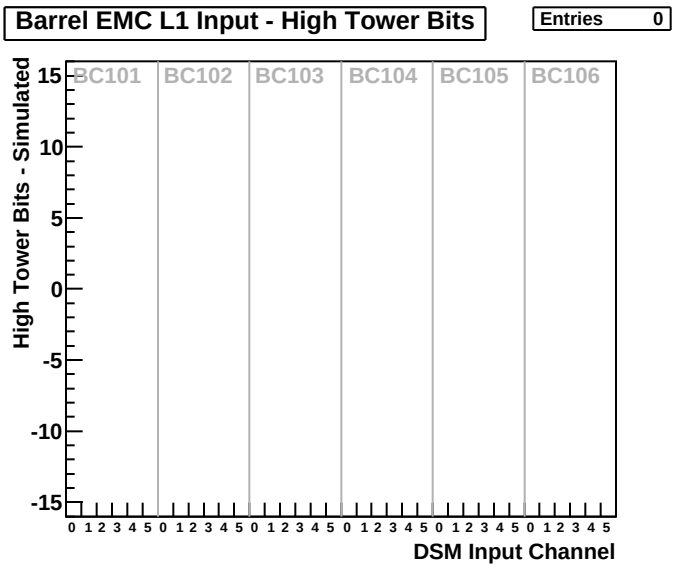

Barrel EMC L1 Input - Low Eta Sum
Entries 1.049744e+08
Low Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

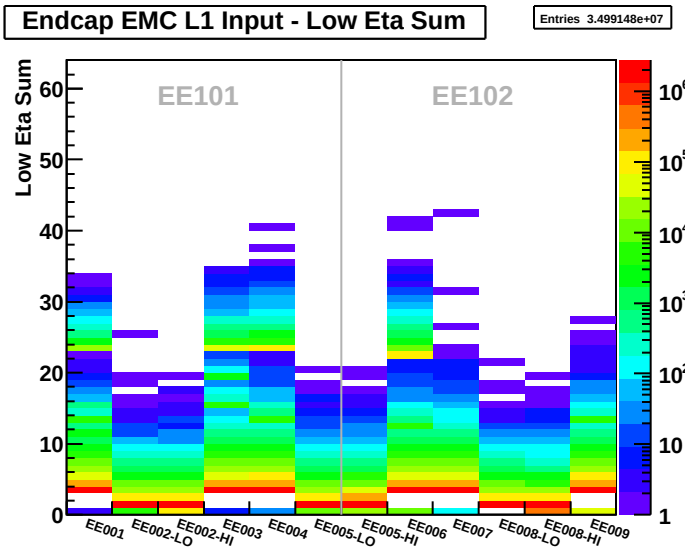

Barrel EMC L1 Input - Low Eta Sum
Entries 63
Low Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

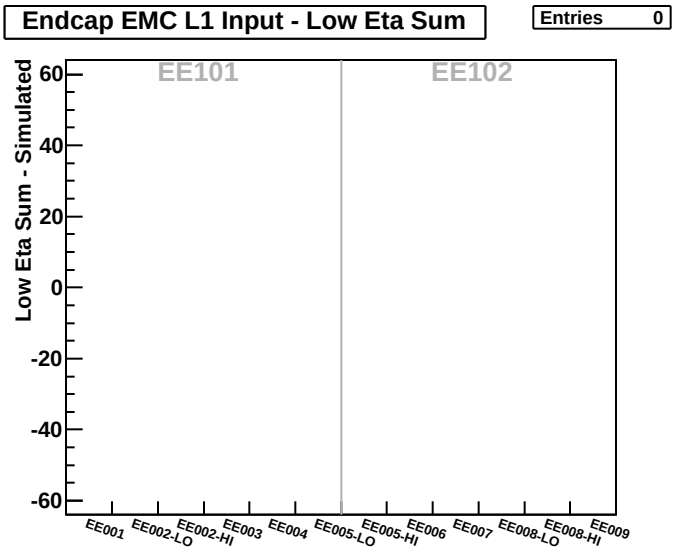

Barrel EMC L1 Input - High Eta Sum
Entries 1.049744e+08
High Eta Sum
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

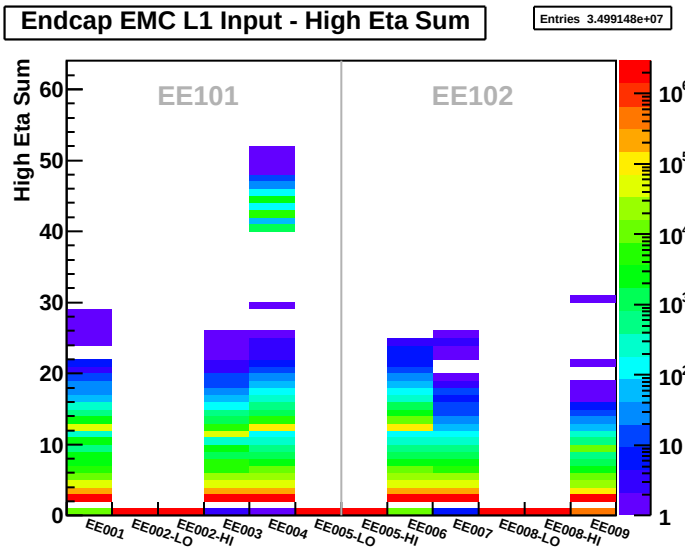

Barrel EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

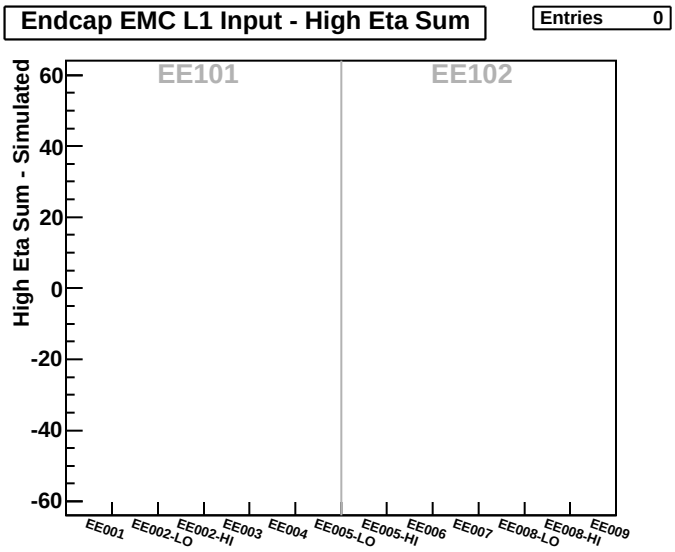

Barrel EMC L1 Input - High Tower Bits
Entries 1.049744e+08
High Tower Bits
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

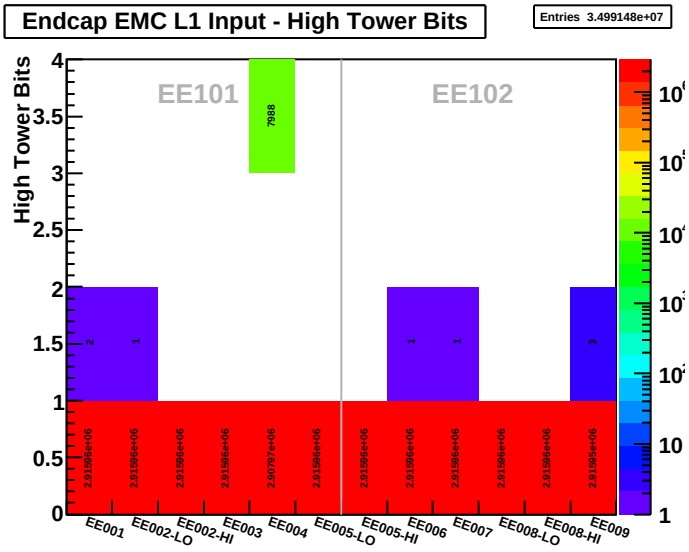

Barrel EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
BC101
BC102
BC103
BC104
BC105
BC106
DSM Input Channel

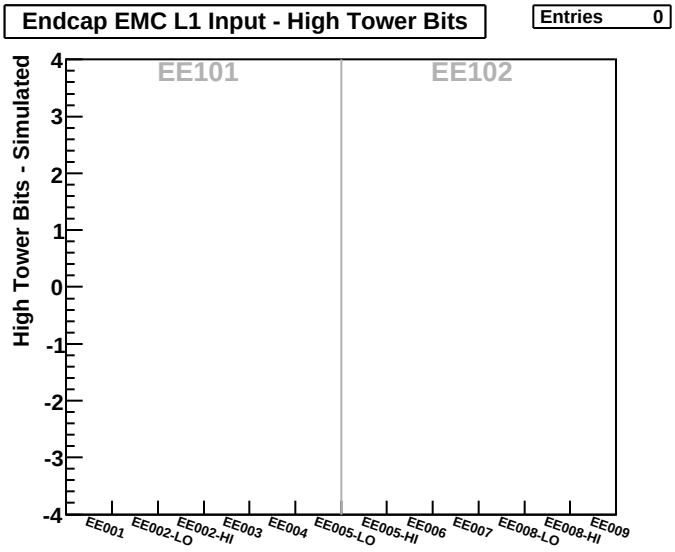

Endcap EMC L1 Input - Low Eta Sum
Entries 3.499148e+07
Low Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

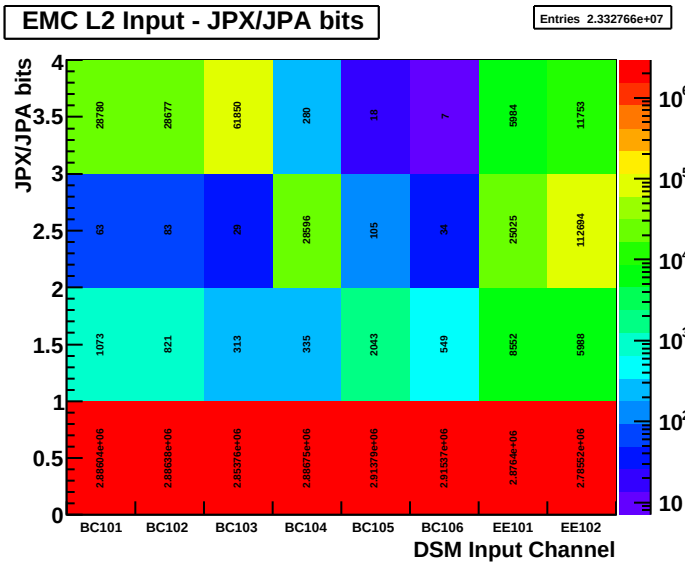

Endcap EMC L1 Input - Low Eta Sum
Entries 0
Low Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

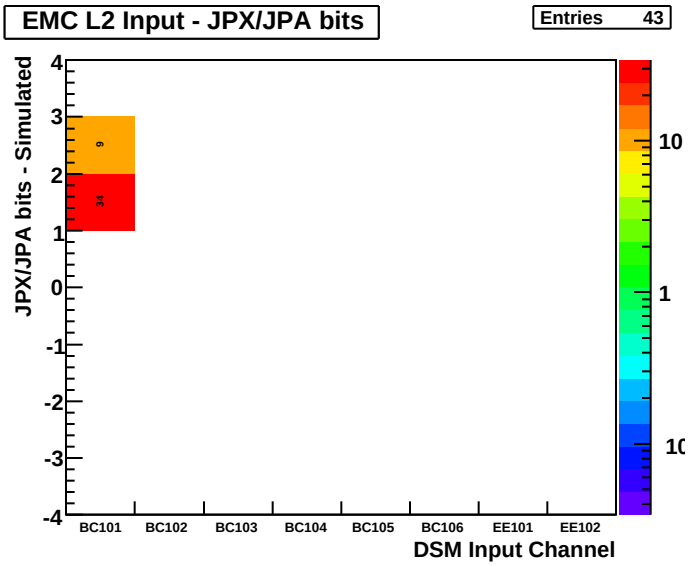

Endcap EMC L1 Input - High Eta Sum
Entries 3.499148e+07
High Eta Sum
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

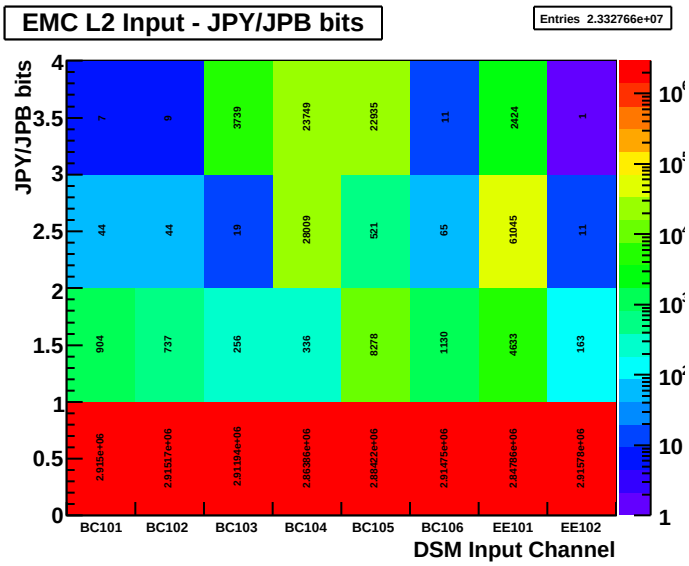

Endcap EMC L1 Input - High Eta Sum
Entries 0
High Eta Sum - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

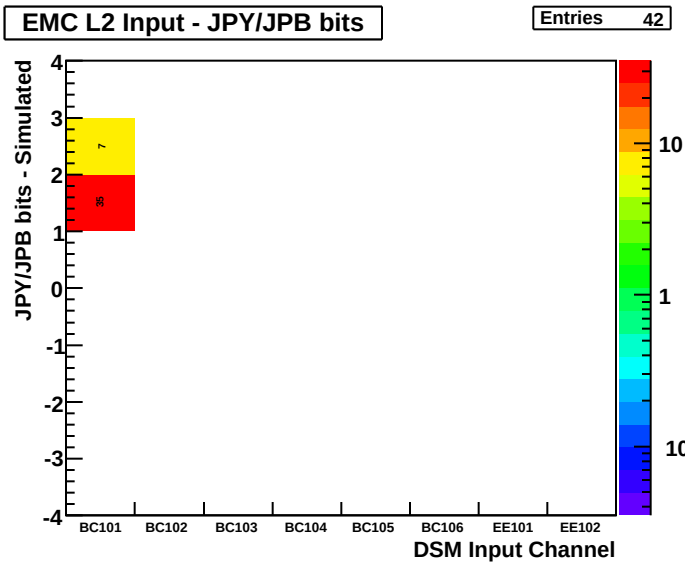

Endcap EMC L1 Input - High Tower Bits
Entries 3.499148e+07
High Tower Bits
EE101
EE102
7988
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

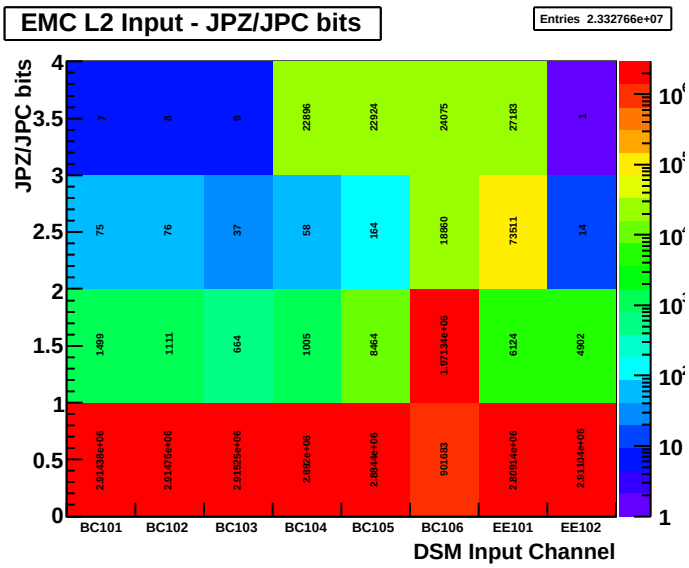

Endcap EMC L1 Input - High Tower Bits
Entries 0
High Tower Bits - Simulated
EE101
EE102
EE001 EE002-LO EE002-HI EE003 EE004 EE005-LO EE005-HI EE006 EE007 EE008-LO EE008-HI EE009

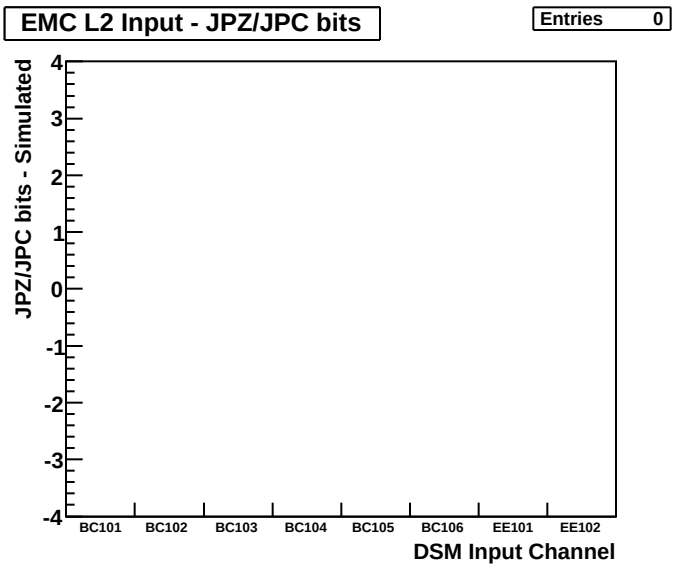

EMC L2 Input - JPX/JPA bits
Entries 2.332766e+07
JPX/JPA bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
28780 28677 61850 280 18 7 5984 11753
63 83 29 28596 105 34 25025 112694
1073 821 313 335 2043 549 8552 5988
2.88604e+06 2.88638e+06 2.85376e+06 2.88675e+06 2.91379e+06 2.91537e+06 2.8754e+06 2.78552e+06

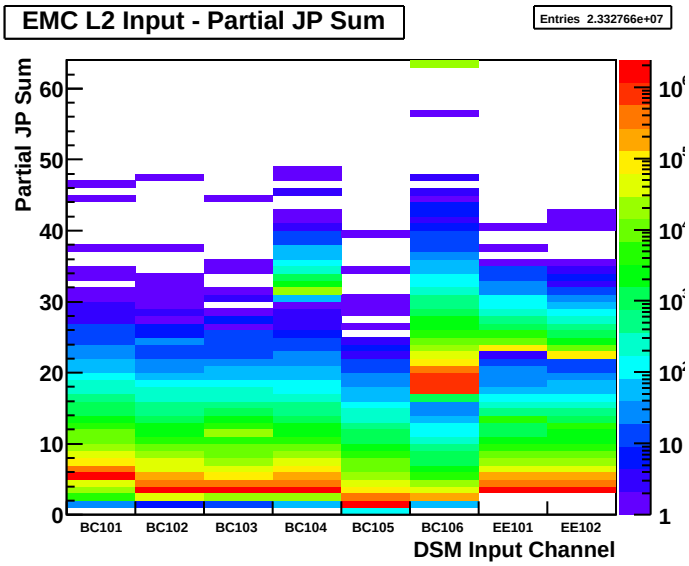

EMC L2 Input - JPX/JPA bits
Entries 43
JPX/JPA bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
9
34

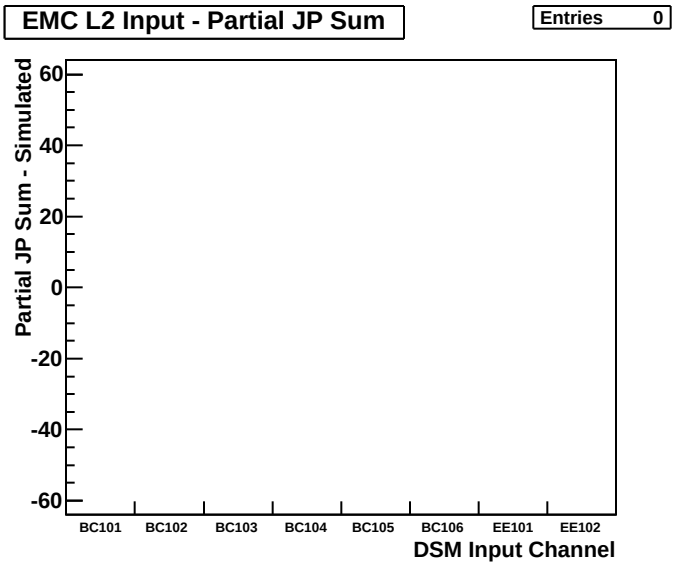

EMC L2 Input - JPY/JPB bits
Entries 2.332766e+07
JPY/JPB bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
7 9 3739 23749 22935 11 2424 1
44 44 19 28009 521 65 61045 11
904 737 256 336 8278 1130 4533 163
2.9156e+06 2.91517e+06 2.91194e+06 2.85386e+06 2.88422e+06 2.91475e+06 2.84786e+06 2.91578e+06

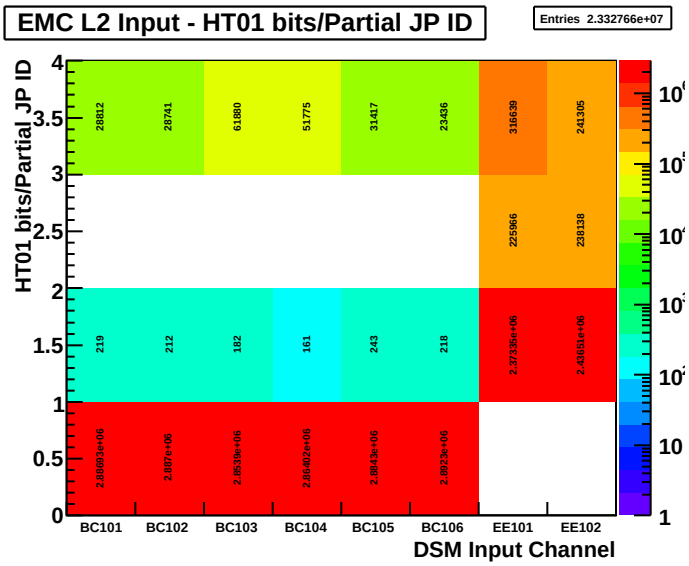

EMC L2 Input - JPY/JPB bits
Entries 42
JPY/JPB bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
7
35

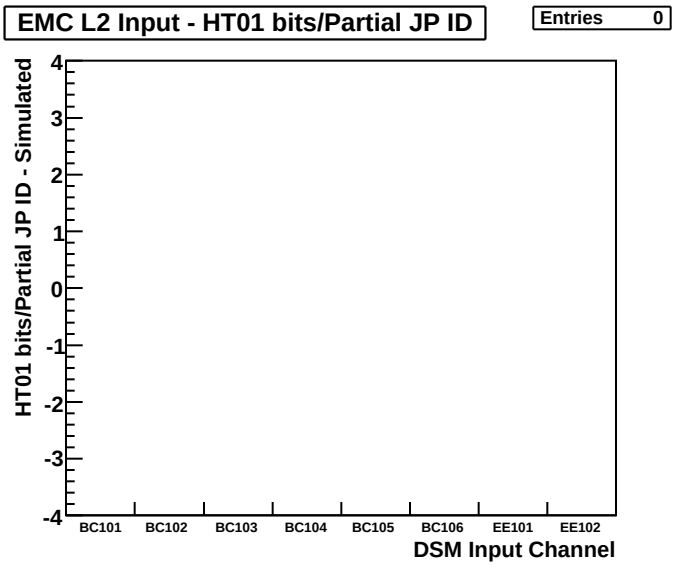

EMC L2 Input - JPZ/JPC bits
Entries 2.332766e+07
JPZ/JPC bits
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102
7 8 9 22896 22924 24075 27183 1
75 76 37 58 164 18860 73511 14
1489 1111 664 1005 8464 1.97134e+06 6124 4902
2.91438e+06 2.91476e+06 2.91525e+06 2.892e+06 2.8844e+06 901683 2.80914e+06 2.91104e+06

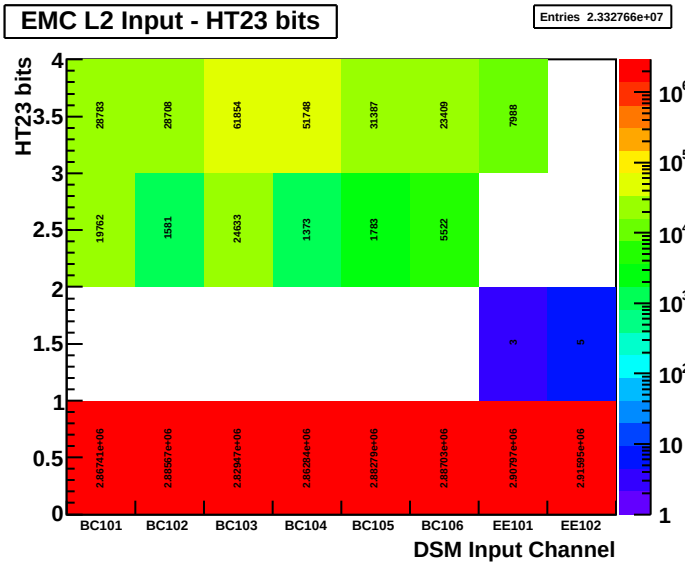

EMC L2 Input - JPZ/JPC bits
Entries 0
JPZ/JPC bits - Simulated
DSM Input Channel
BC101 BC102 BC103 BC104 BC105 BC106 EE101 EE102

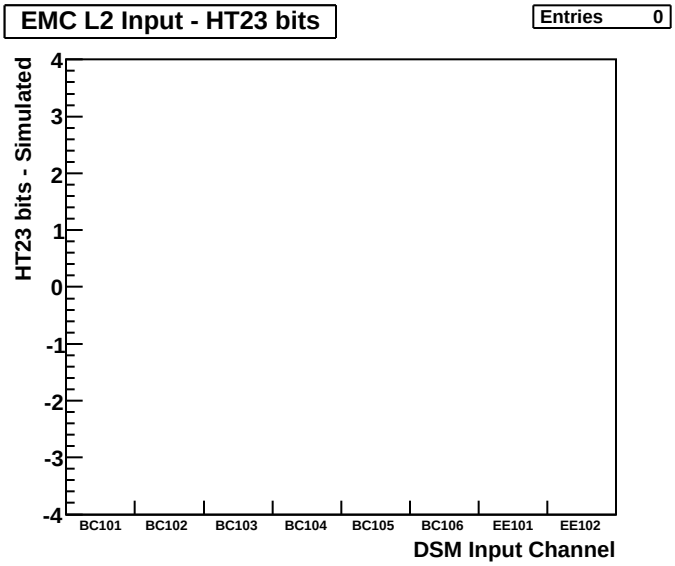

EMC L2 Input - Partial JP Sum
Entries 2.332766e+07
Partial JP Sum
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

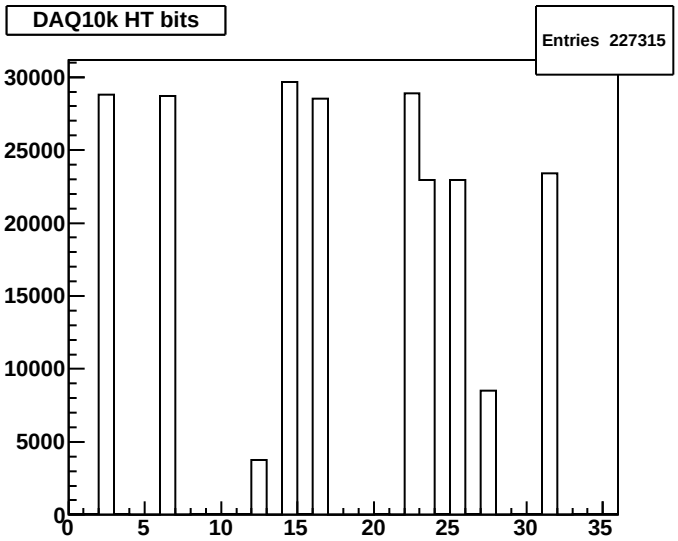

EMC L2 Input - Partial JP Sum
Entries 0
Partial JP Sum - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

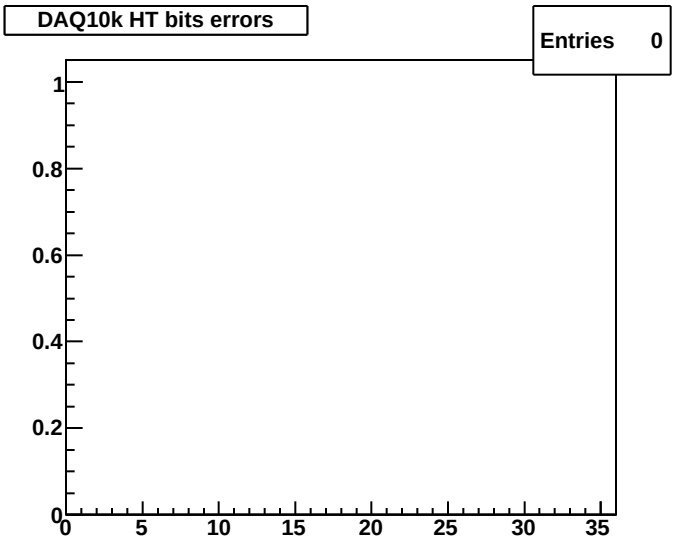

EMC L2 Input - HT01 bits/Partial JP ID
Entries 2.332766e+07
HT01 bits/Partial JP ID
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

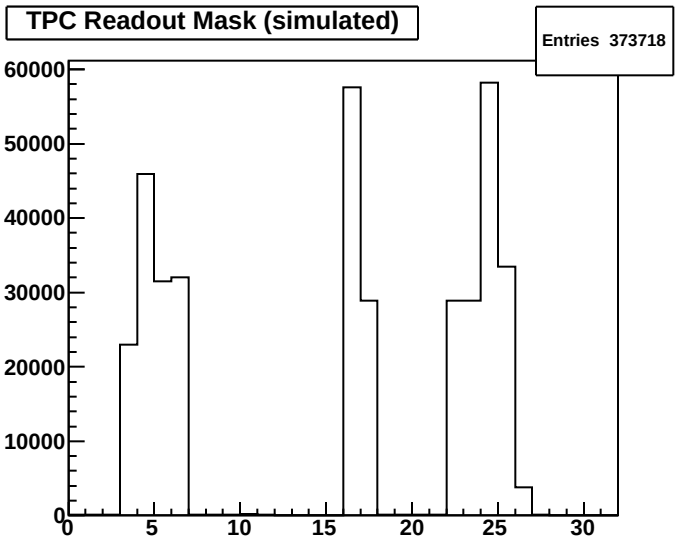

EMC L2 Input - HT01 bits/Partial JP ID
Entries 0
HT01 bits/Partial JP ID - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

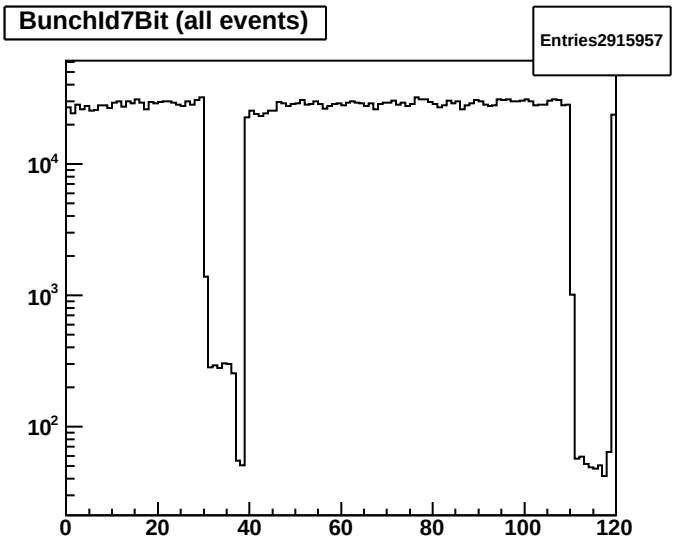

EMC L2 Input - HT23 bits
Entries 2.332766e+07
HT23 bits
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

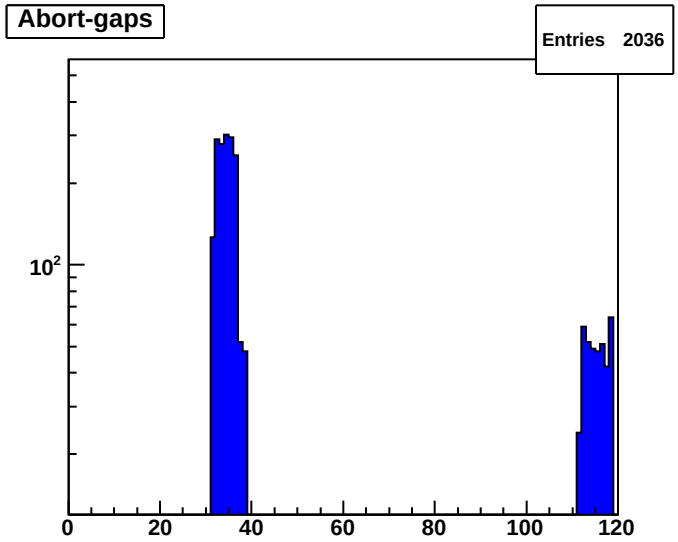

EMC L2 Input - HT23 bits
Entries 0
HT23 bits - Simulated
DSM Input Channel
BC101
BC102
BC103
BC104
BC105
BC106
EE101
EE102

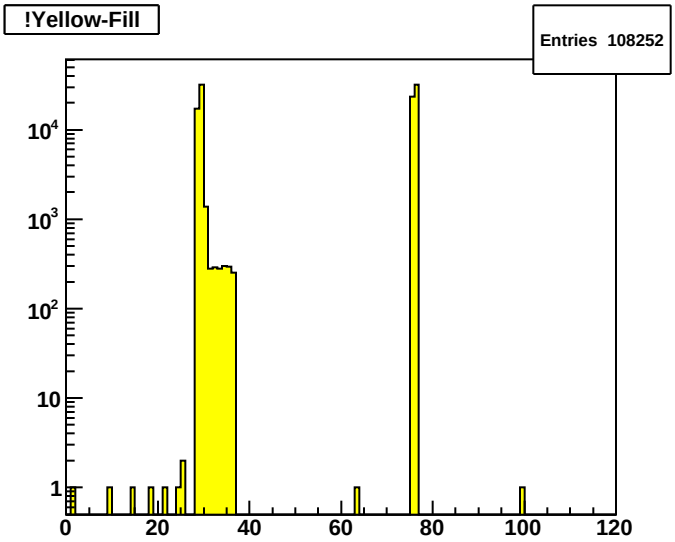

DAQ10k HT bits
Entries 227315
30000
25000
20000
15000
10000
5000
0
0 5 10 15 20 25 30 35

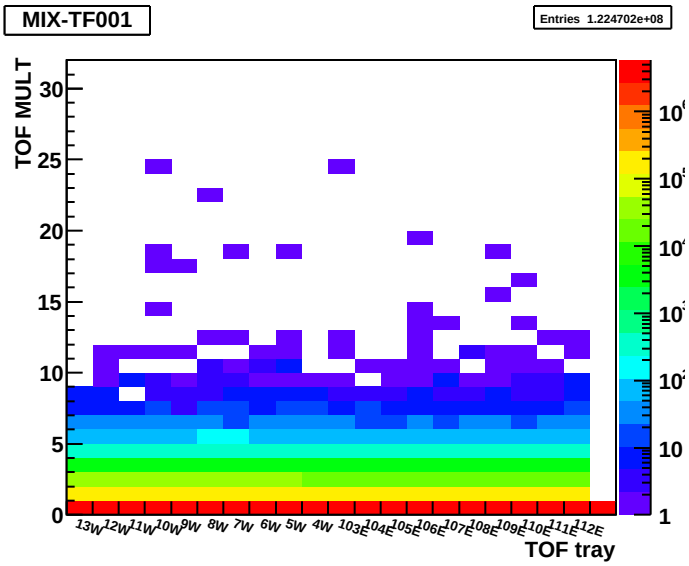

DAQ10k HT bits errors
Entries 0
1
0.8
0.6
0.4
0.2
0
0 5 10 15 20 25 30 35

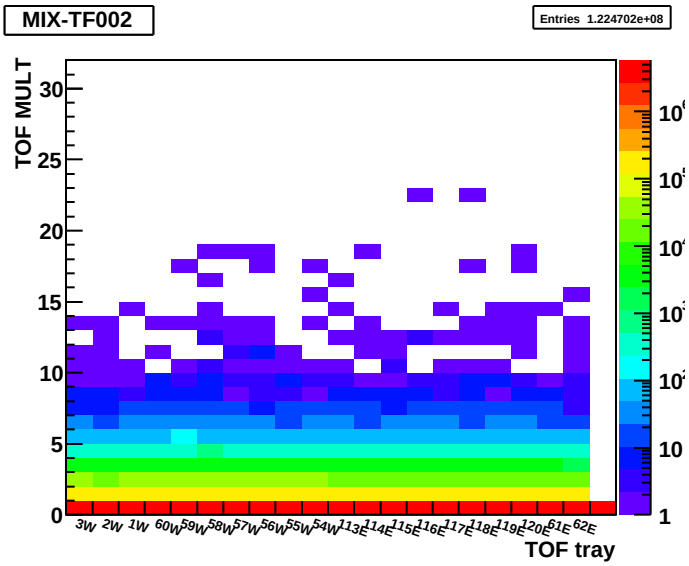

TPC Readout Mask (simulated)
Entries 373718
60000
50000
40000
30000
20000
10000
0
0 5 10 15 20 25 30

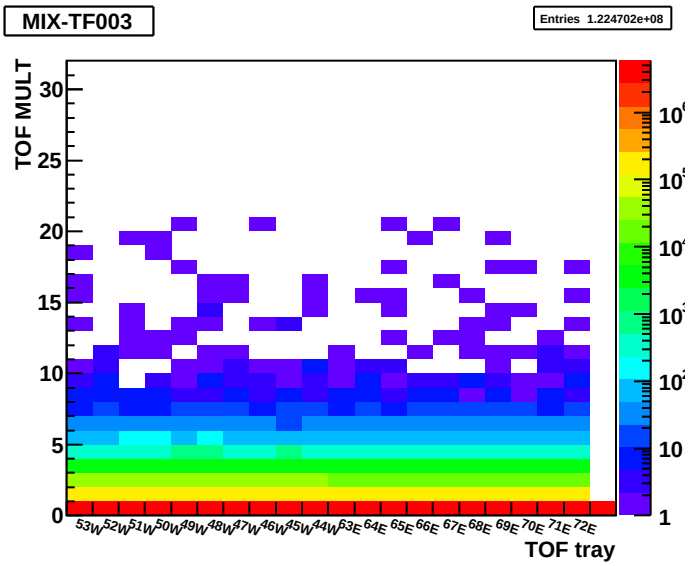

BunchId7Bit (all events)
Entries2915957
$10^4$
$10^3$
$10^2$
0 20 40 60 80 100 120

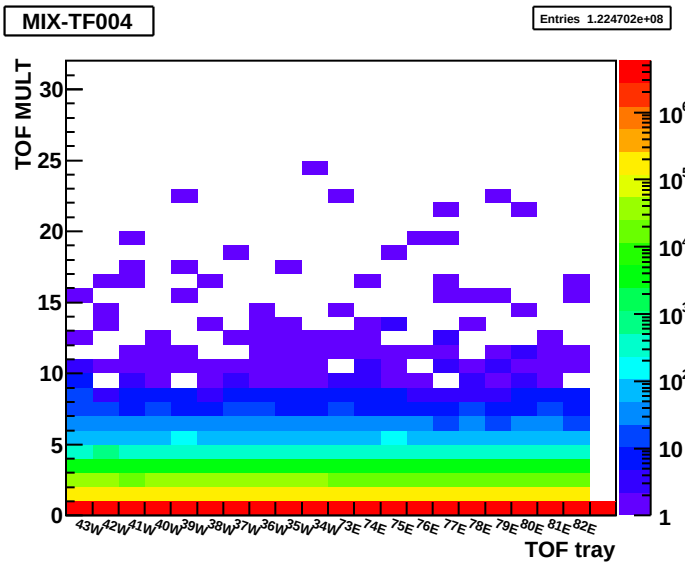

Abort-gaps
Entries 2036
$10^2$
0 20 40 60 80 100 120

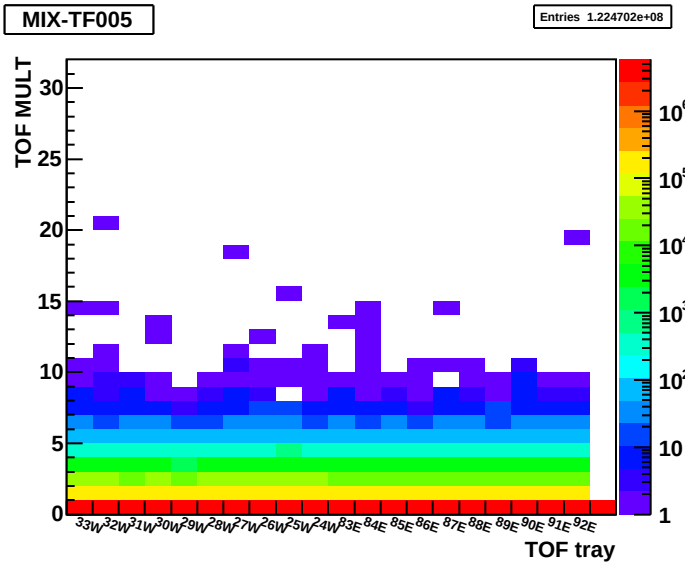

!Yellow-Fill
Entries 108252
$10^4$
$10^3$
$10^2$
10
1
0 20 40 60 80 100 120

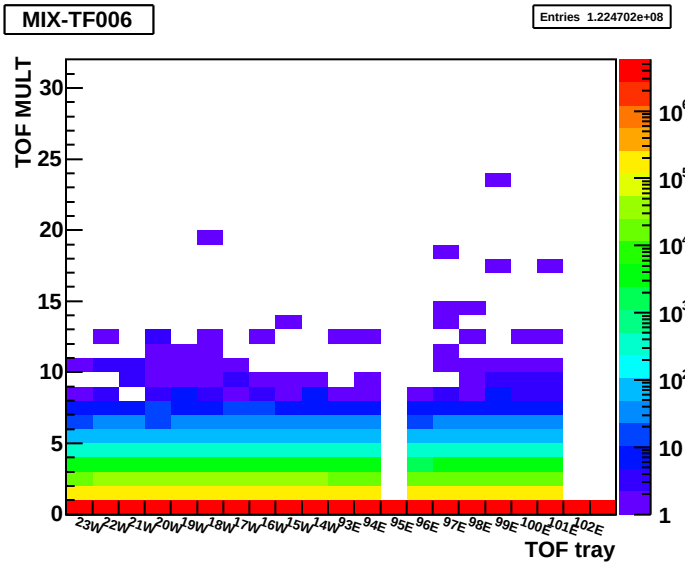

MIX-TF001
Entries 1.224702e+08
TOF MULT
TOF tray

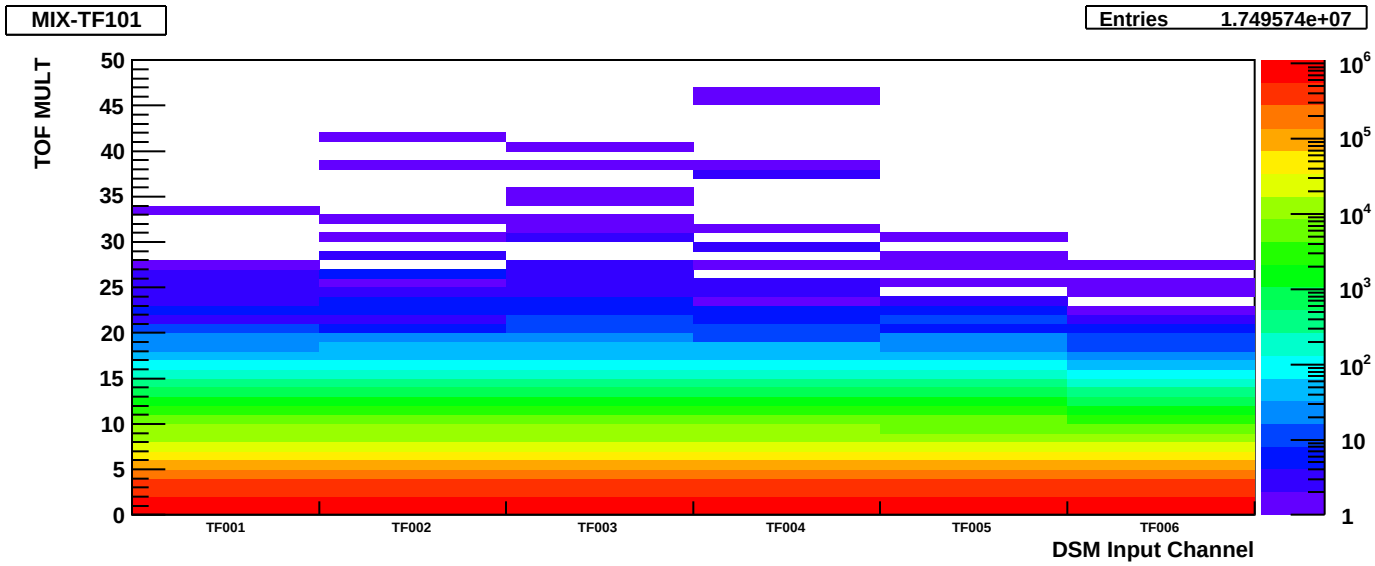

MIX-TF002
Entries 1.224702e+08
TOF MULT
TOF tray

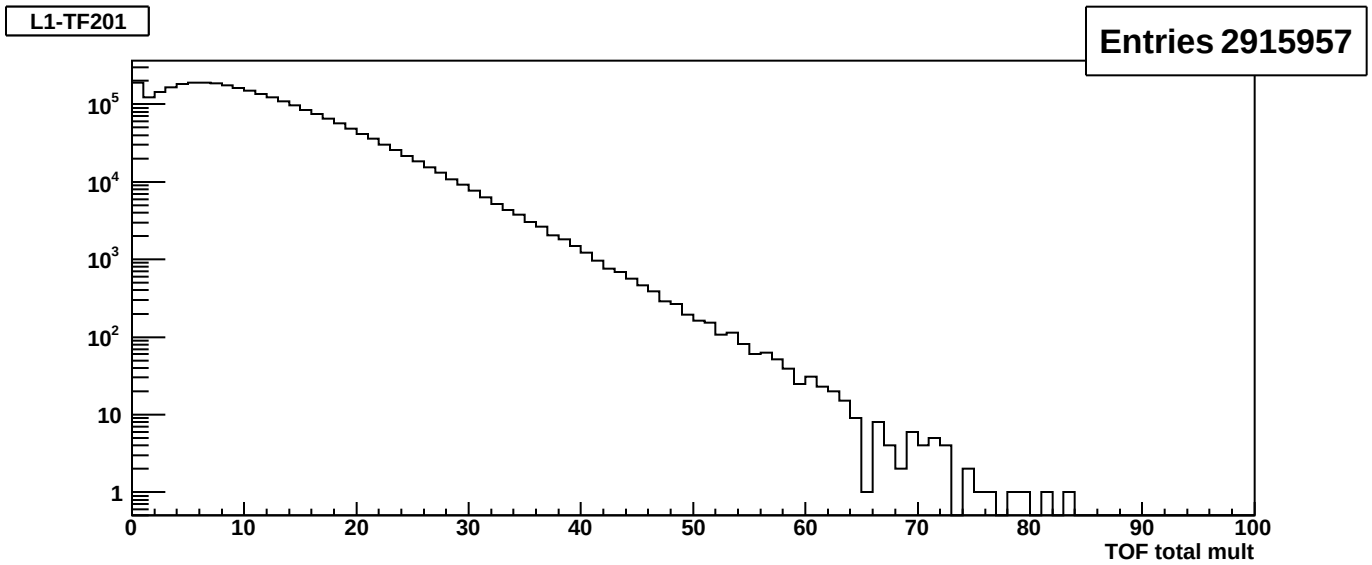

MIX-TF003
Entries 1.224702e+08
TOF MULT
TOF tray

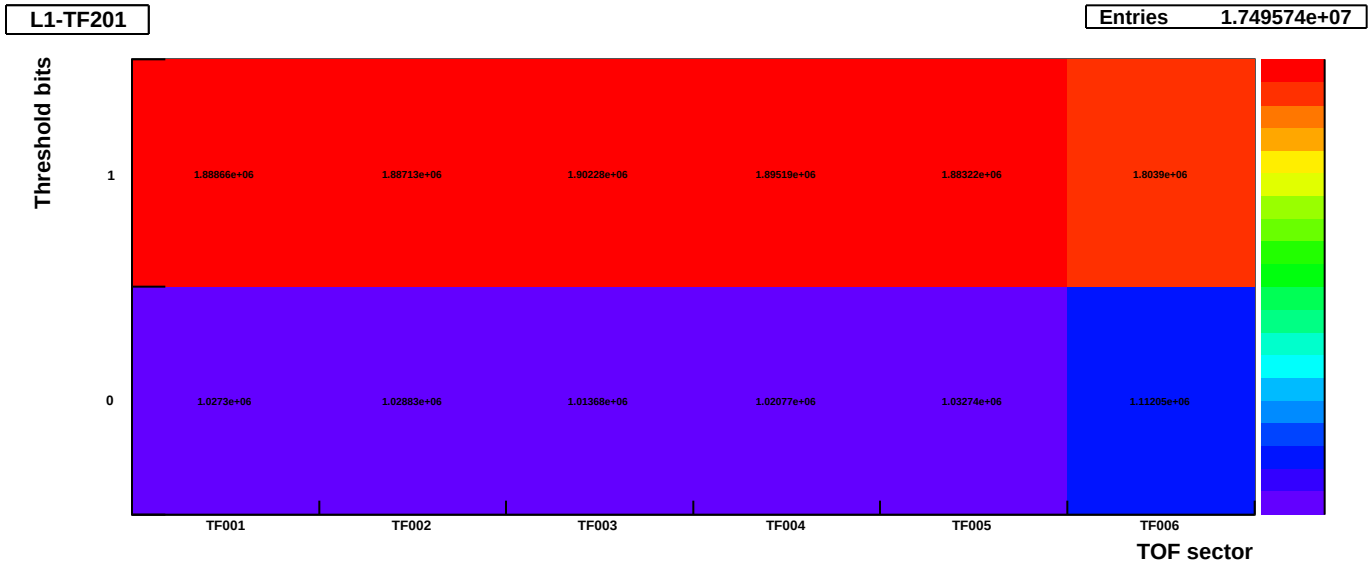

MIX-TF004
Entries 1.224702e+08
TOF MULT
TOF tray


MIX-TF005
Entries 1.224702e+08
TOF MULT
TOF tray


MIX-TF006
Entries 1.224702e+08
TOF MULT
TOF tray


MIX-TF101
Entries 1.749574e+07
TOF MULT
DSM Input Channel
TF001
TF002
TF003
TF004
TF005
TF006


L1-TF201
Entries 2915957
TOF total mult


L1-TF201
Entries 1.749574e+07
Threshold bits
1.88866e+06
1.88713e+06
1.90228e+06
1.89519e+06
1.88322e+06
1.8039e+06
1.0273e+06
1.02883e+06
1.01368e+06
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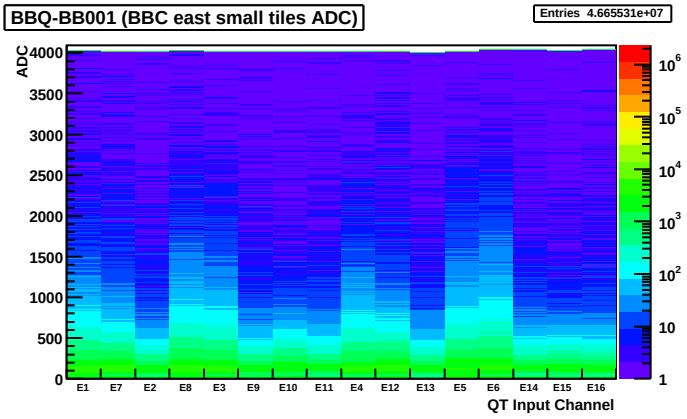
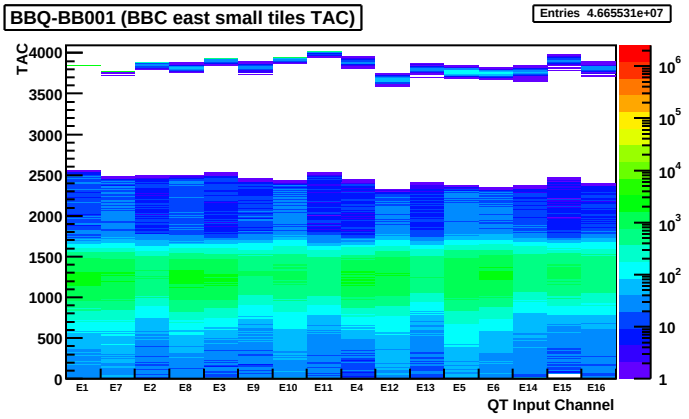
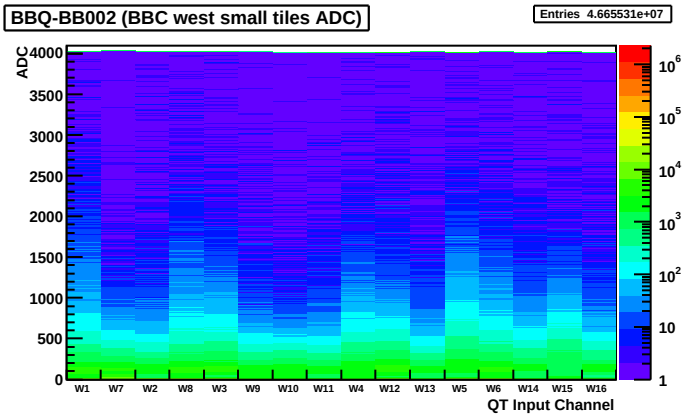
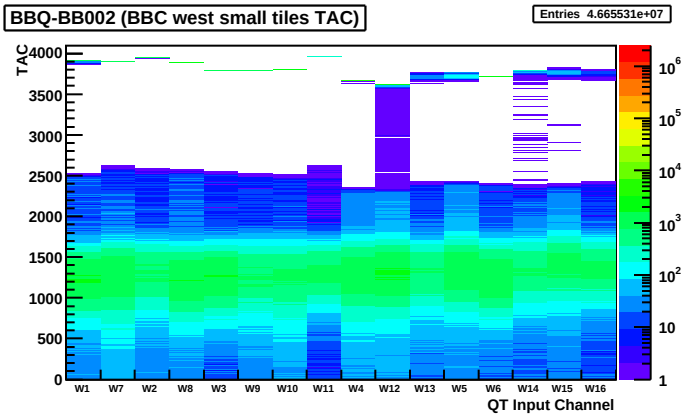
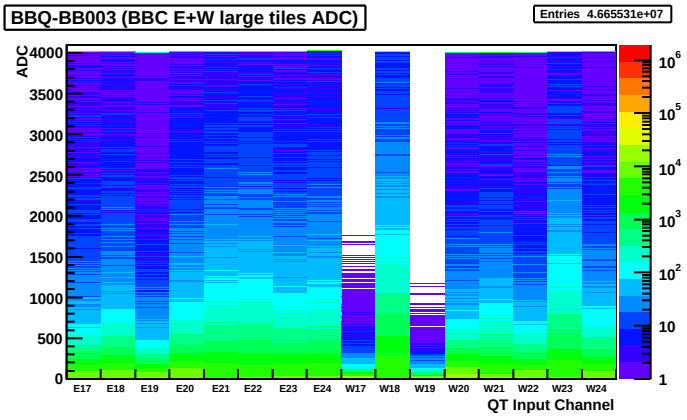
1.03274e+06
1.11205e+06
TF001
TF002
TF003
TF004
TF005
TF006
TOF sector

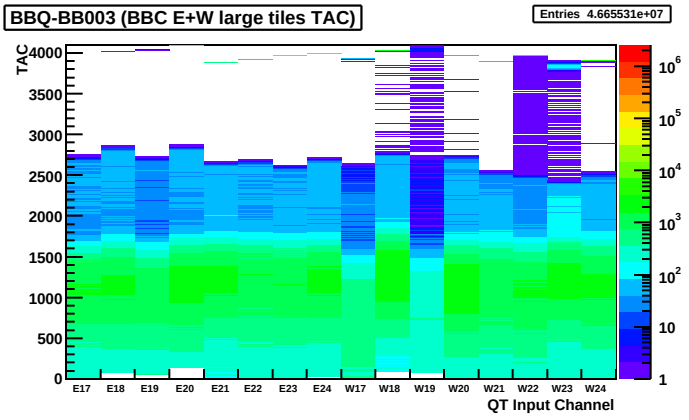

BBQ-BB001 (BBC east small tiles ADC)
Entries 4.665531e+07
ADC
QT Input Channel

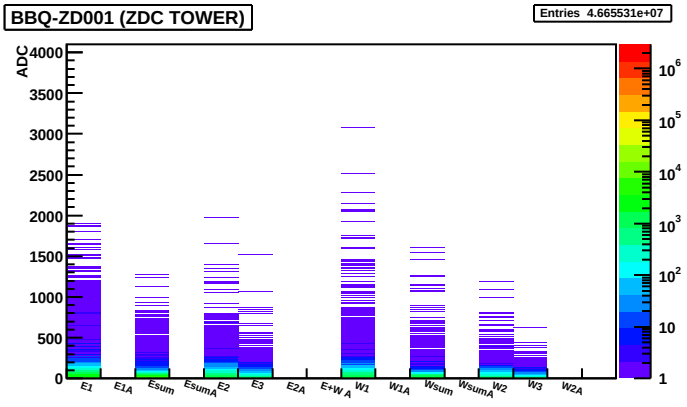

BBQ-BB001 (BBC east small tiles TAC)
Entries 4.665531e+07
TAC
QT Input Channel

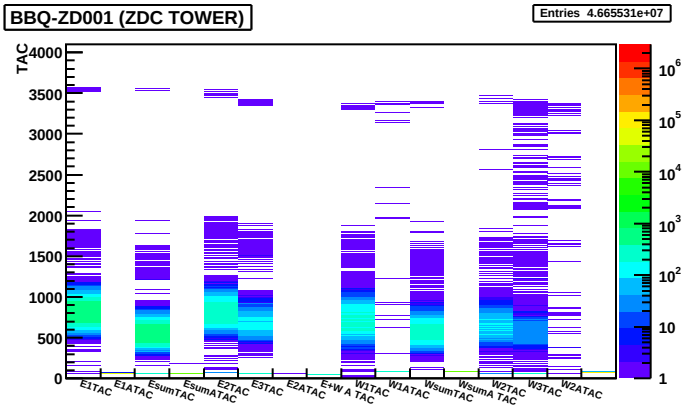

BBQ-BB002 (BBC west small tiles ADC)
Entries 4.665531e+07
ADC
QT Input Channel

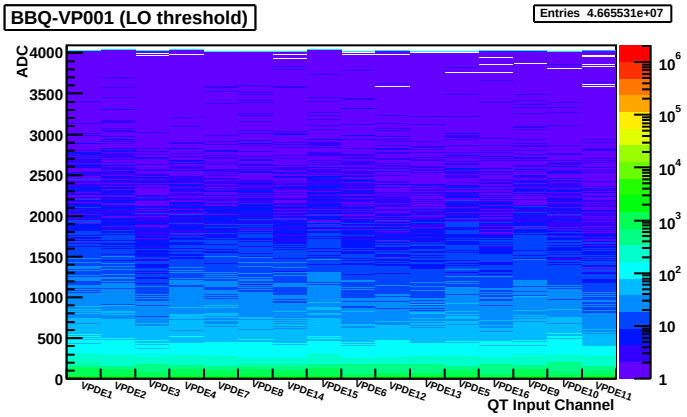

BBQ-BB002 (BBC west small tiles TAC)
Entries 4.665531e+07
TAC
QT Input Channel

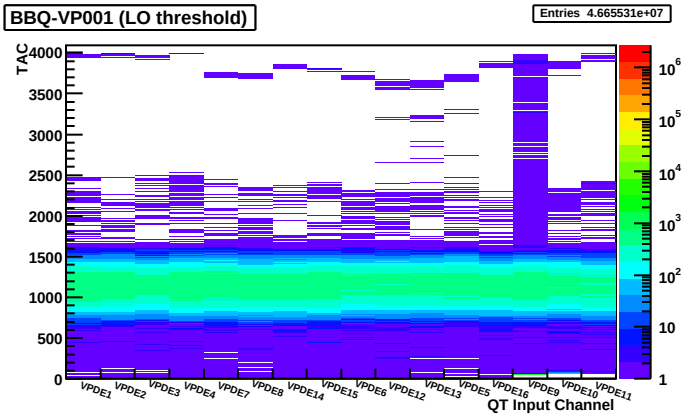

BBQ-BB003 (BBC E+W large tiles ADC)
Entries 4.665531e+07
ADC
QT Input Channel

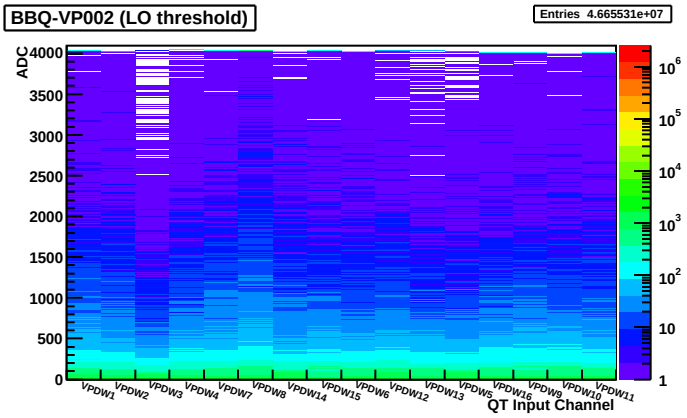

BBQ-BB003 (BBC E+W large tiles TAC)
Entries 4.665531e+07
TAC
QT Input Channel

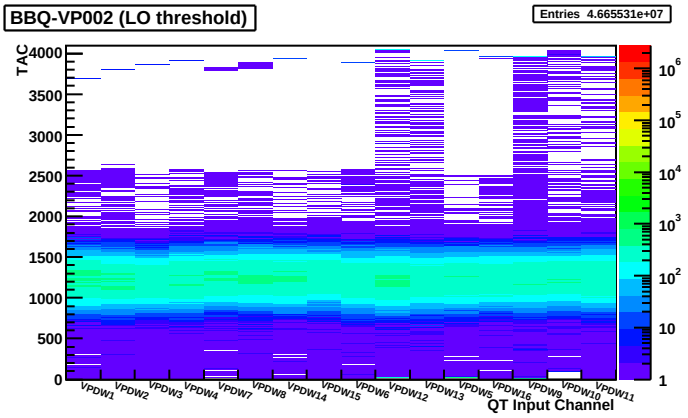

BBQ-ZD001 (ZDC TOWER)
Entries 4.665531e+07
ADC

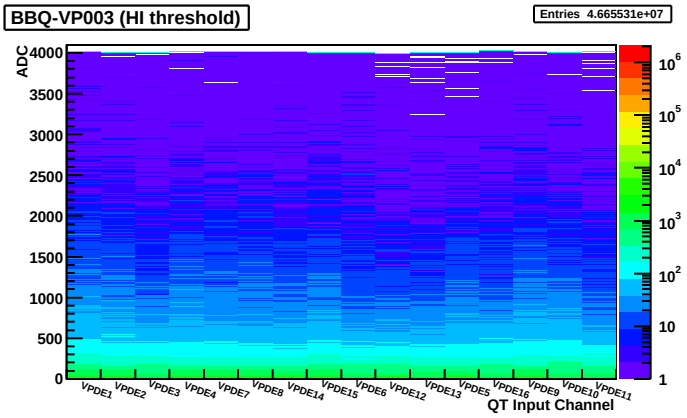

BBQ-ZD001 (ZDC TOWER)
Entries 4.665531e+07
TAC

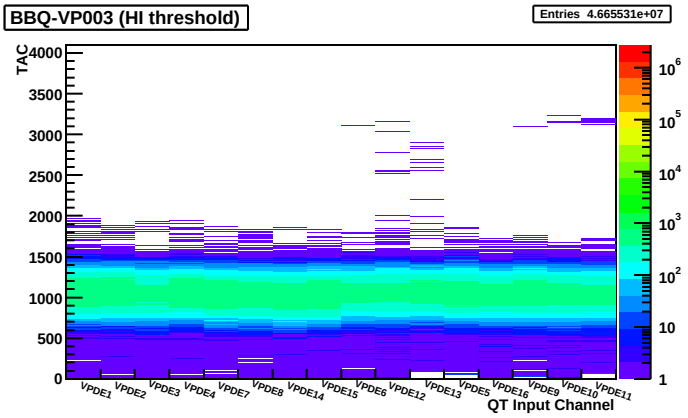

BBQ-VP001 (LO threshold)
Entries 4.665531e+07
ADC
QT Input Channel

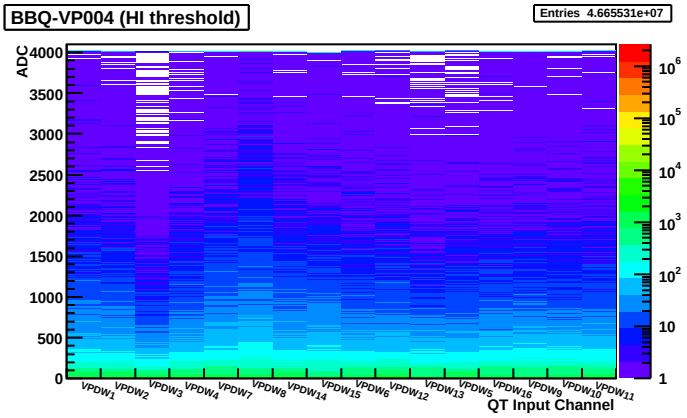

BBQ-VP001 (LO threshold)
Entries 4.665531e+07
TAC
QT Input Channel

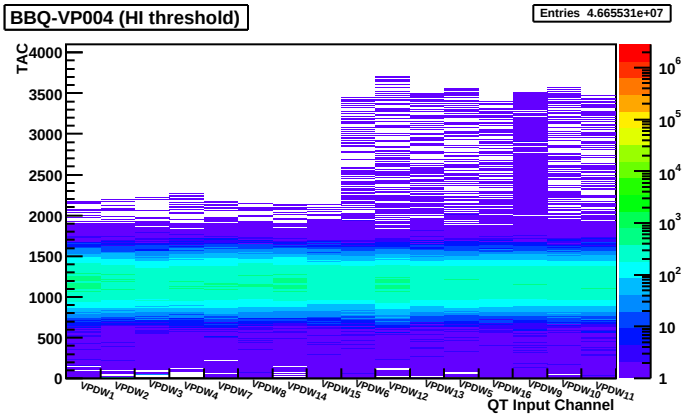

BBQ-VP002 (LO threshold)
Entries 4.665531e+07
ADC
QT Input Channel

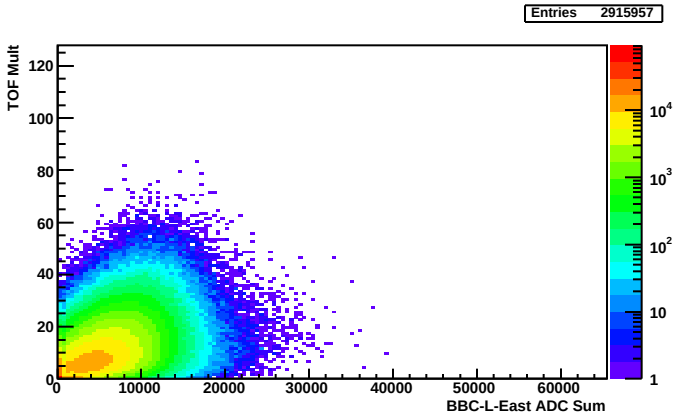

BBQ-VP002 (LO threshold)
Entries 4.665531e+07
TAC
QT Input Channel

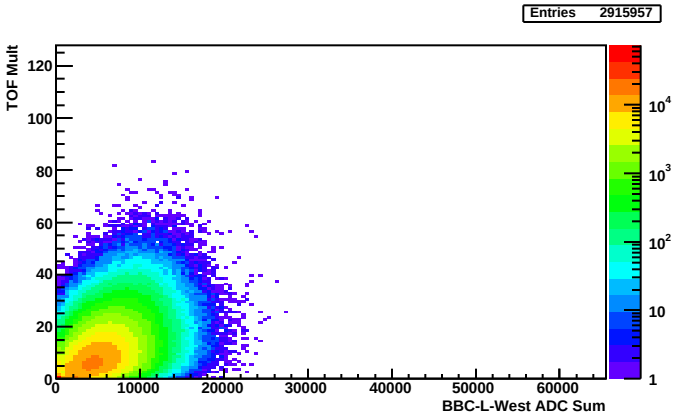

BBQ-VP003 (HI threshold)
Entries 4.665531e+07
ADC
QT Input Channel

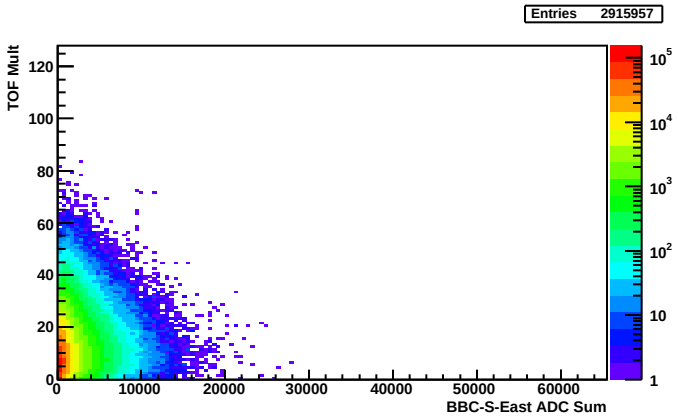

BBQ-VP003 (HI threshold)
Entries 4.665531e+07
TAC
QT Input Channel

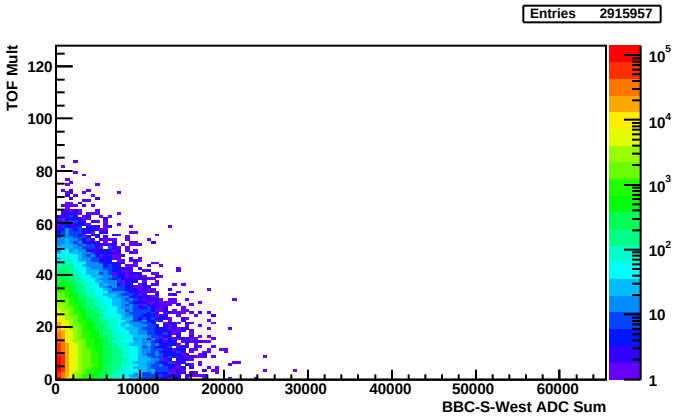

BBQ-VP004 (HI threshold)
Entries 4.665531e+07
ADC
QT Input Channel

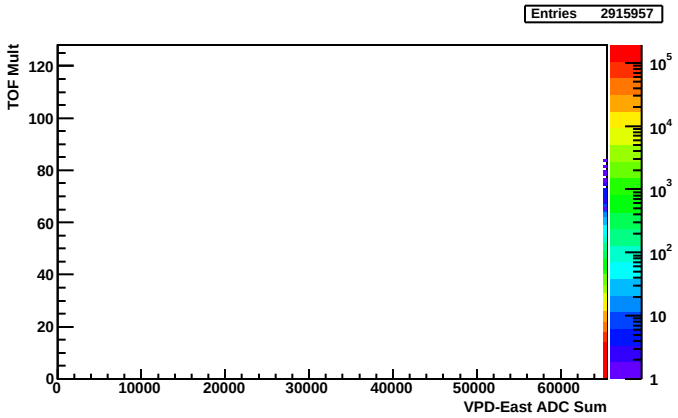

BBQ-VP004 (HI threshold)
Entries 4.665531e+07
TAC
QT Input Channel

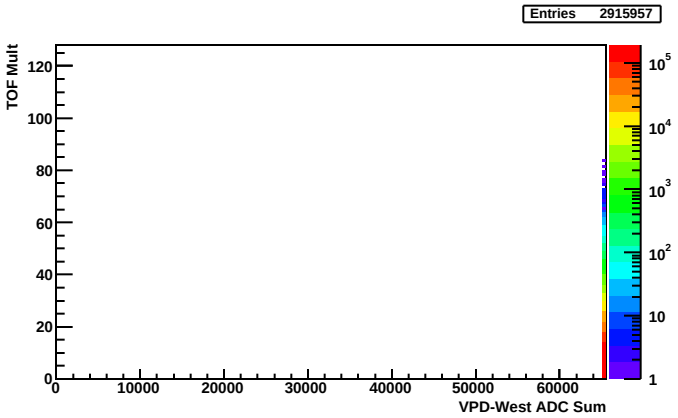

Entries 2915957
TOF Mult
BBC-L-East ADC Sum

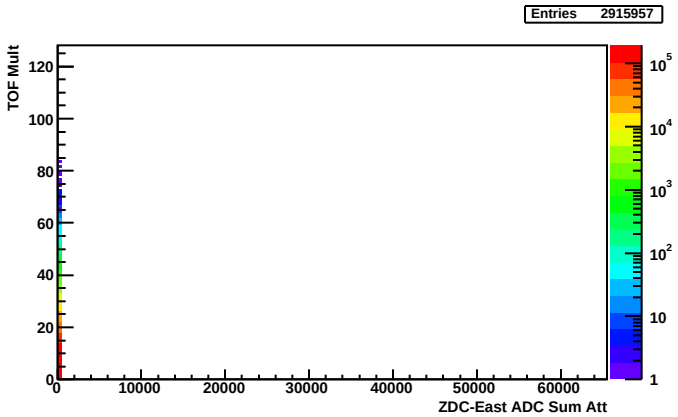

Entries 2915957
TOF Mult
BBC-L-West ADC Sum

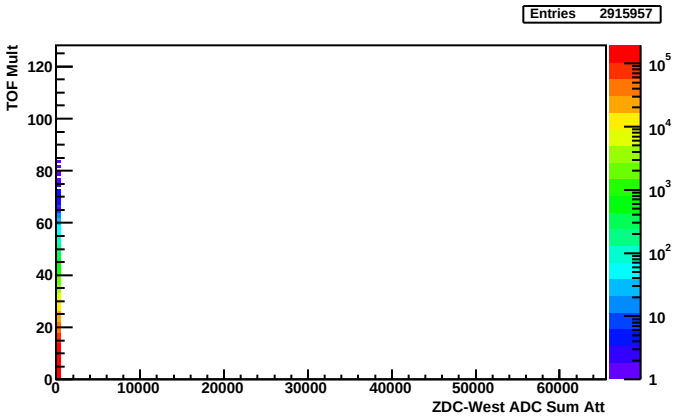

Entries 2915957
TOF Mult
BBC-S-East ADC Sum

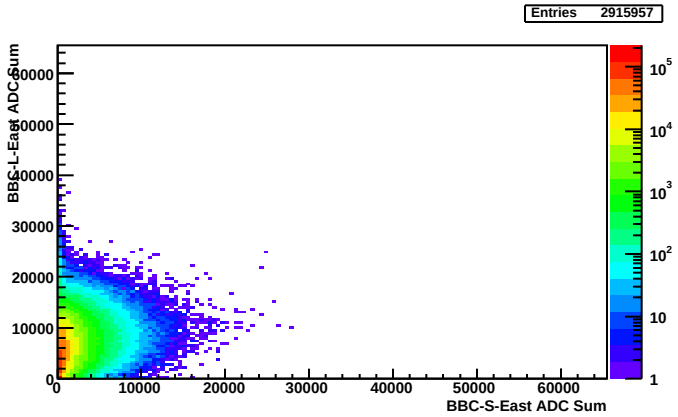

Entries 2915957
TOF Mult
BBC-S-West ADC Sum


Entries 2915957
TOF Mult
VPD-East ADC Sum


Entries 2915957
TOF Mult
VPD-West ADC Sum


Entries 2915957
TOF Mult
ZDC-East ADC Sum Att


Entries 2915957
TOF Mult
ZDC-West ADC Sum Att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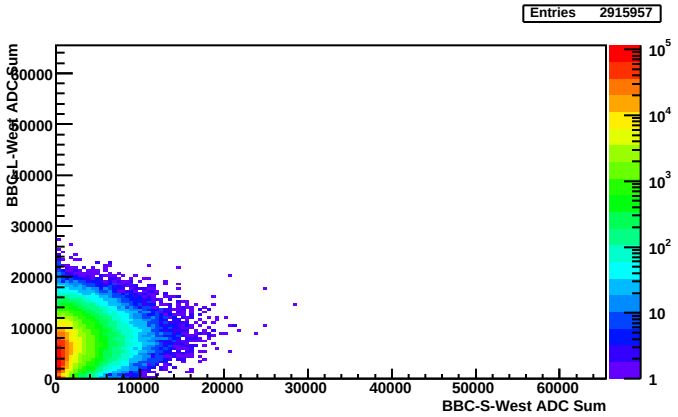
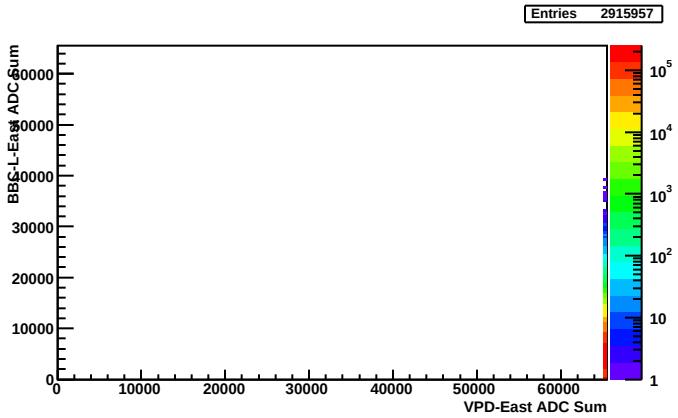
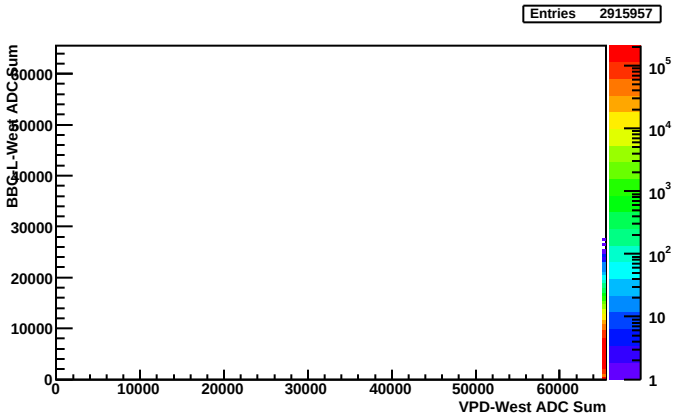
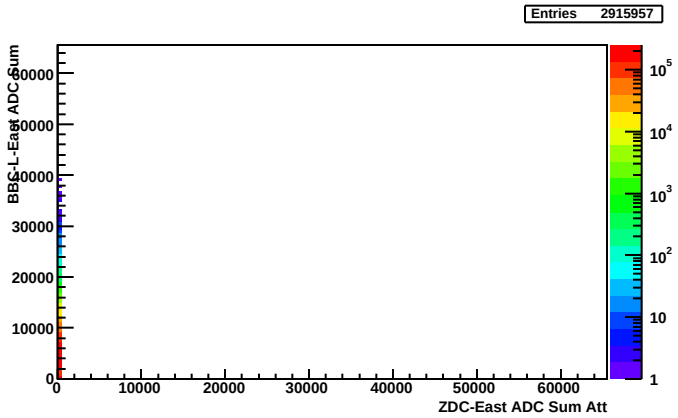
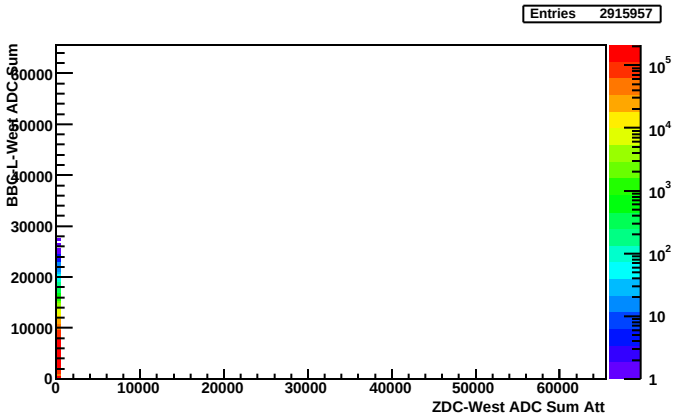
BBC-L-East ADC Sum
BBC-S-East ADC Sum


Entries 2915957
BBC-L-West ADC Sum
BBC-S-West ADC Sum


Entries 2915957
BBC-L-East ADC Sum
VPD-East ADC Sum


Entries 2915957
BBC-L-West ADC Sum
VPD-West ADC Sum


Entries 2915957
BBC-L-East ADC Sum
ZDC-East ADC Sum Att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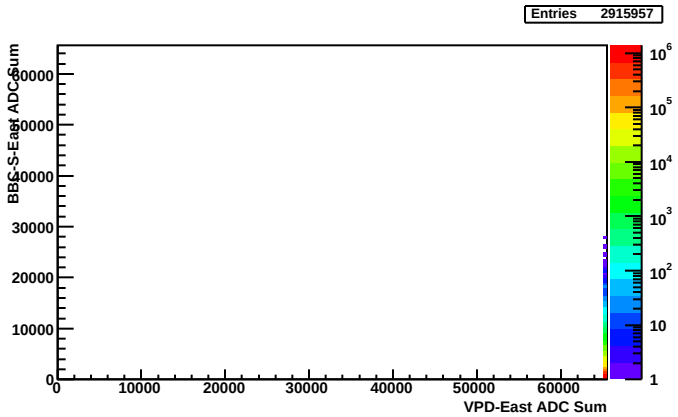
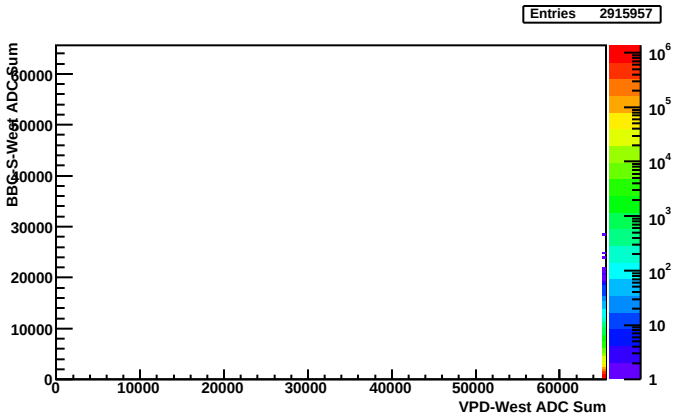
BBC-L-West ADC Sum
ZDC-West ADC Sum Att


Entries 2915957
BBC-S-East ADC Sum
VPD-East ADC Sum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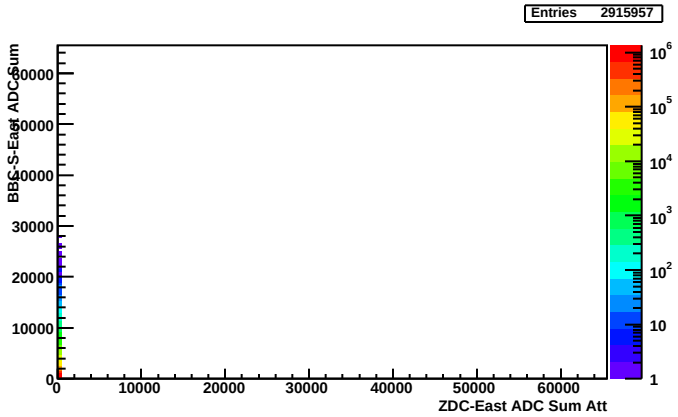
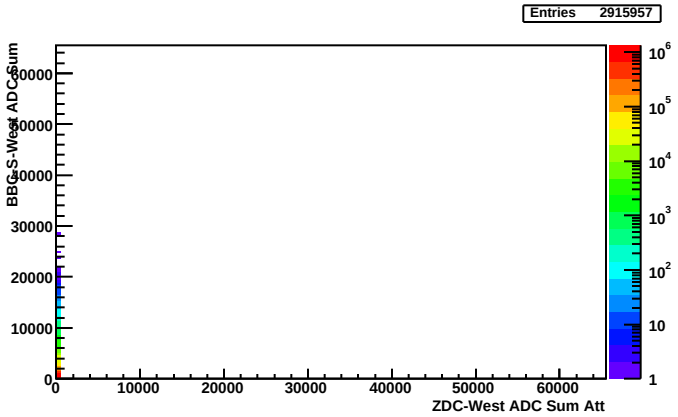
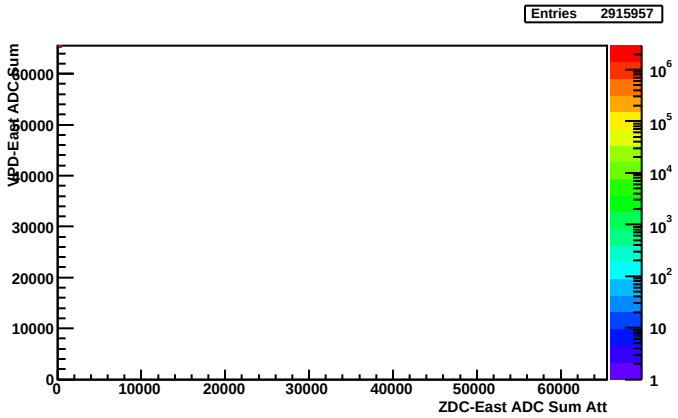
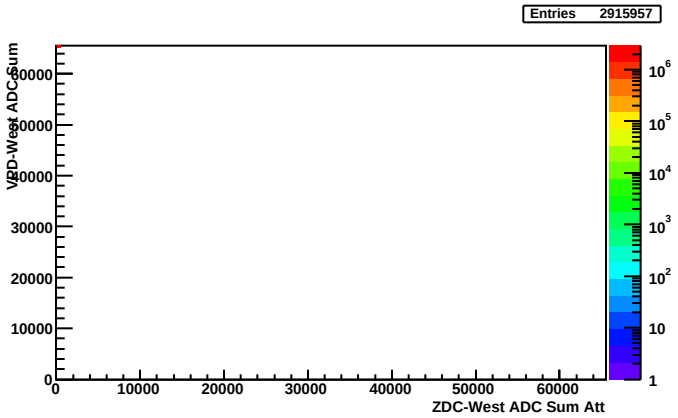
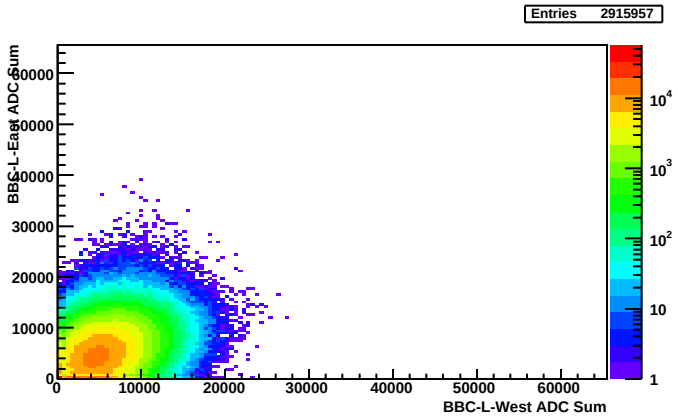
BBC-S-West ADC Sum
VPD-West ADC Sum

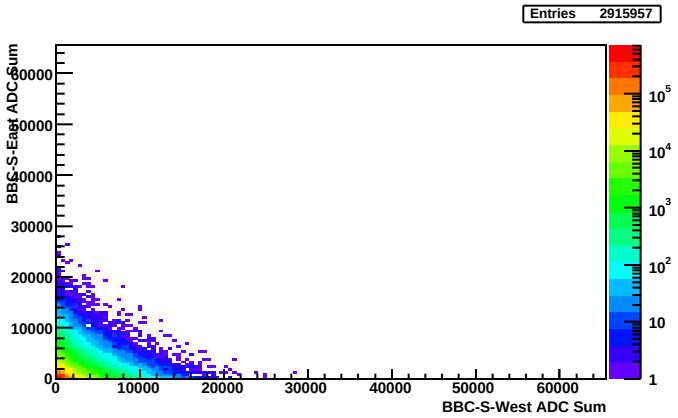

Entries 2915957
BBC-S-East ADC Sum
ZDC-East ADC Sum Att

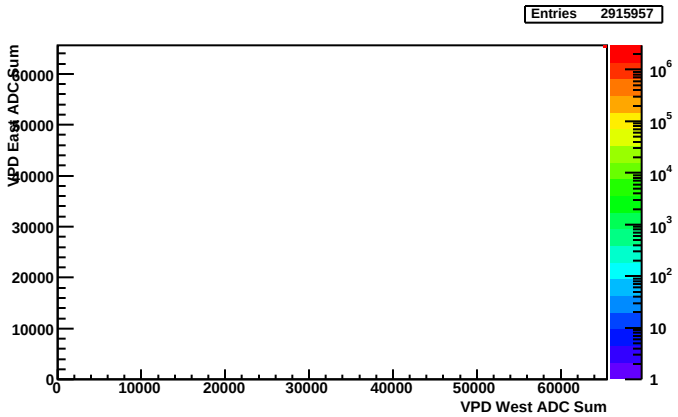

Entries 2915957
BBC-S-West ADC Sum
ZDC-West ADC Sum Att

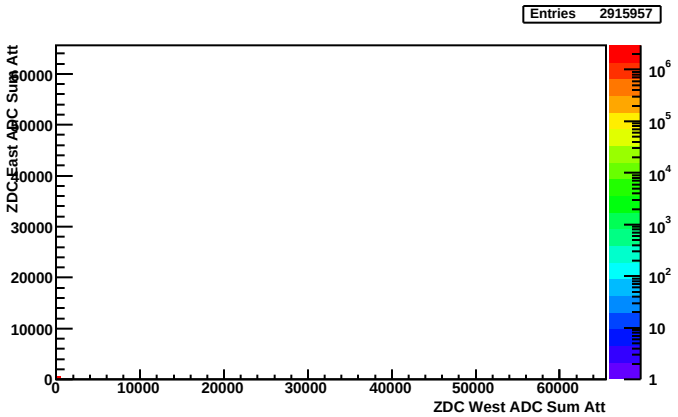

Entries 2915957
VPD-East ADC Sum
ZDC-East ADC Sum Att

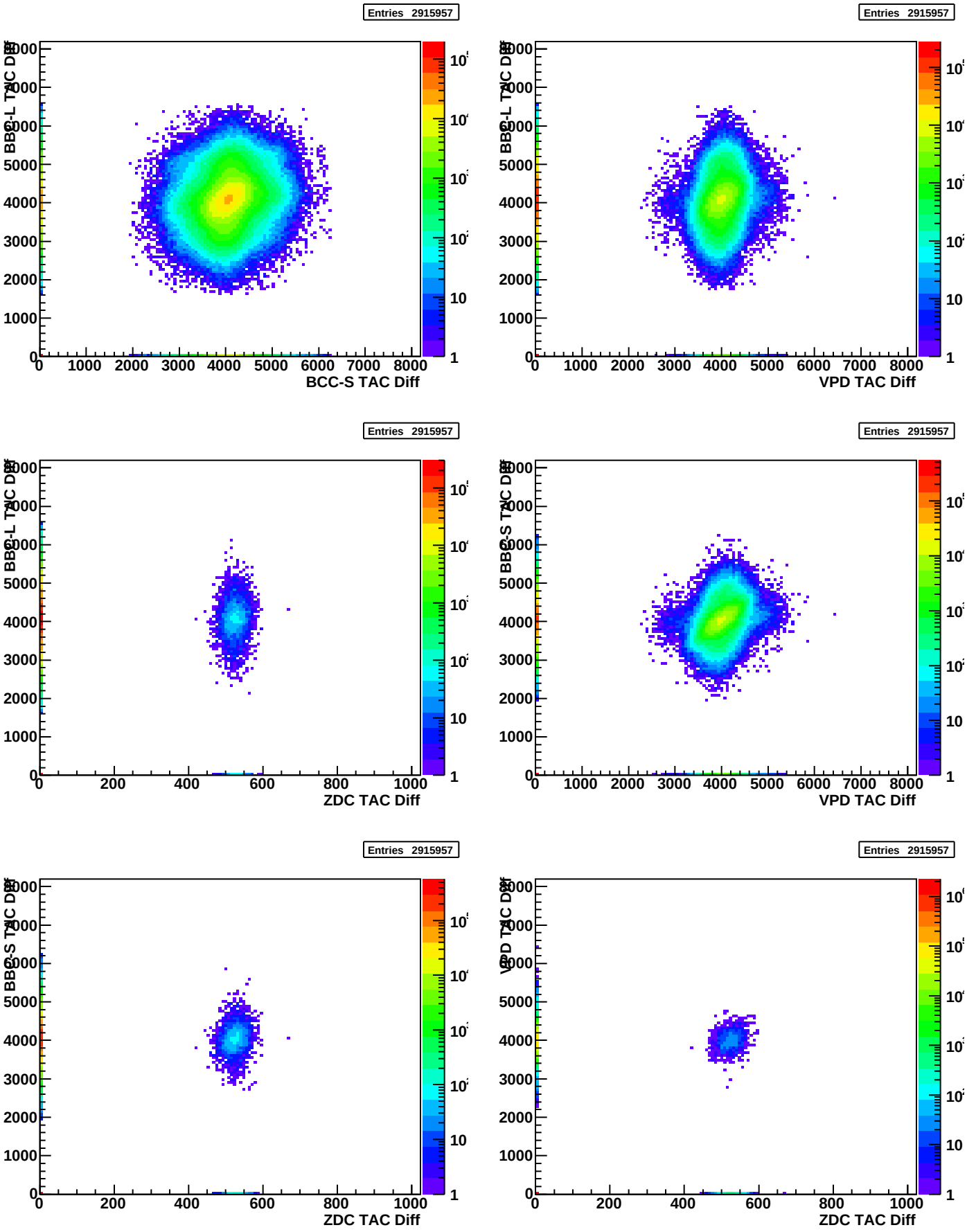

Entries 2915957
VPD-West ADC Sum
ZDC-West ADC Sum Att


Entries 2915957
BBC-L-East ADC Sum
BBC-L-West ADC Sum


Entries 2915957
BBC-S-East ADC Sum
BBC-S-West ADC Sum


Entries 2915957
VPD East ADC Sum
VPD West ADC Sum


Entries 2915957
ZDC East ADC Sum Att
ZDC West ADC Sum Att


Entries 2915957
BBC-L TAC Diff
BCC-S TAC Diff
Entries 2915957
BBC-L TAC Diff
VPD TAC Diff
Entries 2915957
BBC-L TAC Diff
ZDC TAC Diff
Entries 2915957
BBC-S TAC Diff
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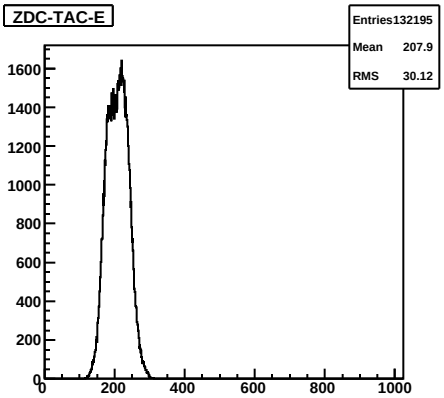
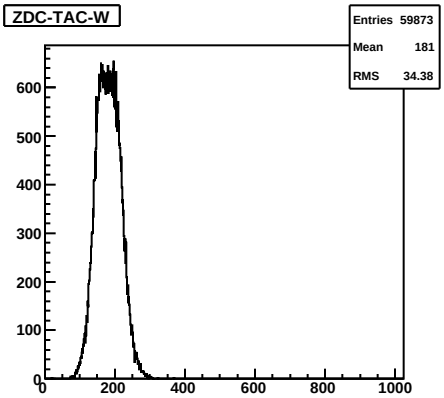
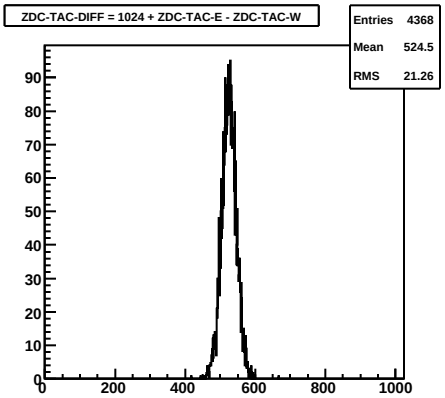
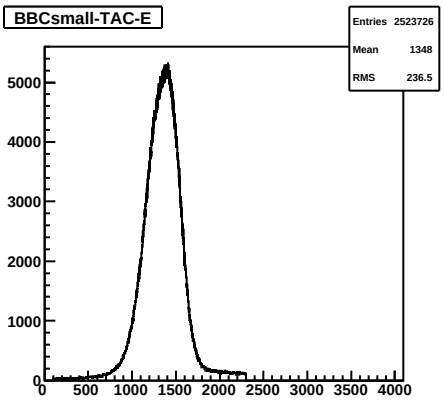
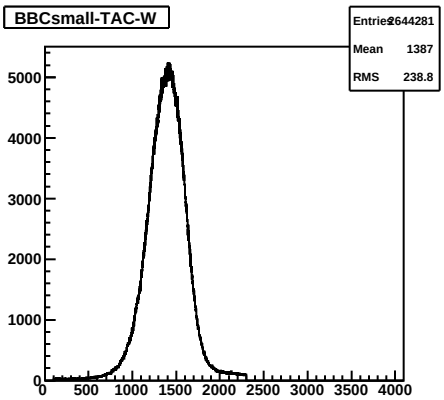
Entries 2915957
BBC-S TAC Diff
ZDC TAC Diff
Entries 2915957
VPD TAC Diff
ZDC TAC Diff

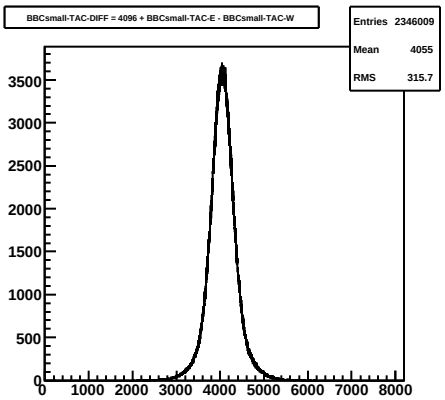

ZDC-TAC-E
Entries 132195
Mean 207.9
RMS 30.12

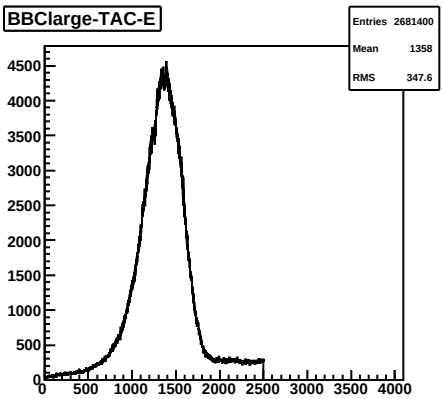

ZDC-TAC-W
Entries 59873
Mean 181
RMS 34.38

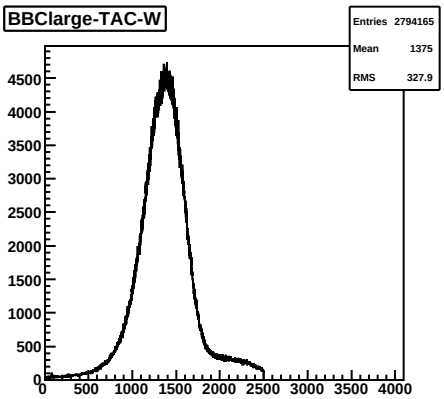

ZDC-TAC-DIFF = 1024 + ZDC-TAC-E - ZDC-TAC-W
Entries 4368
Mean 524.5
RMS 21.26

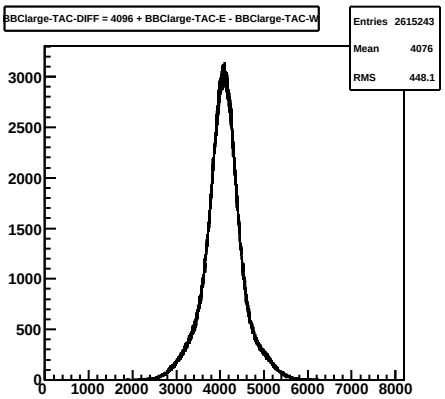

BBCsmall-TAC-E
Entries 2523726
Mean 1348
RMS 236.5

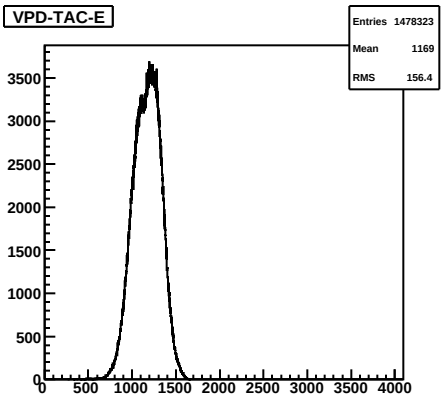

BBCsmall-TAC-W
Entries 2644281
Mean 1387
RMS 238.8

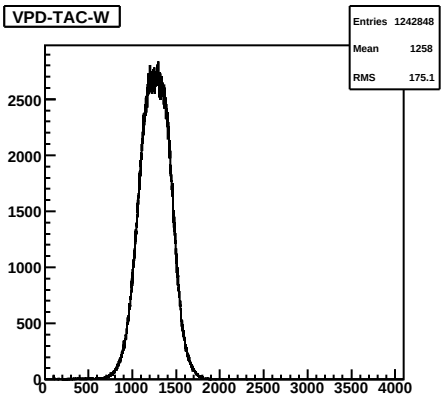

BBCsmall-TAC-DIFF = 4096 + BBCsmall-TAC-E - BBCsmall-TAC-W
Entries 2346009
Mean 4055
RMS 315.7

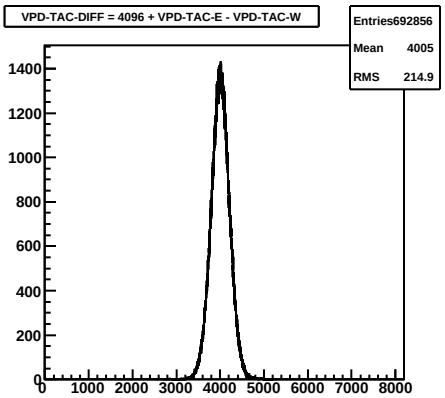

BBClarge-TAC-E
Entries 2681400
Mean 1358
RMS 347.6

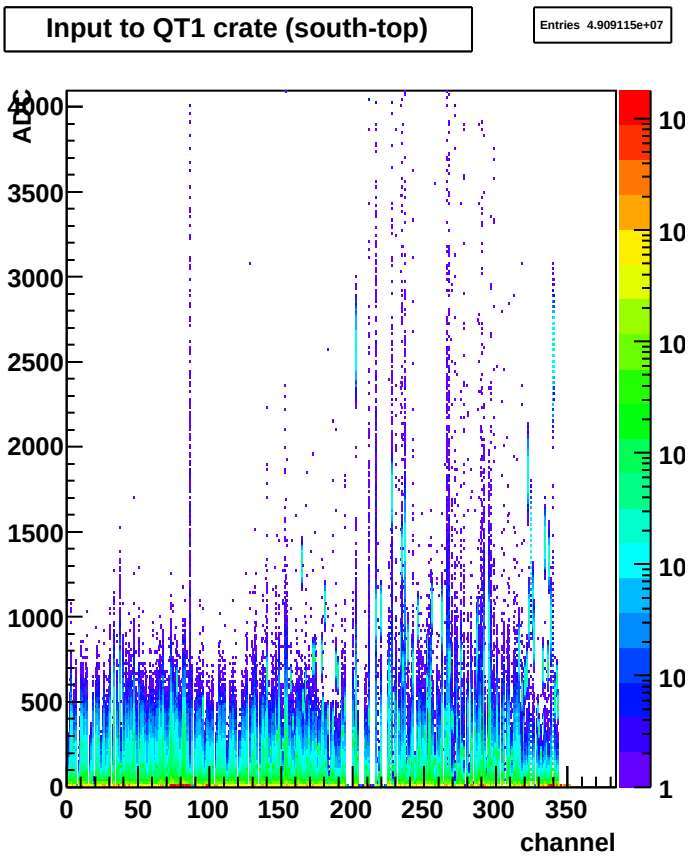

BBClarge-TAC-W
Entries 2794165
Mean 1375
RMS 327.9

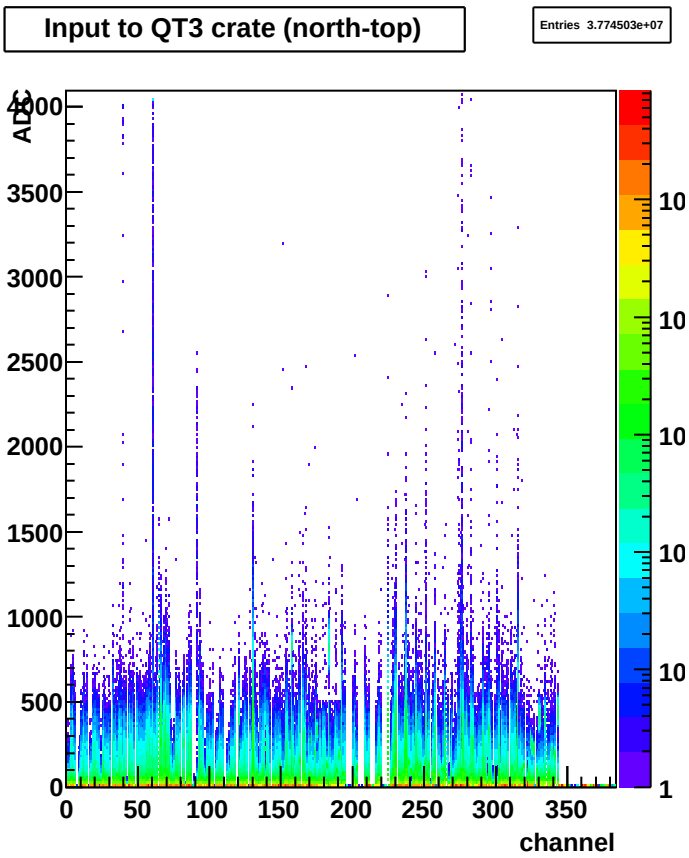

BBClarge-TAC-DIFF = 4096 + BBClarge-TAC-E - BBClarge-TAC-W
Entries 2615243
Mean 4076
RMS 448.1

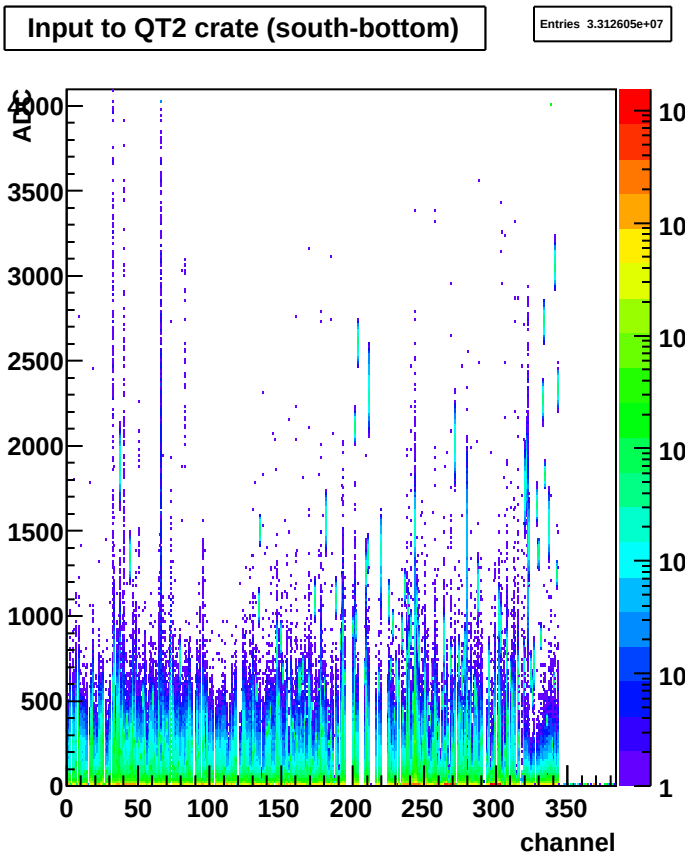

VPD-TAC-E
Entries 1478323
Mean 1169
RMS 156.4

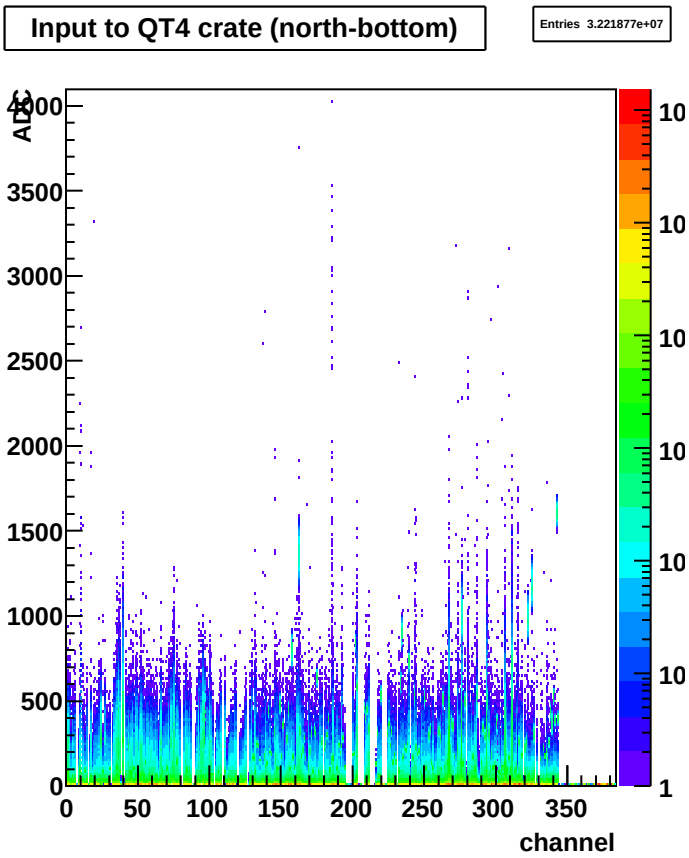

VPD-TAC-W
Entries 1242848
Mean 1258
RMS 175.1

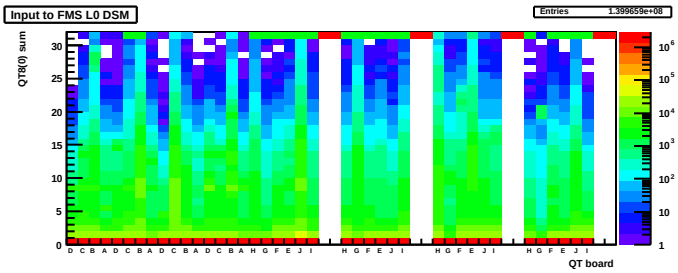

VPD-TAC-DIFF = 4096 + VPD-TAC-E - VPD-TAC-W
Entries 692856
Mean 4005
RMS 214.9

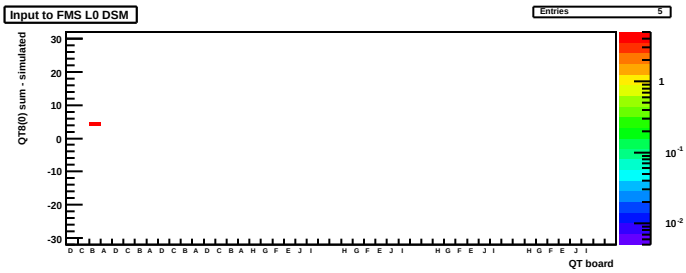

Input to QT1 crate (south-top)
Entries 4.909115e+07
ADC
channel

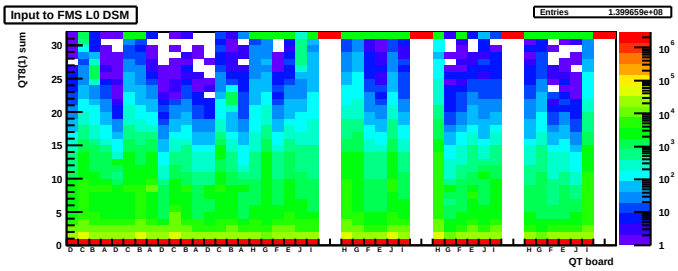

Input to QT3 crate (north-top)
Entries 3.774503e+07
ADC
channel

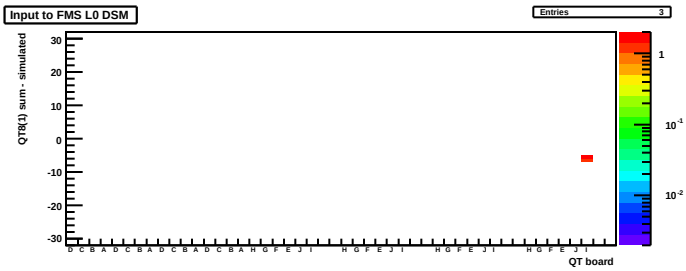

Input to QT2 crate (south-bottom)
Entries 3.312605e+07
ADC
channel

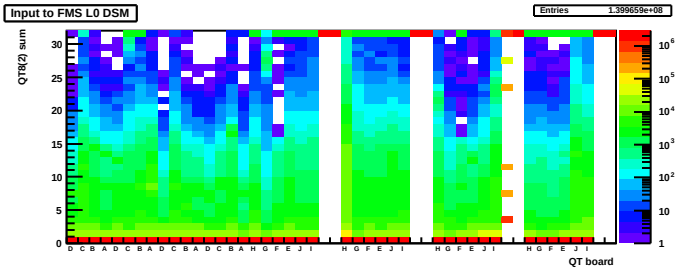

Input to QT4 crate (north-bottom)
Entries 3.221877e+07
ADC
channel

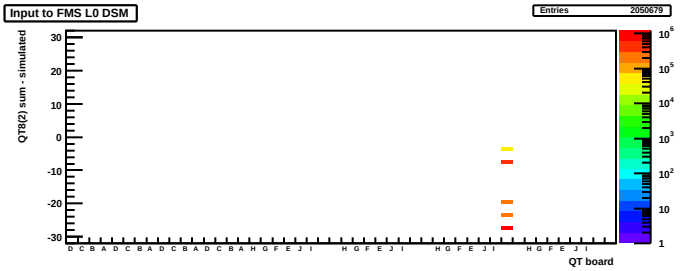

Input to FMS L0 DSM
Entries 1.399659e+08
QT8(0) sum
QT board

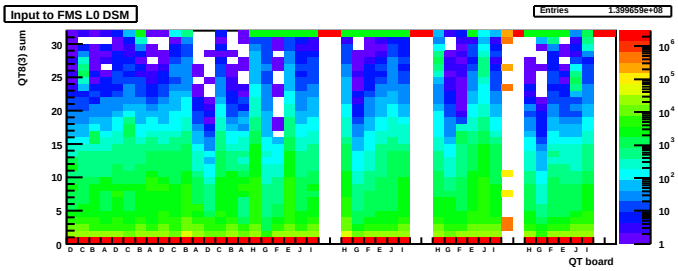

Input to FMS L0 DSM
Entries 5
QT8(0) sum - simulated
QT board

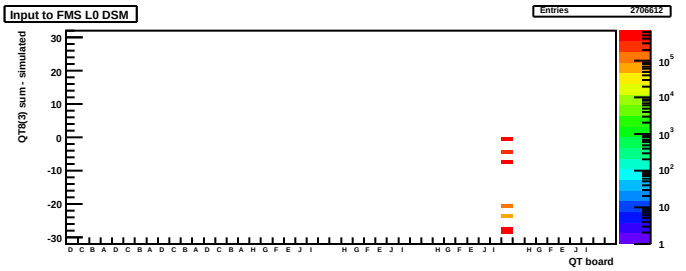

Input to FMS L0 DSM
Entries 1.399659e+08
QT8(1) sum
QT board

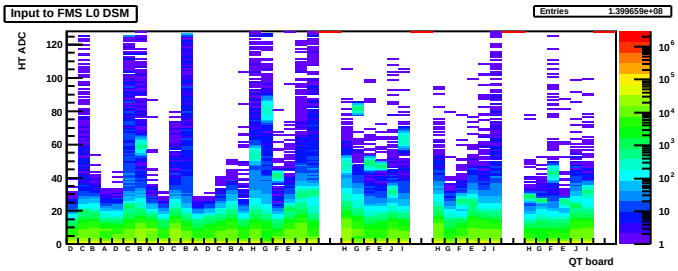

Input to FMS L0 DSM
Entries 3
QT8(1) sum - simulated
QT board

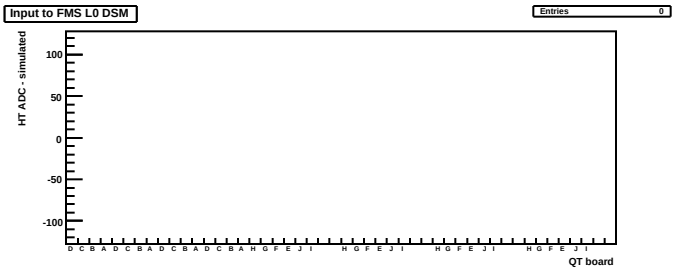

Input to FMS L0 DSM
Entries 1.399659e+08
QT8(2) sum
QT board

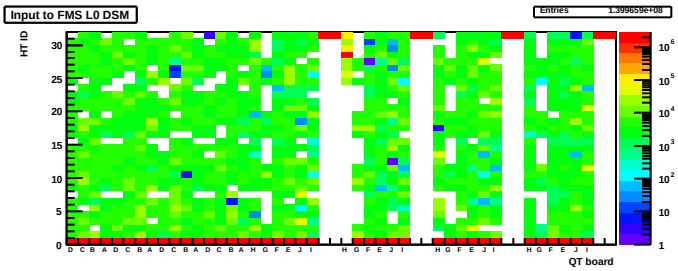

Input to FMS L0 DSM
Entries 2050679
QT8(2) sum - simulated
QT board

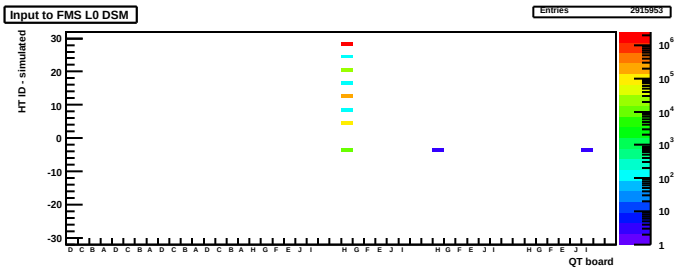

Input to FMS L0 DSM
Entries 1.399659e+08
QT8(3) sum
QT board

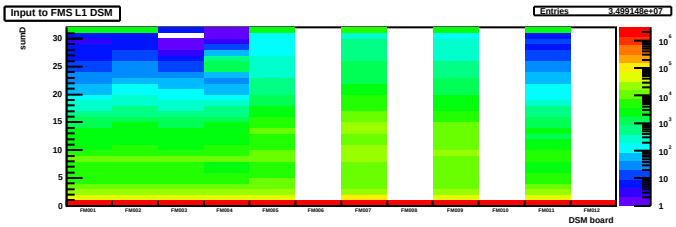

Input to FMS L0 DSM
Entries 2706612
QT8(3) sum - simulated
QT board

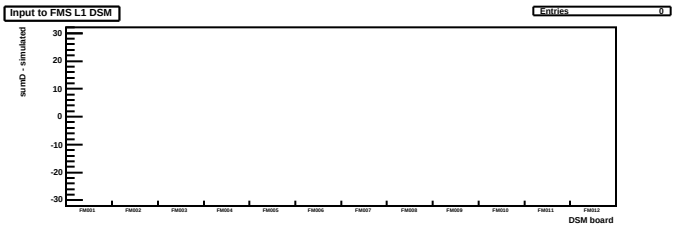

Input to FMS L0 DSM
Entries 1.399659e+08
HT ADC
QT board

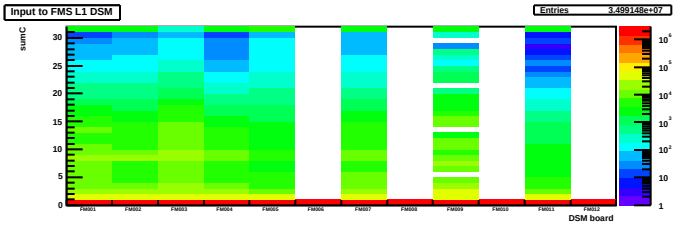

Input to FMS L0 DSM
Entries 0
HT ADC - simulated
QT board

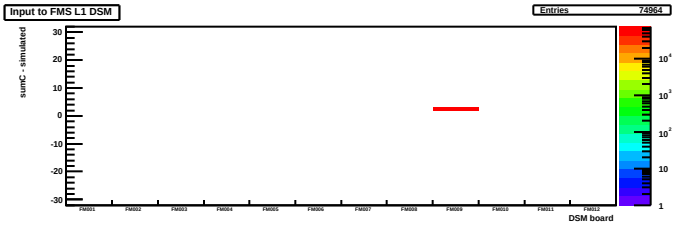

Input to FMS L0 DSM
Entries 1.399659e+08
HT ID
QT board

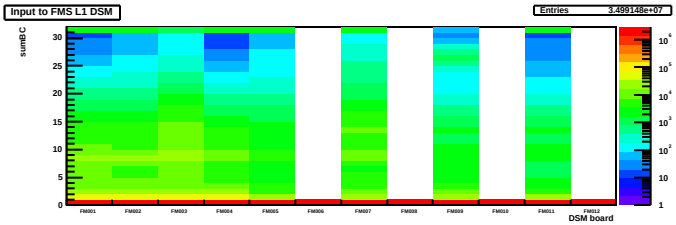

Input to FMS L0 DSM
Entries 2915953
HT ID - simulated
QT board

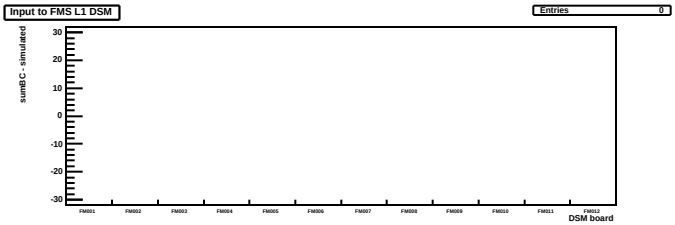

Input to FMS L1 DSM
Entries 3.499148e+07
sumD
DSM board

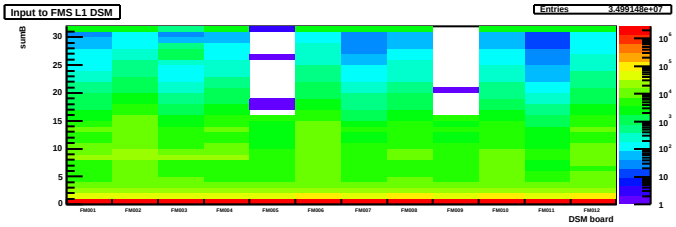

Input to FMS L1 DSM
Entries 0
sumD - simulated
DSM board

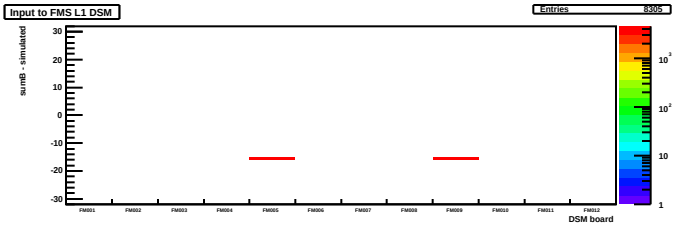

Input to FMS L1 DSM
Entries 3.499148e+07
sumC
DSM board

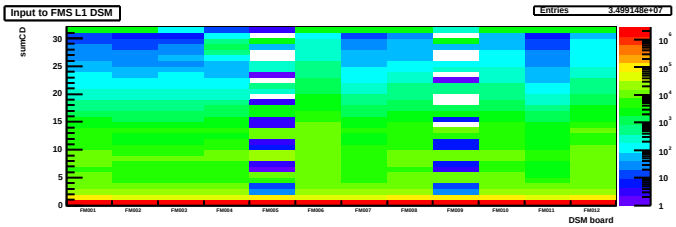

Input to FMS L1 DSM
Entries 74964
sumC - simulated
DSM board

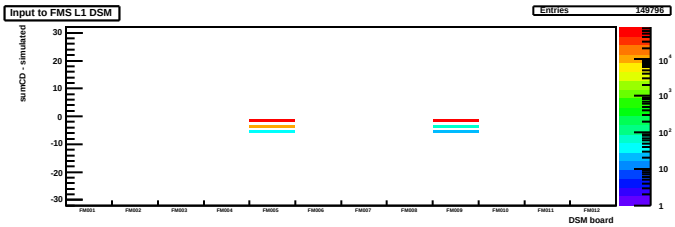

Input to FMS L1 DSM
Entries 3.499148e+07
sumBC
DSM board

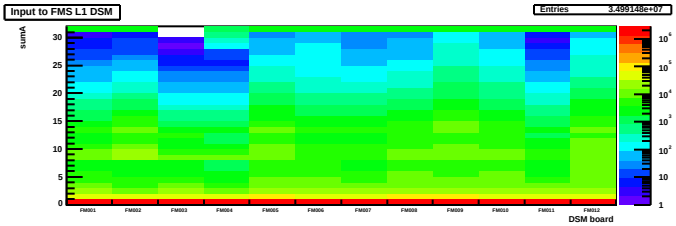

Input to FMS L1 DSM
Entries 0
sumBC - simulated
DSM board

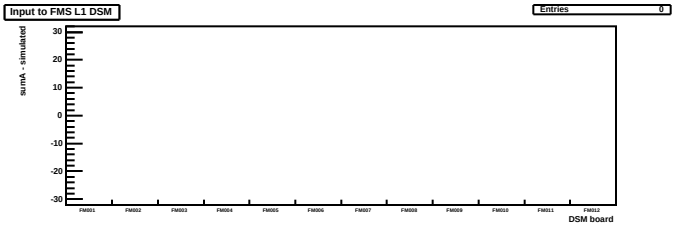

Input to FMS L1 DSM
Entries 3.499148e+07
sumB
DSM board

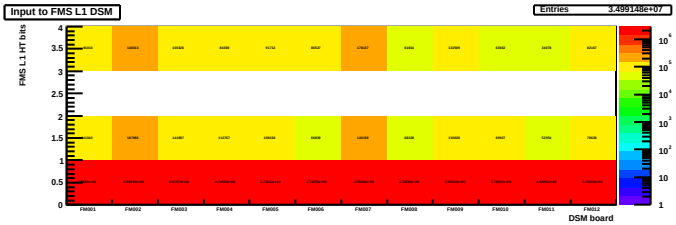

Input to FMS L1 DSM
Entries 8305
sumB - simulated
DSM board

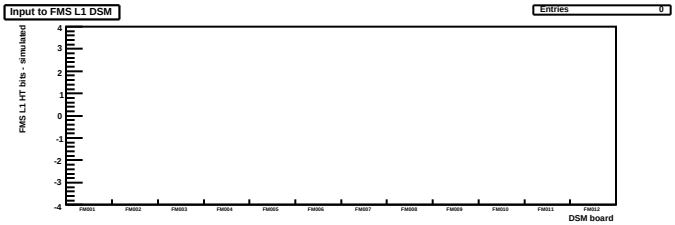

Input to FMS L1 DSM
Entries 3.499148e+07
sumCD
DSM board

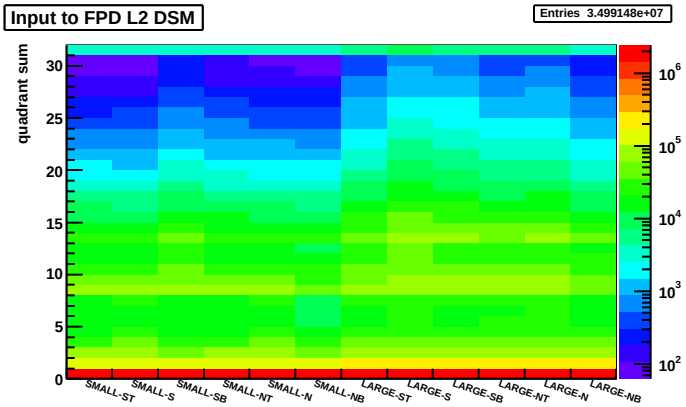

Input to FMS L1 DSM
Entries 149796
sumCD - simulated
DSM board

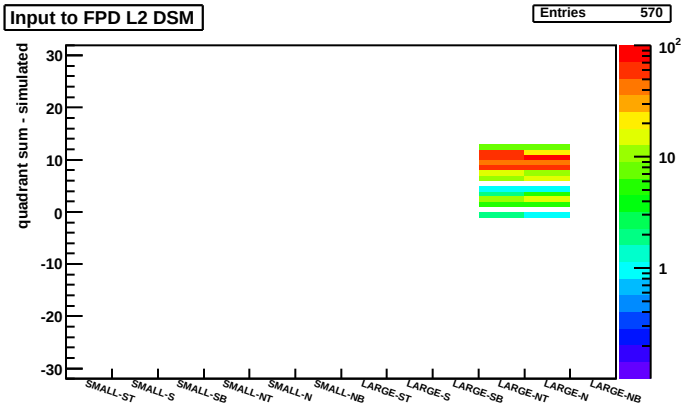

Input to FMS L1 DSM
Entries 3.499148e+07
sumA
DSM board

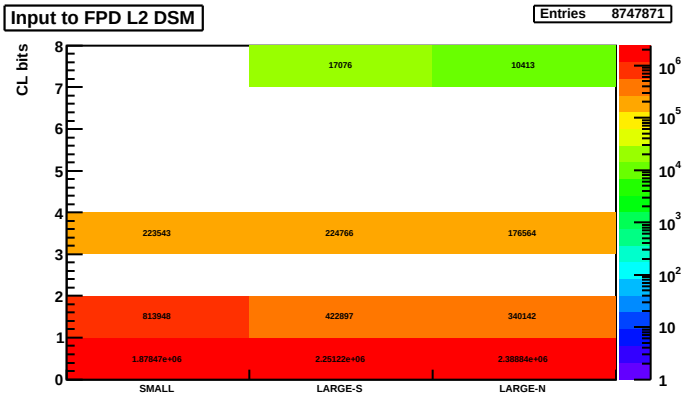

Input to FMS L1 DSM
Entries 0
sumA - simulated
DSM board

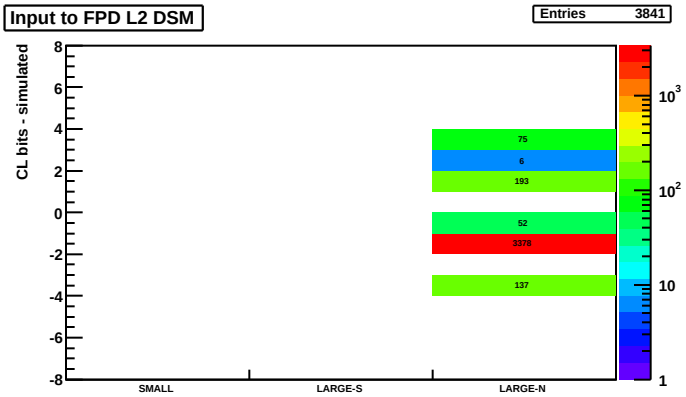

Input to FMS L1 DSM
Entries 3.499148e+07
FMS L1 HT bits
DSM board

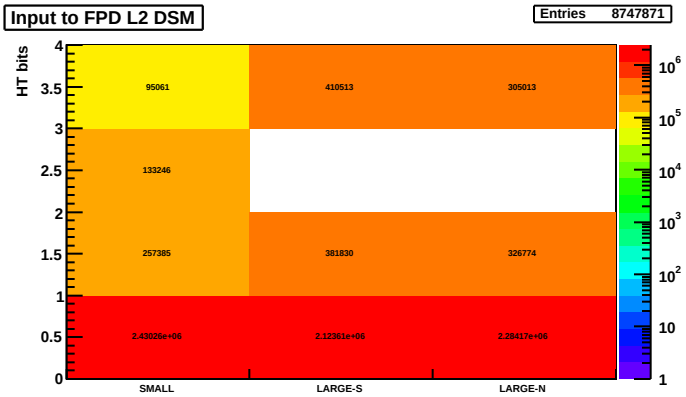

Input to FMS L1 DSM
Entries 0
FMS L1 HT bits - simulated
DSM board

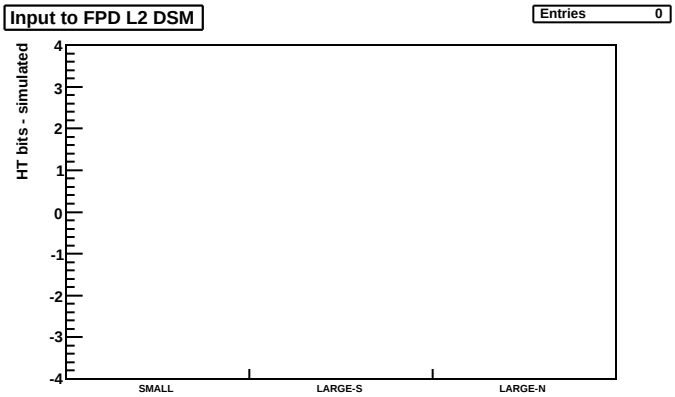

Input to FPD L2 DSM
Entries 3.499148e+07
quadrant sum
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

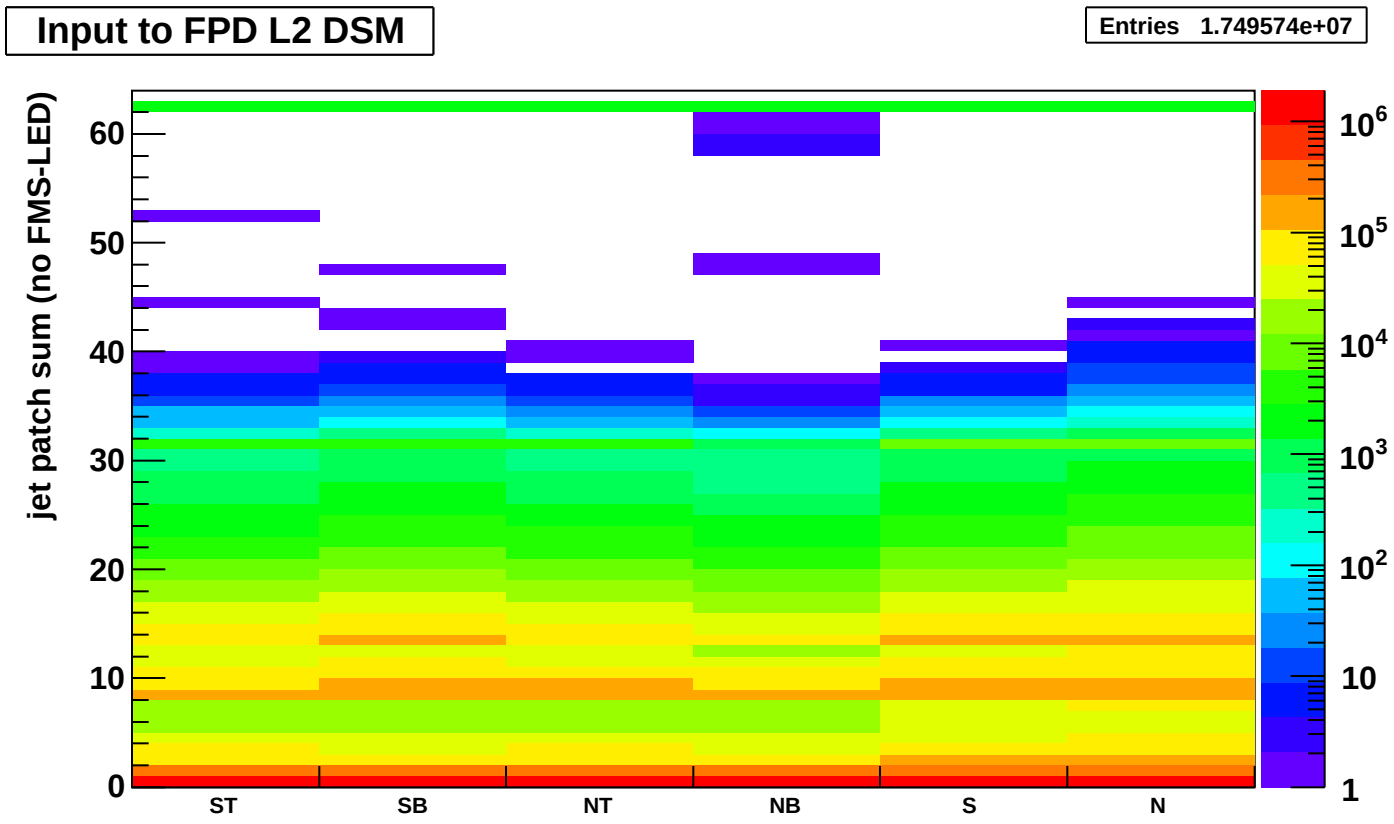

Input to FPD L2 DSM
Entries 570
quadrant sum - simulated
SMALL-ST
SMALL-S
SMALL-SB
SMALL-NT
SMALL-N
SMALL-NB
LARGE-ST
LARGE-S
LARGE-SB
LARGE-NT
LARGE-N
LARGE-NB

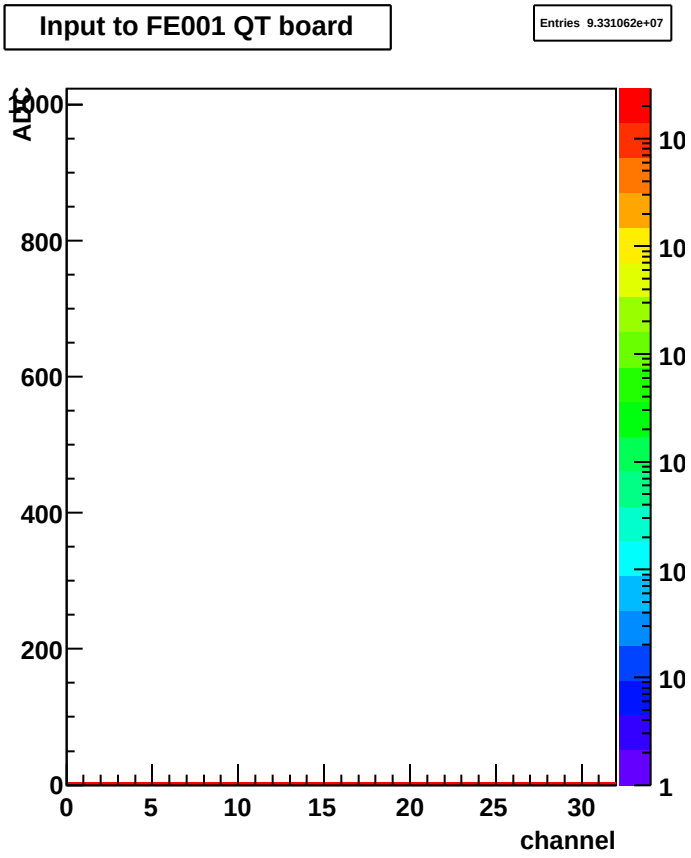

Input to FPD L2 DSM
Entries 8747871
CL bits
17076
10413
223543
224766
176564
813948
422897
340142
1.87847e+06
2.25122e+06
2.38884e+06
SMALL
LARGE-S
LARGE-N

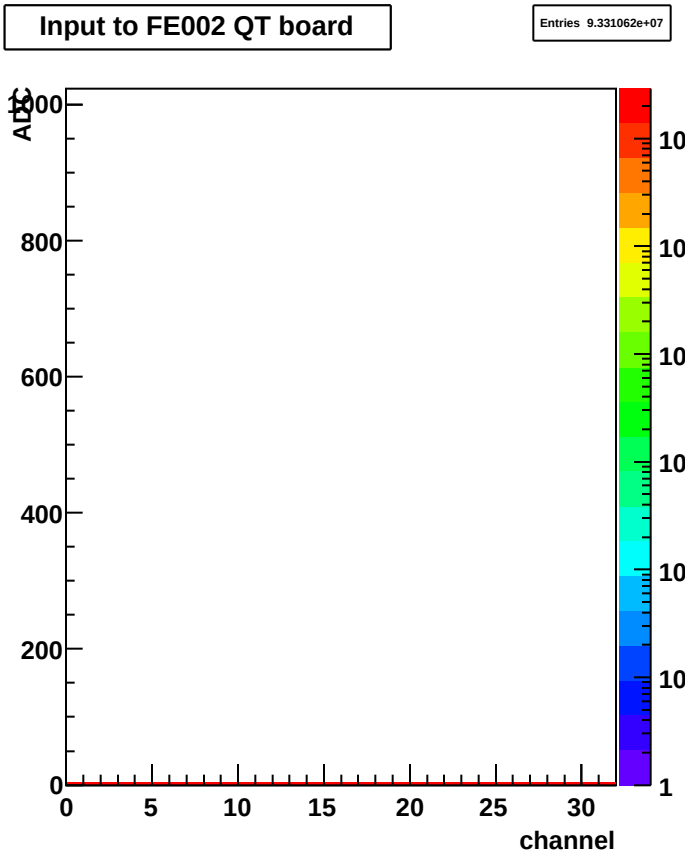

Input to FPD L2 DSM
Entries 3841
CL bits - simulated
75
6
193
52
3378
137
SMALL
LARGE-S
LARGE-N

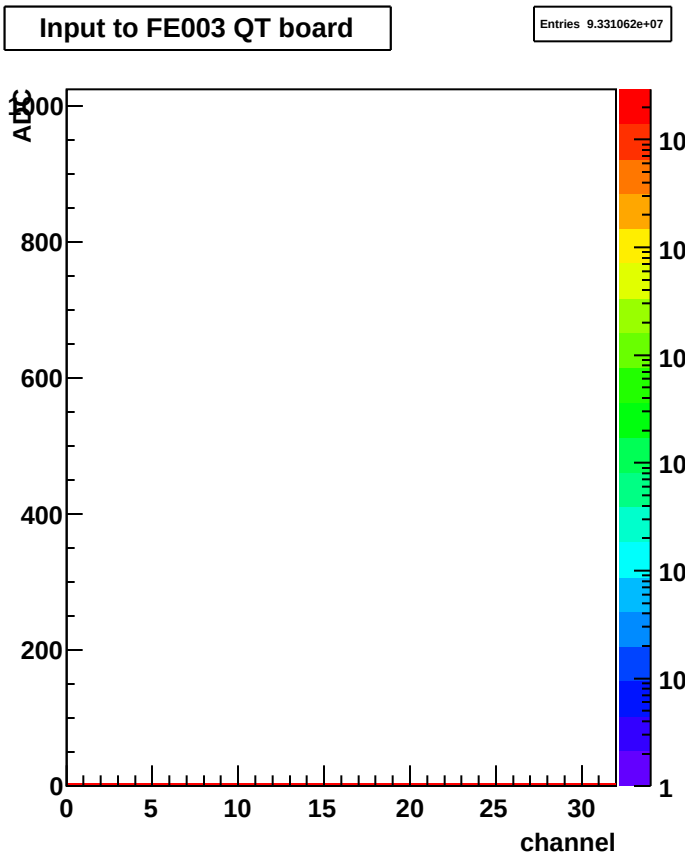

Input to FPD L2 DSM
Entries 8747871
HT bits
95061
410513
305013
133246
257385
381830
326774
2.43026e+06
2.12361e+06
2.28417e+06
SMALL
LARGE-S
LARGE-N

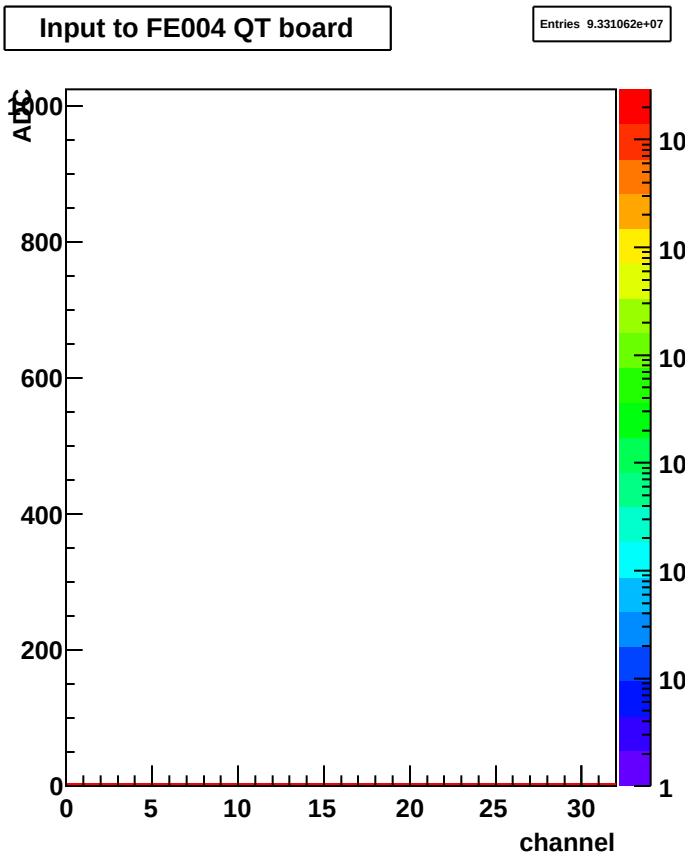

Input to FPD L2 DSM
Entries 0
HT bits - simulated
SMALL
LARGE-S
LARGE-N

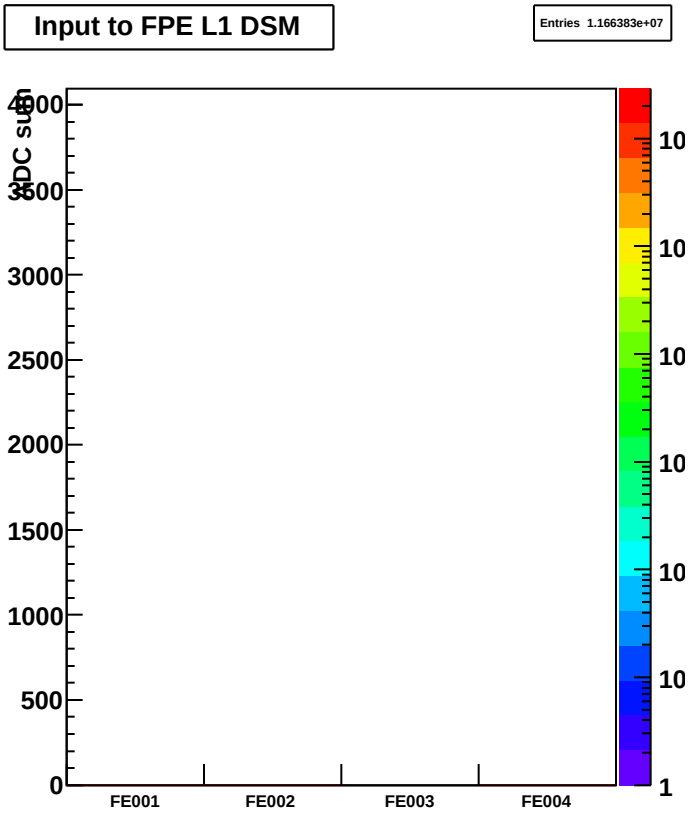

Input to FPD L2 DSM
Entries 1.749574e+07
jet patch sum (no FMS-LED)
0
10
20
30
40
50
60
ST
SB
NT
NB
S
N
1
10
$10^2$
$10^3$
$10^4$
$10^5$
$10^6$


Input to FE001 QT board
Entries 9.331062e+07
ADC
channel

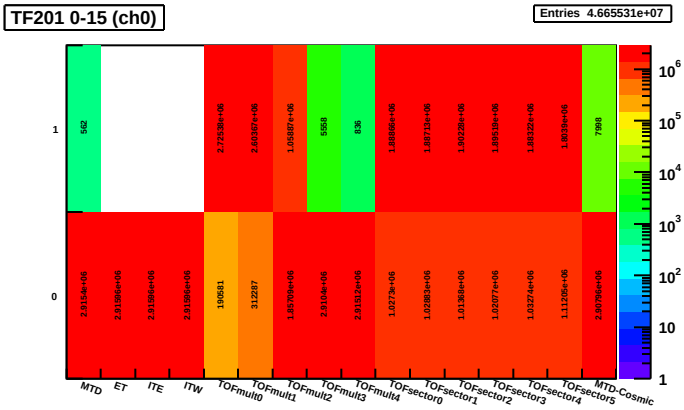

Input to FE002 QT board
Entries 9.331062e+07
ADC
channel


Input to FE003 QT board
Entries 9.331062e+07
ADC
channel

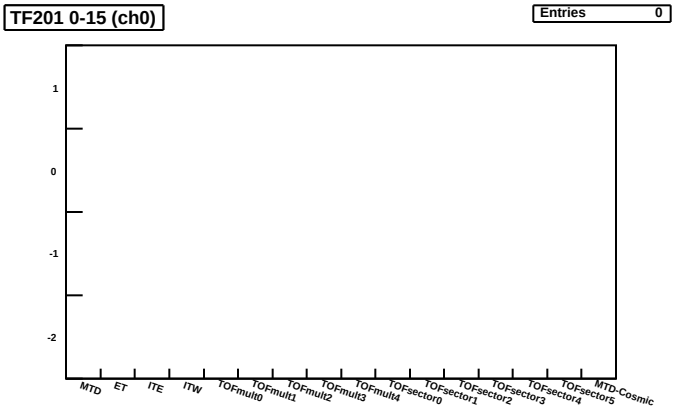

Input to FE004 QT board
Entries 9.331062e+07
ADC
channel


Input to FPE L1 DSM
Entries 1.166383e+07
ADC sum
4000
3500
3000
2500
2000
1500
1000
500
0
FE001
FE002
FE003
FE004
10
10
10
10
10
10
1

TF201 0-15 (ch0)




TF201 0-15 (ch0)

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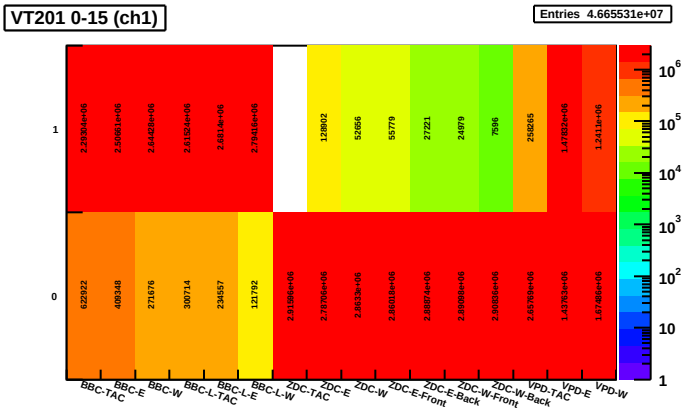


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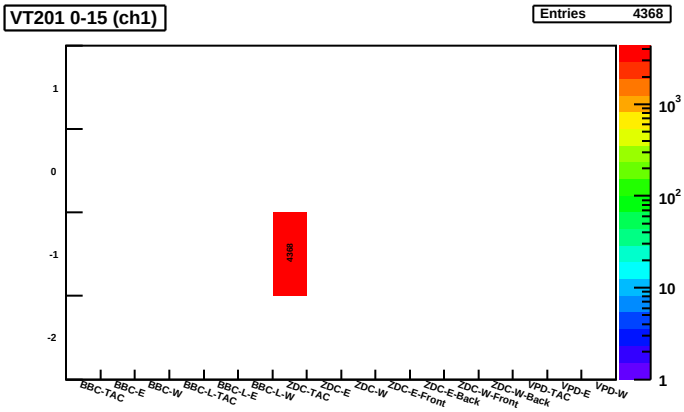
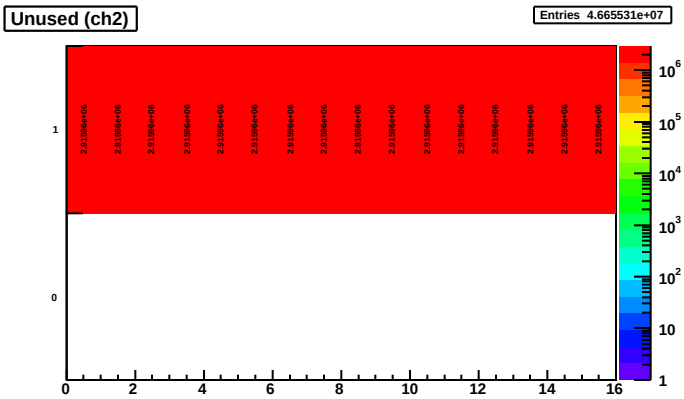
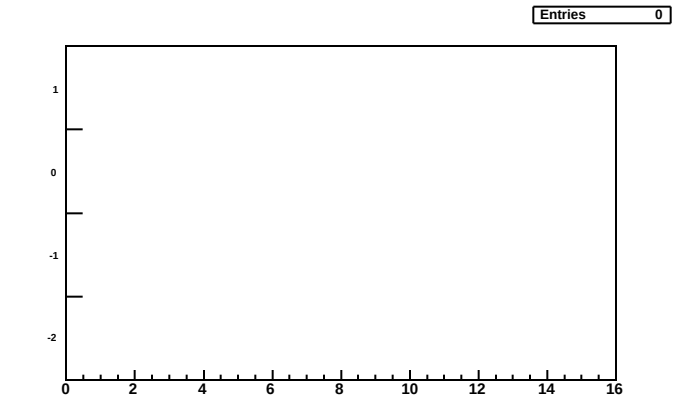
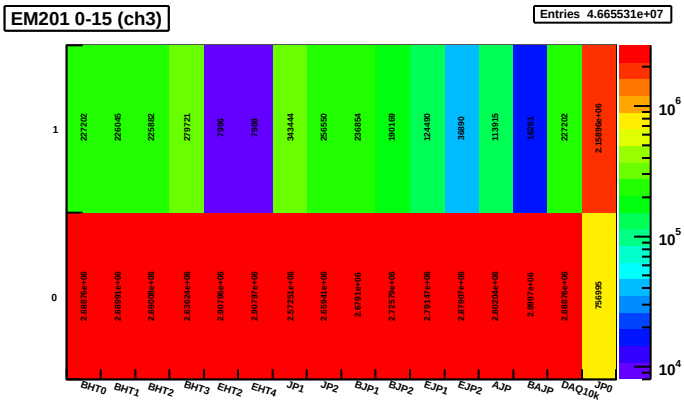



Unused (ch2)

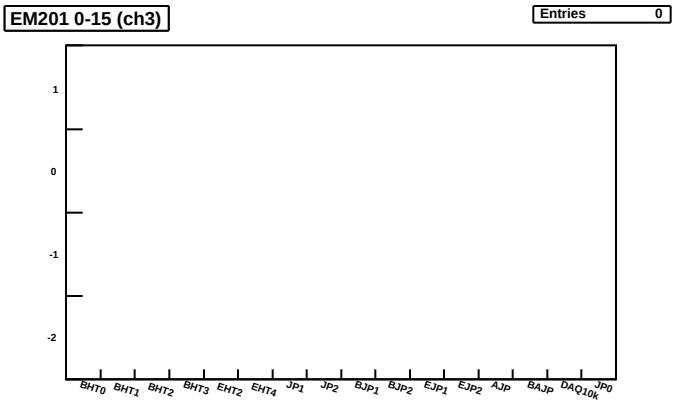


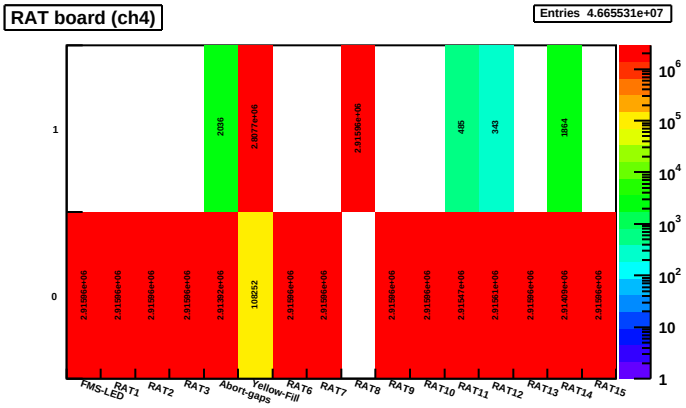

EM201 0-15 (ch3)

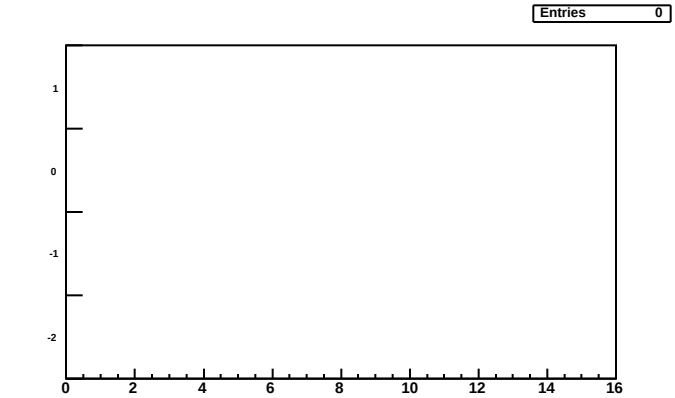



EM201 0-15 (ch3)

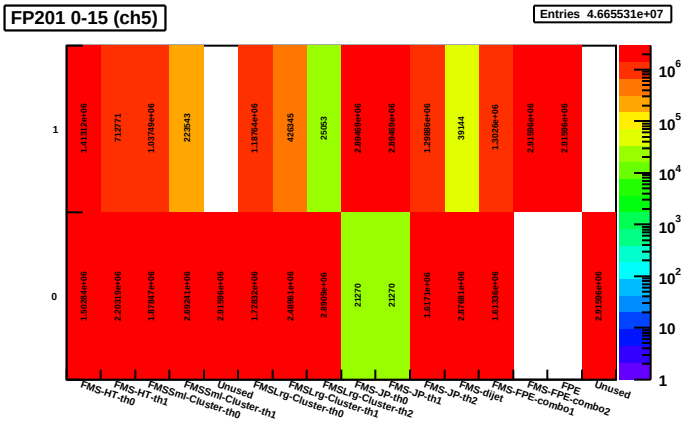


**RAT board (ch4)**

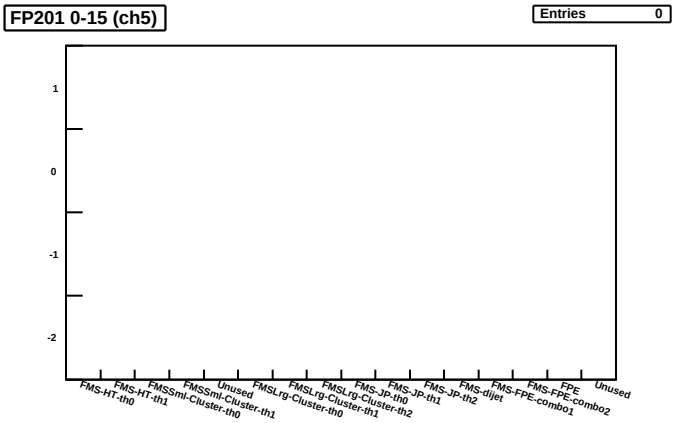


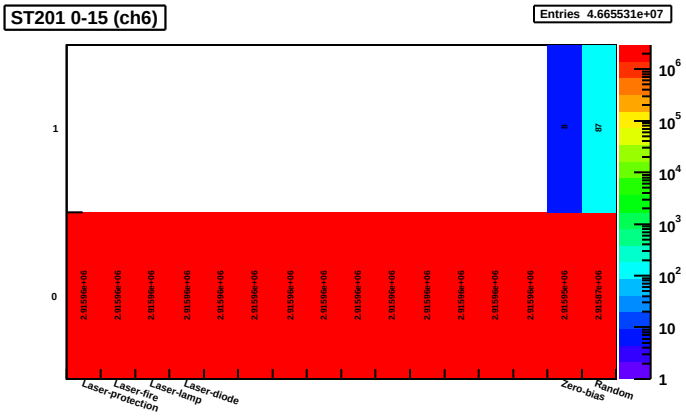

**FP201 0-15 (ch5)**

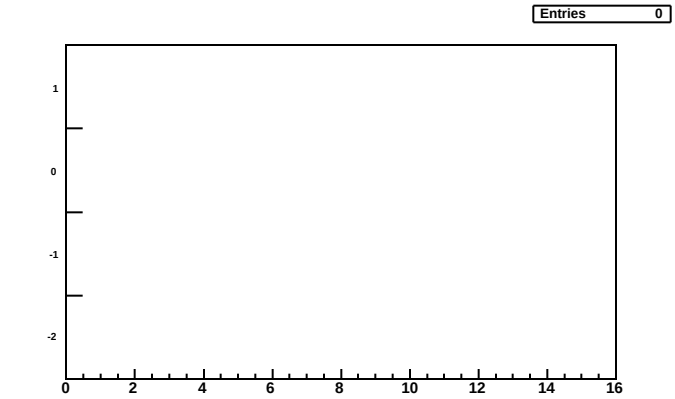


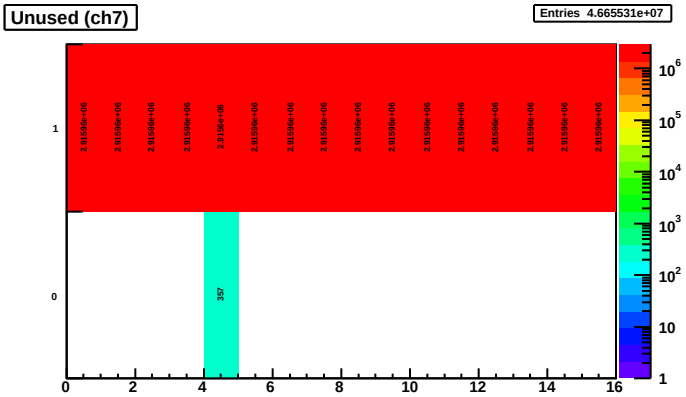
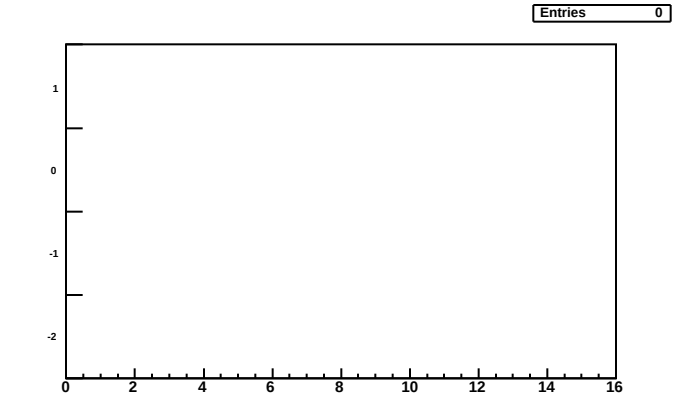

**FP201 0-15 (ch5)**




**ST201 0-15 (ch6)**




**Unused (ch7)**